Creating a CDB

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Objectives

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

- Describe the methods and the options to create an Oracle 12c R2 CDB database

Planning for CDB Creation

- Most non-CDB considerations should be taken into account
- CDB specific considerations:
  - Data file locations (OMF)
  - The value of the PROCESSES initialization parameter
  - The value of the DB_FILES parameter (default 200)
  - Use of Local Undo Mode or Shared Undo Mode
  - Use the character set AL32UTF8
  - Sizing online redo log files and archive redo log destinations
- Oracle Database Administrator's Guide 12c (12.2) Section "37.2", titled "Planning for CDB Creation"

CDB Creation Tools

- SQL*Plus (manual method)
- OUI
- DBCA
  - Interactive
  - Silent mode
  - Response file
  - Generate script files
- RMAN to duplicate an existing CDB

Creating a CDB Manually using SQL*Plus

1. Set the Environment variables
2. Create a PFILE

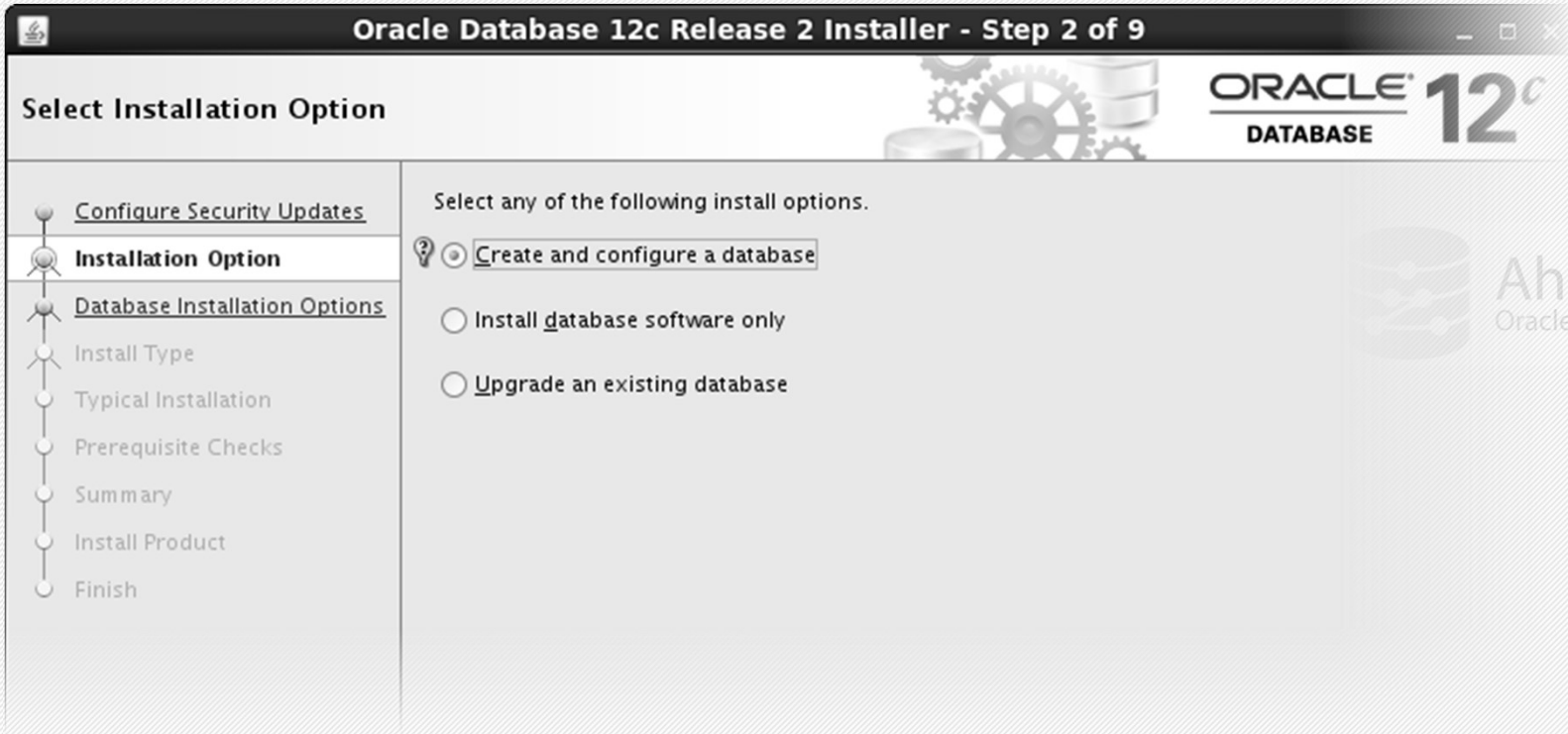
```
..
ENABLE_PLUGGABLE_DATABASE=true
..
```


3. Startup the instance
4. Create the database

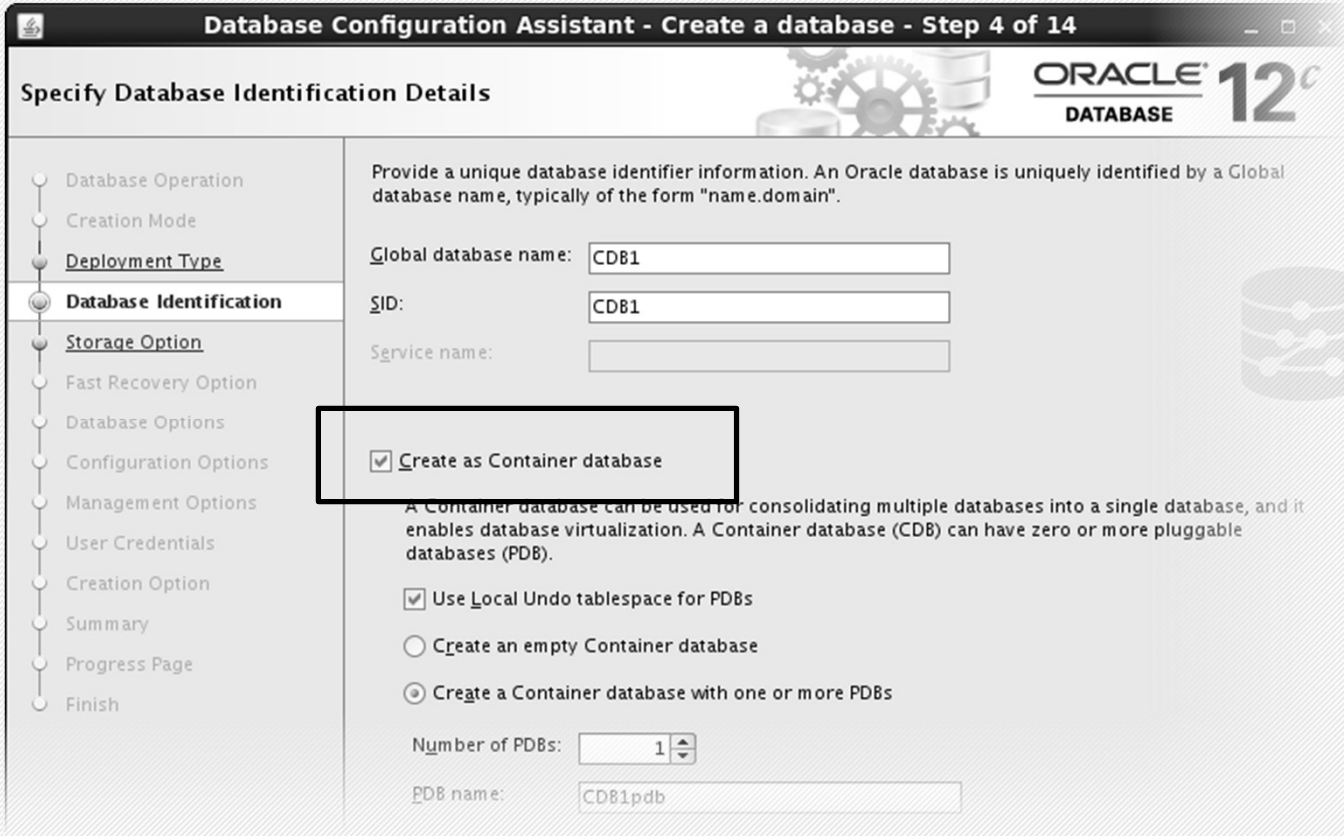
```
CREATE DATABASE CDB1 ENABLE PLUGGABLE DATABASE ...
```

5. Run postcreation scripts (catalog.sql, catproc.sql ..etc)

Creating a CDB using OUI



Creating a CDB using DBCA: Interactive



Creating a CDB using DBCA: Silent Mode

- `createAsContainerDatabase` must be used:

```
dbca -silent -createDatabase -templateName General_Purpose.dbc -gdbname CDB1
-sid CDB1 -responseFile NO_VALUE -characterSet AL32UTF8 -memoryPercentage 40
-emConfiguration LOCAL -createAsContainerDatabase true
-sysPassword mypassword -systemPassword mypassword
```

Creating a CDB using DBCA: using the Response file

- The response file format in 12.1 is different from 12.2

```
dbca -silent -createDatabase -responseFile <response file>
```

```
...
CREATEASCONTAINERDATABASE = true
...
```

Verifying that a CDB was Created

```
$ sqlplus / as sysdba
SQL> select name, cdb from v$database;
NAME CDB
---- -----
CDB1 YES

SQL> select con_id, name from v$containers;
CON_ID NAME
------ --------------------
1      CDB$ROOT
2      PDB$SEED
```

Obtain Information About CDB

View	Description
CDB_PROPERTIES	Lists permanent database properties.
V$DATABASE	Displays information about the database from the control file including the CDB-related information is included.
V$CONTAINERS	Displays information about the containers associated with the current CDB, including the root and all PDBs.
V$PDBS	Displays information about the containers associated with the current CDB. The root is excluded.

Determining Whether a Database is a CDB

```
SQL> SELECT CDB FROM V$DATABASE;

CDB
---
YES
```

Summary

In this lecture, you should have learnt how to:

- Describe the methods and the options to create an Oracle 12c R2 CDB database