


Hewlett-Packard Company	HP ProLiant BL25p - 2P	TPC-C Rev. 5.4
	C/S with 4 HP ProLiant BL35p	Report Date: Sept. 30, 2005

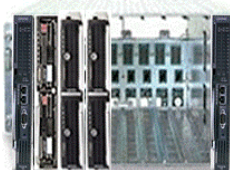
Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$313,003 USD	107,010	\$2.93 USD	Nov. 8, 2005

Processors	Database Manager	Operating System	Other Software	Number of Users
2 AMD Opteron 2.4 GHz/1 MB Dual Core - Server 4 AMD Opteron 2.4 GHz – Clients	Microsoft SQL Server 2005 Enterprise Edition	Windows Server 2003, Enterprise Edition SP1	Microsoft Visual C++ Microsoft COM+	86760



3 HP Rack 5642 containing: 7X HP MSA1000 Enclosures with 14X 36 GB 15K Drives each, 1X HP MSA1000 Enclosure with 12X 72 GB 10K Drives, and 14X HP MSA30 SB Enclosures with 14X 36 GB 15K Drives each

**1X HP BLp Enhanced Enclosure containing:
1X HP ProLiant BL25p
4X HP ProLiant BL35p
1X HP BLp-Class C-GbE2 Interconnect Switch**



6 RTEs simulating 86760 PCs connected to 4 HP ProLiant BL35p with 2x2.4GHz AMD Opteron, 2 GB RAM each

	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	2	AMD Opteron 2.4 GHz w/ 1MB Cache (Dual Core)	2	2.4 GHz AMD Opteron w/ 1MB cache
Memory	8	4 GB DDR	4	512 MB
Disk Controllers	1	Integrated SMART 6i Array Controller	1	Integrated IDE Controller
	1	QLogic Fibre Channel Host Adapter (Dual Port)		
Disk Drives	12	72.8 GB SCSI Drive	2	60 GB IDE Drive
	296	36.4 GB SCSI Drive		
Total Storage		11648 GB		120 GB

Hewlett-Packard		HP ProLiant BL25p 2.4GHz Dual Core			TPC-C Rev. 5.4		
Company		Client/Server			Report Date:		30-Sep-05
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware		Brand	Pricing				
HP ProLiant BL25p 2.4GHz-1M DC 2G 2P - 2 embedded single port NC7781 Gigabit NICs - embedded dual port NC7782 Gigabit NIC - embedded Smart 6i array controller	399598-B21		1	5,399	1	5,399	
HP 8GB REG PC2700 (2x4GB)	395409-B21		1	7,499	4	29,996	
HP Storageworks MSA 30 SB Storage	302969-B21		1	2,829	14	39,606	
Modular SAN Array 1000	201723-B22		1	6,995	8	55,960	
MSA SAN Switch 2/8	288247-B21		1	4,149	2	8,298	
HP 5642 Unassembled Rack	358254-B21		1	689	3	2,067	
HP BL25/45p Dual Port Fiber Channel Adapter	381881-B21		1	599	1	599	
UPS R1500 XR Low Voltage US	204404-001		1	866	1	866	
HP BLp Enhanced Enclosure w/8 RDP Licenses	281404-B22		1	2,039	1	2,039	
HP BLp-Class C-GbE2 Interconnect Switch	283192-B21		1	4,399	1	4,399	
HP BLp 1U Pwr Encl w/6 Pwr Sply Kit	378284-B21		1	2,299	1	2,299	
36GB 15Krpm U320 UNI HDD (OS, data)	286776-B22		1	299	296	88,504	
HP 72GB 15K U320 Pluggable Hard Drive (log)	286778-B22		1	569	12	6,828	
Blade Server Care Pack 3yr 4hr 24x7	UD188E		1	295	1		295
Blade Enclosure Care Pack 3yr 4hr 24x7	HC032E		1	737	1		737
MSA1000 Care Pack 3yr 4hr 24x7	U6357E		1	3,222	8		25,776
MSA30 Care Pack 3yr 4hr 24x7	U8130E		1	1,827	14		25,578
Storage Works LC/LC 15m Fibre Cable	221692-B23		1	103	8	824	
Storage Works LC/LC 15m Fibre Cable (10% spares)	221692-B23		1	103	2		206
HP CAT5 KVM USB 1 Pack Interface Adapter	336047-B21		1	99	1	99	
HP s7540 17in. CRT Monitor	PF997AA#ABA		1	149	1	149	
HP PS/2 Scroll Mouse carbonite	DG169AV		1	5	1	5	
HP Enhanced Keyboard	DG170AV#ABA		1	10	1	10	
					Subtotal	247,947	52,592
Server Software							
Microsoft SQL Server 2005 Enterprise (x86) Edition (per processor)	810-00845	Microsoft	2	19,909	2	39,818	
Visual C++ .Net Standard	254-00170	Microsoft	2	109	1	109	Incl below
Microsoft Windows 2003, Enterprise Edition	P72-00264	Microsoft	2	2,334	1	2,334	Incl below
Microsoft Problem Resolution Services (1 incident)		Microsoft	2	245	1		245
					Subtotal	42,261	245
Client Hardware							
HP BL35p O2.4GHz 1M 2P Blade - 2 GB PC3200 DDR SDRAM, 2 embedded NC7781 Gigabit NIC	374212-B21		1	3,499	4	13,996	
HP BL35p Blade Sleeve Server	354101-B21		1	199	2	398	
HP BL35p 60GB ATA Hard Drive	354052-B21		1	299	8	2,392	
Blade Server Care Pack 3yr 4hr 24x7	UD188E		1	295	4		1,180
					Subtotal	16,786	1,180
Client Software							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	4	2,952	Incl. Above
					Subtotal	2,952	0
Large Purchase and Net 30 discount (See Note 1)	16.0%		1			(\$42,357)	(\$8,604)
					Total	\$267,589	\$45,413
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: \$313,003 USD		
					tpmC Rating: 107,010		
					\$/ tpmC: \$2.93 USD		
Pricing: 1=HP 2=Microsoft							
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount. Discount applied to all items sold by HP, which are indicated with a 1 in the 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

107,010 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.70	1.19	23.44
Payment	0.66	1.15	22.38
Order-Status	0.68	1.17	21.04
Delivery (interactive portion)	0.10	0.11	2.40
Delivery (deferred portion)	0.13	0.16	7.92
Stock-Level	0.68	1.16	30.98
Menu	0.10	0.11	2.41

Transaction Mix, in percent of total transaction

New-Order	44.91%
Payment	43.06%
Order-Status	4.00%
Delivery	4.00%
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	18.02/0.00	18.03/12.07	18.17/120.63
Payment	3.02/0.00	3.03/12.07	3.17/120.63
Order-Status	2.02/0.00	2.03/10.08	2.17/100.63
Delivery (interactive)	2.02/0.00	2.03/5.08	2.17/50.63
Stock-Level	2.02/0.00	2.03/5.08	2.17/50.63

Test Duration

Ramp-up time	91 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	29,609,461
Ramp down time	7 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes