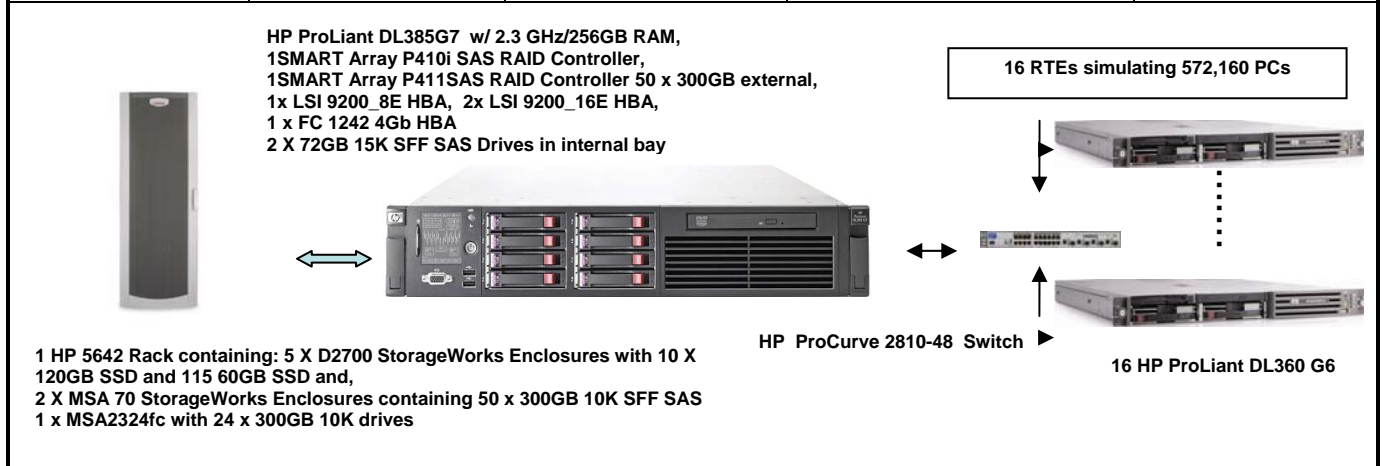


<b>Hewlett-Packard</b>  <b>Company</b>	HP ProLiant DL385G7 2.3 GHz 12MB L3	TPC-C Rev. 5.10.1
	C/S with 16 HP ProLiant DL360 G6	Report Date: Apr 07, 2010

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>USD \$408,333</b>	<b>705,652</b>	<b>USD \$0.58</b>	<b>Sept 1, 2010</b>

Database Server Processors /Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
2/24/24 AMD 2.3 GHz 12MB L3 cache	Microsoft SQL Server 2005 Enterprise x64 Edition SP3	Windows Server 2008 R2 Enterprise Edition	Microsoft Visual C++ Microsoft COM+	<b>572,160</b>



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processors/Cores/Threads	2/24/24	AMD 2.3GHz 12MB L3 cache	1/4/4	2.40 GHz Intel Xeon w/ 8MB L3 cache
Memory	256GB	(8 x 16GB and 16 x 8GB) DDR3	2GB	2048 MB
Disk Controllers	1	Smart P410i Controller	1	Integrated Smart Array P410i Controller
	1	Smart P411 Controller		
	1	LSI 9200_8E HBA		
	2	LSI 9200_16E HBA		
	1	FC1242 Dual Channel 4Gb PCI-e HBA		
Disk Drives	74	300GB 15K SFF SAS 6G	2	72 GB 15K SFF SAS
	115	60 GB SSD		
	10	120 GB SSD		
	2	72 GB 15K SFF SAS		
Total Storage		28,597,20 GB		72 GB

