

Ticket # 3897

We currently have a database called MoidDB on Linux-223 Server. Please upgrade MoidDB only to 12c. More details are provided below.

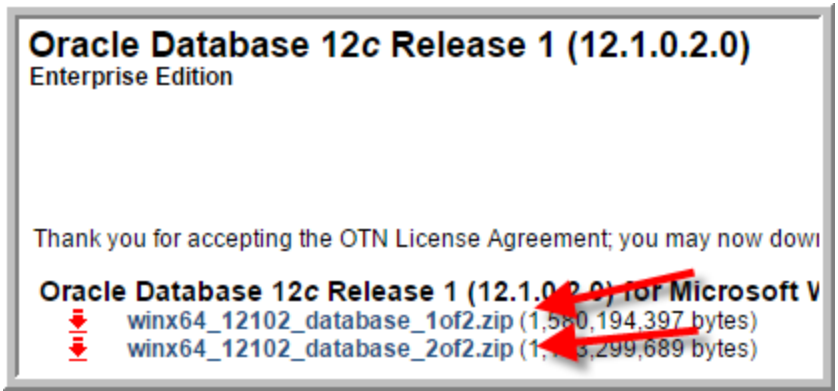
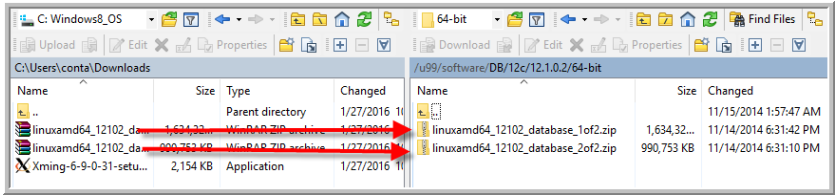
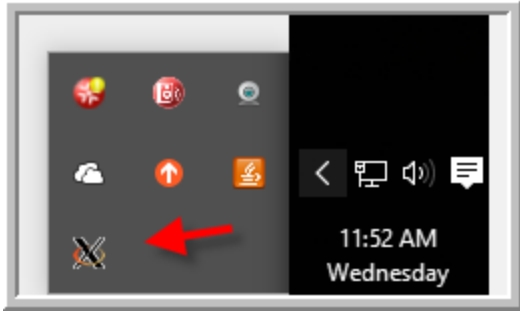
Environment:

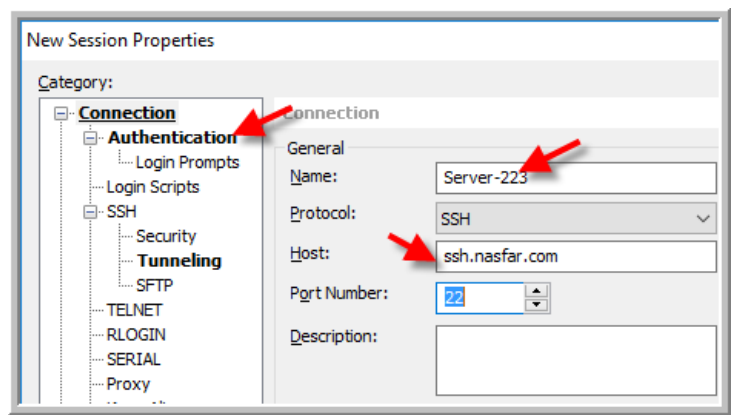
Hostname:	192.168.0.223	<pre>Linux-223:(none)\$ hostname Linux-223</pre>								
Database Name:	MoidDB	<pre>. oraenv → MoidDB echo \$ORACLE_SID</pre> <pre>Linux-223:(none)\$. oraenv ORACLE_SID = [none] ? MoidDB The Oracle base remains unchanged with v Linux-223:(MoidDB)\$ echo \$ORACLE_SID MoidDB</pre>								
Current status of DB?	Open	<pre>sqlplus / as sysdba select status from v\$instance;</pre> <pre>SQL> select status from v\$instance; STATUS ----- OPEN</pre>								
Current Oracle Home:	/u01/app/oracle/product/11.2.0/db_1	<pre>Linux-223:(MoidDB)\$ echo \$ORACLE_HOME /u01/app/oracle/product/11.2.0/db_1</pre>								
Temp TBS Size	minimum is ???? but I have changed to atleast 2 GB.	<u>To check the size of TEMP tablespace:</u> <pre>set linesize 80 col tablespace_name format a20 select TABLESPACE_NAME, BYTES_USED/1024/1024 as Used_space_in_MB, BYTES_FREE/1024/1024 as Free_space_in_MB, (bytes_used+bytes_free)/1024/1024 as Total_size_in_MB from V\$TEMP_SPACE_HEADER;</pre> <table><tr><th>TABLESPACE_NAME</th><th>USED_SPACE_IN_MB</th><th>FREE_SPACE_IN_MB</th><th>TOTAL_SIZE_IN_MB</th></tr><tr><td>TEMP</td><td>49</td><td>0</td><td>49</td></tr></table> <u>How to find the TEMP Datafile names?</u> <pre>set linesize 200 set pagesize 200 col file_name format a40</pre>	TABLESPACE_NAME	USED_SPACE_IN_MB	FREE_SPACE_IN_MB	TOTAL_SIZE_IN_MB	TEMP	49	0	49
TABLESPACE_NAME	USED_SPACE_IN_MB	FREE_SPACE_IN_MB	TOTAL_SIZE_IN_MB							
TEMP	49	0	49							

		<pre>select file_name, bytes/1024/1024 as size_in_mb, round(bytes/1024/1024 ,2) as size_in_GB, tablespace_name from dba_temp_files;</pre> <table><tr><th>FILE_NAME</th><th>SIZE_IN_MB</th><th>SIZE_IN_GB</th><th>TABLESPACE_NAME</th></tr><tr><td>/u14/oradata/MoidDB/temp01.dbf</td><td>49</td><td>.05</td><td>TEMP</td></tr></table> To Increase the size of TEMP tablespace <pre>ALTER DATABASE tempfile '/u14/oradata/MoidDB/temp01.dbf' resize 2048M;</pre> <pre>SQL> ALTER DATABASE tempfile '/u14/oradata/MoidDB/temp01.dbf' resize 2048M; Database altered. SQL> select file_name, bytes/1024/1024 as size_in_mb, round(bytes/1024/1024/</pre> <table><tr><th>FILE_NAME</th><th>SIZE_IN_MB</th><th>SIZE_IN_GB</th><th>TABLESPACE_NAME</th></tr><tr><td>/u14/oradata/MoidDB/temp01.dbf</td><td>2048</td><td>2</td><td>TEMP</td></tr></table>	FILE_NAME	SIZE_IN_MB	SIZE_IN_GB	TABLESPACE_NAME	/u14/oradata/MoidDB/temp01.dbf	49	.05	TEMP	FILE_NAME	SIZE_IN_MB	SIZE_IN_GB	TABLESPACE_NAME	/u14/oradata/MoidDB/temp01.dbf	2048	2	TEMP
FILE_NAME	SIZE_IN_MB	SIZE_IN_GB	TABLESPACE_NAME															
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FILE_NAME	SIZE_IN_MB	SIZE_IN_GB	TABLESPACE_NAME															
/u14/oradata/MoidDB/temp01.dbf	2048	2	TEMP															
SGA Size?	minimum is ???? but I have kept SGA_target to 1 GB and SGA_max_size to 2 GB	<pre>alter system set sga_max_size=2048M scope=spfile; alter system set sga_target=1024M scope=spfile; shutdown immediate; startup show parameter sga</pre> <pre>SQL> alter system set sga_max_size=2048M scope=spfile; System altered. SQL> alter system set sga_target=1024M scope=spfile; System altered. SQL> shutdown immediate; Database closed. Database dismounted. ORACLE instance shut down. SQL> startup ORACLE instance started. Total System Global Area 2137886720 bytes Fixed Size 2228200 bytes Variable Size 1325400088 bytes Database Buffers 805306368 bytes Redo Buffers 4952064 bytes Database mounted. Database opened. SQL> show parameter sga</pre> <table><tr><th>NAME</th><th>TYPE</th><th>VALUE</th></tr><tr><td>lock_sga</td><td>boolean</td><td>FALSE</td></tr><tr><td>pre_page_sga</td><td>boolean</td><td>FALSE</td></tr><tr><td>sga_max_size</td><td>big integer</td><td>2G</td></tr><tr><td>sga_target</td><td>big integer</td><td>1G</td></tr></table> <pre>SQL></pre>	NAME	TYPE	VALUE	lock_sga	boolean	FALSE	pre_page_sga	boolean	FALSE	sga_max_size	big integer	2G	sga_target	big integer	1G	
NAME	TYPE	VALUE																
lock_sga	boolean	FALSE																
pre_page_sga	boolean	FALSE																
sga_max_size	big integer	2G																
sga_target	big integer	1G																

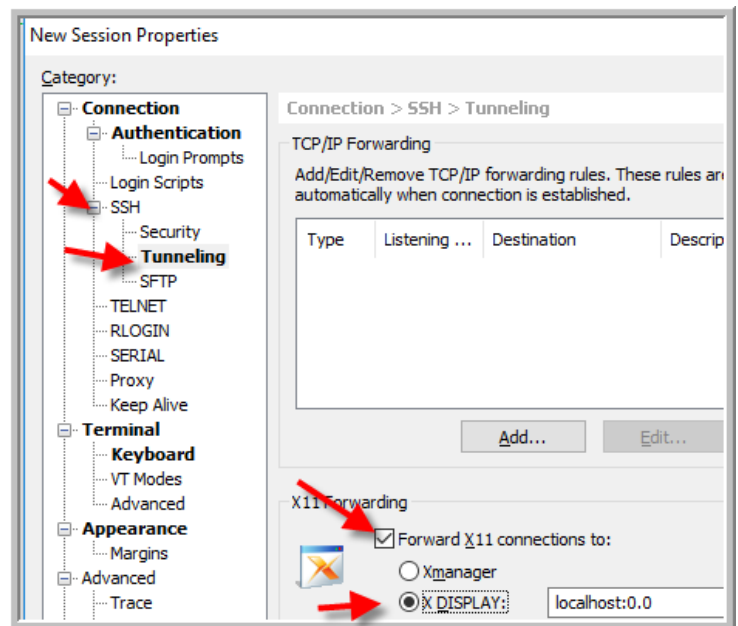
Pre-upgrade:

Step No.	Description	Commands / Screenshot
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Download 12c software to Laptop from http://www.oracle.com/technetwork/database/enterprise-edition/download/database12c-linux-download-2240591.html	
Use Winscp to copy software to Server. I chose the software staging location to be on Server-223: /u99/software/DB/12c/12.1.0.2/64-bit/	
Download the following: Xming from: http://sourceforge.net/projects/xming/files/latest/download Xming fonts from: http://sourceforge.net/projects/xming/files/Xming-fonts/7.5.0.93/Xming-fonts-7-5-0-93-setup.exe/download and install both softwares with default settings.	
Once xming is download and installed, verify it is running. If not, start the program. Once the xming is started, you will see an icon in systray.	
start x-shell (or putty) with x-11 enabled.	1. start xshell (I am using xhell 5) 2. Click File 3. Click New 4. Expand Connections a. Click on Authentication b. Name: Server-223 c. Protocol: SSH d. Host: ssh.....com e. Port: 22



5. Expand SSH
 - a. Click on Tunneling
 - b. Check box on "Forward x11 Connections:
 - c. Select X Display and keep localhost0.0



6. Click Ok

Unzip the software

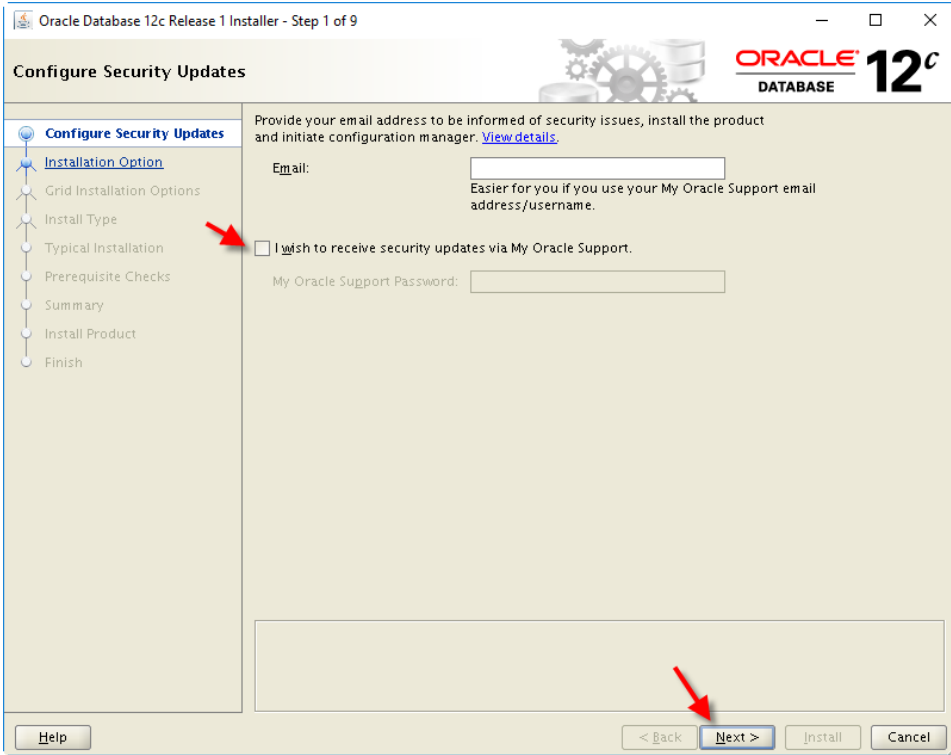
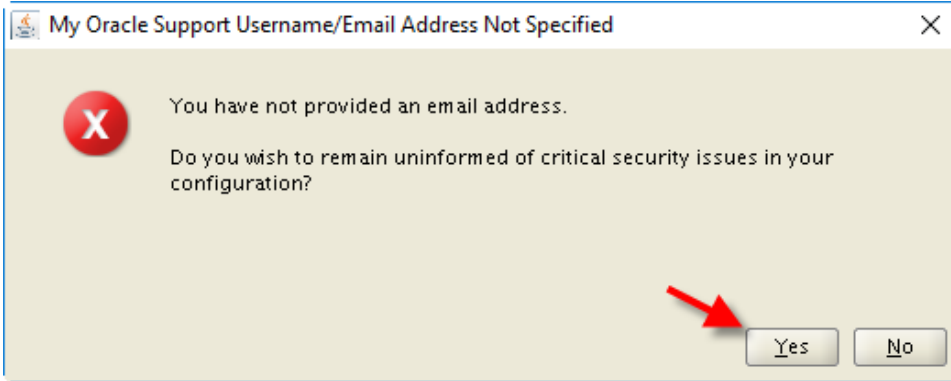
```
cd /u99/software/DB/12c/12.1.0.2/64-bit/
```

```
Linux-223:(MoidDB)$ cd /u99/software/DB/12c/12.1.0.2/64-bit/
Linux-223:(MoidDB)$ ls -ltrh
total 2.6G
-rwxrwxr-x 1 oracle oinstall 968M Nov 14 2014 linuxamd64_12102_database_2
-rwxrwxr-x 1 oracle oinstall 1.6G Nov 14 2014 linuxamd64_12102_database_1
Linux-223:(MoidDB)$
```

```
unzip linuxamd64_12102_database_1of2.zip
unzip linuxamd64_12102_database_2of2.zip
```

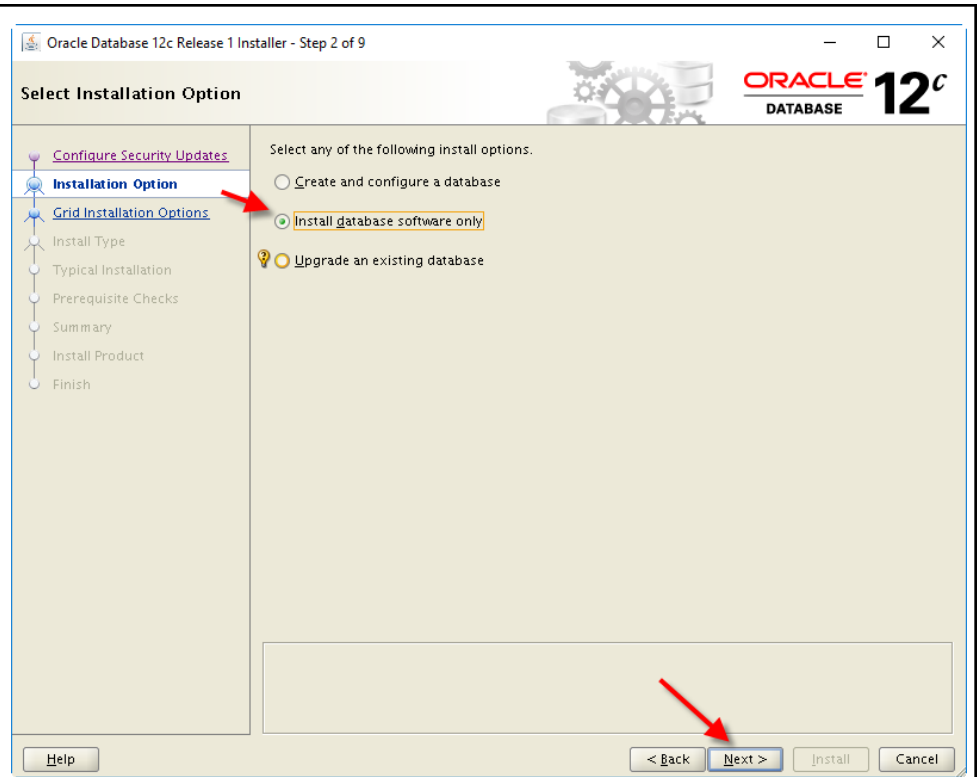
Database Software Installation:

Step	Description	Commands / Screenshot
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No.		
1	set ORACLE_HOME to 12c home where you want to install the database software	<pre>export ORACLE_HOME=/u01/app/oracle/product/12.1.0.2/db_1 export PATH=\$ORACLE_HOME/bin:\$PATH</pre>
2	Change directory to start runInstaller	<pre>cd /u99/software/DB/12c/12.1.0.2/64-bit/database</pre>
3	Execute runInstaller	<pre>./runInstaller</pre>
Step 1 of 9	● Uncheck "I wish to ..." ● click Next	
	● Click on Yes	

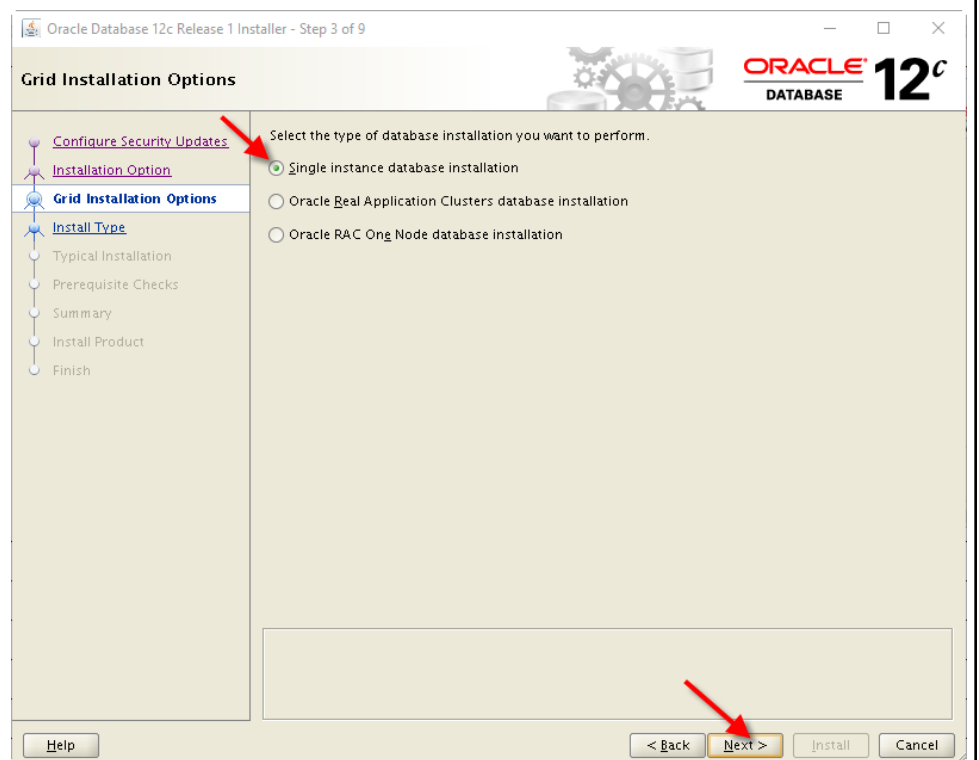
Step
2 of 9

- Install database software only
- click NEXT



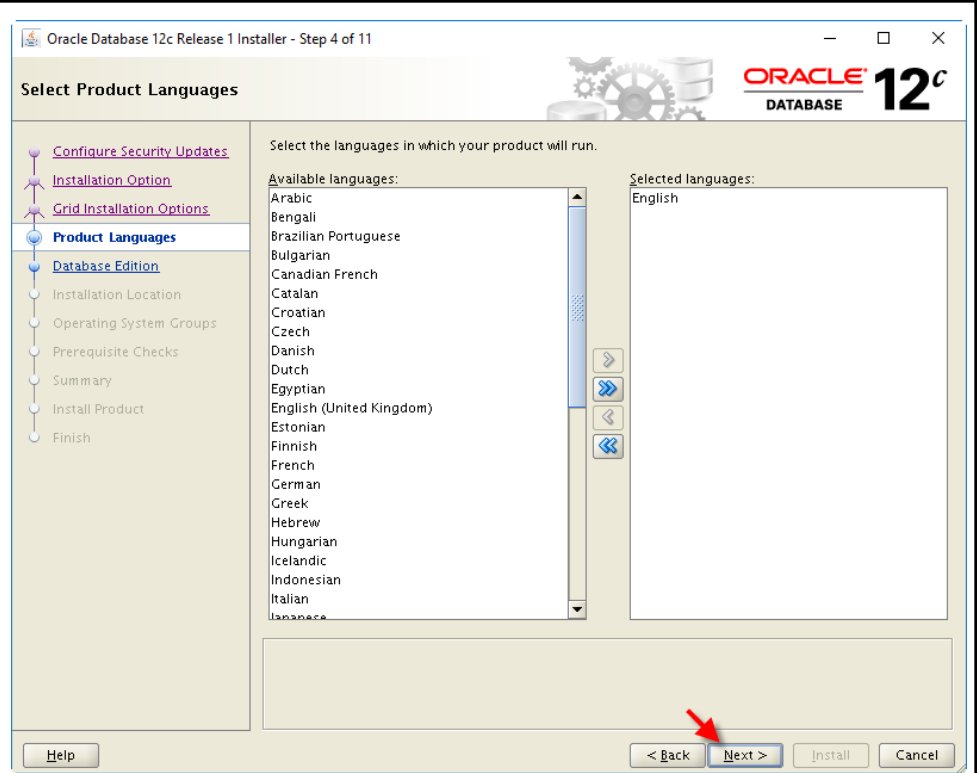
Step
3 of 9

- Select "Single instance...."
- Click Next



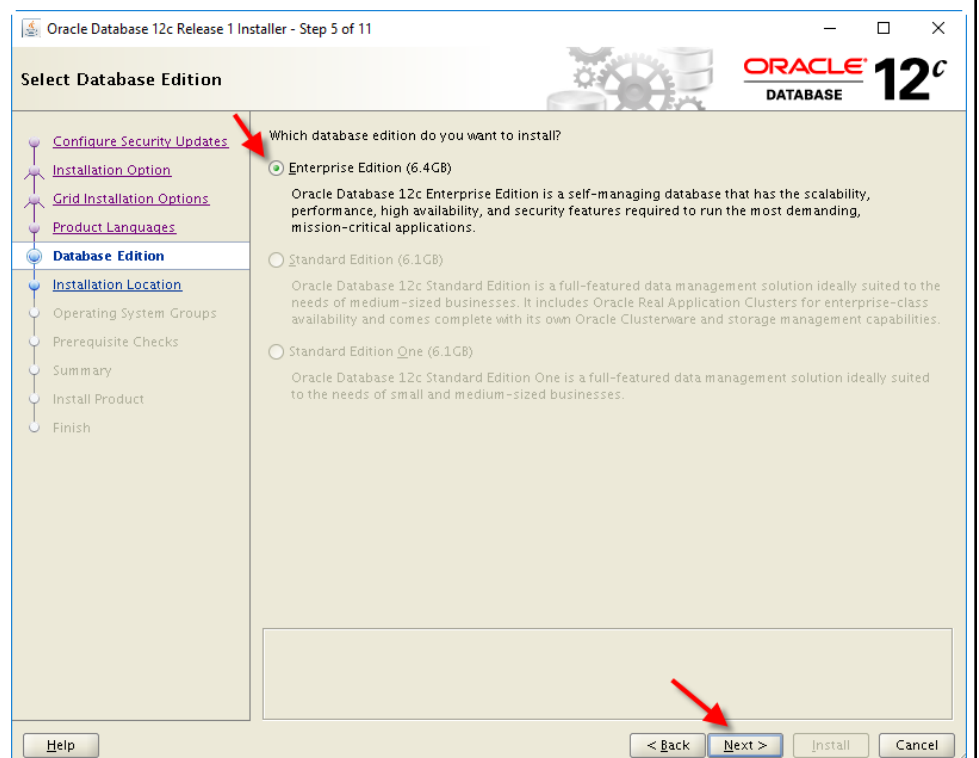
Step
4 of 9

- Click Next



Step
5 of 9

- Select "Enterprise Editions..."
- Click Next



Step
6 of 9

- Verify the following
 - Oracle Base → /u01/app/oracle
 - Oracle Home → /u01/app/oracle/product/12.1.0.2/db_1
- Click Next

Oracle Database 12c Release 1 Installer - Step 6 of 11

Specify Installation Location

Configure Security Updates
Installation Option
Grid Installation Options
Product Languages
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish

Specify a path to place all Oracle software and configuration-related files installed by this installation owner. This location is the Oracle base directory for the installation owner.

Oracle base: /u01/app/oracle

Specify a location for storing Oracle database software files separate from database configuration files in the Oracle base directory. This software directory is the Oracle database home directory.

Software location: /u01/app/oracle/product/12.1.0.2/db_1

Help < Back Next > Install Cancel

Step
7 of 9

- Change all to oinstall except OSOPER to oper

Oracle Database 12c Release 1 Installer - Step 7 of 11

Privileged Operating System groups

Configure Security Updates
Installation Option
Grid Installation Options
Product Languages
Database Edition
Installation Location
Operating System Groups
Prerequisite Checks
Summary
Install Product
Finish

SYS privileges are required to create a database using operating system (OS) authentication. Membership in OS Groups grants the corresponding SYS privilege, eg. membership in OSDBA grants the SYSDBA privilege.

Database Administrator (OSDBA) group: oinstall

Database Operator (OSOPER) group (Optional): oper

Database Backup and Recovery (OSBACKUPDBA) group: oinstall

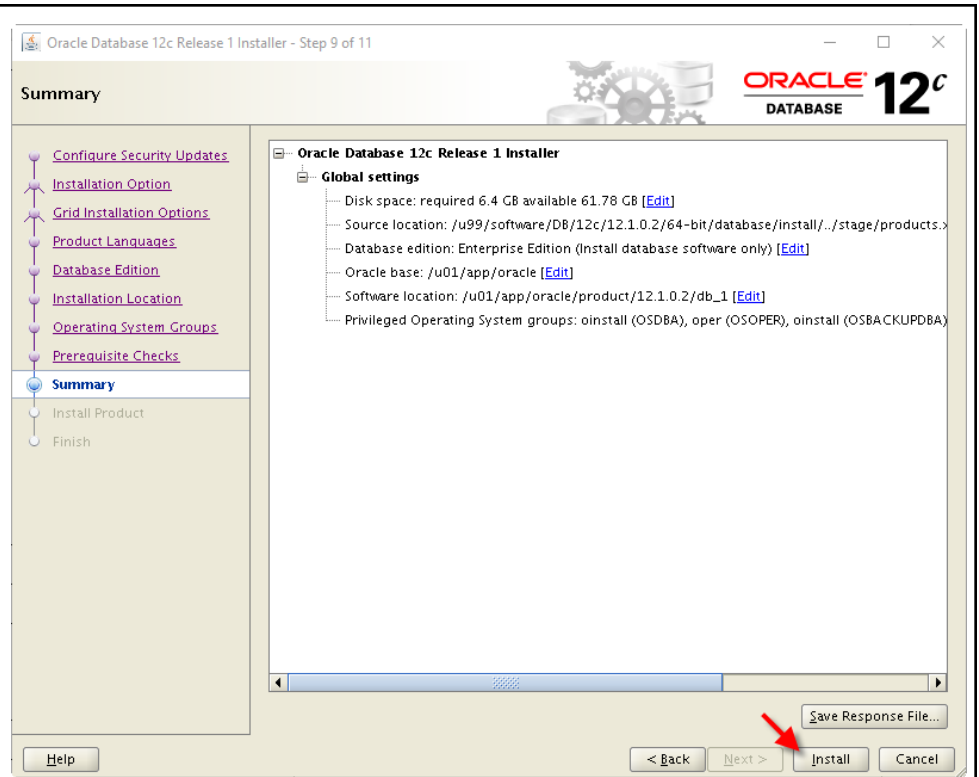
Data Guard administrative (OSDGDBA) group: oinstall

Encryption Key Management administrative (OSKMDBA) group: asmadmin

Help < Back Next > Install Cancel

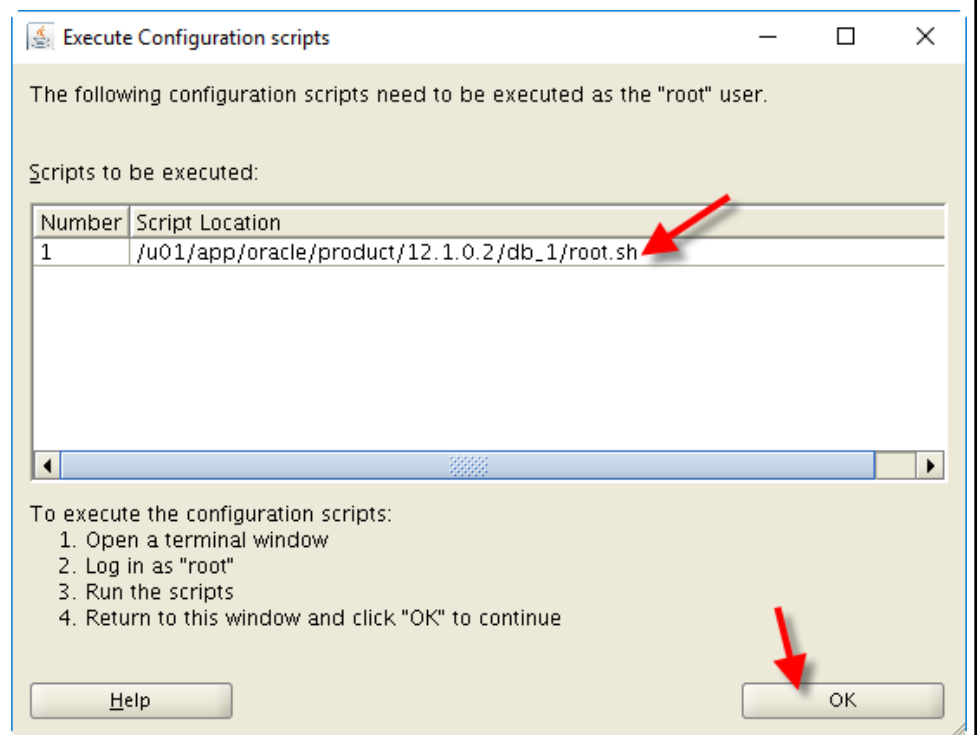
Step
8 of 9

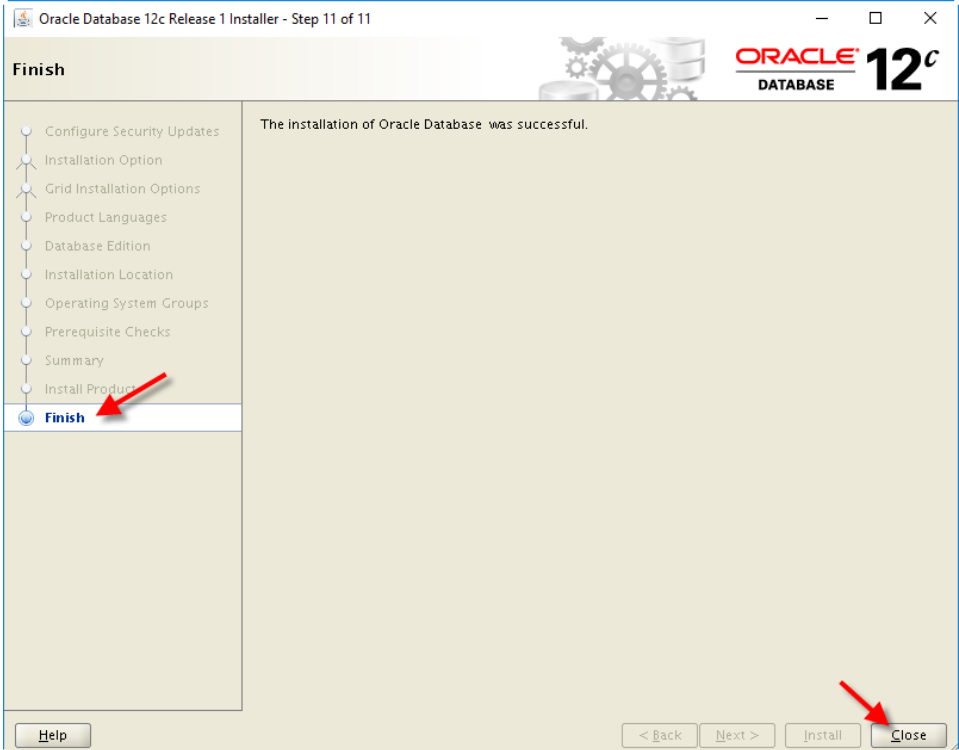
- Click Install to proceed with the installation



Step
8 of 9

- Run the root.sh



Step 8 of 9	When prompting to overwrite, say Y and hit enter for all 3 prompts.	<pre>[root@Linux-223 ~]# /u01/app/oracle/product/12.1.0.2/db_1/root.sh Performing root user operation. The following environment variables are set as: ORACLE_OWNER= oracle ORACLE_HOME= /u01/app/oracle/product/12.1.0.2/db_1 Enter the full pathname of the local bin directory: [/usr/local/bin]: The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y Copying dbhome to /usr/local/bin ... The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y Copying oraenv to /usr/local/bin ... The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y Copying coraenv to /usr/local/bin ... 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. [root@Linux-223 ~]#</pre>
Step 9 of 9	Click close to finish the 12c software installation.	
4	Verify 12c database home is created	

Upgrade:

