

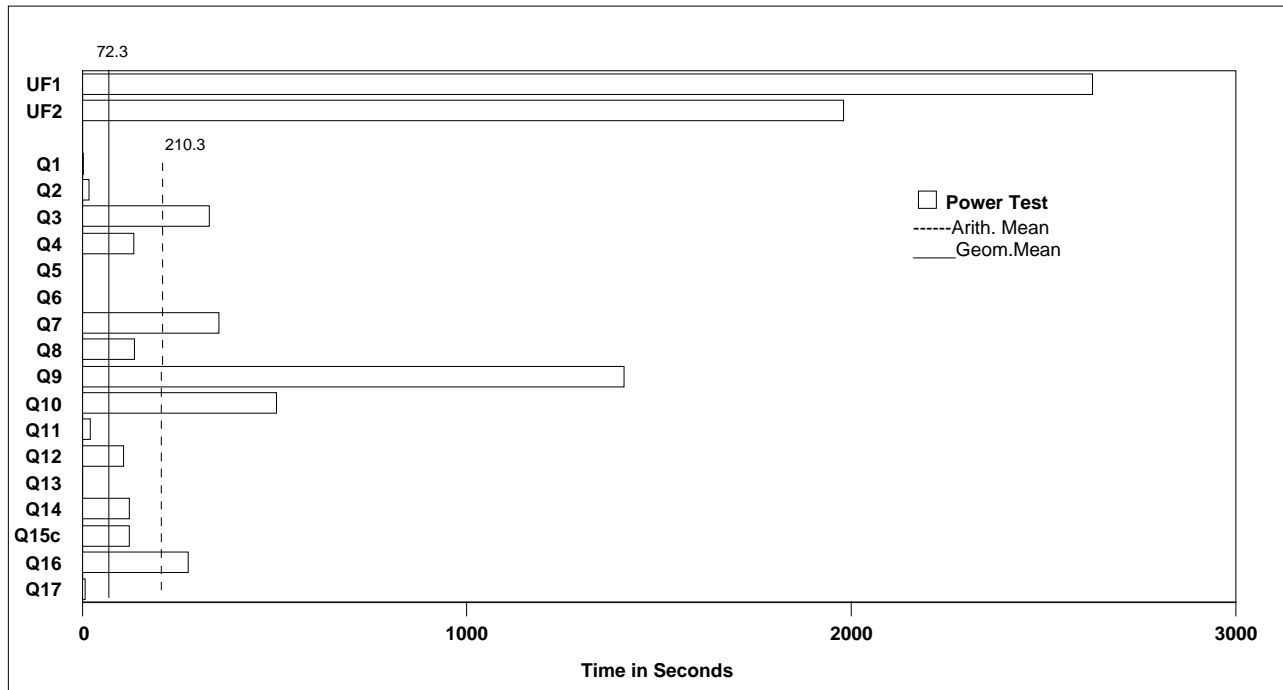


**IBM Netfinity 7000 M10
with DB2 UDB 5.2.0**

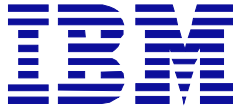
TPC-D Rev 1.3.1

Report Date: 20 Jan. 1999

Total System Cost		TPC-D Power	TPC-D Throughput	Price/Performance
\$238,250		4,977.9 QppD@100GB	747.8 QthD@100GB	\$123 per QphD@100GB
Database Size	Database Manager	Operating System	Other Software	Availability Date
100GB	DB2 UDB 5.2.0	Windows NT Server 4.0	Visual C++ 5.0	June 30, 1999



Database Load Time: 34h 19m		Total Data Storage/Database Size: 8.37	RAID-1
Components	Qty		
Processors	4	450MHz Pentium II Xeon / 2MB L2 Cache	
Memory		2560MB	
Disk Controllers	6	Netfinity ServeRAID-3H Ultra2 SCSI Adapter	
Disk Drives	90	9.1GB	
	4	4.51GB	
Total Storage		837.04GB	



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Description	Part Number	Source	Unit Price	Qty	Ext. Price	5-Yr. Maint.**
Server Hardware						
IBM Netfinity 7000 M10 /450MHz / 2MB L2 Cache Pentium II Xeon (Rack Model)	8680-5RU	2	16,939	1	16,939	6,415
450MHz / 2MB L2 Cache Processor Upgrade	10L5897	2	7,700	3	23,100	0
512 MB (4x128) Memory Expansion Kit	01K8045	1	2,710	5	13,550	0
Memory Card	01K8004	1	516	1	516	0
32MB Battery Backup Cache	28L1003	1	306	6	1,836	0
Netfinity ServeRAID-3H Ultra2 SCSI Adapter	01K7207	1	1,742	6	10,452	0
Netfinity 4.51GB 10K Wide Ultra SCSI Drive	01K7960	1	649	4	2,596	0
Netfinity 4.2M Ultra2 SCSI Cable	03K9311	1	104	18	1,872	0
10/100 Ethernet Fault Tolerant Adapter	08L3341	1	100	1	100	0
IBM G42 14" (13.2" Viewable) Color Monitor	654000N	1	207	1	207	215
10 / 20GB NS Internal SCSI Tape Drive	01K1319	1	622	1	622	0
Netfinity Rack	9306900	1	1,673	1	1,673	0
Side Panel Kit	94G6669	1	198	1	198	0
Subtotal					\$73,661	\$6,630
Server Software						
DB2 UDB 5.2.0 Enterprise Edition		2	24,998	1	21,748	0
IBM Passport/Advantage Discount on DB2 UDB = 13%		2	(3,250)			
Microsoft Windows NT 4.0 with SP4		1	690	1	690	0
Microsoft Visual C++ and Subscription Service		1	460	1	460	0
Microsoft Priority Plus Database Server Support		3	2,095	5		10,475
Subtotal					\$22,898	\$10,475
Storage Devices						
IBM Netfinity EXP15 Rack Storage Expansion Enclosure (includes 2 spares)	35202RU	1	2,596	11	28,556	0
IBM Netfinity EXP10 9.1GB 10K Wide Ultra SCSI Drive (includes 10% spares)	01K8499	1	970	99	96,030	0
Subtotal					\$124,586	\$0
Total					\$221,145	\$17,105

Pricing: 1 - CDW Computer Centers, Inc.; 2 - IBM Corp.; 3 - Microsoft Corp.

**** The standard 3-year warranty and the extended warranty on all hardware are for 7x24, on site same day coverage.**

Audited by Francois Raab of Information Paradigm, Inc.

Five-Year Cost of Ownership: \$238,250

QppD @ 100GB: 4,977.9

QthD @ 100GB: 747.8

QphD @ 100GB: 1,929.4

\$/QphD @ 100GB: \$123

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 specification. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.



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with DB2 UDB 5.2.0**

TPC-D Rev 1.3.1

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Numerical Quantities Summary

Measurement Results:

Database Scaling (SF/Size)	100
Total Data Storage/Database Size	8.37
Database Load Time (h:m)	34:19
Query Streams for Throughput Test	0
TPC-D Power Metric (QppD@100GB)	4,977.9
TPC-D Throughput Metric (QthD@100GB)	747.8
Composite Query-per-Hour Rating (QphD@100GB)	1,929.4
Total System Price over 5 Years	\$238,250
TPC-D Price/Performance Metric (\$/QphD@100GB)	\$123

Measurement Intervals:

Measurement Intervals in Throughput Test (Ts) = 8, 184 seconds

Duration of Stream Execution

Stream ID	Seed Used	Start Date	Start Time	End Date	End Time
UF1		01/14/99	14:06:05	01/14/99	14:49:53
Stream 0	38	01/14/99	14:06:05	01/14/99	16:22:29
UF2		01/14/99	15:49:27	01/14/99	16:22:29

Timing Intervals (in seconds):

Stream ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Stream 00	3.6	20.8	331.8	135.9	0.5	1.8	357.1	137.9	1410.9

Stream ID	Q10	Q11	Q12	Q13	Q14	Q15c	Q16	Q17	UF1	UF2
Stream 00	507.7	21.3	108.4	1.4	125.5	124.9	275.6	9.7	2628.3	1981.7