Itautec	**Servidor Itautec ZX400 4P C/S with Servidor Itautec LX210 1P**	**TPC-C Rev. 5.5**
		Report Date: 12/01/2005

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
R$ 1,350,250.01 BRL	**85,858**	**R$ 15.34 BRL / tpmC:**	**11/30/2005**

Processors	Database Manager	Operating System	Other Software	Number of Users
4 Intel Xeon EM64T @ 3GHz 2+2M - Server 1 Intel Xeon EM64T 3.06 GHz - Client	Microsoft SQL Server 2005 Enterprise Edition	Windows Server 2003 Enterprise Edition	Microsoft Visual C++ Microsoft COM+	**68,000**

8-port 3COM 3C16477 Gigabit Switch

Target Server
Servidor Itautec ZX400, 32GB RAM, 4 x Dual Core Intel Xeon EM64T @ 3GHz 2+2M, LSI 53C1030 SCSI 3 Ultra320 controllers w/ 1 36.4GB 15Krpm drives in internal bays

Storage
18 Storage S320
238 36.4GB 15 Krpm drives
14 73 GB 15 Krpm drives

Client
Servidor Itautec LX210
Intel Xeon EM64T 3.06GHz/1MB
1GB RAM
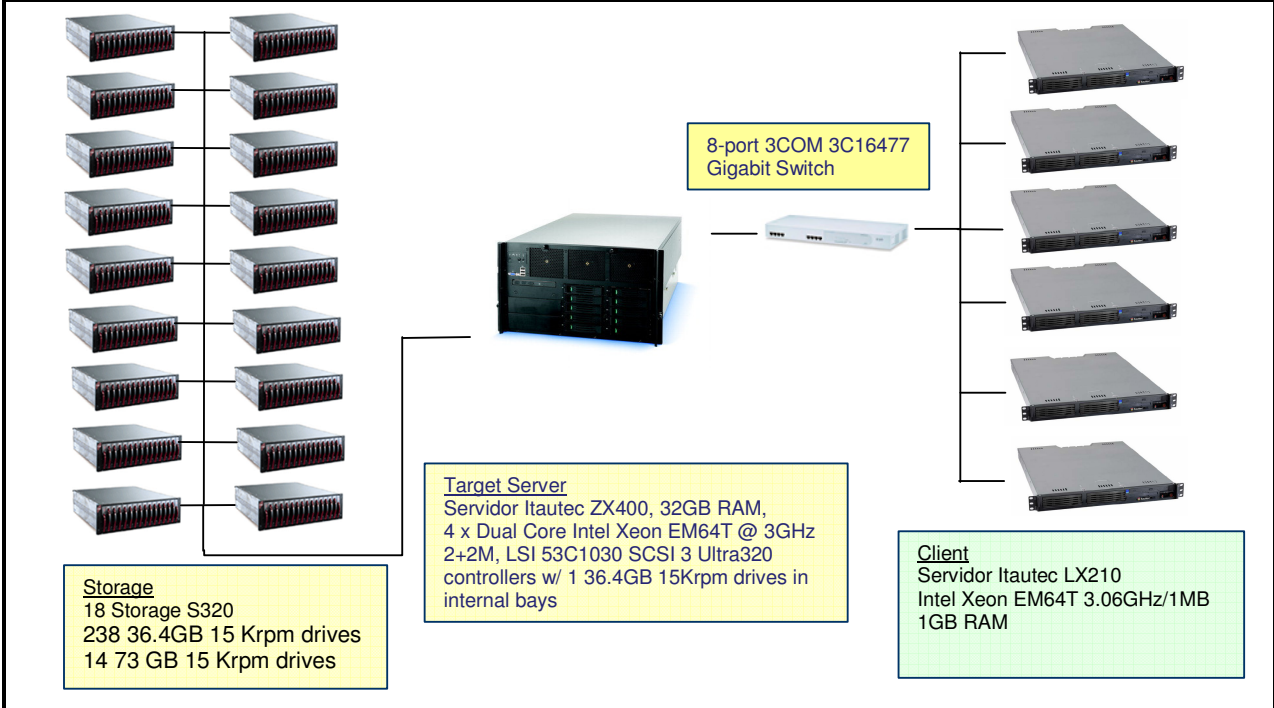
System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processor	4	3.0 GHz Intel Xeon EM64T 2+2M w/ 2 MB cache / 800 MHz FSB	1	3.06 GHz Intel Xeon EM64T w/1MB cache
Memory	16	2GB Register DDR2 @ 400MHz	2	512 MB Register ECC DDR DIMM @ 266 MHz
Disk Controllers	4 2 1	LSI Logic MegaRAID SCSI 320-2E LSI Logic MegaRAID SCSI 320-4X LSI Logic MegaRAID SCSI 320-2X	1	Intel® 82801EB I/O Controller Hub 5
Disk Drives	238 14	36.4 GB SCSI Drive 15 Krpm 73 GB SCSI Drive 15 Krpm	1	80 GB 7200 SATA Drive
Total Storage		8845.2 GB		80 GB

Numerical Quantities Summary

MQTh, Computed Maximum Qualified Throughput   **85,858 tpmC**

Response Times (in seconds)

	Average	90 th	Max
New Order	0.20	0.33	5.15
Payment	0.14	0.22	1.21
Order Status	0.18	0.29	4.40
Delivery (interactive)	0.10	0.11	0.82
Delivery (deferred)	0.16	0.33	4.30
Stock Level	0.23	0.41	2.09
Menu	0.10	0.11	1.09

Response time delay added for emulated components

Menu 0.1
Resp. 0.1

Transaction Mix, in percent of total transactions

New Order	44.91%
Payment	43.04%
Order-Status	4.01%
Delivery	4.02%
Stock-Level	4.02%

Keying/Think Times (in seconds)

	Min		Average		Max	
New Order	18.02	0.00	18.03	12.06	18.15	120.53
Payment	3.02	0.00	3.03	12.06	3.15	120.53
Delivery	2.02	0.00	2.03	5.08	2.15	50.52
Stock Level	2.02	0.00	2.03	5.07	2.15	50.53
Order Status	2.02	0.00	2.03	10.06	2.15	100.53

Test Duration

Ramp-up time	34 minutes
Measurement interval	120 minutes
Number of checkpoints	4
Checkpoint interval	30 minutes
Number of transactions (all types) completed in measurement interval	23.862.034

Itautec	**Servidor Itautec ZX400 4P**					**TPC-C Rev. 5.5**	
						Report Date: Dec 01, 2005	

Description	Part Number	Third Party Brand	Pricing	Unit Price R$	Quantity	Extended Price	3 yr. Maint. Price
Server Hardware							
Servidor Itautec **ZX400** 4P							
Base System with 4 x **Xeon MP 3.0 GHz/2x2MB 667**	**I6950**	Itautec	1	**104.355**	1	104.355	-
2 GB DDR2-400 SDRAM	I2393	Itautec	1	5.132	16	82.112	-
36 GB Ultra320 15Krpm HDD	Included	Itautec	1	-	2	-	-
On-Board LAN Broadcom NetXtreme 1000Gbps	Included	Itautec	1	-	2	-	-
CD-ROM, Internal SCSI Adapter	Included	Itautec	1	-	1	-	-
Upgrade to 3-year / 4-hour response / 7days - 24hrs	2106_05	Itautec	1	4.500	1	-	4.500
Monitor 15" Sync Master 591S	I1555	Itautec	1	390	1	390	-
UPS SMART APC 1	F2643	Itautec	1	1.800	1	1.800	-
					Subtotal	188.657	4.500
Disk Subsystem							
SCSI RAID Controller U320 2-channel PCI-E	I1710	Itautec	1	4.849	4	19.396	-
SCSI RAID Controller U320 2-channel PCI-X	G7622	Itautec	1	4.038	1	4.038	-
SCSI RAID Controller U320 4-channel PCI-X	G7624	Itautec	1	7.918	2	15.836	-
36 GB Ultra320 15K rpm	F6853	Itautec	1	2.728	238	649.264	-
73 GB Ultra320 15K rpm	F4641	Itautec	1	3.583	14	50.162	-
36 GB Ultra320 15K rpm (10% spare)	F6853	Itautec	1	2.728	24	-	65.472
73 GB Ultra320 15K rpm (10% spare)	F4641	Itautec	1	3.583	2	-	7.166
Storage Itautec S320	F1781	Itautec	1	20.321	18	365.783	-
Kit Rack for Storage	F1390	Itautec	1	345	18	6.210	-
Rack Itautec F2400	F2400	Itautec	1	5.281	3	15.843	-
					Subtotal	1.126.532	72.638
Server Software							
Microsoft Windows 2003 Server Enterprise Edition x64	P72-00981	Microsoft	1	10.434	1	10.434	-
SQL Server 2005 Standard Edition 32 bits	81852	Microsoft	1	16.460	1	16.460	-
					Subtotal	26.894	-
Client Hardware							
Servidor Itautec LX-210							
Base System with 1 x Xeon EM64T 3.06GHz/1MB	C0V4F	Itautec	1	6.123	6	36.741	-
1 x XEON EM64T 3.06GHz/1MB BTO Option	G9230	Itautec	1	1.123	6	6.741	-
2 x 512MB Memory	Included	Itautec	1	-	6	-	-
1 x 80GB SATA 7200rpm	Included	Itautec	1	-	6	-	-
2 x Intel Pro/1000 Server Adapter	Included	Itautec	1	-	6	-	-
CD-ROM, On-Board LAN	Included	Itautec	1	-	6	-	-
Upgrade to 3-year / 4-hour response / 7days - 24hrs	001839	Itautec	1	357	6	-	2.142
Monitor 15" SYNC MASTER 551S	E9801	Itautec	1	410	6	2.460	-
					Subtotal	45.941	2.142
Client Software							
Microsoft Windows 2003 Server Standard Edition 32 bits	H0085	Microsoft	1	3.000	1	3.000	-
Visual C++ .NET Standard	254-00257	Microsoft	1	336	1	336	-
					Subtotal	3.336	-
Network components							
Switch 16P Baseline 10/100/1000	G9949	Itautec	1	2.100	2	4.200	-
Switch 16P Baseline 10/100/1000 (spares)	G9949	Itautec	1	2.100	2	4.200	-
					Subtotal	4.200	-
					TOTAL	1.395.561	79.280
Large volume purchase with cash in advance Discount on Itautec Hardware (11.58%)						158.105	
					TOTAL	1.237.455	79.280

Pricing: 1 - Itautec

3-Yr. Cost of Ownership: R$ 1.316.735,23 BRL

tpmC Rating: 85858

R$ / tpmC: 15,34

Audited By Lorna Livingtree of Performance Metrics Inc.