

Lab 12.1: Creating a New PDB from the PDB Seed

Objective

To create a pluggable database (PDB) from the PDB seed in a newly created CDB using SQL*Plus. The new PDB will be named `PDB3` and will have the following characteristics:

- Users SYS and SYSTEM will have the same password as in the CDB.
- The DBA user for the PDB is `pdb3_admin` with the same password as SYS and SYSTEM.
- The PDB datafiles will be located in the `/u01/app/oracle/oradata/` directory.

Assumptions

The CDB and listener have been started.

Steps

Part A: Creating a New CDB

1. Create a New CDB

a. Open a terminal and set the environment variables:

```
. oraenv
ORACLE_SID = [orclcdb] ? NEWCDB
The Oracle base remains unchanged with value /u01/app/oracle
```

b. Run DBCA in silent mode to create the new CDB:

```
dbca -silent -createDatabase \
-templateName General_Purpose.dbc \
-gdbName NEWCDB -sid NEWCDB \
-createAsContainerDatabase true \
-numberOfPDBs 0 \
-responseFile NO_VALUE \
-characterSet AL32UTF8 \
-memoryMgmtType auto_sga \
-totalMemory 2048 \
-emConfiguration NONE \
-datafileDestination '/u01/app/oracle/oradata' \
-sysPassword fenago \
-systemPassword fenago
```

c. Verify the new CDB creation by connecting to it:

```
sqlplus / as sysdba
SQL> select con_id, name, open_mode from v$pdb;
```

Part B: Creating a New PDB from the PDB Seed

1. Open a Terminal and Set the Environment Variables for NEWCDB

Open a terminal and set the environment variables for the `NEWCDB` database:

```
. oraenv
ORACLE_SID = [NEWCDB] ? NEWCDB
```

```
The Oracle base remains unchanged with value /u01/app/oracle
```

2. Create the New PDB

a. Log in to SQL*Plus and connect to the CDB root with a user with the CREATE PLUGGABLE DATABASE privilege:

```
sqlplus / as sysdba
```

b. Execute the CREATE PLUGGABLE DATABASE command:

```
CREATE PLUGGABLE DATABASE PDB3  
ADMIN USER pdb3_admin IDENTIFIED BY fenago  
ROLES=(CONNECT)  
CREATE_FILE_DEST='/u01/app/oracle/oradata';
```

Expected Output:

```
Pluggable database created.
```

3. Check the Status of the New PDB

```
column pdb_name format a16  
SELECT pdb_id, pdb_name, status FROM cdb_pdb;
```

Expected Output:

PDB_ID	PDB_NAME	STATUS
2	PDB\$SEED	NORMAL
3	PDB3	NEW

4. Open the New PDB and Check the Status Again

```
ALTER PLUGGABLE DATABASE PDB3 OPEN;
```

Expected Output:

```
Pluggable database altered.
```

```
SELECT pdb_id, pdb_name, status FROM cdb_pdb;
```

Expected Output:

PDB_ID	PDB_NAME	STATUS
2	PDB\$SEED	NORMAL
3	PDB3	NORMAL

Exit SQL*Plus:

```
exit
```

5. Create a Net Service Name for the New PDB

a. Launch Oracle Net Manager:

```
netmgr
```

b. In Oracle Net Manager:

- Expand Local and select Service Naming.
- Click the plus sign to add a new service.
- Enter Net Service Name: `PDB3` and click Next.
- Select TCP/IP (Internet Protocol) and click Next.
- Enter Host Name: `localhost`, verify the Port Number is 1521, and click Next.
- Enter Service Name: `PDB3`.
- For Connection Type, select Dedicated Server and click Next.
- Click Finish.
- Click File > Save Network Configuration.
- Click File > Exit.

6. Connect to the PDB and Verify the Datafiles

a. Connect to the new PDB using SQL*Plus:

```
sqlplus system@PDB3
Enter password: fenago
```

b. Verify the datafiles are in the correct location:

```
SELECT name FROM v$datafile;
```

Expected Output:

```
NAME
-----
/u01/app/oracle/oradata/CDBLAB/<unique_id>/datafile/ol_mf_system_<unique_id>.dbf
/u01/app/oracle/oradata/CDBLAB/<unique_id>/datafile/ol_mf_sysaux_<unique_id>.dbf
/u01/app/oracle/oradata/CDBLAB/<unique_id>/datafile/ol_mf_undotbs1_<unique_id>.dbf
```

7. Verify the Service

Verify that the service is `PDB3` :

```
column name format a15
SELECT name FROM v$services;
```

Expected Output:

```
NAME
-----
PDB3
```

Exit SQL*Plus:

```
exit
```

8. Exit the Terminal

```
exit
```

Summary

In this lab, you created a new pluggable database (PDB) named `PDB3` from the PDB seed in `CDBLAB` using SQL*Plus. You configured the new PDB with specific characteristics, created a net service name for it, and verified its datafiles and service configuration. This practice ensures you understand how to create and manage PDBs in an Oracle database environment.