

Compaq Computer Corporation		ProLiant 3000-6/500-1S C/S with 2 ProLiant 1600		TPC-C Rev. 3.4 Report Date: May 6, 1999					
Total System Cost		TPC-C Throughput		Price/Performance		Availability Date			
<b>\$200,829</b>		<b>7084.5</b>		<b>\$28.34</b>		<b>May 6, 1999</b>			
Processors		Database		Operating System		Other Software		Number Users	
1 Pentium III 500 MHz		Microsoft SQL Server 7.0 Enterprise Edition		Windows NT 4.0 Enterprise Edition		NonStopTuxedo 1.3 Microsoft Visual C++ MKS Toolkit for NT		<b>5750</b>	
<p style="text-align: center;"><b>5750 PCs</b>                      <b>Compaq ProLiant 3000 6/500</b>                      <b>6 X ProLiant UE Storage Systems, 1 X ProLiant U2 Storage System</b></p> <p>The diagram illustrates the system architecture. On the left, 5750 PCs are arranged in a grid, connected via 10Mb lines to a central network switch. The switch is connected to two 100Mb storage units. In the center, a server rack contains 4 SMART 3200 controllers and 1 Compaq UPS Model. On the right, a storage system consists of 6 ProLiant UE Storage Systems and 1 ProLiant U2 Storage System, all connected to the server rack. Below the storage system, it is noted that there are 82 X 9.1 GB Pluggable Drives (external) + 1 X 4.3 GB (internal).</p>									
			<b>Server</b>			<b>Each Client</b>			
<b>System Components</b>			Quantity                      Description			Quantity                      Description			
Processor			1                      500MHz Pentium III w/ 512Kb Cache			2                      450MhzPentium II w/ 512K cache			
Memory			4                      512MB			2                      128MB			
			1                      128MB			2                      64MB			
Disk Controllers			4                      SMART SCSI Array Controller 3200			1                      Integrated Ultra SCSI Controller			
Disk Drives			82                      9.1 GB SCSI Drive			1                      4.3GB SCSI Drive			
			1                      4.3 GB SCSI Drive						
Total Storage			712 GB			4.3 GB			
Tape Drives			1                      4/16 TurboDAT						

Compaq Computer Corporation		ProLiant 3000- 6/500-1P		TPC-C Rev. 3.4		
		Client/Server		Report Date:	6-May-99	
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	5 yr. Maint. Price
<b>Server Hardware</b>						
		<b>Brand</b>	<b>Pricing</b>			
ProLiant 3000-6/500-1S 1 x Pentium III 500MHz - 512KB Cache 2 x Integrated Fast-SCSI-3 Controller CD-ROM,256MB,SMART 3200 SCSI RAID 10/100 Ethernet Controller	382200-002	1	7,353	1	7,353	
512-MB DIMM Memory Module	313617-B21	1	960	4	3,840	
Compaq SMART Array Controller 3200	295643-B21	1	1,960	3	5,880	
ProLiant Storage System UE	348710-002	1	1,903	6	11,417	
ProLiant Storage System U2	304110-B22	1	1,859	1	1,859	
4.3GB Fast SCSI-2 Hard Drive	199580-001	1	447	1	447	
9.1 GB Hot-Plug SCSI-3 Drive - 10K	336357-B21	1	940	82	77,054	
Compaq VGA V55 Color Monitor	308006-001	1	240	1	240	
4/8GB DAT Drive	295353-B21	1	703	1	703	
Compaq UPS Model T2000	242688-005	1	936	1	936	
ProLiant Enterprise Server - Parts Exchange - 1 Year	FM-HEPRT-12	1	597	2		1,194
ProLiant Storage System - Parts Exchange - 1 Year	FM-STPRT-12	1	255	12		3,060
Onsite 5x8 4 Hr Service Upgrade from Compaq Standard Service		Allstar	1			10,973
				<b>Subtotal</b>	<b>109,729</b>	<b>15,227</b>
<b>Server Software</b>						
Microsoft SQL Server 7.0 Enterprise		Microsc	2	28,999	1	28,999
MKS Toolkit for NT		MKS	1	499	1	499
Microsoft Visual C++ and Subscription Service		Microsc	2	499	1	499
Microsoft Windows NT Enterprise v. 4.0		Microsc	2	3,999	1	3,999
				<b>Subtotal</b>	<b>33,996</b>	<b>10,475</b>
<b>Client Hardware</b>						
ProLiant 1600 6/450 - 64MB,100TX Nic	313650-001	1	2,832	2	5,665	
ProLiant 1600 6/450 Processor Option Kit	313618-B21	1	1,343	2	2,686	
64-Megabyte SD DIMM Kit	313614-B21	1	213	2	426	
128-Megabyte SD DIMM Kit	313615-B21	1	426	4	1,702	
Compaq VGA V55 Color Monitor	308006-001	1	240	2	479	
4.3GB Wide Ultra2 SCSI Hard Drive	349525-B21	1	391	2	782	
ProLiant Workgroup Server - Parts Exchange - 1 Year	FM-LOPRT-12	1	259	4		1,036
Onsite 5x8 4 Hr Service Upgrade from Compaq Standard Service		Allstar	1			1,174
				<b>Subtotal</b>	<b>11,740</b>	<b>2,210</b>
<b>Client Software</b>						
Microsoft Windows NT Server v. 4.0		Microsc	2	809	2	1,618
Compaq Non-Stop Tuxedo CS for NT - 1.3				1,950	2	3,900
				<b>Subtotal</b>	<b>5,518</b>	<b>320</b>
<b>User Connectivity</b>						
3Com Superstack II 24 Port 10/100 Switch		3Com	1	1,110	3	3,330
8-port 10BaseT hub		Generic	1	29.00	799	23,171
				<b>Subtotal</b>	<b>26,501</b>	<b>0</b>
Large Purchase and Cash discount	9.0%	1				
					<b>(\$13,317)</b>	<b>(\$1,569)</b>
				<b>Total</b>	<b>\$174,167</b>	<b>\$26,663</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>Five-Year Cost of Ownership: \$200,829</b>		
				<b>tpmC Rating: 7084.50</b>		
				<b>\$ / tpmC: \$28.34</b>		
Pricing: 1=Allstar Systems 2= Microsoft						
Note 1 = 5 Year warranty with 10% Spares -						
Note: The benchmark results and test methodology were audited by Lorna Livingtree of Performance Metrics, Inc.						

## Numerical Quantities Summary

### MQTH, Computed Maximum Qualified Throughput

**7084.5 tpmC**

% throughput difference, reported & reproducibility runs

0.20%

### Response Times (in seconds)

	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New-Order	0.63	1.09	4.16
Payment	0.56	1.02	2.52
Order-Status	0.59	1.05	2.29
Delivery (interactive portion)	0.11	0.11	0.30
Delivery (deferred portion)	0.30	0.44	1.19
Stock-Level	1.45	1.99	3.38
Menu	0.14	0.12	3.34

### Transaction Mix, in percent of total transaction

New-Order	44.73%
Payment	43.15%
Order-Status	4.06%
Delivery	4.02%
Stock-Level	4.04%

### Emulation Delay (in seconds)

	<b>Resp. Time</b>	<b>Menu</b>
New-Order	N/A	N/A
Payment	N/A	N/A
Order-Status	N/A	N/A
Delivery (interactive)	N/A	N/A
Stock-Level	N/A	N/A

### Keying/Think Times (in seconds)

	<b>Min.</b>	<b>Average</b>	<b>Max.</b>
New-Order	18.00/0.00	18.01/12.04	18.24/121.33
Payment	3.00/0.00	3.01/12.03	3.16/122.01
Order-Status	2.00/0.00	2.01/10.16	2.08/97.30
Delivery (interactive)	2.00/0.00	2.01/5.06	2.08/50.40
Stock-Level	2.00/0.00	2.01/5.09	2.04/50.40

### Test Duration

Ramp-up time	63 minutes
Measurement interval	20 minutes
Transactions (all types) completed during measurement interval	311844
Ramp down time	37 minutes

### Checkpointing

Number of checkpoints	1
Checkpoint interval	20 minutes