Hewlett-Packard Company	HP ProLiant DL385G7			TPC-C Rev. 5.10.1			
	Description	Part Number	Brand	Unit Price	Qty	Extended Price	3 yr. Maint. Price
<b>Server Hardware</b>							
HP DL385G7 SFF CTO Chassis,HP NC382i nic,Smart Array P410i Controller	585322-L21	1	1,612	1	1,612		
HP 6176SE DL385G7 FIO Kit	585322-L21	1	1,899	1	1,899		
HP 6176SE DL385G7 Kit	585322-B21	1	1,899	1	1,899		
HP 16GB 4Rx4 PC3-8500R-7 Kit	500666-B21	1	1,549	8	12,392		
HP 8GB 2Rx4 PC3-8500R-7 Kit	516423-B21	1	990	16	15,840		
HP P411/512 BBWC Smart Array Controller	462832-B21	1	649	1	649		
HP DL385G7 X8/2X4 PCI-E Riser Kit	581783-B21	1	99	1	99		
HP P411 with 512MB Flash Backed Cache Controller	578229-B21	1	699	1	699		
HP LE1851w 18.5-Inch wide Monitor	NK033AA#ABA	1	159	1	159		
HP PS/2 Keyboard And Mouse Bundle	RC464AA#ABA	1	39	1	39		
HP 5642 Pallet Unassembled Rack	358254-B21	1	865	1	865		
HP R1.5 kVA 1U NA UPS	AF419A	1	739	1	739		
HP StorageWorks FC1242 Dual Channel 4Gb PCI-e HBA	AE312A	1	1,780	1	1,780		
2 m LC-LC Multi-Mode Fibre Channel Cable	221692-B21	1	75	2	150		
2 m LC-LC Multi-Mode Fibre Channel Cable	221692-B21	1	75	2			150
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 Controlle	UJ675E	1	1,513	1			1,513
HP 300GB 6G SAS 10K SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Driv	507127-B21	1	549	24	13,176		
HP 120GB 3G SATA 2.5in MDL	572073-B21	1	2,799	10	27,990		
HP 120GB 3G SATA 2.5in MDL (10% spares)	572073-B21	1	2,799	2			5,598
HP 60GB 3G SATA 2.5in	572071-B21	1	1,459	115	167,785		
HP 60GB 3G SATA 2.5in (10% spares)	572071-B21	1	549	12			6,588
HP 300GB 6G SAS 10K SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Driv	507127-B21	1	549	50	27,450		
HP 300GB 6G SAS 10K SFF (2.5-inch) Dual Port Enterprise (10% spares)	507127-B21	1	549	5			2,745
HP 72GB 15k 2.5 dual Port HP SAS Drive	418371-B21	1	349	2	698		
HP StorageWorks D2700 Disk Enclosure	AJ941A	1*	3,399	5	16,995		
HP 3y SupportPlus24 D2000 Enclosures,4h 24x7 onsite response	UQ105E	1	2,147	5			10,735
HP StorageWorks MSA 70 Disk Enclosure	418800-B21	1	3,199	2	6,398		
HP StorageWorks MSA 70 Disk Enclosure (10%spares)	418800-B21	1	3,199	2			6,398
HP 3y 4h 24x7 ProLiant DL380 HW Support ,ProLiant Server DL380	U4545E	1	837	1			837
LSI 9200_8e	LSI00188	4	328	1	328		
LSI 9200_16e	LSI00189	4	498	2	996		
					<b>Subtotal</b>	<b>309,537</b>	<b>34,564</b>
<b>Server Software</b>							
Microsoft SQL Server 2005 Enterprise X64 Edition(per processor)	810-03134	2	23,432	2	46,864		Incl Below
Visual Studio Standard 2005	127-00012	2	250	1	250		Incl Below
Microsoft Windows Server 2008 R2 Enterprise Edition	P72-04217	2	2,280	1	2,280		Incl Below
Microsoft Problem Resolution Services		2	259	1			259
					<b>Subtotal</b>	<b>49,394</b>	<b>259</b>
<b>Client Hardware</b>							
HP ProLiant DL360 G6 Rack CTO Chassis,NC382i Dual Port nic, 2GB memory	484184-B21	1S	1,301	16	20,816		
HP E5530 DL360 G6 FIO Kit	505882-L21	1S	799	16	12,784		
HP 460W CS HE Power Supply Kit	503296-B21	1S	249	16	3,984		
HP 2GB 2Rx8 PC3-10600R-9 Kit	500656-B21	1S	120	16	1,920		
HP 72GB 15k 2.5 dual Port HP SAS Drive	418371-B21	1	349	32	11,168		
HP LE1851w 18.5-Inch wide Monitor	NK033AA#ABA	1	159	16	2,544		
HP PS/2 Keyboard And Mouse Bundle	RC464AA#ABA	1	39	16	624		
HP CP 3Y 4H 24x7 HW Entry300 4-Hour 24 Hour x 7 Day Coverage 3 Years	U4497E	1	698	16			11,168
					<b>Subtotal</b>	<b>53,840</b>	<b>11,168</b>
<b>Client Software</b>							
Windows Server 2008 R2 Standard Edition	P73-04165	2	711	16	11,376		Incl. Above
					<b>Subtotal</b>	<b>11,376</b>	<b>0</b>
<b>User Connectivity</b>							
HP ProCurve Switch 2810-48	J9022A#ABA	1S	3,159	1	3,159		
3-year, 4-hour onsite, 24x7 coverage for hardware	U2856E	1	852	1			852
CAT 6 7 Foot Gray Patch Cable	CB242-7G	3	2	40	64		
CAT 6 7 Foot Gray Patch Cable	CB242-7G	3	2	4			6
					<b>Subtotal</b>	<b>3,223</b>	<b>858</b>
Large Purchase and Net 30 discount (See Note 1)	16.0%	1				<b>(\$58,434)</b>	<b>(\$7,453)</b>
					<b>Total</b>	<b>\$368,936</b>	<b>\$39,396</b>
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 pricing 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.							
						<b>Three-Year Cost of Ownership: USD</b>	<b>\$408,333</b>
						<b>tpmC Rating:</b>	<b>705,652</b>
						<b>\$/ tpmC: USD</b>	<b>\$0.58</b>
Pricing: 1=HP Direct 800-203-6748 2= Microsoft 3= deepsurplus.com 4= Microland Electronics							
Note 1 = Discount based on HP Direct guidance applies to all lines where pricing = 1 * SSD drive support in this enclosure will be available Sept 1 2010 see appendix F							
Note 2= (S) One or more component of the measured configuration have been substituted in the priced configuration. See FDR for details.							
Note 3 = The benchmark results were audited by Lorna Livingtree of Performance Metrics							

## Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**

**705,652 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.59	1.67	47.96
Payment	0.56	1.65	48.17
Order-Status	0.57	1.65	34.31
Delivery (interactive portion)	0.22	0.49	28.12
Delivery (deferred portion)	0.13	0.25	4.85
Stock-Level	0.66	1.75	26.39
Menu	0.22	0.50	45.73

### **Transaction Mix, in percent of total transaction**

New-Order	44.93%
Payment	43.04%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.01%

### **Emulation Delay (in seconds)**

#### **Resp.Time**

#### **Menu**

New-Order	0.10	0.10
Payment	0.10	0.10
Order-Status	0.10	0.10
Delivery (interactive)	0.10	0.10
Stock-Level	0.10	0.10

### **Keying/Think Times (in seconds)**

#### **Min.**

#### **Average**

#### **Max.**

New-Order	18.01/0.00	18.03/12.07	18.07/120.53
Payment	3.02/0.00	3.03/12.06	3.07/120.54
Order-Status	2.02/0.00	2.03/10.06	2.07/100.53
Delivery (interactive)	2.02/0.00	2.03/5.07	2.07/50.53
Stock-Level	2.02/0.00	2.03/5.06	2.07/50.53

### **Test Duration**

Ramp-up time	53 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	188,462,945
Ramp down time	16 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes