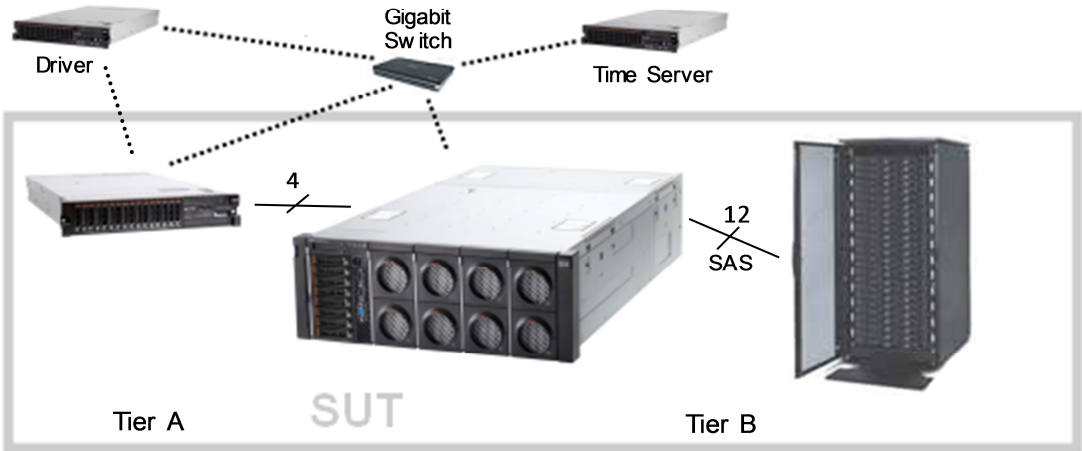
	System x[®] 3850 X6 Microsoft[®] SQL Server[®] 2014		TPC-E[™] 1.13.0 TPC Pricing 2.0.0
			Report Date: May 5, 2015
			Revision Date: May 6, 2015
TPC-E Throughput 6964.75 tpsE	Price/Performance \$245.98 USD per tpsE[™]	Availability Date July 31, 2015	Total System Cost \$1,713,135 USD
Database Server Configuration			
Operating System Microsoft Windows Server[®] 2012 Standard Edition	Database Manager Microsoft SQL Server 2014 Enterprise Edition	Processors/Cores/Threads 4/72/144	Memory 4096GB
			
System x3650 M4, with: <ul style="list-style-type: none"> - 2 x Intel[®] Xeon[®] Processor E5-2697 v2 2.70GHz (2 Procs/24 Cores/48 Threads) - 32GB Memory - 2 x 300GB SFF SAS (RAID-1) - 1 x ServeRAID M5110e - Onboard Quad Gb Ethernet - Dual Port Gb Ethernet 	System x3850 X6, with: <ul style="list-style-type: none"> - 4 x Intel Xeon Processor E7-8890 v3 2.50GHz (4 Procs/72 Cores/144 Threads) - 4096GB Memory - 2 x 300GB 10K SAS (RAID-1) - 6 x 800GB SATA SSD (RAID-10) - 1 x ServeRAID M5210 - 6 x ServeRAID M5225 - 4 x Dual 10Gb-T Ethernet 	12 x EXP2524 JBOD Enclosures, with: <ul style="list-style-type: none"> - 223 x 400GB 2.5" SAS SSD (3 x 19-drive RAID-5 DB data) (5 x 22-drive RAID-5 DB data) (4 x 14-drive RAID-5 DB data) 223 Total External Drives	
Initial Database Size 28,734 GB	Redundancy Level: 1 RAID-10 Log RAID-5 Data		Storage 2 x 300GB 2.5" 10K SAS 6 x 800GB 2.5" SATA SSD 223 x 400GB 2.5" SAS SSD



System x3850 X6 Microsoft SQL Server 2014

TPC-E 1.13.0 TPC Pricing 2.0.0

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Description	Part Number	Price Source	Unit Price	Quantity	Extended Price	3-Yr. Maint. Price
Server Hardware						
System x3850 X6 Configure-To-Order, includes:	6241AC1	1	532,162	1	532,162	
x3850 X6 4U Chassis + Midplane	ASMH, A4A4			1		
X6 DDR4 Compute Book Intel Xeon E7-8890 v3	AS91			4		
X6 Primary I/O Book + X6 Storage Book	ASFB, A4A1			1		
X6 Half-length I/O Book	A4A2			2		
4x 2.5" HS SAS/SATA/SSD HDD Backplane	A4A6			2		
ServeRAID M5210 SAS/SATA Controller for System x	A3YZ			1		
Intel X540 ML2 Dual Port 10GBase-T Adapter for System x	A40P			1		
Intel X540-T2 Dual Port 10GBase-T Adapter for System x	A2ED			3		
1400W HE Redundant Power Supply	A54E			4		
S3700 800GB SATA 2.5" G3HS Enterprise SSD	A4U5			6		
300GB 10K 6Gbps SAS 2.5" G3HS HDD	A4TL			2		
System x Rail Kit	A4AA			1		
Power Cable	6311			4		
64GB TruDDR4 PC4-17000 CL15 2133MHz LP LRDIMM	A5UK			64		
ServeRAID M5225-2GB SAS/SATA Controller for System x	00AE938	1	899	6	5,394	
ServeRAID M5200 Series Performance Accelerator- FoD	47C8710	1	49	1	49	
Preferred Pro Keyboard USB - US English 103P RoHS v2	00AM600	1	29	1	29	
2-Button Optical Mouse - Black - USB	40K9200	1	19	1	19	
ThinkVision E1922 18.5-inch LED Backlit LCD Monitor	60B8AAR6US	1	110	1	110	
ServicePac for 3-Year 24x7x4 Support (x3850 X6)	67568BU	1	1,500	1		1,500
				Subtotal	537,763	1,500
Server Storage						
S2 42U Standard Rack	93074RX	1	1,565	1	1,565	
EXP2524 Storage Enclosure	610024X	1	3,999	12	47,988	
1.5m SAS Cable (mSAS HD to mSAS)	00MU163	1	129	12	1,548	
400GB 2.5 Inch Flash Drive	00NC575	1 - S	6,279	223	1,400,217	
ServicePac for 3-Year 24x7x4 Support (EXP2524)	91Y5785	1	1,200	12		14,400
ServicePac for 3-Year 24x7x4 Support (Rack)	41L2760	1	315	1		315
				Subtotal	1,451,318	14,715
Server Software						
SQL Server 2014 Enterprise Edition	7JQ-00750	2a	13,472.50	36	485,010	
Windows Server 2012 Standard Edition	P73-05761	2	882	2	1,764	
Microsoft Problem Resolution Services	N/A	2a	259	1		259
				Subtotal	486,774	259
Client Hardware						
System x3650 M4 Configure-To-Order, includes:	7915AC1	1	12,436	1	12,436	
x3650 M4 Base + Planar	A1KF, A3V6			1		
750W High Efficiency Platinum AC Power Supply	A1H5			2		
Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB 130W	A3VM, A3W5			2		
NetXtreme II 1000 Express Dual Port Ethernet Adapter	2995			1		
x3650 M4 PCIe Riser Card 1 (1 x8 FH/FL + 2 x8 FH/HL Slots)	A1JT			1		
System x Gen-III Slides Kit	A228			1		
300GB 10K 6Gbps SAS 2.5" SFF G2HS HDD	A2XC			2		
System x Lightpath Kit	A1LF			1		
x3650 M4 8x 2.5" HS HDD Assembly Kit	A1JX			1		
4GB PC3L-12800 CL11 ECC DDR3 1600MHz LP RDIMM	A3QE			8		
Power Cable	6263			2		
ServeRAID M5100 Series 512MB Cache/RAID 5 Upgrade	A1J3			1		
ServicePac for 3-Year 24x7x4 Support (x3650 M4)	67567XR	1	790	1		790
				Subtotal	12,436	790
Client Software						
Windows Server 2012 Standard Edition	P73-05761	2	882	1	882	
				Subtotal	882	0
Infrastructure						
Ethernet Cables	78004256	1	6	4	24	
				Subtotal	24	0
				Total	2,489,197	17,264
Dollar Volume Discount (See Note 1)	39.28%	1			792,885	
Microsoft Open Program Discount Schedule	16.67%	2			441	
Pricing: 1 - Lenovo 1-877-782-7134; 2 - Microsoft Note 1: Discount applies to all line items where Pricing=1; pricing is for these or similar quantities. Discounts for similarly sized configurations will be similar to what is quoted here, but may vary based on the specific components priced. S: One or more components of the measured configuration have been substituted in the priced configuration. See the FDR for details. Benchmark results and test methodology audited by Doug Johnson for InfoSizing, Inc. (www.sizing.com)					Three-Year Cost of Ownership USD: \$1,713,135	
					TPC-E Throughput: 6,964.75	
					\$ USD/tpsE: \$245.98	
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 section of the TPC benchmark specifications. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.						



**System x3850 X6
Microsoft SQL Server 2014**

**TPC-E 1.13.0
TPC Pricing 2.0.0**

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Numerical Quantities Summary				
Reported Throughput: 6964.75 tpsE		Configured Customers: 3,500,000		
Response Time (in seconds)	Minimum	Average	90 th Percentile	Maximum
Broker-Volume	0.01	0.01	0.02	0.29
Customer-Position	0.01	0.01	0.01	3.69
Market-Feed	0.01	0.01	0.02	3.68
Market-Watch	0.01	0.01	0.01	0.26
Security-Detail	0.01	0.01	0.01	0.54
Trade-Lookup	0.01	0.05	0.08	0.59
Trade-Order	0.01	0.06	0.12	0.48
Trade-Result	0.01	0.01	0.02	0.48
Trade-Status	0.01	0.01	0.01	0.55
Trade-Update	0.01	0.05	0.09	0.51
Data-Maintenance	0.01	0.01	N/A	0.17
Transaction Mix		Transaction Count	Mix %	
Broker-Volume		24,571,013	4.900%	
Customer-Position		65,188,338	13.000%	
Market-Feed		5,014,628	1.000%	
Market-Watch		90,260,609	18.000%	
Security-Detail		70,202,478	14.000%	
Trade-Lookup		40,115,332	8.000%	
Trade-Order		50,645,868	10.100%	
Trade-Result		50,146,204	10.001%	
Trade-Status		95,275,516	19.000%	
Trade-Update		10,028,918	2.000%	
Data-Maintenance		120	N/A	
Test Duration and Timings				
Ramp-up Time (hh:mm:ss)				00:21:50
Measurement Interval (hh:mm:ss)				02:00:00
Business Recovery Time (hh:mm:ss)				00:23:18
Total Number of Transactions Completed in Measurement Interval				501,448,904