	HP ProLiant BL685c G7 Blade Server		TPCE Rev 1.11.0
			TPC Pricing 1.5.0
			Report Date June 21,2010
TPC-E Throughput	Price/Performance	Availability Date	Total System Cost
1,464.12	\$302.49 USD/TpsE	June 21, 2010	\$442,879 USD

Database Server Configuration

Operating System	Database Manager	Processor/Cores/Thread	Memory
Microsoft Windows Server 2008 R2 Enterprise Edition	Microsoft SQL Server 2008 R2 Enterprise Edition	4/48/48	512 Gbyte

Tier B: Server

HP ProLiant BL685c G7

4 x 12-Core AMD Processor 6174 (Magny-Cours)
@2.2 GHz
512GB Memory
Onboard P410i SmartArray Raid Controller
2 x 72GB SAS Drive (Boot) (RAID1)
4 x 10Gbps Ethernet NIC (internal)

Storage:

Database:

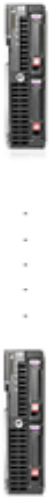
4 x Violin Memory Appliances
1.728TB each (usable)

Log:

1x HP 2324fc Modular Smart Array
24 x 72GB 3G 15K 3.5 inch Dual-port SAS LFF HDD

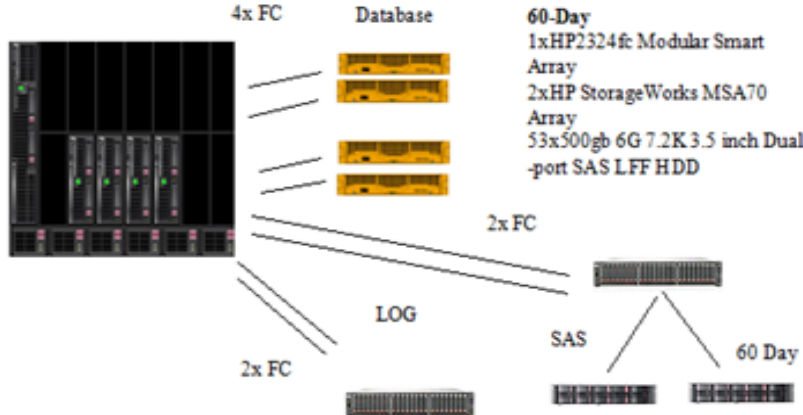
60-Day

1x HP2324fc Modular Smart Array
2x HP StorageWorks MSA70 Array
53x 500gb 6G 7.2K 3.5 inch Dual-port SAS LFF HDD



HP 1gb Network switch
Internal to Blade Enclosure

2x 1Gbps
Ethernet from
each blade client to 2x on



Tier A : Clients

4x ProLiant BL460c G6 Blade (in Blade Enclosure)

Each contains:

2x Quad-Core Intel Xeon processor E5520 2.26Ghz
8Mb L2 cache, 8 processor cores, 8 threads
8GB of Memory
Onboard P410i SmartArray Raid Controller
2 x 146GB SAS drive (Boot) (RAID1)
2x Onboard 1Gbps Ethernet Controllers

Priced Configuration

Initial Database Size 6228 GB	Redundancy Level : 1 RAID10 : Log/ RAID3 : Data	Storage 4 x 1.728TB Violin Mem Appl 24 x 72GB Log 53 x 500gb 60-day
--	--	--



