

Oracle Database Server 11g Single Instance Installation on OEL5.10

Oracle Database Server 11.2.0.4 Single Instance Installation
on Oracle Enterprise Linux 5.10 using ASM [Virtual Box]

Oracle Database 11g [11.2.0.4] Installation on Oracle Linux 5.10 using ASM Storage – VirtualBox

Required Software

Oracle Linux 5.10	V40139-01.iso [Enterprise-R5-U10-Server-x86_64-dvd.iso]
Oracle Database & Grid Software	p13390677_112040_Linux-x86-64_1of7.zip p13390677_112040_Linux-x86-64_2of7.zip p13390677_112040_Linux-x86-64_3of7.zip
Putty	putty.exe
Xming	Xming-6-9-0-31-setup.exe

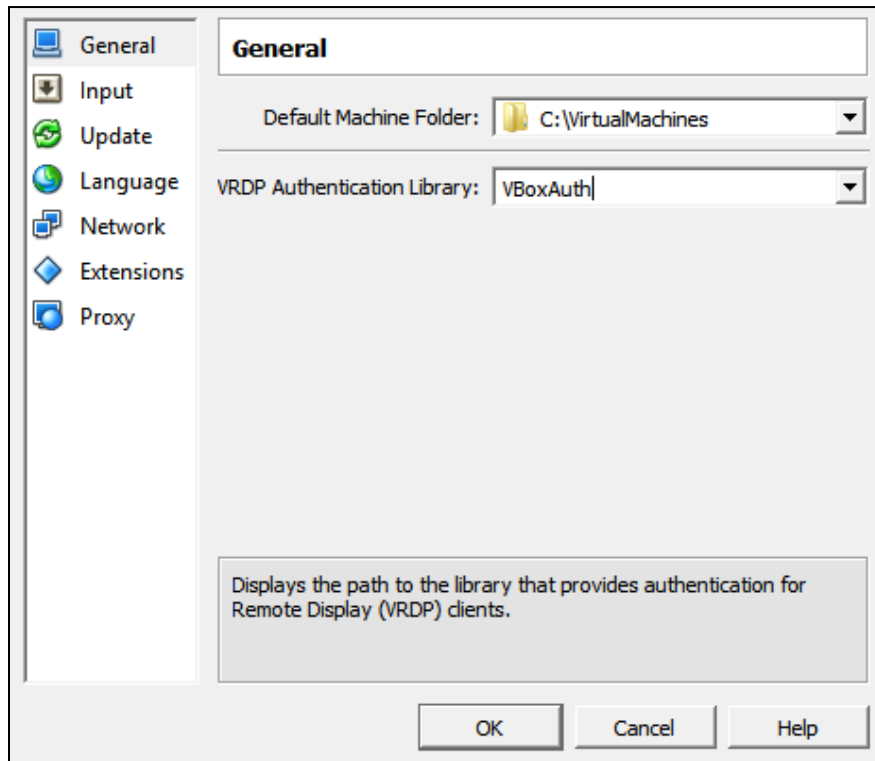
Note: We assume that; VirtualBox, Xming and Putty are already installed on the server, since their installation are straightforward.

Linux Installation

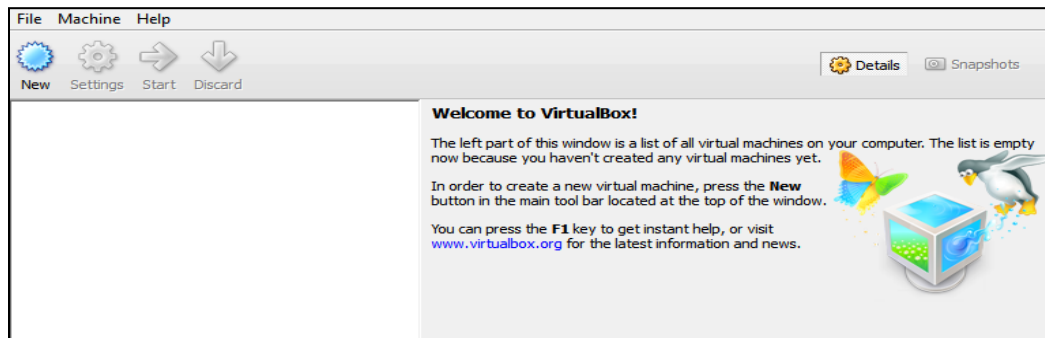
1. Download the Linux iso file and run the VirtualBox
2. If you haven't configured your virtual machine folder, do it now. Click File > Preferences



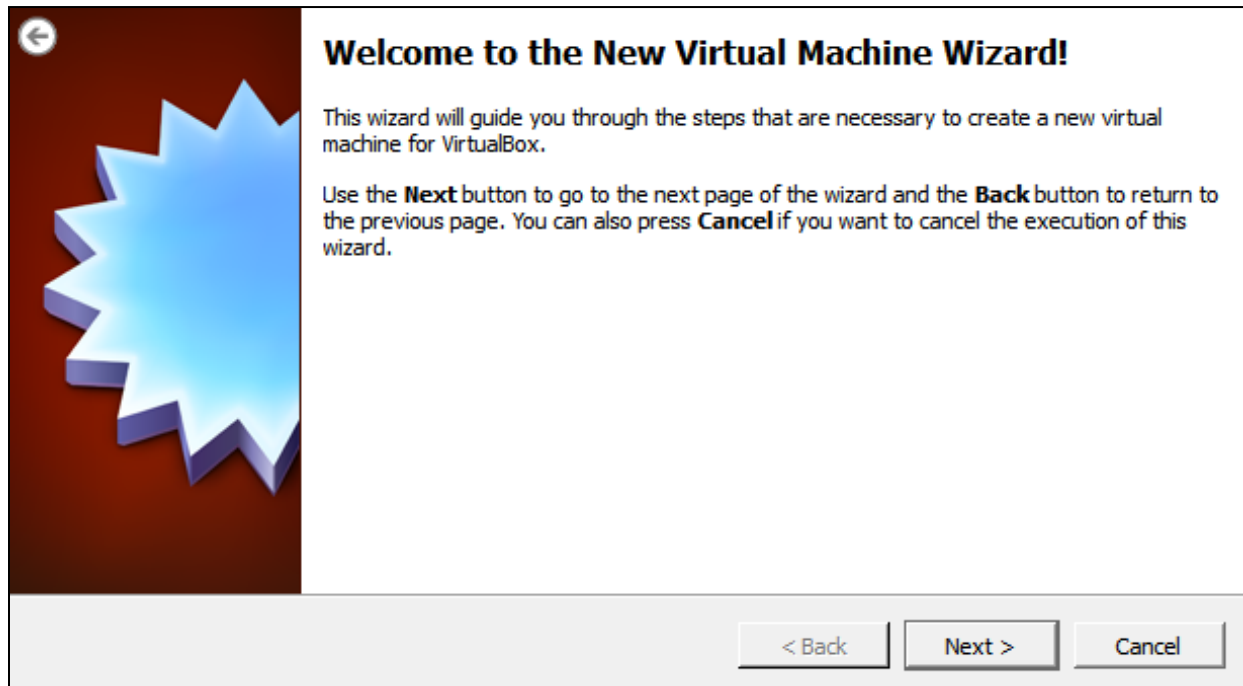
3. Select the folder for the virtual machines and click "OK"



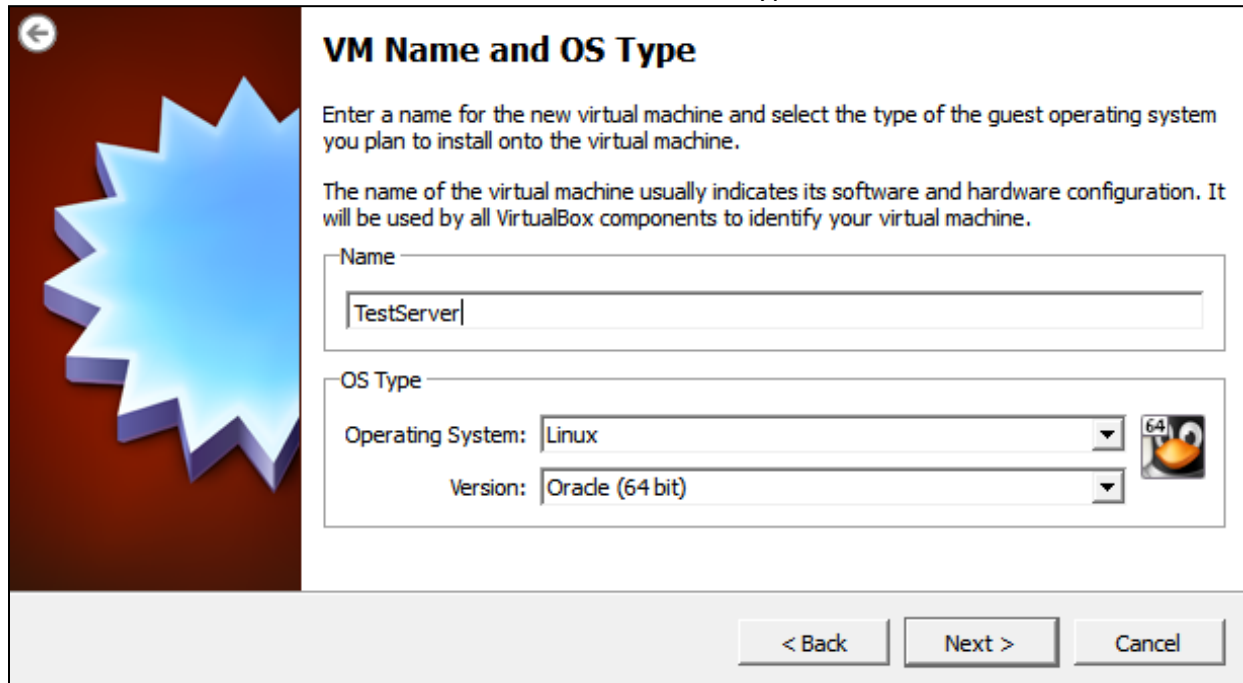
4. Click "New"



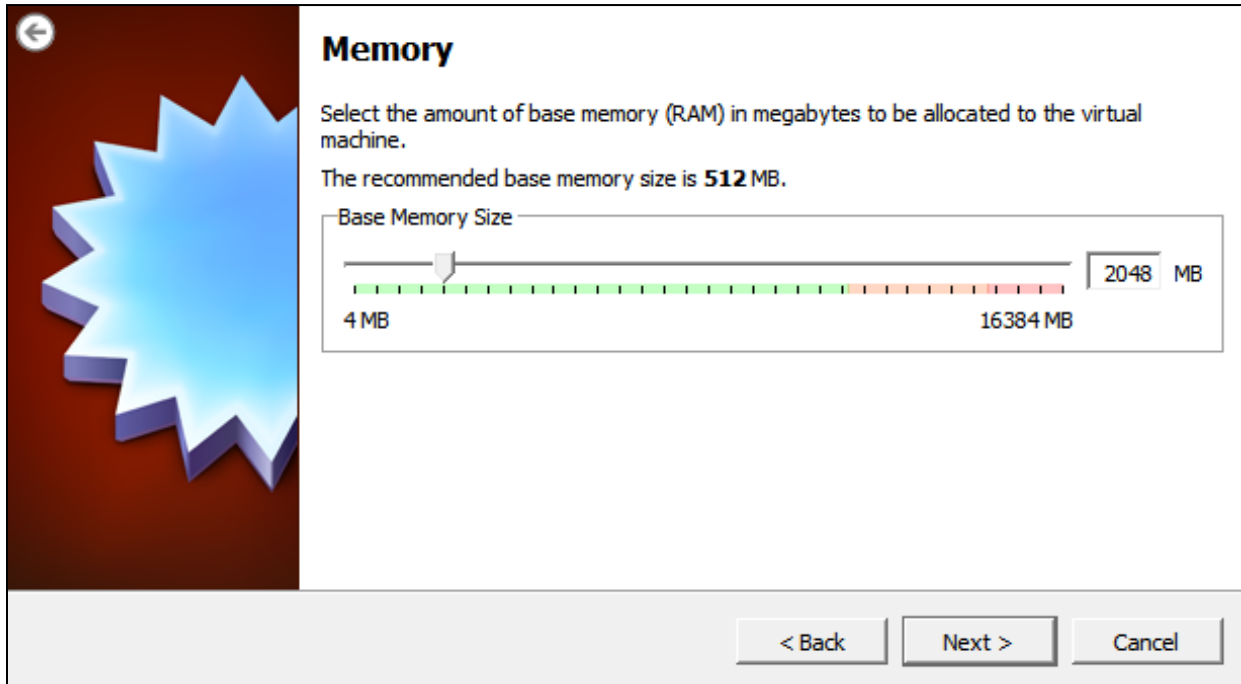
5. Click "Next"



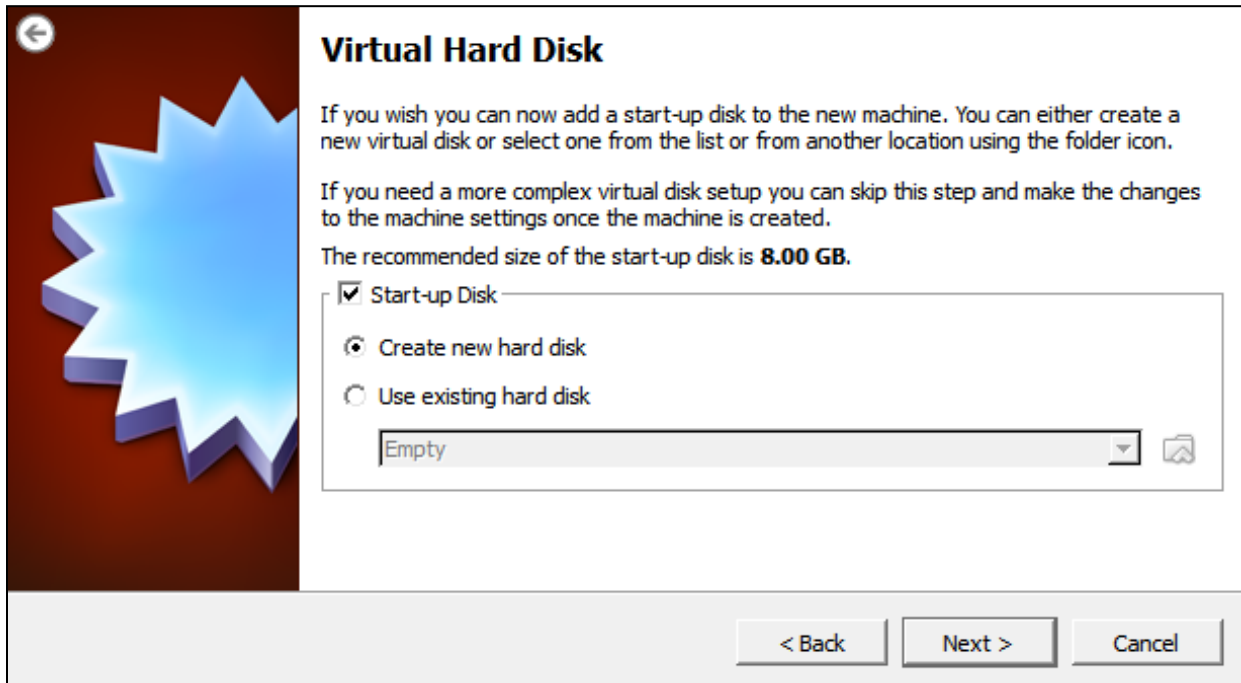
6. Give a name to the virtual machine, and select the OS Type as follows:



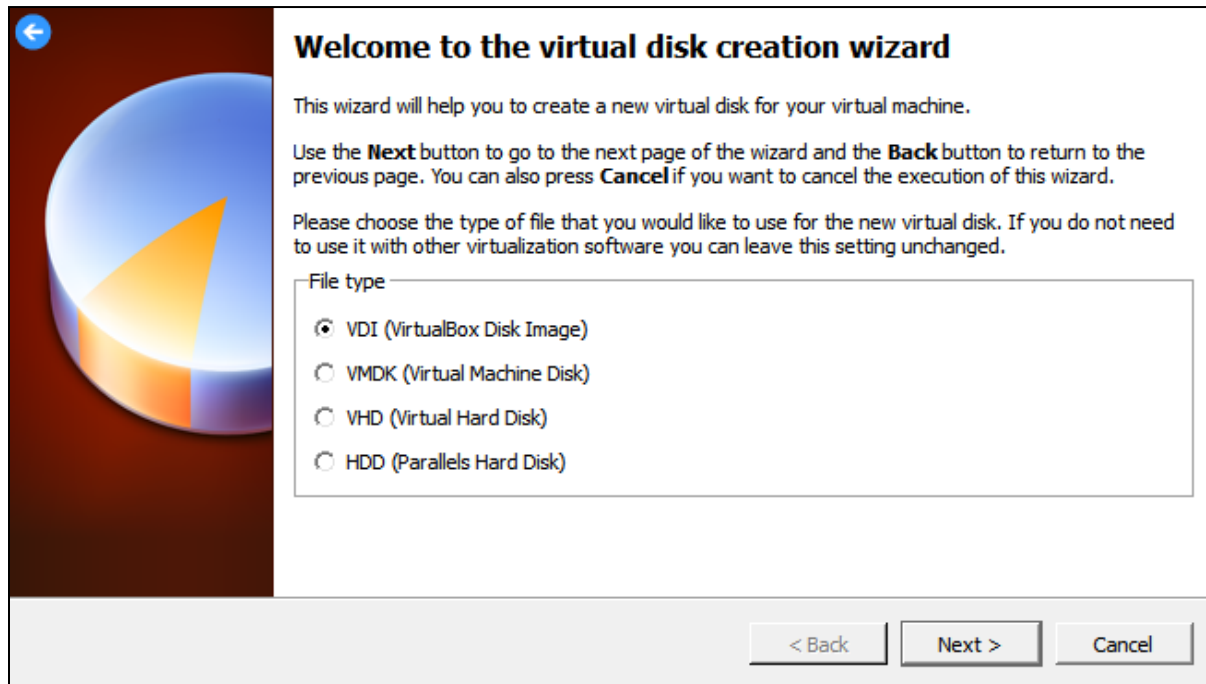
7. Adjust the memory and click "Next" [since this is a test server 2GB is sufficient]



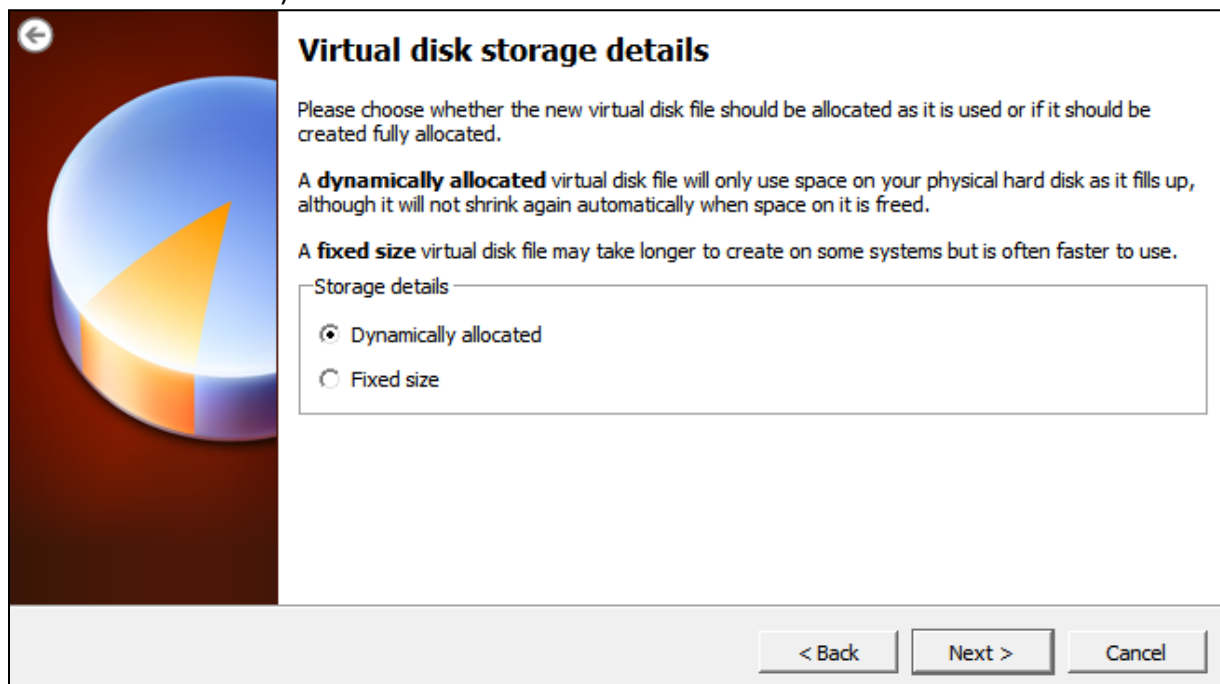
8. Choose "Create new hard disk" and click "Next"



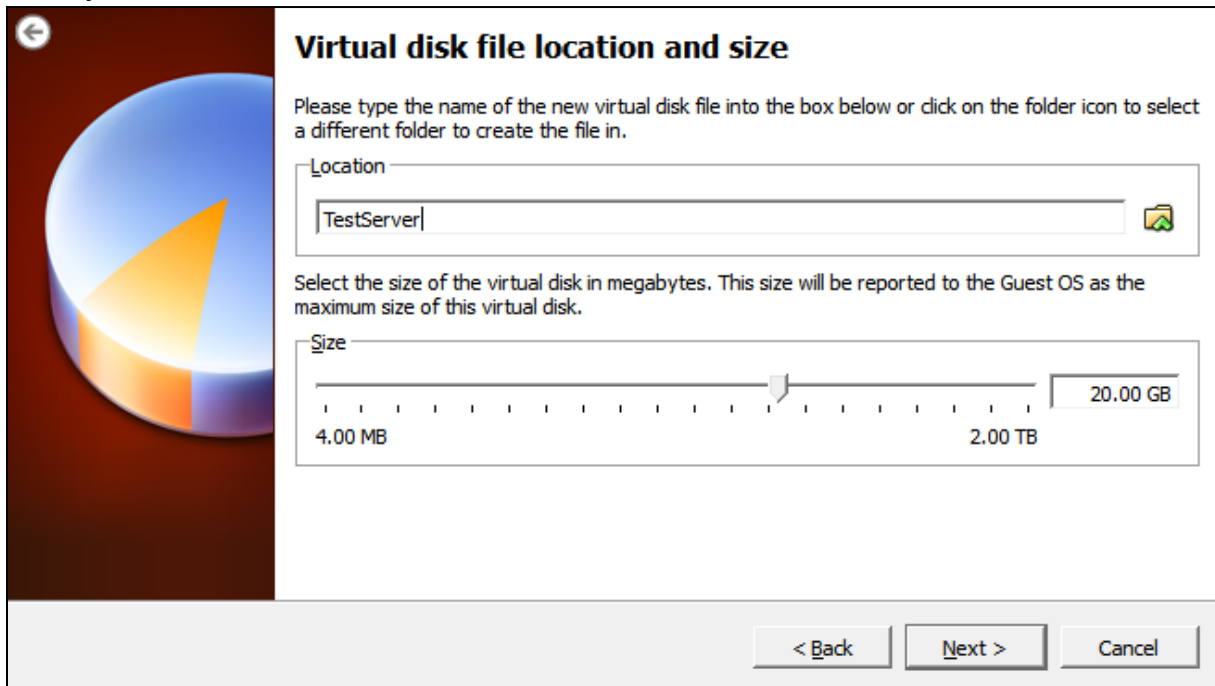
9. Choose "VDI" and click "Next"



10. Click "Dynamically allocated" not to waste any space on the guest host. (Performance is not what we need here...) Click "Next"



11. Adjust the hdd size and click "Next"



Virtual disk file location and size

Please type the name of the new virtual disk file into the box below or click on the folder icon to select a different folder to create the file in.

Location

TestServer

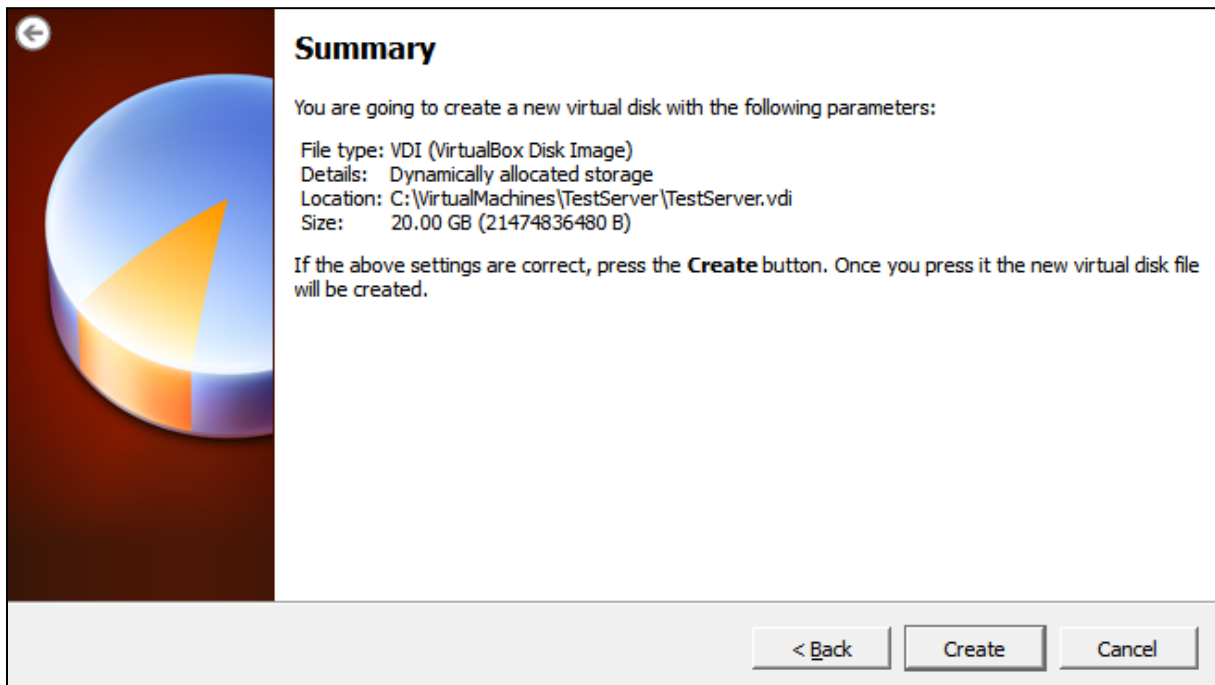
Select the size of the virtual disk in megabytes. This size will be reported to the Guest OS as the maximum size of this virtual disk.

Size

4.00 MB 20.00 GB 2.00 TB

< Back Next > Cancel

12. Click "Create"



Summary

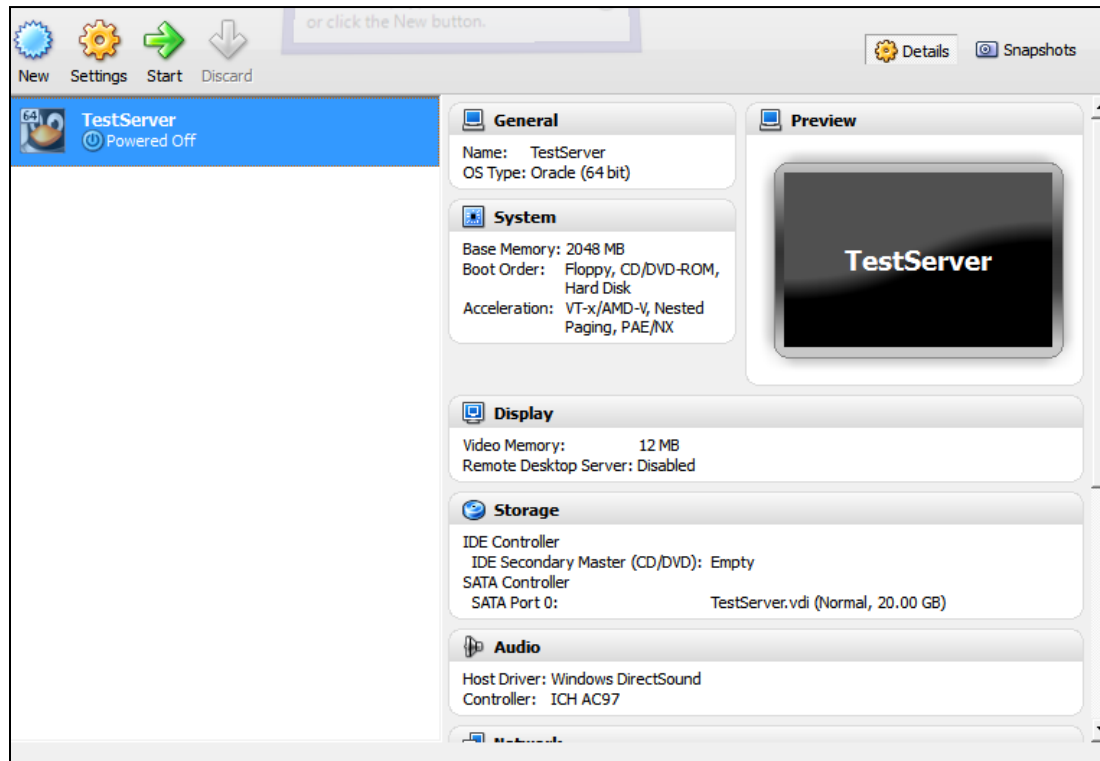
You are going to create a new virtual disk with the following parameters:

File type: VDI (VirtualBox Disk Image)
Details: Dynamically allocated storage
Location: C:\VirtualMachines\TestServer\TestServer.vdi
Size: 20.00 GB (21474836480 B)

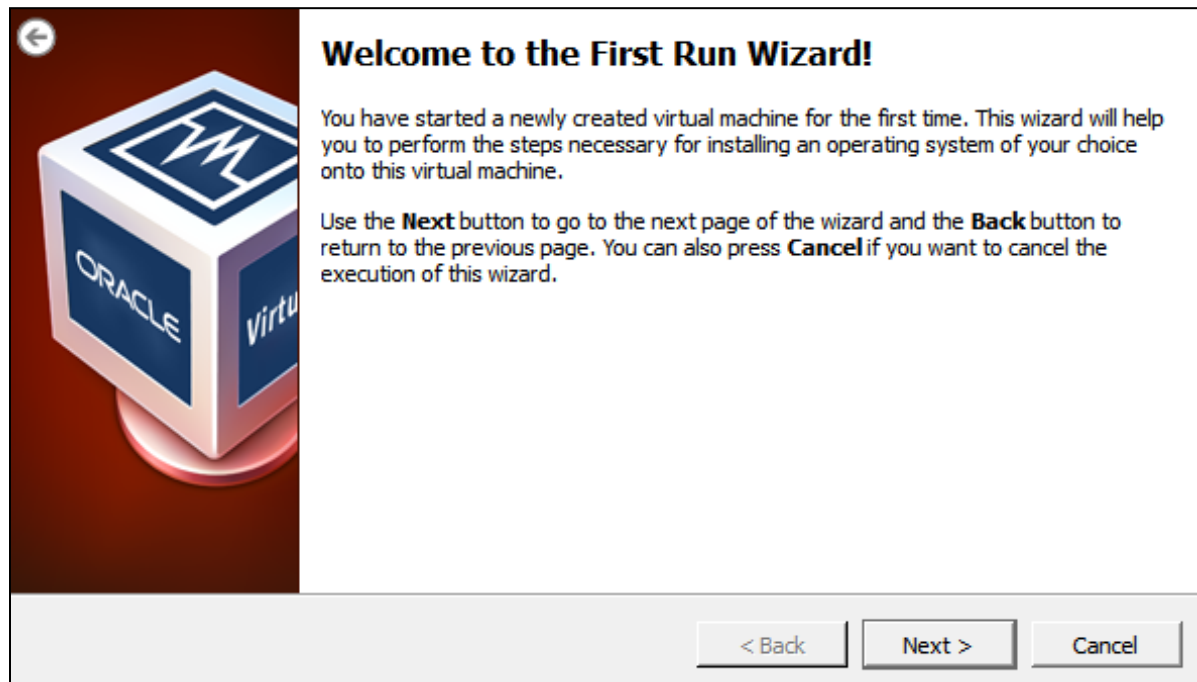
If the above settings are correct, press the **Create** button. Once you press it the new virtual disk file will be created.

< Back Create Cancel

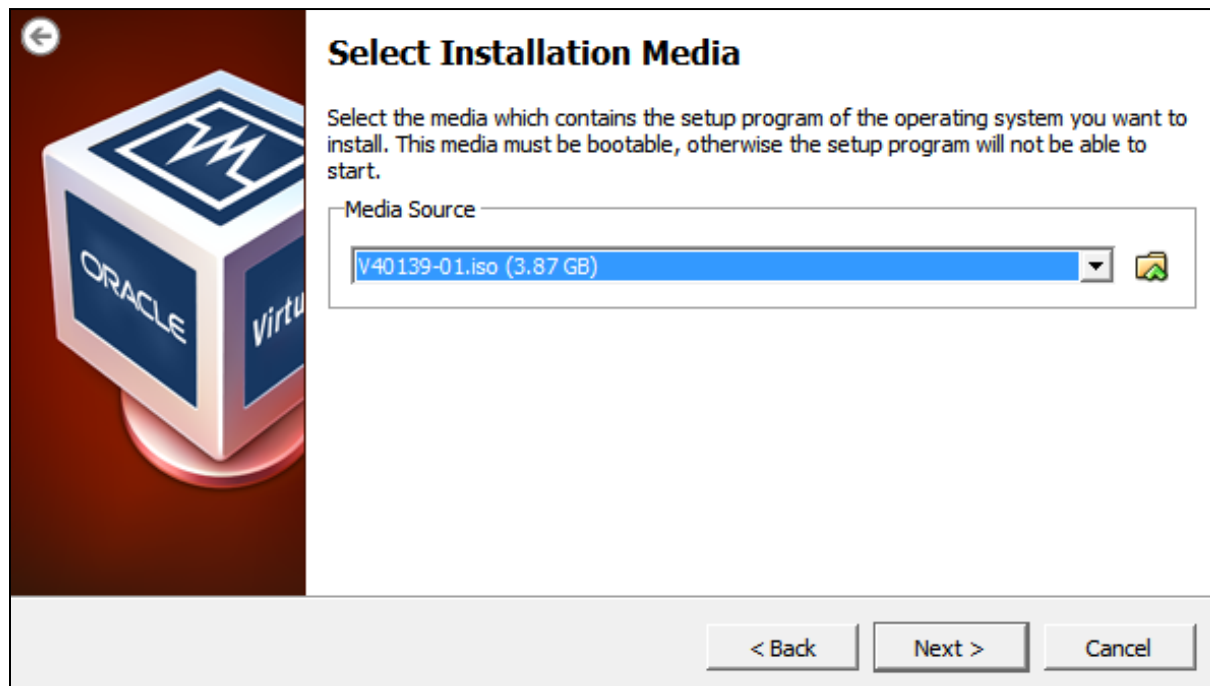
13. Click "Start"



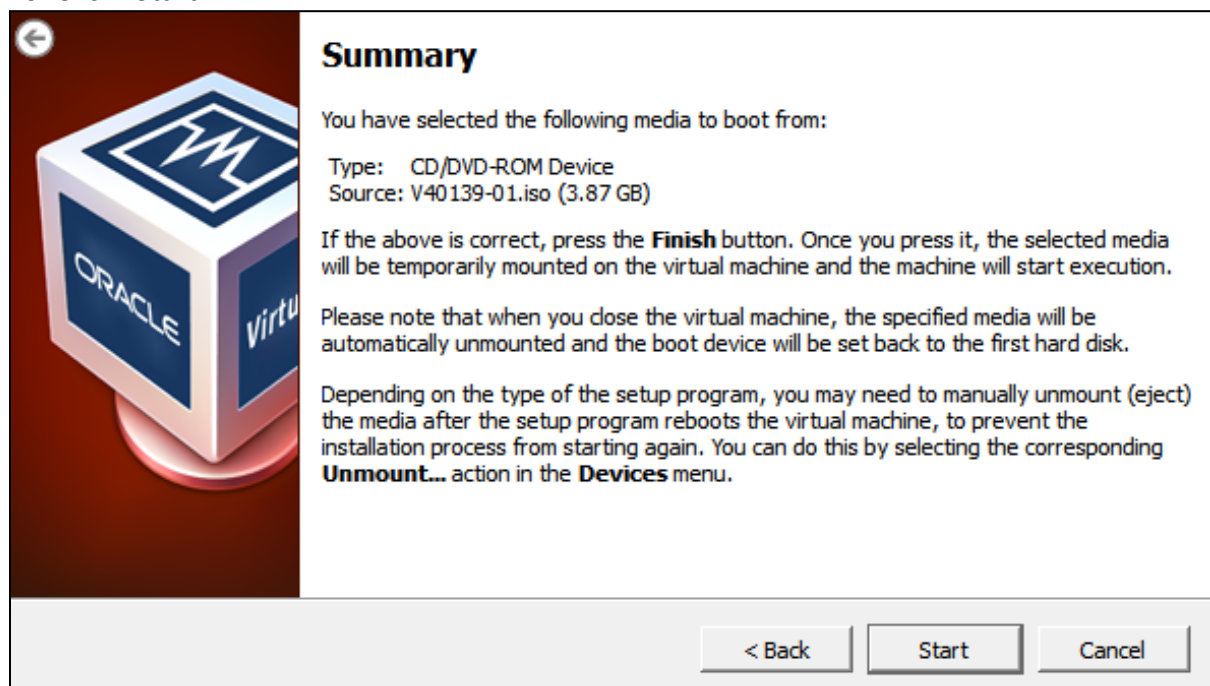
14. Click Next



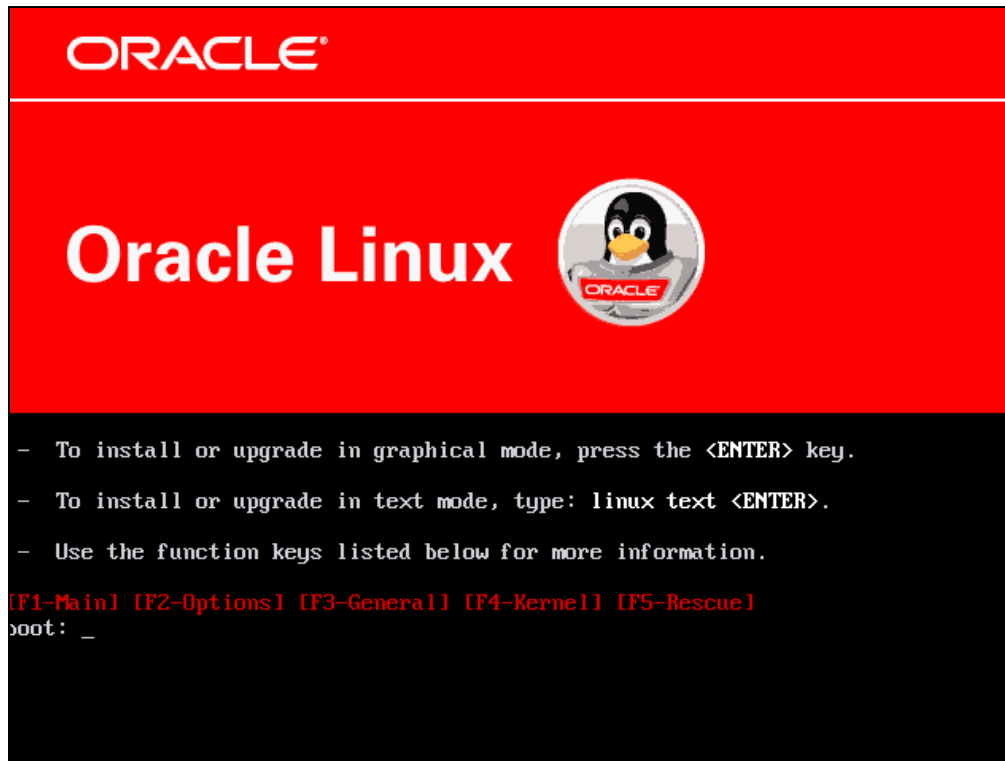
15. Select the media source -> V40139-01.iso and click "Next"



16. Click "Start"



17. Press "Enter"



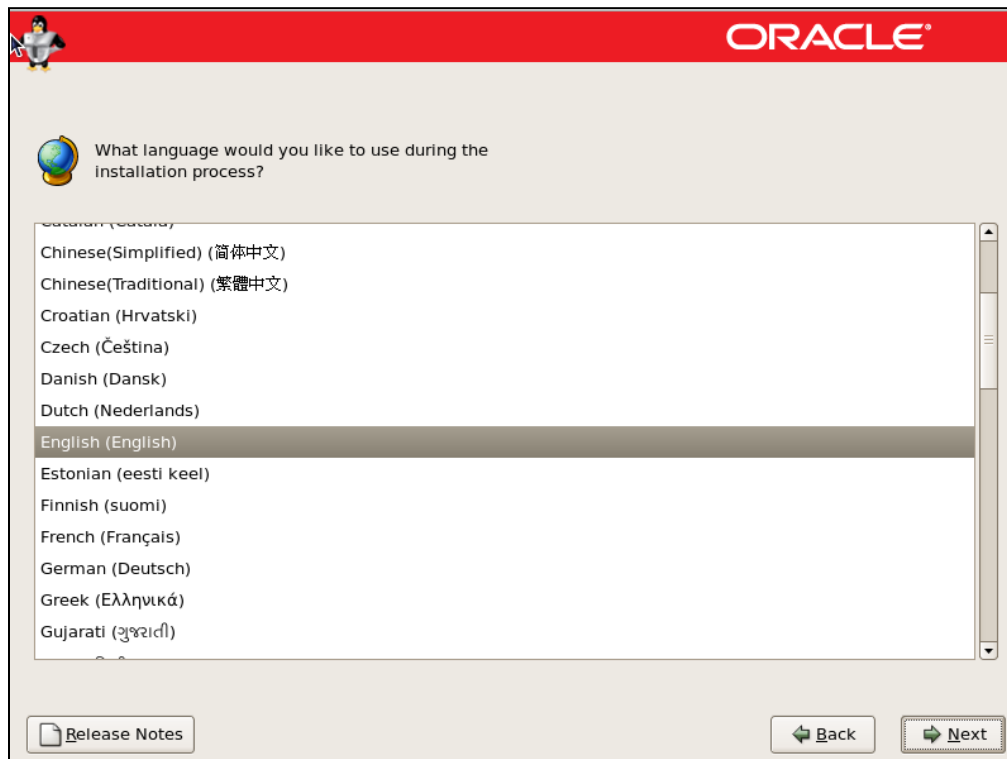
18. Click "Skip"



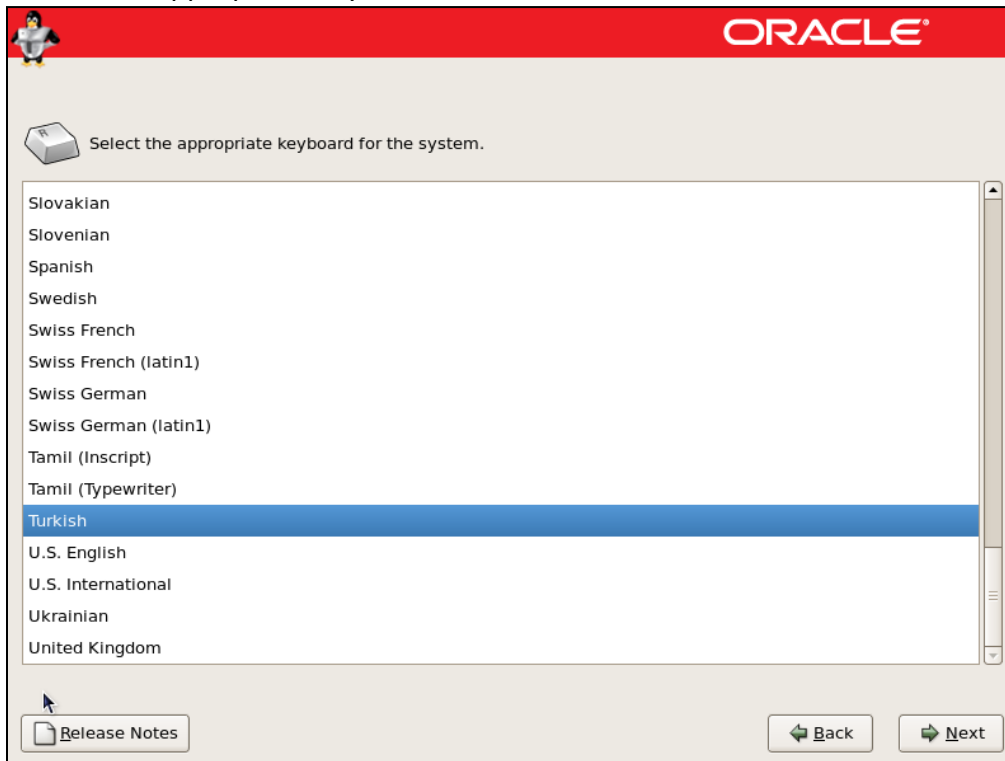
19. Click "Next"



20. Click "Next"



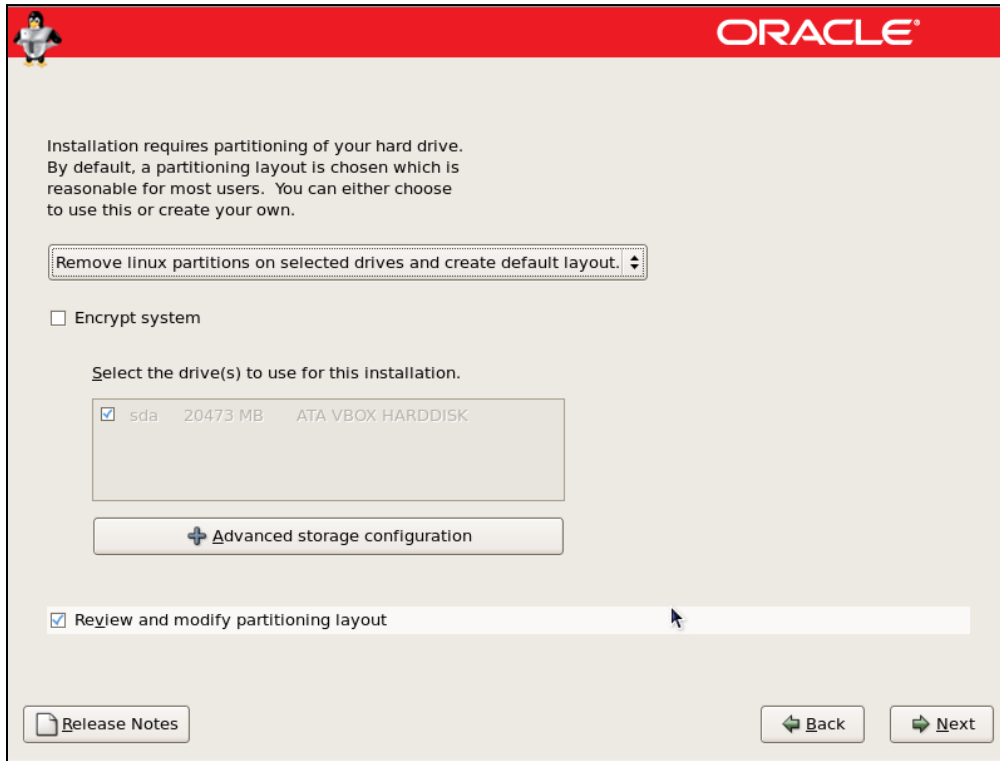
21. Choose appropriate keyboard and click "Next"



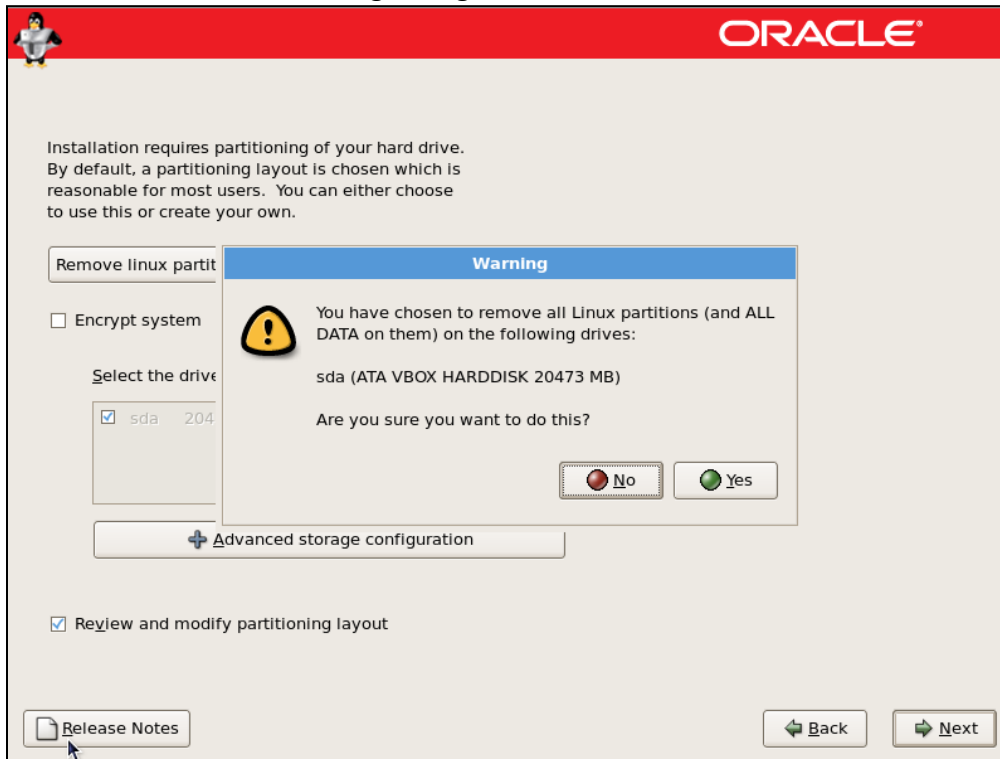
22. Click "Yes" in the warning dialog



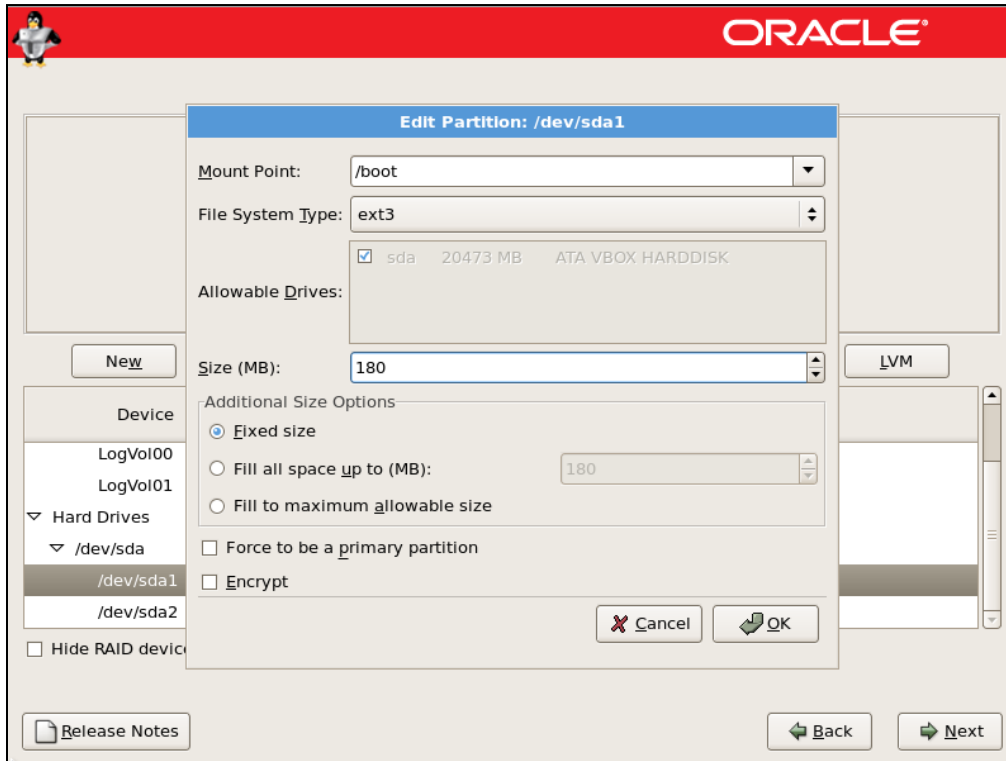
23. Check the "Review and modify partitioning layout" checkbox and click "Next"



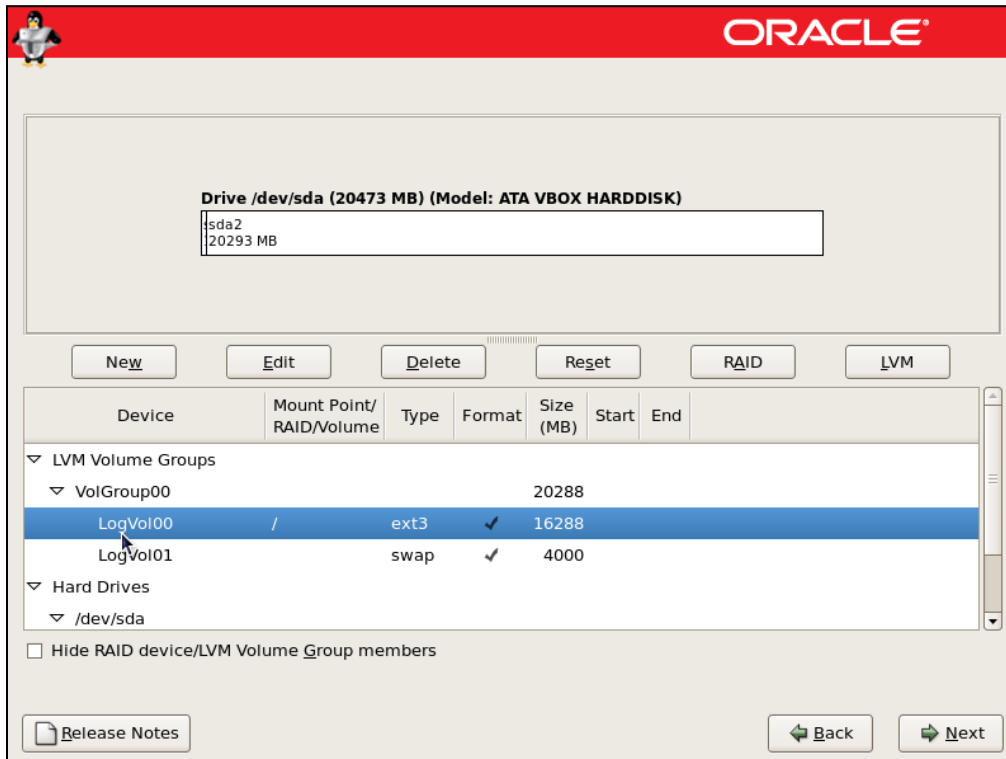
24. Click "Yes" in the warning dialog



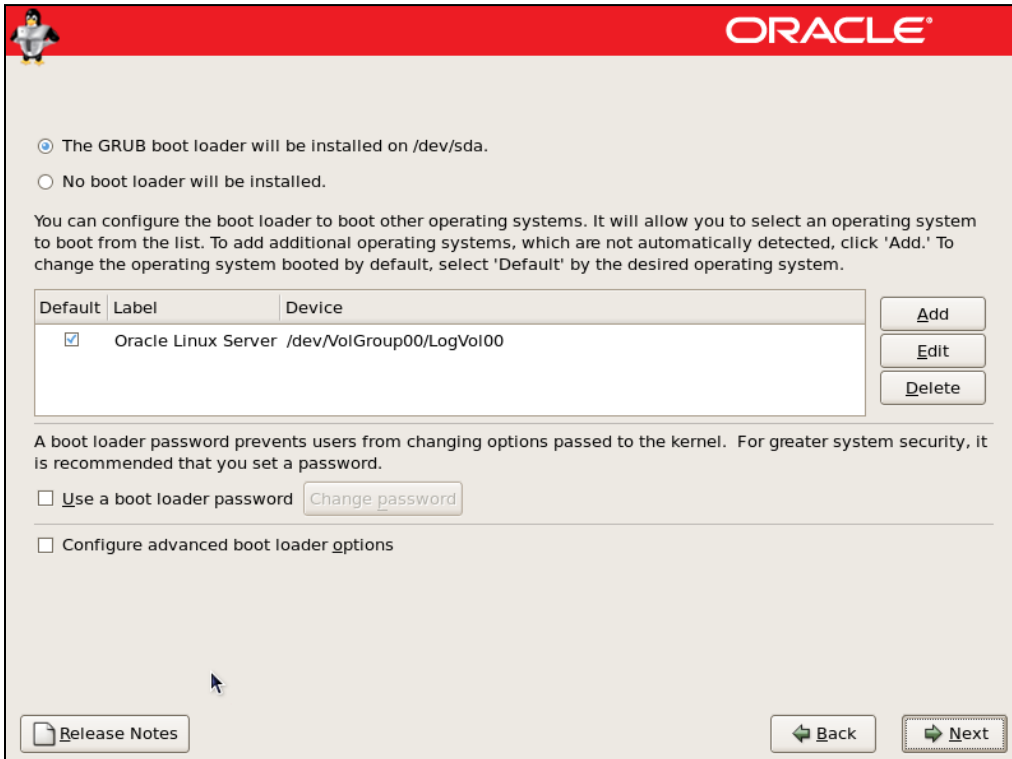
25. Edit the "/boot" partition, setting it to "180M" and "Fixed size", then click the "OK" button




26. Click "Next"



27. Click "Next"



 **ORACLE**

The GRUB boot loader will be installed on /dev/sda.
 No boot loader will be installed.

You can configure the boot loader to boot other operating systems. It will allow you to select an operating system to boot from the list. To add additional operating systems, which are not automatically detected, click 'Add.' To change the operating system booted by default, select 'Default' by the desired operating system.

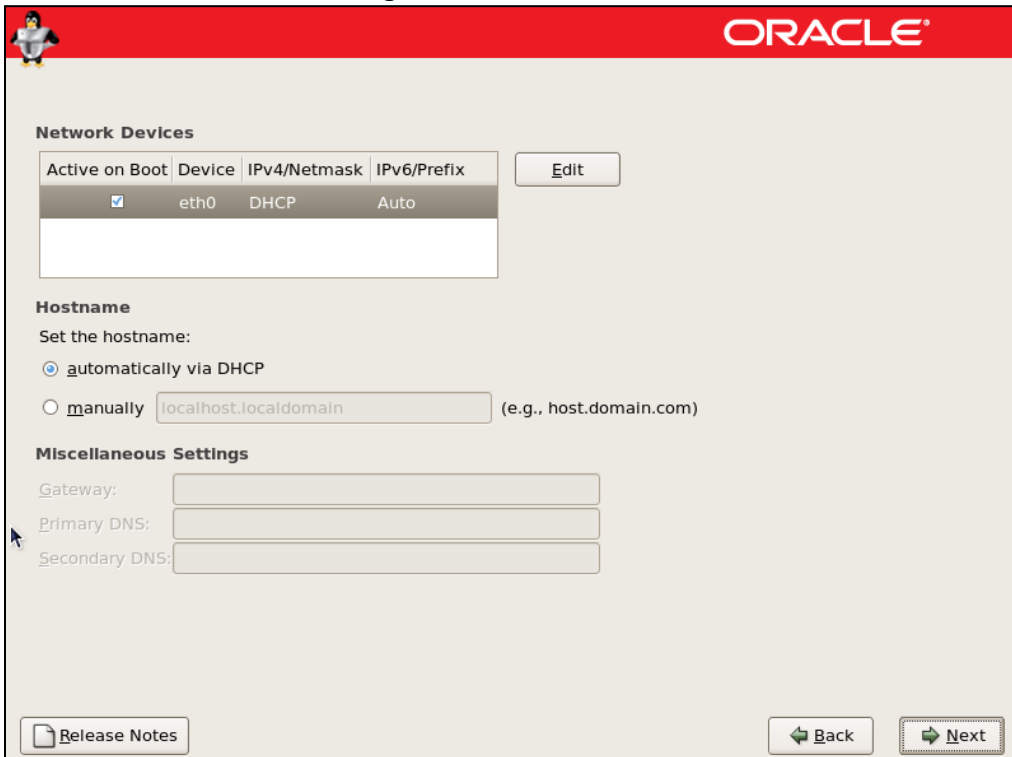
Default	Label	Device
<input checked="" type="checkbox"/>	Oracle Linux Server	/dev/VolGroup00/LogVol00


A boot loader password prevents users from changing options passed to the kernel. For greater system security, it is recommended that you set a password.

Use a boot loader password

Configure advanced boot loader options

28. Click "Next", we will configure this later



 **ORACLE**

Network Devices

Active on Boot	Device	IPv4/Netmask	IPv6/Prefix
<input checked="" type="checkbox"/>	eth0	DHCP	Auto

Hostname
Set the hostname:

automatically via DHCP
 manually (e.g., host.domain.com)

Miscellaneous Settings

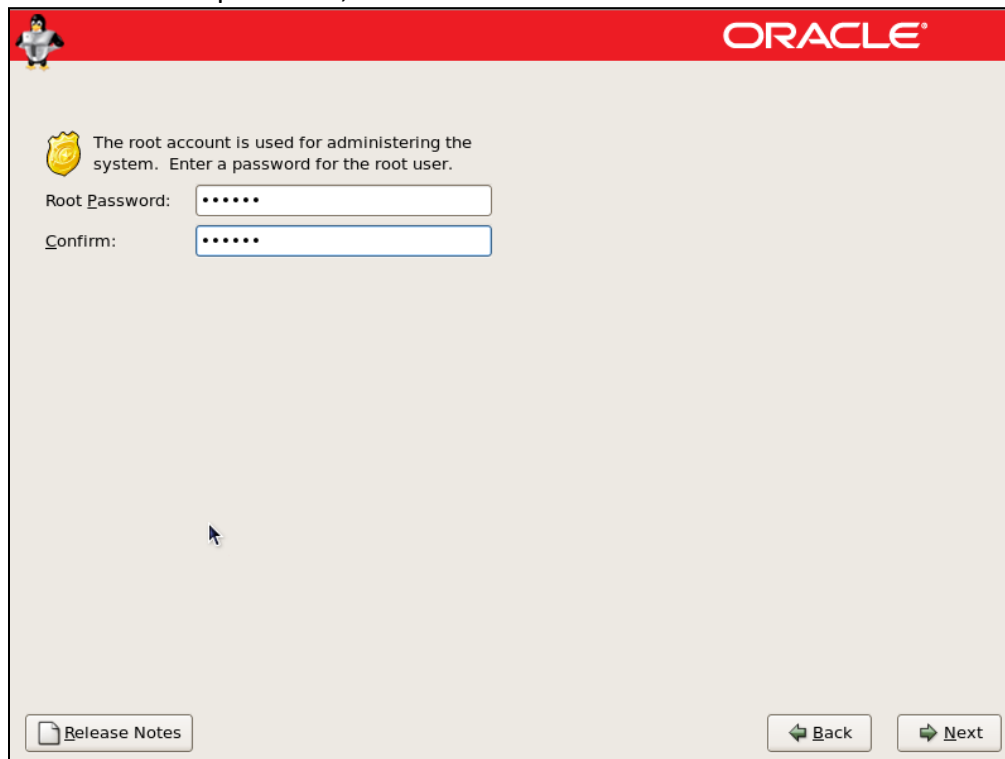
Gateway:
Primary DNS:
Secondary DNS:

29. Select your region/city and click "Next"



The screenshot shows the Oracle installation wizard's region selection screen. At the top, there is a red header with the Oracle logo and a penguin icon. Below the header, the text "Please click into the map to choose a region:" is displayed. A world map is shown with numerous green location markers. A dropdown menu below the map is currently set to "Europe/Istanbul". Below the dropdown, there is a checked checkbox labeled "System clock uses UTC". At the bottom of the screen, there are three buttons: "Release Notes" (with a document icon), "Back" (with a left arrow), and "Next" (with a right arrow).

30. Enter a root password, then click "Next"



The screenshot shows the Oracle installation wizard's root password entry screen. At the top, there is a red header with the Oracle logo and a penguin icon. Below the header, there is a yellow shield icon and the text: "The root account is used for administering the system. Enter a password for the root user." Below this text, there are two input fields: "Root Password:" and "Confirm:", both containing six dots to indicate masked text. At the bottom of the screen, there are three buttons: "Release Notes" (with a document icon), "Back" (with a left arrow), and "Next" (with a right arrow).

31. Select “Customize now” and click “Next”

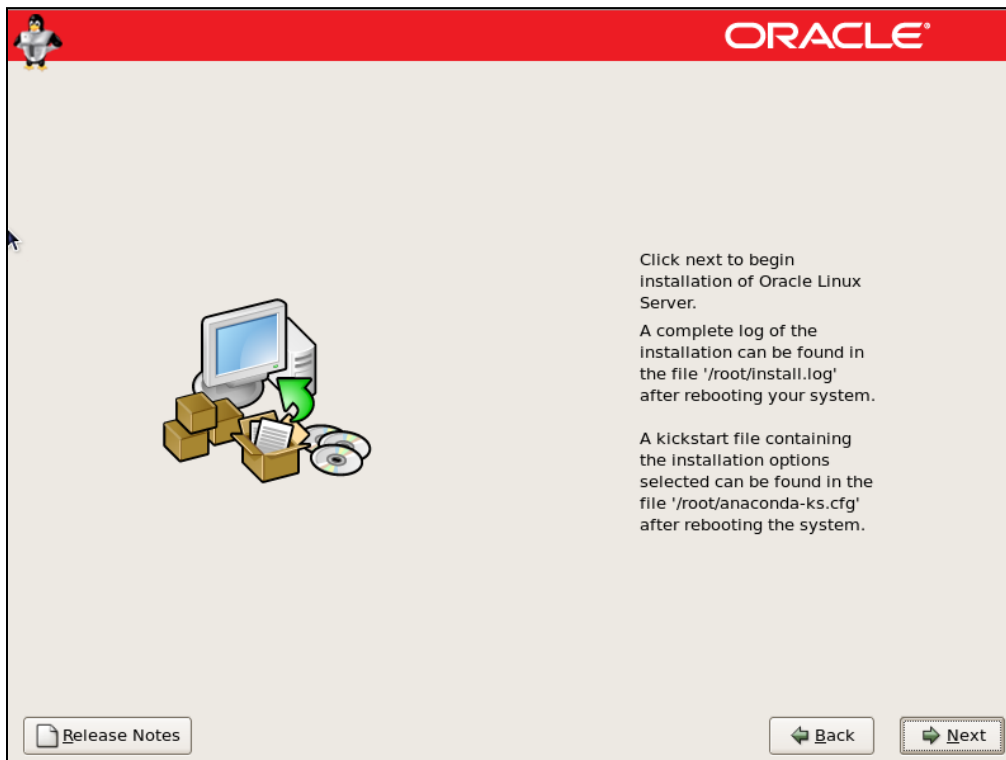


32. Enable the following package groups and click “Next”

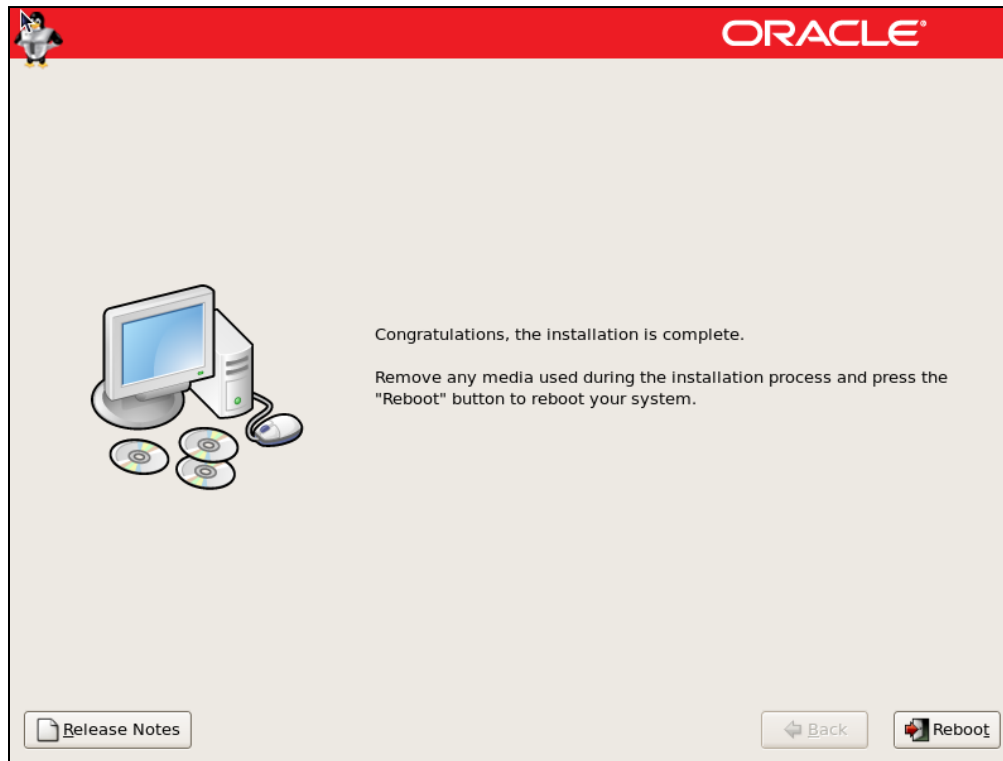
- Desktop Environments > GNOME Desktop Environment
- Applications > Editors
- Applications > Graphical Internet
- Development > Development Libraries
- Development > Development Tools
- Servers > Server Configuration Tools
- Base System > Administration Tools
- Base System > Base
- Base System > System Tools
- Base System > X Window System



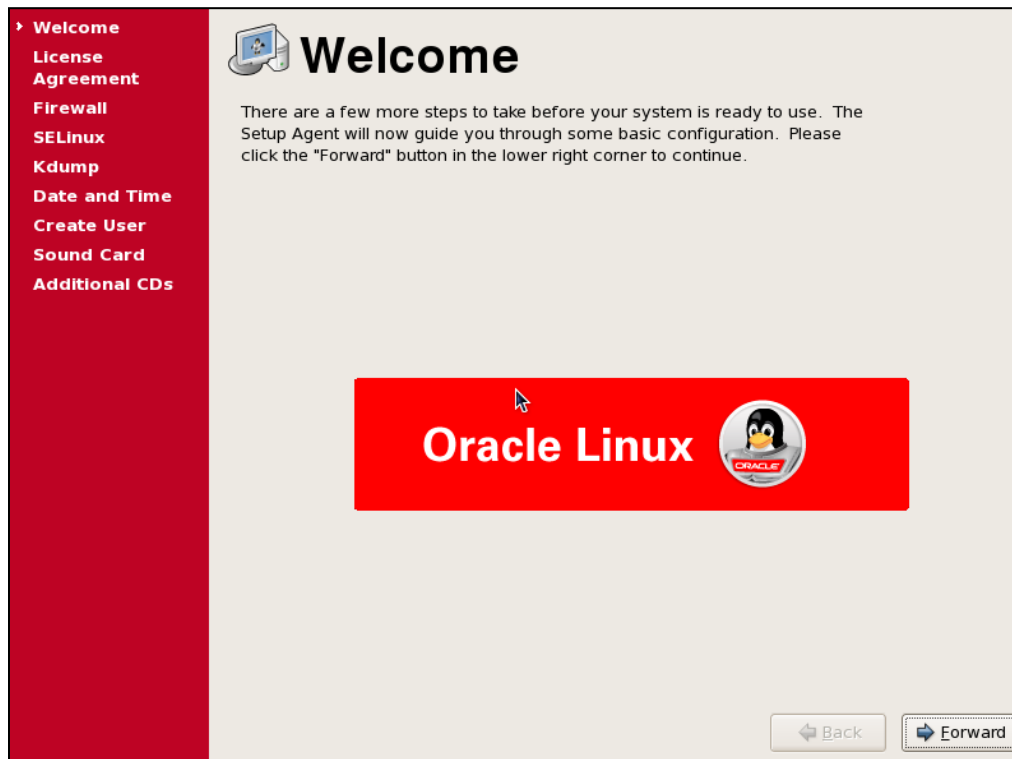
33. Click "Next"



34. Click "Reboot"



35. Click "Forward"



36. Click "Forward"

The screenshot shows the Oracle Linux License Agreement screen. On the left is a red sidebar with navigation links: Welcome, License Agreement (selected), Firewall, SELinux, Kdump, Date and Time, Create User, Sound Card, and Additional CDs. The main content area has a title "License Agreement" with a computer icon. Below the title is a scrollable text area containing the "ORACLE LINUX LICENSE AGREEMENT" text. The text includes a preamble and eight numbered sections: 1. Grant of Licenses, 2. Licenses to Additional Oracle Linux programs, 3. Ownership, 4. Trademark License, 5. Limited Warranty, 6. Limitation of Liability, 7. No Technical Support, and 8. Relationship Between the Parties. At the bottom of the text area, there is a radio button selection: "Yes, I agree to the License Agreement" (selected) and "No, I do not agree". Below the radio buttons are "Back" and "Forward" buttons.

37. Disable firewall and click "Forward"

The screenshot shows the Firewall configuration screen. On the left is a red sidebar with navigation links: Welcome, License Agreement, Firewall (selected), SELinux, Kdump, Date and Time, Create User, Sound Card, and Additional CDs. The main content area has a title "Firewall" with a computer icon. Below the title is a paragraph explaining the firewall's purpose. A "Firewall:" dropdown menu is set to "Disabled". Below this is a "Trusted services:" list with checkboxes for FTP, Mail (SMTP), NFS4, SSH (checked), Samba, and Secure WWW (HTTPS). There is also a section for "Other ports" with a right-pointing arrow. At the bottom are "Back" and "Forward" buttons.

38. Disable "Selinux" and click "Forward"



The screenshot shows the SELinux configuration interface. On the left is a red sidebar with navigation links: Welcome, License Agreement, Firewall, SELinux (highlighted), Kdump, Date and Time, Create User, Sound Card, and Additional CDs. The main content area has a title 'SELinux' with a computer icon. Below the title is a paragraph explaining SELinux. A dropdown menu labeled 'SELinux Setting:' is set to 'Disabled'. At the bottom right are 'Back' and 'Forward' buttons.

Welcome
License Agreement
Firewall
▶ **SELinux**
Kdump
Date and Time
Create User
Sound Card
Additional CDs

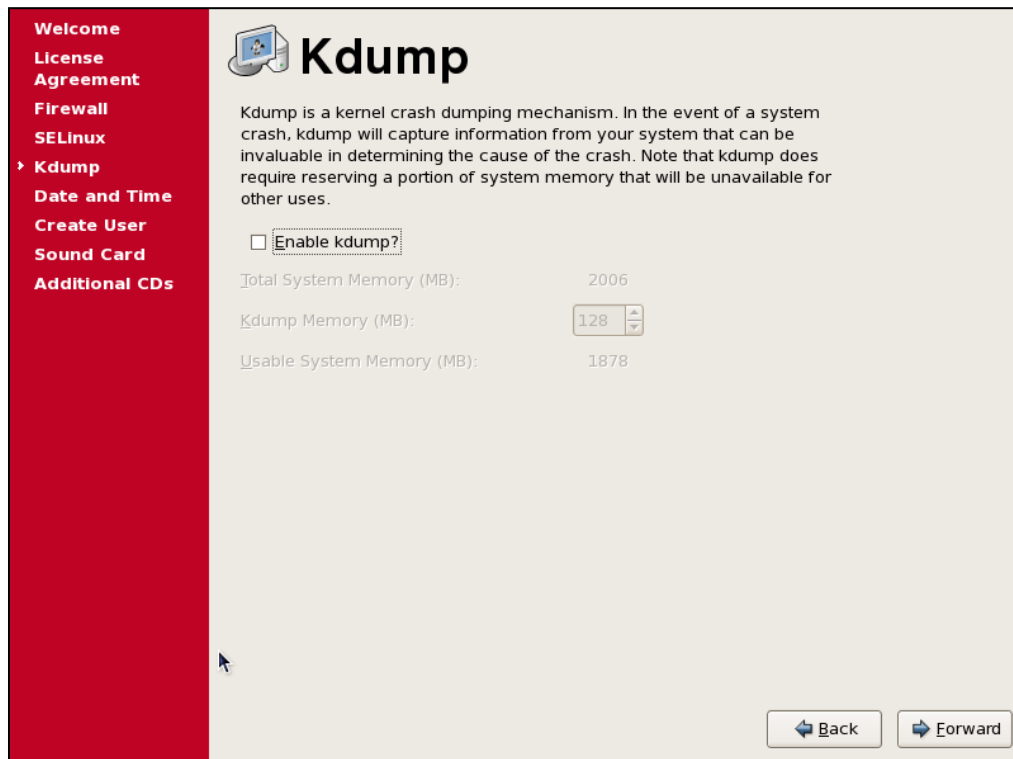
SELinux

Security Enhanced Linux (SELinux) provides finer-grained security controls than those available in a traditional Linux system. It can be set up in a disabled state, a state which only warns about things which would be denied, or a fully active state. Most people should keep the default setting.

SELinux Setting:

[← Back](#) [→ Forward](#)

39. Click "Forward"



The screenshot shows the Kdump configuration interface. On the left is a red sidebar with navigation links: Welcome, License Agreement, Firewall, SELinux, Kdump (highlighted), Date and Time, Create User, Sound Card, and Additional CDs. The main content area has a title 'Kdump' with a computer icon. Below the title is a paragraph explaining Kdump. There is an unchecked checkbox labeled 'Enable kdump?'. Below that are three rows of memory information: Total System Memory (2006 MB), Kdump Memory (128 MB), and Usable System Memory (1878 MB). At the bottom right are 'Back' and 'Forward' buttons.

Welcome
License Agreement
Firewall
SELinux
▶ **Kdump**
Date and Time
Create User
Sound Card
Additional CDs

Kdump

Kdump is a kernel crash dumping mechanism. In the event of a system crash, kdump will capture information from your system that can be invaluable in determining the cause of the crash. Note that kdump does require reserving a portion of system memory that will be unavailable for other uses.

Enable kdump?

Total System Memory (MB): 2006

Kdump Memory (MB):

Usable System Memory (MB): 1878

[← Back](#) [→ Forward](#)

40. Click "Forward"

Welcome
License Agreement
Firewall
SELinux
Kdump
Date and Time
Create User
Sound Card
Additional CDs

Date and Time

Please set the date and time for the system.

Date & Time Network Time Protocol

Date

March 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Time

Current Time : 21:51:43

Hour : 23

Minute : 51

Second : 35

Back Forward

41. Click "Forward" without creating user

Welcome
License Agreement
Firewall
SELinux
Kdump
Date and Time
Create User
Sound Card
Additional CDs

Create User

It is recommended that you create a 'username' for regular (non-administrative) use of your system. To create a system 'username,' please provide the information requested below.

Username:

Full Name:

Password:

Confirm Password:

If you need to use network authentication, such as Kerberos or NIS, please click the Use Network Login button.

Use Network Login...

Back Forward

42. Click "Forward"

Welcome
License Agreement
Firewall
SELinux
Kdump
Date and Time
Create User
▶ **Sound Card**
Additional CDs

Sound Card

An audio device has been detected in your computer.

Click the "Play" button to hear a sample sound. You should hear a series of three sounds. The first sound will be in the right channel, the second sound will be in the left channel, and the third sound will be in the center.

The following audio device was detected.

Selected card

Vendor: Intel Corporation
Model: 82801AA AC'97 Audio Controller
Module: snd-intel8x0

Sound test

... Stopped ... Repeat

Volume settings

Device settings

PCM device Intel 82801AA-ICH

43. Click "Finish"

Welcome
License Agreement
Firewall
SELinux
Kdump
Date and Time
Create User
Sound Card
▶ **Additional CDs**

Additional CDs

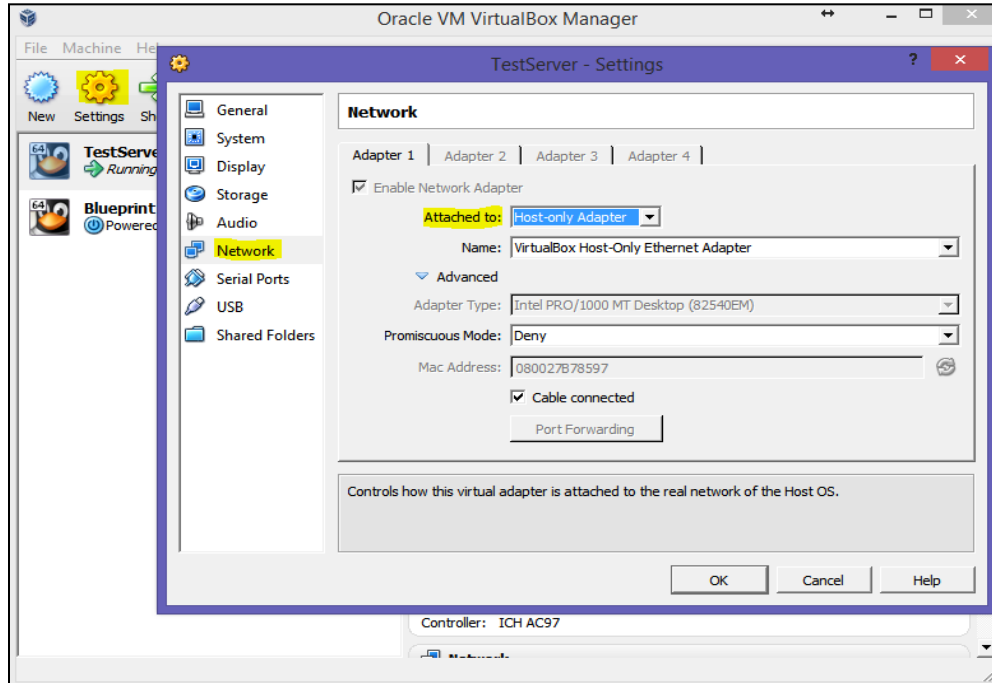
Please insert any additional software install cds at this time.

Additional CDs

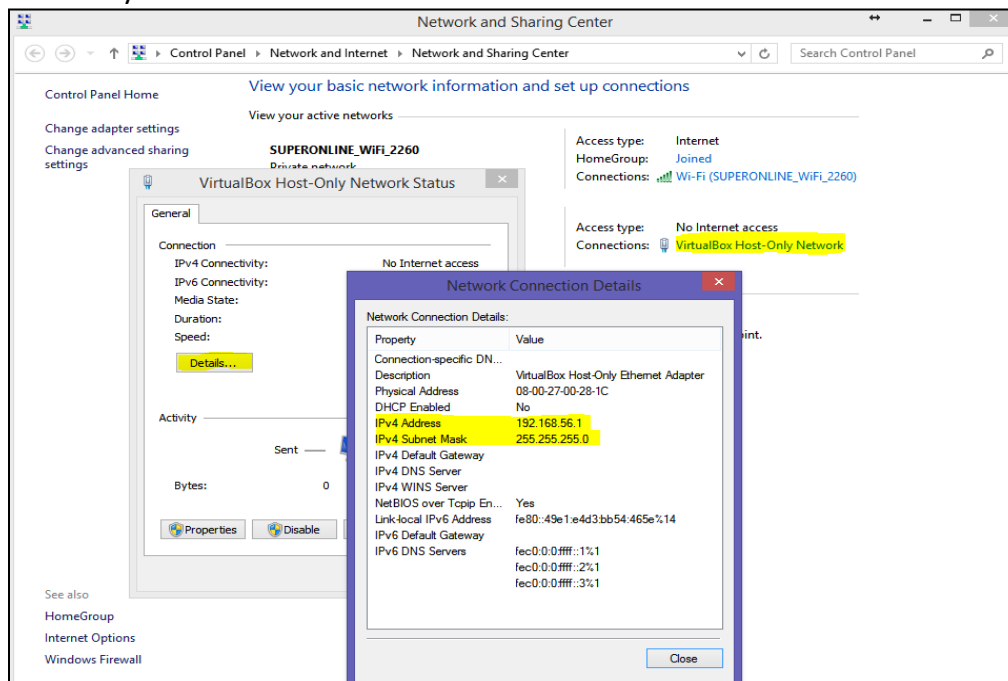
Linux configurations for Oracle Database

1. Configure the network to be able to use putty

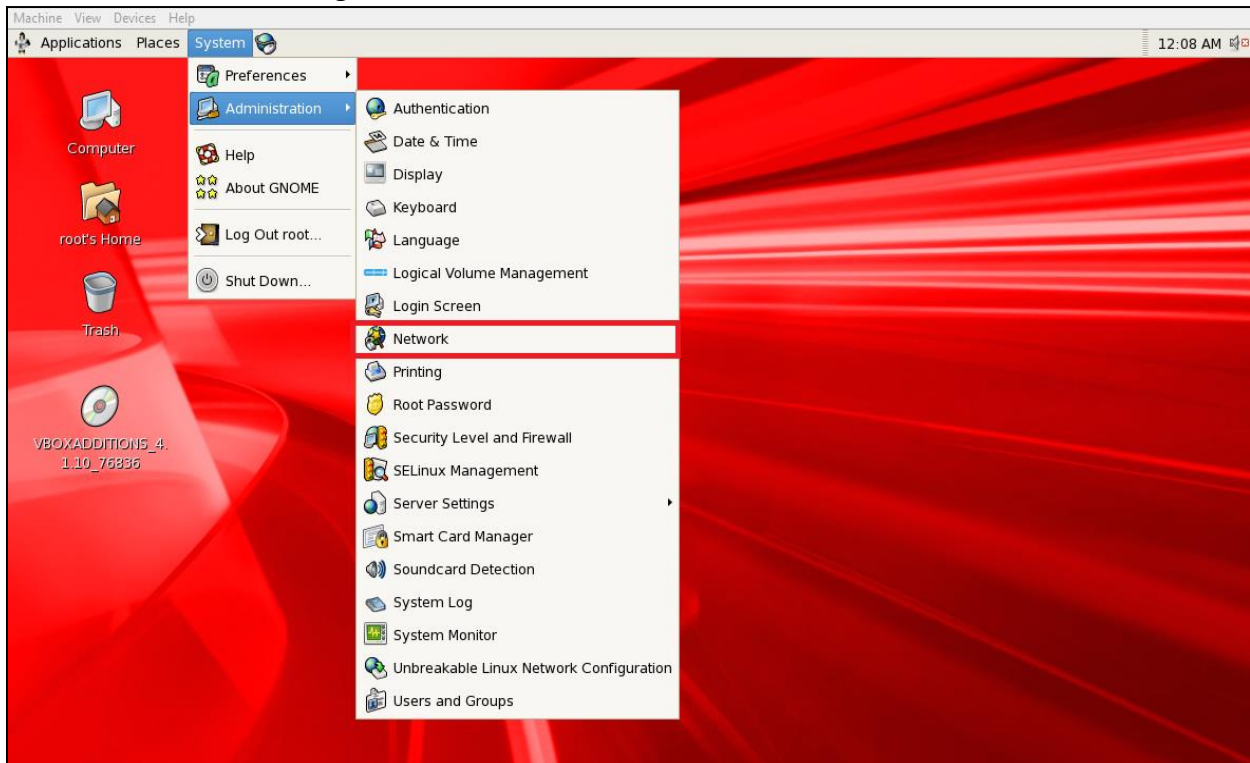
Enter the “Settings” screen of the virtual machine and change the network setting to “Host-only Adapter” as seen below. Click “OK” and reboot the Linux OS



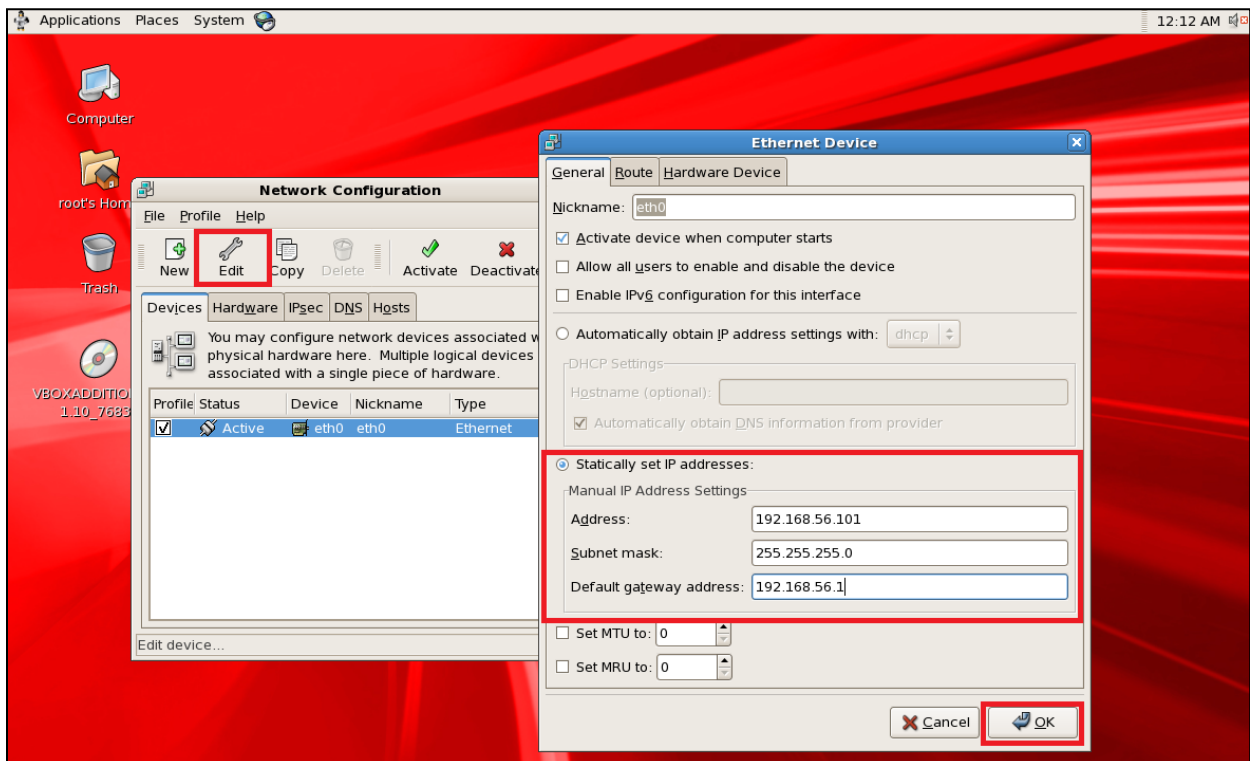
2. Open Network and Sharing Center of the host (Windows) Note down the details of the Virtual Host-Only Network



3. Edit the network settings of the Linux server:



Edit the network config. as shown below by considering the host gateway that was noted before. Click "OK" and then File > Save



4. Linux Kernel & Limits Settings

Edit "/etc/sysctl.conf" and add the following lines:

```
fs.suid_dumpable = 1
fs.aio-max-nr = 1048576
fs.file-max = 6815744
kernel.shmall = 2097152
kernel.shmmax = 2076276736
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=262144
net.core.rmem_max=4194304
net.core.wmem_default=262144
net.core.wmem_max=1048586
```

Then issue the following command:

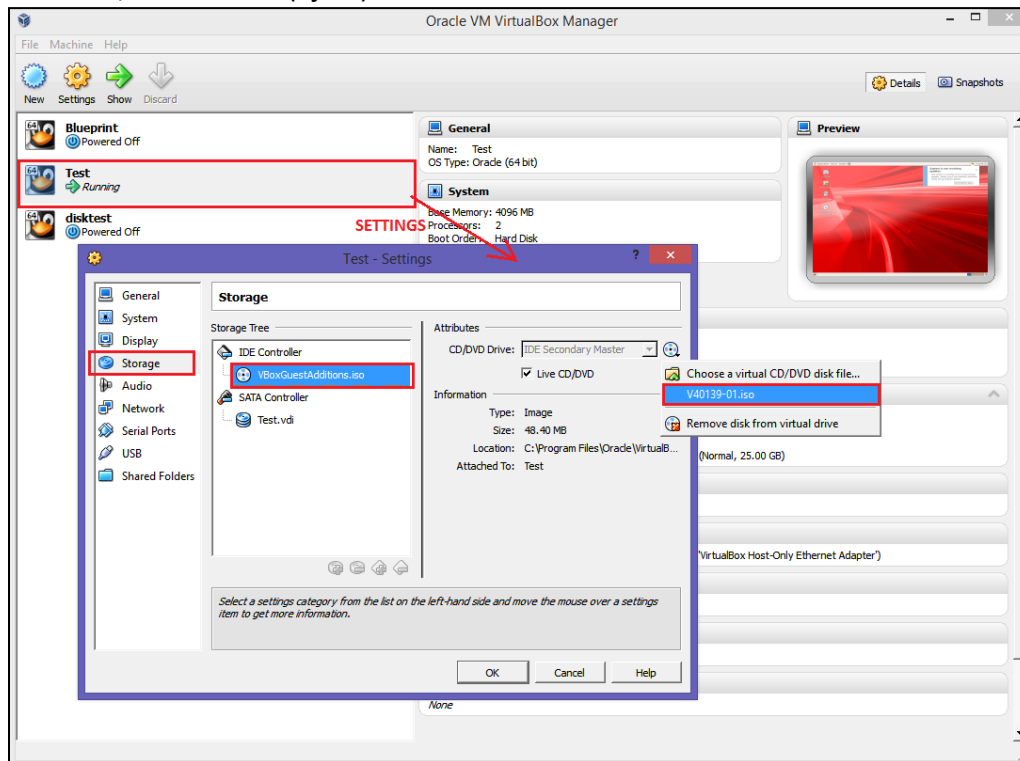
```
sysctl -p
```

Edit "/etc/security/limits.conf" and add the following lines:

```
oracle hard memlock 50000000
oracle soft memlock 50000000
oracle soft core unlimited
oracle hard core unlimited
oracle soft nproc 2047
oracle hard nproc 16384
oracle soft nofile 4096
oracle hard nofile 65536
oracle soft stack 10240

grid hard memlock 50000000
grid soft memlock 50000000
grid soft core unlimited
grid hard core unlimited
grid soft nproc 2047
grid hard nproc 16384
grid soft nofile 4096
grid hard nofile 65536
grid soft stack 10240
```

Mount the Linux installation iso as a CD-ROM device. If something is already mounted to the CD-ROM, unmount it (eject) first...



Install the following RPM packages:

```
cd /media/OL5.10\ x86_64\ dvd\ 20131002\ Server
```

```
rpm -Uvh binutils-2.*
rpm -Uvh compat-libstdc++-33*
rpm -Uvh compat-libstdc++-33*.i386.rpm
rpm -Uvh elfutils-libelf*
rpm -Uvh gcc-4.*
rpm -Uvh gcc-c++-4.*
rpm -Uvh glibc-2.*
rpm -Uvh glibc-common-2.*
rpm -Uvh glibc-devel-2.*
rpm -Uvh glibc-headers-2.*
rpm -Uvh ksh*
rpm -Uvh libaio-0.*
rpm -Uvh libaio-devel-0.*
rpm -Uvh libgomp-4.*
rpm -Uvh libgcc-4.*
rpm -Uvh libstdc++-4.*
rpm -Uvh libstdc++-devel-4.*
rpm -Uvh make-3.*
rpm -Uvh sysstat-7.*
rpm -Uvh unixODBC-libs-2.2.11-10.el5.*
rpm -Uvh unixODBC-2.*
rpm -Uvh unixODBC-devel-2.*
rpm -Uvh numactl-devel*
```

Create oracle groups and user:

```
groupadd oinstall
groupadd asmadmin
groupadd asmdba
groupadd dba

useradd -g oinstall -G asmadmin,asmdba,dba grid
useradd -g oinstall -G dba,asmdba oracle
```

Path Architecture

PATH	ENV	OWNER	MOD
/u01/app/grid	ORACLE_BASE	grid:oinstall	755
/u01/app/11.2.0/grid	ORACLE_HOME	grid:oinstall	755
/u02/app/oracle	ORACLE_BASE	oracle:oinstall	755
/u02/app/oracle/product/11.2.0/db_home	ORACLE_HOME	oracle:oinstall	755

Create paths [with root user]

```
mkdir -p /u01/app/grid
mkdir -p /u01/app/11.2.0/grid
mkdir -p /u02/app/oracle/product/11.2.0/db_home

chown -R grid:oinstall /u01
chown -R oracle:oinstall /u02

chmod -R 755 /u01
chmod -R 755 /u02
```

Edit /etc/hosts

```
127.0.0.1    localhost.localdomain  localhost
::1         localhost6.localdomain6 localhost6
192.168.56.101 testserver.taysi.com.tr testserver
```

BASH_PROFILES

For the ease of use, not to set the env. Variables everytime we log in to the system let's set some bash profile variables...

Login as **oracle** user and edit the bash profile: vi .bash_profile -> add the following lines:

```
# Oracle Settings
TMP=/tmp;export TMP
TMPDIR=$TMP;export TMPDIR

ORACLE_HOSTNAME=testserver.taysi.com.tr;export ORACLE_HOSTNAME
ORACLE_UNQNAME=TESTDB;export ORACLE_UNQNAME
ORACLE_BASE=/u02/app/oracle;export ORACLE_BASE
ORACLE_HOME=/u02/app/oracle/product/11.2.0/db_home;export ORACLE_HOME
```

```
ORACLE_SID=TESTDB;export ORACLE_SID
ORACLE_TERM=xterm;export ORACLE_TERM
BASE_PATH=/usr/sbin:$PATH;export BASE_PATH
PATH=$ORACLE_HOME/bin:$BASE_PATH;export PATH

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

if [ $USER = "oracle" ]; then
if [ $SHELL = "/bin/ksh" ]; then
ulimit -p 16384
ulimit -n 65536
else
ulimit -u 16384 -n 65536
fi
fi
```

Login as **grid** user and edit the bash profile: vi .bash_profile -> add the following lines:

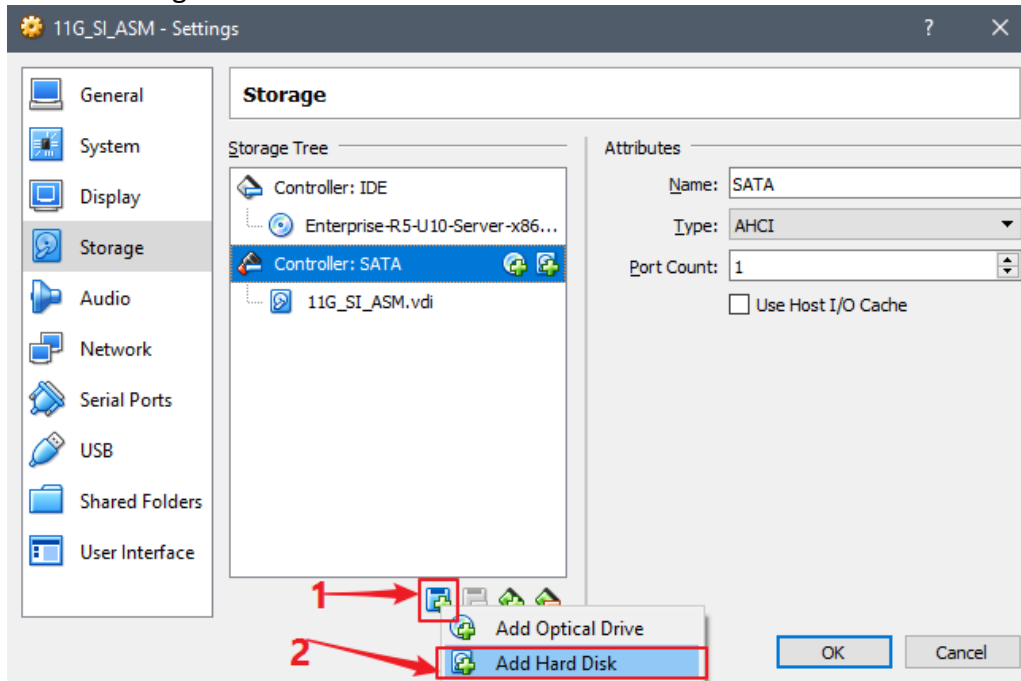
```
# Grid Settings
TMP=/tmp;export TMP
TMPDIR=$TMP;export TMPDIR

ORACLE_HOSTNAME=testserver.taysi.com.tr;export ORACLE_HOSTNAME
ORACLE_BASE=/u01/app/grid;export ORACLE_BASE
ORACLE_HOME=/u01/app/11.2.0/grid;export ORACLE_HOME
ORACLE_SID=+ASM;export ORACLE_SID
ORACLE_TERM=xterm;export ORACLE_TERM
BASE_PATH=/usr/sbin:$PATH;export BASE_PATH
PATH=$ORACLE_HOME/bin:$BASE_PATH;export PATH
LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib; export LD_LIBRARY_PATH
CLASSPATH=$ORACLE_HOME/JRE:$ORACLE_HOME/jlib:$ORACLE_HOME/rdbms/jlib;export CLASSPATH

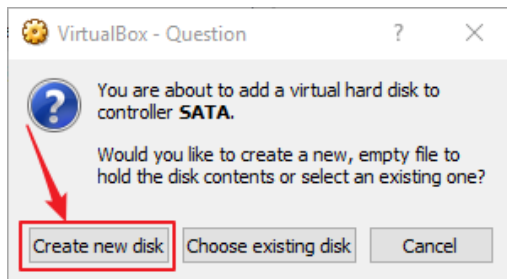
if [ $USER = "grid" ]; then
if [ $SHELL = "/bin/ksh" ]; then
ulimit -p 16384
ulimit -n 65536
else
ulimit -u 16384 -n 65536
fi
fi
```

Add Disk for ASM

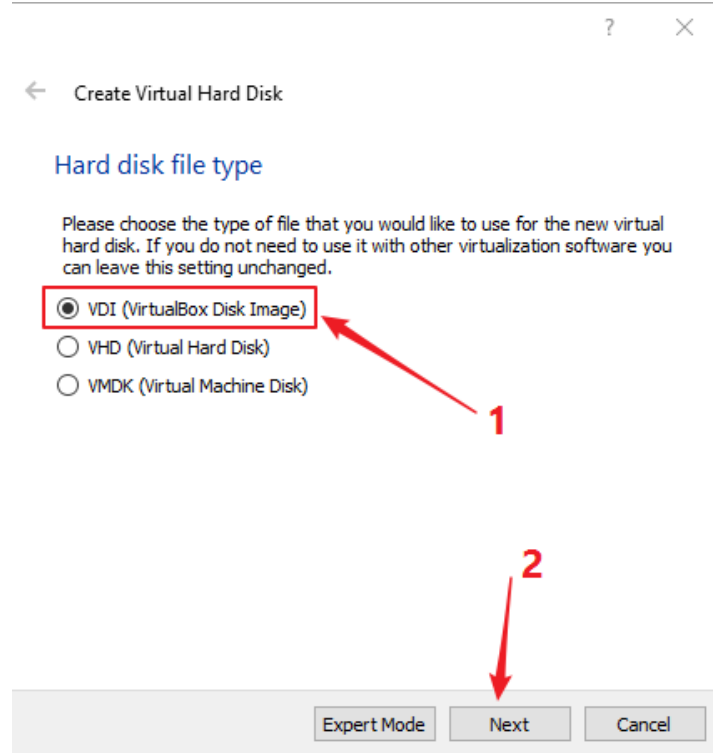
After shutting down the virtual machine... Select “Add Hard Disk”



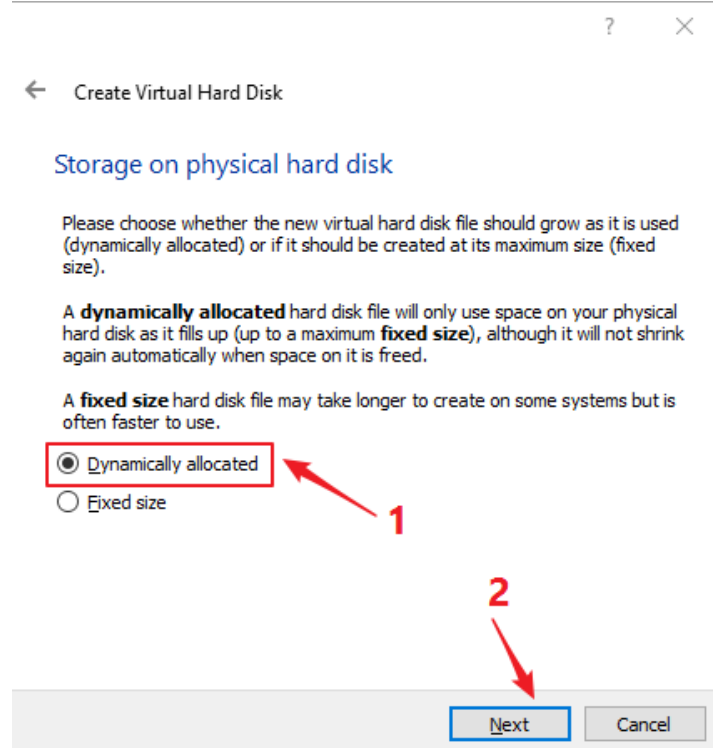
Select “Create new disk”



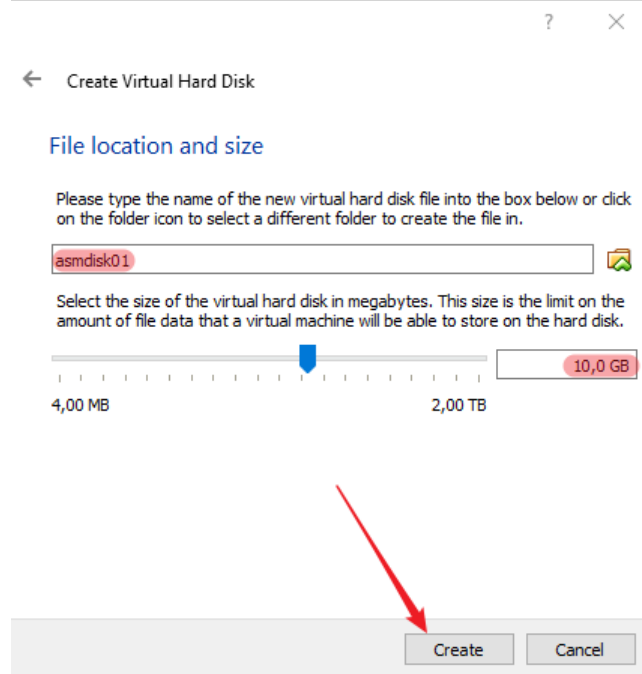
Select "VDI" and click "Next"



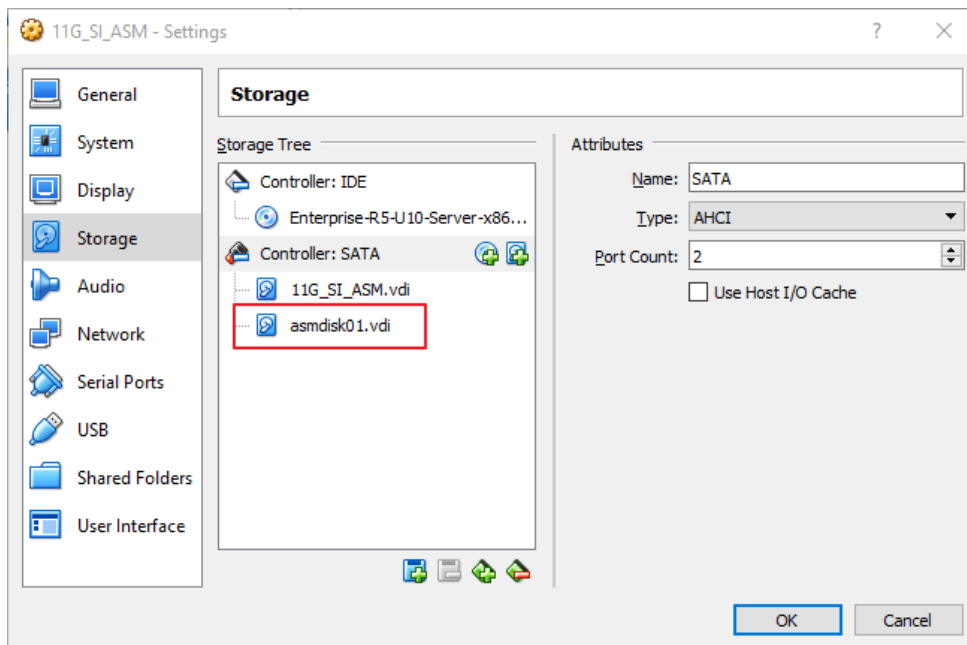
Select "Dynamically allocated" and click "Next"



Name the disk, allocate 10GB (more than enough) and click “Create”



Note: This is a test installation so we'll be creating only one disk group named +DATA and put all our data files in here. If it were a more serious environment we'd be creating separate disk groups like +RECO (for archive logs) +REDO (for redo logs) maybe +FRA and so on... In fact, in a production environment, usually enterprise (mid-range or high-end) disk array solutions are used like EMC Unity or VNX, or Netapp Fas, IBM Storwize etc. and storage admin is responsible for supplying the storage...



FDISK

Start the virtual machine and see the newly added disk:

```
$> ls -ltrh sd*  
brw-r----- 1 root disk 8, 1 Jun 21 10:42 sda1  
brw-r----- 1 root disk 8, 2 Jun 21 13:42 sda2  
brw-r----- 1 root disk 8, 0 Jun 21 13:42 sda  
brw-r----- 1 root disk 8, 16 Jun 21 13:42 sdb
```

Start FDISK (partition the disk...)

```
$> fdisk /dev/sdb  
Device contains neither a valid DOS partition table, nor Sun, SGI or OSF disklabel  
Building a new DOS disklabel. Changes will remain in memory only,  
until you decide to write them. After that, of course, the previous  
content won't be recoverable.  
  
The number of cylinders for this disk is set to 1305.  
There is nothing wrong with that, but this is larger than 1024,  
and could in certain setups cause problems with:  
1) software that runs at boot time (e.g., old versions of LILO)  
2) booting and partitioning software from other OSs  
   (e.g., DOS FDISK, OS/2 FDISK)  
Warning: invalid flag 0x0000 of partition table 4 will be corrected by w(rite)  
  
Command (m for help): u  
Changing display/entry units to sectors  
  
Command (m for help): n  
Command action  
  e  extended  
  p  primary partition (1-4)  
p  
Partition number (1-4): 1  
First sector (63-20971519, default 63):  
Using default value 63  
Last sector or +size or +sizeM or +sizeK (63-20971519, default 20971519):  
Using default value 20971519  
  
Command (m for help): w  
The partition table has been altered!  
  
Calling ioctl() to re-read partition table.  
Syncing disks.
```

Select the following commands in order:

u, n, p, 1, <enter>, <enter>, w

UDEV Configuration for ASM

For the ASM to be able to use disks, it needs to identify the disks consistently and the permissions should be set properly. Sometimes ASMLIB can be used for this purpose but it has never been a popular choice among the DBAs. ASMLIB does not allow – or some complex methodology is required to allow multipath configurations... So our choice here and in production environments will be UDEV.

UDEV >> apply the rules defined in ***"/etc/udev/rules.d"*** directory >> to device nodes listed in ***"/dev"***

Identify the disk (Linux 5)

```
$> /sbin/scsi_id -g -u -s /block/sdb  
  
SATA_VBOX_HARDDISK_VBa28b8dc2-8f59a268_
```

Make the SCSI devices trusted by adding the following line to ***"/etc/scsi_id.config"*** file.

```
options=-g
```

Create UDEV Rule

```
$> vi /etc/udev/rules.d/99-oracle-asmdevices.rules  
  
KERNEL=="sdb1", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s /block/$parent",  
RESULT=="SATA_VBOX_HARDDISK_VBa28b8dc2-8f59a268_", NAME="asmdisk01", OWNER="grid",  
GROUP="oinstall", MODE="0660"
```

Load Updated Block Device Partitions

```
$> /sbin/partprobe /dev/sdb1
```

Test the UDEV

```
$> udevtest /block/sdb/sdb1  
  
main: looking at device '/block/sdb/sdb1' from subsystem 'block'  
udev_rules_get_name: add symlink 'disk/by-id/scsi-SATA_VBOX_HARDDISK_VBa28b8dc2-8f59a268-part1'  
udev_rules_get_name: add symlink 'disk/by-path/pci-0000:00:0d.0-scsi-1:0:0:0-part1'  
run_program: '/lib/udev/vol_id --export /dev/.tmp-8-17'  
run_program: '/lib/udev/vol_id' returned with status 4  
run_program: '/sbin/scsi_id -g -u -s /block/sdb'  
run_program: '/sbin/scsi_id' (stdout) 'SATA_VBOX_HARDDISK_VBa28b8dc2-8f59a268_'  
run_program: '/sbin/scsi_id' returned with status 0  
udev_rules_get_name: rule applied, 'sdb1' becomes 'asmdisk01'  
udev_device_event: device '/block/sdb/sdb1' already in database, validate currently present symlinks  
udev_node_add: creating device node '/dev/asmdisk01', major = '8', minor = '17', mode = '0660', uid = '501', gid = '500'
```

```
udev_node_add: creating symlink '/dev/disk/by-id/scsi-SATA_VBOX_HARDDISK_VBa28b8dc2-8f59a268-part1' to './../asmdisk01'
udev_node_add: creating symlink '/dev/disk/by-path/pci-0000:00:0d.0-scsi-1:0:0:0-part1' to './../asmdisk01'
main: run: 'socket:/org/kernel/dm/multipath_event'
main: run: 'socket:/org/kernel/udev/monitor'
main: run: '/lib/udev/udev_run_devd'
main: run: 'socket:/org/freedesktop/hal/udev_event'
main: run: '/sbin/pam_console_apply /dev/asmdisk01 /dev/disk/by-id/scsi-SATA_VBOX_HARDDISK_VBa28b8dc2-8f59a268-part1
/dev/disk/by-path/pci-0000:00:0d.0-scsi-1:0:0:0-part1'
```

Restart UDEV

```
$> /sbin/udevcontrol reload_rules
$> /sbin/start_udev
```

Check the ownership and permissions

```
$> ls -ltrh /dev/asmdisk01

brw-rw---- 1 grid oinstall 8, 17 Jun 21 12:47 /dev/asmdisk01
```

Grid Installation

Create a temp setup path and copy the database install files in here with root user

```
$> mkdir /setup
$> chmod 777 /setup/

$> chown grid:oinstall p13390677_112040_Linux-x86-64_3of7.zip
$> chown oracle:oinstall p13390677_112040_Linux-x86-64_2of7.zip
$> chown oracle:oinstall p13390677_112040_Linux-x86-64_1of7.zip

# login with grid user and unzip the p13390677_112040_Linux-x86-64_3of7.zip file

$> cd /setup
$> unzip p13390677_112040_Linux-x86-64_3of7.zip
```

If you are using X emulation enable X11 forwarding of Putty.
Run Xming server and export your display (test with xclock)

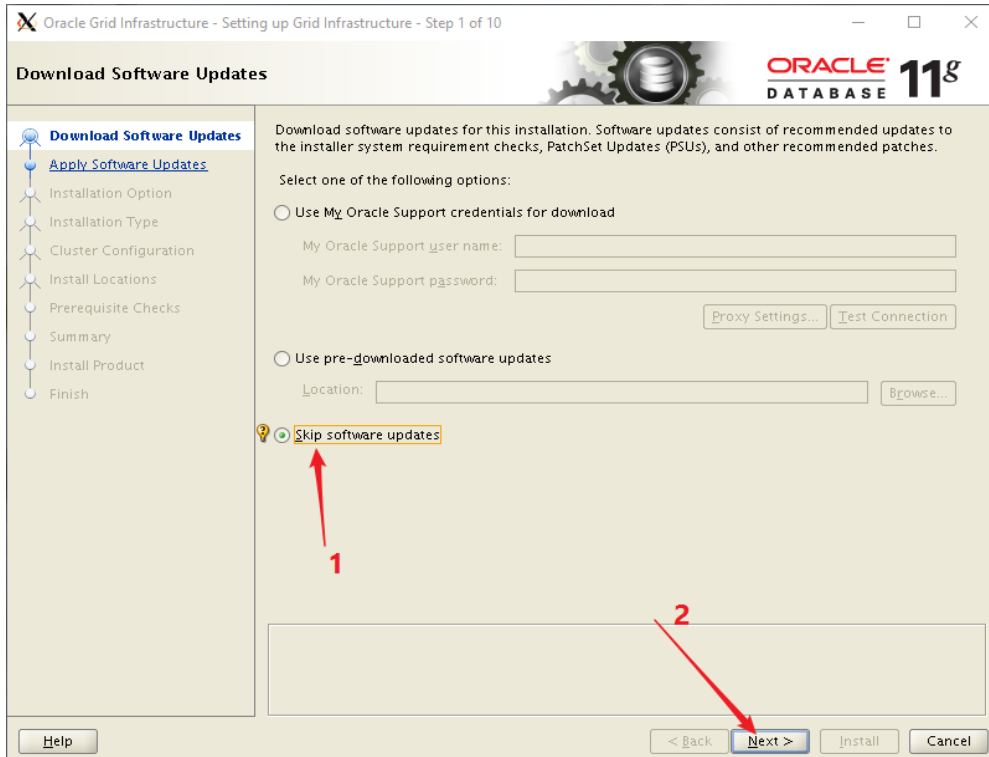
```
$> export DISPLAY=127.0.0.1:10.0
```

If you are having with the Xming and display setting please have a look at web sites like:
<http://www.straightrunning.com/xmingnotes/trouble.php>

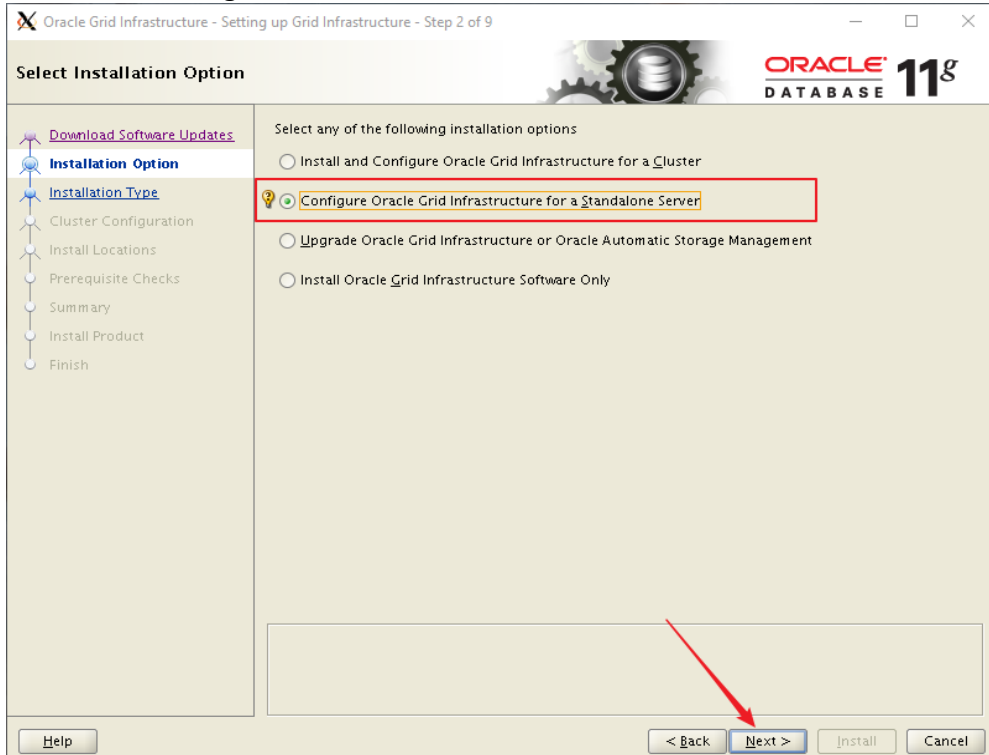
Run the installation with the grid user

```
./runInstaller.sh
```

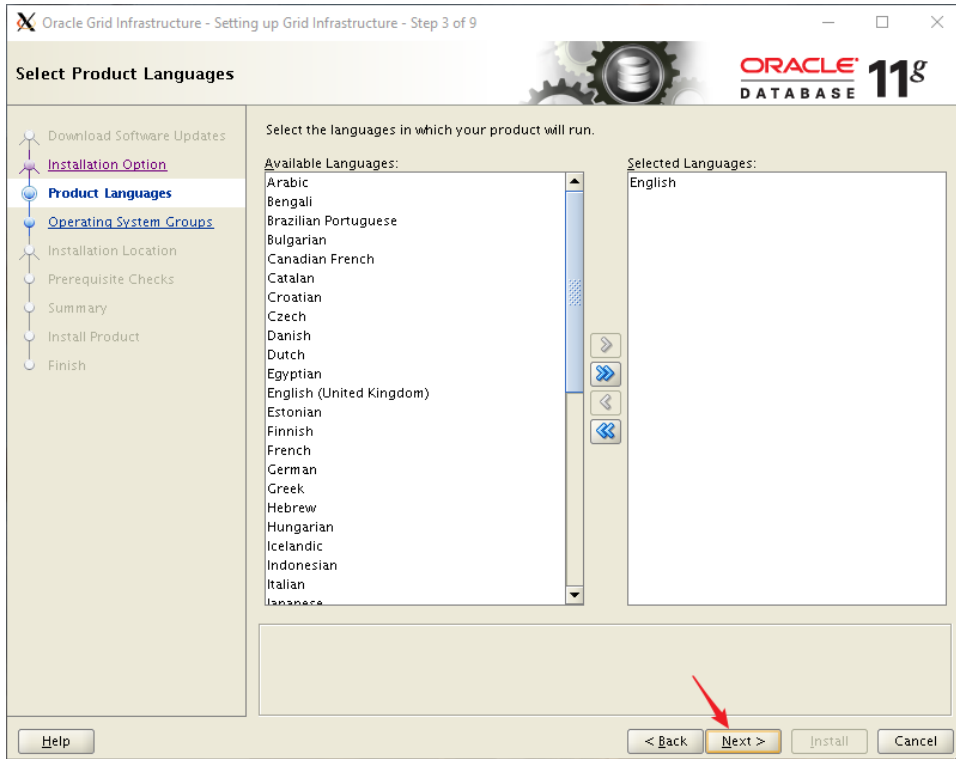
Click "Next"



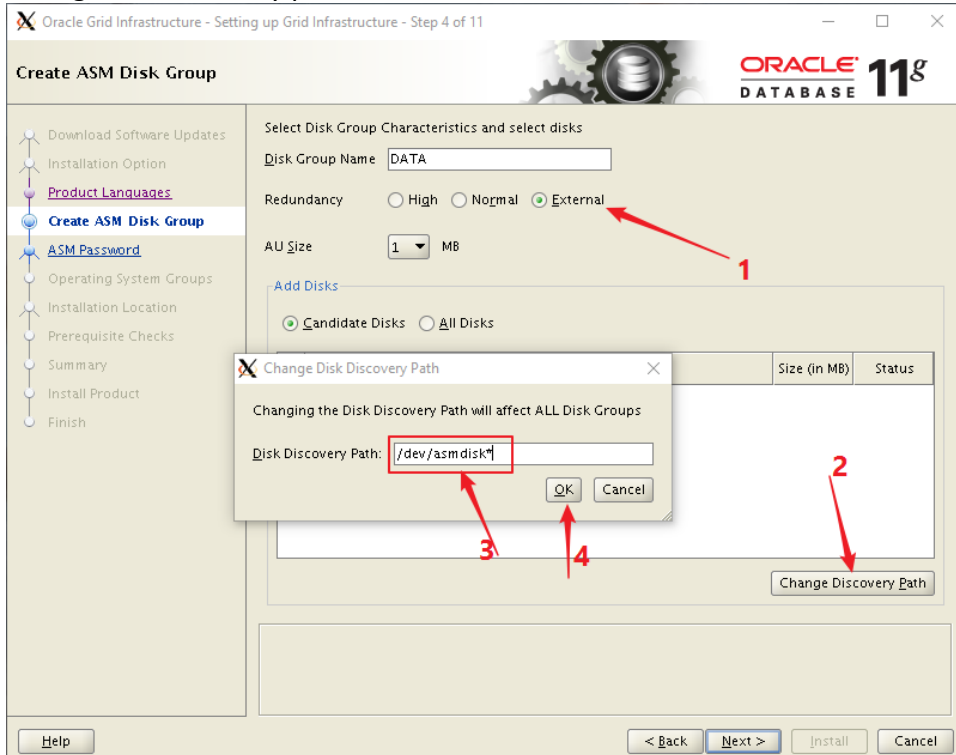
Since this is a single instance installation, choose as follows and click "Next"



Click "Next"



Change the discovery path to reach our candidate disk for ASM as follows



Select the disk and click "Next"

Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 4 of 11

Create ASM Disk Group

Select Disk Group Characteristics and select disks

Disk Group Name:

Redundancy: High Normal External

AU Size: MB

Add Disks

Candidate Disks All Disks

	Disk Path	Size (in MB)	Status
<input checked="" type="checkbox"/>	/dev/asm disk01	10239	Candidate

Choose a password and click "Next"

Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 5 of 11

Specify ASM Password

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

 SYS Password: Confirm Password:

 ASMSNMP Password: Confirm Password:

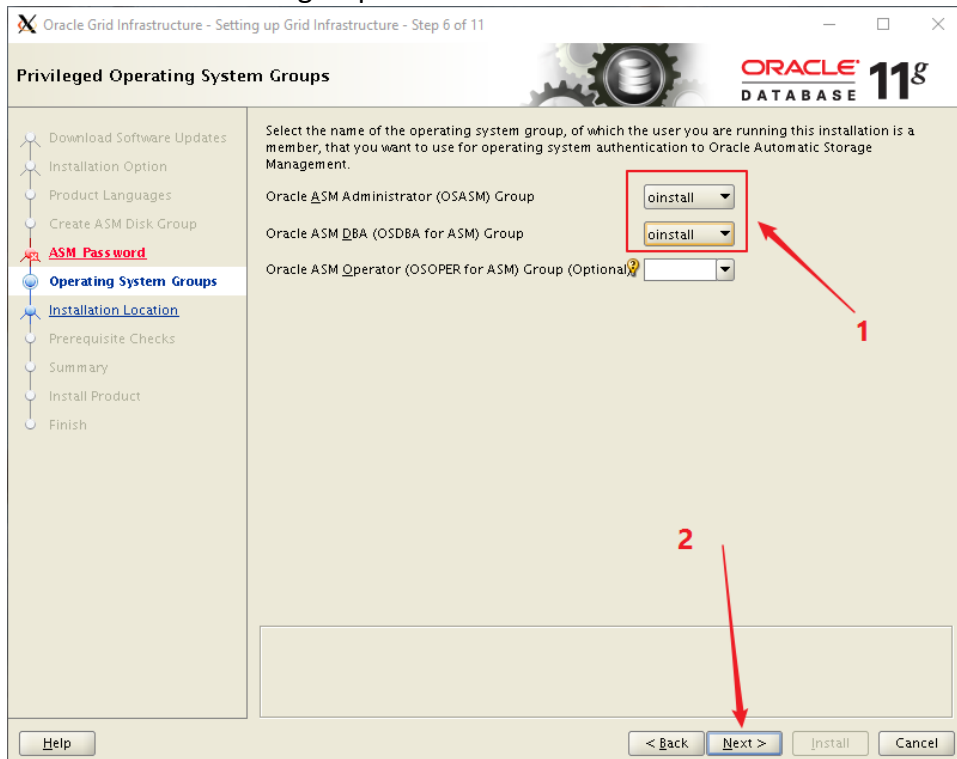
Use game passwords for these accounts

Specify Password: Confirm Password:

Messages:

Specify Password:[INS-30011] The password entered does not conform to the Oracle recommended standards.

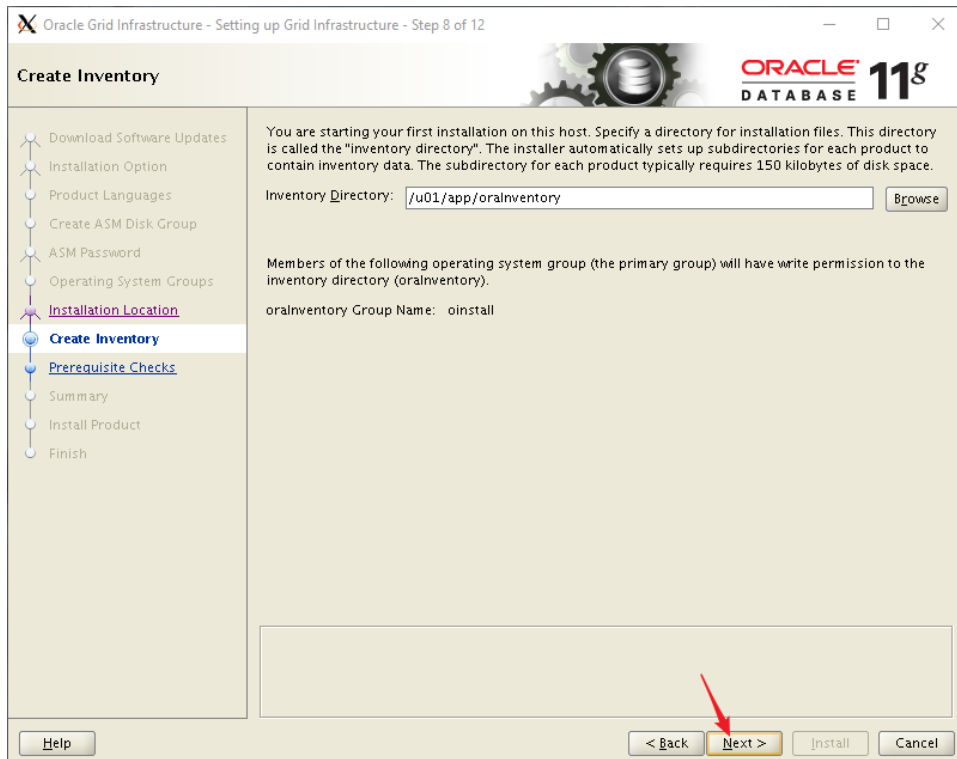
Choose oinstall as the group owners and then click “Next”



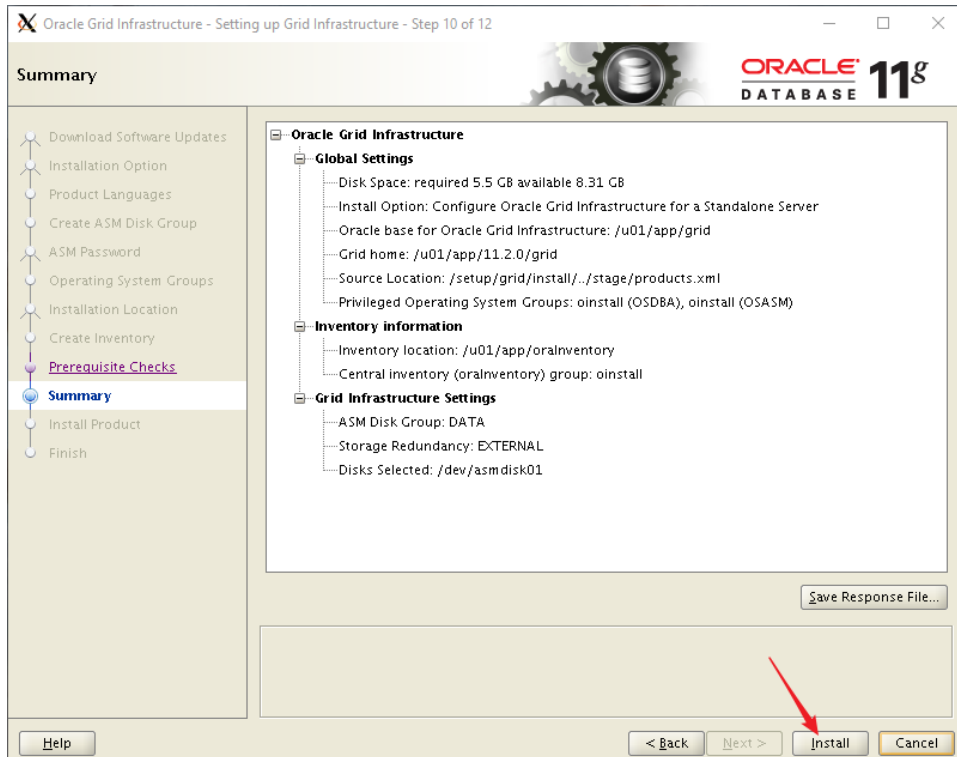
Base and home variables are automatically filled from the env. variables...
Click “Next”



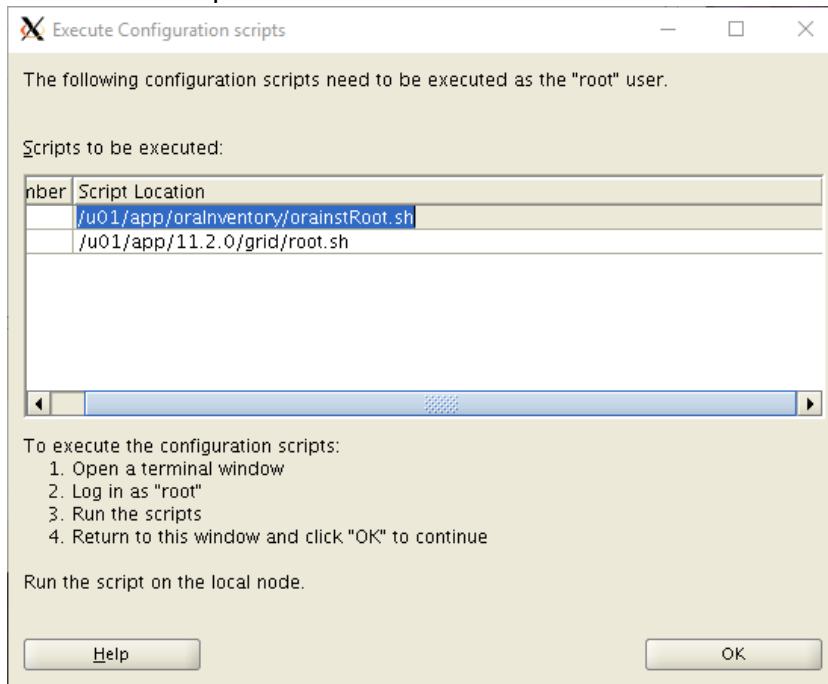
Click "Next"



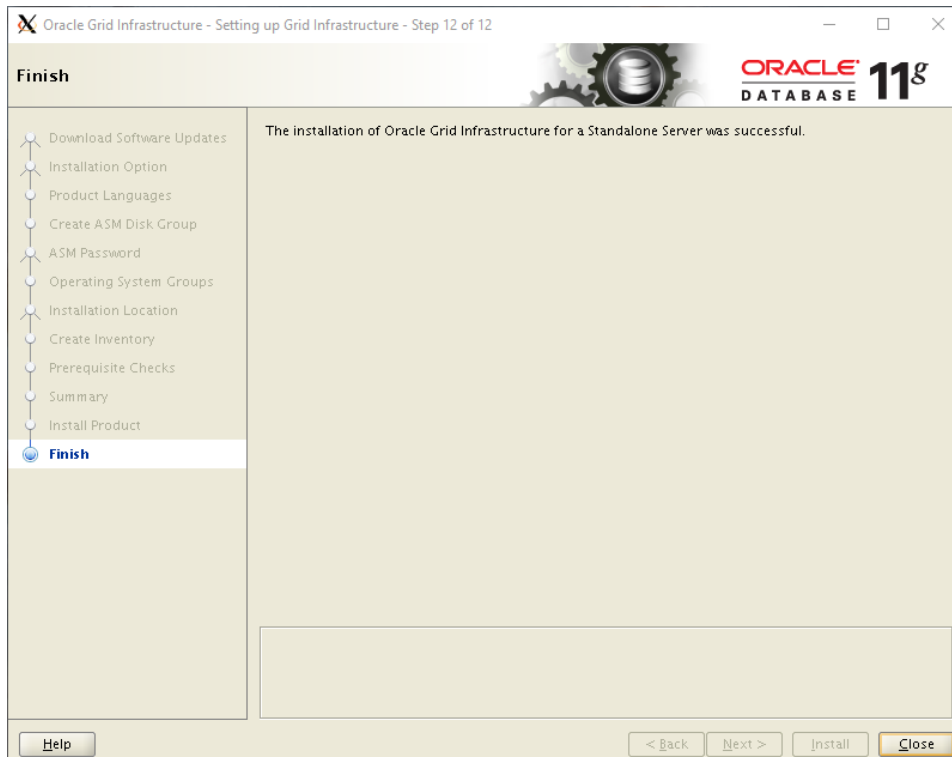
Click "Install"



Execute the scripts as root user and then click "OK":



Grid Installation is done.



Oracle Database Software Installation

Unzip the installation files and start th installation:

```
[oracle@testserver setup]$ unzip p13390677_112040_Linux-x86-64_1of7.zip  
[oracle@testserver setup]$ unzip p13390677_112040_Linux-x86-64_2of7.zip  
[oracle@testserver database]$ ./runInstaller
```

Click “Next”

Oracle Database 11g Release 2 Installer - Installing database - Step 1 of 11

Configure Security Updates

Provide your email address to be informed of security issues, install the product and initiate configuration manager. [View details.](#)

Email:

Easier for you if you use your My Oracle Support email address/username.

I wish to receive security updates via My Oracle Support.

My Oracle Support Password:

Help < Back Next > Install Cancel

Click “Next”

Oracle Database 11g Release 2 Installer - Installing database - Step 2 of 11

Download Software Updates

Download software updates for this installation. Software updates consist of recommended updates to the installer system requirement checks, PatchSet Updates (PSUs), and other recommended patches.

Select one of the following options:

Use My Oracle Support credentials for download

My Oracle Support user name:

My Oracle Support password:

Proxy Settings... Test Connection

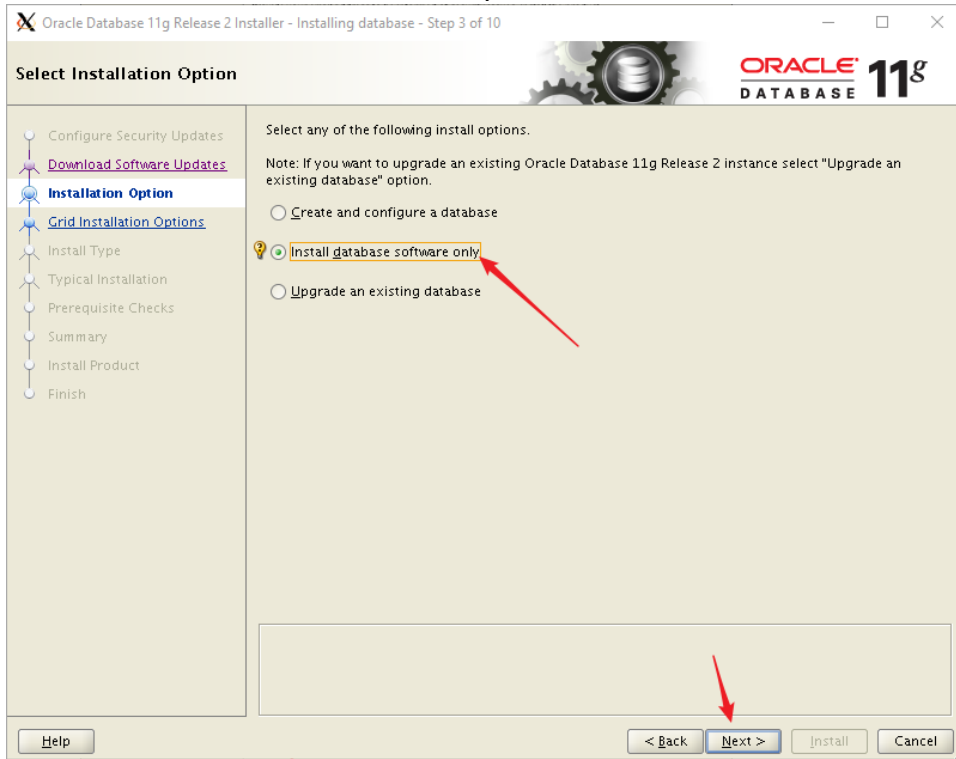
Use pre-downloaded software updates

Location: Browse...

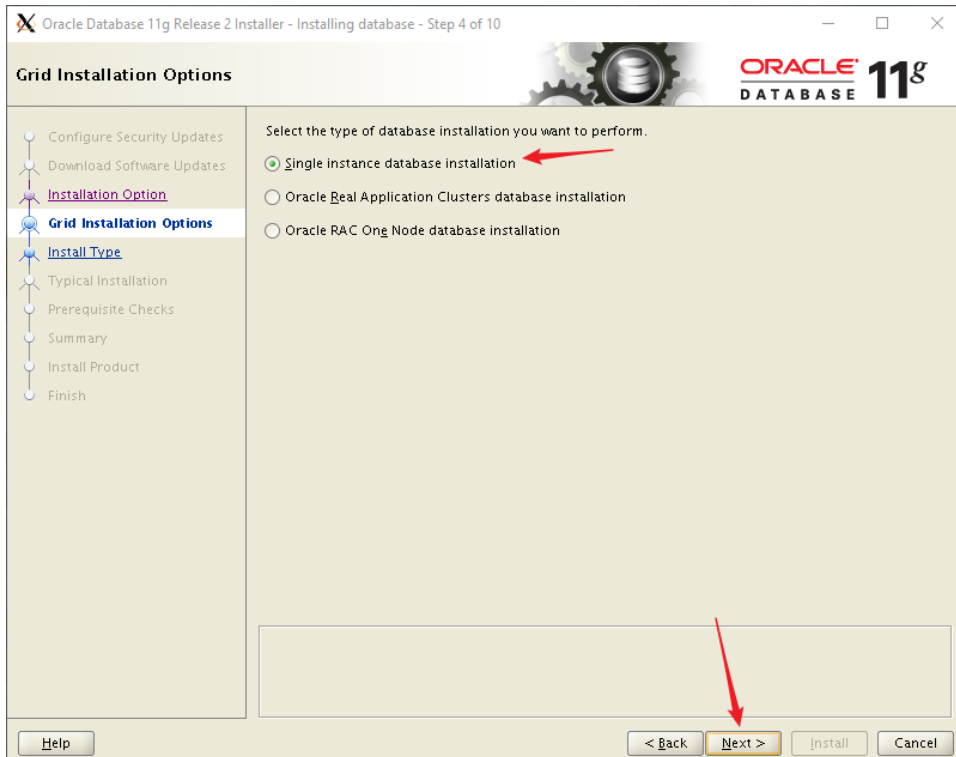
Skip software updates

Help < Back Next > Install Cancel

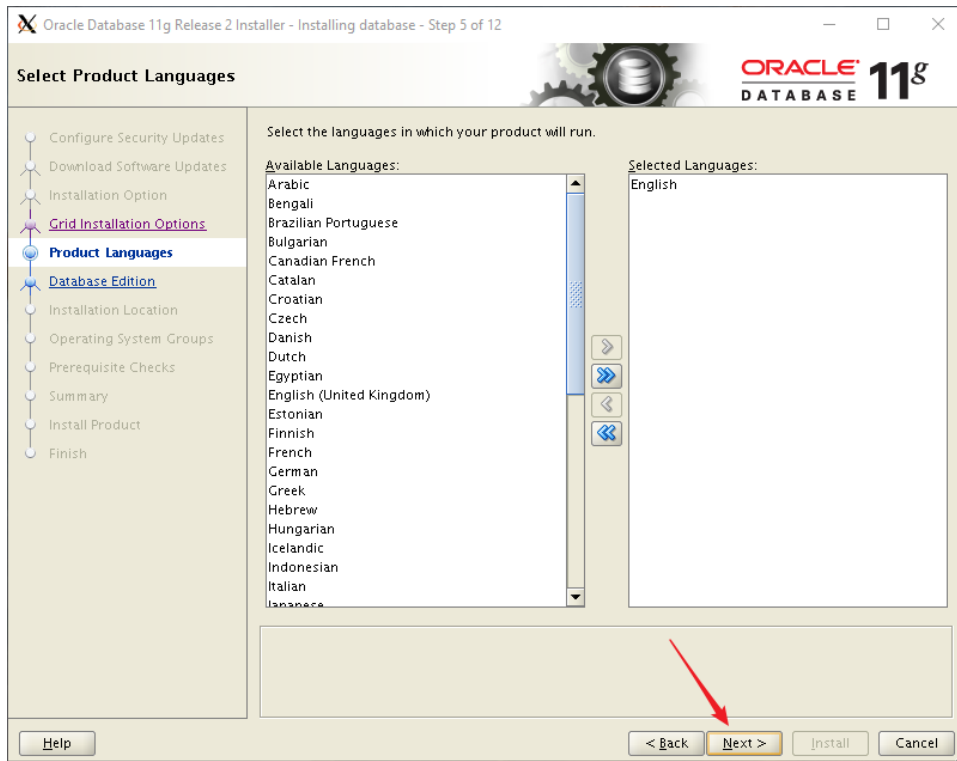
Choose "Install database software only" and click "Next"



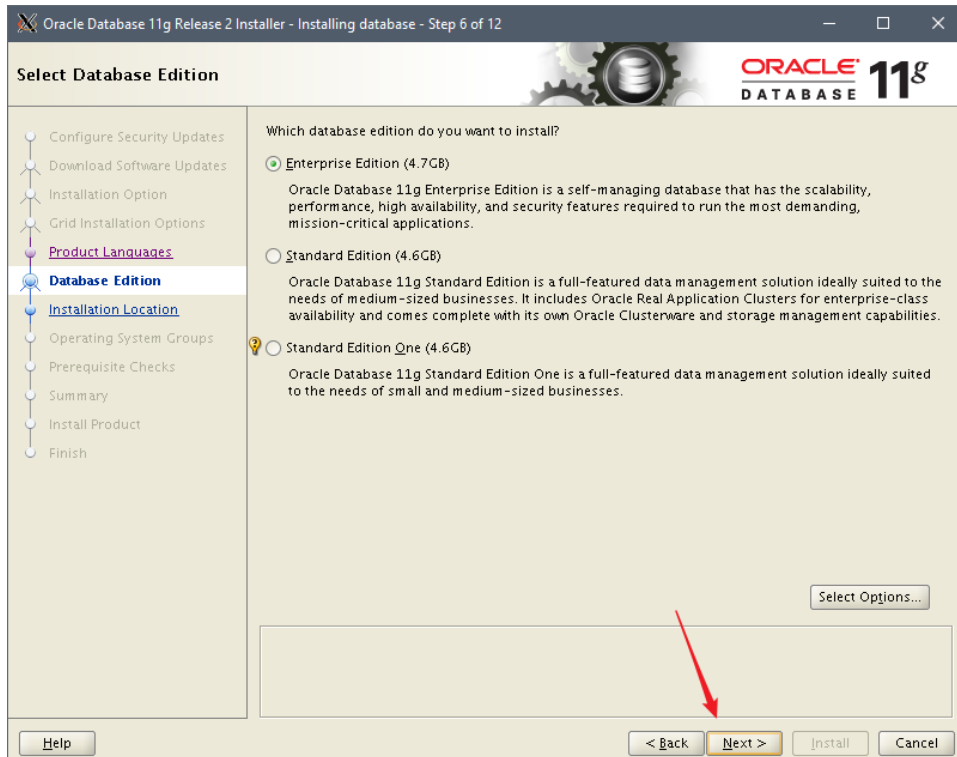
Click "Next"



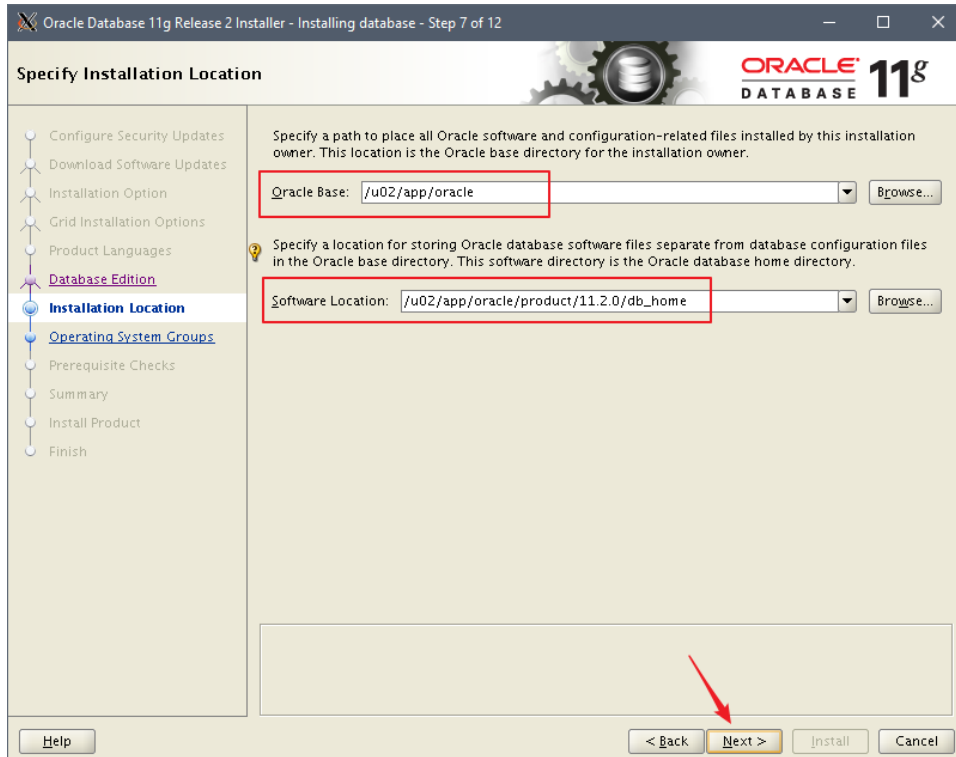
Click "Next"



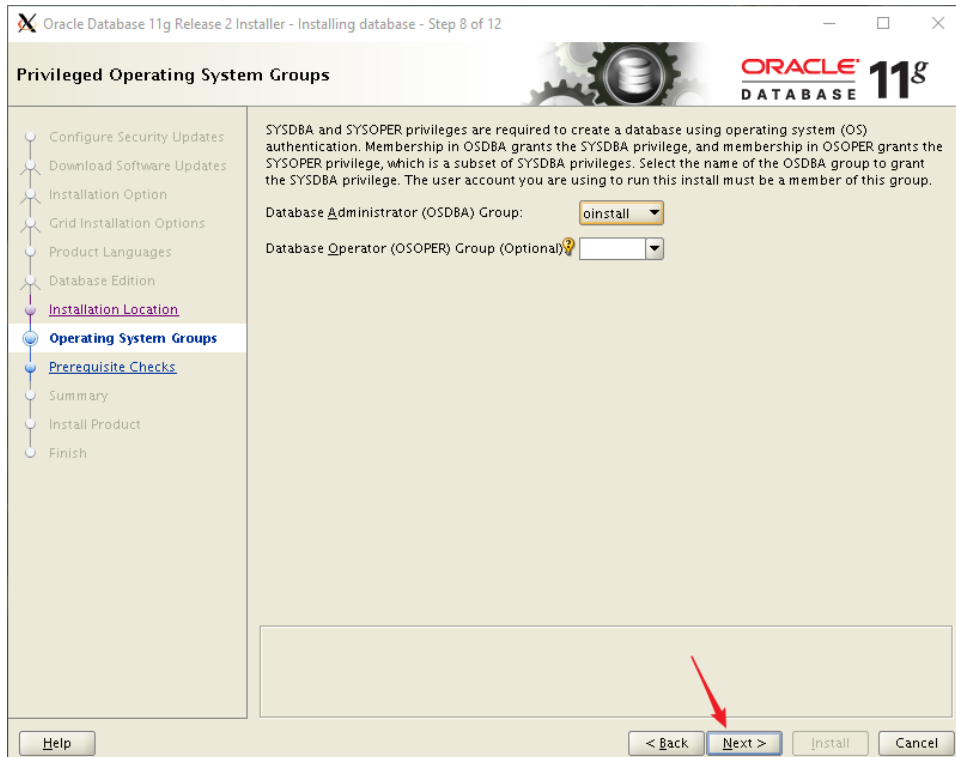
Click "Next"



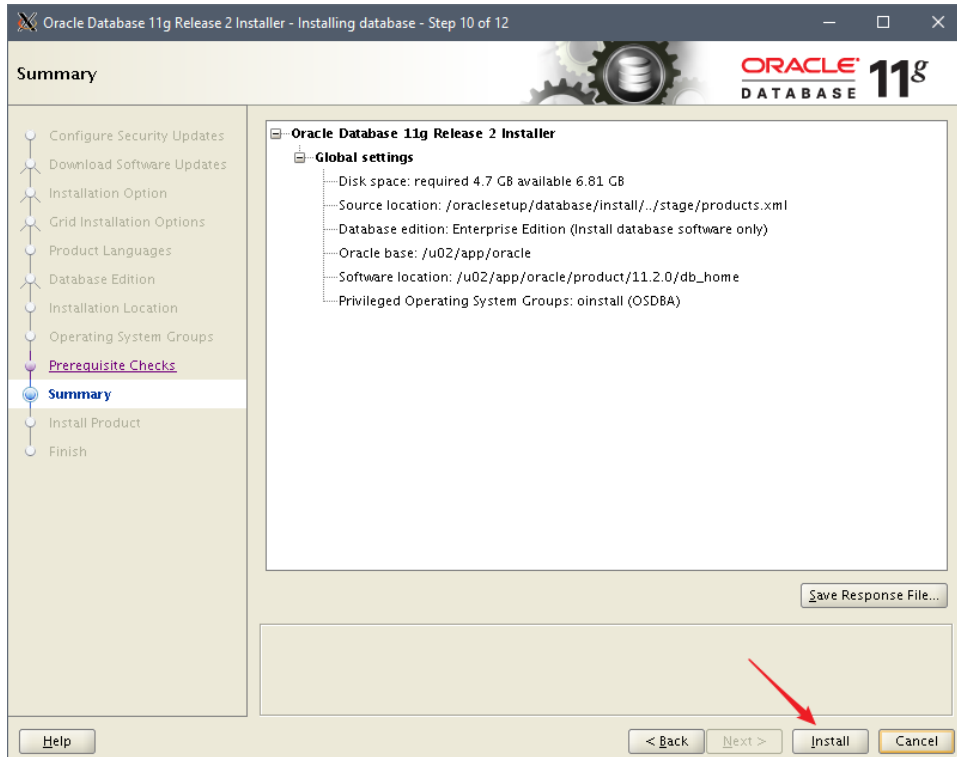
Control the HOME and BASE and then click "Next"



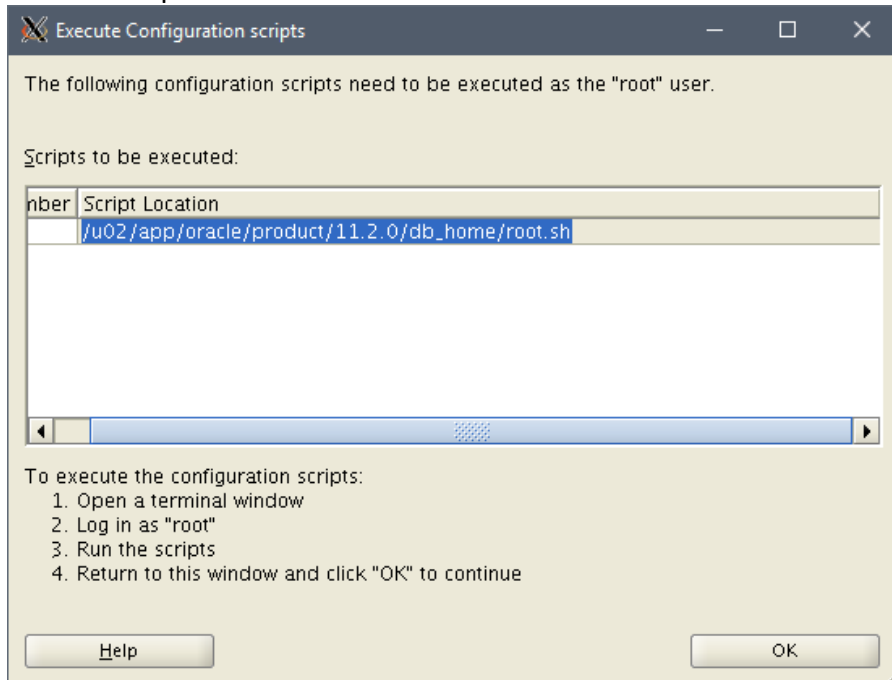
Click "Next"



Click "Next"



Run the script as root use and then click "OK"



```
[root@testserver /]# /u02/app/oracle/product/11.2.0/db_home/root.sh
Performing root user operation for Oracle 11g
```

The following environment variables are set as:

```
ORACLE_OWNER= oracle
```

```
ORACLE_HOME= /u02/app/oracle/product/11.2.0/db_home
```

Enter the full pathname of the local bin directory: [/usr/local/bin]:
The contents of "dbhome" have not changed. No need to overwrite.
The contents of "oraenv" have not changed. No need to overwrite.
The contents of "coraenv" have not changed. No need to overwrite.

Entries will be added to the /etc/oratab file as needed by
Database Configuration Assistant when a database is created

Finished running generic part of root script.

Now product-specific root actions will be performed.

Finished product-specific root actions.

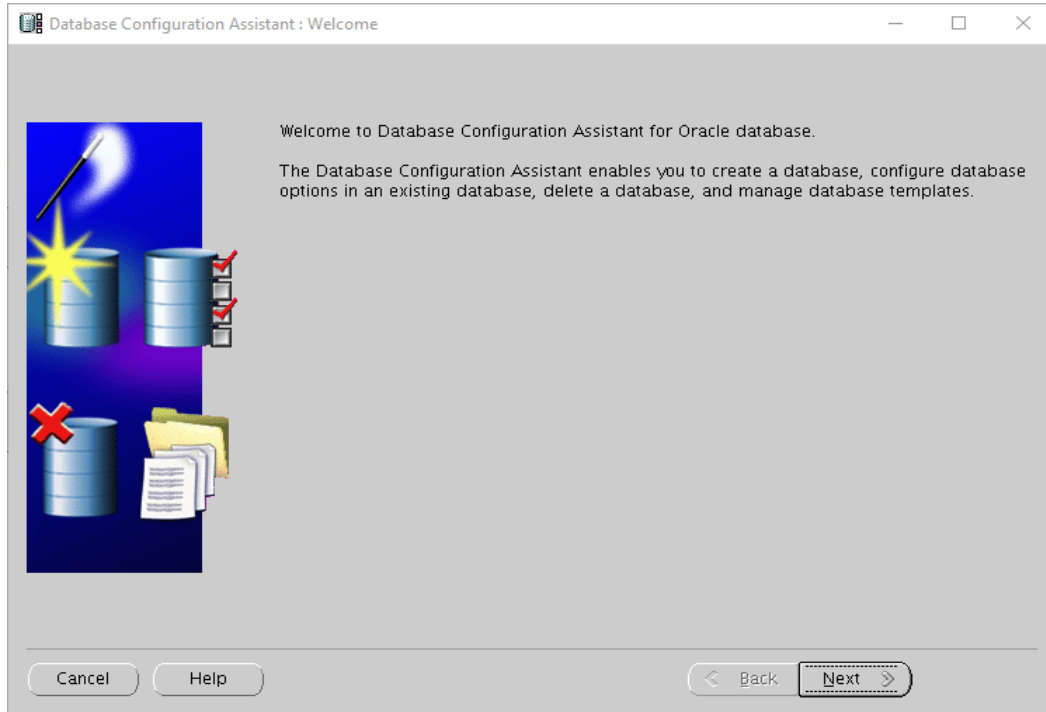
```
[root@testserver /]#
```



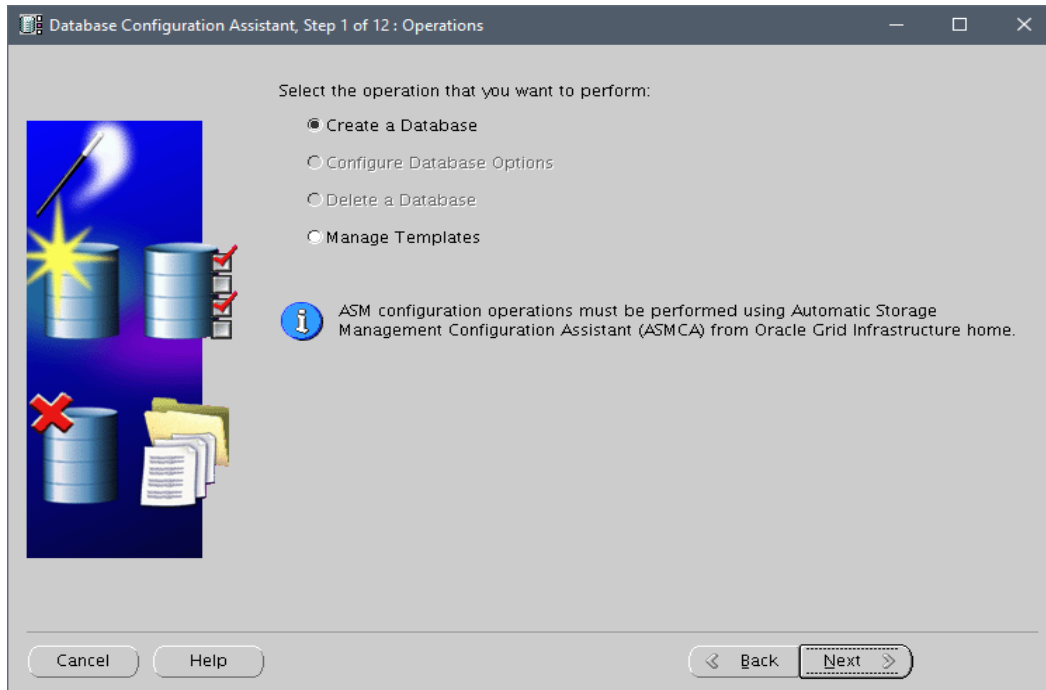
Install the Database using DBCA

```
[oracle@testserver database]$ dbca
```

Click "Next"



Click "Next"



Click "Next"

Templates that include datafiles contain pre-created databases. They allow you to create a new database in minutes, as opposed to an hour or more. Use templates without datafiles only when necessary, such as when you need to change attributes like block size, which cannot be altered after database creation.

Select	Template	Includes Datafiles
<input checked="" type="radio"/>	General Purpose or Transaction Processing	Yes
<input type="radio"/>	Custom Database	No
<input type="radio"/>	Data Warehouse	Yes

Show Details...

Cancel Help < Back Next >

Enter the SID in the bash_profile: TESTDB as the database name and SID

An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".

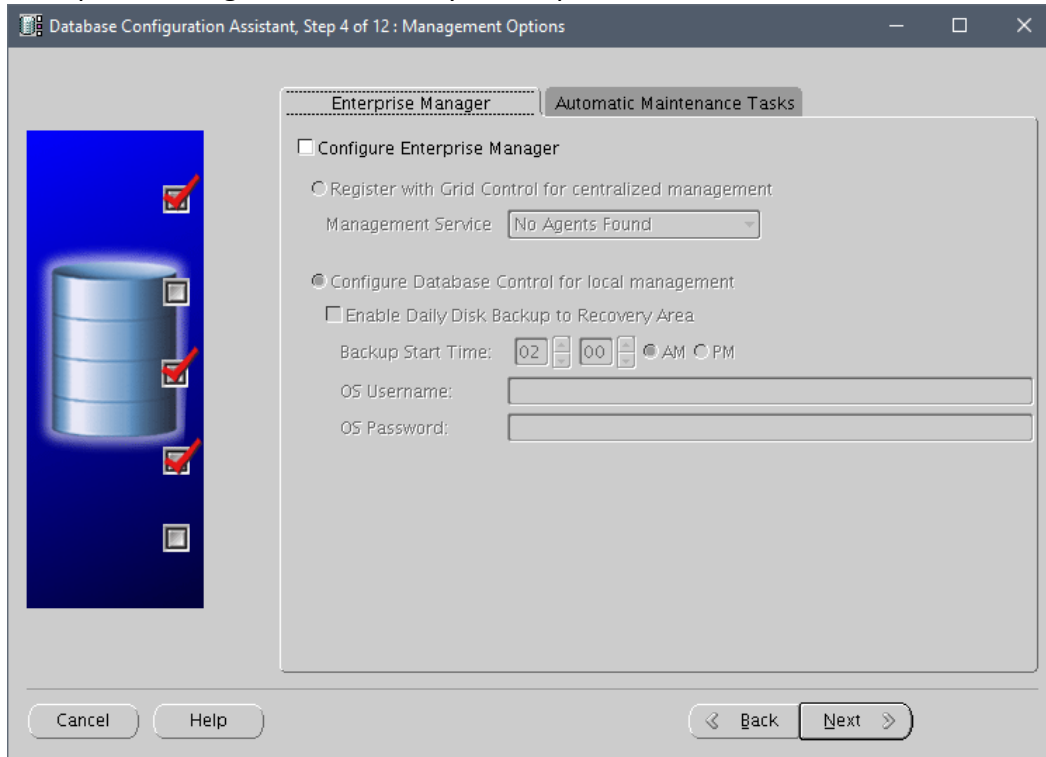
Global Database Name: TESTDB

A database is referenced by at least one Oracle instance which is uniquely identified from any other instance on this computer by an Oracle System Identifier (SID).

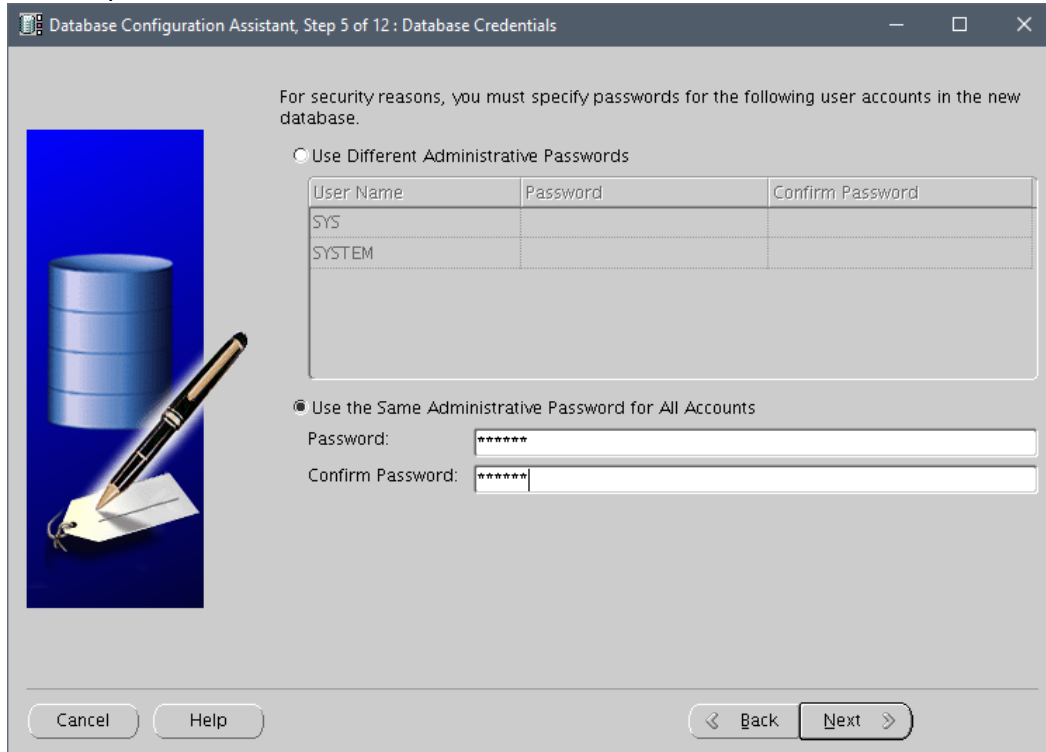
SID: TESTDB

Cancel Help < Back Next >

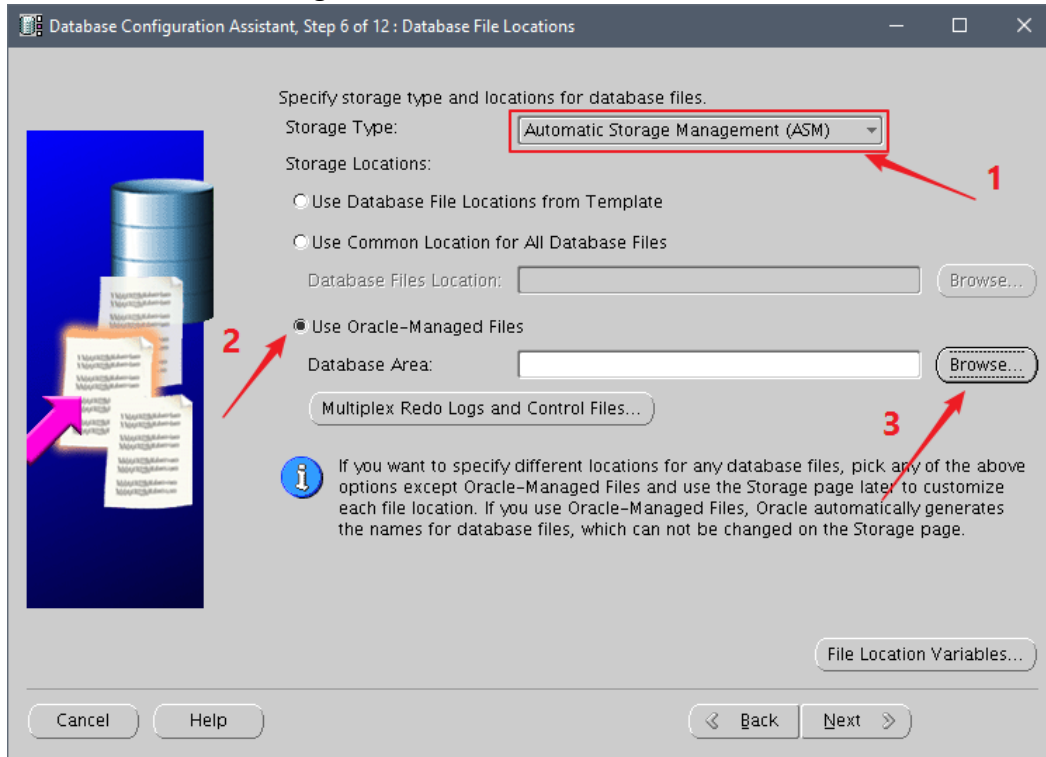
Enterprise Manager is unnecessary at this point... So uncheck and click "Next"



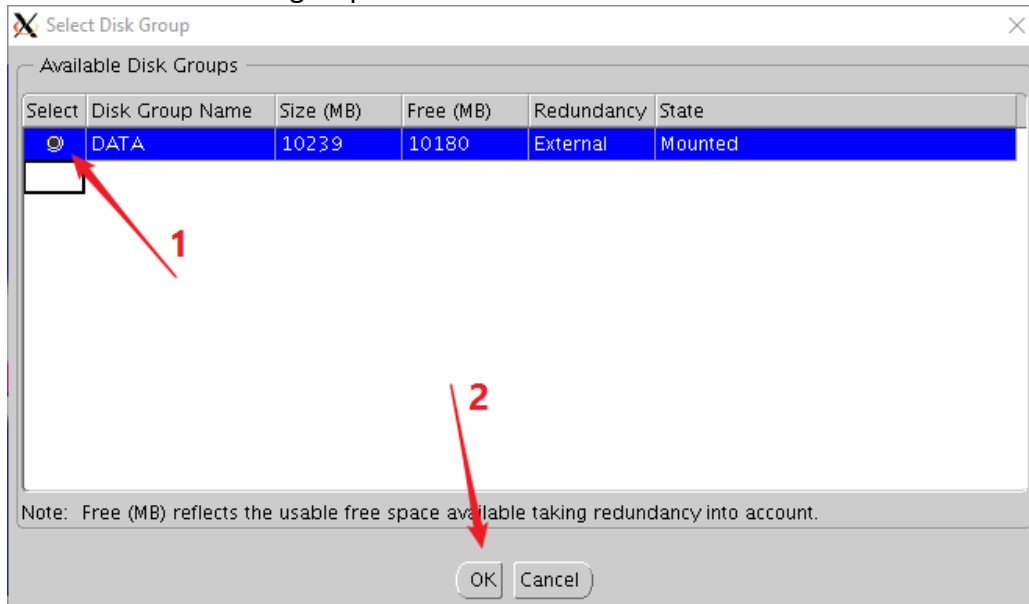
Enter a password and click "Next"



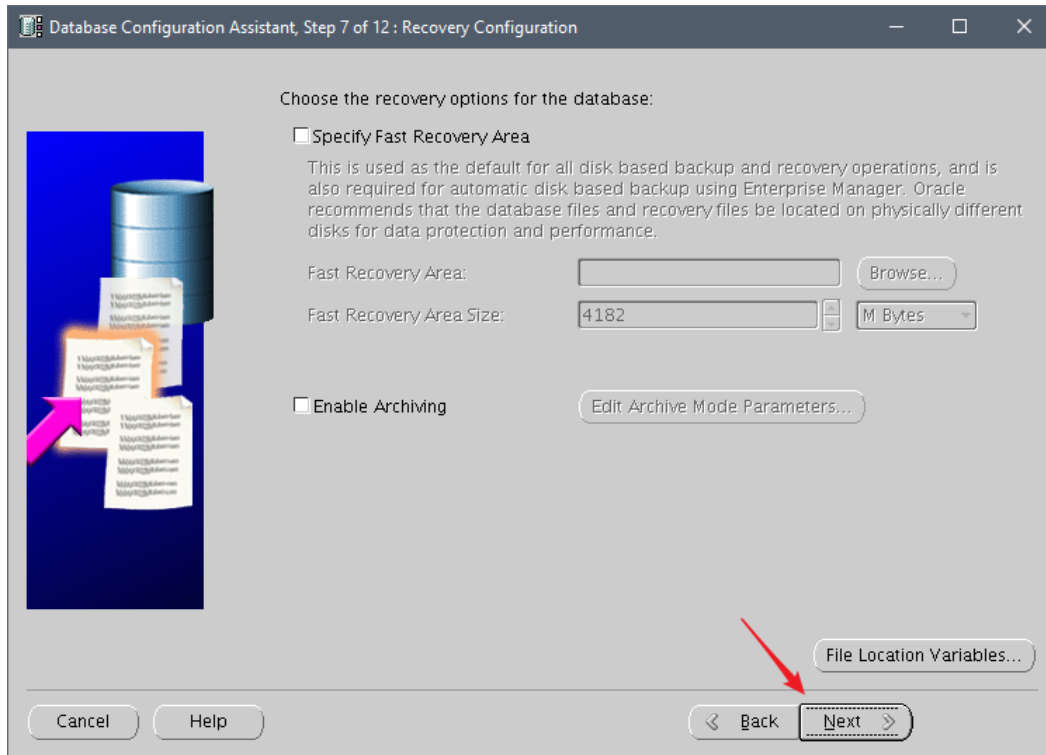
Select ASM as the storage, choose OMF and click browse to choose the ASM diskgroup



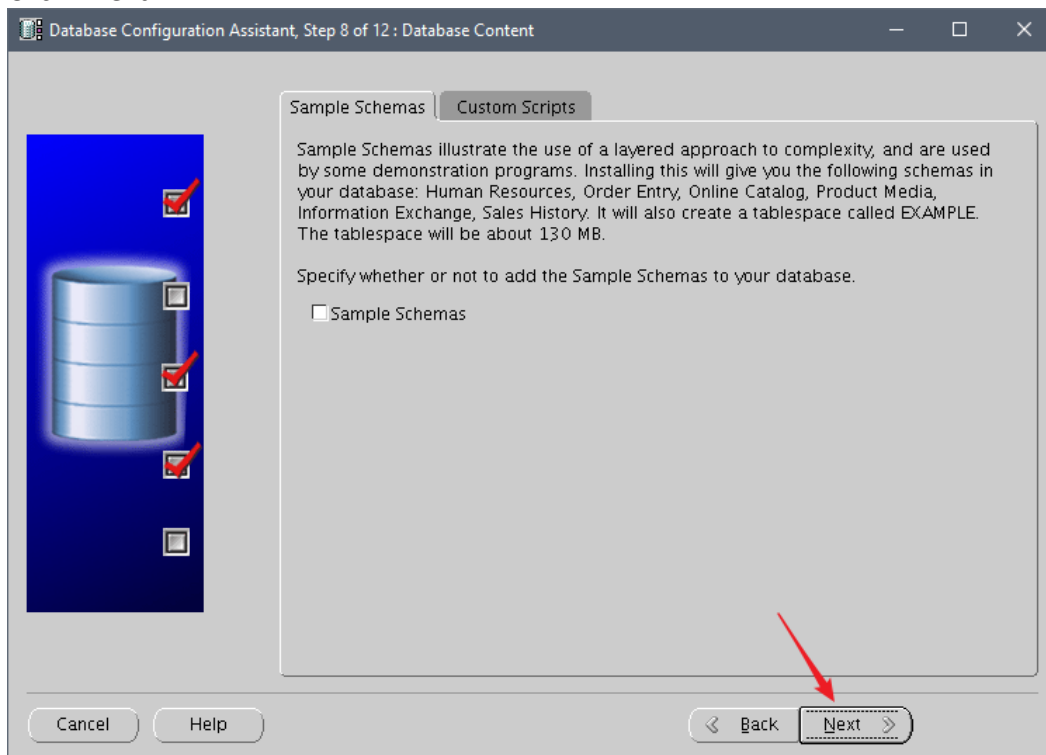
Select the +DATA diskgroup and click "OK"... Then Click "Next"



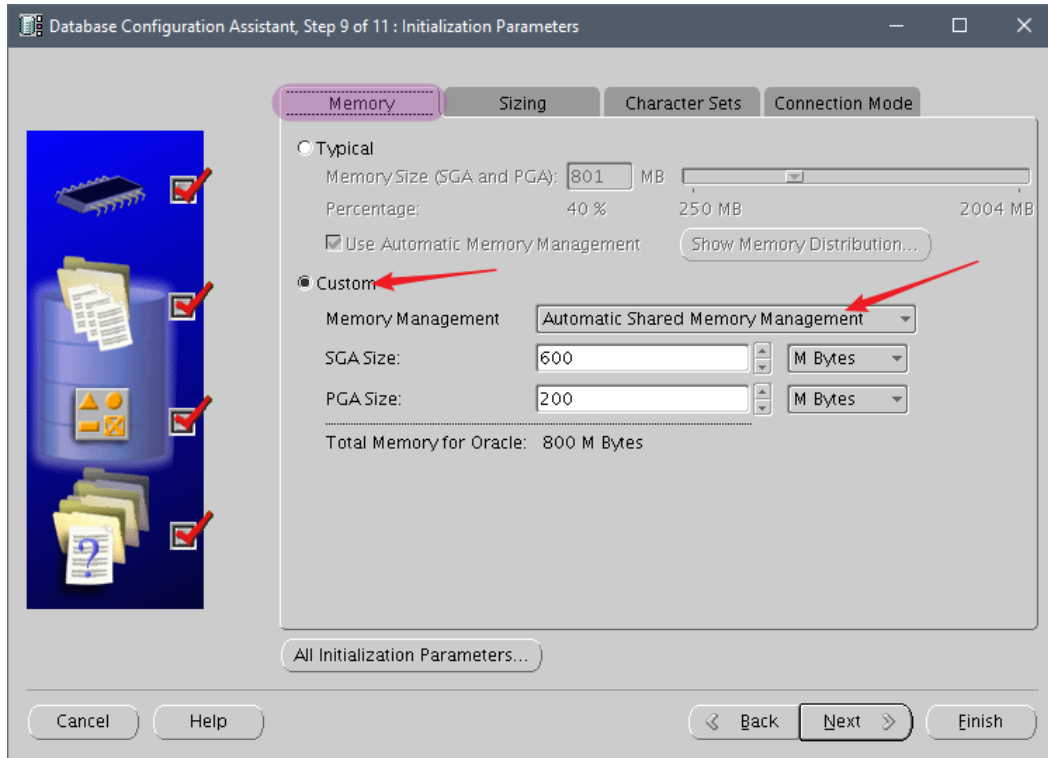
This is a test purpose database so we can leave the archiving disabled for now. We can enable it later on... Click "Next"



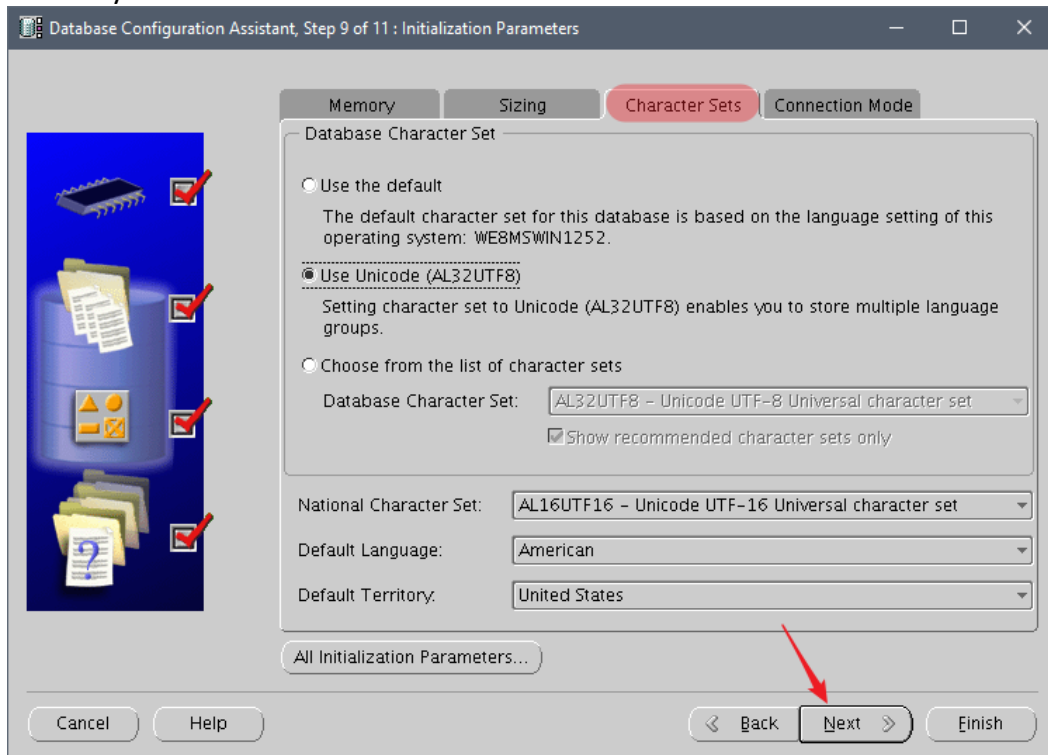
Click "Next"



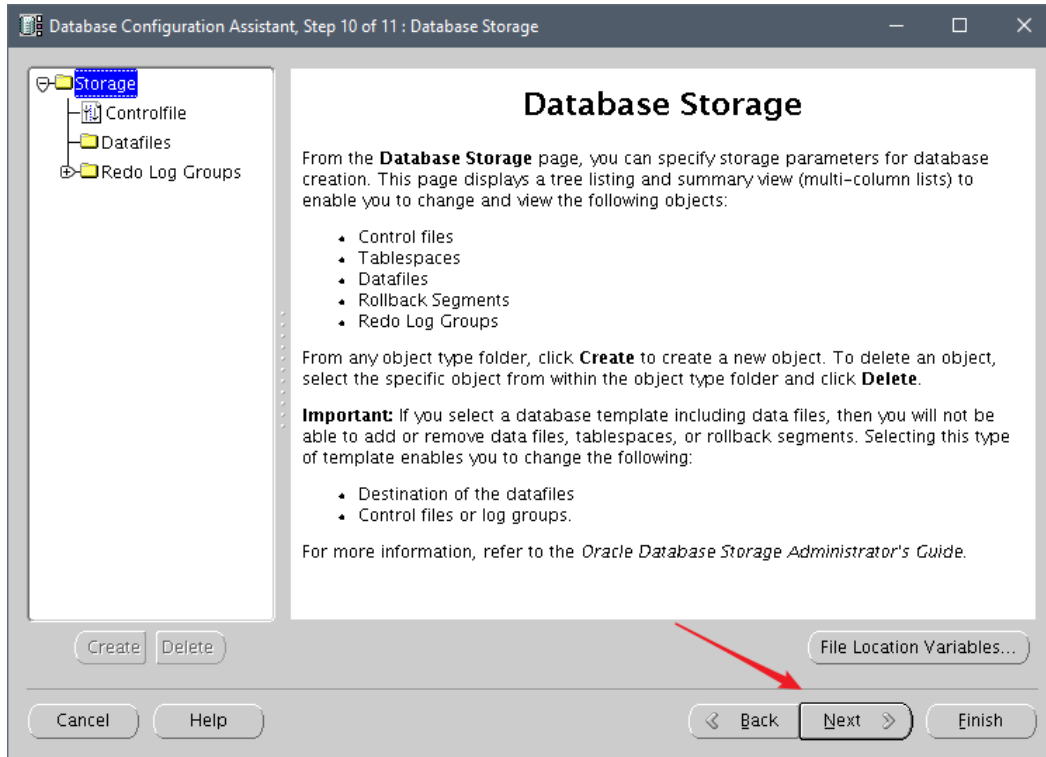
I usually prefer “Automatic Shared Memory Management” because the “Automatic Memeory Management” is not compatible with Linux huge pages. This is not relevant in this simple installation



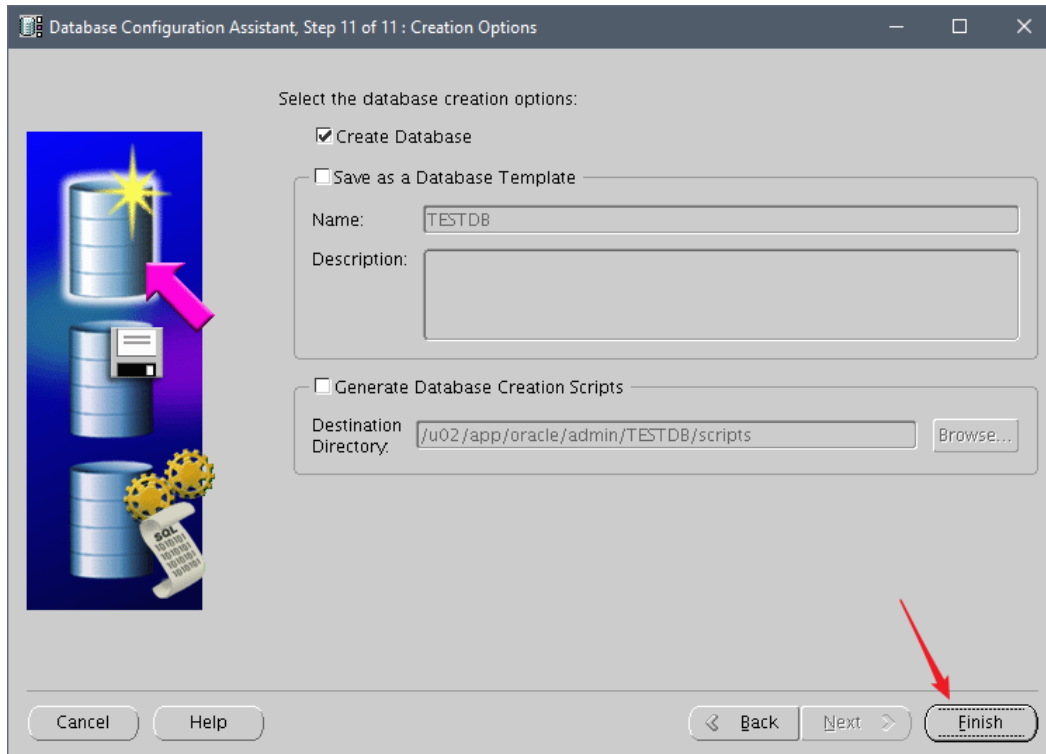
Choose your “Character Sets” and click “Next”



Click "Next"



Click "Finish"



Click "OK"

