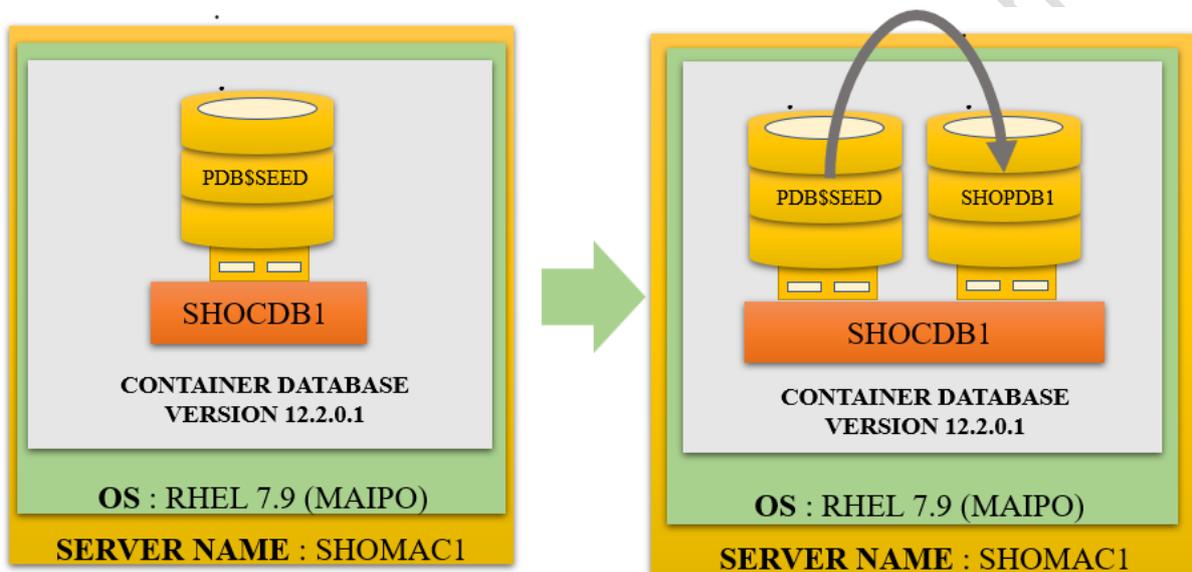


# CREATE ORACLE 12c PLUGGABLE DATABASE MANUALLY

Create a pluggable database PDB (SHOPDB1) from seed pluggable database PDB (PDB\$SEED) in the container database (SHOCDB1)



Let's understand the current environment

We can see that we have 1 container database i.e., SHOCDB1 running over the server i.e., SHOMAC1

```
[oracle@SHOMAC1 ~]$  
[oracle@SHOMAC1 ~]$ ps -ef|grep -i pmon |grep -v grep  
oracle 26166 1 0 Aug31 ? 00:00:11 ora_pmon_shocdb1  
[oracle@SHOMAC1 ~]$  
[oracle@SHOMAC1 ~]$
```

When we login into the container database i.e., SHOCDB1

We can see that it has only one PDB

The pluggable database: PDB\$SEED

```

[oracle@SHOMAC1 ~]$
[oracle@SHOMAC1 ~]$ . oraenv
ORACLE_SID = [shocdb1] ? shocdb1
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@SHOMAC1 ~]$
[oracle@SHOMAC1 ~]$ sqlplus "/ as sysdba"

SQL*Plus: Release 12.2.0.1.0 Production on Fri Sep 2 16:34:10 2022

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SYS@shocdb1 02-SEP-22>show pdbs

   CON_ID CON_NAME                                OPEN MODE RESTRICTED
-----
         2 PDB$SEED                                READ ONLY NO
SYS@shocdb1 02-SEP-22>

```

## The location of the all datafiles

When we login into the container database i.e., SHOCDB1. The location of the datafiles for the PDBs are shown as below:

The container database: SHOCDB1 → /u01/app/oracle/oradata/SHOCDB1/datafile/

The Pluggable database: PDB\$SEED → /u01/app/oracle/oradata/SHOCDB1/datafile/

Note: here we can see that the datafile's naming convention is using OMF (oracle managed format)

```

SYS@shocdb1 02-SEP-22>col name for a80
SYS@shocdb1 02-SEP-22>select name from v$datafile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_system_kjzyld81_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_sysaux_kjzy2j5z_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_undotbs1_kjzy3999_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_system_kjzy5sh2_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_sysaux_kjzy5scj_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_users_kjzy3bdx_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_undotbs1_kjzy5sh8_.dbf

7 rows selected.

```

The location of the all tempfiles

```
SYS@shocdb1 02-SEP-22>select name from v$tempfile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_temp_kjzy5koj_.tmp
/u01/app/oracle/oradata/SHOCDB1/datafile/temp012022-08-31_20-12-20-238-PM.dbf
```

The datafile location specific to the PDB\$SEED database

```
SYS@shocdb1 02-SEP-22>alter session set container=PDB$SEED;

Session altered.

SYS@shocdb1 02-SEP-22>col name for a80
SYS@shocdb1 02-SEP-22>select name from v$datafile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_system_kjzy5sh2_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_sysaux_kjzy5scj_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_undotbs1_kjzy5sh8_.dbf

SYS@shocdb1 02-SEP-22>
```

The tempfile location specific to the PDB\$SEED database

```
SYS@shocdb1 02-SEP-22>select name from v$tempfile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/datafile/temp012022-08-31_20-12-20-238-PM.dbf
```

Create pluggable database PDB (SHOPDB1) from seed pluggable database PDB (PDB\$SEED) manually.

```
CREATE PLUGGABLE DATABASE SHOPDB1
```

```
ADMIN USER PDBADMIN IDENTIFIED BY "welcome123"
```

```
DEFAULT TABLESPACE USERS DATAFILE
```

```
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf' SIZE 10M
```

```
AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED
```

```
tempfile reuse
```

```
FILE_NAME_CONVERT=
```

```
('/u01/app/oracle/oradata/SHOCDB1/datafile/o1_mf ',
```

```
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/',
```

```
'/u01/app/oracle/oradata/SHOCDB1/datafile/temp',
```

```
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/');
```

```
SYS@shocdb1 02-SEP-22>show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO

```
SYS@shocdb1 02-SEP-22>
```

```
SYS@shocdb1 02-SEP-22>CREATE PLUGGABLE DATABASE SHOPDB1
```

```
ADMIN USER PDBADMIN IDENTIFIED BY "welcome123"
```

```
DEFAULT TABLESPACE USERS DATAFILE
```

```
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf' SIZE 10M
```

```
AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED
```

```
tempfile reuse FILE_NAME_CONVERT=
```

```
('/u01/app/oracle/oradata/SHOCDB1/datafile/o1_mf ',
```

```
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/',
```

```
'/u01/app/oracle/oradata/SHOCDB1/datafile/temp',
```

```
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/');
```

```
2 3 4 5 6 7 8 9 10
```

```
Pluggable database created.
```

New pluggable database (SHOPDB1) is created and currently in mount mode

```

SYS@shocdb1 02-SEP-22>show pdbs

  CON_ID CON_NAME                                OPEN MODE  RESTRICTED
-----
      2 PDB$SEED                                READ ONLY  NO
SYS@shocdb1 02-SEP-22>
SYS@shocdb1 02-SEP-22>CREATE PLUGGABLE DATABASE SHOPDB1
ADMIN USER PDBADMIN IDENTIFIED BY "welcomel23"
DEFAULT TABLESPACE USERS DATAFILE
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf' SIZE 10M
AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED
tempfile reuse FILE_NAME_CONVERT=
('/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_',
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/',
'/u01/app/oracle/oradata/SHOCDB1/datafile/temp',
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/');
  2      3      4      5      6      7      8      9     10
Pluggable database created.

SYS@shocdb1 02-SEP-22>show pdbs

  CON_ID CON_NAME                                OPEN MODE  RESTRICTED
-----
      2 PDB$SEED                                READ ONLY  NO
      6 SHOPDB1                                MOUNTED
SYS@shocdb1 02-SEP-22>

```

Open the pluggable database (SHOPDB1) to READ WRITE.

**alter pluggable database SHOPDB1 open;**

```

SYS@shocdb1 02-SEP-22>
SYS@shocdb1 02-SEP-22>alter pluggable database SHOPDB1 open;

Pluggable database altered.

SYS@shocdb1 02-SEP-22>show pdbs

  CON_ID CON_NAME                                OPEN MODE  RESTRICTED
-----
      2 PDB$SEED                                READ ONLY  NO
      6 SHOPDB1                                READ WRITE NO

```

## The location of all the Datafiles

The container database: SHOCDB1 → /u01/app/oracle/oradata/SHOCDB1/datafile/

The Pluggable database: PDB\$SEED → /u01/app/oracle/oradata/SHOCDB1/datafile/

The Pluggable database: SHOPDB1 → /u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/

Note: here we can see that the SHOPDB1 datafile's naming convention is not using OMF (oracle managed files) and even the GUIDs is not there for the pdb)

```
SYS@shocdb1 02-SEP-22>
SYS@shocdb1 02-SEP-22>select name from v$datafile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_system_kjzyld81_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_sysaux_kjzy2j5z_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_undotbs1_kjzy3999_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_system_kjzy5sh2_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_sysaux_kjzy5scj_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_users_kjzy3bdx_.dbf
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_undotbs1_kjzy5sh8_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/system_kjzy5sh2_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/sysaux_kjzy5scj_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/undotbs1_kjzy5sh8_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf

11 rows selected.
```

## The location of all the Tempfiles

```
SYS@shocdb1 02-SEP-22>set lines 200
SYS@shocdb1 02-SEP-22>select name from v$tempfile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/datafile/ol_mf_temp_kjzy5koj_.tmp
/u01/app/oracle/oradata/SHOCDB1/datafile/temp012022-08-31_20-12-20-238-PM.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/012022-08-31_20-12-20-238-PM.dbf
```

The datafile location specific to the SHOPDB1 database

```
SYS@shocdb1 02-SEP-22>alter session set container=SHOPDB1;

Session altered.

SYS@shocdb1 02-SEP-22>select name from v$datafile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/system_kjzy5sh2_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/sysaux_kjzy5scj_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/undotbs1_kjzy5sh8_.dbf
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf
```

The tempfile location specific to the SHOPDB1 database

```
SYS@shocdb1 02-SEP-22>col name for a100
SYS@shocdb1 02-SEP-22>set lines 200
SYS@shocdb1 02-SEP-22>select name from v$tempfile;

NAME
-----
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/012022-08-31_20-12-20-238-PM.dbf
```

During pluggable database creation, the output may fail with ORA-65005: missing or invalid file name pattern for file.

```
SYS@shocdb1 02-SEP-22>
SYS@shocdb1 02-SEP-22>CREATE PLUGGABLE DATABASE SHOPDB1 ADMIN USER PDBADMIN IDENTIFIED BY "welcome123" DEFAULT TABLESPACE USERS DATAFILE '/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf' SIZE 10M AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED FILE_NAME_CONVERT=('/u01/app/oracle/oradata/SHOCDB1/datafile/', '/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/');
CREATE PLUGGABLE DATABASE SHOPDB1 ADMIN USER PDBADMIN IDENTIFIED BY "welcome123" DEFAULT TABLESPACE USERS DATAFILE '/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf' SIZE 10M AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED FILE_NAME_CONVERT=('/u01/app/oracle/oradata/SHOCDB1/datafile/', '/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/'
)
*
ERROR at line 1:
ORA-01276: Cannot add file
/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/ol_mf_system_kjzy5sh2_.dbf.
File has an Oracle Managed Files file name.
```

**Solution1:**

We can change the directory in DB CREATE\_FILE\_DEST parameter.

```
SYS@shocdb1 31-AUG-22>show parameter db_create_file  


| NAME                | TYPE   | VALUE                   |
|---------------------|--------|-------------------------|
| db_create_file_dest | string | /u01/app/oracle/oradata |

  
SYS@shocdb1 31-AUG-22>
```

**Solution2:**

The datafiles using the ORACLE MANAGED FILES (OMF) naming convention start with o1\_mf %.

So, we manually type in the path of the datafile and tempfile to get rid of OMF prefix in the filenames.

```
SYS@shocdb1 02-SEP-22>CREATE PLUGGABLE DATABASE SHOPDB1  
ADMIN USER PDBADMIN IDENTIFIED BY "welcomel23"  
DEFAULT TABLESPACE USERS DATAFILE  
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/users01.dbf' SIZE 10M  
AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED  
tempfile reuse FILE_NAME_CONVERT=  
( '/u01/app/oracle/oradata/SHOCDB1/datafile/o1_mf_',  
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/',  
'/u01/app/oracle/oradata/SHOCDB1/datafile/temp',  
'/u01/app/oracle/oradata/SHOCDB1/SHOPDB1/datafile/' );  
2 3 4 5 6 7 8 9 10  
Pluggable database created.
```

So now Finally when we login into the container database i.e., SHOCDB1

We can see that it has below PDBS

The pluggable database: PDB\$SEED, SHOPDB1

```
[oracle@SHOMAC1 ~]$ . oraenv
ORACLE_SID = [shocdb1] ? shocdb1
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@SHOMAC1 ~]$
[oracle@SHOMAC1 ~]$ sqlplus "/" as sysdba"

SQL*Plus: Release 12.2.0.1.0 Production on Fri Sep 2 17:11:40 2022

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SYS@shocdb1 02-SEP-22>show pdbs

   CON_ID CON_NAME                                OPEN MODE  RESTRICTED
-----
   2 PDB$SEED                                READ ONLY  NO
   6 SHOPDB1                                READ WRITE NO
SYS@shocdb1 02-SEP-22>
```

## Drop a pluggable database PDB

Show pdbs

```
SYS@shocdb1 02-SEP-22>show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
4	SHOPDB1	READ WRITE	NO

```
SYS@shocdb1 02-SEP-22>
```

alter pluggable database SHOPDB1 close;

drop pluggable database SHOPDB1 including datafiles;

```
SYS@shocdb1 02-SEP-22>alter pluggable database SHOPDB1 close;
Pluggable database altered.
SYS@shocdb1 02-SEP-22>drop pluggable database SHOPDB1 including datafiles;
Pluggable database dropped.
SYS@shocdb1 02-SEP-22>show pdbs
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO

```
SYS@shocdb1 02-SEP-22>
```