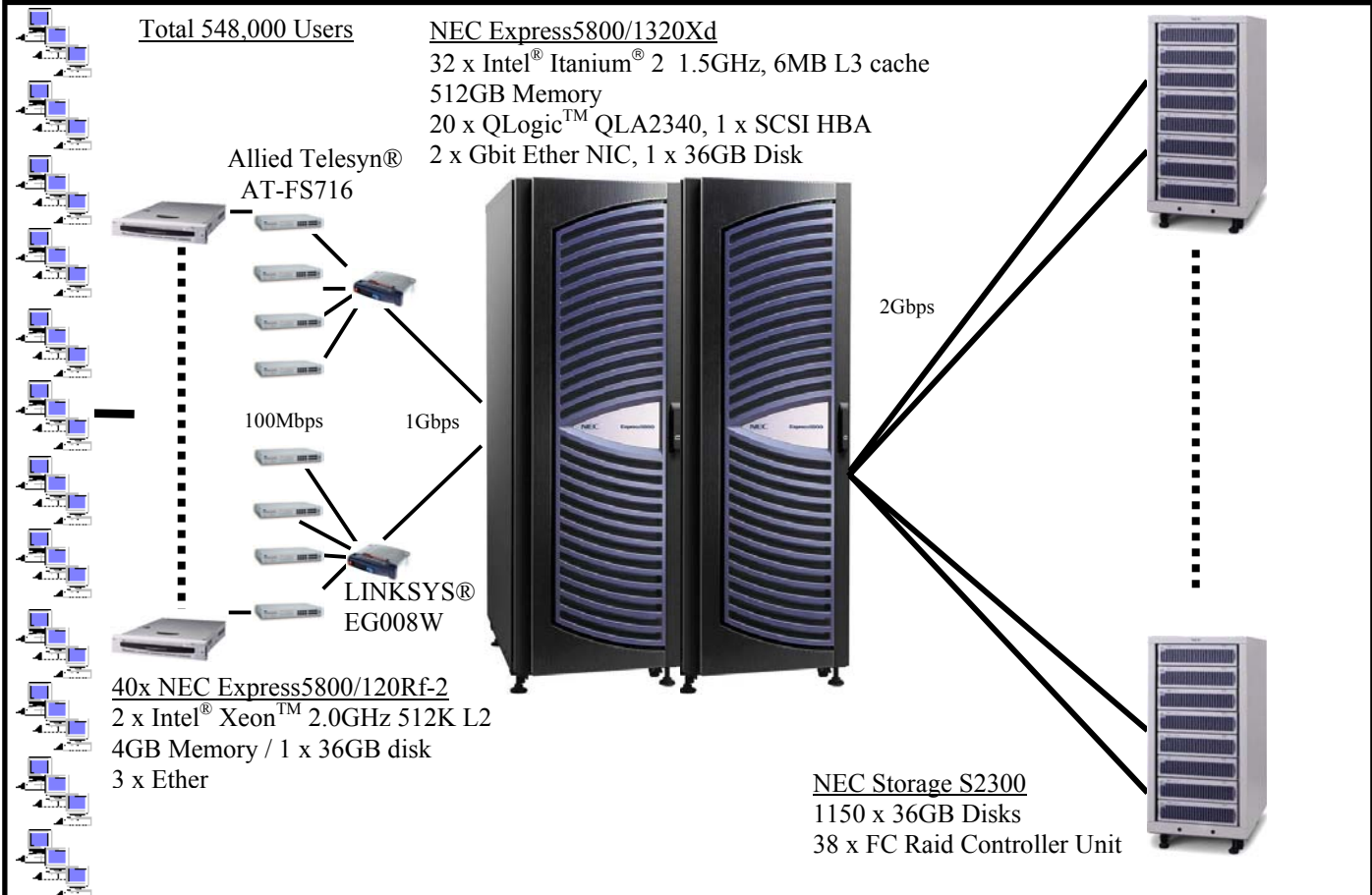




NEC Express5800/1320Xd C/S with Express5800/120Rf-2

TPC-C Rev.53
Reported Date
 Jun 28, 2004
Revised Date
 Aug 30, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$4,092,703 (USD)	683,575 tpmC	\$5.99 per tpmC	Oct 5, 2004
Processors	Database Manager	Operating System	Other Software
32 Intel® Itanium® 2 1.5GHz for Server	Oracle® Database 10g Enterprise Edition	SUSE LINUX Enterprise Server 9 for Itanium Processors	BEA Tuxedo 8.1
Number of Users			
548,000			



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		4GB
Disk Controllers	20 1	QLogic™ QLA2340 SCSI HBA	1	On-board SCSI
Disk Drives	1 1150	36GB 36GB	1	36GB
Total Storage		41,436GB		36GB
Others	1 2	DVD-ROM Drive 1Gbps Ether NIC	1 2 1	CD-ROM Drive On-board Ether controller 100Mbps Ether NIC



NEC Express5800/1320Xd

TPC-C REV 5.3

C/S with Express5800/120Rf-2

Report Date: 6/28/2004

Description	Part Number	Third Party Brand	Pricing	Unit Price	Qty	Extended Price	3-yr Mnt. Price
Server Hardware							
Express5800/1320Xd system	850200703	NEC	1	1,407,745	1	1,407,745	337,859
Express5800/1320Xd base system					1		
NEC 1160Xd/1320Xd Cell with 4 Itanium 2 CPUs - 1.5GHz/6MB Cache					8		
8GB (4x2GB ECC SDRAM DIMM) memory kit					64		
Additional Server Partition					3		
36GB Ultra 320m SCSI HDD (1") 10000RPM					1		
Expansion Cabinet					1		
10/100/1000Mb Ether card (3COM 3C996B-T)					2		
Ultra160 SCSI card (QLA12160/66)					1		
NEC AccuSync500 (15" monitor, +2 spares)	AS500	NEC	5	130	3	390	-
FC HBA QLA2340 (+2 spares)	QLA2340-CK	QLogic	5	1,068	22	23,486	-
Fast Ether Cable 25' RJ45-RJ45 (+10% spares)	N002-025-GY	Tripp Lite	5	7	55	395	
3Com Gigabit Server NIC (+2 spares)	3C996B-T	3com	5	127	3	382	
					Subtotal	1,432,398	337,859
Disk Subsystem							
NEC Storage S2300 Basic Unit	850161002	NEC	1	46,296	38	1,759,248	-
2 RAID_Cntrl, 1GB Cache, 1DE, 3 x 36GB Drive							
1GB(2 x 512MB) PC133 SDRAM memory	062-02301-000	NEC	1	1,999	76	151,924	-
S2300 DE (+10% spares)	062-02302-000	NEC	1	6,999	43	300,957	-
36GB 15K rpm FC HDD (+10% spares)	062-02303-000	NEC	1	1,099	1140	1,252,860	-
3 yr Telephone Upgrade Hdw & Storage Manager SW Support, 7days/ 24hours per day	IS-THSU-1095-0724	NEC	1	1499	38		56,962
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	42	8,400	-
					Subtotal	3,489,580	56,962
Server Software							
3 years Maintenance for SUSE LINUX Enterprise Server 9 for Itanium Processors (per CPU)	TBD	SUSE	3	246.68	32	7,894	
3 years Premium Support for SUSE LINUX Enterprise Server 9 for Itanium Processors (per CPU)	TBD	SUSE	3	369.56	32		11,826
Oracle Database 10g Enterprise Edition for 3 years, Per Processor, Unlimited Users	TBD	Oracle	2	20,000	32	640,000	
Oracle Database Server Support Package for 3 years	TBD	Oracle	2	6,000	1		6,000
					Subtotal	647,894	17,826
Client Hardware							
NEC Express5800/120Rf-2							
Base System with 1 x Xeon Processor 2.0GHz/512KB	850166001	NEC	1	3,499	40	139,960	-
1 x Xeon Processor 2.0GHz/512KB BTO Option,	062-02259-000	NEC	1	499	40	19,960	-
2GB(2 x 1024MB) DDR266 SDRAM memory,	062-02436-000	NEC	1	1,200	80	96,000	-
1 x 36GB 10K rpm HDD,	062-02012-000	NEC	1	459	40	18,360	-
CD-ROM, 2 x On-board LAN, KB/MS	Included	NEC	1	-	40	-	-
3 years of warranty service to 4-hour response, 7x24	DE-0000-1095-7244	NEC	1	1,599	40	-	63,960
NEC AccuSync500 (15" monitor, +2 spares)	AS500	NEC	5	130	3	390	-
42U Rackframe	050-01790-000	NEC	1	1,799	3	5,397	-
Intel PRO/100+ Adapter, 20-pack (+10% spares)	PILA8460BNIPK20	Intel	5	550	3	1,650	-
Fast Ether Cable 25' RJ45-RJ45 (+10% spares)	N010-010-GY	Tripp Lite	5	6	88	548	-
					Subtotal	282,265	63,960
Client Software							
3 years Maintenance for SUSE LINUX Standard Server 8	2133-1-MFJ-3Y-2-VPO	SUSE	3	704	40	28,166	
3 years Premium Support for SUSE LINUX Standard Server 8	2133-S-ST-3Y-2-VPO	SUSE	3	1,054	40		42,159
BEA Tuxedo 8.1 Core functionality Services		BEA	4	1,140	40	45,600	30,240
					Subtotal	73,766	72,399
User Connectivity							
Linksys Gigabit 8-port Workgroup Switch (+2 spares)	EG008W	Linksys	5	129	4	517	
16-port Fast Ether Switch (+2 spares)	AT-FS716	Allied Telesyn	5	79	10	790	
					Subtotal	1,307	0
TOTAL						5,927,210	549,006
Oracle Mandatory E-Business Discount						-129,200	
NEC brand total(Pricing 1-NEC)						5,177,002	458,781
NEC brand Large Purchase Cash PrepayDiscount(-40%)						-2,070,801	-183,512
Notes:						3-Yr. Cost of Ownership: \$4,092,703 USD tpmC Rating: 683575	
Pricing: 1-NEC 2-Oracle 3-SUSE 4-BEA 5-CDW						\$ / tpmC: \$5.99	
Oracle pricing contact: MaryBeth Pierantoni, marybeth.pierantoni@oracle.com, 916-315-5081.							
Results and methodology audited by Francois Raab 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		683,575 tpmC	
<u>Response Times(in seconds)</u>	<u>Average</u>	<u>Maximum</u>	<u>90%</u>
New-Order	0.42	93.24	0.82
Payment	0.4	97.13	0.82
Delivery(interactive portion)	0.11	1.12	0.11
Stock-Level	0.37	89.13	0.79
Order-status	0.37	92.9	0.8
Delivery(deferred portion)	0.06	2.15	0.12
Menu	0.11	0.8	0.11
Response time delay added for emulated components			0.1
<u>Transaction Mix , in percent of total transaction</u>			
New-Order			44.81%
Payment			43.08%
Delivery			4.04%
Stock-Level			4.04%
Order-Status			4.03%
<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	2.03 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
<u>Test Duration</u>			
Ramp-up time			4179 seconds
Measurement interval			7270 seconds
Number of checkpoints			4
Checkpoint interval			1737 seconds
Number of transactions (all types) completed in measurement interval			184,902,653