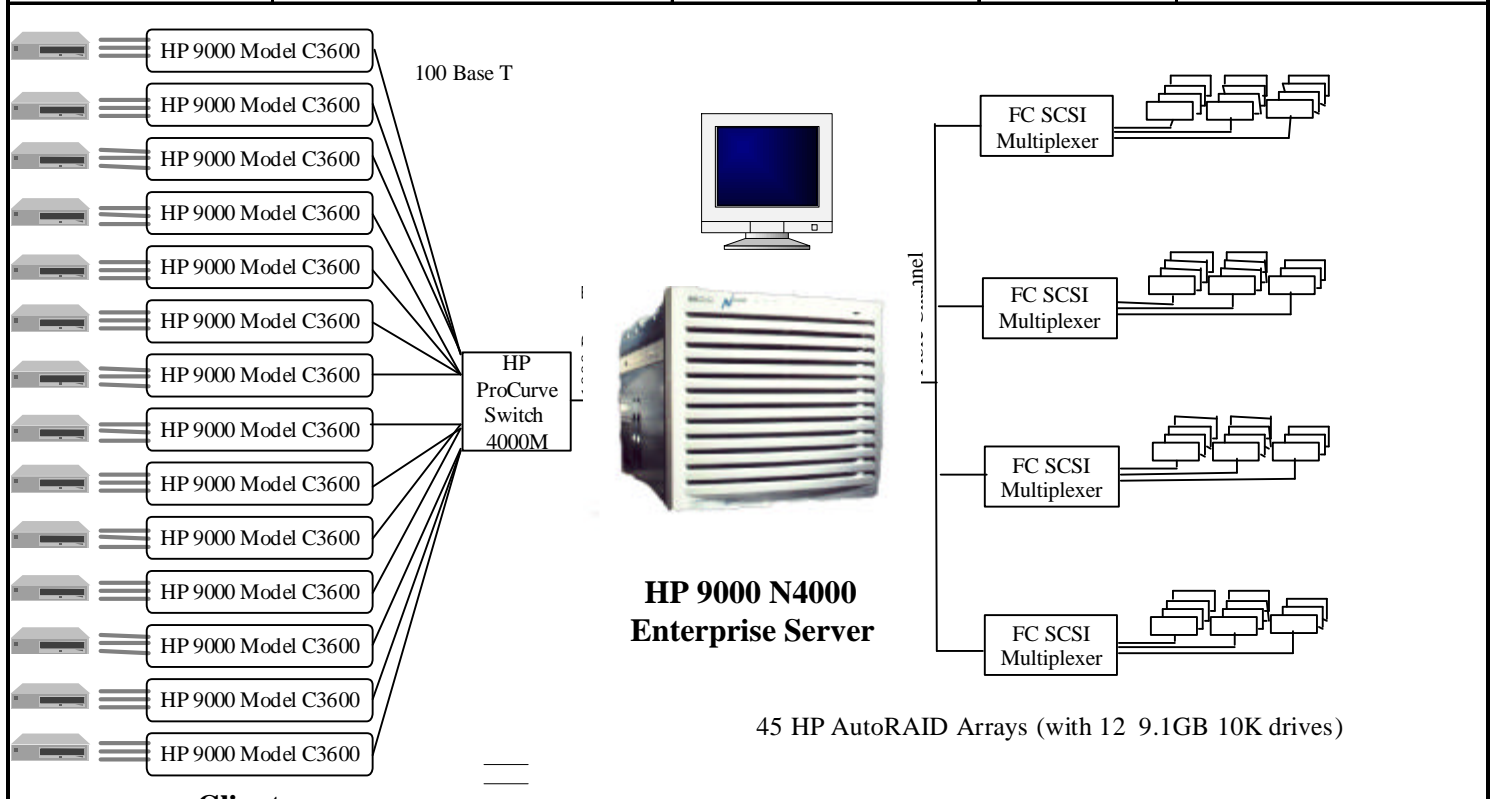
	HP 9000 N4000 Enterprise Server			TPC-C Revision 5
	Client/Server with 14 C3600			Report Date: April 5, 2001
Total System Cost	TPC Throughput	Price/Performance		Availability Date
\$1,842,600	49,308.00 tpmC	\$37.37/tpmC		Now
Processors	Database Manager	Operating System	Other Software	Number of Users
8 PA-RISC 8500 440MHz	Sybase Adaptive Server Enterprise 11.9.3 EBF 8338	HP-UX 11.0 64-bit Extension Pack 9903	TUXEDO 6.4	40,040



<i>System Components</i>		<i>Server (HP 9000 N4000 Enterprise Server)</i>		<i>Each Client (14 C3600)</i>	
		<i>Qty</i>	<i>Type</i>	<i>Qty</i>	<i>Type</i>
Processors		8	440MHz PA-RISC 8500	1	552MHz PA-RISC 8600
Cache Memory	each		0.5 MB I-cache, 1 MB D-cache	each	0.5 MB I-cache/1 MB D-cac
Memory		16	GB	1	1.5 GB
Disk Controllers		4	HP-PCI Fibre Channel	1	Ultra Wide SCSI
		4	FC SCSI Multiplexer		
Disk Drives		45	HP AutoRaid Arrays with 12-9.1 GB 10K drives	1	9 GB disk
Total Storage		3,787	GB		
Tape Drives		1	DDS Storage System		
Terminals		1	Console Terminal		



HP 9000 N4000 Enterprise Server

TPC-C Rev 5

Report Date: April 5, 2001

Description	Part Number	Brand	Price Key	Unit Price	Qty	Extended Price	3 Yr. Maint. Price
Server Hardware							
HP 9000 N4000 Enterprise Server	A3639A		1	18,285	1	18,285	14,372
Add'l 440 MHz PA-RISC 8500 CPUs	A5500A		1	14,625	8	117,000	31,248
Memory Carrier	A4882A		1	3,188	4	12,750	
1 GB Memory	A4923A		1	7,035	16	112,560	
Processor Support Module	A5168A		1	1,376	4	5,505	
9 GB Internal Disk	A5505A		1	1,260	1	1,260	
Rack Installation Kit	A5170A		1	308	1	308	
PCI Fibre Channel Adapter	A5158A		1	1,680	4	6,720	
PCI 1000BT Lan Adapter	A4926A, Opt. 0D1		1	1,601	1	1,601	
4GB DDS-2 DAT Drive	A3183A, Opt. 0DZ		1	1,264	1	1,264	
HP-UX 11.0 Sys Media, CD-ROM	B3920EA, Opt. AAF		1	390	1	390	
PCI 64-port Mux Card	J3593A, Opt. 0D1		1	1,144	1	1,144	
16 port RS232 DB25 port module	J2485A		1	671	1	671	
25 ft cable	J3595A		1	116	1	116	
5.5 kVA HP UPS Rackmount	A3589A, Opt. 002		1	7,500	8	60,000	3,287
1.25m Field Integrated Cabinet	A4900A		1	1,575	1	1,575	
Cabinet Depth Extension Kit	A5541AZ		1	0	1	0	
Cabinet Rear Door	A5211AZ		1	244	1	244	
1.6m Field Integrated Cabinet	J1501A		1	1,331	4	5,325	
2.0m Field Integrated Cabinet	J1500A		1	1,425	8	11,400	
FC SCSI Multiplexor	A3511A		1	7,800	4	31,200	24,453
16 Bit FW SCSI Adapter	A3511A, Opt. 003		1	971	12	11,655	
Auto Raid Array Model 12	A3700AZ		1	4,665	45	209,925	206,010
Two 96 MB controllers with Auto Raid	Opt. 203		1	14,070	45	633,150	
Twelve 9.1 GB disk modules (kickers)	Opt. 172		1	12,150	45	546,750	
16M Fibre Channel Cable	A5277A, Opt. AFY		1	120	4	480	
0.9m 68-pin high dense male connections	Opt. 801		1	38	33	1,238	
2.5m HDTS68 to HPTS68 Cable	C2924A		1	105	12	1,260	
Subtotal						1,793,775	279,369
Server Software							
Sybase Enterprise Adaptive Server 11.9.3	Runtime		2		1	150,000	72,000
Subtotal						150,000	72,000
Client Hardware							
Hewlett Packard Model C3600 Workstation	A5992A		1	6,900	14	96,600	54,054
256 MB memory module	A4994A		1	863	84	72,450	
Console	C1064GX		1	413	1	413	
9GB LVD 10K RPM disk	A4997A		1	619	14	8,663	
Subtotal						178,125	54,054
Client Software							
HP C/ANSI C Compiler	B3901BA, Option AH0		1	1,200	1	1,200	255
BEA Tuxedo 6.4		Bea Sys.	3	3,000	14	42,000	28,980
Subtotal						43,200	29,235
User Connectivity							
HP ProCurve Switch 4000M	J4121A		1	2,474.00	1	2,474	588
HP ProCurve Switch Gigabit-SX Module	J4113A		1	1,124	1	1,124	
Subtotal						3,598	588
Large Configuration Discount and Support Prepayment						(658,900)	(102,444)
Total						1,509,798	332,802

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

Audited by Lorna Livingtree, Performance Metrics, Inc.

Three Year Cost of Ownership: \$1,842,600
tpmC Rating: 49,308.00
\$/tpmC: \$37.37

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 9000 N4000 Enterprise Server

MQTH, Computed Maximum Qualified Throughput

49,308.00 tpmC

Response Times (in seconds)

	90th %-ile	Maximum	Average
New-Order	1.98s	16.55s	0.78s
Payment	1.88s	16.52s	0.71s
Order-Status	2.00s	11.13s	0.82s
Delivery (interactive portion)	0.08s	0.12s	0.07s
Delivery (deferred portion)	2.17s	11.86s	0.99s
Stock-Level	2.88s	11.49s	1.26s
Menu	0.10s	0.51s	0.001s

Transaction Mix, in percent of total transactions

New-Order	44.80%
Payment	43.05%
Order-Status	4.06%
Delivery	4.05%
Stock-Level	4.04%

Keying/Think Times

	Keying Time			Think Time		
	Min	Avg	Max	Min	Avg	Max
New-Order	18.01s	18.03s	18.07s	0.01s	12.14s	185.32s
Payment	3s	3.02s	3.06s	0.01s	12.07s	184.59s
Order-Status	2.01s	2.02s	2.06s	0.01s	10.12s	115.57s
Delivery (interactive)	2.01s	2.02s	2.06s	0.01s	5.06s	57.69s
Stock-Level	2.01s	2.02s	2.06s	0.01s	5.04s	63.28s

Test Duration

Ramp up time	30.6 minutes
Measurement interval	30 minutes
Transactions during measurement interval	3,301,982
Ramp down time	3.7 minutes

Checkpointing

Number of checkpoints in measurement interval	1
Checkpoint Interval	30 minutes

Reproducibility Run

Throughput	49,276.23 tpmC
Relative to MQTH	-0.06%