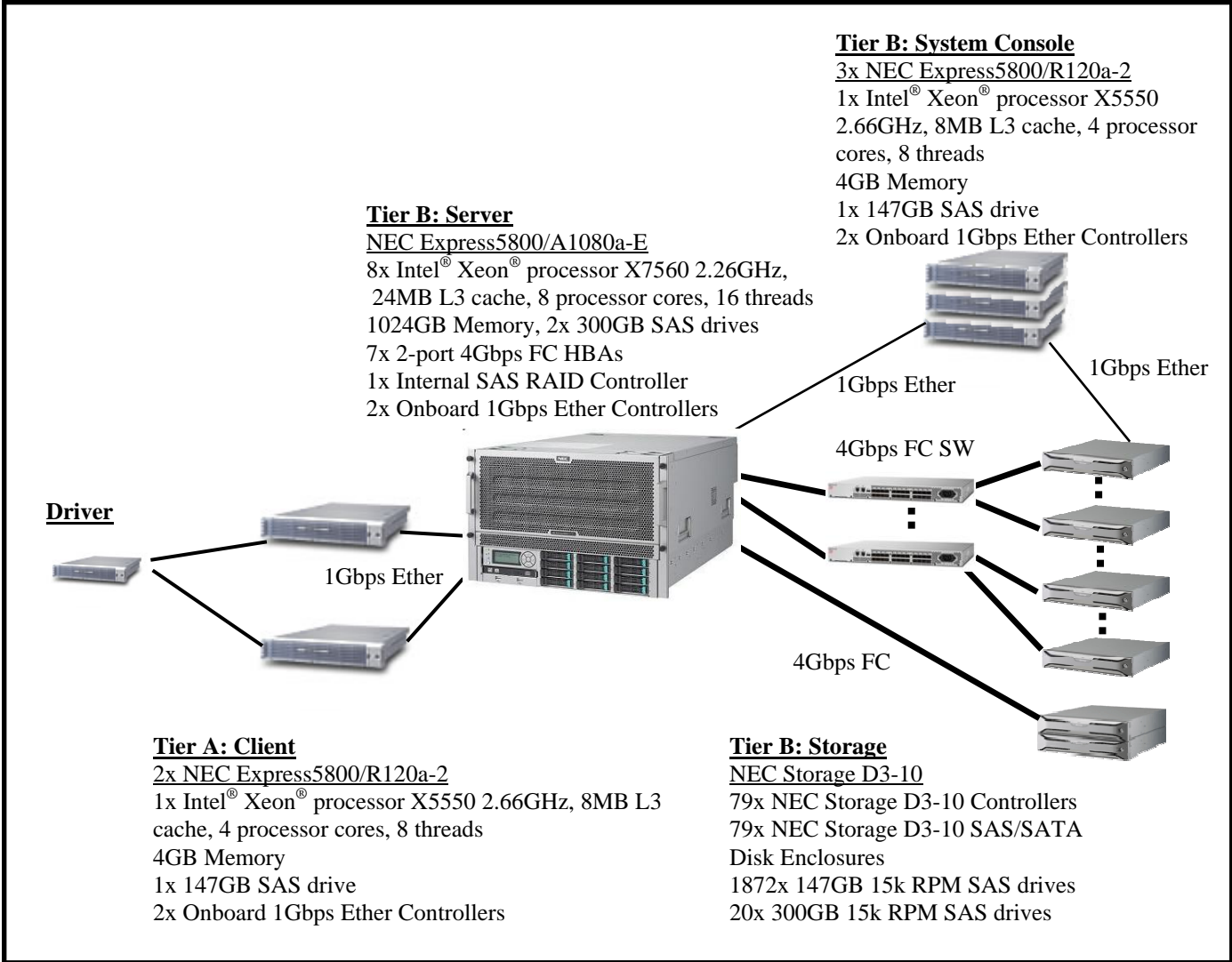


NEC	NEC Express5800/A1080a-E		TPC-E 1.9.0 TPC Pricing 1.5.0
			Report Date : 30-March-2010 Revised Date : 2-June-2010
TPC-E Throughput 3141.76 tpsE	Price/Performance \$768.92 USD per tpsE	Availability Date 30-July-2010	Total System Cost \$2,415,759USD

Database Server Configuration

Operating System Microsoft® Windows Server® 2008 R2 Datacenter x64 Edition	Database Manager Microsoft® SQL Server® 2008 R2 Datacenter Edition	Processors/Cores/Threads 8 /64 /128	Memory 1024GB
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Initial Database Size 13,391 GB	Redundancy Level : 1 RAID50 : Log / RAID10 : Data	Storage 1872 x 147GB 15K 20 x 300GB 15K
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NEC Express5800/A1080a-E

TPC-E 1.9.0 TPC Pricing 1.5.0

Report Date : 30-March-2010
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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) X7560 All Cores Activated	NE3102-001	NEC	1	7,999	8	63,992	
16GB Memory (1067MHz 8GB DIMM x2)	NE3103-003	NEC	1	1,899	64	121,536	
6Gbps SAS RAID Controller for Embedded HDD/SSD	NE3104-001	NEC	1	499	1	499	
300GB 10krpm 6Gbps SAS HDD	NE3105-104	NEC	1	599	2	1,198	
2-port 4Gbps FC-HBA (PClex4)	NE3108-102	NEC	1	2,299	7	16,093	
Embedded DVD-ROM	NE3100-201	NEC	1	99	1	99	
Power Module	NE3100-301	NEC	1	1,499	2	2,998	
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 Datacenter per 4p	062-03621-000	NEC	1	11,996	2	23,992	
Platinum Warranty (Yr 1,2 & 3)	UPPLT-A1080a8-3Y	NEC	1	6,799	1		6,799
NEC Express5800/R120a-2 (for System Maintenance)							
Model R120a-2 (CPU less, MEM less, DVD-ROM, 2 x 1000BaseT port, DAC(RAID0/1), Front Bezel, 3yrs Basic Warranty	N8100-1506FB	NEC	1	2,795	3	8,385	
Xeon X5550 (Nehalem-EP 2.66G)	N8101-428	NEC	1	1,955	3	5,865	
2GB (2GB x1) DDR3-1066 memory for R120a-1 and R120a-2	N8102-327	NEC	1	105	6	630	
146GB HDD 3.5" (SAS) 15KRPM, Hot-Plug	N8150-201	NEC	1	270	3	810	
3 Years of Upgraded Platinum Warranty for the Express 5800/100 Series	UPPLT-GP100-2U-3Y	NEC	1	840	3		2,520
NEC AccuSync 73VX 17" LCD Display (+2 spares)	ASLCD73VX-BK	NEC	3	117	6	702	
					Subtotal	265,772	9,319
Disk Subsystem							
NEC Storage D3-10							
NEC Storage D3-10 Base Model	850193310	NEC	1	6,834	79	539,886	
3 Years of Platinum Warranty Upgrade for D3-10 Base Model	UPPT850193310	NEC	1	1,025	79		80,975
SAS/SATA Disk Enclosure w/NEC logo	NF5021-SE60E-000	NEC	1	2,749	79	217,171	
3 Years of Platinum Warranty Upgrade for 3Gbps Disk Enclosure	UPPTNF5021SE60E	NEC	1	412	79		32,548
SAS disk drive (15k rpm/147GB) (+10% spares)	NF5021-SM624E	NEC	1	343	2060	706,580	
3 Years Platinum Warranty Upgrade SAS Disk Drive(15krpm/147GB/3Gbps)	UPPTNF5021SM624E	NEC	1	51	2060		105,060
SAS disk drive (15k rpm/300GB) (+10% spares)	NF5021-SM625E	NEC	1	485	22	10,670	
3 Years Platinum Warranty Upgrade SAS Disk Drive(15krpm/300GB/3Gbps)	UPPTNF5021SM625E	NEC	1	73	22		1,606
1 yr of Platinum SW Maintenance for Base SW	UFSD0M-310000AMAS	NEC	1	520	237		123,240
UPS 3kVA	050-02424-000	NEC	1	1,799	2	3,598	
42U Rackframe	050-02378-001	NEC	1	1,799	8	14,392	
FC Cable 10M LC-LC (+10% spares)	F2F202LL-10M	Belklin	3	40	102	4,079	
					Subtotal	1,496,376	343,429
Server Software							
Microsoft SQL Server 2008 R2 Datacenter Edition	*	Microsoft	2*	45,807	8	366,456	259
					Subtotal	366,456	259

continued on the next page



NEC Express5800/A1080a-E

TPC-E 1.9.0 TPC Pricing 1.5.0

Report Date : 30-March-2010
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Client Hardware

NEC Express5800/R120a-2								
Model R120a-2 (CPU less, MEM less, DVD-ROM, 2 x 1000BaseT port, DAC(RAID0/1), Front Bezel, 3yrs Basic Warranty	N8100-1506FB	NEC	1	2,795	2	5,590		
Xeon X5550 (Nehalem-EP 2.66G)	N8101-428	NEC	1	1,955	2	3,910		
2GB (2GB x1) DDR3-1066 memory for R120a-1 and R120a-2	N8102-327	NEC	1	105	4	420		
146GB HDD 3.5" (SAS) 15KRPM, Hot-Plug	N8150-201	NEC	1	270	2	540		
3 Years of Upgraded Platinum Warranty for the Express 5800/100 Series	UPPLT-GP100-2U-3Y	NEC	1	840	2		1,680	
NEC AccuSync 73VX 17" LCD Display (+2 spares)	ASLCD73VX-BK	NEC	3	117	4	468		
42U Rackframe	050-02378-001	NEC	1	1,799	1	1,799		
Cat5e Patch Cable 25' RJ45-RJ45 (+10% spares)	N001-025-BL	Tripp Lite	3	6	94	563		
Cat5e Crossover Cable 10' RJ45-RJ45 (+2 spares)	N010-010-GY	Tripp Lite	3	5	7	35		
						Subtotal	13,325	1,680

Client Software

Windows Server 2008 Standard Edition (x86)**	P73-04165	Microsoft	2	711	5	3,555 (Included)		
						Subtotal	3,555	0

Infrastructure

Brocade 300 8Gbps SAN Switch, 4GbSFPx16p	BR-340-0004-A	Brocade	1	8,500	9	76,500		
Rack Mount Kit for Brocade 300 Switch (+2 spares)	XBR-R000162	Brocade	1	1,500	9	13,500		
Brocade 300 ADV REPLMNT Service 1YR	300-SVC-ADVANCE-1	Brocade	1	450	27		12,150	
24-Port 10/100/1000 Gigabit Switch (+2 spares)	SR2024C	Cisco	3	286	6	1,716		
						Subtotal	91,716	12,150

TOTAL 2,237,200 366,837

NEC Large Volume Discount***

-10%

-185,963 -2,315

Notes:

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

* This component is not immediately orderable. See the FDR for more information.

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

***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 vary

based on the components in quotation

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.

3-Yr. Cost of Ownership: **\$2,415,759**

tpsE Throughput: **3141.76**

\$ / tpsE \$768.92



NEC Express5800/A1080a-E

TPC-E 1.9.0
TPC Pricing 1.5.0

Report Date : 30-March-2010
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Numerical Quantities Summary

Reported Throughput : 3141.76 tpsE **Configured Customers : 1,650,000**

Response Times (in seconds)	Minimum	Average	90 th %tile	Maximum
Broker Volume	0.01	0.05	0.09	2.88
Customer Position	0.01	0.02	0.05	43.55
Market Feed	0.01	0.03	0.05	48.81
Market Watch	0.01	0.03	0.07	2.77
Security Detail	0.01	0.01	0.03	2.89
Trade Lookup	0.01	0.50	0.71	49.09
Trade Order	0.01	0.07	0.11	45.96
Trade Result	0.01	0.07	0.13	68.73
Trade Status	0.01	0.02	0.04	60.23
Trade Update	0.01	0.56	0.73	3.46
Data Maintenance	0.01	0.11		1.12

Transaction Mix	Transaction Count	Mix %
Broker Volume	11,084,250	4.900%
Customer Position	29,408,007	13.000%
Market Feed	2,262,086	1.000%
Market Watch	40,718,758	18.000%
Security Detail	31,670,116	14.000%
Trade Lookup	18,096,002	8.000%
Trade Order	22,847,611	10.100%
Trade Result	22,620,694	10.000%
Trade Status	42,980,977	19.000%
Trade Update	4,524,077	2.000%
Data Maintenance	120	

Test Duration and Timings

Ramp-up Time	1:05:42
Measurement Interval	2:00:00
Business Recovery Time	1:39:28
Total Number of Transactions Completed in Measurement Interval	226,212,578