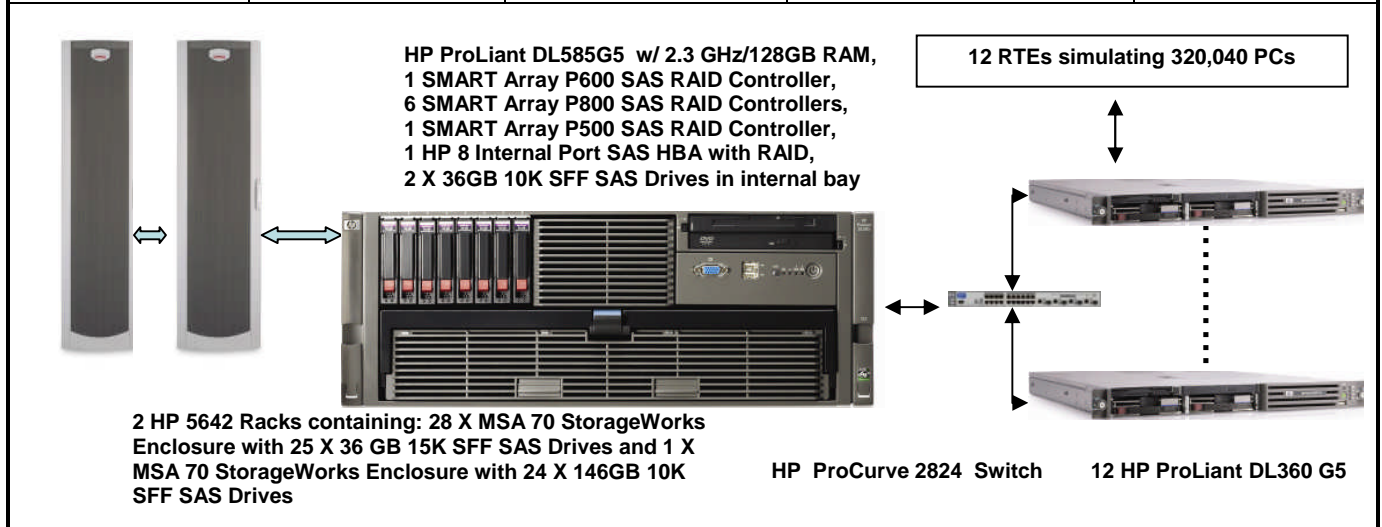


<b>Hewlett-Packard</b>  <b>Company</b>	HP ProLiant DL585 G5 2.3GHz/2MB	TPC-C Rev. 5.9
	C/S with 12 HP ProLiant DL360 G5	Report Date: March 31, 2008

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>USD \$502,836</b>	<b>402,234</b>	<b>USD \$1.26</b>	<b>March 31, 2008</b>

Database Server Processors /Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
4/16/16 AMD 8356 2.3 GHz QC	Microsoft SQL Server 2005 Enterprise x64 Edition SP2	Windows Server 2003 R2 Enterprise x64 Edition	Microsoft Visual C++ Microsoft COM+	<b>320040</b>



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processors/Cores/Threads	4/16/16	AMD 8356 2.3 GHz 2MB cache	1/2/2	2 GHz Intel Xeon w/ 4MB cache
Memory	128GB	(32x 4GB) GB DDR2	1GB	1024 MB
Disk Controllers	1 6 1 1	Smart P600 Controller Smart P800 Controller Smart E500 Controller 8 Internal Port SAS HBA	1	Integrated Smart Array E200i Controller
Disk Drives	24 700 2	146GB 10K SFF SAS Drives (log) 36 GB 15K SFF SAS Drives (data) 36 GB 10K SFF SAS Drives (internal, os)	2	36 GB SCSI Drive
Total Storage		27,555.20 GB		36 GB

Hewlett-Packard Company	HP ProLiant DL585G5			TPC-C Rev. 5.9		
				Report Date	31-Mar-08	
Description	Part Number	Brand	Unit Price	Qty	Extended Price	3 yr. Maint. Price
<b>Server Hardware</b>						
HP ProLiant DL585 G5 Rack 2.3GHz 4P/8GB dual port NIC	448188-001	1	14,929	1	14,929	
8GB PC2-5300 2 x 4GB Kit	408854-B21	1	1,349	16	21,584	
HP Smart Array P800/512MB SAS Controller	381513-B21	1	949	6	5,694	
HP Smart Array E500/256 SAS Controller	435129-B21	1	499	1	499	
HP 8 Internal Port SAS HBA with RAID	347786-B21	1	199	1	199	
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 Keyboard And Mouse Bundle	RC464AA#ABA	1	39	1	39	
HP 5642 Pallet Unassembled Rack	358254-B21	1	865	2	1,730	
HP R1.5 kVA 1U NA UPS	AF419A	1	739	1	739	
HP 36GB 15k 2.5 Single Port HP SAS Drive	431933-B21	1	349	700	244,300	
HP 36GB 15k 2.5 Single Port HP SAS Drive (10% Spares)	431933-B21	1	349	70		24,430
HP 146 GB 3G SAS 10K SFF SP HDD	431958-B21	1	329	24	7,896	
HP 146 GB 3G SAS 10K SFF SP HDD (10% Spares)	431958-B21	1	329	3		987
HP 36GB 10K SAS 2.5 Hot Plug Hard Drive	375859-B21	1	269	2	538	
HP StorageWorks MSA-70 Storage	418800-B21	1	3,199	29	92,771	
HP StorageWorks MSA-70 Storage (10% Spares)	418408-B21	1	3,199	3		9,597
HP 3y 4h 24x7 ProLiant D58x HW Support ,ProLiant Server DL58x	U4608E	1	1,575	1		1,575
<b>Subtotal</b>					<b>391,786</b>	<b>36,589</b>
<b>Server Software</b>						
Microsoft SQL Server 2005 Enterprise X64 Edition(per processor)	810-03134	2	23,432	4	93,728	Incl Below
Visual Studio Standard 2005	127-0012	2	250	1	250	Incl Below
Microsoft Windows 2003 Server R2 Enterprise X64 Edition	P72-01684	2	2,334	1	2,334	Incl Below
Microsoft Problem Resolution Services		2	245	1		245
<b>Subtotal</b>					<b>96,312</b>	<b>245</b>
<b>Client Hardware</b>						
HP DL360G5 5130 1G Entry US Svr	416561-001	1	2,189	12	26,268	
Dual Integrated Gigabit NIC, Integrated Smart Array Controller E200i						
HP 36GB 10K SAS 2.5 Hot Plug Hard Drive	375859-B21	1	269	24	6,456	
HP s7540 17in. CRT Monitor	PF997AA#ABA	1	139	12	1,668	
HP PS/2 Keyboard And Mouse Bundle	RC464AA#ABA	1	39	12	468	
HP CP 3Y 4H 24x7 HW Entry300 4-Hour 24 Hour x 7 Day Coverage 3 Years	U4497E	1	550	12		6,600
<b>Subtotal</b>					<b>34,860</b>	<b>6,600</b>
<b>Client Software</b>						
Windows Server 2003 R2 Standard Edition	P73-01972	2	719	12	8,628	Incl. Above
<b>Subtotal</b>					<b>8,628</b>	<b>0</b>
<b>User Connectivity</b>						
HP ProCurve Switch 2824	J4903A#ABA	1	2,499	1	2,499	
HP CP for HP ProCurve Networking products 3 Yr 4 hr/24x7	U2856E	1	1,000	1		1,000
10 foot Cat5E molded Patch Cables	UTP-4P5E-10-C-GY	3	3	14	44	
10 foot Cat5E molded Patch Cables (10% Spares)	UTP-4P5E-10-C-GY	3	3	2		6
<b>Subtotal</b>					<b>2,543</b>	<b>1,006</b>
Large Purchase and Net 30 discount (See Note 1)	16.0%	1			<b>(\$68,663)</b>	<b>(\$7,070)</b>
<b>Total</b>					<b>\$465,465</b>	<b>\$37,370</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>\$502,836</b>
					<b>tpmC Rating:</b>	<b>402,234</b>
					<b>\$/ tpmC: USD</b>	<b>\$1.26</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						
Note 2 = The benchmark results were audited by Loma Livingtree of Performance Metrics						

## Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**

**402,234 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.28	0.69	5.18
Payment	0.25	0.65	3.43
Order-Status	0.28	0.68	5.17
Delivery (interactive portion)	0.11	0.11	1.98
Delivery (deferred portion)	0.12	0.16	4.97
Stock-Level	0.31	0.77	2.61
Menu	0.11	0.11	1.99

### **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	18.02/0.00	18.03/12.07	18.31/120.53
Payment	3.02/0.00	3.03/12.06	3.31/120.53
Order-Status	2.02/0.00	2.03/10.06	2.28/100.53
Delivery (interactive)	2.02/0.00	2.03/5.07	2.29/50.52
Stock-Level	2.02/0.00	2.03/5.07	2.26/50.53

### **Test Duration**

Ramp-up time	72 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	111,735,237
Ramp down time	5 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes