\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Standby Setup Doc\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**IMP:** when working on the set up, the text highlighted in Yellow needs to be replaced with the actual db \ server name for which you are doing the set up.

**Primary DB pre tasks:**

* **DB should be in archive log mode**

SQL> archive log list (**Currently it’s in archive log mode already**)

Database log mode Archive Mode

Automatic archival Enabled

Archive destination +DG\_FRA01

Oldest online log sequence 13970

Next log sequence to archive 13972

Current log sequence 13972

**If not enabled then follow below steps to enable:**

Srvctl stop database –d db\_name

Srvctl start database –d db\_name –o mount

Sqlplus / as sysdba

Alter database archivelog;

Srvctl stop database –d db\_name

Srvctl start database –d db\_name

Or for stand alone

Sqlplus / as sysdba

Alter database open;

Archive log list;

select name,DATABASE\_ROLE,FORCE\_LOGGING,LOG\_MODE from v$database

SQL> /

NAME DATABASE\_ROLE FORCE\_LOGGING LOG\_MODE

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

MHSDEV PRIMARY YES ARCHIVELOG

* **Check force logging , Enable if not it’s online task(ALTER DATABASE FORCE LOGGING; )**

FORCE\_LOGGING NAME

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

NO MHSDEV

SQL> ALTER DATABASE FORCE LOGGING;

Database altered.

SQL> select force\_logging,name from v$database;

FORCE\_LOGGING NAME

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

YES MHSDEV

* **Check password file & verify connection with sys user using tns alias**

[oracle@usdfw23db30v dbs]$ cd $ORACLE\_HOME/dbs

[oracle@usdfw23db30v dbs]$ pwd

/opt/oracle/product/19.3.0/dbhome\_1/dbs

[oracle@usdfw23db30v dbs]$ ls -ltr orapw$ORACLE\_SID

-rw-r----- 1 oracle oinstall 11264 Apr 8 15:57 orapwMHSDEV

[oracle@usdfw23db30v dbs]$ $ORACLE\_HOME/bin/orapwd file=orapwMHSDEV password=Q2\_ExHilarAting\_2022 force=y entries=10

[oracle@usdfw23db30v dbs]$

[oracle@usdfw23db30v dbs]$ sqlplus sys/Q2\_ExHilarAting\_2022@MHSDEV as sysdba

SQL\*Plus: Release 19.0.0.0.0 - Production on Wed Apr 27 08:58:37 2022

Version 19.14.0.0.0

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Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production

Version 19.14.0.0.0

SQL>

* **Keep primary tns entry handy with meaningful alias name**
  + **The below is just an example, make sure that you create the correct entry based on the databasename and Source.**

MHSDEV\_P= (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = usdfw23db30v)(PORT = 1530)) (CONNECT\_DATA = (SERVER = DEDICATED) (SERVICE\_NAME = MHSDEV)))

* **Verify DB Name/Db etc and create pfile from spfile for standby**

**NAME TYPE VALUE**

**------------------------------------ --------------------------------- ------------------------------**

**spfile string +DG\_DATA01/MHSDEV/spfilemhsdev .ora**

.ora

SQL> create pfile='/tmp/MHSDEV.ora' from spfile;

File created.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* PRIMARY SERVER PRE TASK END \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Standby Side Pre tasks:-**

1. **Copy pfile which was created at primary side and make changes as per standby side, We will keep db\_name,db\_unique\_name same,**
2. **Make sure pfile should be kept under oracle\_home/dbs location,**

**IMP Don’t keep pfile at different loc or else instance will crash after start.**

1. **We need to change create file dest and control file location as per Disk Group available at standby (exadata machine)**
2. **TNS\_ADMIN would be at DB\_HOME/network/admin/db\_name**
3. **We will create standby alone standby**

* **Create env file as below at Exadata machine(usdfw23db02vcn1.mrshmc.com)**

[oracle@usdfw23db02vcn1 ~]$ pwd

/home/oracle

[oracle@usdfw23db02vcn1 ~]$ vi MHSDEV.env

PATH=/u02/app/oracle/product/19.0.0.0/dbhome\_1/bin:/u02/app/oracle/product/19.0.0.0/dbhome\_1/OPatch:$PATH; export PATH

ORACLE\_SID=MHSDEV; export ORACLE\_SID

ORACLE\_HOSTNAME=usdfw23db02vcn1.mrshmc.com; export ORACLE\_HOSTNAME

LD\_LIBRARY\_PATH=/u02/app/oracle/product/19.0.0.0/dbhome\_1/lib; export LD\_LIBRARY\_PATH

ORACLE\_BASE=/u02/app/oracle; export ORACLE\_BASE

OH=/u02/app/oracle/product/19.0.0.0/dbhome\_1; export OH

ORACLE\_HOME=/u02/app/oracle/product/19.0.0.0/dbhome\_1; export ORACLE\_HOME

TNS\_ADMIN=/u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/MHSDEV; export TNS\_ADMIN

[oracle@usdfw23db02vcn1 ~]$

* **Create TNS\_ADMIN directory**

[oracle@usdfw23db02vcn1 admin]$ mkdir MHSDEV

[oracle@usdfw23db02vcn1 admin]$ cd MHSDEV

/u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/MHSDEV

* **Copy sqlnet.ora and tnsnames.ora from other available loc**

[oracle@usdfw23db02vcn1 MHSDEV]$ cp /u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/COLNPCHR/tnsnames.ora /u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/MHSDEV/

[oracle@usdfw23db02vcn1 MHSDEV]$ cp /u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/COLNPCHR/sqlnet.ora /u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/MHSDEV/

[oracle@usdfw23db02vcn1 MHSDEV]$ pwd

/u02/app/oracle/product/19.0.0.0/dbhome\_1/network/admin/MHSDEV

[oracle@usdfw23db02vcn1 MHSDEV]$ ls -ltr

total 8

-rw-r----- 1 oracle oinstall 2654 Apr 27 08:39 tnsnames.ora

-rw-r----- 1 oracle oinstall 995 Apr 27 08:39 sqlnet.ora

* **Do static entry into listener.ora using “grid” user and reload listener**

$ sudo -u grid -i

(AD: corp.mmco.int) Password:

[grid@usdfw23db02vcn1 ~]$ echo $ORACLE\_SID

+ASM1

[grid@usdfw23db02vcn1 ~]$

[grid@usdfw23db02vcn1 ~]$ cd $ORACLE\_HOME/network/admin

[grid@usdfw23db02vcn1 admin]$ ls -ltr listener.ora

-rw-r----- 1 grid oinstall 1976 Apr 25 16:18 listener.ora

**\*\*\*\*\*\*\*\*\*IMP**: In the below listener content, the block that is in RED, copy the block and add it to the file with your specific DB instance name. the block in Red is just an example, make sure to replace with correct details

[grid@usdfw23db02vcn1 admin]$ vi listener.ora

LISTENER=(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER)))) # line added by Agent

LISTENER\_SCAN3=(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER\_SCAN3)))) # line added by Agent

LISTENER\_SCAN2=(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER\_SCAN2)))) # line added by Agent

LISTENER\_SCAN1=(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER\_SCAN1)))) # line added by Agent

ASMNET1LSNR\_ASM=(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=ASMNET1LSNR\_ASM)))) # line added by Agent

ENABLE\_GLOBAL\_DYNAMIC\_ENDPOINT\_ASMNET1LSNR\_ASM=ON # line added by Agent

VALID\_NODE\_CHECKING\_REGISTRATION\_ASMNET1LSNR\_ASM=SUBNET # line added by Agent

ENABLE\_GLOBAL\_DYNAMIC\_ENDPOINT\_LISTENER\_SCAN1=ON # line added by Agent

VALID\_NODE\_CHECKING\_REGISTRATION\_LISTENER\_SCAN1=OFF # line added by Agent - Disabled by Agent because REMOTE\_REGISTRATION\_ADDRESS is set

ENABLE\_GLOBAL\_DYNAMIC\_ENDPOINT\_LISTENER\_SCAN2=ON # line added by Agent

VALID\_NODE\_CHECKING\_REGISTRATION\_LISTENER\_SCAN2=OFF # line added by Agent - Disabled by Agent because REMOTE\_REGISTRATION\_ADDRESS is set

ENABLE\_GLOBAL\_DYNAMIC\_ENDPOINT\_LISTENER\_SCAN3=ON # line added by Agent

VALID\_NODE\_CHECKING\_REGISTRATION\_LISTENER\_SCAN3=OFF # line added by Agent - Disabled by Agent because REMOTE\_REGISTRATION\_ADDRESS is set

ENABLE\_GLOBAL\_DYNAMIC\_ENDPOINT\_LISTENER=ON # line added by Agent

VALID\_NODE\_CHECKING\_REGISTRATION\_LISTENER=SUBNET # line added by Agent

SSL\_VERSION=1.2

WALLET\_LOCATION=(SOURCE = (METHOD = FILE) (METHOD\_DATA = (DIRECTORY = /var/opt/oracle/dbaas\_acfs/grid/tcps\_wallets)))

SSL\_CLIENT\_AUTHENTICATION = FALSE

SID\_LIST\_LISTENER =

(SID\_LIST =

(SID\_DESC =

(GLOBAL\_DBNAME = MHSDEV)

(ORACLE\_HOME = /u02/app/oracle/product/19.0.0.0/dbhome\_1)

(SID\_NAME = MHSDEV)

)

(SID\_DESC=

(GLOBAL\_DBNAME = MFSWWC1D)

(ORACLE\_HOME=/u02/app/oracle/product/19.0.0.0/dbhome\_1)

(SID\_NAME=MFSWWC1D1)

)

(SID\_DESC=

(GLOBAL\_DBNAME = db\_name)

(ORACLE\_HOME=/u02/app/oracle/product/19.0.0.0/dbhome\_1)

(SID\_NAME=InstanceName)

)

)

[grid@usdfw23db02vcn1 admin]$

[grid@usdfw23db02vcn1 admin]$ lsnrctl status|grep -i MHSDEV

[grid@usdfw23db02vcn1 admin]$ lsnrctl reload

LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 27-APR-2022 08:45:16

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER)))

The command completed successfully

[grid@usdfw23db02vcn1 admin]$ lsnrctl status|grep -i MHSDEV

Service "MHSDEV" has 1 instance(s).

Instance "MHSDEV", status UNKNOWN, has 1 handler(s) for this service...

[grid@usdfw23db02vcn1 admin]$

* **Prepare tns entry to standby DB and add into primary and standby (Exadata) TNS\_ADMIN location**

MHSDEV\_S=

(DESCRIPTION=

(ADDRESS=

(PROTOCOL=TCP)

(HOST=usdfw23db02vcn1-vip)

(PORT=1521))

(CONNECT\_DATA=

(SERVER=DEDICATED)

(SERVICE\_NAME= MHSDEV)

(FAILOVER\_MODE=

(TYPE=select)

(METHOD=basic))))

MHSDEV\_P= (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = usdfw23db30v)(PORT = 1530)) (CONNECT\_DATA = (SERVER = DEDICATED) (SERVICE\_NAME = MHSDEV)))

* **Copy password file from source to other location and from there to oracle\_home/dbs**

**Sournce:-[**oracle@usdfw23db30v dbs]$ scp orapwMHSDEV u1101345@usdfw23db02vcn1:/var/oracle/scripts/passwdfile/

**On target:** Go to password copied location and change permission as it’s been copied with individual ID.

$ id

uid=662986355(u1101345) gid=63250 groups=63250,1002(dba),63253(dbadm),65641(atodbs)

$ cd /var/oracle/scripts/passwdfile

[oracle@usdfw23db02vcn1 passwdfile]$ ls -ltr orapwMHSDEV

chmod 775 orapwMHSDEV

**---Now switch to oracle user and copy password file to o\_h/dbs location**

[oracle@usdfw23db02vcn1 passwdfile]$ ls -ltr

total 20

rwxrwxr-x 1 u1101345 63250 6144 Apr 27 08:54 orapwMHSDEV

[oracle@usdfw23db02vcn1 passwdfile]$ cp orapwMHSDEV $ORACLE\_HOME/dbs

**--- Now verify cksum value for password on source/target side and it should be same**

Source:

[oracle@usdfw23db30v dbs]$ cksum orapwMHSDEV

527415220 6144 orapwMHSDEV

[oracle@usdfw23db30v dbs]$

Target:-

[oracle@usdfw23db02vcn1 passwdfile]$ cd $ORACLE\_HOME/dbs

[oracle@usdfw23db02vcn1 dbs]$ cksum orapwMHSDEV

527415220 6144 orapwMHSDEV

* Now create pfile on target from pfile which were created on source. The below is an example of the content of the file.

Main area of concern highlighted with red color, it should already have the database name for which you are building the standby

initMHSDEV.ora

\*.audit\_trail='DB'

\*.client\_statistics\_level='OFF'

\*.cluster\_database=FALSE

\*.compatible='19.0.0'

\*.control\_files='+DATAC2/MHSDEV/CONTROLFILE/current.787.1006437477','+DATAC2/MHSDEV/CONTROLFILE/current.786.1006437477'#Set by RMAN

\*.control\_management\_pack\_access='NONE'

\*.db\_block\_size=8192

\*.db\_create\_file\_dest='+DATAC2'

\*.db\_create\_online\_log\_dest\_1='+DATAC2'

\*.db\_create\_online\_log\_dest\_2='+DATAC2'

\*.db\_domain=''

\*.db\_unique\_name='MHSDEV'

\*.db\_name='MHSDEV'#Reset to original value by RMAN

\*.diagnostic\_dest='/opt/oracle'

\*.dispatchers='(PROTOCOL=TCP) (SERVICE=MHSDEVXDB)'

\*.log\_archive\_dest\_1='LOCATION=+RECOC2'

\*.log\_buffer=7616K# log buffer update

\*.open\_cursors=300

\*.optimizer\_dynamic\_sampling=2

\*.optimizer\_mode='ALL\_ROWS'

\*.pga\_aggregate\_target=0

\*.plsql\_warnings='DISABLE:ALL'# PL/SQL warnings at init.ora

\*.processes=300

\*.query\_rewrite\_enabled='FALSE'

\*.remote\_login\_passwordfile='EXCLUSIVE'

\*.result\_cache\_max\_size=15744K

\*.sga\_max\_size=3G# internally adjusted

\*.sga\_target=3G

\*.skip\_unusable\_indexes=TRUE

\*.undo\_tablespace='UNDOTBS1'

* Create spfile from pfile

SQL> create spfile from pfile='initMHSDEV.ora';

File created.

SQL>

* **Now start instance in No mount**

SQL> startup nomount;

ORACLE instance started.

Total System Global Area 3207320632 bytes

Fixed Size 8901688 bytes

Variable Size 637534208 bytes

Database Buffers 2550136832 bytes

Redo Buffers 10747904 bytes

SQL>

* **Now check remote connection**

[oracle@usdfw23db02vcn1 dbs]$ rman target sys/Q2\_ExHilarAting\_2022@MHSDEV\_P auxiliary sys/Q2\_ExHilarAting\_2022@MHSDEV\_S

Recovery Manager: Release 19.0.0.0.0 - Production on Wed Apr 27 09:12:23 2022

Version 19.14.0.0.0

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

connected to target database: MHSDEV (DBID=1008237948)

connected to auxiliary database: MHSDEV (not mounted)

* **Now run duplicate command as mentioned below**

run {

allocate channel prmy1 type disk;

allocate channel prmy2 type disk;

allocate channel prmy3 type disk;

allocate channel prmy4 type disk;

allocate auxiliary channel stby1 type disk;

allocate auxiliary channel stby2 type disk;

allocate auxiliary channel stby3 type disk;

duplicate target database for standby from active database;

}

* **After completion of duplicate command set below parameter as mentioned.**

**Prod:-**

SQL> alter system set fal\_server=MHSDEV\_S sid='\*';

System altered.

SQL> alter system set fal\_client=MHSDEV\_P sid='\*';

System altered.

**Standby:-**

SQL> alter system set fal\_server=MHSDEV\_p sid='\*';

System altered.

SQL> alter system set fal\_client=MHSDEV\_s sid='\*';

System altered.

**Prod:-**

SQL> alter system set log\_archive\_dest\_2='SERVICE=MHSDEV\_S ASYNC VALID\_FOR=(ONLINE\_LOGFILES,PRIMARY\_ROLE) DB\_UNIQUE\_NAME=MHSDEV' sid='\*';

System altered.

SQL> sho parameter log\_archive\_dest\_2

NAME TYPE VALUE

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

log\_archive\_dest\_2 string SERVICE=MHSDEV\_S ASYNC VALID\_F

OR=(ONLINE\_LOGFILES,PRIMARY\_RO

LE) DB\_UNIQUE\_NAME=MHSDEV

SQL> sho parameter redo

NAME TYPE VALUE

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

redo\_transport\_user string

SQL>

(Redo\_transport\_user can be put null to use default use sys)

* **On standby verify RFS process and start mrp**

**SQL> select process,status,thread#,sequence# from gv$managed\_standby;**

PROCESS STATUS THREAD# SEQUENCE#

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

ARCH CONNECTED 0 0

DGRD ALLOCATED 0 0

DGRD ALLOCATED 0 0

ARCH CONNECTED 0 0

ARCH CONNECTED 0 0

ARCH CONNECTED 0 0

RFS RECEIVING 1 13974

RFS IDLE 1 0

RFS IDLE 0 0

RFS IDLE 0 0

* **START MRP and verify at below:-**

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

NAME DATABASE\_ROLE OPEN\_MODE

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

MHSDEV PHYSICAL STANDBY MOUNTED

SQL>

SQL> ALTER DATABASE RECOVER managed standby database disconnect from session noparallel;

Database altered.

SQL> select process,status,thread#,sequence# from gv$managed\_standby;

PROCESS STATUS THREAD# SEQUENCE#

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

ARCH CONNECTED 0 0

DGRD ALLOCATED 0 0

DGRD ALLOCATED 0 0

ARCH CONNECTED 0 0

ARCH CONNECTED 0 0

ARCH CONNECTED 0 0

RFS RECEIVING 1 13974

RFS IDLE 1 0

RFS IDLE 0 0

RFS IDLE 0 0

MRP0 WAIT\_FOR\_LOG 1 13974

* **Final step take manual switch at prim and verify syncing..**

SQL> SELECT ARCH.THREAD#"Thread",ARCH.SEQUENCE#"LastSequenceReceived",APPL.SEQUENCE#"LastSequenceApplied",(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$LOG\_HISTORY WHERE(THREAD#,FIRST\_TIME)IN(SELECT THREAD#,MAX(FIRST 3 \_TIME)FROM V$LOG\_HISTORY GROUP BY THREAD#))APPL

WHERE ARCH.THREAD#=APPL.THREAD#

ORDER BY 1;

Thread LastSequenceReceived LastSequenceApplied Difference

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

1 13975 13975 0

SQL>

SQL> /

Thread LastSequenceReceived LastSequenceApplied Difference

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

1 13979 13979 0

SQL> /

Thread LastSequenceReceived LastSequenceApplied Difference

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

1 13979 13979 0

**\*\*\*\*\*\*\*\*\*\*\*All the Best\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***