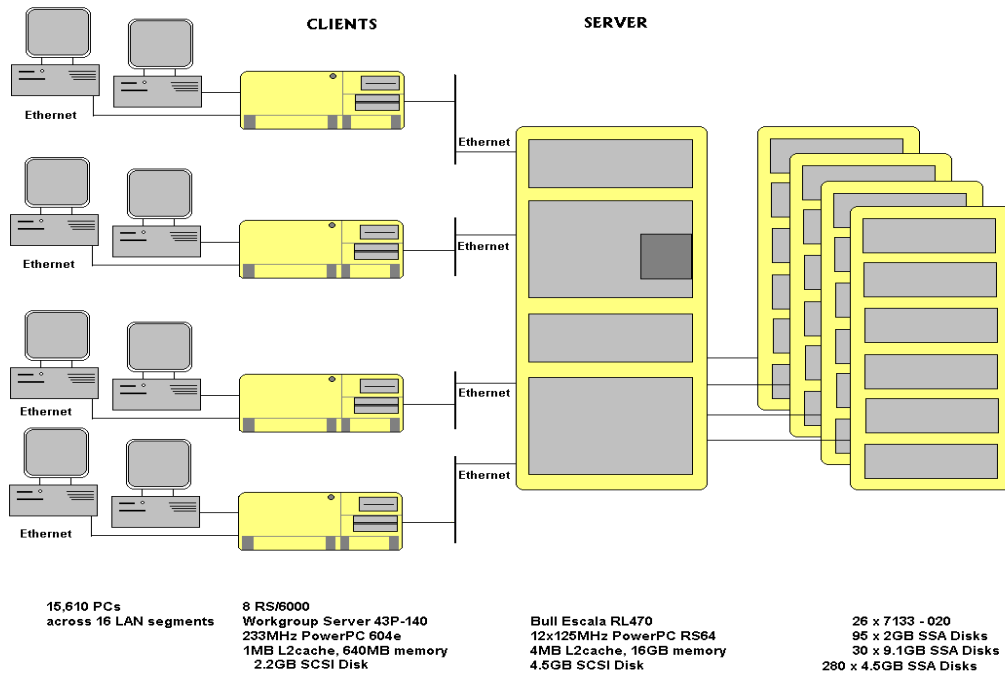


BULL S.A.	ESCALA RL470 C/S			TPC - C Rev.3.3
				Report Date March 25, 98
Total System	TPC - C Throughput		Price / Performance	Availability
\$ 2,177,811	18,666.73 tpmC		\$116.66/ tpmC	Now except: Oracle 8 : sep 2, 98
Processors	Data base Manager	Operating System	Other Software	Number of users
12 Power PC RS64 @125MHz	Oracle8 Enterprise Edition 8.0	AIX4.3.0	IBM TX Series 4.2 for AIX	15,610



System Components	Clients		Server	
	Qty	Type	Qty	Type
Processors	8	PPC 604e @ 233 MHz	12	Power PC RS64 @ 125 MHz
Cache		w/ 1 MB L2 cache		w/ 4 MB L2 cache
Memory (MB)		640 MB each		16 GB
Disk Controllers	8	SCSI-2 Adapters	3	SCSI -2 Adapters
Disk Drives	8	2.2 GB SCSI Disks	5	SSA Adapters
Total Storage (GB)		2.2GB each Client	376	4.5GB SSA Disks
Terminals	3	System Console	30	9.1 SCSI F/W Disks
Terminal Connect	863	Linksys 20 Port Ethernet Hubs + 10% spares		1,598.57 GB
			16	System Consoles

BULL S.A.	Bull Escala RL470 C/S			TPC-C REV 3.3.2			
				Report Date: March 25,1998			
Description	Part Number	Third Party	Unit Price	Quantity	Extended Price	5-year Maint. Price	
Server Hardware		Brand	Pricing				
RL470 Package incl.:12 x RS64 Proc., 16GB mem., AIX 2-user license, 9GB disk	CPXG213-0000	BULL	1	372847	1	372 847	40 416
Async/Terminal Cable	CBLG104-1600	BULL	1	100	1	100	0
Ethernet PCI Adapter	DCCG122-0000	BULL	1	275	9	2 475	864
Remote I/O cable - Drawer to drawer	CBLG182-1000	BULL	1	595	1	595	0
Drawer to drawer power control cable	CBLG184-1000	BULL	1	60	1	60	0
SCSI2 F/W PCI Adapter	MSCG031-0000	BULL	1	360	1	360	96
SSA RAID PCI Adapter	MSCG036-0000	BULL	1	3000	5	15 000	4 800
Rack I/O Drawer	DRWG007-0000	BULL	1	14900	1	14 900	4 656
System Rack Model R00	RCKG004-0000	BULL	1	3500	4	14 000	4 416
SSA Subsystem including 16 x 4.5 GB disk	SSAG005-0000	BULL	1	28067	23	645 541	266 064
SSA Subsystem including 10 x 9.1 GB disk	SSAG006-0000	BULL	1	27689	3	83 067	34 344
4.5 GB Disk Drive Modules	MSUG068-0000	BULL	1	2100	7	14 700	8 064
SSA Cables	CBLG164-1000	BULL	1	35	26	910	0
					Subtotal	1 164 555	363 720
Server Software							
AIX C Compiler	CLGG017-RAAA	BULL	1	575	1	575	288
Performance Toolbox	UTSG136-PA00	BULL	1	950	1	950	192
AIX 4.3 Server Library	EXSG150-SRCE	BULL	1	100	1	100	0
AIX 4.3 Bonus Pack	EXSG083-RA00	BULL	1	50	1	50	0
Oracle Version 8.0.4		Oracle	3	222721	1	222 721	222 721
					Subtotal	224 396	223 201
Client Hardware							
RS/6000 Model 43P-140, 233 MHz	7043-140	IBM	2	8000	8	64 000	26 880
2.1gb Disk, Intg SCSI-2 FW, Intg Enet							
128MB DIMM Memory	4106	IBM	2	1280	8	10 240	0
128MB DIMM Memory Expansion	4115	IBM	2	2560	32	81 920	0
Async Terminal/Printer Cable	2934	IBM	2	45	8	360	0
Ethernet Adapter, PCI	2985	IBM	2	195	8	1 560	0
3Com Fast Ethernet XL	2986	IBM	2	275	8	2 200	0
SYSTEM Console BQ306	CSUG002-2100	BULL	1	620	9	5 580	432
					Subtotal	165 860	27 312
Client Software							
AIX 4.2.1 Unlimited Users	5756-C34	IBM	2	3660	8	29 280	0
IBM TXSeries 4.2 for AIX with 25% Discount	5697-D17	IBM	2	3034	8	18 206	34 355
					Subtotal	47 486	34 355
User Connectivity							
Linksys 20-prt 10Mbps HUB (+10% spares)	EW20HUB	Linksys	4	119	863	102 697	0
					Subtotal	102 697	0
					15%Discount on BULL HW/SW	-175 772	
					TOTAL	1 529 223	648 588
Notes: Pricing: 1-Bull 2-IBM/Dickens 3-Oracle 4-CDW				Five-Year Cost of Ownership: \$2 177 811 tpmC Rating: 18666,73			
Audited by Francois Raab of Information Paradigm, Inc				\$/tpmC: 116,66			
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 reflects 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 BULL ESCALA RL470

MQTH, Maximum Sustained Qualified Throughput: 18,666.73 tpmC

Repeatability Run: 18,580.40 tpmC 0.5% difference

<u>Response Times (in seconds)</u>	<u>90th Percentile</u>	<u>Average</u>
New Order	3.57	1.56
Payment	3.23	1.31
Order-Status	3.24	1.31
Delivery (interactive)	0.2	0.12
Delivery (deferred)	4.99	2.02
Stock-Level	3.04	1.16
Menu	0.02	0.01

<u>Transaction Mix, in percent of total transactions</u>	<u>Percent</u>
New Order	44.69%
Payment	43.17%
Order-Status	4.06%
Delivery	4.05%
Stock-Level	4.00%

<u>Keying/Think Times (in seconds)</u>	<u>Min.</u>	<u>Average</u>	<u>Max.</u>
New Order	18.00/0.01	18.01/12.09	18.11/121.01
Payment	3.00/0.01	3.01/12.12	3.12/121.02
Order-Status	2.00/0.01	2.01/10.11	2.10/101.00
Delivery	2.00/0.01	2.01/5.12	2.01/51.01
Stock-Level	2.00/0.01	2.01/5.12	2.10/51.00

Test Duration

Ramp-up Time	42 min 45 sec
Measurement interval	30 minutes
Transactions during measurement interval (all types)	1,253,044
Ramp-down time	10 minutes

Checkpointing

Number of checkpoints	1
Checkpoint Interval	30