Download
Get Oracle database from Oracle Database 12c Release 2

Extract
Unpack and move **database** folder to **/tmp** . (also, you can extract all the folders/files and move them to here)

```
/tmp/database
```

Groups and users for oracle
Open a terminal and execute following commands with sudo permission.

```
sudo groupadd -g 502 oinstall
sudo groupadd -g 503 dba
sudo groupadd -g 504 oper
sudo groupadd -g 505 asmadmin
```

After that, create oracle user

```
sudo useradd -u 502 -g oinstall -G dba,asmadmin,oper -s /bin/bash -m oracle
```

You will prompt to set to password. set a memorable password and write it down. In case, if nothing prompts, try this command to set password

```
sudo passwd oracle
```

Install required packages
Set Ubuntu Extra Packages Repo

```
echo 'deb http://cz.archive.ubuntu.com/ubuntu precise main universe' >>
/etc/apt/sources.list.d/extra.list
```

If there is any issue in setting the repo, you can try

```
sudo -i
echo 'deb http://cz.archive.ubuntu.com/ubuntu precise main universe' >>
/etc/apt/sources.list.d/extra.list
exit
```

Now, get an update.

```
sudo apt-get update
```

Get libmotif4 and install on your system separately as it is not in ubuntu repository.
Now execute this script to install all required packages.

```
sudo apt-get install alien autoconf automake autotools-dev binutils doxygen
\
elfutils expat gawk gcc gcc-multilib g++-multilib libstdc++6:i386 ksh less
libtiff5 \
libtiff5-dev lib32z1 libaio1 libaio-dev libc6-dev libc6-dev-i386 libc6-i386
\
libelf-dev libltdl-dev libodbcinstq4-1 libodbcinstq4-1:i386 \
libpthread-stubs0 libpth-dev libstdc++5 lsb-cxx make \
pdksh openssh-server rlwrap rpm sysstat unixodbc unixodbc-dev x11-utils \
zlibc libglapi-mesa:i386 libglu1-mesa:i386 libqt4-opengl:i386 \
libpthread-workqueue0       libpthread-workqueue-dev       libzthread-2.3-2
libzthread-dev \
libpthread-stubs0-dev libaio-dev
```

(N.B. if any package is missing, google it to fix).

DB Directory Permissions

Let's set oinstall group to access oracle installation.

```
chown -R oracle:oinstall /tmp/database
```

Host file

Host file should contain the fully qualified name for the local server.

Open hosts file

```
cat /etc/hosts
```

It should have a record similar to following

```
127.0.0.1    localhost
```

Grant Connection to X Server

You need this step to load installation UI as oracle user

Test the x server

```
xclock
```

If you see a clock running you are good to go

Now run

```
xhost
```

Result should be

```
xhost SI:localuser:sajid
# sajid is my user name
```

Now let oracle user to access xhost

```
xhost +SI:localuser:oracle
```

Symlinks to Binaries and Libraries

Linking Binaries

```
ln -s /usr/bin/awk /bin/awk
ln -s /usr/bin/rpm /bin/rpm
ln -s /usr/bin/basename /bin/basename
```

Linking Libraries

```
ln -s /usr/lib/x86_64-linux-gnu /usr/lib64
cd /lib64
ln -s /lib/x86_64-linux-gnu/libgcc_s.so.1 .
```

Make Target Directories

```
mkdir -p /u01/app/oracle/product/12.2.0/dbhome_1
# dbhome_1 is database location
chown -R oracle:oinstall /u01
chmod -R 775 /u01
```

Setup configuration parameters

To add Oracle 12c Kernel Parameters, open

```
sudo nano /etc/sysctl.conf
```

Add to the end of the file

```
#### Oracle 12c Kernel Parameters ####
fs.suid_dumpable = 1
fs.aio-max-nr = 1048576
fs.file-max = 6815744
kernel.shmall = 2097152
kernel.shmmax = 536870912
```

```
kernel.shmmni = 4096
# semaphores: semmsl, semmns, semopm, semmni
kernel.sem = 250 32000 100 128
net.ipv4.ip_local_port_range = 9000 65500
net.core.rmem_default=4194304
net.core.rmem_max=4194304
net.core.wmem_default=262144
net.core.wmem_max=1048586
```

Oracle User Settings for Oracle 12c

```
sudo nano /etc/security/limits.conf
```

Add the following lines

```
#### oracle User Settings 4 Oracle 12c ####
oracle       soft  nproc  2047
oracle       hard  nproc  16384
oracle       soft  nofile 1024
oracle       hard  nofile 65536
oracle       soft  stack  10240
```

Add Paths to oracle's `.bashrc`

Login as Oracle

```
su oracle
```

Edit .bashrc file

```
sudo nano ~/.bashrc
```

Insert:

```
# Oracle Settings
TMP=/tmp;
export TMP TMPDIR=$TMP;
export TMPDIR ORACLE_HOSTNAME=127.0.0.1;
export ORACLE_HOSTNAME
ORACLE_UNQNAME=DB12C;
export ORACLE_UNQNAME
ORACLE_BASE=/u01/app/oracle;
```

```
export ORACLE_BASE
ORACLE_HOME=$ORACLE_BASE/product/12.2.0/dbhome_1;
export ORACLE_HOME
ORACLE_SID=SID;
export ORACLE_SID
PATH=/usr/sbin:$PATH;
export PATH
PATH=$ORACLE_HOME/bin:$PATH;
export PATH
LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib:/usr/lib64;
export LD_LIBRARY_PATH
CLASSPATH=$ORACLE_HOME/jlib:$ORACLE_HOME/rdbms/jlib;
export CLASSPATH
```

(N.B.: be careful about paths)

Installation

Load the New Kernel Parameters.

```
/sbin/sysctl -p
```

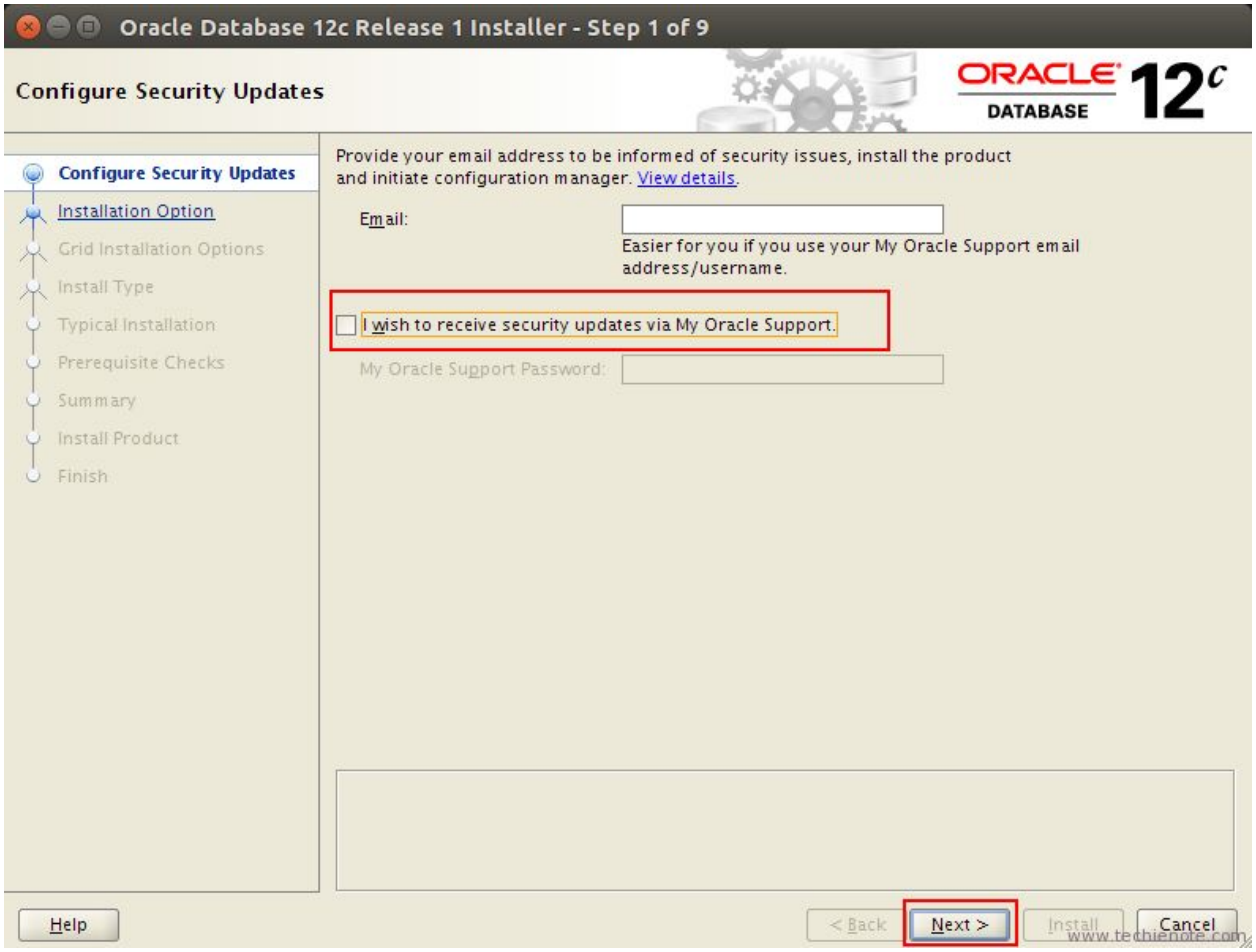
Load New .bashrc Settings

```
source ~/.bashrc
```

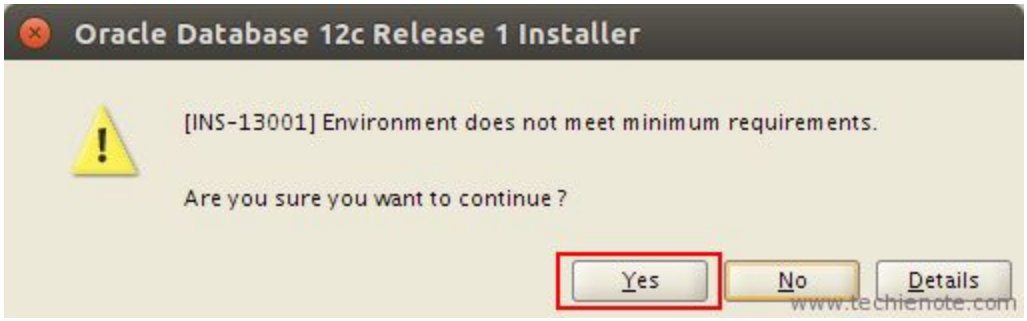
Installation

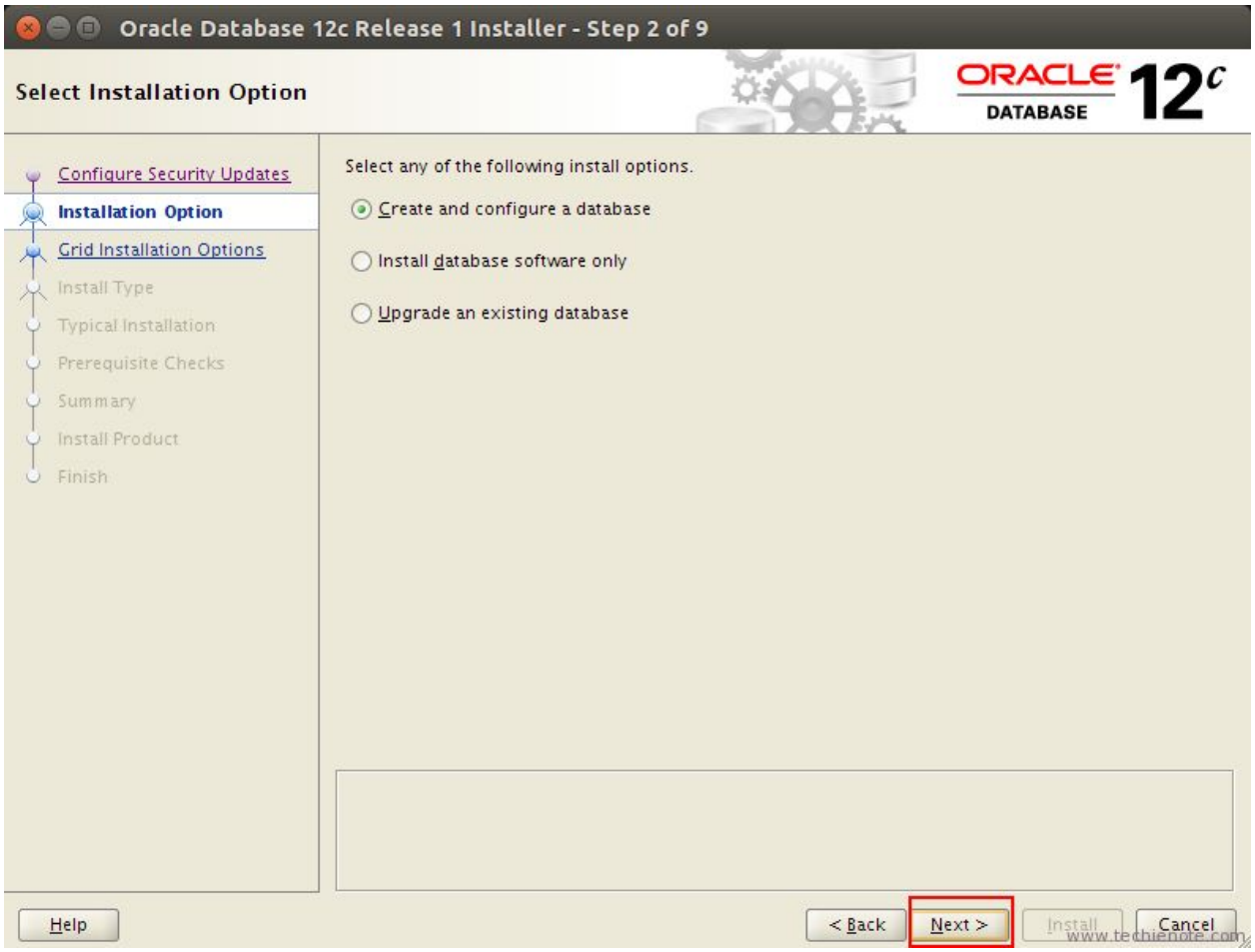
```
sudo chmod -R +x /tmp/database
/tmp/database/runInstaller
```

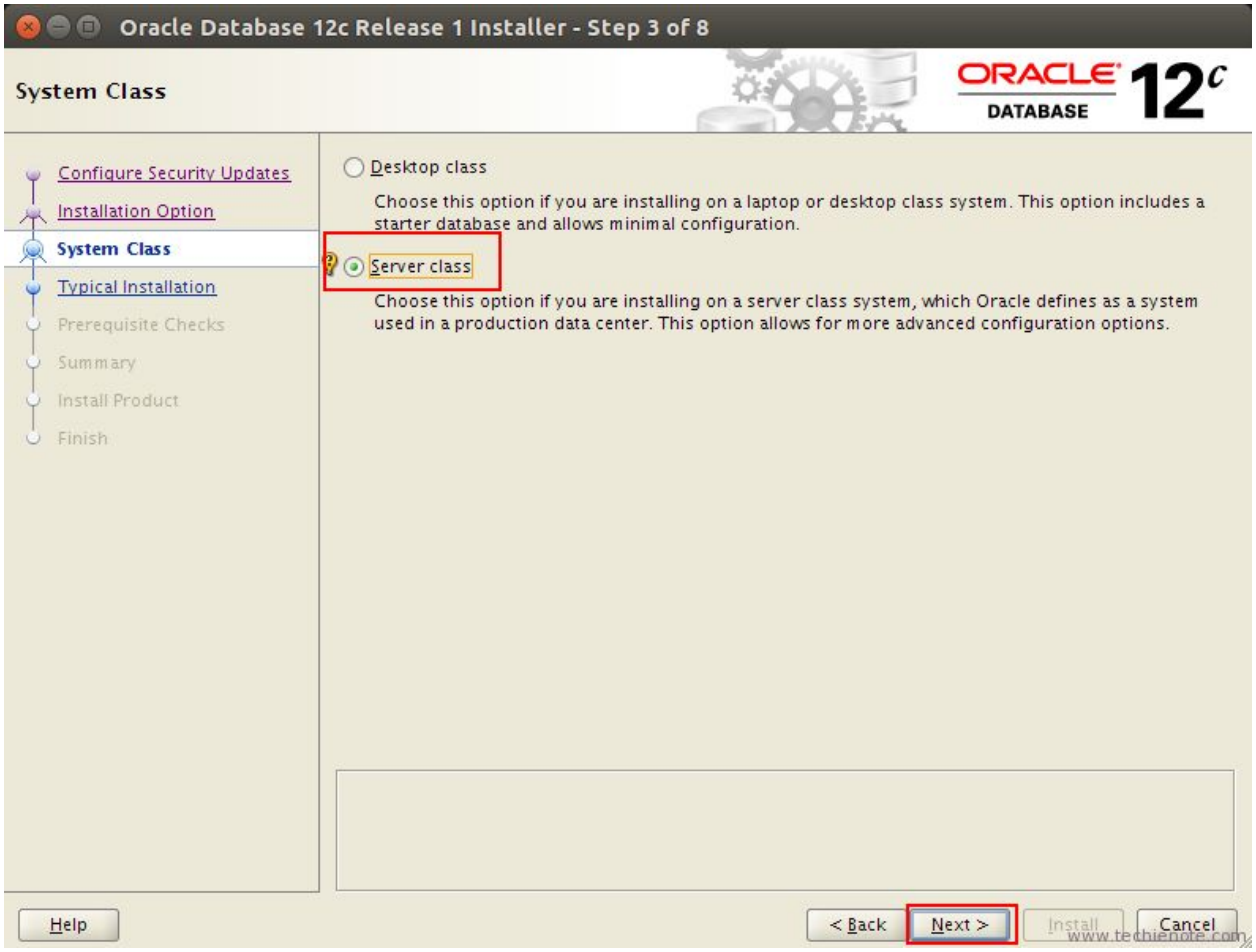
UI Steps



As the Ubuntu isn't a OS supported by oracle this error occurs, click yes.


Oracle Database 12c Release 1 Installer
[INS-13001] Environment does not meet minimum requirements.
Are you sure you want to continue ?
Yes
No
Details
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 2 of 9
Select Installation Option
ORACLE 12c
DATABASE
Configure Security Updates
Installation Option
Grid Installation Options
Install Type
Typical Installation
Prerequisite Checks
Summary
Install Product
Finish
Select any of the following install options.
Create and configure a database
Install database software only
Upgrade an existing database
Help
< Back
Next >
Install
Cancel
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 3 of 8
System Class
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Typical Installation
Prerequisite Checks
Summary
Install Product
Finish
Desktop class
Choose this option if you are installing on a laptop or desktop class system. This option includes a starter database and allows minimal configuration.
Server class
Choose this option if you are installing on a server class system, which Oracle defines as a system used in a production data center. This option allows for more advanced configuration options.
Help
< Back
Next >
Install
Cancel
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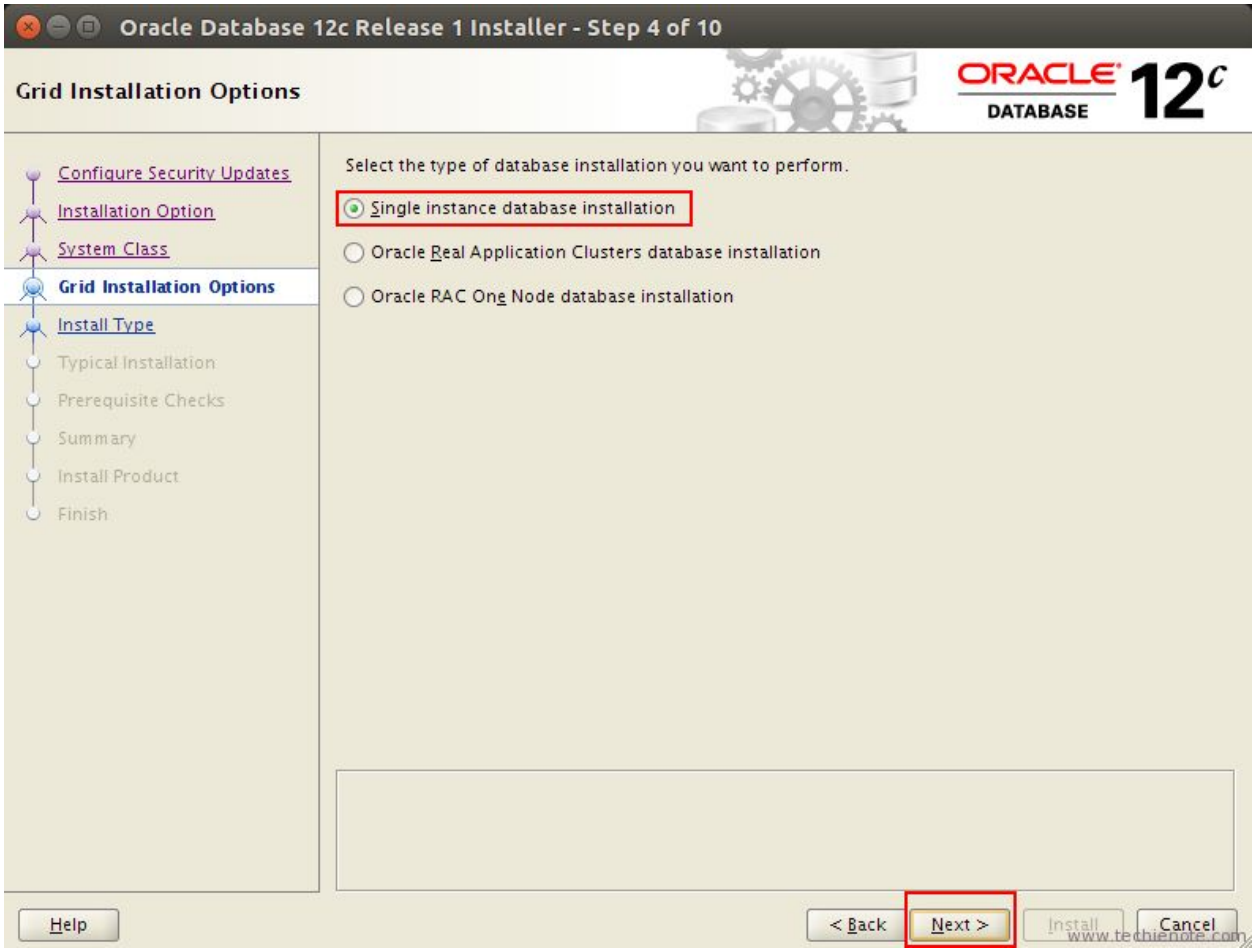
Oracle Database 12c Release 1 Installer - Step 4 of 10
Grid Installation Options
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Typical Installation
Prerequisite Checks
Summary
Install Product
Finish
Select the type of database installation you want to perform.
Single instance database installation
Oracle Real Application Clusters database installation
Oracle RAC One Node database installation
Help
< Back
Next >
Install
Cancel
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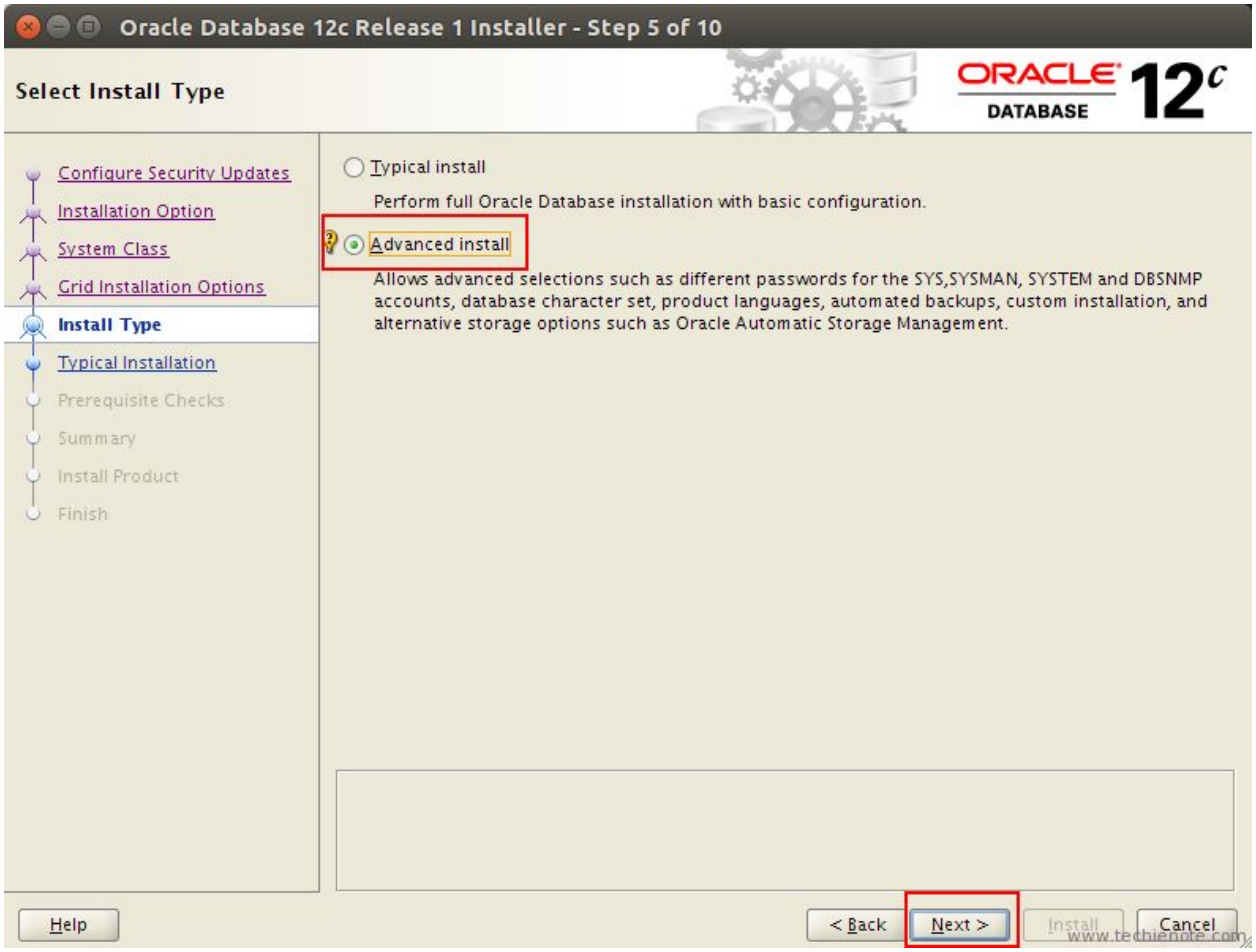
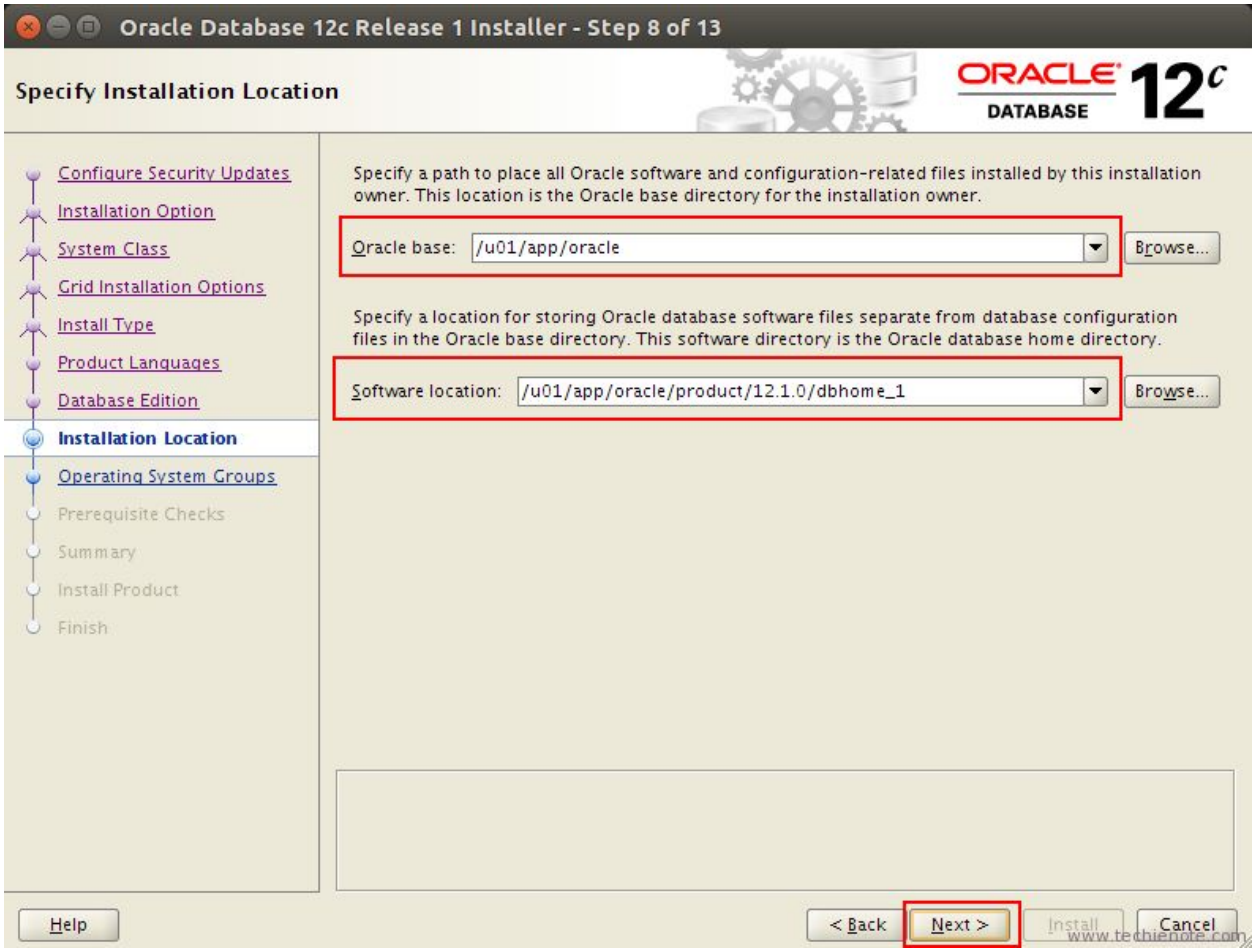

Oracle Database 12c Release 1 Installer - Step 5 of 10
Select Install Type
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Typical Installation
Prerequisite Checks
Summary
Install Product
Finish
Typical install
Perform full Oracle Database installation with basic configuration.
Advanced install
Allows advanced selections such as different passwords for the SYS,SYSMAN, SYSTEM and DBSNMP accounts, database character set, product languages, automated backups, custom installation, and alternative storage options such as Oracle Automatic Storage Management.
Help
< Back
Next >
Install
Cancel
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 8 of 13
Specify Installation Location
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish
Specify a path to place all Oracle software and configuration-related files installed by this installation owner. This location is the Oracle base directory for the installation owner.
Oracle base: /u01/app/oracle
Browse...
Specify a location for storing Oracle database software files separate from database configuration files in the Oracle base directory. This software directory is the Oracle database home directory.
Software location: /u01/app/oracle/product/12.1.0/dbhome_1
Browse...
Help
< Back
Next >
Install
Cancel
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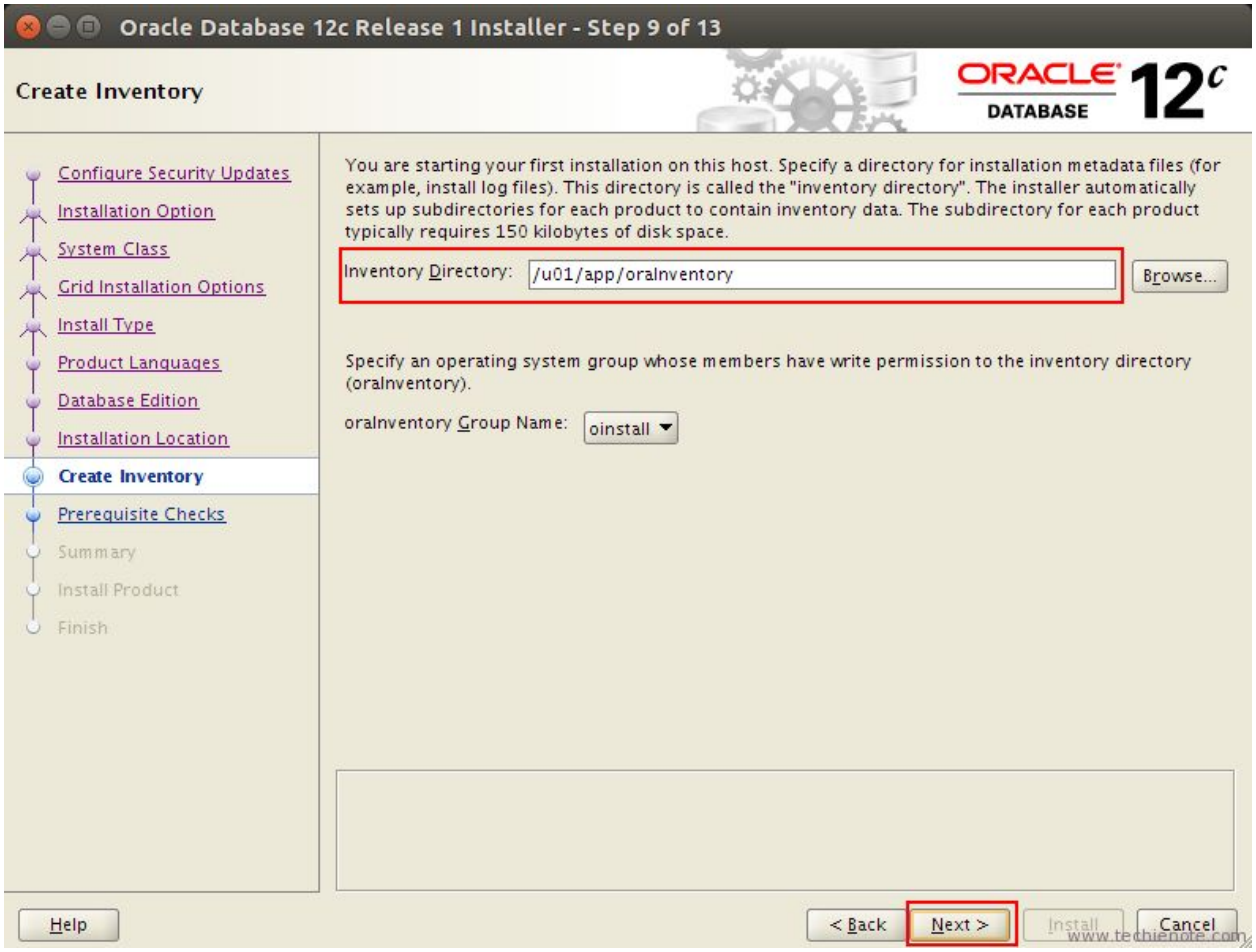
Oracle Database 12c Release 1 Installer - Step 9 of 13
Create Inventory
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Create Inventory
Prerequisite Checks
Summary
Install Product
Finish
You are starting your first installation on this host. Specify a directory for installation metadata files (for example, install log files). This directory is called the "inventory directory". The installer automatically sets up subdirectories for each product to contain inventory data. The subdirectory for each product typically requires 150 kilobytes of disk space.
Inventory Directory: /u01/app/oraInventory
Browse...
Specify an operating system group whose members have write permission to the inventory directory (oraInventory).
oraInventory Group Name: oinstall
Help
< Back
Next >
Install
Cancel
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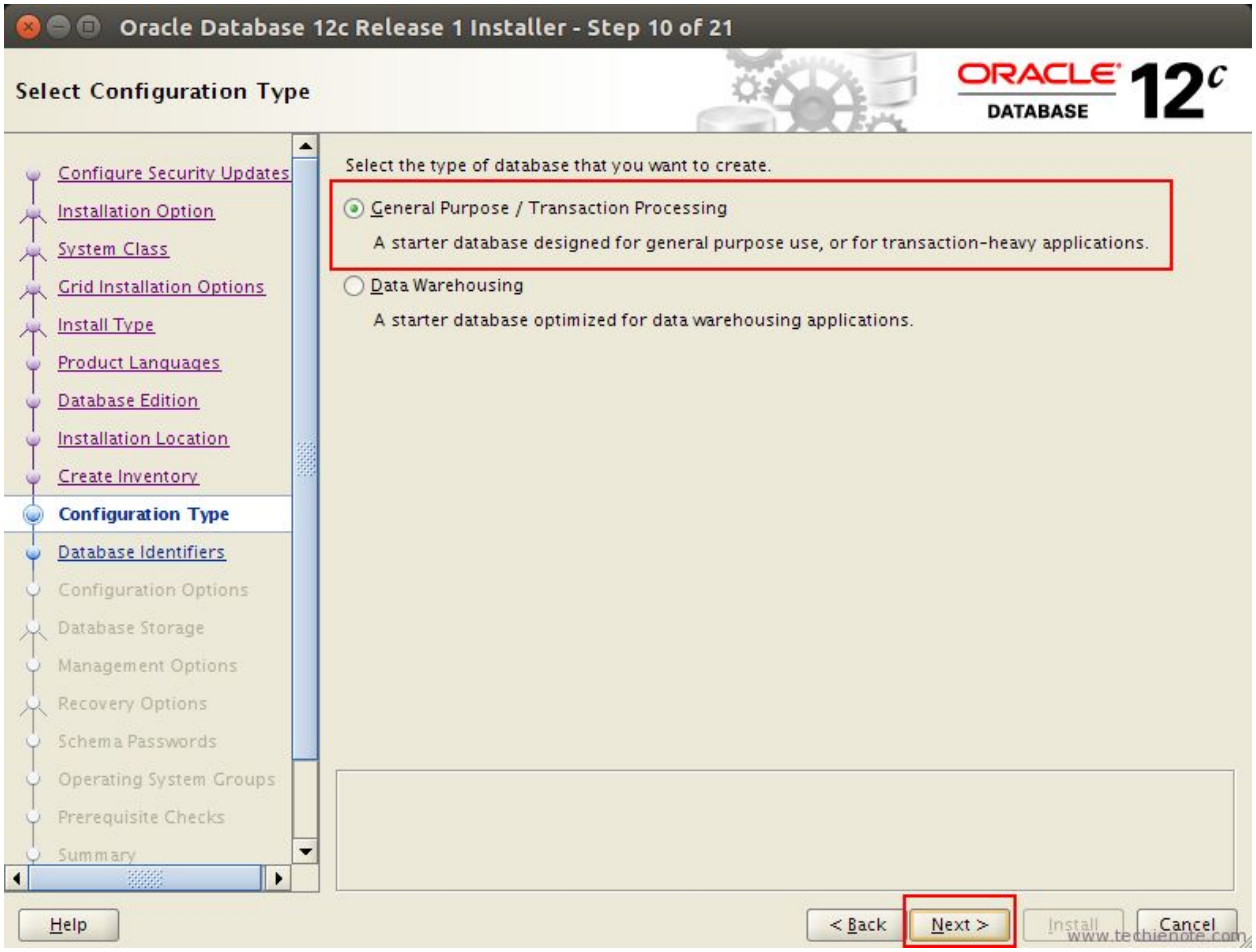
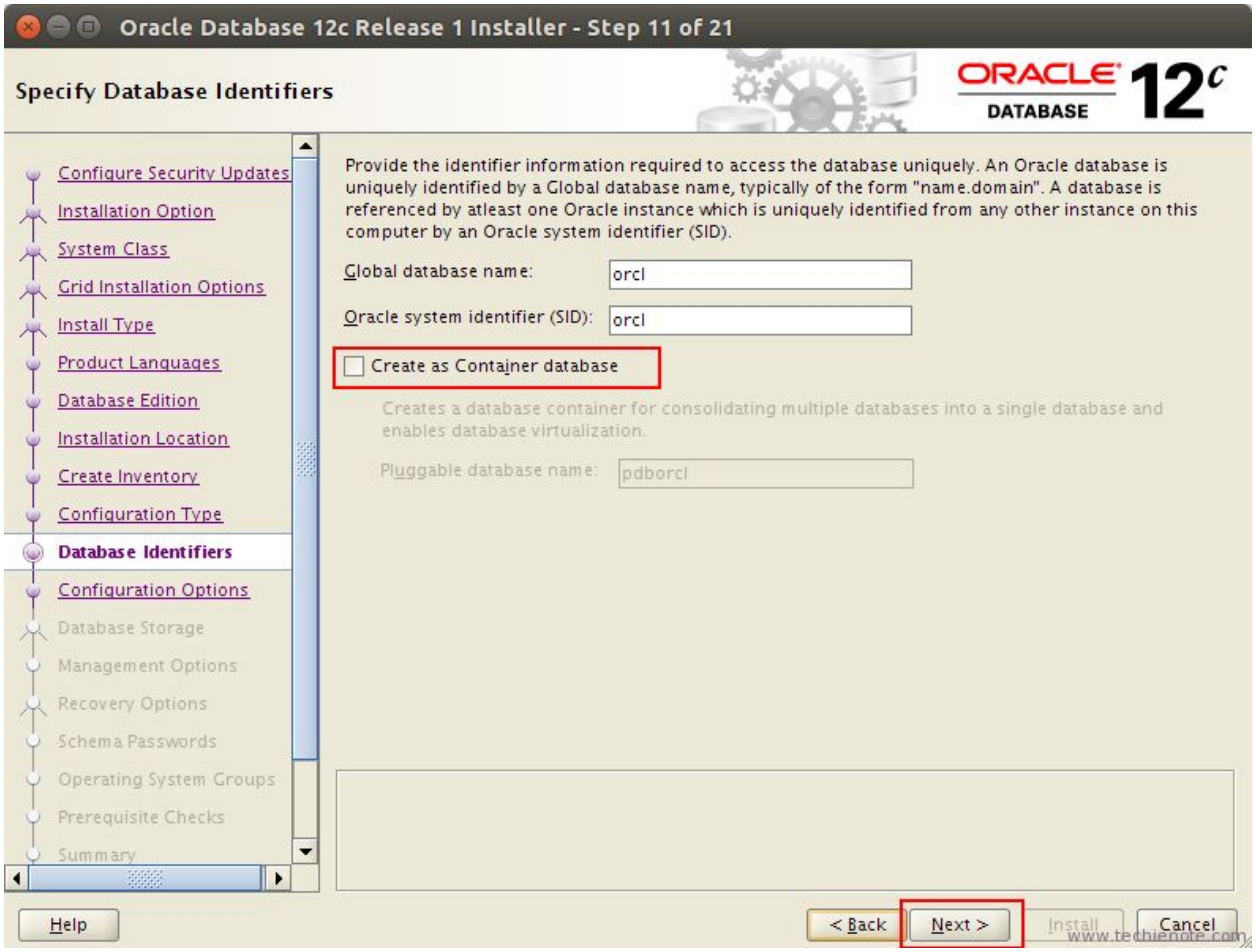

Oracle Database 12c Release 1 Installer - Step 10 of 21
Select Configuration Type
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Create Inventory
Configuration Type
Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Select the type of database that you want to create.
General Purpose / Transaction Processing
A starter database designed for general purpose use, or for transaction-heavy applications.
Data Warehousing
A starter database optimized for data warehousing applications.
Help
< Back
Next >
Install
Cancel
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 11 of 21
Specify Database Identifiers
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Create Inventory
Configuration Type
Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Provide the identifier information required to access the database uniquely. An Oracle database is uniquely identified by a Global database name, typically of the form "name.domain". A database is referenced by atleast one Oracle instance which is uniquely identified from any other instance on this computer by an Oracle system identifier (SID).
Global database name:
orcl
Oracle system identifier (SID):
orcl
Create as Container database
Creates a database container for consolidating multiple databases into a single database and enables database virtualization.
Pluggable database name:
pdborcl
Help
< Back
Next >
Install
Cancel
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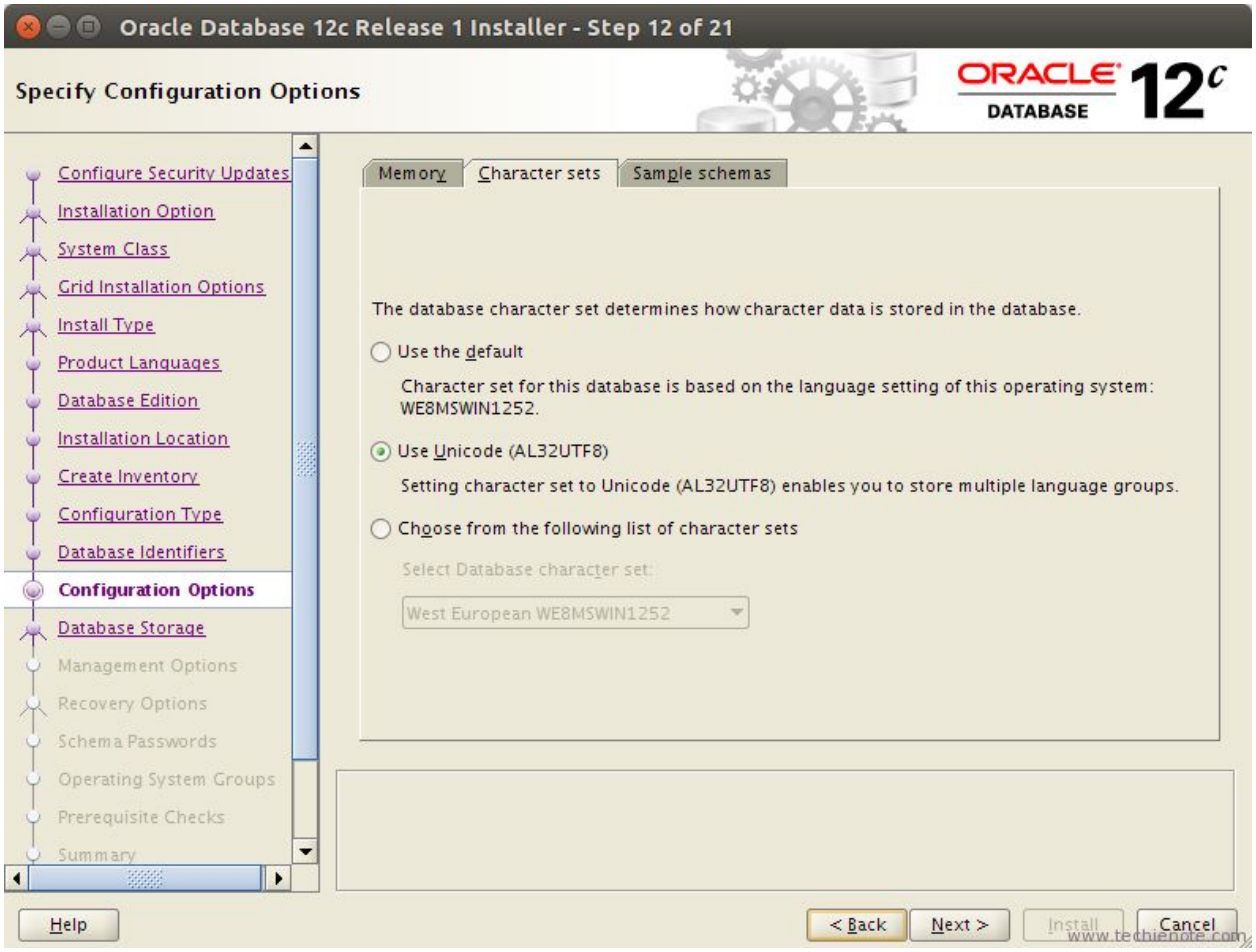
Oracle Database 12c Release 1 Installer - Step 12 of 21
Specify Configuration Options
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Create Inventory
Configuration Type
Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Memory
Character sets
Sample schemas
The database character set determines how character data is stored in the database.
Use the default
Character set for this database is based on the language setting of this operating system: WE8MSWIN1252.
Use Unicode (AL32UTF8)
Setting character set to Unicode (AL32UTF8) enables you to store multiple language groups.
Choose from the following list of character sets
Select Database character set:
West European WE8MSWIN1252
Help
< Back
Next >
Install
Cancel
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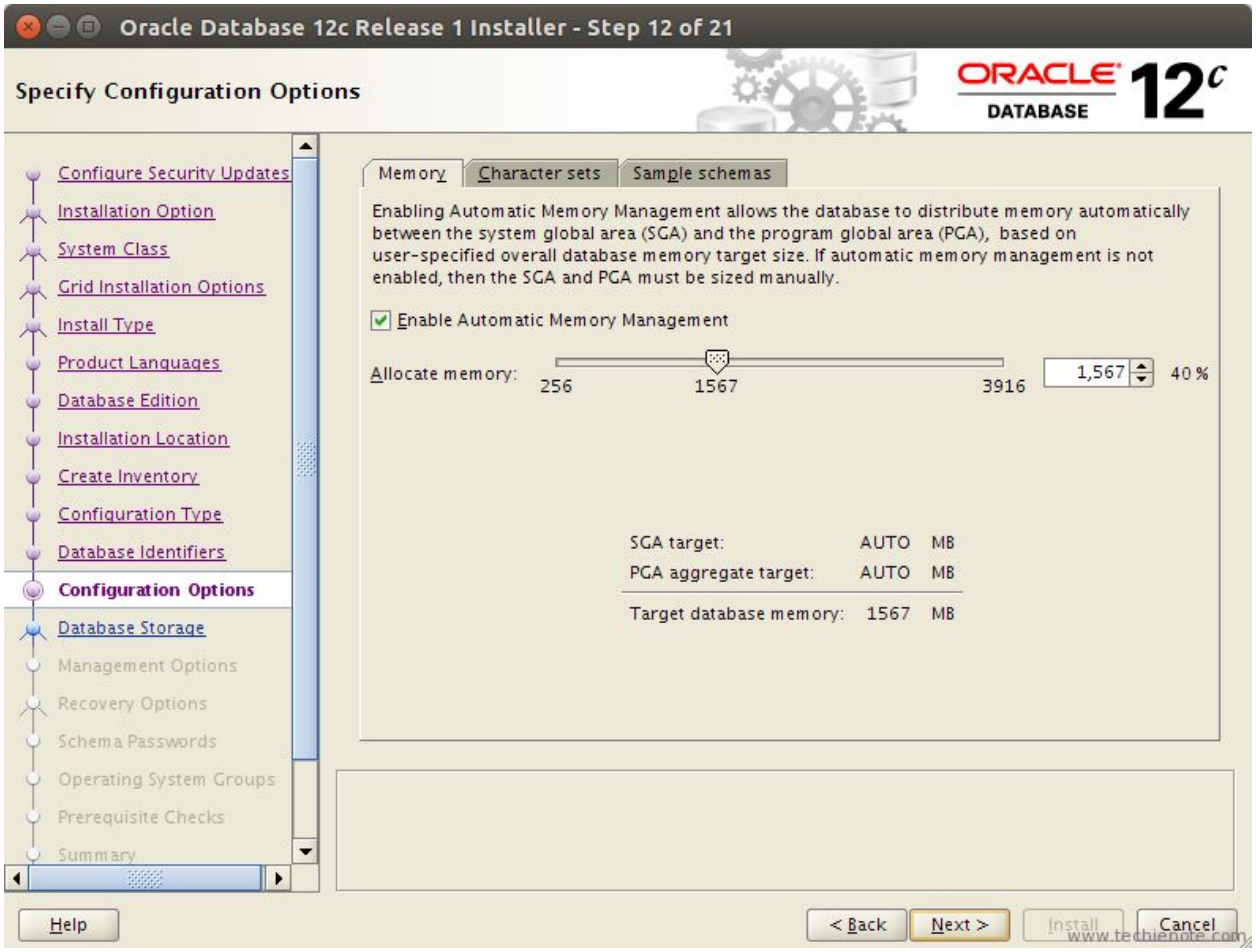
Oracle Database 12c Release 1 Installer - Step 12 of 21
Specify Configuration Options
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
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Create Inventory
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Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Memory
Character sets
Sample schemas
Enabling Automatic Memory Management allows the database to distribute memory automatically between the system global area (SGA) and the program global area (PGA), based on user-specified overall database memory target size. If automatic memory management is not enabled, then the SGA and PGA must be sized manually.
Enable Automatic Memory Management
Allocate memory:
256
1567
3916
1,567
40 %
SGA target: AUTO MB
PGA aggregate target: AUTO MB
Target database memory: 1567 MB
Help
< Back
Next >
Install
Cancel
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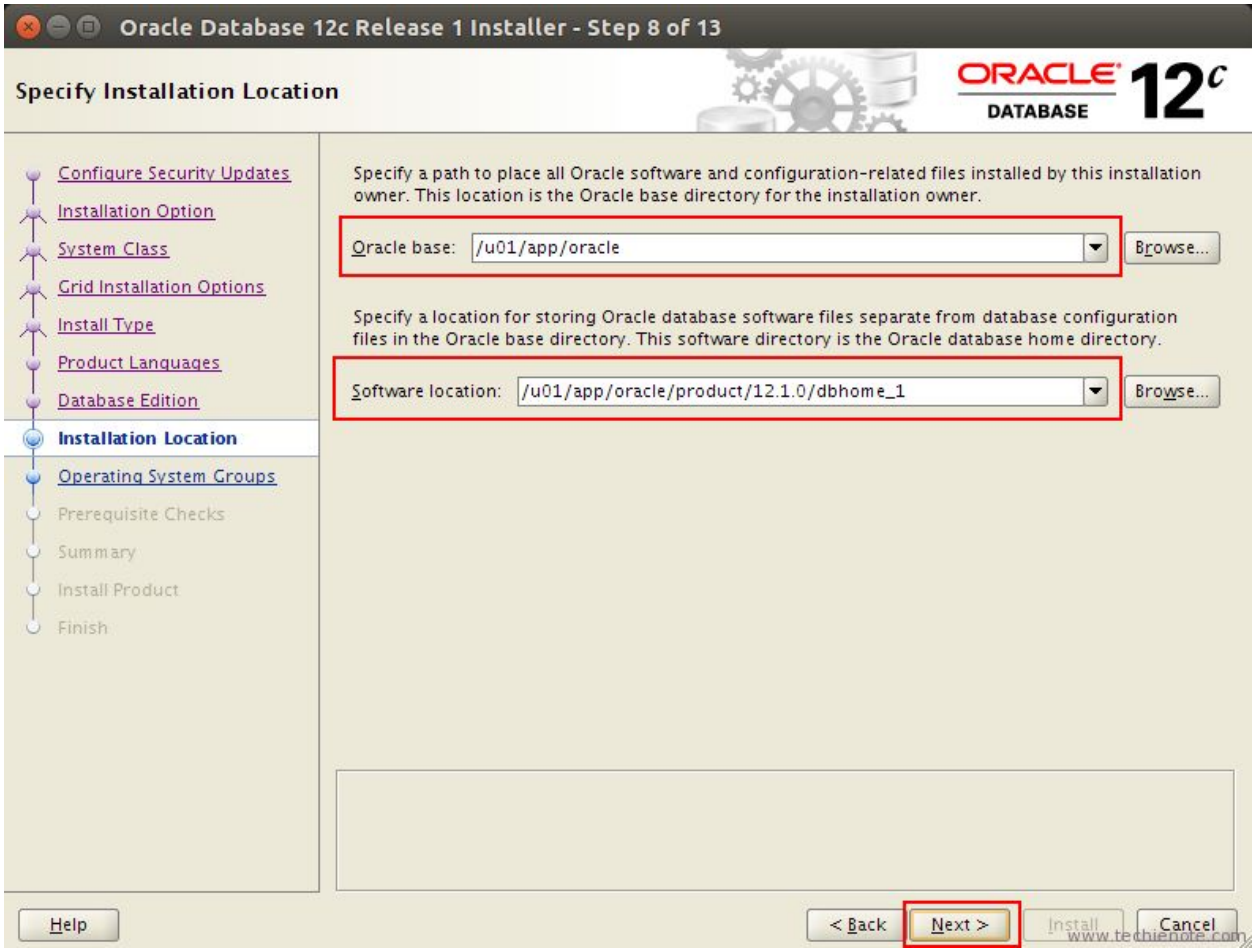
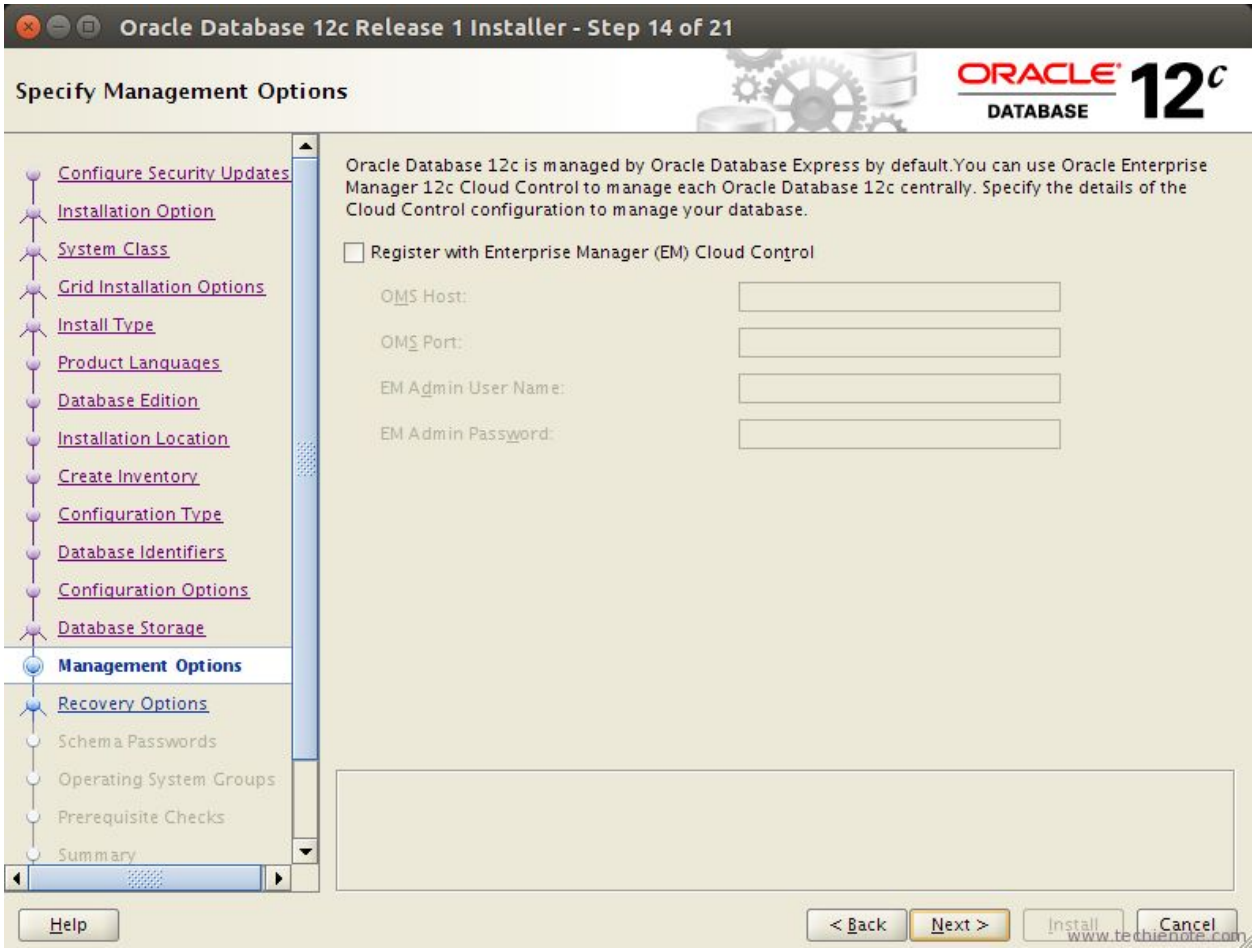
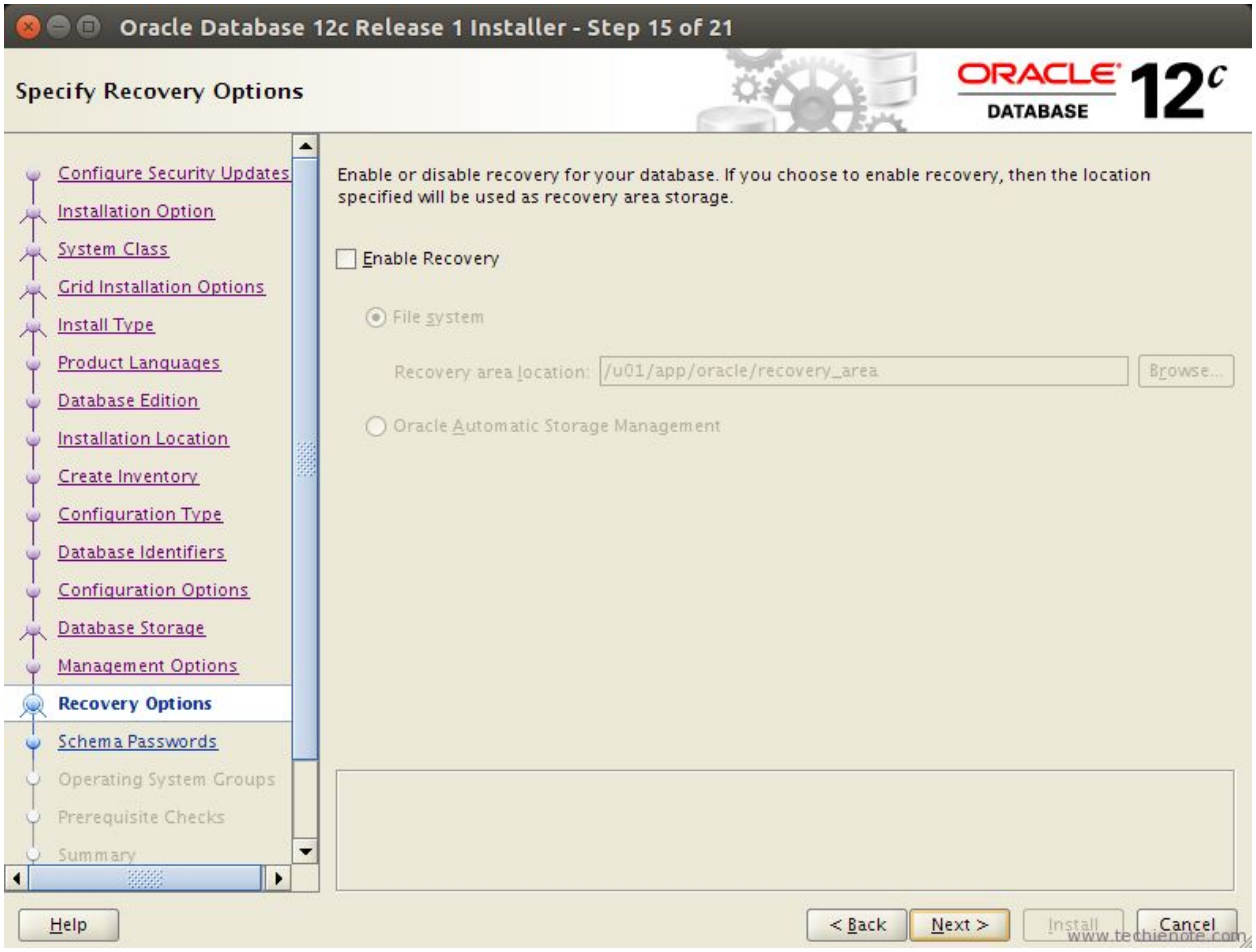

Oracle Database 12c Release 1 Installer - Step 8 of 13
Specify Installation Location
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish
Specify a path to place all Oracle software and configuration-related files installed by this installation owner. This location is the Oracle base directory for the installation owner.
Oracle base: /u01/app/oracle
Browse...
Specify a location for storing Oracle database software files separate from database configuration files in the Oracle base directory. This software directory is the Oracle database home directory.
Software location: /u01/app/oracle/product/12.1.0/dbhome_1
Browse...
Help
< Back
Next >
Install
Cancel
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 14 of 21
Specify Management Options
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
Create Inventory
Configuration Type
Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Oracle Database 12c is managed by Oracle Database Express by default.You can use Oracle Enterprise Manager 12c Cloud Control to manage each Oracle Database 12c centrally. Specify the details of the Cloud Control configuration to manage your database.
Register with Enterprise Manager (EM) Cloud Control
OMS Host:
OMS Port:
EM Admin User Name:
EM Admin Password:
Help
< Back
Next >
Install
Cancel
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 15 of 21
Specify Recovery Options
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
Installation Location
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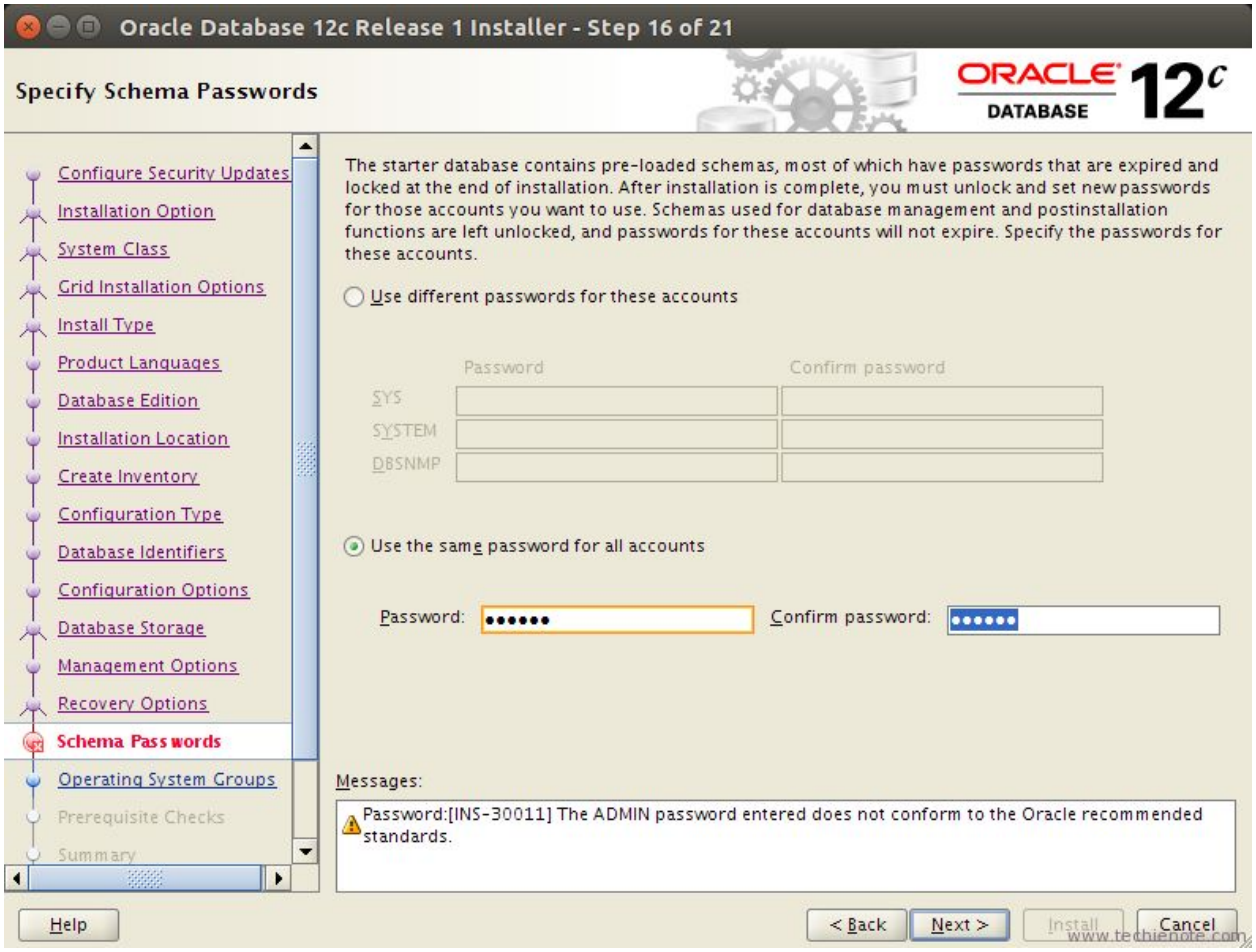
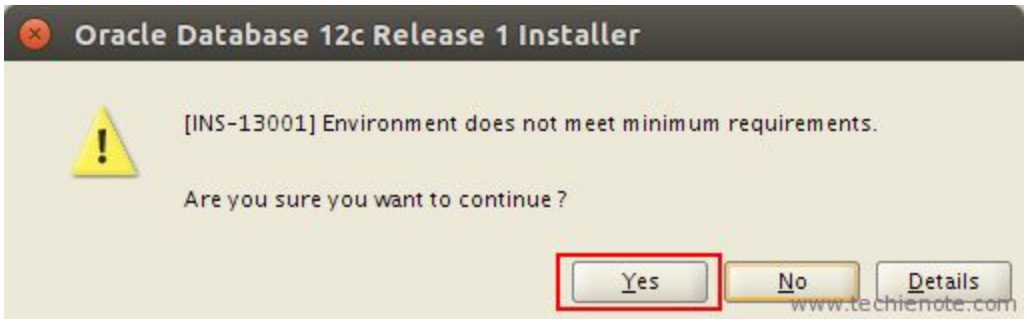
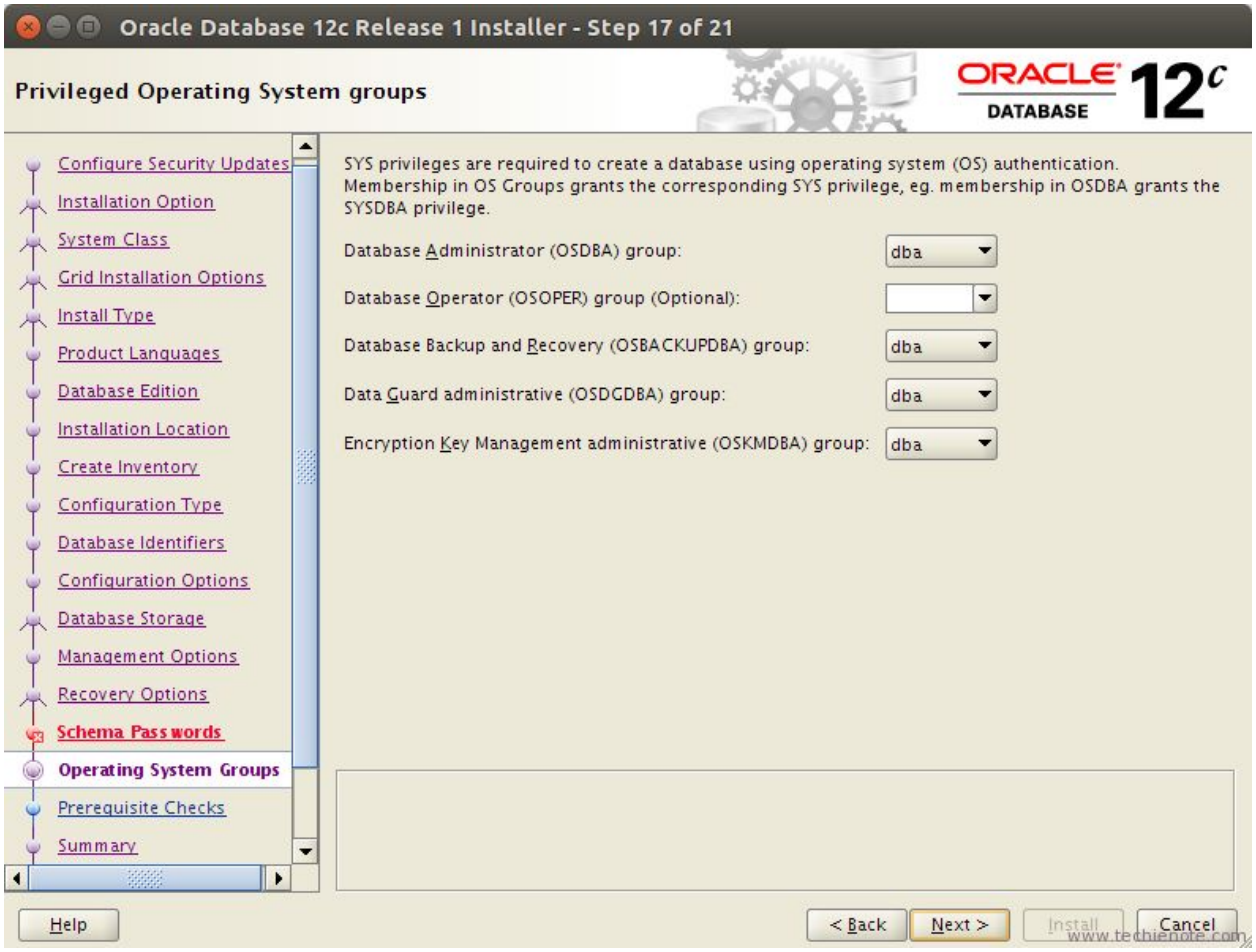
Configuration Type
Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Enable or disable recovery for your database. If you choose to enable recovery, then the location specified will be used as recovery area storage.
Enable Recovery
File system
Recovery area location: /u01/app/oracle/recovery_area
Browse...
Oracle Automatic Storage Management
Help
< Back
Next >
Install
Cancel
www.techienote.com



It may give warning




Oracle Database 12c Release 1 Installer - Step 17 of 21
Privileged Operating System groups
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
System Class
Grid Installation Options
Install Type
Product Languages
Database Edition
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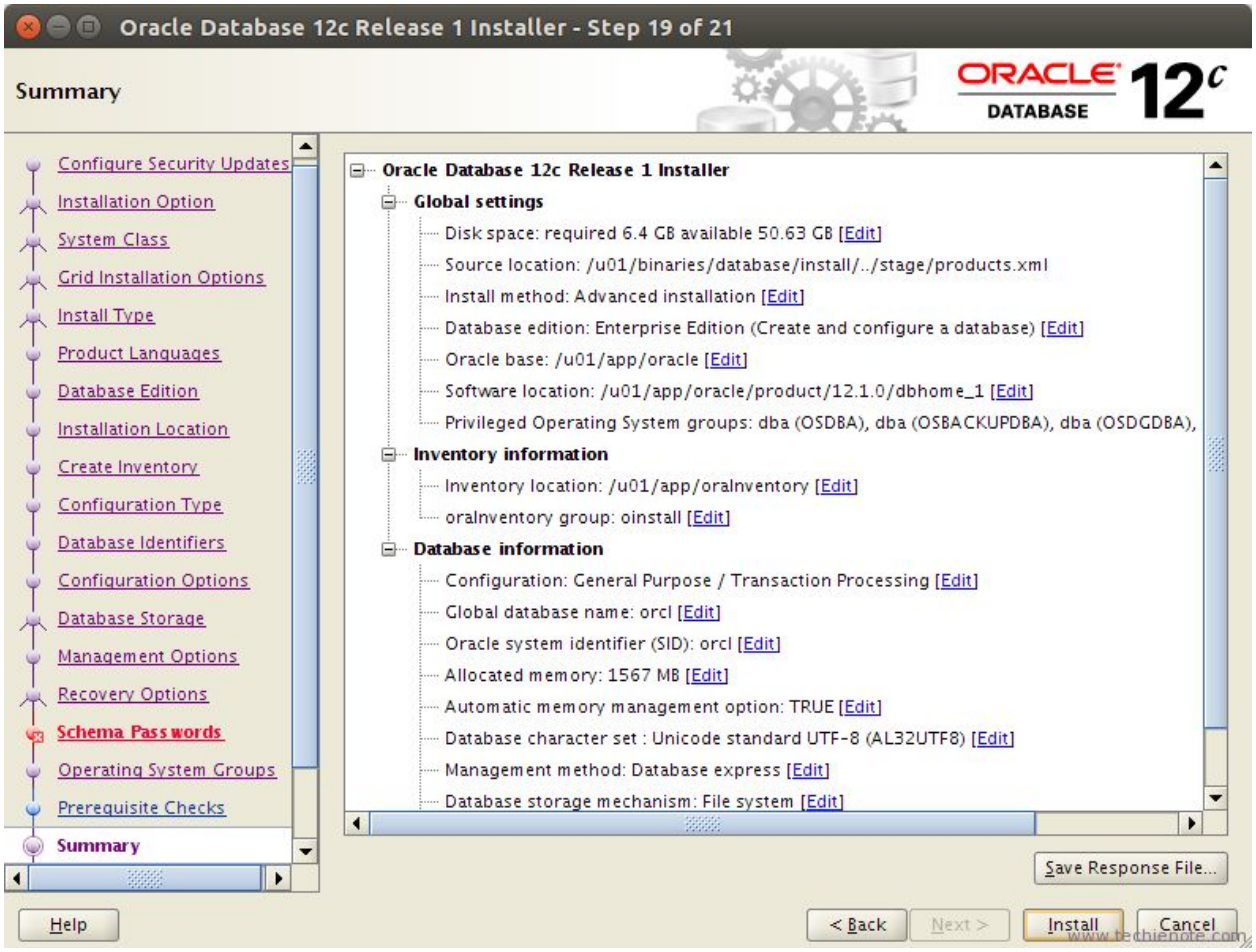
Configuration Type
Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
SYS privileges are required to create a database using operating system (OS) authentication. Membership in OS Groups grants the corresponding SYS privilege, eg. membership in OSDBA grants the SYSDBA privilege.
Database Administrator (OSDBA) group:
dba
Database Operator (OSOPER) group (Optional):
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
www.techienote.com


Oracle Database 12c Release 1 Installer - Step 19 of 21
Summary
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
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Grid Installation Options
Install Type
Product Languages
Database Edition
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Database Identifiers
Configuration Options
Database Storage
Management Options
Recovery Options
Schema Passwords
Operating System Groups
Prerequisite Checks
Summary
Oracle Database 12c Release 1 Installer
Global settings
Disk space: required 6.4 GB available 50.63 GB [Edit]
Source location: /u01/binaries/database/install/../stage/products.xml
Install method: Advanced installation [Edit]
Database edition: Enterprise Edition (Create and configure a database) [Edit]
Oracle base: /u01/app/oracle [Edit]
Software location: /u01/app/oracle/product/12.1.0/dbhome_1 [Edit]
Privileged Operating System groups: dba (OSDBA), dba (OSBACKUPDBA), dba (OSDGDBA),
Inventory information
Inventory location: /u01/app/oraInventory [Edit]
oraInventory group: oinstall [Edit]
Database information
Configuration: General Purpose / Transaction Processing [Edit]
Global database name: orcl [Edit]
Oracle system identifier (SID): orcl [Edit]
Allocated memory: 1567 MB [Edit]
Automatic memory management option: TRUE [Edit]
Database character set : Unicode standard UTF-8 (AL32UTF8) [Edit]
Management method: Database express [Edit]
Database storage mechanism: File system [Edit]
Save Response File...
Help
< Back
Next >
Install
Cancel
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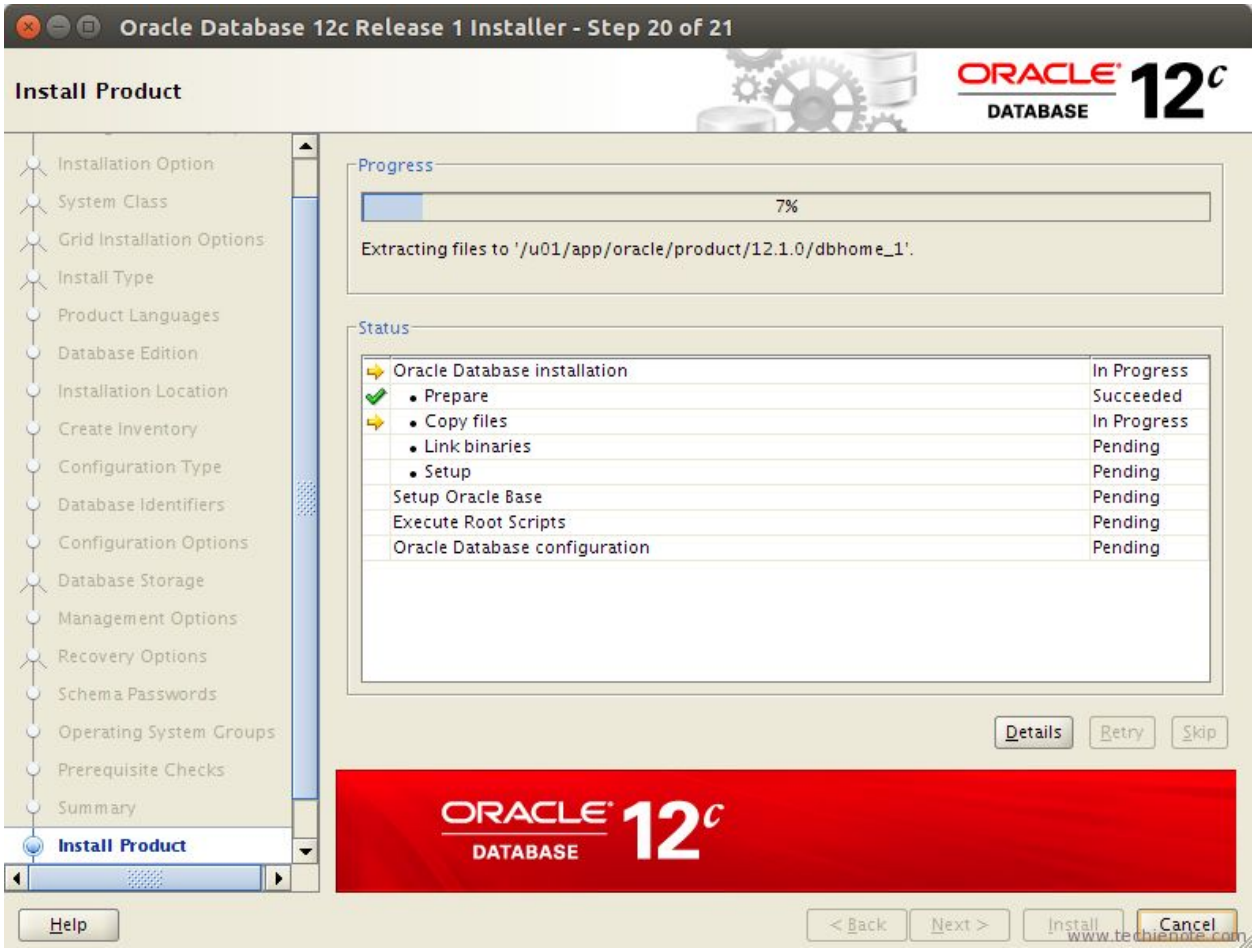
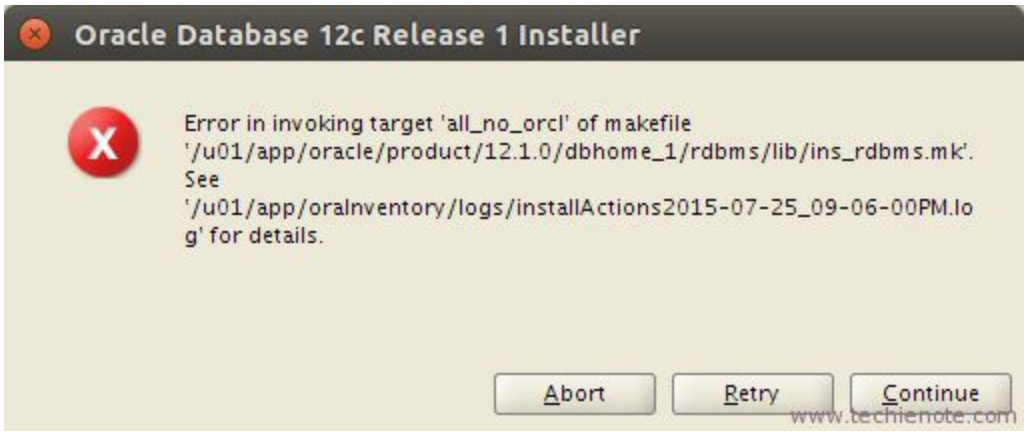
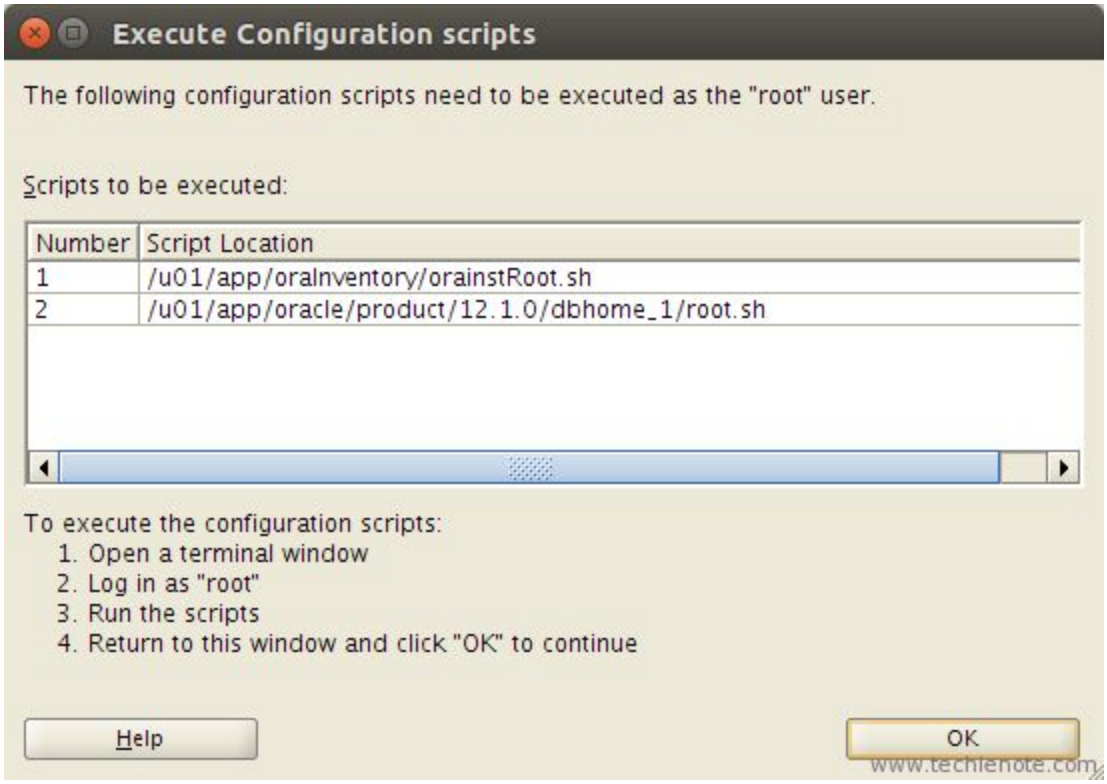


Once you clicked on install button real installation begins. After this point you expect a lot of errors can't ignore. When you see a error message don't abort or skip, just refer the troubleshooting section.
You can find the files from here.
Copy the related files to the directores, for more details, see youtube.



