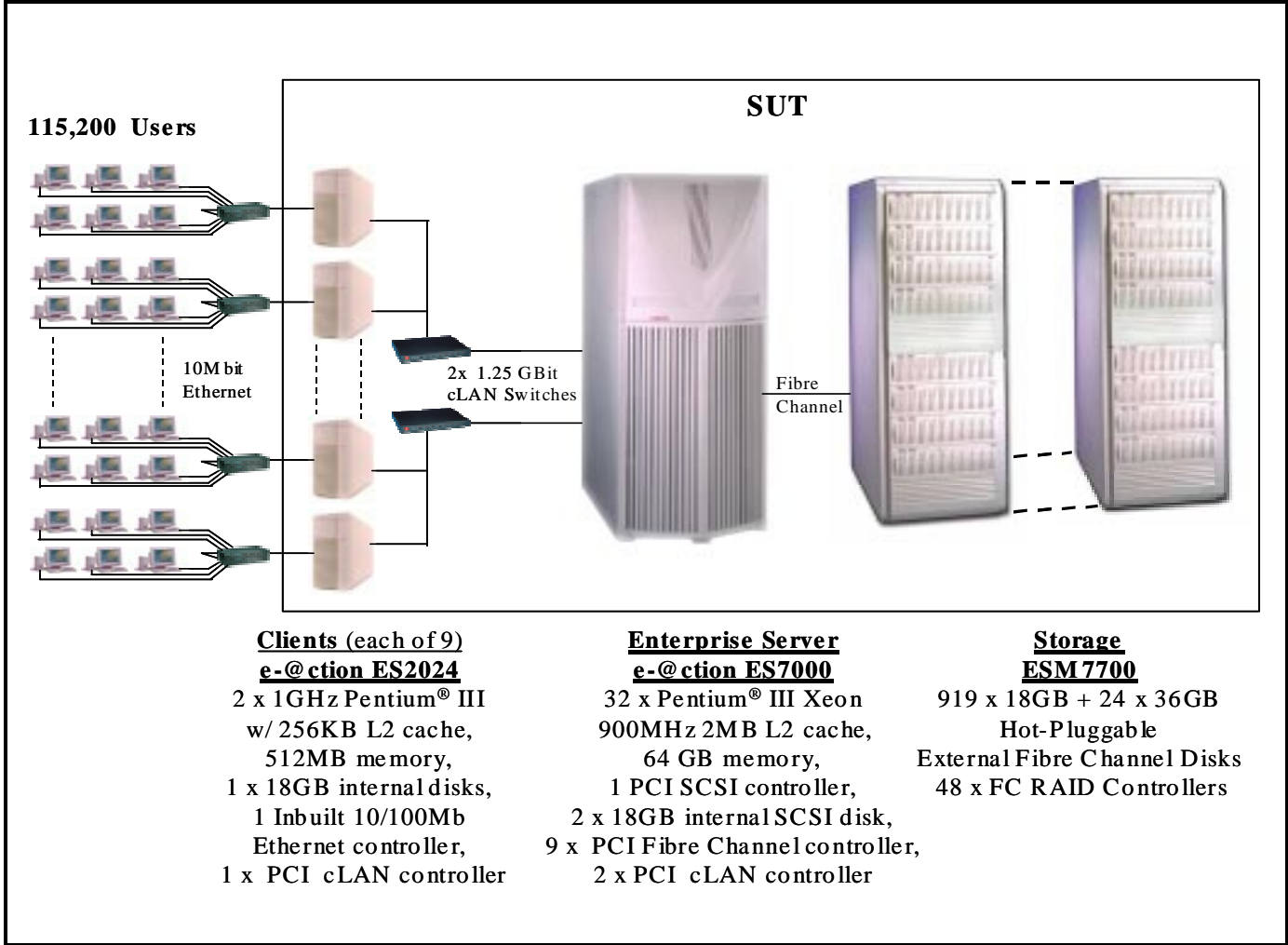


UNISYS	e-@ction Enterprise Server ES7000		TPC-C Rev. 5.0
			Report Date September 10, 2001
Total System Cost	TPC-C Throughput	Price Performance	Availability Date
\$3,363,483	141,138.44 tpmC	\$23.84 / tpmC	March 10, 2002
Processors	Database Manager	Operating System	Other Software
32 - Database 18 - Clients	Microsoft SQL Server 2000 Enterprise Edition	Microsoft Windows Datacenter Server Limited Edition	Windows 2000 Server w/ IIS 5.0 and COM+ Microsoft Visual C++
Number of Users			
115,200			



System Components	Enterprise Server		Clients (each of 9)	
	Quantity	Type	Quantity	Type
Processors	32	900MHz Pentium® III Xeon with 2MB Level 2 Cache	2	1GHz Pentium® III with 256KB Level 2 Cache
Memory	1	64 GB	1	512 MB
Disk Controllers	9	PCI Fibre Channel	1	Inbuilt SCSI
	1	PCI SCSI		
Disk Drives	919	18GB FC (17.0 GB useable)	1	18GB SCSI (16.9 GB useable)
	24	36GB FC (34.0 GB useable)		
	2	18GB SCSI (17.0 GB useable)		
Total Storage		15.6 TB		16.9 GB
Tape / CD-ROM	1	SCSI CD-ROM	1	IDE CD-ROM
Terminals	1	Console Monitor	1	Console Monitor



e-@ction Enterprise Server ES7000

TPC-C Rev. 5.0

Report Date
September 10, 2001

Description	Part No.	Third Party		Unit Price	Qty.	Extended Price	3 yr.Maint. Price
		Brand	Price				
Server Hardware:							
SYS: ES7000, 2 Domain, 32P, 8 GB, 2 MSUs, 2 DIBs	ES73251-GDN		1	\$521,333	1	\$521,333	
MEM: 16GB, 1 GB DIMMs	RAM7-16G		1	\$81,600	3	\$244,800	
MEM: 8GB, 1 GB DIMMs	RAM7-8GB		1	\$43,520	1	\$43,520	
BRD: Memory Carrier Board, 0 Mem.	MSU2000-MBD		1	\$10,880	2	\$21,760	
IO: Module, PCI Enclosure w/ BID Motherboard	PCI2053-12		1	\$2,992	6	\$17,952	
IO: Module, PCI Enclosure 3.3V, 4 Card	PCI3-MOD		1	\$363	10	\$3,630	
CTRL: Fibre Channel HBA, 2-Port, 64-bit PCI	PCI6221-SW		1	\$2,063	9	\$18,567	
CTRL: cLAN, PCI Host Adapter & Cable	PCI10001-CXG		1	\$586	2	\$1,172	
CTRL: 2Ch SCSI, U160, PCI	PCI7602-P64		1	\$442	1	\$442	
DISK: 18GB, 10K SCSI LVD, SCA	HDM18110-CX1		1	\$568	2	\$1,136	
I/F: Monitor, 15-inch Color, Kybrd, Mse & Cable	ES70001-UIF		1	\$272	1	\$272	
MAINT: 3-Yr. Cmprhnsv-Gold Svc Wrrnty Upgrd	WID7323-CGS		1	\$39,038	1		\$39,038
Server Software:							
SYS MGT: ES7000 Value Add Software	ESS700030-N		3	\$4,533	1	\$4,533	\$3,564
O/S: Microsoft Windows Datacenter Server Lmted Edtn, 1-32P	LED320032-EN		3	\$90,667	1	\$90,667	\$71,388
O/S: Windows Datacenter Annual Update, 1-32P	WM320032-EN		1	\$26,293	3		\$78,879
APP: SQL Server 2000 Entrprs Edtn, per Proc. Lcnsng	810-00846	2	2	\$16,541	32	\$529,312	\$6,285
Server Subtotal						\$1,499,096	\$199,154
Storage Hardware:							
DISK: 18GB Drive, 10K FC, SCA	ESM18201-F96		1	\$615	919	\$565,185	Spared
DISK: 18GB Drive, 10K FC, SCA 10% spares*	ESM18201-F96		1	\$615	92		\$56,580
DISK: 36GB Drive, 10K FC, SCA	ESM36202-F94		1	\$928	24	\$22,272	Spared
DISK: 36GB Drive, 10K FC, SCA 10% spares*	ESM36202-F94		1	\$928	3		\$2,784
DAE: Expansion Enclsr, w/ 0 Disk	ESM7200-DAE		3	\$4,087	72	\$294,264	\$62,208
DPE: 2 RAID Cntrl, 512MB Cache ea., 0 Disk	ESM7700-DPE		3	\$29,361	24	\$704,664	\$147,744
SYS MGT: Storage Agent, Monitor, Call Home & ATF	ESM7700-W2K		3	\$1,661	1	\$1,661	\$864
CBL: FC, DB9->DB9 Conn's, 10m	CBL135-10		1	\$193	18	\$3,474	
PWR: Distribution Strip, 220V	SFR9-PWR		1	\$295	24	\$7,080	
CBL: Power, U.S. (Domestic), L6-20P	USE1936-LC6		1	\$56	24	\$1,344	
CAB: 36U x 19" x 34" Cabinet, e-@ction	RM361934-OFE		1	\$810	12	\$9,720	
DOOR: 36U x 19", Rear	RM3619-RDR		1	\$277	12	\$3,324	
PNL: 36U x 34" Side Skins, L&R	RM3634-SDS		1	\$221	12	\$2,652	
Storage Subtotal						\$1,615,640	\$270,180
Client Hardware:							
SYS: ES2024 Tower, w/ 0 Proc., 0MB Mem	ES202141-GZN		1	\$1,547	9	\$13,923	
PROC:1x1GHz Pentium III/256KB Cache	CPU31000-256		1	\$884	18	\$15,912	
ACC: Voltage Regulator	VRM3-83		1	\$29	9	\$261	
MEM: 256 MB SDRAM PC133ECC Memory	DIM13368-256		1	\$221	18	\$3,978	
DISK: 18GB SCSI 3.5 Internal	ES2024-18G		1	\$553	9	\$4,977	
CTRL: cLAN, PCI Host Adapter & Cable	PCI10001-CXG		1	\$586	9	\$5,274	
MAINT: 3 Yr. Cmprhnsv-Gold Svc Warranty Upgrade	WI2003-CGS		1	\$1,326	9		\$11,934
MONITOR:15-inch Color	EVG2100-P		1	\$221	9	\$1,989	
Client Software:							
O/S: Microsoft Windows 2000 Server	C11-00821	2	2	\$738	9	\$6,642	Inc. above
ACC: Microsoft Visual C++ Professional 6.0	048-00317	2	2	\$549	1	\$549	Inc. above
Client Subtotal						\$53,505	\$11,934
Connectivity							
SWITCH: cLAN, 8-port, 1.25Gbit	SWT50082-CXG		3	\$5,157	2	\$10,314	\$2,160
Connectivity Subtotal						\$10,314	\$2,160
Total						\$3,178,555	\$483,428
						(\$283,127)	(\$15,373)

