

Oracle Examples

Examples for day to day Oracle administration

Finding a locking session

Posted on [April 8, 2010](#)

How to identify lockers

This article will explain about locks on rows and on objects in ORACLE.

Locks on rows can cause performance problems or even impede a transaction from finishing, when there are processes running for long time we need to validate that they are not waiting on a row(s).

When there is a lock on a row there is also a lock on the dependent objects, if we want to perform a DDL on a locked object we will get an ORA-00054 error.

Scenario 1:

Terminal A is locking a row and Terminal B is waiting on it:

–TERMINAL A

```
1 SQL> update map1 set col2='MYLOCK' where col1=300;
2
3 1 row updated.
4
5 SQL>
6 (..no commit here..)
```

–TERMINAL B

```
1 SQL> update map1 set col2='NEWVAL2' where col1=300;
2 (..waiting..)
```

Now, lets create a session as a DBA User to monitor the system, this query will tell the locking and waiting SIDs.

```
1 SELECT vh.sid locking_sid,
2        vs.status status,
3        vs.program program_holding,
4        vw.sid waiter_sid,
5        vsw.program program_waiting
6 FROM v$lock vh,
7      v$lock vw,
8      v$session vs,
9      v$session vsw
10 WHERE (vh.id1, vh.id2) IN (SELECT id1, id2
11 FROM v$lock
12 WHERE request = 0
13 INTERSECT
14 SELECT id1, id2
15 FROM v$lock
16 WHERE lmode = 0)
```

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```

17 AND vh.id1 = vw.id1
18 AND vh.id2 = vw.id2
19 AND vh.request = 0
20 AND vw.lmode = 0
21 AND vh.sid = vs.sid
22 AND vw.sid = vsw.sid;

```

LOCKING_SID	STATUS	PROGRAM_HOLDING	WAITER_SID	PROGRAM_WAITING
144	ACTIVE	sqlplus@rh4_node1.fadeserver.net (TNS V1-V3)	131	sqlplus@rh4_node1.fadeserver.net (TNS V1-V3)

Here is an expanded version of the same query, it also includes jobs information.

```

1  SELECT vs.username,
2     vs.osuser,
3     vh.sid locking_sid,
4     vs.status status,
5     vs.module module,
6     vs.program program_holding,
7     jrh.job_name,
8     vsw.username,
9     vsw.osuser,
10    vw.sid waiter_sid,
11    vsw.program program_waiting,
12    jrw.job_name,
13    'alter system kill session ' || '''' || vh.sid || ',' || vs.serial# || ''';' "Kill_Com
14 FROM v$lock vh,
15    v$lock vw,
16    v$session vs,
17    v$session vsw,
18    dba_scheduler_running_jobs jrh,
19    dba_scheduler_running_jobs jrw
20 WHERE (vh.id1, vh.id2) IN (SELECT id1, id2
21    FROM v$lock
22   WHERE request = 0
23  INTERSECT
24   SELECT id1, id2
25    FROM v$lock
26   WHERE lmode = 0)
27 AND vh.id1 = vw.id1
28 AND vh.id2 = vw.id2
29 AND vh.request = 0
30 AND vw.lmode = 0
31 AND vh.sid = vs.sid
32 AND vw.sid = vsw.sid
33 AND vh.sid = jrh.session_id(+)
34 AND vw.sid = jrw.session_id(+);

```

USERNAME	OSUSER	LOCKING_SID	STATUS	MODULE	PROGRAM_HO	JOB_N	USERNAME	OSUSER	WAITER_SID	PROGRAM_
CACOSTA	oracle	144	ACTIVE	SQL*Plus	sqlplus@rh4_node1.fadeserver.net (TNS V1-V3)		CACOSTA	oracle	131	sqlplus@rh4_node1.fadeserver.net (TNS V1-V3)

We can see that the user CACOSTA, sid 144 is locking the session 131.

Scenario 2:

We are performing a DDL (alter somehow the object) and we get an ORA-00054 error.

I have canceled the waiting session in the example above and now I'm creating an index on the table:

```

1 SQL> create index ind2 on map1(col2);
2 create index ind2 on map1(col2)
3 *
4 ERROR at line 1:
5 ORA-00054: resource busy and acquire with NOWAIT specified

```

If I re-run the query from the previous scenario it won't return any rows, because there are no waiting sessions (I canceled the waiting update).

First we need to find out the object ID:

```

1 SQL> select object_id from dba_objects
2 where owner='CACOSTA'
3 and object_name='MAP1';
4
5 OBJECT_ID
6 -----
7 52255

```

Now let's see who is blocking the object 52255

```

1 SELECT c.owner,
2 c.object_name,
3 c.object_type,
4 b.sid,
5 b.serial#,
6 b.status,
7 b.osuser,
8 b.machine
9 FROM v$locked_object a, v$session b, dba_objects c
10 WHERE b.sid = a.session_id AND a.object_id = c.object_id
11 and a.object_id=52255;

```

OWNER	OBJECT_NAME	OBJECT_TYPE	SID	SERIAL#	STATUS	OSUSER	MACHINE
CACOSTA	MAP1	TABLE	144	38973	ACTIVE	oracle	rh4_node1.fadeserver.net

Good luck!

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ap says:

May 1, 2012 at 3:50 am

Certainly nice and helpful depicted nicely with user perspective thats what counts

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aBBy says:

April 4, 2013 at 4:29 pm

Awesome. Just what I was looking for.

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taras says:

November 15, 2013 at 10:19 am

thank's. simple to understand and really useful explanation

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JS says:

November 26, 2013 at 6:32 am

Really great

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