



INSTALL SCHEMAS

Tuning



Oracle 19c Tuning

Note:

- Execute `xhost +` command as root.
- Login as oracle user using the `su - oracle` command.

Start Database

To start up a database from the command line, use SQL*Plus to connect to Oracle with administrator privileges and then issue the STARTUP command.

- Open terminal from the desktop and switch to oracle user:
`su - oracle`
- Enter `sqlplus / as sysdba`
- Start the database using the command `startup`. Enter `startup`
- Enter following commands to open the current PDB
`Alter pluggable database all open;`
- Exit SQL*Plus command-line. Enter `EXIT`.
- Start the listener service by typing the following command:
`lsnrctl START`

1. Verify that the instance is started by checking whether the PMON background process is running.

```
$ ps -ef|grep pmon
```

```
[oracle@host01 ~]$ ps -ef|grep pmon
oracle      8967      1  0 03:27 ?        00:00:00 ora_pmon_orclcdb
oracle     12194 12018  0 04:12 pts/1    00:00:00 grep  --color=auto pmon
[oracle@host01 ~]$
```

2. Change to the \$HOME directory.

```
[oracle@host01 ~]$
[oracle@host01 /]$
[oracle@host01 /]$ cd $HOME
[oracle@host01 ~]$ pwd
/home/oracle
[oracle@host01 ~]$
```

3. Connect to the orcl database instance as the SYS user with SYSDBA privilege.

```
[oracle@host01 ~]$ . oraenv
ORACLE_SID = [orcl] ? orcl
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@host01 ~]$ sqlplus

SQL*Plus: Release 19.0.0.0.0 - Production on Fri Dec 11
06:30:36 2020
Version 19.3.0.0.0

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Enter user-name: /as sysdba

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 -
Production
Version 19.3.0.0.0
SQL>
```

4. Check the current state of PDBs.

```
SQL> SHOW PDBS
```

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

- a. If the PDBs are not open, open them. If it is open, you can skip this step.

Note: Do not run this command if your PDB is already opened.

```
SQL> ALTER PLUGGABLE DATABASE ORCLPDB OPEN;
```

```
Pluggable database altered.
```

- b. Save the state so that PDB1 is opened every time the CDB is opened. Exit SQL*Plus.

```
SQL> ALTER PLUGGABLE DATABASE orclpdb SAVE STATE;
```

```
Pluggable database altered.
```

```
SQL> exit
```

5. Check whether the listener is started and if not, start the listener.

```
[oracle@host01 ~]$ lsnrctl status  
[oracle@host01 ~]$ lsnrctl start
```

6. Verify that you can connect to the `orclpdb` PDB by using the servicename. Exit SQL*Plus.

Note: If you get an error then proceed to the next step.

```
[oracle@host01 ~]$ . oraenv  
ORACLE_SID = [orcl] ?  
The Oracle base remains unchanged with value /u01/app/oracle  
[oracle@host01 ~]$  
[oracle@host01 ~]$ sqlplus system/fenago@orclpdb  
  
...  
Copyright (c) 1982, 2018, Oracle. All rights reserved.  
...  
Connected to:  
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 -  
Production  
Version 19.3.0.0.0  
  
SQL>  
SQL> exit;
```

7. If you are unable to connect to `orclpdb` using the service name then add these lines to `tnsnames.ora`, else skip these steps.

a. Navigate to `$ORACLE_HOME/network/admin` and open `tnsnames.ora`:

```
[oracle@host01 /]$ cd $ORACLE_HOME
[oracle@host01 dbhome_1]$ cd network/admin/
[oracle@host01 dbhome_1]$ vi tnsnames.ora
```

b. Add these lines to `tnsnames.ora`, if not already present:

```
orcl =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = UPDATE_HERE) (PORT
= 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = orcl)
    )
  )

orclpdb =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP) (HOST = UPDATE_HERE) (PORT
= 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = orclpdb)
    )
  )
```

- c. Save the file and quit the vi editor (:wq).
8. Verify that the HR (sample schemas) user was created and there is data in the database.

```
[oracle@host01 /]$ . oraenv
ORACLE_SID = [orcl] ? orcl
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@host01 /]$ sqlplus

SQL*Plus: Release 19.0.0.0.0 - Production on Thu Dec 12 06:43:10
2019
Version 19.3.0.0.0

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Enter user-name: /as sysdba

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 -
Production
Version 19.3.0.0.0

SQL> conn sys/fenago@orclpdb as sysdba
Connected.

SQL> ALTER USER hr IDENTIFIED BY hr account unlock;

User altered.

Note: If you encounter an error "ORA-01918: user 'HR' does not
exist" then follow these steps to install HR schema.

SQL> conn sys/fenago@orclpdb
Connected.

SQL> @?/demo/schema/human_resources/hr_main.sql

specify password for HR as parameter 1:
Enter value for 1:
SP2-0137: DEFINE requires a value following equal sign

specify default tablesppace for HR as parameter 2:
Enter value for 2: users
```

```
specify temporary tablespace for HR as parameter 3:  
Enter value for 3: temp
```

```
specify log path as parameter 4:  
Enter value for 4: $ORACLE_HOME/demo/schema/log
```

```
PL/SQL procedure successfully completed.
```

```
Enter value for pass: cloud_4U
```

```
SQL> Select count(*) from employees;
```

```
      COUNT(*)  
-----  
          107
```

This completes the network and schema configuration.

9. Create a `labs` directory, copy the lab files (in the `labs` directory) from Desktop folder **oracle19c-labs/backup-recovery**.

```
[oracle@host01 ~]$ cd /home/oracle/  
[oracle@host01 ~]$ ln -s  
/headless/Desktop/oracle/oracle19c-  
labs/tuning/labs /home/oracle/  
  
[oracle@host01 ~]$ ls -ltr /home/oracle/  
  
[root@host01 ~]$ chmod -R 777 /home/oracle/labs (Run as root)
```


Install full GitHub sample schemas into each PDB

10. Download sample schemas from this location:

<https://github.com/oracle/db-sample-schemas/releases/tag/v19.2>

11. Copy the downloaded file to `$ORACLE_HOME/demo/schema/` and unzip.

12. Execute `cd $ORACLE_HOME/demo/schema/`

```
su - oracle
wget https://github.com/oracle/db-sample-schemas/archive/refs/tags/v19.2.zip
unzip v19.2.zip
ls -ltr
cd db-sample-schemas-19.2/
ls -ltr
yes | cp -rf * $ORACLE_HOME/demo/schema/
cd $ORACLE_HOME/demo/schema
```

13. Execute `perl -p -i.bak -e 's#__SUB__CWD__#'$ (pwd) '#g' *.sql */*.sql */*.dat`

14. `sqlplus / as sysdba`

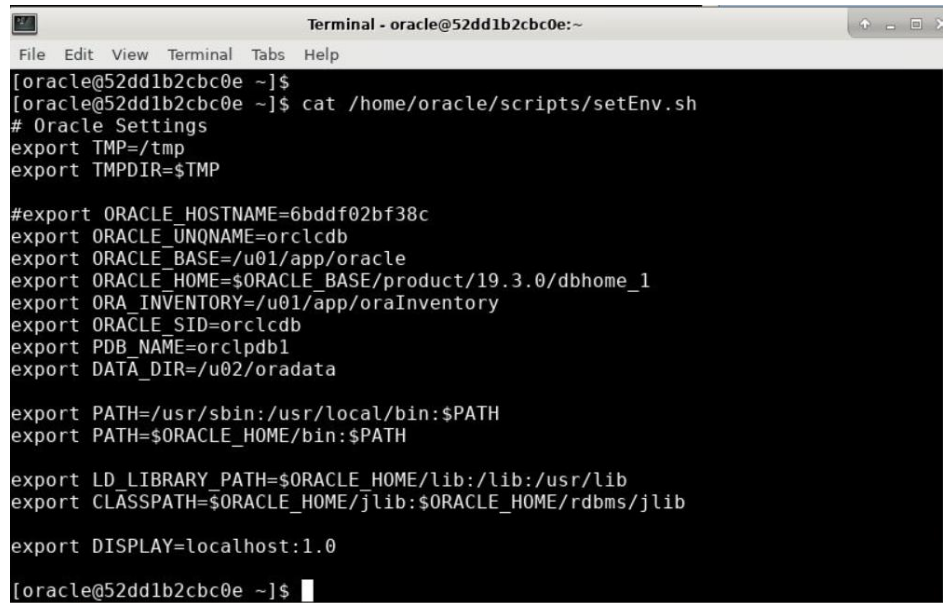
15. Execute `SQL> @?/demo/schema/mksample fenago fenago hr oe fenago fenago sh fenago users temp /home/oracle/setup/schema1/ localhost:1521/orclpdb`

16. Execute `SQL> @?/demo/schema/sales_history/sh_main.sql sh users temp fenago $ORACLE_HOME/demo/schema/sales_history/ $ORACLE_HOME/demo/schema/log/ v3 localhost:1521/orclpdb`

This completes the setup

Oracle User Environment

Following script is being called in /home/oracle/.bashrc. Update variables as needed.

A terminal window titled "Terminal - oracle@52dd1b2cbc0e:~" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The terminal displays the content of a script located at /home/oracle/scripts/setEnv.sh. The script sets various environment variables for the Oracle database user, including TMP, TMPDIR, ORACLE_HOSTNAME, ORACLE_UNQNAME, ORACLE_BASE, ORACLE_HOME, ORA_INVENTORY, ORACLE_SID, PDB_NAME, DATA_DIR, PATH, LD_LIBRARY_PATH, CLASSPATH, and DISPLAY.

```
Terminal - oracle@52dd1b2cbc0e:~
File Edit View Terminal Tabs Help
[oracle@52dd1b2cbc0e ~]$
[oracle@52dd1b2cbc0e ~]$ cat /home/oracle/scripts/setEnv.sh
# Oracle Settings
export TMP=/tmp
export TMPDIR=$TMP

#export ORACLE_HOSTNAME=6bddf02bf38c
export ORACLE_UNQNAME=orclcdb
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=$ORACLE_BASE/product/19.3.0/dbhome_1
export ORA_INVENTORY=/u01/app/oraInventory
export ORACLE_SID=orclcdb
export PDB_NAME=orclpdb1
export DATA_DIR=/u02/oradata

export PATH=/usr/sbin:/usr/local/bin:$PATH
export PATH=$ORACLE_HOME/bin:$PATH

export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib
export CLASSPATH=$ORACLE_HOME/jlib:$ORACLE_HOME/rdbms/jlib

export DISPLAY=localhost:1.0
[oracle@52dd1b2cbc0e ~]$
```

Start Database After Reboot

Edit /etc/oratab and set orcl as **Y** and running following commands:

```
$ su - oracle
$ lsnrctl status
$ lsnrctl start
$ dbstart $ORACLE_HOME
```