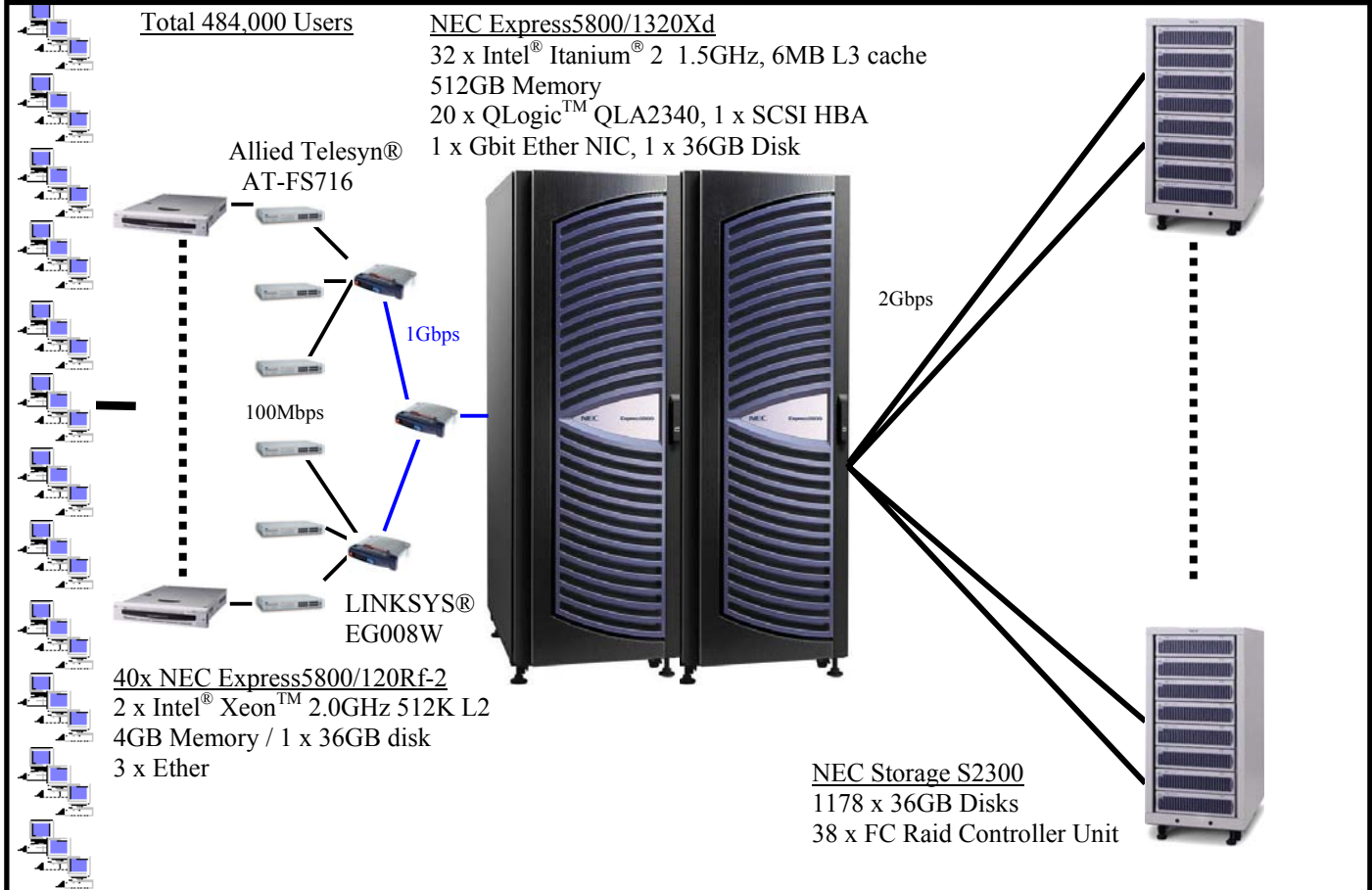




# NEC Express5800/1320Xd C/S with Express5800/120Rf-2

**TPC-C Rev.52**  
**Reported Date**  
 Apr 6, 2004  
**Revised Date**  
 Aug 30, 2004

<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price/Performance</b>	<b>Availability Date</b>	
<b>\$4,128,185</b>	<b>609,467 tpmC</b>	<b>\$6.78 per tpmC</b>	<b>Oct 5, 2004</b>	
<b>Processors</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>	<b>Number of Users</b>
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	<b>484,000</b>



System Component	Server		Each Client	
<b>Processors</b>	32	Intel® Itanium® 2 1.5GHz	2	Intel® Xeon™ 2.0GHz
<b>Cache</b>		6MB L3 Cache		512KB L2 Cache
<b>Memory</b>		512GB		4GB
<b>Disk Controllers</b>	20 1	QLogic™ QLA2340 SCSI HBA	1	On-board SCSI
<b>Disk Drives</b>	1 1178	36GB 36GB	1	36GB
<b>Total Storage</b>		42,444GB		36GB
<b>Others</b>	1 1	DVD-ROM Drive 1Gbps Ether NIC	1 2 1	CD-ROM Drive On-board Ether controller 100Mbps Ether NIC



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

TPC-C REV 5.2

Report Date: 4/6/2004

Description	Part Number	Third Party		Unit Price	Qty	Extended Price	3-yr Mnt. Price
		Brand	Pricing				
<b>Server Hardware</b>							
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 Itanium2 CPUs - 1.5GHz/6MB Cache					8		
8GB (4x2GB ECC SDRAM DIMM) memory kit					64		
Additional Server Partition					3		
36GB Ultra 320/m SCSI HDD (1") 10000RPM					1		
Expansion Cabinet					1		
10/100/1000Mb Either card (3COM 3C996B-T)					1		
Ultra160 SCSI card (QLA12160/66)					1		
NEC AccuSync50 (15" monitor, +2 spares)	AS50	NEC	5	130	3	389	-
FC HBA QLA2340 (+2 spares)	QLA2340-CK	QLogic	5	1,189	22	26,169	-
Fast Ether Cable 25' RJ45-RJ45 (+10% spares)	N002-025-GY	Tripp Lite	5	7	54	395	-
					<b>Subtotal</b>	<b>1,434,698</b>	<b>337,859</b>
<b>Disk Subsystem</b>							
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	46	321,954	-
36GB 15K rpm FC HDD (+10% spares)	062-02303-000	NEC	1	1,099	1171	1,286,929	-
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	-
					<b>Subtotal</b>	<b>3,544,646</b>	<b>56,962</b>
<b>Server Software</b>							
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		Oracle	2	20,000	32	640,000	
Oracle Database Server Support Package for 3 years		Oracle	2	6,000	1		6,000
					<b>Subtotal</b>	<b>647,894</b>	<b>17,826</b>
<b>Client Hardware</b>							
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 AccuSync50 (15" monitor, +2 spares)	AS50	NEC	5	130	3	389	-
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	570	-
					<b>Subtotal</b>	<b>282,286</b>	<b>63,960</b>
<b>Client Software</b>							
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
					<b>Subtotal</b>	<b>73,766</b>	<b>72,399</b>
<b>User Connectivity</b>							
Linksys Gigabit 8-port Workgroup Switch (+2 spares)	EG008W	Linksys	5	159	5	797	
16-port Fast Ether Switch (+2 spares)	AT-FS716	Allied Telesyn	5	79	8	632	
					<b>Subtotal</b>	<b>1,429</b>	<b>0</b>
<b>TOTAL</b>						<b>5,984,718</b>	<b>549,006</b>
Oracle Mandatory E-Business Discount						-129,200	
NEC brand total (Pricing 1-NEC)						5,232,068	458,781
<b>NEC brand Large Purchase Cash Prepay Discount (-40%)</b>						<b>-2,092,827</b>	<b>-183,512</b>
<b>Notes:</b>							
Pricing: 1-NEC 2-Oracle 3-SUSE 4-BEA 5-CDW						3-Yr. Cost of Ownership: <b>\$4,128,185</b>	
						tpmC Rating: <b>609467</b>	
<b>Results and methodology audited by Francois Raab of InfoSizing, Inc. (www.sizing.com)</b>						<b>\$ / tpmC: \$6.78</b>	
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

<b>MQTh, Computed Maximum Qualified Throughput</b>		609,467 tpmC		
<b><u>Response Times(in seconds)</u></b>	<b><u>Average</u></b>	<b><u>Maximum</u></b>	<b><u>90%</u></b>	
New-Order	0.21	53.44	0.27	
Payment	0.20	45.83	0.25	
Delivery(interactive portion)	0.12	56.3	0.11	
Stock-Level	0.18	57.49	0.25	
Order-status	0.20	41.71	0.27	
Delivery(deferred portion)	0.09	57.53	0.16	
Menu	0.11	0.69	0.11	
<b>Response time delay added for emulated components</b>			0.1	
<b><u>Transaction Mix , in percent of total transaction</u></b>				
New-Order			44.81%	
Payment			43.07%	
Delivery			4.04%	
Stock-Level			4.04%	
Order-Status			4.04%	
<b><u>Keying/Think Times (in seconds)</u></b>	<b><u>Average</u></b>	<b><u>Min</u></b>		<b><u>Max</u></b>
New-Order	18.01 12.07	18.01	0.00	18.01 120.7
Payment	3.01 12.07	3.01	0.00	3.01 120.7
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 10.07	2.01	0.00	2.01 100.7
<b><u>Test Duration</u></b>				
Ramp-up time				4068 seconds
Measurement interval				7260 seconds
Number of checkpoints				4
Checkpoint interval				1726 seconds
Number of transactions (all types) completed in measurement interval				164,615,923