 Hewlett Packard Enterprise	HPE ProLiant DL385 Gen10		TPCx-V 2.1.5 TPC Pricing 2.4.0 Report Date Aug. 07, 2019
	Availability Date October 15, 2019	TPCx-V Throughput 2,280.00 tpsV	Price/Performance \$36.26 USD / tpsV

System Under Test Configuration Overview

Virtualization Software	Guest VM OS	Processor Description	Memory Size
VMware vSphere 6.7	Red Hat Enterprise Linux 7.6	AMD EPYC 7702 2.0GHz, 64MB L3	1,024 GB





1x HPE ProLiant DL385 Gen10 with:

2x AMD EPYC 7702 2.0 GHz (2 Procs/128 Cores/256 Threads)
 16x 64GB DDR4 2933 MHz RDIMM

12x HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty
 8x HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty
 1x HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty
 1x HPE Smart Array P408i-p SR Gen10 RAID controller
 1x HPE Smart Array P816i-a SR Gen10 RAID controller

1x HPE Ethernet 1Gb 4-port 331i Adapter - NIC (Embedded LOM)
 1x HPE Eth 10/25Gb 2p 640FLR-SFP28 Adptr (Embedded ALOM)

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Description	Part Number	Key	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Hardware Components							
HPE DL385 Gen10 CTO Mod-X 24 Small Form Factor Server	878613-B21	1	\$114,563.00	1	\$114,563.00		
HPE DL385 Gen10 7702 AMD Kit	P16636-B21		\$0.00	1			
HPE DL385 Gen10 7702 AMD FIO Kit	P16636-B21		\$0.00	1			
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-19-19-19 Registered Smart Memory Kit	P19045-B21		\$0.00	16			
HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21		\$0.00	1			
HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21		\$0.00	1			
HPE DL38X Gen10 12Gb SAS Expander Card Kit with Cables	870549-B21		\$0.00	1			
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04480-B21		\$0.00	2			
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04566-B21		\$0.00	12			
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04570-B21		\$0.00	6			
HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875488-B21		\$0.00	1			
HPE DL385G10 Standard Riser	standardDL385G10Riser		\$0.00	1			
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21		\$0.00	1			
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21		\$0.00	1			
HPE USB US Keyboard/Mouse Kit	631341-B21		\$0.00	1			
HPE 96W Smart Storage Battery (up to 20 Devices) with 145mm Cable Kit	P01366-B21		\$0.00	1			
HPE 3Y Foundation Care 24x7 SVC	H7J34A3	1	\$2,448.00	1		\$2,448.00	
				Subtotal	\$114,563.00	\$2,448.00	
Infrastructure							
HP Z23n G2 23-inch Display (includes 2 spares)	1J506A8#ABA	3	199	3	\$597.00		
				Subtotal	\$597.00		
Software Components							
VMware vSphere 6 Standard for 1 processor	VS6-STD-C	2	\$995.00	2	1,990.00		
3 Year VMware vSphere Production support	VS6-STD-3P-SSS-C	2	\$852.72	2		1,705.44	
Red Hat High Availability 2 Sockets Unlimited Guests 3 Year Subscription LTU	G5167A	1	\$3,548.00	1	3,548.00		
				Subtotal	5,538.00	1,705.44	
			Total		120,698.00	4,153.44	
			Discount 35%		41,338.85	856.80	
			Grand Total		79,359.15	3,296.64	
Pricing: 1 = HPE; 2 = VMware; 3 = HP Inc. * Discount applies to all line items where Key = 1. Discount based upon total system cost as purchased by a regular customer. Audited by Doug Johnson, InfoSizing				Three-Year Cost of Ownership: \$82,656 TPCx-V Throughput: 2,280.00 \$ USD/tpsV: \$36.26			
Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated Line Items. 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 Line Items. For complete details, see the pricing section of the TPC Benchmark Standard. 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 Pricing	2.4.0
					Report Date	Aug. 07, 2019
Guest VM Details						
Database Manager PostgreSQL 10.6	VM Memory (Total) 973 GiB	vCPUs (Total) 372	DB Initial Size 16,013.7 GB	Configured Customers 1,200,000	Active Customers 1,140,000	
Transaction Response Times (in seconds)						
Transaction Type		Min	Avg	90 th %	Max	
Broker-Volume		0.001	0.007	0.011	1.288	
Customer-Position		0.001	0.011	0.019	1.565	
Market-Watch		0.000	0.008	0.014	1.312	
Security-Detail		0.002	0.018	0.029	1.271	
Trade-Lookup		0.001	0.056	0.094	1.023	
Trade-Order		0.002	0.015	0.026	2.157	
Trade-Result		0.002	0.022	0.037	3.217	
Trade-Status		0.001	0.006	0.011	1.240	
Trade-Update		0.005	0.090	0.140	1.033	
Data-Maintenance		0.001	0.008	0.015	0.196	
Market-Feed		0.001	0.005	0.008	3.287	
Transaction Mix						
Transaction Type		Transaction Count		Mix Percentage		
Broker-Volume		6,410,057		3.900%		
Customer-Position		24,654,032		15.000%		
Market-Watch		27,941,088		17.000%		
Security-Detail		26,297,793		16.000%		
Trade-Lookup		14,792,572		9.000%		
Trade-Order		16,600,339		10.100%		
Trade-Result		16,433,028		9.998%		
Trade-Status		29,584,790		18.000%		
Trade-Update		1,643,630		1.000%		
Data-Maintenance		1,920		N/A		
Market-Feed		114,203		N/A		
Transaction Total				164,357,329		
Measurement Interval				02:00:00		
Business Recovery Time				00:07:01		
Redundancy Level Details				Redundancy Level 1 (via RAID 10)		