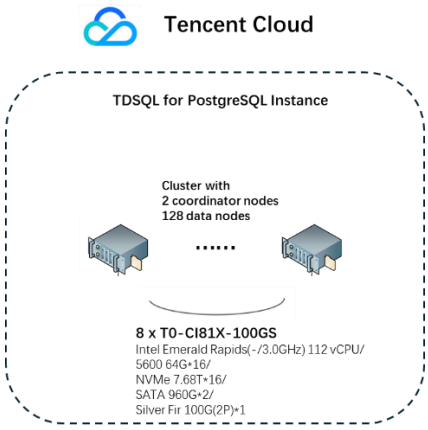
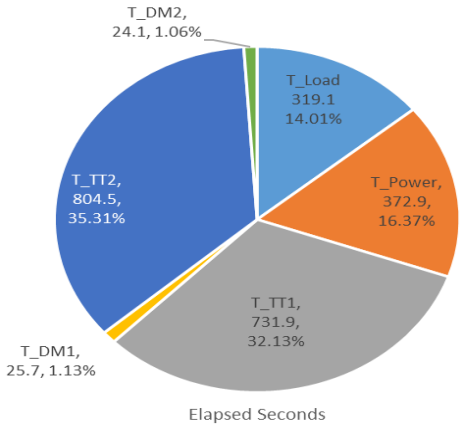
Tencent Cloud	**Tencent Cloud TDSQL for PostgreSQL**		**TPC-DS: 3.2.0** **TPC-Pricing: 2.9.0** **Report Date: 2024-10-08**	
Total System Cost	TPC-DS Throughput	Price / Performance	System Availability Date	
¥2,723,728 CNY	**72,603,042** QphDS@10000GB	**¥37.52** CNY/kQphDS@10000GB	**12/12/2024**	
Dataset Size[1]	Database Manager	Operation System	Other Software	Cluster
10,000 GB	TDSQL for PostgreSQL 5.21.18	TencentOS Server 3.2	N/A	Yes



Benchmarked Configuration



Load includes backup = No	RAID = RAID-10 for all database objects (table data, logs, EADs, metadata)

System Configuration:	**TDSQL for PostgreSQL Cluster**
Servers:	8 x T0-CI81X-100GS
Total Processors/Cores/Threads:	896 vCPU
Total Memory:	8,192 GB
Total Storage[2]:	929,832.46 GB
Storage Ratio[3]:	92.99
Server Configuration:	**Per node**
Processors:	Intel Emerald Rapids(-/3.0GHz)
Memory:	1,024 GB
Network:	Silver Fir Intelligent NIC Speed 100 Gbps
Storage Device:	16 x 7.68 TB NVMe SSD Local Disk (data disk) 2 x 960 GB SATA Local Disk (system disk)

1. Dataset Size includes only raw data (i.e., no temp, index, redundant storage space, etc.).
2. Total Storage = 929,832.46 GB (2x 960 GB and 16x 7.68TB per node should be converted to base-2)
3. Storage Ratio = Total Storage / SF = 92.99

Tencent Cloud	Tencent Cloud TDSQL for PostgreSQL				TPC-DS: 3.2.0 TPC-Pricing: 2.9.0 Report Date: 2024-10-08	
Description	**Part Number**	**Src**	**Unit Price**	**Qty(CNY)**	**Ext. Price (CNY)**	**3-Year Maint. (CNY)**
TDSQL for PostgreSQL Cluster		1	included	8	**2,685,363.95**	included
- T0-CI81X-100GS			included	8		
- System Local Disk (2 x 960GB)			included	8		
- NVMe Local Disk (16 x 7.68TB)			included	8		
- TencentOS Server 3.2			included	8		
- TDSQL for PostgreSQL 5.21.18			included	8		
- Silver Fir Intelligent NIC			included	8		
	Licensed Software Services Sub-Total				**2,685,363.95**	**0.00**
Other Components						
MacBook Pro 16 inch Apple M1 Pro (includes spares)		2	12,788.00	3	38,364.00	
	Other Components Sub-Total				**38,364.00**	**0.00**

1 = Tencent Cloud, 2 = jd.com.cn	**3-Year Cost of Ownership:**	**2,723,728**
All Licensed Services prices are per month and based on 3-year pre-paid subscriptions.	**QphDS@10000GB:**	**72,603,042**
Audited by Doug Johnson, InfoSizing	**¥ /kQphDS@10000GB:**	**37.52**

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 at pricing@tpc.org. Thank you.

Metric Details

Name	Value	Description / Unit
SF	10,000	Scale Factor 10TB
S	8	Total Throughput Streams
Sq	4	Streams / Throughput Test
Q	396	Queries / Throughput Test
T_LD	0.0036	hours@10000
T_PT	0.4144	hours@10000
T_TT	0.4268	hours@10000
T_DM	0.0139	hours@10000

Secondary Metrics

Name	Value	Unit
T_Load	319.1	seconds@10000
T_Power	372.9	seconds@10000
T_TT1	731.9	seconds@10000
T_TT2	804.5	seconds@10000
T_DM1	25.7	seconds@10000
T_DM2	24.1	seconds@10000

Test Timeline

Test	Start	End	Seconds	hh:mm:ss
Load	2024-09-11 03:39:56.381	2024-09-11 03:45:15.449	319.068	0:05:19
Audit/Admin	2024-09-11 03:45:15.457	2024-09-11 03:58:37.289	801.832	0:13:22
Power	2024-09-11 03:58:37.313	2024-09-11 04:04:50.150	372.837	0:06:13
TT-1	2024-09-11 04:04:50.203	2024-09-11 04:17:02.061	731.858	0:12:12
DM-1	2024-09-11 04:17:02.101	2024-09-11 04:17:27.781	25.680	0:00:26
TT-2	2024-09-11 04:17:27.832	2024-09-11 04:30:52.264	804.432	0:13:24
DM-2	2024-09-11 04:30:52.303	2024-09-11 04:31:16.345	24.042	0:00:24

Stream	Start Time	End Time	Seconds	hh:mm:ss
Power - 0	2024-09-11 03:58:37.313	2024-09-11 04:04:50.150	372.837	0:06:13
TT-1 - 1	2024-09-11 04:04:50.203	2024-09-11 04:16:54.686	724.483	0:12:04
TT-1 - 2	2024-09-11 04:04:50.203	2024-09-11 04:16:23.443	693.240	0:11:33
TT-1 - 3	2024-09-11 04:04:50.203	2024-09-11 04:16:54.026	723.823	0:12:04
TT-1 - 4	2024-09-11 04:04:50.204	2024-09-11 04:17:02.061	731.857	0:12:12
DM-1 - 1	2024-09-11 04:17:02.101	2024-09-11 04:17:15.577	13.476	0:00:13
DM-1 - 2	2024-09-11 04:17:15.599	2024-09-11 04:17:27.781	12.182	0:00:12
TT-2 - 5	2024-09-11 04:17:27.832	2024-09-11 04:30:37.395	789.563	0:13:10
TT-2 - 6	2024-09-11 04:17:27.833	2024-09-11 04:30:52.264	804.431	0:13:24
TT-2 - 7	2024-09-11 04:17:27.833	2024-09-11 04:30:42.498	794.665	0:13:15
TT-2 - 8	2024-09-11 04:17:27.833	2024-09-11 04:30:48.568	800.735	0:13:21
DM-2 - 3	2024-09-11 04:30:52.303	2024-09-11 04:31:03.989	11.686	0:00:12
DM-2 - 4	2024-09-11 04:31:04.010	2024-09-11 04:31:16.345	12.335	0:00:12

Timing Intervals for Queries (in Seconds)

Query	Power	Throughput Test 1									Throughput Test 2								
ID	Stream 0	Stream 1	Stream 2	Stream 3	Stream 4	*Min*	*25th*	*Median*	*75th*	*Max*	Stream 5	Stream 6	Stream 7	Stream 8	*Min*	*25th*	*Median*	*75th*	*Max*
1	0.9	1.5	2.3	1.9	4.8	1.50	1.80	2.10	2.93	4.80	1.1	1.7	1.2	1.3	1.10	1.18	1.25	1.40	1.70
2	3.5	1.2	6.4	0.5	10.1	0.50	1.03	3.80	7.33	10.10	9.0	0.5	8.1	11.3	0.50	6.20	8.55	9.58	11.30
3	1.2	4.6	2.6	3.6	2.5	2.50	2.58	3.10	3.85	4.60	3.1	8.6	4.3	6.4	3.10	4.00	5.35	6.95	8.60
4	27.9	44.7	49.2	39.4	49.8	39.40	43.38	46.95	49.35	49.80	42.4	52.6	48.5	62.4	42.40	46.98	50.55	55.05	62.40
5	4.1	5.5	5.2	7.0	5.6	5.20	5.43	5.55	5.95	7.00	5.7	10.5	7.2	8.4	5.70	6.83	7.80	8.93	10.50
6	0.6	11.5	0.6	1.1	7.0	0.60	0.98	4.05	8.13	11.50	2.6	3.5	1.1	1.5	1.10	1.40	2.05	2.83	3.50
7	1.5	3.8	5.7	2.6	8.7	2.60	3.50	4.75	6.45	8.70	6.2	3.4	2.5	4.8	2.50	3.18	4.10	5.15	6.20
8	1.1	10.2	5.2	3.2	1.7	1.70	2.83	4.20	6.45	10.20	1.7	2.1	17.7	1.7	1.70	1.70	1.90	6.00	17.70
9	3.5	6.9	7.7	6.1	0.6	0.60	4.73	6.50	7.10	7.70	1.9	8.0	7.9	8.8	1.90	6.40	7.95	8.20	8.80
10	1.9	3.0	4.0	3.4	3.2	3.00	3.15	3.30	3.55	4.00	3.4	2.8	3.1	3.7	2.80	3.03	3.25	3.48	3.70
11	13.1	24.1	23.3	21.2	24.4	21.20	22.78	23.70	24.18	24.40	18.5	30.9	33.7	27.6	18.50	25.33	29.25	31.60	33.70
12	1.3	1.4	0.9	2.9	1.5	0.90	1.28	1.45	1.85	2.90	1.7	1.0	0.6	0.8	0.60	0.75	0.90	1.18	1.70
13	2.2	4.6	3.7	4.6	4.5	3.70	4.30	4.55	4.60	4.60	7.8	4.8	6.3	5.0	4.80	4.95	5.65	6.68	7.80
14	12.4	27.4	23.6	23.4	55.1	23.40	23.55	25.50	34.33	55.10	20.8	30.0	20.6	23.0	20.60	20.75	21.90	24.75	30.00
15	1.2	2.8	1.6	7.2	5.3	1.60	2.50	4.05	5.78	7.20	4.2	2.3	1.5	3.4	1.50	2.10	2.85	3.60	4.20
16	2.3	6.9	3.1	11.5	5.8	3.10	5.13	6.35	8.05	11.50	3.9	2.4	5.6	10.2	2.40	3.53	4.75	6.75	10.20
17	1.4	1.8	5.8	3.2	5.5	1.80	2.85	4.35	5.58	5.80	2.1	1.6	4.6	3.3	1.60	1.98	2.70	3.63	4.60
18	3.5	9.5	6.0	5.5	10.4	5.50	5.88	7.75	9.73	10.40	15.1	6.1	7.5	6.6	6.10	6.48	7.05	9.40	15.10
19	0.8	1.9	1.8	1.9	3.5	1.80	1.88	1.90	2.30	3.50	1.8	1.9	5.2	1.2	1.20	1.65	1.85	2.73	5.20
20	1.3	1.7	1.5	0.9	1.8	0.90	1.35	1.60	1.73	1.80	1.0	0.9	0.8	0.7	0.70	0.78	0.85	0.93	1.00
21	0.7	0.9	0.6	1.6	4.9	0.60	0.83	1.25	2.43	4.90	1.8	0.9	0.6	0.4	0.40	0.55	0.75	1.13	1.80
22	0.9	0.7	1.0	1.7	1.9	0.70	0.93	1.35	1.75	1.90	1.2	1.0	1.0	1.6	1.00	1.00	1.10	1.30	1.60
23	29.8	10.3	13.5	45.6	12.2	10.30	11.73	12.85	21.53	45.60	65.8	47.9	46.3	66.0	46.30	47.50	56.85	65.85	66.00
24	6.0	12.8	11.5	11.4	13.9	11.40	11.48	12.15	13.08	13.90	12.9	14.1	11.7	16.8	11.70	12.60	13.50	14.78	16.80
25	1.5	2.1	2.1	5.2	2.8	2.10	2.10	2.45	3.40	5.20	2.2	1.9	1.1	2.8	1.10	1.70	2.05	2.35	2.80
26	1.1	2.2	2.7	4.1	1.8	1.80	2.10	2.45	3.05	4.10	2.2	1.7	3.0	4.1	1.70	2.08	2.60	3.28	4.10
27	5.8	8.7	8.7	9.9	9.6	8.70	8.70	9.15	9.68	9.90	9.6	7.7	8.2	6.1	6.10	7.30	7.95	8.55	9.60
28	4.1	10.7	9.6	9.6	9.0	9.00	9.45	9.60	9.88	10.70	11.9	10.4	10.0	11.2	10.00	10.30	10.80	11.38	11.90
29	1.8	4.9	2.9	2.6	3.8	2.60	2.83	3.35	4.08	4.90	3.1	3.3	5.7	4.2	3.10	3.25	3.75	4.58	5.70
30	2.8	6.8	6.6	4.3	4.5	4.30	4.45	5.55	6.65	6.80	7.2	10.6	4.4	5.2	4.40	5.00	6.20	8.05	10.60
31	4.7	6.0	6.2	10.2	10.2	6.00	6.15	8.20	10.20	10.20	6.6	9.6	10.2	5.0	5.00	6.20	8.10	9.75	10.20
32	0.4	0.6	1.1	0.7	0.6	0.60	0.60	0.65	0.80	1.10	0.9	0.8	2.5	0.7	0.70	0.78	0.85	1.30	2.50
33	1.9	8.4	3.6	3.8	6.4	3.60	3.75	5.10	6.90	8.40	2.4	15.4	11.9	1.7	1.70	2.23	7.15	12.78	15.40
34	1.9	5.0	5.3	4.1	4.1	4.10	4.10	4.55	5.08	5.30	4.2	5.8	4.4	7.6	4.20	4.35	5.10	6.25	7.60
35	3.1	8.0	5.6	5.5	5.8	5.50	5.58	5.70	6.35	8.00	5.3	5.7	6.0	7.7	5.30	5.60	5.85	6.43	7.70
36	2.0	2.4	2.9	2.5	4.8	2.40	2.48	2.70	3.38	4.80	4.4	3.5	3.3	5.6	3.30	3.45	3.95	4.70	5.60
37	1.2	1.9	2.0	3.3	2.9	1.90	1.98	2.45	3.00	3.30	4.5	2.2	2.6	3.6	2.20	2.50	3.10	3.83	4.50
38	11.5	28.0	28.3	25.3	24.2	24.20	25.03	26.65	28.08	28.30	27.3	29.8	29.3	23.3	23.30	26.30	28.30	29.43	29.80
39	0.5	0.7	1.8	1.2	0.6	0.60	0.68	0.95	1.35	1.80	1.0	0.8	2.2	1.1	0.80	0.95	1.05	1.38	2.20
40	1.1	1.2	3.4	1.3	1.4	1.20	1.28	1.35	1.90	3.40	1.3	1.2	4.5	1.4	1.20	1.28	1.35	2.18	4.50
41	0.4	0.8	0.3	1.1	0.5	0.30	0.45	0.65	0.88	1.10	0.4	1.3	2.8	0.7	0.40	0.63	1.00	1.68	2.80
42	0.7	0.6	1.1	1.7	0.9	0.60	0.83	1.00	1.25	1.70	2.2	1.5	0.9	2.9	0.90	1.35	1.85	2.38	2.90
43	2.2	6.7	5.3	3.9	3.6	3.60	3.83	4.60	5.65	6.70	6.0	3.2	3.6	3.6	3.20	3.50	3.60	4.20	6.00
44	4.8	15.7	11.9	10.5	6.8	6.80	9.58	11.20	12.85	15.70	12.7	14.7	9.3	15.2	9.30	11.85	13.70	14.83	15.20
45	1.3	3.8	14.2	5.7	1.5	1.50	3.23	4.75	7.83	14.20	1.8	1.6	2.7	2.0	1.60	1.75	1.90	2.18	2.70
46	3.3	6.9	5.7	9.0	10.4	5.70	6.60	7.95	9.35	10.40	8.5	9.3	8.5	4.6	4.60	7.53	8.50	8.70	9.30
47	5.5	0.5	0.4	11.7	6.9	0.40	0.48	3.70	8.10	11.70	0.4	10.3	11.4	0.3	0.30	0.38	5.35	10.58	11.40
48	2.0	6.0	5.4	3.8	5.1	3.80	4.78	5.25	5.55	6.00	4.8	5.8	4.5	4.7	4.50	4.65	4.75	5.05	5.80
49	1.7	2.0	3.1	2.7	3.7	2.00	2.53	2.90	3.25	3.70	7.5	8.7	5.4	2.3	2.30	4.63	6.45	7.80	8.70
50	3.6	8.1	6.5	6.3	5.8	5.80	6.18	6.40	6.90	8.10	11.5	8.6	7.1	7.8	7.10	7.63	8.20	9.33	11.50
51	2.2	3.2	3.5	3.4	4.2	3.20	3.35	3.45	3.68	4.20	8.9	2.7	3.3	5.8	2.70	3.15	4.55	6.58	8.90
52	0.7	1.6	0.5	1.2	1.0	0.50	0.88	1.10	1.30	1.60	1.6	0.9	1.3	1.1	0.90	1.05	1.20	1.38	1.60
53	0.9	1.5	1.1	2.6	1.0	1.00	1.08	1.30	1.78	2.60	1.6	1.9	1.5	1.5	1.50	1.50	1.55	1.68	1.90
54	1.9	6.2	4.8	2.9	6.2	2.90	4.33	5.50	6.20	6.20	7.9	5.2	2.7	5.4	2.70	4.58	5.30	6.03	7.90
55	0.7	0.8	1.8	2.5	2.0	0.80	1.55	1.90	2.13	2.50	0.7	1.3	0.9	4.1	0.70	0.85	1.10	2.00	4.10
56	5.3	11.7	9.1	2.5	8.5	2.50	7.00	8.80	9.75	11.70	7.6	45.0	8.6	10.5	7.60	8.35	9.55	19.13	45.00
57	3.6	0.3	0.5	12.1	5.2	0.30	0.45	2.85	6.93	12.10	5.5	2.3	5.2	5.8	2.30	4.48	5.35	5.58	5.80
58	1.5	1.9	2.2	2.2	3.3	1.90	2.13	2.20	2.48	3.30	3.3	2.5	4.8	8.2	2.50	3.10	4.05	5.65	8.20
59	3.1	8.5	7.7	9.3	8.0	7.70	7.93	8.25	8.70	9.30	8.0	6.1	5.1	6.9	5.10	5.85	6.50	7.18	8.00
60	2.1	3.3	6.3	4.4	7.3	3.30	4.13	5.35	6.55	7.30	3.3	2.6	3.4	3.4	2.60	3.13	3.35	3.40	3.40
61	1.8	17.8	7.7	6.1	5.9	5.90	6.05	6.90	10.23	17.80	3.1	13.9	22.0	10.1	3.10	8.35	12.00	15.93	22.00
62	2.1	2.9	5.4	5.0	3.5	2.90	3.35	4.25	5.10	5.40	3.9	2.9	2.4	5.0	2.40	2.78	3.40	4.18	5.00
63	1.0	11.3	1.5	2.1	1.1	1.10	1.40	1.80	4.40	11.30	2.7	1.5	1.5	1.2	1.20	1.43	1.50	1.80	2.70
64	12.9	16.6	14.1	15.4	16.4	14.10	15.08	15.90	16.45	16.60	11.3	15.1	12.3	16.0	11.30	12.05	13.70	15.33	16.00
65	4.1	7.4	6.5	7.4	7.9	6.50	7.18	7.40	7.53	7.90	5.8	8.1	8.4	6.6	5.80	6.40	7.35	8.18	8.40
66	7.6	7.2	4.1	10.1	5.5	4.10	5.15	6.35	7.93	10.10	4.8	11.9	9.0	9.1	4.80	7.95	9.05	9.80	11.90
67	6.2	13.5	12.5	9.8	6.8	6.80	9.05	11.15	12.75	13.50	17.9	11.1	9.6	9.3	9.30	9.53	10.35	12.80	17.90
68	3.2	7.6	5.9	8.1	6.2	5.90	6.13	6.90	7.73	8.10	6.7	7.9	8.6	6.4	6.40	6.63	7.30	8.08	8.60
69	1.7	4.9	4.0	4.9	5.4	4.00	4.68	4.90	5.03	5.40	4.0	3.8	2.2	2.2	2.20	2.20	3.00	3.85	4.00
70	4.1	9.2	11.6	7.1	9.9	7.10	8.68	9.55	10.33	11.60	10.3	10.8	10.6	13.1	10.30	10.53	10.70	11.38	13.10
71	1.0	2.4	6.3	7.1	1.5	1.50	2.18	4.35	6.50	7.10	2.8	4.6	2.5	2.4	2.40	2.48	2.65	3.25	4.60
72	2.2	5.1	6.5	4.4	5.5	4.40	4.93	5.30	5.75	6.50	14.5	7.4	6.0	8.3	6.00	7.05	7.85	9.85	14.50
73	1.8	4.0	7.6	3.5	2.7	2.70	3.30	3.75	4.90	7.60	5.6	4.5	6.4	3.8	3.80	4.33	5.05	5.80	6.40
74	16.4	30.4	27.0	30.0	40.7	27.00	29.25	30.20	32.98	40.70	37.5	24.4	38.1	47.9	24.40	34.23	37.80	40.55	47.90
75	9.3	29.5	23.3	20.5	19.3	19.30	20.20	21.90	24.85	29.50	24.1	16.7	26.7	16.5	16.50	16.65	20.40	24.75	26.70
76	3.7	8.4	9.1	8.9	7.2	7.20	8.10	8.65	8.95	9.10	8.8	9.2	16.1	10.7	8.80	9.10	9.95	12.05	16.10
77	4.5	7.5	7.4	8.0	11.2	7.40	7.48	7.75	8.80	11.20	9.8	7.2	9.1	12.9	7.20	8.63	9.45	10.58	12.90
78	23.8	31.9	31.7	38.7	35.7	31.70	31.85	33.80	36.45	38.70	33.5	30.7	37.4	33.0	30.70	32.43	33.25	34.48	37.40
79	3.3	10.8	6.1	15.1	10.3	6.10	9.25	10.55	11.88	15.10	14.3	22.3	6.6	14.8	6.60	12.38	14.55	16.68	22.30
80	3.7	6.7	4.8	5.7	5.2	4.80	5.10	5.45	5.95	6.70	4.0	8.3	4.8	4.6	4.00	4.45	4.70	5.68	8.30
81	3.6	7.3	1.7	2.4	4.4	1.70	2.23	3.40	5.13	7.30	9.3	4.6	1.7	4.8	1.70	3.88	4.70	5.93	9.30
82	2.3	4.5	2.9	3.0	5.0	2.90	2.98	3.75	4.63	5.00	2.6	4.0	6.0	2.8	2.60	2.75	3.40	4.50	6.00
83	1.6	2.7	3.3	3.0	2.2	2.20	2.58	2.85	3.08	3.30	4.0	4.7	4.9	4.5	4.00	4.38	4.60	4.75	4.90
84	1.5	2.7	2.4	9.7	2.0	2.00	2.30	2.55	4.45	9.70	5.1	2.2	2.3	4.6	2.20	2.28	3.45	4.73	5.10
85	1.5	2.7	5.6	1.9	2.0	1.90	1.98	2.35	3.43	5.60	3.3	8.9	6.4	3.1	3.10	3.25	4.85	7.03	8.90
86	1.2	3.4	1.5	2.9	1.3	1.30	1.45	2.20	3.03	3.40	2.4	3.5	1.4	1.4	1.40	1.40	1.90	2.68	3.50
87	12.0	28.2	36.2	24.6	21.1	21.10	23.73	26.40	30.20	36.20	24.0	22.1	23.7	24.0	22.10	23.30	23.85	24.00	24.00
88	2.4	6.4	3.9	7.1	4.4	3.90	4.28	5.40	6.58	7.10	6.1	5.4	3.9	4.2	3.90	4.13	4.80	5.58	6.10
89	1.9	2.1	2.6	2.1	2.5	2.10	2.10	2.30	2.53	2.60	6.9	2.4	3.2	1.9	1.90	2.28	2.80	4.13	6.90
90	1.1	2.9	4.9	3.0	2.7	2.70	2.85	2.95	3.48	4.90	3.2	2.4	3.0	3.2	2.40	2.85	3.10	3.20	3.20
91	1.7	3.3	12.8	2.2	2.0	2.00	2.15	2.75	5.68	12.80	6.6	4.5	16.9	3.8	3.80	4.33	5.55	9.18	16.90
92	0.3	0.6	0.6	0.5	1.9	0.50	0.58	0.60	0.93	1.90	0.6	0.4	0.7	0.4	0.40	0.40	0.50	0.63	0.70
93	2.8	7.0	6.0	11.1	7.5	6.00	6.75	7.25	8.40	11.10	10.2	5.5	6.7	7.5	5.50	6.40	7.10	8.18	10.20
94	1.8	4.6	2.9	7.8	4.5	2.90	4.10	4.55	5.40	7.80	23.8	5.9	4.9	5.4	4.90	5.28	5.65	10.38	23.80
95	2.4	5.8	7.4	3.6	9.5	3.60	5.25	6.60	7.93	9.50	6.3	4.9	5.8	9.1	4.90	5.58	6.05	7.00	9.10
96	1.4	2.0	3.2	7.4	2.9	2.00	2.68	3.05	4.25	7.40	3.5	4.1	2.7	4.7	2.70	3.30	3.80	4.25	4.70
97	3.4	5.8	10.5	8.0	5.3	5.30	5.68	6.90	8.63	10.50	8.2	6.6	5.5	12.2	5.50	6.33	7.40	9.20	12.20
98	1.0	1.3	1.3	0.8	11.1	0.80	1.18	1.30	3.75	11.10	1.1	0.7	1.5	1.0	0.70	0.93	1.05	1.20	1.50
99	3.0	12.6	13.1	4.2	5.9	4.20	5.48	9.25	12.73	13.10	6.5	7.3	7.3	6.6	6.50	6.58	6.95	7.30	7.30

Timing Intervals for Refresh Functions (in Seconds)

Function	DM-1		DM-2						
ID	Run 1	Run 2	Run 3	Run 4	*Min*	*25th*	*Median*	*75th*	*Max*
DF_CS	3.0	3.0	3.1	3.2	3.00	3.00	3.05	3.13	3.20
DF_I	0.4	0.5	0.4	0.4	0.40	0.40	0.40	0.43	0.50
DF_SS	8.3	7.3	7.2	7.9	7.20	7.28	7.60	8.00	8.30
DF_WS	2.9	2.5	2.6	2.7	2.50	2.58	2.65	2.75	2.90
LF_CR	3.8	3.6	3.0	2.9	2.90	2.98	3.30	3.65	3.80
LF_CS	5.3	5.0	4.5	4.5	4.50	4.50	4.75	5.08	5.30
LF_I	0.7	0.7	1.0	0.9	0.70	0.70	0.80	0.93	1.00
LF_SR	5.1	2.8	1.9	4.4	1.90	2.58	3.60	4.58	5.10
LF_SS	5.1	5.0	4.4	4.4	4.40	4.40	4.70	5.03	5.10
LF_WR	3.1	2.9	2.3	2.3	2.30	2.30	2.60	2.95	3.10
LF_WS	4.9	4.5	4.0	4.1	4.00	4.08	4.30	4.60	4.90