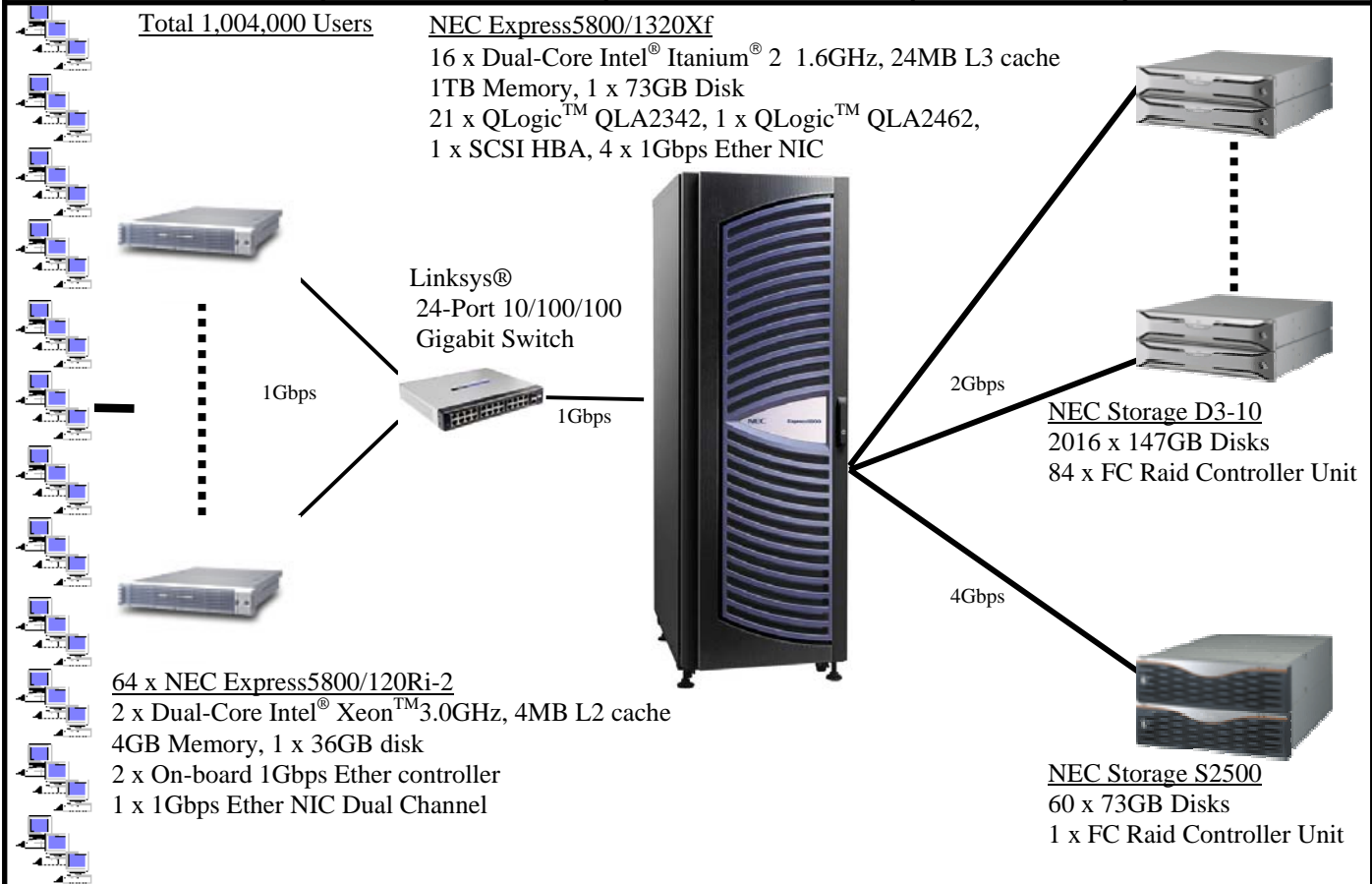





# NEC Express5800/1320Xf C/S with Express5800/120Ri-2

**TPC-C Rev.5.9**  
**Report Date**  
21-Jan-2008

<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price/Performance</b>	<b>Availability Date</b>	
<b>\$5,691,660 (USD)</b>	<b>1,245,516 tpmC</b>	<b>\$4.57 per tpmC</b>	<b>30-Apr-2008</b>	
<b>Database Server Processors/Cores/Threads</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>	<b>Number of Users</b>
16/32/64 Intel® Itanium® 2 1.6GHz	Oracle® Database 10g Release 2 Enterprise Edition with Partitioning	Red Hat Enterprise Linux AS 4	BEA Tuxedo 8.1	1,004,000



