

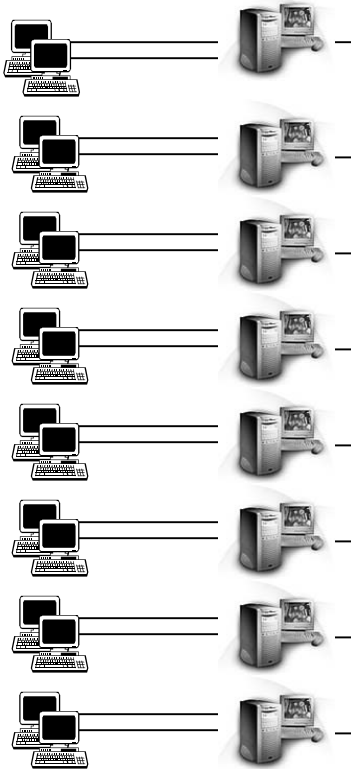


Express5800 HV8000 C/S

TPC-C Rev. 3.3.2
Reported Date
March 18, 1998

Total System Cost		TPC-C Throughput	Price/Performance	Availability
\$632,405		16,216.10 tpmC	\$38.99 per tpmC	June 15, 1998
Processors	Database Manager	Operating System	Other Software	Number of Users
8 x PentiumPro 200MHz 1MB cache	Microsoft SQL Server 6.5 Enterprise Edition	Microsoft Windows NT4.0 Enterprise Edition	Microsoft IIS 3.0 BEA Tuxedo 6.3CFS Microsoft VC++	13,200

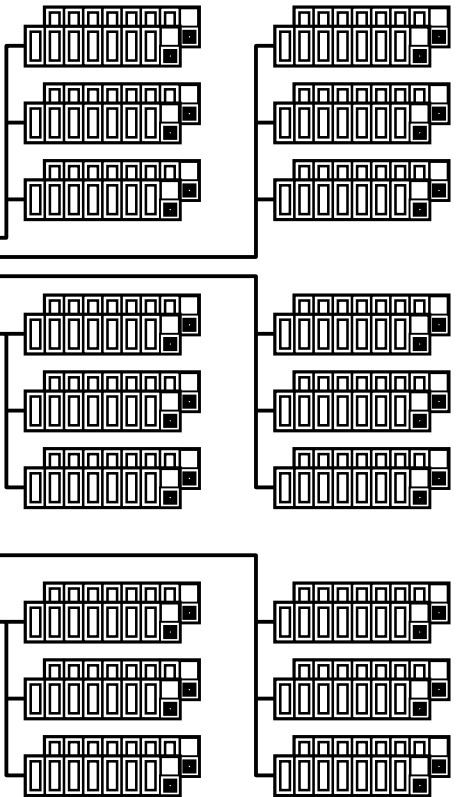
Total of 13,200 PCs



8 x PowerMate Enterprise 800-233

Server : Express5800 HV8000

8 x PPro200MHz/1MB,
4096MB Mem,
2 x Internal 4GB disk + 10 x 9GB disk,
1 x Integrated SCSI ,
7 x Mylex DAC960-PJ,
Win NT4.0 EE
SQL6.5 EE



Storage: Digital Storage Works™

56 x 9GB disks
112 x 4GB disks

System Component	Server		Each Client	
	Processors	8	Pentium Pro ® 200MHz	1
Cache		1MB L2		512KB
Memory	1	4096MB	1	256MB
Disk Controllers	7 1	Mylex DAC960-PJ Integrated Adaptec	1	Integrated IDE
Disk Drives	66 114	9GB (8.47GB usable) 4GB (3.99GB usable)	1	3.2GB
Total Storage		1013.88MB		3.2GB
Others	1 1	CD-ROM Drive DAT Drive	1	CD-ROM Drive



NEC Express 5800 HV8000
C/S

TPC-C REV 3.3.2

Report Date: March 18 1997

Description	Part Number	Third Party		Unit Price	Qty	Extended Price	5-year Maint. Price
		Brand	Pricing				
Server Hardware							
Express 5800 HV8000	850115000	NEC	1	51,550	1	51,550	12,372
4 x PentiumPro/200Mhz/1MB CPU 1024MB CD-ROM, Keyboard, Mouse integrated SCSI controller PCI 10/100Base NIC							
Pentium Pro 200/1M CPU Upgrade Kit	203202	NEC	1	3,500	4	14,000	0
1024MB ECC (4X256MB DIMM)	FI-410-34305	NEC	1	10,199	3	30,597	0
4GB HDD	OP-220-76102	NEC	1	699	2	1,398	0
NEC 15" Multisync Monitor	JC-1576VMA	NEC	1	299	1	299	72
4/8GB SCSI Connor 4mm DAT Drive	FI-230-34001	NEC	1	749	1	749	0
PCI Bridge Card (+2spares)	2031EVM	TI	5	500	3	1,500	0
Disk Subsystem							
Mylex DAC960PJ 3channel w / 8MB EDO (+2 spares)	DACPJ-3-8E-MY1	Mylex	4	1,845	9	16,605	450
DEC Storage Works system							
4.3GB W-Use Seagate Disk(+10% spares)	DS-RZ1CB-VW	DEC	7	900	124	111,600	0
9GB W-Use Seagate Disk(+10% spares)	DS-RZ1DB-VW	DEC	7	1,723	62	106,826	0
Shelf (HA702WUHC single Bus)(+10%spares)	DS-BA356-SD	DEC	7	733	40	29,320	0
180W Power Supply SBB (+10% spares)	DS-BA35X-HH	DEC	7	375	40	15,000	0
ULTRA 68VHD TRI-LINK (+2 spares)	H8861-AA	DEC	7	134	20	2,680	0
ULTRA 68VHD 0.5M SCSI Cable ASSBLY(+2spares)	BN37A-0E	DEC	7	103	20	2,060	0
ULTRA 68VHD 3M SCSI Cable ASSBLY(+2spares)	BN37A-03	DEC	7	103	20	2,060	0
ULTRA 68VHD Converter Cable(+2spares)	BN38E-0B	DEC	7	103	8	824	0
HD 9GB U/W SCSI 10KRPM	203350	NEC	1	1,829	10	18,290	0
Subtotal						405,358	12,894
Server Software							
Microsoft Windows NT Server,Enterprise Edition 4.0		Microsoft	2	3,999	1	3,999	0
Microsoft SQL Server,Enterprise Edition 6.5 Unlimited		Microsoft	2	28,999	1	28,999	10,475
Subtotal						32,998	10,475
Client Hardware							
PowerMate Enterprise 8000-233	P8001T2HT	NEC	1	1,499	8	11,992	2,878
Pentium II 233MHz 32MB,3.2GB HDD CD-ROM, KB, Mouse, integrated Intel Pro 100 128MB DIMM							
EtherExpress Pro/100B NIC 20 pack (including spares)	238-00205	NEC	1	900	16	14,400	0
NEC 15" Multisync Monitor	PILA8465B	Intel	6	1,289	1	1,289	0
	JC-1576VMA	NEC	1	299	8	2,392	72
Subtotal						30,073	2,950
Client Software							
Microsoft Windows NT Server 4.0 w/5 cal		Microsoft	2	809	8	6,472	0
Microsoft Visual C++ 32-bit edition (subscription)		Microsoft	2	499	1	499	0
Microsoft SQL Workstation(includes program's toolkit)		Microsoft	2	499	1	499	0
Tuxedo 6.3 Core functionality Services for NT		BEA	3	3,000	8	24,000	18,000
Subtotal						31,470	18,000
User Connectivity							
Linksys Fast Ethernet 100BTX HUB (+2 spares)	FEHUB16W	Linksys	6	289	3	867	0
Linksys 20-prt 10Mbps HUB (+10% spares)	EW20HUB	Linksys	6	118	740	87,320	0
Subtotal						88,187	0
TOTAL						588,086	44,319

Notes:

All Microsoft maintenance is covered by the maintenance costs of Microsoft SQL Server
Pricing: 1-NEC 2-Microsoft 3-BEA 4-Mylex 5-TI 6-CDW 7-Tenex Data
Intel offers a lifetime warranty free of charge:
Linksys offers standard with 5-year warranty
Audited by Francois Raab of Information Paradigm, Inc

Five-Year Cost of Ownership: **\$632,405**
tpmC Rating: **16216.10**
\$ / tpmC: 38.99

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 sections of the TPC benchmark 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		16216.10 tpmC	
%throughput difference ,reported & reproducibility runs		0.76%	
<u>Response Times(in seconds)</u>	<u>90%</u>	<u>Average</u>	<u>Maximum</u>
New-Order	1.09	0.66	38.29
Payment	0.92	0.48	28.94
Stock-Level	4.41	2.91	18.52
Delivery(interactive portion)	0.30	0.30	1.89
Delivery(deferred portion)	1.71	0.70	3.95
Order-status	1.60	1.04	34.03
Menu	0.30	0.20	2.30
Response time delay added for emulated components		0.1	
<u>Transaction Mix , in percent of total transaction</u>			
New-Order		44.83%	
Payment		43.04%	
Order-status		4.10%	
Delivery		4.03%	
Stock-level		4.01%	
<u>Keying/Think Times (in seconds)</u>	<u>Min.</u>	<u>Average</u>	<u>Max</u>
New-Order	18.01 0.00	18.01 12.06	18.03 120.70
Payment	3.0 0.00	3.01 12.02	3.03 120.70
Stock-Level	2.0 0.00	2.01 5.13	2.02 50.50
Delivery	2.0 0.00	2.01 5.03	2.02 40.23
Order-status	2.0 0.00	2.01 10.13	2.02 100.71
<u>Test Duration</u>			
Ramp-up time		47 minutes	
Measurement interval		30 minutes	
Number of checkpoints		1	
Checkpoint interval		30 minutes	
Number of transactions (all types) completed in measurement interval		1,085,280	