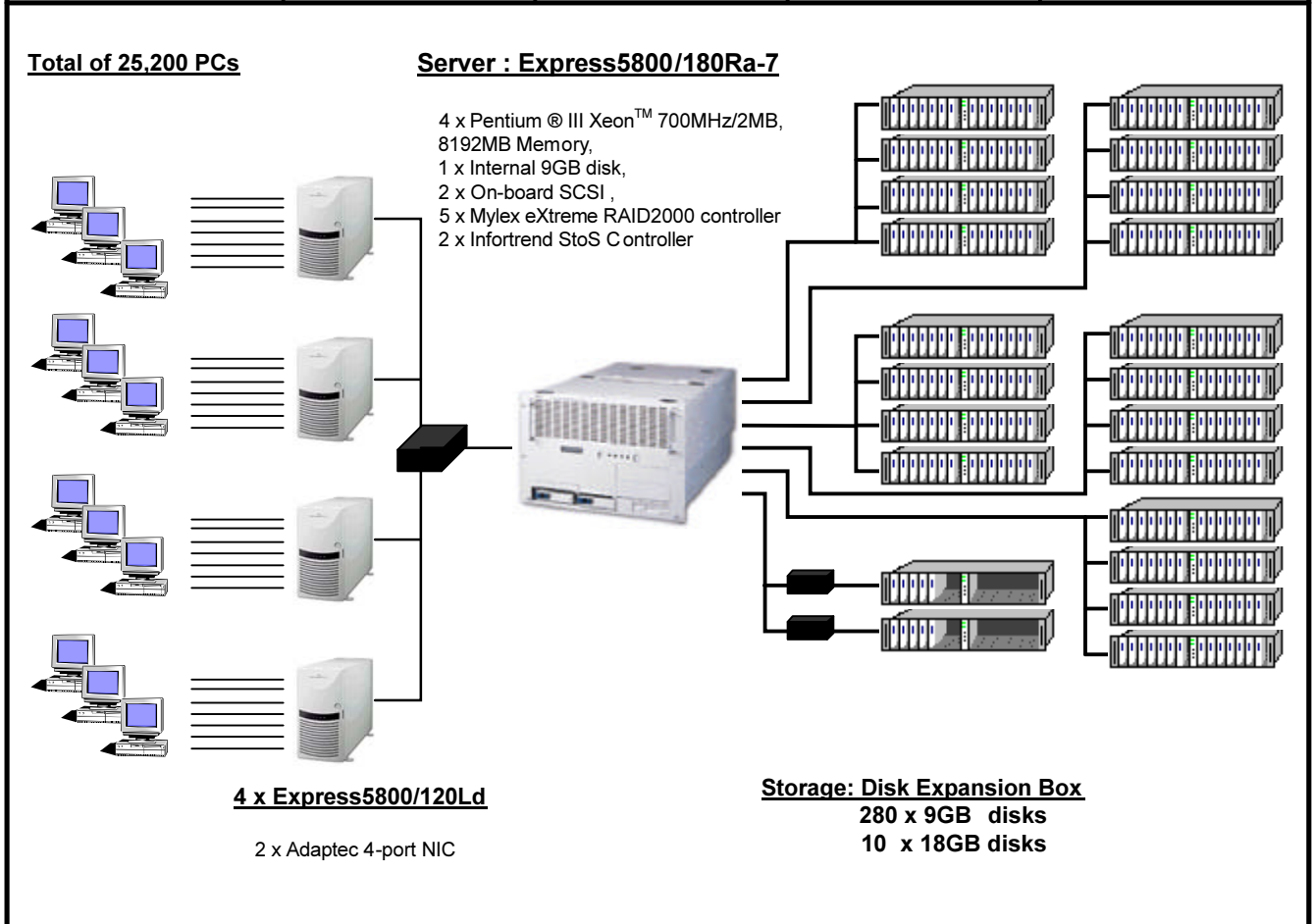



NEC		Express5800/180Ra-7 C/S		TPC-C Rev.3.5 Reported Date June 23 ,2000
Total System Cost		TPC-C Throughput		Price/Performance
\$ 592,075		31,764.37 tpmC		\$18.63 per tpmC
Processors		Database Manager	Operating System	Other Software
4 x Pentium®III Xeon™ 700MHz 2MB L2 cache		Microsoft SQL Server 2000 Enterprise Edition	Microsoft Windows 2000 Advanced Server	Windows2000 Server w/ COM+, IIS5.0 Microsoft VC++
				Number of Users
				25,200



System Component	Server		Each Client	
Processors	4	Pentium ® III Xeon™ 700MHz	2	Pentium ® III 866MHz
Cache		2MB L2 Cache		256KB L2 Cache
Memory	1	8192MB	1	512MB
Disk Controllers	6	Mylex eXtreme RAID 2000	1	On-board SCSI
	2	On-board SCSI		
	2	Infortrend S2S controller		
Disk Drives	281	9GB (8.47GB usable)	1	9GB
	10	18GB (16.95 GB usable)		
Total Storage		2473 GB		9GB
Others	1	CD-ROM Drive	2	Adaptec 4port Ether NIC
	1	On-board Ether controller	1	CD-ROM Drive
			1	On-board Ether controller

	NEC Express5800/180Ra-7 C/S			TPC-C REV 3.5			
	Report Date: June 23 ,2000						
Description	Part Number	Third Party Brand	Pricing	Unit Price	Qty	Extended Price	5-yr Mnt. Price
Server Hardware							
Express5800/180Ra-7 system							
Base system with 1 x Pentium III Xeon 700MHz/2MB	NS070000555	NEC	1	9,160	1	9,160	2,198
Pentium III Xeon 700MHz/2MB BTO Option	UBP-2641-1C-IN	NEC	1	3,899	3	11,697	2,807
2GB (4 x 512MB) memory,	AMS-7020-IN-00	NEC	1	8,599	4	34,396	8,255
9GB 10K rpm HDD,	BDH-1968-IN-00	NEC	1	419	1	419	101
DDS-3 DAT Drive	ADT-2410-IN-00	NEC	1	749	1	749	180
CD-ROM, On-board LAN, KB/MS,	Included	NEC	1	0	1	0	0
Windows2000 Advanced Server Hot Loaded	NUT-A200-IN-US	Microsoft	1	3,459	1	3,459	0
NEC MultiSync A500+	011145	NEC	1	179	1	179	43
Subtotal						60,059	13,584
Disk Subsystem							
eXtreme RAID2000 4channel controller (+2spares)	E2000-4-64NB	Mylex	3	2,050	8	16,400	0
3U Disk Expansion Unit(14 slots)	ADR-0802-IN-00	NEC	1	2,000	22	44,000	10,560
9GB 10k rpm HDD	BDH-1960-IN-00	NEC	1	419	280	117,320	28,157
18GB 10k rpm HDD	BDH-1860-IN-00	NEC	1	599	10	5,990	1,438
42U Rackframe	AZA-4200-00-00	NEC	1	1,879	2	3,758	902
Infotrend S2S RAID Controller (+2spares)	IFT-3102U2G	Infotrend	4	2,092	4	8,368	
64MB EDO SIMM							
Battery back-up module w/ battery (+2spares)	IFT-9070B	Infotrend	4	170	4	680	0
APC Smart UPS (+2 spares)	SU2200NET	APC	5	878	4	3,512	0
Subtotal						200,028	41,056
Server Software							
SQL Server2000 Ent. Edition, per process licensing		Microsoft	2	19,999	4	79,996	10,475
Windows2000 Advanced Server, 25 Client Licenses		Microsoft	(included in svr.)		1	0	0
Subtotal						79,996	10,475
Client Hardware							
NEC Express5800/120Ld							
Base System with 1 x Pentium III 866MHz/256KB	NS020001855	NEC	1	2,909	4	11,636	2,793
1 x Pentium III 866MHz/256 BTO Option	UBP-2718-IN-00	NEC	1	1,599	4	6,396	1,535
1 x 128MB memory,	AMS-5128-IN-00	NEC	1	399	16	6,384	1,532
1 x 9GB 10K rpm HDD,	CDH-1942-00-00	NEC	1	419	4	1,676	402
CD-ROM, On-board LAN, KB/MS	Included	NEC	1	0	4	0	0
Adaptec ANA-62044 NIC (+2spares)	ANA-62044-SGL	Adaptec	5	528	10	5,280	0
NEC MultiSync A500+	011145	NEC	1	179	4	716	172
Subtotal						32,088	6,434
Client Software							
Microsoft Windows 2000 Server, w/5 Client Licenses		Microsoft	2	999	4	3,996	0
Visual C++ Professional 6.0		Microsoft	2	549	1	549	0
Subtotal						4,545	0
User Connectivity							
Cisco Catalyst2912-XL-A (+2spares)	WS-C2912-XL-A	Cisco	5	1,110	3	3,330	0
Compex 16-prt 10Mbps HUB (+10% Spare)	TP1016C-110V	Compex	6	80	1756	140,480	0
Subtotal						143,810	0
TOTAL						520,526	71,549
Notes:							
All Microsoft maintenance is covered by the maintenance costs of Microsoft SQL Server				5-Yr. Cost of Ownership: \$592,075			
Pricing: 1-NEC 2-Microsoft 3-Mylex 4-ADS 5-CDW 6-SDD				tpmC Rating: 31764.37			
3,4,5,6 : with 5-year warranty				\$ / tpmC: 18.63			
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 purchases are not permitted. All discounts reflects stan 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				31764.37 tpmC
%throughput difference ,reported & reproducibility runs				0.13 %
<u>Response Times(in seconds)</u>	<u>90%</u>	<u>Average</u>	<u>Maximum</u>	
New-Order	0.30	0.23	5.17	
Payment	0.19	0.15	4.73	
Stock-Level	1.49	0.95	5.43	
Delivery(interactive portion)	0.11	0.10	0.72	
Delivery(deferred portion)	0.52	0.31	3.56	
Order-status	0.23	0.18	3.77	
Menu	0.11	0.10	1.17	
Response time delay added for emulated components				0.1
<u>Transaction Mix , in percent of total transaction</u>				
New-Order				44.86%
Payment				43.05%
Order-status				4.02%
Delivery				4.05%
Stock-level				4.02%
<u>Keying/Think Times (in seconds)</u>	<u>Min.</u>	<u>Average</u>	<u>Max</u>	
New-Order	18.00 0.00	18.01 12.04	18.04 120.51	
Payment	3.00 0.00	3.02 12.05	3.05 120.50	
Stock-Level	2.00 0.00	2.02 5.01	2.05 50.50	
Delivery	2.00 0.00	2.02 5.06	2.04 50.50	
Order-status	2.00 0.00	2.02 10.11	2.05 100.50	
<u>Test Duration</u>				
Ramp-up time				58 minutes
Measurement interval				30 minutes
Number of checkpoints				1
Checkpoint interval				30 minutes
Number of transactions (all types) completed in measurement interval				2,210,511