

Oracle Fusion Middleware 12c on SUSE Linux Enterprise Server 15 (SP4) for x86-64

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Introduction

This document provides details on installing and configuring Oracle Fusion Middleware 12c Components on SUSE Linux Enterprise Server 15 SP4. Details are provided for Intel x86-64 versions of both Oracle FMW 12c and SUSE Linux Enterprise Server 15 SP4. Similar steps apply to other platforms (x86, ia64, System z, etc.).

Official Oracle product documentation is available at: <http://docs.oracle.com/en/>

System Requirements and Specifications

Hardware Requirements

Requirement	Minimum
CPU	1-GHz CPU
Physical Memory	4 GB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	4 GB
Disk space for software files	4 GB

Software Requirements

SUSE

- SUSE Linux Enterprise Server 15 SP4 GM (x86-64)
(<https://www.suse.com/download/sles/>)

Oracle

- Database 12cR2 (12.2.0.1.0) - (x86_64)
(<https://www.oracle.com/downloads/#category-database>)
- Java SE Development Kit 8 (jdk-8u221-linux-x64.tar.gz)
(<https://www.oracle.com/downloads/#category-java>)
- WebLogic Server 12cR2 (12.2.1.4) (fmw_12.2.1.3.0_wls_Disk1_1of1.zip)
(<https://www.oracle.com/downloads/#category-middleware>)
- WebLogic Server 12cR2 (12.2.1.4.0) - (Fusion Middleware Infrastructure Installer)
(<https://www.oracle.com/downloads/#category-middleware>)
- Forms and Reports 12c (12.2.1.4.0) - (x86_64)
(<https://www.oracle.com/downloads/#category-middleware>)
- WebTier 12cR2 Oracle HTTP Server (12.2.1.4.0) - (x86_64)
(<https://www.oracle.com/downloads/#category-middleware>)
- WebCenter Portal 12c (12.2.1.4.0) - (V983398-01.zip)
(<https://www.oracle.com/downloads/#category-middleware>)
- SOA Suite 12c (12.2.1.4.0) - (V983385-01_1of2.zip)
(<https://www.oracle.com/downloads/#category-middleware>)
- Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) – (Generic Quick Installer)
(<https://www.oracle.com/downloads/#category-middleware>)

Testing Machine Information

Dell Laptop Precision 5530

CPU: 6 * Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz

RAM: 32 GB

NIC: 2

Local HDD: 1TB + 512GB

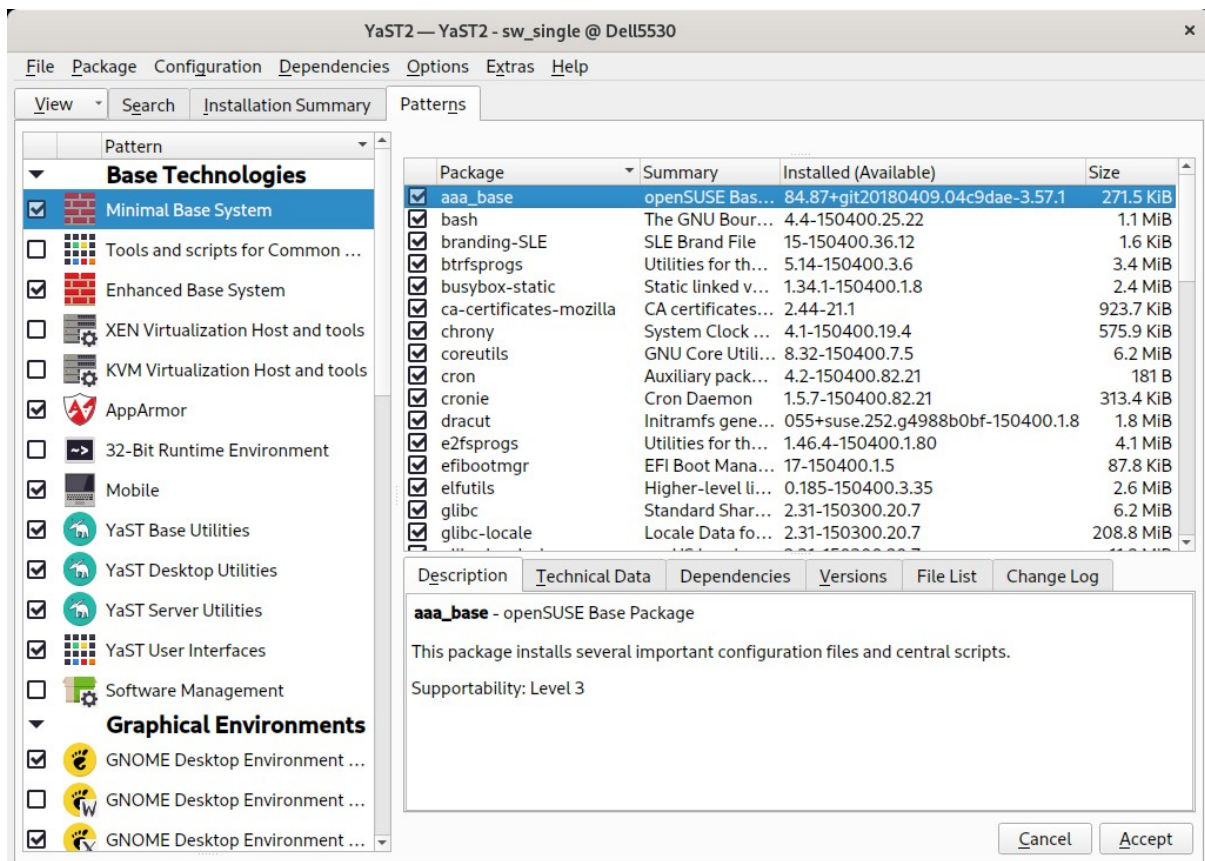
OS: SUSE Linux Enterprise Server 15 SP4 GM (x86-64) - Kernel version: 5.14.21-150400.22-default

Prerequisites

1. Installing SUSE Linux Enterprise Server 15 SP4

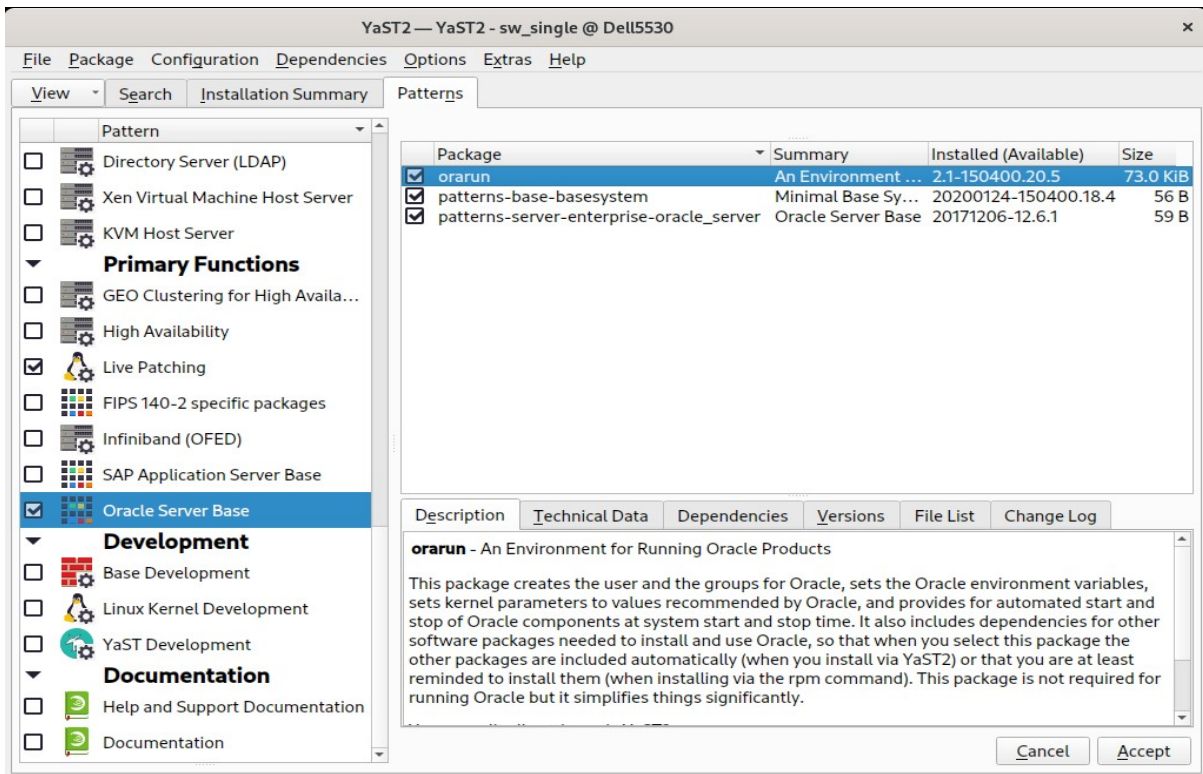
1-1. Install SUSE Linux Enterprise Server 15 SP4 on your testing machine. To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at: <https://www.suse.com/documentation/>.

Figure 1-1 Software Installed as shown below

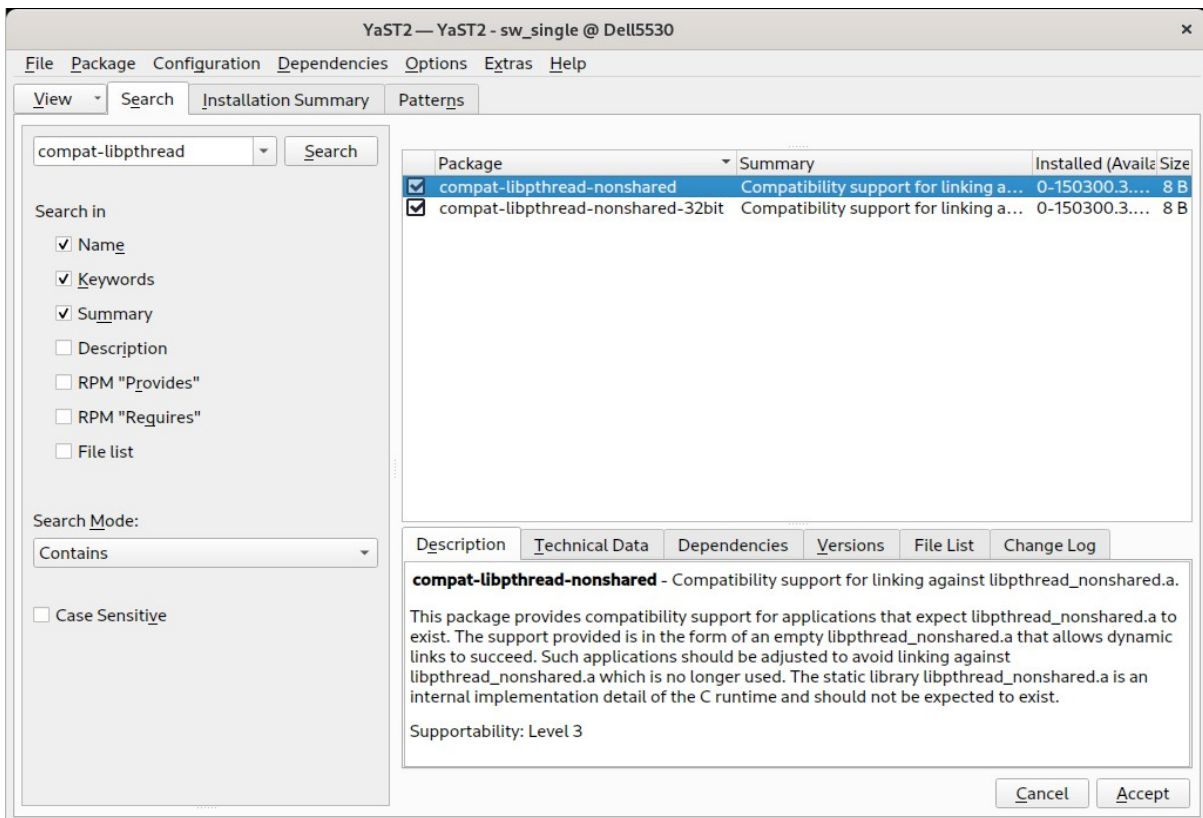


In Yast, select the patterns you need. Make sure you select the patterns and packages required to run Oracle products.

Figure 1-2 Software Installed as shown below



(Note: Please make sure that 'compat-libpthread-nonshared' is installed.



)

After the installation of SUSE Linux Enterprise Server, the following information about the operating system and the kernel version is displayed.

Figure 1-3 OS release information and kernel version

```
oracle@Dell5530:~> more /etc/os-release
NAME="SLES"
VERSION="12-SP5"
VERSION_ID="12.5"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP5"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp5"
oracle@Dell5530:~> uname -a
Linux Dell5530 4.12.14-120-default #1 SMP Thu Nov 7 16:39:09 UTC 2019 (fd9dc36) x86_64 x86_64 x86_64 GNU/Linux
oracle@Dell5530:~> █
```


1-2. SPecial Startup Requirements.

1). To set the SHMMAX kernel parameter.

Change the value of SHMMAX to 16531791872 by including the following line in /etc/sysctl.conf:

```
kernel.shmmax = 16531791872
```

Change the value of shmall to 9272480 by including the following line in /etc/sysctl.conf

```
kernel.shmall = 9272480
```

Activate the new SHMMAX setting by running the command:

```
/sbin/sysctl -p
```

2). Checking the Open File Limit and Maximum Stack Size.

```
ulimit -a
```

To change the open file limits, login as root and edit the /etc/security/limits.conf file. Look for the following lines:

```
* soft nfile 4096
* hard nfile 65536
* soft nproc 2047
* hard nproc 16384
```

To change the maximum stack size, login as root and edit the /etc/security/limits.conf file. Add the following line:

```
oracle soft stack 10240
```

then reboot the machine.

3). Remove /etc/profile.d/oracle.sh and /etc/profile.d/alljava.sh as root.

```
#mv /etc/profile.d/oracle.sh /etc/profile.d/oracle.sh.bak
#mv /etc/profile.d/alljava.sh /etc/profile.d/alljava.sh.bak
```

2. Installing Oracle Database 12cR2

2-1. Log in to the target system (SUSE Linux Enterprise Server 15 SP4 64-bit OS) as a non-admin user. Download Oracle Database 12cR2 (12.2.0.1.0) x86_64 from <https://www.oracle.com/downloads/#category-database>.

2-2. Oracle Database 12cR2 (12.2.0.1.0) is officially certified for SUSE Linux Enterprise Server 12(x86_64). For detailed instructions please use Official Oracle Install guides: <http://docs.oracle.com/en/database/database.html>.

Figure 2-1 Make sure the Database up and running

```
oracle@Dell5530:~> export ORACLE_HOME=/home/oracle/app/product/12.2.0/dbhome_1/
oracle@Dell5530:~> export ORACLE_SID=suse
oracle@Dell5530:~> /home/oracle/app/product/12.2.0/dbhome_1/bin/sqlplus /nolog

SQL*Plus: Release 12.2.0.1.0 Production on Fri Aug 26 15:19:31 2022

Copyright (c) 1982, 2016, Oracle. All rights reserved.

SQL> conn /as sysdba
Connected to an idle instance.
SQL> startup
ORACLE instance started.

Total System Global Area 9898557440 bytes
Fixed Size 12169752 bytes
Variable Size 2013269480 bytes
Database Buffers 7851737088 bytes
Redo Buffers 21381120 bytes
Database mounted.
Database opened.
SQL> select name,open_mode from v$database;

NAME          OPEN_MODE
-----
SUSE          READ WRITE

SQL> exec DBMS_XDB_CONFIG.SETHTTPPORT(5501);

PL/SQL procedure successfully completed.

SQL> exit
Disconnected from Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production
oracle@Dell5530:~> █
```

Figure 2-2 Start the Database listener

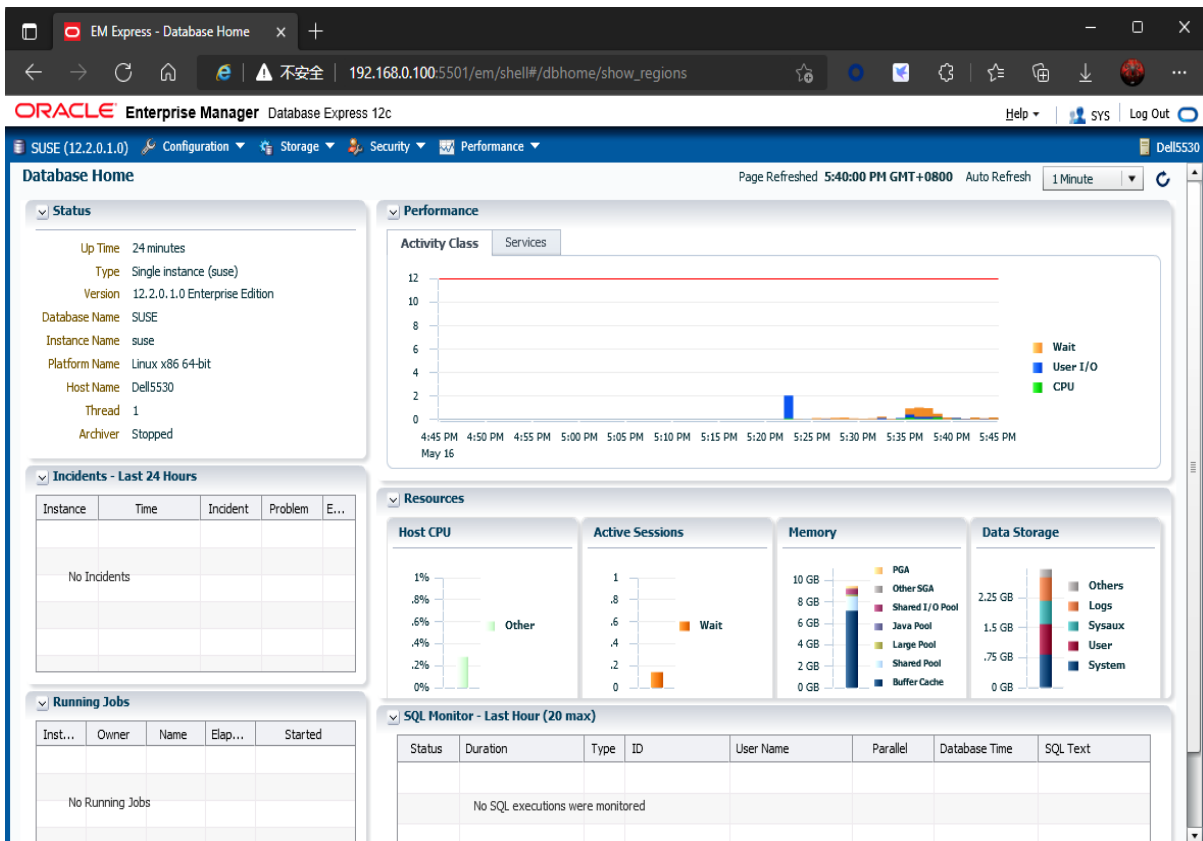
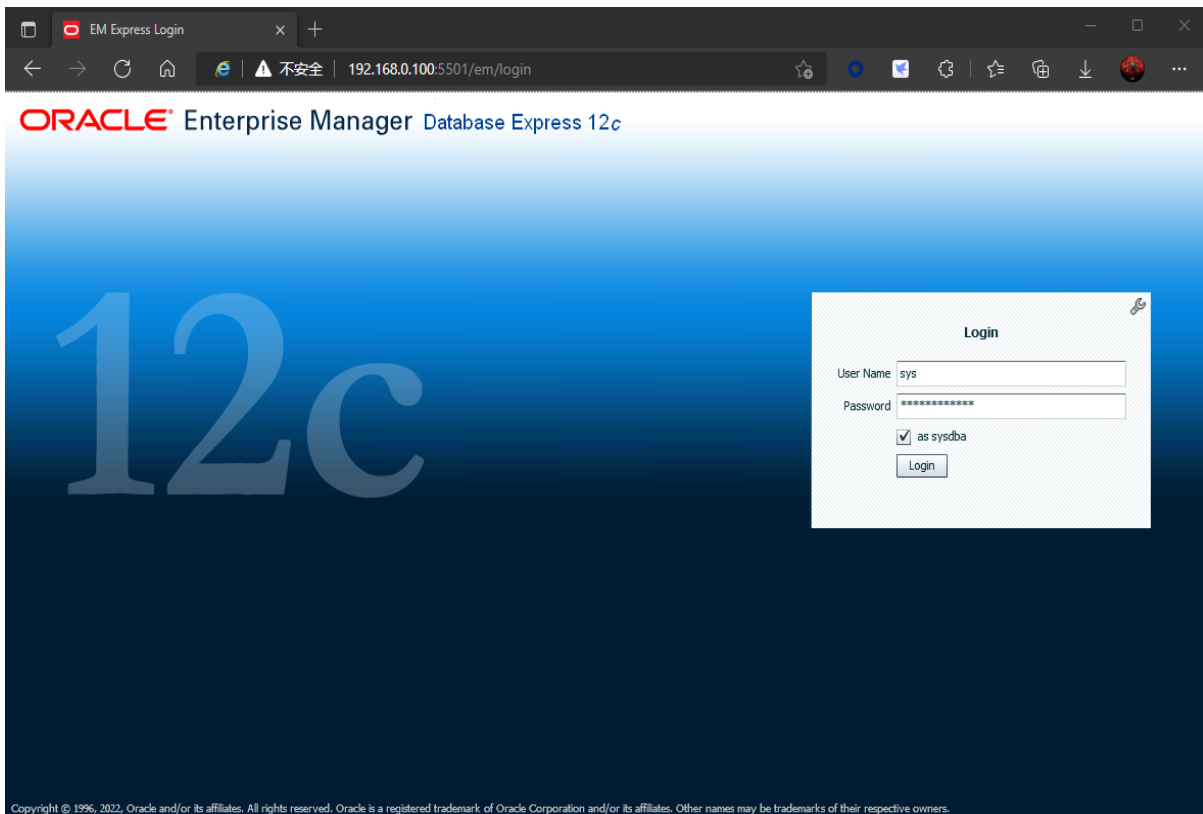
```
oracle@Dell5530:~> /home/oracle/app/product/12.2.0/dbhome_1/bin/lsnrctl start
LSNRCTL for Linux: Version 12.2.0.1.0 - Production on 26-AUG-2022 15:25:12
Copyright (c) 1991, 2016, Oracle. All rights reserved.

Starting /home/oracle/app/product/12.2.0/dbhome_1//bin/tnslnsr: please wait...

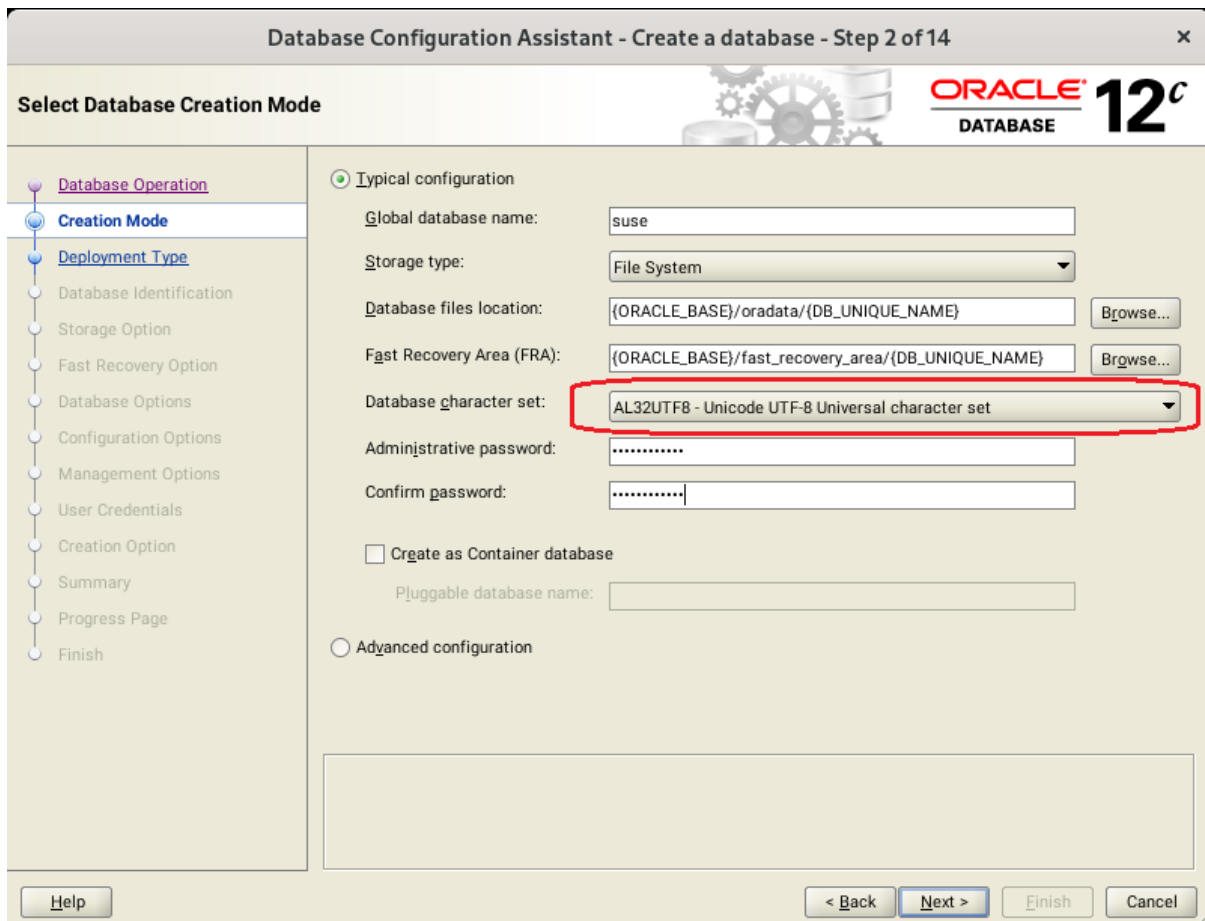
TNSLSNR for Linux: Version 12.2.0.1.0 - Production
Log messages written to /home/oracle/app/diag/tnslnsr/Dell5530/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=Dell5530)(PORT=1521)))

Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
-----
Alias                LISTENER
Version              TNSLSNR for Linux: Version 12.2.0.1.0 - Production
Start Date           26-AUG-2022 15:25:12
Uptime               0 days 0 hr. 0 min. 0 sec
Trace Level          off
Security              ON: Local OS Authentication
SNMP                 OFF
Listener Log File    /home/oracle/app/diag/tnslnsr/Dell5530/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=Dell5530)(PORT=1521)))
The listener supports no services
The command completed successfully
oracle@Dell5530:~> █
```

Figure 2-3 Access to Oracle Database 12cR2 Enterprise Manager



(Note: Oracle strongly recommends using the AL32UTF8 character set for database that support Oracle Fusion Middleware. So, please configures the database character set is AL32UTF8.



)

Oracle Fusion MiddleWare 12c Installation and Configuration

Oracle WebLogic Server software

1. Installing Oracle WebLogic Server software

1-1. Prerequisites:

Installation of Oracle WebLogic Server requires:

- Oracle JDK 1.8.0_221 or later is installed.

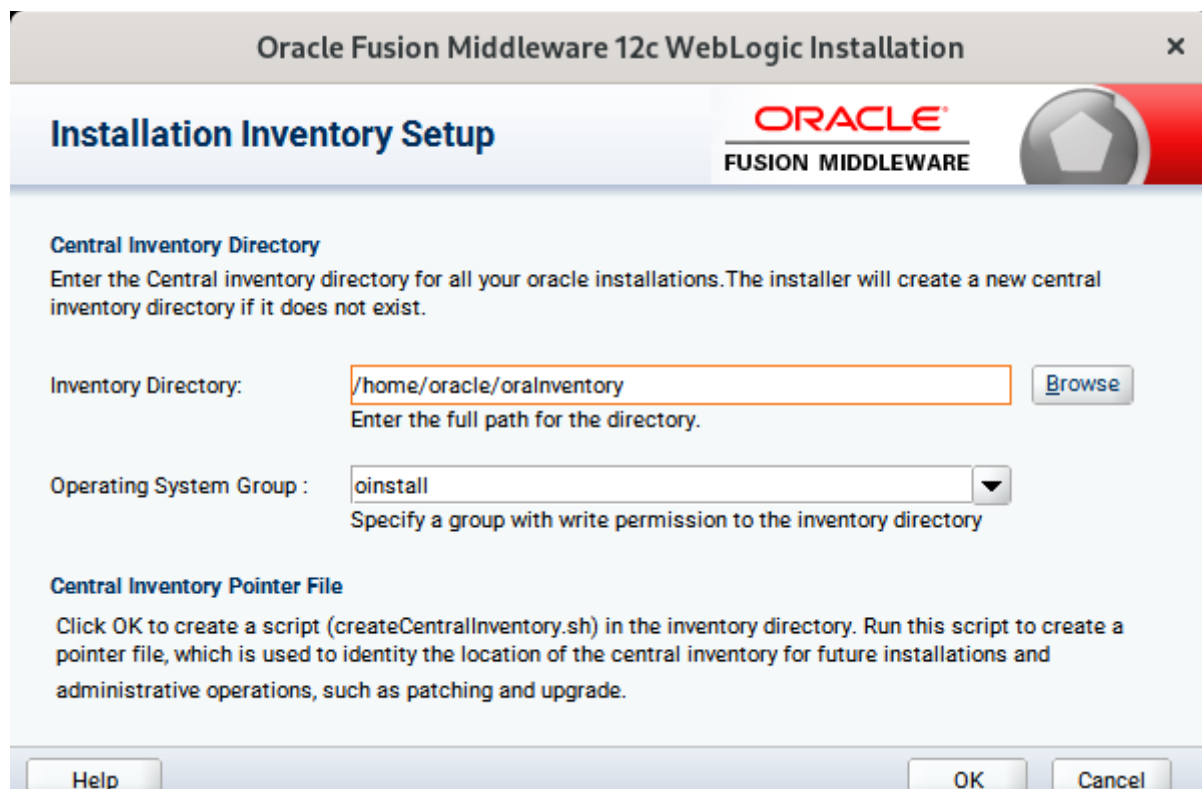
1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP4 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

(Note: Please ensure the installation user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw_12.2.1.4.0_wls_Disk1_1of1.zip) file and launch the installation program by running `'java -jar fmw_12.2.1.4.0_wls.jar'`

For the actual installation, follow the steps below:

1). Installation Inventory Setup.



The screenshot shows a window titled "Oracle Fusion Middleware 12c WebLogic Installation" with a close button (X) in the top right corner. The main heading is "Installation Inventory Setup". To the right of the heading is the Oracle logo and the text "ORACLE FUSION MIDDLEWARE". Below the heading, there is a section titled "Central Inventory Directory" with the following text: "Enter the Central inventory directory for all your oracle installations. The installer will create a new central inventory directory if it does not exist." Below this text, there is a label "Inventory Directory:" followed by a text input field containing the path "/home/oracle/orainventory" and a "Browse" button to its right. Below the input field is the instruction "Enter the full path for the directory." Below that, there is a label "Operating System Group:" followed by a dropdown menu showing "oinstall" and a downward arrow. Below the dropdown is the instruction "Specify a group with write permission to the inventory directory". Below this section is another section titled "Central Inventory Pointer File" with the text: "Click OK to create a script (createCentralInventory.sh) in the inventory directory. Run this script to create a pointer file, which is used to identify the location of the central inventory for future installations and administrative operations, such as patching and upgrade." At the bottom of the window, there are three buttons: "Help", "OK", and "Cancel".

If this is your first Oracle installation on a host that is running SLES, please use this screen to specify the location of the Oracle central inventory directory and Operating System Group Name, then click **OK** to continue.

2). Welcome.



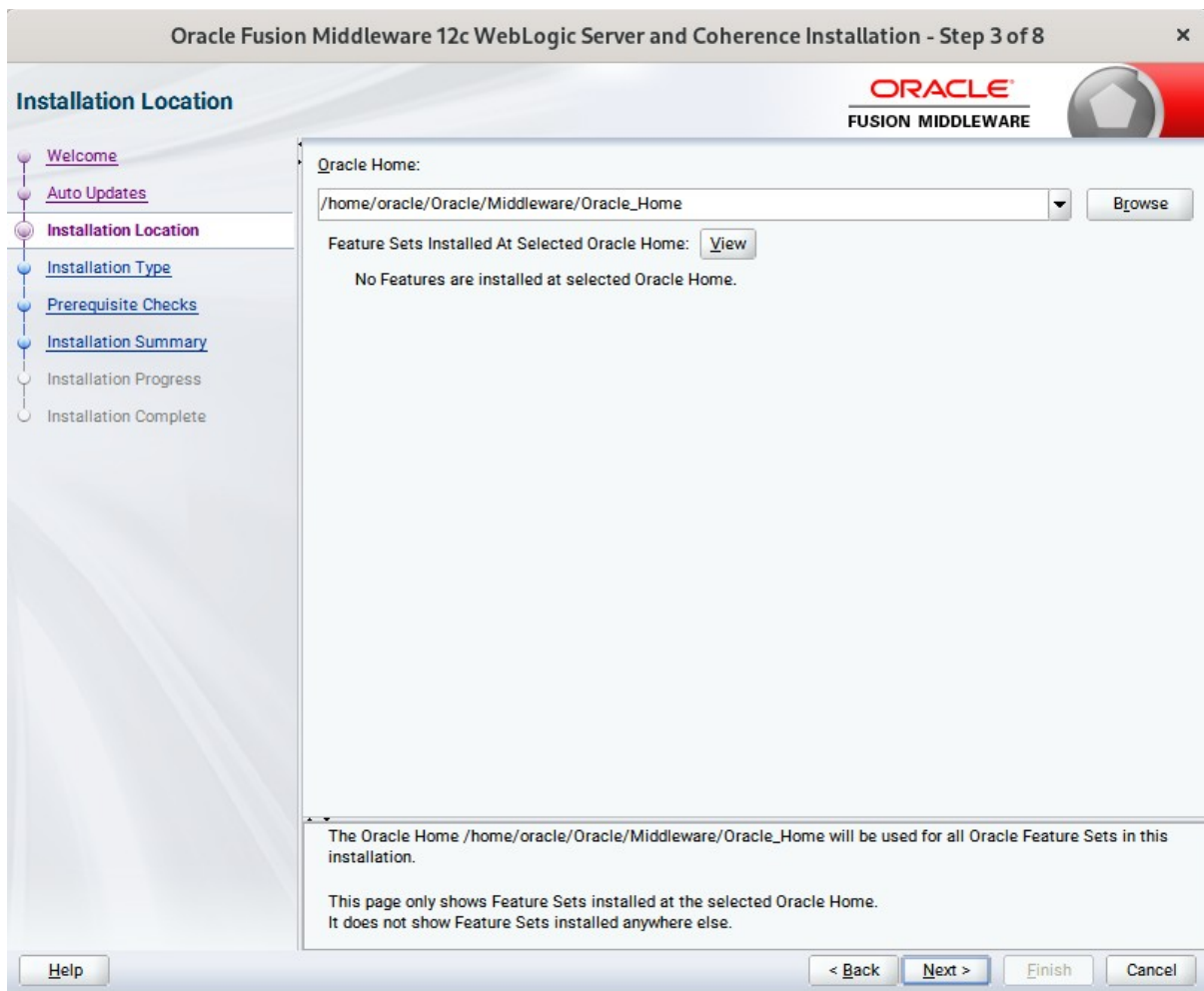
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3). Auto Updates.

The screenshot shows the 'Auto Updates' configuration window for Oracle Fusion Middleware 12c. The window title is 'Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 2 of 8'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists the installation steps: Welcome, Auto Updates (selected), Installation Location, Installation Type, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main area contains three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option includes a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option includes 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. A 'Search' button is located below the search options. A large empty rectangular area is present below the search button. At the bottom of the window, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

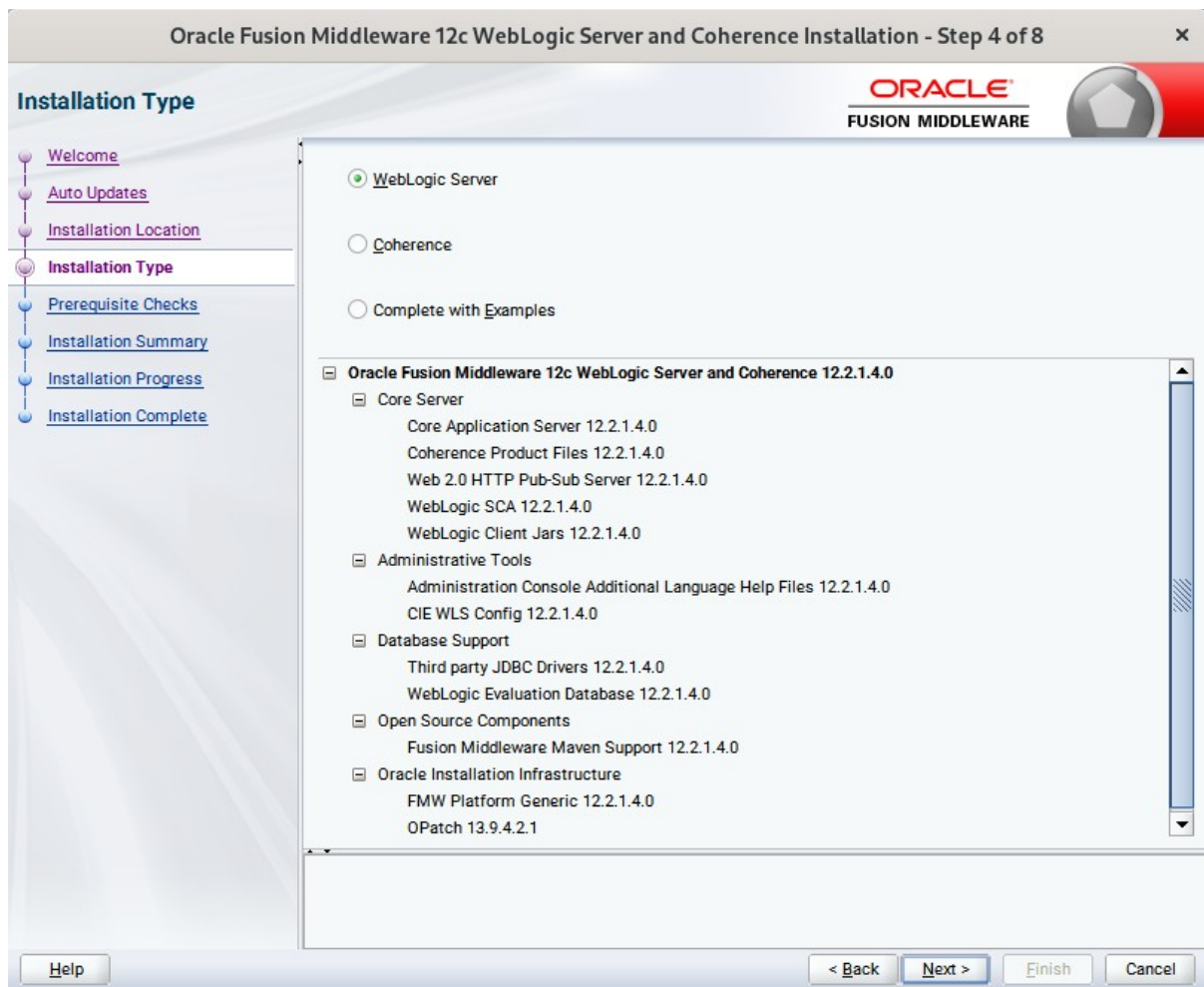
Select option "**Skip Auto Updates**" to skip this screen, then click **Next** to continue.

4). Installation Location.



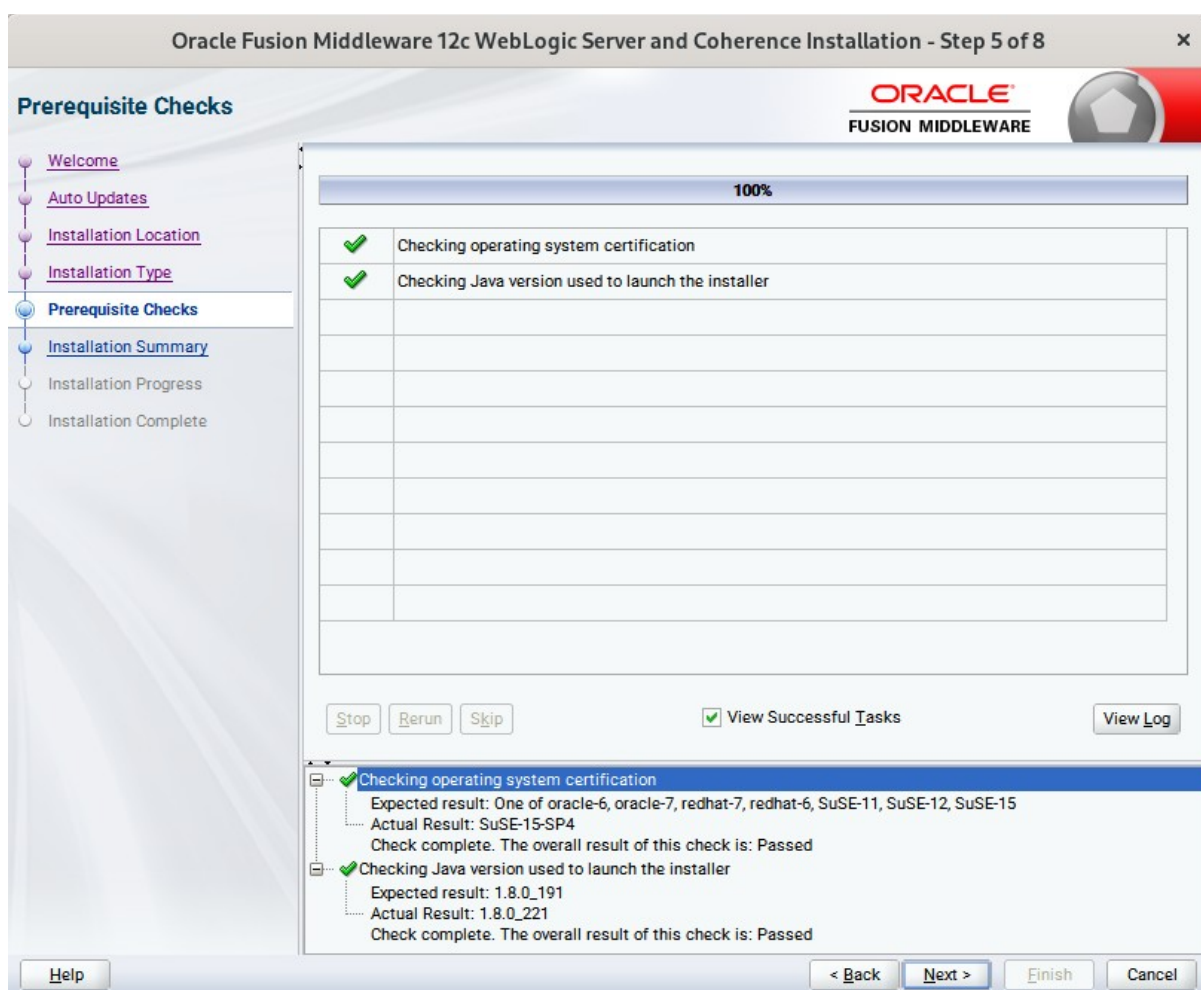
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

5). Installation Type.



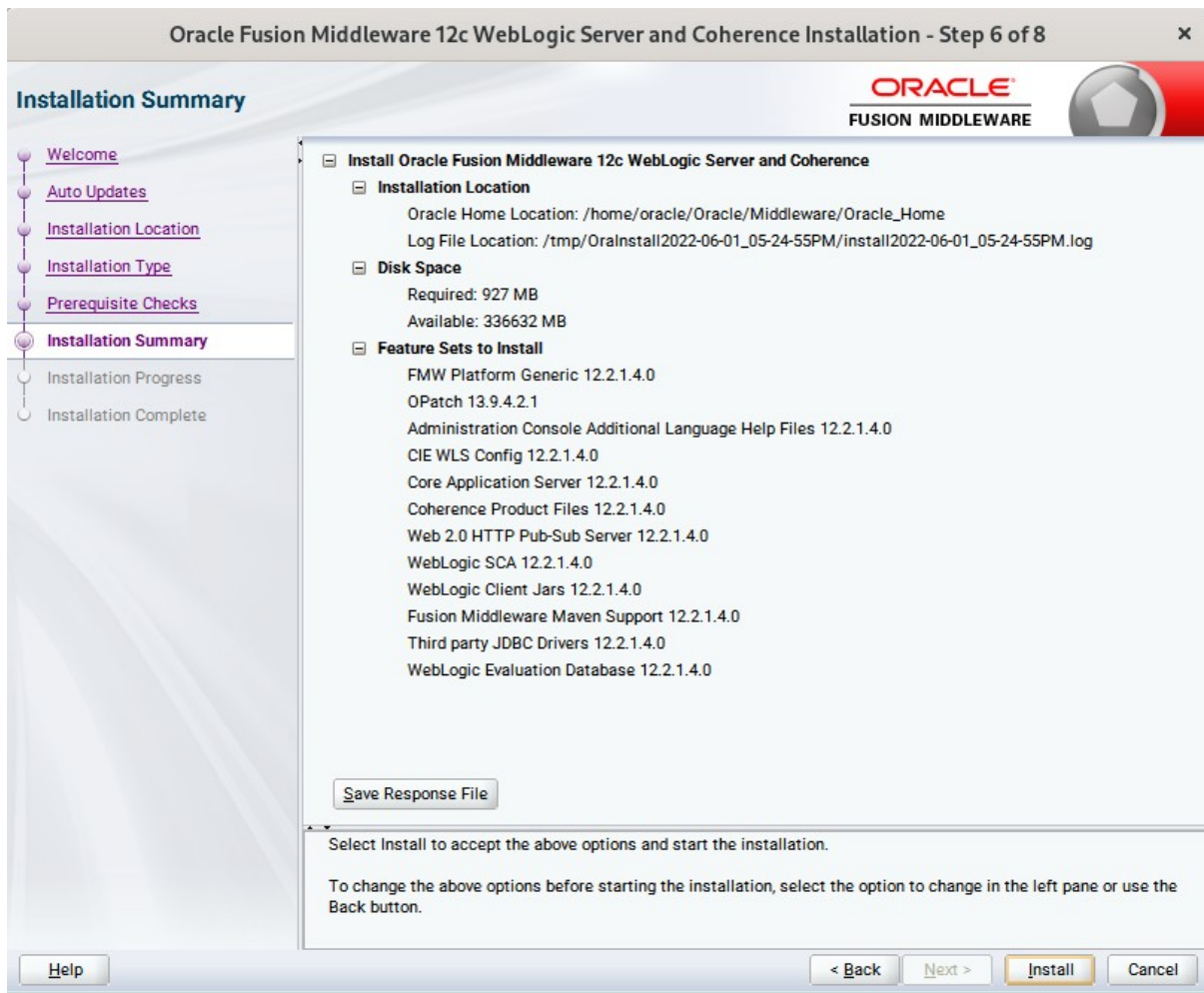
Use this screen to determine the type of installation you want to perform, then click **Next** to continue.

6). Prerequisite Checks.



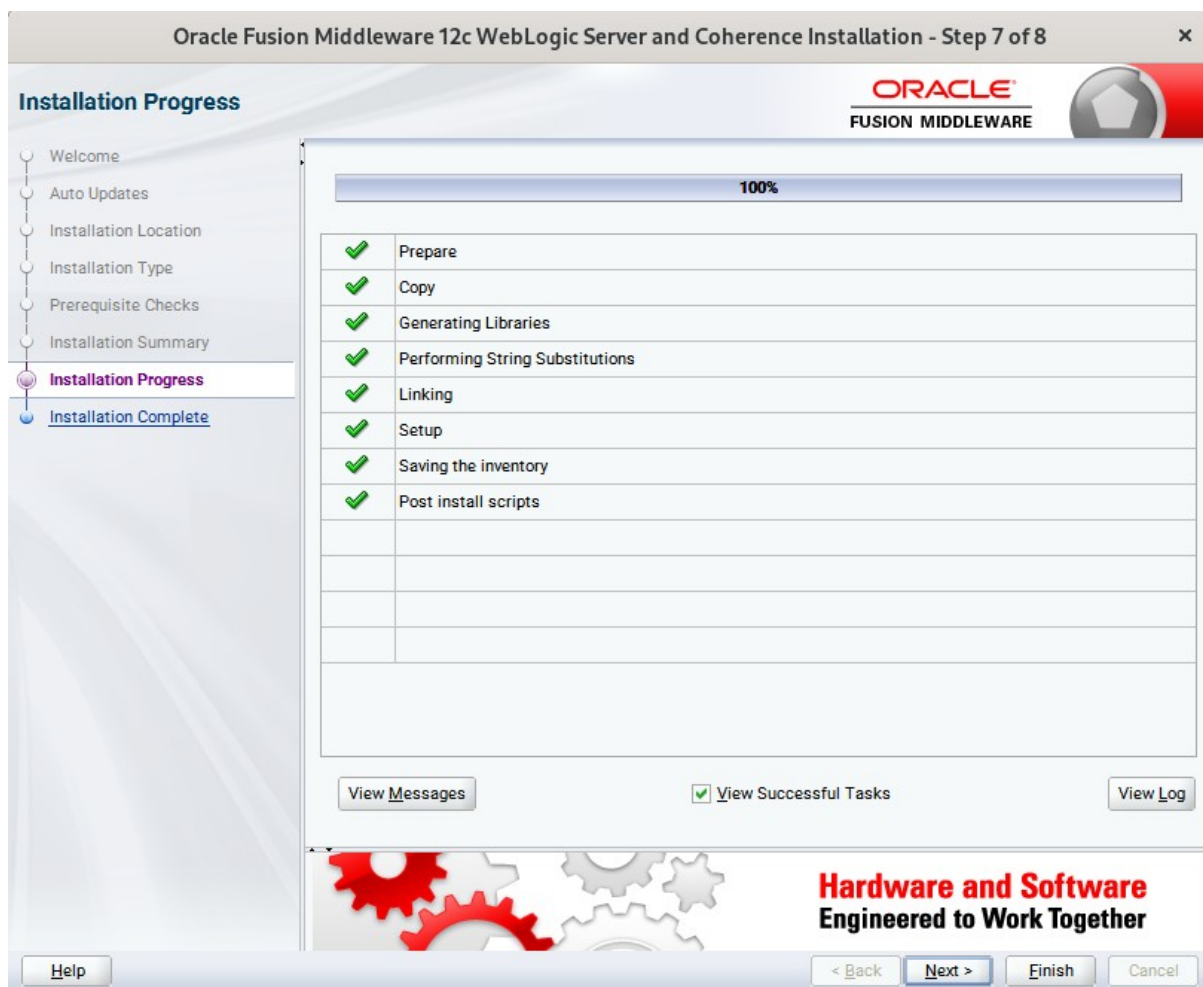
Prerequisite Checks results will be shown as above, click **Next** to continue.

7). Installation Summary.



This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk SPace to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

8). Installation Progress.



This screen shows the progress of the installation. When the progress bar reaches 100%, the installation is complete. Click **Finish** to continue.

9). Installation Complete.



This screen appears at the conclusion of the installation. Select option "**Automatically Launch the Configuration Wizard**", then click **Finish** to dismiss the installer.

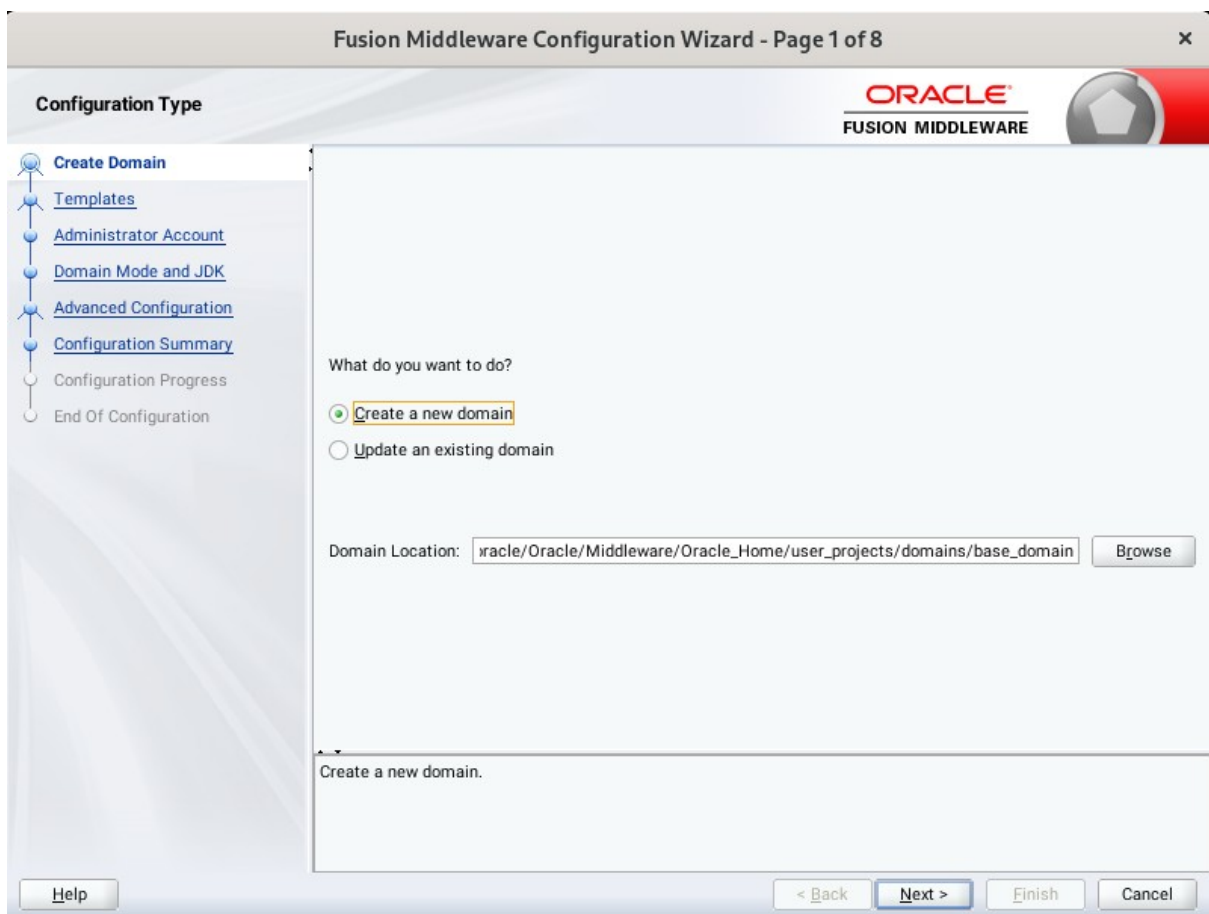
2. Creating and Configuring the WebLogic Domain

2-1. To start the domain configuration, you can choose from two options:

1. From the last-shown screen Installation Complete, you can automatically launch the WebLogic Configuration Wizard through the option **Automatically Launch the Configuration Wizard**.
2. You can also navigate to the directory **ORACLE_HOME/oracle_common/common/bin** and start the WebLogic Server Configuration Wizard by running the command **./config.sh**.

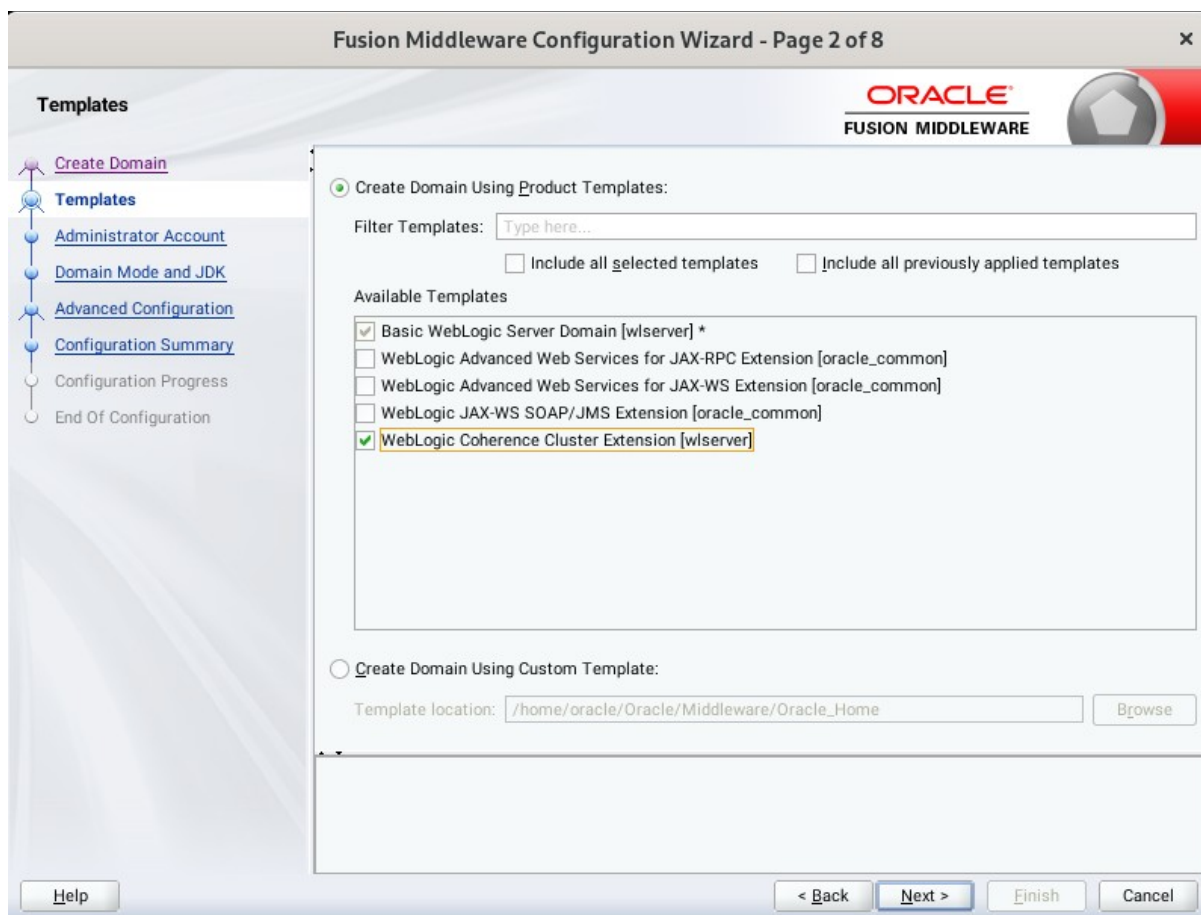
To set up your configuration, follow the steps below:

1). Configuration Type.



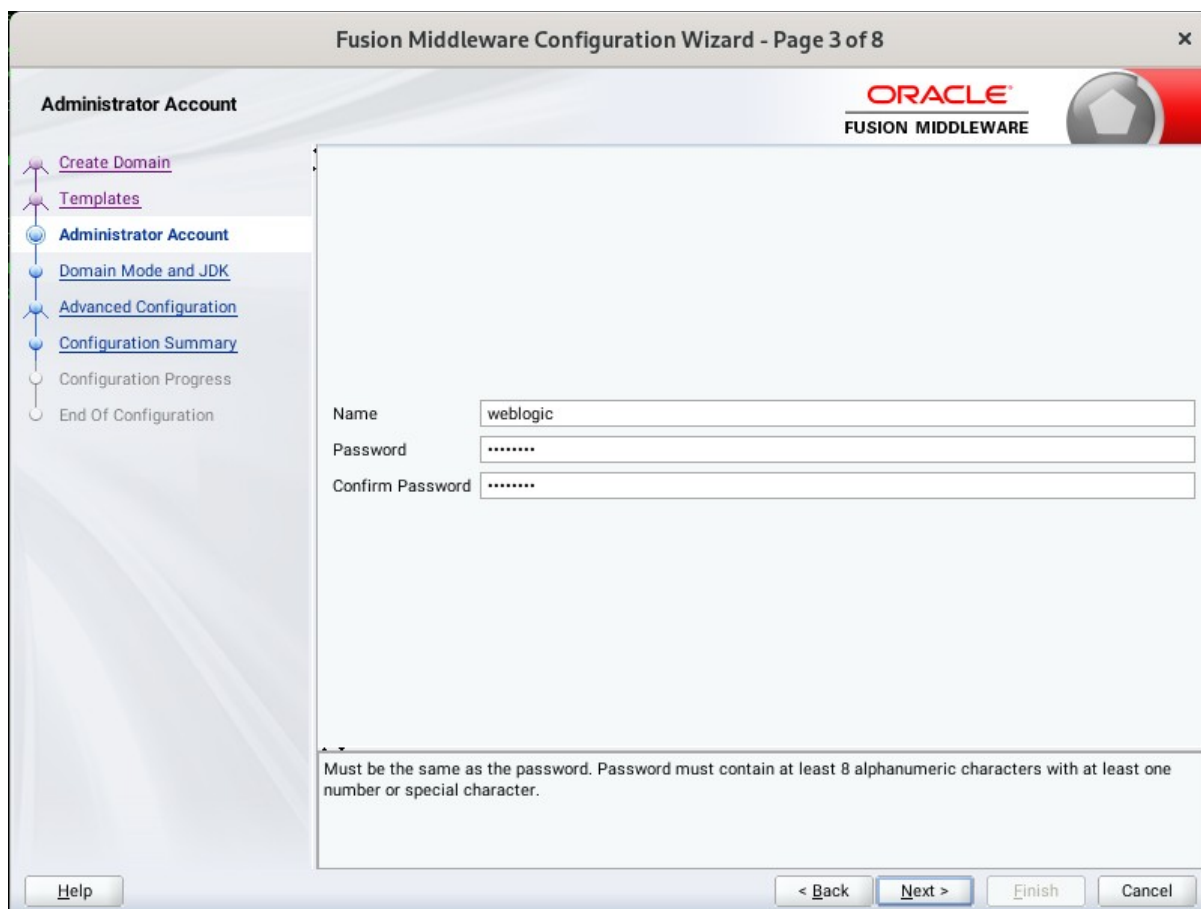
Select option "**Create a New Domain**" and SPecify the Domain home directory in the "**Domain Location**" field, then click **Next** to continue.

2). Templates.



On the Templates screen select "**Basic WebLogic Server Domain (selected by default)**" and "**WebLogic Coherence Cluster Extension**" for configuration, then click **Next** to continue.

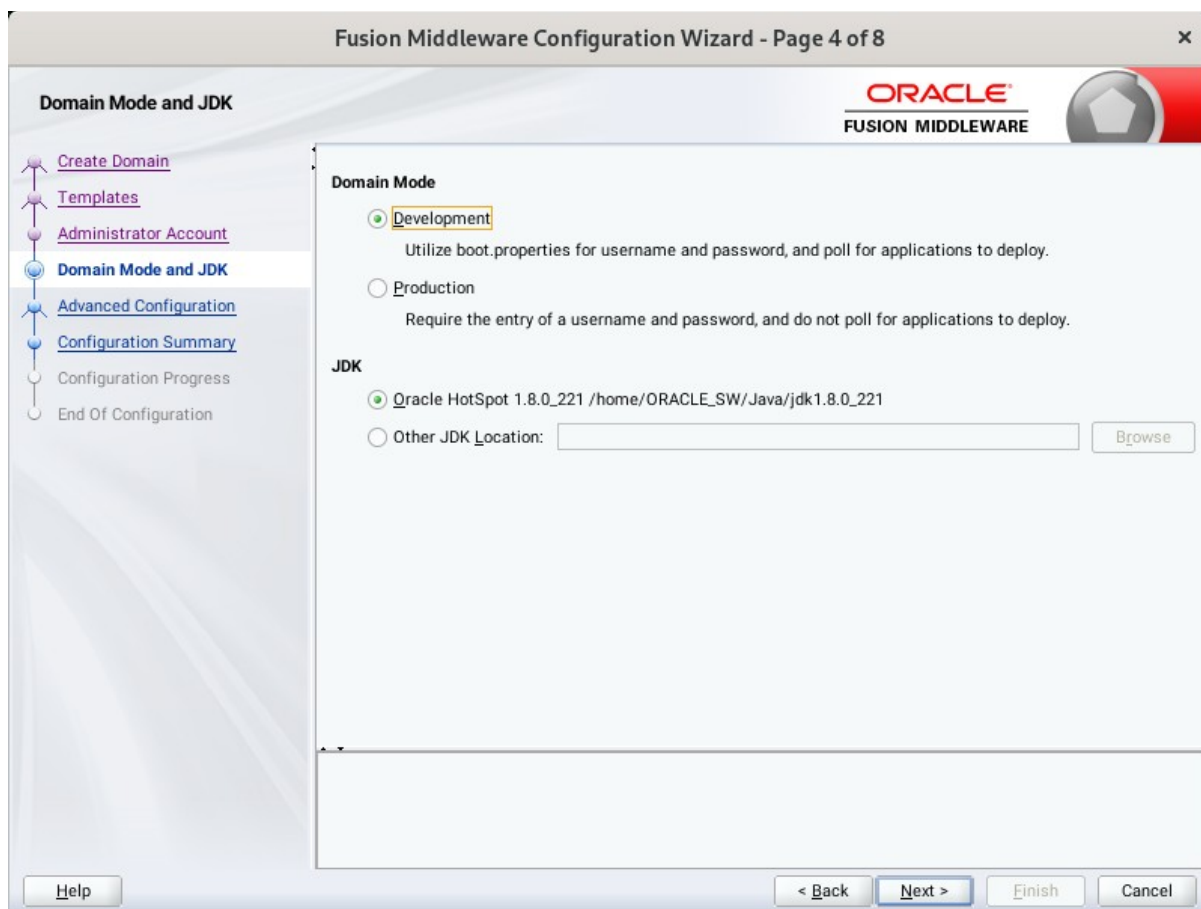
3). Administrator Account.



The screenshot shows the 'Administrator Account' configuration step in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 3 of 8'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists the steps: Create Domain, Templates, Administrator Account (selected), Domain Mode and JDK, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters, and 'Confirm Password' with masked characters. A note at the bottom states: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' Navigation buttons at the bottom include 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

Specify the user name and password for the default WebLogic Administrator account for the domain, then click **Next** to continue.

4). Domain Mode and JDK.



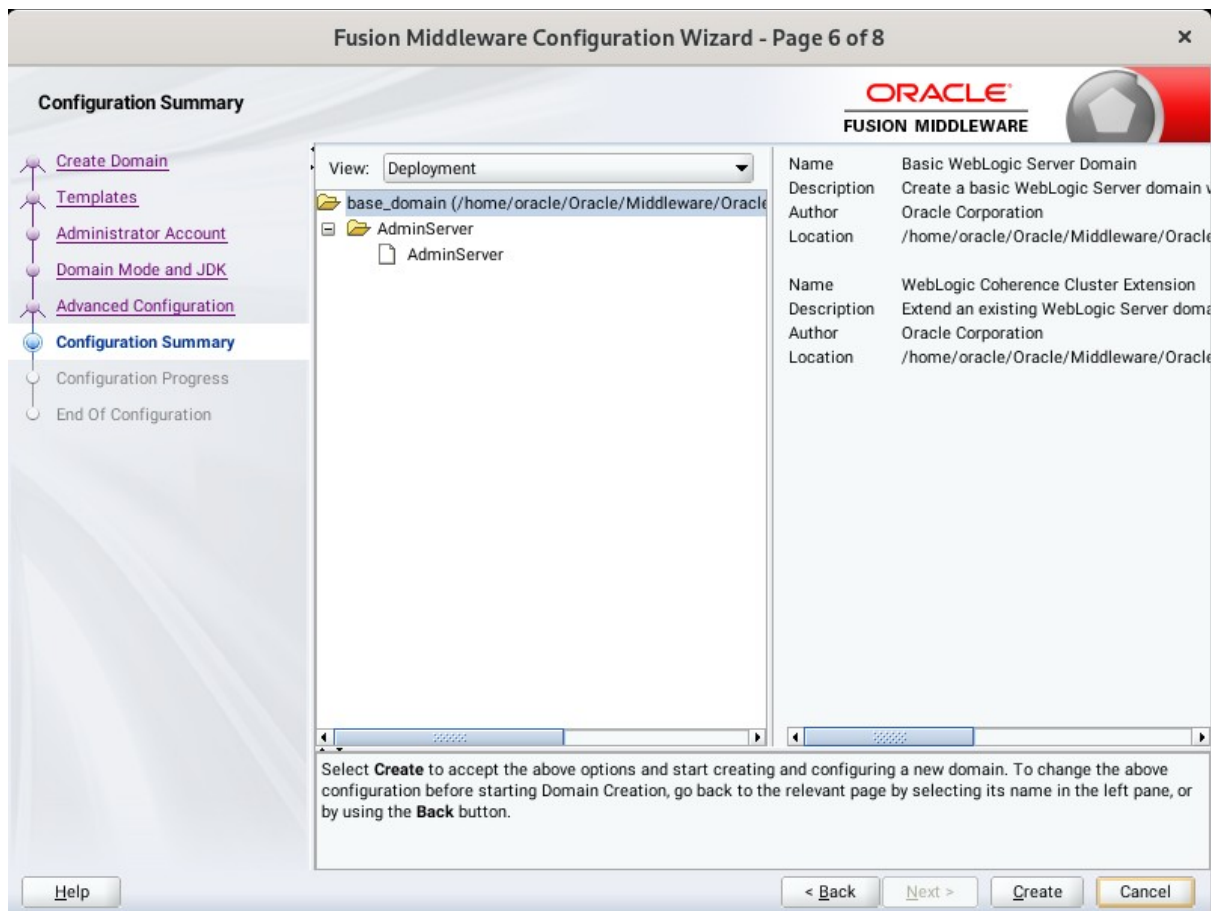
Select "**Development**" in the Domain Mode field, select the "**Oracle HotSPot**" in the JDK field. Then click **Next** to continue.

5). Advanced Configuration.



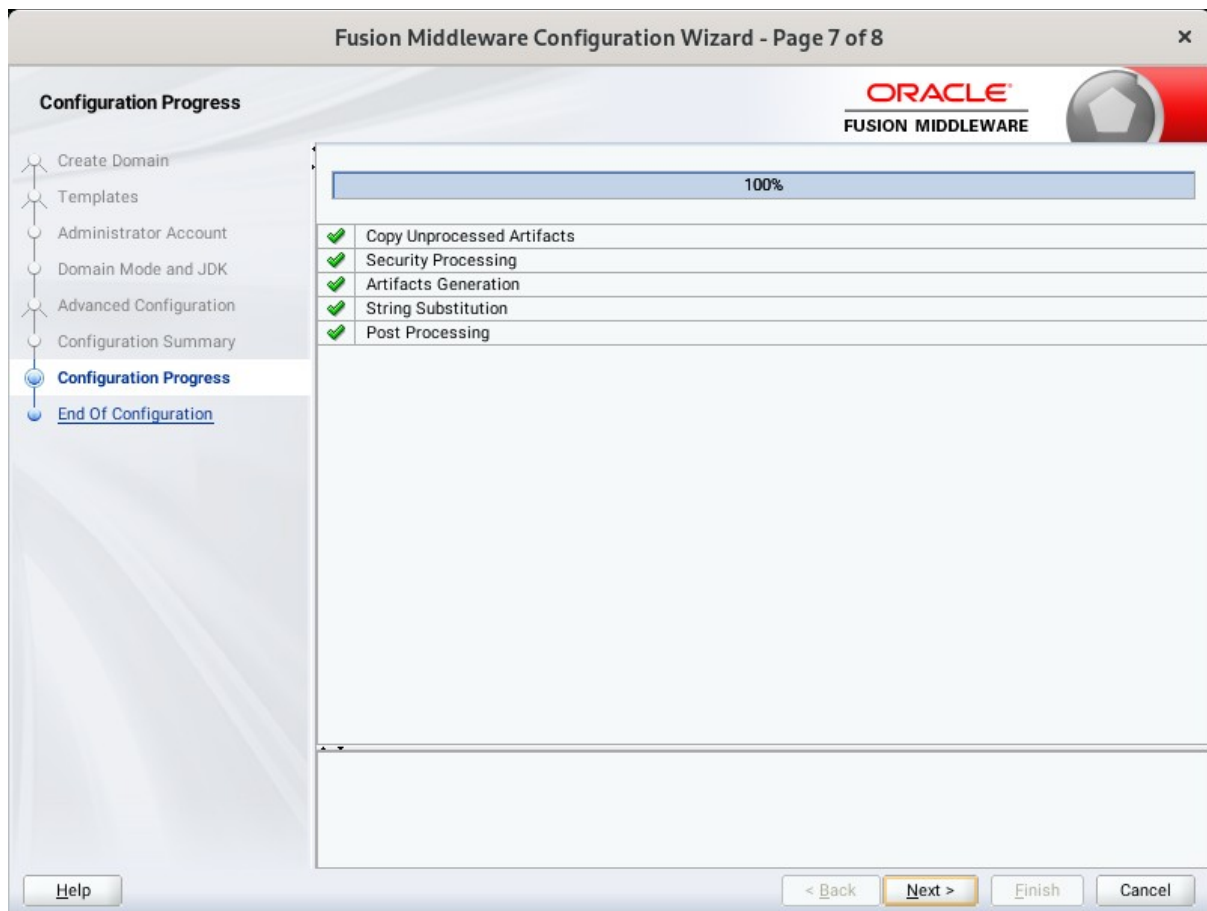
According to your requirements, select the desired options on the Advanced Configuration screen. Then click **Next** to continue.

6). Configuration Summary.



Review this screen to verify the information is correct, then click **Create** to continue.

7). Configuration Progress.



The Configuration Progress screen as shown above, once you see: "Domain Created successfully", click **Next** to continue.

8). End Of Configuration.



Once you see: "Oracle Weblogic Server Configuration Succeeded", record the "**Domain Location**" and "**Admin Server URL**", then click **Finish** to dismiss the Configuration Wizard.

3. Starting the Administration Server and verifying the Configuration

3-1.To start the Administration Server through a terminal, go to the DOMAIN_HOME/bin directory and run the command `./startWebLogic.sh`.

Starting the Administration Server through a terminal

```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:..._SW/WebLogic/12214
Oracle Coherence Version 12.2.1.4.0 Build 74888
Grid Edition: Development mode
Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.

2022-06-01 17:41:07.351/3.740 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): The cluster name has not been configured, a value of "oracle's cluster" has been automatically generated
<Jun 1, 2022 5:41:07,689 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STANDBY.>
<Jun 1, 2022 5:41:07,689 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STARTING.>
<Jun 1, 2022 5:41:07,716 PM CST> <Notice> <Log Management> <BEA-170036> <The Logging monitoring service timer has started to check for logged message counts every 30 seconds.>
<Jun 1, 2022 5:41:07,969 PM CST> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
<Jun 1, 2022 5:41:11,384 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jun 1, 2022 5:41:11,433 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jun 1, 2022 5:41:11,459 PM CST> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1:1.>
<Jun 1, 2022 5:41:11,461 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 1, 2022 5:41:11,461 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 1, 2022 5:41:11,462 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 1, 2022 5:41:11,462 PM CST> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in development mode.>
<Jun 1, 2022 5:41:11,462 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 1, 2022 5:41:11,462 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 1, 2022 5:41:11,462 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 1, 2022 5:41:11,468 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jun 1, 2022 5:41:11,476 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

You know that the administrator server is running when you see the following output:

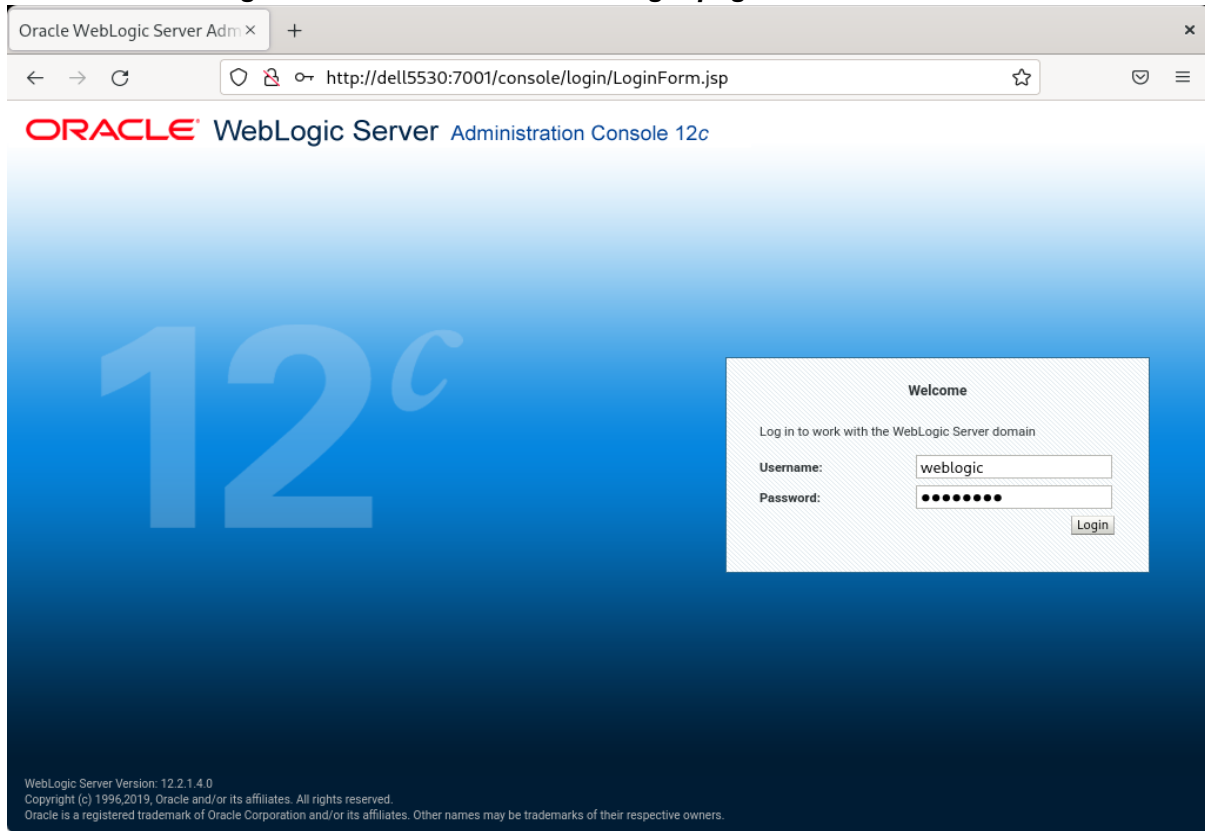
```

-----
Server state changed to RUNNING.
-----

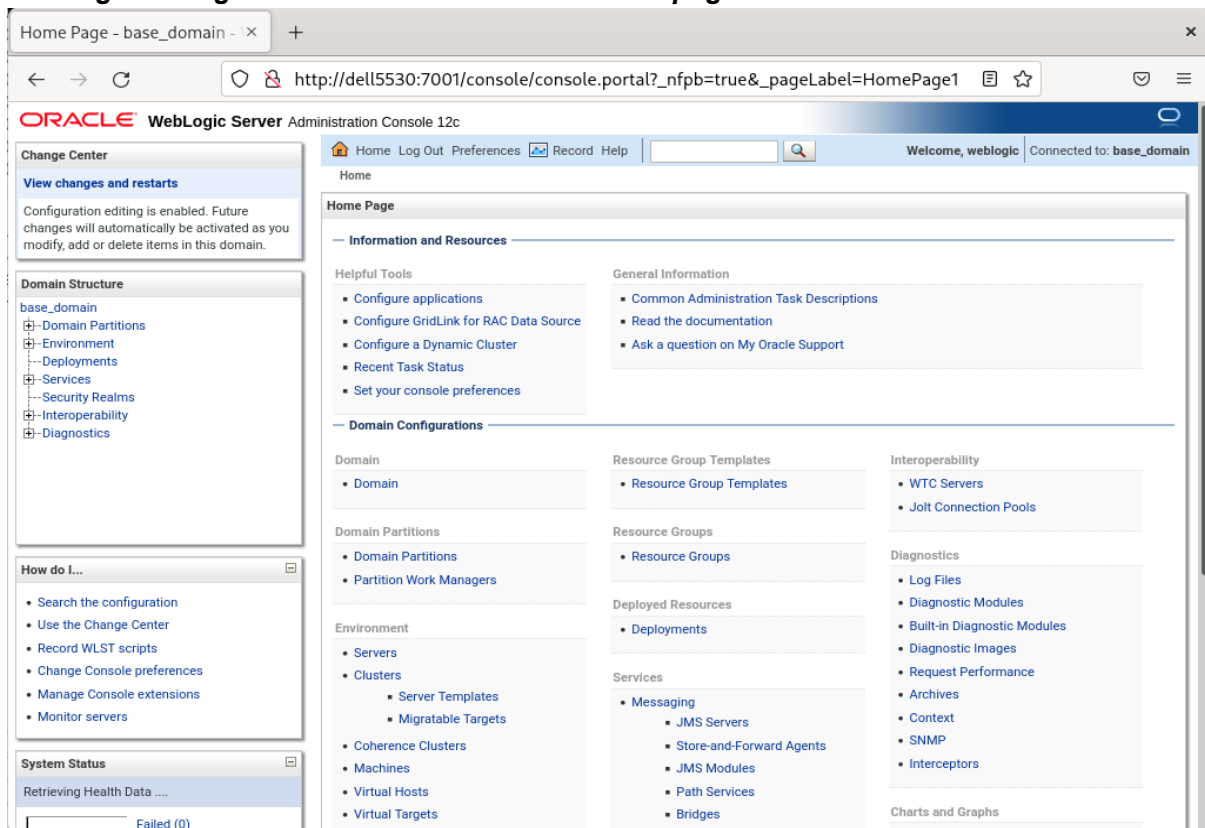
```

3-2. Access to Oracle WebLogic Server Administration Console.

Access to WebLogic Server Admin Console - Login page



Viewing WebLogic Server Admin Console - Home page



Viewing WebLogic Server Admin Console - Summary of Servers

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar indicates the URL: `http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=CoreServerSe`. The page title is "Summary of Servers - base_d".

The interface includes a navigation menu on the left with sections like "Change Center", "Domain Structure", "How do I...", and "System Status". The main content area is titled "Summary of Servers" and contains a table of servers.

Summary of Servers

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Servers (Filtered - More Columns Exist)

<input type="checkbox"/>	Name	Type	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)	Configured			RUNNING	OK	7001

End of Oracle WebLogic Server Software.

Oracle Form and Reports

1. Installing Oracle WebLogic Server software

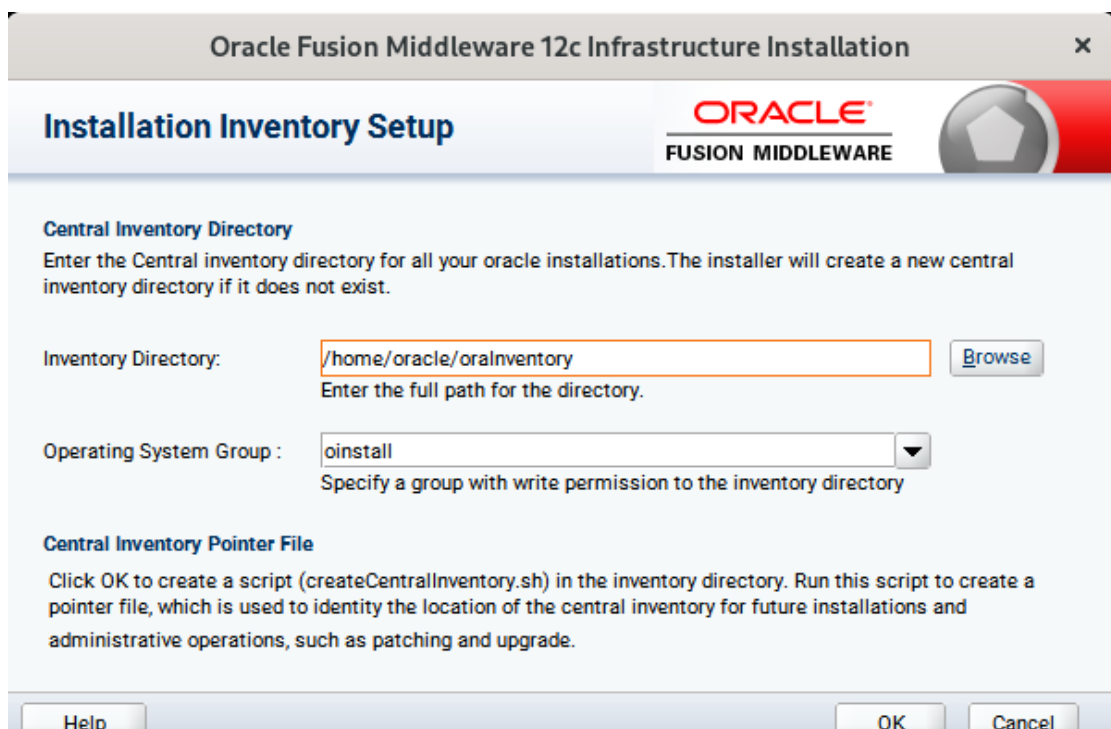
1-1. Prerequisites:

Installation of Oracle Forms and Reports requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0_221 or later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

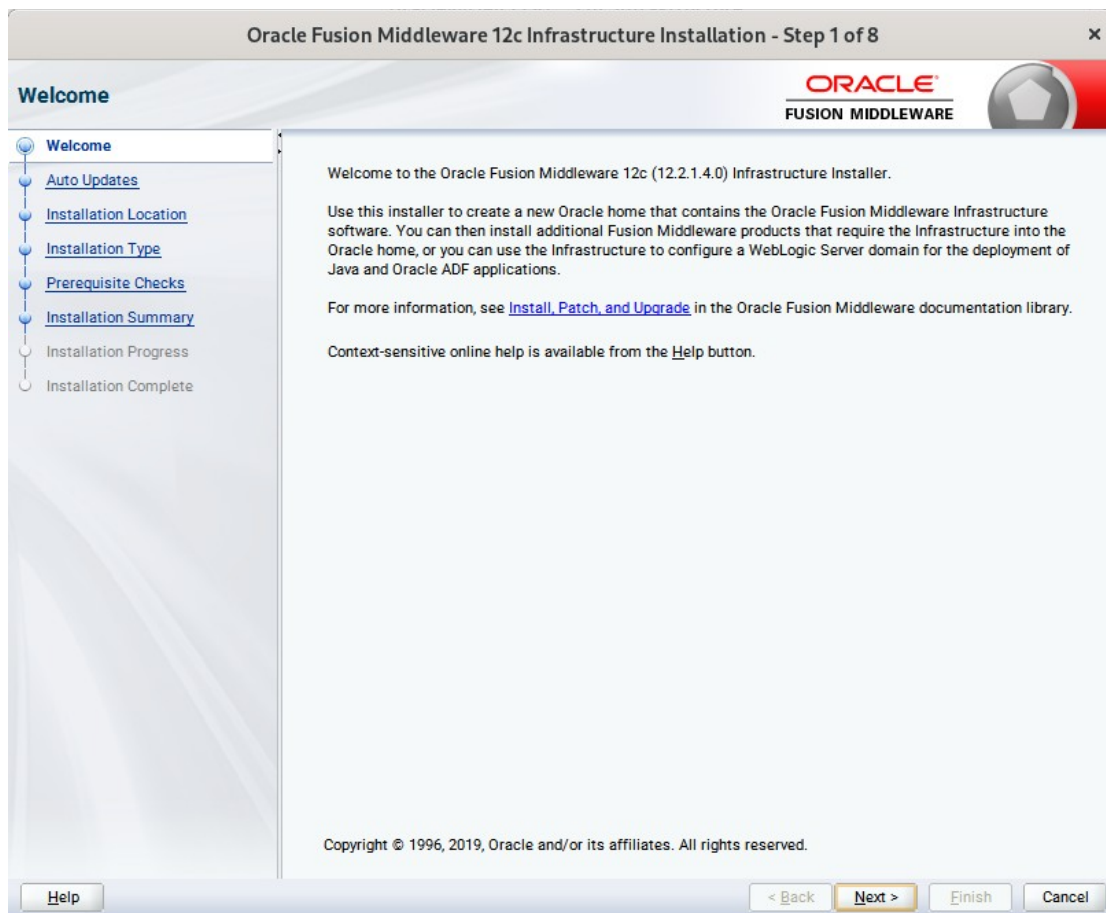
Screenshots: A brief installation setps for Fusion Middleware Infrastructure Installer is as follows:

3-1). Installation Inventory Setup.



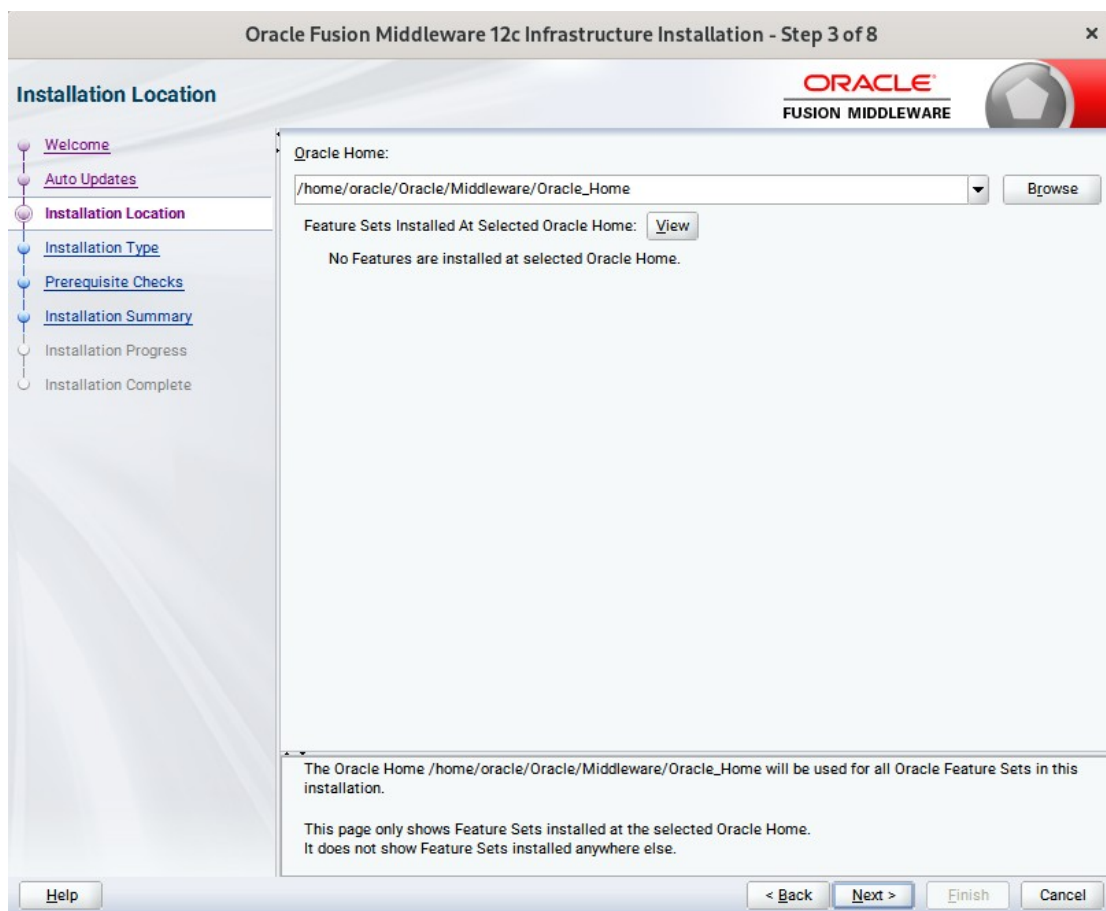
SPecify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

3-2). Welcome.



Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3-3). Installation Location.



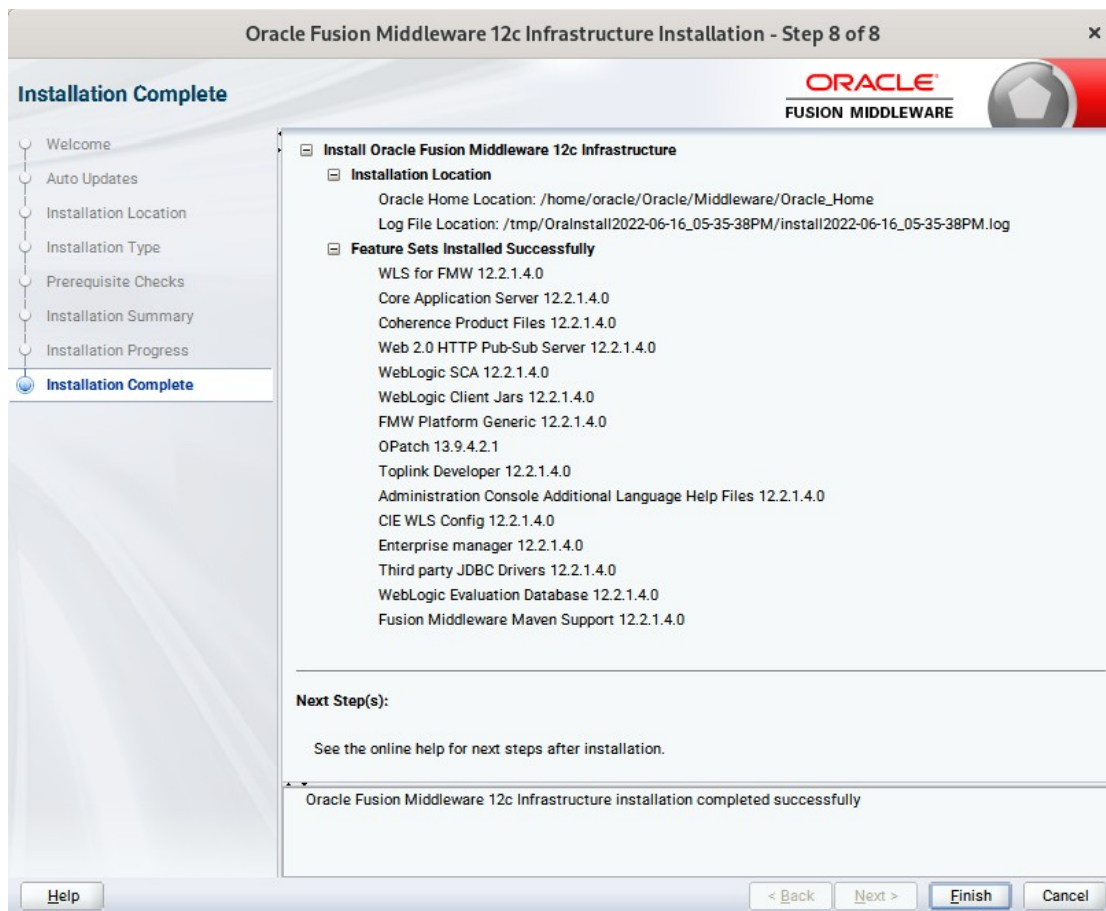
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

3-4). Installation Type.



Use this screen to determine the type of installation you want to perform, then click **Next** to continue.

3-5). Installation Complete.



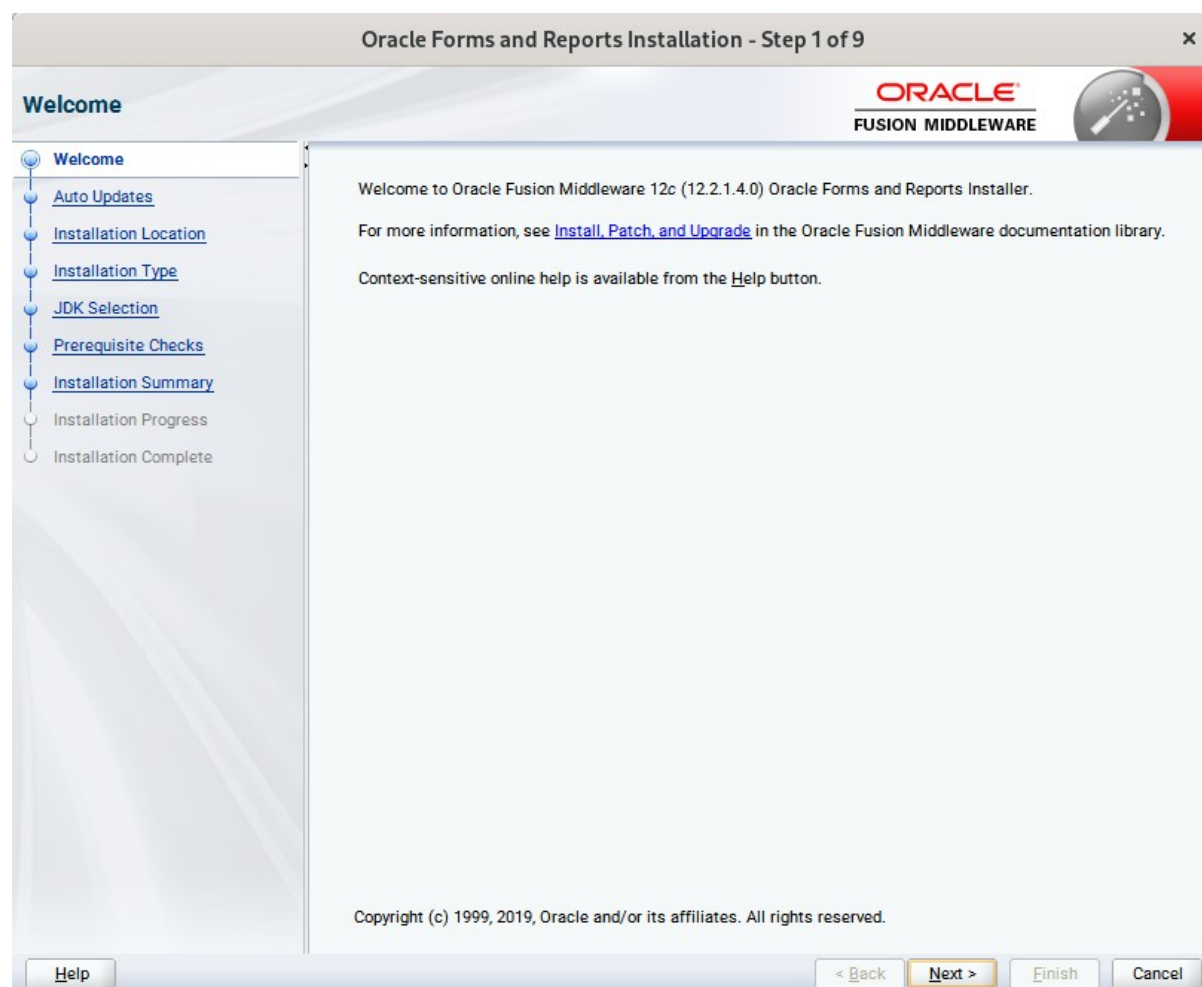
1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP4 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

(**Note:** Please ensure the user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ('V983392-01_1of2.zip' and 'V983392-01_2of2.zip') files and launch the installation program by running '**fmw_12.2.1.4.0_fr_linux64.bin**'.

For the actual installation, follow the steps below:

1). Welcome page.



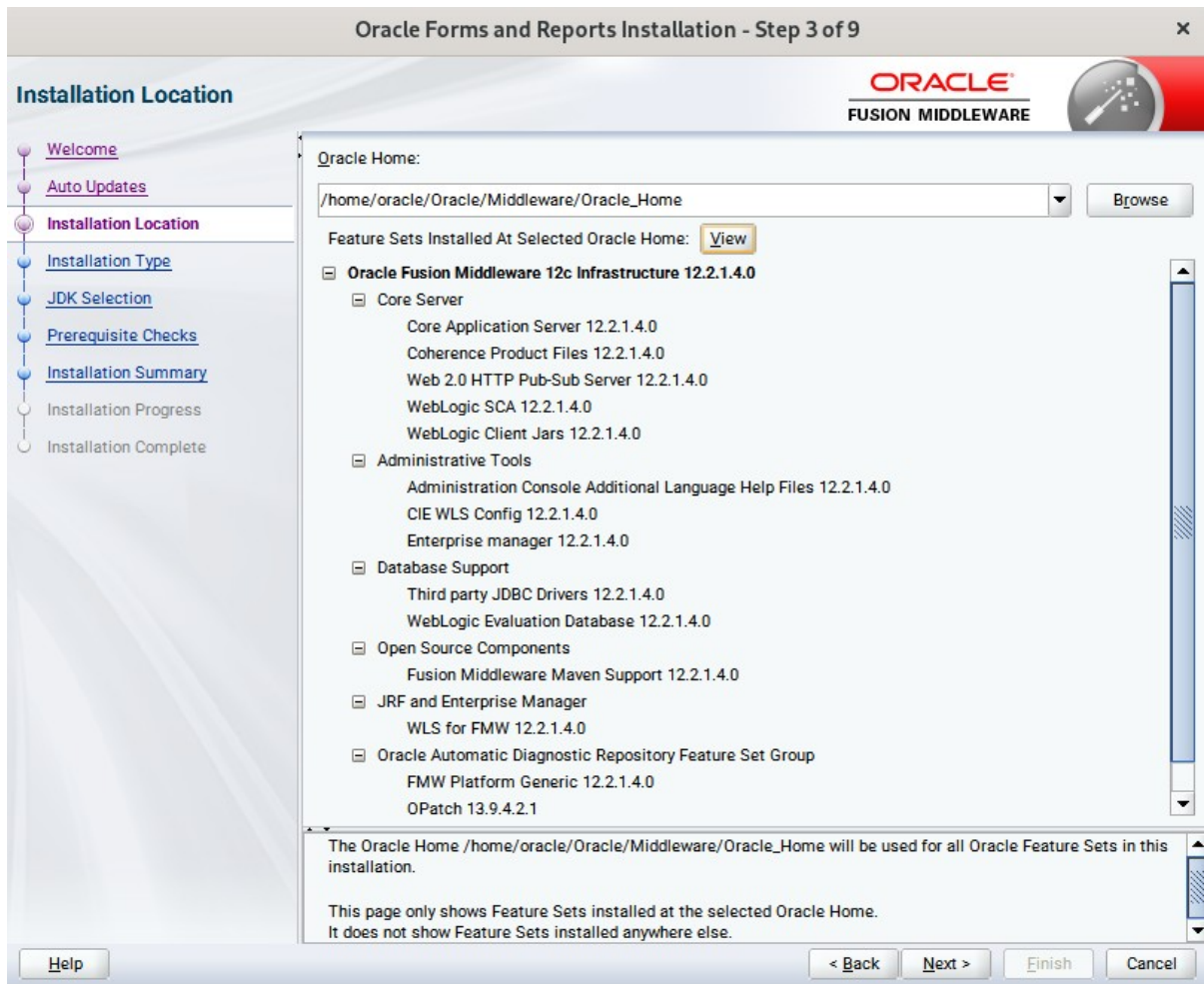
This page welcomes you to the installation. Click **Next** to continue.

2). The **Auto Updates** page appears.

The screenshot shows the 'Auto Updates' page in the Oracle Forms and Reports Installation wizard. The window title is 'Oracle Forms and Reports Installation - Step 2 of 9'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists the installation steps: Welcome, Auto Updates (selected), Installation Location, Installation Type, JDK Selection, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main area contains three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option includes a 'Location' text field and a 'Browse' button. The 'Search My Oracle Support for Updates' option includes 'Username' and 'Password' text fields, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom, there are navigation buttons: 'Help', '< Back', 'Next >' (highlighted), 'Finish', and 'Cancel'.

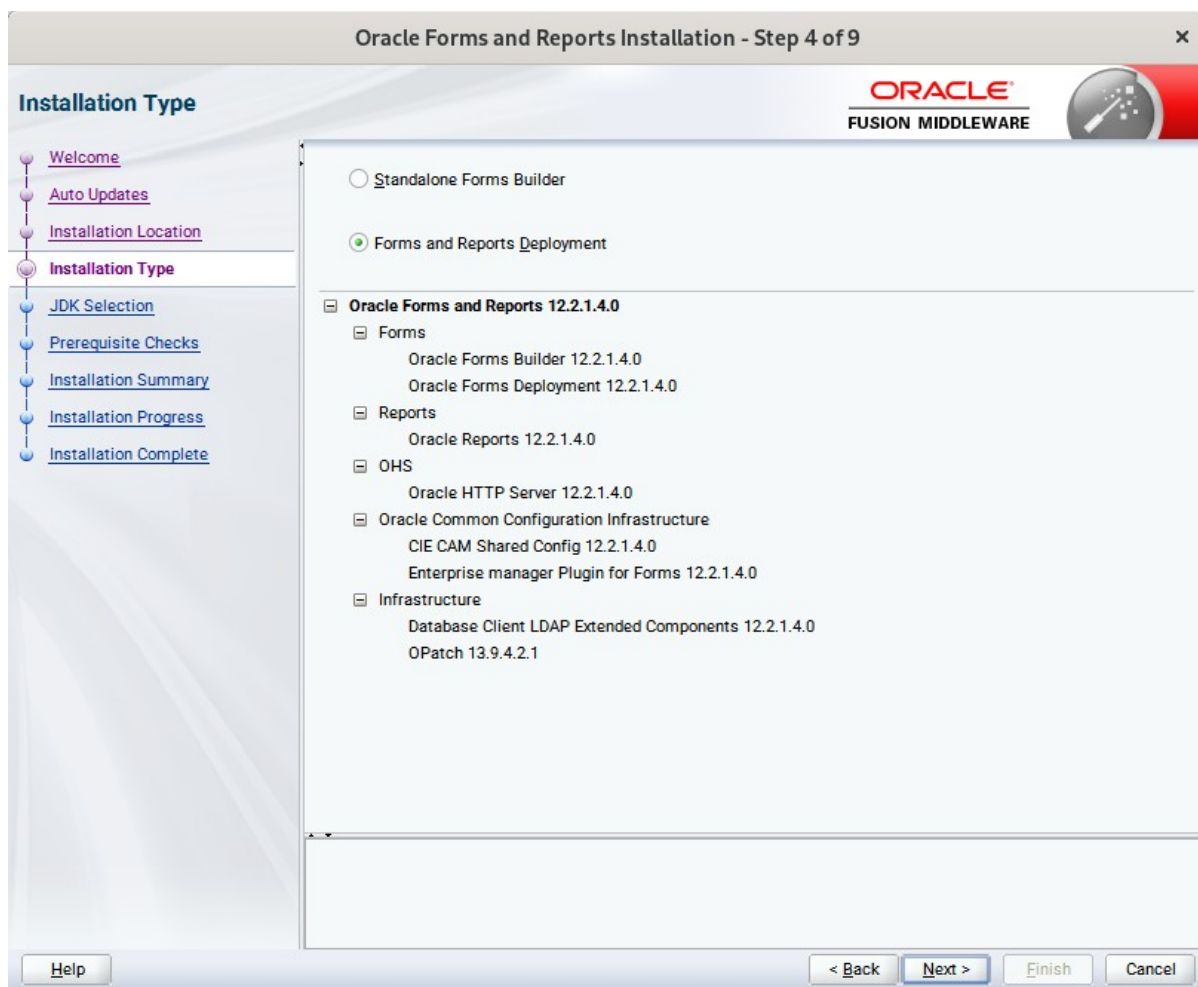
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

3). The **Installation Location** page appears.



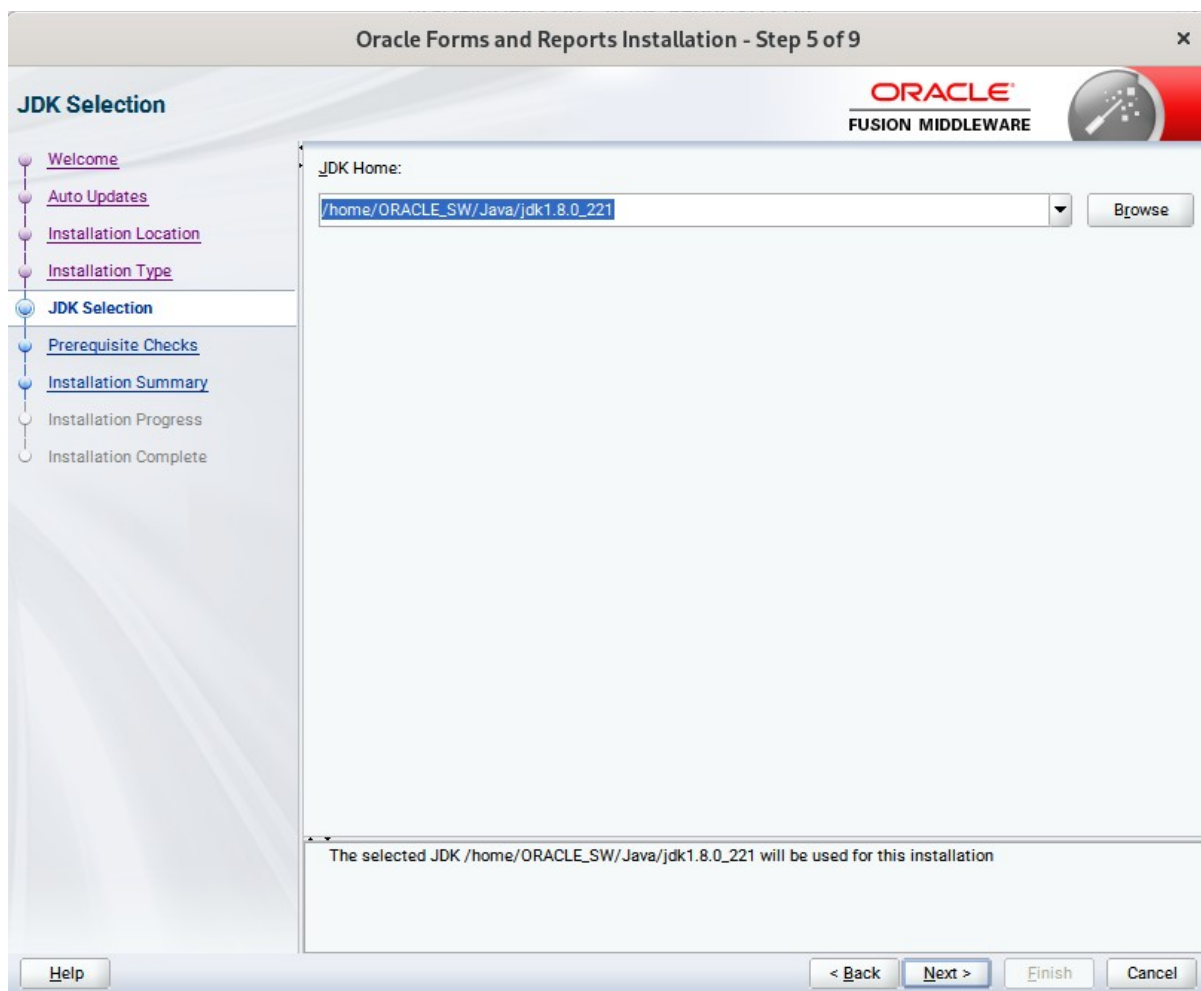
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

4). The **Installation Type** page appears.



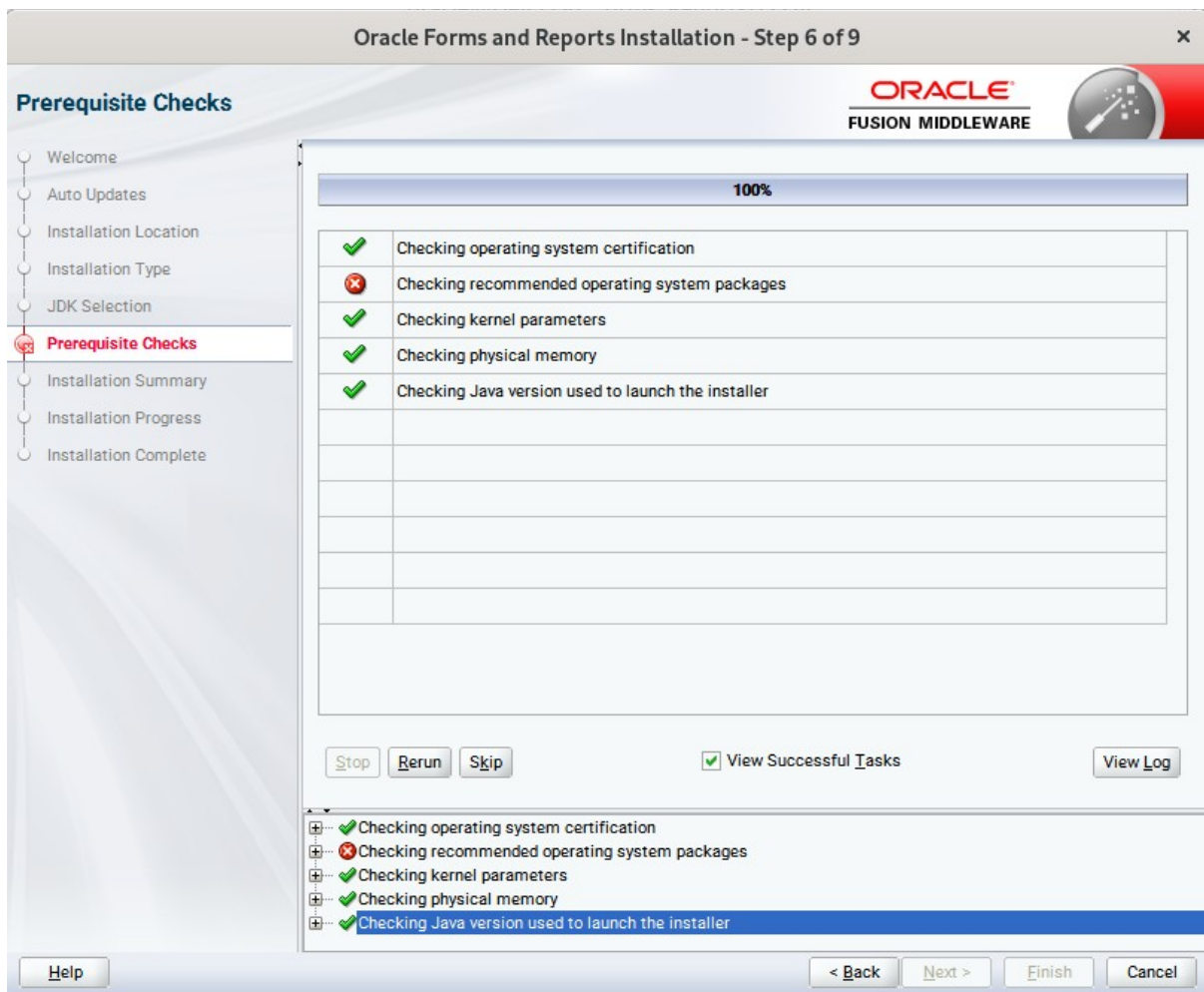
You can select **Standalone Forms Builder** if you want only that functionality, or choose **Forms and Reports Deployment** to install all of the products. Click **Next** to continue.

5). The **JDK Selection** page appears.



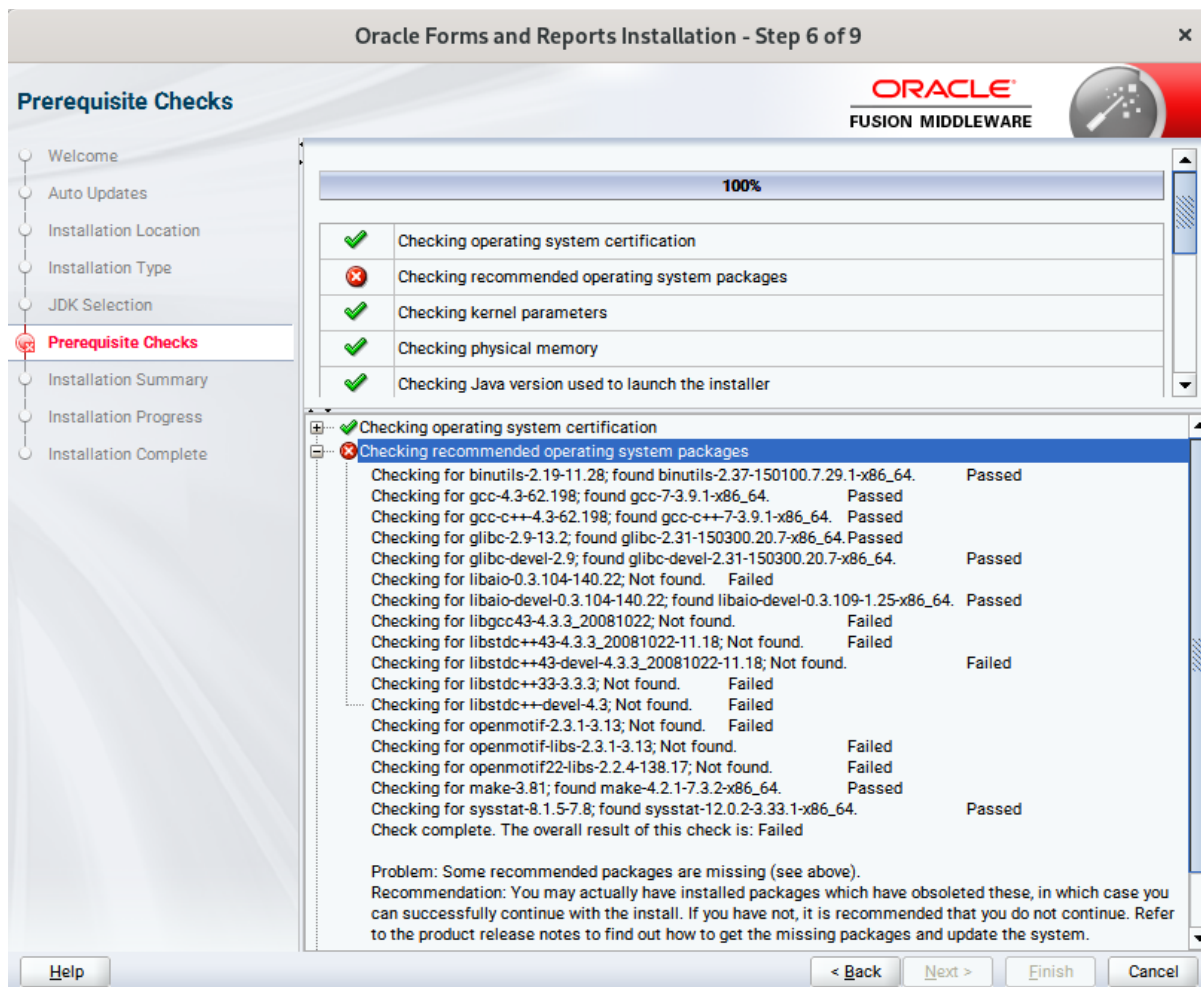
The selected JDK will be used for this installation. Click **Next** to continue.

6). The **Prerequisite Checks** page appears.



Prerequisite Checks results will be shown as above.

(Note: "Checking recommended operating system packages" failed with following info:



Some of the listed OS packages are deprecated or have different versions since SLES15 SP1.

eg:

libaio-0.3 (new name is libaio1-xxx)
libgcc43-4.3.3 (new name is libgcc_s1-xxx)
libstdc++43-4.3.3 (new name is libstdc++6-xxx)
libstdc++33-3.3.3 (deprecated since SLES15 SP1)
openmotif-2.3.1 (deprecated since SLES15 SP1)

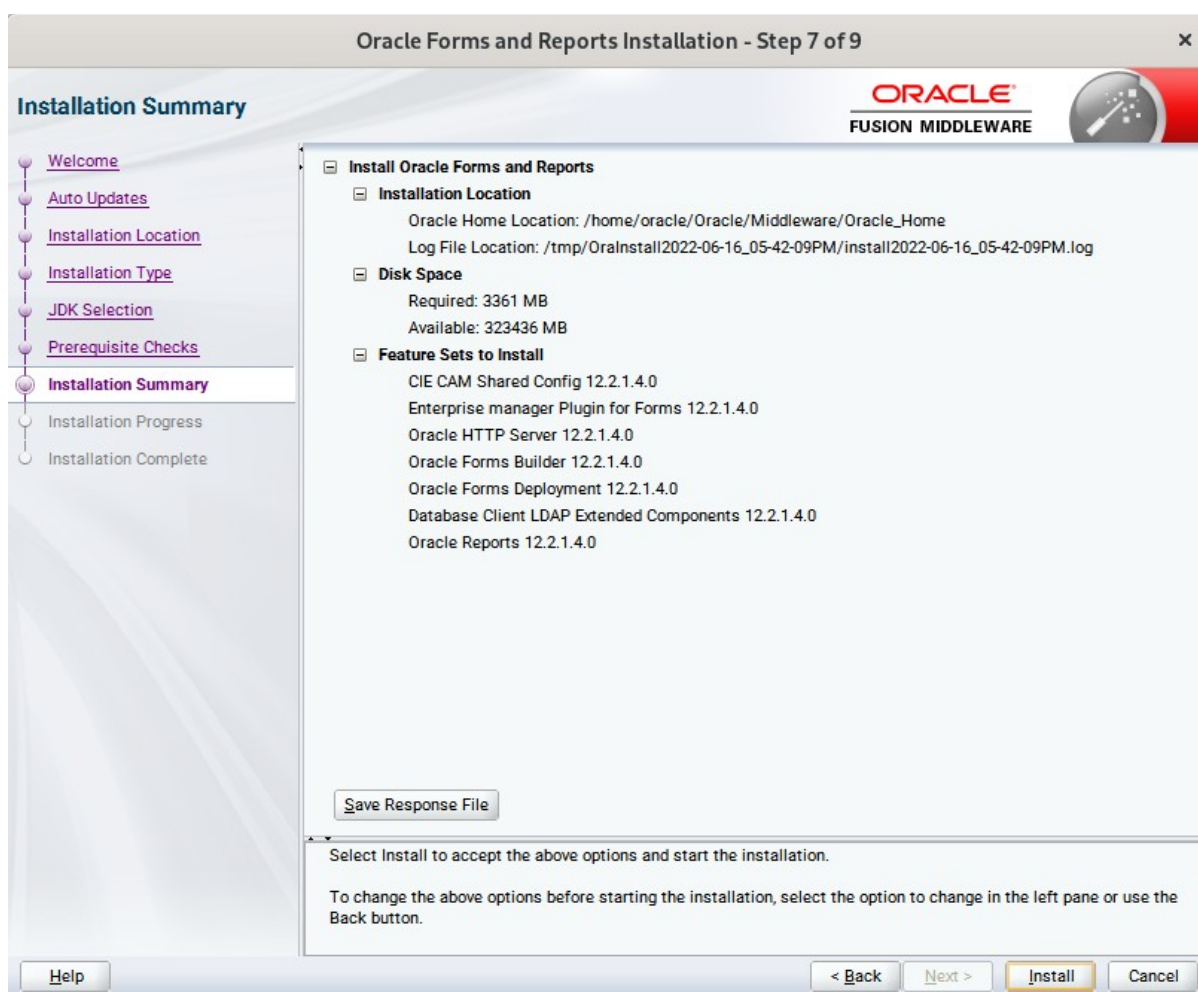
So, please ensure following updated packages(or later) are installed, then click '**Skip**' in the '**Prerequisite Checks**' page and continue installation.

```
binutils-2.29.1-4.46.x86_64
gcc7-ada-7.3.1+r258812-2.15.x86_64
gcc-c++-7-1.563.x86_64
gcc-c++-32bit-7-1.563.x86_64
gcc-ada-7-1.563.x86_64
gcc-locale-7-1.563.x86_64
gcc-info-7-1.563.x86_64
gcc-7-1.563.x86_64
gcc7-c++-7.3.1+r258812-2.15.x86_64
```

gcc7-info-7.3.1+r258812-2.15.noarch
gcc7-7.3.1+r258812-2.15.x86_64
gcc7-locale-7.3.1+r258812-2.15.x86_64
gcc7-c++-32bit-7.3.1+r258812-2.15.x86_64
gcc7-32bit-7.3.1+r258812-2.15.x86_64
gcc-32bit-7-1.563.x86_64
glibc-2.26-11.8.x86_64
linux-glibc-devel-4.15-1.47.noarch
glibc-devel-2.26-11.8.x86_64
glibc-locale-2.26-11.8.x86_64
glibc-extra-2.26-11.8.x86_64
glibc-32bit-2.26-11.8.x86_64
glibc-devel-32bit-2.26-11.8.x86_64
mksh-56c-1.10.x86_64
libaio1-0.3.109-1.25.x86_64
libaio1-32bit-0.3.109-1.25.x86_64
libaio-devel-32bit-0.3.109-1.25.x86_64
libaio-devel-0.3.109-1.25.x86_64
libcap2-2.25-2.41.x86_64
libcap-ng0-0.7.9-1.42.x86_64
libcap2-32bit-2.25-2.41.x86_64
libstdc++6-7.3.1+r258812-2.15.x86_64
libstdc++6-devel-gcc7-7.3.1+r258812-2.15.x86_64
libstdc++6-32bit-7.3.1+r258812-2.15.x86_64
libstdc++6-devel-gcc7-32bit-7.3.1+r258812-2.15.x86_64
libstdc++6-locale-7.3.1+r258812-2.15.x86_64
libstdc++-devel-7-1.563.x86_64
libgcc_s1-7.3.1+r258812-2.15.x86_64
libgcc_s1-32bit-7.3.1+r258812-2.15.x86_64
make-4.2.1-5.48.x86_64
make-lang-4.2.1-5.48.noarch
makedumpfile-1.6.3-5.6.x86_64
xorg-x11-7.6_1-1.22.noarch
xorg-x11-server-1.19.6-6.19.x86_64
xorg-x11-fonts-7.6-3.9.noarch
xorg-x11-driver-video-7.6_1-2.30.x86_64
xorg-x11-Xvnc-1.8.0-11.23.x86_64
xorg-x11-fonts-core-7.6-3.9.noarch
xorg-x11-server-extra-1.19.6-6.19.x86_64
xorg-x11-essentials-7.6_1-1.22.noarch

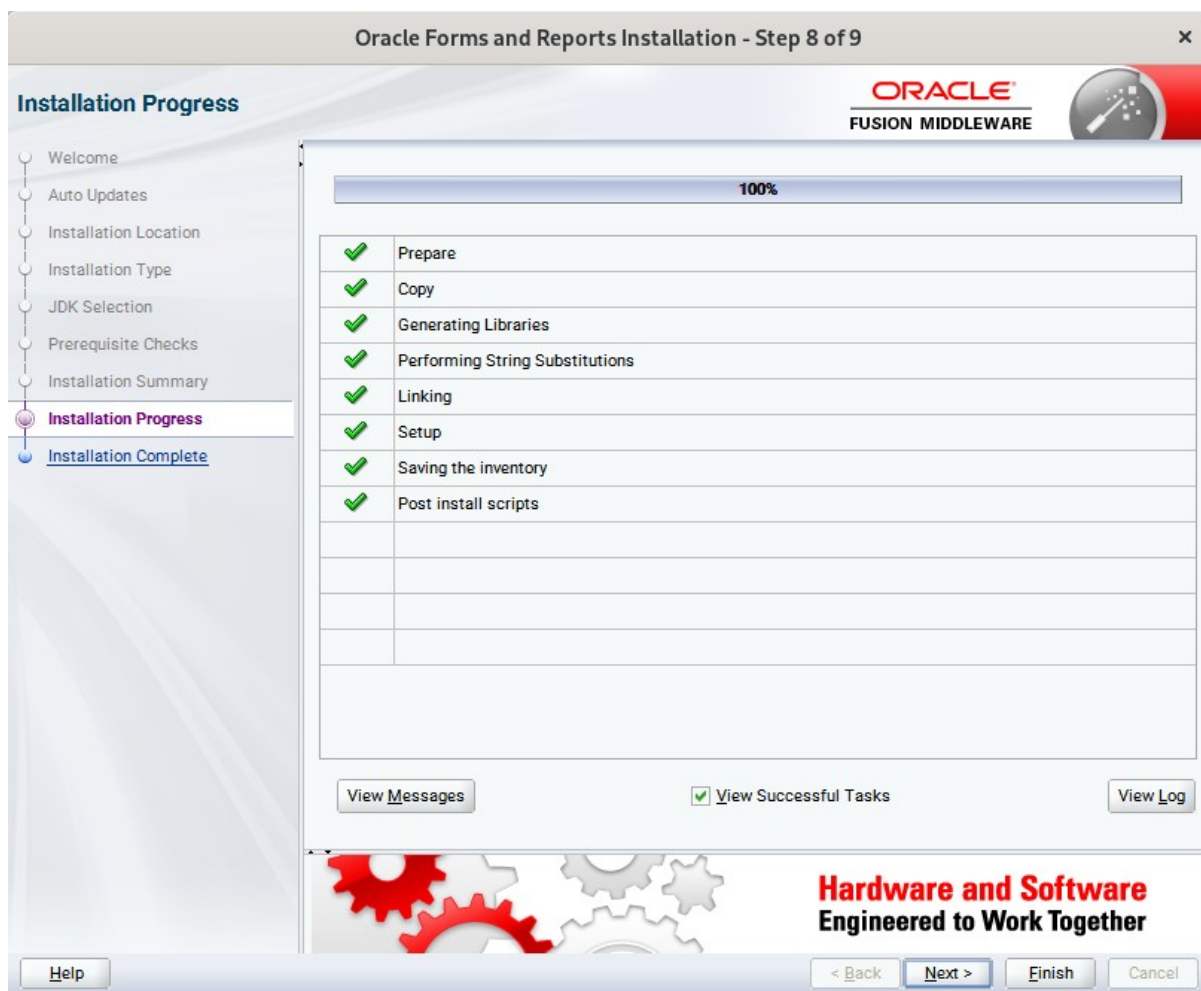
)

7). The **Installation Summary** page appears.



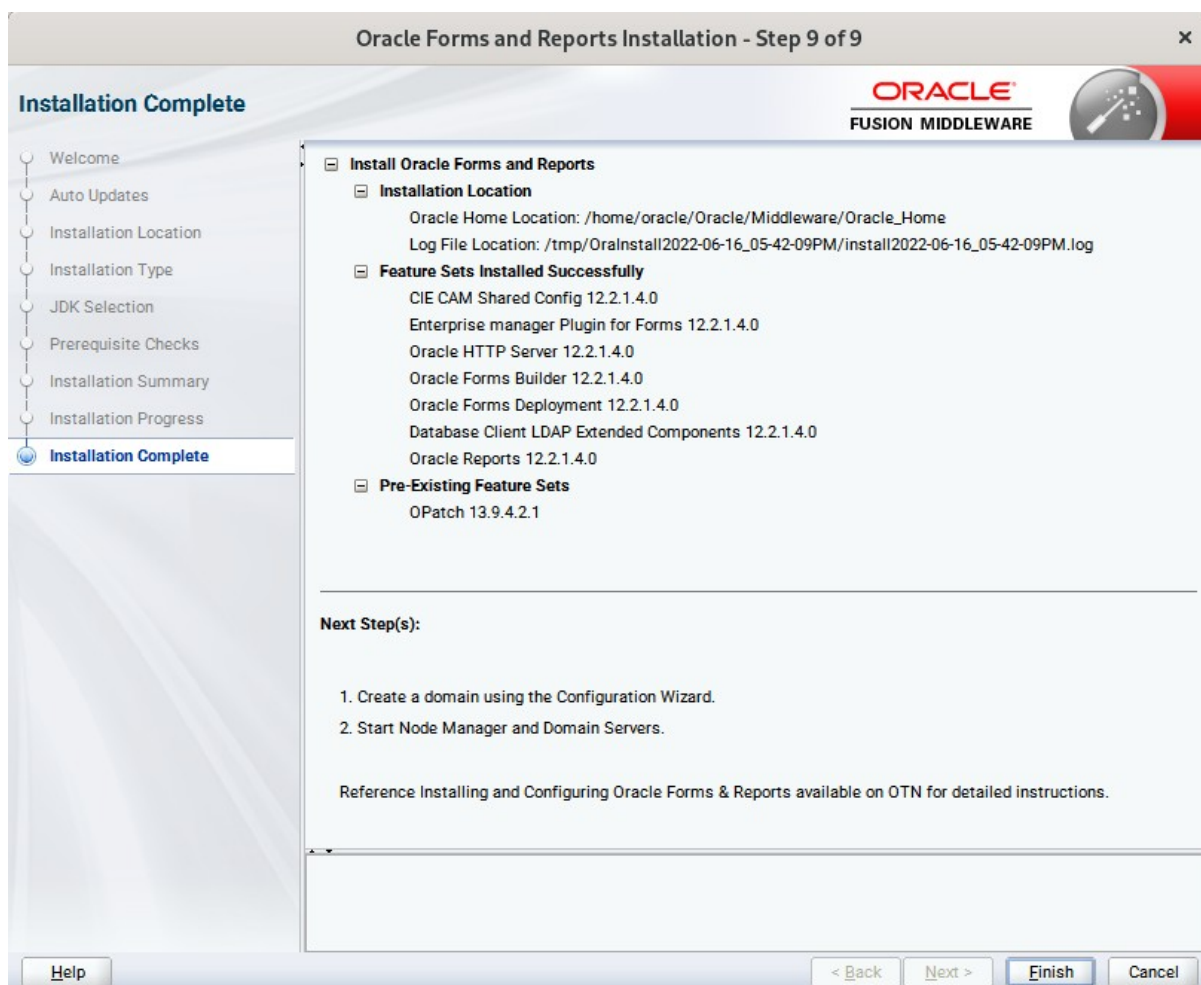
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

8). The **Installation Progress** page appears.



This page shows you the progress of the installation, and will warn you if there are any problems. You can view messages and logs from this page, but typically no action is required here. When progress is complete, click **Next** (go to a Summary page). Alternatively, you can click **Finish**.

9). If you clicked **Next**, the **Installation Complete** page appears, showing you the components that have been installed.

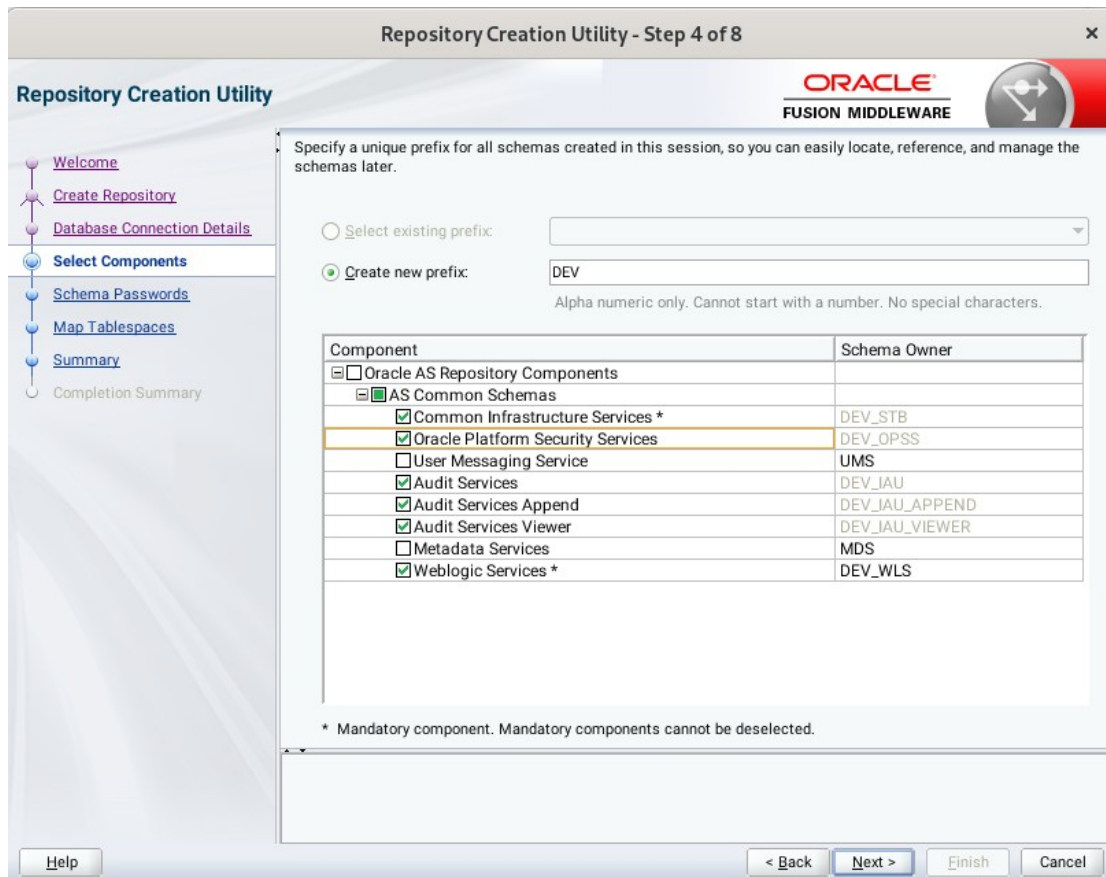


Click **Finish** to dismiss the installer.

2. Creating Oracle Database Schema through Repository Creation Utility(RCU)

2-1. Repository Creation Utility (RCU) is available with the Oracle WebLogic Server 12cR2 Fusion Middleware Infrastructure distribution. Run `$FMW_HOME/oracle_common/bin/rcu` and create required database schemas for Oracle Forms and Reports.

Screenshot: Database schemas creating for Oracle Forms and Reports.



Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the following components: **Common Infrastructure Services***, **Oracle Platform Security Services**, **Audit Services**, **Audit Services Append**, **Audit Services Viewer** and **Weblogic Services***.

(Note: If Forms Application Deployment Services (FADS) is also planned to be configured, include **User Messaging Services (UMS)**.)

Ensure the schema creation is successful.

Repository Creation Utility - Step 8 of 8

Repository Creation Utility
ORACLE
FUSION MIDDLEWARE

- Welcome
- Create Repository
- Database Connection Details
- Select Components
- Schema Passwords
- Map Tablespaces
- Summary
- Completion Summary**

Database details:

Host Name: Dell5530
 Port: 1521
 Service Name: SUSE
 Connected As: sys
 Operation: System and Data Load concurrently
 Execution Time: 1 minute 17 seconds

RCU Logfile:

Component Log Directory:

View Log:

Prefix for (prefixable) Schema DEV
 Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.306(sec)	<input type="button" value="stb.log"/>
Oracle Platform Security Services	Success	00:14.678(sec)	<input type="button" value="opss.log"/>
Audit Services	Success	00:12.191(sec)	<input type="button" value="iau.log"/>
Audit Services Append	Success	00:09.208(sec)	<input type="button" value="iau_append.log"/>
Audit Services Viewer	Success	00:09.110(sec)	<input type="button" value="iau_viewer.log"/>
Weblogic Services	Success	00:13.728(sec)	<input type="button" value="wls.log"/>

3. Configuring Oracle Forms and Reports using the Config Wizard

3-1. In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE_HOME/oracle_common/common/bin** directory.

Follow these steps:

1). Choose **Create a new domain**, and enter the desired domain home path.

Fusion Middleware Configuration Wizard - Page 1 of 8

Configuration Type

ORACLE
FUSION MIDDLEWARE

Create Domain

Templates

Administrator Account

Domain Mode and JDK

Advanced Configuration

Configuration Summary

Configuration Progress

End Of Configuration

What do you want to do?

Create a new domain

Update an existing domain

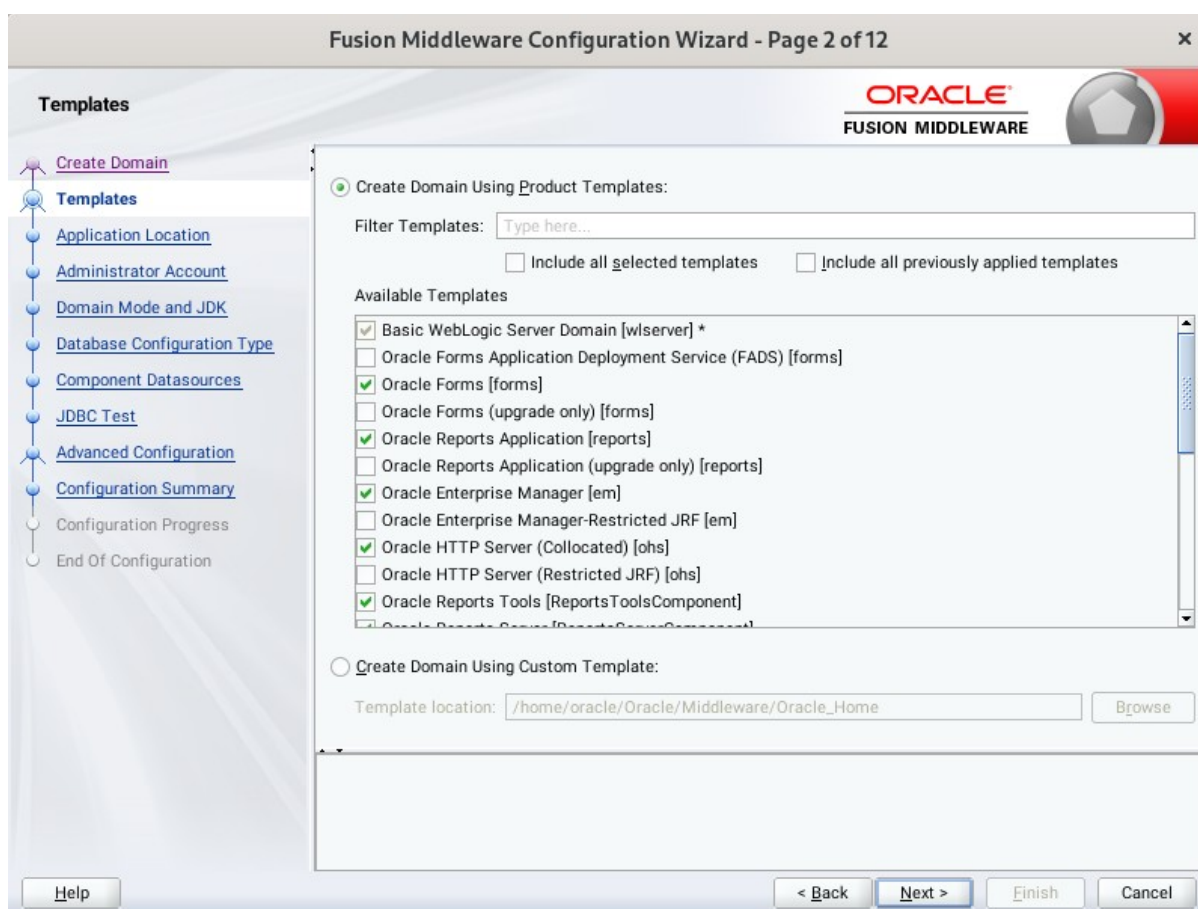
Domain Location: /oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain Browse

Create a new domain.

Help < Back Next > Finish Cancel

Click **Next** to continue.

2). The **Templates** screen appears.

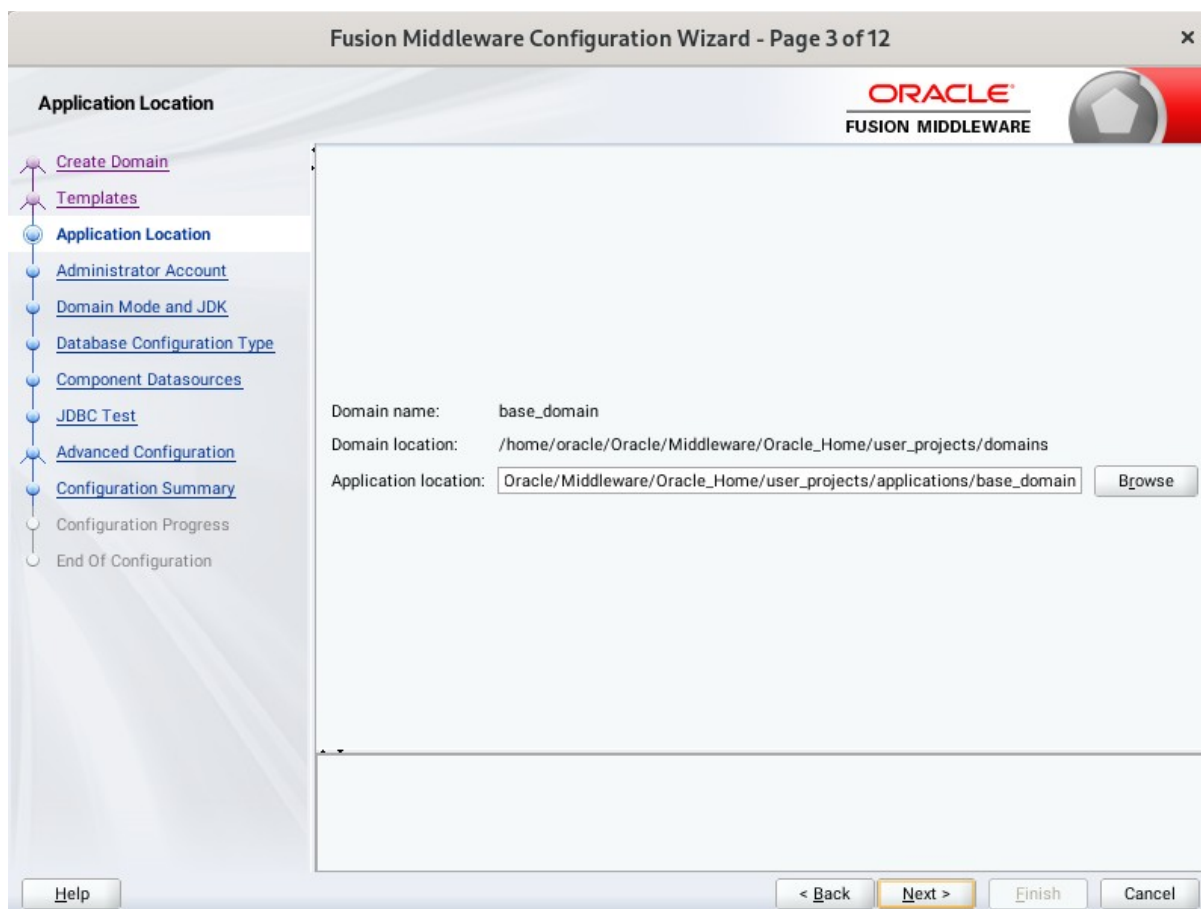


Keep the default selection (**Create Domain using Product Templates**). Selecting

Oracle Forms [forms],
Oracle Reports Server [ReportsServerComponent],
Oracle Reports Tools [ReportsServerComponent],
Oracle Reports Bridge [ReportsServerComponent],
Oracle Reports Application [reports]
and **Oracle HTTP Server(Collocated) [ohs]**.

Any dependent templates will be automatically selected. Click **Next** to continue.

3). The **Application Location** screen appears.



Keep the default value for Application location. Click **Next** to continue.

4). The **Administrator Account** screen appears.

Fusion Middleware Configuration Wizard - Page 4 of 12

Administrator Account

ORACLE
FUSION MIDDLEWARE

Create Domain
Templates
Application Location
Administrator Account
Domain Mode and JDK
Database Configuration Type
Component Datasources
JDBC Test
Advanced Configuration
Configuration Summary
Configuration Progress
End Of Configuration

Name

Password

Confirm Password

Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

Help < Back Next > Finish Cancel

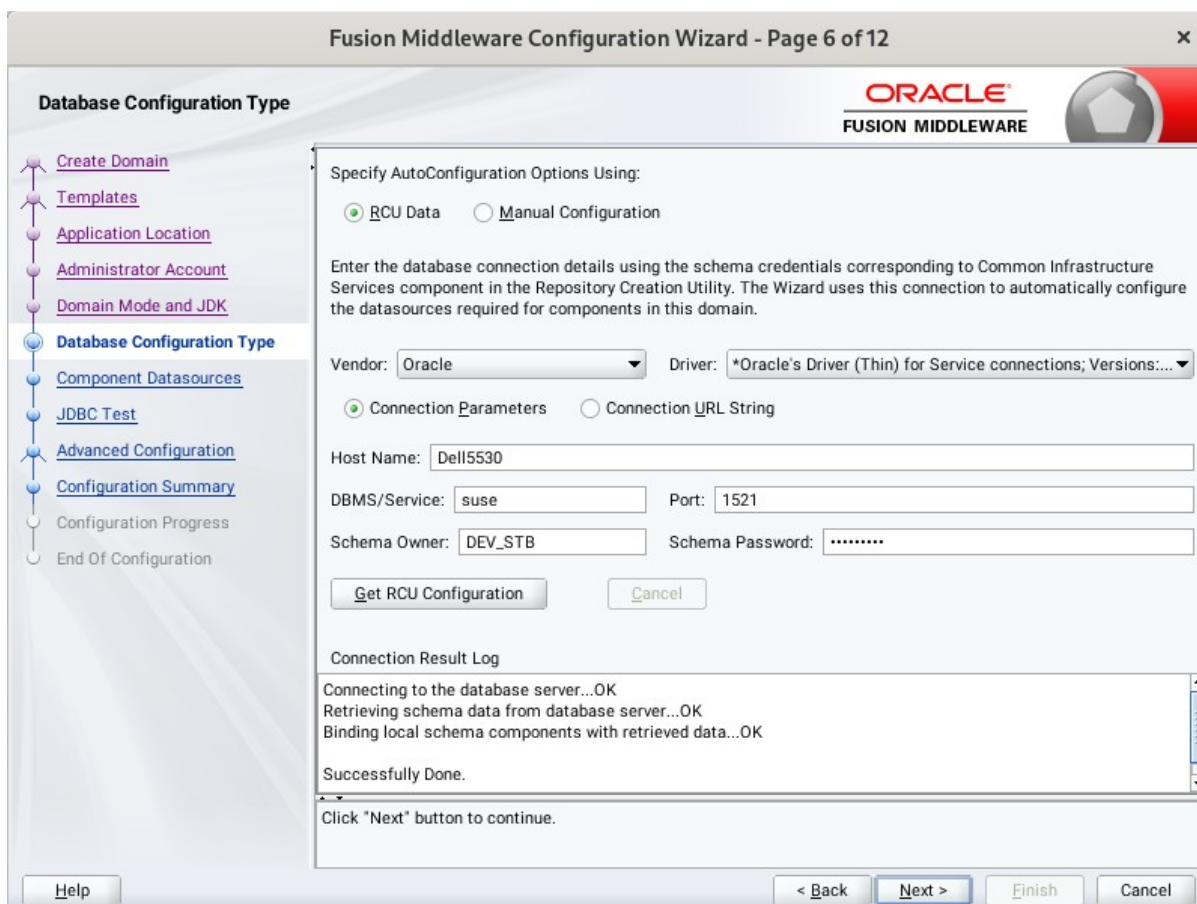
Enter the WebLogic Domain administration username and password. This information will be needed to access WebLogic Server Control and Fusion Middleware Control. Click **Next** to continue.

5). The **Domain Mode and JDK** screen appears.



The Domain Mode and JDK screen appears. Select the Domain Mode (either **Development** or **Production**). To ensure the highest degree of security, selecting **Production** is recommended. Leave the default JDK selection as it appears, unless using another version of the JDK desired.

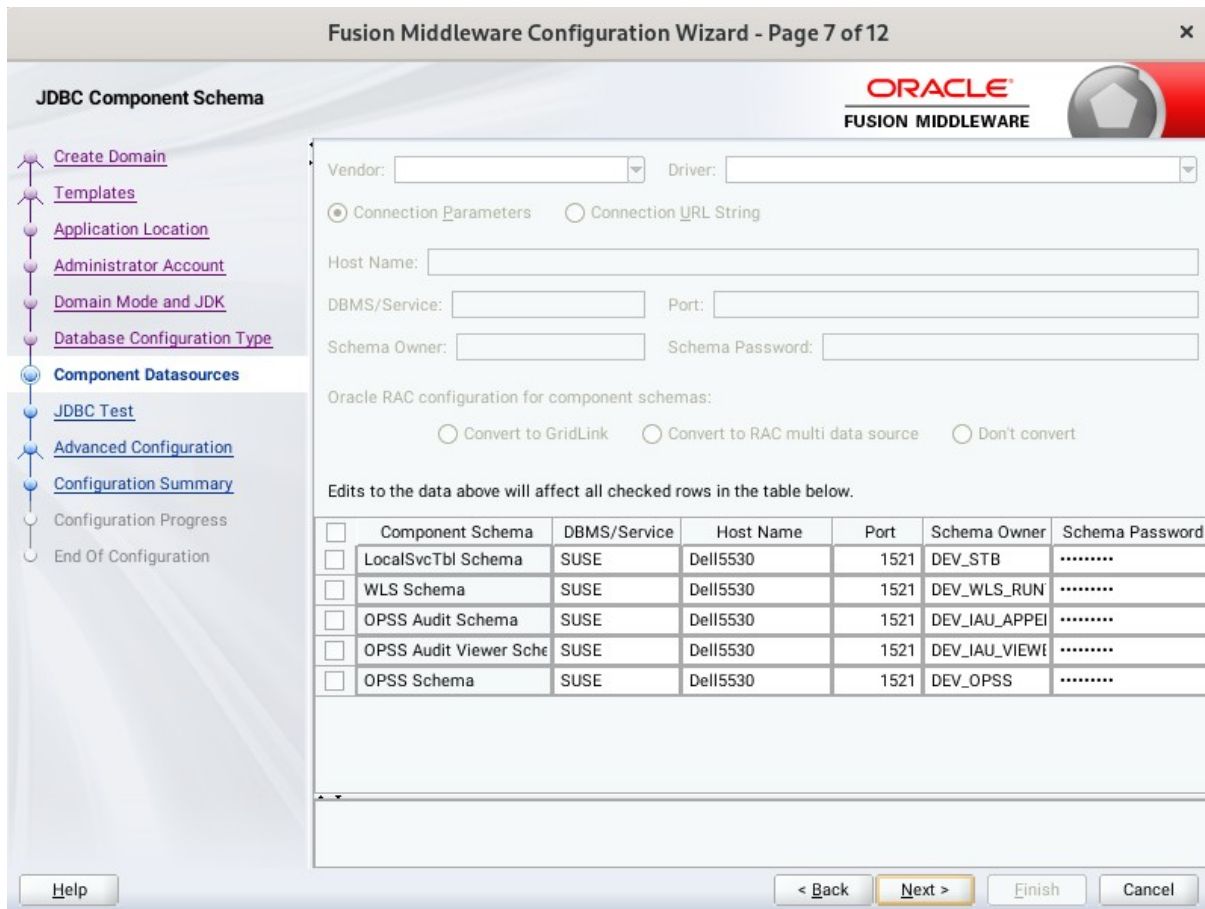
6). The **Database Configuration Type** screen appears.



The screenshot shows the 'Database Configuration Type' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 6 of 12'. The Oracle Fusion Middleware logo is in the top right corner. On the left, a navigation pane lists steps: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type (selected), Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area is titled 'Specify AutoConfiguration Options Using:' and has two radio buttons: 'RCU Data' (selected) and 'Manual Configuration'. Below this, a text box explains that the wizard uses schema credentials from the Repository Creation Utility. There are two options: 'Connection Parameters' (selected) and 'Connection URL String'. The 'Connection Parameters' section includes fields for: Vendor (Oracle), Driver (*Oracle's Driver (Thin) for Service connections; Versions:...), Host Name (Dell5530), DBMS/Service (suse), Port (1521), Schema Owner (DEV_STB), and Schema Password (masked with dots). There are 'Get RCU Configuration' and 'Cancel' buttons. Below is a 'Connection Result Log' showing: 'Connecting to the database server...OK', 'Retrieving schema data from database server...OK', 'Binding local schema components with retrieved data...OK', and 'Successfully Done.'. At the bottom, it says 'Click "Next" button to continue.' and has '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

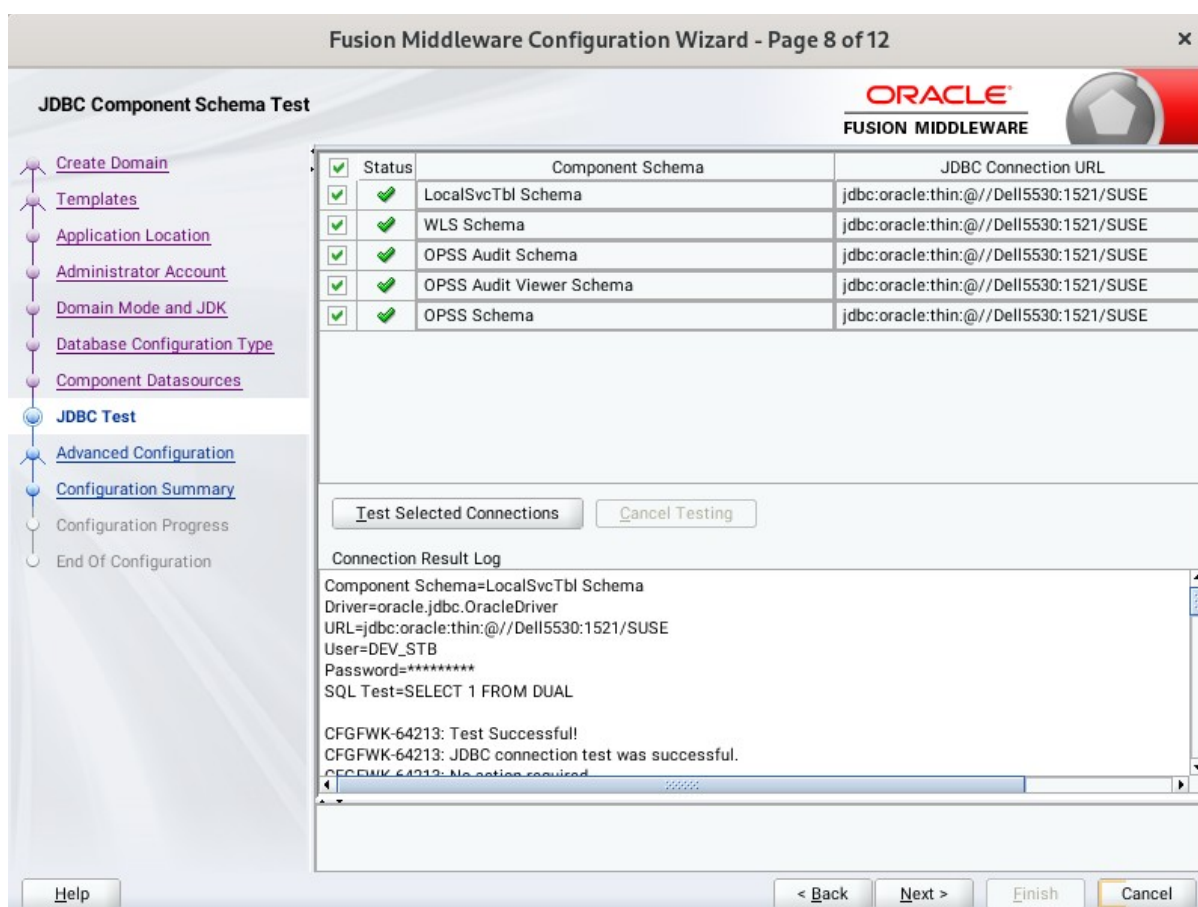
Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

7). The **JDBC Component Schema** screen appears.



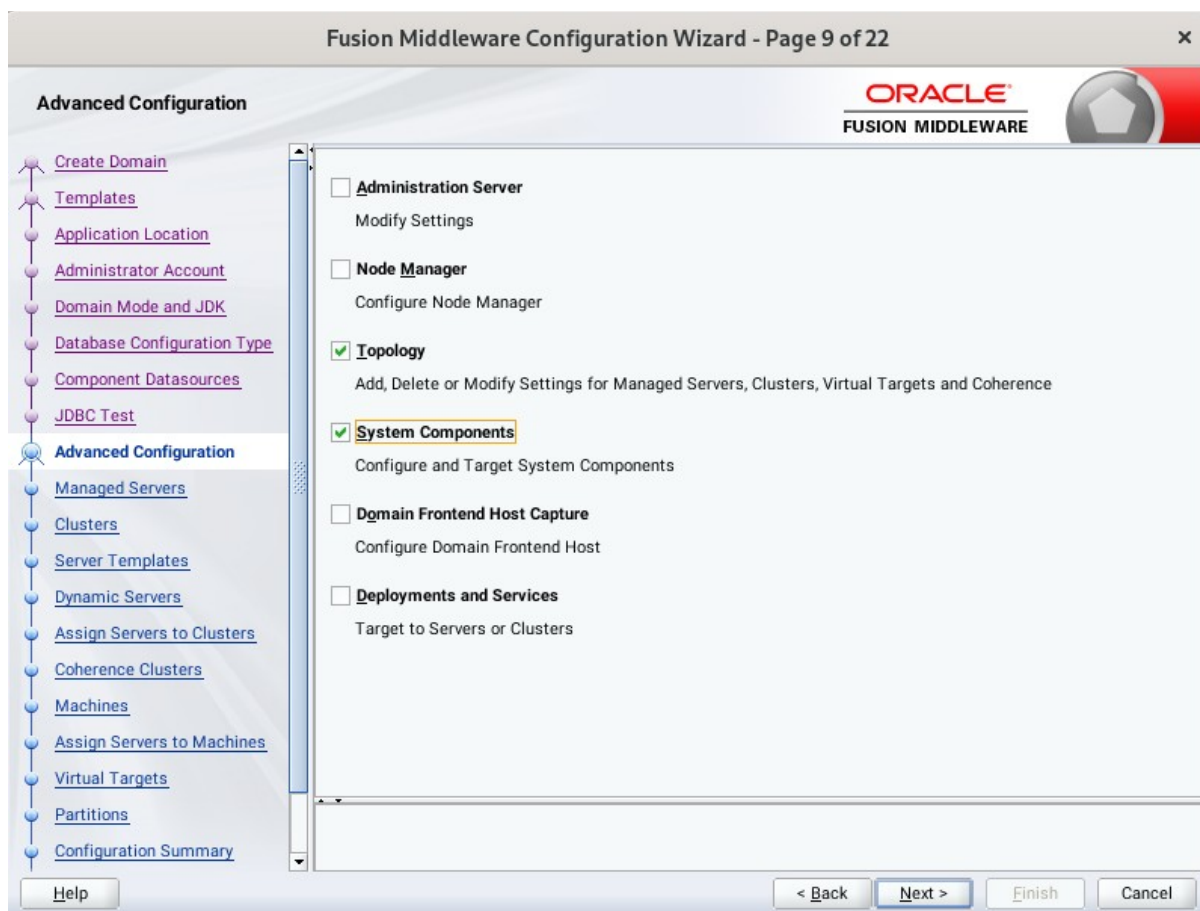
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

8). The **JDBC Component Schema Test** screen appears.



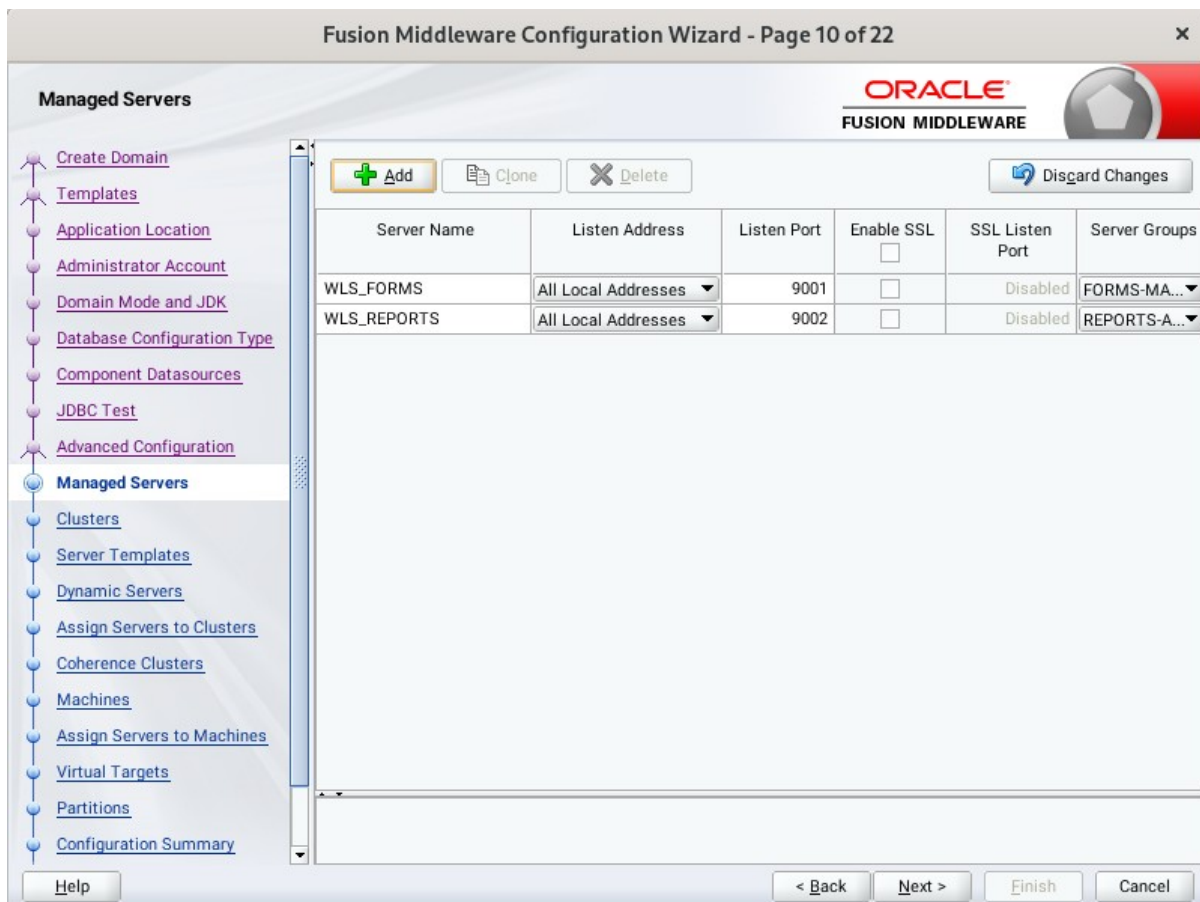
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

9). The **Advanced Configuration** screen appears.



Select **Topology** and **System Components**. Click **Next** to continue.

10). The **Managed Servers** screen appears.

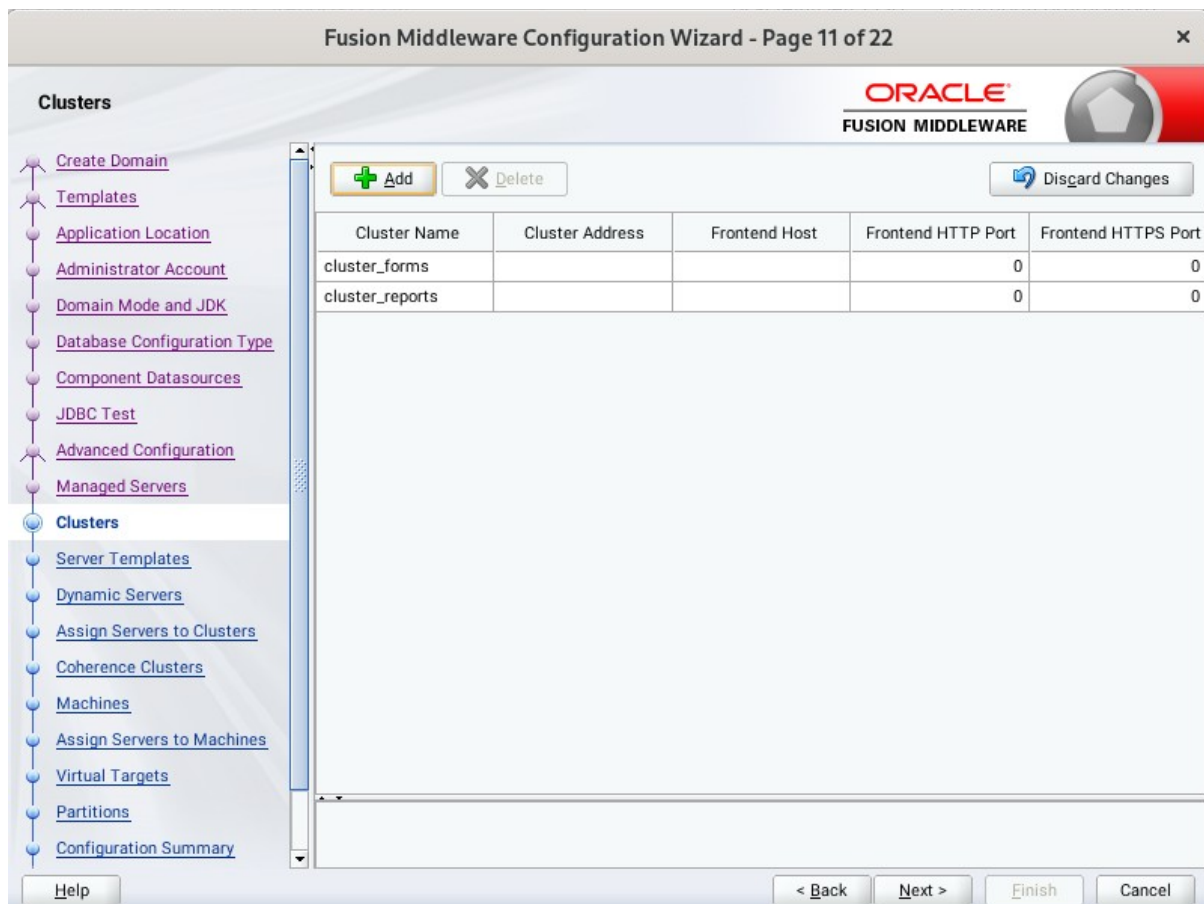


The screenshot shows the 'Managed Servers' configuration screen in the Fusion Middleware Configuration Wizard. The interface includes a navigation pane on the left with various configuration steps, and a main area with a table of servers. The table has the following data:

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
WLS_FORMS	All Local Addresses	9001	<input type="checkbox"/>	Disabled	FORMS-MA...
WLS_REPORTS	All Local Addresses	9002	<input type="checkbox"/>	Disabled	REPORTS-A...

Verify that the Server Groups is set to FORMS-MAN-SVR (for Forms) and REPORTS-APP-SERVERS (for Reports). The Listen address is All Local Addresses. Click **Next** to continue.

11). The **Clusters** screen appears.



Fusion Middleware Configuration Wizard - Page 11 of 22

ORACLE
FUSION MIDDLEWARE

Clusters

Navigation pane:

- Create Domain
- Templates
- Application Location
- Administrator Account
- Domain Mode and JDK
- Database Configuration Type
- Component Datasources
- JDBC Test
- Advanced Configuration
- Managed Servers
- Clusters**
- Server Templates
- Dynamic Servers
- Assign Servers to Clusters
- Coherence Clusters
- Machines
- Assign Servers to Machines
- Virtual Targets
- Partitions
- Configuration Summary

Buttons: + Add, X Delete, Discard Changes

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port
cluster_forms			0	0
cluster_reports			0	0

Buttons: Help, < Back, Next >, Finish, Cancel

Default entries will be acceptable in most cases, unless adding new clusters is desirable. Click **Next** to continue.

12). Then **Server Templates** screen appears.

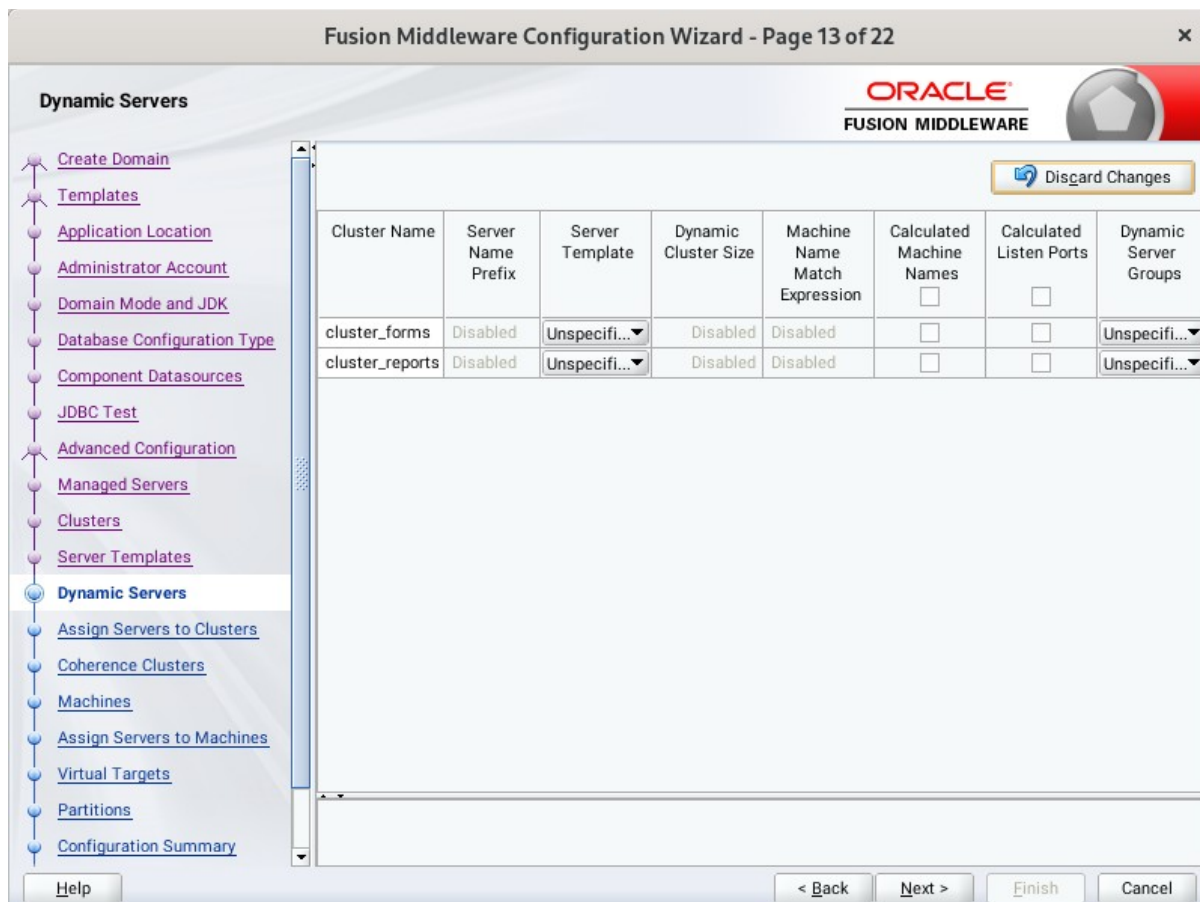
The screenshot shows the 'Server Templates' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 12 of 22'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'Server Templates' currently selected. The main area contains a table with the following data:

Name	Listen Port	SSL Listen Port	Enable SSL
wsm-cache-server-template	7100	8100	<input type="checkbox"/>

Buttons for '+ Add', 'X Delete', and 'Disgard Changes' are located above the table. At the bottom of the wizard, there are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is also present in the bottom left corner.

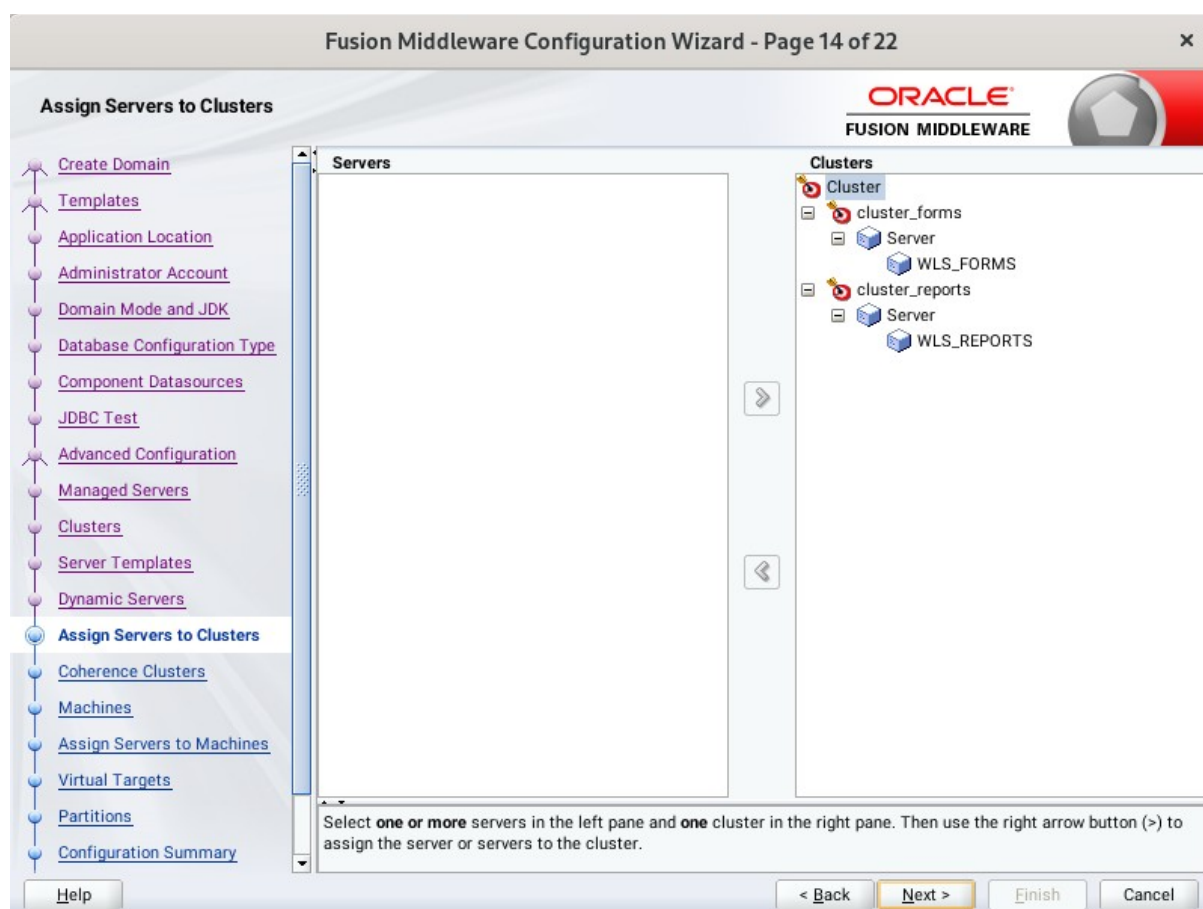
The default values will be appropriate for most cases. Click **Next** to continue.

13). The **Dynamic Servers** screen appears.



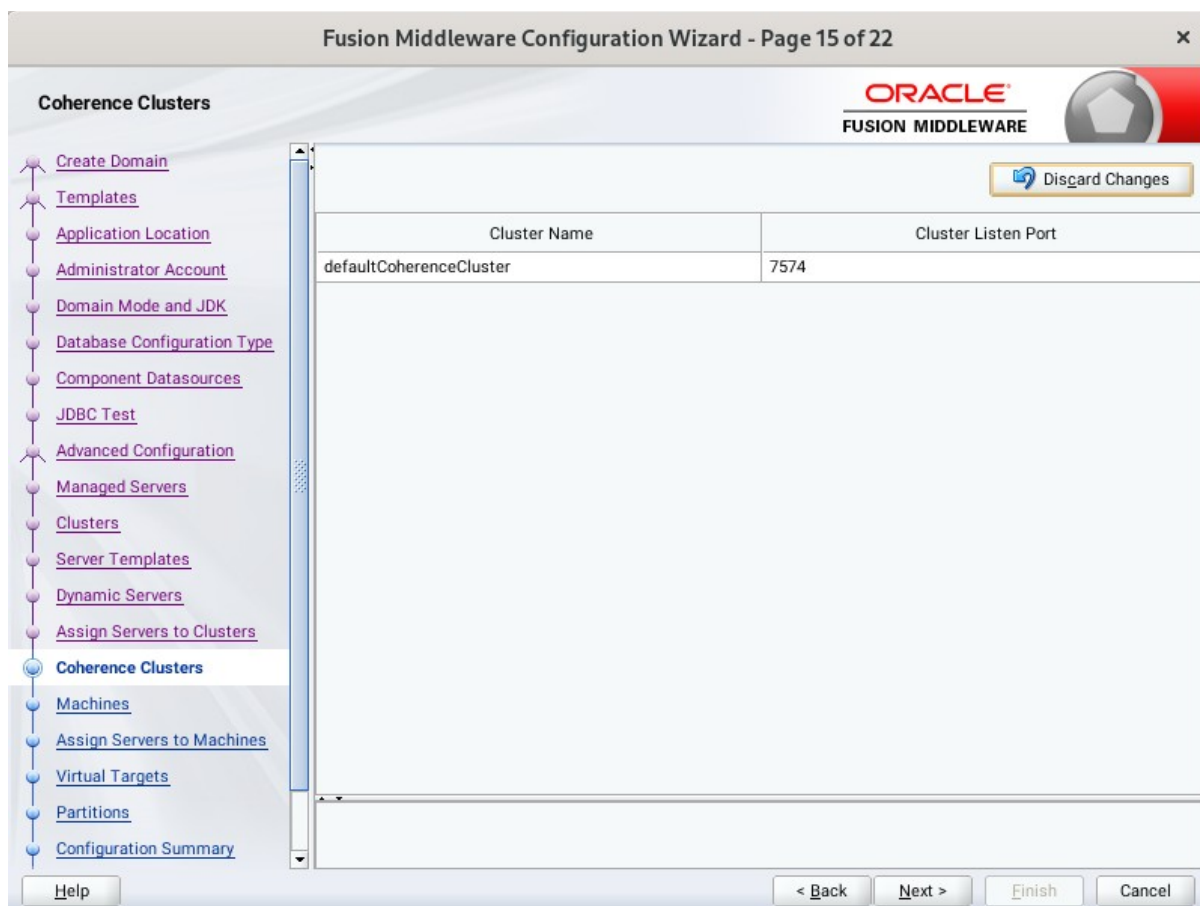
The default values will be appropriate for most cases. Click **Next** to continue.

14). The **Assign Servers to Clusters** screen appears.



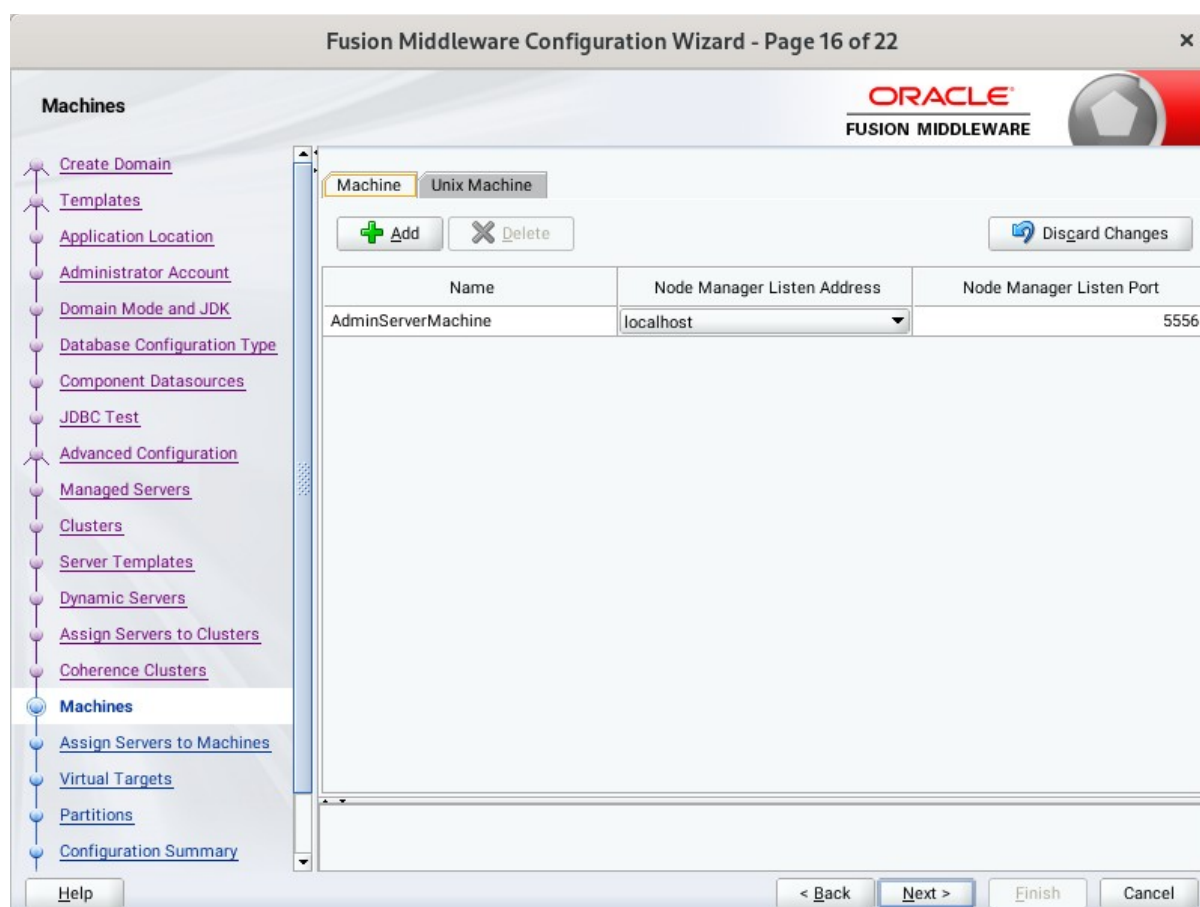
The default values will be appropriate for most cases. However, if new managed servers were added in the previous step, they should be added to the cluster here. Click **Next** to continue.

15). The **Coherence Clusters** screen appears.



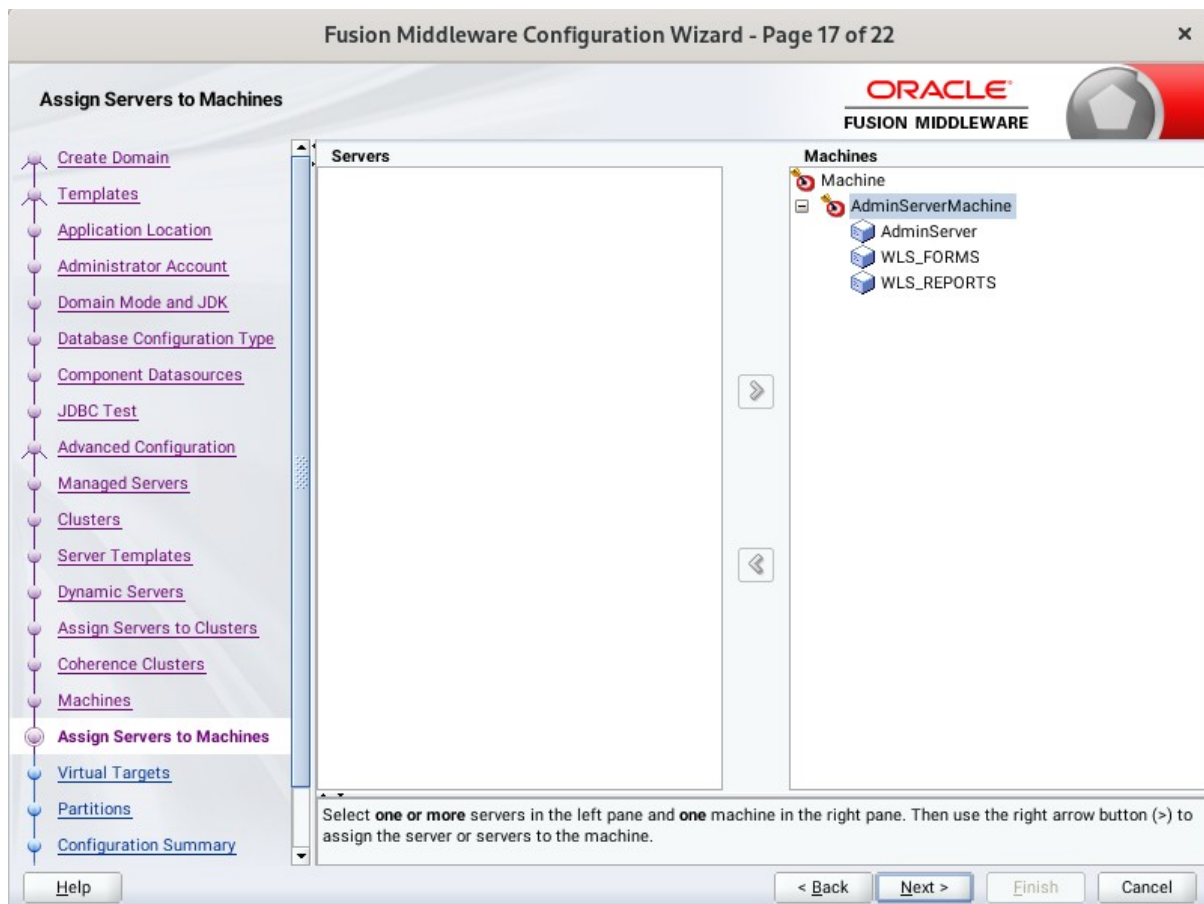
The default values will be appropriate for most cases. Click **Next** to continue.

16). The **Machines** screen appears.



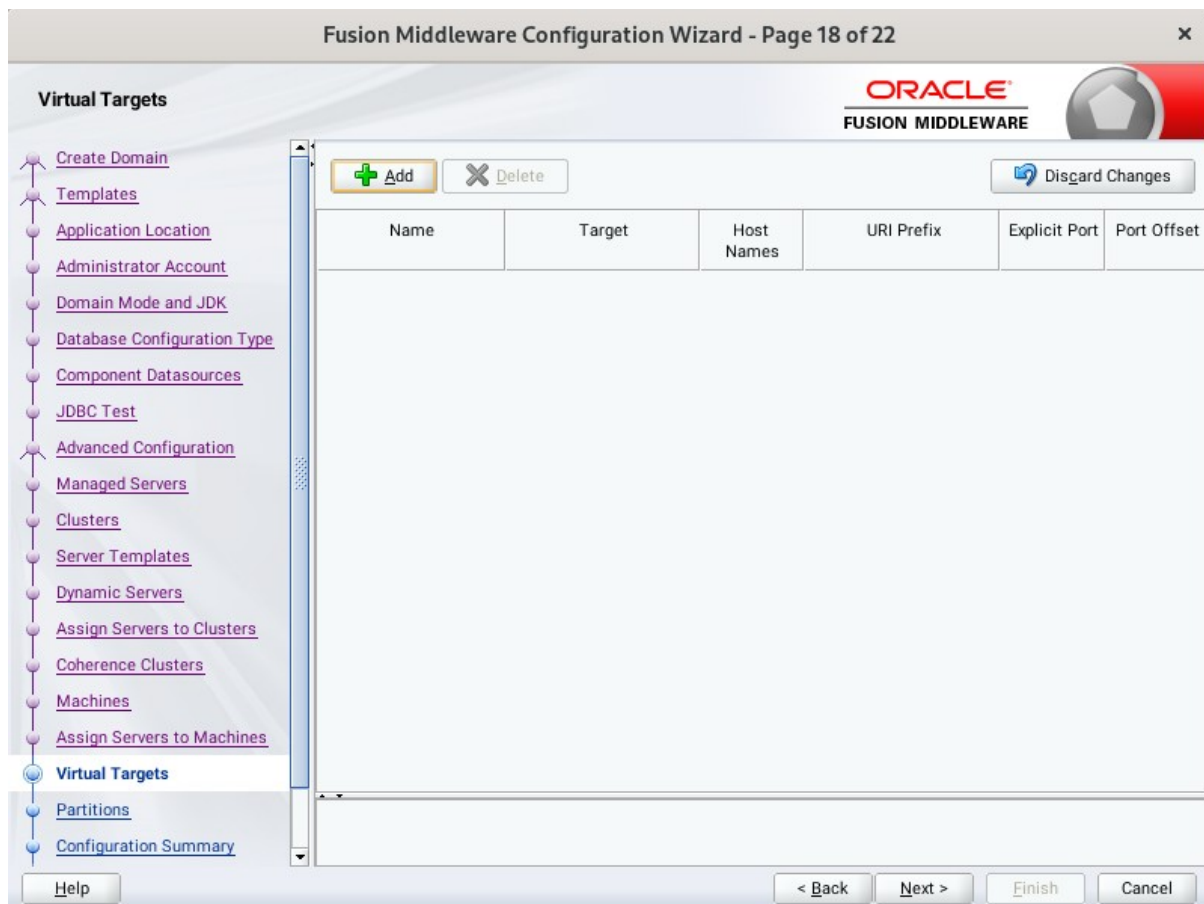
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

17). The **Assign Servers to Machines** screen appears.



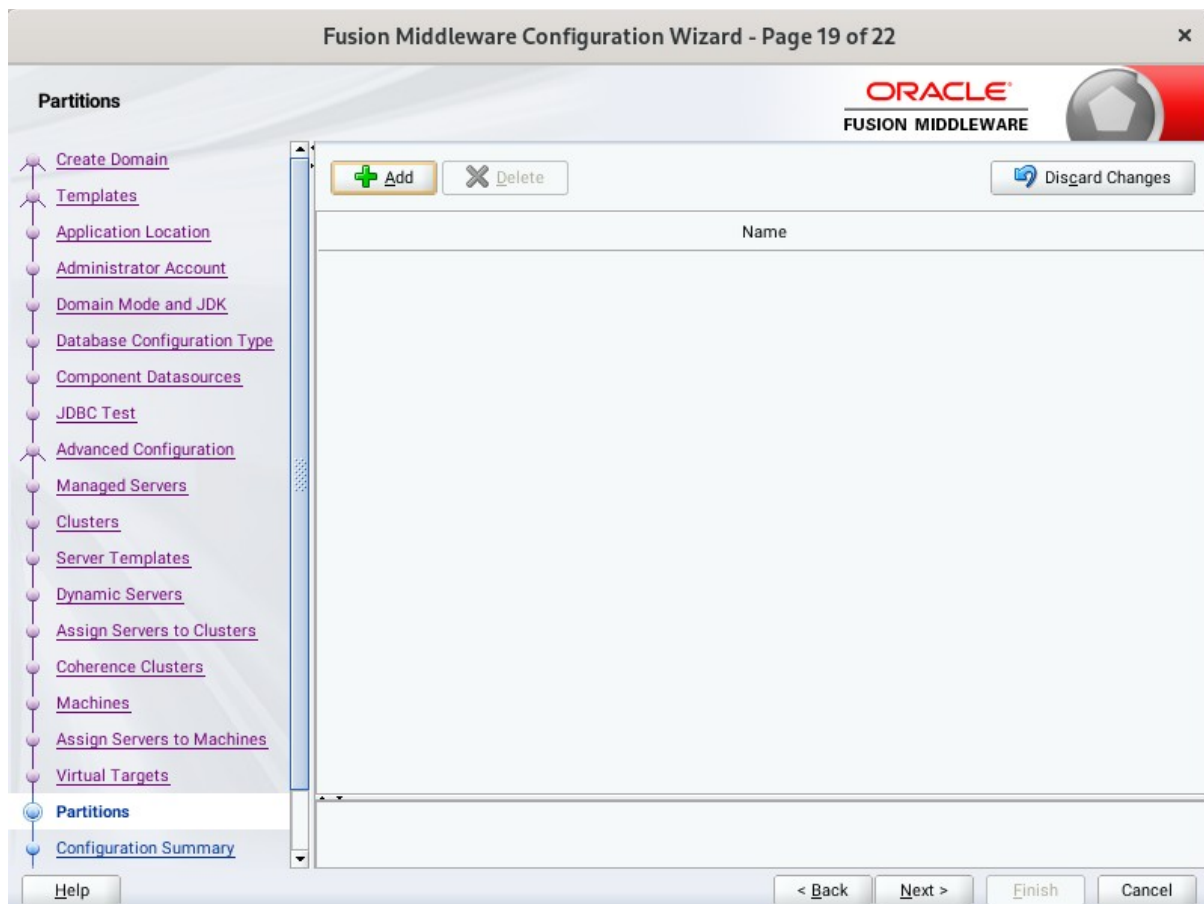
Move the AdminServer to the AdminServerMachine by clicking the '>' button. Click **Next** to continue.

18). The **Virtual Targets** screen appears.



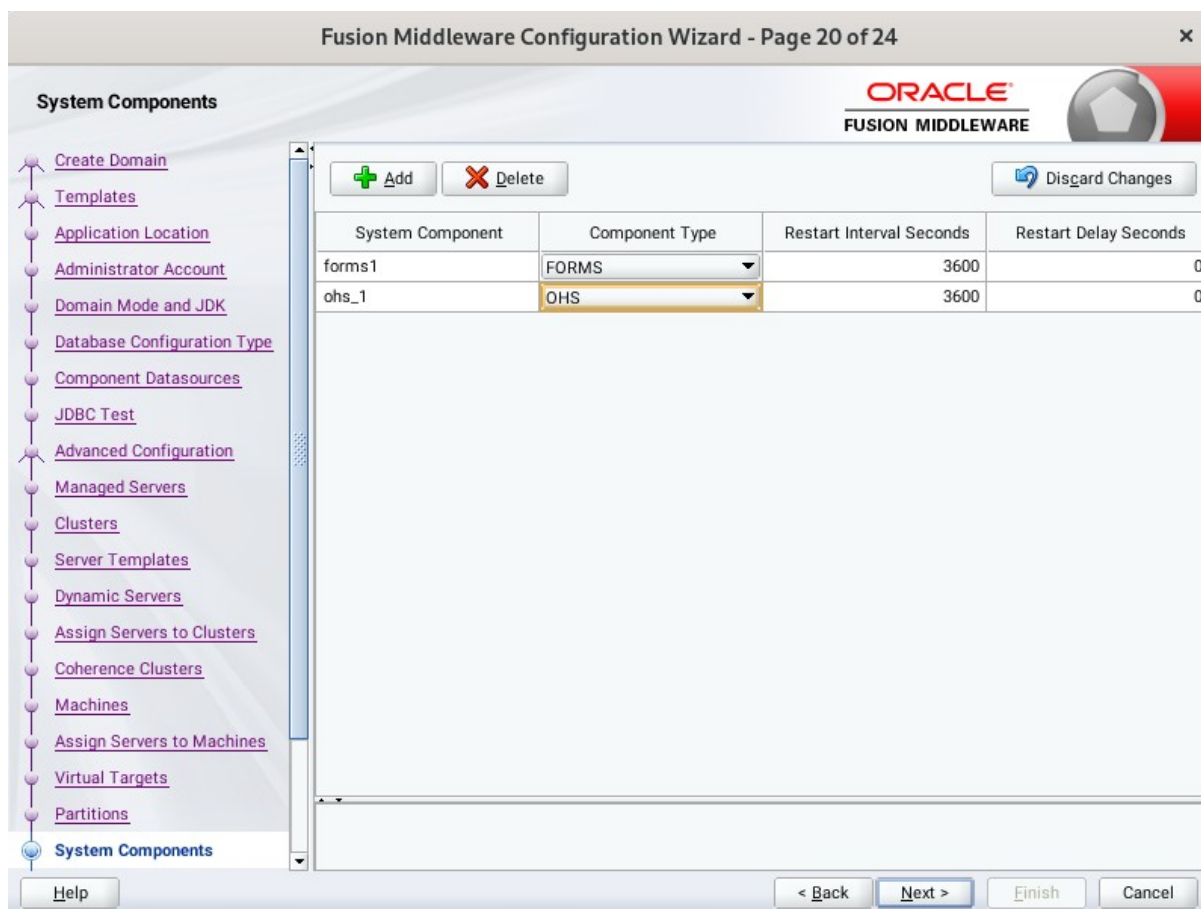
Used with WebLogic Server Partitions. Refer to the WebLogic Server documentation for details. Click **Next** to continue.

19). The **Partitions** screen appears.



The Partitions screen appears. Use this screen to add Weblogic Partitions if desired. Refer to the WebLogic Server documentation for details on how to use Partitions. Click **Next** to continue.

20). The **System Components** screen appears.



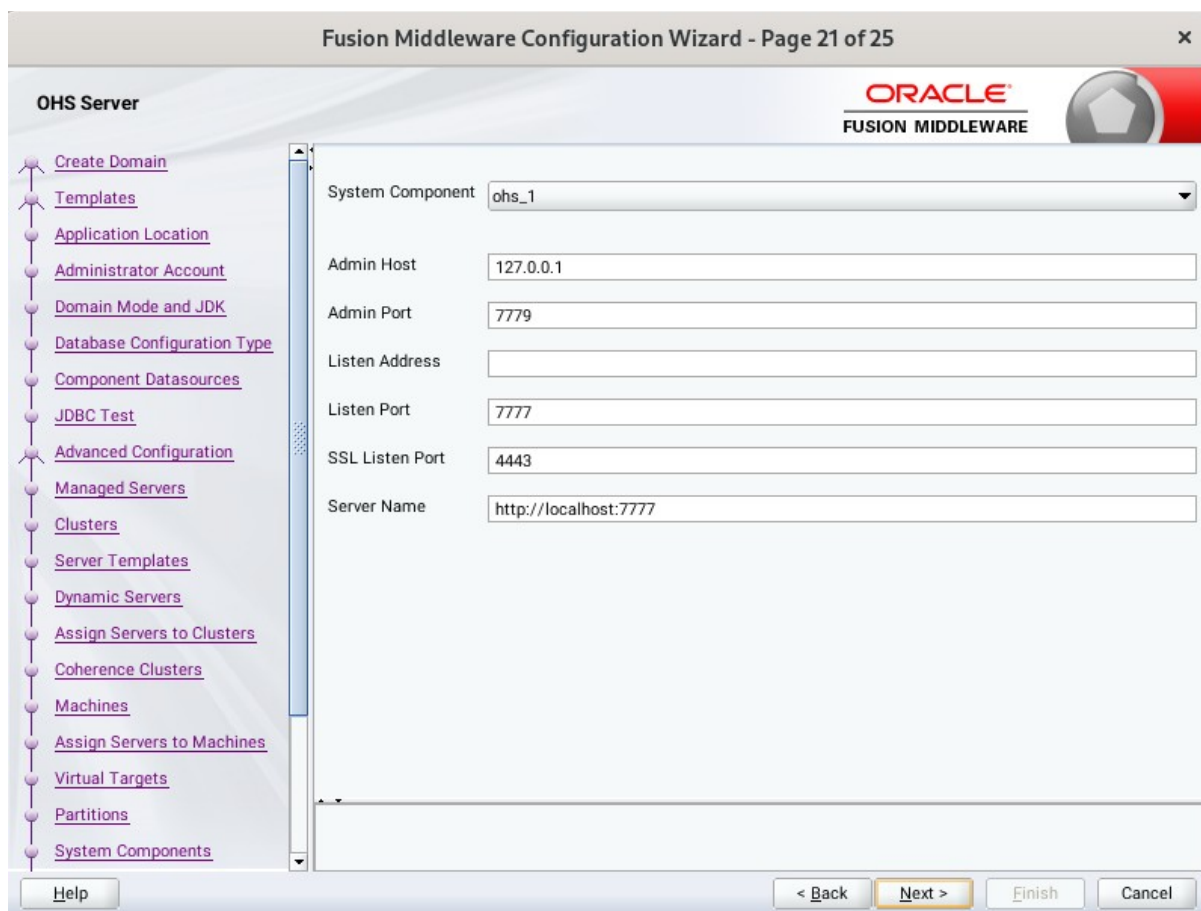
The screenshot shows the 'System Components' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 20 of 24'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a vertical navigation pane lists various configuration steps, with 'System Components' selected and highlighted. The main area contains a table with the following data:

System Component	Component Type	Restart Interval Seconds	Restart Delay Seconds
forms1	FORMS	3600	0
ohs_1	OHS	3600	0

At the top of the table area, there are buttons for '+ Add', 'X Delete', and 'Disgard Changes'. At the bottom of the window, there are navigation buttons: '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located at the bottom left of the main content area.

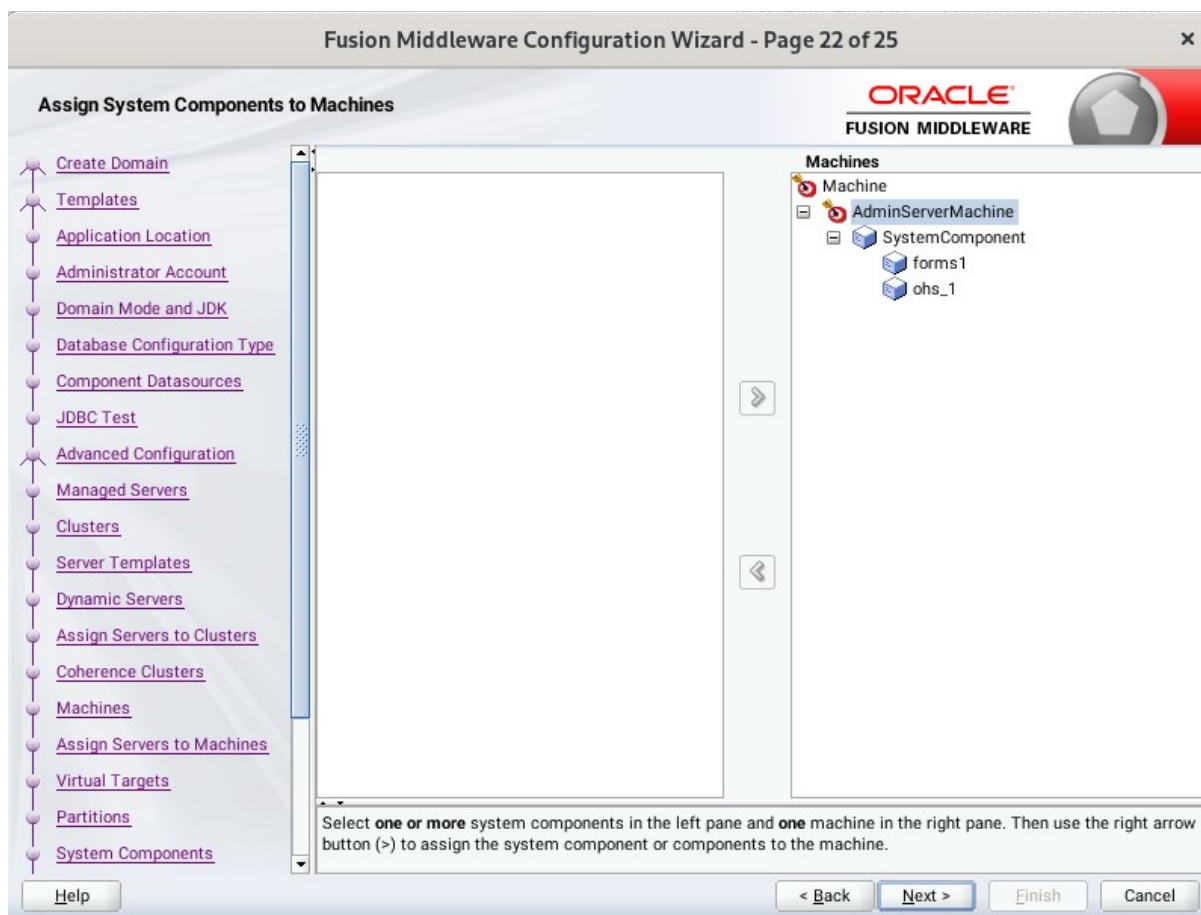
The default values will be appropriate for most cases. You can add additional System Component instances on this screen (for extend domain scenario). If adding OHS, it would appear here. Click **Next** to continue.

21). The **OHS Server** screen appears.



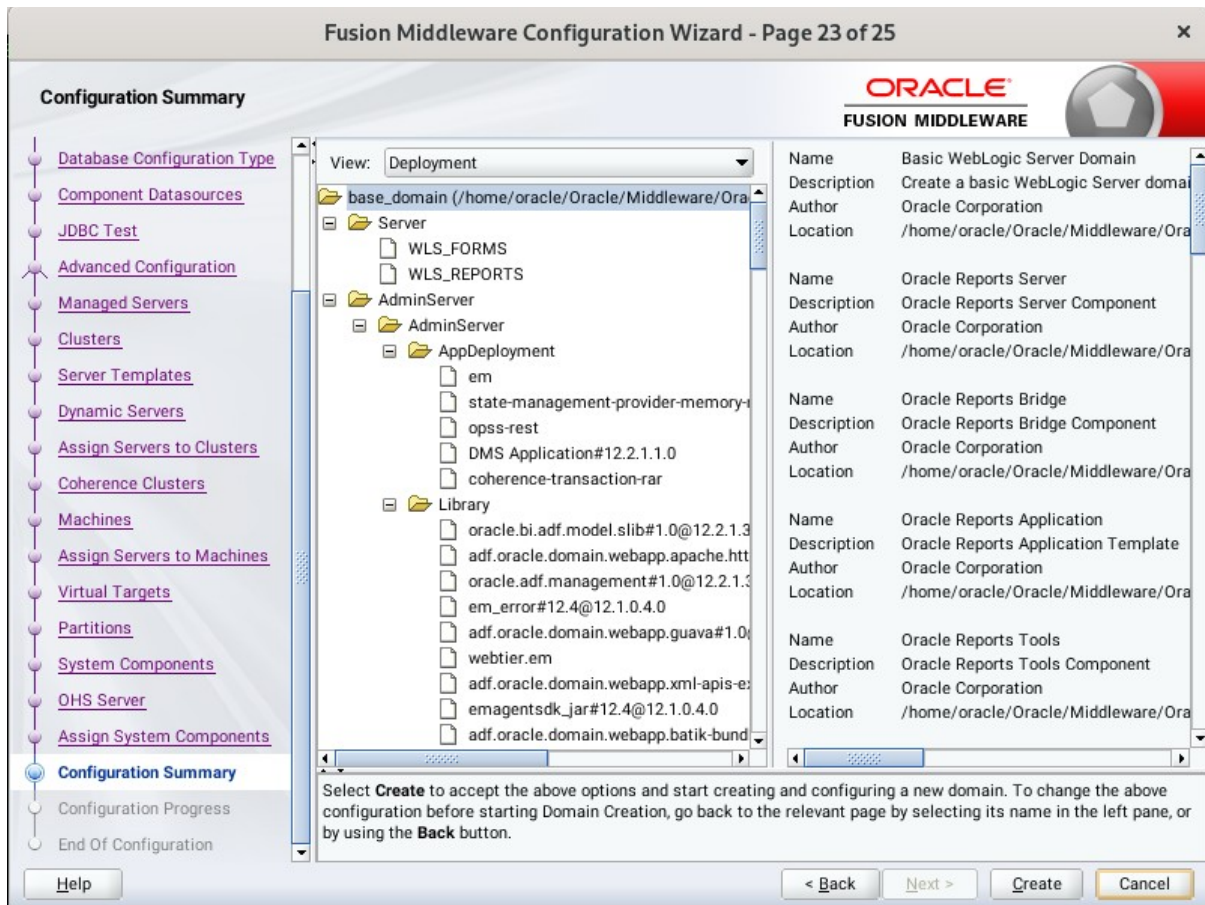
The default values will be appropriate for most cases. Click **Next** to continue.

22). The **Assign System Components to Machines** screen appears.



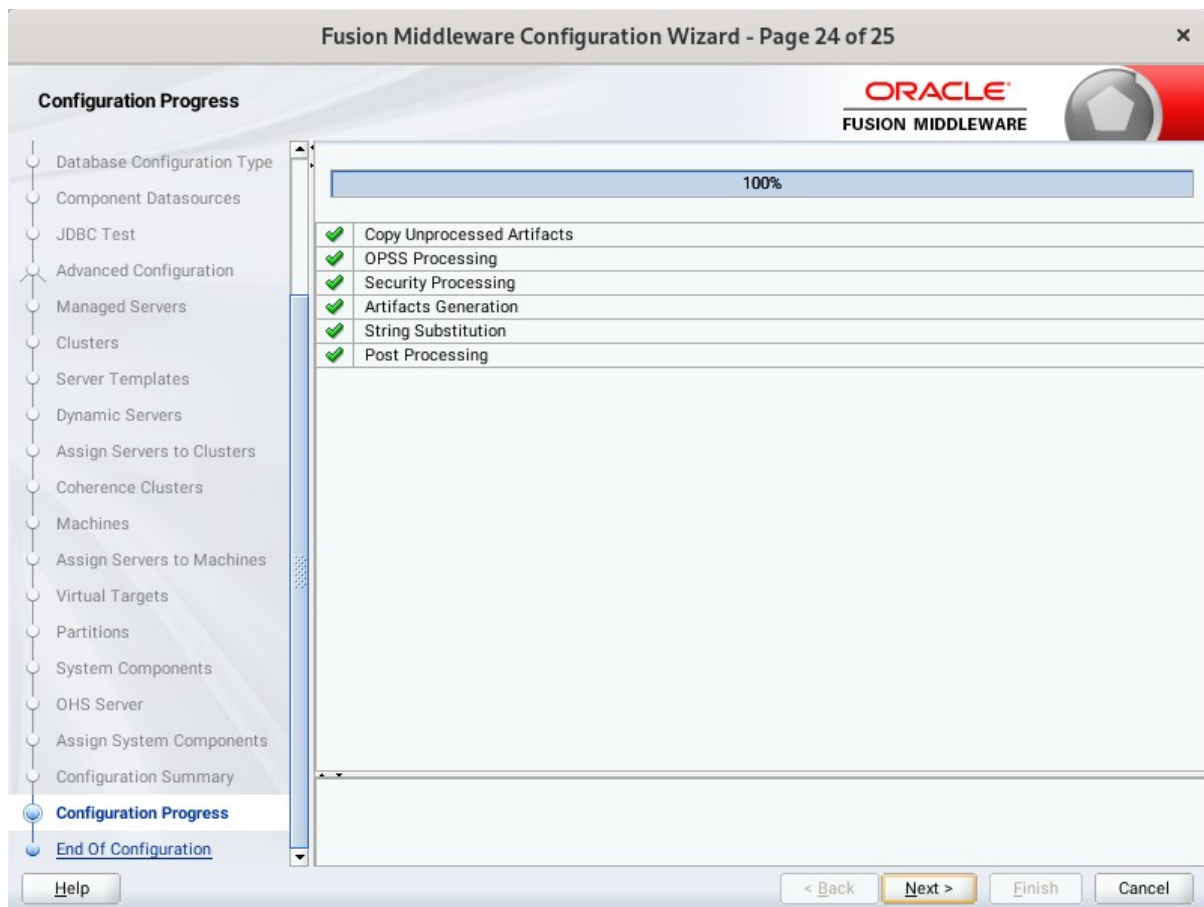
The default values will be appropriate for most cases. Click **Next** to continue.

23). The **Configuration Summary** screen appears.



Select **Create** to accept the above options and start creating and configuring a new domain.

24). The **Configuration Progress** screen appears.



Wait for this part of the configuration to complete. Depending on the location and performance of the Repository database, this process may take a few minutes. Click **Next** to continue.

25). The **End of Configuration** screen appears.



Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

4. Verifying Oracle Forms and Reports Installation and Configuration

4-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

4-2. Starting the Node Manager and the AdminServer.

Starting the Node Manager, go to the `DOMAIN_HOME/bin` directory and run `./startNodeManager.sh > nm.out &`

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> ./startNodeManager.sh > nm.out &
[1] 4214
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> + /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/.. -Dcoherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/.. -Dreports.tools.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsToolsComponent -Dreports.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/reports -Dreports.bridge.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsBridgeComponent -Dreports.server.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsServerComponent -Dforms.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/forms -Dohs.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ohs -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Jun 16, 2022 6:35:13 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jun 16, 2022 6:35:13 PM CST> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jun 16, 2022 6:35:13 PM CST> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jun 16, 2022 6:35:13 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jun 16, 2022 6:35:13 PM CST> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jun 16, 2022 6:35:13 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Jun 16, 2022 6:35:14 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<Jun 16, 2022 6:35:14 PM CST> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1.4.0

Configuration settings:

```

Starting the Admin Server, go to the `DOMAIN_HOME/bin` directory and run `./startWebLogic.sh`

```

.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jun 16, 2022 6:38:07,416 PM CST> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring
feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jun 16, 2022 6:38:08,061 PM CST> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection
with the Domain level Diagnostic Service.>
2022-06-16 18:38:08.081/92.200 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '2' for queue: 'weblogic
.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_H
ome/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2022-06-16 18:38:08.105/92.224 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '2' for queue: 'weblogic
.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jun 16, 2022 6:38:08,502 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jun 16, 2022 6:38:08,564 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jun 16, 2022 6:38:08,564 PM CST> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connecti
on list DomainRuntimeServiceMBean>
<Jun 16, 2022 6:38:08,717 PM CST> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 12
7.0.0.1, 0:0:0:0:0:0:0:1.>
<Jun 16, 2022 6:38:08,717 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jun 16, 2022 6:38:08,717 PM CST> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "A
dminServer" for domain "base_domain" running in production mode.>
<Jun 16, 2022 6:38:08,718 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jun 16, 2022 6:38:08,718 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:
7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 16, 2022 6:38:08,718 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jun 16, 2022 6:38:08,718 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jun 16, 2022 6:38:08,718 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:
7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 16, 2022 6:38:08,750 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jun 16, 2022 6:38:08,758 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2022-06-16 18:38:09.297/93.417 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '7' for queue: 'weblogic
.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST

```

You know that the administrator server is running when you see the following output:

 Server state changed to RUNNING.

4-3. Verifying the Installed Products and Product Versions. Check the products and product version numbers by running the **opatch lsinventory -detail** command from the **ORACLE_HOME/OPatch** directory.

Confirmed that OPatch succeeded.

4-4. Checking Oracle Forms and Reports Product URLs.

1). Access to Enterprise Manager Console.

Login Page:

Sign in - Oracle Enterprise M... x

← → ↻ http://dell5530:7001/em/faces/targetauth/emasLogin?target=%2FDomain_1 90% ☆

SIGN IN TO
ORACLE ENTERPRISE MANAGER
FUSION MIDDLEWARE CONTROL 12c

Domain Domain_base_domain

* User Name weblogic

* Password

Login to Partition

Sign in

ORACLE

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Home Page:

base_domain (Oracle WebLo...)

http://dell5530:7001/em/faces/as-weblogic-webLogicDomainHome?type=weblo 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

base_domain

WebLogic Domain

Jun 16, 2022 6:44:57 PM CST

Information
Certain functionality on this page is available only when you own the edit session lock. To obtain the lock, click "Lock and Edit" in the Change Center menu.

Servers
2 Down
1 Up

Administration Server
Name: AdminServer
Host: Dell5530
Listen Port: 7001

Servers

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		AdminServerMachine	Running	OK
WLS_FORMS	↓	cluster_forms	AdminServerMachine	Shutdown	Unknown
WLS_REPORTS	↓	cluster_reports	AdminServerMachine	Shutdown	Unknown

Columns Hidden 34 Servers 3 of 3

Starting WLS_FORMS

WLS_FORMS (Oracle WebLo...)

http://dell5530:7001/em/faces/as-weblogic-webLogicServerHome?type=weblog 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

WLS_FORMS

WebLogic Server | Start Up | Shut Down

Jun 16, 2022 6:50:20 PM CST

Information
Certain functionality on this page is available only when you own the edit session lock. To obtain the lock, click "Lock and Edit" in the Change Center menu.

Monitoring
Request Processing Time (ms): 0
Requests (per minute): 0.00

Deployments
1 Up

Most Requested
Requests Processed: 0

General
Up Since: Jun 16, 2022 6:49:52 PM
Version: 12.2.1.4.0
State: Running
Health: OK ✓
Server Type: Configured
Cluster: cluster_forms
CPU Usage (%): 1.74
Heap Usage (MB): 313.25
Java Vendor: Oracle Corporation
Java Version: 1.8.0_221

Response and Load

06:36 PM 06:39 06:42 06:45 06:48
June 16 2022

Request Processing Time (ms) | Requests (per minute)

Servlets and JSPs
Active Sessions: 0
Request Processing Time (ms): 0
Requests (per minute): 0.00

EJBs
Beans in Use: 0
Bean Accesses (per minute): 0.00
Bean Access Successes (%): 0.00

http://dell5530:7001/em/faces/a...e_domain/base_domain/WLS_FORMS#

Starting WLS_REPORTS

The screenshot shows the Oracle Enterprise Manager interface for the WLS_REPORTS server. The browser address bar shows the URL: `http://dell5530:7001/em/faces/as-weblogic-webLogicServerHome?type=weblog`. The page title is "WLS_REPORTS (Oracle WebLo...".

Monitoring: Request Processing Time (ms) is 0.00, and Requests (per minute) is 0.00.

Deployments: 1 Up.

Most Requested: 0 Requests Processed.

General Information:

- Up Since: Jun 16, 2022 6:51:48 PM
- Version: 12.2.1.4.0
- State: Running
- Health: OK ✓
- Server Type: Configured
- Cluster: cluster_reports
- CPU Usage (%): 1.48
- Heap Usage (MB): 351.45
- Java Vendor: Oracle Corporation
- Java Version: 1.8.0_221

Response and Load: A line graph showing Request Processing Time (ms) and Requests (per minute) from 06:38 PM to 06:50 PM. The y-axis ranges from 0.0 to 1.0. The x-axis shows time intervals: 06:38 PM, 06:41, 06:44, 06:47, 06:50. A legend indicates blue for Request Processing Time (ms) and green for Requests (per minute). A "Table View" link is present.

Servlets and JSPs:

- Active Sessions: 0
- Request Processing Time (ms): 0
- Requests (per minute): 0.00

EJBs:

- Beans in Use: 0
- Bean Accesses (per minute): 0.00
- Bean Access Successes (%): 0.00

Viewing Home page - All three servers are up and running.

The screenshot shows the Oracle Enterprise Manager interface for the base_domain. The browser address bar shows the URL: `http://dell5530:7001/em/faces/as-weblogic-webLogicDomainHome?type=weblo`. The page title is "base_domain (Oracle WebLo...".

Servers: 3 Up.

Clusters: 2 Up.

Deployments: 3 Up.

Domain Partitions: 0.

Administration Server:

- Name: AdminServer
- Host: Dell5530
- Listen Port: 7001

Servers Table:

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		AdminServerMachine	Running	OK
WLS_FORMS	↑	cluster_forms	AdminServerMachine	Running	OK
WLS_REPORTS	↑	cluster_reports	AdminServerMachine	Running	OK

Columns Hidden 34 Servers 3 of 3

Starting ohs1

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The browser address bar displays `http://dell5530:7001/em/faces/as_ohs_ohsHome?type=oracle_apache&target=% 90%`. The page title is "ORACLE Enterprise Manager Fusion Middleware Control 12c".

On the left sidebar, there are sections for "Monitoring" (CPU Usage: 0.00%, Memory Usage: 0.00%), "Virtual Hosts" (0), and "Modules" (0). The main content area is titled "ohs_1" and includes control buttons for "Start Up", "Shut Down", and "Restart...".

The "General" section provides details for the component:

- Component Name: ohs_1
- Version: 12.2.1.4.0
- State: Running
- Host: Dell5530
- Ports: 7777 4443 127.0.0.1:7779
- Machine Name: AdminServerMachine
- Auto Restart:
- Oracle Home: /home/oracle/Oracle/Middleware/Oracle_Home

The "Key Statistics" section shows:

- Idle Processes: Unavailable
- Busy Processes: Unavailable
- Error Rate (%): -1.00
- Connection Duration (seconds): Unavailable
- Request Processing Time (seconds): Unavailable
- Request Throughput (per second): -1.00
- Response Data Throughput (KB/second): -1.00

Two graphs are displayed: "Response and Load" and "CPU and Memory Usage". Both graphs show data for the time period from 06:39 PM to 06:51 PM on June 16, 2022. The "Response and Load" graph includes a legend for "Request Processing Time (milli seconds)" and "Domain_base_domain/base_domain/ohs_1: Request Through...". The "CPU and Memory Usage" graph includes a legend for "CPU Usage (%)" and "Memory Usage (MB)".

The URL at the bottom of the screenshot is `http://dell5530:7001/em/faces/as_ohs_ohsHome?type=oracle_apache&target=/Domain_base_domain/base_domain/ohs_1#`.

Verified ohs1 URLs can be accessed.

The screenshot shows the Oracle HTTP Server 12c product page. The browser address bar displays `http://dell5530:7777/`. The page title is "ORACLE Oracle HTTP Server 12c".

The main content area features a diagram illustrating the architecture and capabilities of Oracle HTTP Server 12c. The diagram shows a central "OHS" component (represented by a server rack) connected to various services and tools:

- Local Content**: Represented by a folder icon.
- JS** and **HTML**: Represented by icons for JavaScript and HTML.
- Audit Control**: Represented by a padlock icon.
- Identity Management**: Represented by a server rack icon.
- Authentication Authorization**: Represented by a server rack icon.
- Load Balancing**: Represented by a server rack icon.
- Fusion Middleware Applications**: Represented by a server rack icon.
- Enterprise Manager**: Represented by a server rack icon with the text "Manage, monitor, diagnose".
- FMW Lifecycle Tools**: Represented by a server rack icon.
- Automation**: Represented by a gear icon.
- Test to Production**: Represented by a gear icon.
- Certificate management**: Represented by a gear icon.
- Process Management and HA**: Represented by a gear icon.

The text below the diagram states: "Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications."

ohs_1 (Oracle HTTP Server) - Oracle HTTP Server 12c

https://dell5530:4443/

ORACLE Oracle HTTP Server 12c

Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications.

The diagram illustrates the Oracle HTTP Server 12c architecture. On the left, four categories of tools are listed: Process Management and HA, Certificate management, Automation, and Test to Production, all pointing towards the central OHS component. The central OHS (Oracle HTTP Server) is shown as a server icon. Above it are icons for Local Content, JS, HTML, and Audit Control. To the right of OHS are icons for Auditing, Authentication, and Authorization. Further right are icons for Identity Management and Fusion Middleware Applications. Below the OHS is a Load Balancing icon. At the bottom, Enterprise Manager is shown with the text 'Manage, monitor, diagnose' and 'Enterprise Manager'. A red box labeled 'FMW Lifecycle Tools' is positioned below the OHS.

ohs_1 (Oracle HTTP Server) - Oracle HTTP Server 12c

https://127.0.0.1:7779/

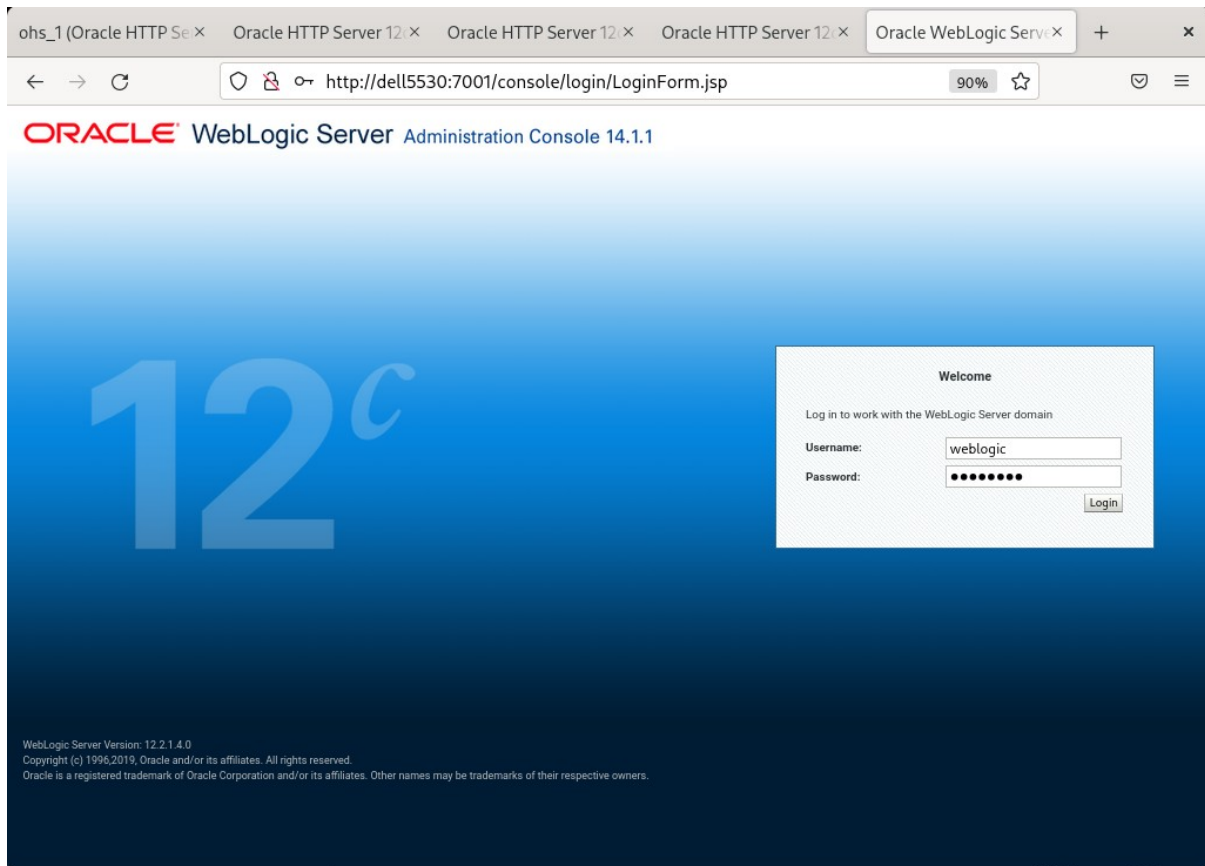
ORACLE Oracle HTTP Server 12c

Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications.

The diagram illustrates the Oracle HTTP Server 12c architecture. On the left, four categories of tools are listed: Process Management and HA, Certificate management, Automation, and Test to Production, all pointing towards the central OHS component. The central OHS (Oracle HTTP Server) is shown as a server icon. Above it are icons for Local Content, JS, HTML, and Audit Control. To the right of OHS are icons for Auditing, Authentication, and Authorization. Further right are icons for Identity Management and Fusion Middleware Applications. Below the OHS is a Load Balancing icon. At the bottom, Enterprise Manager is shown with the text 'Manage, monitor, diagnose' and 'Enterprise Manager'. A red box labeled 'FMW Lifecycle Tools' is positioned below the OHS.

2). Access to Administration Server Console

Login Page as shown below:



Home Page:

The screenshot shows the Oracle WebLogic Server Administration Console Home Page. The browser tabs include 'Oracle HTTP Server 12c' and 'Home Page - base_domain'. The URL is 'http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=Home'. The page title is 'ORACLE WebLogic Server Administration Console 12c'. The main content area is divided into several sections:

- Change Center:** Includes 'View changes and restarts', 'Lock & Edit', and 'Release Configuration' buttons.
- Domain Structure:** A tree view showing 'base_domain' with sub-items like 'Domain Partitions', 'Environment', 'Deployments', 'Services', 'Security Realms', 'Interoperability', and 'Diagnostics'.
- How do I...:** A list of tasks such as 'Search the configuration', 'Use the Change Center', 'Record WLST scripts', 'Change Console preferences', 'Manage Console extensions', and 'Monitor servers'.
- System Status:** Shows 'Health of Running Servers as of 6:59 PM' with a 'Failed (0)' indicator.
- Home Page:** The main content area with sections:
 - Information and Resources:** Includes 'Helpful Tools' (Configure applications, GridLink for RAC Data Source, Dynamic Cluster, Task Status, preferences, Enterprise Manager) and 'General Information' (Administration Task Descriptions, documentation, Oracle Support).
 - Domain Configurations:** Includes 'Domain', 'Domain Partitions', 'Environment', 'Resource Group Templates', 'Resource Groups', 'Deployed Resources', and 'Services'.
 - Interoperability:** Includes 'WTC Servers' and 'Jolt Connection Pools'.
 - Diagnostics:** Includes 'Log Files', 'Diagnostic Modules', 'Built-in Diagnostic Modules', 'Diagnostic Images', 'Request Performance', 'Archives', 'Context', 'SNMP', and 'Interceptors'.
 - Charts and Graphs:** Includes 'Monitoring Dashboard'.

Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console 'Summary of Servers' page. The browser tabs include 'Oracle HTTP Server 12c' and 'Summary of Servers - 12c'. The URL is 'http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=CoreS'. The page title is 'ORACLE WebLogic Server Administration Console 12c'. The main content area is divided into several sections:

- Change Center:** Includes 'View changes and restarts', 'Lock & Edit', and 'Release Configuration' buttons.
- Domain Structure:** A tree view showing 'base_domain' with sub-items like 'Domain Partitions', 'Environment', 'Deployments', 'Services', 'Security Realms', 'Interoperability', and 'Diagnostics'.
- How do I...:** A list of tasks such as 'Create Managed Servers', 'Clone servers', 'Delete Managed Servers', 'Delete the Administration Server', 'Start and stop servers', and 'View objects in the JNDI tree'.
- System Status:** Shows 'Health of Running Servers as of 7:00 PM' with indicators for 'Failed (0)', 'Critical (0)', and 'Overloaded (0)'.
- Summary of Servers:** The main content area with tabs for 'Configuration' and 'Control'. It includes a description of a server and a table of servers.

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

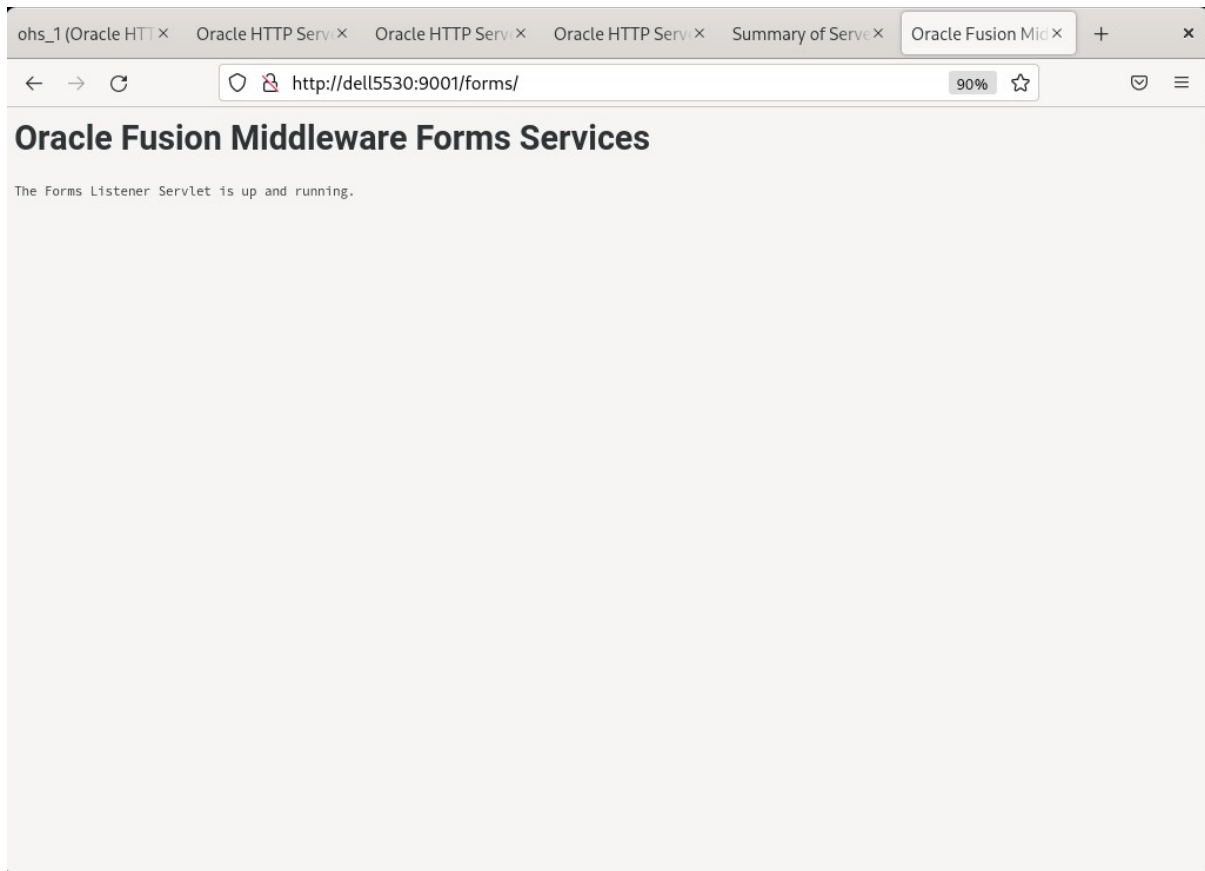
Customize this table

Servers (Filtered - More Columns Exist)

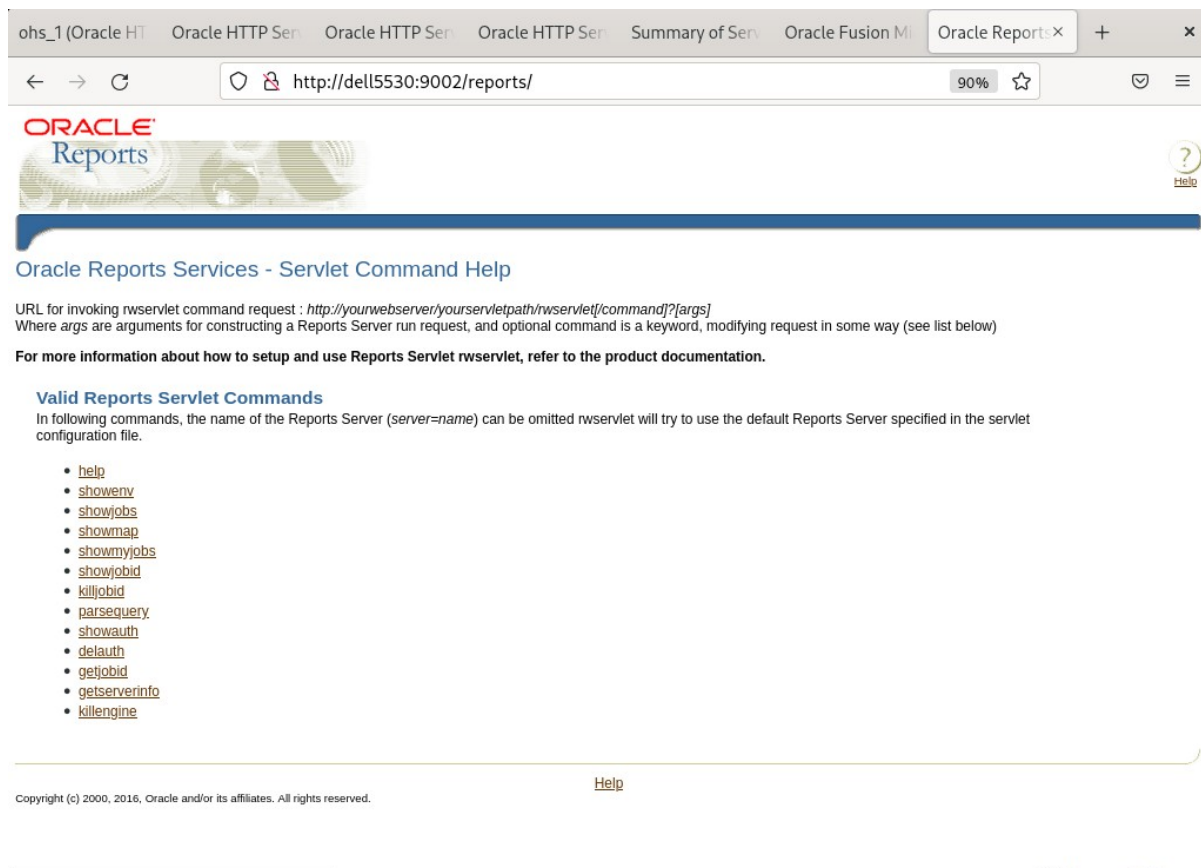
Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		AdminServerMachine	RUNNING	OK	7001
WLS_FORMS	Configured	cluster_forms	AdminServerMachine	RUNNING	OK	9001
WLS_REPORTS	Configured	cluster_reports	AdminServerMachine	RUNNING	OK	9002

3). Access to Oracle Forms Services.



4). Access to Oracle Reports Services.



The screenshot shows a web browser window with the address bar displaying `http://dell5530:9002/reports/`. The page title is "Oracle Reports Services - Servlet Command Help". The content includes the Oracle Reports logo, a help icon, and the following text:

URL for invoking rwservlet command request : `http://yourwebserver/yourervletpath/rwservlet[/command]?[args]`
Where *args* are arguments for constructing a Reports Server run request, and optional command is a keyword, modifying request in some way (see list below)

For more information about how to setup and use Reports Servlet rwservlet, refer to the product documentation.

Valid Reports Servlet Commands
In following commands, the name of the Reports Server (*server=name*) can be omitted rwservlet will try to use the default Reports Server specified in the servlet configuration file.

- [help](#)
- [showenv](#)
- [showjobs](#)
- [showmap](#)
- [showmyjobs](#)
- [showjobid](#)
- [killjobid](#)
- [parsequery](#)
- [showauth](#)
- [delauth](#)
- [getjobid](#)
- [getserverinfo](#)
- [killengine](#)

At the bottom of the page, there is a "Help" link and a copyright notice: "Copyright (c) 2000, 2016, Oracle and/or its affiliates. All rights reserved."

End of Oracle Forms and Reports.

Oracle WebTier OHS

1. Installing Oracle WebTier 12cR2 OHS

1-1. Prerequisites:

Installation of Oracle WebTier Http Server requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0_221 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

1-2. Login to the target system (SLES 15 SP4 64-bit OS) as a non-admin user. Download the Oracle WebTier 12cR2 OHS (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>. (**Note:** Please ensure the installation user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw_12.2.1.4.0_ohs_linux64_Disk1_1of1.zip) file and launch the installation program by running 'fmw_12.2.1.4.0_ohs_linux64.bin'

For the actual installation, follow the steps below:

1). Installation Inventory Setup.

Oracle Fusion Middleware 12c HTTP Server (OHS) Installation

Installation Inventory Setup

Central Inventory Directory
Enter the Central inventory directory for all your oracle installations. The installer will create a new central inventory directory if it does not exist.

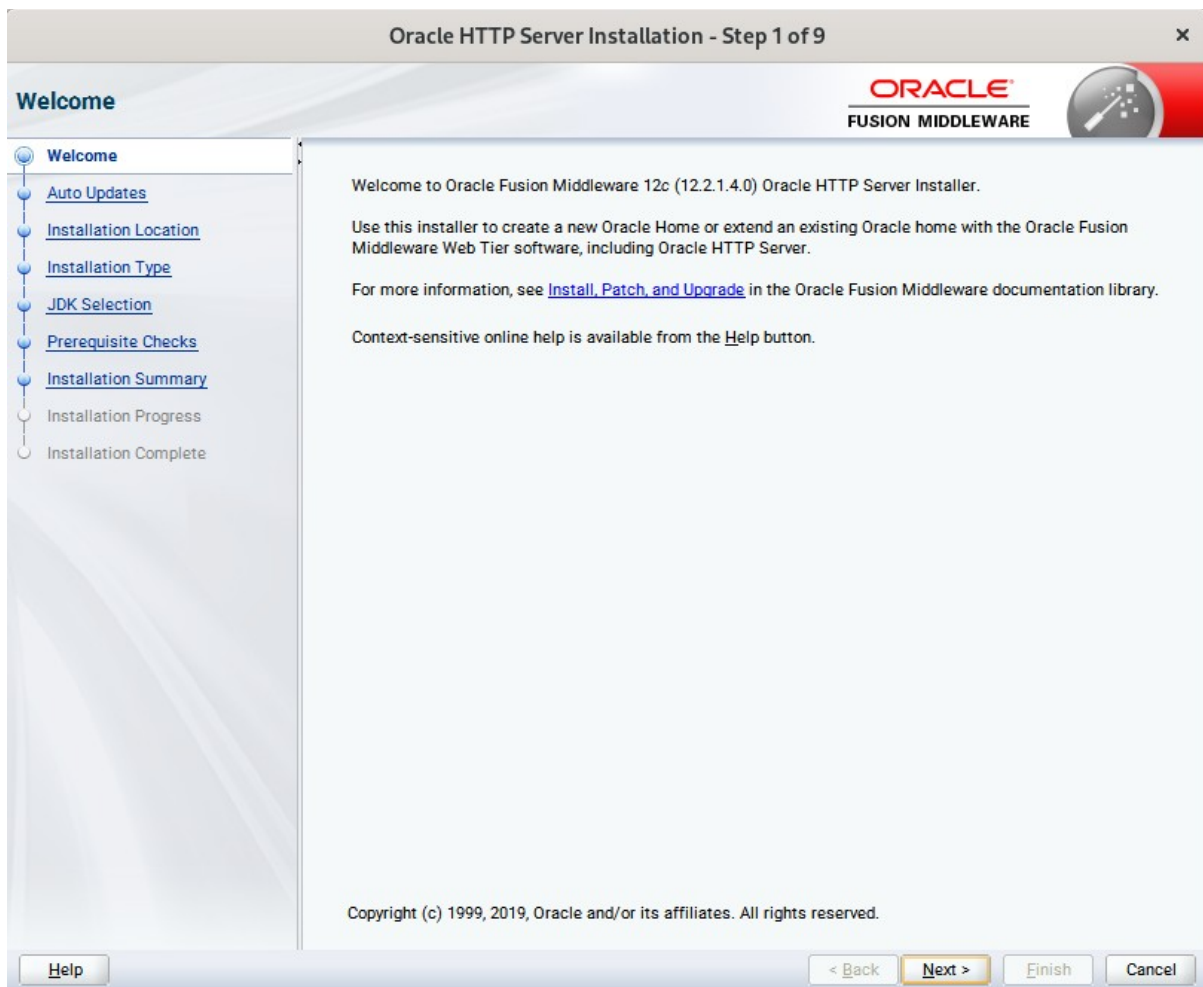
Inventory Directory:
Enter the full path for the directory.

Operating System Group :
Specify a group with write permission to the inventory directory

Central Inventory Pointer File
Click OK to create a script (createCentralInventory.sh) in the inventory directory. Run this script to create a pointer file, which is used to identify the location of the central inventory for future installations and administrative operations, such as patching and upgrade.

SPecify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

2). Welcome page.



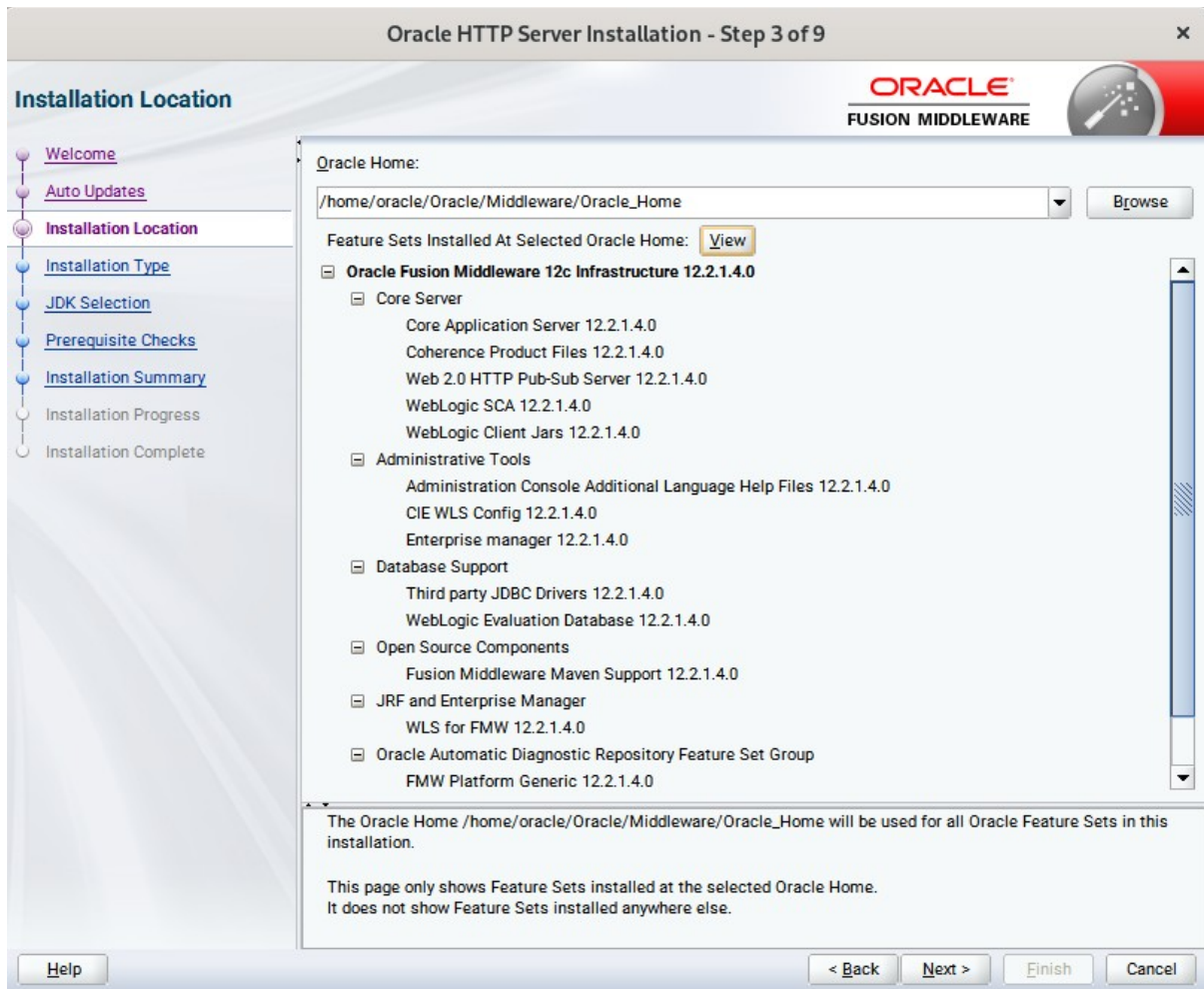
This page welcomes you to the installation. Click **Next** to continue.

2). The **Auto Updates** page appears.

The screenshot shows the 'Auto Updates' window in the Oracle HTTP Server installation process. The window title is 'Oracle HTTP Server Installation - Step 2 of 9'. The Oracle Fusion Middleware logo is in the top right corner. On the left, a navigation pane lists the installation steps: Welcome, Auto Updates (selected), Installation Location, Installation Type, JDK Selection, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main area contains three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option has a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option has 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom, there are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner.

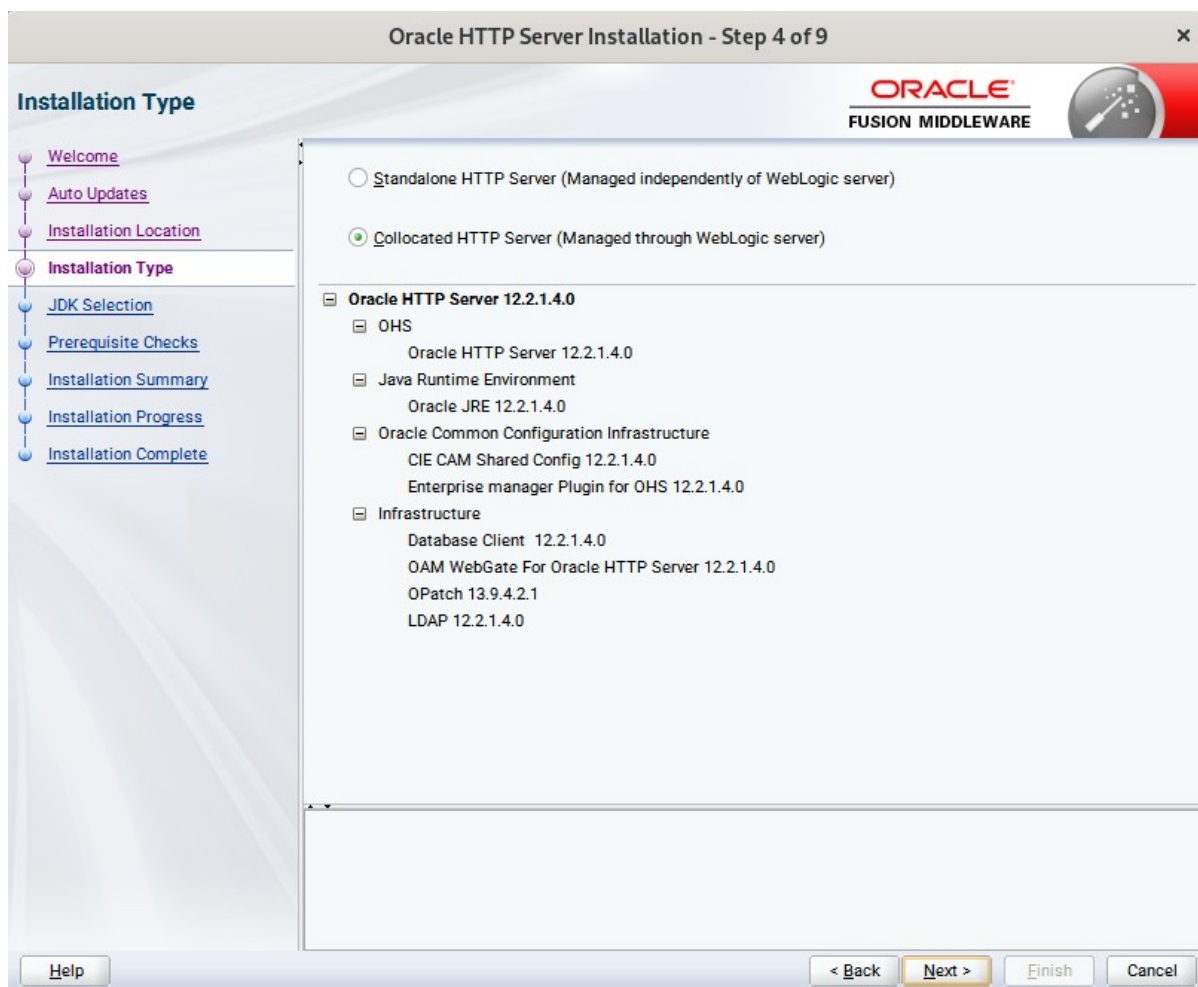
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

3). The **Installation Location** page appears.



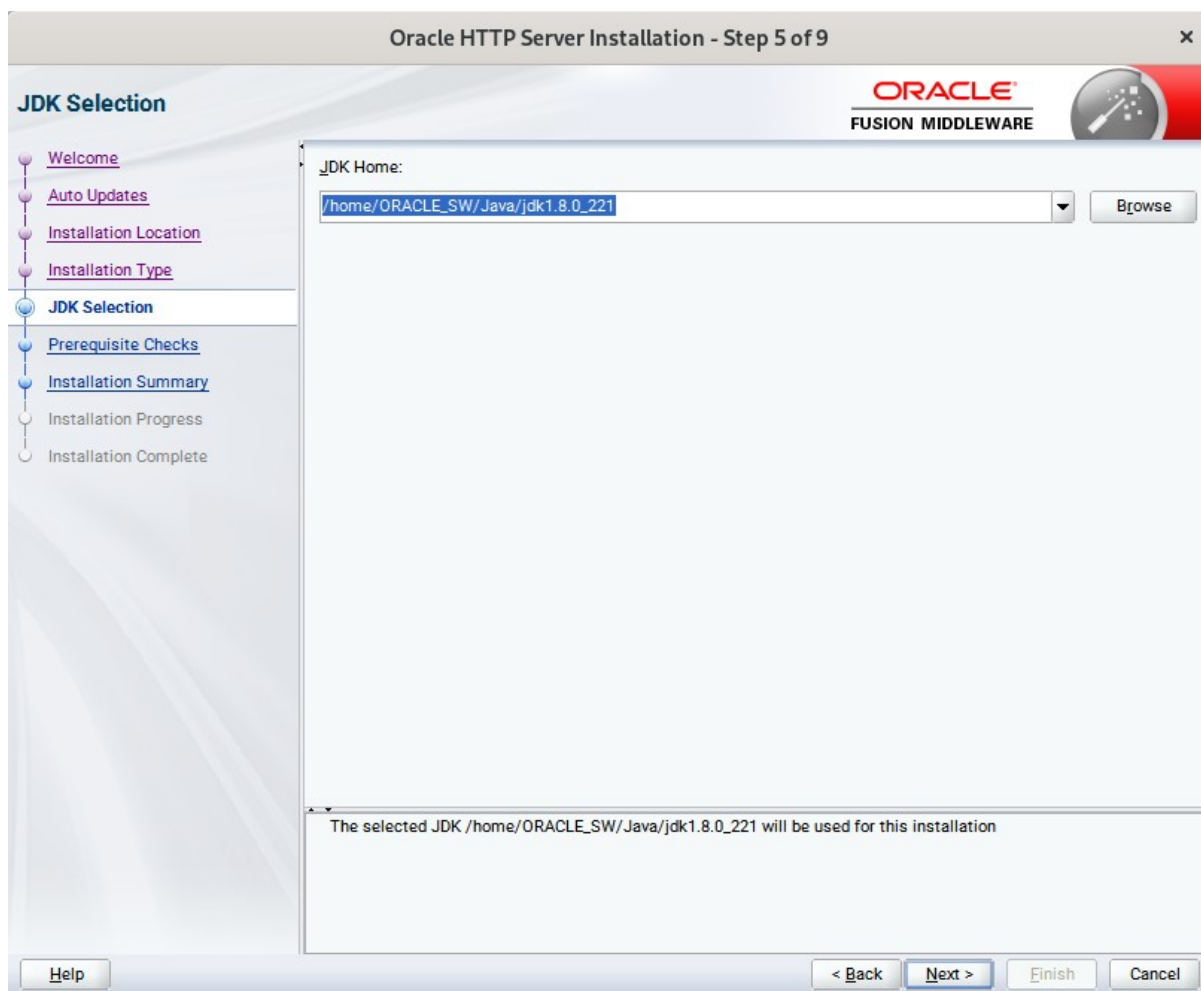
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

4). The **Installation Type** page appears.



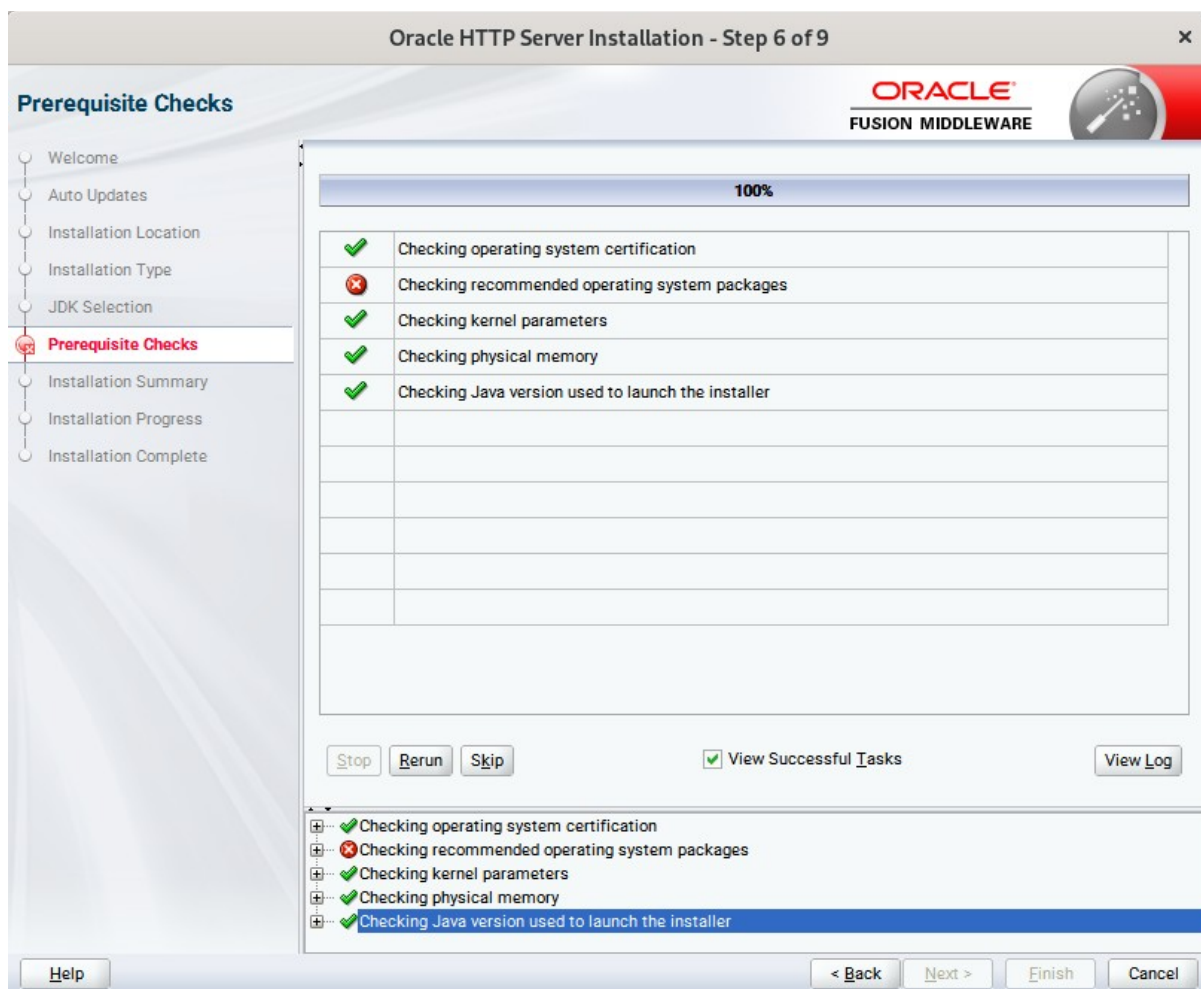
Selected **Collocated HTTP Server (Managed through WebLogic server)** to configure Oracle HTTP Server in a WebLogic Server Domain. (Alternative, select **Standalone HTTP Server (Managed independently of WebLogic server)** in the Installation Type screen to configure Oracle HTTP Server in a Standalone Domain.) Click **Next** to continue.

5). The **JDK Selection** page appears.



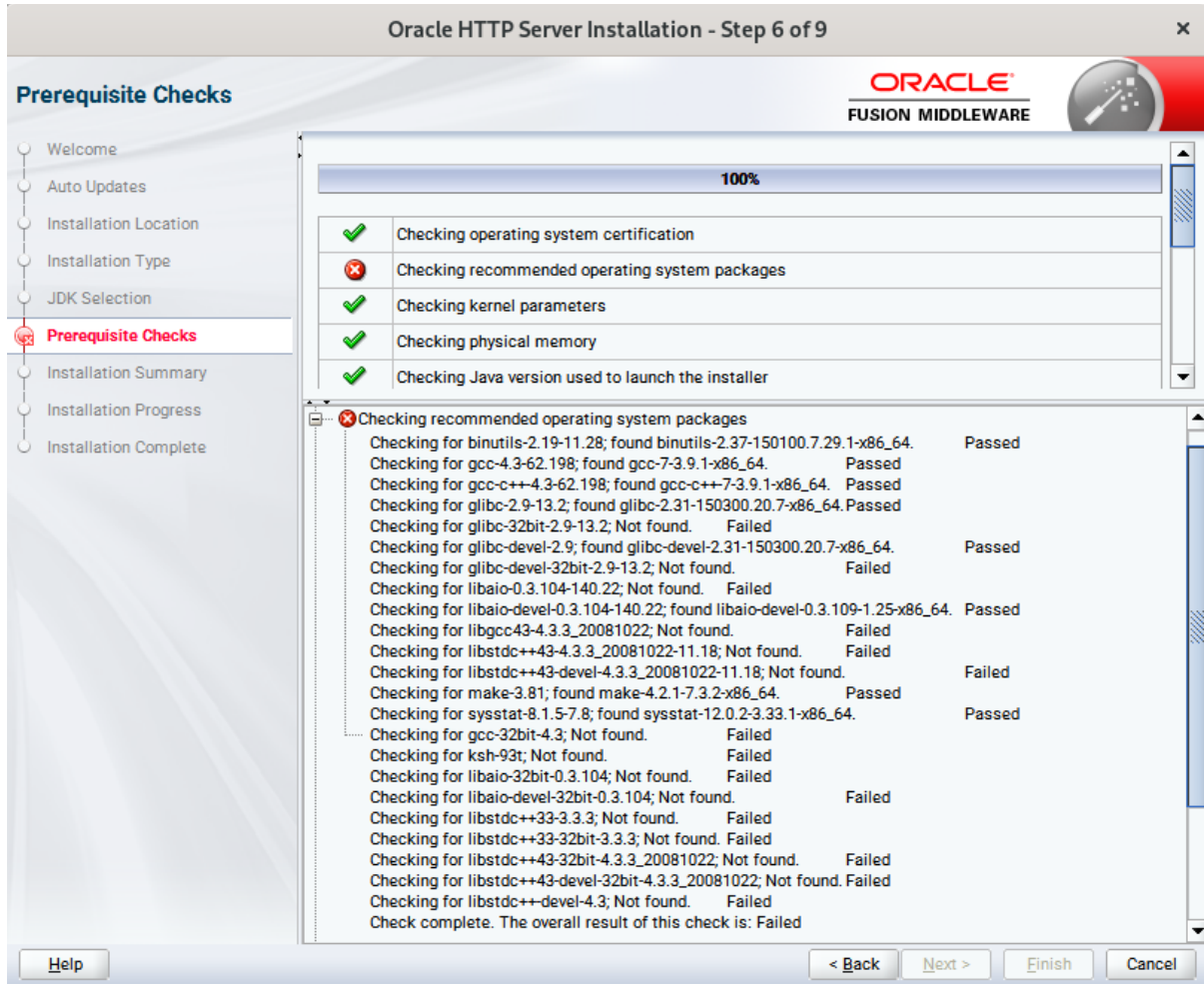
The selected JDK will be used for this installation. Click **Next** to continue.

6). The **Prerequisites Checks** page appears.



Prerequisite Checks results will be shown as above.

(Note: "Checking recommended operating system packages" failed with following info:



Some of the listed OS packages are deprecated or have different versions since SLES15 SP1.

eg:

libaio-0.3 (new name is libaio1-xxx)
libgcc43-4.3.3 (new name is libgcc_s1-xxx)
libstdc++43-4.3.3 (new name is libstdc++6-xxx)
libstdc++33-3.3.3 (deprecated since SLES15 SP1)
openmotif-2.3.1 (deprecated since SLES15 SP1)

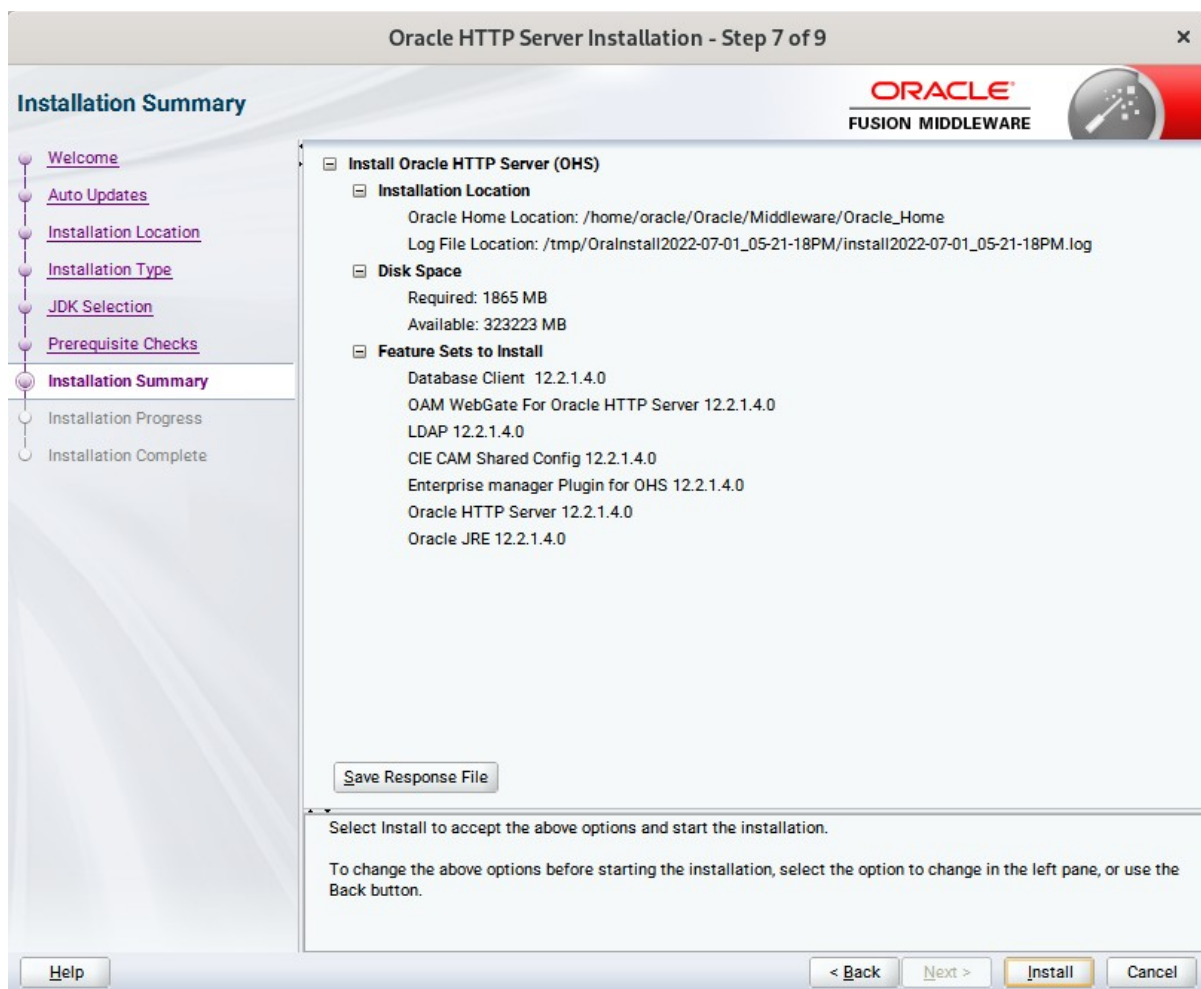
So, please ensure following updated packages(or later) are installed, then click '**Skip**' in the '**Prerequisite Checks**' page and continue installation.

```
binutils-2.29.1-4.46.x86_64
gcc7-ada-7.3.1+r258812-2.15.x86_64
gcc-c++-7-1.563.x86_64
gcc-c++-32bit-7-1.563.x86_64
gcc-ada-7-1.563.x86_64
gcc-locale-7-1.563.x86_64
gcc-info-7-1.563.x86_64
gcc-7-1.563.x86_64
gcc7-c++-7.3.1+r258812-2.15.x86_64
gcc7-info-7.3.1+r258812-2.15.noarch
```

gcc7-7.3.1+r258812-2.15.x86_64
gcc7-locale-7.3.1+r258812-2.15.x86_64
gcc7-c++-32bit-7.3.1+r258812-2.15.x86_64
gcc7-32bit-7.3.1+r258812-2.15.x86_64
gcc-32bit-7-1.563.x86_64
glibc-2.26-11.8.x86_64
linux-glibc-devel-4.15-1.47.noarch
glibc-devel-2.26-11.8.x86_64
glibc-locale-2.26-11.8.x86_64
glibc-extra-2.26-11.8.x86_64
glibc-32bit-2.26-11.8.x86_64
glibc-devel-32bit-2.26-11.8.x86_64
mksh-56c-1.10.x86_64
libaio1-0.3.109-1.25.x86_64
libaio1-32bit-0.3.109-1.25.x86_64
libaio-devel-32bit-0.3.109-1.25.x86_64
libaio-devel-0.3.109-1.25.x86_64
libcap2-2.25-2.41.x86_64
libcap-ng0-0.7.9-1.42.x86_64
libcap2-32bit-2.25-2.41.x86_64
libstdc++6-7.3.1+r258812-2.15.x86_64
libstdc++6-devel-gcc7-7.3.1+r258812-2.15.x86_64
libstdc++6-32bit-7.3.1+r258812-2.15.x86_64
libstdc++6-devel-gcc7-32bit-7.3.1+r258812-2.15.x86_64
libstdc++6-locale-7.3.1+r258812-2.15.x86_64
libstdc++-devel-7-1.563.x86_64
libgcc_s1-7.3.1+r258812-2.15.x86_64
libgcc_s1-32bit-7.3.1+r258812-2.15.x86_64
make-4.2.1-5.48.x86_64
make-lang-4.2.1-5.48.noarch
makedumpfile-1.6.3-5.6.x86_64
xorg-x11-7.6_1-1.22.noarch
xorg-x11-server-1.19.6-6.19.x86_64
xorg-x11-fonts-7.6-3.9.noarch
xorg-x11-driver-video-7.6_1-2.30.x86_64
xorg-x11-Xvnc-1.8.0-11.23.x86_64
xorg-x11-fonts-core-7.6-3.9.noarch
xorg-x11-server-extra-1.19.6-6.19.x86_64
xorg-x11-essentials-7.6_1-1.22.noarch

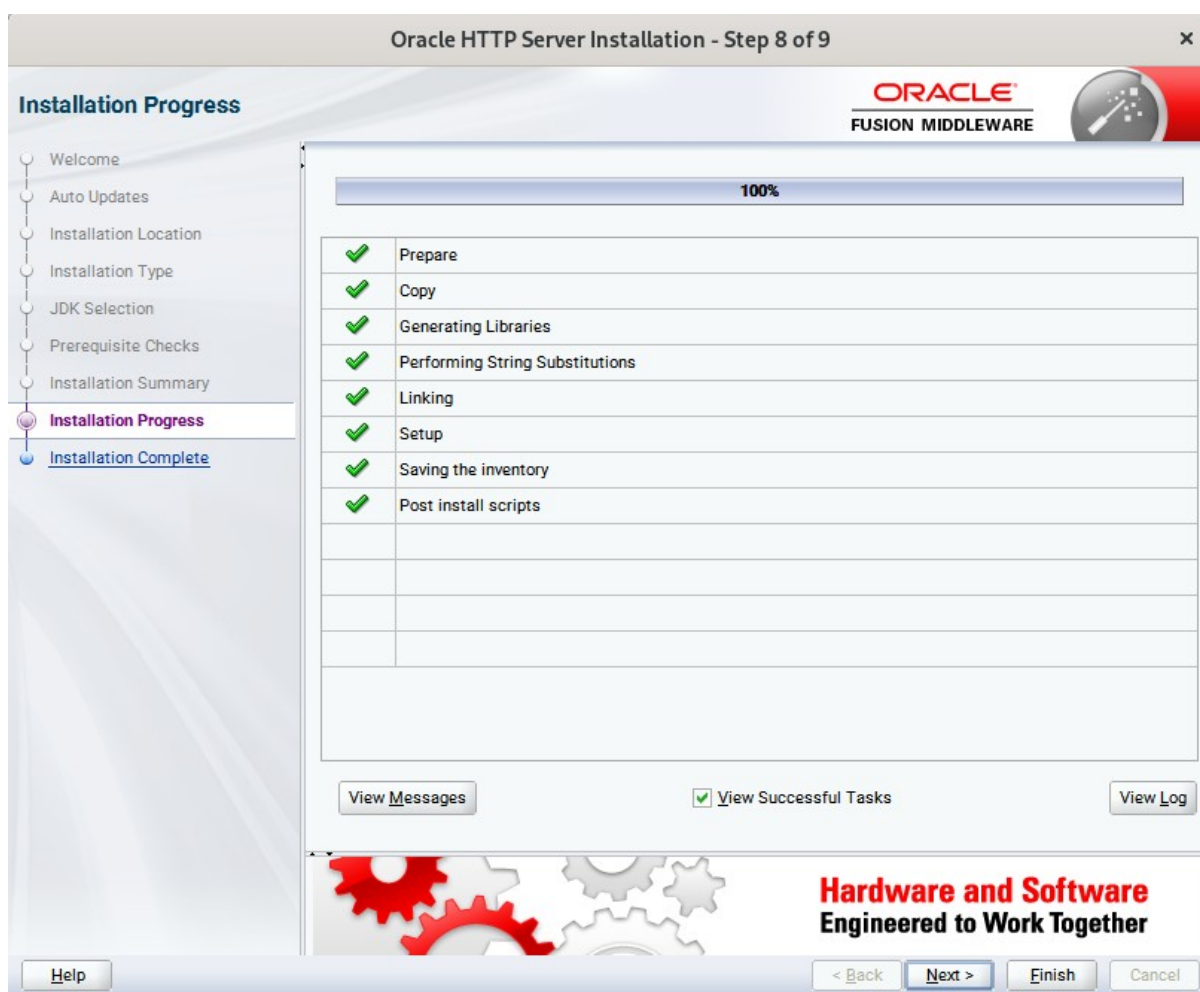
)

7). The **Installation Summary** page appears.



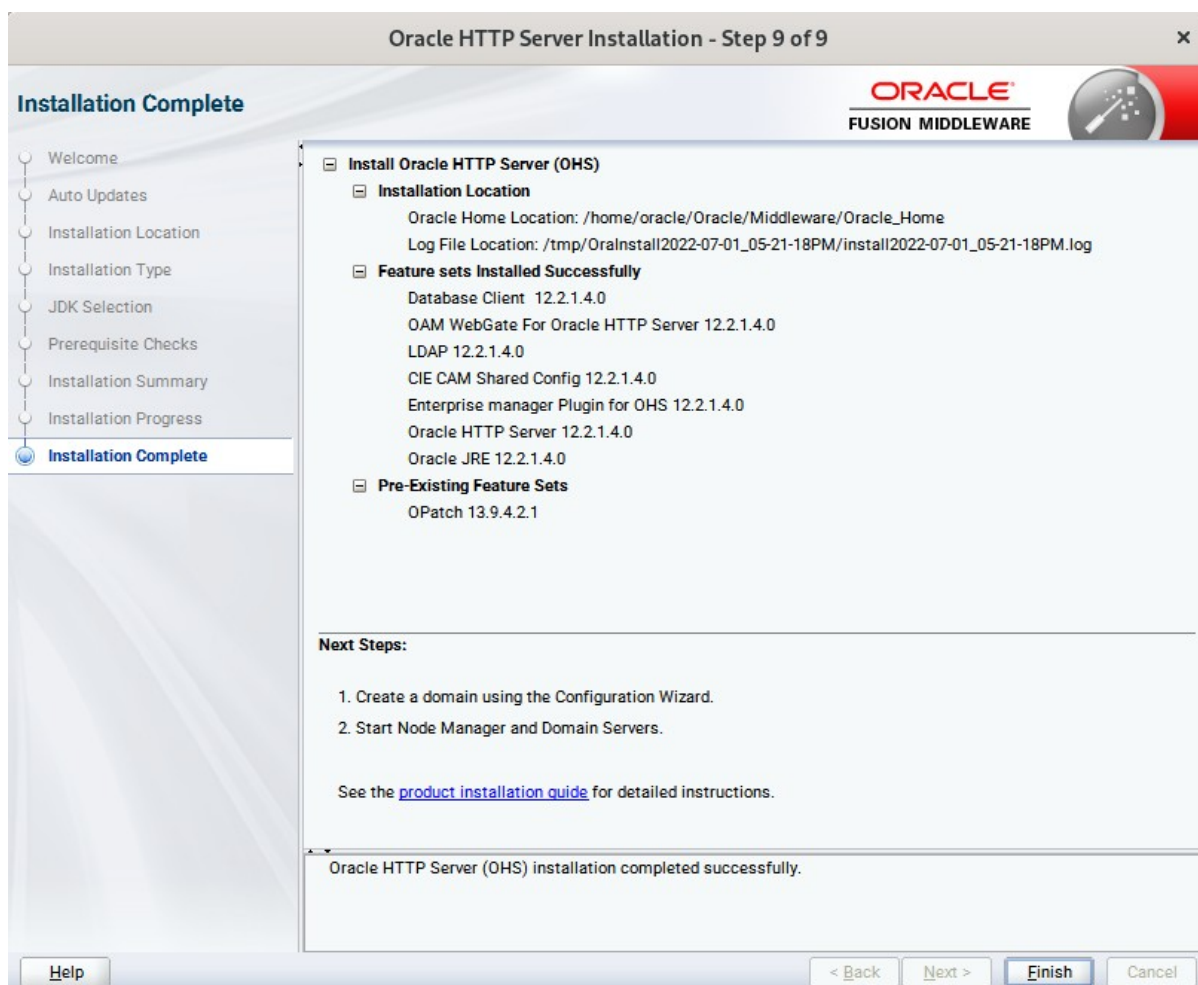
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

8). The **Installation Progress** page appears.



This page shows you the progress of the installation, and will warn you if there are any problems. You can view messages and logs from this page, but typically no action is required here. When progress is complete, click **Next** (go to a Summary page). Alternatively, you can click **Finish**.

9). If you clicked **Next**, the **Installation Complete** page appears, showing you the components that have been installed.

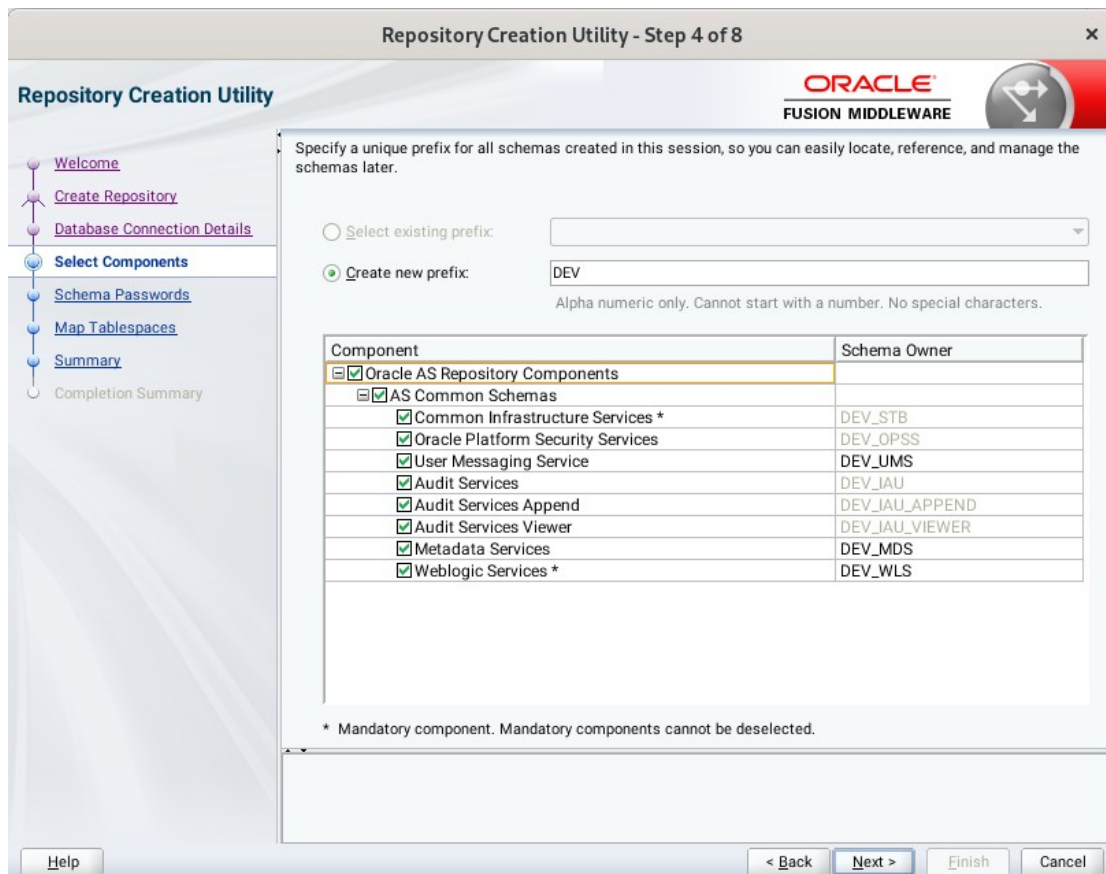


Click **Finish** to dismiss the installer.

2. Creating Oracle Database Schema through Repository Creation Utility(RCU)

2-1. Repository Creation Utility (RCU) is available with the Oracle WebLogic Server 12cR2 Fusion Middleware Infrastructure distribution. Run `$FMW_HOME/oracle_common/bin/rcu` and create required database schemas for Oracle WebTier Http Server.

Screenshot: Database schemas creating for Oracle WebTier Http Server.



Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above.

Ensure the schema creation is successful.

Repository Creation Utility - Step 8 of 8

Repository Creation Utility ORACLE FUSION MIDDLEWARE

Navigation: Welcome, Create Repository, Database Connection Details, Select Components, Schema Passwords, Map Tablespaces, Summary, **Completion Summary**

Database details:

Host Name: Dell5530
 Port: 1521
 Service Name: SUSE
 Connected As: sys
 Operation: System and Data Load concurrently
 Execution Time: 1 minute 38 seconds

RCU Logfile: /tmp/RCU2022-07-01_17-47_943600470/logs/rcu.log
 Component Log Directory: /tmp/RCU2022-07-01_17-47_943600470/logs
 View Log: rcu.log

Prefix for (prefixable) Schema DEV
 Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.367(sec)	stb.log
Oracle Platform Security Services	Success	00:14.599(sec)	opss.log
User Messaging Service	Success	00:11.780(sec)	ucsums.log
Audit Services	Success	00:11.843(sec)	iau.log
Audit Services Append	Success	00:09.161(sec)	iau_append.log
Audit Services Viewer	Success	00:09.128(sec)	iau_viewer.log
Metadata Services	Success	00:11.839(sec)	mds.log
Weblogic Services	Success	00:13.792(sec)	wls.log

Buttons: Help, < Back, Next >, Create, Close

3. Configuring Oracle WebTier 12cR2 OHS using the Config Wizard

3-1. In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE_HOME/oracle_common/common/bin** directory.

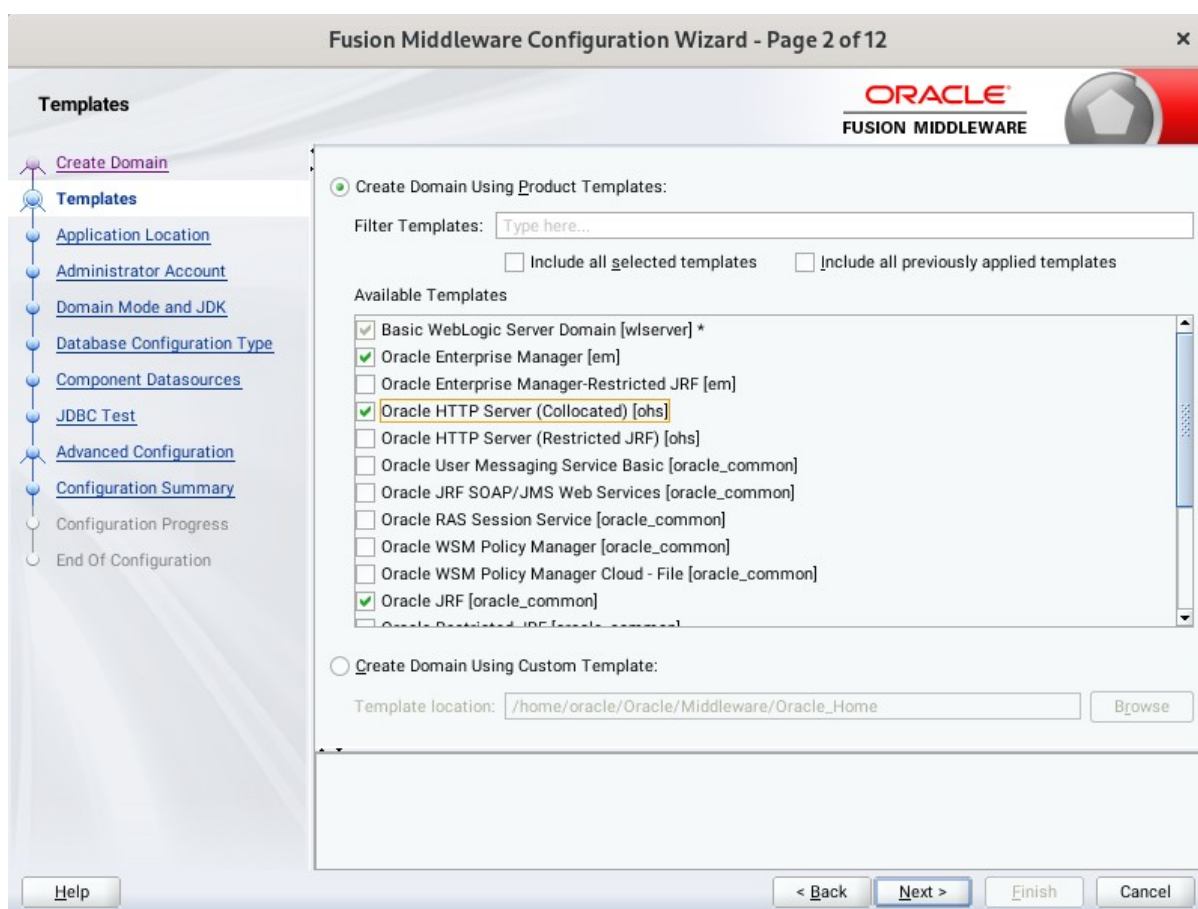
Follow these steps:

1). Choose **Create a new domain**, and enter the desired domain home path.



Click **Next** to continue.

2). The **Templates** screen appears.



Keep the default selection (**Create Domain using Product Templates**), and select **Oracle HTTP Server (Collocated) [ohs]** component. This automatically selects **Oracle Enterprise Manager [em]** and so on. Click **Next** to continue.

3). The **Application Location** screen appears.



Keep the default value for Application location. Click **Next** to continue.

4). The **Administrator Account** screen appears.

Fusion Middleware Configuration Wizard - Page 4 of 12

Administrator Account

ORACLE
FUSION MIDDLEWARE

Create Domain
Templates
Application Location
Administrator Account
Domain Mode and JDK
Database Configuration Type
Component Datasources
JDBC Test
Advanced Configuration
Configuration Summary
Configuration Progress
End Of Configuration

Name

Password

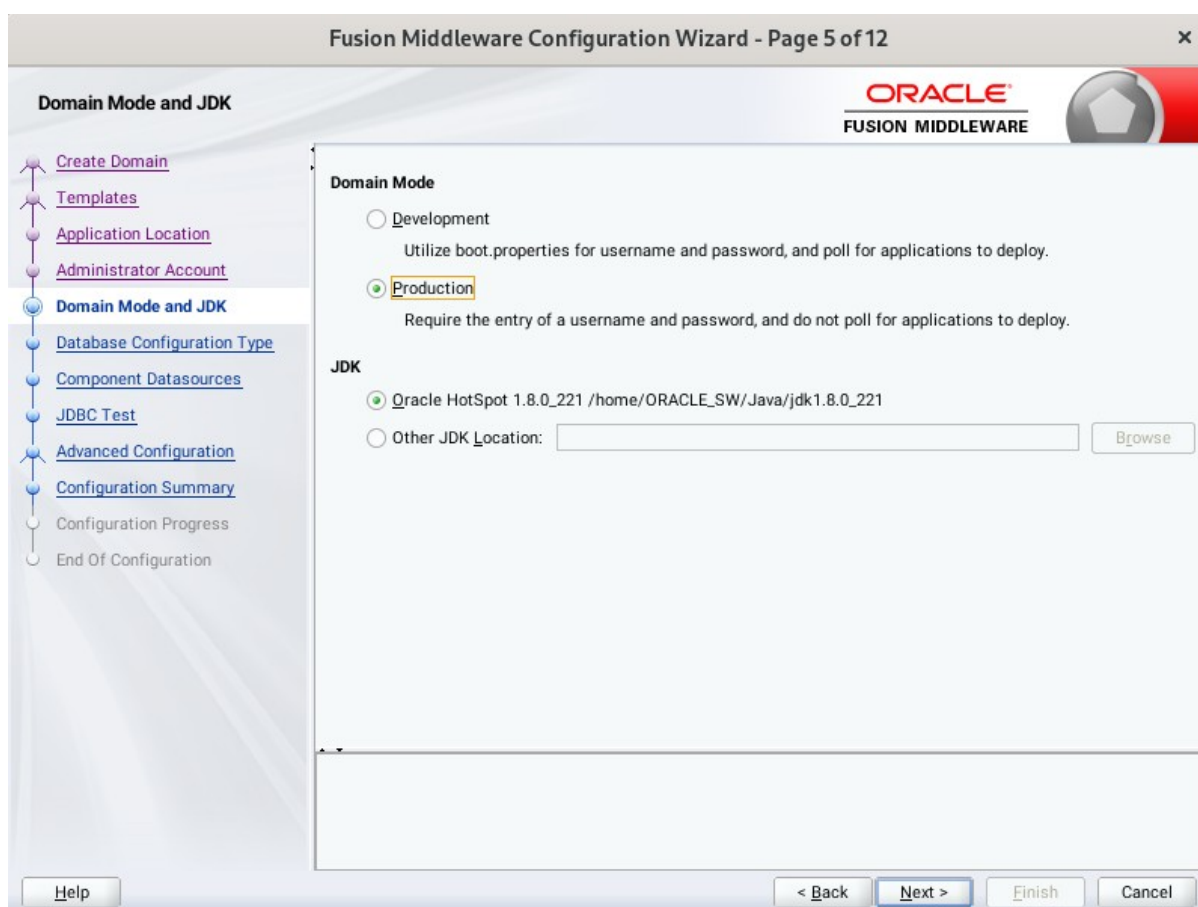
Confirm Password

Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

Help < Back Next > Finish Cancel

Enter the WebLogic Domain administration username and password. This information will be needed to access WebLogic Server Control and Fusion Middleware Control. Click **Next** to continue.

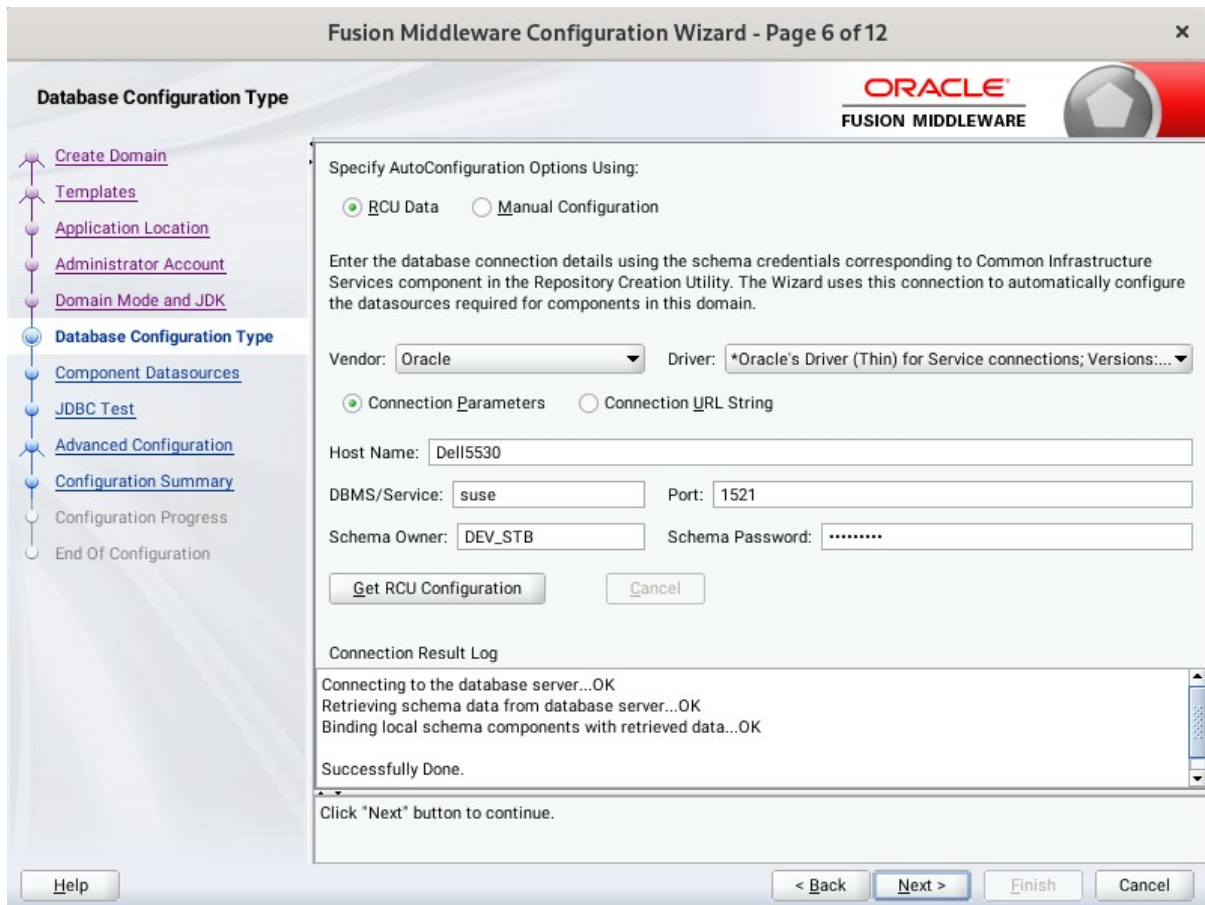
5). The **Domain Mode and JDK** screen appears.



Select the Domain Mode (either **Development** or **Production**). For our purposes, select **Production**. Leave the default JDK selection as it appears, unless using another version of the JDK desired.

(**Note:** The installation can only be secured with Identity Management if you are configuring your components in deployment mode.)

6). The **Database Configuration Type** screen appears.



Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

7). The **JDBC Component Schema** screen appears.

JDBC Component Schema

Vendor: Driver:

Connection Parameters Connection URL String

Host Name:

DBMS/Service: Port:

Schema Owner: Schema Password:

Oracle RAC configuration for component schemas:

Convert to GridLink Convert to RAC multi data source Don't convert

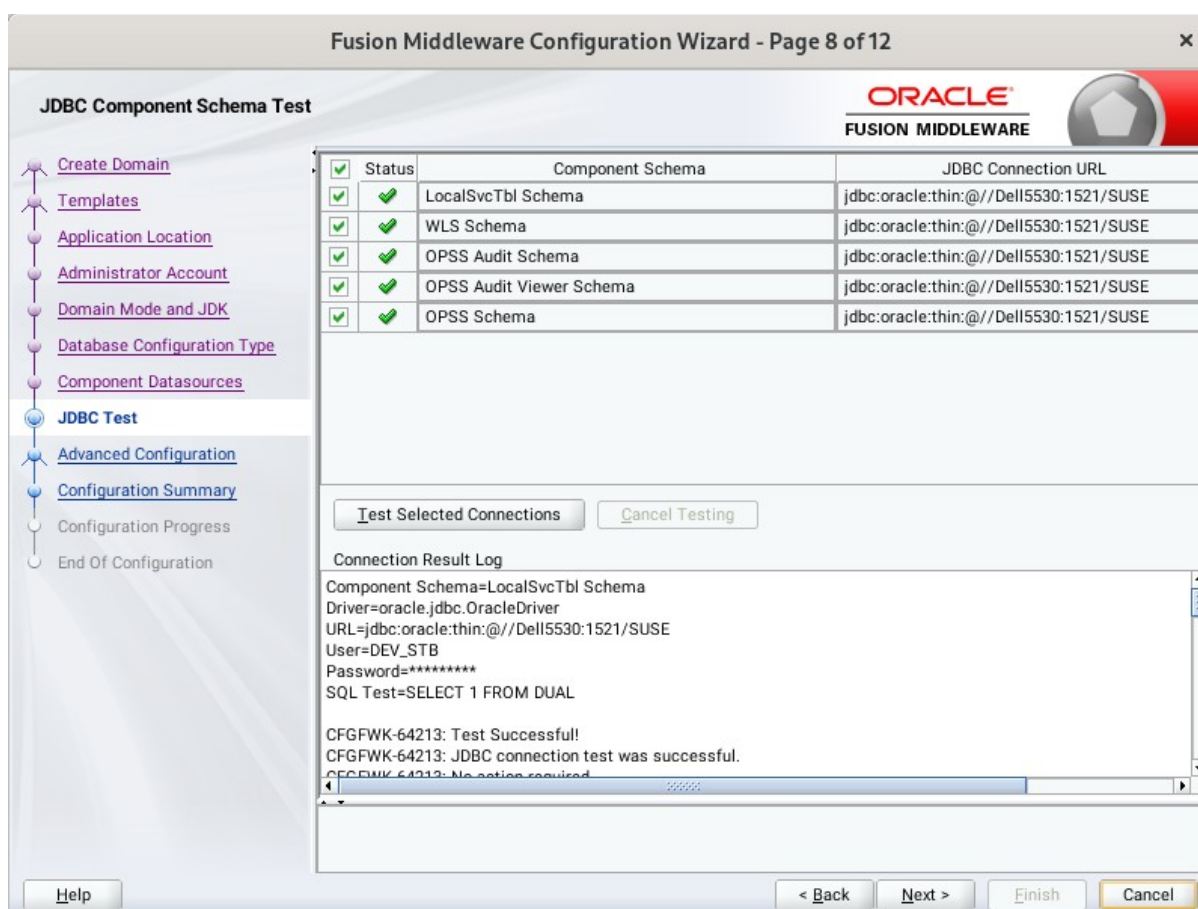
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	Dell5530	1521	DEV_STB	.....
<input type="checkbox"/>	WLS Schema	SUSE	Dell5530	1521	DEV_WLS_RUN	.....
<input type="checkbox"/>	OPSS Audit Schema	SUSE	Dell5530	1521	DEV_IAU_APPE	.....
<input type="checkbox"/>	OPSS Audit Viewer Sche	SUSE	Dell5530	1521	DEV_IAU_VIEWI	.....
<input type="checkbox"/>	OPSS Schema	SUSE	Dell5530	1521	DEV_OPSS	.....

Help

Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

8). The **JDBC Component Schema Test** screen appears.



The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

9). The **Advanced Configuration** screen appears.



Choose the services on your requirements, then click **Next** to continue.

10). The **System Components** screen appears.

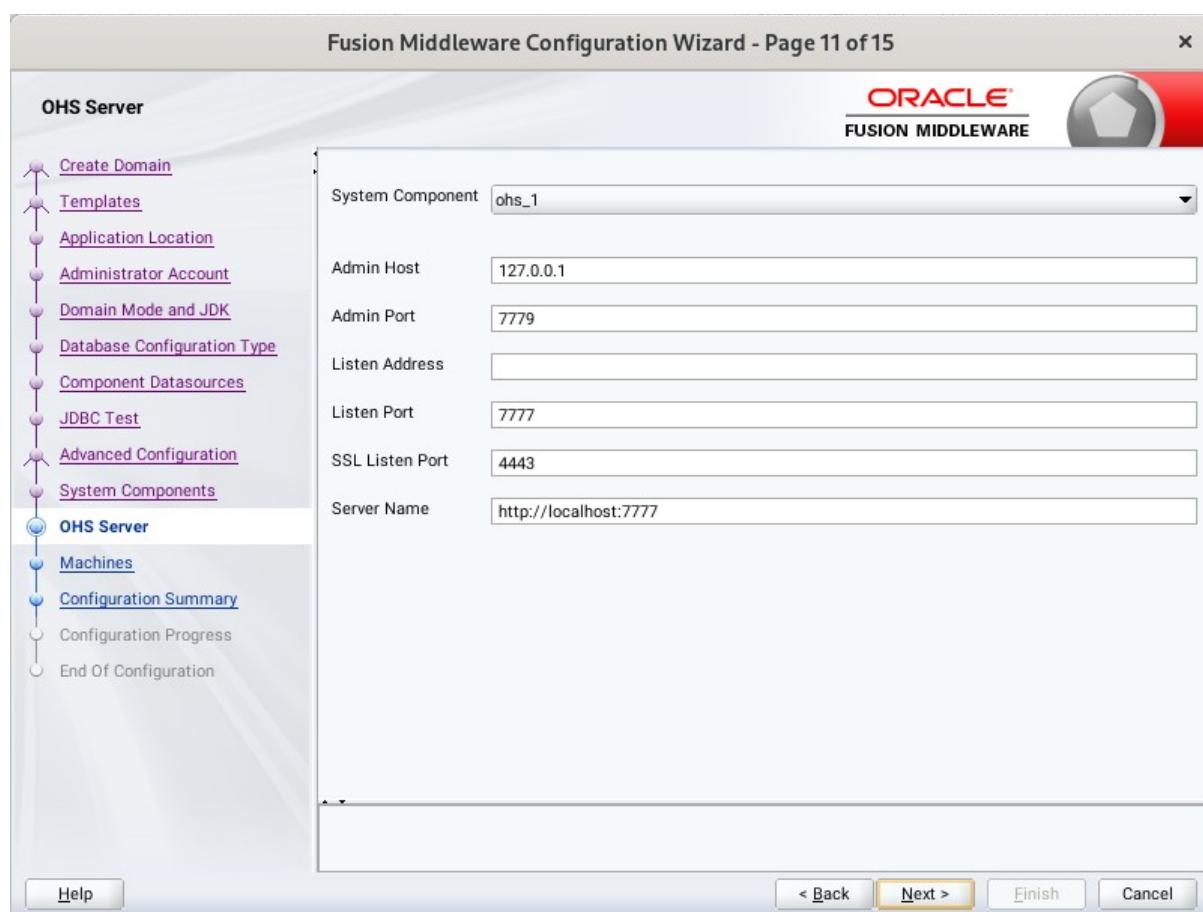
The screenshot shows the 'System Components' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 14'. The Oracle Fusion Middleware logo is in the top right. On the left, a navigation pane lists steps: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, **System Components** (selected), Machines, Configuration Summary, Configuration Progress, and End Of Configuration. The main area has '+ Add' and 'X Delete' buttons, and a 'Disgard Changes' button. Below is a table:

System Component	Component Type	Restart Interval Seconds	Restart Delay Seconds
ohs_1	OHS	3600	0

At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

Click **Add** to create a new Oracle HTTP Server instance. Specify 'ohs_1' in the **System Component** field, and Specify 'OHS' in the **Component Type** field. Click **Next** to continue.

11). The **OHS Server** screen appears.



The screenshot displays the 'OHS Server' configuration screen within the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 11 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists various configuration steps, with 'OHS Server' selected and highlighted in blue. The main configuration area contains the following fields:

System Component	ohs_1
Admin Host	127.0.0.1
Admin Port	7779
Listen Address	
Listen Port	7777
SSL Listen Port	4443
Server Name	http://localhost:7777

At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a yellow border.

Use the **OHS Server** screen to configure the Oracle HTTP Server servers in your domain. In the System Component field SPecify the IP address of the host on which the Oracle HTTP Server instance will reside. Do not use "localhost". Click **Next** to continue.

