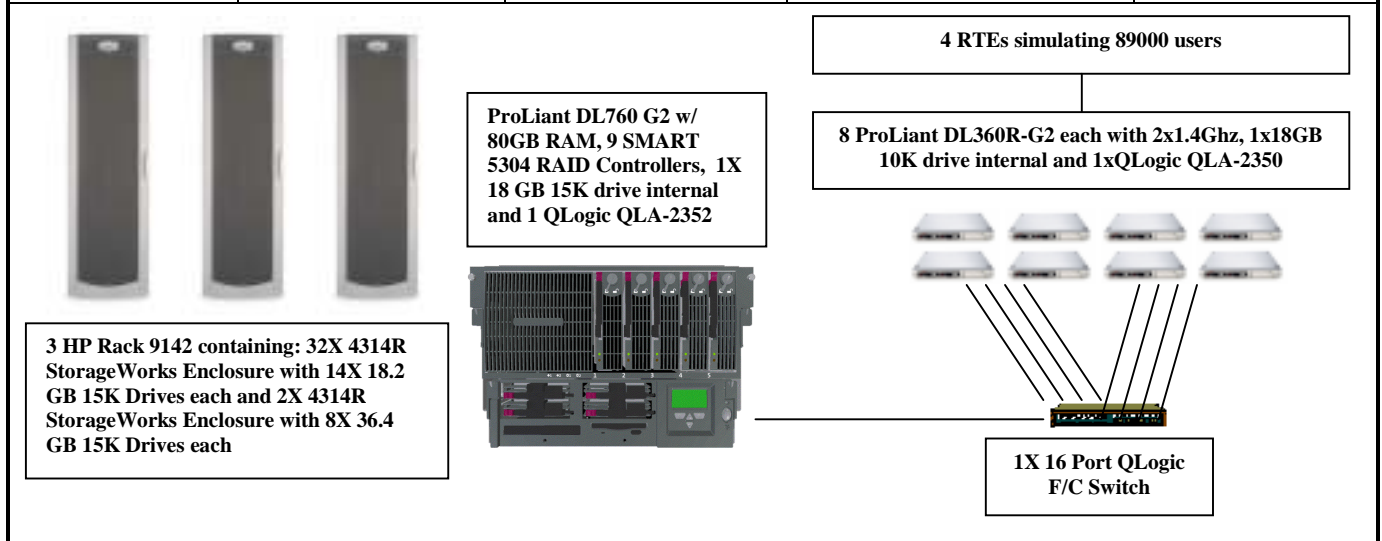


Hewlett Packard Company	HP ProLiant DL760-G2 8P	TPC-C Rev. 5.0
	C/S with 8 ProLiant DL360-G2	Report Date: Nov.4, 2002

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$890,207	111805.22	\$7.97	May 4, 2003

Processors	Database Manager	Operating System	Other Software	Number of Users
8 x Intel Xeon MP Processors – Server 16 x Pentium III 1.4GHz – Client	Microsoft SQL Server 2000 Enterprise Edition (SP3)	Microsoft Windows .NET Datacenter Server	Microsoft Visual C++ Microsoft COM+	89000



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processor	8	2GHz Xeon MP w/ 2MB Cache	2	1.4GHz Pentium III w/ 256K cache
Memory	40	2GB	2	1GB
Disk Controllers	9	SMART 5304/128 Array Controller	1	Integrated SMART 5i Controller
Disk Drives	1	Integrated SMART 5i Controller		
	1	18GB 10K SCSI Drive	1	18GB 10K SCSI Drive
	448	18GB 15K SCSI Drives		
	16	36GB 15K SCSI Drives		
Total Storage		8130.82 GB		18GB
Tape Drives	1	12/24 GB DAT		

Hewlett-Packard Company		HP ProLiant DL760G2-8P Client/Server			TPC-C Rev. 5.0 Report Date: 4-Nov-02		
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware							
		Brand Pricing					
HP ProLiant DL760 X2000 4P X4GB	171206-B21	1	59,500	1	59,500		
4P 2.0 GHz 2M processor option kit	287520-B21	1	30,000	1	30,000		
2GB 133MHz SDRAM option kit	317093-B21	1	5,250	40	210,000		
StorageWorks Enclosure Model 4314R	190209-001	1	2,955	34	100,470		
Smart Array 5304/128 Controller	158939-B21	1	2,099	9	18,891		
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	3	4,056		
HP Rack Sidewall Kit	120670-B21	1	212	1	212		
Baying Kit - 9000 Series racks (36U and 42U)	120669-B21	1	85	2	170		
UPS R1500 XR	204404-001	1	886	1	886		
18.2-GB Pluggable 1" Universal WideUltra3 10K HDD	142673-B22	1	319	1	319		
36.4-GB Pluggable 1" Universal WideUltra3 15K HDD	232916-B22	1	619	16	9,904		
36.4-GB Pluggable 1" Universal WideUltra3 15K HDD (2 spares)	232916-B22	1	619	2		1,238	
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD	188122-B22	1	399	448	178,752		
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD (10% spares)	188122-B22	1	399	45		17,955	
FM-HE724-36 3YR 24X7 4HR 700 SERIES SVR	401784-002	1	3,390	1		3,390	
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002	1	157	34		5,338	
Qlogic QLA-2352 2-channel Fibre-Channel VI Adapter	QLA-2352	3	3,595	3	10,785		
5M LC to LC Cable Kit	221692-B22	1	82	2	164		
2GB Small Form Pluggable Adapter Kit	221470-B21	1	369	2	738		
				Subtotal	625,685	27,921	
Server Software							
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00846	Microsoft	2	16,541	8	132,328	5,850
Microsoft Visual C++ 6.0	048-00317	Microsoft	2	549	1	549	Incl Above
Microsoft Windows .NET Server Datacenter Edition	317517-B21		1	27,899	1	27,899	46,500
				Subtotal	160,776	52,350	
Client Hardware							
HP ProLiant DL360R01 P1.4GHz 512KB 128MB	233271-001	1	2,229	8	17,832		
Dual Integrated Gigabit NIC, Integrated Smart Array Controller							
1.40GHz PIII Processor Option Kit (DL360 G2)	233273-B21	1	734	8	5,872		
2GB 133MHz SDRAM DIMM Memory (2x1GB)	201695-B21	1	1,430	8	11,440		
S5500 15 carbon / silver monitor	261602-001	1	139	8	1,112		
HP Mouse	231947-B21	1	5	8	40		
HP Enhanced Keyboard	265977-001	1	12	8	96		
18.2-GB Pluggable 1" Universal WideUltra3 10K HDD	188122-B22	1	319	8	2,552		
FM-EL724-36 3YR 24X7 4HR 300 SERIES SVR	162657-002	1	1,450	8		11,600	
Qlogic QLA-2350 Fibre-Channel VI Adapter	QLA2350-BK	3	2,095	10	20,950		
5M LC to LC Cable Kit	221692-B22	1	82	8	656		
2GB Small Form Pluggable Adapter Kit	221470-B21	1	369	8	2,952		
				Subtotal	63,502	11,600	
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	8	5,904	Incl. Above
				Subtotal	5,904	0	
User Connectivity							
Qlogic SANBox-2 16-Port Switch	SANBOX 2/16	3	17,995	3	53,985		
				Subtotal	53,985	0	
Large Purchase and Net 30 discount (See Note 1)	16.0%	1			(\$105,192)	(\$6,323)	
				Total	\$804,660	\$85,548	
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: \$890,207			
				tpmC Rating: 111805.22			
				\$/ tpmC: \$7.97			
Pricing: 1=HP Direct 2= Microsoft 3=Qlogic							
Note 1 = Discount based on HP Direct guidance and large cash purchase level.							
Note: The benchmark results and test methodology were audited by Lorna Livingtree of Performance Metrics, Inc.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

111805.22 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.30	0.47	55.70
Payment	0.24	0.41	70.38
Order-Status	0.26	0.42	20.99
Delivery (interactive portion)	0.10	0.11	27.23
Delivery (deferred portion)	0.17	0.22	2.52
Stock-Level	0.59	0.88	27.73
Menu	0.10	0.11	111.44

Transaction Mix, in percent of total transaction

New-Order	44.94%
Payment	43.03%
Order-Status	4.00%
Delivery	4.01%
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	18.02/12.03	18.05/120.32
Payment	3.00/0.00	3.02/12.03	3.05/120.32
Order-Status	2.00/0.00	2.02/10.04	2.04/100.32
Delivery (interactive)	2.00/0.00	2.02/5.03	2.04/50.31
Stock-Level	2.00/0.00	2.02/5.03	2.04/50.31

Test Duration

Ramp-up time	192 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	30,917,890
Ramp down time	18 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes