

WORKLOAD REPOSITORY REPORT (RAC)

Database Summary

Database		Snapshot Ids		Number of Instances		Number of Hosts		Report Total (minutes)			
Id	Name	RAC	Block Size	Begin	End	In Report	Total	In Report	Total	DB time	Elapsed time
796901606	RACDB	YES	8192	75	76	2	2	2	2	101.94	5.03

Database Instances Included In Report

- Listed in order of instance number, #

#	Instance	Host	Startup	Begin Snap Time	End Snap Time	Release	Elapsed Time(min)	DB time(min)	Up Time(hrs)	Avg Active Sessions	Platform
1	racdb1	racnode1	09-Oct-13 02:56	09-Oct-13 04:40	09-Oct-13 04:45	11.2.0.3.0		5.02	58.12	1.83	11.58 Linux x86 64-bit
2	racdb2	racnode2	09-Oct-13 02:56	09-Oct-13 04:40	09-Oct-13 04:45	11.2.0.3.0		5.02	43.82	1.82	8.73 Linux x86 64-bit

Report Summary

Cache Sizes

- All values are in Megabytes
- Listed in order of instance number, #
- End values displayed only if different from Begin values

#	Memory Target		Sga Target		DB Cache		Shared Pool		Large Pool		Java Pool		Streams Pool		PGA Target		Log Buffer
	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	
1	1,216		720		288		384		16		16		496				8.09
2	1,216		736		384		304		16		16		480				8.09
Avg	1,216		728		336		344		16		16		488				8.09
Min	1,216		720		288		304		16		16		480				8.09
Max	1,216		736		384		384		16		16		496				8.09

Main Report

- [Report Summary](#)
- [OS Statistics](#)
- [Time Model Statistics](#)
- [Wait Events Statistics](#)
- [Global Activity Load Profile](#)
- [Global Cache and Enqueue Statistics Summary](#)
- [Global CR Served Stats](#)
- [Global CURRENT Served Stats](#)
- [Global Cache Transfer Stats](#)
- [Interconnect Stats](#)
- [SQL Statistics](#)
- [Global Activity Statistics](#)
- [I/O Statistics](#)
- [Library Cache Statistics](#)
- [Memory Statistics](#)
- [Supplemental Information](#)

[Back to Top](#)

OS Statistics By Instance

- Listed in order of instance number, #
- End values are displayed only if different from begin values

#	Num CPUs	CPU Cores	CPU Sckts	Load Begin	Load End	% Busy	% Usr	% Sys	% WIO	% Idle	Busy Time (s)	Idle Time (s)	Total Time (s)	Memory (M)	End CPUs	End Cores	End Sckts	End Memory (M)
1	2	2	1	4.74	5.60	42.34	11.98	29.95	43.06	57.66	291.17	396.50	687.67	3,015.56				
2	2	2	1	10.74	10.21	42.06	15.35	26.21	52.28	57.94	284.01	391.31	675.32	3,015.56				
Sum											575.18	787.81	1,362.99					

[Back to Top](#)

Time Model Statistics

- [Time Model](#)
- [Time Model - % of DB time](#)

[Back to Top](#)

Time Model

#	DB time (s)	DB CPU (s)	SQL Exec Ela (s)	Parse Ela (s)	Hard Parse Ela (s)	PL/SQL Ela (s)	Java Ela (s)	bg time (s)	bg CPU (s)
1	3,487.05	114.98	1,892.30	45.95	1.06	156.38	0.00	665.49	26.82
2	2,629.09	77.69	1,415.00	37.46	0.78	123.83	0.00	673.18	25.40
Sum	6,116.14	192.67	3,307.30	83.41	1.84	280.21	0.00	1,338.68	52.22
Avg	3,058.07	96.33	1,653.65	41.70	0.92	140.11	0.00	669.34	26.11
Std	606.67	26.36	337.50	6.00	0.20	23.02	0.00	5.44	1.00

[Back to Time Model Statistics](#)

[Back to Top](#)

Time Model - % of DB time

- % Total [DB time/bg time] - instance [DB time/bg time] as a percentage of the cluster-wide total [DB time/bg time]

#	% Total DB time	DB CPU %DB time	SQL Exec Ela %DB time	Parse Ela %DB time	Hard Parse %DB time	PL/SQL Ela %DB time	Java Ela %DB time	% Total bg time	bg CPU %bg time
1	57.01	3.30	54.27	1.32	0.03	0.00	0.00	49.71	4.03
2	42.99	2.96	53.82	1.42	0.03	0.00	0.00	50.29	3.77
Avg	50.00	3.13	54.04	1.37	0.03	0.00	0.00	50.00	3.90

[Back to Time Model Statistics](#)
[Back to Top](#)

Wait Events Statistics

- [Foreground Wait Classes - % of Total DB time](#)
- [Foreground Wait Classes](#)
- [Foreground Wait Classes - % of DB time](#)
- [Top Timed Events](#)
- [Top Timed Foreground Events](#)
- [Top Timed Background Events](#)

[Back to Top](#)

Foreground Wait Classes - % of Total DB time

- Cluster-wide totals of wait class foreground wait times as a percentage of the cluster-wide DB time

User I/O	Sys I/O	Other	Applic	Commit	Network	Concurcy	Config	Cluster	DB CPU
6.64	0.22	1.84	0.00	50.16	3.44	0.33	0.01	33.84	3.15

[Back to Wait Events Statistics](#)
[Back to Top](#)

Foreground Wait Classes

#	User I/O(s)	Sys I/O(s)	Other(s)	Applic(s)	Commit (s)	Network (s)	Concurcy (s)	Config (s)	Cluster (s)	DB CPU (s)	DB time
1	224.45	13.31	68.27	0.00	1,765.30	127.71	17.21	0.20	1,208.59	114.98	3,487.05
2	181.72	0.00	44.43	0.14	1,302.72	82.81	3.23	0.32	861.02	77.69	2,629.09
Sum	406.17	13.31	112.71	0.14	3,068.02	210.52	20.44	0.51	2,069.61	192.67	6,116.14
Avg	203.08	6.65	56.35	0.07	1,534.01	105.26	10.22	0.26	1,034.80	96.33	3,058.07
Std	30.21	9.41	16.86	0.09	327.10	31.75	9.88	0.09	245.77	26.36	606.67

[Back to Wait Events Statistics](#)
[Back to Top](#)

Foreground Wait Classes - % of DB time

- % of Total DB time - instance DB time as a percentage of the cluster-wide total DB time

#	User I/O	Sys I/O	Other	Applic	Commit	Network	Concurcy	Config	Cluster	DB CPU	% Total DB time
1	6.44	0.38	1.96	0.00	50.62	3.66	0.49	0.01	34.66	3.30	57.01
2	6.91	0.00	1.69	0.01	49.55	3.15	0.12	0.01	32.75	2.96	42.99
Avg	6.67	0.19	1.82	0.00	50.09	3.41	0.31	0.01	33.70	3.13	

[Back to Wait Events Statistics](#)
[Back to Top](#)

Top Timed Events

- Instance "" - cluster wide summary
- "" Waits, %Timeouts, Wait Time Total(s) : Cluster-wide total for the wait event
- "" Wait Time Avg (ms) : Cluster-wide average computed as (Wait Time Total / Event Waits) in ms
- "" Summary Avg Wait Time (ms) : Per-instance Wait Time Avg (ms) used to compute the following statistics
- "" [Avg/Min/Max/Std Dev] : average/minimum/maximum/standard deviation of per-instance Wait Time Avg(ms)
- "" Cnt : count of instances with wait times for the event

#	Class	Event	Event		Wait Time			Summary Avg Wait Time (ms)				
			Waits	%Timeouts	Total(s)	Avg(ms)	%DB time	Avg	Min	Max	Std Dev	Cnt
*	Commit	log file sync	6,524	0.00	3,069.84	470.55	50.19	472.85	459.83	485.86	18.40	2
	Cluster	gc buffer busy acquire	2,807	0.00	982.77	350.11	16.07	346.23	321.29	371.17	35.27	2
	Cluster	gc buffer busy release	1,211	0.00	661.57	546.30	10.82	542.42	522.41	562.43	28.30	2
	System I/O	log file parallel write	2,429	0.00	412.81	169.95	6.75	171.10	158.69	183.50	17.54	2
	User I/O	db file sequential read	2,133	0.00	380.90	178.58	6.23	183.28	161.31	205.26	31.08	2
	System I/O	control file sequential read	2,191	0.00	378.12	172.58	6.18	173.60	163.94	183.27	13.67	2
		DB CPU			192.67		3.15					2
	Cluster	gc current block busy	612	0.00	192.08	313.86	3.14	313.92	312.33	315.52	2.26	2
	Other	gcs log flush sync	18,945	66.55	183.85	9.70	3.01	9.69	9.49	9.88	0.28	2
	System I/O	db file parallel write	810	0.00	152.00	187.66	2.49	187.83	177.79	197.88	14.21	2
1	Commit	log file sync	3,839	0.00	1,765.30	459.83	50.62					
	Cluster	gc buffer busy acquire	1,622	0.00	602.04	371.17	17.26					
	Cluster	gc buffer busy release	723	0.00	406.64	562.43	11.66					
	System I/O	log file parallel write	1,327	0.00	210.59	158.69	6.04					
	User I/O	db file sequential read	1,295	0.00	208.89	161.31	5.99					
	System I/O	control file sequential read	1,212	0.00	198.70	163.94	5.70					
		DB CPU			114.98		3.30					
	Other	gcs log flush sync	10,371	67.08	102.48	9.88	2.94					
	Cluster	gc current block busy	294	0.00	92.76	315.52	2.66					
	System I/O	db file parallel write	412	0.00	73.25	177.79	2.10					
2	Commit	log file sync	2,685	0.00	1,304.54	485.86	49.62					
	Cluster	gc buffer busy acquire	1,185	0.00	380.73	321.29	14.48					
	Cluster	gc buffer busy release	488	0.00	254.93	522.41	9.70					
	System I/O	log file parallel write	1,102	0.00	202.22	183.50	7.69					
	System I/O	control file sequential read	979	0.00	179.42	183.27	6.82					
	User I/O	db file sequential read	838	0.00	172.01	205.26	6.54					
	Cluster	gc current block busy	318	0.00	99.32	312.33	3.78					
	Other	gcs log flush sync	8,574	65.91	81.37	9.49	3.09					
	System I/O	db file parallel write	398	0.00	78.76	197.88	3.00					
		DB CPU			77.69		2.96					

[Back to Wait Events Statistics](#)
[Back to Top](#)

Top Timed Foreground Events

- Foreground Activity is captured in release 11g and above
- For prior releases, Foreground Activity is computed as difference between Total Activity and Background Activity
- Instance "" - cluster wide summary
- "" Waits, %Timeouts, Wait Time Total(s) : Cluster-wide total for the wait event
- "" Wait Time Avg (ms) : Cluster-wide average computed as (Wait Time Total / Event Waits) in ms
- "" Summary Avg Wait Time (ms) : Per-instance Wait Time Avg (ms) used to compute the following statistics
- "" [Avg/Min/Max/Std Dev] : average/minimum/maximum/standard deviation of per-instance Wait Time Avg(ms)
- "" Cnt : count of instances with wait times for the event

#	Class	Event	Wait			Event			Wait Time			Summary Avg Wait Time (ms)				
			Waits	%Timeouts	Total(s)	Avg(ms)	%DB time	Avg	Min	Max	Std Dev	Cnt				
*	Commit	log file sync	6,522	0.00	3,068.02	470.41	50.16	472.69	459.83	485.54	18.18	2				
	Cluster	gc buffer busy acquire	2,805	0.00	982.68	350.33	16.07	346.46	321.76	371.17	34.94	2				
	Cluster	gc buffer busy release	1,202	0.00	661.13	550.02	10.81	546.86	531.30	562.43	22.01	2				
	User I/O	db file sequential read	2,090	0.00	375.90	179.85	6.15	185.69	161.31	210.06	34.47	2				
		DB CPU			192.67		3.15					2				
	Cluster	gc current block busy	587	0.00	188.73	321.52	3.09	321.53	315.52	327.54	8.50	2				
	Cluster	gc current block 2-way	6,874	0.00	96.75	14.08	1.58	14.08	13.99	14.17	0.12	2				
	Concurrency	library cache: mutex X	3,004	0.00	84.42	28.10	1.38	28.17	27.89	28.45	0.39	2				
	Concurrency	buffer busy waits	2,272	0.00	75.14	33.07	1.23	32.55	30.27	34.83	3.22	2				
	Cluster	gc cr block busy	146	0.00	55.30	378.80	0.90	354.79	294.34	415.23	85.48	2				
	1	Commit	log file sync	3,839	0.00	1,765.30	459.83	50.62								
		Cluster	gc buffer busy acquire	1,622	0.00	602.04	371.17	17.26								
		Cluster	gc buffer busy release	723	0.00	406.64	562.43	11.66								
		User I/O	db file sequential read	1,295	0.00	208.89	161.31	5.99								
		DB CPU			114.98		3.30									
Cluster		gc current block busy	294	0.00	92.76	315.52	2.66									
Concurrency		library cache: mutex X	1,864	0.00	51.99	27.89	1.49									
Cluster		gc current block 2-way	3,661	0.00	51.23	13.99	1.47									
Concurrency		buffer busy waits	1,395	0.00	48.59	34.83	1.39									
Other		latch free	820	0.00	30.35	37.01	0.87									
2	Commit	log file sync	2,683	0.00	1,302.72	485.54	49.55									
	Cluster	gc buffer busy acquire	1,183	0.00	380.64	321.76	14.48									
	Cluster	gc buffer busy release	479	0.00	254.49	531.30	9.68									
	User I/O	db file sequential read	795	0.00	167.00	210.06	6.35									
	Cluster	gc current block busy	293	0.00	95.97	327.54	3.65									
		DB CPU			77.69		2.96									
	Cluster	gc current block 2-way	3,213	0.00	45.52	14.17	1.73									
	Cluster	gc cr block busy	102	0.00	42.35	415.23	1.61									
	Concurrency	library cache: mutex X	1,140	0.00	32.43	28.45	1.23									
	Concurrency	buffer busy waits	877	0.00	26.55	30.27	1.01									

[Back to Wait Events Statistics](#)

[Back to Top](#)

Top Timed Background Events

- % of bg time: % of background elapsed time
- Instance "" - cluster wide summary
- "" Waits, %Timeouts, Wait Time Total(s) : Cluster-wide total for the wait event
- "" Wait Time Avg (ms) : Cluster-wide average computed as (Wait Time Total / Event Waits) in ms
- "" Summary Avg Wait Time (ms) : Per-instance Wait Time Avg (ms) used to compute the following statistics
- "" [Avg/Min/Max/Std Dev] : average/minimum/maximum/standard deviation of per-instance Wait Time Avg(ms)
- "" Cnt : count of instances with wait times for the event

#	Class	Event	Wait			Event			Wait Time			Summary Avg Wait Time (ms)				
			Waits	%Timeouts	Total(s)	Avg(ms)	%DB time	Avg	Min	Max	Std Dev	Cnt				
*	System I/O	log file parallel write	2,428	0.00	412.79	170.01	30.84	171.17	158.69	183.65	17.65	2				
	System I/O	control file sequential read	2,051	0.00	364.81	177.87	27.25	178.10	172.94	183.27	7.30	2				
	Other	gcs log flush sync	18,945	66.55	183.85	9.70	13.73	9.69	9.49	9.88	0.28	2				
	System I/O	db file parallel write	814	0.00	152.47	187.30	11.39	187.45	177.73	197.17	13.75	2				
	System I/O	control file parallel write	221	0.00	86.01	389.19	6.43	389.50	375.65	403.36	19.59	2				
		background cpu time			52.22		3.90					2				
	Other	latch free	380	0.00	14.50	38.15	1.08	37.33	32.89	41.78	6.29	2				
	Other	Streams AQ: qmn coordinator waiting for slave to start	4	50.00	12.31	3076.75	0.92	3076.75	3003.85	3149.66	103.10	2				
	Other	latch: call allocation	394	0.00	11.12	28.22	0.83	28.37	25.15	31.58	4.55	2				
	Concurrency	os thread startup	21	0.00	10.95	521.58	0.82	570.16	230.16	910.15	480.83	2				
	1	System I/O	log file parallel write	1,327	0.00	210.59	158.69	31.64								
		System I/O	control file sequential read	1,072	0.00	185.39	172.94	27.86								
		Other	gcs log flush sync	10,371	67.08	102.48	9.88	15.40								
		System I/O	db file parallel write	413	0.00	73.40	177.73	11.03								
System I/O		control file parallel write	108	0.00	43.56	403.36	6.55									
		background cpu time			26.82		4.03									
Other		latch free	225	0.00	9.40	41.78	1.41									
Other		Streams AQ: qmn coordinator waiting for slave to start	2	50.00	6.30	3149.66	0.95									
Other		latch: call allocation	206	0.00	5.18	25.15	0.78									
Other		enq: CF - contention	8	87.50	3.57	445.81	0.54									
2	System I/O	log file parallel write	1,101	0.00	202.20	183.65	30.04									
	System I/O	control file sequential read	979	0.00	179.42	183.27	26.65									
	Other	gcs log flush sync	8,574	65.91	81.37	9.49	12.09									
	System I/O	db file parallel write	401	0.00	79.06	197.17	11.74									
	System I/O	control file parallel write	113	0.00	42.45	375.65	6.31									
		background cpu time			25.40		3.77									
	Concurrency	os thread startup	9	0.00	8.19	910.15	1.22									
	Other	Streams AQ: qmn coordinator waiting for slave to start	2	50.00	6.01	3003.85	0.89									
	Other	latch: call allocation	188	0.00	5.94	31.58	0.88									
	User I/O	db file sequential read	44	0.00	5.23	118.87	0.78									

[Back to Wait Events Statistics](#)

[Back to Top](#)

Global Activity Load Profile

- [System Statistics](#)
- [System Statistics - Per Second](#)
- [System Statistics - Per Transaction](#)
- [SysStat and Global Messaging - RAC](#)
- [SysStat and Global Messaging \(per Sec\)- RAC](#)
- [SysStat and Global Messaging \(per Tx\)- RAC](#)

[Back to Top](#)

System Statistics

#	Logical Reads	Physical Reads	Physical Writes	Redo Size (k)	Block Changes	User Calls	Execs	Parses	Logons	Txns
1	197,382	1,382	973	8,816	52,192	12,779	30,367	25,823	1,434	2,235
2	121,404	926	967	7,236	36,441	8,852	20,212	17,588	975	1,505
Sum	318,786	2,308	1,940	16,052	88,633	21,631	50,579	43,411	2,409	3,740
Avg	159,393	1,154	970	8,026	44,317	10,816	25,290	21,706	1,205	1,870
Std	53,725	322	4	1,117	11,138	2,777	7,181	5,823	325	516

[Back to Global Activity Load Profile](#)

[Back to Top](#)

System Statistics - Per Second

#	Logical Reads/s	Physical Reads/s	Physical Writes/s	Redo Size (k)/s	Block Changes/s	User Calls/s	Execs/s	Parses/s	Logons/s	Txns/s
1	655.62	4.59	3.23	29.28	173.36	42.45	100.87	85.77	4.76	7.42
2	403.25	3.08	3.21	24.04	121.04	29.40	67.14	58.42	3.24	5.00
Sum	1,058.87	7.67	6.44	53.32	294.40	71.85	168.00	144.19	8.00	12.42
Avg	529.44	3.83	3.22	26.66	147.20	35.92	84.00	72.10	4.00	6.21
Std	178.45	1.07	0.01	3.71	36.99	9.22	23.85	19.34	1.08	1.71

[Back to Global Activity Load Profile](#)

[Back to Top](#)

System Statistics - Per Transaction

#	Logical Reads/tx	Physical Reads/tx	Physical Writes/tx	Redo Size (k)/tx	Block Changes/tx	User Calls/tx	Execs/tx	Parses/tx	Logons/tx
1	88.31	0.62	0.44	3.94	23.35	5.72	13.59	11.55	0.64
2	80.67	0.62	0.64	4.81	24.21	5.88	13.43	11.69	0.65
Avg	84.49	0.62	0.54	4.38	23.78	5.80	13.51	11.62	0.64

[Back to Global Activity Load Profile](#)

[Back to Top](#)

SysStat and Global Messaging - RAC

#	Blocks Received		Blocks Served		CPU (seconds)		Messages					GC Blks		GC CR	
	GC Current	GC CR	GC Current	GC CR	GC	IPC	GCS Received	GES Received	GCS Sent	GES Sent	Sent Direct	Sent Indir	Lost	Failure	
1	4,421	1,438	4,115	1,575	0	0	12,491	563	14,114	488	8,183	4,519	0	0	
2	4,093	1,573	4,424	1,428	0	0	14,173	504	12,514	584	7,533	3,528	1	0	
Sum	8,514	3,011	8,539	3,003	0	0	26,664	1,067	26,628	1,072	15,716	8,047	1	0	
Avg	4,257	1,506	4,270	1,502	0	0	13,332	534	13,314	536	7,858	4,024	1	0	
Std	232	95	218	104	0	0	1,189	42	1,131	68	460	701	1	0	

[Back to Global Activity Load Profile](#)

[Back to Top](#)

SysStat and Global Messaging (per Sec)- RAC

#	Blocks Received Per Second		Blocks Served per Second		CPU seconds per Second		Messages Per Second					GC Blks		GC CR	
	GC Current	GC CR	GC Current	GC CR	GC	IPC	GCS Received	GES Received	GCS Sent	GES Sent	Sent Direct	Sent Indir	Lost/s	Fail/s	
1	14.68	4.78	13.67	5.23	0.00	0.00	41.49	1.87	46.88	1.62	27.18	15.01	0	0	
2	13.60	5.22	14.69	4.74	0.00	0.00	47.08	1.67	41.57	1.94	25.02	11.72	0	0	
Sum	28.28	10.00	28.36	9.97	0.00	0.00	88.57	3.54	88.45	3.56	52.20	26.73	0	0	
Avg	14.14	5.00	14.18	4.99	0.00	0.00	44.28	1.77	44.22	1.78	26.10	13.36	0	0	
Std	0.77	0.32	0.73	0.35	0.00	0.00	3.95	0.14	3.76	0.23	1.53	2.33	0	0	

[Back to Global Activity Load Profile](#)

[Back to Top](#)

SysStat and Global Messaging (per Tx)- RAC

#	Blocks Received per Tx		Blocks Served		CPU (seconds) per Tx		Messages per Transaction					GC Blks		GC CR	
	GC Current	GC CR	GC Current	GC CR	GC	IPC	GCS Received	GES Received	GCS Sent	GES Sent	Sent Direct	Sent Indir	Lost/Tx	Fail/Tx	
1	1.98	0.64	1.84	0.70	0.00	0.00	5.59	0.25	6.31	0.22	3.66	2.02	0.00	0.00	
2	2.72	1.05	2.94	0.95	0.00	0.00	9.42	0.33	8.31	0.39	5.01	2.34	0.00	0.00	
Avg	2.35	0.84	2.39	0.83	0.00	0.00	7.50	0.29	7.31	0.30	4.33	2.18	0.00	0.00	

[Back to Global Activity Load Profile](#)

[Back to Top](#)

Global Cache and Enqueue Statistics Summary

- [Global Cache Efficiency Percentages](#)
- [Global Cache and Enqueue Workload Characteristics](#)
- [Global Cache and Enqueue Messaging Statistics](#)

[Back to Top](#)

Global Cache Efficiency Percentages

Buffer Access			
#	Local %	Remote %	Disk %
1	96.33	2.97	0.70
2	94.57	4.67	0.76

[Back to Global Cache and Enqueue Statistics Summary](#)
[Back to Top](#)

Global Cache and Enqueue Workload Characteristics

#	GE Get Time (ms)	Receive Time (ms)	CR Blocks					Log Flush CR Srvd %	Receive Time (ms)	Pin Time (ms)	CU Blocks		
			Build Time (ms)	Send Time (ms)	Flush Time (ms)	Log Flush CR Srvd %	Receive Time (ms)				Pin Time (ms)	Flush Time (ms)	Log Flush CU Srvd %
1		1.49	22.67	0.00	0.00	396.69	7.68	32.89	1.17	0.00	288.30	7.44	
2		1.61	43.25	0.00	0.00	307.33	3.15	35.64	0.94	0.00	297.85	6.10	

[Back to Global Cache and Enqueue Statistics Summary](#)
[Back to Top](#)

Global Cache and Enqueue Messaging Statistics

#	Queue Time (ms)			Process Time			% Messages Sent		
	Sent	on ksxp	Received	GCS msgs	GES msgs	Direct	Indirect	Flow Ctrl	
1	0.25	31.17	0.12	0.17	0.14	63.97	35.33	0.70	
2	0.67	32.10	0.14	0.19	0.10	67.65	31.68	0.66	

[Back to Global Cache and Enqueue Statistics Summary](#)
[Back to Top](#)

CR Blocks Served Statistics

#	Block Requests					Results					Fairness			FreeGC		Flushes			Light		Total
	CR	CU	Data	Undo	TX	Current	Private	Zero	Dsk Rd	Fail	Down	Conv	Clears	Elms	Total	Queued	QFull	MaxTm	Works	Errors	
1	1,302	281	1,302	0	26	1,578	0	5	0	0	0	974	74	0	121	0	0	0	2	0	
2	1,189	239	1,189	0	36	1,427	0	1	0	0	0	872	38	0	45	0	0	0	70	0	
Sum	2,491	520	2,491	0	62	3,005	0	6	0	0	0	1,846	112	0	166	0	0	0	72	0	
Avg	1,246	260	1,246	0	31	1,503	0	3	0	0	0	923	56	0	83	0	0	0	36	0	
Std	80	30	80	0	7	107	0	3	0	0	0	72	25	0	54	0	0	0	48	0	

[Back to Top](#)

Current Blocks Served Statistics

#	Pins	% <1ms	% <10ms	% <100ms	% <1s	% <10s	Flushes	% <1ms	% <10ms	% <100ms	% <1s	% <10s	Writes	% <1ms	% <10ms	% <100ms	% <1s	% <10s	
1	126	7.94	24.60	59.52	7.94	0.00	306	0.33	2.29	39.87	52.29	5.23	318	0.00	0.00	0.00	31.76	64.47	3.77
2	120	11.67	26.67	51.67	10.00	0.00	270	0.00	2.96	29.63	61.48	5.93	297	0.00	0.00	0.00	22.90	72.39	4.71
Sum	246						576						615						
Avg	123						288						308						
Std	4						25						15						

[Back to Top](#)

Global Cache Transfer Stats

- Global Cache Transfer Stats
- Global Cache Transfer (Immediate)

[Back to Top](#)

Global Cache Transfer Stats

- Immediate (Immed) - Block Transfer NOT impacted by Remote Processing Delays
- Busy (Busy) - Block Transfer impacted by Remote Contention
- Congested (Cngst) - Block Transfer impacted by Remote System Load
- All - average time of All blocks (Immed, Busy, Cngst) in ms
- Ordered by instance_number, CR + Current Blocks Received desc

Instance#	Block	CR Blocks					Current Blocks				CR Avg Time (ms)				Current Avg Time (ms)				
		Dest	Src	Class	Received	%Immed	%Busy	%Cngst	Received	%Immed	%Busy	%Cngst	All	Immed	Busy	Cngst	All	Immed	Busy
1	2	data block		1,189	95.96	1.26	2.78	4,276	90.72	6.83	2.46	19	14.77	389.95	10.33	35	13.88	317.72	18.05
	2	others		201	86.07	13.43	0.50	148	95.95	1.35	2.70	51	18.46	257.84	1.77	12	12.20	17.49	18.80
	2	undo header		46	89.13	8.70	2.17	1	100.00	0.00	0.00	51	5.68	526.27	1.13	5	5.27		
2	1	data block		1,304	90.80	5.98	3.22	3,947	89.82	7.68	2.51	37	13.93	398.87	22.91	37	13.04	325.78	17.08
	1	others		243	80.25	16.87	2.88	143	90.91	5.59	3.50	88	15.95	440.33	33.28	19	17.68	44.48	9.78
	1	undo header		25	80.00	16.00	4.00	3	33.33	66.67	0.00	38	8.63	195.23	3.09	109	3.20	161.41	

[Back to Global Cache Transfer Stats](#)
[Back to Top](#)

Global Cache Transfer (Immediate)

- Ordered by instance_number, CR + Current Blocks Received desc

Instance#	Block	Lost Blocks		Immediate CR Blocks			Immediate Current Blocks			Immed CR Avg Time (ms)			Immed Current Avg Time (ms)			
		Dest	Src	Count	Time(ms)	Received	%2-hop	%3-hop	Received	%2-hop	%3-hop	Total	2-hop	3-hop	Total	2-hop
1	2	data block		0		1,141	100.00	0.00	3,879	100.00	0.00	14.77	14.77		13.88	13.88

2	others	0	173	100.00	0.00	142	100.00	0.00	18.46	18.46	12.20	12.20	
2	undo header	0	41	100.00	0.00	1	100.00	0.00	5.68	5.68	5.27	5.27	
2	undo block	0	0			0							
2	1 data block	1	0.07	1,184	100.00	0.00	3,545	100.00	0.00	13.93	13.93	13.04	13.04
1	others	0	195	100.00	0.00	130	100.00	0.00	15.95	15.95	17.68	17.68	
1	undo header	0	20	100.00	0.00	1	100.00	0.00	8.63	8.63	3.20	3.20	
1	undo block	0	0			0							

[Back to Global Cache Transfer Stats](#)
[Back to Top](#)

Interconnect Stats

- Cluster Interconnect
- Ping Statistics
- Interconnect Client Statistics
- Interconnect Client Statistics (per Second)
- Interconnect Device Statistics
- Interconnect Device Statistics (per Second)
- Dynamic Remastering Statistics - per Remaster Ops

[Back to Top](#)

Cluster Interconnect

#	NAME	Begin			End (if different from Begin)		
		IP Address	Pub	Source	IP Address	Pub	Source
1	eth1:1	169.254.58.47	N				
2	eth1:1	169.254.229.155	N				

[Back to Interconnect Stats](#)
[Back to Top](#)

Ping Statistics

- Latency of the roundtrip of a message from Src Instance to the Target instances

Instance#	Src	Target	500 bytes				8 Kbytes			
			Ping Count	Ping Time(s)	Avg Time(ms)	Std Dev	Ping Count	Ping Time(s)	Avg Time(ms)	Std Dev
1	1	1	24	0.01	0.36	0.25	24	0.01	0.33	0.22
	2	2	24	0.23	9.45	12.70	24	0.23	9.61	12.61
2	1	2	24	0.11	4.70	4.56	24	0.16	6.85	11.46
	2	1	24	0.01	0.39	0.45	24	0.01	0.37	0.45

[Back to Interconnect Stats](#)
[Back to Top](#)

Interconnect Client Statistics

#	Sent (MB)						Received (MB)					
	Total	Cache	IPQ	DLM	PNG	Misc	Total	Cache	IPQ	DLM	PNG	Misc
1	28.34	22.63	0.06	4.00	0.40	1.25	31.12	23.71	0.08	3.60	0.40	3.33
2	30.91	23.66	0.08	3.59	0.40	3.18	28.20	22.52	0.06	3.99	0.40	1.23
Sum	59.24	46.29	0.14	7.59	0.81	4.42	59.32	46.23	0.14	7.59	0.81	4.56
Avg	29.62	23.14	0.07	3.80	0.40	2.21	29.66	23.11	0.07	3.80	0.40	2.28
Std	1.82	0.72	0.02	0.29	0.00	1.37	2.06	0.84	0.02	0.28	0.00	1.49

[Back to Interconnect Stats](#)
[Back to Top](#)

Interconnect Client Statistics (per Second)

#	Sent (MB/s)						Received (MB/s)					
	Total	Cache	IPQ	DLM	PNG	Misc	Total	Cache	IPQ	DLM	PNG	Misc
1	0.09	0.08	0.00	0.01	0.00	0.00	0.10	0.08	0.00	0.01	0.00	0.01
2	0.10	0.08	0.00	0.01	0.00	0.01	0.09	0.07	0.00	0.01	0.00	0.00
Sum	0.20	0.15	0.00	0.03	0.00	0.01	0.20	0.15	0.00	0.03	0.00	0.02
Avg	0.10	0.08	0.00	0.01	0.00	0.01	0.10	0.08	0.00	0.01	0.00	0.01
Std	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00

[Back to Interconnect Stats](#)
[Back to Top](#)

Interconnect Device Statistics

- Data is retrieved from underlying Operating system and may overflow on some 32-bit OSs
- null means begin value > end value

#	NAME	Interface					Sent					Received				
		IP Address	IP Mask	MBytes	Packets	Errors	Packets Dropped	Buffer Ovrrun	Carrier Lost	MBytes	Packets	Errors	Packets Dropped	Buffer Ovrrun	Frame Errors	
1	eth0	192.168.1.151	255.255.255.0	13.42	61,240	0	0	0	0	12.17	56,058	0	12	0	0	
	eth0:1	192.168.1.189	255.255.255.0	0.00	0	0	0	0	0.00	0	0	0	0	0		
	eth0:2	192.168.1.187	255.255.255.0	0.00	0	0	0	0	0.00	0	0	0	0	0		
	eth0:3	192.168.1.251	255.255.255.0	0.00	0	0	0	0	0.00	0	0	0	0	0		
	eth1	192.168.2.151	255.255.255.0	88.43	122,615	0	0	0	95.75	135,416	0	12	0	0		
2	eth1:1	169.254.58.47	255.255.0.0	0.00	0	0	0	0	0.00	0	0	0	0	0		
	lo	127.0.0.1	255.0.0.0	60.09	7,298	0	0	0	60.09	7,298	0	0	0	0		
	eth0	192.168.1.152	255.255.255.0	12.90	55,844	0	0	0	12.60	61,462	0	12	0	0		
	eth0:1	192.168.1.188	255.255.255.0	0.00	0	0	0	0	0.00	0	0	0	0	0		
	eth0:2	192.168.1.252	255.255.255.0	0.00	0	0	0	0	0.00	0	0	0	0	0		
eth1	192.168.2.152	255.255.255.0	88.71	118,299	0	0	0	86.04	124,927	0	12	0	0			

Table with columns for metric, count, and various time/percentage values. Rows include categories like cleanouts and rollbacks, commit batch, db block gets, enqueue conversions, gc blocks, and physical read IO requests.

physical read total bytes	54,886,400	182,309.64	14,675.51	91,154.82	17,701.61	78,637.89	103,671.75
physical reads	2,308	7.67	0.62	3.83	1.07	3.08	4.59
physical reads cache	2,308	7.67	0.62	3.83	1.07	3.08	4.59
physical reads cache prefetch	113	0.38	0.03	0.19	0.03	0.17	0.21
physical write IO requests	942	3.13	0.25	1.56	0.01	1.56	1.57
physical write bytes	15,892,480	52,788.15	4,249.33	26,394.08	115.51	26,312.40	26,475.75
physical write total IO requests	6,619	21.99	1.77	10.99	1.15	10.18	11.81
physical write total bytes	59,108,352	196,333.17	15,804.37	98,166.59	9,420.93	91,504.98	104,828.19
physical write total multi block requests	55	0.18	0.01	0.09	0.01	0.09	0.10
physical writes	1,940	6.44	0.52	3.22	0.01	3.21	3.23
physical writes direct	27	0.09	0.01	0.04	0.00	0.04	0.05
physical writes from cache	1,913	6.35	0.51	3.18	0.01	3.17	3.19
physical writes non checkpoint	1,038	3.45	0.28	1.72	0.28	1.52	1.92
pinned buffers inspected	17	0.06	0.00	0.03	0.01	0.02	0.04
pinned cursors current	1	0.00	0.00	0.00	0.00	0.00	0.00
prefetch warmup blocks aged out before use	697	2.32	0.19	2.32		2.32	2.32
process last non-idle time	599	1.99	0.16	0.99	0.00	0.99	1.00
queries parallelized	6	0.02	0.00	0.01	0.00	0.01	0.01
recursive calls	356,565	1,184.36	95.34	592.18	160.35	478.80	705.56
recursive cpu usage	6,231	20.70	1.67	10.35	1.54	9.26	11.44
redo blocks checksummed by FG (exclusive)	9,181	30.50	2.45	15.25	1.08	14.48	16.01
redo blocks written	35,187	116.88	9.41	58.44	9.56	51.68	65.20
redo entries	47,266	157.00	12.64	78.50	18.49	65.42	91.58
redo ordering marks	726	2.41	0.19	1.21	0.03	1.18	1.23
redo size	16,437,392	54,598.13	4,395.02	27,299.06	3,798.53	24,613.10	29,985.03
redo size for direct writes	222,156	737.91	59.40	368.95	19.33	355.29	382.62
redo subcn max counts	511	1.70	0.14	0.85	0.09	0.79	0.91
redo synch long waits	522	1.73	0.14	0.87	0.52	0.50	1.23
redo synch time	307,150	1,020.22	82.13	510.11	108.12	433.66	586.57
redo synch time (usec)	3,071,742,303	10,203,041.80	821,321.47	5,101,520.90	1,081,659.83	4,336,671.90	5,866,369.90
redo synch writes	7,135	23.70	1.91	11.85	3.02	9.71	13.99
redo wastage	679,040	2,255.49	181.56	1,127.74	167.61	1,009.23	1,246.26
redo write broadcast ack count	75	0.25	0.02	0.12	0.07	0.07	0.18
redo write broadcast ack time	2,004,745	6,658.92	536.03	3,329.46	923.50	2,676.45	3,982.47
redo write time	41,574	138.09	11.12	69.05	1.89	67.71	70.38
redo writes	2,430	8.07	0.65	4.04	0.54	3.66	4.41
rollback changes - undo records applied	7	0.02	0.00	0.01	0.01	0.01	0.02
rollbacks only - consistent read gets	31	0.10	0.01	0.05	0.05	0.01	0.09
rows fetched via callback	19,843	65.91	5.31	32.96	10.00	25.89	40.03
session connect time	1,287	4.27	0.34	2.14	3.01	0.01	4.27
session cursor cache hits	12,706	42.20	3.40	21.10	7.62	15.71	26.49
session logical reads	318,786	1,058.87	85.24	529.44	178.45	403.25	655.62
shared hash latch upgrades - no wait	9,272	30.80	2.48	15.40	1.61	14.26	16.54
sorts (memory)	10,625	35.29	2.84	17.65	5.90	13.48	21.82
sorts (rows)	23,537	78.18	6.29	39.09	1.30	38.17	40.01
summed dirty queue length	161	0.53	0.04	0.27	0.19	0.14	0.40
switch current to new buffer	35	0.12	0.01	0.06	0.02	0.05	0.07
table fetch by rowid	130,736	434.25	34.96	217.13	119.73	132.46	301.79
table scan blocks gotten	8,903	29.57	2.38	14.79	4.71	11.46	18.12
table scan rows gotten	286,315	951.02	76.55	475.51	205.14	330.45	620.57
table scans (short tables)	5,114	16.99	1.37	8.49	2.21	6.93	10.06
temp space allocated (bytes)	1,048,576	3,482.94	280.37	3,482.94		3,482.94	3,482.94
total of enq hold time	32,170	106.86	8.60	53.43	26.42	34.74	72.11
total number of cf enq holders	19	0.06	0.01	0.03	0.00	0.03	0.03
total number of times SMON posted	11	0.04	0.00	0.02	0.01	0.01	0.03
transaction lock background gets	6	0.02	0.00	0.02	0.02	0.02	0.02
transaction lock foreground requests	6	0.02	0.00	0.02	0.02	0.02	0.02
transaction lock foreground wait time	191	0.63	0.05	0.63	0.03	0.63	0.63
transaction rollbacks	6	0.02	0.00	0.01	0.01	0.00	0.02
undo change vector size	4,961,800	16,481.02	1,326.68	8,240.51	670.21	7,766.60	8,714.42
user I/O wait time	41,302	137.19	11.04	68.59	8.59	62.52	74.67
user calls	21,631	71.85	5.78	35.92	9.22	29.40	42.45
user commits	3,740	12.42	1.00	6.21	1.71	5.00	7.42
workarea executions - optimal	1,072	3.56	0.29	1.78	0.13	1.69	1.87
write clones created in foreground	11	0.04	0.00	0.02	0.01	0.01	0.02

[Back to Global Activity Statistics](#)
[Back to Top](#)

Global Messaging Statistics (Global)

- per Second Average - average of per-instance per Second rates
- per Second Std Dev - standard deviation of per-instance per Second rates
- per Second Min - minimum of per-instance per Second rates
- per Second Max - maximum of per-instance per Second rates

Statistic	per Second						
	Total	per Second	per Trans	Average	Std Dev	Min	Max
acks for commit broadcast(actual)	1,553	5.16	0.42	2.58	0.44	2.27	2.89
acks for commit broadcast(logical)	1,960	6.51	0.52	3.26	0.54	2.87	3.64
broadcast msgs on commit(actual)	1,960	6.51	0.52	3.26	0.54	2.87	3.64
broadcast msgs on commit(logical)	2,427	8.06	0.65	4.03	0.53	3.66	4.40
broadcast msgs on commit(wasted)	546	1.81	0.15	0.91	0.28	0.71	1.10
gcs assume no cvt	4,279	14.21	1.14	7.11	0.27	6.91	7.30
gcs blocked converts	6,200	20.59	1.66	10.30	0.09	10.23	10.36
gcs blocked cr converts	2,991	9.93	0.80	4.97	0.79	4.41	5.53
gcs compatible bast	58	0.19	0.02	0.10	0.05	0.06	0.13
gcs compatible cr bast (global)	273	0.91	0.07	0.45	0.24	0.28	0.62
gcs compatible cr bast (local)	3,429	11.39	0.92	5.69	0.13	5.60	5.79
gcs dbwr flush pi msgs	530	1.76	0.14	0.88	0.03	0.86	0.90
gcs dbwr write request msgs	308	1.02	0.08	0.51	0.09	0.45	0.58
gcs immediate (compatible) converts	972	3.23	0.26	1.61	0.06	1.57	1.65
gcs immediate (null) converts	930	3.09	0.25	1.54	0.11	1.46	1.62

gcs immediate cr (compatible) converts	26	0.09	0.01	0.04	0.05	0.01	0.08
gcs immediate cr (null) converts	1,981	6.58	0.53	3.29	0.08	3.24	3.34
gcs indirect ast	2,237	7.43	0.60	3.72	0.88	3.09	4.34
gcs indirect bidless ast	13	0.04	0.00	0.04		0.04	0.04
gcs indirect fg ast	2,224	7.39	0.59	3.69	0.91	3.05	4.34
gcs lms write request msgs	124	0.41	0.03	0.21	0.00	0.20	0.21
gcs msgs process time(ms)	4,746	15.76	1.27	7.88	1.29	6.97	8.79
gcs msgs received	26,664	88.57	7.13	44.28	3.95	41.49	47.08
gcs new served by master	624	2.07	0.17	1.04	0.13	0.94	1.13
gcs pings refused	51	0.17	0.01	0.08	0.04	0.06	0.11
gcs queued converts	45	0.15	0.01	0.07	0.04	0.05	0.10
gcs side channel msgs actual	1,280	4.25	0.34	2.13	0.00	2.13	2.13
gcs side channel msgs logical	13,746	45.66	3.68	22.83	1.51	21.76	23.90
gcs undo cr	8	0.03	0.00	0.03		0.03	0.03
gcs write notification msgs	59	0.20	0.02	0.10	0.00	0.10	0.10
gcs writes refused	6	0.02	0.00	0.01	0.01	0.00	0.02
ges msgs process time(ms)	133	0.44	0.04	0.22	0.07	0.17	0.27
ges msgs received	1,067	3.54	0.29	1.77	0.14	1.67	1.87
global posts queue time	596	1.98	0.16	0.99	1.16	0.17	1.81
global posts queued	29	0.10	0.01	0.05	0.05	0.01	0.08
global posts requested	42	0.14	0.01	0.07	0.07	0.02	0.12
global posts sent	29	0.10	0.01	0.05	0.05	0.01	0.08
implicit batch messages received	943	3.13	0.25	1.57	0.46	1.24	1.89
implicit batch messages sent	937	3.11	0.25	1.56	0.45	1.24	1.87
messages flow controlled	163	0.54	0.04	0.27	0.04	0.25	0.30
messages queue sent actual	7,318	24.31	1.96	12.15	2.25	10.57	13.74
messages queue sent logical	2,092	6.95	0.56	3.47	1.10	2.69	4.25
messages received actual	24,896	82.69	6.66	41.35	3.43	38.92	43.77
messages received logical	27,731	92.11	7.41	46.06	3.81	43.36	48.75
messages sent directly	15,716	52.20	4.20	26.10	1.53	25.02	27.18
messages sent indirectly	8,047	26.73	2.15	13.36	2.33	11.72	15.01
messages sent not implicit batched	1	0.00	0.00	0.00		0.00	0.00
messages sent patched	5,177	17.20	1.38	8.60	0.17	8.48	8.72
msgs causing lmd to send msgs	423	1.41	0.11	0.70	0.15	0.60	0.81
msgs causing lms(s) to send msgs	1,981	6.58	0.53	3.29	0.02	3.28	3.30
msgs received queue time (ms)	3,728	12.38	1.00	6.19	1.16	5.37	7.01
msgs received queued	27,731	92.11	7.41	46.06	3.81	43.36	48.75
msgs sent queue time (ms)	3,838	12.75	1.03	6.37	3.18	4.13	8.62
msgs sent queue time on ksxp (ms)	787,103	2,614.43	210.46	1,307.21	74.60	1,254.47	1,359.96
msgs sent queued	8,823	29.31	2.36	14.65	2.63	12.79	16.51
msgs sent queued on ksxp	24,902	82.71	6.66	41.36	3.22	39.08	43.64
process batch messages received	3,389	11.26	0.91	5.63	0.04	5.60	5.65
process batch messages sent	3,719	12.35	0.99	6.18	0.01	6.17	6.18

[Back to Global Activity Statistics](#)
[Back to Top](#)

System Statistics (Absolute Values)

#	Sessions		Open Cursors		Session Cached Cursors	
	Begin	End	Begin	End	Begin	End
1	61	88	75	137	187,389	211,480
2	89	60	138	69	92,243	108,676
Sum	150	148	213	206	279,632	320,156
Avg	75	74	107	103	139,816	160,078
Std	20	20	45	48	67,278	72,693

[Back to Global Activity Statistics](#)
[Back to Top](#)

I/O Statistics

- [IOStat by Function \(per Second\)](#)
- [IOStat by File Type \(per Second\)](#)
- [Segment Statistics \(Global\)](#)

[Back to Top](#)

IOStat by Function (per Second)

- Total Reads includes all Functions: Buffer Cache, Direct Reads, ARCH, Data Pump, Others, RMAN, Recovery, Streams/AQ and XDB
- Total Writes includes all Functions: DBWR, Direct Writes, LGWR, ARCH, Data Pump, Others, RMAN, Recovery, Streams/AQ and XDB

#	Reads MB/sec			Writes MB/sec			Reads requests/sec			Writes requests/sec				
	Total	Buffer Cache	Direct Reads	Total	DBWR	Direct Writes	LGWR	Total	Buffer Cache	Direct Reads	Total	DBWR	Direct Writes	LGWR
1	0.10	0.03	0.00	0.10	0.03	0.00	0.06	8.64	4.55	0.00	12.10	1.85	0.00	9.53
2	0.07	0.02	0.00	0.09	0.03	0.00	0.05	6.25	3.04	0.00	10.20	1.67	0.00	7.80
Sum	0.17	0.06	0.00	0.20	0.06	0.00	0.11	14.89	7.59	0.00	22.30	3.52	0.00	17.33
Avg	0.08	0.03	0.00	0.10	0.03	0.00	0.05	7.44	3.80	0.00	11.15	1.76	0.00	8.67

[Back to I/O Statistics](#)
[Back to Top](#)

IOStat by File Type (per Second)

- Total Reads includes all Filetypes: Data File, Temp File, Archive Log, Backups, Control File, Data Pump Dump File, Flashback Log, Log File, Other, etc
- Total Writes includes all Filetypes: Data File, Temp File, Log File, Archive Log, Backup, Control File, Data Pump Dump File, Flashback Log, Log File, Other, etc

#	Reads MB/sec			Writes MB/sec				Reads requests/sec			Writes requests/sec			
	Total	Data File	Temp File	Total	Data File	Temp File	Log File	Total	Data File	Temp File	Total	Data File	Temp File	Log File
1	0.10	0.03	0.00	0.10	0.03	0.00	0.06	8.59	4.58	0.00	12.08	1.89	0.00	9.52
2	0.08	0.03	0.00	0.09	0.03	0.00	0.05	6.26	3.04	0.00	10.25	1.71	0.00	7.81

Sum	0.18	0.06	0.00	0.19	0.05	0.00	0.11	14.85	7.62	0.00	22.33	3.60	0.00	17.33
Avg	0.09	0.03	0.00	0.09	0.03	0.00	0.06	7.43	3.81	0.00	11.16	1.80	0.00	8.67

[Back to I/O Statistics](#)
[Back to Top](#)

Segment Statistics (Global)

- % Total shows % of statistic for each segment compared to the global cluster-wide total (logical reads, physical reads, gc [cr/cu] blocks [rcv/serv])
- % Capture shows % of statistic for each segment compared to the total captured by AWR for all segments during the snapshot interval
- Captured Segments account for 101.7% of Total Logical Reads: 318,786
- Captured Segments account for 100.2% of Total Physical Reads: 2,308
- Captured Segments account for 100.3% of Total Physical Read Requests: 2,307
- Captured Segments account for 100.3% of Total UnOptimized Read Requests: 2,307
- Captured Segments account for 0.0% of Total Optimized Read Requests: 1
- Captured Segments account for 0.0% of Total Direct Physical Reads: 1
- Captured Segments account for 60.1% of Total Physical Writes: 1,940
- Captured Segments account for 72.1% of Total Physical Write Requests: 942
- Captured Segments account for 100.0% of Total Direct Physical Writes: 27
- Captured Segments account for 0.0% of Total Table Scans: 1
- Captured Segments account for 91.2% of Total CR Blocks Received: 3,011
- Captured Segments account for 96.9% of Total Current Blocks Received: 8,514
- Captured Segments account for 91.4% of Total CR Blocks Served: 3,003
- Captured Segments account for 96.6% of Total Current Blocks Served: 8,539

Statistic	Owner	Tablespace Name	Object Name	Subobject Name	Obj. Type	Value	%Total	%Capture
buffer busy waits	SYS	SYSTEM	AUD\$		TABLE	5,259		99.62
	SOE	SOE	LOGON		TABLE	17		0.32
	SOE	SOE	CUSTOMERS_PK		INDEX	1		0.02
	SOE	SOE	CUSTOMERS		TABLE	1		0.02
	SOE	SOE	ORDER_ITEMS		TABLE	1		0.02
db block changes	SYS	SYSTEM	AUD\$		TABLE	38,160		40.04
	SOE	SOE	LOGON		TABLE	36,560		38.36
	SOE	SOE	ORD_ORDER_DATE_IX		INDEX	13,232		13.89
	SOE	SOE	CUST_EMAIL_IX		INDEX	5,248		5.51
	SOE	SOE	ORD_WAREHOUSE_IX		INDEX	2,096		2.20
gc buffer busy	SYS	SYSTEM	AUD\$		TABLE	5,208		99.43
	SOE	SOE	LOGON		TABLE	12		0.23
	SOE	SOE	CUSTOMERS_PK		INDEX	4		0.08
	SOE	SOE	CUST_ACCOUNT_MANAGER_IX		INDEX	4		0.08
	SOE	SOE	CUST_EMAIL_IX		INDEX	3		0.06
	SOE	SOE	ITEM_PRODUCT_IX		INDEX	3		0.06
	SOE	SOE	CUST_UPPER_NAME_IX		INDEX	2		0.04
	SYS	SYSAUX	SYSSERVICE_METRICS_TAB		TABLE	2		0.04
gc cr blocks received	SOE	SOE	INVENTORIES		TABLE	1,683	55.90	72.48
	SYS	SYSTEM	AUD\$		TABLE	336	11.16	14.47
	SOE	SOE	CUSTOMERS_PK		INDEX	177	5.88	7.62
	SOE	SOE	ORD_CUSTOMER_IX		INDEX	76	2.52	3.27
	SOE	SOE	ITEM_ORDER_IX		INDEX	50	1.66	2.15
gc cr blocks served	SOE	SOE	INVENTORIES		TABLE	1,683	56.04	72.48
	SYS	SYSTEM	AUD\$		TABLE	336	11.19	14.47
	SOE	SOE	CUSTOMERS_PK		INDEX	177	5.89	7.62
	SOE	SOE	ORD_CUSTOMER_IX		INDEX	76	2.53	3.27
	SOE	SOE	ITEM_ORDER_IX		INDEX	50	1.67	2.15
gc cu blocks received	SOE	SOE	INVENTORIES		TABLE	3,035	35.65	49.25
	SOE	SOE	ITEM_PRODUCT_IX		INDEX	978	11.49	15.87
	SOE	SOE	ORD_WAREHOUSE_IX		INDEX	810	9.51	13.15
	SYS	SYSTEM	AUD\$		TABLE	774	9.09	12.56
	SOE	SOE	CUSTOMERS		TABLE	565	6.64	9.17
	SOE	SOE	INVENTORIES		TABLE	3,035	35.54	49.25
gc cu blocks served	SOE	SOE	ITEM_PRODUCT_IX		INDEX	978	11.45	15.87
	SOE	SOE	ORD_WAREHOUSE_IX		INDEX	810	9.49	13.15
	SYS	SYSTEM	AUD\$		TABLE	774	9.06	12.56
	SOE	SOE	CUSTOMERS		TABLE	565	6.62	9.17
	SOE	SOE	INVENTORY_PK		INDEX	46,384	14.55	25.07
	SOE	SOE	INVENTORIES		TABLE	1,398	60.57	70.78
logical reads	SYS	SYSTEM	AUD\$		TABLE	44,208	13.87	23.90
	SYS	SYSTEM	I_SYSAUTH1		INDEX	39,024	12.24	21.09
	SYS	SYSTEM	PROPS\$		TABLE	37,936	11.90	20.51
	SOE	SOE	CUSTOMERS_PK		INDEX	17,456	5.48	9.44
physical reads	SOE	SOE	INVENTORIES		TABLE	1,398	60.57	70.78
	SOE	SOE	CUSTOMERS		TABLE	273	11.83	13.82
	SOE	SOE	ORDERS		TABLE	151	6.54	7.65
	SOE	SOE	ORDER_ITEMS		TABLE	85	3.68	4.30
	SOE	SOE	ORD_ORDER_DATE_IX		INDEX	68	2.95	3.44
	SOE	SOE	INVENTORIES		TABLE	1,398	60.60	70.78
physical read requests	SOE	SOE	CUSTOMERS		TABLE	273	11.83	13.82
	SOE	SOE	ORDERS		TABLE	151	6.55	7.65
	SOE	SOE	ORDER_ITEMS		TABLE	85	3.68	4.30
	SOE	SOE	ORD_ORDER_DATE_IX		INDEX	68	2.95	3.44
	SOE	SOE	ORDER_ITEMS_PK		INDEX	199		28.80
	SOE	SOE	ITEM_ORDER_IX		INDEX	142		20.55
physical writes	SOE	SOE	ORD_WAREHOUSE_IX		INDEX	135		19.54
	SOE	SOE	ITEM_PRODUCT_IX		INDEX	121		17.51
	SOE	SOE	INVENTORIES		TABLE	94		13.60
	SYS	SYSAUX	WRHS_ACTIVE_SESSION_HISTORY	WRHS_ACTIVE_796901606_0	TABLE PARTITION	27		100.00
physical write requests	SOE	SOE	ITEM_PRODUCT_IX		INDEX	109	11.57	29.14
	SOE	SOE	ORD_WAREHOUSE_IX		INDEX	90	9.55	24.06
	SOE	SOE	INVENTORIES		TABLE	85	9.02	22.73
	SOE	SOE	ORD_ORDER_DATE_IX		INDEX	52	5.52	13.90
	SOE	SOE	ORD_CUSTOMER_IX		INDEX	38	4.03	10.16
	SOE	SOE	CUST_EMAIL_IX		INDEX	2		33.33
row lock waits	SOE	SOE	ITEM_PRODUCT_IX		INDEX	2		33.33
	SOE	SOE	ORD_ORDER_DATE_IX		INDEX	2		33.33

[Back to I/O Statistics](#)
[Back to Top](#)

Library Cache Activity

- Summarized for all instances in the report
- "Pct Misses" should be very low

Namespace	Get Requests	Pct Miss	Pin Requests	Pct Miss	Reloads	Invali- dations	GES Lock Requests	GES Pin Requests	GES Pin Releases	GES Inval Requests	GES Invali- dations
ACCOUNT_STATUS	4,742	0.00	0	0	0	0	4,742	0	0	0	0
BODY	14,373	0.00	18,020	0.00	0	0	0	17,088	17,088	0	0
CLUSTER	8	0.00	8	0.00	0	0	8	8	8	0	0
DBLINK	4,742	0.00	0	0	0	0	4,742	0	0	0	0
EDITION	2,381	0.00	4,758	0.00	0	0	2,381	2,382	2,382	0	0
INDEX	54	0.00	54	0.00	0	0	54	54	54	0	0
QUEUE	197	0.00	315	0.00	0	0	104	315	315	0	0
RULESET	0	0.00	39	0.00	0	0	0	39	39	0	0
SCHEMA	2,377	0.00	0	0	0	0	2,377	0	0	0	0
SQL AREA	24,465	0.13	66,350	0.21	2	0	0	0	0	0	0
SQL AREA BUILD	47	68.09	0	0	0	0	0	0	0	0	0
SQL AREA STATS	46	95.65	46	95.65	0	0	0	0	0	0	0
SUBSCRIPTION	2	0.00	2	0.00	0	0	0	2	2	0	0
TABLE/PROCEDURE	13,704	0.00	39,047	0.00	1	0	382	37,519	37,519	0	0
TRANSFORMATION	30	0.00	30	0.00	0	0	30	30	30	0	0
TRIGGER	16	0.00	17	0.00	0	0	0	17	17	0	0

[Back to Top](#)

Memory Statistics

- [PGA Aggregate Target Statistics](#)
- [Process Memory Summary](#)

[Back to Top](#)

PGA Aggregate Target Statistics

- all stats are reported in MegaBytes

#	PGA Aggr Target		Auto PGA Target		PGA Mem Alloc		Auto Workareas		Manual Workarea		Global Mem Bound	
	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End
1	496.00	496.00	155.16	111.36	390.48	449.51	0.00	0.00	0.00	0.00	99.20	99.20
2	480.00	480.00	102.40	153.01	448.06	378.68	0.00	0.00	0.00	0.00	96.00	96.00

[Back to Memory Statistics](#)

[Back to Top](#)

Process Memory Summary

- Max Alloc is Maximum PGA allocation size at snapshot time
- Hist Alloc is the Historical Maximum Allocation for still-connected processes
- Num Procs or Allocs: For Begin/End snapshot lines, it is the number of processes For Category lines, it is the number of allocations
- Allocation sizes are displayed in MegaBytes
- ordered by instance, Allocated Total (End) desc

#	Category	Allocated		Used		Avg Alloc		Std Dev		Max Alloc		Hist Max		Num Procs		Num Allocs	
		Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End	Begin	End
1	Other	350.57	404.98			5.56	4.45	7.75	6.65	31.46	31.46	42.12	42.12	63	91	63	91
	Freeable	37.69	37.63	0.00	0.00	2.51	2.51	4.77	4.76	18.00	18.00			15	15	15	15
	PL/SQL	1.13	4.86	0.86	3.56	0.02	0.05	0.04	0.06	0.16	0.16	0.45	0.45	61	89	61	88
	SQL	1.11	2.07	0.72	1.22	0.04	0.04	0.12	0.09	0.63	0.66	5.92	6.25	27	55	20	47
2	Other	395.41	335.70			4.35	5.33	6.20	7.24	31.46	31.46	31.46	31.46	91	63	91	63
	Freeable	43.75	38.75	0.00	0.00	1.41	1.68	3.13	3.61	18.00	18.00			31	23	31	23
	PL/SQL	7.58	3.89	3.67	0.94	0.09	0.06	0.28	0.34	2.66	2.66	3.39	3.39	89	61	89	60
	SQL	1.35	0.35	0.62	0.15	0.02	0.01	0.02	0.01	0.13	0.04	6.27	4.68	58	28	51	20

[Back to Memory Statistics](#)

[Back to Top](#)

Supplemental Information

- [init.ora Parameters](#)
- [init.ora Multi-valued Parameters](#)
- [Complete List of SQL Text](#)

[Back to Top](#)

init.ora Parameters

- "*" indicates same value across all instances

Parameter Name	#	Begin value	End value (if different)
audit_file_dest	*	/u01/app/oracle/admin/racdb/adump	
audit_trail	*	DB	
cluster_database	*	TRUE	
compatible	*	11.2.0.0.0	
control_files	*	+RACDB_DATA/racdb/controlfile/current.269.799284843, +FAR/racdb/controlfile/current.262.799284847	
db_block_size	*	8192	
db_create_file_dest	*	+RACDB_DATA	
db_domain	*	idevelopment.info	
db_file_name_convert	*	RACDB, RACDB	
db_name	*	racdb	
db_recovery_file_dest	*	+FAR	
db_recovery_file_dest_size	*	30408704000	
diagnostic_dest	*	/u01/app/oracle	
dispatchers	*	(PROTOCOL=TCP) (SERVICE=racdbXDB)	

```

fal_server          * DGRACDB
instance_number    1 1
                   2 2
local_listener     1 (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=192.168.1.251)(PORT=1521))))
                   2 (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=192.168.1.252)(PORT=1521))))
log_archive_config * DG_CONFIG=(RACDB, DGRACDB)
log_archive_dest_1 * LOCATION=USE_DB_RECOVERY_FILE_DEST VALID_FOR=(ALL_LOGFILES, ALL_ROLES) DB_UNIQUE_NAME=RACDB
log_archive_dest_2 * SERVICE=DGRACDB ARCH_VALID_FOR=(ONLINE_LOGFILES, PRIMARY_ROLE) DB_UNIQUE_NAME=DGRACDB
log_archive_format * %t_%s_%r.arc
log_archive_max_processes * 8
log_file_name_convert * DGRACDB, RACDB
memory_target      * 1275068416
open_cursors       * 300
processes          * 150
remote_listener    * racnode-cluster-scan:1521
remote_login_passwordfile * EXCLUSIVE
service_names      1 oe.idevelopment.info, racdbsvc.idevelopment.info, racdbtaf.idevelopment.info
                   2 oe.idevelopment.info, racdbsvc.idevelopment.info, racdbtaf_preconnect.idevelopment.info
spfile             * +RACDB_DATA/racdb/spfileracdb.ora
standby_file_management * AUTO
thread             1 1
                   2 2
undo_tablespace    1 UNDOTBS1
                   2 UNDOTBS2
    
```

[Back to Supplemental Information](#)
[Back to Top](#)

init.ora Multi-valued Parameters

- This section only displays parameters that have more one value
- "*" indicates same value across all instances
- '(NULL)' indicates that the parameter value was not set
- A blank value in the End Snapshot indicates the value is the same as the Begin Snapshot

Parameter Name	#	Begin value	End value (if different)
control_files	*	+FAR/racdb/controlfile/current.262.799284847	+RACDB_DATA/racdb/controlfile/current.269.799284843
log_file_name_convert	*	DGRACDB	RACDB

[Back to Supplemental Information](#)
[Back to Top](#)

Complete List of SQL Text

SQL Id	SQL Text
0bzqhjh9mpaa	INSERT INTO CUSTOMERS(CUSTOMER_ID, CUST_FIRST_NAME, CUST_LAST_NAME, NLS_LANGUAGE, NLS_TERRITORY, CREDIT_LIMIT, CUST_EMAIL, ACCOUNT_MGR_ID) VALUES (:B9, :B4, :B3, :B8, :B7, FLOOR(DBMS_RANDOM.VALUE(:B6, :B5)), :B4 '.' :B3 '@' oracle.com', FLOOR(DBMS_RANDOM.VALUE(:B2, :B1)))
0k8522mdzq4k	select privilege# from sysauth\$ where (grantee#=1 or grantee#=1) and privilege#>0
0ruh367af7gbw	SELECT ORDER_ID, ORDER_MODE, CUSTOMER_ID, ORDER_STATUS, ORDER_TOTAL, SALES_REP_ID, PROMOTION_ID FROM ORDERS WHERE CUSTOMER_ID = :B2 AND ROWNUM < :B1
0w2zpu6u2zsp	BEGIN :1 := orderentry.neworder(2, :3, :4); END;
0ws7ah1d78qa	select SYS_CONTEXT('USERENV', 'SERVER_HOST'), SYS_CONTEXT('USERENV', 'DB_UNIQUE_NAME'), SYS_CONTEXT('USERENV', 'INSTANCE_NAME'), SYS_CONTEXT('USERENV', 'SERVICE_NAME'), INSTANCE_NUMBER, STARTUP_TIME, SYS_CONTEXT('USERENV', 'DB_DOMAIN') from v\$instance where INSTANCE_NAME=SYS_CONTEXT('USERENV', 'INSTANCE_NAME')
0y1prvxqc2a9	SELECT PRODUCTS.PRODUCT_ID, PRODUCT_NAME, PRODUCT_DESCRIPTION, CATEGORY_ID, WEIGHT_CLASS, WARRANTY_PERIOD, SUPPLIER_ID, PRODUCT_STATUS, LIST_PRICE, MIN_PRICE, CATALOG_URL, QUANTITY_ON_HAND FROM PRODUCTS, INVENTORIES WHERE PRODUCTS.PRODUCT_ID = :B2 AND INVENTORIES.PRODUCT_ID = PRODUCTS.PRODUCT_ID AND ROWNUM < :B1
0yas01u2p9ch4	INSERT INTO ORDER_ITEMS(ORDER_ID, LINE_ITEM_ID, PRODUCT_ID, UNIT_PRICE, QUANTITY) VALUES (:B4, :B3, :B2, :B1, 1)
147a57cxq3w5y	BEGIN :1 := orderentry.browseproducts(2, :3, :4); END;
1b3utat6thfy	UPDATE ORDER_ITEMS SET QUANTITY = QUANTITY + 1 WHERE ORDER_ITEMS.ORDER_ID = :B2 AND ORDER_ITEMS.LINE_ITEM_ID = :B1
1cd2kbrdzrhvq	insert into wrh\$_tempstabs (snap_id, dbid, instance_number, file#, creation_change#, phyrds, phywrts, singleblkdrds, readtim, writetim, singleblkrdtim, phyblkdr, phyblkwr, wait_count, time) select :snap_id, :dbid, :instance_number, tf.tfnm, to_number(tf.tfcrc_scn) creation_change#, ftio.kctfiopyr, ftio.kctfiopyw, ftio.kctfiostb, floor(ftio.kctfioprt / 10000), floor(ftio.kctfiopwt / 10000), ftio.kctfiostb / 10000, ftio.kctfiopbr, ftio.kctfiopbw, fw.count, fw.time from x\$kctfio ftio, x\$kccctf tf, x\$kcctfwait fw, x\$kcctfn fn, x\$kcctst ts where ts.tstsn = ft.tftsn and ft.kctfiostb = fn.ftfnm and ft.tfnm = fn.ftfnm and ft.tfdup <> 0 and fn.ftnyp = 7 and fn.ftnam is not null and bitand(tf.tfst, 32) <> 32 and fw.indx+1 = (fn.ftfnm + :db_files)
1v717nvrhgbn9	SELECT USER FROM SYS.DUAL
459f3z9u4fb3u	select value\$ from props\$ where name = 'GLOBAL_DB_NAME'
4tx09gq85z630	SELECT ORDER_ID, LINE_ITEM_ID, PRODUCT_ID, UNIT_PRICE, QUANTITY FROM ORDER_ITEMS WHERE ORDER_ID = :B2 AND ROWNUM < :B1
4vs91dov7u1p6	insert into sys.aud\$(sessionid, entryid, statement, ntimestamp#, userid, userhost, terminal, action#, returncode, obj\$creator, obj\$name, auth\$privileges, auth\$grantee, new\$owner, ses\$actions, ses\$tid, logoff\$pread, logoff\$write, logoff\$dead, comment\$text, spare1, spare2, privused, clientid, sessioncpu, proxy\$sid, user\$guid, instance#, process#, xid, scn, auditid, sqbind, sqtext, obj\$editlon, dbid) values(:1, :2, :3, SYS_EXTRACT_UTC(SYSTIMESTAMP), :4, :5, :6, :7, :8, :9, :10, :11, :12, :13, :14, :15, :16, :17, :18, :19, :20, :21, :22, :23, :24, :25, :26, :27, :28, :29, :30, :31, :32, :33, :34, :35, :36)
5mddt5k45rg3	UPDATE ORDERS SET ORDER_MODE = 'online', ORDER_STATUS = FLOOR(DBMS_RANDOM.VALUE(0, :B3)), ORDER_TOTAL = :B2 WHERE ORDER_ID = :B1
5ur69atw3vthj	select decode(failover_method, NULL, 0, 'BASIC', 1, 'PRECONNECT', 2, 'PREPARSE', 4, 0), decode(failover_type, NULL, 1, 'NONE', 1, 'SESSION', 2, 'SELECT', 4, 1), failover_retries, failover_delay, flags from service\$ where name = :1
77636982atn9	UPDATE INVENTORIES SET QUANTITY_ON_HAND = QUANTITY_ON_HAND - :B1 WHERE PRODUCT_ID = :B3 AND WAREHOUSE_ID = :B2
8dq0v1mjngj7i	SELECT CUSTOMER_ID, CUST_FIRST_NAME, CUST_LAST_NAME, NLS_LANGUAGE, NLS_TERRITORY, CREDIT_LIMIT, CUST_EMAIL, ACCOUNT_MGR_ID FROM CUSTOMERS WHERE CUSTOMER_ID = :B2 AND ROWNUM < :B1
8z3542fmp562	SELECT QUANTITY_ON_HAND FROM PRODUCT_INFORMATION P, INVENTORIES I WHERE I.PRODUCT_ID = :B2 AND I.PRODUCT_ID = P.PRODUCT_ID AND I.WAREHOUSE_ID = :B1
apg92g9q2zjh1	BEGIN :1 := orderentry.browseandupdateorders(2, :3, :4); END;
bymb3ujkr3ukb	INSERT INTO ORDERS(ORDER_ID, ORDER_DATE, CUSTOMER_ID, WAREHOUSE_ID) VALUES (ORDERS_SEQ.NEXTVAL + :B3, SYSTIMESTAMP, :B2, :B1) RETURNING ORDER_ID INTO :O0
c13sma6kr27c	SELECT PRODUCTS.PRODUCT_ID, PRODUCT_NAME, PRODUCT_DESCRIPTION, CATEGORY_ID, WEIGHT_CLASS, WARRANTY_PERIOD, SUPPLIER_ID, PRODUCT_STATUS, LIST_PRICE, MIN_PRICE, CATALOG_URL, QUANTITY_ON_HAND FROM PRODUCTS, INVENTORIES WHERE PRODUCTS.CATEGORY_ID = :B3 AND INVENTORIES.PRODUCT_ID = PRODUCTS.PRODUCT_ID AND INVENTORIES.WAREHOUSE_ID = :B2 AND ROWNUM < :B1
cmv5u20fthq1	select /*+ connect_by_filtering */ privilege#, level from sysauth\$ connect by grantee#=prior privilege# and privilege#>0 start with grantee#=1 and privilege#>0
dcq9a12vtcnuw	BEGIN :1 := orderentry.newcustoemr(2, :3, :4, :5, :6, :7); END;
f711my0q6cma	insert into sys.aud\$(sessionid, entryid, statement, ntimestamp#, userid, userhost, terminal, action#, returncode, logoff\$pread, logoff\$spread, logoff\$write, logoff\$dead, logoff\$time, comment\$text, spare1, clientid, sessioncpu, proxy\$sid, user\$guid, instance#, process#, auditid, dbid) values(:1, :2, :3, SYS_EXTRACT_UTC(SYSTIMESTAMP), :4, :5, :6, :7, :8, :9, :10, :11, :12, cast(SYS_EXTRACT_UTC(systimestamp) as date), :13, :14, :15, :16, :17, :18, :19, :20, :21, :22)

[Back to Supplemental Information](#)
[Back to Top](#)

End of Report