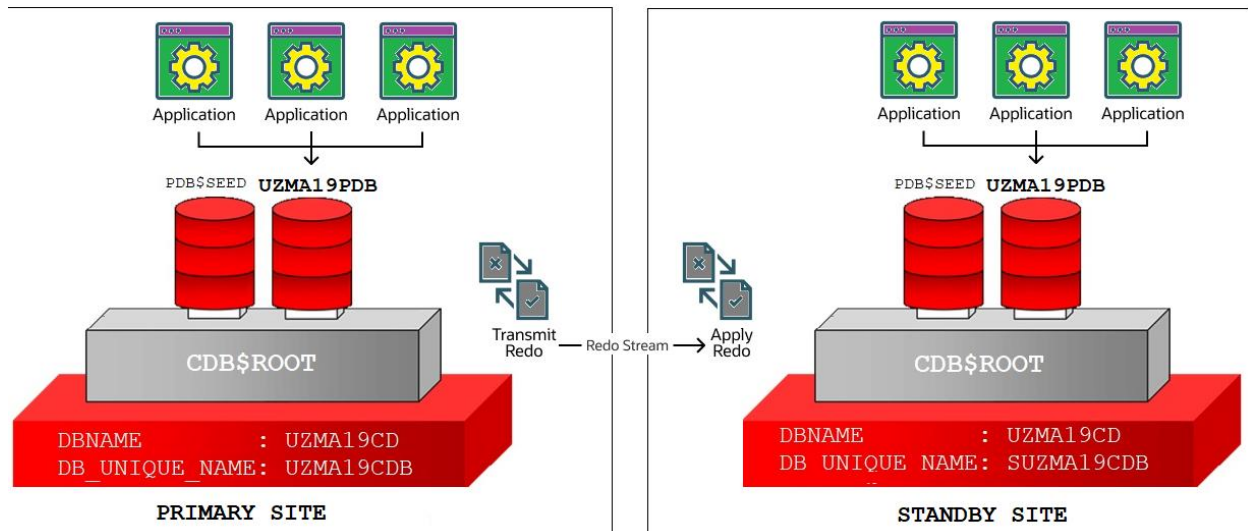


# ORACLE 19c CDB/PDB STANDBY CREATION



In this document I will show step by step configuration of Oracle 19c standby for CDB/PDB on the below environment.

## ENVIRONMENT

Let us understand our environment.

	SOURCE / PRIMARY	TARGET / STANDBY
OS / VERSION	Oracle Linux Server 7.9	Oracle Linux Server 7.9
OS KERNEL	Linux 3.10.0-1160.el7.x86_64	Linux 3.10.0-1160.el7.x86_64
HOSTNAME	OMMAC1.localdomain	SOMMAC1.localdomain
IP ADDRESS	192.168.56.230	192.168.56.240
DB NAME	uzma19cd	uzma19cd
DB UNIQUE NAME	uzma19cdb	suzma19cdb
PDB NAME	uzma19pdb	Uzma19pdb
DB VERSION	19.3.0	19.3.0
ORACLE HOME	/u02/app/oracle/product/19.3.0/db_1	/u02/app/oracle/product/19.3.0/db_1
CDB DATAFILE	/u02/app/oracle/oradata/UZMA19CDB/	/u02/app/oracle/oradata/SUZMA19CDB/
SEED DATAFILE	/u02/app/oracle/oradata/UZMA19CDB/pdbseed	/u02/app/oracle/oradata/SUZMA19CDB/pdbseed
PDB DATAFILE	/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb	/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb
REDO LOGFILE	/u02/app/oracle/oradata/UZMA19CDB/	/u02/app/oracle/oradata/SUZMA19CDB/
FILE SYSTEM	Non – ASM	Non – ASM

Note:

- On Primary site we have oracle binaries installed with database (uzma19cd) created
- On Standby site we have oracle binaries installed.

## THE FORCE LOGGING IS NO AT PRIMARY DATABASE

```
[oracle@OMmac1 ~]$
[oracle@OMmac1 ~]$ ps -ef|grep -i pmon |grep -v grep
oracle   20071      1  0 08:52 ?                00:00:05 ora_pmon_uzma19cdb
[oracle@OMmac1 ~]$
[oracle@OMmac1 ~]$ . oraenv
ORACLE_SID = [uzma19cdb] ? uzma19cdb
The Oracle base remains unchanged with value /u02/app/oracle
[oracle@OMmac1 ~]$
[oracle@OMmac1 ~]$ sqlplus "/ as sysdba"

SQL*Plus: Release 19.0.0.0.0 - Production on Fri Mar 10 19:03:12 2023
Version 19.3.0.0.0

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

SQL> col force_logging for a15
set lines 300 pages 100
select name,open_mode,database_role,flashback_on,force_logging,log_mode from v$database;SQL> SQL>
```

NAME	OPEN_MODE	DATABASE_ROLE	FLASHBACK_ON	FORCE_LOGGING	LOG_MODE
UZMA19CD	READ WRITE	PRIMARY	NO	NO	ARCHIVELOG

## STEPS TO ENABLE FORCE LOGGING AT PRIMARY DATABASE

```
SQL> shut immediate
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL>
SQL> startup mount
ORACLE instance started.

Total System Global Area  603979240 bytes
Fixed Size                  9137640 bytes
Variable Size             272629760 bytes
Database Buffers          318767104 bytes
Redo Buffers               3444736 bytes
Database mounted.
SQL>
SQL> ALTER DATABASE FORCE LOGGING;

Database altered.

SQL> alter database open;

Database altered.

SQL> col force_logging for a15
SQL> set lines 300 pages 100
SQL> select name,open_mode,database_role,flashback_on,force_logging,log_mode from v$database;
```

NAME	OPEN_MODE	DATABASE_ROLE	FLASHBACK_ON	FORCE_LOGGING	LOG_MODE
UZMA19CD	READ WRITE	PRIMARY	NO	YES	ARCHIVELOG

## STEPS TO OPEN PDBs AND SAVE STATE

```
SQL> show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
3	UZMA19PDB	MOUNTED	

```
SQL>
SQL> alter pluggable database UZMA19PDB open read write;

Pluggable database altered.

SQL> show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
3	UZMA19PDB	READ WRITE	NO

```
SQL>
SQL> alter pluggable database UZMA19PDB save state;

Pluggable database altered.

SQL>
```

## CDB - PDB STATUS AT PRIMARY

```
SQL> select name,open_mode,database_role,flashback_on,force_logging,log_mode from v$database;
```

NAME	OPEN_MODE	DATABASE_ROLE	FLASHBACK_ON	FORCE_LOGGING	LOG_MODE
UZMA19CD	READ WRITE	PRIMARY	NO	YES	ARCHIVELOG

```
SQL> show parameter db_name
```

NAME	TYPE	VALUE
db_name	string	uzma19cd

```
SQL>
SQL> show parameter db_unique_name
```

NAME	TYPE	VALUE
db_unique_name	string	uzma19cdb

```
SQL>
SQL> show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
3	UZMA19PDB	READ WRITE	NO

```
SQL>
SQL>
```

## REDO LOGS AND STANDBY REDO LOGS STATUS AT PRIMARY DATABASE

```
SQL> col member for a50
SQL> SELECT GROUP#,STATUS,TYPE,MEMBER FROM V$LOGFILE;
```

GROUP#	STATUS	TYPE	MEMBER
3	ONLINE		/u02/app/oracle/oradata/UZMA19CDB/redo03.log
2	ONLINE		/u02/app/oracle/oradata/UZMA19CDB/redo02.log
1	ONLINE		/u02/app/oracle/oradata/UZMA19CDB/redo01.log

```
SQL> SELECT GROUP#,THREAD#,SEQUENCE#,ARCHIVED,STATUS,BYTES FROM V$LOG;
```

GROUP#	THREAD#	SEQUENCE#	ARC	STATUS	BYTES
1	1	28	YES	INACTIVE	52428800
2	1	29	NO	CURRENT	52428800
3	1	27	YES	INACTIVE	52428800

```
SQL> SELECT GROUP#,THREAD#,SEQUENCE#,ARCHIVED,STATUS FROM V$STANDBY_LOG;
```

no rows selected

```
SQL>
```

## CREATE STANDBY REDO LOG (SRL)

```
SQL> alter database add standby logfile group 4 '/u02/app/oracle/oradata/UZMA19CDB/redo04.log' size 50m;
Database altered.

