

Hewlett-Packard Co.	NetServer LX Pro Client/Server with 4 NetServer E40 front-ends		TPC-C® Rev 3.3
			Report Date: March 12, 1998
Total System Cost	TPC-C® Throughput		Price/Performance
\$376,291	10505.97 tpmC®		\$35.82 / tpmC®
Processors	Database Manager	Operating System	Other Software
4 Intel Pentium Pro 200MHz	Microsoft SQL Server v. 6.5 Enter- prise Edition	Microsoft NT Server 4.0 Enter- prise Edition	Microsoft C++ Compiler TUXEDO Transaction Monitor
			Number of Users
			9000



<i>System Components</i>	<i>Server (LX Pro)</i>		<i>Each Client (E40)</i>	
	<i>Qty</i>	<i>Type</i>	<i>Qty</i>	<i>Type</i>
Processors	4	200 MHz Intel Pentium Pro	1	200 MHz Intel Pentium Pro
Cache memory	<i>each</i>	1MB cache		256 KB cache
Memory	4	GB	256	MB
Disk Array Con- trollers	5	HP AMI Controllers	1	HP SCSI-2 Controller
Disk Drives	60	HP Hot-Swap 9G SCSI	1	2 GB Disk
	36	HP Hot-Swap 4G SCSI		
Total Storage (GB)	684	GB		
Tape Drives	1	DAT Storage System		
Terminals	1	Console terminal	1	Console terminal

Hardware and Software Pricing

Description	Part Number	3d Party		Unit Price	Qty.	Extended Price	5 Year Maint. \$
		Brand	\$				
Server Hardware							
HP NetServer LX Pro 6/200 Model 1	D4311B	HP	1	\$10,171	1	\$10,171	
3 year, on-site, next day warranty	included						
1 200MHz Pentium Pro processor, 64MB memory	included						
12 Hot swap disk bays	included						
Integrated dualPCI F/W SCSI-2cntrlrs&IDEcntrler	included						
Integrtd1024x768 16color 512KB video memory	included						
CD-ROM drive, 3.5-inch, 1.44MB floppy drive	included						
1 parallel, 2 serial ports, keyboard & mouse	included						
3 410W hot-swap power modules & redundant fans	included						
HP NetServer Navigator, HP NetServer Assistant	included						
HP Open View for Windows.	included						
NetServer LX 6/200 Dual Processor card with:	D4966A	HP	2	\$10,495	2	\$20,990	
2 Pentium Pro 200Mhz chips each with 1MB L2 cache							
HP 10/100 PCI Network Adaptor	J3171A	HP	1	\$72	1	\$72	
14" VGA Monitor	D2821S	HP	1	\$219	1	\$219	
5 Yr Support(upgds wrnty to same day,4hr)	H5520A+O2A	HP	2				\$5,396
5 Yr Support - 14" VGA Monitor							\$168
Memory	SPU subtotal:					\$31,452	
4GB memory board with 512MB	D4967A		1	\$4,425	1	\$4,425	
512 MByte ECC DIMM Memory Module	D4968A	HP	1	\$4,425	7	\$30,975	
Server Storage	Memory subtotal:					\$35,400	
AMI MegaRAID Ultra GT F/W SCSI Ctr 3chnl inc spare	432110000	AMI	1	\$1,795	7	\$12,565	
InternalSCSIcable(int68-pin-ext68pin)+10% spare	5182-6740	HP	1	\$30	7	\$210	
ExternalSCSIcable(ext68pin-to SS/6) + 10% spare	5182-6737	HP	1	\$55	17	\$935	
HP Storage System/6 + 10% spare	D3604A	HP	1	\$995	17	\$16,915	
HP 9GB SCSI-2 hot swap drives + 10% spares	D4289A	HP	1	\$1,260	66	\$83,160	
HP 4.2 GB SCSI-2hot swap drive+10% spares	D3583B	HP	1	\$735	42	\$30,870	
HP 9GB SCSI-2 disk drive (common tray)	D4911A	HP	1	\$1,260	1	\$1,260	
HP SureStore Tape 6000i 8Gb Internal DAT	C1528F	HP	1	\$905	1	\$905	
Server Software	Server Storage Subtotal:					\$146,820	
Microsoft Windows NT Server 4. Enterprise Edition0		MS	3	\$3,999	1	\$3,999	
Microsoft SQL Server 6.5 Enterprise Edition		MS	3	\$28,999	1	\$28,999	\$10,475
Client Hardware	Server Software Subtotal:					\$32,998	
HP Netserver E40 incl 2.1GB disk & 10/100 NIC	D4934A	HP	1	\$2,079	5	\$10,395	
32 MB SIMMs	D4892A	HP	1	\$202	20	\$4,040	
64MB SIMMs	D4290A	HP	1	\$529	10	\$5,290	
HP 10/100 PCI Network Adaptor	J3171A	HP	1	\$72	10	\$720	
14" VGA Monitor	D2821S	HP	1	\$219	5	\$1,095	
5 Yr Support - 14" VGA Monitor		HP	2				\$840
5 Yr Support - E40 SPU w/internal components	H5517A+O2A	HP	2				\$6,930
Client Software	Client Hardware Subtotals:					\$21,540	
Windows NT 4.0 Server		MS	1	\$475	5	\$2,375	
SQL Svr Programmer's toolkit		MS	1	\$129	1	\$129	
Tuxedo Run Tlme		BEA	4	\$3,000	5	\$15,000	\$11,250
Tuxedo Developers Kit		BEA	4	\$2,495	1	\$2,495	\$1,871
Microsoft C++ v. 4.0		MS	1	\$425	1	\$425	
Connectivity	Client Software Subtotals:					\$20,424	
Compex Microhub 6port 100BaseT (incl 2 spares)	MX1205		1	\$189	3	\$567	
Netlux 16port Ethernet Hub (incl 10% spares)	NX-H16ez		5	\$80	627	\$50,160	
Connectivity Subtotals:						\$50,727	
Total						\$339,361	\$36,930
Notes:						Five Year Cost:	\$376,291
1.Support pack H5520A upgrades NetServer 3yr warranty to same day, 4hr response, includes SPU internal components (CPUs, mem, NIC, DAT, etc);						tpmC Rating:	10505.97
2. NetServer support for yrs 4-5 via HP contract support 02A includes all HP components in SPU, \$7 per month for monitors							
3. Pricing Key: 1=Software House, 2=HP Corporate Price List, 3=Microsoft, 4=BEA Systems						\$/tpmC:	\$35.82
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 fo 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.							

Note: audited by Richard Gimarc of Performance Metrics, Inc.,

Numerical Quantities Summary for NetServer LX Pro

MQTH, Computed Maximum Qualified Throughput **10505.97 tpmC[®]**

Response Times (in seconds)	90th%-ile	Maximum	Average
New-Order	2.47	94.13	1.85
Payment	1.94	56.56	1.44
Order-Status	3.39	72.01	2.43
Delivery (interactive portion)	0.40	1.65	0.24
Delivery (deferred portion)	1.01	3.80	0.72
Stock-Level	4.78	9.80	2.82
Menu	0.4	2.28	0.23

Transaction Mix, in percent of total transactions

New-Order	44.80%
Payment	43.01%
Order-Status	4.05%
Delivery	4.07%
Stock-Level	4.08%

Keying/Think Times (in seconds)

	Keying Time			Think Time		
	Min.	Avg.	Max.	Min.	Avg.	Max.
New-Order	18.01	18.02	18.14	0.01	12.15	165.45
Payment	3.01	3.02	3.09	0.01	12.15	175.29
Order-Status	2.01	2.02	2.08	0.01	10.02	96.27
Delivery (interactive)	2.01	2.02	2.08	0.01	5.19	67.23
Stock-Level	2.01	2.02	2.08	0.01	5.14	51.50