

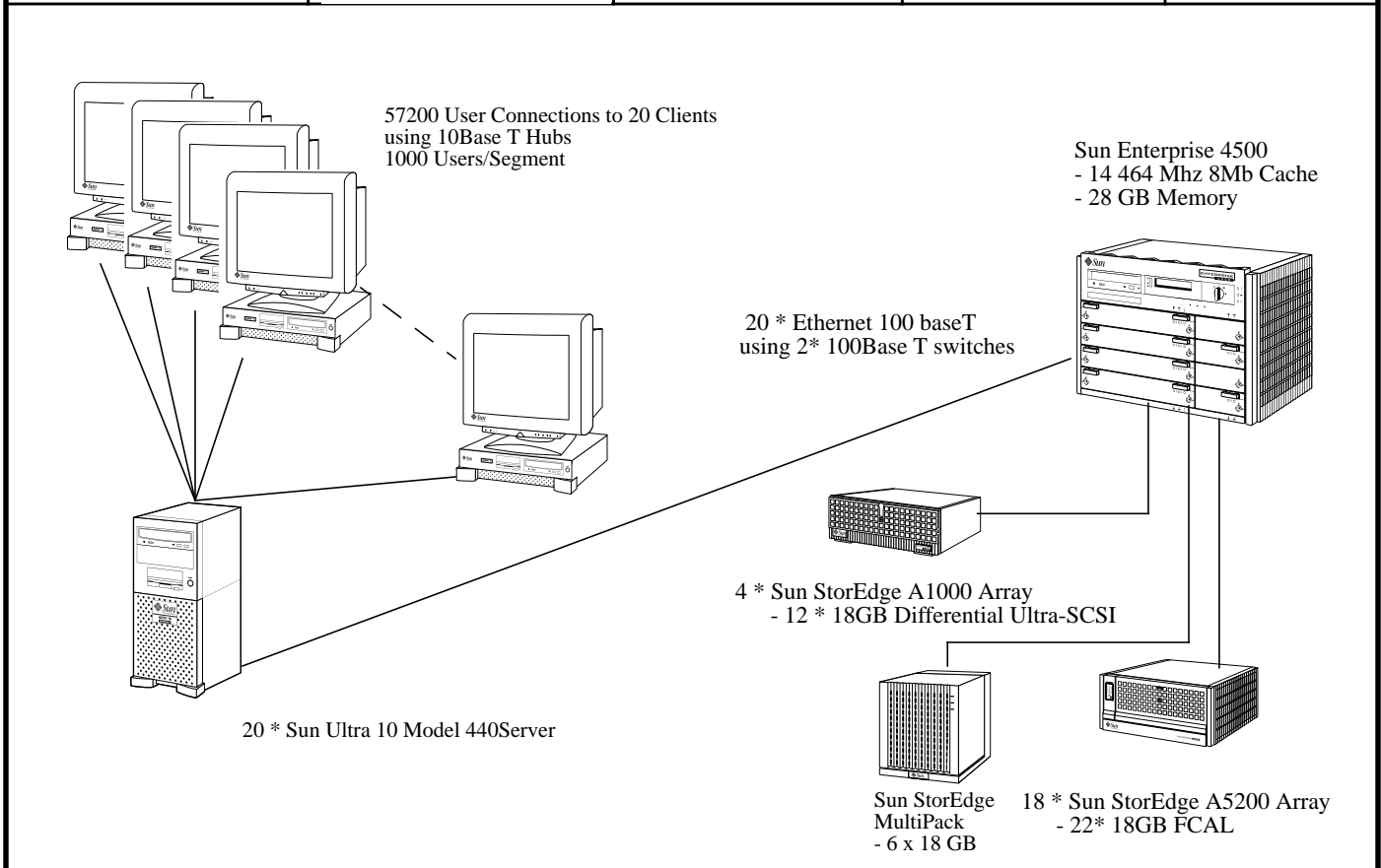


Sun Enterprise 4500 C/S w/ 20 Front-Ends

TPC-C 3.5

Report Date:
March 19, 2001

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$2,493,394	67102.63 tpmC	\$37.16	September 14, 2001	
Processors	Database Manager	Operating System	Other Software	Number of Users
14 * 464 MHz UltraSPARC II	SymfoWARE Server Enterprise Edition for VLM 3.0	Solaris 8	BEA Tuxedo 6.3	57200



Configuration

	Server System	Front End Systems
Database Nodes:	1 Sun Enterprise E4500 Server	20 * Ultra 10 Model 440
Processors	14* 464 MHz UltraSPARC II	1 * 440MHz UltraSPARC II each
Cache memory	32KB (D+I), 8MB external	32KB (D+I), 2MB external, each
Main memory	28 GB	1 GB each
Disk controllers	3 Dualport FC-AL, 2 Fast/Wide SCSI-2	1 * SCSI-2 each
Disk Drives	450 * 18GB FC-AL (18 * A5200, 4 * A1000), 6 * 18GB SCSI-2 (MultiPack)	1 * 18.2GB 10K RPM SCSI
Total Disk Storage	7560GB	18.2 GB each
10 BaseT Hub	None	7160* 9-Port Hubs
100 Base T Hub	1 x 8-port Hub	None
100 BaseT Switches	2 x 16 Port	None



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Pricing Summary

Description	Part Number	Source	Unit Price	Qty	Ext. Price	5 Yr. Maint.
Server Hardware						
E4500	E4503		22,322	1	22,322	31,906
CPU/Memory board	X2602A		7,065	1	7,065	10,433
464MHz/8MB Ultra SPARC II	2590A		15,217	2	30,435	
2GB memory (8 * 256MB)	X7026A		13,526	8	108,209	
CPU/Memory Building Block	2602A-P95A		98913	3	296,739	62,597
SBus I/O building block	2612A-SS-A		7,983	1	7,983	
FCAL SBus Host adapter	6730A		1,996	2	3,991	
DWIS/S SBus Host Adapter	1065A		957	1	957	
2400GB StorEdge A5200 Array	SG-XARY543A-2400G		229,500	3	688,500	254,016
218-Gbyte StorEdge A1000 Array	SG-XARY150A-218G		14,280	4	57,120	40,320
109.2-Gbyte StorEdge MultiPack	SG-XDSK060C-109G		5159	1	5,159	
SCSI Cable 68 pin	3856A		41	1	41	
12-24GB 4mm DDS-3 Tape Drive	6283A		998	1	998	
Server Hardware Subtotal					1,229,518	399,271
Server Software						
Solaris Server Software	SOLMS-26ZW9999		100	1	100	
SPARC Compiler C/C++ 5.0	WCCIS-600-T999		995	1	995	1,080
SymfoWARE Server Enterprise Edition for VLM 3.0			251000	1	251,000	251,000
Server Software Subtotal					252,095	252,080
Client Hardware						
Ultra 10 Server Model 440	A22UKC1Z9P-B512CP		3,648	20	72,962	86,112
512MB Memory for Ultra 10	7039A		1,639	20	32,778	
PCI QEF Card	1034A		1,327	20	26,535	
Color Monitor	x7143a		297	20	5,935	
Client Hardware Subtotal			6910		138,200	86,112
					1,367,718	
Client Software						
BEA Tuxedo CFS 6.3			3,000	20	60,000	48,000
Client Software Subtotal					60,000	48,000
User Connectivity						
16-port 10/100Mbps Fast Ethernet Hub	NX-SOHODH8		1,000	4	4,000	
9-port 10Mbps Ethernet Hub	NX-H9EZ		23	7876	181,148	
User Connectivity Subtotal					185,148	
Sun Enterprise Services discounts						(157,030)
			Total		1,864,961	628,433
			5Yr. cost		2,493,394	
			tpmC Rating		67,103	
			\$/tpmC		\$37.16	

Service for all Sun products is from Sun Microsystems, Inc.

Notes:

1. Sun Microsystems Inc. 2. CAT Technology Inc. 3. Fujitsu 4. BEA Systems, Inc. 5. SHI

Audited by: Bradley J. Askins, 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.



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Numerical Quantity Summary

MQTH, Computed Maximum Qualified Throughput = 67102.63 tpmC
 % throughput difference, reported & reproducibility runs = < 0.1%

Response Times (in secs)	90th Percentile	Average	Maximum
Menu	0.50	0.246	0.810
New-Order	3.600	1.546	56.524
Payment	3.600	1.575	57.909
Order-Status	3.200	1.410	35.477
Delivery(interactive)	0.290	0.347	25.202
Delivery(deferred)	4.00	1.660	28.000
Stock-level	3.00	1.241	27.644

Transaction Mix, in percent of total transactions

New-Order	44.84%
Payment	43.05%
Order-Status	4.03%
Delivery	4.04%
Stock-level	4.04%

Keying/Think Times (in secs)	Average.	Min.	Maximum
New-Order	18.02/12.19	18.01/0	18.88/122.00
Payment	3.02/12.20	3.01/0	3.39/122.00
Order-Status	2.02/10.21	2.01/0	2.37/102.50
Delivery	2.02/5.20	2.01/0	2.33/52.00
Stock-level	2.02/5.21	2.01/0	2.12/52.00

Test Duration

Ramp-up time	43 minutes
Measurement Interval	30 minutes
Number of checkpoints	1
Checkpoint Interval	30 minutes
Number of transactions (all types) completed in measurement interval	4489072
