



TPC Benchmark™ C
Full Disclosure Report

Oracle's SPARC SuperCluster with T3-4 Servers
Using
Oracle Database 11g Release 2 with
Oracle Real Application Clusters and Partitioning

First Edition
December 2, 2010

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Abstract

This report documents the methodology and results of the TPC Benchmark™ C test conducted on the following environment as measured by Oracle America, Inc. 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>
SPARC SuperCluster with 27 T3-4 Servers	4 SPARC T3 1.65GHz (per T3-4 Server)	Oracle Database 11g Release 2 with Oracle Real Application Clusters and Partitioning	Oracle Solaris 10 09/10

TPC Benchmark C Metrics

<i>Total System Cost</i>	<i>TPC-C Throughput</i>	<i>Price / Performance</i>	<i>Availability Date</i>
Three year cost includes: <ul style="list-style-type: none">• 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
\$30,528,863 USD	30,249,688	\$1.01 USD	June 1, 2011



SPARC SuperCluster with T3-4 Servers

TPC-C 5.11.0
TPC-Pricing 1.5.0

Report Date
December 2, 2010

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$30,528,863USD	30,249,688 tpmC	\$1.01USD/tpmC	June 1, 2011	
Database Server Processors/Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
SPARC T3 1.65GHz 108 / 1,728 / 13,824	Oracle Database 11g Release 2 Enterprise Ed. With Oracle Real Application Clusters and Partitioning	Oracle Solaris 10 09/10	Tuxedo CFS-R Tier 1 Oracle iPlanet Web Server	24,300,000

Clients

81 Sun Fire X4170M2
2.93GHz Intel
Xeon X5670 HC
48GB Memory
2 146GB SAS disk

Database Nodes



27 Sun SPARC T3-4 Servers
4 1.65GHz SPARC T3
512GB Memory
3 300GB 10K RPM SAS
4 8Gb/s FC HBA, 2 port
10GbE SFP+
5RU High

Storage

67 X4270M2 DATA COMSTAR
6 2TB 7.2K RPM SAS
2 Sun F5100 Flash Arrays

2 X4270M2 DATA COMSTAR
5 2TB 7.2K RPM SAS
2 Sun F5100 Flash Arrays

28 X4270M2 REDO COMSTAR
11 2TB 7.2K RPM SAS

System Component	Each Server Node		Each Client	
Processors/Cores/Threads and cache	4/64/512	SPARC T3 1.65GHz 6 MB L2 Cache	2/12/24	Intel Xeon X5670 12MB Smart Cache
Memory		512GB (13.5TB Total)		48GB
Disk Controllers	4	8Gb/s FC HBA 2 Port	1	8 port Internal SAS
OS Disks (each system)	3	300GB 10K RPM SAS	2	146GB 10K RPM SAS
External Storage (Equally visible to all T3-4 Server nodes)	11,040 720	24GB SSD Flash Modules 2TB 7.2K RPM SAS		
Total Storage		1.76PB		



SPARC SuperCluster with T3-4 Servers

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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3 yr Maint. Price	
Server Hardware							
Sun T3-4 Server, XATO chassis	SE5ASY11Z		1	6,400	27	172,800	
Pwr Jumper Cables, 2.5mx1 RoHS	SR-JUMP-1MC13		1	23	108	2,484	
8Gb/s FC HBA, 2 port, Emulex	SG-XPCIE2FC-EM8-Z		1	2,399	108	259,092	
Sun Dual 10GbE SFP+ PCIe 2.0	1110A-Z		1	1,195	27	32,265	
Sun 10Gbps Dual Rate SFP+ SR	X2129A-N		1	995	27	26,865	
SE 300GB 10K 2.5" SAS HDD	SE6Y3G11Z		1	689	81	55,809	
2 x SPARC T3 1.65GHz 16c	SE5Y1B11Z		1	31,000	54	1,674,000	
16GB (2*8GB) DDR3 Memory	SE6Y2C11Z		1	3,200	864	2,764,800	
2000 Watt PSU Climate Saver	SE5Y5PS3Z		1	995	108	107,460	
Snap-in Rear I/O Module, Cable Mgmt	SE5YRM2Z		1	699	27	18,873	
Tripp Lite Smart Online 5000VA UPS (+10%)	947887		2	2,953	30	88,590	
Tripp Lite UPS 192V RM 3U Ext. Batt.(+10%)	959740		2	970	30	29,100	
Sub-Total						5,232,138	0
Server Storage							
X4270M2 12 disk 1 x PSU	X4270M2-H1-AA		1s	3,499	97	339,403	
Oracle Solaris 11 Express	SOLZ9-11XC9A7M		1	20	97	1,940	
Jumper Cable Kit: 1 x 1m C13	XSR-JUMP-1MC13-N		1	23	97	2,231	
3.5" 2TB 7.2K RPM SAS HDD	RA-SS1CR-2T7K		1s	949	720	683,280	
8Gb/s FC dual port, QLogic	SG-XPCIE2FC-QF8-N		1	2,399	97	232,703	
6Gb/s SAS External PCI-E HBA	SGX-SAS6-EXT-Z		1	550	276	151,800	
6Gb/s SAS Internal PCI-E HBA	SG-SAS6-INT-Z		1	419	69	28,911	
6Gb/s SAS RAID HBA, Internal	SG-SAS6-R-INT-Z		1	1,079	28	30,212	
1 x Intel Xeon X5670 ATO	5921A		1s	2,499	97	242,403	
1200W AC Gold PSU XATO	5933A		1s	349	97	33,853	
4GB (1 x 4GB) DDR3-1333	4910A		1s	255	194	49,470	
Express Slide rail kit	5889A-N		1	150	97	14,550	
X4270 X4275 CPU Heatsink XATO	5899A-N		1	0	97	0	
0.5M, Mini, shielded, SAS cable	XTA-0.5M-SAS		1	95	552	52,440	
Sun Storage F5100 Flash Array	TA5100RASA4-80AA		1	159,995	138	22,079,310	
15M LC-LC FC Optical Cable	X9734A-Z-N		1	105	410	43,050	
Sub-Total						23,985,556	0
Server Software							
Oracle Solaris 10 09/10 for SPARC T3-4	SOLZS-11X9A9S-IP-N		1	0	27	0	
Oracle Database 11g Release 2 Ent. Ed., Per Processor for 3 years			1	23,750	432	10,260,000	
Oracle Real Applications Clusters, Per Processor for 3 years			1	11,500	432	4,968,000	
Oracle Partitioning, Per Processor for 3 years			1	5,750	432	2,484,000	
Oracle Incident Server Support Package for 3 years			1	62,100	3	186,300	
Sub-Total						17,712,000	186,300
Client Hardware							
X4170M2 1 x Standard PSU	X4170M2-H1-AA		1	2,699	81	218,619	
Jumper Cable Kit: 1 x 1m C13	XSR-JUMP-1MC13-N		1	23	81	1,863	
4GB (1 x 4GB) DDR3-1333	4910A		1	255	972	247,860	
146GB 10K RPM 2.5" SAS disk	RB-SS2CF-146G10K-N		1	329	162	53,298	
6Gb/s SAS Internal PCI-E HBA	SG-SAS6-INT-Z		1	419	81	33,939	
1 x Intel Xeon X5670 ATO	5921A		1	2,499	162	404,838	
Slide Rail Kit	6326A-N		1	150	81	12,150	
X4170 CPU Heatsink, XATO	5898A-N		1	0	162	0	
Sub-Total						972,567	0
Client Software							
Oracle Solaris 10 09/10	5908A		1	0	81	0	
Oracle iPlanet Web Server			1	1,000	81	81,000	
Oracle Premier Software Support			1	17,820	3	53,460	
Tuxedo CFS-R Tier 1			1	1,800	81	145,800	
Oracle Premier Support for 3 years (Tuxedo CFS-R Tier 1)			1	32,076	3	96,228	
Sub-Total						226,800	149,688

Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3 yr Maint. Price	
Other Hardware							
Brocade 5300 with 8G SFP EB	SG-XSWBRO5300-8EB		1	139,995	2	279,990	
Brocade Std Switch Rack Kit	SG-XSWBRO3X50-RK-Z		1	250	4	1,000	
Brocade Power Kit N. America	SG-XSWBRO-PWR-01-Z		1	250	4	1,000	
Brocade DCX Chassis	SG-XSWBRODCX-ZP-N		1	138,999	1	138,999	
Brocade 8Gb 48 port Blade w 8Gb	SG-XSWBRO8GB-M48W8		1	88,500	7	619,500	
Brocade DCX PWR 110V NA	SG-XSWBROPWR-NA110		1	250	2	500	
SUT Mgmt system and Svc Processor Control Workstation							
Sun Fire X4170M2	X4170M2-H1-AA		1	2,699	1	2,699	
Oracle Solaris 10 09/10	5894A-N		1	0	1	0	
US PC Peripheral Kit (Keyboard / Mouse)	3701A-PC		1	50	1	50	
Express Slide rail kit	6326A		1	150	1	150	
4GB (1 x 4GB) DDR3-1333	4850A		1	255	3	765	
6Gb/s SAS Internal PCI-E HBA	SG-SAS6-INT-Z		1	419	1	419	
146GB 10K RPM 2.5" SAS disk	RB-SS2CF-146G10K-N		1	329	1	329	
DVD+/-RW SATA-based drive ATO	8325A-N		1	145	1	145	
1 x Intel Xeon E5620 ATO	5924A		1	599	1	599	
X4170 CPU Heatsink, XATO	5898A-N		1	0	1	0	
17" TFT Monitor	X7204A-N		1	219	1	219	
Sun Network 10GbE Switch 72p	X2074A-F		1	79,200	1	79,200	
Sun QSFP to 4 LC 20M cable	X2127A-20M		1	1,395	7	9,765	
Sun Rack II 42U	SR-1242E-N		1	2,849	15	42,735	
PDU 15kVA, Single Phase, LV	SR-15K-L630-N		1	1,200	8	9,600	
PDU 10kVA, Single Phase, LV	SR-10K-L630-N		1	900	4	3,600	
PDU 5kVA, Single Phase, LV	SR-5K-L630CP-N		1	350	18	6,300	
Netgear ProSafe GS724T 24 port (+10%)	1984876		2	330	19	6,270	
Tripp Lite 25' Black Cat5e cable (+10%)	324521		2	7	546	3,817	
Sub-Total						1,207,651	0
Oracle Premier Hardware Support	Q-PREM-SPRT-SYS		1	3,763,541	3	11,257,249	
Totals						49,336,712	11,593,237
Total Oracle Hardware, Software and Maintenance Discount			1			(30,401,086)	
Pricing Sources:		Notes:		Three-Year Cost of Ownership:		\$30,528,863	
1. Oracle		1s – One or more components of the measured configuration have been substituted in the priced configuration. See the FDR for details.				tpmC 30,249,688	
2. CDW						\$/tpmC 1.01 USD	
Audited by Francois Raab of InfoSizing, Inc.							
<p>Prices used in TPC Benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing section of the TPC benchmark specifications. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.</p>							



SPARC SuperCluster with T3-4 Servers

TPC-C 5.11.0
TPC-Pricing 1.5.0

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Numerical Quantities Summary:

MQTh, computed Maximum Qualified Throughput 30,249,688

Response Time in Seconds	<u>90th %</u>	<u>Avg.</u>	<u>Max.</u>
New-Order	0.75	0.353	17.468
Payment	0.73	0.336	17.463
Order-Status	0.71	0.328	17.308
Delivery (Interactive)	0.66	0.292	8.872
Delivery (Deferred)	0.06	0.034	3.587
Stock-Level	0.76	0.370	17.392
Menu	0.68	0.298	8.881
Response Time delay added for emulated components		0.1	

Transaction Mix, in percent of total transactions

New-Order	44.96%
Payment	43.01%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.01%

Keying / Think Times (in seconds)

	<u>Min.</u>		<u>Avg.</u>		<u>Max.</u>	
New-Order	18.001	0.001	18.007	12.026	21.884	124.167
Payment	3.001	0.001	3.007	12.025	6.865	123.707
Order-Status	2.001	0.001	2.007	10.032	5.884	102.488
Delivery	2.001	0.001	2.007	5.042	5.881	53.640
Stock-Level	2.001	0.001	2.007	5.042	5.882	52.618

Test Duration

Ramp-up Time	1,973 seconds
Measurement Interval	7,200 seconds
Number of Checkpoints	Ongoing
Checkpoint Interval	Ongoing Incremental Checkpoints
Number of transactions (all types) completed in Measurement Interval	8,073,759,601

Benchmark Sponsor: Brad Carlile
 Sr. Director, Strategic Applications Engineering (SAE)
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November 30, 2010

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

Platform: SPARC SuperCluster with T3-4 Servers
 Operating system: Solaris 10 09/10
 Database Manager: Oracle Database 11g Release 2 Enterprise Edition
 with Oracle Real Application Clusters and Partitioning
 Transaction Manager: Tuxedo CFS-R Tier-1

The results were:

CPU's Speed	Memory	Disks	NewOrder 90% RT	tpmC
Server: SPARC SuperCluster with T3-4 Servers (27 nodes, each node with)				
4 x SPARC T3 (1.65GHz)	512 GB (6 MB L2 per T3)	3 300 GB 10k rpm SAS <u>Visible to all nodes</u> 11,040 x 24 GB SSD 720 x 2 TB 7.2k rpm SAS	0.75 Sec.	30,249,688.61
Eighty One (81) Clients: Sun Fire X4170M2 Server (each with)				
2 x Intel Xeon X5670 HC (2.93 GHz)	48.0 GB (12 MB Smart Cache per processor)	2 x 146 GB 10k rpm 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 120 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 distribution of data files was made after the durability tests were executed. The performance run was executed with the new distribution. 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 data file distribution, it is my opinion that this change did not affect compliance of the result with the ACID requirements.

The measured configuration included (82) Sun Fire X4275 Servers used as external storage controllers configured using COMSTAR that were substituted by (82) Sun Fire X4270M2 Servers in the priced configuration. The measured configuration also included (165) 2TB 7.2k rpm SATA disks that were substituted by (165) 2TB 7.2k rpm SAS disks in the priced configuration. Based on the specifications of these systems and on performance data collected during testing, it is my opinion that these substitutions have no significant effect on performance.

Respectfully Yours,

A handwritten signature in black ink, appearing to read "François Raab". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

François Raab, President

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Preface

This report documents the compliance of the Oracle TPC Benchmark™ C testing on the SPARC SuperCluster with 27 T3-4 Servers running Oracle Database 11g Release 2 with Oracle Real Application Clusters and Partitioning, executing the TPC Benchmark™ C Standard, Revision 5.11.0.

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

- The main body of the document lists each item in Clause 8 of the TPC Benchmark™ C Standard and explains how each specification is satisfied.
- Appendix A contains the application source code that implements the Tuxedo CFS-R Tier 1 transaction server code and Oracle iPlanet Web Server plug-ins.
- Appendix B contains the code used to create and load the database.
- Appendix C contains the configuration information for the Oracle Solaris 10 09/10, Oracle Solaris 11 Express, Oracle iPlanet Web Server, Oracle Database 11g Release 2 with Oracle Real Application Clusters and Partitioning and Tuxedo CFS-R Tier 1.

SPARC SuperCluster TPC Benchmark™ C Full Disclosure

Introduction

The TPC Benchmark™ 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™ C* results for the SPARC SuperCluster with T3-4 Servers running Oracle Database 11g Release 2 with Oracle Real Application Clusters 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 Oracle America, 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 T3-4 Server database nodes, the X4270M2 COMSTAR nodes, the Brocade DCX and 5300 SAN switches, the X4170M2 clients, all Oracle Solaris 10 09/10 and Oracle Solaris 11 Express tunables, along with parameters for Oracle Database 11g Release 2 with Oracle Real Application Clusters and Partitioning, Oracle iPlanet Web Server and Tuxedo CFS-R Tier 1.

0.4 Configuration Diagrams

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

Database Nodes Description

The SUT is a SPARC SuperCluster with 27 T3-4 Servers running Oracle Database 11g Release 2 with Oracle Real Application Clusters and Partitioning. Each of the T3-4 Servers are configured as described below:

	<i>Sun T3-4 Server</i>
Processors	4 SPARC T3 1.65GHz
Processors / Cores / Threads	4 / 64 / 512
Memory	512 GB DDR3
Disks	3 300GB 10K RPM 2.5" SAS
Adapters	4 8Gb/s dual port PCI-E FC-AL
	1 internal PCI-E SAS
Networks	1 10GbE dual port PCI-E SFP+ Ethernet
	4 port 1GbE integrated Ethernet
Service Processor	Integrated

Table 1: T3-4 Server Configuration

Oracle Real Application Clusters and Partitioning communicates over a 10GbE fibre utilizing the Sun Network 10GbE 72p Switch. The Oracle Database 11g Release 2 database tables, indexes and logs are accessed equally by all nodes of the cluster by utilizing two separate SAN environments. For descriptive purposes the SANs are labeled as DATA and REDO. All of the TPC-C database objects, including tables, indexes, and temp storage is located in the DATA SAN. The REDO SAN is used solely for the Oracle Database 11g Release 2 redo logs. The T3-4 Server DBMS nodes are connected to the DCX SAN switch via 3 of the 4 8Gb/s PCI-E adapters. The fourth 8Gb/s adapter is connected to the REDO SAN.

DATA COMSTAR Heads Description

The measured configuration of the DATA SAN consists of 67 Sun Fire X4275 and 2 X4270M2 Servers running Oracle Solaris 11 Express as Common Multi-protocol SCSI Target (COMSTAR) heads. The COMSTAR heads are configured and used as external storage controllers. The Sun Fire X4275 Server is no longer orderable and has been replaced by the Sun Fire X4270M2 Server. Each of COMSTAR DATA heads were configured with the same hardware peripherals (except for the 2TB disks, SATA vs. SAS), version of Oracle Solaris 11 Express, and were loaded with the same distribution of database tables and indexes. The configuration of the Sun Fire X4275 Server and the Sun Fire X4270M2 Server is detailed below:

	<i>Sun Fire X4275 Server (Measured)</i>	<i>Sun Fire X4270M2 Server (Measured and Priced)</i>
Processor	Intel Xeon E5540 2.53GHz QC	Intel Xeon X5670 2.93GHz HC
Processors / Cores / Threads	1 / 4 / 8	1 / 6 / 12
Memory	6GB	8GB
Disks	6 2TB SATA 3.5" 7.2K RPM	5 2TB SAS 3.5" 7.2K RPM
Adapters	1 8Gb/s dual port PCI-E FC-AL	
	4 6Gb/s external SAS PCI-E	
	1 6Gb/s internal SAS PCI-E	
Network	4 port 1GbE integrated Ethernet	
Service Processor	Integrated	

Table 2: DATA COMSTAR Configuration

For the Priced Configuration, all 69 of the DATA COMSTAR heads are Sun Fire X4270M2 Servers with the above configuration. Each DATA COMSTAR head is configured with 2 Sun Storage F5100 Flash Arrays. Each F5100 array is configured with 80 24GB FMODS (Flash Modules), for a total of 1.92TB. The F5100 arrays are connected to the 8 port external SAS PCI-E adapters via 0.5m SAS cables. Each SAS port is connected to a FMOD expander port on the F5100 array. Total of 8 external SAS ports on the COMSTAR head to 8 FMOD expanders on the 2 F5100 arrays. Each FMOD is visible to the COMSTAR head as a separate device for a total of 160 devices per DATA COMSTAR head. Multiple logical units (LUNs) are striped across the 160 FMODs using Solaris Volume Manager (SVM). These LUNs are then exported and are visible to each of the 27 T3-4 Servers via the Brocade DCX SAN switch across the 8Gb/s FC-AL.

Sixty-Seven COMSTAR heads of the DATA SAN have 6 2TB disks for Oracle Solaris 11 Express and to satisfy the 60 day space requirements. The remaining two heads have 5 2TB disks. No database tables were stored on the 2TB disks for the measurement, they were used solely for backup of the initial database and for 60 day storage. Each DATA COMSTAR head is connected to the DCX SAN switch via 2 8Gb/s fibre channel connections.

REDO COMSTAR Heads Description (Logs)

The measured configuration of the REDO SAN consists of 15 Sun Fire X4275 and 13 X4270M2 Servers running Oracle Solaris 11 Express as Common Multi-protocol SCSI Target (COMSTAR) heads. The COMSTAR heads are configured and used as external storage controllers. The Sun Fire X4275 Server is no longer orderable and has been replaced by the Sun Fire X4270M2 Server in the priced configuration. Each of the REDO COMSTAR heads is configured with the same hardware peripherals, version of Oracle Solaris 11 Express, and managed the same load for the Oracle redo (recovery) logs. The details of the Sun Fire X4275 Server and the Sun Fire X4270M2 Server are detailed below:

	<i>Sun Fire X4275 Server (Measured)</i>	<i>Sun Fire X4270M2 Server (Measured and Priced)</i>
Processor	Intel Xeon E5540 2.53GHz QC	Intel Xeon X5670 2.93GHz HC
Processors / Cores / Threads	1 / 4 / 8	1 / 6 / 12
Memory	6GB	8GB
Disks	11 2TB SATA 3.5" 7.2K RPM	11 2TB SAS 3.5" 7.2K RPM
Adapters	1 8Gb/s dual port PCI-E FC-AL	
	1 6Gb/s internal SAS RAID PCI-E	
Network	4 port 1GbE integrated Ethernet	
Service Processor	Integrated	

Table 3: REDO COMSTAR Configuration

Each REDO COMSTAR are configured with 11 2TB SATA/SAS disks through the 6Gb/s Internal SAS RAID adapter. One 2TB disk is dedicated for the OS and local filesystems. The remaining ten disks are configured as a 10 way RAID-0 stripe using SVM (Solaris Volume Manager). 2 SVM soft partitions are created and exported to the Brocade 5300 SAN switch via the 8Gb/s fibre. All redo log devices are visible to all T3-4 Server database nodes through the Brocade 5300 SAN switch. The following diagram is an example of how the T3-4 Server database nodes are connected to the REDO COMSTAR heads via the Brocade 5300 SAN switches to provide redundancy and continued access to the database redo (recovery) logs. Each of the T3-4 Server database nodes mirrors their redo logs to separate REDO COMSTAR heads.

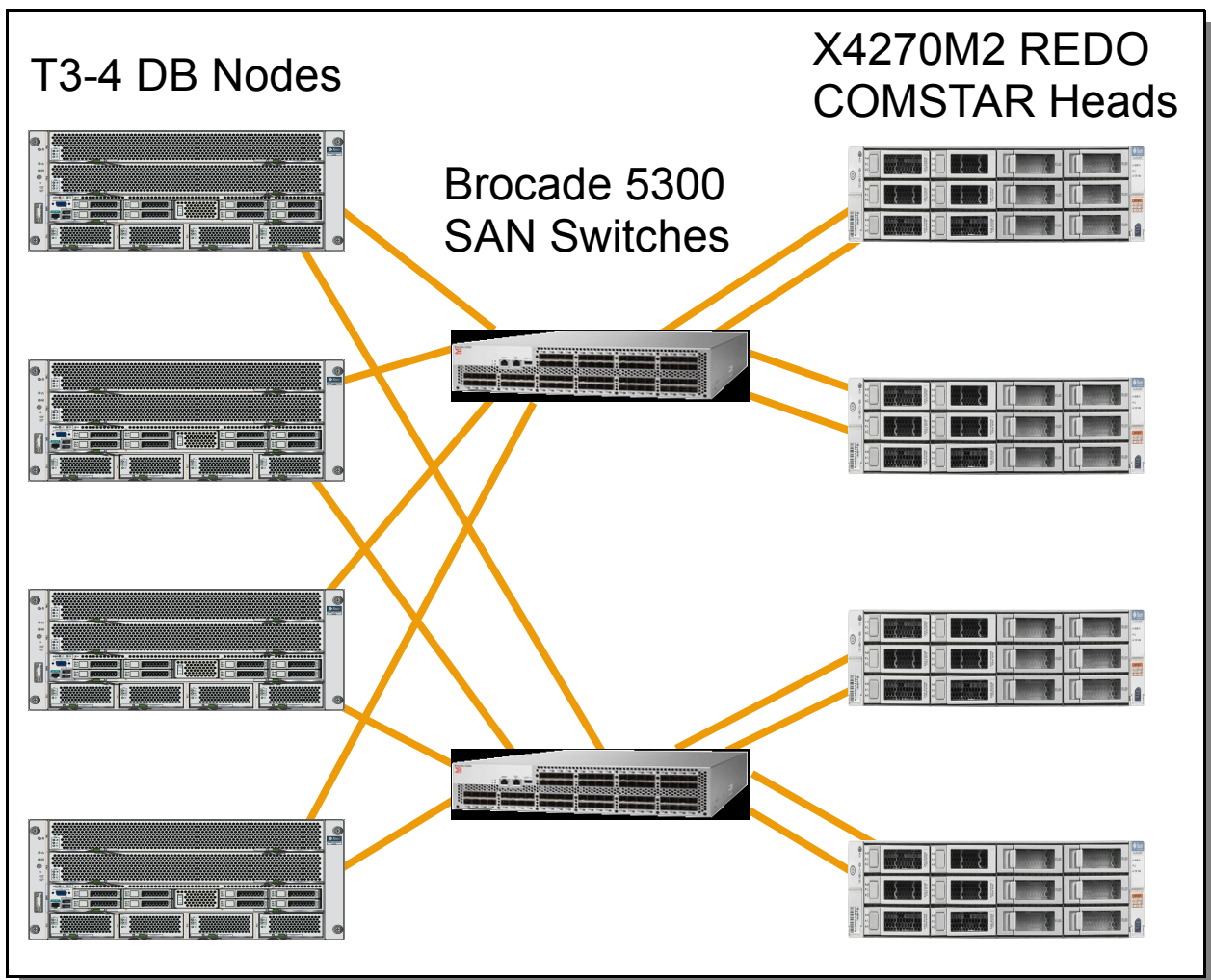


Figure 1: REDO Log Example

Client Configuration Description

The TPC-C transactions are entered via a Remote Terminal Emulator which communicates with Oracle iPlanet Web Server running on 81 Sun Fire X4170M2 clients. Each client is configured with:

	<i>X4170M2 Clients</i>
Processors	2 Intel Xeon X5670 2.93GHz HC
Processors/Cores/ Threads	2 / 12 / 24
Memory	48 GB DDR3
Disks	2 146GB 10K RPM 2.5" SAS
Adapters	1 6Gb/s internal PCI-E SAS
Network	4 port 1GbE integrated Ethernet
Service Processor	Integrated

Table 4: Client Configuration

The client systems receive transactions via Oracle iPlanet Web Server which communicates with Tuxedo CFS-R Tier 1 with connections into the Oracle Database 11g Release 2 with Oracle 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 are members of. This is used for powering on and off and system console access. The second network is the System Under Test (SUT) network between each of the T3-4 Servers, X4270M2s, X4170M2s, SAN switches and 10GbE switch for system administration and other maintenance related activities.

Figure 1 shows the measured configuration and Figure 2 the full priced configuration. The DATA and REDO COMSTAR descriptions above also detail the differences for the priced and measured configurations. The only other addition to the priced configuration are the Tripp-Lite Smart Online UPS for the T3-4 Server database nodes. Sixty-Seven of the external storage controllers for the DATA storage environment will be substituted in the priced configuration, along with fifteen of the external storage controllers used in the REDO environment. The controllers being replaced are the Sun Fire X4275 Servers by the Sun Fire X4270M2 Servers. The substitution is done per Clause 2.3.3.3 of the Pricing specification using the following information:

	<i>DATA COMSTAR heads</i>				<i>REDO COMSTAR heads</i>			
CPU	Qty	X4275	Qty	X4270M2	Qty	X4275	Qty	X4270M2
Type	1	E5540	1	X5670	1	E5540	1	X5670
GHz		2.53		2.93		2.53		2.93
# Cores		4		6		4		6
# Threads		8		12		8		12
L1 cache		64KB		64KB		64KB		64KB
L2 cache	4	256KB	4	256KB	4	256KB	4	256KB
L3 cache		8MB		12MB		8MB		12MB
Memory								
Size	3	2GB	2	4GB	3	2GB	2	4GB
MHz		1066		1333		1066		1333
Type		DDR3		DDR3		DDR3		DDR3
Adapters								
Bus Type	1	6Gb/s SAS HBA, internal	1	6Gb/s SAS HBA, internal	1	6Gb/s SAS RAID internal	1	6Gb/s SAS RAID internal
	1	8Gb/s FC-AL	1	8Gb/s FC-AL	1	8Gb/s FC-AL	1	8Gb/s FC-AL
	4	6Gb/s SAS External	4	6Gb/s SAS External				

Table 5: COMSTAR External Controller Substitution

In addition to the external storage controllers in the REDO environment, the SATA disks used by fifteen of the REDO COMSTAR heads are being substituted with an equal number of SAS disks. The capacity and drive characteristics are the same, only the interface changes. Performance data for the measured run was shown to the auditor demonstrating the SAS drives performed the same amount of work with less than one-half the service time and a third less system overhead. Therefore all requirements of Clause 2.3.4.3 were satisfied.

Measured Configuration

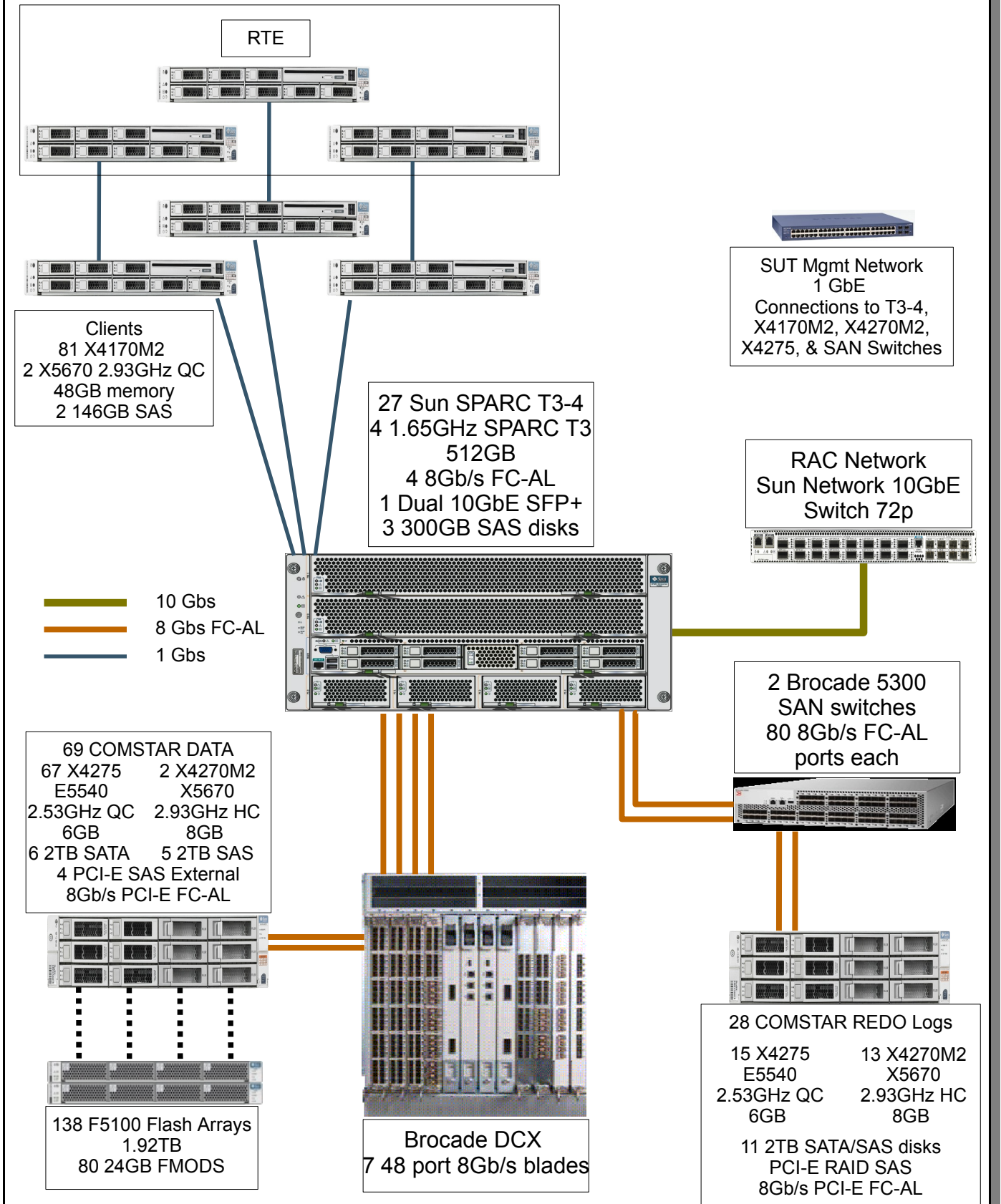


Figure 2: Measured Configuration

Priced Configuration

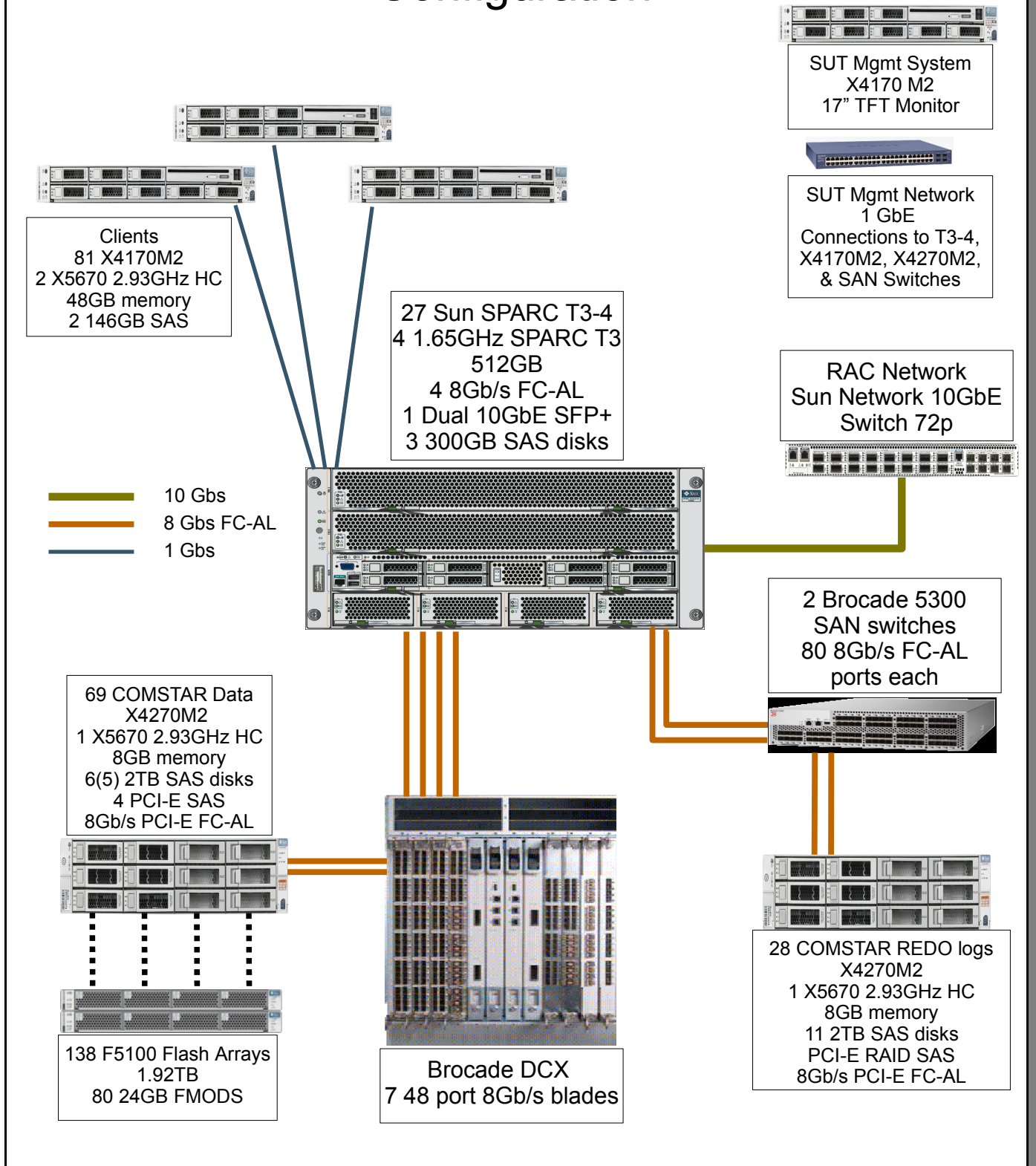


Figure 3: Priced Configuration

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.

Please see the section 0.4 Configuration Details for a detailed description of the SUT environment. Each DATA COMSTAR head has 2 F5100s for a total of 160 24GB Flash Modules (FMODS). Each FMOD is loaded with a VTOC to create four slices. Using SVM, a partition is created across all of the FMODs on a DATA head for each of the slices. Soft partitions are created on each of the four partitions also using SVM. The soft partitions are exported as raw devices through the Brocade DCX switch to each of the T3-4 Server database nodes. These raw devices seen by the database nodes are then evenly “sliced” and the slices used by Oracle Database 11g Release 2 to create the tablespaces on. The full details of the scripts used to create the slices and partitions are in Appendix B.

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.

All tables, except for ITEM and related indexes, are partitioned horizontally. 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 SysVr4 nrand48() and erand48() UNIX calls.

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.

The Transaction Input Percentages and Mix Table 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.

The Transaction Input Percentages and Mix table 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.

The Transaction Input Percentages and Mix table 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.

The Transaction Input Percentages and Mix table 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.

The Transaction Input Percentages and Mix table 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.

The Transaction Input Percentages and Mix table 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.

The Transaction Input Percentages and Mix table contains the mix of each transaction type executed by the SUT.

New-Order	SPARC SuperCluster
Percentage of Home order-lines	99.00%
Percentage of Remote order-lines	1.00%
Percentage of Rolled Back Transactions	1.00%
Avg. Number of Items per Transactions	10.00
Payment	
Percentage of Home Transactions	85.00%
Percentage of Remote Transactions	15.00%
Access by C_LAST (Non-primary key)	
Percentage of Payment Transactions	60.00%
Percentage of Order-Status Transactions	60.00%
Delivery	
Percentage of Deliveries skipped	0.00%
Transaction Mix	
New-Order	44.96%
Payment	43.01%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.01%

Table 6: 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 tpcall() 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 “local” to the database node running the transaction, 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.

The test was repeated using rows selected randomly from the warehouse, district and customer tables considered “remote” to the database node running the transaction and the balances noted. A payment transaction was started using the same warehouse, district and customer identifiers and a known amount. The payment was committed and the rows 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 “local” to the database node running the transaction, 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.

The test was repeated using rows selected randomly from the warehouse, district and customer tables considered “remote” to the database node running the transaction and the balances noted. A payment transaction was started using 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 27-node cluster configured for 2,430,000 warehouses. Each of the nine isolation tests were executed twice. In the first case, all transactions were executed on just one node of the 27-node cluster. In the second case, the transactions were executed on two 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. The test ran for a least one more minute.
5. The following failures were induced simultaneously (within 3 seconds).
 - All database nodes (T3-4 Servers) were interrupted using the system console and put at the Open Boot Prompt (OBP) ok> prompt. (This halts all processing immediately to the database nodes, no instructions are executed.)
 - Power to the RAC switch (Sun Network 10GbE 72p switch) was disconnected
6. The RTE is shutdown. The RTE report is generated.
7. Power was restored to the RAC switch. The T3-4 Server database nodes were booted; Oracle was restarted and an automatic recovery was performed.
8. Step 1 was repeated, giving the ending count.
9. Consistency Test 3 was verified.
10. A sample from the success file was compared against the database.
11. 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, Instantaneous Interruption, Power Loss, 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 test ran for a least one more minute.
5. The cable connecting one of the REDO COMSTAR heads to one of the database nodes is removed, thereby causing the loss of one-half of the mirrored log environment (loss of disk). Because the redo logs for the database node are mirrored across the REDO COMSTAR heads, the test continues to run without interruption.
6. The run continued for at least 5 minutes while maintaining steady state.
7. Power to one database node (T3-4 Server) was disconnected
8. The test was allowed to continue for at least one more minute.
9. A log switch was initiated on the remaining database nodes and automatic recovery of the failed node began.
10. Transaction generation from the RTE was interrupted.
11. A log switch checkpoint was performed on all remaining database nodes.
12. The database was shutdown and restarted. Oracle automatic recovery was initiated and completed.
13. Step 1 was repeated, giving the ending count.
14. Consistency Test 3 was verified.
15. A sample from the success file was compared against the database.
16. 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 Containing Database Tables

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 reduced terminal load to use only 3 of the database nodes accounting for more than 10% of the reported throughput.
3. The test was allowed to ramp up and ran in steady state for more than 5 minutes.
4. The test was allowed to run for a least one more minute.
5. All cables between one DATA COMSTAR head and the Brocade DCX SAN switch was disconnected. This simulates the instantaneous loss of all of the devices on the DATA head.
6. The test was allowed to run until a fault was detected and transactions start reporting errors.
7. The RTE was shutdown. The RTE report was generated.
8. The failed DATA COMSTAR head was restored.
9. The database tables on the failed storage was restored from backup, overwriting the data, except for the logs.
10. The database was started and the roll-forward recovery (Oracle instance recovery) was executed.
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 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 2,430,000 warehouses. The following tables shows the initial cardinality of the tables after table population, and the cardinality prior to the measurement run.

Table	Initial Row Count	Row Count Prior to Measured Run
Warehouse	2,430,000	2,430,000
District	24,300,000	24,300,000
Customer	72,900,000,000	72,900,000,000
History	72,900,000,000	78,655,854,351
Orders	72,900,000,000	78,916,814,964
New order	21,870,000,000	22,520,394,144
Order line	729,046,459,872	789,218,444,086
Stock	243,000,000,000	243,000,000,000
Item	100,000	100,000

Table 7: 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.

Refer to Section 0.4 Configuration Details for a description of the physical layout of the SUT. For each database node, its logs are mirrored across two separate REDO COMSTAR heads. Each REDO head contains the logs for two database nodes, except for redo27 and redo28, they contain the logs for database node 27 only. The physical setup of the REDO heads are described in detail in Section 0.4 REDO COMSTAR Heads Description (Logs).

The database tables are distributed across all of the DATA COMSTAR heads. The mapping of the database tables to the DATA heads are described in Mapping of Database below. The physical setup of the DATA heads are described in detail in Section 0.4 DATA COMSTAR Heads Description.

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 Release 2 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.

All of the database tables are partitioned across the DATA heads. Each DATA head has 160 24GB SSD devices. A VTOC is loaded unto each SSD which creates 4 separate partitions. Oracle Solaris Volume Manager creates a RAID 0 stripe

across all 160 devices for each partition. Soft partitions are created within each of the 4 partitions. These soft partitions are exported to the SAN and are visible to the database nodes. For the measured run, two of the soft partitions for iordr2 were swapped between two DATA COMSTAR heads after the durability testing was complete. This swap of the partition location does not jeopardize the durability of committed transactions nor does it change the number of soft partitions or the data stored in the tables, just the physical location of the soft partitions. The following table shows the distribution of the soft partitions for each DATA head to the database table.

<i>Data Node</i>	<i>cust</i>	<i>hist</i>	<i>icust1</i>	<i>icust2</i>	<i>iordr2</i>	<i>istok</i>	<i>misc</i>	<i>nord</i>	<i>ordr / ordl</i>	<i>stok</i>	<i>system</i>	<i>undo</i>
1	68	6	2	4	4	4	0	0	16	65	0	2
2	68	6	2	4	4	4	0	0	16	65	0	2
3	68	6	2	4	4	4	0	0	17	65	0	2
4	68	6	2	4	4	4	0	0	16	65	0	2
5	68	6	2	4	4	4	0	0	16	65	0	2
6	68	6	2	4	4	4	0	0	16	65	0	2
7	68	6	2	4	4	4	0	0	16	65	0	2
8	68	6	2	4	4	4	0	0	16	65	0	2
9	68	6	2	4	4	4	0	0	16	65	0	2
10	68	6	2	4	4	4	0	0	16	65	0	2
11	68	6	2	4	4	4	0	0	16	65	0	2
12	68	6	2	4	4	4	0	0	17	65	0	2
13	68	6	2	4	4	4	0	0	17	65	1	1
14	68	6	3	4	4	4	0	1	17	65	1	1
15	68	6	2	4	4	5	0	1	17	65	1	1
16	68	6	2	4	4	5	0	1	17	65	1	0
17	68	6	2	4	4	5	0	1	17	65	1	0
18	68	6	2	4	4	5	0	1	17	65	1	0
19	68	6	2	4	4	5	0	1	17	65	1	0
20	68	6	2	4	4	5	0	1	17	65	1	0
21	68	6	2	4	4	4	0	0	16	65	1	0
22	68	5	2	4	4	4	0	1	16	65	1	0
23	68	5	2	4	4	4	0	1	16	65	1	0
24	68	5	2	4	4	4	0	1	16	65	1	0
25	68	5	1	4	4	5	0	1	16	65	1	0
26	68	5	1	4	4	5	0	1	16	65	1	0
27	68	5	1	4	4	5	0	1	16	65	1	0
28	68	5	1	4	4	5	0	1	16	65	1	0
29	68	5	1	4	4	5	0	1	16	65	1	0
30	68	5	1	4	4	5	0	1	16	65	1	0
31	68	5	1	4	4	6	0	2	17	65	1	0
32	68	5	1	4	4	6	0	2	17	65	1	0
33	68	5	1	4	4	6	0	2	17	65	1	0
34	68	5	1	4	4	6	0	2	17	65	1	0
35	68	5	1	4	4	5	0	2	17	65	1	0
36	68	5	1	4	4	5	0	2	17	65	1	0
37	68	5	1	4	4	5	0	2	17	65	1	0
38	68	5	1	4	4	5	0	2	17	65	1	0
39	68	5	1	4	4	5	0	2	17	65	1	0
40	68	5	1	4	3	5	1	2	18	65	0	0
41	68	5	1	4	3	5	1	2	18	65	0	0
42	68	5	1	4	3	5	1	2	18	65	0	0

<i>Data Node</i>	<i>cust</i>	<i>hist</i>	<i>icust1</i>	<i>icust2</i>	<i>iordr2</i>	<i>istok</i>	<i>misc</i>	<i>nord</i>	<i>ordr / ordl</i>	<i>stok</i>	<i>system</i>	<i>undo</i>
43	68	5	1	3	3	5	1	2	19	65	0	0
44	68	5	1	3	3	5	1	2	19	65	0	0
45	68	5	1	3	3	5	1	2	19	65	0	0
46	68	5	1	3	3	5	1	2	19	65	0	0
47	68	5	1	3	3	5	1	2	19	65	0	0
48	68	5	1	3	3	5	1	2	19	65	0	0
49	68	5	1	3	3	5	1	2	19	65	0	0
50	68	5	1	3	3	5	1	2	19	65	0	0
51	68	5	1	3	3	5	1	1	18	65	0	0
52	68	5	1	3	3	5	1	1	18	65	0	0
53	68	5	1	3	3	5	1	1	18	65	0	0
54	68	5	1	3	3	5	1	1	18	65	0	0
55	68	4	2	3	3	5	1	1	18	65	0	0
56	68	4	2	3	3	5	1	1	18	65	0	0
57	68	4	2	3	3	5	1	1	18	65	0	0
58	68	4	2	3	3	5	1	1	18	65	0	0
59	68	4	2	3	3	5	1	1	18	65	0	0
60	68	4	2	3	3	5	1	1	18	65	0	0
61	68	4	2	3	3	5	1	1	18	65	0	0
62	68	4	2	3	3	5	1	1	18	65	0	0
63	68	4	2	3	3	5	1	1	18	65	0	0
64	68	4	2	2	3	5	1	2	18	65	0	0
65	68	4	2	2	3	5	1	2	18	65	0	0
66	68	4	2	2	3	5	1	2	18	65	0	0
67	70	4	2	2	2	6	0	2	18	64	0	0
68	70	4	2	2	2	6	0	2	18	64	0	0
69	70	4	2	2	2	6	0	2	18	64	0	0
Total	4698	351	109	243	243	334	27	81	1191	4482	27	27

Figure 4: Database Mapping

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).

Warehouses	2,430,000				
tpmC	30,249,688				
		(MB)	(MB)	(MB)	(MB)
Table	Rows	Table	Index	5% Growth	Total Space
Warehouse	2,430,000	9,720	1,080	540	11,340
District	24,300,000	96,120	1,080	4,860	102,060
Item	100,000	40	40	4	84
Stock	243,000,000,000	67,878,906	5,072,900	3,647,590	76,599,397
Customer	72,900,000,000	71,269,531	5,216,400	3,824,297	80,310,228
New-Order	21,870,000,000	610,000	43,200	32,660	685,860
Orders	72,900,000,000	5,971,120	297,900		6,269,020
Order-Line	729,046,459,872	53,740,080	2,898,450		56,638,530
History	72,900,000,000	4,343,000	0		4,343,000
Overhead		276,592			276,592
Free Space	19,957,735				

Dynamic Space	67,250,550				
Static Space	157,985,560				
Daily Growth	13,394,622				
Daily Spread	0				
60 Days Storage Requirements					
60 Days (MB)	961,662,856				
60 Days (GB)	939,124				
8 Hours Log Storage					
8 Hours (GB)	308,635				
Storage			Measured		Priced
	Formatted		Capacity		Capacity
Disk Type	Capacity(GB)	# of Disks	(GB)	# of Disks	(GB)
F5100 1.92TB	22.88	11,040	252,595	11,040	252,595
2TB SAS	1,820	412	749,840	412	749,840
2TB SAS (Log RAID 10)	1,820	280	509,600	280	509,600
Total Capacity					1,512,035

Figure 5: 60 Day Space Calculations

5 Clause 5: Performance Metrics and Response Time Related Items

5.1 Measured tpmC

Measured tpmC must be reported.

The measured tpmC was 30,249,688

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.

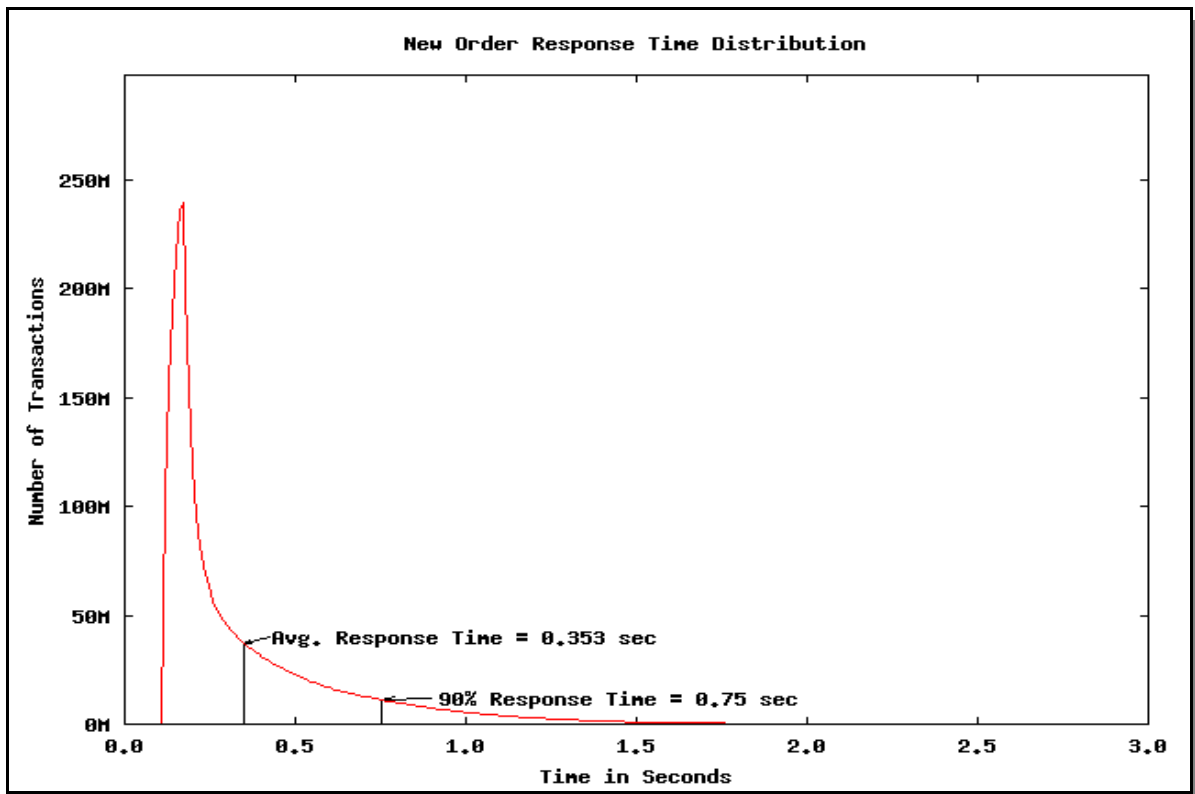


Figure 6: New-Order Response Time Distribution

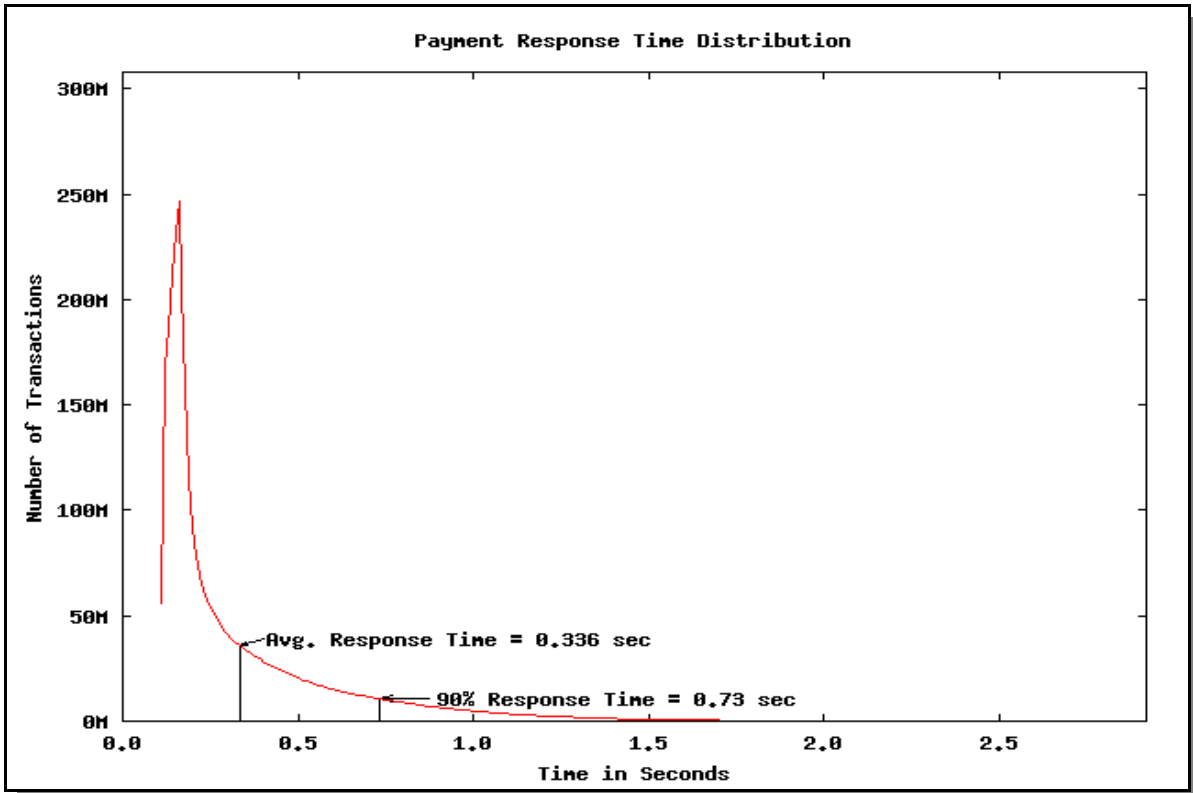


Figure 7: Payment Response Time Distribution

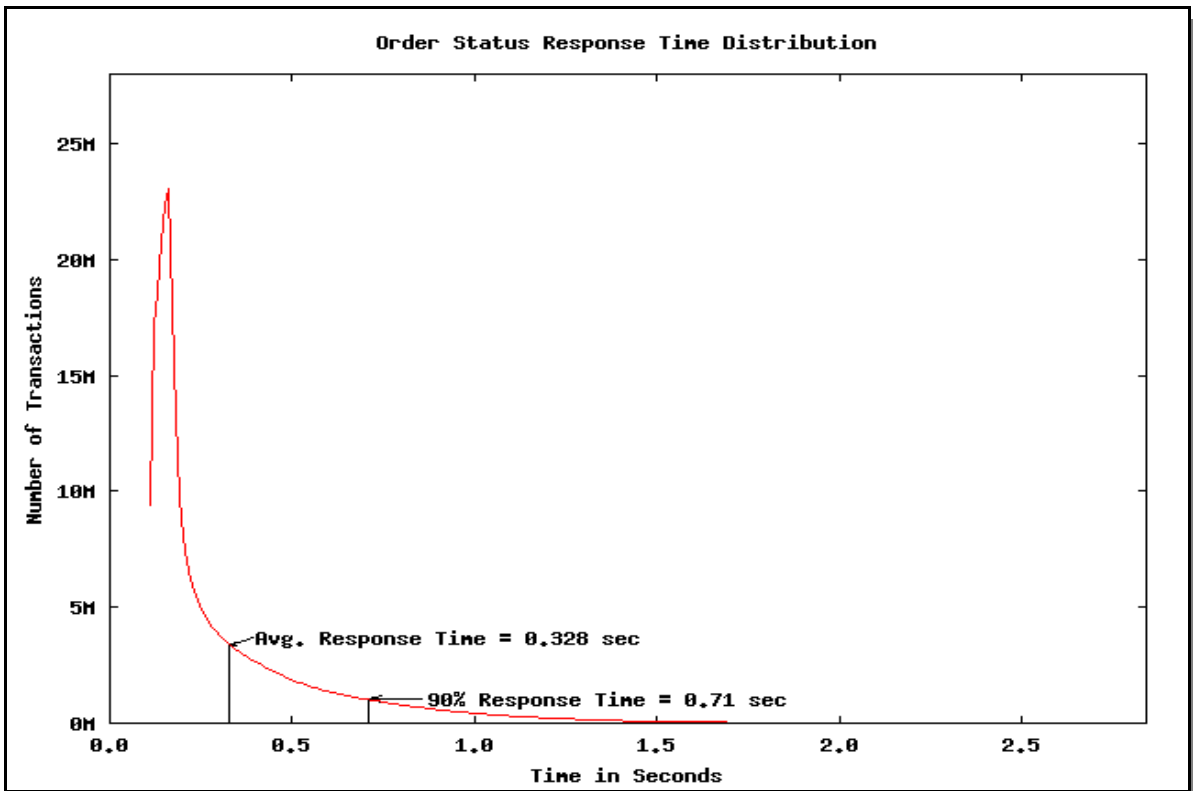


Figure 8: Order-Status Response Time Distribution

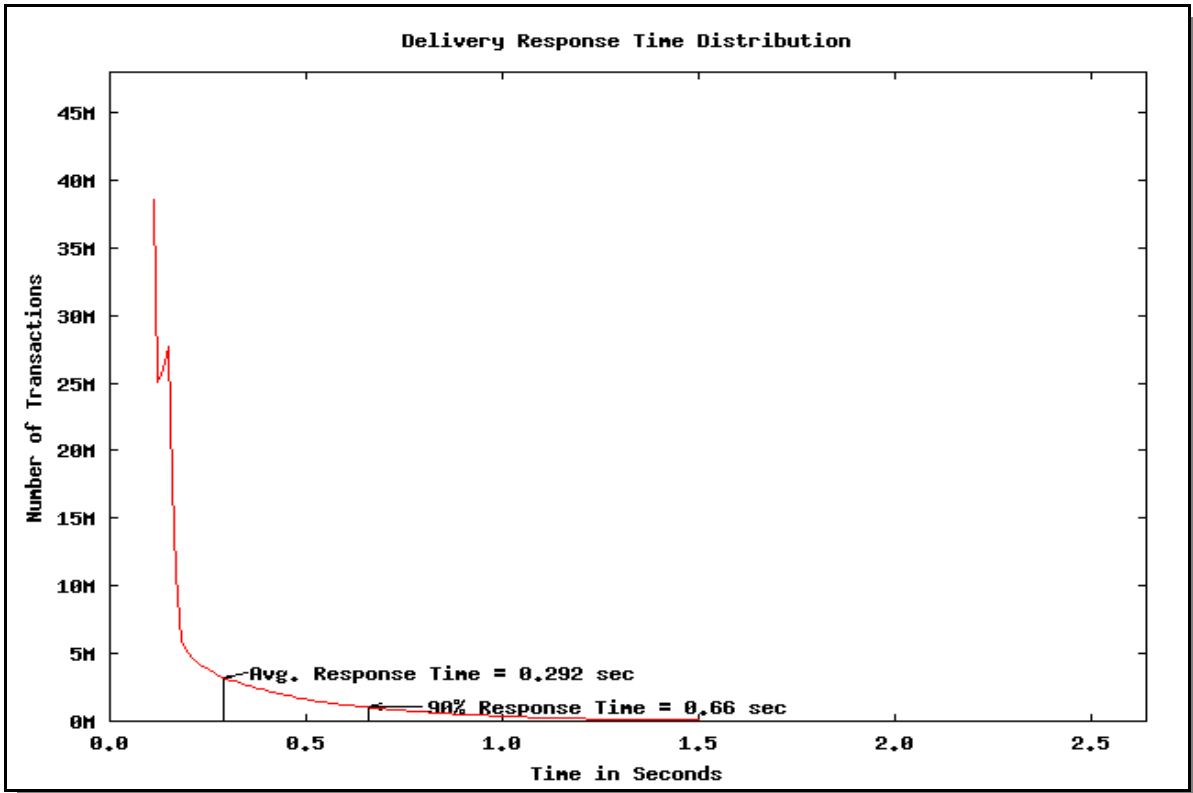


Figure 9: Delivery (Interactive) Response Time Distribution

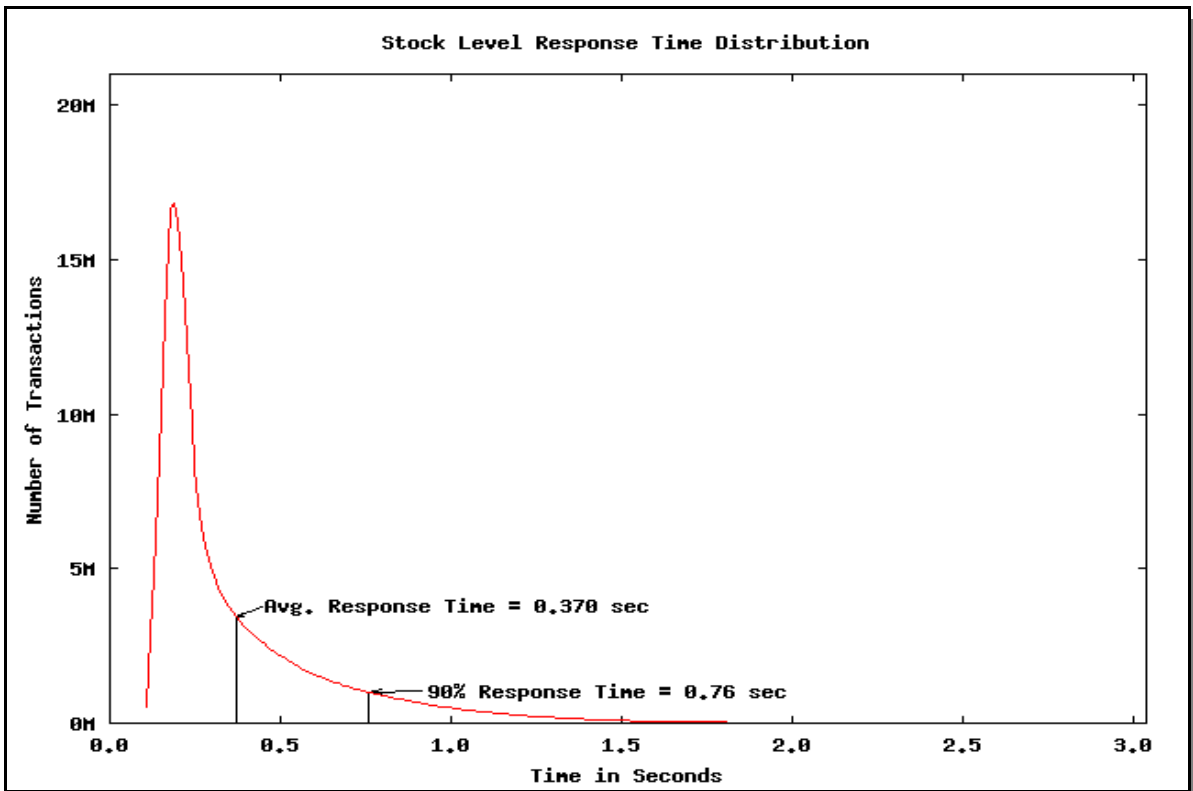


Figure 10: Stock-Level Response Time Distribution

5.5 Think Time Frequency Distribution

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

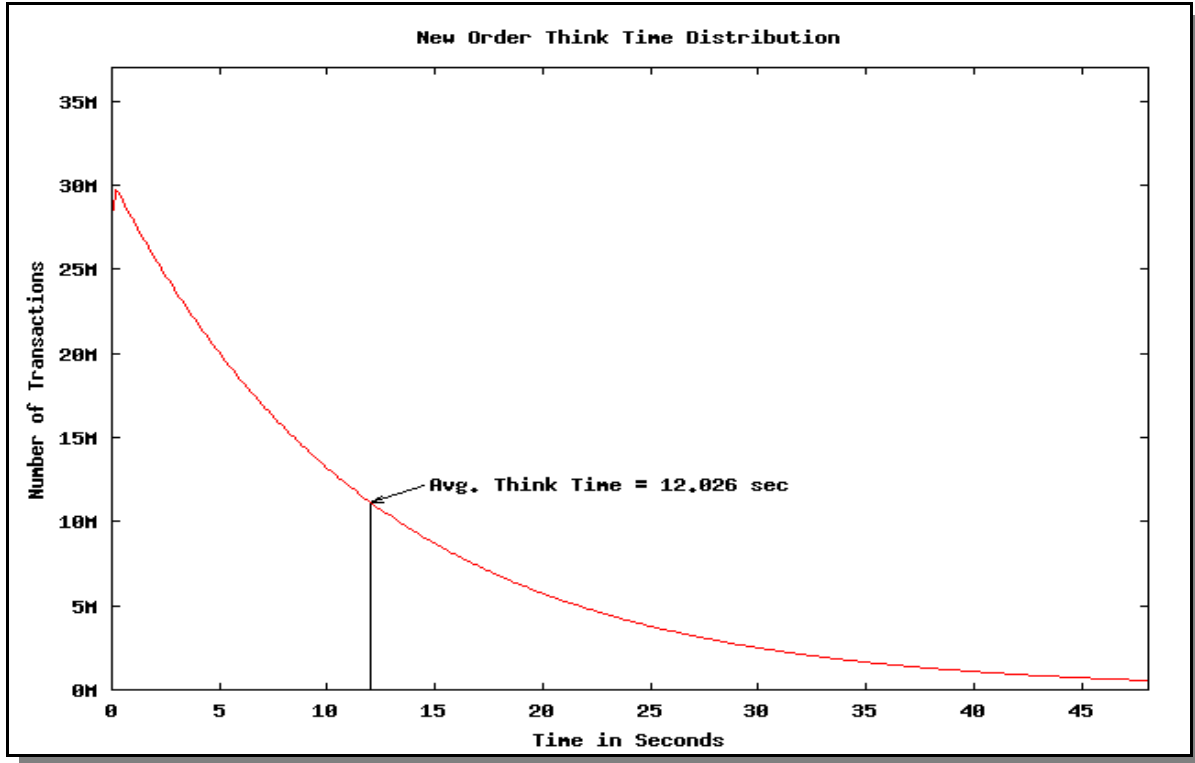


Figure 11: New-Order Think Time Distribution

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.

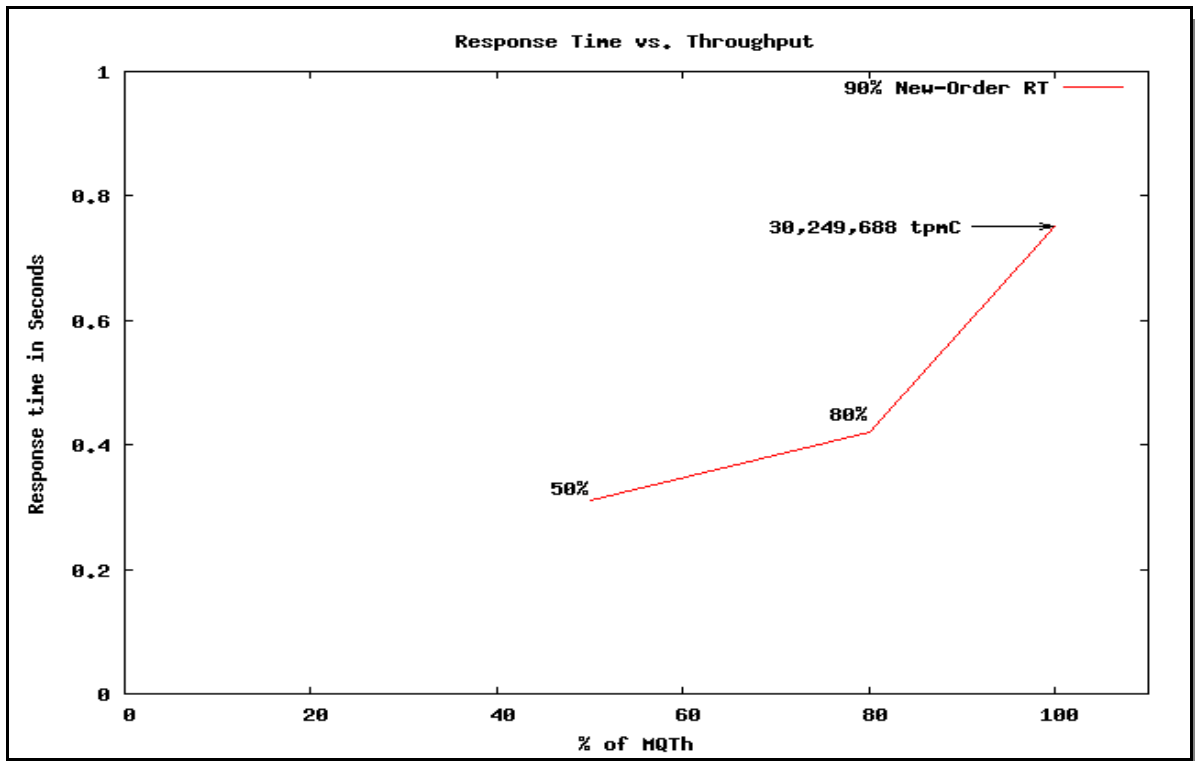


Figure 12: New-Order Response Time versus Throughput

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.

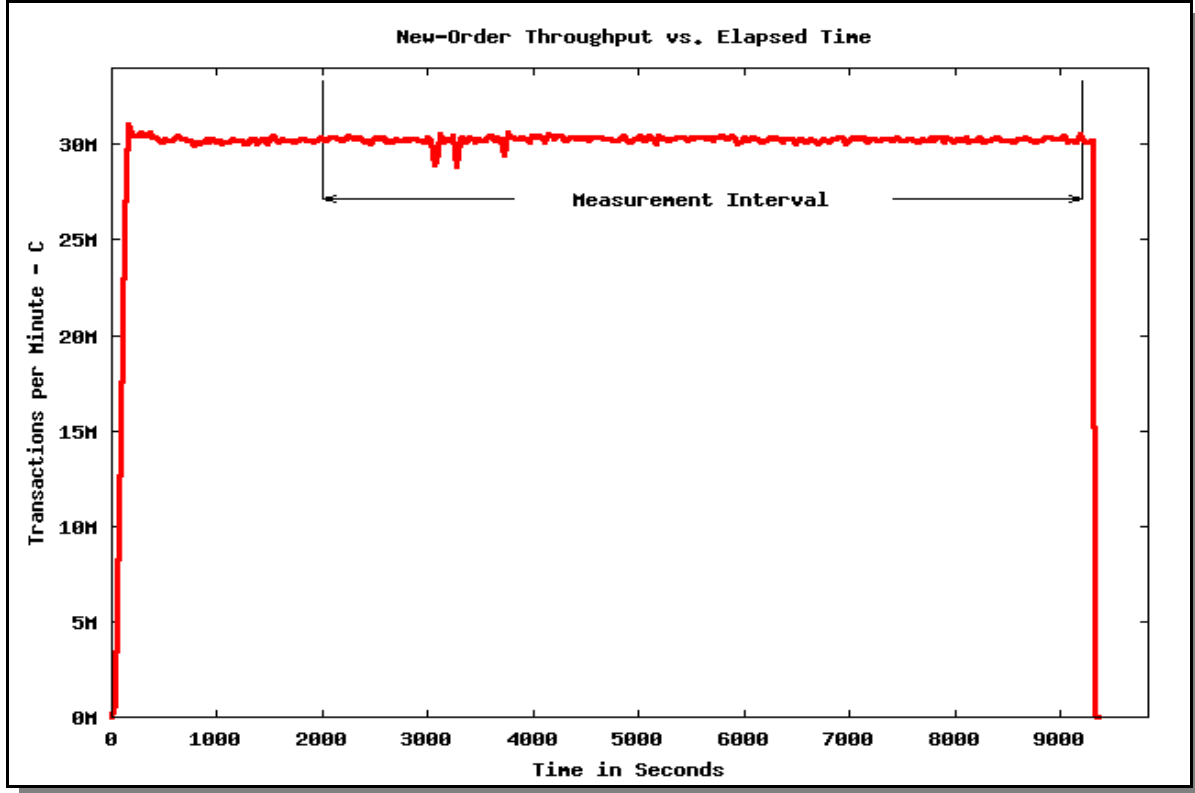


Figure 13: New-Order Throughput versus Time

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 delays for a period of time 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 modified data pages are not left in memory for more than 30 minutes, Oracle implements an ongoing incremental checkpoint to flush modified pages to their respective tables 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 7,200 seconds (2 hours) 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 adjustments automatically made periodically during the run to maintain the desired mix.

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 30.

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 30.

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 30.

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 30.

5.16 Percentage of Remote Payments

The percentage of remote payment transactions must be disclosed.

See Transaction Input Percentages and Mix table on page 30.

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 30.

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 30.

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_mtrr_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 Communications 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 Oracle 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:

<i>Input Type</i>	<i>Value</i>
Ramp-up Duration	1,973 seconds
Ramp-Down Duration	247 seconds
Measurement Interval	7,200 seconds
Database Scale	2,430,000 warehouses
Total Users	24,300,000
Users/Driver	150,000
Number of RTEs	162
Client Ports	8080

Table 8: 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 26 details the configuration used during the measurement. The Priced Configuration on page 27 details the components that were priced. Refer to sections 6.1 and 6.3 above for a description of the emulated components of the Driver System.

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 4 separate networks to administer, maintain, setup, and execute the TPC-C transactions. The first network is a 10GbE fibre network utilizing the Sun Network 10GbE Switch 72p. This is the backbone network for communicating between the T3-4 Server database nodes using Oracle Real Application Clusters and

Partitioning. Another separate network provides administration and support services between all of the T3-4 Servers, all of the X4270M2 COMSTAR heads, and the X4170M2 clients through a 1GbE network using 10 Netgear GS748T 48 port switches. The third network provides system console and service processor control for all of the above machines over a 1GbE through the same Brocade switches as the administration network. The last network is a 1GbE ethernet between the X4170M2 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 SPARC SuperCluster 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. A third-party price quote from CDW is available in Appendix D.

7.2 Total Three Year Cost

The total 3-year price of the entire **Priced Configuration** must be reported, including: hardware, software, and maintenance charges. The justification of any **Discounts** applied must be disclosed in the price sheet. Sufficient detail of what items are being discounted and by how much they are being discounted must be provided so that the **Discount** amount used in the computation of the total system cost can be independently reproduced.

Details of the pricing for all components used in this measurement are included in the Executive Summary at the beginning of this document. Oracle's discounts are based upon US list prices and for similar quantities and configurations. A discount of 50% has been applied to all Oracle hardware, software and services based on the total value and quantities of the components of the configuration, including full payment of all components and maintenance.

For assistance with any of these prices or their applicability to any customer's requirements please contact:

Mary Beth Pierantoni

mary.beth.pierantoni@oracle.com

7.3 Availability

The Committed delivery date for general availability (availability date) of products used in the price calculations must be reported. The Availability Date must be reported on the first page of the Executive Summary and with a precision of one day. 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 **Generally Available**. Each **Component** used in the **Priced Configuration** is considered to be Available on the Availability Date unless an earlier date is specified.

All products will be available on June 1, 2011

7.4 Hardware and Software Support

Oracle's Premier Support for Systems consists of services in support of hardware systems, firmware, and software. For hardware systems this support is limited to Sun hardware only. For Oracle's Sun servers, this includes support for Oracle Solaris 10 09/10 and Oracle Solaris 11 Express. This support is for 24 hours a day, 7 days a week with a 4 hour response time.

Oracle Incident Server Support consists of software support for Oracle Database 11g Release 2, Oracle Real Application Clusters and Partitioning and Tuxedo CFS-R Tier 1 with a 4 hour response time, 24 hours a day, 7 days a week.

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>
SPARC SuperCluster with T3-4 Servers	30,249,688	\$30,528,863	\$1.01	June 1, 2011

Table 9: Statement of tpmC and Price/Performance

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 Oracle 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. While all components are orderable immediately, the following components are not available until:

Product	Availability Date
Sun T3-4 Server	December 14, 2010
Oracle Database 11g Release 2 with Oracle Real Application Clusters and Partitioning for SPARC Solaris	June 1, 2011
Sun Storage F5100 Flash Array Firmware	June 1, 2011

Table 10: Orderability Dates

The pricing for the components does not change. Customers who purchase the components at the current versions will be eligible to download and install upgrades to the levels used in this measurement by the availability date.

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

The Auditor's Attestation Letter is included after the Executive Summary on page 4.

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->iTuxDataLen = 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/netcape/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
            {
                return(FALSE);
            }
        }
}
```

```

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

<pre> } if(tpgetctxt(&pWorker->tpxContext, 0) == -1) { sprintf(pWorker->szErrorTxt, "tpgetctxt failed in bTuxIOInit. TxErrno = %d", tperno); eStatus = TRUE; } if(tpsetctxt(pWorker->tpxContext, 0) == -1) { sprintf(pWorker->szErrorTxt, "tpsetctxt failed in bTuxIOInit. TxErrno = %d", tperno); 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 tperno 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(tpacall(del_service, tuxibuf, pWorker->lTuxDataLen, TPSIGRSTR TPNOREPLY) == -1) { if (tperno == TPEOS) </pre>	<pre> { sprintf(pWorker->szErrorTxt, "del tpcall failed.tperno= %d,Uunixerr = %d", tperno, Uunixerr); eStatus = TRUE; } else { sprintf(pWorker->szErrorTxt, "del tpcall failed.tperno= %d",tperno); eStatus = TRUE; } } else { if(tpcall(szService, tuxibuf, pWorker->lTuxDataLen, (char *)&(pWorker- >pTuxOutData), &lOlen, TPSIGRSTR TPNOTIME) == -1) { if (tperno == TPEOS) { sprintf(pWorker->szErrorTxt, "%s tpcall failed.tperno= %d,Uunixerr = %d", szService, tperno, Uunixerr); eStatus = TRUE; } else { if(strcmp(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; } } else { sprintf(pWorker->szErrorTxt, "%s tpcall failed.tperno=%d", szService, tperno); eStatus = TRUE; } } } } } *piTPRslt = tperno; *pbTPRslt = eStatus; xIt: </pre>	<pre> 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, </pre>
--	--	---

```

"tpalloc failed in bTuxInit. TxErrno = %d Unix-Error = %d", tpermo,
Unixerr);
    }
    else
    {
        sprintf(pWorker->szErrorTxt,
"tpalloc failed in bTuxInit. TxErrno = %d", tpermo);
    }
    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 <Uunix.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*/
} /*vDiagInit*/

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

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:
                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 thread_key_t  wKey;
static WORKER  **ppWorker;

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

void fKeyDestructor(void *vWorker)
{
    bTuxTerm((WORKER *)vWorker);
    free(vWorker);
}

/**
 ** 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  iThrId = -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[iThrId==iThrPvtCtr])
            goto done;
    }
    if (iThrPvtCtr == iMaxWorkers)
    {
        iThrPvtCtr = 0;
    }

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

```

```

        {
            if(iThrPvtCtr == iMaxWorkers)
            {
                attempts++;
                if (attempts == 2) {
                    ereport(LOG_FAILURE, "1 Thread %d from Pvt
IndexId %d > %d\n", iThrId, 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[iThrId]=0; /* This worker is not free anymore */

    iFreeCount--;
    mutex_unlock(&mtThrPvt);

    pWorker = ppWorker[iThrId];
    pWorker->uiThrId = iThrId;

    return(pWorker);
}

WORKER *initHandle(unsigned int  uiThrId)
{
    WORKER *pWorker;
    if((pWorker = (WORKER *)malloc(sizeof(WORKER))) ==
NULL)
    {
        ereport(LOG_FAILURE, "Malloc State");
        return NULL;
    }

    memset(pWorker, 0, sizeof(WORKER));
    pWorker->pTuxInData = NULL;
    pWorker->pTuxOutData = NULL;
    strcpy(pWorker->szErrorTxt,"");
    pWorker->iStatusId = STATUS_OK;
    pWorker->uiThrId = uiThrId;
    /*
 * Initialize the worker data structure.
 */
    if(bInitServer(pWorker,uiThrId,uiThrId,FALSE))
    {
        ereport(LOG_FAILURE, pWorker->szErrorTxt);
        free(pWorker);
    }

```

```

        return NULL;
    }
    /*
 * Initialize Tuxedo connection for this thread with tpinit()
 * call.
 */
    if(bTuxIOInit(pWorker))
    {
        ereport(LOG_FAILURE, pWorker->szErrorTxt);
        free(pWorker);
        return NULL;
    }
    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(&ctIDCond, USYNC_THREAD, NULL);

    if(thr_keycreate(&wKey, fKeyDestructor) != 0)
    {
        ereport(LOG_FAILURE, "Global Key State Failed");
    }

```

<pre> return(REQ_ABORTED); } /* * 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, "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(&ctIDCCond); 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; </pre>	<pre> 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(thr_getspecific(wKey, (void **)&pWorker)) { ereport(LOG_FAILURE, "Invalid Key State"); return REQ_ABORTED; } if(!pWorker) { if(pWorker = initHandle((unsigned int)thr_self()) == NULL) { ereport(LOG_FAILURE, "Bad Handle State"); return REQ_ABORTED; } if(thr_setspecific(wKey, pWorker)) { ereport(LOG_FAILURE, "Cannot Preserve 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 </pre>	<pre> * 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, * 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 </pre>
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<p>that should.</p> <p>buffer</p> <p>>inbuf + nbuf->pos,</p> <p>read</p> <p>iLen,</p> <p>iReadLength,</p> <p>was</p> <p>the pointer</p> <p>iReadLength, iLen, 10);</p> <p>abort</p>	<pre> * query's defined length, we force it to be * size to avoid reading more than we */ if (iReadLength > iReqContentLen) { iReadLength = iReqContentLen; } /* * Copy in the buffer data and advance the * pointer. */ (void) memcpy(pszRequestData, nbuf- iReadLength); nbuf->pos += iReadLength; } /* * If we haven't read in all of the data, we will need to * more data from the socket. */ if (iReadLength < iLen) { /* * We need to redefine the length to be read, * to be the remainder. Hence we subtract * the amount read so far, from iLen, which * initially set to the full length of the query * string. * Then read the remainder, starting from * position offset by iReadLength. */ iLen -= iReadLength; iReadLength = net_read(sn->csd, pszRequestData + iReadLength, iLen, 10); /*uiEndReadTime = GetTime();*/ /* * If the query was not completely read, * servicing the HTTP request. */ if (iReadLength != iLen) { ereport(LOG_INFORM, "POST </pre>	<pre> read failed\n"); } } } } } } } } } } /* * end POST */ /* * The request data is not terminated by a NULL always - do it * 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, "TpcService: NOACTION - start response saw request method HEAD?\n"); return REQ_PROCEED; } /* uiStartWriteTime = GetTime(); */ return_value = net_write(sn->csd, pszReturnData, iHtmlLen); /* uiEndWriteTime = GetTime(); */ if (return_value == IO_ERROR) </pre>	<pre> { ereport(LOG_INFORM, "TpcService: REQ_EXIT - start response returned IO_ERROR?\n"); return REQ_EXIT; } 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 </pre>
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<pre> #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_SIZEC 12 /* size of CMD=Execute */ #define ALT_SIZEA 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>" </pre>	<pre> "<HEAD><TITLE>Welcome To TPC- C</TITLE></HEAD><BODY>" "Please Identify your Warehouse and District for this session.
" "<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>
" "District ID <INPUT NAME=\"d_id\" SIZE=2>
" "<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 = "XXXXX-XXXXX"; /* * Eternal counter for terminal context identifier. */ static volatile int iTermCnt = 1; /* * Function prototypes. */ </pre>	<pre> 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 blsNumeric(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) { </pre>
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<pre> 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; pWorker); } /* * 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, ERRTXT_ALREADY_LOGGEDIN); pWorker->iStatusId = ERR_ALREADY_LOGGEDIN; *piSendLen = iLayoutMenu(pszSendMsg, pWorker); </pre>	<pre> 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) { pWorker); goto ServiceXit; } if(pszExtractWDIDKey(&(pWorker->iDistrictId), pszRecvMsg, "d_id=", pWorker) == NULL) { 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; </pre>	<pre> *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, </pre>
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<pre> 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; strepy(pWorker->szErrorTxt, "Logged Off"); *piSendLen = iLayoutLogin(pszSendMsg, pWorker); goto ServiceXit; default: strepy(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) </pre>	<pre> { *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); } </pre>	<pre> /** ** 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, </pre>
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<pre> 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->lTuxDataLen = 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) </pre>	<pre> { 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_SIZEA) % ALT_SIZEA) { sprintf(pWorker->szErrorTxt, "Embedded Empty Order Lines Or Mandatory Fields Blank"); pWorker->iStatusId = ERR_MANDATORY_FIELD; *piSendLen = iLayoutMenu(pszOutData, </pre>	<pre> 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); } } } </pre>
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<pre> 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); } */ </pre>	<pre> /* * 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 into * items, customer information, item prices) from the database * 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> </pre>	<pre> "Warehouse: %4.4d District: %2.2d ", pNewInf->w_id, pNewInf->d_id); } /* * transaction date/time stamp */ if(!bTxResult) { iLen+=sprintf(pszOutData + iLen, "Date: %s
", pNewInf->o_entry_d); } else { iLen+=sprintf(pszOutData + iLen, "Date:
"); } } /* *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
", pNewInf- >c_discount); iLen+=sprintf(pszOutData + iLen, "Order Number: %8.8d Number of Lines: %2.2d" " W_tax: %5.2f D_tax: %5.2f

", pNewInf->o_id, pNewInf->o_ol_cnt, pNewInf->d_tax); iLen+=sprintf(pszOutData + iLen, " Supp_W Item_Id Item Name" " Qty Stock B/G Price Amount
"); } /* * 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); } </pre>
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<pre> iLen+=sprintf(pszOutData + iLen, " %4.4d %6.6d %s %2.2d " %1.1s \$%6.2f \$%7.2f pNewInf->o_ol[uiLoop].ol_supply_w_id, pNewInf->o_ol[uiLoop].ol_i_id, pWorker- 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:
"); iLen+=sprintf(pszOutData + iLen, "Order Number: %8.8d Number of Lines:" " W_tax: D_tax:

", pNewInf->o_id); if(pWorker->iStatusId == INVALID_ITEM_ID) iLen+=sprintf(pszOutData + iLen, " Supp_W Item_Id " Qty Stock B/G Price Amount
"); uiLoop = 0; } for(; uiLoop < MAX_OL; uiLoop++) iLen+=sprintf(pszOutData + iLen, "
"); /* * 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>	<pre> "</PRE><HR>
%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) { </pre>	<pre> */ 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) { </pre>
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<pre> 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); } </pre>	<pre> } /* * 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%x\n",pWorker->uiThrd, 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%x\n",pWorker->uiThrd, 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
" "Date: %s

" "Warehouse: %4.4d" " District: %2.2d
", 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
", szWork2, szWork3); iLayoutHTMLString(szWork2, pPayInf->w_street_2, ADDR_LEN); iLayoutHTMLString(szWork3, pPayInf->d_street_2, ADDR_LEN); iLen+=sprintf(pszOutData + iLen, "%s %s
", szWork2, szWork3); </pre>	<pre> 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

", 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
" "Name: %s %s %s Since: %s
", 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 " %s Credit: %s
" " %s %Disc: %5.2f
", 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

" "Amount Paid: \$%7.2f New Cust Balance: \$ %14.2f
" "Credit Limit: \$%13.2f

", 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 </pre>
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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);
}

```

<pre> } 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) { strepy(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) { strepy(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) </pre>	<pre> { 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
" "Warehouse: %4.4d District: %2.2d
", 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
" "Cust-Balance: \$%9.2f

", 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
" "Supply-W Item-Id Qty Amount Delivery-Date
", 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
", 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, </pre>	<pre> "
</PRE><HR>
%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); } </pre>
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<pre> */ 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 = bTxTran(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, 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
" "Warehouse: %4.4d District: %2.2d

" "Stock Level Threshold: %2.2d

" "Low Stock: %3.3ld</PRE>
<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 </pre>	<pre> ** 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; </pre>	<pre> /* * 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); } } </pre>
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<pre> *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) </pre>	<pre> 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); } </pre>	<pre> } *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; </pre>
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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_SIZEA + 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",
        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*\"

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<pre> SIZE=6>" " <INPUT NAME="Q00*" SIZE=2>
" " <INPUT NAME="S01*" SIZE=4> <INPUT NAME="I01*" SIZE=6>" " <INPUT NAME="Q01*" SIZE=2>
" " <INPUT NAME="S02*" SIZE=4> <INPUT NAME="I02*" SIZE=6>" " <INPUT NAME="Q02*" SIZE=2>
" " <INPUT NAME="S03*" SIZE=4> <INPUT NAME="I03*" SIZE=6>" " <INPUT NAME="Q03*" SIZE=2>
" " <INPUT NAME="S04*" SIZE=4> <INPUT NAME="I04*" SIZE=6>" " <INPUT NAME="Q04*" SIZE=2>
" " <INPUT NAME="S05*" SIZE=4> <INPUT NAME="I05*" SIZE=6>" " <INPUT NAME="Q05*" SIZE=2>
" " <INPUT NAME="S06*" SIZE=4> <INPUT NAME="I06*" SIZE=6>" " <INPUT NAME="Q06*" SIZE=2>
" " <INPUT NAME="S07*" SIZE=4> <INPUT NAME="I07*" SIZE=6>" " <INPUT NAME="Q07*" SIZE=2>
" " <INPUT NAME="S08*" SIZE=4> <INPUT NAME="I08*" SIZE=6>" " <INPUT NAME="Q08*" SIZE=2>
" " <INPUT NAME="S09*" SIZE=4> <INPUT NAME="I09*" SIZE=6>" " <INPUT NAME="Q09*" SIZE=2>
" " <INPUT NAME="S10*" SIZE=4> <INPUT NAME="I10*" SIZE=6>" " <INPUT NAME="Q10*" SIZE=2>
" " <INPUT NAME="S11*" SIZE=4> <INPUT NAME="I11*" SIZE=6>" " <INPUT NAME="Q11*" SIZE=2>
" " <INPUT NAME="S12*" SIZE=4> <INPUT NAME="I12*" SIZE=6>" " <INPUT NAME="Q12*" SIZE=2>
" " <INPUT NAME="S13*" SIZE=4> <INPUT NAME="I13*" SIZE=6>" " <INPUT NAME="Q13*" SIZE=2>
" " <INPUT NAME="S14*" SIZE=4> <INPUT NAME="I14*" " <INPUT NAME="Q14*" SIZE=2>
" "Execution Status: "Total:
<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
" "Date:

" "Warehouse: %4.4d%%s%", pWorker->iWarehouseId, " District: <INPUT NAME="DID*" " "SIZE=2>

" "Customer: <INPUT NAME="CID*" SIZE=4>" "Cust-Warehouse: <INPUT NAME="CWI*" SIZE=4> " "Cust-District: <INPUT NAME="CDI*" SIZE=1>
" "Name: <INPUT NAME="CLT*" SIZE=16> " "Since:
" " Credit:
" " Disc:
" " Phone:
" "
" "Amount Paid: \$<INPUT NAME="HAM*" SIZE=7> " "New Cust Balance:
" "Credit Limit:

Cust-Data:

</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
" "Warehouse: %4.4d%%s%", pWorker->iWarehouseId, "

" "Carrier Number: <INPUT NAME="OCD*" </pre>	<pre> **/ 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
" "Date:

" "Warehouse: %4.4d%%s%", pWorker->iWarehouseId, " District: <INPUT NAME="DID*" " "SIZE=2>

" "Customer: <INPUT NAME="CID*" SIZE=4>" "Cust-Warehouse: <INPUT NAME="CWI*" SIZE=4> " "Cust-District: <INPUT NAME="CDI*" SIZE=1>
" "Name: <INPUT NAME="CLT*" SIZE=16> " "Since:
" " Credit:
" " Disc:
" " Phone:
" "
" "Amount Paid: \$<INPUT NAME="HAM*" SIZE=7> " "New Cust Balance:
" "Credit Limit:

Cust-Data:

</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
" "Warehouse: %4.4d%%s%", pWorker->iWarehouseId, "

" "Carrier Number: <INPUT NAME="OCD*" </pre>	<pre> SIZE=2>

" "Execution Status:
</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
" "Warehouse: %4.4d %%s%", pWorker->iWarehouseId, "District: <INPUT NAME="DID*" SIZE=2>
" "Customer: <INPUT NAME="CID*" SIZE=4>" Name: " "<INPUT NAME="CLT*" SIZE=23>
" "Cust-Balance:

" "Order-Number: Entry-Date:" " Carrier-Number:
" "Supply-W Item-Id Qty Amount " "Delivery-Date
</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>
---	--	---

<pre> "<PRE> Stock-Level
" "Warehouse: %4.4d District: %2.2d%%s", pWorker->iWarehouseId, pWorker->iDistrictId, "

" "Stock Level Threshold: <INPUT NAME="THR*"SIZE=2>

" "low stock:
<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. </pre>	<pre> **/ 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; </pre>	<pre> 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) </pre>
---	--	--

```

{
    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);
    }
}

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

tpccBooh.h
#ifndef __TPCCBOOLH__
#define __TPCCBOOLH__
#ifndef TRUE
#endif
#endif
#ifndef FALSE
#endif
#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 ERRRTXT_CMD_UNKNOWN "Unrecognized Command"
#define ERR_ALREADY_LOGGEDIN -11
#define ERRRTXT_ALREADY_LOGGEDIN "Already Logged In"
#define ERR_TRID -12
#define ERRRTXT_TRID "Terminal Id or Worker Id Error"
#define ERR_SCREEN_UNKNOWN -13
#define ERRRTXT_SCREEN_UNKNOWN "Unrecognized Screen Id"
#define ERR_WID_INVALID -14
#endif

#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 __TPCCCH__
#define __TPCCCH__
#include <atmi.h> /* TUXEDO */
#include <Unix.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

tpcc.h

```



```

/**
*** tpcc.h
*** (c) 2006 Sun Microsystems, Inc. All rights reserved.
***
*** For iWS/Tuxedo client definitions. Must be in synch
*** with ../vendor/oracle/multi-svrs
***
***/

#ifndef __TPCCH__
#define __TPCCH__
#include <atmi.h> /* TUXEDO */
#include <Unix.h> /* TUXEDO */
#include <userlog.h> /* TUXEDO */
#include "tpccBool.h"
#include "tpccConst.h"
typedef struct items_inf
{
    int ol_supply_w_id;
    int ol_i_id;
    char ol_i_name[25];
    int ol_quantity;
    int ol_stock;
    char ol_brand_generic[2];
    double ol_i_price;
    double ol_amount;
} ITEMS_INF;
typedef 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];
    ITEMS_INF o_ol[MAX_OL];
    char status[25];
    double total_amount;
} NEWO_INF;
typedef 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];
} PAY_INF;
typedef struct ord_itm_inf
{
    int ol_supply_w_id;
    int ol_i_id;
    int ol_quantity;
    double ol_amount;
    char ol_delivery_d[11];
} ORD_ITM_INF;
typedef 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];
    char o_entry_d[20];
    ORD_ITM_INF s_ol[MAX_OL];
} ORD_INF;
typedef struct del_inf
{
    int w_id;
    int o_carrier_id;
    char status[26];
} DEL_INF;
/* Structure used to queue delivery transaction */
typedef struct req_del
{
    int w_id;
    int o_carrier_id;
    time_t qtime; /* Time transaction was queued */
} REQ_DEL;
typedef struct stock_inf

```

```

{
    int w_id;
    int d_id;
    int thresh_hold;
    int low_stock;
} STOCK_INF;

typedef struct
{
    unsigned int uiThrId; /* thread ID */
    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 szRequestData[16384];
    char szReturnData[24576]; /* was 16384 */
    char *pTuxInData; /* Tux Buffer Area*/
    char *pTuxOutData; /* Tux Buffer Area*/
    long lTuxDataLen; /* Tux Buffer Len*/
    TPINIT *pTpInf; /* TUXEDO MULTICONTEXT */
    TPCONTEXT_T tpxContext; /* Tuxedo Context */
} WORKER;

WORKER *pGlobalWorkerArray;

#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/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(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);
        {
            (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.
=====+
/*
#ifdef 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/tpc.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"

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

#define 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, \

```

<pre> 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]; </pre>	<pre> OCIRowid *o_rowid_ptr[NDISTS]; OCIDate del_date[NDISTS]; #if defined(ISO) defined(ISO5) defined(ISO6) defined(ISO8) char inum[10]; #endif OCISlnt *curd0; OCISlnt *curd1; OCISlnt *curd2; OCISlnt *curd3; OCISlnt *curd4; OCISlnt *curd5; OCISlnt *curd6; OCISlnt *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; </pre>	<pre> 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 OCISlnt *curp1; OCISlnt *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]; </pre>
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<pre> 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 msgh_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 msgh_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) { *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, </pre>	<pre> 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 = (pldelctx *) malloc (sizeof(pldelctx)); DISCARD memset(pldctx, (char)0, (ub4)sizeof(pldelctx)); /* Initialize */ </pre>	<pre> DISCARD OCIHandleAlloc(tpcenv, (dvoid**) &pldctx->curp1, OCI_HTYPE_STMT, 0, (dvoid**)0); DISCARD sprintf ((char *) stmbuf, SQLTXT); DISCARD OCISmtPrepare(pldctx->curp1, errhp, stmbuf, (ub4) strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT); DISCARD OCIERROR(errhp, OCISmtExecute(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 OCISmtPrepare(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->ordnt_bp, errhp, "ordnt", ADR(pldctx->ordnt), SIZ(int), SQLT_INT, &pldctx->ordnt_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_rnt); 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_rnt); OCIBNDPLA(pldctx->curp2, pldctx->sums_bp, errhp, "sums", pldctx->sums, SIZ(int), SQLT_INT, pldctx->sums_len, NDISTS, &pldctx->sums_rnt); 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_rnt); 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)); } #endif defined(ISO) defined(ISO5) defined(ISO6) defined(ISO8) </pre>
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```

OCIHandleAlloc(tpcenv, (dvoid **)&dctx->curd0),
OCI_HTYPE_STMT, 0,
(dvoid**0);
sprintf((char *) stmbuf, SQLTXTO);
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

/* If PLSQDEL and ISO? are both defined, then they both try to use
curd0! This could cause a problem. Will try to fix later - VMM 12/30/97 */

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(0)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);

/*

```

<pre> 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]; OCISmtExecute(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 (plsqflflag) { 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, OCISmtExecute(tpcsvc,pldctx->curp2,errhp,1,0,NULL(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: #if defined(ISO) defined(ISO5) defined(ISO6) defined(ISO8) reread = 1; #endif </pre>	<pre> #if defined(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=OCISmtExecute(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++; } } retries_recoverr++; goto retry; } else if (errcode == SNAPSHOT_TOO_OLD) { retries++; retries_snapshot++; } } </pre>	<pre> goto retry; } else { return -1; } } } /* mark districts with no new order */ DISCARD OCIAttrGet(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=OCISmtExecute(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 OCIAttrGet(dctx- >curd3,OCI_HTYPE_STMT,&rcount,NULLP(ub4), OCI_ATTR_ROW_COUNT,errhp); </pre>
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```

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=OCISstmtExecute(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 defined(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 defined(ISO5) || defined(ISO6)
execstatus=OCISstmtExecute(tpcsvc,dctx->curd6,errhp,rpc,0,0,0,
OCI_DEFAULT);
#else
execstatus=OCISstmtExecute(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
}

}

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

```

<pre> /* log off */ 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); 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. */ </pre>	<pre> #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; OCIError *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() { </pre>	<pre> 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_NT_V_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 </pre>
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<pre> 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: %s\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; </pre>	<pre> 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; </pre>	<pre> 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_oci.h #pragma ident "@(#)oci.h 1.1 95/09/14 SMI" / =====+ </pre>
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<pre> Copyright (c) 1994 Oracle Corp, Redwood Shores, CA OPEN SYSTEMS PERFORMANCE GROUP All Rights Reserved =====+ FILENAME tpccpl.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)) </pre>	<pre> 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)); #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,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)), \ (progvl),(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,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)), \ (progvl),(progvl),(ftype), (indp),(alen),(arcodes),0,0,OCI_DEFAULT)); #define OCIBNDRAA(stmp,bndp,errp,sqlvar,progvl,progvl,ftype,indp,alen,arcodes,ms,cu)\ ocierror(__FILE__, __LINE__, (errp), \ </pre>	<pre> 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),(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,progvl,ftype)\ OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),(progvl),(ftype),\ 0,0,0,OCI_DEFAULT) #define OCIDEF(stmp,dfnp,errp,pos,progvl,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,progvl,ftype,indp,alen,arcodes)\ OCIHandleAlloc(tpcenv,(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\ (dvoid**0)); \ OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),\ (progvl),(ftype),(indp), (alen),\ (arcodes),OCI_DEFAULT); \ #define OBNDRV(lda,cursor,sqlvar,progvl,progvl,ftype,NA)\ if (obndrv((cursor),(text*)(sqlvar),NA,(ub1*)(progvl),(progvl),(ftype),NA,\ (sb2 *)0, (text *)0, NA, NA))\ {errprt(lda,cursor,sqlvar);return(-1);} \ else\ DISCARD 0 #define OBNDRA(lda,cursor,sqlvar,progvl,progvl,ftype,indp,alen,arcodes)\ if (obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progvl),(progvl),(ftype),NA,\ (indp),(alen),(arcodes),(ub4)0,(ub4*)0,(text*)0,NA,NA))\ {errprt(lda,cursor,sqlvar);return(-1);} \ else\ DISCARD 0 #define OBNDRAA(lda,cursor,sqlvar,progvl,progvl,ftype,indp,alen,arcodes,ms,cs)\ if (obndraa((cursor),(text*)(sqlvar),NA,(ub1*)(progvl),(progvl),(ftype),NA,\ (indp),(alen),(arcodes),(ub4)0,(ub4*)(ms),(ub4*)(cs),(text*)0,NA,NA))\ {errprt(lda,cursor,sqlvar);return(-1);} \ else\ DISCARD 0 #define ODEFIN(lda,cursor,pos,buf,buf1,ftype,scale,indp,fmt,fmtl,fmtt,rln,rcode)\ if (odefin((cursor),(pos),(ub1*)(buf),(buf1),(ftype),(scale),(indp),\ (text*)(fmt),(fmtl),(fomt),(rln),(rcode))\ {errprt(lda,cursor,(text *) ftype);return(-1);} \ </pre>
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<pre> else\ DISCARD 0 #define OEXFET(lda,cursor,nrows,ancel,exact)\ if (oexfet((cursor),(nrows),(ancel),(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,sqll,defflg,lngflg)\ if (oparse((cursor),(sqlstm),(sb4)(sqll),(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,itiers,rowoff)\ if (oexn((cursor),(itiers),(rowoff))\ {if (errrpt(lda,cursor,(text*)"OEXN")==RECOVERR)\ {orol(lda);return(RECOVERR);}\ else {orol(lda);return(-1);}\ else\ DISCARD 0 #endif </pre>	<pre> /* 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 / =====+ 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; </pre>	<pre> /* TPC-C transaction functions */ #ifndef 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 TPCdumpapp (); 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 #ifndef 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 tkvcdone (); extern void tkvcsdone (); </pre>
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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 *lfp;
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_quant91[15];
extern int nol_ytdqty[15];
#endif
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

#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;

```

<pre>#define min(x,y) (((x) < (y)) ? (x) : (y)) #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)); /* 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,(progvl),(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,progvl,ftype,alen) \ DISCARD ocierror(__FILE__,_LINE__,(errp),\ OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,\ (dvoid**0)); \ DISCARD ocierror(__FILE__,_LINE__,(errp),\ OCIBindByName((stmp),&(bndp),(errp),(CONST text*)(sqlvar),\ (sb4)strlen((CONST char*)(sqlvar)),(dvoid*)(progvl),(progvl),(ftype),\ NULLP(dvoid),(alen),NULLP(ub2),\ 0,NULLP(ub4),OCI_DEFAULT)); /* bind in values for plsql with indicator and rcode */</pre>	<pre>#define OCIBNDR(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)); /* bind in/out for plsql arrays witout indicator and rcode */ #define OCIBNDPLA(stmp,bndp,errp,sqlvar,progvl,ftype,alen,ms,cu) \ DISCARD ocierror(__FILE__,_LINE__,(errp),\ OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,\ (dvoid**0)); \ DISCARD ocierror(__FILE__,_LINE__,(errp),\ OCIBindByName((stmp),&(bndp),(errp),(CONST text*)(sqlvar),\ (sb4)strlen((CONST char*)(sqlvar)),(void*)(progvl),\ (progvl),(ftype),NULL,(alen),NULL,(ms),(cu),OCI_DEFAULT)); /* bind in/out values for plsql with indicator and rcode */ #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)); #define OCIDEFINE(stmp,dfnp,errp,pos,progvl,progvl,ftype)\ OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),(progvl),(ftype),\ 0,0,0,OCI_DEFAULT); #define OCIDEF(stmp,dfnp,errp,pos,progvl,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,progvl,ftype,indp,alen,arcode)\ \ OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\ (dvoid**0)); \ OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),\ (progvl),(ftype),(indp),\ (arcode),OCI_DEFAULT); #define OCIDFNDRYN(stmp,dfnp,errp,pos,progvl,progvl,ftype,indp,ctxp,cbf_data) \ ocierror(__FILE__,_LINE__,(errp), \</pre>	<pre>OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\ (dvoid**0));\ ocierror(__FILE__,_LINE__,(errp), \ OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl), (progvl),(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;</pre>
--	---	--

```

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 bylastame;
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;
};

/* Structure of a message request passed on the msg-queue */
struct msgh_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 msgh_newo;
struct paystruct msgh_paym;
struct ordstruct msgh_ords;
struct delstruct msgh_del;
struct stostruct msgh_stock;
} msgh_un;
} msgh_msg;
};

extern struct msgh_req message;
#define header message.msgh_msg
#define neworder message.msgh_msg.msgh_un.msgh_newo
#define payment message.msgh_msg.msgh_un.msgh_paym
#define ordstat message.msgh_msg.msgh_un.msgh_ords
#define delivery message.msgh_msg.msgh_un.msgh_del
#define stocklevel message.msgh_msg.msgh_un.msgh_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 DMLRETDDEL

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/msgh_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(RECOVER);
     * 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 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" */
#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>
/* #include "ora_err.h" */
/* Tuxedo */
#include "atmi.h"
#include "userlog.h"

OCIEnv *tpcenv;
OCIError *tpcsrv;
OCIError *errhp;
OCISvcCtx *tpcsvc;
OCIStmt *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;

/* 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);

```

<pre> 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, SQLTXST); OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf), OCI_NT_V_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. </pre>	<pre> */ #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 </pre>	<pre> * 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 msggh_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]; </pre>
--	--	--


```

/*      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_quant10[15];
static int nol_quant91[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 inittpc.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];
OCISmt *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;
OCISmt *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-
>curn1),
OCI_HTYPE_STMT, 0, (dvoid**)0));
sqlfile("tkvcnew.sql",stmbuf);
DISCARD OCIERROR(errhp,OCIStmtPrepare(nctx->curn1, errhp, stmbuf,
strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

/* bind variables */

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

```

<pre> SQLT_FLT, &nctx->d_tax_len); OCIBNDPL(nctx->curn1, nctx->o_id_bp, errhp, ":o_id",ADR(o_id),SIZ(o_id), SQLT_INT, &nctx->o_id_len); OCIBNDPL(nctx->curn1, nctx->c_discount_bp, errhp, ":c_discount", ADR(c_discount), SIZ(c_discount),SQLT_FLT, &nctx- >c_discount_len); OCIBNDPL(nctx->curn1, nctx->c_credit_bp, errhp, ":c_credit",c_credit, SIZ(c_credit),SQLT_CHR, &nctx->c_credit_len); OCIBNDPL(nctx->curn1, nctx->c_last_bp, errhp, ":c_last",c_last,SIZ(c_last), SQLT_STR, &nctx->c_last_len); OCIBNDPL(nctx->curn1, nctx->retries_bp, errhp, ":retry",ADR(retries), SIZ(retries),SQLT_INT, &nctx->retries_len); OCIBNDPL(nctx->curn1, nctx->cr_date_bp, errhp, ":cr_date",&cr_date, SIZ(OCIDate), SQLT_ODT, &nctx->cr_date_len); OCIBNDPLA(nctx->curn1, nctx->ol_i_id_bp,errhp,":ol_i_id",nol_i_id, SIZ(int), SQLT_INT, nctx->nol_i_id_len,NITEMS,&nctx- >nol_i_count); OCIBNDPLA(nctx->curn1, nctx->ol_supply_w_id_bp, errhp, ":ol_supply_w_id", nol_supply_w_id,SIZ(int),SQLT_INT, nctx->nol_supply_w_id_len, NITEMS, &nctx->nol_s_count); OCIBNDPLA(nctx->curn1, nctx->ol_quantity_bp,errhp,":ol_quantity", nol_quantity, SIZ(int),SQLT_INT,nctx->nol_quantity_len, NITEMS,&nctx->nol_q_count); OCIBNDPLA(nctx->curn1, nctx- >i_price_bp,errhp,":i_price",i_price,SIZ(int), SQLT_INT, nctx->i_price_len, NITEMS, &nctx->nol_item_count); OCIBNDPLA(nctx->curn1, nctx->i_name_bp,errhp,":i_name",i_name, SIZ(i_name[0]),SQLT_STR, nctx->i_name_len,NITEMS, &nctx->nol_name_count); OCIBNDPLA(nctx->curn1, nctx- >s_quantity_bp,errhp,":s_quantity",s_quantity, SIZ(int), SQLT_INT,nctx->s_quant_len,NITEMS,&nctx- >nol_qty_count); OCIBNDPLA(nctx->curn1, nctx- >s_bg_bp,errhp,":brand_generic",brand_generic, SIZ(char), SQLT_CHR,nctx->s_bg_len,NITEMS,&nctx- >nol_bg_count); OCIBNDPLA(nctx->curn1, nctx- >ol_amount_bp,errhp,":ol_amount",nol_amount, SIZ(int),SQLT_INT, nctx->nol_amount_len,NITEMS,&nctx- >nol_am_count); OCIBNDPLA(nctx->curn1, nctx->s_remote_bp,errhp,":s_remote",nctx- >s_remote, SIZ(int),SQLT_INT, nctx->s_remote_len,NITEMS,&nctx- >s_remote_count); /* open second cursor */ DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid**>(&nctx- >curn2), OCI_HTYPE_STMT, 0, (dvoid**0)); DISCARD sprintf ((char *) stmbuf, SQLTXT2); DISCARD OCIERROR(errhp,OCIStmtPrepare(nctx->curn2, errhp, stmbuf, strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT)); </pre>	<pre> /* 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); userlog("%d newo_tx ERROR %s:%d - execstatus=%d, errcode= %d\n", getpid(), __FILE__, __LINE__, execstatus, errcode); return -1; } } return(0); } /* * END BLOCK OF COMMON CODE */ int get_newo_tx_cnt() { return tx_count; } /* * This function executes the neworder transaction */ #endif ACID #include <sys/types.h> #include <time.h> </pre>	<pre> 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; #endif ACID int rread; 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; </pre>
--	---	--

```

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 = OCIStmtExecute(tpcsvc,nctx->cur1,errhp,1,0,0,0,
OCI_DEFAULT |
OCI_COMMIT_ON_SUCCESS);

if(execstatus != OCI_SUCCESS) {

OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
errcode = OCIERROR(errhp,execstatus);

if(errcode == NOT_SERIALIZABLE) {
    retries++;
    userlog("%d] newo_tx ERROR - NOT SERIALIZE doing retry\n",
getpid());
    goto retry;
} else if (errcode == RECOVER) {
    userlog("%d] newo_tx ERROR - RECOVER doing retry\n", getpid());
    retries++;
    goto retry;
} else if (errcode == SNAPSHOT_TOO_OLD) {
    userlog("%d] newo_tx ERROR - SNAPSHOT_TOO_OLD doing
retry\n", getpid());
    retries++;
    goto retry;
} else {
    userlog("%d] newo_tx ERROR %s:%d - execstatus=%d, errcode=
%d\n", getpid(), __FILE__, __LINE__, execstatus, errcode);
    sprintf(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);
// This is an expected case. This is the neworder rollback transaction
// userlog("%d] newo_tx ERROR - rcount %d != o_ol_cnt %d\n",
getpid(), rcount, o_ol_cnt);
    sprintf(neworder_p->status_mesg, "Item number is not valid");
    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;
strcpy (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;
}

```

<pre> if (nctx) free (nctx); OCIHandleFree((dvoid *)nctx->curn1,OCI_HTYPE_STMT); OCIHandleFree((dvoid *)nctx->curn2,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); </pre>	<pre> 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> </pre>	<pre> STATIC FUNCTION(S) <static functions defined - one-line descriptions> NOTES <other useful comments, qualifications, etc.> MODIFIED (MM/DD/YY) xnjie 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_tpccitr 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]; </pre>
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};
#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"

#ifdef 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;

        OCISlmt *curo0;
        OCISlmt *curo1;
        OCISlmt *curo2;
        OCISlmt *curo3;
        OCISlmt *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];

```

<pre> 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_recover; 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]; OCIStmt *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)); </pre>	<pre> } DISCARD OCIERROR(errhp, OCIHandleAlloc(tpcenv,(dvoid **)&octx->curo0,OCI_HTYPE_STMT,0, (dvoid **)0)); DISCARD OCIERROR(errhp, OCIHandleAlloc(tpcenv,(dvoid **)&octx->curo0,OCI_HTYPE_STMT,0, (dvoid **)0)); DISCARD OCIERROR(errhp, OCIHandleAlloc(tpcenv,(dvoid **)&octx->curo1,OCI_HTYPE_STMT,0, (dvoid **)0)); DISCARD OCIERROR(errhp, OCIHandleAlloc(tpcenv,(dvoid **)&octx->curo2,OCI_HTYPE_STMT,0, (dvoid **)0)); DISCARD OCIERROR(errhp, OCIHandleAlloc(tpcenv,(dvoid **)&octx->curo3,OCI_HTYPE_STMT,0, (dvoid **)0)); DISCARD OCIERROR(errhp, OCIHandleAlloc(tpcenv,(dvoid **)&octx->curo4,OCI_HTYPE_STMT,0, (dvoid **)0)); /* c_id = 0, use find customer by lastname. Get an array or rowid's back */ DISCARD sprintf((char *) stmbuf, SQLCUR0); DISCARD OCIERROR(errhp, OCIStmtPrepare(octx->curo0,errhp,stmbuf,(ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX,OCI_DEFAULT)); DISCARD OCIERROR(errhp, OCIAttrSet(octx->curo0,OCI_HTYPE_STMT,&octx->norow,0, OCI_ATTR_PREFETCH_ROWS,errhp)); /* get order/customer info back based on rowid */ DISCARD sprintf((char *) stmbuf, SQLCUR1); DISCARD OCIERROR(errhp, OCIStmtPrepare(octx->curo1,errhp,stmbuf,(ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX,OCI_DEFAULT)); DISCARD OCIERROR(errhp, OCIAttrSet(octx->curo1,OCI_HTYPE_STMT,&octx->norow,0, OCI_ATTR_PREFETCH_ROWS,errhp)); /* c_id == 0, use lastname to find customer */ DISCARD sprintf((char *) stmbuf, SQLCUR2); DISCARD OCIERROR(errhp, OCIStmtPrepare(octx->curo2,errhp,stmbuf,(ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX,OCI_DEFAULT)); DISCARD OCIERROR(errhp, OCIAttrSet(octx->curo2,OCI_HTYPE_STMT,&octx->norow,0, OCI_ATTR_PREFETCH_ROWS,errhp)); DISCARD sprintf((char *) stmbuf, SQLCUR3); DISCARD OCIERROR(errhp, OCIStmtPrepare(octx->curo3,errhp,stmbuf,(ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX,OCI_DEFAULT)); DISCARD OCIERROR(errhp, OCIAttrSet(octx->curo3,OCI_HTYPE_STMT,&octx->norow,0, OCI_ATTR_PREFETCH_ROWS,errhp)); DISCARD sprintf((char *) stmbuf, SQLCUR4); DISCARD OCIERROR(errhp, </pre>	<pre> OCIStmtPrepare(octx->curo4,errhp,stmbuf,(ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX,OCI_DEFAULT)); DISCARD OCIERROR(errhp, OCIAttrSet(octx->curo4,OCI_HTYPE_STMT,&octx->norow,0, OCI_ATTR_PREFETCH_ROWS,errhp)); for (i = 0; i < NITEMS; i++) { octx->ol_supply_w_id_len[i] = sizeof(int); octx->ol_i_id_len[i] = sizeof(int); octx->ol_quantity_len[i] = sizeof(int); octx->ol_amount_len[i] = sizeof(int); octx->ol_delivery_d_len[i] = sizeof(ol_d_base[0]); } octx->ol_supply_w_id_csize = NITEMS; octx->ol_i_id_csize = NITEMS; octx->ol_quantity_csize = NITEMS; octx->ol_amount_csize = NITEMS; octx->ol_delivery_d_csize = NITEMS; octx->ol_w_id_csize = NITEMS; octx->ol_o_id_csize = NITEMS; octx->ol_d_id_csize = NITEMS; octx->ol_w_id_len = sizeof(int); octx->ol_d_id_len = sizeof(int); octx->ol_o_id_len = sizeof(int); /* bind variables */ /* c_id (customer id) is not known */ OCIBND(octx->curo0,octx->w_id_bp[0],errhp,":w_id",ADR(w_id), SIZ(int),SQLT_INT); OCIBND(octx->curo0,octx->d_id_bp[0],errhp,":d_id",ADR(d_id), SIZ(int),SQLT_INT); OCIBND(octx->curo0,octx->c_last_bp[0],errhp,":c_last",c_last, SIZ(c_last),SQLT_STR); OCIDFNRA(octx->curo0,octx->c_rowid_dp,errhp,1,octx->c_rowid_ptr, SIZ(OCIRowid*),SQLT_RDD,NULL,octx->c_rowid_len,NULL); OCIBND(octx->curo1,octx->c_rowid_bp,errhp,":cust_rowid", &octx->c_rowid_cust, sizeof(octx->c_rowid_ptr[0]),SQLT_RDD); OCIDEF(octx->curo1,octx->c_id_dp,errhp,1,ADR(c_id),SIZ(int),SQLT_INT); 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), </pre>
--	---	---

```

    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++;

#ifdef 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;
        strepy(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=OCISmtExecute(tpscvc,octx->curo0,errhp,100,0,
            NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
        /* will get OCI_NO_DATA if <100 found */
        if ((execstatus != OCI_NO_DATA) && (execstatus != OCI_SUCCESS))
        {
            errcode=OCIERROR(errhp, execstatus);
            if ((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR))
            {
                DISCARD OCITransCommit(tpscvc,errhp,OCI_DEFAULT);
                retries++;
                goto retry;
            }
            else {
                userlog("%d] ordstat_tx ERROR %s:%d - EXITING -1, execstatus=%d, errcode=%d\n", getpid(), __FILE__, __LINE__, execstatus, errcode);
                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=OCISmtExecute(tpscvc,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(tpscvc,errhp,OCI_DEFAULT);
    retries++;
    goto retry;
} else {
    userlog("%d] ordstat_tx ERROR %s:%d - EXITING -1,
execstatus=%d, errcode=%d\n", getpid(), __FILE__, __LINE__, execstatus,
errcode);
    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(tpscvc,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(tpscvc,errhp,OCI_DEFAULT);
        retries++;
        goto retry;
    } else {
        userlog("%d] ordstat_tx ERROR %s:%d - EXITING
-1, execstatus=%d, errcode=%d\n", getpid(), __FILE__, __LINE__,
execstatus, errcode);
        return -1;
    }
}
}
octx->cust_idx=0;
}
}
octx->c_rowid_cust = octx->c_rowid_ptr[octx->cust_idx];
execstatus=OCIStmtExecute(tpscvc,octx->curo1,errhp,1,0,
OCISnapshot,NULLP(OCISnapshot),OCI_DEFAULT);
if (execstatus != OCI_SUCCESS)
{
    errcode=OCIERROR(errhp,execstatus);
    DISCARD OCITransCommit(tpscvc,errhp,OCI_DEFAULT);
}
}
}

if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
|| (errcode == SNAPSHOT_TOO_OLD))
{
    retries++;
    goto retry;
} else {
    userlog("%d] ordstat_tx ERROR %s:%d - EXITING
-1, execstatus=%d, errcode=%d\n", getpid(), __FILE__, __LINE__,
execstatus, errcode);
    return -1;
}
}
}
else
{
    execstatus=OCIStmtExecute(tpscvc,octx->curo2,errhp,1,0,
NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
OCI_DEFAULT);
if (execstatus != OCI_SUCCESS)
{
    errcode=OCIERROR(errhp,execstatus);
    DISCARD OCITransCommit(tpscvc,errhp,OCI_DEFAULT);
    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
    || (errcode == SNAPSHOT_TOO_OLD))
    {
        retries++;
        goto retry;
    }
    else
    {
        userlog("%d] ordstat_tx ERROR %s:%d - EXITING -1,
execstatus=%d, errcode=%d\n", getpid(), __FILE__, __LINE__, execstatus,
errcode);
        return -1;
    }
}
}
}
octx->ol_w_id_len = sizeof(int);
octx->ol_d_id_len = sizeof(int);
octx->ol_o_id_len = sizeof(int);

execstatus = OCIStmtExecute(tpscvc,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(tpscvc,errhp,OCI_DEFAULT);
    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
    || (errcode == SNAPSHOT_TOO_OLD))
    {
        retries++;
        goto retry;
    }
    else
    {
        userlog("%d] ordstat_tx ERROR %s:%d - EXITING -1,
execstatus=%d, errcode=%d\n", getpid(), __FILE__, __LINE__, execstatus,
errcode);
        return -1;
    }
}
}
}

errcode);
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 ORDSTAT for w_id = %d, d_id = %d, c_id = %d,
o_id = %d\n",
        w_id, d_id, c_id, o_id);
    userlog("ACID ORDSTAT 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 */
MOVEBACK(c_first, 16, ordstat_p);
MOVEBACK(c_middle, 2, ordstat_p);
MOVEBACK(c_last, 16, ordstat_p);
/* MOVEBACK(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 "@(#)tpccso_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 |
=====
*/
#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>

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

static int tx_count = 0;

/*#include "proc_stat.h" */

#define MOVETO(element, struct_name) \
    element = struct_name ->
#define MOVEBACK(element, struct_name) \
    struct_name -> 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]
    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];
};

#ifdef 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];

```

<pre> 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 initpcc.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; </pre>	<pre> 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; </pre>	<pre> 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)); </pre>
--	---	---

<pre> 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->curp1, errhp, stmbuf, strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT)); DISCARD OCIERROR(errhp, OCIStmtExecute(tpcvc,pctx->curp1,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; </pre>	<pre> 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); </pre>	<pre> 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), </pre>
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<pre> 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, </pre>	<pre> 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); </pre>	<pre> MOVETO(c_d_id, payment_p); h_amount = (int)(payment_p->h_amount * 100); strcpy(c_last, payment_p->c_last); tx_count++; #if 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=OCISmtExecute(tpsvc,pctx->curp1,errhp,1,0, NULLP(CONST OCISnapshot),NULLP(OCISnapshot), OCI_DEFAULT OCI_COMMIT_ON_SUCCESS); </pre>
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} else {
    bylastname = 0;
    execstatus=OCIStmtExecute(tpcsvc,ptx->curp0,errhp,1,0,
        NULLP(CONST OCI_Snapshot),NULLP(OCI_Snapshot),
        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 == RECOVER) {
        retries++;
        goto retry;
    } else if (errcode == SNAPSHOT_TOO_OLD) {
        retries++;
        goto retry;
    } else {
        userlog("%d] payment_tx: OCIERROR UNRECOVERABLE %d %d
w_id:%d d_id:%d c_id:%d \n", getpid(), execstatus, 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);
MOVEBACK(h_date, 20, payment_p);
MOVEBACK(w_street_1, 21, payment_p);
MOVEBACK(w_street_2, 21, payment_p);
MOVEBACK(w_city, 21, payment_p);
MOVEBACK(w_state, 3, payment_p);
MOVEBACK(w_zip, 11, payment_p);
MOVEBACK(d_street_1, 21, payment_p);
MOVEBACK(d_street_2, 21, payment_p);
MOVEBACK(d_city, 21, payment_p);
MOVEBACK(d_state, 3, payment_p);
MOVEBACK(d_zip, 11, payment_p);
MOVEBACK(c_first, 17, payment_p);
MOVEBACK(c_middle, 3, payment_p);
MOVEBACK(c_last, 17, payment_p);
MOVEBACK(c_street_1, 21, payment_p);
MOVEBACK(c_street_2, 21, payment_p);
MOVEBACK(c_city, 21, payment_p);
MOVEBACK(c_state, 3, payment_p);
MOVEBACK(c_zip, 11, payment_p);
MOVEBACK(c_phone, 17, payment_p);
MOVEBACK(c_credit, 3, payment_p);
strncpy(payment_p->c_data, c_data, 201);

return(0);
}

int PAYM(TPSCVINFO *rqst)
{
    if (payment_tx(rqst))
        treturn(TPFAIL, 0, rqst->data, sizeof(struct pay_inf), 0);
    else
        treturn(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"

/
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+=====
| FILENAME
| plsto.c
| DESCRIPTION
| OCI version of STOCK LEVEL transaction in TPC-C benchmark.
+=====
*/

```

```

/* #include "ora_oci.h" */
#ifndef 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 MOVE_TO(element, struct_name) element = struct_name -> element
#define MOVE_BACK(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 {
    OCIStmt *curs;
    OCIBind *w_id_bp;
    OCIBind *d_id_bp;
    OCIBind *threshold_bp;
#ifndef 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 stmbuf[SQL_BUF_SIZE];
#ifndef 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 *) stmbuf, SQLTXT);
        OCIERROR(errhp,OCIStmtPrepare(sctx->curs,errhp,stmbuf,strlen((char
        *)stmbuf),
                OCI_NTV_SYNTAX,OCI_DEFAULT));
#ifndef PLSQLSTO
        OCIERROR(errhp,
            OCIAttrSet(sctx->curs,OCI_HTYPE_STMT,(dvoid*)&sctx->norow,0,
            OCI_ATTR_PREFETCH_ROWS,errhp));
#endif
        /* bind variables */

        OCIBND(sctx->curs,sctx->w_id_bp,errhp, ":w_id",
        ADR(w_id),sizeof(int),
            SQLT_INT);
        OCIBND(sctx->curs,sctx->d_id_bp,errhp, ":d_id", ADR(d_id),sizeof(int),
            SQLT_INT);
        OCIBND(sctx->curs,sctx->threshold_bp,errhp, ":threshold",
        ADR(threshold),
            sizeof(int),SQLT_INT);
#ifndef 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 {
            userlog("%d] stocklevel_tx ERROR %s:%d - EXITING -1, execstatus=
            %d, errcode=%d, w_id=%d, d_id=%d, threshold=%d\n", getpid(),
            __FILE__, __LINE__, execstatus, errcode,
            stocklevel_p->w_id, stocklevel_p->d_id, stocklevel_p-
            >threshold);
            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
/*

```

<pre> * 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, "tkvuopen() 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) { </pre>	<pre> 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) mempcy(oradt,&Date,7); else *oradt = '\0'; return; } </pre>	<pre> 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; mempcy(&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; mempcy(&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; } </pre>
---	--	--

```

}
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 EDEADLOCK 60
#define SQLNOTFOUND 1403
#define COLUMN_NULL -1405
#define EDUPLICATE -1
#define RECOVERERR -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

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

/
*====+
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+====+
| FILENAME
| tpccpl.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>
****

#endif __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 OCIEERROR(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),
(progvl), (progvl),
(ftype),0,0,0,0,OCI_DEFAULT));

#define
OCIBNDRAD(stmp,bndp,errp,sqlvar,progvl,ftyp,indp,ctxp,cbf_nodata,cbf_
data)\
ocierror(_FILE_,_LINE_,(errp),\
OCIBindByName((stmp),&(bndp),(errp),(text*)(sqlvar),\
strlen((sqlvar)),\
(progvl),(progvl),(ftype),
(indp),(alen),(arcod),0,0,OCI_DEFAULT));

#define
OCIBNDRAA(stmp,bndp,errp,sqlvar,progvl,ftyp,indp,alen,arcod,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),(arcod),(ms),
(cu),OCI_DEFAULT));
/*
ocierror(_FILE_,_LINE_,(errp),
OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
sizeof((alen)[0]),sizeof((arcod)[0]))); */

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

#define OCIDEF(stmp,dfnp,errp,pos,progvl,ftyp)\
OCIHandleAlloc((stmp),(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\
(dvoid**0));\
OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),(progvl),\
(ftyp),NULL,NULL,NULL,OCI_DEFAULT); \
strlen((sqlvar)),0,(progvl),(ftype),\
indp,0,0,0,OCI_DATA_AT_EXEC)); \
ocierror("yufei",_FILE_,(errp),\
OCIBindDynamic((bndp),(errp),(ctxp),(cbf_nodata),(ctxp),
(cbf_data)));

#define
OCIBNDRA(stmp,bndp,errp,sqlvar,progvl,ftyp,indp,alen,arcod)\
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),(arcod),0,0,OCI_DEFAULT));
/*
ocierror(_FILE_,_LINE_,(errp),\
OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
sizeof((alen)[0]),sizeof((arcod)[0]))); */

#define
OCIBNDR(stmp,bndp,errp,sqlvar,progvl,ftyp,indp,alen,arcod)\
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),(arcod),0,0,OCI_DEFAULT));

#define
OCIBNDRAA(stmp,bndp,errp,sqlvar,progvl,ftyp,indp,alen,arcod,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),(arcod),(ms),
(cu),OCI_DEFAULT));
/*
ocierror(_FILE_,_LINE_,(errp),
OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
sizeof((alen)[0]),sizeof((arcod)[0]))); */

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

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

```



```

#define OCIDFNRA(stmp,dfnp,errp,pos,progv,progv1,ftype,indp,alen,arcodes)
\
    OCIHandleAlloc(tpcenv,(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),\
        (progv1),(ftype),(indp),\
        (alen),\
        (arcodes),OCI_DEFAULT);\
#define OBNDRV(lda,cursor,sqlvar,progv,progv1,ftype)\
    if (obndrv((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progv1),(ftype),NA,\
        (sb2 *)0, (text *)0, NA, NA))\
        {errprt(lda,cursor,sqlvar);return(-1);} \
    else \
        DISCARD 0
#define OBNDRA(lda,cursor,sqlvar,progv,progv1,ftype,indp,alen,arcodes)\
    if (obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progv1),(ftype),NA,\
        (indp),(alen),(arcodes),(ub4)0,(ub4*)0,(text*)0,NA,NA))\
        {errprt(lda,cursor,sqlvar);return(-1);} \
    else \
        DISCARD 0
#define
OBNDRAA(lda,cursor,sqlvar,progv,progv1,ftype,indp,alen,arcodes,ms,cs)\
    if (obndraa((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progv1),(ftype),NA,\
        (indp),(alen),(arcodes),(ub4)(ms),(ub4*)(cs),(text*)0,NA,NA))\
        {errprt(lda,cursor,sqlvar);return(-1);} \
    else \
        DISCARD 0
#define
ODEFIN(lda,cursor,pos,buf,buf1,ftype,scale,indp,fmt,fmt1,fmmt,rlen,rcode)\
    if (odefin((cursor),(pos),(ub1*)(buf),(buf1),(ftype),(scale),(indp),\
        (text*)(fmt),(fmt1),(fmmt),(rlen),(rcode))\
        {errprt(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 (errprt(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))\
        {errprt(lda,cursor,(text *)"OOPEN");return(-1);} \
    else \
        DISCARD 0
#define OPARSE(lda,cursor,sqlstm,sqll,defflg,lngflg)\
    if (oparse((cursor),(sqlstm),(sb4)(sqll),(defflg),(ub4)(lngflg))\
        {errprt(lda,cursor,sqlstm);return(-1);} \
    else \
        DISCARD 0
DISCARD 0
#define OFEN(lda,cursor,nrows)\
    if (ofen((cursor),(nrows))\
        {if (errprt(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 (errprt(lda,cursor,(text *)"OEXEC")==RECOVERR) \
            {orol(lda);return(RECOVERR);} \
        else {orol(lda);return(-1);} \
    else \
        DISCARD 0
#define OCOM(lda,cursor)\
    if (ocom((lda)) \
        {errprt(lda,cursor,(text *)"OCOM");orol(lda);return(-1);} \
    else \
        DISCARD 0
#define OEXN(lda,cursor,itors,rowoff)\
    if (oexn((cursor),(itors),(rowoff)) \
        {if (errprt(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_SRVCCTX OCI_ATTR_SERVER
#define OCI_ATTR_USERCTX 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 $ 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
#include #include #include #ifndef boolean #define boolean int #endif
#include #include #include /* #ifdef __STDC__ #include "ociapr.h" #else
#include "ocikpr.h" #endif */ typedef struct cda_def csrdef; typedef struct
cda_def ldadef; /* TPC-C transaction functions */ #ifndef 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 TPCdumpvel (); extern void
TPCdumpsto (); extern void TPCdumpexit (); /* extern void userlog(char*
fmt, ...); */ #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 #ifndef TUX extern int
tkvcninit (); extern int tkvcpinit (); extern int tkvcoint (); extern int
tkvcdinit (); extern int tkvcinit (); extern int tkvcn (); extern int
tkvcp (); extern int tkvco (); extern int tkvcd (); extern int 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 multitrans; extern int ord_init;
#endif extern void errprt (); 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; #ifndef TUX extern
OCIEnv *tpcenv; extern OCIError *tpcsrv; extern OCIError *errhp; extern
OCISvcCtx *tpscvc; extern OCISession *tpcsrv; extern OCISmt *cpctest;
#endif /* The bind and define handles for each transaction are included in
their respective header files. */ extern OCIEnv *tpcenv; extern OCIError
*tpcsrv; extern OCIError *errhp; extern OCISvcCtx *tpscvc; extern
OCISession *tpcsrv; 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]; extern
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
no_l_i_id[15]; extern int no_l_supply_w_id[15]; extern int no_l_quantity[15];
extern int no_l_quant10[15]; extern int no_l_quantity15[15]; extern int
no_l_ydtqty[15]; extern int no_l_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_csiz; 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_csiz; 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_of_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) (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,prog,progvl,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)), \ (prog), (progvl), (ftype), (indp), (alen),
(arcde),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,
(progvl), (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,prog,progvl,ftype,alen) \ DISCARD
ocierror( _FILE_, _LINE_, (errp), \ OCIHandleAlloc((stmp),
(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**0)); \ DISCARD
ocierror( _FILE_, _LINE_, (errp), \ OCIBindByName((stmp),&(bndp),
(errp),(CONST text*)(sqlvar), \ (sb4)strlen((CONST char*)(sqlvar)),
(dvoid*)(prog), (progvl), (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,prog,progvl,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)), \ (prog), (progvl), (ftype), (indp), (alen),
(arcde),0,0, \ OCI_DEFAULT)); /* bind in/out for plsql arrays without
indicator and rcode */ #define
OCIBNDPLA(stmp,bndp,errp,sqlvar,prog,progvl,ftype,alen,ms,cu) \
DISCARD ocierror( _FILE_, _LINE_, (errp), \ OCIHandleAlloc((stmp),
(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**0)); \ DISCARD
ocierror( _FILE_, _LINE_, (errp), \ OCIBindByName((stmp),&(bndp),
(errp),(CONST text*)(sqlvar), \ (sb4)strlen((CONST char*)(sqlvar)), (void
*)(prog), \ (progvl), (ftype),NULL,(alen),NULL,(ms),
(cu),OCI_DEFAULT)); /* bind in/out values for plsql with indicator and
rcode */ #define
OCIBNDRAA(stmp,bndp,errp,sqlvar,prog,progvl,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)), \ (prog), (progvl), (ftype), (indp), (alen),
(arcde), (ms), (cu), OCI_DEFAULT)); #define
OCIDEFINE(stmp,dfnp,errp,pos,prog,progvl,ftype) \
OCIDefineByPos((stmp),&(dfnp), (errp), (pos), (prog), (progvl), (ftype), \
0,0,0,OCI_DEFAULT); #define
OCIDEF(stmp,dfnp,errp,pos,prog,progvl,ftype) \ OCIHandleAlloc((stmp),
(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0, \ (dvoid**0)); \
OCIDefineByPos((stmp),&(dfnp), (errp), (pos), (prog), (progvl), \
(ftype),NULL,NULL,NULL,OCI_DEFAULT); \ #define
OCIDFNRA(stmp,dfnp,errp,pos,prog,progvl,ftype,indp,alen,arcde) \
OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0, \
(dvoid**0)); \ OCIDefineByPos((stmp),&(dfnp), (errp), (pos), (prog), \
(progvl), (ftype), (indp), (alen), \ (arcde), OCI_DEFAULT); #define
OCIDFNDR(stmp,dfnp,errp,pos,prog,progvl,ftype,indp,ctxp,cbf_data) \
ocierror( _FILE_, _LINE_, (errp), \ OCIHandleAlloc((stmp),
(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0, \ (dvoid**0)); \
ocierror( _FILE_, _LINE_, (errp), \ OCIDefineByPos((stmp),&(dfnp),
(errp), (pos), (prog), (progvl), (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 ordinstruc { 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 ordinstruc ordin; struct ordoutstruct ordout; }; /* Delivery */ struct
delinstruc { int w_id; int o_carrier_id; double qtime; int in_timing_int; int
plsqliflag; }; struct deloutstruct { int terror; int retry; }; struct delstruct { struct
delinstruc delin; struct deloutstruct delout; }; /* Stock level */ struct
stoinstruct { int w_id; int d_id; int threshold; }; struct stostruct { int terror;
int low_stock; int retry; }; struct stostruct { struct stostruct stoin; struct
stooutstruct stoout; }; /* Structure of a message request passed on the msg-
queue */ struct msgsh_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
msgsh_newo; struct paystruct msgsh_paym; struct ordstruct msgsh_ords; struct
delstruct msgsh_del; struct stostruct msgsh_stock; } msgsh_un; } msgsh_msg; };
extern struct msgsh_req message; #define header message.msgh_msg #define
neworder message.msgh_msg.msgsh_un.msgsh_newo #define payment

```

```

message.msgh_msg.msgsh_un.msgsh_paym #define ordstat
message.msgh_msg.msgsh_un.msgsh_ords #define delivery
message.msgh_msg.msgsh_un.msgsh_del #define stocklevel
message.msgh_msg.msgsh_un.msgsh_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 ;
!
```

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;"
  createsql="create temporary tablespace $1 tempfile '$2' size $3 reuse
```

```

  extent management local uniform size $4;"
  createsql="create temporary tablespace $1 tempfile '$2' size $3 reuse
```

```

  extent management local uniform size $4;"
  createsql="create temporary tablespace $1 tempfile '$2' size $3 reuse
```

```

  extent management local uniform size $4;"
  createsql="create temporary tablespace $1 tempfile '$2' size $3 reuse
```

```
AUTOEXTEND ON 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 ;"
  createsql="create tablespace $1 datafile '$2' size $3 reuse AUTOEXTEND
ON 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;"
  createsql="create tablespace $1 datafile '$2' size $3 reuse
AUTOEXTEND ON 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 ;"
  createsql="create tablespace $1 datafile '$2' size $3 reuse
AUTOEXTEND ON 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.sh

```
#!/bin/sh

if test "x$tpcc_set_table_stats" = "x0" ; then
  $tpcc_sqlplus $tpcc_user_pass @$ {tpcc_sql_dir}/analyze >
  $tpcc_log_dir/junk 2>&1
elif test "x$tpcc_set_table_stats" = "x1" ; then
  $tpcc_sqlplus $tpcc_user_pass @$ {tpcc_genscripts_dir}/analyze >
  $tpcc_log_dir/junk 2>&1
fi
```

```
if test $? -ne 0
then
  exit 1;
else
  exit 0;
fi
```

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=>'GLOBAL', -
  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=>'GLOBAL', -
  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=>'GLOBAL', -
  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=>'GLOBAL', -
  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=>'GLOBAL', -
  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', -
```

<pre> DEGREE=>10, - GRANULARITY=>'GLOBAL', - 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=>'GLOBAL', - CASCADE=>TRUE); </pre>	<pre> # 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=\${10} sh bug workaround blocksize=`echo \$@ cut -d' ' -f10` #autospace=\${11} sh bug workaround 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` </pre>	<pre> 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 1" >> \$createtsout 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 # echo "NOOFTS=\$noofts, RAC_COUNT=\$rac_count, PHASE=\$tpcc_rac_createts_phase, NAME=\$name, COUNTER=\$filecounter, START=\$filestart, END=\$fileend" >> \$createtsout if test \$filecounter -ge \$filestart -a \$filecounter -lt \$fileend ; then # echo "ADDTS 2" >> \$createtsout 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 \&; # echo "ADDTS 3" >> \$createtsout fi eval "proc\$filecount=\$!" filecounter=`expr \$filecounter + 1` </pre>
<pre> 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=>'GLOBAL', - CASCADE=>TRUE); </pre>	<pre> 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 </pre>	<pre> 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\$sk` wait eval "proc\$sk=\$?" k=`expr \$k + 1` ; done fi </pre>
<pre> 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=>'GLOBAL', - CASCADE=>TRUE); </pre>	<pre> fileend=`expr \$fileavg \% \$tpcc_rac_node` filestart=`expr \$fileend - \$fileavg` if expr \$tpcc_rac_node = \$tpcc_np > /dev/null ; then fileend=\$fileno fi fi </pre>	<pre> i=`expr \$i + 1` ; done </pre>
<pre> 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 > junk 2>&1 if test \$? -ne 0 then exit 1; else exit 0; fi </pre>	<pre> fileend=`expr \$fileavg \% \$tpcc_rac_node` filestart=`expr \$fileend - \$fileavg` if expr \$tpcc_rac_node = \$tpcc_np > /dev/null ; then fileend=\$fileno fi fi </pre>	<pre> 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\$sk` wait eval "proc\$sk=\$?" k=`expr \$k + 1` ; done fi </pre>
<pre> createts.sh #!/bin/sh #NOTE - ANY CHANGES MUST BE MADE TO CREATETS.KSH AS WELL. </pre>	<pre> #if test \$ver = unix; #then fileaddr="\$tpcc_disks_location"; #elif test \$ver = nt; #then # fileaddr=\\.\. #fi filecounter=0 i=0 while test \$i -lt \$noofts; do filecount=`expr \$filecount + 1` ; if expr "x\$tpcc_createts_print" = "xt" > /dev/null ; then if test "x\$tpcc_rac_createts_phase" = "x1" ; then </pre>	<pre> p=`expr \$filecount % \$para` if test \$p != 0; </pre>

<pre> then k=`expr \$filecount - \$p + 1`; if test \$k -le \$S8; then k=`expr \$S8 + 1`; fi while test \$k -le \$filecount; do # wait `eval echo '\$proc\$'k` wait eval "proc\$=\$?" 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 \$noofts -gt 1 -a "x\$tpcc_rac_createts_phase" = "x2"; then filecounter=0 fi filecount=0 fileperts=`expr \$fileno / \$noofts - 1` if test \$fileperts -gt 0 ; then i=0 while test \$i -lt \$noofts ; 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_si_ `expr \$j + 1` \$filesize \$sisTemp \& >> \$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 # parttbs=""`tp \$name parttbs`" parttbs="\$tpcc_ \${name}_parttbs" echo "NAME=\$name, PARTTBS=\$parttbs" if test -z "\$parttbs" -o "\$parttbs"x != "tx" ; then echo \$addfile \$name_\$i \$fileaddr\$name_si_ `expr \$j + 1` \$filesize \$sisTemp \& >> \$createtsout rac_count=`expr \$rac_count + 1` if test "\$rac_count" = "\$para" ; then </pre>	<pre> rac_count=0 echo wait >> \$createtsout fi fi fi fi else \$addfile \$name_\$i \$fileaddr\$name_si_ `expr \$j + 1` \$filesize \$sisTemp j=`expr \$j + 1` done # echo "ADDFILE 3" >> \$junk\$filecount fi eval "proc\$filecount=\$!" filecounter=`expr \$filecounter + 1` p=`expr \$filecount % \$para`; if test \$p = 0; then wait # k=`expr \$filecount - \$para + 1`; # if test \$k -le \$S8; # then # k=`expr \$S8 + 1`; # fi # while test \$k -le \$filecount ; do # wait # eval "proc\$=\$?" # k=`expr \$k + 1`; # done 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 \$S8; then k=`expr \$S8 + 1`; fi while test \$k -le \$filecount; do # wait `eval echo '\$proc\$'k` wait eval "proc\$=\$?" k=`expr \$k + 1` done fi fi if test "x\$tpcc_createts_print" = "xt" ; then echo \$rac_count fi </pre>	<pre> exit 0 i=`expr \$S8 + 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` # Added wait here for all tablespaces to be created 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 createts_node1.sh /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh cust_0 /export/home/tpcc_disks_recap/cust_0_0 16040M 409600K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh stok_0 /export/home/tpcc_disks_recap/stok_0_0 16040M 409600K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh nord_0 /export/home/tpcc_disks_recap/nord_0_0 16040M 102400K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh hist_0 /export/home/tpcc_disks_recap/hist_0_0 16040M 102400K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh ord_r_0 /export/home/tpcc_disks_recap/ord_r_0_0 64040M 102400K 16K 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh icust1_0 /export/home/tpcc_disks_recap/icust1_0_0 16040M 102400K 16K 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh icust2_0 /export/home/tpcc_disks_recap/icust2_0_0 16040M 102400K 16K 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh istok_0 /export/home/tpcc_disks_recap/istok_0_0 16040M 102400K 16K 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh misc_0 /export/home/tpcc_disks_recap/misc_0_0 16040M 40960K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh restbl_0 /export/home/tpcc_disks_recap/restbl_0_0 1024M 10240K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh iordr2_0 /export/home/tpcc_disks_recap/iordr2_0_0 16040M 102400K auto 0 t & /export/home/oracle/tpcc_kit_27nodes/scripts/addts.sh temp_0 /export/home/tpcc_disks_recap/temp_0_0 16040M 102400K auto 1 t & wait wait /export/home/oracle/tpcc_kit_27nodes/scripts/addfile.sh cust_0 /export/home/tpcc_disks_recap/cust_0_1 16040M 0 & /export/home/oracle/tpcc_kit_27nodes/scripts/addfile.sh cust_0 /export/home/tpcc_disks_recap/cust_0_2 16040M 0 & /export/home/oracle/tpcc_kit_27nodes/scripts/addfile.sh cust_0 /export/home/tpcc_disks_recap/cust_0_3 16040M 0 & </pre>
---	---	--


```
connect system/manager
REM @$ORACLE_HOME/sqlplus/admin/pupbld

REM
REM Oracle
REM
```

```
REM if test $NUMBER_ORACLE_NODE -qt 1
REM then
```

```
REM @$ORACLE_HOME/rdbms/admin/catparr
```

```
REM fi
```

```
spool off
!
```

```
#sh $tpcc_scripts/queue.sh
```

loadcust_node[1..27].sh

```
#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:45:17 PDT 2010
rm -f loadcust*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -c -b 1 -e 351 >> loadcust1.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 352 -e 702 >> loadcust2.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 703 -e 1053 >> loadcust3.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 1054 -e 1404 >> loadcust4.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 1405 -e 1755 >> loadcust5.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 1756 -e 2106 >> loadcust6.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 2107 -e 2457 >> loadcust7.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 2458 -e 2808 >> loadcust8.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 2809 -e 3159 >> loadcust9.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 3160 -e 3510 >> loadcust10.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 3511 -e 3861 >> loadcust11.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 3862 -e 4212 >> loadcust12.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 4213 -e 4563 >> loadcust13.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 4564 -e 4914 >> loadcust14.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 4915 -e 5265 >> loadcust15.log 2>&1 &
allprocs="$allprocs $!}"
```

```
$tpcc_load -M 2430000 -c -b 5266 -e 5616 >> loadcust16.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 5617 -e 5967 >> loadcust17.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 5968 -e 6318 >> loadcust18.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 6319 -e 6669 >> loadcust19.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 6670 -e 7020 >> loadcust20.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 7021 -e 7371 >> loadcust21.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 7372 -e 7722 >> loadcust22.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 7723 -e 8073 >> loadcust23.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 8074 -e 8424 >> loadcust24.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 8425 -e 8775 >> loadcust25.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 8776 -e 9126 >> loadcust26.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 9127 -e 9477 >> loadcust27.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 9478 -e 9828 >> loadcust28.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 9829 -e 10179 >> loadcust29.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 10180 -e 10530 >> loadcust30.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 10531 -e 10881 >> loadcust31.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 10882 -e 11232 >> loadcust32.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 11233 -e 11583 >> loadcust33.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 11584 -e 11934 >> loadcust34.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 11935 -e 12285 >> loadcust35.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 12286 -e 12636 >> loadcust36.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 12637 -e 12987 >> loadcust37.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 12988 -e 13338 >> loadcust38.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 13339 -e 13689 >> loadcust39.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 13690 -e 14040 >> loadcust40.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 14041 -e 14391 >> loadcust41.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 14392 -e 14742 >> loadcust42.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 14743 -e 15093 >> loadcust43.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 15094 -e 15444 >> loadcust44.log 2>&1 &
allprocs="$allprocs $!}"
```

```
$tpcc_load -M 2430000 -c -b 15445 -e 15795 >> loadcust45.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 15796 -e 16146 >> loadcust46.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 16147 -e 16497 >> loadcust47.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 16498 -e 16848 >> loadcust48.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 16849 -e 17199 >> loadcust49.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 17200 -e 17550 >> loadcust50.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 17551 -e 17901 >> loadcust51.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 17902 -e 18252 >> loadcust52.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 18253 -e 18603 >> loadcust53.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 18604 -e 18954 >> loadcust54.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 18955 -e 19305 >> loadcust55.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 19306 -e 19656 >> loadcust56.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 19657 -e 20007 >> loadcust57.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 20008 -e 20358 >> loadcust58.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 20359 -e 20709 >> loadcust59.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 20710 -e 21060 >> loadcust60.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 21061 -e 21411 >> loadcust61.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 21412 -e 21762 >> loadcust62.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 21763 -e 22113 >> loadcust63.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 22114 -e 22464 >> loadcust64.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 22465 -e 22815 >> loadcust65.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 22816 -e 23166 >> loadcust66.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 23167 -e 23517 >> loadcust67.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 23518 -e 23868 >> loadcust68.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 23869 -e 24219 >> loadcust69.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 24220 -e 24570 >> loadcust70.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 24571 -e 24921 >> loadcust71.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 24922 -e 25272 >> loadcust72.log 2>&1 &
allprocs="$allprocs $!}"
$tpcc_load -M 2430000 -c -b 25273 -e 25623 >> loadcust73.log 2>&1 &
allprocs="$allprocs $!}"
```



```

$tpcc_load -M 2430000 -c -b 86833 -e 87184 >> loadcust248.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 87185 -e 87536 >> loadcust249.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 87537 -e 87888 >> loadcust250.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 87889 -e 88240 >> loadcust251.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 88241 -e 88592 >> loadcust252.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 88593 -e 88944 >> loadcust253.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 88945 -e 89296 >> loadcust254.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 89297 -e 89648 >> loadcust255.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -c -b 89649 -e 90000 >> loadcust256.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $Sallprocs; do
  wait $curproc
  error=$(( error + $? ))
done
exit `expr $error != 0`

```

NOTE: Repeat loadcust[nodes2-27].sh for each node

loaddist_node[1..27].sh

```

#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:40:09 PDT 2010
rm -f loaddist*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -d -b 1 -e 351 >> loaddist1.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 352 -e 702 >> loaddist2.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 703 -e 1053 >> loaddist3.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 1054 -e 1404 >> loaddist4.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 1405 -e 1755 >> loaddist5.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 1756 -e 2106 >> loaddist6.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 2107 -e 2457 >> loaddist7.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 2458 -e 2808 >> loaddist8.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 2809 -e 3159 >> loaddist9.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 3160 -e 3510 >> loaddist10.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 3511 -e 3861 >> loaddist11.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 3862 -e 4212 >> loaddist12.log 2>&1 &
allprocs="$Sallprocs ${!}"

```

```

$tpcc_load -M 2430000 -d -b 4213 -e 4563 >> loaddist13.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 4564 -e 4914 >> loaddist14.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 4915 -e 5265 >> loaddist15.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 5266 -e 5616 >> loaddist16.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 5617 -e 5967 >> loaddist17.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 5968 -e 6318 >> loaddist18.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 6319 -e 6669 >> loaddist19.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 6670 -e 7020 >> loaddist20.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 7021 -e 7371 >> loaddist21.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 7372 -e 7722 >> loaddist22.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 7723 -e 8073 >> loaddist23.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 8074 -e 8424 >> loaddist24.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 8425 -e 8775 >> loaddist25.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 8776 -e 9126 >> loaddist26.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 9127 -e 9477 >> loaddist27.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 9478 -e 9828 >> loaddist28.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 9829 -e 10179 >> loaddist29.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 10180 -e 10530 >> loaddist30.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 10531 -e 10881 >> loaddist31.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 10882 -e 11232 >> loaddist32.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 11233 -e 11583 >> loaddist33.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 11584 -e 11934 >> loaddist34.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 11935 -e 12285 >> loaddist35.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 12286 -e 12636 >> loaddist36.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 12637 -e 12987 >> loaddist37.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 12988 -e 13338 >> loaddist38.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 13339 -e 13689 >> loaddist39.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 13690 -e 14040 >> loaddist40.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 14041 -e 14391 >> loaddist41.log 2>&1 &
allprocs="$Sallprocs ${!}"

```

```

$tpcc_load -M 2430000 -d -b 14392 -e 14742 >> loaddist42.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 14743 -e 15093 >> loaddist43.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 15094 -e 15444 >> loaddist44.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 15445 -e 15795 >> loaddist45.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 15796 -e 16146 >> loaddist46.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 16147 -e 16497 >> loaddist47.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 16498 -e 16848 >> loaddist48.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 16849 -e 17199 >> loaddist49.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 17200 -e 17550 >> loaddist50.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 17551 -e 17901 >> loaddist51.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 17902 -e 18252 >> loaddist52.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 18253 -e 18603 >> loaddist53.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 18604 -e 18954 >> loaddist54.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 18955 -e 19305 >> loaddist55.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 19306 -e 19656 >> loaddist56.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 19657 -e 20007 >> loaddist57.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 20008 -e 20358 >> loaddist58.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 20359 -e 20709 >> loaddist59.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 20710 -e 21060 >> loaddist60.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 21061 -e 21411 >> loaddist61.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 21412 -e 21762 >> loaddist62.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 21763 -e 22113 >> loaddist63.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 22114 -e 22464 >> loaddist64.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 22465 -e 22815 >> loaddist65.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 22816 -e 23166 >> loaddist66.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 23167 -e 23517 >> loaddist67.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 23518 -e 23868 >> loaddist68.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 23869 -e 24219 >> loaddist69.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 24220 -e 24570 >> loaddist70.log 2>&1 &
allprocs="$Sallprocs ${!}"

```



```

$tpcc_load -M 2430000 -d -b 85777 -e 86128 >> loaddist245.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 86129 -e 86480 >> loaddist246.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 86481 -e 86832 >> loaddist247.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 86833 -e 87184 >> loaddist248.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 87185 -e 87536 >> loaddist249.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 87537 -e 87888 >> loaddist250.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 87889 -e 88240 >> loaddist251.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 88241 -e 88592 >> loaddist252.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 88593 -e 88944 >> loaddist253.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 88945 -e 89296 >> loaddist254.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 89297 -e 89648 >> loaddist255.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -d -b 89649 -e 90000 >> loaddist256.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $Sallprocs; do
    wait $curproc
    error=$(( error + $Error ))
done
exit `expr $error != 0`

loadhist_node[1..27].sh
#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:41:23 PDT 2010
rm -f loadhist*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -h -b 1 -e 351 >> loadhist1.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 352 -e 702 >> loadhist2.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 703 -e 1053 >> loadhist3.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 1054 -e 1404 >> loadhist4.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 1405 -e 1755 >> loadhist5.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 1756 -e 2106 >> loadhist6.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 2107 -e 2457 >> loadhist7.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 2458 -e 2808 >> loadhist8.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 2809 -e 3159 >> loadhist9.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 3160 -e 3510 >> loadhist10.log 2>&1 &
allprocs="$Sallprocs ${!}"

```

```

$tpcc_load -M 2430000 -h -b 3511 -e 3861 >> loadhist11.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 3862 -e 4212 >> loadhist12.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 4213 -e 4563 >> loadhist13.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 4564 -e 4914 >> loadhist14.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 4915 -e 5265 >> loadhist15.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 5266 -e 5616 >> loadhist16.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 5617 -e 5967 >> loadhist17.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 5968 -e 6318 >> loadhist18.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 6319 -e 6669 >> loadhist19.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 6670 -e 7020 >> loadhist20.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 7021 -e 7371 >> loadhist21.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 7372 -e 7722 >> loadhist22.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 7723 -e 8073 >> loadhist23.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 8074 -e 8424 >> loadhist24.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 8425 -e 8775 >> loadhist25.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 8776 -e 9126 >> loadhist26.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 9127 -e 9477 >> loadhist27.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 9478 -e 9828 >> loadhist28.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 9829 -e 10179 >> loadhist29.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 10180 -e 10530 >> loadhist30.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 10531 -e 10881 >> loadhist31.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 10882 -e 11232 >> loadhist32.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 11233 -e 11583 >> loadhist33.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 11584 -e 11934 >> loadhist34.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 11935 -e 12285 >> loadhist35.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 12286 -e 12636 >> loadhist36.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 12637 -e 12987 >> loadhist37.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 12988 -e 13338 >> loadhist38.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 13339 -e 13689 >> loadhist39.log 2>&1 &
allprocs="$Sallprocs ${!}"

```

```

$tpcc_load -M 2430000 -h -b 13690 -e 14040 >> loadhist40.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 14041 -e 14391 >> loadhist41.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 14392 -e 14742 >> loadhist42.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 14743 -e 15093 >> loadhist43.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 15094 -e 15444 >> loadhist44.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 15445 -e 15795 >> loadhist45.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 15796 -e 16146 >> loadhist46.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 16147 -e 16497 >> loadhist47.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 16498 -e 16848 >> loadhist48.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 16849 -e 17199 >> loadhist49.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 17200 -e 17550 >> loadhist50.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 17551 -e 17901 >> loadhist51.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 17902 -e 18252 >> loadhist52.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 18253 -e 18603 >> loadhist53.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 18604 -e 18954 >> loadhist54.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 18955 -e 19305 >> loadhist55.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 19306 -e 19656 >> loadhist56.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 19657 -e 20007 >> loadhist57.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 20008 -e 20358 >> loadhist58.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 20359 -e 20709 >> loadhist59.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 20710 -e 21060 >> loadhist60.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 21061 -e 21411 >> loadhist61.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 21412 -e 21762 >> loadhist62.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 21763 -e 22113 >> loadhist63.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 22114 -e 22464 >> loadhist64.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 22465 -e 22815 >> loadhist65.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 22816 -e 23166 >> loadhist66.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 23167 -e 23517 >> loadhist67.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 23518 -e 23868 >> loadhist68.log 2>&1 &
allprocs="$Sallprocs ${!}"

```



```

$tpcc_load -M 2430000 -h -b 85073 -e 85424 >> loadhist243.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 85425 -e 85776 >> loadhist244.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 85777 -e 86128 >> loadhist245.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 86129 -e 86480 >> loadhist246.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 86481 -e 86832 >> loadhist247.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 86833 -e 87184 >> loadhist248.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 87185 -e 87536 >> loadhist249.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 87537 -e 87888 >> loadhist250.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 87889 -e 88240 >> loadhist251.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 88241 -e 88592 >> loadhist252.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 88593 -e 88944 >> loadhist253.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 88945 -e 89296 >> loadhist254.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 89297 -e 89648 >> loadhist255.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -h -b 89649 -e 90000 >> loadhist256.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $Sallprocs; do
    wait $curproc
    error=$((error + $?)
done
exit `expr $error != 0`

loaditem.sh
cd $tpcc_bench
$tpcc_load -M $tpcc_scale -i > loaditem.log 2>&1

loadnord_node[1..27].sh
#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:42:37 PDT 2010
rm -f loadnord*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -n -b 1 -e 351 >> loadnord1.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 352 -e 702 >> loadnord2.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 703 -e 1053 >> loadnord3.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 1054 -e 1404 >> loadnord4.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 1405 -e 1755 >> loadnord5.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 1756 -e 2106 >> loadnord6.log 2>&1 &
allprocs="$Sallprocs ${!}"

```

```

$tpcc_load -M 2430000 -n -b 2107 -e 2457 >> loadnord7.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 2458 -e 2808 >> loadnord8.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 2809 -e 3159 >> loadnord9.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 3160 -e 3510 >> loadnord10.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 3511 -e 3861 >> loadnord11.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 3862 -e 4212 >> loadnord12.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 4213 -e 4563 >> loadnord13.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 4564 -e 4914 >> loadnord14.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 4915 -e 5265 >> loadnord15.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 5266 -e 5616 >> loadnord16.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 5617 -e 5967 >> loadnord17.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 5968 -e 6318 >> loadnord18.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 6319 -e 6669 >> loadnord19.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 6670 -e 7020 >> loadnord20.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 7021 -e 7371 >> loadnord21.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 7372 -e 7722 >> loadnord22.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 7723 -e 8073 >> loadnord23.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 8074 -e 8424 >> loadnord24.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 8425 -e 8775 >> loadnord25.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 8776 -e 9126 >> loadnord26.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 9127 -e 9477 >> loadnord27.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 9478 -e 9828 >> loadnord28.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 9829 -e 10179 >> loadnord29.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 10180 -e 10530 >> loadnord30.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 10531 -e 10881 >> loadnord31.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 10882 -e 11232 >> loadnord32.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 11233 -e 11583 >> loadnord33.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 11584 -e 11934 >> loadnord34.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 11935 -e 12285 >> loadnord35.log 2>&1 &
allprocs="$Sallprocs ${!}"

```

```

$tpcc_load -M 2430000 -n -b 12286 -e 12636 >> loadnord36.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 12637 -e 12987 >> loadnord37.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 12988 -e 13338 >> loadnord38.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 13339 -e 13689 >> loadnord39.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 13690 -e 14040 >> loadnord40.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 14041 -e 14391 >> loadnord41.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 14392 -e 14742 >> loadnord42.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 14743 -e 15093 >> loadnord43.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 15094 -e 15444 >> loadnord44.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 15445 -e 15795 >> loadnord45.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 15796 -e 16146 >> loadnord46.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 16147 -e 16497 >> loadnord47.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 16498 -e 16848 >> loadnord48.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 16849 -e 17199 >> loadnord49.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 17200 -e 17550 >> loadnord50.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 17551 -e 17901 >> loadnord51.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 17902 -e 18252 >> loadnord52.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 18253 -e 18603 >> loadnord53.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 18604 -e 18954 >> loadnord54.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 18955 -e 19305 >> loadnord55.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 19306 -e 19656 >> loadnord56.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 19657 -e 20007 >> loadnord57.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 20008 -e 20358 >> loadnord58.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 20359 -e 20709 >> loadnord59.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 20710 -e 21060 >> loadnord60.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 21061 -e 21411 >> loadnord61.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 21412 -e 21762 >> loadnord62.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 21763 -e 22113 >> loadnord63.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 22114 -e 22464 >> loadnord64.log 2>&1 &
allprocs="$Sallprocs ${!}"

```



```

$tpcc_load -M 2430000 -n -b 83665 -e 84016 >> loadnord239.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 84017 -e 84368 >> loadnord240.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 84369 -e 84720 >> loadnord241.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 84721 -e 85072 >> loadnord242.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 85073 -e 85424 >> loadnord243.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 85425 -e 85776 >> loadnord244.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 85777 -e 86128 >> loadnord245.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 86129 -e 86480 >> loadnord246.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 86481 -e 86832 >> loadnord247.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 86833 -e 87184 >> loadnord248.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 87185 -e 87536 >> loadnord249.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 87537 -e 87888 >> loadnord250.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 87889 -e 88240 >> loadnord251.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 88241 -e 88592 >> loadnord252.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 88593 -e 88944 >> loadnord253.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 88945 -e 89296 >> loadnord254.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 89297 -e 89648 >> loadnord255.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -n -b 89649 -e 90000 >> loadnord256.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $Sallprocs; do
  wait $curproc
  error=`expr $? + $error`
done
exit `expr $error != 0`

loadordrdl_node[1..27].sh
#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:43:52 PDT 2010
rm -f loadordrdl*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy1.dat -b 1 -e 351
>> loadordrdl1.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy2.dat -b 352 -e 702
>> loadordrdl2.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy3.dat -b 703 -e
1053 >> loadordrdl3.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy4.dat -b 1054 -e
1404 >> loadordrdl4.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy5.dat -b 1405 -e
1755 >> loadordrdl5.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy6.dat -b 1756 -e
2106 >> loadordrdl6.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy7.dat -b 2107 -e
2457 >> loadordrdl7.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy8.dat -b 2458 -e
2808 >> loadordrdl8.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy9.dat -b 2809 -e
3159 >> loadordrdl9.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy10.dat -b 3160 -e
3510 >> loadordrdl10.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy11.dat -b 3511 -e
3861 >> loadordrdl11.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy12.dat -b 3862 -e
4212 >> loadordrdl12.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy13.dat -b 4213 -e
4563 >> loadordrdl13.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy14.dat -b 4564 -e
4914 >> loadordrdl14.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy15.dat -b 4915 -e
5265 >> loadordrdl15.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy16.dat -b 5266 -e
5616 >> loadordrdl16.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy17.dat -b 5617 -e
5967 >> loadordrdl17.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy18.dat -b 5968 -e
6318 >> loadordrdl18.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy19.dat -b 6319 -e
6669 >> loadordrdl19.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy20.dat -b 6670 -e
7020 >> loadordrdl20.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy21.dat -b 7021 -e
7371 >> loadordrdl21.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy22.dat -b 7372 -e
7722 >> loadordrdl22.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy23.dat -b 7723 -e
8073 >> loadordrdl23.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy24.dat -b 8074 -e
8424 >> loadordrdl24.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy25.dat -b 8425 -e
8775 >> loadordrdl25.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy26.dat -b 8776 -e
9126 >> loadordrdl26.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy27.dat -b 9127 -e
9477 >> loadordrdl27.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy28.dat -b 9478 -e
9828 >> loadordrdl28.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy29.dat -b 9829 -e
10179 >> loadordrdl29.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy30.dat -b 10180 -e
10530 >> loadordrdl30.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy31.dat -b 10531 -e
10881 >> loadordrdl31.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy32.dat -b 10882 -e
11232 >> loadordrdl32.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy33.dat -b 11233 -e
11583 >> loadordrdl33.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy34.dat -b 11584 -e
11934 >> loadordrdl34.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy35.dat -b 11935 -e
12285 >> loadordrdl35.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy36.dat -b 12286 -e
12636 >> loadordrdl36.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy37.dat -b 12637 -e
12987 >> loadordrdl37.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy38.dat -b 12988 -e
13338 >> loadordrdl38.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy39.dat -b 13339 -e
13689 >> loadordrdl39.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy40.dat -b 13690 -e
14040 >> loadordrdl40.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy41.dat -b 14041 -e
14391 >> loadordrdl41.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location}dummy42.dat -b 14392 -e

```



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-e 75920 >> loadordrordl216.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy217.dat -b 75921
-e 76272 >> loadordrordl217.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy218.dat -b 76273
-e 76624 >> loadordrordl218.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy219.dat -b 76625
-e 76976 >> loadordrordl219.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy220.dat -b 76977
-e 77328 >> loadordrordl220.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy221.dat -b 77329
-e 77680 >> loadordrordl221.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy222.dat -b 77681
-e 78032 >> loadordrordl222.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy223.dat -b 78033
-e 78384 >> loadordrordl223.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy224.dat -b 78385
-e 78736 >> loadordrordl224.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy225.dat -b 78737
-e 79088 >> loadordrordl225.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy226.dat -b 79089
-e 79440 >> loadordrordl226.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy227.dat -b 79441
-e 79792 >> loadordrordl227.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy228.dat -b 79793
-e 80144 >> loadordrordl228.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy229.dat -b 80145
-e 80496 >> loadordrordl229.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy230.dat -b 80497
-e 80848 >> loadordrordl230.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy231.dat -b 80849
-e 81200 >> loadordrordl231.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy232.dat -b 81201
-e 81552 >> loadordrordl232.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy233.dat -b 81553
-e 81904 >> loadordrordl233.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy234.dat -b 81905
-e 82256 >> loadordrordl234.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy235.dat -b 82257
-e 82608 >> loadordrordl235.log 2>&1 &

allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy236.dat -b 82609
-e 82960 >> loadordrordl236.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy237.dat -b 82961
-e 83312 >> loadordrordl237.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy238.dat -b 83313
-e 83664 >> loadordrordl238.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy239.dat -b 83665
-e 84016 >> loadordrordl239.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy240.dat -b 84017
-e 84368 >> loadordrordl240.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy241.dat -b 84369
-e 84720 >> loadordrordl241.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy242.dat -b 84721
-e 85072 >> loadordrordl242.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy243.dat -b 85073
-e 85424 >> loadordrordl243.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy244.dat -b 85425
-e 85776 >> loadordrordl244.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy245.dat -b 85777
-e 86128 >> loadordrordl245.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy246.dat -b 86129
-e 86480 >> loadordrordl246.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy247.dat -b 86481
-e 86832 >> loadordrordl247.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy248.dat -b 86833
-e 87184 >> loadordrordl248.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy249.dat -b 87185
-e 87536 >> loadordrordl249.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy250.dat -b 87537
-e 87888 >> loadordrordl250.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy251.dat -b 87889
-e 88240 >> loadordrordl251.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy252.dat -b 88241
-e 88592 >> loadordrordl252.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy253.dat -b 88593
-e 88944 >> loadordrordl253.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy254.dat -b 88945
-e 89296 >> loadordrordl254.log 2>&1 &
allprocs="allprocs ${!}"

$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy255.dat -b 89297
-e 89648 >> loadordrordl255.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -o ${tpcc_disks_location} dummy256.dat -b 89649
-e 90000 >> loadordrordl256.log 2>&1 &
allprocs="allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error='expr $? + $error'
done
exit `expr $error != 0`

loadstok_node[1..27].sh
#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:46:30 PDT 2010
rm -f loadstok*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -S -b 1 -e 351 >> loadstok1.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 352 -e 702 >> loadstok2.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 703 -e 1053 >> loadstok3.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 1054 -e 1404 >> loadstok4.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 1405 -e 1755 >> loadstok5.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 1756 -e 2106 >> loadstok6.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 2107 -e 2457 >> loadstok7.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 2458 -e 2808 >> loadstok8.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 2809 -e 3159 >> loadstok9.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 3160 -e 3510 >> loadstok10.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 3511 -e 3861 >> loadstok11.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 3862 -e 4212 >> loadstok12.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 4213 -e 4563 >> loadstok13.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 4564 -e 4914 >> loadstok14.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 4915 -e 5265 >> loadstok15.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 5266 -e 5616 >> loadstok16.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 5617 -e 5967 >> loadstok17.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 5968 -e 6318 >> loadstok18.log 2>&1 &
allprocs="allprocs ${!}"
$tpcc_load -M 2430000 -S -b 6319 -e 6669 >> loadstok19.log 2>&1 &
allprocs="allprocs ${!}"

```



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$tpcc_load -M 2430000 -S -b 67825 -e 68176 >> loadstok194.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 68177 -e 68528 >> loadstok195.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 68529 -e 68880 >> loadstok196.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 68881 -e 69232 >> loadstok197.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 69233 -e 69584 >> loadstok198.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 69585 -e 69936 >> loadstok199.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 69937 -e 70288 >> loadstok200.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 70289 -e 70640 >> loadstok201.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 70641 -e 70992 >> loadstok202.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 70993 -e 71344 >> loadstok203.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 71345 -e 71696 >> loadstok204.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 71697 -e 72048 >> loadstok205.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 72049 -e 72400 >> loadstok206.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 72401 -e 72752 >> loadstok207.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 72753 -e 73104 >> loadstok208.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 73105 -e 73456 >> loadstok209.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 73457 -e 73808 >> loadstok210.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 73809 -e 74160 >> loadstok211.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 74161 -e 74512 >> loadstok212.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 74513 -e 74864 >> loadstok213.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 74865 -e 75216 >> loadstok214.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 75217 -e 75568 >> loadstok215.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 75569 -e 75920 >> loadstok216.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 75921 -e 76272 >> loadstok217.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 76273 -e 76624 >> loadstok218.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 76625 -e 76976 >> loadstok219.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 76977 -e 77328 >> loadstok220.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 77329 -e 77680 >> loadstok221.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 77681 -e 78032 >> loadstok222.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 78033 -e 78384 >> loadstok223.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 78385 -e 78736 >> loadstok224.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 78737 -e 79088 >> loadstok225.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 79089 -e 79440 >> loadstok226.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 79441 -e 79792 >> loadstok227.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 79793 -e 80144 >> loadstok228.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 80145 -e 80496 >> loadstok229.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 80497 -e 80848 >> loadstok230.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 80849 -e 81200 >> loadstok231.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 81201 -e 81552 >> loadstok232.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 81553 -e 81904 >> loadstok233.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 81905 -e 82256 >> loadstok234.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 82257 -e 82608 >> loadstok235.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 82609 -e 82960 >> loadstok236.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 82961 -e 83312 >> loadstok237.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 83313 -e 83664 >> loadstok238.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 83665 -e 84016 >> loadstok239.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 84017 -e 84368 >> loadstok240.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 84369 -e 84720 >> loadstok241.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 84721 -e 85072 >> loadstok242.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 85073 -e 85424 >> loadstok243.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 85425 -e 85776 >> loadstok244.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 85777 -e 86128 >> loadstok245.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 86129 -e 86480 >> loadstok246.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 86481 -e 86832 >> loadstok247.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 86833 -e 87184 >> loadstok248.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 87185 -e 87536 >> loadstok249.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 87537 -e 87888 >> loadstok250.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 87889 -e 88240 >> loadstok251.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 88241 -e 88592 >> loadstok252.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 88593 -e 88944 >> loadstok253.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 88945 -e 89296 >> loadstok254.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 89297 -e 89648 >> loadstok255.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -S -b 89649 -e 90000 >> loadstok256.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

loadware_node[1..27].sh

```

#created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/evenload.sh Fri Aug 20
14:38:55 PDT 2010
rm -f loadware*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 2430000 -w -b 1 -e 351 >> loadware1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 352 -e 702 >> loadware2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 703 -e 1053 >> loadware3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 1054 -e 1404 >> loadware4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 1405 -e 1755 >> loadware5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 1756 -e 2106 >> loadware6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 2107 -e 2457 >> loadware7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 2458 -e 2808 >> loadware8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 2809 -e 3159 >> loadware9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 3160 -e 3510 >> loadware10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 3511 -e 3861 >> loadware11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 3862 -e 4212 >> loadware12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 4213 -e 4563 >> loadware13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 4564 -e 4914 >> loadware14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 4915 -e 5265 >> loadware15.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 5266 -e 5616 >> loadware16.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 2430000 -w -b 5617 -e 5967 >> loadware17.log 2>&1 &
allprocs="$allprocs ${!}"

```



```

$tpcc_load -M 2430000 -w -b 67121 -e 67472 >> loadware192.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 67473 -e 67824 >> loadware193.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 67825 -e 68176 >> loadware194.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 68177 -e 68528 >> loadware195.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 68529 -e 68880 >> loadware196.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 68881 -e 69232 >> loadware197.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 69233 -e 69584 >> loadware198.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 69585 -e 69936 >> loadware199.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 69937 -e 70288 >> loadware200.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 70289 -e 70640 >> loadware201.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 70641 -e 70992 >> loadware202.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 70993 -e 71344 >> loadware203.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 71345 -e 71696 >> loadware204.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 71697 -e 72048 >> loadware205.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 72049 -e 72400 >> loadware206.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 72401 -e 72752 >> loadware207.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 72753 -e 73104 >> loadware208.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 73105 -e 73456 >> loadware209.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 73457 -e 73808 >> loadware210.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 73809 -e 74160 >> loadware211.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 74161 -e 74512 >> loadware212.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 74513 -e 74864 >> loadware213.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 74865 -e 75216 >> loadware214.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 75217 -e 75568 >> loadware215.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 75569 -e 75920 >> loadware216.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 75921 -e 76272 >> loadware217.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 76273 -e 76624 >> loadware218.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 76625 -e 76976 >> loadware219.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 76977 -e 77328 >> loadware220.log 2>&1 &
allprocs="$Sallprocs ${!}"

$tpcc_load -M 2430000 -w -b 77329 -e 77680 >> loadware221.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 77681 -e 78032 >> loadware222.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 78033 -e 78384 >> loadware223.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 78385 -e 78736 >> loadware224.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 78737 -e 79088 >> loadware225.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 79089 -e 79440 >> loadware226.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 79441 -e 79792 >> loadware227.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 79793 -e 80144 >> loadware228.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 80145 -e 80496 >> loadware229.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 80497 -e 80848 >> loadware230.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 80849 -e 81200 >> loadware231.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 81201 -e 81552 >> loadware232.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 81553 -e 81904 >> loadware233.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 81905 -e 82256 >> loadware234.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 82257 -e 82608 >> loadware235.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 82609 -e 82960 >> loadware236.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 82961 -e 83312 >> loadware237.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 83313 -e 83664 >> loadware238.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 83665 -e 84016 >> loadware239.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 84017 -e 84368 >> loadware240.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 84369 -e 84720 >> loadware241.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 84721 -e 85072 >> loadware242.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 85073 -e 85424 >> loadware243.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 85425 -e 85776 >> loadware244.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 85777 -e 86128 >> loadware245.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 86129 -e 86480 >> loadware246.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 86481 -e 86832 >> loadware247.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 86833 -e 87184 >> loadware248.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 87185 -e 87536 >> loadware249.log 2>&1 &
allprocs="$Sallprocs ${!}"

$tpcc_load -M 2430000 -w -b 87537 -e 87888 >> loadware250.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 87889 -e 88240 >> loadware251.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 88241 -e 88592 >> loadware252.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 88593 -e 88944 >> loadware253.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 88945 -e 89296 >> loadware254.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 89297 -e 89648 >> loadware255.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 2430000 -w -b 89649 -e 90000 >> loadware256.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $Sallprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

stepenv.sh
# forces any env variables we set to be exported
set -a
tpcc_kit=t
tpcc_bench=$PWD
tpcc_scripts=$tpcc_bench/scripts
tpcc_require=$tpcc_scripts/require_vars.sh
tpcc_lcm=$tpcc_scripts/lcm.sh
tpcc_tokilobytes=$tpcc_scripts/tokilobytes.sh
tpcc_fromkilobytes=$tpcc_scripts/fromkilobytes.sh
tpcc_estsize=$tpcc_scripts/estsize.sh
tpcc_notneg=$tpcc_scripts/notneg.sh
tpcc_isneg=$tpcc_scripts/isneg.sh

# need a better way to check for bc, may
# resort to checking each directory in path
# if this doesn't work
#11/7/02 - alex.ni this is causing too many problems
#because systems have bc in some odd place. typically
#mangled cygwin installs w/ mksnt/cygwin mixes
#if test -x /usr/bin/bc -o -x /bin/bc; then
tpcc_bcexpr=$tpcc_scripts/bcexpr.sh
#else
#tpcc_bcexpr=expr
#fi

# the ksh version is a bit faster, so we want
# to use it if we have ksh. Otherwise we have
# a compatible version.
#if test -x /bin/ksh; then
#tpcc_createts=$tpcc_scripts/createts.ksh
#else
tpcc_createts=$tpcc_scripts/createts.sh
#fi

```

<pre> tpcc_tabledata=\$tpcc_scripts/tabledata.sh tpcc_load=\$tpcc_bench/benchrun/bin/tpccload.exe tpcc_createtablespace=\$tpcc_scripts/createtablespace.sh ## tpcc_sqlplus=cat tpcc_sqlplus_args="/nolog" tpcc_internal_connect='connect / as sysdba' tpcc_user_pass='tpcc/tpcc' tpcc_dba_user_pass='system/manager' oracle_dba=system oracle_dba_password=manager tpcc_sqlplus=sqlplus # import options generated by gui . \${tpcc_bench}/options.sh #8gb oracle filesize limit (in k) tpcc_fsze_limit_k=8243200 #2gb - 1k oracle extent limit (in k) tpcc_extent_limit_k=2048000 #file number limit: 1024 #tpcc_file_number_limit=1024 tpcc_file_number_limit=10240 # Runlen calculations should be in hours, but # this was the old calculation, which assumed # minutes, and also 8 times: # tpcc_runlen=`\$tpcc_bcexpr 8 * 60 * \$tpcc_runlen` # we just want to keep the value as it is. tpcc_system_size=400M tpcc_kilo_bytes=1024 #tpcc_logfile_size=`\$tpcc_bcexpr 20 + \(\$tpcc_scale \)` if test \$tpcc_np -gt 1 ; then # 4.69k per commit * 2.1 commit per TPMC ~ 9.85K # 9.85k * 30 minutes * 12.5 TPMC per Warehouse = 3693 tpcc_logfile_size=`\$tpcc_bcexpr \(\$tpcc_scale * 3693 \) / \$tpcc_kilo_bytes` else # 2.4k per commit * 2.1 commit per TPMC ~ 5k # 5k * 30 minutes * 12.5 TPMC per Warehouse = 1875 tpcc_logfile_size=`\$tpcc_bcexpr \(\$tpcc_scale * 1875 \) / \$tpcc_kilo_bytes` fi if test \$tpcc_logfile_size -lt 1024; then tpcc_logfile_size=1024 fi tpcc_logfile_size="\${tpcc_logfile_size}M" tpcc_undo_size=`\$tpcc_bcexpr 2 * \$tpcc_scale` if test \$tpcc_undo_size -gt 8096; then tpcc_undo_size=8096 fi if test \$tpcc_undo_size -lt 512; then tpcc_undo_size=512 </pre>	<pre> fi tpcc_undo_size="\${tpcc_undo_size}M" tpcc_undo_bs=8K tpcc_statspack_size=`\$tpcc_bcexpr 1 * \$tpcc_scale` if test \$tpcc_statspack_size -gt 2048; then tpcc_statspack_size=2048 fi if test \$tpcc_statspack_size -lt 300; then tpcc_statspack_size=300 fi tpcc_statspack_size="\${tpcc_statspack_size}M" tpcc_statspack_size="16000M" tpcc_sysaux_size=16000M # fixed table params #table list (note temp is always at the end since it may use numbers from other tables, and it's not included in these lists) tpcc_table_list='ware cust dist hist stok item ordr ordl nord' tpcc_index_list='iware icust1 icust2 idist istok iitem iordr1 iordr2 iordl inord' #for these I use average row length, calculated from multi-blocksize stats. #we figure out how many new rows we will gain in a run (in createtablespace.sh) #and add that much to the base tablespace size. tpcc_hist_growth=51 tpcc_ordr_growth=35 tpcc_nord_growth=regular #tpcc_ordl_growth=660 tpcc_ordl_growth=900 #i started indices at 1/10th... need an exact figure tpcc_iordr1_growth=20 tpcc_iordr2_growth=20 tpcc_iordl_growth=66 tpcc_inord_growth=2 tpcc_item_growth=0 tpcc_iitem_growth=0 tpcc_temp_growth=0 tpcc_cust_growth=regular tpcc_icust1_growth=regular tpcc_icust2_growth=regular tpcc_stok_growth=regular tpcc_istok_growth=regular tpcc_ware_growth=regular tpcc_iware_growth=regular tpcc_dist_growth=regular tpcc_idist_growth=regular # minimum size of temp tablespace tpcc_tempt_min=10240 </pre>	<pre> # for Linux, set appropriate tablespace heuristics # to set high io tables to have 64 files, and minimize # others. if expr \$tpcc_os = linux > /dev/null; then # for table in \$tpcc_table_list \$tpcc_index_list temp; do # eval "tpcc_\${table}_tsfileinc=1" # done if test \$tpcc_numfiles = 0 ; then tpcc_numfiles=256 fi tpcc_os=unix # tpcc_stok_tsfileinc=64 # tpcc_cust_tsfileinc=64 # tpcc_iordl2_tsfileinc=16 # tpcc_icust2_tsfileinc=16 # tpcc_iordl_tsfileinc=16 else #in case someone changes out of linux, and the shell is stuck for table in \$tpcc_table_list \$tpcc_index_list temp; do eval "tpcc_\${table}_tsfileinc=" done fi tpcc_stok_tsfileinc= tpcc_cust_tsfileinc= tpcc_iordl2_tsfileinc= tpcc_icust2_tsfileinc= tpcc_iordl_tsfileinc= #fi # import local options . \${tpcc_bench}/localoptions.sh if expr `echo x\$tpcc_no_options` = xt > /dev/null; then echo Please modify \${tpcc_bench}/localoptions.sh to configure the generator. exit 1 fi tpcc_fixordrordl=\${tpcc_genscripts_dir}/loadfixordrordl.sh tpcc_updateordrordl=\${tpcc_scripts}/updateordrordl.sh #tp- get table param. (that is, \$tpcc_tablename_tableparam) tp(){ eval echo \"\"\$tpcc_\$1_\$2\"" } # automatically generated variables if expr `echo \$tpcc_version cut -b1` = t > /dev/null; then tpcc_auto_undo=t else tpcc_auto_undo=f fi if expr `echo \$tpcc_version cut -b2` = t > /dev/null; then tpcc_autospace_avail=t else </pre>
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<pre> tpcc_autospace_avail=f fi if expr `echo \$tpcc_version cut -b3` = t > /dev/null; then tpcc_queue_avail=t tpcc_use_sysaux=t else tpcc_queue_avail=f tpcc_use_sysaux=f fi # for NT, ORACLE does not like \$variables in sql scripts, so we must # hardcode these things for it. if test x\$tpcc_os = xnt; then tpcc_hardcode=t else tpcc_hardcode=f fi # if this is unset we need to make sure it's something anyway if test x\$tpcc_defbs = x; then tpcc_defbs=2 fi # used for loading program if test x\$tpcc_hash_overflow = xt; then tpcc_hash_overflow=t else unset tpcc_hash_overflow fi if test x\$tpcc_overflow = xt; then tpcc_hash_overflow=t else unset tpcc_hash_overflow fi tpcc_create_steps="buildtpccflags buildcreatets buildcreatedb \ buildcreatetable-ware buildcreatetable-cust buildcreatetable-dist \ buildcreatetable-hist buildcreatetable-stok buildcreatetable-item \ buildcreatetable-ordr buildcreatetable-ordl buildcreatetable-nord buildanalyze \ \ buildloadware buildloadaddit buildloaditem buildloadhist buildloadnord \ buildloadordrordl buildloadcust buildloadstok \ buildcreateindex-iware buildcreateindex-icust1 buildcreateindex-icust2 \ buildcreateindex-idist buildcreateindex-istok buildcreateindex-iitem \ buildcreateindex-iordr1 buildcreateindex-iordr2 buildcreateindex-iordl \ buildcreateindex-inord \ buildstoreprocsql buildspacestats listfiles " # remove runscript-loadfixordrordl - shuang, 030626 tpcc_steps="runsqllocal-createdb shutdowndb startupdb-p_build createuser \ ddview runscript-createts assigntemp \ runsql-createtable_ware runsql-createtable_cust runsql-createtable_dist \ runsql-createtable_hist runsql-createtable_stok runsql-createtable_item \ runsql-createtable_ordr runsql-createtable_ordl runsql-createtable_nord \ runscript-loadware runscript-loadaddit runscript-loaditem runscript-loadhist \ runscript-loadnord runscript-loadordrordl runscript-loadcust runscript- </pre>	<pre> loadstok \ analyze runsql-createindex_iware runsql-createindex_icust1 runsql- \ createindex_icust2 runsql-createindex_idist runsql-createindex_istok runsql- \ createindex_iitem runsql-createindex_iordr1 runsql-createindex_iordr2 \ runsql-createindex_iordl runsql-createindex_inord \ createts createstoredprocs createspacestats createmisc" tpcc_total_files=524 # no longer automatically exports env variables set +a # check for problems with configuration badconf= for table in \$tpcc_table_list; do if expr `tp \$table imp` = queue > /dev/null; then if expr \$tpcc_queue_avail = f > /dev/null; then echo Table \$table may not be a queue, since queues are \ echo are unavailable in the selected Oracle version. badconf=t fi fi if expr \$tpcc_autospace_avail = f & `tp \$table autospace` = t > /dev/null; \ then echo Table \$table may not use bitmapped space management \ echo since it is not available in the selected Oracle version. badconf=t fi done if test -n "\$badconf"; then exit 1 fi # make sure we have everything if \$tpcc_require ORACLE_SID \ tpcc_tokilobytes tpcc_createts tpcc_lcm \ tpcc_sqlplus tpcc_internal_connect \ tpcc_np tpcc_cpu tpcc_os tpcc_runlen tpcc_ldrive tpcc_scale \ tpcc_disks_location tpcc_auto_undo tpcc_tempts_min \ tpcc_system_size tpcc_logfile_size \ tpcc_undo_size tpcc_undo_bs \ oracle_dba oracle_dba_password tpcc_dba_user_pass \ then exit 1; fi if test x\$tpcc_hardcode != xt; then tpcc_disks_location=\${tpcc_disks_location}/ # tpcc_sql_dir=\$tpcc_sql_dir' # tpcc_statspack_size=\$tpcc_statspack_size' # tpcc_genscripts_dir=\$tpcc_genscripts_dir' fi createdb.sql /* created automatically by /export/home/oracle/tpcc_kit_27/nodes/scripts/buildcreatedb.sh Thu Aug 19 \ 13:21:24 PDT 2010 */ spool createdb.log </pre>	<pre> set echo on shutdown abort startup pfile=p_create.ora nomount create database recap controlfile reuse maxinstances 27 maxlogfiles 108 datafile '/export/home/oracle/tpcc_disks_recap/system_0_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_1_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_2_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_3_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_4_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_5_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_6_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_7_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_8_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_9_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_10_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_11_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_12_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_13_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_14_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_15_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_16_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_17_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_18_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_19_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_20_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_21_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_22_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_23_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_24_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_25_0' size 1000M reuse, '/export/home/oracle/tpcc_disks_recap/system_26_0' size 1000M reuse logfile ('/export/home/oracle/tpcc_disks_recap/log_0_0', '/export/home/oracle/tpcc_disks_recap/log_0_2') size 385G reuse, ('/export/home/oracle/tpcc_disks_recap/log_0_1', '/export/home/oracle/tpcc_disks_recap/log_0_3') size 385G reuse sysaux datafile '/export/home/oracle/tpcc_disks_recap/tpccaux' size 16000M \ reuse ; alter database add logfile thread 2 group 3 ('/export/home/oracle/tpcc_disks_recap/log_1_0', '/export/home/oracle/tpcc_disks_recap/log_1_2') size 385G reuse, group 4 ('/export/home/oracle/tpcc_disks_recap/log_1_1', '/export/home/oracle/tpcc_disks_recap/log_1_3') size 385G reuse; alter database enable public thread 2; alter database add logfile thread 3 group 5 ('/export/home/oracle/tpcc_disks_recap/log_2_0', '/export/home/oracle/tpcc_disks_recap/log_2_2') size 385G reuse, group 6 ('/export/home/oracle/tpcc_disks_recap/log_2_1', '/export/home/oracle/tpcc_disks_recap/log_2_3') size 385G reuse; alter database enable public thread 3; alter database add logfile thread 4 </pre>
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<pre> create undo tablespace undo_11 datafile '/export/home/oracle/tpcc_disks_recap/roll10' size 8096M reuse blocksiz 8K; create undo tablespace undo_12 datafile '/export/home/oracle/tpcc_disks_recap/roll11' size 8096M reuse blocksiz 8K; create undo tablespace undo_13 datafile '/export/home/oracle/tpcc_disks_recap/roll12' size 8096M reuse blocksiz 8K; create undo tablespace undo_14 datafile '/export/home/oracle/tpcc_disks_recap/roll13' size 8096M reuse blocksiz 8K; create undo tablespace undo_15 datafile '/export/home/oracle/tpcc_disks_recap/roll14' size 8096M reuse blocksiz 8K; create undo tablespace undo_16 datafile '/export/home/oracle/tpcc_disks_recap/roll15' size 8096M reuse blocksiz 8K; create undo tablespace undo_17 datafile '/export/home/oracle/tpcc_disks_recap/roll16' size 8096M reuse blocksiz 8K; create undo tablespace undo_18 datafile '/export/home/oracle/tpcc_disks_recap/roll17' size 8096M reuse blocksiz 8K; create undo tablespace undo_19 datafile '/export/home/oracle/tpcc_disks_recap/roll18' size 8096M reuse blocksiz 8K; create undo tablespace undo_20 datafile '/export/home/oracle/tpcc_disks_recap/roll19' size 8096M reuse blocksiz 8K; create undo tablespace undo_21 datafile '/export/home/oracle/tpcc_disks_recap/roll20' size 8096M reuse blocksiz 8K; create undo tablespace undo_22 datafile '/export/home/oracle/tpcc_disks_recap/roll21' size 8096M reuse blocksiz 8K; create undo tablespace undo_23 datafile '/export/home/oracle/tpcc_disks_recap/roll22' size 8096M reuse blocksiz 8K; create undo tablespace undo_24 datafile '/export/home/oracle/tpcc_disks_recap/roll23' size 8096M reuse blocksiz 8K; create undo tablespace undo_25 datafile '/export/home/oracle/tpcc_disks_recap/roll24' size 8096M reuse blocksiz 8K; create undo tablespace undo_26 datafile '/export/home/oracle/tpcc_disks_recap/roll25' size 8096M reuse blocksiz 8K; create undo tablespace undo_27 datafile '/export/home/oracle/tpcc_disks_recap/roll26' size 8096M reuse blocksiz 8K; set echo off exit sql.sqlcode createindex_icust1.sql /* created automatically by </pre>	<pre> /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:41 PDT 2010 */ 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) local (partition icust1_0 tablespace icust1_0 , partition icust1_1 tablespace icust1_1 , partition icust1_2 tablespace icust1_2 , partition icust1_3 tablespace icust1_3 , partition icust1_4 tablespace icust1_4 , partition icust1_5 tablespace icust1_5 , partition icust1_6 tablespace icust1_6 , partition icust1_7 tablespace icust1_7 , partition icust1_8 tablespace icust1_8 , partition icust1_9 tablespace icust1_9 , partition icust1_10 tablespace icust1_10 , partition icust1_11 tablespace icust1_11 , partition icust1_12 tablespace icust1_12 , partition icust1_13 tablespace icust1_13 , partition icust1_14 tablespace icust1_14 , partition icust1_15 tablespace icust1_15 , partition icust1_16 tablespace icust1_16 , partition icust1_17 tablespace icust1_17 , partition icust1_18 tablespace icust1_18 , partition icust1_19 tablespace icust1_19 , partition icust1_20 tablespace icust1_20 , partition icust1_21 tablespace icust1_21 , partition icust1_22 tablespace icust1_22 , partition icust1_23 tablespace icust1_23 , partition icust1_24 tablespace icust1_24 , partition icust1_25 tablespace icust1_25 , partition icust1_26 tablespace icust1_26) parallel 256 pctfree 1 intrans 3 storage (buffer_pool default) compute statistics ; set echo off spool off exit sql.sqlcode; createindex_icust2.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:42 PDT 2010 */ set timing on set sqlblanklines on spool createindex_icust2.log ; set echo on ; drop index icust2 ; </pre>	<pre> create unique index icust2 on cust (c_w_id , c_last , c_d_id , c_first , c_id) local (partition icust2_0 tablespace icust2_0 , partition icust2_1 tablespace icust2_1 , partition icust2_2 tablespace icust2_2 , partition icust2_3 tablespace icust2_3 , partition icust2_4 tablespace icust2_4 , partition icust2_5 tablespace icust2_5 , partition icust2_6 tablespace icust2_6 , partition icust2_7 tablespace icust2_7 , partition icust2_8 tablespace icust2_8 , partition icust2_9 tablespace icust2_9 , partition icust2_10 tablespace icust2_10 , partition icust2_11 tablespace icust2_11 , partition icust2_12 tablespace icust2_12 , partition icust2_13 tablespace icust2_13 , partition icust2_14 tablespace icust2_14 , partition icust2_15 tablespace icust2_15 , partition icust2_16 tablespace icust2_16 , partition icust2_17 tablespace icust2_17 , partition icust2_18 tablespace icust2_18 , partition icust2_19 tablespace icust2_19 , partition icust2_20 tablespace icust2_20 , partition icust2_21 tablespace icust2_21 , partition icust2_22 tablespace icust2_22 , partition icust2_23 tablespace icust2_23 , partition icust2_24 tablespace icust2_24 , partition icust2_25 tablespace icust2_25 , partition icust2_26 tablespace icust2_26) parallel 256 pctfree 1 intrans 3 storage (buffer_pool default) compute statistics ; set echo off spool off exit sql.sqlcode; createindex_idist.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:43 PDT 2010 */ 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) local (partition idist_0 tablespace misc_0 , partition idist_1 tablespace misc_1 </pre>
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<pre> , partition idist_2 tablespace misc_2 , partition idist_3 tablespace misc_3 , partition idist_4 tablespace misc_4 , partition idist_5 tablespace misc_5 , partition idist_6 tablespace misc_6 , partition idist_7 tablespace misc_7 , partition idist_8 tablespace misc_8 , partition idist_9 tablespace misc_9 , partition idist_10 tablespace misc_10 , partition idist_11 tablespace misc_11 , partition idist_12 tablespace misc_12 , partition idist_13 tablespace misc_13 , partition idist_14 tablespace misc_14 , partition idist_15 tablespace misc_15 , partition idist_16 tablespace misc_16 , partition idist_17 tablespace misc_17 , partition idist_18 tablespace misc_18 , partition idist_19 tablespace misc_19 , partition idist_20 tablespace misc_20 , partition idist_21 tablespace misc_21 , partition idist_22 tablespace misc_22 , partition idist_23 tablespace misc_23 , partition idist_24 tablespace misc_24 , partition idist_25 tablespace misc_25 , partition idist_26 tablespace misc_26) pctfree 5 intrans 3 storage (buffer_pool default) parallel 1 compute statistics ; set echo off spool off exit sql.sqlcode; createindex_item.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:44 PDT 2010 */ 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 intrans 4 storage (buffer_pool default) compute statistics tablespace misc_0 ; set echo off spool off exit sql.sqlcode; createindex_iordl.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug </pre>	<pre> 19 13:26:48 PDT 2010 */ set timing on exit 0; createindex_inord.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:49 PDT 2010 */ set timing on exit 0; createindex_iordl.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:48 PDT 2010 */ set timing on exit 0; createindex_iord1.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:44 PDT 2010 */ set timing on exit 0; createindex_iord2.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:45 PDT 2010 */ set timing on set sqlblanklines on spool createindex_iordr2.log ; set echo on ; drop index iordr2 ; create unique index iordr2 on order (o_w_id , o_d_id , o_c_id , o_id) local (partition iordr2_0 tablespace iordr2_0 , partition iordr2_1 tablespace iordr2_0 , partition iordr2_2 tablespace iordr2_0 , partition iordr2_3 tablespace iordr2_0 , partition iordr2_4 tablespace iordr2_0 , partition iordr2_5 tablespace iordr2_0 , partition iordr2_6 tablespace iordr2_0 , partition iordr2_7 tablespace iordr2_0 , partition iordr2_8 tablespace iordr2_0 , partition iordr2_9 tablespace iordr2_0 , partition iordr2_10 tablespace iordr2_0 , partition iordr2_11 tablespace iordr2_0 , partition iordr2_12 tablespace iordr2_0 , partition iordr2_13 tablespace iordr2_0 , partition iordr2_14 tablespace iordr2_0 , partition iordr2_15 tablespace iordr2_0 , partition iordr2_16 tablespace iordr2_1 , partition iordr2_17 tablespace iordr2_1 , partition iordr2_18 tablespace iordr2_1 </pre>	<pre> , partition iordr2_19 tablespace iordr2_1 , partition iordr2_20 tablespace iordr2_1 , partition iordr2_21 tablespace iordr2_1 , partition iordr2_22 tablespace iordr2_1 , partition iordr2_23 tablespace iordr2_1 , partition iordr2_24 tablespace iordr2_1 , partition iordr2_25 tablespace iordr2_1 , partition iordr2_26 tablespace iordr2_1 , partition iordr2_27 tablespace iordr2_1 , partition iordr2_28 tablespace iordr2_1 , partition iordr2_29 tablespace iordr2_1 , partition iordr2_30 tablespace iordr2_1 , partition iordr2_31 tablespace iordr2_1 , partition iordr2_32 tablespace iordr2_2 , partition iordr2_33 tablespace iordr2_2 , partition iordr2_34 tablespace iordr2_2 , partition iordr2_35 tablespace iordr2_2 , partition iordr2_36 tablespace iordr2_2 , partition iordr2_37 tablespace iordr2_2 , partition iordr2_38 tablespace iordr2_2 , partition iordr2_39 tablespace iordr2_2 , partition iordr2_40 tablespace iordr2_2 , partition iordr2_41 tablespace iordr2_2 , partition iordr2_42 tablespace iordr2_2 , partition iordr2_43 tablespace iordr2_2 , partition iordr2_44 tablespace iordr2_2 , partition iordr2_45 tablespace iordr2_2 , partition iordr2_46 tablespace iordr2_2 , partition iordr2_47 tablespace iordr2_2 , partition iordr2_48 tablespace iordr2_3 , partition iordr2_49 tablespace iordr2_3 , partition iordr2_50 tablespace iordr2_3 , partition iordr2_51 tablespace iordr2_3 , partition iordr2_52 tablespace iordr2_3 , partition iordr2_53 tablespace iordr2_3 , partition iordr2_54 tablespace iordr2_3 , partition iordr2_55 tablespace iordr2_3 , partition iordr2_56 tablespace iordr2_3 , partition iordr2_57 tablespace iordr2_3 , partition iordr2_58 tablespace iordr2_3 , partition iordr2_59 tablespace iordr2_3 , partition iordr2_60 tablespace iordr2_3 , partition iordr2_61 tablespace iordr2_3 , partition iordr2_62 tablespace iordr2_3 , partition iordr2_63 tablespace iordr2_3 , partition iordr2_64 tablespace iordr2_4 , partition iordr2_65 tablespace iordr2_4 , partition iordr2_66 tablespace iordr2_4 , partition iordr2_67 tablespace iordr2_4 , partition iordr2_68 tablespace iordr2_4 , partition iordr2_69 tablespace iordr2_4 , partition iordr2_70 tablespace iordr2_4 , partition iordr2_71 tablespace iordr2_4 , partition iordr2_72 tablespace iordr2_4 , partition iordr2_73 tablespace iordr2_4 , partition iordr2_74 tablespace iordr2_4 , partition iordr2_75 tablespace iordr2_4 , partition iordr2_76 tablespace iordr2_4 </pre>
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<pre> , partition iodr2_425 tablespace iodr2_26 , partition iodr2_426 tablespace iodr2_26 , partition iodr2_427 tablespace iodr2_26 , partition iodr2_428 tablespace iodr2_26 , partition iodr2_429 tablespace iodr2_26 , partition iodr2_430 tablespace iodr2_26 , partition iodr2_431 tablespace iodr2_26) parallel 256 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_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:43 PDT 2010 */ 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) local (partition istok_0 tablespace istok_0 , partition istok_1 tablespace istok_1 , partition istok_2 tablespace istok_2 , partition istok_3 tablespace istok_3 , partition istok_4 tablespace istok_4 , partition istok_5 tablespace istok_5 , partition istok_6 tablespace istok_6 , partition istok_7 tablespace istok_7 , partition istok_8 tablespace istok_8 , partition istok_9 tablespace istok_9 , partition istok_10 tablespace istok_10 , partition istok_11 tablespace istok_11 , partition istok_12 tablespace istok_12 , partition istok_13 tablespace istok_13 , partition istok_14 tablespace istok_14 , partition istok_15 tablespace istok_15 , partition istok_16 tablespace istok_16 , partition istok_17 tablespace istok_17 , partition istok_18 tablespace istok_18 , partition istok_19 tablespace istok_19 , partition istok_20 tablespace istok_20 , partition istok_21 tablespace istok_21 , partition istok_22 tablespace istok_22 , partition istok_23 tablespace istok_23 , partition istok_24 tablespace istok_24 , partition istok_25 tablespace istok_25 , partition istok_26 tablespace istok_26) </pre>	<pre> parallel 256 pctfree 1 initrans 3 storage (buffer_pool default) compute statistics ; set echo off spool off exit sql.sqlcode; createindex_iware.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreateindex.sh Thu Aug 19 13:26:43 PDT 2010 */ set timing on set sqlblanklines on drop index iware ; create unique index iware on ware (w_id) local (partition iware_0 tablespace misc_0 , partition iware_1 tablespace misc_1 , partition iware_2 tablespace misc_2 , partition iware_3 tablespace misc_3 , partition iware_4 tablespace misc_4 , partition iware_5 tablespace misc_5 , partition iware_6 tablespace misc_6 , partition iware_7 tablespace misc_7 , partition iware_8 tablespace misc_8 , partition iware_9 tablespace misc_9 , partition iware_10 tablespace misc_10 , partition iware_11 tablespace misc_11 , partition iware_12 tablespace misc_12 , partition iware_13 tablespace misc_13 , partition iware_14 tablespace misc_14 , partition iware_15 tablespace misc_15 , partition iware_16 tablespace misc_16 , partition iware_17 tablespace misc_17 , partition iware_18 tablespace misc_18 , partition iware_19 tablespace misc_19 , partition iware_20 tablespace misc_20 , partition iware_21 tablespace misc_21 , partition iware_22 tablespace misc_22 , partition iware_23 tablespace misc_23 , partition iware_24 tablespace misc_24 , partition iware_25 tablespace misc_25 , partition iware_26 tablespace misc_26) parallel 256 pctfree 1 initrans 3 storage (buffer_pool default) compute statistics ; set echo off spool off exit sql.sqlcode; createtoreprocs.log </pre>	<pre> spool createtoreprocs.log @tkvcinin.sql spool off exit sql.sqlcode; createtable_cust.sql /* created automatically by /export/home/oracle/tpcc_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19 13:21:28 PDT 2010 */ 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 2700000000 hash is ((c_w_id * 30000 + c_id * 10 + c_d_id - 30011)) size 850 pctfree 0 initrans 3 storage (buffer_pool recycle) parallel (degree 1024) partition by range(c_w_id) (partition cust_0 values less than (90001) tablespace cust_0 , partition cust_1 values less than (180001) tablespace cust_1 , partition cust_2 values less than (270001) tablespace cust_2 , partition cust_3 values less than (360001) tablespace cust_3 , partition cust_4 values less than (450001) tablespace cust_4 , partition cust_5 values less than (540001) tablespace cust_5 , partition cust_6 values less than (630001) tablespace cust_6 , partition cust_7 values less than (720001) tablespace cust_7 , partition cust_8 values less than (810001) tablespace cust_8 , partition cust_9 values less than (900001) tablespace cust_9 , partition cust_10 values less than (990001) tablespace cust_10 , partition cust_11 values less than (1080001) tablespace cust_11 , partition cust_12 values less than (1170001) tablespace cust_12 , partition cust_13 values less than (1260001) tablespace cust_13 , partition cust_14 values less than (1350001) tablespace cust_14 , partition cust_15 values less than (1440001) tablespace cust_15 , partition cust_16 values less than (1530001) tablespace cust_16 , partition cust_17 values less than (1620001) tablespace cust_17 , partition cust_18 values less than (1710001) tablespace cust_18 , partition cust_19 values less than (1800001) tablespace cust_19 , partition cust_20 values less than (1890001) tablespace cust_20 , partition cust_21 values less than (1980001) tablespace cust_21 , partition cust_22 values less than (2070001) tablespace cust_22 , partition cust_23 values less than (2160001) tablespace cust_23 , partition cust_24 values less than (2250001) tablespace cust_24 , partition cust_25 values less than (2340001) tablespace cust_25 , partition cust_26 values less than (maxvalue) tablespace cust_26) ; </pre>
--	--	---

```

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)
)
, partition dist_5 values less than ( 540001 ) tablespace misc_5
, partition dist_6 values less than ( 630001 ) tablespace misc_6
, partition dist_7 values less than ( 720001 ) tablespace misc_7
, partition dist_8 values less than ( 810001 ) tablespace misc_8
, partition dist_9 values less than ( 900001 ) tablespace misc_9
, partition dist_10 values less than ( 990001 ) tablespace misc_10
, partition dist_11 values less than ( 1080001 ) tablespace misc_11
, partition dist_12 values less than ( 1170001 ) tablespace misc_12
, partition dist_13 values less than ( 1260001 ) tablespace misc_13
, partition dist_14 values less than ( 1350001 ) tablespace misc_14
, partition dist_15 values less than ( 1440001 ) tablespace misc_15
, partition dist_16 values less than ( 1530001 ) tablespace misc_16
, partition dist_17 values less than ( 1620001 ) tablespace misc_17
, partition dist_18 values less than ( 1710001 ) tablespace misc_18
, partition dist_19 values less than ( 1800001 ) tablespace misc_19
, partition dist_20 values less than ( 1890001 ) tablespace misc_20
, partition dist_21 values less than ( 1980001 ) tablespace misc_21
, partition dist_22 values less than ( 2070001 ) tablespace misc_22
, partition dist_23 values less than ( 2160001 ) tablespace misc_23
, partition dist_24 values less than ( 2250001 ) tablespace misc_24
, partition dist_25 values less than ( 2340001 ) tablespace misc_25
, partition dist_26 values less than ( maxvalue ) tablespace misc_26
)
)
, 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 ( 5626 ) tablespace hist_0
, partition hist_1 values less than ( 11251 ) tablespace hist_0
, partition hist_2 values less than ( 16876 ) tablespace hist_0
, partition hist_3 values less than ( 22501 ) tablespace hist_0
, partition hist_4 values less than ( 28126 ) tablespace hist_0
, partition hist_5 values less than ( 33751 ) tablespace hist_0
, partition hist_6 values less than ( 39376 ) tablespace hist_0
, partition hist_7 values less than ( 45001 ) tablespace hist_0
, partition hist_8 values less than ( 50626 ) tablespace hist_0
, partition hist_9 values less than ( 56251 ) tablespace hist_0
, partition hist_10 values less than ( 61876 ) tablespace hist_0
, partition hist_11 values less than ( 67501 ) tablespace hist_0
, partition hist_12 values less than ( 73126 ) tablespace hist_0
, partition hist_13 values less than ( 78751 ) tablespace hist_0
, partition hist_14 values less than ( 84376 ) tablespace hist_0
, partition hist_15 values less than ( 90001 ) tablespace hist_0
, partition hist_16 values less than ( 95626 ) tablespace hist_1
, partition hist_17 values less than ( 101251 ) tablespace hist_1
, partition hist_18 values less than ( 106876 ) tablespace hist_1
, partition hist_19 values less than ( 112501 ) tablespace hist_1
, partition hist_20 values less than ( 118126 ) tablespace hist_1
, partition hist_21 values less than ( 123751 ) tablespace hist_1
, partition hist_22 values less than ( 129376 ) tablespace hist_1
, partition hist_23 values less than ( 135001 ) tablespace hist_1
, partition hist_24 values less than ( 140626 ) tablespace hist_1
, partition hist_25 values less than ( 146251 ) tablespace hist_1
, partition hist_26 values less than ( 151876 ) tablespace hist_1
, partition hist_27 values less than ( 157501 ) tablespace hist_1
, partition hist_28 values less than ( 163126 ) tablespace hist_1
, partition hist_29 values less than ( 168751 ) tablespace hist_1
, partition hist_30 values less than ( 174376 ) tablespace hist_1
, partition hist_31 values less than ( 180001 ) tablespace hist_1
, partition hist_32 values less than ( 185626 ) tablespace hist_2
, partition hist_33 values less than ( 191251 ) tablespace hist_2
, partition hist_34 values less than ( 196876 ) tablespace hist_2
, partition hist_35 values less than ( 202501 ) tablespace hist_2
, partition hist_36 values less than ( 208126 ) tablespace hist_2
, partition hist_37 values less than ( 213751 ) tablespace hist_2
, partition hist_38 values less than ( 219376 ) tablespace hist_2
, partition hist_39 values less than ( 225001 ) tablespace hist_2
, partition hist_40 values less than ( 230626 ) tablespace hist_2
, partition hist_41 values less than ( 236251 ) tablespace hist_2
, partition hist_42 values less than ( 241876 ) tablespace hist_2
, partition hist_43 values less than ( 247501 ) tablespace hist_2
, partition hist_44 values less than ( 253126 ) tablespace hist_2
, partition hist_45 values less than ( 258751 ) tablespace hist_2
, partition hist_46 values less than ( 264376 ) tablespace hist_2
, partition hist_47 values less than ( 270001 ) tablespace hist_2
)
);
set echo off
spool off
exit sql.sqlcode;
createtable_dist.sql
/* created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:30 PDT 2010 */
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 900000
hash is (((d_w_id - 1) * 10) + d_id - 1))
size 3496
intrans 4
storage ( buffer_pool default ) parallel (degree 32)
partition by range( d_w_id ) (
partition dist_0 values less than ( 90001 ) tablespace misc_0
, partition dist_1 values less than ( 180001 ) tablespace misc_1
, partition dist_2 values less than ( 270001 ) tablespace misc_2
, partition dist_3 values less than ( 360001 ) tablespace misc_3
, partition dist_4 values less than ( 450001 ) tablespace misc_4
)
);
createtable_hist.sql
/* created automatically by
/export/home/oracle/tpcc_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:32 PDT 2010 */
set timing on
set sqlblanklines on
spool createtable_hist.log
set echo on
drop table hist ;

create table hist (
  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;

```



```

, partition hist_396 values less than ( 223126 ) tablespace hist_24
, partition hist_397 values less than ( 2238751 ) tablespace hist_24
, partition hist_398 values less than ( 2244376 ) tablespace hist_24
, partition hist_399 values less than ( 2250001 ) tablespace hist_24
, partition hist_400 values less than ( 2255626 ) tablespace hist_25
, partition hist_401 values less than ( 2261251 ) tablespace hist_25
, partition hist_402 values less than ( 2266876 ) tablespace hist_25
, partition hist_403 values less than ( 2272501 ) tablespace hist_25
, partition hist_404 values less than ( 2278126 ) tablespace hist_25
, partition hist_405 values less than ( 2283751 ) tablespace hist_25
, partition hist_406 values less than ( 2289376 ) tablespace hist_25
, partition hist_407 values less than ( 2295001 ) tablespace hist_25
, partition hist_408 values less than ( 2300626 ) tablespace hist_25
, partition hist_409 values less than ( 2306251 ) tablespace hist_25
, partition hist_410 values less than ( 2311876 ) tablespace hist_25
, partition hist_411 values less than ( 2317501 ) tablespace hist_25
, partition hist_412 values less than ( 2323126 ) tablespace hist_25
, partition hist_413 values less than ( 2328751 ) tablespace hist_25
, partition hist_414 values less than ( 2334376 ) tablespace hist_25
, partition hist_415 values less than ( 2340001 ) tablespace hist_25
, partition hist_416 values less than ( 2345626 ) tablespace hist_26
, partition hist_417 values less than ( 2351251 ) tablespace hist_26
, partition hist_418 values less than ( 2356876 ) tablespace hist_26
, partition hist_419 values less than ( 2362501 ) tablespace hist_26
, partition hist_420 values less than ( 2368126 ) tablespace hist_26
, partition hist_421 values less than ( 2373751 ) tablespace hist_26
, partition hist_422 values less than ( 2379376 ) tablespace hist_26
, partition hist_423 values less than ( 2385001 ) tablespace hist_26
, partition hist_424 values less than ( 2390626 ) tablespace hist_26
, partition hist_425 values less than ( 2396251 ) tablespace hist_26
, partition hist_426 values less than ( 2401876 ) tablespace hist_26
, partition hist_427 values less than ( 2407501 ) tablespace hist_26
, partition hist_428 values less than ( 2413126 ) tablespace hist_26
, partition hist_429 values less than ( 2418751 ) tablespace hist_26
, partition hist_430 values less than ( 2424376 ) tablespace hist_26
, partition hist_431 values less than ( maxvalue ) tablespace hist_26
)
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_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:41 PDT 2010 */
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 misc_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_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:51 PDT 2010 */
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 56250
hash is ( (no_w_id - 1) * 10 + no_d_id - 1 )
size 390 parallel (degree 32)
partition by range( no_w_id ) (
partition nord_0 values less than ( 5626 ) tablespace nord_0
, partition nord_1 values less than ( 11251 ) tablespace nord_0
, partition nord_2 values less than ( 16876 ) tablespace nord_0
, partition nord_3 values less than ( 22501 ) tablespace nord_0
, partition nord_4 values less than ( 28126 ) tablespace nord_0
, partition nord_5 values less than ( 33751 ) tablespace nord_0
, partition nord_6 values less than ( 39376 ) tablespace nord_0
, partition nord_7 values less than ( 45001 ) tablespace nord_0
, partition nord_8 values less than ( 50626 ) tablespace nord_0
, partition nord_9 values less than ( 56251 ) tablespace nord_0
, partition nord_10 values less than ( 61876 ) tablespace nord_0
, partition nord_11 values less than ( 67501 ) tablespace nord_0
, partition nord_12 values less than ( 73126 ) tablespace nord_0
, partition nord_13 values less than ( 78751 ) tablespace nord_0

```

```

, partition nord_14 values less than ( 84376 ) tablespace nord_0
, partition nord_15 values less than ( 90001 ) tablespace nord_0
, partition nord_16 values less than ( 95626 ) tablespace nord_1
, partition nord_17 values less than ( 101251 ) tablespace nord_1
, partition nord_18 values less than ( 106876 ) tablespace nord_1
, partition nord_19 values less than ( 112501 ) tablespace nord_1
, partition nord_20 values less than ( 118126 ) tablespace nord_1
, partition nord_21 values less than ( 123751 ) tablespace nord_1
, partition nord_22 values less than ( 129376 ) tablespace nord_1
, partition nord_23 values less than ( 135001 ) tablespace nord_1
, partition nord_24 values less than ( 140626 ) tablespace nord_1
, partition nord_25 values less than ( 146251 ) tablespace nord_1
, partition nord_26 values less than ( 151876 ) tablespace nord_1
, partition nord_27 values less than ( 157501 ) tablespace nord_1
, partition nord_28 values less than ( 163126 ) tablespace nord_1
, partition nord_29 values less than ( 168751 ) tablespace nord_1
, partition nord_30 values less than ( 174376 ) tablespace nord_1
, partition nord_31 values less than ( 180001 ) tablespace nord_1
, partition nord_32 values less than ( 185626 ) tablespace nord_2
, partition nord_33 values less than ( 191251 ) tablespace nord_2
, partition nord_34 values less than ( 196876 ) tablespace nord_2
, partition nord_35 values less than ( 202501 ) tablespace nord_2
, partition nord_36 values less than ( 208126 ) tablespace nord_2
, partition nord_37 values less than ( 213751 ) tablespace nord_2
, partition nord_38 values less than ( 219376 ) tablespace nord_2
, partition nord_39 values less than ( 225001 ) tablespace nord_2
, partition nord_40 values less than ( 230626 ) tablespace nord_2
, partition nord_41 values less than ( 236251 ) tablespace nord_2
, partition nord_42 values less than ( 241876 ) tablespace nord_2
, partition nord_43 values less than ( 247501 ) tablespace nord_2
, partition nord_44 values less than ( 253126 ) tablespace nord_2
, partition nord_45 values less than ( 258751 ) tablespace nord_2
, partition nord_46 values less than ( 264376 ) tablespace nord_2
, partition nord_47 values less than ( 270001 ) tablespace nord_2
, partition nord_48 values less than ( 275626 ) tablespace nord_3
, partition nord_49 values less than ( 281251 ) tablespace nord_3
, partition nord_50 values less than ( 286876 ) tablespace nord_3
, partition nord_51 values less than ( 292501 ) tablespace nord_3
, partition nord_52 values less than ( 298126 ) tablespace nord_3
, partition nord_53 values less than ( 303751 ) tablespace nord_3
, partition nord_54 values less than ( 309376 ) tablespace nord_3
, partition nord_55 values less than ( 315001 ) tablespace nord_3
, partition nord_56 values less than ( 320626 ) tablespace nord_3
, partition nord_57 values less than ( 326251 ) tablespace nord_3
, partition nord_58 values less than ( 331876 ) tablespace nord_3
, partition nord_59 values less than ( 337501 ) tablespace nord_3
, partition nord_60 values less than ( 343126 ) tablespace nord_3
, partition nord_61 values less than ( 348751 ) tablespace nord_3
, partition nord_62 values less than ( 354376 ) tablespace nord_3
, partition nord_63 values less than ( 360001 ) tablespace nord_3
, partition nord_64 values less than ( 365626 ) tablespace nord_4
, partition nord_65 values less than ( 371251 ) tablespace nord_4
, partition nord_66 values less than ( 376876 ) tablespace nord_4
, partition nord_67 values less than ( 382501 ) tablespace nord_4
, partition nord_68 values less than ( 388126 ) tablespace nord_4
, partition nord_69 values less than ( 393751 ) tablespace nord_4
, partition nord_70 values less than ( 399376 ) tablespace nord_4
, partition nord_71 values less than ( 405001 ) tablespace nord_4

```



```
, partition nord_420 values less than ( 2368126 ) tablespace nord_26
, partition nord_421 values less than ( 2373751 ) tablespace nord_26
, partition nord_422 values less than ( 2379376 ) tablespace nord_26
, partition nord_423 values less than ( 2385001 ) tablespace nord_26
, partition nord_424 values less than ( 2390626 ) tablespace nord_26
, partition nord_425 values less than ( 2396251 ) tablespace nord_26
, partition nord_426 values less than ( 2401876 ) tablespace nord_26
, partition nord_427 values less than ( 2407501 ) tablespace nord_26
, partition nord_428 values less than ( 2413126 ) tablespace nord_26
, partition nord_429 values less than ( 2418751 ) tablespace nord_26
, partition nord_430 values less than ( 2424376 ) tablespace nord_26
, partition nord_431 values less than ( maxvalue ) tablespace nord_26
)
;
```

```
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_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:50 PDT 2010 */
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_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:43 PDT 2010 */
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_i_id number SORT
, o_number number SORT
)
hashkeys 56250
hash is ( (o_w_id - 1) * 10 + o_d_id - 1 )
size 1490 parallel (degree 64)
partition by range( o_w_id ) (
partition ordr_0 values less than ( 5626 ) tablespace ordr_0
, partition ordr_1 values less than ( 11251 ) tablespace ordr_0
, partition ordr_2 values less than ( 16876 ) tablespace ordr_0
, partition ordr_3 values less than ( 22501 ) tablespace ordr_0
, partition ordr_4 values less than ( 28126 ) tablespace ordr_0
, partition ordr_5 values less than ( 33751 ) tablespace ordr_0
, partition ordr_6 values less than ( 39376 ) tablespace ordr_0
, partition ordr_7 values less than ( 45001 ) tablespace ordr_0
, partition ordr_8 values less than ( 50626 ) tablespace ordr_0
, partition ordr_9 values less than ( 56251 ) tablespace ordr_0
, partition ordr_10 values less than ( 61876 ) tablespace ordr_0
, partition ordr_11 values less than ( 67501 ) tablespace ordr_0
, partition ordr_12 values less than ( 73126 ) tablespace ordr_0
, partition ordr_13 values less than ( 78751 ) tablespace ordr_0
, partition ordr_14 values less than ( 84376 ) tablespace ordr_0
, partition ordr_15 values less than ( 90001 ) tablespace ordr_0
, partition ordr_16 values less than ( 95626 ) tablespace ordr_1
, partition ordr_17 values less than ( 101251 ) tablespace ordr_1
, partition ordr_18 values less than ( 106876 ) tablespace ordr_1
, partition ordr_19 values less than ( 112501 ) tablespace ordr_1
, partition ordr_20 values less than ( 118126 ) tablespace ordr_1
, partition ordr_21 values less than ( 123751 ) tablespace ordr_1
, partition ordr_22 values less than ( 129376 ) tablespace ordr_1
, partition ordr_23 values less than ( 135001 ) tablespace ordr_1
, partition ordr_24 values less than ( 140626 ) tablespace ordr_1
, partition ordr_25 values less than ( 146251 ) tablespace ordr_1
, partition ordr_26 values less than ( 151876 ) tablespace ordr_1
, partition ordr_27 values less than ( 157501 ) tablespace ordr_1
, partition ordr_28 values less than ( 163126 ) tablespace ordr_1
, partition ordr_29 values less than ( 168751 ) tablespace ordr_1
, partition ordr_30 values less than ( 174376 ) tablespace ordr_1
, partition ordr_31 values less than ( 180001 ) tablespace ordr_1
, partition ordr_32 values less than ( 185626 ) tablespace ordr_2
, partition ordr_33 values less than ( 191251 ) tablespace ordr_2
, partition ordr_34 values less than ( 196876 ) tablespace ordr_2
, partition ordr_35 values less than ( 202501 ) tablespace ordr_2
, partition ordr_36 values less than ( 208126 ) tablespace ordr_2
```

```
, partition ordr_37 values less than ( 213751 ) tablespace ordr_2
, partition ordr_38 values less than ( 219376 ) tablespace ordr_2
, partition ordr_39 values less than ( 225001 ) tablespace ordr_2
, partition ordr_40 values less than ( 230626 ) tablespace ordr_2
, partition ordr_41 values less than ( 236251 ) tablespace ordr_2
, partition ordr_42 values less than ( 241876 ) tablespace ordr_2
, partition ordr_43 values less than ( 247501 ) tablespace ordr_2
, partition ordr_44 values less than ( 253126 ) tablespace ordr_2
, partition ordr_45 values less than ( 258751 ) tablespace ordr_2
, partition ordr_46 values less than ( 264376 ) tablespace ordr_2
, partition ordr_47 values less than ( 270001 ) tablespace ordr_2
, partition ordr_48 values less than ( 275626 ) tablespace ordr_3
, partition ordr_49 values less than ( 281251 ) tablespace ordr_3
, partition ordr_50 values less than ( 286876 ) tablespace ordr_3
, partition ordr_51 values less than ( 292501 ) tablespace ordr_3
, partition ordr_52 values less than ( 298126 ) tablespace ordr_3
, partition ordr_53 values less than ( 303751 ) tablespace ordr_3
, partition ordr_54 values less than ( 309376 ) tablespace ordr_3
, partition ordr_55 values less than ( 315001 ) tablespace ordr_3
, partition ordr_56 values less than ( 320626 ) tablespace ordr_3
, partition ordr_57 values less than ( 326251 ) tablespace ordr_3
, partition ordr_58 values less than ( 331876 ) tablespace ordr_3
, partition ordr_59 values less than ( 337501 ) tablespace ordr_3
, partition ordr_60 values less than ( 343126 ) tablespace ordr_3
, partition ordr_61 values less than ( 348751 ) tablespace ordr_3
, partition ordr_62 values less than ( 354376 ) tablespace ordr_3
, partition ordr_63 values less than ( 360001 ) tablespace ordr_3
, partition ordr_64 values less than ( 365626 ) tablespace ordr_4
, partition ordr_65 values less than ( 371251 ) tablespace ordr_4
, partition ordr_66 values less than ( 376876 ) tablespace ordr_4
, partition ordr_67 values less than ( 382501 ) tablespace ordr_4
, partition ordr_68 values less than ( 388126 ) tablespace ordr_4
, partition ordr_69 values less than ( 393751 ) tablespace ordr_4
, partition ordr_70 values less than ( 399376 ) tablespace ordr_4
, partition ordr_71 values less than ( 405001 ) tablespace ordr_4
, partition ordr_72 values less than ( 410626 ) tablespace ordr_4
, partition ordr_73 values less than ( 416251 ) tablespace ordr_4
, partition ordr_74 values less than ( 421876 ) tablespace ordr_4
, partition ordr_75 values less than ( 427501 ) tablespace ordr_4
, partition ordr_76 values less than ( 433126 ) tablespace ordr_4
, partition ordr_77 values less than ( 438751 ) tablespace ordr_4
, partition ordr_78 values less than ( 444376 ) tablespace ordr_4
, partition ordr_79 values less than ( 450001 ) tablespace ordr_4
, partition ordr_80 values less than ( 455626 ) tablespace ordr_5
, partition ordr_81 values less than ( 461251 ) tablespace ordr_5
, partition ordr_82 values less than ( 466876 ) tablespace ordr_5
, partition ordr_83 values less than ( 472501 ) tablespace ordr_5
, partition ordr_84 values less than ( 478126 ) tablespace ordr_5
, partition ordr_85 values less than ( 483751 ) tablespace ordr_5
, partition ordr_86 values less than ( 489376 ) tablespace ordr_5
, partition ordr_87 values less than ( 495001 ) tablespace ordr_5
, partition ordr_88 values less than ( 500626 ) tablespace ordr_5
, partition ordr_89 values less than ( 506251 ) tablespace ordr_5
, partition ordr_90 values less than ( 511876 ) tablespace ordr_5
, partition ordr_91 values less than ( 517501 ) tablespace ordr_5
, partition ordr_92 values less than ( 523126 ) tablespace ordr_5
, partition ordr_93 values less than ( 528751 ) tablespace ordr_5
, partition ordr_94 values less than ( 534376 ) tablespace ordr_5
```



```

,o_all_local number
,o_entry_d date
,constraint ord_r_uk primary key ( o_w_id
,o_d_id
,o_id )
)
cluster ord_r_cluster_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_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:39 PDT 2010 */
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 9000000000
hash is ( (abs(s_i_id - 1) * 90000 + mod((s_w_id - 1), 90000) + trunc
((s_w_id - 1) / 90000) * 90000 * 100000) )
size 270
pctfree 0 initrans 2 maxtrans 2
storage ( buffer_pool keep ) parallel ( degree 1024 )
partition by range( s_w_id ) (
partition stok_0 values less than ( 90001 ) tablespace stok_0
, partition stok_1 values less than ( 180001 ) tablespace stok_1
, partition stok_2 values less than ( 270001 ) tablespace stok_2
, partition stok_3 values less than ( 360001 ) tablespace stok_3
, partition stok_4 values less than ( 450001 ) tablespace stok_4
, partition stok_5 values less than ( 540001 ) tablespace stok_5
, partition stok_6 values less than ( 630001 ) tablespace stok_6
, partition stok_7 values less than ( 720001 ) tablespace stok_7
, partition stok_8 values less than ( 810001 ) tablespace stok_8
, partition stok_9 values less than ( 900001 ) tablespace stok_9
, partition stok_10 values less than ( 990001 ) tablespace stok_10
, partition stok_11 values less than ( 1080001 ) tablespace stok_11
, partition stok_12 values less than ( 1170001 ) tablespace stok_12
, partition stok_13 values less than ( 1260001 ) tablespace stok_13
, partition stok_14 values less than ( 1350001 ) tablespace stok_14
, partition stok_15 values less than ( 1440001 ) tablespace stok_15
, partition stok_16 values less than ( 1530001 ) tablespace stok_16
, partition stok_17 values less than ( 1620001 ) tablespace stok_17
, partition stok_18 values less than ( 1710001 ) tablespace stok_18
, partition stok_19 values less than ( 1800001 ) tablespace stok_19
, partition stok_20 values less than ( 1890001 ) tablespace stok_20
, partition stok_21 values less than ( 1980001 ) tablespace stok_21
, partition stok_22 values less than ( 2070001 ) tablespace stok_22
, partition stok_23 values less than ( 2160001 ) tablespace stok_23
, partition stok_24 values less than ( 2250001 ) tablespace stok_24
, partition stok_25 values less than ( 2340001 ) tablespace stok_25
, partition stok_26 values less than ( maxvalue ) tablespace stok_26
)
;

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_kit_27nodes/scripts/buildcreatetable.sh Thu Aug 19
13:21:25 PDT 2010 */
set timing on
set sqlblanklines on
spool createtable_ware.log
set echo on
drop cluster warecluster including tables ;

REM alter system set events '70000 trace name context forever, level 1';

create cluster warecluster (
w_id number
)
single table
hashkeys 90000
hash is ( (w_id - 1) )
size 3496
initrans 2
storage ( buffer_pool default ) parallel ( degree 32 )
partition by range( w_id ) (
partition ware_0 values less than ( 90001 ) tablespace misc_0
, partition ware_1 values less than ( 180001 ) tablespace misc_1
, partition ware_2 values less than ( 270001 ) tablespace misc_2
, partition ware_3 values less than ( 360001 ) tablespace misc_3
, partition ware_4 values less than ( 450001 ) tablespace misc_4
, partition ware_5 values less than ( 540001 ) tablespace misc_5
, partition ware_6 values less than ( 630001 ) tablespace misc_6
, partition ware_7 values less than ( 720001 ) tablespace misc_7
, partition ware_8 values less than ( 810001 ) tablespace misc_8
, partition ware_9 values less than ( 900001 ) tablespace misc_9
, partition ware_10 values less than ( 990001 ) tablespace misc_10
, partition ware_11 values less than ( 1080001 ) tablespace misc_11
, partition ware_12 values less than ( 1170001 ) tablespace misc_12
, partition ware_13 values less than ( 1260001 ) tablespace misc_13
, partition ware_14 values less than ( 1350001 ) tablespace misc_14
, partition ware_15 values less than ( 1440001 ) tablespace misc_15
, partition ware_16 values less than ( 1530001 ) tablespace misc_16
, partition ware_17 values less than ( 1620001 ) tablespace misc_17
, partition ware_18 values less than ( 1710001 ) tablespace misc_18
, partition ware_19 values less than ( 1800001 ) tablespace misc_19
, partition ware_20 values less than ( 1890001 ) tablespace misc_20
, partition ware_21 values less than ( 1980001 ) tablespace misc_21
, partition ware_22 values less than ( 2070001 ) tablespace misc_22
, partition ware_23 values less than ( 2160001 ) tablespace misc_23
, partition ware_24 values less than ( 2250001 ) tablespace misc_24
, partition ware_25 values less than ( 2340001 ) tablespace misc_25
, partition ware_26 values less than ( maxvalue ) tablespace misc_26
)
;

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
);
REM alter system set events '70000 trace name context off';
set echo off
spool off
exit sql.sqlcode;

createuser.sql
#!/bin/sh

echo Creating user tpcc...
$tpcc_sqlplus $tpcc_dba_user_pass @$tpcc_sql_dir/createuser > junk 2>&1
if ! test $? -ne 0

```

```

then
  exit 1;
else
  exit 0;
fi

tkvcinin.sql
-- The initnew package for storing variables used in the
-- New Order anonymous block

CREATE OR REPLACE PACKAGE inittppc
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;
  idxlarr         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 inittppc;
/

show errors;

CREATE OR REPLACE PACKAGE BODY inittppc AS
  PROCEDURE init_no (idxarr intarray)
  IS
  BEGIN
    -- initialize null date
    nulldate := TO_DATE('01-01-1811', 'MM-DD-YYYY');
    idxlarr := 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 inittppc;
/

show errors
exit

p_build.ora
compatible = 11.2.0.0.0
db_name = recap
control_files =
(/export/home/oracle/tpcc_disks_recap/control_003,/export/home/oracle/tpcc
_disks_recap/control_004)
parallel_max_servers = 64
parallel_min_servers = 64
recovery_parallelism = 64
db_files = 15845
db_cache_size = 130G
db_8k_cache_size = 8G
db_16k_cache_size = 100G
dml_locks = 500
statistics_level = basic
processes = 1000
sessions = 1000
transactions = 1000
shared_pool_size = 50G
db_block_size = 4096
undo_management = auto
undo_retention = 2
plsql_optimize_level=2
resource_manager_plan=""
transactions_per_rollback_segment=1
cluster_database = true
_lm_file_affinity="56-488=1:489-921=2:922-1354=3:1355-1787=4:1788-
2220=5:2221-2653=6:2654-3086=7:3087-3519=8:3520-3952=9:3953-
4385=10:4386-4818=11:4819-5251=12:5252-5684=13:5685-6117=14:6118-
6550=15:6551-6983=16:6984-7416=17:7417-7849=18:7850-8282=19:8283-
8715=20:8716-9148=21:9149-9581=22:9582-10014=23:10015-
10447=24:10448-10880=25:10881-11313=26:11314-11746=27"
trace_enabled = FALSE

p_create.ora
compatible = 11.2.0.0.0
db_name = recap
control_files = (/export/home/oracle/tpcc_disks_recap/control_003,
/export/home/oracle/tpcc_disks_recap/control_004)
db_block_size = 4096
db_cache_size = 10G
db_8k_cache_size = 8G
log_buffer = 10485760
db_16k_cache_size = 8G
undo_management = manual
statistics_level = basic
shared_pool_size = 50G
plsql_optimize_level=2
processes = 2000
sessions = 2000
db_files = 20000
cpu_count = 32

p_run.ora
compatible = 11.2.0.0.0
aq_tm_processes = 0
db_file_multiblock_read_count = 1
control_files =
(/export/home/oracle/tpcc_disks_recap/control_003,/export/home/oracle/tpcc
_disks_recap/control_004)
db_16k_cache_size = 100G
db_8k_cache_size = 4G
db_block_size = 4096
db_cache_size = 20G
db_keep_cache_size=297G
#db_keep_cache_size=292G
db_recycle_cache_size=15G
shared_pool_size=25G
db_files=14000
db_name = recap
log_buffer = 10485760
plsql_optimize_level=2
timed_statistics = true
fast_start_mtr_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 = 1000
undo_management = auto
undo_retention = 2
processes = 1400
cluster_database = true
cluster_database_instances=27
parallel_max_servers = 0
parallel_min_servers = 0
recovery_parallelism = 32
resource_manager_plan=""
transactions_per_rollback_segment=1
db_writer_processes=32
db_block_checking = FALSE
db_block_checksum = FALSE
trace_enabled = FALSE
parallel_execution_message_size=65536
gcs_server_processes=12
db_cache_advice=off
_lm_file_affinity="11774,11778,11781,11811,29,56-
488=1:11777,11799,11828,30,489-921=2:11769,11780,11825,31,922-
1354=3:11771,11779,11822,32,1355-1787=4:11773,11791,11824,33,1788-
2220=5:11768,11783,11832,34,2221-2653=6:11776,11785,11818,35,2654-
3086=7:11770,11782,11819,36,3087-3519=8:11772,11784,11815,37,3520-
3952=9:11775,11786,11827,38,3953-4385=10:11800,11810,39,4386-
4818=11:11789,11814,40,4819-5251=12:11798,11812,41,5252-
5684=13:11801,11806-11809,42,5685-6117=14:11787,11813,43,6118-
6550=15:11804,11833,44,6551-6983=16:11795,11816,45,6984-
7416=17:11793,11821,46,7417-7849=18:11792,11817,47,7850-
8282=19:11805,11829,48,8283-8715=20:11794,11830,49,8716-
9148=21:11803,11834,50,9149-9581=22:11797,11823,51,9582-

```

```

10014=23:11796,11835,52,10015-10447=24:11788,11831,53,10448-
10880=25:11790,11826,54,10881-11313=26:11802,11820,55,11314-
11746=27"
sessions = 1500
statistics_level=BASIC
local_listener = all_listeners

tpccload.c
#ifdef RCSID
static char *RCSid =
"$Header: tk_perf/benchmark_kits/tpcc-
new/benchrun/source/server/tpccload.c /main/1 2008/12/15 05:58:52 avliet
Exp $ 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
#endif
#include <process.h>
#include "dpbcore.h"
# define gettime dpbtimef
# define getcpu dpbcpu
#define lrand48() ((long)rand() <<15 | rand())
#ifndef _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 RECOVERERR -10
#define IRRECERR -20

#define SQLXTXW "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 SQLXTXD "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,30000000, :d_tax, \
3001, :d_name, :d_street_1, :d_street_2, :d_city, :d_state, :d_zip)"

#define SQLXTXCQUERY "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 SQLXTXC "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 SQLXTXH "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 SQLXTXSQUERY "select /*+ HASH ( stok )*/ count(*) from stok
where s_w_id = :s_s_w_id and s_i_id = :s_s_i_id"

#define SQLXTXS "INSERT INTO stok (s_i_id, s_w_id,
s_quantity, s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05, s_dist_06,
s_dist_07, s_dist_08, s_dist_09, s_dist_10, s_ytd, s_order_cnt, s_remote_cnt,
s_data) \
VALUES (:s_i_id, :s_w_id, :s_quantity, \
:s_dist_01, :s_dist_02, :s_dist_03, :s_dist_04, :s_dist_05, :s_dist_06, \
:s_dist_07, :s_dist_08, :s_dist_09, :s_dist_10, 0, 0, 0, :s_data)"

#define SQLXTXI "INSERT INTO item
(I_ID,I_IM_ID,I_NAME,I_PRICE,I_DATA) VALUES (:i_id, :i_im_id,
:i_name, :i_price, \
:i_data)"

#define SQLXTXO1 "INSERT INTO ordr (O_ID,
O_D_ID,O_W_ID,O_C_ID,O_ENTRY_D,O_CARRIER_ID,O_OL_CNT,O
_ALL_LOCAL) \
VALUES (:o_id, :o_d_id, :o_w_id, :o_c_id, \
SYSDATE, :o_carrier_id, :o_ol_cnt, 1)"

#define SQLXTXO2 "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 SQLXTXOL1 "INSERT INTO ordl (OL_O_ID, OL_D_ID,
OL_W_ID, OL_NUMBER, OL_DELIVERY_D, OL_I_ID,
OL_SUPPLY_W_ID, OL_QUANTITY, OL_AMOUNT, OL_DIST_INFO) \
VALUES (:ol_o_id, :ol_d_id, \
:ol_w_id, :ol_number, SYSDATE, :ol_i_id, :ol_supply_w_id, 5, 0, \
:ol_dist_info)"

#define SQLXTXOL2 "INSERT INTO ordl (OL_O_ID, OL_D_ID,
OL_W_ID, OL_NUMBER, OL_DELIVERY_D, OL_I_ID,
OL_SUPPLY_W_ID, OL_QUANTITY, OL_AMOUNT, OL_DIST_INFO) \
VALUES (:ol_o_id, :ol_d_id, \
:ol_w_id, :ol_number, to_date('01-Jan-1811'), :ol_i_id, :ol_supply_w_id,
5, :ol_amount, \
:ol_dist_info)"

```



```

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;
    long loopcount;
    int cid;
    int dwid;
    int cdid;
    int cwid;
    int sid;
    int swid;
    int olcnt;
    long nrows;
    long 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 stmbuf[16*1024];

```

```

int no_o_id[100];
int no_d_id[100];
int no_w_id[100];

char sdate[30];

#ifdef ORA_NT
clock_t begin_time, end_time;
clock_t begin_cpu, end_cpu;

char *arg_ptr, **end_args;
#else
double begin_time, end_time;
double begin_cpu, end_cpu;
double gettime(), getcpu();

extern int getopt();
extern char *optarg;
extern int optind, opterr;
int opt;
#endif

char *argstr="M:AwdcCisShno:b:e:j:k:l:m:g";
int do_A=0;
int do_w=0;
int do_d=0;
int do_i=0;
int do_c=0;
int do_C=0;
int do_s=0;
int do_S=0;
int do_h=0;
int do_o=0;
int do_n=0;
int gen=0;
int bware=1;
int eware=0;
int bitem=1;
int eitem=0;
int bcid=1;
int ecid=0;

FILE *olfp=NULL;
char olfname[100];
char* basename;
int status;
#ifdef ORA_NT
char fname[100];
FILE *logfile;
#endif /* ORA_NT */

/*-----+
| Parse command line -- look for scale factor.
|
+-----*/

if (argc == 1) {

```

```

    myusage ();
}

#ifdef ORA_NT
end_args = argv + argc;
for (++argv; argv < end_args; )
{
    arg_ptr = *argv++;

    if (*arg_ptr != '-')
    {
        myusage ();
    } else
    {
        switch (arg_ptr[1]) {
        case '?': myusage ();
            break;
        case 'M': scale = atoi (*argv++);
            break;
        case 'A': do_A = 1;
            break;
        case 'w': do_w = 1;
            break;
        case 'd': do_d = 1;
            break;
        case 'c': do_c = 1;
            break;
        case 'C': do_C = 1;
            break;
        case 'i': do_i = 1;
            break;
        case 's': do_s = 1;
            break;
        case 'S': do_S = 1;
            break;
        case 'h': do_h = 1;
            break;
        case 'n': do_n = 1;
            break;
        case 'o': do_o = 1;
            strcpy (olfname, *argv++);
            break;
        case 'b': bware = atoi (*argv++);
            break;
        case 'e': eware = atoi (*argv++);
            break;
        case 'j': bitem = atoi (*argv++);
            break;
        case 'k': eitem = atoi (*argv++);
            break;
        case 'l': bcid = atoi (*argv++);
            break;
        case 'm': ecid = atoi (*argv++);
            break;
        case 'g': gen = 1;
            strcpy (fname, *argv++);
            break;
        case '!': 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 ();
    }
}

```

<pre> } #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)) { </pre>	<pre> 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); </pre>	<pre> 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); 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 *)SQLXTD, strlen((char *)SQLXTD), (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 *)SQLXTC, strlen((char *)SQLXTC), (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 *)SQLXTCQUERY, strlen((char *)SQLXTCQUERY), (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 *)SQLXTH, strlen((char *)SQLXTH), (ub4) OCI_NTV_SYNTAX, (ub4) OCI_DEFAULT)); } if (do_A do_s do_S) { OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)&curcs), OCI_HTYPE_STMT, 0, (dvoid **)0); OCIERROR(errhp,OCIStmtPrepare(curs, errhp, (text *)SQLXTS, strlen((char *)SQLXTS), (ub4) OCI_NTV_SYNTAX, (ub4) OCI_DEFAULT)); } </pre>
--	--	--

<pre> OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)&curss), OCI_HTYPE_STMT, 0, (dvoid**)0); OCIERROR(errhp,OCIStmtPrepare(curss, errhp, (text *)SQLTXTSQUERY, strlen((char *)SQLTXTSQUERY), (ub4) OCI_NTV_SYNTAX, (ub4) OCI_DEFAULT)); } if (do_A do_i) { OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)&curi), OCI_HTYPE_STMT, 0, (dvoid**)0); OCIERROR(errhp,OCIStmtPrepare(cur_i, errhp, (text *)SQLXTI, strlen((char *)SQLXTI), (ub4) OCI_NTV_SYNTAX, (ub4) OCI_DEFAULT)); } if (do_A do_o) { int stat; char fname[160]; OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)&curol), OCI_HTYPE_STMT, 0, (dvoid**)0); DISCARD strcpy(fname, basename); DISCARD strcat(fname, ""); DISCARD strcat(fname, "benchrun/blocks/load_ordordl.sql"); stat = sqlfile(fname, stmbuf); if (!stat) { fprintf(stderr, "unable to open %s \n", fname); quit(); exit(1); } OCIERROR(errhp,OCIStmtPrepare(curol, 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 *)SQLXTXNO, strlen((char *)SQLXTXNO), (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 </pre>	<pre> *)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, </pre>	<pre> (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_name_bp, errhp, (text *)":d_name", strlen(":d_name"), (ub1 *)d_name, 11, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_street1_bp, errhp, (text *)":d_street_1", strlen(":d_street_1"), (ub1 *)d_street_1, 21, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_street2_bp, errhp, (text *)":d_street_2", strlen(":d_street_2"), (ub1 *)d_street_2, 21, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_city_bp, errhp, (text *)":d_city", strlen(":d_city"), (ub1 *)d_city, 21, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_state_bp, errhp, (text *)":d_state", strlen(":d_state"), (ub1 *)d_state, 2, SQLT_CHR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_zip_bp, errhp, (text *)":d_zip", strlen(":d_zip"), (ub1 *)d_zip, 9, SQLT_CHR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curd, &d_tax_bp, errhp, (text *)":d_tax", strlen(":d_tax"), (ub1 *)d_tax, sizeof(float), SQLT_FLT, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); } /* customer */ if (do_A do_c do_C) { OCIERROR(errhp, OCIBindByName(curcs, &s_c_id_bp, errhp, (text *)":s_c_id", strlen(":s_c_id"), (ub1 *)&s_c_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curcs, &s_c_w_id_bp, errhp, </pre>
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<pre> (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)); OCIErrror(errhp, OCIBindByName(curcs, &s_c_d_id_bp, errhp, (text *)":s_c_d_id", strlen(":s_c_d_id"), (ub1 *)&s_c_d_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIDefineByPos(curcs,&s_c_ret_bp,errhp,1,&s_c_count,sizeof(int),S QLT_INT,\ 0,0,0,OCI_DEFAULT); OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(errhp, OCIBindByName(curc, &c_last_bp, errhp, (text *)":c_last", strlen(":c_last"), (ub1 *)c_last, 17, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIErrror(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)); OCIErrror(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)); </pre>	<pre> OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(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) { OCIErrror(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)); OCIErrror(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)); } </pre>	<pre> OCIErrror(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)); OCIErrror(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)); OCIErrror(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) { OCIErrror(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)); OCIErrror(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),SQ LT_INT,\ 0,0,0,OCI_DEFAULT); OCIErrror(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)); OCIErrror(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)); OCIErrror(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)); OCIErrror(errhp, OCIBindByName(curs, &s_dist_01_bp, errhp, (text *)":s_dist_01", </pre>
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<pre> strlen(":s_dist_01"), (ub1 *)s_dist_01, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_02_bp, errhp, (text *)":s_dist_02", strlen(":s_dist_02"), (ub1 *)s_dist_02, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_03_bp, errhp, (text *)":s_dist_03", strlen(":s_dist_03"), (ub1 *)s_dist_03, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_04_bp, errhp, (text *)":s_dist_04", strlen(":s_dist_04"), (ub1 *)s_dist_04, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_05_bp, errhp, (text *)":s_dist_05", strlen(":s_dist_05"), (ub1 *)s_dist_05, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_06_bp, errhp, (text *)":s_dist_06", strlen(":s_dist_06"), (ub1 *)s_dist_06, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_07_bp, errhp, (text *)":s_dist_07", strlen(":s_dist_07"), (ub1 *)s_dist_07, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_08_bp, errhp, (text *)":s_dist_08", strlen(":s_dist_08"), (ub1 *)s_dist_08, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curs, &s_dist_09_bp, errhp, (text *)":s_dist_09", strlen(":s_dist_09"), (ub1 *)s_dist_09, 25, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0, </pre>	<pre> (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) */ </pre>	<pre> 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, &ol_o_id_bp, errhp, (text *)":ol_o_id", strlen(":ol_o_id"), (ub1 *)ol_o_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_o_id_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *)&ol_o_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_d_id_bp, errhp, (text *)":ol_d_id", strlen(":ol_d_id"), (ub1 *)ol_d_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_d_id_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *)&ol_d_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_w_id_bp, errhp, (text *)":ol_w_id", strlen(":ol_w_id"), (ub1 *)ol_w_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_w_id_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *)&ol_w_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_number_bp, errhp, (text *)":ol_number", strlen(":ol_number"), (ub1 *)ol_number, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_number_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *)&ol_number_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_i_id_bp, errhp, (text *)":ol_i_id", strlen(":ol_i_id"), (ub1 *)ol_i_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_i_id_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *)&ol_i_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_supply_w_id_bp, errhp, (text *)":ol_supply_w_id", strlen(":ol_supply_w_id"), (ub1 *)ol_supply_w_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_supply_w_id_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *)&ol_supply_w_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_dist_info_bp, errhp, (text *)":ol_dist_info", </pre>
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<pre> strlen(":ol_dist_info"), (ub1 *)ol_dist_info, 24, SQLT_CHR, (dvoid *) 0, (ub2 *)ol_dist_info_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *) &ol_dist_info_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &ol_amount_bp, errhp, (text *)":ol_amount", strlen(":ol_amount"), (ub1 *)ol_amount, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)ol_amount_len, (ub2 *)0, (ub4) 15*ORDEARR, (ub4 *) &ol_amount_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_id_bp, errhp, (text *)":o_id", strlen(":o_id"), (ub1 *)o_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)o_id_len, (ub2 *)0, (ub4) ORDEARR, (ub4 *) &o_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_d_id_bp, errhp, (text *)":o_d_id", strlen(":o_d_id"), (ub1 *)o_d_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)o_d_id_len, (ub2 *)0, (ub4) ORDEARR, (ub4 *) &o_d_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_w_id_bp, errhp, (text *)":o_w_id", strlen(":o_w_id"), (ub1 *)o_w_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)o_w_id_len, (ub2 *)0, (ub4) ORDEARR, (ub4 *) &o_w_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_c_id_bp, errhp, (text *)":o_c_id", strlen(":o_c_id"), (ub1 *)o_c_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)o_c_id_len, (ub2 *)0, (ub4) ORDEARR, (ub4 *) &o_c_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_carrier_id_bp, errhp, (text *)":o_carrier_id", strlen(":o_carrier_id"), (ub1 *)o_carrier_id, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)o_carrier_id_len, (ub2 *)0, (ub4) ORDEARR, (ub4 *) &o_carrier_id_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_ol_cnt_bp, errhp, (text *)":o_ol_cnt", strlen(":o_ol_cnt"), (ub1 *)o_ol_cnt, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)o_ol_cnt_len, (ub2 *)0, (ub4) ORDEARR, (ub4 *) &o_ol_cnt_clen, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_ocnt_bp, errhp, (text *)":order_rows", </pre>	<pre> strlen(":order_rows"), (ub1 *)&o_cnt, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp, (text *)":ordl_rows", strlen(":ordl_rows"), (ub1 *)&ol_cnt, sizeof(int), SQLT_INT, (dvoid *) 0, (ub2 *)0, (ub2 *)0, (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT)); } /* 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 = (long)eware - (long)bware + 1; fprintf (stderr, "Loading/generating warehouse: w%d - w%d (%ld rows)\n", bware, eware, nrows); </pre>	<pre> begin_time = gettimeofday (); begin_cpu = getcpu (); for (loop = bware; loop <= eware; loop++) { w_tax = (float) ((rand48 () % 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 OCI_Snapshot*) 0, (OCI_Snapshot*) 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. %ld 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 = ((long)eware - (long)bware + 1) * DISTFAC; fprintf (stderr, "Loading/generating district: w%d - w%d (%ld rows)\n", bware, eware, nrows); begin_time = gettimeofday (); begin_cpu = getcpu (); dwid = bware - 1; </pre>
---	--	--

```

for (row = 0; row < nrows; ) {
    dwid++;

    for (i = 0; i < DISTARR; i++, row++) {
        d_tax[i] = (float) ((Irand48 () % 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 = OCISStmtExecute(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 = gettimeofday ();
    end_cpu = getcpu ();
    fprintf (stderr, "Done. %ld 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 = ((long)eware - (long)bware + 1) * CUSTFAC * DISTFAC;

```

```

    fprintf (stderr, "Loading/generating customer: w%d - w%d (%ld 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**));
        sprintf ((char *) stmbuf, SQLTXTENHA);
        OCISStmtPrepare(cur, errhp, stmbuf, strlen((char *)stmbuf),
            OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(errhp, OCISstmtExecute(tpcsvc, curi,
errhp, 1, 0, 0, OCI_DEFAULT));
        OCIHandleFree(cur, OCI_HTYPE_STMT);
        fprintf (stderr, "Customer loaded for horizontal partitioning\n");
    }
    else {
        fprintf (stderr, "Customer not loaded for horizontal partitioning\n");
    }

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    s_c_id = 1;
    s_c_d_id = 1;
    s_c_w_id = bware;

    while (s_c_w_id <= eware) {
        status = OCISstmtExecute(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 = OCISstmtExecute(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 = OCISstmtExecute(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 = ((long)eware - (long)s_c_w_id + 1) * DISTFAC * CUSTFAC -
((long)s_c_d_id - 1) * CUSTFAC - (long)s_c_id + 1;
    fprintf (stderr, "remaining rows: %ld\n ", nrows);
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < CUSTARR && row < nrows; i++, row++) {
            cid++;
            if (cid > CUSTFAC) { /* cycle cust id */
                cid = 1; /* cheap mod */
                cdid++; /* shift dist cycle */
                if (cdid > DISTFAC) {
                    cdid = 1;
                    cwid++; /* shift ware cycle */
                }
            }
            c_id[i] = cid;
            c_d_id[i] = cdid;
            c_w_id[i] = cwid;
            if (cid <= 1000)
                randlastname (c_last[i], cid - 1);
            else
                randlastname (c_last[i], NURand (255, 0, 999, CNUM1));

```

```

c_credit[i][1] = 'C';
if (lrand48 () % 10)
    c_credit[i][0] = 'G';
else
    c_credit[i][0] = 'B';
c_discount[i] = (float)((lrand48 () % 5001) * 0.0001);
randstr (c_first[i], 8, 16);
randstr (c_street_1[i], 10, 20);
randstr (c_street_2[i], 10, 20);
randstr (c_city[i], 10, 20);
randstr (str2, 2, 2);
randnum (num9, 9);
num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';
randnum (num16, 16);
randstr (c_data[i], 300, 500);

if (gen) {
    printf ("%d %d %d %s OE %s %s %s %s %s %s %cC
5000000 %6.4f -1000 1000 1 0 %s\n",
        cid, cdid, cwid, c_first[i], c_last[i],
        c_street_1[i], c_street_2[i], c_city[i], str2, num9,
        num16, sdate, c_credit[i][0], c_discount[i], c_data[i]);
}
else {
    strncpy (c_state[i], str2, 2);
    strncpy (c_zip[i], num9, 9);
    strncpy (c_phone[i], num16, 16);
}
}

if (gen) {
    fflush (stdout);
}
else {
    status = OCISmtExecute(tpscvc, curc, errhp, (ub4) i, (ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

    if (status != OCI_SUCCESS) {
        fprintf (stderr, "Aborted at w_id %d, d_id %d, c_id
%d\n",
            c_w_id[0], c_d_id[0], c_id[0]);
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
}

if ((++loopcount) % 50)
    fprintf (stderr, ".");
else
    fprintf (stderr, "%ld rows committed\n ", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %ld 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);
    OCISmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
        OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCISmtExecute(tpscvc, curi,
errhp, 1, 0, 0, 0, OCI_DEFAULT));
    OCIHandleFree(curi, OCI_HTYPE_STMT);
}
}

/*-----+
| Load the CUSTOMER table (cluster around c_id) |
+-----*/

if (do_C) {
    srand (bcid);
#ifdef ORA_NT
    srand48 (bcid);
#endif

    nrows = ((long)ecid - (long)bcid + 1) * ((long)eware - (long)bware + 1) *
DISTFAC;

    fprintf (stderr, "Loading/generating customer: c%d - c%d, w%d - w%d
(%ld rows)\n ", bcid, ecid, bware, eware, nrows);

    if (getenv("tpcc_hash_overflow")) {
        fprintf(stderr, "Hash overflow is enabled\n");
        OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
        sprintf ((char *) stmbuf, SQLXTENHA);
        OCISmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
            OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(errhp, OCISmtExecute(tpscvc, 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 = gettimeofday ();
    begin_cpu = getcpu ();

    s_c_id = bcid;
    s_c_d_id = 1;
    s_c_w_id = bware;

    while (s_c_id <= ecid) {
        status = OCISmtExecute(tpscvc, curc, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,

```

```

        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }

        if (s_c_count == 0) {
            s_c_id--;
            break;
        }
        else s_c_id++;
    }

    if (s_c_id < bcid) s_c_id = bcid;
    else {
        if (s_c_id > ecid) s_c_id = ecid;
        while (s_c_w_id <= eware) {
            status = OCISmtExecute(tpscvc, curc, errhp, (ub4) 1, (ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
            if (status != OCI_SUCCESS) {
                fprintf (stderr, "Select failed\n");
                OCIERROR(errhp, status);
                quit ();
                exit (1);
            }
        }
        if (s_c_count == 0) {
            s_c_w_id--;
            break;
        }
        else s_c_w_id++;
    }

    if (s_c_w_id > eware) s_c_w_id = eware;
    else if (s_c_w_id < bware) s_c_w_id = bware;

    while (s_c_d_id <= DISTFAC) {
        status = OCISmtExecute(tpscvc, curc, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }
    if (s_c_count == 0) break;
    else s_c_d_id++;
}

if (s_c_d_id > DISTFAC) {
    s_c_d_id = 1;
    if (s_c_w_id == eware) {
        s_c_w_id = bware;
        s_c_id++;
    }
    else s_c_w_id++;
}
}

```

```

fprintf(stderr, "start at cid: %d, wid: %d, did: %d\n ", s_c_id, s_c_w_id,
s_c_d_id);
cid = s_c_id;
cdid = s_c_d_id - 1;
cwid = s_c_w_id;
nrows = ((long)ecid - (long)s_c_id + 1) * ((long)eware - (long)bware +
1) * DISTFAC - ((long)s_c_w_id - 1) * DISTFAC - (long)s_c_d_id + 1;
fprintf(stderr, "remaining rows: %ld\n ", nrows);
loopcount = 0;

for (row = 0; row < nrows; ) {
for (i = 0; i < CUSTARR && row < nrows; i++, row++) {
cdid++;
if (cdid > DISTFAC) { /* cycle dist id */
cdid = 1; /* cheap mod */
cwid++; /* shift dist cycle */
if (cwid > eware) {
cwid = bware; /* shift ware cycle */
cdid++;
}
}
c_id[i] = cid;
c_d_id[i] = cdid;
c_w_id[i] = cwid;
if (cid <= 1000)
randlastname (c_last[i], cid - 1);
else
randlastname (c_last[i], NURand (255, 0, 999, CNUM1));
c_credit[i][1] = 'C';
if (lrand48 () % 10)
c_credit[i][0] = 'G';
else
c_credit[i][0] = 'B';
c_discount[i] = (float)((lrand48 () % 5001) * 0.0001);
randstr (c_first[i], 8, 16);
randstr (c_street_1[i], 10, 20);
randstr (c_street_2[i], 10, 20);
randstr (c_city[i], 10, 20);
randstr (str2, 2, 2);
randnum (num9, 9);
num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';
randnum (num16, 16);
randstr (c_data[i], 300, 500);

if (gen) {
printf ("%d %d %d %s OE %s %s %s %s %s %s %s %cC
5000000 %6.4f -1000 1000 1 0 %s\n",
cid, cdid, cwid, c_first[i], c_last[i],
c_street_1[i], c_street_2[i], c_city[i], str2, num9,
num16, sdate, c_credit[i][0], c_discount[i], c_data[i]);
}
else {
strncpy (c_state[i], str2, 2);
strncpy (c_zip[i], num9, 9);
strncpy (c_phone[i], num16, 16);
}
}
}

```

```

if (gen) {
flush (stdout);
}
else {
status = OCISmtExecute(tpcsvc, curc, errhp, (ub4) i, (ub4) 0,
(CONST OCISnapshot*) 0, (OCISnapshot*) 0,
(ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

if (status != OCI_SUCCESS) {
fprintf (stderr, "Aborted at w_id %d, d_id %d, c_id
%d\n",
c_w_id[0], c_d_id[0], c_id[0]);
OCIERROR(errhp, status);
quit ();
exit (1);
}
}

if ((++loopcount) % 50)
fprintf (stderr, ".");
else
fprintf (stderr, "%ld rows committed\n ", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %ld 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);
OCISmtPrepare(curc, errhp, stmbuf, strlen((char *)stmbuf),
OCI_NT_V_SYNTAX, OCI_DEFAULT);
OCIERROR(errhp, OCISmtExecute(tpcsvc, curi,
errhp, 1, 0, 0, 0, OCI_DEFAULT));
OCIHandleFree(curc, OCI_HTYPE_STMT);
}
}

/*-----+
| Load the ITEM table.
|
+-----*/

if (do_A || do_i) {
nrows = ITEMFAC;

fprintf (stderr, "Loading/generating item: (%ld rows)\n ", nrows);

begin_time = gettime ();
begin_cpu = getcpu ();

loopcount = 0;

```

```

for (row = 0; row < nrows; ) {
for (i = 0; i < ITEMARR; i++, row++) {
i_im_id[i] = (lrand48 () % 10000) + 1;
i_price[i] = ((lrand48 () % 9901) + 100);
randstr (i_name[i], 14, 24);
randdatastr (i_data[i], 26, 50);

if (gen) {
printf ("%d %d %s %d %s\n", row + 1, i_im_id[i], i_name[i],
i_price[i], i_data[i]);
}
else {
i_id[i] = row + 1;
}
}

if (gen) {
flush (stdout);
}
else {
status = OCISmtExecute(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, "%ld rows committed\n ", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %ld 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 = ((long)eware - (long)bware + 1) * STOCFAC;

fprintf (stderr, "Loading/generating stock: w%d - w%d (%ld 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 = OCISmtExecute(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 = OCISmtExecute(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 = ((long)eware - (long)s_s_w_id + 1) * STOCFAC -
(long)s_s_i_id - 1;
fprintf(stderr, "remaining rows: %ld\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 = OCISmtExecute(tpcsvc, curss, 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, "%ld rows committed\n ", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %ld 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 = ((long)eitem - (long)bitem + 1) * ((long)eware - (long)bware +
1);

    fprintf (stderr, "Loading/generating stock: i%d - i%d, w%d - w%d (%ld
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 = OCISmtExecute(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 = OCISmtExecute(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++;
}
}

```

<pre> 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 = ((long)ewitem - (long)s_s_i_id + 1) * ((long)eware - (long)bware + 1) - ((long)s_s_w_id - (long)bware); fprintf (stderr, "remaining rows: %ld\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 = OCISmtExecute(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); } } } } </pre>	<pre> if ((++loopcount) % 50) fprintf (stderr, "."); else fprintf (stderr, "%ld rows committed\n ", row); } end_time = gettimeofday (); end_cpu = getcpu (); fprintf (stderr, "Done. %ld 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 = ((long)eware - (long)bware + 1) * HISTFAC; fprintf (stderr, "Loading/generating history: w%d - w%d (%ld 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 < 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, cidid, cwid, sdate, h_data[i]); } } } if (gen) { fflush (stdout); } else { } } </pre>	<pre> 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, "%ld rows committed\n ", row); } end_time = gettimeofday (); end_cpu = getcpu (); fprintf (stderr, "Done. %ld 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 = ((long)eware - (long)bware + 1) * ORDEFAC * DISTFAC; fprintf (stderr, "Loading/generating orders and order-line: w%d - w%d (%ld ord, ~%ld ordl)\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) { } } } } } </pre>
--	--	---


```

        cid = 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 %d %d %d %d\n", cid, cidid, 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 %d\n", cid, cidid, cwid,
            randperm3000[cid - 1], sdate, o_ol_cnt[i]);
    }
}
else {
    o_id[i] = cid;
    o_d_id[i] = cidid;
    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 %d %s %d %d %d 5 %ld %s\n", cid,
                cidid, 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 %d 5 %ld %s\n",
                cid,
                cidid, 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] = cidid;
        ol_w_id[batch_olcnt] = cwid;
        ol_number[batch_olcnt] = j + 1;
        ol_supply_w_id[batch_olcnt] = cwid;
        strncpy (ol_dist_info[batch_olcnt], str24[j], 24);
    }
}

```

```

    }
}
if (gen) {
    fflush (olfp);
}
}

o_cnt = ORDEARR;
ol_cnt = batch_olcnt;

for (j = 0; j < batch_olcnt; j++) {
    ol_o_id_len[j] = sizeof(int);
    ol_d_id_len[j] = sizeof(int);
    ol_w_id_len[j] = sizeof(int);
    ol_number_len[j] = sizeof(int);
    ol_i_id_len[j] = sizeof(int);
    ol_supply_w_id_len[j] = sizeof(int);
    ol_dist_info_len[j] = 24;
    ol_amount_len[j] = sizeof(int);
}

for (j = batch_olcnt; j < 15*ORDEARR; j++) {
    ol_o_id_len[j] = 0;
    ol_d_id_len[j] = 0;
    ol_w_id_len[j] = 0;
    ol_number_len[j] = 0;
    ol_i_id_len[j] = 0;
    ol_supply_w_id_len[j] = 0;
    ol_dist_info_len[j] = 0;
    ol_amount_len[j] = 0;
}

o_id_clen = ORDEARR;
o_d_id_clen = ORDEARR;
o_w_id_clen = ORDEARR;
o_c_id_clen = ORDEARR;
o_carrier_id_clen = ORDEARR;
o_ol_cnt_clen = ORDEARR;

ol_o_id_clen = batch_olcnt;
ol_d_id_clen = batch_olcnt;
ol_w_id_clen = batch_olcnt;
ol_number_clen = batch_olcnt;
ol_i_id_clen = batch_olcnt;
ol_supply_w_id_clen = batch_olcnt;
ol_dist_info_clen = batch_olcnt;
ol_amount_clen = batch_olcnt;

OCIERROR(errhp, OCIStmtExecute(tpscvc, curo1, errhp, (ub4) 1,
(ub4) 0,
    (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
    (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS));

if ((++loopcount) % 50) {
    fprintf (stderr, ".");
}
else {
    fprintf (stderr, " %ld orders committed\n ", row);
}
}
}

```

```

    end_time = gettimeofday ();
    end_cpu = getcpu ();
    fprintf (stderr, "Done. %ld 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 = ((long)bware - (long)bware + 1) * NEWOFAC * DISTFAC;

    fprintf (stderr, "Loading/generating new-order: w%d - w%d (%ld rows)\n",
        bware, eware, nrows);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    cid = 0;
    cidid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < NEWOARR; i++, row++) {
            cid++;
            if (cid > NEWOFAC) {
                cid = 1;
                cidid++;
                if (cidid > DISTFAC) {
                    cidid = 1;
                    cwid++;
                }
            }

            if (gen) {
                printf ("%d %d %d\n", cid + 2100, cidid, cwid);
            }
            else {
                no_o_id[i] = cid + 2100;
                no_d_id[i] = cidid;
                no_w_id[i] = cwid;
            }
        }

        if (gen) {
            fflush (stdout);
        }
        else {
            status = OCIStmtExecute(tpscvc, curno, errhp, (ub4) NEWOARR,
(ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT |
OCI_COMMIT_ON_SUCCESS);
            if (status != OCI_SUCCESS) {

```

<pre> 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, "%ld rows committed\n ", row); } end_time = gettime (); end_cpu = getcpu (); fprintf(stderr, "Done. %ld 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; </pre>	<pre> 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] = 'T'; 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'; } </pre>	<pre> } 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"); } } </pre>
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<pre> 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 / *=====+ 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. +=====+ */ #endif TPCC_H #define TPCC_H </pre>	<pre> #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, ...); #define RECOVERR -10 #define IRRECERR -20 </pre>	<pre> #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 tkvcddone (); extern void tkvcsdone (); extern int tkvcss (); /* for alter session to get memory size and trace */ extern boolean multitrans; 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 *Ifp; extern FILE *fopen (); extern int proc_no; extern int doid[]; extern int execstatus; extern int errcode; extern OCIEnv *tpcenv; extern OCIServer *tpcsrv; extern OCIError *errhp; extern OCISvcCtx *tpcsvc; extern OCISession *tpcusr; extern OCISmt *curntest; /* The bind and define handles for each transaction are included in their respective header files. */ </pre>
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<pre> /* 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]; </pre>	<pre> 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[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; </pre>	<pre> 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,rcode) \ 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), </pre>
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<pre> (indp),(alen),(arcode),0,0,OCI_DEFAULT)); /* use with callback data */ #define OCIBNDRAD(stmp,bndp,errp,sqlvar,progv,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,progv,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),(progv),(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,progv,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),(progv),(ftype),(indp),(alen),(arcode),0,0,\ OCI_DEFAULT)); /* bind in/out for plsql arrays without indicator and rcode */ #define OCIBNDPLA(stmp,bndp,errp,sqlvar,progv,progv,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),\ (progv),(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,progv,ftype,indp,alen,arcode,\ ms,cu)\ ocierror(__FILE__,_LINE__,(errp),\ OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0, </pre>	<pre> (dvoid**0));\ ocierror(__FILE__,_LINE__,(errp),\ OCIBindByName((stmp)&(bndp),(errp),(text *)\ (sqlvar),strlen((sqlvar)),\ (progv),(progv),(ftype),(indp),(alen),(arcode),(ms),\ (cu),OCI_DEFAULT)); #define OCIDEFINE(stmp,dfnp,errp,pos,progv,progv,ftype)\ OCIDefineByPos((stmp)&(dfnp),(errp),(pos),(progv),(progv),(ftype),\ 0,0,0,OCI_DEFAULT); #define OCIDEF(stmp,dfnp,errp,pos,progv,progv,ftype)\ OCIHandleAlloc((stmp),(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\ (dvoid**0));\ OCIDefineByPos((stmp)&(dfnp),(errp),(pos),(progv),(progv),\ (ftype),NULL,NULL,NULL,OCI_DEFAULT); #define OCIDFNRA(stmp,dfnp,errp,pos,progv,progv,ftype,indp,alen,arcode)\ \ OCIHandleAlloc((stmp),(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\ (dvoid**0));\ OCIDefineByPos((stmp)&(dfnp),(errp),(pos),(progv),\ (progv),(ftype),(indp),\ (alen),\ (arcode),OCI_DEFAULT); #define OCIDFNDR(stmp,dfnp,errp,pos,progv,progv,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),(progv),(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]; </pre>	<pre> 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]; </pre>
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<pre> 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 plsflag; }; </pre>	<pre> 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 Files Initnew.sql 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, </pre>	<pre> 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; payz.sql DECLARE /* payz */ not_serializable EXCEPTION; PRAGMA EXCEPTION_INIT(not_serializable,-8177); deadlock EXCEPTION; PRAGMA EXCEPTION_INIT(deadlock,-60); snapshot_too_old EXCEPTION; PRAGMA EXCEPTION_INIT(snapshot_too_old,-1555); BEGIN LOOP BEGIN UPDATE ware SET w_ytd = w_ytd + h_amount WHERE w_id = :w_id RETURNING w_name, w_street_1, w_street_2, w_city, w_state, w_zip INTO inittpcc.ware_name, :w_street_1, :w_street_2, :w_city, :w_state, :w_zip; SELECT rowid BULK COLLECT INTO inittpcc.row_id FROM cust </pre>
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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;

inittpc.c_num := sql%rowcount;
inittpc.cust_rowid := inittpc.row_id((inittpc.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 = inittpc.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 = inittpc.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 inittpc.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, inittpc.ware_name || ' ' || inittpc.dist_name);

EXIT;

```

```

EXCEPTION
WHEN not_serializable OR deadlock OR snapshot_too_old THEN
ROLLBACK;
:retry := :retry + 1;
END;

END LOOP;
END;

```

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 inittpc.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 inittpc.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 = inittpc.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 inittpc.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, inittpc.ware_name || ' ' || inittpc.dist_name);
EXIT;

EXCEPTION
WHEN not_serializable OR deadlock OR snapshot_too_old THEN
ROLLBACK;
:retry := :retry + 1;
END;

END LOOP;
END;

tkvcin.sql
-- The initnew package for storing variables used in the
-- New Order anonymous block

CREATE OR REPLACE PACKAGE inittpc
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;
idxlarr 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 inittpc;
/
show errors;

```

```

CREATE OR REPLACE PACKAGE BODY inittpc AS
PROCEDURE init_no (idxarr intarray)
IS
BEGIN
-- initialize null date
nulldate := TO_DATE('01-01-1811', 'MM-DD-YYYY');
idxlarr := 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 inittpc;
/
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.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;

:ordent := SQL%ROWCOUNT;

```

```

FORALL o in 1.. :ordent
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.. :ordent
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.. :ordent
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_03,
i_price*:ol_quantity(idx),

```

```

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, inittpc.s_dist,
:ol_amount, :brand_generic;

END u2;

PROCEDURE u3 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_03,
i_price*:ol_quantity(idx),

```



```

CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpc.s_dist,
:ol_amount,:brand_generic;
END u3;

PROCEDURE u4 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_04,
i_price* :ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpc.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, inittpc.s_dist,
:ol_amount,:brand_generic;
END u5;

PROCEDURE u6 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_06,
i_price* :ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpc.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, inittpc.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, inittpc.s_dist,
:ol_amount,:brand_generic;
END u8;

PROCEDURE u9 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_09,
i_price* :ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpc.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, inittpc.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);
inittpc.s_dist(temp_index + 1) := inittpc.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;
inittpc.s_dist(idx + rows_lost) := NULL;
:brand_generic(idx + rows_lost) := '';
:ol_amount(idx + rows_lost) := 0;
rows_lost := rows_lost + 1;
max_index := max_index + 1;
END IF;

```

```

END LOOP;
END fix_items;

BEGIN
LOOP BEGIN
cache_ol_cnt := :o_ol_cnt;

UPDATE dist SET d_next_o_id = d_next_o_id + 1
WHERE d_id = :d_id AND d_w_id = :w_id
RETURNING d_tax, d_next_o_id-1
INTO :d_tax, :o_id;

SELECT c_discount, c_last, c_credit
INTO :c_discount, :c_last, :c_credit
FROM cust
WHERE c_id = :c_id AND c_d_id = :d_id AND c_w_id = :w_id;

SELECT w_tax
INTO :w_tax
FROM ware
WHERE w_id = :w_id;

INSERT INTO nord (no_o_id, no_d_id, no_w_id)
VALUES (:o_id, :d_id, :w_id);

INSERT INTO ordr (o_id, o_d_id, o_w_id, o_c_id, o_entry_d,
o_carrier_id, o_ol_cnt, o_all_local)
VALUES (:o_id, :d_id, :w_id, :c_id,
:cr_date, 11, :o_ol_cnt, :o_all_local);

dummy_local := :d_id;

IF (dummy_local < 6) THEN
IF (dummy_local < 3) THEN
IF (dummy_local = 1) THEN
u1;
ELSE
u2;
END IF;
ELSE
IF (dummy_local = 3) THEN
u3;
ELSIF (dummy_local = 4) then
u4;
ELSE
u5;
END IF;
END IF;
ELSE
IF (dummy_local < 8) THEN
IF (dummy_local = 6) THEN
u6;
ELSE
u7;
END IF;
ELSE

```

```

IF (dummy_local = 8) THEN
u8;
ELSIF (dummy_local = 9) then
u9;
ELSE
u10;
END IF;
END IF;
END IF;

dummy_local := sql%rowcount;

IF (dummy_local != cache_ol_cnt ) THEN fix_items; END IF;

FORALL idx IN 1..dummy_local
INSERT INTO ordl
(ol_o_id, ol_d_id, ol_w_id, ol_number, ol_delivery_d, ol_i_id,
ol_supply_w_id, ol_quantity, ol_amount, ol_dist_info)
VALUES (:o_id, :d_id, :w_id, inittpc.idx1arr(idx), inittpc.nulldate,
:ol_i_id(idx), :ol_supply_w_id(idx),
:ol_quantity(idx), :ol_amount(idx), inittpc.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
connect tpcc/tpcc;
set echo on;

create or replace view wh_cust
(w_id, w_tax, c_id, c_d_id, c_w_id, c_discount, c_last, c_credit)
as select w.w_id, w.w_tax,
c.c_id, c.c_d_id, c.c_w_id, c.c_discount, c.c_last, c.c_credit
from cust c, ware w
where w.w_id = c.c_w_id;

create or replace view wh_dist
(w_id, d_id, d_tax, d_next_o_id, w_tax )
as select w.w_id, d.d_id, d.d_tax, d.d_next_o_id, w.w_tax
from dist d, ware w
where w.w_id = d.d_w_id;

create or replace view stock_item
(i_id, s_w_id, i_price, i_name, i_data, s_data, s_quantity,
s_order_cnt, s_ytd, s_remote_cnt,
s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,

```

```
s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10)
as
select /*+ leading(s) use_nl(i) */
i.i_id, s_w_id, i.i_price, i.i_name, i.i_data, s_data, s_quantity,
s_order_cnt, s_ytd, s_remote_cnt,
s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10
from stok s, item i
where i.i_id = s.s_i_id;

set echo off;
```

RTE Parameters

RTE parameters

```
setDriverParams :think_neworder => 12.02
setDriverParams :think_payment => 12.02
setDriverParams :think_orderstatus => 10.02
setDriverParams :think_delivery => 5.02
setDriverParams :think_stocklevel => 5.02
```

```
set :mix_payment => 43.001
set :mix_orderstatus => 4.001
set :mix_delivery => 4.001
set :mix_stocklevel => 4.001
```

```
set :warehouses => 90000*27
set :ramptime => 30*60
set :runtime => 3*60*60
```


281	1649 MHz	SPARC-T3	on-line
282	1649 MHz	SPARC-T3	on-line
283	1649 MHz	SPARC-T3	on-line
284	1649 MHz	SPARC-T3	on-line
285	1649 MHz	SPARC-T3	on-line
286	1649 MHz	SPARC-T3	on-line
287	1649 MHz	SPARC-T3	on-line
288	1649 MHz	SPARC-T3	on-line
289	1649 MHz	SPARC-T3	on-line
290	1649 MHz	SPARC-T3	on-line
291	1649 MHz	SPARC-T3	on-line
292	1649 MHz	SPARC-T3	on-line
293	1649 MHz	SPARC-T3	on-line
294	1649 MHz	SPARC-T3	on-line
295	1649 MHz	SPARC-T3	on-line
296	1649 MHz	SPARC-T3	on-line
297	1649 MHz	SPARC-T3	on-line
298	1649 MHz	SPARC-T3	on-line
299	1649 MHz	SPARC-T3	on-line
300	1649 MHz	SPARC-T3	on-line
301	1649 MHz	SPARC-T3	on-line
302	1649 MHz	SPARC-T3	on-line
303	1649 MHz	SPARC-T3	on-line
304	1649 MHz	SPARC-T3	on-line
305	1649 MHz	SPARC-T3	on-line
306	1649 MHz	SPARC-T3	on-line
307	1649 MHz	SPARC-T3	on-line
308	1649 MHz	SPARC-T3	on-line
309	1649 MHz	SPARC-T3	on-line
310	1649 MHz	SPARC-T3	on-line
311	1649 MHz	SPARC-T3	on-line
312	1649 MHz	SPARC-T3	on-line
313	1649 MHz	SPARC-T3	on-line
314	1649 MHz	SPARC-T3	on-line
315	1649 MHz	SPARC-T3	on-line
316	1649 MHz	SPARC-T3	on-line
317	1649 MHz	SPARC-T3	on-line
318	1649 MHz	SPARC-T3	on-line
319	1649 MHz	SPARC-T3	on-line
320	1649 MHz	SPARC-T3	on-line
321	1649 MHz	SPARC-T3	on-line
322	1649 MHz	SPARC-T3	on-line
323	1649 MHz	SPARC-T3	on-line
324	1649 MHz	SPARC-T3	on-line
325	1649 MHz	SPARC-T3	on-line
326	1649 MHz	SPARC-T3	on-line
327	1649 MHz	SPARC-T3	on-line
328	1649 MHz	SPARC-T3	on-line
329	1649 MHz	SPARC-T3	on-line

504	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP0/BOB2/CH1/D0	/pci@600/pci@2/pci@0/pci@0/pci@0/pci@2/network@0,1
505	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP0/BOB2/CH1/D1	/SYS/PCI-EM7 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
506	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP0/BOB3/CH0/D0	/pci@600/pci@2/pci@0/pci@0/pci@0/pci@3/SUNW,emlxs
507	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP0/BOB3/CH0/D1	@0
508	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP0/BOB3/CH1/D0	/SYS/PCI-EM7 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
509	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP0/BOB3/CH1/D1	/pci@600/pci@2/pci@0/pci@0/pci@0/pci@3/SUNW,emlxs
510	1649 MHz	SPARC-T3	on-line		64 GB /SYS/PM1/CMP1/BOB0/CH0/D0	@0,1
511	1649 MHz	SPARC-T3	on-line		/SYS/PM1/CMP1/BOB0/CH0/D1	/SYS/RIO/NET2 PCIE network-pciex8086,10c9
===== Physical Memory Configuration						/pci@600/pci@2/pci@0/pci@3/network@0
Segment Table:						/SYS/RIO/NET3 PCIE network-pciex8086,10c9
-----						/pci@600/pci@2/pci@0/pci@3/network@0,1
Base Address	Segment Size	Interleave Factor	Bank Size	Contains Modules		/SYS/MB/REM1/SASHBA1PCIE LSI,sas-pciex1000,72 LSI,2008
0x0	512 GB	8	64 GB	/SYS/PM0/CMP0/BOB0/CH0/D0		/pci@700/pci@1/pci@0/pci@0/LSI,sas@0
				/SYS/PM0/CMP0/BOB0/CH0/D1		/SYS/PCI-EM14 PCIE network-pciex8086,105e LPem12002E-S
				/SYS/PM0/CMP0/BOB0/CH1/D0		/pci@700/pci@1/pci@0/pci@4/pci@0/pci@2/network@0
				/SYS/PM0/CMP0/BOB0/CH1/D1		/SYS/PCI-EM14 PCIE network-pciex8086,105e LPem12002E-S
				/SYS/PM0/CMP0/BOB1/CH0/D0		/pci@700/pci@1/pci@0/pci@4/pci@0/pci@2/network@0,1
				/SYS/PM0/CMP0/BOB1/CH0/D1		/SYS/PCI-EM14 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
				/SYS/PM0/CMP0/BOB1/CH1/D0		/pci@700/pci@1/pci@0/pci@4/pci@0/pci@3/SUNW,emlxs
				/SYS/PM0/CMP0/BOB1/CH1/D1		@0
				64 GB /SYS/PM0/CMP0/BOB2/CH0/D0		/SYS/PCI-EM14 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
				/SYS/PM0/CMP0/BOB2/CH0/D1		/pci@700/pci@1/pci@0/pci@4/pci@0/pci@3/SUNW,emlxs
				/SYS/PM0/CMP0/BOB2/CH1/D0		@0,1
				/SYS/PM0/CMP0/BOB2/CH1/D1		/SYS/PCI-EM15 PCIE network-pciex8086,1507 X1110a-z/1110a-z
				/SYS/PM0/CMP0/BOB3/CH0/D0		/pci@700/pci@2/pci@0/pci@5/network@0
				/SYS/PM0/CMP0/BOB3/CH0/D1		/SYS/PCI-EM15 PCIE network-pciex8086,1507 X1110a-z/1110a-z
				/SYS/PM0/CMP0/BOB3/CH1/D0		/pci@700/pci@2/pci@0/pci@5/network@0,1
				/SYS/PM0/CMP0/BOB3/CH1/D1		/SYS/MB/VIDEO PCIX display-pci1a03,2000
				64 GB /SYS/PM0/CMP1/BOB0/CH0/D0		/pci@400/pci@1/pci@0/pci@7/pci@0/display@0
				/SYS/PM0/CMP1/BOB0/CH0/D1		MB PCIX usb-pciex8086,10c9
				/SYS/PM0/CMP1/BOB0/CH1/D0		/pci@400/pci@1/pci@0/pci@8/pci@0/usb@0
				/SYS/PM0/CMP1/BOB0/CH1/D1		MB PCIX usb-pciex8086,10c9
				/SYS/PM0/CMP1/BOB1/CH0/D0		/pci@400/pci@1/pci@0/pci@8/pci@0/usb@0,1
				/SYS/PM0/CMP1/BOB1/CH0/D1		MB PCIX usb-pciex8086,105e LPem12002E-S
				/SYS/PM0/CMP1/BOB1/CH1/D0		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@2/network@0
				/SYS/PM0/CMP1/BOB1/CH1/D1		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@2/network@0,1
				64 GB /SYS/PM0/CMP1/BOB2/CH0/D0		/SYS/PCI-EM9 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
				/SYS/PM0/CMP1/BOB2/CH0/D1		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@3/SUNW,emlxs
				/SYS/PM0/CMP1/BOB2/CH1/D0		@0
				/SYS/PM0/CMP1/BOB2/CH1/D1		/SYS/PCI-EM9 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
				/SYS/PM0/CMP1/BOB3/CH0/D0		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@3/SUNW,emlxs
				/SYS/PM0/CMP1/BOB3/CH0/D1		@0,1
				/SYS/PM0/CMP1/BOB3/CH1/D0		/SYS/PCI-EM4 PCIE network-pciex8086,105e LPem12002E-S
				/SYS/PM0/CMP1/BOB3/CH1/D1		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@2/network@0
				64 GB /SYS/PM1/CMP0/BOB0/CH0/D0		/SYS/PCI-EM4 PCIE network-pciex8086,105e LPem12002E-S
				/SYS/PM1/CMP0/BOB0/CH0/D1		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@2/network@0,1
				/SYS/PM1/CMP0/BOB0/CH1/D0		/SYS/PCI-EM4 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
				/SYS/PM1/CMP0/BOB0/CH1/D1		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@3/SUNW,emlxs
				/SYS/PM1/CMP0/BOB1/CH0/D0		@0
				/SYS/PM1/CMP0/BOB1/CH0/D1		/SYS/PCI-EM4 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S
				/SYS/PM1/CMP0/BOB1/CH1/D0		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@3/SUNW,emlxs
				/SYS/PM1/CMP0/BOB1/CH1/D1		@0,1
				64 GB /SYS/PM1/CMP0/BOB2/CH0/D0		/SYS/PCI-EM7 PCIE network-pciex8086,105e LPem12002E-S
				/SYS/PM1/CMP0/BOB2/CH0/D1		/pci@600/pci@2/pci@0/pci@0/pci@0/pci@2/network@0
						/SYS/PCI-EM7 PCIE network-pciex8086,105e LPem12002E-S

===== IO Devices

Slot + Status	Bus Type	Name + Path	Model
		/SYS/MB/REM0/SASHBA0PCIE	LSI,sas-pciex1000,72 LSI,2008
		/pci@400/pci@1/pci@0/pci@0/LSI,sas@0	
		/SYS/RIO/NET0 PCIE network-pciex8086,10c9	
		/pci@400/pci@1/pci@0/pci@2/network@0	
		/SYS/RIO/NET1 PCIE network-pciex8086,10c9	
		/pci@400/pci@1/pci@0/pci@2/network@0,1	
		/SYS/PCI-EM9 PCIE network-pciex8086,105e LPem12002E-S	
		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@2/network@0	
		/SYS/PCI-EM9 PCIE network-pciex8086,105e LPem12002E-S	
		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@2/network@0,1	
		/SYS/PCI-EM9 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S	
		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@3/SUNW,emlxs	
		@0	
		/SYS/PCI-EM9 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S	
		/pci@500/pci@2/pci@0/pci@2/pci@0/pci@3/SUNW,emlxs	
		@0,1	
		/SYS/PCI-EM4 PCIE network-pciex8086,105e LPem12002E-S	
		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@2/network@0	
		/SYS/PCI-EM4 PCIE network-pciex8086,105e LPem12002E-S	
		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@2/network@0,1	
		/SYS/PCI-EM4 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S	
		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@3/SUNW,emlxs	
		@0	
		/SYS/PCI-EM4 PCIE SUNW,emlxs-pciex10df,fc40 LPem12002E-S	
		/pci@600/pci@1/pci@0/pci@4/pci@0/pci@3/SUNW,emlxs	
		@0,1	
		/SYS/PCI-EM7 PCIE network-pciex8086,105e LPem12002E-S	
		/pci@600/pci@2/pci@0/pci@0/pci@0/pci@2/network@0	
		/SYS/PCI-EM7 PCIE network-pciex8086,105e LPem12002E-S	

===== Environmental Status

Fan sensors:
All fan sensors 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:

Location	Indicator	Condition
SYS/MB/FMOD	WRITE_THROUGH	disabled

===== FRU Status

All FRUs are enabled.

Prtconf nodes 1..27

System Configuration: Sun Microsystems sun4v

Memory size: 523776 Megabytes

System Peripherals (Software Nodes):

sun4v

- scsi_vhci, instance #0
- disk, instance #0
- disk, instance #1
- disk, instance #2
- disk, instance #3
- disk, instance #6
- disk, instance #5
- disk, instance #7
- disk, instance #8
- ssd, instance #2042
- ssd, instance #2043
- ssd, instance #2044
- ssd, instance #2045
- ssd, instance #2046
- ssd, instance #2047
- ssd, instance #2036
- ssd, instance #2049
- ssd, instance #2030
- ssd, instance #2031
- ssd, instance #2032
- ssd, instance #2033
- ssd, instance #2034
- ssd, instance #2035
- ssd, instance #2048
- ssd, instance #2193
- ssd, instance #2194
- ssd, instance #2195
- ssd, instance #2196
- ssd, instance #2197
- ssd, instance #2198
- ssd, instance #2211
- ssd, instance #2205
- ssd, instance #2206
- ssd, instance #2207
- ssd, instance #2208
- ssd, instance #2209
- ssd, instance #2210
- ssd, instance #2199
- ssd, instance #2212
- ssd, instance #2168
- ssd, instance #2169
- ssd, instance #2170

- ssd, instance #2171
- ssd, instance #2172
- ssd, instance #2173
- ssd, instance #2186
- ssd, instance #2230
- ssd, instance #2231
- ssd, instance #2232
- ssd, instance #2233
- ssd, instance #2234
- ssd, instance #2235
- ssd, instance #2224
- ssd, instance #2237
- ssd, instance #1911
- ssd, instance #1912
- ssd, instance #1913
- ssd, instance #1914
- ssd, instance #1915
- ssd, instance #1916
- ssd, instance #1904
- ssd, instance #2073
- ssd, instance #2074
- ssd, instance #2075
- ssd, instance #2076
- ssd, instance #2077
- ssd, instance #2078
- ssd, instance #2161
- ssd, instance #1931
- ssd, instance #1932
- ssd, instance #1933
- ssd, instance #1934
- ssd, instance #1935
- ssd, instance #1936
- ssd, instance #1929
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- ssd, instance #2183
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- ssd, instance #2359
- ssd, instance #2360
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- ssd, instance #2295
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- ssd, instance #2338
- ssd, instance #2339
- ssd, instance #2361
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- ssd, instance #2382
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- ssd, instance #2389
- ssd, instance #2390
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- ssd, instance #2392
- ssd, instance #2393
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- ssd, instance #2384
- ssd, instance #2385
- ssd, instance #2184
- ssd, instance #2185
- ssd, instance #2174
- ssd, instance #2187
- ssd, instance #2218
- ssd, instance #2219
- ssd, instance #2220
- ssd, instance #2221
- ssd, instance #2222
- ssd, instance #2223
- ssd, instance #2236
- ssd, instance #1923
- ssd, instance #1924
- ssd, instance #1925
- ssd, instance #1926
- ssd, instance #1927
- ssd, instance #1928

ssd, instance #1937
ssd, instance #1930
ssd, instance #2011
ssd, instance #2012
ssd, instance #2023
ssd, instance #2024
ssd, instance #2155
ssd, instance #2156
ssd, instance #2157
ssd, instance #2158
ssd, instance #2159
ssd, instance #2160
ssd, instance #2079
ssd, instance #2162
ssd, instance #2104
ssd, instance #2105
ssd, instance #2106
ssd, instance #2107
ssd, instance #2108
ssd, instance #2109
ssd, instance #2148
ssd, instance #1968
ssd, instance #1969
ssd, instance #1970
ssd, instance #1971
ssd, instance #1972
ssd, instance #1973
ssd, instance #1961
ssd, instance #2116
ssd, instance #2117
ssd, instance #2118
ssd, instance #2119
ssd, instance #2120
ssd, instance #2121
ssd, instance #2091
ssd, instance #2123
ssd, instance #1955
ssd, instance #1956
ssd, instance #1957
ssd, instance #1958
ssd, instance #1959
ssd, instance #1960
ssd, instance #1974
ssd, instance #1962
ssd, instance #1898
ssd, instance #1899
ssd, instance #1900
ssd, instance #1901
ssd, instance #1902
ssd, instance #1903
ssd, instance #1917
ssd, instance #1905
ssd, instance #1993
ssd, instance #1994
ssd, instance #1995
ssd, instance #1996
ssd, instance #1997
ssd, instance #1998

ssd, instance #2061
ssd, instance #2142
ssd, instance #2143
ssd, instance #2144
ssd, instance #2145
ssd, instance #2146
ssd, instance #2147
ssd, instance #2110
ssd, instance #2149
ssd, instance #1886
ssd, instance #1887
ssd, instance #1888
ssd, instance #1889
ssd, instance #1890
ssd, instance #1891
ssd, instance #1879
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ssd, instance #2096
ssd, instance #2097
ssd, instance #2098
ssd, instance #2135
ssd, instance #2055
ssd, instance #2056
ssd, instance #2057
ssd, instance #2058
ssd, instance #2059
ssd, instance #2060
ssd, instance #1999
ssd, instance #2062
ssd, instance #2085
ssd, instance #2086
ssd, instance #2087
ssd, instance #2088
ssd, instance #2089
ssd, instance #2090
ssd, instance #2122
ssd, instance #1873
ssd, instance #1874
ssd, instance #1875
ssd, instance #1876
ssd, instance #1877
ssd, instance #1878
ssd, instance #1892
ssd, instance #1880
ssd, instance #1943
ssd, instance #1944
ssd, instance #1945
ssd, instance #1946
ssd, instance #1947
ssd, instance #1948
ssd, instance #1986
ssd, instance #2129
ssd, instance #2130
ssd, instance #2131
ssd, instance #2132
ssd, instance #2133

ssd, instance #2134
ssd, instance #2099
ssd, instance #2136
ssd, instance #1980
ssd, instance #1981
ssd, instance #1982
ssd, instance #1983
ssd, instance #1984
ssd, instance #1985
ssd, instance #1949
ssd, instance #1987
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ssd, instance #2387
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ssd, instance #2426
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ssd, instance #2485
ssd, instance #2486
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ssd, instance #2395
ssd, instance #2396
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ssd, instance #2310
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ssd, instance #2480
ssd, instance #2481
ssd, instance #2302
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ssd, instance #2498
ssd, instance #2322
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ssd, instance #2473

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ssd, instance #2466
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ssd, instance #2492
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ssd, instance #2300
ssd, instance #2449
ssd, instance #2450
ssd, instance #2451
ssd, instance #2452
ssd, instance #2453
ssd, instance #2454
ssd, instance #2297
ssd, instance #2298
ssd, instance #744
ssd, instance #936
ssd, instance #937
ssd, instance #938
ssd, instance #939
ssd, instance #940
ssd, instance #941
ssd, instance #9
ssd, instance #943
ssd, instance #738
ssd, instance #740
ssd, instance #741
ssd, instance #742
ssd, instance #743
ssd, instance #745

ssd, instance #944
ssd, instance #942
ssd, instance #945
ssd, instance #946
ssd, instance #947
ssd, instance #55
ssd, instance #746
ssd, instance #747
ssd, instance #755
ssd, instance #756
ssd, instance #757
ssd, instance #758
ssd, instance #935
ssd, instance #56
ssd, instance #57
ssd, instance #58
ssd, instance #59
ssd, instance #60
ssd, instance #61
ssd, instance #62
ssd, instance #63
ssd, instance #64
ssd, instance #65
ssd, instance #66
ssd, instance #67
ssd, instance #68
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<p> ssd, instance #79 ssd, instance #80 ssd, instance #81 ssd, instance #82 ssd, instance #1809 ssd, instance #1810 ssd, instance #1811 ssd, instance #1812 ssd, instance #1813 ssd, instance #1814 ssd, instance #1815 ssd, instance #1816 ssd, instance #1817 ssd, instance #1818 ssd, instance #1819 ssd, instance #1820 ssd, instance #1821 ssd, instance #1822 ssd, instance #1823 ssd, instance #1824 ssd, instance #1825 ssd, instance #1826 ssd, instance #1827 ssd, instance #1828 ssd, instance #1829 ssd, instance #1830 ssd, instance #1831 ssd, instance #1832 ssd, instance #1833 ssd, instance #1834 packages (driver not attached) SUNW,builtin-drivers (driver not attached) deblocker (driver not attached) disk-label (driver not attached) terminal-emulator (driver not attached) dropins (driver not attached) SUNW,asr (driver not attached) kbd-translator (driver not attached) obp-tftp (driver not attached) ufs-file-system (driver not attached) hsfs-file-system (driver not attached) chosen (driver not attached) openprom (driver not attached) client-services (driver not attached) options, instance #0 aliases (driver not attached) memory (driver not attached) virtual-memory (driver not attached) iscsi-hba (driver not attached) disk (driver not attached) virtual-devices, instance #0 flashprom (driver not attached) tpm (driver not attached) channel-devices, instance #0 virtual-channel, instance #0 virtual-channel-client, instance #1 virtual-channel-client, instance #2 virtual-channel, instance #3 </p>	<p> virtual-domain-service, instance #0 n2cp, instance #0 (driver not attached) ncp, instance #0 random-number-generator, instance #0 console, instance #0 rtc (driver not attached) 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 cpu, instance #16 cpu, instance #17 cpu, instance #18 cpu, instance #19 cpu, instance #20 cpu, instance #21 cpu, instance #22 cpu, instance #23 cpu, instance #24 cpu, instance #25 cpu, instance #26 cpu, instance #27 cpu, instance #28 cpu, instance #29 cpu, instance #30 cpu, instance #31 cpu, instance #32 cpu, instance #33 cpu, instance #34 cpu, instance #35 cpu, instance #36 cpu, instance #37 cpu, instance #38 cpu, instance #39 cpu, instance #40 cpu, instance #41 cpu, instance #42 cpu, instance #43 cpu, instance #44 cpu, instance #45 cpu, instance #46 cpu, instance #47 cpu, instance #48 cpu, instance #49 cpu, instance #50 cpu, instance #51 cpu, instance #52 </p>	<p> cpu, instance #53 cpu, instance #54 cpu, instance #55 cpu, instance #56 cpu, instance #57 cpu, instance #58 cpu, instance #59 cpu, instance #60 cpu, instance #61 cpu, instance #62 cpu, instance #63 cpu, instance #64 cpu, instance #65 cpu, instance #66 cpu, instance #67 cpu, instance #68 cpu, instance #69 cpu, instance #70 cpu, instance #71 cpu, instance #72 cpu, instance #73 cpu, instance #74 cpu, instance #75 cpu, instance #76 cpu, instance #77 cpu, instance #78 cpu, instance #79 cpu, instance #80 cpu, instance #81 cpu, instance #82 cpu, instance #83 cpu, instance #84 cpu, instance #85 cpu, instance #86 cpu, instance #87 cpu, instance #88 cpu, instance #89 cpu, instance #90 cpu, instance #91 cpu, instance #92 cpu, instance #93 cpu, instance #94 cpu, instance #95 cpu, instance #96 cpu, instance #97 cpu, instance #98 cpu, instance #99 cpu, instance #100 cpu, instance #101 cpu, instance #102 cpu, instance #103 cpu, instance #104 cpu, instance #105 cpu, instance #106 cpu, instance #107 cpu, instance #108 cpu, instance #109 cpu, instance #110 </p>
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 cpu, instance #511
 cpu, instance #512
 pci, instance #0
 pci, instance #0
 pci, instance #2
 pci, instance #3

LSI,sas, instance #0
 tape (driver not attached)
 disk (driver not attached)
 iport, instance #7
 iport, instance #3
 iport, instance #5
 iport, instance #6
 iport, instance #4
 pci, instance #4
 network, instance #0
 network, instance #1
 pci, instance #5
 pci, instance #6
 pci, instance #8
 display, instance #0
 pci, instance #7
 pci, instance #9
 usb, instance #0
 usb, instance #1
 usb (driver not attached)
 hub (driver not attached)
 hub (driver not attached)
 storage (driver not attached)
 disk (driver not attached)
 device (driver not attached)
 keyboard (driver not attached)
 mouse (driver not attached)
 hub (driver not attached)
 pci, instance #1
 pci, instance #10
 pci, instance #11
 pci, instance #12
 pci, instance #13
 pci, instance #14
 pci, instance #1
 pci, instance #15
 pci, instance #17
 pci, instance #18
 pci, instance #19
 pci, instance #20
 pci, instance #16
 pci, instance #21
 pci, instance #22
 pci, instance #23
 pci, instance #25
 pci, instance #26
 network, instance #0
 network, instance #1
 pci, instance #27
 SUNW,emlxs, instance #0
 fp (driver not attached)
 disk (driver not attached)
 tape (driver not attached)
 fp, instance #8
 SUNW,emlxs, instance #1
 fp (driver not attached)
 disk (driver not attached)
 tape (driver not attached)

 fp, instance #1
 pci, instance #24
 pci, instance #28
 pci, instance #2
 pci, instance #29
 pci, instance #31
 pci, instance #32
 pci, instance #33
 pci, instance #35
 pci, instance #36
 network, instance #2
 network, instance #3
 pci, instance #37
 SUNW,emlxs, instance #2
 fp (driver not attached)
 disk (driver not attached)
 tape (driver not attached)
 fp, instance #3
 SUNW,emlxs, instance #3
 fp (driver not attached)
 disk (driver not attached)
 tape (driver not attached)
 fp, instance #4
 pci, instance #34
 pci, instance #30
 pci, instance #38
 pci, instance #39
 pci, instance #41
 pci, instance #42
 network, instance #4
 network, instance #5
 pci, instance #43
 SUNW,emlxs, instance #4
 fp (driver not attached)
 disk (driver not attached)
 tape (driver not attached)
 fp, instance #7
 SUNW,emlxs, instance #5
 fp (driver not attached)
 disk (driver not attached)
 tape (driver not attached)
 fp, instance #9
 pci, instance #40
 network, instance #2
 network, instance #3
 pci, instance #44
 pci, instance #3
 pci, instance #45
 pci, instance #47
 pci, instance #48
 LSI,sas, instance #1
 tape (driver not attached)
 disk (driver not attached)
 iport, instance #8
 iport, instance #9
 iport, instance #10
 iport, instance #11
 iport, instance #2

<pre> pci, instance #49 pci, instance #51 pci, instance #52 network, instance #6 network, instance #7 pci, instance #53 SUNW,emlxs, instance #6 fp (driver not attached) disk (driver not attached) tape (driver not attached) fp, instance #13 SUNW,emlxs, instance #7 fp (driver not attached) disk (driver not attached) tape (driver not attached) fp, instance #12 pci, instance #50 pci, instance #54 pci, instance #46 pci, instance #55 pci, instance #56 pci, instance #57 pci, instance #58 pci, instance #59 network, instance #0 network, instance #1 niu, instance #0 niu, instance #1 niu, instance #2 niu, instance #3 pci-performance-counters, instance #0 pci-performance-counters, instance #1 pci-performance-counters, instance #2 pci-performance-counters, instance #3 ramdisk-root, instance #0 (driver not attached) os-io (driver not attached) iscsi, instance #0 pseudo, instance #0 /etc/project – nodes 1..27 system:0:::: user.root:1:::: noproject:2:::: default:3:::: group.staff:10:::: elcap:100:ELCAP:oracle::process.max-sem- nsems=(priv,512,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 – nodes 1..27 *ident "@(#)system 1.18 97/06/27 SMI" /* SVR4 1.5 */ * * SYSTEM SPECIFICATION FILE * * moddir: * </pre>	<pre> * * 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 </pre>	<pre> * 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 * ***** * /etc/system ademdum added by SAE's Jumpstart * at OS install time. * * * endit * * set a few lvm params we like * * faster resyncs! set md_mirror:md_resync_bufsz = 2048 * * less than 50% metadb quorum okay! set md:mirrored_root_flag=1 * * end lvm settings we like * ** For TPC-C exclude: ehci exclude: uhci exclude: hubd set rlim_fd_cur=1024 set hires_tick=1 set lgrp_mem_pset_aware=1 set segspt_minfree=0x80000 # set to 1G, since otherwise it is 60G set swapfs_minfree=0x20000 set maxphys=1048576 set autoup=3000 set ip:ip_squeue_bind = 0 * Settings for LP for Kmem *set segkmem_lpsize = 0x400000 </pre>
--	---	---

```

* lockstat shows extra frame in most kernel call stacks, truncates others to a
single frame
set profile:profile_aframes = 4

* Workaround to avoid fast track cache px_dvma_map_fast (Paul
Riethmuller)
*set px:px_dvma_page_cache_clustsz = 0

* Disable Halt Idle CPUs
* set enable_halt_idle_cpus = 0

* Enable MPO Debug
*set sun4v_mpo_debug = 1

* Workaround for USB interrupt issue. Keep excludes, but keep OBP as well
set force_domaining_disabled = 1

* Reduce retained memory, djm 8/6/10
* default 2% of memory, so 10G
set bufhwm=100000
* default 1/64 of memory, so 8G. desfree and minfree derive from this.
set lotsfree=131072

* turn off kernel cage
set kernel_cage_enable=0

/etc/user_attr – nodes 1..27
#
# 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

sd.conf – nodes 1..27
#
# 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";

ssd.conf – nodes 1..27
#

```

```

# 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:12";

interrupts.ksh – nodes 1..27
#!/bin/ksh

# emlxs start at 256-263, but numbers are hex, so 100-107
EMLXS0=80
EMLXS1=81
EMLXS2=100
EMLXS3=101
EMLXS4=102
EMLXS5=103
EMLXS6=180
EMLXS7=181

# ixgbe are 264-271, but still hex
IXGBE0=108
IXGBE1=109
IXGBE2=10A
IXGBE3=10B
IXGBE4=10C
IXGBE5=10D
IXGBE6=10E
IXGBE7=10F

# nxge and qlc are 272-279
E1000G0=110
E1000G1=111
E1000G2=112

map_lf()
{
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 $5 }' | awk -Fx '{ print
$2 }'`
do
pcitool /pci@500 -i ino=${i} -w cpu=$EMLXS0
done

```

<pre> #emlx1 for i in `grep "emlxs#1" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@500 -i ino=\${i} -w cpu=\$EMLXS1 done #emlx2 for i in `grep "emlxs#2" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@600 -i ino=\${i} -w cpu=\$EMLXS2 done #emlx3 for i in `grep "emlxs#3" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@600 -i ino=\${i} -w cpu=\$EMLXS3 done #emlx4 for i in `grep "emlxs#4" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@600 -i ino=\${i} -w cpu=\$EMLXS4 done #emlx5 for i in `grep "emlxs#5" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@600 -i ino=\${i} -w cpu=\$EMLXS5 done #emlx6 for i in `grep "emlxs#6" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@700 -i ino=\${i} -w cpu=\$EMLXS6 done #emlx7 for i in `grep "emlxs#7" /tmp/mdb.\$\$ awk '{ print \$5 }' awk -Fx '{ print \$2 }'" do pcitool /pci@700 -i ino=\${i} -w cpu=\$EMLXS7 done fi } map_log() { echo "Setting Log Device Interrupt mapping" sleep 2 if [\$EMLXS -ne 0] then INDX=0 for q in 0 1; do IN=`grep "qlc#\$q" /tmp/mdb.\$\$ head -1 awk '{ print \$5 }' awk -Fx '{ print \$2 }'" if ["\$IN" != "X"]; then INO[\$INDX]=\$IN INDX=`expr \$INDX + 1` fi done fi } </pre>	<pre> fi done #qlc0 pcitool /pci@500 -i ino=\${INO[0]} -w cpu=\$QLC0 #qlc1 pcitool /pci@500 -i ino=\${INO[1]} -w cpu=\$QLC1 fi } map_network() { echo "Setting Network Interrupt mapping" sleep 2 # 10Gb RAC interconnect ixgbe0 # Put on last 8 threads because map to pci@700 C=0 grep "ixgbe#0" /tmp/mdb.\$\$ awk '{ print \$5 }' 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=\$IXGBE0 pcitool /pci@700 -i ino=\${INO[1]} -w cpu=\$IXGBE0 pcitool /pci@700 -i ino=\${INO[2]} -w cpu=\$IXGBE1 pcitool /pci@700 -i ino=\${INO[3]} -w cpu=\$IXGBE1 pcitool /pci@700 -i ino=\${INO[4]} -w cpu=\$IXGBE2 pcitool /pci@700 -i ino=\${INO[5]} -w cpu=\$IXGBE2 pcitool /pci@700 -i ino=\${INO[6]} -w cpu=\$IXGBE3 pcitool /pci@700 -i ino=\${INO[7]} -w cpu=\$IXGBE3 pcitool /pci@700 -i ino=\${INO[8]} -w cpu=\$IXGBE4 pcitool /pci@700 -i ino=\${INO[9]} -w cpu=\$IXGBE4 pcitool /pci@700 -i ino=\${INO[10]} -w cpu=\$IXGBE5 pcitool /pci@700 -i ino=\${INO[11]} -w cpu=\$IXGBE5 pcitool /pci@700 -i ino=\${INO[12]} -w cpu=\$IXGBE6 pcitool /pci@700 -i ino=\${INO[13]} -w cpu=\$IXGBE6 pcitool /pci@700 -i ino=\${INO[14]} -w cpu=\$IXGBE7 pcitool /pci@700 -i ino=\${INO[15]} -w cpu=\$IXGBE7 rm /tmp/ino.\$\$ # 1Gb client nxge0-3 C=0 egrep "e1000g#0 e1000g#1 e1000g#2" /tmp/mdb.\$\$ awk '{ print \$5 }' 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=\$E1000G0 pcitool /pci@500 -i ino=\${INO[1]} -w cpu=\$E1000G1 pcitool /pci@600 -i ino=\${INO[2]} -w cpu=\$E1000G2 rm /tmp/ino.\$\$ } check_intr() </pre>	<pre> { echo "LF links" echo " Device Type MSG # State INO Mondo Shared Pil CPU" if [\$EMLXS -ne 0] then # we're using emulex for e in 0 1 2 3 4 5 6 7; 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 Type MSG # State INO Mondo Shared Pil CPU" if [\$EMLXS -ne 0] then # we're using emulex for q in 0 1; 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 fi # echo echo echo NW echo " Device Type MSG # State INO Mondo Shared Pil CPU" for n in 0 1 2; do grep "e1000g#\$n" /tmp/mdb.\$\$ done grep "ixgbe#0" /tmp/mdb.\$\$ echo echo echo "Existing PSRSETS" psrset } do_mdb() { echo ::interrupts mdb -k 2>&1 grep -v "failed to read" > /tmp/mdb.\$\$ } usage() { </pre>
--	--	---

<pre> 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 map_lf #map_log map_network rm /tmp/mdb.\$\$ exit ;; -check) shift do_mdb EMLXS=`grep emlxs /tmp/mdb.\$\$ wc -l` check_intr rm /tmp/mdb.\$\$ exit ;; -clean) lockfs -fa exit ;; *) echo "option \$1 not recognized" usage exit ;; esac shift done neworaset.sh – nodes 1..27 #!/bin/ksh # setup: #bd 0: #0 clock #1-127 listener 1 #bd 1: #130-255 listener 2 #bd 2: (cage) #128-129 256-259 384-385 emlxs #264-271 ixgbe #272-274 e1000g </pre>	<pre> #280-287 lgwr (turn off 280-286) #288-299 lms #300-331 ora_ (except lms/igwr) #332-383 system partition #bd 3: #386-511 listener 3 CLEAN=\$1 # first reenale all psrs and remove all psrsets psradm -n -a set `echo 0; psrset nawk '{print \$4 }' sed "s:///"` shift while [\$# -ne 0]; do psrset -d \$1 shift done # stop if only want to clean if ["\$xCLEAN" == "xclean" -o "\$xCLEAN" == "x-clean"]; then exit fi # now turn off cpus and interrupts for lgwr and lms/lmd psradm -f 280-286 psradm -i 287-295 # now set interrupts based on local script /mjhtools/interrupts.ksh -map # create psrsets for system stuff psrset -c 0 psrset -c 128-129 256-259 384-385 psrset -c 264-271 psrset -c 272-274 psrset -c 287 psrset -c 288-299 psrset -c 300-331 # now 3 listener psrsets (8-10) psrset -c 1-127 psrset -c 130-255 psrset -c 386-511 # now move in lgwr psrset -b 5 `ps -eaf grep ora_lgw grep -v grep nawk '{print \$2}`" # Pset for lms/lmd for p in `ps -eaf grep ora_lms grep -v grep nawk '{print \$2}`"; do psrset -b 6 \$p done psrset -b 7 `ps -eaf grep ora_ grep -v grep grep -v ora_lgw grep -v ora_lms nawk '{print \$2}`" </pre>	<pre> # finally the listeners LSNR=8 for p in `ps -eaf grep tnslnr grep -v grep grep -v SCAN nawk '{print \$2}`";do psrset -b \$LSNR \$p LSNR=`expr \$LSNR + 1` done # Now set the priority on things # All oracle to FX 17. This should be inherited from the listeners /bin/prioctl -s -c FX -m 17 -p 17 -i pid `pgrep -f ora` # lgwr to RT /bin/prioctl -s -c RT -p 1 -i pid `pgrep -f ora_l` # vktm to FX 19 /bin/prioctl -s -c FX -m 19 -p 19 -i pid `pgrep -f ora_vktm` uname -a – node2 (same for all nodes 1..27) SunOS db2 5.10 Generic_142909-17 sun4v sparc sun4v /etc/release – nodes 1..27 Oracle Solaris 10 9/10 s10s_u9wos_14a SPARC Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved. Assembled 11 August 2010 Oracle DBMS version – nodes 1..27 oracle@db1> sqlplus tpcc/tpcc SQL*Plus: Release 11.2.0.1.0 Production on Wed Oct 6 14:29:17 2010 Copyright (c) 1982, 2009, Oracle. All rights reserved. Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production With the Partitioning, Real Application Clusters, Data Mining and Real Application Testing options Oracle Clusterware version – nodes 1..27 root@db1> crsctl query crs activeversion Oracle Clusterware active version on the cluster is [11.2.0.1.0] prun.ora – nodes 1..27 compatible = 11.2.0.0.0 aq_tm_processes = 0 db_file_multiblock_read_count = 1 control_files = (/export/home/oracle/tpcc_disks_recap/control_003,/export/home/oracle/tpcc _disks_recap/control_004) db_16k_cache_size = 100G db_8k_cache_size = 4G db_block_size = 4096 db_cache_size = 20G db_keep_cache_size=296G db_recycle_cache_size=15G shared_pool_size=26G db_files=14000 db_name = recap </pre>
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```

log_buffer = 10485760
plsql_optimize_level=2
timed_statistics = true
fast_start_mtr_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 = 1000
undo_management = auto
undo_retention = 2
processes = 1400
cluster_database = true
cluster_database_instances=27
parallel_max_servers = 0
parallel_min_servers = 0
recovery_parallelism = 32
resource_manager_plan=""
transactions_per_rollback_segment=1
db_writer_processes=32
db_block_checking = FALSE
db_block_checksum = FALSE
trace_enabled = FALSE
parallel_execution_message_size=65536
gcs_server_processes=12
db_cache_advice=off
_lm_file_affinity="29,56-488=1:30,489-921=2:31,922-1354=3:32,1355-
1787=4:33,1788-2220=5:34,2221-2653=6:35,2654-3086=7:36,3087-
3519=8:37,3520-3952=9:38,3953-4385=10:39,4386-4818=11:40,4819-
5251=12:41,5252-5684=13:42,5685-6117=14:43,6118-6550=15:44,6551-
6983=16:45,6984-7416=17:46,7417-7849=18:47,7850-8282=19:48,8283-
8715=20:49,8716-9148=21:50,9149-9581=22:51,9582-10014=23:52,10015-
10447=24:53,10448-10880=25:54,10881-11313=26:55,11314-11746=27"

sessions = 1500
#_inline_sql_in_plsql=true
#_fast_cursor_reexecute = true
#_undo_autotune=false
#_enable_obj_queues = false
#_fg_sync_sleep_usec=1000
#_log_parallelism_max = 8

#_enable_list_io = TRUE

#_resource_manager_always_off=TRUE
#_resource_manager_always_on=FALSE
#_timer_precision=100
statistics_level=BASIC
#_awr_restrict_mode=TRUE

cpu_count=128
#_immediate_commit_propagation=false
local_listener = all_listeners

#_ksxp_reaping=256
#_lm_tx_delta=32
#_rollback_segment_count=1000
#_db_block_prefetch_limit = 0

# Debug spinning issue
event = "10994 trace name context forever, level 1000"

# Help HW contention?
#_smu_debug_mode=134219268

# Debug for ORA-00240: control file enqueue held for more than 120
seconds
# event = "10474 trace name context forever, level 1"

#_lm_rcvr_hang_allow_time=300
#_lm_rcvr_hang_kill=FALSE

/etc/vfstab - nodes 1..27
#device          device          mount          FS
#to mount to fsck mount point type pass
#         at boot options
#
fd - /dev/fd fd - no -
/proc - /proc proc - no -
/dev/dsk/c0t5000C5001CB428AFd0s1 - - swap
- - no -
# add more swap - PHYSICAL DISKS HDD2 and HDD3 in that order:
/dev/dsk/c0t5000C5001CB49B1Bd0s0 - - swap - no -
/dev/dsk/c0t5000C5001CB4300Bd0s0 - - swap - no -
/dev/dsk/c0t5000C5001CB428AFd0s0 / ufs
1 no -
/dev/dsk/c0t5000C5001CB428AFd0s4 /dev/dsk/c0t5000C5001CB428AFd0s4 /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 - nodes 1..27
#
# Internet host table
#
::1 localhost
127.0.0.1 localhost
10.196.100.2 db2 loghost
#
# NIS servers for reference
10.196.232.10 minister196
10.196.232.30 onager196
10.196.0.2 saegate196

# endit
### everything after this is managed from CENTRAL FILE don't make
changes
### below here without expecting them to get blown away by heartless
### and uncaring admin at the next update!! ;-))

#####
#####
#
# Begin ReCap DB host table addendum!! The MASTER lives in:
#
# /export/ptmp/recap/ewt/recap_host_addendum.txt
#
# This file WILL have hosts that have EVERYTHING listed in it - all drivers
# too, even though THIS node will only be able to see it's associated "three"..
# SOOO much easier to simply edit one file, and use
/opt/SUNWcluster/bin/cssh to
# edit every node concurrently to implement changes.. ewt 7.17.2010
#
#####
#####
#
# First, despite having naming services, we should INSURE that all nodes
# have local knowledge of all OTHER nodes, "Just in case".. Yes, that's
# paranoia you hear in my voice... ewt 7.19.2010
# All nodes SHOULD be able to see all other nodes!!
# Be careful about updating these in NIS without updating these
# local records!! ;-)) (doing my best to keep things confusing!)
#
10.196.100.1 db1 # ReCap: Database node number 1 (db1:igb0)
10.196.100.2 db2 # ReCap: Database node number 2 (db2:igb0)
10.196.100.3 db3 # ReCap: Database node number 3 (db3:igb0)
10.196.100.4 db4 # ReCap: Database node number 4 (db4:igb0)
10.196.100.5 db5 # ReCap: Database node number 5 (db5:igb0)
10.196.100.6 db6 # ReCap: Database node number 6 (db6:igb0)
10.196.100.7 db7 # ReCap: Database node number 7 (db7:igb0)
10.196.100.8 db8 # ReCap: Database node number 8 (db8:igb0)
10.196.100.9 db9 # ReCap: Database node number 9 (db9:igb0)
10.196.100.10 db10 # ReCap: Database node number 10 (db10:igb0)
10.196.100.11 db11 # ReCap: Database node number 11 (db11:igb0)
10.196.100.12 db12 # ReCap: Database node number 12 (db12:igb0)
10.196.100.13 db13 # ReCap: Database node number 13 (db13:igb0)
10.196.100.14 db14 # ReCap: Database node number 14 (db14:igb0)
10.196.100.15 db15 # ReCap: Database node number 15 (db15:igb0)
10.196.100.16 db16 # ReCap: Database node number 16 (db16:igb0)
10.196.100.17 db17 # ReCap: Database node number 17 (db17:igb0)
10.196.100.18 db18 # ReCap: Database node number 18 (db18:igb0)
10.196.100.19 db19 # ReCap: Database node number 19 (db19:igb0)
10.196.100.20 db20 # ReCap: Database node number 20 (db20:igb0)
10.196.100.21 db21 # ReCap: Database node number 21 (db21:igb0)
10.196.100.22 db22 # ReCap: Database node number 22 (db22:igb0)
10.196.100.23 db23 # ReCap: Database node number 23 (db23:igb0)
10.196.100.24 db24 # ReCap: Database node number 24 (db24:igb0)
10.196.100.25 db25 # ReCap: Database node number 25 (db25:igb0)
10.196.100.26 db26 # ReCap: Database node number 26 (db26:igb0)
10.196.100.27 db27 # ReCap: Database node number 27 (db27:igb0)
10.196.100.28 db28 # ReCap: Database node number 28 (db28:igb0)

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10.196.100.29 db29 # ReCap: Database node number 29 (db29:igb0) #####
10.196.100.30 db30 # ReCap: Database node number 30 (db30:igb0) #
# # RAC heart beat (igb1) - this is common to all DB nodes and all
# # SHOULD be able to see all!!
# #
192.168.1.1 db1hb1 # db1 RAC rack HEARTBEAT network
##### (db1:igb1)
#####
192.168.1.2 db2hb1 # db2 RAC rack HEARTBEAT network
# (db2:igb1)
# # endit: RAC heartbeat interconnect
#####
# For the SAME reasons as above, all nodes should know about all
# other nodes "VIP", or Virtual IP. ewt 7.19.2010
# Be careful about updating these in NIS without updating these
# local records!! ;-) (doing my best to keep things confusing!)
#
10.196.100.101 db1-vip # ReCap: Database node number 1 VIP
10.196.100.102 db2-vip # ReCap: Database node number 2 VIP
10.196.100.103 db3-vip # ReCap: Database node number 3 VIP
10.196.100.104 db4-vip # ReCap: Database node number 4 VIP
10.196.100.105 db5-vip # ReCap: Database node number 5 VIP
10.196.100.106 db6-vip # ReCap: Database node number 6 VIP
10.196.100.107 db7-vip # ReCap: Database node number 7 VIP
10.196.100.108 db8-vip # ReCap: Database node number 8 VIP
10.196.100.109 db9-vip # ReCap: Database node number 9 VIP
10.196.100.110 db10-vip # ReCap: Database node number 10 VIP
10.196.100.111 db11-vip # ReCap: Database node number 11 VIP
10.196.100.112 db12-vip # ReCap: Database node number 12 VIP
10.196.100.113 db13-vip # ReCap: Database node number 13 VIP
10.196.100.114 db14-vip # ReCap: Database node number 14 VIP
10.196.100.115 db15-vip # ReCap: Database node number 15 VIP
10.196.100.116 db16-vip # ReCap: Database node number 16 VIP
10.196.100.117 db17-vip # ReCap: Database node number 17 VIP
10.196.100.118 db18-vip # ReCap: Database node number 18 VIP
10.196.100.119 db19-vip # ReCap: Database node number 19 VIP
10.196.100.120 db20-vip # ReCap: Database node number 20 VIP
10.196.100.121 db21-vip # ReCap: Database node number 21 VIP
10.196.100.122 db22-vip # ReCap: Database node number 22 VIP
10.196.100.123 db23-vip # ReCap: Database node number 23 VIP
10.196.100.124 db24-vip # ReCap: Database node number 24 VIP
10.196.100.125 db25-vip # ReCap: Database node number 25 VIP
10.196.100.126 db26-vip # ReCap: Database node number 26 VIP
10.196.100.127 db27-vip # ReCap: Database node number 27 VIP
10.196.100.128 db28-vip # ReCap: Database node number 28 VIP
10.196.100.129 db29-vip # ReCap: Database node number 29 VIP
10.196.100.130 db30-vip # ReCap: Database node number 30 VIP
#
# SCAN address of all of the above Virtual IP's
#
10.196.100.200 scan-27node
10.196.100.201 scan-4node
10.196.100.202 scan-4node-2
10.196.100.203 scan-4node-3
10.196.100.204 scan-4node-4
10.196.100.205 scan-4node-5
#
# endit: db scan virtual IP's
#####
192.168.1.21 db21hb1 # db21 RAC rack HEARTBEAT network
##### (db21:igb1)
192.168.1.22 db22hb1 # db22 RAC rack HEARTBEAT network
##### (db22:igb1)
192.168.1.23 db23hb1 # db23 RAC rack HEARTBEAT network
##### (db23:igb1)
192.168.1.24 db24hb1 # db24 RAC rack HEARTBEAT network
##### (db24:igb1)
192.168.1.25 db25hb1 # db25 RAC rack HEARTBEAT network
##### (db25:igb1)
192.168.1.26 db26hb1 # db26 RAC rack HEARTBEAT network
##### (db26:igb1)
192.168.1.27 db27hb1 # db27 RAC rack HEARTBEAT network
##### (db27:igb1)
192.168.1.28 db28hb1 # db28 RAC rack HEARTBEAT network
##### (db28:igb1)
192.168.1.29 db29hb1 # db29 RAC rack HEARTBEAT network
##### (db29:igb1)
192.168.1.30 db30hb1 # db30 RAC rack HEARTBEAT network
##### (db30:igb1)
#
# endit: RAC heartbeat interconnect
#####
# Recap database servers public network access.. All should be able to
# ping all!!
#
10.137.235.1 db1pub # db1 Public interface to OWAN.. (db1:igb2)
10.137.235.2 db2pub # db2 Public interface to OWAN.. (db2:igb2)
10.137.235.3 db3pub # db3 Public interface to OWAN.. (db3:igb2)
10.137.235.4 db4pub # db4 Public interface to OWAN.. (db4:igb2)
10.137.235.5 db5pub # db5 Public interface to OWAN.. (db5:igb2)
10.137.235.6 db6pub # db6 Public interface to OWAN.. (db6:igb2)
10.137.235.7 db7pub # db7 Public interface to OWAN.. (db7:igb2)
10.137.235.8 db8pub # db8 Public interface to OWAN.. (db8:igb2)
10.137.235.9 db9pub # db9 Public interface to OWAN.. (db9:igb2)
10.137.235.10 db10pub # db10 Public interface to OWAN..
##### (db10:igb2)
10.137.235.11 db11pub # db11 Public interface to OWAN.. (db11:igb2)
10.137.235.12 db12pub # db12 Public interface to OWAN..
##### (db12:igb2)
10.137.235.13 db13pub # db13 Public interface to OWAN..
##### (db13:igb2)
10.137.235.14 db14pub # db14 Public interface to OWAN..
##### (db14:igb2)
10.137.235.15 db15pub # db15 Public interface to OWAN..
##### (db15:igb2)
10.137.235.16 db16pub # db16 Public interface to OWAN..
##### (db16:igb2)
10.137.235.17 db17pub # db17 Public interface to OWAN..
##### (db17:igb2)
10.137.235.18 db18pub # db18 Public interface to OWAN..
##### (db18:igb2)
10.137.235.19 db19pub # db19 Public interface to OWAN..
##### (db19:igb2)
10.137.235.20 db20pub # db20 Public interface to OWAN..
##### (db20:igb2)
10.137.235.21 db21pub # db21 Public interface to OWAN..
##### (db21:igb2)
10.137.235.22 db22pub # db22 Public interface to OWAN..
##### (db22:igb2)
10.137.235.23 db23pub # db23 Public interface to OWAN..
##### (db23:igb2)
10.137.235.24 db24pub # db24 Public interface to OWAN..
##### (db24:igb2)
10.137.235.25 db25pub # db25 Public interface to OWAN..
##### (db25:igb2)
10.137.235.26 db26pub # db26 Public interface to OWAN..
##### (db26:igb2)

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10.137.235.27	db27pub	# db27 Public interface to OWAN..	(db27:igb2)	(db25:ixgbe0)	192.168.100.26	db26d1	# db26 RAC rack DATA network	(client8:igb1)	192.168.113.1	db3client9	# p2p, DB3 and Client9,	
10.137.235.28	db28pub	# db28 Public interface to OWAN..	(db28:igb2)	(db26:ixgbe0)	192.168.100.27	db27d1	# db27 RAC rack DATA network	(db3:e1000g2)	192.168.113.2	client9db3	# p2p, Client9 and DB3,	
10.137.235.29	db29pub	# db29 Public interface to OWAN..	(db29:igb2)	(db27:ixgbe0)	192.168.100.28	db28d1	# db28 RAC rack DATA network	(client9:igb1)	#	#	#	
10.137.235.30	db30pub	# db30 Public interface to OWAN..	(db30:igb2)	(db28:ixgbe0)	192.168.100.29	db29d1	# db29 RAC rack DATA network	# db4 client connections:	192.168.111.1	db4client10	# p2p, DB4 and	
#				(db29:ixgbe0)	192.168.100.30	db30d1	# db30 RAC rack DATA network	Client10, (db4:e1000g0)	192.168.111.2	client10db4	# p2p, Client10 and	
#				(db30:ixgbe0)	#			DB4, (client10:igb1)	192.168.112.1	db4client11	# p2p, DB4 and	
#								Client11, (db4:e1000g1)	192.168.112.2	client11db4	# p2p, Client11 and	
#								DB4, (client11:igb1)	192.168.113.1	db4client12	# p2p, DB4 and	
#								Client12, (db4:e1000g2)	192.168.113.2	client12db4	# p2p, Client12 and	
#								DB4, (client12:igb1)	#	#	#	
#								# db5 client connections:	192.168.111.1	db5client13	# p2p, DB5 and	
#								Client13, (db5:e1000g0)	192.168.111.2	client13db5	# p2p, Client13 and	
#								DB5, (client13:igb1)	192.168.112.1	db5client14	# p2p, DB5 and	
#								Client14, (db5:e1000g1)	192.168.112.2	client14db5	# p2p, Client14 and	
#								DB5, (client14:igb1)	192.168.113.1	db5client15	# p2p, DB5 and	
#								Client15, (db5:e1000g2)	192.168.113.2	client15db5	# p2p, Client15 and	
#								DB5, (client15:igb1)	#	#	#	
#								# db6 client connections:	192.168.111.1	db6client16	# p2p, DB6 and	
#								Client16, (db6:e1000g0)	192.168.111.2	client16db6	# p2p, Client16 and	
#								DB6, (client16:igb1)	192.168.112.1	db6client17	# p2p, DB6 and	
#								Client17, (db6:e1000g1)	192.168.112.2	client17db6	# p2p, Client17 and	
#								DB6, (client17:igb1)	192.168.113.1	db6client18	# p2p, DB6 and	
#								Client18, (db6:e1000g2)	192.168.113.2	client18db6	# p2p, Client18 and	
#								DB6, (client18:igb1)	#	#	#	
#								# db7 client connections:	192.168.111.1	db7client19	# p2p, DB7 and	
#								Client19, (db7:e1000g0)	192.168.111.2	client19db7	# p2p, Client19 and	
#								DB7, (client19:igb1)	192.168.112.1	db7client20	# p2p, DB7 and	
#								Client20, (db7:e1000g1)	192.168.112.2	client20db7	# p2p, Client20 and	
#								DB7, (client20:igb1)	192.168.113.1	db7client21	# p2p, DB7 and	
#												
#####				#				#####				
#####				#				#####				
#				#				#				
# RAC data traffic (10GbE) - this is common to all DB nodes and all				# Private Point to Point (p2p) connections between ClientX nodes and				#				
# SHOULD be able to see all!!				# db[1-27] nodes. Because this are POINT TO POINT, only the nodes in				#				
#				# smaller subsets should be able to ping to the DB node listed..				#				
#				#				#				
192.168.100.1	db1d1	# db1 RAC rack DATA network (db1:ixgbe0)	(db1:ixgbe0)	# db1 client connections:	192.168.111.1	db1client1	# p2p, DB1 and Client1,	192.168.111.1	Client13, (db5:e1000g0)	client13db5	# p2p, Client13 and	
192.168.100.2	db2d1	# db2 RAC rack DATA network (db2:ixgbe0)	(db2:ixgbe0)	192.168.111.1	(db1:e1000g0)	client1db1	# p2p, Client1 and DB1,	192.168.111.2	DB5, (client13:igb1)	db5client14	# p2p, DB5 and	
192.168.100.3	db3d1	# db3 RAC rack DATA network (db3:ixgbe0)	(db3:ixgbe0)	192.168.111.2	(client1:igb1)	db1client2	# p2p, DB1 and Client2,	192.168.112.1	Client14, (db5:e1000g1)	client14db5	# p2p, Client14 and	
192.168.100.4	db4d1	# db4 RAC rack DATA network (db4:ixgbe0)	(db4:ixgbe0)	192.168.112.1	(db1:e1000g1)	client2db1	# p2p, Client2 and DB1,	192.168.112.2	DB5, (client14:igb1)	db5client15	# p2p, DB5 and	
192.168.100.5	db5d1	# db5 RAC rack DATA network (db5:ixgbe0)	(db5:ixgbe0)	192.168.112.2	(client2:igb1)	db1client3	# p2p, DB1 and Client3,	192.168.113.1	Client15, (db5:e1000g2)	client15db5	# p2p, Client15 and	
192.168.100.6	db6d1	# db6 RAC rack DATA network (db6:ixgbe0)	(db6:ixgbe0)	192.168.113.1	(db1:e1000g2)	client3db1	# p2p, Client3 and DB1,	192.168.113.2	DB5, (client15:igb1)	#	#	
192.168.100.7	db7d1	# db7 RAC rack DATA network (db7:ixgbe0)	(db7:ixgbe0)	192.168.113.2	(client3:igb1)	#	#	# db6 client connections:	192.168.111.1	db6client16	# p2p, DB6 and	
192.168.100.8	db8d1	# db8 RAC rack DATA network (db8:ixgbe0)	(db8:ixgbe0)	192.168.111.1	#	# db2 client connections:	#	Client16, (db6:e1000g0)	192.168.111.2	client16db6	# p2p, Client16 and	
192.168.100.9	db9d1	# db9 RAC rack DATA network (db9:ixgbe0)	(db9:ixgbe0)	192.168.111.2	(db2:e1000g0)	db2client4	# p2p, DB2 and Client4,	192.168.112.1	DB6, (client16:igb1)	db6client17	# p2p, DB6 and	
192.168.100.10	db10d1	# db10 RAC rack DATA network	(db10:ixgbe0)	192.168.111.2	(client4:igb1)	client4db2	# p2p, Client4 and DB2,	192.168.112.1	Client17, (db6:e1000g1)	client17db6	# p2p, Client17 and	
192.168.100.11	db11d1	# db11 RAC rack DATA network	(db11:ixgbe0)	192.168.112.1	(db2:e1000g1)	db2client5	# p2p, DB2 and Client5,	192.168.112.2	DB6, (client17:igb1)	db6client18	# p2p, DB6 and	
192.168.100.12	db12d1	# db12 RAC rack DATA network	(db12:ixgbe0)	192.168.112.2	(client5:igb1)	client5db2	# p2p, Client5 and DB2,	192.168.113.1	Client18, (db6:e1000g2)	client18db6	# p2p, Client18 and	
192.168.100.13	db13d1	# db13 RAC rack DATA network	(db13:ixgbe0)	192.168.113.1	(db2:e1000g2)	db2client6	# p2p, DB2 and Client6,	192.168.113.2	DB6, (client18:igb1)	#	#	
192.168.100.14	db14d1	# db14 RAC rack DATA network	(db14:ixgbe0)	192.168.113.2	(client6:igb1)	client6db2	# p2p, Client6 and DB2,	#	# db7 client connections:	192.168.111.1	db7client19	# p2p, DB7 and
192.168.100.15	db15d1	# db15 RAC rack DATA network	(db15:ixgbe0)	#	#	#	#	Client19, (db7:e1000g0)	192.168.111.2	client19db7	# p2p, Client19 and	
192.168.100.16	db16d1	# db16 RAC rack DATA network	(db16:ixgbe0)	# db3 client connections:	192.168.111.1	db3client7	# p2p, DB3 and Client7,	192.168.112.1	DB7, (client19:igb1)	db7client20	# p2p, DB7 and	
192.168.100.17	db17d1	# db17 RAC rack DATA network	(db17:ixgbe0)	192.168.111.2	(db3:e1000g0)	client7db3	# p2p, Client7 and DB3,	192.168.112.1	Client20, (db7:e1000g1)	client20db7	# p2p, Client20 and	
192.168.100.18	db18d1	# db18 RAC rack DATA network	(db18:ixgbe0)	192.168.111.2	(client7:igb1)	db3client8	# p2p, DB3 and Client8,	192.168.112.2	DB7, (client20:igb1)	db7client21	# p2p, DB7 and	
192.168.100.19	db19d1	# db19 RAC rack DATA network	(db19:ixgbe0)	192.168.112.1	(db3:e1000g1)	client8db3	# p2p, Client8 and DB3,	192.168.113.1				
192.168.100.20	db20d1	# db20 RAC rack DATA network	(db20:ixgbe0)	192.168.112.2								
192.168.100.21	db21d1	# db21 RAC rack DATA network	(db21:ixgbe0)									
192.168.100.22	db22d1	# db22 RAC rack DATA network	(db22:ixgbe0)									
192.168.100.23	db23d1	# db23 RAC rack DATA network	(db23:ixgbe0)									
192.168.100.24	db24d1	# db24 RAC rack DATA network	(db24:ixgbe0)									
192.168.100.25	db25d1	# db25 RAC rack DATA network	(db25:ixgbe0)									

Client21, (db7:e1000g2) 192.168.113.2 DB7, (client21:igb1) # # db8 client connections: 192.168.111.1 Client22, (db8:e1000g0) 192.168.111.2 DB8, (client22:igb1) 192.168.112.1 Client23, (db8:e1000g1) 192.168.112.2 DB8, (client23:igb1) 192.168.113.1 Client24, (db8:e1000g2) 192.168.113.2 DB8, (client24:igb1) # # db9 client connections: 192.168.111.1 Client25, (db9:e1000g0) 192.168.111.2 DB9, (client25:igb1) 192.168.112.1 Client26, (db9:e1000g1) 192.168.112.2 DB9, (client26:igb1) 192.168.113.1 Client27, (db9:e1000g2) 192.168.113.2 DB9, (client27:igb1) # # db10 client connections: 192.168.111.1 Client28, (db10:e1000g0) 192.168.111.2 DB10, (client28:igb1) 192.168.112.1 Client29, (db10:e1000g1) 192.168.112.2 DB10, (client29:igb1) 192.168.113.1 Client30, (db10:e1000g2) 192.168.113.2 DB10, (client30:igb1) # # db11 client connections: 192.168.111.1 Client31, (db11:e1000g0) 192.168.111.2 DB11, (client31:igb1) 192.168.112.1 Client32, (db11:e1000g1) 192.168.112.2 DB11, (client32:igb1) 192.168.113.1 Client33, (db11:e1000g2) 192.168.113.2	client21db7 db8client22 client22db8 db8client23 client23db8 db8client24 client24db8 db9client25 client25db9 db9client26 client26db9 db9client27 client27db9 db10client28 client28db10 db10client29 client29db10 db10client30 client30db10 db11client31 client31db11 db11client32 client32db11 db11client33 client33db11	# p2p, Client21 and # p2p, DB8 and # p2p, Client22 and # p2p, DB8 and # p2p, Client23 and # p2p, DB8 and # p2p, Client24 and # p2p, DB9 and # p2p, Client25 and # p2p, DB9 and # p2p, Client26 and # p2p, DB9 and # p2p, Client27 and # p2p, DB10 and # p2p, Client28 and # p2p, DB10 and # p2p, Client29 and # p2p, DB10 and # p2p, Client30 and # p2p, DB11 and # p2p, Client31 and # p2p, DB11 and # p2p, Client32 and # p2p, DB11 and # p2p, Client33 and	DB11, (client33:igb1) # # db12 client connections: 192.168.111.1 Client34, (db12:e1000g0) 192.168.111.2 DB12, (client34:igb1) 192.168.112.1 Client35, (db12:e1000g1) 192.168.112.2 DB12, (client35:igb1) 192.168.113.1 Client36, (db12:e1000g2) 192.168.113.2 DB12, (client36:igb1) # # db13 client connections: 192.168.111.1 Client37, (db13:e1000g0) 192.168.111.2 DB13, (client37:igb1) 192.168.112.1 Client38, (db13:e1000g1) 192.168.112.2 DB13, (client38:igb1) 192.168.113.1 Client39, (db13:e1000g2) 192.168.113.2 DB13, (client39:igb1) # # db14 client connections: 192.168.111.1 Client40, (db14:e1000g0) 192.168.111.2 DB14, (client40:igb1) 192.168.112.1 Client41, (db14:e1000g1) 192.168.112.2 DB14, (client41:igb1) 192.168.113.1 Client42, (db14:e1000g2) 192.168.113.2 DB14, (client42:igb1) # # db15 client connections: 192.168.111.1 Client43, (db15:e1000g0) 192.168.111.2 DB15, (client43:igb1) 192.168.112.1 Client44, (db15:e1000g1) 192.168.112.2 DB15, (client44:igb1) 192.168.113.1 Client45, (db15:e1000g2) 192.168.113.2 DB15, (client45:igb1) #	db12client34 client34db12 db12client35 client35db12 db12client36 client36db12 db13client37 client37db13 db13client38 client38db13 db13client39 client39db13 db14client40 client40db14 db14client41 client41db14 db14client42 client42db14 db15client43 client43db15 db15client44 client44db15 db15client45 client45db15	# p2p, DB12 and # p2p, Client34 and # p2p, DB12 and # p2p, Client35 and # p2p, DB12 and # p2p, Client36 and # p2p, DB13 and # p2p, Client37 and # p2p, DB13 and # p2p, Client38 and # p2p, DB13 and # p2p, Client39 and # p2p, DB14 and # p2p, Client40 and # p2p, DB14 and # p2p, Client41 and # p2p, DB14 and # p2p, Client42 and # p2p, DB15 and # p2p, Client43 and # p2p, DB15 and # p2p, Client44 and # p2p, DB15 and # p2p, Client45 and	# db16 client connections: 192.168.111.1 Client46, (db16:e1000g0) 192.168.111.2 DB16, (client46:igb1) 192.168.112.1 Client47, (db16:e1000g1) 192.168.112.2 DB16, (client47:igb1) 192.168.113.1 Client48, (db16:e1000g2) 192.168.113.2 DB16, (client48:igb1) # # db17 client connections: 192.168.111.1 Client49, (db17:e1000g0) 192.168.111.2 DB17, (client49:igb1) 192.168.112.1 Client50, (db17:e1000g1) 192.168.112.2 DB17, (client50:igb1) 192.168.113.1 Client51, (db17:e1000g2) 192.168.113.2 DB17, (client51:igb1) # # db18 client connections: 192.168.111.1 Client52, (db18:e1000g0) 192.168.111.2 DB18, (client52:igb1) 192.168.112.1 Client53, (db18:e1000g1) 192.168.112.2 DB18, (client53:igb1) 192.168.113.1 Client54, (db18:e1000g2) 192.168.113.2 DB18, (client54:igb1) # # db19 client connections: 192.168.111.1 Client55, (db19:e1000g0) 192.168.111.2 DB19, (client55:igb1) 192.168.112.1 Client56, (db19:e1000g1) 192.168.112.2 DB19, (client56:igb1) 192.168.113.1 Client57, (db19:e1000g2) 192.168.113.2 DB19, (client57:igb1) # # db20 client connections: 192.168.111.1	db16client46 client46db16 db16client47 client47db16 db16client48 client48db16 db17client49 client49db17 db17client50 client50db17 db17client51 client51db17 db18client52 client52db18 db18client53 client53db18 db18client54 client54db18 db19client55 client55db19 db19client56 client56db19 db19client57 client57db19 db20client58	# p2p, DB16 and # p2p, Client46 and # p2p, DB16 and # p2p, Client47 and # p2p, DB16 and # p2p, Client48 and # p2p, DB17 and # p2p, Client49 and # p2p, DB17 and # p2p, Client50 and # p2p, DB17 and # p2p, Client51 and # p2p, DB18 and # p2p, Client52 and # p2p, DB18 and # p2p, Client53 and # p2p, DB18 and # p2p, Client54 and # p2p, DB19 and # p2p, Client55 and # p2p, DB19 and # p2p, Client56 and # p2p, DB19 and # p2p, Client57 and # p2p, DB20 and
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Client58, (db20:e1000g0) 192.168.111.2 DB20, (client58:igb1) 192.168.112.1 Client59, (db20:e1000g1) 192.168.112.2 DB20, (client59:igb1) 192.168.113.1 Client60, (db20:e1000g2) 192.168.113.2 DB20, (client60:igb1) # # db21 client connections: 192.168.111.1 Client61, (db21:e1000g0) 192.168.111.2 DB21, (client61:igb1) 192.168.112.1 Client62, (db21:e1000g1) 192.168.112.2 DB21, (client62:igb1) 192.168.113.1 Client63, (db21:e1000g2) 192.168.113.2 DB21, (client63:igb1) # # db22 client connections: 192.168.111.1 Client64, (db22:e1000g0) 192.168.111.2 DB22, (client64:igb1) 192.168.112.1 Client65, (db22:e1000g1) 192.168.112.2 DB22, (client65:igb1) 192.168.113.1 Client66, (db22:e1000g2) 192.168.113.2 DB22, (client66:igb1) # # db23 client connections: 192.168.111.1 Client67, (db23:e1000g0) 192.168.111.2 DB23, (client67:igb1) 192.168.112.1 Client68, (db23:e1000g1) 192.168.112.2 DB23, (client68:igb1) 192.168.113.1 Client69, (db23:e1000g2) 192.168.113.2 DB23, (client69:igb1) # # db24 client connections: 192.168.111.1 Client70, (db24:e1000g0) 192.168.111.2	client58db20 # p2p, Client58 and db20client59 # p2p, DB20 and client59db20 # p2p, Client59 and db20client60 # p2p, DB20 and client60db20 # p2p, Client60 and # db21client61 # p2p, DB21 and client61db21 # p2p, Client61 and db21client62 # p2p, DB21 and client62db21 # p2p, Client62 and db21client63 # p2p, DB21 and client63db21 # p2p, Client63 and # db22client64 # p2p, DB22 and client64db22 # p2p, Client64 and db22client65 # p2p, DB22 and client65db22 # p2p, Client65 and db22client66 # p2p, DB22 and client66db22 # p2p, Client66 and # db23client67 # p2p, DB23 and client67db23 # p2p, Client67 and db23client68 # p2p, DB23 and client68db23 # p2p, Client68 and db23client69 # p2p, DB23 and client69db23 # p2p, Client69 and # db24client70 # p2p, DB24 and client70db24 # p2p, Client70 and	DB24, (client70:igb1) 192.168.112.1 Client71, (db24:e1000g1) 192.168.112.2 DB24, (client71:igb1) 192.168.113.1 Client72, (db24:e1000g2) 192.168.113.2 DB24, (client72:igb1) # # db25 client connections: 192.168.111.1 Client73, (db25:e1000g0) 192.168.111.2 DB25, (client73:igb1) 192.168.112.1 Client74, (db25:e1000g1) 192.168.112.2 DB25, (client74:igb1) 192.168.113.1 Client75, (db25:e1000g2) 192.168.113.2 DB25, (client75:igb1) # # db26 client connections: 192.168.111.1 Client76, (db26:e1000g0) 192.168.111.2 DB26, (client76:igb1) 192.168.112.1 Client77, (db26:e1000g1) 192.168.112.2 DB26, (client77:igb1) 192.168.113.1 Client78, (db26:e1000g2) 192.168.113.2 DB26, (client78:igb1) # # db27 client connections: 192.168.111.1 Client79, (db27:e1000g0) 192.168.111.2 DB27, (client79:igb1) 192.168.112.1 Client80, (db27:e1000g1) 192.168.112.2 DB27, (client80:igb1) 192.168.113.1 Client81, (db27:e1000g2) 192.168.113.2 DB27, (client81:igb1) # # endit: db2client p2p's ##### ##### #	db24client71 # p2p, DB24 and client71db24 # p2p, Client71 and db24client72 # p2p, DB24 and client72db24 # p2p, Client72 and # db25client73 # p2p, DB25 and client73db25 # p2p, Client73 and db25client74 # p2p, DB25 and client74db25 # p2p, Client74 and db25client75 # p2p, DB25 and client75db25 # p2p, Client75 and # db26client76 # p2p, DB26 and client76db26 # p2p, Client76 and db26client77 # p2p, DB26 and client77db26 # p2p, Client77 and db26client78 # p2p, DB26 and client78db26 # p2p, Client78 and # db27client79 # p2p, DB27 and client79db27 # p2p, Client79 and db27client80 # p2p, DB27 and client80db27 # p2p, Client80 and db27client81 # p2p, DB27 and client81db27 # p2p, Client81 and #	# Private Point to Point (p2p) connections between ClientX nodes and # rteX nodes. Because these are POINT TO POINT, and further, PRIVATE # to # the three node Client/RTE tuples of three, this ONE section good for ALL!! # #The following is GENERIC FOR ALL CLIENT DRIVER TUPLES! 192.168.200.1 drvvrte1 # p2p, client driver 1, clientX:igb2 192.168.200.2 rte1drv # p2p, client driver 1, rteX- 1:igb2 192.168.201.1 drvvrte2 # p2p, client driver 2, clientX:igb3 192.168.201.2 rte2drv # p2p, client driver 2, rteX- 2:igb3 # # endit: client2driver (or RTE) p2p's format – devices seen by db nodes 1..27 Searching for disks...done AVAILABLE DISK SELECTIONS: 0. c0t5000C5001CB42DB3d0 <LSI-LogicalVolume-3000 cyl 65533 alt 2 hd 64 sec 139> /scsi_vhcsi/disk@g5000c5001cb42db3 1. c0t5000C5001CB48C67d0 <SEAGATE-ST930003SSUN300G-0868- 279.40GB> /scsi_vhcsi/disk@g5000c5001cb48c67 2. c0t5000C5001CB49B1Bd0 <SUN300G cyl 46873 alt 2 hd 20 sec 625> /scsi_vhcsi/disk@g5000c5001cb49b1b 3. c0t5000C5001CB428AFd0 <SUN300G cyl 46873 alt 2 hd 20 sec 625> /scsi_vhcsi/disk@g5000c5001cb428af 4. c0t5000C5001CB4300Bd0 <SUN300G cyl 46873 alt 2 hd 20 sec 625> /scsi_vhcsi/disk@g5000c5001cb4300b 5. c0t5000C5001CB4627Fd0 <SEAGATE-ST930003SSUN300G-0868- 279.40GB> /scsi_vhcsi/disk@g5000c5001cb4627f 6. c0t5000C5001CB43063d0 <SUN300G cyl 46873 alt 2 hd 20 sec 625> /scsi_vhcsi/disk@g5000c5001cb43063 7. c0t5000C5001CB48753d0 <LSI-LogicalVolume-3000 cyl 65533 alt 2 hd 64 sec 139> /scsi_vhcsi/disk@g5000c5001cb48753 8. c0t600144F0A8A8CE0000000000D14D101d0 <SUN-COMSTAR- 1.0-156.53GB> /scsi_vhcsi/ssd@g600144f0a8a8ce0000000000d14d101 9. c0t600144F0A8A8CE0000000000D14D102d0 <SUN-COMSTAR- 1.0-203.41GB> /scsi_vhcsi/ssd@g600144f0a8a8ce0000000000d14d102 10. c0t600144F0A8A8CE0000000000D14D103d0 <SUN-COMSTAR- 1.0-156.53GB> /scsi_vhcsi/ssd@g600144f0a8a8ce0000000000d14d103 11. c0t600144F0A8A8CE0000000000D14D104d0 <SUN-COMSTAR- 1.0-109.66GB> /scsi_vhcsi/ssd@g600144f0a8a8ce0000000000d14d104
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940. c0t600144F0D9944D0000000000D19D127d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0d9944d0000000000d19d127	1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d119	/scsi_vhci/ssd@g600144f0ded70c0000000000d50d112
941. c0t600144F0DBBFC10000000000D45D101d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d101	960. c0t600144F0DBBFC10000000000D45D120d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d120	979. c0t600144F0DED70C0000000000D50D113d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d113
942. c0t600144F0DBBFC10000000000D45D102d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d102	961. c0t600144F0DBBFC10000000000D45D121d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d121	980. c0t600144F0DED70C0000000000D50D114d0 <SUN-COMSTAR-1.0-15.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d114
943. c0t600144F0DBBFC10000000000D45D103d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d103	962. c0t600144F0DBBFC10000000000D45D122d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d122	981. c0t600144F0DED70C0000000000D50D115d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d115
944. c0t600144F0DBBFC10000000000D45D104d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d104	963. c0t600144F0DBBFC10000000000D45D123d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d123	982. c0t600144F0DED70C0000000000D50D116d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d116
945. c0t600144F0DBBFC10000000000D45D105d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d105	964. c0t600144F0DBBFC10000000000D45D124d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d124	983. c0t600144F0DED70C0000000000D50D117d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d117
946. c0t600144F0DBBFC10000000000D45D106d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d106	965. c0t600144F0DBBFC10000000000D45D125d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d125	984. c0t600144F0DED70C0000000000D50D118d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d118
947. c0t600144F0DBBFC10000000000D45D107d0 <SUN-COMSTAR-1.0-15.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d107	966. c0t600144F0DBBFC10000000000D45D126d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d126	985. c0t600144F0DED70C0000000000D50D119d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d119
948. c0t600144F0DBBFC10000000000D45D108d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d108	967. c0t600144F0DED70C0000000000D50D101d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d101	986. c0t600144F0DED70C0000000000D50D120d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d120
949. c0t600144F0DBBFC10000000000D45D109d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d109	968. c0t600144F0DED70C0000000000D50D102d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d102	987. c0t600144F0DED70C0000000000D50D121d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d121
950. c0t600144F0DBBFC10000000000D45D110d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d110	969. c0t600144F0DED70C0000000000D50D103d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d103	988. c0t600144F0DED70C0000000000D50D122d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d122
951. c0t600144F0DBBFC10000000000D45D111d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d111	970. c0t600144F0DED70C0000000000D50D104d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d104	989. c0t600144F0DED70C0000000000D50D123d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d123
952. c0t600144F0DBBFC10000000000D45D112d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d112	971. c0t600144F0DED70C0000000000D50D105d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d105	990. c0t600144F0DED70C0000000000D50D124d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d124
953. c0t600144F0DBBFC10000000000D45D113d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d113	972. c0t600144F0DED70C0000000000D50D106d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d106	991. c0t600144F0DED70C0000000000D50D125d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d125
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955. c0t600144F0DBBFC10000000000D45D115d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d115	974. c0t600144F0DED70C0000000000D50D108d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d108	993. c0t600144F0DFB8A0000000000D42D101d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dfb8a0000000000d42d101
956. c0t600144F0DBBFC10000000000D45D116d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhci/ssd@g600144f0dbbfc10000000000d45d116	975. c0t600144F0DED70C0000000000D50D109d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0ded70c0000000000d50d109	994. c0t600144F0DFB8A0000000000D42D102d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhci/ssd@g600144f0dfb8a0000000000d42d102
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1935. c0t600144F068CE0B0000000000D48D108d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d108	1954. c0t600144F072C7030000004C488C850001d0 <SUN-COMSTAR-1.0-1023.94MB> /scsi_vhcsi/ssd@g600144f072c7030000004c488c850001	1973. c0t600144F072C7030000000000D08D119d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d119
1936. c0t600144F068CE0B0000000000D48D109d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d109	1955. c0t600144F072C7030000000000D08D101d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d101	1974. c0t600144F072C7030000000000D08D120d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d120
1937. c0t600144F068CE0B0000000000D48D110d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d110	1956. c0t600144F072C7030000000000D08D102d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d102	1975. c0t600144F072C7030000000000D08D121d0 <SUN-COMSTAR-1.0-15.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d121
1938. c0t600144F068CE0B0000000000D48D111d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d111	1957. c0t600144F072C7030000000000D08D103d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d103	1976. c0t600144F072C7030000000000D08D122d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d122
1939. c0t600144F068CE0B0000000000D48D112d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d112	1958. c0t600144F072C7030000000000D08D104d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d104	1977. c0t600144F072C7030000000000D08D123d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d123
1940. c0t600144F068CE0B0000000000D48D113d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d113	1959. c0t600144F072C7030000000000D08D105d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d105	1978. c0t600144F072C7030000000000D08D124d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d124
1941. c0t600144F068CE0B0000000000D48D114d0 <SUN-COMSTAR-1.0-15.66GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d114	1960. c0t600144F072C7030000000000D08D106d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d106	1979. c0t600144F072C7030000000000D08D125d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d125
1942. c0t600144F068CE0B0000000000D48D115d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d115	1961. c0t600144F072C7030000000000D08D107d0 <SUN-COMSTAR-1.0-15.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d107	1980. c0t600144F072C7030000000000D08D126d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d126
1943. c0t600144F068CE0B0000000000D48D116d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d116	1962. c0t600144F072C7030000000000D08D108d0 <SUN-COMSTAR-1.0-148.77GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d108	1981. c0t600144F072C7030000000000D08D127d0 <SUN-COMSTAR-1.0-109.66GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d127
1944. c0t600144F068CE0B0000000000D48D117d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f068ce0b0000000000d48d117	1963. c0t600144F072C7030000000000D08D109d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhcsi/ssd@g600144f072c7030000000000d08d109	1982. c0t600144F0082D080000000000D37D101d0 <SUN-COMSTAR-1.0-156.53GB> /scsi_vhcsi/ssd@g600144f0082d080000000000d37d101
1945. c0t600144F068CE0B0000000000D48D118d0 <SUN-COMSTAR-1.0-156.53GB>	1964. c0t600144F072C7030000000000D08D110d0 <SUN-COMSTAR-1.0-156.53GB>	1983. c0t600144F0082D080000000000D37D102d0 <SUN-COMSTAR-1.0-203.41GB> /scsi_vhcsi/ssd@g600144f0082d080000000000d37d102


```

2274. c0t600144F01798850000000000D66D126d0 <SUN-COMSTAR-
1.0-109.66GB>
/scsi_vhci/ssd@g600144f01798850000000000d66d126
Specify disk (enter its number):
emlxs.conf – nodes 1..27
# Copyright 2010 Emulex. All rights reserved.
# Use is subject to license terms.
#
#ident      "@(#)emlxs.conf    1.2      10/01/27 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  0xffff0000 /* 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;
#
# 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: emlx0-assign-alpa=0x01; assigns ALPA 0x01 to adapter 0
#               emlx1-assign-alpa=0x02; assigns ALPA 0x02 to adapter 1
#               emlx2-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;

fm-capable=0;
log-debug=0xfffff;

fp.conf – nodes 1..27
#
# 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";

mpt.conf – nodes 1..27
#
# 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
# 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 mpt controllers set:
# mpzio-disable="no";
#
# To globally disable MPxIO on all mpt controllers set:
# mpzio-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" mpzio-
disable="yes";
#
# SATA mpzio supported
#
# To disable SATA mpzio, set
# disable-sata-mpzio="yes";
# When mpzio-disable="yes" is set, the disable-sata-mpzio property
# has no effect
#
mpzio-disable="no";
disable-sata-mpzio="no";

ses.conf – nodes 1..27
#
# 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;

psrset for database nodes [1,3,9,11,12,14,16,17,19,20,21,25,27]
user processor set 1: processor 0
user processor set 2: processors 128 129 256 257 258 259 384 385
user processor set 3: processors 388 389 390 391 392 393 394 395
user processor set 4: processors 396 397 398
user processor set 5: processor 407
user processor set 6: processors 408 409 410 411 412 413 414 415 416 417
418 419
user processor set 7: processors 420 421 422 423 424 425 426 427 428 429
430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446
447 448 449 450 451
user processor set 8: processors 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68
69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93
94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112
113 114 115 116 117 118 119 120 121 122 123 124 125 126 127
user processor set 9: processors 130 131 132 133 134 135 136 137 138 139
140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156
157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173
174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190
191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207
208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224
225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241
242 243 244 245 246 247 248 249 250 251 252 253 254 255
user processor set 10: processors 260 261 262 263 264 265 266 267 268 269
270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286
287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303
304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320
321 322 323 452 453 454 455 456 457 458 459 460 461 462 463 464 465
466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482
483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499
500 501 502 503 504 505 506 507 508 509 510 511

psrset for database node 2
user processor set 1: processor 0
user processor set 2: processors 128 129 256 257 258 259 384 385
user processor set 3: processors 388 389 390 391 392 393 394 395
user processor set 4: processors 396 397 398
user processor set 5: processor 407
user processor set 6: processors 408 409 410 411 412 413 414 415 416 417
418 419
user processor set 7: processors 420 421 422 423 424 425 426 427 428 429
430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446
447 448 449 450 451
user processor set 8: processors 33 34 35 36 37 38 39 40 41 42 43 44 45 46
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 1 2 3 4 5 6

```

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468
469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485
486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502
503 504 505 506 507 508 509 510 511
user processor set 9: processors 162 163 164 165 166 167 168 169 170 171
172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188
189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205
206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222
223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239
240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 146
147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 130 131
132 133 134 135 136 137 138 139 140 141 142 143 144 145
user processor set 10: processors 260 261 262 263 264 265 266 267 268 269
270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286
287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303
304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320
321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337
338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354
355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371
372 373 374 375 376 377 378 379 380 381 382 383

psrset for database nodes [4,5,7,15,22,24]

user processor set 1: processor 0
user processor set 2: processors 128 129 256 257 258 259 384 385
user processor set 3: processors 388 389 390 391 392 393 394 395
user processor set 4: processors 396 397 398
user processor set 5: processor 407
user processor set 6: processors 408 409 410 411 412 413 414 415 416 417
418 419
user processor set 7: processors 420 421 422 423 424 425 426 427 428 429
430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446
447 448 449 450 451
user processor set 8: processors 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68
69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93
94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112
113 114 115 116 117 118 119 120 121 122 123 124 125 126 127
user processor set 9: processors 130 131 132 133 134 135 136 137 138 139
140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156
157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173
174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190
191 192 193 194 195 452 453 454 455 456 457 458 459 460 461 462 463
464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480
481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497
498 499 500 501 502 503 504 505 506 507 508 509 510 511
user processor set 10: processors 260 261 262 263 264 265 266 267 268 269
270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286
287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303
304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320
321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337
338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354
355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371
372 373 374 375 376 377 378 379 380 381 382 383

Oracle Real Application Cluster Parameters

build_init_[1..27].ora
editor's note: substitute node number below for value in [...]
instance_number = [1..27]
thread = [1..27]
undo_tablespace = undo_[1..27]
ifile = /export/home/oracle/tpcc_kit_27nodes/p_build.ora

run[1..27].ora
editor's note: substitute node number below for value in [...]
instance_number=[1..27]
thread=[1..27]
undo_tablespace=undo_[1..27]
ifile=/export/home/oracle/tpcc_kit_27nodes/p_run.ora

COMSTAR DATA HEADS – 1..69

format – disk devices seen by COMSTAR
Searching for disks...done

psrset for database nodes [6,8,10,13,18,23,26]

AVAILABLE DISK SELECTIONS:
0. c2t0d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@0,0
1. c2t1d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@1,0
2. c2t2d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@2,0
3. c2t3d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@3,0
4. c2t4d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@4,0
5. c2t5d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@5,0
6. c2t6d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@6,0
7. c2t7d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@7,0
8. c2t8d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@8,0
9. c2t9d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@9,0
10. c2t10d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@a,0
11. c2t11d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@b,0
12. c9t5080020000558FC0d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc0,0
13. c9t5080020000558FC1d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc1,0
14. c9t5080020000558FC2d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc2,0
15. c9t5080020000558FC3d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc3,0
16. c9t5080020000558FC4d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc4,0
17. c9t5080020000558FC5d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc5,0
18. c9t5080020000558FC6d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc6,0
19. c9t5080020000558FC7d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,
30b0@0/iptort@f/disk@w5080020000558fc7,0
20. c9t5080020000558FC8d0 <ATA-MARVELLS88SA02-D129 cyl


```

30b0@0/iport@f0/disk@w5080020000559bd2,0
 151. c16t5080020000559BD3d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000
,30b0@0/iport@f0/disk@w5080020000559bd3,0
 152. c16t5080020000559B4Ad0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b4a,0
 153. c16t5080020000559B4Bd0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b4b,0
 154. c16t5080020000559B4Cd0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b4c,0
 155. c16t5080020000559B4Dd0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b4d,0
 156. c16t5080020000559B4Ed0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b4e,0
 157. c16t5080020000559B4Fd0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b4f,0
 158. c16t5080020000559B40d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b40,0
 159. c16t5080020000559B41d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b41,0
 160. c16t5080020000559B42d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b42,0
 161. c16t5080020000559B43d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b43,0
 162. c16t5080020000559B44d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b44,0
 163. c16t5080020000559B45d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b45,0
 164. c16t5080020000559B46d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b46,0
 165. c16t5080020000559B47d0 <ATA-MARVELLS88SA02-D129 cyl

```

```

23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b47,0
 166. c16t5080020000559B48d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b48,0
 167. c16t5080020000559B49d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b49,0
 168. c16t5080020000559B50d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b50,0
 169. c16t5080020000559B51d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b51,0
 170. c16t5080020000559B52d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b52,0
 171. c16t5080020000559B53d0 <ATA-MARVELLS88SA02-D129 cyl
23434 alt 2 hd 16 sec 128>
 /pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000
,30b0@0/iport@f0/disk@w5080020000559b53,0
Specify disk (enter its number):

prttdiag – DATA heads
System Configuration: SUN MICROSYSTEMS SUN FIRE X4275 SERVER
BIOS Configuration: American Megatrends Inc. 07060223 03/04/2010
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
-----
Unknown   in use 0 D2                BANK2
Unknown   empty 0 D1                BANK1
Unknown   empty 0 D0                BANK0
Unknown   in use 0 D5                BANK5
Unknown   empty 0 D4                BANK4
Unknown   empty 0 D3                BANK3
Unknown   in use 0 D8                BANK8
Unknown   empty 0 D7                BANK7
Unknown   empty 0 D6                BANK6
Unknown   empty 0 D2                BANK2
Unknown   empty 0 D1                BANK1
Unknown   empty 0 D0                BANK0
Unknown   empty 0 D5                BANK5
Unknown   empty 0 D4                BANK4

```

```

Unknown   empty 0 D3                BANK3
Unknown   empty 0 D8                BANK8
Unknown   empty 0 D7                BANK7
Unknown   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 – DATA heads
System Configuration: Sun Microsystems i86pc
Memory size: 6136 Megabytes
System Peripherals (Software Nodes):

i86pc
scsi_vhci, instance #0
pci_instance #0
pci108e,4845 (driver not attached)
pci8086,3408, instance #0
pci108e,0, instance #0
pci108e,0, instance #1 (driver not attached)
pci8086,3409, instance #1
pci108e,0, instance #2 (driver not attached)
pci108e,0, instance #3 (driver not attached)
pci8086,340a, instance #2
pci1077,171, instance #0
pci1077,171, instance #1
pci8086,340c, instance #3
pci1000,3150, instance #0
sd, instance #0
sd, instance #2
sd, instance #3
sd, instance #8
sd, instance #4
sd, instance #5
sd, instance #6
sd, instance #7
sd, instance #9
sd, instance #10
sd, instance #11
sd, instance #1
smp, instance #0 (driver not attached)
ses, instance #12 (driver not attached)
pci8086,340e, instance #4

```

pci111d,806e, instance #6
pci111d,806e, instance #7
pci1000,30b0, instance #0
iport, instance #8
smp, instance #1 (driver not attached)
disk, instance #89
disk, instance #36
disk, instance #65
disk, instance #69
disk, instance #73
disk, instance #77
disk, instance #81
disk, instance #85
disk, instance #40
disk, instance #44
disk, instance #12
disk, instance #13
disk, instance #49
disk, instance #53
disk, instance #14
disk, instance #57
disk, instance #61
disk, instance #93
disk, instance #97
disk, instance #101
enclosure, instance #0 (driver not attached)
iport, instance #13
smp, instance #7 (driver not attached)
disk, instance #157
disk, instance #105
disk, instance #161
disk, instance #109
disk, instance #165
disk, instance #113
disk, instance #169
disk, instance #30
disk, instance #31
disk, instance #133
disk, instance #137
disk, instance #141
disk, instance #145
disk, instance #149
disk, instance #153
disk, instance #117
disk, instance #121
disk, instance #32
disk, instance #125
disk, instance #129
enclosure, instance #6 (driver not attached)
iport, instance #1
pci111d,806e, instance #8
pci1000,30b0, instance #7
iport, instance #12
smp, instance #5 (driver not attached)
disk, instance #160
disk, instance #108
disk, instance #162
disk, instance #139

disk, instance #143
disk, instance #146
disk, instance #152
disk, instance #156
disk, instance #115
disk, instance #111
disk, instance #24
disk, instance #25
disk, instance #118
disk, instance #123
disk, instance #26
disk, instance #126
disk, instance #130
disk, instance #135
disk, instance #167
disk, instance #171
enclosure, instance #4 (driver not attached)
iport, instance #10
smp, instance #3 (driver not attached)
disk, instance #90
disk, instance #38
disk, instance #94
disk, instance #42
disk, instance #98
disk, instance #46
disk, instance #103
disk, instance #18
disk, instance #19
disk, instance #68
disk, instance #71
disk, instance #75
disk, instance #78
disk, instance #83
disk, instance #88
disk, instance #51
disk, instance #54
disk, instance #20
disk, instance #60
disk, instance #63
enclosure, instance #2 (driver not attached)
iport, instance #2
pci8086,3410, instance #5
pci111d,806e, instance #9
pci111d,806e, instance #10
pci1000,30b0, instance #5
iport, instance #15
smp, instance #8 (driver not attached)
disk, instance #154
disk, instance #104
disk, instance #159
disk, instance #107
disk, instance #163
disk, instance #112
disk, instance #168
disk, instance #33
disk, instance #34
disk, instance #114
disk, instance #119

disk, instance #35
disk, instance #124
disk, instance #128
disk, instance #132
disk, instance #136
disk, instance #140
disk, instance #144
disk, instance #147
disk, instance #151
enclosure, instance #7 (driver not attached)
iport, instance #11
smp, instance #4 (driver not attached)
disk, instance #87
disk, instance #37
disk, instance #92
disk, instance #43
disk, instance #95
disk, instance #21
disk, instance #100
disk, instance #22
disk, instance #48
disk, instance #47
disk, instance #23
disk, instance #52
disk, instance #56
disk, instance #58
disk, instance #64
disk, instance #67
disk, instance #72
disk, instance #76
disk, instance #80
disk, instance #84
enclosure, instance #3 (driver not attached)
iport, instance #3
pci111d,806e, instance #11
pci1000,30b0, instance #6
iport, instance #14
smp, instance #6 (driver not attached)
disk, instance #158
disk, instance #106
disk, instance #164
disk, instance #110
disk, instance #166
disk, instance #27
disk, instance #170
disk, instance #28
disk, instance #134
disk, instance #138
disk, instance #142
disk, instance #148
disk, instance #150
disk, instance #155
disk, instance #120
disk, instance #122
disk, instance #29
disk, instance #116
disk, instance #127
disk, instance #131

d9161 -p /dev/md/rdsd/d8001 -o 1178450944 -b 132098048	d9103 -p /dev/md/rdsd/d8003 -o 578677760 -b 32913408	d5074 -p /dev/md/rdsd/d5000 -o 2102592512 -b 32851968
d9160 -p /dev/md/rdsd/d8000 -o 1148477440 -b 132098048	d9102 -p /dev/md/rdsd/d8002 -o 585108480 -b 32913408	d5073 -p /dev/md/rdsd/d5000 -o 2069739520 -b 32851968
d9159 -p /dev/md/rdsd/d8004 -o 1139105792 -b 132098048	d9101 -p /dev/md/rdsd/d8001 -o 585108480 -b 32913408	d5072 -p /dev/md/rdsd/d5000 -o 2036886528 -b 32851968
d9158 -p /dev/md/rdsd/d8003 -o 1139105792 -b 132098048	d9093 -p /dev/md/rdsd/d8003 -o 512848896 -b 32913408	d5071 -p /dev/md/rdsd/d5000 -o 2004033536 -b 32851968
d9150 -p /dev/md/rdsd/d8000 -o 884279296 -b 132098048	d9092 -p /dev/md/rdsd/d8002 -o 519279616 -b 32913408	d5070 -p /dev/md/rdsd/d5000 -o 1971180544 -b 32851968
d9149 -p /dev/md/rdsd/d8000 -o 874907648 -b 132098048	d9100 -p /dev/md/rdsd/d8000 -o 555134976 -b 32913408	d5069 -p /dev/md/rdsd/d5000 -o 1938327552 -b 32851968
d9148 -p /dev/md/rdsd/d8003 -o 874907648 -b 132098048	d9099 -p /dev/md/rdsd/d8004 -o 545763328 -b 32913408	d5068 -p /dev/md/rdsd/d5000 -o 1905474560 -b 32851968
d9157 -p /dev/md/rdsd/d8002 -o 1046351872 -b 132098048	d9098 -p /dev/md/rdsd/d8003 -o 545763328 -b 32913408	d5067 -p /dev/md/rdsd/d5000 -o 1872621568 -b 32851968
d9156 -p /dev/md/rdsd/d8001 -o 1046351872 -b 132098048	d9097 -p /dev/md/rdsd/d8002 -o 552194048 -b 32913408	d5066 -p /dev/md/rdsd/d5000 -o 1839768576 -b 32851968
d9155 -p /dev/md/rdsd/d8000 -o 1016378368 -b 132098048	d9096 -p /dev/md/rdsd/d8001 -o 552194048 -b 32913408	d5065 -p /dev/md/rdsd/d5000 -o 1806915584 -b 32851968
d9154 -p /dev/md/rdsd/d8004 -o 1007006720 -b 132098048	d9095 -p /dev/md/rdsd/d8000 -o 522220544 -b 32913408	d5064 -p /dev/md/rdsd/d5000 -o 1774062592 -b 32851968
d9153 -p /dev/md/rdsd/d8003 -o 1007006720 -b 132098048	d9094 -p /dev/md/rdsd/d8004 -o 512848896 -b 32913408	d5063 -p /dev/md/rdsd/d5000 -o 1741209600 -b 32851968
d9152 -p /dev/md/rdsd/d8002 -o 914252800 -b 132098048	d9091 -p /dev/md/rdsd/d8001 -o 519279616 -b 32913408	d5062 -p /dev/md/rdsd/d5000 -o 1708356608 -b 32851968
d9151 -p /dev/md/rdsd/d8001 -o 914252800 -b 132098048	d9090 -p /dev/md/rdsd/d8000 -o 489306112 -b 32913408	d5061 -p /dev/md/rdsd/d5000 -o 1675503616 -b 32851968
d9147 -p /dev/md/rdsd/d8002 -o 881338368 -b 32913408	d9089 -p /dev/md/rdsd/d8004 -o 479934464 -b 32913408	d5060 -p /dev/md/rdsd/d5000 -o 1642650624 -b 32851968
d9146 -p /dev/md/rdsd/d8001 -o 881338368 -b 32913408	d9088 -p /dev/md/rdsd/d8003 -o 479934464 -b 32913408	d5059 -p /dev/md/rdsd/d5000 -o 1609797632 -b 32851968
d9145 -p /dev/md/rdsd/d8000 -o 851364864 -b 32913408	d9087 -p /dev/md/rdsd/d8002 -o 486365184 -b 32913408	d5058 -p /dev/md/rdsd/d5000 -o 1576944640 -b 32851968
d9144 -p /dev/md/rdsd/d8004 -o 841993216 -b 32913408	d9085 -p /dev/md/rdsd/d8000 -o 456391680 -b 32913408	d5057 -p /dev/md/rdsd/d5000 -o 1544091648 -b 32851968
d9143 -p /dev/md/rdsd/d8003 -o 841993216 -b 32913408	d9010 -p /dev/md/rdsd/d8000 -o 2099200 -b 780288	d5056 -p /dev/md/rdsd/d5000 -o 1511238656 -b 32851968
d9135 -p /dev/md/rdsd/d8000 -o 785536000 -b 32913408	d3104 -p /dev/md/rdsd/d8004 -o 3663782912 -b 229963776	d5055 -p /dev/md/rdsd/d5000 -o 1478385664 -b 32851968
d9134 -p /dev/md/rdsd/d8004 -o 776164352 -b 32913408	d3107 -p /dev/md/rdsd/d8003 -o 426571776 -b 32849920	d5054 -p /dev/md/rdsd/d5000 -o 1445532672 -b 32851968
d9133 -p /dev/md/rdsd/d8003 -o 776164352 -b 32913408	d3114 -p /dev/md/rdsd/d8004 -o 361118720 -b 32849920	d5053 -p /dev/md/rdsd/d5000 -o 1412679680 -b 32851968
d9132 -p /dev/md/rdsd/d8002 -o 782595072 -b 32913408	d3121 -p /dev/md/rdsd/d8004 -o 328267776 -b 32849920	d5052 -p /dev/md/rdsd/d5000 -o 1379826688 -b 32851968
d9142 -p /dev/md/rdsd/d8002 -o 848423936 -b 32913408	d3105 -p /dev/md/rdsd/d8002 -o 3646638080 -b 229961728	d5051 -p /dev/md/rdsd/d5000 -o 1346973696 -b 32851968
d9141 -p /dev/md/rdsd/d8001 -o 848423936 -b 32913408	d3106 -p /dev/md/rdsd/d8001 -o 426571776 -b 92706816 -o 3737061376 -b 137254912	d5050 -p /dev/md/rdsd/d5000 -o 1314120704 -b 32851968
d9140 -p /dev/md/rdsd/d8000 -o 818450432 -b 32913408	d3111 -p /dev/md/rdsd/d8000 -o 3493620736 -b 229961728	d5049 -p /dev/md/rdsd/d5000 -o 1281267712 -b 32851968
d9139 -p /dev/md/rdsd/d8004 -o 809078784 -b 32913408	d3112 -p /dev/md/rdsd/d8000 -o 3263657984 -b 229961728	d5048 -p /dev/md/rdsd/d5000 -o 1248414720 -b 32851968
d9138 -p /dev/md/rdsd/d8003 -o 809078784 -b 32913408	d3113 -p /dev/md/rdsd/d8001 -o 3507098624 -b 229961728	d5047 -p /dev/md/rdsd/d5000 -o 1215561728 -b 32851968
d9137 -p /dev/md/rdsd/d8002 -o 815509504 -b 32913408	d3118 -p /dev/md/rdsd/d8002 -o 3416675328 -b 229961728	d5046 -p /dev/md/rdsd/d5000 -o 1182708736 -b 32851968
d9136 -p /dev/md/rdsd/d8001 -o 815509504 -b 32913408	d3119 -p /dev/md/rdsd/d8003 -o 3602298880 -b 229961728	d5045 -p /dev/md/rdsd/d5000 -o 1149855744 -b 32851968
d9131 -p /dev/md/rdsd/d8001 -o 782595072 -b 32913408	d3120 -p /dev/md/rdsd/d8004 -o 3433820160 -b 229961728	d5044 -p /dev/md/rdsd/d5000 -o 1117002752 -b 32851968
d9130 -p /dev/md/rdsd/d8000 -o 752621568 -b 32913408	d3125 -p /dev/md/rdsd/d8004 -o 3203857408 -b 229961728	d5043 -p /dev/md/rdsd/d5000 -o 1084149760 -b 32851968
d9129 -p /dev/md/rdsd/d8004 -o 743249920 -b 32913408	d3126 -p /dev/md/rdsd/d8003 -o 3372336128 -b 229961728	d5042 -p /dev/md/rdsd/d5000 -o 1051296768 -b 32851968
d9121 -p /dev/md/rdsd/d8001 -o 716766208 -b 32913408	d3127 -p /dev/md/rdsd/d8002 -o 3186712576 -b 229961728	d5041 -p /dev/md/rdsd/d5000 -o 1018443776 -b 32851968
d9120 -p /dev/md/rdsd/d8000 -o 686792704 -b 32913408	d3108 -p /dev/md/rdsd/d8001 -o 3195101184 -b 311996416	d5040 -p /dev/md/rdsd/d5000 -o 985590784 -b 32851968
d9119 -p /dev/md/rdsd/d8004 -o 677421056 -b 32913408	d3115 -p /dev/md/rdsd/d8000 -o 2951660544 -b 311996416	d5039 -p /dev/md/rdsd/d5000 -o 952737792 -b 32851968
d9118 -p /dev/md/rdsd/d8003 -o 677421056 -b 32913408	d3101 -p /dev/md/rdsd/d8000 -o 2623393792 -b 328265728	d5038 -p /dev/md/rdsd/d5000 -o 919884800 -b 32851968
d9117 -p /dev/md/rdsd/d8002 -o 683851776 -b 32913408	d3103 -p /dev/md/rdsd/d8001 -o 2866834432 -b 328265728	d5037 -p /dev/md/rdsd/d5000 -o 887031808 -b 32851968
d9116 -p /dev/md/rdsd/d8001 -o 683851776 -b 32913408	d3110 -p /dev/md/rdsd/d8002 -o 2858445824 -b 328265728	d5036 -p /dev/md/rdsd/d5000 -o 854178816 -b 32851968
d9128 -p /dev/md/rdsd/d8003 -o 743249920 -b 32913408	d3117 -p /dev/md/rdsd/d8003 -o 3044069376 -b 328265728	d5035 -p /dev/md/rdsd/d5000 -o 821325824 -b 32851968
d9127 -p /dev/md/rdsd/d8002 -o 749680640 -b 32913408	d3123 -p /dev/md/rdsd/d8004 -o 2875590656 -b 328265728	d5034 -p /dev/md/rdsd/d5000 -o 788472832 -b 32851968
d9126 -p /dev/md/rdsd/d8001 -o 749680640 -b 32913408	d3124 -p /dev/md/rdsd/d8004 -o 1024 -b 328265728	d5033 -p /dev/md/rdsd/d5000 -o 755619840 -b 32851968
d9125 -p /dev/md/rdsd/d8000 -o 719707136 -b 32913408	d3102 -p /dev/md/rdsd/d8003 -o 1024 -b 426569728	d5032 -p /dev/md/rdsd/d5000 -o 722766848 -b 32851968
d9124 -p /dev/md/rdsd/d8004 -o 710335488 -b 32913408	d3109 -p /dev/md/rdsd/d8002 -o 1024 -b 426569728	d5031 -p /dev/md/rdsd/d5000 -o 689913856 -b 32851968
d9123 -p /dev/md/rdsd/d8003 -o 710335488 -b 32913408	d3116 -p /dev/md/rdsd/d8001 -o 1024 -b 426569728	d5030 -p /dev/md/rdsd/d5000 -o 657060864 -b 32851968
d9122 -p /dev/md/rdsd/d8002 -o 716766208 -b 32913408	d3122 -p /dev/md/rdsd/d8000 -o 2880512 -b 426569728	d5029 -p /dev/md/rdsd/d5000 -o 624207872 -b 32851968
d9115 -p /dev/md/rdsd/d8000 -o 653878272 -b 32913408	d5084 -p /dev/md/rdsd/d5000 -o 2386107392 -b 32913408	d5028 -p /dev/md/rdsd/d5000 -o 591354880 -b 32851968
d9114 -p /dev/md/rdsd/d8004 -o 644506624 -b 32913408	d5000 1 1 /dev/rdsd/c2t1d0s6	d5027 -p /dev/md/rdsd/d5000 -o 558501888 -b 32851968
d9113 -p /dev/md/rdsd/d8003 -o 644506624 -b 32913408	d5083 -p /dev/md/rdsd/d5000 -o 2359685120 -b 26421248	d5026 -p /dev/md/rdsd/d5000 -o 525648896 -b 32851968
d9112 -p /dev/md/rdsd/d8002 -o 650937344 -b 32913408	d5082 -p /dev/md/rdsd/d5000 -o 2333262848 -b 26421248	d5025 -p /dev/md/rdsd/d5000 -o 492795904 -b 32851968
d9111 -p /dev/md/rdsd/d8001 -o 650937344 -b 32913408	d5081 -p /dev/md/rdsd/d5000 -o 2306840576 -b 26421248	d5024 -p /dev/md/rdsd/d5000 -o 459942912 -b 32851968
d9110 -p /dev/md/rdsd/d8000 -o 620963840 -b 32913408	d5080 -p /dev/md/rdsd/d5000 -o 2280418304 -b 26421248	d5023 -p /dev/md/rdsd/d5000 -o 427089920 -b 32851968
d9109 -p /dev/md/rdsd/d8004 -o 611592192 -b 32913408	d5079 -p /dev/md/rdsd/d5000 -o 2253996032 -b 26421248	d5022 -p /dev/md/rdsd/d5000 -o 394236928 -b 32851968
d9108 -p /dev/md/rdsd/d8003 -o 611592192 -b 32913408	d5078 -p /dev/md/rdsd/d5000 -o 2227573760 -b 26421248	d5021 -p /dev/md/rdsd/d5000 -o 361383936 -b 32851968
d9107 -p /dev/md/rdsd/d8002 -o 618022912 -b 32913408	d5077 -p /dev/md/rdsd/d5000 -o 2201151488 -b 26421248	d5020 -p /dev/md/rdsd/d5000 -o 328530944 -b 32851968
d9106 -p /dev/md/rdsd/d8001 -o 618022912 -b 32913408	d5076 -p /dev/md/rdsd/d5000 -o 2168298496 -b 32851968	d5019 -p /dev/md/rdsd/d5000 -o 295677952 -b 32851968
d9105 -p /dev/md/rdsd/d8000 -o 588049408 -b 32913408	d5075 -p /dev/md/rdsd/d5000 -o 2135445504 -b 32851968	d5018 -p /dev/md/rdsd/d5000 -o 262824960 -b 32851968
d9104 -p /dev/md/rdsd/d8004 -o 578677760 -b 32913408		d5017 -p /dev/md/rdsd/d5000 -o 229971968 -b 32851968

d5016 -p /dev/md/rdisk/d5000 -o 197118976 -b 32851968	/dev/rdisk/c9t5080020000558FC6d0s7	/dev/rdisk/c14t5080020000559B0Ad0s7
d5015 -p /dev/md/rdisk/d5000 -o 164265984 -b 32851968	/dev/rdisk/c11t5080020000558F0d0s7	/dev/rdisk/c16t5080020000559B4Bd0s7
d5014 -p /dev/md/rdisk/d5000 -o 131412992 -b 32851968	/dev/rdisk/c13t5080020000559B80d0s7	/dev/rdisk/c10t5080020000558F4Bd0s7
d5013 -p /dev/md/rdisk/d5000 -o 98560000 -b 32851968	/dev/rdisk/c15t5080020000559BC7d0s7	/dev/rdisk/c12t5080020000558F8Bd0s7
d5012 -p /dev/md/rdisk/d5000 -o 65707008 -b 32851968	/dev/rdisk/c9t5080020000558FC7d0s7	/dev/rdisk/c14t5080020000559B0Bd0s7
d5011 -p /dev/md/rdisk/d5000 -o 32854016 -b 32851968	/dev/rdisk/c11t5080020000558F01d0s7	/dev/rdisk/c16t5080020000559B4Cd0s7
d5010 -p /dev/md/rdisk/d5000 -o 1024 -b 32851968	/dev/rdisk/c13t5080020000559B81d0s7	/dev/rdisk/c10t5080020000558F4Cd0s7
d2107 -p /dev/md/rdisk/d8003 -o 3011218432 -b 32849920	/dev/rdisk/c15t5080020000559BC8d0s7	/dev/rdisk/c12t5080020000558F8Cd0s7
d2114 -p /dev/md/rdisk/d8004 -o 2842739712 -b 32849920	/dev/rdisk/c9t5080020000558FC8d0s7	/dev/rdisk/c14t5080020000559B0Cd0s7
d2121 -p /dev/md/rdisk/d8000 -o 2590542848 -b 32849920	/dev/rdisk/c11t5080020000558F02d0s7	/dev/rdisk/c16t5080020000559B4Dd0s7
d2104 -p /dev/md/rdisk/d8001 -o 2636871680 -b 229961728	/dev/rdisk/c13t5080020000559BC2d0s7	/dev/rdisk/c10t5080020000558F4Dd0s7
d2105 -p /dev/md/rdisk/d8002 -o 2628483072 -b 229961728	/dev/rdisk/c15t5080020000559BC9d0s7	/dev/rdisk/c12t5080020000558F8Dd0s7
d2106 -p /dev/md/rdisk/d8003 -o 2781255680 -b 229961728	/dev/rdisk/c9t5080020000558FC9d0s7	/dev/rdisk/c14t5080020000559B0Dd0s7
d2111 -p /dev/md/rdisk/d8004 -o 2612776960 -b 229961728	/dev/rdisk/c11t5080020000558F03d0s7	/dev/rdisk/c16t5080020000559B4Ed0s7
d2112 -p /dev/md/rdisk/d8000 -o 2360580096 -b 229961728	/dev/rdisk/c13t5080020000559B83d0s7	/dev/rdisk/c10t5080020000558F4Ed0s7
d2113 -p /dev/md/rdisk/d8001 -o 2406908928 -b 229961728	/dev/rdisk/c15t5080020000559BCAd0s7	/dev/rdisk/c12t5080020000558F8Ed0s7
d2118 -p /dev/md/rdisk/d8002 -o 2398520320 -b 229961728	/dev/rdisk/c9t5080020000558FCAd0s7	/dev/rdisk/c14t5080020000559B0Ed0s7
d2119 -p /dev/md/rdisk/d8003 -o 2551292928 -b 229961728	/dev/rdisk/c11t5080020000558F04d0s7	/dev/rdisk/c16t5080020000559B4Fd0s7
d2120 -p /dev/md/rdisk/d8004 -o 2382814208 -b 229961728	/dev/rdisk/c13t5080020000559B84d0s7	/dev/rdisk/c10t5080020000558F4Fd0s7
d2125 -p /dev/md/rdisk/d8000 -o 2130617344 -b 229961728	/dev/rdisk/c15t5080020000559BCBd0s7	/dev/rdisk/c12t5080020000558F8Fd0s7
d2126 -p /dev/md/rdisk/d8001 -o 2176946176 -b 229961728	/dev/rdisk/c9t5080020000558FCBd0s7	/dev/rdisk/c14t5080020000559B0Fd0s7
d2127 -p /dev/md/rdisk/d8002 -o 2168557568 -b 229961728	/dev/rdisk/c11t5080020000558F05d0s7	/dev/rdisk/c16t5080020000559B40d0s7
d2108 -p /dev/md/rdisk/d8003 -o 2239295488 -b 311996416	/dev/rdisk/c13t5080020000559B85d0s7	/dev/rdisk/c10t5080020000558F40d0s7
d2115 -p /dev/md/rdisk/d8004 -o 2070816768 -b 311996416	/dev/rdisk/c15t5080020000559BCCd0s7	/dev/rdisk/c12t5080020000558F80d0s7
d2101 -p /dev/md/rdisk/d8000 -o 1802350592 -b 328265728	/dev/rdisk/c9t5080020000558FCd0s7	/dev/rdisk/c14t5080020000559B00d0s7
d2103 -p /dev/md/rdisk/d8001 -o 1848679424 -b 328265728	/dev/rdisk/c11t5080020000558F06d0s7	/dev/rdisk/c16t5080020000559B41d0s7
d2110 -p /dev/md/rdisk/d8002 -o 1840290816 -b 328265728	/dev/rdisk/c13t5080020000559B86d0s7	/dev/rdisk/c10t5080020000558F41d0s7
d2117 -p /dev/md/rdisk/d8003 -o 1911028736 -b 328265728	/dev/rdisk/c15t5080020000559BCDd0s7	/dev/rdisk/c12t5080020000558F81d0s7
d2123 -p /dev/md/rdisk/d8004 -o 1742550016 -b 328265728	/dev/rdisk/c9t5080020000558FCd0s7	/dev/rdisk/c14t5080020000559B01d0s7
d2124 -p /dev/md/rdisk/d8004 -o 1414283264 -b 328265728	/dev/rdisk/c11t5080020000558F07d0s7	/dev/rdisk/c16t5080020000559B42d0s7
d2102 -p /dev/md/rdisk/d8003 -o 1484457984 -b 426569728	/dev/rdisk/c13t5080020000559B87d0s7	/dev/rdisk/c10t5080020000558F42d0s7
d2109 -p /dev/md/rdisk/d8002 -o 1413720064 -b 426569728	/dev/rdisk/c15t5080020000559BCEd0s7	/dev/rdisk/c12t5080020000558F82d0s7
d127 -p /dev/md/rdisk/d3 -o 1543036416 -b 229963776	/dev/rdisk/c9t5080020000558FCEd0s7	/dev/rdisk/c14t5080020000559B02d0s7
d3 1 160 /dev/rdisk/c15t5080020000559BC0d0s7	/dev/rdisk/c11t5080020000558F08d0s7	/dev/rdisk/c16t5080020000559B43d0s7
/dev/rdisk/c9t5080020000558FC0d0s7	/dev/rdisk/c13t5080020000559B88d0s7	/dev/rdisk/c10t5080020000558F43d0s7
/dev/rdisk/c11t5080020000558F0Ad0s7	/dev/rdisk/c15t5080020000559BCF0d0s7	/dev/rdisk/c12t5080020000558F83d0s7
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/dev/rdisk/c15t5080020000559BC4d0s7	/dev/rdisk/c11t5080020000558F12d0s7	/dev/rdisk/c16t5080020000559B47d0s7
/dev/rdisk/c9t5080020000558FC4d0s7	/dev/rdisk/c13t5080020000559B92d0s7	/dev/rdisk/c10t5080020000558F47d0s7
/dev/rdisk/c11t5080020000558F0Ed0s7	/dev/rdisk/c15t5080020000559BD3d0s7	/dev/rdisk/c12t5080020000558F87d0s7
/dev/rdisk/c13t5080020000559B8Ed0s7	/dev/rdisk/c9t5080020000558FD3d0s7	/dev/rdisk/c14t5080020000559B07d0s7
/dev/rdisk/c15t5080020000559BC5d0s7	/dev/rdisk/c11t5080020000558F13d0s7	/dev/rdisk/c16t5080020000559B48d0s7
/dev/rdisk/c9t5080020000558FC5d0s7	/dev/rdisk/c13t5080020000559B93d0s7	/dev/rdisk/c10t5080020000558F48d0s7
/dev/rdisk/c11t5080020000558F0Fd0s7	/dev/rdisk/c15t5080020000559B94d0s7	/dev/rdisk/c12t5080020000558F88d0s7
/dev/rdisk/c13t5080020000559B8Fd0s7	/dev/rdisk/c9t5080020000558F4Ad0s7	/dev/rdisk/c14t5080020000559B08d0s7
/dev/rdisk/c15t5080020000559BC6d0s7	/dev/rdisk/c11t5080020000558F14d0s7	/dev/rdisk/c16t5080020000559B49d0s7

/dev/rdisk/c10t5080020000558F49d0s7	/dev/rdisk/c11t5080020000558F01d0s6	/dev/rdisk/c16t5080020000559B4Cd0s6
/dev/rdisk/c12t5080020000558F89d0s7	/dev/rdisk/c13t5080020000559B82d0s6	/dev/rdisk/c10t5080020000558F4Cd0s6
/dev/rdisk/c14t5080020000559B09d0s7	/dev/rdisk/c15t5080020000559BC8d0s6	/dev/rdisk/c12t5080020000558F8Cd0s6
/dev/rdisk/c16t5080020000559B50d0s7	/dev/rdisk/c9t5080020000558FC8d0s6	/dev/rdisk/c14t5080020000559B0Dd0s6
/dev/rdisk/c10t5080020000558F50d0s7	/dev/rdisk/c11t5080020000558F02d0s6	/dev/rdisk/c16t5080020000559B4Dd0s6
/dev/rdisk/c12t5080020000558F90d0s7	/dev/rdisk/c13t5080020000559B83d0s6	/dev/rdisk/c10t5080020000558F4Dd0s6
/dev/rdisk/c14t5080020000559B10d0s7	/dev/rdisk/c15t5080020000559BC9d0s6	/dev/rdisk/c12t5080020000558F8Dd0s6
/dev/rdisk/c16t5080020000559B51d0s7	/dev/rdisk/c9t5080020000558FC9d0s6	/dev/rdisk/c14t5080020000559B0Ed0s6
/dev/rdisk/c10t5080020000558F51d0s7	/dev/rdisk/c11t5080020000558F03d0s6	/dev/rdisk/c16t5080020000559B4Ed0s6
/dev/rdisk/c12t5080020000558F91d0s7	/dev/rdisk/c13t5080020000559B84d0s6	/dev/rdisk/c10t5080020000558F4Ed0s6
/dev/rdisk/c14t5080020000559B11d0s7	/dev/rdisk/c15t5080020000559BCAd0s6	/dev/rdisk/c12t5080020000558F8Ed0s6
/dev/rdisk/c16t5080020000559B52d0s7	/dev/rdisk/c9t5080020000558FCAd0s6	/dev/rdisk/c14t5080020000559B0Fd0s6
/dev/rdisk/c10t5080020000558F52d0s7	/dev/rdisk/c11t5080020000558F04d0s6	/dev/rdisk/c16t5080020000559B4Fd0s6
/dev/rdisk/c12t5080020000558F92d0s7	/dev/rdisk/c13t5080020000559B85d0s6	/dev/rdisk/c10t5080020000558F4Fd0s6
/dev/rdisk/c14t5080020000559B12d0s7	/dev/rdisk/c15t5080020000559BCBd0s6	/dev/rdisk/c12t5080020000558F8Fd0s6
/dev/rdisk/c16t5080020000559B53d0s7	/dev/rdisk/c9t5080020000558FCBd0s6	/dev/rdisk/c14t5080020000559B00d0s6
/dev/rdisk/c10t5080020000558F53d0s7	/dev/rdisk/c11t5080020000558F05d0s6	/dev/rdisk/c16t5080020000559B40d0s6
/dev/rdisk/c12t5080020000558F93d0s7	/dev/rdisk/c13t5080020000559B86d0s6	/dev/rdisk/c10t5080020000558F40d0s6
/dev/rdisk/c14t5080020000559B13d0s7 -i 256b	/dev/rdisk/c15t5080020000559BCCd0s6	/dev/rdisk/c12t5080020000558F80d0s6
d126 -p /dev/md/rdisk/d3 -o 1313072384 -b 229963776	/dev/rdisk/c9t5080020000558FCCd0s6	/dev/rdisk/c14t5080020000559B01d0s6
d125 -p /dev/md/rdisk/d3 -o 1083108352 -b 229963776	/dev/rdisk/c11t5080020000558F06d0s6	/dev/rdisk/c16t5080020000559B41d0s6
d124 -p /dev/md/rdisk/d3 -o 754840320 -b 328267776	/dev/rdisk/c13t5080020000559B87d0s6	/dev/rdisk/c10t5080020000558F41d0s6
d123 -p /dev/md/rdisk/d3 -o 426572288 -b 328267776	/dev/rdisk/c15t5080020000559BCDd0s6	/dev/rdisk/c12t5080020000558F81d0s6
d122 -p /dev/md/rdisk/d3 -o 256 -b 426571776	/dev/rdisk/c9t5080020000558FCDd0s6	/dev/rdisk/c14t5080020000559B02d0s6
d2116 -p /dev/md/rdisk/d8001 -o 1422108672 -b 426569728	/dev/rdisk/c11t5080020000558F07d0s6	/dev/rdisk/c16t5080020000559B42d0s6
d2122 -p /dev/md/rdisk/d8000 -o 1375779840 -b 426569728	/dev/rdisk/c13t5080020000559B88d0s6	/dev/rdisk/c10t5080020000558F42d0s6
d121 -p /dev/md/rdisk/d2 -o 1756731136 -b 32851968	/dev/rdisk/c15t5080020000559BCEd0s6	/dev/rdisk/c12t5080020000558F82d0s6
d2 1 160 /dev/rdisk/c13t5080020000559B8Ad0s6	/dev/rdisk/c9t5080020000558FCEd0s6	/dev/rdisk/c14t5080020000559B03d0s6
/dev/rdisk/c15t5080020000559BC0d0s6	/dev/rdisk/c11t5080020000558F08d0s6	/dev/rdisk/c16t5080020000559B43d0s6
/dev/rdisk/c9t5080020000558FC0d0s6	/dev/rdisk/c13t5080020000559B89d0s6	/dev/rdisk/c10t5080020000558F43d0s6
/dev/rdisk/c11t5080020000558F0Ad0s6	/dev/rdisk/c15t5080020000559BCFd0s6	/dev/rdisk/c12t5080020000558F83d0s6
/dev/rdisk/c13t5080020000559B8Bd0s6	/dev/rdisk/c9t5080020000558FCFd0s6	/dev/rdisk/c14t5080020000559B04d0s6
/dev/rdisk/c15t5080020000559BC1d0s6	/dev/rdisk/c11t5080020000558F09d0s6	/dev/rdisk/c16t5080020000559B44d0s6
/dev/rdisk/c9t5080020000558FC1d0s6	/dev/rdisk/c13t5080020000559B90d0s6	/dev/rdisk/c10t5080020000558F44d0s6
/dev/rdisk/c11t5080020000558F0Bd0s6	/dev/rdisk/c15t5080020000559BD0d0s6	/dev/rdisk/c12t5080020000558F84d0s6
/dev/rdisk/c13t5080020000559B8Cd0s6	/dev/rdisk/c9t5080020000558FD0d0s6	/dev/rdisk/c14t5080020000559B05d0s6
/dev/rdisk/c15t5080020000559BC2d0s6	/dev/rdisk/c11t5080020000558F10d0s6	/dev/rdisk/c16t5080020000559B45d0s6
/dev/rdisk/c9t5080020000558FC2d0s6	/dev/rdisk/c13t5080020000559B91d0s6	/dev/rdisk/c10t5080020000558F45d0s6
/dev/rdisk/c11t5080020000558F0Cd0s6	/dev/rdisk/c15t5080020000559BD1d0s6	/dev/rdisk/c12t5080020000558F85d0s6
/dev/rdisk/c13t5080020000559B8Dd0s6	/dev/rdisk/c9t5080020000558FD1d0s6	/dev/rdisk/c14t5080020000559B06d0s6
/dev/rdisk/c15t5080020000559BC3d0s6	/dev/rdisk/c11t5080020000558F11d0s6	/dev/rdisk/c16t5080020000559B46d0s6
/dev/rdisk/c9t5080020000558FC3d0s6	/dev/rdisk/c13t5080020000559B92d0s6	/dev/rdisk/c10t5080020000558F46d0s6
/dev/rdisk/c11t5080020000558F0Dd0s6	/dev/rdisk/c15t5080020000559BD2d0s6	/dev/rdisk/c12t5080020000558F86d0s6
/dev/rdisk/c13t5080020000559B8Ed0s6	/dev/rdisk/c9t5080020000558FD2d0s6	/dev/rdisk/c14t5080020000559B07d0s6
/dev/rdisk/c15t5080020000559BC4d0s6	/dev/rdisk/c11t5080020000558F12d0s6	/dev/rdisk/c16t5080020000559B47d0s6
/dev/rdisk/c9t5080020000558FC4d0s6	/dev/rdisk/c13t5080020000559B93d0s6	/dev/rdisk/c10t5080020000558F47d0s6
/dev/rdisk/c11t5080020000558F0Ed0s6	/dev/rdisk/c15t5080020000559BD3d0s6	/dev/rdisk/c12t5080020000558F87d0s6
/dev/rdisk/c13t5080020000559B8Fd0s6	/dev/rdisk/c9t5080020000558FD3d0s6	/dev/rdisk/c14t5080020000559B08d0s6
/dev/rdisk/c15t5080020000559BC5d0s6	/dev/rdisk/c11t5080020000558F13d0s6	/dev/rdisk/c16t5080020000559B48d0s6
/dev/rdisk/c9t5080020000558FC5d0s6	/dev/rdisk/c14t5080020000559B0Ad0s6	/dev/rdisk/c10t5080020000558F48d0s6
/dev/rdisk/c11t5080020000558F0Fd0s6	/dev/rdisk/c16t5080020000559B4Ad0s6	/dev/rdisk/c12t5080020000558F88d0s6
/dev/rdisk/c13t5080020000559B80d0s6	/dev/rdisk/c10t5080020000558F4Ad0s6	/dev/rdisk/c14t5080020000559B09d0s6
/dev/rdisk/c15t5080020000559BC6d0s6	/dev/rdisk/c12t5080020000558F8Ad0s6	/dev/rdisk/c16t5080020000559B49d0s6
/dev/rdisk/c9t5080020000558FC6d0s6	/dev/rdisk/c14t5080020000559B0Bd0s6	/dev/rdisk/c10t5080020000558F49d0s6
/dev/rdisk/c11t5080020000558F00d0s6	/dev/rdisk/c16t5080020000559B4Bd0s6	/dev/rdisk/c12t5080020000558F89d0s6
/dev/rdisk/c13t5080020000559B81d0s6	/dev/rdisk/c10t5080020000558F4Bd0s6	/dev/rdisk/c14t5080020000559B10d0s6
/dev/rdisk/c15t5080020000559BC7d0s6	/dev/rdisk/c12t5080020000558F8Bd0s6	/dev/rdisk/c16t5080020000559B50d0s6
/dev/rdisk/c9t5080020000558FC7d0s6	/dev/rdisk/c14t5080020000559B0Cd0s6	/dev/rdisk/c10t5080020000558F50d0s6

d105 -p /dev/md/rdsd/d0 -o 1313072384 -b 229963776
d104 -p /dev/md/rdsd/d0 -o 1083108352 -b 229963776
d103 -p /dev/md/rdsd/d0 -o 754840320 -b 328267776
d102 -p /dev/md/rdsd/d0 -o 328268288 -b 426571776
d101 -p /dev/md/rdsd/d0 -o 256 -b 328267776
d9000 -p /dev/md/rdsd/d8000 -o 1024 -b 2097152

sbdadm output – DATA heads

COMSTAR mapping of raw device to export devices UID

Found 28 LU(s)

GUID	DATA SIZE	SOURCE
600144f0a3770e0000000000d01d101	168073035776	/dev/md/rdsd/d101
600144f0a3770e0000000000d01d102	218404683776	/dev/md/rdsd/d102
600144f0a3770e0000000000d01d103	168073035776	/dev/md/rdsd/d103
600144f0a3770e0000000000d01d104	117741387776	/dev/md/rdsd/d104
600144f0a3770e0000000000d01d105	117741387776	/dev/md/rdsd/d105
600144f0a3770e0000000000d01d106	117741387776	/dev/md/rdsd/d106
600144f0a3770e0000000000d01d107	16820142080	/dev/md/rdsd/d107
600144f0a3770e0000000000d01d108	159743148032	/dev/md/rdsd/d108
600144f0a3770e0000000000d01d109	218404683776	/dev/md/rdsd/d109
600144f0a3770e0000000000d01d110	168073035776	/dev/md/rdsd/d110
600144f0a3770e0000000000d01d111	117741387776	/dev/md/rdsd/d111
600144f0a3770e0000000000d01d112	117741387776	/dev/md/rdsd/d112
600144f0a3770e0000000000d01d113	117741387776	/dev/md/rdsd/d113
600144f0a3770e0000000000d01d114	16820142080	/dev/md/rdsd/d114
600144f0a3770e0000000000d01d115	159743148032	/dev/md/rdsd/d115
600144f0a3770e0000000000d01d116	218404683776	/dev/md/rdsd/d116
600144f0a3770e0000000000d01d117	168073035776	/dev/md/rdsd/d117
600144f0a3770e0000000000d01d118	117741387776	/dev/md/rdsd/d118
600144f0a3770e0000000000d01d119	117741387776	/dev/md/rdsd/d119
600144f0a3770e0000000000d01d120	117741387776	/dev/md/rdsd/d120
600144f0a3770e0000000000d01d121	16820142080	/dev/md/rdsd/d121
600144f0a3770e0000000000d01d122	218404683776	/dev/md/rdsd/d122

600144f0a3770e0000000000d01d123 168073035776
/dev/md/rdsd/d123
600144f0a3770e0000000000d01d124 168073035776
/dev/md/rdsd/d124
600144f0a3770e0000000000d01d125 117741387776
/dev/md/rdsd/d125
600144f0a3770e0000000000d01d126 117741387776
/dev/md/rdsd/d126
600144f0a3770e0000000000d01d127 117741387776
/dev/md/rdsd/d127
600144f0a3770e00000004c488c900001 1073676288
/dev/md/rdsd/d9000

stmfadm output – DATA heads

COMSTAR UIDs that are exported

LU Name: 600144F0A3770E0000000000D01D101
LU Name: 600144F0A3770E0000000000D01D102
LU Name: 600144F0A3770E0000000000D01D103
LU Name: 600144F0A3770E0000000000D01D104
LU Name: 600144F0A3770E0000000000D01D105
LU Name: 600144F0A3770E0000000000D01D106
LU Name: 600144F0A3770E0000000000D01D107
LU Name: 600144F0A3770E0000000000D01D108
LU Name: 600144F0A3770E0000000000D01D109
LU Name: 600144F0A3770E0000000000D01D110
LU Name: 600144F0A3770E0000000000D01D111
LU Name: 600144F0A3770E0000000000D01D112
LU Name: 600144F0A3770E0000000000D01D113
LU Name: 600144F0A3770E0000000000D01D114
LU Name: 600144F0A3770E0000000000D01D115
LU Name: 600144F0A3770E0000000000D01D116
LU Name: 600144F0A3770E0000000000D01D117
LU Name: 600144F0A3770E0000000000D01D118
LU Name: 600144F0A3770E0000000000D01D119
LU Name: 600144F0A3770E0000000000D01D120
LU Name: 600144F0A3770E0000000000D01D121
LU Name: 600144F0A3770E0000000000D01D122
LU Name: 600144F0A3770E0000000000D01D123
LU Name: 600144F0A3770E0000000000D01D124
LU Name: 600144F0A3770E0000000000D01D125
LU Name: 600144F0A3770E0000000000D01D126
LU Name: 600144F0A3770E0000000000D01D127
LU Name: 600144F0A3770E00000004C488C900001

/etc/system – DATA heads

```
*ident    "%Z%%M%    %I%    %E% SMI" /* SVR4 1.5 */  
*  
* CDDL HEADER START  
*  
* The contents of this file are subject to the terms of the  
* Common Development and Distribution License, Version 1.0 only  
* (the "License"). You may not use this file except in compliance  
* with the License.  
*  
* You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE  
* or http://www.opensolaris.org/os/licensing.  
* See the License for the specific language governing permissions  
* and limitations under the License.
```

```
*  
* When distributing Covered Code, include this CDDL HEADER in each  
* file and include the License file at usr/src/OPENSOLARIS.LICENSE.  
* If applicable, add the following below this CDDL HEADER, with the  
* fields enclosed by brackets "[]" replaced with your own identifying  
* information: Portions Copyright [yyyy] [name of copyright owner]  
*  
* CDDL HEADER END  
*  
*  
* 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
*
exclude: ehci
exclude: uhci
set autoup=300
set md_mirror:md_resync_bufsz = 2048
set md:md_maxphys=131072
set maxphys=131072

mpt.conf output – DATA heads
#
# Copyright 2008 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
#
# 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
# 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 mpt controllers set:
# mpzio-disable="no";
#
# To globally disable MPxIO on all mpt controllers set:
# mpzio-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" mpzio-
# disable="yes";
#
mpzio-disable="yes";
#
# SATA mpzio supported
#
# To disable SATA mpzio, set
# disable-sata-mpzio="yes";
# When mpzio-disable="yes" is set, the disable-sata-mpzio property
# takes no effect
#
disable-sata-mpzio="no";

/etc/project – DATA heads
system:0::::
user.root:1::::
noproject:2::::
default:3::::
group.staff:10::::

/etc/user_attr – DATA heads
#
# Copyright 2009 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
# 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.
#
# You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
# or http://www.opensolaris.org/os/licensing.
# See the License for the specific language governing permissions
# and limitations under the License.
#
# When distributing Covered Code, include this CDDL HEADER in each
# file and include the License file at usr/src/OPENSOLARIS.LICENSE.
# If applicable, add the following below this CDDL HEADER, with the
# fields enclosed by brackets "[]" replaced with your own identifying
# information: Portions Copyright [yyyy] [name of copyright owner]
#
# CDDL HEADER END
#

# /etc/user_attr
#
# user attributes. see user_attr(4)
#
#
dbbench::::type=normal;profiles=Primary Administrator;roles=root
dbd::::type=normal;profiles=Primary Administrator;roles=root
root::::type=normal;auths=solaris.*;solaris.grant;profiles=All;lock_after_retri
es=no;min_label=admin_low;clearance=admin_high
sas::::type=normal;profiles=Primary Administrator;roles=root
sasadm::::type=normal;profiles=Primary Administrator;roles=root
storage::::type=normal;profiles=Primary Administrator;roles=root
tpc::::type=normal;profiles=Primary Administrator

```

COMSTAR REDO HEADS

format output – REDO heads

Searching for disks..done

AVAILABLE DISK SELECTIONS:

0. c2t0d0 <DEFAULT cyl 60754 alt 2 hd 255 sec 252>
/pci@0,0/pci8086,340c@5/pci1000,9263@0/sd@0,0
1. c2t1d0 <LSI-MR9261-8i-2.50-9.09TB>
/pci@0,0/pci8086,340c@5/pci1000,9263@0/sd@1,0
2. c2t2d0 <LSI-MR9261-8i-2.50-9.09TB>
/pci@0,0/pci8086,340c@5/pci1000,9263@0/sd@2,0
3. c3t0d0 <DEFAULT cyl 1946 alt 2 hd 255 sec 63>
/pci@0,0/pci108e,4845@1d,7/storage@1/disk@0,0

Specify disk (enter its number):

prtdiag – REDO heads

System Configuration: SUN MICROSYSTEMS SUN FIRE X4275 SERVER
 BIOS Configuration: American Megatrends Inc. 07060223 03/04/2010
 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
Unknown	in use	0	D2		BANK2	
Unknown	empty	0	D1		BANK1	
Unknown	empty	0	D0		BANK0	
Unknown	in use	0	D5		BANK5	
Unknown	empty	0	D4		BANK4	
Unknown	empty	0	D3		BANK3	
Unknown	in use	0	D8		BANK8	
Unknown	empty	0	D7		BANK7	
Unknown	empty	0	D6		BANK6	
Unknown	empty	0	D2		BANK2	

```

Unknown empty 0 D1 BANK1
Unknown empty 0 D0 BANK0
Unknown empty 0 D5 BANK5
Unknown empty 0 D4 BANK4
Unknown empty 0 D3 BANK3
Unknown empty 0 D8 BANK8
Unknown empty 0 D7 BANK7
Unknown 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	available	PCI Express	PCIE1
2	available	PCI Express	PCIE2
3	in use	PCI Express	PCIE3
4	available	PCI Express	PCIE4
5	available	PCI Express	PCIE5

prtconf – REDO heads

```

System Configuration: Sun Microsystems i86pc
Memory size: 6136 Megabytes
System Peripherals (Software Nodes):

```

```

i86pc
scsi_vhci, instance #0
pci, instance #0
pci108e,4845 (driver not attached)
pci8086,3408, instance #0
pci108e,0, instance #0
pci108e,0, instance #1 (driver not attached)
pci8086,3409, instance #1
pci108e,0, instance #2 (driver not attached)
pci108e,0, instance #3 (driver not attached)
pci8086,340a, instance #2
pci1077,171, instance #0
pci1077,171, instance #1
pci8086,340c, instance #3
pci1000,9263, instance #0
sd, instance #0
sd, instance #1
sd, instance #2
pci8086,340e, instance #4
pci111d,806e, instance #6
pci111d,806e, instance #7
pci111d,806e, instance #8
pci8086,3410, instance #5
pci111d,806e, instance #9
pci111d,806e, instance #10
pci111d,806e, instance #11

```

```

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, instance #0
pci108e,4845, instance #1
pci108e,4845, instance #2
device, instance #0
keyboard, instance #0
mouse, instance #1
pci108e,4845, instance #0
hub, instance #0
pci108e,4845, instance #3
pci108e,4845, instance #4
pci108e,4845, instance #5
pci108e,4845, instance #1
storage, instance #0
disk, instance #4
pci8086,244e, instance #0
display, instance #0
isa, instance #0
motherboard (driver not attached)
asy, instance #0
motherboard (driver not attached)
pit_beep, instance #0
pci108e,4845, instance #0
pci108e,4845 (driver not attached)
ioapics (driver not attached)
ioapic, instance #0 (driver not attached)
fw, 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
sb, instance #1
used-resources (driver not attached)
options, instance #0
pseudo, instance #0
agpgart, instance #0 (driver not attached)
xsvc, instance #0

```

uname -a output – REDO heads

```

SunOS redo1 5.11 snv_134a i86pc i386 i86pc

```

/etc/vfstab – REDO heads

```

#device device mount mount FS
fsck device mount mount
#to mount to fsck mount point type pass
at boot options
#
/devices - /devices devfs - no
-
/proc - /proc proc
- no - /system/contract ctfs -
objfs - /system/object objfs
- no - /etc/dfs/sharetab sharefs
fd - /dev/fd fd
- no - /tmp tmpfs
swap - yes -
/dev/zvol/dsk/rpool/swap - -
swap - no -

```

/etc/hosts – REDO heads

```

# CDDL HEADER START
#
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#
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#
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#
# ident "%Z%%M% %I% %E% SMI"
#
# Internet host table
#
::1 redo1.local localhost loghost
127.0.0.1 redo1.local localhost loghost
10.196.105.1 redo1 redo1.west.sun.com
# NIS masters
10.196.232.10 minister196 minister196.west.sun.com
10.196.232.28 osol196 osol196.west.sun.com

```

metastat -p output – REDO heads

<pre> d110 -p /dev/md/rdisk/d120 -o 1569259520 -b 229963776 d120 1 1 /dev/rdisk/c2t1d0s5 d109 -p /dev/md/rdisk/d130 -o 1339294720 -b 229963776 d130 1 1 /dev/rdisk/c2t2d0s5 d108 -p /dev/md/rdisk/d120 -o 1339294720 -b 229963776 d107 -p /dev/md/rdisk/d130 -o 1109329920 -b 229963776 d106 -p /dev/md/rdisk/d120 -o 1109329920 -b 229963776 d105 -p /dev/md/rdisk/d130 -o 879365120 -b 229963776 d104 -p /dev/md/rdisk/d120 -o 879365120 -b 229963776 d103 -p /dev/md/rdisk/d130 -o 649400320 -b 229963776 d102 -p /dev/md/rdisk/d120 -o 649400320 -b 229963776 d101 -p /dev/md/rdisk/d130 -o 419435520 -b 229963776 d100 -p /dev/md/rdisk/d120 -o 419435520 -b 229963776 d7134 -p /dev/md/rdisk/d130 -o 314576896 -b 104857600 d7133 -p /dev/md/rdisk/d130 -o 209718272 -b 104857600 d7132 -p /dev/md/rdisk/d130 -o 104859648 -b 104857600 d7131 -p /dev/md/rdisk/d130 -o 1024 -b 104857600 d7124 -p /dev/md/rdisk/d120 -o 314576896 -b 104857600 d7123 -p /dev/md/rdisk/d120 -o 209718272 -b 104857600 d7122 -p /dev/md/rdisk/d120 -o 104859648 -b 104857600 d7121 -p /dev/md/rdisk/d120 -o 1024 -b 104857600 d7034 -p /dev/md/rdisk/d3 -o 2516586496 -b 838860800 d3 1 1 /dev/rdisk/c2t2d0s4 d7033 -p /dev/md/rdisk/d3 -o 1677724672 -b 838860800 d7032 -p /dev/md/rdisk/d3 -o 838862848 -b 838860800 d7031 -p /dev/md/rdisk/d3 -o 1024 -b 838860800 d7024 -p /dev/md/rdisk/d2 -o 2516586496 -b 838860800 d2 1 1 /dev/rdisk/c2t1d0s4 d7023 -p /dev/md/rdisk/d2 -o 1677724672 -b 838860800 d7022 -p /dev/md/rdisk/d2 -o 838862848 -b 838860800 d7021 -p /dev/md/rdisk/d2 -o 1024 -b 838860800 sbdadm output – REDO heads COMSTAR mapping of raw device to export device UID Found 15 LU(s) GUID DATA SIZE SOURCE ----- 600144f0a3770e00000000000a01c210 429496664064 /dev/rdisk/c2t1d0s0 600144f0a3770e00000000000a01c211 429496664064 /dev/rdisk/c2t1d0s1 600144f0a3770e00000000000a01c220 429496664064 /dev/rdisk/c2t2d0s0 600144f0a3770e00000000000a01c221 429496664064 /dev/rdisk/c2t2d0s1 600144f0a3770e00000000000a01d100 117741387776 /dev/md/rdisk/d100 600144f0a3770e00000000000a01d101 117741387776 /dev/md/rdisk/d101 600144f0a3770e00000000000a01d102 117741387776 /dev/md/rdisk/d102 600144f0a3770e00000000000a01d103 117741387776 /dev/md/rdisk/d103 600144f0a3770e00000000000a01d104 117741387776 /dev/md/rdisk/d104 600144f0a3770e00000000000a01d105 117741387776 </pre>	<pre> /dev/md/rdisk/d105 600144f0a3770e00000000000a01d106 117741387776 /dev/md/rdisk/d106 600144f0a3770e00000000000a01d107 117741387776 /dev/md/rdisk/d107 600144f0a3770e00000000000a01d108 117741387776 /dev/md/rdisk/d108 600144f0a3770e00000000000a01d109 117741387776 /dev/md/rdisk/d109 600144f0a3770e00000000000a01d110 117741387776 /dev/md/rdisk/d110 stmfadm output – REDO heads COMSTAR UIDs that are exported LU Name: 600144F0A3770E00000000000A01C210 LU Name: 600144F0A3770E00000000000A01C211 LU Name: 600144F0A3770E00000000000A01C220 LU Name: 600144F0A3770E00000000000A01C221 LU Name: 600144F0A3770E00000000000A01D100 LU Name: 600144F0A3770E00000000000A01D101 LU Name: 600144F0A3770E00000000000A01D102 LU Name: 600144F0A3770E00000000000A01D103 LU Name: 600144F0A3770E00000000000A01D105 LU Name: 600144F0A3770E00000000000A01D106 LU Name: 600144F0A3770E00000000000A01D107 LU Name: 600144F0A3770E00000000000A01D108 LU Name: 600144F0A3770E00000000000A01D109 LU Name: 600144F0A3770E00000000000A01D110 /etc/system – REDO heads *ident "%Z%%M% %I% %E% SMI" /* SVR4 1.5 */ * * CDDL HEADER START * * The contents of this file are subject to the terms of the * Common Development and Distribution License, Version 1.0 only * (the "License"). You may not use this file except in compliance * with the License. * * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE * or http://www.opensolaris.org/os/licensing. * See the License for the specific language governing permissions * and limitations under the License. * * When distributing Covered Code, include this CDDL HEADER in each * file and include the License file at usr/src/OPENSOLARIS.LICENSE. * If applicable, add the following below this CDDL HEADER, with the * fields enclosed by brackets "[]" replaced with your own identifying * information: Portions Copyright [yyyy] [name of copyright owner] * * CDDL HEADER END * * * SYSTEM SPECIFICATION FILE * * moddir: </pre>	<pre> * * 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: </pre>
--	---	--

```

*          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 autoup=300
# Help with restore speed

set maxphys=1048576
set md_mirror.md_resync_bufsz = 2048
set md:md_maxphys=131072

mpt.conf – REDO heads
#
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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
# 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 mpt controllers set:
# mpzio-disable="no";
#
# To globally disable MPxIO on all mpt controllers set:
# mpzio-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" mpzio-
# disable="yes";

```

```

#
mpzio-disable="yes";
#
# SATA mpzio supported
#
# To disable SATA mpzio, set
# disable-sata-mpzio="yes";
# When mpzio-disable="yes" is set, the disable-sata-mpzio property
# takes no effect
#
disable-sata-mpzio="no";

/etc/project – REDO heads
system:0:::
user.root:1:::
noproject:2:::
default:3:::
group.staff:10:::

/etc/user_attr – DATA heads
#
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# information: Portions Copyright [yyyy] [name of copyright owner]
#
CDDL HEADER END
#
# /etc/user_attr
#
# user attributes. see user_attr(4)
#
#
dbbench:::type=normal;profiles=Primary Administrator;roles=root
dbd:::type=normal;profiles=Primary Administrator;roles=root
root:::type=normal;auths=solaris.*,solaris.grant;profiles=All;lock_after_retri
es=no;min_label=admin_low;clearance=admin_high
sas:::type=normal;profiles=Primary Administrator;roles=root
sasadm:::type=normal;profiles=Primary Administrator;roles=root
storage:::type=normal;profiles=Primary Administrator;roles=root
tpc:::type=normal;profiles=Primary Administrator

```

Client Configuration

format output – clients

Searching for disks..done

AVAILABLE DISK SELECTIONS:

0. c0t0d0 <DEFAULT cyl1 17747 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340a@3/pci1000,9263@0/sd@0,0
1. c0t1d0 <DEFAULT cyl1 17747 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340a@3/pci1000,9263@0/sd@1,0

Specify disk (enter its number):

prtdiag – clients

System Configuration: SUN MICROSYSTEMS SUN FIRE X4170 M2 SERVER

BIOS Configuration: American Megatrends Inc. 08010405 04/08/2010
BMC Configuration: IPMI 1.5 (KCS: Keyboard Controller Style)

==== Processor Sockets =====

Version	Location Tag
Intel(R) Xeon(R) CPU	X5670 @ 2.93GHz CPU 0
Intel(R) Xeon(R) CPU	X5670 @ 2.93GHz CPU 1

==== Memory Device Sockets =====

Type	Status	Set	Device	Locator	Bank	Locator
Unknown	in use	0	D2		BANK2	
Unknown	in use	0	D1		BANK1	
Unknown	empty	0	D0		BANK0	
Unknown	in use	0	D5		BANK5	
Unknown	in use	0	D4		BANK4	
Unknown	empty	0	D3		BANK3	
Unknown	in use	0	D8		BANK8	
Unknown	in use	0	D7		BANK7	
Unknown	empty	0	D6		BANK6	
Unknown	in use	0	D2		BANK2	
Unknown	in use	0	D1		BANK1	
Unknown	empty	0	D0		BANK0	
Unknown	in use	0	D5		BANK5	
Unknown	in use	0	D4		BANK4	
Unknown	empty	0	D3		BANK3	
Unknown	in use	0	D8		BANK8	
Unknown	in use	0	D7		BANK7	
Unknown	empty	0	D6		BANK6	
FLASH	in use	0				

==== On-Board Devices =====

Intel 82576 Ethernet Controller.
Intel 82576 Ethernet Controller.
Intel 82576 Ethernet Controller.
Intel 82576 Ethernet Controller.

==== Upgradeable Slots =====

ID	Status	Type	Description
0	in use	PCI Express	PCIE0
1	in use	PCI Express	PCIE1
2	available	PCI Express	PCIE2
prtconf – clients			
System Configuration: Sun Microsystems i86pc			
Memory size: 49144 Megabytes			
System Peripherals (Software Nodes):			
i86pc			
			pci8086,244e, instance #0
			display, instance #0
			pci108e,484c (driver not attached)
			pci108e,484c, instance #0
			pci108e,484c (driver not attached)
			ioapics (driver not attached)
			ioapic, instance #0 (driver not attached)
			iscsi, instance #0
			pseudo, instance #0
			apggart, instance #0 (driver not attached)
			options, instance #0
			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
			cpu, instance #16
			cpu, instance #17
			cpu, instance #18
			cpu, instance #19
			cpu, instance #20
			cpu, instance #21
			cpu, instance #22
			cpu, instance #23
			/etc/release – clients
			Oracle Solaris 10 9/10 s10x_u9wos_09 X86
			Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
			Assembled 17 May 2010
			Early Access Build for Evaluation and Test Purposes Only.
			NOT SUPPORTED FOR PRODUCTION USE. Not patchable.
			/etc/vfstab – clients
			#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 – clients
			#
			# Internet host table
			#
			::1 localhost
			127.0.0.1 localhost
			10.196.101.1 client1 loghost
			10.196.232.10 minister196
			10.196.232.30 onager196
			#
			# NIS servers for reference
			10.1.140.1 minister-140
			10.1.141.1 minister minister-141
			10.1.142.1 minister-142
			10.1.140.32 ritus-140
			10.1.141.32 ritus ritus-141
			10.1.142.32 ritus-142
			10.1.140.2 imam-140
			10.1.141.2 imam imam-141
			10.1.142.2 imam-142
			# endit
			### everything after this is managed from CENTRAL FILE don't make changes
			### below here without expecting them to get blown away by heartless
			### and uncaring admin at the next update!! ;-)
			#####
			#####
			#
			# Begin ReCap DB host table addendum!! The MASTER lives in:
			#
			# /export/ptmp/recap/ewt/recap_host_addendum.txt
			#
			# This file WILL have hosts that have EVERYTHING listed in it - all drivers
			# too, even though THIS node will only be able to see it's associated "three"..
			# SOOO much easier to simply edit one file, and use
			/opt/SUNWcluster/bin/cssh to
			# edit every node concurrently to implement changes.. ewt 7.17.2010
			#
			#####
			#####
			#
			# First, despite having naming services, we should INSURE that all nodes
			# have local knowledge of all OTHER nodes, "Just in case".. Yes, that's

```

# paranoia you hear in my voice... ewt 7.19.2010
# All nodes SHOULD be able to see all other nodes!!
# Be careful about updating these in NIS without updating these
# local records!! ;-) (doing my best to keep things confusing!)
#
10.196.100.1 db1 # ReCap: Database node number 1
10.196.100.2 db2 # ReCap: Database node number 2
10.196.100.3 db3 # ReCap: Database node number 3
10.196.100.4 db4 # ReCap: Database node number 4
10.196.100.5 db5 # ReCap: Database node number 5
10.196.100.6 db6 # ReCap: Database node number 6
10.196.100.7 db7 # ReCap: Database node number 7
10.196.100.8 db8 # ReCap: Database node number 8
10.196.100.9 db9 # ReCap: Database node number 9
10.196.100.10 db10 # ReCap: Database node number 10
10.196.100.11 db11 # ReCap: Database node number 11
10.196.100.12 db12 # ReCap: Database node number 12
10.196.100.13 db13 # ReCap: Database node number 13
10.196.100.14 db14 # ReCap: Database node number 14
10.196.100.15 db15 # ReCap: Database node number 15
10.196.100.16 db16 # ReCap: Database node number 16
10.196.100.17 db17 # ReCap: Database node number 17
10.196.100.18 db18 # ReCap: Database node number 18
10.196.100.19 db19 # ReCap: Database node number 19
10.196.100.20 db20 # ReCap: Database node number 20
10.196.100.21 db21 # ReCap: Database node number 21
10.196.100.22 db22 # ReCap: Database node number 22
10.196.100.23 db23 # ReCap: Database node number 23
10.196.100.24 db24 # ReCap: Database node number 24
10.196.100.25 db25 # ReCap: Database node number 25
10.196.100.26 db26 # ReCap: Database node number 26
10.196.100.27 db27 # ReCap: Database node number 27
10.196.100.28 db28 # ReCap: Database node number 28
10.196.100.29 db29 # ReCap: Database node number 29
10.196.100.30 db30 # ReCap: Database node number 30
#
# endit:db node primaries..
#####
# For the SAME reasons as above, all nodes should know about all
# other nodes "VIP", or Virtual IP.. ewt 7.19.2010
# Be careful about updating these in NIS without updating these
# local records!! ;-) (doing my best to keep things confusing!)
#
10.196.100.101 db1-vip # ReCap: Database node number 1 VIP
10.196.100.102 db2-vip # ReCap: Database node number 2 VIP
10.196.100.103 db3-vip # ReCap: Database node number 3 VIP
10.196.100.104 db4-vip # ReCap: Database node number 4 VIP
10.196.100.105 db5-vip # ReCap: Database node number 5 VIP
10.196.100.106 db6-vip # ReCap: Database node number 6 VIP
10.196.100.107 db7-vip # ReCap: Database node number 7 VIP
10.196.100.108 db8-vip # ReCap: Database node number 8 VIP
10.196.100.109 db9-vip # ReCap: Database node number 9 VIP
10.196.100.110 db10-vip # ReCap: Database node number 10 VIP
10.196.100.111 db11-vip # ReCap: Database node number 11 VIP
10.196.100.112 db12-vip # ReCap: Database node number 12 VIP
10.196.100.113 db13-vip # ReCap: Database node number 13 VIP
10.196.100.114 db14-vip # ReCap: Database node number 14 VIP
10.196.100.115 db15-vip # ReCap: Database node number 15 VIP
10.196.100.116 db16-vip # ReCap: Database node number 16 VIP
10.196.100.117 db17-vip # ReCap: Database node number 17 VIP
10.196.100.118 db18-vip # ReCap: Database node number 18 VIP
10.196.100.119 db19-vip # ReCap: Database node number 19 VIP
10.196.100.120 db20-vip # ReCap: Database node number 20 VIP
10.196.100.121 db21-vip # ReCap: Database node number 21 VIP
10.196.100.122 db22-vip # ReCap: Database node number 22 VIP
10.196.100.123 db23-vip # ReCap: Database node number 23 VIP
10.196.100.124 db24-vip # ReCap: Database node number 24 VIP
10.196.100.125 db25-vip # ReCap: Database node number 25 VIP
10.196.100.126 db26-vip # ReCap: Database node number 26 VIP
10.196.100.127 db27-vip # ReCap: Database node number 27 VIP
10.196.100.128 db28-vip # ReCap: Database node number 28 VIP
10.196.100.129 db29-vip # ReCap: Database node number 29 VIP
10.196.100.130 db30-vip # ReCap: Database node number 30 VIP
#
# SCAN address of all of the above Virtual IP's
#
10.196.100.200 scna-27node
10.196.100.201 scan-4node
10.196.100.202 scan-4node-2
10.196.100.203 scan-4node-3
#
# endit: db scan virtual IP's
#####
# RAC heart beat (igb1) - this is common to all DB nodes and all
# SHOULD be able to see all!!
#
192.168.1.1 db1hb1 # db1 RAC rack HEARTBEAT network
(igb1)
192.168.1.2 db2hb1 # db2 RAC rack HEARTBEAT network
(igb1)
192.168.1.3 db3hb1 # db3 RAC rack HEARTBEAT network
(igb1)
192.168.1.4 db4hb1 # db4 RAC rack HEARTBEAT network
(igb1)
192.168.1.5 db5hb1 # db5 RAC rack HEARTBEAT network
(igb1)
192.168.1.6 db6hb1 # db6 RAC rack HEARTBEAT network
(igb1)
192.168.1.7 db7hb1 # db7 RAC rack HEARTBEAT network
(igb1)
192.168.1.8 db8hb1 # db8 RAC rack HEARTBEAT network
(igb1)
192.168.1.9 db9hb1 # db9 RAC rack HEARTBEAT network
(igb1)
192.168.1.10 db10hb1 # db10 RAC rack HEARTBEAT network
(igb1)
192.168.1.11 db11hb1 # db11 RAC rack HEARTBEAT network
(igb1)
192.168.1.12 db12hb1 # db12 RAC rack HEARTBEAT network
(igb1)
192.168.1.13 db13hb1 # db13 RAC rack HEARTBEAT network
(igb1)
192.168.1.14 db14hb1 # db14 RAC rack HEARTBEAT network
(igb1)
192.168.1.15 db15hb1 # db15 RAC rack HEARTBEAT network
(igb1)
192.168.1.16 db16hb1 # db16 RAC rack HEARTBEAT network
(igb1)
192.168.1.17 db17hb1 # db17 RAC rack HEARTBEAT network
(igb1)
192.168.1.18 db18hb1 # db18 RAC rack HEARTBEAT network
(igb1)
192.168.1.19 db19hb1 # db19 RAC rack HEARTBEAT network
(igb1)
192.168.1.20 db20hb1 # db20 RAC rack HEARTBEAT network
(igb1)
192.168.1.21 db21hb1 # db21 RAC rack HEARTBEAT network
(igb1)
192.168.1.22 db22hb1 # db22 RAC rack HEARTBEAT network
(igb1)
192.168.1.23 db23hb1 # db23 RAC rack HEARTBEAT network
(igb1)
192.168.1.24 db24hb1 # db24 RAC rack HEARTBEAT network
(igb1)
192.168.1.25 db25hb1 # db25 RAC rack HEARTBEAT network
(igb1)
192.168.1.26 db26hb1 # db26 RAC rack HEARTBEAT network
(igb1)
192.168.1.27 db27hb1 # db27 RAC rack HEARTBEAT network
(igb1)
192.168.1.28 db28hb1 # db28 RAC rack HEARTBEAT network
(igb1)
192.168.1.29 db29hb1 # db29 RAC rack HEARTBEAT network
(igb1)
192.168.1.30 db30hb1 # db30 RAC rack HEARTBEAT network
(igb1)
#
# endit: RAC heartbeat interconnect
#####
# RAC data traffic (10GbE) - this is common to all DB nodes and all
# SHOULD be able to see all!!
#
192.168.100.1 db1d1 # db1 RAC rack DATA network (ixgbe0)
192.168.100.2 db2d1 # db2 RAC rack DATA network (ixgbe0)
192.168.100.3 db3d1 # db3 RAC rack DATA network (ixgbe0)
192.168.100.4 db4d1 # db4 RAC rack DATA network (ixgbe0)
192.168.100.5 db5d1 # db5 RAC rack DATA network (ixgbe0)
192.168.100.6 db6d1 # db6 RAC rack DATA network (ixgbe0)
192.168.100.7 db7d1 # db7 RAC rack DATA network (ixgbe0)
192.168.100.8 db8d1 # db8 RAC rack DATA network (ixgbe0)
192.168.100.9 db9d1 # db9 RAC rack DATA network (ixgbe0)
192.168.100.10 db10d1 # db10 RAC rack DATA network (ixgbe0)

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192.168.100.11	db11d1	# db11 RAC rack DATA network (ixgbe0)	#			192.168.111.1	db7client19	# p2p, DB7 and
192.168.100.12	db12d1	# db12 RAC rack DATA network (ixgbe0)	# db3 client connections:			Client19, (db7:ngxge0)	Client19, (db7:ngxge0)	
192.168.100.13	db13d1	# db13 RAC rack DATA network (ixgbe0)	192.168.111.1	db3client7 # p2p, DB3 and Client7,		192.168.111.2	client19db7	# p2p, Client19 and
192.168.100.14	db14d1	# db14 RAC rack DATA network (ixgbe0)	(db3:ngxge0)			DB7, (client19:igb1)		
192.168.100.15	db15d1	# db15 RAC rack DATA network (ixgbe0)	192.168.111.2	client7db3 # p2p, Client7 and DB3,		192.168.112.1	db7client20	# p2p, DB7 and
192.168.100.16	db16d1	# db16 RAC rack DATA network (ixgbe0)	(client7:igb1)			Client20, (db7:ngxge1)		
192.168.100.17	db17d1	# db17 RAC rack DATA network (ixgbe0)	192.168.112.1	db3client8 # p2p, DB3 and Client8,		192.168.112.2	client20db7	# p2p, Client20 and
192.168.100.18	db18d1	# db18 RAC rack DATA network (ixgbe0)	(db3:ngxge1)			DB7, (client20:igb1)		
192.168.100.19	db19d1	# db19 RAC rack DATA network (ixgbe0)	192.168.112.2	client8db3 # p2p, Client8 and DB3,		192.168.113.1	db7client21	# p2p, DB7 and
192.168.100.20	db20d1	# db20 RAC rack DATA network (ixgbe0)	(client8:igb1)			Client21, (db7:ngxge2)		
192.168.100.21	db21d1	# db21 RAC rack DATA network (ixgbe0)	192.168.113.1	db3client9 # p2p, DB3 and Client9,		192.168.113.2	client21db7	# p2p, Client21 and
192.168.100.22	db22d1	# db22 RAC rack DATA network (ixgbe0)	(db3:ngxge2)			DB7, (client21:igb1)		
192.168.100.23	db23d1	# db23 RAC rack DATA network (ixgbe0)	192.168.113.2	client9db3 # p2p, Client9 and DB3,		#		
192.168.100.24	db24d1	# db24 RAC rack DATA network (ixgbe0)	(client9:igb1)			# db8 client connections:		
192.168.100.25	db25d1	# db25 RAC rack DATA network (ixgbe0)	#			192.168.111.1	db8client22	# p2p, DB8 and
192.168.100.26	db26d1	# db26 RAC rack DATA network (ixgbe0)	# db4 client connections:			Client22, (db8:ngxge0)	Client22, (db8:ngxge0)	
192.168.100.27	db27d1	# db27 RAC rack DATA network (ixgbe0)	192.168.111.1	db4client10 # p2p, DB4 and		192.168.111.2	client22db8	# p2p, Client22 and
192.168.100.28	db28d1	# db28 RAC rack DATA network (ixgbe0)	Client10, (db4:ngxge0)			DB8, (client22:igb1)		
192.168.100.29	db29d1	# db29 RAC rack DATA network (ixgbe0)	192.168.111.2	client10db4 # p2p, Client10 and		192.168.112.1	db8client23	# p2p, DB8 and
192.168.100.30	db30d1	# db30 RAC rack DATA network (ixgbe0)	DB4, (client10:igb1)			Client23, (db8:ngxge1)		
#			192.168.112.1	db4client11 # p2p, DB4 and		192.168.112.2	client23db8	# p2p, Client23 and
# endit: RAC data interconnect			Client11, (db4:ngxge1)			DB8, (client23:igb1)		
#####			192.168.112.2	client11db4 # p2p, Client11 and		192.168.113.1	db8client24	# p2p, DB8 and
#####			DB4, (client11:igb1)			Client24, (db8:ngxge2)		
#			192.168.113.1	db4client12 # p2p, DB4 and		192.168.113.2	client24db8	# p2p, Client24 and
# Private Point to Point (p2p) connections between ClientX nodes and			Client12, (db4:ngxge2)			DB8, (client24:igb1)		
# db[1-27] nodes. Because this are POINT TO POINT, only the nodes in			192.168.113.2	client12db4 # p2p, Client12 and		#		
# smaller subsets should be able to ping to the DB node listed..			DB4, (client12:igb1)			# db9 client connections:		
#			#			192.168.111.1	db9client25	# p2p, DB9 and
			# db5 client connections:			Client25, (db9:ngxge0)	Client25, (db9:ngxge0)	
# db1 client connections:			192.168.111.1	db5client13 # p2p, DB5 and		192.168.111.2	client25db9	# p2p, Client25 and
192.168.111.1	db1client1 # p2p, DB1 and Client1,		Client13, (db5:ngxge0)			DB9, (client25:igb1)		
(db1:ngxge0)			192.168.111.2	client13db5 # p2p, Client13 and		192.168.112.1	db9client26	# p2p, DB9 and
192.168.111.2	client1db1 # p2p, Client1 and DB1,		DB5, (client13:igb1)			Client26, (db9:ngxge1)		
(client1:igb1)			192.168.112.1	db5client14 # p2p, DB5 and		192.168.112.2	client26db9	# p2p, Client26 and
192.168.112.1	db1client2 # p2p, DB1 and Client2,		Client14, (db5:ngxge1)			DB9, (client26:igb1)		
(db1:ngxge1)			192.168.112.2	client14db5 # p2p, Client14 and		192.168.113.1	db9client27	# p2p, DB9 and
192.168.112.2	client2db1 # p2p, Client2 and DB1,		DB5, (client14:igb1)			Client27, (db9:ngxge2)		
(client2:igb1)			192.168.113.1	db5client15 # p2p, DB5 and		192.168.113.2	client27db9	# p2p, Client27 and
192.168.113.1	db1client3 # p2p, DB1 and Client3,		Client15, (db5:ngxge2)			DB9, (client27:igb1)		
(db1:ngxge2)			192.168.113.2	client15db5 # p2p, Client15 and		#		
192.168.113.2	client3db1 # p2p, Client3 and DB1,		DB5, (client15:igb1)			# db10 client connections:		
(client3:igb1)			#			192.168.111.1	db10client28	# p2p, DB10 and
#			# db6 client connections:			Client28, (db10:ngxge0)	Client28, (db10:ngxge0)	
# db2 client connections:			192.168.111.1	db6client16 # p2p, DB6 and		192.168.111.2	client28db10	# p2p, Client28 and
192.168.111.1	db2client4 # p2p, DB2 and Client4,		Client16, (db6:ngxge0)			DB10, (client28:igb1)		
(db2:ngxge0)			192.168.111.2	client16db6 # p2p, Client16 and		192.168.112.1	db10client29	# p2p, DB10 and
192.168.111.2	client4db2 # p2p, Client4 and DB2,		DB6, (client16:igb1)			Client29, (db10:ngxge1)		
(client4:igb1)			192.168.112.1	db6client17 # p2p, DB6 and		192.168.112.2	client29db10	# p2p, Client29 and
192.168.112.1	db2client5 # p2p, DB2 and Client5,		Client17, (db6:ngxge1)			DB10, (client29:igb1)		
(db2:ngxge1)			192.168.112.2	client17db6 # p2p, Client17 and		192.168.113.1	db10client30	# p2p, DB10 and
192.168.112.2	client5db2 # p2p, Client5 and DB2,		DB6, (client17:igb1)			Client30, (db10:ngxge2)		
(client5:igb1)			192.168.113.1	db6client18 # p2p, DB6 and		192.168.113.2	client30db10	# p2p, Client30 and
192.168.113.1	db2client6 # p2p, DB2 and Client6,		Client18, (db6:ngxge2)			DB10, (client30:igb1)		
(db2:ngxge2)			192.168.113.2	client18db6 # p2p, Client18 and		#		
192.168.113.2	client6db2 # p2p, Client6 and DB2,		DB6, (client18:igb1)			# db11 client connections:		
(client6:igb1)			#			192.168.111.1	db11client31	# p2p, DB11 and
			# db7 client connections:			Client31, (db11:ngxge0)	Client31, (db11:ngxge0)	

192.168.111.2 DB11, (client31:igb1)	client31db11	# p2p, Client31 and	192.168.112.1 Client44, (db15:nxge1)	db15client44	# p2p, DB15 and	192.168.112.2 DB19, (client56:igb1)	client56db19	# p2p, Client56 and
192.168.112.1 Client32, (db11:nxge1)	db11client32	# p2p, DB11 and	192.168.112.2 DB15, (client44:igb1)	client44db15	# p2p, Client44 and	192.168.113.1 Client57, (db19:nxge2)	db19client57	# p2p, DB19 and
192.168.112.2 DB11, (client32:igb1)	client32db11	# p2p, Client32 and	192.168.113.1 Client45, (db15:nxge2)	db15client45	# p2p, DB15 and	192.168.113.2 DB19, (client57:igb1)	client57db19	# p2p, Client57 and
192.168.113.1 Client33, (db11:nxge2)	db11client33	# p2p, DB11 and	192.168.113.2 DB15, (client45:igb1)	client45db15	# p2p, Client45 and	#		
192.168.113.2 DB11, (client33:igb1)	client33db11	# p2p, Client33 and	#			# db20 client connections:		
#			# db16 client connections:			192.168.111.1 Client58, (db20:nxge0)	db20client58	# p2p, DB20 and
# db12 client connections:			192.168.111.1 Client46, (db16:nxge0)	db16client46	# p2p, DB16 and	192.168.111.2 DB20, (client58:igb1)	client58db20	# p2p, Client58 and
192.168.111.1 Client34, (db12:nxge0)	db12client34	# p2p, DB12 and	192.168.111.2 DB16, (client46:igb1)	client46db16	# p2p, Client46 and	192.168.112.1 Client59, (db20:nxge1)	db20client59	# p2p, DB20 and
192.168.112.2 DB12, (client34:igb1)	client34db12	# p2p, Client34 and	192.168.112.1 Client47, (db16:nxge1)	db16client47	# p2p, DB16 and	192.168.112.2 DB20, (client59:igb1)	client59db20	# p2p, Client59 and
192.168.112.1 Client35, (db12:nxge1)	db12client35	# p2p, DB12 and	192.168.112.2 DB16, (client47:igb1)	client47db16	# p2p, Client47 and	192.168.113.1 Client60, (db20:nxge2)	db20client60	# p2p, DB20 and
192.168.112.2 DB12, (client35:igb1)	client35db12	# p2p, Client35 and	192.168.113.1 Client48, (db16:nxge2)	db16client48	# p2p, DB16 and	192.168.113.2 DB20, (client60:igb1)	client60db20	# p2p, Client60 and
192.168.113.1 Client36, (db12:nxge2)	db12client36	# p2p, DB12 and	192.168.113.2 DB16, (client48:igb1)	client48db16	# p2p, Client48 and	#		
192.168.113.2 DB12, (client36:igb1)	client36db12	# p2p, Client36 and	#			# db21 client connections:		
#			# db17 client connections:			192.168.111.1 Client61, (db21:nxge0)	db21client61	# p2p, DB21 and
# db13 client connections:			192.168.111.1 Client49, (db17:nxge0)	db17client49	# p2p, DB17 and	192.168.111.2 DB21, (client61:igb1)	client61db21	# p2p, Client61 and
192.168.111.1 Client37, (db13:nxge0)	db13client37	# p2p, DB13 and	192.168.111.2 DB17, (client49:igb1)	client49db17	# p2p, Client49 and	192.168.112.1 Client62, (db21:nxge1)	db21client62	# p2p, DB21 and
192.168.111.2 DB13, (client37:igb1)	client37db13	# p2p, Client37 and	192.168.112.1 Client50, (db17:nxge1)	db17client50	# p2p, DB17 and	192.168.112.2 DB21, (client62:igb1)	client62db21	# p2p, Client62 and
192.168.112.1 Client38, (db13:nxge1)	db13client38	# p2p, DB13 and	192.168.112.2 DB17, (client50:igb1)	client50db17	# p2p, Client50 and	192.168.113.1 Client63, (db21:nxge2)	db21client63	# p2p, DB21 and
192.168.112.2 DB13, (client38:igb1)	client38db13	# p2p, Client38 and	192.168.113.1 Client51, (db17:nxge2)	db17client51	# p2p, DB17 and	192.168.113.2 DB21, (client63:igb1)	client63db21	# p2p, Client63 and
192.168.113.1 Client39, (db13:nxge2)	db13client39	# p2p, DB13 and	192.168.113.2 DB17, (client51:igb1)	client51db17	# p2p, Client51 and	#		
192.168.113.2 DB13, (client39:igb1)	client39db13	# p2p, Client39 and	#			# db22 client connections:		
#			# db18 client connections:			192.168.111.1 Client64, (db22:nxge0)	db22client64	# p2p, DB22 and
# db14 client connections:			192.168.111.1 Client52, (db18:nxge0)	db18client52	# p2p, DB18 and	192.168.111.2 DB22, (client64:igb1)	client64db22	# p2p, Client64 and
192.168.111.1 Client40, (db14:nxge0)	db14client40	# p2p, DB14 and	192.168.111.2 DB18, (client52:igb1)	client52db18	# p2p, Client52 and	192.168.112.1 Client65, (db22:nxge1)	db22client65	# p2p, DB22 and
192.168.111.2 DB14, (client40:igb1)	client40db14	# p2p, Client40 and	192.168.112.1 Client53, (db18:nxge1)	db18client53	# p2p, DB18 and	192.168.112.2 DB22, (client65:igb1)	client65db22	# p2p, Client65 and
192.168.112.1 Client41, (db14:nxge1)	db14client41	# p2p, DB14 and	192.168.112.2 DB18, (client53:igb1)	client53db18	# p2p, Client53 and	192.168.113.1 Client66, (db22:nxge2)	db22client66	# p2p, DB22 and
192.168.112.2 DB14, (client41:igb1)	client41db14	# p2p, Client41 and	192.168.113.1 Client54, (db18:nxge2)	db18client54	# p2p, DB18 and	192.168.113.2 DB22, (client66:igb1)	client66db22	# p2p, Client66 and
192.168.113.1 Client42, (db14:nxge2)	db14client42	# p2p, DB14 and	192.168.113.2 DB18, (client54:igb1)	client54db18	# p2p, Client54 and	#		
192.168.113.2 DB14, (client42:igb1)	client42db14	# p2p, Client42 and	#			# db23 client connections:		
#			# db19 client connections:			192.168.111.1 Client67, (db23:nxge0)	db23client67	# p2p, DB23 and
# db15 client connections:			192.168.111.1 Client55, (db19:nxge0)	db19client55	# p2p, DB19 and	192.168.111.2 DB23, (client67:igb1)	client67db23	# p2p, Client67 and
192.168.111.1 Client43, (db15:nxge0)	db15client43	# p2p, DB15 and	192.168.111.2 DB19, (client55:igb1)	client55db19	# p2p, Client55 and	192.168.112.1 Client68, (db23:nxge1)	db23client68	# p2p, DB23 and
192.168.111.2 DB15, (client43:igb1)	client43db15	# p2p, Client43 and	192.168.112.1 Client56, (db19:nxge1)	db19client56	# p2p, DB19 and	192.168.112.2 DB23, (client68:igb1)	client68db23	# p2p, Client68 and

192.168.113.1 Client69, (db23:nxge2) 192.168.113.2 DB23, (client69:igb1) # # db24 client connections: 192.168.111.1 Client70, (db24:nxge0) 192.168.111.2 DB24, (client70:igb1) 192.168.112.1 Client71, (db24:nxge1) 192.168.112.2 DB24, (client71:igb1) 192.168.113.1 Client72, (db24:nxge2) 192.168.113.2 DB24, (client72:igb1) # # db25 client connections: 192.168.111.1 Client73, (db25:nxge0) 192.168.111.2 DB25, (client73:igb1) 192.168.112.1 Client74, (db25:nxge1) 192.168.112.2 DB25, (client74:igb1) 192.168.113.1 Client75, (db25:nxge2) 192.168.113.2 DB25, (client75:igb1) # # db26 client connections: 192.168.111.1 Client76, (db26:nxge0) 192.168.111.2 DB26, (client76:igb1) 192.168.112.1 Client77, (db26:nxge1) 192.168.112.2 DB26, (client77:igb1) 192.168.113.1 Client78, (db26:nxge2) 192.168.113.2 DB26, (client78:igb1) # # db27 client connections: 192.168.111.1 Client79, (db27:nxge0) 192.168.111.2 DB27, (client79:igb1) 192.168.112.1 Client80, (db27:nxge1) 192.168.112.2 DB27, (client80:igb1) 192.168.113.1 Client81, (db27:nxge2)	db23client69 client69db23 db24client70 client70db24 db24client71 client71db24 db24client72 client72db24 db25client73 client73db25 db25client74 client74db25 db25client75 client75db25 db26client76 client76db26 db26client77 client77db26 db26client78 client78db26 db27client79 client79db27 db27client80 client80db27 db27client81	# p2p, DB23 and # p2p, Client69 and # p2p, DB24 and # p2p, Client70 and # p2p, DB24 and # p2p, Client71 and # p2p, DB24 and # p2p, Client72 and # p2p, DB25 and # p2p, Client73 and # p2p, DB25 and # p2p, Client74 and # p2p, DB25 and # p2p, Client75 and # p2p, DB26 and # p2p, Client76 and # p2p, DB26 and # p2p, Client77 and # p2p, DB26 and # p2p, Client78 and # p2p, DB27 and # p2p, Client79 and # p2p, DB27 and # p2p, Client80 and # p2p, Client80 and # p2p, DB27 and	192.168.113.2 client81db27 DB27, (client81:igb1) # # endit: db2client p2p's ##### ##### # Private Point to Point (p2p) connections between ClientX nodes and # rteX nodes. Because these are POINT TO POINT, and further, PRIVATE to # the three node Client/RTE tuples of three, this ONE section good for ALL!! # #The following is GENERIC FOR ALL CLIENT DRIVER TUPLES! 192.168.200.1 drvrtel # p2p, client driver 1, clientX:igb2 192.168.200.2 rte1drv # p2p, client driver 1, rteX- 1:igb2 192.168.201.1 drvrtel2 # p2p, client driver 2, clientX:igb3 192.168.201.2 rte2drv # p2p, client driver 2, rteX- 2:igb3 # # endit: client2driver (or RTE) p2p's 192.168.111.1 recapdb 10.196.232.10 minister196 10.196.231.30 onager196 10.196.231.15 saegw1-196 10.196.231.16 saegw2-196 ifconfig output – clients lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTU AL> mtu 8232 index 1 inet 127.0.0.1 netmask ffffffff igb0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 2 inet 10.196.101.1 netmask ffff0000 broadcast 10.196.255.255 igb1: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 3 inet 192.168.111.2 netmask ffffff00 broadcast 192.168.111.255 igb2: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 4 inet 192.168.200.1 netmask ffffff00 broadcast 192.168.200.255 igb3: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 5 inet 192.168.201.1 netmask ffffff00 broadcast 192.168.201.255 Tuxedo version – clients INFO: Oracle Tuxedo, Version 11.1.1.2.0, 64-bit, Patch Level (none) /etc/system – clients *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
*
*****
*
* /etc/system ademdum added by SAE's Jumpstart
* at OS install time.
*
* set "Soft" limit on file descriptors that a single process can have open.
* installed at Guy's request...
set rlim_fd_cur=1024
*
* endit
*
* set a few lvm params we like
*
* faster resyncs!
set md_mirror:md_resync_bufsz = 2048
*
* less than 50% metadb quorum okay!
set md:mirrored_root_flag=1
*
* end lvm settings we like
*
*TPCC-Setup-Pallab-Do-not-play with it
set rlim_fd_max=2000000
set rlim_fd_cur=2000000
set sq_max_size=0
*set ddi_msix_alloc_limit=4
*set pcplusmp:apic_multi_msi_max=4
*set pcplusmp:apic_msix_max=4
*set pcplusmp:apic_intr_policy=1
*
*set ip:ip_queue_bind=0
*set ip:ip_queue_fanout=1
*set ip:ip_soft_rings_cnt=4

*set ip_queue_soft_ring=1
*set ip:tcp_queue_wput=1

set shmsys:shminfo_shmmax=0xffffffff
set shmsys:shminfo_shmmni=1
set shmsys:shminfo_shmmni=800
set shmsys:shminfo_shmsegs=800
*set shmsys:shminfo_shmmni=500
*set shmsys:shminfo_shmsegs=600
*
set semsys:seminfo_semmani=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_msgctl=5000

/etc/project - clients
system:0:::
user.root:1:::
noproject:2:::
default:3:::
group.staff:10:::
group.dba:100:DBA Project::dba:process.max-sem-
nsems=(priv,1024,deny);project.max-sem-ids=(priv,1024,
deny);project.max-shm-memory=(priv,644245094400,deny);project.max-
msg-ids=(priv,8192,deny)

/etc/user_attr - clients
#
# 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
root:::auths=solaris.*;solaris.grant;profiles=Web Console
Management,All;lock_after_retries=no;min_label=admin_low;clearance=admin_high
tpc:::type=normal;profiles=Primary Administrator
dbbench:::type=normal;profiles=Primary Administrator
oracle:::type=normal;profiles=Primary Administrator

tnsnames.ora - client1
tpcc =
(DESCRIPTION =

        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.111.1 ) (Port =
1521))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set1 =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.111.1 ) (Port =
1521))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set2 =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.111.1 ) (Port =
1522))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set3 =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.111.1 ) (Port =
1523))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set4 =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.111.1 ) (Port =
1524))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )

tnsnames.ora - client2
tpcc =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.112.1 ) (Port =
1522))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set1 =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.112.1 ) (Port =
1521))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set2 =
(DESCRIPTION =
        (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.112.1 ) (Port =
1522))
        (CONNECT_DATA = (SERVICE_NAME = RECAP)
        )
        )
tpcc_set3 =
(DESCRIPTION =

```

<pre>(ADDRESS = (PROTOCOL = TCP) (Host = 192.168.112.1) (Port = 1523)) (CONNECT_DATA = (SERVICE_NAME = RECAP))) tpcc_set4 = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.112.1) (Port = 1524)) (CONNECT_DATA = (SERVICE_NAME = RECAP))))</pre>	<pre>MAXSERVERS 4096 MAXSERVICES 4096 MAXBUFTYPE 8192 MAXBUFSTYPE 8192 NOTIFY IGNORE MODEL SHM LDBAL Y SCANUNIT 10 SANITYSCAN 10 BLOCKTIME 10 BBLQUERY 10 OPTIONS NO_XA,NO_AA *MACHINES "client1" 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=10000 *GROUPS "DEL1" LMID="tpcc_cli" GRPNO=1 ENVFILE="env.two_task1" "DEL2" LMID="tpcc_cli" GRPNO=2 ENVFILE="env.two_task2" "DEL3" LMID="tpcc_cli" GRPNO=3 ENVFILE="env.two_task3" "group1" LMID="tpcc_cli" GRPNO=4 ENVFILE="env.two_task1" "group2" LMID="tpcc_cli" GRPNO=5 ENVFILE="env.two_task2" "group3" LMID="tpcc_cli" GRPNO=6 ENVFILE="env.two_task3" *SERVERS tpcc_srv_del SRVGRP="DEL3" SRVID=1 RQADDR=delq1 REPLYQ=N CLOPT="-A -- 1" tpcc_srv_del SRVGRP="DEL3" SRVID=2 RQADDR=delq2 REPLYQ=N CLOPT="-A -- 2" tpcc_srv_del SRVGRP="DEL3" SRVID=3 RQADDR=delq3 REPLYQ=N CLOPT="-A -- 3" tpcc_srv_del SRVGRP="DEL3" SRVID=4 RQADDR=delq4 REPLYQ=N CLOPT="-A -- 4" tpcc_srv_del SRVGRP="DEL3" SRVID=5 RQADDR=delq5 REPLYQ=N CLOPT="-A -- 5" tpcc_srv_del SRVGRP="DEL3" SRVID=6 RQADDR=delq6 REPLYQ=N CLOPT="-A -- 6" tpcc_srv_del SRVGRP="DEL3" SRVID=7 RQADDR=delq7 REPLYQ=N CLOPT="-A -- 7" tpcc_srv_del SRVGRP="DEL3" SRVID=8 RQADDR=delq8 REPLYQ=N CLOPT="-A -- 8" tpcc_srv_del SRVGRP="DEL3" SRVID=9 RQADDR=delq9 REPLYQ=N CLOPT="-A -- 9" tpcc_srv_del SRVGRP="DEL3" SRVID=10 RQADDR=delq10 REPLYQ=N CLOPT="-A -- 10" tpcc_srv_del SRVGRP="DEL3" SRVID=11 RQADDR=delq11 REPLYQ=N CLOPT="-A -- 11" tpcc_srv_del SRVGRP="DEL3" SRVID=12 RQADDR=delq12 REPLYQ=N CLOPT="-A -- 12" tpcc_srv_del SRVGRP="DEL3" SRVID=13 RQADDR=delq13 REPLYQ=N CLOPT="-A -- 13" tpcc_srv_del SRVGRP="DEL3" SRVID=14 RQADDR=delq14 REPLYQ=N</pre>	<pre>CLOPT="-A -- 14" tpcc_srv_del SRVGRP="DEL3" SRVID=15 RQADDR=delq15 REPLYQ=N CLOPT="-A -- 15" tpcc_srv_del SRVGRP="DEL3" SRVID=16 RQADDR=delq16 REPLYQ=N CLOPT="-A -- 16" tpcc_srv_del SRVGRP="DEL3" SRVID=17 RQADDR=delq17 REPLYQ=N CLOPT="-A -- 17" tpcc_srv_del SRVGRP="DEL3" SRVID=18 RQADDR=delq18 REPLYQ=N CLOPT="-A -- 18" tpcc_srv_del SRVGRP="DEL3" SRVID=19 RQADDR=delq19 REPLYQ=N CLOPT="-A -- 19" tpcc_srv_del SRVGRP="DEL3" SRVID=20 RQADDR=delq20 REPLYQ=N CLOPT="-A -- 20" tpcc_srv_del SRVGRP="DEL3" SRVID=21 RQADDR=delq21 REPLYQ=N CLOPT="-A -- 21" 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="group2" SRVID=106 RQADDR=svcq6 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group2" SRVID=107 RQADDR=svcq7 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group2" SRVID=108 RQADDR=svcq8 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group2" SRVID=109 RQADDR=svcq9 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group2" SRVID=110 RQADDR=svcq10 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=111 RQADDR=svcq11 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=112 RQADDR=svcq12 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=113 RQADDR=svcq13 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=114 RQADDR=svcq14 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=115 RQADDR=svcq15 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=116 RQADDR=svcq16 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=117 RQADDR=svcq17 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=118 RQADDR=svcq18 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=119 RQADDR=svcq19 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=120 RQADDR=svcq20 REPLYQ=Y MIN=1 MAX=1 tpcc_srv_ora SRVGRP="group3" SRVID=121 RQADDR=svcq21 REPLYQ=Y MIN=1 MAX=1</pre>
<pre>tnsnames.ora - client3 tpcc = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.113.1) (Port = 1523)) (CONNECT_DATA = (SERVICE_NAME = RECAP)))) tpcc_set1 = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.113.1) (Port = 1521)) (CONNECT_DATA = (SERVICE_NAME = RECAP)))) tpcc_set2 = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.113.1) (Port = 1522)) (CONNECT_DATA = (SERVICE_NAME = RECAP)))) tpcc_set3 = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.113.1) (Port = 1523)) (CONNECT_DATA = (SERVICE_NAME = RECAP)))) tpcc_set4 = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (Host = 192.168.113.1) (Port = 1524)) (CONNECT_DATA = (SERVICE_NAME = RECAP))))</pre>	<pre>ubbcfg - clients *RESOURCES IPCKEY 40001 MASTER tpcc_cli PERM 0666 MAXACCESSERS 4096</pre>	

<pre>STOCK server.xml – clients Webserver configuration <?xml version="1.0" encoding="UTF-8"?> <!-- Copyright 2008 Sun Microsystems, Inc. All rights reserved. Use is subject to license terms. --> <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>>true</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> <!-- --> <max-open-files>1024</max-open-files> </file-cache> <user>dbbench</user> <keep-alive> <enabled>>true</enabled> <threads>32</threads> <max-connections>60000</max-connections> <timeout>3600</timeout></pre>	<pre></poll-interval>.10</poll-interval> </keep-alive> <thread-pool> <queue-size>60000</queue-size> <min-threads>768</min-threads> <max-threads>768</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>192.168.200.1</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>192.168.200.1</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> <http-listener> <name>http-listener-3</name> <ip>192.168.200.1</ip> <port>8082</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-4</name> <ip>192.168.201.1</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-5</name> <ip>192.168.201.1</ip> <port>8081</port> <acceptor-threads>4</acceptor-threads> <listen-queue-size>81920</listen-queue-size></pre>	<pre><server-name>X64</server-name> <default-virtual-server-name>X64</default-virtual-server-name> </http-listener> <http-listener> <name>http-listener-6</name> <ip>192.168.201.1</ip> <port>8082</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> <http-listener-name>http-listener-3</http-listener-name> <http-listener-name>http-listener-4</http-listener-name> <http-listener-name>http-listener-5</http-listener-name> <http-listener-name>http-listener-6</http-listener-name> <document-root>/sun/webserver7/https-X64/docs</document-root> </virtual-server> </server> magnus.conf – clients # # 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="define-perf-bucket" name="tpcc-bucket" description="TPCC responses" Init fn="TpccInit" LateInit="no" max-workers=768 obj.conf – clients ## 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" bucket="tpcc-bucket" Service fn="service- dump" metastat -p output – clients metastat: client1: there are no existing databases</pre> <hr/> <p>SAN Switch Configurations</p> <hr/> <p>Brocade DCX – DATA</p> <hr/> <p>Switch Information Report for dcx1-ch</p>
---	---	--

List of Switches

```
Switch ID   Worldwide Name   Enet IP Addr
FC IP Addr   Name
-----
1: fffc01 10:00:00:05:1e:ec:50:00 10.196.0.104
0.0.0.0      >"dcx1-ch"
```

Current Switch Information

```
Ethernet IP Address: 10.196.0.104
Ethernet Subnetmask: 255.255.0.0
Fibre Channel IP Address: 0.0.0.0
Fibre Channel Subnetmask: 0.0.0.0
Gateway Address: 10.196.0.1
Ethernet IPv6 Addresses:

Kernel:      2.6.14.2
Fabric OS:   v6.3.1a
Made on:     Fri Feb 26 18:23:42 2010
Flash:       Wed Apr 14 14:43:45 2010
BootProm:   1.0.15
```

List of Inter-Switch Links

Local Domain ID: 1

```
Local Port   Domain   Remote Port   State
-----
```

List of Ports

```
switchName:   dcx1-ch
switchType:   62.3
switchState:  Online
switchMode:   Native
switchRole:   Principal
switchDomain: 1
switchId:     fffc01
switchWwn:    10:00:00:05:1e:ec:50:00
zoning:       ON (All_Ports)
switchBeacon: OFF
FC Router:    OFF
Allow XISL Use: OFF
LS Attributes: [FID: 128, Base Switch: No, Default
Switch: Yes, Address Mode 0]
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Index Slot Port Address Media Speed State Proto
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16 2 0 011000 id N8 Online FC
F-Port 21:01:00:1b:32:b2:86:19
17 2 1 011100 id N8 Online FC
F-Port 21:01:00:1b:32:b2:86:19
```

F-Port 18	2	2	011200	id	N8	Online	FC	273	2	33	0199c0	id	N8	No_Light	FC
F-Port 19	2	3	011300	id	N8	Online	FC	274	2	34	019ac0	id	N8	No_Light	FC
F-Port 20	2	4	011400	id	N8	Online	FC	275	2	35	019bc0	id	N8	No_Light	FC
F-Port 21	2	5	011500	id	N8	Online	FC	276	2	36	019cc0	id	N8	Online	FC
F-Port 22	2	6	011600	id	N8	Online	FC	F-Port 277	2	37	019dc0	id	N8	Online	FC
F-Port 23	2	7	011700	id	N8	Online	FC	F-Port 278	2	38	019ec0	id	N8	Online	FC
F-Port 24	2	8	011800	id	N8	Online	FC	F-Port 279	2	39	019fc0	id	N8	Online	FC
F-Port 25	2	9	011900	id	N8	No_Light	FC	F-Port 280	2	40	0190c0	id	N8	No_Light	FC
F-Port 26	2	10	011a00	id	N8	No_Light	FC	F-Port 281	2	41	0191c0	id	N8	Online	FC
F-Port 27	2	11	011b00	id	N8	No_Light	FC	F-Port 282	2	42	0192c0	id	N8	Online	FC
F-Port 28	2	12	011c00	id	N8	Online	FC	F-Port 283	2	43	0193c0	id	N8	Online	FC
F-Port 29	2	13	011d00	id	N8	Online	FC	F-Port 284	2	44	0194c0	id	N8	Online	FC
F-Port 30	2	14	011e00	id	N8	Online	FC	F-Port 285	2	45	0195c0	id	N8	Online	FC
F-Port 31	2	15	011f00	id	N8	Online	FC	F-Port 286	2	46	0196c0	id	N8	Online	FC
F-Port 144	2	16	019040	id	N8	No_Light	FC	F-Port 287	2	47	0197c0	id	N8	Online	FC
F-Port 145	2	17	019140	id	N8	Online	FC	F-Port 32	3	0	012000	id	N8	Online	FC
F-Port 146	2	18	019240	id	N8	Online	FC	F-Port 33	3	1	012100	id	N8	Online	FC
F-Port 147	2	19	019340	id	N8	Online	FC	F-Port 34	3	2	012200	id	N8	Online	FC
F-Port 148	2	20	019440	id	N8	Online	FC	F-Port 35	3	3	012300	id	N8	Online	FC
F-Port 149	2	21	019540	id	N8	Online	FC	F-Port 36	3	4	012400	id	N8	Online	FC
F-Port 150	2	22	019640	id	N8	Online	FC	F-Port 37	3	5	012500	id	N8	Online	FC
F-Port 151	2	23	019740	id	N8	Online	FC	F-Port 38	3	6	012600	id	N8	Online	FC
F-Port 152	2	24	019840	id	N8	Online	FC	F-Port 39	3	7	012700	id	N8	Online	FC
F-Port 153	2	25	019940	id	N8	Online	FC	F-Port 40	3	8	012800	id	N8	Online	FC
F-Port 154	2	26	019a40	id	N8	Online	FC	F-Port 41	3	9	012900	id	N8	Online	FC
F-Port 155	2	27	019b40	id	N8	Online	FC	F-Port 42	3	10	012a00	id	N8	No_Light	FC
F-Port 156	2	28	019c40	id	N8	Online	FC	F-Port 43	3	11	012b00	id	N8	No_Light	FC
F-Port 157	2	29	019d40	id	N8	Online	FC	F-Port 44	3	12	012c00	id	N8	No_Light	FC
F-Port 158	2	30	019e40	id	N8	Online	FC	F-Port 45	3	13	012d00	id	N8	Online	FC
F-Port 159	2	31	019f40	id	N8	Online	FC	F-Port 46	3	14	012e00	id	N8	Online	FC
F-Port 272	2	32	0198c0	id	N8	Online	FC	F-Port 47	3	15	012f00	id	N8	Online	FC
F-Port 273	2	33	0199c0	id	N8	Online	FC	F-Port 160	3	16	01a040	id	N8	No_Light	FC
F-Port 274	2	34	019ac0	id	N8	Online	FC	F-Port 161	3	17	01a140	id	N8	Online	FC
F-Port 275	2	35	019bc0	id	N8	Online	FC	F-Port 162	3	18	01a240	id	N8	Online	FC
F-Port 276	2	36	019cc0	id	N8	Online	FC								

F-Port 10:00:00:00:c9:94:9b:21	50	4	2	013200	id	N8	Online	FC	F-Port 21:00:00:24:ff:2f:d2:00	51	4	3	013300	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:74:4d	52	4	4	013400	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:75:5d	53	4	5	013500	id	N8	Online	FC	F-Port 21:01:00:1b:32:b2:f0:19	54	4	6	013600	id	N8	Online	FC	F-Port 21:01:00:1b:32:b2:c2:19	55	4	7	013700	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1b:7f	56	4	8	013800	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1c:d7	57	4	9	013900	id	N8	Online	FC	F-Port 21:01:00:1b:32:b2:bb:19	58	4	10	013a00	id	N8	No_Light	FC	F-Port 10:00:00:00:c9:94:ae:51	61	4	13	013d00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:ae:e1	62	4	14	013e00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:9d	63	4	15	013f00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:c1	176	4	16	01b040	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:21	177	4	17	01b140	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9d:85	178	4	18	01b240	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:f1	179	4	19	01b340	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9d:9d	180	4	20	01b440	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:35	181	4	21	01b540	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:c9	182	4	22	01b640	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9b:4d	183	4	23	01b740	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9b:7d	184	4	24	01b840	id	N8	Online	FC	F-Port 21:00:00:24:ff:2f:d3:26	185	4	25	01b940	id	N8	Online	FC	F-Port 21:00:00:24:ff:2f:d2:c5	186	4	26	01ba40	id	N8	Online	FC	F-Port 21:00:00:24:ff:2f:d2:01	187	4	27	01bb40	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:74:4c	188	4	28	01bc40	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:75:5c	189	4	29	01bd40	id	N8	Online	FC	F-Port 21:00:00:1b:32:92:f0:19	190	4	30	01be40	id	N8	Online	FC	F-Port 21:00:00:1b:32:92:c2:19	191	4	31	01bf40	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1b:7e	304	4	32	01b8c0	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1c:d6	305	4	33	01b9c0	id	N8	Online	FC	F-Port 21:00:00:1b:32:92:bb:19	306	4	34	01bac0	id	N8	No_Light	FC	F-Port 10:00:00:00:c9:94:ae:50	309	4	37	01bdc0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:ae:e0	310	4	38	01bec0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:9c	311	4	39	01bfc0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:c0	312	4	40	01b0c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:20	313	4	41	01b1c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9d:84	314	4	42	01b2c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:f0	315	4	43	01b3c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9d:9c	316	4	44	01b4c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:34	317	4	45	01b5c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:c8	318	4	46	01b6c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9b:4c	319	4	47	01b7c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9b:7c	384	5	0	-----	cu	8G	No_Sync	FC	385	5	1	-----	cu	8G	No_Sync	FC	386	5	2	-----	cu	8G	No_Sync	FC	387	5	3	-----	cu	8G	No_Sync	FC	388	5	4	-----	cu	8G	No_Sync	FC	389	5	5	-----	cu	8G	No_Sync	FC	390	5	6	-----	cu	8G	No_Sync	FC	391	5	7	-----	cu	8G	No_Sync	FC	392	5	8	-----	cu	8G	No_Sync	FC	393	5	9	-----	cu	8G	No_Sync	FC	394	5	10	-----	cu	8G	No_Sync	FC	395	5	11	-----	cu	8G	No_Sync	FC	396	5	12	-----	cu	8G	No_Sync	FC	397	5	13	-----	cu	8G	No_Sync	FC	398	5	14	-----	cu	8G	No_Sync	FC	399	5	15	-----	cu	8G	No_Sync	FC	400	5	16	-----	cu	8G	No_Sync	FC	401	5	17	-----	cu	8G	No_Sync	FC	402	5	18	-----	cu	8G	No_Sync	FC	403	5	19	-----	cu	8G	No_Sync	FC	404	5	20	-----	cu	8G	No_Sync	FC	405	5	21	-----	cu	8G	No_Sync	FC	406	5	22	-----	cu	8G	No_Sync	FC	407	5	23	-----	cu	8G	No_Sync	FC	408	5	24	-----	cu	8G	No_Sync	FC	409	5	25	-----	cu	8G	No_Sync	FC	410	5	26	-----	cu	8G	No_Sync	FC	411	5	27	-----	cu	8G	No_Sync	FC	412	5	28	-----	cu	8G	No_Sync	FC	413	5	29	-----	cu	8G	No_Sync	FC
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414	5	30	-----	cu	8G	No_Sync	FC	77	9	13	014d00	id	N8	Online	FC	332	9	44	01c4c0	id	N8	Online	FC
415	5	31	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:af:c9							F-Port	10:00:00:00:c9:94:9a:2c						
416	8	0	-----	cu	8G	No_Sync	FC	78	9	14	014e00	id	N8	Online	FC	333	9	45	01c5c0	id	N8	Online	FC
417	8	1	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:99:d9							F-Port	10:00:00:00:c9:94:af:2c						
418	8	2	-----	cu	8G	No_Sync	FC	79	9	15	014f00	id	N8	No_Light	FC	334	9	46	01c6c0	id	N8	Online	FC
419	8	3	-----	cu	8G	No_Sync	FC	192	9	16	01c040	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:90:6c						
420	8	4	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:9c:45							335	9	47	01c7c0	id	N8	Online	FC
421	8	5	-----	cu	8G	No_Sync	FC	193	9	17	01c140	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:9b:24						
422	8	6	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:9a:29							80	10	0	015000	id	N8	Online	FC
423	8	7	-----	cu	8G	No_Sync	FC	194	9	18	01c240	id	N8	Online	FC	F-Port	21:00:00:24:ff:2f:d2:53						
424	8	8	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:9d:4d							81	10	1	015100	id	N8	Online	FC
425	8	9	-----	cu	8G	No_Sync	FC	195	9	19	01c340	id	N8	Online	FC	F-Port	21:00:00:24:ff:2f:d2:cb						
426	8	10	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:99:fd							82	10	2	015200	id	N8	Online	FC
427	8	11	-----	cu	8G	No_Sync	FC	196	9	20	01c440	id	N8	Online	FC	F-Port	21:00:00:24:ff:2f:d1:f7						
428	8	12	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:9a:2d							83	10	3	015300	id	N8	Online	FC
429	8	13	-----	cu	8G	No_Sync	FC	197	9	21	01c540	id	N8	Online	FC	F-Port	21:00:00:24:ff:2f:d2:e5						
430	8	14	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:af:2d							84	10	4	015400	id	N8	Online	FC
431	8	15	-----	cu	8G	No_Sync	FC	198	9	22	01c640	id	N8	Online	FC	F-Port	21:00:00:24:ff:20:74:31						
432	8	16	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:90:6d							85	10	5	015500	id	N8	Online	FC
433	8	17	-----	cu	8G	No_Sync	FC	199	9	23	01c740	id	N8	Online	FC	F-Port	21:01:00:1b:32:b2:41:18						
434	8	18	-----	cu	8G	No_Sync	FC	F-Port	10:00:00:00:c9:94:9b:25							86	10	6	015600	id	N8	Online	FC
435	8	19	-----	cu	8G	No_Sync	FC	200	9	24	01c840	id	N8	Online	FC	F-Port	21:01:00:1b:32:b2:8f:19						
436	8	20	-----	cu	8G	No_Sync	FC	F-Port	21:00:00:24:ff:2f:d3:1e							87	10	7	015700	id	N8	Online	FC
437	8	21	-----	cu	8G	No_Sync	FC	201	9	25	01c940	id	N8	Online	FC	F-Port	21:01:00:1b:32:b2:14:19						
438	8	22	-----	cu	8G	No_Sync	FC	F-Port	21:00:00:24:ff:20:7d:cc							88	10	8	015800	id	N8	Online	FC
439	8	23	-----	cu	8G	No_Sync	FC	202	9	26	01ca40	id	N8	Online	FC	F-Port	21:00:00:24:ff:30:1c:a1						
440	8	24	-----	cu	8G	No_Sync	FC	F-Port	21:00:00:24:ff:2f:d2:96							89	10	9	015900	id	N8	Online	FC
441	8	25	-----	cu	8G	No_Sync	FC	203	9	27	01cb40	id	N8	Online	FC	F-Port	21:00:00:24:ff:20:07:77						
442	8	26	-----	cu	8G	No_Sync	FC	F-Port	21:00:00:24:ff:20:7d:d0							90	10	10	015a00	id	N8	No_Light	FC
443	8	27	-----	cu	8G	No_Sync	FC	204	9	28	01cc40	id	N8	Online	FC	91	10	11	015b00	id	N8	Online	FC
444	8	28	-----	cu	8G	No_Sync	FC	F-Port	21:00:00:24:ff:2f:d1:dc							F-Port	10:00:00:00:c9:94:99:45						
445	8	29	-----	cu	8G	No_Sync	FC	205	9	29	01cd40	id	N8	Online	FC	92	10	12	015c00	id	N8	Online	FC
446	8	30	-----	cu	8G	No_Sync	FC	F-Port	21:00:00:1b:32:92:2d:1a							F-Port	10:00:00:00:c9:94:ae:f5						
447	8	31	-----	cu	8G	No_Sync	FC	206	9	30	01ce40	id	N8	Online	FC	93	10	13	015d00	id	N8	Online	FC
64	9	0	014000	id	N8	Online	FC	F-Port	21:00:00:1b:32:92:13:19							F-Port	10:00:00:00:c9:94:af:59						
F-Port	21:00:00:24:ff:2f:d3:1f							207	9	31	01cf40	id	N8	Online	FC	94	10	14	015e00	id	N8	Online	FC
65	9	1	014100	id	N8	Online	FC	F-Port	21:00:00:24:ff:30:1c:aa							F-Port	10:00:00:00:c9:94:9d:65						
F-Port	21:00:00:24:ff:20:7d:cd							320	9	32	01c8c0	id	N8	Online	FC	95	10	15	015f00	id	N8	No_Light	FC
66	9	2	014200	id	N8	Online	FC	F-Port	21:00:00:24:ff:30:1c:48							208	10	16	01d040	id	N8	Online	FC
F-Port	21:00:00:24:ff:2f:d2:97							321	9	33	01c9c0	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:9c:e1						
67	9	3	014300	id	N8	Online	FC	F-Port	21:00:00:24:ff:30:1b:ac							209	10	17	01d140	id	N8	Online	FC
F-Port	21:00:00:24:ff:20:7d:d1							322	9	34	01cac0	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:90:e5						
68	9	4	014400	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:99:b0							210	10	18	01d240	id	N8	Online	FC
F-Port	21:00:00:24:ff:2f:d1:dd							323	9	35	01cbc0	id	N8	No_Light	FC	F-Port	10:00:00:00:c9:94:99:b5						
69	9	5	014500	id	N8	Online	FC	324	9	36	01ccc0	id	N8	Online	FC	211	10	19	01d340	id	N8	Online	FC
F-Port	21:01:00:1b:32:b2:2d:1a							F-Port	10:00:00:00:c9:94:af:dc							F-Port	10:00:00:00:c9:94:9c:25						
70	9	6	014600	id	N8	Online	FC	325	9	37	01cdc0	id	N8	Online	FC	212	10	20	01d440	id	N8	Online	FC
F-Port	21:01:00:1b:32:b2:13:19							F-Port	10:00:00:00:c9:94:af:c8							F-Port	10:00:00:00:c9:94:90:cd						
71	9	7	014700	id	N8	Online	FC	326	9	38	01cec0	id	N8	Online	FC	213	10	21	01d540	id	N8	Online	FC
F-Port	21:00:00:24:ff:30:1c:ab							F-Port	10:00:00:00:c9:94:99:d8							F-Port	10:00:00:00:c9:94:9c:f9						
72	9	8	014800	id	N8	Online	FC	327	9	39	01cfc0	id	N8	No_Light	FC	214	10	22	01d640	id	N8	Online	FC
F-Port	21:00:00:24:ff:30:1c:49							328	9	40	01c0c0	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:99:2d						
73	9	9	014900	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:9c:44							215	10	23	01d740	id	N8	Online	FC
F-Port	21:00:00:24:ff:30:1b:ad							329	9	41	01c1c0	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:91:0d						
74	9	10	014a00	id	N8	Online	FC	F-Port	10:00:00:00:c9:94:9a:28							216	10	24	01d840	id	N8	Online	FC
F-Port	10:00:00:00:c9:94:99:b1							330	9	42	01c2c0	id	N8	Online	FC	F-Port	21:00:00:24:ff:2f:d2:52						
75	9	11	014b00	id	N8	No_Light	FC	F-Port	10:00:00:00:c9:94:9d:4c							217	10	25	01d940	id	N8	Online	FC
76	9	12	014c00	id	N8	Online	FC	331	9	43	01c3c0	id	N8	Online	FC	F-Port	21:00:00:24:ff:2f:d2:ca						
F-Port	10:00:00:00:c9:94:af:dd							F-Port	10:00:00:00:c9:94:99:fc							218	10	26	01da40	id	N8	Online	FC

F-Port 21:00:00:24:ff:2f:d1:f6	105	11	9	016900	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9d:2c	361	11	41	01e1c0	id	N8	Online	FC	
219 10 27 01db40 id N8 Online FC	F-Port 21:00:00:24:ff:20:6a:b9	106	11	10	016a00	id	N8	No_Light	FC	F-Port 10:00:00:00:c9:94:9d:34	362	11	42	01e2c0	id	N8	Online	FC
F-Port 21:00:00:24:ff:2f:d2:e4	107	11	11	016b00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:38	363	11	43	01e3c0	id	N8	Online	FC	
220 10 28 01dc40 id N8 Online FC	F-Port 10:00:00:00:c9:94:9d:21	108	11	12	016c00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:f8	364	11	44	01e4c0	id	N8	Online	FC
F-Port 21:00:00:24:ff:20:74:30	F-Port 10:00:00:00:c9:94:ae:d9	109	11	13	016d00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:90:9c	365	11	45	01e5c0	id	N8	Online	FC
221 10 29 01dd40 id N8 Online FC	F-Port 10:00:00:00:c9:94:9b:e1	110	11	14	016e00	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:00	366	11	46	01e6c0	id	N8	Online	FC
F-Port 21:00:00:1b:32:92:41:18	111	11	15	016f00	id	N8	No_Light	FC	F-Port 10:00:00:00:c9:94:9b:30	367	11	47	01e7c0	id	N8	Online	FC	
222 10 30 01de40 id N8 Online FC	F-Port 10:00:00:00:c9:94:9d:2d	224	11	16	01e040	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:88	112	12	0	017000	id	N8	Online	FC
F-Port 21:00:00:1b:32:92:8f:19	F-Port 10:00:00:00:c9:94:9d:35	226	11	18	01e240	id	N8	Online	FC	F-Port 21:01:00:1b:32:b2:7c:19	113	12	1	017100	id	N8	Online	FC
223 10 31 01df40 id N8 Online FC	F-Port 10:00:00:00:c9:94:99:39	227	11	19	01e340	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:7d:b5	114	12	2	017200	id	N8	Online	FC
F-Port 21:00:00:1b:32:92:14:19	F-Port 10:00:00:00:c9:94:99:f9	228	11	20	01e440	id	N8	Online	FC	F-Port 21:00:00:24:ff:2f:d2:c9	115	12	3	017300	id	N8	Online	FC
336 10 32 01d8c0 id N8 Online FC	F-Port 10:00:00:00:c9:94:90:9d	229	11	21	01e540	id	N8	Online	FC	F-Port 21:00:00:24:ff:2f:d1:f5	116	12	4	017400	id	N8	Online	FC
F-Port 21:00:00:24:ff:30:1c:a0	F-Port 10:00:00:00:c9:94:9a:01	230	11	22	01e640	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1c:53	117	12	5	017500	id	N8	Online	FC
337 10 33 01d9c0 id N8 Online FC	F-Port 10:00:00:00:c9:94:91:15	231	11	23	01e740	id	N8	Online	FC	F-Port 21:01:00:1b:32:b2:57:18	118	12	6	017600	id	N8	Online	FC
F-Port 21:00:00:24:ff:20:07:76	F-Port 10:00:00:00:c9:94:9a:89	232	11	24	01e840	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1c:4f	119	12	7	017700	id	N8	Online	FC
338 10 34 01dac0 id N8 No_Light FC	F-Port 21:00:00:24:ff:2f:d2:6a	233	11	25	01e940	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:74:47	120	12	8	017800	id	N8	Online	FC
339 10 35 01dbc0 id N8 Online FC	F-Port 21:00:00:24:ff:20:74:3a	234	11	26	01ea40	id	N8	Online	FC	F-Port 21:00:00:24:ff:30:1c:e1	121	12	9	017900	id	N8	Online	FC
F-Port 10:00:00:00:c9:94:99:44	F-Port 21:00:00:24:ff:20:7d:56	235	11	27	01eb40	id	N8	Online	FC	F-Port 21:00:00:24:ff:20:6a:c1	122	12	10	017a00	id	N8	No_Light	FC
340 10 36 01dcc0 id N8 Online FC	F-Port 21:00:00:24:ff:20:74:52	236	11	28	01ec40	id	N8	Online	FC	123	12	11	017b00	id	N8	Online	FC	
F-Port 10:00:00:00:c9:94:ae:f4	F-Port 21:00:00:1b:32:92:12:1a	237	11	29	01ed40	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9c:1d	124	12	12	017c00	id	N8	Online	FC
341 10 37 01ddc0 id N8 Online FC	F-Port 21:00:00:1b:32:92:68:19	238	11	30	01ee40	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9d:41	125	12	13	017d00	id	N8	Online	FC
F-Port 10:00:00:00:c9:94:af:58	F-Port 21:00:00:24:ff:d1:fd	239	11	31	01ef40	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:af:11	126	12	14	017e00	id	N8	Online	FC
342 10 38 01dec0 id N8 Online FC	F-Port 21:00:00:1b:32:92:21:18	352	11	32	01e8c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:1d	127	12	15	017f00	id	N8	No_Light	FC
F-Port 10:00:00:00:c9:94:9d:64	F-Port 21:00:00:24:ff:30:3b:44	353	11	33	01e9c0	id	N8	Online	FC	240	12	16	01f040	id	N8	Online	FC	
343 10 39 01dfc0 id N8 No_Light FC	F-Port 21:00:00:24:ff:20:6a:b8	354	11	34	01eac0	id	N8	No_Light	FC	F-Port 10:00:00:00:c9:94:99:f5	241	12	17	01f140	id	N8	Online	FC
344 10 40 01d0c0 id N8 Online FC	355	11	35	01ebc0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:bd	242	12	18	01f240	id	N8	Online	FC	
F-Port 10:00:00:00:c9:94:9c:e0	F-Port 10:00:00:00:c9:94:9d:20	356	11	36	01ecc0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:45	243	12	19	01f340	id	N8	Online	FC
345 10 41 01dlc0 id N8 Online FC	F-Port 10:00:00:00:c9:94:99:e4	357	11	37	01edc0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:ed	244	12	20	01f440	id	N8	Online	FC
F-Port 10:00:00:00:c9:94:90:e4	F-Port 10:00:00:00:c9:94:ae:d8	358	11	38	01eec0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:99:f1	245	12	21	01f540	id	N8	Online	FC
346 10 42 01d2c0 id N8 Online FC	F-Port 10:00:00:00:c9:94:9b:e0	359	11	39	01efc0	id	N8	No_Light	FC	F-Port 10:00:00:00:c9:94:99:41	246	12	22	01f640	id	N8	Online	FC
F-Port 10:00:00:00:c9:94:99:b4	360	11	40	01e0c0	id	N8	Online	FC	F-Port 10:00:00:00:c9:94:9a:6d									
347 10 43 01d3c0 id N8 Online FC																		
F-Port 10:00:00:00:c9:94:9c:24																		
348 10 44 01d4c0 id N8 Online FC																		
F-Port 10:00:00:00:c9:94:90:cc																		
349 10 45 01d5c0 id N8 Online FC																		
F-Port 10:00:00:00:c9:94:9c:f8																		
350 10 46 01d6c0 id N8 Online FC																		
F-Port 10:00:00:00:c9:94:99:2c																		
351 10 47 01d7c0 id N8 Online FC																		
F-Port 10:00:00:00:c9:94:91:0c																		
96 11 0 016000 id N8 Online FC																		
F-Port 21:00:00:24:ff:2f:d2:6b																		
97 11 1 016100 id N8 Online FC																		
F-Port 21:00:00:24:ff:20:74:3b																		
98 11 2 016200 id N8 Online FC																		
F-Port 21:00:00:24:ff:20:7d:57																		
99 11 3 016300 id N8 Online FC																		
F-Port 21:00:00:24:ff:20:74:53																		
100 11 4 016400 id N8 Online FC																		
F-Port 21:01:00:1b:32:b2:12:1a																		
101 11 5 016500 id N8 Online FC																		
F-Port 21:01:00:1b:32:b2:68:19																		
102 11 6 016600 id N8 Online FC																		
F-Port 21:00:00:24:ff:2f:d1:fc																		
103 11 7 016700 id N8 Online FC																		
F-Port 21:01:00:1b:32:b2:21:18																		
104 11 8 016800 id N8 Online FC																		
F-Port 21:00:00:24:ff:30:3b:45																		

<p>Share Area: No Device Shared in Other AD: No Redirect: No N 011400; 3;21:00:00:24:ff:2f:d2:77;20:00:00:24:ff:2f:d2:77; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data35" Fabric Port Name: 20:14:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:77 Port Index: 20 Share Area: No Device Shared in Other AD: No Redirect: No N 011500; 3;21:01:00:1b:32:b2:78:19;20:01:00:1b:32:b2:78:19; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data42" Fabric Port Name: 20:15:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:78:19 Port Index: 21 Share Area: No Device Shared in Other AD: No Redirect: No N 011600; 3;21:01:00:1b:32:b2:07:1a;20:01:00:1b:32:b2:07:1a; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data49" Fabric Port Name: 20:16:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:07:1a Port Index: 22 Share Area: No Device Shared in Other AD: No Redirect: No N 011700; 3;21:00:00:24:ff:30:3b:41;20:00:00:24:ff:30:3b:41; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data56" Fabric Port Name: 20:17:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:41 Port Index: 23 Share Area: No Device Shared in Other AD: No Redirect: No N 011800; 3;21:01:00:1b:32:b2:fe:19;20:01:00:1b:32:b2:fe:19; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data63" Fabric Port Name: 20:18:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:fe:19</p>	<p>Port Index: 24 Share Area: No Device Shared in Other AD: No Redirect: No N 011c00; 3;10:00:00:00:c9:94:af:e9;20:00:00:00:c9:94:af:e9; na</p> <p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db8" Fabric Port Name: 20:1c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:e9 Port Index: 28 Share Area: No Device Shared in Other AD: No Redirect: No N 011d00; 3;10:00:00:00:c9:94:99:21;20:00:00:00:c9:94:99:21; na</p> <p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db1" Fabric Port Name: 20:1d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:21 Port Index: 29 Share Area: No Device Shared in Other AD: No Redirect: No N 011e00; 3;10:00:00:00:c9:94:af:29;20:00:00:00:c9:94:af:29; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db18" Fabric Port Name: 20:1e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:29 Port Index: 30 Share Area: No Device Shared in Other AD: No Redirect: No N 011f00; 3;10:00:00:00:c9:94:99:69;20:00:00:00:c9:94:99:69; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db11" Fabric Port Name: 20:1f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:69 Port Index: 31 Share Area: No Device Shared in Other AD: No Redirect: No N 012000; 3;21:01:00:1b:32:bb:13:6b;20:01:00:1b:32:bb:13:6b; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data6" Fabric Port Name: 20:20:00:05:1e:ec:50:00</p>	<p>Permanent Port Name: 21:01:00:1b:32:bb:13:6b Port Index: 32 Share Area: No Device Shared in Other AD: No Redirect: No N 012100; 3;21:00:00:24:ff:2f:d2:6e;20:00:00:24:ff:2f:d2:6e; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data13" Fabric Port Name: 20:21:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:6e Port Index: 33 Share Area: No Device Shared in Other AD: No Redirect: No N 012200; 3;21:00:00:24:ff:2f:d1:ee;20:00:00:24:ff:2f:d1:ee; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data20" Fabric Port Name: 20:22:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:ee Port Index: 34 Share Area: No Device Shared in Other AD: No Redirect: No N 012300; 3;21:00:00:24:ff:20:7c:e5;20:00:00:24:ff:20:7c:e5; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data27" Fabric Port Name: 20:23:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7c:e5 Port Index: 35 Share Area: No Device Shared in Other AD: No Redirect: No N 012400; 3;21:00:00:24:ff:2f:d2:79;20:00:00:24:ff:2f:d2:79; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data34" Fabric Port Name: 20:24:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:79 Port Index: 36 Share Area: No Device Shared in Other AD: No Redirect: No N 012500; 3;21:00:00:24:ff:30:3b:23;20:00:00:24:ff:30:3b:23; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data41"</p>
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<p>Fabric Port Name: 20:25:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:23 Port Index: 37 Share Area: No Device Shared in Other AD: No Redirect: No N 012600; 3;21:01:00:1b:32:b2:22:18;20:01:00:1b:32:b2:22:18; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data48" Fabric Port Name: 20:26:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:22:18 Port Index: 38 Share Area: No Device Shared in Other AD: No Redirect: No N 012700; 3;21:00:00:24:ff:30:1c:5d;20:00:00:24:ff:30:1c:5d; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data55" Fabric Port Name: 20:27:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:5d Port Index: 39 Share Area: No Device Shared in Other AD: No Redirect: No N 012800; 3;21:00:00:24:ff:30:3c:85;20:00:00:24:ff:30:3c:85; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" Fabric Port Name: 20:28:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3c:85 Port Index: 40 Share Area: No Device Shared in Other AD: No Redirect: No N 012900; 3;21:00:00:24:ff:30:1b:81;20:00:00:24:ff:30:1b:81; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data69" Fabric Port Name: 20:29:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1b:81 Port Index: 41 Share Area: No Device Shared in Other AD: No Redirect: No N 012d00; 3;10:00:00:00:c9:94:ae:89;20:00:00:00:c9:94:ae:89; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db24"</p>	<p>Fabric Port Name: 20:2d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:89 Port Index: 45 Share Area: No Device Shared in Other AD: No Redirect: No N 012e00; 3;10:00:00:00:c9:94:9b:ed;20:00:00:00:c9:94:9b:ed; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db17" Fabric Port Name: 20:2e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:ed Port Index: 46 Share Area: No Device Shared in Other AD: No Redirect: No N 012f00; 3;10:00:00:00:c9:94:9d:01;20:00:00:00:c9:94:9d:01; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db10" Fabric Port Name: 20:2f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:01 Port Index: 47 Share Area: No Device Shared in Other AD: No Redirect: No N 013000; 3;21:00:00:24:ff:2f:d3:27;20:00:00:24:ff:2f:d3:27; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data5" Fabric Port Name: 20:30:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d3:27 Port Index: 48 Share Area: No Device Shared in Other AD: No Redirect: No N 013100; 3;21:00:00:24:ff:2f:d2:c4;20:00:00:24:ff:2f:d2:c4; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data12" Fabric Port Name: 20:31:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:c4 Port Index: 49 Share Area: No Device Shared in Other AD: No Redirect: No N 013200; 3;21:00:00:24:ff:2f:d2:00;20:00:00:24:ff:2f:d2:00; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0"</p>	<p>NodeSymb: [6] "data19" Fabric Port Name: 20:32:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:00 Port Index: 50 Share Area: No Device Shared in Other AD: No Redirect: No N 013300; 3;21:00:00:24:ff:20:74:4d;20:00:00:24:ff:20:74:4d; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data26" Fabric Port Name: 20:33:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:4d Port Index: 51 Share Area: No Device Shared in Other AD: No Redirect: No N 013400; 3;21:00:00:24:ff:20:75:5d;20:00:00:24:ff:20:75:5d; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data33" Fabric Port Name: 20:34:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:75:5d Port Index: 52 Share Area: No Device Shared in Other AD: No Redirect: No N 013500; 3;21:01:00:1b:32:b2:f0:19;20:01:00:1b:32:b2:f0:19; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data40" Fabric Port Name: 20:35:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:f0:19 Port Index: 53 Share Area: No Device Shared in Other AD: No Redirect: No N 013600; 3;21:01:00:1b:32:b2:c2:19;20:01:00:1b:32:b2:c2:19; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data47" Fabric Port Name: 20:36:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:c2:19 Port Index: 54 Share Area: No Device Shared in Other AD: No Redirect: No N 013700; 3;21:00:00:24:ff:30:1b:7f;20:00:00:24:ff:30:1b:7f; na</p> <p>FC4s: FCP</p>
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PortSymb: [6] "qlt1,0" NodeSymb: [6] "data54" Fabric Port Name: 20:37:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1b:7f Port Index: 55 Share Area: No Device Shared in Other AD: No Redirect: No N 013800; 3;21:00:00:24:ff:30:1c:d7;20:00:00:24:ff:30:1c:d7; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data61" Fabric Port Name: 20:38:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:d7 Port Index: 56 Share Area: No Device Shared in Other AD: No Redirect: No N 013900; 3;21:01:00:1b:32:b2:bb:19;20:01:00:1b:32:b2:bb:19; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data68" Fabric Port Name: 20:39:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:bb:19 Port Index: 57 Share Area: No Device Shared in Other AD: No Redirect: No N 013c00; 3;10:00:00:00:c9:94:ae:51;20:00:00:00:c9:94:ae:51; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db6" Fabric Port Name: 20:3c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:51 Port Index: 60 Share Area: No Device Shared in Other AD: No Redirect: No N 013d00; 3;10:00:00:00:c9:94:ae:e1;20:00:00:00:c9:94:ae:e1; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db23" Fabric Port Name: 20:3d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:e1 Port Index: 61 Share Area: No Device Shared in Other AD: No Redirect: No N 013e00; 3;10:00:00:00:c9:94:99:9d;20:00:00:00:c9:94:99:9d; na	FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db16" Fabric Port Name: 20:3e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:9d Port Index: 62 Share Area: No Device Shared in Other AD: No Redirect: No N 013f00; 3;10:00:00:00:c9:94:9a:c1;20:00:00:00:c9:94:9a:c1; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db9" Fabric Port Name: 20:3f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:c1 Port Index: 63 Share Area: No Device Shared in Other AD: No Redirect: No N 014000; 3;21:00:00:24:ff:2f:d3:1f;20:00:00:24:ff:2f:d3:1f; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data4" Fabric Port Name: 20:40:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d3:1f Port Index: 64 Share Area: No Device Shared in Other AD: No Redirect: No N 014100; 3;21:00:00:24:ff:20:7d:cd;20:00:00:24:ff:20:7d:cd; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data11" Fabric Port Name: 20:41:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:cd Port Index: 65 Share Area: No Device Shared in Other AD: No Redirect: No N 014200; 3;21:00:00:24:ff:2f:d2:97;20:00:00:24:ff:2f:d2:97; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data18" Fabric Port Name: 20:42:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:97 Port Index: 66 Share Area: No Device Shared in Other AD: No Redirect: No N 014300; 3;21:00:00:24:ff:20:7d:d1;20:00:00:24:ff:20:7d:d1;	na FC4s: FCP [SUN COMSTAR 1.0] Fabric Port Name: 20:43:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:d1 Port Index: 67 Share Area: No Device Shared in Other AD: No Redirect: No N 014400; 3;21:00:00:24:ff:2f:d1:dd;20:00:00:24:ff:2f:d1:dd; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data32" Fabric Port Name: 20:44:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:dd Port Index: 68 Share Area: No Device Shared in Other AD: No Redirect: No N 014500; 3;21:01:00:1b:32:b2:2d:1a;20:01:00:1b:32:b2:2d:1a; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data39" Fabric Port Name: 20:45:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:2d:1a Port Index: 69 Share Area: No Device Shared in Other AD: No Redirect: No N 014600; 3;21:01:00:1b:32:b2:13:19;20:01:00:1b:32:b2:13:19; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data46" Fabric Port Name: 20:46:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:13:19 Port Index: 70 Share Area: No Device Shared in Other AD: No Redirect: No N 014700; 3;21:00:00:24:ff:30:1c:ab;20:00:00:24:ff:30:1c:ab; na FC4s: FCP [SUN COMSTAR 1.0] Fabric Port Name: 20:47:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:ab Port Index: 71 Share Area: No Device Shared in Other AD: No Redirect: No N 014800; 3;21:00:00:24:ff:30:1c:49;20:00:00:24:ff:30:1c:49; na FC4s: FCP PortSymb: [6] "qlt1,0"
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<p>NodeSymb: [6] "data60" Fabric Port Name: 20:48:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:49 Port Index: 72 Share Area: No Device Shared in Other AD: No Redirect: No N 014900; 3;21:00:00:24:ff:30:1b:ad;20:00:00:24:ff:30:1b:ad; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data67" Fabric Port Name: 20:49:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1b:ad Port Index: 73 Share Area: No Device Shared in Other AD: No Redirect: No N 014a00; 3;10:00:00:00:c9:94:99:b1;20:00:00:00:c9:94:99:b1; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db7" Fabric Port Name: 20:4a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:b1 Port Index: 74 Share Area: No Device Shared in Other AD: No Redirect: No N 014c00; 3;10:00:00:00:c9:94:af:dd;20:00:00:00:c9:94:af:dd; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db5" Fabric Port Name: 20:4c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:dd Port Index: 76 Share Area: No Device Shared in Other AD: No Redirect: No N 014d00; 3;10:00:00:00:c9:94:af:c9;20:00:00:00:c9:94:af:c9; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db22" Fabric Port Name: 20:4d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:c9 Port Index: 77 Share Area: No Device Shared in Other AD: No Redirect: No N 014e00; 3;10:00:00:00:c9:94:99:d9;20:00:00:00:c9:94:99:d9; na FC4s: IPFC FCP</p>	<p>NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db15" Fabric Port Name: 20:4e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:d9 Port Index: 78 Share Area: No Device Shared in Other AD: No Redirect: No N 015000; 3;21:00:00:24:ff:2f:d2:53;20:00:00:24:ff:2f:d2:53; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data3" Fabric Port Name: 20:50:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:53 Port Index: 80 Share Area: No Device Shared in Other AD: No Redirect: No N 015100; 3;21:00:00:24:ff:2f:d2:cb;20:00:00:24:ff:2f:d2:cb; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data10" Fabric Port Name: 20:51:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:cb Port Index: 81 Share Area: No Device Shared in Other AD: No Redirect: No N 015200; 3;21:00:00:24:ff:2f:d1:f7;20:00:00:24:ff:2f:d1:f7; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data17" Fabric Port Name: 20:52:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:f7 Port Index: 82 Share Area: No Device Shared in Other AD: No Redirect: No N 015300; 3;21:00:00:24:ff:2f:d2:e5;20:00:00:24:ff:2f:d2:e5; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data24" Fabric Port Name: 20:53:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:e5 Port Index: 83 Share Area: No Device Shared in Other AD: No Redirect: No N 015400; 3;21:00:00:24:ff:20:74:31;20:00:00:24:ff:20:74:31; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data31" Fabric Port Name: 20:54:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:31 Port Index: 84 Share Area: No Device Shared in Other AD: No Redirect: No N 015500; 3;21:01:00:1b:32:b2:41:18;20:01:00:1b:32:b2:41:18; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data38" Fabric Port Name: 20:55:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:41:18 Port Index: 85 Share Area: No Device Shared in Other AD: No Redirect: No N 015600; 3;21:01:00:1b:32:b2:8f:19;20:01:00:1b:32:b2:8f:19; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data45" Fabric Port Name: 20:56:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:8f:19 Port Index: 86 Share Area: No Device Shared in Other AD: No Redirect: No N 015700; 3;21:01:00:1b:32:b2:14:19;20:01:00:1b:32:b2:14:19; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data52" Fabric Port Name: 20:57:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:14:19 Port Index: 87 Share Area: No Device Shared in Other AD: No Redirect: No N 015800; 3;21:00:00:24:ff:30:1c:a1;20:00:00:24:ff:30:1c:a1; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data59" Fabric Port Name: 20:58:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:a1 Port Index: 88 Share Area: No Device Shared in Other AD: No Redirect: No N 015900; 3;21:00:00:24:ff:20:07:77;20:00:00:24:ff:20:07:77;</p>
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na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data66" Fabric Port Name: 20:59:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:07:77 Port Index: 89 Share Area: No Device Shared in Other AD: No Redirect: No N 015b00; 3;10:00:00:00:c9:94:99:45;20:00:00:00:c9:94:99:45; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db27" Fabric Port Name: 20:5b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:45 Port Index: 91 Share Area: No Device Shared in Other AD: No Redirect: No N 015c00; 3;10:00:00:00:c9:94:ae:f5;20:00:00:00:c9:94:ae:f5; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db4" Fabric Port Name: 20:5c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:f5 Port Index: 92 Share Area: No Device Shared in Other AD: No Redirect: No N 015d00; 3;10:00:00:00:c9:94:af:59;20:00:00:00:c9:94:af:59; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db21" Fabric Port Name: 20:5d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:59 Port Index: 93 Share Area: No Device Shared in Other AD: No Redirect: No N 015e00; 3;10:00:00:00:c9:94:9d:65;20:00:00:00:c9:94:9d:65; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db14" Fabric Port Name: 20:5e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:65 Port Index: 94 Share Area: No Device Shared in Other AD: No Redirect: No N 016000;	3;21:00:00:24:ff:2f:d2:6b;20:00:00:24:ff:2f:d2:6b; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data2" Fabric Port Name: 20:60:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:6b Port Index: 96 Share Area: No Device Shared in Other AD: No Redirect: No N 016100; 3;21:00:00:24:ff:20:74:3b;20:00:00:24:ff:20:74:3b; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data9" Fabric Port Name: 20:61:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:3b Port Index: 97 Share Area: No Device Shared in Other AD: No Redirect: No N 016200; 3;21:00:00:24:ff:20:7d:57;20:00:00:24:ff:20:7d:57; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data16" Fabric Port Name: 20:62:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:57 Port Index: 98 Share Area: No Device Shared in Other AD: No Redirect: No N 016300; 3;21:00:00:24:ff:20:74:53;20:00:00:24:ff:20:74:53; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data23" Fabric Port Name: 20:63:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:53 Port Index: 99 Share Area: No Device Shared in Other AD: No Redirect: No N 016400; 3;21:01:00:1b:32:b2:12:1a;20:01:00:1b:32:b2:12:1a; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data30" Fabric Port Name: 20:64:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:12:1a Port Index: 100 Share Area: No Device Shared in Other AD: No Redirect: No	N 016500; 3;21:01:00:1b:32:b2:68:19;20:01:00:1b:32:b2:68:19; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data37" Fabric Port Name: 20:65:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:68:19 Port Index: 101 Share Area: No Device Shared in Other AD: No Redirect: No N 016600; 3;21:00:00:24:ff:2f:d1:fc;20:00:00:24:ff:2f:d1:fc; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data44" Fabric Port Name: 20:66:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:fc Port Index: 102 Share Area: No Device Shared in Other AD: No Redirect: No N 016700; 3;21:01:00:1b:32:b2:21:18;20:01:00:1b:32:b2:21:18; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data51" Fabric Port Name: 20:67:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:21:18 Port Index: 103 Share Area: No Device Shared in Other AD: No Redirect: No N 016800; 3;21:00:00:24:ff:30:3b:45;20:00:00:24:ff:30:3b:45; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data58" Fabric Port Name: 20:68:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:45 Port Index: 104 Share Area: No Device Shared in Other AD: No Redirect: No N 016900; 3;21:00:00:24:ff:20:6a:b9;20:00:00:24:ff:20:6a:b9; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data65" Fabric Port Name: 20:69:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:6a:b9 Port Index: 105 Share Area: No Device Shared in Other AD: No
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<p>Redirect: No N 016b00; 3;10:00:00:00:c9:94:9d:21;20:00:00:00:c9:94:9d:21; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db26" Fabric Port Name: 20:6b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:21 Port Index: 107 Share Area: No Device Shared in Other AD: No Redirect: No N 016c00; 3;10:00:00:00:c9:94:99:e5;20:00:00:00:c9:94:99:e5; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db3" Fabric Port Name: 20:6c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:e5 Port Index: 108 Share Area: No Device Shared in Other AD: No Redirect: No N 016d00; 3;10:00:00:00:c9:94:ae:d9;20:00:00:00:c9:94:ae:d9; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db20" Fabric Port Name: 20:6d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:d9 Port Index: 109 Share Area: No Device Shared in Other AD: No Redirect: No N 016e00; 3;10:00:00:00:c9:94:9b:e1;20:00:00:00:c9:94:9b:e1; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db13" Fabric Port Name: 20:6e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:e1 Port Index: 110 Share Area: No Device Shared in Other AD: No Redirect: No N 017000; 3;21:01:00:1b:32:b2:7c:19;20:01:00:1b:32:b2:7c:19; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data1" Fabric Port Name: 20:70:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:7c:19 Port Index: 112 Share Area: No</p>	<p>Device Shared in Other AD: No Redirect: No N 017100; 3;21:00:00:24:ff:20:7d:b5;20:00:00:24:ff:20:7d:b5; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "data8" Fabric Port Name: 20:71:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:b5 Port Index: 113 Share Area: No Device Shared in Other AD: No Redirect: No N 017200; 3;21:00:00:24:ff:2f:d2:c9;20:00:00:24:ff:2f:d2:c9; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data15" Fabric Port Name: 20:72:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:c9 Port Index: 114 Share Area: No Device Shared in Other AD: No Redirect: No N 017300; 3;21:00:00:24:ff:2f:d1:f5;20:00:00:24:ff:2f:d1:f5; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data22" Fabric Port Name: 20:73:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:f5 Port Index: 115 Share Area: No Device Shared in Other AD: No Redirect: No N 017400; 3;21:00:00:24:ff:30:1c:53;20:00:00:24:ff:30:1c:53; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data29" Fabric Port Name: 20:74:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:53 Port Index: 116 Share Area: No Device Shared in Other AD: No Redirect: No N 017500; 3;21:01:00:1b:32:b2:57:18;20:01:00:1b:32:b2:57:18; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data36" Fabric Port Name: 20:75:00:05:1e:ec:50:00 Permanent Port Name: 21:01:00:1b:32:b2:57:18 Port Index: 117</p>	<p>Share Area: No Device Shared in Other AD: No Redirect: No N 017600; 3;21:00:00:24:ff:30:1c:4f;20:00:00:24:ff:30:1c:4f; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data43" Fabric Port Name: 20:76:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:4f Port Index: 118 Share Area: No Device Shared in Other AD: No Redirect: No N 017700; 3;21:00:00:24:ff:20:74:47;20:00:00:24:ff:20:74:47; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data50" Fabric Port Name: 20:77:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:47 Port Index: 119 Share Area: No Device Shared in Other AD: No Redirect: No N 017800; 3;21:00:00:24:ff:30:1c:e1;20:00:00:24:ff:30:1c:e1; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data57" Fabric Port Name: 20:78:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:e1 Port Index: 120 Share Area: No Device Shared in Other AD: No Redirect: No N 017900; 3;21:00:00:24:ff:20:6a:c1;20:00:00:24:ff:20:6a:c1; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data64" Fabric Port Name: 20:79:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:6a:c1 Port Index: 121 Share Area: No Device Shared in Other AD: No Redirect: No N 017b00; 3;10:00:00:00:c9:94:9c:1d;20:00:00:00:c9:94:9c:1d; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db25" Fabric Port Name: 20:7b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:1d</p>
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Port Index: 123 Share Area: No Device Shared in Other AD: No Redirect: No N 017c00; 3;10:00:00:00:c9:94:9d:41;20:00:00:00:c9:94:9d:41; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db2" Fabric Port Name: 20:7c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:41 Port Index: 124 Share Area: No Device Shared in Other AD: No Redirect: No N 017d00; 3;10:00:00:00:c9:94:af:11;20:00:00:00:c9:94:af:11; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db19" Fabric Port Name: 20:7d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:11 Port Index: 125 Share Area: No Device Shared in Other AD: No Redirect: No N 017e00; 3;10:00:00:00:c9:94:99:1d;20:00:00:00:c9:94:99:1d; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db12" Fabric Port Name: 20:7e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:1d Port Index: 126 Share Area: No Device Shared in Other AD: No Redirect: No N 019140; 3;10:00:00:00:c9:94:99:cd;20:00:00:00:c9:94:99:cd; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:91:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:cd Port Index: 145 Share Area: Yes Device Shared in Other AD: No Redirect: No N 0191c0; 3;10:00:00:00:c9:94:99:cc;20:00:00:00:c9:94:99:cc; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:19:00:05:1e:ec:50:00	Permanent Port Name: 10:00:00:00:c9:94:99:cc Port Index: 281 Share Area: Yes Device Shared in Other AD: No Redirect: No N 019240; 3;10:00:00:00:c9:94:99:29;20:00:00:00:c9:94:99:29; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db21" Fabric Port Name: 20:92:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:29 Port Index: 146 Share Area: Yes Device Shared in Other AD: No Redirect: No N 0192c0; 3;10:00:00:00:c9:94:99:28;20:00:00:00:c9:94:99:28; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db21" Fabric Port Name: 2e:1a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:28 Port Index: 282 Share Area: Yes Device Shared in Other AD: No Redirect: No N 019340; 3;10:00:00:00:c9:94:9d:59;20:00:00:00:c9:94:9d:59; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:93:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:59 Port Index: 147 Share Area: Yes Device Shared in Other AD: No Redirect: No N 0193c0; 3;10:00:00:00:c9:94:9d:58;20:00:00:00:c9:94:9d:58; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:1b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:58 Port Index: 283 Share Area: Yes Device Shared in Other AD: No Redirect: No N 019440; 3;10:00:00:00:c9:94:99:11;20:00:00:00:c9:94:99:11; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db14"	Fabric Port Name: 20:94:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:11 Port Index: 148 Share Area: Yes Device Shared in Other AD: No Redirect: No N 0194c0; 3;10:00:00:00:c9:94:99:10;20:00:00:00:c9:94:99:10; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db14" Fabric Port Name: 2e:1c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:10 Port Index: 284 Share Area: Yes Device Shared in Other AD: No Redirect: No N 019540; 3;10:00:00:00:c9:94:9a:91;20:00:00:00:c9:94:9a:91; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:95:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:91 Port Index: 149 Share Area: Yes Device Shared in Other AD: No Redirect: No N 0195c0; 3;10:00:00:00:c9:94:9a:90;20:00:00:00:c9:94:9a:90; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:1d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:90 Port Index: 285 Share Area: Yes Device Shared in Other AD: No Redirect: No N 019640; 3;10:00:00:00:c9:94:9a:bd;20:00:00:00:c9:94:9a:bd; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db7" Fabric Port Name: 20:96:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:bd Port Index: 150 Share Area: Yes Device Shared in Other AD: No Redirect: No N 0196c0; 3;10:00:00:00:c9:94:9a:bc;20:00:00:00:c9:94:9a:bc; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5
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<p>DVpr11 db7"</p> <p>Fabric Port Name: 2e:1e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:bc Port Index: 286 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019740; 3;10:00:00:00:c9:94:9b:19;20:00:00:00:c9:94:9b:19; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>PortSymb: [6] "qlt0,0" NodeSymb: [6] "data14" Fabric Port Name: 20:99:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:f0 Port Index: 153 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019a40; 3;21:00:00:24:ff:20:74:34;20:00:00:24:ff:20:74:34; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data21" Fabric Port Name: 20:9a:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:34 Port Index: 154 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019b40; 3;21:00:00:24:ff:2f:d1:f2;20:00:00:24:ff:2f:d1:f2; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data42" Fabric Port Name: 20:9d:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:78:19 Port Index: 157 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019dc0; 3;10:00:00:00:c9:94:99:20;20:00:00:00:c9:94:99:20; na</p> <p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5</p> <p>DVpr11 db1"</p> <p>Fabric Port Name: 2e:15:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:20 Port Index: 277 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019e40; 3;21:00:00:1b:32:92:07:1a;20:00:00:1b:32:92:07:1a; na</p>
<p>DVpr11 "</p> <p>Fabric Port Name: 20:97:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:19 Port Index: 151 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 0197c0; 3;10:00:00:00:c9:94:9b:18;20:00:00:00:c9:94:9b:18; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data28" Fabric Port Name: 20:9b:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:f2 Port Index: 155 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019c40; 3;21:00:00:24:ff:2f:d2:76;20:00:00:24:ff:2f:d2:76; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data35" Fabric Port Name: 20:9c:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:76 Port Index: 156 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019cc0; 3;10:00:00:00:c9:94:af:e8;20:00:00:00:c9:94:af:e8; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data49" Fabric Port Name: 20:9e:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:07:1a Port Index: 158 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019ec0; 3;10:00:00:00:c9:94:af:28;20:00:00:00:c9:94:af:28; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5</p> <p>DVpr11 db18"</p> <p>Fabric Port Name: 2e:16:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:28 Port Index: 278 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019f40; 3;21:00:00:24:ff:30:3b:40;20:00:00:24:ff:30:3b:40; na</p>
<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data7" Fabric Port Name: 20:98:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:86:19 Port Index: 152 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 0198c0; 3;21:00:00:1b:32:92:fe:19;20:00:00:1b:32:92:fe:19; na</p>	<p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5</p> <p>DVpr11 db8"</p> <p>Fabric Port Name: 2e:14:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:e8 Port Index: 276 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019d40; 3;21:00:00:1b:32:92:78:19;20:00:00:1b:32:92:78:19; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data56" Fabric Port Name: 20:9f:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:40 Port Index: 159 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019fc0; 3;10:00:00:00:c9:94:99:68;20:00:00:00:c9:94:99:68; na</p>
<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data63" Fabric Port Name: 2e:10:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:fe:19 Port Index: 272 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019940; 3;21:00:00:24:ff:2f:d1:f0;20:00:00:24:ff:2f:d1:f0; na</p> <p>FC4s: FCP</p>	<p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5</p> <p>DVpr11 db8"</p> <p>Fabric Port Name: 2e:14:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:e8 Port Index: 276 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019d40; 3;21:00:00:1b:32:92:78:19;20:00:00:1b:32:92:78:19; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data56" Fabric Port Name: 20:9f:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:40 Port Index: 159 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 019fc0; 3;10:00:00:00:c9:94:99:68;20:00:00:00:c9:94:99:68; na</p>

na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db11" Fabric Port Name: 2e:17:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:68 Port Index: 279 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a140; 3;10:00:00:00:c9:94:9b:59;20:00:00:00:c9:94:9b:59; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db24" Fabric Port Name: 20:a1:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:59 Port Index: 161 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a1c0; 3;10:00:00:00:c9:94:9b:58;20:00:00:00:c9:94:9b:58; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db24" Fabric Port Name: 2e:29:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:58 Port Index: 297 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a240; 3;10:00:00:00:c9:94:9b:21;20:00:00:00:c9:94:9b:21; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:a2:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:21 Port Index: 162 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a2c0; 3;10:00:00:00:c9:94:9b:20;20:00:00:00:c9:94:9b:20; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:2a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:20 Port Index: 298 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a340;	3;10:00:00:00:c9:94:99:51;20:00:00:00:c9:94:99:51; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db17" Fabric Port Name: 20:a3:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:51 Port Index: 163 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a3c0; 3;10:00:00:00:c9:94:99:50;20:00:00:00:c9:94:99:50; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db17" Fabric Port Name: 2e:2b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:50 Port Index: 299 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a440; 3;10:00:00:00:c9:94:99:15;20:00:00:00:c9:94:99:15; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:a4:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:15 Port Index: 164 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a4c0; 3;10:00:00:00:c9:94:99:14;20:00:00:00:c9:94:99:14; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:2c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:14 Port Index: 300 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a540; 3;10:00:00:00:c9:94:99:09;20:00:00:00:c9:94:99:09; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db10" Fabric Port Name: 20:a5:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:09 Port Index: 165 Share Area: Yes Device Shared in Other AD: No Redirect: No	N 01a5c0; 3;10:00:00:00:c9:94:99:08;20:00:00:00:c9:94:99:08; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db10" Fabric Port Name: 2e:2d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:08 Port Index: 301 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a640; 3;10:00:00:00:c9:94:99:ed;20:00:00:00:c9:94:99:ed; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:a6:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:ed Port Index: 166 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a6c0; 3;10:00:00:00:c9:94:99:ec;20:00:00:00:c9:94:99:ec; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:2e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:ec Port Index: 302 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a740; 3;10:00:00:00:c9:94:9d:a5;20:00:00:00:c9:94:9d:a5; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db3" Fabric Port Name: 20:a7:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:a5 Port Index: 167 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01a7c0; 3;10:00:00:00:c9:94:9d:a4;20:00:00:00:c9:94:9d:a4; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db3" Fabric Port Name: 2e:2f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:a4 Port Index: 303 Share Area: Yes Device Shared in Other AD: No
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<p>Redirect: No N 01a840; 3;21:00:00:1b:32:9b:13:6b;20:00:00:1b:32:9b:13:6b; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data6" Fabric Port Name: 20:a8:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:9b:13:6b Port Index: 168 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01a8c0; 3;21:00:00:24:ff:30:3c:84;20:00:00:24:ff:30:3c:84; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data62" Fabric Port Name: 2e:20:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3c:84 Port Index: 288 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01a940; 3;21:00:00:24:ff:2f:d2:6f;20:00:00:24:ff:2f:d2:6f; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data13" Fabric Port Name: 20:a9:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:6f Port Index: 169 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01a9c0; 3;21:00:00:24:ff:30:1b:80;20:00:00:24:ff:30:1b:80; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data69" Fabric Port Name: 2e:21:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1b:80 Port Index: 289 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01aa40; 3;21:00:00:24:ff:2f:d1:ef;20:00:00:24:ff:2f:d1:ef; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data20" Fabric Port Name: 20:aa:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:ef Port Index: 170 Share Area: Yes</p>	<p>Device Shared in Other AD: No Redirect: No</p> <p>N 01ab40; 3;21:00:00:24:ff:20:7c:e4;20:00:00:24:ff:20:7c:e4; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data27" Fabric Port Name: 20:ab:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7c:e4 Port Index: 171 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01ac40; 3;21:00:00:24:ff:2f:d2:78;20:00:00:24:ff:2f:d2:78; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data34" Fabric Port Name: 20:ac:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:78 Port Index: 172 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01ad40; 3;21:00:00:24:ff:30:3b:22;20:00:00:24:ff:30:3b:22; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data41" Fabric Port Name: 20:ad:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:22 Port Index: 173 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01adc0; 3;10:00:00:00:c9:94:ae:88;20:00:00:00:c9:94:ae:88; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db24" Fabric Port Name: 2e:25:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:88 Port Index: 293 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01ae40; 3;21:00:00:1b:32:92:22:18;20:00:00:1b:32:92:22:18; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data48" Fabric Port Name: 20:ae:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:22:18 Port Index: 174</p>	<p>Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01aec0; 3;10:00:00:00:c9:94:9b:ec;20:00:00:00:c9:94:9b:ec; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db17" Fabric Port Name: 2e:26:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:ec Port Index: 294 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01af40; 3;21:00:00:24:ff:30:1c:5c;20:00:00:24:ff:30:1c:5c; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data55" Fabric Port Name: 20:af:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:5c Port Index: 175 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01afc0; 3;10:00:00:00:c9:94:9d:00;20:00:00:00:c9:94:9d:00; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db10" Fabric Port Name: 2e:27:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:00 Port Index: 295 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01b040; 3;10:00:00:00:c9:94:9a:21;20:00:00:00:c9:94:9a:21; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db27" Fabric Port Name: 20:b0:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:21 Port Index: 176 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01b0c0; 3;10:00:00:00:c9:94:9a:20;20:00:00:00:c9:94:9a:20; na</p> <p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db27" Fabric Port Name: 2e:38:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:20</p>
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Port Index: 312 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b140; 3;10:00:00:00:c9:94:9d:85;20:00:00:00:c9:94:9d:85; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:b1:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:85 Port Index: 177 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b1c0; 3;10:00:00:00:c9:94:9d:84;20:00:00:00:c9:94:9d:84; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:39:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:84 Port Index: 313 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b240; 3;10:00:00:00:c9:94:9a:f1;20:00:00:00:c9:94:9a:f1; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db20" Fabric Port Name: 20:b2:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:f1 Port Index: 178 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b2c0; 3;10:00:00:00:c9:94:9a:f0;20:00:00:00:c9:94:9a:f0; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db20" Fabric Port Name: 2e:3a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:f0 Port Index: 314 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b340; 3;10:00:00:00:c9:94:9d:9d;20:00:00:00:c9:94:9d:9d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:b3:00:05:1e:ec:50:00	Permanent Port Name: 10:00:00:00:c9:94:9d:9d Port Index: 179 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b3c0; 3;10:00:00:00:c9:94:9d:9c;20:00:00:00:c9:94:9d:9c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:3b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:9c Port Index: 315 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b440; 3;10:00:00:00:c9:94:99:35;20:00:00:00:c9:94:99:35; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db13" Fabric Port Name: 20:b4:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:35 Port Index: 180 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b4c0; 3;10:00:00:00:c9:94:99:34;20:00:00:00:c9:94:99:34; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db13" Fabric Port Name: 2e:3c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:34 Port Index: 316 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b540; 3;10:00:00:00:c9:94:99:c9;20:00:00:00:c9:94:99:c9; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:b5:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:c9 Port Index: 181 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b5c0; 3;10:00:00:00:c9:94:99:c8;20:00:00:00:c9:94:99:c8; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:b3:00:05:1e:ec:50:00	Fabric Port Name: 2e:3d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:c8 Port Index: 317 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b640; 3;10:00:00:00:c9:94:9b:4d;20:00:00:00:c9:94:9b:4d; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db6" Fabric Port Name: 20:b6:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:4d Port Index: 182 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b6c0; 3;10:00:00:00:c9:94:9b:4c;20:00:00:00:c9:94:9b:4c; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db6" Fabric Port Name: 2e:3e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:4c Port Index: 318 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b740; 3;10:00:00:00:c9:94:9b:7d;20:00:00:00:c9:94:9b:7d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:b7:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:7d Port Index: 183 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b7c0; 3;10:00:00:00:c9:94:9b:7c;20:00:00:00:c9:94:9b:7c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:3f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:7c Port Index: 319 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b840; 3;21:00:00:24:ff:2f:d3:26;20:00:00:24:ff:2f:d3:26; na FC4s: FCP PortSymb: [6] "qlt0,0"
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NodeSymb: [5] "data5" Fabric Port Name: 20:b8:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d3:26 Port Index: 184 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b8c0; 3;21:00:00:24:ff:30:1c:d6;20:00:00:24:ff:30:1c:d6; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data61" Fabric Port Name: 2e:30:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:d6 Port Index: 304 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b940; 3;21:00:00:24:ff:2f:d2:c5;20:00:00:24:ff:2f:d2:c5; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data12" Fabric Port Name: 20:b9:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:c5 Port Index: 185 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01b9c0; 3;21:00:00:1b:32:92:bb:19;20:00:00:1b:32:92:bb:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data68" Fabric Port Name: 2e:31:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:bb:19 Port Index: 305 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ba40; 3;21:00:00:24:ff:2f:d2:01;20:00:00:24:ff:2f:d2:01; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data19" Fabric Port Name: 20:ba:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:01 Port Index: 186 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bb40; 3;21:00:00:24:ff:20:74:4c;20:00:00:24:ff:20:74:4c; na FC4s: FCP	PortSymb: [6] "qlt0,0" NodeSymb: [6] "data26" Fabric Port Name: 20:bb:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:4c Port Index: 187 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bc40; 3;21:00:00:24:ff:20:75:5c;20:00:00:24:ff:20:75:5c; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data33" Fabric Port Name: 20:bc:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:75:5c Port Index: 188 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bcc0; 3;10:00:00:00:c9:94:ae:50;20:00:00:00:c9:94:ae:50; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db6" Fabric Port Name: 2e:34:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:50 Port Index: 308 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bd40; 3;21:00:00:1b:32:92:f0:19;20:00:00:1b:32:92:f0:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data40" Fabric Port Name: 20:bd:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:f0:19 Port Index: 189 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bdc0; 3;10:00:00:00:c9:94:ae:e0;20:00:00:00:c9:94:ae:e0; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db23" Fabric Port Name: 2e:35:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:e0 Port Index: 309 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01be40; 3;21:00:00:1b:32:92:c2:19;20:00:00:1b:32:92:c2:19; na	FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data47" Fabric Port Name: 20:be:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:c2:19 Port Index: 190 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bec0; 3;10:00:00:00:c9:94:99:9c;20:00:00:00:c9:94:99:9c; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db16" Fabric Port Name: 2e:36:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:9c Port Index: 310 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bf40; 3;21:00:00:24:ff:30:1b:7e;20:00:00:24:ff:30:1b:7e; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data54" Fabric Port Name: 20:bf:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1b:7e Port Index: 191 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01bfc0; 3;10:00:00:00:c9:94:9a:c0;20:00:00:00:c9:94:9a:c0; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db9" Fabric Port Name: 2e:37:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:c0 Port Index: 311 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c040; 3;10:00:00:00:c9:94:9c:45;20:00:00:00:c9:94:9c:45; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:c0:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:45 Port Index: 192 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c0c0; 3;10:00:00:00:c9:94:9c:44;20:00:00:00:c9:94:9c:44;
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na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:48:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:44 Port Index: 328 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c140; 3;10:00:00:00:c9:94:9a:29;20:00:00:00:c9:94:9a:29; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db23" Fabric Port Name: 20:c1:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:29 Port Index: 193 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c1c0; 3;10:00:00:00:c9:94:9a:28;20:00:00:00:c9:94:9a:28; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db23" Fabric Port Name: 2e:49:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:28 Port Index: 329 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c240; 3;10:00:00:00:c9:94:9d:4d;20:00:00:00:c9:94:9d:4d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:c2:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:4d Port Index: 194 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c2c0; 3;10:00:00:00:c9:94:9d:4c;20:00:00:00:c9:94:9d:4c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:4a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:4c Port Index: 330 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c340;	3;10:00:00:00:c9:94:99:fd;20:00:00:00:c9:94:99:fd; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db16" Fabric Port Name: 20:c3:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:fd Port Index: 195 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c3c0; 3;10:00:00:00:c9:94:99:fc;20:00:00:00:c9:94:99:fc; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db16" Fabric Port Name: 2e:4b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:fc Port Index: 331 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c440; 3;10:00:00:00:c9:94:9a:2d;20:00:00:00:c9:94:9a:2d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:c4:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:2d Port Index: 196 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c4c0; 3;10:00:00:00:c9:94:9a:2c;20:00:00:00:c9:94:9a:2c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:4c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:2c Port Index: 332 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c540; 3;10:00:00:00:c9:94:af:2d;20:00:00:00:c9:94:af:2d; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db9" Fabric Port Name: 20:c5:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:2d Port Index: 197 Share Area: Yes Device Shared in Other AD: No Redirect: No	N 01c5c0; 3;10:00:00:00:c9:94:af:2c;20:00:00:00:c9:94:af:2c; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db9" Fabric Port Name: 2e:4d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:2c Port Index: 333 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c640; 3;10:00:00:00:c9:94:90:6d;20:00:00:00:c9:94:90:6d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:c6:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:6d Port Index: 198 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c6c0; 3;10:00:00:00:c9:94:90:6c;20:00:00:00:c9:94:90:6c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:4e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:6c Port Index: 334 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c740; 3;10:00:00:00:c9:94:9b:25;20:00:00:00:c9:94:9b:25; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db2" Fabric Port Name: 20:c7:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:25 Port Index: 199 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c7c0; 3;10:00:00:00:c9:94:9b:24;20:00:00:00:c9:94:9b:24; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:4f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:24 Port Index: 335 Share Area: Yes Device Shared in Other AD: No
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<p>Redirect: No N 01c840; 3;21:00:00:24:ff:2f:d3:1e;20:00:00:24:ff:2f:d3:1e; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data4" Fabric Port Name: 20:c8:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d3:1e Port Index: 200 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c8c0; 3;21:00:00:24:ff:30:1c:48;20:00:00:24:ff:30:1c:48; na FC4s: FCP Fabric Port Name: 2e:40:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:48 Port Index: 320 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c940; 3;21:00:00:24:ff:20:7d:cc;20:00:00:24:ff:20:7d:cc; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data11" Fabric Port Name: 20:c9:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:cc Port Index: 201 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01c9c0; 3;21:00:00:24:ff:30:1b:ac;20:00:00:24:ff:30:1b:ac; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data67" Fabric Port Name: 2e:41:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1b:ac Port Index: 321 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ca40; 3;21:00:00:24:ff:2f:d2:96;20:00:00:24:ff:2f:d2:96; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data18" Fabric Port Name: 20:ca:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:96 Port Index: 202 Share Area: Yes Device Shared in Other AD: No Redirect: No</p>	<p>N 01cac0; 3;10:00:00:00:c9:94:99:b0;20:00:00:00:c9:94:99:b0; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db7" Fabric Port Name: 2e:42:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:b0 Port Index: 322 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01cb40; 3;21:00:00:24:ff:20:7d:d0;20:00:00:24:ff:20:7d:d0; na FC4s: FCP Fabric Port Name: 20:cb:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:d0 Port Index: 203 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01cc40; 3;21:00:00:24:ff:2f:d1:dc;20:00:00:24:ff:2f:d1:dc; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data32" Fabric Port Name: 20:cc:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:dc Port Index: 204 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ccc0; 3;10:00:00:00:c9:94:af:dc;20:00:00:00:c9:94:af:dc; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db5" Fabric Port Name: 2e:44:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:dc Port Index: 324 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01cd40; 3;21:00:00:1b:32:92:2d:1a;20:00:00:1b:32:92:2d:1a; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data39" Fabric Port Name: 20:cd:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:2d:1a Port Index: 205 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01cdc0;</p>	<p>3;10:00:00:00:c9:94:af:c8;20:00:00:00:c9:94:af:c8; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db22" Fabric Port Name: 2e:45:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:c8 Port Index: 325 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ce40; 3;21:00:00:1b:32:92:13:19;20:00:00:1b:32:92:13:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data46" Fabric Port Name: 20:ce:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:13:19 Port Index: 206 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01cec0; 3;10:00:00:00:c9:94:99:d8;20:00:00:00:c9:94:99:d8; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db15" Fabric Port Name: 2e:46:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:d8 Port Index: 326 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01cf40; 3;21:00:00:24:ff:30:1c:aa;20:00:00:24:ff:30:1c:aa; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data53" Fabric Port Name: 20:cf:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:aa Port Index: 207 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01d040; 3;10:00:00:00:c9:94:9c:e1;20:00:00:00:c9:94:9c:e1; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db26" Fabric Port Name: 20:d0:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:e1 Port Index: 208 Share Area: Yes Device Shared in Other AD: No Redirect: No</p>
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<p>N 01d0c0; 3;10:00:00:00:c9:94:9c:e0;20:00:00:00:c9:94:9c:e0; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db26" Fabric Port Name: 2e:58:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:e0 Port Index: 344 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d140; 3;10:00:00:00:c9:94:90:e5;20:00:00:00:c9:94:90:e5; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:d1:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:e5 Port Index: 209 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d1c0; 3;10:00:00:00:c9:94:90:e4;20:00:00:00:c9:94:90:e4; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:59:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:e4 Port Index: 345 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d240; 3;10:00:00:00:c9:94:99:b5;20:00:00:00:c9:94:99:b5; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db19" Fabric Port Name: 20:d2:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:b5 Port Index: 210 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d2c0; 3;10:00:00:00:c9:94:99:b4;20:00:00:00:c9:94:99:b4; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db19" Fabric Port Name: 2e:5a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:b4 Port Index: 346 Share Area: Yes Device Shared in Other AD: No</p>	<p>Redirect: No</p> <p>N 01d340; 3;10:00:00:00:c9:94:9c:25;20:00:00:00:c9:94:9c:25; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db16" Fabric Port Name: 20:d3:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:25 Port Index: 211 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d3c0; 3;10:00:00:00:c9:94:9c:24;20:00:00:00:c9:94:9c:24; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:5b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:24 Port Index: 347 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d440; 3;10:00:00:00:c9:94:90:cd;20:00:00:00:c9:94:90:cd; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db12" Fabric Port Name: 20:d4:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:cd Port Index: 212 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d4c0; 3;10:00:00:00:c9:94:90:cc;20:00:00:00:c9:94:90:cc; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db12" Fabric Port Name: 2e:5c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:cc Port Index: 348 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d540; 3;10:00:00:00:c9:94:9c:f9;20:00:00:00:c9:94:9c:f9; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:d5:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:f9 Port Index: 213 Share Area: Yes</p>	<p>Device Shared in Other AD: No Redirect: No</p> <p>N 01d5c0; 3;10:00:00:00:c9:94:9c:f8;20:00:00:00:c9:94:9c:f8; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:5d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:f8 Port Index: 349 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d640; 3;10:00:00:00:c9:94:99:2d;20:00:00:00:c9:94:99:2d; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db5" Fabric Port Name: 20:d6:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:2d Port Index: 214 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d6c0; 3;10:00:00:00:c9:94:99:2c;20:00:00:00:c9:94:99:2c; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db5" Fabric Port Name: 2e:5e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:2c Port Index: 350 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d740; 3;10:00:00:00:c9:94:91:0d;20:00:00:00:c9:94:91:0d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:d7:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:91:0d Port Index: 215 Share Area: Yes Device Shared in Other AD: No Redirect: No</p> <p>N 01d7c0; 3;10:00:00:00:c9:94:91:0c;20:00:00:00:c9:94:91:0c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:5f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:91:0c Port Index: 351</p>
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<p>Share Area: Yes Device Shared in Other AD: No Redirect: No N 01d840; 3;21:00:00:24:ff:2f:d2:52;20:00:00:24:ff:2f:d2:52; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data3" Fabric Port Name: 20:d8:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:52 Port Index: 216 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01d8c0; 3;21:00:00:24:ff:30:1c:a0;20:00:00:24:ff:30:1c:a0; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data59" Fabric Port Name: 2e:50:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:a0 Port Index: 336 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01d940; 3;21:00:00:24:ff:2f:d2:ca;20:00:00:24:ff:2f:d2:ca; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data10" Fabric Port Name: 20:d9:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:ca Port Index: 217 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01d9c0; 3;21:00:00:24:ff:20:07:76;20:00:00:24:ff:20:07:76; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data66" Fabric Port Name: 2e:51:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:07:76 Port Index: 337 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01da40; 3;21:00:00:24:ff:2f:d1:f6;20:00:00:24:ff:2f:d1:f6; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data17" Fabric Port Name: 20:da:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:f6</p>	<p>Port Index: 218 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01db40; 3;21:00:00:24:ff:2f:d2:e4;20:00:00:24:ff:2f:d2:e4; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data24" Fabric Port Name: 20:db:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:e4 Port Index: 219 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01dbc0; 3;10:00:00:00:c9:94:99:44;20:00:00:00:c9:94:99:44; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db27" Fabric Port Name: 2e:53:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:44 Port Index: 339 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01dc40; 3;21:00:00:24:ff:20:74:30;20:00:00:24:ff:20:74:30; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data31" Fabric Port Name: 20:dc:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:30 Port Index: 220 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01dcc0; 3;10:00:00:00:c9:94:ae:f4;20:00:00:00:c9:94:ae:f4; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db4" Fabric Port Name: 2e:54:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:f4 Port Index: 340 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01dd40; 3;21:00:00:1b:32:92:41:18;20:00:00:1b:32:92:41:18; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data38" Fabric Port Name: 20:dd:00:05:1e:ec:50:00</p>	<p>Permanent Port Name: 21:00:00:1b:32:92:41:18 Port Index: 221 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ddc0; 3;10:00:00:00:c9:94:af:58;20:00:00:00:c9:94:af:58; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db21" Fabric Port Name: 2e:55:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:58 Port Index: 341 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01de40; 3;21:00:00:1b:32:92:8f:19;20:00:00:1b:32:92:8f:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data45" Fabric Port Name: 20:de:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:8f:19 Port Index: 222 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01dec0; 3;10:00:00:00:c9:94:9d:64;20:00:00:00:c9:94:9d:64; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db14" Fabric Port Name: 2e:56:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:64 Port Index: 342 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01df40; 3;21:00:00:1b:32:92:14:19;20:00:00:1b:32:92:14:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data52" Fabric Port Name: 20:df:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:14:19 Port Index: 223 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e040; 3;10:00:00:00:c9:94:9d:2d;20:00:00:00:c9:94:9d:2d; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 "</p>
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<p>Fabric Port Name: 20:e0:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:2d Port Index: 224 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e0c0; 3;10:00:00:00:c9:94:9d:2c;20:00:00:00:c9:94:9d:2c; na</p>	<p>DVpr11 " Fabric Port Name: 2e:6a:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:38 Port Index: 362 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e340; 3;10:00:00:00:c9:94:99:f9;20:00:00:00:c9:94:99:f9; na</p>	<p>NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db8" Fabric Port Name: 20:e5:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:01 Port Index: 229 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e5c0; 3;10:00:00:00:c9:94:9a:00;20:00:00:00:c9:94:9a:00; na</p>
<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:68:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:2c Port Index: 360 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e140; 3;10:00:00:00:c9:94:9d:35;20:00:00:00:c9:94:9d:35; na</p>	<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db15" Fabric Port Name: 20:e3:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:f9 Port Index: 227 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e3c0; 3;10:00:00:00:c9:94:99:f8;20:00:00:00:c9:94:99:f8; na</p>	<p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db8" Fabric Port Name: 2e:6d:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:00 Port Index: 365 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e640; 3;10:00:00:00:c9:94:91:15;20:00:00:00:c9:94:91:15; na</p>
<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db22" Fabric Port Name: 20:e1:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:35 Port Index: 225 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e1c0; 3;10:00:00:00:c9:94:9d:34;20:00:00:00:c9:94:9d:34; na</p>	<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db15" Fabric Port Name: 2e:6b:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:f8 Port Index: 363 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e440; 3;10:00:00:00:c9:94:90:9d;20:00:00:00:c9:94:90:9d; na</p>	<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:e6:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:91:15 Port Index: 230 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e6c0; 3;10:00:00:00:c9:94:9b:30;20:00:00:00:c9:94:9b:30; na</p>
<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db22" Fabric Port Name: 2e:69:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:34 Port Index: 361 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e240; 3;10:00:00:00:c9:94:99:39;20:00:00:00:c9:94:99:39; na</p>	<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:e4:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:9d Port Index: 228 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e4c0; 3;10:00:00:00:c9:94:90:9c;20:00:00:00:c9:94:90:9c; na</p>	<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:6e:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:30 Port Index: 366 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e740; 3;10:00:00:00:c9:94:9a:89;20:00:00:00:c9:94:9a:89; na</p>
<p>FC4s: FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db19" Fabric Port Name: 20:e2:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:39 Port Index: 226 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e2c0; 3;10:00:00:00:c9:94:99:38;20:00:00:00:c9:94:99:38; na</p>	<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:6c:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:90:9c Port Index: 364 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e540; 3;10:00:00:00:c9:94:9a:01;20:00:00:00:c9:94:9a:01; na</p>	<p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db1" Fabric Port Name: 20:e7:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:89 Port Index: 231 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e7c0; 3;10:00:00:00:c9:94:9a:88;20:00:00:00:c9:94:9a:88; na</p>
<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>FC4s: IPFC FCP</p>	<p>FC4s: IPFC FCP</p>

<p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db1" Fabric Port Name: 2e:6f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9a:88 Port Index: 367 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e840; 3;21:00:00:24:ff:2f:d2:6a;20:00:00:24:ff:2f:d2:6a; na</p>	<p>na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data16" Fabric Port Name: 20:ea:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:56 Port Index: 234 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01eb40; 3;21:00:00:24:ff:20:74:52;20:00:00:24:ff:20:74:52; na</p>	<p>3;21:00:00:1b:32:92:68:19;20:00:00:1b:32:92:68:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data37" Fabric Port Name: 20:ed:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:68:19 Port Index: 237 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01edc0; 3;10:00:00:00:c9:94:ae:d8;20:00:00:00:c9:94:ae:d8; na</p>
<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data2" Fabric Port Name: 20:e8:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:6a Port Index: 232 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e8c0; 3;21:00:00:24:ff:30:3b:44;20:00:00:24:ff:30:3b:44; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data23" Fabric Port Name: 20:eb:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:52 Port Index: 235 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ebc0; 3;10:00:00:00:c9:94:9d:20;20:00:00:00:c9:94:9d:20; na</p>	<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db20" Fabric Port Name: 2e:65:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:ae:d8 Port Index: 357 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ee40; 3;21:00:00:24:ff:2f:d1:fd;20:00:00:24:ff:2f:d1:fd; na</p>
<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data58" Fabric Port Name: 2e:60:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:3b:44 Port Index: 352 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e940; 3;21:00:00:24:ff:20:74:3a;20:00:00:24:ff:20:74:3a; na</p>	<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db26" Fabric Port Name: 2e:63:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9d:20 Port Index: 355 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ec40; 3;21:00:00:1b:32:92:12:1a;20:00:00:1b:32:92:12:1a; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "data44" Fabric Port Name: 20:ee:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:fd Port Index: 238 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01eec0; 3;10:00:00:00:c9:94:9b:e0;20:00:00:00:c9:94:9b:e0; na</p>
<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data9" Fabric Port Name: 20:e9:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:3a Port Index: 233 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01e9c0; 3;21:00:00:24:ff:20:6a:b8;20:00:00:24:ff:20:6a:b8; na</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data30" Fabric Port Name: 20:ec:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:12:1a Port Index: 236 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ecc0; 3;10:00:00:00:c9:94:99:e4;20:00:00:00:c9:94:99:e4; na</p>	<p>FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db13" Fabric Port Name: 2e:66:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:e0 Port Index: 358 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ef40; 3;21:00:00:1b:32:92:21:18;20:00:00:1b:32:92:21:18; na</p>
<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data65" Fabric Port Name: 2e:61:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:6a:b8 Port Index: 353 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ea40; 3;21:00:00:24:ff:20:7d:56;20:00:00:24:ff:20:7d:56;</p>	<p>FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db3" Fabric Port Name: 2e:64:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:e4 Port Index: 356 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ed40;</p>	<p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data51" Fabric Port Name: 20:ef:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:21:18 Port Index: 239 Share Area: Yes Device Shared in Other AD: No Redirect: No</p>

N 01f040;
3;10:00:00:00:c9:94:99:f5;20:00:00:00:c9:94:99:f5;
na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5
DVpr11 db25"
Fabric Port Name: 20:f0:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:f5
Port Index: 240
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f0c0;
3;10:00:00:00:c9:94:99:f4;20:00:00:00:c9:94:99:f4;
na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5
DVpr11 db25"
Fabric Port Name: 2e:78:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:f4
Port Index: 376
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f140;
3;10:00:00:00:c9:94:99:bd;20:00:00:00:c9:94:99:bd;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 20:f1:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:bd
Port Index: 241
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f1c0;
3;10:00:00:00:c9:94:99:bc;20:00:00:00:c9:94:99:bc;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 2e:79:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:bc
Port Index: 377
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f240;
3;10:00:00:00:c9:94:9a:45;20:00:00:00:c9:94:9a:45;
na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5
DVpr11 db18"
Fabric Port Name: 20:f2:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9a:45
Port Index: 242
Share Area: Yes
Device Shared in Other AD: No

Redirect: No

N 01f2c0;
3;10:00:00:00:c9:94:9a:44;20:00:00:00:c9:94:9a:44;
na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5
DVpr11 db18"
Fabric Port Name: 2e:7a:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9a:44
Port Index: 378
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f340;
3;10:00:00:00:c9:94:9a:ed;20:00:00:00:c9:94:9a:ed;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 20:f3:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9a:ed
Port Index: 243
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f3c0;
3;10:00:00:00:c9:94:9a:ec;20:00:00:00:c9:94:9a:ec;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 2e:7b:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9a:ec
Port Index: 379
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f440;
3;10:00:00:00:c9:94:99:f1;20:00:00:00:c9:94:99:f1;
na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5
DVpr11 db11"
Fabric Port Name: 20:f4:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:f1
Port Index: 244
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f4c0;
3;10:00:00:00:c9:94:99:f0;20:00:00:00:c9:94:99:f0;
na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5
DVpr11 db11"
Fabric Port Name: 2e:7c:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:f0
Port Index: 380
Share Area: Yes

Device Shared in Other AD: No
Redirect: No

N 01f540;
3;10:00:00:00:c9:94:99:41;20:00:00:00:c9:94:99:41;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 20:f5:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:41
Port Index: 245
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f5c0;
3;10:00:00:00:c9:94:99:40;20:00:00:00:c9:94:99:40;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 2e:7d:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:99:40
Port Index: 381
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f640;
3;10:00:00:00:c9:94:9a:6d;20:00:00:00:c9:94:9a:6d;
na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5
DVpr11 db4"
Fabric Port Name: 20:f6:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9a:6d
Port Index: 246
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f6c0;
3;10:00:00:00:c9:94:9a:6c;20:00:00:00:c9:94:9a:6c;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 2e:7e:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9a:6c
Port Index: 382
Share Area: Yes
Device Shared in Other AD: No
Redirect: No

N 01f740;
3;10:00:00:00:c9:94:9b:0d;20:00:00:00:c9:94:9b:0d;
na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
DVpr11 "
Fabric Port Name: 20:f7:00:05:1e:ec:50:00
Permanent Port Name: 10:00:00:00:c9:94:9b:0d
Port Index: 247

<p>Share Area: Yes Device Shared in Other AD: No Redirect: No N 01f7c0; 3;10:00:00:00:c9:94:9b:0c;20:00:00:00:c9:94:9b:0c; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 2e:7f:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9b:0c Port Index: 383 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01f840; 3;21:00:00:1b:32:92:7c:19;20:00:00:1b:32:92:7c:19; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data1" Fabric Port Name: 20:f8:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:7c:19 Port Index: 248 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01f8c0; 3;21:00:00:24:ff:30:1c:e0;20:00:00:24:ff:30:1c:e0; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data57" Fabric Port Name: 2e:70:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:e0 Port Index: 368 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01f940; 3;21:00:00:24:ff:20:7d:b4;20:00:00:24:ff:20:7d:b4; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "data8" Fabric Port Name: 20:f9:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:7d:b4 Port Index: 249 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01f9c0; 3;21:00:00:24:ff:20:6a:c0;20:00:00:24:ff:20:6a:c0; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data64" Fabric Port Name: 2e:71:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:6a:c0</p>	<p>Port Index: 369 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fa40; 3;21:00:00:24:ff:2f:d2:c8;20:00:00:24:ff:2f:d2:c8; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data15" Fabric Port Name: 20:fa:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d2:c8 Port Index: 250 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fb40; 3;21:00:00:24:ff:2f:d1:f4;20:00:00:24:ff:2f:d1:f4; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data22" Fabric Port Name: 20:fb:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:2f:d1:f4 Port Index: 251 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fbc0; 3;10:00:00:00:c9:94:9c:1c;20:00:00:00:c9:94:9c:1c; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db25" Fabric Port Name: 2e:73:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:9c:1c Port Index: 371 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fc40; 3;21:00:00:24:ff:30:1c:52;20:00:00:24:ff:30:1c:52; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data29" Fabric Port Name: 20:fc:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:52 Port Index: 252 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fcc0; 3;10:00:00:00:c9:94:9d:40;20:00:00:00:c9:94:9d:40; na FC4s: IPFC FCP NodeSymb: [39] "Emulex LPem12002E-S FV1.11a5 DVpr11 db2" Fabric Port Name: 2e:74:00:05:1e:ec:50:00</p>	<p>Permanent Port Name: 10:00:00:00:c9:94:9d:40 Port Index: 372 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fd40; 3;21:00:00:1b:32:92:57:18;20:00:00:1b:32:92:57:18; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data36" Fabric Port Name: 20:fd:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:1b:32:92:57:18 Port Index: 253 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fdc0; 3;10:00:00:00:c9:94:af:10;20:00:00:00:c9:94:af:10; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db19" Fabric Port Name: 2e:75:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:af:10 Port Index: 373 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fe40; 3;21:00:00:24:ff:30:1c:4e;20:00:00:24:ff:30:1c:4e; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data43" Fabric Port Name: 20:fe:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:30:1c:4e Port Index: 254 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01fec0; 3;10:00:00:00:c9:94:99:1c;20:00:00:00:c9:94:99:1c; na FC4s: IPFC FCP NodeSymb: [40] "Emulex LPem12002E-S FV1.11a5 DVpr11 db12" Fabric Port Name: 2e:76:00:05:1e:ec:50:00 Permanent Port Name: 10:00:00:00:c9:94:99:1c Port Index: 374 Share Area: Yes Device Shared in Other AD: No Redirect: No N 01ff40; 3;21:00:00:24:ff:20:74:46;20:00:00:24:ff:20:74:46; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "data50"</p>
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<pre> Fabric Port Name: 20:ff:00:05:1e:ec:50:00 Permanent Port Name: 21:00:00:24:ff:20:74:46 Port Index: 255 Share Area: Yes Device Shared in Other AD: No Redirect: No The Local Name Server has 300 entries } </pre>	<pre> 1,220; 1,221; 1,222; 1,223; 1,224; 1,225; 1,226; 1,227; 1,228; 1,229; 1,230; 1,231; 1,232; 1,233; 1,234; 1,235; 1,236; 1,237; 1,238; 1,239; 1,240; 1,241; 1,242; 1,243; 1,244; 1,245; 1,246; 1,247; 1,248; 1,249; 1,250; 1,251; 1,252; 1,253; 1,254; 1,255; 1,272; 1,273; 1,274; 1,275; 1,276; 1,277; 1,278; 1,279; 1,280; 1,281; 1,282; 1,283; 1,284; 1,285; 1,286; 1,287; 1,288; 1,289; 1,290; 1,291; 1,292; 1,293; 1,294; 1,295; 1,296; 1,297; 1,298; 1,299; 1,300; 1,301; 1,302; 1,303; 1,304; 1,305; 1,306; 1,307; 1,308; 1,309; 1,310; 1,311; 1,312; 1,313; 1,314; 1,315; 1,316; 1,317; 1,318; 1,319; 1,320; 1,321; 1,322; 1,323; 1,324; 1,325; 1,326; 1,327; 1,328; 1,329; 1,330; 1,331; 1,332; 1,333; 1,334; 1,335; 1,336; 1,337; 1,338; 1,339; 1,340; 1,341; 1,342; 1,343; 1,344; 1,345; 1,346; 1,347; 1,348; 1,349; 1,350; 1,351; 1,352; 1,353; 1,354; 1,355; 1,356; 1,357; 1,358; 1,359; 1,360; 1,361; 1,362; 1,363; 1,364; 1,365; 1,366; 1,367; 1,368; 1,369; 1,370; 1,371; 1,372; 1,373; 1,374; 1,375; 1,376; 1,377; 1,378; 1,379; 1,380; 1,381; 1,382; 1,383 zone: FourNode_A 1,16; 1,28; 1,32; 1,48; 1,60; 1,64; 1,65; 1,76; 1,81; 1,92; 1,96; 1,97; 1,112; 1,113; 1,151; 1,152; 1,168; 1,182; 1,184; 1,198; 1,200; 1,201; 1,214; 1,217; 1,229; 1,230; 1,232; 1,233; 1,245; 1,246; 1,248; 1,249; 1,276; 1,287; 1,308; 1,318; 1,324; 1,334; 1,340; 1,350; 1,365; 1,366; 1,381; 1,382 zone: FourNode_AE 1,16; 1,23; 1,32; 1,39; 1,48; 1,55; 1,64; 1,65; 1,71; 1,72; 1,81; 1,87; 1,88; 1,96; 1,97; 1,103; 1,104; 1,112; 1,113; 1,120; 1,146; 1,151; 1,152; 1,159; 1,161; 1,162; 1,168; 1,175; 1,177; 1,182; 1,184; 1,191; 1,193; 1,198; 1,200; 1,201; 1,207; 1,209; 1,214; 1,217; 1,223; 1,225; 1,229; 1,230; 1,232; 1,233; 1,239; 1,241; 1,245; 1,246; 1,248; 1,249; 1,282; 1,287; 1,297; 1,298; 1,313; 1,318; 1,320; 1,329; 1,334; 1,336; 1,345; 1,350; </pre>	<pre> 1,352; 1,361; 1,365; 1,366; 1,368; 1,377; 1,381; 1,382 zone: FourNode_B 1,18; 1,19; 1,31; 1,35; 1,47; 1,51; 1,63; 1,67; 1,83; 1,99; 1,100; 1,115; 1,116; 1,126; 1,149; 1,154; 1,155; 1,165; 1,171; 1,181; 1,187; 1,197; 1,203; 1,212; 1,213; 1,219; 1,228; 1,235; 1,236; 1,244; 1,251; 1,252; 1,279; 1,285; 1,295; 1,301; 1,311; 1,317; 1,333; 1,348; 1,349; 1,364; 1,374; 1,380 zone: FourNode_C 1,20; 1,36; 1,52; 1,53; 1,62; 1,68; 1,69; 1,78; 1,84; 1,85; 1,94; 1,101; 1,110; 1,117; 1,148; 1,156; 1,164; 1,172; 1,180; 1,188; 1,189; 1,195; 1,196; 1,204; 1,205; 1,211; 1,220; 1,221; 1,227; 1,237; 1,243; 1,253; 1,284; 1,300; 1,310; 1,316; 1,326; 1,331; 1,332; 1,342; 1,347; 1,358; 1,363; 1,379 zone: FourNode_E 1,23; 1,39; 1,45; 1,55; 1,61; 1,71; 1,72; 1,77; 1,87; 1,88; 1,93; 1,103; 1,104; 1,120; 1,146; 1,159; 1,161; 1,162; 1,175; 1,177; 1,191; 1,193; 1,207; 1,209; 1,223; 1,225; 1,239; 1,241; 1,282; 1,293; 1,297; 1,298; 1,309; 1,313; 1,320; 1,325; 1,329; 1,336; 1,341; 1,345; 1,352; 1,361; 1,368; 1,377 zone: Four_Node_AB 1,16; 1,18; 1,19; 1,32; 1,35; 1,48; 1,51; 1,64; 1,65; 1,67; 1,81; 1,83; 1,96; 1,97; 1,99; 1,100; 1,112; 1,113; 1,115; 1,116; 1,149; 1,151; 1,152; 1,154; 1,155; 1,165; 1,168; 1,171; 1,181; 1,182; 1,184; 1,187; 1,197; 1,198; 1,200; 1,201; 1,203; 1,212; 1,213; 1,214; 1,217; 1,219; 1,228; 1,229; 1,230; 1,232; 1,233; 1,235; 1,236; 1,244; 1,245; 1,246; 1,248; 1,249; 1,251; 1,252; 1,285; 1,287; 1,301; 1,317; 1,318; 1,333; 1,334; 1,348; 1,349; 1,350; 1,364; 1,365; 1,366; 1,380; 1,381; 1,382 zone: Four_Node_BC 1,18; 1,19; 1,20; 1,35; 1,36; 1,51; 1,52; 1,53; 1,67; 1,68; 1,69; 1,83; 1,84; 1,85; 1,99; 1,100; 1,101; 1,115; 1,116; 1,117; 1,148; 1,149; 1,154; 1,155; 1,156; 1,164; 1,165; 1,171; </pre>
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Zoning Information

Defined configuration:

```

cfg: All_ports
      All_ports
cfg: Four_node_1
      db28_data12thru13_4paul;
db29_data14_4daveV; FourNode_A;
      FourNode_B; FourNode_C; FourNode_E;
John Henning
zone: All_ports
1,16; 1,17; 1,18; 1,19; 1,20; 1,21;
1,22; 1,23; 1,24; 1,25;
1,26; 1,27; 1,28; 1,29; 1,30; 1,31;
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; 1,50; 1,51;
1,52; 1,53; 1,54; 1,55;
1,56; 1,57; 1,58; 1,59; 1,60; 1,61;
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; 1,80; 1,81;
1,82; 1,83; 1,84; 1,85;
1,86; 1,87; 1,88; 1,89; 1,90; 1,91;
1,92; 1,93; 1,94; 1,95;
1,96; 1,97; 1,98; 1,99; 1,100;
1,101; 1,102; 1,103; 1,104;
1,105; 1,106; 1,107; 1,108; 1,109;
1,110; 1,111; 1,112; 1,113;
1,114; 1,115; 1,116; 1,117; 1,118;
1,119; 1,120; 1,121; 1,122;
1,123; 1,124; 1,125; 1,126; 1,127;
1,144; 1,145; 1,146; 1,147;
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1,153; 1,154; 1,155; 1,156;
1,157; 1,158; 1,159; 1,160; 1,161;
1,162; 1,163; 1,164; 1,165;
1,166; 1,167; 1,168; 1,169; 1,170;
1,171; 1,172; 1,173; 1,174;
1,175; 1,176; 1,177; 1,178; 1,179;
1,180; 1,181; 1,182; 1,183;
1,184; 1,185; 1,186; 1,187; 1,188;
1,189; 1,190; 1,191; 1,192;
1,193; 1,194; 1,195; 1,196; 1,197;
1,198; 1,199; 1,200; 1,201;
1,202; 1,203; 1,204; 1,205; 1,206;
1,207; 1,208; 1,209; 1,210;
1,211; 1,212; 1,213; 1,214; 1,215;
1,216; 1,217; 1,218; 1,219;

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1,172; 1,180; 1,181; 1,187; 1,188;	1,44	1,103
1,189; 1,195; 1,196; 1,197;	1,45	1,104
1,203; 1,204; 1,205; 1,211; 1,212;	1,46	1,105
1,213; 1,219; 1,220; 1,221;	1,47	1,106
1,227; 1,228; 1,235; 1,236; 1,237;	1,48	1,107
1,243; 1,244; 1,251; 1,252;	1,49	1,108
1,253; 1,284; 1,285; 1,300; 1,301;	1,50	1,109
1,316; 1,317; 1,331; 1,332;	1,51	1,110
1,333; 1,347; 1,348; 1,349; 1,363;	1,52	1,111
1,364; 1,379; 1,380	1,53	1,112
zone: John_Henning	1,54	1,113
1,145; 1,147; 1,150; 1,163; 1,166;	1,55	1,114
1,176; 1,178; 1,179; 1,192;	1,56	1,115
1,194; 1,199; 1,208; 1,210; 1,215;	1,57	1,116
1,224; 1,226; 1,231; 1,240;	1,58	1,117
1,242; 1,247; 1,250; 1,281; 1,283;	1,59	1,118
1,286; 1,299; 1,302; 1,312;	1,60	1,119
1,314; 1,315; 1,319; 1,328; 1,330;	1,61	1,120
1,335; 1,344; 1,346; 1,351;	1,62	1,121
1,360; 1,362; 1,367; 1,376; 1,378;	1,63	1,122
1,383	1,64	1,123
zone: db28_data12thru13_4paul	1,65	1,124
1,33; 1,49; 1,144; 1,160; 1,169;	1,66	1,125
1,185; 1,280; 1,296	1,67	1,126
zone: db29_data14_4daveV	1,68	1,127
1,17; 1,111; 1,127; 1,153; 1,359;	1,69	1,144
1,375	1,70	1,145
	1,71	1,146
Effective configuration:	1,72	1,147
cfg: All_Ports	1,73	1,148
zone: All_ports	1,74	1,149
1,16	1,75	1,150
1,17	1,76	1,151
1,18	1,77	1,152
1,19	1,78	1,153
1,20	1,79	1,154
1,21	1,80	1,155
1,22	1,81	1,156
1,23	1,82	1,157
1,24	1,83	1,158
1,25	1,84	1,159
1,26	1,85	1,160
1,27	1,86	1,161
1,28	1,87	1,162
1,29	1,88	1,163
1,30	1,89	1,164
1,31	1,90	1,165
1,32	1,91	1,166
1,33	1,92	1,167
1,34	1,93	1,168
1,35	1,94	1,169
1,36	1,95	1,170
1,37	1,96	1,171
1,38	1,97	1,172
1,39	1,98	1,173
1,40	1,99	1,174
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1,369
1,370


```

Slot 5/Port 19: cu
Slot 5/Port 20: cu
Slot 5/Port 21: cu
Slot 5/Port 22: cu
Slot 5/Port 23: cu
Slot 5/Port 24: cu
Slot 5/Port 25: cu
Slot 5/Port 26: cu
Slot 5/Port 27: cu
Slot 5/Port 28: cu
Slot 5/Port 29: cu
Slot 5/Port 30: cu
Slot 5/Port 31: cu
Slot 8/Port 0: cu
Slot 8/Port 1: cu
Slot 8/Port 2: cu
Slot 8/Port 3: cu
Slot 8/Port 4: cu
Slot 8/Port 5: cu
Slot 8/Port 6: cu
Slot 8/Port 7: cu
Slot 8/Port 8: cu
Slot 8/Port 9: cu
Slot 8/Port 10: cu
Slot 8/Port 11: cu
Slot 8/Port 12: cu
Slot 8/Port 13: cu
Slot 8/Port 14: cu
Slot 8/Port 15: cu
Slot 8/Port 16: cu
Slot 8/Port 17: cu
Slot 8/Port 18: cu
Slot 8/Port 19: cu
Slot 8/Port 20: cu
Slot 8/Port 21: cu
Slot 8/Port 22: cu
Slot 8/Port 23: cu
Slot 8/Port 24: cu
Slot 8/Port 25: cu
Slot 8/Port 26: cu
Slot 8/Port 27: cu
Slot 8/Port 28: cu
Slot 8/Port 29: cu
Slot 8/Port 30: cu
Slot 8/Port 31: cu

```

```

-----
1: fffc01 10:00:00:05:1e:ae:ec:50 10.196.0.100
0.0.0.0 >"b5300-1"

```

Current Switch Information

```

Ethernet IP Address: 10.196.0.100
Ethernet Subnetmask: 255.255.0.0
Fibre Channel IP Address: 0.0.0.0
Fibre Channel Subnetmask: 0.0.0.0
Gateway Address: 10.196.0.1
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
-----

```

List of Ports

```

switchName:    b5300-1
switchType:    64.3
switchState:   Online
switchMode:    Native
switchRole:    Principal
switchDomain:   1
switchId:      fffc01
switchWwn:     10:00:00:05:1e:ae:ec:50
zoning:        ON (ALL_DEVS)
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
	10:00:00:00:c9:94:9b:a1				F-Port
	1	1	id	N8	Online
	10:00:00:00:c9:94:9a:49				F-Port
	2	2	id	N8	Online
	10:00:00:00:c9:94:90:ad				F-Port
	3	3	id	N8	Online
	10:00:00:00:c9:94:9d:99				F-Port
	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:c9:94:99:b9					
9	9	id	N8	Online	F-Port
10:00:00:00:c9:94:99:8d					
10	10	id	N8	Online	F-Port
10:00:00:00:c9:94:99:a1					
11	11	id	N8	Online	F-Port
10:00:00:00:c9:94:99:59					
12	12	id	N8	No_Light	
13	13	id	N8	Online	F-Port
10:00:00:00:c9:94:9a:15					
14	14	id	N8	Online	F-Port
10:00:00:00:c9:94:99:81					
15	15	id	N8	Online	F-Port
10:00:00:00:c9:94:90:fd					
16	16	id	N8	Online	F-Port
10:00:00:00:c9:94:9d:75					
17	17	id	N8	Online	F-Port
10:00:00:00:c9:94:90:b5					
18	18	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:15					
19	19	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:31					
20	20	id	N8	Online	F-Port
10:00:00:00:c9:94:99:a9					
21	21	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:11					
22	22	id	N8	Online	F-Port
10:00:00:00:c9:94:99:a5					
23	23	id	N8	Online	F-Port
10:00:00:00:c9:94:af:39					
24	24	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:55					
25	25	id	N8	Online	F-Port
10:00:00:00:c9:94:9a:69					
26	26	id	N8	Online	F-Port
10:00:00:00:c9:94:91:19					
27	27	id	N8	Online	F-Port
10:00:00:00:c9:94:9a:7d					
28	28	id	N8	Online	F-Port
10:00:00:00:c9:94:9c:21					
29	29	id	N8	Online	F-Port
10:00:00:00:c9:94:90:d1					
30	30	id	N8	Online	F-Port
10:00:00:00:c9:94:90:a9					
31	31	id	N8	Online	F-Port
10:00:00:00:c9:94:90:85					
32	32	id	N8	No_Light	
33	33	id	N8	No_Light	
34	34	id	N8	No_Light	
35	35	id	N8	No_Light	
36	36	id	N8	No_Light	
37	37	id	N8	No_Light	
38	38	id	N8	No_Light	
39	39	id	N8	No_Light	
40	40	id	N8	No_Light	
41	41	id	N8	No_Light	

Brocade 5300-1 – REDO Log

Switch Information Report for b5300-1

List of Switches

Switch ID	Worldwide Name	Enet IP Addr
FC IP Addr	Name	

42	42	id	N8	No_Light		21:00:00:1b:32:92:4a:18		na
43	43	id	N8	No_Light		76 76 id N8 Online	F-Port	FC4s: IPFC FCP
44	44	id	N8	No_Light		21:00:00:24:ff:20:6a:ad		NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
45	45	id	N8	No_Light		77 77 id N8 Online	F-Port	DVpr11 "
46	46	id	N8	No_Light		21:00:00:24:ff:20:6a:ac		Fabric Port Name: 20:02:00:05:1e:ae:ec:50
47	47	id	N8	No_Light		78 78 id N8 Online	F-Port	Permanent Port Name: 10:00:00:00:c9:94:90:ad
48	48	id	N8	No_Light		21:00:00:24:ff:20:6a:d9		Port Index: 2
49	49	id	N8	No_Light		79 79 id N8 Online	F-Port	Share Area: No
50	50	id	N8	Online	F-Port	21:00:00:24:ff:20:6a:d8		Device Shared in Other AD: No
51	51	id	N8	Online	F-Port			Redirect: No
52	52	id	N8	Online	F-Port			N 010300;
53	53	id	N8	Online	F-Port			3;10:00:00:00:c9:94:9d:99;20:00:00:00:c9:94:9d:99;
54	54	id	N8	Online	F-Port			na
55	55	id	N8	Online	F-Port			FC4s: IPFC FCP
56	56	id	N8	Online	F-Port			NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
57	57	id	N8	Online	F-Port			DVpr11 "
58	58	id	N8	Online	F-Port			Fabric Port Name: 20:03:00:05:1e:ae:ec:50
59	59	id	N8	Online	F-Port			Permanent Port Name: 10:00:00:00:c9:94:9d:99
60	60	id	N8	Online	F-Port			Port Index: 3
61	61	id	N8	Online	F-Port			Share Area: No
62	62	id	N8	Online	F-Port			Device Shared in Other AD: No
63	63	id	N8	Online	F-Port			Redirect: No
64	64	id	N8	Online	F-Port			N 010800;
65	65	id	N8	Online	F-Port			3;10:00:00:00:c9:94:99:b9;20:00:00:00:c9:94:99:b9;
66	66	id	N8	Online	F-Port			na
67	67	id	N8	Online	F-Port			FC4s: IPFC FCP
68	68	id	N8	Online	F-Port			NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
69	69	id	N8	Online	F-Port			DVpr11 "
70	70	id	N8	Online	F-Port			Fabric Port Name: 20:08:00:05:1e:ae:ec:50
71	71	id	N8	Online	F-Port			Permanent Port Name: 10:00:00:00:c9:94:99:b9
72	72	id	N8	Online	F-Port			Port Index: 8
73	73	id	N8	Online	F-Port			Share Area: No
74	74	id	N8	Online	F-Port			Device Shared in Other AD: No
75	75	id	N8	Online	F-Port			Redirect: No
								N 010900;
								3;10:00:00:00:c9:94:99:8d;20:00:00:00:c9:94:99:8d;
								na
								FC4s: IPFC FCP
								NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
								DVpr11 "
								Fabric Port Name: 20:00:00:05:1e:ae:ec:50
								Permanent Port Name: 10:00:00:00:c9:94:9b:a1
								Port Index: 0
								Share Area: No
								Device Shared in Other AD: No
								Redirect: No
								N 010100;
								3;10:00:00:00:c9:94:9a:49;20:00:00:00:c9:94:9a:49;
								na
								FC4s: IPFC FCP
								NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
								DVpr11 "
								Fabric Port Name: 20:01:00:05:1e:ae:ec:50
								Permanent Port Name: 10:00:00:00:c9:94:9a:49
								Port Index: 1
								Share Area: No
								Device Shared in Other AD: No
								Redirect: No
								N 010200;
								3;10:00:00:00:c9:94:90:ad;20:00:00:00:c9:94:90:ad;
								na
								FC4s: IPFC FCP
								NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
								DVpr11 "
								Fabric Port Name: 20:0a:00:05:1e:ae:ec:50
								Permanent Port Name: 10:00:00:00:c9:94:99:a1
								Port Index: 10
								Share Area: No
								Device Shared in Other AD: No
								Redirect: No
								N 010b00;

<pre> 3;10:00:00:00:c9:94:99:59;20:00:00:00:c9:94:99:59; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:0b:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:99:59 Port Index: 11 Share Area: No Device Shared in Other AD: No Redirect: No N 010d00; </pre>	<pre> N 011100; 3;10:00:00:00:c9:94:90:b5;20:00:00:00:c9:94:90:b5; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:11:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:90:b5 Port Index: 17 Share Area: No Device Shared in Other AD: No Redirect: No N 011200; </pre>	<pre> Redirect: No N 011600; 3;10:00:00:00:c9:94:99:a5;20:00:00:00:c9:94:99:a5; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:16:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:99:a5 Port Index: 22 Share Area: No Device Shared in Other AD: No Redirect: No N 011700; </pre>
<pre> 3;10:00:00:00:c9:94:9a:15;20:00:00:00:c9:94:9a:15; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:0d:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9a:15 Port Index: 13 Share Area: No Device Shared in Other AD: No Redirect: No N 010e00; </pre>	<pre> N 011200; 3;10:00:00:00:c9:94:9b:15;20:00:00:00:c9:94:9b:15; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:12:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9b:15 Port Index: 18 Share Area: No Device Shared in Other AD: No Redirect: No N 011300; </pre>	<pre> 3;10:00:00:00:c9:94:af:39;20:00:00:00:c9:94:af:39; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:17:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:af:39 Port Index: 23 Share Area: No Device Shared in Other AD: No Redirect: No N 011800; </pre>
<pre> 3;10:00:00:00:c9:94:99:81;20:00:00:00:c9:94:99:81; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:0e:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:99:81 Port Index: 14 Share Area: No Device Shared in Other AD: No Redirect: No N 010f00; </pre>	<pre> N 011300; 3;10:00:00:00:c9:94:9b:31;20:00:00:00:c9:94:9b:31; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:13:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9b:31 Port Index: 19 Share Area: No Device Shared in Other AD: No Redirect: No N 011400; </pre>	<pre> 3;10:00:00:00:c9:94:9b:55;20:00:00:00:c9:94:9b:55; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:18:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9b:55 Port Index: 24 Share Area: No Device Shared in Other AD: No Redirect: No N 011900; </pre>
<pre> 3;10:00:00:00:c9:94:90:fd;20:00:00:00:c9:94:90:fd; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:0f:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:90:fd Port Index: 15 Share Area: No Device Shared in Other AD: No Redirect: No N 011000; </pre>	<pre> N 011400; 3;10:00:00:00:c9:94:99:a9;20:00:00:00:c9:94:99:a9; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:14:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:99:a9 Port Index: 20 Share Area: No Device Shared in Other AD: No Redirect: No N 011500; </pre>	<pre> 3;10:00:00:00:c9:94:9a:69;20:00:00:00:c9:94:9a:69; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:19:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9a:69 Port Index: 25 Share Area: No Device Shared in Other AD: No Redirect: No N 011a00; </pre>
<pre> 3;10:00:00:00:c9:94:9d:75;20:00:00:00:c9:94:9d:75; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:10:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9d:75 Port Index: 16 Share Area: No Device Shared in Other AD: No Redirect: No </pre>	<pre> N 011500; 3;10:00:00:00:c9:94:9b:11;20:00:00:00:c9:94:9b:11; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:15:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9b:11 Port Index: 21 Share Area: No Device Shared in Other AD: No </pre>	<pre> 3;10:00:00:00:c9:94:91:19;20:00:00:00:c9:94:91:19; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:1a:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:91:19 Port Index: 26 Share Area: No </pre>

<p>Device Shared in Other AD: No Redirect: No N 011b00; 3;10:00:00:00:c9:94:9a:7d;20:00:00:00:c9:94:9a:7d; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 "</p> <p>Fabric Port Name: 20:1b:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9a:7d Port Index: 27 Share Area: No Device Shared in Other AD: No Redirect: No N 011c00; 3;10:00:00:00:c9:94:9c:21;20:00:00:00:c9:94:9c:21; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 "</p> <p>Fabric Port Name: 20:1c:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:9c:21 Port Index: 28 Share Area: No Device Shared in Other AD: No Redirect: No N 011d00; 3;10:00:00:00:c9:94:90:d1;20:00:00:00:c9:94:90:d1; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 "</p> <p>Fabric Port Name: 20:1d:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:90:d1 Port Index: 29 Share Area: No Device Shared in Other AD: No Redirect: No N 011e00; 3;10:00:00:00:c9:94:90:a9;20:00:00:00:c9:94:90:a9; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 "</p> <p>Fabric Port Name: 20:1e:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:90:a9 Port Index: 30 Share Area: No Device Shared in Other AD: No Redirect: No N 011f00; 3;10:00:00:00:c9:94:90:85;20:00:00:00:c9:94:90:85; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 "</p> <p>Fabric Port Name: 20:1f:00:05:1e:ae:ec:50 Permanent Port Name: 10:00:00:00:c9:94:90:85 Port Index: 31</p>	<p>Share Area: No Device Shared in Other AD: No Redirect: No N 013200; 3;21:00:00:24:ff:2f:d1:ff;20:00:00:24:ff:2f:d1:ff; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo14" Fabric Port Name: 20:32:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:2f:d1:ff Port Index: 50 Share Area: No Device Shared in Other AD: No Redirect: No N 013300; 3;21:00:00:24:ff:2f:d1:fe;20:00:00:24:ff:2f:d1:fe; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo14" Fabric Port Name: 20:33:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:2f:d1:fe Port Index: 51 Share Area: No Device Shared in Other AD: No Redirect: No N 013400; 3;21:00:00:24:ff:20:6a:bd;20:00:00:24:ff:20:6a:bd; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo30" Fabric Port Name: 20:34:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:bd Port Index: 52 Share Area: No Device Shared in Other AD: No Redirect: No N 013500; 3;21:00:00:24:ff:20:6a:bc;20:00:00:24:ff:20:6a:bc; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo30" Fabric Port Name: 20:35:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:bc Port Index: 53 Share Area: No Device Shared in Other AD: No Redirect: No N 013600; 3;21:00:00:24:ff:20:6a:d3;20:00:00:24:ff:20:6a:d3; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo28" Fabric Port Name: 20:36:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:d3</p>	<p>Port Index: 54 Share Area: No Device Shared in Other AD: No Redirect: No N 013700; 3;21:00:00:24:ff:20:6a:d2;20:00:00:24:ff:20:6a:d2; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo28" Fabric Port Name: 20:37:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:d2 Port Index: 55 Share Area: No Device Shared in Other AD: No Redirect: No N 013800; 3;21:00:00:24:ff:20:74:51;20:00:00:24:ff:20:74:51; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo12" Fabric Port Name: 20:38:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:74:51 Port Index: 56 Share Area: No Device Shared in Other AD: No Redirect: No N 013900; 3;21:00:00:24:ff:20:74:50;20:00:00:24:ff:20:74:50; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo12" Fabric Port Name: 20:39:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:74:50 Port Index: 57 Share Area: No Device Shared in Other AD: No Redirect: No N 013a00; 3;21:00:00:24:ff:20:74:3f;20:00:00:24:ff:20:74:3f; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo10" Fabric Port Name: 20:3a:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:74:3f Port Index: 58 Share Area: No Device Shared in Other AD: No Redirect: No N 013b00; 3;21:00:00:24:ff:20:74:3e;20:00:00:24:ff:20:74:3e; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo10" Fabric Port Name: 20:3b:00:05:1e:ae:ec:50</p>
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<p>Permanent Port Name: 21:00:00:24:ff:20:74:3e Port Index: 59 Share Area: No Device Shared in Other AD: No Redirect: No N 013c00; 3;21:01:00:1b:32:bb:88:6a;20:01:00:1b:32:bb:88:6a; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo26" Fabric Port Name: 20:3c:00:05:1e:ae:ec:50 Permanent Port Name: 21:01:00:1b:32:bb:88:6a Port Index: 60 Share Area: No Device Shared in Other AD: No Redirect: No N 013d00; 3;21:00:00:1b:32:9b:88:6a;20:00:00:1b:32:9b:88:6a; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo26" Fabric Port Name: 20:3d:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:1b:32:9b:88:6a Port Index: 61 Share Area: No Device Shared in Other AD: No Redirect: No N 013e00; 3;21:00:00:24:ff:20:6a:b1;20:00:00:24:ff:20:6a:b1; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo24" Fabric Port Name: 20:3e:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:b1 Port Index: 62 Share Area: No Device Shared in Other AD: No Redirect: No N 013f00; 3;21:00:00:24:ff:20:6a:b0;20:00:00:24:ff:20:6a:b0; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo24" Fabric Port Name: 20:3f:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:b0 Port Index: 63 Share Area: No Device Shared in Other AD: No Redirect: No N 014000; 3;21:00:00:24:ff:2f:d2:75;20:00:00:24:ff:2f:d2:75; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo8"</p>	<p>Fabric Port Name: 20:40:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:2f:d2:75 Port Index: 64 Share Area: No Device Shared in Other AD: No Redirect: No N 014100; 3;21:00:00:24:ff:2f:d2:74;20:00:00:24:ff:2f:d2:74; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo8" Fabric Port Name: 20:41:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:2f:d2:74 Port Index: 65 Share Area: No Device Shared in Other AD: No Redirect: No N 014200; 3;21:00:00:24:ff:20:74:55;20:00:00:24:ff:20:74:55; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo6" Fabric Port Name: 20:42:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:74:55 Port Index: 66 Share Area: No Device Shared in Other AD: No Redirect: No N 014300; 3;21:00:00:24:ff:20:74:54;20:00:00:24:ff:20:74:54; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo6" Fabric Port Name: 20:43:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:74:54 Port Index: 67 Share Area: No Device Shared in Other AD: No Redirect: No N 014400; 3;21:00:00:24:ff:20:6a:db;20:00:00:24:ff:20:6a:db; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo22" Fabric Port Name: 20:44:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:db Port Index: 68 Share Area: No Device Shared in Other AD: No Redirect: No N 014500; 3;21:00:00:24:ff:20:6a:da;20:00:00:24:ff:20:6a:da; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0"</p>	<p>NodeSymb: [6] "redo22" Fabric Port Name: 20:45:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:da Port Index: 69 Share Area: No Device Shared in Other AD: No Redirect: No N 014600; 3;21:01:00:1b:32:bb:57:69;20:01:00:1b:32:bb:57:69; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo20" Fabric Port Name: 20:46:00:05:1e:ae:ec:50 Permanent Port Name: 21:01:00:1b:32:bb:57:69 Port Index: 70 Share Area: No Device Shared in Other AD: No Redirect: No N 014700; 3;21:00:00:1b:32:9b:57:69;20:00:00:1b:32:9b:57:69; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo20" Fabric Port Name: 20:47:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:1b:32:9b:57:69 Port Index: 71 Share Area: No Device Shared in Other AD: No Redirect: No N 014800; 3;21:00:00:24:ff:2f:d1:e1;20:00:00:24:ff:2f:d1:e1; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo4" Fabric Port Name: 20:48:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:2f:d1:e1 Port Index: 72 Share Area: No Device Shared in Other AD: No Redirect: No N 014900; 3;21:00:00:24:ff:2f:d1:e0;20:00:00:24:ff:2f:d1:e0; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo4" Fabric Port Name: 20:49:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:2f:d1:e0 Port Index: 73 Share Area: No Device Shared in Other AD: No Redirect: No N 014a00; 3;21:01:00:1b:32:b2:4a:18;20:01:00:1b:32:b2:4a:18; na</p> <p>FC4s: FCP</p>
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<pre> PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo2" Fabric Port Name: 20:4a:00:05:1e:ae:ec:50 Permanent Port Name: 21:01:00:1b:32:b2:4a:18 Port Index: 74 Share Area: No Device Shared in Other AD: No Redirect: No N 014b00; 3;21:00:00:1b:32:92:4a:18;20:00:00:1b:32:92:4a:18; na </pre>	<pre> FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo16" Fabric Port Name: 20:4f:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:d8 Port Index: 79 Share Area: No Device Shared in Other AD: No Redirect: No The Local Name Server has 57 entries } </pre>	<pre> zone: All_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 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 1,25 1,26 1,27 1,28 1,29 1,30 1,31 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 1,50 1,51 1,52 1,53 1,54 1,55 1,56 1,57 </pre>
<pre> FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo2" Fabric Port Name: 20:4b:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:1b:32:92:4a:18 Port Index: 75 Share Area: No Device Shared in Other AD: No Redirect: No N 014c00; 3;21:00:00:24:ff:20:6a:ad;20:00:00:24:ff:20:6a:ad; na </pre>	<pre> Zoning Information Defined configuration: cfg: ALL_DEVS All_ports zone: All_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; 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; 1,25; 1,26; 1,27; 1,28; 1,29; 1,30; 1,31; 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; 1,50; 1,51; 1,52; 1,53; 1,54; 1,55; 1,56; 1,57; 1,58; 1,59; 1,60; 1,61; 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 zone: Four_node_A 1,16; 1,18; 1,19; 1,24; 1,72; 1,73; 1,74; 1,75 zone: Four_node_AB 1,16; 1,18; 1,19; 1,24; 1,28; 1,29; 1,30; 1,31; 1,64; 1,65; 1,66; 1,67; 1,72; 1,73; 1,74; 1,75 zone: Four_node_AE 1,0; 1,1; 1,2; 1,3; 1,16; 1,18; 1,19; 1,24; 1,50; 1,51; 1,72; 1,73; 1,74; 1,75 zone: Four_node_B 1,28; 1,29; 1,30; 1,31; 1,64; 1,65; 1,66; 1,67 zone: Four_node_BC 1,20; 1,21; 1,22; 1,23; 1,28; 1,29; 1,30; 1,31; 1,56; 1,57; 1,58; 1,59; 1,64; 1,65; 1,66; 1,67 zone: Four_node_C 1,20; 1,21; 1,22; 1,23; 1,56; 1,57; 1,58; 1,59 zone: Four_node_E 1,0; 1,1; 1,2; 1,3; 1,50; 1,51 Effective configuration: cfg: ALL_DEVS </pre>	<pre> 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 1,25 1,26 1,27 1,28 1,29 1,30 1,31 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 1,50 1,51 1,52 1,53 1,54 1,55 1,56 1,57 </pre>
<pre> FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo18" Fabric Port Name: 20:4c:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:ad Port Index: 76 Share Area: No Device Shared in Other AD: No Redirect: No N 014d00; 3;21:00:00:24:ff:20:6a:ac;20:00:00:24:ff:20:6a:ac; na </pre>	<pre> FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo18" Fabric Port Name: 20:4d:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:ac Port Index: 77 Share Area: No Device Shared in Other AD: No Redirect: No N 014e00; 3;21:00:00:24:ff:20:6a:d9;20:00:00:24:ff:20:6a:d9; na </pre>	<pre> 1,16; 1,18; 1,19; 1,24; 1,28; 1,29; 1,30; 1,31; 1,64; 1,65; 1,66; 1,67; 1,72; 1,73; 1,74; 1,75 zone: Four_node_AE 1,0; 1,1; 1,2; 1,3; 1,16; 1,18; 1,19; 1,24; 1,50; 1,51; 1,72; 1,73; 1,74; 1,75 zone: Four_node_B 1,28; 1,29; 1,30; 1,31; 1,64; 1,65; 1,66; 1,67 zone: Four_node_BC 1,20; 1,21; 1,22; 1,23; 1,28; 1,29; 1,30; 1,31; 1,56; 1,57; 1,58; 1,59; 1,64; 1,65; 1,66; 1,67 zone: Four_node_C 1,20; 1,21; 1,22; 1,23; 1,56; 1,57; 1,58; 1,59 zone: Four_node_E 1,0; 1,1; 1,2; 1,3; 1,50; 1,51 Effective configuration: cfg: ALL_DEVS </pre>
<pre> FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo16" Fabric Port Name: 20:4e:00:05:1e:ae:ec:50 Permanent Port Name: 21:00:00:24:ff:20:6a:d9 Port Index: 78 Share Area: No Device Shared in Other AD: No Redirect: No N 014f00; 3;21:00:00:24:ff:20:6a:d8;20:00:00:24:ff:20:6a:d8; na </pre>	<pre> Effective configuration: cfg: ALL_DEVS </pre>	<pre> 1,56 1,57 </pre>

No: UAF1093500003E7 Speed: 200,400,800_MB/s
 Port 76: id (sw) Vendor: BROCADE Serial
 No: UAF1093500003E5 Speed: 200,400,800_MB/s
 Port 77: id (sw) Vendor: BROCADE Serial
 No: UAF109350000JNJ Speed: 200,400,800_MB/s
 Port 78: id (sw) Vendor: BROCADE Serial
 No: UAF109350000FS3 Speed: 200,400,800_MB/s
 Port 79: id (sw) Vendor: BROCADE Serial
 No: UAF109350000HK9 Speed: 200,400,800_MB/s

switchRole: Principal
 switchDomain: 3
 switchId: fffc03
 switchWwn: 10:00:00:05:1e:9a:8e:be
 zoning: ON (All_devs)
 switchBeacon: OFF
 FC Router: OFF
 Allow XISL Use: OFF
 LS Attributes: [FID: 128, Base Switch: No, Default Switch: Yes]

10:00:00:00:c9:94:9a:68
 26 26 id N8 Online F-Port
 10:00:00:00:c9:94:91:18
 27 27 id N8 Online F-Port
 10:00:00:00:c9:94:9a:7c
 28 28 id N8 Online F-Port
 10:00:00:00:c9:94:9c:20
 29 29 id N8 Online F-Port
 10:00:00:00:c9:94:90:d0
 30 30 id N8 Online F-Port
 10:00:00:00:c9:94:90:a8
 31 31 id N8 Online F-Port
 10:00:00:00:c9:94:90:84

Brocade 5300-2 – REDO Log

Switch Information Report for b5300-2

List of Switches

Switch ID	Worldwide Name	Enet IP Addr
FC IP Addr	Name	
3: fffc03	10:00:00:05:1e:9a:8e:be	10.196.0.101
0.0.0.0	>"b5300-2"	

Current Switch Information

Ethernet IP Address: 10.196.0.101
 Ethernet Subnetmask: 255.255.0.0
 Fibre Channel IP Address: 0.0.0.0
 Fibre Channel Subnetmask: 0.0.0.0
 Gateway Address: 10.196.0.1
 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

List of Ports

switchName: b5300-2
 switchType: 64.3
 switchState: Online
 switchMode: Native

Area	Port	Media	Speed	State	Proto
0	0	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:a0					
1	1	id	N8	Online	F-Port
10:00:00:00:c9:94:9a:48					
2	2	id	N8	Online	F-Port
10:00:00:00:c9:94:90:ac					
3	3	id	N8	Online	F-Port
10:00:00:00:c9:94:9d:98					
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:c9:94:99:b8					
9	9	id	N8	Online	F-Port
10:00:00:00:c9:94:99:8c					
10	10	id	N8	Online	F-Port
10:00:00:00:c9:94:99:a0					
11	11	id	N8	Online	F-Port
10:00:00:00:c9:94:99:58					
12	12	id	N8	No_Light	
13	13	id	N8	Online	F-Port
10:00:00:00:c9:94:9a:14					
14	14	id	N8	Online	F-Port
10:00:00:00:c9:94:99:80					
15	15	id	N8	Online	F-Port
10:00:00:00:c9:94:90:fc					
16	16	id	N8	Online	F-Port
10:00:00:00:c9:94:9d:74					
17	17	id	N8	Online	F-Port
10:00:00:00:c9:94:90:b4					
18	18	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:14					
19	19	id	N8	Online	F-Port
10:00:00:00:c9:94:91:14					
20	20	id	N8	Online	F-Port
10:00:00:00:c9:94:99:a8					
21	21	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:10					
22	22	id	N8	Online	F-Port
10:00:00:00:c9:94:99:a4					
23	23	id	N8	Online	F-Port
10:00:00:00:c9:94:af:38					
24	24	id	N8	Online	F-Port
10:00:00:00:c9:94:9b:54					
25	25	id	N8	Online	F-Port

21:00:00:24:ff:2f:d2:a1
 49 49 id N8 Online F-Port
 21:00:00:24:ff:2f:d2:a0
 50 50 id N8 Online F-Port
 21:00:00:24:ff:2f:d2:73
 51 51 id N8 Online F-Port
 21:00:00:24:ff:2f:d2:72
 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 Online F-Port
 21:00:00:24:ff:2f:d3:31
 57 57 id N8 Online F-Port
 21:00:00:24:ff:2f:d3:30
 58 58 id N8 Online F-Port
 21:00:00:24:ff:2f:d2:69
 59 59 id N8 Online F-Port
 21:00:00:24:ff:2f:d2:68
 60 60 id N8 Online F-Port
 21:00:00:24:ff:20:6a:af
 61 61 id N8 Online F-Port
 21:00:00:24:ff:20:6a:ae
 62 62 id N8 Online F-Port
 21:00:00:24:ff:20:6a:c7
 63 63 id N8 Online F-Port
 21:00:00:24:ff:20:6a:c6
 64 64 id N8 Online F-Port
 21:00:00:24:ff:2f:d1:f9

65 65 id N8 Online 21:00:00:24:ff:2f:d1:f8	F-Port	Permanent Port Name: 10:00:00:00:c9:94:9b:a0 Port Index: 0	Fabric Port Name: 20:09:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:99:8c
66 66 id N8 Online 21:00:00:24:ff:20:74:1f	F-Port	Share Area: No Device Shared in Other AD: No	Port Index: 9 Share Area: No Device Shared in Other AD: No
67 67 id N8 Online 21:00:00:24:ff:20:74:1e	F-Port	Redirect: No	Redirect: No
68 68 id N8 Online 21:00:00:24:ff:20:6a:cb	F-Port	N 030100; 3;10:00:00:00:c9:94:9a:48;20:00:00:00:c9:94:9a:48; na	N 030a00; 3;10:00:00:00:c9:94:99:a0;20:00:00:00:c9:94:99:a0; na
69 69 id N8 Online 21:00:00:24:ff:20:6a:ca	F-Port	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
70 70 id N8 Online 21:00:00:24:ff:20:6a:e3	F-Port	DVpr11 " Fabric Port Name: 20:01:00:05:1e:9a:8e:be	DVpr11 " Fabric Port Name: 20:0a:00:05:1e:9a:8e:be
71 71 id N8 Online 21:00:00:24:ff:20:6a:e2	F-Port	Permanent Port Name: 10:00:00:00:c9:94:9a:48 Port Index: 1	Permanent Port Name: 10:00:00:00:c9:94:99:a0 Port Index: 10
72 72 id N8 Online 21:00:00:24:ff:2f:d2:43	F-Port	Share Area: No Device Shared in Other AD: No	Share Area: No Device Shared in Other AD: No
73 73 id N8 Online 21:00:00:24:ff:2f:d2:42	F-Port	Redirect: No	Redirect: No
74 74 id N8 Online 21:00:00:24:ff:2f:d1:bf	F-Port	N 030200; 3;10:00:00:00:c9:94:90:ac;20:00:00:00:c9:94:90:ac; na	N 030b00; 3;10:00:00:00:c9:94:99:58;20:00:00:00:c9:94:99:58; na
75 75 id N8 Online 21:00:00:24:ff:2f:d1:be	F-Port	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
76 76 id N8 Online 21:00:00:24:ff:20:6a:b3	F-Port	DVpr11 " Fabric Port Name: 20:02:00:05:1e:9a:8e:be	DVpr11 " Fabric Port Name: 20:0b:00:05:1e:9a:8e:be
77 77 id N8 Online 21:00:00:24:ff:20:6a:b2	F-Port	Permanent Port Name: 10:00:00:00:c9:94:90:ac Port Index: 2	Permanent Port Name: 10:00:00:00:c9:94:99:58 Port Index: 11
78 78 id N8 Online 21:00:00:24:ff:20:6a:ab	F-Port	Share Area: No Device Shared in Other AD: No	Share Area: No Device Shared in Other AD: No
79 79 id N8 Online 21:00:00:24:ff:20:6a:aa	F-Port	Redirect: No	Redirect: No
		N 030300; 3;10:00:00:00:c9:94:9d:98;20:00:00:00:c9:94:9d:98; na	N 030d00; 3;10:00:00:00:c9:94:9a:14;20:00:00:00:c9:94:9a:14; na
Name Server		FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
{		DVpr11 " Fabric Port Name: 20:03:00:05:1e:9a:8e:be	DVpr11 " Fabric Port Name: 20:0d:00:05:1e:9a:8e:be
030000 030100 030200 030300 030800 030900 030a00		Permanent Port Name: 10:00:00:00:c9:94:9d:98 Port Index: 3	Permanent Port Name: 10:00:00:00:c9:94:9a:14 Port Index: 13
030b00		Share Area: No Device Shared in Other AD: No	Share Area: No Device Shared in Other AD: No
030d00 030e00 030f00 031000 031100 031200 031300		Redirect: No	Redirect: No
031400		N 030800; 3;10:00:00:00:c9:94:99:b8;20:00:00:00:c9:94:99:b8; na	N 030e00; 3;10:00:00:00:c9:94:99:80;20:00:00:00:c9:94:99:80; na
031500 031600 031700 031800 031900 031a00 031b00		FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
031c00		DVpr11 " Fabric Port Name: 20:08:00:05:1e:9a:8e:be	DVpr11 " Fabric Port Name: 20:0e:00:05:1e:9a:8e:be
031d00 031e00 031f00 033000 033100 033200 033300		Permanent Port Name: 10:00:00:00:c9:94:99:b8 Port Index: 8	Permanent Port Name: 10:00:00:00:c9:94:99:80 Port Index: 14
033800		Share Area: No Device Shared in Other AD: No	Share Area: No Device Shared in Other AD: No
033900 033a00 033b00 033c00 033d00 033e00 033f00		Redirect: No	Redirect: No
034000		N 030900; 3;10:00:00:00:c9:94:99:8c;20:00:00:00:c9:94:99:8c; na	N 030f00; 3;10:00:00:00:c9:94:90:fc;20:00:00:00:c9:94:90:fc; na
034100 034200 034300 034400 034500 034600 034700		FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
034800		DVpr11 " Fabric Port Name: 20:08:00:05:1e:9a:8e:be	DVpr11 " Fabric Port Name: 20:0e:00:05:1e:9a:8e:be
034900 034a00 034b00 034c00 034d00 034e00 034f00		Permanent Port Name: 10:00:00:00:c9:94:99:b8 Port Index: 8	Permanent Port Name: 10:00:00:00:c9:94:99:80 Port Index: 14
55 Nx_Ports in the Fabric }		Share Area: No Device Shared in Other AD: No	Share Area: No Device Shared in Other AD: No
{		Redirect: No	Redirect: No
Type Pid COS PortName		N 030900; 3;10:00:00:00:c9:94:9b:a0;20:00:00:00:c9:94:9b:a0; na	N 030f00; 3;10:00:00:00:c9:94:90:fc;20:00:00:00:c9:94:90:fc; na
NodeName TTL(sec)		FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5	FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5
N 030000;		DVpr11 " Fabric Port Name: 20:00:00:05:1e:9a:8e:be	DVpr11 " Fabric Port Name: 20:00:00:05:1e:9a:8e:be
3;10:00:00:00:c9:94:9b:a0;20:00:00:00:c9:94:9b:a0;			
na			

<p>DVpr11 "</p> <p>Fabric Port Name: 20:0f:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:90:fc Port Index: 15 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031000; 3;10:00:00:00:c9:94:9d:74;20:00:00:00:c9:94:9d:74; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p> <p>DVpr11 "</p> <p>Fabric Port Name: 20:14:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:99:a8 Port Index: 20 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031500; 3;10:00:00:00:c9:94:9b:10;20:00:00:00:c9:94:9b:10; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p> <p>DVpr11 "</p> <p>Fabric Port Name: 20:19:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9a:68 Port Index: 25 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031a00; 3;10:00:00:00:c9:94:91:18;20:00:00:00:c9:94:91:18; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>
<p>DVpr11 "</p> <p>Fabric Port Name: 20:10:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9d:74 Port Index: 16 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031100; 3;10:00:00:00:c9:94:90:b4;20:00:00:00:c9:94:90:b4; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:15:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9b:10 Port Index: 21 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031600; 3;10:00:00:00:c9:94:99:a4;20:00:00:00:c9:94:99:a4; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:1a:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:91:18 Port Index: 26 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031b00; 3;10:00:00:00:c9:94:9a:7c;20:00:00:00:c9:94:9a:7c; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>
<p>DVpr11 "</p> <p>Fabric Port Name: 20:11:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:90:b4 Port Index: 17 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031200; 3;10:00:00:00:c9:94:9b:14;20:00:00:00:c9:94:9b:14; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:16:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:99:a4 Port Index: 22 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031700; 3;10:00:00:00:c9:94:af:38;20:00:00:00:c9:94:af:38; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:1b:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9a:7c Port Index: 27 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031c00; 3;10:00:00:00:c9:94:9c:20;20:00:00:00:c9:94:9c:20; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>
<p>DVpr11 "</p> <p>Fabric Port Name: 20:12:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9b:14 Port Index: 18 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031300; 3;10:00:00:00:c9:94:91:14;20:00:00:00:c9:94:91:14; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:17:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:af:38 Port Index: 23 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031800; 3;10:00:00:00:c9:94:9b:54;20:00:00:00:c9:94:9b:54; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:1c:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9c:20 Port Index: 28 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031d00; 3;10:00:00:00:c9:94:90:d0;20:00:00:00:c9:94:90:d0; na</p> <p>FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5</p>
<p>DVpr11 "</p> <p>Fabric Port Name: 20:13:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:91:14 Port Index: 19 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031400; 3;10:00:00:00:c9:94:99:a8;20:00:00:00:c9:94:99:a8; na</p> <p>FC4s: IPFC FCP</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:18:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:9b:54 Port Index: 24 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031900; 3;10:00:00:00:c9:94:9a:68;20:00:00:00:c9:94:9a:68; na</p> <p>FC4s: IPFC FCP</p>	<p>DVpr11 "</p> <p>Fabric Port Name: 20:1d:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:90:d0 Port Index: 29 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 031e00; 3;10:00:00:00:c9:94:90:a8;20:00:00:00:c9:94:90:a8; na</p> <p>FC4s: IPFC FCP</p>

na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:1e:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:90:a8 Port Index: 30 Share Area: No Device Shared in Other AD: No Redirect: No N 031f00; 3;10:00:00:00:c9:94:90:84;20:00:00:00:c9:94:90:84; na FC4s: IPFC FCP NodeSymb: [36] "Emulex LPem12002E-S FV1.11a5 DVpr11 " Fabric Port Name: 20:1f:00:05:1e:9a:8e:be Permanent Port Name: 10:00:00:00:c9:94:90:84 Port Index: 31 Share Area: No Device Shared in Other AD: No Redirect: No N 033000; 3;21:00:00:24:ff:2f:d2:a1;20:00:00:24:ff:2f:d2:a1; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo15" Fabric Port Name: 20:30:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:a1 Port Index: 48 Share Area: No Device Shared in Other AD: No Redirect: No N 033100; 3;21:00:00:24:ff:2f:d2:a0;20:00:00:24:ff:2f:d2:a0; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo15" Fabric Port Name: 20:31:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:a0 Port Index: 49 Share Area: No Device Shared in Other AD: No Redirect: No N 033200; 3;21:00:00:24:ff:2f:d2:73;20:00:00:24:ff:2f:d2:73; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo13" Fabric Port Name: 20:32:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:73 Port Index: 50 Share Area: No Device Shared in Other AD: No Redirect: No N 033300;	3;21:00:00:24:ff:2f:d2:72;20:00:00:24:ff:2f:d2:72; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo13" Fabric Port Name: 20:33:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:72 Port Index: 51 Share Area: No Device Shared in Other AD: No Redirect: No N 033800; 3;21:00:00:24:ff:2f:d3:31;20:00:00:24:ff:2f:d3:31; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo11" Fabric Port Name: 20:38:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d3:31 Port Index: 56 Share Area: No Device Shared in Other AD: No Redirect: No N 033900; 3;21:00:00:24:ff:2f:d3:30;20:00:00:24:ff:2f:d3:30; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo11" Fabric Port Name: 20:39:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d3:30 Port Index: 57 Share Area: No Device Shared in Other AD: No Redirect: No N 033a00; 3;21:00:00:24:ff:2f:d2:69;20:00:00:24:ff:2f:d2:69; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo9" Fabric Port Name: 20:3a:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:69 Port Index: 58 Share Area: No Device Shared in Other AD: No Redirect: No N 033b00; 3;21:00:00:24:ff:2f:d2:68;20:00:00:24:ff:2f:d2:68; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo9" Fabric Port Name: 20:3b:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:68 Port Index: 59 Share Area: No Device Shared in Other AD: No Redirect: No	N 033c00; 3;21:00:00:24:ff:20:6a:af;20:00:00:24:ff:20:6a:af; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo27" Fabric Port Name: 20:3c:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:af Port Index: 60 Share Area: No Device Shared in Other AD: No Redirect: No N 033d00; 3;21:00:00:24:ff:20:6a:ae;20:00:00:24:ff:20:6a:ae; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo27" Fabric Port Name: 20:3d:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:ae Port Index: 61 Share Area: No Device Shared in Other AD: No Redirect: No N 033e00; 3;21:00:00:24:ff:20:6a:c7;20:00:00:24:ff:20:6a:c7; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo25" Fabric Port Name: 20:3e:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:c7 Port Index: 62 Share Area: No Device Shared in Other AD: No Redirect: No N 033f00; 3;21:00:00:24:ff:20:6a:c6;20:00:00:24:ff:20:6a:c6; na FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo25" Fabric Port Name: 20:3f:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:c6 Port Index: 63 Share Area: No Device Shared in Other AD: No Redirect: No N 034000; 3;21:00:00:24:ff:2f:d1:f9;20:00:00:24:ff:2f:d1:f9; na FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo7" Fabric Port Name: 20:40:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d1:f9 Port Index: 64 Share Area: No Device Shared in Other AD: No
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<p>Redirect: No N 034100; 3;21:00:00:24:ff:2f:d1:f8;20:00:00:24:ff:2f:d1:f8; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo7" Fabric Port Name: 20:41:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d1:f8 Port Index: 65 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034200; 3;21:00:00:24:ff:20:74:1f;20:00:00:24:ff:20:74:1f; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo5" Fabric Port Name: 20:42:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:74:1f Port Index: 66 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034300; 3;21:00:00:24:ff:20:74:1e;20:00:00:24:ff:20:74:1e; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo5" Fabric Port Name: 20:43:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:74:1e Port Index: 67 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034400; 3;21:00:00:24:ff:20:6a:cb;20:00:00:24:ff:20:6a:cb; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo23" Fabric Port Name: 20:44:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:cb Port Index: 68 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034500; 3;21:00:00:24:ff:20:6a:ca;20:00:00:24:ff:20:6a:ca; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo23" Fabric Port Name: 20:45:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:ca Port Index: 69 Share Area: No</p>	<p>Device Shared in Other AD: No Redirect: No N 034600; 3;21:00:00:24:ff:20:6a:e3;20:00:00:24:ff:20:6a:e3; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo21" Fabric Port Name: 20:46:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:e3 Port Index: 70 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034700; 3;21:00:00:24:ff:20:6a:e2;20:00:00:24:ff:20:6a:e2; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo21" Fabric Port Name: 20:47:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:e2 Port Index: 71 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034800; 3;21:00:00:24:ff:2f:d2:43;20:00:00:24:ff:2f:d2:43; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo3" Fabric Port Name: 20:48:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:43 Port Index: 72 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034900; 3;21:00:00:24:ff:2f:d2:42;20:00:00:24:ff:2f:d2:42; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo3" Fabric Port Name: 20:49:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d2:42 Port Index: 73 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034a00; 3;21:00:00:24:ff:2f:d1:bf;20:00:00:24:ff:2f:d1:bf; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [5] "redo1" Fabric Port Name: 20:4a:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d1:bf Port Index: 74</p>	<p>Share Area: No Device Shared in Other AD: No Redirect: No N 034b00; 3;21:00:00:24:ff:2f:d1:be;20:00:00:24:ff:2f:d1:be; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [5] "redo1" Fabric Port Name: 20:4b:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:2f:d1:be Port Index: 75 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034c00; 3;21:00:00:24:ff:20:6a:b3;20:00:00:24:ff:20:6a:b3; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo19" Fabric Port Name: 20:4c:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:b3 Port Index: 76 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034d00; 3;21:00:00:24:ff:20:6a:b2;20:00:00:24:ff:20:6a:b2; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo19" Fabric Port Name: 20:4d:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:b2 Port Index: 77 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034e00; 3;21:00:00:24:ff:20:6a:ab;20:00:00:24:ff:20:6a:ab; na</p> <p>FC4s: FCP PortSymb: [6] "qlt1,0" NodeSymb: [6] "redo17" Fabric Port Name: 20:4e:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:ab Port Index: 78 Share Area: No Device Shared in Other AD: No Redirect: No</p> <p>N 034f00; 3;21:00:00:24:ff:20:6a:aa;20:00:00:24:ff:20:6a:aa; na</p> <p>FC4s: FCP PortSymb: [6] "qlt0,0" NodeSymb: [6] "redo17" Fabric Port Name: 20:4f:00:05:1e:9a:8e:be Permanent Port Name: 21:00:00:24:ff:20:6a:aa</p>
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Port Index: 79
Share Area: No
Device Shared in Other AD: No
Redirect: No
The Local Name Server has 55 entries }

Zoning Information
Defined configuration:
cfg: All_devs
    All_ports
cfg: COMSTAR_1stZONE_LOGS_2ndZone
    Four_node_A
zone: All_ports
    3,0; 3,1; 3,2; 3,3; 3,4; 3,5; 3,6;
3,7; 3,8; 3,9; 3,10; 3,11;
    3,12; 3,13; 3,14; 3,15; 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;
    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; 3,69; 3,70; 3,71;
    3,72; 3,73; 3,74; 3,75; 3,76; 3,77;
3,78; 3,79
zone: Four_node_A
    3,16; 3,18; 3,19; 3,24; 3,72; 3,73;
3,74; 3,75
zone: Four_node_AB
    3,16; 3,18; 3,19; 3,24; 3,28; 3,29;
3,30; 3,31; 3,64; 3,65;
    3,66; 3,67; 3,72; 3,73; 3,74; 3,75
zone: Four_node_AE
    3,0; 3,1; 3,2; 3,3; 3,16; 3,18;
3,19; 3,24; 3,50; 3,51; 3,72;
    3,73; 3,74; 3,75
zone: Four_node_B
    3,28; 3,29; 3,30; 3,31; 3,64; 3,65;
3,66; 3,67
zone: Four_node_BC
    3,20; 3,21; 3,22; 3,23; 3,28; 3,29;
3,30; 3,31; 3,56; 3,57;
    3,58; 3,59; 3,64; 3,65; 3,66; 3,67
zone: Four_node_E
    3,0; 3,1; 3,2; 3,3; 3,50; 3,51
zone: four_node_C
    3,20; 3,21; 3,22; 3,23; 3,56; 3,57;
3,58; 3,59

Effective configuration:
cfg: All_devs
zone: All_ports
    3,0
    3,1

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3,2
3,3
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SFP Serial ID Information

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Port 0: id (sw) Vendor: BROCADE Serial
No: UAF10910000BFH Speed: 200,400,800_MB/s
Port 1: id (sw) Vendor: BROCADE Serial
No: UAF10910000BER Speed: 200,400,800_MB/s
Port 2: id (sw) Vendor: BROCADE Serial
No: UAF10910000BEV Speed: 200,400,800_MB/s
Port 3: id (sw) Vendor: BROCADE Serial
No: UAF10910000BEN Speed: 200,400,800_MB/s
Port 4: id (sw) Vendor: BROCADE Serial
No: UAF10910000BFN Speed: 200,400,800_MB/s
Port 5: id (sw) Vendor: BROCADE Serial
No: UAF10910000BFR Speed: 200,400,800_MB/s
Port 6: id (sw) Vendor: BROCADE Serial
No: UAF10910000BFC Speed: 200,400,800_MB/s
Port 7: id (sw) Vendor: BROCADE Serial
No: UAF10910000BEU Speed: 200,400,800_MB/s
Port 8: id (sw) Vendor: BROCADE Serial
No: UAF1091100004HV Speed: 200,400,800_MB/s
Port 9: id (sw) Vendor: BROCADE Serial
No: UAF1091100002FU 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: UAF10911000058P 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: UAF109110000154 Speed: 200,400,800_MB/s

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Appendix D: Third Party Price Quotes





CDW Shopping Cart

http://www.cdw.com/shop/cart/default.aspx?printable=1



800.800.4239

Shopping Cart

Quantity	Product	CDW	Availability	Price	Ext. Price
546	 Tripp Lite 25' Black Cat5e or Cat5 RJ45 Molded 350mhz UTP Patch Cable	324521	In Stock	\$6.99	\$3,816.54
19	 NETGEAR ProSafe GS724Tv3 - switch - managed - 24 ports	1984876	In Stock	\$329.99	\$6,269.81
30	 Tripp Lite Smart Online 5000VA UPS 4U Rackmount Hot-Swapp 5kVA	947887	4-6 days	\$2,952.99	\$88,589.70
30	 Tripp Lite Smart Online UPS 192V RM 3U External Battery Pack	959740	In Stock	\$969.99	\$29,099.70
				Sub-Total	\$127,775.75

Related Top Sellers For: Tripp Lite Smart Online 5000VA UPS 4U Rackmount Hot-Swapp 5kVA

Recommended Accessories	Recommended Warranties
 Tripp Lite Digital Power Distribution Unit PDU 1U RM 12 NEMA5-15/20R 20A \$129.99	 4Yr Consumer Electronic Protection-Extends Warranty 3 addl years \$2501-3500 \$152.99
	 2Yr Consumer Electronic Protection-Extends Warranty 1 addl year \$2501-3500 \$63.99
	 3Yr Consumer Electronic Protection-Extends Warranty 2 addl years \$2501-3500 \$122.99