The following installation is done from scratch.

```
## hostname
hostnamectl set-hostname orac1.powerm.ma
## Increase Swap Size to 2G
dd if=/dev/zero of=/swapfile bs=1024k count=2000
mkswap /swapfile
chmod 0600 /swapfile
swapon /swapfile
swapon -s
## Hosts file
>/etc/hosts
echo "172.20.10.7 orac1.powerm.ma orac1" >> /etc/hosts
echo "172.20.10.8 orac2.powerm.ma orac2" >> /etc/hosts
echo "## Private " >> /etc/hosts
echo "192.168.20.7 orac1.powerm.ma orac1" >> /etc/hosts
echo "192.168.20.8 orac2.powerm.ma orac2" >> /etc/hosts
echo "## Virtual" >> /etc/hosts
echo "172.20.10.10 orac1-vip.powerm.ma orac1-vip" >> /etc/hosts
echo "172.20.10.11 orac2-vip.powerm.ma orac2-vip" >> /etc/hosts
echo "## Scan " >> /etc/hosts
echo "172.20.10.100 oracclusterscan.powerm.ma oracclusterscan" >> /etc/hosts

cat /etc/hosts
## Mount CD
mount -o loop /dev/sr0  /mnt
cp /mnt/media.repo /etc/yum.repos.d/
>/etc/yum.repos.d/media.repo
echo "[rhe64]" >> /etc/yum.repos.d/media.repo
echo "name=Red hat Linux 7.4 x86_64" >> /etc/yum.repos.d/media.repo
echo "baseurl=file:///mnt" >> /etc/yum.repos.d/media.repo
echo "gpgcheck=0" >> /etc/yum.repos.d/media.repo
echo "enabled=1" >> /etc/yum.repos.d/media.repo

## Install Prerequisites
yum install gcc gcc-c++ kernel-devel autoconf automake -y
yum install binutils compat-libcap1 compat-libstdc++-33 elfutils-libelf
elfutils-libelf-devel gcc gcc-++ glibc glibc-common glibc-devel glibc-headers
ksh libaio libaio-devel libgcc libstdc++ libstdc++-devel make numactl-devel
sysstat unixODBC unixODBC-devel libXxf86vm cpp libdmx mpfr kernel-headers xorg-
x11-utils libXmu xorg-x11-xauth libXt libXv libXxf86dga nfs-utils
yum install tigervnc-server.x86_64 xclock man parted.x86_64 unzip.x86_64 xterm
lsof bind xorg-x11-twm xclock
yum install xorg-x11-xinit xorg-x11-font-utils xorg-x11-fonts-Type1 libX11-
common xorg-x11-xauth libX11 dbus-x11
yum install xorg-x11-server-utils xorg-x11-xkb-utils tigervnc-server xterm
yum install xorg-x11-fonts-75dpi xorg-x11-fonts-100dpi xorg-x11-fonts-misc

## Download the following packages from the internet
## > compat-libstdc++-33-3.2.3-72.el7.x86_64
## > xorg-x11-twm-1.0.3-5.1.el6.x86_64.rpm

rpm -ivh compat-libstdc++-33-3.2.3-72.el7.x86_64
rpm -ivh --nodeps xorg-x11-twm-1.0.3-5.1.el6.x86_64.rpm
```

```
##  System Settings
cp /etc/sysctl.conf /etc/sysctl.conf.bkup
>/etc/sysctl.conf
echo "net.ipv4.ip_forward = 0">>/etc/sysctl.conf
echo "net.ipv4.conf.default.rp_filter = 1">>/etc/sysctl.conf
echo "net.ipv4.conf.default.accept_source_route = 0">>/etc/sysctl.conf
echo "net.core.rmem_default = 262144">>/etc/sysctl.conf
echo "net.core.rmem_max = 4194304">>/etc/sysctl.conf
echo "net.core.wmem_default = 262144">>/etc/sysctl.conf
echo "net.core.wmem_max = 1048576">>/etc/sysctl.conf
echo "kernel.sysrq = 0">>/etc/sysctl.conf
echo "kernel.core_uses_pid = 1">>/etc/sysctl.conf
echo "net.ipv4.tcp_syncookies = 1">>/etc/sysctl.conf
echo "net.bridge.bridge-nf-call-ip6tables = 0">>/etc/sysctl.conf
echo "net.bridge.bridge-nf-call-iptables = 0">>/etc/sysctl.conf
echo "net.bridge.bridge-nf-call-arptables = 0">>/etc/sysctl.conf
echo "vm.swappiness = 0">>/etc/sysctl.conf
echo "vm.dirty_background_ratio = 3">>/etc/sysctl.conf
echo "vm.dirty_ratio = 80">>/etc/sysctl.conf
echo "vm.dirty_expire_centisecs = 500">>/etc/sysctl.conf
echo "vm.dirty_writeback_centisecs = 100">>/etc/sysctl.conf
echo "kernel.msgmnb = 65536">>/etc/sysctl.conf
echo "kernel.msgmax = 65536">>/etc/sysctl.conf
echo "kernel.shmmax = 68719476736">>/etc/sysctl.conf
echo "kernel.shmmni = 4096">>/etc/sysctl.conf
echo "kernel.shmall = 4294967296">>/etc/sysctl.conf
echo "kernel.sem = 250 32000 100 128">>/etc/sysctl.conf
echo "fs.aio-max-nr = 1048576">>/etc/sysctl.conf
echo "fs.file-max = 6815744">>/etc/sysctl.conf
echo "net.ipv4.ip_local_port_range = 9000 65500">>/etc/sysctl.conf

sysctl -p /etc/sysctl.conf

## Disable selinux
vi /etc/selinux/config

## Disable firewall
systemctl stop firewalld
systemctl disable firewalld

## Create Users and Groups
groupadd --gid 501 oinstall
groupadd --gid 502 dba
groupadd --gid 503 asmdba
groupadd --gid 504 asmoper
groupadd --gid 505 asmadmin
groupadd --gid 506 oper
useradd --uid 501 --gid oinstall --groups dba,oper,asmdba,asmoper -d
/home/oracle -s /bin/bash -c "Oracle Software Owner" oracle
useradd --uid 502 --gid oinstall --groups dba,asmadmin,asmdba,asmoper,root -d
/home/grid -s /bin/bash -c "Grid Software Owner" grid
passwd grid
passwd oracle

## Set Ulimits
echo "## oracle user limits add the following" >> /etc/security/limits.conf
echo "oracle soft nproc 2047" >> /etc/security/limits.conf
echo "oracle hard nproc 16384" >> /etc/security/limits.conf
```

```
echo "oracle soft nofile 1024" >> /etc/security/limits.conf
echo "oracle hard nofile 65536" >> /etc/security/limits.conf
echo "oracle soft stack 10240" >> /etc/security/limits.conf
echo "oracle hard stack 32768" >> /etc/security/limits.conf

## Create an ulimit shell script
vi /etc/profile.d/oracle-grid.sh

## -- Start Here --
#!/bin/bash
if [ $USER = "oracle" ]; then
if [ $SHELL = "/bin/ksh" ]; then
ulimit -u 16384
ulimit -n 65536
else
ulimit -u 16384 -n 65536
fi
fi
if [ $USER = "grid" ]; then
if [ $SHELL = "/bin/ksh" ]; then
ulimit -u 16384
ulimit -n 65536
else
ulimit -u 16384 -n 65536
fi
fi
## -- End Here --

ln -s /lib64/security/* /lib/security/ .

## Set Home bash
su - oracle
vi ~/.bash_profile

# Oracle Settings for oracle user
export TMP=/tmp
export TMPDIR=$TMP
#export ORACLE_HOSTNAME=london1
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=$ORACLE_BASE/product/12.1.0.2/db_1
#export ORACLE_SID=RACdb1
export GRID_HOME=/u01/oracle/product/12.1.0.2/grid
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

su - grid
vi ~/.bash_profile

# Oracle Settings for grid user
export TMP=/tmp
export TMPDIR=$TMP
#export ORACLE_HOSTNAME=london1
export ORACLE_BASE=/u01/app/grid
export GRID_HOME=/u01/oracle/product/12.1.0.2/grid
export ORA_CRS_HOME=$ORACLE_HOME
export ORACLE_HOME=$GRID_HOME
```

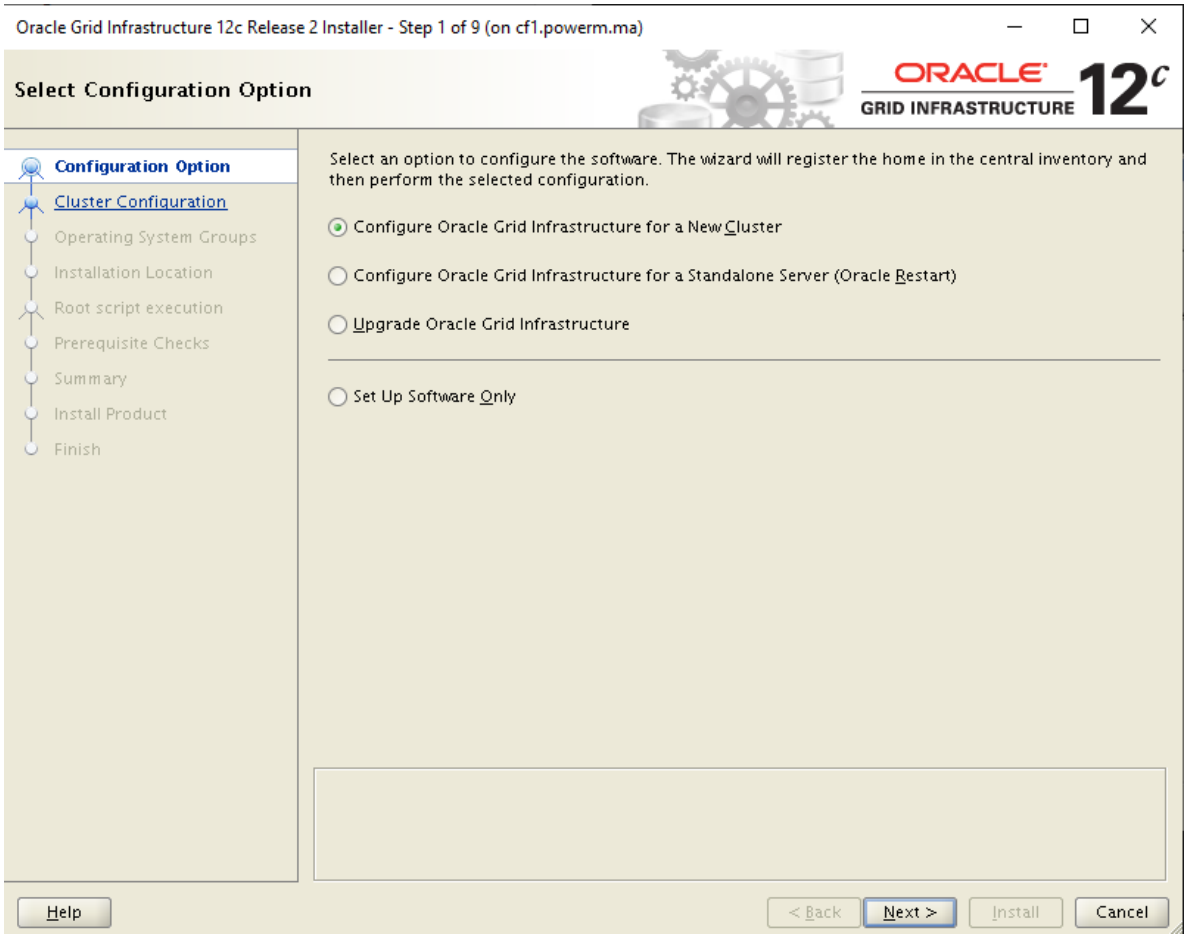
```
export ORACLE_SID=+ASM
export PATH=/usr/sbin:$PATH
export PATH=$ORACLE_HOME/bin:$ORACLE_HOME/OPatch:$PATH
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib
export CLASSPATH=$ORACLE_HOME/jlib:$ORACLE_HOME/rdbms/jlib


## SSL Key Setup
su - oracle
ssh-keygen -t rsa
cat /home/oracle/.ssh/id_rsa.pub >>/home/oracle/.ssh/authorized_keys
su - grid
ssh-keygen -t rsa
cat /home/grid/.ssh/id_rsa.pub >>/home/grid/.ssh/authorized_keys

## Create Directories
mkdir -p /u01/app/OraIventory
chown -R grid:oinstall /u01/app/OraIventory
chmod -R 775 /u01/app/OraIventory
mkdir -p /u01/grid/oracle/product/12.1.0.2/grid
chown -R grid:oinstall /u01/grid
chmod -R 775 /u01/grid
mkdir -p /u01/app/grid
chown -R grid:oinstall /u01/app/grid
chmod -R 775 /u01/app/grid
mkdir -p /u01/app/oracle
mkdir -p /u01/app/oracle/cfgtoollogs
chmod -R 775 /u01/app/oracle/cfgtoollogs/
chown -R oracle:oinstall /u01/app/oracle
chmod -R 775 /u01/app/oracle
mkdir -p /u01/app/oracle/product/12.1.0.2/db_1
chown -R oracle:oinstall /u01/app/oracle/product/12.1.0.2/
chmod -R 775 /u01/app/oracle

## Init Parameters
echo "grid:/u01/grid/oracle/product/12.1.0.2/grid:N" >>  /etc/oratab
chown oracle:dba /etc/oratab

echo "ORAENV_ASK=NO" >> /root/.bashrc
echo "ORACLE_SID=grid" >> /root/.bashrc
echo ". oraenv >/dev/null" >> /root/.bashrc
echo "unset ORAENV_ASK" >> /root/.bashrc

## Setup DNS
touch /var/named/powerm.ma
chmod 664 /var/named/powerm.ma
chgrp named /var/named/powerm.ma
chmod g+w /var/named/powerm.ma
touch /var/named/powerm.ma.rev
chmod 664 /var/named/powerm.ma.rev
chgrp named /var/named/powerm.ma.rev
chmod g+w /var/named/powerm.ma.rev
chmod g+w /var/named
cp /etc/named.conf /etc/named.conf.org
```

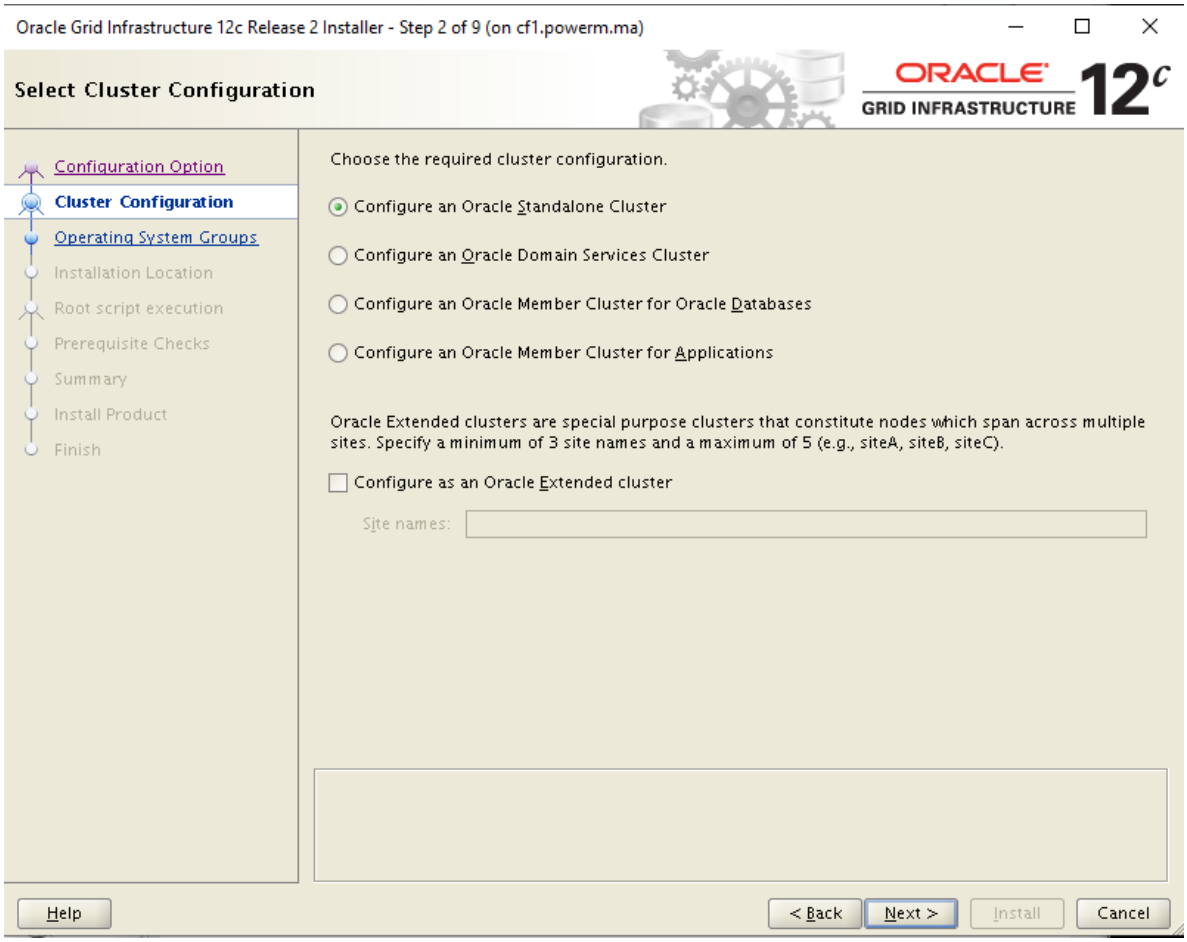
```
sed -i -e 's/listen-on .*/listen-on port 53 { 172.20.10.7; };/' \-e 's/allow-
query .*/allow-query { 172.20.10.0\/24; localhost; };\n allow-transfer {
172.20.10.0\/24; };/' \-e 's/session.key";/session.key"; \n empty-zones-enable
no;\n/;' \-e '$azone "powerm.ma" {\n type master;\n file
"powerm.ma";\n};\n\nzone "in-addr.arpa" {\n type master;\n file
"powerm.ma.rev";\n};' /etc/named.conf

echo '$TTL 3H
@ IN SOA orac1 hostmaster (
101 ; serial
1D ; refresh
1H ; retry
1W ; expire
3H ) ; minimum
        NS orac1.powerm.ma
        NS orac2.powerm.ma
orac1.powerm.ma A       172.20.10.7
orac1-vip.powerm.ma     A       172.20.10.10
orac1-priv.powerm.ma    A       192.168.20.7

orac2.powerm.ma A       172.20.10.8
orac2-vip.powerm.ma     A       172.20.10.11
orac2-priv.powerm.ma    A       192.168.20.8
orac-cluster-scan.powerm.ma     A       172.20.10.100' >/var/named/powerm.ma

## Reverse zone
echo '$TTL 3H
@ IN SOA orac1. hostmaster.powerm.ma(
101 ; serial
1D ; refresh
1H ; retry
1W ; expire
3H ) ; minimum
        NS orac1.
        NS orac2.
7.10.20.172     PTR     orac1.powerm.ma.
10.10.20.172    PTR     orac1-vip.powerm.ma.
7.20.168.192    PTR     orac1-priv.powerm.ma.
8.10.20.172     PTR     orac2.powerm.ma.
11.10.20.172    PTR     orac2-vip.powerm.ma.
8.20.168.192    PTR     orac2-priv.powerm.ma.
100.10.20.172   PTR     orac-cluster-scan.powerm.ma.' > /var/named/powerm.ma.rev

## RNDC Config
rndc-confgen -a -r /dev/urandom
chgrp named /etc/rndc.key
chmod g+r /etc/rndc.key

## Restart Bind service
service named restart
chkconfig named on
ln -s '/usr/lib/systemd/system/named.service' '/etc/systemd/system/multi-
user.target.wants/named.service'
systemctl enable named

## Setup resolve
echo "nameserver 172.20.10.7" >> /etc/resolv.conf
named-checkzone powerm.ma.rev /var/named/powerm.ma.rev
```

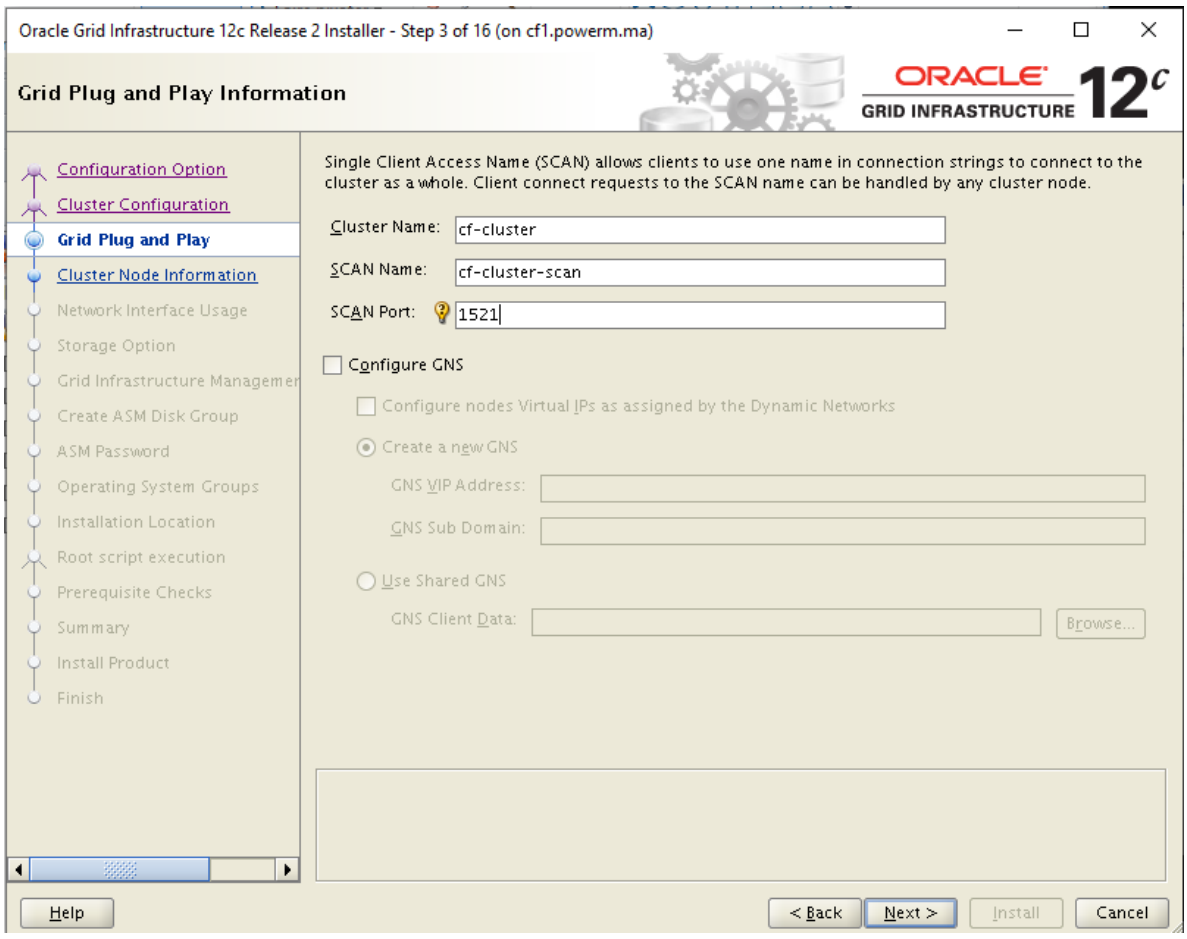
```
netstat -tulnp | grep -i 53


## Setup ASM Disks
lsblk
fdisk /dev/sdb
fdisk /dev/sdc
fdisk /dev/sdd
fdisk /dev/sde

## Install ASM Support
yum install oracleasmlib-2.0.12-1.el7.x86_64.rpm
yum install oracleasm-support-2.1.11-2.el7.x86_64.rpm

## Configure ASM
##### --- Start Here ----
[root@orac1 tmp]# oracleasm configure -i
Configuring the Oracle ASM library driver.

This will configure the on-boot properties of the Oracle ASM library
driver.  The following questions will determine whether the driver is
loaded on boot and what permissions it will have.  The current values
will be shown in brackets ('[]').  Hitting <ENTER> without typing an
answer will keep that current value.  Ctrl-C will abort.

Default user to own the driver interface []: grid
Default group to own the driver interface []: asmadmin
Start Oracle ASM library driver on boot (y/n) [n]: y
Scan for Oracle ASM disks on boot (y/n) [y]: y
Writing Oracle ASM library driver configuration: done
##### --- End Here ----

oracleasm init
oracleasm status
oracleasm createdisk ASMDISK1 /dev/sdb1
oracleasm createdisk ASMDISK2 /dev/sdc1
oracleasm createdisk ASMDISK3 /dev/sdd1
oracleasm createdisk ASMDISK4 /dev/sde1
oracleasm listdisks

## Unzip Grid Package
cd /u01/app/grid
unzip /u01/app/grid/cv/rpm
rpm -ivh /u01/app/grid/cv/rpm/cvuqdisk-1.0.10-1.rpm

## Launch Setup
export DISPLAY=<your_ip>:0.0
/u01/app/grid/gridSetup.sh
```

Errors Notes

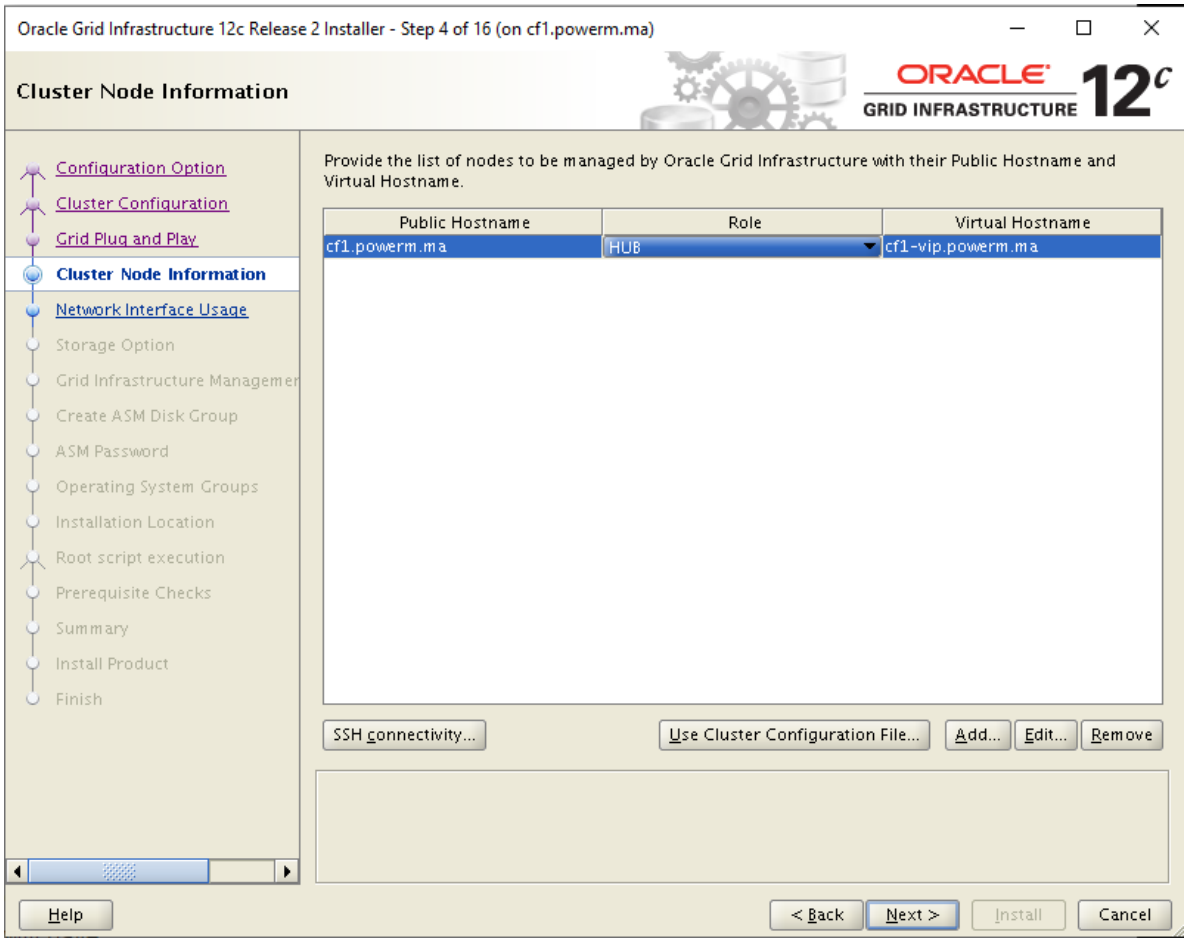
```
Caused by: java.lang.ArrayIndexOutOfBoundsException: 0
        at sun.font.CompositeStrike.getStrikeForSlot(CompositeStrike.java:75)
        at sun.font.CompositeStrike.getFontMetrics(CompositeStrike.java:93)
        at
sun.font.FontDesignMetrics.initMatrixAndMetrics(FontDesignMetrics.java:359)
## This error is launched while installing Oracle Rac on Linux 7. It is a known
java bug.
## Workaround :
yum install java
```



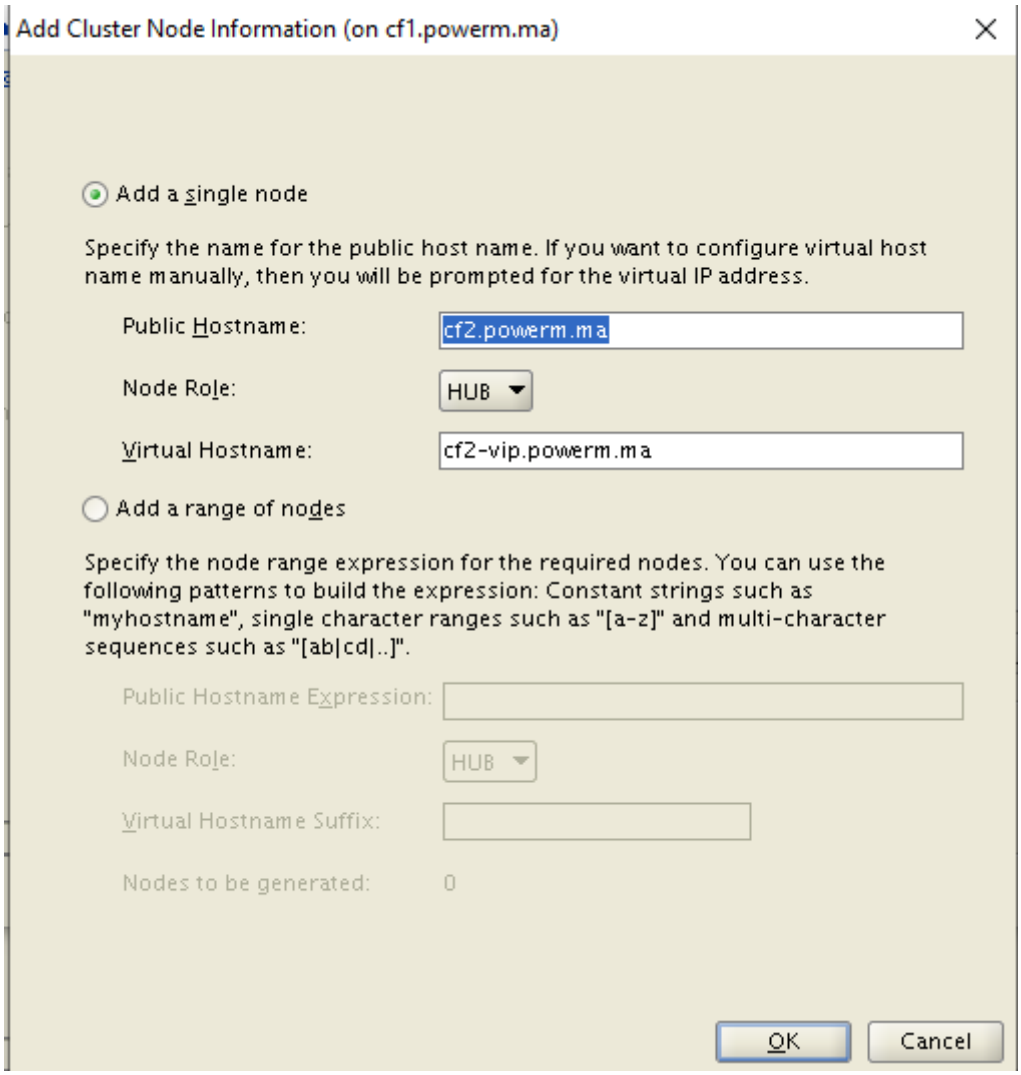




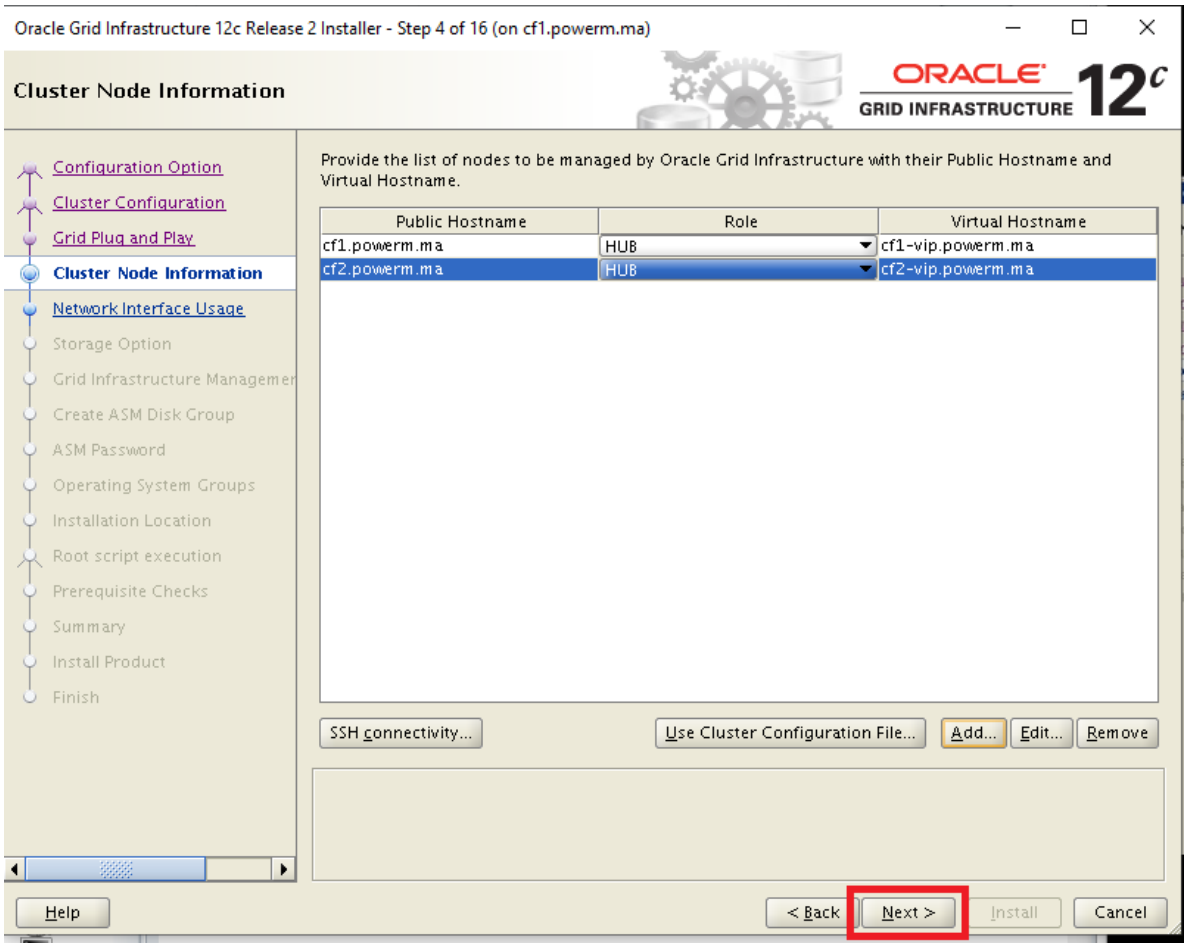
Click next, it will resolve your *SCAN NAME* which should contain the virtual IP address your cluster will have.

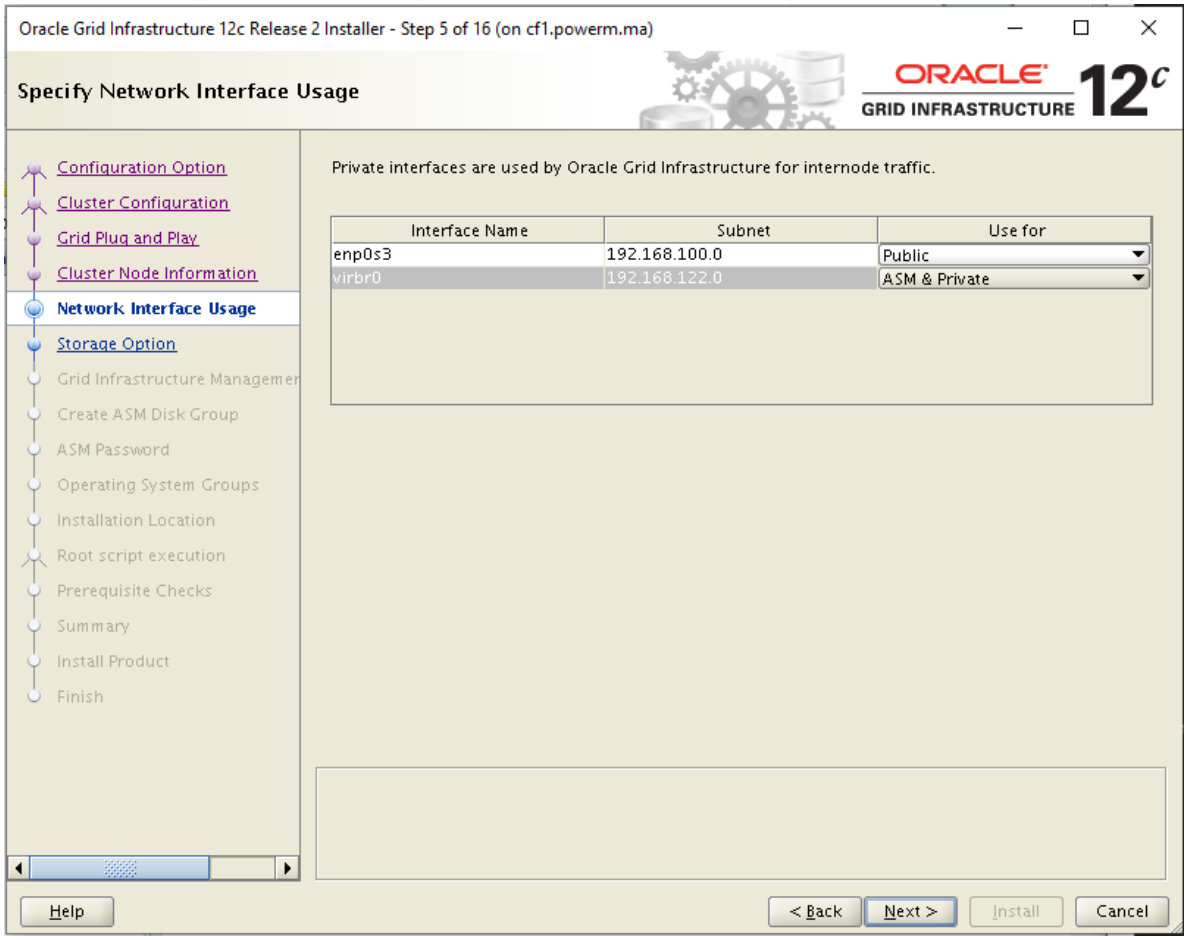

Oracle Grid Infrastructure 12c Release 2 Installer - Step 4 of 16 (on cf1.powerm.ma)
Cluster Node Information
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
Provide the list of nodes to be managed by Oracle Grid Infrastructure with their Public Hostname and Virtual Hostname.
Public Hostname
Role
Virtual Hostname
cf1.powerm.ma
HUB
cf1-vip.powerm.ma
SSH connectivity...
Use Cluster Configuration File...
Add...
Edit...
Remove
Help
< Back
Next >
Install
Cancel

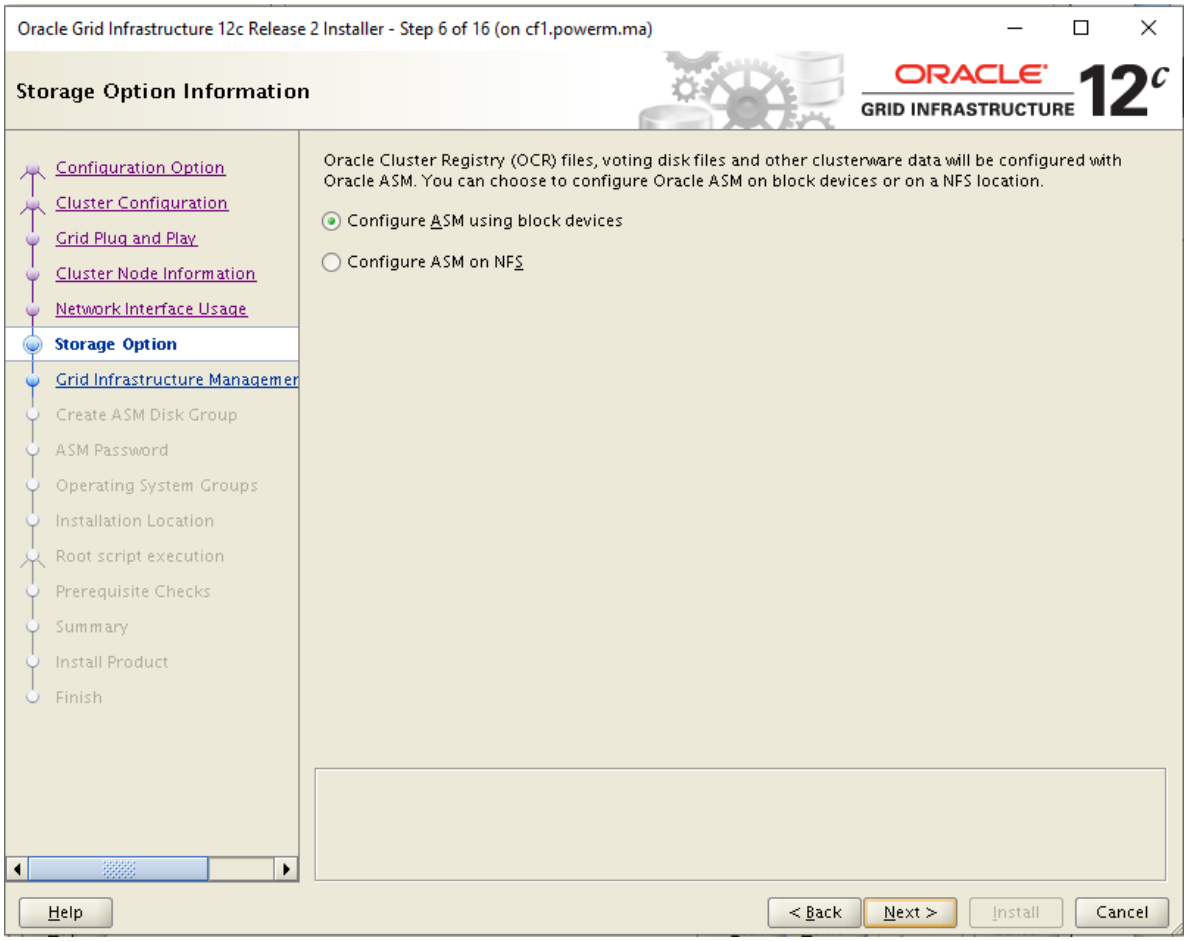
Click **ADD**

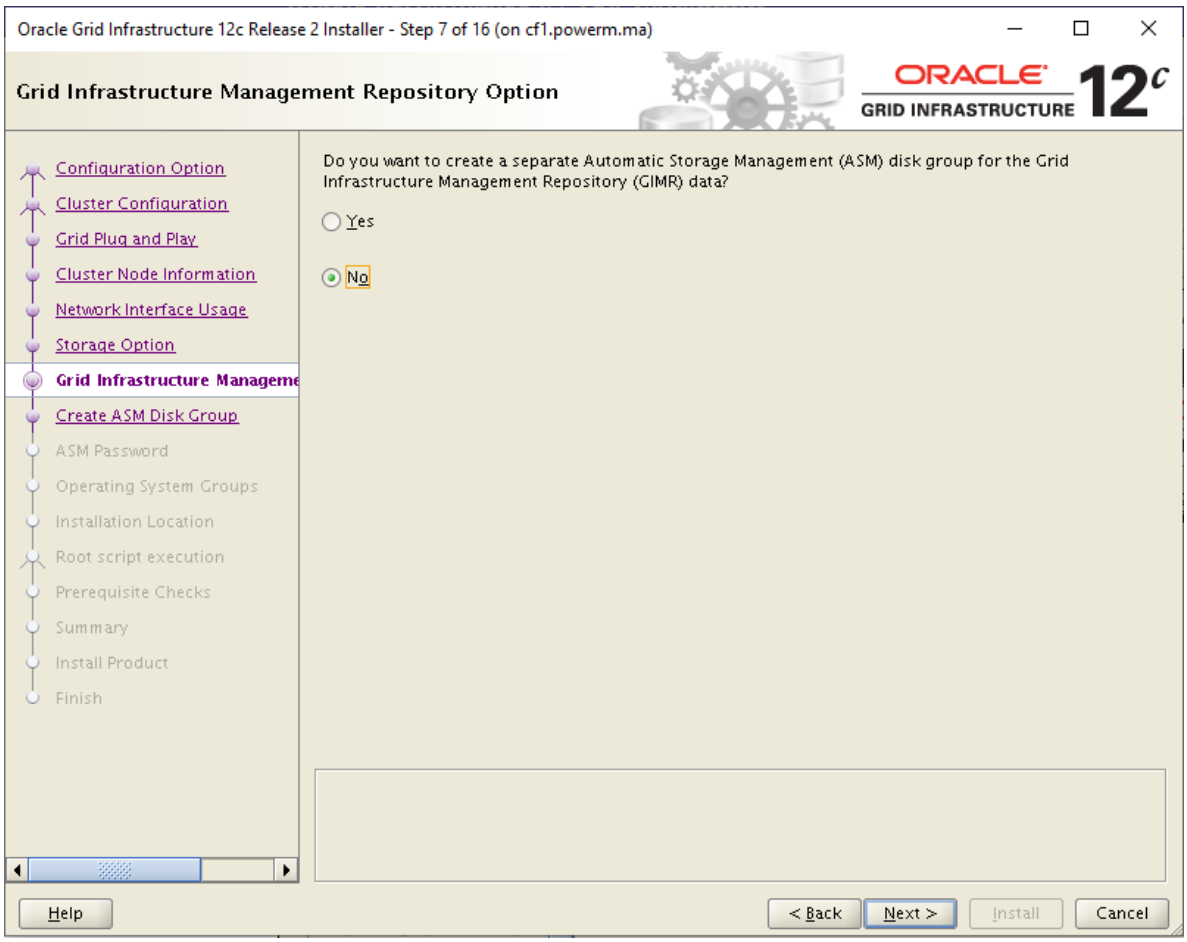

Add Cluster Node Information (on cf1.powerm.ma)
Add a single node
Specify the name for the public host name. If you want to configure virtual host name manually, then you will be prompted for the virtual IP address.
Public Hostname:
cf2.powerm.ma
Node Role:
HUB
Virtual Hostname:
cf2-vip.powerm.ma
Add a range of nodes
Specify the node range expression for the required nodes. You can use the following patterns to build the expression: Constant strings such as "myhostname", single character ranges such as "[a-z]" and multi-character sequences such as "[ab|cd|..]".
Public Hostname Expression:
Node Role:
HUB
Virtual Hostname Suffix:
Nodes to be generated:
0
OK
Cancel

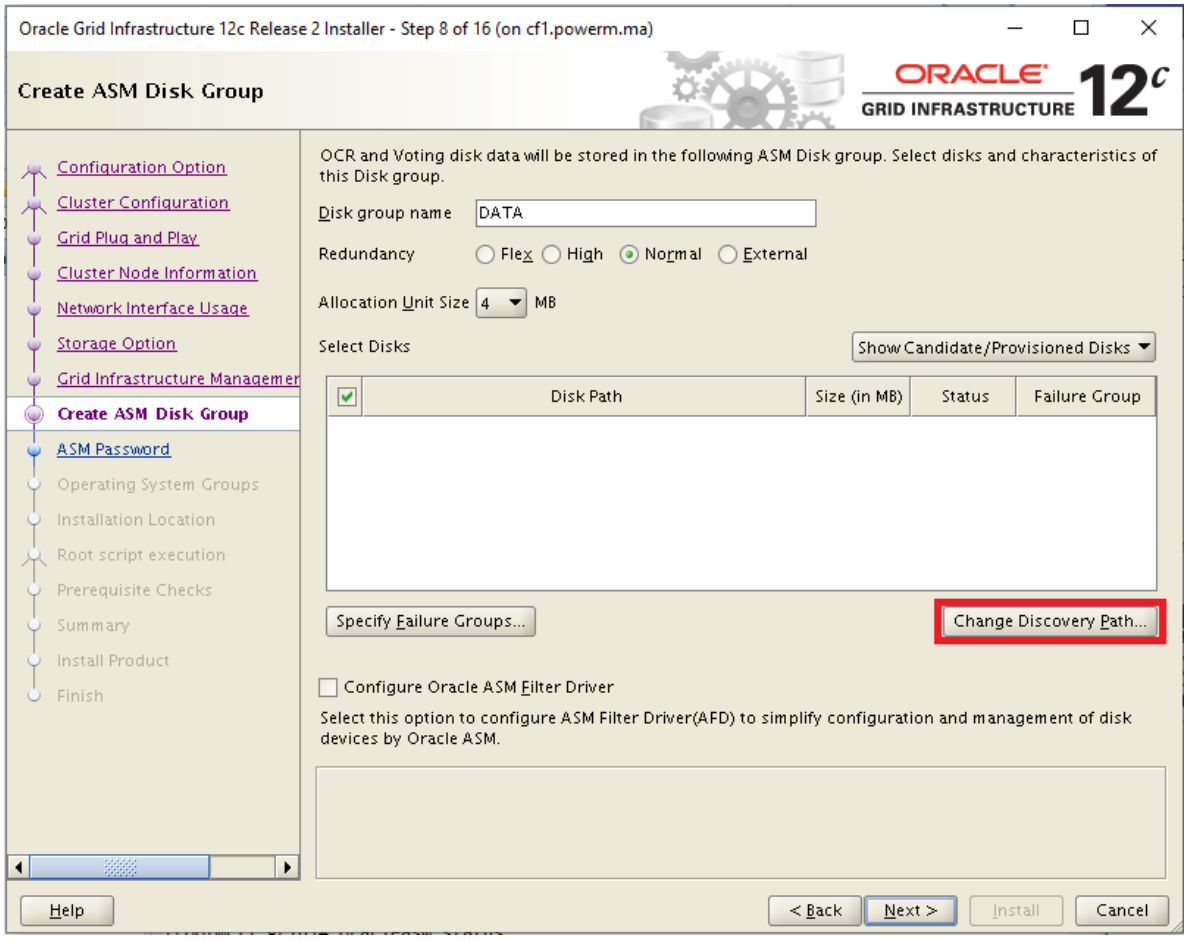
```
## Set passwordless connectivity for user GRID between the two hosts, then click
NEXT
 su - grid
 ssh-keygen -t rsa -N ""
 ssh-copy-id -i grid@<other_server>
 ## This command should be executed on two servers, full & short
 ## Or alternatively, click on "SSH Connectivity" then click on "Setup"
```




Oracle Grid Infrastructure 12c Release 2 Installer - Step 5 of 16 (on cf1.powerm.ma)
Specify Network Interface Usage
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
Private interfaces are used by Oracle Grid Infrastructure for internode traffic.
Interface Name
Subnet
Use for
enp0s3
192.168.100.0
Public
virbr0
192.168.122.0
ASM & Private
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure 12c Release 2 Installer - Step 6 of 16 (on cf1.powerm.ma)
Storage Option Information
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
Oracle Cluster Registry (OCR) files, voting disk files and other clusterware data will be configured with Oracle ASM. You can choose to configure Oracle ASM on block devices or on a NFS location.
Configure ASM using block devices
Configure ASM on NFS
Help
< Back
Next >
Install
Cancel

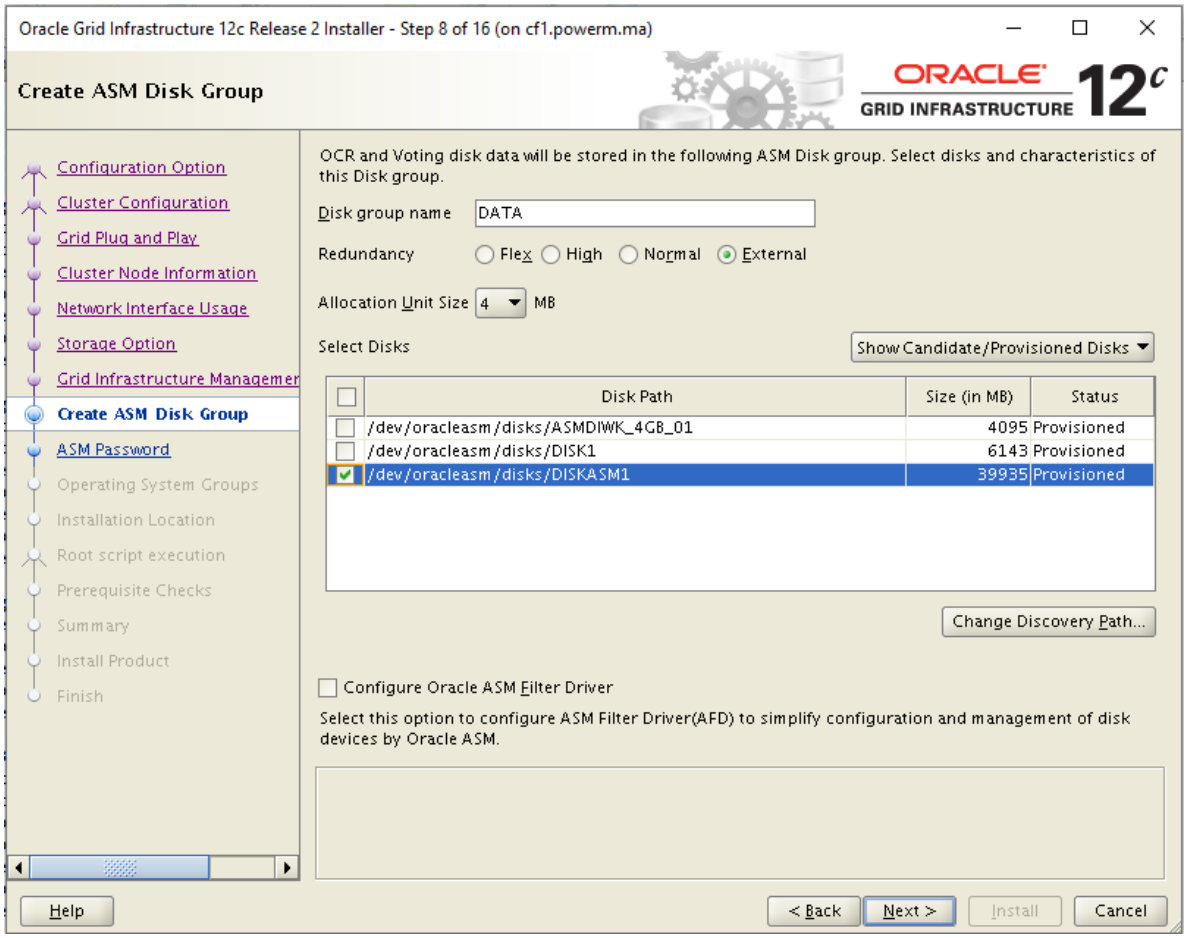


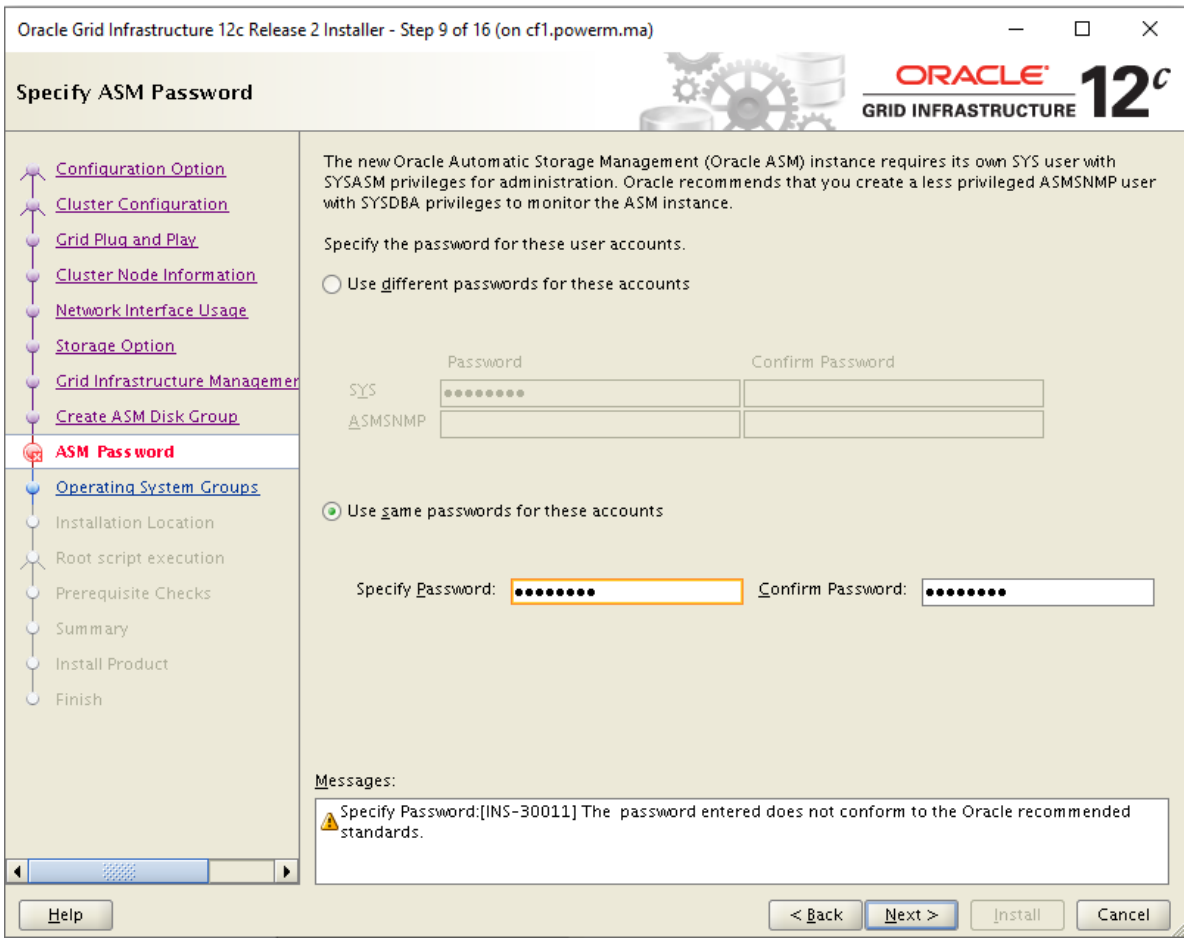


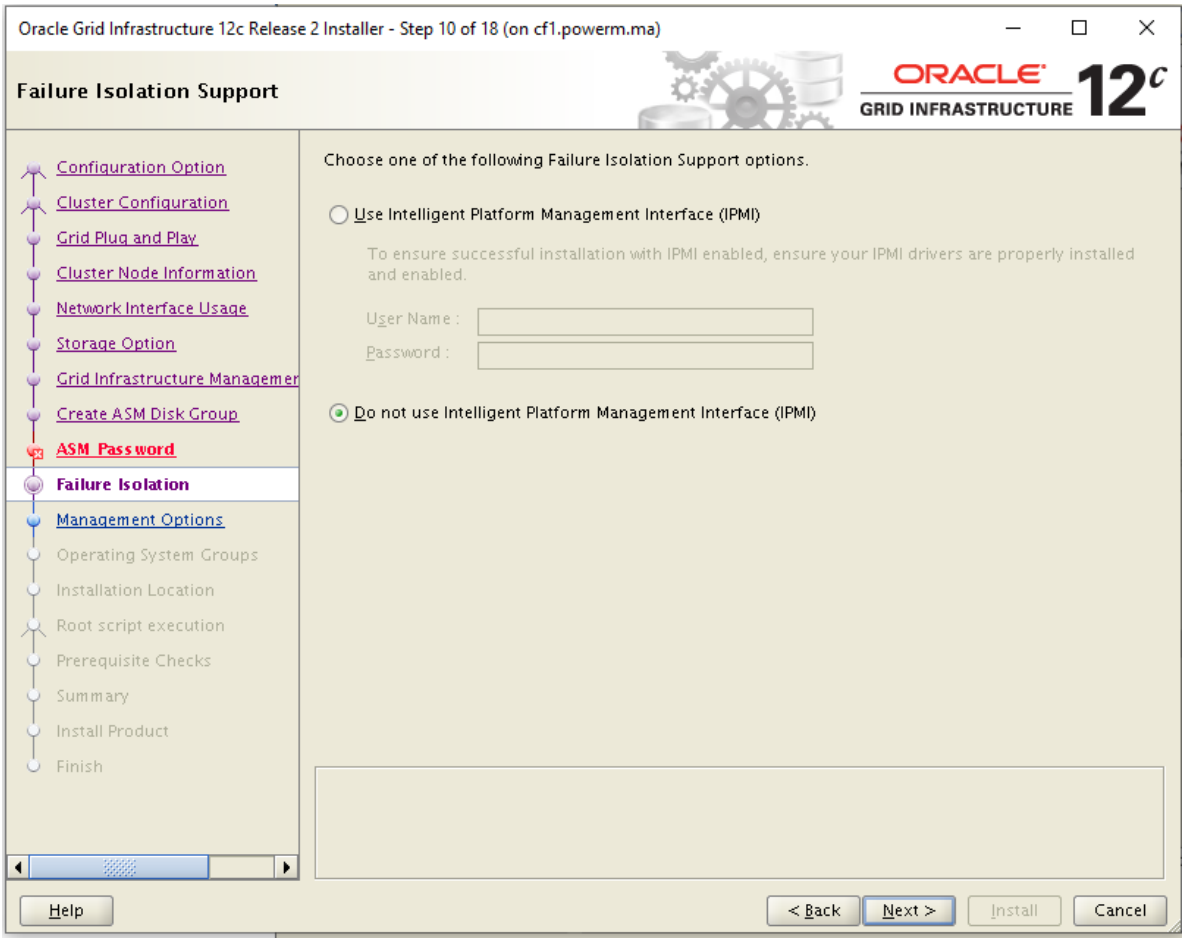
Change Discovery Path, and enter (/dev/oracleasm/disks)

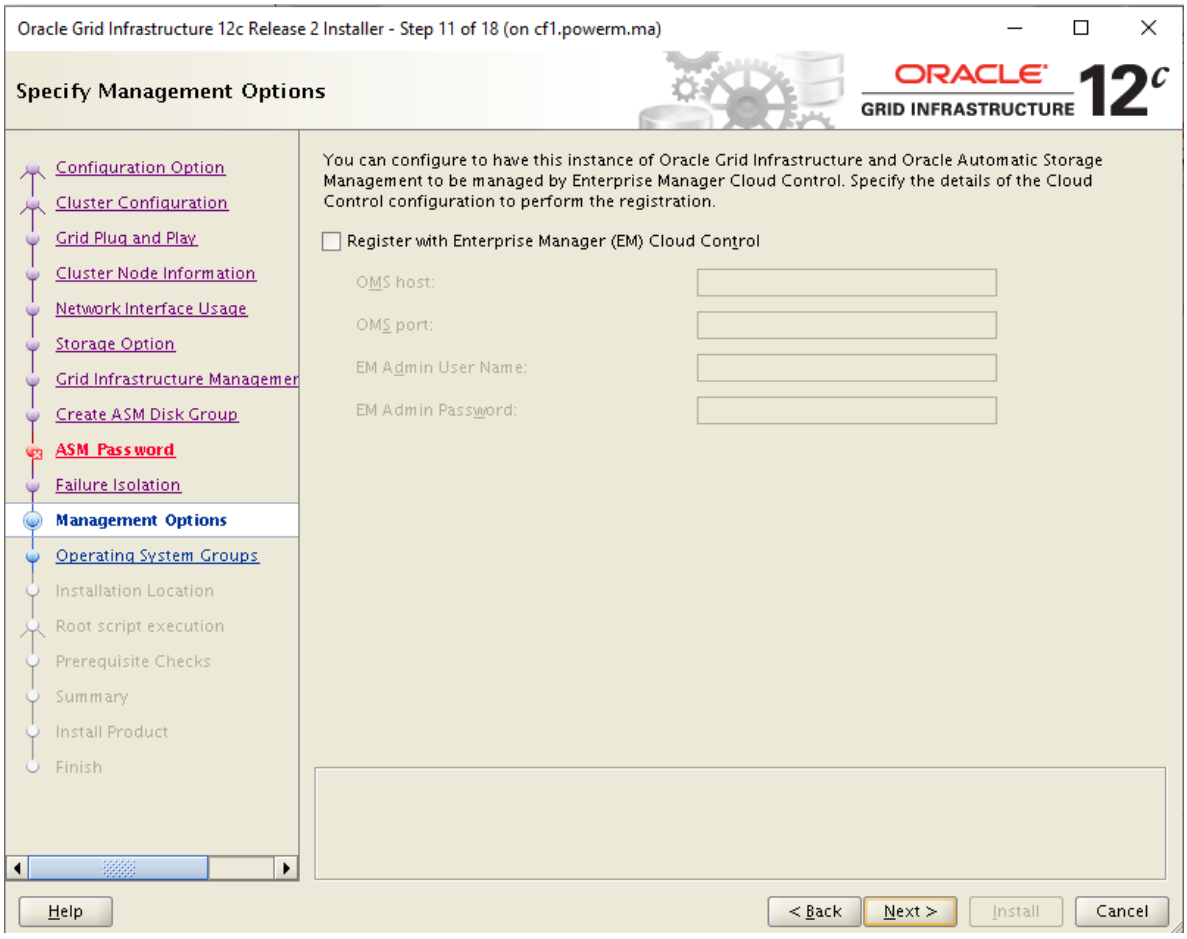
Then select your disk

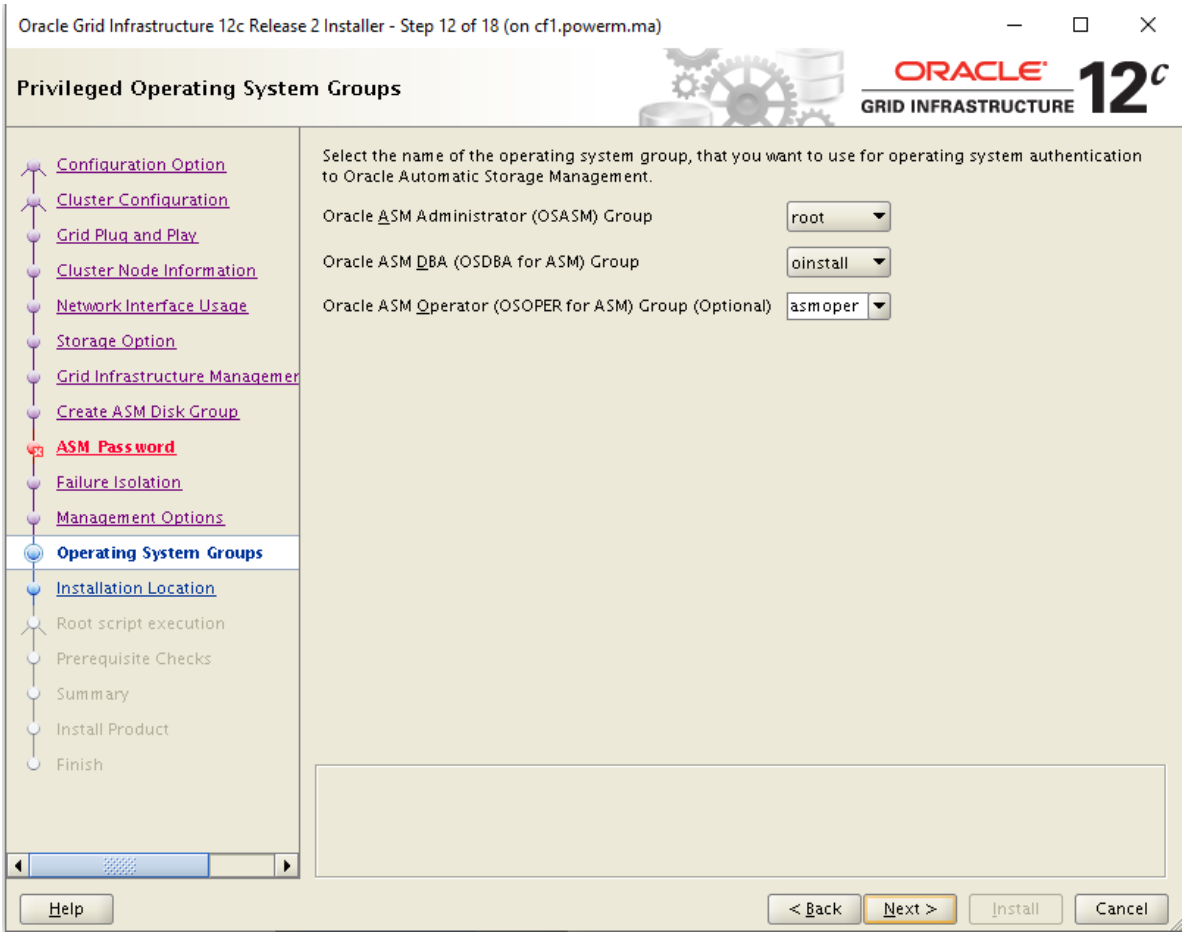
Note : Attention !! you disk must have at least 38 Gb in size.


Oracle Grid Infrastructure 12c Release 2 Installer - Step 8 of 16 (on cf1.powerm.ma)
Create ASM Disk Group
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Management
Create ASM Disk Group
ASM Password
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
OCR and Voting disk data will be stored in the following ASM Disk group. Select disks and characteristics of this Disk group.
Disk group name DATA
Redundancy Flex High Normal External
Allocation Unit Size 4 MB
Select Disks
Show Candidate/Provisioned Disks
Disk Path
Size (in MB)
Status
/dev/oracleasm/disks/ASMDIWK_4GB_01 4095 Provisioned
/dev/oracleasm/disks/DISK1 6143 Provisioned
/dev/oracleasm/disks/DISKASM1 39935 Provisioned
Change Discovery Path...
Configure Oracle ASM Filter Driver
Select this option to configure ASM Filter Driver(AFD) to simplify configuration and management of disk devices by Oracle ASM.
Help
< Back
Next >
Install
Cancel

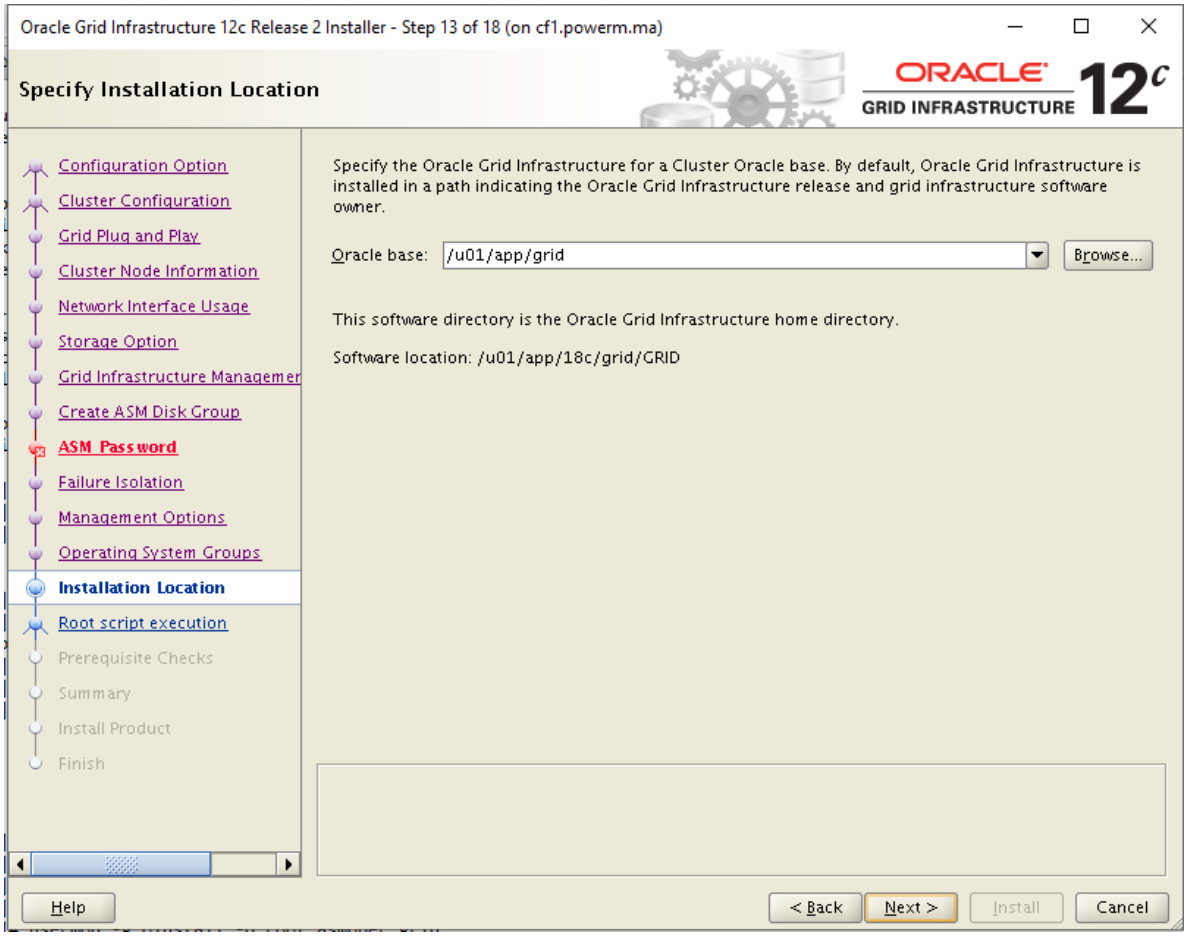

Oracle Grid Infrastructure 12c Release 2 Installer - Step 9 of 16 (on cf1.powerm.ma)
Specify ASM Password
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Management
Create ASM Disk Group
ASM Password
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
The new Oracle Automatic Storage Management (Oracle ASM) instance requires its own SYS user with SYSASM privileges for administration. Oracle recommends that you create a less privileged ASMSNMP user with SYSDBA privileges to monitor the ASM instance.
Specify the password for these user accounts.
Use different passwords for these accounts
Password
Confirm Password
SYS
ASMSNMP
Use same passwords for these accounts
Specify Password:
Confirm Password:
Messages:
Specify Password:[INS-30011] The password entered does not conform to the Oracle recommended standards.
Help
< Back
Next >
Install
Cancel

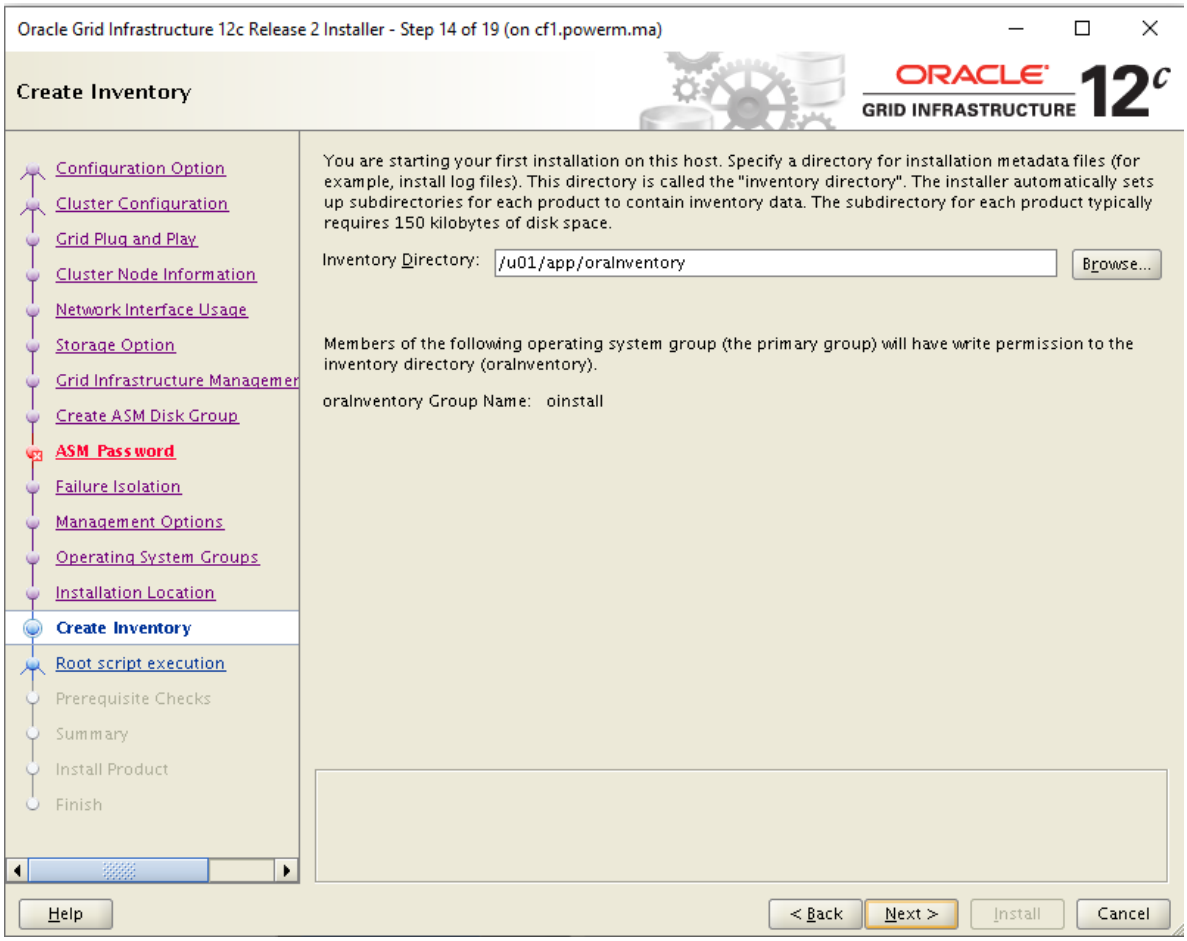

Oracle Grid Infrastructure 12c Release 2 Installer - Step 10 of 18 (on cf1.powerm.ma)
Failure Isolation Support
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Failure Isolation
Management Options
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
Choose one of the following Failure Isolation Support options.
Use Intelligent Platform Management Interface (IPMI)
To ensure successful installation with IPMI enabled, ensure your IPMI drivers are properly installed and enabled.
User Name :
Password :
Do not use Intelligent Platform Management Interface (IPMI)
Help
< Back
Next >
Install
Cancel

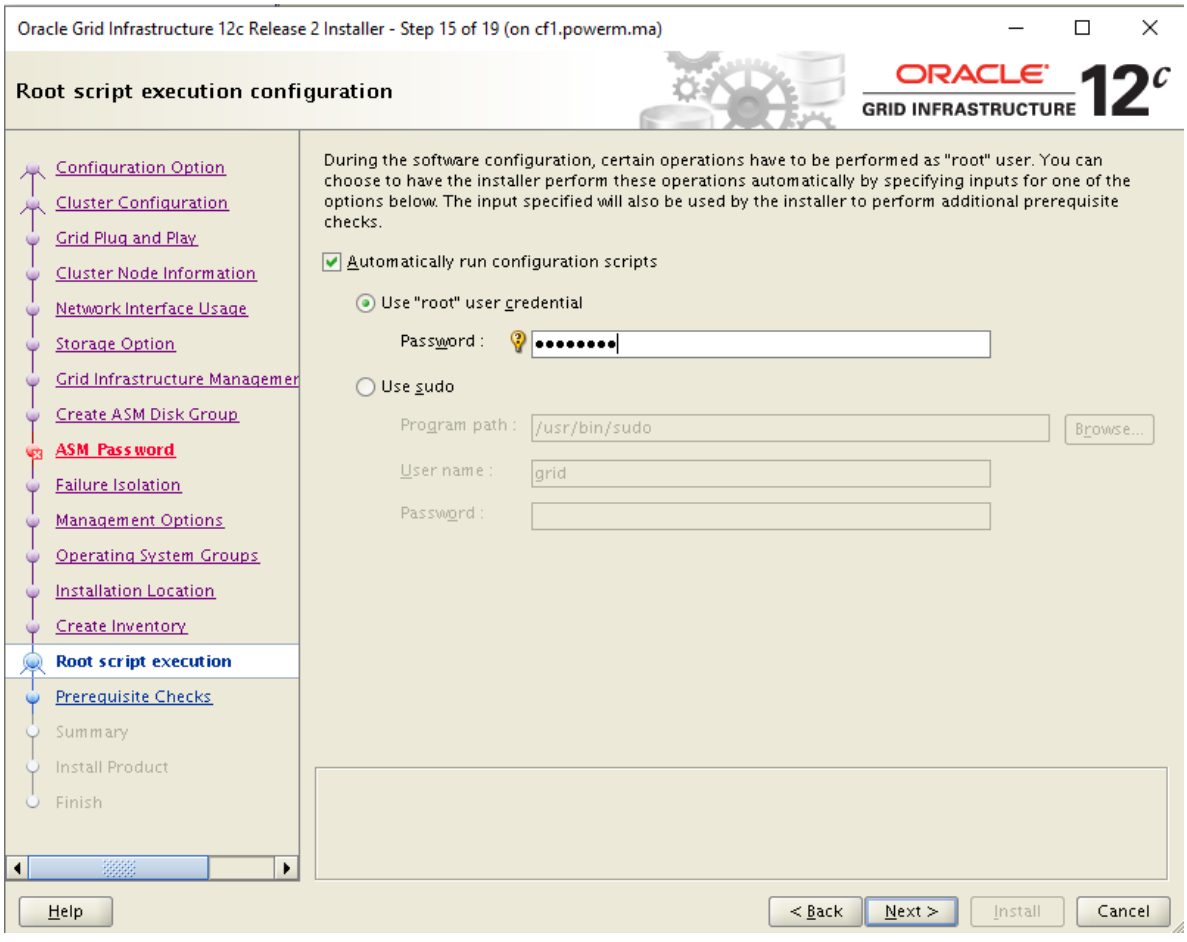

Oracle Grid Infrastructure 12c Release 2 Installer - Step 11 of 18 (on cf1.powerm.ma)
Specify Management Options
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Failure Isolation
Management Options
Operating System Groups
Installation Location
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
You can configure to have this instance of Oracle Grid Infrastructure and Oracle Automatic Storage Management to be managed by Enterprise Manager Cloud Control. Specify the details of the Cloud Control configuration to perform the registration.
Register with Enterprise Manager (EM) Cloud Control
OMS host:
OMS port:
EM Admin User Name:
EM Admin Password:
Help
< Back
Next >
Install
Cancel

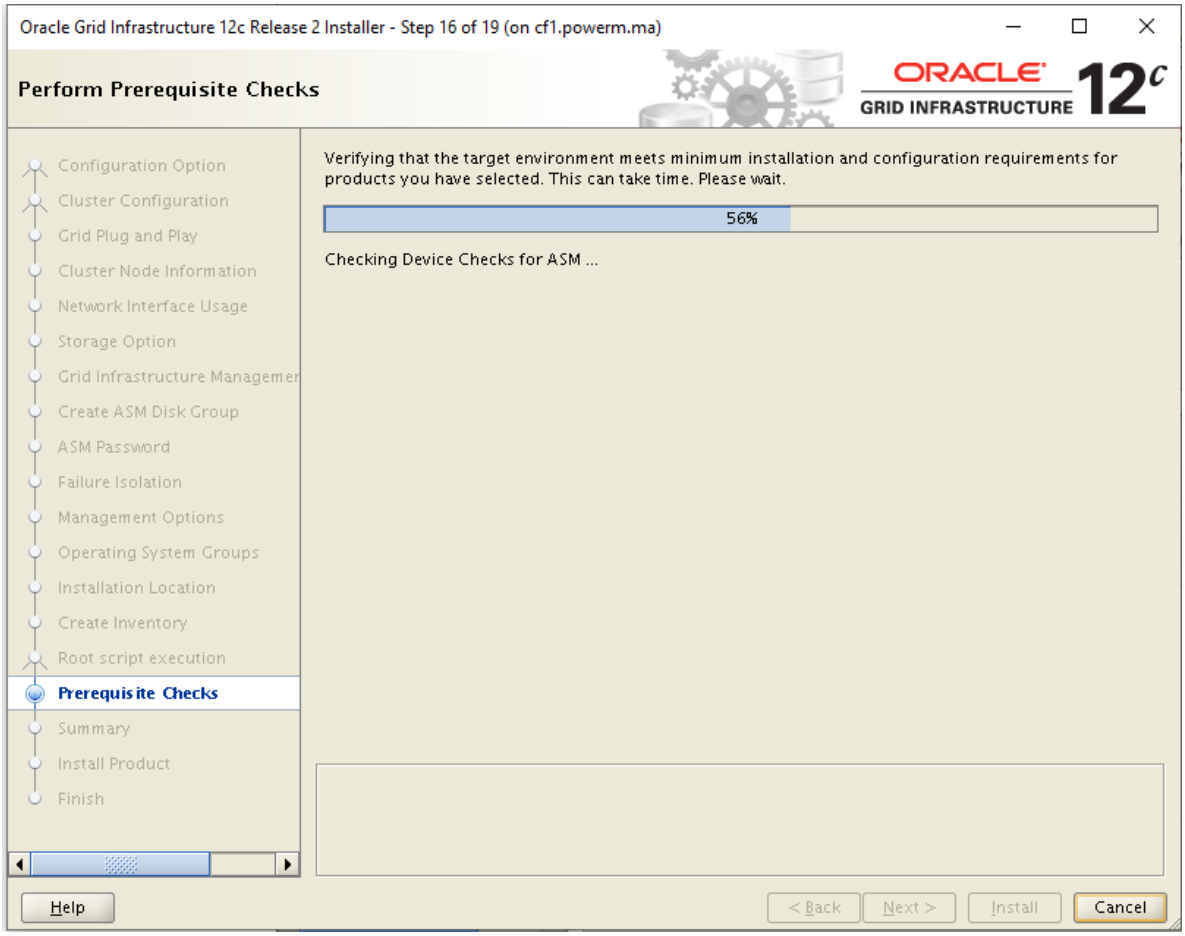


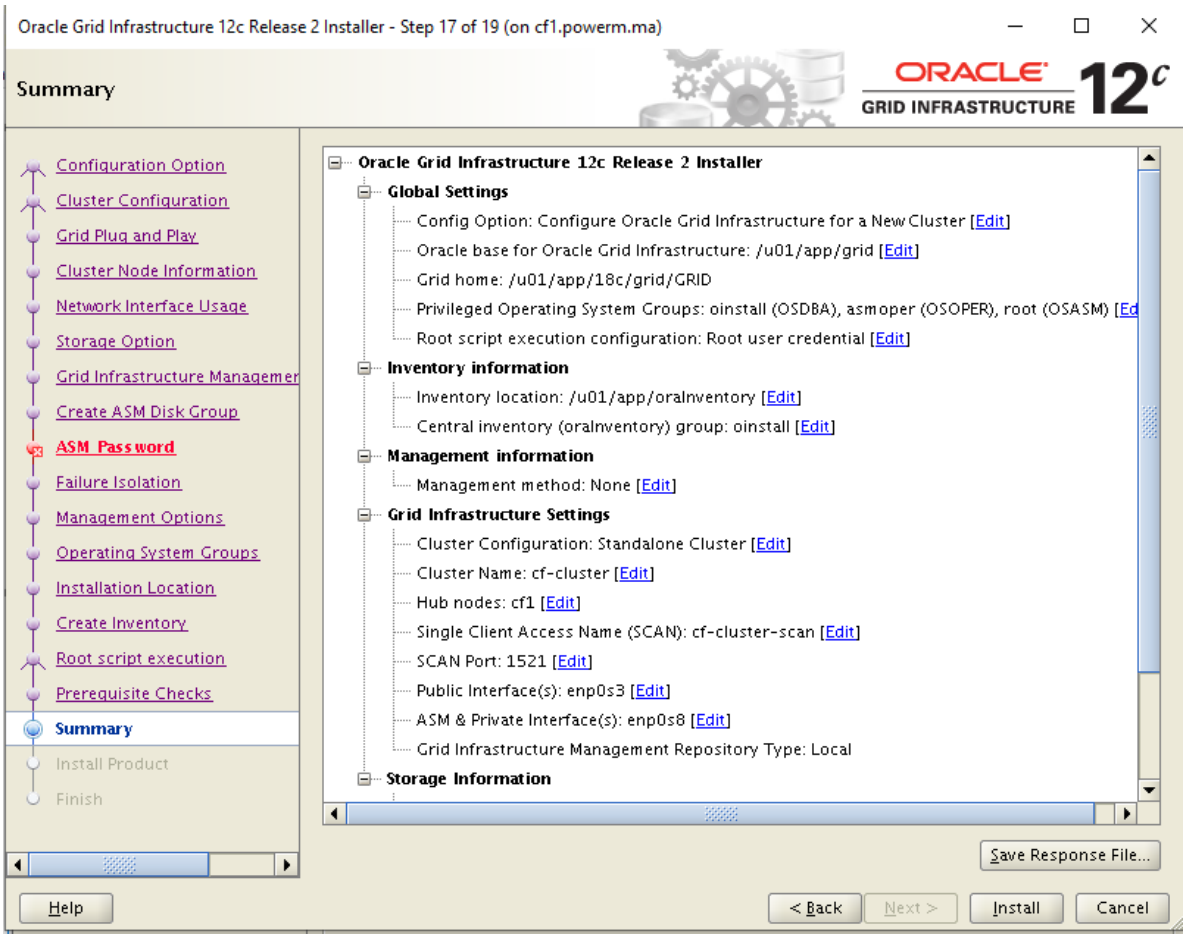
Make sure the user **grid** belongs to **root,oinstall,asmoper** groups

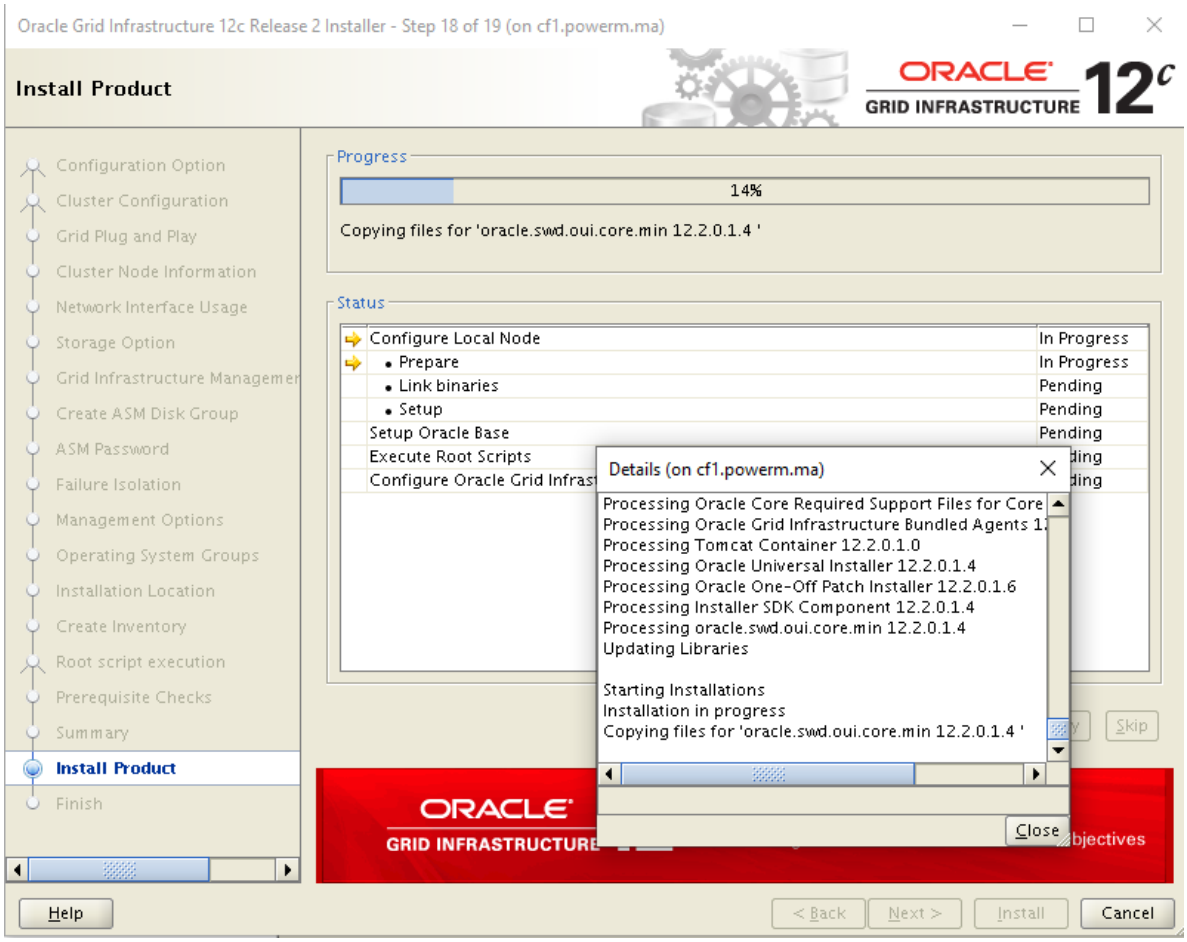



Oracle Grid Infrastructure 12c Release 2 Installer - Step 14 of 19 (on cf1.powerm.ma)
Create Inventory
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Management
Create ASM Disk Group
ASM Password
Failure Isolation
Management Options
Operating System Groups
Installation Location
Create Inventory
Root script execution
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...
Members of the following operating system group (the primary group) will have write permission to the inventory directory (oraInventory).
oraInventory Group Name: oinstall
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure 12c Release 2 Installer - Step 15 of 19 (on cf1.powerm.ma)
Root script execution configuration
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Management
Create ASM Disk Group
ASM Password
Failure Isolation
Management Options
Operating System Groups
Installation Location
Create Inventory
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
During the software configuration, certain operations have to be performed as "root" user. You can choose to have the installer perform these operations automatically by specifying inputs for one of the options below. The input specified will also be used by the installer to perform additional prerequisite checks.
Automatically run configuration scripts
Use "root" user credential
Password :
Use sudo
Program path : /usr/bin/sudo
Browse...
User name : grid
Password :
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure 12c Release 2 Installer - Step 16 of 19 (on cf1.powerm.ma)
Perform Prerequisite Checks
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Failure Isolation
Management Options
Operating System Groups
Installation Location
Create Inventory
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
Verifying that the target environment meets minimum installation and configuration requirements for products you have selected. This can take time. Please wait.
56%
Checking Device Checks for ASM ...
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure 12c Release 2 Installer - Step 17 of 19 (on cf1.powerm.ma)
Summary
ORACLE GRID INFRASTRUCTURE 12c
Configuration Option
Cluster Configuration
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Grid Infrastructure Managemer
Create ASM Disk Group
ASM Password
Failure Isolation
Management Options
Operating System Groups
Installation Location
Create Inventory
Root script execution
Prerequisite Checks
Summary
Install Product
Finish
Oracle Grid Infrastructure 12c Release 2 Installer
Global Settings
Config Option: Configure Oracle Grid Infrastructure for a New Cluster [Edit]
Oracle base for Oracle Grid Infrastructure: /u01/app/grid [Edit]
Grid home: /u01/app/18c/grid/GRID
Privileged Operating System Groups: oinstall (OSDBA), asmoper (OSOPER), root (OSASM) [Ed
Root script execution configuration: Root user credential [Edit]
Inventory information
Inventory location: /u01/app/oraInventory [Edit]
Central inventory (oraInventory) group: oinstall [Edit]
Management information
Management method: None [Edit]
Grid Infrastructure Settings
Cluster Configuration: Standalone Cluster [Edit]
Cluster Name: cf-cluster [Edit]
Hub nodes: cf1 [Edit]
Single Client Access Name (SCAN): cf-cluster-scan [Edit]
SCAN Port: 1521 [Edit]
Public Interface(s): enp0s3 [Edit]
ASM & Private Interface(s): enp0s8 [Edit]
Grid Infrastructure Management Repository Type: Local
Storage Information
Save Response File...
Help
< Back
Next >
Install
Cancel



After Installation

Either the root script ends or not, it is not important. Execute it manually following these commands :

```
/u01/app/oraInventory/orainstRoot.sh
/u01/app/grid/product/12.1.0.2/grid/root.sh
```

Error Notes

```
## This script might cause an ASM error as follow :
ASM failed to start. Check /u01/app/GRID/cfgtoollogs/asmca/asmca-
200303PM025906.log for details.

2020/03/03 15:12:14 CLSRSC-184: Configuration of ASM failed
2020/03/03 15:12:21 CLSRSC-258: Failed to configure and start ASM
Died at /u01/app/grid/crs/install/crsinstall.pm line 2091.
The command '/u01/app/grid/perl/bin/perl -I/u01/app/grid/perl/lib -
I/u01/app/grid/crs/install /u01/app/grid/crs/install/rootcrs.pl ' execution
failed

## This is a bug on version 12 with Rhel 7. Use the following command to fix it
:
sed -i 's/perl -I$ORACLE_HOME\/perl\/lib -I$ORACLE_HOME\/crs/perl -I
$ORACLE_HOME\/perl\/lib -I $ORACLE_HOME\/crs/' rootconfig.sh
```

Post Installation Steps

```
su - grid
/u01/app/grid/cfgtoollogs/configToolAllCommands
sed -i 's/CV_ASSUME_DISTID=OEL4/CV_ASSUME_DISTID=OEL7/'
/u01/app/grid/cv/admin/cvu_config
```

Verify Oracle RAC Cluster

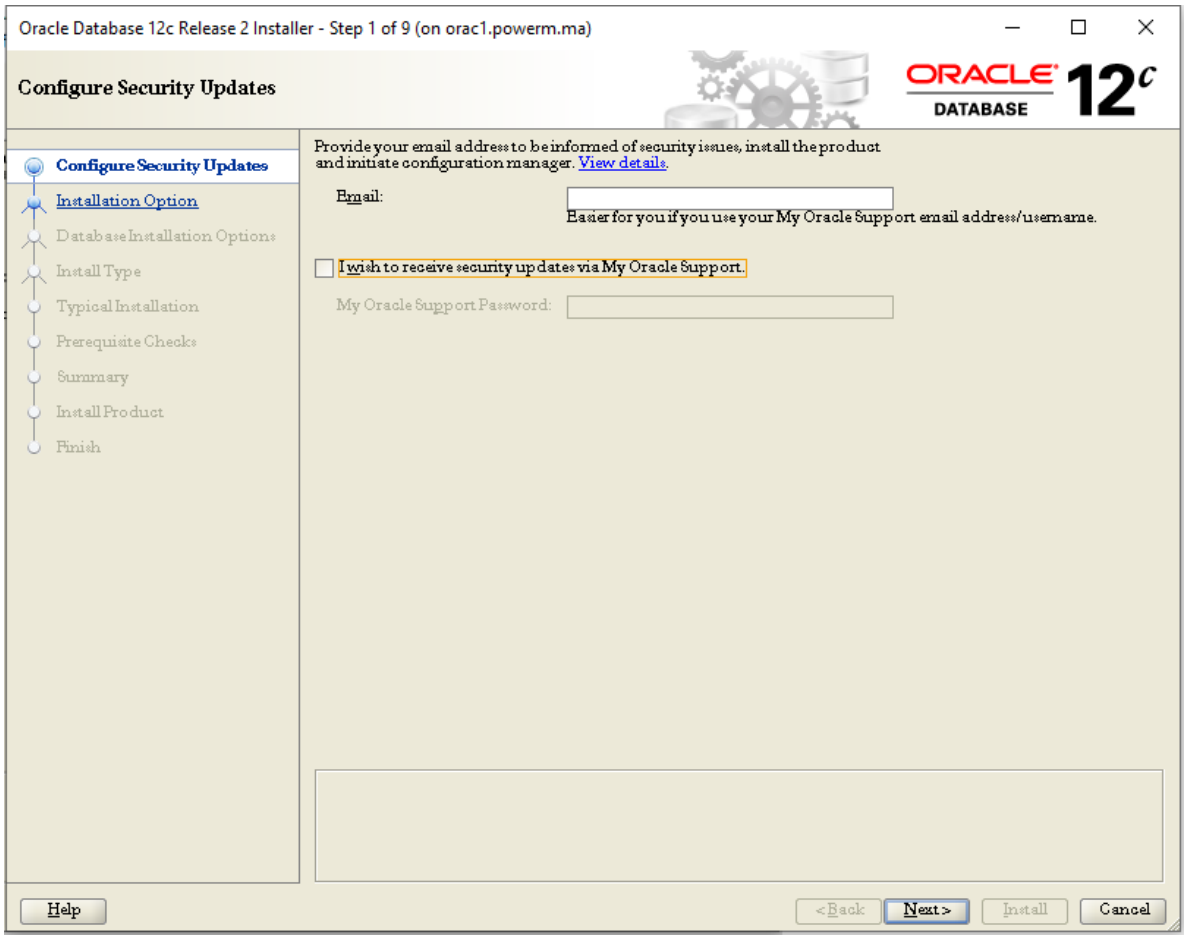
```
# crsctl stat res -t -init
--------------------------------------------------------------------------------
Name           Target  State        Server                   State details
--------------------------------------------------------------------------------
Cluster Resources
--------------------------------------------------------------------------------
ora.asm
      1        ONLINE  ONLINE       orac1                    Started,STABLE
ora.cluster_interconnect.haip
      1        ONLINE  ONLINE       orac1                    STABLE
ora.crf
      1        ONLINE  ONLINE       orac1                    STABLE
ora.crsd
      1        ONLINE  ONLINE       orac1                    STABLE
ora.cssd
      1        ONLINE  ONLINE       orac1                    STABLE
ora.cssdmonitor
      1        ONLINE  ONLINE       orac1                    STABLE
ora.ctssd
      1        ONLINE  ONLINE       orac1                    OBSERVER,STABLE
ora.diskmon
      1        OFFLINE OFFLINE                               STABLE
ora.evmd
      1        ONLINE  ONLINE       orac1                    STABLE
ora.gipcd
      1        ONLINE  ONLINE       orac1                    STABLE
ora.gpnpd
      1        ONLINE  ONLINE       orac1                    STABLE
ora.mdnsd
      1        ONLINE  ONLINE       orac1                    STABLE
ora.storage
      1        ONLINE  ONLINE       orac1                    STABLE
--------------------------------------------------------------------------------
```

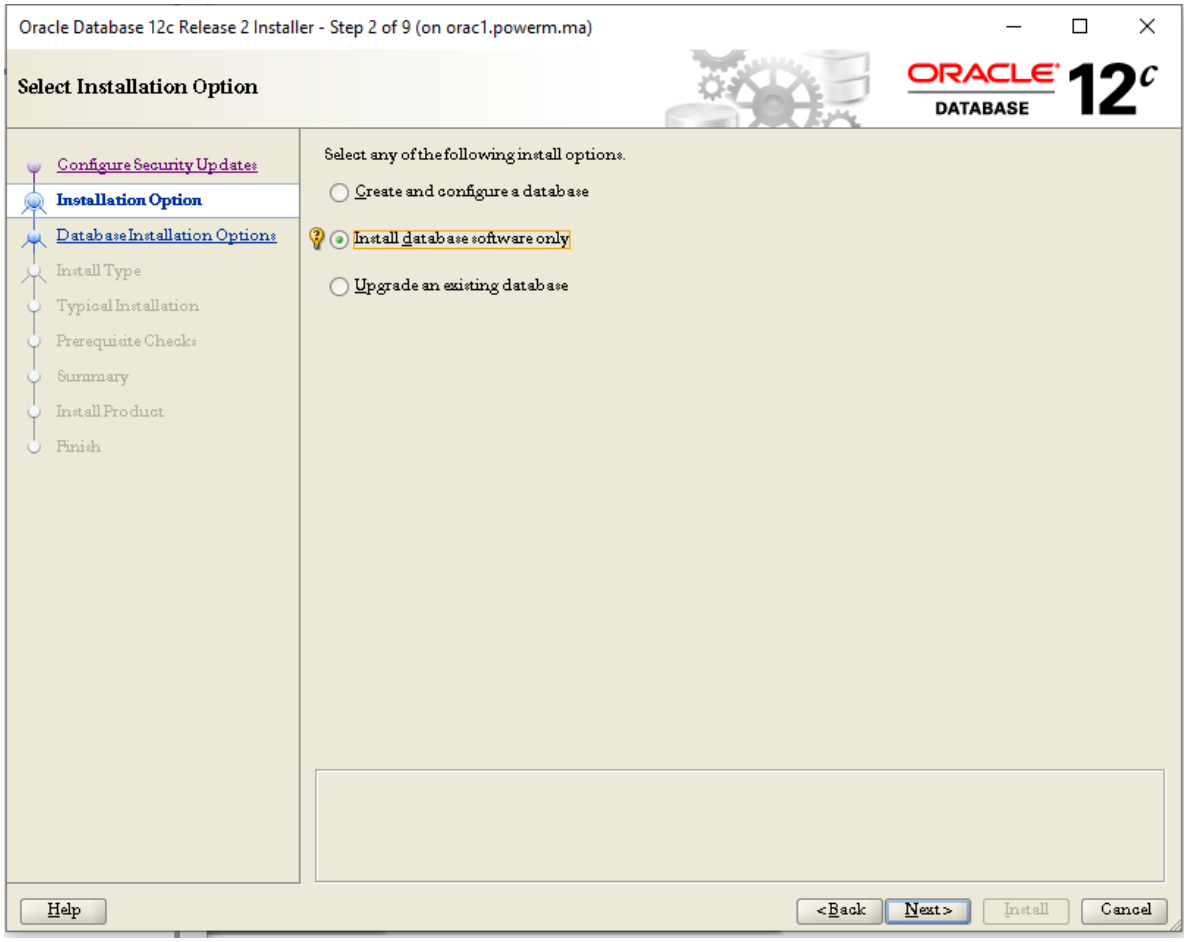
If the state of a service is offline, make sure they all startup using the following command :

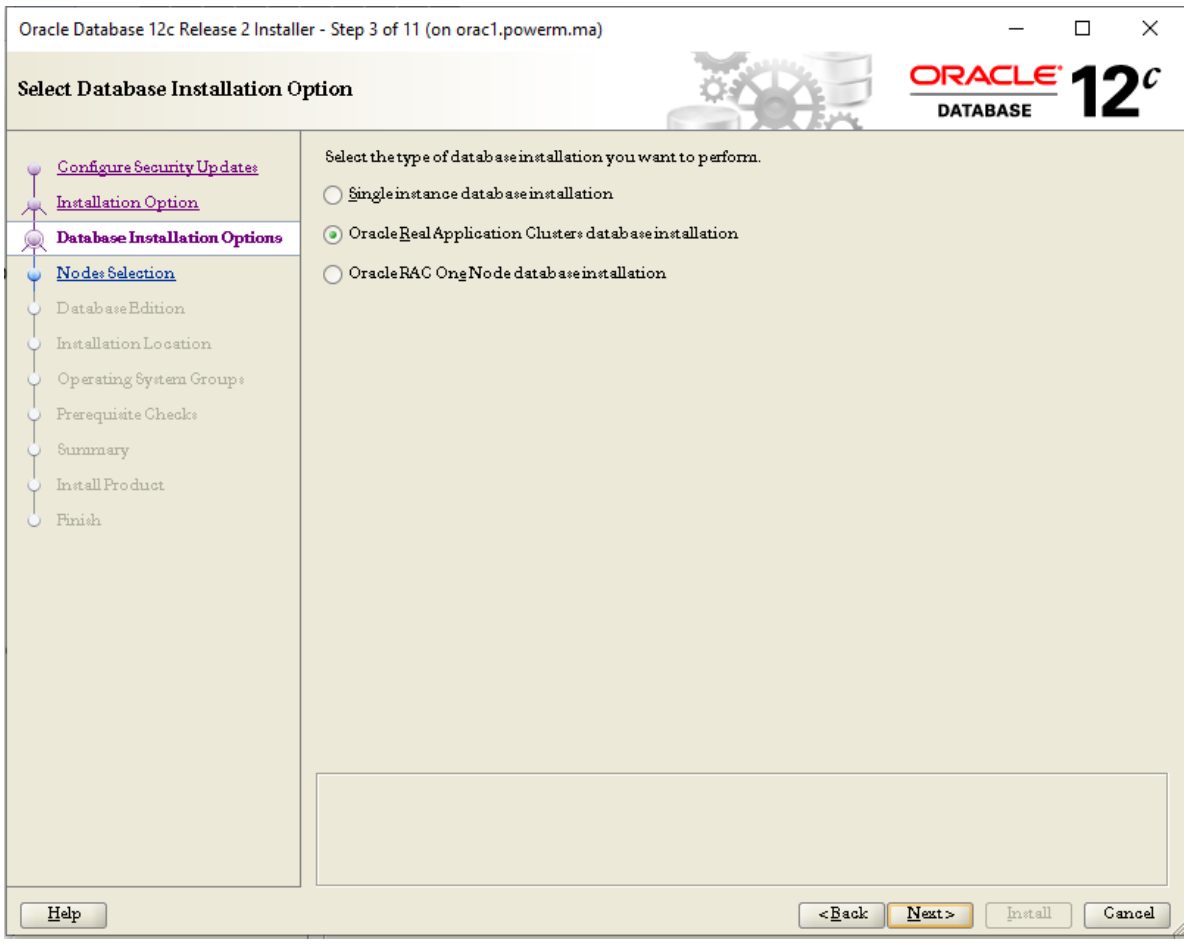
```
crsctl start res <service_name> -init
```

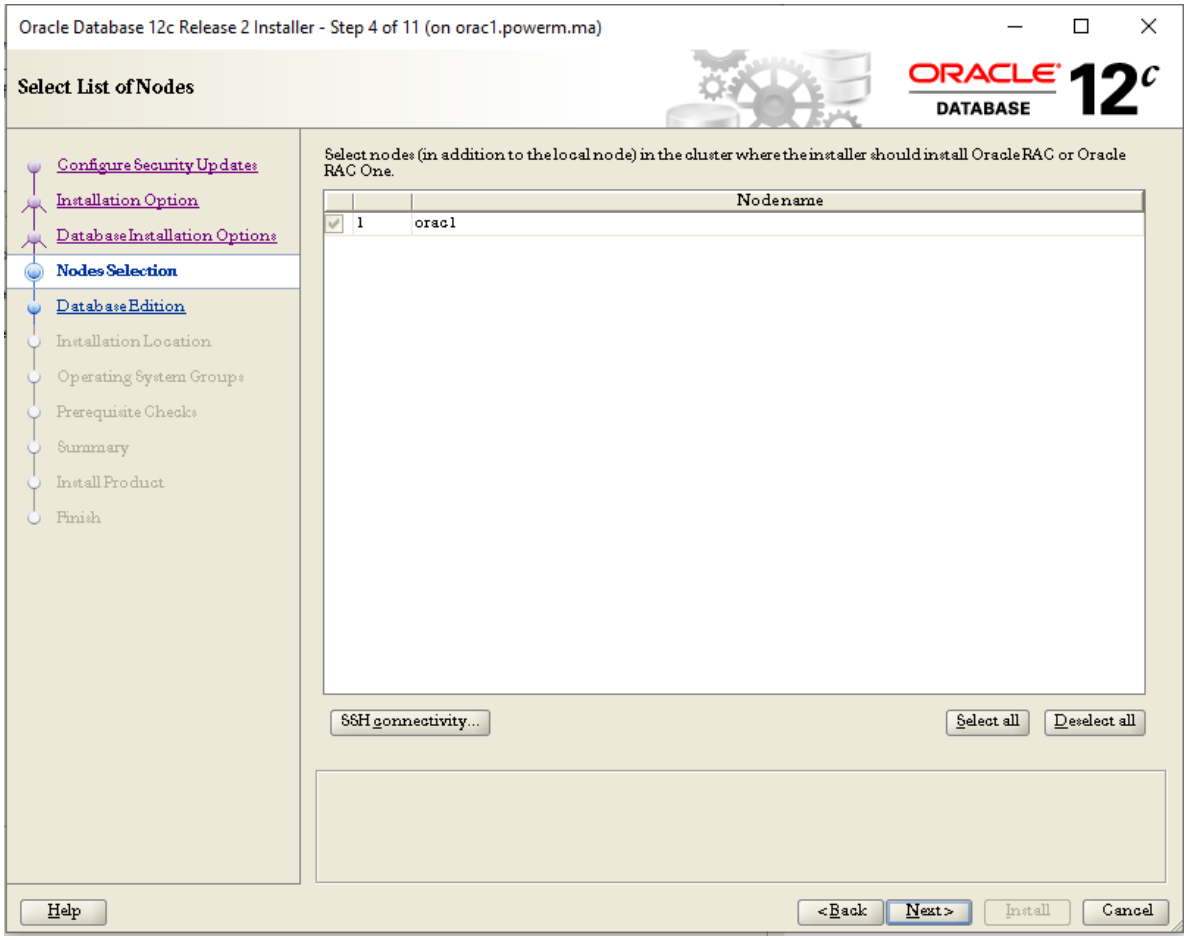
Installing Oracle Database

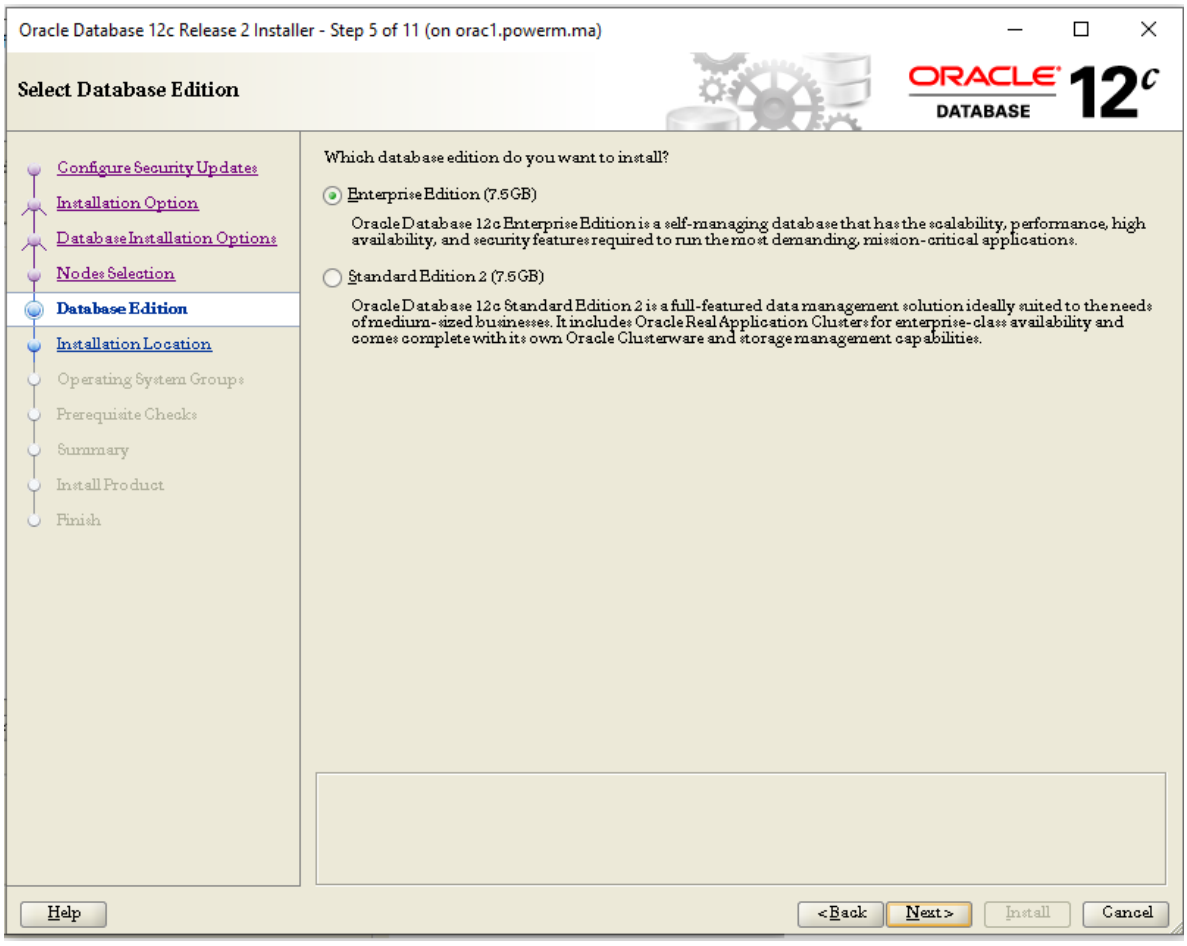
```
cd /tmp/ORACLE
unzip linuxx64_12201_database.zip
chmod -R oracle:oinstall ./database
su - oracle
cd /tmp/ORACLE/database
export DISPLAY=192.168.100.7:0.0
./runInstaller
```

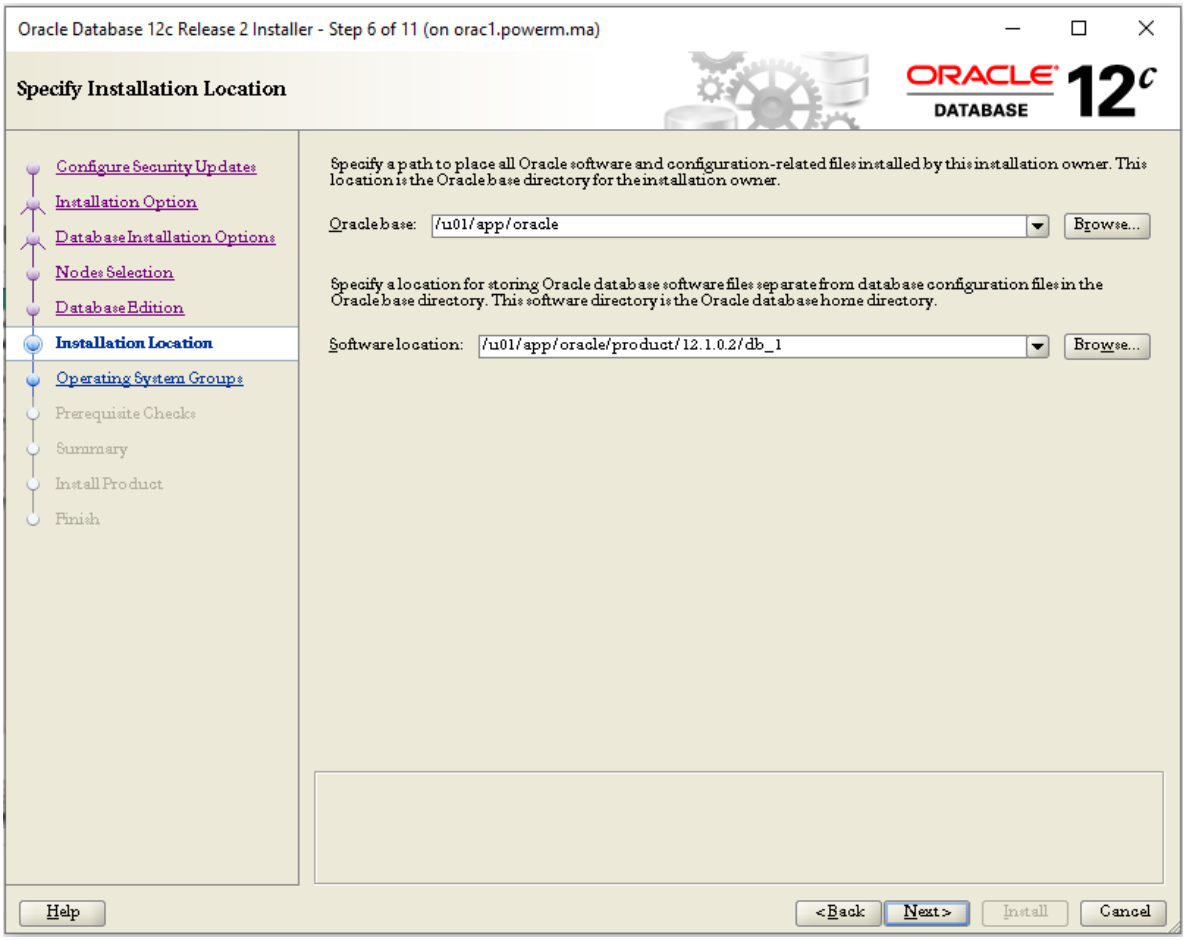


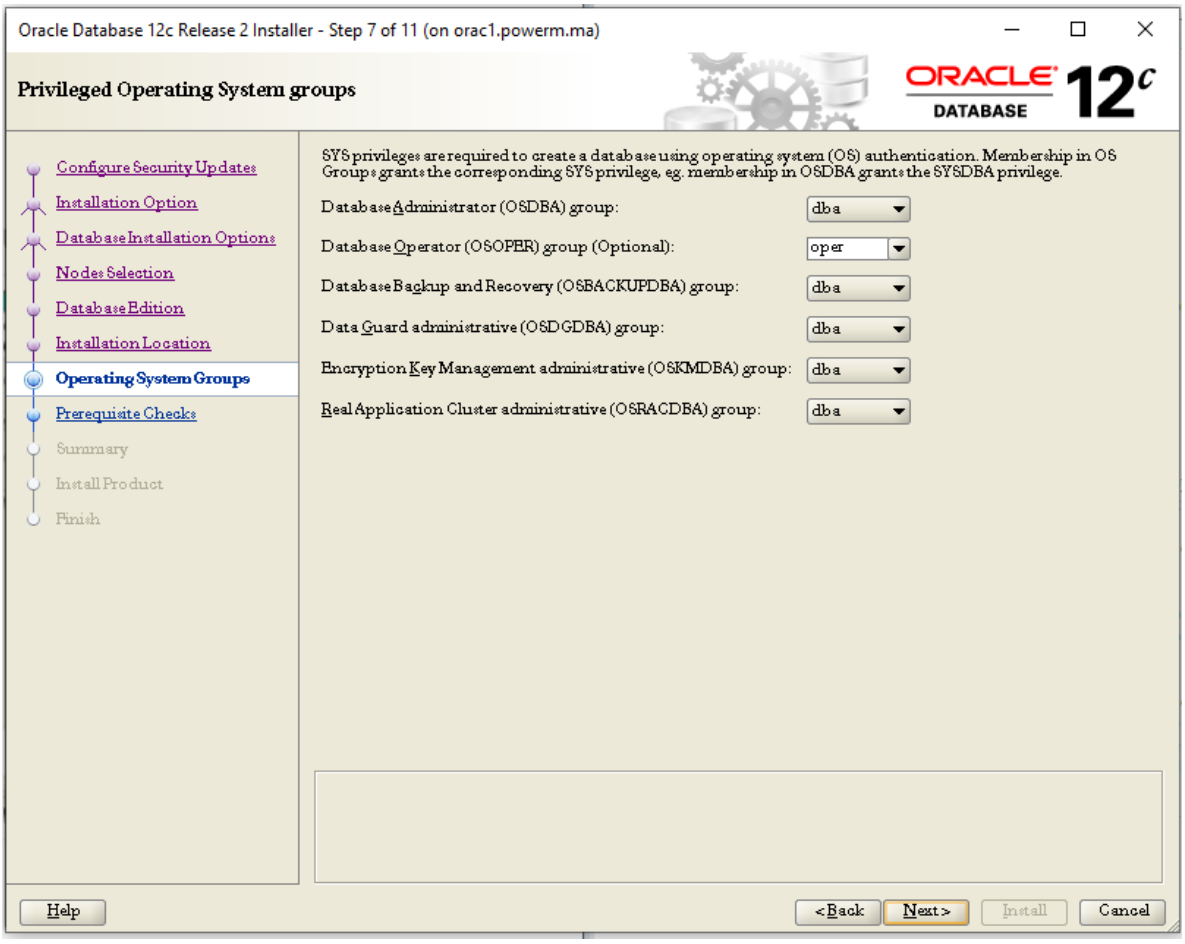

Oracle Database 12c Release 2 Installer - Step 2 of 9 (on orac1.powerm.ma)
Select Installation Option
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
Database Installation Options
Install Type
Typical Installation
Prerequisite Checks
Summary
Install Product
Finish
Select any of the following install options.
Create and configure a database
Install database software only
Upgrade an existing database
Help
< Back
Next >
Install
Cancel

