
		FUJITSU Server PRIMERGY RX2540 M2		TPC-E 1.14.0 TPC Pricing 2.0.0
				Report Date March 31, 2016
TPC-E Throughput 4,734.87 tpsE	Price/Performance \$ 111.65 USD per tpsE	Availability Date July 31, 2016	Total System Cost \$ 528,618 USD	
Database Server Configuration				
Operating System Microsoft Windows Server 2012 R2 Standard Edition	Database Manager Microsoft SQL Server 2016 Enterprise Edition	Processors/Cores/Threads 2/44/88	Memory 1024 GB	
SUT				
		Tier A PRIMERGY RX2530 M1 2x Intel Xeon E5-2697 v3 2.60 GHz 64 GB Memory 2x 300 GB 15k rpm SAS Drive 2x Onboard LAN 10 Gb/s 1x Dual Port LAN 1 Gb/s 1x SAS RAID controller		
		Tier B PRIMERGY RX2540 M2 2x Intel Xeon E5-2699 v4 2.20 GHz 1024 GB Memory 2x 300 GB 15k rpm SAS Drives 4x 600 GB 15k rpm SAS Drives 2x onboard LAN 10 Gb/s 6x SAS RAID Controller		
		Storage 1x PRIMECENTER Rack 5x ETERNUS JX40 S2 80x 400 GB SSD Drives		
		Initial Database Size 19,552 GB		
		Redundancy Level 1 RAID-5 data and RAID-10 log		Storage 80 x 400 GB SSD 4 x 600 GB 15k rpm HDD



FUJITSU Server PRIMERGY RX2540 M2

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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 M2						
PY RX2540 M2 8x 2.5' expandable	S26361-K1566-V401	1	1,124.00	1	1,124.00	
Config 4: 8x 2.5" HDD	S26361-F2495-E440	1	161.00	1	161.00	
Modular PSU 800W platinum hp	S26113-F574-E13	1	322.00	2	644.00	
Cable power cord rack, 4m, grey	T26139-Y1968-E100	1	12.00	2	24.00	
Intel Xeon E5-2699v4 22C/44T 2.20 GHz	S26361-F3933-E199	1	6,885.00	2	13,770.00	
Cooler Kit 2nd CPU	S26361-F3849-E100	1	33.00	1	33.00	
64GB (1x64GB) 4Rx4 DDR4-2400 LR ECC	S26361-F3935-E516	1	4,977.00	16	79,632.00	
Performance Mode Installation	S26361-F3694-E2	1	7.00	2	14.00	
PLAN EM 2x10Gb T OC14000-LOM interface	S26361-F5302-E210	1	611.00	1	611.00	
DVD-RW supermulti ultraslim SATA	S26361-F3778-E1	1	102.00	1	102.00	
HD SAS 12G 300GB 15K HOT PL 2.5' EP	S26361-F5531-E530	1	520.00	2	1,040.00	
HD SAS 12G 600GB 15K HOT PL 2.5' EP	S26361-F5531-E560	1	969.00	4	3,876.00	
PRAID EP420i	S26361-F5243-E2	1	461.00	1	461.00	
PRAID EP420e LP	S26361-F3847-E202	1	702.00	5	3,510.00	
Rack Mount Kit F1 CMA QRL LV	S26361-F2735-E175	1	102.00	1	102.00	
Mounting of RMK in symmetrical racks	S26361-F4530-E10	1	7.00	1	7.00	
region-kit America	S26361-F1452-E130	1	12.00	1	12.00	
PYRX2540 Series during normal business hours, Primergy Installation, Mdrange Server, w/o OS, One Time billing	PYR254-N038005-0NA	1	350.00			350.00
PYRX2540 Series Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PYR254-U004121-0NA	1	913.00	1		913.00
					Subtotal (*)	1,263.00
Storage						
PRIMECENTER RACK						
PRIMECENTER M1 Rack 724S 24U-1050x700	S26361-K827-V220	1	2,285.00	1	2,285.00	
Dummy panel, plastics, 1U + assembly	S26361-F4530-L131	1	17.00	3	51.00	
Dummy panel, plastics, 2U + assembly	S26361-F4530-L132	1	23.00	6	138.00	
Socket strip 8x IEC320 + IEC309 plug 32A	S26361-F2262-L45	1	311.00	1	311.00	
PY PRIMECENTER during normal business hours, PRIMERGY Installation, Racks, One Time billing	PY PCTR-N076005-0NA	1	265.00	1		265.00
PY PRIMECENTER Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing (PY PCTR-U004361-0NA)	PY PCTR-U004361-0NA	1	540.00	1		540.00
ETERNUS JX40 S2						
ETERNUS JX40 S2 Enclosure w 1x IOM	FTS:ETJEADU		2,234.00	5	11,170.00	
JX40 S2 MLC SSD 400GB	FTS:ETJ4SA4	1	2,032.00	80	162,560.00	
MiniSAS-HD cable 1.1m	FTS:ETJ4KM11-L	1	73.00	5	365.00	
PY JX40 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	PY JX40-U004121-0NA	1	639.00	5		3,195.00
PY JX40 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	PY JX40-P004241-0NA	1	1,218.00	5		6,090.00
PY JX40 during normal business hours, Primergy storage installation, One Time billing	PY JX40-N043005-0NA	1	450.00	5		2,250.00
					Subtotal(*)	12,340.00
Database Server (Tier B) Software						
SQL Server 2016 Enterprise Edition 2 Core License	7JQ-00256	2	13,472.50	22	296,395.00	
Microsoft Windows Server 2012 R2 Standard Edition 2 Processor License	P73-06284	2	735.00	1	735.00	
Microsoft Problem Resolution Services	n/a	2	259.00	1		259.00
					Subtotal	259.00
					297,130.00	



FUJITSU Server PRIMERGY RX2540 M2

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Application Server (Tier A) Hardware						
PRIMERGY RX2530 M1						
PY RX2530 M1 4x 2.5" expandable	S26361-K1492-V301	1	1,249.00	1	1,249.00	
Modular PSU 450W platinum hp	S26113-F575-E13	1	275.00	2	550.00	
Cable power cord rack, 4m, grey	T26139-Y1968-E100	1	13.00	2	26.00	
Cool-safe Advanced Thermal Design	S26361-F3776-E101	1	4.00	1	4.00	
Intel Xeon E5-2697v3 14C/28T 2.60 GHz	S26361-F3849-E197	1	4,145.00	2	8,290.00	
Cooler Kit 2nd CPU	S26361-F3849-E100	1	35.00	1	35.00	
8GB (1x8GB) 2Rx8 DDR4-2133 R ECC	S26361-F3843-E515	1	252.00	8	2,016.00	
Performance Mode Installation	S26361-F3694-E2	1	7.00	2	14.00	
DVD ROM UltralSlim	S26361-F3718-E2	1	104.00	1	104.00	
HD SAS 12G 300GB 15K HOT PL 2.5" EP	S26361-F5531-E530	1	554.00	2	1,108.00	
PRAID EP400i	S26361-F5243-E1	1	514.00	1	514.00	
PLAN EM 2x10Gb T OCl14000-LOM interface	S26361-F5302-E210	1	189.00	1	189.00	
PLAN CP 2x1Gbit Cu Intel I350-T2 LP	S26361-F4610-E202	1	268.00	1	268.00	
Rack Mount Kit F1-CMA Slim Line	S26361-F2735-E400	1	92.00	1	92.00	
Mounting of RMK in symmetrical racks	S26361-F4530-E10	1	7.00	1	7.00	
region-kit America	S26361-F1452-E130	1	13.00	1	13.00	
PYRX2530 M1 during normal business hours, Primergy Installation, Mdrange Server, w/o OS, One Time billing	PYR253-N038005-0NA	1	350.00	2		700.00
PYRX2530 M1 Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PYR253_S26361-K1492-V301	1	931.00	2		1,862.00
				Subtotal(*)	14,479.00	2,562.00
Application Server (Tier A) Software						
Microsoft Windows Server 2012 Standard Edition 2 Processor License	P73-06284	2	735.00	1	735.00	
				Subtotal	735.00	
Miscellaneous						
Display E24T-7 LED, Cross Trade (incl 2spares)	S26361-K1543-V140	1	332.00	3	996.00	
Infrastructure or Connectivity						
KB900 Keyboard USB USA (incl 2 spares)	S26381-K560-L402	1	27.00	3	81.00	
Mouse MC200 (incl 2 spares)	S26381-K463-L100	1	16.00	3	48.00	
StarTech.com 7 ft Blue Shielded Snagless 10Gb RJ45 STP Cat6a Patch Cable (incl 2 spares)	C6ASPA T7BL	3	12.99	4	51.96	
				Subtotal(*)	1,176.96	0.00
				Total	595,523.96	16,424.00
Dollar Volume Discount (see Notes)		28%	1		83,329.96	
					512,194.00	

Notes: Price Source: 1=FUJITSU, 2=Microsoft Corporation, 3=www.cdw.com Discount applies to all subtotal marked with (*). 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	\$528,618.00
	TPC-E Throughput	4734.87
	\$ USD/tpsE	\$111.65

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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Numerical Quantities Summary

Reported Throughput:	4,734.87 tpsE	Configured Customers:	2,380,000	
Response Times (in seconds)	Minimum	Average	90th%tile	Maximum
Broker Volume	0.01	0.01	0.02	0.39
Customer Position	0.01	0.01	0.02	0.62
Market Feed	0.01	0.01	0.02	0.38
Market Watch	0.01	0.01	0.01	0.21
Security Detail	0.01	0.01	0.01	0.21
Trade Lookup	0.01	0.04	0.07	0.30
Trade Order	0.01	0.03	0.09	0.89
Trade Result	0.01	0.02	0.04	0.88
Trade Status	0.01	0.01	0.01	0.21
Trade Update	0.01	0.05	0.08	0.29
Data Maintenance	0.01	0.01	N/A	0.03
Transaction Mix	Transaction Count		Mix %	
Broker Volume	16,703,128		4.900%	
Customer Position	44,314,631		13.000%	
Market Feed	3,409,116		1.000%	
Market Watch	61,358,668		18.000%	
Security Detail	47,723,132		14.000%	
Trade Lookup	27,270,209		8.000%	
Trade Order	34,428,841		10.100%	
Trade Result	34,091,105		10.001%	
Trade Status	64,767,475		19.000%	
Trade Update	6,817,573		2.000%	
Data Maintenance	120		N/A	
Test Duration and Timings				
Ramp-up Time (hh:mm:ss)	0:18:39			
Measurement Interval (hh:mm:ss)	2:00:00			
Business Recovery Time (hh:mm:ss)	0:20:04			
Total Number of Transactions Completed in Measurement Interval	340,883,878			