



NEC Express5800/1320Xd

C/S with Express5800/120Rf-2

TPC-C Rev.5.1
Reported Date
Sep 8, 2003

Total System Cost

TPC-C Throughput

Price/Performance

Availability Date

\$6,136,554

521,440.53 tpmC

\$11.77 per tpmC

March 7, 2004

Processors

Database Manager

Operating System

Other Software

Number of Users

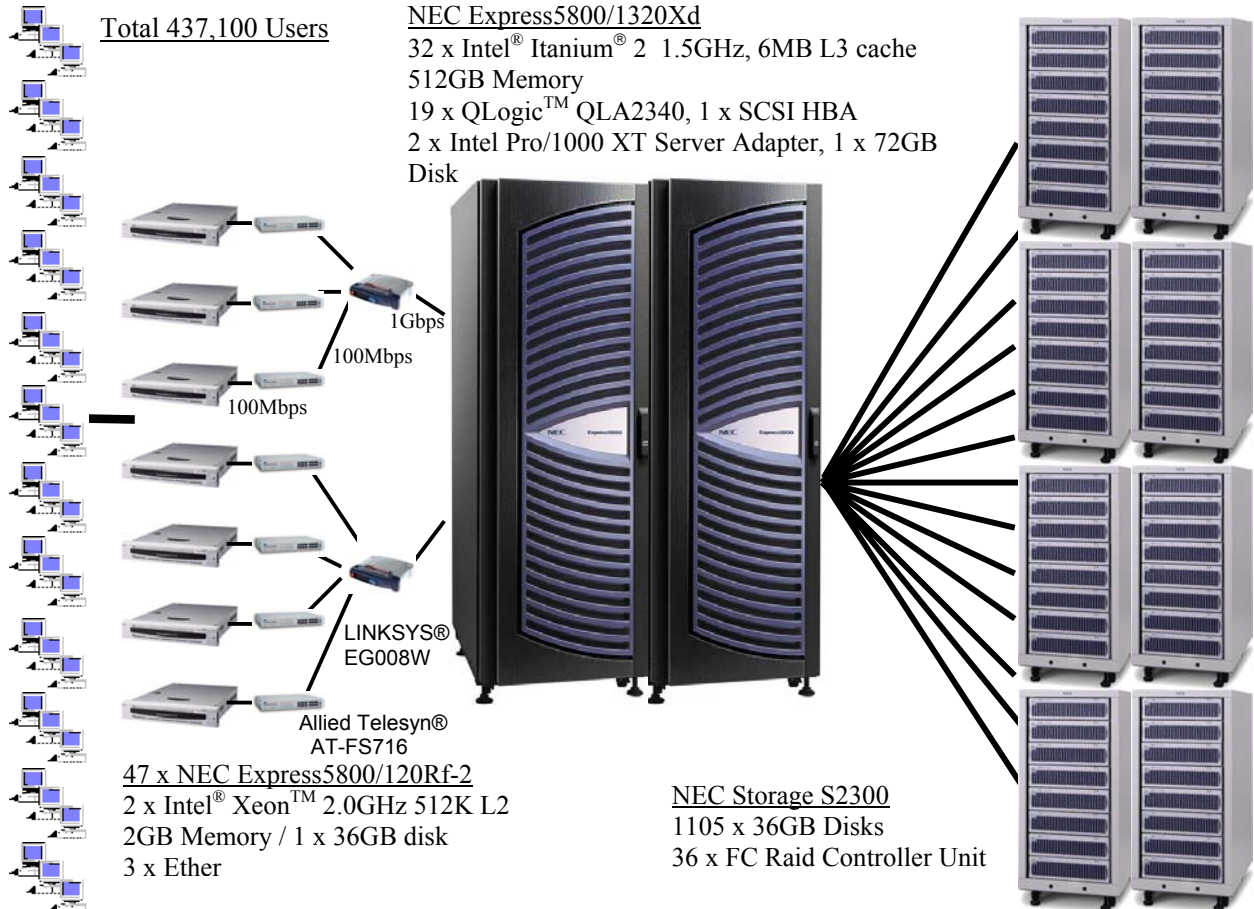
32 Intel® Itanium® 2 1.5GHz
for Server

Oracle® Database 10g
Enterprise Edition

Microsoft®
Windows® Server 2003,
Datacenter Edition for 64-bit
Itanium-based Systems

