**RMAN To Perform a Point In Time Tablespace Recovery (TBPINT) of a single Pluggable Database (PDB) in a Multitenant Environment**

RMAN backups, in oracle 12c & 19c, can be taken either of a complete CDB or of a specific PDB or just of a ROOT. Backup taken of a CDB includes the ROOT, SEED and all the PDBs of that CDB.

This demo, I am going to restore 19c database to restoration server. To proceed with, I've taken a level 0 backup of the CDB.

Source DB : TOHK1TST / TOHK1TST\_DG

Source Server : HKLVDTAPP022

Target DB : TOHK1TST

Target Server : HKLVDPAPP071

1. As a test case, i took level 0 backup from production and restore in new server. During restore, I restored root DB, PDB$SEED and required tablespace in a PDB along with mandatory tablespaces.

In this case, am trying to restore tablespace TBPITR

RMAN> backup format '/u01/app/oracle/local/RMAN/DR/%U.bkp' database plus archivelog;

2. Copy all the backup pieces from source server to target server.

3. On the new server, create pfile and start DB in nomount state. Now restore control file.

run

{

set dbid=860564382;

allocate channel CH1 device type DISK;

restore controlfile from '/oradump/RMAN/DR/o1\_mf\_s\_1204389468\_n5dw2l0x\_.bkp';

release channel CH1;

}

4. Mount the database and catalog the RMAN backup pieces.

SQL> alter database mount;

RMAN> catalog start with '/oradump/RMAN';

List the backup of database for verification.

RMAN> list backup of database;

5. use preview summary command to check for both restore and recovery to make sure its running fine. We can get sign off from PSS regarding the time until restore needed.

RMAN>

run

{

allocate channel CH1 device type DISK;

allocate channel CH2 device type DISK;

set until time "to\_date ('18/JUN/2025 19:41:49','DD/MON/YYYY HH24:MI:SS')";

SET NEWNAME FOR DATABASE TO '/oradata/%b';

restore database root PREVIEW SUMMARY;

restore database "PDB$SEED" PREVIEW SUMMARY;

restore tablespace PDBT\_TEST:SYSTEM,PDBT\_TEST:SYSAUX,PDBT\_TEST:UNDOTBS1,PDBT\_TEST:USERS,PDBT\_TEST:TBPITR PREVIEW SUMMARY;

release channel CH1;

release channel CH2;

}

once preview summary is successful, initiate the actual restore command.

RMAN>

run

{

allocate channel CH1 device type DISK;

allocate channel CH2 device type DISK;

set until time "to\_date ('18/JUN/2025 19:41:49','DD/MON/YYYY HH24:MI:SS')";

SET NEWNAME FOR DATABASE TO '/oradata/%b';

restore database root;

restore database "PDB$SEED";

restore tablespace PDBT\_TEST:SYSTEM,PDBT\_TEST:SYSAUX,PDBT\_TEST:UNDOTBS1,PDBT\_TEST:USERS,PDBT\_TEST:TBPITR;

release channel CH1;

release channel CH2;

}

6. Now switch datafile to copy for root, pdb$seed and all restored tablespace of PDB.

switch tablespace SYSTEM to copy;

switch tablespace SYSAUX to copy;

switch tablespace UNDOTBS1 to copy;

switch tablespace USERS to copy;

switch tablespace SCB\_ADMIN\_DATA to copy;

switch tablespace AUDIT\_TBS to copy;

switch pluggable database 'PDB$SEED' to copy;

switch pluggable database 'PDBT\_TEST' to copy; --> switch only system, sysaux, undotbs,users and required tablespace. Remaining you can ignore.

7. Now run recovery preview command to make sure it is successful.

RMAN>

run

{

allocate channel CH1 device type DISK;

allocate channel CH2 device type DISK;

set until time "to\_date ('18/JUN/2025 19:41:49','DD/MON/YYYY HH24:MI:SS')";

recover database skip forever tablespace PDBT\_TEST:AUDIT\_TBS,PDBT\_TEST:SCB\_ADMIN\_DATA preview summary; -- list the remaining tablespace from PDB for skipping the recover.

release channel CH1;

release channel CH2;

}

Query to get skip tablespace list (Change PDB NAME ) in the production.

SELECT a.PDB\_NAME||':'||t.TABLESPACE\_NAME||',' from cdb\_pdbs a,cdb\_tablespaces t WHERE a.CON\_ID=t.CON\_ID and a.PDB\_NAME NOT IN ('PDB$SEED');

8. Now run the actual recovery. In this step, RMAN will run drop offline tablespace for the skipped tablespaces.

run

{

allocate channel CH1 device type DISK;

allocate channel CH2 device type DISK;

set until time "to\_date ('18/JUN/2025 19:41:49','DD/MON/YYYY HH24:MI:SS')";

recover database skip forever tablespace PDBT\_TEST:AUDIT\_TBS,PDBT\_TEST:SCB\_ADMIN\_DATA; -- list the remaining tablespace from PDB for skipping the recover.

release channel CH1;

release channel CH2;

}

9. Open the database with resetlogs and make sure all PDB are open read write.

RMAN> alter database open resetlogs;

Statement processed

10. Now actual scenario for SCB standard where backup is running on DR DB and archivelog running on PROD DB. So, i took Full backup on DR DB and archivelog on Prod database.

We can use above steps for tablespace point time recovery except small change in controlfile restore script. Must use restore primary control file keyword while using standby controlfile backup piece.

run

{

set dbid=860564382;

allocate channel CH1 device type DISK;

restore primary controlfile from '/oradump/RMAN/DR/o1\_mf\_s\_1204389468\_n5dw2l0x\_.bkp';

release channel CH1;

}

Attached logfiles for both cases for reference.