Comark and Unisys Pre-Pay Discounts

Notes:

1. 3rd Party Brand and Pricing: 1 = Comark, 2 = Microsoft, 3 = Comark Product Price, Unisys Maintenance Price
2. HW & SW maintenance figured at 24 x 7 w/ 4 hr. max. response time for spares.
3. * = 10% spare disks added in place of onsite service.

Three Year Cost of Ownership: \$3,363,483
tpmC Rating: 141,138.44
\$ / tpmC: \$23.84

Benchmark results and test methodology audited by Lorna Livingtree of Performance Metrics, 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 assumption about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmarks specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank You.

Numerical Quantities Summary

MQTh, Computed Maximum Qualified Throughput: 141,138.44 tpmC

Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	1.03	0.68	6.00
Payment	0.95	0.60	5.81
Order-Status	0.97	0.62	6.18
Delivery (interactive portion)	0.58	0.32	1.33
Delivery (deferred portion)	0.52	0.37	1.66
Stock-Level	1.35	0.89	3.00
Menu	0.59	0.32	1.44

Response time delay added for emulated components, in seconds

RT Response time	0.1
Menu Response time	0.1

Transaction Mix, in percent of total transactions

New Order	44.81%
Payment	43.07%
Order-Status	4.03%
Delivery (interactive portion)	4.03%
Stock-Level	4.03%

Keying / Think Time Times, in seconds

Transaction	Minimum	Average	Maximum
New Order	18.00 / 0.00	18.00 / 12.03	18.05 / 120.30
Payment	3.00 / 0.00	3.00 / 12.03	3.02 / 120.31
Order-Status	2.00 / 0.00	2.00 / 10.06	2.01 / 100.71
Delivery (interactive portion)	2.00 / 0.00	2.00 / 5.06	2.03 / 50.60
Stock-Level	2.00 / 0.00	2.00 / 5.06	2.03 / 50.60

Test Duration

Ramp up time	54 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	37,788,695
Ramp-down time	10 minutes

Checkpointing:

Number of checkpoints	4
Checkpoint interval	30 minutes