	HP ProLiant DL385 G7 AMD Opteron™ 6282 SE C/S with 1 Proliant DL360 G7		TPC-E Rev 1.12.0
			TPC Pricing 1.6.0
			Report Date Nov 14, 2011

TPC-E Throughput	Price/Performance	Availability Date	Total System Cost
1232.84 tpsE	$257 USD/tpsE	Dec 31, 2011	$316,836 USD

Database Server Configuration

Operating System	Database Manager	Processor/Cores/Thread	Memory
Microsoft Windows Server 2008 R2 Enterprise Edition	Microsoft SQL Server 2008 R2 SP1 Enterprise Edition	2/32/32 AMD Opteron™ 6282 SE 2.6 GHz 16 MB L3	256 Gbyte

Tier B: Server
HP ProLiant DL385 G7

2 x AMD Opteron™ Processor 6282 SE 2.60 GHZ
256 GB Memory

2 x HP 72GB SAS 15K SFF DP ENT HDD

Direct Connect
2 x 1Gbps Ethernet

Database Log
4 x HP 500GB HDD (internal)

2x Violin 3205 Memory Arrays
(PCI direct connect)

Tier A: Clients

1 x ProLiant DL360 G7
1 x Quad-Core Intel Xeon X5630 Processor 2.53Ghz
3x 2GB PC3-10600 Memory
2 x 146GB 6G SAS 10K SFF DP
4 x Onboard 1Gbps Ethernet

Storage

2 x Violin Memory Systems V3205 Flash Array
4 x 500GB 6G SAS 7.2K SFF DP Midline HDD (log)

Priced Only
1x HP SmartArray P411/512MB (60 Day Space)
1x HP StorageWorks MSA70 Array (60 day space)
5x HP 500GB 6G SAS 7.2K RPM SFF HDD (60 day Space)

Initial Database Size	Redundancy Level: 1	Storage
5,622 GB	RAID10:Log/RAID3:Data	2x 3205 Violin Array, 4x500GB HDD (log), 5x500GB HDD(60Day)

	TPC-E	1.12.0
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HP ProLiant DL385G7

Description	Part Number	Brand	Unit Price	Qty.	Extended Price	3 Yr Maint Price
Server Hardware (Tier B)						
HP DL385G7 SFF CTO Chassis	573122-B21	1	1,261	1	1,261	
AMD Opteron 6282 SE	654868-B21	1	1,249	2	2,498	
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 Reg. Memory Kit	627812-B21	1	899	16	14,384	
HP 72GB 6G SAS 15K rpm SFF Dual Port Hard Drive	512545-B21	1	279	2	558	
HP COMPAQ LE1711 LCD Monitor	EM886AA#ABA	1	159	1	159	
HP PS/2 Keyboard And Mouse Bundle	RC464AA#ABA	1	39	1	39	
HP R1.5 kVA 1U NA UPS	AF419A	1	739	1	739	
HP 500GB 6G SAS 7.2K rpm SFF Dual Port Midline Hard Drive	507610-B21	1	349	4	1,396	
HP 3y 4h 24x7 ProLiant DL38x HW Support ,Proliant Server DL38x	U4545E	1	931	1		$931
			Subtotal		**$21,034**	**$931**
Server Software						
SQL Server 2008 R2 Enterprise Edition, Per Processor License	810-08529	2	23,370	2	46,740	
Windows Server 2008 R2 Enterprise Edition	P72-04219	2	2,320	1	2,320	
Microsoft Problem Resolution Services	N/A	2	259	1		259
			Subtotal		**$49,060**	**259**
Storage						
Violin Memory Systems V3205 Flash Memory Array	V-3205	3	100,500	2	201,000	
Violin Premium Support 1 years of 4h 24 x7 support	VS-PM1Y	3	12,000	3		36,000
HP Smart Array P411/512 MB with BBWC Controller	462832-B21	1	599	1	599	
HP StorageWorks MSA70 Array (60 Day)	418800-B21	1	3,199	1	3,199	
HP 3year 4hour 24x7 MSA 60/70 HW Support (60 Day)	UF303E	1	1,982	1		1,982
HP 500GB 6G SAS 7.2K rpm SFF DP Midline Hard Drive (60 Day)	507610-B21	1	349	5	1,745	
HP Universal Rack 10642 G2 Shock Rack	AF002A	1	1,489	1	1,489	
			Subtotal		**208,032**	**37,982**
Client Hardware (Tier A)						
HP ProLiant DL360 G7 CTO Server	579237-B21	1	1,471	1	1,471	
HP DL360 G7 Intel Xeon X5630 (2.53Ghz/4-core/12MB/80W) Proc	587478-B21	1	799	1	799	
HP 2GB (1x2GB) Dual Rank x8 PC3-10600 Memory Kit	500656-B21	1	110	3	330	
HP 146GB 6G SAS 15K 2.5in DP ENT HDD	512547-B21	1	369	2	738	
HP 3y 4h 24x7 ProLiant DL36x HW Support ,ProLiant DL36x	U4497E	1	750	1		750
			Subtotal		**3,338**	**750**
Client Software						
Microsoft Windows Server 2008 R2 Standard (x64)	P73-00352	2	870	1	870	
			Subtotal		**870**	**0**
Infrastructure						
HP 1.2m/4ft CAT5 RJ45 M/M Ethernet Cable	C7533A	1	4	3	12	
			Subtotal		**12**	**0**
			Total Extended Price		**$282,346**	**$39,922**
Large Purchase and Net 30 discount (See Note 1)	16.0%		**Total Discounts**		**$4,846**	**$586**
			Grand Total		**$277,500**	**$39,336**

Pricing: 1=HP Direct 800-203-6748 2= Microsoft. 3= Violin Memory Systems Note 1: Discount based on H0P Direct guidence applies to all lines where pricing = 1. Note 2: All the hardware are available to order. Note 3: The benchmark results were audited by Doug Johnson for InfoSizing, www.sizing.com

Three-year Cost of Ownership: USD	**$316,836**
tpsE	1,232.84
$ USD/tpsE	$257

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 terms, please inform at pricing@tpc.org. Thank you.

HP ProLiant DL385 G7
AMD Opteron™ 6282 SE
C/S with 1 DL360 G7

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Numerical Quantities Summary

Reported Throughput	1232.84 tpsE	Configured Customers:		700,000

Response Times (in seconds)	Minimum	Average	90th %tile	Maximum
Broker Volume	0.00	0.02	0.04	0.16
Customer Position	0.00	0.02	0.03	0.33
Market Feed	0.00	0.02	0.04	0.42
Market Watch	0.00	0.02	0.04	0.40
Security Detail	0.00	0.01	0.02	0.11
Trade Lookup	0.00	0.10	0.14	0.25
Trade Order	0.00	0.05	0.07	0.64
Trade Result	0.00	0.06	0.08	1.39
Trade Status	0.00	0.01	0.02	0.30
Trade Update	0.02	0.12	0.16	0.78
Data Maintenance	0.01	0.03		0.07

Transaction Mix	Transaction Count	Mix %
Broker Volume	4,349,506	4.900%
Customer Position	11,539,558	13.000%
Market Feed	887,654	1.000%
Market Watch	15,977,923	18.000%
Security Detail	12,427,068	14.000%
Trade Lookup	7,101,109	8.000%
Trade Order	8,965,113	10.100%
Trade Result	8,876,486	10.000%
Trade Status	16,865,439	19.000%
Trade Update	1,775,232	2.000%
Data Maintenance	120	

Ramp-up Time	0:25:26
Measurement Interval	2:00:00
Business Recovery Time	0:30:58
Total Number of Transactions Completed in Measurement Interval	88,765,088