**Flashback experience**

**Will use below file systems**

On Primary

+DG\_ORA2 – 679 GB free after 11% threshold

On standby

+DG\_ORA2 – 762 GB free after 11% threshold

**ON PRIMARY**

Create a sanity check table:

CREATE TABLE "SYS"."DEAN\_FLASH\_BACK"

 ( "COL\_01" CHAR(100 BYTE)

 ) PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255

 NOCOMPRESS LOGGING

 STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645

 PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1

 BUFFER\_POOL DEFAULT)

 TABLESPACE "SYSTEM" ;

ALTER SESSION SET TIME\_ZONE='est';

insert

into "SYS"."DEAN\_FLASH\_BACK"

(

col\_01

)

values

(

'start of effort ' || TO\_CHAR(current\_date,'yyyy-mm-dd-mm hh24:mi')

)

;

commit;

select \* from "SYS"."DEAN\_FLASH\_BACK" ;

***Before starting, check that log apply is current***

**ON STANDBY**

Logon to node 4 stdbysrvr-DATASTB4

Check if all instances are up

srvctl status database -d DATASTB

SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG NO

(Will be no. Need to be in archivlog mode for flashback.)

MRP is running on node 4

Stop MRP

alter database recover managed standby database cancel;

alter system set db\_recovery\_file\_dest\_size=500g SCOPE=BOTH SID='\*';

alter system set db\_recovery\_file\_dest='+DG\_ORA2' SCOPE=BOTH SID='\*';

(This will create +DG\_ORA2/DATASTB/FLASHBACK directory)

alter system set db\_flashback\_retention\_target=480 SCOPE=BOTH SID='\*';

ALTER DATABASE FLASHBACK ON;

(This will take 2-2 minutes to complete)

If you get message:

ORA-01153: an incompatible media recovery is active

Check to see if MRP is running as shown below:

SELECT PROCESS, STATUS, THREAD#, SEQUENCE#, BLOCK#, BLOCKS FROM V$MANAGED\_STANDBY;

PROCESS STATUS THREAD# SEQUENCE# BLOCK# BLOCKS

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

ARCH CONNECTED 0 0 0 0

ARCH CONNECTED 0 0 0 0

***MRP0 APPLYING\_LOG 1 464782 115 204800***

RFS IDLE 1 464782 117 23

RFS IDLE 0 0 0 0

If it is issue;

ALTER DATABASE RECOVER MANAGED STANDBY DATABASE CANCEL;

SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG YES

(Should be yes)

*Identify a pre upgrade recovery scn*

(Will probably use the primary scn - 5 but just in case)

select name,DB\_UNIQUE\_NAME,current\_scn from v$database;

DATAPRD DATASTBY 13331100866

Start MRP

ALTER DATABASE RECOVER MANAGED STANDBY DATABASE DISCONNECT FROM SESSION;

Check that all nodes are up

srvctl status database -d DATASTB

Check that MRP is up on node 4

**ON PRIMARY**

Logon to node 4 ndcgrid42-DATAPRD4

Check if all instances are up

srvctl status database -d DATAPRD

SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG NO

(Will be no. Need to be in archivlog mode for flashback.)

alter system set db\_recovery\_file\_dest\_size=500g SCOPE=BOTH SID='\*';

alter system set db\_recovery\_file\_dest='+DG\_ORA2' SCOPE=BOTH SID='\*';

(This will create +DG\_ORA2/DATAPRD/flashback directory)

alter system set db\_flashback\_retention\_target=480;

ALTER DATABASE FLASHBACK ON;

If you get

ORA-38759: Database must be mounted by only one instance and not open.

Shutdown immediate;

Startup mount;

Alter database open;

SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG YES

(Should be yes)

insert

into "SYS"."DEAN\_FLASH\_BACK"

(

col\_01

)

values

(

'flashback is on ' || TO\_CHAR(current\_date,'yyyy-mm-dd-mm hh24:mi')

)

;

commit;

select \* from "SYS"."DEAN\_FLASH\_BACK" ;

***Identify a pre upgrade recovery scn***

select to\_char(dbms\_flashback.get\_system\_change\_number) from dual;

TO\_CHAR(DBMS\_FLASHBACK.GET\_SYSTEM\_CHANGE

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

99316791417

select sysdate,name,DB\_UNIQUE\_NAME,to\_char(current\_scn) from gv$database order by inst\_id;

SYSDATE NAME DB\_UNIQUE\_NAME TO\_CHAR(CURRENT\_SCN)

15-DEC-16 DATAPRD DATAPRD 99316844320

15-DEC-16 DATAPRD DATAPRD 99316844318

15-DEC-16 DATAPRD DATAPRD 99316844319

15-DEC-16 DATAPRD DATAPRD 99316844318

Check the utilization of FRA area on both primary and standby

Create a GRP

CREATE RESTORE POINT GRP\_01\_BEF\_UPGRADE GUARANTEE FLASHBACK DATABASE;





Cut a log and make sure it gets applied.

***Make sure that the primary/standby log apply is caught up.***

***If yes, begin the upgrade***

**Monitor FRA usage with**

SELECT a.name

 , round(((a.space\_limit)/1024/1024/1024),0) space\_limit\_gb

 , round(((a.space\_used)/1024/1024/1024),0) space\_used\_gb

 , round(((a.space\_reclaimable)/1024/1024/1024),0) space\_reclaimable\_gb

 , a.number\_of\_files

 , round(((a.SPACE\_USED/a.SPACE\_LIMIT)/100),4) as percent\_used

FROM V$RECOVERY\_FILE\_DEST a;

**After we are done, turn off flashback**

**ON STANDBY**

ALTER DATABASE RECOVER MANAGED STANDBY DATABASE CANCEL;

ALTER DATABASE FLASHBACK OFF;

FRA files will be deleted nos. Messages such as below will appear in alert log

Thu Dec 15 22:26:08 2016

ALTER DATABASE FLASHBACK OFF

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_1.407.930684989

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_2.430.930685003

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_3.362.930685007

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_4.749.930685007

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_5.909.930685009

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_6.529.930685023

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_7.395.930685027.

.

.

Many such deletes

.

.

.

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_25.916.930694065

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_26.514.930694949

Deleted Oracle managed file +DG\_ORA2/DATASTB/flashback/log\_27.404.930694957

Flashback Database Disabled

Completed: ALTER DATABASE FLASHBACK OFF

SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG NO

(Should be no)

Start MRP

ALTER DATABASE RECOVER MANAGED STANDBY DATABASE THROUGH ALL SWITCHOVER DISCONNECT USING CURRENT LOGFILE;

Check that MRP is running

**ON PRIMARY**

ALTER DATABASE FLASHBACK OFF;

The files in the FRA will not be deleted if there is a GRP in place.

SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG NO

(Should be no)

If you have created a GRP, you will see

SQL> SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG RESTORE POINT ONLY

DROP RESTORE POINT GRP\_01\_BEF\_UPGRADE;

Alert log will show

Thu Dec 15 22:28:07 2016

ALTER DATABASE FLASHBACK OFF

Flashback Database Disabled

Completed: ALTER DATABASE FLASHBACK OFF

Thu Dec 15 22:30:37 2016

Drop guaranteed restore point GRP\_01\_BEF\_UPGRADE

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_1.345.930685433

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_2.346.930685457

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_3.347.930685461

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_4.348.930685461

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_5.349.930685461

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_6.350.930685487

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_7.351.930685487

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_8.352.930685503

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_9.353.930686527

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_10.354.930687587

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_11.355.930687673

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_12.356.930687817

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_13.357.930689211

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_14.358.930689555

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_15.359.930690089

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_16.360.930691267

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_17.361.930692391

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_18.362.930692397

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_19.363.930692711

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_20.364.930693093

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_21.365.930693135

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_22.366.930693185

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_23.367.930693459

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_24.368.930693693

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_25.369.930693987

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_26.370.930694869

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_27.371.930694939

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_28.372.930695081

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_29.373.930695111

Deleted Oracle managed file +DG\_ORA2/DATAPRD/flashback/log\_30.374.930695407

Guaranteed restore point GRP\_01\_BEF\_UPGRADE dropped

SQL> SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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ARCHIVELOG RESTORE POINT ONLY

SQL> DROP RESTORE POINT GRP\_01\_BEF\_UPGRADE;

Restore point dropped.

SQL> SELECT LOG\_MODE,FLASHBACK\_ON FROM V$DATABASE;

LOG\_MODE FLASHBACK\_ON

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

ARCHIVELOG NO

*Make sure that the primary/standby log apply is caught up.*