

Practice 3: Creating PDBs from the Seed

Practice Overview

In this practice, you will create PDB databases from the seed using two methods.

In this practice you will perform the following:

- Create a PDB using SQL*Plus
- Create a PDB using the DBCA
- Add the created Pluggable Database net service name in the `tnsnames.ora` file
- Perform basic exploring to the created PDBs.

Practice Assumptions

- You have the `srv1` virtual appliance and its CDB database up and running.

Creating PDBs from the Seed

A. Create a PDB from the Seed using SQL*Plus

1. Create a Putty session to `srv1` and login as `oracle` user
2. Login to the CDB as `sysdba` in SQL*Plus

```
sqlplus / as sysdba
```

3. Verify that the OMF is configured.

```
show parameter DB_CREATE_FILE_DEST
```

4. Issue the following command to create a PDB

This statement assumes the OMF is configured, you do not want to specify a location for the datafiles different from the default location, you do not want to specify the default tablespace, and finally that you do not want to specify the directory on which any directory-based can only access.

This statement creates a local user named `PDB1ADMIN` in `PDB1` container. This user is granted a role named `PDB_DBA`. This role has no privilege other than connecting to the `PDB1`. It is the `SYS` user responsibility to assign the needed privileges to the role. You will practice the security part later in the course.

```
CREATE PLUGGABLE DATABASE PDB1  
ADMIN USER pdb1admin IDENTIFIED BY oracle  
STORAGE (MAXSIZE 2G);
```

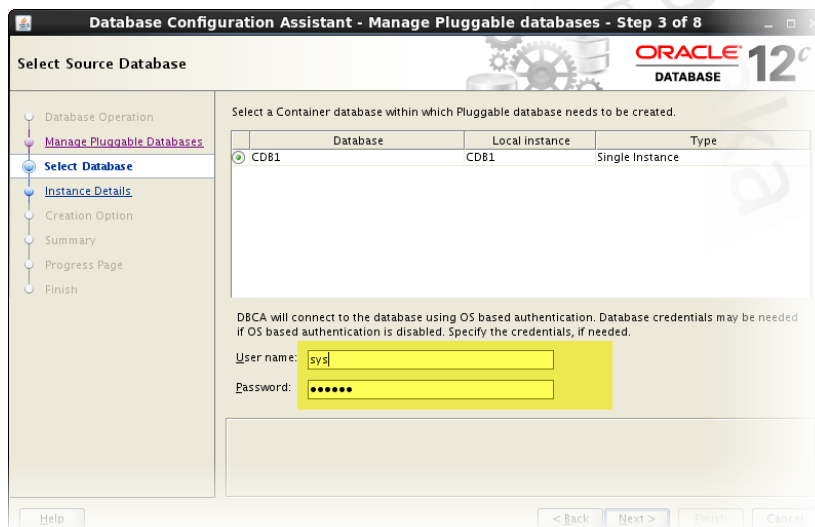
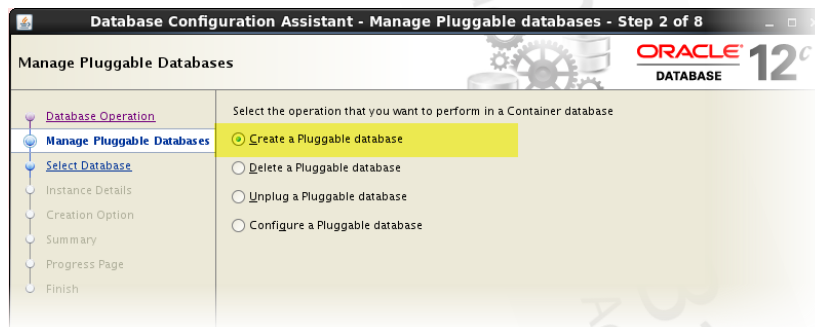
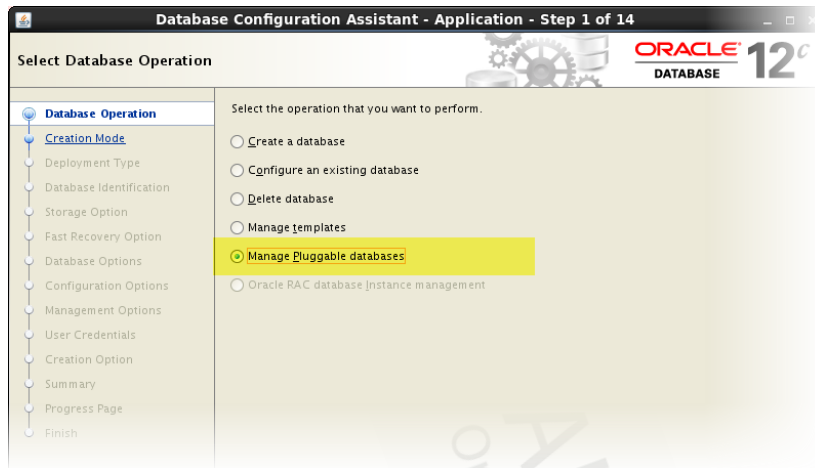
5. Open `PDB1` in read/write mode.

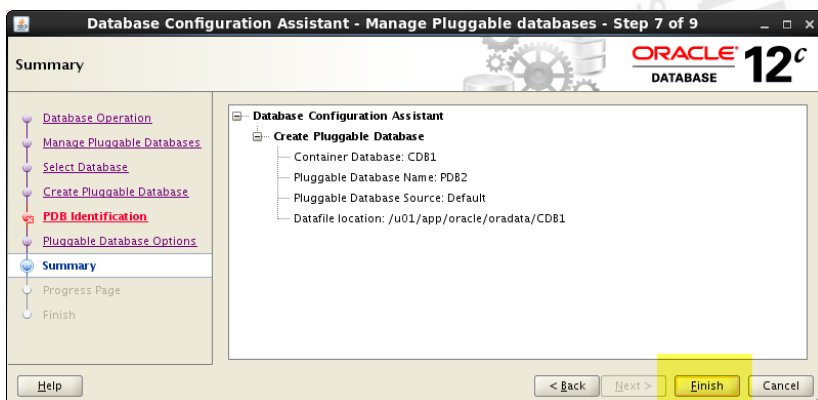
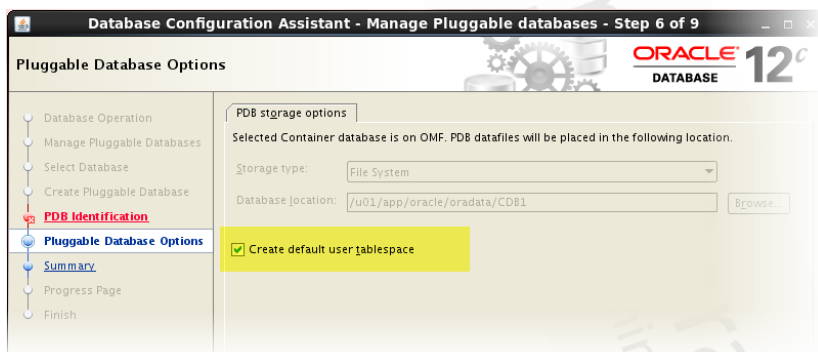
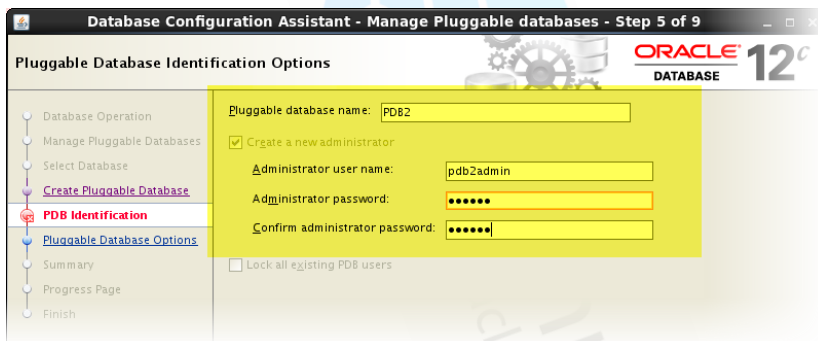
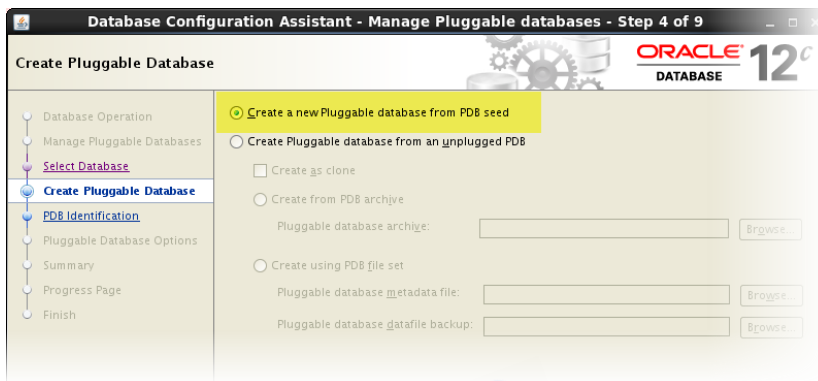
```
ALTER PLUGGABLE DATABASE pdb1 OPEN;
```

