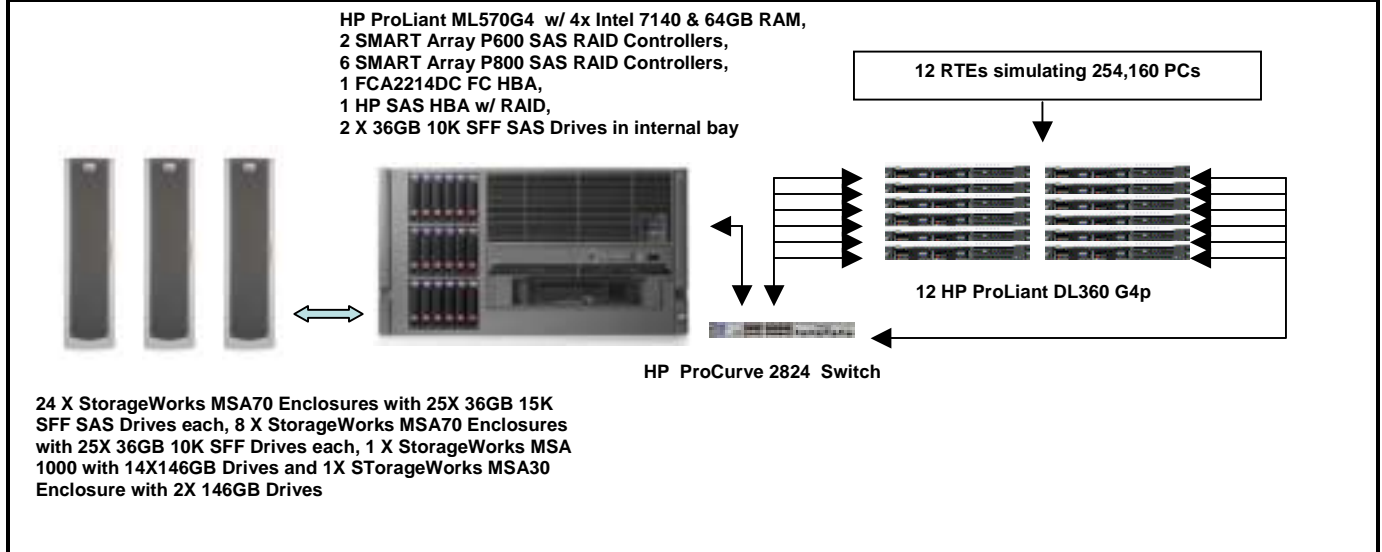


<b>Hewlett-Packard</b>  <b>Company</b>	HP ProLiant ML570 G4 Intel Xeon 7140 3.4GHz/16MB	TPC-C Rev. 5.7
	C/S with 12 HP ProLiant DL360G4p	Report Date: Oct 19, 2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>USD \$596,689</b>	<b>318,407</b>	<b>USD \$1.88</b>	<b>April 19, 2007</b>

Database Server Processors /Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
4/8/16 Intel Xeon 7140 3.4GHz DC	Microsoft SQL Server 2005 Enterprise x64 Edition SP1	Windows Server 2003 Enterprise x64 Edition SP1	Microsoft Visual C++ Microsoft COM+	<b>254,160</b>



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processors/Cores/Threads	4/8/16	Intel Xeon 7140 3.4GHz/16MB	1/1/2	3.6 GHz Intel Xeon w/ 2MB cache
Memory	64GB	(16x 4GB) GB DDR2	1GB	1024 MB
Disk Controllers	2 6 1 1	Smart P600 Controller Smart P800 Controller FCA2214DC FCA HP SAS HBA w/ RAID	1	Integrated Smart Array 6i Controller
Disk Drives	600 202 16	36GB 15K SFF SAS 36 GB 10K SFF SAS 146GB 15K U320	2	36 GB SCSI Drive
Total Storage		29,227 GB		36 GB

