Practice 17

Using Data Recovery Advisor

Practice Target

In this practice you will use the Data Recovery Advisor to detect and repair the loss of data files.

Practice Overview

In this practice, you will implement the following recovery tasks:

- Simulate losing a datafile
- Use the Data Recovery Advisor to troubleshoot and repair the failure

Assumptions

This practice assumes the srv1 appliance is up and running and its database ORADB is running in OPEN state.

Note

It is recommended to take a snapshot of srv1 appliance at this stage before starting with the practice.

Using Data Recovery Advisor

Preparing for the Scenario

1. Start Putty and connect to `srv1` as `oracle`

2. Invoke RMAN and login to `ORADB` as target

   ```
   rman target "'/ as SYSBACKUP'"
   ```

3. Take backup of the database then exit from RMAN

   ```
   BACKUP DATABASE TAG 'FULL_DB';
   ```

Simulating the Loss

In the following steps, you will simulate losing a datafile.

4. Change the directory to the CrashSimulator directory then invoke the CrashSimulater.

   ```
   cd ~/scripts/crashsimulator/
   ./CrashSimulator_Low.sh.x
   ```

5. Type '**12**' then press **Enter**. This is menu option of the crash action "**Loss of a non-system tablespace**".

6. Confirm the lost datafile is not there. Obtain the full name of the datafile from the message returned by the simulator.

   ```
   ls /u01/app/oracle/oradata/ORADB/datafile/*.dbf
   ```

7. Confirm the instance is down.

   ```
   ps -ef | grep pmon
   ```

8. Start SQL*Plus and login as sysdba to the local instance.

   ```
   sqlplus / as sysdba
   ```

9. Try starting the database.

   Starting the database fails with the following error:

   ```
   ORA-01157: cannot identify/lock data file n
   ```

   ```
   STARTUP
   ```

Diagnosing and Repairing the Loss

Perform the following actions to troubleshoot and repair the loss.

11. Invoke RMAN and connect to local database as target

```
rman target "'/ as SYSBACKUP'"
```

12. Use the Data Recovery Advisor to list the database failure.

```
LIST FAILURE;
```

13. Use the Data Recovery Advisor to obtain recommendations on how to repair the failure.

```
ADVISE FAILURE;
```

14. Use the Data Recovery Advisor to implement the proposed repair. Examine the proposed repair script before it executes.

Enter **Y** or **YES** when prompted to execute the script and open the database.

```
REPAIR FAILURE;
```

15. Verify that the issue has been resolved by validating database datafiles.

```
VALIDATE DATABASE;
```

Clean Up

16. If you have created a snapshot for `srv1`, restore the appliance to that snapshot.

17. Delete that snapshot.

Summary

The Data Recovery Advisor helps the DBA to be more productive on diagnosing data failures by quickly reporting the cause of the data loss issues and proposing solutions to repair them.