12). The **Machines** screen appears.

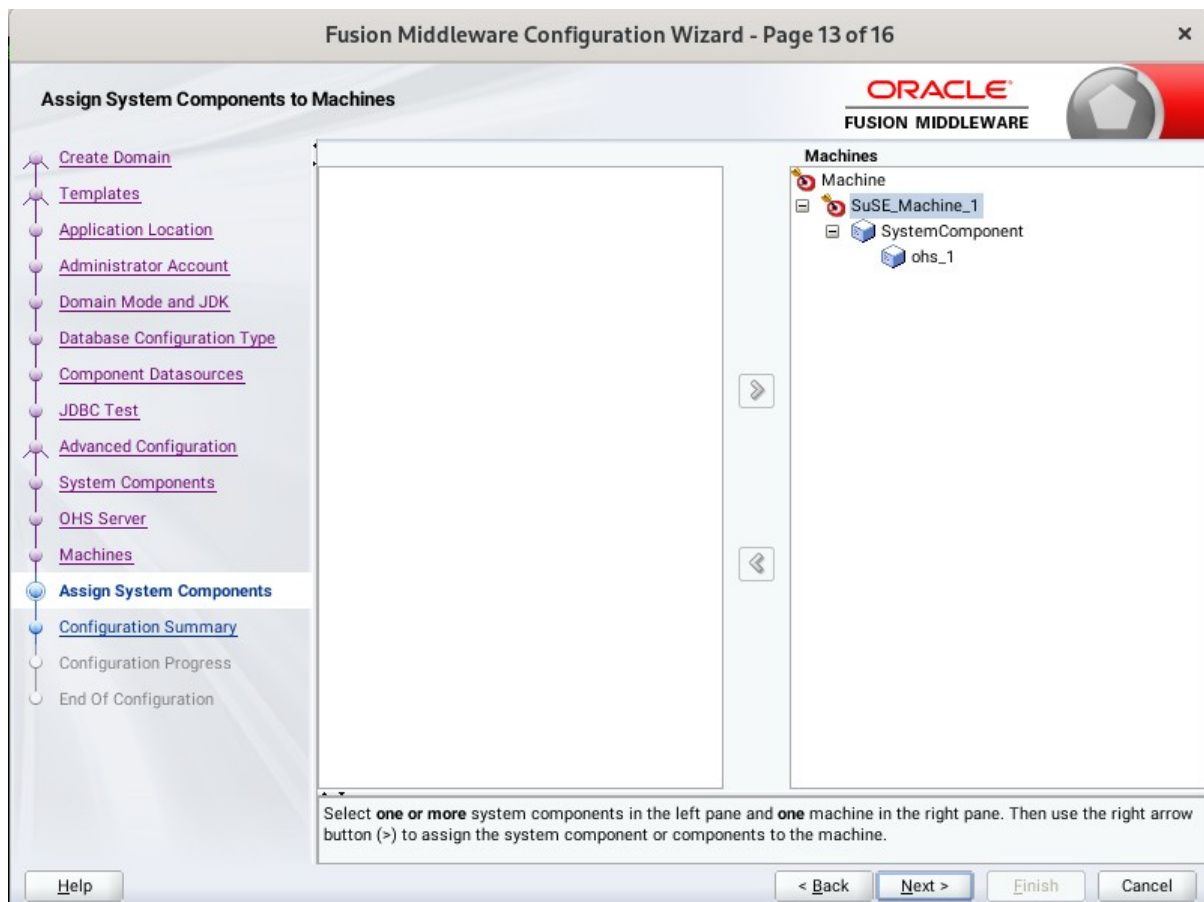
The screenshot shows the 'Machines' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 12 of 16'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, there is a navigation pane with the following items: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, System Components, OHS Server, **Machines** (selected), Assign System Components, Configuration Summary, Configuration Progress, and End Of Configuration. The main area is titled 'Machines' and has a 'Machine' tab and a 'Unix Machine' sub-tab. There are 'Add' and 'Delete' buttons, and a 'Disgard Changes' button. Below these is a table with the following data:

Name	Node Manager Listen Address	Node Manager Listen Port
SuSE_Machine_1	192.168.0.100	5556

At the bottom of the screen, there are navigation buttons: '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner.

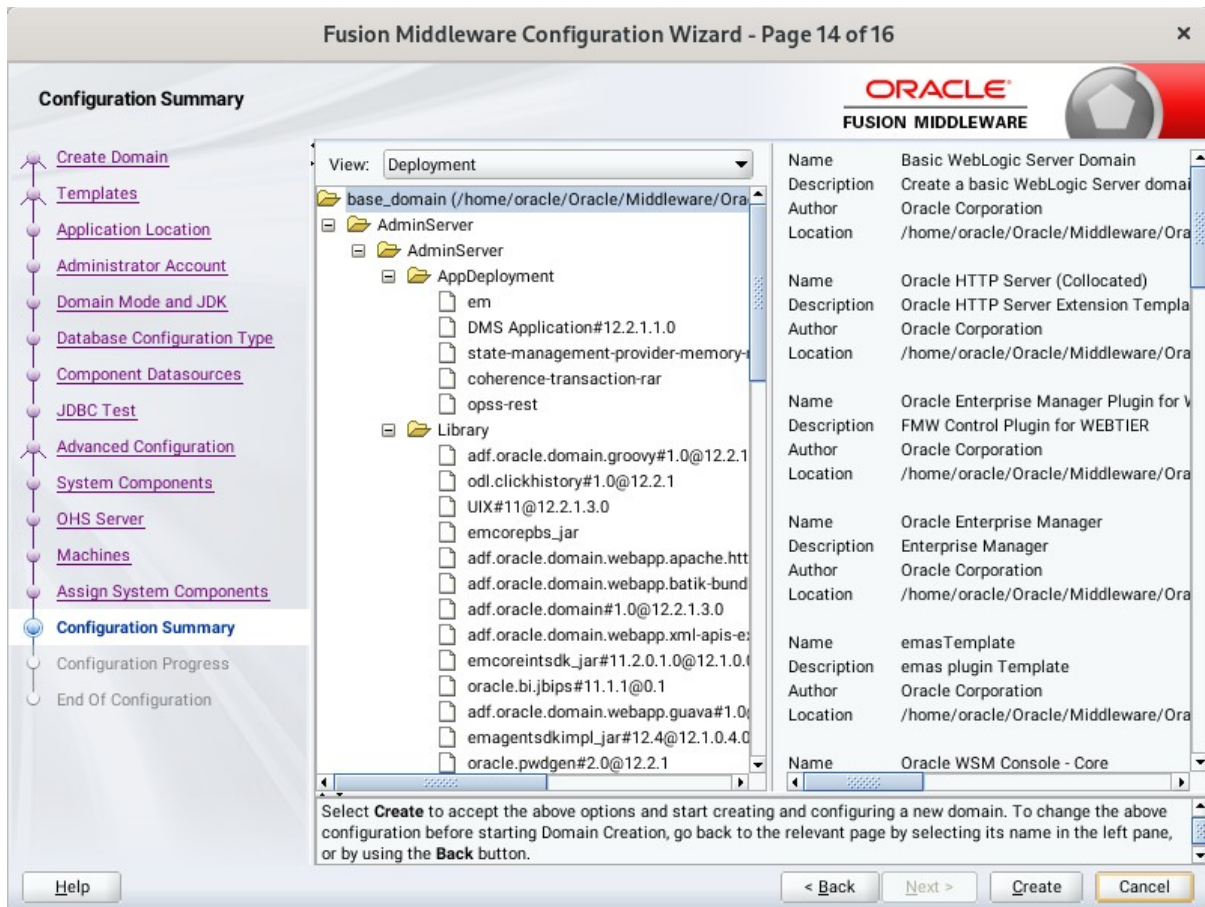
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

13). The **Assign System Components** screen appears.



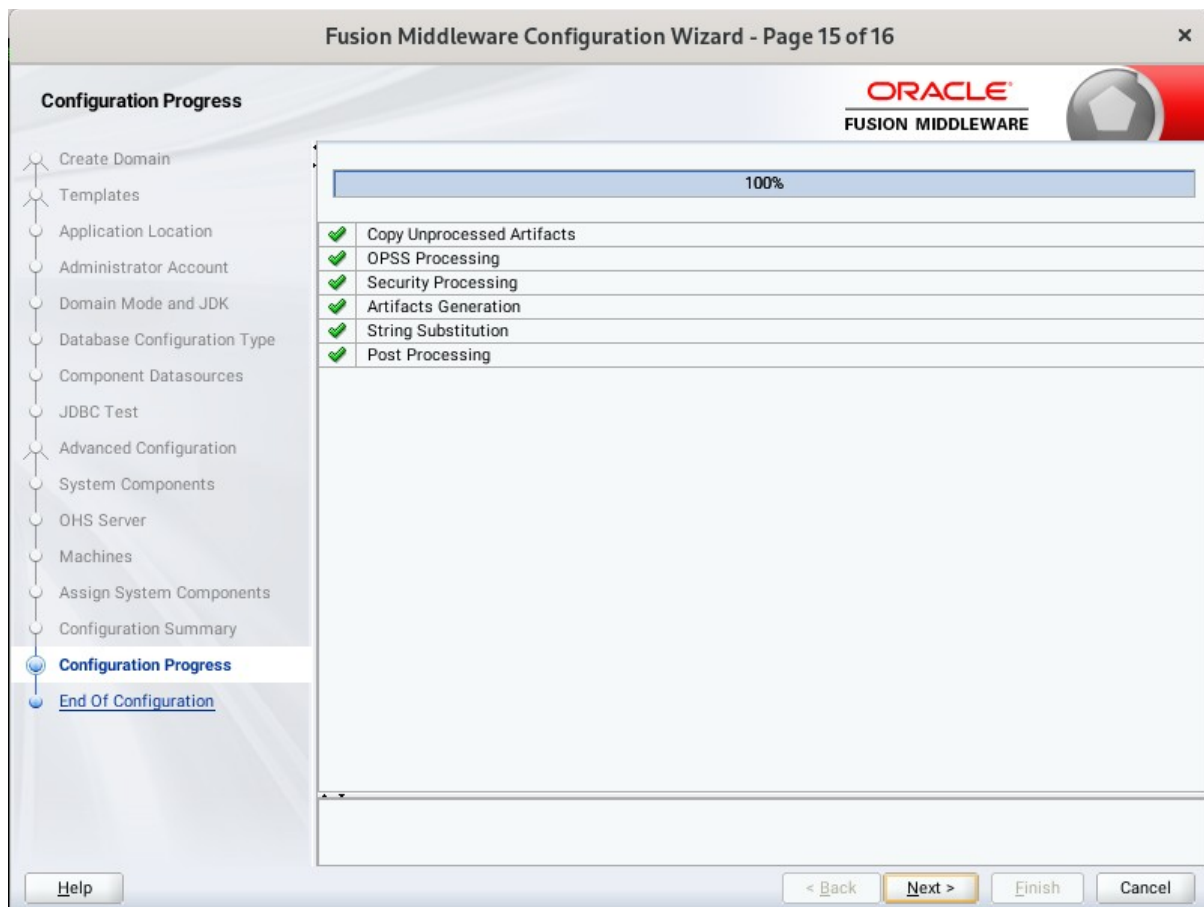
Select the '**ohs_1**' in the System Component list box and click the right arrow. Click **Next** to continue.

14). The **Configuration Summary** screen appears.



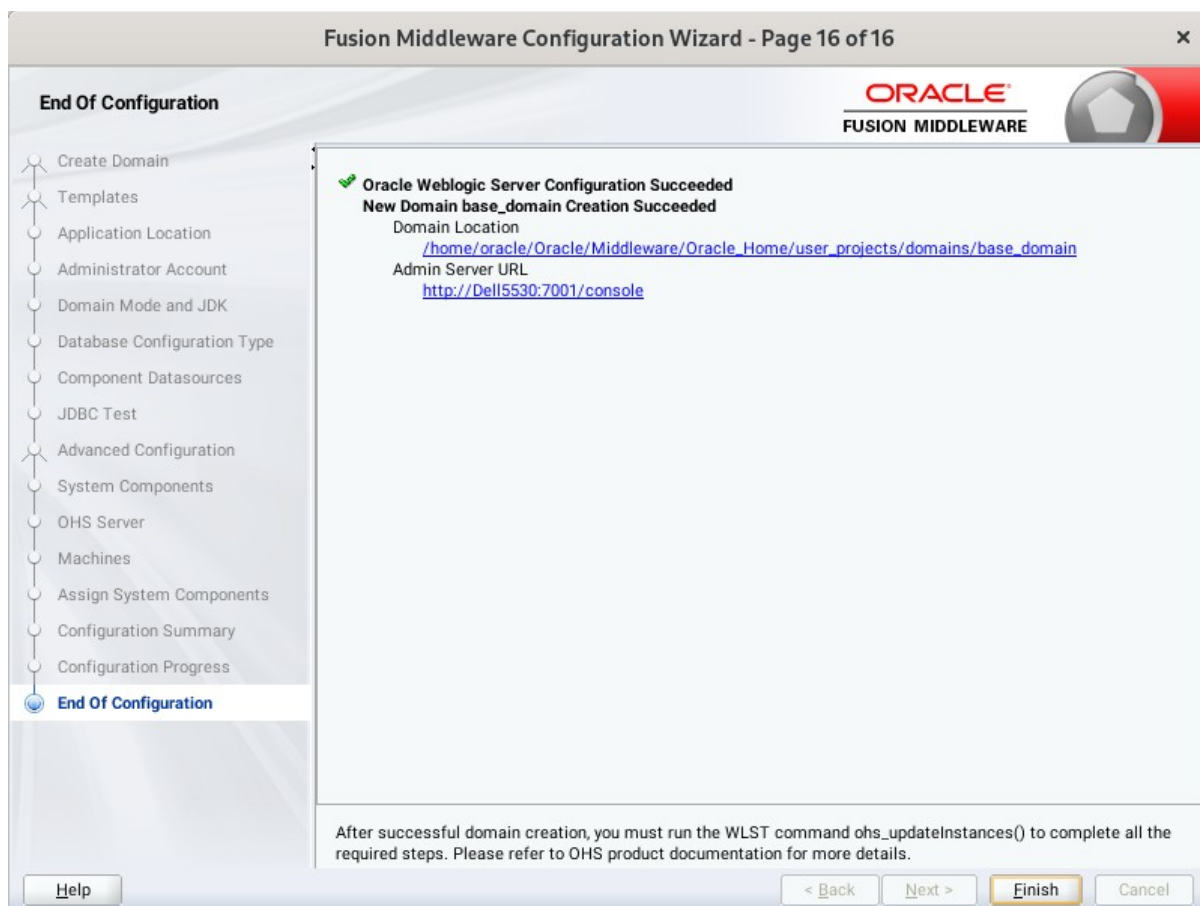
Select **Create** to accept the above options and start creating and configuring a new domain.

15). The **Configuration Progress** screen appears.



Wait for this part of the configuration to complete. Depending on the location and performance of the Repository database, this process may take a few minutes. Click **Next** to continue.

16). The **End of Configuration** screen appears.



Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

4. Verifying Oracle WebTier 12cR2 OHS Installation and Configuration

4-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

4-2. Starting the Node Manager and the Admin Server.

Starting the Node Manager, go to the DOMAIN_HOME/bin directory and run 'nohup ./startNodeManager.sh > nm.out&'

```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:...214_infrastructure x oracle@Dell5530:...ns/base_domain/bin x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh
> nm.out &
[1] 496
nohup: ignoring input and redirecting stderr to stdout
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager
CLASSPATH=/home/ORACLE_SW/Java/jdk1.8.0_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblo
gic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/or
acle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware
/Oracle_Home/wlserver/./home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home
/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..
-Dohs.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ohs -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/
Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle
/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_H
ome/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.secu
rity.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/ho
me/ORACLE_SW/Java/jdk1.8.0_221/weblogic.NodeManager -v
<Jul 1, 2022 6:05:18 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/ba
se_domain/nodemanager/nodemanager.domains>
<Jul 1, 2022 6:05:18 PM CST> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jul 1, 2022 6:05:18 PM CST> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracl
e_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 1, 2022 6:05:18 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/ba
se_domain/nodemanager/nodemanager.domains>
<Jul 1, 2022 6:05:18 PM CST> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=
true>
Jul 01, 2022 6:05:18 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse
.xml
Jul 01, 2022 6:05:19 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credent
ials. If required, use Wlst or configuration management interfaces.
<Jul 1, 2022 6:05:19 PM CST> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_H
ome/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1.4.0

```


Starting Admin Server, go to the DOMAIN_HOME/bin directory and run './startWebLogic.sh.'

```

oracle@Dell5530:...ns/base_domain/bin
Anonymous url config processing:/WEB-INF/config/anonymous-access-emcore.config
Anonymous-urls:[/em/IEsvgdetect.js.*, /em/LoginStatusServlet.*, /em/adf/.*, /em/adflib/.*, /em/afr/.*, /em/bi/.*, /em/bmp/disc
overtargets, /em/cabo/.*, /em/console/help.*, /em/console/logon/.*, /em/consoleStatus.jsp, /em/dynamicImage.*, /em/ecm/csa/CSA
.jar, /em/ecm/csa/CSA.mb, /em/ecm/csa/csabanner.gif, /em/emcli/custAttrib.*, /em/emr/.*, /em/faces/logon/.*, /em/faces/helppag
es/.*, /em/flashbridge.*, /em/formsapp/lib/formsRecorder.jar, /em/images/.*, /em/install/getAgentImage, /em/helppages/help.*,
/em/jslibs/.*, /em/jslibsObf/.*, /em/login.jsp, /em/mapproxy.*, /em/mobile/core/uifwk/skins/.*, /em/ocamm/lib.*, /em/onetime.*
, /em/ovs/discovertarget, /em/public/.*, /em/public_lib_download/.*, /em/redirect.*, /em/relocatetarget.*, /em/sdkImpl/core/u
ifwkmobile/skins/.*, /em/servlet/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs
.*, /em/jobrecv.*]
<Jul 1, 2022 6:07:49,902 PM CST> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring
feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jul 1, 2022 6:07:50,582 PM CST> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection
with the Domain level Diagnostic Service.>
<Jul 1, 2022 6:07:51,052 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 1, 2022 6:07:51,117 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 1, 2022 6:07:51,118 PM CST> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connectio
n list DomainRuntimeServiceMBean>
<Jul 1, 2022 6:07:51,259 PM CST> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 127
.0.0.1, 0:0:0:0:0:0:1.>
<Jul 1, 2022 6:07:51,259 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for p
rotocols iiop, t3, ldap, snmp, http.>
<Jul 1, 2022 6:07:51,260 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 1, 2022 6:07:51,260 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:7
001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 1, 2022 6:07:51,260 PM CST> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "Ad
minServer" for domain "base_domain" running in production mode.>
<Jul 1, 2022 6:07:51,260 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for p
rotocols iiop, t3, ldap, snmp, http.>
<Jul 1, 2022 6:07:51,260 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 1, 2022 6:07:51,260 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:7
001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 1, 2022 6:07:51,345 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 1, 2022 6:07:51,352 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

You know that the administrator server is running when you see the following output:

Server state changed to RUNNING.

4-3. Run the WLST command `ohs_updateInstances()` to complete all the required steps.

```
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/ohs/common/bin> ./wlst.sh
WARNING: This is a deprecated script. Please invoke the wlst.sh script under oracle_common/common/bin.
Initializing WebLogic Scripting Tool (WLST) ...
Jython scans all the jar files it can find at first startup. Depending on the system, this process may take a few minutes to complete, and WLST may not return a prompt right away.
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands

wls:/offline> connect('weblogic','welcome1','Dell5530:7001')
Connecting to t3://Dell5530:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

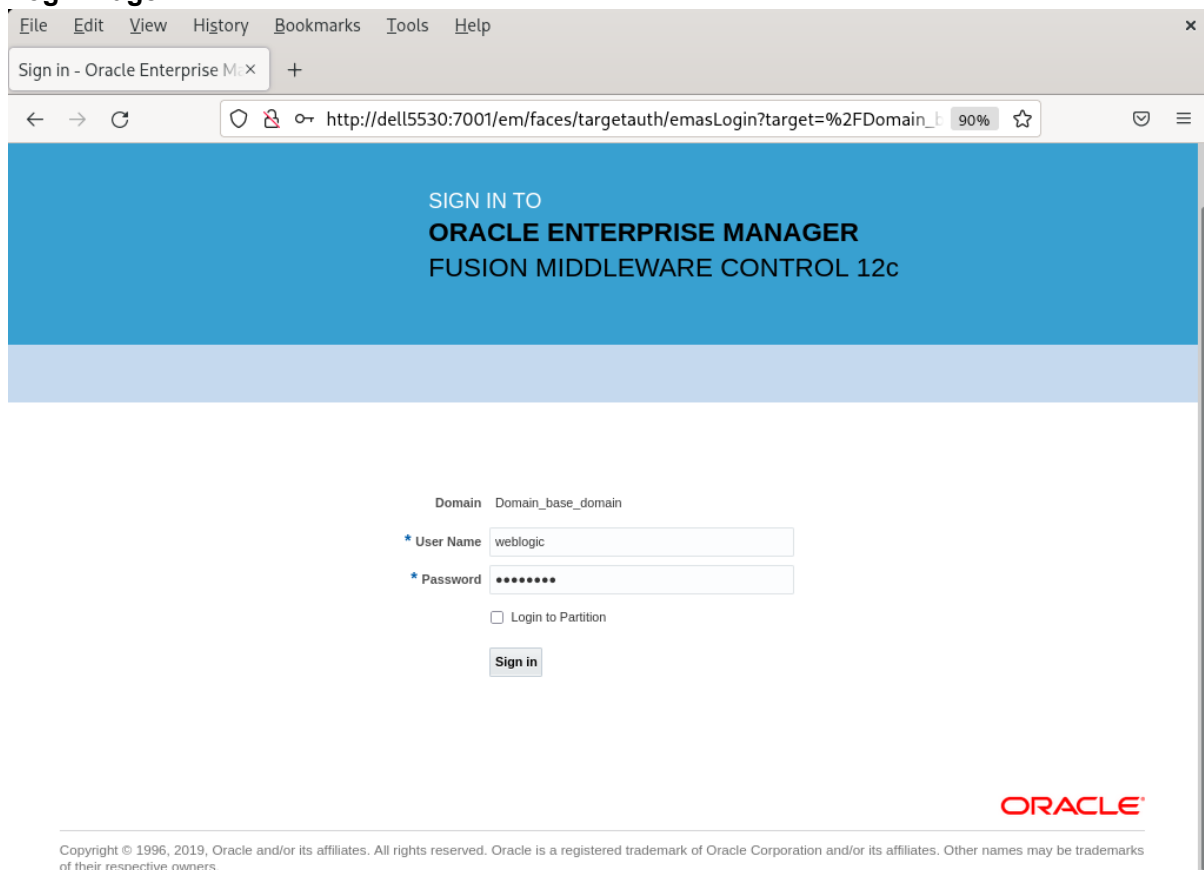
Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

wls:/base_domain/serverConfig> ohs_updateInstances()
Location changed to edit custom tree. This is a writable tree with No root.
For more help, use help('editCustom')

Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Saving all your changes ...
Saved all your changes successfully.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
OHS instances have been updated successfully.
wls:/base_domain/serverConfig> █
```

4-4. Checking Oracle WebTier Product URLs.

1). Access to Enterprise Manager Console.

Login Page:

The screenshot shows a web browser window with the following details:

- Browser menu: File, Edit, View, History, Bookmarks, Tools, Help
- Tab: Sign in - Oracle Enterprise M... x
- Address bar: http://dell5530:7001/em/faces/targetauth/emasLogin?target=%2FDomain_... 90%
- Page Content:
 - Header: SIGN IN TO ORACLE ENTERPRISE MANAGER FUSION MIDDLEWARE CONTROL 12c
 - Form fields:
 - Domain: Domain_base_domain
 - * User Name: weblogic
 - * Password: [masked]
 - Login to Partition
 - Sign in button
 - Oracle logo
 - Footer: Copyright © 1996, 2019, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Home Page:

The screenshot shows the Oracle Enterprise Manager interface for the 'base_domain' WebLogic Domain. The main content area displays the 'Administration Server' configuration with the following details:

- Name: AdminServer
- Host: Dell5530
- Listen Port: 7001

Below the configuration, a 'Servers' table lists the server's status:

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑			Running	OK

On the left sidebar, there are summary cards for 'Servers' (1 Up), 'Clusters' (0 Clusters), 'Deployments' (1 Up), and 'Domain Partitions'.

Starting Oracle HTTP Server (ohs_1)

The screenshot shows the Oracle Enterprise Manager interface for the 'ohs_1' Oracle HTTP Server. The main content area displays the following configuration details:

- Component Name: ohs_1
- Version: 12.2.1.4.0
- State: Shutdown
- Host: 192.168.0.100
- Ports: 7777 4443 127.0.0.1:7779
- Machine Name: SuSE_Machine_1
- Auto Restart:
- Oracle Home: /home/oracle/Oracle/Middleware/Oracle_Home

Below the configuration, there are sections for 'Key Statistics' and 'Response and Load'.

Key Statistics:

- Idle Processes: Unavailable
- Busy Processes: Unavailable
- Error Rate (%): -1.00
- Connection Duration (seconds): Unavailable
- Request Processing Time (seconds): Unavailable
- Request Throughput (per second): -1.00
- Response Data Throughput (KB/second): -1.00

Response and Load: This section contains a graph showing metrics over time (05:59 PM to 06:11 PM on July 01, 2022). The legend includes 'Request Processing Time (milli seconds)' and '/Domain_base_domain/base_domain/ohs_1: Request Throu...'. A 'Table View' button is also present.

CPU and Memory Usage: This section contains a graph showing CPU and memory usage over the same time period. The legend includes 'CPU Usage (%)' and 'Memory Usage (MR)'. A 'Table View' button is also present.

On the left sidebar, there are summary cards for 'Monitoring' (Metrics Unavailable), 'Virtual Hosts' (0 Virtual Hosts), and 'Modules' (0 Modules). At the top, there are buttons for 'Start Up', 'Shut Down', and 'Restart...'. The state 'ohs_1' is shown with a red downward arrow.

ohs_1 is up.

Oracle HTTP Server **Start Up** **Shut Down** **Restart...** Jul 1, 2022 6:14:15 PM CST

Monitoring
 0.00 CPU Usage (%)
 0.00 Memory Usage (%)

Virtual Hosts
 2 Virtual Hosts

Modules
 52 Modules

General

Component Name ohs_1
 Version 12.2.1.4.0
 State Running
 Host 192.168.0.100
 Ports 7777 4443 127.0.0.1:7779
 Machine Name SuSE_Machine_1
 Auto Restart
 Oracle Home /home/oracle/Oracle/Middleware/Oracle_Home

Response and Load

06:00 PM July 01 2022
 06:03 06:06 06:09 06:12

Request Processing Time (milli seconds)
 /Domain_base_domain/base_domain/ohs_1: Request Throu...

Key Statistics

Idle Processes 3
 Busy Processes 0
 Error Rate (%) 0.00
 Connection Duration (seconds) 0
 Request Processing Time (seconds) 0
 Request Throughput (per second) 0.00

CPU and Memory Usage

06:00 PM July 01 2022
 06:03 06:06 06:09 06:12

memory Usage (MR)

OHS Ports Configuration as shown below.

Port Usage: ohs_1 (Oracle HT ×) +

http://dell5530:7001/em/faces/as/as/portsUsage?type=oracle_apache&target=% 90%

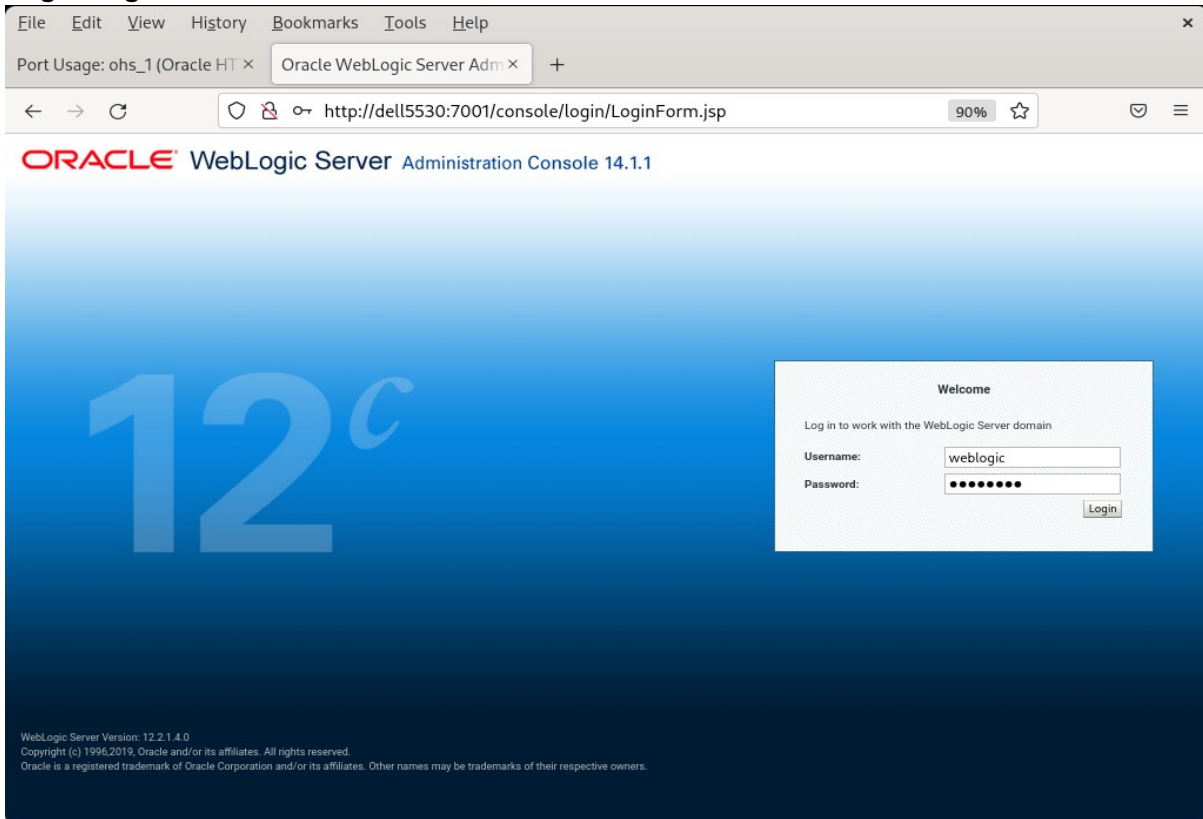
Oracle HTTP Server **Start Up** **Shut Down** **Restart...** Jul 1, 2022 6:14:48 PM CST

Port Usage

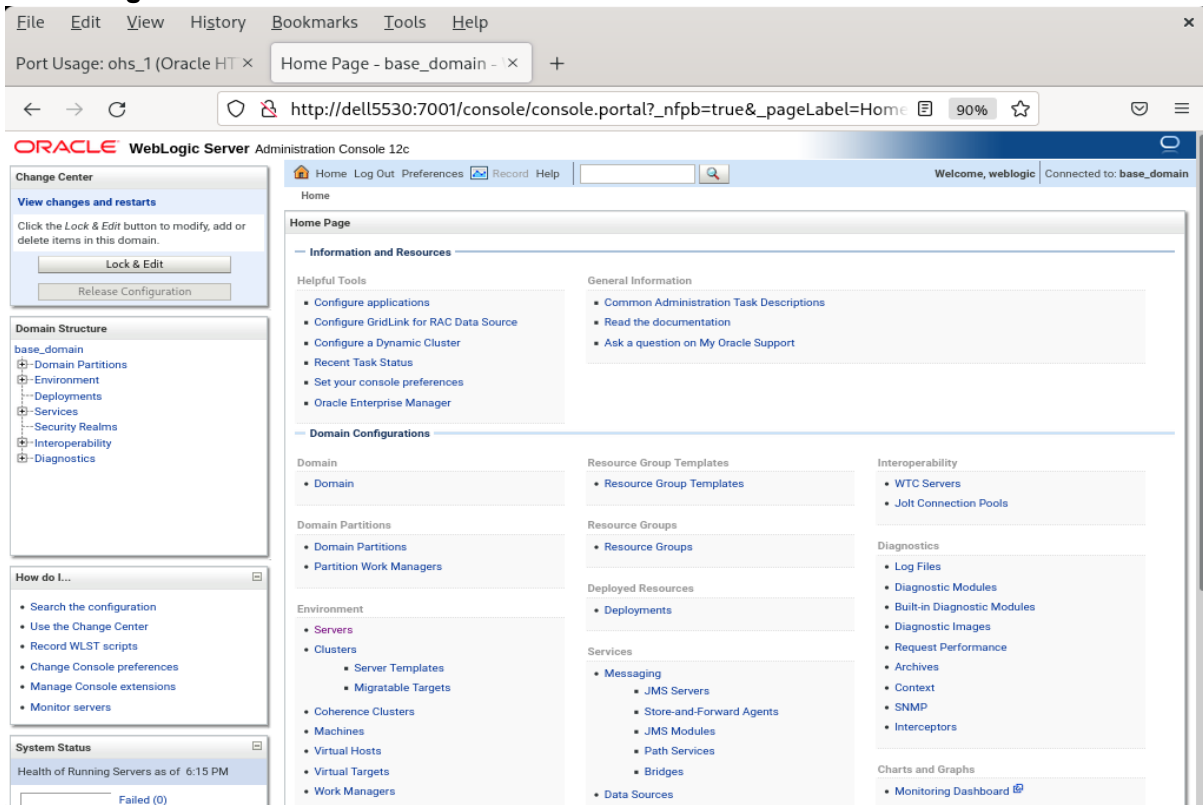
Port in Use	IP Address	Component	Protocol
7779	127.0.0.1	ohs_1	HTTPS
4443	ALL	ohs_1	HTTPS
7777	ALL	ohs_1	HTTP

2). Access to Administration Server Console

Login Page as shown below:



Home Page:



Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar displays the URL: `http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=CoreS`. The page title is "Summary of Servers".

Change Center: Includes "View changes and restarts" with "Lock & Edit" and "Release Configuration" buttons.

Domain Structure: A tree view showing the hierarchy: `base_domain` > `Domain Partitions` > `Environment` > `Deployments` > `Services` > `Security Realms` > `Interoperability` > `Diagnostics`.

How do I...: A list of tasks including "Create Managed Servers", "Clone servers", "Delete Managed Servers", "Delete the Administration Server", "Start and stop servers", and "View objects in the JNDI tree".

System Status: Shows "Health of Running Servers as of 6:15 PM" with "Failed (0)".

Summary of Servers:

- Configuration tab selected.
- Text: "A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain."
- Table: "Servers (Filtered - More Columns Exist)"

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured			RUNNING	OK	7001

Viewing the summary of Machines:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar displays the URL: `http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=CoreM`. The page title is "Summary of Machines".

Change Center: Includes "View changes and restarts" with "Lock & Edit" and "Release Configuration" buttons.

Domain Structure: A tree view showing the hierarchy: `base_domain` > `Domain Partitions` > `Environment` > `Deployments` > `Services` > `Security Realms` > `Interoperability` > `Diagnostics`.

How do I...: A list of tasks including "Create and configure machines", "Assign server instances to machines", "Clone machines", and "Delete machines".

System Status: Shows "Health of Running Servers as of 6:16 PM" with "Failed (0)", "Critical (0)", and "Overloaded (0)".

Summary of Machines:

- Text: "A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). WebLogic Server uses configured machine names to determine the optimum server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers. This page displays key information about each machine that has been configured in the current WebLogic Server domain."
- Table: "Machines"

Name	Type
SuSE_Machine_1	Machine

3). Access to Oracle HTTP Server listening address

URL: <http://host:7777/>

ORACLE Oracle HTTP Server 12c

Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications.

Local Content, Audit Control, Identity Management, OHS, Load Balancing, Fusion Middleware Applications, Enterprise Manager, FMW Lifecycle Tools, Process Management and HA, Certificate management, Automation, Test to Production, Authentication, Auditing.

SSL URL: <https://host:4443/>

ORACLE Oracle HTTP Server 12c

Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications.

Local Content, Audit Control, Identity Management, OHS, Load Balancing, Fusion Middleware Applications, Enterprise Manager, FMW Lifecycle Tools, Process Management and HA, Certificate management, Automation, Test to Production, Authentication, Auditing.

Admin Host SSL URL: <https://host:7779/>

ORACLE Oracle HTTP Server 12c

Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications.

Process Management and HA
Certificate management
Automation
Test to Production

Local Content
JS
HTML
Audit Control
Identity Management
Auditing
Authentication
Authorization
Load Balancing
Fusion Middleware Applications

FMW Lifecycle Tools

Manage, monitor, diagnose
Enterprise Manager

4-5. Checking OHS state through Oracle WLST tool.

```
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/ohs/common/bin> ./wlst.sh
WARNING: This is a deprecated script. Please invoke the wlst.sh script under oracle_common/common/bin.

Initializing WebLogic Scripting Tool (WLST) ...

Jython scans all the jar files it can find at first startup. Depending on the system, this process may take a few minutes to complete, and WLST may not return a prompt right away.

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

wls:/offline> connect('weblogic','welcome1','Dell5530:7001')
Connecting to t3://Dell5530:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

wls:/base_domain/serverConfig/> ohs_updateInstances()
Location changed to edit custom tree. This is a writable tree with No root.
For more help, use help('editCustom')

Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Saving all your changes ...
Saved all your changes successfully.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
OHS instances have been updated successfully.
wls:/base_domain/serverConfig/> state('ohs_1')
Current state of "ohs_1" : RUNNING
wls:/base_domain/serverConfig/>
```

End of Oracle WebTier Http Server.

Oracle WebCenter Portal

1. Installing Oracle WebCenter Portal 12c

1-1. Prerequisites:

Installation of Oracle WebCenter Portal requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0_221 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

1-2. Log in to the target system (SLES 15 SP4 64-bit OS) as a non-admin user. Download the Oracle WebCenter Portal 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>. (**Note:** Please ensure the installation user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (V983398-01.zip) file and launch the installation program by running '**java -jar fmw_12.2.1.4.0_wcportal.jar**'

For the actual installation, follow the steps below:

1). Installation Inventory Setup

Oracle Fusion Middleware 12c WebCenter Portal Installation

Installation Inventory Setup

CENTRAL INVENTORY DIRECTORY

Enter the Central inventory directory for all your oracle installations. The installer will create a new central inventory directory if it does not exist.

Inventory Directory:
 Enter the full path for the directory.

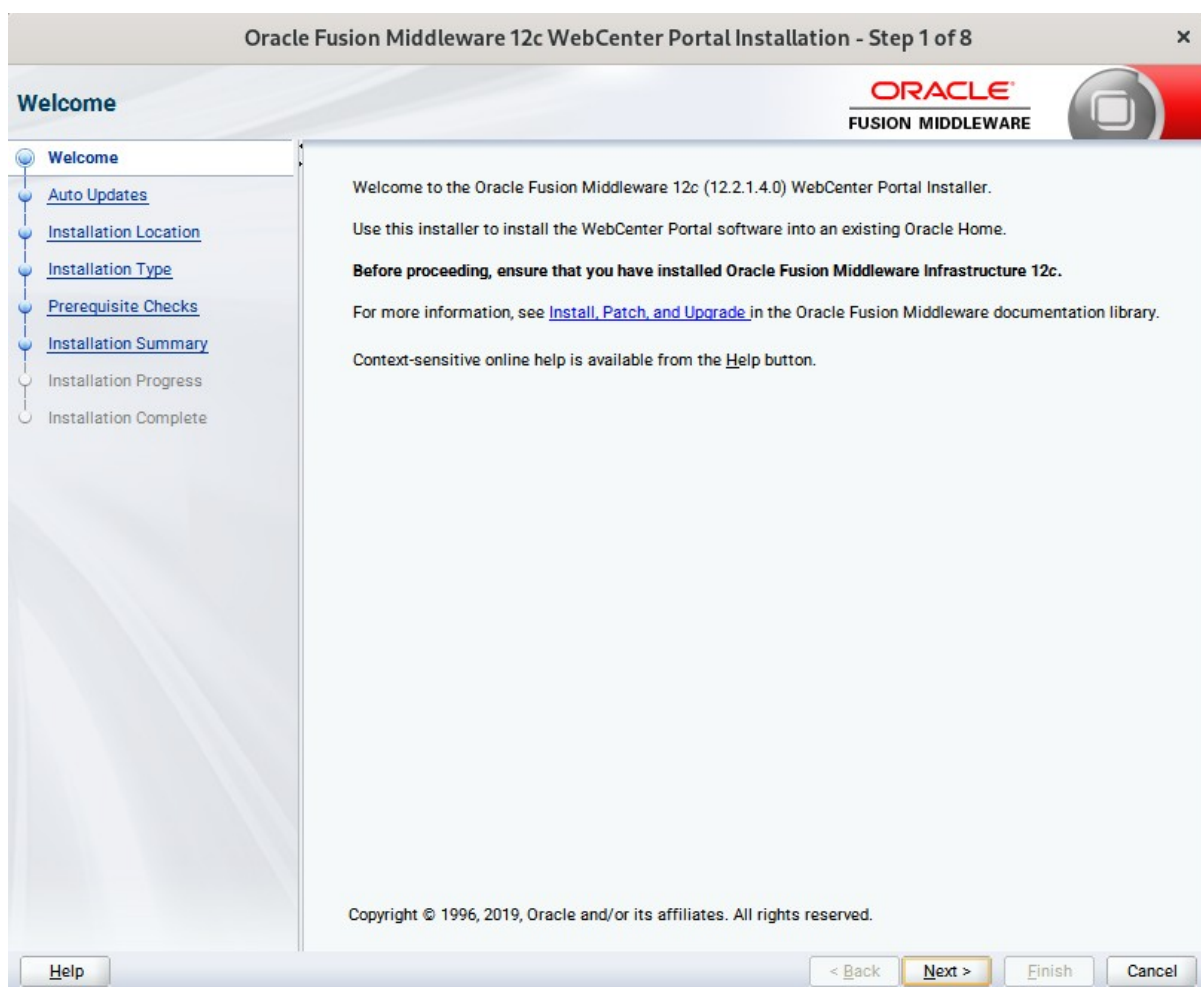
Operating System Group :
 Specify a group with write permission to the inventory directory

CENTRAL INVENTORY POINTER FILE

Click OK to create a script (createCentralInventory.sh) in the inventory directory. Run this script to create a pointer file, which is used to identify the location of the central inventory for future installations and administrative operations, such as patching and upgrade.

Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

2). Welcome page.



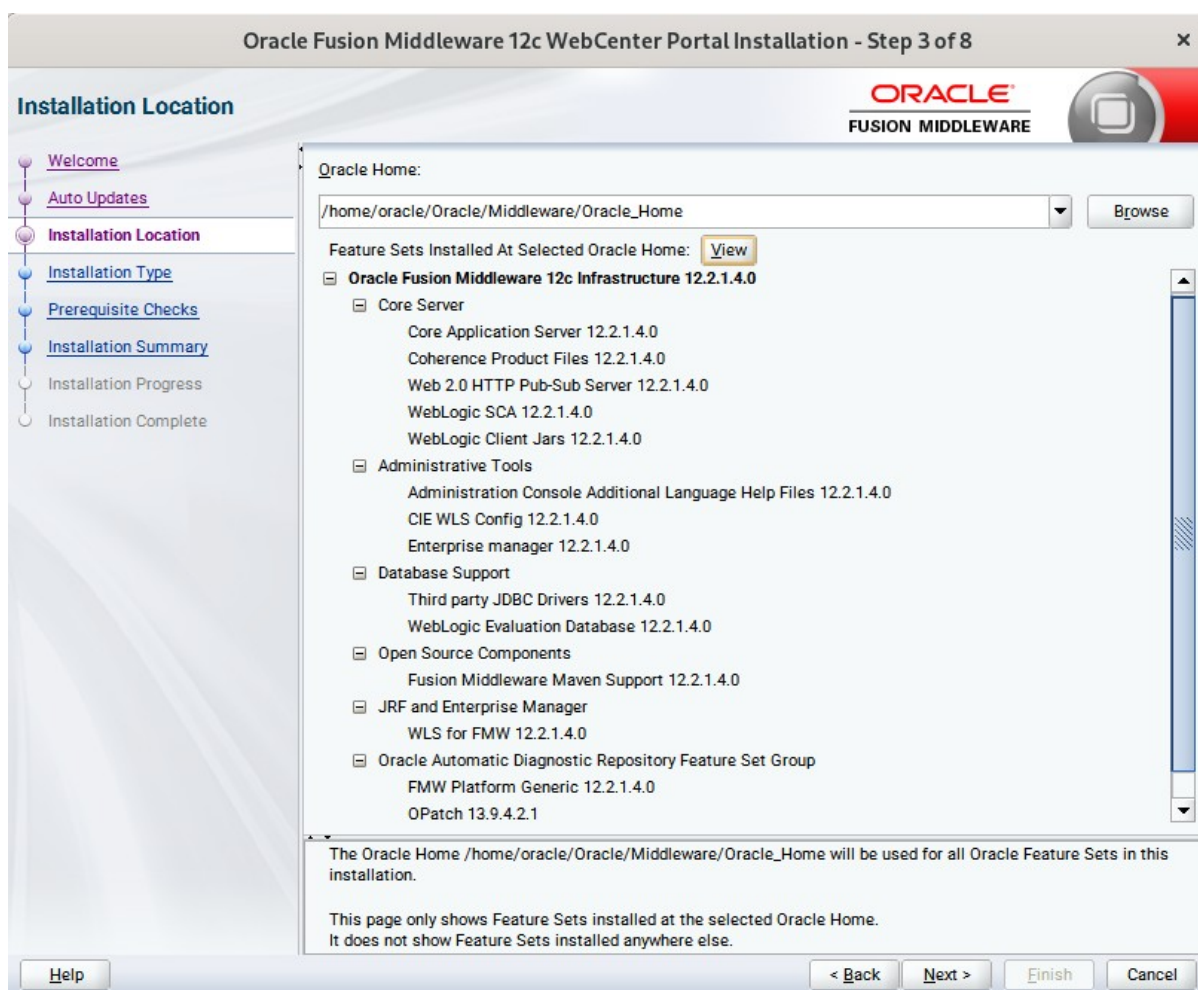
This page welcomes you to the installation. Click **Next** to continue.

3). The **Auto Updates** page appears.

The screenshot shows the 'Auto Updates' configuration page in the Oracle Fusion Middleware 12c WebCenter Portal installation wizard. The window title is 'Oracle Fusion Middleware 12c WebCenter Portal Installation - Step 2 of 8'. The page features a navigation pane on the left with links for 'Welcome', 'Auto Updates', 'Installation Location', 'Installation Type', 'Prerequisite Checks', 'Installation Summary', 'Installation Progress', and 'Installation Complete'. The main content area has the Oracle logo and 'FUSION MIDDLEWARE' text. It contains three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option includes a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option includes 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

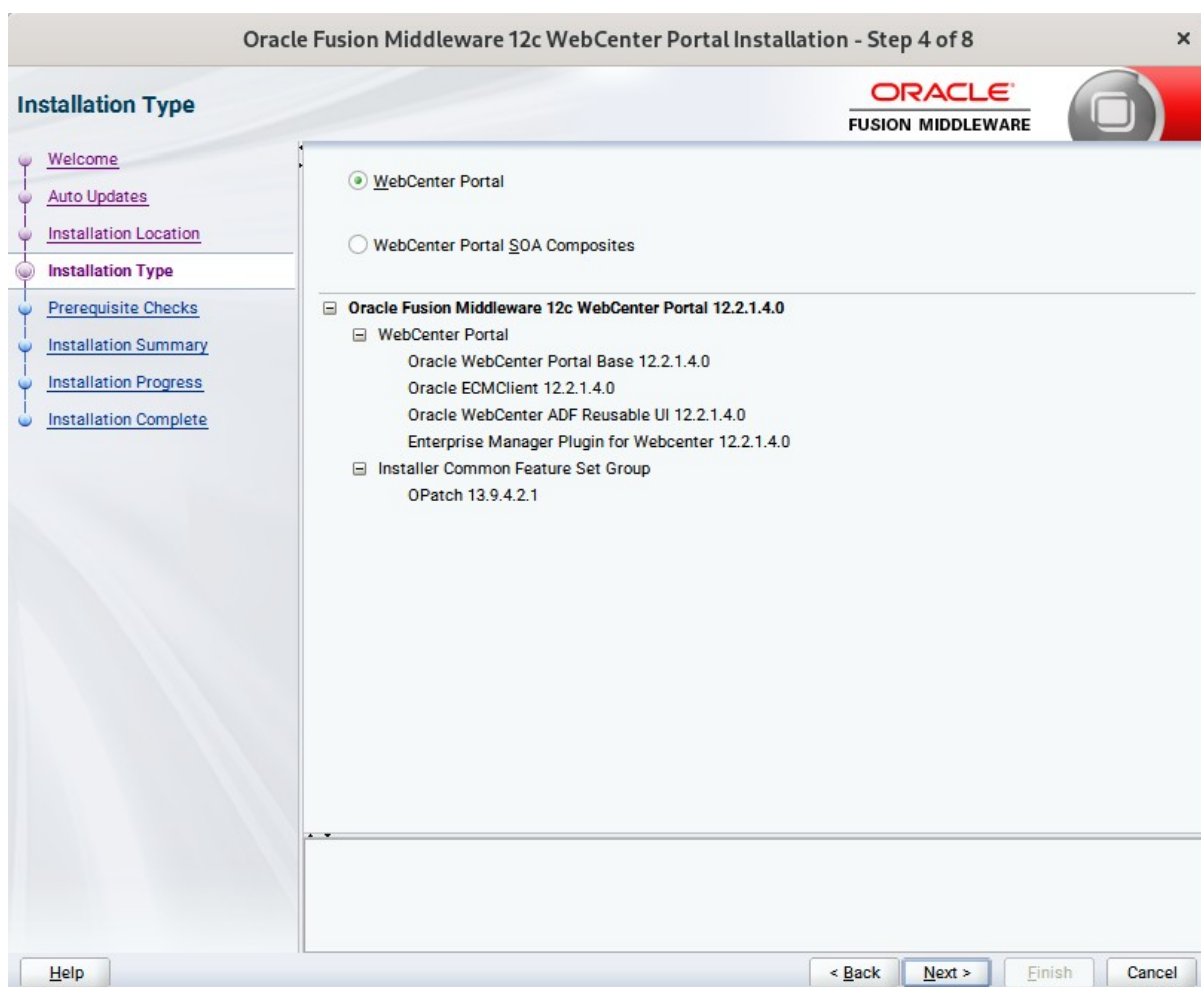
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

4). The **Installation Location** page appears.



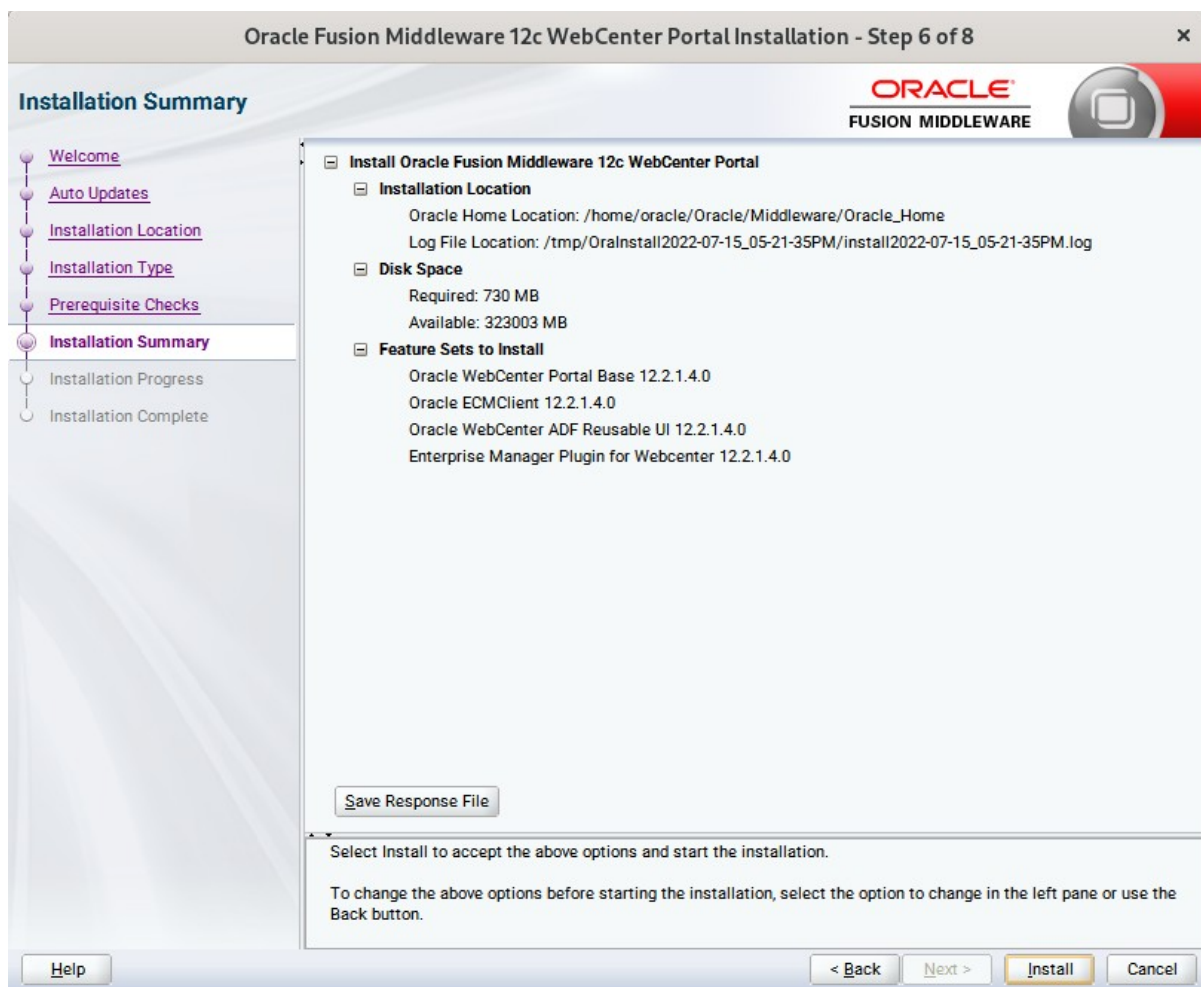
SPecify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

5). The **Installation Type** page appears.



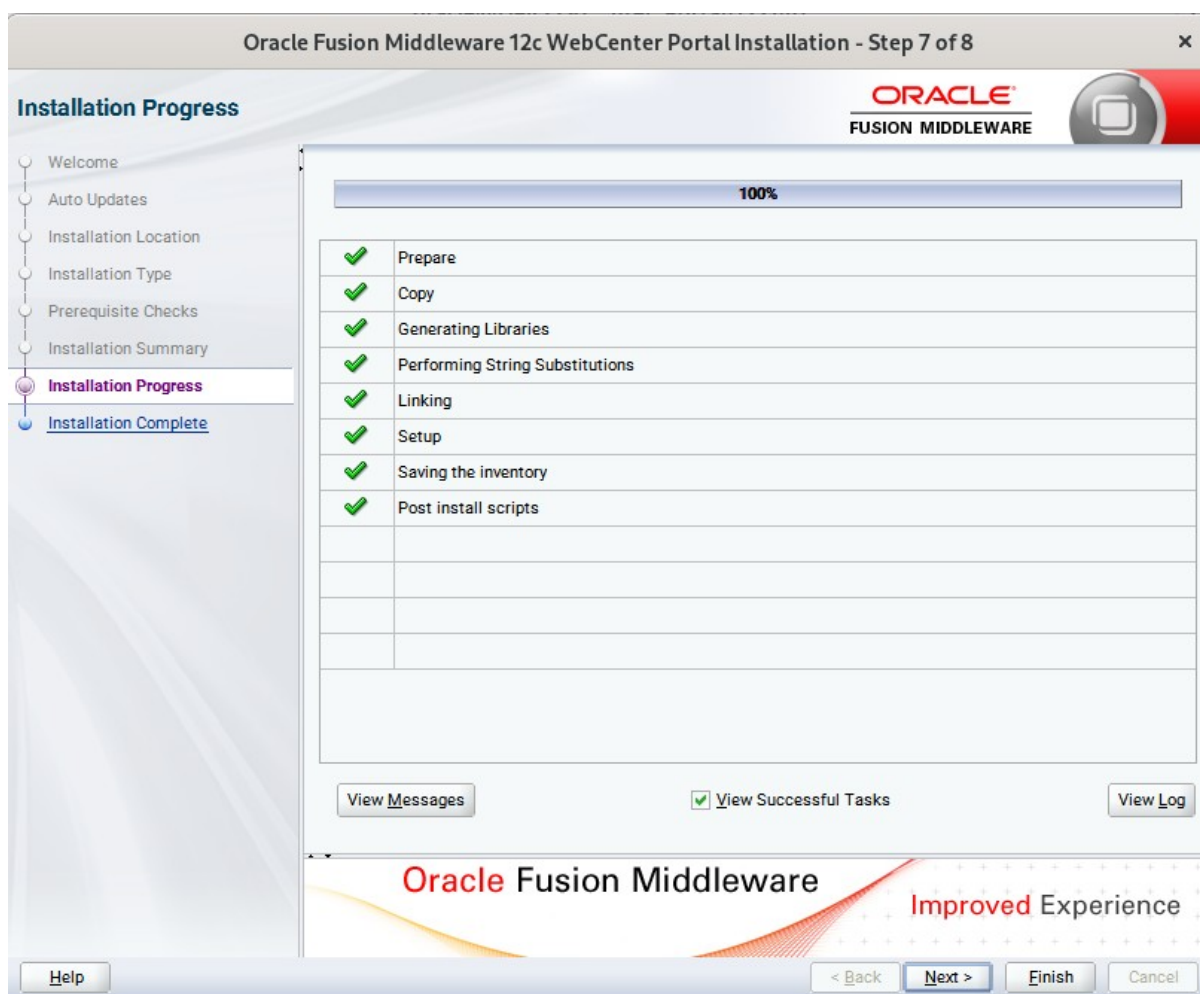
Use this screen to select the installation type and then products or feature sets you want to install. Selected the **WebCenter Portal** install type to install the WebCenter product. Click **Next** to continue.

7). The **Installation Summary** page appears.



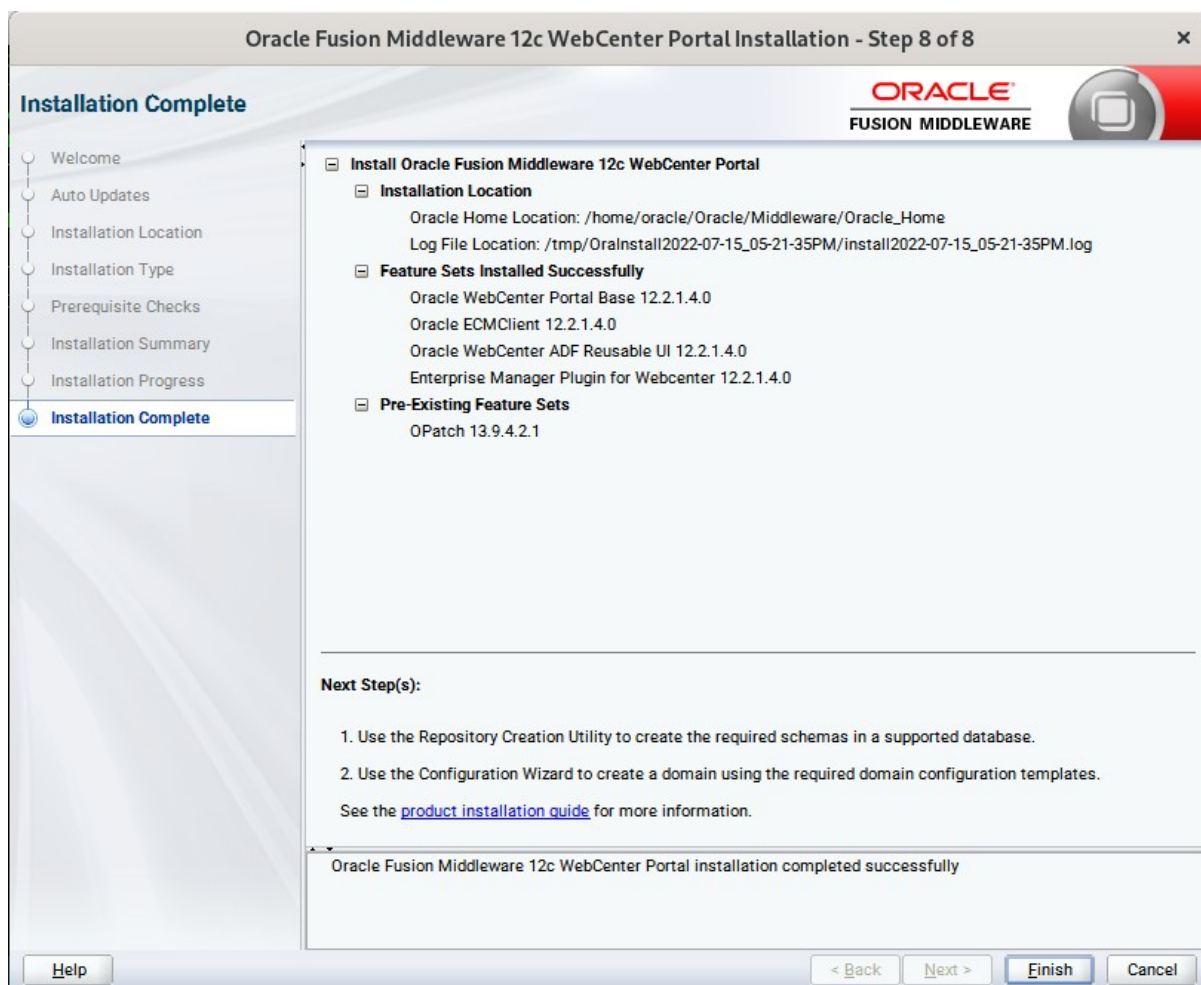
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

8). The **Installation Progress** page appears.



This page shows you the progress of the installation, and will warn you if there are any problems. You can view messages and logs from this page, but typically no action is required here. When progress is complete, click **Next** (go to a Summary page). Alternatively, you can click **Finish**.

9). If you clicked **Next**, the **Installation Complete** page appears, showing you the components that have been installed.

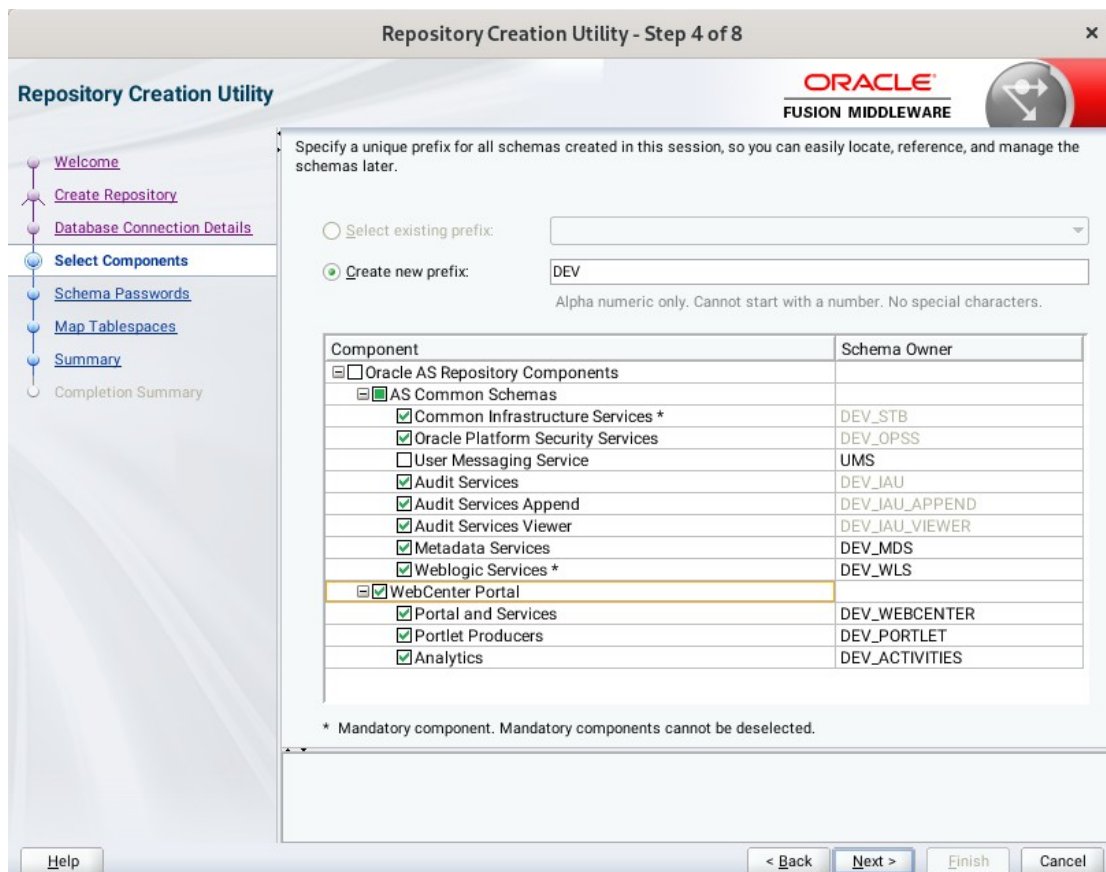


Click **Finish** to dismiss the installer.

2. Creating Oracle Database Schema through Repository Creation Utility(RCU)

2-1. Repository Creation Utility (RCU) is available with the Oracle WebLogic Server 12cR2 Fusion Middleware Infrastructure distribution. Run `$FMW_HOME/oracle_common/bin/rcu` and create required database schemas for Oracle Oracle WebCenter Portal.

Screenshot: Database schemas creating for Oracle WebCenter Portal.



Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above.

Ensure schema creation is successful.

Repository Creation Utility - Step 9 of 9

Repository Creation Utility ORACLE FUSION MIDDLEWARE

Database details:

Host Name: Dell5530
Port: 1521
Service Name: SUSE
Connected As: sys
Operation: System and Data Load concurrently
Execution Time: 2 minutes 6 seconds

RCU Logfile: /tmp/RCU2022-07-15_17-33_167303142/logs/rcu.log
Component Log Directory: /tmp/RCU2022-07-15_17-33_167303142/logs
View Log: rcu.log

Prefix for (prefixable) Schema DEV
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.257(sec)	stb.log
Oracle Platform Security Services	Success	00:14.760(sec)	opss.log
Audit Services	Success	00:11.600(sec)	iau.log
Audit Services Append	Success	00:09.130(sec)	iau_append.log
Audit Services Viewer	Success	00:09.136(sec)	iau_viewer.log
Metadata Services	Success	00:11.837(sec)	mds.log
Weblogic Services	Success	00:13.656(sec)	wls.log
Portal and Services	Success	00:19.084(sec)	webcenter.log
Portlet Producers	Success	00:10.206(sec)	portlet.log
Analytics	Success	00:10.626(sec)	activities.log

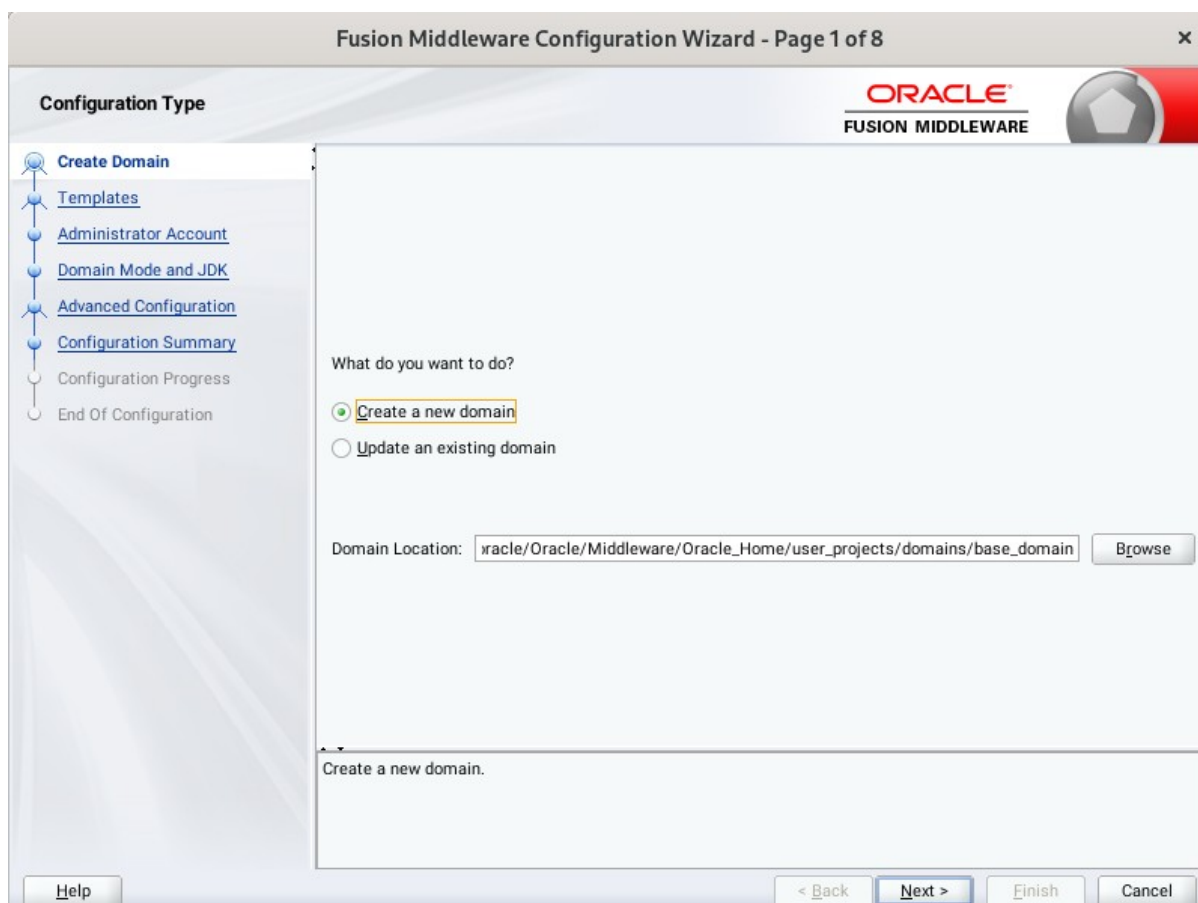
Help < Back Next > Create Close

3. Configuring Oracle WebCenter Portal 12c using the Config Wizard

3-1. In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE_HOME/oracle_common/common/bin** directory.

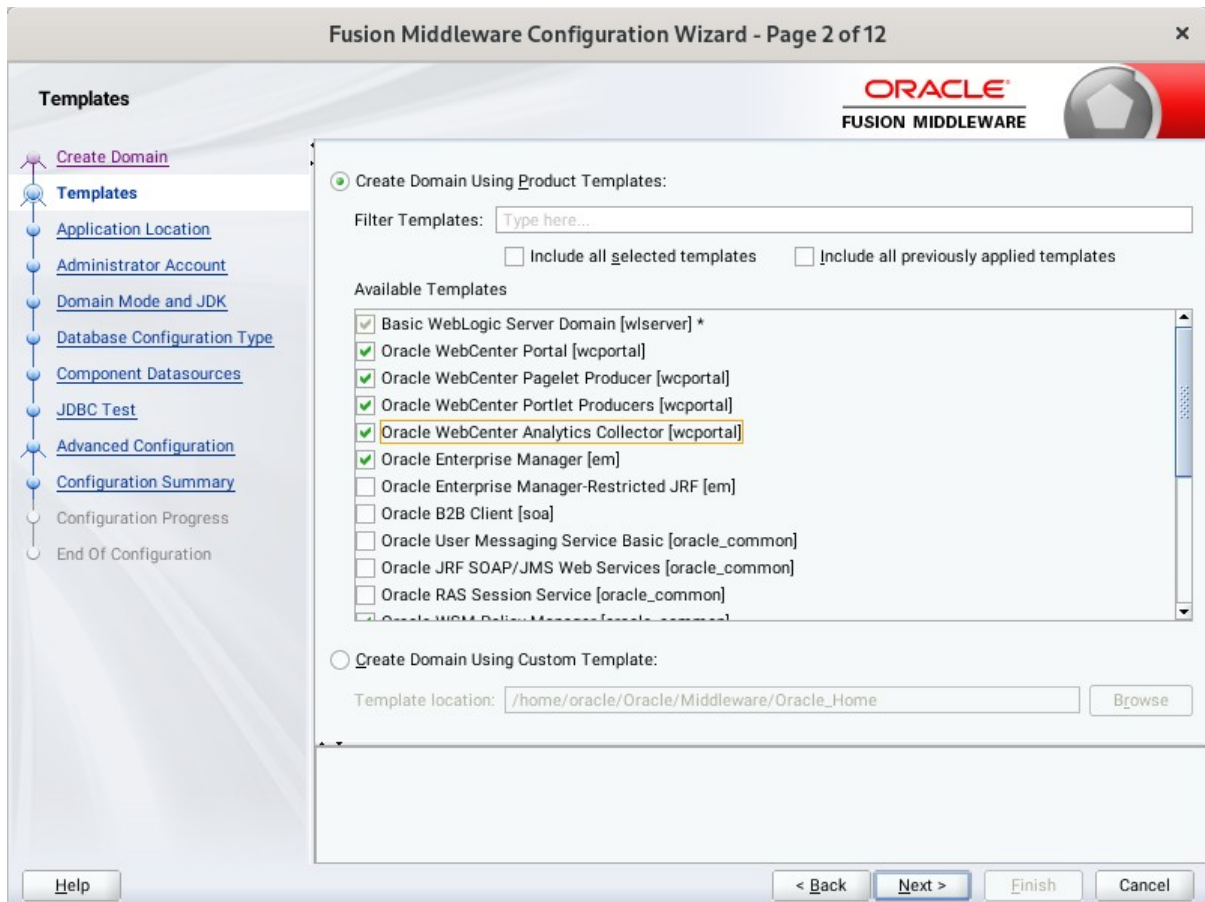
Follow these steps:

1). On the Configuration Type screen, select **Create a new domain**, and enter the desired domain home path.



Click **Next** to continue.

2). The **Templates** screen appears.



Use the **Templates** screen to select the templates you require. On the **Templates** screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

- Oracle WebCenter Portal [wcportal]

Selecting this template automatically selects the following as dependencies:

- Oracle Enterprise Manager
- Oracle WSM Policy Manager
- Oracle JRF
- WebLogic Coherence Cluster Extension
- Oracle WebCenter Pagelet Producer [wcportal]
- Oracle WebCenter Portlet Producers [wcportal]
- Oracle WebCenter Analytics Collector [wcportal]

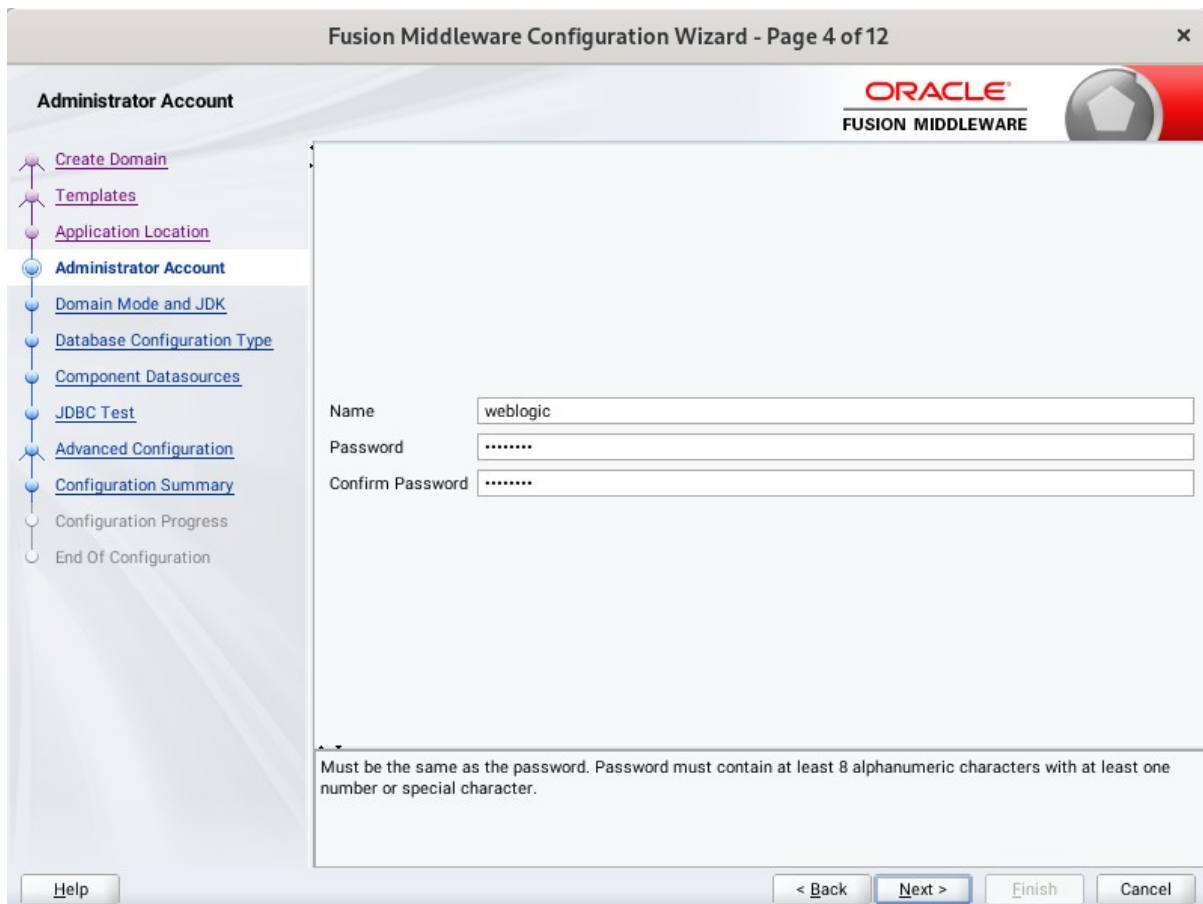
You can also select any of the Oracle WebCenter Portal products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

3). The **Application Location** screen appears.



Keep the default value for Application location. Click **Next** to continue.

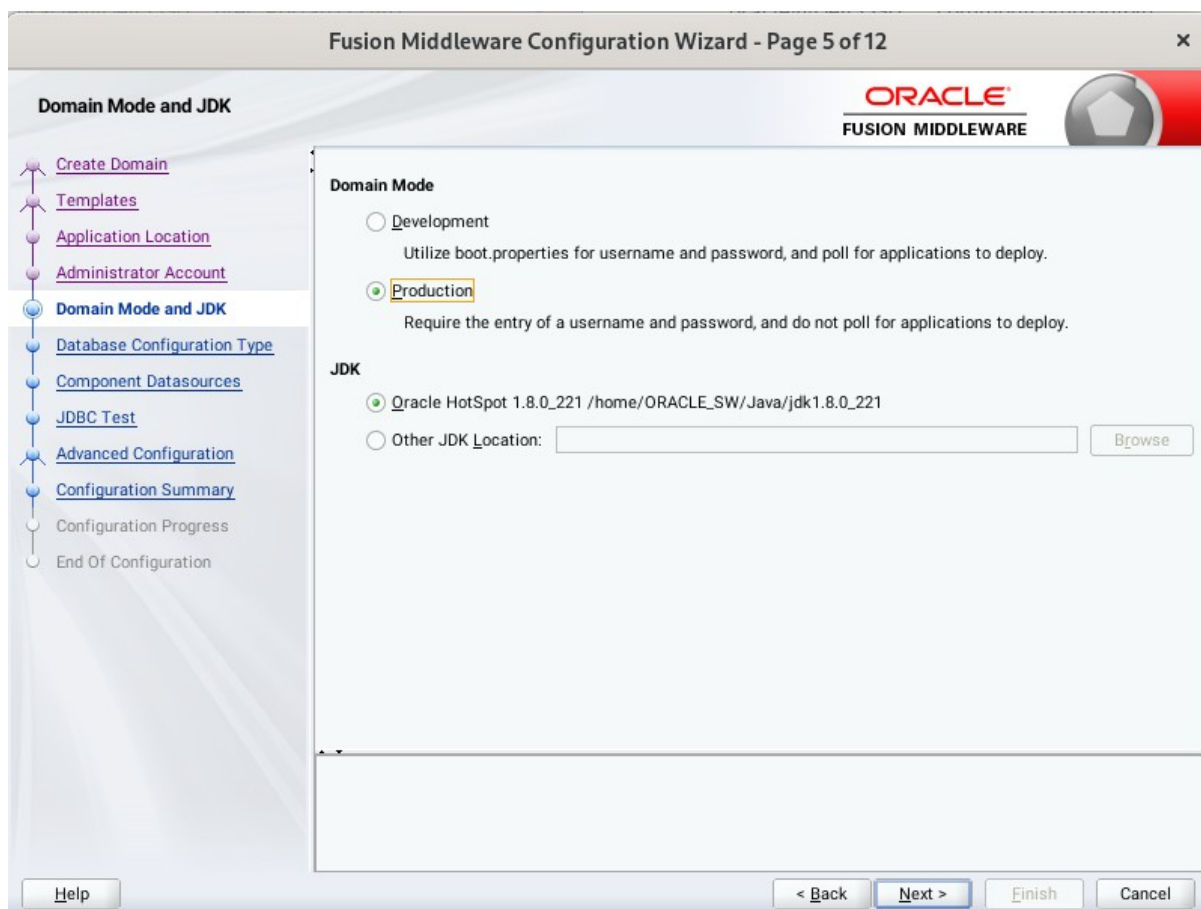
4). The **Administrator Account** screen appears.



The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 4 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists the following steps: Create Domain, Templates, Application Location, Administrator Account (selected), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters '.....', and 'Confirm Password' with masked characters '.....'. Below the fields is a note: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

Enter the WebLogic Domain administration username and password. This information will be needed to access WebLogic Server Control and Fusion Middleware Control. Click **Next** to continue.

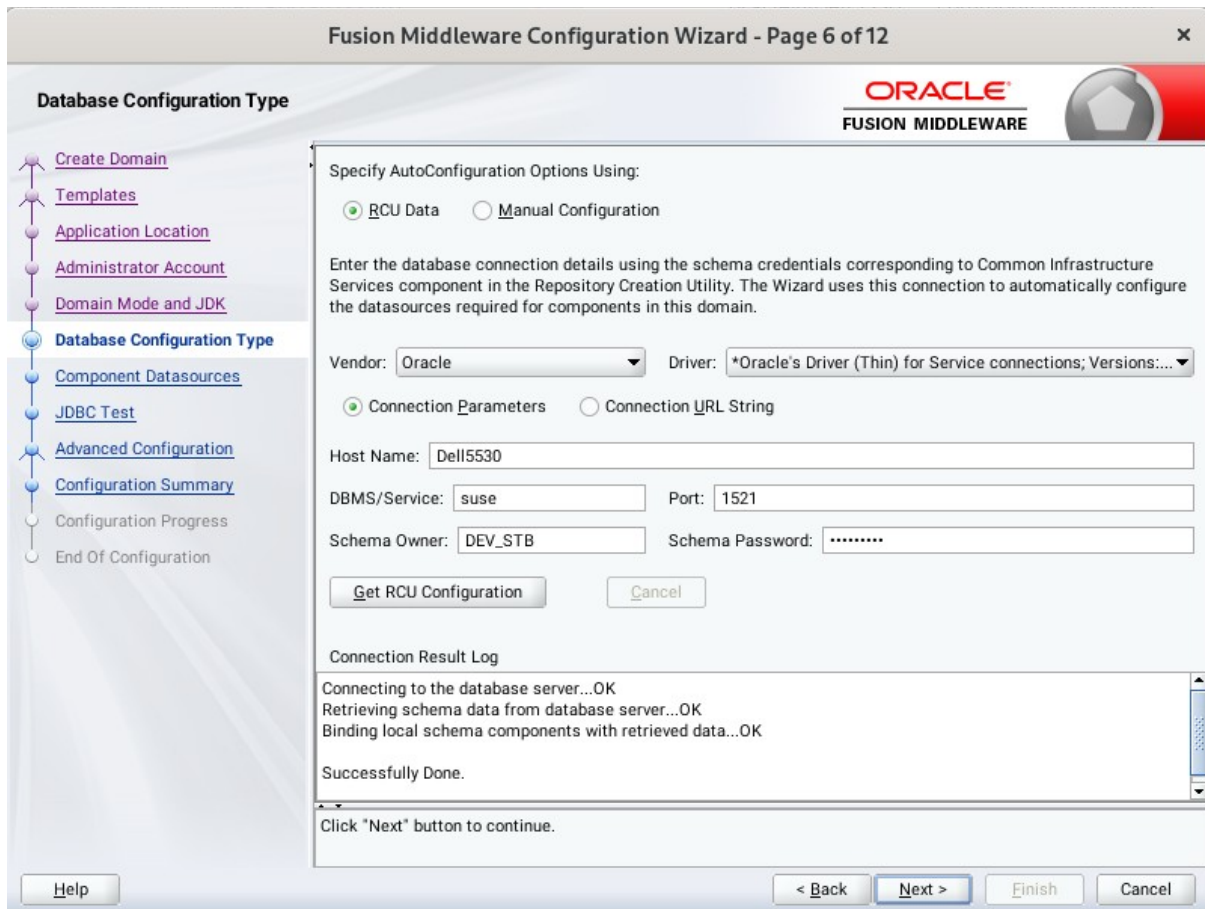
5). The **Domain Mode and JDK** screen appears.



Select the Domain Mode (either **Development** or **Production**). For our purposes, select **Production**. Leave the default JDK selection as it appears, unless using another version of the JDK desired.

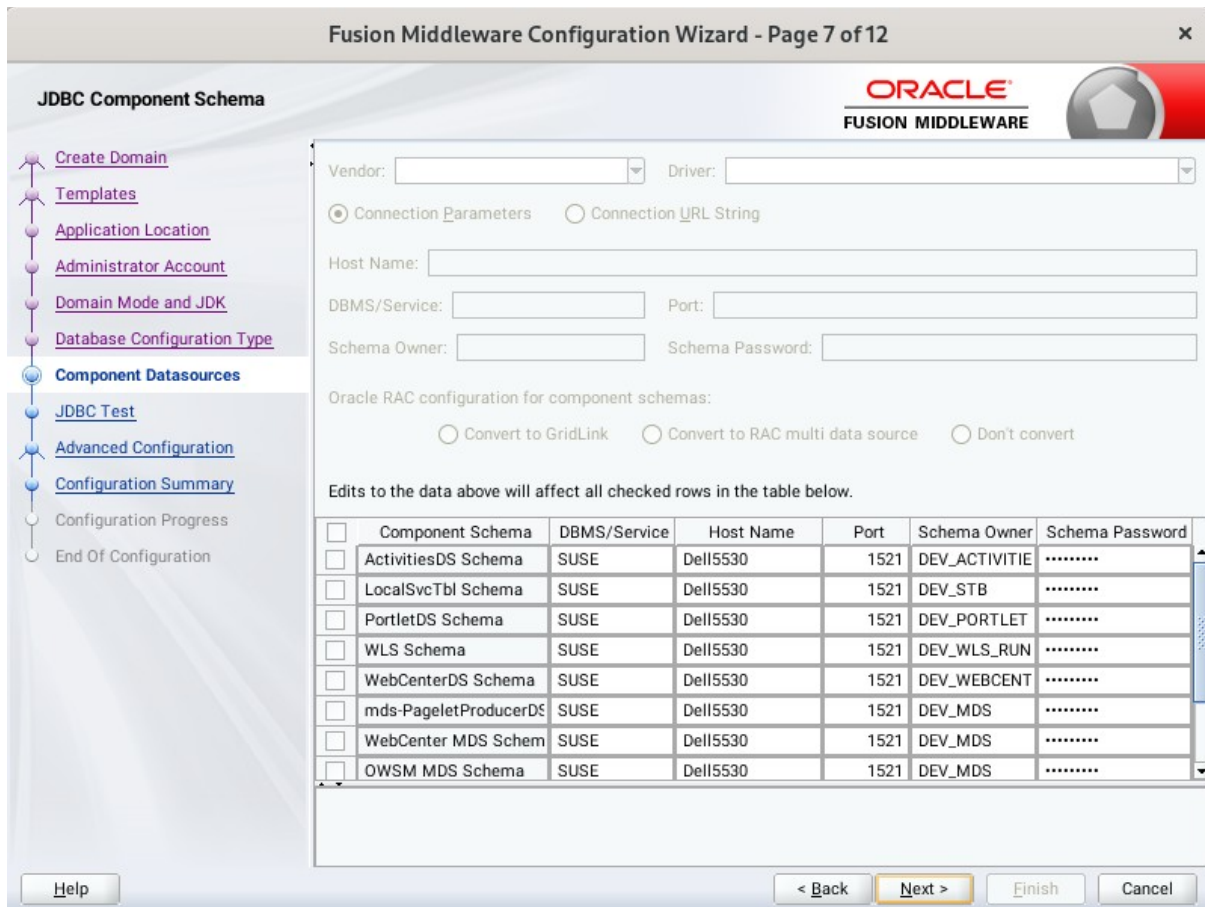
(**Note:** The installation can only be secured with Identity Management if you are configuring your components in deployment mode.)

6). The **Database Configuration Type** screen appears.



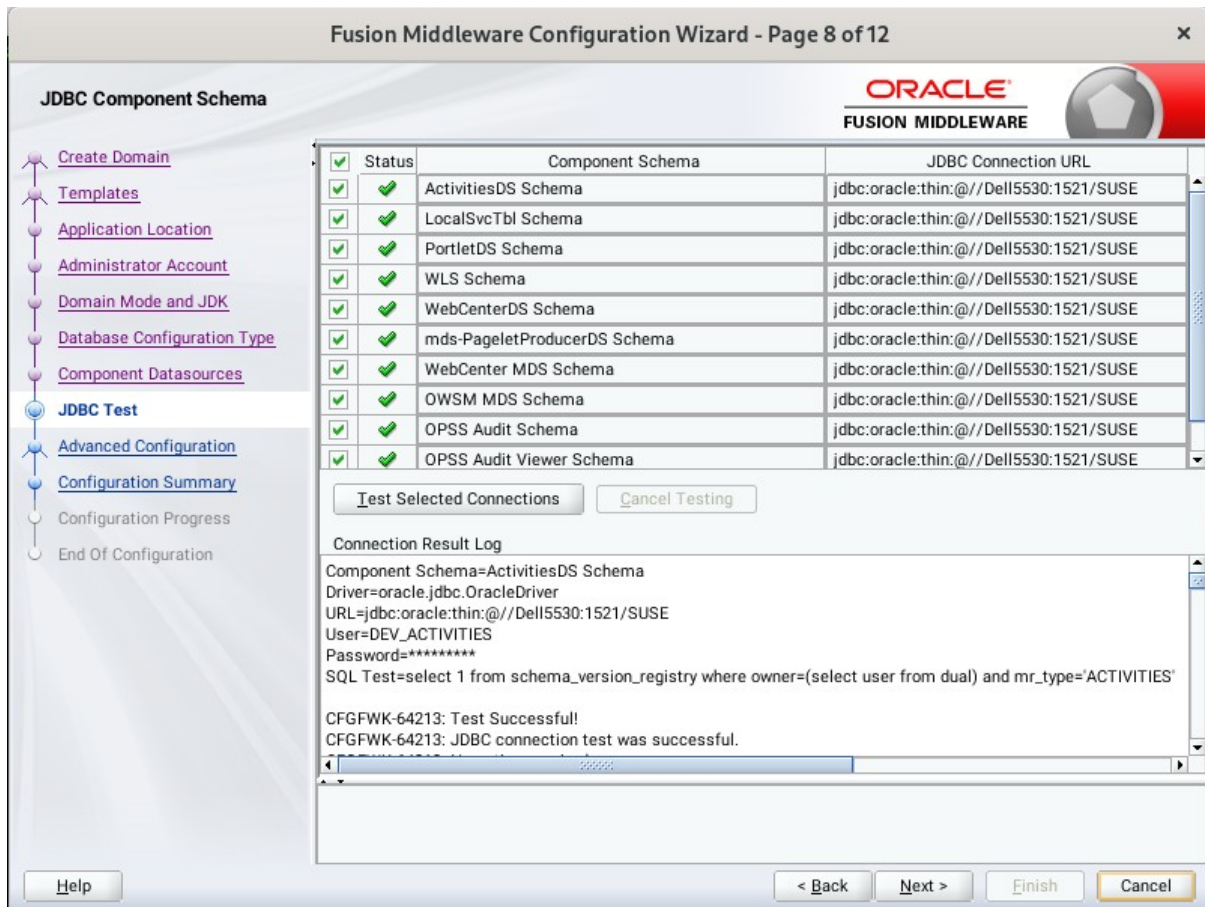
Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

7). The **JDBC Component Schema** screen appears.



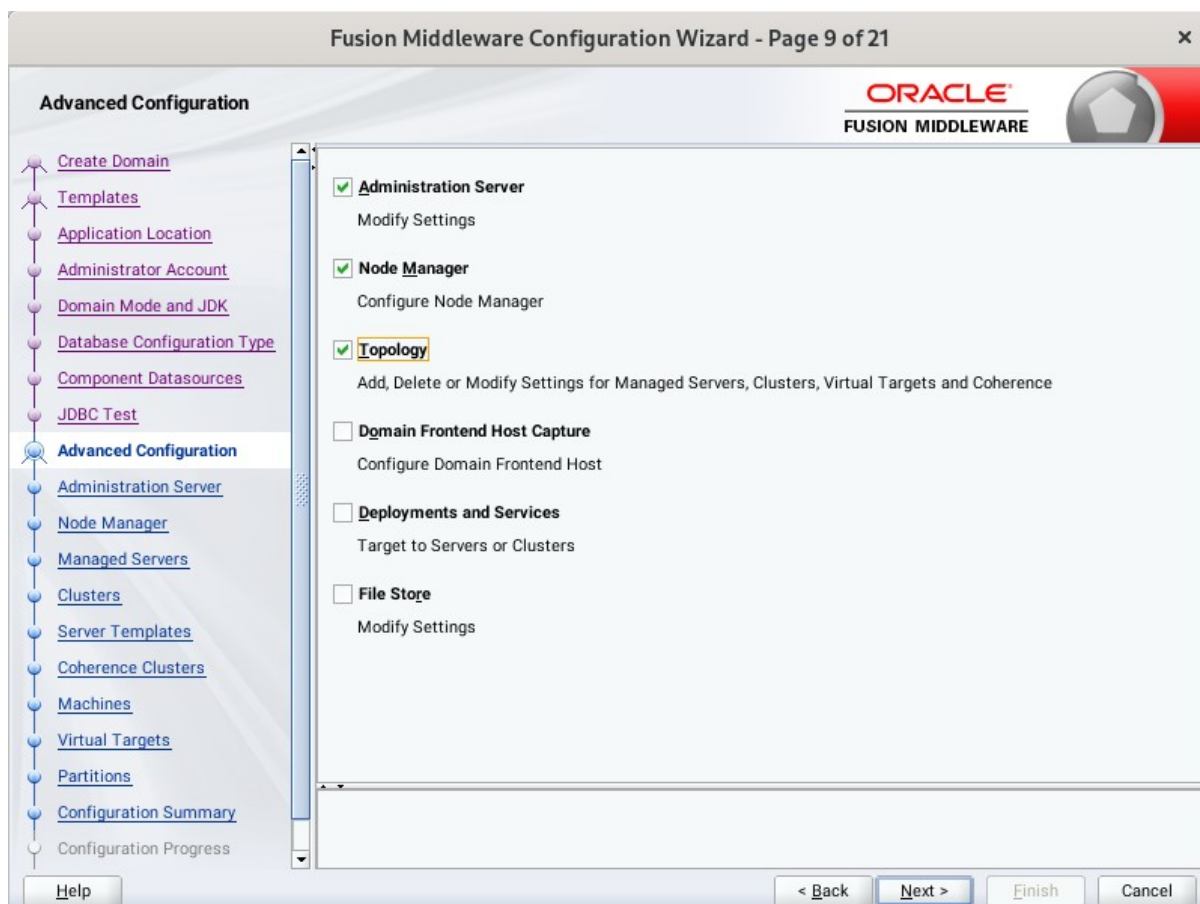
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

8). The **JDBC Component Schema Test** screen appears.



The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

9). The **Advanced Configuration** screen appears.

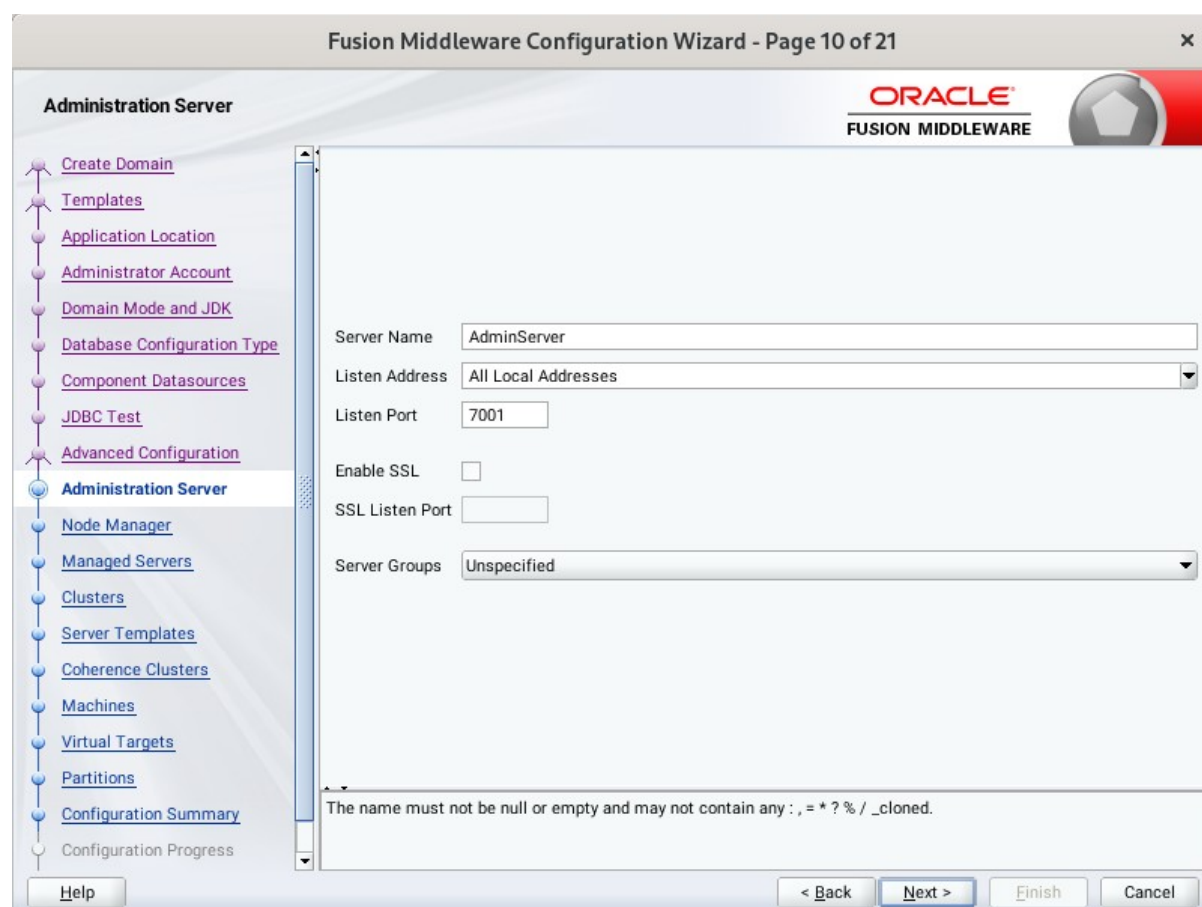


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

10). The **Administration Server** screen appears.



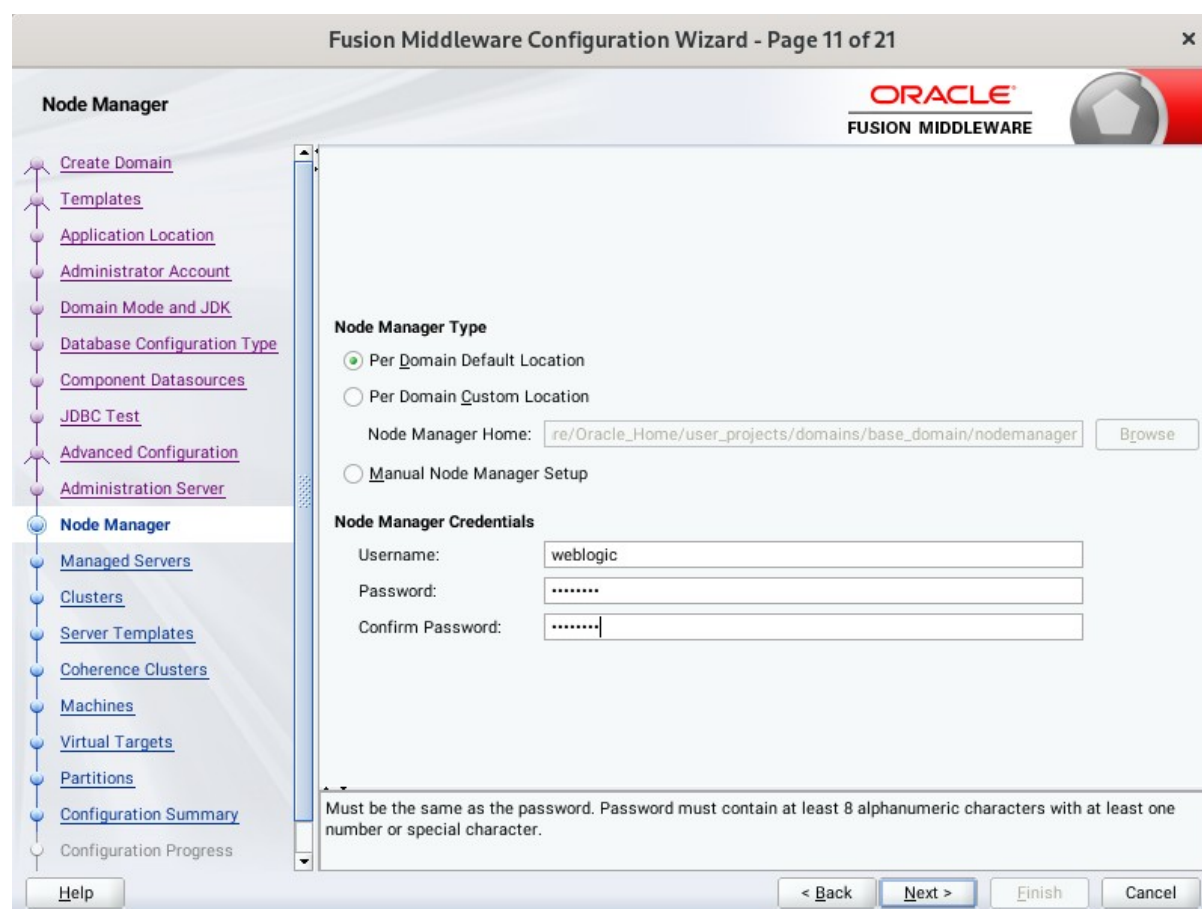
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 10 of 21". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with "Administration Server" selected and highlighted in blue. The main area contains the following fields:

- Server Name: AdminServer
- Listen Address: All Local Addresses (dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty text box)
- Server Groups: Unspecified (dropdown menu)

At the bottom of the main area, there is a validation message: "The name must not be null or empty and may not contain any : , = * ? % / _cloned." Below this, there are four buttons: "Help", "< Back", "Next >", "Finish", and "Cancel".

Use the **Administration Server** screen to select the IP address of the host. Select the drop-down list next to **Listen Address** and select the IP address of the host where the Administration Server will reside, or use the system name or DNS name that maps to a single IP address. Click **Next** to continue.

11). Configuring **Node Manager** screen appears.



The screenshot shows the "Node Manager" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 11 of 21". The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists various configuration steps, with "Node Manager" selected and highlighted in blue. The main content area is divided into two sections: "Node Manager Type" and "Node Manager Credentials".

Node Manager Type

- Per Domain Default Location
- Per Domain Custom Location

Node Manager Home:

Manual Node Manager Setup

Node Manager Credentials

Username:

Password:

Confirm Password:

Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

At the bottom of the window, there are four buttons: "Help", "< Back", "Next >", "Finish", and "Cancel".

Select **Per Domain Default Location** as the Node Manager type, then Specify Node Manager credentials. Click **Next** to continue.

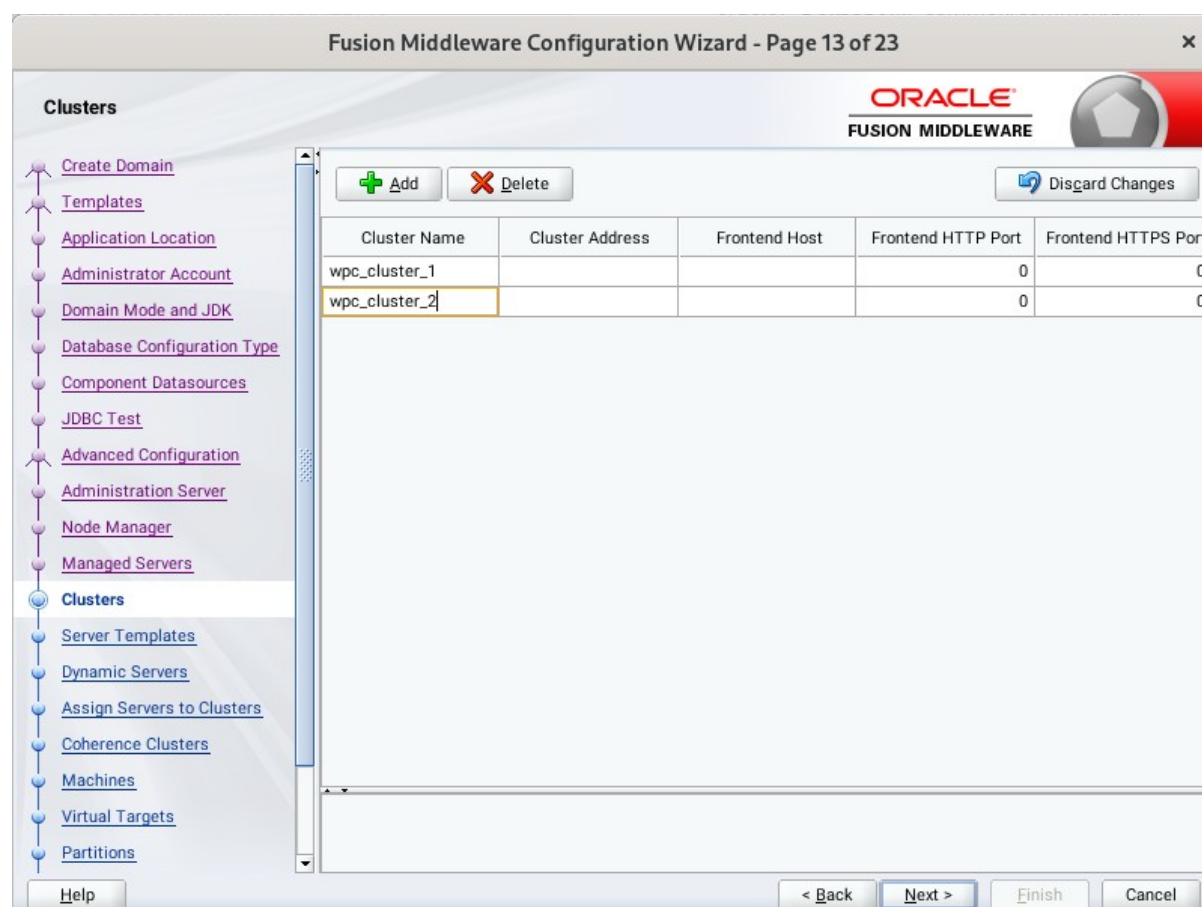
12). The **Managed Servers** screen appears.

Managed Servers

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
WC_Portlet	192.168.0.100	8889	<input type="checkbox"/>	Disabled	WebCenter ...
WC_Portal	192.168.0.100	8888	<input type="checkbox"/>	Disabled	WebCenter ...

On the **Managed Servers** screen, new Managed Servers named *WC_Portlet*, and *WC_Portal* are automatically created. In the **Listen Address** drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. The default **Server Groups** have already been selected for each server. Click **Next** to continue.

13). The **Clusters** screen appears.

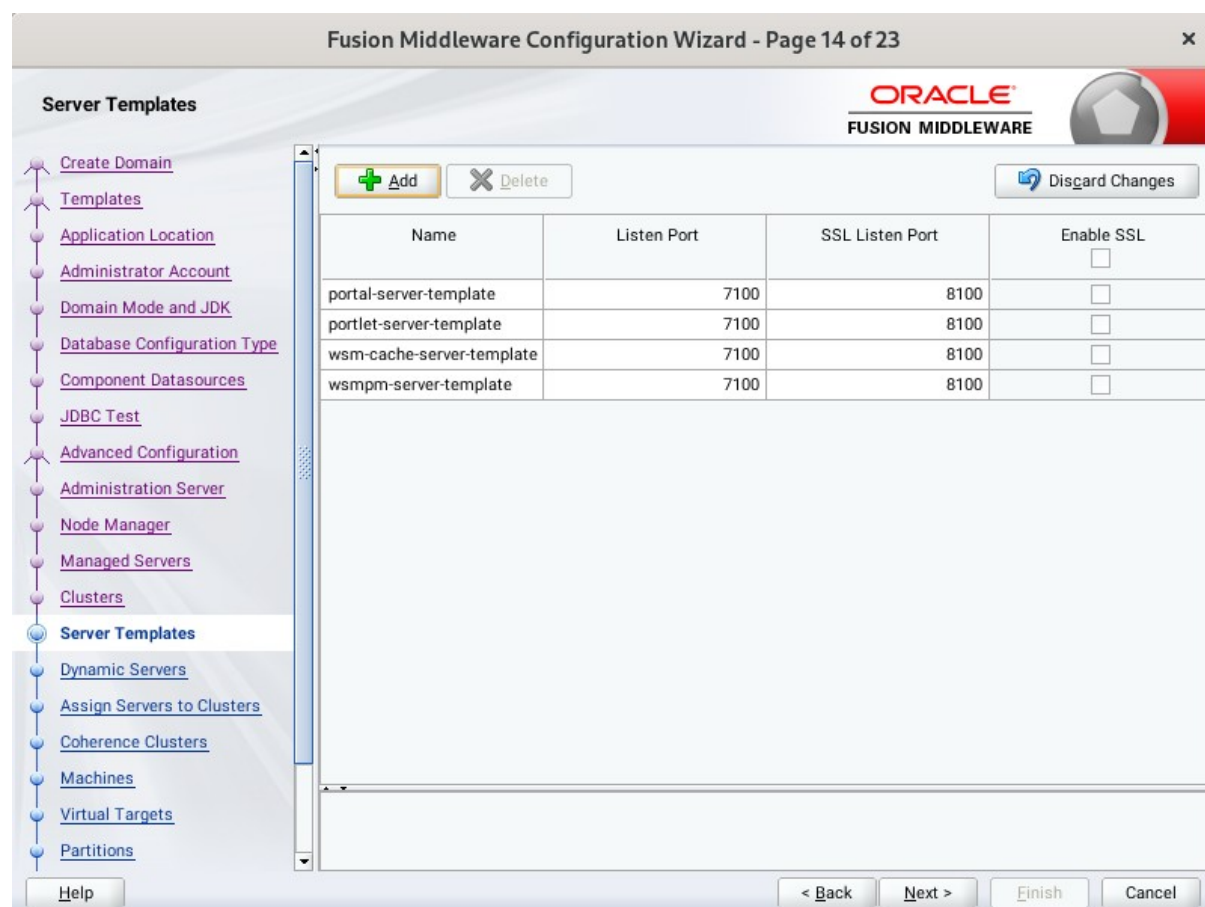


On the Clusters screen:

1. Click **Add**.
2. Specify **wpc_cluster_1** in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create one more clusters: **wpc_cluster_2**.

Click **Next** to continue.

14). The **Server templates** screen appears.



Fusion Middleware Configuration Wizard - Page 14 of 23

ORACLE
FUSION MIDDLEWARE

Server Templates

Create Domain
Templates
Application Location
Administrator Account
Domain Mode and JDK
Database Configuration Type
Component Datasources
JDBC Test
Advanced Configuration
Administration Server
Node Manager
Managed Servers
Clusters
Server Templates
Dynamic Servers
Assign Servers to Clusters
Coherence Clusters
Machines
Virtual Targets
Partitions

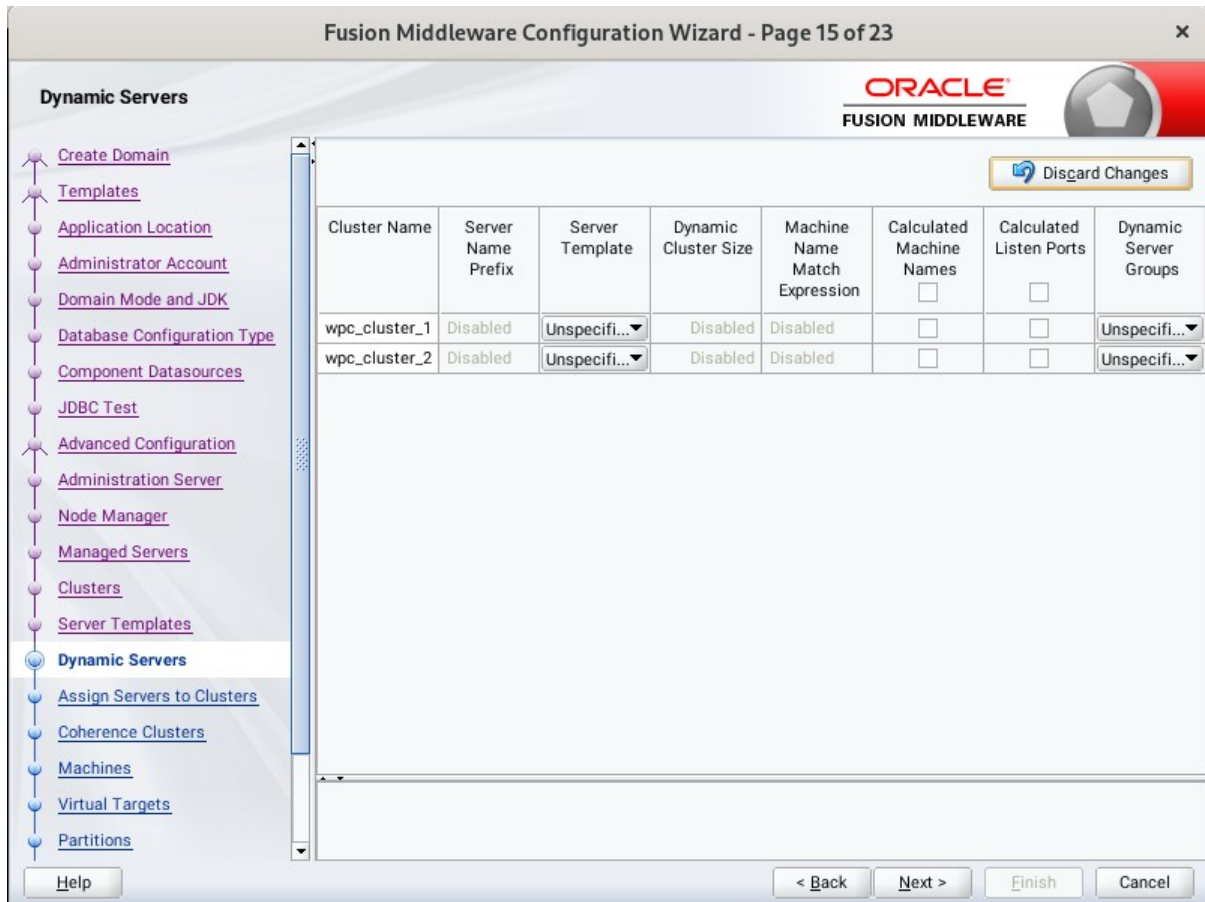
+ Add X Delete Disgard Changes

Name	Listen Port	SSL Listen Port	Enable SSL
portal-server-template	7100	8100	<input type="checkbox"/>
portlet-server-template	7100	8100	<input type="checkbox"/>
wsm-cache-server-template	7100	8100	<input type="checkbox"/>
wsmrpm-server-template	7100	8100	<input type="checkbox"/>

Help < Back Next > Finish Cancel

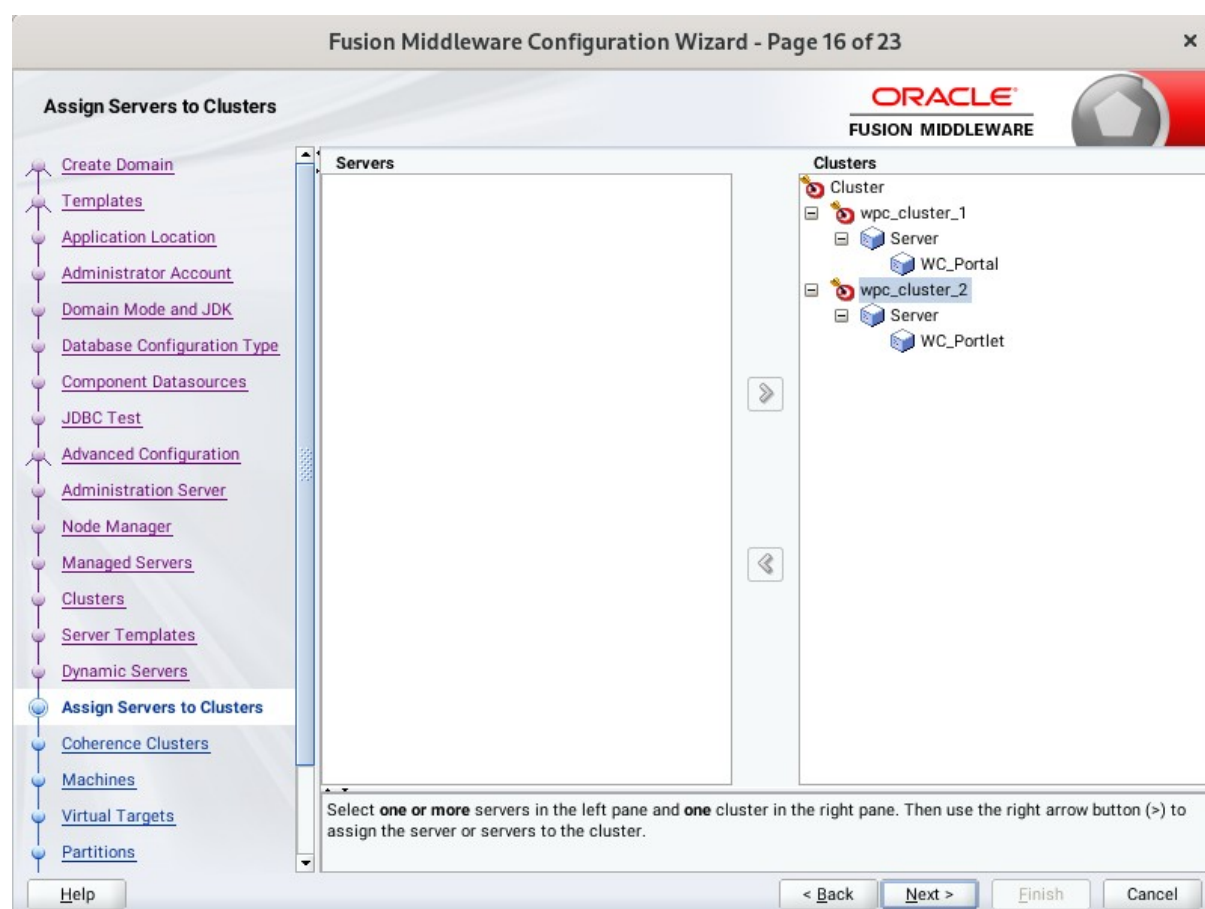
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

15). The **Dynamic Servers** screen appears.



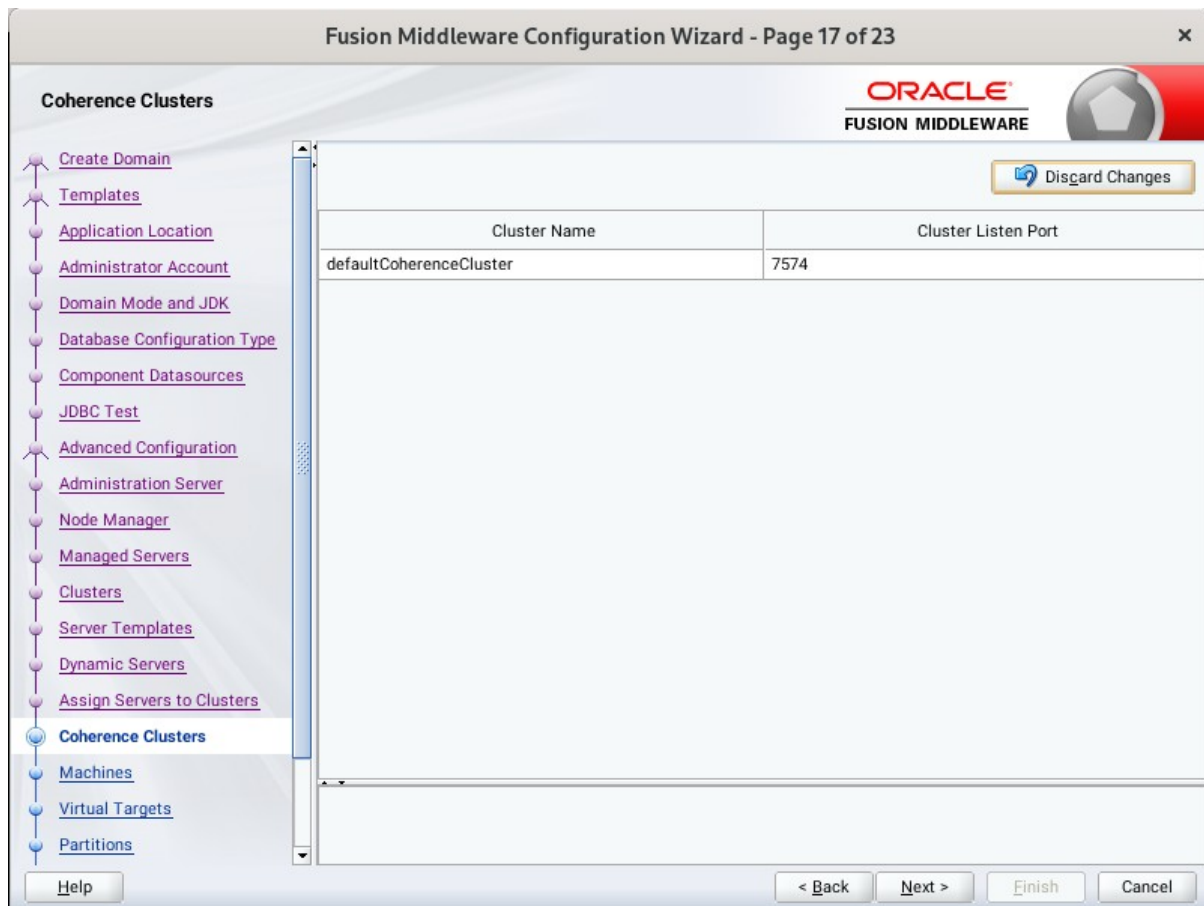
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

16). The **Assign Servers to Clusters** screen appears.



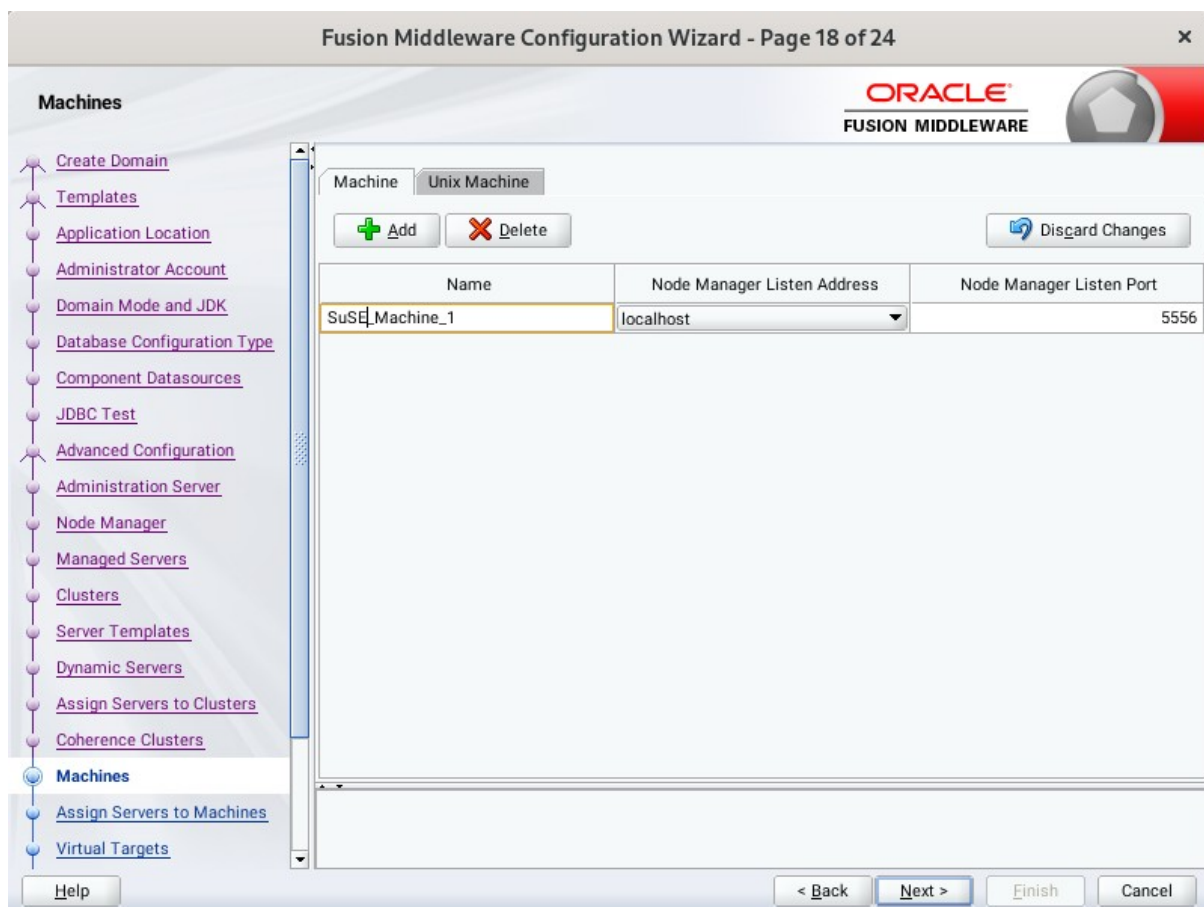
In the Clusters pane, select the cluster to which you want to assign the servers; in this case, **wcp_cluster_1**. In the Servers pane, assign **WC_Portal** to **wcp_cluster_1**, then repeat to assign **WC_Portlet** to **wcp_cluster_2**. Click **Next** to continue.

17). The **Coherence Clusters** screen appears.



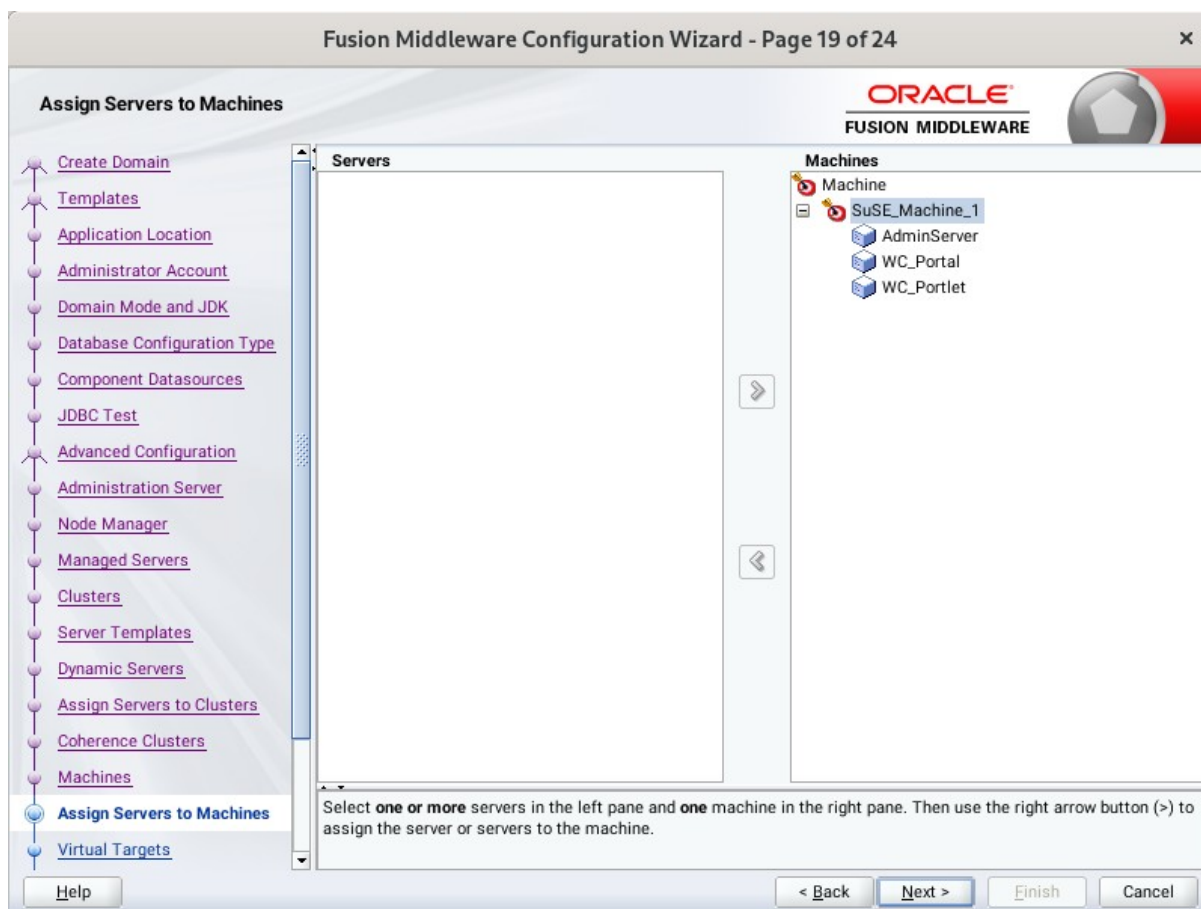
Leave the default port number as the Coherence cluster listen port. Click **Next** to continue.

18). The **Machines** screen appears.



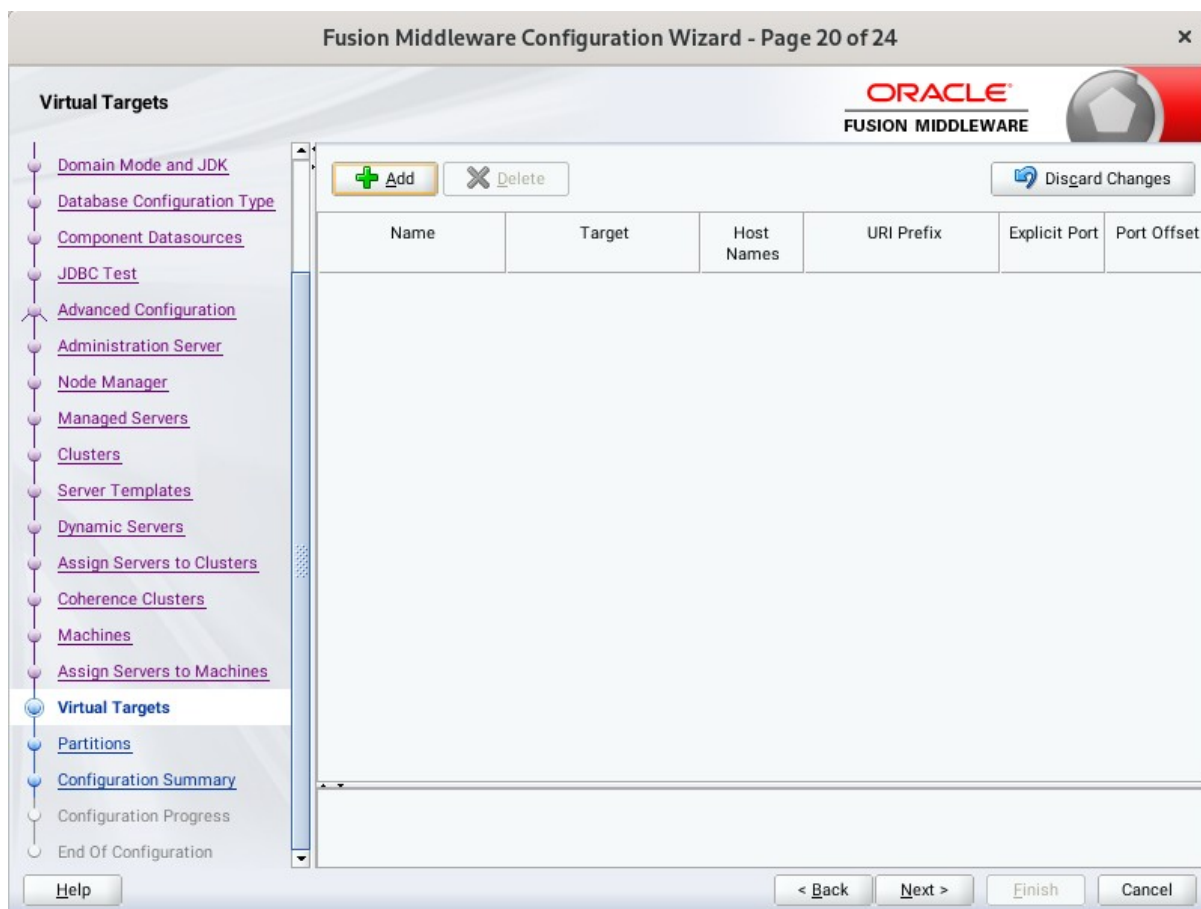
To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers. Click **Next** to continue.

19). The **Assign Servers to Machines** screen appears.



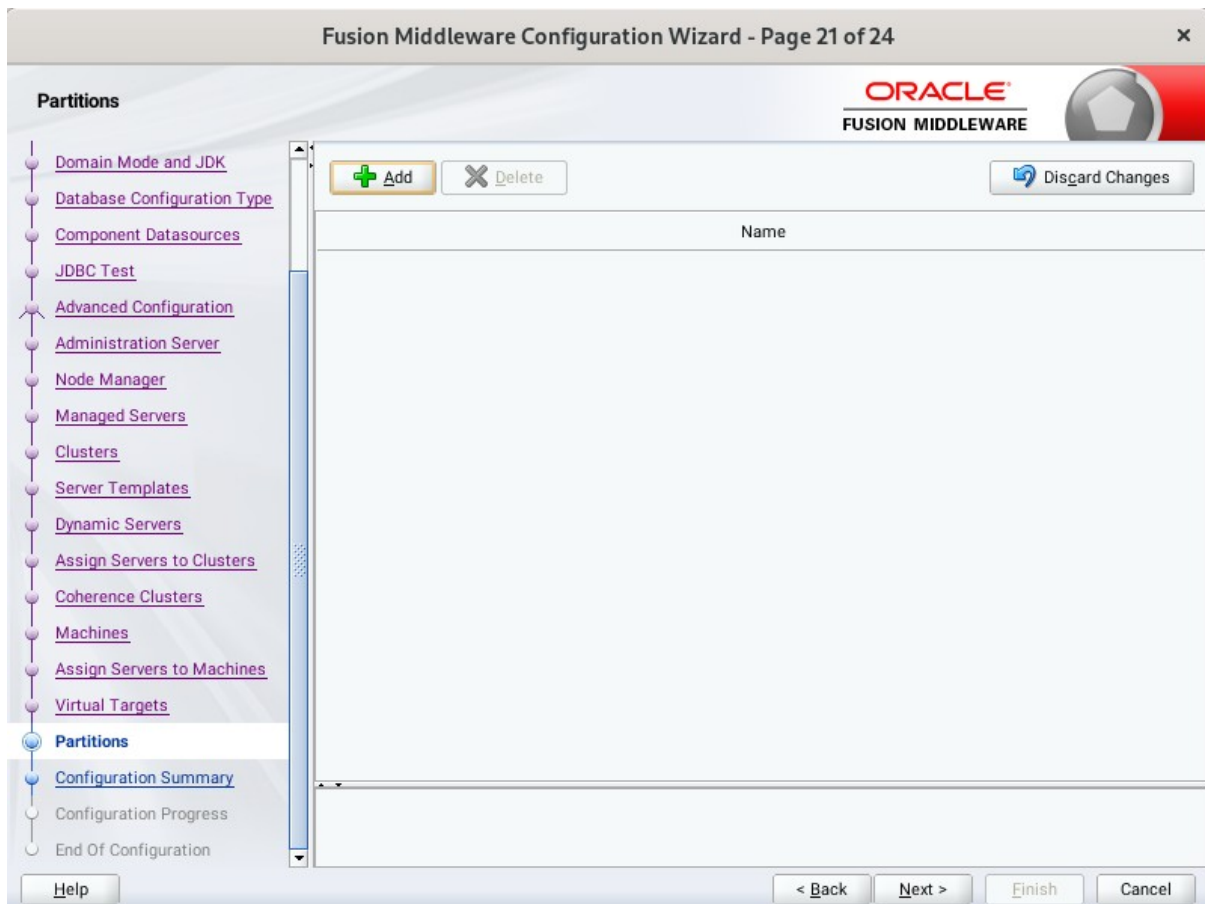
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

20). The **Virtual Targets** screen appears.



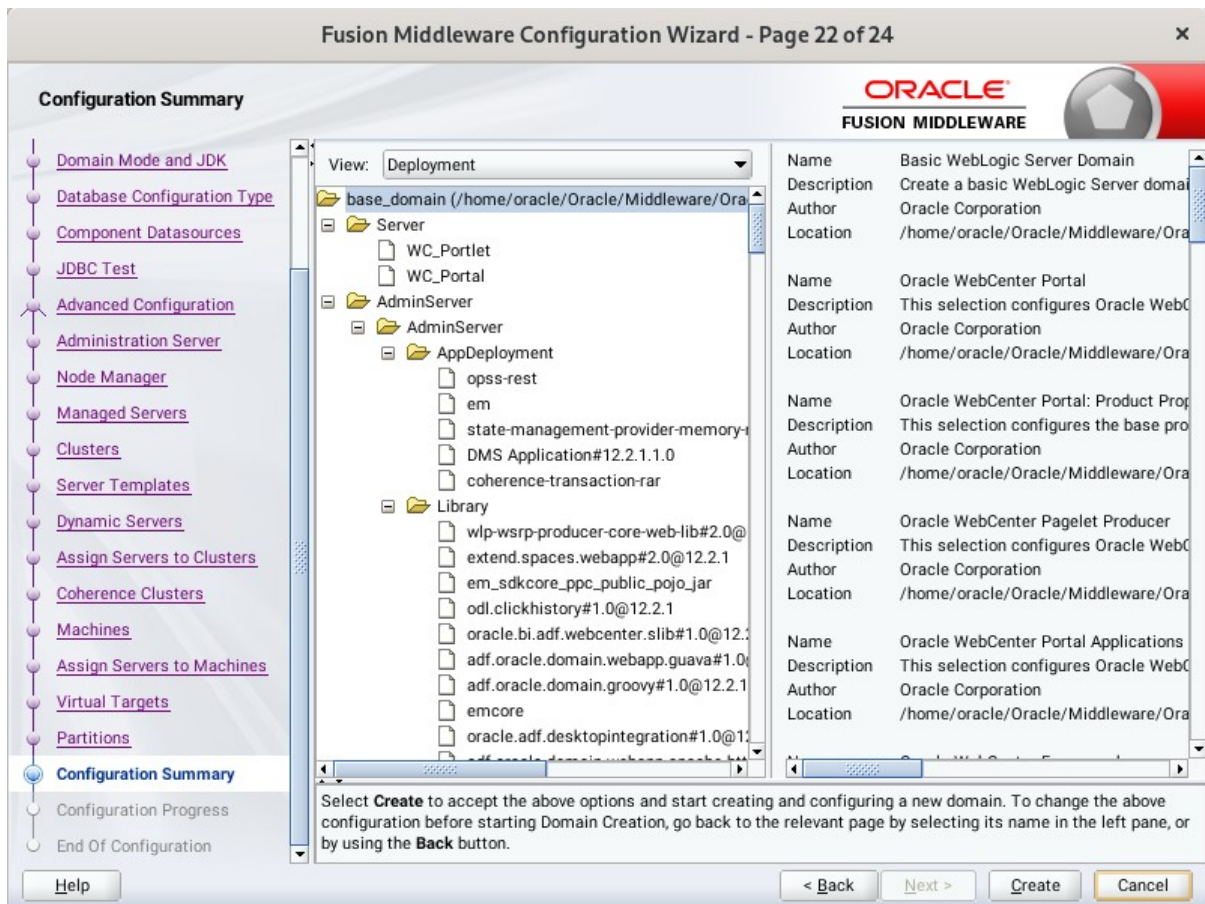
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

21). The **Partitions** screen appears.



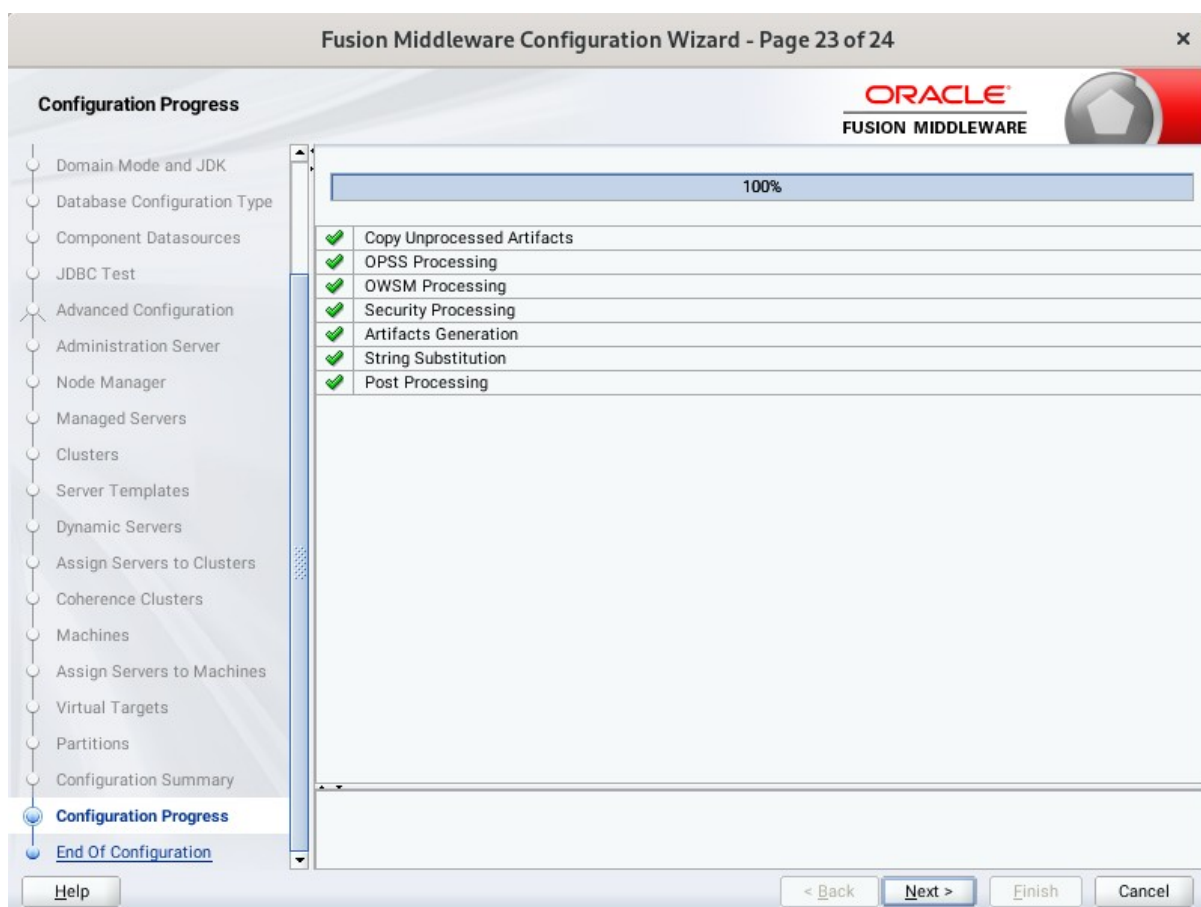
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

22). The **Configuration Summary** screen appears.



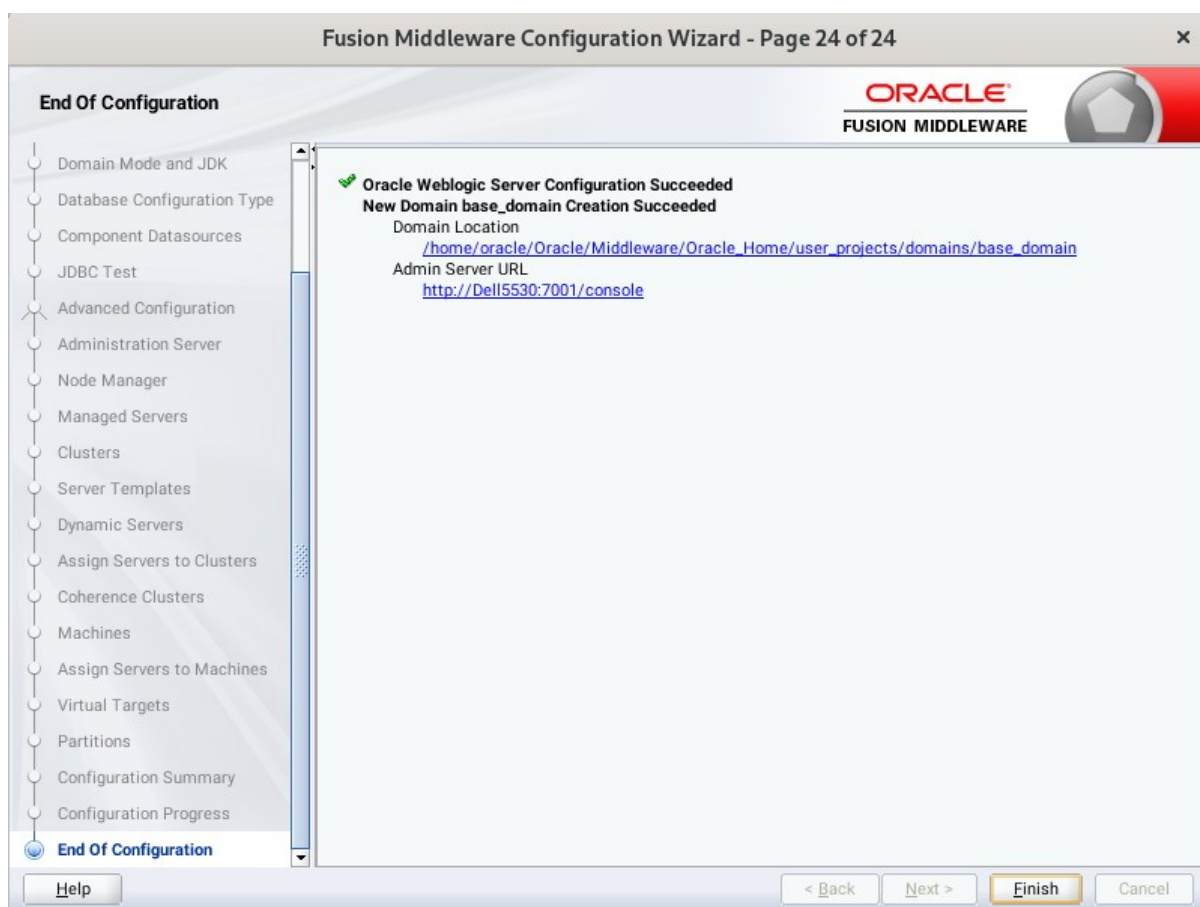
Select **Create** to accept the above options and start creating and configuring a new domain.

23). The **Configuration Progress** screen appears.



Wait for this part of the configuration to complete. Depending on the location and performance of the Repository database, this process may take a few minutes. After the domain successful created, click **Next** to continue.

24). The **End of Configuration** screen appears.



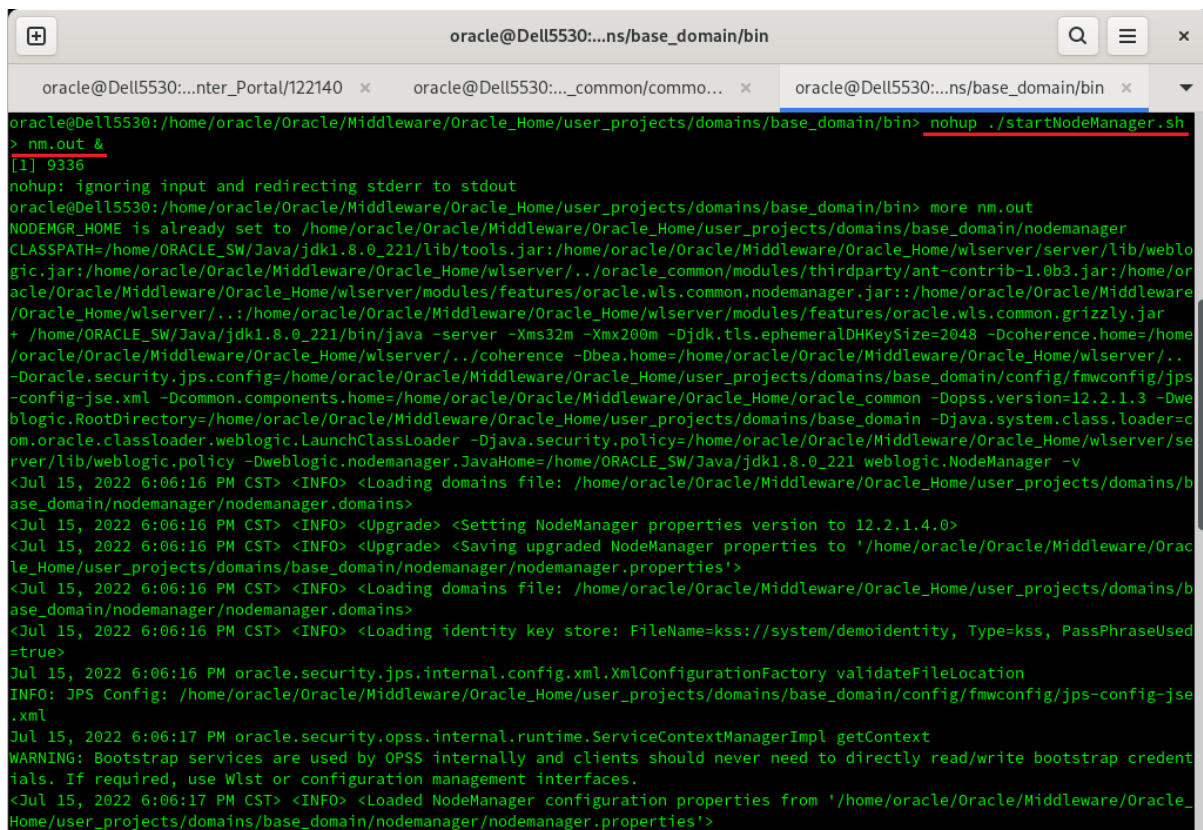
Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

4. Verifying Oracle WebCenter Portal 12c Installation and Configuration

4-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

4-2. Starting the Node Manager and the Admin Server.

Starting the Node Manager, go to the DOMAIN_HOME/bin directory and run 'nohup ./startNodeManager.sh > nm.out &'



