Assignment No. 8

Batch: T6
PRN No: 2019BTECS00033

- **Title: Install & configure Oracle Advanced Replication server. Use Oracle Enterprise Edition for multiple master sites.**

Aim:

- Use Oracle Enterprise Edition for multiple master sites.

Steps for Install & configure Oracle Advanced Replication server

I System Requirements:
8 GB of RAM; 80 GB of free space on the hard disk + staging area for Oracle Linux and RAC downloads, about 12 GB; This procedure was tested on 64-bit Windows 10.

I Download Software :
OracleLinux 7
Mobile Xstream
Linux ISO file(4.5GB)

I Install the system Linux prerequisites

The package oracle-database-preinstall-19c contains all the prerequisites on Oracle Linux using the Oracle Unbreakable Enterprise Kernel (UEK).

```
# yum update -y
# yum install -y oracle-database-preinstall-19c.x86_64
# yum install oracleasm-support
# yum install bind* -y
```

sysctl -p

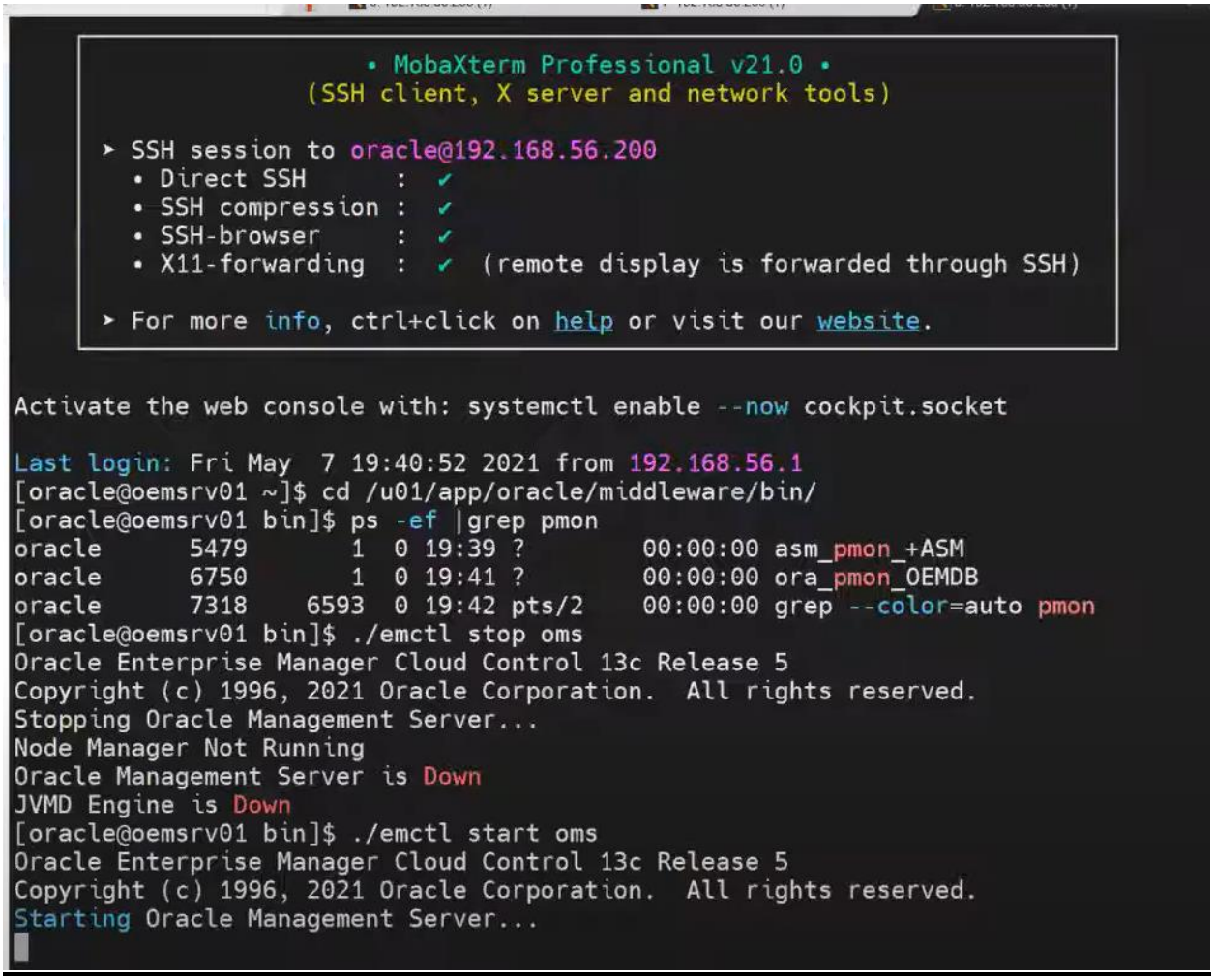
I OS level prerequisites (User creation + Network and System level changes):

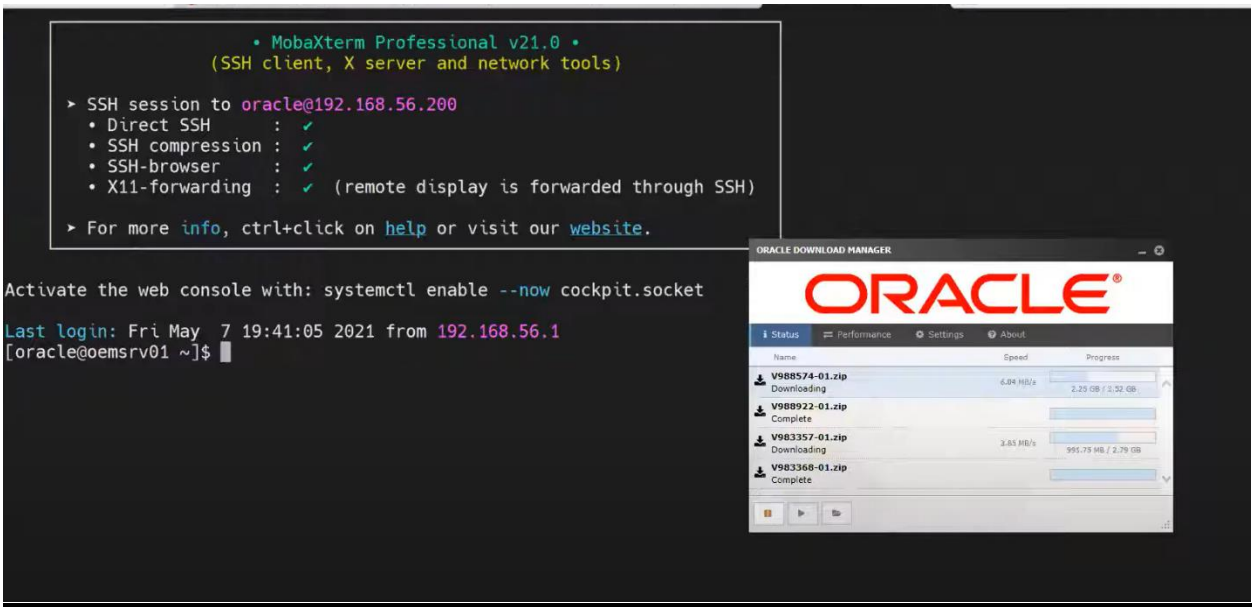
II • Add the following entry in /etc/hosts file

```
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
::1 localhost localhost.localdomain localhost6 localhost6.localdomain6
# Private
192.168.10.1 rac1-priv.localdomain rac1-priv
192.168.10.2 rac2-priv.localdomain rac2-priv
# Public
192.168.56.71 rac1.localdomain rac1
192.168.56.72 rac2.localdomain rac2
# Virtual
192.168.56.81 rac1-vip.localdomain rac1-vip
192.168.56.82 rac2-vip.localdomain rac2-vip
```

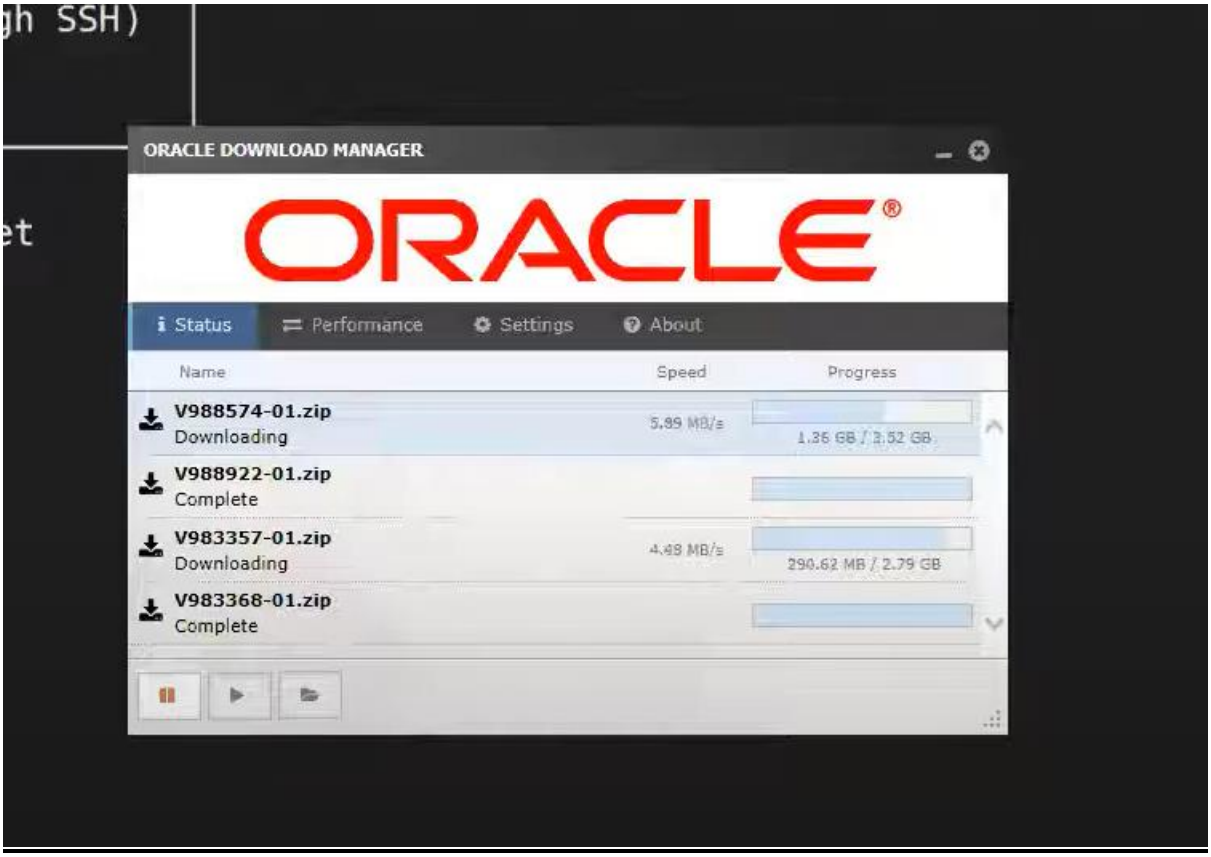
I Configure oracleasm on both the nodes as root user.

ScreenSHOTS OF Practical:


• MobaXterm Professional v21.0 •
(SSH client, X server and network tools)
➤ SSH session to oracle@192.168.56.200
• Direct SSH : ✔
• SSH compression : ✔
• SSH-browser : ✔
• X11-forwarding : ✔ (remote display is forwarded through SSH)
➤ For more info, ctrl+click on help or visit our website.
Activate the web console with: systemctl enable --now cockpit.socket
Last login: Fri May 7 19:40:52 2021 from 192.168.56.1
[oracle@oemsrv01 ~]$ cd /u01/app/oracle/middleware/bin/
[oracle@oemsrv01 bin]$ ps -ef |grep pmon
oracle 5479 1 0 19:39 ? 00:00:00 asm_pmon_+ASM
oracle 6750 1 0 19:41 ? 00:00:00 ora_pmon_OEMDB
oracle 7318 6593 0 19:42 pts/2 00:00:00 grep --color=auto pmon
[oracle@oemsrv01 bin]$ ./emctl stop oms
Oracle Enterprise Manager Cloud Control 13c Release 5
Copyright (c) 1996, 2021 Oracle Corporation. All rights reserved.
Stopping Oracle Management Server...
Node Manager Not Running
Oracle Management Server is Down
JVMD Engine is Down
[oracle@oemsrv01 bin]$ ./emctl start oms
Oracle Enterprise Manager Cloud Control 13c Release 5
Copyright (c) 1996, 2021 Oracle Corporation. All rights reserved.
Starting Oracle Management Server...


• MobaXterm Professional v21.0 •
(SSH client, X server and network tools)
➤ SSH session to oracle@192.168.56.200
• Direct SSH : ✔
• SSH compression : ✔
• SSH-browser : ✔
• X11-forwarding : ✔ (remote display is forwarded through SSH)
➤ For more info, ctrl+click on help or visit our website.
Activate the web console with: systemctl enable --now cockpit.socket
Last login: Fri May 7 19:41:05 2021 from 192.168.56.1
[oracle@oemsrv01 ~]$
ORACLE DOWNLOAD MANAGER
ORACLE
Status
Performance
Settings
About
Name
Speed
Progress
V988574-01.zip
Downloading
V988922-01.zip
Complete
V983357-01.zip
Downloading
V983368-01.zip
Complete

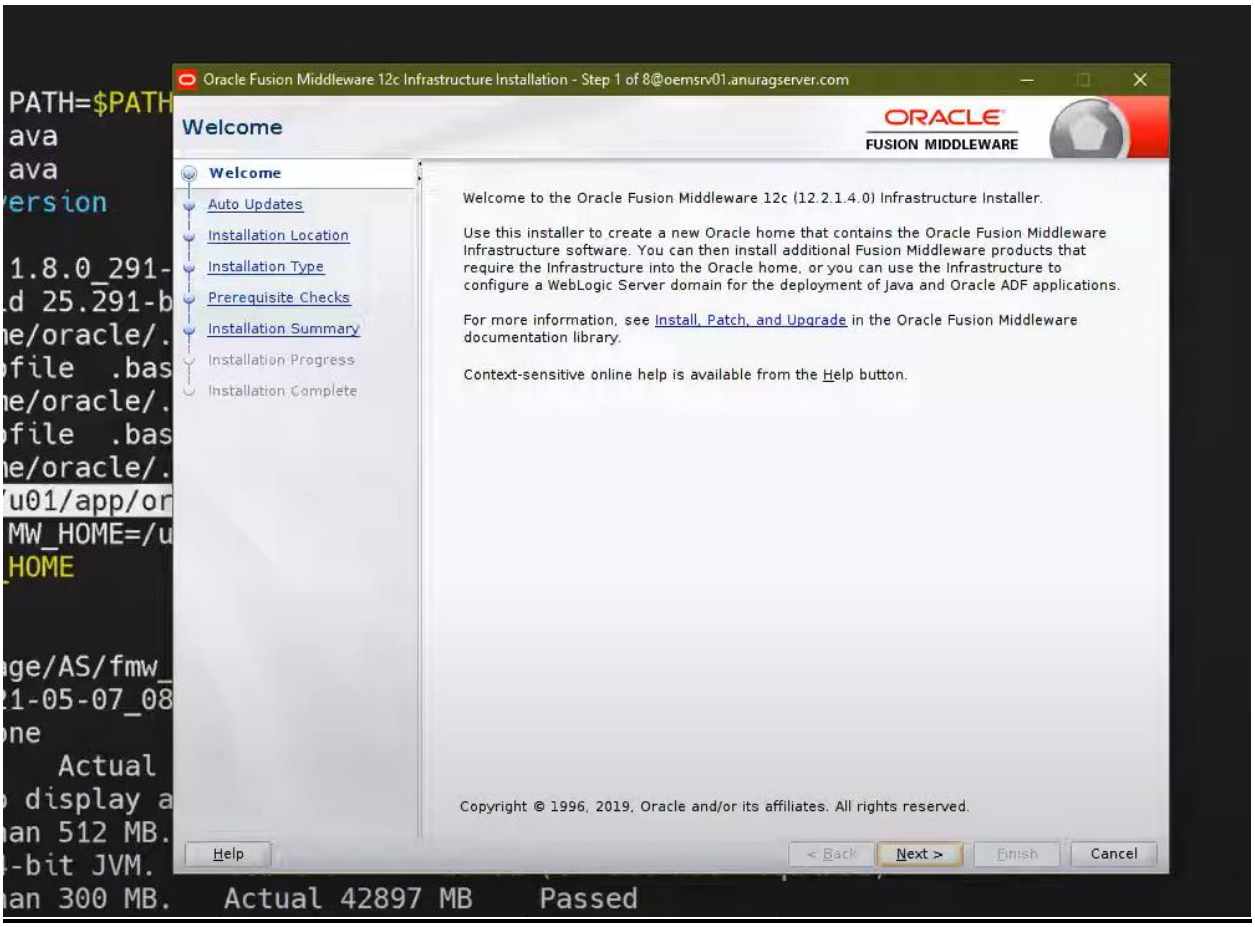
ket
ORACLE DOWNLOAD MANAGER
ORACLE
Status
Performance
Settings
About
Name
Speed
Progress
V988574-01.zip
Downloading
5,55 MB/s
1.58 GB / 3.52 GB
V988922-01.zip
Complete
V983357-01.zip
Downloading
4,11 MB/s
464.47 MB / 2.79 GB
V983368-01.zip
Complete

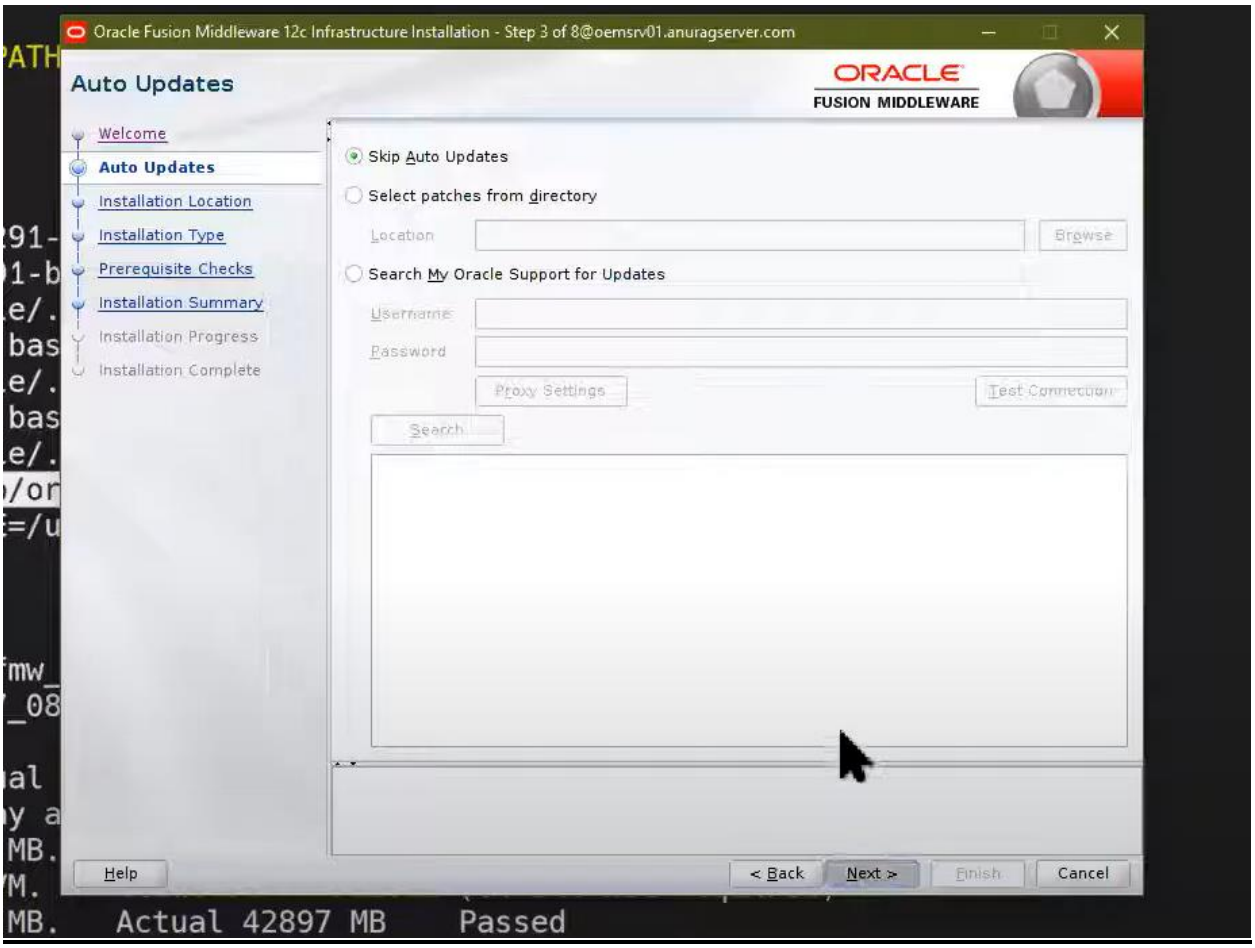


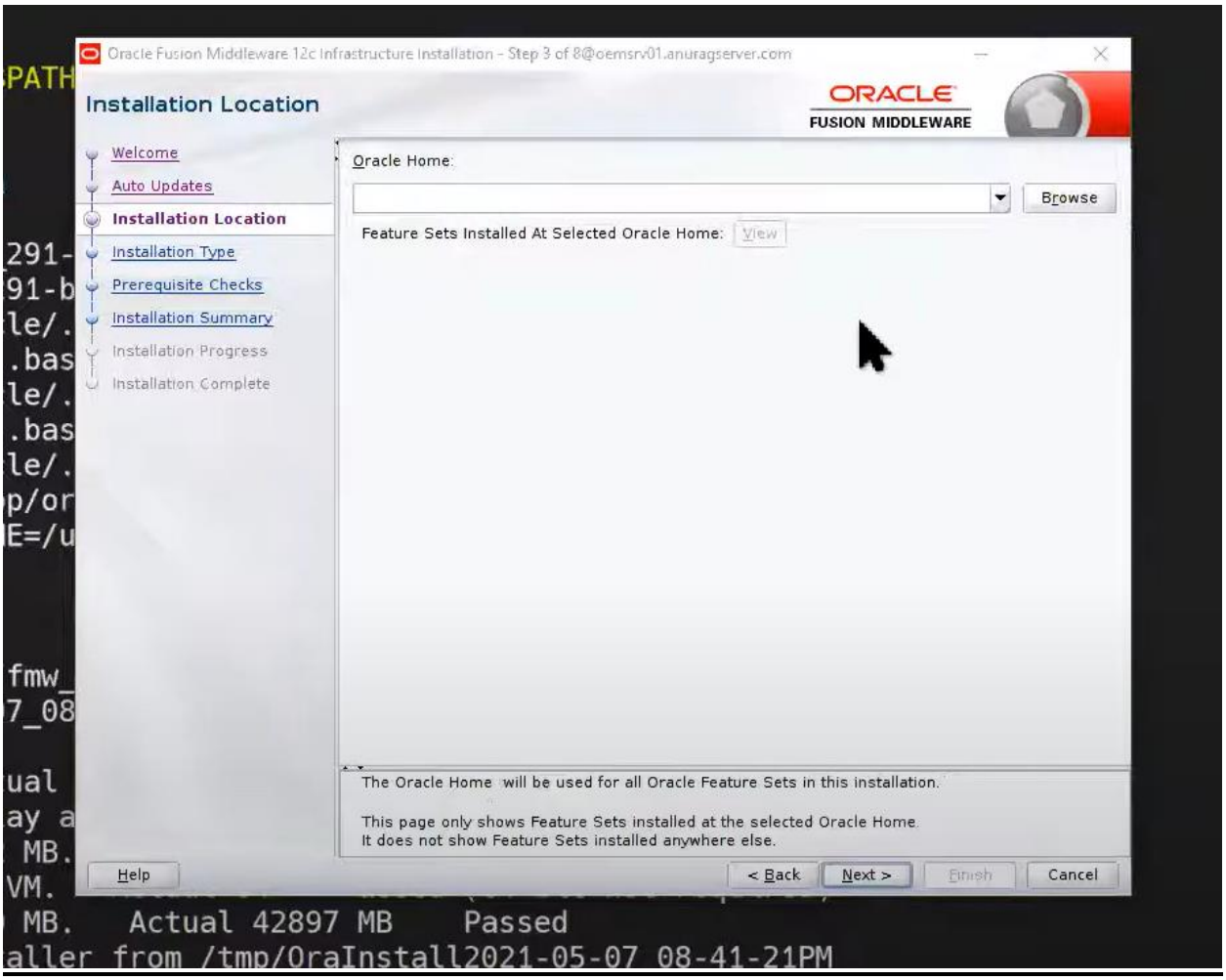

```
➤ For more info, ctrl+click on help or visit our website.

Activate the web console with: systemctl enable --now cockpit.socket

Last login: Fri May  7 14:55:31 2021 from 192.168.56.1
[root@oemsrv01 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
devtmpfs               23G     0   23G   0% /dev
tmpfs                  23G  671M   23G   3% /dev/shm
tmpfs                  23G  9.3M   23G   1% /run
tmpfs                  23G     0   23G   0% /sys/fs/cgroup
/dev/mapper/ol-root    50G  6.5G   44G  13% /
/dev/mapper/ol-stage   50G   22G   29G  44% /stage
/dev/mapper/ol-home   5.0G  169M  4.9G   4% /home
/dev/mapper/ol-u01    378G   46G  333G  13% /u01
/dev/sda2            1014M  256M  759M  26% /boot
tmpfs                 4.6G  4.0K  4.6G   1% /run/user/54321
Soft                  1.9T  1.3T  566G  70% /media/sf_Soft
tmpfs                 4.6G  1.2M  4.6G   1% /run/user/42
tmpfs                 4.6G     0  4.6G   0% /run/user/0
[root@oemsrv01 ~]# cd
```

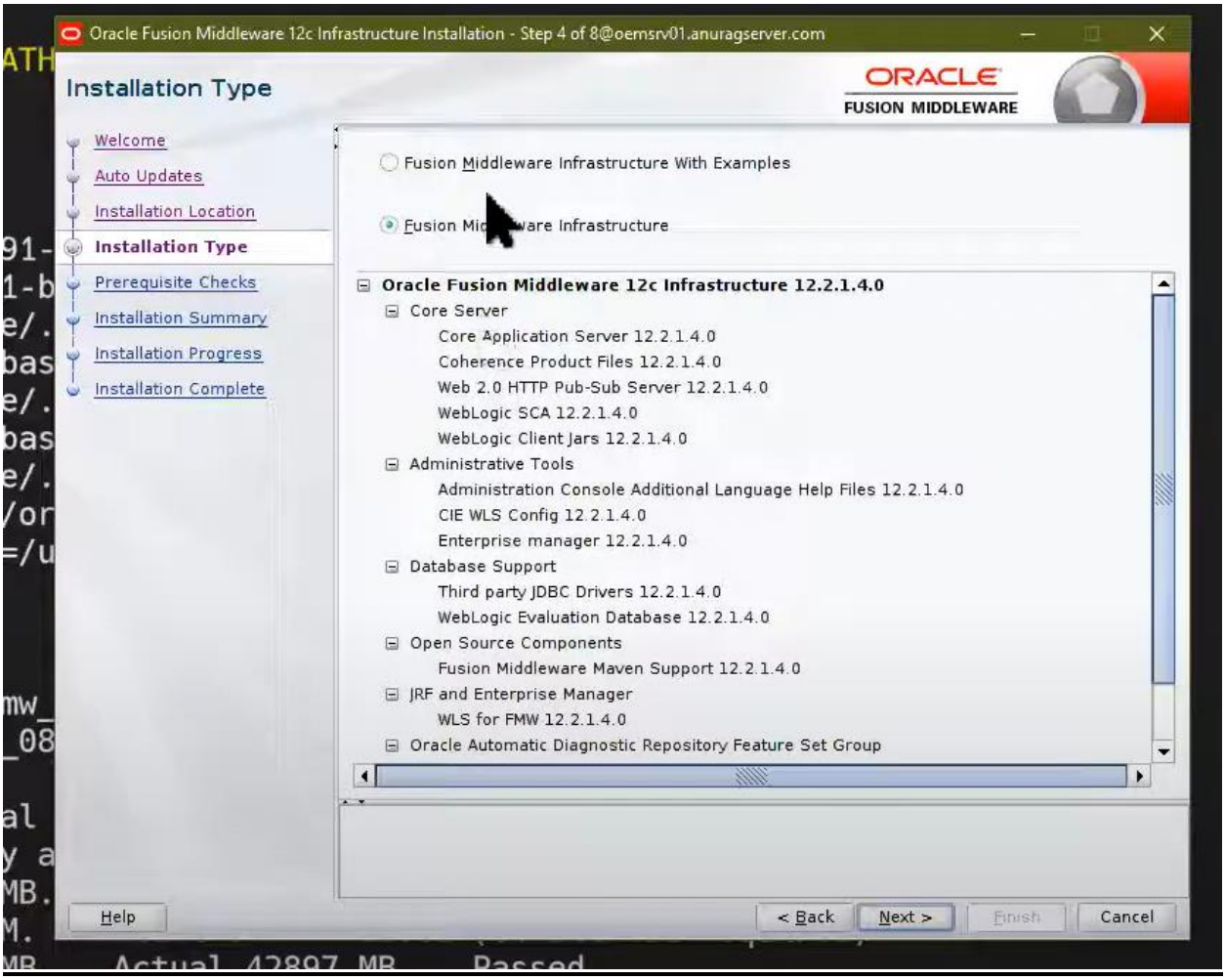
```
[root@oemsrv01 sf_Soft]# ls -ltr
total 40158548
-rwxrwx--- 1 root vboxsf 9235857408 May  1 22:07 OracleLinux-R8-U3-x86_64-dvd.iso
-rwxrwx--- 1 root vboxsf      86908 May  1 23:37 oracleasm-support-2.1.11-2.el7.x86_64.rpm
-rwxrwx--- 1 root vboxsf 1586801533 May  6 19:26 em13500_linux64.bin
-rwxrwx--- 1 root vboxsf 1897494675 May  6 19:27 em13500_linux64-2.zip
-rwxrwx--- 1 root vboxsf 2130750885 May  6 19:28 em13500_linux64-3.zip
-rwxrwx--- 1 root vboxsf 1454982045 May  6 19:29 em13500_linux64-4.zip
-rwxrwx--- 1 root vboxsf 1494500710 May  6 19:30 em13500_linux64-5.zip
-rwxrwx--- 1 root vboxsf  346552256 May  6 19:34 19.5.0.0_Database_Template_for_EM13_4_0_0_0_Linux_x64.zip
-rwxrwx--- 1 root vboxsf 2889184573 May  6 19:35 LINUX.X64_193000_grid_home.zip
-rwxrwx--- 1 root vboxsf 3059705302 May  6 19:35 LINUX.X64_193000_db_home.zip
-rwxrwx--- 1 root vboxsf 2661075097 May  6 19:37 p32578973_190000_Linux-x86-64.zip
-rwxrwx--- 1 root vboxsf  120761121 May  6 19:38 p6880880_200000_Linux-x86-64.zip
-rwxrwx--- 1 root vboxsf  144935989 May  7 19:54 jdk-8u291-linux-x64.tar.gz
-rwxrwx--- 1 root vboxsf  637756056 May  7 19:55 fmw_14.1.1.0.0_wls_lite_Disk1_1of1.zip
-rwxrwx--- 1 root vboxsf      64852 May  7 19:56 p30657796_122140_Generic.zip
-rwxrwx--- 1 root vboxsf 4065836180 May  7 19:58 Oracle_Analytics_Server_Linux_5.9.0.zip
-rwxrwx--- 1 root vboxsf    1862176 May  7 20:01 Oracle_SSN_DLM_05071431.exe
-rwxrwx--- 1 root vboxsf      64852 May  7 20:02 V988922-01.zip
-rwxrwx--- 1 root vboxsf 1635717400 May  7 20:09 V983368-01.zip
-rwxrwx--- 1 root vboxsf 2991032010 May  7 20:14 V983357-01.zip
-rwxrwx--- 1 root vboxsf 3783463137 May  7 20:18 V988574-01.zip
-rwxrwx--- 1 root vboxsf  983790512 May  7  2021 p32294034_55000_Linux-x86-64.zip.crdownload
```

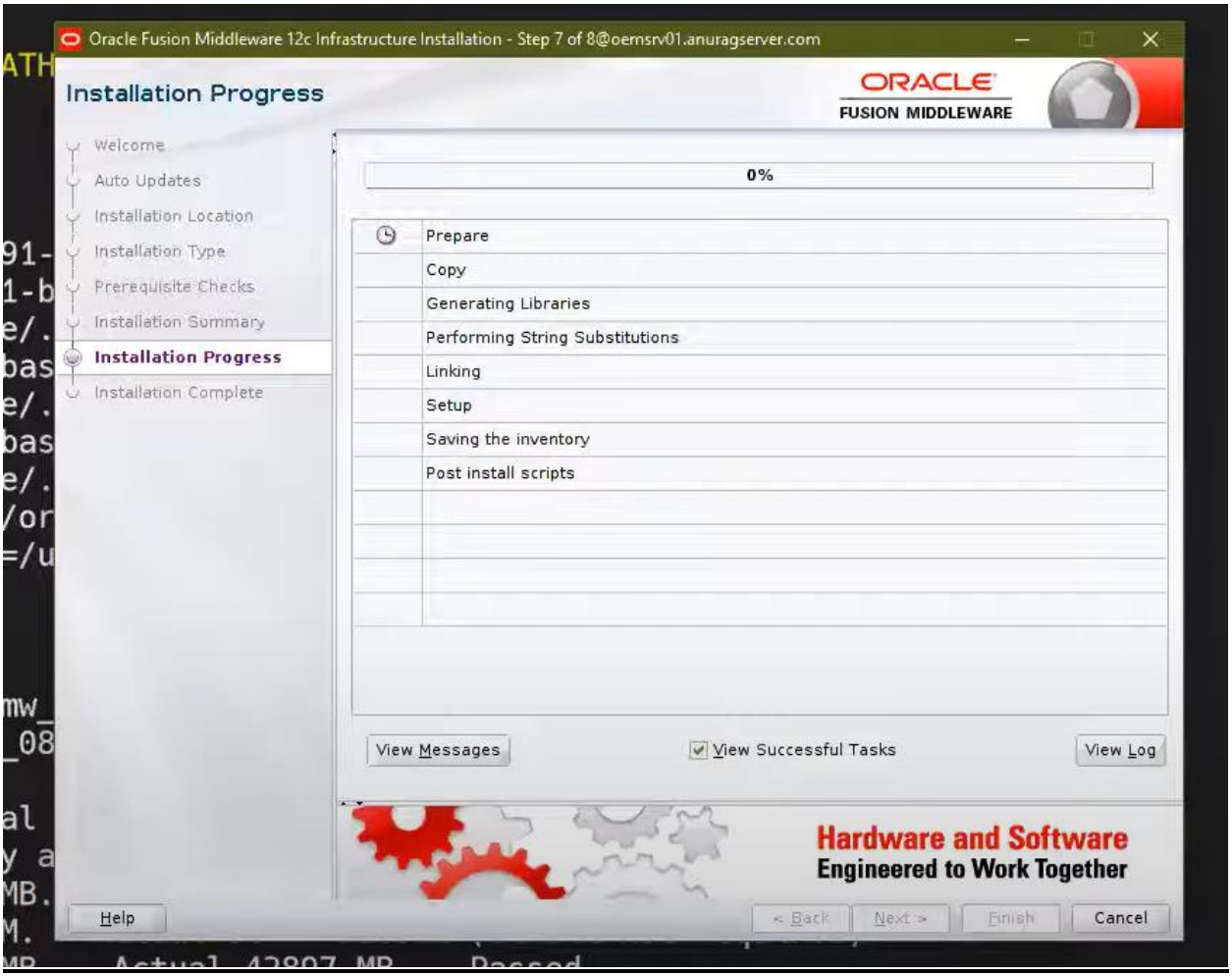
```
-rwxr-xr-x 1 root root 3037163520 Sep 13  2019 fmw_12.2.1.4.0_infrastructure_generic-12.2.1.4.0-190912.1920.645.1909130253.ova
-rw-r--r-- 1 root root       1890 Sep 17  2019 ReadmeFMW.txt
-rwxr-x--- 1 root root  144935989 May  7 20:19 jdk-8u291-linux-x64.tar.gz
-rwxr-x--- 1 root root 2991032010 May  7 20:20 V983357-01.zip
-rwxr-x--- 1 root root 1635717400 May  7 20:21 V983368-01.zip
-rwxr-x--- 1 root root 3783463137 May  7 20:21 V988574-01.zip
-rwxr-x--- 1 root root      64852 May  7 20:21 V988922-01.zip
-rwxr-x--- 1 root root      64852 May  7 20:22 p30657796_122140_Generic.zip
[root@oemsrv01 AS]# rm -rf fmw_12.2.1.4.0_infrastructure_generic-12.2.1.4.0-190912.1920.645.1909130253.ova ReadmeFMW.txt V983357-01.zip
[root@oemsrv01 AS]# ls -ltr
total 5433844
-rwxr-x--- 1 root root  144935989 May  7 20:19 jdk-8u291-linux-x64.tar.gz
-rwxr-x--- 1 root root 1635717400 May  7 20:21 V983368-01.zip
-rwxr-x--- 1 root root 3783463137 May  7 20:21 V988574-01.zip
-rwxr-x--- 1 root root      64852 May  7 20:21 V988922-01.zip
-rwxr-x--- 1 root root      64852 May  7 20:22 p30657796_122140_Generic.zip
[root@oemsrv01 AS]# unzip V983368-01.zip
Archive:  V983368-01.zip
  inflating: fmw_12.2.1.4.0_infrastructure.jar
  inflating: fmw_12214_readme.html
[root@oemsrv01 AS]# ls -ltr
total 7031520
-r-xr-xr-x 1 root root 1636007590 Sep 13  2019 fmw_12.2.1.4.0_infrastructure.jar
-rw-r--r-- 1 root root      10185 Sep 16  2019 fmw_12214_readme.html
-rwxr-x--- 1 root root  144935989 May  7 20:19 jdk-8u291-linux-x64.tar.gz
-rwxr-x--- 1 root root 1635717400 May  7 20:21 V983368-01.zip
-rwxr-x--- 1 root root 3783463137 May  7 20:21 V988574-01.zip
-rwxr-x--- 1 root root      64852 May  7 20:21 V988922-01.zip
-rwxr-x--- 1 root root      64852 May  7 20:22 p30657796_122140_Generic.zip
[root@oemsrv01 AS]# rm -rf V983368-01.zip
```

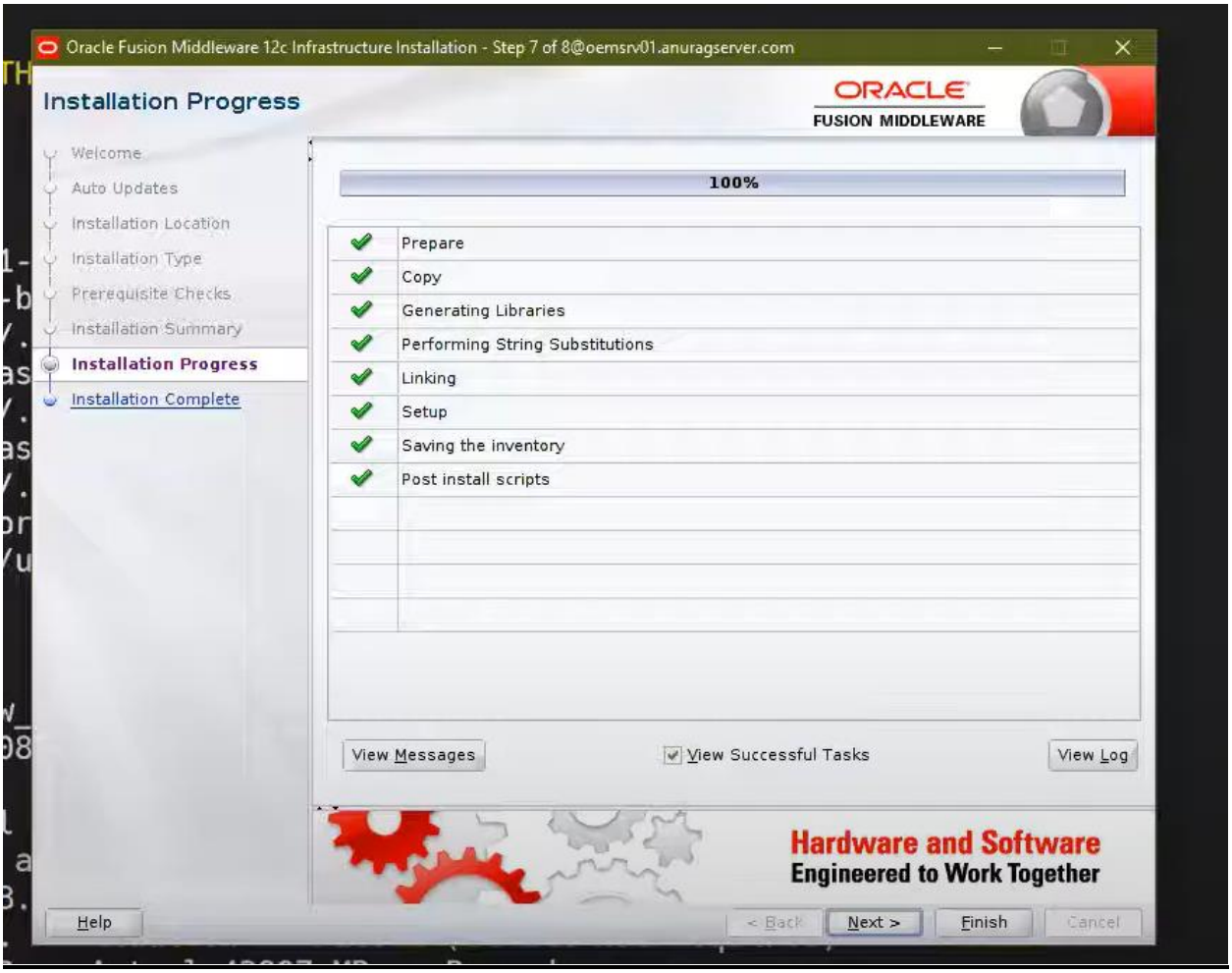

Oracle Fusion Middleware 12c Infrastructure Installation - Step 1 of 8@oemsrv01.anuragserver.com
Welcome
ORACLE
FUSION MIDDLEWARE
Welcome
Auto Updates
Installation Location
Installation Type
Prerequisite Checks
Installation Summary
Installation Progress
Installation Complete
Welcome to the Oracle Fusion Middleware 12c (12.2.1.4.0) Infrastructure Installer.
Use this installer to create a new Oracle home that contains the Oracle Fusion Middleware Infrastructure software. You can then install additional Fusion Middleware products that require the Infrastructure into the Oracle home, or you can use the Infrastructure to configure a WebLogic Server domain for the deployment of Java and Oracle ADF applications.
For more information, see Install, Patch, and Upgrade in the Oracle Fusion Middleware documentation library.
Context-sensitive online help is available from the Help button.
Copyright © 1996, 2019, Oracle and/or its affiliates. All rights reserved.
Help
< Back
Next >
Finish
Cancel
Actual 42897 MB
Passed


Oracle Fusion Middleware 12c Infrastructure Installation - Step 3 of 8@oemsrv01.anuragserver.com
Auto Updates
ORACLE
FUSION MIDDLEWARE
Welcome
Auto Updates
Installation Location
Installation Type
Prerequisite Checks
Installation Summary
Installation Progress
Installation Complete
Skip Auto Updates
Select patches from directory
Location
Browse
Search My Oracle Support for Updates
Username
Password
Proxy Settings
Test Connection
Search
Help
< Back
Next >
Finish
Cancel
Actual 42897 MB
Passed


Oracle Fusion Middleware 12c Infrastructure Installation - Step 3 of 8@oemsrv01.anuragserver.com
Installation Location
ORACLE
FUSION MIDDLEWARE
Welcome
Auto Updates
Installation Location
Installation Type
Prerequisite Checks
Installation Summary
Installation Progress
Installation Complete
Oracle Home:
Browse
Feature Sets Installed At Selected Oracle Home:
View
The Oracle Home will be used for all Oracle Feature Sets in this installation.
This page only shows Feature Sets installed at the selected Oracle Home.
It does not show Feature Sets installed anywhere else.
Help
< Back
Next >
Finish
Cancel
MB. Actual 42897 MB Passed
aller from /tmp/OraInstall2021-05-07 08-41-21PM


Oracle Fusion Middleware 12c Infrastructure Installation - Step 4 of 8@oemsrv01.anuragserver.com
Installation Type
ORACLE
FUSION MIDDLEWARE
Welcome
Auto Updates
Installation Location
Installation Type
Prerequisite Checks
Installation Summary
Installation Progress
Installation Complete
Fusion Middleware Infrastructure With Examples
Fusion Middleware Infrastructure
Oracle Fusion Middleware 12c Infrastructure 12.2.1.4.0
Core Server
Core Application Server 12.2.1.4.0
Coherence Product Files 12.2.1.4.0
Web 2.0 HTTP Pub-Sub Server 12.2.1.4.0
WebLogic SCA 12.2.1.4.0
WebLogic Client Jars 12.2.1.4.0
Administrative Tools
Administration Console Additional Language Help Files 12.2.1.4.0
CIE WLS Config 12.2.1.4.0
Enterprise manager 12.2.1.4.0
Database Support
Third party JDBC Drivers 12.2.1.4.0
WebLogic Evaluation Database 12.2.1.4.0
Open Source Components
Fusion Middleware Maven Support 12.2.1.4.0
JRF and Enterprise Manager
WLS for FMW 12.2.1.4.0
Oracle Automatic Diagnostic Repository Feature Set Group
Help
< Back
Next >
Finish
Cancel


Oracle Fusion Middleware 12c Infrastructure Installation - Step 7 of 8@oemsrv01.anuragserver.com
Installation Progress
ORACLE
FUSION MIDDLEWARE
Welcome
Auto Updates
Installation Location
Installation Type
Prerequisite Checks
Installation Summary
Installation Progress
Installation Complete
0%
Prepare
Copy
Generating Libraries
Performing String Substitutions
Linking
Setup
Saving the inventory
Post install scripts
View Messages
View Successful Tasks
View Log
Hardware and Software
Engineered to Work Together
Help
< Back
Next >
Finish
Cancel



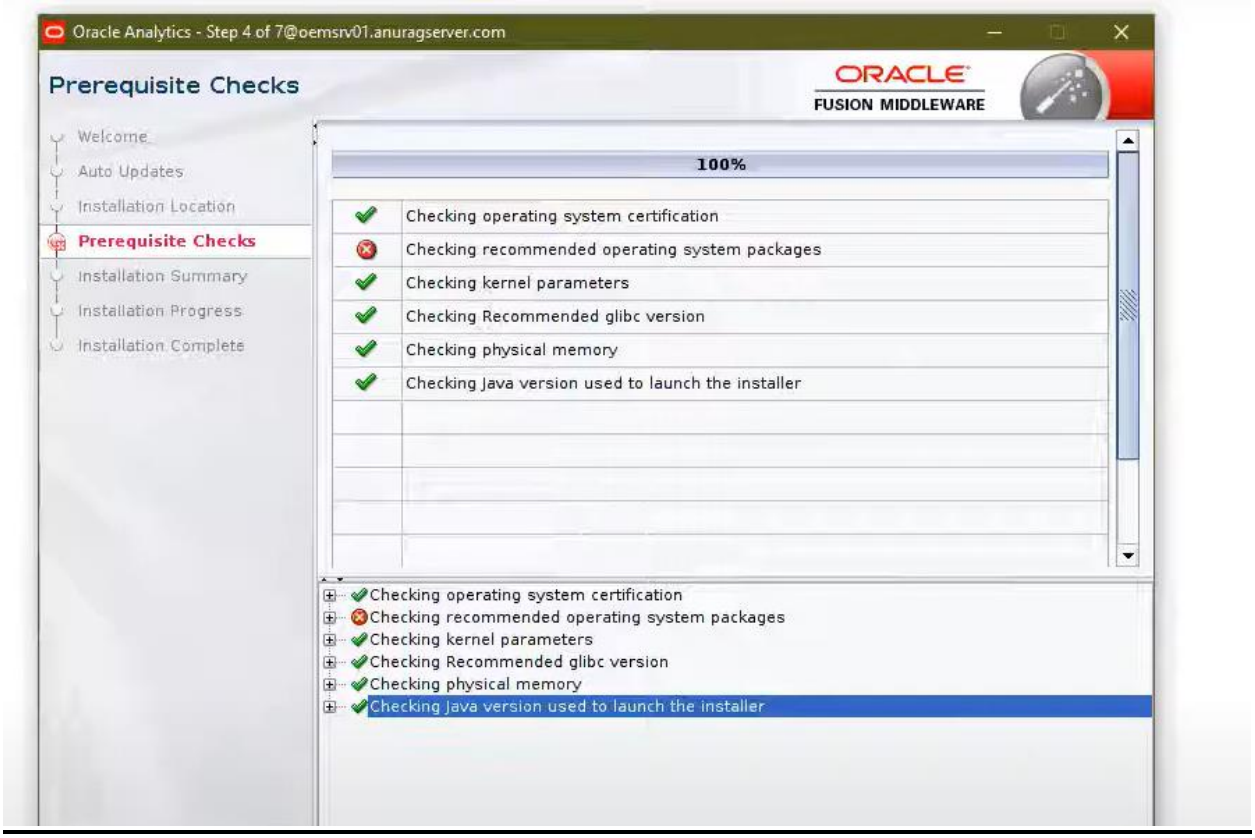

```
Launcher log file is /tmp/OraInstall2021-05-07_08-41-21PM/launcher2021-
Extracting the installer . . . . . Done
Checking if CPU speed is above 300 MHz.   Actual 3696.004 MHz    Passed
Checking monitor: must be configured to display at least 256 colors.
Checking swap space: must be greater than 512 MB.   Actual 16383 MB
Checking if this platform requires a 64-bit JVM.   Actual 64    Passed
Checking temp space: must be greater than 300 MB.   Actual 42897 MB
Preparing to launch the Oracle Universal Installer from /tmp/OraInstall
Log: /tmp/OraInstall2021-05-07_08-41-21PM/install2021-05-07_08-41-21PM.
Logs successfully copied to /u01/app/oraInventory/logs.
[oracle@oemsrv01 OASMW]$ export MW_HOME=/u01/app/oracle/OASMW
```

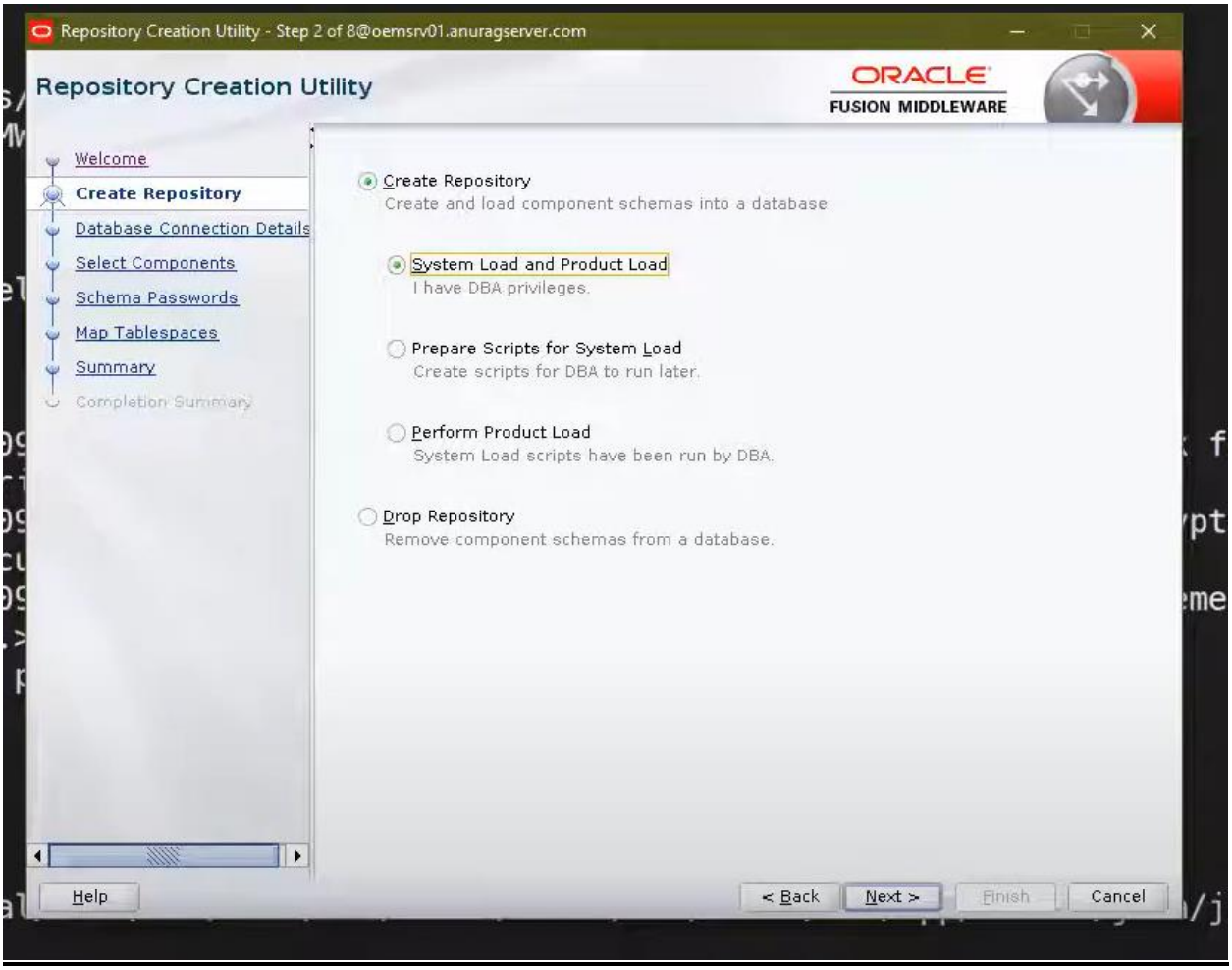
```
OPatch succeeded.
[oracle@oemsrv01 30657796]$ pwd
/u01/app/oracle/OASMW/30657796
[oracle@oemsrv01 30657796]$ opatch apply
Oracle Interim Patch Installer version 13.9.4.2.1
Copyright (c) 2021, Oracle Corporation.  All rights reserved.


Oracle Home       : /u01/app/oracle/OASMW
Central Inventory : /u01/app/oraInventory
   from           : /u01/app/oracle/OASMW/oraInst.loc
OPatch version    : 13.9.4.2.1
OUI version       : 13.9.4.0.0
Log file location : /u01/app/oracle/OASMW/cfgtoollogs/opatch/opatch2021-05-07_20-48-42PM_1.log


OPatch detects the Middleware Home as "/u01/app/oracle/OASMW"

Verifying environment and performing prerequisite checks...
OPatch continues with these patches:   30657796

Do you want to proceed? [y|n]
y
```

```
[ol8_u1_baseos_base]
name=Oracle Linux 8.1 BaseOS ($basearch)
baseurl=https://yum$ociregion.oracle.com/repo/OracleLinux/OL8/1/baseos/base/$basearch/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
gpgcheck=1
enabled=0

[ol8_u2_baseos_base]
name=Oracle Linux 8.2 BaseOS ($basearch)
baseurl=https://yum$ociregion.oracle.com/repo/OracleLinux/OL8/2/baseos/base/$basearch/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
gpgcheck=1
enabled=0

[ol8_u3_baseos_base]
name=Oracle Linux 8.3 BaseOS ($basearch)
baseurl=https://yum$ociregion.oracle.com/repo/OracleLinux/OL8/3/baseos/base/$basearch/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
gpgcheck=1
enabled=0

[ol8_addons]
```

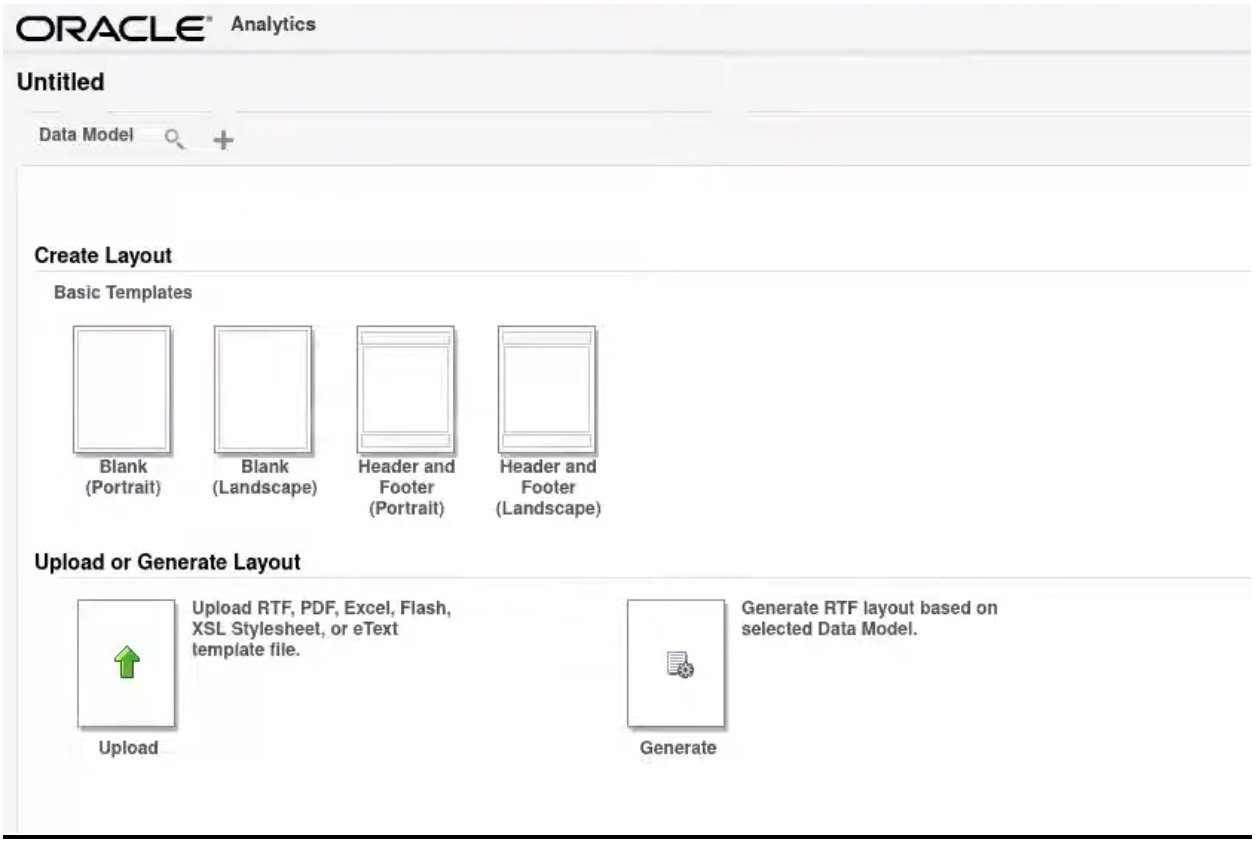
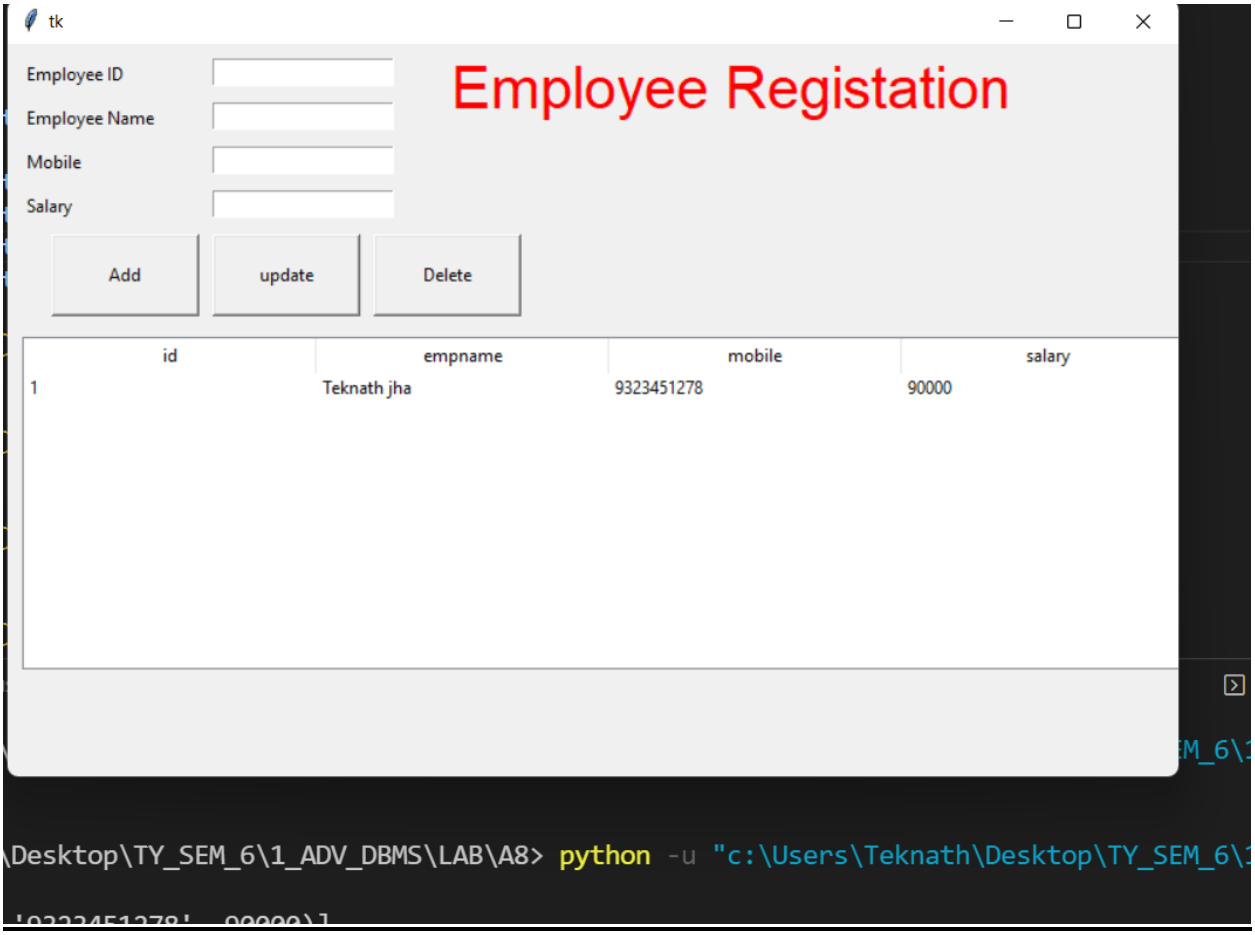
```
authselect-compat.x86_64 : Tool to provide minimum backwards compatibility with authconfig
bitmap-fonts-compat.noarch : Compatibility files of bitmap-font families
compat-exiv2-026.i686 : Compatibility package with the exiv2 library in version 0.26
compat-exiv2-026.x86_64 : Compatibility package with the exiv2 library in version 0.26
compat-exiv2-026.src : Compatibility package with the exiv2 library in version 0.26
compat-libgfortran-48.i686 : Compatibility Fortran runtime library version 4.8.5
compat-libgfortran-48.x86_64 : Compatibility Fortran runtime library version 4.8.5
compat-libgfortran-48.src : Compatibility Fortran runtime library version 4.8.5
compat-libpthread-nonshared.x86_64 : Compatibility support for linking against libpthread_nonshared.a
compat-libtiff3.i686 : Compatibility package for libtiff 3
compat-libtiff3.x86_64 : Compatibility package for libtiff 3
compat-libtiff3.src : Compatibility package for libtiff 3
compat-locales-sap.noarch : Compatibility locales for SAP
compat-locales-sap.x86_64 : Compatibility locales for SAP
compat-locales-sap.src : Compatibility locales for SAP
compat-openssl10.i686 : Compatibility version of the OpenSSL library
compat-openssl10.x86_64 : Compatibility version of the OpenSSL library
compat-openssl10.src : Compatibility version of the OpenSSL library
ipa-python-compat.noarch : Compatiblity package for Python libraries used by IPA
libpsm2-compat.x86_64 : Compat library for Intel PSM
ncurses-compat-libs.i686 : Ncurses compatibility libraries
ncurses-compat-libs.x86_64 : Ncurses compatibility libraries
perl-MRO-Compat.noarch : Mro::* interface compatibility for Perls < 5.9.5
```

```
[root@oemsrv01 sf_Soft]# yum localinstall -y compat-libcap1-1.10-7.el7.x86_64.rpm
Oracle Linux 8 BaseOS Latest (x86_64)
Oracle Linux 8 Application Stream (x86_64)
Dependencies resolved.
================================================================================
 Package                          Architecture                 Version
================================================================================
Installing:
 compat-libcap1                   x86_64                       1.10-7.el7

Transaction Summary
================================================================================
Install  1 Package

Total size: 17 k
Installed size: 29 k
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :
  Installing       : compat-libcap1-1.10-7.el7.x86_64
  Running scriptlet: compat-libcap1-1.10-7.el7.x86_64
  Verifying        : compat-libcap1-1.10-7.el7.x86_64

Installed:
  compat-libcap1-1.10-7.el7.x86_64

Complete!
```


Oracle Analytics - Step 4 of 7@oemsrv01.anuragserver.com
Prerequisite Checks
ORACLE
FUSION MIDDLEWARE
Welcome
Auto Updates
Installation Location
Prerequisite Checks
Installation Summary
Installation Progress
Installation Complete
100%
Checking operating system certification
Checking recommended operating system packages
Checking kernel parameters
Checking Recommended glibc version
Checking physical memory
Checking Java version used to launch the installer
Checking operating system certification
Checking recommended operating system packages
Checking kernel parameters
Checking Recommended glibc version
Checking physical memory
Checking Java version used to launch the installer


Repository Creation Utility - Step 2 of 8@oemsrv01.anuragserver.com
Repository Creation Utility
ORACLE
FUSION MIDDLEWARE
Welcome
Create Repository
Database Connection Details
Select Components
Schema Passwords
Map Tablespaces
Summary
Completion Summary
Create Repository
Create and load component schemas into a database
System Load and Product Load
I have DBA privileges.
Prepare Scripts for System Load
Create scripts for DBA to run later.
Perform Product Load
System Load scripts have been run by DBA.
Drop Repository
Remove component schemas from a database.
Help
< Back
Next >
Finish
Cancel

Configuration Progress
ORACLE
FUSION MIDDLEWARE
Welcome
Components
Prerequisite Checks
Define Domain
Database Schema
Port Management
Initial Content
Summary
Configuration Progress
Configuration Complete
Configuration Tools
Name
Progress
Oracle_Analytics_Configuration
12%
Create default domains dir
Success
Create expanded domain
Success
Create schemas using RCU
In Progress
Oracle Analytics Server
Not started
Oracle Analytics Publisher
Not started
Complete domain
Not started
Store port range
Not started
Create SSL certificates
Not started
Create internal channels
Not started
Sync mid tier database
Not started
Create system components
Not started
Add default service instance
Not started


ORACLE Analytics
Untitled
Data Model
Create Layout
Basic Templates
Blank (Portrait)
Blank (Landscape)
Header and Footer (Portrait)
Header and Footer (Landscape)
Upload or Generate Layout
Upload RTF, PDF, Excel, Flash, XSL Stylesheet, or eText template file.
Upload
Generate RTF layout based on selected Data Model.
Generate

Write Python desktop application to demonstrate the CRUD operations on replica server.