

# Creating a CDB

By Ahmed Baraka

# 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



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# 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"



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# CDB Creation Tools

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



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# Creating a CDB Manually using SQL\*Plus

1. Set the Environment variables
2. Create a PFILE

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



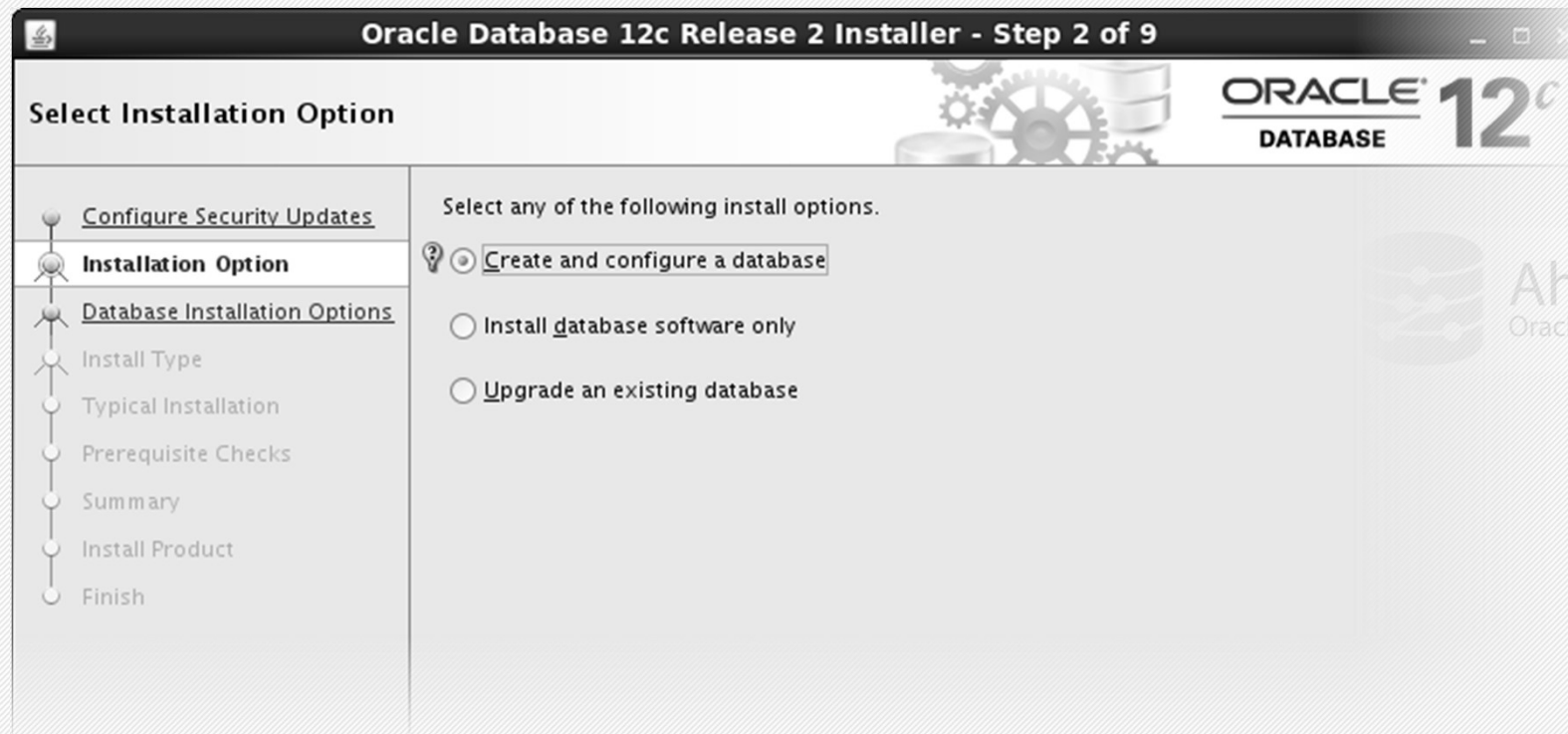
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3. Startup the instance
4. Create the database

```
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

Database Configuration Assistant - Create a database - Step 4 of 14

Specify Database Identification Details

ORACLE 12c DATABASE

Database Operation  
Creation Mode  
Deployment Type  
**Database Identification**  
Storage Option  
Fast Recovery Option  
Database Options  
Configuration Options  
Management Options  
User Credentials  
Creation Option  
Summary  
Progress Page  
Finish

Provide a unique database identifier information. An Oracle database is uniquely identified by a Global database name, typically of the form "name.domain".

Global database name: CDB1

SID: CDB1

Service name:

☒ Create as Container database

A Container database can be used for consolidating multiple databases into a single database, and it enables database virtualization. A Container database (CDB) can have zero or more pluggable databases (PDB).

☒ Use Local Undo tablespace for PDBs

☐ Create an empty Container database

☒ Create a Container database with one or more PDBs

Number of PDBs: 1

PDB name: CDB1pdb



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# 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
```



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# 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  
...
```



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# 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
```



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# Obtain Information About CDB

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



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# Determining Whether a Database is a CDB

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

```
CDB
```

```
---
```

```
YES
```



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# Summary

In this lecture, you should have learnt how to:

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



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