Microsoft® IIS 5.0
BEA® Tuxedo 6.5 CFS-R
Microsoft® VC++

437,100



System Component	Server		Each Client	
Processors	32	Intel® Itanium® 2 1.5GHz	2	Intel® Xeon™ 2.0GHz
Cache		6MB L3 Cache		512KB L2 Cache
Memory		512GB		2GB
Disk Controllers	19 1	QLogic™ QLA2340 SCSI HBA	1	On-board SCSI
Disk Drives	1 1105	72GB (68.05GB Usable) 36GB (33.2GB Usable)	1	36GB
Total Storage		39,852GB		36GB
Others	1 2	DVD-ROM Drive 1Gbps Ether NIC	1 2 1	CD-ROM Drive On-board Ether controller 100Mbps Ether NIC

NEC	NEC Express5800/1320Xd C/S with Express5800/120Rf-2				TPC-C REV 5.1			
					Report Date: 09/08/03			
Description	Part Number	Third Party Brand	Pricing	Unit Price	Qty	Extended Price	3-yr Mnt. Price	
Server Hardware								
Express5800/1320Xd system	850200045	NEC	1	2,326,090	1	2,326,090	1,206,910	
Base Original 32	Included	NEC	1	-	1	-	-	
Cell Card Original	Included	NEC	1	-	8	-	-	
CPU(1.5GHz/6MB)	Included	NEC	1	-	32	-	-	
Memory(8GB)	Included	NEC	1	-	64	-	-	
Base PCI Box	Included	NEC	1	-	3	-	-	
Core PCI Box(Windows Model)	Included	NEC	1	-	1	-	-	
PCI Cable(2.5m)	Included	NEC	1	-	6	-	-	
PCI Cable(3.0m)	Included	NEC	1	-	2	-	-	
Expansion Cabinet	Included	NEC	1	-	1	-	-	
18GB 10K rpm HDD	Included	NEC	1	-	1	-	-	
Gbit Ether NIC	Included	NEC	1	-	1	-	-	
Mouse/Keyboard	Included	NEC	1	-	1	-	-	
SCSI HBA with VHDCI cables	Included	NEC	1	-	1	-	-	
Windows Server 2003, Datacenter Edition	Included	NEC	1	-	1	-	-	
NEC AccuSync50 (15" monitor)	AS50	NEC	5	129	1	129	-	
73.9GB 10K rpm SCSI HDD (+2 spares)	DK32EJ-72NC	HITACHI	5	649	3	1,948	-	
FC HBA QLA2340 (+2 spares)	QLA2340-CK	QLogic	5	1,256	21	26,376	-	
Intel PRO/1000 XT Server Adapter (+2 spares)	PWLA8490XT	Intel	5	138	4	553	-	
Fast Ether Cable 25' RJ45-RJ45 (+10% spares)	N002-025-GY	Tripp Lite	5	7	62	454	-	
Subtotal						2,355,550	1,206,910	
Disk Subsystem								
NEC Storage S2300 Basic Unit	850161002	NEC	1	46,296	36	1,666,656	-	
2 RAID_Cntrl, 1GB Cache, 1DE, 3 x 36GB Drive								
1GB(2 x 512MB) PC133 SDRAM memory	062-02301-000	NEC	1	1,999	72	143,928	-	
S2300 DE (+10% spares)	062-02302-000	NEC	1	6,999	42	293,958	-	
36GB 15K rpm FC HDD (+10% spares)	062-02303-000	NEC	1	1,099	1097	1,205,603	-	
3 yr Telephone Upgrade Hdw & Storage								
Manager SW Support; 7days/ 24hours per day	IS-THSU-1095-072	NEC	1	1499	36		53,964	
42U Rackframe	050-01790-000	NEC	1	1,799	9	16,191	-	
FC Cable 10M LC-LC (+10% spares)	062-02304-000	NEC	1	200	40	8,000	-	
Subtotal						3,334,336	53,964	
Server Software								
Oracle Database 10g Enterprise Edition for 3 years, Unlimited Users		Oracle	2	20,000	32	640,000	-	
Oracle Database Server Support Package for 3 years		Oracle	2	6,000	1		6,000	
Subtotal						640,000	6,000	
Client Hardware								
NEC Express5800/120Rf-2								
Base System with 1 x Xeon Processor 2.0GHz/512	850166001	NEC	1	3,499	47	164,453	-	
1 x Xeon Processor 2.0GHz/512KB BTO Option,	062-02259-000	NEC	1	499	47	23,453	-	
1GB(2 x 512MB) DDR266 SDRAM memory,	062-02264-000	NEC	1	599	94	56,306	-	
1 x 36GB 10K rpm HDD,	062-02012-000	NEC	1	459	47	21,573	-	
CD-ROM, 2 x On-board LAN, KB/MS	Included	NEC	1	-	47	-	-	
3 years of warranty service to 4-hour response, 7x24	DE-0000-1095-724	NEC	1	1,599	47	-	75,153	
NEC AccuSync50 (15" monitor)	AS50	NEC	5	129	47	6,073	-	
42U Rackframe	050-01790-000	NEC	1	1,799	3	5,397	-	
Intel PRO/100+ Adapter, 20-pack (+10% spares)	PILA8460BNIPK20	Intel	5	549	3	1,647	-	
Fast Ether Cable 10' RJ45-RJ45 (+10% spares)	N010-010-GY	Tripp Lite	5	6	104	665	-	
Subtotal						279,567	75,153	
Client Software								
Windows2000 Server, Server License	C11-00821	Microsoft	3	738	47	34,686	-	
Visual C++ Standard	254-00170	Microsoft	3	109	1	109	-	
Database Server Support Package	PRO-PRORS-16U-C	Microsoft	3	1,950	3		5,850	
BEA Tuxedo 6.5 Core Functionality Services (CFS-R)		BEA	4	1,140	47	53,580	35,532	
Subtotal						88,375	41,382	
User Connectivity								
Linksys Gigabit 8-port Workgroup Switch (+2 spares)	EG008W	Linksys	5	178	4	713	-	
16-port Fast Ether Switch (+2 spares)	AT-FS716	Allied Telesyn	5	79	9	713	-	
Subtotal						1,426	0	
TOTAL						6,699,254	1,383,409	
Oracle Mandatory E-Business Discount						-129,200		
NEC brand total(Pricing 1-NEC)						5,931,608	1,336,027	
NEC brand Large Purchase Cash Prepay Discount(-25%)						(1,482,902)	(334,007)	
Notes:								
Pricing: 1-NEC 2-Oracle 3-Microsoft 4-BEA 5-CDW								
						3-Yr. Cost of Ownership:	\$6,136,554	
						tpmC Rating:	521440.53	
						\$ / tpmC:	\$11.77	
Results and methodology audited by Bradley J. Askins of 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 purchases are not permitted. All discounts reflects 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

