Creating PDBs More Options

Part II

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Objectives

By the end of this lecture, you should be able to:

- Create a PDB by plugging in an unplugged PDB

- Create a PDB by cloning a non-CDB
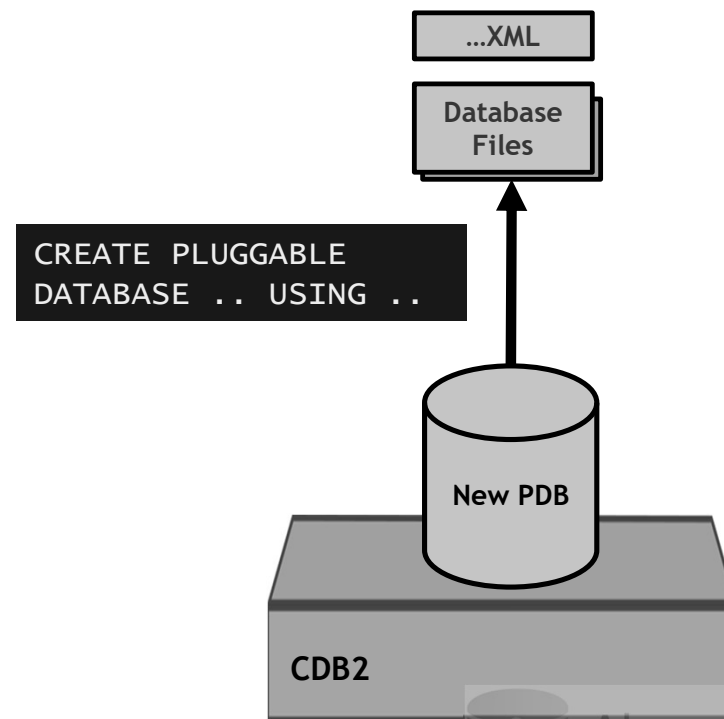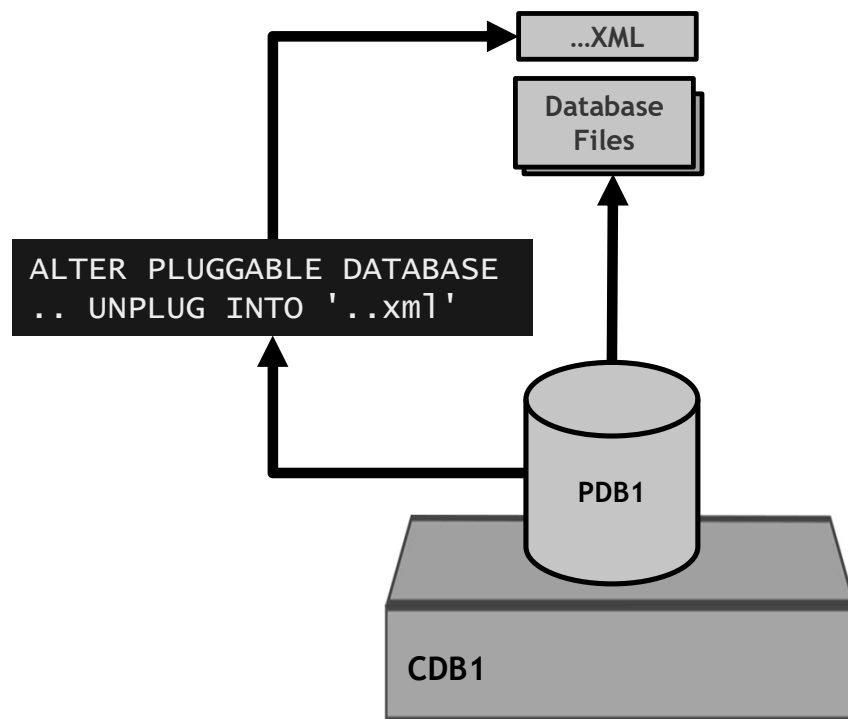
- Create a PDB using DBMS_PDB on a non-CDB

Options for Creating a PDB using CREATE PLUGGABLE DATABASE command

Category	Option	Description
Copying	**From the seed**	By using the files of the CDB seed or application seed.
	Clone a local PDB	By cloning a source local PDB.
	Clone a remote PDB	By cloning a remote PDB.
	Clone a non-CDB	By cloning a non-CDB.
Plugging In	**Plugging in an Unplugged PDB**	By plugging in an unplugged PDB
	Adopting a Non-CDB as a PDB (Using the DBMS_PDB)	By creating an unplugged PDB from a non-CDB and then plug the unplugged PDB into the CDB.
Relocating	**Relocating a PDB**	By moving the files associated with the PDB to a new location.
Proxy PDB	**Creating a PDB as a proxy PDB**	By referencing a different PDB with a database link

About Plugging In an Unplugged PDB

Plugging In an Unplugged PDB Procedure

1. Login to the root of the source PDB
2. Close the PDB
3. Unplug the PDB

```
ALTER PLUGGABLE DATABASE pdb1 UNPLUG INTO
'/oracle/data/pdb1.xml';
```

4. Copy the files to the target system
5. Create the PDB (CREATE PLUGGABLE DATABASE .. USING)
6. Open the PDB in read/write mode

Plugging PDB Methods

- ## NOCOPY Method

```
create pluggable database pdb2 using '/oracle/data/pdb1.xml'
NOCOPY TEMPFILE REUSE;
```

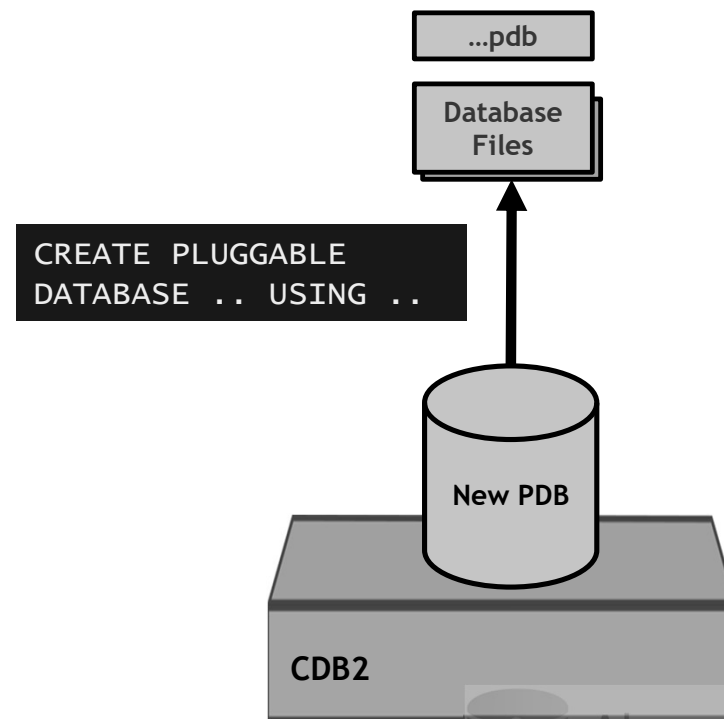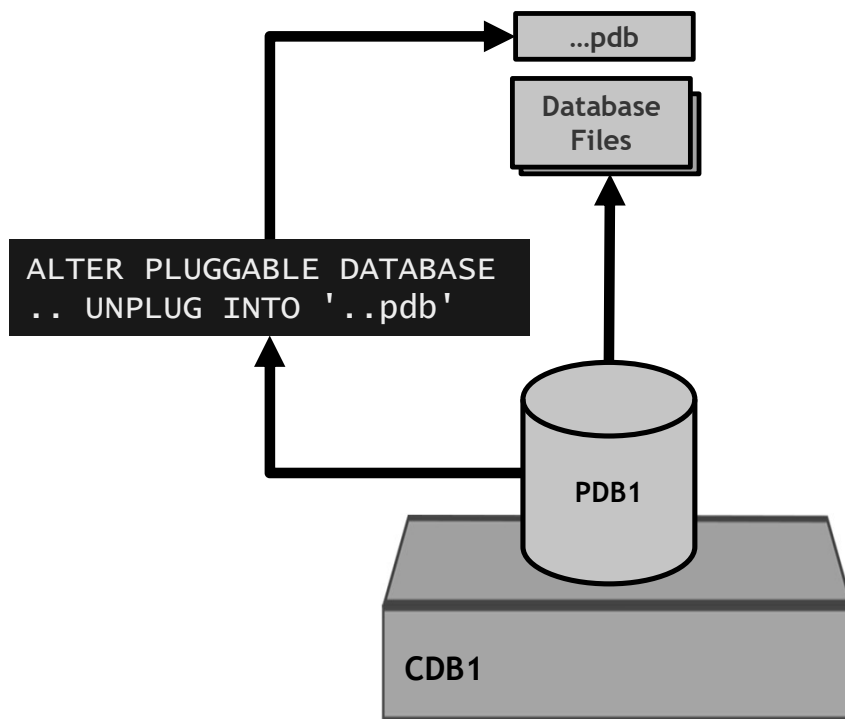- ## COPY Method

```
create pluggable database pdb2 using '/oracle/data/pdb1.xml'
COPY
FILE_NAME_CONVERT=('/oradata/cdb1/pdb1','/oradata/cdb2/pdb2');
```

- ## AS CLONE .. MOVE/COPY Method

```
create pluggable database pdb2 AS CLONE using './pdb1.xml' MOVE
FILE_NAME_CONVERT=('/oradata/cdb1/pdb1','/oradata/cdb2/pdb2');
```

About Plugging In an Unplugged PDB using PDB Archive File (12.2)
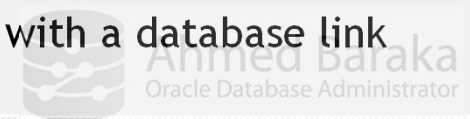
Creating a PDB from a Non-CDB Options

- Cloning from a non-CDB

- Using the DBMS_PDB package

- Using the Data Pump export/import
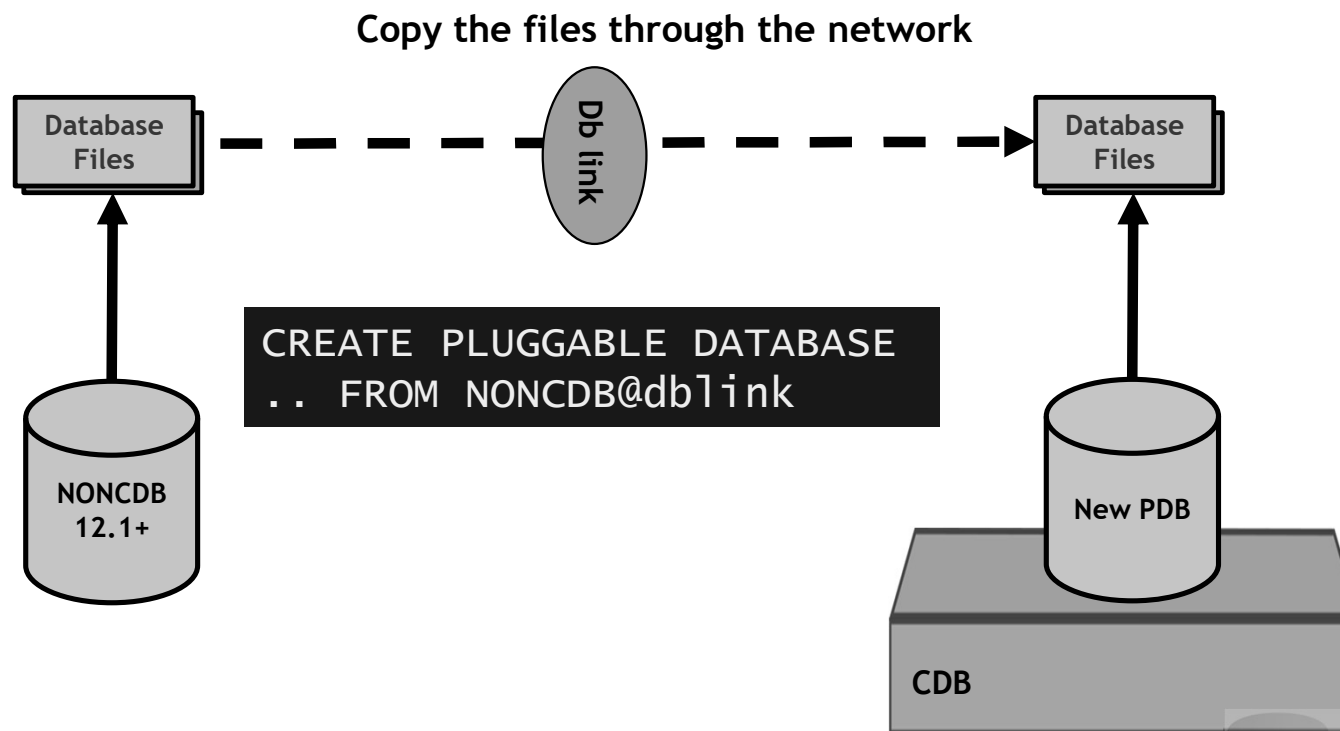
- Using Oracle GoldenGate

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About Cloning from a non-CDB

Copy the files through the network

Database Files → Db link → Database Files

```
CREATE PLUGGABLE DATABASE
.. FROM NONCDB@dblink
```

NONCDB 12.1+

New PDB

CDB

Cloning from a non-CDB Considerations

- Both the CDB and the non-CDB must be of release 12.1.0.2 or later.

Cloning from a non-CDB Procedure

1. Connect to the root as a common user

2. Create the database link

```
CREATE DATABASE LINK sourcedb CONNECT TO system IDENTIFIED BY
mypassword USING 'SOURCEDB';
```
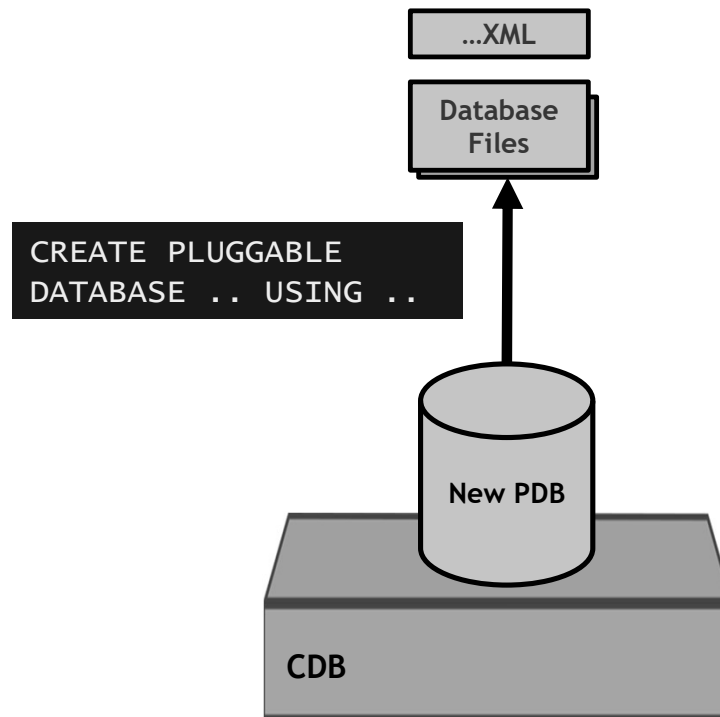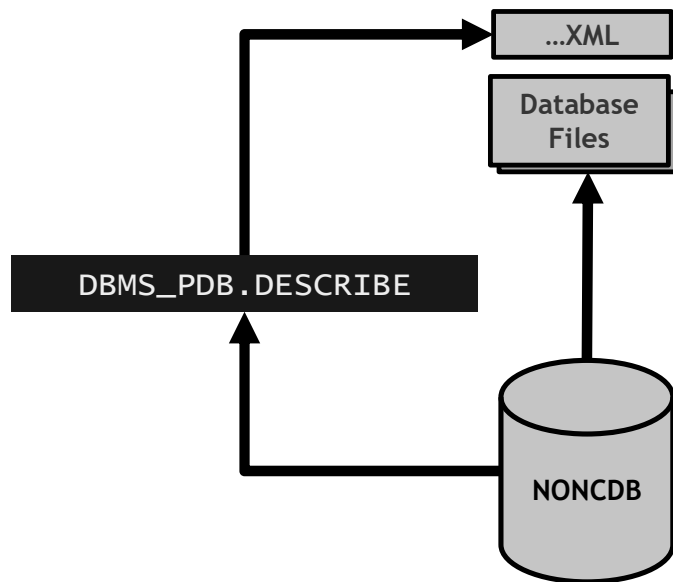
3. Clone the PDB

```
CREATE PLUGGABLE DATABASE pdb4 FROM NONCDB@sourcedb
FILE_NAME_CONVERT=('/u01/sourcedb','/u01/pdb4');
```

4. Run the script in the pdb
   $ORACLE_HOME/rdbms/admin/noncdb_to_pdb.sql

5. Open the PDB

About Using DBMS_PDB on a non-CDB

Using the DBMS_PDB Package on a Non-CDB

1. Open the non-CDB in READ ONLY mode
2. Run the DBMS_PDB.DESCRIBE:

```
DBMS_PDB.DESCRIBE( PDB_DESCR_FILE => './ncdb.xml');
```

3. Determine if the non-CDB is compatible with the CDB (in target):

```
DBMS_PDB.CHECK_PLUG_COMPATIBILITY(
PDB_DESCR_FILE => './ncdb.xml', PDB_NAME => 'PDB4')
```

4. Shutdown the non-CDB

Cont …

Using the DBMS_PDB Package on a Non-CDB

5. Plug in the non-CDB (but do not open it)

```
CREATE PLUGGABLE DATABASE ncdb USING './ncdb.xml'
FILE_NAME_CONVERT = ('/dbs/', '/ncdb/')
[USER_TABLESPACES=('sablestbs');]
```

6. Run the ORACLE_HOME/rdbms/admin/noncdb_to_pdb.sql script in the newly created PDB

7. Open the PDB in READ WRITE mode

8. Verify the PDB status from the CDB_PDBS

Summary

In this lecture, you should have learnt how to:

- Create a PDB by plugging in an unplugged PDB

- Create a PDB by cloning a non-CDB

- Create a PDB using DBMS_PDB on a non-CDB