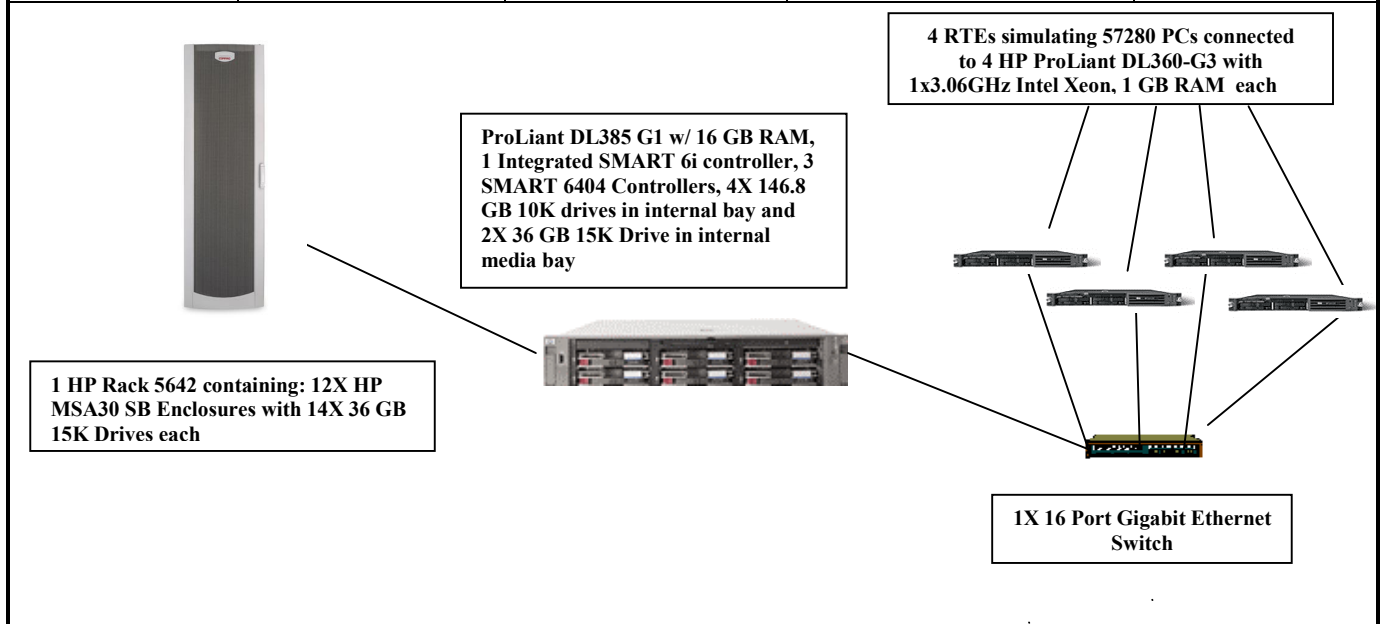


Hewlett-Packard Company	HP ProLiant DL385 G1 16GB/2.6GHz/2P	TPC-C Rev. 5.3
	C/S with 4 HP ProLiant DL360R	Report Date: Feb. 14, 2005

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$153,494 USD	71,413	\$2.15 USD	March 31, 2005

Processors	Database Manager	Operating System	Other Software	Number of Users
2 Opteron 252 2.6 GHz (1MB) Server 4 Intel Xeon 3.06 GHz – Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Windows Server 2003, Enterprise Edition	Microsoft Visual C++ Microsoft COM+	57280



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	2	Opteron 252 2.6GHz w/ 1MB Cache	1	3.06 GHz Intel Xeon w/ 512K cache
Memory	8	2 GB DDR	2	512MB
Disk Controllers	1	Integrated SMART 6i Controller	1	Integrated SMART 5i Array Controller
	3	HP SMART 6404 Array Controllers		
Disk Drives	4	146.8 GB SCSI Drive	2	36.4 GB SCSI Drive
	170	36.4 GB SCSI Drive		
Total Storage		6279.36 GB		36.4 GB

Hewlett-Packard		HP ProliantDL385G1 2.6GHz/1M			TPC-C Rev. 5.3		
Company		Client/Server			Report Date:	14-Feb-05	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware							
Brand Pricing							
DL385G1 Opteron 252 2.6GHz/1M US 6i controller and 2 Gb NICs	379912-001	1	3,299	1	3,299		
AMD Opteron 252 2.6 GHz-1MB Processor Option Kit	376190-B21	1	1,249	1	1,249		
4GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB)	379300-B21	1	2,419	4	9,676		
HP Storageworks MSA 30 SB Storage	302969-B21	1	2,978	12	35,736		
HP 5642 Unassembled Rack	358254-B21	1	689	1	689		
HP Smart Array 6404/256MB Controller	273914-B21	1	1,899	3	5,697		
HP T500 Uninterruptible Power System	361475-001	1	99	1	99		
36GB 15Krpm U320 UNI HDD	286776-B22	1	299	170	50,830		
HP 146GB 10K U320 Pluggable Hard Drive	286716-B22	1	599	4	2,396		
36GB 15Krpm U320 UNI HDD (10% spares)	286776-B22	1	299	17		5,083	
CarePaq Service - 300 Series Servers 3Yr,7x24,4hr	162657-002	1	949	1		949	
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002	1	157	12		1,884	
Subtotal					109,671	7,916	
Server Software							
Microsoft SQL Server 2000 Enterprise Edition(per processor)	810-00845	Microsoft	2	17,279	2	34,558	
Visual C++ .Net Standard	254-00170	Microsoft	2	109	1	109	Incl below
Microsoft Windows Server 2003, Enterprise Edition	P72-00264	Microsoft	2	2,399	1	2,399	Incl below
Microsoft Problem Resolution Services (1 incident)		Microsoft	2	245	1		245
Subtotal					37,066	245	
Client Hardware							
HP Proliant DL360G3 1P 3.06GHz/533 (512KB L2, 1MB L3)	322471-001	1	2,599	4	10,396		
- 1024 MB memory, embedded SMART 5i array controller							
- embedded dual channel Gigabit NIC							
36GB 15Krpm U320 UNI HDD	286776-B22	1	299	8	2,392		
HP s7540 17in. CRT Monitor	PF997AA#ABA	1	129	4	516		
HP PS/2 Scroll Mouse carbonite	DG169AV	1	5	4	20		
HP Enhanced Keyboard	DG170AV#ABA	1	10	4	40		
HP CP 3Y 4H 24x7 HW Support DL360 4-Hour 24 x 7 Coverage 3 Yrs	U4497E	1	550	4		2,200	
Subtotal					13,364	2,200	
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	4	2,952	Incl. Above
Subtotal					2,952	0	
User Connectivity							
Netgear 16-port 10/100/1000BTX Gigabit Switch	44508	Netgear	3	361	1	361	
Netgear 16-port 10/100/1000BTX Gigabit Switch (10% spares)	44508	Netgear	3	361	2		723
3 year extended warranty from PC Universe		PCUniverse	3	100	3		300
Subtotal					361	1,023	
Large Purchase and Net 30 discount (See Note 1)	16.0%		1			(\$19,686)	(\$1,619)
Total					\$143,729	\$9,765	
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: \$153,494 USD		
					tpmC Rating: 71,413		
					\$ / tpmC: \$2.15 USD		
Pricing: 1=HP 2=Microsoft 3=PCUniverse.com							
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

71,413 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.47	0.75	5.29
Payment	0.40	0.68	4.45
Order-Status	0.42	0.69	4.58
Delivery (interactive portion)	0.10	0.11	0.46
Delivery (deferred portion)	0.17	0.25	1.03
Stock-Level	1.28	1.68	4.85
Menu	0.10	0.11	0.47

Transaction Mix, in percent of total transaction

New-Order	44.90%
Payment	43.05%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.04%

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	18.02/12.05	18.12/120.60
Payment	3.00/0.00	3.02/12.06	3.13/120.60
Order-Status	2.00/0.00	2.02/10.07	2.12/100.60
Delivery (interactive)	2.00/0.00	2.02/5.07	2.03/50.61
Stock-Level	2.00/0.00	2.02/5.06	2.11/50.60

Test Duration

Ramp-up time	30 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	19,851,950
Ramp down time	20 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes