

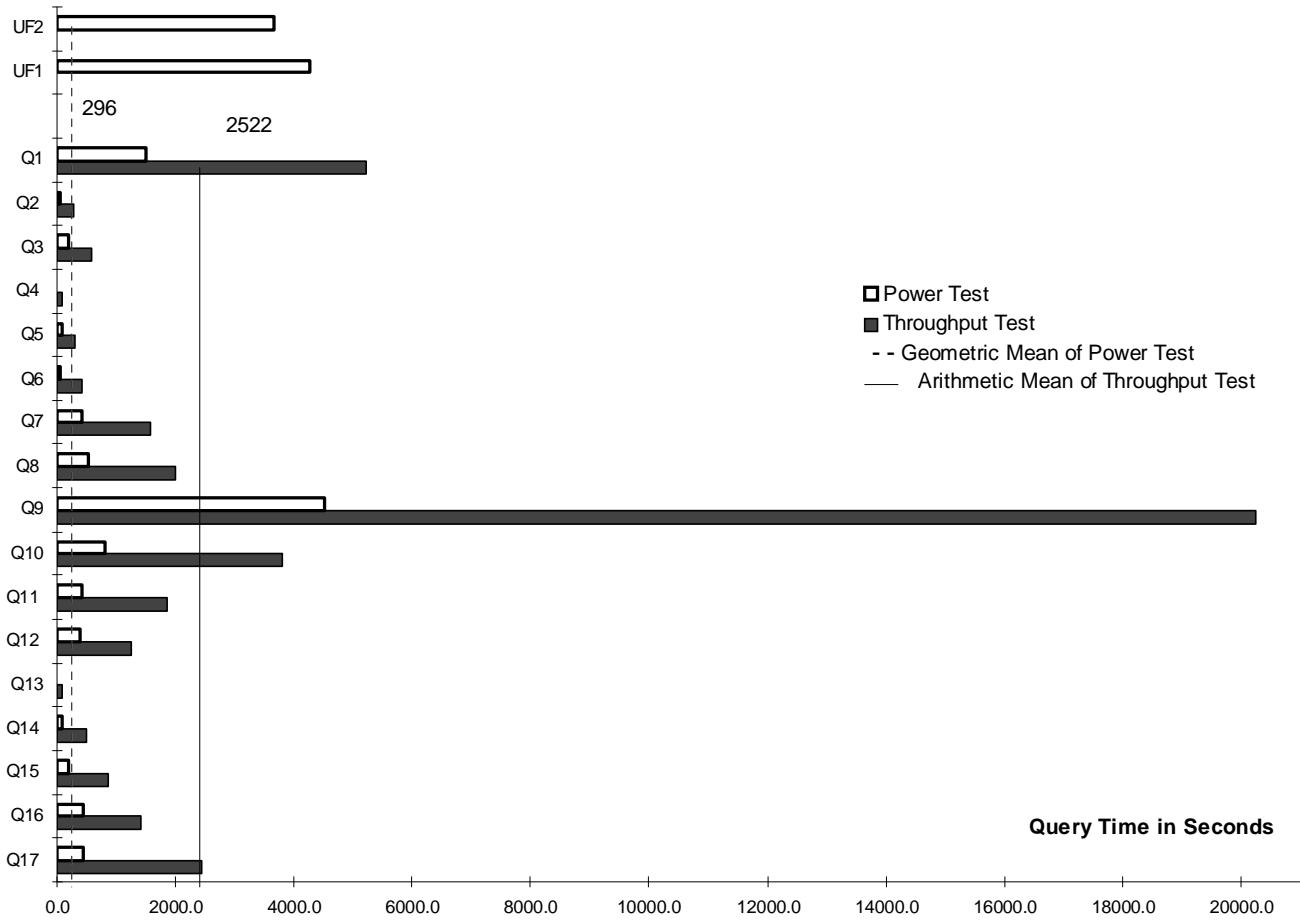


WorldMark 5150 Server Using Teradata V2R2.1

TPC-D Rev 1.2.3

Report Date:
Oct. 27, 1997

Total System Cost	TPC-D Power	TPC-D Throughput	Price/Performance	
\$14,495,886	12,149.2 QppD@1TB	3912.3 QthD@1TB	\$2,103 per QphD@1TB	
Database Size	Database Manager	Operating System	Other Software	Availability Date
1TB	Teradata V2R2.1	UNIX SVR4 MP-RAS 03.01.00	None	03-15-98



Database Load Time = 41 Hrs 2 Mins

Total Data Storage / Database Size = 5.41

RAID = Y

32 Nodes:

- 4 Intel Pentium Pro 200 MHz CPUs
- 1 GB Memory
- 2 Quad Ultra SCSI Adapters
- 1 9 GB internal drives
- 2 Disk Array modules, each with
 - 2 Series 4 controllers with 64 MB cache
 - 20 x 4 GB drives

BYNET interconnect support with:

- 4 BYNET chassis type BYA
- 2 BYNET chassis type BYB

Total GB of Storage = 5408



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PRODUCT ID	DESCRIPTION	QTY	UNIT	EXT PRICE	5-YR MAINT.
9100-5151-8090	Worldmark 5150 System Cabinet	2	\$376,500	\$753,000	\$378,415
9100-5152-8090	Worldmark 5150 Extender Cabinet	1	\$736,500	\$736,500	\$229,332
9100-4704-8090	Worldmark 5150 & 4700 Expansion Cabinet	13	\$297,750	\$3,870,750	\$563,238
9100-F149	ADPT - Ethernet EISA - 10/100	2	\$221	\$443	\$0
3426-7604-XXXX	AWS Console/4 (6+ Nodes)	1	\$13,500	\$13,500	\$3,828
3498-2292-8090	21in Color Monitor [AWS]	1	\$1,875	\$1,875	\$638
9100-K934-	BYNET Cable Kit (per node)	32	\$900	\$28,800	\$0
9100-K935-	Systems Accessories Kit	1	\$720	\$720	\$0
1428-C001-0000	Power cord for monitor	1	\$0	\$0	\$0
1412-C126-0100	BYNET 128 Cable 10.0M	16	\$450	\$7,200	\$0
Central Equipment Complex Subtotal				\$5,412,788	\$1,175,451
6257-6000-6000	Staged 19" Rackmount Cabinet 56" tall with 2 Bays	32	\$4,578	\$146,496	\$313,600
6257-F058-	Series 4 Controller with 64MB Cache	128	\$7,308	\$935,424	\$250,880
6257-F070-	Internal Terminal Concentrator & Cables	32	\$1,320	\$42,240	\$0
6257-F200-	Series 4 Disk Array Module, Single Power Source	64	\$8,244	\$527,616	\$0
6257-F304-	4.2GB LP Disk Drive	1280	\$960	\$1,228,800	\$0
9100-K790-	16 Port External Terminal Concentrator	2	\$1,050	\$2,100	\$0
9100-F900	UNIX RAID Manager 5	32	\$0	\$0	\$0
9100-K931-	Symbios Cable Kit	64	\$720	\$46,080	\$0
Storage Devices Subtotal				\$2,928,756	\$564,480
Software Licenses					
F601-7730-0000	EOE/MPP 8 nodes	4	\$37,500	\$150,000	\$0
F601-7811-0000	S40 AWS Operating Environment [AWS]	1	\$8,250	\$8,250	\$22,556
F784-1091-0000	Teradata Client for 5100 (node license)	1	\$6,000	\$6,000	\$3,257
F784-2312-0000	Teradata V2R2.0 4700/5150 Base (<=128 users)	1	\$36,000	\$36,000	\$15,600
F784-2332-0000	Teradata V2R2.0 4700/5150 Node (<=128 users; nodes 2-4)	3	\$67,500	\$202,500	\$84,240
F784-2331-0000	Teradata V2R2.0 4700/5150 (Unlimited users)	28	\$101,250	\$2,835,000	\$1,051,008
Software Subtotal				\$3,237,750	\$1,176,661
TOTAL				\$11,579,294	\$2,916,592
FIVE YEAR COST OF OWNERSHIP					\$14,495,886

"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 Server Teradata DBS V2R2.1

TPC-D Rev. 1.2.3

Report Date:
Oct. 27, 1997

Numerical Quantity Summary

Measurement Results:

Scale Factor	= 1000
Total Data Storage / Database Size	= 5.41
Database Load Time	= 41 Hrs 2 Min
Query Streams for Throughput Test	= 5
Geometric Mean of Power Test	= 296
TPC-D Power Metric (QppD@1TB)	= 12,149.2
TPC-D Throughput Metric (QthD@1TB)	= 3912.3
Composite QphD@1TB	= 6894.3
Total System Price Over 5 Years	= \$14,495,886
TPC-D Price/Performance Metric	= \$2,103

Measurement Intervals:

Measurement Interval in Throughput Test (Ts) = 78215 seconds

Duration of stream execution:

Stream ID	Seed	Start-Date	Start-Time	End-Date	End-Time	Total Time
Stream00	802894536	10/14/97	06:26:58	10/14/97	11:28:32	18094 sec
Stream01	802894537	10/14/97	11:28:32	10/14/97	23:44:54	44182 sec
Stream02	802894538	10/14/97	11:28:32	10/14/97	23:16:05	42453 sec
Stream03	802894539	10/14/97	11:28:32	10/14/97	23:14:03	42331 sec
Stream04	802894540	10/14/97	11:28:32	10/14/97	22:55:39	41227 sec
Stream05	802894541	10/14/97	11:28:32	10/14/97	23:44:32	44160 sec
Updates		10/14/97	11:28:32	10/15/97	09:12:07	78215 sec

TPC-D Timing Intervals (in seconds):

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Stream0	1489.3	65.9	191.8	31.7	78.0	61.9	423.6	528.7	4530.9	807.8
Stream01	6942.7	288.3	759.1	28.4	104.9	528.5	833.8	1722.9	21302.5	3065.7
Stream02	4654.0	235.2	427.6	127.3	334.3	368.0	1555.3	1685.7	20477.2	5081.4
Stream03	4110.1	242.8	494.6	70.2	246.8	346.0	1765.8	2209.7	18098.0	5372.8
Stream04	4240.9	273.2	473.9	67.3	274.7	553.7	1836.6	1624.1	20355.9	2324.6
Stream05	6074.0	285.1	707.4	78.8	572.3	247.0	1928.8	2684.6	20986.5	3106.9
Minimum	4110.1	235.2	427.6	28.4	104.9	247.0	833.8	1624.1	18098.0	2324.6
Average	5204.3	264.9	572.5	74.4	306.6	408.6	1584.0	1985.4	20244.0	3790.3
Maximum	6942.7	288.3	759.1	127.3	572.3	553.7	1928.8	2684.6	21302.5	5372.8
	Q11	Q12	Q13	Q14	Q15	Q16	Q17	UF1	UF2	
Stream0	417.0	381.8	4.5	92.7	192.3	436.3	448.8	4265.8	3648.1	
Stream01	1818.4	1108.0	84.0	915.2	1302.7	683.5	2693.7	3224.2	3574.1	
Stream02	1735.2	1625.1	91.5	764.3	803.0	1185.1	1302.5	2812.2	4142.7	
Stream03	1811.8	1222.7	2.5	244.7	940.5	2242.5	2909.2	2924.9	3430.2	
Stream04	2015.6	1314.1	8.2	528.6	915.7	2237.1	2183.1	3004.4	3509.8	
Stream05	1936.9	952.5	281.0	101.3	314.6	732.7	3169.2	3229.9	4179.5	
Minimum	1735.2	952.5	2.5	101.3	314.6	683.5	1302.5	2812.2	3430.2	
Average	1863.6	1244.5	93.5	510.8	855.3	1416.2	2451.5	3039.1	3767.3	
Maximum	2015.6	1625.1	281.0	915.2	1302.7	2242.5	3169.2	3229.9	4179.5	