Oracle Standby Database Creation Guide

Prepared by: Malik Ismail Ali Khan (Oracle DBA)

(*Step-by-Step Implementation using RMAN Active Duplicate)*

DataGuard Configuration:

Primary:

```
Database_Name       : TESTPRIMARY
DB_UNIQUE_NAME      : TESTPRIMARY
Host Name           : xxxxxxx.xxxxx.com.sa
DB Version          : 19.3.0.0.0
TDE                 : No
Multitenancy        : Non-CDB
OS                  : Oracle Linux Server 7.9
Residency           : On-Prem Data Center
```

Standby:

```
Database_Name       : TESTSTANDBY
DB_UNIQUE_NAME      : TESTSTANDBY
Host Name           : DR-XXXX-DR.xxxxxxx.com
DB Version          : 19.25.0.0.0
TDE                 : No
Multitenancy        : Non-CDB
OS                  : Oracle Linux Server 8.10
Residency           : ODA
```

Primary Database Details:

```
[oracle@xxxxxxx ~]$ env | grep ORA
ORACLE_SID=TESTPRIMARY
PATH=/u01/ORACDBTSTUAT/19.3.0/bin:/usr/lib64/qt-
3.3/bin:/usr/local/bin:/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/home/oracle/.local/bin:/ho
me/oracle/bin
ORACLE_HOME=/u01/ORACDBTSTUAT/19.3.0

[oracle@xxxxxxx ~]$ sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Tue Jan 28 14:53:09 2025
Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle.  All rights reserved.


Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

```
SQL> show parameter name

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
cdb_cluster_name                     string
cell_offloadgroup_name               string
db_file_name_convert                 string
db_name                              string      TESTPRIMARY
db_unique_name                       string      TESTPRIMARY
global_names                         boolean     FALSE
instance_name                        string      TESTPRIMARY
lock_name_space                      string
log_file_name_convert                string
pdb_file_name_convert                string
processor_group_name                 string

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
service_names                        string      TESTPRIMARY
SQL> set lines 300 pages 300
select distinct  name,instance_name,open_mode,database_role,status,cdb from
gv$database,gv$instance;SQL>

NAME      INSTANCE_NAME    OPEN_MODE            DATABASE_ROLE    STATUS       CDB
--------- ---------------- -------------------- ---------------- ------------ ---
TESTPRIMARY  TESTPRIMARY         READ WRITE           PRIMARY          OPEN         YES

SQL> show parameter list

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
forward_listener                     string
listener_networks                    string
local_listener                       string
remote_listener                      string

SQL> show parameter create

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
create_bitmap_area_size              integer     8388608
create_stored_outlines               string
db_create_file_dest                  string
db_create_online_log_dest_1          string
db_create_online_log_dest_2          string
db_create_online_log_dest_3          string
db_create_online_log_dest_4          string
db_create_online_log_dest_5          string
```

```
SQL> set lines 300 pages 300
SQL> col name for a100
select file,name,bytes/1024/1024/1024,status from v$datafile;SQL>

     FILE
NAME
BYTES/1024/1024/1024 STATUS
---------- --------------------------------------------------------------------------------
-------------------- ------------------- -------
         1 /u02/ORACDBTSTUAT/oradata/TESTPRIMARY/system01.dbf
.91796875 SYSTEM
         3 /u02/ORACDBTSTUAT/oradata/TESTPRIMARY/sysaux01.dbf
1.4453125 ONLINE
         4 /u02/ORACDBTSTUAT/oradata/TESTPRIMARY/undotbs01.dbf
.302734375 ONLINE
         5 /u02/ORACDBTSTUAT/oradata/TESTPRIMARY/pdbseed/system01.dbf
.263671875 SYSTEM
.
.
63 rows selected.

SQL> col member for a80
select member from v$logfile;SQL>

MEMBER
--------------------------------------------------------------------------------
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo03.log
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo02.log
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo01.log

SQL> select group,thread,sequence,bytes/1024/1024,members from v$log;
    GROUP
THREAD
SEQUENCE
BYTES/1024/1024    MEMBERS
---------- ---------- ---------- --------------- ----------
         1          1      36634             200          1
         2          1      36632             200          1
         3          1      36633             200          1

SQL> select group,thread,sequence,bytes/1024/1024 from v$standby_log;

no rows selected

SQL> SELECT group, type, member FROM v$logfile WHERE type='STANDBY' order by group;

no rows selected
SQL> show parameter reco
```

```
NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
control_file_record_keep_time        integer     7
db_recovery_file_dest                string
db_recovery_file_dest_size           big integer 0
db_unrecoverable_scn_tracking        boolean     TRUE
recovery_parallelism                 integer     0
remote_recovery_file_dest            string

SQL> show parameter diag

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
diagnostic_dest                      string      /u01/ORACDBTSTUAT
SQL>
SQL>
```

Check Wallet Status:

```
SQL> show parameter wallet

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
ssl_wallet                           string
wallet_root                          string      /u01/ORACDBTSTUAT/wallet

SQL> show parameter tde_configuration

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
tde_configuration                    string      KEYSTORE_CONFIGURATION=FILE

SQL> set lines 300 pages 300
col WRL_PARAMETER for a60
select * from v$encryption_wallet;SQL> SQL>

WRL_TYPE             WRL_PARAMETER                                                STATUS
WALLET_TYPE          WALLET_OR KEYSTORE FULLY_BAC     CON_ID
-------------------- ------------------------------------------------------------ --------
---------------------- -------------------- --------- -------- --------- ----------
FILE                 /u01/ORACDBTSTUAT/wallet/tde/                              OPEN
AUTOLOGIN            SINGLE    NONE     NO                1
FILE                                                                            OPEN
AUTOLOGIN            SINGLE    UNITED   NO                2
FILE                                                                            OPEN
AUTOLOGIN            SINGLE    UNITED   NO                3
SQL> select * from v$tablespace;
```

```
       TS
NAME
INC BIG FLA ENC     CON_ID
---------- ------------------------------------------------------------------------------
-------------------- --- --- --- --- ----------
         1 SYSAUX
YES NO  YES             1
         0 SYSTEM
YES NO  YES             1
         2 UNDOTBS1
YES NO  YES             1
         4 USERS
YES NO  YES             1
         3 TEMP
NO  NO  YES             1
.
.
26 rows selected.

SQL> select tablespace_name,encrypted from dba_tablespaces;

TABLESPACE_NAME                ENC
------------------------------ ---
SYSTEM                         NO
SYSAUX                         NO
UNDOTBS1                       NO
TEMP                           NO
USERS                          NO

SQL> col creation_time for a55
set lines 300 pages 300
col KEY_ID for a60
col TAG for a20
select KEY_ID,TAG,KEY_USE,CREATION_TIME,BACKED_UP,CON_ID from v$encryption_keys;SQL> SQL>
SQL> SQL>

KEY_ID                                                          TAG                  KEY_USE
CREATION_TIME                                          BACKED_UP     CON_ID
------------------------------------------------------------ -------------------- --------
-- ---------------------------------------------------- --------- ----------
AcQsnetc+U/pvzUHfVnsr5sAAAAAAAAAAAAAAAAAAAAAAAAAAAA                                  TDE IN
PDB 25-JUL-22 10.25.21.693912 AM +00:00                YES                1
AXv2Cihj+E+Tv3Ve3ro7EVMAAAAAAAAAAAAAAAAAAAAAAAAAAAA                                  TDE IN
PDB 25-JUL-22 10.26.04.484044 AM +00:00                YES                3
Adxz8zS/Jk8rvyOCmb1Kp7kAAAAAAAAAAAAAAAAAAAAAAAAAAAA                                  TDE IN
PDB 26-JUL-22 07.00.21.388206 PM +00:00                YES                1
AaknSKdprU/iv7ONV3su/D0AAAAAAAAAAAAAAAAAAAAAAAAAAAA                                  TDE IN
PDB 26-JUL-22 07.11.23.160206 PM +00:00                NO                 3
```

Database size:

```
SQL> select sum(bytes/1024/1024/1024) as "Actual_Size_GB" from dba_segments;

Actual_Size_GB
--------------
     2.2086792

SQL> select sum(bytes/1024/1024/1024) "Total_Size_GB" from dba_data_files;

Total_Size_GB
-------------
   2.67089844
```

Database Character Set and National Character Set:

```
SQL> set lines 300 pages 300
col parameter for a30
col value for a20
select parameter, value from nls_database_parameters where parameter in
('NLS_CHARACTERSET','NLS_NCHAR_CHARACTERSET');SQL> SQL> SQL>

PARAMETER                      VALUE
------------------------------ --------------------
NLS_NCHAR_CHARACTERSET         AL16UTF16
NLS_CHARACTERSET               AR8MSWIN1256
```

Set Required DG parameters:

```
SQL> show parameter log_archive_config

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
log_archive_config                   string
SQL> show parameter DB_UNIQUE_NAME

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
db_unique_name                       string      TESTPRIMARY

SQL> alter system set log_archive_config='DG_CONFIG=(TESTPRIMARY, TESTSTANDBY)' scope=both
sid='*';

System altered.

SQL> show parameter log_archive_config

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
```

```
log_archive_config                   string      DG_CONFIG=(TESTPRIMARY, TESTSTANDBY
SQL> show parameter log_archive_dest_2

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
log_archive_dest_2                   string
log_archive_dest_20                  string
log_archive_dest_21                  string
log_archive_dest_22                  string


SQL> alter system set LOG_ARCHIVE_DEST_2='SERVICE=TESTSTANDBY LGWR ASYNC
VALID_FOR=(ONLINE_LOGFILES,PRIMARY_ROLE) DB_UNIQUE_NAME=TESTSTANDBY' scope=both sid='*';

System altered.

SQL> show parameter log_archive_dest_2

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
log_archive_dest_2                   string      SERVICE=TESTSTANDBY LGWR ASYNC
                                                 VALID_FOR=(ONLINE_LOGFILES,PRI
                                                 MARY_ROLE) DB_UNIQUE_NAME=CDBA
                                                 YUATDR
log_archive_dest_20                  string
log_archive_dest_21                  string
log_archive_dest_22                  string


SQL> show parameter log_archive_dest_state_2

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
log_archive_dest_state_2             string      enable
```

Set FAL client and FAL server parameters:

```
SQL> alter system set FAL_CLIENT = TESTPRIMARY scope=both sid='*';

System altered.

SQL> show parameter FAL_CLIENT

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
fal_client                           string      TESTPRIMARY
```

```
SQL> alter system set FAL_SERVER = TESTSTANDBY scope=both sid='*';

System altered.

SQL> show parameter FAL_SERVER

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
fal_server                           string      TESTSTANDBY
SQL>

SQL> show parameter standby_file

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
standby_file_management              string      MANUAL

SQL> alter system set standby_file_management=AUTO scope=both sid='*';

System altered.

SQL> show parameter standby_file

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
standby_file_management              string      AUTO
SQL>

SQL>  show parameter remote_login_passwordfile

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
remote_login_passwordfile            string      EXCLUSIVE
SQL>
```

Enable force logging:

```
SQL> select name,force_logging from v$database;

NAME
FORCE_LOGGING
--------------------------------------------------------------------------------------------
---------- ---------------------------------------
TESTPRIMARY
NO

SQL> alter database force logging;
```

```
Database altered.

SQL> select name,force_logging from v$database;

NAME
FORCE_LOGGING
--------------------------------------------------------------------------------------------
---------- ---------------------------------------
TESTPRIMARY
YES
```

Update TNS Entries On both Primary & Standby Server:

```
-----------
On Primary:
-----------

[oracle@xxxxxxx admin]$ pwd
/u01/ORACDBTSTUAT/19.3.0/network/admin
[oracle@xxxxxxx admin]$ ls -ltr
total 60
-rw-r--r-- 1 oratest dba 1536 Feb 14  2018 shrept.lst
-rw-r--r-- 1 oratest dba  419 Aug 12 11:35 sqlnet.ora
-rw-r--r-- 1 oratest dba  780 Aug 12 12:06 listener.ora
-rw-r--r-- 1 oratest dba  791 Aug 13 11:30 tnsnames.ora

[oracle@xxxxxxx admin]$ cat tnsnames.ora
tnsnames.ora Network Configuration File:
/u01/ORACDBTSTUAT/19.3.0/network/admin/tnsnames.ora

TESTPRIMARY =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = 172.19.105.31)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = TESTPRIMARY)
    )
  )

[oracle@xxxxxxx admin]$

[oracle@xxxxxxx admin]$ tnsping TESTPRIMARY

TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 28-JAN-2025 15:18:58

Copyright (c) 1997, 2019, Oracle.  All rights reserved.

Used parameter files:
/u01/ORACDBTSTUAT/19.3.0/network/admin/sqlnet.ora
```

```
Used TNSNAMES adapter to resolve the alias
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = xxxxxxx)(PORT =
1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = TESTPRIMARY)))
OK (10 msec)
[oracle@xxxxxxx admin]$

[oracle@xxxxxxx admin]$ tnsping TESTSTANDBY

TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 28-JAN-2025 18:23:23

Copyright (c) 1997, 2019, Oracle.  All rights reserved.

Used parameter files:
/u01/ORACDBTSTUAT/19.3.0/network/admin/sqlnet.ora


Used TNSNAMES adapter to resolve the alias
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = xxxxxxxx)(PORT =
1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = TESTSTANDBY)))
OK (10 msec)
[oracle@xxxxxxx admin]$
```

On Standby:

```
[oracle@DR-XXXX-DR admin]$ env | grep ORA
ORACLE_SID=testdb
ORACLE_BASE=/u01/app/odaorabase/oracle
ORACLE_HOME=/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1
[oracle@DR-XXXX-DR admin]$ cd $TNS_ADMIN/
[oracle@DR-XXXX-DR admin]$ pwd
/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/network/admin
[oracle@DR-XXXX-DR admin]$ ls -ltr
total 60
-rw-r--r-- 1 oracle oinstall  1536 Feb 14  2018 shrept.lst
drwxr-xr-x 2 oracle oinstall 20480 Apr 17  2019 samples
-rw-r----- 1 oracle oinstall   627 Jan 28 14:49 tnsnames.ora
[oracle@DR-XXXX-DR admin]$

[oracle@DR-XXXX-DR admin]$ cp -rp tnsnames.ora tnsnames.ora_bkp-28jan2025
[oracle@DR-XXXX-DR admin]$ ls -lrth
total 64K
-rw-r--r-- 1 oracle oinstall 1.5K Feb 14  2018 shrept.lst
drwxr-xr-x 2 oracle oinstall  20K Apr 17  2019 samples
-rw-r----- 1 oracle oinstall  627 Jan 28 14:49 tnsnames.ora_bkp-28jan2025
```

```
-rw-r----- 1 oracle oinstall  627 Jan 28 14:49 tnsnames.ora
[oracle@DR-XXXX-DR admin]$ vi tnsnames.ora

[oracle@DR-XXXX-DR admin]$ cat tnsnames.ora
tnsnames.ora Network Configuration File:
/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/network/admin/tnsnames.ora
Generated by Oracle configuration tools.

LISTENER_TESTDB =
  (ADDRESS = (PROTOCOL = TCP)(HOST = DR-XXXX-DR)(PORT = 1521))


TESTPRIMARY =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = xxxxxxxxx)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = TESTPRIMARY)
    )
  )

TESTSTANDBY =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = DR-XXXX-DR)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = TESTSTANDBY)
    )
  )
[oracle@DR-XXXX-DR admin]$


[oracle@DR-XXXX-DR admin]$ tnsping TESTPRIMARY

TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 28-JAN-2025 15:13:26

Copyright (c) 1997, 2024, Oracle.  All rights reserved.

Used parameter files:

Used TNSNAMES adapter to resolve the alias
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST =
172.19.105.31)(PORT = 1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME =
TESTPRIMARY)))
OK (0 msec)
[oracle@DR-XXXX-DR admin]$

[oracle@DR-XXXX-DR admin]$ tnsping TESTSTANDBY
```

```
TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 28-JAN-2025 15:14:01

Copyright (c) 1997, 2024, Oracle.  All rights reserved.

Used parameter files:

Used TNSNAMES adapter to resolve the alias
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = DR-XXXX-DR)(PORT =
1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = TESTSTANDBY)))
OK (0 msec)
```

Copy the passwd file from On-Prem (Primary) to ODA(Standby):

```
SCP /u01/ORACDBTSTUAT/19.3.0/dbs/orapwTESTPRIMARY oracle@DR-XXXX-DR:
/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/dbs/orapwTESTSTANDBY
```

Add static listener entries:

It allows listener to handle both TESTPRIMARY and TESTSTANDBY, even if databases aren't open yet. It required during duplicate or redo apply

```
[grid@DR-XXXX-DR  ~]$ cd /u01/app/19.0.0.0/grid/network/admin/
[grid@DR-XXXX-DR  admin]$
[grid@DR-XXXX-DR  admin]$ ls -lrth
total 36K
-rw-r----- 1 grid oinstall 1.5K Feb 14  2018 shrept.lst
drwxr-xr-x 2 grid oinstall   64 Apr 17  2019 samples
-rw-r----- 1 grid oinstall  992 Oct  7 16:30 sqlnet.ora
-rw-r----- 1 grid oinstall 2.2K Oct 31 16:37 listener.ora
-rw-r----- 1 grid oinstall 1.9K Oct 31 18:39 tnsnames.ora
[grid@DR-XXXX-DR  admin]$ vi listener.ora
[grid@DR-XXXX-DR  admin]$
[grid@DR-XXXX-DR  admin]$ cat listener.ora
LISTENER=(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER))))
line added by Agent

SID_LIST_LISTENER =
  (SID_LIST =
        (SID_DESC =
          (GLOBAL_DBNAME = TESTPRIMARY)
          (ORACLE_HOME =/u01/ORACDBTSTUAT/19.3.0/)
          (SID_NAME = TESTPRIMARY)
        (SID_DESC =
          (GLOBAL_DBNAME = TESTSTANDBY)
          (ORACLE_HOME =/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1)
          (SID_NAME = TESTSTANDBY)
        )
)
```

Create necessary directories on Standby (Node on which you want to duplicate the database):

Create wallet directory:

```
mkdir -p
/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/admin/TESTSTANDBY/wallet_root
```

Create audit directories:

```
mkdir -p /u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump
mkdir -p /u01/app/odaorahome/oracle/admin/TESTSTANDBY/cdump
```

--> Create pfile and start database in NOMOUNT:

```
[oracle@DR-XXXX-DR ~]$ export ORACLE_UNQNAME=TESTSTANDBY
[oracle@DR-XXXX-DR ~]$ export ORACLE_SID=TESTSTANDBY
[oracle@DR-XXXX-DR ~]$ export
ORACLE_HOME=/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1
[oracle@DR-XXXX-DR ~]$ . TESTSTANDBY.env
[oracle@DR-XXXX-DR trace]$ env|grep ORA
ORACLE_UNQNAME=TESTSTANDBY
ORACLE_SID=TESTPRIMARY
ORACLE_BASE=/u01/app/odaorabase/oracle
ORACLE_HOME=/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1


[oracle@DR-XXXX-DR ~]$ cd $ORACLE_HOME/dbs
[oracle@DR-XXXX-DR dbs]$ pwd
/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/dbs
[oracle@DR-XXXX-DR dbs]$
[oracle@DR-XXXX-DR dbs]$ ls -ltr
total 12
-rw-r--r-- 1 oracle oinstall 3079 May 14  2015 init.ora
-rw-r----- 1 oracle oinstall 2048 Jan 28 19:11 orapwTESTSTANDBY
-rw-r--r-- 1 oracle oinstall 1238 Jan 28 19:37 initTESTSTANDBY.ora
[oracle@DR-XXXX-DR dbs]$

[oracle@sa01vdbxcdt01 dbs]$ vi initTESTSTANDBY.ora
[oracle@sa01vdbxcdt01 dbs]$
[oracle@DR-XXXX-DR dbs]$ cat initTESTSTANDBY.ora
*.audit_file_dest='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump'
*.audit_trail='db'
*.compatible='19.0.0'
*.control_files='+DATA','+RECO'
*.db_block_size=8192
*.db_name='TESTPRIMARY'
*.db_unique_name='TESTSTANDBY'
*.diagnostic_dest='/u01/app/odaorabase/oracle/diag'
```

```
*.enable_pluggable_database=true
*.nls_language='AMERICAN'
*.nls_territory='AMERICA'
*.open_cursors=500
*.pga_aggregate_target=3190m
*.processes=960
*.remote_login_passwordfile='EXCLUSIVE'
*.sessions=1800
*.sga_max_size='10G'
*.sga_target='8G'
*.tde_configuration='KEYSTORE_CONFIGURATION=FILE'
*.undo_tablespace='UNDOTBS1'
*.wallet_root='/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/admin/TESTSTANDBY/wall
et_root '

[oracle@DR-XXXX-DR ~]$ sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Tue Jan 28 20:04:49 2025
Version 19.25.0.0.0

Copyright (c) 1982, 2024, Oracle.  All rights reserved.

Connected to an idle instance.

SQL> startup nomount
pfile='/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/dbs/initTESTSTANDBY.ora';
ORACLE instance started.

Total System Global Area 1.0737E+10 bytes
Fixed Size                  13938904 bytes
Variable Size            3573547008 bytes
Database Buffers         7113539584 bytes
Redo Buffers               36388864 bytes

SQL> show parameter name

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
cdb_cluster_name                     string
cell_offloadgroup_name               string
db_file_name_convert                 string
db_name                              string      TESTPRIMARY
db_unique_name                       string      TESTSTANDBY
global_names                         boolean     FALSE
instance_name                        string      TESTPRIMARY
lock_name_space                      string
log_file_name_convert                string
pdb_file_name_convert                string
processor_group_name                 string
```

```
NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
service_names                        string      TESTSTANDBY

SQL> show parameter root

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
wallet_root                          string      /u01/app/odaorahome/oracle/
                                                 /19.0.0.0/dbhome_1/admin/TESTSTANDBY
SQL>
```

RMAN Active Duplicate Command:

```
rman target sys/xxxxxxxxxx@TESTPRIMARY

connect auxiliary sys/xxxxxxxxxxxxx@TESTSTANDBY

host "date +'%F %H-%M-%S'";
run
{
ALLOCATE CHANNEL CH1 TYPE DISK;
ALLOCATE CHANNEL CH2 TYPE DISK;
ALLOCATE CHANNEL CH4 TYPE DISK;
ALLOCATE CHANNEL CH3 TYPE DISK;
ALLOCATE CHANNEL CH5 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH1 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH2 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH3 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH4 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH5 TYPE DISK;
DUPLICATE TARGET DATABASE FOR STANDBY FROM ACTIVE DATABASE
  SPFILE
  PARAMETER_VALUE_CONVERT 'TESTPRIMARY','TESTSTANDBY'
  SET DB_NAME='TESTPRIMARY'
  SET DB_UNIQUE_NAME='TESTSTANDBY'
  SET CONTROL_FILES='+DATA'
  SET CLUSTER_DATABASE='FALSE'
  SET LOG_FILE_NAME_CONVERT =
    '/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo01.log', '+DATA',
    '/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo02.log', '+DATA',
    '/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo03.log', '+DATA'
  SET DB_FILE_NAME_CONVERT = '/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/', '+DATA';
  SET DB_CREATE_FILE_DEST='+DATA'
  SET DB_CREATE_ONLINE_LOG_DEST_1='+DATA'
  SET DB_RECOVERY_FILE_DEST='+RECO'
```

```
  SET DB_RECOVERY_FILE_DEST_SIZE='10G'
  SET AUDIT_FILE_DEST='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump'
  SET CORE_DUMP_DEST='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/cdump'
  SET DIAGNOSTIC_DEST='/u01/app/odaorabase/oracle/diag'
  SET REMOTE_LOGIN_PASSWORDFILE='EXCLUSIVE'
  SET
WALLET_ROOT='/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/admin/TESTSTANDBY/wallet
_root'
  SET SERVICE_NAMES='TESTSTANDBY'
  SET SGA_MAX_SIZE='10G'
  SET SGA_TARGET='8G'
  NOFILENAMECHECK;
}
host "date +'%F %H:%M:%S'";
```

Start Active Duplicate:

```
[oracle@DR-XXXX-DR ~]$ rman target sys/xxxxxxxx@TESTPRIMARY

Recovery Manager: Release 19.0.0.0.0 - Production on Tue Jan 28 23:46:46 2025
Version 19.25.0.0.0

Copyright (c) 1982, 2019, Oracle and/or its affiliates.  All rights reserved.

PL/SQL package SYS.DBMS_BACKUP_RESTORE version 19.03.00.00 in TARGET database is not
current
PL/SQL package SYS.DBMS_RCVMAN version 19.03.00.00 in TARGET database is not current
connected to target database: TESTPRIMARY (DBID=3269537954)

RMAN> connect auxiliary sys/xxxxxxxxxxx@TESTSTANDBY
connect auxiliary *
connected to auxiliary database: TESTPRIMARY (not mounted)


RMAN> host "date +'%F %H-%M-%S'";

run
h{
ALLOCATE CHANNEL CH1 TYPE DISK;
ALLOCATE CHANNEL CH2 TYPE DISK;
ALLOCATE CHANNEL CH3 TYPE DISK;
ALLOCATE CHANNEL CH4 TYPE DISK;
ALLOCATE CHANNEL CH5 TYPE DISK;
ostALLOCATE AUXILIARY CHANNEL ACH1 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH2 TYPE DISK;
 ALLOCATE AUXILIARY CHANNEL ACH3 TYPE DISK;
```

```
ALLOCATE AUXILIARY CHANNEL ACH4 TYPE DISK;
ALLOCATE AUXILIARY CHANNEL ACH5 TYPE DISK;

DUPLICATE TARGET DATABASE FOR STANDBY FROM ACTIVE DATABASE
  SPFILE
"date  PARAMETER_VALUE_CONVERT 'TESTPRIMARY','TESTSTANDBY'
  SET DB_NAME='TESTPRIMARY'
  SET DB_UNIQUE_NAME='TESTSTANDBY'
  SET CONTROL_FILES='+DATA/TESTSTANDBY/CONTROLFILE/ctrl01.ctl'
  SET CLUSTER_DATABASE='FALSE'
  SET LOG_FILE_NAME_CONVERT =
    '/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/', '+DATA/TESTSTANDBY/'
  SET DB_FILE_NAME_CONVERT = '/u02/ORACDBTSTUAT/oradata/CDBAYU AT/', '+DATA/TESTSTANDBY/'
, '/u01/ORACDBTSTUAT/19.3.0/dbs/', '+DATA/TESTSTANDBY/'
+'%  SET DB_CREATE_FILE_DEST='+DATA'
  SET DB_CREATE_ONLINE_LOG_DEST_1='+DATA'
F  SET DB_RECOVERY_FILE_DEST='+RECO'
   SET DB_RECOVERY_FILE_DEST_SIZE='10G'
  SET AUDIT_FILE_DEST='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump'
  SET CORE_DUMP_DEST='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/cdump'
  SET DIAGNOSTIC_DEST='/u01/%app/odaorabase/oracle/diag'
  SET REMOTE_LOGIN_PASSWORDFILE='EXCLUSIVE'
  SET
WALLET_ROOT='/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/admin/TESTSTANDBY/wallet
_root'
  SET SERVICE_NAMES='TESTSTANDBY'
  SET SGA_MAX_SIZE='10G'
H-  SET SGA_TARGET='8G'
  NOFILENAMECHECK;
%}

host "date +'%F %H:%M:%S'";
M-%S'";
2025-01-29 14-47-23
host command complete


RMAN>

RMAN> run
2> {
3> ALLOCATE CHANNEL CH1 TYPE DISK;
4> ALLOCATE CHANNEL CH2 TYPE DISK;
5> ALLOCATE CHANNEL CH3 TYPE DISK;
6> ALLOCATE CHANNEL CH4 TYPE DISK;
7> ALLOCATE CHANNEL CH5 TYPE DISK;
8> ALLOCATE AUXILIARY CHANNEL ACH1 TYPE DISK;
9> ALLOCATE AUXILIARY CHANNEL ACH2 TYPE DISK;
10> ALLOCATE AUXILIARY CHANNEL ACH3 TYPE DISK;
```

```
11> ALLOCATE AUXILIARY CHANNEL ACH4 TYPE DISK;
12> ALLOCATE AUXILIARY CHANNEL ACH5 TYPE DISK;
13>
14> DUPLICATE TARGET DATABASE FOR STANDBY FROM ACTIVE DATABASE
15>   SPFILE
16>   PARAMETER_VALUE_CONVERT 'TESTPRIMARY','TESTSTANDBY'
17>   SET DB_NAME='TESTPRIMARY'
18>   SET DB_UNIQUE_NAME='TESTSTANDBY'
19>   SET CONTROL_FILES='+DATA/TESTSTANDBY/CONTROLFILE/ctrl01.ctl'
20>   SET CLUSTER_DATABASE='FALSE'
21>   SET LOG_FILE_NAME_CONVERT =
22>     '/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/', '+DATA/TESTSTANDBY/'
23>   SET DB_FILE_NAME_CONVERT = '/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/',
'+DATA/TESTSTANDBY/' , '/u01/ORACDBTSTUAT/19.3.0/dbs/', '+DATA/TESTSTANDBY/'
24>   SET DB_CREATE_FILE_DEST='+DATA'
25>   SET DB_CREATE_ONLINE_LOG_DEST_1='+DATA'
26>   SET DB_RECOVERY_FILE_DEST='+RECO'
27>   SET DB_RECOVERY_FILE_DEST_SIZE='10G'
28>   SET AUDIT_FILE_DEST='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump'
29>   SET CORE_DUMP_DEST='/u01/app/odaorahome/oracle/admin/TESTSTANDBY/cdump'
30>   SET DIAGNOSTIC_DEST='/u01/app/odaorabase/oracle/diag'
31>   SET REMOTE_LOGIN_PASSWORDFILE='EXCLUSIVE'
32>   SET
WALLET_ROOT='/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/admin/TESTSTANDBY/wallet
_root'
33>   SET SERVICE_NAMES='TESTSTANDBY'
34>   SET SGA_MAX_SIZE='10G'
35>   SET SGA_TARGET='8G'
36>   NOFILENAMECHECK;
37> }
using target database control file instead of recovery catalog
allocated channel: CH1
channel CH1: SID=1510 device type=DISK

allocated channel: CH2
channel CH2: SID=5 device type=DISK

allocated channel: CH3
channel CH3: SID=1516 device type=DISK

allocated channel: CH4
channel CH4: SID=1518 device type=DISK

allocated channel: CH5
channel CH5: SID=910 device type=DISK

allocated channel: ACH1
channel ACH1: SID=1770 device type=DISK
```

```
allocated channel: ACH2
channel ACH2: SID=1799 device type=DISK

allocated channel: ACH3
channel ACH3: SID=1828 device type=DISK

allocated channel: ACH4
channel ACH4: SID=1 device type=DISK

allocated channel: ACH5
channel ACH5: SID=30 device type=DISK

Starting Duplicate Db at 29-JAN-25

contents of Memory Script:
{
   backup as copy reuse
   passwordfile auxiliary format
'/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/dbs/orapwCDBAYUATDR'   ;
   restore clone from service  'TESTPRIMARY' spfile to
 '/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/dbs/spfileTESTSTANDBY.ora';
   sql clone "alter system set spfile=
''/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/dbs/spfileTESTSTANDBY.ora''";
}
executing Memory Script

Starting backup at 29-JAN-25
Finished backup at 29-JAN-25

Starting restore at 29-JAN-25

channel ACH1: starting datafile backup set restore
channel ACH1: using network backup set from service TESTPRIMARY
channel ACH1: restoring SPFILE
output file
name=/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/dbs/spfileTESTSTANDBY.ora
channel ACH1: restore complete, elapsed time: 00:00:01
Finished restore at 29-JAN-25

sql statement: alter system set spfile=
''/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/dbs/spfileTESTSTANDBY.ora''

contents of Memory Script:
{
   sql clone "alter system set  dispatchers =
 ''(PROTOCOL=TCP) (SERVICE=TESTSTANDBYXDB)'' comment=
 '''' scope=spfile";
   sql clone "alter system set  fal_client =
 ''TESTSTANDBY'' comment=
```

```
'''' scope=spfile";
  sql clone "alter system set  fal_server =
''CDBAYUATDRDR'' comment=
'''' scope=spfile";
  sql clone "alter system set  db_name =
''TESTPRIMARY'' comment=
'''' scope=spfile";
  sql clone "alter system set  db_unique_name =
''TESTSTANDBY'' comment=
'''' scope=spfile";
  sql clone "alter system set  CONTROL_FILES =
''+DATA/TESTSTANDBY/CONTROLFILE/ctrl01.ctl'' comment=
'''' scope=spfile";
  sql clone "alter system set  CLUSTER_DATABASE =
FALSE comment=
'''' scope=spfile";
  sql clone "alter system set  LOG_FILE_NAME_CONVERT =
''/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/'', ''+DATA/TESTSTANDBY/'' comment=
'''' scope=spfile";
  sql clone "alter system set  db_file_name_convert =
''/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/'', ''+DATA/TESTSTANDBY/'',
''/u01/ORACDBTSTUAT/19.3.0/dbs/'', ''+DATA/TESTSTANDBY/'' comment=
'''' scope=spfile";
  sql clone "alter system set  DB_CREATE_FILE_DEST =
''+DATA'' comment=
'''' scope=spfile";
  sql clone "alter system set  DB_CREATE_ONLINE_LOG_DEST_1 =
''+DATA'' comment=
'''' scope=spfile";
  sql clone "alter system set  db_recovery_file_dest =
''+RECO'' comment=
'''' scope=spfile";
  sql clone "alter system set  DB_RECOVERY_FILE_DEST_SIZE =
10G comment=
'''' scope=spfile";
  sql clone "alter system set  AUDIT_FILE_DEST =
''/u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump'' comment=
'''' scope=spfile";
  sql clone "alter system set  CORE_DUMP_DEST =
''/u01/app/odaorahome/oracle/admin/TESTSTANDBY/cdump'' comment=
'''' scope=spfile";
  sql clone "alter system set  DIAGNOSTIC_DEST =
''/u01/app/odaorabase/oracle/diag'' comment=
'''' scope=spfile";
  sql clone "alter system set  REMOTE_LOGIN_PASSWORDFILE =
''EXCLUSIVE'' comment=
'''' scope=spfile";
  sql clone "alter system set  WALLET_ROOT =
''/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/admin/TESTSTANDBY/wallet_root''
```

```
comment=
 '''' scope=spfile";
   sql clone "alter system set  SERVICE_NAMES =
 ''TESTSTANDBY'' comment=
 '''' scope=spfile";
   sql clone "alter system set  SGA_MAX_SIZE =
 10G comment=
 '''' scope=spfile";
   sql clone "alter system set  SGA_TARGET =
 8G comment=
 '''' scope=spfile";
   shutdown clone immediate;
   startup clone nomount;
}
executing Memory Script

sql statement: alter system set  dispatchers =  ''(PROTOCOL=TCP) (SERVICE=CDBAYUATDRXDB)''
comment= '''' scope=spfile

sql statement: alter system set  fal_client =  ''TESTSTANDBY'' comment= '''' scope=spfile

sql statement: alter system set  fal_server =  ''CDBAYUATDRDR'' comment= '''' scope=spfile

sql statement: alter system set  db_name =  ''TESTPRIMARY'' comment= '''' scope=spfile

sql statement: alter system set  db_unique_name =  ''TESTSTANDBY'' comment= ''''
scope=spfile

sql statement: alter system set  CONTROL_FILES =
''+DATA/TESTSTANDBY/CONTROLFILE/ctrl01.ctl'' comment= '''' scope=spfile

sql statement: alter system set  CLUSTER_DATABASE =  FALSE comment= '''' scope=spfile

sql statement: alter system set  LOG_FILE_NAME_CONVERT =
''/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/'', ''+DATA/TESTSTANDBY/'' comment= ''''
scope=spfile

sql statement: alter system set  db_file_name_convert =
''/u02/ORACDBTSTUAT/oradata/TESTPRIMARY/'', ''+DATA/TESTSTANDBY/'',
''/u01/ORACDBTSTUAT/19.3.0/dbs/'', ''+DATA/TESTSTANDBY/'' comment= '''' scope=spfile

sql statement: alter system set  DB_CREATE_FILE_DEST =  ''+DATA'' comment= ''''
scope=spfile

sql statement: alter system set  DB_CREATE_ONLINE_LOG_DEST_1 =  ''+DATA'' comment= ''''
scope=spfile

sql statement: alter system set  db_recovery_file_dest =  ''+RECO'' comment= ''''
scope=spfile
```

```
sql statement: alter system set  DB_RECOVERY_FILE_DEST_SIZE =  10G comment= ''''
scope=spfile

sql statement: alter system set  AUDIT_FILE_DEST =
''/u01/app/odaorahome/oracle/admin/TESTSTANDBY/adump'' comment= '''' scope=spfile

sql statement: alter system set  CORE_DUMP_DEST =
''/u01/app/odaorahome/oracle/admin/TESTSTANDBY/cdump'' comment= '''' scope=spfile

sql statement: alter system set  DIAGNOSTIC_DEST =  ''/u01/app/odaorabase/oracle/diag''
comment= '''' scope=spfile

sql statement: alter system set  REMOTE_LOGIN_PASSWORDFILE =  ''EXCLUSIVE'' comment= ''''
scope=spfile

sql statement: alter system set  WALLET_ROOT =
''/u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_2/admin/TESTSTANDBY/wallet_root''
comment= '''' scope=spfile

sql statement: alter system set  SERVICE_NAMES =  ''TESTSTANDBY'' comment= ''''
scope=spfile

sql statement: alter system set  SGA_MAX_SIZE =  10G comment= '''' scope=spfile

sql statement: alter system set  SGA_TARGET =  8G comment= '''' scope=spfile

Oracle instance shut down

connected to auxiliary database (not started)
Oracle instance started

Total System Global Area   10737414360 bytes

Fixed Size                    13938904 bytes
Variable Size               3573547008 bytes
Database Buffers            7113539584 bytes
Redo Buffers                  36388864 bytes
allocated channel: ACH1
channel ACH1: SID=1654 device type=DISK
allocated channel: ACH2
channel ACH2: SID=1683 device type=DISK
allocated channel: ACH3
channel ACH3: SID=1712 device type=DISK
allocated channel: ACH4
channel ACH4: SID=1741 device type=DISK
allocated channel: ACH5
channel ACH5: SID=1770 device type=DISK
```

```
contents of Memory Script:
{
   restore clone from service  'TESTPRIMARY' standby controlfile;
}
executing Memory Script

Starting restore at 29-JAN-25

channel ACH1: starting datafile backup set restore
channel ACH1: using network backup set from service TESTPRIMARY
channel ACH1: restoring control file
channel ACH1: restore complete, elapsed time: 00:00:01
output file name=+DATA/TESTSTANDBY/CONTROLFILE/ctrl01.ctl
Finished restore at 29-JAN-25

contents of Memory Script:
{
   sql clone 'alter database mount standby database';
}
executing Memory Script

sql statement: alter database mount standby database
RMAN-05529: warning: DB_FILE_NAME_CONVERT resulted in invalid ASM names; names changed to
disk group only.

contents of Memory Script:
{
   set newname for tempfile  3 to
 "+DATA/TESTSTANDBY/AYTIUATD/temp01.dbf";
   set newname for tempfile  4 to
 "+DATA/TESTSTANDBY/AYTIUATD/temp02.dbf";
   set newname for tempfile  5 to
 "+DATA/TESTSTANDBY/temp02.dbf";
   set newname for tempfile  6 to
 "+DATA/TESTSTANDBY/pdbseed/temp02.dbf";
   switch clone tempfile all;
   set newname for datafile  1 to
 "+DATA/TESTSTANDBY/system01.dbf";
   set newname for datafile  3 to
 "+DATA/TESTSTANDBY/sysaux01.dbf";
   set newname for datafile  4 to
 "+DATA/TESTSTANDBY/undotbs01.dbf";
   set newname for datafile  5 to
 "+DATA/TESTSTANDBY/pdbseed/system01.dbf";
   set newname for datafile  6 to
 "+DATA/TESTSTANDBY/pdbseed/sysaux01.dbf";
   set newname for datafile  7 to
 "+DATA/TESTSTANDBY/users01.dbf";
   set newname for datafile  8 to
```

```
"+DATA/TESTSTANDBY/pdbseed/undotbs01.dbf";
  set newname for datafile  48 to
"+DATA";
  set newname for datafile  49 to
"+DATA";
  set newname for datafile  50 to
"+DATA";
  set newname for datafile  51 to
"+DATA";
  set newname for datafile  52 to
"+DATA";
  set newname for datafile  53 to
"+DATA";
  set newname for datafile  54 to
"+DATA";
  set newname for datafile  55 to
"+DATA";
  set newname for datafile  56 to
"+DATA";
  set newname for datafile  57 to
"+DATA";
  set newname for datafile  58 to
"+DATA";
  set newname for datafile  59 to
"+DATA";
  set newname for datafile  60 to
"+DATA";
  set newname for datafile  70 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_dev01.dbf";
  set newname for datafile  71 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_dev02.dbf";
  set newname for datafile  72 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_dev03dbf";
  set newname for datafile  73 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_dev04dbf";
  set newname for datafile  74 to
"+DATA/TESTSTANDBY/AYTIUATD/undotbs01.dbf";
  set newname for datafile  75 to
"+DATA/TESTSTANDBY/AYTIUATD/preprod01.dbf";
  set newname for datafile  76 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jan01.dbf";
  set newname for datafile  77 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jan02.dbf";
  set newname for datafile  78 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jan03dbf";
  set newname for datafile  79 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jan04dbf";
  set newname for datafile  80 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jan05dbf";
```

```
  set newname for datafile  81 to
"+DATA/TESTSTANDBY/AYTIUATD/amlock_xxxxxxxx_uat01.dbf";
  set newname for datafile  82 to
"+DATA/TESTSTANDBY/AYTIUATD/amlock_xxxxxxxx_uat02.dbf";
  set newname for datafile  83 to
"+DATA/TESTSTANDBY/AYTIUATD/amlock_xxxxxxxx_uat03dbf";
  set newname for datafile  84 to
"+DATA/TESTSTANDBY/AYTIUATD/preprod02.dbf";
  set newname for datafile  85 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jan06.dbf";
  set newname for datafile  86 to
"+DATA/TESTSTANDBY/AYTIUATD/sysaux01.dbf";
  set newname for datafile  87 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2301.dbf";
  set newname for datafile  88 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2302.dbf";
  set newname for datafile  89 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2303dbf";
  set newname for datafile  90 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2304dbf";
  set newname for datafile  91 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2305dbf";
  set newname for datafile  92 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2306dbf";
  set newname for datafile  93 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2307dbf";
  set newname for datafile  94 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2308dbf";
  set newname for datafile  95 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2309dbf";
  set newname for datafile  96 to
"+DATA/TESTSTANDBY/AYTIUATD/xxxxxxxx_jul2310.dbf";
  set newname for datafile  98 to
"+DATA/TESTSTANDBY/testuat_data1.dbf";
  set newname for datafile  99 to
"+DATA/TESTSTANDBY/AYTIUATD/users.4674.10813419689";
  set newname for datafile  100 to
"+DATA/TESTSTANDBY/AYTIUATD/users.46714.108131419689";
  set newname for datafile  101 to
"+DATA/TESTSTANDBY/AYTIUATD/users.467124.108131419689";
  set newname for datafile  102 to
"+DATA/TESTSTANDBY/AYTIUATD/users.4674.108134129689";
  set newname for datafile  103 to
"+DATA/TESTSTANDBY/AYTIUATD/users.4674.108134196989";
  set newname for datafile  104 to
"+DATA/TESTSTANDBY/AYTIUATD/users.4124.108131419689";
  set newname for datafile  105 to
"+DATA/TESTSTANDBY/AYTIUATD/users.1674.10813419689";
  set newname for datafile  106 to
```

```
 "+DATA";
   set newname for datafile  107 to
 "+DATA/TESTSTANDBY/AYTIUATD/users.24.108131419689";
   set newname for datafile  108 to
 "+DATA";
   set newname for datafile  109 to
 "+DATA";
   set newname for datafile  110 to
 "+DATA";
   set newname for datafile  111 to
 "+DATA";
   set newname for datafile  112 to
 "+DATA";
   set newname for datafile  113 to
 "+DATA/TESTSTANDBY/AYTIUATD/dmsprod_01.dbf";
   restore
   from  nonsparse   from service
 'TESTPRIMARY'   clone database
   ;
   sql 'alter system archive log current';
}
executing Memory Script

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

renamed tempfile 3 to +DATA/TESTSTANDBY/AYTIUATD/temp01.dbf in control file
renamed tempfile 4 to +DATA/TESTSTANDBY/AYTIUATD/temp02.dbf in control file
renamed tempfile 5 to +DATA/TESTSTANDBY/temp02.dbf in control file
renamed tempfile 6 to +DATA/TESTSTANDBY/pdbseed/temp02.dbf in control file

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME


Starting restore at 29-JAN-25

channel ACH1: starting datafile backup set restore
channel ACH1: using network backup set from service TESTPRIMARY
```

```
channel ACH1: specifying datafile(s) to restore from backup set
channel ACH1: restoring datafile 00001 to +DATA/TESTSTANDBY/system01.dbf
channel ACH2: starting datafile backup set restore
channel ACH2: using network backup set from service TESTPRIMARY
channel ACH2: specifying datafile(s) to restore from backup set
channel ACH2: restoring datafile 00003 to +DATA/TESTSTANDBY/sysaux01.dbf
channel ACH3: starting datafile backup set restore
channel ACH3: using network backup set from service TESTPRIMARY
channel ACH3: specifying datafile(s) to restore from backup set
channel ACH3: restoring datafile 00004 to +DATA/TESTSTANDBY/undotbs01.dbf
channel ACH4: starting datafile backup set restore
channel ACH4: using network backup set from service TESTPRIMARY
channel ACH4: specifying datafile(s) to restore from backup set
channel ACH4: restoring datafile 00005 to +DATA/TESTSTANDBY/pdbseed/system01.dbf
channel ACH5: starting datafile backup set restore
channel ACH5: using network backup set from service TESTPRIMARY
channel ACH5: specifying datafile(s) to restore from backup set
channel ACH5: restoring datafile 00006 to +DATA/TESTSTANDBY/pdbseed/sysaux01.dbf
channel ACH3: restore complete, elapsed time: 00:00:01
channel ACH3: starting datafile backup set restore
channel ACH3: using network backup set from service TESTPRIMARY
channel ACH3: specifying datafile(s) to restore from backup set
channel ACH3: restoring datafile 00007 to +DATA/TESTSTANDBY/users01.dbf
channel ACH3: restore complete, elapsed time: 00:00:01
channel ACH1: restore complete, elapsed time: 00:01:30
channel ACH2: restore complete, elapsed time: 00:01:46
channel ACH3: restore complete, elapsed time: 00:01:31
channel ACH4: restore complete, elapsed time: 00:01:57
channel ACH5: restore complete, elapsed time: 00:01:25
Finished restore at 29-JAN-25

sql statement: alter system archive log current

contents of Memory Script:
{
   switch clone datafile all;
}
executing Memory Script

datafile 1 switched to datafile copy
input datafile copy RECID=413 STAMP=1191683085 file name=+DATA/TESTSTANDBY/system01.dbf
datafile 3 switched to datafile copy
input datafile copy RECID=414 STAMP=1191683085 file name=+DATA/TESTSTANDBY/sysaux01.dbf
datafile 4 switched to datafile copy
input datafile copy RECID=415 STAMP=1191683085 file name=+DATA/TESTSTANDBY/undotbs01.dbf
datafile 5 switched to datafile copy
input datafile copy RECID=416 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/pdbseed/system01.dbf
datafile 6 switched to datafile copy
```

```
input datafile copy RECID=417 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/pdbseed/sysaux01.dbf
datafile 7 switched to datafile copy
input datafile copy RECID=418 STAMP=1191683085 file name=+DATA/TESTSTANDBY/users01.dbf
datafile 8 switched to datafile copy
input datafile copy RECID=419 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/pdbseed/undotbs01.dbf
datafile 48 switched to datafile copy
input datafile copy RECID=420 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/CA4A00259A62671FE053166513AC1AF0/DATAFILE/system.286.1191682111
datafile 49 switched to datafile copy
input datafile copy RECID=421 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/CA4A00259A62671FE053166513AC1AF0/DATAFILE/sysaux.289.1191682103
datafile 50 switched to datafile copy
input datafile copy RECID=422 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/CA4A00259A62671FE053166513AC1AF0/DATAFILE/undotbs1.291.1191682101
datafile 51 switched to datafile copy
input datafile copy RECID=423 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/CA4A00259A62671FE053166513AC1AF0/DATAFILE/users.294.1191682099
datafile 52 switched to datafile copy
input datafile copy RECID=424 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/CA4A00259A62671FE053166513AC1AF0/DATAFILE/undotbs2.293.1191682101
datafile 53 switched to datafile copy
input datafile copy RECID=425 STAMP=1191683085 file
name=+DATA/TESTSTANDBY/CA4A00259A62671FE053166513AC1AF0/DATAFILE/xxxxxxxx_uat.284.11916821
11
released channel: CH1
released channel: CH2
released channel: CH3
released channel: CH4
released channel: CH5
released channel: ACH1
released channel: ACH2
released channel: ACH3
released channel: ACH4
released channel: ACH5


RMAN>

RMAN> host "date +'%F %H:%M:%S'";
2025-01-29 15:04:47
host command complete


RMAN>

exit
```

```
RMAN Client Diagnostic Trace file :
/u01/app/odaorabase/oracle/diag/clients/user_oracle/host_2270713290_110/trace/ora_73156_14
0131821451776.trc
RMAN Server Diagnostic Trace file :
/u01/app/odaorabase/oracle/diag/diag/rdbms/cdbayuatdr/TESTSTANDBY/trace/CDBAYUATDR_ora_756
60.trc
RMAN Server Diagnostic Trace file :
/u01/ORACDBTSTUAT/diag/rdbms/cdbayuat/TESTPRIMARY/trace/CDBAYUAT_ora_24077.trc

Recovery Manager complete.
-> Took 10 min to finish active duplicate:
```

Standby Database Checks:

```
[oracle@sa01vdbxcdt01 dbs]$ env | grep ORA
ORACLE_UNQNAME=TESTSTANDBY
ORACLE_SID=TESTSTANDBY
ORACLE_BASE=/u02/app/oracle
ORACLE_HOME=/u02/app/oracle/product/19.0.0.0/dbhome_3
ORACLE_HOSTNAME=sa01vdbxcdt01.tadawul.com.sa
[oracle@sa01vdbxcdt01 dbs]$
[oracle@sa01vdbxcdt01 dbs]$ sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Thu Oct 31 23:12:57 2024
Version 19.21.0.0.0

Copyright (c) 1982, 2022, Oracle.  All rights reserved.


Connected to:
Oracle Database 19c EE Extreme Perf Release 19.0.0.0.0 - Production
Version 19.21.0.0.0

SQL>  show parameter name

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
cdb_cluster_name                     string
cell_offloadgroup_name               string
db_file_name_convert                 string      /u02/ORACDBTSTUAT/oradata/CDBAY
                                                 UAT/, +DATA/TESTSTANDBY/, /u01/
                                                 ORACDBTSTUAT/19.3.0/dbs/, +DATA
                                                 /TESTSTANDBY/
db_name                              string      TESTPRIMARY
db_unique_name                       string      TESTSTANDBY
global_names                         boolean     FALSE
```

```
instance_name                        string      TESTSTANDBY
lock_name_space                      string

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
log_file_name_convert                string      /u02/ORACDBTSTUAT/oradata/CDBAY
                                                 UAT/, +DATA/TESTSTANDBY/
pdb_file_name_convert                string
processor_group_name                 string
service_names                        string      TESTSTANDBY
SQL>

SQL> set lines 300 pages 300
select distinct  name,instance_name,open_mode,database_role,status,cdb from
gv$database,gv$instance;SQL>

NAME      INSTANCE_NAME    OPEN_MODE            DATABASE_ROLE    STATUS       CDB
--------- ---------------- -------------------- ---------------- ------------ ---
TESTPRIMARY  TESTSTANDBY       MOUNTED              PHYSICAL STANDBY MOUNTED      YES

SQL>
```

Check Wallet Status:

```
SQL> set lines 300 pages 300
col WRL_PARAMETER for a60
select * from v$encryption_wallet;SQL> SQL>

WRL_TYPE             WRL_PARAMETER                                                STATUS
WALLET_TYPE          WALLET_OR KEYSTORE FULLY_BAC     CON_ID
-------------------- ------------------------------------------------------------ --------
---------------------- -------------------- --------- -------- --------- ----------
FILE                 /u01/app/odaorahome/oracle/product/19.0.0.0/dbhome_1/admin/
NOT_AVAILABLE                 UNKNOWN              SINGLE    NONE     UNDEFINED
1
                     TESTSTANDBY/wallet_root/tde/

SQL> col creation_time for a55
set lines 300 pages 300
col KEY_ID for a60
col TAG for a20
select KEY_ID,TAG,KEY_USE,CREATION_TIME,BACKED_UP,CON_ID from v$encryption_keys;SQL> SQL>
SQL> SQL>

no rows selected
```

--> Add Standby Redologs on both Primary & Standby:

On-Primary:

```
SSQL> show parameter name

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
cdb_cluster_name                     string
cell_offloadgroup_name               string
db_file_name_convert                 string
db_name                              string      TESTPRIMARY
db_unique_name                       string      TESTPRIMARY
global_names                         boolean     FALSE
instance_name                        string      TESTPRIMARY
lock_name_space                      string
log_file_name_convert                string
pdb_file_name_convert                string
processor_group_name                 string

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
service_names                        string      TESTPRIMARY
SQL>


SQL> set lines 300 pages 300
select group,thread,sequence,bytes/1024/1024,members,status from v$log v$logfile;SQL>

    GROUP
THREAD
SEQUENCE
BYTES/1024/1024    MEMBERS STATUS
---------- ---------- ---------- --------------- ---------- ----------------
         1          1      36742             200          1 INACTIVE
         2          1      36743             200          1 ACTIVE
         3          1      36744             200          1 CURRENT

SQL> col member for a100
SQL> select member from v$logfile;

MEMBER
----------------------------------------------------------------------------------------------------
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo03.log
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo02.log
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo01.log
```

```
SQL> select group,thread,sequence,bytes/1024/1024 from v$standby_log;

no rows selected

SQL> SELECT group, type, member FROM v$logfile WHERE type = 'STANDBY' order by group;

no rows selected


ALTER DATABASE ADD STANDBY LOGFILE THREAD 1 GROUP 4
'/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/standby_redo07.log' SIZE 200M;
ALTER DATABASE ADD STANDBY LOGFILE THREAD 1 GROUP 5
'/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/standby_redo05.log' SIZE 200M;
ALTER DATABASE ADD STANDBY LOGFILE THREAD 1 GROUP 6
'/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/standby_redo06.log' SIZE 200M;
Database altered.

SQL>
Database altered.

SQL>

Database altered.


SQL> SELECT group, type, member FROM v$logfile WHERE type='STANDBY' order by group;

    GROUP

TYPE    MEMBER
---------- ------- --------------------------------------------------------------------------------
         4 STANDBY /u01/ORACDBTSTUAT/oradata/TESTPRIMARY/standby_redo04.log
         5 STANDBY /u01/ORACDBTSTUAT/oradata/TESTPRIMARY/standby_redo05.log
         6 STANDBY /u01/ORACDBTSTUAT/oradata/TESTPRIMARY/standby_redo06.log


On Standby:
-----------
SQL> show parameter name

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
cdb_cluster_name                     string
cell_offloadgroup_name               string
db_file_name_convert                 string      /u02/ORACDBTSTUAT/oradata/CDBAY
                                                 UAT/, +DATA/TESTSTANDBY/, /u01/
                                                 ORACDBTSTUAT/19.3.0/dbs/, +DATA
                                                 /TESTSTANDBY/
db_name                              string      TESTPRIMARY
```

```
db_unique_name                       string      TESTSTANDBY
global_names                         boolean     FALSE
instance_name                        string      TESTSTANDBY
lock_name_space                      string
log_file_name_convert                string      /u02/ORACDBTSTUAT/oradata/CDBAY
                                                 UAT/, +DATA/TESTSTANDBY/
pdb_file_name_convert                string
processor_group_name                 string
service_names                        string      TESTSTANDBY

SQL> set lines 300 pages 300
SQL> set lines 300 pages 300
SQL> select group,thread,sequence,bytes/1024/1024,members,status from v$log;

    GROUP
THREAD
SEQUENCE
BYTES/1024/1024    MEMBERS STATUS
---------- ---------- ---------- --------------- ---------- ----------------
         1          1          0             200          1 UNUSED
         3          1          0             200          1 UNUSED
         2          1          0             200          1 CURRENT


SQL> col MEMBER for a100
SQL> select member from v$logfile;

MEMBER
----------------------------------------------------------------------------------------------------
----------
+DATA/TESTSTANDBY/redo03.log
+DATA/TESTSTANDBY/redo02.log
+DATA/TESTSTANDBY/redo01.log
+DATA/TESTSTANDBY/standby_redo04.log
+DATA/TESTSTANDBY/standby_redo05.log
+DATA/TESTSTANDBY/standby_redo06.log

6 rows selected.

SQL> SQL> select group,thread,sequence,bytes/1024/1024 from v$standby_log;

    GROUP
THREAD
SEQUENCE
BYTES/1024/1024
---------- ---------- ---------- ---------------
         4          1      36744             200
         5          1          0             200
         6          1          0             200
```

```
SQL> select member from v$logfile;

MEMBER
--------------------------------------------------------------------------------
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo03.log
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo02.log
/u01/ORACDBTSTUAT/oradata/TESTPRIMARY/redo01.log
+DATA/TESTSTANDBY/ONLINELOG/group_4.271.1191685251
+DATA/TESTSTANDBY/ONLINELOG/group_5.272.1191685251
+DATA/TESTSTANDBY/ONLINELOG/group_6.273.1191685251
+DATA/TESTSTANDBY/ONLINELOG/group_7.274.1191685253

7 rows selected.

SQL> select group,thread,sequence,bytes/1024/1024,status from v$standby_log;

    GROUP
THREAD
SEQUENCE
BYTES/1024/1024 STATUS
---------- ---------- ---------- --------------- ----------
         4          1          0             200 UNASSIGNED
         5          1          0             200 UNASSIGNED
         6          1          0             200 UNASSIGNED
         7          1          0             200 UNASSIGNED


SQL> SELECT group, type, member FROM v$logfile WHERE type ='STANDBY' order by group;

    GROUP
TYPE    MEMBER
---------- ------- --------------------------------------------------------------------------------
----------------------------
         4 STANDBY +RECO/TESTSTANDBY/ONLINELOG/group_4.271.1191685251
         5 STANDBY +RECO/TESTSTANDBY/ONLINELOG/group_5.272.1191685251
         6 STANDBY +RECO/TESTSTANDBY/ONLINELOG/group_6.273.1191685251
         7 STANDBY +RECO/TESTSTANDBY/ONLINELOG/group_7.274.1191685253
```

Check the dest_2 status and errors if any on Primary DB:

On Primary:

```
-----------

SQL> set lines 300 pages 300
col Archive_dest for a30
SELECT DEST_ID "ID",STATUS "DB_status",DESTINATION "Archive_dest",ERROR "Error" FROM
V$ARCHIVE_DEST fetch first 4 rows only;SQL> SQL>

        ID DB_status Archive_dest                   Error
```

```
---------- --------- ------------------------------ ------------------------------------
--------------------------
         1 VALID     USE_DB_RECOVERY_FILE_DEST
         2 VALID     TESTSTANDBY
         3 INACTIVE
         4 INACTIVE
```

Start MRP Process:

On Standby:

```
-----------


SQL> ALTER DATABASE RECOVER MANAGED STANDBY DATABASE DISCONNECT FROM SESSION;

Database altered.

SQL> set lines 300 pages 300
SQL> select process,inst_id as "MRP Running On Inst",status,client_process,thread
,sequence,block,blocks,delay_mins from gv$managed_standby;

PROCESS   MRP Running On Inst STATUS       CLIENT_P    THREAD
SEQUENCE
BLOCK
BLOCKS DELAY_MINS
--------- ------------------- ------------ -------- ---------- ---------- ---------- -----
----- ----------
ARCH                        1 CONNECTED    ARCH              0          0          0
0          0
DGRD                        1 ALLOCATED    N/A               0          0          0
0          0
DGRD                        1 ALLOCATED    N/A               0          0          0
0          0
ARCH                        1 CONNECTED    ARCH              0          0          0
0          0
ARCH                        1 CONNECTED    ARCH              0          0          0
0          0
ARCH                        1 CONNECTED    ARCH              0          0          0
0          0
RFS                         1 IDLE         Archival          1          0          0
0          0
RFS                         1 RECEIVING    LGWR              2        239       1455
1          0
RFS                         1 IDLE         UNKNOWN           0          0          0
0          0
MRP0                        1 WAIT_FOR_LOG N/A               2        239          0
0          0

10 rows selected.
```

Verify Sycn Between Primary & Standby:

On Primary:

```
-----------
SQL> select thread
, max(sequence

) "Last Primary Seq Generated" from v$archived_log val, v$database vdb where val
= vdb.resetlogs_change
group by thread
order by 1;

THREAD

Last Primary Seq Generated
---------- -------------------------
         1                       139
         2                       238


SQL> alter system switch logfile;

System altered.

SQL> /

System altered.

SQL> select thread
, max(sequence

) "Last Primary Seq Generated" from v$archived_log val, v$database vdb where val
= vdb.resetlogs_change
group by thread
order by 1;

   THREAD

Last Primary Seq Generated
---------- -------------------------
         1                       139
         2                       241
```

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
---------- ---------------------- --------------------- ----------
         2                    241                   241          0

SQL> select process,inst_id as "MRP Running On Inst",status,client_process,thread
,sequence
,block
,blocks,delay_mins from gv$managed_standby;

PROCESS   MRP Running On Inst STATUS       CLIENT_P    THREAD
SEQUENCE
BLOCK
BLOCKS DELAY_MINS
--------- ------------------- ------------ -------- ---------- ---------- ---------- -----
----- ----------
0          0
ARCH                         1 CLOSING      ARCH              2        241          1
9          0
0          0
RFS                          1 RECEIVING    LGWR              2        242         45
1          0
RFS                          1 IDLE         UNKNOWN           0          0          0
0          0
MRP0                         1 APPLYING_LOG N/A               2        242         44
1024000          0

10 rows selected.
```