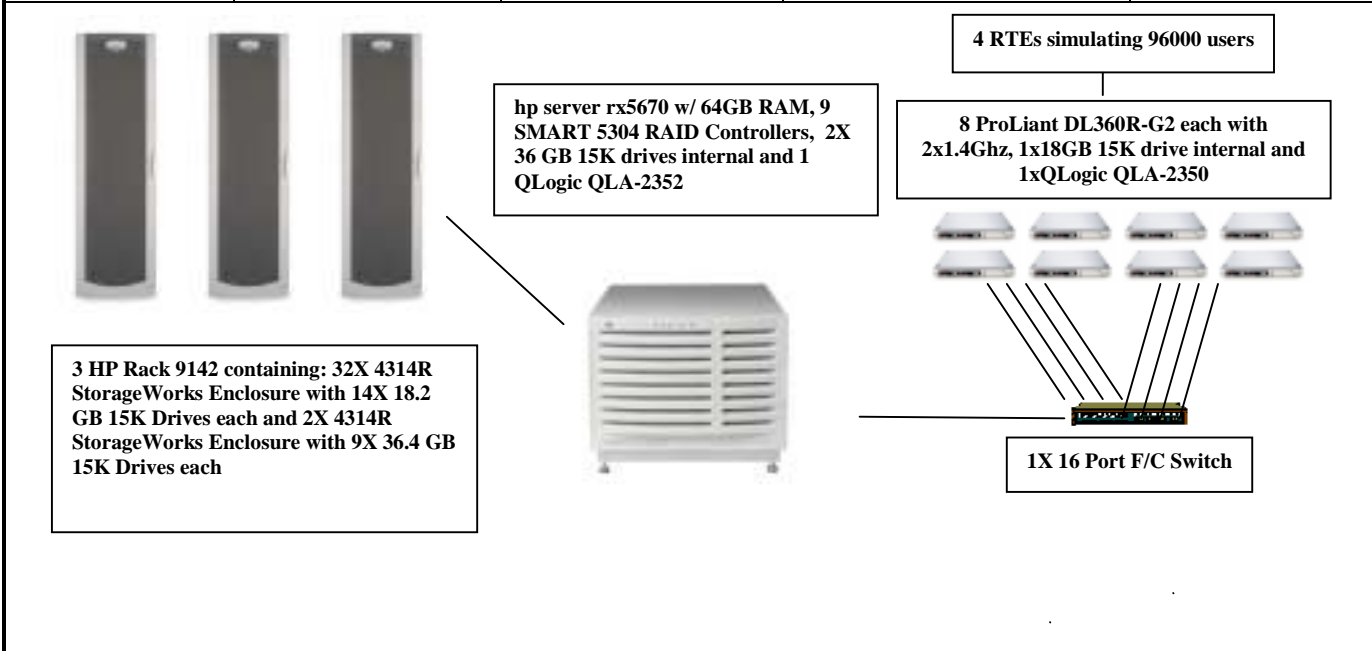


Hewlett Packard Company	hp server rx5670	TPC-C Rev. 5.1
	C/S with 8 ProLiant DL360-G2	Report Date: Apr.24, 2003

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$543,023	121065.13	\$4.49	Aug. 1, 2003

Processors	Database Manager	Operating System	Other Software	Number of Users
4 x 1.5GHz Intel Itanium 2 6M Processors – Server 16 x Pentium III 1.4GHz – Client	Microsoft SQL Server 2000 Enterprise Edition 64-bit	Microsoft Windows Server 2003, Enterprise Edition	Microsoft Visual C++ Microsoft COM+	96000



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processor	4	1.5GHz Itanium 2 6M w/ 6MB Cache	2	1.4GHz Pentium III w/ 256K cache
Memory	16	2GB	2	512MB
	32	1GB		
Disk Controllers	9	SMART 5304/128 Array Controller	1	Integrated SMART 5i Controller
	1	Integrated SCSI Controller		
Disk Drives	448	18GB 15K SCSI Drives	1	18GB 15K SCSI Drive
	20	36GB 15K SCSI Drives		
Total Storage		8271.80 GB		18GB
Tape Drives	1	20/40 GB DAT		

Hewlett Packard Company	hp server rx5670 client/server			TPC-C Rev. 5.1			
	Price Key	Part Numbr	Unit Price	Qty	Extended Price	3 Yr Maint Price	
Description							
hp server rx5670							
1.5GHz Itanium 2 w/ 6MB iL3 cache,							
0 MB RAM, 0 disk							
CPU upgrade Itanium 2, 1.5GHz w/ 6MB iL3 cache							
4GB PC2100 DDR-SDRAM (4x1GB DIMMs)							
8GB PC2100 DDR-SDRAM (4x2GB DIMMs)							
Memory Carrier Board							
HP 36GB, 15krpm Ultra320 hot-swap disk							
HP Rackmount Kit Factory							
DVD Rom drive							
Graphics USB Card							
HP USB keyboard and mouse							
HP Smart Array Controller 5304							
Qlogic QLA-2352 Fibre-Channel VI Adapter							
5m LC to LC Cable Kit							
2GB SFP Adapter Kit							
S5500 15 carbon / silver monitor							
HP Rack Model 9142 (42U - Opal) - Flat Pallet							
HP Power Distribution Unit 120-240V							
UPS R1500 XR							
HP Hardware Support 3 yr, 24x7, 4 hr rx5670							
HP Hardware Support 3 yr, 24x7, 4 hr add'l CPU							
20/40 GB DAT Drive, External							
Storageworks enclosure 4314R							
18GB, 15krpm Ultra320 Wide disk							
18GB, 15krpm Ultra320 Wide disk (10% spares)							
36GB, 15krpm Ultra320 Wide disk							
36GB, 15krpm Ultra320 Wide disk (2 spares)							
Hardware Support 3 yr, 24x7, 4hr empty enclosure							
Server Subtotal					\$478,368	\$15,849	
Microsoft Windows Server 2003, Enterprise Edition Preload							
Microsoft SQL Server 2000 Enterprise Edition 64 bit							
HP Support for Windows Advanced Server 3 yr 24x7							
MS Software Support (3 yrs)							
Server Software Subtotal					\$69,766	\$13,152	
HP ProLiant DL360R01 P1.4GHz 512KB 128MB, 2 emb NICs							
1.40GHz PIII Processor Option Kit (DL360 G2)							
1GB 133MHz SDRAM DIMM Memory (2x512MB)							
HP Mouse							
HP Enhanced Keyboard							
S5500 15 carbon / silver monitor							
18GB, 15krpm Ultra320 Wide disk							
Qlogic QLA-2350 Fibre-Channel VI Adapter							
5M LC to LC Cable Kit							
2GB Small Form Pluggable Adapter Kit							
FM-EL724-36 3YR 24X7 4HR 300 SERIES SVR							
Client Subtotal					\$49,426	\$7,592	
Microsoft Windows 2000 Server							
Microsoft Visual C++ .NET Standard							
Client Software Subtotal					\$6,013		
SAN Switch 2/16							
Connectivity Subtotal					\$18,500		
HP's Large Configuration Discount *					* Discounts:	-\$109,655	-\$5,988
Total:					\$512,418	\$30,605	
Price Key: 1-HP at 30% discount, 2-HP at 16% discount, 3-Qlogic, 4-Microsoft				3 year cost of ownership:		\$543,023	
				tpmC:		121065.13	
* All discounts are based on US list prices and for similar quantities and configurations				\$/tpmC:		\$4.49	
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 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.							
Results independently audited by Lorna Livingtree of Performance Metrics Inc							

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput

121065.13 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.24	0.37	17.23
Payment	0.20	0.33	15.20
Order-Status	0.21	0.34	12.21
Delivery (interactive portion)	0.10	0.11	0.59
Delivery (deferred portion)	0.11	0.15	2.73
Stock-Level	0.47	0.72	13.97
Menu	0.10	0.11	0.60

Transaction Mix, in percent of total transaction

New-Order	44.95%
Payment	43.00%
Order-Status	4.01%
Delivery	4.01%
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	18.02/12.06	18.04/120.62
Payment	3.00/0.00	3.02/12.06	3.04/120.62
Order-Status	2.00/0.00	2.02/10.05	2.03/100.61
Delivery (interactive)	2.00/0.00	2.02/5.07	2.04/50.61
Stock-Level	2.00/0.00	2.02/5.05	2.04/50.61

Test Duration

Ramp-up time	49 minutes
Measurement interval	120 minutes
Transactions (all types) completed during measurement interval	33,473,048
Ramp down time	6 minutes

Checkpointing

Number of checkpoints	4
Checkpoint interval	30 minutes