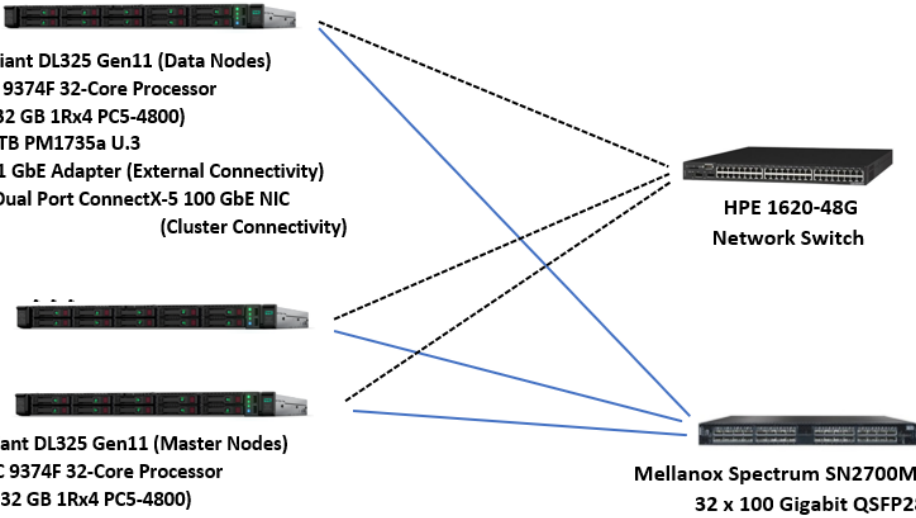


 Hewlett Packard Enterprise	<h1>HPE ProLiant DL325 Gen11</h1>		TPCx-HS 2.0.3 TPC Pricing 2.8.0 Report Date Mar. 23, 2023
Availability Date December 5, 2022	TPCx-HS Performance 42.91 HSp@1TB	Price/Performance \$43,953.54 / HSp@1TB	Total System Cost \$1,886,046 USD
System Under Test Configuration Overview			
Scale Factor 1	Hadoop Software CDP Private Cloud Base Edition 7.1.7	Operating System Red Hat Enterprise Linux 8.6	Other Software N/A
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>16 x HPE ProLiant DL325 Gen11 (Data Nodes) 1x AMD EPYC 9374F 32-Core Processor 384 GB (12 x 32 GB 1Rx4 PC5-4800) 8x NVMe 3.2 TB PM1735a U.3 1x USB3.0 to 1 GbE Adapter (External Connectivity) 1x Mellanox Dual Port ConnectX-5 100 GbE NIC (Cluster Connectivity)</p> <p>1 x HPE ProLiant DL325 Gen11 (Master Nodes) 1x AMD EPYC 9374F 32-Core Processor 384 GB (12 x 32 GB 1Rx4 PC5-4800) 2x NVMe 3.2 TB PM1735a U.3 1x USB3.0 to 1 GbE Adapter (External Connectivity) 1x Mellanox Dual Port ConnectX-5 100 GbE NIC (Cluster Connectivity)</p> </div> <div style="width: 45%; text-align: center;">  <p>HPE 1620-48G Network Switch</p> <p>Mellanox Spectrum SN2700M Switch 32 x 100 Gigabit QSFP28</p> </div> </div>			
Physical Storage/Scale Factor: 416.00		Scale Factor/Physical Memory: 0.16	
Total Number of Servers:		17 (1x ProLiant DL325 Gen11; 16x ProLiant DL325 Gen11)	
Total Processors/Cores/Threads:		17/544/1,088	
Server Configuration: Processors	1x ProLiant DL325 Gen11 1x AMD EPYC 9374F 32-Core Processor	16x ProLiant DL325 Gen11 1x AMD EPYC 9374F 32-Core Processor	
Memory	384 GiB	384 GiB	
Storage Device	2x 3.2 TB NVMe	8x 3.2 TB NVMe	
Network Connectivity:	1x Mellanox Spectrum SN2700M 32x100 GbE (cluster) 1x HPE 1620-48G (admin)		
Total Rack Units:	17 (1U) + 1 (1U) + 1 (1U) = 19U		

	<h1>HPE ProLiant DL325 Gen11</h1>	TPCx-HS 2.0.3 TPC Pricing 2.8.0 Report Date Mar. 23, 2023				
Description	Price Key	Part Number	Unit Price	Qty	Extended Price	3 Yr Maint Price
Server Hardware						
Master Node						
HPE DL325 Gen11 8SFF CTO Server	1	P54199-B21	\$2,767	1	\$2,767	
AMD EPYC 9374F 3.85GHz 32-core 320W Processor for HPE	1	P53710-B21	\$11,087	1	\$11,087	
HPE ProLiant DL3X5 Gen11 CPU Performance 1U Heat Sink Kit	1	P58457-B21	\$430	1	\$430	
HPE ProLiant DL3XX Gen11 1U Performance Fan Kit	1	P58462-B21	\$305	7	\$2,135	
HPE 32GB (1x32GB) Single Rank x4 DDR5-4800 EC8 Reg. Smart Memory	1	P50310-B21	\$2,465	12	\$29,580	
HPE DL3X5 Gen11 NS204i-u NVMe Hot Plug Boot Device Cable Kit	1	P57013-B21	\$83	1	\$83	
HPE 3.2TB NVMe MU SFF BC U.3 PM1735a SSD	1	P50230-B21	\$6,476	2	\$12,952	
HPE 1600W FS Plat Ht Plug LH PS Kit	1	P38997-B21	\$685	2	\$1,370	
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	1	P25960-B21	\$4,373	1	\$4,373	
HPE DL3XX Gen11 Easy Install Rail 2 Kit	1	P52351-B21	\$141	1	\$141	
HPE DL325Gen11 Standard Riser	1	stdDL325Gen11Riser		1		
Data Nodes						
HPE DL325 Gen11 8SFF CTO Server	1	P54199-B21	\$2,767	16	\$44,272	
AMD EPYC 9374F 3.85GHz 32-core 320W Processor for HPE	1	P53710-B21	\$11,087	16	\$177,392	
HPE ProLiant DL3X5 Gen11 CPU Performance 1U Heat Sink Kit	1	P58457-B21	\$430	16	\$6,880	
HPE ProLiant DL3XX Gen11 1U Performance Fan Kit	1	P58462-B21	\$305	112	\$34,160	
HPE 32GB (1x32GB) Single Rank x4 DDR5-4800 EC8 Reg. Smart Memory	1	P50310-B21	\$2,465	192	\$473,280	
HPE DL3X5 Gen11 NS204i-u NVMe Hot Plug Boot Device Cable Kit	1	P57013-B21	\$83	16	\$1,328	
HPE 3.2TB NVMe MU SFF BC U.3 PM1735a SSD	1	P50230-B21	\$6,476	128	\$828,928	
HPE 1600W FS Plat Ht Plug LH PS Kit	1	P38997-B21	\$685	32	\$21,920	
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	1	P25960-B21	\$4,373	16	\$69,968	
HPE DL3XX Gen11 Easy Install Rail 2 Kit		P52351-B21	\$141	16	\$2,256	
HPE DL325Gen11 Standard Riser		stdDL325Gen11Riser		16		
Other Hardware Components						
HPE 1620 48G Switch (no support available above 90 days, hence increase qty to 3)	1	JG914A	\$630	3	\$1,890	
HPE SN2700M 100GbE 32QSFP28 Switch with 3Y Tech Care Essential Service	1	Q2F21A	\$34,510	1	\$34,510	
HPE USB US Keyboard/Mouse Kit	1	631341-B21	\$32	3	\$96	
HPE 100Gb QSFP28 to QSFP28 3m Direct Attach Copper Cable	1	845406-B21	\$685	20	\$13,700	
Rack 48U 600mmx 1075mm G2 Advanced Pallet	1	P9K19A	\$3,023	1	\$3,023	
HPE C13 - JIS C8303 JP 100V 12Amp 2.0m Power Cord	1	AF572A	\$54	37	\$1,994	
HPE 3 Year Tech Care Essential DL325 GEN11 Service	1	H78S6E	\$2,958	17		\$50,286
			Subtotal		\$1,780,515	\$50,286
Other						
HP V22v G5 FHD Monitor	3	65P56AA	\$130	3	\$390	
USB3.0 to 1GbE Adapter	2		\$14.99	20	\$300	
			Subtotal		\$690	\$0
(Continued on next page.)						

 Hewlett Packard Enterprise	<h1>HPE ProLiant DL325 Gen11</h1>	TPCx-HS 2.0.3 TPC Pricing 2.8.0 Report Date Mar. 23, 2023																																																								
(Continued from previous page.)																																																										
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Pricing: 1 = HPE; 2 = BestBuy.com; 3 = hp.com; 4 = cloudera.com * All discounts are based on US list prices and for similar quantities and configurations. A 35% discount was based on the overall specific components pricing from vendor 1 in this single quotation. Discounts for similarly sized configurations will be similar to those quoted here, but may vary based on the components in the configuration.	Three-Year Cost of Ownership: \$1,886,046 HSph@1TB: 42.91 \$ / HSph@1TB: \$43,953.54																																																									
Audited by Doug Johnson, InfoSizing																																																										
Sales contact: HPE WW Headquarters, 3000 Hanover St., Palo Alto, CA 94304-1185 (650) 857-1501 or HPE: 855-472-5233																																																										
<i>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.</i>																																																										

 Hewlett Packard Enterprise	<h1>HPE ProLiant DL325 Gen11</h1>	TPCx-HS 2.0.3 TPC Pricing 2.8.0 Report Date Mar. 23, 2023
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Numerical Quantities

Performance Run – Run 1

Scale Factor	1TB
Run Start Time	2023-02-28 19:29:38.000
Run End Time	2023-02-28 19:31:00.000
Run Elapsed Time	84.000
HSGen Start Time	2023-02-28 19:29:39.000
HSGen End Time	2023-02-28 19:29:58.000
HSGen Elapsed Time	20.567
HSSort Start Time	2023-02-28 19:30:00.000
HSSort End Time	2023-02-28 19:30:49.000
HSSort Elapsed Time	49.830
HSValidate Start Time	2023-02-28 19:30:51.000
HSValidate End Time	2023-02-28 19:31:00.000
HSValidate Elapsed Time	10.316

Repeatability Run – Run 2

Scale Factor	1TB
Run Start Time	2023-02-28 19:31:14.000
Run End Time	2023-02-28 19:32:36.000
Run Elapsed Time	84.000
HSGen Start Time	2023-02-28 19:31:14.000
HSGen End Time	2023-02-28 19:31:34.000
HSGen Elapsed Time	20.965
HSSort Start Time	2023-02-28 19:31:36.000
HSSort End Time	2023-02-28 19:32:25.000
HSSort Elapsed Time	49.906
HSValidate Start Time	2023-02-28 19:32:27.000
HSValidate End Time	2023-02-28 19:32:36.000
HSValidate Elapsed Time	10.105

	<h1>HPE ProLiant DL325 Gen11</h1>	<table> <tr><td>TPCx-HS</td><td>2.0.3</td></tr> <tr><td>TPC Pricing</td><td>2.8.0</td></tr> <tr><td>Report Date</td><td>Mar. 23, 2023</td></tr> </table>	TPCx-HS	2.0.3	TPC Pricing	2.8.0	Report Date	Mar. 23, 2023
TPCx-HS	2.0.3							
TPC Pricing	2.8.0							
Report Date	Mar. 23, 2023							

Run Reports

Run Report for Performance Run – Run 1

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TPCx-HS Performance Metric (HSph@SF) Report

Test Run 1 Details	Total Time =	84
	Total Size =	10000000000
	Scale-Factor =	1

TPCx-HS Performance Metric (HSph@SF): 42.9184

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Run Report for Repeatability Run – Run 2

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TPCx-HS Performance Metric (HSph@SF) Report

Test Run 2 Details	Total Time =	84
	Total Size =	10000000000
	Scale-Factor =	1

TPCx-HS Performance Metric (HSph@SF): 42.9184

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 Hewlett Packard Enterprise	<h1>HPE ProLiant DL325 Gen11</h1>	TPCx-HS 2.0.3 TPC Pricing 2.8.0 Report Date Mar. 23, 2023
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Revision History

Date	Edition	Description
March 23, 2023	First	Initial Publication