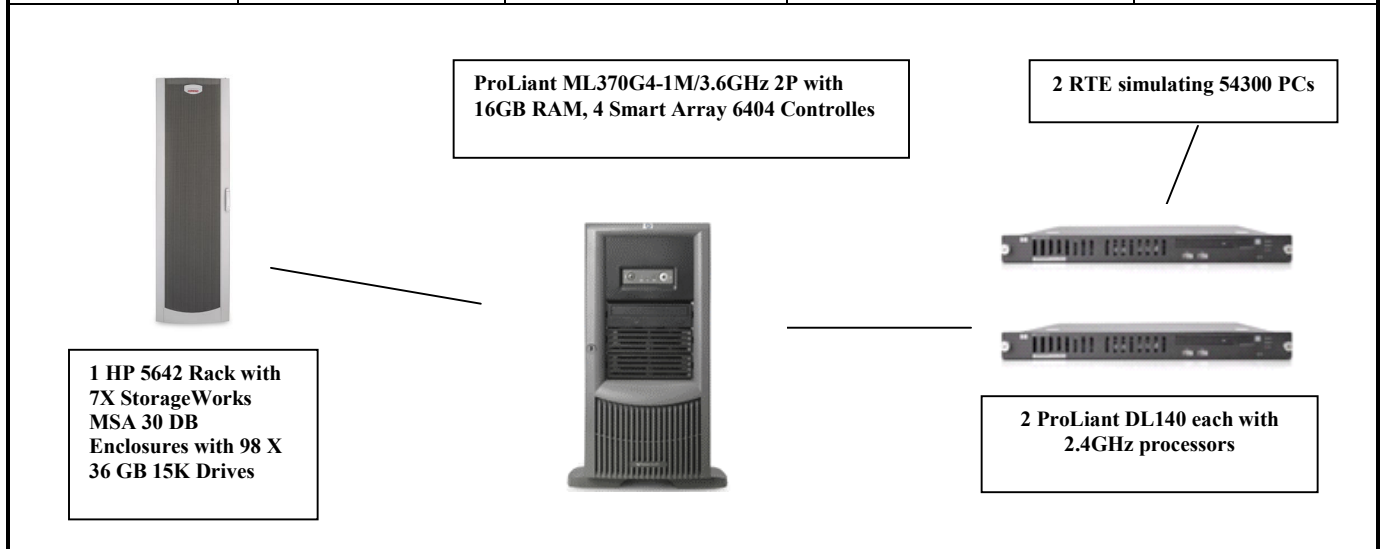


Hewlett Packard	ProLiant ML370-G4-1M/3.6GHz 2P		TPC-C Rev. 5.3
	C/S with ProLiant DL140		Report Date: Nov 1, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$122,218	68,010	\$1.80	Nov 1, 2004

Processors	Database Manager	Operating System	Other Software	Number of Users
2 Intel Xeon 3.6 GHz – 1M L3 cache – Server 2 Intel Xeon 2.4GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Microsoft Windows Server 2003, Enterprise Edition	Microsoft Visual C++ Microsoft COM+	54300



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	2	3.6 GHz Intel Xeon w/ 1M Cache	1	2.4 GHz Intel Xeon w/ 512K cache
Memory	8	2 GB DDR2	1	1 GB (2x 512 MB)
Disk Controllers	1	Integrated Ultra-3 SCSI Controller	1	IDE Controller
	4	Smart Array 6404 Controllers		
Disk Drives	1	36 GB SCSI Drive	1	80 GB ATA Drive
	6	72 GB SCSI Drives		
	98	36 GB SCSI Drives		
Total Storage		3996 GB		80 GB

Hewlett-Packard		ProLiant ML370-G4-1M/3.6GHz 2P			TPC-C Rev. 5.3		
Company		Client/Server			Report Date:		1-Nov-04
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware							
		Brand	Pricing				
ML370T04 X3.6/800-1M US	311135-001	1	3,199	1	3,199		
Intel X3.6GHz 1MB 370/380 G4 Processor	311584-B21	1	1,399	1	1,399		
4GB PC3200 DDR SDRAM (2x2GB)	343057-B21	1	5,099	4	20,396		
HP Storageworks MSA 30 DB Storage	302970-B21	1	3,209	7	22,463		
HP 5642 42U Pallet Rack	358254-B21	1	689	1	689		
HP Smart Array 6404/256MB Controller	273914-B21	1	1,899	4	7,596		
UPS T700	136386-001	1	146	1	146		
36GB 15Krpm U320 UNI HDD	286776-B22	1	299	98	29,302		
HP 36GB 10K U320 Non-Hot Plug Hard Drive (OS)	271832-B21	1	259	1	259		
36GB 15Krpm U320 UNI HDD (10% spares)	286776-B22	1	299	10			2,990
HP 72GB 10K U320 Pluggable Hard Drive	286714-B22	1	389	6	2,334		
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	7			1,099
Subtotal					87,783	5,038	
Server Software							
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00845	Microsoft	2	17,279	2	34,558	
Visual C++ .Net Standard	254-00170	Microsoft	2	109	1	109	Incl below
Microsoft Windows 2003, Enterprise Edition	P72-00264	Microsoft	2	2,399	1	2,399	Incl below
Microsoft Problem Resolution Services (1 incident)		Microsoft	2	245	1		245
Subtotal					37,066	245	
Client Hardware							
HP ProLiant DL140 X2.4/533-512 1P WW	350534-B21	1	1,149	2	2,298		
512MB ECC PC2100 SDRAM Memory Kit WW	351108-B21	1	229	2	458		
S5500 15 carbon / silver monitor	P9006A#ABA	1	129	2	258		
HP PS/2 Scroll Mouse carbonite	DG169AV	1	5	2	10		
HP Enhanced Keyboard	DG170AV#ABA	1	10	2	20		
HP CP 3Y 4H 24x7 HW 300 Srs 4-Hour 24 x 7 Coverage 3 Years	351584-001	1	478	2			956
Subtotal					3,044	956	
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	2	1,476	Incl. Above
Subtotal					1,476	0	
User Connectivity							
DLink DGS-1005D Switch 5-PORT 10/100/1000MBPS	DGS-1005D	Dlink	3	55	3	165	
Subtotal					165	0	
Large Purchase and Net 30 discount (See Note 1)	14.0%		1			(\$12,716)	(\$839)
Total					\$116,818	\$5,400	
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.					Three-Year Cost of Ownership: \$122,218 USD		
					tpmC Rating: 68,010		
					\$/ tpmC: \$1.80 USD		
Pricing: 1=HP 2=Microsoft 3=Provantage.com							
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount.							
Note: The benchmark results and test methodology were audited by Tom Sawyer of Performance Metrics, Inc.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

68,010 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.39	0.57	9.14
Payment	0.28	0.43	8.97
Order-Status	0.32	0.48	9.90
Delivery (interactive portion)	0.11	0.13	0.82
Delivery (deferred portion)	0.33	0.55	1.55
Stock-Level	1.62	2.06	4.58
Menu	0.11	0.13	1.12

Transaction Mix, in percent of total transaction

New-Order	44.95%
Payment	43.02%
Order-Status	4.00%
Delivery	4.01%
Stock-Level	4.02%

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	18.00/0.00	18.01/12.05	18.50/120.49
Payment	3.00/0.00	3.01/12.05	3.50/120.49
Order-Status	2.00/0.00	2.01/10.06	2.50/100.49
Delivery (interactive)	2.00/0.00	2.01/5.05	2.50/50.95
Stock-Level	2.00/0.00	2.01/5.05	2.50/50.50

Test Duration

Ramp-up time	49 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	18,156,206
Ramp down time	5 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes