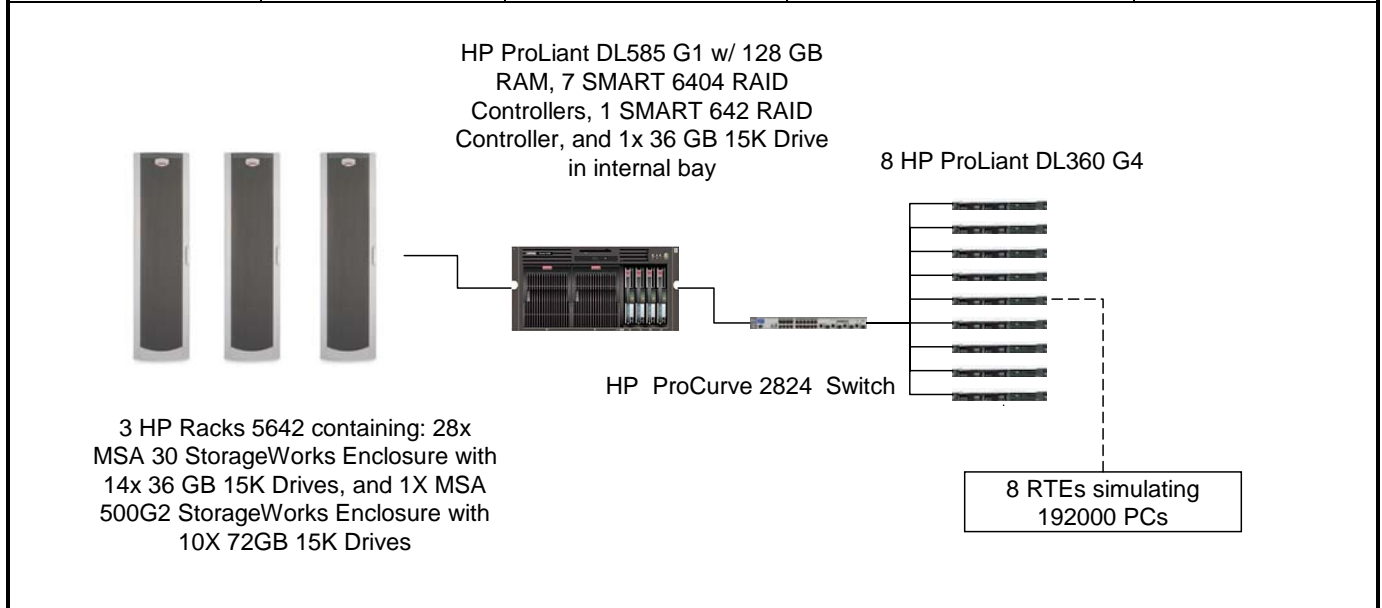


Hewlett Packard	HP ProLiant DL585-G1 2.4GHz DC 4P	TPC-C Rev. 5.5
Company	C/S 8 HP ProLiant DL360 G4	Report Date: Dec 5, 2005

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$476,378 USD	236,054 tpmC	\$2.02 USD/tpmC	December 5, 2005

Database Server Processors /Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
4/8/8 AMD Opteron 2.4DC GHz	IBM DB2 UDB v8.2	Microsoft Windows 2003 Enterprise x64	Microsoft Visual C++ Microsoft COM+	192000



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processors/Cores/Threads	4/8/8	2.4GHz DC AMD Opteron w/ 1M Cache / core	2/2/4	3.6 GHz Intel Xeon w/ 1MB cache
Memory	32	4GB DDR PC2700	2	512MB DDR
Disk Controllers	1	Integrated Smart 5i Controller	1	Integrated SMART 6i Controller
	1	SMART 642 Array Controller		
	7	SMART 6404 Array Controllers		
Disk Drives	393	36 GB SCSI Drives	2	36 GB SCSI Drive
	10	72 GB SCSI Drives		
Total Storage		13984 GB		36 GB

Hewlett-Packard	HP ProLiant DL585 2.4DC			TPC-C Rev. 5.5		
Company	Client/Server			Report Date:	5-Dec-05	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price
Server Hardware						
ProLiant DL585 O880 2.4GHzDC (1 MB) 2P	397841-001		14,129	1	14,129	
- 2 GB PC2700 DDR, Integrated Smart Array Controller 5i,						
- Dual Port NC7782 embedded NIC						
DL585 2.4GHzDC/PC2700 processor option kit	397843-B21		5,199	2	10,398	
8GB PC2700 DDR SDRAM DIMM 2x4096 WW	395409-B21		7,499	16	119,984	
MSA30 SB storage enclosure	302969-B21		2,829	28	79,212	
HP Modular Smart Array 500 G2 Storage	335880-B21		4,499	1	4,499	
- 1 MSA500 G2 controller w/ 256 MB cache, 2 SA642 controllers						
HP Modular Smart Array 500 G2 Controller	335881-B21		2,499	1	2,499	
HP T500 Uninterruptible Power System	361475-001		99	1	99	
HP Smart Array 6404/256MB Controller	273914-B21		1,899	7	13,293	
HP s7540 17in. CRT Monitor	PF997AA#ABA		149	1	149	
HP PS/2 Scroll Mouse carbonite	DG169AV		5	1	5	
HP Enhanced Keyboard	DG170AV#ABA		10	1	10	
HP 5642 Unassembled Rack	358254-B21		689	3	2,067	
36GB 15K U320 Pluggable Hard Drive	286776-B22		299	392	117,208	
36GB 15K U320 Pluggable Hard Drive (OS)	286776-B22		299	1	299	
72GB 15K U320 Pluggable Hard Drive (Log)	286778-B22		479	10	4,790	
HP 3y 4h 24x7 ProLiant DL585 HW Support	U4608E		1,575	1		1,575
MSA30 SB storage enclosure (10% spare)	302969-B21		2,829	3		8,487
36GB 15K U320 Pluggable Hard Drive (10% spare)	286776-B22		299	40		11,960
HP CP 3Y 4H 24x7 MSA500	U6456A/E		1,950	1		1,950
				Subtotal	368,641	23,972
Server Software						
DB2 UDB ESE 8.2 for Windows Operating Systems on 64-Bit		IBM	22,608	4	90,432	
DB2 SW Maintenance Renewal - 1 Year		IBM	1,077	8	8,616	
Microsoft Visual C++ Professional 6.0	254-00170	Microsoft	109	1	109	
Microsoft Windows 2003 Server, x64 Enterprise Edition	P72-00264	Microsoft	3,999	1	3,999	Incl Below
Microsoft Professional Support - 1 incident		Microsoft	245	1		245
				Subtotal	103,156	245
Client Hardware						
DL360 G4 X3.6GHz 1GB 1P RCK US	360528-001		2,799	8	22,392	
- Dual Integrated Gigabit NIC, Integrated Smart Array Controller 6i						
Intel Xeon 3.6GHz 1MB DL360G4 Processor	354583-B21		999	8	7,992	
HP s7540 17in. CRT Monitor	PF997AA#ABA		149	8	1,192	
HP PS/2 Scroll Mouse carbonite	DG169AV		5	8	40	
HP Enhanced Keyboard	DG170AV#ABA		10	8	80	
36GB 15K U320 Pluggable Hard Drive	286776-B22		299	16	4,784	
HP 3y 4h 24x7 ProLiant DL360 HW Suppor	U4497E		550	8		4,400
				Subtotal	36,480	4,400
Client Software						
Microsoft Windows 2000 Server	C11-00821	Microsoft	738	8	5,904	Incl. Above
				Subtotal	5,904	0
User Connectivity						
HP Procurve 2824 switch	J4903A		2499	1	2,499	
HP 3y 4h 24x7 Procurve 2824 HW Support	U2856E		1000	1		1,000
				Subtotal	2,499	1,000
Large Purchase and Cash discount (See Note 1)	16.0%				(\$65,219)	(\$4,700)
				Total	\$451,461	\$24,917
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 476,378		
				tpmC Rating: 236,054		
				\$/ tpmC: USD 2.02		
Pricing: 1=HP Direct 2= IBM 3=Microsoft						
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount. Applies to all lines with 1 in pricing column.						
Note: The benchmark results and test methodology were audited by Lorna Livingtree of Performance Metrics, Inc.						

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

236,054 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.79	1.41	3.50
Payment	0.76	1.39	2.79
Order-Status	0.78	1.40	2.76
Delivery (interactive portion)	0.17	0.39	1.20
Delivery (deferred portion)	0.18	0.23	2.11
Stock-Level	0.78	1.41	2.69
Menu	0.17	0.39	1.20

Transaction Mix, in percent of total transaction

New-Order	44.92%
Payment	43.02%
Order-Status	4.02%
Delivery	4.02%
Stock-Level	4.02%

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	18.01/12.01	18.03/120.10
Payment	3.01/0.00	3.01/12.01	3.04/120.09
Order-Status	2.01/0.00	2.01/10.01	2.04/100.05
Delivery (interactive)	2.01/0.00	2.01/5.02	2.03/50.20
Stock-Level	2.01/0.00	2.01/5.01	2.03/50.09

Test Duration

Ramp-up time	63 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	63,066,834
Ramp down time	71 minutes

Checkpointing

Number of checkpoints	N/A
Checkpoint interval	N/A