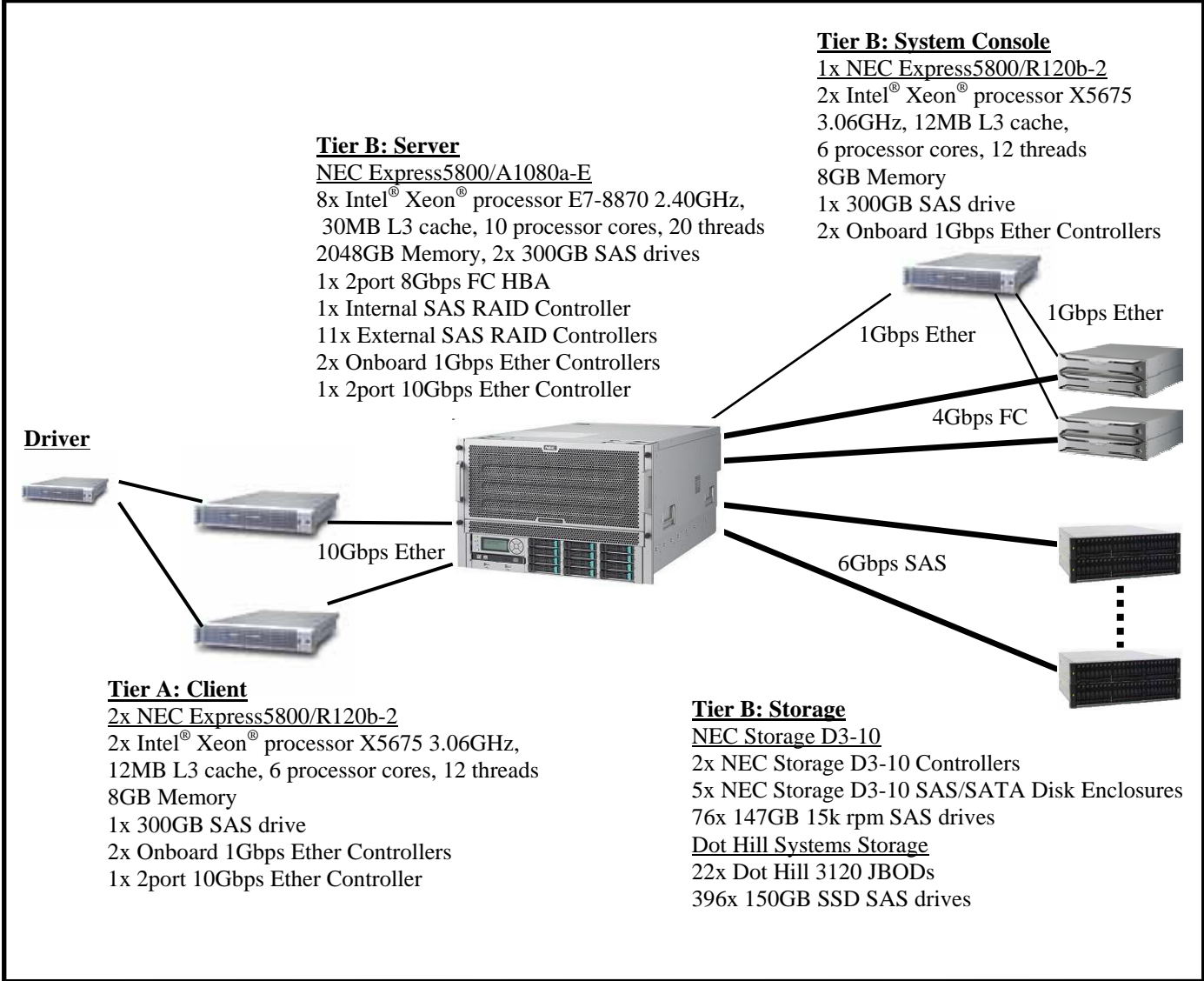


NEC	NEC Express5800/A1080a-E		TPC-E 1.12.0 TPC Pricing 1.7.0
			Report Date 28-Mar-2012
TPC-E Throughput 4,614.22 tpsE	Price/Performance \$450.18 USD per tpsE	Availability Date 2-Apr-2012	Total System Cost \$2,077,196USD

Database Server Configuration

Operating System Microsoft® Windows Server® 2008 R2 Enterprise Edition with Service Pack 1	Database Manager Microsoft® SQL Server® 2012 Enterprise Edition	Processors/Cores/Threads 8 / 80 / 160	Memory 2048GB
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Initial Database Size 19,267 GB	Redundancy Level : 1 RAID10 : Log / RAID5 : Data	Storage 76 x 147GB 15K HDD 396 x 150GB SSD
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NEC Express5800/A1080a-E

TPC-E 1.12.0 TPC Pricing 1.7.0

Report Date
28-Mar-2012

Available Date
2-Apr-2012

Description	Part Number	Third Party		Unit Price	Qty	Extended Price	3-yr Mnt. Price
		Brand	Pricing				
Server Hardware							
NEC Express5800/A1080a-E							
A1080a-E Base Unit (1x MGM card, 2x power module included)	NE3100-101H	NEC	1	12,499	1	12,499	
Processor Memory Module (PMM) Xeon E7-8870 All Cores Activated	NE3102-011	NEC	1	9,499	8	75,992	
32GB Memory (1067MHz 16GB DIMM x 2)	NE3103-014	NEC	1	2,599	64	166,336	
6Gbps SAS RAID Controller for Embedded HDD/SSD	NE3104-001	NEC	1	499	1	499	
300GB 10krpm 6Gbps SAS HDD	NE3105-104	NEC	1	399	2	798	
2Port 8G FC HBA	NE3108-104	NEC	1	2,499	1	2,499	
MegaRAID SAS 9285-8e	Q24-FR000000011373	NEC	1	1,000	11	11,000	
2port 10GBASE	NE3108-004	NEC	1	999	1	999	
Optical Module for 10G SR	NE3108-005	NEC	1	159	2	318	
Embedded DVD-ROM	NE3100-201	NEC	1	99	1	99	
Power Module	NE3100-301	NEC	1	799	2	1,598	
Power Cable for 200V	NE3107-001	NEC	1	69	4	276	
PDU L6-30P	NE3107-101	NEC	1	599	2	1,198	
Installation	SP-GX00-STIN001	NEC	1	5,000	1	5,000	
Microsoft Windows Server 2008 R2 Enterprise Edition w/25 CALs	062-03622-000	NEC	1	3,999	1	3,999	
Platinum Warranty (Yr 1,2 & 3)	UPPLT-A1080a8-3Y	NEC	1	6,799	1		6,799
NEC Express5800/R120b-2 (for System Maintenance)							
Model R120b-2 (1x X5675, MEM less, ODD/HDD less)	N8100-1712F	NEC	1	4,850	1	4,850	
CPU kit (X5675)	N8101-487F	NEC	1	2,720	1	2,720	
Additional 4GB Memory Module	N8102-373F	NEC	1	195	2	390	
RAID Controller (256MB, RAID0/1)	N8103-129	NEC	1	410	1	410	
300GB HDD (SAS 10k rpm, 2.5")	N8150-301	NEC	1	365	1	365	
External DVD-ROM (USB)	N8160-85	NEC	1	215	1	215	
3 Years of Upgraded Platinum Warranty for the Express 5800/100 Series	UPPLT-GP100-2U-3Y	NEC	1	840	1		840
AccuSync AS171-BK 17" LCD Display (+2 spares)	AS171-BK	NEC	3	139	4	556	
					Subtotal	292,616	7,639
Disk Subsystem							
NEC Storage D3-10							
NEC Storage D3-10 Base Model	850193310	NEC	1	6,834	2	13,668	
3 Years of Platinum Warranty Upgrade for D3-10 Base Model	UPPT850193310	NEC	1	1,025	2		2,050
SAS/SATA Disk Enclosure w/NEC logo	NF5021-SE60E-000	NEC	1	2,749	5	13,745	
3 Years of Platinum Warranty Upgrade for 3Gbps Disk Enclosure	UPPTNF5021SE60E	NEC	1	412	5		2,060
SAS disk drive (15k rpm/147GB) (+10% spares)	NF5021-SM624E	NEC	1	311	84	26,124	
3 Years Platinum Warranty Upgrade SAS Disk Drive(15krpm/147GB/3Gbps)	UPPTNF5021SM624E	NEC	1	51	84		4,284
1 yr of Platinum SW Maintenance for Base SW	UFSD0M-310000AMAS	NEC	1	520	6		3,120
Dot Hill Systems Storage							
3120,2RM,NO DRIVES,AC	D3120X000000DA	DotHill	4	3,467	22	76,274	
DRIVE, 150GB, SLC, SAS, (+10% spares)	PFRUKF73-01	DotHill	4	2,323	436	1,012,828	
DD,AMS SFF BLANK, 48 BULK PACK	PFRUKF31-48	DotHill	4	864	2	1,728	
DD,AMS SFF BLANK,FRU,PKG	PFRUKF31-01	DotHill	4	18	36	648	
RACK MOUNT KIT	FHDW018-02	DotHill	4	120	22	2,640	
3120 JBOD, 7x24x4 Onsite	DS3120XPA4D1SW0	DotHill	4	2,046	22		45,012
2m External SAS Cable 4 Channel SFF-8088 to SFF-8088 (+2 spares)	S524-02M	Tripp Lite	3	124	13	1,612	
UPS 3kVA	050-02424-000	NEC	1	1,799	24	43,176	
42U Rackframe	050-02378-001	NEC	1	1,799	3	5,397	
10 meter Multimode LC/LC 62.5/125 Duplex Fiber Optic cable (+2 spares)	F2F202LL-10M	Belklin	3	30	4	120	
					Subtotal	1,197,960	56,526
Server Software							
Microsoft SQL Server 2012 Enterprise Edition 2 core License	TBD	Microsoft	2	13,473	40	538,900	259
					Subtotal	538,900	259

continued on the next page



NEC Express5800/A1080a-E

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Client Hardware

Client Hardware								
NEC Express5800/R120b-2								
Model R120b-2 (1x X5675, MEM less, ODD/HDD less)	N8100-1712F	NEC	1	4,850	2	9,700		
CPU kit (X5675)	N8101-487F	NEC	1	2,720	2	5,440		
Additional 4GB Memory Module	N8102-373F	NEC	1	195	4	780		
300GB HDD (SAS 10k rpm, 2.5")	N8150-301	NEC	1	365	2	730		
RAID Controller (256MB, RAID0/1)	N8103-129	NEC	1	410	2	820		
10GBASE Adapter (SFP+/2ch)	N8104-128	NEC	1	710	2	1,420		
SFP+ Module (10G-SR)	N8104-129	NEC	1	155	2	310		
3 Years of Upgraded Platinum Warranty for the Express 5800/100 Series	UPPLT-GP100-2U-3Y	NEC	1	840	2		1,680	
AccuSync AS171-BK 17" LCD Display (+2 spares)	AS171-BK	NEC	3	139	4	556		
42U Rackframe	050-02378-001	NEC	1	1,799	1	1,799		
Cat5 Snagless RJ45 UTP Patch Cable 25 ft (+2 spares)	N001-025-BL	Tripp Lite	3	7	5	35		
Cat5 Snagless Crossover Cable 7 ft cross over (+2 spares)	N010-007-GY	Tripp Lite	3	5	5	25		
						Subtotal	21,615	1,680

Client Software

Client Software								
Windows Server 2008 R2 Standard Edition w/10 CALs	P73-04980	Microsoft	2	711	3	2,133 (Included)		
						Subtotal	2,133	0

Infrastructure

Infrastructure								
3 Meter OM3 10Gb Aqua 50/125 Multimode Fiber Cable, LC/LC, 10ft (+2 spares)	N820-03M	Tripp Lite	3	38	4	152		
SD2005 5-port 10/100/1000 Gigabit Switch (+2 spares)	SD2005	Cisco	3	55	3	165		
						Subtotal	317	0

TOTAL 2,053,541 66,104

NEC Large Volume Discount*** -10% -41,517 -932

Notes:

Pricing: 1-NEC Contact: 1-866-632-3226, 2-Microsoft, 3-CDW, 4-Promark TECHNOLOGY

3-Yr. Cost of Ownership: **\$2,077,196**

** Qty of Windpws Server 2008 Standard Edition includes the license of the DB server's maintenance Console

tpsE Throughput: **4,614.22**

***10% 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

Discount for similarly sized configurations will be similar to those quoted here but may be vary

based on the components in quotation

\$ / tpsE \$450.18

Results and methodology audited by Doug Johnson 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.



NEC Express5800/A1080a-E

TPC-E 1.12.0
TPC Pricing 1.7.0

Report Date
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Numerical Quantities Summary

Reported Throughput : 4,614.22 tpsE		Configured Customers : 2,400,000		
Response Times (in seconds)	Minimum	Average	90 th %tile	Maximum
Broker Volume	0.00	0.05	0.09	2.79
Customer Position	0.00	0.04	0.06	5.52
Market Feed	0.00	0.03	0.05	5.63
Market Watch	0.00	0.03	0.05	5.46
Security Detail	0.00	0.02	0.04	4.52
Trade Lookup	0.00	0.10	0.18	5.58
Trade Order	0.00	0.08	0.12	5.84
Trade Result	0.00	0.10	0.16	5.76
Trade Status	0.00	0.02	0.04	4.51
Trade Update	0.01	0.12	0.20	5.78
Data Maintenance	0.00	0.02		0.17
Transaction Mix		Transaction Count		Mix %
Broker Volume		16,275,912		4.900%
Customer Position		43,181,132		13.000%
Market Feed		3,322,268		1.000%
Market Watch		59,789,369		18.000%
Security Detail		46,503,062		14.000%
Trade Lookup		26,572,694		8.000%
Trade Order		33,548,390		10.100%
Trade Result		33,222,410		10.002%
Trade Status		63,110,406		18.999%
Trade Update		6,643,249		2.000%
Data Maintenance		120		
Test Duration and Timings				
Ramp-up Time			1:01:39	
Measurement Interval			2:00:00	
Business Recovery Time			1:08:53	
Total Number of Transactions Completed in Measurement Interval			332,168,892	