SQL> alter database add standby logfile group 5 '/u02/app/oracle/oradata/UZMA19CDB/redo05.log' size 50m;
Database altered.

SQL> alter database add standby logfile group 6 '/u02/app/oracle/oradata/UZMA19CDB/redo06.log' size 50m;
Database altered.

SQL> alter database add standby logfile group 7 '/u02/app/oracle/oradata/UZMA19CDB/redo07.log' size 50m;
Database altered.
```

## STANDBY REDO LOGS STATUS AT PRIMARY DATABASE

```

SQL> col member for a50
SQL> SELECT GROUP#,STATUS,TYPE,MEMBER FROM V$LOGFILE;

```

GROUP#	STATUS	TYPE	MEMBER
3	ONLINE		/u02/app/oracle/oradata/UZMA19CDB/redo03.log
2	ONLINE		/u02/app/oracle/oradata/UZMA19CDB/redo02.log
1	ONLINE		/u02/app/oracle/oradata/UZMA19CDB/redo01.log
4	STANDBY		/u02/app/oracle/oradata/UZMA19CDB/redo04.log
5	STANDBY		/u02/app/oracle/oradata/UZMA19CDB/redo05.log
6	STANDBY		/u02/app/oracle/oradata/UZMA19CDB/redo06.log
7	STANDBY		/u02/app/oracle/oradata/UZMA19CDB/redo07.log

7 rows selected.

```

SQL> SELECT GROUP#,THREAD#,SEQUENCE#,ARCHIVED,STATUS FROM V$STANDBY_LOG;

```

GROUP#	THREAD#	SEQUENCE#	ARC	STATUS
4	0	0	YES	UNASSIGNED
5	0	0	YES	UNASSIGNED
6	0	0	YES	UNASSIGNED
7	0	0	YES	UNASSIGNED

```

SQL>

```

## TNSNAMES ENTRY FOR PRIMARY &amp; STANDBY DATABASES AT PRIMARY SITE

```
LISTENER_UZMA19CDB =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = TCP) (HOST = OMMACl.localdomain) (PORT = 1556))
    (ADDRESS = (PROTOCOL = TCP) (HOST = OMMACl.localdomain) (PORT = 1555))
  )

UZMA19CDB =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = OMMACl.localdomain) (PORT = 1556))
    (ADDRESS = (PROTOCOL = TCP) (HOST = OMMACl.localdomain) (PORT = 1555))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = uzma19cdb)
    )
  )

SUZMA19CDB =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMACl.localdomain) (PORT = 1556))
    (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMACl.localdomain) (PORT = 1555))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = suzma19cdb)
    )
  )

[oracle@OMmac1 admin]$
[oracle@OMmac1 admin]$ pwd
/u02/app/oracle/product/19.3.0/db_1/network/admin
[oracle@OMmac1 admin]$
```

## LISTENER STATUS AT PRIMARY SITE

```

[oracle@OMmac1 admin]$
[oracle@OMmac1 admin]$ lsnrctl status LISTENER_UZMA19CDB

LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 10-MAR-2023 19:31:20

Copyright (c) 1991, 2019, Oracle. All rights reserved.

Connecting to (ADDRESS=(PROTOCOL=TCP) (HOST=OMMAC1.localdomain) (PORT=1556))
TNS-12541: TNS:no listener
TNS-12560: TNS:protocol adapter error
TNS-00511: No listener
Linux Error: 111: Connection refused
Connecting to (ADDRESS=(PROTOCOL=TCP) (HOST=OMMAC1.localdomain) (PORT=1555))
STATUS of the LISTENER
-----
Alias                     L_19C
Version                   TNSLSNR for Linux: Version 19.0.0.0.0 - Production
Start Date                24-FEB-2023 04:14:52
Uptime                    14 days 15 hr. 16 min. 28 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File   /u02/app/oracle/product/19.3.0/db_1/network/admin/listener.ora
Listener Log File         /u02/app/oracle/diag/tnslsnr/OMmac1/l_19c/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=OMmac1) (PORT=1555)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=EXTPROC1555)))
Services Summary...
Service "86b637b62fdf7a65e053f706e80a27ca" has 1 instance(s).
  Instance "uzmal9cdb", status READY, has 1 handler(s) for this service...
Service "f68506ad9eee4edfe053e638a8c01059" has 1 instance(s).
  Instance "uzmal9cdb", status READY, has 1 handler(s) for this service...
Service "uzmal9cdb" has 1 instance(s).
  Instance "uzmal9cdb", status READY, has 1 handler(s) for this service...
Service "uzmal9cdbXDB" has 1 instance(s).
  Instance "uzmal9cdb", status READY, has 1 handler(s) for this service...
Service "uzmal9pdb" has 1 instance(s).
  Instance "uzmal9cdb", status READY, has 1 handler(s) for this service...
The command completed successfully
[oracle@OMmac1 admin]$

```

## TNSNAMES ENTRY FOR PRIMARY & STANDBY DATABASES AT STANDBY SITE

```

LISTENER_SUZMA19CDB =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1556))
    (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1555))
  )

UZMA19CDB =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = OMMAC1.localdomain) (PORT = 1556))
    (ADDRESS = (PROTOCOL = TCP) (HOST = OMMAC1.localdomain) (PORT = 1555))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = uzma19cdb)
    )
  )

SUZMA19CDB =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1556))
    (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1555))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = suzma19cdb)
    )
  )

[oracle@sommac1 admin]$ pwd
/u02/app/oracle/product/19.3.0/db_1/network/admin
[oracle@sommac1 admin]$

```

## LISTENER ENTRY FOR STANDBY DATABASE AT STANDBY SITE

```

LISTENER_SUZMA19CDB =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1555))
      (ADDRESS = (PROTOCOL = IPC) (KEY = EXTPROC1555))
    )
  )

SID_LIST_LISTENER_SUZMA19CDB =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = suzma19cdb)
      (ORACLE_HOME = /u02/app/oracle/product/19.3.0/db_1)
      (SID_NAME = suzma19cdb)
    )
  )

[oracle@sommac1 admin]$ pwd
/u02/app/oracle/product/19.3.0/db_1/network/admin
[oracle@sommac1 admin]$

```



## START LISTENER FOR STANDBY DATABASES AT STANDBY SITE

```

[oracle@sommacl ~]$
[oracle@sommacl ~]$ lsnrctl start LISTENER_SUZMA19CDB

LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 11-MAR-2023 00:43:37

Copyright (c) 1991, 2019, Oracle. All rights reserved.

Starting /u02/app/oracle/product/19.3.0/db_1/bin/tnslsnr: please wait...

TNSLSNR for Linux: Version 19.0.0.0.0 - Production
System parameter file is /u02/app/oracle/product/19.3.0/db_1/network/admin/listener.ora
Log messages written to /u02/app/oracle/diag/tnslsnr/sommacl/listener_suzma19cdb/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=SOMMAcl)(PORT=1555)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC1555)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=SOMMAcl.localdomain)(PORT=1555)))
STATUS of the LISTENER
-----
Alias                     LISTENER_SUZMA19CDB
Version                   TNSLSNR for Linux: Version 19.0.0.0.0 - Production
Start Date                11-MAR-2023 00:43:38
Uptime                    0 days 0 hr. 0 min. 2 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File   /u02/app/oracle/product/19.3.0/db_1/network/admin/listener.ora
Listener Log File         /u02/app/oracle/diag/tnslsnr/sommacl/listener_suzma19cdb/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=SOMMAcl)(PORT=1555)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC1555)))
Services Summary...
Service "suzma19cdb" has 1 instance(s).
  Instance "suzma19cdb", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully
[oracle@sommacl ~]$
[oracle@sommacl ~]$

```

## TNSPING PRIMARY DB FROM PRIMARY SITE

```
[oracle@OMmac1 admin]$  
[oracle@OMmac1 admin]$ tnsping UZMA19CDB  
  
TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 10-MAR-2023 20:00:37  
  
Copyright (c) 1997, 2019, Oracle. All rights reserved.  
  
Used parameter files:  
/u02/app/oracle/product/19.3.0/db_1/network/admin/sqlnet.ora  
  
Used TNSNAMES adapter to resolve the alias  
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (HOST = OMMAC1.localdomain) (PORT = 1556)) (ADDRESS = (PROTOCOL = TCP) (HOST = OMMAC1.localdomain) (PORT = 1555)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = uzma19cdb)))  
OK (0 msec)  
[oracle@OMmac1 admin]$
```

## TNSPING STANDBY DB FROM PRIMARY SITE

```
[oracle@OMmac1 admin]$  
[oracle@OMmac1 admin]$ tnsping SUZMA19CDB  
  
TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 10-MAR-2023 20:00:48  
  
Copyright (c) 1997, 2019, Oracle. All rights reserved.  
  
Used parameter files:  
/u02/app/oracle/product/19.3.0/db_1/network/admin/sqlnet.ora  
  
Used TNSNAMES adapter to resolve the alias  
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1556)) (ADDRESS = (PROTOCOL = TCP) (HOST = SOMMAC1.localdomain) (PORT = 1555)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = suzma19cdb)))  
OK (10 msec)
```

## TNSPING PRIMARY DB FROM STANDBY SITE

```
[oracle@sommac1 ~]$  
[oracle@sommac1 ~]$ tnsping UZMA19CDB  
  
TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 10-MAR-2023 19:59:00  
  
Copyright (c) 1997, 2019, Oracle. All rights reserved.  
  
Used parameter files:  
/u02/app/oracle/product/19.3.0/db_1/network/admin/sqlnet.ora  
  
Used TNSNAMES adapter to resolve the alias  
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = OMMAC1.localdom  
ain)(PORT = 1556)) (ADDRESS = (PROTOCOL = TCP)(HOST = OMMAC1.localdomain)(PORT = 1555))  
(CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = uzma19cdb)))  
OK (10 msec)  
[oracle@sommac1 ~]$
```

## TNSPING STANDBY DB FROM STANDBY SITE

```
[oracle@sommac1 ~]$  
[oracle@sommac1 ~]$ tnsping SUZMA19CDB  
  
TNS Ping Utility for Linux: Version 19.0.0.0.0 - Production on 10-MAR-2023 19:59:04  
  
Copyright (c) 1997, 2019, Oracle. All rights reserved.  
  
Used parameter files:  
/u02/app/oracle/product/19.3.0/db_1/network/admin/sqlnet.ora  
  
Used TNSNAMES adapter to resolve the alias  
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = SOMMAC1.localdo  
main)(PORT = 1556)) (ADDRESS = (PROTOCOL = TCP)(HOST = SOMMAC1.localdomain)(PORT = 1555  
)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = suzma19cdb)))  
OK (0 msec)  
[oracle@sommac1 ~]$
```

## PRIMARY CDB-PDB DATAFILE LOCATION AT PRIMARY SITE

	DISTINCT DATAFILE PATH
CDB DATAFILE LOCATION	/u02/app/oracle/oradata/UZMA19CDB/
PDBSEED DATAFILE LOCATION	/u02/app/oracle/oradata/UZMA19CDB/pdbseed
PDB DATAFILE LOCATION	/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb

```
SQL> set lines 300 pages 100
col db_unique_name for a15
select name,db_unique_name,status, flashback_on, database_role,open_mode from v$database, v$instance;
```

NAME	DB_UNIQUE_NAME	STATUS	FLASHBACK_ON	DATABASE_ROLE	OPEN_MODE
UZMA19CD	uzma19cdb	OPEN	NO	PRIMARY	READ WRITE

```
SQL> col name for a70
SQL> select name from v$datafile;
```

NAME
/u02/app/oracle/oradata/UZMA19CDB/system01.dbf
/u02/app/oracle/oradata/UZMA19CDB/sysaux01.dbf
/u02/app/oracle/oradata/UZMA19CDB/undotbs01.dbf
/u02/app/oracle/oradata/UZMA19CDB/pdbseed/system01.dbf
/u02/app/oracle/oradata/UZMA19CDB/pdbseed/sysaux01.dbf
/u02/app/oracle/oradata/UZMA19CDB/users01.dbf
/u02/app/oracle/oradata/UZMA19CDB/pdbseed/undotbs01.dbf
/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/system01.dbf
/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/sysaux01.dbf
/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/undotbs01.dbf
/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/users01.dbf

```
11 rows selected.
```

## PRIMARY CDB LOGFILE LOCATION AT PRIMARY SITE

	LOGFILE PATH
REDO LOGFILES LOCATION	/u02/app/oracle/oradata/UZMA19CDB/

```
SQL> col member for a70
SQL> select member from v$logfile;
```

MEMBER
/u02/app/oracle/oradata/UZMA19CDB/redo03.log
/u02/app/oracle/oradata/UZMA19CDB/redo02.log
/u02/app/oracle/oradata/UZMA19CDB/redo01.log
/u02/app/oracle/oradata/UZMA19CDB/redo04.log
/u02/app/oracle/oradata/UZMA19CDB/redo05.log
/u02/app/oracle/oradata/UZMA19CDB/redo06.log
/u02/app/oracle/oradata/UZMA19CDB/redo07.log

```
7 rows selected.

SQL>
```

## CREATE DIRECTORIES AT STANDBY SITE

```
[oracle@sommac1 ~]$
[oracle@sommac1 ~]$ mkdir -p /u02/app/oracle/oradata/SUZMA19CDB/
[oracle@sommac1 ~]$ mkdir -p /u02/app/oracle/oradata/SUZMA19CDB/pdbseed/
[oracle@sommac1 ~]$ mkdir -p /u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/
[oracle@sommac1 ~]$
[oracle@sommac1 ~]$
[oracle@sommac1 ~]$ mkdir -p /u02/app/oracle/arch
[oracle@sommac1 ~]$ mkdir -p /u02/app/oracle/admin/suzma19cdb/adump/
[oracle@sommac1 ~]$
```

## PRIMARY DB INIT PARAMETERS USED FOR STANDBY CREATION - BEFORE CHANGE

```
SQL> set lines 180
SQL> col name for a30
SQL> col value for a30
SQL> set pages 20
SQL> select name, value
from v$parameter
where name in ('db_name','db_unique_name','log_archive_config',
'log_archive_dest_1','log_archive_dest_2',
'log_archive_dest_state_1','log_archive_dest_state_2',
'remote_login_passwordfile','log_archive_format','log_archive_max_processes',
'fal_server','db_file_name_convert','log_file_name_convert','standby_file_management');
```

NAME	VALUE
db_file_name_convert	
log_file_name_convert	
log_archive_dest_1	
log_archive_dest_2	
log_archive_dest_state_1	enable
log_archive_dest_state_2	enable
fal_server	
log_archive_config	
log_archive_format	%t_%s_%r.dbf
log_archive_max_processes	4
standby_file_management	MANUAL
remote_login_passwordfile	EXCLUSIVE
db_name	uzma19cd
db_unique_name	uzma19cdb

```
14 rows selected.
```

Note:

- Log\_archive\_dest\_state\_2 should be ENABLED after standby creation activity is complete.
- Log\_archive\_max\_processes should be set at per CPU resources available

## ALTER PRIMARY DB INIT PARAMETERS TO BE USED FOR STANDBY CREATION

PARAMETER	SOURCE/PRIMARY VALUE
DB_UNIQUE_NAME	uzma19cdb
LOG_ARCHIVE_CONFIG	DG_CONFIG=(uzma19cdb, suzma19cdb)
LOG_ARCHIVE_DEST_1	LOCATION=use_db_recovery_file_dest VALID_FOR=(ALL_LOGFILES, ALL_ROLES) DB_UNIQUE_NAME=uzma19cdb
LOG_ARCHIVE_DEST_2	SERVICE=suzma19cdb NOAFFIRM ASYNC VALID_FOR=(ONLINE_LOGFILES, PRIMARY_ROLE) DB_UNIQUE_NAME=suzma19cdb
LOG_ARCHIVE_DEST_STATE_1	ENABLE
LOG_ARCHIVE_DEST_STATE_2	ENABLE
LOG_ARCHIVE_FORMAT	%t_%s_%r.dbf
LOG_ARCHIVE_MAX_PROCESSES	4
REMOTE_LOGIN_PASSWORDFILE	EXCLUSIVE
FAL_CLIENT	uzma19cdb
FAL_SERVER	suzma19cdb
DB_FILE_NAME_CONVERT	'/u02/app/oracle/oradata/UZMA19CDB/','/u02/app/oracle/oradata/SUZMA19CDB/', '/u02/app/oracle/oradata/UZMA19CDB/pdbseed','/u02/app/oracle/oradata/SUZMA19CDB/pdbseed', '/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb','/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb'
LOG_FILE_NAME_CONVERT	'/u02/app/oracle/oradata/UZMA19CDB/','/u02/app/oracle/oradata/SUZMA19CDB/'
STANDBY_FILE_MANAGEMENT	AUTO
AUDIT_FILE_DEST	/u02/app/oracle/admin/suzma19cdb/adump

```

SQL> select name,db_unique_name,status, flashback_on, database_role,open_mode from v$database, v$instance;

NAME          DB_UNIQUE_NAME  STATUS      FLASHBACK_ON  DATABASE_ROLE  OPEN_MODE
-----
UZMA19CD      uzma19cdb       OPEN        NO             PRIMARY        READ WRITE

SQL> ALTER SYSTEM SET log_archive_config='dg_config=(uzma19cdb,suzma19cdb)' SCOPE=both;

System altered.

SQL> ALTER SYSTEM SET log_archive_dest_1='location=use_db_recovery_file_dest
  2  valid_for=(all_logfiles,all_roles) db_unique_name=uzma19cdb' SCOPE=both;

System altered.

SQL> ALTER SYSTEM SET log_archive_dest_2='service=suzma19cdb noaffirm async
  2  valid_for=(online_logfiles,primary_role) db_unique_name=suzma19cdb' SCOPE=both;

System altered.

SQL> ALTER SYSTEM SET fal_server='suzma19cdb' SCOPE=both;

System altered.

SQL> ALTER SYSTEM SET fal_client='uzma19cdb' SCOPE=both;

System altered.

SQL> ALTER SYSTEM SET standby_file_management='AUTO' SCOPE=both;

System altered.

SQL> ALTER SYSTEM SET db_file_name_convert='/u02/app/oracle/oradata/uzma19cdb/','/u02/app/oracle/oradata/suzma19cdb/',
  2  '/u02/app/oracle/oradata/uzma19cdb/pdbseed/','/u02/app/oracle/oradata/suzma19cdb/pdbseed/',
  3  '/u02/app/oracle/oradata/uzma19cdb/uzma19pdb/','/u02/app/oracle/oradata/suzma19cdb/uzma19pdb/' scope=spfile;

System altered.

SQL> ALTER SYSTEM SET log_file_name_convert ='/u02/app/oracle/oradata/UZMA19CDB/','
  2  '/u02/app/oracle/oradata/SUZMA19CDB/' scope=spfile;

System altered.

```

## PRIMARY DB INIT PARAMETERS TO BE USED FOR STANDBY CREATION – AFTER CHANGE AND DB BOUNCE

```
SQL> set lines 180 pages 30
col name for a30
col value for a72
select name, value
from v$parameter
where name in ('db_name','db_unique_name','log_archive_config',
'log_archive_dest_1','log_archive_dest_2',
'log_archive_dest_state_1','log_archive_dest_state_2',
'remote_login_passwordfile','log_archive_format','log_archive_max_processes',
'fal_server','db_file_name_convert','log_file_name_convert','standby_file_management');SQL> SQL> SQL>
```

NAME	VALUE
db_file_name_convert	/u02/app/oracle/oradata/uzmal9cdb/, /u02/app/oracle/oradata/suzmal9cdb/, /u02/app/oracle/oradata/uzmal9cdb/pdbseed/, /u02/app/oracle/oradata/suz mal9cdb/pdbseed/, /u02/app/oracle/oradata/uzmal9cdb/uzmal9pdb/, /u02/app /oracle/oradata/suzmal9cdb/uzmal9pdb/
log_file_name_convert	/u02/app/oracle/oradata/UZMAL9CDB/, /u02/app/oracle/oradata/SUZMAL9CDB/
log_archive_dest_1	location=use_db_recovery_file_dest valid_for=(all_logfiles,all_roles) db_unique_name=uzmal9cdb
log_archive_dest_2	service=suzmal9cdb noaffirm async valid_for=(online_logfiles,primary_role) db_unique_name=suzmal9cdb
log_archive_dest_state_1	enable
log_archive_dest_state_2	enable
fal_server	suzmal9cdb
log_archive_config	dg_config=(uzmal9cdb,suzmal9cdb)
log_archive_format	%t_%s_%r.dbf
log_archive_max_processes	4
standby_file_management	AUTO
remote_login_passwordfile	EXCLUSIVE
db_name	uzmal9cd
db_unique_name	uzmal9cdb

14 rows selected.

## COPY &amp; RENAME PASSWORD FILE FROM PRIMARY SITE TO STANDBY SITE

```
[oracle@OMmac1 ~]$  
[oracle@OMmac1 ~]$ cd $ORACLE_HOME/dbs  
[oracle@OMmac1 dbs]$ pwd  
/u02/app/oracle/product/19.3.0/db_1/dbs  
[oracle@OMmac1 dbs]$  
[oracle@OMmac1 dbs]$ ls -lrth orapwuzmal9cdb  
-rw-r-----. 1 oracle oinstall 2.0K Mar  9 22:13 orapwuzmal9cdb  
[oracle@OMmac1 dbs]$  
[oracle@OMmac1 dbs]$ scp orapwuzmal9cdb oracle@sommac1:$ORACLE_HOME/dbs/orapwsuzmal9cdb  
oracle@sommac1's password:  
orapwuzmal9cdb                                100% 2048      1.5MB/s   00:00  
[oracle@OMmac1 dbs]$  
[oracle@OMmac1 dbs]$
```

## CHECK PASSWORD FILE AT STANDBY SITE

```
[oracle@sommac1 ~]$  
[oracle@sommac1 ~]$ cd $ORACLE_HOME/dbs  
[oracle@sommac1 dbs]$ pwd  
/u02/app/oracle/product/19.3.0/db_1/dbs  
[oracle@sommac1 dbs]$  
[oracle@sommac1 dbs]$ ls -lrth orapwsuzmal9cdb  
-rw-r-----. 1 oracle oinstall 2.0K Mar 10 22:14 orapwsuzmal9cdb  
[oracle@sommac1 dbs]$  
[oracle@sommac1 dbs]$
```

## EDIT AND MAKE ENTRY FOR STANDBY DATABASE IN ORATAB FILE AT STANDBY SITE

```
[oracle@sommac1 ~]$  
[oracle@sommac1 ~]$ vi /etc/oratab  
[oracle@sommac1 ~]$  
[oracle@sommac1 ~]$ cat /etc/oratab |grep -i suzmal9cdb  
suzmal9cdb:/u02/app/oracle/product/19.3.0/db_1:N  
[oracle@sommac1 ~]$  
[oracle@sommac1 ~]$
```



## STANDBY DB INIT PARAMETERS

```
[oracle@sommocl ~]$  
[oracle@sommocl ~]$ cd $ORACLE_HOME/dbs  
[oracle@sommocl dbs]$ pwd  
/u02/app/oracle/product/19.3.0/db_1/dbs  
[oracle@sommocl dbs]$  
[oracle@sommocl dbs]$ cat initsuzmal9cdb.ora  
db_name=uzmal9cd  
enable_pluggable_database=true  
[oracle@sommocl dbs]$  
[oracle@sommocl dbs]$
```

## START AUXILIARY DB IN NOMOUNT STAGE USING ABOVE INIT FILE

```
[oracle@sommocl ~]$  
[oracle@sommocl ~]$ cd $ORACLE_HOME/dbs  
[oracle@sommocl dbs]$ pwd  
/u02/app/oracle/product/19.3.0/db_1/dbs  
[oracle@sommocl dbs]$  
[oracle@sommocl dbs]$ ls -lrth initsuzmal9cdb.ora  
-rw-r--r--. 1 oracle oinstall 48 Mar 11 00:35 initsuzmal9cdb.ora  
[oracle@sommocl dbs]$  
[oracle@sommocl dbs]$ sqlplus "/" as sysdba"  
  
SQL*Plus: Release 19.0.0.0.0 - Production on Sat Mar 11 00:36:35 2023  
Version 19.3.0.0.0  
  
Copyright (c) 1982, 2019, Oracle. All rights reserved.  
  
Connected to an idle instance.  
  
SQL> startup nomount pfile='$ORACLE_HOME/dbs/initsuzmal9cdb.ora'  
ORACLE instance started.  
  
Total System Global Area 297795128 bytes  
Fixed Size 9133624 bytes  
Variable Size 234881024 bytes  
Database Buffers 50331648 bytes  
Redo Buffers 3448832 bytes  
SQL>  
SQL>
```

## STANDBY DB SPFILE PARAMETERS TO BE USED WITH RMAN DUPLICATE CMD

PARAMETER	SOURCE/PRIMARY VALUE
DB_NAME	uzma19cd
DB_UNIQUE_NAME	suzma19cdb
DIAGNOSTIC_DEST	/u02/app/oracle/admin/suzma19cdb/adump
AUDIT_FILE_DEST	/u02/app/oracle/admin/suzma19cdb/adump
CONTROL_FILES	/u02/app/oracle/oradata/SUZMA19CDB/suzma19cdbstandby1.ctl
LOG_ARCHIVE_DEST_1	LOCATION=use_db_recovery_file_dest VALID_FOR=(ALL_LOGFILES, ALL_ROLES) DB_UNIQUE_NAME=uzma19cdb
LOG_ARCHIVE_DEST_2	SERVICE=suzma19cdb NOAFFIRM ASYNC VALID_FOR=(ONLINE_LOGFILES, PRIMARY_ROLE) DB_UNIQUE_NAME=suzma19cdb
DB_FILE_NAME_CONVERT	'/u02/app/oracle/oradata/UZMA19CDB/', '/u02/app/oracle/oradata/SUZMA19CDB/', '/u02/app/oracle/oradata/UZMA19CDB/pdbseed', '/u02/app/oracle/oradata/SUZMA19CDB/pdbseed', '/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb', '/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb'
LOG_FILE_NAME_CONVERT	'/u02/app/oracle/oradata/UZMA19CDB/', '/u02/app/oracle/oradata/SUZMA19CDB/'
LOG_ARCHIVE_MAX_PROCESSES	5
FAL_CLIENT	uzma19cdb
FAL_SERVER	suzma19cdb
STANDBY_FILE_MANAGEMENT	AUTO
LOG_ARCHIVE_CONFIG	DG_CONFIG=(uzma19cdb, suzma19cdb)
COMPATIBLE	19.0.0.0.0
MEMORY_TARGET	1500m

## CONNECT WITH PRIMARY DB AND AUXILIARY DB VIA RMAN AT PRIMARY SITE

```

[oracle@OMmac1 ~]$
[oracle@OMmac1 ~]$ rman target sys/Oracle#1234@uzma19cdb auxiliary sys/Oracle#1234@suzma19cdb

Recovery Manager: Release 19.0.0.0.0 - Production on Sat Mar 11 00:45:42 2023
Version 19.3.0.0.0

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connected to target database: UZMA19CD (DBID=2870186481)
connected to auxiliary database: UZMA19CD (not mounted)

RMAN>

```

## CONNECT PRIMARY AND AUXILIARY DB VIA RMAN AND RUN DUPLICATE CMD

```

[oracle@OMmac1 ~]$
[oracle@OMmac1 ~]$ rman target sys/Oracle#1234@uzmal9cdb auxiliary sys/Oracle#1234@suzmal9cdb

Recovery Manager: Release 19.0.0.0.0 - Production on Sat Mar 11 00:45:42 2023
Version 19.3.0.0.0

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

connected to target database: UZMAL9CD (DBID=2870186481)
connected to auxiliary database: UZMAL9CD (not mounted)

RMAN> run
{
allocate channel c1 type disk;
allocate channel c2 type disk;
allocate channel c3 type disk;
allocate channel c4 type disk;
allocate auxiliary channel aux1 type disk;
duplicate target database for standby from active database
spfile
parameter_value_convert 'uzmal9cdb','suzmal9cdb'
set db_name='uzmal9cd'
set db_unique_name='suzmal9cdb'
set diagnostic_dest='/u02/app/oracle/admin/suzmal9cdb/adump/'
set audit_file_dest='/u02/app/oracle/admin/suzmal9cdb/adump/'
set control_files='/u02/app/oracle/oradata/SUZMAL9CDB/suzmal9cdbstandby1.ctl'
set log_archive_dest_1='location=use_db_recovery_file_dest
valid_for=(all_logfiles,all_roles) db_unique_name=suzmal9cdb'
set log_archive_dest_2='service=uzmal9cdb noaffirm async
valid_for=(online_logfiles,primary_role) db_unique_name=uzmal9cdb'
set db_file_name_convert='/u02/app/oracle/oradata/UZMAL9CDB/',
'/u02/app/oracle/oradata/SUZMAL9CDB/', '/u02/app/oracle/oradata/UZMAL9CDB/pdbseed/',
'/u02/app/oracle/oradata/SUZMAL9CDB/pdbseed/', '/u02/app/oracle/oradata/UZMAL9CDB/uzmal9pdb/',
'/u02/app/oracle/oradata/SUZMAL9CDB/uzmal9pdb/'
set log_file_name_convert='/u02/app/oracle/oradata/UZMAL9CDB/', '/u02/app/oracle/oradata/SUZMAL9CDB/'
set log_archive_max_processes='5'
set fal_client='suzmal9cdb'
set fal_server='uzmal9cdb'
set standby_file_management='AUTO'
set log_archive_config='dg_config=(uzmal9cdb,suzmal9cdb)'
set compatible='19.0.0.0.0'
set memory_target='1500m'
nofilenamecheck;
}2> 3> 4> 5> 6> 7> 8> 9> 10> 11> 12> 13> 14> 15> 16> 17> 18> 19> 20> 21> 22> 23> 24> 25> 26> 27> 28> 2

```

## RMAN DUPLICATE COMMAND OUTPUT

```

connected to target database: UZMA19CD (DBID=2870186481)
connected to auxiliary database: UZMA19CD (not mounted)

RMAN> run
{
allocate channel c1 type disk;
allocate channel c2 type disk;
allocate channel c3 type disk;
allocate channel c4 type disk;
allocate auxiliary channel aux1 type disk;
duplicate target database for standby from active database
spfile
parameter value convert 'uzma19cdb','suzma19cdb'
set db_name='uzma19cd'
set db_unique_name='suzma19cdb'
set diagnostiG_dest='/u02/app/oracle/admin/suzma19cdb/adump/'
set audit_file_dest='/u02/app/oracle/admin/suzma19cdb/adump/'
set control_files='/u02/app/oracle/oradata/SUZMA19CDB/suzma19cdbstandby1.ctl'
set log_archive_dest_1='location=use_db_recovery_file_dest
valid_for=(all logfiles,all roles) db_unique_name=suzma19cdb'
set log_archive_dest_2='service=uzma19cdb noaffirm async
valid_for=(online_logfiles,primary role) db_unique_name=uzma19cdb'
set db_file_name_convert='/u02/app/oracle/oradata/UZMA19CDB/',
'/u02/app/oracle/oradata/SUZMA19CDB/', '/u02/app/oracle/oradata/UZMA19CDB/pdbseed/',
'/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/', '/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/',
'/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/'
set log_file_name_convert='/u02/app/oracle/oradata/UZMA19CDB/', '/u02/app/oracle/oradata/SUZMA19CDB/'
set log_archive_max_processes='5'
set fal_client='suzma19cdb'
set fal_server='uzma19cdb'
set standby_file_management='AUTO'
set log_archive_config='dg_config=(uzma19cdb,suzma19cdb)'
set compatible='19.0.0.0.0'
set memory_target='1500m'
nofilenamecheck;
12> 3> 4> 5> 6> 7> 8> 9> 10> 11> 12> 13> 14> 15> 16> 17> 18> 19> 20> 21> 22> 23> 24> 25> 26> 27> 28>
using target database control file instead of recovery catalog
allocated channel: c1
channel c1: SID=465 device type=DISK

allocated channel: c2
channel c2: SID=468 device type=DISK

allocated channel: c3
channel c3: SID=469 device type=DISK

allocated channel: c4
channel c4: SID=2 device type=DISK

allocated channel: aux1
channel aux1: SID=39 device type=DISK

Starting Duplicate Db at 11-MAR-23

contents of Memory Script:
{
  backup as copy reuse
    passwordfile auxiliary format '/u02/app/oracle/product/19.3.0/db_1/dbs/orapwsuzma19cdb' targetf
ile
    '/u02/app/oracle/product/19.3.0/db_1/dbs/spfileuzma19cdb.ora' auxiliary format
    '/u02/app/oracle/product/19.3.0/db_1/dbs/spfilesuzma19cdb.ora' ;
    sql clone "alter system set spfile= '/u02/app/oracle/product/19.3.0/db_1/dbs/spfilesuzma19cdb.ora
    '";
}
executing Memory Script

Starting backup at 11-MAR-23
Finished backup at 11-MAR-23

sql statement: alter system set spfile= '/u02/app/oracle/product/19.3.0/db_1/dbs/spfilesuzma19cdb.ora'

contents of Memory Script:
{
  sql clone "alter system set  audit_file_dest =
    '/u02/app/oracle/admin/suzma19cdb/adump/' comment=
    'scope=spfile";
    sql clone "alter system set  dispatchers =
    '(PROTOCOL=TCP) (SERVICE=suzma19cdbXDB)' comment=
    'scope=spfile";
    sql clone "alter system set  db_name =
    'uzma19cd' comment=
    'scope=spfile";
    sql clone "alter system set  db_unique_name =
    'suzma19cdb' comment=
    'scope=spfile";
}

```

```

sql clone "alter system set diagnostic_dest =
'/u02/app/oracle/admin/suzmal9cdb/adump/'" comment=
''' scope=spfile";
sql clone "alter system set control_files =
'/u02/app/oracle/oradata/SUZMAL9CDB/suzmal9cdbstandby1.ctl'" comment=
''' scope=spfile";
sql clone "alter system set log_archive_dest_1 =
'location=use_db_recovery_file_dest valid_for=(all_logfiles,all_roles) db_unique_name=suzmal9cdb'" co
mment=
''' scope=spfile";
sql clone "alter system set log_archive_dest_2 =
'service=uzmal9cdb noaffirm async valid_for=(online_logfiles,primary_role) db_unique_name=uzmal9cdb'"
comment=
''' scope=spfile";
sql clone "alter system set db_file_name_convert =
'/u02/app/oracle/oradata/UZMAL9CDB/', '/u02/app/oracle/oradata/SUZMAL9CDB/', '/u02/app/oracle/o
radata/UZMAL9CDB/pdbseed/', '/u02/app/oracle/oradata/SUZMAL9CDB/pdbseed/', '/u02/app/oracle/orada
ta/UZMAL9CDB/uzmal9pdb/', '/u02/app/oracle/oradata/SUZMAL9CDB/uzmal9pdb/'" comment=
''' scope=spfile";
sql clone "alter system set log_file_name_convert =
'/u02/app/oracle/oradata/UZMAL9CDB/', '/u02/app/oracle/oradata/SUZMAL9CDB/'" comment=
''' scope=spfile";
sql clone "alter system set log_archive_max_processes =
5 comment=
''' scope=spfile";
sql clone "alter system set fal_client =
'suzmal9cdb'" comment=
''' scope=spfile";
sql clone "alter system set fal_server =
'uzmal9cdb'" comment=
''' scope=spfile";
sql clone "alter system set standby_file_management =
'AUTO'" comment=
''' scope=spfile";
sql clone "alter system set log_archive_config =
'dg_config=(uzmal9cdb,suzmal9cdb)" comment=
''' scope=spfile";
sql clone "alter system set compatible =
'19.0.0.0.0'" comment=
''' scope=spfile";
sql clone "alter system set memory_target =
1500m comment=
''' scope=spfile";
shutdown clone immediate;
startup clone nomount;
}
executing Memory Script

sql statement: alter system set audit_file_dest = '/u02/app/oracle/admin/suzmal9cdb/adump'" commen
t= ''' scope=spfile

sql statement: alter system set dispatchers = '(PROTOCOL=TCP) (SERVICE=suzmal9cdbXDB)" comment= '
''' scope=spfile

sql statement: alter system set db_name = 'uzmal9cd'" comment= ''' scope=spfile

sql statement: alter system set db_unique_name = 'suzmal9cdb'" comment= ''' scope=spfile

sql statement: alter system set diagnostic_dest = '/u02/app/oracle/admin/suzmal9cdb/adump'" comme
nt= ''' scope=spfile

sql statement: alter system set control_files = '/u02/app/oracle/oradata/SUZMAL9CDB/suzmal9cdbstan
dby1.ctl'" comment= ''' scope=spfile

sql statement: alter system set log_archive_dest_1 = 'location=use_db_recovery_file_dest valid_for=(
all_logfiles,all_roles) db_unique_name=suzmal9cdb'" comment= ''' scope=spfile

sql statement: alter system set log_archive_dest_2 = 'service=uzmal9cdb noaffirm async valid_for=(on
line_logfiles,primary_role) db_unique_name=uzmal9cdb'" comment= ''' scope=spfile

sql statement: alter system set db_file_name_convert = '/u02/app/oracle/oradata/UZMAL9CDB/', '/u
02/app/oracle/oradata/SUZMAL9CDB/', '/u02/app/oracle/oradata/UZMAL9CDB/pdbseed/', '/u02/app/oracl
e/oradata/SUZMAL9CDB/pdbseed/', '/u02/app/oracle/oradata/UZMAL9CDB/uzmal9pdb/', '/u02/app/oracle/
oradata/SUZMAL9CDB/uzmal9pdb/'" comment= ''' scope=spfile

sql statement: alter system set log_file_name_convert = '/u02/app/oracle/oradata/UZMAL9CDB/', '/
u02/app/oracle/oradata/SUZMAL9CDB/'" comment= ''' scope=spfile

sql statement: alter system set log_archive_max_processes = 5 comment= ''' scope=spfile

sql statement: alter system set fal_client = 'suzmal9cdb'" comment= ''' scope=spfile

sql statement: alter system set fal_server = 'uzmal9cdb'" comment= ''' scope=spfile

```

```

sql statement: alter system set standby_file_management = 'AUTO' comment= '' scope=spfile

sql statement: alter system set log_archive_config = 'dg_config=(uzma19cdb,suzma19cdb)' comment=
'' scope=spfile

sql statement: alter system set compatible = '19.0.0.0.0' comment= '' scope=spfile

sql statement: alter system set memory_target = 1500m comment= '' scope=spfile

Oracle instance shut down

connected to auxiliary database (not started)
Oracle instance started

Total System Global Area      1577055360 bytes

Fixed Size                     9135232 bytes
Variable Size                  1191182336 bytes
Database Buffers               369098752 bytes
Redo Buffers                   7639040 bytes
allocated channel: aux1
channel aux1: SID=35 device type=DISK

contents of Memory Script:
{
  backup as copy current controlfile for standby auxiliary format '/u02/app/oracle/oradata/SUZMA19C
DB/suzma19cdbstandby1.ctl';
}
executing Memory Script

Starting backup at 11-MAR-23
channel cl: starting datafile copy
copying standby control file
output file name=/u02/app/oracle/product/19.3.0/db_1/dbs/snapcf_uzma19cdb.f tag=TAG20230311T193554
channel cl: datafile copy complete, elapsed time: 00:00:01
Finished backup at 11-MAR-23

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

sql statement: alter database mount standby database

contents of Memory Script:
{
  set newname for tempfile 1 to
"/u02/app/oracle/oradata/SUZMA19CDB/temp01.dbf";
  set newname for tempfile 2 to
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/temp012023-03-09_22-45-50-112-PM.dbf";
  set newname for tempfile 3 to
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/temp01.dbf";
  switch clone tempfile all;
  set newname for datafile 1 to
"/u02/app/oracle/oradata/SUZMA19CDB/system01.dbf";
  set newname for datafile 3 to
"/u02/app/oracle/oradata/SUZMA19CDB/sysaux01.dbf";
  set newname for datafile 4 to
"/u02/app/oracle/oradata/SUZMA19CDB/undotbs01.dbf";
  set newname for datafile 5 to
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/system01.dbf";
  set newname for datafile 6 to
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/sysaux01.dbf";
  set newname for datafile 7 to
"/u02/app/oracle/oradata/SUZMA19CDB/users01.dbf";
  set newname for datafile 8 to
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/undotbs01.dbf";
  set newname for datafile 9 to
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/system01.dbf";
  set newname for datafile 10 to
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/sysaux01.dbf";
  set newname for datafile 11 to
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/undotbs01.dbf";
  set newname for datafile 12 to
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/users01.dbf";
  backup as copy reuse
datafile 1 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/system01.dbf" datafile
3 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/sysaux01.dbf" datafile
4 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/undotbs01.dbf" datafile
5 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/system01.dbf" datafile
6 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/sysaux01.dbf" datafile
7 auxiliary format

```



```

7 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/users01.dbf" datafile
8 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/undotbs01.dbf" datafile
9 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/system01.dbf" datafile
10 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/sysaux01.dbf" datafile
11 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/undotbs01.dbf" datafile
12 auxiliary format
"/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/users01.dbf" ;
sql 'alter system archive log current';
}
executing Memory Script

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

renamed tempfile 1 to /u02/app/oracle/oradata/SUZMA19CDB/temp01.dbf in control file
renamed tempfile 2 to /u02/app/oracle/oradata/SUZMA19CDB/pdbseed/temp012023-03-09_22-45-50-112-PM.dbf
in control file
renamed tempfile 3 to /u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/temp01.dbf in control file

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

executing command: SET NEWNAME

Starting backup at 11-MAR-23
channel c1: starting datafile copy
input datafile file number=00001 name=/u02/app/oracle/oradata/UZMA19CDB/system01.dbf
channel c2: starting datafile copy
input datafile file number=00003 name=/u02/app/oracle/oradata/UZMA19CDB/sysaux01.dbf
channel c3: starting datafile copy
input datafile file number=00010 name=/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/sysaux01.dbf
channel c4: starting datafile copy
input datafile file number=00006 name=/u02/app/oracle/oradata/UZMA19CDB/pdbseed/sysaux01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/sysaux01.dbf tag=TAG20230311T193602
channel c3: datafile copy complete, elapsed time: 00:00:35
channel c3: starting datafile copy
input datafile file number=00009 name=/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/system01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/sysaux01.dbf tag=TAG20230311T193602
channel c4: datafile copy complete, elapsed time: 00:00:36
channel c4: starting datafile copy
input datafile file number=00005 name=/u02/app/oracle/oradata/UZMA19CDB/pdbseed/system01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/sysaux01.dbf tag=TAG20230311T193602
channel c2: datafile copy complete, elapsed time: 00:00:42
channel c2: starting datafile copy
input datafile file number=00004 name=/u02/app/oracle/oradata/UZMA19CDB/undotbs01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/system01.dbf tag=TAG20230311T193602
channel c1: datafile copy complete, elapsed time: 00:01:09
channel c1: starting datafile copy
input datafile file number=00008 name=/u02/app/oracle/oradata/UZMA19CDB/pdbseed/undotbs01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/undotbs01.dbf tag=TAG20230311T193602
channel c2: datafile copy complete, elapsed time: 00:00:25
channel c2: starting datafile copy
input datafile file number=00011 name=/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/undotbs01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/system01.dbf tag=TAG20230311T193602
channel c3: datafile copy complete, elapsed time: 00:00:34
channel c3: starting datafile copy
input datafile file number=00007 name=/u02/app/oracle/oradata/UZMA19CDB/users01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/system01.dbf tag=TAG20230311T193602
channel c4: datafile copy complete, elapsed time: 00:00:33
channel c4: starting datafile copy

```

```
channel c4: starting datafile copy
input datafile file number=00012 name=/u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/users01.dbf
output file name=/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/undotbs01.dbf tag=TAG20230311T193602
channel c1: datafile copy complete, elapsed time: 00:00:05
output file name=/u02/app/oracle/oradata/SUZMA19CDB/users01.dbf tag=TAG20230311T193602
channel c3: datafile copy complete, elapsed time: 00:00:02
output file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/undotbs01.dbf tag=TAG20230311T193602
channel c2: datafile copy complete, elapsed time: 00:00:07
output file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/users01.dbf tag=TAG20230311T193602
channel c4: datafile copy complete, elapsed time: 00:00:03
Finished backup at 11-MAR-23

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=4 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/system01.dbf
datafile 3 switched to datafile copy
input datafile copy RECID=5 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/sysaux01.dbf
datafile 4 switched to datafile copy
input datafile copy RECID=6 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/undotbs01.dbf
datafile 5 switched to datafile copy
input datafile copy RECID=7 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/system01.dbf
datafile 6 switched to datafile copy
input datafile copy RECID=8 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/sysaux01.dbf
datafile 7 switched to datafile copy
input datafile copy RECID=9 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/users01.dbf
datafile 8 switched to datafile copy
input datafile copy RECID=10 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/pdbseed/undotbs01.dbf
datafile 9 switched to datafile copy
input datafile copy RECID=11 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/system01.dbf
datafile 10 switched to datafile copy
input datafile copy RECID=12 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/sysaux01.dbf
datafile 11 switched to datafile copy
input datafile copy RECID=13 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/undotbs01.dbf
datafile 12 switched to datafile copy
input datafile copy RECID=14 STAMP=1131219443 file name=/u02/app/oracle/oradata/SUZMA19CDB/uzma19pdb/users01.dbf
Finished Duplicate Db at 11-MAR-23
released channel: c1
released channel: c2
released channel: c3
released channel: c4
released channel: aux1

RMAN> █
```



## OPEN THE STANDBY DATABASE AND START RECOVERY PROCESS (MRP)

```
SQL> set lines 300 pages 100
col db_unique_name for a15
select name,db_unique_name,status, flashback_on, database_role,open_mode from v$database, v$instance;SQL> S
```

NAME	DB_UNIQUE_NAME	STATUS	FLASHBACK_ON	DATABASE_ROLE	OPEN_MODE
UZMA19CD	suzma19cdb	MOUNTED	NO	PHYSICAL STANDBY	MOUNTED

```
SQL> alter database open;

Database altered.

SQL> recover managed standby database disconnect from session;
Media recovery complete.
SQL>
SQL> select name,db_unique_name,status, flashback_on, database_role,open_mode from v$database, v$instance;
```

NAME	DB_UNIQUE_NAME	STATUS	FLASHBACK_ON	DATABASE_ROLE	OPEN_MODE
UZMA19CD	suzma19cdb	OPEN	NO	PHYSICAL STANDBY	READ ONLY WITH APPLY

## OPEN THE STANDBY DATABASE PDBs

```
SQL>
SQL> select name,db_unique_name,status, flashback_on, database_role,open_mode from v$database, v$instance;
```

NAME	DB_UNIQUE_NAME	STATUS	FLASHBACK_ON	DATABASE_ROLE	OPEN_MODE
UZMA19CD	suzma19cdb	OPEN	NO	PHYSICAL STANDBY	READ ONLY WITH APPLY

```
SQL>
SQL> show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
3	UZMA19PDB	MOUNTED	

```
SQL>
SQL> alter pluggable database UZMA19PDB open read only;

Pluggable database altered.

SQL> show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
3	UZMA19PDB	READ ONLY	NO

```
SQL>
```

## STANDBY DB SPFILE PARAMETERS

```

SQL> set lines 180 pages 30
col name for a30
SQL> SQL> col value for a72
select name, value
from v$parameter
where name in ('db_name','db_unique_name','log_archive_config',
'log_archive_dest_1','log_archive_dest_2','diagnostic_dest',
'log_archive_dest_state_1','log_archive_dest_state_2','audit_file_dest',
'remote_login_passwordfile','log_archive_format','log_archive_max_processes',
'fal_server','db_file_name_convert','log_file_name_convert','standby_file_management');SQL>

```

NAME	VALUE
db_file_name_convert	/u02/app/oracle/oradata/UZMA19CDB/, /u02/app/oracle/oradata/SUZMA19CDB/, /u02/app/oracle/oradata/UZMA19CDB/pdbseed/, /u02/app/oracle/oradata/SUZ MA19CDB/pdbseed/, /u02/app/oracle/oradata/UZMA19CDB/uzma19pdb/, /u02/app /oracle/oradata/SUZMA19CDB/uzma19pdb/
log_file_name_convert	/u02/app/oracle/oradata/UZMA19CDB/, /u02/app/oracle/oradata/SUZMA19CDB/
log_archive_dest_1	location=use_db_recovery_file_dest valid_for=(all_logfiles,all_roles) db _unique_name=suzma19cdb
log_archive_dest_2	service=suzma19cdb noaffirm async valid_for=(online_logfiles,primary_role ) db_unique_name=suzma19cdb
log_archive_dest_state_1	enable
log_archive_dest_state_2	enable
fal_server	uzma19cdb
log_archive_config	dg_config=(suzma19cdb,suzma19cdb)
log_archive_format	%t_%s_%r.dbf
log_archive_max_processes	5
standby_file_management	AUTO
remote_login_passwordfile	EXCLUSIVE
audit_file_dest	/u02/app/oracle/admin/suzma19cdb/adump/
db_name	uzma19cd
db_unique_name	suzma19cdb
diagnostic_dest	/u02/app/oracle/admin/suzma19cdb/adump/

```

16 rows selected.

SQL>

```

## LET us CHECK THAT PRIMARY AND STANDBY DBs ARE IN SYNC

At Primary make few switches and check current log sequence # 62

```
SQL>
SQL> select name,db_unique_name,status, instance_name, database_role,open_mode from v$database, v$instance;

NAME          DB_UNIQUE_NAME          STATUS      INSTANCE_NAME  DATABASE_ROLE  OPEN_MODE
-----
UZMA19CDB     uzma19cdb              OPEN        uzma19cdb      PRIMARY        READ WRITE

SQL> select thread#, max(sequence#) "Last Primary Seq Generated" from v$archived_log val, v$database vdb
where val.resetlogs_change# = vdb.resetlogs_change# group by thread# order by 1;

  THREAD# Last Primary Seq Generated
-----
        1                58

SQL> alter system switch logfile;

System altered.

SQL> alter system switch logfile;

System altered.

SQL> alter system switch logfile;

System altered.

SQL> alter system switch logfile;

System altered.

SQL> select thread#, max(sequence#) "Last Primary Seq Generated" from v$archived_log val, v$database vdb
where val.resetlogs_change# = vdb.resetlogs_change# group by thread# order by 1;

  THREAD# Last Primary Seq Generated
-----
        1                62

SQL>
```

```
SQL>
SQL> archive log list
Database log mode          Archive Mode
Automatic archival         Enabled
Archive destination        USE_DB_RECOVERY_FILE_DEST
Oldest online log sequence 61
Next log sequence to archive 63
Current log sequence        63
SQL>
SQL> show parameter DB_RECOVERY_FILE_DEST

NAME                                TYPE                                VALUE
-----
db_recovery_file_dest               string                             /u02/app/oracle/arch
db_recovery_file_dest_size          big integer                        11382M
SQL>
SQL> !ls -lrth /u02/app/oracle/arch/UZMA19CDB/archivelog/2023_03_12 |tail
-rw-r-----. 1 oracle oinstall 1.0K Mar 12 03:08 ol_mf_1_53_10tymhxh_.arc
-rw-r-----. 1 oracle oinstall 2.5K Mar 12 03:08 ol_mf_1_54_10tymm12_.arc
-rw-r-----. 1 oracle oinstall 1.0K Mar 12 03:08 ol_mf_1_55_10tymm41_.arc
-rw-r-----. 1 oracle oinstall 2.5K Mar 12 03:08 ol_mf_1_56_10tymp19_.arc
-rw-r-----. 1 oracle oinstall 1.0K Mar 12 03:08 ol_mf_1_57_10tymp2q_.arc
-rw-r-----. 1 oracle oinstall 2.5K Mar 12 03:08 ol_mf_1_58_10tyms3p_.arc
-rw-r-----. 1 oracle oinstall 683K Mar 12 03:12 ol_mf_1_59_10tyv5cl_.arc
-rw-r-----. 1 oracle oinstall 4.5K Mar 12 03:12 ol_mf_1_60_10tyvdd3_.arc
-rw-r-----. 1 oracle oinstall 6.5K Mar 12 03:12 ol_mf_1_61_10tyvhkr_.arc
-rw-r-----. 1 oracle oinstall 1.5K Mar 12 03:12 ol_mf_1_62_10tyvk3n_.arc
SQL>
```

On Standby site we can see that last sequence # 62 is applied on standby.

```
SQL> select name,db_unique_name,status, instance_name, database_role,open_mode from v$database, v$instance;
```

NAME	DB_UNIQUE_NAME	STATUS	INSTANCE_NAME	DATABASE_ROLE	OPEN_MODE
UZMA19CD	suzma19cdb	OPEN	suzma19cdb	PHYSICAL STANDBY	READ ONLY WITH APPLY

```
SQL> select thread#, max(sequence#) "Last Standby Seq Applied" from v$archived_log val, v$database vdb
where val.resetlogs_change# = vdb.resetlogs_change# and val.applied in ('YES','IN-MEMORY') group by thread# order by 1;
```

THREAD#	Last Standby Seq Applied
1	62

```
SQL> show parameter db_recovery
```

NAME	TYPE	VALUE
db_recovery_file_dest	string	/u02/app/oracle/arch
db_recovery_file_dest_size	big integer	11382M

```
SQL>
SQL> !ls -lrth /u02/app/oracle/arch/SUZMA19CDB/archivelog/2023_03_12|tail
```

```
-rw-r-----. 1 oracle oinstall 2.5K Mar 12 03:08 oi_mf_1_54_10tymj0m_.arc
-rw-r-----. 1 oracle oinstall 1.0K Mar 12 03:08 oi_mf_1_55_10tymm5q_.arc
-rw-r-----. 1 oracle oinstall 2.5K Mar 12 03:08 oi_mf_1_56_10tymm57_.arc
-rw-r-----. 1 oracle oinstall 1.0K Mar 12 03:08 oi_mf_1_57_10tymp3r_.arc
-rw-r-----. 1 oracle oinstall 2.5K Mar 12 03:08 oi_mf_1_58_10tymp51_.arc
-rw-r-----. 1 oracle oinstall 683K Mar 12 03:12 oi_mf_1_59_10tym57d_.arc
-rw-r-----. 1 oracle oinstall 4.5K Mar 12 03:12 oi_mf_1_60_10tyv5h4_.arc
-rw-r-----. 1 oracle oinstall 6.5K Mar 12 03:12 oi_mf_1_61_10tyvvdhn_.arc
-rw-r-----. 1 oracle oinstall 1.5K Mar 12 03:12 oi_mf_1_62_10tyvhol_.arc
-rw-r-----. 1 oracle oinstall 51M Mar 12 03:16 oi_mf_1_63_10tyvk75_.arc
```

```
SQL>
```

**THANKYOU!!!**