**SWITCH OVER STEPS USING MANUAL**

**Overview steps:**

**Step:1** Check the db name, open mode, database role of the primary and standby databases.

**Step:2** Select switchover status on primary & standby db.

**Step:3** Check that there is no active users connected to the databases.

**Step:4** Switch the current online redo log file on primary database and verify that it has been applied in the standby database.

**Step:5** Connect with primary database and initiate the switchover.

**Step:6** Bounce the primary db and check the switchover status.

**Step:7** Then convert the physical standby into primary db.(stop the MRP process)

**Step:8** Open the new standby db in read only mode.

**Step:9** Apply the redo log files in newly created standby.(start the MRP process).Check whether the logs are applying in the new standby db.

Step:1 Check the db name, open mode, database role of the primary and standby databases.

**On Primary:**

**============**

SQL> select name,open\_mode,database\_role,switchover\_status from v$database;

NAME         OPEN\_MODE          DATABASE\_ROLE     SWITCHOVER\_STATUS

--------- -------------------- ---------------- --------------------

PROD        READ WRITE            PRIMARY           TO STANDBY

**On Standby:**

**===========**

SQL> select name,open\_mode,database\_role,switchover\_status from v$database;

NAME         OPEN\_MODE          DATABASE\_ROLE   SWITCHOVER\_STATUS

--------- -------------------- ---------------- --------------------

PROD         READ ONLY          PHYSICAL STANDBY   TO PRIMARY

The **switchover\_status** column of **v$database** can have the following values:

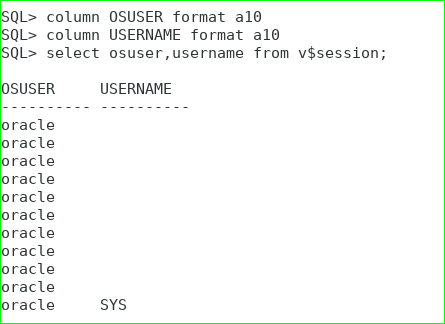
**Not Allowed:-**Either this is a standby database and the primary database has not been switched first, or this is a primary database and there are no standby databases  
**Session Active:-** Indicates that there are active SQL sessions attached to the primary or standby database that need to be disconnected before the switchover operation is permitted  
**Switchover Pending:-** This is a standby database and the primary database switchover request has been received but not processed.  
**Switchover Latent:-** The switchover was in pending mode, but did not complete and went back to the primary database  
**To Primary:-** This is a standby database, with no active sessions, that is allowed to switch over to a primary database  
**To Standby:-** This is a primary database, with no active sessions, that is allowed to switch over to a standby database  
**Recovery Needed:-** This is a standby database that has not received the switchover request

**Step:2 Check that there is no active users connected to the databases.**

column OSUSER format a10

column USERNAME format a10

select osuser,username from v$session;

[](https://doyensys.com/blogs/wp-content/uploads/2021/06/18.png)

**Step:3 Check the log sequence number in primary and standby db(before switchover).**

**On Primary:**

SQL> SELECT ARCH.THREAD# "Thread", ARCH.SEQUENCE# "Last Sequence Received", APPL.SEQUENCE# "Last Sequence Applied", (ARCH.SEQUENCE# - APPL.SEQUENCE#) "Difference" FROM (SELECT THREAD# ,SEQUENCE# FROM V$ARCHIVED\_LOG WHERE (THREAD#,FIRST\_TIME ) IN (SELECT THREAD#,MAX(FIRST\_TIME) FROM V$ARCHIVED\_LOG GROUP BY THREAD#)) ARCH, (SELECT THREAD# ,SEQUENCE# FROM V$LOG\_HISTORY WHERE (THREAD#,FIRST\_TIME ) IN (SELECT THREAD#,MAX(FIRST\_TIME) FROM V$LOG\_HISTORY GROUP BY THREAD#)) APPL WHERE ARCH.THREAD# = APPL.THREAD# ORDER BY 1;

Thread    Last Sequence Received Last Sequence Applied Difference

---------- ---------------------- --------------------- ----------

       1                 61              61                  0

**On Standby:**

SQL> SELECT ARCH.THREAD# "Thread", ARCH.SEQUENCE# "Last Sequence Received", APPL.SEQUENCE# "Last Sequence Applied", (ARCH.SEQUENCE# - APPL.SEQUENCE#) "Difference" FROM (SELECT THREAD# ,SEQUENCE# FROM V$ARCHIVED\_LOG WHERE (THREAD#,FIRST\_TIME ) IN (SELECT THREAD#,MAX(FIRST\_TIME) FROM V$ARCHIVED\_LOG GROUP BY THREAD#)) ARCH, (SELECT THREAD# ,SEQUENCE# FROM V$LOG\_HISTORY WHERE (THREAD#,FIRST\_TIME ) IN (SELECT THREAD#,MAX(FIRST\_TIME) FROM V$LOG\_HISTORY GROUP BY THREAD#)) APPL WHERE ARCH.THREAD# = APPL.THREAD# ORDER BY 1;

Thread    Last Sequence Received Last Sequence Applied Difference

---------- ---------------------- --------------------- ----------

       1                 61             61                  0

**Step:4 In this step primary db is converted into standby by giving the following command.**

SQL> alter database commit to switchover to physical standby with session shutdown;

Database altered.

Startup mount;

SQL> alter database mount standby database;

Database altered.

[](https://doyensys.com/blogs/wp-content/uploads/2021/06/35.png)

**Step:5 Check name, open\_mode, database\_role of new standby database.**

SQL> select name, open\_mode, database\_role from v$database;

NAME  OPEN\_MODE   DATABASE\_ROLE

--------- -------------------- ----------------

PROD        READ ONLY PHYSICAL STANDBY

**Step:6 Then start to apply the redo log (MRP process) on primary(current standby).**

SQL> alter database recover managed standby database disconnect from session;

Database altered.

SQL> select max(sequence#) from v$archived\_log where applied='YES';

MAX(SEQUENCE#)

--------------

         62

**Step:8 Now we have to stop the MRP process in old standby.**

SQL> alter database recover managed standby database cancel;

Database altered.

**Step:9 Conversion of standby to primary db and also check the name, open mode, database role of standby db.**

SQL> alter database commit to switchover to primary with session shutdown;

Database altered.

**Step:10 Check name, open\_mode, database\_role of new primary database.**

SQL> select name, open\_mode, database\_role from v$database;

NAME OPEN\_MODE       DATABASE\_ROLE

--------- -------------------- ----------------

PROD READ WRITE        PRIMARY

Switch over activity has been completed successfully…..!!!

**Dataguard Switchover Using DGMGRL**

**CHECK THE DATABASE STATUS :**

**Check the  Database Is Ready for a Role Change**

**PERFORM THE SWITCHOVER OPERATION :**

**CHECK THE STATUS IN DG\_BROKER :**

**VERIFY THE STATUS :**

1. **CHECK THE DATABASE STATUS :**

**DGMGRL> show configuration**

Configuration – sathish

Protection Mode: MaxPerformance  
Members:  
PROD – Primary database  
STANDBY – Physical standby database

Fast-Start Failover: Disabled

Configuration Status:  
SUCCESS (status updated 42 seconds ago)

1. **Check the  Database Is Ready for a Role Change**

It will checks whether it is ready for switchover.

**DGMGRL> VALIDATE DATABASE ‘prod’;**Database Role: Primary database  
Ready for Switchover: Yes  
Flashback Database Status:  
prime: Off

DGMGRL> **VALIDATE DATABASE ‘standby’;**  
Database Role: Physical standby database  
Primary Database: prime  
Ready for Switchover: Yes  
Ready for Failover: Yes (Primary Running)  
Flashback Database Status:  
prime: Off  
stand: Off

1. **PERFORM THE SWITCHOVER OPERATION :**

**DGMGRL> switchover to standby;**  
Performing switchover NOW, please wait…  
Operation requires a connection to database “STANDBY”  
Connecting …  
Connected to “STANDBY”  
Connected as SYSDBA.  
New primary database “STANDBY” is opening…  
Operation requires start up of instance “prod” on database “BALL”  
Starting instance “prod”…  
Connected to an idle instance.  
ORACLE instance started.  
Connected to “PROD”  
Database mounted.  
Connected to “PROD”  
Switchover succeeded, new primary is “standby”  
DGMGRL>

1. **CHECK THE STATUS IN DG\_BROKER :**

DGMGRL> show configuration

Configuration – sathish

Protection Mode: MaxPerformance  
Members:  
STANDBY – Primary database  
PROD – Physical standby database

Fast-Start Failover: Disabled

Configuration Status:  
SUCCESS (status updated 21 seconds ago)

1. **VERIFY THE STATUS :**

DGMGRL> show database ‘**PROD**‘;

Database – PROD

Role: PHYSICAL STANDBY  
Intended State: APPLY-ON  
Transport Lag: 0 seconds (computed 0 seconds ago)  
Apply Lag: 0 seconds (computed 0 seconds ago)  
Average Apply Rate: 7.00 KByte/s  
Real Time Query: OFF  
Instance(s):  
PROD

Database Status:  
SUCCESS

**DGMGRL> SHOW DATABASE ‘STANDBY‘;**

Database – STANDBY

Role: PRIMARY  
Intended State: TRANSPORT-ON  
Instance(s):  
PROD

Database Status:  
SUCCESS