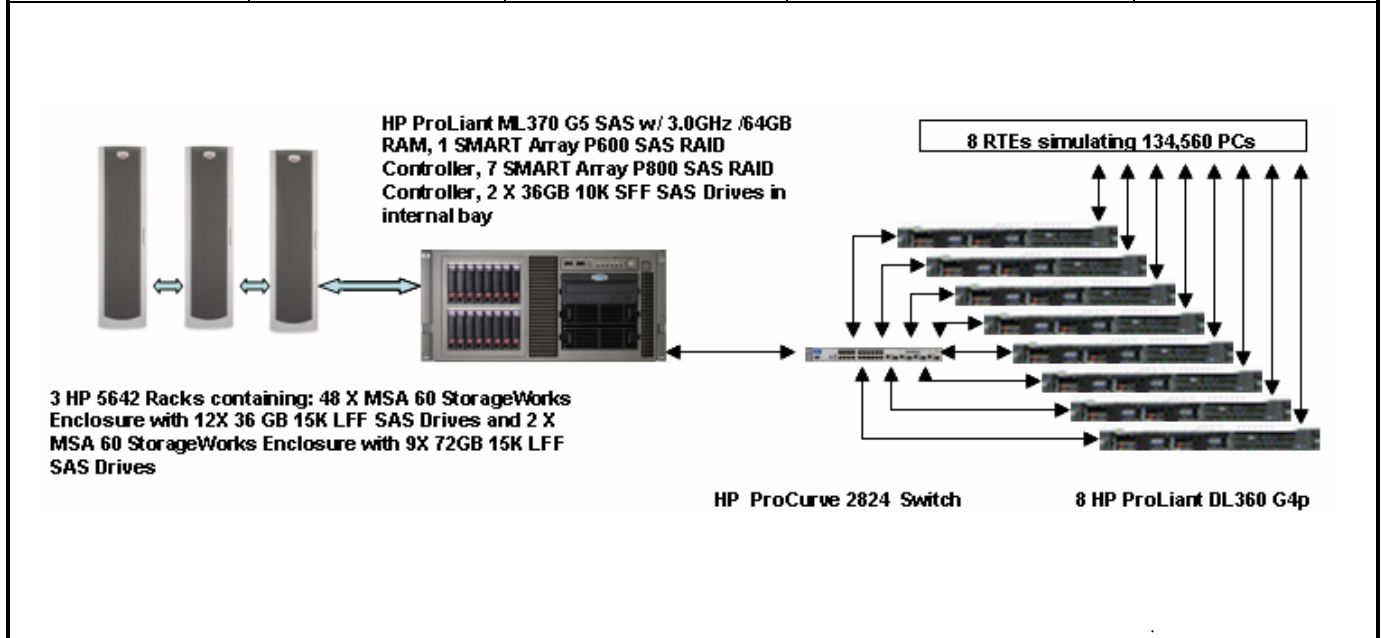


<b>Hewlett-Packard</b>  <b>Company</b>	HP ProLiant ML370 G5 SAS 3.0 GHz/4MB Dual Core	TPC-C Rev. 5.7
	C/S with 8 HP ProLiant DL360 G4p	Report Date: May 22, 2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>USD \$496,122</b>	<b>169,360</b>	<b>USD \$2.93</b>	<b>Nov. 22, 2006</b>

Database Server Processors /Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
2/4/4 Intel 5160 3.0 GHz DC	Microsoft SQL Server 2005 Enterprise x64 Edition SP1	Windows Server 2003 Enterprise x64 Edition SP1	Microsoft Visual C++ Microsoft COM+	<b>134,560</b>



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processors/Cores/Threads	2/4/4	3.0 GHz DC Intel 5160 w/ 4M Cache	2/2/4	3.6 GHz Intel Xeon w/ 2MB cache
Memory	8	8 GB DDR (2 X 4 GB)	1	1024 MB
Disk Controllers	1 7	Smart P600 Controller Smart P800 Controller	1	Integrated Smart Array 6i Controller
Disk Drives	18	72GB 15K LFF SAS Drives (log)	2	36 GB SCSI Drive
Total Storage	576	36 GB 15K LFF SAS Drives (data)		
	2	36 GB 10K SFF SAS Drives (internal, os)		
		22,104 GB		72 GB

