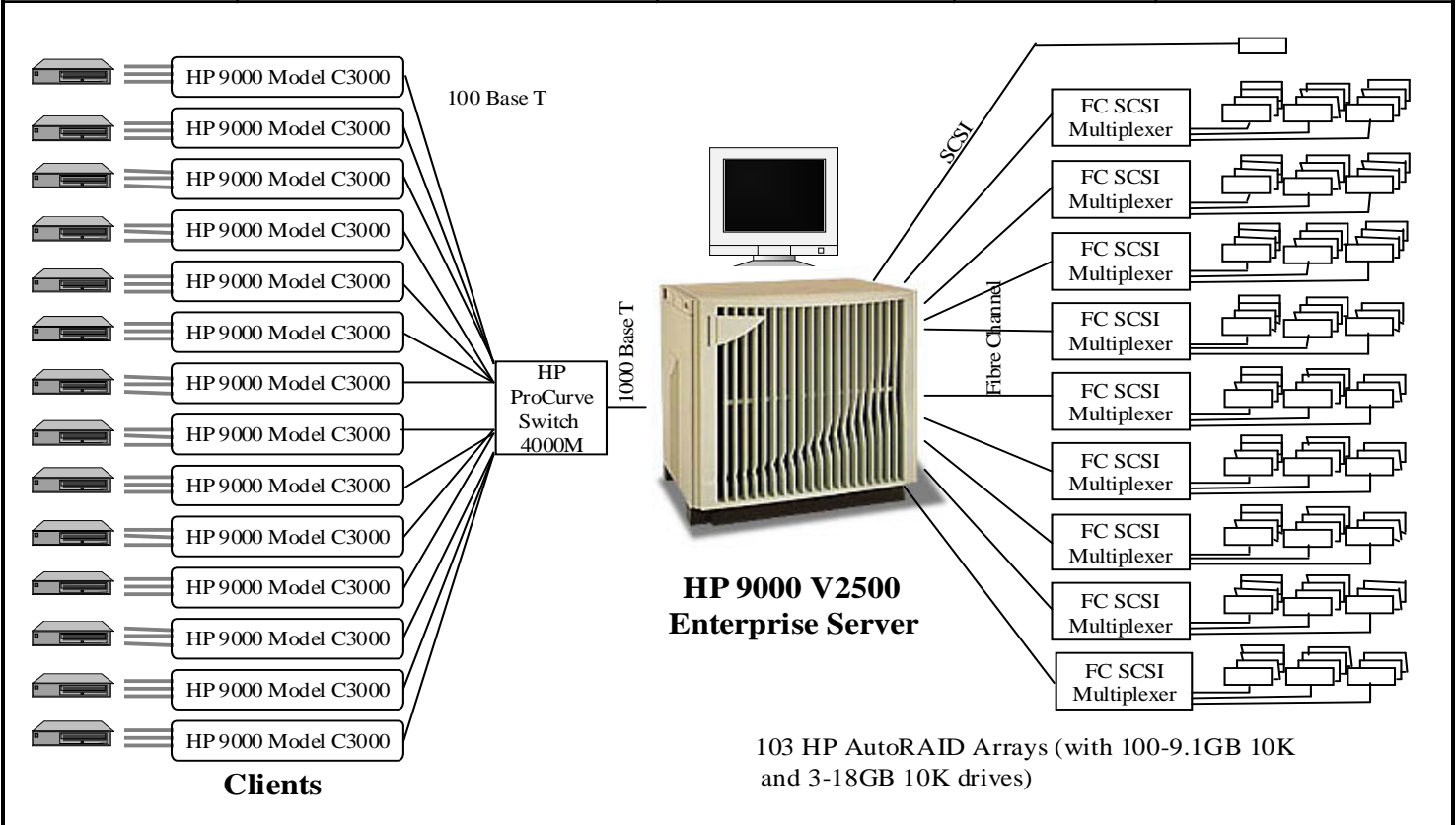
	<h1>HP 9000 V2500 Enterprise Server</h1> <h2>Client/Server with 14 C3000 front-ends</h2>			TPC-C Revision 3.4
				Report Date: August 24, 1999
Total System Cost	TPC Throughput	Price/Performance		Availability Date
<b>\$6,448,894</b>	<b>102,023.50 tpmC</b>	<b>\$63.21/tpmC</b>		<b>November 30, 1999</b>
Processors	Database Manager	Operating System	Other Software	Number of Users
<b>32 PA-RISC 8500 440MHz</b>	<b>Sybase Adaptive Server Enterprise 12.0</b>	<b>HP-UX 11.00 64-bit Extension Pack 9911</b>	<b>TUXEDO 6.4</b>	<b>84,890</b>



System Components	Server (HP 9000 V2500 Enterprise Server)		Each Client (14 C3000)	
	Qty	Type	Qty	Type
<b>Processors</b>	32	440MHz PA-RISC 8500	1	400MHz PA-RISC 8500
<b>Cache Memory</b>	each	0.5 MB I-cache, 1 MB D-cache	each	0.5 MB I-cache/1 MB D-cache
<b>Memory</b>	32	GB	1	3 GB
<b>Disk Controllers</b>	9	HP-PCI Fibre Channel	1	Ultra2 SCSI LVD
	9	FC SCSI Multiplexer		
<b>Disk Drives</b>	103	HP AutoRaid Arrays with 100 9.1 GB 10K & 3 18 GB 10K drives	1	9 GB LVD 10K RPM disk
<b>Total Storage</b>	8,922	GB		
<b>Tape Drives</b>	1	DDS Storage System		
<b>Terminals</b>	1	Console Terminal		



# HP 9000 V2500 Enterprise Server

TPC-C Rev 3.4

Report Date: August 24, 1999

Description	Part Number	Brand	Price Key	Unit Price	Qty	5 Year Price	Maint. Price
<b>Server Hardware</b>							
HP 9000 V2500 Enterprise Server	A5074A		1	139,825	1	139,825	119,532
Add'l Dual 440 MHz PARISC 8500 CPU's	A5492A Opt. 0D1		1	46,165	16	738,640	118,272
System Mgmt. Station	A4802B		1	8,197	1	8,197	2,116
Memory Controller Board	A5078A, Opt 0D1		1	7,140	4	28,560	
256 MB DIMM for a total of 2 GB	A5082A, Opt. 0D1		1	20,997	16	335,944	
PCI Fibre Channel Adapter	A3740A, Opt. 0D1		1	1,929	9	17,357	
PCI FWD SCSI-2 Adapter	A4800A, Opt. 0D1		1	858	1	858	
PCI 1000BT LAN Adapter	A4926A Opt 0D1		1	1,495	1	1,495	
4GB DDS-2 DAT Drive	A3183A, Opt 0DZ		1	1,180	1	1,180	
PCI 64-port Mux card	J3593A Opt. 0D1		1	1,068	1	1,068	
16 port RS232 DB25 port module	J2485A		1	627	1	627	
25 ft cable	J3595A		1	109	1	109	
5.5 kVA UPS	A3589A Opt. 002		1	7,000	1	7,000	336
1.8kVA HP UPS Rackmount	A2997A Opt. 002		1	2,310	52	120,120	16,027
2.0m Field Integrated Cabinet	C2787A		1	1,330	31	41,230	
FC SCSI Multiplexor	A3511A		1	7,280	9	65,520	71,019
16 Bit FW SCSI Adapter	A3511A Opt. 003		1	907	36	32,634	
Auto Raid Array Model 12H	A3700AZ		1	3,110	103	320,330	560,210
Two 96 MB controllers with Auto Raid	Opt. 203		1	9,385	103	966,655	
Twelve 9.1 GB disk modules, 10K rpm	Opt. 172		1	14,070	100	1,407,000	
Twelve 18 GB disk modules, 10K rpm	Option 192		1	18,900	3	56,700	
16M Fibre Channel Cable	A3661B, Opt AFY		1	112	9	1,008	
0.9m 68-pin high density male connec.	Option 801		1	84	66	5,544	
2.5m HDTS68 to HDTS68 Cable	C2924A		1	98	37	3,626	
<b>Subtotal</b>						<b>4,301,224</b>	<b>887,512</b>
<b>Server Software</b>							
Sybase Adaptive Server		Sybase	2	295,000	1	295,000	244,316
Sybase Development			2	9,600	1	9,600	
Sybase open client			2	795	1	795	
Sybase discount			2	-30,540	1	-30,540	
HP-UX 11.0 Sys Media, CD-ROM	B3920EA, Opt AAF		1	137	1	137	
<b>Subtotal</b>						<b>274,992</b>	<b>244,316</b>
<b>Client Hardware</b>							
HP Model C3000 Workstation	A4986A		1	7,700	14	107,800	55,641
256 MB memory module SDRAM	A4994A		1	806	56	45,158	
512 MB memory module SDRAM	A4995A		1	2,688	56	150,528	
Console	C1064GX		1	385	1	385	168
9 GB LVD 10K RPM Disk	A4997A		1	788	14	11,025	
100 Base T PCI LAN Adapter	B5509BA		1	191	14	2,675	
<b>Subtotal</b>						<b>317,572</b>	<b>55,809</b>
<b>Client Software</b>							
HP C/ANSI C Compiler	B3899BA		1	774	1	774	993
BEA Tuxedo 6.4		Bea Sys.	3	3,000	14	42,000	33,600
<b>Subtotal</b>						<b>42,774</b>	<b>34,593</b>
<b>User Connectivity</b>							
(8+1) port 10Mbps Ethernet Hub, 10% spares	DEH2924	SW House	4	24	11,734	281,616	
HP ProCurve Switch 4000M	J4121A		1	2,519	1	2,519	588
HP ProCurve Switch Gigabit-SX Module	J4113A		1	1,049	1	1,049	
HP ProCurve Switch 408	J4097		1	279	14	3,910	420
<b>Subtotal</b>						<b>289,095</b>	<b>1,008</b>
<b>Other discounts*</b>						<b>0</b>	<b>0</b>
<b>Total</b>						<b>5,225,656</b>	<b>1,223,238</b>

Notes: 1=Solarcom, 2=Sybase  
3=BEA Systems, 4=Software House International

Audited by Lorna Livingtree, Performance Metrics, Inc.

<b>Five Year Cost of Ownership:</b>	<b>\$6,448,894</b>
<b>tpmC Rating:</b>	<b>102,023.50</b>
<b>\$/tpmC:</b>	<b>\$63.21</b>

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](mailto:pricing@tpc.org). Thank you.

# Numerical Quantities Summary for HP 9000 V2500 Enterprise Server

**MQTH, Computed Maximum Qualified Throughput**

**102,023.50 tpmC**

**Response Times (in seconds)**

	90th %-ile	Maximum	Average
New-Order	2.54s	10.94s	1.36s
Payment	2.48s	11.55s	1.30s
Order-Status	2.64s	9.40s	1.44s
Delivery (interactive portion)	0.08s	0.83s	0.07s
Delivery (deferred portion)	2.87s	9.74s	1.68s
Stock-Level	3.42s	13.47s	1.91s
Menu	0.10s	1.24s	0.003s

**Transaction Mix, in percent of total transactions**

New-Order	44.82%
Payment	43.03%
Order-Status	4.04%
Delivery	4.05%
Stock-Level	4.07%

**Keying/Think Times**

	Keying Time			Think Time		
	Min	Avg	Max	Min	Avg	Max
New-Order	18.02s	18.03s	18.04s	0.01s	12.13s	179.25s
Payment	3.01s	3.02s	3.03s	0.01s	12.07s	190.62s
Order-Status	2.01s	2.02s	2.03s	0.01s	10.1s	143.35s
Delivery (interactive)	2.01s	2.02s	2.03s	0.02s	5.08s	64.36s
Stock-Level	2.01s	2.02s	2.03s	0.01s	5.06s	59.5s

**Test Duration**

Ramp up time	28.5 minutes
Measurement interval	30 minutes
Transactions during measurement interval	6,828,815
Ramp down time	0.005 minutes

**Checkpointing**

Number of checkpoints in measurement interval	1
Checkpoint Interval	30 minutes

**Reproducibility Run**

Throughput	101,806.20 tpmC
Relative to MQTH	-0.21%