HP ProLiant BL685c G7

TPC-E	1.11.0
TPC-Pricing	1.5.0
Report date	21-Jun-10
Availability Date	21-Jun-10

Description	Part Number	Brand	Unit Price	Qty.	Extended Price	3 Yr Maint Price
Server Hardware (Tier B)						
HP BL685c G7 CTO Blade (support included under client hardware)	518878-B21		4,191	1	4,191	
HP BL685c G7 O6174 12C 2P Kit	518871-B21		2,999	1	2,999	
HP BL685c G7 O6174 12C 2P FIO Kit	518871-L21		2,999	1	2,999	
HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	593915-B21		1,549	32	49,568	
HP 72GB 3G SAS 10K SFF DP ENT HDD	384842-B21		259	2	518	
QLogic QMH2562 8Gb FC HBA for HP BladeSystem c-Class	451871-B21		849	1	849	
HP LE1851w 18.5-Inch wide Monitor	NK033AA#ABA		159	1	159	
HP PS/2 Keyboard And Mouse Bundle	RC464AA#ABA		39	1	39	
Subtotal					\$61,322	\$0
Server Software						
SQL Server 2008 R2 Enterprise Edition, Per Processor License	810-07580	2	19,188	4	76,752	
Windows Server 2008 Enterprise Edition R2	P72-03868	2	2,280	1	2,280	
Microsoft Problem Resolution Services	N/A	2	259	1		259
Subtotal					\$79,032	259
Storage						
V-3200 Chassis with PCIe 20 Gbit/s Interface 2.6TB Flash (21 x VIMM-128GSLC)	V-3202	4	50,250	4	201,000	
Violin Network Head:Quad 4/8 Gbit/s Fiber Channel Interfaces	V-IF-8GFCx4	4	8,040	2	16,080	
Violin Standard Warranty includes 3 years of 4h 24 x7 support	VS-SW	4	0	1		0
HP StorageWorks 2324fc G2 Dual Controller Modular Smart Array (SFF)	AJ797A	1	8,900	1	8,900	
HP 3y 4h 24x7 MSA2000 Array HWSupp ,MSA2000 Dual Controller	UJ675E	1	1,513	1		1,513
HP 72GB 3G SAS 15K SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	418371-B21	1	349	24	8,376	
HP StorageWorks 2324fc G2 Dual Controller Modular Smart Array (SFF)	AJ797A	1	8,900	1	8,900	
HP 3y 4h 24x7 MSA2000 Array HWSupp ,MSA2000 Dual Controller (includes disks)	UJ675E	1	1,513	1		1,513
HP StorageWorks MSA70 Array (60-day)	418800-B21	1	3,199	2	6,398	
3-year, 4-hour, 24x7 MSA70 hardware support (includes disks) (60-day)	UF303E	1	2,198	2		4,396
HP 500GB 6G SAS 7.2K SFF (2.5-inch) Dual Port Midline Hard Dr (60-day)	507610-B21	1	419	53	22,207	
Subtotal					271,861	7,422
Client Hardware (Tier A)						
HP BLc7000 Blade Enclosure 3 Inch LCD display	507019-B21	1	4,837	1	4,837	
Single Phase Power option for Blade Enclosure	413379-B21	1	175	1	175	
HP BLc 6x Active Cool 200 FIO Fan Option	517520-B21	1	894	1	894	
HP 2400W High Efficiency Power Supply	499243-B21	1	349	6	2,094	
HP GbE2c Layer 2/3 Ethernet Blade Switch	438030-B21	1	1,799	2	3,598	
HP ProLiant BL460C G6 E5520 2.26Ghz Quad Core Blade Server	507782-B21	1	2,489	4	9,956	
HP E5520 BL460c G6 FIO Kit	507799-B21	1	599	4	2,396	
HP 4GB 2Rx4 PC3-10600R-9 Memory Kit	500658-B21	1	230	8	1,840	
HP 146GB 15k 2.5 dual Port HP SAS Drive	418367-B21	1	269	8	2,152	
HP 1year 4h 24x7 B Series Blades HW Support 16 Blades	UB329E	1	612	3		1,836
Subtotal					27,942	1,836
Client Software						
Microsoft Windows Server 2008 Standard (x64) R2		2	711	4	2,844	
Subtotal					2,844	0
Infrastructure						
HP 5642 Pallet Unassembled Rack	358254-B21	1	865	2	1,730	
HP Brocade 8/12c SAN Switch for BladeSystem c-Class	AJ820A	1	6,374	2	12,748	
HP 8Gb Shortwave B-series Fibre Channel 1 Pack SFP+ Transceiver	AJ716A	1	249	10	2,490	
2 m LC-LC Multi-Mode Fibre Channel Cable	221692-B21	1	75	8	600	
2 m LC-LC Multi-Mode Fibre Channel Cable (spares)	221692-B21	1	75	2	150	
CAT 6 7 Foot Gray Patch Cable	CB242-7G	3	2	2	3	
CAT 6 7 Foot Gray Patch Cable (Spares)	CB242-7G	3	2	2	3	
Subtotal					17,724	0
Total Extended Price					\$460,725	\$9,517
Large Purchase and Net 30 discount (See Note 1)					Total Discounts	\$25,882
					Grand Total	\$434,843
<p>Pricing: 1=HP Direct 800-203-6748 2= Microsoft. 3= deepsurplus.com 4=Violin Memory Systems Note 1: Discount based on HP Direct guidance applies to all lines where pricing = 1. Note 2: All the hardware are available to order.</p> <p>The benchmark results were audited by Francois Raab of Infosizing Inc (www.infosizing.com).</p>					<p>Three-year Cost of Ownership: USD</p> <p>tpsE</p> <p>\$ USD/tpsE</p>	
						\$442,879
						1,464.12
						\$302.49
<p>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.</p>						



HP ProLiant BL685c G7 Blade Server

TPCE Rev 1.11.0 TPC
Pricing 1.5.0
Report Date June 21, 2010
Availability Date June 21, 2010

Numerical Quantities Summary

Reported Throughput	1,464.12	Configured Customers:		800,000	
Response Times (in seconds)		Minimum	Average	90 th %tile	Maximum
Broker Volume	0.00	0.04	0.06	0.90	
Customer Position	0.00	0.03	0.04	1.02	
Market Feed	0.00	0.02	0.04	1.61	
Market Watch	0.00	0.03	0.06	0.96	
Security Detail	0.00	0.01	0.02	1.27	
Trade Lookup	0.00	0.11	0.16	1.74	
Trade Order	0.00	0.06	0.08	1.64	
Trade Result	0.00	0.08	0.11	2.75	
Trade Status	0.00	0.02	0.03	1.04	
Trade Update	0.01	0.13	0.18	2.94	
Data Maintenance	0.00	0.03		0.34	
Transaction Mix		Transaction Count		Mix %	
Broker Volume		5,165,673		4.900%	
Customer Position		13,704,694		13.000%	
Market Feed		1,054,173		1.000%	
Market Watch		18,975,612		18.000%	
Security Detail		14,759,361		14.000%	
Trade Lookup		8,433,494		8.000%	
Trade Order		10,647,612		10.100%	
Trade Result		10,541,668		10.000%	
Trade Status		20,030,234		19.000%	
Trade Update		2,108,431		2.000%	
Data Maintenance		120			
Ramp-up Time				54:06	
Measurement Interval				2:00:00	
Business Recovery Time				00:58:50	
Total Number of Transactions Completed in Measurement Interval				105,420,952	