	PRIMERGY R450 C/S with **3** PRIMERGY C200		TPC-C REV 5.0 EXECUTIVE SUMMARY
FUJITSU			Report Date: January 21, 2003
Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
Yen 78,549,210	**68,264.47 tpmC**	**Yen 1,150.66/tpmC**	**July 20, 2003**

Processors	Database Manager	Operating System	Other Software	Number of Users
Server 4 Intel Xeon™ MP 2.00 GHz with 2M iL3 Cache Client 3 x 2 Intel Pentium® III 1400 MHz with 512 KB SLC	**Microsoft SQL Server 2000 Enterprise Edition SP3**	**Microsoft Windows .NET Server 2003 Enterprise Edition**	**Windows 2000 Server, IIS 5.0 and COM+**	**55000**

Terminals:
55000 User

Client:
2 x PRIMERGY C200
18300 users per client
1 x PRIMERGY C200
18400 users per client

Server:
PRIMERGY R450
7 SCSI Controller

Storage:
25 x PRIMERGY S30
288 disk 18GB
10 disks 36 GB
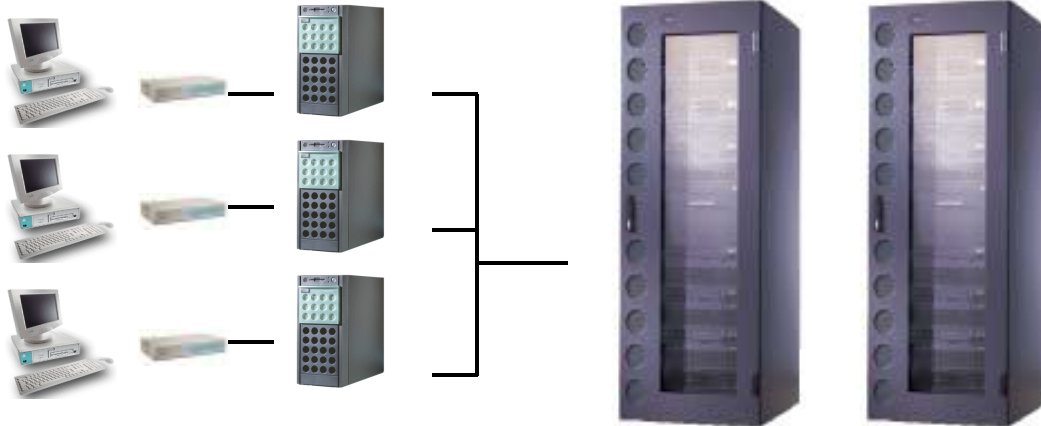
100 Mbs   **2 Gb/s FC Switch**

System Components	Qty/Srv.	1 PRIMERGY R450	Qty/Client	3 PRIMERGY C200
Processors	**4**	**Intel Xeon™ MP 2.00 GHz with 2M iL3 Cache**	**2**	**Intel Pentium® III 1400 MHz with512 KB SLC**
Memory	**16**	**GB**	**768**	**MB**
Disk Controller	**7**	**Mylex eXtremeRAID 2000**	**1**	**SCSI Controller**
Disk Drives	**289** **10**	**18 GB** **36 GB**	**1**	**18 GB**
Total GB of Storage	**1**	**4,865 GB**		
Tape Drive	**1**	**20 GB DAT**		

Description	Part Number	Third Party Brand Pricing	Unit Price	Qty.	Extended Price	3yr Maint. Price
PRIMERGY R450 Xeon-MP 2.0GHz/2MB	PGR4AE1R2	1	1,421,000 Yen	1	1,421,000 Yen	
Processor Xeon MP 2.0 GHz/2MB	PGBFG21E	1	952,000 Yen	3	2,856,000 Yen	
Memory 512MB => 4GB Conversion Kit	PGBRU4M2	1	1,120,000 Yen	3	3,360,000 Yen	
Memory 4GB	PGBRM4M2	1	1,190,000 Yen	3	3,570,000 Yen	
Tape DAT DDS4 20GB	GP5SDT401	1	140,000 Yen	1	140,000 Yen	
18GB, 15k, U160, Hot plug, 1"	PG-HDH85B2	1	84,000 Yen	1	84,000 Yen	
Mylex eXtremeRAID 2000 4x U160 SCSI, BBU	PG-144B	1	294,000 Yen	7	2,058,000 Yen	
Keybord	GP5-R1KB1	1	14,000 Yen	1	14,000 Yen	
Monitor 15"	FMV-DP849W	1	16,100 Yen	1	16,100 Yen	
PRIMERGY S30 GE RH 2-Channel U160 SCSI	PG-R1DC6	1	238,000 Yen	1	238,000 Yen	
SCSI Cable UHD68(S)	PG-CBLS004	1	21,000 Yen	2	42,000 Yen	
3 Year Maintenance Server, 7x24, 4hr Resp.						2,831,570 Yen
Server Hardware Subtotal					13,799,100 Yen	
DataCenter Rack	PG-R3RC1	1	238,000 Yen	3	714,000 Yen	
APC-USV 3000VA Rack	GP5-R1UP3	1	271,600 Yen	2	543,200 Yen	
18GB, 15k, U160, Hot plug, 1"	PG-HDH85B2	1	84,000 Yen	288	24,192,000 Yen	
36GB, 15k, U160, Hot plug, 1"	PG-HDH65B	1	175,000 Yen	10	1,750,000 Yen	
PRIMERGY S30 GE RH 1-Ch	PG-R1DC6BZ	1	238,000 Yen	24	5,712,000 Yen	
SCSI Cable UHD68 (S)	PG-CBLS005	1	28,000 Yen	24	672,000 Yen	
3 Year Maintenance Storage, 7x24, 4hr Resp.						6,891,270 Yen
Storage Subtotal					33,583,200 Yen	
Maint. Server + Storage						9,722,840 Yen
PRIMERGY C200 GE FS PIII 1.26GHz/512KB	PGC2CP1A2	1	210,000 Yen	3	630,000 Yen	
Processor Pentium III 1.26GHz => 1.4GHz	PGBFU12V	1	35,000 Yen	3	105,000 Yen	
Pentium III Processor 1.4GHz 512kB	PGBFG12V	1	140,000 Yen	3	420,000 Yen	
Memory 512MB SDRAM PC133 ECC	PGBRM51HA	1	70,000 Yen	3	210,000 Yen	
Hard Disk 18GB, 10k, U160, hot plug, 1"	PG-HDH81B2	1	56,000 Yen	3	168,000 Yen	
Monitor 15"	FMV-DP849W	1	16,100 Yen	3	48,300 Yen	
3 Year Maintenance, 7x24, 4hr Resp.						324,480 Yen
Client Hardware Subtotal					1,581,300 Yen	324,480 Yen
Windows .NET Enterprise Server 2003 (open program no level)	N/A	1	567,200 Yen	1	567,200 Yen	
MS SQL-Server 2000 Ent.Edit. Per Proc Lic. (open program level C)	B293C80Y0	1	2,791,700 Yen	4	11,166,800 Yen	
Server Software Subtotal					11,734,000 Yen	
Windows Svr 2000 (open program no level)	B511C02A2	1	142,000 Yen	3	426,000 Yen	
VC++ Pro 6.0 Win32	B298C2033	1	84,600 Yen	1	84,600 Yen	
Client Software Subtotal					510,600 Yen	
Software Support (all above)						3,140,730 Yen
FC Switch 8 Port, 2GBit	SN20M215	1	1,134,250 Yen	1	1,134,250 Yen	
FC GBIC SFP Multi Mode 2 GB	SN20SWSFP	1	42,250 Yen	4	169,000 Yen	
FC Cabel MMF 5m, Connector DLC-DLC	CBL-MLLB05	1	22,750 Yen	4	91,000 Yen	
Qlogic 2350	PG-FC104Z	1	490,000 Yen	4	1,960,000 Yen	
3 Year Maintenance FC, 7x24, 4hr Resp.						798,710 Yen
User Connectivity Subtotal					3,354,250 Yen	
Total					64,562,450 Yen	13,986,760 Yen

1=Fujitsu

Prices used in TPC bechmarks 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 section of the TPC benchmark pricing 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.

3 -Year Cost of Ownership:	Yen 78,549,210
tpmC Rating:	68,264.47
Yen / tpmC:	1,150.66

Note: The benchmark results and test methodology were audited by Bradley Askins of InfoSizing

Numerical Quantities Summary

MQTh, computed Maximum Qualified Throughput		68,264.47 tpmC	
Response Times (in seconds)	**90th percentile**	**Average**	**Maximum**
- New-Order	**0.95**	**0.58**	**5.61**
- Payment	**0.88**	**0.52**	**5.47**
- Order-Status	**0.89**	**0.53**	**6.00**
- Delivery (interactive portion)	**0.12**	**0.11**	**0.59**
- Delivery (deferred portion)	**0.55**	**0.31**	**1.77**
- Stock-Level	**1.78**	**1.29**	**5.50**
- Menu	**0.12**	**0.11**	**1.20**
Transaction Mix, in percent of total transactions			
- New-Order			**44.91 %**
- Payment			**43.03 %**
- Order-Status			**4.02 %**
- Delivery			**4.02 %**
- Stock-Level			**4.02 %**
Emulation Delay (in seconds)		**Response Time**	**Menu**
- New-Order		**0.1**	**0.1**
- Payment		**0.1**	**0.1**
- Order-Status		**0.1**	**0.1**
- Delivery (interactive)		**0.1**	**0.1**
- Stock-Level		**0.1**	**0.1**
Keying/Think Times (in seconds)	**Minimum**	**Average**	**Maximum**
- New-Order	**18.00/0.000**	**18.02/12.05**	**18.04/120.51**
- Payment	**3.00/0.000**	**3.02/12.04**	**3.04/120.51**
- Order-Status	**2.00/0.000**	**2.02/10.02**	**2.04/100.50**
- Delivery (interactive)	**2.00/0.000**	**2.02/ 5.05**	**2.03/ 50.50**
- Stock-Level	**2.00/0.000**	**2.02/ 5.06**	**2.04/ 50.50**
Test Duration and Checkpointing			
- Ramp-up time		**46 minutes**	
- Measurement interval		**120 minutes**	
- Number of checkpoints		**4**	
- Checkpoint interval		**30 minutes**	
- Transactions during measurement interval (all types)		**18,971,511**	