When it is done, you will see

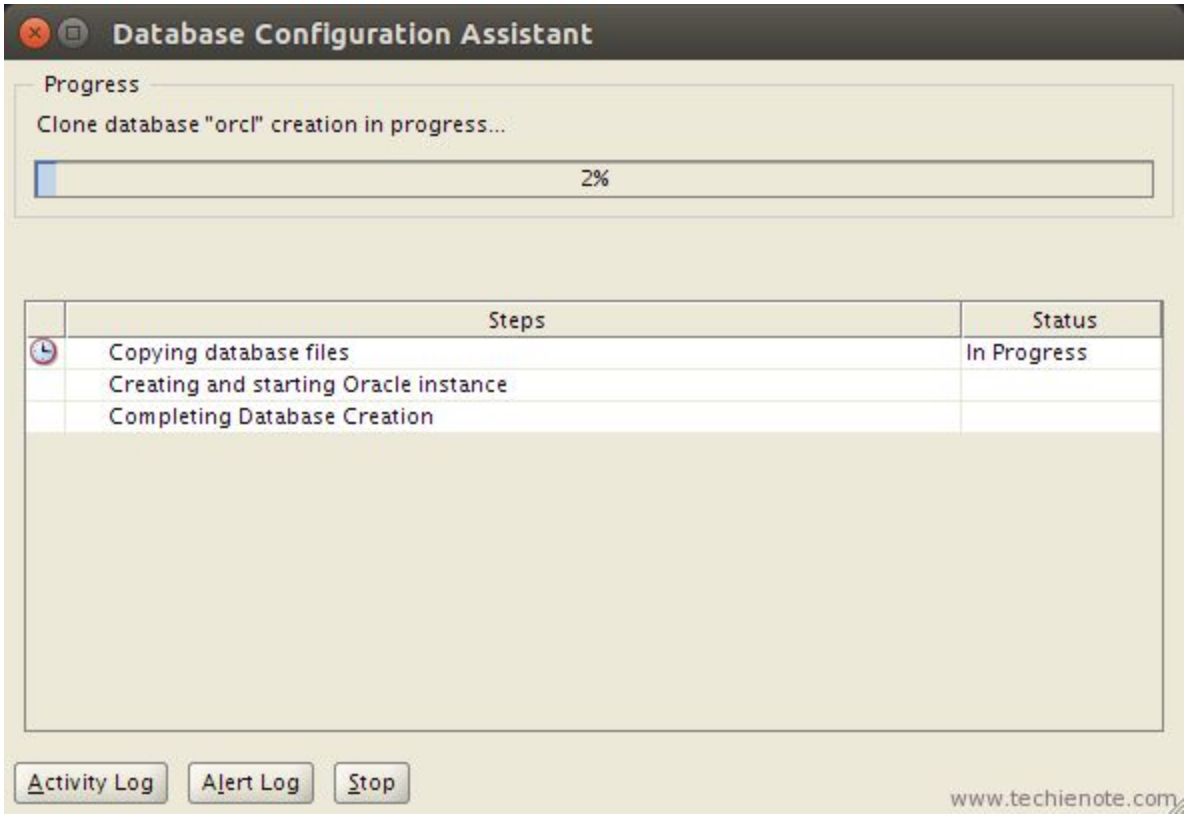


Now as per the instructions run the following commands with root / root equivalent user:

```
--/u01/app/oraInventory/orainstRoot.sh
--/u01/app/oracle/product/12/dbhome_1/root.sh
```

You will see something like

```
Copying dbhome to /usr/local/bin ...
Copying oraenv to /usr/local/bin ...
Copying coraenv to /usr/local/bin ...
/etc/oratab file
```


Database Configuration Assistant
Progress
Clone database "orcl" creation in progress...
2%
Steps
Status
Copying database files
In Progress
Creating and starting Oracle instance
Completing Database Creation
Activity Log
Alert Log
Stop
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Database Configuration Assistant
Database creation complete. For details check the logfiles at:
/u01/app/oracle/cfgtoollogs/dbca/orcl.
Database Information:
Global Database Name: orcl
System Identifier(SID): orcl
Server Parameter File name: /u01/app/oracle/product/12.1.0/dbhome_1/dbs/spfileorcl.ora
EM Database Express URL: https://techienote:5500/em
Note: All database accounts except SYS and SYSTEM are locked. Select the Password Management button to view a complete list of locked accounts or to manage the database accounts. From the Password Management window, unlock only the accounts you will use. Oracle strongly recommends changing the default passwords immediately after unlocking the account.
Password Management...
OK
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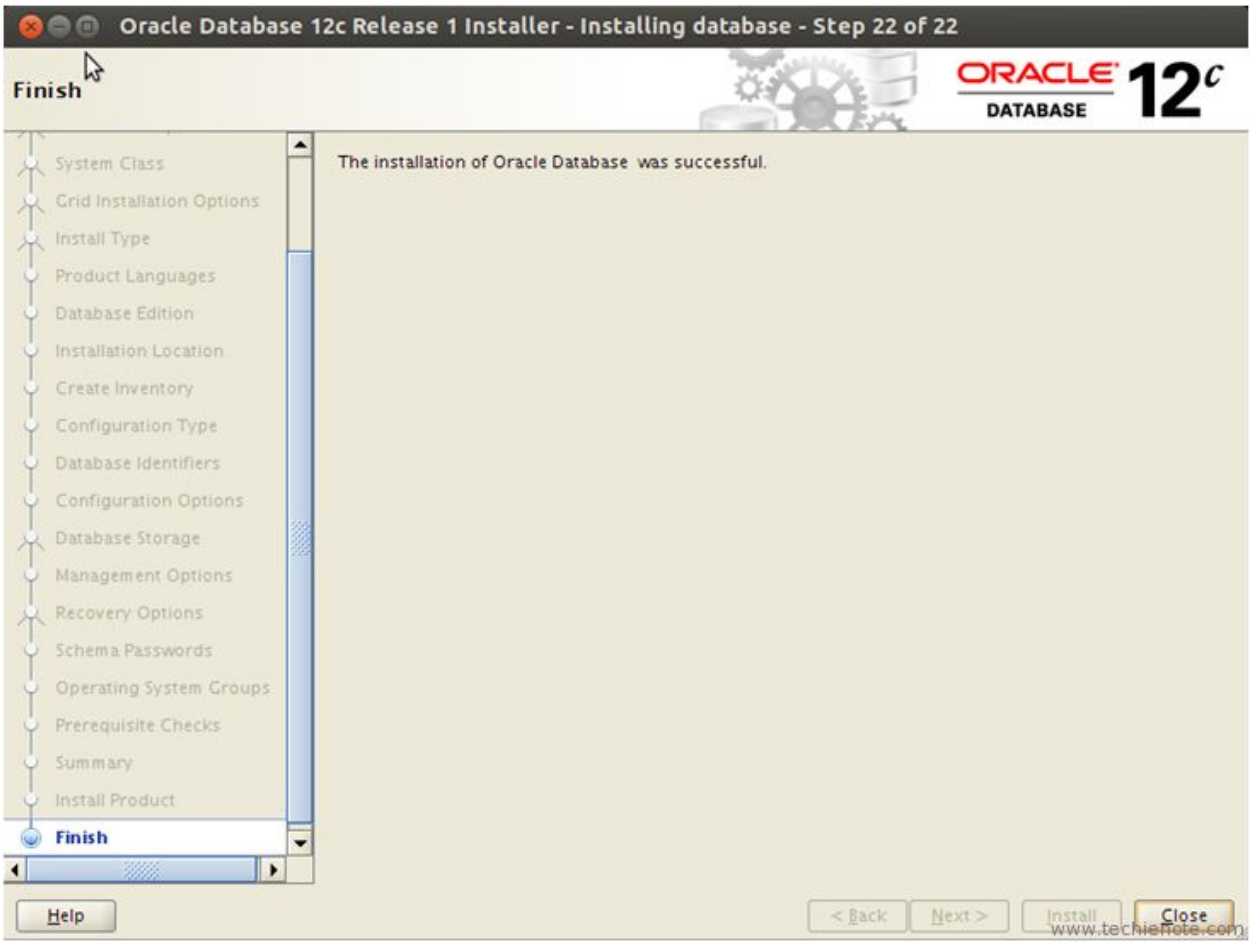


Post Installation task

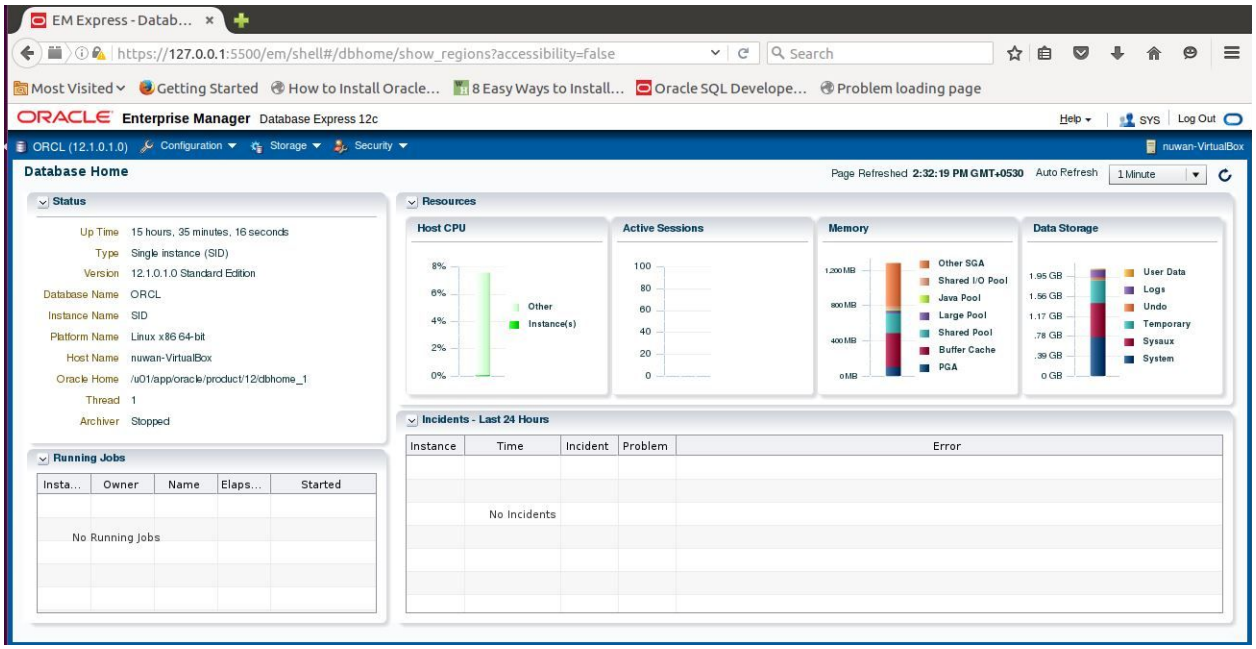
To start listener run following as oracle user

```
$ORACLE_HOME/bin/lsnrctl start
```

To start database run following

```
sqlplus /nolog
SQL> connect sys as sysdba
SQL> STARTUP;
SQL> EXIT;
```

Start em
https://127.0.0.1:5500/em



Congratulations, hope you have successfully installed Oracle database 12c on your ubuntu 16.04 64-bit machine

Sources

1) http://nu-one.blogspot.com/2016/07/oracle-database-12c-installation-on.html
2) http://codigo61.blogspot.com/2018/01/como-instalar-oracle-12c-en-linux_12.html
3) https://www.oracle.com/technetwork/database/enterprise-edition/downloads/index.html