



**DELL**  
**PowerEdge T610**  
 with SQL Server 2008 Enterprise  
 x64 Edition™ SP1

**TPC-H Revision 2.8.0**

Report Date: **June 2, 2009**

Revision Date: **August 5, 2009**

**Total System Cost**  
**\$41,998 USD**

**TPC-H Composite Query per Hour**  
**28,772.9 QphH@100GB**

**Price/Performance**  
**\$1.46 USD/ QphH@100GB**

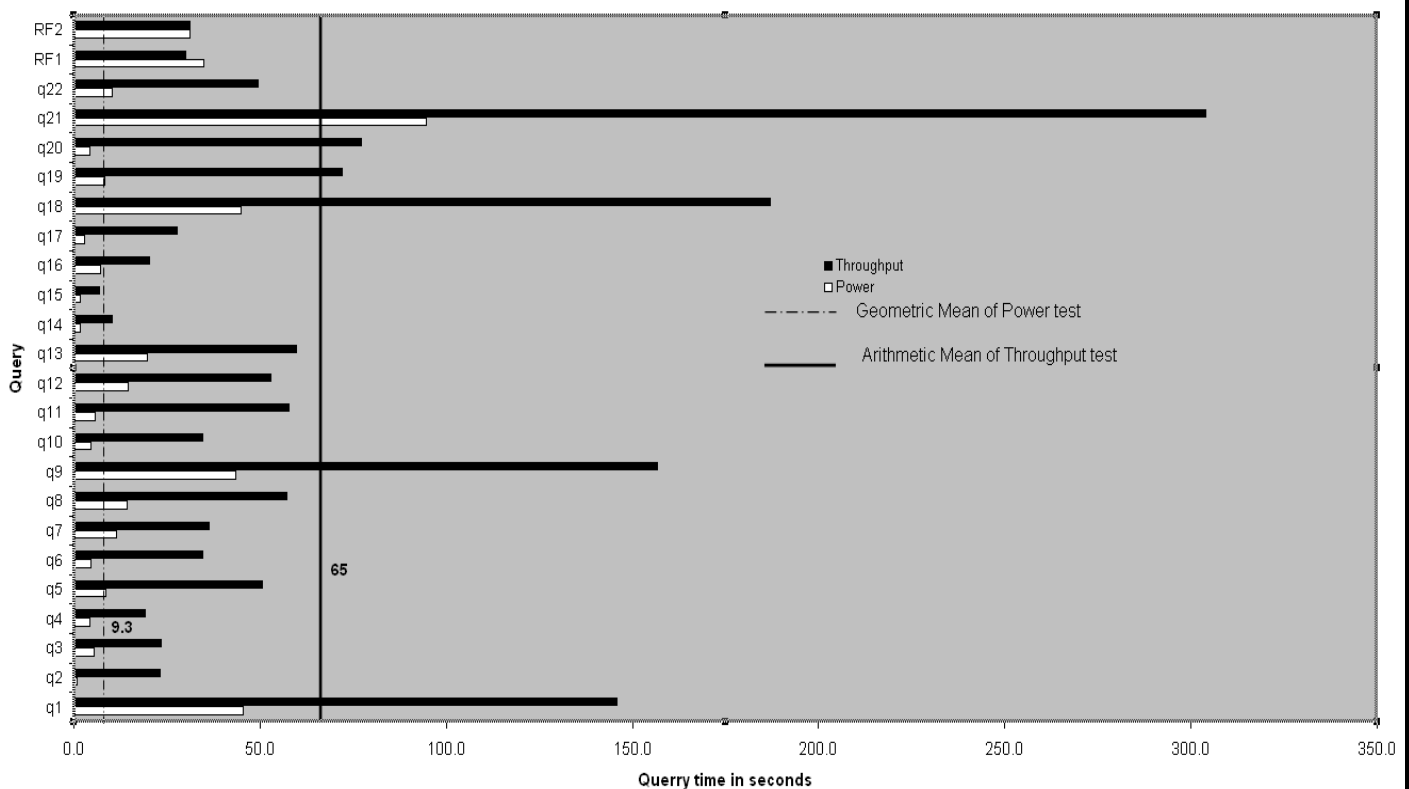
**Database Size**  
**100GB**

**Database Manager**  
 SQL Server 2008 Enterprise x64  
 Edition™ SP1

**Operating System**  
 Microsoft Windows Server  
 2008 Enterprise x64  
 Edition™ SP1

**Other Software**  
 Visual C++ 2008  
 Visual Studio Standard 2005

**Availability Date**  
**June 2, 2009**



**Database Load Time**  
 3:43:30

**Total Disk/Database Size**  
 8.4

**Load Includes Backup**  
 Y

**RAID (Base tables only)**  
 N

**RAID (Base tables and auxiliary data structures)**  
 N

**RAID (Everything)**  
 N

**System Configuration :** 1 node  
**Processors (per node) :** 2x Intel® Xeon™ X5570 QC 2.93GHz w/ 8M L2 Cache  
**Memory: (per node) :** 48GB RAM  
**Disk Drives:** 4 FusionIO 80GB ioDrives & 8 – 73GB 15k SAS HDD

“Database Size includes only raw data (e.g., no temp, index, redundant storage space, etc.)”



# PowerEdge T610

TPC-H REV 2.7 EXECUTIVE SUMMARY

Server

Report Date: 02-June-09

Revision Date: 05-Aug-09

Description	Part Number	Third Party		Unit Price	Qty	Extended Price	3 yr. Maint. Price
		Brand	Pricing				
<b>Server Hardware</b>							
PE610 Tower Chasis, Up to 8 2.5in HDD & 2 Broadcom NICs	224-4854			\$849.00	1	\$849.00	\$540.00
X5570, 2.93GHz, 8M, XN, 6.40GT/S Processor	317-0254			\$1,799.00	2	\$3,598.00	
HO Pwr Sply, Non-Redundant, 870W UPG	330-3550			\$30.00	1	\$30.00	
48GB, 12x4GB, 1066MHZ, 2R RDIMM, 2P, OPTIMIZED	317-0239			\$2,092.00	1	\$2,092.00	
PERC6i SAS RAID, Internal, Bat	341-5699			\$299.00	1	\$299.00	
73GB, SAS, 2.5-inch, 15K RPM HD	341-4727			\$339.00	8	\$2,712.00	
DELL E157FP, 15 IN, 15.0 VIS	320-5090			\$189.00	1	\$189.00	
					<b>Subtotal</b>	<b>\$9,769.00</b>	<b>\$540.00</b>
<b>Server Storage</b>							
Fusion IO IoDrive 80GB	A2595165			\$3,591.00	6	\$21,546.00	\$0.00
					<b>Subtotal</b>	<b>\$21,546.00</b>	<b>\$0.00</b>
<b>Server Software</b>							
SQL Server 2008 Enterprise x64 Edition	810-07580	Microsoft	1	\$8,487.00	1	\$8,487.00	
SQL Server 2008 Client Licence **	359-01912	Microsoft	1	156	25	\$3,900.00	
Windows Server 2008 Enterprise x64 Server **	P72-03195	Microsoft	1	\$2,357.00	1	\$2,357.00	
Visual Studio Standard 2005	127-00012	Microsoft	1	\$250.00	1	\$250.00	
Professional Support (1 Incident)		Microsoft	1	\$245.00	1		\$245.00
					<b>Subtotal</b>	<b>\$14,994.00</b>	<b>\$245.00</b>
All components from Dell are discounted 16% based on total dollar volume of this configuration.						<b>Other Discounts (16%)</b>	\$5,096.80
						<b>Total</b>	<b>\$41,212</b>
							<b>\$785</b>
Notes:				<b>Three-Year Cost of Ownership:</b>		<b>\$41,998</b>	<b>USD</b>
** All Microsoft maintenance is covered by the maintenance costs of Microsoft SQL Server							
Pricing: NIO = These components are Not Immediately Orderable; 1 = Microsoft, all others are Dell				<b>OphH@100G</b>		<b>28,772.9</b>	
Pricing may be verified by calling 1-800-BUY-DELL and referencing quote # 489414805 as a complex quote.							
<b>Audited by Lorna Livingtree, Performance Metrics Inc.</b>				<b>\$ / OphH@100G:</b>		<b>\$1.46</b>	<b>USD</b>
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 items, please inform the TPC at <a href="mailto:pricing@tpc.org">pricing@tpc.org</a> .							



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**PowerEdge T610**  
w/ **SQL Server 2008 Enterprise**  
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## Numerical Quantities Summary

### Measurement Results:

Database Scale Factor	100
Total Data Storage/Database Size	8.4
Start of Database Load	2009-05-06 08:33:41
End of Database Load	2009-05-06 12:17:11
Database Load Time	3:43:30
Query Streams for Throughput Test	5
TPC-H Power	38,550.7
TPC-H Throughput	21,475.1
TPC-H Composite Query-per-Hour Metric (QpH@100GB)	28,772.9
Total System Price Over 3 Years	\$41,998
TPC-H Price Performance Metric (\$/QpH@100GB)	\$1.46

### Measurement Interval:

Measurement Interval in Throughput Test (Ts) = 1,844 seconds

### Duration of stream execution:

	Seed	Start Date/Time	End Date/Time	Duration
<b>Stream00</b>	506121711	5/6/09 13:11:12	5/6/09 13:17:11	0:05:59
<b>Stream01</b>	506121712	5/6/09 13:17:43	5/6/09 13:43:12	0:25:29
<b>Stream02</b>	506121713	5/6/09 13:17:43	5/6/09 13:42:24	0:24:41
<b>Stream03</b>	506121714	5/6/09 13:17:43	5/6/09 13:42:10	0:24:27
<b>Stream04</b>	506121715	5/6/09 13:17:43	5/6/09 13:43:06	0:25:23
<b>Stream05</b>	506121716	5/6/09 13:17:43	5/6/09 13:43:16	0:25:33
<b>Refresh00</b>		5/6/09 13:10:29	5/6/09 13:11:04	0:00:35
		5/6/09 13:17:11	5/6/09 13:17:42	0:00:31
<b>Refresh01</b>		5/6/09 13:43:17	5/6/09 13:44:17	0:01:00
<b>Refresh02</b>		5/6/09 13:44:18	5/6/09 13:45:17	0:00:59
<b>Refresh03</b>		5/6/09 13:45:18	5/6/09 13:46:21	0:01:03
<b>Refresh04</b>		5/6/09 13:46:21	5/6/09 13:47:22	0:01:01
<b>Refresh05</b>		5/6/09 13:47:23	5/6/09 13:48:27	0:01:04

