



SureServer R630 G7

TPC-H Rev. 2.6.1

Report Date:
Feb 7, 2008

Total System Cost

1,661,226.00
CNY

Composite Query per Hour Metric

33,184.3
QphH@100GB

Price/Performance

50.07
CNY / QphH@100GB

Database Size

100GB

Database Manager

**Microsoft SQL Server
2005 Enterprise
Edition SP2**

Operating System

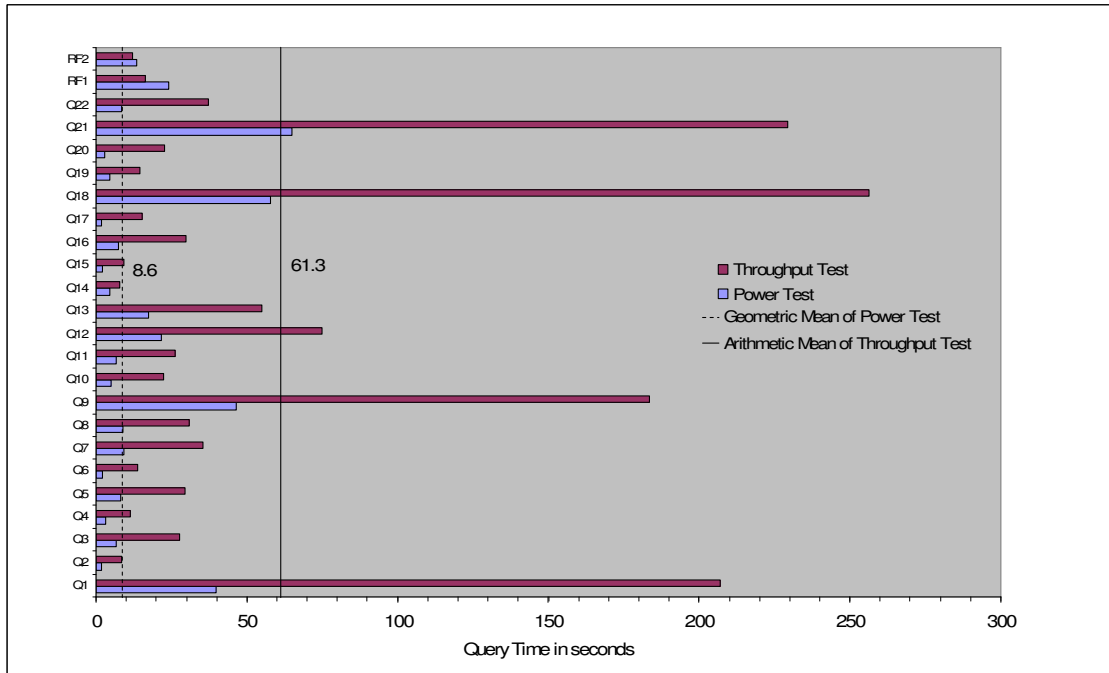
**Windows Server
2003,Enterprise
Edition SP2**

Other Software

**Visual Studio
Standard 2005**

Availability Date

Jan 31, 2008



Database Load Time = 0:45:20

Load Included Backup: Y

Total Data Storage / Database Size = 128.48

RAID(Base tables only): N

RAID(Base tables and auxiliary data structures): N

RAID(All): Y

System Configuration:

Processors: 4 x Intel X7350 Quad Core 2.93GHz w/ 8MB Cache
 Cores: 16
 Threads: 16
 Memory: 128GB
 OS Disk Drives: 4 x 73GB Seagate SAS 2.5" 10K rpm drives (internal)
 Network: 2 x on-board GigE
 Disk Controllers: 1 x Intel(R) RAID SAS Riser controller AFCSASRISER (internal)
 7 x MegaRAID SAS 8888ELP RAID Controller (external)
 Disks: 8 x 73GB Seagate SAS 2.5" 10K rpm drives (internal)
 168 x 73GB Seagate SAS 3.5" 15K rpm drives (external)
 Total Disk Storages: 12,848 GB

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



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Description	Part Number	Third Party	Unit Price CNY	Qty	Extended Price CNY	3 yr. Maint. Price CNY
Server Hardware						
		Brand	Pricing			
Lenovo SureServer R630 G7, 4P Xeon Quad-Core 2.93GHZ, Intel(R) RAID SAS Riser controller AFCSASRISER (internal), 128G Memory	888-610097	Lenovo	1	384,000.00	1	384,000.00
monitor(17" CRT monitor)	880-00669	Lenovo	1	828.00	1	828.00
APC Smart UPS 1500 rackmount	36-98321	APC	1	2,450.00	1	2,450.00
APC Smart UPS 1500 rackmount (spare)	36-98321	APC	1	2,450.00	2	4,900.00
					Subtotal	392178.00
Storage Subsystem						
LSI MegaRAID SAS 8888ELP RAID Controller	11-56398	LSI	1	9,500.00	7	66,500.00
Newisys SA2120 SAS JBOD	AS5064	Newisys	1	20,110.00	14	281,540.00
73GB, 15krpm, 4-Pack, RoHS w/Black Carrier	LFAS5985	Newisys	1	11,592.00	42	486,864.00
5 Meter SAS x4 (SFF-8470) to SAS x4 (SFF-8470) cable	11-0078731	Adaptec	1	700.00	14	9,800.00
73GB Seagate SAS 2.5" 10K rpm drives(internal)	16-003005	Seagate	1	1,200.00	8	9,600.00
10% spare LSI MegaRAID SAS 8888ELP RAID Controller	11-56398	LSI	1	9,500.00	2	19,000.00
10% spare Newisys SA2120 SAS JBOD	AS5064	Newisys	1	11,592.00	2	23,184.00
10% 73GB, 15krpm, 4-Pack, RoHS w/Black Carrier	LFAS5985	Newisys	1	11,592.00	5	57,960.00
10% spare 5 Meter SAS x4 (SFF-8470) to SAS x4 (SFF-8470) cable	11-0078731	Adaptec	1	700.00	2	1,400.00
10% 73GB Seagate SAS 2.5" 10K rpm drives (internal)	16-003005	Seagate	1	1,200.00	2	2,400.00
					Subtotal	958248.00
Server Software						
Microsoft SQL Server 2005 Enterprise x64 Edition SP2 (per processor)	810-04779	Microsoft	1	63,000.00	4	252,000.00
Microsoft SQL Server 2005 Client License	359-01911	Microsoft	1	1,200.00	25	30,000.00
Windows Server 2003 R2 Enterprise x64 Edition	P72-01684	Microsoft	1	17,000.00	1	17,000.00
Visual Studio Standard 2005	127-00012	Microsoft	1	2,000.00	1	2,000.00
Microsoft Problem Resolution Services		Microsoft	1	1,800.00	1	1,800.00
					Subtotal	301000.00
					Total	1651426.00

Audited by Lorna Livingtree of Performance Metrics Inc.
Pricing Key: 1.Lenovo. To order this configuration, please call
Lenovo at (86)10-58868888.

Three-Year Cost of Ownership	CNY
	1,661,226.00
QphH@100GB:	33,184.3
CNY/	CNY 50.07
QphH@100GB:	

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 pricing@tpc.org. Thank you.



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Numerical Quantities

Measurement Results:

Database Scale Factor	= 100
Total Data Storage / Database Size	= 128.48
Start of Database Load	= 2008-01-10 00:34:08
End of Database Load	= 2008-01-10 01:19:28
Database Load Time	= 0:45:20
Query Streams for Throughput Test	= 5
TPC-H Power	= 41,970.6
TPC-H Throughput	= 26,237.3
TPC-H Composite Query-per-Hour Metric(QphH@100GB)	= 33,184.3
Total System Price over 3 Years	= 1,661,226.00 CNY
TPC-H Price/Performance Metric (CNY/QphH@100GB)	= 50.07

Measurement Intervals:

Measurement Interval in Throughput Test(Ts)	= 1,509.3 seconds
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Duration of Stream Execution:

Stream ID	Seed	Start Date	Start Time	Stop Date	Stop Time	Duration
Stream00	110011927	1/10/2008	3:10:59	1/10/2008	3:16:31	0:05:32
Stream01	110011928	1/10/2008	3:16:46	1/10/2008	3:39:26	0:22:40
Stream02	110011929	1/10/2008	3:16:47	1/10/2008	3:39:15	0:22:29
Stream03	110011930	1/10/2008	3:16:47	1/10/2008	3:38:48	0:22:01
Stream04	110011931	1/10/2008	3:16:47	1/10/2008	3:39:19	0:22:32
Stream05	110011932	1/10/2008	3:16:47	1/10/2008	3:39:28	0:22:41
Refresh00		1/10/2008	3:10:35	1/10/2008	3:10:59	0:00:24
		1/10/2008	3:16:31	1/10/2008	3:16:45	0:00:14
Refresh01		1/10/2008	3:39:28	1/10/2008	3:40:02	0:00:34
Refresh02		1/10/2008	3:40:04	1/10/2008	3:40:33	0:00:29
Refresh03		1/10/2008	3:40:34	1/10/2008	3:40:59	0:00:25
Refresh04		1/10/2008	3:41:01	1/10/2008	3:41:28	0:00:27
Refresh05		1/10/2008	3:41:29	1/10/2008	3:41:56	0:00:27



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TPC-H Timing Intervals(in seconds):

Query	Q01	Q02	Q03	Q04	Q05	Q06	Q07	Q08
Stream 00	39.9	1.7	6.6	3.3	8.3	2.0	9.4	9.0
Stream 01	199.0	6.7	25.5	7.2	35.0	9.9	34.0	26.8
Stream 02	204.4	11.0	29.0	12.3	29.9	12.8	37.1	31.4
Stream 03	212.5	8.1	29.0	13.6	33.1	12.6	41.9	28.8
Stream 04	203.3	7.2	26.1	11.6	19.6	23.6	32.7	33.5
Stream 05	216.5	8.8	29.3	11.5	29.1	10.7	32.5	34.7
Min Qi	199.0	6.7	25.5	7.2	19.6	9.9	32.5	26.8
Max Qi	216.5	11.0	29.3	13.6	35.0	23.6	41.9	34.7
Avg Qi	207.1	8.4	27.8	11.2	29.3	13.9	35.6	31.0
Query	Q09	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Stream 00	46.5	5.0	6.7	21.8	17.5	4.7	2.1	7.6
Stream 01	167.4	18.0	37.4	83.3	54.6	7.9	9.9	32.3
Stream 02	193.7	22.6	19.0	69.6	61.1	8.8	9.4	35.5
Stream 03	181.0	21.2	22.4	76.5	52.8	6.1	9.0	32.4
Stream 04	205.3	21.5	23.2	78.8	54.3	8.3	10.6	24.3
Stream 05	169.9	28.1	28.6	66.7	52.9	7.4	7.3	24.8
Min Qi	167.4	18.0	19.0	66.7	52.8	6.1	7.3	24.3
Max Qi	205.3	28.1	37.4	83.3	61.1	8.8	10.6	35.5
Avg Qi	183.5	22.3	26.1	75.0	55.1	7.7	9.2	29.9
Query	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
Stream 00	1.9	57.9	4.7	3.0	64.9	8.4	24.0	13.4
Stream 01	13.0	260.0	18.9	21.5	257.1	34.2	20.3	13.4
Stream 02	15.2	250.2	14.0	24.5	214.1	43.2	18.0	10.9
Stream 03	12.9	264.6	13.9	20.7	191.1	36.7	14.0	11.2
Stream 04	17.3	240.7	13.3	22.1	241.1	33.9	14.8	12.2
Stream 05	18.7	265.7	12.8	24.5	243.1	37.9	14.8	12.0
Min Qi	12.9	240.7	12.8	20.7	191.1	33.9	14.0	10.9
Max Qi	18.7	265.7	18.9	24.5	257.1	43.2	20.3	13.4
Avg Qi	15.4	256.2	14.6	22.7	229.3	37.2	16.4	11.9