
		<b>PRIMERGY RX2540 M1</b>		<b>TPC-E 1.13.0</b> <b>TPC Pricing 2.0.0</b>
				Report Date October 6, 2014
TPC-E Throughput <b>3,772.08 tpsE</b>	Price/Performance <b>\$ 130.44 USD per tpsE</b>	Availability Date <b>December 1, 2014</b>	Total System Cost <b>\$ 492,023 USD</b>	
<b>Database Server Configuration</b>				
Operating System <b>Microsoft Windows Server 2012 R2 Standard Edition</b>	Database Manager <b>Microsoft SQL Server 2014 Enterprise Edition</b>	Processors/Cores/Threads <b>2/36/72</b>	Memory <b>512 GB</b>	
<b>SUT</b>				
		<b>Tier A</b> PRIMERGY RX200 S8 2x Intel Xeon E5-2667 v2 3.30 GHz 64 GB Memory 2x 250 GB 7.2k rpm SATA Drive 2x onboard LAN 1 Gb/s 1x Dual Port LAN 10 Gb/s		
		<b>Tier B</b> PRIMERGY RX2540 M1 2x Intel Xeon E5-2699 v3 2.30 GHz 512 GB Memory 2x 300 GB 15k rpm SAS Drives 4x 450 GB 15k rpm SAS Drives 2x onboard LAN 10 Gb/s 6x SAS RAID Controller		
<b>Storage</b> 1x PRIMECENTER Rack 5x ETERNUS JX40 65x 400 GB SSD Drives				
Initial Database Size <b>15,604 GB</b>	Redundancy Level 1 <b>RAID-5 data and RAID-10 log</b>	Storage <b>65 x 400 GB SSD</b> <b>4 x 450 GB 15k rpm HDD</b>		



# PRIMERGY RX2540 M1

## TPC-E 1.13.0 TPC Pricing 2.0.0

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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3-yr. Maint. Price
			\$		\$	\$
<b>Database Server (Tier B) Hardware</b>						
<b>PRIMERGY RX2540 M1</b>						
PY RX2540 M1 4x 3.5' expandable	S26361-K1495-V101	1	1,472.00	1	1,472.00	
Upgrade kit from 4x to 8x 3.5' HDD	S26361-F2495-E120	1	102.00	1	102.00	
Modular PSU 800W platinum hp	S26113-F574-E13	1	351.00	1	351.00	
Cable power cord rack, 4m, grey	T26139-Y1968-E100	1	14.00	1	14.00	
Power Supply Dummy	S26113-F574-E99	1	7.00	1	7.00	
Intel Xeon E5-2699v3 18C/36T 2.30 GHz	S26361-F3849-E199	1	6,885.00	2	13,770.00	
Cooler Kit 2nd CPU	S26361-F3849-E100	1	34.00	1	34.00	
32GB (1x32GB) 4Rx4 DDR4-2133 LR ECC	S26361-F3844-E517	1	1,357.00	16	21,712.00	
Performance Mode Installation	S26361-F3694-E2	1	7.00	2	14.00	
PLAN EM 2x 10Gb T interface card	S26361-F5302-E210	1	657.00	1	657.00	
DVD-RW supermulti ultraslim SATA	S26361-F3778-E1	1	129.00	1	129.00	
HD SAS 12G 300GB 15K HOT PL 3.5' EP	S26361-F5532-E530	1	662.00	2	1,324.00	
HD SAS 12G 450GB 15K HOT PL 3.5' EP	S26361-F5532-E545	1	891.00	4	3,564.00	
PRAID EP400i	S26361-F5243-E1	1	608.00	1	608.00	
RAID Ctrl SAS 6G 8Port ex 1GB LP LSI V3	S26361-F3713-L503	1	950.00	5	4,750.00	
Rack Mount Kit F1 CMA QRL LV	S26361-F2735-E175	1	156.00	1	156.00	
Mounting of RMK in symmetrical racks	S26361-K1495-V101	1	7.00	1	7.00	
Region-kit APAC/EMEA/ India	S26361-F1452-E100	1	14.00	1	14.00	
PY RX2540 Series during normal business hours, Primergy Installation, Midrange Server, w/o OS, One Time billing	PYR254-N038005-ONA	1	350.00	1		350.00
PY RX2540 Series Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PYR254_S26361-K1495-V101	1	2,267.00	1		2,267.00
					<b>Subtotal (*)</b>	<b>48,685.00</b>
						<b>2,617.00</b>
<b>Storage</b>						
<b>PRIMECENTER RACK</b>						
PRIMECENTER M1 Rack 724S 24U-1050x700	S26361-K827-V220	1	2,400.00	1	2,400.00	
Dummy panel, plastics, 1U + assembly	S26361-F4530-L131	1	12.00	3	36.00	
Dummy panel, plastics, 2U + assembly	S26361-F4530-L132	1	12.00	6	72.00	
Socket strip 3phase 3x 8 sockets	S26361-F2262-L31	1	240.00	1	240.00	
PY PRIMECENTER during normal business hours, PRIMERGY Installation, Racks, One Time billing	PYPCTR-N076005-ONA	1	265.00	1		265.00
PY PRIMECENTER Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing (PYPCTR-U004361-ONA)	PYPCTR-U004361-ONA	1	750.00	1		750.00
<b>ETERNUS JX40</b>						
ETERNUS JX40	FTS:ETJXS11BG	1	3,232.00	5	16,160.00	
JX40 SSD SAS 12G 400GB MLC 2.5"	FTS:JX40-SSD400	1	3,706.00	65	240,890.00	
SAS CABLE 1X SFF 8088-1X SFF 8088 2M	D:KBSA1S1S-1S-2M	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	PYJX40-U004121-ONA	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	PYJX40-P004241-ONA	1	1,218.00	5		6,090.00
PY JX40 during normal business hours, Primergy storage installation, One Time billing	PYJX40-N043005-ONA	1	450.00	5		2,250.00
					<b>Subtotal(*)</b>	<b>260,163.00</b>
						<b>12,550.00</b>



# PRIMERGY RX2540 M1

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Database Server (Tier B) Software						
SQL Server 2014 Enterprise Edition 2 Core License	7JQ-00750	2	13,472.50	18	242,505.00	
Microsoft Windows Server 2012 R2 Standard Edition 2 Processor License	P72-06284	2	735.00	1	735.00	
Microsoft Problem Resolution Services	n/a	2	259.00	1		259.00
				<b>Subtotal</b>	243,240.00	259.00
Application Server (Tier A) Hardware						
<b>Primergy RX200 S8</b>						
PY RX200 S8, 4x2.5	S26361-K1455-V101	1	1,323.00	1	1,323.00	
Modulare SV 450W platin hp Power Supply Dummy	S26113-F575-E12	1	275.00	1	275.00	
Intel Xeon E5-2667v2 8C/16T 3.30GHz 25MB	S26113-F574-E99	1	7.00	1	7.00	
Fan upgrade kit 2nd CPU	S26361-F3803-E300	1	3,490.00	2	6,980.00	
8GB (1x8GB) 2Rx8 DDR3-1866 R ECC Performance Mode Installation	S26361-F1386-E120	1	61.00	1	61.00	
DVD-RW supermulti slimline SATA	S26361-F3793-E515	1	237.00	8	1,896.00	
HD SATA 6G 250GB 7.2K HOT PL 2.5" BC	S26361-F3694-E2	1	7.00	2	14.00	
Eth Ctrl 2x10GBase-T PCIe x8 X540-T2	S26361-F3269-E2	1	129.00	1	129.00	
Rack Mount Kit F1 CMA QRL LV	S26361-F3708-E250	1	304.00	2	608.00	
Cable power cord rack, 4m, grey	S26361-F3752-E202	1	966.00	1	966.00	
Mounting of RMK in symmetrical racks	S26361-F2735-E175	1	156.00	1	156.00	
Rack Cable Arm 1U	S26361-F2735-E81	1	27.00	1	27.00	
Region-kit APAC/EMEA/ India	S26361-F1452-E100	1	14.00	1	14.00	
PYRX200 Series during normal business hours, Primergy installation, Low-end Server, w/o OS, One Time billing	PYR200-N039005-0NA	1	200.00	1		200.00
PYRX200 Series Warranty Uplift, 36 Months, Enhanced Level, 12x5 4hr Onsite, Prepaid billing	PYR200_S26361-K1455-V101	1	536.00	1		536.00
				<b>Subtotal(*)</b>	12,477.00	736.00
Application Server (Tier A) Software						
Microsoft Windows Server 2012 Standard Edition 2 Processor License	P73-05761	2	735.00	1	735.00	
				<b>Subtotal</b>	735.00	
Miscellaneous						
DISPLAY B20T-6 LED (incl 2spares)	S26361-K1416-V140	1	200.00	3	600.00	
Infrastructure or Connectivity						
KB400 USB grey INT USA (incl 2 spares)	S26381-K550-E102	1	14.00	3	42.00	
Mouse M480 grey (incl 2 spares)	S26381-K431-E101	1	8.00	3	24.00	
StarTech.com Shielded Cat6a Molded STP Patch Cable - patch cable - 7 ft - b (+2 spares)	C6ASPA7BL	3	12.99	4	51.96	
				<b>Subtotal(*)</b>	717.96	0.00
				<b>Total</b>	566,017.96	16,162.00
Dollar Volume Discount (see Notes)		28%	1		90,157.48	
					475,860.48	

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.	<b>Three-Year Cost of Ownership USD</b>		\$492,023.00
	<b>TPC-E Throughput</b>		3772.08
	<b>\$ USD/tpsE</b>		\$130.44

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.



# PRIMERGY RX2540 M1

**TPC-E 1.13.0  
TPC Pricing 2.0.0**

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## Numerical Quantities Summary

Reported Throughput:	3,772.08 tpsE	Configured Customers:	1,900,000	
Response Times (in seconds)	Minimum	Average	90th%tile	Maximum
Broker Volume	0.00	0.01	0.02	0.12
Customer Position	0.00	0.01	0.02	3.41
Market Feed	0.00	0.01	0.02	3.39
Market Watch	0.00	0.01	0.01	0.20
Security Detail	0.00	0.00	0.01	0.14
Trade Lookup	0.00	0.05	0.08	0.25
Trade Order	0.00	0.04	0.12	0.44
Trade Result	0.00	0.01	0.04	1.45
Trade Status	0.00	0.00	0.01	0.14
Trade Update	0.00	0.06	0.08	0.29
Data Maintenance	0.00	0.01	N/A	0.10
Transaction Mix	Transaction Count		Mix %	
Broker Volume	13,307,785		4.900%	
Customer Position	35,306,398		13.000%	
Market Feed	2,715,902		1.000%	
Market Watch	48,885,835		18.000%	
Security Detail	38,022,531		14.000%	
Trade Lookup	21,726,689		8.000%	
Trade Order	27,430,355		10.100%	
Trade Result	27,158,982		10.000%	
Trade Status	51,601,664		19.000%	
Trade Update	5,431,761		2.000%	
Data Maintenance	120		N/A	
Test Duration and Timings				
Ramp-up Time (hh:mm:ss)	00:16:04			
Measurement Interval (hh:mm:ss)	02:00:00			
Business Recovery Time (hh:mm:ss)	00:13:44			
Total Number of Transactions Completed	271,587,902			