

WORKLOAD REPOSITORY report for

| DB Name | DB Id | Instance | Inst Num | Startup Time | Release | RAC |
|---------|------------|----------|----------|-----------------|------------|-----|
| SLOB | 3501483725 | SLOB | 1 | 02-Mar-12 10:44 | 11.2.0.2.0 | NO |

| Host Name | Platform | CPUs | Cores | Sockets | Memory(GB) |
|------------|------------------|------|-------|---------|------------|
| omsdbaup02 | Linux x86 64-bit | 8 | 8 | 2 | 31.31 |

| | Snap Id | Snap Time | Sessions | Curs/Sess |
|-------------|---------|--------------------|----------|-----------|
| Begin Snap: | 691 | 02-Mar-12 14:38:01 | 21 | 1.0 |
| End Snap: | 692 | 02-Mar-12 14:43:46 | 22 | 1.0 |
| Elapsed: | | 5.76 (mins) | | |
| DB Time: | | 66.02 (mins) | | |

| Cache Sizes | Begin | End | | |
|-------------------|-------|------|-----------------|--------|
| Buffer Cache: | 32M | 32M | Std Block Size: | 8K |
| Shared Pool Size: | 256M | 256M | Log Buffer: | 4,580K |

| Load Profile | Per Second | Per Transaction | Per Exec | Per Call |
|-------------------|------------|-----------------|----------|----------|
| DB Time(s): | 11.5 | 360.1 | 0.05 | 7.45 |
| DB CPU(s): | 1.8 | 57.2 | 0.01 | 1.18 |
| Redo size: | 3,108.0 | 97,621.1 | | |
| Logical reads: | 44,760.8 | 1,405,923.8 | | |
| Block changes: | 9.1 | 284.2 | | |
| Physical reads: | 44,866.3 | 1,409,237.4 | | |
| Physical writes: | 1.5 | 45.6 | | |
| User calls: | 1.5 | 48.4 | | |
| Parses: | 5.0 | 156.3 | | |
| Hard parses: | 0.4 | 13.7 | | |
| W/A MB processed: | 0.1 | 2.7 | | |
| Logons: | 0.1 | 1.6 | | |
| Executes: | 238.2 | 7,481.1 | | |
| Rollbacks: | 0.0 | 0.0 | | |
| Transactions: | 0.0 | | | |

Instance Efficiency Percentages (Target 100%)

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Buffer Nowait %: 100.00    Redo NoWait %: 100.00  
 Buffer Hit %: -0.24    In-memory Sort %: 100.00  
 Library Hit %: 99.42    Soft Parse %: 91.22  
 Execute to Parse %: 97.91    Latch Hit %: 99.97  
 Parse CPU to Parse Elapsed %: 10.13    % Non-Parse CPU: 99.95

Shared Pool Statistics    Begin    End

-----  
 Memory Usage %: 92.00 91.67  
 % SQL with executions>1: 73.35 75.37  
 % Memory for SQL w/exec>1: 50.32 47.00

Top 5 Timed Foreground Events

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| Event                       | Waits     | Avg<br>Time(s) | % DB<br>(ms) | time | Wait Class |
|-----------------------------|-----------|----------------|--------------|------|------------|
| db file parallel read       | 447,655   | 2,345          | 5            | 59.2 | User I/O   |
| db file sequential read     | 1,005,632 | 1,312          | 1            | 33.1 | User I/O   |
| DB CPU                      |           | 630            | 15.9         |      |            |
| cursor: pin S wait on X     | 234       | 2              | 7            | .0   | Concurrenc |
| latch: cache buffers chains | 3,678     | 1              | 0            | .0   | Concurrenc |

Host CPU (CPUs: 8 Cores: 8 Sockets: 2)

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Load Average

| Begin | End   | %User | %System | %WIO | %Idle |
|-------|-------|-------|---------|------|-------|
| 0.40  | 11.24 | 11.0  | 10.5    | 13.8 | 69.5  |

Instance CPU

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% of total CPU for Instance: 22.8  
 % of busy CPU for Instance: 74.5  
 %DB time waiting for CPU - Resource Mgr: 0.0

Memory Statistics

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|                              | Begin    | End      |
|------------------------------|----------|----------|
| Host Mem (MB):               | 32,060.6 | 32,060.6 |
| SGA use (MB):                | 318.6    | 318.6    |
| PGA use (MB):                | 49.5     | 52.9     |
| % Host Mem used for SGA+PGA: | 1.15     | 1.16     |

Time Model Statistics                    DB/Inst: SLOB/SLOB    Snaps: 691-692

- > Total time in database user-calls (DB Time): 3961.3s
- > Statistics including the word "background" measure background process time, and so do not contribute to the DB time statistic
- > Ordered by % or DB time desc, Statistic name

| Statistic Name                             | Time (s) | % of DB Time |
|--------------------------------------------|----------|--------------|
| sql execute elapsed time                   | 3,958.0  | 99.9         |
| DB CPU                                     | 629.6    | 15.9         |
| PL/SQL execution elapsed time              | 3.7      | .1           |
| parse time elapsed                         | 3.3      | .1           |
| connection management call elapsed time    | 0.9      | .0           |
| failed parse elapsed time                  | 0.7      | .0           |
| hard parse elapsed time                    | 0.5      | .0           |
| hard parse (sharing criteria) elapsed time | 0.3      | .0           |
| PL/SQL compilation elapsed time            | 0.1      | .0           |
| hard parse (bind mismatch) elapsed time    | 0.1      | .0           |
| sequence load elapsed time                 | 0.0      | .0           |
| repeated bind elapsed time                 | 0.0      | .0           |
| DB time                                    | 3,961.3  |              |
| background elapsed time                    | 2.8      |              |
| background cpu time                        | 0.3      |              |

Operating System Statistics DB/Inst: SLOB/SLOB Snaps: 691-692

-> \*TIME statistic values are diffed.

All others display actual values. End Value is displayed if different

-> ordered by statistic type (CPU Use, Virtual Memory, Hardware Config), Name

| Statistic             | Value           | End Value |
|-----------------------|-----------------|-----------|
| BUSY_TIME             | 84,489          |           |
| IDLE_TIME             | 192,195         |           |
| IOWAIT_TIME           | 38,101          |           |
| NICE_TIME             | 0               |           |
| SYS_TIME              | 29,009          |           |
| USER_TIME             | 30,428          |           |
| LOAD                  | 0               | 11        |
| VM_IN_BYTES           | 126,995,906,560 |           |
| VM_OUT_BYTES          | 235,606,016     |           |
| PHYSICAL_MEMORY_BYTES | 33,617,973,248  |           |
| NUM_CPUS              | 8               |           |
| NUM_CPU_CORES         |                 | 8         |

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NUM_CPU_SOCKETS                2
GLOBAL_RECEIVE_SIZE_MAX        4,194,304
GLOBAL_SEND_SIZE_MAX           4,194,304
TCP_RECEIVE_SIZE_DEFAULT       87,380
TCP_RECEIVE_SIZE_MAX           4,194,304
TCP_RECEIVE_SIZE_MIN           4,096
TCP_SEND_SIZE_DEFAULT          16,384
TCP_SEND_SIZE_MAX              4,194,304
TCP_SEND_SIZE_MIN              4,096

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Operating System Statistics - Detail      DB/Inst: SLOB/SLOB    Snaps: 691-692

| Snap Time       | Load | %busy | %user | %sys | %idle | %iowait |
|-----------------|------|-------|-------|------|-------|---------|
| 02-Mar 14:38:01 | 0.4  | N/A   | N/A   | N/A  | N/A   | N/A     |
| 02-Mar 14:43:46 | 11.2 | 30.5  | 11.0  | 10.5 | 69.5  | 13.8    |

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Foreground Wait Class      DB/Inst: SLOB/SLOB    Snaps: 691-692

-> s - second, ms - millisecond - 1000th of a second  
-> ordered by wait time desc, waits desc  
-> %Timeouts: value of 0 indicates value was < .5%. Value of null is truly 0  
-> Captured Time accounts for 108.3% of Total DB time 3,961.27 (s)  
-> Total FG Wait Time: 3,661.20 (s) DB CPU time: 629.57 (s)

| Wait Class  | %Time     |       | Avg                 |           | %DB time |
|-------------|-----------|-------|---------------------|-----------|----------|
|             | Waits     | -outs | Total Wait Time (s) | wait (ms) |          |
| User I/O    | 1,453,325 | 0     | 3,657               | 3         | 92.3     |
| DB CPU      |           |       | 630                 |           | 15.9     |
| Concurrency | 4,208     | 0     | 3                   | 1         | 0.1      |
| Other       | 897       | 14    | 1                   | 1         | 0.0      |
| System I/O  | 70        | 0     | 0                   | 0         | 0.0      |
| Application | 32        | 0     | 0                   | 0         | 0.0      |
| Commit      | 1         | 0     | 0                   | 6         | 0.0      |
| Network     | 332       | 0     | 0                   | 0         | 0.0      |

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Foreground Wait Events      DB/Inst: SLOB/SLOB    Snaps: 691-692

-> s - second, ms - millisecond - 1000th of a second  
-> Only events with Total Wait Time (s) >= .001 are shown

-> ordered by wait time desc, waits desc (idle events last)

-> %Timeouts: value of 0 indicates value was < .5%. Value of null is truly 0

| Event                      | Avg         |             |               |           |            |           |
|----------------------------|-------------|-------------|---------------|-----------|------------|-----------|
|                            | %Time Waits | Total -outs | Wait Time (s) | wait (ms) | Waits /txn | % DB time |
| db file parallel read      | 447,655     | 0           | 2,345         | 5         | 4.07E+04   | 59.2      |
| db file sequential read    | 1,005,632   | 0           | 1,312         | 1         | 9.14E+04   | 33.1      |
| cursor: pin S wait on X    | 234         | 0           | 2             | 7         | 21.3       | .0        |
| latch: cache buffers chain | 3,678       | 0           | 1             | 0         | 334.4      | .0        |
| kksfbc child completion    | 19          | 95          | 1             | 48        | 1.7        | .0        |
| latch free                 | 698         | 0           | 0             | 0         | 63.5       | .0        |
| library cache: mutex X     | 102         | 0           | 0             | 2         | 9.3        | .0        |
| library cache lock         | 32          | 0           | 0             | 3         | 2.9        | .0        |
| latch: row cache objects   | 32          | 0           | 0             | 2         | 2.9        | .0        |
| row cache lock             | 27          | 0           | 0             | 2         | 2.5        | .0        |
| latch: shared pool         | 86          | 0           | 0             | 1         | 7.8        | .0        |
| cursor: pin S              | 8           | 0           | 0             | 4         | 0.7        | .0        |
| library cache load lock    | 7           | 0           | 0             | 3         | 0.6        | .0        |
| control file sequential re | 70          | 0           | 0             | 0         | 6.4        | .0        |
| latch: object queue header | 49          | 0           | 0             | 0         | 4.5        | .0        |
| read by other session      | 8           | 0           | 0             | 1         | 0.7        | .0        |
| latch: cache buffers lru c | 22          | 0           | 0             | 0         | 2.0        | .0        |
| Disk file operations I/O   | 27          | 0           | 0             | 0         | 2.5        | .0        |
| SQL*Net break/reset to cli | 32          | 0           | 0             | 0         | 2.9        | .0        |
| log file sync              | 1           | 0           | 0             | 6         | 0.1        | .0        |
| db file scattered read     | 2           | 0           | 0             | 2         | 0.2        | .0        |
| SQL*Net message from clien | 332         | 0           | 157           | 474       | 30.2       |           |

Background Wait Events

DB/Inst: SLOB/SLOB Snaps: 691-692

-> ordered by wait time desc, waits desc (idle events last)

-> Only events with Total Wait Time (s) >= .001 are shown

-> %Timeouts: value of 0 indicates value was < .5%. Value of null is truly 0

| Event                      | Avg         |             |               |           |            |           |
|----------------------------|-------------|-------------|---------------|-----------|------------|-----------|
|                            | %Time Waits | Total -outs | Wait Time (s) | wait (ms) | Waits /txn | % bg time |
| db file sequential read    | 49          | 0           | 0             | 6         | 4.5        | 10.2      |
| control file sequential re | 214         | 0           | 0             | 1         | 19.5       | 5.2       |
| log file parallel write    | 181         | 0           | 0             | 1         | 16.5       | 4.9       |

|                            |       |     |       |        |       |     |
|----------------------------|-------|-----|-------|--------|-------|-----|
| control file parallel writ | 123   | 0   | 0     | 1      | 11.2  | 4.0 |
| db file parallel write     | 141   | 0   | 0     | 0      | 12.8  | 2.3 |
| os thread startup          | 1     | 0   | 0     | 17     | 0.1   | .6  |
| latch free                 | 1     | 0   | 0     | 8      | 0.1   | .3  |
| latch: shared pool         | 1     | 0   | 0     | 1      | 0.1   | .1  |
| LGWR wait for redo copy    | 25    | 0   | 0     | 0      | 2.3   | .0  |
| rdbms ipc message          | 1,720 | 94  | 3,451 | 2006   | 156.4 |     |
| DIAG idle wait             | 690   | 100 | 691   | 1001   | 62.7  |     |
| smon timer                 | 3     | 33  | 475   | 158181 | 0.3   |     |
| Space Manager: slave idle  | 80    | 95  | 391   | 4891   | 7.3   |     |
| dispatcher timer           | 6     | 100 | 360   | 60004  | 0.5   |     |
| shared server idle wait    | 12    | 100 | 360   | 30002  | 1.1   |     |
| pmon timer                 | 117   | 99  | 348   | 2974   | 10.6  |     |
| Streams AQ: qmn slave idle | 12    | 0   | 336   | 28010  | 1.1   |     |
| Streams AQ: qmn coordinato | 24    | 50  | 336   | 14005  | 2.2   |     |
| SQL*Net message from clien | 69    | 0   | 0     | 1      | 6.3   |     |

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Wait Event Histogram                      DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Units for Total Waits column: K is 1000, M is 1000000, G is 1000000000  
-> % of Waits: value of .0 indicates value was <.05%; value of null is truly 0  
-> % of Waits: column heading of <=1s is truly <1024ms, >1s is truly >=1024ms  
-> Ordered by Event (idle events last)

% of Waits

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| Event                      | Total | Waits | <1ms | <2ms | <4ms | <8ms | <16ms | <32ms | <=1s | >1s |
|----------------------------|-------|-------|------|------|------|------|-------|-------|------|-----|
| -----                      |       |       |      |      |      |      |       |       |      |     |
| Disk file operations I/O   | 29    | 96.6  | 3.4  |      |      |      |       |       |      |     |
| LGWR wait for redo copy    | 25    | 100.0 |      |      |      |      |       |       |      |     |
| SQL*Net break/reset to cli | 32    | 96.9  |      | 3.1  |      |      |       |       |      |     |
| SQL*Net message to client  | 384   | 100.0 |      |      |      |      |       |       |      |     |
| asynch descriptor resize   | 127   | 100.0 |      |      |      |      |       |       |      |     |
| control file parallel writ | 124   | 90.3  | 4.0  | .8   | 2.4  | 2.4  |       |       |      |     |
| control file sequential re | 284   | 88.0  | 8.8  | 2.1  | .4   | .7   |       |       |      |     |
| cursor: mutex S            | 1     | 100.0 |      |      |      |      |       |       |      |     |
| cursor: mutex X            | 1     | 100.0 |      |      |      |      |       |       |      |     |
| cursor: pin S              | 8     | 62.5  |      | 12.5 | 25.0 |      |       |       |      |     |
| cursor: pin S wait on X    | 232   | 6.5   | 13.8 | 19.0 | 40.9 | 11.6 | 8.2   |       |      |     |
| db file parallel read      | 447.7 | 6.7   | 19.1 | 26.5 | 29.2 | 15.5 | 2.7   | .3    |      |     |
| db file parallel write     | 141   | 95.7  | .7   | 1.4  | .7   | .7   | .7    |       |      |     |
| db file scattered read     | 2     | 50.0  | 50.0 |      |      |      |       |       |      |     |



```

64ms
Event          to 2s <32ms <64ms <1/8s <1/4s <1/2s <1s <2s >=2s
-----
db file parallel read    1197 99.7 .2 .0 .0 .0
db file sequential read   579 99.9 .0 .0 .0
kksfbc child completion   18  5.3 94.7
-----

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Wait Event Histogram Detail (4 sec to 2 min)DB/Inst: SLOB/SLOB Snaps: 691-69

No data exists for this section of the report.

Wait Event Histogram Detail (4 min to 1 hr)DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Service Statistics DB/Inst: SLOB/SLOB Snaps: 691-692  
-> ordered by DB Time

| Service Name    | Physical    |            | Logical   |           |
|-----------------|-------------|------------|-----------|-----------|
|                 | DB Time (s) | DB CPU (s) | Reads (K) | Reads (K) |
| SYS\$USERS      | 3,961       | 630        | 15,502    | 15,464    |
| SLOB            | 0           | 0          | 0         | 0         |
| SYS\$BACKGROUND | 0           | 0          | 0         | 1         |
| orclXDB         | 0           | 0          | 0         | 0         |

Service Wait Class Stats DB/Inst: SLOB/SLOB Snaps: 691-692

-> Wait Class info for services in the Service Statistics section.  
-> Total Waits and Time Waited displayed for the following wait classes: User I/O, Concurrency, Administrative, Network  
-> Time Waited (Wt Time) in seconds

Service Name

| Service Name | User I/O  |         | Concurcy  |         | Admin     |         | Network   |         |
|--------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
|              | Total Wts | Wt Time |

|            |         |      |      |   |   |   |     |   |
|------------|---------|------|------|---|---|---|-----|---|
| SYS\$USERS | 1453327 | 3657 | 4208 | 3 | 0 | 0 | 332 | 0 |
|------------|---------|------|------|---|---|---|-----|---|

SYSS\$BACKGROUND

52 0 1 0 0 0 0 0

SQL ordered by Elapsed Time DB/Inst: SLOB/SLOB Snaps: 691-692  
 -> Resources reported for PL/SQL code includes the resources used by all SQL statements called by the code.  
 -> % Total DB Time is the Elapsed Time of the SQL statement divided into the Total Database Time multiplied by 100  
 -> %Total - Elapsed Time as a percentage of Total DB time  
 -> %CPU - CPU Time as a percentage of Elapsed Time  
 -> %IO - User I/O Time as a percentage of Elapsed Time  
 -> Captured SQL account for 99.7% of Total DB Time (s): 3,961  
 -> Captured PL/SQL account for 99.9% of Total DB Time (s): 3,961

| Elapsed Time (s) | Executions | Elapsed Time per Exec (s) | %Total | %CPU | %IO  | SQL Id        |
|------------------|------------|---------------------------|--------|------|------|---------------|
| 3,957.9          | 16         | 247.37                    | 99.9   | 15.9 | 92.4 | 9xhqh6x4n4tgz |

Module: SQL\*Plus

```
DECLARE x NUMBER := 0; v_r PLS_INTEGER; BEGIN dbms_random.initialize(UID * 7777);
FOR i IN 1..5000 LOOP v_r := dbms_random.value(257, 10000); SELECT COUNT(c2) into x FROM cf1 where custid > v_r - 256 AND custid < v_r; END LOOP; END;
```

3,946.5 80,000 0.05 99.6 15.7 92.7 68vu5q46nu22s

Module: SQL\*Plus

```
SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1
```

0.7 1 0.69 .0 69.3 25.9 1uk5m5qbzj1vt

Module: sqlplus@omsdbaup02 (TNS V1-V3)

```
BEGIN dbms_workload_repository.create_snapshot; END;
```

0.5 17 0.03 .0 58.5 2.0 74vzwyatnts3

Module: sqlplus@omsdbaup02 (TNS V1-V3)

```
select value ||'/'||(select instance_name from v$instance) ||'_ora_'||
(select spid||case when traceid is not null then '_'||traceid else null end
from v$process where addr = (select paddr from v$session
where sid = (select sid from v$mystat
```

0.4 16 0.03 .0 2.2 .0 0k8522rmdzg4k

```
select privilege# from sysauth$ where (grantee#=:1 or grantee#=:1) and privilege# >0
```

```

0.2      17      0.01  .0 70.6  1.1 dkgjp06t3y6cc
Module: sqlplus@omsdbaup02 (TNS V1-V3)
select s.username i_username, i.instance_name i_instance_name, i.host_name
i_host_name, to_char(s.sid) i_sid, to_char(s.serial#) i_serial, (select
substr(banner, instr(banner, 'Release ')+8,10) from v$version where rownum = 1)
i_ver, (select substr(substr(banner, instr(banner, 'Release ')+8), 1,

```

```

0.2      249      0.00  .0 13.6  81.5 3c1kubcdjnppq
update sys.col_usage$ set equality_preds = equality_preds + decode(bitand(
d(:flag,1),0,0,1), equijoin_preds = equijoin_preds + decode(bitand(:flag
,2),0,0,1), nonequijoin_preds = nonequijoin_preds + decode(bitand(:flag,4),0,0
,1), range_preds = range_preds + decode(bitand(:flag,8),0,0,1),

```

```

0.1      32      0.00  .0 16.2  1.9 5qgz1p0cut7mx
Module: sqlplus@omsdbaup02 (TNS V1-V3)
BEGIN DBMS_OUTPUT.DISABLE; END;

```

```

0.1      1      0.11  .0 23.8  20.5 b4qw7n9wg64mh
INSERT /*+ APPEND LEADING(@"SEL$F5BB74E1" "H"@"SEL$2" "A"@"SEL$1")
USE_NL(@"SE
L$F5BB74E1" "A"@"SEL$1") */ INTO WRH$_ACTIVE_SESSION_HISTORY ( snap_id,
dbid, instance_number, sample_id, sample_time , session_id, session_serial#, ses
sion_type , flags , user_id , sql_id, sql_child_number, sql_opcode, force_matchi

```

```

0.1      1      0.10  .0 85.0  14.8 6ajkhukk78nsr
begin prvt_hdm.auto_execute( :dbid, :inst_num , :end_snap_id ); end;

```

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SQL ordered by CPU Time          DB/Inst: SLOB/SLOB  Snaps: 691-692
-> Resources reported for PL/SQL code includes the resources used by all SQL
statements called by the code.
-> %Total - CPU Time    as a percentage of Total DB CPU
-> %CPU   - CPU Time    as a percentage of Elapsed Time
-> %IO    - User I/O Time as a percentage of Elapsed Time
-> Captured SQL account for 98.4% of Total CPU Time (s):      630
-> Captured PL/SQL account for 99.9% of Total CPU Time (s):    630

```

| CPU<br>Time (s) | CPU per<br>Executions | CPU per<br>Exec (s) | Elapsed<br>%Total | Elapsed<br>Time (s) | %CPU | %IO  | SQL Id        |
|-----------------|-----------------------|---------------------|-------------------|---------------------|------|------|---------------|
| 628.1           | 16                    | 39.25               | 99.8              | 3,957.9             | 15.9 | 92.4 | 9xhqh6x4n4tgz |

Module: SQL\*Plus

```
DECLARE x NUMBER := 0; v_r PLS_INTEGER; BEGIN dbms_random.initialize(UID * 7777
); FOR i IN 1..5000 LOOP v_r := dbms_random.value(257, 10000) ; SELECT COUNT(
c2) into x FROM cf1 where custid > v_r - 256 AND custid < v_r; END LOOP; END;
```

```
618.5 80,000 0.01 98.2 3,946.5 15.7 92.7 68vu5q46nu22s
Module: SQL*Plus
SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1
```

```
0.5 1 0.48 0.1 0.7 69.3 25.9 1uk5m5qbzj1vt
Module: sqlplus@omsdbaup02 (TNS V1-V3)
BEGIN dbms_workload_repository.create_snapshot; END;
```

```
0.3 17 0.02 0.0 0.5 58.5 2.0 74vzwyatnts3
Module: sqlplus@omsdbaup02 (TNS V1-V3)
select value ||'/'||(select instance_name from v$instance) ||'_ora_'||
(select spid||case when traceid is not null then '_'||traceid else null end
from v$process where addr = (select paddr from v$session
where sid = (select sid from v$mystat
```

```
0.1 17 0.01 0.0 0.2 70.6 1.1 dkgjp06t3y6cc
Module: sqlplus@omsdbaup02 (TNS V1-V3)
select s.username i_username, i.instance_name i_instance_name, i.host_name
i_host_name, to_char(s.sid) i_sid, to_char(s.serial#) i_serial, (select
substr(banner, instr(banner, 'Release')+8,10) from v$version where rownum = 1)
i_ver, (select substr(substr(banner, instr(banner, 'Release')+8), 1,
```

```
0.1 1 0.08 0.0 0.1 85.0 14.8 6ajkhukk78nsr
begin prvt_hdm.auto_execute( :dbid, :inst_num , :end_snap_id ); end;
```

```
0.0 1 0.04 0.0 0.0 100.2 .0 5dfmd823r8dsp
insert into wrh$_memory_resize_ops (snap_id, dbid, instance_number, compone
nt, oper_type, start_time, end_time, target_size, oper_mode, parameter, initi
al_size, final_size, status) select snap_id, dbid, instance_num, compo
nent, oper_type, start_time, max(end_time), target_size, max(oper_mode),
```

```
0.0 1 0.03 0.0 0.1 48.2 52.6 4dy1xm4nxc0gf
insert into wrh$_system_event (snap_id, dbid, instance_number, event_id, to
tal_waits, total_timeouts, time_waited_micro, total_waits_fg, total_timeouts_
fg, time_waited_micro_fg) select :snap_id, :dbid, :instance_number, event_id
, total_waits, total_timeouts, time_waited_micro, total_waits_fg, total_ti
```

```
0.0 1 0.03 0.0 0.1 23.8 20.5 b4qw7n9wg64mh
INSERT /*+ APPEND LEADING(@ "SEL$F5BB74E1" "H"@ "SEL$2" "A"@ "SEL$1")
```

```

USE_NL(@"SE
L$F5BB74E1" "A"@"SEL$1") */ INTO WRH$_ACTIVE_SESSION_HISTORY ( snap_id,
dbid, instance_number, sample_id, sample_time , session_id, session_serial#, ses
sion_type , flags , user_id , sql_id, sql_child_number, sql_opcode, force_matchi

```

```

0.0 249 0.00 0.0 0.2 13.6 81.5 3c1kubcdjnppq
update sys.col_usage$ set equality_preds = equality_preds + decode(bitand(:flag,1),0,0,1), equijoin_preds = equijoin_preds + decode(bitand(:flag,2),0,0,1), nonequijoin_preds = nonequijoin_preds + decode(bitand(:flag,4),0,0,1), range_preds = range_preds + decode(bitand(:flag,8),0,0,1),

```

```

-----
SQL ordered by User I/O Wait Time      DB/Inst: SLOB/SLOB  Snaps: 691-692
-> Resources reported for PL/SQL code includes the resources used by all SQL
statements called by the code.
-> %Total - User I/O Time as a percentage of Total User I/O Wait time
-> %CPU - CPU Time as a percentage of Elapsed Time
-> %IO - User I/O Time as a percentage of Elapsed Time
-> Captured SQL account for 100.0% of Total User I/O Wait Time (s):      3
-> Captured PL/SQL account for 100.0% of Total User I/O Wait Time (s):

```

| User I/O<br>Time (s) | UIO per<br>Executions | Elapsed<br>Exec (s) | %Total | Time (s) | %CPU | %IO | SQL Id |
|----------------------|-----------------------|---------------------|--------|----------|------|-----|--------|
|----------------------|-----------------------|---------------------|--------|----------|------|-----|--------|

```

-----
3,656.6 16 228.54 100.0 3,957.9 15.9 92.4 9xhqh6x4n4tgz

```

Module: SQL\*Plus

```

DECLARE x NUMBER := 0; v_r PLS_INTEGER; BEGIN dbms_random.initialize(UID * 7777
); FOR i IN 1..5000 LOOP v_r := dbms_random.value(257, 10000); SELECT COUNT(
c2) into x FROM cf1 where custid > v_r - 256 AND custid < v_r; END LOOP; END;

```

```

3,656.6 80,000 0.05 100.0 3,946.5 15.7 92.7 68vu5q46nu22s

```

Module: SQL\*Plus

```

SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1

```

```

0.2 1 0.18 0.0 0.7 69.3 25.9 1uk5m5qbzj1vt

```

Module: sqlplus@omsdbaup02 (TNS V1-V3)

```

BEGIN dbms_workload_repository.create_snapshot; END;

```

```

0.1 249 0.00 0.0 0.2 13.6 81.5 3c1kubcdjnppq
update sys.col_usage$ set equality_preds = equality_preds + decode(bitand(:flag,1),0,0,1), equijoin_preds = equijoin_preds + decode(bitand(:flag,2),0,0,1), nonequijoin_preds = nonequijoin_preds + decode(bitand(:flag,4),0,0,1),

```

,1), range\_preds = range\_preds + decode(bitand(:flag,8),0,0,1),

0.1 70 0.00 0.0 0.1 11.8 89.4 g00cj285jmgsw  
update sys.mon\_mods\$ set inserts = inserts + :ins, updates = updates + :upd, deletes = deletes + :del, flags = (decode(bitand(flags, :flag), :flag, flags, flags + :flag)), drop\_segments = drop\_segments + :dropseg, timestamp = :time where obj# = :objn

0.0 1 0.03 0.0 0.0 5.8 96.3 d87cd6s72f197  
insert into wrh\$\_seg\_stat (snap\_id, dbid, instance\_number, ts#, obj#, dataobj#, logical\_reads\_total, logical\_reads\_delta, buffer\_busy\_waits\_total, buffer\_busy\_waits\_delta, db\_block\_changes\_total, db\_block\_changes\_delta, physical\_reads\_total, physical\_reads\_delta, physical\_writes\_total, physical\_writes\_delta,

0.0 1 0.03 0.0 0.0 20.8 77.9 f0s0bk5k713yb  
insert into wrh\$\_parameter (snap\_id, dbid, instance\_number, parameter\_hash, value, isdefault, ismodified) select :snap\_id, :dbid, :instance\_number, i.kspsthash hash, substr(sv.kspstvl, 1, 512), sv.kspstfdf, decode(bitand(sv.kspstvf,7), 1, 'MODIFIED', 'FALSE') from x\$kspst i, x\$kspstsv sv where i.indx

0.0 1 0.03 0.0 0.1 48.2 52.6 4dy1xm4nxc0gf  
insert into wrh\$\_system\_event (snap\_id, dbid, instance\_number, event\_id, total\_waits, total\_timeouts, time\_waited\_micro, total\_waits\_fg, total\_timeouts\_fg, time\_waited\_micro\_fg) select :snap\_id, :dbid, :instance\_number, event\_id, total\_waits, total\_timeouts, time\_waited\_micro, total\_waits\_fg, total\_timeouts\_fg,

0.0 1 0.03 0.0 0.0 .0 94.6 0z1031991bd7w  
insert into wrh\$\_sysmetric\_summary (snap\_id, dbid, instance\_number, begin\_time, end\_time, intsize, group\_id, metric\_id, num\_interval, maxval, minval, average, standard\_deviation, sum\_squares) select :snap\_id, :dbid, :instance\_number, begtime, endtime, intsize\_csec, groupid, metricid, numin

0.0 226 0.00 0.0 0.0 33.1 76.2 96g93hntrzjtr  
select /\*+ rule \*/ bucket\_cnt, row\_cnt, cache\_cnt, null\_cnt, timestamp#, sample\_size, minimum, maximum, distcnt, lowval, hival, density, col#, spare1, spare2, avgln from hist\_head\$ where obj#=:1 and intcol#=:2

-----

SQL ordered by Gets DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Resources reported for PL/SQL code includes the resources used by all SQL statements called by the code.  
-> %Total - Buffer Gets as a percentage of Total Buffer Gets

-> %CPU - CPU Time as a percentage of Elapsed Time  
 -> %IO - User I/O Time as a percentage of Elapsed Time  
 -> Total Buffer Gets: 15,465,162  
 -> Captured SQL account for 100.0% of Total

| Buffer Gets                                                                                                                                                                                                                                                                                    | Gets Executions | Elapsed per Exec | %Total Time (s) | %CPU    | %IO  | SQL Id           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|-----------------|---------|------|------------------|
| 15,452,924                                                                                                                                                                                                                                                                                     | 16              | 965,807.8        | 99.9            | 3,957.9 | 15.9 | 92.4 9xhqh6x4n4t |
| Module: SQL*Plus                                                                                                                                                                                                                                                                               |                 |                  |                 |         |      |                  |
| DECLARE x NUMBER := 0; v_r PLS_INTEGER; BEGIN dbms_random.initialize(UID * 7777); FOR i IN 1..5000 LOOP v_r := dbms_random.value(257, 10000); SELECT COUNT(c2) into x FROM cf1 where custid > v_r - 256 AND custid < v_r; END LOOP; END;                                                       |                 |                  |                 |         |      |                  |
| 15,452,391                                                                                                                                                                                                                                                                                     | 80,000          | 193.2            | 99.9            | 3,946.5 | 15.7 | 92.7 68vu5q46nu2 |
| Module: SQL*Plus                                                                                                                                                                                                                                                                               |                 |                  |                 |         |      |                  |
| SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1                                                                                                                                                                                                                            |                 |                  |                 |         |      |                  |
| 7,554                                                                                                                                                                                                                                                                                          | 1               | 7,554.0          | 0.0             | 0.7     | 69.3 | 25.9 1uk5m5qbzj1 |
| Module: sqlplus@omsdbaup02 (TNS V1-V3)                                                                                                                                                                                                                                                         |                 |                  |                 |         |      |                  |
| BEGIN dbms_workload_repository.create_snapshot; END;                                                                                                                                                                                                                                           |                 |                  |                 |         |      |                  |
| 3,595                                                                                                                                                                                                                                                                                          | 1               | 3,595.0          | 0.0             | 0.1     | 85.0 | 14.8 6ajkhukk78n |
| begin prvt_hdm.auto_execute( :dbid, :inst_num , :end_snap_id ); end;                                                                                                                                                                                                                           |                 |                  |                 |         |      |                  |
| 2,626                                                                                                                                                                                                                                                                                          | 1               | 2,626.0          | 0.0             | 0.0     | 97.0 | .0 6wm3n4d7bnd   |
| SELECT source, (case when time_secs < 1 then 1 else time_secs end) as time_secs, operation FROM ( SELECT 1 as source, trunc((sysdate - cast(II.log_date as date)) * 86400) as time_secs, decode(II.operation, 'OPEN', 0                                                                        |                 |                  |                 |         |      |                  |
| 858                                                                                                                                                                                                                                                                                            | 249             | 3.4              | 0.0             | 0.2     | 13.6 | 81.5 3c1kubcdjnp |
| update sys.col_usage\$ set equality_preds = equality_preds + decode(bitand(:flag,1),0,0,1), equijoin_preds = equijoin_preds + decode(bitand(:flag,2),0,0,1), nonequijoin_preds = nonequijoin_preds + decode(bitand(:flag,4),0,0,1), range_preds = range_preds + decode(bitand(:flag,8),0,0,1), |                 |                  |                 |         |      |                  |
| 680                                                                                                                                                                                                                                                                                            | 1               | 680.0            | 0.0             | 0.0     | 54.0 | 40.3 35y2u24f4rx |
| insert into wrh\$_seg_stat_obj ( snap_id , dbid , ts# , obj# , dataobj# , owner , object_name , subobject_name , partition_type , object_type , tablespace_name) select :lah_snap_id , :dbid , ss1.tsn_k                                                                                       |                 |                  |                 |         |      |                  |

616 226 2.7 0.0 0.0 33.1 76.2 96g93hnrzj  
 select /\*+ rule \*/ bucket\_cnt, row\_cnt, cache\_cnt, null\_cnt, timestamp#, sample\_size, minimum, maximum, distcnt, lowval, hival, density, col#, spare1, spare2, a  
 vgcln from hist\_head\$ where obj#=:1 and intcol#=:2

551 1 551.0 0.0 0.1 23.8 20.5 b4qw7n9wg64  
 INSERT /\*+ APPEND LEADING(@"SEL\$F5BB74E1" "H"@"SEL\$2" "A"@"SEL\$1")  
 USE\_NL(@"SE  
 L\$F5BB74E1" "A"@"SEL\$1") \*/ INTO WRH\$\_ACTIVE\_SESSION\_HISTORY ( snap\_id,  
 dbid, instance\_number, sample\_id, sample\_time , session\_id, session\_serial#, ses  
 sion\_type , flags , user\_id , sql\_id, sql\_child\_number, sql\_opcode, force\_matchi

523 228 2.3 0.0 0.0 50.0 19.7 3nkd3g3ju5p  
 select obj#,type#,ctime,mtime,stime, status, dataobj#, flags, oid\$, spare1, spar  
 e2 from obj\$ where owner#=:1 and name=:2 and namespace=:3 and remoteowner is nul  
 l and linkname is null and subname is null

-----  
 SQL ordered by Reads DB/Inst: SLOB/SLOB Snaps: 691-692  
 -> %Total - Physical Reads as a percentage of Total Disk Reads  
 -> %CPU - CPU Time as a percentage of Elapsed Time  
 -> %IO - User I/O Time as a percentage of Elapsed Time  
 -> Total Disk Reads: 15,501,611  
 -> Captured SQL account for 100.0% of Total

| Physical Reads | Reads Executions | per Exec  | Elapsed %Total | Time (s) | %CPU | %IO  | SQL Id        |
|----------------|------------------|-----------|----------------|----------|------|------|---------------|
| 15,501,392     | 16               | 968,837.0 | 100.0          | 3,957.9  | 15.9 | 92.4 | 9xhqh6x4n4tgz |

Module: SQL\*Plus  
 DECLARE x NUMBER := 0; v\_r PLS\_INTEGER; BEGIN dbms\_random.initialize(UID \* 7777  
 ); FOR i IN 1..5000 LOOP v\_r := dbms\_random.value(257, 10000); SELECT COUNT(  
 c2) into x FROM cf1 where custid > v\_r - 256 AND custid < v\_r; END LOOP; END;

|            |        |       |       |         |      |      |               |
|------------|--------|-------|-------|---------|------|------|---------------|
| 15,501,378 | 80,000 | 193.8 | 100.0 | 3,946.5 | 15.7 | 92.7 | 68vu5q46nu22s |
|------------|--------|-------|-------|---------|------|------|---------------|

Module: SQL\*Plus  
 SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1

47 1 47.0 0.0 0.7 69.3 25.9 1uk5m5qbzj1vt  
 Module: sqlplus@omsdbaup02 (TNS V1-V3)  
 BEGIN dbms\_workload\_repository.create\_snapshot; END;

```
23      249      0.1  0.0    0.2  13.6  81.5 3c1kubcdjnppq
update sys.col_usage$ set equality_preds = equality_preds + decode(bitand(:flag,1),0,0,1), equijoin_preds = equijoin_preds + decode(bitand(:flag,2),0,0,1), nonequijoin_preds = nonequijoin_preds + decode(bitand(:flag,4),0,0,1), range_preds = range_preds + decode(bitand(:flag,8),0,0,1),
```

```
21      1      21.0  0.0    0.0  54.0  40.3 35y2u24f4rxqm
insert into wrh$_seg_stat_obj ( snap_id , dbid , ts#
, obj# , dataobj# , owner , object_name
, subobject_name , partition_type , object_type
, tablespace_name) select :lah_snap_id , :dbid , ss1.tsn_k
```

```
12      16      0.8  0.0    0.0  47.0  13.6 g4y6nw3tts7cc
Module: sqlplus@omsdbaup02 (TNS V1-V3)
BEGIN DBMS_APPLICATION_INFO.SET_MODULE(:1,NULL); END;
```

```
11      226      0.0  0.0    0.0  33.1  76.2 96g93hnrzjtr
select /*+ rule */ bucket_cnt, row_cnt, cache_cnt, null_cnt, timestamp#, sample_size, minimum, maximum, distcnt, lowval, hival, density, col#, spare1, spare2, avgln from hist_head$ where obj#=:1 and intcol#=:2
```

```
10      1      10.0  0.0    0.0  .0  94.6 0z1031991bd7w
insert into wrh$_sysmetric_summary (snap_id, dbid, instance_number, begin_time, end_time, intsize, group_id, metric_id, num_interval, maxval, minval, average, standard_deviation, sum_squares) select :snap_id, :dbid, :instance_number, begtime, endtime, intsize_csec, groupid, metricid, numin
```

```
9       64      0.1  0.0    0.0  88.3  33.1 3g7sxtj9d6zd3
select privilege#,nvl(col#,0),max(mod(nvl(option$,0),2))from objauth$ where obj#=:1 and grantee#=:2 group by privilege#,nvl(col#,0)
```

```
9       228      0.0  0.0    0.0  50.0  19.7 3nkd3g3ju5ph1
select obj#,type#,ctime,mtime,stime, status, dataobj#, flags, oid$, spare1, spare2 from obj$ where owner#=:1 and name=:2 and namespace=:3 and remoteowner is null and linkname is null and subname is null
```

---

```
SQL ordered by Physical Reads (UnOptimized)DB/Inst: SLOB/SLOB Snaps: 691-692
-> UnOptimized Read Reqs = Physical Read Reqs - Optimized Read Reqs
-> %Opt - Optimized Reads as percentage of SQL Read Requests
-> %Total - UnOptimized Read Reqs as a percentage of Total UnOptimized Read Reqs
-> Total Physical Read Requests: 15,501,609
```

-> Captured SQL account for 8.4% of Total  
 -> Total UnOptimized Read Requests: 15,501,609  
 -> Captured SQL account for 8.4% of Total  
 -> Total Optimized Read Requests: 1  
 -> Captured SQL account for 0.0% of Total

| UnOptimized<br>Read Reqs | Physical<br>Read Reqs | UnOptimized<br>Executions | Reqs per Exe | %Opt | %Total | SQL Id |
|--------------------------|-----------------------|---------------------------|--------------|------|--------|--------|
|--------------------------|-----------------------|---------------------------|--------------|------|--------|--------|

|           |           |    |          |     |     |               |
|-----------|-----------|----|----------|-----|-----|---------------|
| 1,295,530 | 1,295,530 | 16 | 80,970.6 | 0.0 | 8.4 | 9xhqh6x4n4tgz |
|-----------|-----------|----|----------|-----|-----|---------------|

Module: SQL\*Plus  
 DECLARE x NUMBER := 0; v\_r PLS\_INTEGER; BEGIN dbms\_random.initialize(UID \* 7777); FOR i IN 1..5000 LOOP v\_r := dbms\_random.value(257, 10000); SELECT COUNT(c2) into x FROM cf1 where custid > v\_r - 256 AND custid < v\_r; END LOOP; END;

|           |           |        |      |     |     |               |
|-----------|-----------|--------|------|-----|-----|---------------|
| 1,295,518 | 1,295,518 | 80,000 | 16.2 | 0.0 | 8.4 | 68vu5q46nu22s |
|-----------|-----------|--------|------|-----|-----|---------------|

Module: SQL\*Plus  
 SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1

|     |     |   |       |     |     |               |
|-----|-----|---|-------|-----|-----|---------------|
| 114 | 114 | 1 | 114.0 | 0.0 | 0.0 | 1uk5m5qbzj1vt |
|-----|-----|---|-------|-----|-----|---------------|

Module: sqlplus@omsdbaup02 (TNS V1-V3)  
 BEGIN dbms\_workload\_repository.create\_snapshot; END;

|    |    |   |      |     |     |               |
|----|----|---|------|-----|-----|---------------|
| 28 | 28 | 1 | 28.0 | 0.0 | 0.0 | 35y2u24f4rxqm |
|----|----|---|------|-----|-----|---------------|

insert into wrh\$\_seg\_stat\_obj ( snap\_id , dbid , ts# , obj# , dataobj# , owner , object\_name , subobject\_name , partition\_type , object\_type , tablespace\_name) select :lah\_snap\_id , :dbid , ss1.tsn\_k

|    |    |   |      |     |     |               |
|----|----|---|------|-----|-----|---------------|
| 23 | 23 | 1 | 23.0 | 0.0 | 0.0 | 1cq3qr774cu45 |
|----|----|---|------|-----|-----|---------------|

insert into WRH\$\_IOSTAT\_FILETYPE (snap\_id, dbid, instance\_number, filetype\_id, small\_read\_megabytes, small\_write\_megabytes, large\_read\_megabytes, large\_write\_megabytes, small\_read\_reqs, small\_write\_reqs, small\_sync\_read\_reqs, large\_read\_reqs, large\_write\_reqs, small\_read\_servicetime, small\_wr

|    |    |    |     |     |     |               |
|----|----|----|-----|-----|-----|---------------|
| 12 | 12 | 16 | 0.8 | 0.0 | 0.0 | g4y6nw3tts7cc |
|----|----|----|-----|-----|-----|---------------|

Module: sqlplus@omsdbaup02 (TNS V1-V3)  
 BEGIN DBMS\_APPLICATION\_INFO.SET\_MODULE(:1,NULL); END;

|    |    |     |     |     |     |              |
|----|----|-----|-----|-----|-----|--------------|
| 11 | 11 | 226 | 0.0 | 0.0 | 0.0 | 96g93hntzjtr |
|----|----|-----|-----|-----|-----|--------------|

select /\*+ rule \*/ bucket\_cnt, row\_cnt, cache\_cnt, null\_cnt, timestamp#, sample\_size, minimum, maximum, distcnt, lowval, hival, density, col#, spare1, spare2, avgcln from hist\_head\$ where obj#=1 and intcol#=2

10 10 1 10.0 0.0 0.0 0z1031991bd7w  
 insert into wrh\$\_sysmetric\_summary (snap\_id, dbid, instance\_number, beg  
 in\_time, end\_time, intsize, group\_id, metric\_id, num\_interval, maxval, minv  
 al, average, standard\_deviation, sum\_squares) select :snap\_id, :dbid, :ins  
 tance\_number, begintime, endtime, intsize\_csec, groupid, metricid, numin

9 9 64 0.1 0.0 0.0 3g7sxtj9d6zd3  
 select privilege#,nvl(col#,0),max(mod(nvl(option\$,0),2))from objauth\$ where obj#  
 =:1 and grantee#=:2 group by privilege#,nvl(col#,0)

9 9 228 0.0 0.0 0.0 3nkd3g3ju5ph1  
 select obj#,type#,ctime,mtime,stime, status, dataobj#, flags, oid\$, spare1, spar  
 e2 from obj\$ where owner#=:1 and name=:2 and namespace=:3 and remoteowner is nul  
 l and linkname is null and subname is null

-----  
 SQL ordered by Executions DB/Inst: SLOB/SLOB Snaps: 691-692  
 -> %CPU - CPU Time as a percentage of Elapsed Time  
 -> %IO - User I/O Time as a percentage of Elapsed Time  
 -> Total Executions: 82,292  
 -> Captured SQL account for 99.1% of Total

Elapsed  
 Executions Rows Processed Rows per Exec Time (s) %CPU %IO SQL Id  
 -----  
 80,000 80,000 1.0 3,946.5 15.7 92.7 68vu5q46nu2  
 Module: SQL\*Plus  
 SELECT COUNT(C2) FROM CF1 WHERE CUSTID > :B1 - 256 AND CUSTID < :B1

249 249 1.0 0.2 13.6 81.5 3c1kubcdjnp  
 update sys.col\_usage\$ set equality\_preds = equality\_preds + decode(bitand  
 (:flag,1),0,0,1), equijoin\_preds = equijoin\_preds + decode(bitand(:flag  
 ,2),0,0,1), nonequijoin\_preds = nonequijoin\_preds + decode(bitand(:flag,4),0,0  
 ,1), range\_preds = range\_preds + decode(bitand(:flag,8),0,0,1),

228 67 0.3 0.0 50.0 19.7 3nkd3g3ju5p  
 select obj#,type#,ctime,mtime,stime, status, dataobj#, flags, oid\$, spare1, spar  
 e2 from obj\$ where owner#=:1 and name=:2 and namespace=:3 and remoteowner is nul  
 l and linkname is null and subname is null

226 151 0.7 0.0 33.1 76.2 96g93hnrzj

```
select /*+ rule */ bucket_cnt, row_cnt, cache_cnt, null_cnt, timestamp#, sample_
size, minimum, maximum, distcnt, lowval, hival, density, col#, spare1, spare2, a
vgcln from hist_head$ where obj#=:1 and intcol#=:2
```

```
106      0      0.0      0.0 125.8   .0 b2gnxm5z6r5
lock table sys.col_usage$ in exclusive mode nowait
```

```
70      0      0.0      0.0 214.8   .0 350f5yrnmms
lock table sys.mon_mods$ in exclusive mode nowait
```

```
70      70      1.0      0.1 11.8   89.4 g00cj285jmg
update sys.mon_mods$ set inserts = inserts + :ins, updates = updates + :upd, del
etes = deletes + :del, flags = (decode(bitand(flags, :flag), :flag, flags, flags
+ :flag)), drop_segments = drop_segments + :dropseg, timestamp = :time where ob
j# = :objn
```

```
64      3      0.0      0.0 88.3   33.1 3g7sxtj9d6z
select privilege#,nvl(col#,0),max(mod(nvl(option$,0),2))from objauth$ where obj#
=:1 and grantee#=:2 group by privilege#,nvl(col#,0)
```

```
32      32      1.0      0.1 16.2   1.9 5qgz1p0cut7
Module: sqlplus@omsdbaup02 (TNS V1-V3)
BEGIN DBMS_OUTPUT.DISABLE; END;
```

```
32      537      16.8      0.1 17.7   8.9 cm5vu20fhtn
select /*+ connect_by_filtering */ privilege#,level from sysauth$ connect by gra
ntee#=:prior privilege# and privilege#>0 start with grantee#=:1 and privilege#>0
```

```
-----
SQL ordered by Parse Calls          DB/Inst: SLOB/SLOB  Snaps: 691-692
-> Total Parse Calls:              1,719
-> Captured SQL account for 60.4% of Total
```

```

          % Total
Parse Calls Executions  Parses  SQL Id
-----
106      249      6.17 3c1kubcdjnpq
update sys.col_usage$ set equality_preds = equality_preds + decode(bitand(:flag,1),0,0,1), equijoin_preds = equijoin_preds + decode(bitand(:flag,2),0,0,1), nonequijoin_preds = nonequijoin_preds + decode(bitand(:flag,4),0,0,1), range_preds = range_preds + decode(bitand(:flag,8),0,0,1),
```

106 106 6.17 b2gnxm5z6r51n  
lock table sys.col\_usage\$ in exclusive mode nowait

105 228 6.11 3nkd3g3ju5ph1  
select obj#,type#,ctime,mtime,stime, status, dataobj#, flags, oid\$, spare1, spare2 from obj\$ where owner#=:1 and name=:2 and namespace=:3 and remoteowner is null and linkname is null and subname is null

70 70 4.07 350f5yrnmshs  
lock table sys.mon\_mods\$ in exclusive mode nowait

70 70 4.07 g00cj285jmgsw  
update sys.mon\_mods\$ set inserts = inserts + :ins, updates = updates + :upd, deletes = deletes + :del, flags = (decode(bitand(flags, :flag), :flag, flags, flags + :flag)), drop\_segments = drop\_segments + :dropseg, timestamp = :time where obj# = :objn

32 32 1.86 5qgz1p0cut7mx  
Module: sqlplus@omsdbaup02 (TNS V1-V3)  
BEGIN DBMS\_OUTPUT.DISABLE; END;

32 32 1.86 cm5vu20fhtnq1  
select /\*+ connect\_by\_filtering \*/ privilege#,level from sysauth\$ connect by grantee#=:prior privilege# and privilege#>0 start with grantee#=:1 and privilege#>0

29 30 1.69 0kugqg48477gf  
select distinct(-privilege#),nvl(option\$,0) from sysauth\$ where grantee#=:1 and privilege#<0

25 25 1.45 2tkw12w5k68vd  
select user#,password,datats#,tempts#,type#,defrole,resource\$, ptime,decode(defschclass,NULL,'DEFAULT\_CONSUMER\_GROUP',defschclass),spare1,spare4,ext\_username,spare2 from user\$ where name=:1

23 226 1.34 96g93hntzjtr  
select /\*+ rule \*/ bucket\_cnt, row\_cnt, cache\_cnt, null\_cnt, timestamp#, sample\_size, minimum, maximum, distcnt, lowval, hival, density, col#, spare1, spare2, avgcln from hist\_head\$ where obj#=:1 and intcol#=:2

22 64 1.28 3g7sxtj9d6zd3  
select privilege#,nvl(col#,0),max(mod(nvl(option\$,0),2))from objauth\$ where obj#=:1 and grantee#=:2 group by privilege#,nvl(col#,0)

22 27 1.28 83taa7kaw59c1

select name,intcol#,segcol#,type#,length,nvl(precision#,0),decode(type#,2,nvl(scale,-127/\*MAXSB1MINAL\*/),178,scale,179,scale,180,scale,181,scale,182,scale,183,scale,231,scale,0),null\$,fixedstorage,nvl(deflength,0),default\$,rowid,col#,property, nvl(charsetid,0),nvl(charsetform,0),spare1,spare2,nvl(spare3,0) from col\$ wh

21 24 1.22 2q93zsrbdw48

select grantee#,privilege#,nvl(col#,0),max(mod(nvl(option\$,0),2))from objauth\$ where obj#=:1 group by grantee#,privilege#,nvl(col#,0) order by grantee#

20 20 1.16 1gu8t96d0bdmu

SQL ordered by Parse Calls DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Total Parse Calls: 1,719  
-> Captured SQL account for 60.4% of Total

% Total

Parse Calls Executions Parses SQL Id

-----  
select t.ts#,t.file#,t.block#,nvl(t.bobj#,0),nvl(t.tab#,0),t.intcols,nvl(t.clucols,0),t.audit\$,t.flags,t.pctfree\$,t.pctused\$,t.initrans,t.maxtrans,t.rowcnt,t.blkcnt,t.empcnt,t.avgspc,t.chncnt,t.avgrln,t.analyzetime,t.samplesize,t.cols,t.property,nvl(t.degree,1),nvl(t.instances,1),t.avgspc\_flb,t.flbcnt,t.kernelcols,nvl(

20 20 1.16 3ktacv9r56b51

select owner#,name,namespace,remoteowner,linkname,p\_timestamp,p\_obj#, nvl(property,0),subname,type#,d\_attrs from dependency\$ d, obj\$ o where d\_obj#=:1 and p\_obj#=:obj#(+) order by order#

20 23 1.16 6aq34nj2zb2n7

select col#, grantee#, privilege#,max(mod(nvl(option\$,0),2)) from objauth\$ where obj#=:1 and col# is not null group by privilege#, col#, grantee# order by col#, grantee#

20 22 1.16 7ng34ruy5awxq

select i.obj#,i.ts#,i.file#,i.block#,i.intcols,i.type#,i.flags,i.property,i.pctfree\$,i.initrans,i.maxtrans,i.blevel,i.leafcnt,i.distkey,i.lblkkey,i.dblkkey,i.cluafac,i.cols,i.analyzetime,i.samplesize,i.dataobj#,nvl(i.degree,1),nvl(i.instances,1),i.rowcnt,mod(i.pctthres\$,256),i.indmethod#,i.truncnt,nvl(c.unicols,0),nvl(

20 20 1.16 8swypbbr0m372

select order#,columns,types from access\$ where d\_obj#=:1

18 20 1.05 5n1fs4m2n2y0r

select pos#,intcol#,col#,spare1,bo#,spare2,spare3 from icol\$ where obj#=:1

18 21 1.05 87gaftwrm2h68

select o.owner#,o.name,o.namespace,o.remoteowner,o.linkname,o.subname from obj\$  
o where o.obj#=:1

-----  
SQL ordered by Sharable Memory DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
-----

SQL ordered by Version Count DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
-----

Instance Activity Stats DB/Inst: SLOB/SLOB Snaps: 691-692

-> Ordered by statistic name

| Statistic                       | Total   | per Second | per Trans |
|---------------------------------|---------|------------|-----------|
| Batched IO (bound) vector count |         | 0          | 0.0 0.0   |
| Batched IO (full) vector count  |         | 0          | 0.0 0.0   |
| Batched IO block miss count     |         | 0          | 0.0 0.0   |
| Batched IO buffer defrag count  |         | 0          | 0.0 0.0   |
| Batched IO double miss count    |         | 0          | 0.0 0.0   |
| Batched IO same unit count      |         | 0          | 0.0 0.0   |
| Batched IO vector block count   |         | 0          | 0.0 0.0   |
| Batched IO vector read count    |         | 0          | 0.0 0.0   |
| Block Cleanout Optim referenced |         | 3          | 0.0 0.3   |
| CCursor + sql area evicted      |         | 0          | 0.0 0.0   |
| CPU used by this session        | 62,935  | 182.2      | 5,721.4   |
| CPU used when call started      | 62,918  | 182.1      | 5,719.8   |
| CR blocks created               | 1       | 0.0        | 0.1       |
| Cached Commit SCN referenced    |         | 3,302      | 9.6 300.2 |
| Commit SCN cached               |         | 7          | 0.0 0.6   |
| DB time                         | 396,041 | 1,146.3    | 36,003.7  |
| DBWR checkpoint buffers written |         | 214        | 0.6 19.5  |
| DBWR transaction table writes   |         | 10         | 0.0 0.9   |
| DBWR undo block writes          |         | 97         | 0.3 8.8   |
| HSC Heap Segment Block Changes  |         | 612        | 1.8 55.6  |

|                                  |                    |                |               |
|----------------------------------|--------------------|----------------|---------------|
| Heap Segment Array Inserts       | 78                 | 0.2            | 7.1           |
| Heap Segment Array Updates       | 9                  | 0.0            | 0.8           |
| IMU Flushes                      | 1                  | 0.0            | 0.1           |
| IMU Redo allocation size         | 36,580             | 105.9          | 3,325.5       |
| IMU commits                      | 10                 | 0.0            | 0.9           |
| IMU undo allocation size         | 50,480             | 146.1          | 4,589.1       |
| SMON posted for dropping temp se | 0                  | 0.0            | 0.0           |
| SMON posted for undo segment shr | 0                  | 0.0            | 0.0           |
| SQL*Net roundtrips to/from clien | 332                | 1.0            | 30.2          |
| active txn count during cleanout | 36                 | 0.1            | 3.3           |
| background timeouts              | 1,611              | 4.7            | 146.5         |
| buffer is not pinned count       | 15,431,759         | 44,664.1       | 1,402,887.2   |
| buffer is pinned count           | 15,244,467         | 44,122.0       | 1,385,860.6   |
| bytes received via SQL*Net from  | 101,550            | 293.9          | 9,231.8       |
| bytes sent via SQL*Net to client | 126,458            | 366.0          | 11,496.2      |
| calls to get snapshot scn: kcmgs | 82,179             | 237.9          | 7,470.8       |
| calls to kcmgas                  | 345                | 1.0            | 31.4          |
| calls to kcmgcs                  | 426                | 1.2            | 38.7          |
| cell physical IO interconnect by | 127,001,227,776    | 367,579,319.0  | 1.1545566E+10 |
| change write time                | 1                  | 0.0            | 0.1           |
| cleanout - number of ktugct call | 43                 | 0.1            | 3.9           |
| cleanouts only - consistent read | 6                  | 0.0            | 0.6           |
| cluster key scan block gets      | 271                | 0.8            | 24.6          |
| cluster key scans                | 227                | 0.7            | 20.6          |
| commit batch/immediate performed | 4                  | 0.0            | 0.4           |
| commit batch/immediate requested | 4                  | 0.0            | 0.4           |
| commit cleanout failures: callba | 3                  | 0.0            | 0.3           |
| commit cleanouts                 | 477                | 1.4            | 43.4          |
| commit cleanouts successfully co | 474                | 1.4            | 43.1          |
| commit immediate performed       | 4                  | 0.0            | 0.4           |
| commit immediate requested       | 4                  | 0.0            | 0.4           |
| commit txn count during cleanout | 24                 | 0.1            | 2.2           |
| concurrency wait time            | 300                | 0.9            | 27.3          |
| consistent changes               | 14                 | 0.0            | 1.3           |
| consistent gets                  | 15,462,109         | 44,751.9       | 1,405,646.3   |
| consistent gets - examination    | 63,164             | 182.8          | 5,742.2       |
| consistent gets from cache       | 15,462,109         | 44,751.9       | 1,405,646.3   |
| consistent gets from cache (fast | 14,428,238         | 41,759.6       | 1,311,658.0   |
| cursor authentications           | 88                 | 0.3            | 8.0           |
| data blocks consistent reads - u | 1                  | 0.0            | 0.1           |
| Instance Activity Stats          | DB/Inst: SLOB/SLOB | Snaps: 691-692 |               |

-> Ordered by statistic name

| Statistic                        | Total         | per Second  | per Trans     |
|----------------------------------|---------------|-------------|---------------|
| db block changes                 | 3,126         | 9.1         | 284.2         |
| db block gets                    | 3,053         | 8.8         | 277.6         |
| db block gets direct             | 18            | 0.1         | 1.6           |
| db block gets from cache         | 3,035         | 8.8         | 275.9         |
| db block gets from cache (fastpa | 831           | 2.4         | 75.6          |
| deferred (CURRENT) block cleanou |               | 310         | 0.9 28.2      |
| dirty buffers inspected          | 252           | 0.7         | 22.9          |
| enqueue conversions              | 2             | 0.0         | 0.2           |
| enqueue releases                 | 1,008         | 2.9         | 91.6          |
| enqueue requests                 | 1,008         | 2.9         | 91.6          |
| enqueue timeouts                 | 0             | 0.0         | 0.0           |
| enqueue waits                    | 0             | 0.0         | 0.0           |
| execute count                    | 82,292        | 238.2       | 7,481.1       |
| file io wait time                | 1,313,382,290 | 3,801,318.9 | 1.1939839E+08 |
| free buffer inspected            | 15,678,225    | 45,377.5    | 1,425,293.2   |
| free buffer requested            | 15,501,758    | 44,866.7    | 1,409,250.7   |
| heap block compress              | 6             | 0.0         | 0.6           |
| hot buffers moved to head of LRU |               | 1,877       | 5.4 170.6     |
| immediate (CR) block cleanout ap |               | 6           | 0.0 0.6       |
| immediate (CURRENT) block cleano |               | 49          | 0.1 4.5       |
| index crx upgrade (positioned)   |               | 0           | 0.0 0.0       |
| index fast full scans (full)     | 0             | 0.0         | 0.0           |
| index fetch by key               | 1,254         | 3.6         | 114.0         |
| index scans kdiixs1              | 67,878        | 196.5       | 6,170.7       |
| leaf node 90-10 splits           | 13            | 0.0         | 1.2           |
| leaf node splits                 | 17            | 0.1         | 1.6           |
| lob reads                        | 0             | 0.0         | 0.0           |
| lob writes                       | 3             | 0.0         | 0.3           |
| lob writes unaligned             | 3             | 0.0         | 0.3           |
| logons cumulative                | 18            | 0.1         | 1.6           |
| max cf enq hold time             | 0             | 0.0         | 0.0           |
| messages received                | 316           | 0.9         | 28.7          |
| messages sent                    | 316           | 0.9         | 28.7          |
| min active SCN optimization appl |               | 0           | 0.0 0.0       |
| no buffer to keep pinned count   | 64,345        | 186.2       | 5,849.6       |
| no work - consistent read gets   | 15,393,350    | 44,552.9    | 1,399,395.5   |
| non-idle wait count              | 1,459,851     | 4,225.2     | 132,713.7     |
| non-idle wait time               | 366,207       | 1,059.9     | 33,291.6      |
| opened cursors cumulative        | 82,248        | 238.1       | 7,477.1       |
| parse count (describe)           | 1             | 0.0         | 0.1           |
| parse count (failures)           | 16            | 0.1         | 1.5           |

|                                  |                                   |               |               |
|----------------------------------|-----------------------------------|---------------|---------------|
| parse count (hard)               | 151                               | 0.4           | 13.7          |
| parse count (total)              | 1,719                             | 5.0           | 156.3         |
| parse time cpu                   | 31                                | 0.1           | 2.8           |
| parse time elapsed               | 306                               | 0.9           | 27.8          |
| physical read IO requests        | 15,501,609                        | 44,866.3      | 1,409,237.2   |
| physical read bytes              | 126,989,197,312                   | 367,544,499.3 | 1.1544472E+10 |
| physical read total IO requests  | 15,501,897                        | 44,867.1      | 1,409,263.4   |
| physical read total bytes        | 126,993,883,136                   | 367,558,061.5 | 1.1544898E+10 |
| physical reads                   | 15,501,611                        | 44,866.3      | 1,409,237.4   |
| physical reads cache             | 15,501,611                        | 44,866.3      | 1,409,237.4   |
| physical reads cache prefetch    | 14,048,253                        | 40,659.8      | 1,277,113.9   |
| physical reads direct            | 0                                 | 0.0           | 0.0           |
| physical reads prefetch warmup   | 0                                 | 0.0           | 0.0           |
| physical write IO requests       | 389                               | 1.1           | 35.4          |
| physical write bytes             | 4,112,384                         | 11,902.5      | 373,853.1     |
| physical write total IO requests | 696                               | 2.0           | 63.3          |
| physical write total bytes       | 7,344,640                         | 21,257.6      | 667,694.6     |
| physical write total multi block | 2                                 | 0.0           | 0.2           |
| physical writes                  | 502                               | 1.5           | 45.6          |
| Instance Activity Stats          | DB/Inst: SLOB/SLOB Snaps: 691-692 |               |               |

-> Ordered by statistic name

| Statistic                        | Total     | per Second | per Trans |
|----------------------------------|-----------|------------|-----------|
| physical writes direct           | 18        | 0.1        | 1.6       |
| physical writes from cache       | 484       | 1.4        | 44.0      |
| physical writes non checkpoint   | 207       | 0.6        | 18.8      |
| pinned buffers inspected         | 116,066   | 335.9      | 10,551.5  |
| pinned cursors current           | 1         | 0.0        | 0.1       |
| prefetch warmup blocks aged out  | 0         | 0.0        | 0.0       |
| prefetched blocks aged out befor | 276,733   | 801.0      | 25,157.6  |
| recursive calls                  | 90,963    | 263.3      | 8,269.4   |
| recursive cpu usage              | 62,463    | 180.8      | 5,678.5   |
| redo blocks checksummed by FG (e | 1,346     | 3.9        | 122.4     |
| redo blocks written              | 2,345     | 6.8        | 213.2     |
| redo entries                     | 1,727     | 5.0        | 157.0     |
| redo ordering marks              | 81        | 0.2        | 7.4       |
| redo size                        | 1,073,832 | 3,108.0    | 97,621.1  |
| redo size for direct writes      | 104       | 0.3        | 9.5       |
| redo subscn max counts           | 233       | 0.7        | 21.2      |
| redo synch long waits            | 1         | 0.0        | 0.1       |
| redo synch time                  | 1         | 0.0        | 0.1       |
| redo synch time (usec)           | 5,761     | 16.7       | 523.7     |

|                                  |            |          |             |
|----------------------------------|------------|----------|-------------|
| redo synch writes                | 2          | 0.0      | 0.2         |
| redo wastage                     | 52,296     | 151.4    | 4,754.2     |
| redo write time                  | 14         | 0.0      | 1.3         |
| redo writes                      | 182        | 0.5      | 16.6        |
| rollback changes - undo records  | 2          | 0.0      | 0.2         |
| rollbacks only - consistent read | 1          | 0.0      | 0.1         |
| rows fetched via callback        | 506        | 1.5      | 46.0        |
| session cursor cache hits        | 81,023     | 234.5    | 7,365.7     |
| session logical reads            | 15,465,162 | 44,760.8 | 1,405,923.8 |
| shared hash latch upgrades - no  | 44,324     | 128.3    | 4,029.5     |
| shared hash latch upgrades - wai | 7          | 0.0      | 0.6         |
| sorts (memory)                   | 581        | 1.7      | 52.8        |
| sorts (rows)                     | 7,575      | 21.9     | 688.6       |
| sql area evicted                 | 116        | 0.3      | 10.6        |
| sql area purged                  | 16         | 0.1      | 1.5         |
| summed dirty queue length        | 2,004      | 5.8      | 182.2       |
| switch current to new buffer     | 14         | 0.0      | 1.3         |
| table fetch by rowid             | 15,303,487 | 44,292.8 | 1,391,226.1 |
| table fetch continued row        | 18         | 0.1      | 1.6         |
| table scan blocks gotten         | 279        | 0.8      | 25.4        |
| table scan rows gotten           | 19,122     | 55.3     | 1,738.4     |
| table scans (long tables)        | 0          | 0.0      | 0.0         |
| table scans (short tables)       | 96         | 0.3      | 8.7         |
| total cf enq hold time           | 0          | 0.0      | 0.0         |
| total number of cf enq holders   | 2          | 0.0      | 0.2         |
| total number of times SMON poste | 2          | 0.0      | 0.2         |
| transaction rollbacks            | 1          | 0.0      | 0.1         |
| undo change vector size          | 359,976    | 1,041.9  | 32,725.1    |
| user I/O wait time               | 365,739    | 1,058.6  | 33,249.0    |
| user calls                       | 532        | 1.5      | 48.4        |
| user commits                     | 11         | 0.0      | 1.0         |
| workarea executions - optimal    | 388        | 1.1      | 35.3        |

-----

Instance Activity Stats - Absolute Values DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Statistics with absolute values (should not be diffed)

| Statistic              | Begin Value | End Value   |
|------------------------|-------------|-------------|
| session uga memory     | 11,494,128  | 12,979,960  |
| opened cursors current | 21          | 22          |
| logons current         | 21          | 22          |
| session uga memory max | 290,630,736 | 333,246,584 |

|                            |            |            |
|----------------------------|------------|------------|
| session pga memory         | 40,569,560 | 40,503,920 |
| session pga memory max     | 45,895,032 | 47,664,400 |
| session cursor cache count | 2,023      | 2,713      |

-----

Instance Activity Stats - Thread Activity DB/Inst: SLOB/SLOB Snaps: 691-692  
 -> Statistics identified by '(derived)' come from sources other than SYSSTAT

| Statistic              | Total | per Hour |
|------------------------|-------|----------|
| log switches (derived) | 0     | .00      |

-----

IOStat by Function summary DB/Inst: SLOB/SLOB Snaps: 691-692  
 -> 'Data' columns suffixed with M,G,T,P are in multiples of 1024  
 other columns suffixed with K,M,G,T,P are in multiples of 1000  
 -> ordered by (Data Read + Write) desc

|                 | Reads: | Reqs    | Data    | Writes: | Reqs    | Data    | Waits:  | Avg    |  |
|-----------------|--------|---------|---------|---------|---------|---------|---------|--------|--|
| Function Name   | Data   | per sec | per sec | Data    | per sec | per sec | Count   | Tm(ms) |  |
| Buffer Cache Re | 118.2G | 4.5E+04 | 350.186 | 0M      | 0.0     | 0M      | 1453.2K | 2.0    |  |
| Others          | 4M     | 0.8     | .011577 | 2M      | 0.4     | .005788 | 412     | 0.3    |  |
| DBWR            | 0M     | 0.0     | 0M      | 4M      | 1.1     | .011577 | 0       | N/A    |  |
| LGWR            | 0M     | 0.0     | 0M      | 1M      | 0.5     | .002894 | 184     | 0.5    |  |
| Direct Writes   | 0M     | 0.0     | 0M      | 0M      | 0.0     | 0M      | 0       | N/A    |  |
| TOTAL:          | 118.2G | 4.5E+04 | 350.198 | 7M      | 2.0     | .020260 | 1453.8K | 2.0    |  |

-----

IOStat by Filetype summary DB/Inst: SLOB/SLOB Snaps: 691-692  
 -> 'Data' columns suffixed with M,G,T,P are in multiples of 1024  
 other columns suffixed with K,M,G,T,P are in multiples of 1000  
 -> Small Read and Large Read are average service times, in milliseconds  
 -> Ordered by (Data Read + Write) desc

|               | Reads: | Reqs    | Data    | Writes: | Reqs    | Data    | Small | Large |
|---------------|--------|---------|---------|---------|---------|---------|-------|-------|
| Filetype Name | Data   | per sec | per sec | Data    | per sec | per sec | Read  | Read  |
| Data File     | 118.2G | 4.5E+04 | 350.181 | 4M      | 1.1     | .011577 | 4.8   | N/A   |
| Control File  | 4M     | 0.8     | .011577 | 2M      | 0.4     | .005788 | 0.2   | N/A   |
| Log File      | 0M     | 0.0     | 0M      | 1M      | 0.5     | .002894 | N/A   | N/A   |
| TOTAL:        | 118.2G | 4.5E+04 | 350.192 | 7M      | 2.0     | .020260 | 4.8   | N/A   |

IOStat by Function/Filetype summary DB/Inst: SLOB/SLOB Snaps: 691-692

-> 'Data' columns suffixed with M,G,T,P are in multiples of 1024  
 other columns suffixed with K,M,G,T,P are in multiples of 1000  
 -> Ordered by (Data Read + Write) desc for each function

Reads: Reqs Data Writes: Reqs Data Waits: Avg  
 Data per sec per sec Data per sec per sec Count Tm(ms)

```

-----
Buffer Cache Reads
118.2G 4.5E+04 350.186 0M 0.0 0M 1005.5K 0.8
Buffer Cache Reads (Data File)
118.2G 4.5E+04 350.186 0M 0.0 0M 1005.5K 0.8
Others
4M 0.8 .011577 2M 0.4 .005788 288 0.2
Others (Control File)
4M 0.8 .011577 2M 0.4 .005788 284 0.2
Others (Data File)
0M 0.0 0M 0M 0.0 0M 4 0.0
DBWR
0M 0.0 0M 4M 1.1 .011577 0 N/A
DBWR (Data File)
0M 0.0 0M 4M 1.1 .011577 0 N/A
LGWR
0M 0.0 0M 1M 0.5 .002894 0 N/A
LGWR (Log File)
0M 0.0 0M 1M 0.5 .002894 0 N/A
TOTAL:
118.2G 4.5E+04 350.198 7M 2.0 .020260 1005.8K 0.8
-----
    
```

Tablespace IO Stats DB/Inst: SLOB/SLOB Snaps: 691-692

-> ordered by IOs (Reads + Writes) desc

Tablespace

```

-----
          Av  Av  Av          Av  Buffer  Av Buf
          Reads Reads/s Rd(ms) Blks/Rd  Writes Writes/s  Waits Wt(ms)
-----
IOPS
15,462,835 44,754 0.1 1.0 6 0 0 0.0
SYSAUX
75 0 3.9 1.0 317 1 0 0.0
    
```

```

SYSTEM
      122  0  2.2  1.0      10  0   9  2.2
SYS_UNDOTS
      16  0  7.5  1.0      56  0   0  0.0
-----

```

File IO Stats DB/Inst: SLOB/SLOB Snaps: 691-692  
-> ordered by Tablespace, File

```

Tablespace      Filename
-----
      Av  Av  Av          Av  Buffer Av Buf
      Reads Reads/s Rd(ms) Blks/Rd   Writes Writes/s  Waits Wt(ms)
-----
IOPS            /databases/SLOB/SLOB/datafile/o1_mf_iops_7m3tc6g1_.d
15,462,835 44,754 0.1 1.0      6  0   0  0.0
SYS_AUX        /databases/SLOB/SLOB/datafile/o1_mf_sysaux_7m3sxyrn_
  75  0  3.9  1.0     317  1   0  0.0
SYSTEM        /databases/SLOB/SLOB/datafile/o1_mf_system_7m3sxwoz_
 122  0  2.2  1.0      10  0   9  2.2
SYS_UNDOTS    /databases/SLOB/SLOB/datafile/o1_mf_sys_undo_7m3sy1d
  16  0  7.5  1.0      56  0   0  0.0
-----

```

Buffer Pool Statistics DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Standard block size Pools D: default, K: keep, R: recycle  
-> Default Pools for other block sizes: 2k, 4k, 8k, 16k, 32k

```

      Free Writ Buffer
      Number of Pool  Buffer  Physical  Physical  Buff Comp  Busy
P  Buffers Hit%      Gets   Reads   Writes  Wait Wait  Waits
-----
D   3,928 -0 15,461,211 15,496,259  484  0  0   9
-----

```

Checkpoint Activity DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Total Physical Writes: 502

```

      Other  Autotune  Thread
      MTTR  Log Size  Log Ckpt  Settings  Ckpt  Ckpt
      Writes  Writes  Writes  Writes  Writes  Writes
-----
      0  0  0  0  214  0

```

-----  
Instance Recovery Stats DB/Inst: SLOB/SLOB Snaps: 691-692  
-> B: Begin Snapshot, E: End Snapshot

|        | Estd |          |          |          | Log Ckpt |          | Log Ckpt | Opt      | RAC       |      |
|--------|------|----------|----------|----------|----------|----------|----------|----------|-----------|------|
| Target | Estd | Log Ckpt | Log Ckpt | Actual   | Target   | Log Sz   | Timeout  | Interval | Log Avail |      |
| (s)    | (s)  | Estd IOs | RedoBlks | RedoBlks | RedoBlks | RedoBlks | RedoBlks | RedoBlks | Sz(M)     | Time |
| B      | 0    | 7        | 184      | 647      | 80       | 1.36E+07 | 80       | N/A      | N/A       | N/A  |
| E      | 0    | 7        | 185      | 943      | 2515     | 1.36E+07 | 2515     | N/A      | N/A       | N/A  |

-----  
MTTR Advisory DB/Inst: SLOB/SLOB Snap: 692

No data exists for this section of the report.

-----  
Buffer Pool Advisory DB/Inst: SLOB/SLOB Snap: 692

-> Only rows with estimated physical reads >0 are displayed

-> ordered by Block Size, Buffers For Estimate

|           | Est    |             | Phys   |             | Estimated         |          | Est     |  |
|-----------|--------|-------------|--------|-------------|-------------------|----------|---------|--|
| Size for  | Size   | Buffers     | Read   | Phys        | Reads             | Est Phys | %DBtime |  |
| P Est (M) | Factor | (thousands) | Factor | (thousands) | Read Time for Rds |          |         |  |
| D         | 4      | .1          | 0      | 1.1         | 36,817            | 1        | 2110.0  |  |
| D         | 8      | .3          | 1      | 1.0         | 36,523            | 1        | 2094.0  |  |
| D         | 12     | .4          | 1      | 1.0         | 36,238            | 1        | 2077.0  |  |
| D         | 16     | .5          | 2      | 1.0         | 35,961            | 1        | 2061.0  |  |
| D         | 20     | .6          | 2      | 1.0         | 35,710            | 1        | 2047.0  |  |
| D         | 24     | .8          | 3      | 1.0         | 35,443            | 1        | 2032.0  |  |
| D         | 28     | .9          | 3      | 1.0         | 35,157            | 1        | 2015.0  |  |
| D         | 32     | 1.0         | 4      | 1.0         | 34,848            | 1        | 1998.0  |  |
| D         | 36     | 1.1         | 4      | 1.0         | 34,516            | 1        | 1979.0  |  |
| D         | 40     | 1.3         | 5      | 1.0         | 34,172            | 1        | 1959.0  |  |
| D         | 44     | 1.4         | 5      | 1.0         | 33,826            | 1        | 1939.0  |  |
| D         | 48     | 1.5         | 6      | 1.0         | 33,478            | 1        | 1919.0  |  |
| D         | 52     | 1.6         | 6      | 1.0         | 33,140            | 1        | 1900.0  |  |
| D         | 56     | 1.8         | 7      | 0.9         | 32,811            | 1        | 1881.0  |  |
| D         | 60     | 1.9         | 7      | 0.9         | 32,481            | 1        | 1862.0  |  |

D      64   2.0            8   0.9      32,160            1 1844.0

---

PGA Aggr Summary

DB/Inst: SLOB/SLOB Snaps: 691-692

-> PGA cache hit % - percentage of W/A (WorkArea) data processed only in-memory

PGA Cache Hit %   W/A MB Processed   Extra W/A MB Read/Written

---

100.0            29            0

---

PGA Aggr Target Stats

DB/Inst: SLOB/SLOB Snaps: 691-692

-> B: Begin Snap   E: End Snap (rows identified with B or E contain data which is absolute i.e. not diffed over the interval)

-> Auto PGA Target - actual workarea memory target

-> W/A PGA Used    - amount of memory used for all Workareas (manual + auto)

-> %PGA W/A Mem    - percentage of PGA memory allocated to workareas

-> %Auto W/A Mem   - percentage of workarea memory controlled by Auto Mem Mgmt

-> %Man W/A Mem    - percentage of workarea memory under manual control

|           |           |          | %PGA    | %Auto | %Man |     |     |          |     |
|-----------|-----------|----------|---------|-------|------|-----|-----|----------|-----|
| PGA Aggr  | Auto PGA  | PGA Mem  | W/A PGA | W/A   | W/A  | W/A | W/A | Global   | Mem |
| Target(M) | Target(M) | Alloc(M) | Used(M) | Mem   | Mem  | Mem | Mem | Bound(K) |     |
| B         | 63        | 24       | 49.5    | 0.0   | .0   | .0  | .0  | 12,943   |     |
| E         | 63        | 16       | 52.9    | 0.0   | .0   | .0  | .0  | 12,943   |     |

---

PGA Aggr Target Histogram

DB/Inst: SLOB/SLOB Snaps: 691-692

-> Optimal Executions are purely in-memory operations

Low    High  
 Optimal Optimal    Total Execs    Optimal Execs    1-Pass Execs    M-Pass Execs

---

|      |       |     |     |   |   |
|------|-------|-----|-----|---|---|
| 2K   | 4K    | 353 | 353 | 0 | 0 |
| 64K  | 128K  | 8   | 8   | 0 | 0 |
| 512K | 1024K | 24  | 24  | 0 | 0 |
| 4M   | 8M    | 2   | 2   | 0 | 0 |

---

PGA Memory Advisory

DB/Inst: SLOB/SLOB Snap: 692

-> When using Auto Memory Mgmt, minimally choose a pga\_aggregate\_target value where Estd PGA Overallloc Count is 0

| PGA Target Est (MB) | Size Factr | Estd Extra W/A MB Processed | Estd P W/A MB Written to Disk | Estd PGA Read/ Hit % | Cache Overalllo Count | Estd Time |
|---------------------|------------|-----------------------------|-------------------------------|----------------------|-----------------------|-----------|
| 16                  | 0.3        | 1,679.1                     | 0.0                           | 100.0                | 2                     | 2,518     |
| 32                  | 0.5        | 1,679.1                     | 0.0                           | 100.0                | 2                     | 2,518     |
| 47                  | 0.8        | 1,679.1                     | 0.0                           | 100.0                | 1                     | 2,518     |
| 63                  | 1.0        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 76                  | 1.2        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 88                  | 1.4        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 101                 | 1.6        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 114                 | 1.8        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 126                 | 2.0        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 190                 | 3.0        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 253                 | 4.0        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 379                 | 6.0        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |
| 506                 | 8.0        | 1,679.1                     | 0.0                           | 100.0                | 0                     | 2,518     |

Shared Pool Advisory

DB/Inst: SLOB/SLOB Snap: 692

-> SP: Shared Pool Est LC: Estimated Library Cache Factr: Factor

-> Note there is often a 1:Many correlation between a single logical object in the Library Cache, and the physical number of memory objects associated with it. Therefore comparing the number of Lib Cache objects (e.g. in v\$librarycache), with the number of Lib Cache Memory Objects is invalid.

| Shared Pool Size(M) | SP Size Factr | Est LC (M) | Est LC Mem Obj | Est LC Saved (s) | Est LC Saved Factr | Est LC Load Time (s) | Est LC Load Time Factr | Est LC Mem Obj Hits (K) |
|---------------------|---------------|------------|----------------|------------------|--------------------|----------------------|------------------------|-------------------------|
| 256                 | 1.0           | 23         | 1,292          | 336              | 1.0                | 13                   | 1.0                    | 99                      |
| 284                 | 1.1           | 51         | 2,428          | 344              | 1.0                | 5                    | .4                     | 120                     |
| 312                 | 1.2           | 79         | 3,195          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 340                 | 1.3           | 94         | 3,889          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 368                 | 1.4           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 396                 | 1.5           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 424                 | 1.7           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 452                 | 1.8           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 480                 | 1.9           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 508                 | 2.0           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |
| 536                 | 2.1           | 96         | 3,997          | 347              | 1.0                | 2                    | .2                     | 121                     |

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SGA Target Advisory DB/Inst: SLOB/SLOB Snap: 692

No data exists for this section of the report.  
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Streams Pool Advisory DB/Inst: SLOB/SLOB Snap: 692

No data exists for this section of the report.  
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Java Pool Advisory DB/Inst: SLOB/SLOB Snap: 692

No data exists for this section of the report.  
-----

Buffer Wait Statistics DB/Inst: SLOB/SLOB Snaps: 691-692  
-> ordered by wait time desc, waits desc

| Class      | Waits | Total Wait Time (s) | Avg Time (ms) |
|------------|-------|---------------------|---------------|
| data block | 9     | 0                   | 2             |

-----

Enqueue Activity DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
-----

Undo Segment Summary DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
-----

Undo Segment Stats DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
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Latch Activity DB/Inst: SLOB/SLOB Snaps: 691-692  
-> "Get Requests", "Pct Get Miss" and "Avg Slps/Miss" are statistics for  
willing-to-wait latch get requests

-> "NoWait Requests", "Pct NoWait Miss" are for no-wait latch get requests  
 -> "Pct Misses" for both should be very close to 0.0

| Latch Name               | Pct Avg Wait |          |            | Pct        |        |      |
|--------------------------|--------------|----------|------------|------------|--------|------|
|                          | Get          | Get Slps | Miss /Miss | NoWait (s) | NoWait | Miss |
| AQ deq hash table latch  |              | 1        | 0.0        | 0          | 0      | N/A  |
| ASM db client latch      | 230          |          | 0.0        | 0          | 0      | N/A  |
| ASM map operation hash t |              | 1        | 0.0        | 0          | 0      | N/A  |
| ASM network state latch  |              | 5        | 0.0        | 0          | 0      | N/A  |
| AWR Alerted Metric Eleme |              | 2,552    | 0.0        | 0          | 0      | N/A  |
| Change Notification Hash |              | 116      | 0.0        | 0          | 0      | N/A  |
| Consistent RBA           | 181          |          | 0.0        | 0          | 0      | N/A  |
| DML lock allocation      | 662          |          | 0.0        | 0          | 0      | N/A  |
| Event Group Locks        |              | 19       | 0.0        | 0          | 0      | N/A  |
| FOB s.o list latch       | 56           |          | 0.0        | 0          | 0      | N/A  |
| File State Object Pool P |              | 1        | 0.0        | 0          | 0      | N/A  |
| I/O Staticstics latch    | 1            |          | 0.0        | 0          | 0      | N/A  |
| IPC stats buffer allocat | 1            |          | 0.0        | 0          | 0      | N/A  |
| In memory undo latch     | 132          |          | 0.0        | 0          | 11     | 0.0  |
| JS Sh mem access         |              | 1        | 0.0        | 0          | 0      | N/A  |
| JS queue access latch    |              | 1        | 0.0        | 0          | 0      | N/A  |
| JS slv state obj latch   | 1            |          | 0.0        | 0          | 0      | N/A  |
| KFC FX Hash Latch        |              | 1        | 0.0        | 0          | 0      | N/A  |
| KFC Hash Latch           | 1            |          | 0.0        | 0          | 0      | N/A  |
| KFCL LE Freelist         | 1            |          | 0.0        | 0          | 0      | N/A  |
| KGNFS-NFS:SHM structure  |              | 1        | 0.0        | 0          | 0      | N/A  |
| KGNFS-NFS:SVR LIST       |              | 1        | 0.0        | 0          | 0      | N/A  |
| KJC message pool free li |              | 1        | 0.0        | 0          | 0      | N/A  |
| KJCT flow control latch  | 1            |          | 0.0        | 0          | 0      | N/A  |
| KMG MMAN ready and start |              | 115      | 0.0        | 0          | 0      | N/A  |
| KTF sga latch            | 2            |          | 0.0        | 0          | 110    | 0.0  |
| Locator state objects po |              | 1        | 0.0        | 0          | 0      | N/A  |
| Lsod array latch         | 1            |          | 0.0        | 0          | 0      | N/A  |
| MQL Tracking Latch       |              | 0        | N/A        | 0          | 7      | 0.0  |
| Memory Management Latch  |              | 1        | 0.0        | 0          | 115    | 0.0  |
| Memory Queue             | 1            |          | 0.0        | 0          | 0      | N/A  |
| Memory Queue Message Sub |              | 1        | 0.0        | 0          | 0      | N/A  |
| Memory Queue Message Sub |              | 1        | 0.0        | 0          | 0      | N/A  |
| Memory Queue Message Sub |              | 1        | 0.0        | 0          | 0      | N/A  |
| Memory Queue Message Sub |              | 1        | 0.0        | 0          | 0      | N/A  |
| Memory Queue Subscriber  |              | 1        | 0.0        | 0          | 0      | N/A  |

|                          |       |     |   |     |     |
|--------------------------|-------|-----|---|-----|-----|
| MinActiveScn Latch       | 4     | 0.0 | 0 | 0   | N/A |
| Mutex                    | 1     | 0.0 | 0 | 0   | N/A |
| Mutex Stats              | 1     | 0.0 | 0 | 0   | N/A |
| OS process               | 58    | 0.0 | 0 | 0   | N/A |
| OS process allocation    | 727   | 0.0 | 0 | 0   | N/A |
| OS process: request allo | 35    | 0.0 | 0 | 0   | N/A |
| PL/SQL warning settings  | 383   | 0.0 | 0 | 0   | N/A |
| PX hash array latch      | 1     | 0.0 | 0 | 0   | N/A |
| QMT                      | 1     | 0.0 | 0 | 0   | N/A |
| Real-time plan statistic | 147   | 0.0 | 0 | 0   | N/A |
| SGA IO buffer pool latch | 13    | 0.0 | 0 | 13  | 0.0 |
| SGA blob parent          | 1     | 0.0 | 0 | 0   | N/A |
| SGA bucket locks         | 1     | 0.0 | 0 | 0   | N/A |
| SGA heap locks           | 1     | 0.0 | 0 | 0   | N/A |
| SGA pool locks           | 1     | 0.0 | 0 | 0   | N/A |
| SQL memory manager latch | 1     | 0.0 | 0 | 115 | 0.0 |
| SQL memory manager worka | 7,925 | 0.0 | 0 | 0   | N/A |
| Shared B-Tree            | 13    | 0.0 | 0 | 0   | N/A |
| Streams Generic          | 1     | 0.0 | 0 | 0   | N/A |
| Testing                  | 1     | 0.0 | 0 | 0   | N/A |
| Token Manager            | 1     | 0.0 | 0 | 0   | N/A |
| WCR: sync                | 1     | 0.0 | 0 | 0   | N/A |
| Write State Object Pool  | 1     | 0.0 | 0 | 0   | N/A |
| X\$KSFQP                 | 1     | 0.0 | 0 | 0   | N/A |

Latch Activity DB/Inst: SLOB/SLOB Snaps: 691-692  
-> "Get Requests", "Pct Get Miss" and "Avg Slps/Miss" are statistics for willing-to-wait latch get requests  
-> "NoWait Requests", "Pct NoWait Miss" are for no-wait latch get requests  
-> "Pct Misses" for both should be very close to 0.0

| Latch Name              | Get Requests | Pct Get | Avg Slps | Wait Time /Miss | Pct NoWait (s) | NoWait Requests | NoWait Miss |
|-------------------------|--------------|---------|----------|-----------------|----------------|-----------------|-------------|
| XDB NFS Security Latch  |              |         | 1        | 0.0             | 0              | 0               | N/A         |
| XDB unused session pool |              |         | 1        | 0.0             | 0              | 0               | N/A         |
| XDB used session pool   |              |         | 1        | 0.0             | 0              | 0               | N/A         |
| active checkpoint queue |              |         | 257      | 0.0             | 0              | 0               | N/A         |
| active service list     | 330          | 0.0     |          | 0               | 720            | 0.0             |             |
| begin backup scn array  |              |         | 2        | 0.0             | 0              | 0               | N/A         |
| buffer pool             | 1            | 0.0     |          | 0               | 0              | N/A             |             |
| business card           |              |         | 1        | 0.0             | 0              | 0               | N/A         |
| cache buffer handles    |              |         | 109      | 0.9             | 0.0            | 0               | N/A         |

|                          |            |     |     |     |            |     |
|--------------------------|------------|-----|-----|-----|------------|-----|
| cache buffers chains     | 46,415,193 | 0.0 | 0.2 | 1   | 30,172,321 | 0.1 |
| cache buffers lru chain  | 66,881     | 1.8 | 0.0 | 0   | 15,685,112 | 3.0 |
| cache table scan latch   | 2          | 0.0 | 0   | 2   | 0.0        |     |
| call allocation          | 300        | 0.0 | 0   | 0   | N/A        |     |
| cas latch                | 1          | 0.0 | 0   | 0   | N/A        |     |
| change notification clie | 1          | 0.0 | 0   | 0   | N/A        |     |
| channel handle pool latc | 36         | 0.0 | 0   | 0   | N/A        |     |
| channel operations paren | 2,133      | 0.0 | 0   | 0   | N/A        |     |
| checkpoint queue latch   | 22,628     | 0.0 | 0   | 467 | 0.0        |     |
| client/application info  | 200        | 0.0 | 0   | 0   | N/A        |     |
| compile environment latc | 18         | 0.0 | 0   | 0   | N/A        |     |
| cp cmon/server latch     | 1          | 0.0 | 0   | 0   | N/A        |     |
| cp pool latch            | 1          | 0.0 | 0   | 0   | N/A        |     |
| cp server hash latch     | 1          | 0.0 | 0   | 0   | N/A        |     |
| cp sga latch             | 5          | 0.0 | 0   | 0   | N/A        |     |
| cvmap freelist lock      | 1          | 0.0 | 0   | 0   | N/A        |     |
| deferred cleanup latch   | 5          | 0.0 | 0   | 0   | N/A        |     |
| dml lock allocation      | 7          | 0.0 | 0   | 0   | N/A        |     |
| done queue latch         | 1          | 0.0 | 0   | 0   | N/A        |     |
| dummy allocation         | 36         | 0.0 | 0   | 0   | N/A        |     |
| enqueue hash chains      | 2,023      | 0.0 | 0   | 0   | N/A        |     |
| enqueues                 | 902        | 0.0 | 0   | 0   | N/A        |     |
| fifth spare latch        | 1          | 0.0 | 0   | 0   | N/A        |     |
| file cache latch         | 15         | 0.0 | 0   | 0   | N/A        |     |
| flashback copy           | 1          | 0.0 | 0   | 0   | N/A        |     |
| fourth Audit Vault latch | 1          | 0.0 | 0   | 0   | N/A        |     |
| gc element               | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs commit scn state     | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs partitioned table ha | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs pcm hashed value buc | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs resource freelist    | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs resource hash        | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs resource scan list   | 1          | 0.0 | 0   | 0   | N/A        |     |
| gcs shadows freelist     | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges domain table         | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges enqueue table freeli | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges group table          | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges process hash list    | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges process parent latch | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges resource hash list   | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges resource scan list   | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges resource table freel | 1          | 0.0 | 0   | 0   | N/A        |     |
| ges value block free lis | 1          | 0.0 | 0   | 0   | N/A        |     |

|                          |     |     |   |       |     |
|--------------------------|-----|-----|---|-------|-----|
| global KZLD latch for me | 16  | 0.0 | 0 | 0     | N/A |
| global tx hash mapping   | 1   | 0.0 | 0 | 0     | N/A |
| granule operation        | 1   | 0.0 | 0 | 0     | N/A |
| hash table column usage  | 109 | 0.0 | 0 | 2,874 | 0.0 |
| hash table modification  | 51  | 0.0 | 0 | 0     | N/A |
| heartbeat check          | 1   | 0.0 | 0 | 0     | N/A |
| intra txn parallel recov | 1   | 0.0 | 0 | 0     | N/A |
| io pool granule metadata | 1   | 0.0 | 0 | 0     | N/A |

Latch Activity DB/Inst: SLOB/SLOB Snaps: 691-692

-> "Get Requests", "Pct Get Miss" and "Avg Slps/Miss" are statistics for willing-to-wait latch get requests

-> "NoWait Requests", "Pct NoWait Miss" are for no-wait latch get requests

-> "Pct Misses" for both should be very close to 0.0

| Latch Name               | Pct Avg Wait |          |            | Pct        |                 |             |
|--------------------------|--------------|----------|------------|------------|-----------------|-------------|
|                          | Get Requests | Get Miss | Slps /Miss | NoWait (s) | NoWait Requests | NoWait Miss |
| job workq parent latch   | 1            | 0.0      | 0          | 0          | N/A             |             |
| k2q lock allocation      | 1            | 0.0      | 0          | 0          | N/A             |             |
| kdlx hb parent latch     | 1            | 0.0      | 0          | 0          | N/A             |             |
| kgb parent               | 1            | 0.0      | 0          | 0          | N/A             |             |
| kgnfs mount latch        | 1            | 0.0      | 0          | 0          | N/A             |             |
| kokc descriptor allocati | 4            | 0.0      | 0          | 0          | N/A             |             |
| ksfv messages            | 1            | 0.0      | 0          | 0          | N/A             |             |
| ksim group membership ca |              | 1        | 0.0        | 0          | 0               | N/A         |
| kss move lock            | 3            | 0.0      | 0          | 0          | N/A             |             |
| ksuosstats global area   | 26           | 0.0      | 0          | 0          | N/A             |             |
| ksv allocation latch     | 8            | 0.0      | 0          | 0          | N/A             |             |
| ksv class latch          | 3            | 0.0      | 0          | 0          | N/A             |             |
| ksv msg queue latch      | 1            | 0.0      | 0          | 0          | N/A             |             |
| ksz_so allocation latch  | 35           | 0.0      | 0          | 0          | N/A             |             |
| ktm global data          | 11           | 0.0      | 0          | 0          | N/A             |             |
| kwqbsn:qsga              | 12           | 0.0      | 0          | 0          | N/A             |             |
| lgwr LWN SCN             | 278          | 0.0      | 0          | 0          | N/A             |             |
| list of block allocation | 22           | 0.0      | 0          | 0          | N/A             |             |
| loader state object free | 2            | 0.0      | 0          | 0          | N/A             |             |
| lob segment dispenser la | 1            | 0.0      | 0          | 0          | N/A             |             |
| lob segment hash table l | 1            | 0.0      | 0          | 0          | N/A             |             |
| lob segment query latch  | 1            | 0.0      | 0          | 0          | N/A             |             |
| lock DBA buffer during m | 1            | 0.0      | 0          | 0          | N/A             |             |
| logical standby cache    | 1            | 0.0      | 0          | 0          | N/A             |             |
| logminer context allocat | 1            | 0.0      | 0          | 0          | N/A             |             |

|                          |            |     |     |       |        |     |  |
|--------------------------|------------|-----|-----|-------|--------|-----|--|
| logminer work area       | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| longop free list parent  | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| mapped buffers lru chain | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| message pool operations  | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| messages                 | 4,005      | 0.0 | 0   | 0     | N/A    |     |  |
| mostly latch-free SCN    | 281        | 0.0 | 0   | 0     | N/A    |     |  |
| msg queue latch          | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| multiblock read objects  | 907,200    | 0.4 | 0.2 | 0     | 0      | N/A |  |
| name-service namespace b | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| ncodef allocation latch  | 5          | 0.0 | 0   | 0     | N/A    |     |  |
| object queue header heap | 68,339     | 0.0 | 0   | 0     | 66,586 | 0.0 |  |
| object queue header oper | 31,073,167 | 0.0 | 0.1 | 0     | 0      | N/A |  |
| object stats modificatio | 82         | 0.0 | 0   | 0     | N/A    |     |  |
| parallel query alloc buf | 49         | 0.0 | 0   | 0     | N/A    |     |  |
| parallel query stats     | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| parameter list           | 18         | 0.0 | 0   | 0     | N/A    |     |  |
| parameter table manageme | 52         | 0.0 | 0   | 0     | 0      | N/A |  |
| peshm                    | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| pesom_free_list          | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| pesom_hash_node          | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| post/wait queue          | 3          | 0.0 | 0   | 1     | 0.0    |     |  |
| process allocation       | 36         | 2.8 | 1.0 | 0     | 18     | 0.0 |  |
| process group creation   | 35         | 0.0 | 0   | 0     | 0      | N/A |  |
| process queue            | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| process queue reference  | 1          | 0.0 | 0   | 0     | 0      | N/A |  |
| qmn task queue latch     | 48         | 0.0 | 0   | 0     | N/A    |     |  |
| query server freelists   | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| queued dump request      | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| queuing load statistics  | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| recovery domain hash lis | 1          | 0.0 | 0   | 0     | N/A    |     |  |
| redo allocation          | 760        | 0.1 | 0.0 | 0     | 1,701  | 0.1 |  |
| redo copy                | 1          | 0.0 | 0   | 1,701 | 2.8    |     |  |
| redo writing             | 1,045      | 0.0 | 0   | 0     | N/A    |     |  |
| resmgr group change latc | 34         | 0.0 | 0   | 0     | N/A    |     |  |
| resmgr:active threads    | 36         | 0.0 | 0   | 0     | N/A    |     |  |

Latch Activity DB/Inst: SLOB/SLOB Snaps: 691-692

-> "Get Requests", "Pct Get Miss" and "Avg Slps/Miss" are statistics for willing-to-wait latch get requests

-> "NoWait Requests", "Pct NoWait Miss" are for no-wait latch get requests

-> "Pct Misses" for both should be very close to 0.0

|     | Pct | Avg  | Wait |        | Pct    |
|-----|-----|------|------|--------|--------|
| Get | Get | Slps | Time | NoWait | NoWait |

| Latch Name               | Requests  | Miss | /Miss | (s) | Requests  | Miss |
|--------------------------|-----------|------|-------|-----|-----------|------|
| resmgr:actses change gro | 19        | 0.0  |       | 0   | 0         | N/A  |
| resmgr:actses change sta | 1         | 0.0  |       | 0   | 0         | N/A  |
| resmgr:free threads list | 35        | 0.0  |       | 0   | 0         | N/A  |
| resmgr:plan CPU method   | 1         | 0.0  |       | 0   | 0         | N/A  |
| resmgr:resource group CP | 1         | 0.0  |       | 0   | 0         | N/A  |
| resmgr:schema config     | 1         | 0.0  |       | 0   | 0         | N/A  |
| resmgr:session queuing   | 1         | 0.0  |       | 0   | 0         | N/A  |
| rm cas latch             | 1         | 0.0  |       | 0   | 0         | N/A  |
| row cache objects        | 26,254    | 1.2  | 0.1   | 0   | 196       | 0.5  |
| second Audit Vault latch | 1         | 0.0  |       | 0   | 0         | N/A  |
| second spare latch       | 1         | 0.0  |       | 0   | 0         | N/A  |
| sequence cache           | 70        | 0.0  |       | 0   | 0         | N/A  |
| session allocation       | 241       | 0.0  |       | 0   | 208       | 0.0  |
| session idle bit         | 1,252     | 0.0  |       | 0   | 0         | N/A  |
| session queue latch      | 1         | 0.0  |       | 0   | 0         | N/A  |
| session state list latch | 8         | 0.0  |       | 0   | 0         | N/A  |
| session switching        | 91        | 0.0  |       | 0   | 0         | N/A  |
| session timer            | 116       | 0.0  |       | 0   | 0         | N/A  |
| shared pool              | 79,716    | 0.9  | 0.1   | 0   | 0         | N/A  |
| shared pool sim alloc    | 8         | 0.0  |       | 0   | 0         | N/A  |
| shared pool simulator    | 1,400     | 0.0  |       | 0   | 0         | N/A  |
| sim partition latch      | 1         | 0.0  |       | 0   | 0         | N/A  |
| simulator hash latch     | 3,744,474 | 0.0  | 0.1   | 0   | 0         | N/A  |
| simulator lru latch      | 254       | 0.0  |       | 0   | 1,936,398 | 0.1  |
| sort extent pool         | 10        | 0.0  |       | 0   | 0         | N/A  |
| space background state o | 1         | 0.0  |       | 0   | 0         | N/A  |
| space background task la | 280       | 0.0  |       | 0   | 232       | 0.0  |
| state object free list   | 2         | 0.0  |       | 0   | 0         | N/A  |
| statistics aggregation   | 560       | 0.0  |       | 0   | 0         | N/A  |
| tablespace key chain     | 1         | 0.0  |       | 0   | 0         | N/A  |
| temp lob duration state  | 2         | 0.0  |       | 0   | 0         | N/A  |
| test excl. parent I0     | 1         | 0.0  |       | 0   | 0         | N/A  |
| test excl. parent2 I0    | 1         | 0.0  |       | 0   | 0         | N/A  |
| third spare latch        | 1         | 0.0  |       | 0   | 0         | N/A  |
| threshold alerts latch   | 6         | 0.0  |       | 0   | 0         | N/A  |
| trace latch              | 9         | 0.0  |       | 0   | 0         | N/A  |
| transaction allocation   | 17        | 0.0  |       | 0   | 0         | N/A  |
| undo global data         | 898       | 0.0  |       | 0   | 0         | N/A  |
| virtual circuit buffers  | 1         | 0.0  |       | 0   | 0         | N/A  |
| virtual circuit holder   | 1         | 0.0  |       | 0   | 0         | N/A  |
| virtual circuit queues   | 1         | 0.0  |       | 0   | 0         | N/A  |

Latch Sleep Breakdown

DB/Inst: SLOB/SLOB Snaps: 691-692

-> ordered by misses desc

| Latch Name                 | Get        |        | Spin   |  | Gets   |
|----------------------------|------------|--------|--------|--|--------|
|                            | Requests   | Misses | Sleeps |  |        |
| cache buffers chains       | 46,415,193 | 17,366 | 3,926  |  | 13,689 |
| multiblock read objects    | 907,200    | 3,489  | 651    |  | 2,877  |
| cache buffers lru chain    | 66,881     | 1,196  | 23     |  | 1,173  |
| simulator hash latch       | 3,744,474  | 986    | 95     |  | 900    |
| shared pool                | 79,716     | 706    | 89     |  | 621    |
| object queue header operat | 31,073,167 | 492    | 59     |  | 436    |
| row cache objects          | 26,254     | 319    | 36     |  | 286    |
| process allocation         | 36         | 1      | 1      |  | 0      |

Latch Miss Sources

DB/Inst: SLOB/SLOB Snaps: 691-692

-> only latches with sleeps are shown

-> ordered by name, sleeps desc

| Latch Name               | Where                      | NoWait | Waiter |        | Sleeps |
|--------------------------|----------------------------|--------|--------|--------|--------|
|                          |                            | Misses | Sleeps | Sleeps |        |
| cache buffers chains     | kcbzibmlt: multi-block rea | 0      | 2,527  | 0      |        |
| cache buffers chains     | kcbzgb: scan from tail. no | 0      | 809    | 0      |        |
| cache buffers chains     | kcbgtcr: fast path (cr pin | 0      | 337    | 2,098  |        |
| cache buffers chains     | kcbzibmlt: finish free buf | 0      | 212    | 1,762  |        |
| cache buffers chains     | kcbgtcr_2                  | 0      | 211    | 60     |        |
| cache buffers chains     | kcbrls: fast release       | 0      | 59     | 157    |        |
| cache buffers chains     | kcbzib: finish processing  | 0      | 49     | 95     |        |
| cache buffers chains     | kcbrls_2                   | 0      | 17     | 70     |        |
| cache buffers chains     | kcbgtcr_1                  | 0      | 16     | 0      |        |
| cache buffers chains     | kcbgtcr: kslbegin shared   | 0      | 12     | 2      |        |
| cache buffers chains     | kcbgtcr: fast path         | 0      | 9      | 14     |        |
| cache buffers chains     | kcbgtcr: kslbegin excl     | 0      | 4      | 6      |        |
| cache buffers chains     | kcbgcur_2                  | 0      | 1      | 0      |        |
| cache buffers lru chain  | kcbzgws                    | 0      | 23     | 0      |        |
| multiblock read objects  | kcbzibmlt                  | 0      | 368    | 275    |        |
| multiblock read objects  | kcbzibmlt: normal mbr free | 0      | 283    | 376    |        |
| object queue header oper | kcbo_link_q:reget          | 0      | 49     | 0      |        |
| object queue header oper | kcbo_link_q                | 0      | 14     | 1      |        |

|                                                |  |   |    |    |
|------------------------------------------------|--|---|----|----|
| object queue header oper kcbo_unlink_q         |  | 0 | 2  | 58 |
| object queue header oper kcbo_switch_q_bg      |  | 0 | 1  | 1  |
| process allocation ksucrp:1                    |  | 0 | 1  | 0  |
| row cache objects kqreqd: reget                |  | 0 | 14 | 0  |
| row cache objects kqrpre: find obj             |  | 0 | 11 | 17 |
| row cache objects kqreqd                       |  | 0 | 6  | 9  |
| row cache objects kqrso                        |  | 0 | 5  | 1  |
| shared pool kghalo                             |  | 0 | 42 | 34 |
| shared pool kghupr1                            |  | 0 | 33 | 46 |
| shared pool kghalp                             |  | 0 | 8  | 6  |
| shared pool kghfre                             |  | 0 | 2  | 1  |
| shared pool kghfrunp: alloc: wait              |  | 0 | 2  | 0  |
| shared pool kgh_heap_sizes                     |  | 0 | 1  | 1  |
| shared pool kghasp                             |  | 0 | 1  | 1  |
| simulator hash latch kcbs_lookup_setid: lookup |  | 0 | 34 | 30 |
| simulator hash latch kcbsacc: insert dba       |  | 0 | 29 | 0  |
| simulator hash latch kcbsacc: lookup dba       |  | 0 | 17 | 27 |
| simulator hash latch kcbsacc: remove dba       |  | 0 | 15 | 38 |

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Mutex Sleep Summary DB/Inst: SLOB/SLOB Snaps: 691-692  
-> ordered by number of sleeps desc

| Mutex Type    | Location            | Wait   |           |
|---------------|---------------------|--------|-----------|
|               |                     | Sleeps | Time (ms) |
| Cursor Pin    | kkslce [KKSCHLPIN2] | 1,407  | 1,530     |
| Library Cache | kgllkd1 85          | 31     | 46        |
| Library Cache | kgldgn2 106         | 21     | 22        |
| Library Cache | kgllkc1 57          | 10     | 12        |
| Library Cache | kglpin1 4           | 10     | 20        |
| Library Cache | kgllka3 82          | 9      | 11        |
| Library Cache | kgldgn1 62          | 6      | 3         |
| Library Cache | kglpna1 90          | 6      | 14        |
| Library Cache | kglpnd1 95          | 6      | 11        |
| Library Cache | kgldtin1 42         | 5      | 11        |
| Library Cache | kglget2 2           | 5      | 1         |
| Library Cache | kglati1 45          | 4      | 0         |
| Library Cache | kgInti1 46          | 4      | 11        |
| Library Cache | kgllld2 112         | 2      | 0         |
| Library Cache | kgIUpgradeLock 119  | 1      | 0         |
| Library Cache | kglget1 1           | 1      | 1         |
| Library Cache | kgIhbh1 63          | 1      | 0         |

|               |                   |               |   |    |   |   |
|---------------|-------------------|---------------|---|----|---|---|
| Library Cache | kglini1           | 32            | 1 | 0  |   |   |
| Library Cache | kgllal3           | 111           | 1 | 11 |   |   |
| Library Cache | kglobd1           | 75            | 1 | 5  |   |   |
| Cursor Parent | kkscsAddChildNode | [KKSPRTLOC34] |   |    | 1 | 0 |
| Cursor Parent | kkscsPruneChild   | [KKSPRTLOC35] |   |    | 1 | 0 |
| Cursor Pin    | kksfbc            | [KKSCHLFSP2]  | 1 | 9  |   |   |

Parent Latch Statistics DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Child Latch Statistics DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Segments by Logical Reads DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total Logical Reads: 15,465,162

-> Captured Segments account for 100.0% of Total

| Owner  | Tablespace Name | Subobject Object Name | Obj. Name | Logical Type | Reads | %Total |
|--------|-----------------|-----------------------|-----------|--------------|-------|--------|
| USER1  | IOPS            | CF1                   | TABLE     | 1,275,008    | 8.24  |        |
| USER2  | IOPS            | CF1                   | TABLE     | 1,275,008    | 8.24  |        |
| USER6  | IOPS            | CF1                   | TABLE     | 1,275,008    | 8.24  |        |
| USER8  | IOPS            | CF1                   | TABLE     | 1,275,008    | 8.24  |        |
| USER10 | IOPS            | CF1                   | TABLE     | 1,274,992    | 8.24  |        |

Segments by Physical Reads DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total Physical Reads: 15,501,611

-> Captured Segments account for 100.0% of Total

| Owner  | Tablespace Name | Subobject Object Name | Obj. Name | Physical Type | Reads | %Total |
|--------|-----------------|-----------------------|-----------|---------------|-------|--------|
| USER8  | IOPS            | CF1                   | TABLE     | 1,285,010     | 8.29  |        |
| USER9  | IOPS            | CF1                   | TABLE     | 1,284,963     | 8.29  |        |
| USER11 | IOPS            | CF1                   | TABLE     | 1,284,344     | 8.29  |        |
| USER6  | IOPS            | CF1                   | TABLE     | 1,284,154     | 8.28  |        |

USER2 IOPS CF1 TABLE 1,282,837 8.28

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Segments by Physical Read Requests DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total Physical Read Requests: 15,501,609

-> Captured Segments account for 100.0% of Total

| Owner  | Tablespace Name | Subobject Object Name | Obj. Name | Phys Read Type | Requests | %Total |
|--------|-----------------|-----------------------|-----------|----------------|----------|--------|
| USER8  | IOPS            | CF1                   | TABLE     | 1,285,010      | 8.29     |        |
| USER9  | IOPS            | CF1                   | TABLE     | 1,284,963      | 8.29     |        |
| USER11 | IOPS            | CF1                   | TABLE     | 1,284,344      | 8.29     |        |
| USER6  | IOPS            | CF1                   | TABLE     | 1,284,153      | 8.28     |        |
| USER2  | IOPS            | CF1                   | TABLE     | 1,282,837      | 8.28     |        |

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Segments by UnOptimized Reads DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total UnOptimized Read Requests: 15,501,609

-> Captured Segments account for 100.0% of Total

| Owner  | Tablespace Name | Subobject Object Name | Obj. Name | UnOptimized Type | Reads | %Total |
|--------|-----------------|-----------------------|-----------|------------------|-------|--------|
| USER8  | IOPS            | CF1                   | TABLE     | 1,285,010        | 8.29  |        |
| USER9  | IOPS            | CF1                   | TABLE     | 1,284,963        | 8.29  |        |
| USER11 | IOPS            | CF1                   | TABLE     | 1,284,344        | 8.29  |        |
| USER6  | IOPS            | CF1                   | TABLE     | 1,284,153        | 8.28  |        |
| USER2  | IOPS            | CF1                   | TABLE     | 1,282,837        | 8.28  |        |

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Segments by Optimized Reads DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Segments by Direct Physical Reads DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Segments by Physical Writes DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total Physical Writes: 502

-> Captured Segments account for 46.0% of Total

| Owner | Tablespace Name | Subobject Object Name | Obj. Name  | Physical Type | Writes | %Total |
|-------|-----------------|-----------------------|------------|---------------|--------|--------|
| SYS   | SYSAUX          | WRH\$_SQLSTAT         | 483725_650 | TABLE         | 33     | 6.57   |
| SYS   | SYSAUX          | WRH\$_SQLSTAT_INDEX   | 483725_650 | INDEX         | 31     | 6.18   |
| SYS   | SYSAUX          | WRH\$_ACTIVE_SESSION_ | 483725_650 | TABLE         | 19     | 3.78   |
| SYS   | SYSAUX          | WRH\$_SYSSTAT_PK      | 483725_650 | INDEX         | 15     | 2.99   |
| SYS   | SYSAUX          | WRH\$_MVPARAMETER_PK  | 483725_650 | INDEX         | 14     | 2.79   |

Segments by Physical Write Requests DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total Physical Write Requests: 389

-> Captured Segments account for 46.8% of Total

| Owner | Tablespace Name | Subobject Object Name | Obj. Name  | Phys Write Type | Requests | %Total |
|-------|-----------------|-----------------------|------------|-----------------|----------|--------|
| SYS   | SYSAUX          | WRH\$_SQLSTAT         | 483725_650 | TABLE           | 33       | 8.48   |
| SYS   | SYSAUX          | WRH\$_SQLSTAT_INDEX   | 483725_650 | INDEX           | 13       | 3.34   |
| SYS   | SYSAUX          | WRH\$_SYSSTAT_PK      | 483725_650 | INDEX           | 13       | 3.34   |
| SYS   | SYSAUX          | WRH\$_MVPARAMETER_PK  | 483725_650 | INDEX           | 11       | 2.83   |
| SYS   | SYSAUX          | WRH\$_PARAMETER_PK    | 483725_650 | INDEX           | 10       | 2.57   |

Segments by Direct Physical Writes DB/Inst: SLOB/SLOB Snaps: 691-692

-> Total Direct Physical Writes: 18

-> Captured Segments account for 100.0% of Total

| Owner | Tablespace Name | Subobject Object Name | Obj. Name  | Direct Write Type | Writes | %Total |
|-------|-----------------|-----------------------|------------|-------------------|--------|--------|
| SYS   | SYSAUX          | WRH\$_ACTIVE_SESSION_ | 483725_650 | TABLE             | 18     | 100.00 |

Segments by Table Scans DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Segments by DB Blocks Changes DB/Inst: SLOB/SLOB Snaps: 691-692

-> % of Capture shows % of DB Block Changes for each top segment compared

-> with total DB Block Changes for all segments captured by the Snapshot

| Owner | Tablespace Name | Subobject Object Name | Obj. Name  | DB Block Type | % of Changes Capture |
|-------|-----------------|-----------------------|------------|---------------|----------------------|
| SYS   | SYSAUX          | WRH\$_SQLSTAT_INDEX   | 483725_650 | INDEX         | 96 12.50             |
| SYS   | SYSAUX          | WRH\$_SQLSTAT         | 483725_650 | TABLE         | 80 10.42             |
| SYS   | SYSAUX          | WRM\$_SNAPSHOT_DETAIL |            | INDEX         | 80 10.42             |
| SYS   | SYSAUX          | WRH\$_MVPARAMETER_PK  | 483725_650 | INDEX         | 48 6.25              |
| SYS   | SYSAUX          | WRH\$_SYSSTAT_PK      | 483725_650 | INDEX         | 48 6.25              |

Segments by Row Lock Waits DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Segments by ITL Waits DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Segments by Buffer Busy Waits DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Dictionary Cache Stats DB/Inst: SLOB/SLOB Snaps: 691-692

-> "Pct Misses" should be very low (< 2% in most cases)

-> "Final Usage" is the number of cache entries being used

| Cache                | Get Requests | Pct Miss | Scan Miss | Pct Reqs | Mod Miss | Final Reqs | Usage |
|----------------------|--------------|----------|-----------|----------|----------|------------|-------|
| dc_awr_control       | 9            | 0.0      | 0         | N/A      | 2        | 1          |       |
| dc_free_extents      | 18           | 22.2     | 2         | 0.0      | 10       | 7          |       |
| dc_global_oids       | 11           | 0.0      | 0         | N/A      | 0        | 25         |       |
| dc_histogram_data    | 864          | 3.2      | 0         | N/A      | 0        | 778        |       |
| dc_histogram_defs    | 2,852        | 8.0      | 0         | N/A      | 0        | 1,925      |       |
| dc_object_grants     | 570          | 11.2     | 0         | N/A      | 0        | 64         |       |
| dc_objects           | 2,269        | 10.2     | 0         | N/A      | 0        | 882        |       |
| dc_profiles          | 16           | 6.3      | 0         | N/A      | 0        | 1          |       |
| dc_rollback_segments | 44           | 0.0      | 0         | N/A      | 0        | 15         |       |

|                      |       |      |   |     |   |     |
|----------------------|-------|------|---|-----|---|-----|
| dc_segments          | 426   | 6.8  | 0 | N/A | 6 | 250 |
| dc_sequences         | 5     | 80.0 | 0 | N/A | 5 | 5   |
| dc_tablespaces       | 635   | 0.0  | 0 | N/A | 0 | 4   |
| dc_used_extents      | 4     | 50.0 | 0 | N/A | 4 | 0   |
| dc_users             | 1,633 | 3.4  | 0 | N/A | 0 | 34  |
| global database name | 247   | 0.0  | 0 | N/A | 0 | 1   |

Library Cache Activity DB/Inst: SLOB/SLOB Snaps: 691-692  
-> "Pct Misses" should be very low

| Namespace       | Get Requests | Pct Miss | Pin    | Pct Requests | Invali- Miss | Reloads | dations |
|-----------------|--------------|----------|--------|--------------|--------------|---------|---------|
| ACCOUNT_STATUS  | 32           | 50.0     | 0      | N/A          | 0            | 0       | 0       |
| BODY            | 89           | 3.4      | 106    | 3.8          | 0            | 0       |         |
| CLUSTER         | 8            | 0.0      | 8      | 0.0          | 0            | 0       |         |
| DBLINK          | 33           | 0.0      | 0      | N/A          | 0            | 0       |         |
| EDITION         | 17           | 0.0      | 33     | 3.0          | 1            | 0       |         |
| INDEX           | 12           | 0.0      | 12     | 0.0          | 0            | 0       |         |
| SCHEMA          | 242          | 7.0      | 0      | N/A          | 0            | 0       |         |
| SQL AREA        | 1,094        | 2.9      | 83,959 | 0.3          | 99           | 16      |         |
| SQL AREA BUILD  | 204          | 15.7     | 0      | N/A          | 0            | 0       |         |
| SQL AREA STATS  | 133          | 51.9     | 133    | 51.9         | 0            | 0       |         |
| TABLE/PROCEDURE | 2,712        | 7.7      | 3,305  | 5.6          | 17           | 0       |         |

Memory Dynamic Components DB/Inst: SLOB/SLOB Snaps: 691-692  
-> Min/Max sizes since instance startup  
-> Oper Types/Modes: INitializing,GROw,SHRink,STAtic/IMMediate,DEFerred  
-> ordered by Component

| Component       | Begin Snap Size (Mb) | Current Size (Mb) | Min Size (Mb) | Max Size (Mb) | Oper Count | Last Op Typ/Mod |
|-----------------|----------------------|-------------------|---------------|---------------|------------|-----------------|
| ASM Buffer Cach | .00                  | .00               | .00           | .00           | 0          | STA/            |
| DEFAULT 16K buf | .00                  | .00               | .00           | .00           | 0          | STA/            |
| DEFAULT 2K buff | .00                  | .00               | .00           | .00           | 0          | STA/            |
| DEFAULT 32K buf | .00                  | .00               | .00           | .00           | 0          | STA/            |
| DEFAULT 4K buff | .00                  | .00               | .00           | .00           | 0          | STA/            |
| DEFAULT 8K buff | .00                  | .00               | .00           | .00           | 0          | STA/            |
| DEFAULT buffer  | 32.00                | 32.00             | 32.00         | 32.00         | 0          | STA/            |
| KEEP buffer cac | .00                  | .00               | .00           | .00           | 0          | STA/            |

|                |        |        |        |        |        |
|----------------|--------|--------|--------|--------|--------|
| PGA Target     | 64.00  | 64.00  | 64.00  | 64.00  | 0 STA/ |
| RECYCLE buffer | .00    | .00    | .00    | .00    | 0 STA/ |
| SGA Target     | .00    | .00    | .00    | .00    | 0 STA/ |
| Shared IO Pool | .00    | .00    | .00    | .00    | 0 STA/ |
| java pool      | 24.00  | 24.00  | 24.00  | 24.00  | 0 STA/ |
| large pool     | .00    | .00    | .00    | .00    | 0 STA/ |
| shared pool    | 256.00 | 256.00 | 256.00 | 256.00 | 0 STA/ |
| streams pool   | .00    | .00    | .00    | .00    | 0 STA/ |

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Memory Resize Operations Summary DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Memory Resize Ops DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Process Memory Summary DB/Inst: SLOB/SLOB Snaps: 691-692

- > B: Begin Snap E: End Snap
- > All rows below contain absolute values (i.e. not diffed over the interval)
- > Max Alloc is Maximum PGA Allocation size at snapshot time
- > Hist Max Alloc is the Historical Max Allocation for still-connected processes
- > ordered by Begin/End snapshot, Alloc (MB) desc

| Category | Alloc (MB) | Used (MB) | Hist           |              | Max Alloc (MB) | Max Alloc (MB) | Num (MB) | Num Proc | Num Alloc |
|----------|------------|-----------|----------------|--------------|----------------|----------------|----------|----------|-----------|
|          |            |           | Avg Alloc (MB) | Std Dev (MB) |                |                |          |          |           |
| B Other  | 45.5       | N/A       | 2.0            | 2.5          | 11             | 11             | 23       | 23       |           |
| Freeable | 3.5        | .0        | .7             | .8           | 2              | N/A            | 5        | 5        |           |
| SQL      | 1.6        | 1.6       | .2             | .5           | 2              | 2              | 10       | 7        |           |
| PL/SQL   | .4         | .3        | .0             | .1           | 0              | 0              | 21       | 21       |           |
| E Other  | 45.7       | N/A       | 1.9            | 2.4          | 11             | 11             | 24       | 24       |           |
| Freeable | 5.1        | .0        | 1.0            | .9           | 2              | N/A            | 5        | 5        |           |
| SQL      | 1.6        | 1.6       | .2             | .5           | 2              | 2              | 10       | 7        |           |
| PL/SQL   | .5         | .4        | .0             | .1           | 0              | 0              | 22       | 22       |           |

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SGA Memory Summary DB/Inst: SLOB/SLOB Snaps: 691-692

| SGA regions      | Begin Size (Bytes) | End Size (Bytes)<br>(if different) |
|------------------|--------------------|------------------------------------|
| Database Buffers | 33,554,432         |                                    |
| Fixed Size       | 2,226,192          |                                    |
| Redo Buffers     | 4,689,920          |                                    |
| Variable Size    | 293,603,312        |                                    |
| sum              | 334,073,856        |                                    |

SGA breakdown difference DB/Inst: SLOB/SLOB Snaps: 691-692  
-> ordered by Pool, Name  
-> N/A value for Begin MB or End MB indicates the size of that Pool/Name was insignificant, or zero in that snapshot

| Pool Name                        | Begin MB | End MB | % Diff |
|----------------------------------|----------|--------|--------|
| java free memory                 | 24.0     | 24.0   | 0.00   |
| shared ASH buffers               | 12.8     | 12.8   | 0.00   |
| shared FileOpenBlock             | 3.8      | 3.8    | 0.00   |
| shared KCB Table Scan Buffer     | 3.8      | 3.8    | 0.00   |
| shared KGLH0                     | 13.0     | 14.2   | 9.17   |
| shared KGLS                      | 4.4      | 3.1    | -28.89 |
| shared KGLSG                     | 5.0      | 5.0    | 0.00   |
| shared KSFD SGA I/O b            | 3.8      | 3.8    | 0.00   |
| shared KTI-UNDO                  | 11.3     | 11.3   | 0.00   |
| shared PLMCD                     | 3.1      | 3.1    | 0.73   |
| shared SQLA                      | 10.3     | 10.2   | -1.09  |
| shared VIRTUAL CIRCUITS          | 3.8      | 3.8    | 0.00   |
| shared dbktb: trace buffer       | 15.6     | 15.6   | 0.00   |
| shared dirty object counts array | 4.0      | 4.0    | 0.00   |
| shared enqueue                   | 3.8      | 3.8    | 0.00   |
| shared event statistics per sess | 19.0     | 19.0   | 0.00   |
| shared free memory               | 20.5     | 21.3   | 4.08   |
| shared kglsim hash table bkts    | 4.0      | 4.0    | 0.00   |
| shared ksunfy : SSO free list    | 17.8     | 17.8   | 0.00   |
| shared private strands           | 21.8     | 21.8   | 0.00   |
| shared procs: ksunfy             | 4.0      | 4.0    | 0.00   |
| shared row cache                 | 7.2      | 7.2    | 0.00   |
| shared transaction               | 4.1      | 4.1    | 0.00   |
| shared write state object        | 2.7      | 2.7    | 0.00   |

|              |      |      |      |
|--------------|------|------|------|
| buffer_cache | 32.0 | 32.0 | 0.00 |
| fixed_sga    | 2.1  | 2.1  | 0.00 |
| log_buffer   | 4.5  | 4.5  | 0.00 |

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Streams CPU/IO Usage DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Streams Capture DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Streams Capture Rate DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Streams Apply DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Streams Apply Rate DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Buffered Queues DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Buffered Queue Subscribers DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Rule Set DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Persistent Queues DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
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Persistent Queues Rate DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
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Persistent Queue Subscribers DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.  
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Resource Limit Stats DB/Inst: SLOB/SLOB Snap: 692

No data exists for this section of the report.  
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Shared Servers Activity DB/Inst: SLOB/SLOB Snaps: 691-692

-> Values represent averages for all samples

| Avg Total   | Avg Active  | Avg Total   | Avg Active  | Avg Total   | Avg Active  |
|-------------|-------------|-------------|-------------|-------------|-------------|
| Connections | Connections | Shared Svrs | Shared Svrs | Dispatchers | Dispatchers |

-----  
0 0 1 0 1 0  
-----

Shared Servers Rates DB/Inst: SLOB/SLOB Snaps: 691-692

| Common  | Disp    |          | Common | Disp  | Server |       |           |
|---------|---------|----------|--------|-------|--------|-------|-----------|
| Queue   | Queue   | Server   | Server | Queue | Queue  | Total | Server    |
| Per Sec | Per Sec | Msgs/Sec | KB/Sec | Total | Total  | Msgs  | Total(KB) |

-----  
0 0 0 0.0 0 0 0 0  
-----

Shared Servers Utilization DB/Inst: SLOB/SLOB Snaps: 691-692

-> Statistics are combined for all servers

-> Incoming and Outgoing Net % are included in %Busy

| Total Server<br>Time (s) | %Busy | Incoming<br>%Idle | Outgoing<br>Net % | Net % |
|--------------------------|-------|-------------------|-------------------|-------|
| 346                      | 0.0   | 100.0             | 0.0               | 0.0   |

Shared Servers Common Queue DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

Shared Servers Dispatchers DB/Inst: SLOB/SLOB Snaps: 691-692

-> Ordered by %Busy, descending

-> Total Queued, Total Queue Wait and Avg Queue Wait are for dispatcher queue

-> Name suffixes:

"(N)" - dispatcher started between begin and end snapshots

"(R)" - dispatcher re-started between begin and end snapshots

| Name | Avg Total Disp<br>Conns | Total Total Queue<br>Time (s) | Avg Queue<br>%Busy | Total Total Queue<br>%Idle | Avg Queue<br>Queued | Avg Queue<br>Wait (s) | Avg Queue<br>Wait (ms) |
|------|-------------------------|-------------------------------|--------------------|----------------------------|---------------------|-----------------------|------------------------|
| D000 | 0.0                     | 346                           | 0.0                | 100.0                      | 0                   | 0                     |                        |

init.ora Parameters

DB/Inst: SLOB/SLOB Snaps: 691-692

| Parameter Name       | Begin value                      | End value<br>(if different) |
|----------------------|----------------------------------|-----------------------------|
| compatible           | 11.2.0.2                         |                             |
| control_files        | /databases/SLOB/SLOBcntl.ctl     |                             |
| db_block_size        | 8192                             |                             |
| db_cache_size        | 33554432                         |                             |
| db_create_file_dest  | /databases/SLOB                  |                             |
| db_domain            |                                  |                             |
| db_name              | SLOB                             |                             |
| dispatchers          | (PROTOCOL=TCP) (SERVICE=orclXDB) |                             |
| filesystemio_options | setall                           |                             |
| open_cursors         | 300                              |                             |
| parallel_max_servers | 0                                |                             |
| processes            | 1000                             |                             |
| shared_pool_size     | 268435456                        |                             |

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init.ora Multi-Valued Parameters      DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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Dynamic Remastering Stats      DB/Inst: SLOB/SLOB Snaps: 691-692

No data exists for this section of the report.

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End of Report