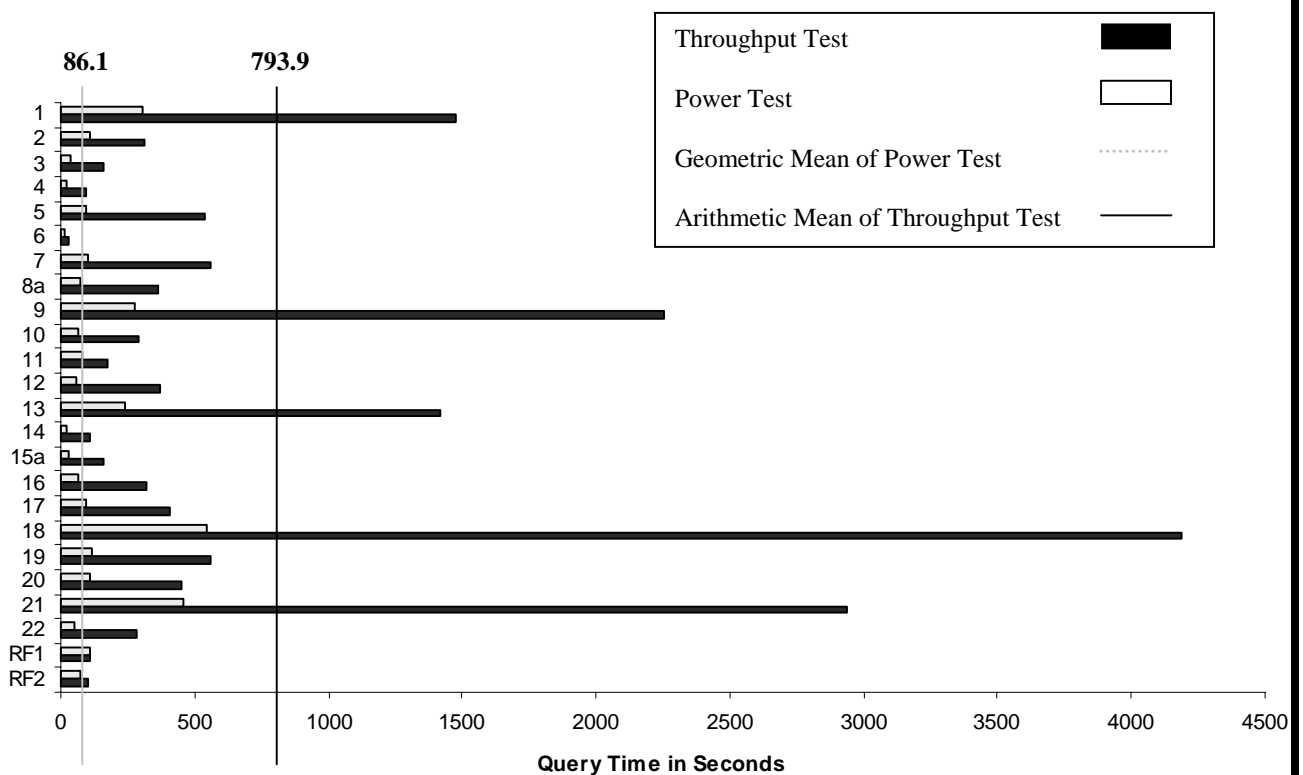
	PRIMEPOWER 2500 With Oracle Database 10g		TPC-H REV 2.0 EXECUTIVE SUMMARY	
			Report Date: Jan. 14, 2004	
Total System Cost	Composite Query per Hour Metric		Price/Performance	
\$ 4,861,985	34,492.5 QphH@1000GB		\$141 \$/QphH@1000GB	
Database Size	Database Manager	Operating System	Other Software	Availability Date
1000GB	Oracle Database 10g Enterprise Edition	Solaris 9	Veritas Volume Mgr.3.5.0	March 8, 2004



Database Load time = 02:18:34	Load Includes Backup: N	Total Data Storage/database Size=43.68
RAID (base tables): N	RAID (Base Tables & auxil. Data structures): N	RAID (A11): Y

System Configuration: PRIMEPOWER 2500
Processors: 64 Fujitsu SPARC64 V 1.3 GHz with 2 MB L2 cache
Memory: 256 GB
Disks: 5 internal disks 36 GB, 64 FibreCat S80 arrays with 640 disks 73 GB
Total Storage: 43,679.04 GB (1GB defined as 2^30 bytes)

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



PRIMEPOWER 2500

With Oracle Database 10g

**TPC-H REV 2.0
EXECUTIVE SUMMARY**

Report Date: Jan. 14, 2004

Description	Part Number	Source	Unit Price	Qty	Ext. Price	3 Yr. Maint.
Server Hardware						
PRIMEPOWER2500(1.3GHz/2MB\$(For 8-64CPU)- Solaris9	PW2K0BP7U	1	504,450	1	504,450	457,776
Systemboard	PW2K7SB11U	1	37,500	8	300,000	
1.3GHz/2MB\$ CPU Module Expansion (2x)	PW2K1B12U	1	42,510	32	1,360,320	
8GB Additional Memory (1.3GHz/2MB\$)	PW2K2M41U	1	14,800	32	473,600	
36GB Hard Disk Drive, AL8LE	PW0R3D24	1	1,000	5	5,000	
PCI/DISK BOX	PW2K7BD1U	1	27,500	16	440,000	
I/O Rack	PW2K7RK3U	1	24,500	2	49,000	
I/O Rack Joint Kit	PW2K7RK91U	1	9,500	1	9,500	
I/O Rack Joint Kit	PW2K7RK92U	1	9,500	1	9,500	
Fibre Channel Card(2Gb)	PW028FC3	1	2,795	64	178,880	
System Expansion Kit (w/ Solaris 9 RTU)	PW2K7ER6U	1	4900	1	4900	
Fibre Channel cable	DCL-FCA20U	1	780	64	49920	
PRIMEPOWER 100 for System Console	PW087MC4AU	1	13,500	1	13,500	
Subtotal					3,398,570	457,776
Server Software						
Solaris 9 CD set PRIMEPOWER		1	100	1	100	
Sun ONE Studio 7, Compiler Collection Slim Kits 1 User Slim Kit	D23QBB0H1H	1	987	1	987	
Volume Manager, Solaris, v3.5, License, Tier 4C	A08974F-M0000	2	39,126.75	1	39,126.75	
Volume Manager,Solaris,v3.5 Tier 4C Extended Support, 3 Yr 24x7	W08974F-M00236	2		3		35,304.75
Storage Solution, Solaris v3.5 Maintenance Pack 1, English, Media Kit	N09665F	2	65	1	65	
Volume Manager, Solaris, Administrator's Guide, v3.5 English Manual	N08836F	2	32.50	1	32.50	
Oracle Database 10g Enterprise Edition for 3 years, Named User Plus		3	10,000	64	640,000	
Partitioning for 3 years, Named User Plus		3	2,500	64	160,000	
Database Server Support Package for 3 years		3	6,000	1		6,000
Oracle Mandatory E-Business Discount (license and support)		3			-161,200	
Subtotal					679,111.25	41,304.75
Storage						
FC-S80 Basis Shelf	D:S80-Base	4	3,650	64	233,600	225,000
S80 RAID Controller 2 Gbit/s	D:S80FC-RDM	4	9,675	64	619,200	80,000
S80 Disk, 73GB 10.000rpm	D:S80-HD7310	4	1,700	640	1,088,000	
PRIMECENTER Rack 38 HE	D:GPRAC-BG52	4	2,350	6	14,100	
Subtotal					1,954,900	305,000
Large Configuration Discount and Support Prepayment*					-1,899,602	-75,075
Notes:					Total	\$4,132,979
Source: 1=Fujitsu					3 Yr. Cost	\$4,861,985
2=Veritas, contact: Michael Mawson (see Appendix G)					QphH@1000GB	34,492.5
3=Oracle, contact: MaryBeth Pierantoni (see Appendix G)					\$/QphH@1000GB	\$141
4=Fujitsu Siemens, contact: Jürgen Binder (see Appendix G)						
*All discounts are based on US list prices and for similar quantities and configurations						

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

Prices used in TPC benchmarks 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.



PRIMEPOWER 2500

With Oracle Database 10g

TPC-H REV 2.0
EXECUTIVE SUMMARY

Report Date: Jan. 14, 2004

Numerical Quantities

Measurement Results:

Database Scale Factor	1000 GB
Total Data Storage / Database Size	43.68
Start of Database Load Time	05.09.2003 08:08:28
End of Database Load Time	05.09.2003 10:27:02
Database Load Time	2:18:34
Query Streams for Throughput Test	7
TPC-H Power	41,829.5
TPC-H Throughput	28,442.4
TPC-H Comp. Query-per-Hour-Rating (QphH@1000GB)	34,492.5
Total System Prize over 3 Years (US\$)	4,861,985
TPC-H Price/Performance Metric (US\$/QphH@1000GB)	141

Measurements Intervals:

Measurement Interval in Throughput Test	19,492	Seconds
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Duration of Stream Execution:

Stream ID	Seed	Start Date	Start Time	End Date	End Time	Duration
Stream 00	905102702	05. Sep	16:54:50	05. Sep	17:47:18	00:52:28
Stream 01	905102703	05. Sep	17:47:39	05. Sep	22:36:06	04:48:27
Stream 02	905102704	05. Sep	17:47:39	05. Sep	22:34:56	04:47:17
Stream 03	905102705	05. Sep	17:47:39	05. Sep	22:36:15	04:48:36
Stream 04	905102706	05. Sep	17:47:39	05. Sep	22:29:30	04:41:51
Stream 05	905102707	05. Sep	17:47:39	05. Sep	22:45:16	04:57:37
Stream 06	905102708	05. Sep	17:47:39	05. Sep	22:41:27	04:53:48
Stream 07	905102709	05. Sep	17:47:39	05. Sep	22:47:51	05:00:12
Refresh		05. Sep	22:47:51	05. Sep	23:12:31	00:24:40



PRIMEPOWER 2500

With Oracle Database 10g

TPC-H REV 2.0
EXECUTIVE SUMMARY

Report Date: Jan. 14, 2004

TPC-H Timing Intervals (in seconds)

	1	2	3	4	5	6	7	8a	9	10	11	12
Stream 00	306.0	105.6	33.3	23.3	94.7	13.8	101.4	71.9	276.1	64.3	81.3	61.2
Stream 01	1161.7	315.4	120.0	38.6	645.9	19.5	660.4	501.4	2346.6	369.6	172.4	304.7
Stream 02	1424.6	312.7	127.0	114.9	606.9	77.1	530.6	387.3	2110.3	289.3	144.3	370.9
Stream 03	1351.7	267.5	104.0	112.3	662.1	24.1	580.2	432.4	1931.0	386.7	203.1	458.4
Stream 04	1417.4	299.9	180.1	86.1	302.3	18.4	685.4	279.2	1960.1	387.5	176.2	358.5
Stream 05	1671.0	375.3	160.7	98.3	709.5	21.5	643.2	364.3	2084.1	392.9	160.4	485.2
Stream 06	1661.7	351.8	260.1	93.9	696.0	16.5	669.3	235.6	2351.3	165.1	147.2	532.1
Stream 07	1633.0	283.1	165.1	94.9	143.0	17.1	125.8	341.1	3009.8	67.7	211.5	99.2
Minimum	1161.7	267.5	104.0	38.6	143.0	16.5	125.8	235.6	1931.0	67.7	144.3	99.2
Average	1474.4	315.1	159.6	91.3	538.0	27.7	556.4	363.0	2256.2	294.1	173.6	372.7
Maximum	1671.0	375.3	260.1	114.9	709.5	77.1	685.4	501.4	3009.8	392.9	211.5	532.1

	13	14	15a	16	17	18	19	20	21	22	RF1	RF2
Stream 00	240.3	23.0	31.2	63.8	95.0	548.3	113.5	109.6	459.1	49.9	107.7	73.1
Stream 01	1538.1	125.9	166.7	327.1	299.9	3855.2	496.3	525.8	2989.3	326.1	113.2	74.2
Stream 02	1365.3	120.1	172.5	398.2	719.7	3877.1	618.4	301.8	2919.0	249.0	108.2	184.9
Stream 03	1452.5	112.0	217.2	324.5	450.2	4020.4	609.2	289.6	2987.8	339.5	110.9	91.0
Stream 04	1468.8	106.4	172.5	345.5	275.8	3923.4	536.1	830.5	2785.2	315.6	112.4	82.8
Stream 05	1481.4	130.7	179.6	338.2	367.2	3726.2	504.2	245.7	3463.5	253.5	110.2	85.0
Stream 06	1394.8	124.6	196.2	432.7	390.0	4047.7	585.5	281.5	2759.9	233.8	116.6	85.9
Stream 07	1203.8	28.0	33.4	71.5	366.3	5879.4	589.4	689.3	2673.7	284.6	107.3	96.7
Minimum	1203.8	28.0	33.4	71.5	275.8	3726.2	496.3	245.7	2673.7	233.8	107.3	74.2
Average	1415.0	106.8	162.6	319.7	409.9	4189.9	562.7	452.0	2939.7	286.0	111.2	100.1
Maximum	1538.1	130.7	217.2	432.7	719.7	5879.4	618.4	830.5	3463.5	339.5	116.6	184.9