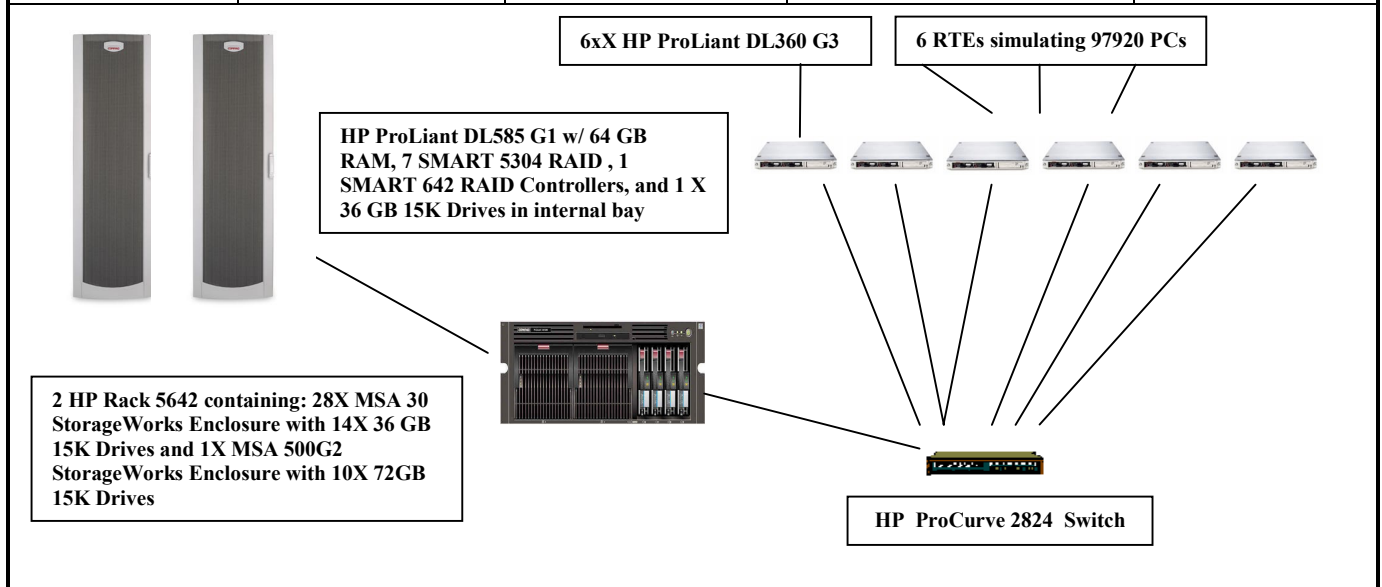


Hewlett-Packard Company	HP ProLiant DL585-G1/2.4GHz	TPC-C Rev. 5.3
	C/S with 6 HP ProLiant DL360R	Report Date: Dec 7, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
USD \$360,470	123,027	USD \$2.94	May 6, 2005

Processors	Database Manager	Operating System	Other Software	Number of Users
4 AMD Opteron 2.4 GHz – Server 6 Intel Xeon 3.06 GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Windows Server 2003, Enterprise Edition SP1	Microsoft Visual C++ Microsoft COM+	97920



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	4	2.4 GHz AMD Opteron w/ 1M Cache	2	3.06 GHz Intel Xeon w/ 512K cache
Memory	16	4 GB DDR (2 X 2 GB)	2	512MB
Disk Controllers	1	Integrated Smart 5i Controller	1	Integrated SMART 5i Controller
	7	SMART 5304 Array Controllers		
	1	SMART 642 Array Controller		
Disk Drives	10	72 GB SCSI Drive	1	36 GB SCSI Drive
	393	36 GB SCSI Drive		
Total Storage		14,001.06 GB		36 GB

Hewlett-Packard Company	HP ProLiant DL585-G1 2.4GHz-4P		TPC-C Rev. 5.3			
	Client/Server		Report Date:	7-Dec-04		
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price
Server Hardware						
		Brand Pricing				
DL585 2.4GHz (2P) 2GB (4 x 512 KB)- Americas	365504-001		12,699	1	12,699	
DL585 Opteron 850 2.4GHz-1MB Processor Option Kit	366725-B21		4,549	2	9,098	
4GB PC2100 DDR SDRAM DIMM 2x2048 WW	300682-B21		2,499	16	39,984	
MSA30 storage enclosure	302969-B21		2,978	28	83,384	
MSA500G2 Starter Kit (includes MSA500G2 + 2 SA-642 HBAs)	335880-B21		4,499	1	4,499	
MSA500G2 Redundant controller	335881-B21		2,499	1	2,499	
Smart Array 5304/256 Controller	283551-B21		2,247	7	15,729	
17" S7500 CRT Monitor	P9008A#ABA		149	1	149	
PS/2 scroll mse HP carbonite	DK725AV		10	1	10	
HP Enhanced Keyboard	DG170AV#ABA		10	1	10	
HP 5642 Unassembled Rack	358254-B21		689	2	1,378	
UPS R1500 XR Low Voltage US	204404-001		866	1	866	
36GB 15K U320 Pluggable Hard Drive	286776-B22		299	393	117,507	
36GB 15K U320 Pluggable Hard Drive (10% Spares external dri	286776-B22		299	40		11,960
72GB 15K U320 Pluggable Hard Drive	286778-B22		529	10	5,290	
72GB 15K U320 Pluggable Hard Drive (2 spares)	286778-B22		529	2		1,058
FM-MI724-36 3YR 24X7 4HR 500 SERIES SVR	401782-002		1,795	1		1,795
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002		157	28		4,396
HP CP 3Y 4H 24x7 MSA500	U6456A/E		1,950	1		1,950
				Subtotal	293,102	21,159
Server Software						
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00846	Microsoft	2	16,541	4	66,164
Microsoft Visual C++ Standard	254-00170	Microsoft	2	109	1	109
Microsoft Windows 2003 Server, Enterprise Edition SP1	P72-00264	Microsoft	2	2,399	1	2,399
Database Server Support Package 1-year term		Microsoft	2	245	1	245
				Subtotal	68,672	245
Client Hardware						
DL360 G3 X3.06GHz 512KB 1024MB 1P RCK US 5i	322471-001		2,499	6	14,994	
X3.06/533-1M DL360G3 ALL	322472-B21		599	6	3,594	
36GB 15K U320 Pluggable Hard Drive	286776-B22		299	6	1,794	
FM-EL724-36 3YR 24X7 4HR ENTRY 300 SVR	162675-002		599	6		3,594
				Subtotal	20,382	3,594
Client Software						
Windows Server 2003, Standard Edition	P73-00295	Microsoft	2	738	6	4,428
				Subtotal	4,428	0
User Connectivity						
HP ProCurve Switch 2824	J4903A#ABA		2499	1	2,499	
HP CP for HP ProCurve Networking products 3 Yr 4 hr/24x7	U2856A		1080	1		1,080
				Subtotal	2,499	1,080
Large Purchase and Cash discount (See Note 1)	16.0%				(\$50,557)	(\$4,133)
				Total	\$338,526	\$21,945
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: USD \$360,470		
				tpmC Rating: 123027		
				\$ / tpmC: USD \$2.94		
Pricing: 1=HP Direct 2= Microsoft						
Note 1 = Discount based on HP Direct guidance and large cash purchase level.						
Note: The benchmark results and test methodology were audited by Tom Sawyer of Performance Metrics, Inc.						

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

123,027 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.25	0.44	5.13
Payment	0.19	0.36	3.97
Order-Status	0.20	0.37	5.07
Delivery (interactive portion)	0.14	0.24	1.66
Delivery (deferred portion)	0.10	0.15	0.50
Stock-Level	0.48	0.72	2.15
Menu	0.14	0.25	1.68

Transaction Mix, in percent of total transaction

New-Order	44.90%
Payment	43.05%
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	18.02/12.09	18.04/120.91
Payment	3.00/0.00	3.02/12.09	3.04/120.91
Order-Status	2.00/0.00	2.02/10.08	2.04/100.81
Delivery (interactive)	2.00/0.00	2.02/5.07	2.04/50.71
Stock-Level	2.00/0.00	2.02/5.07	2.04/50.70

Test Duration

Ramp-up time	21 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	34,196,463
Ramp down time	3 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes