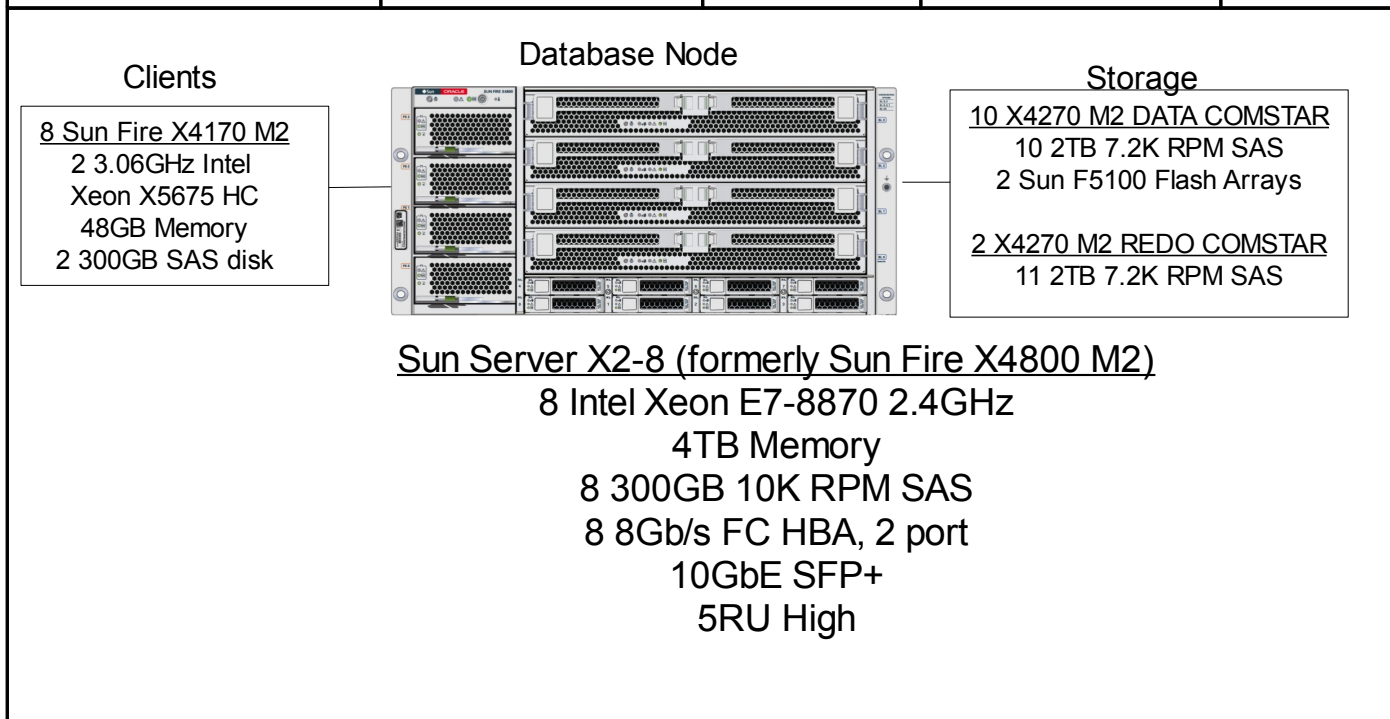


ORACLE®	Sun Server X2-8		TPC-C 5.11.0 TPC-Pricing 1.7.0
			Report Date Revised: July 10, 2012

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$4,483,729USD	5,055,888 tpmC	\$0.89USD/tpmC	July 10, 2012

Database Server Processors/Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
Intel Xeon E7-8870 2.4GHz 8 / 80 / 160	Oracle Database 11g Release 2 Enterprise Edition	Oracle Linux with UEK Release 2	Tuxedo CFS-R Tier 1 Oracle iPlanet Web Server	4,000,000



Sun Server X2-8 (formerly Sun Fire X4800 M2)
 8 Intel Xeon E7-8870 2.4GHz
 4TB Memory
 8 300GB 10K RPM SAS
 8 8Gb/s FC HBA, 2 port
 10GbE SFP+
 5RU High

System Component	Each Server Node		Each Client	
Processors/Cores/Threads and cache	8/80/160	Intel Xeon E7-8870 2.4GHz 30 MB Smart Cache	2/12/24	Intel Xeon X5675 12MB Smart Cache
Memory		4TB		48GB
Disk Controllers	8	8Gb/s FC HBA 2 Port	1	8 port Internal SAS
OS Disks (each system)	8	300GB 10K RPM SAS	2	300GB 10K RPM SAS
External Storage	1,600 122	24GB SSD Flash Modules 2TB 7.2K RPM SAS		
Total Storage		284.3TB		

Description	Part Number	Price Source	Unit Price	Qty	Extended Price	Support
Server Hardware						
Sun Server X2-8: base chassis	7100176	1	6,702	1	6,702	
Power Jumper Cables, 2.5m x 1	SR-JUMP-1MC13	1	29	4	116	
300GB 10K rpm 2.5" SAS-2 HDD	RB-SS2CM-300G10K2	1	345	8	2,760	
1 Intel® Xeon® E7-8870 2.4GHz Proc w/ heat sink	7100128	1	7,222	8	57,776	
Two 32 GB DDR3-1066 DIMMs (factory installation)	7103610	1	4,634	64	296,576	
CPU Module w/ 32 DIMM slots, 2 USB ports	7100177	1	3,248	4	12,992	
6Gb/s SAS REM RAID HBA, ATO	SG-SAS6-R-REM-Z	1	1,079	1	1,079	
8Gb/s FC GbE HBA, EM, Qlogic, ATO	SG-PCIEFCGBE-Q8-N	1	2,089	6	12,534	
8Gb/s FC GbE HBA, EM, Qlogic	SG-XPCIEFCGBE-Q8-N	1	2,089	2	4,178	
Sun Dual 10GbE PCIe 2.0 FEM	4871A-Z-N	1	720	1	720	
Sun 10Gbps Dual Rate SFP+ SR	2129A	1	840	1	840	
Network Express Module	8508A	1	2,399	2	4,798	
			Sub-Total		401,071	
Server Storage						
Sun Fire X4270 M2 Server chassis	X4270M2-H1-AA	1s	3,618	12	43,416	
Oracle Solaris 11		1	0	12	0	
2TB 7.2K RPM SAS disk	RA-SS1CR-2T7K	1s	949	122	115,778	
Jumper Cable Kit: 1 x 1m C13	SR-JUMP-1MC13-N	1	29	64	1,856	
Intel® Xeon® X5675, 6-core 3.06GHz, w/ heat sink	4373A	1s	2,304	10	23,040	
Intel® Xeon® X5690, 6-core 3.47GHz, w/ heat sink	4375A	1s	2,706	2	5,412	
4GB (1 x 4GB) DDR3-1333 DIMM	4910A	1s	92	26	2,392	
1,200 W AC PSU (for factory installation)	5933A	1s	302	12	3,624	
StorageTek 8Gb/s FC PCI-e HBA dual port Qlogic	SG-PCIE2FC-QF8-Z	1	2,399	12	28,788	
Sun Storage 6 Gb/s SAS PCIe HBA: 8 Port	SGX-SAS6-EXT-Z	1	599	40	23,960	
Sun Storage 6Gb/s SAS PCIe HBA, 512 MB, RAID	SGX-SAS6-R-INT-Z	1	1,079	12	12,948	
Sun Storage F5100 Flash Array	TA-F5100-M2SA	1	19,995	20	399,900	
20 24GB SATA SLC Flash Modules	TA-24GBSTSF-20FM	1	33,750	80	2,700,000	
0.5M, Mini, shielded, SAS cable	XTA-0.5M-SAS	1	95	40	3,800	
15M LC to LC FC cable	X9734A-Z-N	1	105	24	2,520	
			Sub-Total		3,367,434	
Server Software						
Oracle Linux		1	0	1	0	
Oracle Linux Basic Support - 3 Years		1	3,597	1		3,597
Oracle 11g Enterprise Edition Per Processor for 3 years (for 40 processors)		1	23,750	40	950,000	
Partitioning, Per Processor for 3 years (for 40 processors)		1	5,750	40	230,000	
Incident Server Support for 3 years		1	2,300	3		6,900
			Sub-Total		1,180,000	10,497
Client Hardware						
Sun Fire X4170 M2	X4170M2-H1-AA	1	2,378	8	19,024	
300GB 10K RPM 2.5" SAS disk	RB-SS2CF-300G10K2	1	345	16	5,520	
Snap-In Slide Rail Rackmount kit	6325A-N	1	70	8	560	
Jumper Cable Kit: 1 x 1m C13	SR-JUMP-1MC13	1	29	8	232	
Intel® Xeon® X5675 3.06GHz, 6-core, w/ heat sink	4373A	1s	2,304	16	36,864	
Sun Storage 6Gb/s SAS PCIe HBA, Internal: 8 port	SG-SAS6-INT-Z	1	419	8	3,352	
4GB (1 x 4GB) DDR3-1333 DIMM	4910A	1s	92	96	8,832	
			Sub-Total		74,384	
Client Software						
Oracle Solaris 10 Pre-Install	5908A	1	0	8	0	
Oracle Solaris Development Tools Support	B59320	1	1,200	3		3,600
Oracle Fusion Middleware Web Tier for 3 years		1	2,500	48	120,000	
Oracle Premier Software Support		1	26,400	3		79,200
Tuxedo CFS-R Tier 1			1,800	8	14,400	
Oracle Premier Support for 3 years (Tuxedo CFS-R Tier 1)			3,168	3		9,504
			Sub-Total		134,400	92,304

Other Hardware

Brocade 5300 w/ 80 8Gb/s SFPs	SGXSWBRO5300-8EB-N	1	139,995	1	139,995	
Rackmount kit for the Brocade 5300	SG-XSWBRO3X50-RK-N	1	250	1	250	
Jumper Cable Kit: 1 x 1m C13	SR-JUMP-1MC13	1	29	2	58	
SUT Mgmt system and Service Processor Control Workstation						
Sun Fire X4170 M2	X4170M2-H1-AA	1	2,378	1	2,378	
Oracle Solaris 10 Pre-Install	5894A-N	1	0	1	0	
US PC Peripheral Kit (Keyboard/Mouse)	X3701A-PC	1	50	1	50	
4GB (1x4GB) DDR3-1333	4910A	1	92	2	184	
Sun Storage 6Gb/s SAS PCIe HBA, Internal: 8 port	SG-SAS6-INT-Z	1	419	1	419	
300GB 10K RPM 2.5" SAS Disk	RB-SS2CF-300G10K2	1	345	1	345	
DVD+/-RW SATA-based drive ATO	8325A-N	1	134	1	134	
Jumper Cable Kit: 1 x 1m C13	SR-JUMP-1MC13	1	29	1	29	
Intel® Xeon® E5620 2.4GHz, 4-core, w/ heat sink	5924A	1	683	1	683	
Sun Rack II 42U	SR-1242E-N	1	2,849	2	5,698	
PDU 15kVA, Single Phase, LV	SR-15K-L630-N	1	1,200	4	4,800	
Jumper Cable Kit SunRack II	SR-JUMPKIT-N	1	198	2	396	
2M LC to LC FC Optical Cable	X9732A-Z-N	1	65	1	65	
Acer V173 DJb 17" LCD	2091793	2	102	3	306	
Brocade FastIronGS 648P switch	FGS648P	2	4,977	1	4,977	3,669
Brocade expansion module (10GbE)	FLS-1XG	2	850	1	850	
Netgear ProSafe Plus GS524E 24 port	JGS524E-100NAS	2	279	3	837	
Tripp Lite 25' Black Cat5e cable (+10%)	N002-025-BK	2	7	103	721	
			Sub-Total		163,175	
Oracle Premier Hardware Support	Q-PREM-SPRT-SYS	1	479,805	3		1,439,415
			Total		5,320,464	1,545,885
Total Oracle Software, Hardware and Maintenance Discount					(2,382,620)	
3 Year Total Cost					\$4,483,729	
					tpmC	5,055,888
					\$/tpmC	\$0.89

Pricing Sources:

- Oracle
- CDW

Notes:

1s – One or more components of the measured configuration have been substituted in the priced configuration. See the FDR for details.

Audited by Francois Raab of InfoSizing, Inc.

Prices used in TPC Benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on 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.



Sun Server X2-8

TPC-C 5.11.0
TPC-Pricing 1.7.0

Report Date
July 10, 2012

Numerical Quantities Summary:

MQTh, computed Maximum Qualified Throughput 5,055,888

Response Time in Seconds	90th %	Avg.	Max.
New-Order	0.22	0.166	2.531
Payment	0.21	0.163	2.671
Order-Status	0.21	0.163	2.446
Delivery (Interactive)	0.18	0.149	1.876
Delivery (Deferred)	0.02	0.010	1.001
Stock-Level	0.21	0.161	2.312
Menu	0.18	0.149	1.995

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)

	Min.		Avg.		Max.	
New-Order	18.001	0.001	18.007	12.028	18.938	120.851
Payment	3.001	0.001	3.007	12.028	3.934	120.734
Order-Status	2.001	0.001	2.007	10.034	2.919	100.664
Delivery	2.001	0.001	2.007	5.042	2.919	50.711
Stock-Level	2.001	0.001	2.007	5.042	2.916	50.957

Test Duration

Ramp-up Time	35 minutes
Measurement Interval	134 minutes, 10 seconds
Number of Checkpoints	5
Checkpoint Interval	longest Interval: 1632 seconds
Number of transactions (all types) completed in Measurement Interval	1508749941