|  |
| --- |
| Re-Sync Standby database using RMAN incremental backup  ---> Naga Vegesna |

Step 0) Verify if new files have been added between the las SCN in the DG and the current SCN in the primary

1. Log into both primary and dataguard instances and run:

set linesize 200

column NAME format a100

select FILE#, CREATION\_TIME, NAME from v$datafile order by 1;

1. Compare results. If there’s any files added, you’ll probably see them at the end of the list. E.g. consider the following list of missing files:

FILE# CREATION\_TIME NAME

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

60 04/06/2018 08:30:56 /u02/oradata/DB01/data28.dbf

61 04/09/2018 08:35:45 /u02/oradata/DB01/data17.dbf

1. Backup missing files manually:

$ rman target / nocatalog

RMAN> backup as copy datafile 60 format '/u04/ora\_backup/DB01/data28.dbf';

RMAN> backup as copy datafile 61 format '/u04/ora\_backup/DB01/data17.dbf';

Step 1) Check the SCN , where standby lost by querying the standby database

Note : choose minimum of below three queries

|  |
| --- |
| select to\_char(current\_scn, '999999999999999') CURRENT\_SCN from v$database;  select min(fhscn) from x$kcvfh;  select min(f.fhscn) from x$kcvfh f, v$datafile d where f.hxfil =d.file# and d.enabled != 'READ ONLY'; |

Step 2 ) Make an incremental backup from the scn identified from step 1.

This example, we took backup to location , /u04/ora\_backup/PLT01/ , where we have sufficient space

|  |
| --- |
| rman target / nocatalog log=/u04/ora\_backup/PLT01/resync-DB.log <<EOF  run  {  allocate channel ch1 type disk;  allocate channel ch2 type disk;  allocate channel ch3 type disk;  allocate channel ch4 type disk;  backup incremental from scn <replace SCN here> database format '/u04/ora\_backup/PLT01/INCR\_\_%d\_%U';  backup current controlfile for standby format '/u04/ora\_backup/PLT01/cntrl\_%U';  }  EOF |

NOTE: on Standby, disable any process that will delete archivelogs (I.e. cleanhouse, etc) until this entire process is complete

Step 3 ) These are the backup files generated on Primary database server.

-rw-r----- 1 oracle dba 19650232320 Jan 24 23:22 INCR\_\_PLT01\_lkrqrp2b\_1\_1

-rw-r----- 1 oracle dba 8123539456 Jan 25 00:00 INCR\_\_PLT01\_ljrqrp2a\_1\_1

-rw-r----- 1 oracle dba 17494892544 Jan 25 02:31 INCR\_\_PLT01\_lirqrp2a\_1\_1

-rw-r----- 1 oracle dba 11082473472 Jan 25 03:52 INCR\_\_PLT01\_lhrqrp2a\_1\_1

-rw-r----- 1 oracle dba 113770496 Jan 25 03:52 INCR\_\_PLT01\_llrqrrad\_1\_1

-rw-r----- 1 oracle dba 113770496 Jan 25 03:53 cntrl\_lmrqrrav\_1\_1

Step 4 ) Copy the files to standby database server , where you have sufficient space

Example :

scp INCR\_\_PLT01\_lkrqrp2b\_1\_1 oracle@mydbserver1:/u04/ora\_backup/PLT01/

scp INCR\_\_PLT01\_ljrqrp2a\_1\_1 oracle@mydbserver1:/u04/ora\_backup/PLT01/

scp INCR\_\_PLT01\_lirqrp2a\_1\_1 oracle@mydbserver1:/u04/ora\_backup/PLT01/

scp INCR\_\_PLT01\_lhrqrp2a\_1\_1 oracle@mydbserver1:/u04/ora\_backup/PLT01/

scp INCR\_\_PLT01\_llrqrrad\_1\_1 oracle@mydbserver1:/u04/ora\_backup/PLT01/

scp cntrl\_lmrqrrav\_1\_1 oracle@mydbserver1:/u04/ora\_backup/PLT01/

Step 5) If any files were identified in Step 0, copy them manuially to the right location:

$ cp /u04/ora\_backup/DB01/viawaredata28.dbf /u02/oradata/DB01/data28.dbf

$ cp /u04/ora\_backup/DB01/viaware\_repdata17.dbf /u02/oradata/DB01/data17.dbf

Step 6) On standby database server, catalog the backup copied

[oracle@mydbserver1 PLT01]$ pwd

|  |
| --- |
| /u04/ora\_backup/PLT01 🡪 this the location , where we copied backup  [oracle@mydbserver1 PLT01]$ rman target /  Recovery Manager: Release 11.2.0.3.0 - Production on Wed Jan 25 12:31:25 2017  Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.  connected to target database: PLT01 (DBID=1788907950, not open)  RMAN> catalog start with '/u04/ora\_backup/PLT01/'; |

Output is like below:

using target database control file instead of recovery catalog

searching for all files that match the pattern /u04/ora\_backup/PLT01/

List of Files Unknown to the Database

=====================================

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_llrqrrad\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lkrqrp2b\_1\_1

File Name: /u04/ora\_backup/PLT01/cntrl\_lmrqrrav\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lirqrp2a\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_ljrqrp2a\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lhrqrp2a\_1\_1

Do you really want to catalog the above files (enter YES or NO)? YES

cataloging files...

cataloging done

List of Cataloged Files

=======================

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_llrqrrad\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lkrqrp2b\_1\_1

File Name: /u04/ora\_backup/PLT01/cntrl\_lmrqrrav\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lirqrp2a\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_ljrqrp2a\_1\_1

File Name: /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lhrqrp2a\_1\_1

RMAN> exit

Recovery Manager complete.

Step 7) Stop recovery manager

|  |
| --- |
| SQL> alter database recover managed standby database cancel;  Database altered. |

Step 8) Recover standby database using incremental backup

NOTE: for standby dbs in ASM, add additional directory to db\_file\_name\_convert to Standby instance

alter system set db\_file\_name\_convert=('/u02/oradata/DB01/','+DATA/DB01STBY/DATAFILES')'

|  |
| --- |
| [oracle@mydbserver1 PLT01]$ rman target /  Recovery Manager: Release 11.2.0.3.0 - Production on Wed Jan 25 12:32:20 2017  Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.  connected to target database: PLT01 (DBID=1788907950, not open)  RMAN> run  {  allocate channel ch1 type disk;  allocate channel ch2 type disk;  allocate channel ch3 type disk;  allocate channel ch4 type disk;  recover database;  } |

allocated channel: ch1

channel ch1: SID=570 device type=DISK

allocated channel: ch2

channel ch2: SID=712 device type=DISK

allocated channel: ch3

channel ch3: SID=854 device type=DISK

allocated channel: ch4

channel ch4: SID=996 device type=DISK

allocated channel: ch5

channel ch5: SID=1138 device type=DISK

allocated channel: ch6

channel ch6: SID=1280 device type=DISK

allocated channel: ch7

channel ch7: SID=1422 device type=DISK

allocated channel: ch8

channel ch8: SID=1564 device type=DISK

Starting recover at 25-JAN-17

channel ch1: starting incremental datafile backup set restore

channel ch1: specifying datafile(s) to restore from backup set

destination for restore of datafile 00001: /u02/oradata/PLT01/data/system01.dbf

destination for restore of datafile 00003: /u02/oradata/PLT01/data/undotbs01.dbf

destination for restore of datafile 00010: /u02/oradata/PLT01/data/DATA03.dbf

destination for restore of datafile 00019: /u02/oradata/PLT01/data/DATA08.dbf

destination for restore of datafile 00062: /u02/oradata/PLT01/data/INDX09.dbf

destination for restore of datafile 00067: /u02/oradata/PLT01/data/DATA46.dbf

channel ch1: reading from backup piece /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lkrqrp2b\_1\_1

channel ch2: starting incremental datafile backup set restore

channel ch2: specifying datafile(s) to restore from backup set

destination for restore of datafile 00002: /u02/oradata/PLT01/data/sysaux01.dbf

destination for restore of datafile 00060: /u02/oradata/PLT01/data/DATA41.dbf

destination for restore of datafile 00064: /u02/oradata/PLT01/data/DATA44.dbf

destination for restore of datafile 00069: /u02/oradata/PLT01/data/INDX12.dbf

channel ch2: reading from backup piece /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lhrqrp2a\_1\_1

channel ch3: starting incremental datafile backup set restore

channel ch3: specifying datafile(s) to restore from backup set

destination for restore of datafile 00051: /u02/oradata/PLT01/data/DATA32.dbf

destination for restore of datafile 00055: /u02/oradata/PLT01/data/DATA36.dbf

destination for restore of datafile 00059: /u02/oradata/PLT01/data/DATA40.dbf

destination for restore of datafile 00063: /u02/oradata/PLT01/data/DATA43.dbf

destination for restore of datafile 00068: /u02/oradata/PLT01/data/INDX11.dbf

channel ch3: reading from backup piece /u04/ora\_backup/PLT01/INCR\_\_PLT01\_ljrqrp2a\_1\_1

channel ch4: starting incremental datafile backup set restore

channel ch4: specifying datafile(s) to restore from backup set

destination for restore of datafile 00061: /u02/oradata/PLT01/data/DATA42.dbf

destination for restore of datafile 00065: /u02/oradata/PLT01/data/INDX10.dbf

destination for restore of datafile 00066: /u02/oradata/PLT01/data/DATA45.dbf

destination for restore of datafile 00070: /u02/oradata/PLT01/data/undotbs04.dbf

destination for restore of datafile 00071: /u02/oradata/PLT01/data/INDX14.dbf

channel ch4: reading from backup piece /u04/ora\_backup/PLT01/INCR\_\_PLT01\_lirqrp2a\_1\_1

channel ch3: piece handle=/u04/ora\_backup/PLT01/INCR\_\_PLT01\_ljrqrp2a\_1\_1 tag=TAG20170124T201049

channel ch3: restored backup piece 1

channel ch3: restore complete, elapsed time: 00:13:56

channel ch4: piece handle=/u04/ora\_backup/PLT01/INCR\_\_PLT01\_lirqrp2a\_1\_1 tag=TAG20170124T201049

channel ch4: restored backup piece 1

channel ch4: restore complete, elapsed time: 00:17:16

channel ch1: piece handle=/u04/ora\_backup/PLT01/INCR\_\_PLT01\_lkrqrp2b\_1\_1 tag=TAG20170124T201049

channel ch1: restored backup piece 1

channel ch1: restore complete, elapsed time: 00:18:46

channel ch2: piece handle=/u04/ora\_backup/PLT01/INCR\_\_PLT01\_lhrqrp2a\_1\_1 tag=TAG20170124T201049

channel ch2: restored backup piece 1

channel ch2: restore complete, elapsed time: 00:20:36

starting media recovery

archived log for thread 1 with sequence 8062 is already on disk as file /u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8062\_d8hjspc1\_.arc

archived log for thread 1 with sequence 8063 is already on disk as file /u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8063\_d8hk4rs3\_.arc

archived log for thread 1 with sequence 8150 is already on disk as file /u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_25/o1\_mf\_1\_8150\_d8jkgd76\_.arc

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8059\_d8hjppbf\_.arc thread=1 sequence=8059

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8060\_d8hjqr0v\_.arc thread=1 sequence=8060

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/old.o1\_mf\_1\_8061\_d8hwz61n\_.arc thread=1 sequence=8061

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8062\_d8hjspc1\_.arc thread=1 sequence=8062

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8063\_d8hk4rs3\_.arc thread=1 sequence=8063

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8064\_d8hk5s6c\_.arc thread=1 sequence=8064

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8065\_d8hkk5sv\_.arc thread=1 sequence=8065

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8066\_d8hkn2rr\_.arc thread=1 sequence=8066

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8067\_d8hkrsl9\_.arc thread=1 sequence=8067

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8068\_d8hl25bm\_.arc thread=1 sequence=8068

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8069\_d8hl4qkw\_.arc thread=1 sequence=8069

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8070\_d8hlwqyw\_.arc thread=1 sequence=8070

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8071\_d8hldl9j\_.arc thread=1 sequence=8071

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8072\_d8htd2m1\_.arc thread=1 sequence=8072

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8073\_d8htd2n2\_.arc thread=1 sequence=8073

archived log file name=/u03/fast\_recovery\_area/PLT01STBY/archivelog/2017\_01\_24/o1\_mf\_1\_8074\_d8htd2ov\_.arc thread=1 sequence=8074

Note : I trimmed the above output to make the doc crispy

Step 9)

Restore standby control file

SQL> shutdown Immediate;

Rename the existing controlfiles

SQL> startup nomount;

rman target /

RMAN> RESTORE STANDBY CONTROLFILE FROM '/u04/ora\_backup/PLT01/cntrl\_lmrqrrav\_1\_1';

RMAN> ALTER DATABASE MOUNT;

Step 10)

NOTE: if adding missing datafiles to standby, particularly within ASM, rename datafiles on standby if necessary. ASM file name can be found in the alert.log.

Enable recovery manager

|  |
| --- |
| SQL> alter database recover managed standby database disconnect from session;  Database altered. |

NOTE: if log gap found in alert log, on Standby, register log files found in the archive log destination

Rman target /

Catalog start with '/ora\_archivelog/CP07';

Step 11)

Set the archive deletion policy, if missing or vanished (Standby side only)

|  |
| --- |
| RMAN> CONFIGURE ARCHIVELOG DELETION POLICY TO APPLIED ON STANDBY;  new RMAN configuration parameters:  CONFIGURE ARCHIVELOG DELETION POLICY TO APPLIED ON STANDBY;  new RMAN configuration parameters are successfully stored |

Step 12)

Check , if the standby is in sync and progressing

|  |
| --- |
| On standby DB  SQL> select thread#,max(SEQUENCE#) from v$archived\_log  where RESETLOGS\_CHANGE#=(select RESETLOGS\_CHANGE# from v$database\_incarnation where status='CURRENT')  and applied='YES' group by thread#;  on primary DB:  select thread#,max(SEQUENCE#) from v$archived\_log  where resetlogs\_change#=(select RESETLOGS\_CHANGE# from v$database\_incarnation where status='CURRENT')  group by thread#; |

Note : Issue alter system archive log current on primary , and check the above queries again.