

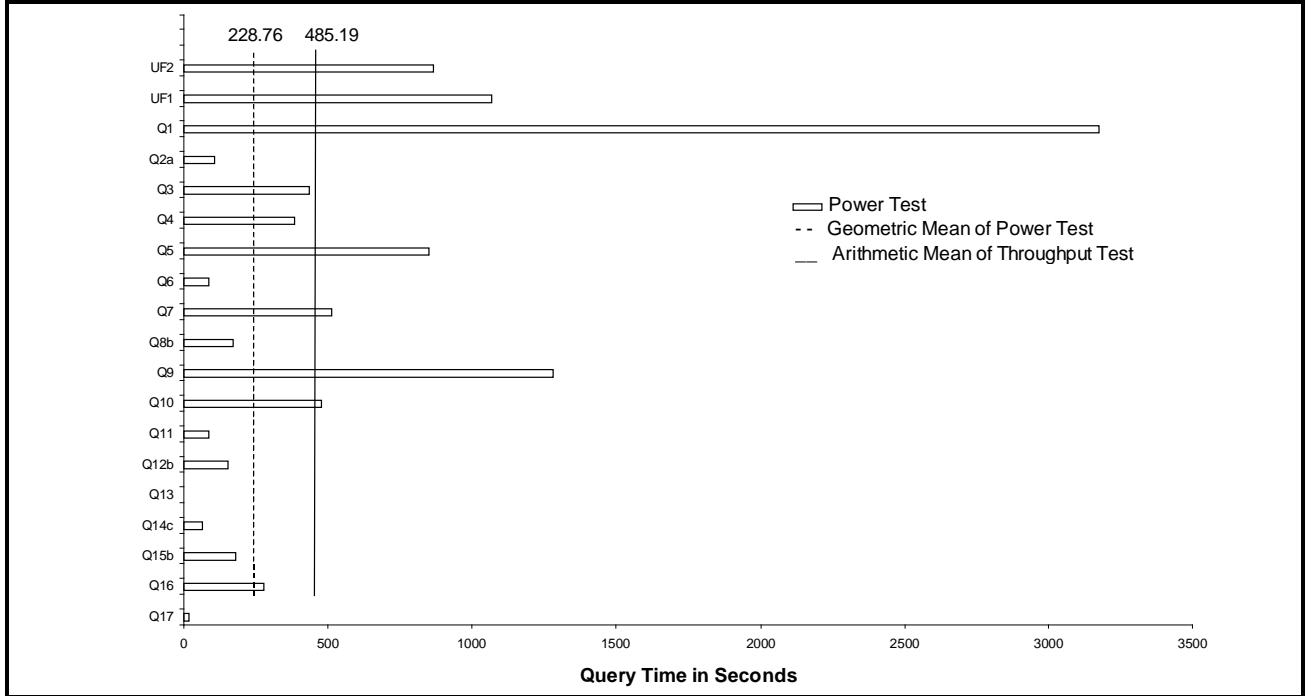


Executive Summary

 	Silicon Graphics Origin2000 running Oracle 8.0.4	TPC-D™ 1.3.1
		REPORT DATE: May 18, 1998

TOTAL SYSTEM COST	TPC-D POWER	TPC-D THROUGHPUT	PRICE/PERFORMANCE
\$770,838	1573.2 QppD@100GB	601.0 QthD@100GB	\$793 \$/QphD@100GB

DATABASE SIZE	DATABASE MANAGER	OPERATING SYSTEM	OTHER SOFTWARE	AVAILABILITY DATE
100GB	Oracle 8.0.4	IRIX 6.5	MIPSpro™ C Compiler, XFS™ Plexing	July 31, 1998



Database Load Time: 18 Hours 16 Minutes 46 Seconds	DISK SIZE/DATABASE SIZE =5.09	RAID: N
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- The tested system was a Silicon Graphics Origin2000 with:
- Eight 250 MHz MIPS R10000 64-bit CPUs, each with 4MB of L2 cache
 - 8 GB of main memory
 - One Base IO card, which includes internal SE Ultra SCSI, external SE Ultra SCSI, 100Base-Tx ethernet port & two 460kbps serial ports.
 - 1 9.1 GB internal SCSI disk drive
 - 2 4.5 GB internal SCSI disk drives.
 - 6 2-port fibre channel adapters.
 - 58 9.1 GB fibre channel disk drives
 - Total GB of Storage = 508.798
 - 1 internal CDROM drive
 - 1 4mm DAT drive



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**SILICON
GRAPHICS
Origin2000**

TPC-D™ 1.3.1

**Report Date:
May 18, 1998**

Description	Part Number	Source	Unit Price	Qty	Extended Price	5 yr. Maint. Price
Origin2000 Server Hardware						
Origin2000 DS: 8 x 250 MHz R10000, 4MB Cache, CDROM, IRIX	D4-H6508-4	1	\$191,500	1	\$158,945	\$55,232
9.1GB Standard Internal System Disk	FTO-9GB	1	\$0	1	\$0	\$0
4.5GB SE Ultra SCSI Disks	P-S-4	1	\$1,200	2	\$1,992	\$402
Origin2000 Destination Kit	DK-LD1-001	1	\$0	1	\$0	\$0
First 2 GB Memory per Node Board	OPN-2GB-D4	1	\$30,720	4	\$101,990	\$10,331
2 Port Fibre Channel XIO Adapters for O2000	XT-FC-2P	1	\$4,000	6	\$19,920	\$2,019
10-Meter Copper Fibre Channel Cables	X-F-COP-10M	1	\$150	8	\$996	\$0
Subtotal					\$283,843	\$67,984
Origin2000 Server Software						
IRIX 6.5 Operating System	SC4-IRIX-6.5	1	\$1,200	1	\$1,200	\$0
CD-ROM Update Media Required (support only)	MO5-CD	1	\$0	1	\$0	\$1,049
Data Base Accel. (Oracle & Informix) including nsort	SC4-DBA-2.0	1	\$1,000	1	\$830	\$690
RTU for XFS Volume Plexing Including Mirroring	SR4-PLEX-2.0	1	\$3,995	1	\$3,316	\$2,954
MIPSpro C Compiler 7.2.1, Single User on <= 8CPU System.	SCN4-C-7.2-8	1	\$2,100	1	\$1,743	\$1,551
Oracle8 Sever - Enterprise Edition v. 8.0.4	N/A	2	\$100,320	1	\$100,320	\$133,280
Subtotal					\$107,409	\$139,524
Storage Devices						
Origin FibreRack (empty) for rackmount FibreVault	P-F-RACK	1	\$7,500	1	\$6,225	\$638
Origin Rackmount FibreVault with 10 9.1GB FC Disks	P-F-B10X9-R	1	\$28,000	6	\$139,440	\$14,106
Origin Rackmount FibreVault (no FC disks)	P-F-BOX-R	1	\$5,000	2	\$8,300	\$1,093
4mm DAT 4GB/8GB Tape Drive	P-S-DDS-SCA	1	\$2,500	1	\$2,075	\$201
Subtotal					\$156,040	\$16,038
Total					\$547,292	\$223,546
Sources:		Five-Year Cost of Ownership:			\$770,838	
1 Intervision Systems Technologies, Santa Clara, CA. Attn: Mark McEnroe (408) 567 4212		Price/Performance @ 972.3 QphD (US Dollars)			\$793	
2 Oracle Corporation						

Audited by Lorna Livingtree, Performance Metrics, Inc.

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 items, please inform the TPC at pricing@tpc.org.



Numerical Quantities

TPC-D™ Rev. 1.3.1

Report Date:
May 18, 1998

Measurement Results:

Database Scaling (SF/Size)	=	100
Total Data Storage/Database Size	=	5.09
Database Load Time	=	18 Hrs, 16 M, 46 S
Query Streams for Throughput Test (S)	=	0
TPC-D Power Metric (QppD@100GB)	=	1573.2
TPC-D Throughput Metric (QthD@100GB)	=	601.0
Total System Price Over five years	=	\$770,838
TPC-D Power Throughput Metric (\$/QphD@100GB)	=	\$793

Measurement Intervals:

Measurement Interval in Throughput Test (Ts)	=	10183.5 sec
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Duration of Stream Execution:

Stream ID	Seed	Start Date	Start Time	End Date	End Time	Total Time
Stream 00	1236756928	5/16/98	19:18:28	5/16/98	21:35:57	2:17:29
UF1		5/16/98	19:00:39	5/16/98	19:18:28	0:17:49
UF2		5/16/98	21:35:57	5/16/98	21:50:23	0:14:26

TPC-D Timing Intervals (in seconds):

Q1	Q2a	Q3	Q4	Q5	Q6	Q7	Q8b	Q9
3174.57	106.19	434.98	382.70	847.33	84.49	510.55	168.81	1278.40

Q10	Q11	Q12b	Q13	Q14c	Q15b	Q16	Q17	UF1	UF2
476.68	87.32	155.40	5.28	63.11	181.13	276.09	15.26	1068.8	865.58