



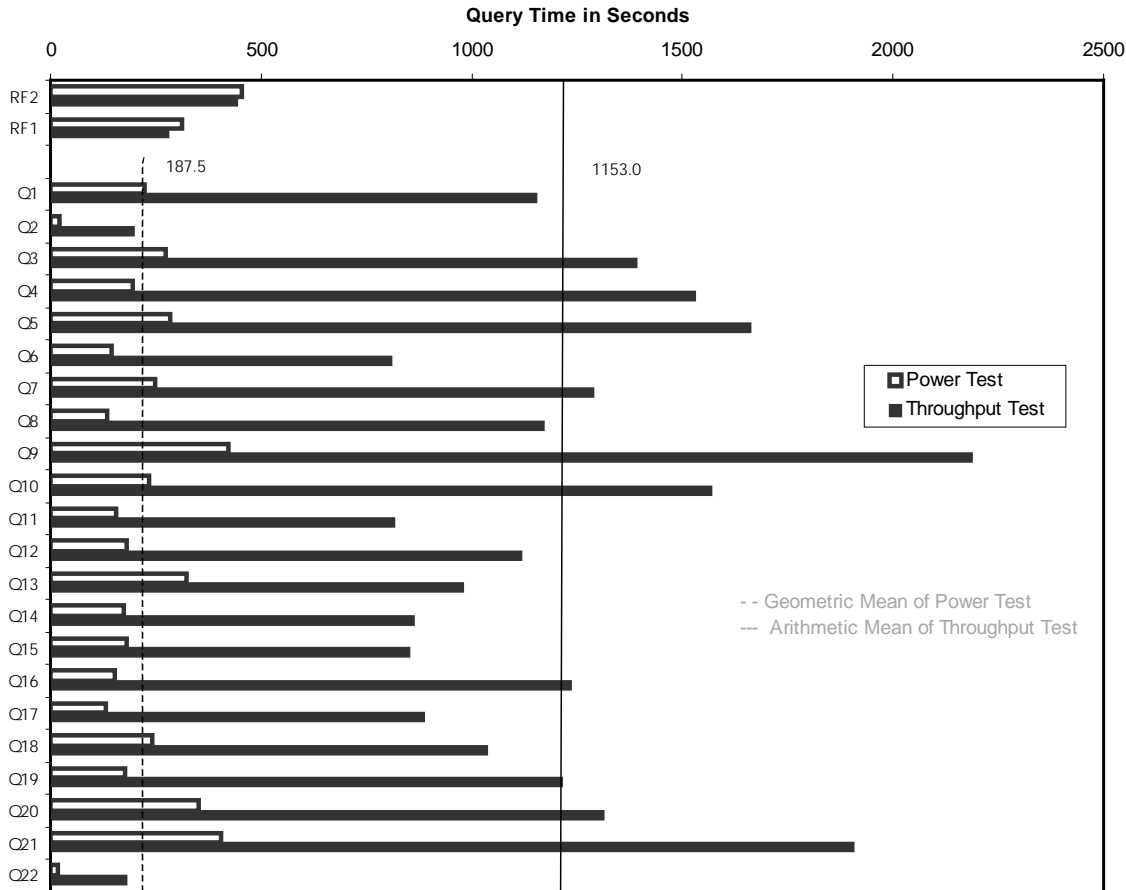
WorldMark 5250

Using Teradata V2R4.1

TPC-H Rev 1.3.0

Report Date:
October 9, 2001

Total System Cost	Composite Query Per Hour Rating	Price/Performance		
\$ 11,837,244	18,542.9 QphH@1000GB	\$638 per QphH@1000GB		
Database Size	Database Manager	Operating System	Other Software	Availability Date
1000GB	Teradata V2R4.1	UNIX MP-RAS 3.02.00	None	07-27-01



Database Load Time = 6 Hrs 23 Mins	Load included backup: N	Total Data Storage / Database Size = 9.0
RAID (base tables): Y	RAID (Base tables & Auxiliary Data Structures) = Y	RAID (All): Y

System Configuration

Processors: 32 x 4 Intel Pentium III Xeon 700 MHz CPUs 1 MB Cache
 Memory (per node): 2 GB Memory
 Disk Drives (per node): 2 Quad Ultra SCSI Adapters
 2 9GB internal drives on 10 nodes and 1 9GB internal drive on the other 22 nodes
 1 WES Modular Array with 32 x 9 GB 10K RPM drives (32 drives/node)
 BYNET interconnect support with 2 64-port BYNET switches

Total GB of Storage = 9,035.7 GB

* Database size includes only raw data (e.g. no temp, index, redundant storage space, etc.)

NCR 5250 Teradata DBS V2R4.1

TPC-H Rev. 1.3.0

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PRODUCT ID	DESCRIPTION	QTY	EXT PRICE	5 -YR MAINT
Server Hardware				
9100-5242-8090	WM5250 SYSTEM CAB W/BYNET V2-16 NODE SWITCH - 700 MHZ	1	\$361,350	\$105,188
9100-5240-8090	WM5250 DUAL NODE EXPANSION CABINET - 700 MHZ	15	\$5,420,250	\$1,577,813
9102-5201-8090	64 NODES BYNET SWITCH CABINET	2	\$0	\$238,000
9100-F118	MEMORY DIMM 1GB EDO (4X256)	32	\$256,960	\$0
9100-F283	ADAPTER - PCI HPPQS 80MB/SEC	64	\$151,840	\$0
3484-1007-8090	S24,2X550AWS,12+ NODES	1	\$10,731	\$3,124
3498-2294-8090	MONITOR 21IN COL .25,TCO95	1	\$948	\$276
9100-F430	TAPE- 8MM 2X 7/14GB	1	\$2,070	\$602
3484-F050	POWER CORD- US	1	\$18	\$0
3484-F700	KEYBOARD (US ENGLISH) INTL	1	\$37	\$0
3484-F730	MODEM- EXTERNAL 28.8 USA	1	\$164	\$0
1428-C001-0010	POWER CORD, USA (UL/CSA)	1	\$4	\$0
9100-F807	NCR UNIX MP-RAS NFS PRELOAD	16	\$0	\$0
9100-K933	CABLE & TERMINATORS - BYNET V2	16	\$29,200	\$0
9100-K936	4800/5200 PANELS,STABALIZERS,MANUALS	1	\$1,095	\$0
	Server Subtotal		\$ 6,234,666	\$ 1,925,002
Storage Devices				
6000-0000-8090	WES CABINET FOR BUNDLED ARRAYS	16	\$843,427	\$210,857
6288-0000-8090	DUAL CONTROLLER BUNDLED ARRAY WITH 32 9 GB DRIVES USED IN 6000-0000-8090	32	\$1,113,437	\$63,605
	Storage Devices Subtotal		\$ 1,956,864	\$ 274,462
Software Licenses				
F601-7730-0000	SW;EOE/MPP 8 NODES	4	\$75,000	\$50,000
F601-7811-0000	SW;OLTP AWS OP ENV FOR S26/S40	1	\$3,000	\$2,000
F7A4-1010-0000	TERADATA FASTLOAD FOR MPP UNIX NODE LICENSE	1	\$7,500	\$5,000
F7A4-0970-0000	TERADATA BTEQ FOR MPP UNIX NODE LICENSE	1	\$3,000	\$2,000
F7A4-0990-0000	TERADATA CLI FOR MPP UNIX NODE LICENSE	1	\$3,000	\$2,000
F784-1755-0000	TERADATA/DB V2R4.1 WM 5250 MP-RAS 0 - 1 TB OF USER DATA LICENSE	1	\$776,250	\$517,500
	Software Subtotal		\$ 867,750	\$ 578,500
	TOTAL		\$ 9,059,280	\$ 2,777,964
	5-YEAR COST OF OWNERSHIP			\$ 11,837,244
	QpH@1000GB			18,543
	\$/QpH@1000GB			\$ 638

"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 terms, please inform the TPC at pricing@tpc.org. Thank you."

Audited by: Francois Raab
InfoSizing (www.sizing.com)



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Teradata DBS V2R4.1

TPC-H Rev. 1.3.0

Report Date:
October 9, 2001

Numerical Quantity Summary

Measurement Results:

Database Scale Factor	=	1000
Total Data Storage / Database Size	=	9.0
Start of Database Load Time		11-03-00 00:18:05
End of Database Load Time		11-03-00 06:40:47
Database Load Time	=	6 hrs. 23 min.
Query Streams for Throughput Test	=	7
TPC-H Power	=	19,200.7
TPC-H Throughput	=	17,907.6
Composite QphH@1000GB	=	18,542.9
Total System Price Over 5 Years	=	\$11,837,244
TPC-H Price/Performance Metric	=	\$638

Measurement Intervals:

Measurement Interval in Throughput Test (Ts) = 30,959 seconds

Duration of stream execution:

StreamID	Seed	Start Date	Start Time	End Date	End Time	Duration
Stream00	1103064047	11/3/00	07:45:19	11/3/00	09:16:08	01:30:49
Stream01	1103064048	11/3/00	09:16:08	11/3/00	16:01:52	06:45:44
Stream02	1103064049	11/3/00	09:16:08	11/3/00	16:16:38	07:00:30
Stream03	1103064050	11/3/00	09:16:08	11/3/00	16:27:34	07:11:26
Stream04	1103064051	11/3/00	09:16:08	11/3/00	16:14:19	06:58:11
Stream05	1103064052	11/3/00	09:16:08	11/3/00	16:25:46	07:09:38
Stream06	1103064053	11/3/00	09:16:08	11/3/00	16:26:25	07:10:17
Stream07	1103064054	11/3/00	09:16:08	11/3/00	16:19:40	07:03:32
Refresh		11/3/00	09:16:08	11/3/00	17:52:07	08:35:59

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Intervals

Query	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Stream0	223.8	22.6	272.5	196.1	284.6	145.3	248.2	135.4
Stream01	1235.1	166.1	1866.3	1384.4	1391.1	682.9	1350.9	1685.6
Stream02	840.5	183.9	1406.9	1649.8	1378.2	1146.8	1322.7	1052.2
Stream03	1584.0	152.2	566.3	2266.7	1609.2	663.3	1189.5	1188.4
Stream04	744.9	268.0	1679.8	1137.6	1930.6	801.2	1253.0	1109.6
Stream05	988.3	384.7	1369.9	2115.7	1953.1	654.7	1092.7	1631.6
Stream06	1220.6	86.4	1333.3	1169.7	1867.9	479.9	1225.3	796.8
Stream07	1454.4	140.1	1516.5	980.5	1506.0	1236.7	1582.0	727.4
Min Qi	744.9	86.4	566.3	980.5	1378.2	479.9	1092.7	727.4
Max Qi	1584.0	384.7	1866.3	2266.7	1953.1	1236.7	1582.0	1685.6
Avg Qi	1152.5	197.3	1391.3	1529.2	1662.3	809.3	1288.0	1170.2
Query	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Stream0	423.1	234.3	156.5	180.0	324.4	173.4	181.4	152.5
Stream01	2304.6	1623.6	600.3	754.2	690.9	940.0	753.9	944.8
Stream02	2043.3	1077.4	777.0	2042.1	1011.2	971.9	982.1	1213.9
Stream03	2495.6	1848.5	560.9	952.1	1025.7	686.1	976.4	1087.9
Stream04	2339.1	1703.5	1275.8	641.1	1085.9	930.1	626.4	917.2
Stream05	1384.9	1961.5	973.1	693.2	1058.3	761.7	1058.4	879.4
Stream06	2425.8	1417.6	664.9	2039.5	1183.6	769.0	743.0	1838.8
Stream07	2318.9	1354.6	855.4	698.5	805.3	988.7	834.3	1764.7
Min Qi	1384.9	1077.4	560.9	641.1	690.9	686.1	626.4	879.4
Max Qi	2495.6	1961.5	1275.8	2042.1	1183.6	988.7	1058.4	1838.8
Avg Qi	2187.5	1569.5	815.3	1117.2	980.1	863.9	853.5	1235.2
Query	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
Stream0	132.8	241.1	175.8	352.4	405.5	19.1	312.4	456.1
Stream01	759.4	867.6	807.6	1182.4	2276.2	76.4	280.1	432.1
Stream02	583.5	819.4	947.9	1366.3	2071.2	341.8	287.7	460.4
Stream03	668.4	1343.0	1660.9	1351.0	1912.4	97.3	284.7	483.2
Stream04	1163.5	764.1	1050.9	1398.4	2084.6	185.7	279.4	430.1
Stream05	698.6	1466.6	1062.8	1441.4	2012.9	134.7	275.7	419.4
Stream06	1403.6	713.6	2016.9	1051.0	1196.5	173.9	276.4	458.6
Stream07	938.4	1286.7	945.5	1417.8	1795.0	264.8	275.0	431.1
Min Qi	583.5	713.6	807.6	1051.0	1196.5	76.4	275.0	419.4
Max Qi	1403.6	1466.6	2016.9	1441.4	2276.2	341.8	287.7	483.2
Avg Qi	887.9	1037.3	1213.2	1315.5	1907.0	182.1	279.8	445.0