



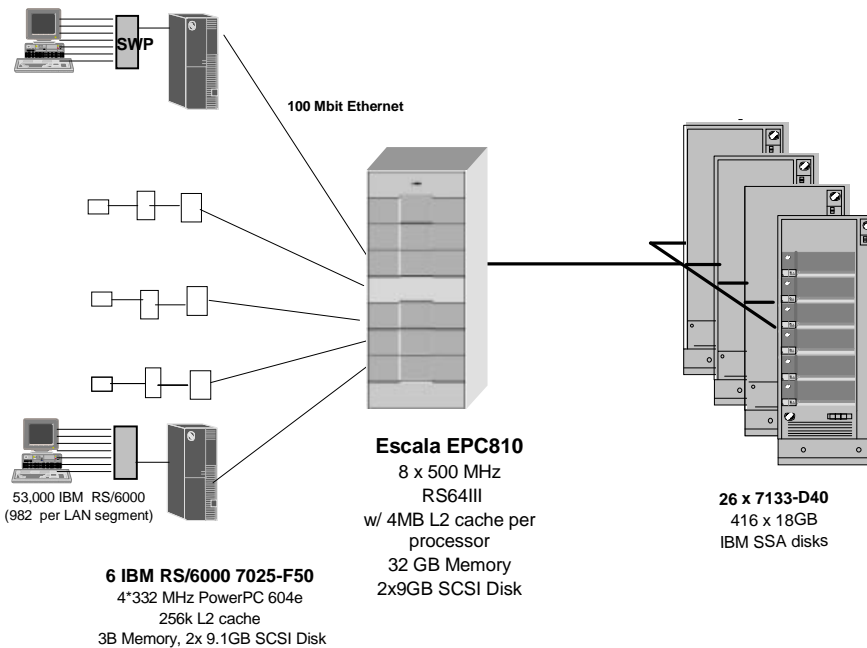
Bull Escala EPC 810 c/s

TPC-C Rev. 3.5


ORACLE

Report Date
June 19, 2000

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$3,037,499	66,750.27 tpmC	\$45.50/tpmC	September 30, 2000	
Processors	Database Manager	Operating System	Other Software	No. Users
6 x IBM RS64-III	Oracle Version 8.1.7	AIX 4.3.3 +APAR IY10778	Websphere Application Server Enterprise Edition Version 3.0	53



System Components	Clients		Server	
	Quantity	Description	Quantity	Description
Processor	6	4 x 332 MHz PowerPC 604e w/ 256KB L2 cache each	1	8 x 500 MHz RS64-III w/ 4MB L2 cache each
Memory		3 GB		32 GB
Disk Controllers	1	SCSI-2 integrated	1	SCSI-2 Integrated
			7	SSA Adapters
Disk Drives	2	9.1 GB SCSI each client	416	18 GB SSA disk
			2	9.1 GB SCSI Disk
Total Storage		16.93 GB each client		7 031.21 GB
Terminals	6	System Console	1	System Console
Term. Connect	7 306	8-Port Ethernet Hubs + spares		

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Description	Part Number	Source	Unit Price	Quantity	Extended Price	5-year Maint. Price	
Server Hardware							
ESCALA NODE EPC810 including AIX 4.3.3 license	CPSG027-0000	1	13 430	1	13 430	18 960	
MEMORY BOARD, 32 POSITION	MBRG006-0000	1	1 500	1	1 500	0	
Remote I/O Cable - 3m	CBLG202-1000	1	595	1	595	0	
Redundant Power Supply I/O Drawer (5EIA)	PSSG039-0000	1	725	1	725	0	
32X (Max) SCSI-2 Internal CD ROM drive	CDRG016-0000	1	375	1	375	0	
9,1 GB Ultra-SCSI Disk Drive (1"/7200rpm)	MSUG133-0000	1	1 160	2	2 320	0	
ETHERNET 10/100Mb/s PCI ADAPTER	DCCG137-0000	1	275	6	1 650	0	
4096MB (8x512MB DIMMS)	CMMG157-0000	1	53 248	8	425 984	0	
CPU Board with 4 RS64-3@500MHz - 4MB L2 cache	CPUG051-0000	1	85 000	2	170 000	40 320	
Power Regulator 190A (6&8 CPUs)	REFG002-0000	1	4 000	1	4 000	0	
Secondary I/O Drawer 5 EIA with :	DRWG017-0000	1	7 000	1	7 000	0	
Internal IPL Disk Mounting Hardware	CKTG133-0000	1	100	1	100	0	
Rack 36U (with one PDU)	RCKG005-0000	1	4 350	5	21 750	7 680	
ADDITIONAL POWER DISTRIBUTION UNIT- SING	PSSG028-0000	1	1 000	5	5 000	0	
3.5M CABLE LOCAL RS232 (D25F/D25M)	CBLG104-1600	1	73	1	73	0	
SYSTEM CONSOLE BQ 306 (White display, AZERT	CSUG002-1100	1	620	1	620	0	
Advanced SerialRAID Adapter	6230	2	3 000	7	21 000	0	
32MB Fast-Write Cache Option	6235	2	575	2	1 150	0	
SSA disk Subsystem, Black Cover	7133-D40	2	12 750	26	331 500	229 632	
50/60 Hz AC, 300 VDC Power Supply	8022	2	2 000	26	52 000	0	
Prestige EXT10000VA,110-127V,50/60Hz	9910-U01	2	698	1	698	0	
18.2GB Advanced DiskDriver Modules	8518	2	4 500	416	1 872 000	0	
SSA Cables	8802	2	125	26	3 250	0	
Subtotal					2 936 720	296 592	
Server Software							
C FOR AIX V4.4 (64 bits & SMP)- 1 CONCUR ACC	CLGG020-RAAA	1	779	1	779	0	
C FOR AIX V4.4 (64 bits & SMP) - MEDIA & DOC	CLGG020-SRAE	1	48	1	48	0	
PERFORMANCE AIDE FOR AIX 4.3 LICENCE - QT	UTSG135-RA0A	1	450	1	450	0	
Oracle Version 8.1.7 64 bits		3	363420	1	363 420	363 420	
Subtotal					364 697	363 420	
Client Hardware							
RS/6000 Model F50	7025-F50	2	13900	6	83 400	66 240	
IntgSCSI-2FW,IntgEnet,CDROM					0		
2x9.1GB 1" Ultra SCSI Disk (2919)	2908	2	1510	6	9 060	0	
AsyncTerminal/Cable	2934	2	45	6	270	0	
10/100Mbps Ethernet Adapter, PCI	2968	2	275	18	4 950	0	
Memory Expansion Feature	4093	2	1038	6	6 228	0	
256MB SDRAM DIMM Memory	4106	2	1280	6	7 680	0	
256MB SDRAM DIMM Memory	4110	2	2560	66	168 960	0	
2-way 332MHz, 512KB L2	4357	2	3000	6	18 000	14 688	
2-way 332MHz, 512KB L2	4359	2	10000	6	60 000	31 968	
Media Bay Disk Drive Mounting Kit	6509	2	50	6	300	0	
IBM ASCII Terminal, Keyboard, Cable	3153-BG3	2	577	6	3 462	2 424	
Subtotal					362 310	115 320	
Client Software							
AIX 4. Unlimited Users	5756-C34	2	50	6	300	0	
IBM Websphere Application Server Enterprise Editio	41L3462	2	3075	6	18 450	0	
Subtotal					18 750	0	
User Connectivity							
8port Ethernet Switch + 2 Spare	Nbase	4	327	8	2 616	523	
OptiSwitch-800 Chassis + 2 Spare	Nbase	4	897	3	2 691	538	
Ethernet Hub (8port) + 10% Spares	HB1009DX/P	5	25	7306	182 650		
Subtotal					187 957	1 061	
Discounts					-1 485 273	-124 055	
TOTAL					2 385 161	652 338	
Notes: Pricing: 1-Bull 2-IBM 3-Oracle 4-NBase 5-NetcruiserTech.Inc				Five-Year Cost of Ownership: \$3 037 499 tpmC Rating: 66750,27			
Audited by Francois Raab of InfoSizing				\$ / tpmC: 45,50			
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 the Bull ESCALA EPC 810

MQTH, computed Maximum Qualified Throughput: 66,750.27 tpmC

Repeatability Run: 66,738.70 tpmC 0.017% difference

<u>Response Times (in seconds)</u>	<u>90th %</u>	<u>Average</u>	<u>Maximum</u>
New Order	0.85	0.39	105.10
Payment	0.77	0.34	105.46
Order-Status	0.83	0.37	101.69
Delivery (interactive)	0.19	0.11	2.62
Delivery (deferred)	1.18	0.48	8.03
Stock-Level	1.19	0.66	106.34
Menu	0.01	0.00	2.47

Transaction Mix, in percent of total transactions

	<u>Percent</u>
New Order	44.88%
Payment	43.01%
Order-Status	4.05%
Delivery	4.02%
Stock-Level	4.02%

Keying/Think Times (in seconds)

	<u>Min.</u>	<u>Average</u>	<u>Max.</u>
New Order	18.00/0.01	18.01/12.03	18.12/120.21
Payment	3.00/0.01	3.01/12.01	3.15/120.21
Order-Status	2.00/0.01	2.01/10.00	2.14/100.11
Delivery	2.00/0.01	2.01/5.01	2.11/50.20
Stock-Level	2.00/0.01	2.01/5.01	2.10/50.21

Test Duration

Ramp-up Time	39 min 55 sec
Measurement interval	30 minutes
Transactions during measurement interval (all types)	4,461,742
Ramp-down time	10 minutes

Checkpointing

Number of checkpoints	1
Checkpoint interval	29 min 41 sec