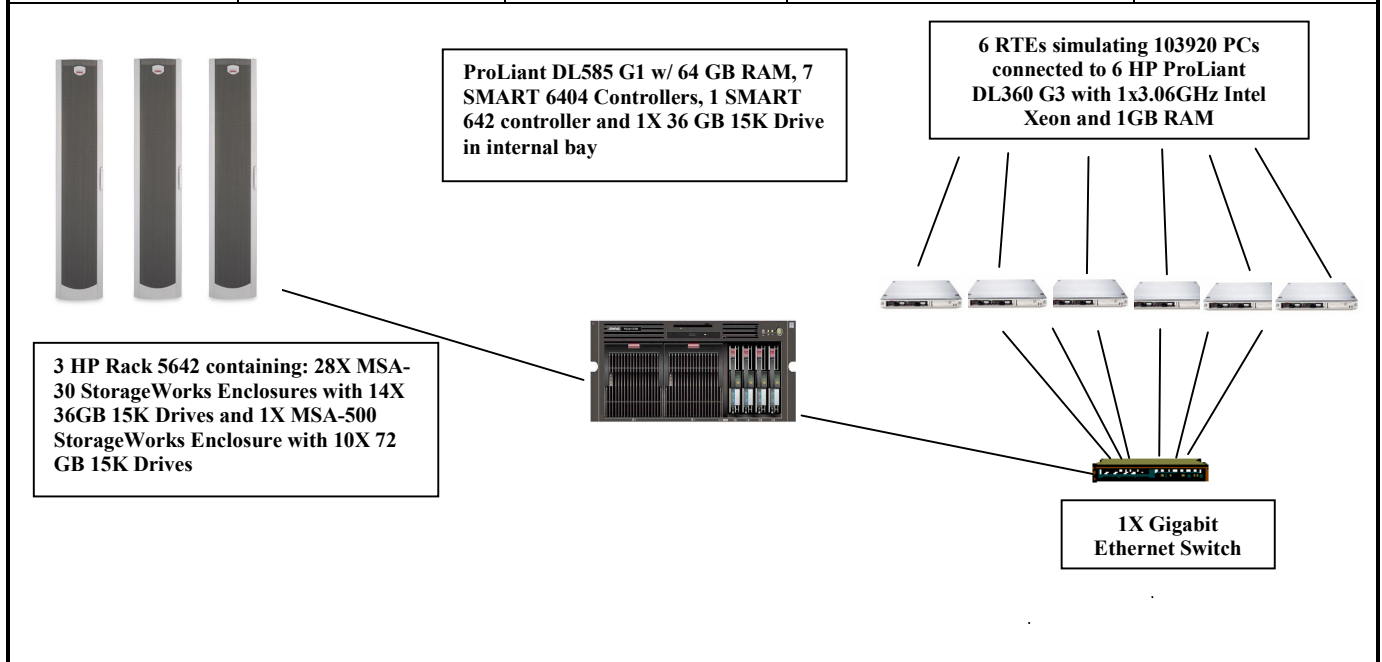


Hewlett-Packard Company	ProLiant DL585-G1/2.6GHz	TPC-C Rev. 5.3
	C/S with 6 ProLiant DL360R G3	Report Date: Feb 14, 2005

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$364,539 USD	130,623	\$2.80 USD	May 6, 2005

Processors	Database Manager	Operating System	Other Software	Number of Users
4 AMD Opteron 2.6 GHz – Server 6 Intel Xeon 3.06GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition with QFE	Windows Server 2003, Enterprise Edition SP1	Microsoft Visual C++ Microsoft COM+	103920



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	4	2.6GHz AMD Opteron w/ 1MB Cache	1	3.06GHz Intel Xeon w/ 1MB cache
Memory	32	2 GB DDR	4	256MB
Disk Controllers	1	HP Integrated 5i Smart Controller	1	Integrated SMART 5i Array Controller
	7	HP SMART 6404 Array Controller		
	1	HP SMART 642 Array Controller		
Disk Drives	10	72GB SCSI Drive	2	36 GB SCSI Drives
	393	36GB SCSI Drive		
Total Storage		13297.27 GB		72 GB

Hewlett-Packard Company		HP ProLiant DL585 2.6GHz/64GB/4P			TPC-C Rev. 5.3			
Description		Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware			Brand Pricing					
ProLiant DL585 O850 2.6GHz (1 MB) x 2 - 2 GB PC2100 DDR, Integrated Smart Array Controller 5i, - Dual Port NC7782 embedded NIC		380124-001	1	12,699	1	12,699		
DL585 2.6GHz/PC2700 8 socket processor option kit		381476-B21	1	3,199	2	6,398		
4GB PC2700 DDR SDRAM DIMM 2x2048 WW		371049-B21	1	2,999	16	47,984		
MSA30 SB storage enclosure		302969-B21	1	2,978	28	83,384		
HP Modular Smart Array 500 G2 Storage - 1 MSA500 G2 controller w/ 256 MB cache, 2 SA642 controllers		335880-B21	1	4,499	1	4,499		
HP Modular Smart Array 500 G2 Controller		335881-B21	1	2,499	1	2,499		
HP T500 Uninterruptible Power System		361475-001	1	99	1	99		
HP Smart Array 6404/256MB Controller		273914-B21	1	1,899	7	13,293		
15" S5500 CRT Monitor		P9006A#ABA	1	129	1	129		
HP PS/2 Scroll Mouse carbonite		DG169AV	1	5	1	5		
HP Enhanced Keyboard		DG170AV#ABA	1	10	1	10		
HP 5642 Unassembled Rack		358254-B21	1	689	3	2,067		
36GB 15K U320 Pluggable Hard Drive		286776-B22	1	299	392	117,208		
36GB 15K U320 Pluggable Hard Drive (10% Spares external drives)		286776-B22	1	299	40		11,960	
36GB 15K U320 Pluggable Hard Drive (OS)		286776-B22	1	299	1	299		
72GB 15K U320 Pluggable Hard Drive		286778-B22	1	529	10	5,290		
72GB 15K U320 Pluggable Hard Drive (2 spares)		286778-B22	1	529	2		1,058	
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	28		4,396	
HP CP 3Y 4H 24x7 MSA500		U6456A/E	1	1,950	1		1,950	
Subtotal						295,863	21,159	
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
Microsoft Professional Support - 1 incident			Microsoft	2	245	1		245
Subtotal						68,672	245	
Client Hardware								
DL360 G3 X3.06GHz 512KB 1GB 1P RCK US - Dual Integrated Gigabit NIC, Integrated Smart Array Controller 5i		322470-001	1	2,349	6	14,094		
15" S5500 CRT Monitor		P9006A#ABA	1	129	6	774		
HP PS/2 Scroll Mouse carbonite		DG169AV	1	5	6	30		
HP Enhanced Keyboard		DG170AV#ABA	1	10	6	60		
36GB 15K U320 Pluggable Hard Drive		286776-B22	1	299	12	3,588		
FM-EL724-36 3YR 24X7 4HR ENTRY 300 SVR		162675-002	1	599	6		3,594	
Subtotal						18,546	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 2824 switch		J4903A	1	2499	3	7,497		
Subtotal						7,497	0	
Large Purchase and Cash discount (See Note 1)		16.0%	1					
Total						\$343,501	\$21,038	
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 364,539			
					tpmC Rating: 130,623			
					\$ / tpmC: USD 2.80			
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

130,623 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.25	0.39	5.74
Payment	0.22	0.35	6.81
Order-Status	0.24	0.36	5.07
Delivery (interactive portion)	0.10	0.11	0.31
Delivery (deferred portion)	0.13	0.18	0.61
Stock-Level	0.56	0.84	4.96
Menu	0.10	0.11	0.45

Transaction Mix, in percent of total transaction

New-Order	44.93%
Payment	43.02%
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	18.01/0.00	18.03/12.11	18.23/121.11
Payment	3.00/0.00	3.01/12.11	3.22/121.11
Order-Status	2.00/0.00	2.01/10.10	2.22/101.00
Delivery (interactive)	2.00/0.00	2.01/5.07	2.22/50.70
Stock-Level	2.00/0.00	2.01/5.07	2.22/50.70

Test Duration

Ramp-up time	46 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	36,129,725
Ramp down time	8 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes