# Practices for Lesson 5: Starting Up and Shutting Down an Oracle Database

Practices for Lesson 5: Overview

Overview

In these practices, you will learn how to shut down and start up an Oracle Database.

Practice 5-1: Shutting Down and Starting Up the Oracle Database

Overview

This practice lets you look more closely at shutting down and starting up your Oracle database instance.

Assumptions

The practice assumes that the database and listener are running and may have been started in a previous practice.

The database and listener are NOT automatically started when the VM is started. A script

dbstart.sh is provided to start the database and listener when needed.

The OS command pgrep -lf smon will show any databases that are started, and pgrep -lf tns will report any listener processes that are running.

Tasks

As the oracle OS user, source the oraenv script.

Create a PDB, orclpdb3 with the script:

/home/oracle/labs/DBMod\_CreateDB/setup\_pdb3.sh

Note: ignore any errors for unable to drop objects.

mkdir: cannot create directory

\u2018/u01/app/oracle/oradata/ORCLCDB/orclpdb3\u2019: File exists

SQL> CREATE PLUGGABLE DATABASE ORCLPDB3

2 ADMIN USER admin IDENTIFIED BY cloud\_4U ROLES=(CONNECT)

3

FILE\_NAME\_CONVERT=('/u01/app/oracle/oradata/ORCLCDB/pdbseed','/u01/ app/oracle/oradata/ORCLCDB/orclpdb3');

Pluggable database created.

SQL> alter PLUGGABLE DATABASE ORCLPDB3 open;

Pluggable database altered. SQL>

SQL> exit

…

SQL> drop user test cascade; drop user test cascade

\* ERROR at line 1:

ORA-01918: user 'TEST' does not exist

SQL> create user test identified by cloud\_4U; User created.

SQL> grant dba to test; Grant succeeded.

SQL> create table test.bigtab (label varchar2(30)); Table created.

SQL> begin

Start SQL\*Plus and log in to the database as the SYS user with the SYSDBA privilege.

Shut down the database instance in IMMEDIATE mode. Normal is the default shutdown mode if no mode is specified. During this mode of shutdown, users sessions are terminated and active transactions are rolled back. The database instance closes the database—all data files and online redo log files are closed. Next, the database instance dismounts the database—all control files associated with the database instance are closed. Lastly, the Oracle software shuts down the database instance—background processes are terminated and the System Global Area (SGA) is removed from memory. When a database instance shuts down in normal mode, the database instance waits for all users to disconnect before completing the shutdown, and no new connections are allowed. Control is not returned to the session that initiates a database shutdown until shutdown is complete.

Show the current user. Note that SQL\*Plus is still running and the current user is SYS.

Show the current container name. This step returns an error because the database is shut down.

Start up the database instance in NOMOUNT mode. During this step, the Oracle software locates the parameter file (SPFILE or PFILE), allocates memory to the System Global Area (SGA), starts the background processes, and opens the alert log and trace files . At this stage, the database instance is started; however, users cannot access it yet. You would usually start in NOMOUNT mode if you were creating a database, re-creating control files, or performing certain backup and recovery tasks.

Mount the database by using the ALTER DATABASE MOUNT command. During this step, the database instance mounts the database. This means that the database instance locates and opens all the control files specified in the initialization parameter file and reads the control files to obtain the names and statuses of the data files and online redo log files. The database instance does not, however, verify the existence of the data files and online redo log files at this time. You must mount the database, but not open it when you want to rename data files, enable/disable online redo log file archiving options, or perform a full database recovery.

Open the database by using the ALTER DATABASE command. During this step, the database instance opens the data files for the CDB and online redo log files and checks the consistency of the database. When the database is open, all users can access the database instance.

Show the current container name.

Show the current user.

Check whether ORCLPDB3 is open by querying the OPEN\_MODE column in the V$PDBS

view.

Did you expect ORCLPDB3 to be open? By default, PDBs are mounted when a CDB is opened. The STATE of the PDB can be saved in DBA\_PDB\_SAVED\_STATES. This value specifies the STATE the PDB should be in after CDB startup.

Remove the saved states.

Set the pluggable databases closed.

Set the saved states

View the PDB states.

Verify the behavior of the save states:

Shut down the CDB.

Start up the CDB.

View the actual states.

Reset the PDB save states to open:

Set the pluggable databases open.

Set the saved state for all PDBs.

View the saved states.

Shut down a single PDB, ORCLPDB3.

View the status of the PDBs.

Remove ORCLPDB3 and drop the data files associated with ORCLPBD3.

Exit SQL\*Plus.

Close all terminals.