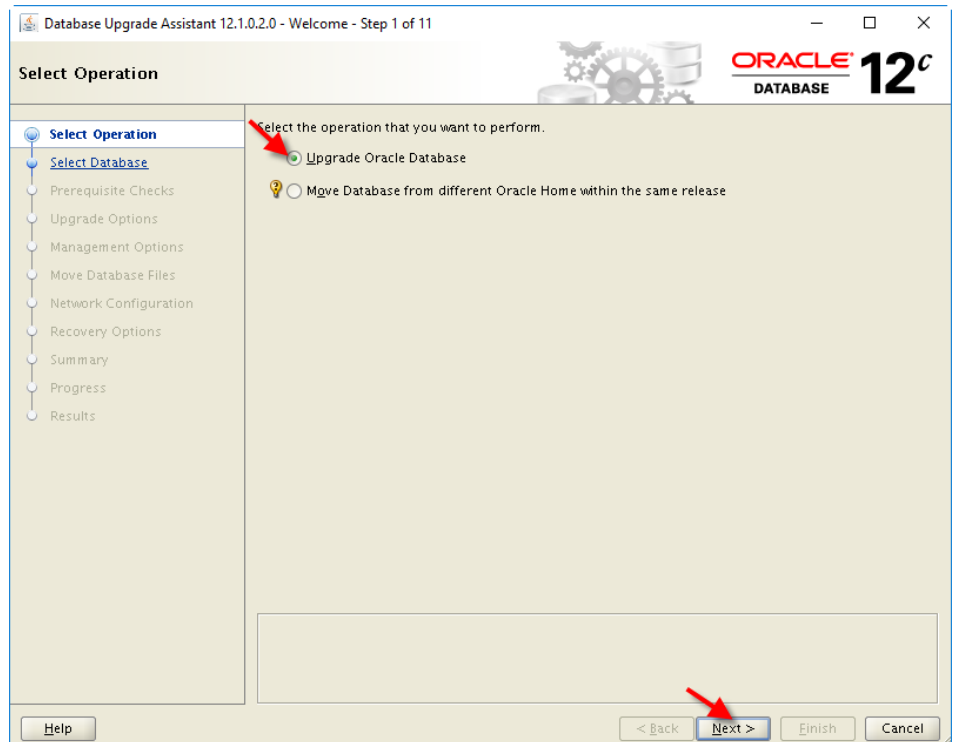
Step No.	Description	Command / Screenshot
1	Set environment to new 12 oracle home	- export ORACLE_HOME=/u01/app/oracle/product/12.1.0.2/db_1 - export PATH=\$ORACLE_HOME/bin:\$PATH

start Database Upgrade Assistance

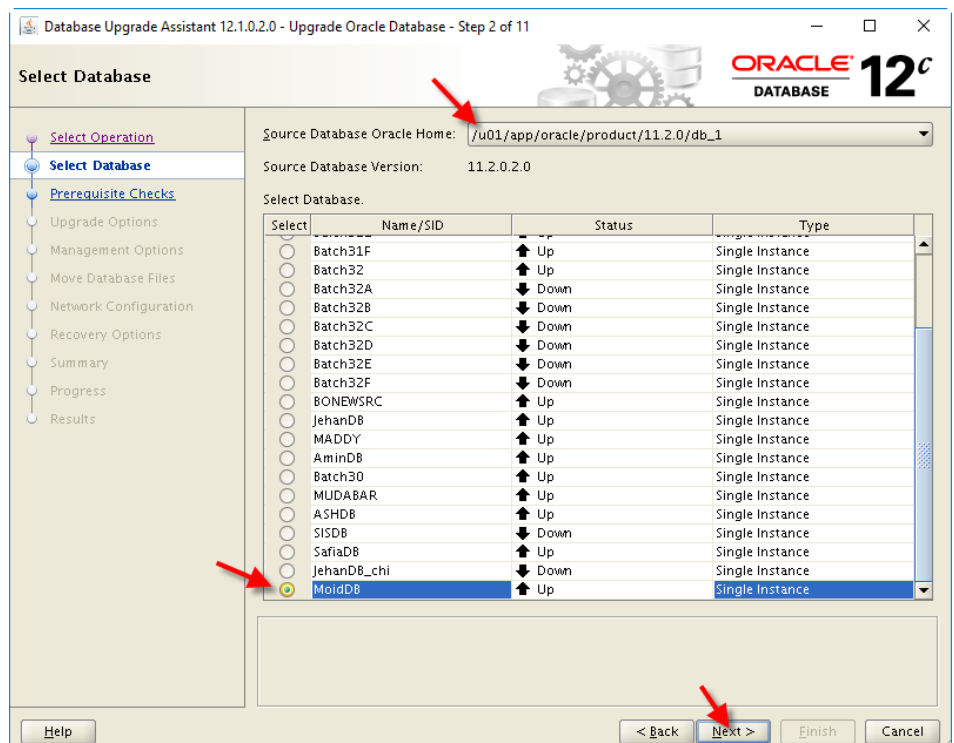
```
Linux-223:(none)$ export ORACLE_HOME=/u01/app/oracle/product/12.1.0.2/db_1
Linux-223:(none)$ export PATH=$ORACLE_HOME/bin:$PATH
Linux-223:(none)$ dbua
```

dbua

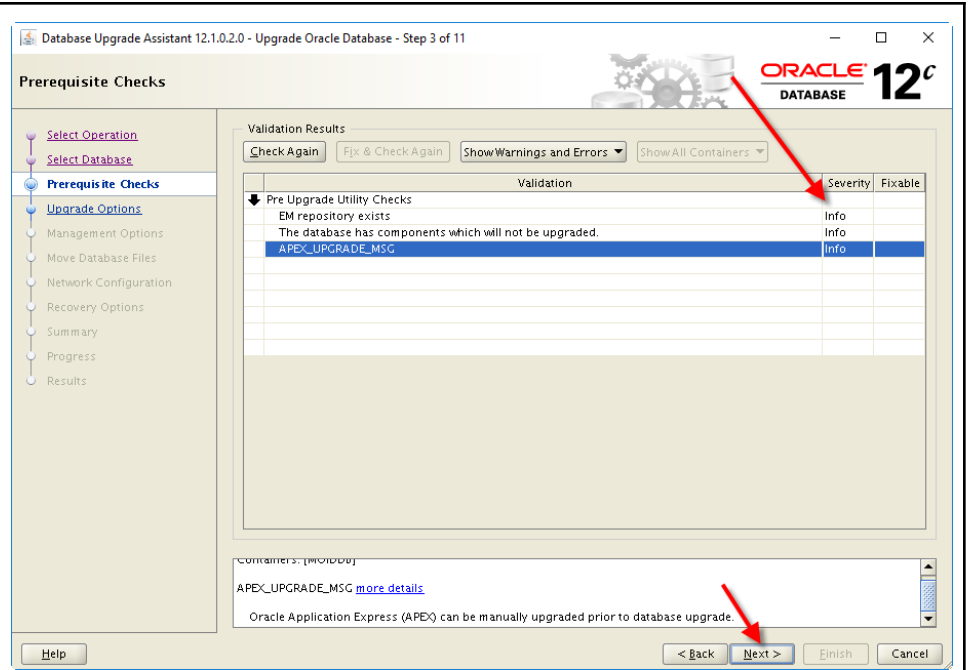
- Select “Upgrade Oracle Database”
- Click Next



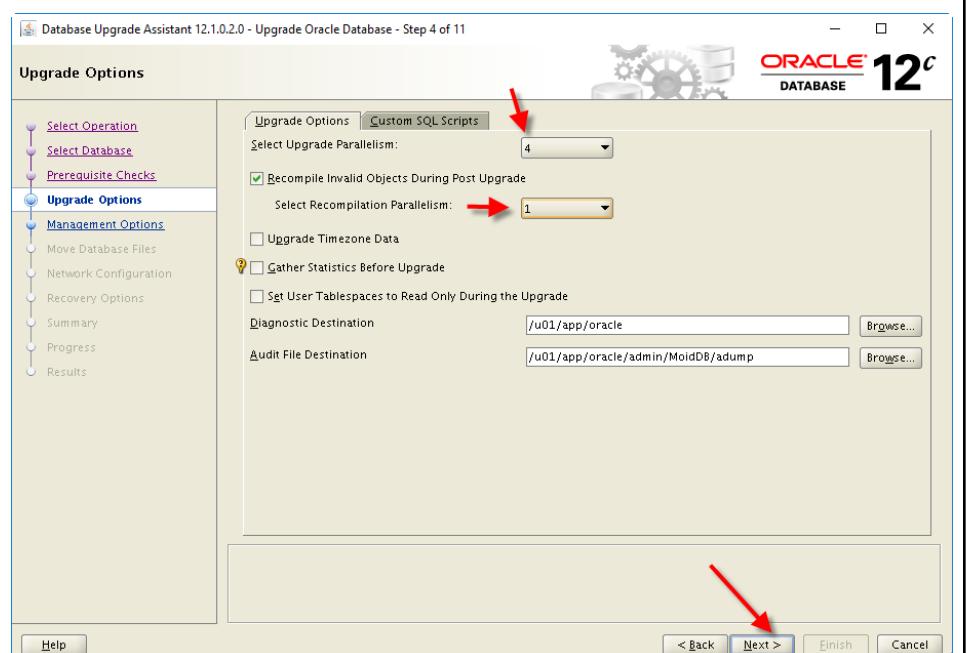
- Select the source Database Home that you want to upgrade
- select the Database that you want to upgrade
- Click Next



- If the prerequisite checks highlight any issues, take the appropriate action to fix the issues. When you are happy with the prerequisites, click the "Next" button.
- Click Next



- Select Upgrade Parallism to 4 or less.
- Select 1 for recompile objects post upgrade.
- If you like to select any other option, do it.
- Click Next



- Uncheck the enterprise manager option
- Click Next

Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 5 of 11

Management Options

Specify the management options for the database.

☐ **Configure Enterprise Manager (EM) Database Express**

EM Database Express Port: 5500

☐ Register with Enterprise Manager (EM) Cloud Control

OMS Host:

OMS Port:

EM Admin Username:

EM Admin Password:

DBSNMP User Password:

Help < Back Next > Finish Cancel

- Since we are not moving datafiles or FRA, leave both unchecked
- Click Next

Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 6 of 11

Move Database Files

☐ Move Database Files as Part of Upgrade

Storage Type: File System

☒ Use Common Location for All Database Files

Files Location: /u01/app/oracle/oradata

☐ Use Oracle Managed Files

☐ Multiplex Redo Logs and Control Files

☐ Use a Mapping File to Specify Location of Database Files

Mapping File: /u01/app/oracle/cfgtoollogs/dbua/MoldDB/upgrade1/mapfile.txt

☐ Move Fast Recovery Area as Part of Upgrade

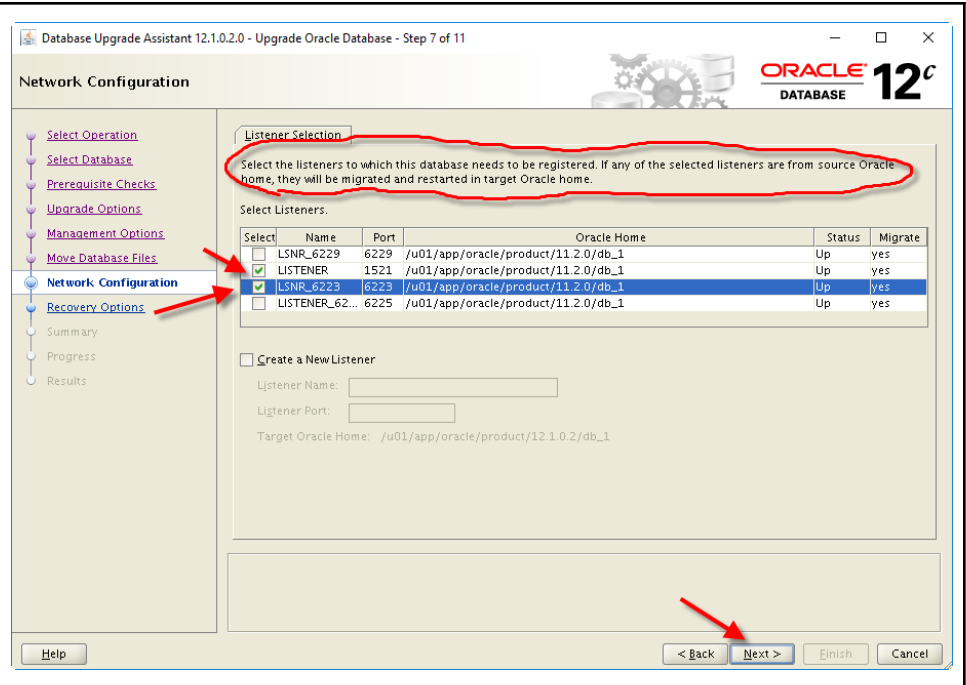
Storage Type: File System

Fast Recovery Area Location: /u01/app/oracle/fast_recovery_area

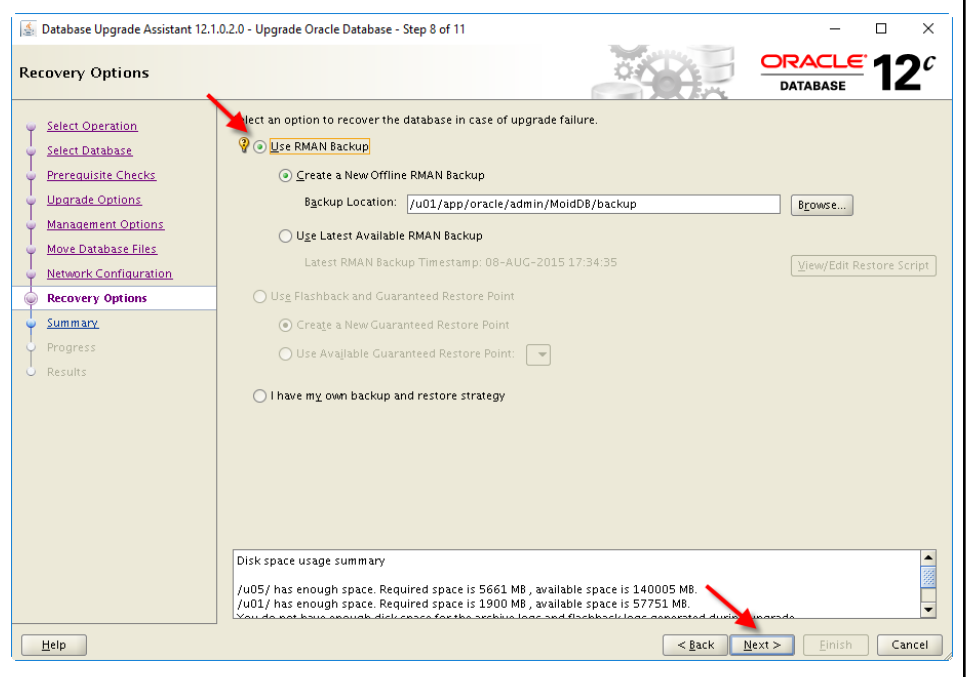
Fast Recovery Area Size: 5220 MB

Help < Back Next > Finish Cancel

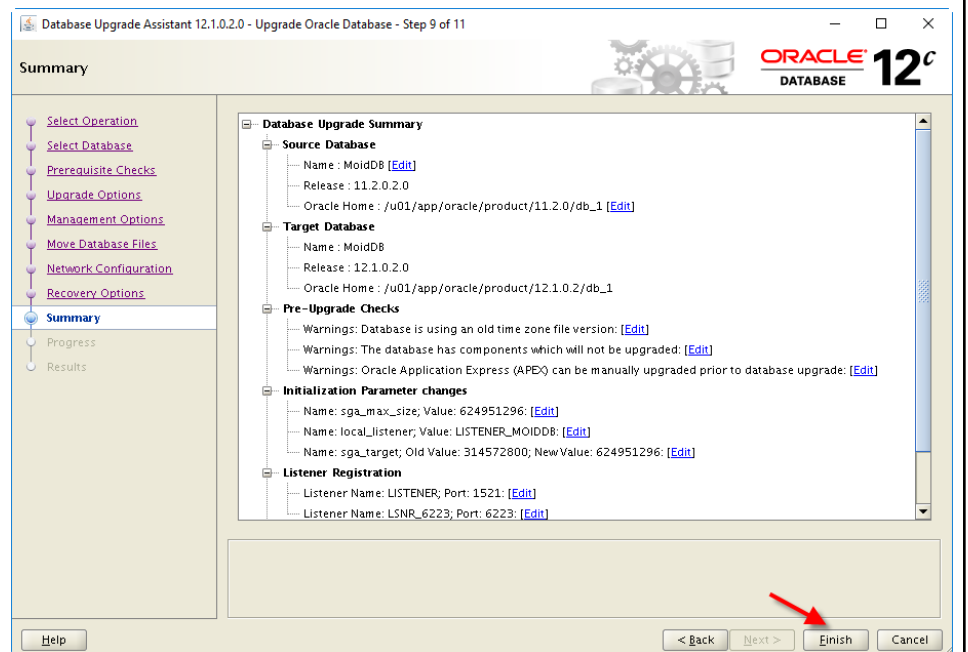
- Select the listeners you want to upgrade
- Click Next



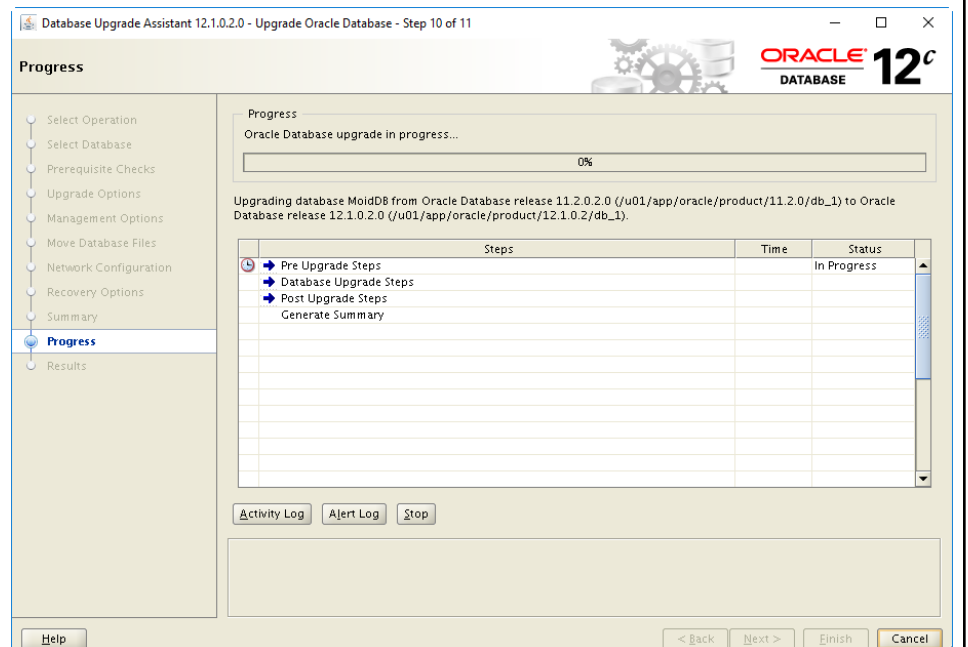
- Select the choice of rollback plan you want in case of upgrade failure
- Click Next



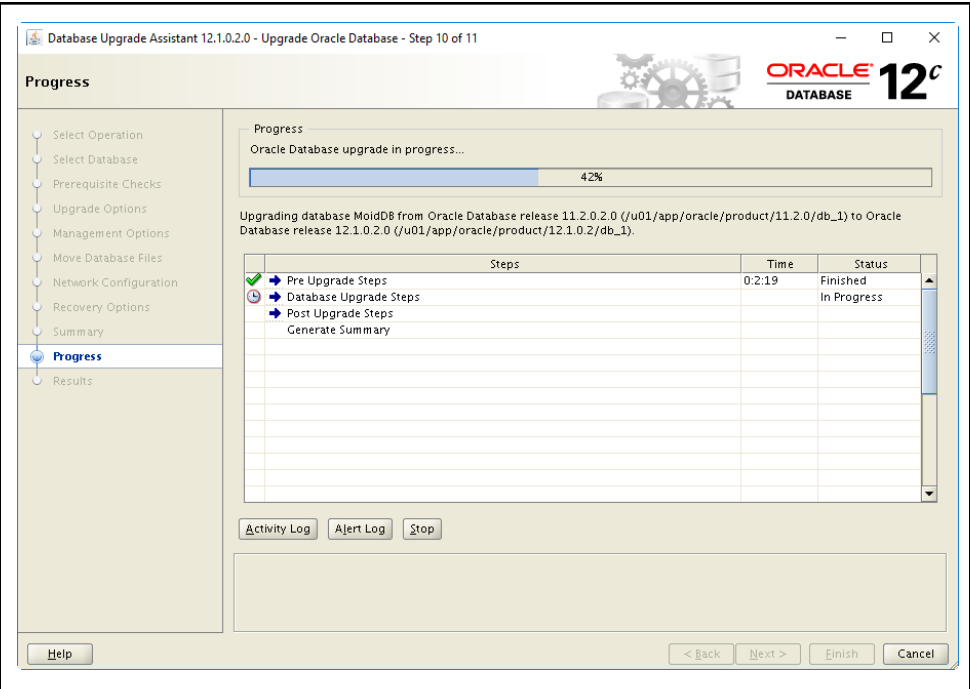
- Click Finish to begin installation



- DBUA will start Pre Upgrade steps running for few minutes...



- ...before database upgrade steps starts, you'll see a screen like the following→



Post-Upgrade:

Step No.	Description	Commands / Screenshot