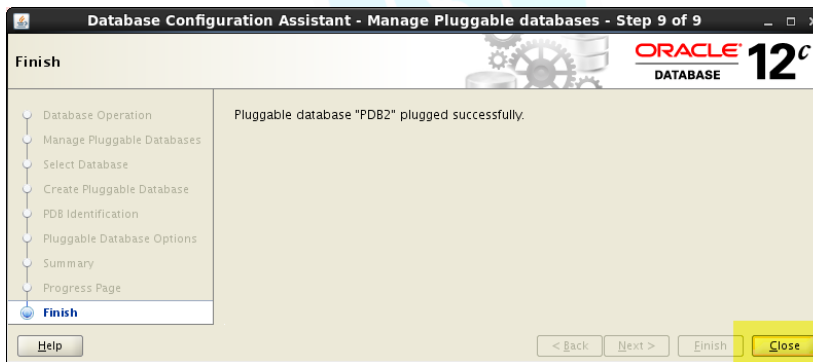
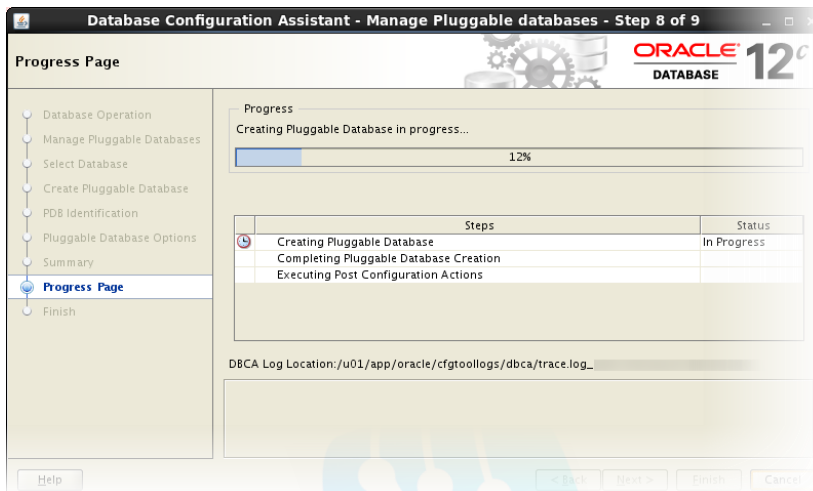
B. Create a PDB from the Seed using DBCA

In this section of the practice, you will create a PDB from the seed using the DBCA utility.

6. Login to `srv1` and as `oracle` user in the VM window
7. Open a terminal window and execute the `dbca` utility
8. Response to the utility windows as shown in the highlighted areas in following screenshots:







C. Create Net Service name of PDB1 and PDB2 in the `tnsnames.ora` file

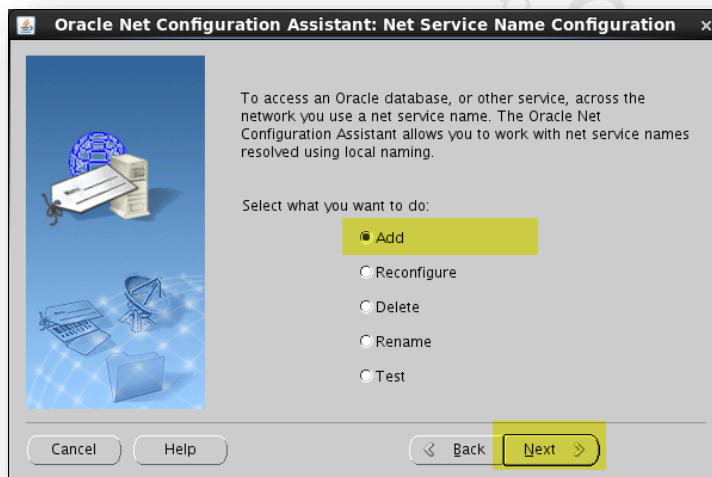
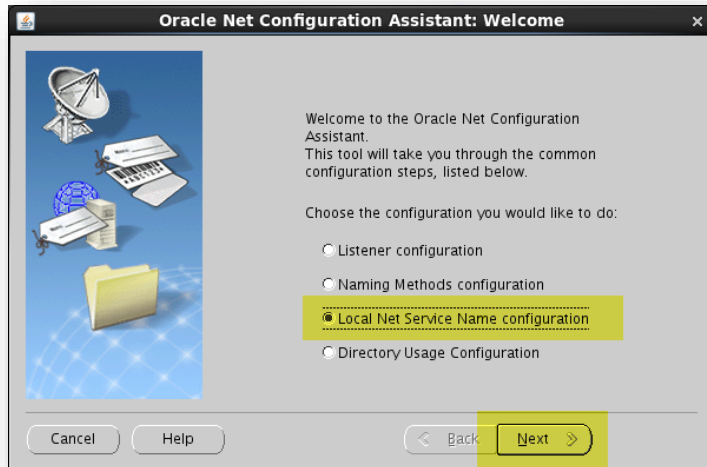
In this section of the practice, you will use Oracle Net Configuration Assistant to add a net service name for PDB1 and PDB2 in the `tnsnames.ora` file.

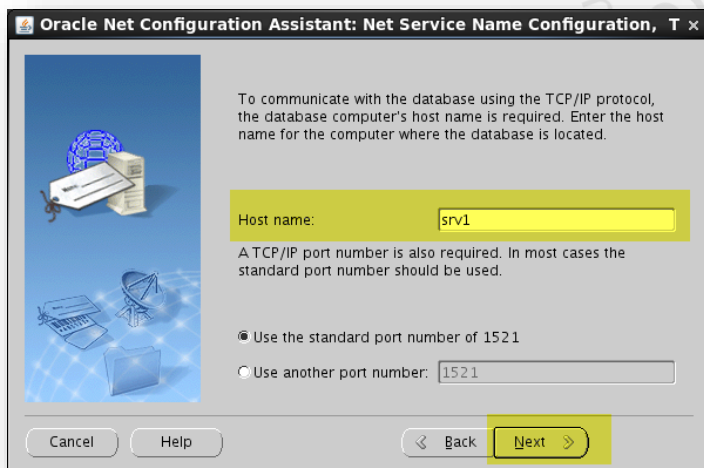
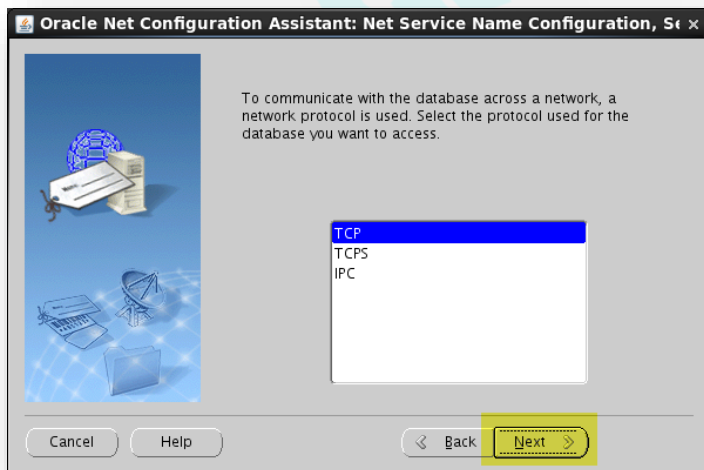
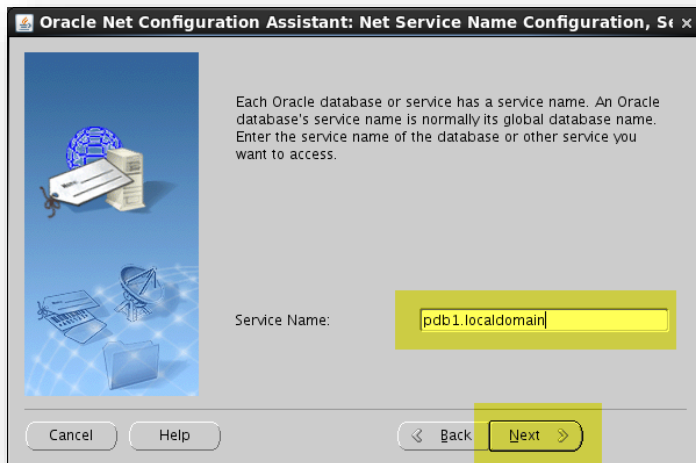
9. In the Putty window, make sure the `pdb1` is registered in the listener

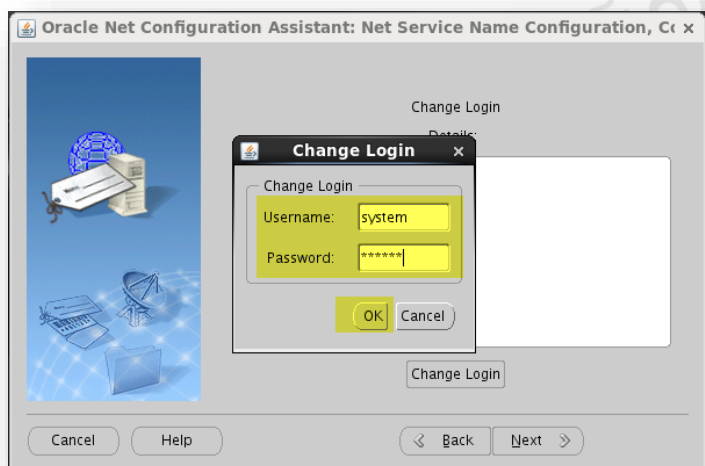
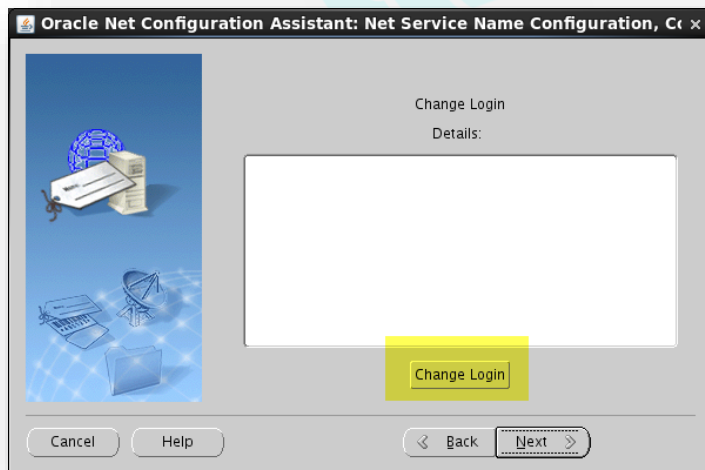
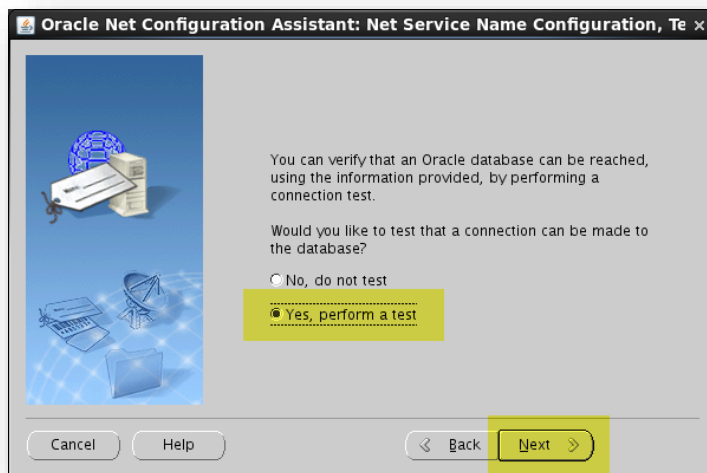
```
lsnrctl services
```

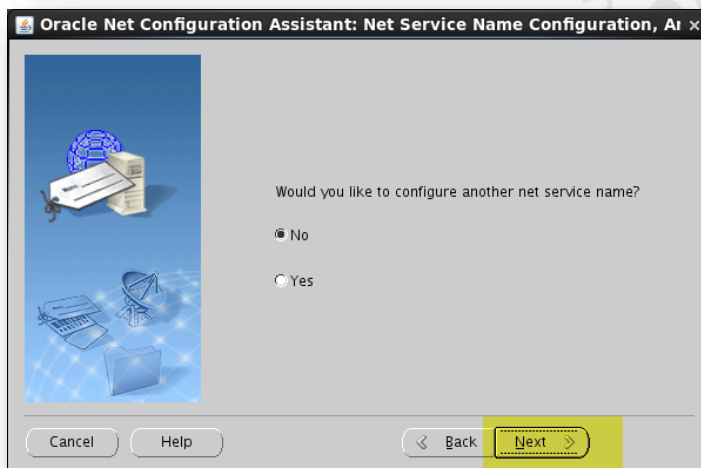
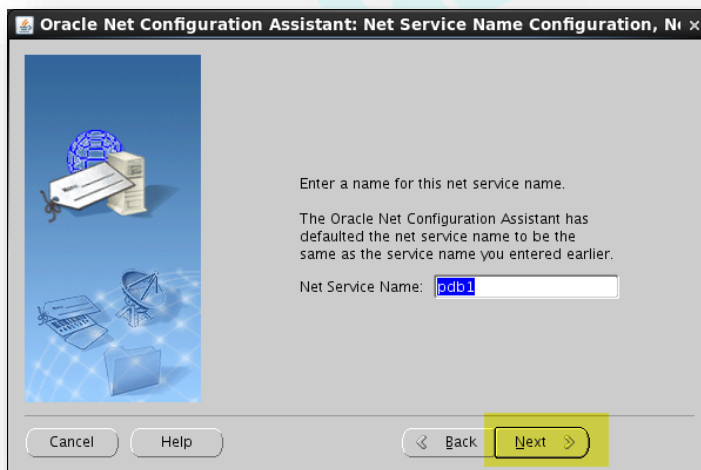
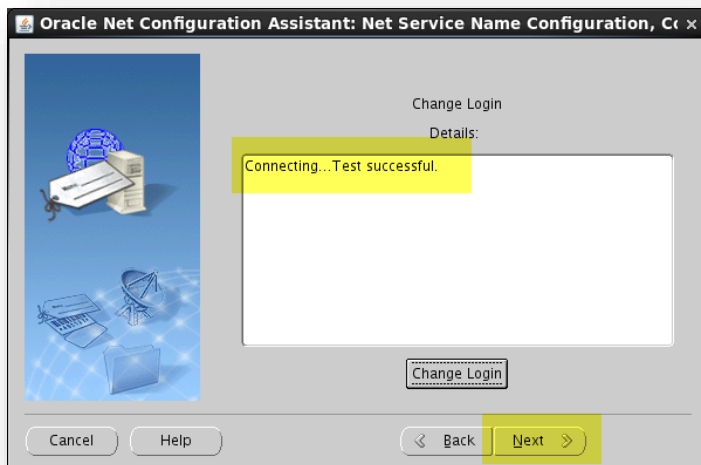
10. In the VM window, open a terminal window and execute the `netca` utility

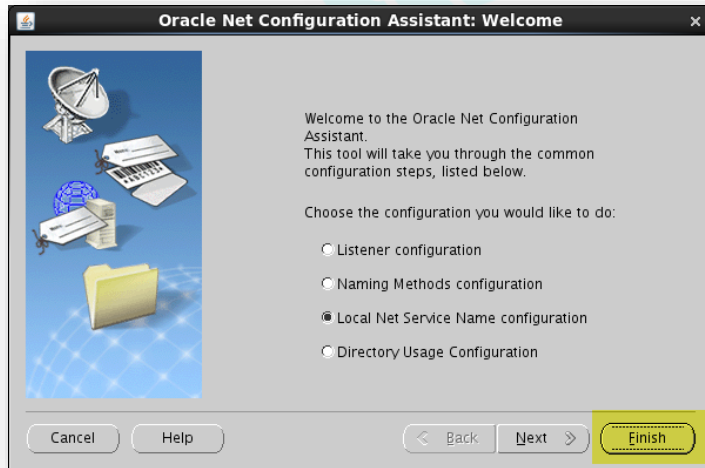
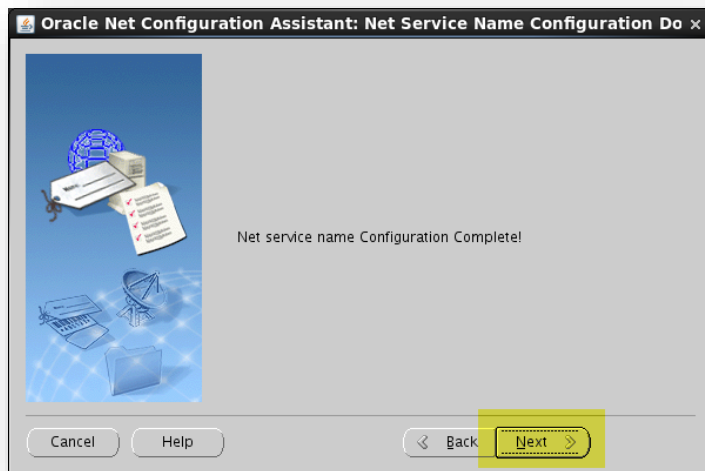
11. Response to the utility windows as shown in the highlighted areas in following screenshots:











12. Verify the changes in the `tnsnames.ora` file

```
cat $TNS_ADMIN/tnsnames.ora
```

13. Test the connection to `PDB1` using the naming method

```
conn system/oracle@pdb1
```

14. Test the connection to `PDB1` using the EasyConnect method

```
conn system/oracle@//srv1:1521/pdb1.localdomain
```

15. Repeat the steps in this section to add the connection settings of `PDB2`. Alternatively, edit the `tnsnames.ora` file manually to add the setting.

```
vi $TNS_ADMIN/tnsnames.ora
```

D. Obtain Information about the created PDBs

In this section of the practice, you will retrieve some basic information about the PDBs that you just created. You will learn more details about exploring the PDBs later in the course.

16. In a Putty command prompt window, login to `srv1` as `oracle` user

17. Login to the CDB as `sysdba`

18. Execute the following query.

```
col name format a10
SELECT NAME, CON_ID, OPEN_MODE, GUID
FROM V$PDBS
ORDER BY 1;
```

Observe from the output the following:

- The seed PDB name is `PDB$SEED` and it is opened in READ ONLY mode.
- `PDB2` is opened in READ WRITE mode. The DBCA automatically starts up the PDB. When you created `PDB1` using SQL*Plus, you needed to manually start it up.

19. Execute the following query.

```
set pagesize 15
col c format a2
col file_name format a65
SELECT SUBSTR(CON_ID,1,1) AS C, FILE_NAME
FROM CDB_DATA_FILES
ORDER BY 1;
```

Observe from the output the following:

- The datafiles of the PDBs were created under the OMF directory using the following format:
<OMF>/<CDB Name>/<PDB GUID>/datafile/

Summary

In this practice you learnt how to create a PDB from the seed using SQL*Plus and the DBCA utility.

