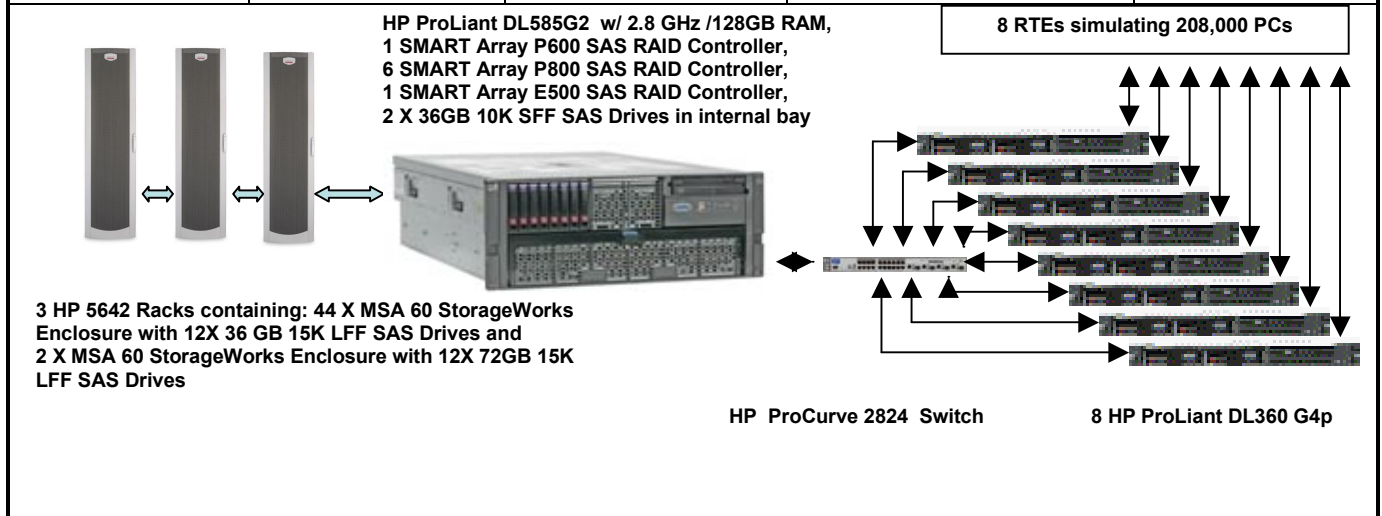


<b>Hewlett-Packard</b>  <b>Company</b>	HP ProLiant DL585 G2 2.8GHz/1MB DC	TPC-C Rev. 5.7
	C/S with 8 HP ProLiant DL360 G4p	Report Date: Sept 26, 2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>USD \$549,416</b>	<b>262,989</b>	<b>USD \$2.09</b>	<b>Mar. 26, 2007</b>

Database Server Processors /Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
4/8/8 AMD 8220SE 2.8 GHz DC	Microsoft SQL Server 2005 Enterprise x64 Edition SP1	Windows Server 2003 Enterprise x64 Edition SP1	Microsoft Visual C++ Microsoft COM+	<b>208,000</b>



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processors/Cores/Threads	4/8/8	AMD 8220SE 2.8 GHz 1MB cache	1/1/2	3.6 GHz Intel Xeon w/ 2MB cache
Memory	128GB	(32x 4GB) GB DDR2	1GB	1024 MB
Disk Controllers	1 6 1	Smart P600 Controller Smart P800 Controller Smart E500 Controller	1	Integrated Smart Array 6i Controller
Disk Drives	24 528 2	72GB 15K LFF SAS Drives (log) 36 GB 15K LFF SAS Drives (data) 36 GB 10K SFF SAS Drives (internal, os)	2	36 GB SCSI Drive
Total Storage		19,536 GB		36 GB

