# Practices for Lesson 6: Using Optional Backup Features

Practices for Lesson 6: Overview

Overview

In this practice, you will use RMAN to create an archival backup.

Practice 6-1: Creating an Archival Backup

Overview

In this practice, you create an archival backup, that is, a backup that is not under your normal retention policies and it is not in your normal fast recovery area (FRA) destination. This KEEP FOREVER database backup could be used for recovery if some of your later hands-on activities were to require it. Archival backups can be created with an open or a mounted database.

You must use a recovery catalog to be able to create an archival backup of an OPEN database. Without a recovery catalog, you must put the database in a MOUNTED state.

Assumptions

You are using a terminal window as the oracle OS user, with environment variables pointing to the ORCLCDB database instance.

It is assumed that the database and listener are running. You can use the pgrep -lf smon command to verify that the database is started and the pgrep -lf tns command to verify that the listener is started. If you need to restart the database and listener, use the dbstart.sh script.

Timing Estimate

It should take approximately 20 minutes to complete this practice.

Tasks

Log in to RMAN.

Shut down and then restart the database instance in MOUNT mode so you can create a backup copy of the entire database in a mounted state.

Attempt to make an archival backup of your ORCLCDB database with the KEEP FOREVER

option.

**Question:** Why did the backup command fail?

**Answer:** It failed because a backup with the KEEP FOREVER option requires the use of a recovery catalog. A recovery catalog is required when KEEP FOREVER is specified because backup records will eventually age out of the control file.

Attempt to make an archival backup of your ORCLCDB database that will be kept for 365 days.

**Question:** Why did the backup command fail?

**Answer:** It failed because a backup with the KEEP option (an archival backup) cannot be written to the Fast Recovery Area. Allowing this has the potential of causing the Fast Recovery Area to quickly run out of space.

Create an archival backup with a FORMAT clause that will direct RMAN to create the backup in the /home/oracle/backup directory and keep it for 365 days.

RMAN> BACKUP DATABASE FORMAT '/home/oracle/backup/%U' TAG keep\_db\_tag KEEP UNTIL TIME 'SYSDATE+365';

Starting backup at 2019-06-21:15:39:34

using channel ORA\_DISK\_1

backup will be obsolete on date 2020-06-20:15:39:34

archived logs required to recover from this backup will be backed up

channel ORA\_DISK\_1: starting full datafile backup set channel ORA\_DISK\_1: specifying datafile(s) in backup set

input datafile file number=00001 name=/u01/app/oracle/oradata/ORCLCDB/system01.dbf

…

using channel ORA\_DISK\_1

backup will be obsolete on date 2020-06-20:15:40:12 archived logs will not be kept or backed up

channel ORA\_DISK\_1: starting full datafile backup set channel ORA\_DISK\_1: specifying datafile(s) in backup set including current control file in backup set

channel ORA\_DISK\_1: starting piece 1 at 2019-06-21:15:40:13

channel ORA\_DISK\_1: finished piece 1 at 2019-06-21:15:40:14

piece handle=/home/oracle/backup/32u4lp6s\_1\_1 tag=KEEP\_DB\_TAG comment=NONE

Open the database.

Delete obsolete backups. Be sure to respond **YES** to the prompt.

RMAN> **delete obsolete;**

RMAN retention policy will be applied to the command RMAN retention policy is set to redundancy 1

using channel ORA\_DISK\_1

Deleting the following obsolete backups and copies:

/u01/app/oracle/fast\_recovery\_area/ORCLCDB/autobackup/2019\_06\_20

/o1\_mf\_s\_1011474768\_gjqxpjsb\_.bkp

/u01/app/oracle/fast\_recovery\_area/ORCLCDB/autobackup/2019\_06\_20

/o1\_mf\_s\_1011475441\_gjqycl1b\_.bkp

Do you really want to delete the above objects (enter YES or NO)? **YES**

deleted backup piece backup piece

handle=/u01/app/oracle/fast\_recovery\_area/ORCLCDB/autobackup/201 9\_06\_20/o1\_mf\_s\_1011474768\_gjqxpjsb\_.bkp RECID=38 STAMP=1011474768

deleted backup piece

backup piece handle=/u01/app/oracle/fast\_recovery\_area/ORCLCDB/autobackup/201 9\_06\_20/o1\_mf\_s\_1011475441\_gjqycl1b\_.bkp RECID=39 STAMP=1011475442

Deleted 2 objects

RMAN>

Exit RMAN.