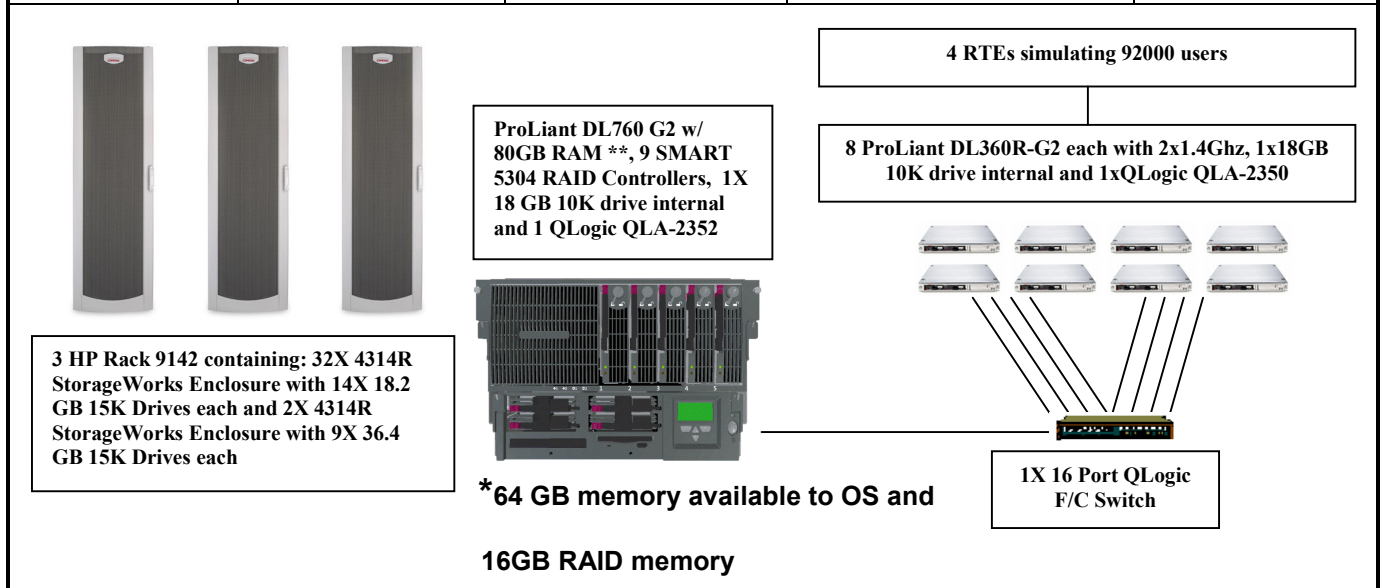


Hewlett-Packard Company	HP ProLiant DL760-G2 8P	TPC-C Rev. 5.0
	C/S with 8 HP ProLiant DL360-G2	Report Date: Dec 6, 2002

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$884,216	115,025.75	\$7.69	March 31, 2003

Processors	Database Manager	Operating System	Other Software	Number of Users
8 Intel Xeon MP 2.0 GHz – Server 16 x Pentium III 1.4GHz – Client	Microsoft SQL Server 2000 Enterprise Edition SP3 QFE	Microsoft Windows .NET Datacenter Server	Microsoft Visual C++ Microsoft COM+	92000



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	8	2GHz Xeon MP w/ 2MB Cache	2	1.4GHz Pentium III w/ 256K cache
Memory	40	2 GB	2	1GB
Disk Controllers	9	SMART 5304/128 Array Controller	1	Integrated SMART 5i Controller
	1	Integrated SMART 5i Controller		
Disk Drives	1	18GB 10K SCSI Drive	1	18GB 10K SCSI Drive
	448	18GB 15K SCSI Drive		
	18	36GB 15K SCSI Drives		
Total Storage		8198.66 GB		18 GB
Tape Drives	1	12/24 GB DAT		

Hewlett-Packard Company		HP ProLiant DL760G2-8P			TPC-C Rev. 5.0		
Description		Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price
		Brand Pricing			Report Date:		2-Dec-02
Server Hardware							
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	
NC7131 Gigabit Server Adapter PCI, 64/66 10/100/1000-T	158575-B21	1		221	1	221	
StorageWorks Enclosure Model 4314R	190209-001	1		2,955	34	100,470	
Smart Array 5304/128 Controller	158939-B21	1		2,052	9	18,468	
S5500 15 carbon / silver monitor	261602-001	1		149	1	149	
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		1,321	3	3,963	
HP Rack Sidewall Kit	120670-B21	1		207	1	207	
Baying Kit - 9000 Series racks (36U and 42U)	120669-B21	1		83	2	166	
UPS R1500 XR	204404-001	1		866	1	866	
18.2-GB Pluggable 1" Universal WideUltra3 10K HDD	142673-B22	1		311	1	311	
36.4-GB Pluggable 1" Universal WideUltra3 15K HDD	232916-B22	1		605	18	10,890	
36.4-GB Pluggable 1" Universal WideUltra3 15K HDD (2 spai	232916-B22	1		605	2		1,210
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD	188122-B22	1		390	448	174,720	
18.2-GB Pluggable 1" Universal WideUltra3 15K HDD (10% s	188122-B22	1		390	45		17,550
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						622,317	27,488
Server Software							
Database Server Support Package	PRO-PRORS-16U-01	Microsoft	2	1,950	3		5,850
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00846	Microsoft	2	16,541	8	132,328	Incl Above
Visual C++ .NET Standard	254-00170	Microsoft	2	109	1	109	Incl Above
Microsoft Windows .NET Server Datacenter Edition	317517-B21		1	27,899	1	27,899	46,500
Subtotal						160,336	52,350
Client Hardware							
HP ProLiant DL360R01 P1.4GHz 512KB 128MB Controller	233271-001	1		1,925	8	15,400	
1.40GHz PIII Processor Option Kit (DL360 G2)	233273-B21	1		717	8	5,736	
2GB 133MHz SDRAM DIMM Memory (2x1GB)	201695-B21	1		1,398	8	11,184	
S5500 15 carbon / silver monitor	261602-001	1		149	8	1,192	
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	142673-B22	1		311	8	2,488	
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						60,694	11,600
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsof	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			(\$104,204)	(\$6,254)
Total						\$799,032	\$85,184
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: \$884,216	
						tpmC Rating: 115025.75	
						\$ / tpmC: \$7.69	
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

115025.75 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.35	0.63	325.98
Payment	0.30	0.58	125.99
Order-Status	0.31	0.59	48.97
Delivery (interactive portion)	0.11	0.11	27.23
Delivery (deferred portion)	0.16	0.21	2.36
Stock-Level	0.66	1.06	49.95
Menu	0.11	0.11	55.89

Transaction Mix, in percent of total transaction

New-Order	44.92%
Payment	43.05%
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	18.02/12.06	18.04/120.62
Payment	3.00/0.00	3.02/12.07	3.04/120.62
Order-Status	2.00/0.00	2.02/10.06	2.04/100.62
Delivery (interactive)	2.00/0.00	2.02/5.07	2.05/50.61
Stock-Level	2.00/0.00	2.02/5.06	2.04/50.61

Test Duration

Ramp-up time	36 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	30,724,787
Ramp down time	30 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes