

Hewlett Packard Enterprise		HPE ProLiant DL385 Gen11		TPC-H Rev. 3.0.1 TPC Pricing Rev. 2.9.0																																																																												
Total System Cost		Composite Query per Hour Rating		Report Date: April 28, 2025																																																																												
\$1,223,522 USD		3,577,603.0 QphH @ 10,000GB		Price/Performance \$342 USD \$ / kQphH @ 10,000GB																																																																												
Database Size	Database Manager	Operating System	Other Software	Availability Date																																																																												
10,000GB	Microsoft® SQL Server 2022 Enterprise Edition	Microsoft Windows Server 2025	None	April 28, 2025																																																																												
8.64 - Power Test Geometric Mean of Query & Refresh Times 101.83 - Throughput Arithmetic Mean of Query Times <table><tr><th>Query</th><th>Power Run</th><th>Throughput Run</th></tr><tr><td>RF2</td><td>~165</td><td>~165</td></tr><tr><td>RF1</td><td>~45</td><td>~70</td></tr><tr><td>Q22</td><td>~55</td><td>~55</td></tr><tr><td>Q21</td><td>~25</td><td>~295</td></tr><tr><td>Q20</td><td>~40</td><td>~40</td></tr><tr><td>Q19</td><td>~10</td><td>~120</td></tr><tr><td>Q18</td><td>~35</td><td>~265</td></tr><tr><td>Q17</td><td>~10</td><td>~120</td></tr><tr><td>Q16</td><td>~10</td><td>~25</td></tr><tr><td>Q15</td><td>~10</td><td>~15</td></tr><tr><td>Q14</td><td>~10</td><td>~15</td></tr><tr><td>Q13</td><td>~40</td><td>~100</td></tr><tr><td>Q12</td><td>~10</td><td>~145</td></tr><tr><td>Q11</td><td>~30</td><td>~60</td></tr><tr><td>Q10</td><td>~10</td><td>~110</td></tr><tr><td>Q9</td><td>~30</td><td>~165</td></tr><tr><td>Q8</td><td>~10</td><td>~110</td></tr><tr><td>Q7</td><td>~10</td><td>~100</td></tr><tr><td>Q6</td><td>~10</td><td>~20</td></tr><tr><td>Q5</td><td>~10</td><td>~100</td></tr><tr><td>Q4</td><td>~10</td><td>~100</td></tr><tr><td>Q3</td><td>~10</td><td>~130</td></tr><tr><td>Q2</td><td>~10</td><td>~20</td></tr><tr><td>Q1</td><td>~10</td><td>~110</td></tr></table>						Query	Power Run	Throughput Run	RF2	~165	~165	RF1	~45	~70	Q22	~55	~55	Q21	~25	~295	Q20	~40	~40	Q19	~10	~120	Q18	~35	~265	Q17	~10	~120	Q16	~10	~25	Q15	~10	~15	Q14	~10	~15	Q13	~40	~100	Q12	~10	~145	Q11	~30	~60	Q10	~10	~110	Q9	~30	~165	Q8	~10	~110	Q7	~10	~100	Q6	~10	~20	Q5	~10	~100	Q4	~10	~100	Q3	~10	~130	Q2	~10	~20	Q1	~10	~110
Query	Power Run	Throughput Run																																																																														
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Q3	~10	~130																																																																														
Q2	~10	~20																																																																														
Q1	~10	~110																																																																														
Database Load Time = 0d 18h 5m 18s		Storage Redundancy Level																																																																														
Load included backup: Y		Base Tables and Auxiliary Data Structures		No RAID																																																																												
Total Data Storage / Database Size = 4.86		DBMS Temporary Space		No RAID																																																																												
Memory/Database Size = 30.7%		OS, DBMS Software and Backup		RAID 1																																																																												
System Components System Total Nodes: 1 AMD® EPYC 9575F @ 3.29 GHz: 2 Cores/Threads: 128/256 Memory: 3,072 GiB 3.2TB E3S Drives 12 6.4TB NVMe Drives 2 RAID1 Boot Controller with 480GB M.2 NVMe 2 Total Storage: 48,577.79 GiB																																																																																

 Hewlett Packard Enterprise	HPE ProLiant DL385 Gen11		TPC-H Rev. 3.0.1 TPC Pricing Rev. 2.9.0			
			Report Date: April 28, 2025			
Description	Price Key	Part Number	Unit Price	Qty	Extended Price	3 Yr Maint Price
Server Hardware						
HPE DL385 Gen11 12EDSFF CTO Svr	1	P53929-B21	\$5,840	1	\$5,840	
AMD EPYC 9575F 64C CPU for HPE	1	P72758-B21	\$27,148	2	\$54,295	
HPE DL3X5 Gen11 Perf 2U Heat Sink Kit	1	P58459-B21	\$307	1	\$307	
HPE DL3X5 Gen11 2U Perf Fan Kit	1	P58465-B21	\$192	1	\$192	
HPE 128GB 2Rx4 PC5-6400B-R Smart Kit	1	P69730-B21	\$14,011	24	\$336,269	
HPE 1600W FS Plat Ht Plg LH Pwr Sply Kit	1	P38997-B21	\$901	2	\$1,802	
MLX MCX623106AS 100GbE 2p QSFP56 Adptr	1	P25960-B21	\$774	1	\$774	
HPE 48U 600x1075mm Adv G2 Kit Plt Rack	1	P9K19A	\$3,023	1	\$3,023	
HPE 3 Year Total Care Essential for DL385 Gen11	1	H79H3E	\$6,169	1		\$6,169
Subtotal					\$402,503	\$6,169
Storage						
HPE 3.2TB NVMe MU E3S EC1 CM7 SSD	1	P61191-B21	\$8,280	12	\$99,360	
HPE 6.4TB NVMe MU SFF BC U.3 PM1735a SSD	1	P50233-B21	\$18,360	2	\$36,720	
HPE NS204i-u Gen11 Ht Plg Boot Opt Dev	1	P48183-B21	\$1,994	1	\$1,994	
HPE MR416i-p Gen11 SPDM Storage Cntrlr	1	P47777-B21	\$4,746	1	\$4,746	
HPE DL3X5 G11 NS204i-u NVMe Boot Cbl Kit	1	P57013-B21	\$100	1	\$100	
HPE DL385 Gen11 20EDSFF x4 FIO Kit	1	P64383-B21	\$1,430	1	\$1,430	
HPE DL385 G11 2 SFF NVME U.3 x4 drive cage kit	1	P55091-B21	\$1,374	1	\$1,374	
HPE Gen 11 EI Rail Kit	1	P52351-B21	\$169	1	\$169	
HPE DL385G10 Standard Riser	1	standardDL325G10Riser		1		
Subtotal					\$145,893	\$0
Other						
HP Series 5 FHD Monitor + Wireless Mouse and Keyboard Bundle	3	94C21AA 3ML04AA	\$149	3	\$447	
Subtotal					\$447	\$0
Software Components						
SQL Server 2022 Enterprise Edition (2 core license, 64 cores)	2	N/A	\$15,123	64	\$967,872	
Microsoft Problem Resolution Services	2	N/A	\$259	1		\$259
MS WS25 16C DC Add Lic WW SW(16 Core license)	1	P77107-B21	\$5,325.73	8	\$42,606	
Subtotal					\$1,010,478	\$259
Total Extended Price					\$1,559,321	\$6,428
Total Discounts					\$338,836.0	\$3,392.00
Price Key: 1 - HPE , 2 – Microsoft, 3 – Hewlett Packard Inc.						
Audited by Doug Johnson of InfoSizing (www.sizing.com)		Grand Total		\$1,220,485.16 \$3,036.00		
All discounts are based on US list prices and for similar quantities and configurations. A 60% discount was based on the overall specific components pricing from vendor 1 except 23% only for Software Component 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.		3 year cost of ownership USD:				\$1,223,522.00
		QphH @ 10,000GB :				3,577,603.00
		\$ USD/QphH @ 10,000GB				\$342.00
Sales contact: HPE WW Headquarters, 3000 Hanover St., Palo Alto, CA 94304-1185 (855)472-5233 / (800)786-7967 / (888)269-4073 (US)						
Microsoft Corporation, One Microsoft Way, Redmond, WA 98052-6399 (425) 882 8080						
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 sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform at pricing@tpc.org. Thank you.						

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			Report Date: April 28, 2025		
Numerical Quantities					
Measurement Results					
Database Scale Factor		10,000			
Total Data Storage / Database Size		4.86			
Percentage Memory / Database Size		30.7%			
Start of Database Load		2025-03-09 23:59:17			
End of Database Load		2025-03-10 18:04:35			
Database Load Time		00d 18h 05m 18s			
Query Streams for Throughput Test		9			
TPC-H Power		4,168,929.8			
TPC-H Throughput		3,070,150.9			
TPC-H Composite Query-per-Hour (QphH@10,000GB)		3,577,603.0			
Total System Price over 3 Years (\$ USD)		\$1,223,522			
TPC-H Price/Performance Metric (\$ USD / kQphH@10,000GB)		\$342.00			
Measurement Interval					
Measurement Interval in Throughput Test		2,321.71 seconds			
Duration of Stream Execution					
Power Run	Seed	Query Start Time	Total Time	RF1 Start Time	RF2 Start Time
		Query End Time	(hh:mm:ss)	RF1 End Time	RF2 End Time
	310180435	2025-03-10 23:27:31	00:04:17	2025-03-10 23:26:48	2025-03-10 23:31:48
		2025-03-10 23:31:48		2025-03-10 23:27:31	2025-03-10 23:33:09
Throughput Stream	Seed	Query Start Time	Total Time	RF1 Start Time	RF2 Start Time
		Query End Time	(hh:mm:ss)	RF1 End Time	RF2 End Time
1	310180436	2025-03-10 23:33:08	00:37:41	2025-03-10 23:33:08	2025-03-10 23:34:16
		2025-03-11 00:10:49		2025-03-10 23:34:16	2025-03-10 23:37:25
2	310180437	2025-03-10 23:33:08	00:34:07	2025-03-10 23:37:25	2025-03-10 23:38:39
		2025-03-11 00:07:15		2025-03-10 23:38:39	2025-03-10 23:41:33
3	310180438	2025-03-10 23:33:08	00:37:35	2025-03-10 23:41:34	2025-03-10 23:42:49
		2025-03-11 00:10:43		2025-03-10 23:42:49	2025-03-10 23:44:59
4	310180439	2025-03-10 23:33:08	00:38:43	2025-03-10 23:44:59	2025-03-10 23:46:11
		2025-03-11 00:11:51		2025-03-10 23:46:11	2025-03-10 23:48:55
5	310180440	2025-03-10 23:33:08	00:36:58	2025-03-10 23:48:55	2025-03-10 23:50:05
		2025-03-11 00:10:06		2025-03-10 23:50:05	2025-03-10 23:53:23
6	310180441	2025-03-10 23:33:08	00:38:37	2025-03-10 23:53:23	2025-03-10 23:54:36
		2025-03-11 00:11:45		2025-03-10 23:54:36	2025-03-10 23:57:32
7	310180442	2025-03-10 23:33:08	00:35:52	2025-03-10 23:57:32	2025-03-10 23:58:40
		2025-03-11 00:09:00		2025-03-10 23:58:40	2025-03-11 00:01:01
8	310180443	2025-03-10 23:33:08	00:38:41	2025-03-11 00:01:02	2025-03-11 00:02:20
		2025-03-11 00:11:49		2025-03-11 00:02:20	2025-03-11 00:05:46
9	310180444	2025-03-10 23:33:09	00:37:59	2025-03-11 00:05:46	2025-03-11 00:06:58
		2025-03-11 00:11:08		2025-03-11 00:06:57	2025-03-11 00:09:01



**Hewlett Packard
Enterprise**

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TPC-H Rev. 3.0.1
TPC Pricing Rev. 2.9.0

Report Date:
April 28, 2025

TPC-H Timing Intervals (in seconds):

Stream ID	0	1	2	3	4	5	6	7	8	9	Min Qi	Avg. Qi	Max. Qi
Q1	4.58	160.21	106.65	86.20	62.67	121.55	157.24	45.33	165.40	105.75	4.58	101.56	165.40
Q2	2.84	5.42	30.07	23.59	10.68	16.26	17.03	25.79	17.59	18.87	2.84	16.81	30.07
Q3	8.08	143.26	80.32	179.88	27.12	138.98	193.03	123.05	166.18	126.42	8.08	118.63	193.03
Q4	7.53	47.25	102.69	92.56	82.68	96.57	136.25	148.04	103.62	94.32	7.53	91.15	148.04
Q5	10.42	142.00	177.49	151.65	56.17	43.57	122.78	79.27	133.84	29.18	10.42	94.64	177.49
Q6	0.75	13.87	13.28	36.34	28.34	11.81	28.68	12.33	23.23	23.04	0.75	19.17	36.34
Q7	7.76	58.44	71.64	97.01	131.91	114.25	26.76	107.69	140.06	147.82	7.76	90.33	147.82
Q8	8.40	104.56	155.10	78.95	87.14	130.72	91.95	164.00	125.78	70.48	8.40	101.71	164.00
Q9	32.23	103.05	127.81	124.94	177.78	174.00	147.96	200.95	171.07	261.72	32.23	152.15	261.72
Q10	7.30	137.02	121.22	95.49	121.85	122.13	117.59	72.37	108.09	126.78	7.30	102.98	137.02
Q11	30.68	62.78	109.99	45.54	61.94	71.95	57.00	57.97	35.51	43.94	30.68	57.73	109.99
Q12	5.41	143.48	82.87	163.01	152.37	130.50	195.26	215.03	133.19	109.57	5.41	133.07	215.03
Q13	40.27	95.31	99.21	100.35	158.41	112.21	56.08	58.53	95.49	122.70	40.27	93.86	158.41
Q14	2.37	14.33	16.97	6.36	13.03	11.64	11.72	10.89	12.50	6.03	2.37	10.58	16.97
Q15	4.22	7.64	15.84	30.07	12.15	15.75	7.22	7.05	13.73	39.19	4.22	15.29	39.19
Q16	4.70	34.91	14.33	12.53	22.99	25.24	41.84	44.72	32.38	9.19	4.70	24.28	44.72
Q17	3.70	157.81	81.22	119.14	184.97	75.06	134.25	59.47	137.92	129.76	3.70	108.33	184.97
Q18	35.09	330.89	234.60	229.76	286.10	315.12	352.35	122.78	311.47	211.09	35.09	242.93	352.35
Q19	2.70	151.18	141.35	45.67	173.08	139.31	128.84	85.21	89.53	136.58	2.70	109.35	173.08
Q20	5.36	29.12	46.74	48.16	6.00	41.98	41.77	35.32	36.15	62.78	5.36	35.34	62.78
Q21	25.38	286.00	142.50	410.28	452.57	292.28	221.85	395.81	209.09	251.11	25.38	268.69	452.57
Q22	6.01	31.34	73.75	76.87	11.67	16.32	28.26	78.82	57.42	152.59	6.01	53.31	152.59
RF1	42.65	66.52	73.79	75.14	72.31	69.80	72.87	67.20	78.91	71.14	42.65	69.03	78.91
RF2	81.14	188.99	174.75	130.06	163.32	198.11	176.32	141.59	205.64	123.53	81.14	158.35	205.64