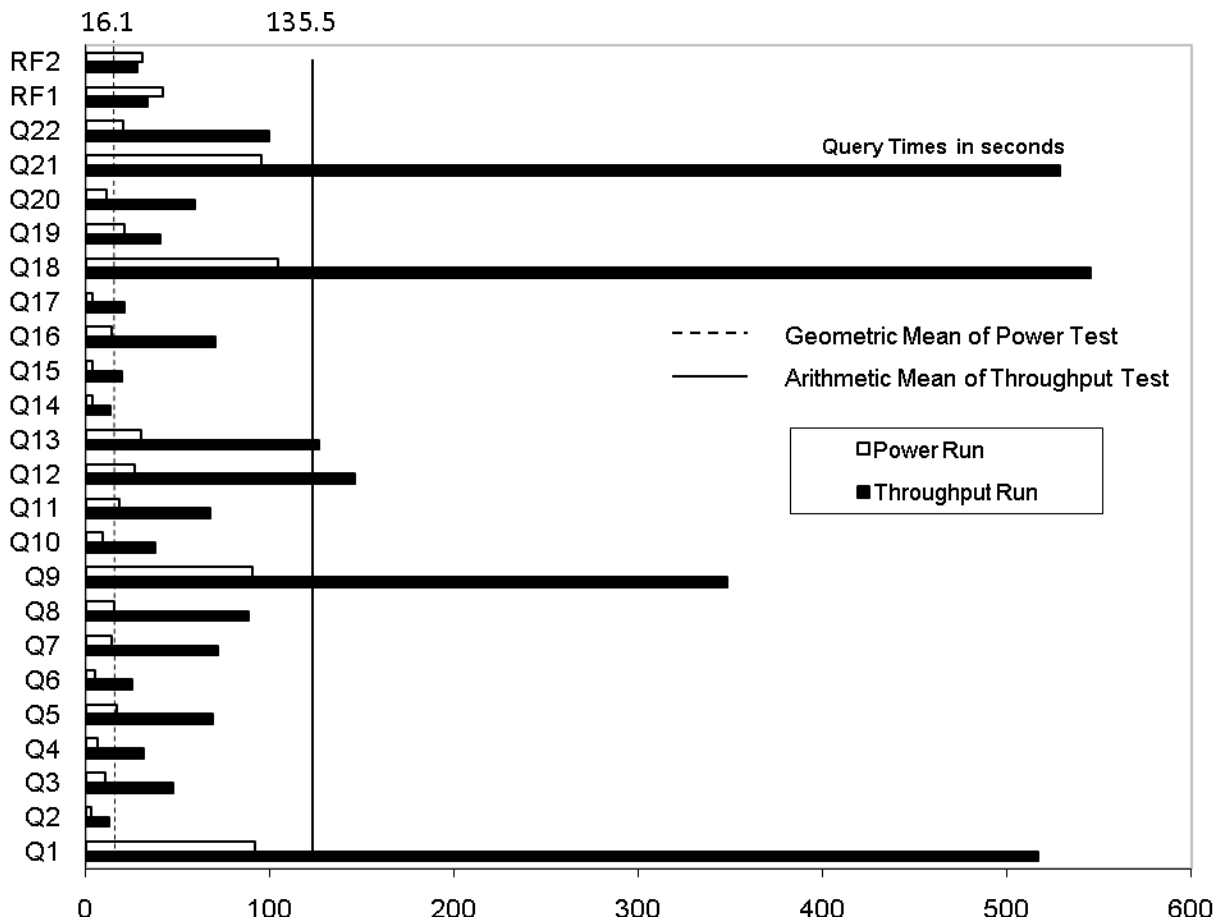
		HP Proliant DL785		TPC-H Rev. 2.7.0	
				Report Date: July 14, 2008	
Total System Cost		Composite Query per Hour Rating		Price Performance	
\$195,833 USD		52,860.2 QphH @ 300G		\$3.71 USD / QphH @300G	
Database size	Database Manager	Operating System	Other Software	Availability Date	
300G	Microsoft SQL Server 2008 Enterprise Edition for x64	Windows Server 2008 Enterprise Edition for x64	MS Visual Studio Standard	August 30, 2008	



Database Load Time = 16h09m07sec Load included backup: Y Total Data Storage / Database Size = 47.42
 RAID(Base Tables): Y RAID(Base Tables and Auxiliary Data Structure): Y RAID(All)= Y

System configuration

Processors/Cores/Threads	8/32/32	AMD Opteron™ 8360 SE Quad-Core 2.5GHz
Memory	256 GB	Main Memory
Disk Controllers	7	SmartArray P800
Disk Drives	4	36GB SAS Disks
	206	72GB SAS Disks
Total Disk Storage	14,226GB	



HP Proliant DL785

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TPC Pricing 1.3.0

Report Date: July 14, 2008

Availability Date: August 30, 2008

Description	Price Key	Part Number	Unit Price	Qty.	Extended Price	3 Yr Maint Price
Server Hardware						
HP DL785 CTO Chassis	1	AH233A	\$9,999	1	\$9,999	
HP 2.5GHz DL785 4p FIO	1	468118-L21	\$17,999	1	\$17,999	
HP 2.5GHz DL785 4p Proc Kit	1	468118-B21	\$17,999	1	\$17,999	
HP 8GB Reg PC2-5300 2x4GB	1	408854-B21	\$849	32	\$27,168	
HP 36GB 15k 2.5 Single Port HP SAS Drive	1	431933-B21	\$349	4	\$1,396	
HP 3year 4h 24x7 Proliant DL785 HW Support	1	HA104A3 Opt.6XP	\$2,768	1		\$2,768
HP s7540 17" CRT Monitor	1	PF997AA#ABA	\$139	1	\$139	
HP USB Keyboard	1	GM321AA#ABA	\$14	1	\$14	
HP Optical 4 Button USB Mouse	1	EW208AA#ABA	\$13	1	\$13	
Subtotal					\$74,727	\$2,768
Storage						
HP 5642 Unassembled Rack	1	358254-B21	\$865	1	\$865	
HP Smart Array Controller P800	1	381513-B21	\$949	7	\$6,643	
Storage MSA70	1	418800-B21	\$3,199	13	\$41,587	
Storage MSA70 10% Spares	1	418800-B21	\$3,199	2	\$6,398	
HP ext Mini SAS 4m Cable	1	432238-B21	\$142	13	\$1,846	
HP 72GB 15k 2.5 Single Port HP SAS Drive	1	431935-B21	\$369	206	\$76,014	
HP 72GB 15k 2.5 Single Port HP SAS Drive 10% spares	1	431935-B21	\$369	21	\$7,749	
Subtotal					\$141,102	\$0
Server Software						
Microsoft Windows Server 2008 Enterprise Edition (x64)	2	P72-03168	\$2,310	1	\$2,310	
Microsoft SQL Server 2008 Enterprise x64 Edition with 25 CALs	2	810-07578	\$8,318	1	\$8,318	\$245
Microsoft SQL Server 2008 Client License	2	359-01912	\$156	35	\$5,460	
Microsoft Visual Studio Standard 2005	2	127-00012	\$250	1	\$250	
Subtotal					\$16,338	\$245
Total Extended Price					\$232,167	\$3,013
Large Purchase Discount 18%	1				\$38,849	\$498
Grand Total					\$193,318	\$2,515
Price Key: 1 - HP , 2 - Microsoft, Audited by Lorna Livingtree of Performance Metrics, Inc						
All discounts are based on US list prices and for similar quantities and configurations. 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:				\$195,833
		QpH @ 300GB:				52,860.2
		\$ USD/QpH @ 300GB				\$3.71

Sales contact: HP Sales Development, 19111 Pruneridge Ave., Cupertino, CA 95014 (408) 447 2320 or H-P direct: 800-203-6748

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.



HP Proliant DL785

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Report Date: July 14, 2008

Availability Date: August 30, 2008

Numerical Quantities

Measurement Results

Database Scale Factor	300GB
Total Data Storage / Database Size	47.42
Start of Database Load	07-04-2008 19:45:40
End of Database Load	07-05-2008 11:54:47
Database Load Time	16h09m07sec
Query Streams for Throughput Test	6
TPC-H Power	67,287.4
TPC-H Throughput	41,526.4
TPC-H Composite Query-per-Hour (QpH@300GB)	52,860.2
Total System Price over 3 Years	\$195,833
TPC-H Price/Performance Metric (USD / QpH@300GB)	\$ 3.71 / QpH@300GB

Measurement Interval

Measurement Interval in Throughput Test (Ts) = seconds 3433 seconds

Duration of Stream Execution

Stream	Seed	Query Start		RF1 Start		RF2 Start		Duration
		Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	
Stream 00	705115447	07/12/08	12:18:00	07/12/08	12:17:06	07/12/08	12:28:09	0:11:33
		07/12/08	12:28:09	07/12/08	12:17:48	07/12/08	12:28:39	
Stream 01	705115448	07/12/08	12:28:55	07/12/08	13:19:54	07/12/08	13:20:32	0:52:06
		07/12/08	13:18:35	07/12/08	13:20:31	07/12/08	13:21:01	
Stream 02	705115449	07/12/08	12:28:55	07/12/08	13:21:02	07/12/08	13:21:36	0:53:10
		07/12/08	13:19:42	07/12/08	13:21:36	07/12/08	13:22:06	
Stream 03	705115450	07/12/08	12:28:55	07/12/08	13:22:07	07/12/08	13:22:41	0:54:13
		07/12/08	13:17:45	07/12/08	13:22:40	07/12/08	13:23:09	
Stream 04	705115451	07/12/08	12:28:55	07/12/08	13:23:10	07/12/08	13:23:41	0:55:14
		07/12/08	13:19:54	07/12/08	13:23:40	07/12/08	13:24:09	
Stream 05	705115452	07/12/08	12:28:55	07/12/08	13:24:10	07/12/08	13:24:44	0:56:14
		07/12/08	13:16:47	07/12/08	13:24:43	07/12/08	13:25:09	
Stream 06	705115453	07/12/08	12:28:56	07/12/08	13:25:10	07/12/08	13:25:43	0:57:12
		07/12/08	13:18:59	07/12/08	13:25:42	07/12/08	13:26:08	



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TPC-H Timing Intervals (in seconds):

Query	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Stream 0	91.4	2.6	10.1	6.0	16.6	4.8	13.7	15.5
Stream 1	513.0	9.7	54.4	21.7	58.8	24.7	87.5	74.3
Stream 2	535.1	13.1	50.2	27.7	66.9	24.1	52.7	90.5
Stream 3	537.7	12.9	45.9	41.2	74.7	28.1	79.2	90.8
Stream 4	508.1	12.5	17.5	27.7	67.6	19.4	63.0	92.6
Stream 5	494.2	14.2	62.5	34.5	69.2	26.5	72.6	94.9
Stream 6	510.9	11.4	51.3	34.0	74.8	28.2	73.4	84.3
Min Qi	494.2	9.7	17.5	21.7	58.8	19.4	52.7	74.3
Max Qi	537.7	14.2	62.5	41.2	74.8	28.2	87.5	94.9
Avg Qi	516.5	12.3	47.0	31.1	68.7	25.2	71.4	87.9
Query	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Stream 0	90.0	8.7	18.2	26.6	30.2	3.2	3.7	13.8
Stream 1	331.0	31.9	64.6	188.6	140.8	12.5	20.3	70.5
Stream 2	281.6	42.8	73.8	129.7	101.3	15.1	19.6	71.6
Stream 3	353.3	34.9	74.9	180.4	119.9	14.7	19.2	67.8
Stream 4	511.3	42.8	75.5	156.6	128.6	13.3	19.3	71.6
Stream 5	304.4	37.0	46.9	140.2	132.9	13.0	19.6	67.6
Stream 6	304.3	37.2	67.1	79.4	133.9	11.3	19.2	72.1
Min Qi	281.6	31.9	46.9	79.4	101.3	11.3	19.2	67.6
Max Qi	511.3	42.8	75.5	188.6	140.8	15.1	20.3	72.1
Avg Qi	347.7	37.8	67.1	145.8	126.2	13.3	19.5	70.2
Query	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
Stream 0	3.2	104.0	20.7	11.3	94.8	19.9	42.0	30.4
Stream 1	22.1	467.1	33.8	70.7	581.9	99.7	37.3	29.2
Stream 2	28.8	823.9	37.8	61.9	387.6	111.2	33.3	29.4
Stream 3	19.5	403.3	24.6	69.6	529.0	108.3	33.6	27.6
Stream 4	25.5	510.9	45.3	11.9	586.7	51.1	30.6	28.3
Stream 5	15.5	395.2	54.7	80.8	581.7	113.3	32.8	25.6
Stream 6	15.1	670.9	46.5	61.0	504.5	112.8	31.9	25.1
Min Qi	15.1	395.2	24.6	11.9	387.6	51.1	30.6	25.1
Max Qi	28.8	823.9	54.7	80.8	586.7	113.3	37.3	29.4
Avg Qi	21.1	545.2	40.5	59.3	528.6	99.4	33.2	27.5