Hewlett-Packard Company	HP ProLiant ML570 G4 3.4GHz/16MB DC Client/Server			TPC-C Rev. 5.7		
				Report Date	19-Oct-06	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price
<b>Server Hardware</b>						
<b>Brand Pricing</b>						
HP ML570R04 X7140M 2P US Svr	430808-001	1	11,799	1	11,799	
HP X7140 570/580G4 DC Kit	430816-B21	1	2,799	2	5,598	
HP DL580G4 Memory Expansion Board Kit	410061-B21	1	499	3	1,497	
HP 8GB REG PC2-3200 2X4GB Memory	348106-B21	1	6,299	8	50,392	
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 Smart Array P800/512MB SAS Controller	381513-B21	1*	1,099	6	6,594	
HP Smart Array P600/256MB SAS Controller	337972-B21	1	729	2	1,458	
HP 8 Internal Port SAS HBA with RAID	347786-B21	1	249	1	249	
FCA2214DC dual channel Host Adapter	321835-B21	1	2,250	1	2,250	
HP StorageWorks MSA-70 Storage	418800-B21	1*	3,250	32	104,000	
HP StorageWorks MSA-70 Storage (10% Spares)	418800-B21	1*	3,250	4		13,000
Modular SAN Array 1000 (incl. 2 Gb SFP SW Transceiver Kit)	201723-B22	1	6,995	1	6,995	
HP 3y 4h 24x7 StorWrks MSA 1000 HWSupp	U6357E	1	3,222	1		3,222
Storage Works LC/LC 15m Fibre Cable	221692-B23	1	103	1	103	
Storage Works LC/LC 15m Fibre Cable (10% spares)	221692-B23	1	103	2		206
HP Storageworks MSA 30 SB Storage	302969-B21	1	2,829	1	2,829	
HP 3y 4h 24x7 MSA20/30/50 HW Support HP 3y 4h 24x7 MSA20/30/50 HW	U8130E	1	1,827	1		1,827
146GB 15Krpm U320 UNI HDD	347708-B22	1	599	16	9,584	
36GB 15Krpm SFF SAS HDD	431933-B21	1*	375	600	225,000	
36GB 15Krpm SFF SAS HDD (10% spares)	431933-B21	1*	375	60	22,500	
HP 36GB 10K SAS SFF Hot Plug Hard Drive	375859-B21	1	279	200	55,800	
HP 36GB 10K SAS SFF Hot Plug Hard Drive (10% Spares)	375859-B21	1	279	20	5,580	
HP 36GB 10K SAS 2.5 Hot Plug Hard Drive (O/S)	375859-B21	1	279	2	558	
HP 3y 4h 24x7 ProLiant ML570 HW Support ,ProLiant Server ML570	U4592E	1	1,575	1		1,575
<b>Subtotal</b>					<b>515,873</b>	<b>19,830</b>
<b>Server Software</b>						
Microsoft SQL Server 2005 Enterprise X64 Edition(per processor)	810-03150	Microsoft	23,432	4	93,728	Incl Below
Microsoft Visual C++ Standard	254-00170	Microsoft	109	1	109	Incl Below
Microsoft Windows 2003 Server, Enterprise Edition X64	P72-00274	Microsoft	2,334	1	2,334	Incl Below
Microsoft Problem Resolution Services		Microsoft	245	1		245
<b>Subtotal</b>					<b>96,171</b>	<b>245</b>
<b>Client Hardware</b>						
HP DL360G4p X3.6GHz/2MB/1GB SCSI US Svr	376236-001	1	2,699	12	32,388	
Dual Integrated Gigabit NIC, Integrated Smart Array Controller 6i						
36GB 15K U320 Pluggable Hard Drive	286776-B22	1	269	24	6,456	
HP CP 3Y 4H 24x7 HW Entry300 4-Hour 24 Hour x 7 Day Coverage 3 Years	162675-002	1	599	12		7,188
<b>Subtotal</b>					<b>38,844</b>	<b>7,188</b>
<b>Client Software</b>						
Windows Server 2003, Standard Edition	P73-00295	Microsoft	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	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 (plus 10% spares)	cb1c5ENB10	3	3	16	48	
<b>Subtotal</b>					<b>2,547</b>	<b>1,000</b>
<b>Subtotal</b>					<b>(\$89,155)</b>	<b>(\$4,483)</b>
<b>Total</b>					<b>\$572,908</b>	<b>\$23,780</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 <a href="mailto:pricing@tpc.org">pricing@tpc.org</a> . Thank you.					<b>Three-Year Cost of Ownership: USD \$596,689</b>	
					<b>tpmC Rating: 318,407</b>	
					<b>\$ / tpmC: USD \$1.88</b>	
Pricing: 1=HP Direct 800-203-6748 2= Microsoft 3= LanAdapters.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**

**318,407 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.40	0.63	5.91
Payment	0.35	0.59	5.10
Order-Status	0.38	0.62	5.32
Delivery (interactive portion)	0.11	0.12	2.39
Delivery (deferred portion)	0.17	0.24	5.34
Stock-Level	0.39	0.63	3.02
Menu	0.11	0.12	2.40

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

New-Order	44.95%
Payment	43.01%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.03%

### **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	18.03/12.04	18.34/120.33
Payment	3.02/0.00	3.03/12.04	3.35/120.33
Order-Status	2.02/0.00	2.03/10.03	2.35/100.32
Delivery (interactive)	2.02/0.00	2.03/5.05	2.34/50.33
Stock-Level	2.02/0.00	2.03/5.05	2.34/50.33

### **Test Duration**

Ramp-up time	49 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	88,030,518
Ramp down time	7 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes