
		FUJITSU Server PRIMEQUEST 2800E2		TPC-E 1.14.0 TPC Pricing 2.0.0
				Report Date November 11, 2015
TPC-E Throughput 10,058.28 tpsE	Price/Performance \$ 187.53 USD per tpsE	Availability Date November 11, 2015	Total System Cost \$ 1,886,164 USD	
Database Server Configuration				
Operating System Microsoft Windows Server 2012 R2 Standard Edition	Database Manager Microsoft SQL Server 2014 Enterprise Edition	Processors/Cores/Threads 8/128/256	Memory 4 TB	
SUT			<div style="border: 1px solid black; padding: 5px;"> <p>Tier A PRIMERGY RX2530 M1 2x Intel Xeon E5-2699 v3 2.30 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</p> <p>Tier B PRIMEQUEST 2800E2 8x Intel Xeon E7-8890 v3 2.50 GHz 4 TB Memory 2x 300 GB 10k rpm SAS Drives 2x 400 GB SSD Drives 2x Onboard LAN 10 Gb/s 15x SAS RAID Controller</p> <p>Storage 1x PRIMECENTER Rack 15x ETERNUS JX40 210x 400 GB SSD Drives 10x 900 GB 10k rpm SAS Drives</p> </div>	
Initial Database Size 42,571 GB	Redundancy Level 1 RAID-5 data and RAID-10 log		Storage 210 x 400 GB SSD 10 x 900 GB 10k rpm HDD	



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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3-yr. Maint. Price
Database Server (Tier B) Hardware						
PRIMEQUEST 2800E2						
Base Unit PQ2800E2	MCG3AC111	1	47,900.00	1	47,900.00	
PQ 2x00E Management Board_1	MC-5HMM21	1	4,270.00	2	8,540.00	
Power Supply 2.880W platinum hp	MC-5HPS41	1	1,240.00	4	4,960.00	
UL/CSA/PSE, Plug:IEC60320-C20, connector:IEC60320-C19	MC-0HCA83	1	60.00	4	240.00	
Power Cord IEC320 C19 -> US NEMA L6-20p	S26361-F3151-E500	1	60.00	4	240.00	
Fan Unit	MC-5HFA41	1	325.00	2	650.00	
System Board PQ2800E2	MC-3HSB71	1	43,000.00	4	172,000.00	
Memory Extension Board PQ2800E2	MC-3HMB21	1	1,400.00	4	5,600.00	
Intel Xeon E7-8890v3 18C/36T 2.50GHz	MC-3BDA11	1	16,115.00	8	128,920.00	
64GB (2x32GB) 4Rx4 DDR4-2133 LR ECC	MC-3CD711	1	4,218.00	64	269,952.00	
PRAID EP420i	MC-0JSR51	1	630.00	1	630.00	
Mounting kit for Raid contr. on SB (E2)	MC-0HCK31	1	60.00	1	60.00	
HD SAS 6G 300GB 10K HOT PL 2.5" EP	MC-5DS741	1	310.00	2	620.00	
IO Unit F (10GbE, 2xbaseTports) PQ2800E	MC-3HUX41	1	8,260.00	1	8,260.00	
IO Unit (1GbE) PQ2800E	MC-3HUX31	1	5,610.00	3	16,830.00	
PRAID EP420e FH	MC-0JSR62	1	791.00	2	1,582.00	
PRAID EP420e LP	MC-0JSR61	1	791.00	13	10,283.00	
JX40 SSD SAS 12G 400GB MLC 2.5" (tempdb)	FTS:JX40-SSD400	1	2,536.00	2	5,072.00	
Rack Mount Kit F1-C S7 LV	S26361-F2735-E175	1	144.00	1	144.00	
Rack Cable Arm 2U	S26361-F2735-E82	1	40.00	1	40.00	
Mounting of RMK in symmetrical racks	S26361-F4530-E10	1	126.00	1	126.00	
Region-Kit APA/C/America/EMEA/Indien	S26361-F1452-E100	1	13.00	1	13.00	
PRIMEQUEST PQ2800E Installation, normal business hours	PQ280E-A046005-ABL	1	5,000.00	1		5,000.00
PQ2800E Series Warranty Uplift, 36 Months, Enhanced Plus Level, 24x7 4hr Onsite, Prepaid billing	PQ280E-U004361-ABL	1	53,717.00	1		53,717.00
Subtotal (*)					682,662.00	58,717.00
Storage						
PRIMECENTER RACK						
PRIMECENTER M1 Rack 742S 42U-1050x700	S26361-K827-V240	1	2,795.00	1	2,795.00	
Dummy panel, plastics, 1U + assembly	S26361-F4530-L131	1	12.00	1	12.00	
Socket strip 3phase 3x 8 sockets	S26361-F2262-E31	1	240.00	2	480.00	
PY PRIMECENTER during normal business hours, PRIMERGY Installation, Racks, One Time billing	PYPCTR-N076005-ONA	1	280.00	1		280.00
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
ETERNUS JX40						
ETERNUS JX40	FTS:ETJXS11BG	1	2,594.00	15	38,910.00	
JX40 SAS 6G Disk 900GB 10k 2.5"	FTS:ETJSA9MBG	1	336.00	10	3,360.00	
JX40 SSD SAS 12G 400GB MLC 2.5"	FTS:JX40-SSD400	1	2,536.00	210	532,560.00	
SAS Cable 6Gb 1x SFF 8088-1x SFF 8088 4m	D:KBSAS6G-1S-1S-4M	1	94.00	15	1,410.00	
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	15		9,585.00
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	15		18,270.00
PY JX40 during normal business hours, Primergy storage installation, One Time billing	PYJX40-N043005-ONA	1	450.00	15		6,750.00
Subtotal(*)					579,527.00	35,635.00



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Database Server (Tier B) Software						
SQL Server 2014 Enterprise Edition 2 Core License	7JQ-00750	2	13,472.50	64	862,240.00	
Microsoft Windows Server 2012 R2 Standard Edition 2 Processor License	P72-06284	2	735.00	4	2,940.00	
Microsoft Problem Resolution Services	n/a	2	259.00	1		259.00
				Subtotal	865,180.00	259.00
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 E5-2699v3 18C/36T 2.30 GHz	S26361-F3849-E199	1	6,237.00	2	12,474.00	
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 Ultralim	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 OCl4000-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 region-kit America	S26361-F4530-E10	1	7.00	1	7.00	
	S26361-F1452-E130	1	13.00	1	13.00	
PYRX2530 M1 during normal business hours, Primergy Installation, Midrange Server, w/o OS, One Time billing	PYR253-N038005-ONA	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(*)	18,663.00	2,562.00
Application Server (Tier A) Software						
Microsoft Windows Server 2012 R2 Standard Edition 2 Processor License	P72-06284	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)	C6ASPAT7BL	3	12.99	4	51.96	
				Subtotal(*)	1,176.96	0.00
				Total	2,147,943.96	97,173.00
Dollar Volume Discount (see Notes)		28%	1		358,953.56	
					1,788,990.40	

Notes: Price Source: 1=FUJITSU, 2=Microsoft Corporation, 3=www.cdw.com. Discount applies to all Extended Price Subtotal marked with(*) and Price Source = 1. 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	\$1,886,164
	TPC-E Throughput	10,058.28
	\$ USD/tpsE	\$187.53

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:	10,058.28 tpsE	Configured Customers:	5,184,000	
Response Times (in seconds)	Minimum	Average	90th%tile	Maximum
Broker Volume	0.01	0.01	0.02	0.97
Customer Position	0.01	0.01	0.01	3.17
Market Feed	0.01	0.01	0.02	3.16
Market Watch	0.01	0.01	0.01	0.95
Security Detail	0.01	0.01	0.01	0.88
Trade Lookup	0.01	0.04	0.07	0.99
Trade Order	0.01	0.05	0.14	1.14
Trade Result	0.01	0.01	0.02	0.95
Trade Status	0.01	0.01	0.01	0.95
Trade Update	0.01	0.05	0.08	1.02
Data Maintenance	0.01	0.01	N/A	0.14
Transaction Mix	Transaction Count		Mix %	
Broker Volume	35,486,687		4.900%	
Customer Position	94,149,128		13.000%	
Market Feed	7,241,967		1.000%	
Market Watch	130,359,570		18.000%	
Security Detail	101,391,285		14.000%	
Trade Lookup	57,937,621		8.000%	
Trade Order	73,146,173		10.100%	
Trade Result	72,419,665		10.000%	
Trade Status	137,602,233		19.000%	
Trade Update	14,484,345		2.000%	
Data Maintenance	120		N/A	
Test Duration and Timings				
Ramp-up Time (hh:mm:ss)	0:20:00			
Measurement Interval (hh:mm:ss)	2:00:00			
Business Recovery Time (hh:mm:ss)	0:43:10			
Total Number of Transactions Completed in Measurement Interval	724,218,674			