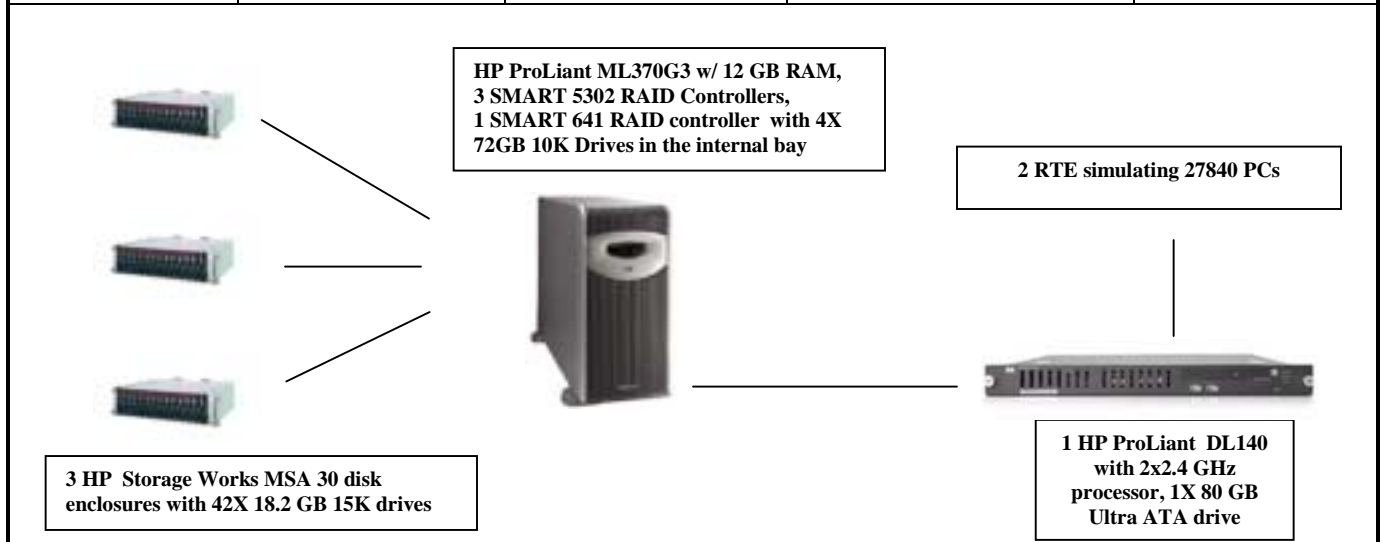


Hewlett Packard	ProLiant ML370-G3-2M/3.2GHz 1P	TPC-C Rev. 5.2
Company	C/S with HP DL140	Report Date: Mar. 2, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$65,528	35,030	\$1.88	March 17, 2004

Processors	Database Manager	Operating System	Other Software	Number of Users
1 Intel Xeon 3.2 GHz – 2M L3 cache – Server 2 Intel Xeon 2.4 GHz – Client	Microsoft SQL Server 2000 Enterprise Edition SP3	Microsoft Windows Server 2003, Enterprise Edition	Microsoft Visual C++ Microsoft COM+	27840



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	1	3.2 GHz Intel Xeon w/ 2M Cache	2	2.4 GHz Intel Xeon w/ 256K cache
Memory	6	2048 MB DDR	1	1 GB (2x 512 MB)
Disk Controllers	1	SMART 641 Array Controller	1	Integrated Dual Channel Ultra ATA-100 IDE Controller
	3	SMART 5302 Array Controller		
Disk Drives	4	72.8 GB SCSI Drives	1	80 GB Ultra ATA Drive
	43	18.2 GB SCSI Drives		
Total Storage		998.1 GB		80 GB
Backup Storage	1	DVD+R/DVD+RW drive		

Hewlett-Packard	ProLiant ML370-G3-2M/3.2GHz 1P		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
Server Hardware		Brand Pricing				
ML370 3.2/533-2M cache 1P 1GB, Integrated Gigabit NIC	352530-xx1	1	3,099	1	3,099	
4GB PC2100 DDR SDRAM DIMM 2x2048 WW (upgrade)	300682-B21	1	3,346	3	10,038	
2-Bay Hot Plug Wide Ultra2/Ultra3 SCSI Drive Cage	244059-B21	1	370	1	370	
15" S5500 CRT Monitor	P9006A#ABA	1	119	1	119	
Scroll Mouse-Carbon	231947-B21	1	5	1	5	
PS/2 Easy Access Internet Keyboard	265977-001	1	12	1	12	
Mini Desktop KVM Switch	3891817	4	30	1		
StorageWorks Enclosure Model MSA 30 - Rack-mountable	302969-B21	1	2,978	3	8,934	
Smart Array 5302/128 Controller WW	283552-B21	1	1,299	3	3,897	
SmartArray641 U320 Intrl.RAID Ctrl. WW	291966-B21	1	499	1	499	
HP DVD Writer dvd420i	Q2133A#ABA	1	180	1	180	
Pro UPS 500 (500VA/300 Watts; 110-127 VAC,60 Hz)	136386-001	1	146	1	146	
18.2GB 15Krpm U320 UNI HDD	286775-B22	1	269	43	11,567	
18.2GB 15Krpm U320 UNI HDD (10% spares)	286775-B22	1	269	5		1,345
72GB 10K U320 Pluggable Hard Drive WW	286714-B22	1	429	4	1,716	
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	3		471
Subtotal					40,582	2,765
Server Software						
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00961	Microsoft	2	17,279	1	17,279
Visual C++ .Net Standard	254-00170	Microsoft	2	109	1	109
Microsoft Windows 2003, Enterprise Edition	P72-00264	Microsoft	2	2,399	1	2,399
Database Server Support Package	PRO-PRORS-16	Microsoft	2	1,950	3	5,850
Subtotal					19,787	5,850
Client Hardware						
DL140 X2.4/533 1GB 2P ALL	350535-B21	1	1,499	1	1,499	
, Two integrated Gigabit NIC, internal 80 GB ATA drive						
NC7770 PCI-X Gigabit Server Adapter WW	244948-B21	1	199	1	199	
HP CPe 3 Years 4 Hours 24 Hour x 7 Day HW DL140	351584-001	1	478	1		478
Subtotal					1,698	478
Client Software						
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	1	738
Subtotal					738	0
User Connectivity						
7ft CAT 5e Network Patch Cables	CBLC57	LanAdapters	3	1	3	3
Subtotal					3	0
Large Purchase and Net 30 discount (See Note 1)	14.0%	1			(\$5,919)	(\$454)
Total					\$56,889	\$8,639
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: \$65,528		
				tpmC Rating: 35,030		
				\$ / tpmC: \$1.88		
Pricing: 1=HP 2=Microsoft 3=LanAdapters.com 4=Fry's						
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 Lorna Livingtree of Performance Metrics, Inc.						

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

35,030 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.32	0.46	14.15
Payment	0.21	0.31	13.95
Order-Status	0..31	0.45	10.31
Delivery (interactive portion)	0.11	0.11	3.60
Delivery (deferred portion)	0.31	0.46	4.69
Stock-Level	1.22	1.96	13.63
Menu	0.11	0.11	3.71

Transaction Mix, in percent of total transaction

New-Order	44.94%
Payment	43.01%
Order-Status	4.01%
Delivery	4.02%
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	18.02/12.11	18.14/120.31
Payment	3.00/0.00	3.02/12.11	3.15/120.31
Order-Status	2.00/0.00	2.02/10.54	2.04/100.31
Delivery (interactive)	2.00/0.00	2.02/5.08	2.13/50.31
Stock-Level	2.00/0.00	2.02/5.09	2.11/50.31

Test Duration

Ramp-up time	20 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	7,944,083
Ramp down time	10 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes