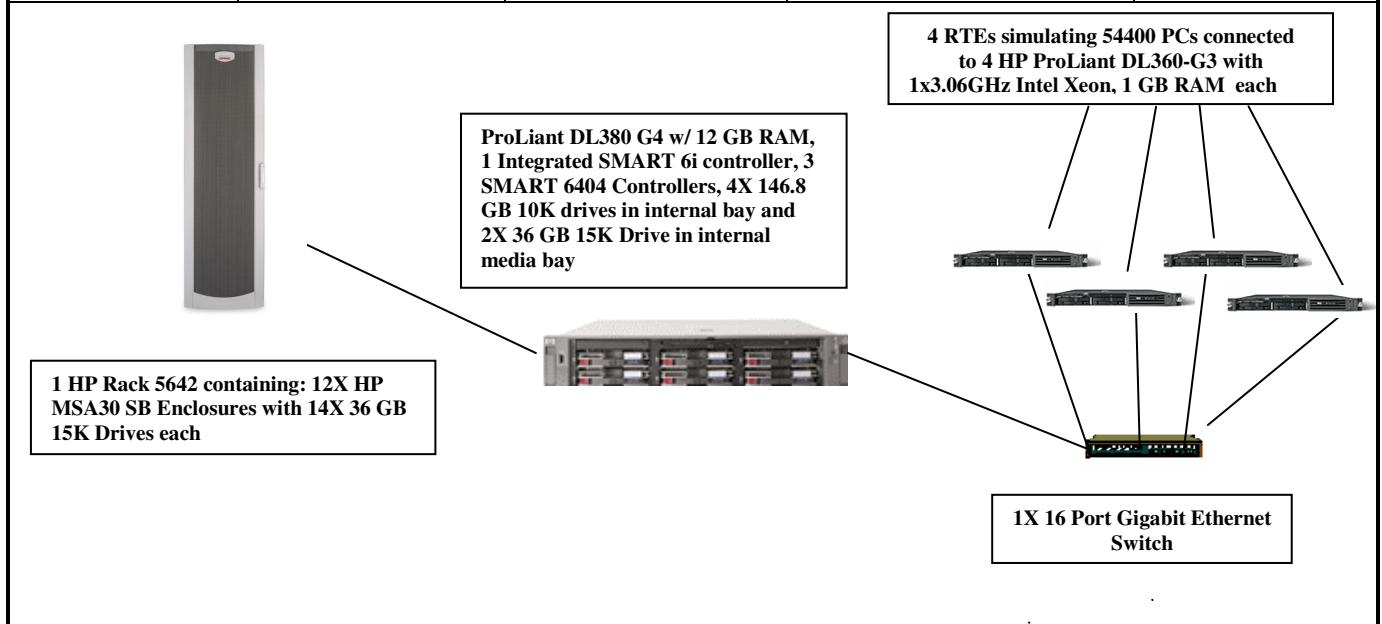


<b>Hewlett-Packard</b>  <b>Company</b>	HP ProLiant DL380 G4 12GB/3.6GHz/2P	TPC-C Rev. 5.3
	C/S with 4 HP ProLiant DL360R	<b>Report Date: Feb. 14, 2005</b>

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>\$159,587 USD</b>	<b>67,754</b>	<b>\$2.36 USD</b>	<b>Feb. 14, 2005</b>

Processors	Database Manager	Operating System	Other Software	Number of Users
2 Intel Xeon 3.6 GHz (2MB) 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+	<b>54400</b>



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processor	2	Intel Xeon 2.6GHz w/ 2MB Cache	1	3.06 GHz Intel Xeon w/ 512K cache
Memory	6	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		ProLiant DL380-G4-2M/3.6GHz 2P			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	
<b>Server Hardware</b>		<b>Brand Pricing</b>					
DL380G4 X3.6/800-2M US	378738-001		1	3,649	1	3,649	
Intel X3.6GHz 2MB 370/380 G4 Processor	378751-B21		1	1,399	1	1,399	
4GB PC3200 DDR SDRAM (2x2GB)	343057-B21		1	5,799	3	17,397	
HP s7540 17in. CRT Monitor	PF997AA#ABA		1	149	1	149	
HP Storageworks MSA 30 SB Storage	302969-B21		1	2,978	12	35,736	
HP 5642 Pallet Unassembled Rack	358254-B21		1	689	1	689	
HP Smart Array 6404/256MB Controller	273914-B21		1	1,899	3	5,697	
36GB 15Krpm U320 UNI HDD (OS)	286776-B22		1	299	2	598	
36GB 15Krpm U320 UNI HDD	286776-B22		1	299	168	50,232	
36GB 15Krpm U320 UNI HDD (10% spares)	286776-B22		1	299	17		5,083
HP 146GB 10K U320 Pluggable Hard Drive	286716-B22		1	599	4	2,396	
HP T500 Uninterruptible Power System	361475-001		1	99	1	99	
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
<b>Subtotal</b>						<b>118,041</b>	<b>7,916</b>
<b>Server Software</b>							
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	2,399	1	2,399	Incl below
Microsoft Problem Resolution Services (1 incident)		Microsoft	2	245	1		245
<b>Subtotal</b>						<b>37,066</b>	<b>245</b>
<b>Client Hardware</b>							
HP ProLiant DL360G3 1P 3.06GHz/533 (512KB L2, 1MB L3) - 1024 MB memory, embedded SMART 6i array controller - embedded dual channel Gigabit NIC	322471-001		1	2,599	4	10,396	
36GB 15Krpm U320 UNI HDD	286776-B22		1	299	4	1,196	
HP s7540 17in. CRT Monitor	PF997AA#ABA		1	149	4	596	
HP PS/2 Scroll Mouse carbonite	DG168AV		1	5	4	20	
HP Enhanced Keyboard	DG170AV#ABA		1	10	4	40	
HP CP 3Y 4H 24x7 HW Support DL360 4-Hour 24 x7 Coverage 3 Yrs	U4497E		1	550	4		2,200
<b>Subtotal</b>						<b>12,248</b>	<b>2,200</b>
<b>Client Software</b>							
Microsoft Windows 2000 Server	C11-00821	Microsoft	2	738	4	2,952	Incl. Above
<b>Subtotal</b>						<b>2,952</b>	<b>0</b>
<b>User Connectivity</b>							
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
<b>Subtotal</b>						<b>361</b>	<b>1,023</b>
Large Purchase and Net 30 discount (See Note 1)	16.0%		1			(\$20,846)	(\$1,619)
<b>Total</b>						<b>\$149,822</b>	<b>\$9,765</b>
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.					<b>Three-Year Cost of Ownership: \$159,587 USD</b>		
Pricing: 1=HP 2= Microsoft 3=PCUniverse.com					<b>tpmC Rating: 67,754</b>		
Note 1 = Discount based on HP Direct guidance with large purchase and Net 30 discount.					<b>\$ / tpmC: \$2.36 USD</b>		
Note: The benchmark results and test methodology were audited by Tom Sawyer of Performance Metrics, Inc.							

## Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**

**67,754 tpmC**

<b>Response Times (in seconds)</b>	<b>Average</b>	<b>90 %</b>	<b>Maximum</b>
New-Order	0.44	0.72	7.20
Payment	0.36	0.63	5.87
Order-Status	0.38	0.65	4.96
Delivery (interactive portion)	0.10	0.11	0.23
Delivery (deferred portion)	0.28	0.44	1.66
Stock-Level	1.53	2.06	6.53
Menu	0.10	0.11	0.44

### **Transaction Mix, in percent of total transaction**

New-Order	44.89%
Payment	43.03%
Order-Status	4.02%
Delivery	4.03%
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	18.00/0.00	18.02/12.10	18.14/121.12
Payment	3.00/0.00	3.02/12.11	3.14/121.12
Order-Status	2.00/0.00	2.02/10.11	2.14/101.00
Delivery (interactive)	2.00/0.00	2.02/5.08	2.14/50.71
Stock-Level	2.00/0.00	2.02/5.07	2.14/50.71

### **Test Duration**

Ramp-up time	26 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	18,758,781
Ramp down time	9 minutes

### **Checkpointing**

Number of checkpoints	4
Checkpoint interval	30 minutes