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

Oracle Database Server 11g Single Instance Installation on Oracle Enterprise Linux 5.10 using Virtual Box

# Oracle Database 11g [11.2.0.4] Installation on Oracle Linux 5.10 – VirtualBox

#### **Required Software**

Oracle Linux 5.10	V40139-01.iso
Oracle Database Software	p13390677_112040_Linux-x86-64_1of7.zip
	p13390677_112040_Linux-x86-64_2of7.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 configu	ired vour virtual	machine folder	. do it now.	Click File >	Preferences
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Fil	e Machine Help				
	Virtual Media Manager Import Appliance	Ctrl+D Ctrl+l	<b>(</b>	Details	Snapshots
≫ ⊘	Preferences Exit	Ctrl+G Ctrl+Q	Welcome to VirtualBox! The left part of this window is a list of all virtual machines on your now because you haven't created any virtual machines yet.	r compute	er. The list is empty
			You can press the F1 key to get instant help, or visit www.virtualbox.org for the latest information and news.		

3. 9	Select the	folder	for the	virtual	machines	and click	"OK"
------	------------	--------	---------	---------	----------	-----------	------

📃 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



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 <b>Next</b> button to go to the next page of the wizard and the <b>Back</b> button to return to the previous page. You can also press <b>Cancel</b> 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 <b>Next</b> button to go to the next page of the wizard and the <b>Back</b> button to return to the previous page. You can also press <b>Cancel</b> 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)
O VMDK (Virtual Machine Disk)
C VHD (Virtual Hard Disk)
C 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"

¢	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 <b>dynamically allocated</b> 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 <b>fixed size</b> virtual disk file may take longer to create on some systems but is often faster to use.		
	Storage details		
	Eved 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.
	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  2.00 TB
	< <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 <b>Create</b> 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	onto this virtual machine. Use the <b>Next</b> button to go to the next page of the wizard and the <b>Back</b> button to return to the previous page. You can also press <b>Cancel</b> 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 <b>Finish</b> 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 <b>Unmount</b> action in the <b>Devices</b> menu.
	< Back Start Cancel

#### 17. Press "Enter"



#### 18. Click "Skip"





	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
**	
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	<ul> <li>Io create new partitions it must be initialized, causing the loss of ALL DATA on this drive.</li> </ul>
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

<b>}</b>	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		<b>+</b>	
		🗹 sda 20473 MB	ATA VBOX HARDDISK		
	Allowable <u>D</u> rives:				
	_				
New	<u>S</u> ize (MB):	180		🖯 📃	
Device	Additional Size O	ptions			<b>•</b>
LogVol00	• <u>Fixed size</u>				
LogVol01	O Fill all space i	<u>u</u> p to (MB):	180	<b>T</b>	
∀ Hard Drives	<ul> <li>Fill to maxim</li> </ul>	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

<b>}</b>							0	RA	CL	E.	
-											
D	rive /dev/sda (2047)	з мв) (м	odel: ATA	<b>VBOX</b>	HARDDI	SK)					
15	da2 0293 MB										
L <sup>2</sup>	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	ennoers									
								4- 0			_

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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 m	egion:	
Europe/Istanbul		
	•	
System clock uses UTC		
Belease Notes		Back

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

÷		C	RACLE
н			
i The root acc system. En	ount is used for administering the er a password for the root user.		
Root <u>P</u> assword:	•••••		
<u>C</u> onfirm:	•••••		
	•		
<u>R</u> elease Notes			<u>■</u> Back <u>■</u> Next

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

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.	
○ Customize later	
<u>■ R</u> elease Notes	]

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	<b>N</b>	29 of 39 optional packages selected Qptional packages ▲ Back

*	ORACLE <sup>.</sup>
	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"

<b>*</b>	ORACLE <sup>.</sup>
	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"





#### 37. Disable firewall and click "Forward"

	Welcome License Agreement	<b>Fire</b>	wall		
•	Firewall	You can use a firew	all to allow access to specific services on you	r computer	
	SELinux	world. Which servi	ces, if any, do you wish to allow access to?	outside	
	Kdump		,,		
	Date and Time	Firewall: Disable	d		\$
	Create User				
	Sound Card	Trusted services:	□ FTP		<u></u>
	Additional CDs		Mail (SMTP)		
			NFS4		=
			SSH		
			Samba		
		Other ports			
			▶		
				🖕 Back 📄	Eorward

38. Disable "Selinux" and click "Forward"

Welcome	
License	🖬 🗉 SELinux
Agreement	,
Firewall	Security Enhanced Linux (SELinux) provides finer-grained security controls
SELinux	than those available in a traditional Linux system. It can be set up in a
Kdump	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.
Date and Time	
Create User	SELinux Setting: Disabled
Sound Card	
Additional CDs	
	h
	⊕ Eorward     ↓     Eorward     ↓

Welcome	🔊 Kdump			
Agreement	Kaump			
Firewall	Kdump is a kernel crash dumping r	mechanism. In the event	of a system	
SELinux	crash, kdump will capture informat	tion from your system the	at can be	
Kdump	require reserving a portion of syste	m memory that will be u	navailable for	
Date and Time	other uses.			
Create User				
Sound Card				
Additional CDs	<u>T</u> otal System Memory (MB):	2006		
	<u>K</u> dump Memory (MB):	128		
	Usable System Memory (MB):	1878		
	1. C			
			🖨 <u>B</u> ack	幹 <u>F</u> orward

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.	
<ul> <li>Date and Time</li> <li>Create User</li> </ul>	<u>D</u> ate ▲ M	Date March				4	2015 •	Time 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	🕅 Create IIser							
Agreement								
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	rovide the information requested below.							
Date and Time	Username:							
Create User								
Sound Card	Full Nam <u>e</u> :							
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 Login							
	← <u>B</u> ack							

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 center.
Date and Time	
Create User	The following audio device was detected.
<ul> <li>Sound Card</li> <li>Additional CDs</li> </ul>	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"



#### **Oracle Database Software Installation**

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

Ŷ		Oracle VM VirtualBox Manager 🔶 – 🗆 🗙
File Machine He		TestServer - Settings ? ×
New Settings Sh New Settings Sh TestServe A Running Blueprint O Powered P D D D D D D D D D D D D D	General System Display Storage Audio Network Serial Ports USB Shared Folders	Network       Adapter 1     Adapter 2     Adapter 3     Adapter 4       Image: Tenable Network Adapter       Attached to:     Host-only Adapter       Name:     VirtualBox Host-Only Ethernet Adapter       Image: Tenable Network Adapter       Attached to:     Host-only Adapter       Name:     VirtualBox Host-Only Ethernet Adapter       Image: Advanced     Adapter Type:       Intel PRO/1000 MT Desktop (82540EM)     Image: Promiscuous Mode:       Promiscuous Mode:     Deny       Mac Address:     080027878597       Image: Cable connected
		Port Forwarding         Controls how this virtual adapter is attached to the real network of the Host OS.         OK       Cancel         Help         Controller:       ICH AC97         Image: Statement of the statemen

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:

Places

Edit the network config. as shown below by considerig the host gateway that was noted before. Click "OK" and then File > Save System @ 12-12 AM M

r Applications Haces System 🕎		IZ.IZ AM M
Computer		
	Ethernet Device	
	General Poute Hardware Device	
Retwork Configuration		
Eile Profile Help		
	☑ <u>A</u> ctivate device when computer starts	
New Edit Copy Delete Activate Deactivat	Allow all users to enable and disable the device	
Trash Devices Hardware IPsec DNS Hosts	Enable IPv <u>6</u> configuration for this interface	
	O Automatically obtain IP address settings with: disco 1	
nou may configure network devices associated to		
associated with a single piece of bardware	DHCP Settings	
VROVADDITIO	Hostname (optional):	
1 10 7623 Profile Status Device Nickname Type		
🗹 🚿 Active 📑 eth0 eth0 🛛 Ethernet	Automatically obtain DNS information from provider	
	Statically set ID addresses	
	Staucally set IP addresses:	
	Manual IP Address Settings	
	A <u>d</u> dress: 192.168.56.101	
	Subact marks	
	<u>Sublict mask:</u>	
	Default gateway address: 192.168.56.1	
	Set MTU to: 0	
Edit device		
	Set MRU to: 0	
	🗙 <u>C</u> ancel 🖉 <u>O</u> K	

4. Linux 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:

/sbin/sysctl -p

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

4 6 0
-------------

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

ŵ		Oracle VM VirtualBox Manager	- 🗆 ×
File Machine Help			
New Settings Show Discard			🚱 Details 💿 Snapshots
Blueprint       ③ Powered Off       ✓ Farming       ✓ Raming       ④ Powered Off       ④ Powered Off	SETTINGS Test - Setting	General Name: Test OS Type: Orade (64 bit) Gymer Orade (64 bit) Gymer Memory: 4096 MB Procemory: 2 Boot Orden Hurd Disk Is Procemory: 2 State S	Preview
■       General       Strange         ■       Display       Storage         ●       Audio       Image: Storage         ●       Network       Storage         ●       Network       Storage         ●       Storage       Image: Storage         ●       Network       Serial Ports         ●       USB       Shared Folders	Storage  orage Tree	Attributes CD/DVD Drive: IDE Secondary Master • • • Fue CD/DVD Information Type: Image Srze: 48,40 MB Location: C: (Program Files (Oracle (VirtualB Attached To: Test	Choose a virtual CD/DVD disk file V40139-01 iso Remove disk from virtual drive (Normal, 25.00 GB) VirtualBox Host-Only Ethernet Adapter')
S	Select a settings category from the list on the tern to get more information.	e left-hand side and move the mouse over a settings           OK         Cancel         Help	
		None	-

Install the following 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 glibc-2.*
rpm -Uvh glibc-common-2.*
rpm -Uvh glibc-devel-2.*
rpm -Uvh glibc-headers-2.*
rpm -Uvh glibc-headers-2.*
rpm -Uvh libaio-0.*
rpm -Uvh libaio-devel-0.*
rpm -Uvh libaio-devel-0.*
rpm -Uvh libgcc-4.*
rpm -Uvh libstdc++-4.*
rpm -Uvh libstdc++-devel-4.*
rpm -Uvh make-3.*
rpm -Uvh unixODBC-libs-2.2.11-10.el5.*
rpm -Uvh unixODBC-devel-2.*
rpm -Uvh numactl-devel-*
```

Create oracle groups and user:

groupadd oinstall groupadd dba useradd -g oinstall -G dba oracle

Create paths:

mkdir -p /u01/app/oracle/product/11.2.0/dbhome
chown -R oracle:oinstall /u01
chmod -R 775 /u01

#### Edit /etc/hosts

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

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; export ORACLE\_HOSTNAME ORACLE\_UNQNAME=TESTDB; export ORACLE\_UNQNAME ORACLE\_BASE=/u01/app/oracle; export ORACLE\_BASE ORACLE\_HOME=\$ORACLE\_BASE/product/11.2.0/dbhome; export ORACLE\_HOME ORACLE\_SID=TESTDB; export ORACLE\_SID PATH=/usr/sbin:\$PATH; export PATH PATH=\$ORACLE\_HOME/bin:\$PATH; export PATH

LD\_LIBRARY\_PATH=\$ORACLE\_HOME/lib:/lib:/usr/lib; export LD\_LIBRARY\_PATH CLASSPATH=\$ORACLE\_HOME/jlib:\$ORACLE\_HOME/rdbms/jlib; export CLASSPATH

Re-login with the oracle user for the bash\_profile to take effect...

# Installation



If you are using X emulation enable X11 forwarding of Putty as follows:

#### Run Xming server and export your display (tt with xclock)

export DISPLAY=127.0.0.1:10.0

Create a temp setup path and copy the database install files in here and unzip them.

mkdir -p /u01/setup

#### Run the installation:

./runInstaller.sh

X Oracle	Database 11g Release 2 Insta	aller - Installing database - Step 1	l of 11 🛛 🗕 🗖 🗙
Configure Security Updates	5		DRACLE 118
Configure Security Updates	Provide your email address to be and initiate configuration manage	informed of security issues, install the pr er. <u>View details</u> .	roduct
Apply Software Updates Apply Software Updates	E <u>m</u> ail:	Easier for you if you use your My Oracle address/username.	Support email
Grid Installation Options Install Type Typical Installation Prerequisite Checks Summary Install Product Finish	U wish to receive security upda	tes via My Oracle Support.	
Help		< <u>B</u> ack	ext > Install Cancel

X Oracle	Database 11g Release 2 Installer - Installing database - Step 2 of 11 👘 🚽 🗖 🔼
Download Software Update	
Download Software Updates Configure Security Updates Download Software Updates Apply Software Updates Installation Option Grid Installation Options Install Type Typical Installation Prerequisite Checks Summary Install Product Finish	Source and the installer system requirement checks, PatchSet Updates (PSUs), and other recommended updates to the installer system requirement checks, PatchSet Updates (PSUs), and other recommended patches. Select one of the following options:  Ouse My Oracle Support credentials for download  My Oracle Support gser name:  My Oracle Support password:  Proxy Settings Test Connection  Ouse pre-gownloaded software updates  Location:  Settings: Settings
	< Back Next > Install Cancel

# Select "Instal database software only" Click "Next"



X Oracle	Database 11g Release 2 Installer - Installing database - Step 4 of 10 🛛 🚽 🗖 💌
Grid Installation Options	
<ul> <li>Configure Security Updates</li> </ul>	Select the type of database installation you want to perform.
Download Software Updates	Single instance database installation
Installation Option	Oracle <u>Real</u> Application Clusters database installation
Grid Installation Options	♀ ○ Oracle RAC On <u>e</u> Node database installation
🙀 Install Type	
Y Typical Installation	
<ul> <li>Prerequisite Checks</li> </ul>	
<ul> <li>Summary</li> </ul>	
<ul> <li>Install Product</li> </ul>	
- Finish	
Help	< <u>Back</u> <u>Next&gt;</u> Install Cancel

🕅 Oracle I	Database 11g Release 2 Installer - Installing database - Step 5	5 of 12 🚽 🗖 🗙
Select Product Languages		DATABASE <b>11</b> <sup>g</sup>
Configure Security Updates Download Software Updates Installation Options Crid Installation Options Product Languages Database Edition Installation Location Operating System Groups Prerequisite Checks Summary Install Product Finish	Select the languages in which your product will run. Arabic Arabic Bengali Brazilian Portuguese Bulgarian Canadian French Catalan Croatian Czech Danish Dutch Egyptian English (United Kingdom) Estonian French German Greek Hebrew Hungarian Italian Italian Italian Italian Italian Italian	ges:
Help	< <u>Back</u>	ext > Install Cancel

X Oracle	Database 11g Release 2 Installer - Installing database - Step 6 of 12 💫 🚽 🗖 🔀
Select Database Edition	
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	Which database edition do you want to install? <ul> <li>Enterprise Edition (4.7G8)</li> <li>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.</li> <li>Standard Edition (4.6C8)</li> <li>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.</li> <li>Standard Edition Qne (4.6C8)</li> <li>Oracle Database 11g Standard Edition Ore is a full-featured data management solution ideally suited to the needs of small and medium-sized businesses.</li> </ul>
Help	< <u>Back</u> _Next>InstallCancel



X Oracle	Database 11g Release 2 Installer - Installing database - Step 8 of 12 💫 🚽 🗖 💌
Create Inventory	
Configure Security Updates	You are starting your first installation on this host. Specify a directory for installation files. This directory is called the "inventory directory". The installer automatically sets up subdirectories for each product to contain inventory data. The subdirectory for each product typically requires 150 kilobytes of disk space.
Grid Installation Option	Inventory Directory: //u01/app/oralnventory Browse
Product Languages     Database Edition	Specify an operating system group whose members have write permission to the inventory directory (oralnventory).
Installation Location     Oreate Inventory	orainventory Group Name& oinstall 🔻
Prerequisite Checks Summary Install Product Finish	
Help	<back next=""> Install Cancel</back>

🕅 Oracle	Database 11g Release 2 Installer - Installing database - Step 9 of 13 💫 🚽 🗖 🔜
Privileged Operating Syste	m Groups
Configure Security Updates Download Software Updates Installation Option Grid Installation Options Product Languages Database Edition Installation Location <u>Create Inventory</u> Operating System Groups Prerequisite Checks Summary Install Product Finish	SYSDBA and SYSOPER privileges are required to create a database using operating system (OS) authentication. Membership in OSDBA grants the SYSDBA privilege, and membership in OSOPER grants the SYSOPER privilege, which is a subset of SYSDBA privileges. Select the name of the OSDBA group to grant the SYSDBA privilege. The user account you are using to run this install must be a member of this group. Database Administrator (OSDBA) Group: dba Database Operator (OSOPER) Group (Optional)
Help	< <u>Back</u> <u>Next&gt;</u> <u>Install</u> Cancel

#### Click "Install"

🕅 Oracle [	Database 11g Release 2 Installer - Installing database - Step 11 of 13 💫 🚽 🗖 💌
Summary	
Configure Security Updates Download Software Updates Grid Installation Options Product Languages Database Edition Installation Location Create Inventory Operating System Groups Prerequisite Checks Summary Install Product Finish	Oracle Database 11g Release 2 Installer     Global settings     Disk space: required 4.7 CB available 13.06 CB     Source location: /u01/setup/database/install//stage/products.xml     Database edition: Enterprise Edition (Install database software only)     Oracle base: /u01/app/oracle/product/11.2.0/dbhome     Privileged Operating System Groups: dba (OSDBA)     Inventory information     Inventory group: oinstall     Software location: /u01/app/oralnventory     oralnventory group: oinstall
Help	< <u>B</u> ack <u>N</u> ext > <u>I</u> nstall Cancel

# Run those scripts as root user then click "OK"

X Execute Configuration scripts	-		×
The following configuration scripts need to be executed as the "root" user.			
Scripts to be executed:			
Number   Script Location			
2 /u01/app/oraniventory/oranistkool.sn			
To execute the configuration scripts:			
1. Open a terminal window			
2. Log in as "root" 3. Run the scrints			
4. Return to this window and click "OK" to continue			
Help	0	)K	

#### Software installation is done.

X Oracle	Database 11g Release 2 Installer - Installing database - Step 13 of 13 🛛 🛛 – 🗖 📉
Finish	
Configure Security Updates Download Software Updates Installation Option Grid Installation Options Product Languages Database Edition Installation Location Create Inventory Operating System Groups Prerequisite Checks Summary	The installation of Oracle Database was successful.
Finish	
Help	< <u>B</u> ack <u>N</u> ext > <u>Install</u> <u>Close</u>

# Configure a Database

#### 1. Run DBCA with oracle user

\$> dbca

Click Next

<b>Ci</b>	Database Configuration Assistant : Welcome 🛛 🗕 🗖 💌				
	Welcome to Database Configuration Assistant for Oracle database. The Database Configuration Assistant enables you to create a database, configure database options in an existing database, delete a database, and manage database templates.				
Cancel Help	< Back Next >>				

01	Database Configuration Assistant, Step 1 of 12 : Operations – 🗖 🔼
	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 Automatic Storage Management Configuration Assistant (ASMCA) from Oracle Grid Infrastructure home.
Cancel Help	S Back Next >>

Click Next			
Da Da	atabase Confi	guration Assistant, Step 2 of 12 : Database Templates	- 🗆 🗙
	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 b altered after database creation.	allow you to create a es without datafiles plock size, which
	Select	Template	Includes Datafiles
	9	General Purpose or Transaction Processing	Yes
	0	Custom Database	No
Wagenzykidenten Wagenzykidenten	0	Data Warehouse	Yes
Participation of the second se			
			(Show Details)
Cancel Help	$\supset$	S Back Nex	r »)

#### Enter the SID that was given in bash profile and click Next

D D	atabase Configuration Assistant, Step 3 of 12 : Database Identification 💦 📮 🗖 💌
	An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain". Global Database Name: TESTD8 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: TESTD8
Cancel	Ip 🔗 Back Next >>

#### I disable the EM because I use Cloud Control... Click Next

Databas	e Configuration Assistant, Step 4 of 12 : Management Options 💫 🗕 🗖 🔜 🗙
	Enterprise Manager Automatic Maintenance Tasks
	Configure Enterprise Manager  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 AM C PM OS Username: OS Password:
Cancel Help	<u> </u>

#### Enter a password and click Next

Databas	e Configuration Assist	ant, Step 5 of 12 : Da	itabase Credentials 🛛 🗕 🗖 🗙
	or security reasons, you latabase. © Use Different Adminis	must specify passwords trative Passwords	for the following user accounts in the new
	User Name	Password	Confirm Password
	SYS		
	SYSTEM		
	Password: + Confirm Password: +	*****	
Cancel Help			(⊰ <u>B</u> ack Next ≫)

We did not configure grid and ASM so select file system... Multiplexing redo and controlfiles can be done later so skip...

#### Click Next

<b>01</b>	tabase Configuration Assistant, Step 6 of 12 : Database File Locations 💫 🗕 🗖 💌
ника Население	Specify storage type and locations for database files.         Storage Type:       File System         Storage Locations:       Image: Storage Locations         Image: Use Database File Locations from Template       Image: Storage Location for All Database Files         Database Files Location:       Browse         Image: Use Oracle-Managed Files       Browse         Database Area:       Browse         Multiplex Redo Logs and Control Files       Browse         Image: Storage Database file locations for any database files, pick any of the above options except Oracle-Managed Files and use the Storage page later to customize each file location. If you want to specify different locations for any database files, pick any of the above options except Oracle-Managed Files, Oracle automatically generates the names for database files, which can not be changed on the Storage page.
	File Location Variables)
Cancel H	D Einish

I also do not setup FRA, this also can be done later...

Archiving is important but I usually configure those stuff after the installation... Click Next

Databas	se Configuration Assistant, Ste	ep 7 of 12 : Recovery Configuration 🛛 🗕 🗖 🗙			
	Choose the recovery options for	the database:			
	Specify Fast Recovery Area				
	This is used as the default for all disk based backup and recovery operations, and is also required for automatic disk based backup using Enterprise Manager. Oracle recommends that the database files and recovery files be located on physically different disks for data protection and performance.				
	Fast Recovery Area:	{ORACLE_BASE}/fast_recovery_a Browse)			
Hanna Salahar San Hanna Salahar San Hanna Salahar San Mara Salahar San Mara Salahar San	Fast Recovery Area Size:	4182 M Bytes v			
And Andrew Strategies	Enable Archiving	Edit Archive Mode Parameters)			
		File Location Variables)			
Cancel Help		🔇 Back Next » Einish			

Click Next	
Datab	base Configuration Assistant, Step 8 of 12 : Database Content 🛛 🚽 🗖 🔜
	Sample Schemas       Custom Scripts         Sample Schemas illustrate the use of a layered approach to complexity, and are used by some demonstration programs. Installing this will give you the following schemas in your database: Human Resources, Order Entry, Online Catalog, Product Media, Information Exchange, Sales History. It will also create a tablespace called EXAMPLE. The tablespace will be about 130 MB.         Specify whether or not to add the Sample Schemas to your database.         Sample Schemas
Cancel Help	🔇 Back Next >> Einish

This part is important. Of course this is not an enterprise installation so the values will reflect a typical personal test environment.

Those all can also be changed later, except the character set. It may cause you some trouble, so select it accordingly.

Since we've selected general purpose template, we are not allowed to change the block size, which is also not possible to change later on...

One last thing to note, if you are planning to use HUGE PAGES of the Liinux OS, you should not select Automatic Memory Management (AMM) which is Incompatible with huge pages... Select ASMM instead as follows:

Database	e Configuration Assistant, S	Step 9 of 11 : Initialization Parameters 🛛 🗕 🗖 💌
	Memory Siz C Typical Memory Size (SGA and P Percentage: Use Automatic Memory Custom Memory Management SGA Size: PGA Size: Total Memory for Oracle	ing Character Sets Connection Mode GA): 1584 MB 40 % 250 MB 3960 MB y Management Show Memory Distribution Automatic Shared Memory Management 1188 M Bytes 396 M Bytes : 1584 M Bytes
	All Initialization Parameters	
Cancel Help		🦪 Back 🛛 Next 📎 🕞 Einish

You may also want to change the process count according to your concurrent session count you expect. I do not change...

Databas	e Configuration As	sistant, Step 9 of	11 : Initialization	Parameters -	
	Memory A block is the smal once the database Block Size: 819 Specify the maximus simultaneously con processes and the Processes: 150	Sizing llest unit of storage is created. 2 Bytes um number of oper nected to this data Oracle background	Character Sets for allocation and for rating system user p base. The value of t d processes.	Connection Mode or I/O. It cannot be cha rocesses that can be his parameter includes	nged : the user
	All Initialization Para	ameters)			
Cancel Help			S Bad	ck Next »	Einish

# Select the codepage

	Memory Si: Database Character Set Ouse the default The default character set operating system: WE8M Use Unicode (AL32UTF8 Setting character set to groups. Choose from the list of co Database Character Set	ting Character Sets Connection Mode
Cancel Help	National Character Set: [ Default Language: [ Default Territory: [ All Initialization Parameters.	AL16UTF16 - Unicode UTF-16 Universal character set

#### Dedicated mode is ok, click Next

Database	Configuration A	ssistant, Step 9 of	11 : Initialization	Parameters – 🗆 🗙
	Memory	Sizing	Character Sets	Connection Mode
	Select the mode in © Dedicated Servi For each client of only that client. to be small or wid database. © Shared Server M Several client co when a large nu efficiently utilizing Shared Servers and instance is st Shared Server:	n which you want you er Mode connection the datab Use this mode when when clients will be m fode nnections share a d- mber of users need ng system resources specifies the numbe arted up.	ur database to oper nase will allocate a r n the number of tot naking persistent, lo atabase-allocated p to connect to the d . The Oracle share r of server processe Ec	rate by default: esource dedicated to serving al client connections is expected ong-running requests to the bool of resources. Use this mode atabase simultaneously while d server feature will be enabled. es that you want to create when
	All Initialization Pa	rameters)		
Cancel Help			(∢ Ba	ck <u>N</u> ext ≫ <u>F</u> inish

📴 🛛 🗧 🗖 🔀 Database Configuration Assistant, Step 10 of 11 : Database Storage 🚽 🗖 🔀					
Storage         - 1 1         Controlfile         - □ Datafiles         - □ Redo Log Groups	Database Storage page, you can specify storage parameters for database foreation. This page displays a tree listing and summary view (multi-column lists) to enable you to change and view the following objects: <ul> <li>Control file</li> <li>Tablespaces</li> <li>Datafiles</li> <li>Redo Log Groups</li> </ul> <li>Tom any object type folder, click Create to create a new object. To delete an object, select the specific object from within the object type folder and click Delete.</li> <li>Important: If you select a database template including data files, then you will not be able to add or remove data files, tablespaces, or rollback segments. Selecting this type of template enables you to change the following.</li> <li>Destination of the datafiles</li> <li>Control files or log groups.</li> <li>For more information, refer to the Oracle Database Storage Administrator's Guide.</li>				
Create Delete	File Location Variables				
Cancel Help	🔇 Back 🛛 Next >> Einish				

### Click Finish

<b>0</b> :	Database Configuration Assistant, Step 11 of 11 : Creation Options – 🗖 🗙
	Select the database creation options:  Create Database  Save as a Database Template  Name:  TESTDB  Description:  Generate Database Creation Scripts  Destination Directory:  Prowse  Browse
Cancel	elp ( Back Next > ( Finish )

Click OK

×	Confirmation	×
The following operations will be pe A database called "TESTDB" will I	rformed: pe created.	
Database Details:		
Create	Database – Summary	
Database Configuratio	on Summary	
Global Database Name:	TESTOB	
Database Configuration Type:	Single Instance	
SID:	TESTDB	
Management Option Type:	None	
Storage Type:	File System	
Memory Configuration Type:	Automatic Shared Memory Management	
Database Configuratio	on Details	I
Component	Selected	
Oracle JVM	true	
Oracle Text	true	
Oracle XML DB	true	
Oracle Multimedia	true	
Oracle OLAP	true	
	Save as an HTML f	ile)
	OK Cancel Help	

Installation is DONE...