



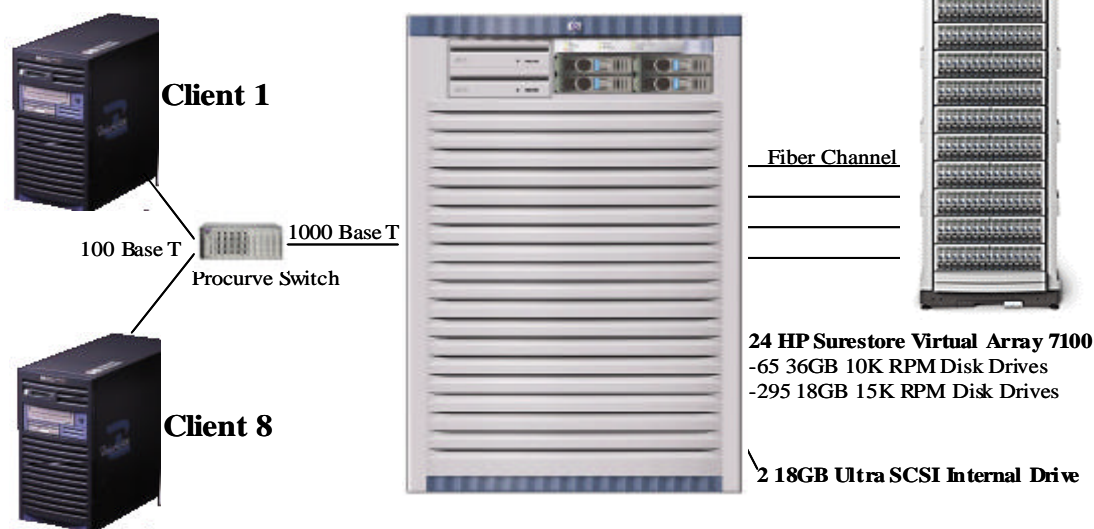
# hp server rp8400

TPC-C Revision 5

Report Date:  
February 22, 2002

Total System Cost	TPC Throughput	Price/Performance	Availability Date
<b>\$2,015,289</b>	<b>140,239.97 tpmC</b>	<b>\$14.37/tpmC</b>	<b>September 18, 2001</b>
Processors	Database Manager	Operating System	Other Software
<b>16 PA-RISC 8700 750MHz</b>	<b>Sybase Adaptive Server Enterprise v12.5</b>	<b>HP-UX 11i 64-bit Base OS, September 2001</b>	<b>BEA TUXEDO 6.4</b>
			Number of Users
			<b>114,400</b>

## Server



Clients – 8 hp workstation c3700

**hp server rp8400**  
 16 - 750MHz PA-RISC 8700  
 64GB Memory  
 w/.75MB I-cache/1.5MB D-cache

System Components	Server (hp server rp8400 )		each Client (8 hp workstation c3700)	
	Qty	Type	Qty	Type
Processors	16	750MHz PA-RISC 8700	1	750MHz PA-RISC 8700
Cache Memory	each	.75 MB I-cache, 1.5 MB D-cache	each	.75MB I-cache/1.5MB D-cache
Memory	64	GB	1	8 GB
Disk Controllers	8	PCI Fibre Channel 2X	1	Ultra2 SCSI LVD
Disk Drives	24	HP Surestore Virtual Array 7100 with 295 18GB 15K RPM drive and 65 36GB 10K RPM drives	1	18 GB disk
Internal Drive	2	18GB Ultra SCSI drive		
Total Storage	3,498	GB		
Tape Drives	1	DVD ROM		
Terminals	1	Console Terminal	1	Console Terminal



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Description	Part Number	Brand	Price Key	Unit Price	Qty	Price	3Year Main.Price
<b>Server Hardware</b>							
hp server rp8400 Enterprise Server	A6093A		1	40000	1	40,000	49,218
750MHz PA_RISC 8700 CPU-Dual Processor/Memory Cell Board	A6444A, Opt. 0D1		1	46000	8	368,000	69,216
Core I/O	A6094A, Opt. 0D1		1	7000	4	28,000	
4GB SyncDRAM Memory Modules	A6096A, Opt. 0D1		1	5000	1	5,000	
18GB Ultra SCSI Internal Drive	A6098A, Opt. 0D1		1	28000	16	448,000	
DVD Drive	A6723A, Opt 0D1		1	1764	2	3,528	
PCI Fibre Channel 2X	A6180A, Opt. 0D1		1	460	1	460	
PCI 1000BT Lan Adapter	A5158A, Opt 0D1		1	2240	8	17,920	
Rack System/E Cabinet	A4926A, Opt. 0D1		1	2135	1	2,135	
4.5m. Server to UPS Power Cord	J1528AZ		1	510	1	510	
System Hotswap Power Supply	J1528AZ, Opt. A5F		1	0	1	0	
HPUX Operating Environment	A6099A, Opt 0D1		1	560	4	2,240	
6.5kW/9kVA HP UPS Rackmount	B9088AC		1	520	1	520	
Surestore VA7100 w/dual controllers 512/MB cache	A6584A		1	8799	5	43,995	
18GB 15K RPM FC HDD	A6262A		1	44250	24	1,062,000	101,064
36GB 10K RPM FC HDD	A6191A		1	914	295	269,630	
2 meter Fibre Optic Cable	A6192		1	1026	65	66,690	
10 Port Short Wave Fibre Channel Hub	A3583A		1	175	24	4,200	
16 meter Fibre Optic Cable	A3724A		1	9690	8	77,520	
HP9000 Std. Rack System E41	92227C		1	200	8	1,600	
Modular Power Dist.	A4902AZ		1	2350	4	9,400	
200-240 Volts	A5137AZ		1	155	8	1,240	
	A5137AZ, Opt AW4		1	115	8	920	
				<b>Subtotal</b>		<b>2,453,508</b>	<b>219,498</b>
<b>Server Software</b>							
Sybase Adaptive Server Enterprise 12.5	Runtime	Sybase	2	295,000	1	295,000	194,700
Software Developers Kit	License	Sybase	2	995	1	995	480
				<b>Subtotal</b>		<b>295,995</b>	<b>195,180</b>
<b>Client Hardware</b>							
hp workstation c3700 with 2GB Memory	A6057B		1	13390	8	107,120	31,048
1 GB Memory Moudle	A6016A, Opt. 0D1		1	1395	48	66,960	
700/96 Console	C1064GX		1	550	1	550	
100BaseT 4-Port PCI Lan Adapter	A5506B		1	1830	8	14,640	
18 GB LVD 10K RPM Disk	A4998A, Opt. 0D1		1	595	8	4,760	
				<b>Subtotal</b>		<b>194,030</b>	<b>31,048</b>
<b>Client Software</b>							
HP C/ANSI C Compiler	B3901BA, Option AH0		1	1,600	1	1,600	170
BEA Tuxedo 6.4		Bea Sys.	3	2,850	8	22,800	16,560
				<b>Subtotal</b>		<b>24,400</b>	<b>16,730</b>
<b>User Connectivity</b>							
HP ProCurve Switch 8000M	J4110A		1	1,699	1	1,699	821
HP ProCurve Switch 10/100Base-T Module	J4111A		1	509	1	509	
HP ProCurve Switch Gigabit-SX Module	J4113A		1	1,189	1	1,189	
				<b>Subtotal</b>		<b>3,397</b>	<b>821</b>
Large configuration Discount and Support Prepayment*						(1,326,268)	(93,050)
<b>Total</b>						<b>1,645,063</b>	<b>370,227</b>

\* All discounts are based on US list prices and for similar quantities and configurations

Notes: 1=HP, 2=Sybase  
3=BEA Systems

Note: 3 of the hp workstations c3700 clients were emulated, see FDR for further documentation

<b>Five Year Cost of Ownership:</b>	<b>\$2,015,289</b>
<b>tpmC Rating:</b>	<b>140,240</b>
<b>\$/tpmC:</b>	<b>\$14.37</b>

Audited by Lorna Livingtree for Performance Metrics, Inc.

Prices used in TPC benchmarks reflect 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.

# Numerical Quantities Summary for hp server rp8400

**MQTH, Computed Maximum Qualified Throughput**

**140,239.97 tpmC**

## Response Times (in seconds)

	90th %-ile	Maximum	Average
New-Order	1.63s	8.17s	0.88s
Payment	1.59s	8.13s	0.84s
Order-Status	1.67s	8.12s	0.92s
Delivery (interactive portion)	0.15s	0.70s	0.09s
Delivery (deferred portion)	1.80s	7.54s	1.04s
Stock-Level	1.95s	8.03s	1.09s
Menu	0.10s	1.04s	0.003s

## Transaction Mix, in percent of total transactions

New-Order	44.80%
Payment	43.05%
Order-Status	4.05%
Delivery	4.05%
Stock-Level	4.05%

## Keying/Think Times

	Keying Time			Think Time		
	Min	Avg	Max	Min	Avg	Max
New-Order	18.02s	18.03s	18.05s	0.01s	12.14s	191.15s
Payment	3.01s	3.02s	3.04s	0.01s	12.07s	201.55s
Order-Status	2.01s	2.02s	2.04s	0.01s	10.13s	154.64s
Delivery (interactive)	2.01s	2.02s	2.04s	0.01s	5.07s	77.46s
Stock-Level	2.01s	2.02s	2.04s	0.01s	5.06s	76.21s

## Test Duration

Ramp up time	44 minutes
Measurement interval	120 minutes
Transactions during measurement interval	37,565,265
Ramp down time	6.45 minutes

## Checkpointing

Number of checkpoints in measurement interval	4
Checkpoint Interval	30 minutes