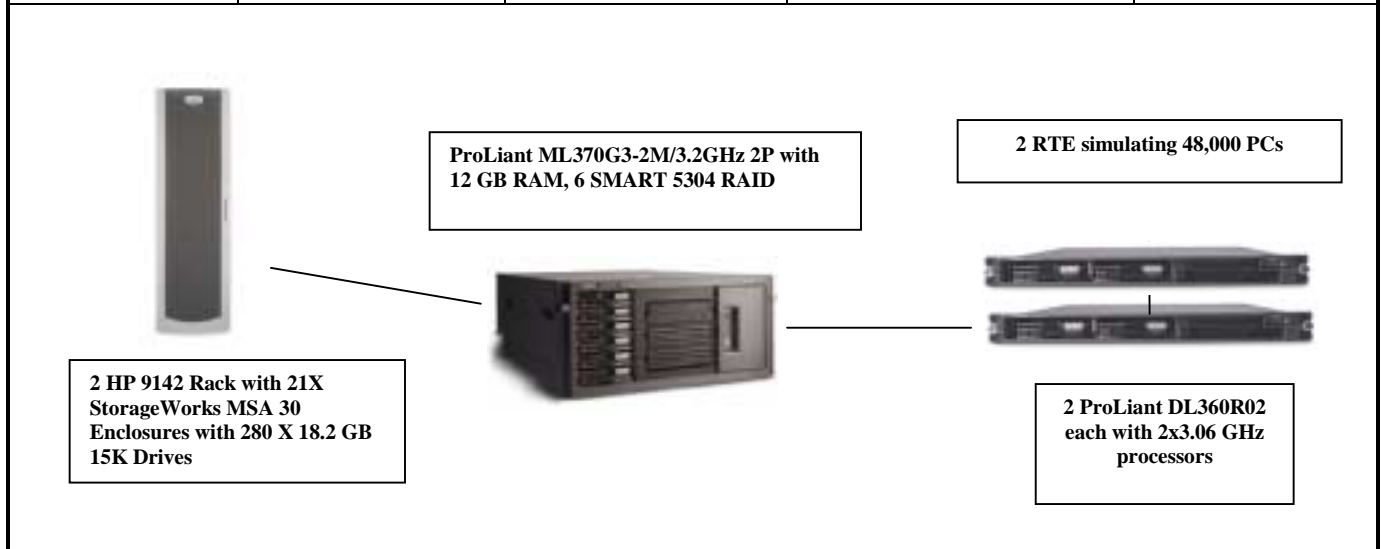


Hewlett Packard	ProLiant ML370-G3-2M/3.2GHz 2P	TPC-C Rev. 5.2
Company	C/S with ProLiant DL360R02	Report Date: Mar 2, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>\$211,519</b>	<b>60,364</b>	<b>\$3.51</b>	<b>Mar 17, 2004</b>

Processors	Database Manager	Operating System	Other Software	Number of Users
2 Intel Xeon 3.20 GHz – 2M L3 cache – Server 4 Pentium III 3.06 GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Microsoft Windows Server 2003, Enterprise Edition	Microsoft Visual C++ Microsoft COM+	<b>48000</b>



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	2	3.20 GHz Intel Xeon w/ 2M Cache	2	3.06 GHz Pentium III Xeon w/ 256K cache
Memory	6	2 GB DDR	1	1 GB (2x 512 MB)
Disk Controllers	1	Integrated Ultra-3 SCSI Controller	1	Integrated SMART Array Controller
	6	SMART 5304 Array Controller		
Disk Drives	1	18 GB SCSI Drive	1	36 GB SCSI Drive
	10	36 GB SCSI Drives		
	280	18.2 GB SCSI Drives		
Total Storage		5088 GB		36 GB
Backup Storage	1	DVD Writer		

Hewlett-Packard		ProLiant ML370-G3-2M/3.2GHz 2P			TPC-C Rev. 5.2		
Company		Client/Server			Report Date:		2-Mar-04
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
		Brand	Pricing				
<b>Server Hardware</b>							
ProLiant ML370G3T 2M 1P 3.2GHz, Integrated Gigabit NIC	352530-xx1	1	3,099	1	3,099		
X3.20GHz-2M /533MHz Processor Option Kit - ML370G3	352568-B21	1	1,499	1	1,499		
4GB PC2100 DDR SDRAM DIMM 2x2048 WW	300682-B21	1	3,499	3	10,497		
2-Bay Hot Plug Wide Ultra2/Ultra3 SCSI Drive Cage	244059-B21	1	370	1	370		
StorageWorks Enclosure Model MSA 30 - Rack-mountable	302969-B21	1	2,978	21	62,538		
Rack Model 9142 (42U - Opal) - Flat Pallet	120663-B21	1	1,321	2	2,642		
Side Panel Kit - 9142 Rack	120670-B21	1	207	1	207		
Smart Array 5304/256 Controller	283551-B21	1	2,247	6	13,482		
HP DVD Writer dvd400i	Q2119A#ABA	1	150	1	150		
UPS T700	136386-001	1	146	1	146		
18.2GB 15Krpm U320 UNI HDD	286775-B22	1	269	280	75,320		
18.2GB 15Krpm U320 UNI HDD (OS)	286775-B23	1	269	1	269		
18.2GB 15Krpm U320 UNI HDD (10% spares)	286775-B22	1	269	28		7,532	
36GB 10K U320 Pluggable Hard Drive WW (log)	286713-B22	1	299	12	3,588		
CarePaq Service - 300 Series Servers 3Yr,7x24,4hr	162657-002	1	949	1		949	
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002	1	157	21		3,297	
<b>Subtotal</b>					<b>173,807</b>	<b>11,778</b>	
<b>Server Software</b>							
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00961	Microsoft	2	17,279	2	34,558	
Visual C++ .Net Standard	254-00170	Microsoft	2	109	1	109	Incl Above
Microsoft Windows 2003, Enterprise Edition	P72-00264	Microsoft	2	2,399	1	2,399	Incl Above
Database Server Support Package	PRO-PRORS-16U-01	Microsoft	2	1,950	3		5,850
<b>Subtotal</b>					<b>37,066</b>	<b>5,850</b>	
<b>Client Hardware</b>							
DL360 G3 X3.06GHz 512KB 512MB 1P RCK US	322470-001	1	2,549	2	5,098		
Two integrated Gigabit NIC, Integrated Smart Array Controller							
1GB 133MHz SDRAM DIMM Memory (2x512MB)	201694-B21	1	600	1	600		
X3.06GHz 533MHz Proc Opt Kit DL360G3 WW	322472-B21	1	699	2	1,398		
S5500 15 carbon / silver monitor	261602-001	1	129	1	129		
Scroll Mouse-Carbon	231947-B21	1	5	1	5		
PS/2 Easy Access Internet Keyboard	265977-001	1	12	1	12		
36GB 10K U320 Pluggable Hard Drive WW (OS)	286713-B22	1	299	2	598		
HP CP 3Y 4H 24x7 HW 300 Srs 4-Hour 24 x 7 Coverage 3 Years	162657-002	1	949	2	1,898	1,898	
<b>Subtotal</b>					<b>9,738</b>	<b>1,898</b>	
<b>Client Software</b>							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	2	1,476	Incl. Above
<b>Subtotal</b>					<b>1,476</b>	<b>0</b>	
<b>User Connectivity</b>							
Netgear GS508T 8 port Copper Gigabit Switch	1058966	Netgear	3	485	3	1,455	
7ft CAT 5e Network Patch Cables	CBLC57	LanAdapters	4	1	6	6	
<b>Subtotal</b>					<b>1,461</b>	<b>0</b>	
Large Purchase and Net 30 discount (See Note 1)	16.0%		1			(\$29,367)	(\$2,188)
<b>Total</b>					<b>\$194,181</b>	<b>\$17,338</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: \$211,519</b>		
					<b>tpmC Rating: 60,364</b>		
					<b>\$ / tpmC: \$3.51</b>		
Pricing: 1=HP 2=Microsoft 3=Compuplus.com 4=LanAdapters.com							
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount.							

## Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**

**60,364 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.34	0.55	7.65
Payment	0.25	0.42	4.47
Order-Status	0.26	0.42	8.29
Delivery (interactive portion)	0.10	0.11	0.14
Delivery (deferred portion)	0.21	0.35	1.44
Stock-Level	1.17	1.57	4.43
Menu	0.10	0.11	0.34

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

New-Order	44.96%
Payment	43.01%
Order-Status	4.01%
Delivery	4.02%
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	18.00/0.00	18.02/12.04	18.20/120.32
Payment	3.00/0.00	3.02/12.02	3.20/120.31
Order-Status	2.00/0.00	2.02/10.01	2.17/100.32
Delivery (interactive)	2.00/0.00	2.02/5.03	2.17/50.31
Stock-Level	2.00/0.00	2.02/5.02	2.15/50.31

### **Test Duration**

Ramp-up time	20 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	16,039,885
Ramp down time	5 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes