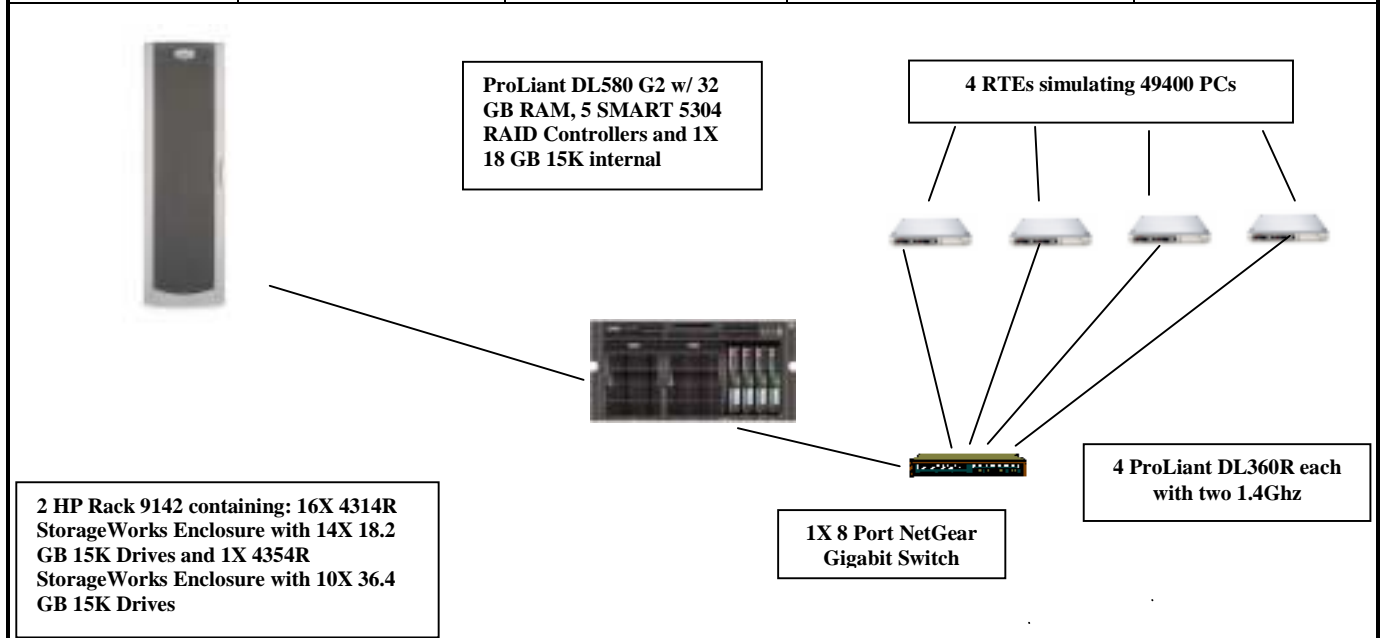


Hewlett-Packard Company	ProLiant DL580 G2 32GB	TPC-C Rev. 5.0
	C/S with 4 ProLiant DL360R	Report Date: Aug 23, 2002

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$376,806	61,564.50	\$6.13	Dec 31, 2002

Processors	Database Manager	Operating System	Other Software	Number of Users
4 Intel Xeon processor MP 1.6 GHz – Server 8 Pentium III 1.4 GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition	Windows .NET Enterprise Server Edition	Microsoft Visual C++ Microsoft COM+	49400



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	4	1.6 GHz Intel Xeon MP w/ 1M Cache	2	1.4GHz Pentium III w/ 256K cache
Memory	16	2 GB DDR (2x1GB)	4	128MB
Disk Controllers	1	HP Integrated 5i Smart Controller	1	Integrated SMART 5i Array Controller
	5	HP SMART 5304 Array Controller		
Disk Drives	225	18.2 GB SCSI Drive	1	18.2 GB SCSI Drive
	10	36.4 GB SCSI Drive		
Total Storage		4459 GB		18.2 GB
Tape Drives	1	12/24 GB DAT		