System Component	Server		Each Client	
<b>Processors/Cores/Threads</b>	16/32/64	Dual-Core Intel® Itanium® 2 9050 1.6GHz 24MB L3 Cache	2/4/4	Dual-Core Intel® Xeon™ 5160 3.0GHz 4MB L2 Cache
<b>Cache</b>				
<b>Memory</b>		1TB		4GB
<b>Disk Controllers</b>	21 1 1	QLogic™ QLA2342 QLogic™ QLA2462 SCSI HBA	1	On-board SAS controller
<b>Disk Drives</b>	1 2016 60	73GB 147GB 73GB	1	36GB
<b>Total Storage</b>		300,805GB		36GB
<b>Others</b>	1 4	DVD-ROM Drive 1Gbps Ether NIC	1 2 1	DVD-ROM Drive On-board Ether controller 1Gbps Ether NIC Dual Channel

		<b>NEC Express5800/1320Xf</b> C/S with Express5800/120Ri-2			TPC-C Rev 5.9 / TPC Pricing Rev 1.2 <b>Report Date:</b> <b>21-Jan-2008</b>			
		Description	Part Number	Third Party Brand	Pricing	Unit Price	Qty	Extended Price
<b>Server Hardware</b>								
Express5800/1320Xf system	850203701	NEC	1	1,516,720	1	1,516,720	455,016	
Cabinet w/8cells&1IO					1			
4 Itanium2 CPU(1.6G/24M) for 1320Xf					4			
1320Xf Memory 16GB (4x4GB DIMM) memory kit					64			
Memory Slot Expansion Module Option					8			
IO Expansion Cabinet					1			
IO Enclosure					3			
1320Xf IO partition (Core)					1			
1320Xf IO partition (Non-core)					7			
73GB Ultra SCSI HDD 10k RPM					1			
SCSI card					1			
1port 10/100/1000 base-T LAN card					4			
Basic Warranty Extension for Year 2 and 3					1			
Year 1,2 & 3 4 hour HW maintenance					1			
NEC Express5800/120Ri-2 (for System Maintenance)	850190702		1	6,695	1	6,695 (included)		
120Ri-2,XD2/3.0G/2G N8100-1248F								
CPU Kit (XD2/3.0G(4))								
Additional 2G Memory Board								
1000Base-T NIC Dual Channel								
Additional 36.3 GB HDD								
Warranty Extension Year2&3								
3Year 4h 24x7 support								
NEC AccuSync500 (15" monitor)	573757	NEC	5	120	4	480		
FC HBA QLA2342 (+10% spares)	408082	QLogic	5	1,990	24	47,760		
FC HBA QLA2462 (+2 spares)	868491	QLogic	5	1,684	3	5,052		
						<b>Subtotal</b>	<b>1,576,707</b>	<b>455,016</b>
<b>Disk Subsystem</b>								
NEC Storage D3-10 Base Model	850193310	NEC	1	16,000	84	1,344,000		
SAS/SATA Enclosure	NF5021-SE60E	NEC	1	5,400	84	453,600		
SAS disk drive (15k rpm/147GB) (+10% spares)	NF5021-SM624E	NEC	1	1,325	2218	2,938,850		
Software Base Product D3-10 Lite	UFSD0M-310002AM	NEC	1	6,800	84	571,200		
4hr onsite maintenance service	OS2X-SD4HR-YYY	NEC	1	473,645	1		473,645	
Extended 1 year software warranty - per title	SW-EXT1YR-YYN	NEC	1	114,240	3		342,720	
NEC Storage S2500 Base Model	850183001	NEC	1	31,000	1	31,000		
S2500 FC Disk Expansion Box	062-02942-000	NEC	1	6,200	3	18,600		
Fibre channel disk drive (15k rpm/73GB) (+10% spares)	062-02959-000	NEC	1	1,220	66	80,520		
4hr onsite maintenance service	OS2X-SD4HR-YYY	NEC	1	13,012	1		13,012	
42U Rackframe	050-02378-001	NEC	1	1,799	9	16,191		
FC Cable 10M LC-LC (+10% spares)	BR-FC5PVLCLC-10	NEC	1	50	95	4,750		
						<b>Subtotal</b>	<b>5,458,711</b>	<b>829,377</b>
<b>Server Software</b>								
Red Hat Enterprise Linux Advanced Platform, Premium (Unlimited Sockets)		Red Hat	2	2,499	3	7,497		
Oracle Database 10g Enterprise Edition Per Processor, Unlimited Users for 3 years		Oracle	3	20,000	16*	320,000		
Partitioning, Per Processor, Unlimited Users for 3 years		Oracle	3	5,000	16*	80,000		
Database Server Support Package for 3 years		Oracle	3	2,000	3	6,000		
						<b>Subtotal</b>	<b>413,497</b>	<b>0</b>
<b>Client Hardware</b>								
NEC Express5800/120Ri-2	850190702		1	6,695	64	428,480 (included)		
120Ri-2,XD2/3.0G/2G N8100-1248F								
CPU Kit (XD2/3.0G(4))								
Additional 2G Memory Board								
1000Base-T NIC Dual Channel								
Additional 36.3 GB HDD								
Warranty Extension Year2&3								
3Year 4h 24x7 support								
NEC AccuSync500 (15" monitor)	573757	NEC	5	120	71	8,519		
42U Rackframe	050-02378-001	NEC	1	1,799	4	7,196		
Ether Cable 25' RJ45-RJ45 (+10% spares)	324516	Tripp Lite	5	8	75	590		
Ether Cable 10' RJ45-RJ45 (+10% spares)	324527	Tripp Lite	5	6	212	1,270		
						<b>Subtotal</b>	<b>446,055</b>	<b>0</b>
<b>Client Software</b>								
Red Hat Enterprise Linux, Premium (up to 2 Sockets)		Red Hat	2	1,299	192	249,408 (Included)		
BEA Tuxedo 8.1 Core functionality Service		BEA	4	1,140	64	72,960	48,384	
						<b>Subtotal</b>	<b>322,368</b>	<b>48,384</b>
<b>User Connectivity</b>								
24-Port 10/100/1000 Gigabit Switch (+2 spares)	1012601	Linksys	5	283	6	1,698		
						<b>Subtotal</b>	<b>1,698</b>	<b>0</b>
<b>TOTAL</b>							<b>8,219,036</b>	<b>1,332,777</b>
Oracle Mandatory E-Business Discount								-81,200
NEC Large Volume Discount**								-3,560,545
<b>Notes: Pricing: 1-NEC 2-Red Hat 3-Oracle 4-BEA 5-CDW</b>								
Oracle pricing contact: MaryBeth Pierantoni, mary.beth.pierantoni@oracle.com								
*For the purposes of counting the number of processors which require licensing, an Intel multicore chip with "n" cores shall be determined by multiplying "n" cores by a factor of 0.50.								
**48% discount was based on the overall value of the specific components from NEC in this single quotation except 3-yr Mnt. Price for Disk Subsystem.								
Discounts for similarly sized configurations will be similar to those quoted here but may vary based on the components in the quotation.								
<b>Results and methodology audited by Francois Raab of InfoSizing, Inc. (www.sizing.com)</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 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.								
							3-Yr. Cost of Ownership:	<b>\$5,691,660</b>
							tpmC Rating:	<b>1245516</b>
							<b>\$ / tpmC:</b>	<b>\$4.57</b>

## Numerical Quantities Summary

<b>MQTh, Computed Maximum Qualified Throughput</b>		1,245,516 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		0.57		461.24		0.57	
Payment		0.57		468.69		0.55	
Delivery(interactive portion)		0.12		24.13		0.11	
Stock-Level		0.47		257.47		0.52	
Order-status		0.48		381.32		0.54	
Delivery(deferred portion)		0.06		25.18		0.11	
Menu		0.11		0.77		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		44.91%					
Payment		43.03%					
Delivery		4.02%					
Stock-Level		4.02%					
Order-Status		4.02%					
<b><u>Keving/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	18.03	120.70
Payment		3.01	12.07	3.01	0.00	3.03	120.70
Delivery		2.01	5.07	2.01	0.00	2.03	50.70
Stock-Level		2.01	5.08	2.01	0.00	2.03	50.70
Order-Status		2.01	10.08	2.01	0.00	2.03	100.70
<b><u>Test Duration</u></b>							
Ramp-up time		7210 seconds					
Measurement interval		7200 seconds					
Number of checkpoints		4					
Checkpoint interval		1776 seconds					
Number of transactions (all types) completed in measurement interval		332900583					