Hewlett-Packard Company	HP ProLiant DL585 G2 Rack		TPC-C Rev. 5.7				
	2.8GHz/1MB DC Client/Server		Report Date	26-Sep-06			
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
<b>Server Hardware</b>							
		<b>Brand Pricing</b>					
HP ProLiant DL585 G2 Rack CTO Chassis/dual port NIC	418633-B21	1	3,663	1	3,663		
AMD Opteron 8220SE 2.8 GHz-1 MB Dual-Core Processor 2P Option Kit	413934-L21	1	5,343	1	5,343		
AMD Opteron Processor 8220SE, 2P Dual-Core (2.8 GHz, 120 Watts) Option Kit	413934-B21	1	5,343	1	5,343		
8GB PC2-5300 2 x 4GB Kit	408854-B21	1*	8,499	16	135,984		
HP Smart Array P800/512MB SAS Controller	381513-B21	1*	1,099	6	6,594		
HP Smart Array E500/256 SAS Controller	435129-B21	1*	600	1	600		
HP SMART Array P600 3G SAS/SATA RAID Controller	337972-B21	1	729	1	729		
HP s7540 17in. CRT Monitor	PF997AA#ABA	1	139	1	139		
HP PS/2 Scroll Mouse carbonite	DG169AV	1	5	1	5		
HP Enhanced Keyboard	DG170AV#ABA	1	10	1	10		
HP 5642 Pallet Unassembled Rack	358254-B21	1	689	3	2,067		
UPS R1500 XR Low Voltage US	204404-001	1	866	1	866		
HP 36GB 15K SAS 3.5 Hot Plug Hard Drive	375868-B21	1	269	528	142,032		
HP 36GB 15K SAS 3.5 Hot Plug Hard Drive (10% Spares)	375868-B21	1	269	53		14,257	
HP 72GB 15K SAS 3.5 Hot Plug Hard Drive	375870-B21	1	399	24	9,576		
HP 72GB 15K SAS 3.5 Hot Plug Hard Drive (10% Spares)	375870-B21	1	399	3		1,197	
HP 36GB 10K SAS 2.5 Hot Plug Hard Drive	375859-B21	1	279	2	558		
HP StorageWorks MSA-60 Storage	418408-B21	1*	3,250	46	149,500		
HP StorageWorks MSA-60 Storage (10% Spares)	418408-B21	1*	3,250	5		16,250	
HP 3y 4h 24x7 ProLiant D58x HW Support ,ProLiant Server DL58x	U4608E	1	1,575	1		1,575	
				<b>Subtotal</b>	<b>463,009</b>	<b>33,279</b>	
<b>Server Software</b>							
Microsoft SQL Server 2005 Enterprise X64 Edition(per processor)	810-03150	Microsoft	2	23,911	4	95,644	Incl Below
Microsoft Visual C++ Standard	254-00170	Microsoft	2	109	1	109	Incl Below
Microsoft Windows 2003 Server, Enterprise Edition X64	P72-00274	Microsoft	2	2,334	1	2,334	Incl Below
Microsoft Problem Resolution Services		Microsoft	2	245	1		245
				<b>Subtotal</b>	<b>98,087</b>	<b>245</b>	
<b>Client Hardware</b>							
HP DL360G4p X3.6GHz/2MB/1GB SCSI US Srvr	376236-001	1	2,699	8	21,592		
Dual Integrated Gigabit NIC, Integrated Smart Array Controller 6i							
36GB 15K U320 Pluggable Hard Drive	286776-B22	1	269	16	4,304		
HP CP 3Y 4H 24x7 HW Entry300 4-Hour 24 Hour x 7 Day Coverage 3 Years	U4497E	1	550	8		4,400	
				<b>Subtotal</b>	<b>25,896</b>	<b>4,400</b>	
<b>Client Software</b>							
Windows Server 2003, Standard Edition	P73-00295	Microsoft	2	719	8	5,752	Incl. Above
				<b>Subtotal</b>	<b>5,752</b>	<b>0</b>	
<b>User Connectivity</b>							
HP ProCurve Switch 2824	J4903A#ABA	1	2499	1	2,499		
HP CP for HP ProCurve Networking products 3 Yr 4 hr/24x7	U2856E	1	1000	1		1,000	
10 foot Cat5E Non Booted Network Patch Cables	UTP-4P5E-10	3	3	18	56		
10 foot Cat5E Non Booted Network Patch Cables (plus 10% spares)	UTP-4P5E-10	3	3	2		6	
				<b>Subtotal</b>	<b>2,555</b>	<b>1,006</b>	
Large Purchase and Net 30 discount (See Note 1)	16.0%	1			<b>(\$78,625)</b>	<b>(\$6,189)</b>	
				<b>Total</b>	<b>\$516,675</b>	<b>\$32,742</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 \$549,416</b>			
				<b>tpmC Rating: 262,989</b>			
				<b>\$ / tpmC: USD \$2.09</b>			
Pricing: 1=HP Direct 800-203-6748 2= Microsoft 3= Lanshack.com							
Note 1 = Discount based on HP Direct guidance applies to all lines where pricing = 1							
* = These components are not immediately orderable. See the FDR for more information.							
Note 2 = The benchmark results were audited by Loma Livingtree of Performance Metrics							

## Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**

**262,989 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.15	0.19	4.51
Payment	0.14	0.16	4.18
Order-Status	0.15	0.18	4.50
Delivery (interactive portion)	0.10	0.11	1.50
Delivery (deferred portion)	0.10	0.13	3.75
Stock-Level	0.15	0.19	4.16
Menu	0.10	0.11	1.50

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

New-Order	44.92%
Payment	43.01%
Order-Status	4.03%
Delivery	4.01%
Stock-Level	4.03%

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

	<b>Resp.Time</b>	<b>Menu</b>
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)**

	<b>Min.</b>	<b>Average</b>	<b>Max.</b>
New-Order	18.02/0.00	18.03/12.06	18.47/120.90
Payment	3.02/0.00	3.03/12.06	3.47/120.53
Order-Status	2.02/0.00	2.03/10.06	2.46/100.53
Delivery (interactive)	2.02/0.00	2.03/5.07	2.46/50.52
Stock-Level	2.02/0.00	2.03/5.07	2.46/50.53

### **Test Duration**

Ramp-up time	40 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	73,080,704
Ramp down time	5 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes