

Sun Fire™ X4270 **with Sybase IQ 15.1 ESD#1** **Single Application Server**

TPC-H Rev. 2.8.0

Report Date: Dec 4, 2009

Total System Cost

Composite Query per Hour Metric

Price/Performance

\$61,217.99

53,501.6
QphH@100GB

\$1.14
per QphH@100GB

Database Size

Database Manager

Operating System

Other Software

Availability Date

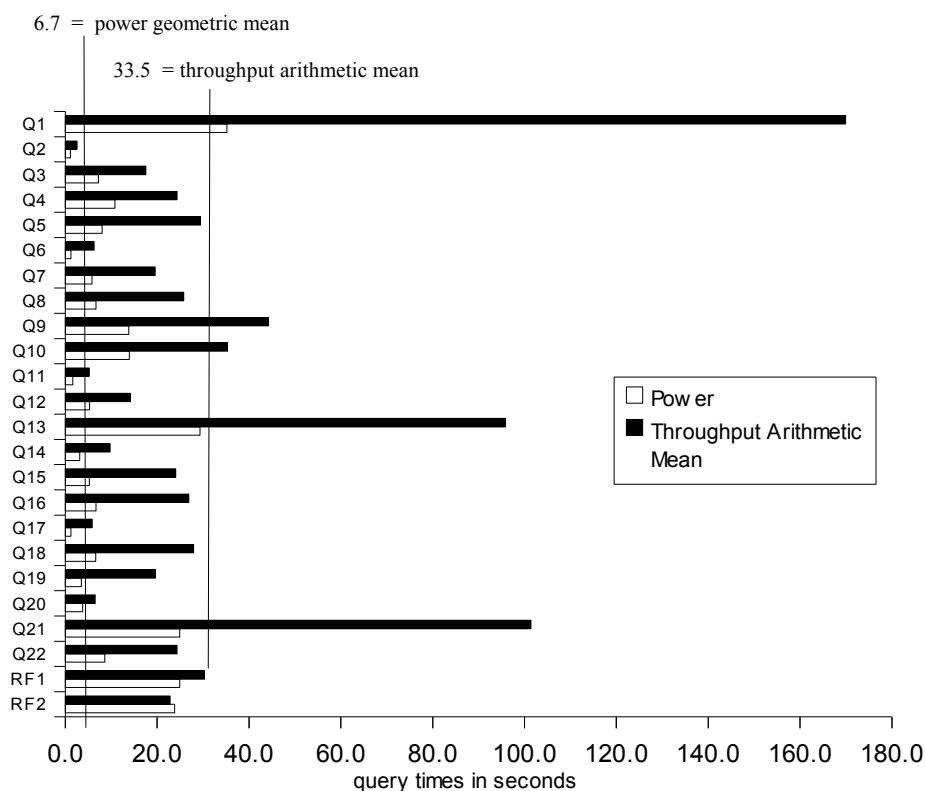
100GB

Sybase IQ 15.1
ESD#1 Single
Application Server

Solaris 10

Solaris Volume
Manager

Dec 4, 2009



Database Load Time = 25 min 2 secs

Load Includes Backup: N

Total Storage/Database Size= 3.74

RAID (Base tables): RAID 1

RAID (Base tables and auxiliary data structures): RAID 1

RAID (All): N

System Configuration:

SunFire X4270 with

2 Intel Xeon 5570 2.93 GHz Quad Core processors

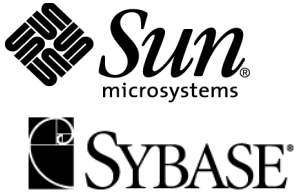
120 GB memory

1x 146GB SAS internal disk (10K RPM)

8 x 32GB internal SSDs

Total Storage: 374.4 GB

1 GB = 1024*1024*1024 bytes



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Description	Part Num	Source	Unit Price	Qty	Ext. Price	3 Yr. maint.
Server Hardware						
SunFire X4270, 2x2.93GHz xeon 5570 CPUs, 120 GB mem, 8 x 32 GB SSDs, 1 x 146 GB SAS disk	7960173	1	33,038.00	1	33,038.00	
3 Year Gold Warranty Upgrade – X4270Server	X4270-S1-AA	1	844.2	1		844.20
Sun Server Discount					-5,946.84	
TechRack 6U rack	TR-06U-30	3	349.00	1	349.00	
ASUS VW193TR 19" LCD monitor	N82E16824236069	4	119.99	1	119.99	
1 year support for monitor	N82E16824236069	4	16.99	3		50.97
LITE-ON SK-1688U USB keyboard(1 + 2 spares)	N82E16823107128	4	6.99	3	20.97	
Server Hardware Subtotal					27,581.12	895.17
External Storage						
None						
Server Software						
Sybase IQ 15.1 Single App Svr – per cpu core	12193	2	2,595.00	8	20,760.00	
Sybase IQ 3 Years Extended Support 24 x 7	98477	2	1,713	8		13,704.00
Sybase discount					1,038.00	685.00
Server Software Subtotal					19,722.00	13,018.80
Total					47,303.12	13,913.97
3 Yr. Cost					61,217.09	
QphH@ 100G					53,501.6	
\$/QphH@ 100G					1.14	

Service for Sun products is from Sun Microsystems, Inc.
Service for Sybase products is from Sybase Inc.

Notes (Source):

1. Sun Microsystems Inc.
 2. Sybase Inc.
 3. http://www.techrack.com/catalog/Desktop_Enclosure.html
 4. <http://www.newegg.com>
- PriceQuotes provided in Appendix G

Audited by: Brad Askins, 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 standard components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchase 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 the TPC at pricing@tpc.org. Thank you.



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Numerical Quantities

Measurement Results:

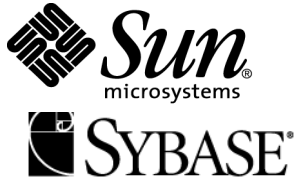
Database Scale Factor	= 100GB
Total Data Storage / Database Size	= 3.74
Start of database load time	= 2009-11-04 15:43:40
End of database load time	= 2009-11-04 16:08:42
Database Load Time	= 25mins:2secs
Query Streams for Throughput Test	= 5
TPC-H Power	= 53,923.4
TPC-H Throughput	= 53,083.1
TPC-H Composite Query-per-Hour Rating (QphH@100GB)	= 53,501.6
Total System Price Over 3 Years (\$US)	= 61,217.99
TPC-H Price/Performance Metric (\$/QphH@100GB)	= 1.14

Measurement Intervals:

Measurement Interval in Throughput Test (Ts)	= 746 seconds
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Duration of Stream Execution:

Stream ID	Seed	Start Date	Start Time	End Date	End Time	Duration
Stream 00	1104160842	4-Nov-09	16:08:45	4-Nov-09	16:12:52	0:04:07
Stream 01	1104160843	4-Nov-09	16:12:52	4-Nov-09	16:25:05	0:12:12
Stream 02	1104160844	4-Nov-09	16:12:52	4-Nov-09	16:24:59	0:12:07
Stream 03	1104160845	4-Nov-09	16:12:52	4-Nov-09	16:25:05	0:12:12
Stream 04	1104160846	4-Nov-09	16:12:52	4-Nov-09	16:25:17	0:12:25
Stream 05	1104160847	4-Nov-09	16:12:52	4-Nov-09	16:25:18	0:12:26



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TPC-H Timing Intervals (in seconds)

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Stream0	35.2	1.1	7.2	10.8	8.0	1.2	5.8	6.7	13.8	13.9	1.6	5.3
Stream1	155.5	3.0	26.0	22.3	22.2	6.8	20.1	17.3	37.1	32.6	5.9	13.1
Stream2	165.1	1.9	14.6	19.4	26.8	14.9	18.2	24.3	60.2	37.3	3.5	14.9
Stream3	167.6	2.8	15.7	26.6	33.4	2.2	23.2	48.4	41.9	34.9	5.2	14.2
Stream4	186.0	3.4	10.9	25.6	49.0	3.6	19.2	24.9	47.0	40.0	4.8	12.6
Stream5	175.4	1.5	20.3	27.7	15.7	3.7	17.1	13.9	35.0	31.8	6.7	15.9
min	155.5	1.5	10.9	19.4	15.7	2.2	17.1	13.9	35.0	31.8	3.5	12.6
avg	169.9	2.5	17.5	24.3	29.4	6.2	19.6	25.8	44.2	35.3	5.2	14.1
max	186.0	3.4	26.0	27.7	49.0	14.9	23.2	48.4	60.2	40.0	6.7	15.9



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	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
Stream0	23.3	3.1	5.2	6.7	1.2	6.6	3.5	3.8	24.9	8.6	24.9	23.8
Stream1	74.6	8.1	29.7	24.0	3.4	37.5	26.4	10.8	129.3	26.6	31.1	22.9
Stream2	111.8	7.5	19.1	37.7	17.5	23.5	13.9	3.7	72.6	18.1	30.1	23.0
Stream3	106.4	10.1	16.6	21.3	2.3	37.2	16.8	5.3	80.7	19.5	31.2	23.0
Stream4	110.0	8.7	21.5	24.8	2.2	16.7	16.2	2.8	98.3	16.4	33.5	22.8
Stream5	76.3	14.4	33.3	26.6	3.8	24.7	24.9	9.8	126.2	40.9	25.5	22.4
min	74.6	7.5	16.6	21.3	2.2	16.7	13.9	2.8	72.6	16.4	25.5	22.4
avg	95.8	9.8	24.0	26.9	5.8	27.9	19.6	6.5	101.4	24.3	30.3	22.8
max	111.8	14.4	33.3	37.7	17.5	37.5	26.4	10.8	129.3	40.9	33.5	23.0