

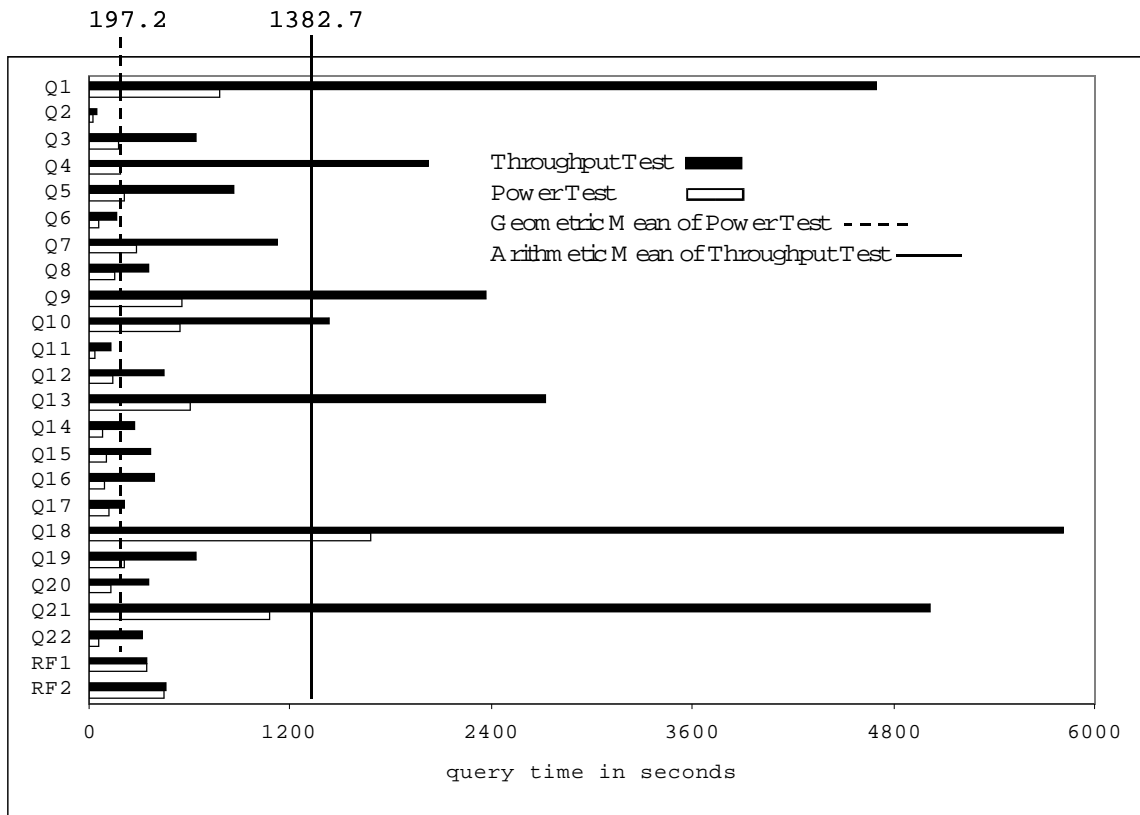


Sun Fire™ V 250 Server
with Sybase IQ 12.5 Single
Application Server

TPC-H Rev. 2.0

Report Date: may 9, 2005
Revision Date: july 25, 2005

| | | | | |
|-------------------|---------------------------------------------|---------------------------------|---------------------------|------------------------|
| Total System Cost | | Composite Query per Hour Metric | | Price/Performance |
| \$21,879 | | 1,442.7 QphH@ 100GB | | \$15 \$/QphH@ 100GB |
| Database Size | Database Manager | Operating System | Other Software | Availability Date |
| 100GB | Sybase IQ 12.5 Single Application Server | Solaris 9 | Solaris Volume Manager | may 9, 2005 |



Database Load Time = 4:59

Load Includes Backup: N

Total Data Storage/Database Size = 4.10

RAID (Base tables): RAID 1

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

RAID (All): N

System Configuration: Sun Fire™ V 250 Server

Processors: 2 UltraSPARC™ IIIiCu 1.28GHz processors

Memory: 8 GB memory

Disks: 6 internal disks (73 GB)

Total Storage: 409.8 GB (in this calculation one GB is defined as 1024*1024*1024 bytes)



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| Description | Part Number | Source | Unit Price | Qty | Ext. Price | 3 Yr. maint. |
|----------------------------------------------------------------|--------------------|--------|------------|-----|------------|--------------|
| Server Hardware | | | | | | |
| Sun Fire V250 Server 2 - 1.28GHz CPUs, 8G memory, 2x73G disks | A50-XWB2-DV-819AV2 | | 10,545.00 | 1 | 10,545.00 | |
| 73G Disk Drive 10K (Server upgrade add internal disks) | XRASC1CB-73G10K | | 650.00 | 4 | 2,600.00 | |
| Sun Fire V250 3 Year Gold Support Upgrade (includes all disks) | W9D-A50-3G | | 3,492.00 | 1 | | 3,492.00 |
| Sun Discount | | | | | -1,971.75 | -1,117.44 |
| Server Hardware Subtotal | | | | | 11,173.25 | 2,374.56 |
| Storage | | | | | | |
| External Storage | | | 0 | 0 | 0 | |
| Storage Subtotal | | | | | 0 | |
| Server Software | | | | | | |
| Solaris 9 CD SPARC Edition Slim kit | SOLZS-090C9AYS | | 50.00 | 1 | 50.00 | |
| Sun Discount | | | | 1 | -22.50 | |
| Sybase IQ-M Single App Svr-4 cpus | 11467 | | 2,595.00 | 2 | 5,190.00 | |
| Sybase IQ 3 Years Extended Support 24x7 | 98480 | | 1,557.00 | 2 | | 3,114.00 |
| Sybase discount | | | | 2 | 0.00 | |
| Server Software Subtotal | | | | | 5,217.50 | 3,114.00 |
| Total | | | | | 16,390.75 | 5,488.56 |
| 3 Yr. Cost | | | | | 21,879.00 | |
| QphH@ 100GB | | | | | 1,442.70 | |
| \$QphH@ 100GB | | | | | \$15 | |

Service for all 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. Price quotes in Appendix G
4. The pricing of the Sybase IQ Single Application Server was found to be an "insignificant deviation" of Clause 0.2 by the General Council. This was corrected by increasing the visibility of Sybase IQ Single Application Server on the Web.

Audited by: Brad A skins, InfoSizing, Inc. (www.sizing.com)

Prices used in TPC benchmark asks 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 | = 4.10 |
| Start of database load time | = 2003-09-06 08:34:44 |
| End of database load time | = 2003-09-06 13:33:14 |
| Database Load Time | = 4:59 |
| Query Streams for Throughput Test | = 5 |
| TPC-H Power | = 1,825.9 |
| TPC-H Throughput | = 1,140.0 |
| TPC-H Composite Query-per-Hour Rating (QphH @ 100GB) | = 1,442.7 |
| Total System Price Over 3 Years | = \$21,879 |
| TPC-H Price/Performance Metric (\$/QphH @ 100GB) | = \$15 |

Measurement Intervals:

| | |
|----------------------------------------------|------------------|
| Measurement Interval in Throughput Test (Ts) | = 34,738 seconds |
|----------------------------------------------|------------------|

Duration of Stream Execution:

| Stream ID | Seed | Start Date | Start Time | End Date | End Time | Duration |
|-----------|-----------|-------------|------------|-------------|----------|----------|
| Stream 00 | 906133314 | Sep 6, 2003 | 13:35:18 | Sep 6, 2003 | 15:50:22 | 02:15:04 |
| Stream 01 | 906133315 | Sep 6, 2003 | 15:50:22 | Sep 7, 2003 | 00:12:22 | 08:22:00 |
| Stream 02 | 906133316 | Sep 6, 2003 | 15:50:22 | Sep 7, 2003 | 00:22:44 | 08:32:22 |
| Stream 03 | 906133317 | Sep 6, 2003 | 15:50:22 | Sep 7, 2003 | 00:16:23 | 08:26:01 |
| Stream 04 | 906133318 | Sep 6, 2003 | 15:50:22 | Sep 7, 2003 | 00:21:53 | 08:31:31 |
| Stream 05 | 906133319 | Sep 6, 2003 | 15:50:22 | Sep 7, 2003 | 00:13:57 | 08:23:35 |
| Refresh | | Sep 7, 2003 | 00:22:44 | Sep 7, 2003 | 01:29:20 | 01:06:36 |



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TPC-H Timing Intervals (in seconds)

| | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 |
|-----------|--------|------|-------|--------|--------|-------|--------|-------|--------|--------|-------|-------|
| Stream 00 | 779.0 | 23.8 | 177.0 | 193.7 | 207.1 | 55.6 | 281.1 | 148.4 | 561.8 | 540.7 | 36.9 | 137.3 |
| Stream 01 | 5058.8 | 41.4 | 660.9 | 1804.6 | 729.3 | 104.8 | 1043.3 | 283.7 | 2195.3 | 1386.6 | 116.5 | 343.4 |
| Stream 02 | 4954.5 | 56.6 | 925.9 | 1922.0 | 841.2 | 235.6 | 1118.9 | 316.2 | 2479.2 | 1355.4 | 153.5 | 541.0 |
| Stream 03 | 4658.1 | 45.1 | 499.0 | 2174.2 | 868.5 | 165.7 | 1230.5 | 631.0 | 2390.4 | 1414.7 | 113.5 | 412.3 |
| Stream 04 | 4281.7 | 48.2 | 401.7 | 1934.0 | 1163.3 | 198.1 | 1060.1 | 266.7 | 2540.6 | 1308.4 | 107.3 | 430.3 |
| Stream 05 | 4562.7 | 52.0 | 727.3 | 2294.7 | 688.7 | 119.4 | 1168.5 | 277.6 | 2247.1 | 1713.3 | 149.4 | 494.8 |
| Minimum | 4281.7 | 41.4 | 401.7 | 1804.6 | 688.7 | 104.8 | 1043.3 | 266.7 | 2195.3 | 1308.4 | 107.3 | 343.4 |
| Average | 4703.2 | 48.7 | 643.0 | 2025.9 | 858.2 | 164.7 | 1124.3 | 355.0 | 2370.5 | 1435.7 | 128.0 | 444.3 |
| Maximum | 5058.8 | 56.6 | 925.9 | 2294.7 | 1163.3 | 235.6 | 1230.5 | 631.0 | 2540.6 | 1713.3 | 153.5 | 541.0 |

| | Q13 | Q14 | Q15 | Q16 | Q17 | Q18 | Q19 | Q20 | Q21 | Q22 | RF1 | RF2 |
|-----------|--------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|-------|
| Stream 00 | 603.8 | 78.9 | 102.8 | 97.2 | 112.8 | 1675.5 | 208.6 | 128.6 | 1078.5 | 62.3 | 342.0 | 455.5 |
| Stream 01 | 2467.0 | 241.2 | 511.9 | 357.1 | 164.9 | 5739.5 | 617.4 | 426.8 | 5512.0 | 307.9 | 344.8 | 453.9 |
| Stream 02 | 2606.5 | 307.2 | 399.2 | 522.4 | 291.5 | 6023.6 | 707.0 | 455.2 | 4156.5 | 367.8 | 342.5 | 451.3 |
| Stream 03 | 3047.3 | 254.1 | 320.1 | 387.3 | 208.8 | 5508.4 | 646.1 | 352.1 | 4747.9 | 281.1 | 340.1 | 463.6 |
| Stream 04 | 3155.3 | 328.1 | 311.1 | 296.5 | 167.0 | 6489.4 | 649.7 | 159.8 | 5152.6 | 236.9 | 340.7 | 459.2 |
| Stream 05 | 2327.2 | 244.1 | 302.3 | 387.6 | 218.3 | 5320.5 | 588.8 | 378.9 | 5545.1 | 399.5 | 342.4 | 456.9 |
| Minimum | 2327.2 | 241.2 | 302.3 | 296.5 | 164.9 | 5320.5 | 588.8 | 159.8 | 4156.5 | 236.9 | 340.1 | 451.3 |
| Average | 2720.7 | 274.9 | 368.9 | 390.2 | 210.1 | 5816.3 | 641.8 | 354.6 | 5022.8 | 318.6 | 342.1 | 457.0 |
| Maximum | 3155.3 | 328.1 | 511.9 | 522.4 | 291.5 | 6489.4 | 707.0 | 455.2 | 5545.1 | 399.5 | 344.8 | 463.6 |