

Hewlett-Packard Company	HP ProLiant BL25p - 2P	TPC-C Rev. 5.4
	C/S with 4 HP ProLiant BL35p	Report Date: June 24, 2005

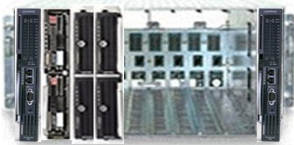
Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$206,252 USD	65,453	\$3.16 USD	June 24, 2005

Processors	Database Manager	Operating System	Other Software	Number of Users
2 AMD Opteron 2.6 GHz - Server 8 AMD Opteron 2.4 GHz - Clients	Microsoft SQL Server 2000 Enterprise Edition SP3	Windows Server 2003, Enterprise Edition SP1	Microsoft Visual C++ Microsoft COM+	52400



2 HP Rack 5642 containing: 4X HP MSA1000 Enclosures with 14X 36 GB 15K Drives each, 1X HP MSA1000 Enclosure with 4X 146 GB 10K Drives, and 8X 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



4 RTEs simulating 52400 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 2.6 GHz w/ 1MB Cache	2	2.4 GHz AMD Opteron w/ 1MB cache
Memory	8	2 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	4	146.8 GB SCSI Drive	2	60 GB IDE Drive
	170	36.4 GB SCSI Drive		
Total Storage		6775.2 GB		120 GB

Hewlett-Packard		HP Proliant BL25p 2.6GHz/1M			TPC-C Rev. 5.4		
Company		Client/Server			Report Date:	24-Jun-05	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware		Brand Pricing					
HP BL25p O2.6GHz 1GB 1P Blade	374798-B21	1	3,099	1	3,099		
AMD(R) O252 2.6GHz E-0 BL25p Processor	381588-B21	1	999	1	999		
HP 4GB Reg PC3200 2x2GB Memory	379300-B21	1	2,369	4	9,476		
HP Storageworks MSA 30 SB Storage	302969-B21	1	2,829	8	22,632		
Modular SAN Array 1000	201723-B22	1	6,995	5	34,975		
MSA SAN Switch 2/8	288247-B21	1	4,149	2	8,298		
HP 5642 Unassembled Rack	358254-B21	1	689	2	1,378		
HP BL25/45p 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	286776-B22	1	299	170	50,830		
HP 146GB 10K U320 Pluggable Hard Drive	286716-B22	1	499	4	1,996		
Blade Carepaq 3yr 4hr 24x7	UA205E	1	424	1			424
MSA1000 Carepaq 3yr 4hr 24x7	402164-002	1	3,538	5			17,690
MSA30 Carepaq 3yr 4hr 24x7	U8130E	1	1,827	8			14,616
Storage Works LC/LC 15m Fibre Cable	221692-B23	1	103	5	515		
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		
USB Optical Mouse cbt/slvr USB 2-Button Optical Scroll Mouse	PT951AV	1	5	1	5		
Standard Keyboard USB	DX752AV#ABA	1	12	1	12		
Subtotal					144,665	32,936	
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 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					37,001	245	
Client Hardware							
HP BL35p O2.4GHz 1M 2P Blade	374212-B21	1	3,899	4	15,596		
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 Carepaq 3yr 4hr 24x7	UA205E	1	424	4			1,696
Subtotal					18,386	1,696	
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				
					(\$26,088)	(\$5,541)	
Total					\$176,916	\$29,336	
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: \$206,252 USD		
Pricing: 1=HP 2= Microsoft					tpmC Rating: 65,453		
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount.					\$ / tpmC: \$3.16 USD		
Note: The benchmark results and test methodology were audited by Tom Sawyer of Performance Metrics, Inc.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

65,453 tpmC

Response Times (in seconds)	Average	90 %	Maximum
New-Order	0.43	0.68	21.67
Payment	0.36	0.61	22.03
Order-Status	0.36	0.61	20.34
Delivery (interactive portion)	0.10	0.11	2.85
Delivery (deferred portion)	0.17	0.24	4.42
Stock-Level	1.23	1.64	21.53
Menu	0.10	0.11	0.94

Transaction Mix, in percent of total transaction

New-Order	44.90%
Payment	43.05%
Order-Status	4.03%
Delivery	4.01%
Stock-Level	4.01%

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	18.02/12.06	18.14/120.62
Payment	3.00/0.00	3.02/12.07	3.14/120.62
Order-Status	2.00/0.00	2.02/10.07	2.13/100.61
Delivery (interactive)	2.00/0.00	2.02/5.07	2.13/50.61
Stock-Level	2.00/0.00	2.02/5.06	2.13/50.61

Test Duration

Ramp-up time	80 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	18,116,160
Ramp down time	10 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes