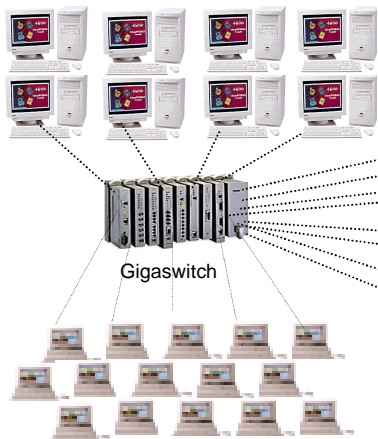


COMPAQ**ORACLE®**Compaq AlphaServer GS320
Model 6/731**32 CPU Client/Server System**TPC-C Rev. 5.0 Upgrade from
TPC-C Rev. 3.5**Report Date:** April 3, 2001
November 10, 2000 (Original)

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$8,205,964	155,179.25	\$52.88	February 2, 2001	
Processors	Database	Operating System	Other Software	Number of Users
(32) 731MHz Alphachip 21264A	Oracle v8.1.7 Enterprise Edition for Tru64 UNIX	Compaq Tru64 UNIX V5.1	Compaq DB Web Connector V1.1	135,040

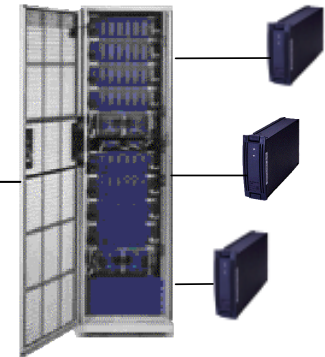
(8) Compaq ProLiant ML370s



133 Ethernet Segments
on 10/100 Mbps
Fast Ethernet
1,016 Users per Segment
Total PC's – 135,040



**Compaq AlphaServer GS320
Model 6/731- 32 CPU 128GB**



(18) 380620-001 Cabs
(854) DS-RZ1EA-VW (18GB)
(20) DS-RZ1DA-VW (9GB)

	System Components Database Server, Compaq AlphaServer GS320 Model 6/731		Client Components (Each of 8) Compaq ProLiant ML370	
	Qty	Type	Qty	Type
Processors	32	6/731 MHz Alphachip 21264A	2	600 MHz Intel Pentium III
Cache Memory		4MB Cache	1	512KB Cache
Memory	32	4 GB Memory	1	128MB Memory
Total Memory	128	GB Memory	2	256MB Memory
Disk Controllers	52	Fiber Storage Controllers		640MB Total
Disks	20	9.1GB Disks	1	18GB Disk
	854	18.1GB Disks		
Total Disk Storage	15,639.4	GB		



**AlphaServer GS320
Model 6/731
32 CPU C/S System**

TPC-C Rev 5.0
Upgrade from TPC-C Rev. 3.5
EXECUTIVE SUMMARY

Report Date: Apr. 3, 2001
Nov. 10, 2000 (Original)

Description	Part Number	Third Party Brand	Unit Price	Qty	Extended Price	3 Yr. Maint. Price	
Server Hardware							
Compaq AlphaServer GS320 6/731 Model 32	DA-320EC-AA		1	666,000	666,000	370,210	
GS160/320 ADD-on CPU UNIX SMP	3X-KN8AA-AD		1	23,000	713,000	Inc.	
GS80/160/320 2GB MEMORY OPT	3X-KN8AA-CB		1	26,000	832,000	Inc.	
GS80/160/320 2GB MEMORY UPG	3X-KN8AA-CU		1	22,000	704,000	Inc.	
PCI Fibre Adapter	DS-KGPSA-CA		1	4,000	208,000	Inc.	
PCI to Ultra SCSI Adapter	KZPBA-CA		1	460	920	Inc.	
D shf 180w Dif Blw Mtrc blue	DS-BA356-JF		1	1,464	2,928	Inc.	
16Bit SCSI for KZPSC/BA356	BN31S-1E		1	116	232	Inc.	
1600 Watt Bulk Power Converter	H7506-AA		1	10,000	40,000	Inc.	
GS160/320 PCI Expansion Box	3X-DWWPA-BA		1	12,000	96,000	Inc.	
GS80/160/320 Expansion Cab	H9A20-AA		1	5,000	10,000	Inc.	
15M Fibre Op Cable 50/125	234457-B23		1	227	11,804	Inc.	
PCI to gbE SX Adapter	DEGPA-SA		1	1,949	15,592	Inc.	
PCO Mempru Channel Two Controller	CCMAB-AA		1	2,990	2,990	Inc.	
SC-SC DUAL FO Cbl, MM, PP, 4.5M	BN34B-4E		1	96	768	0	
ESA 12000 Storage Array	380620-001		1	88,629	1,595,322	240,768	
15M Fibre Op Cable 50/125	234457-B23		1	227	32,688	0	
9.1GB 7200rpm UWSCSI Disk**	DS-RZ1DA-VW		1	650	13,650	Spared	
18.2GB 7200rpm UWSCSI Disk**	DS-RZ1EA-VW		1	1,195.45	1,123,723	Spared	
16 port Fibre Switch	DS-DSGGB-AB		1	35,714	464,282	158,600	
Short Wave Optical GBIC	3380561-B21		1	492	96,432	Inc.	
12/24gb 4MM DAT Tape	TLZ10-LB		1	1,135	1,135	1,078	
GS-Router 16 Slot Chassis	DGSRA-BA		1	9,995	19,990	5,184	
GS-R 64MB Switch Control Pro	DGSRC-BA		1	8,995	17,990	5,184	
GS/Rtr 2-P Geeth SX 16mB Line Card	DGSRs-AB		1	7,995	63,960	20,736	
GS/R 16-Slot Switching Fabric Module	DGSRD-AA		1	4,995	19,980	4,880	
GS/Rtr 8-P Fast Ethernet 16mb Line Card	DGSRT-AB		1	5,995	101,915	31,110	
VT510, WHITE, NORTH AMER, NO KEY	VT510-AA		1	395	395	0	
US & Canada/English KB	PCXLA-NA		1	25	25	0	
					Subtotal	6,855,721	837,750
Server Software							
3YR TRU64UNIX BRZ24x7	FM-W16US-36		1	23,819		23,819	
3YR GS160/320 TRU64 UNIX SMP	FM-W16SM-36		1	1,607	31	49,817	
3YR Tru64Unix O/S & LP	FM-CDDST-36		1	8,456	1	8,456	
HSG80 ACSsf All Lic/PCRM Pkg	128697-B21		1	7,000	72	504,000	
GIGAsw/Rtr All Lic/MCD Pkg	QB-64PAA-WA		1	3,995	1	3,995	
3YR 24X7 HS*80 SW Dual Controller	FM-DUAL6-36		1	12,761	36	459,396	
3YR 24X7 HS*90 Platform SW	FM-PLAT2-36		1	1,055	36	37,980	
TRU64 UNIX Alpha CDRM	QA-MT4AA-H8		1	395	1	395	
Oracle v 8.1.7 Enterprise Edition for Tru64 UNIX	Oracle		2	1,224,158	1	1,224,158	
					Subtotal	1,732,548	1,803,626
Client Hardware							
ML370T01 P600-256 128 US	195293-001		1	3,855	8	11,600	
Processor 600Mhz	128292-B21		1	1,005	8	8,040	
256MB SDRAM DIMM Memory	128278-B21		1	1,205	16	19,280	
Ethernet Dual Channel	338456-B21		1	285	8	2,280	
Gigabit Daughter CD Upgrade	338456-B23		1	570	8	4,560	
18GB Drive	388144-B22		1	556	8	4,448	
SC-SC DUAL FO Cbl, MM, PP, 4.5M	BN34B-4E		1	96	8	768	
V700 15" Color Monitor**	325900-001		1	125	10	1,250	
					Subtotal	71,466	11,600
Client Software							
Application Optimizer WNT Server Edition	QB-641AA-SA		1	450	8	2,880	
					Subtotal	3,600	2,880

ICS Discount: 38% on Server Hardware/Software based on volume.

(\$2,826,887)

ICS Discount: 20% on FM and FR numbers based on volume.

(\$286,340)

Subtotal

\$5,836,448

\$2,369,516

Three Year Cost of Ownership

\$8,205,964

1=IC System Solutions, 2=Oracle, 3= NetCruiser Technologies

tpmC Rating:

155,179.25

Audited by InfoSizing (www.infoSizing.com)

\$ / tpmC:

\$52.88

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 6/731 Client/Server

MQTH

MQTH, computed Maximum Qualified Throughput	155179
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Response Times in seconds

Transaction	90th percentile	Average	Maximum
New-Order	1.826	1.050	9.952
Payment	1.780	1.037	9.567
Order-Status	1.676	0.947	8.727
Delivery (interactive)	1.190	0.625	9.176
Delivery (deferred)	1.141	0.611	7.907
Stock-Level	1.989	1.223	9.755
Menu	1.202	0.607	9.234

Transaction Mix in percent of total transactions

Transaction	Total Occurrences	Percentage
New-Order	18621511	44.980%
Payment	17803546	43.004%
Order-Status	1658365	4.006%
Delivery (interactive)	1658112	4.005%
Stock-Level	1657747	4.004%

Keying/Think Times in seconds

Transaction	Minimum	Average	Maximum
New-Order	18.000/0.000	18.001/13.904	18.192/140.005
Payment	3.000/0.000	3.000/12.004	3.172/120.007
Order-Status	2.000/0.000	2.001/10.003	2.163/ 99.977
Delivery (interactive)	2.000/0.000	2.001/ 5.002	2.163/ 49.963
Stock-Level	2.000/0.000	2.001/ 5.003	2.163/ 49.920

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
Number of New Order transactions	18621511
Number of transactions (all types) completed in measurement interval	41399281