



PowerEdge™ T610 Server

**TPC-E 1.7.0
TPC Pricing 1.5**

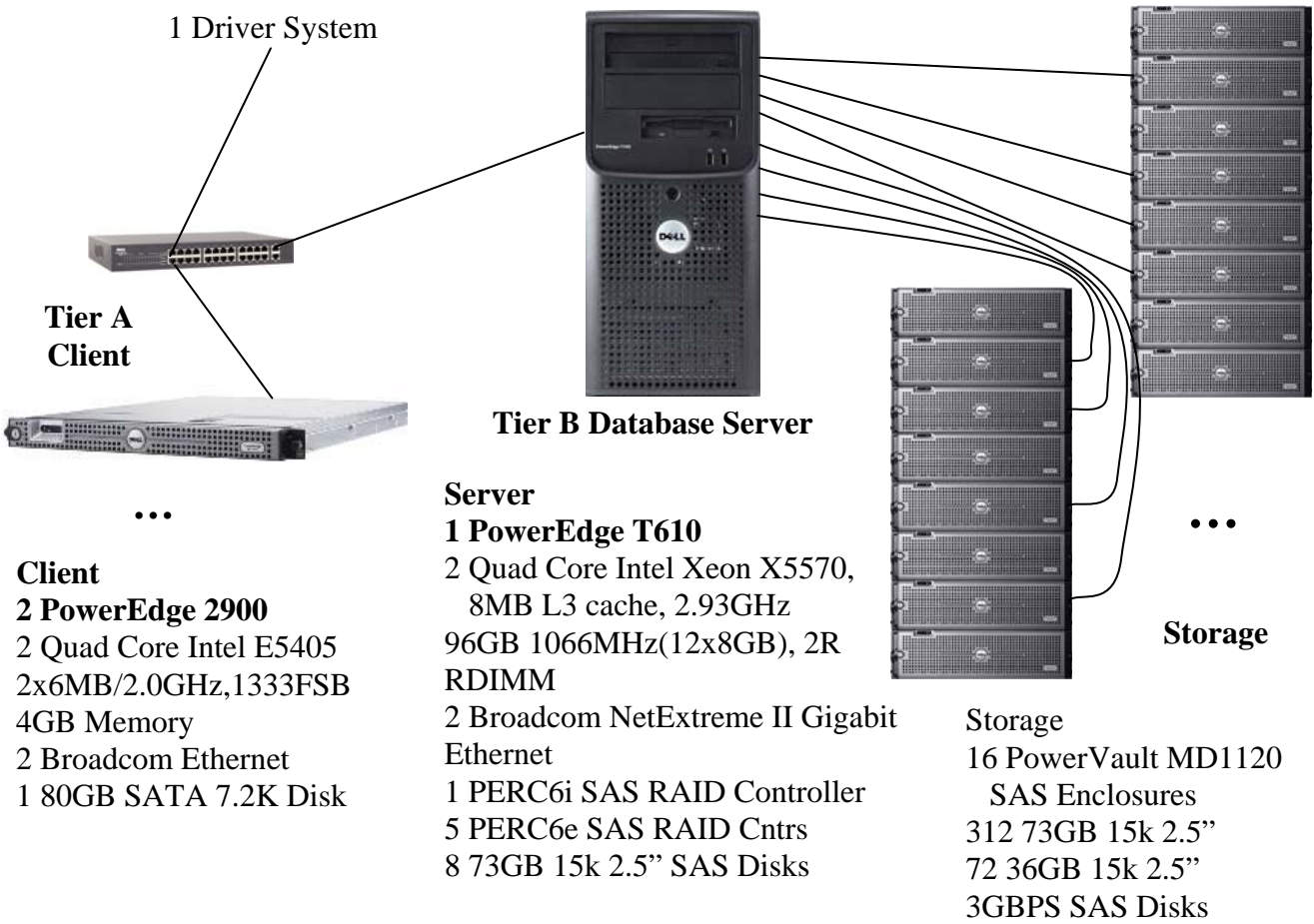
Report Date:
March 30, 2009

Revision Date:
June 8, 2010

TPC-E Throughput	Price/Performance	Availability Date	Total System Cost
766.47 tpsE	\$273.65 USD per tpsE	March 30, 2009	\$209,741 USD

Database Server Configuration

Operating System	Database Manager	Processors/Cores/ Threads	Memory
Microsoft Windows Server 2008 Enterprise x64 Edition™	SQL Server 2008 Enterprise x64 Edition™	2/8/16	96GB