Hewlett-Packard	HP ProLiant ML370 G5 SAS			TPC-C Rev. 5.7		
Company	3.0GHz/4MB DC Client/Server			Report Date	22-May-06	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price
<b>Server Hardware</b>						
		<b>Brand Pricing</b>				
HP ML370 G5 Rack SAS MOD-FX Svr	400606-B21	1*	1,450	1	1,450	
HP X5160 ML370G5 Kit (3.0GHz/4MB dual-core processor option kit)	416198-B21	1*	1,349	2	2,698	
8GB FBD PC2-5300 2 x 4GB Kit	397415-B21	1*	10,499	8	83,992	
HP ML370 G5 Mem. Board Kit	403768-B21	1*	249	1	249	
HP Smart Array P800/512MB SAS Controller	381513-B21	1*	1,299	7	9,093	
HP SMART Array P600 3G SAS/SATA RAID Controller	337972-B21	1	799	1	799	
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	299	576	172,224	
HP 36GB 15K SAS 3.5 Hot Plug Hard Drive (10% Spares)	375868-B21	1	299	58		17,342
HP 72GB 15K SAS 3.5 Hot Plug Hard Drive	375870-B21	1	459	18	8,262	
HP 72GB 15K SAS 3.5 Hot Plug Hard Drive (10% Spares)	375870-B21	1	459	2		918
HP 36GB 10K SAS 2.5 Hot Plug Hard Drive	375859-B21	1	299	2	598	
HP StorageWorks MSA-60 Storage	418408-B21	1*	3,250	50	162,500	
HP StorageWorks MSA-60 Storage (10% Spares)	418408-B21	1*	3,250	5		16,250
HP CPe 3Y 4H 24x7 HW ProLiant ML370	U4529E	1	949	1		949
				<b>Subtotal</b>	<b>444,952</b>	<b>35,459</b>
<b>Server Software</b>						
Microsoft SQL Server 2005 Enterprise X64 Edition(per processor)	810-03150	Microsoft	23,911	2	47,822	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>50,265</b>	<b>245</b>
<b>Client Hardware</b>						
HP DL360G4p X3.6GHz/2MB/1GB SCSI US Svr	376236-001	1	2,799	8	22,392	
Dual Integrated Gigabit NIC, Integrated Smart Array Controller 6i						
Intel Xeon 3.6GHz 2MB DL360G4 Processor	376242-B21	1	999	8	7,992	
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	162875-002	1	599	8		4,792
				<b>Subtotal</b>	<b>34,688</b>	<b>4,792</b>
<b>Client Software</b>						
Windows Server 2000, Standard Edition	C11-00821	Microsoft	738	8	5,904	Incl. Above
				<b>Subtotal</b>	<b>5,904</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	cb1c5ENB10	3	3	18	54	
10 foot Cat5E Non Booted Network Patch Cables (plus 10% spares)	cb1c5ENB10	3	3	2		6
				<b>Subtotal</b>	<b>2,553</b>	<b>1,006</b>
Large Purchase and Net 30 discount (See Note 1)	16.0%	1			(\$77,142)	(\$6,600)
				<b>Total</b>	<b>\$461,220</b>	<b>\$34,902</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>\$496,122</b>
				<b>tpmC Rating:</b>		<b>169,360</b>
				<b>\$ / tpmC: USD</b>		<b>\$2.93</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 Lorna Livingtree of Performance Metrics						

## Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**

**169,360 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.28	0.44	4.48
Payment	0.26	0.43	3.87
Order-Status	0.27	0.44	4.45
Delivery (interactive portion)	0.10	0.11	0.16
Delivery (deferred portion)	0.13	0.18	0.80
Stock-Level	0.27	0.43	4.18
Menu	0.10	0.11	0.45

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

New-Order	44.93%
Payment	43.02%
Order-Status	4.03%
Delivery	4.01%
Stock-Level	4.01%

### **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	18.03/12.04	18.19/120.33
Payment	3.02/0.00	3.03/12.04	3.19/120.33
Order-Status	2.02/0.00	2.03/10.04	2.15/100.35
Delivery (interactive)	2.02/0.00	2.03/5.05	2.19/50.33
Stock-Level	2.02/0.00	2.03/5.05	2.17/50.33

### **Test Duration**

Ramp-up time	52 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	46,838,873
Ramp down time	32 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes