

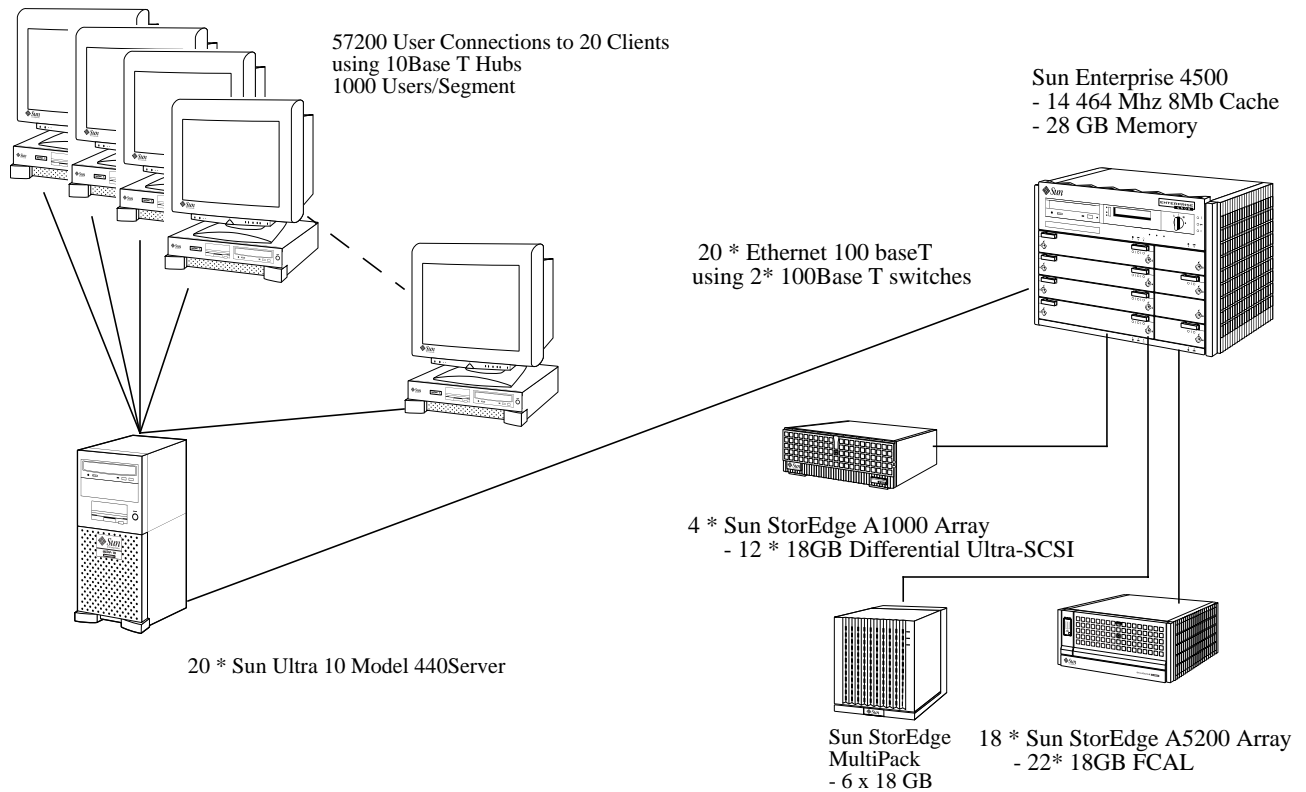


# Sun Enterprise 4500 C/S w/ 20 Front-Ends

TPC-C Rev. 5.0 Upgrade  
from TPC-C Rev 3.5

Report Date: March 19, 2001  
Upgrade Date: September 25, 2001

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
<b>\$1,734,522</b>	<b>67102.63</b> tpmC	<b>\$25.85</b> per tpmC	<b>September 14, 2001</b>	
Processors	Database Manager	Operating System	Other Software	Number of Users
Server: 14 * 464 MHz Clients: 20 * 440 Mhz	<b>SymfoWARE Server Enterprise Edition for VLM 3.0</b>	<b>Solaris 8</b>	<b>BEA Tuxedo 6.3</b>	<b>57200</b>



## 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	
Disk Drives	450 * 18GB FC-AL (18 * A5200, 4 * A1000), 6 * 18GB SCSI-2 (MultiPack)	1 * 20GB EIDE
Total Disk Storage	7560GB	20 GB each
100 BaseT Switches	3 x 24Port	None



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

TPC-C Rev. 5.0 Upgrade  
from TPC-C Rev. 3.5

Report Date: March 24, 2001  
Upgrade Date: September 25, 2001

## Pricing Summary

Description	Part Number	Source	Unit Price	Qty	Ext Price	3 Yr. maint	
<b>Server Hardware</b>							
E4500	E4503	1	30,200	1	30,200	20,652	
CPU/Memory Board	X2602A	1	9,000	1	9,000	6,768	
464MHz/8MB UltraSPARC II	2590A	1	15,000	2	30,000		
2GB Memory (8*256MB)	X7026A	1	7,000	8	56,000		
CPU/Memory Building Block	2602A-P95A	1	82,900	3	248,700	40,608	
SBus I/O building block	2612A-SS-A	1	10,800	1	10,800		
FCAL SBus Host adapter	6730A	1	2,700	2	5,400		
DWIS/S SBus Host Adapter	1065A	1	1,295	1	1,295		
2400GB StorEdge A5200 Array	SG-XARY543A-2400G	1	310,500	3	931,500	189,000	
218-Gbyte StorEdge A1000 Array	SG-XARY150A-218G	1	11,995	4	47,980	30,000	
109.2-Gbyte StorEdge MultiPack	SG-XDSK060C-109G	1	5,650	1	5,650		
SCSI Cable 68 pin	3856A	1	45	1	45		
12-24GB 4mm DDS-3 Tape Drive	6283A	1	1,148	1	1,148		
<i>Server Hardware Subtotal</i>					1,377,718	287,028	
<b>Server Software</b>							
Solaris Server Software	SOLZS-080B9AYM	1	100	1	100		
SPARC Compiler C/C++	FCEIS-602-T999	1	3,495	1	3,495	2,952	
SymfoWARE Server Enterprise Edition for VLM 3.0		2	251,000	1	251,000	150,600	
<i>Server Software Subtotal</i>					254,595	153,552	
<b>Client Hardware</b>							
Ultra 10 Server Model 440	A22UKC1Z9P-C512CY	1	3,995	20	79,900	75,600	
512MB Memory for Ultra 10	7039A	1	1,795	20	35,900		
PCI QFE Card	1034A	1	1,795	20	35,900		
Color Monitor	X7143A	1	325	20	6,500		
24-port 10/100Mbps Ethernet Switch	3300XM	4	730	3	2,190		
<i>Client Hardware Subtotal</i>					160,390	75,600	
<b>Client Software</b>							
BEA Tuxedo CFS 6.3		3	3,000	20	60,000	41,400	
<i>Client Software Subtotal</i>					60,000	41,400	
					Discounts	-615,805	-59,955
Service for all Sun products is from Sun Microsystems, Inc.							
Service for SymfoWARE is from Fujitsu				Total	1,236,897	497,625	
Notes (Source):							
1. Sun Microsystems Inc. 2. Fujitsu 3. BEA Systems 4. Micro Warehouse				3 Yr. Cost	1,734,522		
				tpmC Rating	67102.63		
				\$/tpmC	\$25.85		

Audited by: Bradley J. Askins, Infosizing Inc. (www.sizing.com)

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.



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

TPC-C Rev. 5.0 Upgrade  
from TPC-C Rev. 3.5

Report Date: March 21, 2001  
Upgrade Date: September 25, 2001

## 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

---

---