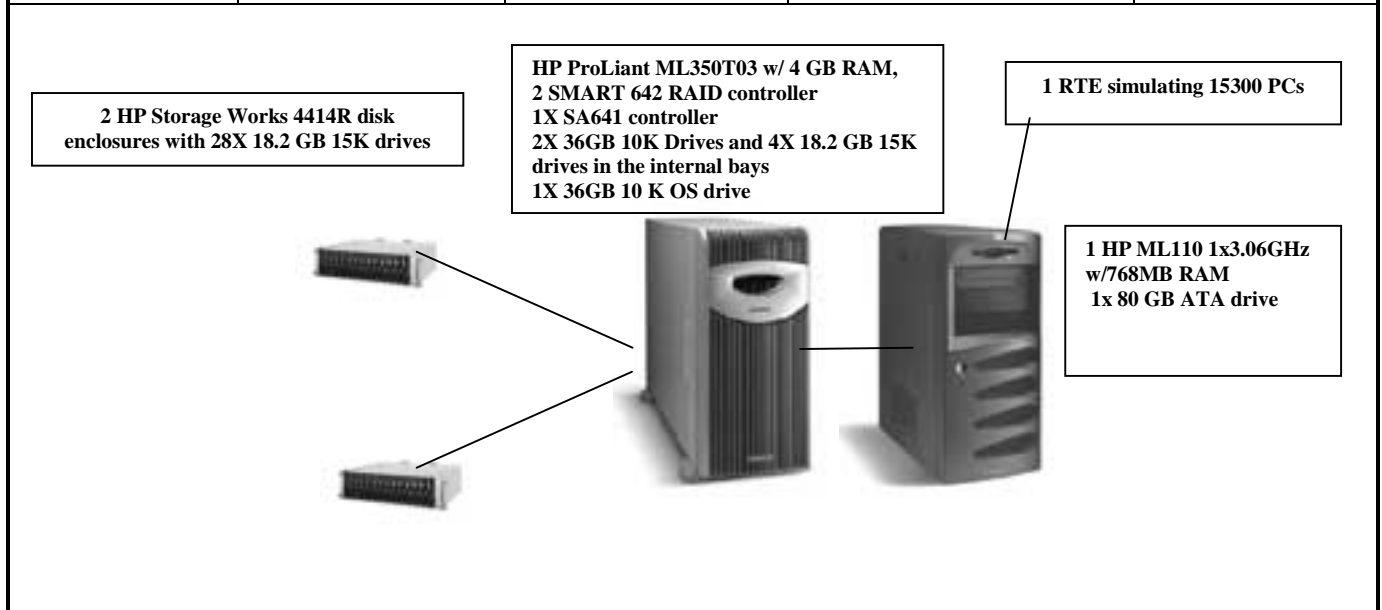


Hewlett Packard Company	ProLiant ML350T03 X3.06/533 512 SA641	TPC-C Rev. 5.3
	C/S with HP ML110	Report Date: July 16, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$29,990 USD	18,661 tpmC	\$1.61 USD/tpmC	December 15, 2004

Processors	Database Manager	Operating System	Other Software	Number of Users
1 Intel Xeon 3.06 GHz – 512 K L3 cache – Server 1 Intel Xeon 3.06 GHz – Clients	IBM DB2 UDB Express Edition v8.1	SUSE Linux Enterprise Server 9	Microsoft Visual C++ Microsoft COM+	15300



	Server		Each Client	
System Components	Quantity	Description	Quantity	Description
Processor	1	3.06GHz Intel Xeon w/ 512 K Cache	1	3.06 GHz Intel Xeon w/ 512K cache
Memory	4	1GB DDR	1	256 MB DDR
Disk Controllers	1	SA 641 Controller	1	512MB DDR
	2	SMART 642 Array Controller	1	IDE Controller
	1	Internal SCSI Controller		
Disk Drives	3	36.4 GB SCSI Drives	1	80 GB ATA
	32	18.2 GB SCSI Drives		
Total Storage		691.6 GB		80GB

Hewlett-Packard		ML350T03 X3.06/533 512 SA641			TPC-C Rev. 5.3		
Company		Client/Server			Report Date:		16-Jul-04
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware							
		Brand	Pricing				
ML350T03 X3.06/533 512 SA641 US	333371-001	HP	1	2,149	1	2,149	
1GB PC2100 DDR SDRAM DIMM WW	287497-B21	HP	1	499	4	1,996	
S5500 15" monitor	P9006A#ABA	HP	1	119	1	119	
StorageWorks MSA30 S-B ALL	302969-B21	HP	1	2,978	2	5,956	
SmartArray642 U320 Intrl.RAID Ctrl. WW	291967-B21	HP	1	649	2	1,298	
Pro UPS 500 127V US	136386-001	HP	1	146	1	146	
18.2GB 15Krpm U320 UNI HDD	286775-B22	HP	1	269	32	8,608	
18.2GB 15Krpm U320 UNI HDD (10% spares)	286775-B22	HP	1	269	3		807
36GB 10K U320 Pluggable Hard Drive WW	286713-B22	HP	1	299	2	598	
36GB 10K Ultra320 NHP Hard Drive WW	271832-B21	HP	1	259	1	259	
HP CP 3Y 4H 24x7 HW Entry300 4-Hour 24 x 7 Coverage 3 Years	162675-002	HP	1	599	1		599
FM-4E724-36 3YR 24X7/4HR EMPTY DISK ENCL	171242-002	HP	1	157	2		314
Subtotal						21,129	1,720
Server Software							
1 Year Maintenance and Support SUSE Linux Enterprise Server 9 for x86	TBD	SUSE	2	399	3		1,197
IBM DB2 UDB Express Edition v8.1	D535PLL	IBM	3	4,874	1	4,874	
IBM DB2 UDB Exp. Ed. Maintenance renewal (annual)	E013SLL	IBM	3	975	2		1,950
Subtotal						4,874	3,147
Client Hardware							
ML110T01 P3.0/800HT 256 ATA-80 US	359661-001	HP	1	829	1	829	
512 UNREG PC3200 1X512 ML110 WW	354560-B21	HP	1	299	1	299	
NC1020 PCI Gigabit NIC 10/100/1000 WOL (Wake on LAN)	353377-B21	HP	1	99	1	99	
S5500 15" monitor	P9006A#ABA	HP	1	119	1	119	
HP CP 3Y 4H 24x7 HW ML110 4-Hour 24 x 7 Coverage 3 Years	321653-002	HP	1	448	1		448
Subtotal						1,346	448
Client Software							
Microsoft Windows 2000 Server	C1100016	Microsoft	4	679	1	679	
Visual C++ Standard	254-00257	Microsoft	4	94	1	94	
Subtotal						773	0
User Connectivity							
7ft CAT 5e Network Patch Cables	CBLC5C7	LanAdapters	5	1	3	3	
Subtotal						3	0
Large Purchase and Net 30 discount (See Note 1)	14.0%		1			(\$3,147)	(\$304)
Total						\$24,979	\$5,011
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: \$29990 USD		
Pricing: 1=HP 2=SUSE 3=IBM 4=BuyCheapSoftware.com 5=LanAdapters.com					tpmC Rating: 18,661		
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount.					\$ / tpmC: \$1.61 USD		
Note: The benchmark results and test methodology were audited by Lorna Livingtree of Performance Metrics, Inc.							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

18,661 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.54	1.06	8.06
Payment	0.38	0.87	8.31
Order-Status	0.48	0.97	6.18
Delivery (interactive portion)	0.10	0.10	0.83
Delivery (deferred portion)	0.71	1.06	3.11
Stock-Level	2.77	4.04	9.48
Menu	0.10	0.10	0.85

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	18.01/13.01	18.02/130.00
Payment	3.01/0.00	3.02/12.02	3.04/120.00
Order-Status	2.01/0.00	2.02/10.02	2.04/97.94
Delivery (interactive)	2.01/0.00	2.02/5.03	2.03/49.56
Stock-Level	2.01/0.00	2.02/5.02	2.04/47.70

Test Duration

Ramp-up time	88 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	4,985,827
Ramp down time	53 minutes

Checkpointing

Number of checkpoints	N/A
Checkpoint interval	N/A