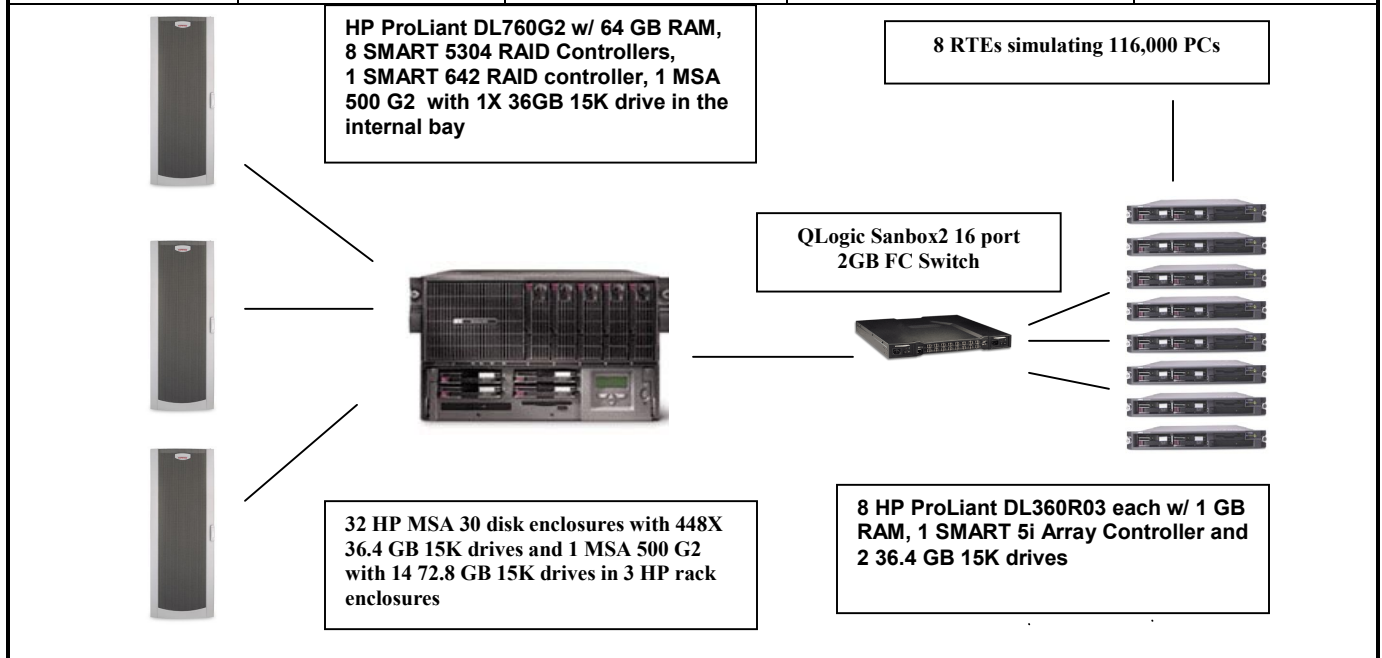


Hewlett Packard Company	HP ProLiant DL760G2 8x3.0GHz 4MB	TPC-C Rev. 5.3
	C/S with ProLiant DL360R03	Report Date: Dec. 10, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$567,702 USD	143,367	\$3.96 USD	May 6, 2005

Processors	Database Manager	Operating System	Other Software	Number of Users
8 Intel Xeon 3.0 GHz – 4M L3 cache – Server 16 Intel Xeon 3.2 GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Microsoft Windows Server 2003, Enterprise Edition SP1	Microsoft Visual C++ Microsoft COM+	116,000



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	8	3.0 GHz Intel Xeon w/ 4M Cache	2	3.2 GHz Intel Xeon w/ 256K cache
Memory	32	2048 MB DDR	1	1 GB (2x 512 MB)
Disk Controllers	1	SMART 642 Array Controller	1	Integrated SMART 5i Array Controller
	8	SMART 5302 Array Controller		
	1	MSA 500 G2		
Disk Drives	14	72.8 GB SCSI Drives	2	36.4 GB SCSI Drive
	449	36.4 GB SCSI Drives		
Total Storage		16,998.8 GB		72.8 GB

Hewlett-Packard		P ProLiant DL760G2 8x3.0GHz 4MB			TPC-C Rev. 5.3		
Company		Client/Server			Report Date:		10-Dec-04
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware							
Brand Pricing							
HP ProLiant DL760 G2 X3 0 4M 4P 4G WWV	348442-B21		1	40,899	1	40,899	
X3 0-4M 740/760 G2 WWV (4 Processor package)	351050-B21		1	28,899	1	28,899	
2GB REG PC133 SGLDMM WWV	317093-B21		1	1,489	32	47,648	
MSA500G2 Starter Kit (incl MSA500G2 + 2 SA-642 HBAs)	335880-B21		1	4,499	1	4,499	
MSA500G2 Redundant controller	335881-B21		1	2,499	1	2,499	
StorageWorks MSA30 Storage Enclosure - Rack-mountable	302969-B21		1	2,978	32	95,296	
Smart Array 5304/258 Controller	283551-B21		1	2,247	8	17,976	
Qlogic QLA-2352 Dual Channel Fibre-Channel VI Adapter	A390976		1	1,950	1	1,950	
17" S7500 CRT Monitor	P9008A#ABA		1	149	1	149	
PS/2 Standard Keyboard	DU734AV#ABA		1	10	1	10	
HP PS/2 scroll mouse carbonite 2-Button	DC261AV		1	5	1	5	
Rack 10842 (42U) Shock Pallet WWV	257415-B22		1	2,180	3	6,540	
Rack Coupling Kit WWV	248929-B21		1	83	2	166	
42U 10K Side Panel kit WWV	246099-B21		1	312	1	312	
UPS R1500 XR Low Voltage US	204404-001		1	866	1	866	
36GB 15K U320 Pluggable Hard Drive	286776-B22		1	299	448	133,952	
36GB 15K U320 Pluggable Hard Drive (10% spares)	286776-B22		1	299	45		13,455
36GB 15K U320 Pluggable Hard Drive (OS)	286776-B22		1	299	1	299	
72GB 15K U320 Pluggable Hard Drive	286778-B22		1	579	14	8,106	
72GB 15K U320 Pluggable Hard Drive (10% spares)	286778-B22		1	579	2		1,158
HP DVD Writer dvd530i	Q6751A		1	100	1	100	
HP CP 3 Years 4 Hours 24 Hour x 7 Days HW 700 Srs	401784-002		1	3,390	1		3,390
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002		1	157	32		5,024
HP CP 3Y 4H 24x7 MSA500	U6456E		1	1,950	1		1,950
Subtotal					390,271	24,977	
Server Software							
Microsoft Problem Resolution Services	PRORS-16U-01	Microsoft	2	245	1		245
- Professional Support (1 incident)							
SQL Server 2000 Enterprise Edition 32-bit	810-00848	Microsoft	2	16,541	8	132,328	Incl Above
Visual C++ .Net Standard	254-00170	Microsoft	2	109	1	109	Incl Above
Windows Server 2003 Enterprise Edition SP1	P72-00264	Microsoft	2	2,399	1	2,399	Incl Above
Subtotal					134,836	245	
Client Hardware							
DL380G3 X3 2GHz/533 1M 1GB 1P Rck US	345101-001		1	2,899	8	23,192	
Intel X3 2GHz/533 1MB DL380 G3 Processor	345103-B21		1	1,099	8	8,792	
36GB 15K U320 Pluggable Hard Drive	286776-B22		1	299	16	4,784	
Qlogic QLA-2350 Fibre-Channel VI Adapter	A390975		1	1,233	8	9,866	
17" S7500 CRT Monitor	P9008A#ABA		1	149	8	1,192	
PS/2 Standard Keyboard	DU734AV#ABA		1	10	8	80	
HP PS/2 scroll mouse carbonite 2-Button	DC261AV		1	5	8	40	
HP CPe 3 Yrs 4 Hrs 24 Hour x 7 Day HW Entry 300 Srs	162675-002		1	599	8		4,792
Subtotal					47,946	4,792	
Client Software							
Windows Server 2003, Standard Edition	P73-00295	Microsoft	2	738	8	5,904	Incl. Above
Subtotal					5,904	0	
User Connectivity							
5M LC to LC Cable Kit	221692-B22		1	82	10	820	
5M LC to LC Cable Kit (10% spares)	221692-B22		1	82	2		164
5m 2gbit Small Form Pluggable Adapter Kit	221470-B21		1	199	10	1,990	
5m 2gbit Small Form Pluggable Adapter Kit (10% spars)	221470-B21		1	199	2		398
QLOGIC SANBOX2 16PT 2GB FC SWCH FR REAR	A222889		1	12,213	1	12,213	
QLOGIC SANBOX2 16PT 2GB FC SWCH FR REAR	A222889		1	12,213	2		24,425
Subtotal					15,023	24,987	
Large Purchase and Net 30 discount (See Note 1)					16.0%		
						(\$72,518)	(\$8,761)
Total						\$521,461	\$46,240
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:		\$567,702 USD
					tpmC Rating:		143,367
					\$ / tpmC:		\$3.96 USD
Pricing: 1=HP 2= Microsoft							
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 Tom Sawyer of Performance Metrics, Inc.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

143,367 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.53	0.92	6.39
Payment	0.49	0.89	2.81
Order-Status	0.48	0.87	9.12
Delivery (interactive portion)	0.12	0.18	1.20
Delivery (deferred portion)	0.15	0.21	1.28
Stock-Level	0.93	1.39	3.14
Menu	0.12	0.19	1.20

Transaction Mix, in percent of total transaction

New-Order	44.86%
Payment	43.06%
Order-Status	4.02%
Delivery	4.03%
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	18.02/12.17	18.07/121.73
Payment	3.00/0.00	3.02/12.17	3.08/121.73
Order-Status	2.00/0.00	2.02/10.14	2.08/101.52
Delivery (interactive)	2.00/0.00	2.02/5.10	2.07/51.01
Stock-Level	2.00/0.00	2.02/5.10	2.07/51.01

Test Duration

Ramp-up time	87 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	39,726,599
Ramp down time	77 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes