



Dell PowerEdge R7625 Using Microsoft SQL Server 2022

TPC-H Rev. 3.0.1
TPC-Pricing Rev. 2.9.0

Report Date
March 20, 2024

Total System Cost

Composite Query per Hour Metric

Price / Performance

\$1,332,342.00

2,720,098.1
QphH@10000GB

\$ 489.82
Price/ kQphH@10000GB

Database Size

Database Manager

Operating System

Other Software

Availability Date

10,000GB

SQL Server 2022

Windows Server
2022

N/A

March 20, 2024



Database Load Time = 00d 004h 15m 38s

Load includes backup = Y

Total Data Storage / Database Size = 5.48

Memory to Database Size Percentage = 61.4%

Storage Redundancy Levels:

Base Tables and Auxiliary Data Structures	Level 0
DBMS Temporary Space	Level 0
OS and DBMS Software	Level 1
DBMS Log	Level 1

System Configuration:	Dell PowerEdge R7625 Server
Processors/Model:	2x AMD EPYC 9554 3.1GHz/3.75GHz 64c/128t, 245MB Cache
Cores/Thread	128C/256T
Memory	6144 (24x 256 GB DDR5-4800MT/s)
Storage	PERC 755 Controller w/ 4x 1.92TB SAS SSDs 8x Dell 6.4 TB NVMe, Mixed Use
Total Storage	54836.27



Dell PowerEdge R7625

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Report Date: March-20-2024

Description	Part Number	Key	Unit Price	Qty	Extended Price	3 yr. Maint Price
HARDWARE COMPONENTS						
PowerEdge R7625 Server	210-BFMO	1	\$907,633.84	1	\$907,633.84	
2.5 Chassis	379-BDTF	1	\$0.00	1	\$0.00	
SAS/SATA/NVMe Capable Backplane	379-BDSW	1	\$0.00	1	\$0.00	
No Rear Storage	379-BDTE	1	\$0.00	1	\$0.00	
Trusted Platform Module 2.0 V3	461-AAIG	1	\$0.00	1	\$0.00	
2.5" Chassis with up to 24 SAS4/SATA Drives including 8 Universal Slots (NVMe Direct), Front PERC 11	321-BICT	1	\$0.00	1	\$0.00	
AMD EPYC 9554 3.10GHz, 64C/128T, 256M Cache (360W) DDR5-4800	338-CGXC	1	\$0.00	2	\$0.00	
Additional Processor Selected	379-BDCO	1	\$0.00	1	\$0.00	
High Performance Heatsink for 2 CPU Configuration	412-ABCZ	1	\$0.00	1	\$0.00	
Performance Optimized	370-AHLL	1	\$0.00	1	\$0.00	
4800MT/s RDIMMs	370-AHCL	1	\$0.00	1	\$0.00	
256GB RDIMM, 4800MT/s Octo Rank	370-AHCO	1	\$0.00	24	\$0.00	
RAID 1	780-BCDN	1	\$0.00	1	\$0.00	
PERC H755 SAS Front	405-AAZB	1	\$0.00	1	\$0.00	
Front PERC Mechanical Parts, for 2.5" x24 SAS/SATA Chassis	750-ADUB	1	\$0.00	1	\$0.00	
1.92TB SSD SAS ISD, Mixed Use up to 24Gbps 512e 2.5in Hot-Plug ,AG Drive	345-BELI	1 S	\$0.00	4	\$0.00	
6.4TB Enterprise NVMe Mixed Use AG Drive U.2 Gen4 with carrier	400-BKGI	1	\$0.00	8	\$0.00	
Performance BIOS Settings	384-BBBL	1	\$0.00	1	\$0.00	
UEFI BIOS Boot Mode with GPT Partition	800-BBDM	1	\$0.00	1	\$0.00	
No Energy Star	387-BBEY	1	\$0.00	1	\$0.00	
Fan Foam, HDD 2U	750-ACOM	1	\$0.00	1	\$0.00	
Very High Performance Fan x6	750-ADGJ	1	\$0.00	1	\$0.00	
Dual, Hot-Plug, Power Supply 2400W Redundant, D Mixed Mode	450-AJEV	1	\$0.00	1	\$0.00	
C19 to C20, PDU Style, 16 AMP, Power Cord	450-AEJJ	1	\$0.00	2	\$0.00	
Riser Config 2, 6 x8 FH + 2 x16 LP	330-BCBH	1	\$0.00	1	\$0.00	
PowerEdge R7625 Motherboard	329-BHNU	1	\$0.00	1	\$0.00	
No OCP 3.0 mezzanine NIC card	412-AASK	1	\$0.00	1	\$0.00	
Broadcom 5720 Dual Port 1GbE LOM	540-BDKD	1	\$0.00	1	\$0.00	
Broadcom 57414 Dual Port 10/25GbE SFP28 Adapter, PCIe Full Height, V2	540-BDHF	1	\$0.00	1	\$0.00	
No Cables Required	470-AEYU	1	\$0.00	1	\$0.00	
Dell Luggage Tag	321-BHXZ	1	\$0.00	1	\$0.00	
No Bezel	350-BBBW	1	\$0.00	1	\$0.00	
Assembly BOSS Blank	329-BERC	1	\$0.00	1	\$0.00	
iDRAC9, Enterprise 16G	528-CTIC	1	\$0.00	1	\$0.00	
Secured Component Verification	528-COYT	1	\$0.00	1	\$0.00	
No Quick Sync	350-BBYX	1	\$0.00	1	\$0.00	
iDRAC, Factory Generated Password	379-BCSF	1	\$0.00	1	\$0.00	
iDRAC Service Module (ISM), NOT Installed	379-BCQX	1	\$0.00	1	\$0.00	
iDRAC Group Manager, Disabled	379-BCQY	1	\$0.00	1	\$0.00	
No Rack Rails	770-BBBS	1	\$0.00	1	\$0.00	
No Systems Documentation, No OpenManage DVD Kit	631-AACK	1	\$0.00	1	\$0.00	
PowerEdge R7625 Shipping	340-DCWB	1	\$0.00	1	\$0.00	
PowerEdge R7625 Shipping Material	340-DCXY	1	\$0.00	1	\$0.00	
PowerEdge R7625 No CE or CCC Marking	389-EFMJ	1	\$0.00	1	\$0.00	
Basic Next Business Day 36 Months	709-BBFM	1	\$249.00	1	\$0.00	\$249.00
ProSupport and 4Hr Mission Critical Initial, 36 Month(s)	865-BBNB	1	\$110,037.32	1	\$0.00	\$110,037.32
Dell 24 Monitor – S2421HN	210-AXHJ	1	158.49	1	158.49	
Dell Wireless Keyboard and Mouse - KM3322W	580-AKCW	1	29.99	1	29.99	
				Subtotal	\$907,822.32	\$110,286.32
SOFTWARE COMPONENTS						
Windows Server 2022 Standard, 16CORE License		2	984.00	8	7,872.00	
Microsoft Problem Resolution		2	259.00	1	259.00	
Microsoft SQL Server 2022 Enterprise Edition, 2 core licenses		2	15,123.00	64	967,872.00	
				Subtotal	\$976,003.00	\$0.00
Total					\$1,883,825.32	110,286.32
Large Purchase Discount (65%)*					-590,084.51	-71,686.11
Pricing: 1 - Dell Mohan Rakkam; 2- Microsoft Corporation				Three-Year Cost of Ownership:		\$1,332,342.00
* Discount based upon total system cost as purchased by a regular customer.				QpH@SF10,000GB:		2,720,098.10
S- One or more components of the Measured Configuration have been substituted in the Priced Configuration. See the FDR for details.				\$ /kQpH@SF10,000GB:		489.82
Audited by Doug Johnson, 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

Numerical Quantities

Measurement Results

Database Scale Factor	10,000 GB
Total Data Storage / Database Size	5.48
Percentage Memory / Database Size	61.4%
Start of Database Load	2024-03-14 19:57:11
End of Database Load	2024-03-15 00:12:49
Database Load Time	00d 04h 15m 38s
Query Streams for Throughput Test	9
TPC-H Power	3,025,456.0
TPC-H Throughput	2,445,559.9
TPC-H Composite Query-per-Hour Metric (QphH@10000GB)	2,720,098.1
Total System Price Over 3 Years	USD 1,332,342.00
TPC-H Price/ Performance Metric (\$/QphH@10000GB)	USD 489.82

Measurement Interval

Measurement Interval in Throughput Test (Ts)	2,914.67
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Duration of Stream Execution

Power Run	Seed	Query Start Time	Total Time (hh:mm:ss)	RF1 Start Time	RF2 Start Time
		Query End Time		RF1 End Time	RF2 End Time
	315001249	2024-03-15 01:17:18	00:05:45	2024-03-15 01:16:03	2024-03-15 01:23:05
		2024-03-15 01:23:03		2024-03-15 01:17:16	2024-03-15 01:25:15
Throughput Stream	Seed	Query Start Time	Total Time (hh:mm:ss)	RF1 Start Time	RF2 Start Time
		Query End Time		RF1 End Time	RF2 End Time
1	315001250	2024-03-15 01:25:14	00:41:09	2024-03-15 01:25:14	2024-03-15 01:26:41
		2024-03-15 02:06:23		2024-03-15 01:26:41	2024-03-15 01:30:17
2	315001251	2024-03-15 01:25:14	00:44:38	2024-03-15 01:30:17	2024-03-15 01:31:50
		2024-03-15 02:09:52		2024-03-15 01:31:50	2024-03-15 01:36:09
3	315001252	2024-03-15 01:25:14	00:41:00	2024-03-15 01:36:09	2024-03-15 01:37:39
		2024-03-15 02:06:14		2024-03-15 01:37:39	2024-03-15 01:41:54
4	315001253	2024-03-15 01:25:14	00:44:46	2024-03-15 01:41:55	2024-03-15 01:43:29
		2024-03-15 02:10:00		2024-03-15 01:43:29	2024-03-15 01:47:38
5	315001254	2024-03-15 01:25:14	00:43:06	2024-03-15 01:47:38	2024-03-15 01:49:07
		2024-03-15 02:08:20		2024-03-15 01:49:07	2024-03-15 01:53:28
6	315001255	2024-03-15 01:25:14	00:40:56	2024-03-15 01:53:28	2024-03-15 01:54:56
		2024-03-15 02:06:10		2024-03-15 01:54:56	2024-03-15 01:58:56
7	315001256	2024-03-15 01:25:14	00:41:56	2024-03-15 01:58:56	2024-03-15 02:00:30
		2024-03-15 02:07:10		2024-03-15 02:00:30	2024-03-15 02:04:22
8	315001257	2024-03-15 01:25:14	00:40:12	2024-03-15 02:04:23	2024-03-15 02:05:56
		2024-03-15 02:05:26		2024-03-15 02:05:56	2024-03-15 02:10:13
9	315001258	2024-03-15 01:25:14	00:42:35	2024-03-15 02:10:13	2024-03-15 02:11:29
		2024-03-15 02:07:49		2024-03-15 02:11:29	2024-03-15 02:13:49



Dell PowerEdge R6415
using Microsoft SQL Server 2022

TPC-H Rev. 3.0.1
TPC-Pricing Rev. 2.9.0

Report Date
March 20, 2024

TPC-H Timing Intervals (in seconds)

Stream ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
0	5.62	1.92	11.44	15.13	20.95	0.52	11.66	15.58	34.13	7.57	25.72	4.98
1	95.78	13.90	92.75	70.40	103.76	14.88	183.22	101.96	136.21	148.67	51.30	244.40
2	153.14	26.22	41.96	22.85	75.91	6.19	124.07	206.63	180.56	154.26	45.14	292.38
3	93.27	20.77	118.03	115.46	39.21	33.28	89.55	70.62	72.03	166.33	40.22	90.39
4	58.91	16.33	24.60	66.00	77.76	21.28	161.29	91.52	121.79	153.91	81.64	225.04
5	155.16	17.17	57.01	72.28	149.18	16.15	155.20	50.07	67.96	103.71	85.03	207.59
6	121.27	8.73	90.74	41.82	102.01	8.69	56.53	217.04	134.19	140.31	44.95	170.34
7	104.73	17.48	54.34	85.17	115.19	5.77	100.82	146.59	122.05	94.26	99.33	202.70
8	147.34	13.30	30.13	70.12	73.85	28.24	82.28	240.73	96.82	108.14	57.05	137.81
9	89.33	11.69	31.13	41.53	33.03	25.81	49.36	105.70	126.06	180.20	66.20	79.78
Qi Min	5.62	1.92	11.44	15.13	20.95	0.52	11.66	15.58	34.13	7.57	25.72	4.98
Qi Avg	102.46	14.75	55.21	60.08	79.09	16.08	101.40	124.64	109.18	125.74	59.66	165.54
Qi Max	155.16	26.22	118.03	115.46	149.18	33.28	183.22	240.73	180.56	180.20	99.33	292.38

Stream ID	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
0	42.85	2.51	4.72	11.39	5.59	53.14	9.09	14.25	38.24	6.62	72.69	129.61
1	67.32	7.05	13.64	16.10	117.15	477.01	43.12	43.17	347.45	78.76	86.21	216.00
2	94.29	10.16	25.30	27.06	162.02	745.21	116.79	27.11	74.13	65.50	92.91	258.50
3	59.87	4.85	8.12	33.22	165.36	654.27	38.93	51.40	352.15	142.20	90.55	255.03
4	68.52	18.75	24.42	33.09	142.58	647.21	169.77	67.61	391.52	21.23	94.32	249.11
5	113.49	5.70	20.63	33.56	118.27	515.90	62.16	48.23	491.20	39.41	88.20	260.94
6	54.45	5.20	8.50	24.21	148.89	556.59	161.34	36.98	282.30	39.57	88.36	239.49
7	68.14	11.55	30.77	44.53	64.95	514.94	166.00	71.66	374.39	19.16	93.71	232.60
8	57.36	5.57	17.19	37.80	131.97	663.55	21.19	21.86	313.92	55.00	93.34	256.92
9	58.07	8.22	12.36	37.99	157.73	538.33	209.87	54.09	459.71	178.04	75.30	140.76
Qi Min	42.85	2.51	4.72	11.39	5.59	53.14	9.09	14.25	38.24	6.62	72.69	129.61
Qi Avg	68.44	7.96	16.57	29.90	121.45	536.62	99.83	43.64	312.50	64.55	87.56	223.90
Qi Max	113.49	18.75	30.77	44.53	165.36	745.21	209.87	71.66	491.20	178.04	94.32	260.94