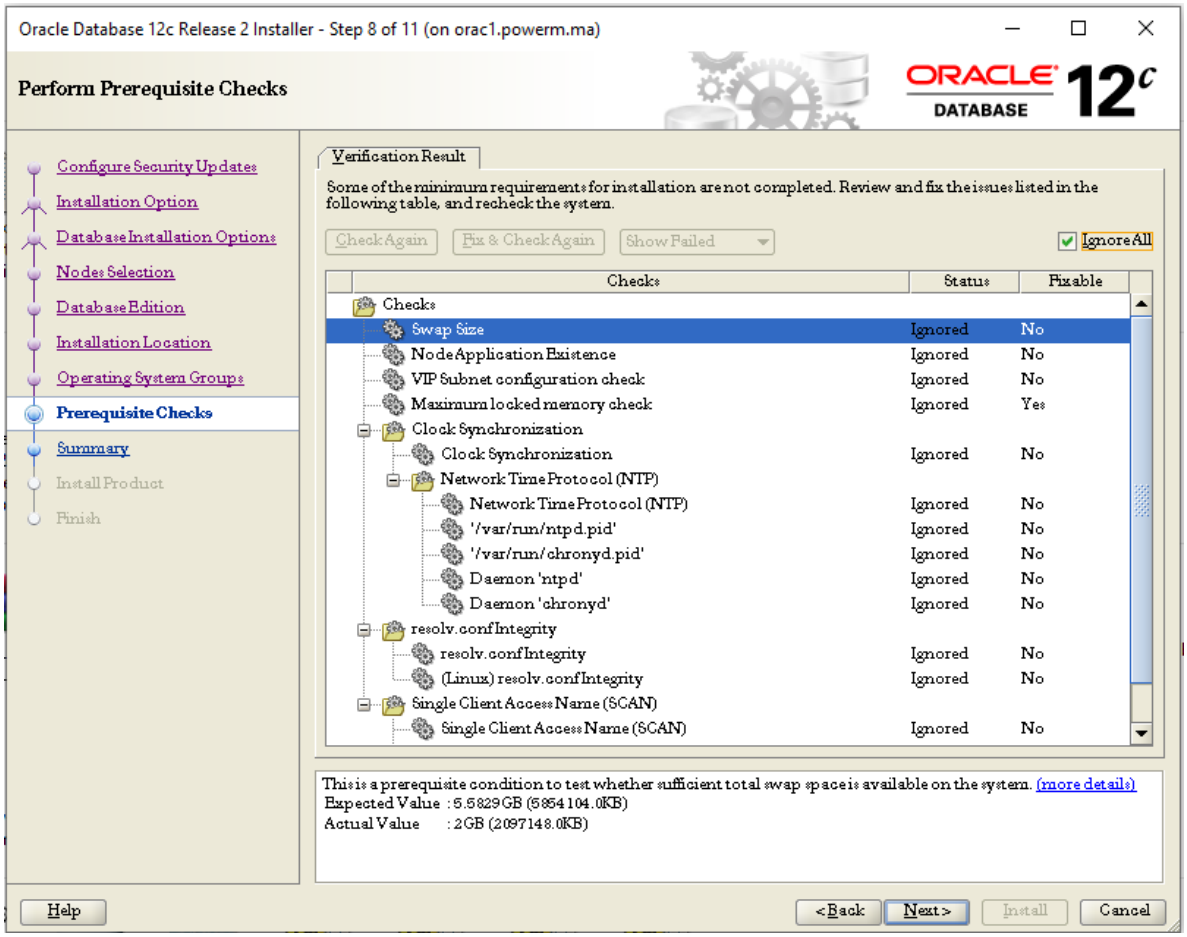

Oracle Database 12c Release 2 Installer - Step 3 of 11 (on orac1.powerm.ma)
Select Database Installation Option
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
Database Installation Options
Nodes Selection
Database Edition
Installation Location
Operating System Groups
Prerequisite 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

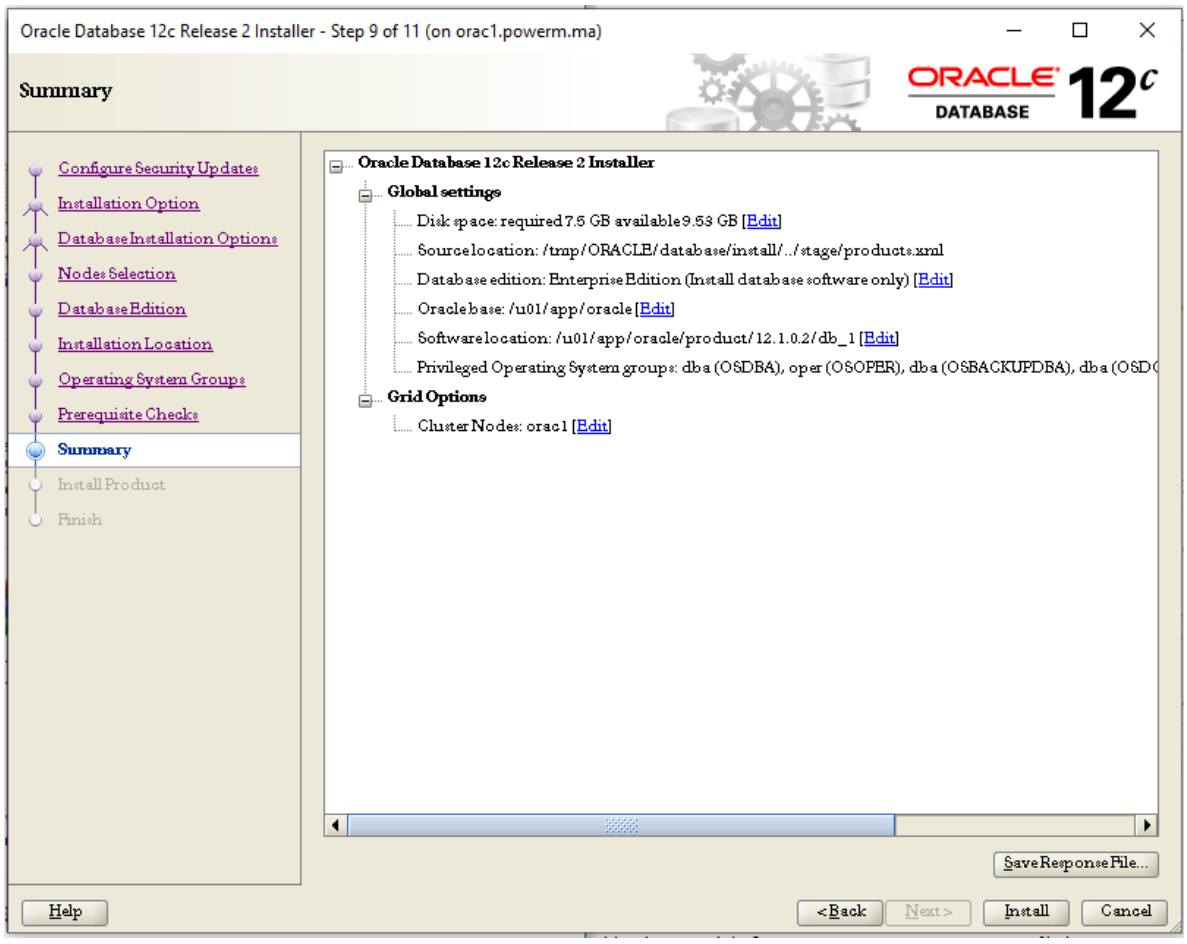

Oracle Database 12c Release 2 Installer - Step 4 of 11 (orac1.powerm.ma)
Select List of Nodes
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
Database Installation Options
Nodes Selection
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish
Select nodes (in addition to the local node) in the cluster where the installer should install Oracle RAC or Oracle RAC One.
Node name
1
orac1
SSH connectivity...
Select all
Deselect all
Help
< Back
Next >
Install
Cancel


Oracle Database 12c Release 2 Installer - Step 5 of 11 (orac1.powerm.ma)
Select Database Edition
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
Database Installation Options
Nodes Selection
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish
Which database edition do you want to install?
Enterprise Edition (7.5GB)
Oracle Database 12c Enterprise Edition is a self-managing database that has the scalability, performance, high availability, and security features required to run the most demanding, mission-critical applications.
Standard Edition 2 (7.5GB)
Oracle Database 12c Standard Edition 2 is a full-featured data management solution ideally suited to the needs of medium-sized businesses. It includes Oracle Real Application Clusters for enterprise-class availability and comes complete with its own Oracle Clusterware and storage management capabilities.
Help
< Back
Next >
Install
Cancel


Oracle Database 12c Release 2 Installer - Step 6 of 11 (on orac1.powerm.ma)
Specify Installation Location
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
Database Installation Options
Nodes Selection
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/12.1.0.2/db_1
Browse...
Help
< Back
Next >
Install
Cancel


Oracle Database 12c Release 2 Installer - Step 7 of 11 (on orac1.powerm.ma)
Privileged Operating System groups
ORACLE DATABASE 12c
Configure Security Updates
Installation Option
Database Installation Options
Nodes Selection
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish
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
Real Application Cluster administrative (OSRACDBA) group: dba
Help
< Back
Next >
Install
Cancel





Using Silent Mode

Or you can use an alternative mode, silently, by using the following response file (adjust it depending on your env). Name it : **db_install.rsp**

```
##############################################################################
## Copyright(c) Oracle Corporation 1998,2017. All rights reserved.##
##                                                                          ##
## Specify values for the variables listed below to customize               ##
## your installation.                                                       ##
##                                                                          ##
## Each variable is associated with a comment. The comment                  ##
## can help to populate the variables with the appropriate                  ##
## values.                                                                  ##
##                                                                          ##
## IMPORTANT NOTE: This file contains plain text passwords and              ##
## should be secured to have read permission only by oracle user            ##
## or db administrator who owns this installation.                          ##
##                                                                          ##
##############################################################################


#------------------------------------------------------------------------------
# Do not change the following system generated value.
#------------------------------------------------------------------------------
oracle.install.responseFileVersion=/oracle/install/rspfmt_dbinstall_response_sch
ema_v12.2.0

#------------------------------------------------------------------------------
# Specify the installation option.
# It can be one of the following:
#   - INSTALL_DB_SWONLY
#   - INSTALL_DB_AND_CONFIG
#   - UPGRADE_DB
#------------------------------------------------------------------------------
oracle.install.option=INSTALL_DB_SWONLY

#------------------------------------------------------------------------------
# Specify the Unix group to be set for the inventory directory.
#------------------------------------------------------------------------------
UNIX_GROUP_NAME=oinstall

#------------------------------------------------------------------------------
# Specify the location which holds the inventory files.
# This is an optional parameter if installing on
# Windows based Operating System.
#------------------------------------------------------------------------------
INVENTORY_LOCATION=/u01/app/oraInventory
#------------------------------------------------------------------------------
# Specify the complete path of the Oracle Home.
#------------------------------------------------------------------------------
ORACLE_HOME=/u01/app/oracle/product/12.2.0.1/db_1

#------------------------------------------------------------------------------
# Specify the complete path of the Oracle Base.
#------------------------------------------------------------------------------
ORACLE_BASE=/u01/app/oracle

#------------------------------------------------------------------------------
# Specify the installation edition of the component.
#
# The value should contain only one of these choices.
```

```
#   - EE     : Enterprise Edition

#   - SE2    : Standard Edition 2


#------------------------------------------------------------------------------

oracle.install.db.InstallEdition=EE
###############################################################################
#                                                                             #
# PRIVILEGED OPERATING SYSTEM GROUPS                                          #
# ------------------------------------                                        #
# Provide values for the OS groups to which SYSDBA and SYSOPER privileges     #
# needs to be granted. If the install is being performed as a member of the   #
# group "dba", then that will be used unless specified otherwise below.       #
#                                                                             #
# The value to be specified for OSDBA and OSOPER group is only for UNIX based #
# Operating System.                                                           #
#                                                                             #
###############################################################################

#------------------------------------------------------------------------------
# The OSDBA_GROUP is the OS group which is to be granted SYSDBA privileges.
#------------------------------------------------------------------------------
oracle.install.db.OSDBA_GROUP=dba

#------------------------------------------------------------------------------
# The OSOPER_GROUP is the OS group which is to be granted SYSOPER privileges.
# The value to be specified for OSOPER group is optional.
#------------------------------------------------------------------------------
oracle.install.db.OSOPER_GROUP=

#------------------------------------------------------------------------------
# The OSBACKUPDBA_GROUP is the OS group which is to be granted SYSBACKUP
privileges.
#------------------------------------------------------------------------------
oracle.install.db.OSBACKUPDBA_GROUP=dba

#------------------------------------------------------------------------------
# The OSDGDBA_GROUP is the OS group which is to be granted SYSDG privileges.
#------------------------------------------------------------------------------
oracle.install.db.OSDGDBA_GROUP=dba

#------------------------------------------------------------------------------
# The OSKMDBA_GROUP is the OS group which is to be granted SYSKM privileges.
#------------------------------------------------------------------------------
oracle.install.db.OSKMDBA_GROUP=dba

#------------------------------------------------------------------------------
# The OSRACDBA_GROUP is the OS group which is to be granted SYSRAC privileges.
#------------------------------------------------------------------------------
oracle.install.db.OSRACDBA_GROUP=dba

###############################################################################
#                                                                             #
#                                Grid Options                                 #
#                                                                             #
###############################################################################
```

```
#------------------------------------------------------------------------------
# Specify the type of Real Application Cluster Database
#
#   - ADMIN_MANAGED: Admin-Managed
#   - POLICY_MANAGED: Policy-Managed
#
# If left unspecified, default will be ADMIN_MANAGED
#------------------------------------------------------------------------------
oracle.install.db.rac.configurationType=

#------------------------------------------------------------------------------
# Value is required only if RAC database type is ADMIN_MANAGED
#
# Specify the cluster node names selected during the installation.
# Leaving it blank will result in install on local server only (Single Instance)
#
# Example : oracle.install.db.CLUSTER_NODES=node1,node2
#------------------------------------------------------------------------------
oracle.install.db.CLUSTER_NODES=ol7-122-rac1,ol7-122-rac2

#------------------------------------------------------------------------------
# This variable is used to enable or disable RAC One Node install.
#
#   - true  : Value of RAC One Node service name is used.
#   - false : Value of RAC One Node service name is not used.
#
# If left blank, it will be assumed to be false.
#------------------------------------------------------------------------------
oracle.install.db.isRACOneInstall=false

#------------------------------------------------------------------------------
# Value is required only if oracle.install.db.isRACOneInstall is true.
#
# Specify the name for RAC One Node Service
#------------------------------------------------------------------------------
oracle.install.db.racOneServiceName=

#------------------------------------------------------------------------------
# Value is required only if RAC database type is POLICY_MANAGED
#
# Specify a name for the new Server pool that will be configured
# Example : oracle.install.db.rac.serverpoolName=pool1
#------------------------------------------------------------------------------
oracle.install.db.rac.serverpoolName=

#------------------------------------------------------------------------------
# Value is required only if RAC database type is POLICY_MANAGED
#
# Specify a number as cardinality for the new Server pool that will be
configured
# Example : oracle.install.db.rac.serverpoolCardinality=2
#------------------------------------------------------------------------------
oracle.install.db.rac.serverpoolCardinality=0

###############################################################################
#                                                                             #
#                        Database Configuration Options                       #
#                                                                             #
```

```
##############################################################################

#-------------------------------------------------------------------------------
# Specify the type of database to create.
# It can be one of the following:
#   - GENERAL_PURPOSE
#   - DATA_WAREHOUSE
# GENERAL_PURPOSE: A starter database designed for general purpose use or
transaction-heavy applications.
# DATA_WAREHOUSE : A starter database optimized for data warehousing
applications.
#-------------------------------------------------------------------------------
oracle.install.db.config.starterdb.type=GENERAL_PURPOSE

#-------------------------------------------------------------------------------
# Specify the Starter Database Global Database Name.
#-------------------------------------------------------------------------------
oracle.install.db.config.starterdb.globalDBName=

#-------------------------------------------------------------------------------
# Specify the Starter Database SID.
#-------------------------------------------------------------------------------
oracle.install.db.config.starterdb.SID=

#-------------------------------------------------------------------------------
# Specify whether the database should be configured as a Container database.
# The value can be either "true" or "false". If left blank it will be assumed
# to be "false".
#-------------------------------------------------------------------------------
oracle.install.db.ConfigureAsContainerDB=false

#-------------------------------------------------------------------------------
# Specify the  Pluggable Database name for the pluggable database in Container
Database.
#-------------------------------------------------------------------------------
oracle.install.db.config.PDBName=

#-------------------------------------------------------------------------------
# Specify the Starter Database character set.
#
#  One of the following
#  AL32UTF8, WE8ISO8859P15, WE8MSWIN1252, EE8ISO8859P2,
#  EE8MSWIN1250, NE8ISO8859P10, NEE8ISO8859P4, BLT8MSWIN1257,
#  BLT8ISO8859P13, CL8ISO8859P5, CL8MSWIN1251, AR8ISO8859P6,
#  AR8MSWIN1256, EL8ISO8859P7, EL8MSWIN1253, IW8ISO8859P8,
#  IW8MSWIN1255, JA16EUC, JA16EUCTILDE, JA16SJIS, JA16SJISTILDE,
#  KO16MSWIN949, ZHS16GBK, TH8TISASCII, ZHT32EUC, ZHT16MSWIN950,
#  ZHT16HKSCS, WE8ISO8859P9, TR8MSWIN1254, VN8MSWIN1258
#-------------------------------------------------------------------------------
oracle.install.db.config.starterdb.characterSet=

#-------------------------------------------------------------------------------
# This variable should be set to true if Automatic Memory Management
# in Database is desired.
# If Automatic Memory Management is not desired, and memory allocation
# is to be done manually, then set it to false.
#-------------------------------------------------------------------------------
oracle.install.db.config.starterdb.memoryOption=false
```

```
#------------------------------------------------------------------------------
# Specify the total memory allocation for the database. Value(in MB) should be
# at least 256 MB, and should not exceed the total physical memory available
# on the system.
# Example: oracle.install.db.config.starterdb.memoryLimit=512
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.memoryLimit=

#------------------------------------------------------------------------------
# This variable controls whether to load Example Schemas onto
# the starter database or not.
# The value can be either "true" or "false". If left blank it will be assumed
# to be "false".
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.installExampleSchemas=false

###############################################################################
#                                                                             #
# Passwords can be supplied for the following four schemas in the             #
# starter database:                                                           #
#   SYS                                                                       #
#   SYSTEM                                                                    #
#   DBSNMP (used by Enterprise Manager)                                       #
#                                                                             #
# Same password can be used for all accounts (not recommended)               #
# or different passwords for each account can be provided (recommended)       #
#                                                                             #
###############################################################################

#------------------------------------------------------------------------------
# This variable holds the password that is to be used for all schemas in the
# starter database.
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.password.ALL=

#------------------------------------------------------------------------------
# Specify the SYS password for the starter database.
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.password.SYS=

#------------------------------------------------------------------------------
# Specify the SYSTEM password for the starter database.
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.password.SYSTEM=

#------------------------------------------------------------------------------
# Specify the DBSNMP password for the starter database.
# Applicable only when
oracle.install.db.config.starterdb.managementOption=CLOUD_CONTROL
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.password.DBSNMP=

#------------------------------------------------------------------------------
# Specify the PDBADMIN password required for creation of Pluggable Database in
the Container Database.
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.password.PDBADMIN=
```

```
#------------------------------------------------------------------------------
# Specify the management option to use for managing the database.
# Options are:
# 1. CLOUD_CONTROL - If you want to manage your database with Enterprise Manager
Cloud Control along with Database Express.
# 2. DEFAULT   -If you want to manage your database using the default Database
Express option.
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.managementOption=DEFAULT

#------------------------------------------------------------------------------
# Specify the OMS host to connect to Cloud Control.
# Applicable only when
oracle.install.db.config.starterdb.managementOption=CLOUD_CONTROL
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.omsHost=

#------------------------------------------------------------------------------
# Specify the OMS port to connect to Cloud Control.
# Applicable only when
oracle.install.db.config.starterdb.managementOption=CLOUD_CONTROL
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.omsPort=0

#------------------------------------------------------------------------------
# Specify the EM Admin user name to use to connect to Cloud Control.
# Applicable only when
oracle.install.db.config.starterdb.managementOption=CLOUD_CONTROL
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.emAdminUser=

#------------------------------------------------------------------------------
# Specify the EM Admin password to use to connect to Cloud Control.
# Applicable only when
oracle.install.db.config.starterdb.managementOption=CLOUD_CONTROL
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.emAdminPassword=

###############################################################################
#                                                                             #
# SPECIFY RECOVERY OPTIONS                                                    #
# ------------------------------------                                        #
# Recovery options for the database can be mentioned using the entries below  #
#                                                                             #
###############################################################################

#------------------------------------------------------------------------------
# This variable is to be set to false if database recovery is not required. Else
# this can be set to true.
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.enableRecovery=false

#------------------------------------------------------------------------------
# Specify the type of storage to use for the database.
# It can be one of the following:
#   - FILE_SYSTEM_STORAGE
#   - ASM_STORAGE
```

```
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.storageType=

#------------------------------------------------------------------------------
# Specify the database file location which is a directory for datafiles, control
# files, redo logs.
#
# Applicable only when
oracle.install.db.config.starterdb.storage=FILE_SYSTEM_STORAGE
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.fileSystemStorage.dataLocation=

#------------------------------------------------------------------------------
# Specify the recovery location.
#
# Applicable only when
oracle.install.db.config.starterdb.storage=FILE_SYSTEM_STORAGE
#------------------------------------------------------------------------------
oracle.install.db.config.starterdb.fileSystemStorage.recoveryLocation=

#------------------------------------------------------------------------------
# Specify the existing ASM disk groups to be used for storage.
#
# Applicable only when
oracle.install.db.config.starterdb.storageType=ASM_STORAGE
#------------------------------------------------------------------------------
oracle.install.db.config.asm.diskGroup=

#------------------------------------------------------------------------------
# Specify the password for ASMSNMP user of the ASM instance.
#
# Applicable only when oracle.install.db.config.starterdb.storage=ASM_STORAGE
#------------------------------------------------------------------------------
oracle.install.db.config.asm.ASMSNMPPassword=

#------------------------------------------------------------------------------
# Specify the My Oracle Support Account Username.
#
#  Example   : MYORACLESUPPORT_USERNAME=abc@oracle.com
#------------------------------------------------------------------------------
MYORACLESUPPORT_USERNAME=

#------------------------------------------------------------------------------
# Specify the My Oracle Support Account Username password.
#
# Example    : MYORACLESUPPORT_PASSWORD=password
#------------------------------------------------------------------------------
MYORACLESUPPORT_PASSWORD=

#------------------------------------------------------------------------------
# Specify whether to enable the user to set the password for
# My Oracle Support credentials. The value can be either true or false.
# If left blank it will be assumed to be false.
#
# Example    : SECURITY_UPDATES_VIA_MYORACLESUPPORT=true
#------------------------------------------------------------------------------
SECURITY_UPDATES_VIA_MYORACLESUPPORT=false
```

```
#------------------------------------------------------------------------------
# Specify whether user doesn't want to configure Security Updates.
# The value for this variable should be true if you don't want to configure
# Security Updates, false otherwise.
#
# The value can be either true or false. If left blank it will be assumed
# to be true.
#
# Example    : DECLINE_SECURITY_UPDATES=false
#------------------------------------------------------------------------------
DECLINE_SECURITY_UPDATES=true

#------------------------------------------------------------------------------
# Specify the Proxy server name. Length should be greater than zero.
#
# Example    : PROXY_HOST=proxy.domain.com
#------------------------------------------------------------------------------
PROXY_HOST=

#------------------------------------------------------------------------------
# Specify the proxy port number. Should be Numeric and at least 2 chars.
#
# Example    : PROXY_PORT=25
#------------------------------------------------------------------------------
PROXY_PORT=

#------------------------------------------------------------------------------
# Specify the proxy user name. Leave PROXY_USER and PROXY_PWD
# blank if your proxy server requires no authentication.
#
# Example    : PROXY_USER=username
#------------------------------------------------------------------------------
PROXY_USER=

#------------------------------------------------------------------------------
# Specify the proxy password. Leave PROXY_USER and PROXY_PWD
# blank if your proxy server requires no authentication.
#
# Example    : PROXY_PWD=password
#------------------------------------------------------------------------------
PROXY_PWD=

#------------------------------------------------------------------------------
# Specify the Oracle Support Hub URL.
#
# Example    : COLLECTOR_SUPPORTHUB_URL=https://orasupporthub.company.com:8080/
#------------------------------------------------------------------------------
```

Issue the following command to install the database :

```
./runInstaller -silent -ignoreSysPrereqs -showProgress -responseFile
/tmp/db_install.rsp
```

Create a Database

Create a database in your RAC environment, called cdbrac, using a silent mode :

```
su - oracle
dbca -silent -responseFile /tmp/dbca.rsp
```

The content of dbca.rsp is like follow

```
###############################################################################
##                                                                           ##
##                           DBCA response file                              ##
##                           ------------------                              ##
## Copyright(c) Oracle Corporation 1998,2017. All rights reserved.          ##
##                                                                           ##
## Specify values for the variables listed below to customize                ##
## your installation.                                                        ##
##                                                                           ##
## Each variable is associated with a comment. The comment                   ##
## can help to populate the variables with the appropriate                   ##
## values.                                                                   ##
##                                                                           ##
## IMPORTANT NOTE: This file contains plain text passwords and               ##
## should be secured to have read permission only by oracle user             ##
## or db administrator who owns this installation.                           ##
###############################################################################
#------------------------------------------------------------------------------
# Do not change the following system generated value.
#------------------------------------------------------------------------------
responseFileVersion=/oracle/assistants/rspfmt_dbca_response_schema_v12.2.0

#------------------------------------------------------------------------------
# Name          : gdbName
# Datatype      : String
# Description   : Global database name of the database
# Valid values  : <db_name>.<db_domain> - when database domain isn't NULL
#                 <db_name>             - when database domain is NULL
# Default value : None
# Mandatory     : Yes
#------------------------------------------------------------------------------
gdbName=cdbrac

#------------------------------------------------------------------------------
# Name          : sid
# Datatype      : String
# Description   : System identifier (SID) of the database
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : <db_name> specified in GDBNAME
# Mandatory     : No
#------------------------------------------------------------------------------
sid=cdbrac

#------------------------------------------------------------------------------
# Name          : databaseConfigType
# Datatype      : String
# Description   : database conf type as Single Instance, Real Application
Cluster or Real Application Cluster One Nodes database
# Valid values  : SI\RAC\RACONENODE
# Default value : SI
# Mandatory     : No
```

```
#-------------------------------------------------------------------------------
databaseConfigType=RAC

#-------------------------------------------------------------------------------
# Name          : RACOneNodeServiceName
# Datatype      : String
# Description   : Service is required by application to connect to RAC One
#         Node Database
# Valid values  : Service Name
# Default value : None
# Mandatory     : No [required in case DATABASECONFTYPE is set to RACONENODE ]
#-------------------------------------------------------------------------------
RACOneNodeServiceName=

#-------------------------------------------------------------------------------
# Name          : policyManaged
# Datatype      : Boolean
# Description   : Set to true if Database is policy managed and
#         set to false if  Database is admin managed
# Valid values  : TRUE\FALSE
# Default value : FALSE
# Mandatory     : No
#-------------------------------------------------------------------------------
policyManaged=false


#-------------------------------------------------------------------------------
# Name          : createServerPool
# Datatype      : Boolean
# Description   : Set to true if new server pool need to be created for database
#         if this option is specified then the newly created database
#         will use this newly created serverpool.
#         Multiple serverpoolname can not be specified for database
# Valid values  : TRUE\FALSE
# Default value : FALSE
# Mandatory     : No
#-------------------------------------------------------------------------------
createServerPool=false

#-------------------------------------------------------------------------------
# Name          : serverPoolName
# Datatype      : String
# Description   : Only one serverpool name need to be specified
#          if Create Server Pool option is specified.
#          Comma-separated list of Serverpool names if db need to use
#          multiple Server pool
# Valid values  : ServerPool name

# Default value : None
# Mandatory     : No [required in case of RAC service centric database]
#-------------------------------------------------------------------------------
serverPoolName=

#-------------------------------------------------------------------------------
# Name          : cardinality
# Datatype      : Number
# Description   : Specify Cardinality for create server pool operation
```

```
# Valid values  : any positive Integer value
# Default value : Number of qualified nodes on cluster
# Mandatory     : No [Required when a new serverpool need to be created]
#------------------------------------------------------------------------------
cardinality=

#------------------------------------------------------------------------------
# Name          : force
# Datatype      : Boolean
# Description   : Set to true if new server pool need to be created by force
#         if this option is specified then the newly created serverpool
#         will be assigned server even if no free servers are available.
#         This may affect already running database.
#         This flag can be specified for Admin managed as well as policy managed
db.
# Valid values  : TRUE\FALSE
# Default value : FALSE
# Mandatory     : No
#------------------------------------------------------------------------------
force=false

#------------------------------------------------------------------------------
# Name          : pqPoolName
# Datatype      : String
# Description   : Only one serverpool name needs to be specified
#          if create server pool option is specified.
#          Comma-separated list of serverpool names if use
#          server pool. This is required to
#                  create Parallel Query (PQ) database. Applicable to Big
Cluster
# Valid values  :  Parallel Query (PQ) pool name
# Default value : None
# Mandatory     : No [required in case of RAC service centric database]
#------------------------------------------------------------------------------
pqPoolName=

#------------------------------------------------------------------------------
# Name          : pqCardinality
# Datatype      : Number
# Description   : Specify Cardinality for create server pool operation.
#                 Applicable to Big Cluster
# Valid values  : any positive Integer value
# Default value : Number of qualified nodes on cluster
# Mandatory     : No [Required when a new serverpool need to be created]
#------------------------------------------------------------------------------
pqCardinality=

#------------------------------------------------------------------------------
# Name          : createAsContainerDatabase
# Datatype      : boolean
# Description   : flag to create database as container database
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : false
# Mandatory     : No
#------------------------------------------------------------------------------
createAsContainerDatabase=true

#------------------------------------------------------------------------------
```

```
# Name          : numberOfPDBs
# Datatype      : Number
# Description   : Specify the number of pdb to be created
# Valid values  : 0 to 252
# Default value : 0
# Mandatory     : No
#-------------------------------------------------------------------------------
numberOfPDBs=1

#-------------------------------------------------------------------------------
# Name          : pdbName
# Datatype      : String
# Description   : Specify the pdbname/pdbanme prefix if one or more pdb need to
be created
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : No
#-------------------------------------------------------------------------------
pdbName=pdb1

#-------------------------------------------------------------------------------
# Name          : useLocalUndoForPDBs
# Datatype      : boolean
# Description   : Flag to create local undo tablespace for all PDB's.
# Valid values  : TRUE\FALSE
# Default value : TRUE
# Mandatory     : No
#-------------------------------------------------------------------------------
useLocalUndoForPDBs=true

#-------------------------------------------------------------------------------
# Name          : pdbAdminPassword
# Datatype      : String
# Description   : PDB Administrator user password
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : No
#-------------------------------------------------------------------------------

pdbAdminPassword=

#-------------------------------------------------------------------------------
# Name          : nodelist
# Datatype      : String
# Description   : Comma-separated list of cluster nodes
# Valid values  : Cluster node names
# Default value : None
# Mandatory     : No (Yes for RAC database-centric database )
#-------------------------------------------------------------------------------
nodelist=ol7-122-rac1,ol7-122-rac2

#-------------------------------------------------------------------------------
# Name          : templateName
# Datatype      : String
# Description   : Name of the template
# Valid values  : Template file name
# Default value : None
# Mandatory     : Yes
```

```
#-------------------------------------------------------------------------------
templateName=/u01/app/oracle/product/12.2.0.1/db_1/assistants/dbca/templates/Gen
eral_Purpose.dbc

#-------------------------------------------------------------------------------
# Name          : sysPassword
# Datatype      : String
# Description   : Password for SYS user
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : Yes
#-------------------------------------------------------------------------------
sysPassword=

#-------------------------------------------------------------------------------
# Name          : systemPassword
# Datatype      : String
# Description   : Password for SYSTEM user
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : Yes
#-------------------------------------------------------------------------------
systemPassword=

#-------------------------------------------------------------------------------
# Name          : serviceUserPassword
# Datatype      : String
# Description   : Password for Windows Service user
# Default value : None
# Mandatory     : If Oracle home is installed with windows service user
#-------------------------------------------------------------------------------
serviceUserPassword=

#-------------------------------------------------------------------------------
# Name          : emConfiguration
# Datatype      : String
# Description   : Enterprise Manager Configuration Type
# Valid values  : CENTRAL|DBEXPRESS|BOTH|NONE
# Default value : NONE
# Mandatory     : No
#-------------------------------------------------------------------------------
emConfiguration=

#-------------------------------------------------------------------------------
# Name          : emExpressPort
# Datatype      : Number
# Description   : Enterprise Manager Configuration Type
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : NONE
# Mandatory     : No, will be picked up from DBEXPRESS_HTTPS_PORT env variable
#                 or auto generates a free port between 5500 and 5599
#-------------------------------------------------------------------------------
emExpressPort=0

#-------------------------------------------------------------------------------
# Name          : runCVUChecks
# Datatype      : Boolean
# Description   : Specify whether to run Cluster Verification Utility checks
```

```
#                 periodically in Cluster environment
# Valid values  : TRUE\FALSE
# Default value : FALSE
# Mandatory     : No
#------------------------------------------------------------------------------
runCVUChecks=false

#------------------------------------------------------------------------------
# Name          : dbsnmpPassword
# Datatype      : String
# Description   : Password for DBSNMP user
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : Yes, if emConfiguration is specified or
#                 the value of runCVUChecks is TRUE
#------------------------------------------------------------------------------
dbsnmpPassword=

#------------------------------------------------------------------------------
# Name          : omsHost
# Datatype      : String
# Description   : EM management server host name
# Default value : None
# Mandatory     : Yes, if CENTRAL is specified for emConfiguration
#------------------------------------------------------------------------------
omsHost=

#------------------------------------------------------------------------------
# Name          : omsPort
# Datatype      : Number
# Description   : EM management server port number
# Default value : None
# Mandatory     : Yes, if CENTRAL is specified for emConfiguration
#------------------------------------------------------------------------------
omsPort=0

#------------------------------------------------------------------------------
# Name          : emUser
# Datatype      : String
# Description   : EM Admin username to add or modify targets
# Default value : None
# Mandatory     : Yes, if CENTRAL is specified for emConfiguration
#------------------------------------------------------------------------------
emUser=

#------------------------------------------------------------------------------
# Name          : emPassword
# Datatype      : String
# Description   : EM Admin user password
# Default value : None
# Mandatory     : Yes, if CENTRAL is specified for emConfiguration
#------------------------------------------------------------------------------
emPassword=

#------------------------------------------------------------------------------
# Name          : dvConfiguration
# Datatype      : Boolean
# Description   : Specify "True" to configure and enable Oracle Database vault
```

```
# Valid values  : True/False
# Default value : False
# Mandatory     : No
#------------------------------------------------------------------------------
dvConfiguration=false

#------------------------------------------------------------------------------
# Name          : dvUserName
# Datatype      : String
# Description   : DataVault Owner
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : Yes, if DataVault option is chosen
#------------------------------------------------------------------------------
dvUserName=

#------------------------------------------------------------------------------
# Name          : dvUserPassword
# Datatype      : String
# Description   : Password for DataVault Owner
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : Yes, if DataVault option is chosen
#------------------------------------------------------------------------------
dvUserPassword=

#------------------------------------------------------------------------------
# Name          : dvAccountManagerName
# Datatype      : String
# Description   : DataVault Account Manager
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : No
#------------------------------------------------------------------------------
dvAccountManagerName=

#------------------------------------------------------------------------------
# Name          : dvAccountManagerPassword
# Datatype      : String
# Description   : Password for  DataVault Account Manager
# Valid values  : Check Oracle12c Administrator's Guide
# Default value : None
# Mandatory     : No
#------------------------------------------------------------------------------
dvAccountManagerPassword=

#------------------------------------------------------------------------------
# Name          : olsConfiguration
# Datatype      : Boolean
# Description   : Specify "True" to configure and enable Oracle Label Security
# Valid values  : True/False
# Default value : False
# Mandatory     : No
#------------------------------------------------------------------------------
olsConfiguration=false

#------------------------------------------------------------------------------
# Name          : datafileJarLocation
```

```
# Datatype      : String
# Description   : Location of the data file jar
# Valid values  : Directory containing compressed datafile jar
# Default value : None
# Mandatory     : No
#-------------------------------------------------------------------------------
datafileJarLocation={ORACLE_HOME}/assistants/dbca/templates/

#-------------------------------------------------------------------------------
# Name          : datafileDestination
# Datatype      : String
# Description   : Location of the data file's
# Valid values  : Directory for all the database files
# Default value : $ORACLE_BASE/oradata
# Mandatory     : No
#-------------------------------------------------------------------------------
datafileDestination=+DATA/{DB_UNIQUE_NAME}/

#-------------------------------------------------------------------------------
# Name          : recoveryAreaDestination
# Datatype      : String
# Description   : Location of the data file's
# Valid values  : Recovery Area location
# Default value : $ORACLE_BASE/flash_recovery_area
# Mandatory     : No
#-------------------------------------------------------------------------------
recoveryAreaDestination=+DATA

#-------------------------------------------------------------------------------
# Name          : storageType
# Datatype      : String
# Description   : Specifies the storage on which the database is to be created
# Valid values  : FS (CFS for RAC), ASM
# Default value : FS
# Mandatory     : No
#-------------------------------------------------------------------------------
storageType=ASM

#-------------------------------------------------------------------------------
# Name          : diskGroupName
# Datatype      : String
# Description   : Specifies the disk group name for the storage
# Default value : DATA
# Mandatory     : No
#-------------------------------------------------------------------------------
diskGroupName=+DATA/{DB_UNIQUE_NAME}/

#-------------------------------------------------------------------------------
# Name          : asmsnmpPassword
# Datatype      : String
# Description   : Password for ASM Monitoring
# Default value : None
# Mandatory     : No
#-------------------------------------------------------------------------------
asmsnmpPassword=

#-------------------------------------------------------------------------------
# Name          : recoveryGroupName
```

```
# Datatype      : String
# Description   : Specifies the disk group name for the recovery area
# Default value : RECOVERY
# Mandatory     : No
#------------------------------------------------------------------------------
recoveryGroupName=+DATA

#------------------------------------------------------------------------------
# Name          : characterSet
# Datatype      : String
# Description   : Character set of the database
# Valid values  : Check Oracle12c National Language Support Guide
# Default value : "US7ASCII"
# Mandatory     : NO
#------------------------------------------------------------------------------
characterSet=AL32UTF8

#------------------------------------------------------------------------------
# Name          : nationalCharacterSet
# Datatype      : String
# Description   : National Character set of the database
# Valid values  : "UTF8" or "AL16UTF16". For details, check Oracle12c National
Language Support Guide
# Default value : "AL16UTF16"
# Mandatory     : No
#------------------------------------------------------------------------------
nationalCharacterSet=

#------------------------------------------------------------------------------
# Name          : registerWithDirService
# Datatype      : Boolean
# Description   : Specifies whether to register with Directory Service.
# Valid values  : TRUE \ FALSE
# Default value : FALSE
# Mandatory     : No
#------------------------------------------------------------------------------
registerWithDirService=false


#------------------------------------------------------------------------------
# Name          : dirServiceUserName
# Datatype      : String
# Description   : Specifies the name of the directory service user
# Mandatory     : YES, if the value of registerWithDirService is TRUE
#------------------------------------------------------------------------------
dirServiceUserName=

#------------------------------------------------------------------------------
# Name          : dirServicePassword
# Datatype      : String
# Description   : The password of the directory service user.
#         You can also specify the password at the command prompt instead of
here.
# Mandatory     : YES, if the value of registerWithDirService is TRUE
#------------------------------------------------------------------------------
dirServicePassword=

#------------------------------------------------------------------------------
```

```
# Name          : walletPassword
# Datatype      : String
# Description   : The password for wallet to created or modified.
#         You can also specify the password at the command prompt instead of
here.
# Mandatory     : YES, if the value of registerWithDirService is TRUE
#-------------------------------------------------------------------------------
walletPassword=

#-------------------------------------------------------------------------------
# Name          : listeners
# Datatype      : String
# Description   : Specifies list of listeners to register the database with.
#         By default the database is configured for all the listeners specified
in the
#         $ORACLE_HOME/network/admin/listener.ora
# Valid values  : The list should be comma separated like "listener1,listener2".
# Mandatory     : NO
#-------------------------------------------------------------------------------
listeners=LISTENER

#-------------------------------------------------------------------------------
# Name          : variablesFile
# Datatype      : String
# Description   : Location of the file containing variable value pair
# Valid values  : A valid file-system file. The variable value pair format in
this file
#         is <variable>=<value>. Each pair should be in a new line.
# Default value : None
# Mandatory     : NO
#-------------------------------------------------------------------------------
variablesFile=

#-------------------------------------------------------------------------------
# Name          : variables
# Datatype      : String
# Description   : comma separated list of name=value pairs. Overrides variables
defined in variablefile and templates
# Default value : None
# Mandatory     : NO
#-------------------------------------------------------------------------------
variables=DB_UNIQUE_NAME=cdbrac,ORACLE_BASE=/u01/app/oracle,PDB_NAME=,DB_NAME=cd
brac,ORACLE_HOME=/u01/app/oracle/product/12.2.0.1/db_1,SID=cdbrac

#-------------------------------------------------------------------------------
# Name          : initParams
# Datatype      : String
# Description   : comma separated list of name=value pairs. Overrides
initialization parameters defined in templates
# Default value : None
# Mandatory     : NO
#-------------------------------------------------------------------------------
```

```
initParams=family:dw_helper.instance_mode=read-
only,processes=300,db_recovery_file_dest_size=8016MB,pga_aggregate_target=369MB,
sga_target=1107MB,dispatchers=(PROTOCOL=TCP) (SERVICE=
{SID}XDB),db_recovery_file_dest=+DATA,db_block_size=8KB,cdbrac2.thread=2,cdbrac1
.thread=1,diagnostic_dest={ORACLE_BASE},cluster_database=true,audit_file_dest=
{ORACLE_BASE}/admin/{DB_UNIQUE_NAME}/adump,db_create_file_dest=+DATA/{DB_UNIQUE_
NAME}/,local_listener=-oraagent-
dummy-,cdbrac1.undo_tablespace=UNDOTBS1,compatible=12.2.0,cdbrac1.instance_numbe
r=1,db_name=cdbrac,audit_trail=db,remote_login_passwordfile=exclusive,open_curso
rs=300,cdbrac2.undo_tablespace=UNDOTBS2,cdbrac2.instance_number=2

#-------------------------------------------------------------------------------
# Name          : sampleSchema
# Datatype      : Boolean
# Description   : Specifies whether or not to add the Sample Schemas to your
database
# Valid values  : TRUE \ FALSE
# Default value : FASLE
# Mandatory     : No
#-------------------------------------------------------------------------------
sampleSchema=false

#-------------------------------------------------------------------------------
# Name          : memoryPercentage
# Datatype      : String
# Description   : percentage of physical memory for Oracle
# Default value : None
# Mandatory     : NO
#-------------------------------------------------------------------------------
memoryPercentage=40

#-------------------------------------------------------------------------------
# Name          : databaseType
# Datatype      : String
# Description   : used for memory distribution when memoryPercentage specified
# Valid values  : MULTIPURPOSE|DATA_WAREHOUSING|OLTP
# Default value : MULTIPURPOSE
# Mandatory     : NO
#-------------------------------------------------------------------------------
databaseType=MULTIPURPOSE

#-------------------------------------------------------------------------------
# Name          : automaticMemoryManagement
# Datatype      : Boolean
# Description   : flag to indicate Automatic Memory Management is used
# Valid values  : TRUE/FALSE
# Default value : TRUE
# Mandatory     : NO
#-------------------------------------------------------------------------------
automaticMemoryManagement=false

#-------------------------------------------------------------------------------
# Name          : totalMemory
# Datatype      : String
# Description   : total memory in MB to allocate to Oracle
# Valid values  :
# Default value :
# Mandatory     : NO
```

```
#--------------------------------------------------------------------------
totalMemory=0
```