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	p13390677_112040_Linux-x86-64_1of7.zip
Software	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 y	ou haven't	configured	your virtual	machine folder	, do it now.	Click File >	Preferences
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3. S	Select the	e folder	for the	virtual	machines an	d click "O	∙К″
------	------------	----------	---------	---------	-------------	------------	-----

📃 General	General
Input Ø Update	Default Machine Folder: C:\VirtualMachines
Language	VRDP Authentication Library: VBoxAuth
Extensions	
Proxy	
	Displays the path to the library that provides authentication for Remote Display (VRDP) clients.
	OK Cancel Help



5. Click "Next"

6	Welcome to the New Virtual Machine Wizard!
	This wizard will guide you through the steps that are necessary to create a new virtual machine for VirtualBox.
	Use the Next button to go to the next page of the wizard and the Back button to return to the previous page. You can also press Cancel if you want to cancel the execution of this wizard.
	< Back Next > Cancel

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

6	VM Name and OS Type
	Enter a name for the new virtual machine and select the type of the guest operating system you plan to install onto the virtual machine.
	The name of the virtual machine usually indicates its software and hardware configuration. It will be used by all VirtualBox components to identify your virtual machine.
	Name TestServer
	OS Type
	Operating System: Linux Version: Oracle (64 bit)
	< Back Next > Cancel

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

•	Memory
	Select the amount of base memory (RAM) in megabytes to be allocated to the virtual machine.
	The recommended base memory size is 512 MB.
	Base Memory Size
	4 MB 16384 MB
	< Back Next > Cancel

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

©	Virtual Hard Disk
	If you wish you can now add a start-up disk to the new machine. You can either create a new virtual disk or select one from the list or from another location using the folder icon.
	If you need a more complex virtual disk setup you can skip this step and make the changes to the machine settings once the machine is created.
	The recommended size of the start-up disk is 8.00 GB.
	✓ Start-up Disk
	Oreate new hard disk
	O Use existing hard disk
	Empty 💌 🔀
	< Back Next > Cancel

9. Choose "VDI" and click "Next"

Welcome to the virtual disk creation wizard
This wizard will help you to create a new virtual disk for your virtual machine.
Use the Next button to go to the next page of the wizard and the Back button to return to the previous page. You can also press Cancel if you want to cancel the execution of this wizard.
Please choose the type of file that you would like to use for the new virtual disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.
File type VDI (VirtualBox Disk Image)
C VMDK (Virtual Machine Disk)
HDD (Parallels Hard Disk)
< Back Next > Cancel

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

e	Virtual disk storage details	
	Please choose whether the new virtual disk file should be allocated as it is used or if it should be created fully allocated.	
	A dynamically allocated virtual disk file will only use space on your physical hard disk as it fills up, although it will not shrink again automatically when space on it is freed.	
	A fixed size virtual disk file may take longer to create on some systems but is often faster to use. Storage details	
	© Fixed size	
	< Back Next > Cancel	

11. Adjust the hdd size and click "Next"

e	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.
	TestServer Image: Comparison of the virtual disk in megabytes. This size will be reported to the Guest OS as the maximum size of this virtual disk.
	Size
	< <u>B</u> ack <u>N</u> ext > Cancel

12. Click "Create"

e	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.
	< <u>B</u> ack Create Cancel

13. Click "Start"



14. Click Next

9	Welcome to the First Run Wizard!
(M)	You have started a newly created virtual machine for the first time. This wizard will help you to perform the steps necessary for installing an operating system of your choice onto this virtual machine.
ORACLE	Use the Next button to go to the next page of the wizard and the Back button to return to the previous page. You can also press Cancel if you want to cancel the execution of this wizard.
	< Back Next > Cancel

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

0	Select Installation Media
(PA)	Select the media which contains the setup program of the operating system you want to install. This media must be bootable, otherwise the setup program will not be able to start.
ORACLE	Media Source
	< Back Next > Cancel

16. Click "Start"

6	Summary
ORACLE VITU	You have selected the following media to boot from: Type: CD/DVD-ROM Device Source: V40139-01.iso (3.87 GB) If the above is correct, press the Finish button. Once you press it, the selected media will be temporarily mounted on the virtual machine and the machine will start execution. Please note that when you close the virtual machine, the specified media will be automatically unmounted and the boot device will be set back to the first hard disk. Depending on the type of the setup program, you may need to manually unmount (eject) the media after the setup program reboots the virtual machine, to prevent the installation process from starting again. You can do this by selecting the corresponding Unmount action in the Devices menu.
	< Back Start Cancel

17. Press "Enter"



18. Click "Skip"



19. Click "Next"



	ORACLE
What language would you like to use during the installation process?	
Chinese(Simplified) (简体中文)	
Chinese(Traditional) (繁體中文)	
Croatian (Hrvatski)	
Czech (Čeština)	
Danish (Dansk)	
Dutch (Nederlands)	
English (English)	
Estonian (eesti keel)	
Finnish (suomi)	
French (Français)	
German (Deutsch)	
Greek (Ελληνικά)	
Gujarati (ગુજરાતી)	-
Release Notes	⊕ <u>B</u> ack

21. Choose appropriate keyboard and click "Next"

÷	ORACLE
H.	
Select the appropriate keyboard for the system.	
Slovakian	
Slovenian	
Spanish	
Swedish	
Swiss French	
Swiss French (latin1)	
Swiss German	
Swiss German (latin1)	
Tamil (Inscript)	
Tamil (Typewriter)	
Turkish	
U.S. English	
U.S. International	
Ukrainian	
United Kingdom	
×	
Release Notes	<u>■</u> Back <u>■</u> Next

22. Click "Yes" in the warning dialog

÷	ORACLE
Select the app	ropriate keyboard for the system.
Slovenian	Warning
Spanish	The partition table on device sda (ATA VBOX HARDDISK
Swedish	20473 MB) was unreadable.
Swiss French	 Io create new partitions it must be initialized, causing the loss of ALL DATA on this drive.
Swiss French (latin1	
Swiss German	This operation will override any previous installation choices about which drives to ignore
Swiss German (latin	
Tamil (Inscript)	Would you like to initialize this drive, erasing ALL DATA?
Tamil (Typewriter)	
Turkish	<u>₩o</u> <u>Y</u> es
U.S. English	
U.S. International	
Ukrainian	
United Kingdom	
<u>R</u> elease Notes	◆ <u>B</u> ack ♦ <u>N</u> ext

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

÷.	ORACLE
••	
Installation requires partitioning of your hard drive.	
By default, a partitioning layout is chosen which is reasonable for most users. You can either choose	
to use this or create your own.	
Remove linux partitions on selected drives and create default	layout. 🗘
Encrypt system	
Select the drive(s) to use for this installation.	
Sda 20473 MB ATA VBOX HARDDISK	
Advanced storage configuration]
Keview and modify partitioning layout	Ţ
<u>B</u> elease Notes	

24. Click "Yes" in the warning dialog

}	ORACLE
Installation requires partitic By default, a partitioning la reasonable for most users. to use this or create your on	oning of your hard drive. yout is chosen which is You can either choose wn.
Remove linux partit	Warning
Encrypt system	You have chosen to remove all Linux partitions (and ALL DATA on them) on the following drives:
Select the drive	sda (ATA VBOX HARDDISK 20473 MB)
☑ sda 204	Are you sure you want to do this?
	<u>No</u> Yes
♣ <u>A</u> dvanc	ed storage configuration
✓ Review and modify part	itioning layout
Release Notes	◆ <u>B</u> ack

٠			C		ILE"
**					
	-	Edit Partition:	/dev/sdal		
	<u>M</u> ount Point:	/boot		•	
	File System <u>T</u> ype:	ext3		+	
		🗹 sda 20473 MB	ATA VBOX HARDDISK		
	Allowable <u>D</u> rives:				
	_				
New	<u>S</u> ize (MB):	180		🖯 📃	
Device	Additional Size O	ptions			•
LogVol00	• <u>Fixed size</u>				
LogVol01	O Fill all space i	<u>u</u> p to (MB):	180	T	
∀ Hard Drives	 Fill to maxim 	um <u>a</u> llowable size			
▽ /dev/sda	Force to be a <u>p</u>	primary partition			
/dev/sda1	Encrypt				
/dev/sda2	2		X Cancel		
🗌 Hide RAID devi	ci			·	
Release Notes	5			🖨 Back	Next

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

}							0	RA	CL	E.	
-											
D	rive /dev/sda (2047)	з мв) (м	odel: ATA	VBOX	HARDDI	SK)					
15	da2 0293 MB										
L ²	0233 MB										
New	Edit	Delet	-	Reg	set	ſ	RAID			VM	
		Derec			200		T <u>A</u> ID				
Device	Mount Point/ RAID/Volume	Туре	Format	Size (MB)	Start I	End					
✓ LVM Volume Groups											
✓ VolGroup00				20288							
LogVol00	/	ext3	4	16288							
LogVol01		swap	4	4000							
✓ Hard Drives											
▽ /dev/sda											
	M Volume Group me	ambors									
	in volume <u>o</u> roup me	embers									
								4- 0			_

27. Click "Next"

÷		ORACLE
н		
③ The GRUB boot loader will	be installed on /dev/sda.	
\bigcirc No boot loader will be inst	alled.	
You can configure the boot loo to boot from the list. To add a change the operating system	ader to boot other operating systems. It w dditional operating systems, which are no booted by default, select 'Default' by the	rill allow you to select an operating system ot automatically detected, click 'Add.' To e desired operating system.
Default Label	Device	Add
✓ Oracle Linux Server	/dev/VolGroup00/LogVol00	Edit
		Delete
A boot loader password preve is recommended that you set	nts users from changing options passed t a password.	to the kernel. For greater system security, it
Use a boot loader passwo	rd Change password	
Configure advanced boot	oader <u>o</u> ptions	
Release Notes		👍 Back 📄 🖨 Next

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

						ORACL	LE.
H.							
Network Devic	es						
Active on Boot	Device	IPv4/Netmask	IPv6/Prefix	Edit			
	eth0	DHCP	Auto				
Hostname							
Set the hostnam	e:						
automatically	y via DH	CP					
O manually	calhost.	localdomain		(e.g., host.d	omain.com)		
Miscellaneous	Setting	s					
Gateway:	j	-					
Primary DNS:							
Secondary DNS:							
	_						
Release Notes	5					🖨 <u>B</u> ack	🛸 <u>N</u> ext

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

÷	ORACLE	
Please click into the map to choose a r	gion:	
Europe/Istanbul \$		
	•	
✓ System clock uses UTC		
Belease Notes	🗢 Back 🛛 🖨 Nex	t

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

÷		ORA	ACLE
**			
Difference of the second of th	count is used for administering the ter a password for the root user.		
Root <u>P</u> assword:	•••••		
<u>C</u> onfirm:	•••••		
	•		
<u>R</u> elease Notes		4	<u>B</u> ack

31. Select "Customize now" and click "Next"

Ō	RACL	E
The default installation of Oracle Linux Server includes a set of software applicable for general internet usage. What additional tasks would you like your system to include support for?		
Software Development		
Web server		
□ Virtualization		
Clustering		
Storage Clustering		
You can further customize the software selection now, or after install via the software management application.		
O Customize later O Customize now		
<u><u>R</u>elease Notes</u>	🖨 <u>B</u> ack	₽ <u>N</u> ext

