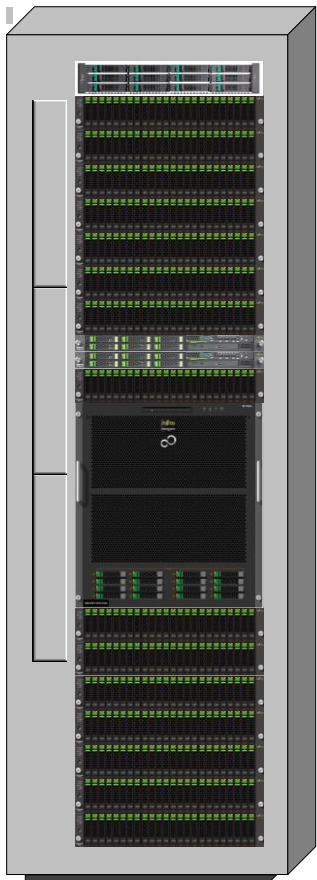


	PRIMEQUEST 1800E	TPC-E 1.12.0 TPC Pricing 1.5.0
		Report Date October 26, 2010

TPC-E Throughput 3,800.00 tpsE	Price/Performance \$ 283.03 USD per tpsE	Availability Date October 1, 2010	Total System Cost \$ 1,075,507
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Database Server Configuration

Operating System Microsoft Windows Server 2008 R2 Datacenter Edition	Database Manager Microsoft SQL Server 2008 R2 Datacenter Edition	Processors/Cores/Threads 8/64/128	Memory 1024 GB
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Tier A (2x)
 PRIMERGY RX200 S6
 2x Intel Xeon E5640 2.66 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
 PRIMEQUEST 1800E
 8x Intel Xeon X7560 2.26 GHz
 1024 GB Memory
 2x 146 GB 15K SAS Drives
 6x 300 GB 10K SAS Drives
 8x onboard LAN 1 Gb/s
 15x SAS RAID Controller
 1x ETERNUS JX40

Storage
 1x PRIMECENTER Rack
 14x ETERNUS JX40
 336x 64 GB SSD Drives
 1x FibreCAT SX40
 7x 750 GB 7.2K SATA Drives

Initial Database Size 15,248 GB	Redundancy Level 1 RAID-5 data and RAID-10 log	Storage 336 x 64 GB SSD 7 x 750 GB 7.2K HDD 6 x 300 GB 10K HDD
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Description	Part Number	Price Source	Unit Price USD	Qty	Extended Price USD	3-yr. Maint. Price USD
Database Server Hardware						
PRIMEQUEST 1800E						
PRIMEQUEST 1800E Base Cabinet	MCD3AC211U	1	261,260.00	1	261,260.00	
System Board	MC-3HSB21			4		
CPU Module (2.26GHz/24M, 8core)	MC-3BAA11			8		
32GB Memory Module (8GB DIMM x4)	MC-3CA611			32		
146GB Hard Disk Drive (15,000rpm)	MC-5DS621			2		
IO Unit	MC-3HUX11			2		
SAS Disk Unit	MC-5HSC11			1		
SAS RAID Controller Card	MC-0JSR11			15		
FSCJX40_FTS:ETJXS11BG_107478-01		1	2,611.20	1	2,611.20	
ETERNUS JX40	FTS:ETJXS11BG					
JX40 SAS 6G Disk 300GB 10k 2.5" (3-yr. Maint. see below)	FTS:ETJSA3MBG	1	399.6	6	2,397.60	
PYRX800 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	PYR800-U004361-0NA	1	8,708.00	1		8,708.00
				Subtotal	266,268.80	8,708.00
Server Storage						
FSCPCTR_S26361-K826-V214_106605-01		1	2,584.00	1	2,584.00	
PRIMECENTER Rack 46U, 1100mm deep	S26361-K826-V214			1		
Dummy panel, plastics, 2U + assembly	S26361-F2735-E131			3		
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-U004361-0NA	1	720.00	1		720.00
FSCJX40_FTS:ETJXS11BG_106605-02		1	2,611.20	14	36,556.80	
ETERNUS JX40	FTS:ETJXS11BG			14		
PRIMERGY Rackinstallation SX/DX ex works	D:FCSX-INPSR			14		
SSD SATA 3G 64GB SLC HOT PLUG 2.5" EP	S26361-F3298-L64	1	1,131.35	336	380,133.60	
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-U004121-0NA	1	609.00	15		9,135.00
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-P004241-0NA	1	1,218.00	15		18,270.00
PYJX40 during normal business hours, Primergy storage installation, One Time billing	PYJX40-N043005-0NA	1	450.00	15		6,750.00
FSCSX40_S26361-K1122-V200_106605-03		1	3,100.80	1	3,100.80	
FibreCAT SX40 SAS Disk Subsystem	S26361-K1122-V200			1		
HD SATA 3Gb/s 750GB 7.2k hot p 3.5" SX40	S26361-F3245-E750			7		
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 6Gb 1x SFF 8088-1x SFF 8088 2m	D:KBSAS6G-1S-1S-2M	1	85.00	14	1,190.00	
SAS CBL EXT 2m 8088-8470	S26361-F3246-L203	1	62.90	1	62.90	
				Subtotal	423,785.35	37,152.00



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Server Software							
SQL Server 2008 R2 Datacenter Edition Per Processor License	810-00445	2	38,524.00	8	308,192.00		
Windows Server 2008 R2 Datacenter Edition Per Processor License	P71-06367	2	2,310.00	8	18,480.00		
Microsoft Problem Resolution Services	n/a	2	259.00	1		259.00	
				Subtotal	326,672.00	259.00	
Tier A Client Hardware							
FSCR2S6_S26361-K1342-V101_106605-05		1	4,414.90	2	8,829.80		
PY RX200 S6, 6HD-bays 2.5"	S26361-K1342-V101			2			
Intel Xeon E5640 4C/8T 2.66 GHz 12 MB	S26361-F4419-E266			4			
SP 6GB 3x2 DDR3 1333 MHz PC3-10600 rg s	S26361-F3604-E533			4			
DVD-RW supermulti slimline SATA	S26361-F3269-E2			2			
HD SAS 6G 73GB 15K HOT PLUG 2.5" EP	S26361-F4006-E573			2			
RAID 0/1 SAS based on LSI MegaRAID 4Port	S26361-F3257-E4			2			
Eth Ctrl 2x1Gbit PCIe PRO/1000PT Cu lp	S26361-F3228-E201			4			
Rack installation ex works, SX10, 1U Nod	S26361-F1647-E302			2			
RMK-P_1-2U servers (new)	S26361-F2735-E110			2			
Power Supply Module 450W gold hp	S26113-F570-E1			2			
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	2		1,100.00	
PYRX200 S6 during normal business hours, Primergy installation, Low-end Server, w/o OS, One Time billing	PYR2S6-N039005-0NA	1	200.00	2		400.00	
				Subtotal	8,829.80	1,500.00	
Tier A Client Software							
Windows Server 2008 R2 Standard x64 Edition	P73-04980	2	711.00	2	1,422.00		
Infrastructure or Connectivity							
DISPLAY A19-5 ECO (incl. 2 spares)	S26361-K1339-V140	1	125.80	5	629.00		
KB400 USB US (incl. 2 spares)	S26381-K550-L402	1	15.30	5	76.50		
Mini Optical Mouse (incl. 2 spares)	S26381-K452-L100	1	11.05	5	55.25		
LAN-CAT 5 Enhanced, l=3m	S26361-F3417-L3	1	18.70	8	149.60		
				Total	1,027,888.30	47,619.00	
Notes:				Three-Year Cost of Ownership USD		\$1,075,507	
Price Source: 1=Fujitsu 1-408-746-7802 http://www.fujitsu.com/us/, 2=Microsoft Corporation				TPC-E Throughput		3,800.00	
				\$ USD/tpsE		\$283.03	

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



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TPC-E 1.12.0
TPC Rev 1.5.0

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October 1, 2010

Numerical Quantities Summary

Reported Throughput:		3800.00 tpsE		Configured Customers:		1,900,000	
Response Times (in seconds)		Minimum	Average	90th%tile	Maximum		
Broker Volume		0.00	0.06	0.10	0.44		
Customer Position		0.00	0.05	0.07	2.31		
Market Feed		0.00	0.03	0.05	2.25		
Market Watch		0.00	0.05	0.09	0.53		
Security Detail		0.00	0.02	0.04	0.71		
Trade Lookup		0.00	0.13	0.19	0.96		
Trade Order		0.00	0.10	0.14	1.69		
Trade Result		0.00	0.13	0.18	1.72		
Trade Status		0.00	0.03	0.04	1.56		
Trade Update		0.01	0.14	0.20	0.89		
Data Maintenance		0.00	0.06	N/A	0.37		
Transaction Mix			Transaction Count		Mix %		
Broker Volume			13,430,877		4.900%		
Customer Position			35,633,507		13.000%		
Market Feed			2,741,163		1.000%		
Market Watch			49,338,805		18.000%		
Security Detail			38,374,736		14.000%		
Trade Lookup			21,928,616		8.000%		
Trade Order			27,685,008		10.100%		
Trade Result			27,411,324		10.000%		
Trade Status			52,079,935		19.000%		
Trade Update			5,481,999		2.000%		
Data Maintenance			120		N/A		
Test Duration and Timings							
Ramp-up Time (hh:mm:ss)				00:23:13			
Measurement Interval (hh:mm:ss)				02:00:00			
Business Recovery Time (hh:mm:ss)				00:52:52			
Total Number of Transactions Completed in Measurement Interval				274,105,970			