

Sun Fire™ X4140 Server with Sybase IQ 12.6 Single Application Server

TPC-H Rev. 2.6.2

Report Date: Apr 15, 2008

Total System Cost

\$ 27,503.90

Composite Query per Hour Metric

8,337.7
QphH@100GB

Price/Performance

\$ 3.30
per QphH@100GB

Database Size

100GB

Database Manager

**Sybase IQ 12.6
Single Application
Server**

Operating System

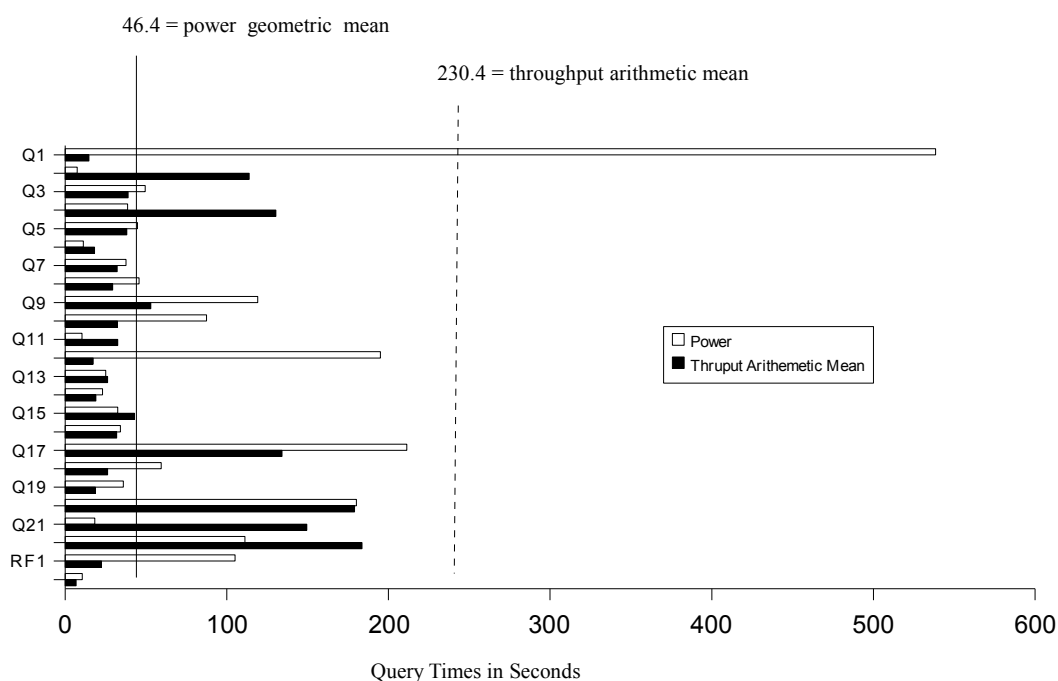
Solaris 10

Other Software

**Solaris Volume
Manager**

Availability Date

Apr 15, 2005



Database Load Time = 60 min

Load Includes Backup: N

Total Storage/Database Size= 5.4

RAID (Base tables): RAID 1

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

RAID (All): N

System Configuration:

SunFire X4140 Server each with
2 Opteron 3.0 GHz Dual Core processors
16 GB memory
8 X 73GB internal disks (10K RPM)

Total Storage: 544 GB

(in this calculation 1 GB is defined as 1024 * 1024 * 1024)



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Description	Part Number	Source	Unit Price	Qty	Ext. Price	3 Yr. maint.
Server Hardware						
SunFire X4140, 2x3.0 GHz CPUs, 16GB memory, 8 x 73GB (15K) disks			1	9,851.00	1	9,851.00
3 Year Gold Warranty Upgrade – X4140 Server			1		1	2,030.00
Sun Server Discount					985.10	
Server Hardware Subtotal					8,865.90	2,030.00
External Storage						
None						
Server Software						
Sybase IQ Single App Svr – per cpu core	11467		4	2,595.00	4	10,380.00
Sybase IQ 3 Years Extended Support 24 x 7	98477		4	1,557	4	6,228.00
Sybase discount					0.00	
Server Software Subtotal					10,380.00	6,228.00
Total					19,245.90	8,258.00
3 Yr. Cost					27,503.90	
QphH@ 100GB					8,337.7	
\$/QphH@ 100GB					3.30	

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.

PriceQuotes provided in Appendix G

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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	= 5.4
Start of database load time	= 02-07-2008 14:39:16
End of database load time	= 02-07-2008 15:38:54
Database Load Time	= 60 min
Query Streams for Throughput Test	= 6
TPC-H Power	= 7,756.2
TPC-H Throughput	= 8,962.7
TPC-H Composite Query-per-Hour Rating (QphH@100GB)	= 8,337.7
Total System Price Over 3 Years (\$US)	= 27,503.90
TPC-H Price/Performance Metric (\$/QphH@100GB)	= 3.30

Measurement Intervals:

Measurement Interval in Throughput Test (Ts)	= 5,302 seconds
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Duration of Stream Execution:

Stream ID	Seed	Start Date	Start Time	End Date	End Time	Duration
Stream 00	207153854	7-Feb-08	17:33:55	7-Feb-08	18:01:10	0:27:15
Stream 01	207153855	7-Feb-08	18:01:11	7-Feb-08	19:10:19	1:09:08
Stream 02	207153856	7-Feb-08	18:01:11	7-Feb-08	19:28:40	1:27:30
Stream 03	207153857	7-Feb-08	18:01:11	7-Feb-08	19:28:08	1:26:57
Stream 04	207153858	7-Feb-08	18:01:11	7-Feb-08	19:28:58	1:27:47
Stream 05	207153859	7-Feb-08	18:01:11	7-Feb-08	19:29:32	1:28:21
Stream 06	207153860	7-Feb-08	18:01:11	7-Feb-08	19:28:29	1:27:18
Refresh			18:01:11	7-Feb-08	18:37:54	0:21:58



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TPC-H Timing Intervals (in seconds)

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Stream 00	538.50	7.40	49.50	38.70	44.70	11.30	37.70	45.80	119.20	87.50	10.50	27.40
Stream 01	969.08	8.70	195.20	55.90	95.90	18.80	71.90	50.50	225.40	161.50	24.50	46.30
Stream 02	1684.67	30.40	111.60	166.40	153.60	58.30	183.00	140.10	409.70	407.10	23.80	113.30
Stream 03	1013.14	8.10	94.00	168.30	288.60	47.20	131.00	195.90	256.30	177.00	20.40	68.90
Stream 04	961.83	9.40	93.30	180.70	290.80	44.40	56.70	99.50	483.50	329.50	16.40	117.90
Stream 05	967.62	12.30	80.60	206.50	93.30	30.40	76.20	91.70	253.10	230.30	37.20	65.00
Stream 06	675.76	12.90	154.70	125.70	121.50	29.20	228.90	98.50	532.40	595.10	21.10	59.40
Minimum	675.76	8.10	80.60	55.90	93.30	18.80	56.70	50.50	225.40	161.50	16.40	46.30
Average	1045.35	13.63	121.57	150.58	173.95	38.05	124.62	112.70	360.07	316.75	23.90	78.47
Maximum	1684.67	30.40	195.20	206.50	290.80	58.30	228.90	195.90	532.40	595.10	37.20	117.90



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	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
Stream 00	195.00	25.10	23.10	32.50	34.10	211.30	59.50	36.10	180.20	18.40	111.30	105.10
Stream 01	295.40	31.00	37.10	50.80	42.80	1032.30	82.10	63.60	992.90	26.80	230.20	178.50
Stream 02	611.40	85.10	64.10	177.20	121.70	692.90	236.90	91.60	327.40	69.20	157.20	223.10
Stream 03	539.40	31.50	52.50	122.00	105.20	808.60	86.20	50.10	231.20	49.60	191.20	140.00
Stream 04	482.30	69.40	173.00	136.00	127.20	628.10	243.70	50.10	564.00	55.50	189.30	191.40
Stream 05	534.00	72.20	141.10	83.80	43.80	752.00	250.60	90.50	1090.40	103.20	236.80	164.50
Stream 06	690.40	44.90	54.30	149.60	53.00	760.80	85.00	85.70	303.10	62.40	154.00	145.40
Minimum	295.40	31.00	37.10	50.80	42.80	628.10	82.10	50.10	231.20	26.80	154.00	140.00
Average	525.48	55.68	87.02	119.90	82.28	779.12	164.08	71.93	584.83	61.12	193.12	173.82
Maximum	690.40	85.10	173.00	177.20	127.20	1032.30	250.60	91.60	1090.40	103.20	236.80	223.10