



PRIMERGY RX600 S5

TPC-E 1.10.0
TPC Pricing 1.5.0

Report Date
June 18, 2010

TPC-E Throughput
2,046.96 tpsE

Price/Performance
\$ 193.68 USD per tpsE

Availability Date
September 1, 2010

Total System Cost
\$ 396,435

Database Server Configuration

Operating System
**Microsoft Windows
Server 2008 R2
Enterprise x64 Edition**

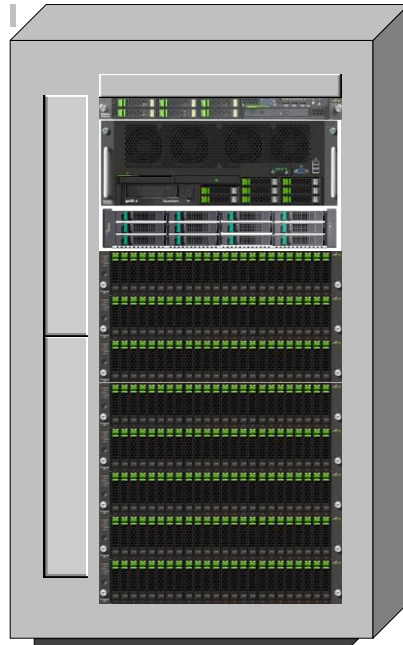
Database Manager
**Microsoft SQL Server
2008 R2 Enterprise
x64 Edition**

Processors/Cores/Threads
4/32/64

Memory
512 GB

SUT

1 Driver
Systems



Tier A

PRIMERGY RX200 S6
2x Intel Xeon E5620 2.40 GHz
12 GB Memory
1x 73 GB 15K SAS Drive
2x onboard LAN 1 Gb/s
2x Dual Port LAN 1 Gb/s

Tier B

PRIMERGY RX600 S5
4x Intel Xeon X7560 2.26 GHz
512 GB Memory
2x 73 GB 15K SAS Drives
6x 300 GB 10K SAS Drives
4x onboard LAN 1 Gb/s
1x onboard SAS RAID Controller
8x SAS RAID Controller

Storage

1x PRIMECENTER Rack
8x ETERNUS JX40
192x 64 GB SSD Drives
1x FibreCAT SX40
4x 750 GB 7.2K SATA Drives

Initial Database Size
8,512 GB

Redundancy Level 1
RAID-5 data and RAID-10 log

Storage
192 x 64 GB SSD
4 x 750 GB 7.2K HDD
6 x 300 GB 10K HDD



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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3-yr. Maint. Price
Database Server Hardware						
FSCR6S5_S26361-K1287-V400_101912-05		1	60,104.35	1	60,104.35	
PY RX600S5	S26361-K1287-V400			1		
Intel Xeon X7560 8C/16T 2.26 GHz 24 MB	S26361-F3999-E560			4		
Memory Board RX600 S5	S26361-F3990-E100			6		
32GB (4x8) DDR3 1333 MHz PC3-10600 rg d	S26361-F4003-E645			16		
DVD-RW supermulti slimline SATA	S26361-F3269-E2			1		
HD SAS 6G 73GB 15K HOT PLUG 2.5" EP	S26361-F4006-E573			2		
HD SAS 6G 300GB 10K HOT PLUG 2.5" EP	S26361-F4006-E130			6		
RAID Ctrl SAS 6G 5/6 512MB (D2616)	S26361-F3554-E512			1		
Rack installation ex works	SNP:SY-F1647E301-P			1		
RMK-F2_3-xU-Servers_13mm-Drop-in Rails	S26361-F2735-E202			1		
Cable magmt. for 19" DC- PC- Rack	S26361-F2735-E7			1		
Power Supply Module 850W	S26113-F561-E10			2		
RAID Ctrl SAS 6G 8Port ex 512M FH/LP LSI	S26361-F3593-L501	1	493.85	8	3,950.80	
PYRX600 S5 Warranty Uplift, 36 Months,Enhanced Plus Level, 24x7x365 Phone Support (Sev1 - Live Transfer), 24x7x365 Onsite and Parts (Sev1 Resp. Time - 4 Hours), Incl. Holidays, Prepaid billing	PYR6S5-U004361-ONA	1	1,575.00	1		1,575.00
PYRX600 S5 during normal business hours, Primergy Installation, Midrange Server, w/o OS, One Time billing	PYR6S5-N038005-ONA	1	350.00	1		350.00
				Subtotal	64,055.15	1,925.00
Server Storage						
FSCPCTR_S26361-K826-V212_101912-01		1	1,995.80	1	1,995.80	
PRIMECENTER Rack 24U, 1100mm deep	S26361-K826-V212			1		
Dummy panel, plastics, 1U + assembly	S26361-F2735-E130			1		
Dummy panel, plastics, 2U + assembly	S26361-F2735-E131			2		
Socket strip 3phase 3x 8 sockets	S26361-F2262-L31	1	157.25	1	157.25	
PYPCTR Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7x365 Phone Support (Sev1 - Live Transfer), 24x7x365 Onsite and Parts (Sev1 Resp. Time - 4 Hours), Incl. Holidays, Prepaid billing	PYPCTR-U004361-ONA	1	720.00	1		720.00
FSCJX40_FTS:ETJXS11BG_101912-02		1	2,611.20	8	20,889.60	
ETERNUS JX40	FTS:ETJXS11BG			8		
SSD SATA 3G 64GB SLC HOT PLUG 2.5" EP	S26361-F3298-L64	1	1,031.90	192	198,124.80	
PYJX40 Warranty Uplift, 12 Months, Enhanced Plus Level, 24x7x365 Phone Support (Sev1 - Live Transfer), 24x7x365 Onsite and Parts (Sev1 Resp. Time - 4 Hours), Incl. Holidays, Prepaid billing	PYJX40-U004121-ONA	1	609.00	8		4,872.00
PYJX40 Post Warranty, 24 Months, Enhanced Plus Level, 24x7x365 Phone Support (Sev1 - Live Transfer), 24x7x365 Onsite and Parts (Sev1 Resp. Time - 4 Hours), Incl. Holidays, Prepaid billing	PYJX40-P004241-ONA	1	1,218.00	8		9,744.00
PYJX40 during normal business hours, Primergy storage installation, One Time billing	PYJX40-N043005-ONA	1	450.00	8		3,600.00



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FSCSX40_S26361-K1122-V200_101912-03		1	2,334.95	1	2,334.95	
FibreCAT SX40 SAS Disk Subsystem	S26361-K1122-V200			1		
HD SATA 3Gb/s 750GB 7.2k hot p 3.5" SX40	S26361-F3245-E750			4		
Rack installation ex works, SX10, 1U Nod	S26361-F1647-E302			1		
PYSX40 Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7x365 Phone Support (Sev1 - Live Transfer), 24x7x365 Onsite and Parts (Sev1 Resp. Time - 4 Hours), Incl. Holidays, Prepaid billing	PYSX40-U004361-0NA	1	1,827.00	1		1,827.00
PYSX40 during normal business hours, Primergy storage installation, One Time billing	PYSX40-N043005-0NA	1	450.00	1		450.00
SAS CABLE 1X SFF 8088-1X SFF 8088 2M	D:KBSAS1S-1S-2M	1	66.30	8	530.40	
SAS CBL EXT 2m 8088-8470	S26361-F3246-L203	1	62.90	1	62.90	
				Subtotal	224,095.70	21,213.00
Server Software						
SQL Server 2008 R2 Enterprise x64 Edition Per Processor License		2	19,188.00	4	76,752.00	
Windows Server 2008 R2 Enterprise x64 Edition	P72-04217	2	2,280.00	1	2,280.00	
Microsoft Problem Resolution Services	n/a	2	259.00	1		259.00
				Subtotal	79,032.00	259.00
Tier A Client Hardware						
FSCR2S6_S26361-K1342-V101_101912-04		1	3,490.10	1	3,490.10	
PY RX200 S6, 6HD-bays 2.5"	S26361-K1342-V101			1		
Intel Xeon E5620 4C/8T 2.40 GHz 12 MB	S26361-F4419-E240			2		
2 GB DDR3 1333 MHz PC3-10600 rg s	S26361-F3604-E513			6		
CD-RW/DVD slimline SATA	S26361-F3269-E2			1		
HD SAS 6G 73GB 15K HOT PLUG 2.5" EP	S26361-F4006-E573			1		
RAID 0/1 SAS based on LSI MegaRAID 4Port	S26361-F3257-E4			1		
Eth Ctrl 2x1Gbit PCIe PRO/1000PT Cu lp	S26361-F3228-E201			2		
Rack installation ex works, SX10, 1U Nod	S26361-F1647-E302			1		
RMK-P_1-2U servers (new)	S26361-F2735-E110			1		
Power Supply Module 770W silver hp	S26113-F539-E1					
PYRX200 S6 Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7x365 Phone Support (Sev1 - Live Transfer), 24x7x365 Onsite and Parts (Sev1 Resp. Time - 4 Hours), Incl. Holidays, Prepaid billing	PYR2S6-U004361-0NA	1	550.00	1		550.00
PYRX200 S6 during normal business hours, Primergy installation, Low-end Server, w/o OS, One Time billing	PYR2S6-N039005-0NA	1	200.00	1		200.00
				Subtotal	3,490.10	750.00
Tier A Client Software						
Windows Server 2008 R2 Standard x64 Edition	P73-04980	2	711.00	1	711.00	
Infrastructure or Connectivity						
DISPLAY A19-5 ECO (incl. 2 spares)	S26361-K1339-V140	1	176.80	4	707.20	
KB SLIM MF USA (incl. 2 spares)	S26381-K370-V510	1	20.40	4	81.60	
Mini Optical Mouse (incl. 2 spares)	S26381-K452-L100	1	10.20	4	40.80	
LAN-CAT 5 Enhanced, l=3m	S26361-F3417-L3	1	18.70	4	74.80	
				Total	372,288.35	24,147.00

Notes:

Price Source: 1=Fujitsu, 2=Microsoft Corporation

Three-Year Cost of Ownership USD \$396,435

TPC-E Throughput 2046.96

\$ USD/tpsE \$193.68

The benchmark results and test methodology were audited by Doug Johnson for InfoSizing Inc. (www.sizing.com)

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 section of the TPC benchmark pricing specifications. If you find that the stated prices are not available according to



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Numerical Quantities Summary

Reported Throughput:		2046.96 tpsE		Configured Customers:		1,050,000	
Response Times (in seconds)		Minimum	Average	90th%tile	Maximum		
Broker Volume		0.01	0.07	0.11	3.11		
Customer Position		0.00	0.05	0.07	3.40		
Market Feed		0.00	0.03	0.05	17.78		
Market Watch		0.00	0.05	0.09	3.25		
Security Detail		0.00	0.03	0.04	2.75		
Trade Lookup		0.00	0.12	0.19	18.53		
Trade Order		0.00	0.11	0.15	3.63		
Trade Result		0.00	0.14	0.19	3.37		
Trade Status		0.00	0.03	0.05	3.22		
Trade Update		0.01	0.14	0.19	3.53		
Data Maintenance		0.01	0.07	N/A	2.49		
Transaction Mix			Transaction Count		Mix %		
Broker Volume			7,221,370		4.900%		
Customer Position			19,159,129		13.000%		
Market Feed			1,473,839		1.000%		
Market Watch			26,527,584		18.000%		
Security Detail			20,632,736		14.000%		
Trade Lookup			11,790,040		8.000%		
Trade Order			14,884,816		10.100%		
Trade Result			14,738,164		10.000%		
Trade Status			28,001,435		19.000%		
Trade Update			2,947,457		2.000%		
Data Maintenance			120		N/A		
Test Duration and Timings							
Ramp-up Time (hh:mm:ss)				00:22:03			
Measurement Interval (hh:mm:ss)				02:00:00			
Business Recovery Time (hh:mm:ss)				00:48:22			
Total Number of Transactions Completed in Measurement Interval				147,376,570			