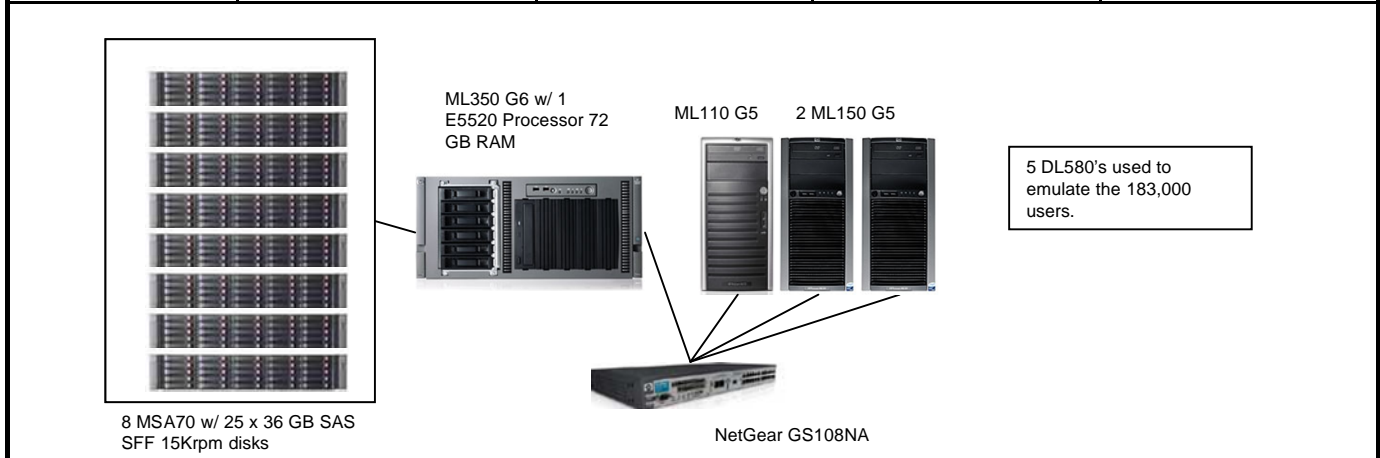


	HP ProLiant ML350 G6 2.27 GHz 8 MB L2 C/S with 2 ProLiant ML150 G5 and 1 ProLiant ML110 G5		TPC-C Version 5.10.1 Report Date May 21, 2009
	Total System Cost	TPC-C Throughput	Price/Performance

\$123,681 USD	232,002 tpmC	\$0.54 USD/tpmC	May 21, 2009
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Processors	Database Manager	Operating System	Other Software	Number of Users
1/4/8 Intel Xeon E5520 2.27 GHz 8MB L2 cache	Oracle Database 11g Standard Edition One	Oracle Enterprise Linux	Microsoft COM+	183,000



	ML350G6 (Server)		ML150G5 (Clients)	ML110G5 (Client)		
System Components	Quantity	Description	Quantity Per Server	Description	Quantity	Description
Processor/Core/Thread	1/4/8	Intel® Xeon® E5520 (2.27 GHz 8MB L2 Cache)	1/4/4	Intel® Xeon® E5405 (2.00 GHz, 12M L2 Cache)	1/2/2	Intel® Xeon® 3075 (2.66 GHz, 4M L2 Cache)
Memory	9	8GB 2Rx4 PC3-8500R	2	1GB PC2-5300 DIMMs (DDR2-667)	2	1GB PC2-6400 ECC (DDR2-800)
Disk Controllers	4	HP P411/512MB BBWC Smart Array Controllers	1	HP SAS SC40Ge 4-Port SATA/SAS HBA Controller	1	HP Embedded 6 Port SATA Controller
Disk Drives	6	300GB 10K SFF SAS drives (Log)	1	146GB 15K LFF SAS drive	1	160GB 7.2K LFF SATA drive
	200	36GB 15K SFF SAS drives (Data)				
	1	36GB 15 SFF SAS drives (OS)				
Total Storage	12636 GB					

Hewlett-Packard Company		HP ProLiant ML350G6		TPC-C Rev. 5.10.1		
				Report Date	21-May-09	
Description	Part Number	Pricing	Unit Price	Qty	Extended Price	3 yr. Maint. Price
Server Hardware						
HP ProLiant ML350G6 SFF SAS/SATA Tower CTO Chassis	483447-B21	1	712	1	712	
HP E5520 ML350 G6 FIO Kit	495914-L21	1	599	1	599	
HP 8GB 2Rx4 PC3-8500R-7 Kit	516423-B21	1	990	9	8,910	
HP Half-Height SATA DVD-ROM Optical Drive	447326-B21	1	69	1	69	
HP Smart Array P411/512 MB BBWC controller	462832-B21	1	649	4	2,596	
HP w17e 17-inch Widescreen LCD Monitor	GV537AA#ABA	1	169	1	169	
HP 5642 Pallet Unassembled Rack	358254-B21	1	865	1	865	
T1000 UPS	AF403A	1	395	1	395	
HP 300GB 10K rpm Hot Plug SAS 2.5 Dual Port Hard Drive	492620-B21	1	599	6	3,594	
36GB 15Krpm SFF SAS HDD	431933-B21	1	349	1	349	
36GB 15Krpm SFF SAS HDD	431933-B21	1	349	200	69,800	
36GB 15Krpm SFF SAS HDD	431933-B21	1	349	20		6,980
HP StorageWorks MSA-70 Storage	418800-B21	1	3,199	8	25,592	
HP StorageWorks MSA-70 Storage (10% or minimum of 2 spares)	418800-B21	1	3,199	2		6,398
HP 3y 4h 24x7 ProLiant ML350 HW Support	U4513E	1	543	1		543
Subtotal					113,650	13,921
Server Software						
Oracle Enterprise Linux		6	0	1	0	
Oracle Unbreakable Linux Support: Enterprise Linux Basic Limited for 3 years		2	1,497	1		1,497
Oracle Database 11g Standard Edition One, Unlimited Users , 3 years		2	2,900	1	2,900	
Oracle Premium Support for 3 years		2	1,276	3		3,828
Subtotal					2,900	5,325
Client Hardware						
HP S-BUY ML110 G5 3075 160GB SATA US Svr	455946-005	1	749	1	749	
HP 1GB UnBuffered PC2-6400 1x1GB DDR2 Memory Kit	450259-B21	1	19	1	19	
HP NC110T PCI-E Gigabit Server Adapter	434905-B21	1	79	1	79	
HP S-Buy 3y 4h24x7 ProLiant ML11x HWSupp,Proliant ML110,3 years of hardware support	UE896E	1	275	1		275
HP ProLiant ML150 G5 E5405 2.0GHz Quad Core Hot Plug SATA/SAS Tower Server	450163-001	1	1,099	2	2,198	
HP 146GB 15K rpm Hot Plug SAS 3.5 Single Port Hard Drive	375872-B21	1	359	2	718	
HP NC110T PCI-E Gigabit Server Adapter	434905-B21	1	79	2	158	
HP 3y 4h 24x7 ProLiant ML150 HW Support ,Proliant Server ML150,3 years of hardware.	U8193E	1	500	2		1,000
Subtotal					3,921	1,275
Client Software						
Microsoft Problem Resolution Services	N/A	3	245	1		245
Windows Server 2003 R2 Standard x64 Edition	P73-01675	3	999	3	2,997	Incl.
Visual Studio Standard 2005	127-00012	3	250	1	250	
Subtotal					3,247	245
User Connectivity						
Netgear 8-Port Gigabit Switch	GS108NA	5	77	3	232	
4 port KVM switch	NW0099	5	66	3	198	
3Ft Cat.5E Non-Boot Patch Cable Gray	GC-100402GY	4	2	6	10	
Subtotal					439	0
Subtotal					116,590	15,201
Large Purchase and Net 30 discount (See Note 1)	16.0%	1			(\$18,811)	(\$2,431)
Total					\$105,346	\$18,335
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						\$123,681
tpmC Rating:						232,002
\$/ tpmC: USD						\$0.54
Pricing: 1=HP Direct 800-203-6748 2=Oracle 3= Microsoft 4= http://store.graycables.com 5= www.serversdirect.com						
Note 1 = Discount based on HP Direct guidance applies to all lines where pricing = 1						
Note 6=Oracle Enterprise Linux is a free download						
The benchmark results were audited by Lorna Livingtree of Performance Metrics						

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

232,002 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.157	0.203	7.297
Payment	0.125	0.156	7.324
Order-Status	0.173	0.240	2.007
Delivery (interactive portion)	0.102	0.101	1.135
Delivery (deferred portion)	0.040	0.092	1.361
Stock-Level	0.678	0.953	2.604
Menu	0.103	0.101	1.167

Transaction Mix, in percent of total transaction

New-Order	44.950
Payment	43.02%
Order-Status	4.01%
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	18.01/0.00	18.01/12.03	18.10/120.30
Payment	3.01/0.00	3.01/12.01	3.11/120.08
Order-Status	2.01/0.00	2.01/10.01	2.09/99.94
Delivery (interactive)	2.01/0.00	2.01/5.02	2.07/50.15
Stock-Level	2.01/0.00	2.01/5.01	2.07/50.08

Test Duration

Ramp-up time	1:13:51
Measurement interval	2:00:00
Transactions (all types) completed during measurement interval	61,935,928
Ramp down time	3:01:29

Checkpointing

Number of checkpoints	4
Checkpoint interval (average)	27:23