Initial Database Size 2,976.57GB	Redundancy Level: 1 RAID10 Log Data	Storage 8 x 73GB, 312 x 73GB, 72 x 36GB
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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3 yr. Maint. Price
Server Hardware						
PEt610 Tower Chassis, Up to 8 2.5in HDD & 2 Broadcom NICs	244-4855	1	\$521.00	1	\$521.00	\$540.00
X5570, 2.93GHz, 8M, XN, 6.40GT/S Processor	317-0254	1	\$1,799.00	2	\$3,598.00	
HO Pwr Sply,Non-Redundant,870W UPG	330-3550	1	\$30.00	1	\$30.00	
High Output Pwr Sply,Rdnt,870W	330-3549	1	\$299.00	1	\$299.00	
96GB,12x8GB,1066MH,2R RDIMM,2P,OPTIMIZED	317-3549	1	\$5,597.00	1	\$5,597.00	
PERC6i SAS RAID, Internal, Bat	341-5699	1	\$299.00	1	\$299.00	
PERC6E SAS RAID, 2X4 EXT 256	341-6488	1	\$599.00	5	\$2,995.00	
73GB,SAS,2.5-inch,15K RPM HD	341-8714	1S	\$329.00	8	\$2,632.00	
DELL E157FP,15 IN,15.0 VIS	320-5090	1	\$189.00	1	\$189.00	
				Subtotal	\$16,160.00	\$540.00
Server Storage						
PV MD1220,RACK,2U,24 BAY,LBZL	224-7093	1S	\$2,794.00	16	\$44,704.00	
PV MD1220,RACK,2U,24 BAY,LBZL (10% spares)	224-7093	1S	\$2,794.00	2		\$5,588.00
Enclosure Management Modules, PowerVault MD1220	330-6058	1	\$0.00	16	\$0.00	
EM Modules, PowerVault MD1220 (10% spares)	330-6058	1	\$0.00	2		\$0.00
73GB,SAS,2.5-inch,15K RPM HD	341-9888	1S	\$329.00	384	\$126,336.00	
73GB,SAS,2.5-inch,15K RPM HD (10% spares)	341-9888	1S	\$329.00	39		\$12,831.00
RACK-42U, CUST	340-4896	1	\$239.99	1	\$239.99	
				Subtotal	\$171,279.99	\$18,419.00
Server Software						
SQL Server 2008 Enterprise x64 Edition **	810-07509	2	\$23,911.00	2	\$47,822.00	
Windows Server 2008 Enterprise Edition (x64) **	P72-03195	2	\$2,357.00	1	\$2,357.00	
Professional Support (1 Incident)	N/A		\$259.00	1		\$259.00
				Subtotal	\$50,179.00	\$259.00
Client Hardware						
Dell PowerEdge 2900, E5405,2x6MB/2.0GHz,1333FSB	223-4719	1S	\$413.00	2	\$826.00	\$492.00
Additional processor, E5405,2X6MB/2.0GHz,1333FSB	311-8025	1S	\$369.00	2	\$738.00	
4GB,667MHz,(2X2GB),2R,FBD	311-7168	1	\$403.00	2	\$806.00	
80G 7K SATA,2,3G,3.5,HP	341-3034	1	\$99.00	2	\$198.00	
DUAL,OnBoard,Broadcom,GB,ENET NICs	430-1764	1	\$0.00	2	\$0.00	
				Subtotal	\$2,568.00	\$984.00
Client Software						
Windows Server 2008 Standard Edition (x64) **	P73-04190	2	\$725.00	2	\$1,450.00	
				Subtotal	\$1,450.00	\$0.00
Infrastructure						
PowerConnect 2216, 16port Switch	222-2259	1	\$69.00	1	\$69.00	
1M SAS Cable, MD1000	310-7082	1	\$30.00	15	\$450.00	
				Subtotal	\$519.00	\$0.00
				Other Discounts*	(\$47,631.75)	(\$4,985.75)
				Total	\$194,524.24	\$15,216.25
Notes:						
One or more components of the measured configuration have been substituted in the Priced Configuration. See the FDR for details.						
*All hardware from Dell(1) is discounted 25% based on total dollar volume of this config.						
** All Microsoft maintenance is covered by the maint. costs of Microsoft SQL Server						
Price Source: 1=Dell, 2=Microsoft, NIO = Not Immediately Orderable						
Pricing may be verified by calling 1-800-BUY-DELL and referencing quote #544155584 as a complex quote.						
Audited by Lorna Livingtree, Performance Metrics Inc.						
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 items, please inform the TPC at pricing@tpc.org.						
Three-Year Cost of Ownership:					\$209,741	USD
TPC-E Throughput:					766.47	tpsE
Price/Performance:					\$273.65	tpsE/USD

Numerical Quantities Summary				
Reported Throughput: 766.47 tpsE		Configured Customers: 385,000		
Response Times (in seconds)	Minimum	Average	90th%tile	Maximum
Broker-Volume	0.03	0.17	0.26	0.89
Customer-Position	0.03	0.17	0.24	5.37
Market-Feed	0.02	0.13	0.22	5.20
Market-Watch	0.01	0.12	0.22	1.43
Security-Detail	0.00	0.08	0.12	1.00
Trade-Lookup	0.05	0.84	1.08	2.67
Trade-Order	0.03	0.38	0.49	3.62
Trade-Result	0.16	0.47	0.61	4.03
Trade-Status	0.01	0.10	0.16	2.60
Trade-Update	0.08	0.98	1.16	2.69
Data-Maintenance	0.06	0.34		5.19
Transaction Mix		Transaction Count		Mix %
Broker-Volume		2,703,741		4.900%
Customer-Position		7,173,334		13.000%
Market-Feed		551,888		1.000%
Market-Watch		9,932,795		18.000%
Security-Detail		7,725,850		14.001%
Trade-Lookup		4,413,687		7.998%
Trade-Order		5,573,117		10.100%
Trade-Result		5,518,633		10.001%
Trade-Status		10,484,832		19.001%
Trade-Update		1,103,570		2.000%
Data-Maintenance		120		
Test Duration and Timings				
Ramp-up Time (hh:mm:ss)			00:11:07	
Measurement Interval (hh:mm:ss)			02:00:00	
Business Recovery Time (hh:mm:ss)			00:34:11	
Total number of Transactions Completed in Measurement Interval			55,181,447	