Hewlett-Packard		ProLiant DL580G2-4P 32GB		TPC-C Rev. 5.0			
Company		Client/Server		Report Date:		23-Aug-02	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware		Brand Pricing					
ProLiant DL580 X1600 2P X2GB	201203-001	1	18,999	1	18,999		
1.6 GHz 1M processor	226776-B21	1	6,199	2	12,398		
8GB (4x2GB) DDR ECC 200MHz Memory	202173-B21	1	25,909	4	103,636		
StorageWorks Enclosure Model 4314R	190209-001	1	2,955	16	47,280		
StorageWorks Enclosure Model 4354	190211-001	1	3,523	1	3,523		
Smart Array 5304/128 Controller	158939-B21	1	2,099	5	10,495		
NC7770 PCI-X Gigabit Server Adapter	244948-B21	1	227	1	227		
S5500 15 carbon / silver monitor	261602-001	1	139	1	139		
HP Mouse	231947-B21	1	5	1	5		
HP Enhanced Keyboard	265977-001	1	12	1	12		
12/24-Gigabyte DAT Drive (Internal)	295513-B22	1	682	1	682		
HP Rack Model 9142 (42U - Opal) - Flat Pallet	120663-B21	1	1,352	2	2,704		
HP Rack Sidewall Kit	120670-B21	1	212	1	212		
UPS R3000 XR	192186-001	1	1,703	1	1,703		
36.4-GB Pluggable 1" Universal WideUltra3 15K HDD + 10% spares	232916-B22	1	832	12	9,984		
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD	188122-B22	1	459	225	103,275		
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD (10% spares)	188122-B22	1	459	22			10,098
FM-MI724-36 3YR 24X7 4HR 500 SERIES SVR	401782-002	1	1,795	1			1,795
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002	1	157	17			2,669
Subtotal					315,274	14,562	
Server Software							
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00846	Microsoft	2	16,541	4	66,164	5,850
Microsoft Visual C++ 6.0	048-00317	Microsoft	2	549	1	549	Incl Above
Microsoft Windows .NET Server Enterprise Edition	N/A	Microsoft	2	2,599	1	2,599	Incl Above
Subtotal					69,312	5,850	
Client Hardware							
ProLiant DL360R01 P1.4GHz 512KB 128MB	233271-001	1	2,229	4	8,916		
Dual Integrated Gigabit NIC, Integrated Smart Array Controller							
1.40GHz PIII Processor Option Kit (DL360 G2)	201099-B21	1	949	4	3,796		
128 MB 133 DIMM	128277-B21	1	122	12	1,464		
S5500 15 carbon / silver monitor	261602-001	1	139	4	556		
HP Mouse	231947-B21	1	5	4	20		
HP Enhanced Keyboard	265977-001	1	12	4	48		
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD	188122-B22	1	459	4	1,836		
FM-EL724-36 3YR 24X7 4HR ENTRY 300 SVR	162675-002	1	750	4			3,000
Subtotal					16,636	3,000	
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	4	2,952	Incl. Above
Subtotal					2,952	0	
User Connectivity							
GS508T 8 port Copper Gigabit Switch	1058966	NetGear	3	665	3	1,994	
Subtotal					1,994	0	
Large Purchase and Net 30 discount (See Note 1)	16.0%		1				
Total					\$355,724	\$21,082	
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: \$376,806		
					tpmC Rating: 61564.50		
					\$ / tpmC: \$6.13		
Pricing: 1=HP Direct 2=Microsoft 3=Ecost.com							
Note 1 = Discount based on HP Direct guidance and large cash purchase level.							
Note: The benchmark results and test methodology were audited by Loma Livingtree of Performance Metrics, Inc.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

61,564.50 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.30	0.53	5.72
Payment	0.23	0.44	5.98
Order-Status	0.24	0.45	4.94
Delivery (interactive portion)	0.10	0.11	0.89
Delivery (deferred portion)	0.15	0.21	0.53
Stock-Level	0.65	0.99	5.64
Menu	0.10	0.11	2.34

Transaction Mix, in percent of total transaction

New-Order	44.95%
Payment	43.01%
Order-Status	4.01%
Delivery	4.02%
Stock-Level	4.01%

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	18.02/12.29	18.04/122.91
Payment	3.00/0.00	3.02/12.28	3.04/122.91
Order-Status	2.00/0.00	2.02/10.23	2.03/102.50
Delivery (interactive)	2.00/0.00	2.02/5.15	2.03/51.50
Stock-Level	2.00/0.00	2.02/5.14	2.03/51.50

Test Duration

Ramp-up time	25 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	16,360,639
Ramp down time	5 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes