ASSIGNMENT 5 (ACTIVITY LIST)

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DATA SERVER MANAGEMENT LINUX

NSCC IT-Campus

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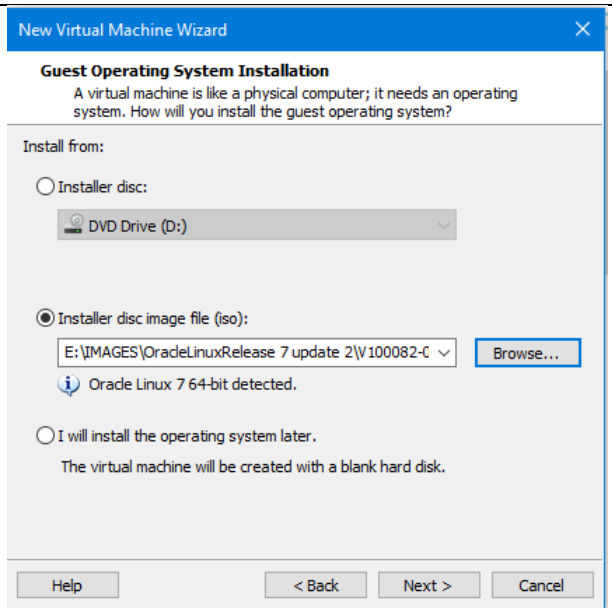
Introduction

In the following document I will go through the steps required to install Oracle Linux 7.2 and how to install Oracle 12C release 2. Other steps involved would be performing updates and upgrades. When going through the steps it is important it is important to take snapshots after significant steps and creat a gold copy after the initial install of Oracle Linux.

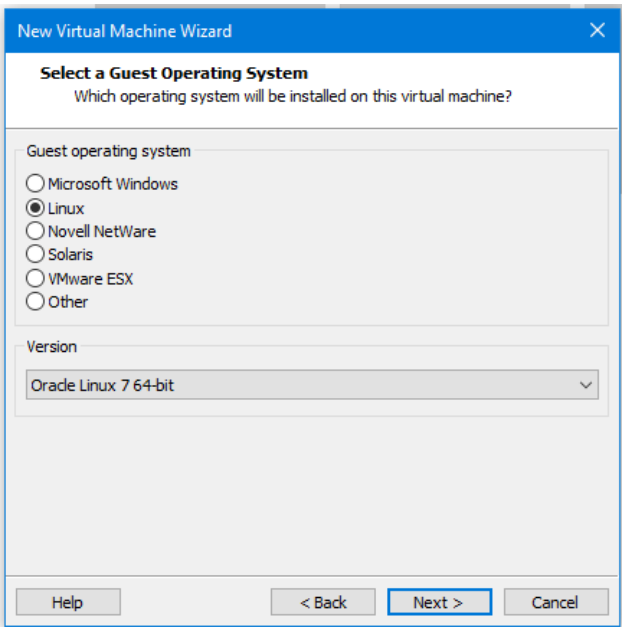
<table>
<tr><td colspan="4">Activity List</td></tr>
<tr><td colspan="3">Project: Installing Oracle Linux 7.2 with Oracle 12C release 2</td><td>Date: October 16th, 2018</td></tr>
<tr><td>Activity ID</td><td>Activity Name</td><td>Description of Work</td><td>Responsibility</td></tr>
<tr><td>A001</td><td>Creating VM in VMWare workstation 14</td><td>1) To begin the installation process you should click on the button “create a New Virtual Machine”.
 

2) For the purposes of this assignment you will want to do a “Typical Installation”.
 

3) At this next step you can either select the disc image by clicking on the “browse” button or click the radio button that says “I will Install the Operating System later”.</td><td></td></tr>
</table>

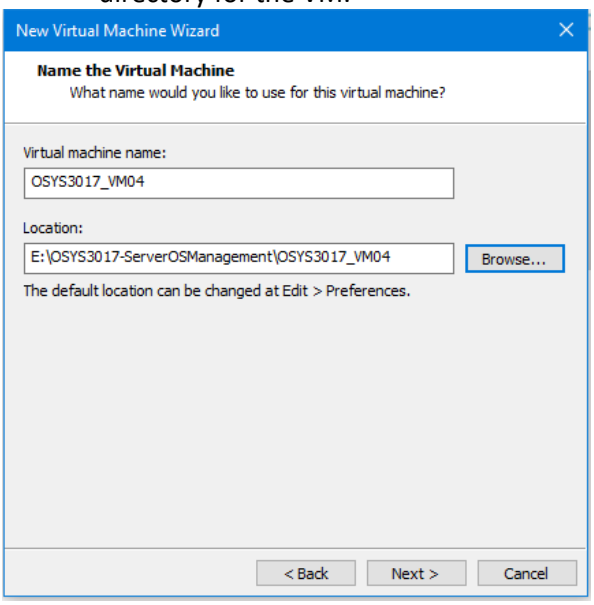


4) When selecting a guest operating system version that you are installing it is important to make sure that the versions match up. At the screen below select “Linux” and “Oracle Linux 7 64-bit”.

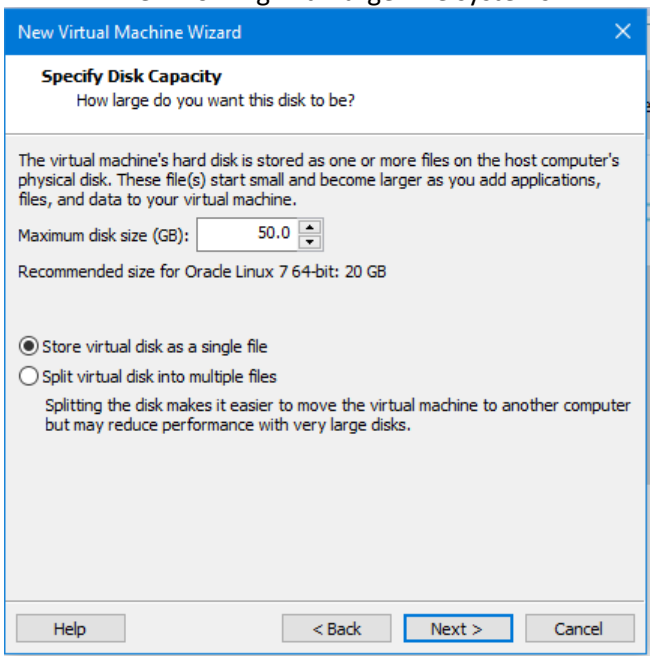


5) When selecting naming for your machine you should follow standard naming conventions. For example: the name selected in the documentation is “OSYS3017_VM06”. The break down is basically the class number followed by the VM number.
6) You will also have to select the location for the install. Create the VM in a location that is

convenient and remember to create the directory for the VM.

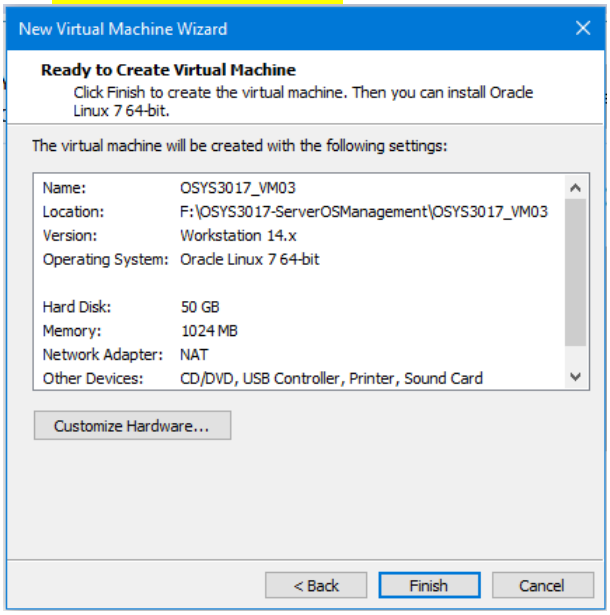


7) Selecting the proper amount of disk space is a very tricky part of every installation. You need to really think about physical requirements and what the business needs will be.
8) I recommend setting maximum disk space to 100GB and storing physical disks as a single file when working with larger file systems.



9) The screen shot below shows a summary of all the hardware configuration. You will notice that some of the settings need to be changed. To make changes click on “Customize Hardware”.

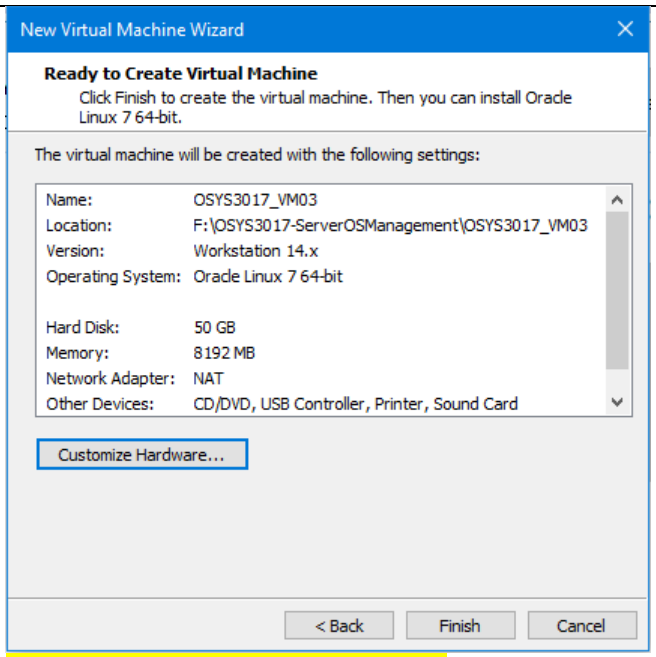
*Set Hard Disk to 100GB



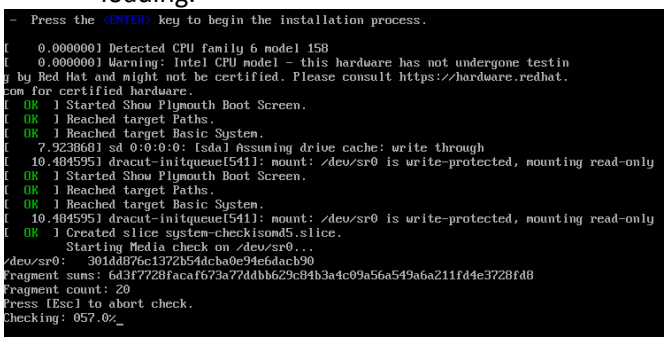
10) Another hardware configuration that needs to be changed is the amount of RAM that the VM will be using. You can select 4GB, 8GB or 16GB if your system permits it.

11) The processor and cores can remain at 1. Again, if you need to change this you can go back and make the changes.

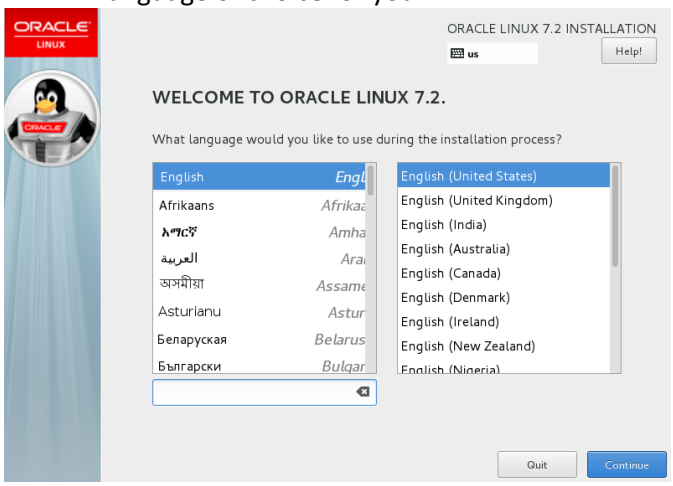
12) Once you have the correct configuration you will see it in the screen below. Once you are happy with the install click “Finish”.

		 *Make sure hard disk is set to 100GB	
A002	Installing Oracle Linux 7.2	1) Once you have the VM configurations made you are ready to boot the virtual machine via the iso file. To do so click on the green arrow shown below.  2) Then make sure to highlight Install Oracle Linux 7.2 and hit enter and the install will proceed. 	

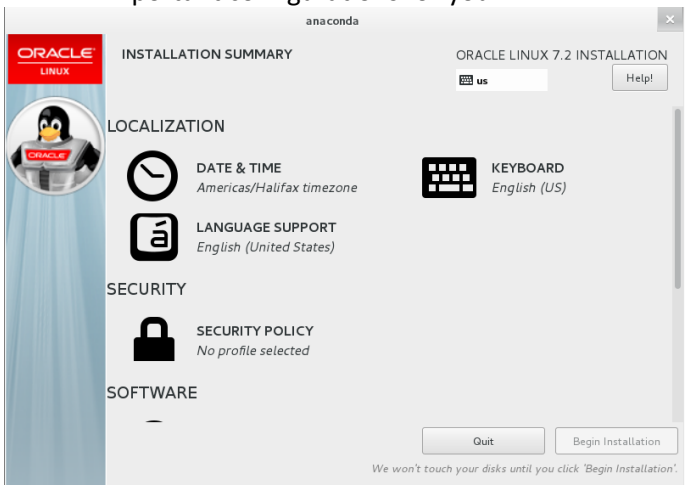
3) After you hit enter you will see a screen like the one shown below showing that the software is loading.



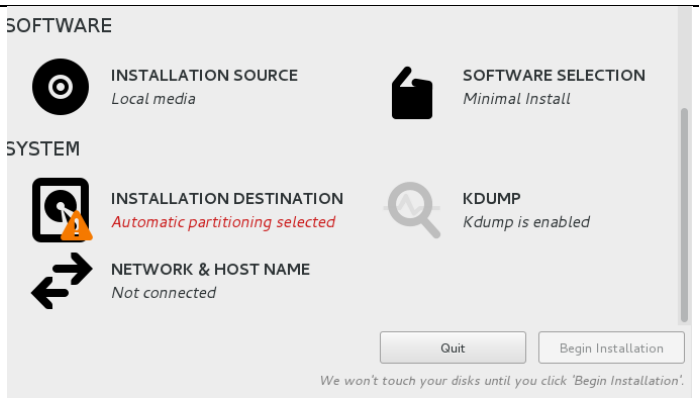
4) After the initial software loading you will get the first screen of the installation which asks you the language of choice for your VM.



5) Next you will be given an installation summary page which basically contains all the most important configurations for your VM.

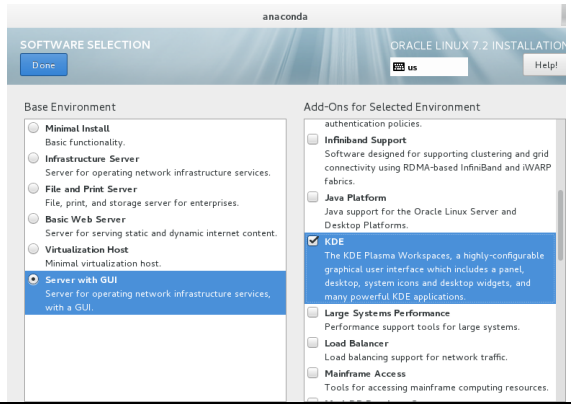


6) The screen below shows the bottom portion of the installation summary page. The ones with a orange triangle are the most important.

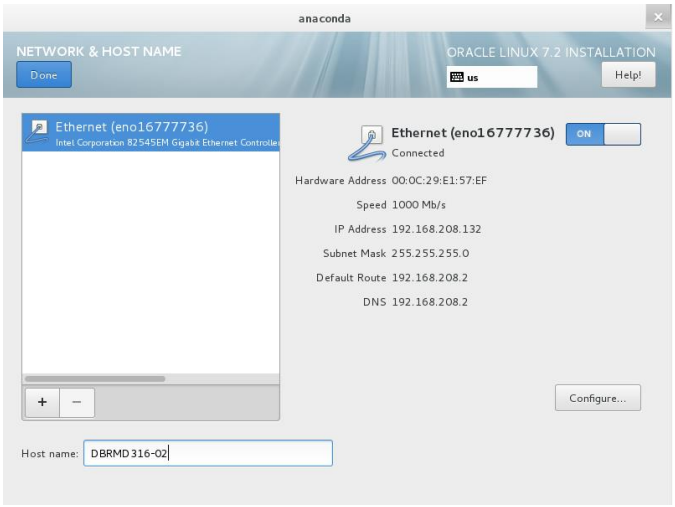


7) One of the settings on the installation summary page is the location and time zone you are in. Set this to your current location and click Done.

8) The software selection screen is an important one because you need to ensure that you install all the right packages and select the correct environment.
9) The environment you should select for this install is “Server with GUI”.
10) Also you are going to want to install “KDE” environment.
11) Once the desired configuration is selected click “DONE”.

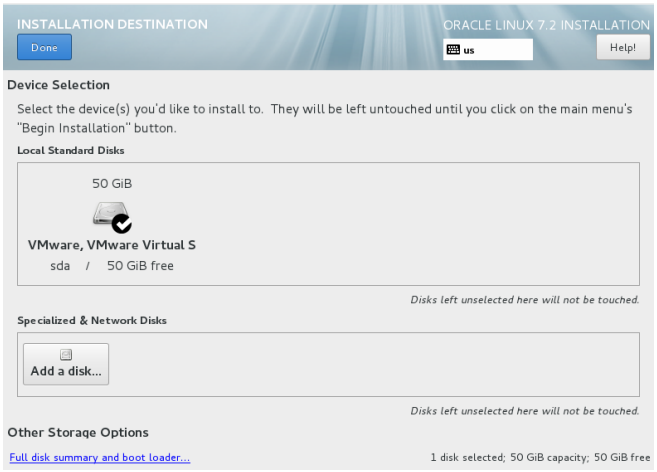


12) For the “Network and Hostname” configuration screen you should turn on the network connection. If done successfully you will see the IP address being assigned to the configuration.
13) If Installing a server it may be a good idea to configure it with a static IP address that way you have a consistent connection.
14) For the hostname you should select a name that is descriptive to your machine so you know how to connect to it.



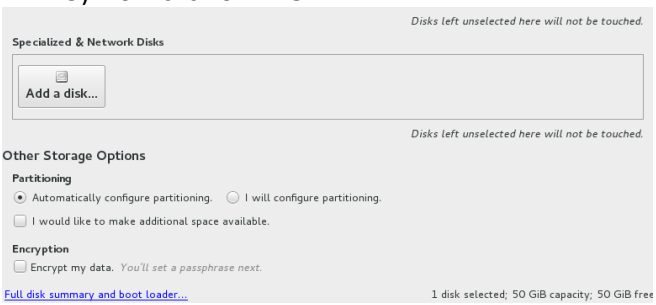
15) When installing a new machine the hard drive space configuration is very important. You should research requirements of your VM before this step because there are so many ways to setup your hard disk.
16) As you can see there is already 50GB assigned to the Installation.

*You will need 100GB

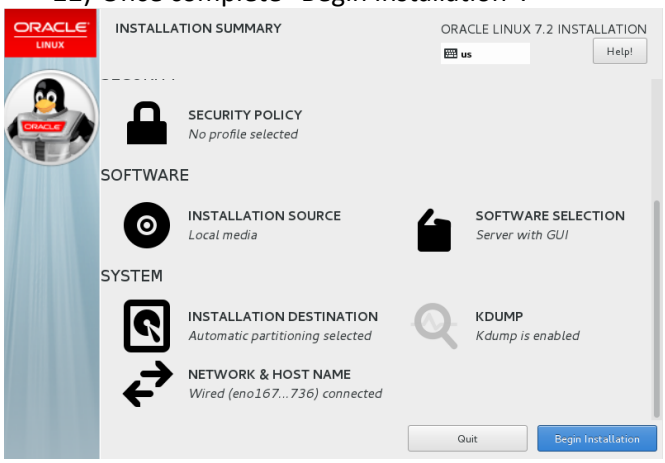


17) For the purposes of this installation we will need to “configure partitioning manually”.

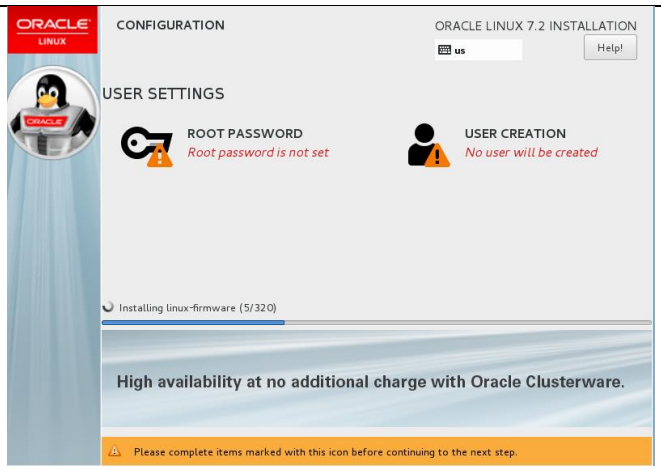
18) I recommend setting the following:
   - ➔ 50GB “/”
   - ➔ 10 GB “/swap”
   - ➔ 35GB “/home”
19) Now click on “DONE”.



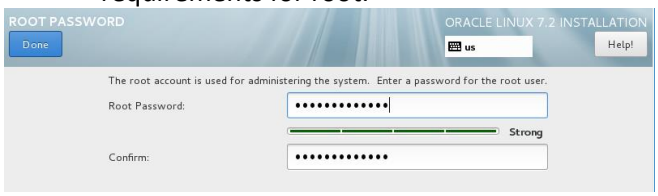
20) After clicking on done it should bring you back to the “Installation Summary”.
21) Remember to configure these things:
   - → Hard disk configuration
   - → Network and Hostname
   - → Software selection
   - ➔ Date and Time
22) Once complete “Begin Installation”.



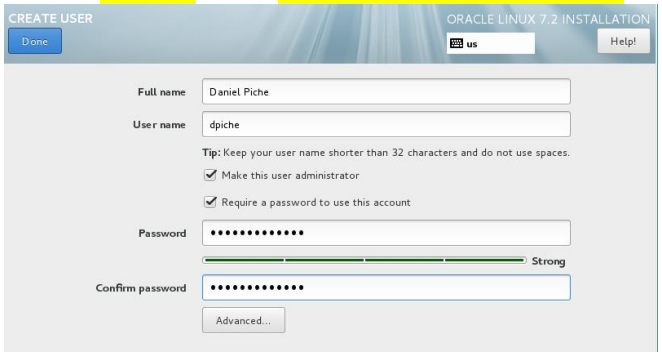
23) While the OS is installing you will be prompted to configure root password as well as create a primary user.
   - ➔ Root=123student01$
   - → dpiche=123student01$



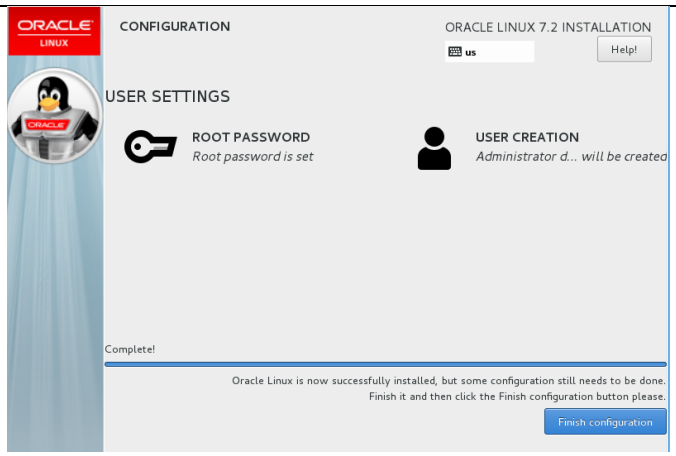
24) Be sure to set a password that meets complexity requirements for root.



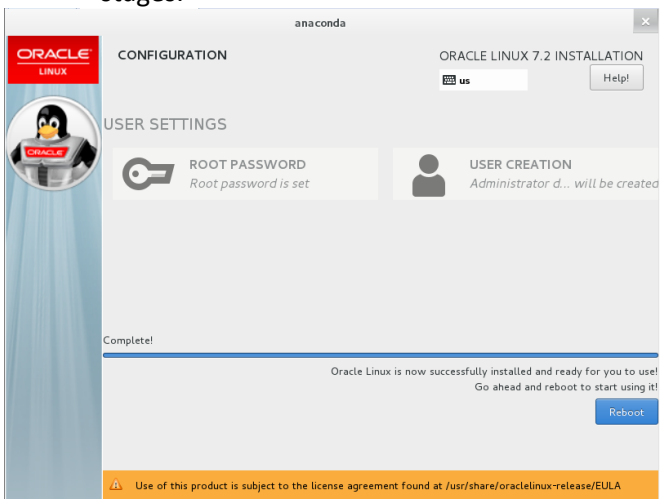
25) When creating the primary user you should select a username that follows naming convention and a password that follows complexity requirements.
26) Also select "require password to use this account" and "Make this user administrator".



27) Eventually you will get to the screen below. Click on "Finish configuration".

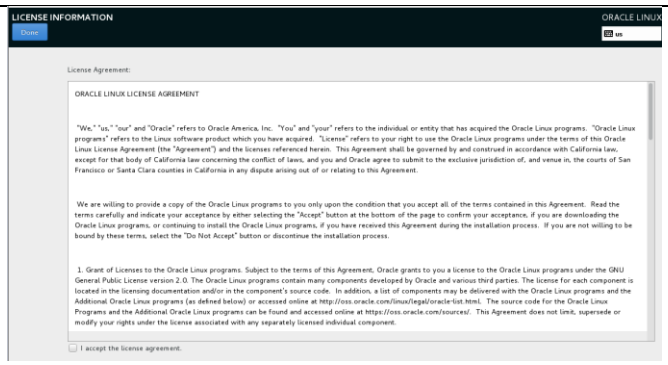


28) Then the install will go through its finishing stages.

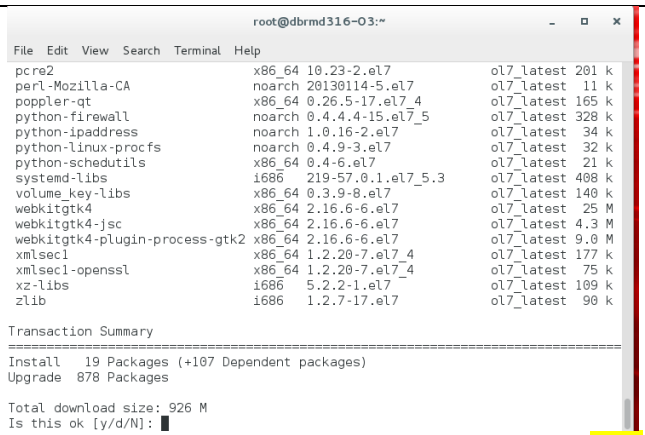
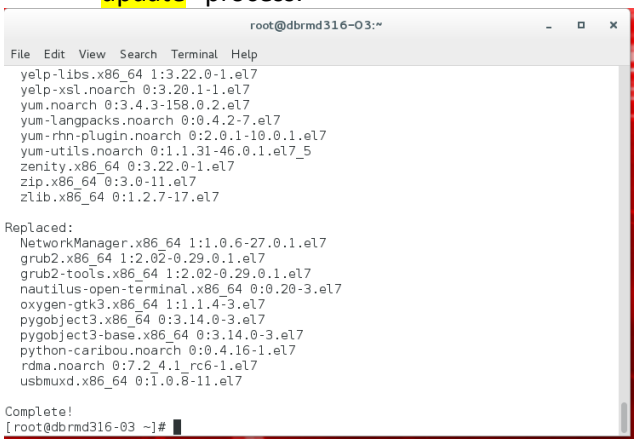
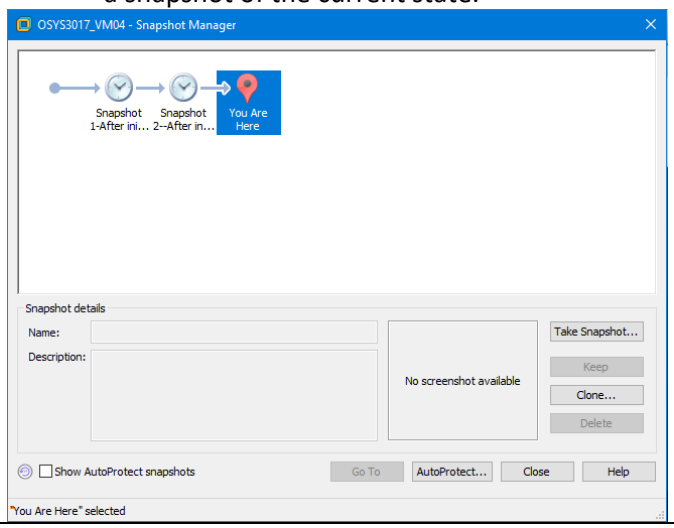


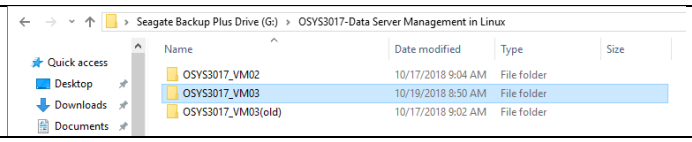
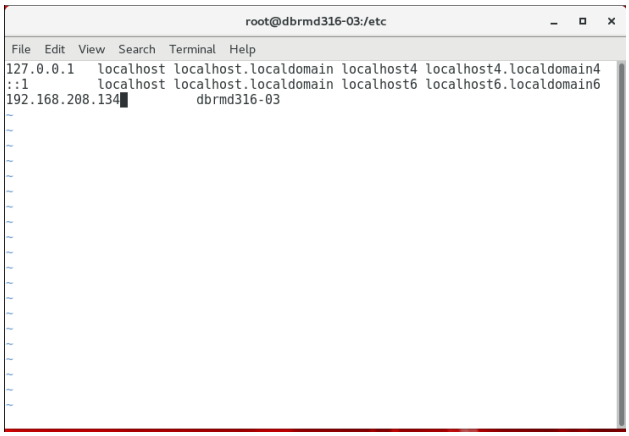
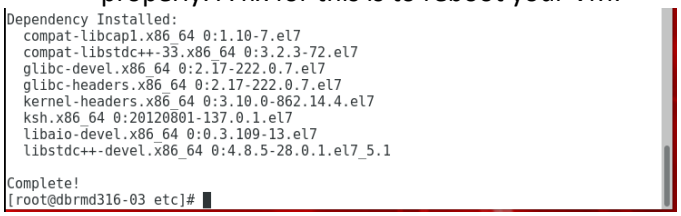
29) After the installation is complete you will be asked to accept the License agreement.

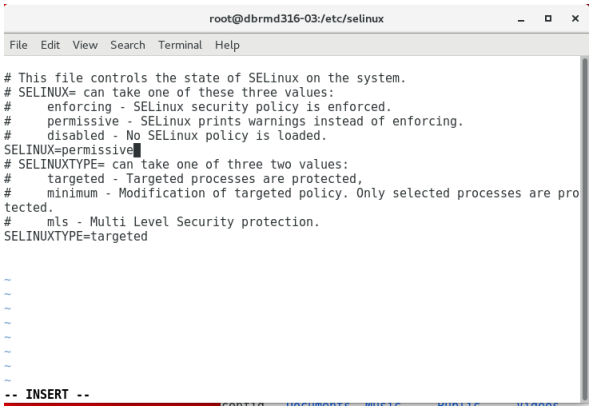
30) Look at it and select that you have read it.

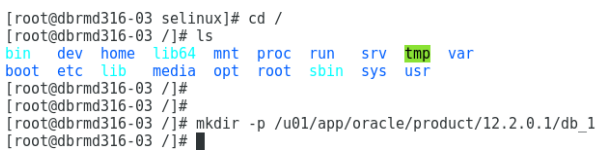
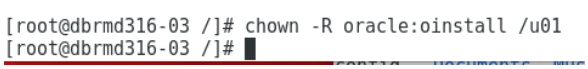
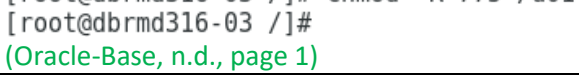
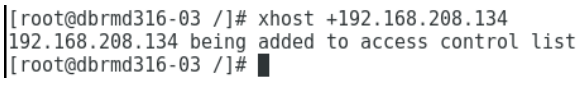
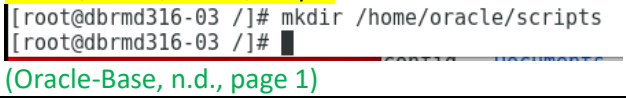
		 31) After completing the installation you should be brought to a GUI similar to the one below. 

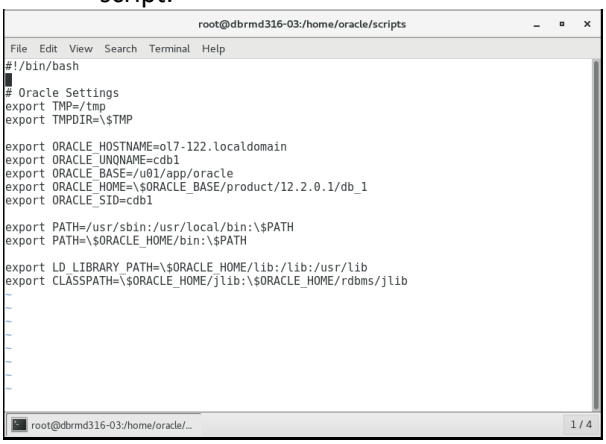
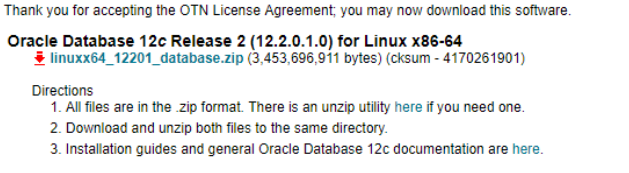
A003	Update Oracle Linux	1) After an initial install it is important to do an update so that the software you install after has all the required dependancies.
		2) First you will use the "yum check-update" command to get a list of all the new packages.
		`[root@dbrmd316-03 ~]# yum check-update`
		`Loaded plugins: langpacks, ulninfo`
		`ol7_UEKR3 | 1.2 kB 00:00`
		`ol7_latest | 1.4 kB 00:00`
		`(1/5): ol7_UEKR3/x86_64/updateinfo | 99 kB 00:00`
		`(2/5): ol7_latest/x86_64/group | 659 kB 00:00`
		`(3/5): ol7_latest/x86_64/updateinfo | 568 kB 00:00`
		`(4/5): ol7_latest/x86_64/primary | 7.8 MB 00:13`
		`(5/5): ol7_UEKR3/x86_64/primary | 34 MB 00:19`
		`ol7_UEKR3 804/804`
		`ol7_latest 8768/8768`
		3) Now that you checked for updates you can install them with the "yum update" command.
		`[root@dbrmd316-03 ~]# yum update`
		4) Below shows the process of the "yum update" command.	

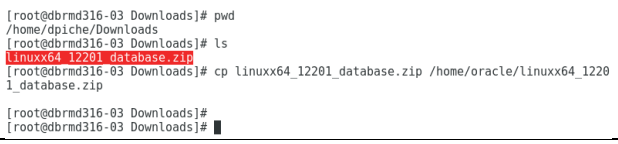
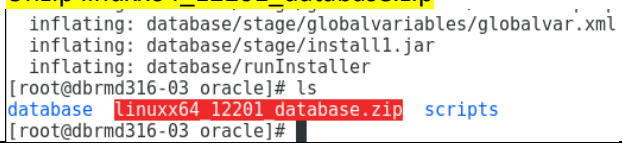
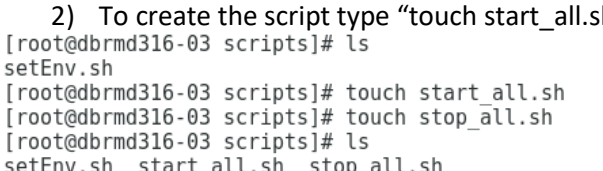
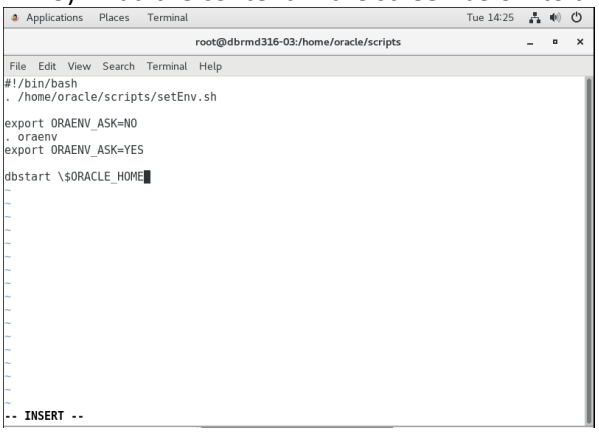
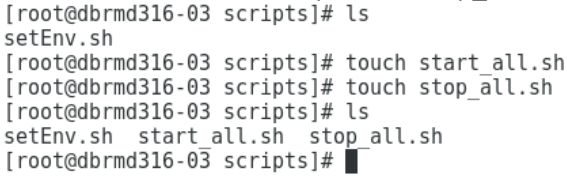
		 5) The screen below shows the end of the "yum update" process.  (Oracle, 2018, page 1)	
A004	Create Snapshot	1) After completing an install it is important to take a snapshot of the current state. 	
A005	Create Gold Copy	1) You should also create a gold copy G:\OSYS3017-Data Server Management in Linux\OSYS3017_VM06	

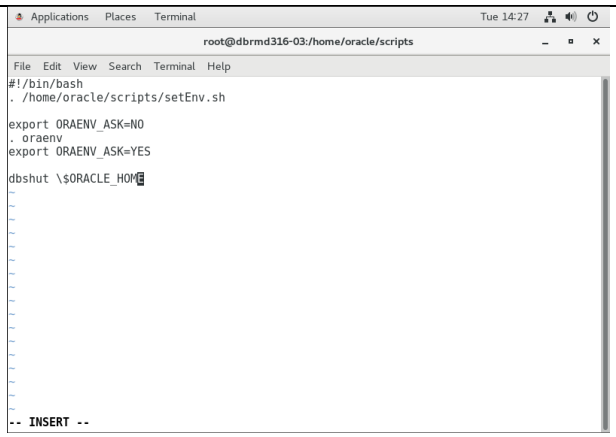
			
A006	Edit hosts file	1) The first step in installing the Oracle 12C release 2 database is to edit the "/etc/hosts" file as shown in the screen shot below.  (Oracle-Base, n.d., page 1)	
A007	Automatic Setup	1) There are 2 ways of installing an Oracle database. You can go with a manual install or an automatic install. To save some extra work we will go with the preinstall package. 2) Run the command below to install the package. yum install oracle-database-server-12cR2-preinstall -y  3) Sometimes the preinstall package will not run properly. A fix for this is to reboot your VM.  (Oracle-Base, n.d., page 1)	
A008	Set password for Oracle	1) The preinstall package automatically created the users and groups necessary for the install. Before being able to use the install user or "oracle" user you need to set the password for that user. 2) Below is the command to do that. Passwd oracle	

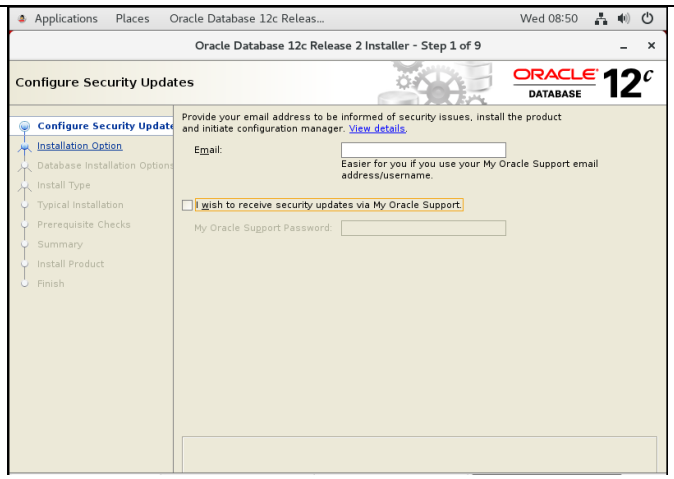
		[root@dbrmd316-03 etc]# passwd oracle Changing password for user oracle. New password: Retype new password: passwd: all authentication tokens updated successfully. [root@dbrmd316-03 etc]# (Oracle-Base, n.d., page 1)	
A009	Edit /etc/selinux/config and restart server	1) There is a setting that is necessary to the database called "SELINUX=permissive". To apply this setting you will need to go into the "/etc/SELINUX" directory and edit the config file. You will need to change the line that says "SELINUX=enforcing" to "SELINUX=permissive". 2) A tip to save you a lot of headache later would be to backup the file before modifying it. [root@dbrmd316-03 selinux]# cp config /home/dpiche/config [root@dbrmd316-03 selinux]# 3) Your file should now match with the screen shot below.  4) After editing the file there is a command you can use you restart the server with the modified configuration. setenforce Permissive [root@dbrmd316-03 selinux]# setenforce Permissive [root@dbrmd316-03 selinux]# (Oracle-Base, n.d., page 1)	
A010	Stop and Disable Firewall	1) So that the install can run successfully you will need stop the firewall. The command to do that is below. systemctl stop firewalld [root@dbrmd316-03 selinux]# systemctl stop firewalld [root@dbrmd316-03 selinux]# 2) You will also have to disable the firewall. systemctl disable firewalld [root@dbrmd316-03 selinux]# systemctl disable firewalld Removed symlink /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service. Removed symlink /etc/systemd/system/basic.target.wants/firewalld.service. [root@dbrmd316-03 selinux]# (Oracle-Base, n.d., page 1)	

A011	Create Directory for install	1) So that the install can run successfully it needs a directory to install in. I recommend being very carefull when making a directory to make sure it goes to the right place. A suggestion would be to go to the root directory and running the command. mkdir -p /u01/app/oracle/product/12.2.0.1/db_1  (Oracle-Base, n.d., page 1)	
A012	Change owner and permissions to directory	1) Because the install has to be run as the oracle user, the directory created in the previous step has to be modified so that the oracle user is the owner of it. The command to use is below. chown -R oracle:oinstall /u01  2) Now that oracle is the owner of the directory you can apply permissions to the folder. The permissions will allow the install to perform read, write and execute within the directory owned by oracle. chmod -R 775 /u01  (Oracle-Base, n.d., page 1)	
A013	Configure xhost	1) The xhost command is basically a command that will add a machine to an access control list. I recommend using your IP address as an identifier. xhost +192.168.208.134  (Oracle-Base, n.d., page 1)	
A014	Make a directory for oracle user	1) Part of the install requires that you run some scripts. The first step is to create a folder for the scripts. mkdir /home/oracle/scripts  (Oracle-Base, n.d., page 1)	

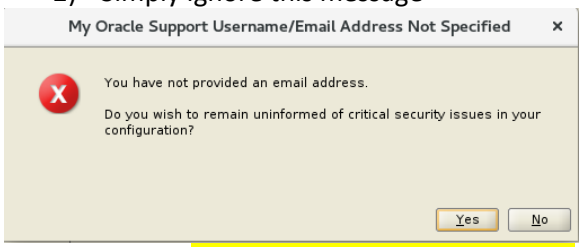
A015	Create script	1) To create a script from within the scripts directory you should use the touch command. *The scripts should be called “setEnv.sh” touch /home/oracle/scripts/setEnv.sh [root@dbrmd316-03 scripts]# touch /home/oracle/scripts/setEnv.sh [root@dbrmd316-03 scripts]# 2) Add the information in the screen below to the script.  root@dbrmd316-03:/home/oracle/scripts File Edit View Search Terminal Help #!/bin/bash # Oracle Settings export TMP=/tmp export TMPDIR=\$TMP export ORACLE_HOSTNAME=ol7-122.localdomain export ORACLE_UNQNAME=cdb1 export ORACLE_BASE=/u01/app/oracle export ORACLE_HOME=\$ORACLE_BASE/product/12.2.0.1/db_1 export ORACLE_SID=cdb1 export PATH=/usr/sbin:/usr/local/bin:\$PATH export PATH=\$ORACLE_HOME/bin:\$PATH export LD_LIBRARY_PATH=\$ORACLE_HOME/lib:/lib:/usr/lib export CLASSPATH=\$ORACLE_HOME/jlib:\$ORACLE_HOME/rdbms/jlib root@dbrmd316-03:/home/oracle/... 1 / 4 (Oracle-Base, n.d., page 1)	
A016	Add a reference to setEnv.sh	1) Once the script is created you will need to append the information in the file to the “.bash_profile” file in the oracle directory. echo ". /home/oracle/scripts/setEnv.sh" >> /home/oracle/.bash_profile [root@dbrmd316-03 scripts]# echo ". /home/oracle/scripts/setEnv.sh" >> /home/oracle/.bash_profile [root@dbrmd316-03 scripts]# (Oracle-Base, n.d., page 1)	
A017	Download Oracle 12C Release 2 to /home/oracle/	1) To be able to install the database the “Oracle 12C Release 2” zip file needs to be unzipped within the oracle users directory. 2) You may have to do a google search to aquire this file. The link to the fileis below. Be sure to be in your “oracle” user for this step. https://www.oracle.com/technetwork/database/enterprise-edition/downloads/oracle12c-linux-12201-3608234.html  Thank you for accepting the OTN License Agreement; you may now download this software. **Oracle Database 12c Release 2 (12.2.0.1.0) for Linux x86-64** linuxx64_12201_database.zip (3,453,696,911 bytes) (cksum - 4170261901) Directions 1. All files are in the .zip format. There is an unzip utility here if you need one. 2. Download and unzip both files to the same directory. 3. Installation guides and general Oracle Database 12c documentation are here. 3) After clicking on the link you will be asked to log in with your Oracle Web Account.	

		4) Now that the file is downloaded, copy it from the "Downloads" folder to your "/home/oracle" directory. cp linuxx64_12201_database.zip /home/oracle/linuxx64_12201_database.zip 	
A018	Unzip Oracle 12C	1) Extract the contents of the zip file into "/home/oracle" directory. 2) It should create a "database" directory. Unzip linuxx64_12201_database.zip 	
A019	Create start_all.sh script	1) Part of the install requires a start script. 2) To create the script type "touch start_all.sh".  3) Add the content in the screen below to the file.  (Oracle-Base, n.d., page 1)	
A020	Create stop_all.sh scripts	1) The install also requires a "stop_all.sh" script.  2) Add the content in the screen below to the "stop_all.sh" script.	

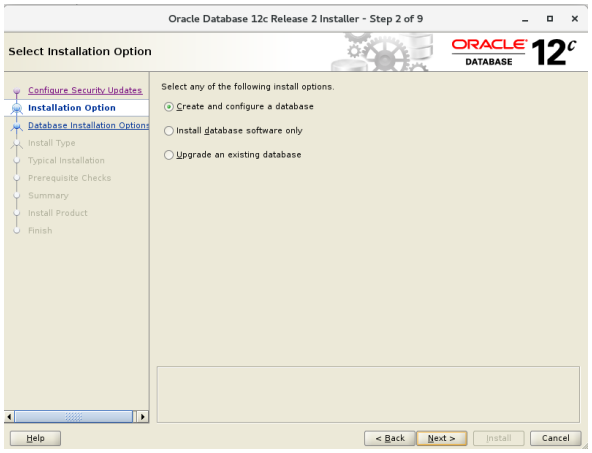
		 (Oracle-Base, n.d., page 1)	
A021	Change ownership and permissions to scripts	1) So that the "Oracle" user can make use of the scripts we need to make the "oracle" user the owner of the scripts. chown -R oracle.oinstall /home/oracle/scripts 2) Now that the "oracle" user is the owner of the scripts you can assign permissions to the folder and have the permissions be inherited by the "oracle" user. chmod u+x /home/oracle/scripts/*.sh [root@dbrmd316-03 scripts]# chown -R oracle.oinstall /home/oracle/scripts [root@dbrmd316-03 scripts]# chmod u+x /home/oracle/scripts/*.sh [root@dbrmd316-03 scripts]# (Oracle-Base, n.d., page 1)	
A022	Export Display	1) The last step before running the installer is to export the display variable set to the value below 2) DISPLAY=:0; export DISPLAY [oracle@dbrmd316-03 ~]$ export DISPLAY=:0 [oracle@dbrmd316-03 ~]$ 3) For this setting to take effect you need to reboot the machine. 4) Now you are ready for the installer (Linux Questions, 2004, para. 4)	
A023	Install Oracle 12C	1) Go to "/home/oracle/database" and type "./runInstaller" 1) For the first step you can leave the email field blank and uncheck the checkbox to receive updates.	



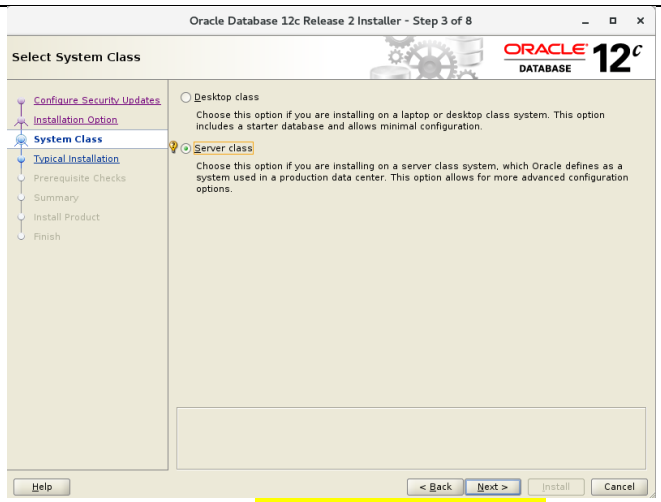
2) Simply ignore this message



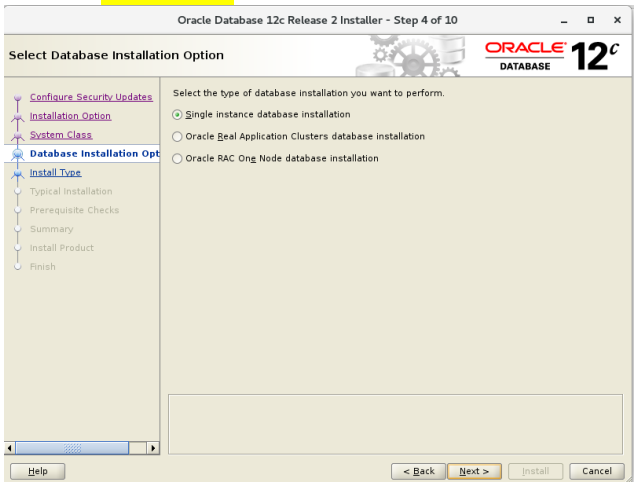
3) Select "create and configure a database" radio button.



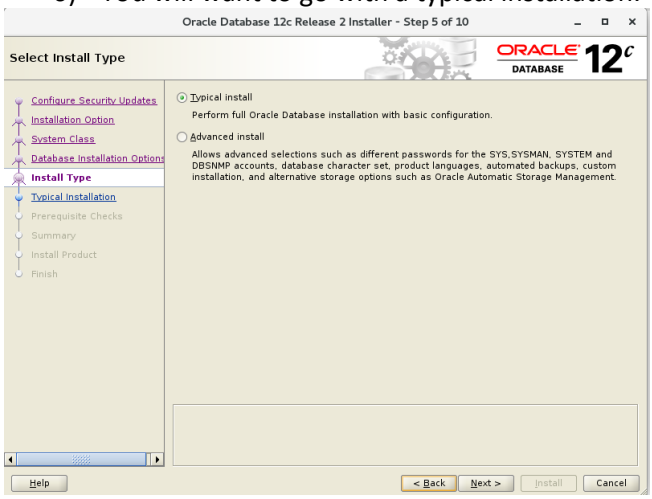
4) Select "Server class" Installation.



5) Now select "single instance database installation".

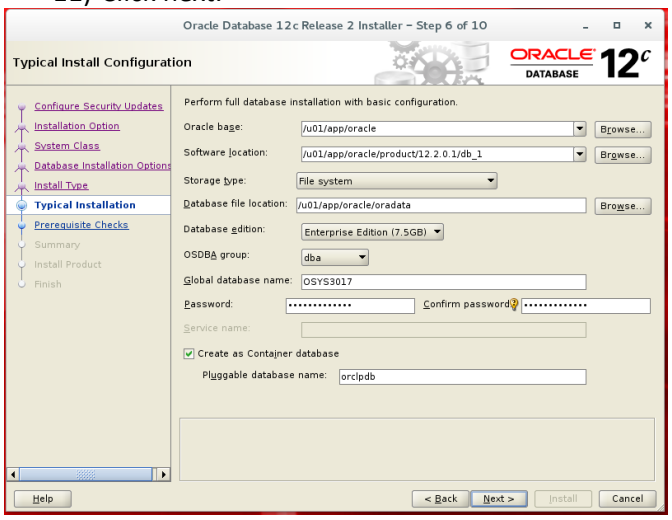


6) You will want to go with a typical installation.

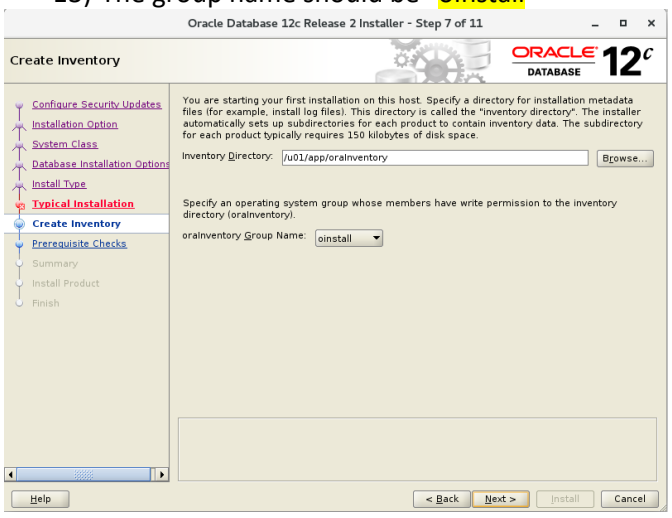


7) Make sure that all the fields in the form below match with your screen.

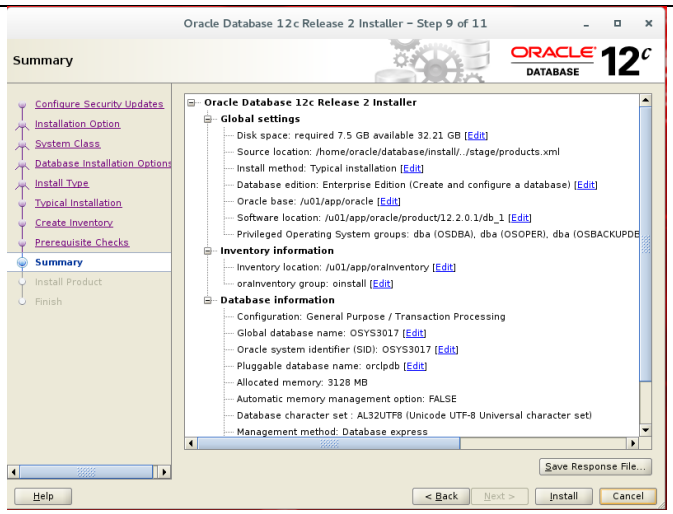
8) The installation is picky about the password. You need to select a password that meets requirements.
9) For "Global Database Name" you should use a value that is meaningfull.
10) Again, make sure that your "Oracle Base" and "Software location" match.
11) Click next.



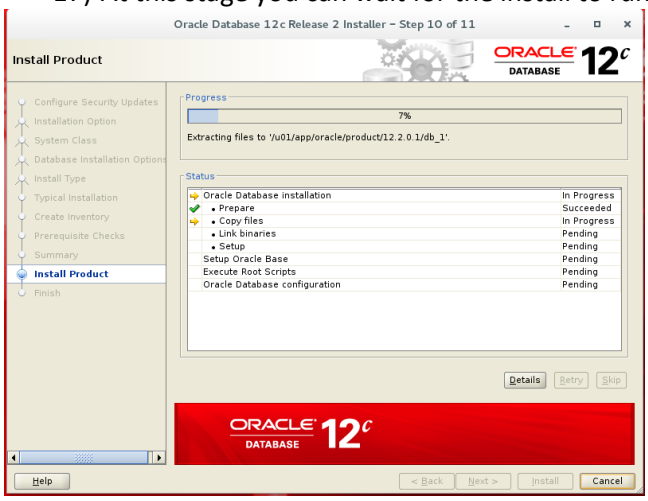
12) The inventory directory should show the correct value by default.
13) The group name should be "oinstall"



14) If you have done everything correctly so far you should get the screen below.
15) If you do not have the screen below you will need to go back and fix any issues.
16) Click "Install"



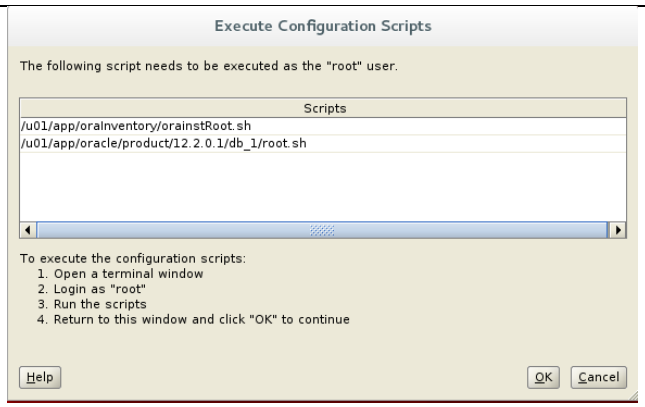
17) At this stage you can wait for the install to run.



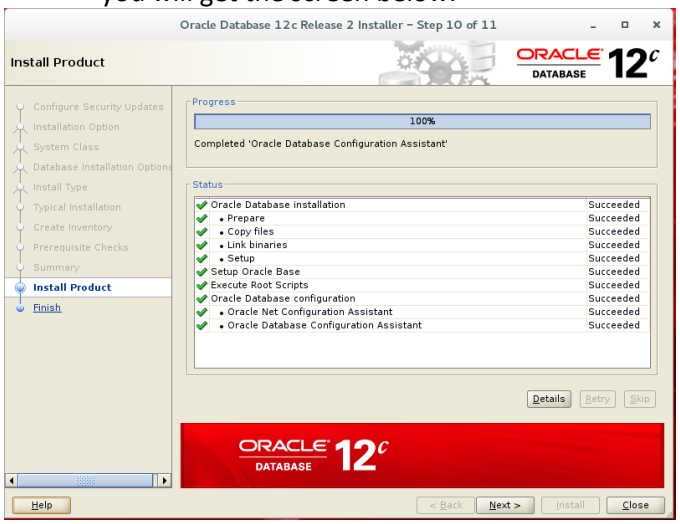
18) Half way through the install you will be prompted to start two scripts.
19) Simply open the terminal and start them. After click “OK on the screen below.
20) You will also be prompted with a screen asking you to install “Trace File Analyzer”. You will want to install it.
21) Afterwards you will also be prompted to enter the full pathname to the local bin directory. The value is:
    /usr/local/.packages/local/bin

(Lalit Kumar B, 2015, para. 3)

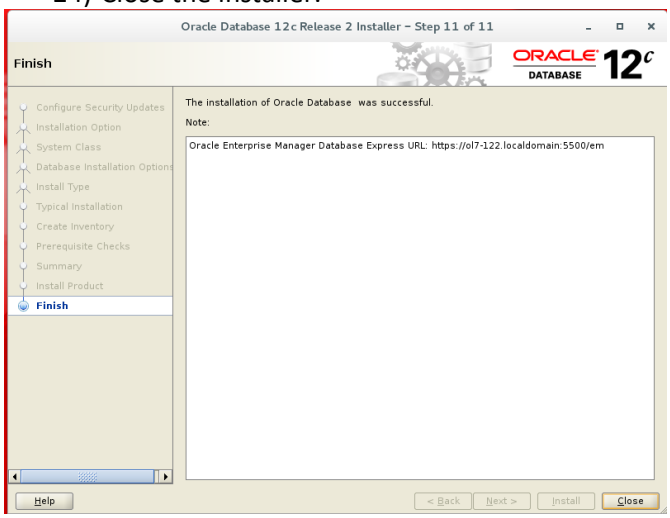
22) At the screen below you should open a terminal and run the two scripts manually from command line.



23) If you have successfully followed the instructions you will get the screen below.



24) Close the installer.



(Oracle-Base, n.d., page 1)

A024	Modify "setEnv.sh" file and "./bash_profile" for Oracle user	1) After going through all the steps you will find yourself not being able to login as the oracle user through the GUI. 2) Problem number 2 is that you will not be able to start the database 3) Problem number 3 is that some commands for the oracle user will not execute 4) The solution is all in the ".bash_profile" file in the home oracle directory. 5) Start by copying the contecnts of the "setEnv.sh" file and paste it into the "/home/oracle/.bash_profile" file.	

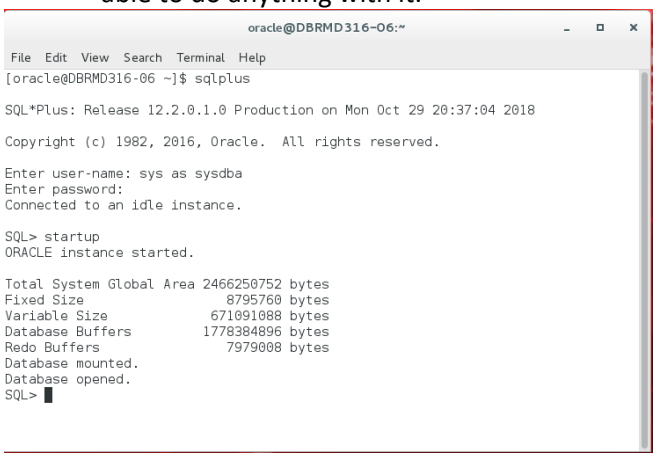
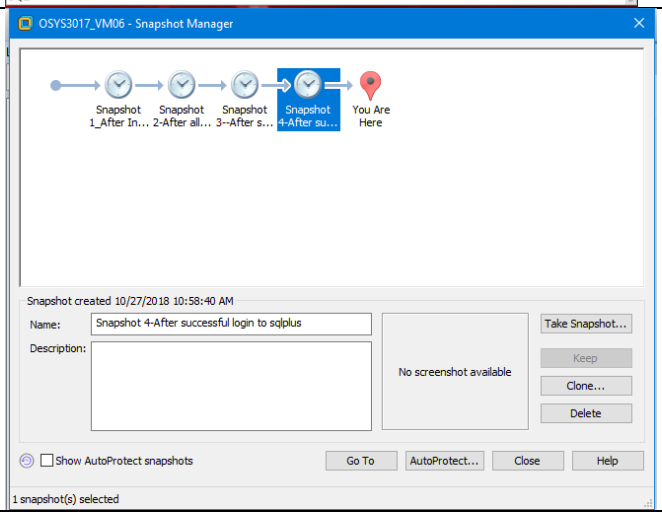
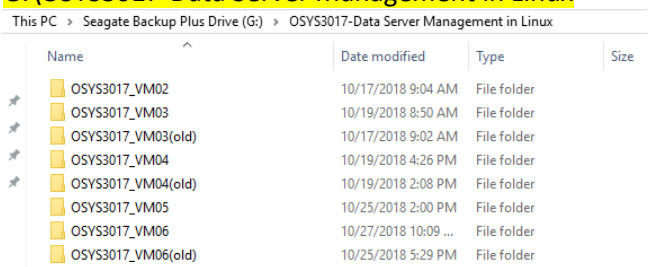
```
# Oracle Settings
export TMP=/tmp
export TMPDIR=$TMP

export ORACLE_HOSTNAME=ol7-122.localdomain
export ORACLE_UNQNAME=cdb1
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=$ORACLE_BASE/product/12.2.0.1/db_1
export ORACLE_SID=cdb1

export PATH=/usr/sbin:/usr/local/bin:\$PATH
export PATH=$ORACLE_HOME/bin:\$PATH

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

6) Below is the content of the "/home/oracle/.bash_profile" file.
7) Make sure that your file matches this one

*For "export ORACLE_SID=OSYS3017" and "export ORACLE_UNIQNAME=OSYS3017" you should export your database name.
*Take out all the backwards slashes as shown below

```
# User specific environment and startup programs

PATH=$PATH:$HOME/.local/bin:$HOME/bin

#export PATH
#. /home/oracle/scripts/setEnv.sh

#####################
export TMP=/tmp
export TMPDIR=$TMP

export ORACLE_HOSTNAME=ol7-122.localdomain
export ORACLE_UNQNAME=OSYS3017
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=$ORACLE_BASE/product/12.2.0.1/db_1
export ORACLE_SID=OSYS3017

export PATH=/usr/sbin:/usr/local/bin:$PATH
export PATH=$ORACLE_HOME/bin:$PATH

export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib
export CLASSPATH=$ORACLE_HOME/jlib:$ORACLE_HOME/rdbms/jlib
[oracle@DBRMD316-06 ~]$
```

A025	Using SQLPLUS	1) The first step to loging into the database is using the "Oracle" user. 2) Next you should type "SQLPLUS" at the command line.	

		3) Username is “sys as sysdba” and password is “123Student01$” 4) Once into the database you need to start it to be able to do anything with it.  5) Remember to shutdown the database once you are done.  	
A026	Take Snapshot	 	
A027	Create Gold Copy	G:\OSYS3017-Data Server Management in Linux  	

Glossary

Commands Used
su - root ls -la yum update yum check-update sudo setfacl -m u:root:rwx auto_script.sh sudo getfacl auto_script.sh hostnamectl set-hostname oel7.dbaora.com –static rpm -q --qf '%{NAME}-%{VERSION}-%{RELEASE}(%{ARCH})\n' binutils \ yum install oracle-database-server-12cR2-preinstall –y systemctl stop firewalld systemctl disable firewalld mkdir chown chmod touch

Activity Plan

ActivityPlan_A6.docx

Change Management Log

OSYS3017_VM06.pdf

OSYS3017_VM06

Role	DataOfChan	TimeOfChar	DescriptionOfChange	CommandsUsed	Click to Add
Administrator	10/19/2018	2:11:00 PM	Create Gold copy	G:\OSYS3017-Data Server Management in Linux\OSYS3017_VM06	
Administrator	10/19/2018	2:15:00 PM	Create Snapshot	After initial install	
Administrator	10/19/2018	2:16:00 PM	Check for updates	yum check-update	
Administrator	10/19/2018	2:18:00 PM	Install Updates	yum update	
Administrator	10/19/2018	2:38:00 PM	Create snapshot		
Administrator	10/19/2018	4:37:00 PM	Create Gold copy	G:\OSYS3017-Data Server Management in Linux\OSYS3017_VM06	
Administrator	10/19/2018	4:38:00 PM	Backup hosts file	cp /etc/hosts /home/dpiche/hosts	
Administrator	10/19/2018	4:56:00 PM	Download Oracle 12C release 2	stored in /dpiche/home/downloads	
Administrator	10/20/2018	10:03:00 AM	Make directory for script	mkdir /home/dpiche/script	
Administrator	10/20/2018	10:20:00 AM	Create script file	touch auto_script.sh	
Administrator	10/20/2018	10:38:00 AM	Set permissions	sudo setfacl -m u:root:rwx auto_script.sh	
Administrator	10/20/2018	10:38:00 AM	Ensure permissions	sudo getfacl auto_script.sh	
Administrator	10/20/2018	10:54:00 AM	Backup hosts file	cp /etc/hosts /home/dpiche/hosts	
Administrator	10/20/2018	10:54:00 AM	Edit Hosts file	/etc/hosts	
Administrator	10/23/2018	12:50:00 PM	Run Automatic setup	yum install oracle-database-server-12cR2-preinstall -y	
Administrator	10/23/2018	12:58:00 PM	Set password for Oracle	passwd oracle	
Administrator	10/23/2018	1:00:00 PM	Backup /etc/selinux/config file	cp config /home/dpiche/config	
Administrator	10/23/2018	1:06:00 PM	Edit the /etc/selinux/config file	SELINUX=permissive	
Administrator	10/23/2018	1:16:00 PM	Restart server	setenforce Permissive	
Administrator	10/23/2018	1:20:00 PM	Stop firewall	systemctl stop firewalld	
Administrator	10/23/2018	1:20:00 PM	Disable Firewall	systemctl disable firewalld	
Administrator	10/23/2018	1:26:00 PM	Create Install Directory	mkdir -p /u01/app/oracle/product/12.2.0.1/db_1	
Administrator	10/23/2018	1:30:00 PM	Change ownership	chown -R oracle:oinstall /u01	
Administrator	10/23/2018	1:32:00 PM	Change permissions	chmod -R 775 /u01	
Administrator	10/23/2018	1:34:00 PM	Config xhosts	xhost +192.168.208.134	
Administrator	10/23/2018	1:39:00 PM	Make a scripts directory	mkdir /home/oracle/scripts	
Administrator	10/23/2018	1:48:00 PM	Create setEnv.sh file	touch /home/oracle/scripts/setEnv.sh	
Administrator	10/23/2018	1:56:00 PM	Insert script	/home/oracle/scripts/setEnv.sh	
Administrator	10/23/2018	1:58:00 AM	Add a reference to setEnv.sh	echo ". /home/oracle/scripts/setEnv.sh" >> /home/oracle/.bash_profile	
Administrator	10/23/2018	2:15:00 PM	Copy Oracle Release 2 Download to oracle directory	cp linuxx64_12201_database.zip /home/oracle/linuxx64_12201_database.zip	
Administrator	10/23/2018	2:15:00 PM	Unzip linuxx64_12201_database.zip	unzip linuxx64_12201_database.zip	
Administrator	10/23/2018	2:21:00 PM	Create start_all.sh	touch start_all.sh	
Administrator	10/23/2018	2:22:00 PM	Create stop_all.sh	touch stop_all.sh	
Administrator	10/23/2018	2:28:00 PM	Edit scripts		
Administrator	10/23/2018	2:30:00 PM	Change ownership to scripts	chown -R oracle.oinstall /home/oracle/scripts	
Administrator	10/23/2018	2:39:00 PM	Change permissions	chmod u+x /home/oracle/scripts/*.sh	
Administrator	10/23/2018	2:40:00 PM	Create snapshot	Before running ./runInstaller	
dba	10/23/2018	2:42:00 PM	Export Display	DISPLAY=:0; export DISPLAY	
dba	10/23/2018		Run Install scripts	./home/oracle/database/runInstaller.sh	
dba	10/27/2018	10:11:00 AM	Modify setEnv.sh	Modify /home/oracle/setEnv.sh	
dba	10/27/2018	10:23:00 AM	Modify ./bash_profile for oracle user	Modify ./bash_profile for oracle user	
dba	10/27/2018	10:30:00 AM	Successfully run sqlplus	sys as sysdba	
dba	10/27/2018	10:54:00 AM	Create Gold Copy	G:\OSYS3017-Data Server Management in Linux\OSYS3017_VM06	
dba	10/27/2018	10:55:00 AM	Take snapshot		
dba	10/27/2018	11:01:00 AM	Login as sysdba	sys as sysdba	

References

Oracle. (2018). Oracle Linux-Administrators Solutions Guide for Release 6. Retrieved from https://docs.oracle.com/cd/E37670_01/E37355/html/ol_creating_yum_repo.html

NixCraft. (2018, January 24th). How to run the .sh file Shell Script in Linux. Retrieved from https://www.cyberciti.biz/faq/run-execute-sh-shell-script/

Oracle-Base. (n.d.). Oracle Database 12C Release 2 Install on Oracle Linux 6 and 7. Retrieved from https://oracle-base.com/articles/12c/oracle-db-12cr2-installation-on-oracle-linux-6-and-7

Lalit Kumar B. (2015, November 3). Root.sh: Enter the full path of the local bin directory. Retrieved from https://lalitkumarb.wordpress.com/2015/11/03/root-sh-enter-the-full-pathname-of-the-local-bin-directory/

Helpful Links

Instructions on how to create a swap file and directory

https://docs.oracle.com/cd/E52668_01/E54669/html/ol7-s4-storage.html?fbclid=IwAR3gGZuRcLEbzvrZaV3fZKJ6BYkRvcRlnVHIwSfoA-ENtUGRfiRLQ31rjQE

Another method to install Oracle database 12C Release 2 on oracle Linux 7

http://dbaora.com/install-oracle-12c-release-2-12-2-on-oracle-linux-7-oel7/

How to set the full path of the local bin directory

https://lalitkumarb.wordpress.com/2015/11/03/root-sh-enter-the-full-pathname-of-the-local-bin-directory/

Information about what trace file analyzer is

https://community.oracle.com/community/support/support-blogs/database-support-blog/blog/2016/12/12/oracle-trace-file-analyzer-tfa-an-overview-guide

A good repository to download install packages repository

http://yum.oracle.com/repo/OracleLinux/OL7/0/base/x86_64/index.html

Solutions for USB port dropping

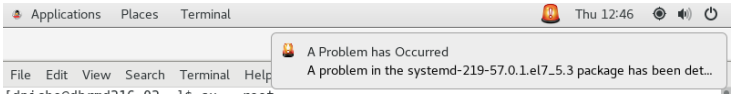
https://www.easeus.com/storage-media-recovery/external-hard-drive-keeps-disconnecting-and-reconnecting.html

Fix for DISPLAY setting in Install

https://www.linuxquestions.org/questions/linux-general-1/can%27t-connect-to-x11-window-server-using-%27-0-0%27-as-the-value-of-the-display-variable-178234/

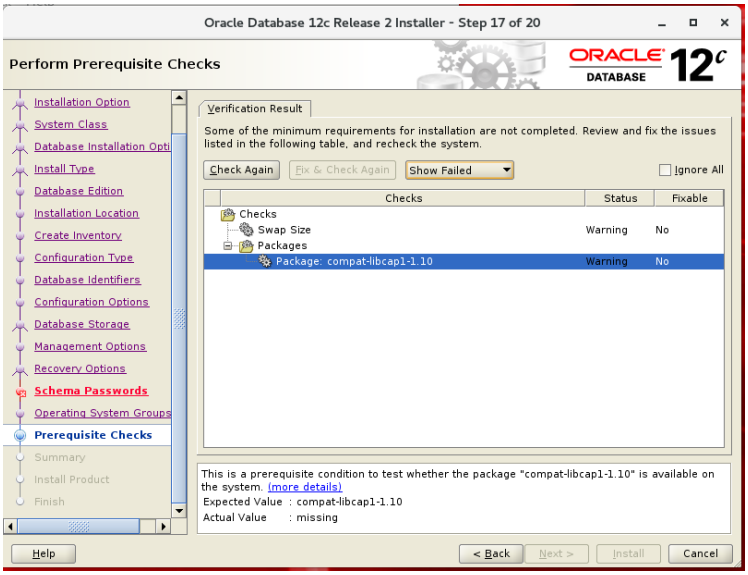
Troubleshooting

You may run into this problem from running your VM on not enough ram or not shutting down your VM properly.

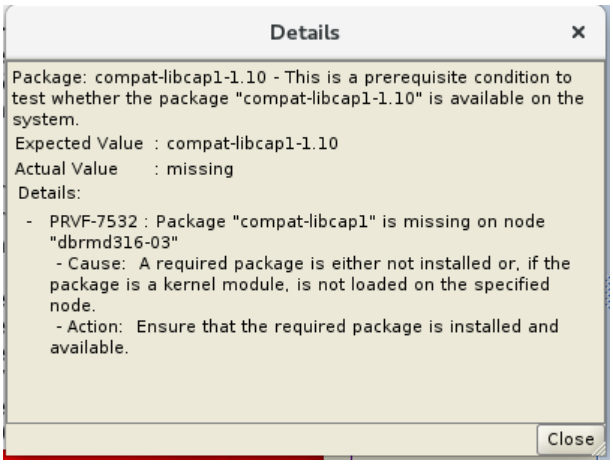


After going through the initial install of the database there were requirements that were not met

1) There is a package missing→Fix is to use the preinstall package in one of the resources in this document
2) The second issue is the swap partition size→ Fix is to reinstall the OS and partition the drive correctly



Below is an example of the error from not having a needed package.



Below is an error message from not having enough space in the swap directory