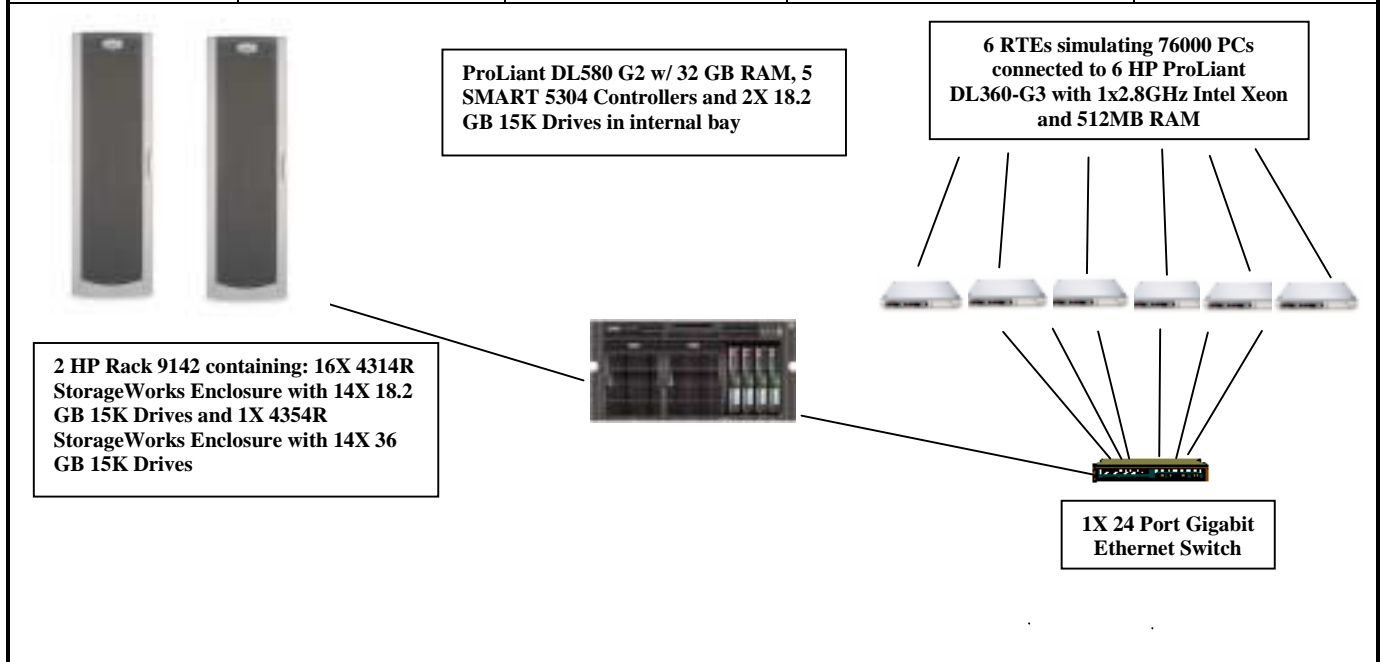


Hewlett-Packard Company	ProLiant DL580-G2/3.0GHz	TPC-C Rev. 5.2
	C/S with 6 ProLiant DL360R	Report Date: March 1, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$278,114	95,163	\$2.93	March 2, 2004

Processors	Database Manager	Operating System	Other Software	Number of Users
4 Intel Xeon MP 3.0 GHz – Server 6 Intel Xeon 2.8GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Windows Server 2003, Enterprise Edition	Microsoft Visual C++ Microsoft COM+	76000



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	4	3.0GHz Intel Xeon MP w/ 4MB Cache	1	2.8GHz Intel Xeon w/ 512K cache
Memory	16	2 GB DDR	2	256MB
Disk Controllers	1	HP Integrated 5i Smart Controller	1	Integrated SMART 5i Array Controller
	5	HP SMART 5304 Array Controller		
Disk Drives	14	36 GB SCSI Drive	1	18.2 GB SCSI Drive
	226	18.2 GB SCSI Drive		
Total Storage		4305.44 GB		18.2 GB
Tape Drives	1	40 GB DAT		

