

Oracle Database 12c Release 1 (12.1) Installation On Oracle Linux 7.8

This article describes the installation of Oracle Database 12c Release 1 (12.1) (64-bit) on Oracle Linux 7.8 (64-bit). The is based on a server installation with a minimum of 3G swap, with SELinux set to permissive and the firewall disabled.

Download Software:

Download the Oracle software from OTN or MOS depending on your support status.

- [OTN: Oracle Database 12c Release 1 \(12.1.0.2\) Software \(64-bit\).](#)
- [edelivery: Oracle Database 12c Release 1 \(12.1.0.2\) Software \(64-bit\)](#)

Unpack Files:

Unzip the files.

```
Running] - Oracle VM VirtualBox : 1
View Input Devices Help
Applications Places Terminal
oracle@pr:/u01
File Edit View Search Terminal Help
[oracle@pr u01]$
[oracle@pr u01]$ cd /u01/
[oracle@pr u01]$ ll
total 2625108
drwxr-xr-x. 3 oracle oinstall      4096 Apr 17 22:22 app
drwx-----. 2 oracle oinstall     16384 Apr 11 13:23 lost+found
-rw-r--r--. 1 oracle oinstall 1673544724 Apr 10 19:39 V46095-01_1of2.zip
-rw-r--r--. 1 oracle oinstall 1014530602 Apr 10 19:36 V46095-01_2of2.zip
[oracle@pr u01]$
[oracle@pr u01]$
[oracle@pr u01]$
[oracle@pr u01]$ unzip V46095-01_1of2.zip
Archive: V46095-01_1of2.zip
  creating: database/
  creating: database/rpm/
 inflating: database/rpm/cvuqdisk-1.0.9-1.rpm
  creating: database/response/
 inflating: database/response/netca.rsp
 inflating: database/response/db_install.rsp
 inflating: database/response/dbca.rsp
```

➤ You should now have a single directory called "database" containing installation files.

Oracle Installation Prerequisites:

Perform either the Automatic Setup or the Manual Setup to complete the basic prerequisites. The Additional Setup is required for all installations.

Automatic Setup:

If you plan to use the "oracle-rdbms-server-12cR1-preinstall" package to perform all your prerequisite setup, issue the following command.

Command : yum install oracle-rdbms-12cR1-preinstall -y

```
PR_node1 [Running] - Oracle VM VirtualBox : 1
File Machine View Input Devices Help
Applications Places Terminal

root@pr_node1:~#
File Edit View Search Terminal Help
[root@pr_node1 ~]# yum install oracle-database-server-12cR2-preinstall -y
Loaded plugins: langpacks, ulninfo
Resolving Dependencies
--> Running transaction check
--> Package oracle-database-server-12cR2-preinstall.x86_64 0:1.0-5.el7 will be installed
--> Processing Dependency: ksh for package: oracle-database-server-12cR2-preinstall-1.0-5.el7.x86_64
--> Processing Dependency: libaio-devel for package: oracle-database-server-12cR2-preinstall-1.0-5.el7.x86_64
--> Running transaction check
--> Package ksh.x86_64 0:20120801-144.0.1.el7_9 will be installed
--> Package libaio-devel.x86_64 0:0.3.109-13.el7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                                Arch      Version              Repository            Size
=====
Installing:
oracle-database-server-12cR2-preinstall x86_64    1.0-5.el7            ol7_latest            19 k
Installing for dependencies:
ksh                                       x86_64    20120801-144.0.1.el7_9 ol7_latest            882 k
libaio-devel                            x86_64    0.3.109-13.el7       ol7_latest            12 k
=====

Transaction Summary
=====
Install 1 Package (+2 Dependent packages)

Total download size: 913 k
Installed size: 3.2 M
Downloading packages:
warning: /var/cache/yum/x86_64/7Server/ol7_latest/packages/libaio-devel-0.3.109-13.el7.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID ec551f03: NOKEY
Public key for libaio-devel-0.3.109-13.el7.x86_64.rpm is not installed
(1/3): libaio-devel-0.3.109-13.el7.x86_64.rpm | 12 kB 00:00:00
(2/3): oracle-database-server-12cR2-preinstall-1.0-5.el7.x86_64.rpm | 19 kB 00:00:00
(3/3): ksh-20120801-144.0.1.el7_9.x86_64.rpm | 882 kB 00:00:01
-----
Total                                     589 kB/s | 913 kB 00:00:01
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
Importing GPG key 0xEC551F03:
  Userid   : "Oracle OSS group (Open Source Software group) <build@oss.oracle.com>"
  Fingerprint: 4214 4123 fecf c55b 9086 313d 72f9 7b74 ec55 1f03
  Package   : 7:oraclelinux-release-7.8-1.0.7.el7.x86_64 (@anaconda/7.8)
  From      : /etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
Running transaction check
Running transaction test
```

Earlier versions of Oracle Linux required manual setup of the Yum repository by following the instructions at <http://public-yum.oracle.com>.

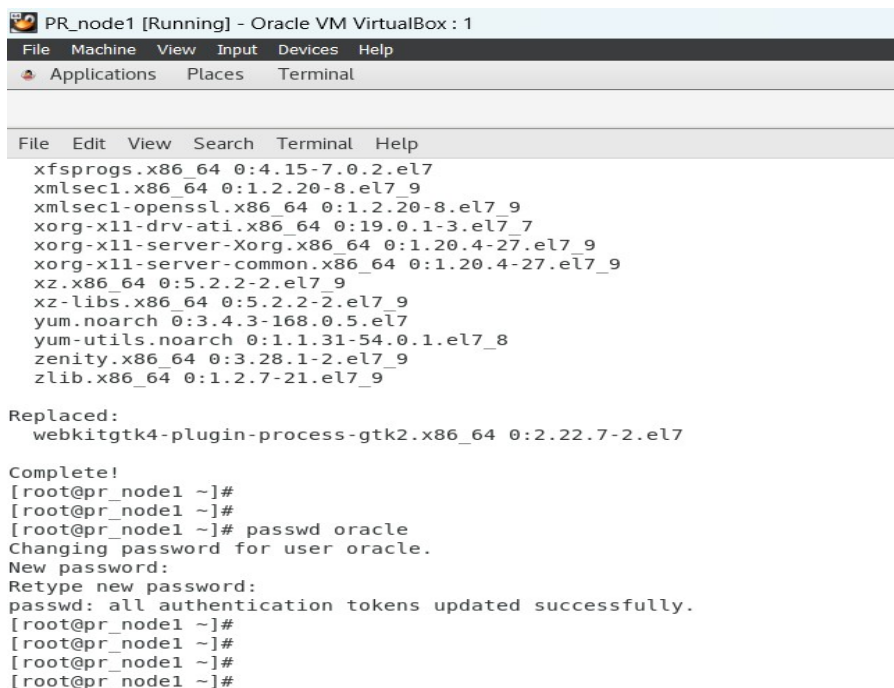
It is probably worth doing a full update as well, but this is not strictly speaking necessary.

yum update

```
~~~~~
[root@pr_node1 ~]# yum update -y
Loaded plugins: langpacks, ulninfo
Resolving Dependencies
--> Running transaction check
--> Package ModemManager.x86_64 0:1.6.10-3.el7 will be updated
--> Package ModemManager.x86_64 0:1.6.10-4.el7 will be an update
--> Package ModemManager-glib.x86_64 0:1.6.10-3.el7 will be updated
--> Package ModemManager-glib.x86_64 0:1.6.10-4.el7 will be an update
--> Package NetworkManager.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-adsl.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-adsl.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-config-server.noarch 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-config-server.noarch 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-glib.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-glib.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-libnm.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-libnm.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-ppp.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-ppp.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-team.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-team.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-tui.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-tui.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package NetworkManager-wifi.x86_64 1:1.18.4-3.el7 will be updated
--> Package NetworkManager-wifi.x86_64 1:1.18.8-2.0.1.el7_9 will be an update
--> Package SDL.x86_64 0:1.2.15-16.el7 will be updated
--> Package SDL.x86_64 0:1.2.15-17.el7 will be an update
--> Package abrt.x86_64 0:2.1.11-57.0.1.el7 will be updated
--> Package abrt.x86_64 0:2.1.11-60.0.3.el7 will be an update
--> Package abrt-addon-ccpp.x86_64 0:2.1.11-57.0.1.el7 will be updated
--> Package abrt-addon-ccpp.x86_64 0:2.1.11-60.0.3.el7 will be an update
--> Package abrt-addon-kerneloops.x86_64 0:2.1.11-57.0.1.el7 will be updated
--> Package abrt-addon-kerneloops.x86_64 0:2.1.11-60.0.3.el7 will be an update
--> Package abrt-addon-pstoreoops.x86_64 0:2.1.11-57.0.1.el7 will be updated
--> Package abrt-addon-pstoreoops.x86_64 0:2.1.11-60.0.3.el7 will be an update
--> Package abrt-addon-python.x86_64 0:2.1.11-57.0.1.el7 will be updated
--> Package abrt-addon-python.x86_64 0:2.1.11-60.0.3.el7 will be an update
```

Additional Setup:

- Set the password for the "oracle" user.



```
PR_node1 [Running] - Oracle VM VirtualBox : 1
File Machine View Input Devices Help
Applications Places Terminal

File Edit View Search Terminal Help
xfsprogs.x86_64 0:4.15-7.0.2.el7
xmlsec1.x86_64 0:1.2.20-8.el7_9
xmlsec1-openssl.x86_64 0:1.2.20-8.el7_9
xorg-x11-drv-ati.x86_64 0:19.0.1-3.el7_7
xorg-x11-server-Xorg.x86_64 0:1.20.4-27.el7_9
xorg-x11-server-common.x86_64 0:1.20.4-27.el7_9
xz.x86_64 0:5.2.2-2.el7_9
xz-libs.x86_64 0:5.2.2-2.el7_9
yum.noarch 0:3.4.3-168.0.5.el7
yum-utils.noarch 0:1.1.31-54.0.1.el7_8
zenity.x86_64 0:3.28.1-2.el7_9
zlib.x86_64 0:1.2.7-21.el7_9

Replaced:
webkitgtk4-plugin-process-gtk2.x86_64 0:2.22.7-2.el7

Complete!
[root@pr_node1 ~]#
[root@pr_node1 ~]#
[root@pr_node1 ~]# passwd oracle
Changing password for user oracle.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@pr_node1 ~]#
[root@pr_node1 ~]#
[root@pr_node1 ~]#
[root@pr_node1 ~]#
```

- Set secure Linux to permissive by editing the "/etc/selinux/config" file, making sure the SELINUX flag is set as follows.

SELINUX=permissive >> In { vi /etc/selinux/config }

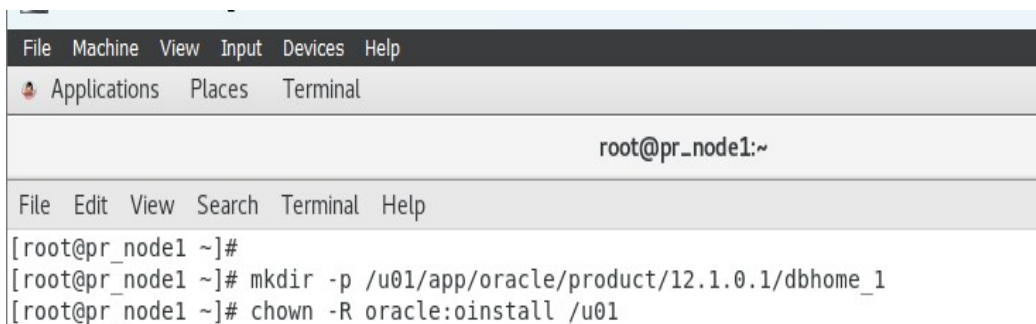
Once the change is complete, restart the server or run the following command.

setenforce Permissive

If you have the Linux firewall enabled, you will need to disable or configure it, as shown [here](#) or [here](#). To disable it, do the following.

```
[root@pr_node1 ~]#  
[root@pr_node1 ~]# hostname -i  
172.20.10.2  
[root@pr_node1 ~]#  
[root@pr_node1 ~]# systemctl disable firewalld.service  
Removed symlink /etc/systemd/system/multi-user.target.wants/firewalld.service.  
Removed symlink /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.  
[root@pr_node1 ~]# systemctl stop firewalld.service  
[root@pr_node1 ~]#  
[root@pr_node1 ~]#  
[root@pr_node1 ~]#
```

- Create the directories in which the Oracle software will be installed.



The screenshot shows a terminal window with a menu bar (File, Machine, View, Input, Devices, Help) and a sub-menu bar (Applications, Places, Terminal). The prompt is root@pr_node1:~. Below the menu bar is another menu bar (File, Edit, View, Search, Terminal, Help). The terminal output shows the following commands and their results:

```
[root@pr_node1 ~]#  
[root@pr_node1 ~]# mkdir -p /u01/app/oracle/product/12.1.0.1/dbhome_1  
[root@pr_node1 ~]# chown -R oracle:oinstall /u01
```

Putting mount points directly under root without mounting separate disks to them is typically a bad idea. It's done here for simplicity, but for a real installation "/" storage should be reserved for the OS.

- Unless you are working from the console, or using SSH tunnelling, login as root and issue the following command.

```
[root@pr_node1 ~]#  
[root@pr_node1 ~]#  
[root@pr_node1 ~]# xhost +  
access control disabled, clients can connect from any host  
[root@pr_node1 ~]#  
[root@pr_node1 ~]#  
[root@pr_node1 ~]# echo $DISPLAY  
:  
[root@pr_node1 ~]#
```

- Add the following lines at the end of the "/home/oracle/.bash_profile" file.

```
[oracle@pr_node1 ~]$  
[oracle@pr_node1 ~]$  
[oracle@pr_node1 ~]$  
[oracle@pr_node1 ~]$ cat .bash_profile  
# .bash_profile  
  
# Get the aliases and functions  
if [ -f ~/.bashrc ]; then  
    . ~/.bashrc  
fi  
  
# User specific environment and startup programs  
  
PATH=$PATH:$HOME/.local/bin:$HOME/bin  
  
export PATH  
[oracle@pr_node1 ~]$  
[oracle@pr_node1 ~]$
```

Oracle Settings

export TMP=/tmp

export TMPDIR=\$TMP

export ORACLE_HOSTNAME=dr.node1.localdomain

export ORACLE_UNQNAME=orcl

export ORACLE_BASE=/u01/app/oracle

export ORACLE_HOME=\$ORACLE_BASE/product/12.1.0.2.0/dbhome_1

export ORACLE_SID=orcl

export PATH=/usr/sbin:\$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

Installation:

- Set the Display environmental variable same as root user in oracle user.

Log into the oracle user. If you are using X emulation then set the DISPLAY environmental variable.

```
[Running] - Oracle VM VirtualBox: 1
View Input Devices Help
Applications Places Terminal

oracle@pr:/u01/database

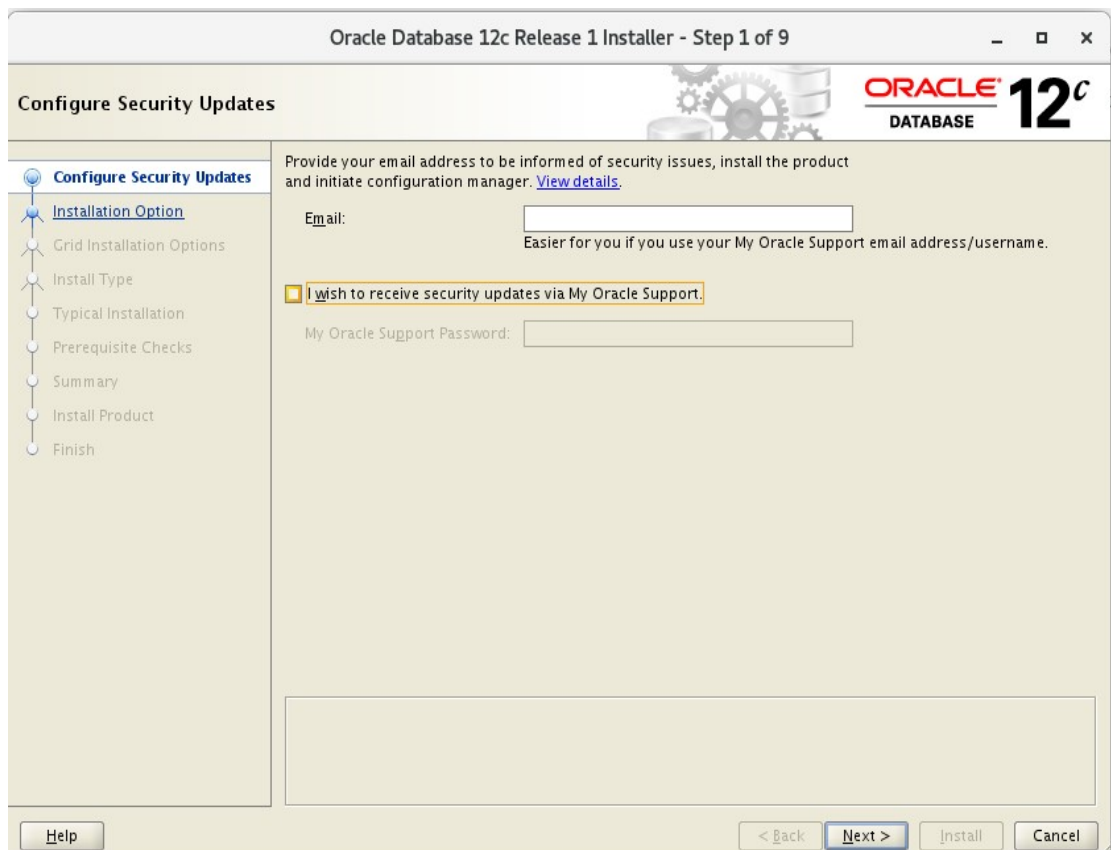
[root@pr u01]#
[root@pr u01]# xhost +
access control disabled, clients can connect from any host
[root@pr u01]#
[root@pr u01]# echo $DISPLAY
:0
[root@pr u01]#
[root@pr u01]# su - oracle
Last login: Wed Apr 17 22:23:10 IST 2024 on pts/0
[oracle@pr ~]$
[oracle@pr ~]$ cd /u01/database/
[oracle@pr database]$
[oracle@pr database]$ export DISPLAY=:0;
[oracle@pr database]$
[oracle@pr database]$ echo $DISPLAY
:0
[oracle@pr database]$
[oracle@pr database]$ ./runInstaller
Starting Oracle Universal Installer...

Checking Temp space: must be greater than 500 MB.   Actual 7006 MB   Passed
Checking swap space: must be greater than 150 MB.   Actual 5992 MB   Passed
Checking monitor: must be configured to display at least 256 colors.   Actual 16777216   Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2024-04-17_10-28-33PM. Please wait ...[oracle@pr database]$
```

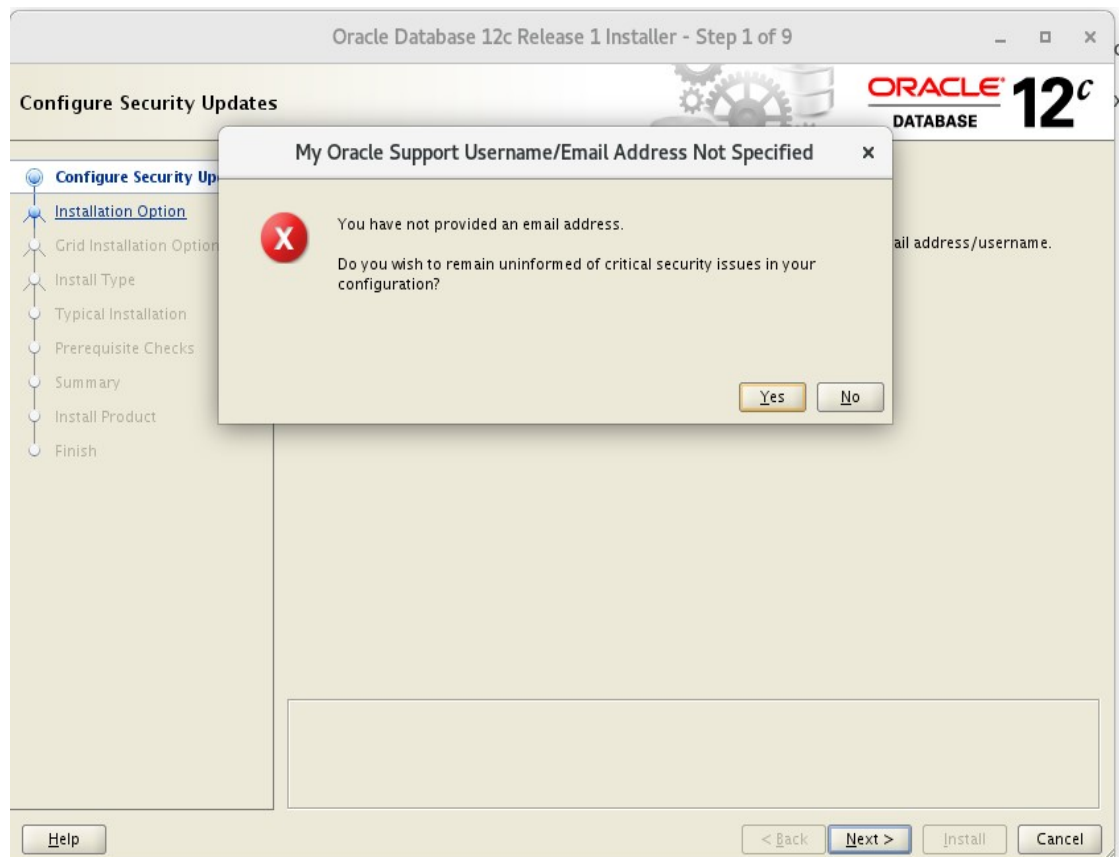
Start the Oracle Universal Installer (OUI) by issuing the following command in the database directory.

./runInstaller

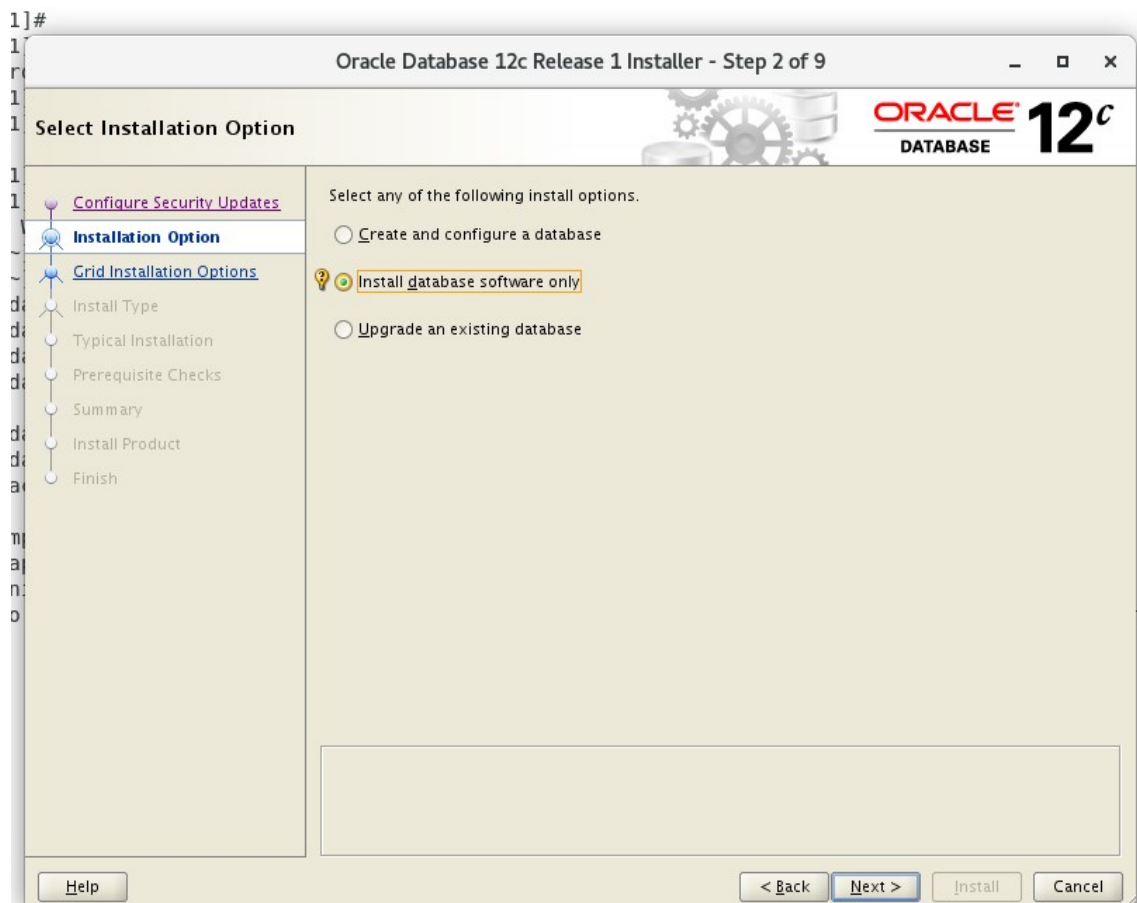
- **Configure Security Updates:**



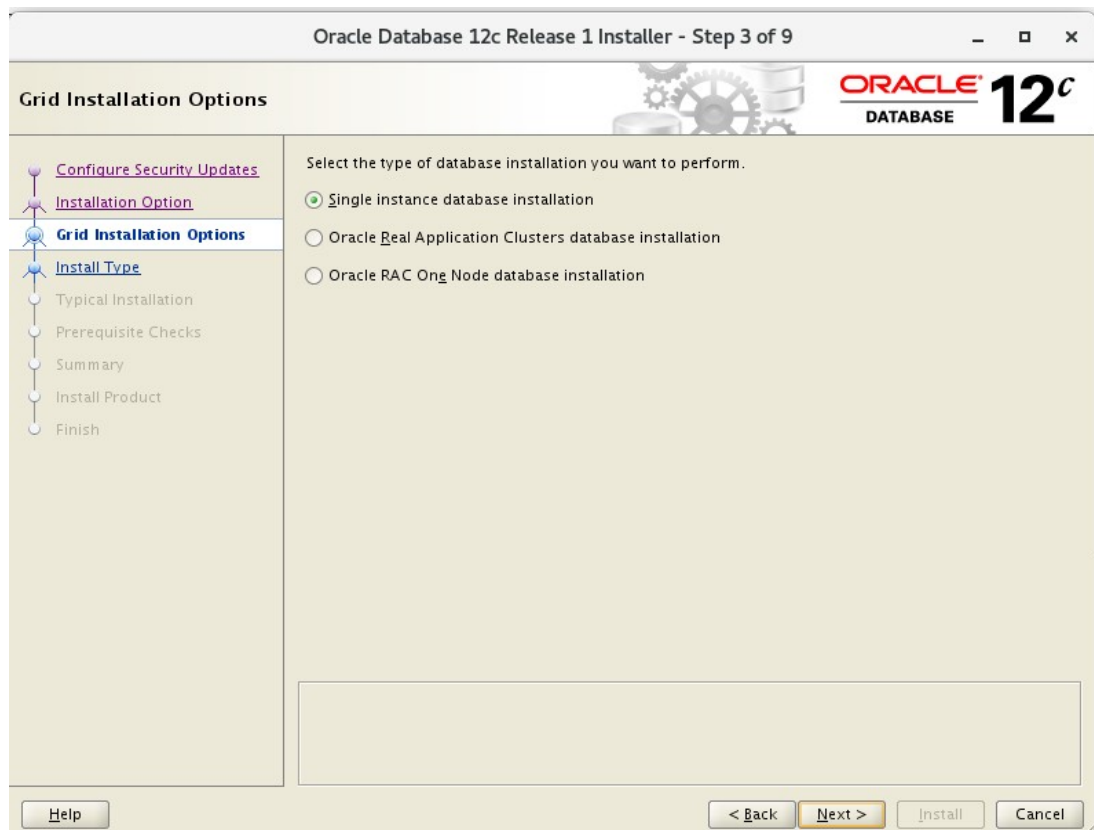
➤ My Oracle Support Credentials:



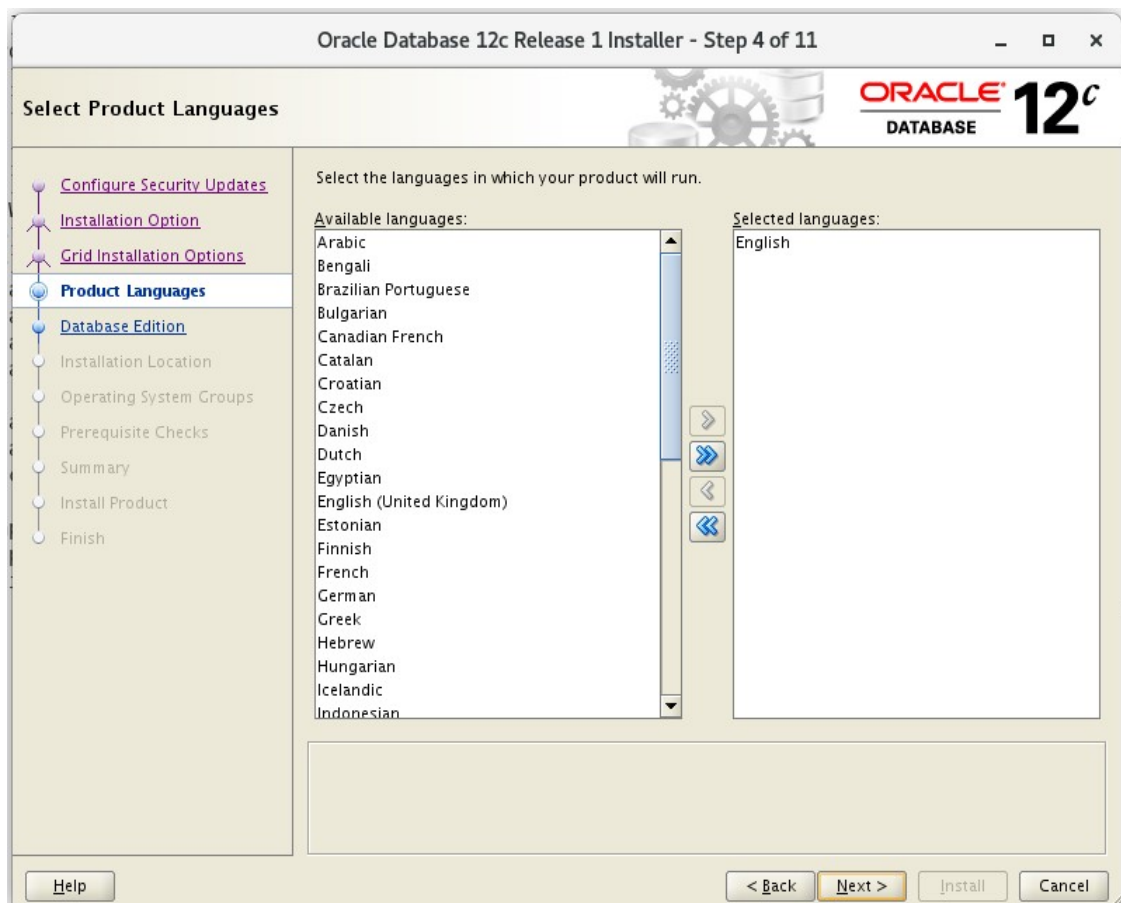
➤ Select Installation Type:



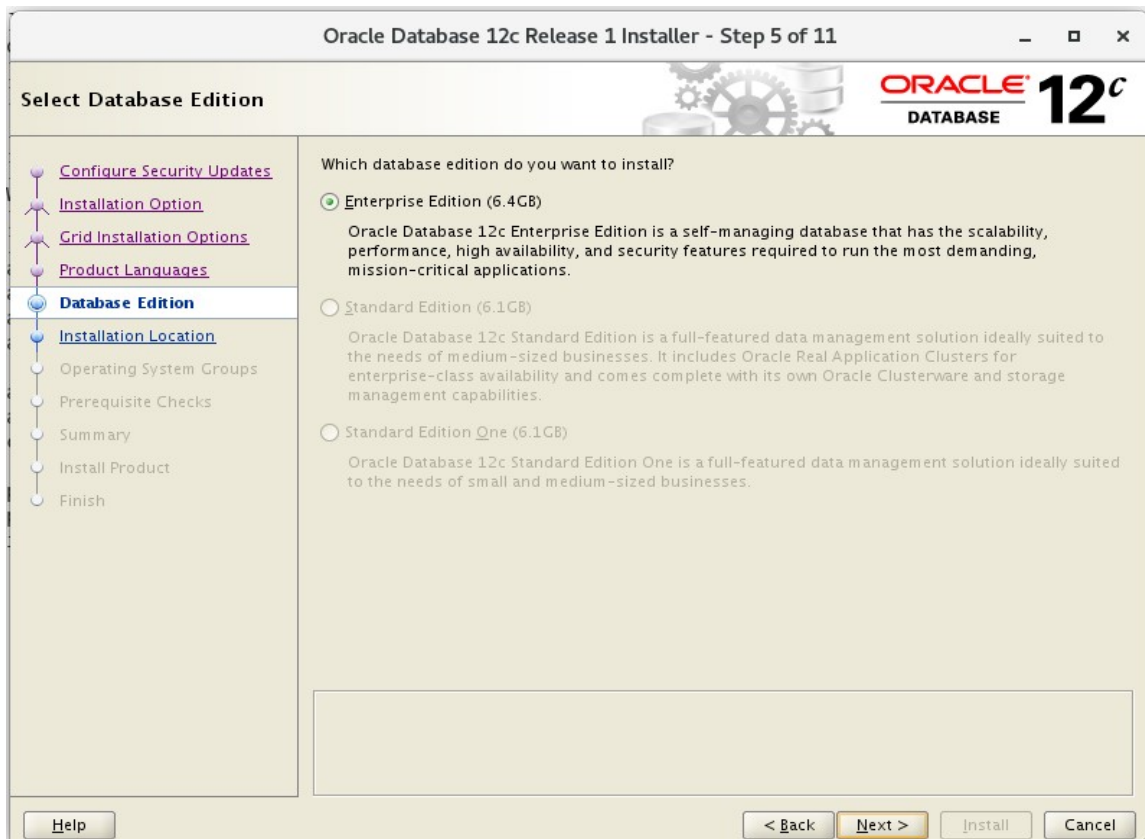
- Grid Installation Options: Select single or RAC installation & Click Next.



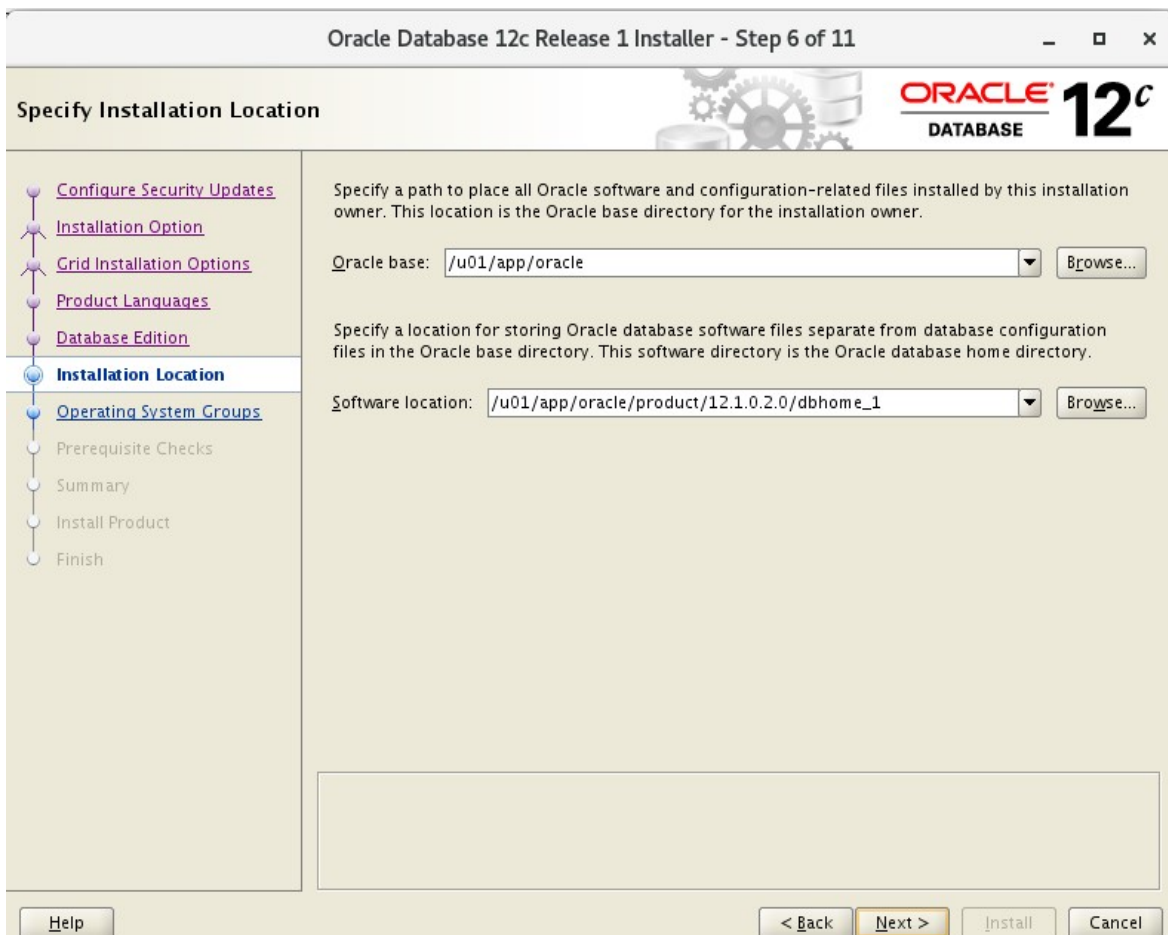
- Select product Languages:



➤ Database Edition: Select & Click Next.



➤ Installation location: Specify the Oracle_home location for installation.



- Operating system groups: Click Next.

Oracle Database 12c Release 1 Installer - Step 7 of 11

Privileged Operating System groups

SYS privileges are required to create a database using operating system (OS) authentication. Membership in OS Groups grants the corresponding SYS privilege, eg. membership in OSDBA grants the SYSDBA privilege.

Database Administrator (OSDBA) group: dba

Database Operator (OSOPER) group (Optional): oper

Database Backup and Recovery (OSBACKUPDBA) group: dba

Data Guard administrative (OSDGDBA) group: dba

Encryption Key Management administrative (OSKMDBA) group: dba

Help < Back Next > Install Cancel

- Summary:

Oracle Database 12c Release 1 Installer - Step 9 of 11

Summary

Configure Security Updates

Installation Option

Grid Installation Options

Product Languages

Database Edition

Installation Location

Operating System Groups

Prerequisite Checks

Summary

Install Product

Finish

Help

Oracle Database 12c Release 1 Installer

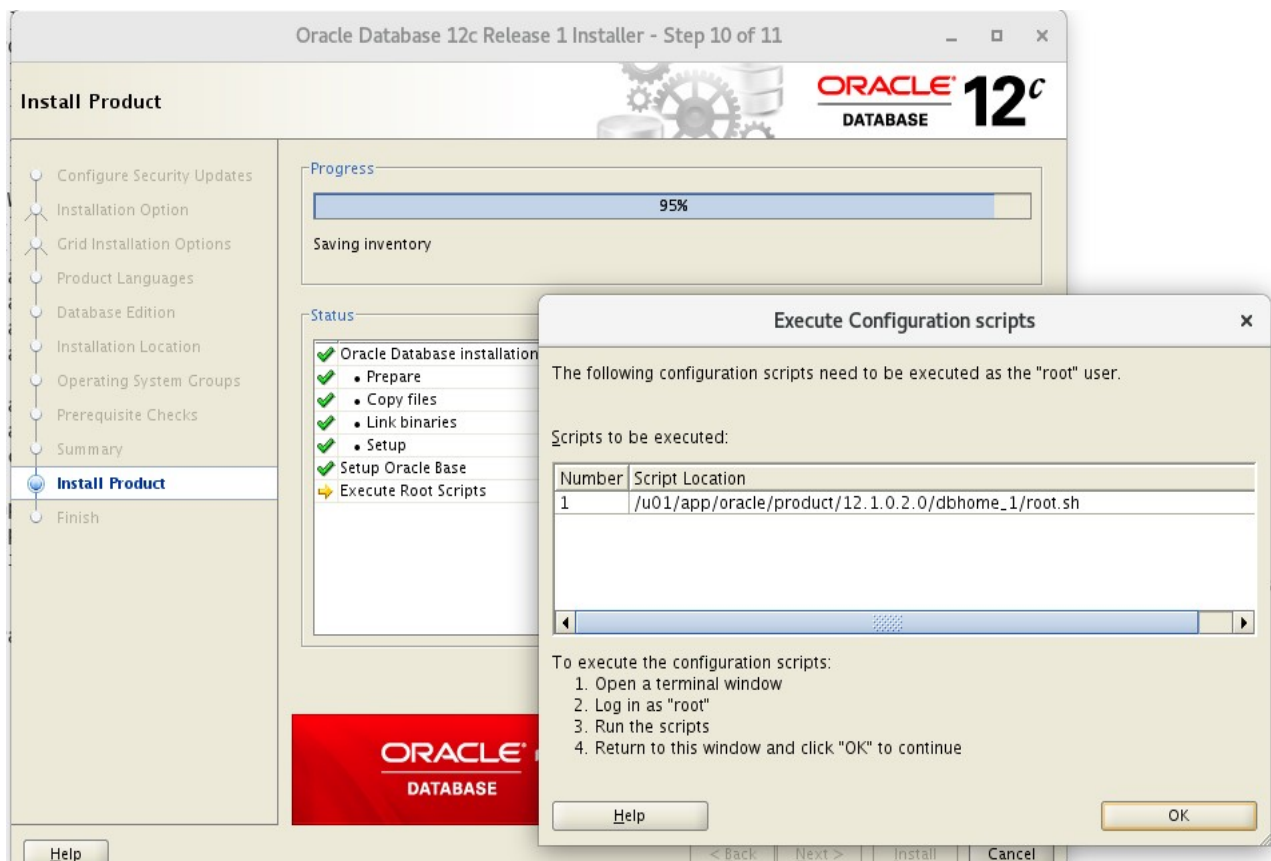
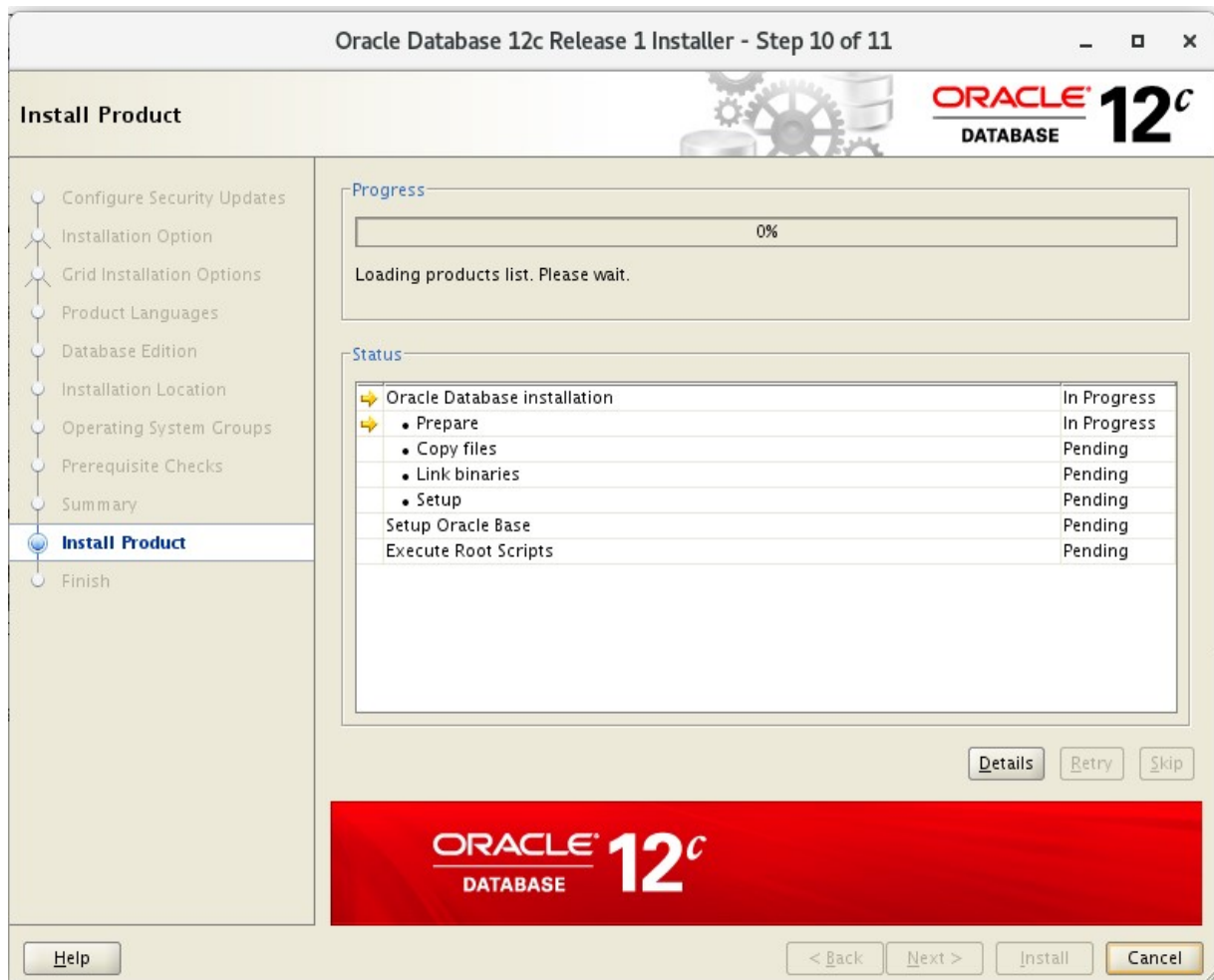
Global settings

- Disk space: required 6.4 GB available 14.42 GB [\[Edit\]](#)
- Source location: /u01/database/install/./stage/products.xml
- Database edition: Enterprise Edition (Install database software only) [\[Edit\]](#)
- Oracle base: /u01/app/oracle [\[Edit\]](#)
- Software location: /u01/app/oracle/product/12.1.0.2.0/dbhome_1 [\[Edit\]](#)
- Privileged Operating System groups: dba (OSDBA), oper (OSOPER), dba (OSBACKUPDBA), dba

Save Response File...

< Back Next > Install Cancel

- Install Product: After the progress complete, click on install.



- Copy & Run in root user and just enter:

```
[root@pr ~]# /u01/app/oraInventory/orainstRoot.sh
Changing permissions of /u01/app/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.

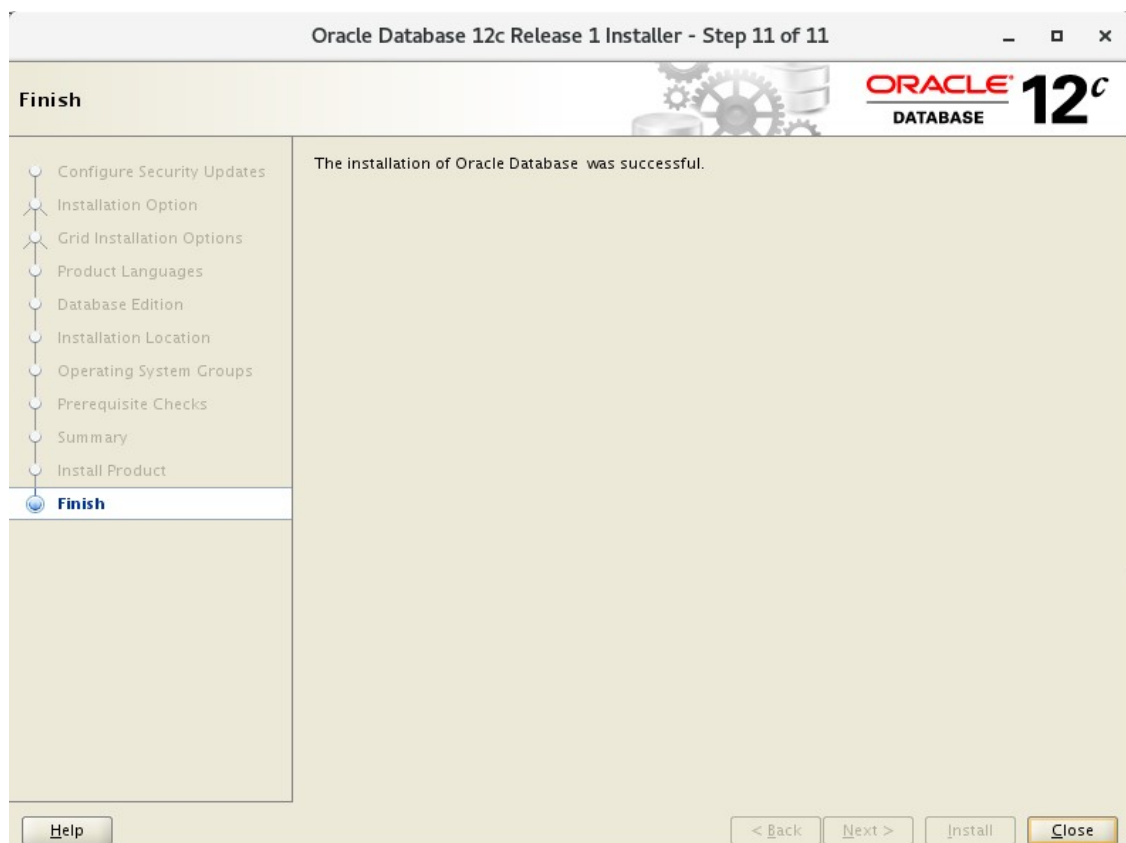
Changing groupname of /u01/app/oraInventory to oinstall.
The execution of the script is complete.
[root@pr ~]#
[root@pr ~]# /u01/app/oracle/product/12.1.0.2.0/dbhome_1/root.sh
Performing root user operation.

The following environment variables are set as:
    ORACLE_OWNER= oracle
    ORACLE_HOME=  /u01/app/oracle/product/12.1.0.2.0/dbhome_1

Enter the full pathname of the local bin directory: [/usr/local/bin]:
    Copying dbhome to /usr/local/bin ...
    Copying oraenv to /usr/local/bin ...
    Copying coraenv to /usr/local/bin ...

Creating /etc/oratab file...
Entries will be added to the /etc/oratab file as needed by
Database Configuration Assistant when a database is created
Finished running generic part of root script.
Now product-specific root actions will be performed.
[root@pr ~]#
```

- Finish:

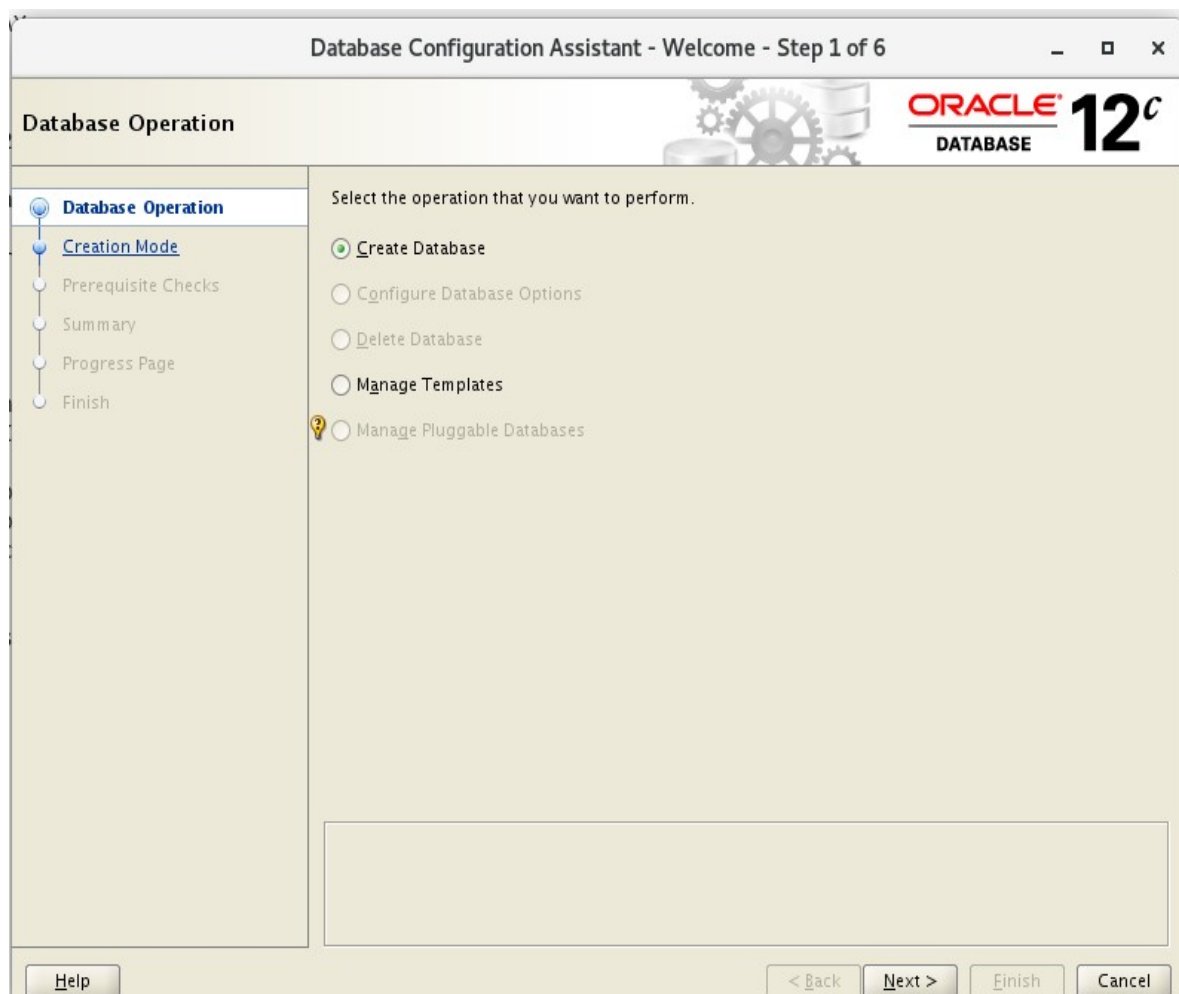


- After the installation software only run “dbca” to install and configure database:

```
/u01/app/oraInventory/logs/installActions2024-04-17_10-28-33PM.log

[oracle@pr database]$
[oracle@pr database]$
[oracle@pr database]$
[oracle@pr database]$
[oracle@pr database]$ cd
[oracle@pr ~]$
[oracle@pr ~]$
[oracle@pr ~]$ dbca
[oracle@pr ~]$
[oracle@pr ~]$
```

- Database Operation: Select Create database & Click Next.



➤ **Creation Mode:**

- # Give database name (anyname) : orcl
- # Password for database
- # If you want to create Pluggable database check the box if not uncheck the box and give the pluggable database name : pdborcl

Click Next.

Database Configuration Assistant - Create Database - Step 2 of 6

Creation Mode

Database Operation
Creation Mode
Prerequisite Checks
Summary
Progress Page
Finish

Create a database with default configuration

Global Database Name: orcl

Storage Type: File System

Database Files Location: {ORACLE_BASE}/oradata Browse...

Fast Recovery Area: {ORACLE_BASE}/fast_recovery_area Browse...

Database Character Set: WE8MSWIN1252 - MS Windows Code Page 1252 8-bit Wes...

Administrative Password:

Confirm Password:

☒ Create As Container Database


Pluggable Database Name: pdborcl

☐ Advanced Mode

Help < Back Next > Finish Cancel

- Perform Prerequisite Checks:
- Summary : Click finish

Database Configuration Assistant - Create Database - Step 4 of 6



Summary

- [Database Operation](#)
- [Creation Mode](#)
- [Prerequisite Checks](#)
- [Summary](#)**
- [Progress Page](#)
- [Finish](#)

Database Configuration Assistant: Summary

Create Database - Summary

Database Configuration Summary

Global Database Name: orcl
Database Configuration Type: Single Instance
SID: orcl
Create As Container Database: Yes
Number of Pluggable Databases: 1
Pluggable Database Name: pdborcl
Storage Type: File System
Memory Configuration Type: Automatic Memory Management
Template Name: General Purpose or Transaction Processing

Database Configuration Details

Database Components

Component	Selected
Oracle JVM	true
Oracle Text	true
Oracle Multimedia	true
Oracle OLAP	true
Oracle Spatial	true
Oracle Label Security	true
Oracle Application Express	true
Oracle Database Vault	true

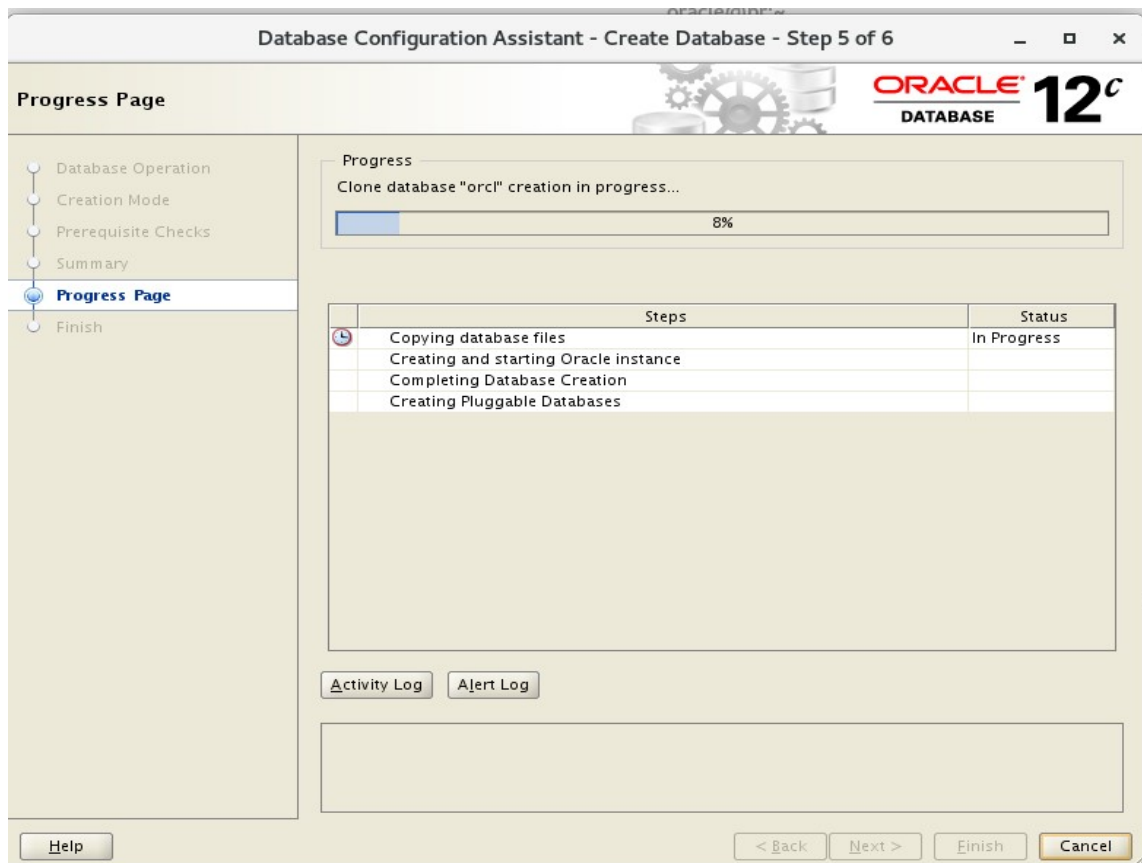
Initialization Parameters

Name	Value
audit_file_dest	{ORACLE_BASE}/admin/{DB_UNIQUE_NAME}/adump
audit_trail	db
compatible	12.1.0.2.0

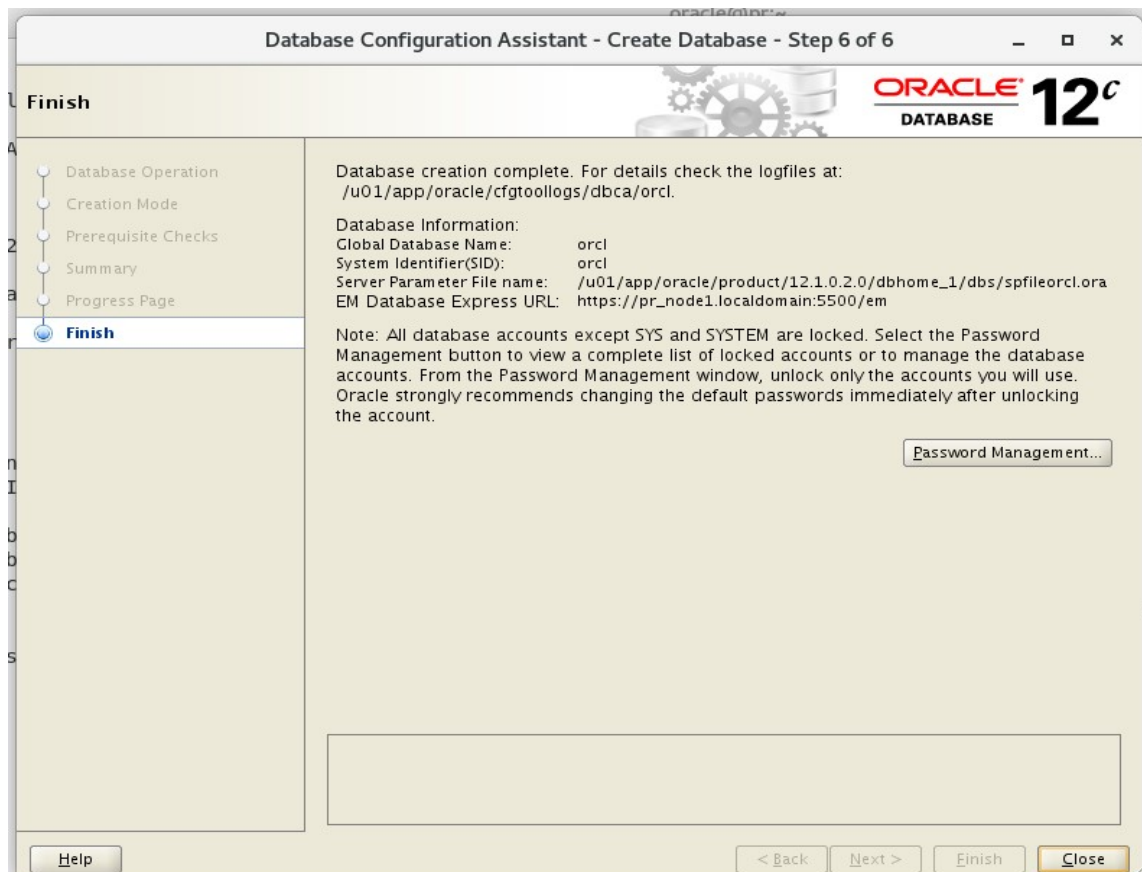
[Help](#)

[< Back](#)
[Next >](#)
[Finish](#)
[Cancel](#)

➤ Progress Page: Click next



➤ Finish:



Post Installation:

Edit the "/etc/oratab" file setting the restart flag for each instance to 'Y'.

```
cdb1:/u01/app/oracle/product/12.1.0.2/db_1:Y
```

➤ Oracle Network Configuration[ONC] (Listener.ora, tnsnames.ora & sqlnet.ora):

```
[oracle@pr admin]$  
[oracle@pr admin]$ pwd  
/u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin  
[oracle@pr admin]$ ll  
total 20  
-rw-r--r--. 1 oracle oinstall 352 Apr 11 16:24 listener.ora  
drwxr-xr-x. 2 oracle oinstall 4096 Apr 11 16:20 samples  
-rw-r--r--. 1 oracle oinstall 373 Oct 31 2013 shrept.lst  
-rw-r--r--. 1 oracle oinstall 199 Apr 11 16:24 sqlnet.ora  
-rw-r-----. 1 oracle oinstall 434 Apr 11 16:27 tnsnames.ora  
[oracle@pr admin]$
```

```
oracle@pr:/u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin  
-rw-r--r--. 1 oracle oinstall 774 Apr 18 16:06 tnsnames.ora  
[oracle@pr admin]$  
[oracle@pr admin]$ cat listener.ora  
  
# listener.ora Network Configuration File:/u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin/listener.ora  
# Generated by Oracle configuration tools.  
  
LISTENER =  
  (DESCRIPTION_LIST =  
    (DESCRIPTION =  
      (ADDRESS = (PROTOCOL = IPC) (KEY = EXTPROC1))  
      (ADDRESS = (PROTOCOL = TCP) (HOST = 172.20.10.6) (PORT = 1521))  
    )  
  )  
  
SID_LIST_LISTENER =  
  (SID_LIST =  
    (SID_DESC =  
      (GLOBAL_DBNAME = orcl)  
      (ORACLE_HOME = /u01/app/oracle/product/12.1.0.2.0/dbhome_1)  
      (SID_NAME = orcl)  
    )  
  )  
[oracle@pr admin]$ cat tnsnames.ora  
  
# tnsnames.ora Network Configuration File: /u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin/tnsnames.ora  
# Generated by Oracle configuration tools.  
  
LISTENER = (ADDRESS = (PROTOCOL = TCP) (HOST = 172.20.10.6) (PORT = 1521))  
  
ORCL =  
  (DESCRIPTION =  
    (ADDRESS_LIST =  
      (ADDRESS = (PROTOCOL = TCP) (HOST = 172.20.10.6) (PORT = 1521))  
    )  
    (CONNECT_DATA =  
      (SERVICE_NAME = orcl)  
    )  
  )  
  
PDBORCL =  
  (DESCRIPTION =  
    (ADDRESS = (PROTOCOL = TCP) (HOST = 172.20.10.6) (PORT = 1521))  
    (CONNECT_DATA =  
      (SERVER = DEDICATED)  
      (SERVICE_NAME = PDBORCL)  
    )  
  )
```

➤ After oracle network configuration, need to start listener:

Commands: lsnrctl start listener

>>> To start the listener

: lsnrctl status listener

>>> To check the status of listener

```
oracle@pr:/u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options
[oracle@pr admin]$
[oracle@pr admin]$ lsnrctl status

LSNRCTL for Linux: Version 12.1.0.2.0 - Production on 19-APR-2024 22:36:31

Copyright (c) 1991, 2014, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC) (KEY=EXTPROC)))
STATUS of the LISTENER
-----
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 12.1.0.2.0 - Production
Start Date                19-APR-2024 22:35:31
Uptime                    0 days 0 hr. 1 min. 0 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File   /u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin/listener.ora
Listener Log File         /u01/app/oracle/diag/tnslsnr/pr/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=EXTPROC)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=172.20.10.6) (PORT=1521)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcps) (HOST=pr.node1) (PORT=5500)) (Security=(my_wallet_directory=
Services Summary...
Service "orcl" has 2 instance(s).
  Instance "orcl", status UNKNOWN, has 1 handler(s) for this service...
  Instance "orcl", status READY, has 1 handler(s) for this service...
Service "orclXDB" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this service...
Service "pdborcl" has 1 instance(s).
  Instance "orcl", status READY, has 1 handler(s) for this service...
The command completed successfully
[oracle@pr admin]$
```


➤ Pre-check of database:

```
oracle@pr:/u01/app/oracle/product/12.1.0.2.0/dbhome_1/network/admin

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> show parameter name

NAME                                     TYPE        VALUE
-----
cell_offloadgroup_name                  string
db_file_name_convert                    string      /u01/app/oracle/oradata/ORCL,
                                           /u01/app/oracle/oradata/ORCL_D
                                           R, /u01/app/oracle/oradata/ORC
                                           L/164F10280414194EE063060A14AC
                                           8BF1, /u01/app/oracle/oradata/
                                           ORCL_DR/PDBORCL
db_name                                 string      orcl
db_unique_name                           string      ORCL
global_names                            boolean     FALSE
instance_name                           string      orcl

NAME                                     TYPE        VALUE
-----
lock_name_space                         string
log_file_name_convert                   string      /u01/app/oracle/oradata/ORCL,
                                           /u01/app/oracle/oradata/ORCL_D
                                           R
pdb_file_name_convert                   string
processor_group_name                     string
service_names                           string      ORCL
SQL>
SQL> select INST_ID,NAME,LOG_MODE,OPEN_MODE,DATABASE_ROLE,CDB from gv$database;

INST_ID NAME      LOG_MODE  OPEN_MODE  DATABASE_ROLE  CDB
-----
1 ORCL        ARCHIVELOG  READ WRITE  PRIMARY        YES

SQL> show pdbs

CON_ID CON_NAME          OPEN MODE  RESTRICTED
-----
2 PDB$SEED          READ ONLY  NO
3 PDBORCL            MOUNTED

SQL> alter pluggable database PDBORCL open;

Pluggable database altered.

SQL>
```

~~~~~END~~~~~