Implementation of Oracle data guard on Oracle 19c

Environment:

Primary: 192.168.100.54

Sid= orcl

Standby: 192.168.100.52

Sid=orcldr

Primary Server side Configurations:-

Step1:-Change Archivelog mode and force logging mode

$ export ORACLE_SID=orcl
$ sqlplus / as sysdba
Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 – Production Version 19.4.1.0.0

SQL> startup mount
ORACLE instance started.
Total System Global Area 1048575776 bytes
Fixed Size 8904480 bytes
Variable Size 272629760 bytes
Database Buffers 763363328 bytes Redo
Buffers 3678208 bytes Database mounted.
SQL> alter database archivelog;

Database altered.

SQL> ALTER DATABASE FORCE LOGGING;

Database altered.

SQL> alter database open;

Database altered.

SQL> select FORCE_LOGGING,log_mode from v$database;

FORCE_LOGGING LOG_MODE
——————————— ————
YES ARCHIVELOG

Step2:-Adding Redologfile for standby database

SQL> alter database add standby logfile group 4
'/u01/app/oracle/oradata/ORCL/redo04.log' size 50m;

Database altered.

SQL> alter database add standby logfile group 5
'/u01/app/oracle/oradata/ORCL/redo05.log' size 50m;

Database altered.

SQL> alter database add standby logfile group 6
'/u01/app/oracle/oradata/ORCL/redo06.log' size 50m;

Database altered.

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

Step3:-Adding the network entry in primary and standby side(Both servers)

(DESCRIPTION =
(ADDRESS_LIST =
(ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.100.54)(PORT = 1521))
)

```
(CONNECT_DATA =
(SERVER = DEDICATED)
(SERVICE_NAME = orcl)
)
)

orcldr =
(DESCRIPTION =
(ADDRESS_LIST =
(ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.100.52)(PORT = 1521))
)
(CONNECT_DATA =
(SERVICE_NAME = orcldr)
)
)
```

Listener Entry:-

****

```
SID_LIST_LISTENER =
(SID_LIST =
(SID_DESC =
(GLOBAL_DBNAME = orcl)
(ORACLE_HOME = /u01/app/oracle/product/19.0.0/ dbhome_1)
(SID_NAME = orcl)
)
(SID_DESC =
(GLOBAL_DBNAME = orcldr)
(ORACLE_HOME = /u01/app/oracle/product/19.0.0/dbhome_1)
(SID_NAME = orcldr)
)
)
```

Now check with ping that both nodes tns are connected or not

```
$ tnsping orcl
$ tnsping orcldr
```

Step5:-Copy password file from primary to standby

$ scp orapworcl oracle@orcldr:$ORACLE_HOME/dbs

Rename password file on standby:

$ cd $ORACLE_HOME/dbs

$ mv orapworcl orapworcl_dr

Step6:-Changing parameters in primary database

SQL> ALTER SYSTEM SET log_archive_config='dg_config=(orcl,orcldr)'
SCOPE=both;
System altered.

SQL> ALTER SYSTEM SET
log_archive_dest_1='location=use_db_recovery_file_dest
valid_for=(all_logfiles,all_roles) db_unique_name=orcl' SCOPE=both;
System altered.

SQL> ALTER SYSTEM SET log_archive_dest_2='service=orcldr async
valid_for=(online_logfiles,primary_role) db_unique_name=orcldr' SCOPE=both;
System altered.

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

System altered.

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

System altered.

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

Step7:- Changing parameters in standby database

In the $ORACLE_HOME/dbs directory of the standby system, create an initialization parameter file named initorcldr.ora
Containing a single parameter: DB_NAME=orcl

$ cat initorcldr.ora db_name=orcl
$ pwd
/u01/app/oracle/product/19.0.0/dbhome_1/dbs

Step8:- Create directory Structure in Standby database

$ mkdir -p /u01/app/oracle/oradata/ORCL/datafile/
$ mkdir –p /u01/app/oracle/admin/orcl/adump

Step9:- start the standby database using pfile

$ cd $ORACLE_HOME/dbs
$ export ORACLE_SID=orcldr
$ sqlplus / as sysdba
Connected to an idle instance.

SQL> startup pfile=’orcldr.ora’ nomount
ORACLE instance started.
Total System Global Area 243268216 bytes
Fixed Size 8895096 bytes
Variable Size 180355072 bytes
Database Buffers 50331648 bytes
Redo Buffers 3686400 bytes

Step8:-Connect with RMAN on Primary database

Connect with rman from the standby database using the following commands
$ rman target sys/oracle@orcl auxiliary sys/oracle@orcldr

duplicate target database for standby from active database dorecover nofilenamecheck;

DUPLICATE TARGET DATABASE FOR STANDBY FROM ACTIVE DATABASE DORECOVER SPFILE SET db_unique_name=’orcld’ NOFILENAMECHECK;

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