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

*		ORACLE
Desktop Applicat Develop Servers Base Sy Cluster Cluster Virtuali	p Environments tions oment s /stem Storage ing zation	Base Dialup Networking Support Java Legacy Software Support OpenFabrics Enterprise Distribut System Tools X Window System
Insta	ill this group of packages to	o use the base graphical (X) user interface.
Release Note	N	29 of 39 optional packages selected Qptional packages ▲ Back

*	ORACLE [.]
	Click next to begin Installation of Oracle Linux Server. A complete log of the Installation can be found in the file '/root/install.log' after rebooting your system. A kickstart file containing the installation options selected can be found in the file '/root/anaconda-ks.cfg' after rebooting the system.
<u>Release Notes</u>	

34. Click "Reboot"

*	ORACLE [.]
	Congratulations, the installation is complete. Remove any media used during the installation process and press the "Reboot" button to reboot your system.
Release Notes	Reboot

35. Click "Forward"



36. Click "Forward"



37. Disable firewall and click "Forward"

Welcome License Agreement	Firewall	
 Firewall Firewall 	fou can use a firewall to allow access to specific services on your comput	er
SELINUX W	vorld. Which services, if any, do you wish to allow access to?	
Raump Date and Time		
Create liser	Firewall: Disabled	\$
Sound Card	Trusted services:	
Additional CDs		
		_
	NF54	
	M SSH	
	Samba	
	Secure WWW (HTTPS)	
	> Other ports	
	▶	
	🗢 <u>B</u>	ack 🖨 🖨 Eorward

38. Disable "Selinux" and click "Forward"

Welcome License Agreement	SELinux
Firewall	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.
Create User Sound Card Additional CDs	SELinux Setting: Disabled
	₩.
	← <u>B</u> ack ← <u>E</u> orward

39. Click "Forward"

Welcome License Agreement Firewall SELinux Kdump Date and Time	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.
Create User Sound Card	Enable Kdump?
Additional CDs	Total System Memory (MB): 2006
	Usable System Memory (MB): 1878
	►

40. Click "Forward"

Welcome License Agreement		Da	te	ar	hd	Ti	me	
Firewall SELinux Kdump	Please Date 8	set the a <u>T</u> ime	date ar Net <u>w</u> o	nd time rk Time	for the	syste	m.	
 Date and Time Create User 	<u>D</u> ate ▲ M	larch	•	10/	The c	4	2015 •	Current Time : 21:51:43
Sound Card Additional CDs	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25 1	5 12 19 26 2	6 13 20 27 3	7 14 21 28 4	Hour: 23 Minute: $\beta 1$ Second: 35

41. Click "Forward" without creating user

Welcome	
License Agreement	Create User
Firewall	It is recommended that you create a 'username' for regular (non-
SELinux	administrative) use of your system. To create a system 'username,' please
Kdump	
Date and Time	Username:
Create User	Full Name
Sound Card	
Additional CDs	Password:
	Confir <u>m</u> Password:
	If you need to use network authentication, such as Kerberos or NIS, please click the Upe Network Login button. Use Network <u>L</u> ogin
	Sorter Back

42. Click "Forward"

Welcome License Agreement	🍯 Sound Card
Firewall	An audio device has been detected in your computer.
SELinux	Click the "Play" button to hear a sample sound. You should hear a series of
Kdump	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.
Date and Time	
Create User	The following audio device was detected.
 Sound Card Additional CDs 	Selected card Vendor: Intel Corporation Model: 82801AA AC'97 Audio Controller Module: snd-intel8x0
	Sound test Sound test Image: Stopped Volume settings
	Device settings PCM device Intel 82801AA-ICH
	► <u>Eorward</u>

43. Click "Finish"



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

÷	Oracle VM VirtualBox Manager 🐡 🗕 🗆 🗙
File Machine He	TestServer - Settings ? ×
New Settings Sh TestServe Aunning Blueprint @Powerec	Image: Seneral Image: Network Image: System Adapter 1 Adapter 2 Adapter 3 Adapter 4 Image: Storage Image: Adapter 1 Adapter 2 Adapter 3 Adapter 4 Image: Storage Image: Storage Image: Storage Image: Storage Image: Storage Image: Addition Image: Attached to: Image: Storage Image: Storage Image: Storage Image: Network Name: VirtualBox Host-Only Adapter Image: Storage Image: Storage Image: Network Name: VirtualBox Host-Only Ethernet Adapter Image: Storage Image: Network Adapter Type: Intel PRO/1000 MT Desktop (82540EM) Image: Storage Image: Storage: Name: Network Name: Deny Image: Storage Image: Storage Image: Storage: Name: Of Storage: Storage: Storage: Storage: Storage Image: Storage Image: Storage Image: Storage: Stor
	Controls how this virtual adapter is attached to the real network of the Host OS. OK Cancel Help Controller: ICH AC97 The second secon

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 considerig the host gateway that was noted before. Click "OK" and then File > Save

🍄 Applications F	Places System 🥱		12:12 AM 🗐 🛙
Computer		Ethernet Device	
	Network Configuration	General Route Hardware Device	
root's Hom	File Profile Help	Nickname: eth0	
Trach	New Edit Copy Delete Activate Deactivate	 ☑ Activate device when computer starts □ Allow all users to enable and disable the device 	
ii abii	Devices Hardware IPsec DNS Hosts	Enable IPv <u>6</u> configuration for this interface	
Ø	You may configure network devices associated w physical hardware here. Multiple logical devices associated with a single piece of hardware.	O Automatically obtain IP address settings with: dhcp \$	
VBOXADDITIO 1.10 7683	Profile Status Device Nickname Type	Hostname (optional):	
	🗹 🚿 Active 📑 eth0 eth0 🛛 Ethernet	Automatically obtain DNS information from provider	
		In Statically set IP addresses:	
		Manual IP Address Settings	
		A <u>d</u> dress: 192.168.56.101	
		Subnet mask: 255.255.255.0	
		Default gateway address: 192.168.56.1	
	Edit device	Set MTU to: 0	
		Set MRU to: 0	

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 5000000 oracle soft memlock 5000000 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 5000000 grid soft memlock 5000000 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...

9		Oracle VM VirtualBox Manager	- 🗆 🗙
File Machine Help			
New Settings Show Discard			🔅 Details 🔟 Snapshots
Blueprint Powered Off Ranning Constraints Blueprint Powered Off Constraints	Storage Tree Storage Tree Test - Setting Storage Tree Storage Tree Storage Tree Storage Tree Storage Tree Test.vd Select a settings category from the last on the storage Tree thore and the last on the Select a settings category from the last on the Select a settings cat	General Name: Tet OS Type: Crade (64 bit) System Declary 1995 M8 Processor: 2 Boot Order: Pad Dak Processor: 2 Boot Order: DESecondary Master CD/DVD Drive: DESecondary Master CO/DVD Drive: DESecondary Master	Preview P
			////////////////////////////////

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

iost ost6 erver	
-----------------------	--

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/ilib:\$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

🤹 11G_SI_ASM ·	- Settings	?	×
General	Storage		
🛒 System	Storage Tree Attributes		
🔲 Display	Controller: IDE Name: SATA		
Storage	Enterprise-R5-U10-Server-x86 Type: AHCI		-
Storage	Controller: SATA 🚱 🚱 Port Count: 1		-
Audio 📢	IIG_SI_ASM.vdi Use Host I/O C	ache	
P Network			
Serial Port	ts		
🏈 USB			
Shared Fo	lders		
User Inter	face		
	Add Optical Drive	Car	cel
	Add Hard Disk	Car	Cel

After shutting down the virtual machine... Select "Add Hard Disk"

Select "Create new disk"



×

?

Create Virtual Hard Disk

Hard disk file type

Please choose the type of file that you would like to use for the new virtual hard disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.



Select "Dynamically allocated" and click "Next"

? ×

Create Virtual Hard Disk



Please choose whether the new virtual hard disk file should grow as it is used (dynamically allocated) or if it should be created at its maximum size (fixed size).

A **dynamically allocated** hard disk file will only use space on your physical hard disk as it fills up (up to a maximum **fixed size**), although it will not shrink again automatically when space on it is freed.

A **fixed size** hard disk file may take longer to create on some systems but is often faster to use.



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

? ×

← Create Virtual Hard Disk

asmdisk01					[
Select the size of amount of file d	of the virtual har ata that a virtua	rd disk in meg al machine wil	abytes. This	s size is the store on the	limit on the
					10.0
		<mark>т</mark> ттт	1 1 1 1		10,01
4,00 MB			2,00	тв	
		$\langle \rangle$			

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 seperate 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...

🥹 11G_SI_ASM - Setti	ngs			?	\times
General	Storage				
🛒 System	Storage Tree	Attributes			
Display	Controller: IDE	<u>N</u> ame:	SATA		
C Storage	Enterprise-R5-U10-Server-x86	<u>Type</u> :	AHCI		•
Storage	😤 Controller: SATA 🛛 🚱 😭	Port Count:	2		*
Audio 📦	😥 11G_SI_ASM.vdi		Use Host I/O Cache		
P Network	···· 😡 asmdisk01.vdi				
Serial Ports					
🏈 USB					
Shared Folders					
User Interface					
	🔁 🚍 🕹 🔶				
			ОК	Can	cel

FDISK

Start the virtual machine and see the newly added disk:

\$> Is -Itrh 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) р 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 methoology 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: '/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' 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/udev/monitor' main: run: 'socket:/org/freedesktop/hal/udev_event' 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

```
$> Is -Itrh /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: <u>http://www.straightrunning.com/xmingnotes/trouble.php</u>
```

Run the installation with the grid user

./runInstaller.sh

Click "Next"

X Oracle Grid Infrastructure - Settin	ng up Grid Infrastructure - Step 1 of 10	- 🗆 ×
Download Software Update	IS CONTRACTOR	DATABASE 118
🔎 Download Software Updates	Download software updates for this installation. Software the installation of the second seco	updates consist of recommended updates to s (PSUs), and other recommended patches,
Apply Software Updates Installation Option Installation Type Cluster Configuration Install Locations Prerequisite Checks Summary	Select one of the following options: O Use My Oracle Support credentials for download My Oracle Support user name: My Oracle Support password: O Use pre-downloaded software undates	Proxy Settings] Test Connection
Finish	Location:	2 2
Help	[< Back Next > Install Cancel

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

X Oracle Grid Infrastructure - Settin	ng up Grid Infrastructure - Step 2 of 9 - 🗆 🗙
Select Installation Option	
Download Software Updates	Select any of the following installation options Install and Configure Oracle Grid Infrastructure for a <u>C</u>luster
Cluster Configuration	Image: Configure Oracle Grid Infrastructure for a Standalone Server
Prerequisite Checks	 Upgrade Oracle Grid Infrastructure or Oracle Automatic Storage Management Instali Oracle <u>Gr</u>id Infrastructure Software Only
Summary Install Product Finish	
Help	< <u>Back</u> <u>Next></u> Install Cancel

Click "Next"

🗙 Oracle Grid Infrastructure - Settin	ng up Grid Infrastructure - Step 3 of 9		- 🗆 X
Select Product Languages			ORACLE 118
Download Software Updates Installation Option. Product Languages Operating System Groups Installation Location Prerequisite Checks Summary Install Product Finish	Select the languages in which your prod Available Languages: Arabic Bengali Brazilian Portuguese Bulgarian Canadian French Catalan Croatian Czech Danish Dutch Egyptian English (United Kingdom) Estonian Finnish French Cerman Greek Hebrew Hungarian Icelandic Indonesian Italian	uct will run. Selected Langue English (() () () () () () () () ()	Ages:
Help		Sack I	Vext > Install Cancel

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

X Oracle Grid Infrastructure - Setti	ng up Grid Infrastructu	ure - Step 4 of 11		-	
Create ASM Disk Group					11 ^g
Download Software Updates	Select Disk Group <u>D</u> isk Group Name	Characteristics and se DATA	lect disks		
Product Languages Oreate ASM Disk Group	Redundancy	⊖Hi <u>a</u> h ⊖No <u>r</u> mal			
ASM Password	AU <u>S</u> ize	1 • MB		_ 1	
Operating System Groups Installation Location	Add Disks	isks 🔿 <u>A</u> ll Disks			
Summary	K Change Disk Disco	very Path	×	Size (in ME	3) Status
Finish	Changing the Disk D <u>D</u> isk Discovery Path:	iscovery Path will affer	et ALL Disk Groups	2	2
		Æ	4	Change D	iscovery <u>P</u> ath
Help			< <u>B</u> ack	K <u>N</u> ext > Insta	II Cancel

Select the disk and click "Next"

🗙 Oracle Grid Infrastructure - Settin	g up Grid Infrastructure - Step 4 of 11 - 🛛 🕹 🕹
Create ASM Disk Group	
Download Software Updates Installation Option Product Languages Create ASM Disk Group ASM Password Operating System Groups Installation Location Prerequisite Checks	Select Disk Group Characteristics and select disks Disk Group Name DATA Redundancy High ONormal O External AU Size MB Add Disks O Gandidate Disks All Disks
Summary Install Product Finish	Disk Path Size (in MB) Status //dev/asmdisk01 10239/Candidate
	2 Change Discovery <u>Path</u>
Help	< <u>Back</u> Next> Install Cancel

Choose a password and click "Next"

🗙 Oracle Grid Infrastructure - Setti	ng up Grid Infrastructure - Step 5 of 11	- 🗆 ×
Specify ASM Password		
Download Software Updates	The new Oracle Automatic Storage Managemen SYSASM privileges for administration. Oracle re with SYSDBA privileges to monitor the ASM inst	t (Oracle ASM) instance requires its own SYS user with commends that you create a less privileged ASMSNMP user ance.
Product Languages	Specify the password for these user accounts.	
Create ASM Disk Group	 Use different passwords for these accounts 	
R ASM Password		
Operating System Groups Installation Location Prerequisite Checks Summary Install Product Finish	Password SYS ASMSNMP Use game passwords for these accounts	Confirm Password
	Specify <u>P</u> assword: ****** Messages: Specify Password:[INS-30011] The password standards.	Confirm Password
Help		< <u>Back Next > Install</u> Cancel

Choose oinstall as the group owners and then click "Next"

X Oracle Grid Infrastructure - Settir	ng up Grid Infrastructure - Step 6 of 11 — —	
Privileged Operating Syste	m Groups	E 11 ^g
Download Software Updates Installation Option Product Languages Create ASM Disk Group ASM Pass word Operating System Groups Installation Location Prerequisite Checks Summary Install Product Finish	Select the name of the operating system group, of which the user you are running this in: member, that you want to use for operating system authentication to Oracle Automatic St Management. Oracle ASM Administrator (OSASM) Group Oracle ASM <u>D</u> BA (OSDBA for ASM) Group Oracle ASM <u>Operator (OSOPER for ASM)</u> Group (Optional)	tallation is a orage
Help	< <u>B</u> ack <u>N</u> ext > Inst	ali Cancel

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

🗙 Oracle Grid Infrastructure - Settin	g up Grid Infrastructure - Step 7 of 11			-	_		\times
Specify Installation Locatio	n				_ € ' s e	11 ⁸	3
Download Software Updates Installation Option Product Languages Create ASM Disk Group ASM Password Operating System Groups Installation Location Prereguisite Checks Summary Install Product Finish	Specify a base location for storing the Oracle base directory. Create and configuration files are install Qracle Base: //u01/app/grid Specify a location for storing Ora directory. This software directory Software Location: //u01/app/1:	g all Oracle so one Oracle ba ed by version : cle software fil is the Oracle 1.2.0/grid	ftware and configurati isse for each operating and database name in les separate from conf Grid Infrastructure ho	on-related files. T system user. By d the Oracle base d iguration files in t me directory.	his loc efault, rector	ation is softwar y. <u>Brows</u> e <u>Brow</u> se	e 2
Help			< Back	Next > Ins	tall	Can	cel

Click "Next"



Click "Install"

X Oracle Grid Infrastructure - Settin	g up Grid Infrastructure - Step 10 of 12 - 🗌 🗙
Summary	
Download Software Updates Installation Option Product Languages Create ASM Disk Group ASM Password Operating System Groups Installation Location Create Inventory Prerequisite Checks Summary Install Product Finish	Oracle Grid Infrastructure Global Settings Disk Space: required 5.5 GB available 8.31 GB Disk Space: required 5.5 GB available 8.31 GB Disk Space: required 5.5 GB available 8.31 GB Oracle base for Oracle Grid Infrastructure for a Standalone Server Oracle base for Oracle Grid Infrastructure: /u01/app/grid Grid home: /u01/app/11.2.0/grid Source Location: /setup/grid/install//stage/products.xml Privileged Operating System Groups: oinstall (OSDBA), oinstall (OSASM) Orentral inventory Information Inventory Information Gentral inventory (oralnventory) Central inventory (oralnventory) Gentral inventory: EXTERNAL Disks Selected: /dev/asmdisk01 Save Response File
Help	< Back Next > Install Cancel

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

X Execute Configuration scripts	—		\times
The following configuration scripts need to be executed as the "root"	user.		
Sector a la constante			
Scubts to be executed:			
nber Script Location			
/u01/app/oralnventory/orainstRoot.sh			
/u01/app/11.2.0/grid/root.sh			
000001			
To execute the configuration scripts:			
1. Open a terminal window			
2. Log in as "root" 2. Rup the corinte			
4. Return to this window and click "OK" to continue			
Run the script on the local node.			
Hala		OK	
<u>U</u> cib		UK	

Grid Installation is done.

X Oracle Grid Infrastructure - Setti	ng up Grid Infrastructure - Step 12 of 12	- 🗆 X
Finish		ORACLE 118
Download Software Updates Installation Option Product Languages Create ASM Disk Group ASM Password Operating System Groups Installation Location Create Inventory Prerequisite Checks Summary Install Product © Finish	The installation of Oracle Grid Infrastructure for a Standalone Se	PATABASE CONSTRUCTION
Help	< <u><u><u>β</u></u>a</u>	ick <u>N</u> ext > <u>I</u> nstall <u>C</u> lose

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 In	staller - Installing database - Step 1	of 11	- 🗆 ×
Configure Security Updates	5		ORACLE 118
Configure Security Updates	Provide your email address to be and initiate configuration manag	informed of security issues, install the pr er. <u>View details</u> .	roduct
Configure Sector by Optimizes Apply Software Updates Apply Software Updates Installation Option Grid Installation Options Install Type Typical Installation Prerequisite Checks Summary Install Product Finish	Email:	er, <u>view details</u> . Easier for you if you use your My Oracle address/username. ates via My Oracle Support.	Support email
		~	
Help		< <u>B</u> ack	ext > Install Cancel

X Oracle Database 11g Release 2 In	staller - Installing database - Step 2 of 11	- 🗆 ×
Download Software Update	s	
Configure Security Updates Download Software Updates Apply Software Updates Installation Option Grid Installation Options Install Type Typical Installation Prerequisite Checks Summary Install Product Finish	Download software updates for this installation. Soft the installer system requirement checks, PatchSet Up Select one of the following options: Use My Oracle Support credentials for download My Oracle Support ges name: My Oracle Support password: Use pre-glownloaded software updates Location: Skip software updates	DATABASE ware updates consist of recommended updates to obates (PSUs), and other recommended patches.
Help		<back next=""> Install Cancel</back>

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



X Oracle Database 11g Release 2 In:	staller - Installing database - Step 4 of 10	_	\Box \times
Grid Installation Options			11 ^g
Configure Security Updates Download Software Updates Installation Option Grid Installation Options Install Type Typical Installation Prerequisite Checks Summary Install Product Finish	Select the type of database installation you want to perform.	DATABASE	
Help	< Back	<u>N</u> ext > Install	Cancel

Click "Next"

X Oracle Database 11g Release 2 Ins	taller - Installing database - Step 5 of 12		- 🗆 X
Select Product Languages			ORACLE 118
Configure Security Updates Download Software Updates Installation Option Crid Installation Options Product Languages Database Edition Installation Location Operating System Groups Prerequisite Checks Summary Install Product Finish	Select the languages in which your prod Available Languages: Arabic Bengai Brazilian Portuguese Bulgarian Craatian French Catalan Croatian Creach Danish Dutch Egyptian English (United Kingdom) Estonian Finnish French German Greek Hebrew Hungarian Icelandic Indonesian Italian	uct will run. Selected Langu English ((((((((((((((((((ages:
Help		< <u>B</u> ack	Next > Install Cancel

💥 Oracle Database 11g Release 2 II	istaller - Installing database - Step 6 of 12 — 🛛 🗙
Select Database Edition	
Select Database Edition Configure Security Updates Download Software Updates Installation Option Grid Installation Option Product Languages Database Edition Installation Location Operating System Groups Prerequisite Checks Summary Install Product Finish	 Which database edition do you want to install? Interprise Edition (4.7C8) Oracle Database 11g 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 (4.6C8) Oracle Database 11g Standard Edition 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. Standard Edition one (4.6C8) Oracle Database 11g Standard Edition One is a full-featured data management solution ideally suited to the needs of small and medium-sized businesses.
	Select Options
Help	< <u>Back</u> <u>Next></u> Install Cancel

Control the HOME and BASE and then click "Next"

💥 Oracle Database 11g Release 2 I	taller - Installing database - Step 7 of 12 —	o x
Specify Installation Locati		11 ^g
Configure Security Updates Download Software Updates Installation Option Grid Installation Options Product Languages Database Edition Operating System Groups Prerequisite Checks Summary Install Product Finish	Specify a path to place all Oracle software and configuration-related files installed by this insta owner. This location is the Oracle base directory for the installation owner. Oracle Base: /u02/app/oracle Image: Specify a location for storing Oracle database software files separate from database configura in the Oracle base directory. This software directory is the Oracle database home directory. Software Location: /u02/app/oracle/product/11.2.0/db_home	allation Browse tion files Browse
Help	< <u>Back</u> Next > Install	Cancel
Clcik "Next"		

🗙 Oracle Database 11g Release 2 Ir	staller - Installing database - Step 8 of 12	- 🗆 ×
Privileged Operating Syste	m Groups	DATABASE 11 ^g
Configure Security Updates Download Software Updates Installation Option Grid Installation Options Product Languages Database Edition Installation Location Operating System Groups Prerequisite Checks Summary Install Product Finish	SYSDBA and SYSOPER privileges are required to create a data authentication. Membership in OSDBA grants the SYSDBA privileges. Si the SYSDBA privilege, which is a subset of SYSDBA privileges. Si the SYSDBA privilege. The user account you are using to run Database Administrator (OSDBA) Group: Database Administrator (OSDPER) Group (Optional)	abase using operating system (OS) wilege, and membership in OSOPER grants the elect the name of the OSDBA group to grant this install must be a member of this group.
Help	·	< <u>B</u> ack <u>N</u> ext > <u>I</u> nstali Cancel

Click "Next"



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

The following configuration scripts need to be executed as the "root" user.	
Scripts to be executed:	
nber Script Location	
/u02/app/oracle/product/11.2.0/db_home/root.sh	_
	►
To execute the configuration scripts:	
1. Open a terminal window	
2. Log in as "root" 2. Run the scripts	
4. Return to this window and click "OK" to continue	
<u>H</u> elp 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 /]#

X Oracle Database 11g Release 2 In	taller - Installing database - Step 12 of 12 — 🗌 🗙
Finish	
Configure Security Updates Download Software Updates Installation Option Grid Installation Options Product Languages Database Edition Installation Location Operating System Groups Prerequisite Checks Summary Install Product	The installation of Oracle Database was successful.
🧅 Finish	
Help	<pre></pre>

Install the Database using DBCA

[oracle@testserver database]\$ dbca

Click "Next"

Database Configuration Assis	tant : Welcome	_		\times
	Welcome to Database Configuration Assistant for Oracle database. The Database Configuration Assistant enables you to create a database, i options in an existing database, delete a database, and manage databas	:onfigur e templ	e datab lates.	ase
Cancel Help	S Back Next	<u>»</u>)		

Database Configuration Assist	ant, Step 1 of 12 : Operations			\times
Cancel Help Select the operation that you want to perform: Create a Database Configure Database Options Delete a Database Manage Templates ASM configuration operations must be performed using Autom Management Configuration Assistant (ASMCA) from Oracle Crice 		tic Storag	e ture hom	ne.
Cancel Help	S Back Nex	t >>)		

Click "Next"

Database Configuration Assist				
	Template new data only wher cannot be	is that include datafiles contain pre-created databases. They base in minutes, as opposed to an hour or more. Use templat n necessary, such as when you need to change attributes like l e altered after database creation.	allow you t es without plock size,	o create a datafiles which
	Select	Template	Includes	Datafiles
	9	General Purpose or Transaction Processing	1	(es
	0	Custom Database		No
Warney Balancian Warney Balancian	0	Data Warehouse	ו	/es
Hydrocalitation Bucklingscharten Bucklingscharten Bucklingscharten Bucklingscharten Bucklingscharten Bucklingscharten Bucklingscharten				
			Show	v Details)
Cancel Help		S Back Nex	t >>)	

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

Database Configuration Assistant, Step 3 of 12 : Database Identification			×
An Oracle database is uniquely identified by a Global Database "name. domain". Global Database Name: TESTDB A database is referenced by at least one Oracle instance whic any other instance on this computer by an Oracle System Iden SID: TESTDB	e Name, typically h is uniquely iden tifier (SID).	r of the for	m n
Cancel Help	Next ≫)		

Database Configuration Assistar	nt, Step 4 of 12 : Management Options — 🛛	×
	Enterprise Manager Automatic Maintenance Tasks Configure Enterprise Manager C Register with Grid Control for centralized management Management Service No Agents Found	
	© Configure Database Control for local management □ Enable Daily Disk Backup to Recovery Area Backup Start Time: 02 00 0 0 AM O PM OS Username: OS Password:	
Cancel Help	§ack Next ≫	

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

Enter a password and click "Next"

Database Configuration Assist	ant, Step 5 of 12 : Database	Credentials	-		
	For security reasons, you database.	u must specify passwords	; for the following user account:	s in the new	
		Descuerd	Confirm Recoverd		
	User Name	Password	Commensioner Password		
	SVSTEM				
	© Use the Same Admir Password: Confirm Password:	nistrative Password for All	Accounts		
Cancel Help			S Back Next >		

Database Configuration Assist	ant, Step 6 of 12 : Database File	Locations		-		×
инстранит инстранит Инстранит	 Specify storage type and loc Storage Type: Storage Locations: Use Database File Locat Use Common Location for Database Files Location: Use Oracle-Managed File Database Area: Multiplex Redo Logs ar If you want to specify options except Oracle each file location. If y the names for database 	ations for database fil Automatic Storage N ions from Template or All Database Files es d Control Files) d different locations for e-Managed Files and you use Oracle-Manag ase files, which can no	r any database use the Storage ed Files, Oracle t be changed o	5M) files, pick an page later tr automaticali n the Storage File Locatio	Brow of the all o customiz y generati e page.	1 se) se)
Cancel Help			🔇 Back	<u>N</u> ext ≫		

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"

🗙 Select Disk Group				\rightarrow	<
Available Disk Groups —					η
Select Disk Group Name	Size (MB)	Free (MB)	Redundancy	State	4
🔍 DATA	10239	10180	External	Mounted	
		2			
Note: Free (MB) reflects the	e usable free sj	pace available	taking redund	lancy into account.	μ
		ОК	Iancel)		

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

Database Configuration As	sistant, Step 7 of 12 : Recovery Configur	ation	-		×
	Choose the recovery options for	the database:			
	Specify Fast Recovery Area				
	This is used as the default fo also required for automatic o recommends that the databa disks for data protection and	r all disk based backup and recove lisk based backup using Enterprise ise files and recovery files be locate I performance.	ry operation Manager. O d on physica	is, and is racle ally differ	rent
	Fast Recovery Area:		Browse)	
V Sparstandersteine V Sparstandersteine V Augustandersteine V Augustandersteine V Augustandersteine V Augustandersteine	Fast Recovery Area Size:	4182	M Bytes		
And	Enable Archiving	Edit Archive Mode Parameter	s)		
Cancel Help)	G Back	File Location	Variable	:s)

Database Configuration Assist	ant, Step 8 of 12 : Database Content			×
	Sample Schemas Custom Scripts Sample Schemas illustrate the use of a layered approach to complexit by some demonstration programs. Installing this will give you the follo your database: Human Resources, Order Entry, Online Catalog, Produ Information Exchange, Sales History. It will also create a tablespace of The tablespace will be about 130 MB. Specify whether or not to add the Sample Schemas to your database. Sample Schemas	y, and a wing sch ict Media alled EXA	ure used iemas in a, AMPLE.	
Cancel Help	G Back 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

Database Configuration Assista	nt, Step 9 of 11 : Initia	lization Parameters		-	
(Memory	Sizing	Character Sets	Connection Mode	
	O Typical Memory Size (Percentage:	SGA and PGA): 801 40 %	MB S 250 MB	x	2004 MB
	© Custom © Custom Memory Mana SGA Size:	gement Automa 600	tic Shared Memory	Management	
	PGA Size: Total Memory	200 for Oracle: 800 M I	Bytes		
	All Initialization Pa	rameters)			
Cancel Help			I Ba	ick <u>N</u> ext ≫	Einish

Choose your "Character Sets" and click "Next"

Database Configuration Assista	nt, Step 9 of 11 : Initialization Parameters			-		×
	Memory Sizing Character Sets Connection Mode Database Character Set O Use the default The default character set for this database is based on the language setting of this operating system: WE8MSWIN1252. Image: Unicode (AL32UTF8) Setting character set to Unicode (AL32UTF8) enables you to store multiple language groups. Image: Character Set: AL32UTF8 - Unicode UTF-8 Universal character set					
	National Character Set: AL16UTF16 - Unit Default Language: American Default Territory: United States All Initialization Parameters Initialization Parameters	nicode UTF-16	Universal char	acter	set	
Cancel Help		(∉ Back	k <u>N</u> ext S)	Einish	

Click "Next"

📴 Database Configuration Assist	nt, Step 10 of 11 : Database Storage	_		×
Gonzage - 12 Controlfile - □ Datafiles Image: Control file Ima	Database Storage page, you can specify storage parameter creation. This page displays a tree listing and summary view (multi-or enable you to change and view the following objects: Control files Tablespaces Datafiles Rollback Segments Redo Log Groups Torm any object type folder, click Create to create a new object. To create the specific object from within the object type folder and click if the specific object from within the object type folder and click if the specific object of the stablespaces, or rollback segments. of template enables you to change the following: Destination of the datafiles Control files or log groups. Tor more information, refer to the Oracle Database Storage Administration of the datafiles of the Oracle Database Storage Administration of the datafiles of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of the data files of the Oracle Database Storage Administration of t	rs for da olumn lis delete ar Delete . n you wi Selecting <i>ator's G</i>	atabase sts) to n object, Il not be g this typ wide.	e
Create Delete	File Li	ocation \	/ariables)
Cancel Help	S Back Next	>)	Einish	

Click "Finish"

Database Configuration Assistar	t, Step 11 of 11 : Creat	tion Options		-		×
	elect the database of Create Databa Save as a Data Name: Description:	creation options: ase abase Template				
	Generate Data	abase Creation Scripts	DB/scripts		Browse	
Cancel Help			S Back	Next >)	Einis	h)

Click "OK"

💥 Confirmation	>	<
The following operations will be pe A database called "TESTDB" will I	erformed: be created.	
Database Details:		
Create	Database – Summary	
Database Configuratio	on Summary	
Global Database Name:	TESTDB	
Database Configuration Type:	Oracle Restart Enabled Single Instance	
SID:	TESTOB	
Management Option Type:	None	
Storage Type:	Automatic Storage Management (ASM)	
Memory Configuration Type:	Automatic Shared Memory Management	
Database Configurativ	on Dotails	
Database configuration	on Details	
Database Components		
Component	Selected	
Oracle JVM	true	
Oracle Text	true	
Oracle XML DB	true	
Oracle Multimedia	true	
Oracle OLAP	true	9
	Save as an HTML file.	
C	OK Cancel Help	

🔉 Database Configuration Assist	ant			×
Database creation complete. F /u02/app/oracle/cfgtoollogs/	or details check dbca/TESTDB.	k the lo	gfiles at	t:
Database Information: Global Database Name: System Identifier(SID): Server Parameter File name:	TESTDB TESTDB +DATA/TESTI	DB/spfi	Ietesti	DB.ora
Note: All database accounts except SYS and SYSTEM are locked. Select the Password Management button to view a complete list of locked accounts or to manage the database accounts. From the Password Management window, unlock only the accounts you will use. Oracle Corporation strongly recommends changing the default passwords immediately after unlocking the account.				
	Passw	ord Ma	nageme	ent)
(Exit)			