521,440.53 tpmC

<u>Response Times(in seconds)</u>	<u>Average</u>	<u>Maximum</u>	<u>90%</u>
New-Order	1.24	1623	3.49
Payment	0.83	101.16	2.93
Delivery(interactive portion)	0.58	21.71	1.99
Stock-Level	0.76	38.07	2.69
Order-status	0.81	53.63	2.85
Delivery(deferred portion)	0.33	61.61	1.32
Menu	0.49	20.83	1.41

Response time delay added for emulated components 0.1

Transaction Mix , in percent of total transaction

New-Order	44.80%
Payment	43.08%
Delivery	4.04%
Stock-Level	4.04%
Order-Status	4.04%

<u>Keying/Think Times (in seconds)</u>	<u>Average</u>		<u>Min</u>		<u>Max</u>	
New-Order	18.01	12.07	18.01	0.00	18.03	120.7
Payment	3.01	12.07	3.01	0.00	3.03	120.7
Delivery	2.01	5.07	2.01	0.00	2.01	50.7
Stock-Level	2.01	5.08	2.01	0.00	2.01	50.7
Order-Status	2.01	10.08	2.01	0.00	2.03	100.7

Test Duration

Ramp-up time	3820 seconds
Measurement interval	7203 seconds
Number of checkpoints	4
Checkpoint interval	1763 seconds
Number of transactions (all types) completed in measurement interval	139,778,175