

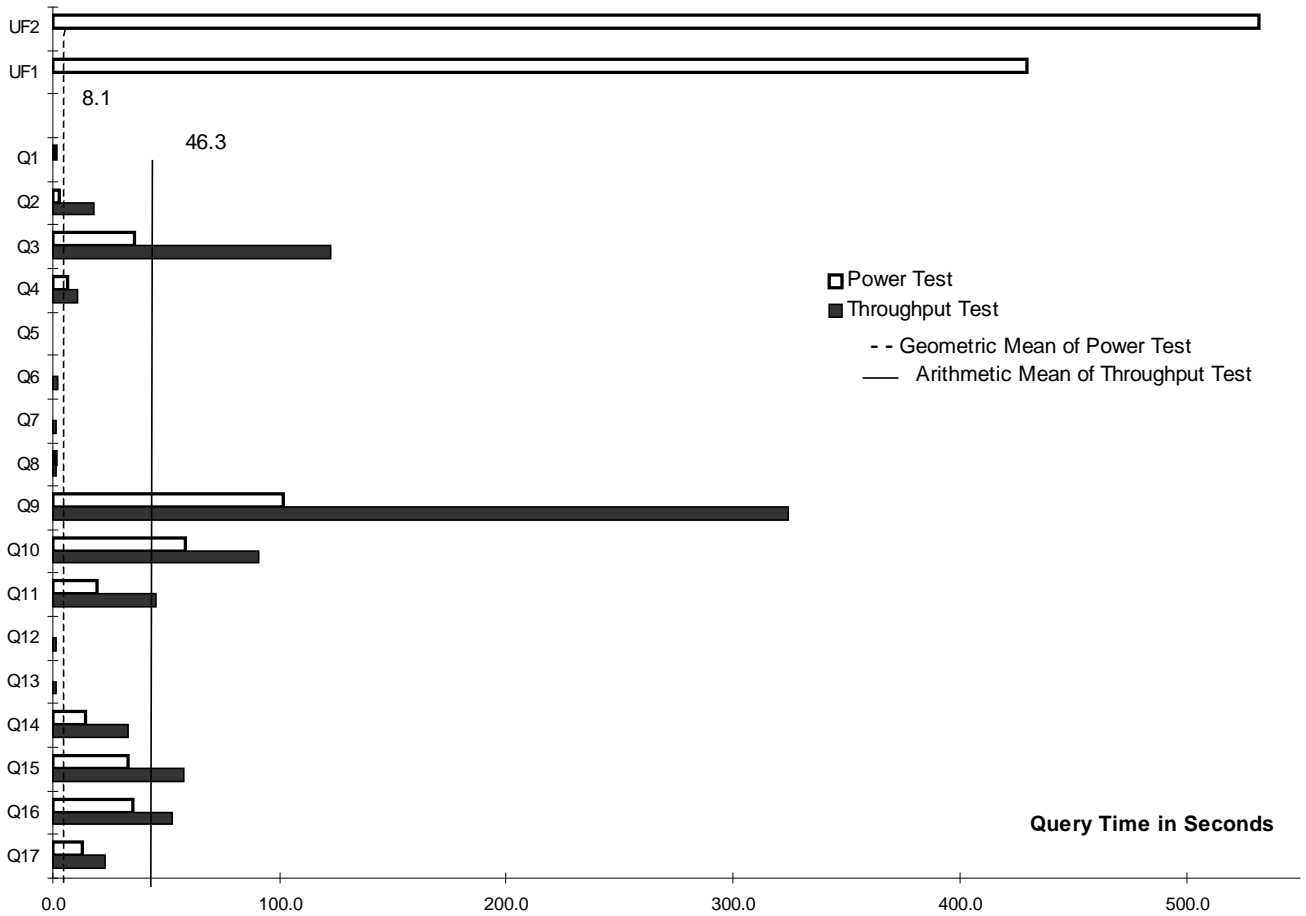


WorldMark 5200 Using Teradata V2R3.0

TPC-D Rev 1.3.1

**Report Date:
June 18, 1999**

Total System Cost	TPC-D Power	TPC-D Throughput	Price/Performance
\$18,881,332	133,966.8 QppD@300GB	13,756.2 QthD@300GB	\$440 per QphD@300GB
Database Size	Database Manager	Operating System	Other Software
300GB	Teradata V2R3.0	UNIX SVR4 MP-RAS 03.02.00	None
			Availability Date
			HW: 4-16-99 SW: 8-10-99



Database Load Time = 5 Hrs 16 Mins Total Data Storage / Database Size = 38.7 RAID = Y

32 5200 Nodes:

- 4 Intel Pentium II Xeon 450 MHz CPUs 1 MB Cache
- 2 GB Memory
- 2 Ultra SCSI Adapters
- 1 CD-ROM Unit, Floppy Drive & Tape Drive
- 1 Network card
- 3 9GB internal drives
- 2 Modularized arrays, each with
20 x 9 GB drives

Total GB of Storage = 11,610



WorldMark 5200 Teradata DBS V2R3.0

TPC-D Rev. 1.3.1

Report Date:
June 18, 1999

PRODUCT ID	DESCRIPTION	QTY	UNIT PRICE	EXT PRICE	5 - YR MAINT
9100-5200-8090	WM 5200 Dual Node Expansion Cabinet	16	\$371,250	\$5,940,000	\$1,368,576
9101-5201-8090	BYNET V2 64 Node Switch Cabinet	2	\$420,000	\$840,000	\$249,984
9100-F118	Memory DIMM 1 GB	32	\$8,250	\$264,000	\$0
9100-F281	PQS - Shared Adapter Board w/Cable Assembly	64	\$2,096	\$134,160	\$0
3426-9004-8090	AWS Console/4 (6+ Nodes)	1	\$10,500	\$10,500	\$3,394
3498-2293-8090	21" Color Monitor [AWS]	1	\$1,388	\$1,388	\$1,292
3426-F147	Ethernet Adapter, Fast PCI	2	\$94	\$188	\$0
6000-K930	NSC Accessories Kit	4	\$0	\$0	\$0
9100-F936	Side Panels, Stabilizers, Manuals	4	\$1,125	\$4,500	\$0
Server Hardware				\$7,194,735	\$1,623,246
6000-9000-8090	NCR Storage Cabinet	22	\$22,608	\$497,376	\$0
6285-1220-8900	Modular Array (MA) 1220	64	\$10,650	\$681,600	\$398,131
6285-F101	MA Single Controller 32MB Cache	128	\$6,408	\$820,224	\$0
6285-F409	MA (4) 9GB 7200K RPM disk drive	320	\$3,420	\$1,094,400	\$0
6000-F900	Raid Manager for UNIX	22	\$0	\$0	\$0
9100-K931-	NSC Cables & Terminators Kit	22	\$738	\$16,236	\$0
Storage Devices				\$3,109,836	\$398,131
F601-7730-0000	EOE/MPP 8 nodes	4	\$18,750	\$75,000	\$60,445
F601-7811-0000	S40 AWS Operating Environment [AWS]	1	\$3,000	\$3,000	\$15,051
F784-5030-0000	Teradata CLI for MPP Node	1	\$3,000	\$3,000	\$5,332
F784-5031-0000	Teradata BTEQ for MPP Node	1	\$375	\$375	\$0
F784-5032-0000	Teradata FastLoad for MPP Node	1	\$3,000	\$3,000	\$0
F784-1425-0000	Teradata V2R3.0 4800/5200	1	\$37,500	\$37,500	\$51,050
F784-1426-0000	Teradata V2R3.0 4800/5200 Nodes (nodes 2-4)	3	\$112,500	\$337,500	\$153,151
F784-1427-0000	Teradata V2R3.0 4800/5200 nodes 5+	28	\$146,250	\$4,095,000	\$1,715,979
Software Subtotal				\$4,554,375	\$2,001,009
TOTAL				\$ 14,858,946	\$4,022,386
FIVE YEAR COST OF OWNERSHIP					\$18,881,332

(1) Each cabinet contains 2 nodes (4 x 450 MHz CPU and 1 GB memory per node)

"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
Information Paradigm



WorldMark 5200 Teradata DBS V2R3.0

TPC-D Rev. 1.3.1

Report Date:
June 18, 1999

Numerical Quantity Summary

Measurement Results:

Scale Factor	= 300
Total Data Storage / Database Size	= 38.7
Database Load Time	= 5 Hrs 16 Min
Query Streams for Throughput Test	= 3
Geometric Mean of Power Test	= 8.1
TPC-D Power Metric (QppD@300GB)	= 133,966.8
TPC-D Throughput Metric (QthD@300GB)	= 13,756.2
Composite QphD@300GB	= 42,928.8
Total System Price Over 5 Years	= \$18,881,332
TPC-D Price/Performance Metric	= \$439.83

Measurement Intervals:

Measurement Interval in Throughput Test (Ts) =4,004 seconds

Duration of stream execution:

Stream ID	Seed	Start-Date	Start-Time	End-Date	End-Time	Total Time
Stream00	1963440703	2/2/99	3:05:49	2/2/99	3:27:15	1,286
Stream01	1963440704	2/2/99	3:27:15	2/2/99	3:39:13	718
Stream02	1963440705	2/2/99	3:27:15	2/2/99	3:41:03	828
Stream03	1963440706	2/2/99	3:27:15	2/2/99	3:41:02	827
Updates		2/2/99	3:27:15	2/2/99	4:33:59	4,004

TPC-D Timing Intervals (in seconds):

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Stream0	1.2	2.7	36.1	6.2	0.5	0.3	0.7	1.2	101.9	58.6
Stream01	0.5	47.3	122.3	5.1	0.7	1.0	0.7	1.9	281.1	69.4
Stream02	0.7	3.9	135.6	16.3	0.8	4.2	2.3	0.9	318.6	111.8
Stream03	1.1	2.5	110.0	10.5	1.5	0.4	2.1	0.8	373.3	90.2
Minimum	0.5	2.5	110.0	5.1	0.7	0.4	0.7	0.8	281.1	69.4
Average	0.7	17.9	122.7	10.7	1.0	1.9	1.7	1.2	324.3	90.5
Maximum	1.1	47.3	135.6	16.3	1.5	4.2	2.3	1.9	373.3	111.8

	Q11	Q12	Q13	Q14	Q15	Q16	Q17	UF1	UF2
Stream0	19.6	0.4	0.8	14.3	32.8	35.0	13.0	429.3	531.9
Stream01	28.8	0.5	1.4	31.2	40.3	43.2	38.8	1266.5	541.8
Stream02	37.3	2.2	1.8	29.8	96.0	48.2	13.9	539.6	536.5
Stream03	69.4	1.1	1.2	39.2	36.9	66.3	16.2	476.1	543.0
Minimum	28.8	0.5	1.2	29.8	36.9	43.2	13.9	476.1	536.5
Average	45.2	1.3	1.5	33.4	57.7	52.6	22.9	760.7	540.4
Maximum	69.4	2.2	1.8	39.2	96.0	66.3	38.8	1266.5	543.0