



Sybase, Inc.

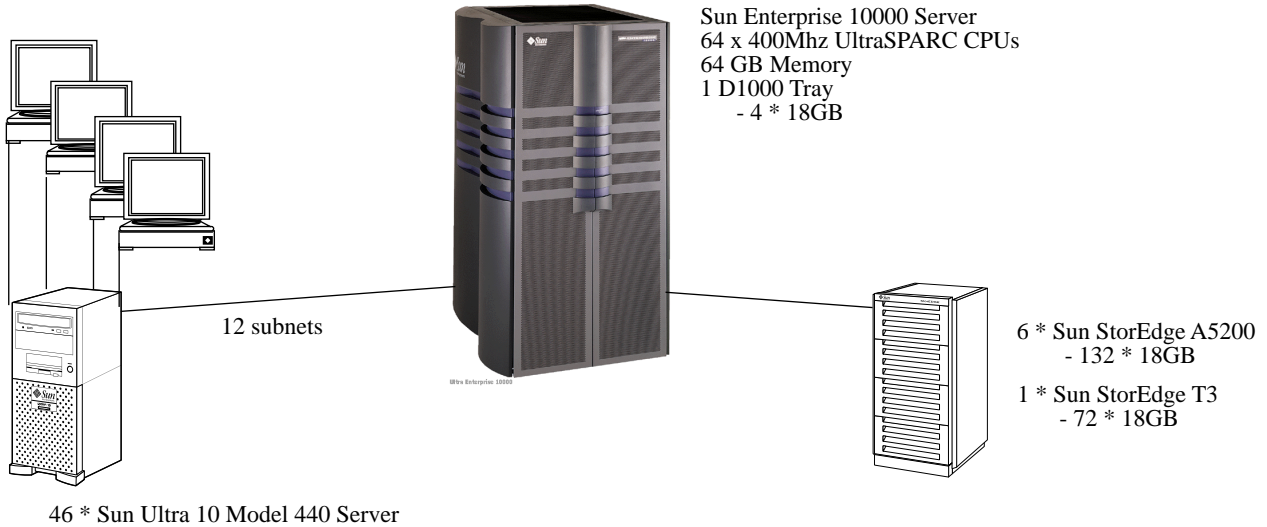
Sun Starfire Enterprise 10000 with Sybase ASE 12.0.0.2

TPC-C 3.5

Report Date:
August 29, 2000

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$7,657,324	156,873.03 tpmC	\$48.81 per tpmC	February 28, 2001	
Processors	Database Manager	Operating System	Other Software	Number of Users
64 * 400MHz	Sybase ASE 12.0.0.2	Solaris 7	BEA Tuxedo 6.3 Veritas Vol. Mgr. 3.0.2	128,800

128,800 user connections to 46 clients



Configuration

	Server System	Front End Systems
Database Nodes:	1 Sun Enterprise 10000 Server	46 * Ultra 10 Model 440
Processors	64 * 400 MHz UltraSPARC II	1 * 440 MHz UltraSPARC II each
Cache memory	32KB (D+I), 8MB external	32KB (D+I), 512KB external, each
Main memory	64 GB	1 GB each
Disk controllers	1 Fast/Wide SCSI-2 , 26 Dual Port FC-AL	1 * SCSI-2 each
Disk Drives	4 * 18GB SCSI-2, 864 * 18GB FC-AL	1 * 9GB SCSI-2 each
Total Disk Storage	15,624GB	9GB each
Terminals	1 Console	1 Console each
10 BaseT Hub	None	16,100 x 8-Port Hubs
100 Base T Hubs	12 x 8-Port Hubs	None



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Pricing Summary

Description	Part Number	Source	Unit Price	Qty	Ext. Price	5 Yr. Maint.
Server Hardware						
E10000 Base Cabinet	E10000-4		129600	1	129600	337920
System Board: unpopulated	2761A		39600	16	633600	581376
CPU 400MHz 8MB L2S	2580A		10800	64	691200	
Memory Board unpopulated	7025A		7200	16	115200	
1GB for Ex000	7023A		6120	64	391680	
Dual SBus I/O daughter card	2730A		5400	16	86400	
System Service Proc	2754A		7560	1	7560	3264
AC input module	3875A		2160	4	8640	
48 volt power supply	9685A		2160	8	17280	
Power Control Module	9681A		720	1	720	
Fan tray	9671A		1080	16	17280	
Control Board w/ Enet Cable	2720A		10800	1	10800	
Power Cord for System	3865A		0	4	0	
Rack Mount D1000 W/4x18GB	SG-ARY154A-72GR5		8406	1	8406	
FCAL Host Adapter	6730A		1944	26	50544	
SBus Quad Fast Eth Host Adapter	1049A		1436	3	4309	
Sbus Fast Eth 2.0 Host Adapter	1059A		572	1	572	
12 Meter SCSI cable	979A		265	1	265	
2400GB StorEdge A5200	SG-ARY543A-2400G		376909	6	2261455	483840
N Am/Uni/Can Type 6 Country kit	3508A		0	1	0	
U.S. Power Cord for StorEdge	3858A		0	12	0	
Power Cord for Data Center Cab (US)	3800A		0	1	0	
1310GB StorEdge T3 ES	XT3ES-RK-88-1310		263376	1	263376	50688
SBus Ultra DWIS/S Host Adapter	X1065A		932	1	932	
15M Fibre Channel Cable	978A		175	24	4200	
Symmetra 16kva UPS	SX-SY16K		15845	1	15845	1315
12GB 4mm Tape Drive	6283A		972	1	972	
Subtotal					4720837	1458403
SunService Discount (10% Volume + 5% yearly prepay)						-211468
Server Hardware Subtotal					4720837	1246935
Server Software						
Solaris 7 Media	SOLMS-070W9999		100	1	100	
SPARC Compiler C/C++ 5.0	WCIS-500-T999		995	1	995	1380
Sun StorEdge Comp Mgr V2.1	SCMMS-210-9P99		0	1	0	
Veritas Vol Mgr 3.0.4 for A5x000's	VVMGS-304-9999		0	1	0	
E10000 Sys Serv Proc 3.1	E10000-SW-SSP-3.1		0	1	0	
Sybase Adapt Serv Enterprise	Version 12.0.0.2 SWR 9197		295000	1	295000	236000
Sybase Development			11400	1	11400	
Sybase Open Client				1	0	
Subtotal					307495	237380
SunService Discount (10% Volume + 5% yearly prepay)						-200
Sybase Discount (10%)						-23600
Server Software Subtotal					307495	213580
Client Hardware						
Ultra 10 Model 444	A22UKC1A9P-C512P		4357	46	200401	192979
512 MB memory for Ultra 10	7039A		1598	46	73487	
PCI Quad Fast Eth Controller	1034A		1292	46	59450	
Color Monitor	X7126		289	46	13306	
Subtotal					346645	192979
SunService Discount (10% Volume + 5% yearly prepay)						-27982
Client Hardware Subtotal					346645	164997
Client Software						
BEA Tuxedo CFS 6.3			3000	46	138000	110400
Client Software Subtotal					138000	110400
User Connectivity						
8-port 10/100 Mbps Fast Eth Hub	Z222147		79	14	1106	
8-port+1 10 Mbps Eth Hub	Z222146		23	17710	407330	
User Connectivity Subtotal					408436	
					Total	1735912
					5Yr. cost	7657324
Service for all Sun Products is from Sun Microsystems Inc.					tpmC Rating	156873.03
Service for Sybase products is from Sybase Inc.					S/tpmC	48.81
Service for Tuxedo is from BEA Systems Inc.						

Audited by: Francois Raab, 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 purchase are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.

Note: (Source): 1) Sun Microsystems Inc.; 2) CAT Technology Inc.; 3) Sybase Corp.; 4) BEA Systems Inc.; 5) Software House International

Note: Hardware Available and Sun Software Available Now; Sybase Software Available Feb 28, 2001.



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Numerical Quantity Summary

MQTh, Computed Maximum Qualified Throughput = 156,873.03 tpmC
% throughput difference, reported & reproducibility runs = < 0.1%

Table with 4 columns: Response Times (in secs), 90th Percentile, Average, Maximum. Rows include Menu, New-Order, Payment, Order-Status, Delivery(interactive), Delivery(deferred), Stock-level.

Transaction Mix, in percent of total transactions

Table with 2 columns: Transaction Type, Percentage. Rows include New-Order, Payment, Order-Status, Delivery, Stock-level.

Table with 4 columns: Keying/Think Times (in secs), Average, Min., Maximum. Rows include New-Order, Payment, Order-Status, Delivery, Stock-level.

Test Duration

Table with 2 columns: Test Parameter, Value. Rows include Ramp-up time, Measurement Interval, Number of checkpoints, Checkpoint Interval, Number of transactions (all types) completed in measurement interval.