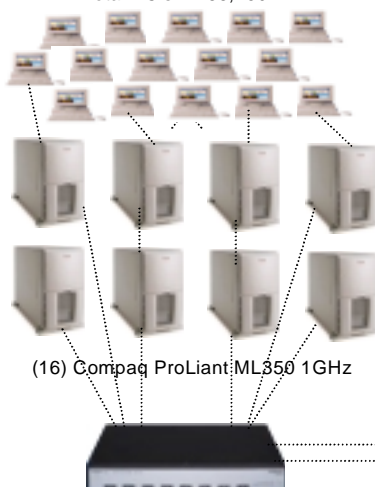
	Compaq AlphaServer GS320 32 CPU Client/Server System	TPC-C Rev. 5
		Report Date: June 25, 2001

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$10,286,029	230,533	\$44.62	July 30, 2001


Processors	Database	Operating System	Other Software	Number of Users
(32) 1001MHz Alphachip 21264A	Oracle9i, 9.0.1. Enterprise Edition and Real Applications Cluster with Partitioning for Tru64 UNIX	Compaq Tru64 UNIX V5.1	Compaq DB Web Connector V1.1	188,160

192 Ethernet Segments on 10/100 Mbps
980 Users per Segment
Total PC's - 188,160

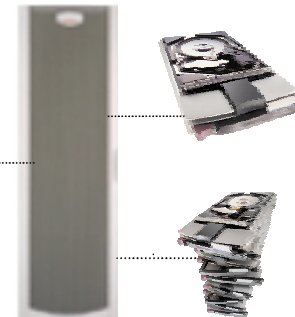


(16) Compaq ProLiant ML350 1GHz

(4) VH-8GB Verizon Horizontal Switch



Compaq AlphaServer GS320
32 CPU
256GB Memory



18	DS-SWXEB-AA
6	DS-RZ1EA-VW 18GB
1172	3R-A0584-AA 9GB
425	3R-A0585-AA 18GB
116	3R-A0527-AA 36GB

	System Components		Client Components (Each of 16)	
	Database Server, Compaq AlphaServer GS320		Compaq ProLiant ML350	
	Qty	Type	Qty	Type
Processors	32	68/1001 MHz Alphachip 21264A	2	1GHz Intel Pentium III
Cache Memory	8	MB Cache	1	512KB Cache
Memory	32	8 GB Memory	1	128MB Memory
Total Memory	256	GB Memory	2	256MB Memory
Disk Controllers	57	Fiber Storage Controllers		640MB Total Memory
Disks	1172	9 GB Disks	1	18GB Disk
	431	18 GB Disks		
	116	36 GB Disks		
Total Disk Storage	22.4	TB		



**AlphaServer GS320
Model 68/1001
32 CPU C/S System**

TPC-C Rev 5
EXECUTIVE SUMMARY

Report Date: June 25, 2001

Description	Part Number	Third Party Brand	Unit Price	Qty	Extended Price	3 Yr. Maint. Price
Server Hardware						
Compaq AlphaServer GS 320 6/1001 Model 32	DA-320EE-AA	1	466,200	1	466,200	296,168
GS 160/320 ADD-on 1GHz CPU	3X-KN8AB-AE	1	16,100	31	499,100	Inc.
GS 80/160/320 4GB MEM Module	3X-MS8AA-DB	1	23,400	32	748,800	Inc.
GS 80/160/320 4GB MEM DIM UP	3X-MS8AA-DU	1	19,800	32	633,600	Inc.
RH ULTRAS CSISHELF CAB SPLITB	BA36R-RD	1	1,078	1	1,078	Inc.
3M VHDCl to 68HD Cable Assy	BN38C-03	1	88	1	88	Inc.
PCI Fibre Adapter	DS-KGSA-CA	1	2,800	56	156,800	Inc.
PCI to UltraS CSI Adapter	KZPBA-CA	1	322	1	322	Inc.
1600 Watt Bulk Power Converter	H7506-AA	1	7,000	4	28,000	Inc.
GS 160/320 PCI Expansion Box	3X-DWWP A-SA	1	10,500	11	115,500	Inc.
System I/O Module	3X-KF WHA-AA	1	2,100	15	31,500	Inc.
GS 80/160/320 Expansion Cab	H9A20-AA	1	3,500	3	10,500	Inc.
15M Fibre Op Cable 50/125	234457-B23	1	159	56	8,904	Inc.
PCI to gbE SX Adapter	DEGP A-SA	1	1,364	8	10,912	Inc.
SC-SC DUAL FOCbl, MM, P.P., 4.5M	BN34B-4E	1	67	8	536	Inc.
EMA 12000 Storage Array	DS-SWXEB-AA	1	49,976	18	899,568	192,600
HS G80 FC Controller, w/o ECB Cable Kit 256 Cache w/Op	DS-HS G80-BK	1	11,547	108	1,247,076	Inc.
16 Port Fibre Switch	DS-DSGGB-AB	1	25,000	18	450,000	Inc.
Model 2200 ECB	DS-SE2CS-CB	1	207	108	22,356	Inc.
Short Wave Optical GBIC	380561B21	1	345	256	88,320	Inc.
15M Fibre Op Cable 50/125	234457-B23	1	159	216	34,344	0
18.2GB 7200/rpm UWS CSI Disk**	DS-R7EA-VW	1	837	8	6,696	Spared
9.1GB 10Krpm UWS CSI3 Disk**	3R-A0584-AA	1	403	1290	519,870	Spared
18.1GB 10Krpm UWS CSI3 Disk**	3R-A0585-AA	1	578	468	270,504	Spared
36.4GB 10Krpm UWS CSI3 Disk**	3R-A0919-AA	1	972	128	124,416	Spared
12/24gb 4MM DAT Tape	TLZ10-LB	1	637	1	637	862
VT 510, WHITE, NORTH AMER, NOKEY	VT 510-AA	1	427	1	427	0
US & Canada/English KB	PCLXA-NA	1	18	1	18	0
Vertical Horizon VH-8G Gigabit Ethernet Switch	VH-8G	2	5,246.25	6	31,478	Spared
SC Duplex to SC Duplex mm Fiber, PVC	9342125-10M	2	39.76	32	1,272	0
Subtotal					6,408,822	489,630
Server Software						
3YR TRU64UNIX BRZ 7X24	FM-W16US-36	1	19,055	1	19,055	19,055
3YR GS 160/320 TRU64 UNIX SMP	FM-W16SM-36	1	1,286	31	39,866	39,866
3YR Tru64Unix O/S & LP	FM-CDDST-36	1	6,765	1	6,765	6,765
HS G80 ACSsf All Lic/P CRM Pkg	QB-SBUAA-SA	1	4,900	108	529,200	
3YR 7X24 HS*80 SW Dual Controller	FM-DUAL6-36	1	10,209	54	551,286	551,286
3YR 7X24 HS*80 Platform SW	FM-PLAT2-36	1	844	54	45,576	45,576
TRU64 UNIX Alpha CDRM	QA-MT4AA-H8	1	277	1	277	
Oracle9i Enterprise Edition Real Application Cluster and Partitioning (3 year term)	Oracle	3	924,000	1	924,000	1,108,000
Subtotal					1,453,477	1,770,548
Client Hardware						
Compaq ProLiant ML350 1.0Ghz	160247-001	1	2,093	16	33,488	18,560
Pentium II P 1000-256k Processor	207068-B21	1	1,597	16	25,552	Inc.
512MB SDRAM DIMM Memory	128279-B21	1	1,168	16	18,688	Inc.
ProLiant ML350 Hot Plug Drive Cage	161275-B21	1	441	16	7,056	Inc.
18.2GB Wide Ultra 3 Drive	142673-B22	1	601	16	9,616	Inc.
SC-SC Dual FOCbl, MM, P.P., 4.5M	BN34B-4E	1	42	16	672	Inc.
Compaq NC3134 Fast Ethernet NIC 64 Dual Port 10/100	138603-B21	1	277	64	17,728	Inc.
Compaq NC3135 Fast Ethernet Mod Dual 10/100 upgrd for NC3134	138604-B21	1	221	48	10,608	Inc.
Compaq NC6132 Gigabit Module 1000 SX Upgrade for NC3134	338456-B23	1	551	16	8,816	Inc.
S510 15" Monitor NH US	168636-001	1	193	16	3,088	Inc.
Subtotal					135,312	18,560
Client Software						
Application Optimizer WNT Server Edition	QB-641AA-SA	1	315	16	5,040	4,640
Subtotal					5,040	4,640
Notes:** 10% Spares						
Subtotal					\$8,002,651	\$2,283,378
Three Year Cost of Ownership						\$10,286,029
1=IC System Solutions, 2=Enterasys Networks, 3= Oracle					tpmC Rating:	230,533.06
Audited by InfoSizing (www.infosizing.com)					\$ / tpmC:	\$44.62
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.						

Numeric Quantities Summary
AlphaServer GS320 Client/Server

MQTH

MQTH, computed Maximum Qualified Throughput	230533
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Response Times in seconds

Transaction	90th percentile	Average	Maximum
New-Order	1.337	0.674	11.644
Payment	1.385	0.746	8.362
Order-Status	1.337	0.679	7.432
Delivery (interactive)	0.785	0.362	5.586
Delivery (deferred)	1.844	0.758	11.265
Stock-Level	1.574	0.826	7.956
Menu	0.733	0.339	5.702

Transaction Mix in percent of total transactions

Transaction	Total Occurrences	Percentage
New-Order	27663967	44.981%
Payment	26447136	43.003%
Order-Status	2462929	4.005%
Delivery (interactive)	2462839	4.005%
Stock-Level	2464183	4.007%

Keying/Think Times in seconds

Transaction	Minimum	Average	Maximum
New-Order	18.000/0.000	18.000/12.002	18.155/119.981
Payment	3.000/0.000	3.000/12.002	3.145/120.007
Order-Status	2.000/0.000	2.000/10.003	2.144/ 99.958
Delivery (interactive)	2.000/0.000	2.000/ 5.001	2.144/ 49.975
Stock-Level	2.000/0.000	2.000/ 5.003	2.143/ 49.911

Emulation Delay in seconds

Transaction	Response Time	Menu Response Time
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

Test Duration

Ramp up time	60 minutes
Measurement interval	120:00.00 minutes
Number of checkpoints	4
Checkpoint interval	30 minutes
Number of transactions (all types) completed in measurement interval	61501054