
		FUJITSU Server PRIMERGY RX2540 M4		TPC-E™ 1.14.0 TPC Pricing 2.2.0	
				Report Date: March 31, 2018 Revision Date: April 26, 2018	
TPC-E Throughput 6,606.75 tpsE	Price/Performance \$ 92.85 USD per tpsE	Availability Date March 31, 2018	Total System Cost \$ 613,391 USD		
Database Server Configuration					
Operating System Microsoft Windows Server 2016 Standard Edition		Database Manager Microsoft SQL Server 2017 Enterprise Edition		Processors/Cores/Threads 2/56/112	
				Memory 1,536 GB	
SUT					
			Tier A PRIMERGY RX2530 M4 2x Intel Xeon Platinum 8180 2.50 GHz 192 GB Memory 2x 300 GB 10k rpm SAS Drive 1x onboard dual port LAN 10 Gb/s 1x onboard dual port LAN 1 Gb/s 1x SAS RAID controller		
			Tier B PRIMERGY RX2540 M4 2x Intel Xeon Platinum 8180 2.50 GHz 1,536 GB Memory 2x 300 GB 15k rpm SAS Drives 6x 960 GB SAS SSD 1x onboard dual port LAN 10 Gb/s 1x onboard dual port LAN 1 Gb/s 6x SAS RAID Controller		
Storage 1x PRIMECENTER Rack 5x ETERNUS JX40 S2 74x 960 GB SSD Drives					
Initial Database Size 33,388 GB		Redundancy Level 1 RAID-5 for data RAID-10 for tempDB and log		Storage 80 x 960 GB SSD	



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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3-yr. Maint. Price
Database Server (Tier B) Hardware						
PRIMERGY RX2540 M4						
PY RX2540 M4 8x 2.5' expandable	S26361-K1567-V408	1	895.80	1	895.80	
Modular PSU 1200W platinum hp	S26113-F616-E10	1	270.60	2	541.20	
Cable pow ercord rack, 4m, grey	T26139-Y1968-E100	1	13.20	2	26.40	
Intel Xeon Platinum 8180 28C/56T 2.50 GHz	S26361-F4051-E180	1	11,880.00	2	23,760.00	
Cooler Kit 2nd CPU	S26361-F3849-E100	1	21.00	1	21.00	
64GB (1x64GB) 4Rx4 DDR4-2666 3DS ECC	S26361-F4026-E364	1	1,290.00	24	30,960.00	
Performance Mode Installation	S26361-F3694-E2	1	3.00	2	6.00	
PLAN EM 2x 10Gb T OCP interface Intel	S26361-F3953-E210	1	411.00	1	411.00	
DVD-RW supermulti ultraslim SATA	S26361-F3778-E1	1	84.00	1	84.00	
HD SAS 12G 300GB 15K HOT PL 2.5' EP	S26361-F5531-E530	1	320.40	2	640.80	
SSD SAS 12G 960GB HOT PL 2.5' EP	S26361-F5617-E960	1	1,470.00	6	8,820.00	
PRAID EP420i	S26361-F5243-E12	1	309.00	1	309.00	
PRAID EP420e LP	S26361-F3847-E202	1	471.00	5	2,355.00	
Rack Mount Kit F1 CMA QRL LV	S26361-F2735-E175	1	63.00	1	63.00	
Mounting of RMK in symmetrical racks	S26361-F4530-E10	1	1.20	1	1.20	
region-kit America	S26361-F1452-E130	1	6.60	1	6.60	
PY RX2540 Series during normal business hours, Primergy Installation, Midrange Server, w/o OS, One Time billing	PYR254-N038005-ONA	1	280.00	1		280.00
PY RX2540 Series Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PYR254-U004361-ONA	1	921.60	1		921.60
				Subtotal (*)	68,901.00	1,201.60
Storage						
PRIMECENTER RACK						
PRIMECENTER M1 Rack 724S 24U-1050x700	S26361-K827-V220	1	1,565.40	1	1,565.40	
Dummy panel, plastics, 1U + assembly	S26361-F4530-L131	1	10.20	3	30.60	
Dummy panel, plastics, 2U + assembly	S26361-F4530-L132	1	13.20	6	79.20	
Socket strip 2x12 outlets f. USA/CAN	S26361-F2262-L411	1	390.00	1	390.00	
PY Rack Console during normal business hours, PRIMERGY Installation, Console, One Time billing	PYRACK-N077005-ONA	1	212.00	1		212.00
PY Rack Console Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PYRACK-U004361-ONA	1	259.20	1		259.20
ETERNUS JX40 S2						
ETERNUS JX40 S2 Enclosure w 1x IOM	ETJEA DU	1	1,797.00	5	8,985.00	
JX40 S2 MLC SSD 960GB	ETJ4SB9	1	2,220.00	74	164,280.00	
MiniSAS-HD cable1.1m	ETJ4KM11-L	1	51.00	5	255.00	
ETJX40 Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	ETJX40-U004361-ABC	1	1,461.60	5		7,308.00
ETJX40 during normal business hours, Eternus Installation, One Time billing	ETJX40-N043005-ABC	1	520.00	5		2,600.00
						0.00
				Subtotal(*)	175,585.20	10,379.20
Database Server (Tier B) Software						
SQL Server 2017 Enterprise Edition 2 Core License	n/a	2	13,472.50	28	377,230.00	
Microsoft Window s Server 2016 Standard Edition 2 Core License	n/a	2	92.00	28	2,576.00	
Microsoft Problem Resolution Services	n/a	2	259.00	1		259.00
				Subtotal	379,806.00	259.00



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Application Server (Tier A) Hardware						
PRIMERGY RX2530 M4						
PY RX2530 M4 4x 2.5" expandable	S26361-K1592-V301	1	835.20	1	835.20	
Modular PSU 800W platinum hp	S26113-F574-E13	1	198.00	1	198.00	
Cable power cord rack, 4m, grey	T26139-Y1968-E100	1	13.20	1	13.20	
Power Supply Dummy	S26113-F574-E99	1	3.60	1	3.60	
Intel Xeon Platinum 8180 28C/56T 2.50 GHz	S26361-F4051-E180	1	11,880.00	2	23,760.00	
Cooler Kit 2nd CPU	S26361-F3849-E100	1	21.00	1	21.00	
16GB (1x16GB) 1Rx4 DDR4-2666 R ECC	S26361-F4026-E216	1	309.00	12	3,708.00	
Performance Mode Installation	S26361-F3694-E2	1	3.00	2	6.00	
DVD ROM UltralSlim	S26361-F3718-E2	1	69.00	1	69.00	
HD SAS 12G 300GB 10K HOT PL 2.5" EP	S26361-F5550-E130	1	168.60	2	337.20	
PRAID EP400i	S26361-F5243-E11	1	291.00	1	291.00	
PLAN EM 2x 10Gb T OCP interface Intel	S26361-F3953-E210	1	411.00	1	411.00	
Rack Mount Kit F1-CMA Slim Line	S26361-F2735-E400	1	52.80	1	52.80	
Mounting of RMK in symmetrical racks region-kit America	S26361-F4530-E10	1	1.20	1	1.20	
	S26361-F1452-E130	1	6.60	1	6.60	
PY RX2530 Series during normal business hours, Primergy Installation, Midrange Server, w/o OS, One Time billing	PYR253-N038005-ONA	1	280.00	2		560.00
PYRX2530 Series Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PYR253-U004361-ONA	1	363.20	2		726.40
				Subtotal(*)	29,713.80	1,286.40
Application Server (Tier A) Software						
Microsoft Windows Server 2012 R2 Standard Edition 2 Processor License	n/a	2	750.00	1	750.00	
				Subtotal	750.00	
Miscellaneous						
Display E22T-7 Pro (incl 2spares)	S26361-K1579-V160	1	100.20	3	300.60	
Infrastructure or Connectivity						
Keyboard KB521 US 104 key (incl 2 spares)	S26381-K521-L110	1	14.40	3	43.20	
MOUSE M520 BLACK (incl 2 spares)	S26381-K467-L100	1	9.00	3	27.00	
StarTech.com Cat6a Ethernet Cable 7 ft Black - STP Cat 6a Patch Cable (incl 2 spares)	C6ASPAT7BK	3	12.99	4	51.96	
				Subtotal(*)	422.76	0.00
				Total	655,178.76	13,126.20
Dollar Volume Discount (see Notes)		20%	1		54,914.16	
					600,264.60	

Notes: Price Source: 1=Fujiitsu, 2=Microsoft Corporation, 3=www.cdw.com Discount applies to all subtotal marked with (*), excluding items from source 3. Pricing is for these or similar quantities. Discounts for similar sized configurations will be similar to what is quoted here, but may vary based on the specific components priced.	Three-Year Cost of Ownership USD	\$613,391.00
	TPC-E Throughput	6,606.75
	\$ USD/tpsE	\$92.85

The benchmark results and test methodology were audited by Francois Raab for InfoSizing (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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Numerical Quantities Summary

Reported Throughput:	6,606.75 tpsE	Configured Customers:	4,060,000	
Response Times (in seconds)	Minimum	Average	90th%tile	Maximum
Broker Volume	0.01	0.01	0.02	0.34
Customer Position	0.01	0.01	0.02	0.33
Market Feed	0.01	0.01	0.04	0.38
Market Watch	0.01	0.01	0.02	0.33
Security Detail	0.01	0.01	0.01	0.37
Trade Lookup	0.01	0.04	0.06	0.42
Trade Order	0.01	0.04	0.09	0.66
Trade Result	0.01	0.02	0.05	1.20
Trade Status	0.01	0.01	0.01	0.38
Trade Update	0.01	0.05	0.07	0.43
Data Maintenance	0.01	0.01	N/A	0.03
Transaction Mix	Transaction Count		Mix %	
Broker Volume	23,308,582		4.900%	
Customer Position	61,839,248		13.000%	
Market Feed	4,756,874		1.000%	
Market Watch	85,623,567		18.000%	
Security Detail	66,596,215		14.000%	
Trade Lookup	38,054,756		8.000%	
Trade Order	48,044,273		10.100%	
Trade Result	47,568,658		10.000%	
Trade Status	90,380,769		19.000%	
Trade Update	9,513,644		2.000%	
Data Maintenance	120		N/A	
Test Duration and Timings				
Ramp-up Time (hh:mm:ss)	0:15:00			
Measurement Interval (hh:mm:ss)	2:00:00			
Business Recovery Time (hh:mm:ss)	0:21:02			
Total Number of Transactions Completed in Measurement Interval	475,686,586			