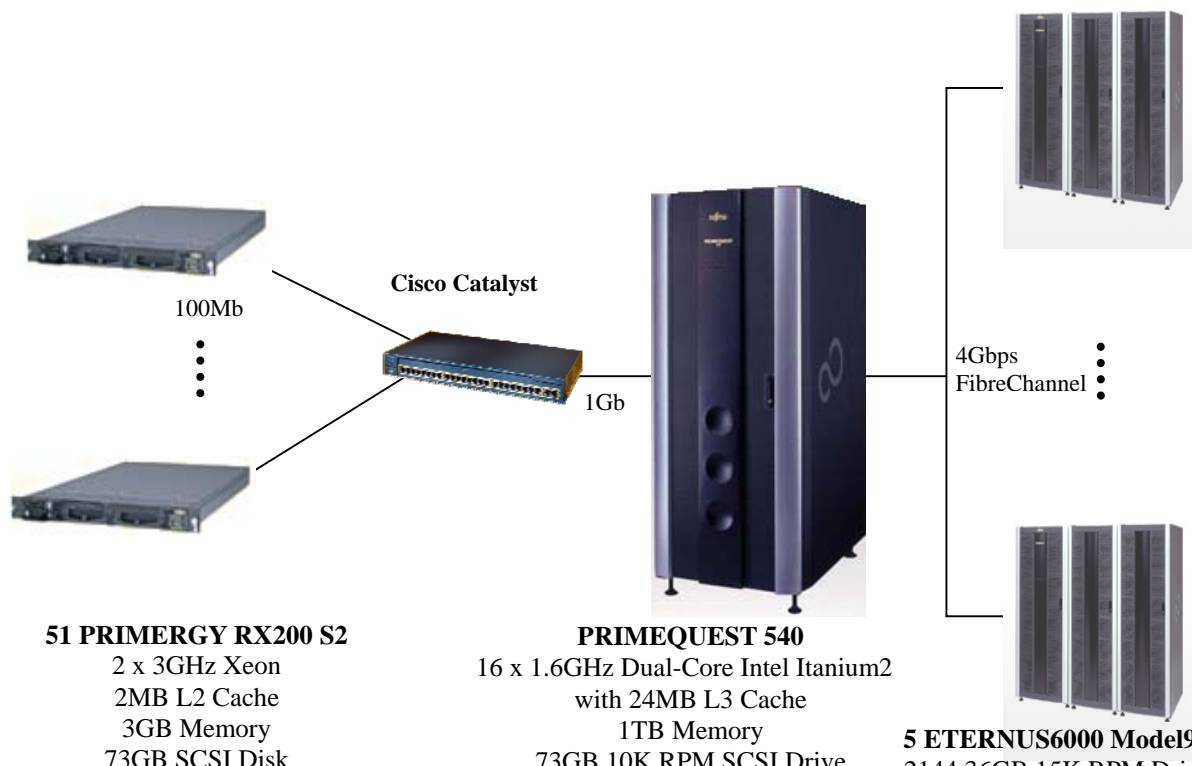
	PRIMEQUEST 540 c/s w/51 Front-Ends		TPC-C Rev 5.7	
			Report Date: November 30, 2006	
Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$4,875,856 USD	1,238,579 tpmC	\$3.94 USD/tpmC	December 15, 2006	
Database Server Processors/Cores/Threads	Database Manager	Operating system	Other Software	Number of users
16/32/64 Dual-Core Intel Itanium 2 1.6GHz	Oracle Database 10g Enterprise Edition	Red Hat Enterprise Linux 4 AS	BEA Tuxedo 8.1	989,910
 <p>The diagram illustrates the system architecture. On the left, 51 PRIMERGY RX200 S2 servers are connected to a Cisco Catalyst switch at 100Mb. The switch is connected to a PRIMEQUEST 540 server rack at 1Gb. The PRIMEQUEST 540 rack is connected to 5 ETERNUS6000 Model900 server racks via 4Gbps FibreChannel.</p>				
<p>51 PRIMERGY RX200 S2 2 x 3GHz Xeon 2MB L2 Cache 3GB Memory 73GB SCSI Disk</p> <p>PRIMEQUEST 540 16 x 1.6GHz Dual-Core Intel Itanium2 with 24MB L3 Cache 1TB Memory 73GB 10K RPM SCSI Drive</p> <p>5 ETERNUS6000 Model900 2144 36GB 15K RPM Drives</p>				
System Component	Qty	Server:	Qty	Each of 51 Clients:
Processors/Cores/Threads	16/32/64	1.6GHz Dual-Core Intel Itanium2	2/2/4	3GHz Intel Xeon
Cache Memory		24MB L3 Cache		2MB L2 Cache
Memory	32	32GB (4 x 8GB DDR2-400)	3	1GB (2 x 512MB PC-3200)
Disk Controllers	20	4G bps Fibre Channel (used at 2Gbps)	1	SCSI controller
Disk Drives	1 2144	73GB 10K rpm 36GB 15K rpm	1	73 GB 10K rpm
Total Storage		77,257 GB		4,599 GB



**PRIMEQUEST 540 c/s
w/51 Front-Ends**

TPC-C Rev 5.7
Report Date: November 30, 2006

Server Hardware	Part Number	Qty	Source	Unit Price	Ext. Price	3 Yr. Maint.
PRIMEQUEST 540 Base Unit	MC4B0P211U	1	1	14,000.00	14,000.00	20,208.00
System Board	MC-87SB11	4	1	18,000.00	72,000.00	
CPU Module(Dual core Itanium 2 1.6GHz/24MB L3/533MHz FSB)	MC-01EA114	16	1	20,900.00	334,400.00	77,952.00
32GB Memory Module (4x8GB DDR2-400)	MC-02A6114	32	1	32,880.00	1,052,160.00	
I/O Unit	MC-87UX11	4	1	15,000.00	60,000.00	
BMC Module	MC-87BM11	1	1	1,720.00	1,720.00	
Disk Drive Unit (3.5inch, 73GB, 10,000rpm, Ultra320)	MC-03D321	1	1	680.00	680.00	
Gigabit Switch Board (w/ 8 external 1000Base-T ports)	MC-87GE11	2	1	11,850.00	23,700.00	
PCI-Box	MC-07PB21U	1	1	20,700.00	20,700.00	
External I/O Cabinet	MC-87PK11U	1	1	20,850.00	20,850.00	
PCI Unit	MC-07PU21	2	1	5,170.00	10,340.00	
PCI Unit Cable (5m)	MC-07CA11	2	1	890.00	1,780.00	
FibreChannel Card (4Gbps, PCI-X, dual port)	MC-08FC41	20	1	4,270.00	85,400.00	
FibreChannel Cable (15m, LC-LC)	CBL-MLLB15	20	1	330.00	6,600.00	
Flag Panel Display	MC-07FL21	1	1	4,830.00	4,830.00	
USB Keyboard	MC-07KB11	1	1	480.00	480.00	
USB Mouse	MC-07MU11	1	1	80.00	80.00	
Server Hardware Subtotals					1,709,720.00	98,160.00

Storage	Part Number	Qty	Source	Unit Price	Ext. Price	3 Yr. Maint.
ETERNUS6000 Model900 Base Unit w/ 2 Controllers, 8 Drive Enclosures, 4 Device Adapters	E690S01AU	5	1	195,000.00	975,000.00	428,640.00
Additional Expansion Rack	E600CR3U	10	1	8,000.00	80,000.00	
Additional Controller w/ Power Supply	E600CJ3U	5	1	16,000.00	80,000.00	
Additional Controller w/ Power Supply	E600CJ4U	5	1	16,000.00	80,000.00	
Cache Memory (4x2GB)	E600CM41	5	1	108,600.00	543,000.00	
FibreChannel Host Interface (2Gbps, 2 x dual port)	E600CH14	20	1	12,800.00	256,000.00	
Drive Enclosure Set (4 units) w/ 2 Device Adapters	E690SE22U	10	1	39,400.00	394,000.00	
Drive Enclosure Set (4 units)	E600CE21U	20	1	31,000.00	620,000.00	
Disk Drive Unit (36GB, 15,000rpm)	E600CA2	2144	1	1,000.00	2,144,000.00	
Storage Subtotals					5,172,000.00	428,640.00

Server Software	Part Number	Qty	Source	Unit Price	Ext. Price	3 Yr. Maint.
Red Hat Enterprise Linux 4 AS (for Intel Itanium)	MCT0738US	1	1	7,497.00	7,497.00	5,130.00
Oracle Database 10g Enterprise Edition, Per Processor, Unlimited Users, 3 years		16*	2	20,000.00	320,000.00	
Oracle Database Server Support Package for 3 years		3	2	2,000.00	6,000.00	
Server Software Subtotals					327,497.00	11,130.00

Client Hardware	Part Number	Qty	Source	Unit Price	Ext. Price	3 Yr. Maint.
PRIMERGY RX200 S2 (Xeon 3GHz,1GB mem,2x1000Base-T)	S26361-K942-V211	51	1	1,947.00	99,297.00	34,650.00
CPU Module (Xeon 3GHz)	S26361-F3099-E400	51	1	523.20	26,683.20	
1GB Memory Module (2 x 512MB PC2-3200)	S26361-F3072-E521	102	1	264.00	26,928.00	
Disk Drive Unit (3.5inch, 73GB, 10,000rpm, Ultra320)	S26361-F3121-E173	51	1	237.60	12,117.60	
CD-RW/ DVD ATAPI slimline	S26361-F3123-E1	51	1	100.80	5,140.80	
19inch Rack (24U)	S26361-K826-V102	3	1	1,843.20	5,529.60	
LCD/KB/Pointing Device Unit (1U)	S26361-K1023-V200	3	1	1,821.60	5,464.80	
KVM Switch (8ports, 1U)	S26361-F2293-E801	9	1	708.00	6,372.00	
KVM Cable (1.8m)	S26361-F2293-L20	57	1	10.80	615.60	
Client Hardware Subtotals					188,148.60	34,650.00

Client Software	Part Number	Qty	Source	Unit Price	Ext. Price	3 Yr. Maint.
Red Hat Enterprise Linux 4 ES (for x86)	S26361-F2346-E212	51	1	1,331.00	67,881.00	
BEA TUXEDO 8.1 CFS-R (for RHEL4 x86)		51	3	1,140.00	58,140.00	38,556.00
Client Software Subtotals					126,021.00	38,556.00

User Connectivity	Part Number	Qty	Source	Unit Price	Ext. Price	3 Yr. Maint.
Cisco Catalyst 2950T-24 Switch		4	4	799.00	3,196.00	
Cisco SMARTnet 24x7x4 Maintenance		4	4			1,308.00
User Connectivity Subtotals					3,196.00	1,308.00

Oracle Mandatory E-Business Discount	2			(65,200.00)		
Large Configuration Discount and Support Prepayment*	1			(3,066,271.00)	(131,700.00)	
Total					4,395,112.00	480,744.00

Three-Year Cost of Ownership \$4,875,856

Pricing Sources: 1 = Fujitsu , 2 = Oracle , 3 = BEA , 4 = Computer Online
Audited by: Francois Raab, InfoSizing, Inc. (www.sizing.com)
Oracle Corp. pricing contact: Herve Lejeune, herve.lejeune@oracle.com, 650-506-1894
* 16=0.50 x 32. Explanation: For the purposes of counting the number of processors which require licensing, an Intel multicore chip with "n" cores shall be determined by multiplying "n" cores by a factor of 0.50.

Three-Year Cost of Ownership USD	\$4,875,856
tpmC	1,238,579
\$ USD / tpmC	\$3.94

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 items, please inform the TPC at pricing@tpc.org. Thank you.

**Numerical Quantities Summary for
PRIMEQUEST 540 c/s w/ 51 Front-Ends
Oracle Database 10g Enterprise Edition**

MQTH, Computed Maximum Qualified Throughput

1,238,579 tpmC

Response Times (in seconds)	Average	90th %	Maximum
New-Order	0.453	0.913	5.184
Payment	0.441	0.901	5.230
Order-Status	0.449	0.909	4.878
Delivery (interactive portion)	0.103	0.104	0.326
Delivery (deferred portion)	0.346	0.806	4.989
Stock-Level	0.433	0.891	5.080
Menu	0.103	0.104	0.508

Transaction Mix, in percent of total transaction

New-Order	44.94%
Payment	43.02%
Order-Status	4.01%
Delivery (interactive)	4.02%
Stock-Level	4.01%

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)

	Keying Time			Think Time		
	Min	Avg	Max	Min	Avg	Max
New-Order	18.003	18.012	18.273	0.000	12.015	120.202
Payment	3.004	3.012	3.275	0.000	12.018	120.199
Order-Status	2.004	2.012	2.240	0.000	10.017	100.200
Delivery (interactive)	2.005	2.012	2.243	0.000	5.019	50.191
Stock-Level	2.004	2.012	2.265	0.000	5.022	50.186

Test Duration

Ramp-up time (seconds)	4,440
Measurement interval (seconds)	7,200
Transactions during measurement interval	330,903,411

Checkpointing

Number of checkpoints	4
Checkpoint interval (seconds)	1,620