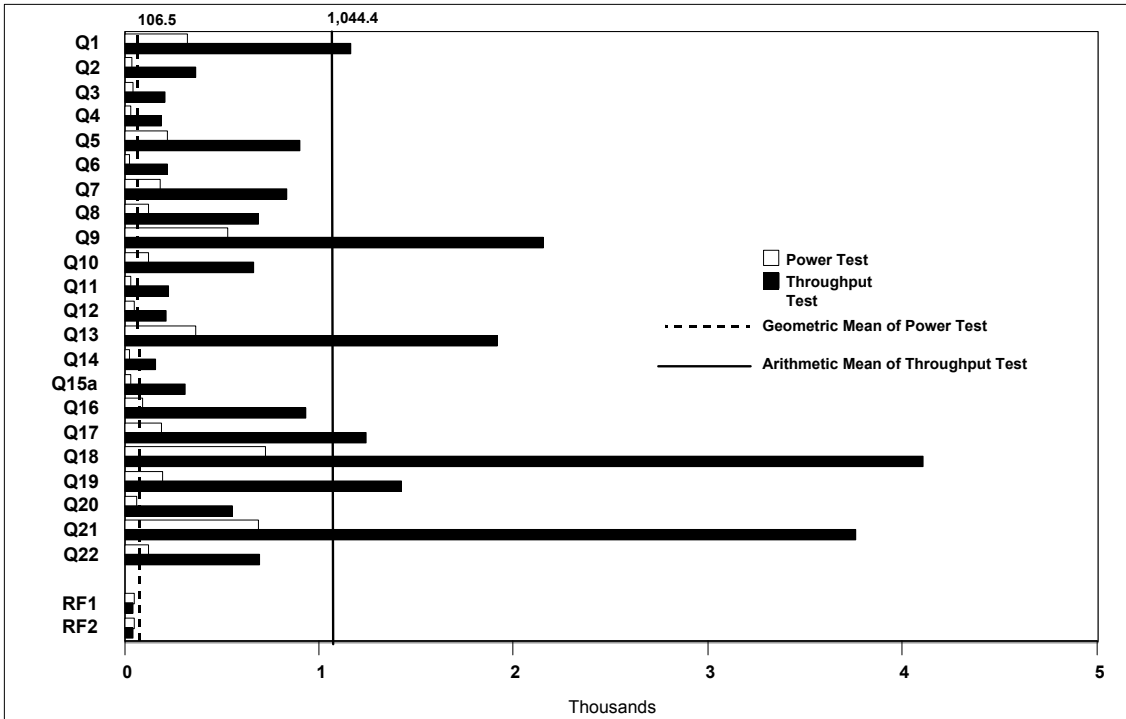
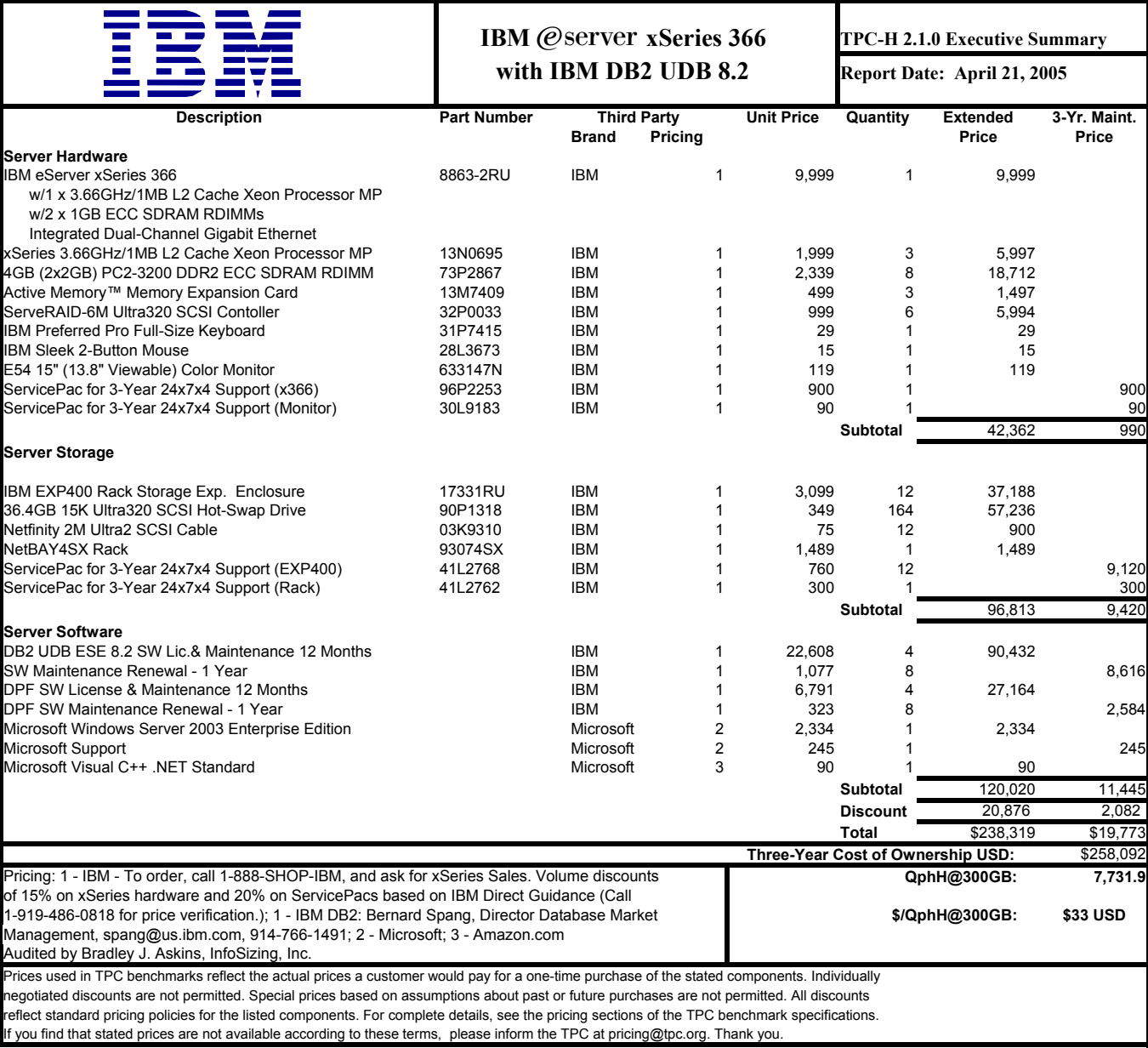
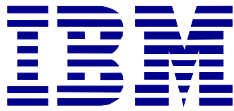


		IBM® @server® xSeries® 366 with IBM DB2® UDB 8.2		TPC-H Rev 2.1.0																																																																											
				Report Date: April 21, 2005																																																																											
Total System Cost		Composite Query-per-Hour Metric		Price/Performance																																																																											
\$258,092 USD		7,731.9 QphH @ 300GB		\$33 USD per QphH @ 300GB																																																																											
Database Size	Database Manager	Operating System	Other Software	Availability Date																																																																											
300GB	IBM DB2 UDB 8.2	Microsoft® Windows® Server 2003 Enterprise Edition with QFE 834628	Microsoft Visual C++ .NET Standard	Aug. 20, 2005																																																																											
<table><caption>Approximate data from the chart (Values in Thousands)</caption><thead><tr><th>Query</th><th>Power Test (Mean)</th><th>Throughput Test (Mean)</th></tr></thead><tbody><tr><td>Q1</td><td>0.1</td><td>1.1</td></tr><tr><td>Q2</td><td>0.1</td><td>0.4</td></tr><tr><td>Q3</td><td>0.1</td><td>0.3</td></tr><tr><td>Q4</td><td>0.1</td><td>0.2</td></tr><tr><td>Q5</td><td>0.1</td><td>0.9</td></tr><tr><td>Q6</td><td>0.1</td><td>0.3</td></tr><tr><td>Q7</td><td>0.1</td><td>0.9</td></tr><tr><td>Q8</td><td>0.1</td><td>0.7</td></tr><tr><td>Q9</td><td>0.1</td><td>2.1</td></tr><tr><td>Q10</td><td>0.1</td><td>0.7</td></tr><tr><td>Q11</td><td>0.1</td><td>0.3</td></tr><tr><td>Q12</td><td>0.1</td><td>0.3</td></tr><tr><td>Q13</td><td>0.1</td><td>1.9</td></tr><tr><td>Q14</td><td>0.1</td><td>0.2</td></tr><tr><td>Q15a</td><td>0.1</td><td>0.3</td></tr><tr><td>Q16</td><td>0.1</td><td>0.9</td></tr><tr><td>Q17</td><td>0.1</td><td>1.2</td></tr><tr><td>Q18</td><td>0.1</td><td>4.1</td></tr><tr><td>Q19</td><td>0.1</td><td>1.4</td></tr><tr><td>Q20</td><td>0.1</td><td>0.5</td></tr><tr><td>Q21</td><td>0.1</td><td>3.8</td></tr><tr><td>Q22</td><td>0.1</td><td>0.7</td></tr><tr><td>RF1</td><td>0.1</td><td>0.1</td></tr><tr><td>RF2</td><td>0.1</td><td>0.1</td></tr></tbody></table>					Query	Power Test (Mean)	Throughput Test (Mean)	Q1	0.1	1.1	Q2	0.1	0.4	Q3	0.1	0.3	Q4	0.1	0.2	Q5	0.1	0.9	Q6	0.1	0.3	Q7	0.1	0.9	Q8	0.1	0.7	Q9	0.1	2.1	Q10	0.1	0.7	Q11	0.1	0.3	Q12	0.1	0.3	Q13	0.1	1.9	Q14	0.1	0.2	Q15a	0.1	0.3	Q16	0.1	0.9	Q17	0.1	1.2	Q18	0.1	4.1	Q19	0.1	1.4	Q20	0.1	0.5	Q21	0.1	3.8	Q22	0.1	0.7	RF1	0.1	0.1	RF2	0.1	0.1
Query	Power Test (Mean)	Throughput Test (Mean)																																																																													
Q1	0.1	1.1																																																																													
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Q22	0.1	0.7																																																																													
RF1	0.1	0.1																																																																													
RF2	0.1	0.1																																																																													
Database Load Time: 04:20:00		Load Included Backup: Y		Total Data Storage / Database Size: 18.53																																																																											
RAID (Base Tables Only): N		RAID (Base Tables and Auxiliary Data Structures): N		RAID (All): N																																																																											
Configuration		Intel Xeon MP at 3.66GHz with 1MB ECC L2 Cache 2GB PC2-3200 DDR2 ECC SDRAM RDIMM ServeRAID-6M Ultra320 SCSI Adapter 36.4GB 15K Ultra320 SCSI Drive 36.4GB 15K Ultra320 SCSI Drive 5559.6GB																																																																													
Processors/Cores/Threads	4/4/8																																																																														
Memory	16																																																																														
Disk Controllers	6																																																																														
Disk Drives	160																																																																														
Total Disk Storage	4																																																																														





**IBM @server xSeries 366
with
IBM DB2 UDB 8.2**

TPC-H Rev 2.1.0

Report Date: April 21, 2005

Measurement Results:

Database Scale Factor	300
Total Data Storage/Database Size	18.53
Start of Database Load	18:26:23
End of Database Load	22:45:51
Database Load Time	4:20
Query Streams for Throughput Test	6
TPC-H Power	10,137.7
TPC-H Throughput	5,897.0
TPC-H Composite Query-per-Hour (QphH@300GB)	7,731.9
Total System Price over 3 Years	\$258,092 USD
TPC-H Price/Performance Metric (\$/QphH@300GB)	\$33 USD

Measurement Interval:

Measurement Interval in Throughput Test (Ts) = 24,175

Duration of Stream Execution:

	Seed	Query Start Date/Time Query End Date/Time	RF1 Start Date/Time RF1 End Date/Time	RF2 Start Date/Time RF2 End Date/Time	Duration
Stream 00	215224551	02/16/05 07:24:19 02/16/05 08:37:10	02/16/05 07:24:19 02/16/05 07:25:10	02/16/05 08:36:19 02/16/05 08:37:10	01:12:51
Stream 01	215224552	02/16/05 08:37:13 02/16/05 15:05:37	02/16/05 08:37:13 02/16/05 15:11:27	02/16/05 15:11:27 02/16/05 15:12:18	06:28:24
Stream 02	215224553	02/16/05 08:37:14 02/16/05 15:05:26	02/16/05 15:12:18 02/16/05 15:13:04	02/16/05 15:13:04 02/16/05 15:13:51	06:28:12
Stream 03	215224554	02/16/05 08:37:14 02/16/05 14:30:45	02/16/05 15:13:51 02/16/05 15:14:37	02/16/05 15:14:37 02/16/05 15:15:23	05:53:31
Stream 04	215224555	02/16/05 08:37:16 02/16/05 14:59:11	02/16/05 15:15:23 02/16/05 15:16:09	02/16/05 15:16:09 02/16/05 15:16:57	06:21:55
Stream 05	215224556	02/16/05 08:37:15 02/16/05 15:10:39	02/16/05 15:16:57 02/16/05 15:17:45	02/16/05 15:17:45 02/16/05 15:18:34	06:33:24
Stream 06	2152245517	02/16/05 08:37:15 02/16/05 15:09:26	02/16/05 15:18:34 02/16/05 15:19:19	02/16/05 15:19:19 02/16/05 15:20:08	06:32:11



**IBM @server xSeries 366
with
IBM DB2 UDB 8.2**

TPC-H Rev 2.1.0

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TPC-H Timing Intervals (in seconds):

Query	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Stream 00	327.7	39.1	43.7	34.3	221.5	27.6	185.6	126.3	533.2	123.5	33.7	50.2
Stream 01	1,158.9	326.2	237.1	149.9	997.2	202.4	862.0	791.0	2,114.8	596.8	237.7	145.0
Stream 02	1,373.8	307.4	213.8	231.2	886.9	239.9	856.2	680.2	2,249.5	695.3	293.0	271.6
Stream 03	1,413.2	572.7	209.3	236.1	1,102.1	187.1	736.1	778.3	1,959.5	655.9	158.1	269.6
Stream 04	1,309.9	268.0	210.7	212.7	757.0	241.4	759.9	302.4	2,922.4	697.6	169.8	169.6
Stream 05	1,066.0	411.6	166.0	185.8	764.3	227.6	938.8	744.5	1,224.5	726.1	233.5	282.8
Stream 06	665.3	321.6	227.6	148.2	896.1	219.9	859.4	844.4	2,450.8	616.4	266.7	153.8
Minimum	665.3	268.0	166.0	148.2	757.0	187.1	736.1	302.4	1,224.5	596.8	158.1	145.0
Average	1,164.5	367.9	210.8	194.0	900.6	219.7	835.4	690.1	2,153.6	664.7	226.5	215.4
Maximum	1,413.2	572.7	237.1	236.1	1,102.1	241.4	938.8	844.4	2,922.4	726.1	293.0	282.8

Stream ID	Q13	Q14	Q15a	Q16	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
Stream 00	366.7	29.4	36.0	94.7	189.7	726.6	199.2	66.4	691.4	122.4	50.9	51.6
Stream 01	2,515.4	225.2	201.7	860.6	870.4	3,315.0	1,522.5	754.1	4,437.2	782.9	48.0	51.4
Stream 02	1,649.0	200.0	307.7	804.8	1,489.3	4,151.7	1,309.3	527.7	3,861.0	693.5	45.9	47.3
Stream 03	1,639.2	134.2	332.9	900.2	1,137.4	4,036.2	1,413.7	399.1	2,317.8	622.0	45.7	45.8
Stream 04	1,820.8	159.2	360.6	1,076.5	1,396.7	3,416.4	1,508.5	455.1	4,210.1	489.7	46.1	48.3
Stream 05	1,749.5	74.7	289.4	1,061.0	1,334.9	5,087.7	1,404.9	538.3	4,385.9	705.9	47.5	49.2
Stream 06	2,158.5	178.6	397.9	898.0	1,248.8	4,630.9	1,415.3	671.0	3,372.1	890.0	45.1	48.8
Minimum	1,639.2	74.7	201.7	804.8	870.4	3,315.0	1,309.3	399.1	2,317.8	489.7	45.1	45.8
Average	1,922.1	162.0	315.0	933.5	1,246.3	4,106.3	1,429.0	557.6	3,764.0	697.3	46.4	48.5
Maximum	2,515.4	225.2	397.9	1,076.5	1,489.3	5,087.7	1,522.5	754.1	4,437.2	890.0	48.0	51.4