Hewlett-Packard		HP ProLiant DL580 G2/3.0GHz-4P			TPC-C Rev. 5.2		
Company		Client/Server			Report Date:	1-Mar-04	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware		Brand Pricing					
ProLiant DL580 X3000 2P X2GB, Integrated Smart Array Controller	347905-001	1	15,999	1	15,999		
3.0 GHz 4M processor	345323-B21	1	5,899	2	11,798		
8GB (4x2GB) DDR ECC 200MHz Memory	202173-B21	1	7,399	4	29,596		
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 5304/256 Controller	283551-B21	1	2,247	5	11,235		
Compaq S7500 17" Carbon/Silver S7500 NH/MPR GSA LTNA	261606-169	1	145	1	145		
PS/2 scroll mse HP carbonite	DK725AV	1	10	1	10		
HP Enhanced Keyboard	DG170AV#ABA	1	10	1	10		
HP DAT 40 Ext Tape Drive US for ProLiant 40 GB (compressed) DD	Q1554A	1	949	1	949		
Rack 10642 (42U) Shock Pallet WW	245161-B22	1	1,603	2	3,206		
NC7170 DP PCI-X 1000T Gig WW	313881-B21	1	289	1	289		
UPS R1500 XR Low Voltage US	204404-001	1	866	1	866		
18GB 15K U320 Pluggable Hard Drive	286775-B22	1	299	226	67,574		
18GB 15K U320 Pluggable Hard Drive (10% Spares external drives)	286775-B22	1	299	23			6,877
36GB 15K U320 Pluggable Hard Drive	286776-B22	1	429	14	6,006		
36GB 15K U320 Pluggable Hard Drive (2 spares)	286776-B22	1	429	2			858
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					198,486	12,199	
Server Software							
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00846	Microsoft	2	16,541	4	66,164	Incl Below
Microsoft Visual C++ Standard	254-00170	Microsoft	2	109	1	109	Incl Below
Microsoft Windows 2003 Server, Enterprise Edition	P72-00264	Microsoft	2	2,399	1	2,399	Incl Below
Database Server Support Package 1-year term	PRO-PRORS-16U-01	Microsoft	2	1,950	3		5,850
Subtotal					68,672	5,850	
Client Hardware							
DL360 G3 X2.80GHz 512KB 512MB 1P RCK US	292889-001	1	2,299	6	13,794		
Dual Integrated Gigabit NIC, Integrated Smart Array Controller 5i							
18GB 15K U320 Pluggable Hard Drive	286775-B22	1	299	6	1,794		
FM-EL724-36 3YR 24X7 4HR ENTRY 300 SVR	162675-002	1	599	6			3,594
Subtotal					15,588	3,594	
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	6	4,428	Incl. Above
Subtotal					4,428	0	
User Connectivity							
HP Procurve 4104gl switch	J4887A	1	1219	3	3,657		
Hewlett Packard ProCurve switch GL 100/1000-T module	J4863A	1	894	4	3,576		
Subtotal					7,233	0	
Large Purchase and Cash discount (See Note 1)	16.0%	1					
Total					\$258,998	\$19,116	
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: \$278,114		
					tpmC Rating: 95163.61		
					\$ / tpmC: \$2.93		
Pricing: 1=HP Direct 2= Microsoft							
Note 1 = Discount based on HP Direct guidance and large cash purchase level.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

95,163 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.40	0.63	5.84
Payment	0.32	0.55	5.09
Order-Status	0.34	0.56	6.62
Delivery (interactive portion)	0.10	0.11	0.49
Delivery (deferred portion)	0.19	0.27	2.16
Stock-Level	1.06	1.42	12.22
Menu	0.10	0.11	5.26

Transaction Mix, in percent of total transaction

New-Order	44.93%
Payment	43.03%
Order-Status	4.00%
Delivery	4.01%
Stock-Level	4.03%

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	18.02/12.06	18.04/120.61
Payment	3.00/0.00	3.02/12.06	3.05/120.61
Order-Status	2.00/0.00	2.02/10.05	2.04/100.61
Delivery (interactive)	2.00/0.00	2.02/5.07	2.04/50.61
Stock-Level	2.00/0.00	2.02/5.06	2.04/50.61

Test Duration

Ramp-up time	49 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	26,321,155
Ramp down time	42 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes