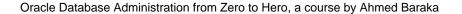**Practice**

Enabling the ARCHIVELOG Mode

Practice Target

In this practice you will enable the ARCHIVELOG mode in the database in srv1 and examine the generated archived redo log files.

Practice Assumptions

- This practice assumes that the virtual machines srv1 is up and running and restore from its **CDB** snapshot.

Note: All the steps in this practice are applicable in non-CDB database as well.

Enabling the ARCHIVELOG Mode in the ORADB

In this section of the practice, you will enable the ARCHIVELOG mode in oradb database in srv1 and examine the generated archived redo log files.

1. Open Putty and login to srv1 as oracle.

2. Invoke SQL*Plus and login to the database as SYS

```
sqlplus / as sysdba
```

3. Check out if the FRA is enabled or not.

    Because the parameters DB_RECOVERY_FILE_DEST and DB_RECOVERY_FILE_DEST_SIZE are set, FRA is enabled in the database. We enabled the FRA in the dbca when we created the database.

```
show parameter DB_RECOVERY_FILE_DEST
```

4. Submit the ARCHIVE LOG LIST command to verify that the database is operating in NOARCHIVELOG mode.

    "ARCHIVE LOG LIST" is SQL*Plus command that displays the ARCHIVELOG information about the current database. The command displays the following information:

    o Is the ARCHIVELOG mode enabled?
    o To which destination the archivelogs are to be saved. The value "USE_DB_RECOVERY_FILE_DEST" means that the archivelogs are to be saved in the FRA.
    o The oldest and current online redo log sequence number. Log sequence numbers are incremented with every log switch.

```
ARCHIVE LOG LIST
```

5. Using SQL, verify that the database is operating in NOARCHIVELOG mode

```
SELECT LOG_MODE FROM V$DATABASE;
```

6. Using SQL, check out to which directory the archived redo log is pointed.

    All the LOG_ARCHIVE_DEST_n parameters are pointed to no destination.

```
show parameter LOG_ARCHIVE_DEST
```

7. Set LOG_ARCHIVE_DEST_1 to the FRA.

    It is recommended to set the archive log destination to the FRA. Yet, technically speaking, we can set it to any accessible directory.

    Note: This step is technically not required because when the log archive destination is not set, it will go by default to FRA. However, for a better clarity, it is advisable to explicitly set it to FRA.

```
ALTER SYSTEM SET LOG_ARCHIVE_DEST_1='LOCATION=USE_DB_RECOVERY_FILE_DEST'
SCOPE=SPFILE;
```

8. Check out if the OMF is enabled.

    OMF is enabled if the parameter DB_CREATE_FILE_DEST is set to a non-Null value.

    When OMF is enabled, the parameter LOG_ARCHIVE_FORMAT is ignored.

    ```
    show parameter DB_CREATE_FILE_DEST
    ```

9. Mount the database.

    To change the ARCHIVELOG mode of a database, the database must be in MOUNT state.

    ```
    SHUTDOWN IMMEDIATE
    STARTUP MOUNT
    ```

10. Enable the ARCHIVELOG mode in the database.

    ```
    ALTER DATABASE ARCHIVELOG;
    ```

11. Open the database in read/write mode.

    ```
    ALTER DATABASE OPEN ;
    ```

12. Verify that the ARCHIVELOG is enabled

    Observe in the output a new piece of information is displayed. That is the "Next log sequence to archive".

    ```
    ARCHIVE LOG LIST
    ```

13. Switch the log file so that an archived redo log is generated.

    ```
    ALTER SYSTEM SWITCH LOGFILE;
    ```

14. Verify that the redo log sequence is incremented.

    ```
    ARCHIVE LOG LIST
    ```

15. Checkout the generated archive log file

    Observe the following from the output:

    o   The produced file name is automatically set by the database.

    o   The produced file is saved in a subdirectory that has a name the same as the current date. Having the archived redo log files organized into their produced dates makes it easier to manage them. We cannot obtain the same benefit if the archive log destination is set to a location other than the FRA.

    ```
    SELECT NAME FROM V$ARCHIVED_LOG;
    ```

Cleanup

16. Shutdown the database and restore the `srv1` from its **CDB** snapshot. We will enable the `ARCHIVELOG` mode again in another practice in the future.

Summary

- The procedure to enable the ARCHIVELOG mode in a database is simple but requires mounting the database.
- It is recommended that we set the archive redo log destination to the FRA.