```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:...nter_Portal/122140 x oracle@Dell5530:..._common/commo... x oracle@Dell5530:...ns/base_domain/bin x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 9336
nohup: ignoring input and redirecting stderr to stdout
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager
CLASSPATH=/home/ORACLE_SW/Java/jdk1.8.0_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..-Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Jul 15, 2022 6:06:16 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 15, 2022 6:06:16 PM CST> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jul 15, 2022 6:06:16 PM CST> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 15, 2022 6:06:16 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 15, 2022 6:06:16 PM CST> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jul 15, 2022 6:06:16 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Jul 15, 2022 6:06:17 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<Jul 15, 2022 6:06:17 PM CST> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>

```

Starting the Admin Server, go to the `DOMAIN_HOME/bin` directory and run `./startWebLogic.sh`.

```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:...nter_... x oracle@Dell5530:..._com... x oracle@Dell5530:...ns/ba... x oracle@Dell5530:...ns/ba... x
<Jul 15, 2022 6:08:49,650 PM CST> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring
feature-dependency on feature "AdfUIChoose". No such feature exists.>
2022-07-15 18:08:50.380/75.847 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogic
.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_H
ome/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
<Jul 15, 2022 6:08:50,381 PM CST> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection
with the Domain level Diagnostic Service.>
2022-07-15 18:08:50.396/75.863 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogic
.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 15, 2022 6:08:50,814 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 15, 2022 6:08:50,861 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 15, 2022 6:08:50,861 PM CST> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connecti
on list DomainRuntimeServiceMBean>
<Jul 15, 2022 6:08:51,053 PM CST> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 12
7.0.0.1, 0:0:0:0:0:0:1.>
<Jul 15, 2022 6:08:51,054 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 15, 2022 6:08:51,054 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 15, 2022 6:08:51,054 PM CST> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "A
dminServer" for domain "base_domain" running in production mode.>
<Jul 15, 2022 6:08:51,055 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:
7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 15, 2022 6:08:51,055 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 15, 2022 6:08:51,055 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 15, 2022 6:08:51,055 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:
7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 15, 2022 6:08:51,057 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 15, 2022 6:08:51,065 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2022-07-15 18:08:51.557/77.023 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '70' for queue: 'weblogic
.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST

```

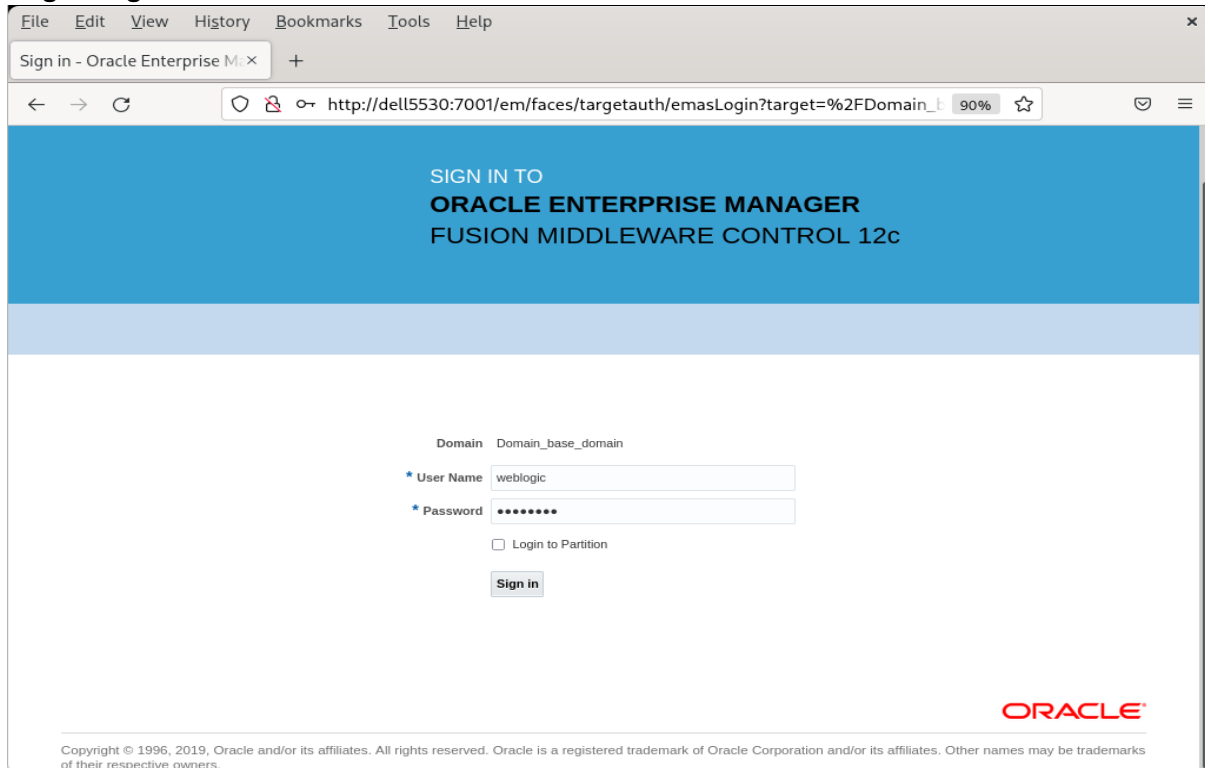
You know that the administrator server is running when you see the following output:

The server started in RUNNING mode.

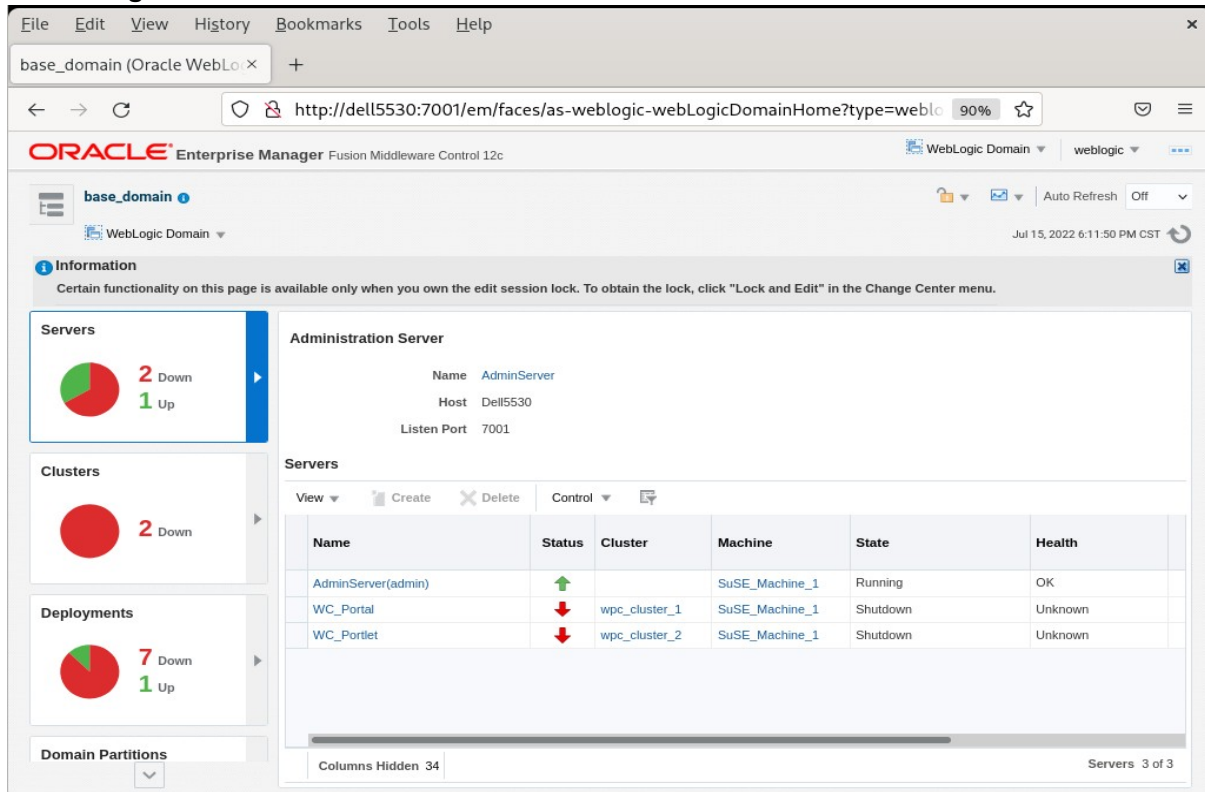
4-3. Checking Oracle WebCenter Product URLs.

1). Access to Enterprise Manager Console.

Login Page:



Home Page:



Starting the Oracle WebCenter Portal Managed Servers:

The screenshot displays the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The browser address bar shows the URL: `http://dell5530:7001/em/faces/as-weblogic-webLogicDomainHome?type=weblogic`. The page title is "base_domain (Oracle WebLogic Domain)".

The interface shows the following information:

- Information:** Certain functionality on this page is available only when you own the edit session lock. To obtain the lock, click "Lock and Edit" in the Change Center menu.
- Servers:** 2 Down, 1 Up
- Clusters:** 2 Down
- Deployments:** 7 Down, 1 Up
- Domain Partitions:** (Dropdown menu)

The **Administration Server** details are:

- Name: AdminServer
- Host: Dell5530
- Listen Port: 7001

The **Servers** table is as follows:

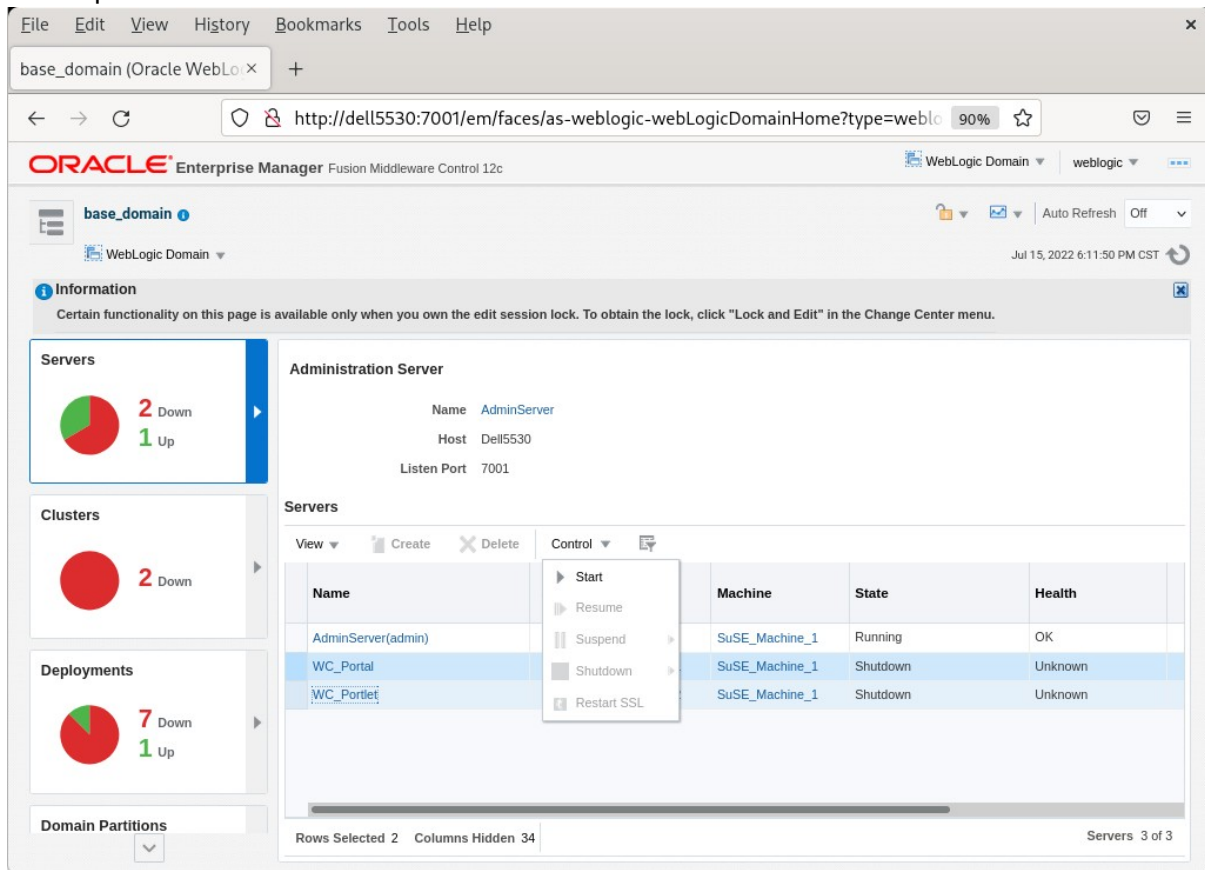
Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
WC_Portal	↓	wpc_cluster_1	SuSE_Machine_1	Shutdown	Unknown
WC_Portlet	↓	wpc_cluster_2	SuSE_Machine_1	Shutdown	Unknown

At the bottom of the table, it indicates "Rows Selected 2" and "Columns Hidden 34". The status bar shows "Servers 3 of 3".

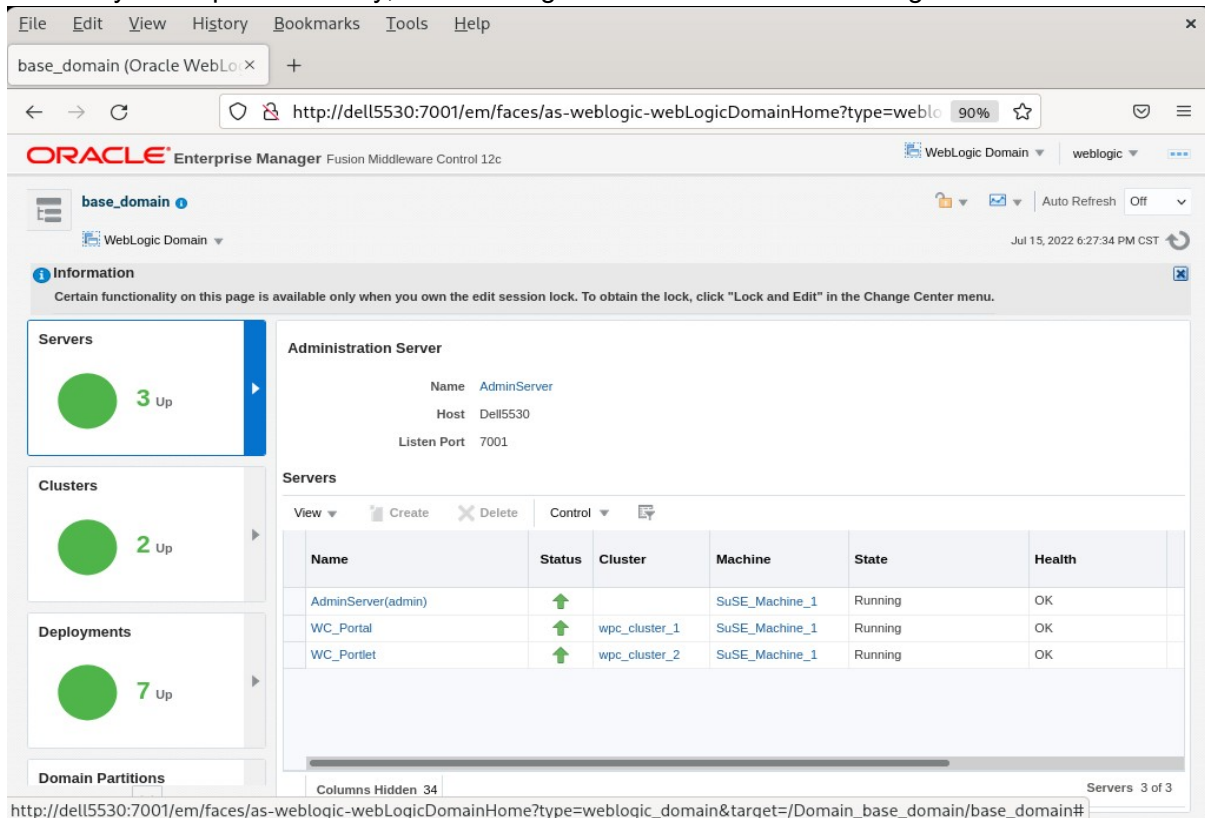
Select **WC_Portal**, and **WC_Portlet**.

- Left-click to select a managed server.
- Hold down the SHIFT key to select more than one managed server.

Select **Control** from the ribbon menu above the list of managed servers. Then select **Start** from the drop-down menu.



After they start up successfully, each managed server is listed as Running.



Checking WebCenter Servers state through Oracle WLST tool.

```
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/common/bin> ./wlst.sh
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

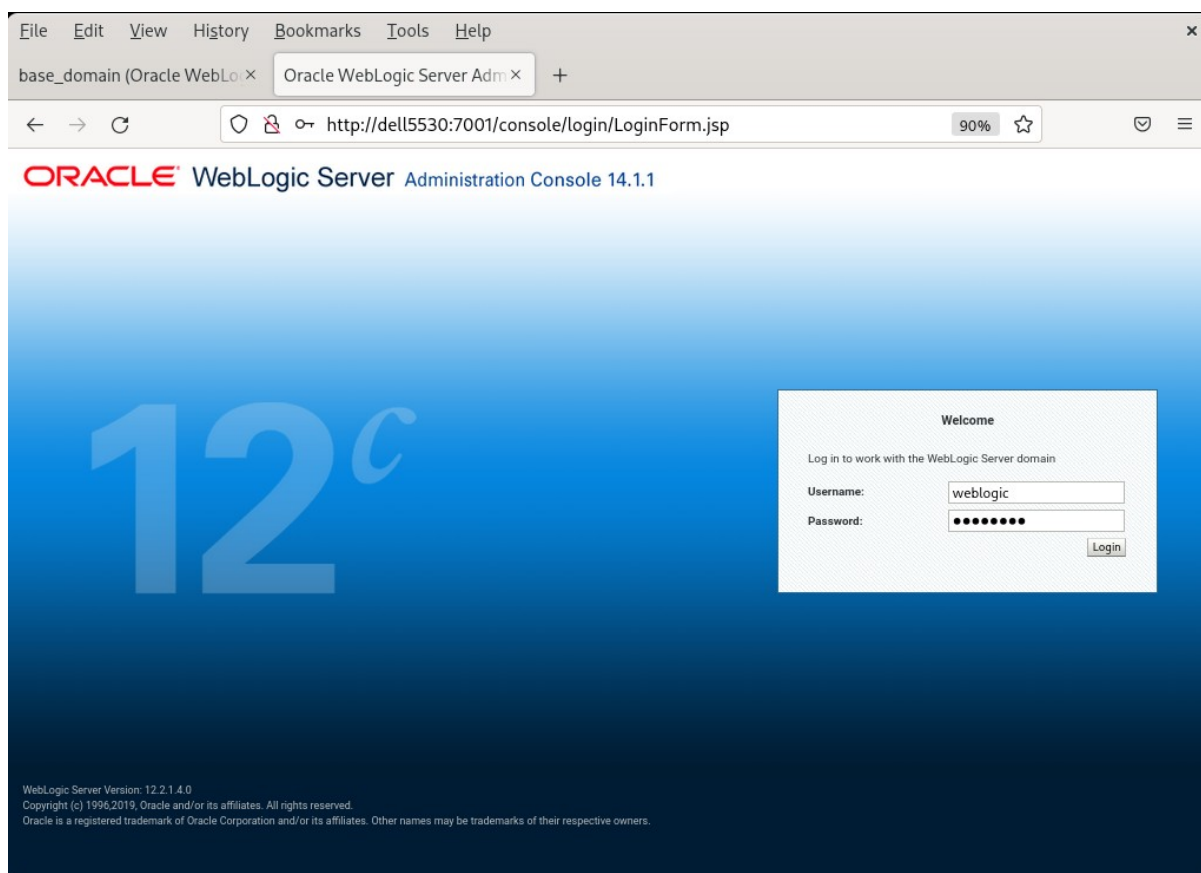
wls:/offline> connect('weblogic','welcome1','Dell5530:7001')
Connecting to t3://Dell5530:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

wls:/base_domain/serverConfig/> state('AdminServer')
Current state of "AdminServer" : RUNNING
wls:/base_domain/serverConfig/> state('WC_Portal')
Current state of "WC_Portal" : RUNNING
wls:/base_domain/serverConfig/> state('WC_Portlet')
Current state of "WC_Portlet" : RUNNING
wls:/base_domain/serverConfig/> █
```

2). Access to Administration Server Console

Login Page as shown below:



Home Page:

The screenshot shows the Oracle WebLogic Server Administration Console Home Page. The browser address bar displays the URL: `http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=Home`. The page title is "ORACLE WebLogic Server Administration Console 12c". The main content area is titled "Home Page" and contains several sections:

- Information and Resources:** Includes "Helpful Tools" (Configure applications, Configure GridLink for RAC Data Source, Configure a Dynamic Cluster, Recent Task Status, Set your console preferences, Oracle Enterprise Manager) and "General Information" (Common Administration Task Descriptions, Read the documentation, Ask a question on My Oracle Support).
- Domain Configurations:** Includes "Domain" (Domain), "Resource Group Templates" (Resource Group Templates), "Interoperability" (WTC Servers, Jolt Connection Pools), "Domain Partitions" (Domain Partitions, Partition Work Managers), "Resource Groups" (Resource Groups), "Diagnosics" (Log Files, Diagnostic Modules, Built-in Diagnostic Modules, Diagnostic Images, Request Performance, Archives, Context, SNMP, Interceptors), "Deployed Resources" (Deployments), "Environment" (Servers, Clusters (Server Templates, Migratable Targets), Coherence Clusters, Machines, Virtual Hosts, Virtual Targets, Work Managers), "Services" (Messaging (JMS Servers, Store-and-Forward Agents, JMS Modules, Path Services, Bridges), Data Sources), "Charts and Graphs" (Monitoring Dashboard).
- Change Center:** Includes "View changes and restarts", "Lock & Edit", and "Release Configuration".
- Domain Structure:** Includes "base_domain", "Domain Partitions", "Environment", "Deployments", "Services", "Security Realms", "Interoperability", and "Diagnosics".
- How do I...:** Includes "Search the configuration", "Use the Change Center", "Record WLST scripts", "Change Console preferences", "Manage Console extensions", and "Monitor servers".
- System Status:** Includes "Health of Running Servers as of 6:30 PM" and "Failed (0)".

Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console Summary of Servers page. The browser address bar displays the URL: `http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=CoreS`. The page title is "ORACLE WebLogic Server Administration Console 12c". The main content area is titled "Summary of Servers" and contains the following information:

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

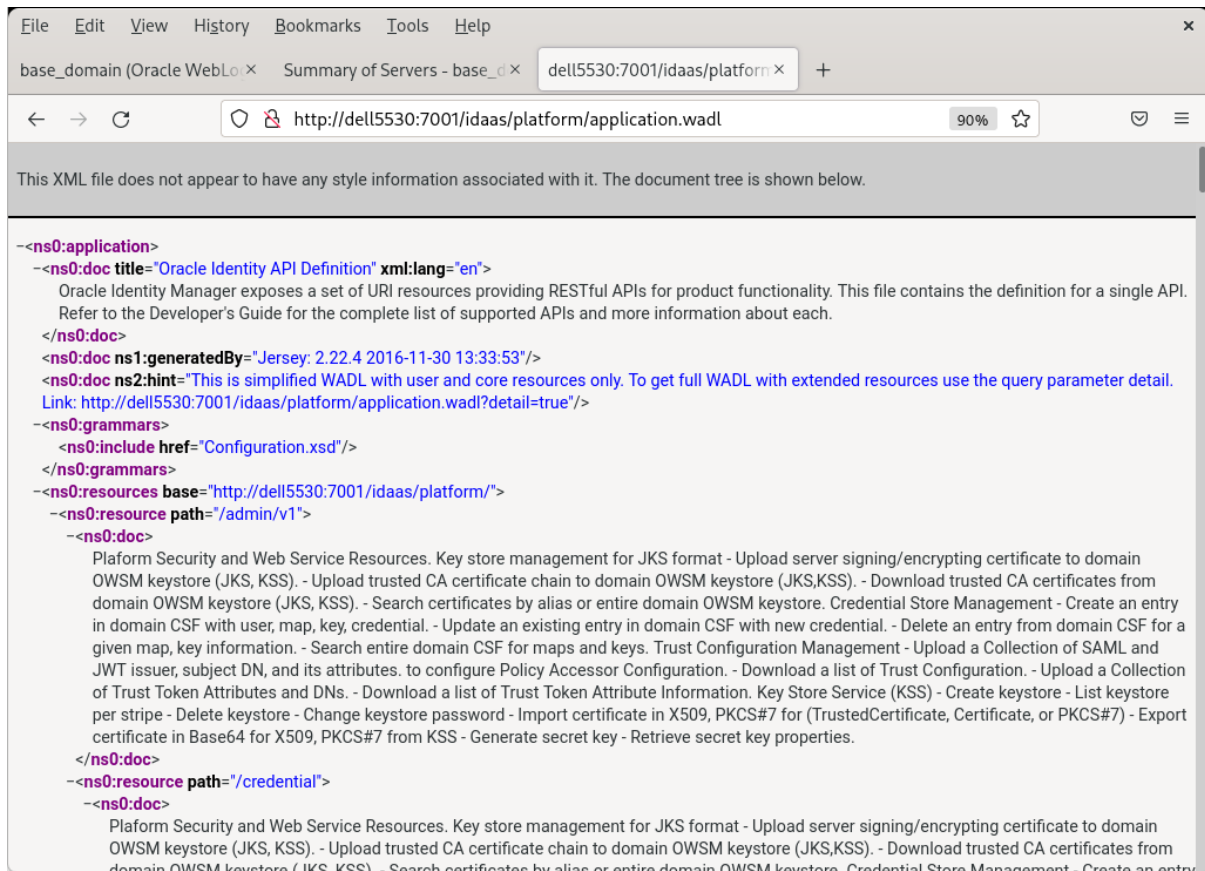
Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		SuSE_Machine_1	RUNNING	OK	7001
WC_Portlet	Configured	wpc_cluster_1	SuSE_Machine_1	RUNNING	OK	8888
WC_Portlet	Configured	wpc_cluster_2	SuSE_Machine_1	RUNNING	OK	8889

The left sidebar contains "Change Center", "Domain Structure", "How do I..." (Create Managed Servers, Clone servers, Delete Managed Servers, Delete the Administration Server, Start and stop servers, View objects in the JNDI tree), and "System Status" (Health of Running Servers as of 6:31 PM, Failed (0)).

3). Test Oracle WebCenter Portal Web Service

a. **Application:** opss-rest (URL:<http://host:7001/idaas/platform/application.wadl>)

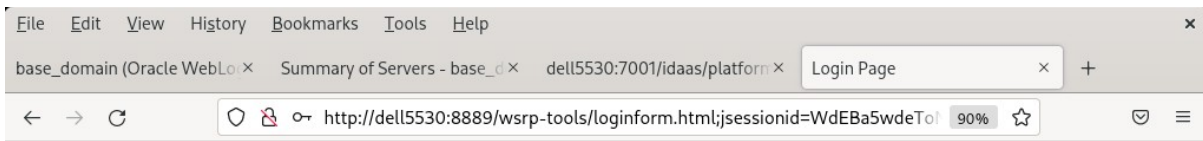


This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<ns0:application>
  <ns0:doc title="Oracle Identity API Definition" xml:lang="en">
    Oracle Identity Manager exposes a set of URI resources providing RESTful APIs for product functionality. This file contains the definition for a single API. Refer to the Developer's Guide for the complete list of supported APIs and more information about each.
  </ns0:doc>
  <ns0:doc ns1:generatedBy="Jersey: 2.22.4 2016-11-30 13:33:53"/>
  <ns0:doc ns2:hint="This is simplified WADL with user and core resources only. To get full WADL with extended resources use the query parameter detail. Link: http://dell5530:7001/idaas/platform/application.wadl?detail=true"/>
  <ns0:grammars>
    <ns0:include href="Configuration.xsd"/>
  </ns0:grammars>
  <ns0:resources base="http://dell5530:7001/idaas/platform/">
    <ns0:resource path="/admin/v1">
      <ns0:doc>
        Platform Security and Web Service Resources. Key store management for JKS format - Upload server signing/encrypting certificate to domain OWSM keystore (JKS, KSS). - Upload trusted CA certificate chain to domain OWSM keystore (JKS,KSS). - Download trusted CA certificates from domain OWSM keystore (JKS, KSS). - Search certificates by alias or entire domain OWSM keystore. Credential Store Management - Create an entry in domain CSF with user, map, key, credential. - Update an existing entry in domain CSF with new credential. - Delete an entry from domain CSF for a given map, key information. - Search entire domain CSF for maps and keys. Trust Configuration Management - Upload a Collection of SAML and JWT issuer, subject DN, and its attributes. to configure Policy Accessor Configuration. - Download a list of Trust Configuration. - Upload a Collection of Trust Token Attributes and DNs. - Download a list of Trust Token Attribute Information. Key Store Service (KSS) - Create keystore - List keystore per stripe - Delete keystore - Change keystore password - Import certificate in X509, PKCS#7 for (TrustedCertificate, Certificate, or PKCS#7) - Export certificate in Base64 for X509, PKCS#7 from KSS - Generate secret key - Retrieve secret key properties.
      </ns0:doc>
    <ns0:resource path="/credential">
      <ns0:doc>
        Platform Security and Web Service Resources. Key store management for JKS format - Upload server signing/encrypting certificate to domain OWSM keystore (JKS, KSS). - Upload trusted CA certificate chain to domain OWSM keystore (JKS,KSS). - Download trusted CA certificates from domain OWSM keystore (JKS, KSS). - Search certificates by alias or entire domain OWSM keystore. Credential Store Management - Create an entry
      </ns0:doc>
    </ns0:resource>
  </ns0:resources>
</ns0:application>
  
```

b. **Application:** wsrp-tools (URL: <http://host:8889/wsrp-tools>)



Login

Username*

Password*



ORACLE WebCenter Portal : Portlets

WSRP Producer Test Page

Your WSRP Producer Contains the Following Portlets:

Portlet Name (Minimum WSRP Version)

- Parameter Display Portlet (2.0)
- Parameter Form Portlet (2.0)

Container Configuration

Persistent Store Type: Database
Value obtained from environment entry java.comp/env/oracle/portal/wsrp/server/persistentStore

Data Source Name: java.comp/env/jdbc/portletPrefs
Using default value. To change it, specify the following environment entry java.comp/env/oracle/portal/wsrp/server/dataSourceName

Use Java Object Cache: true
Value obtained from environment entry java.comp/env/oracle/portal/wsrp/server/enableJavaObjectCache

Container Version

Implementation version: 12.2.1.3.0 , Label: WCCORE_12.2.1.4.0_GENERIC_190909.1237.S

WSDL URLs

[WSRP v1 WSDL](#)
[WSRP v2 WSDL](#)

SOAP Monitor

[SOAP Monitor](#)

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

--<definitions targetNamespace="urn:oasis:names:tc:wsrp:v1:wsdl">
  <import namespace="urn:oasis:names:tc:wsrp:v1:bind" location="http://dell5530:8889/wsrp-tools/portlets/wsrp1?WSDL=wsrp_v1_bindings.wsdl"/>
  --<service name="WSRP_v1_Service">
    --<port name="WSRPBaseService" binding="bind:WSRP_v1_Markup_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPBaseService"/>
    </port>
    --<port name="WSRPServiceDescriptionService" binding="bind:WSRP_v1_ServiceDescription_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPServiceDescriptionService"/>
    </port>
    --<port name="WSRPRegistrationService" binding="bind:WSRP_v1_Registration_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPRegistrationService"/>
    </port>
    --<port name="WSRPPortletManagementService" binding="bind:WSRP_v1_PortletManagement_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPPortletManagementService"/>
    </port>
  </service>
</definitions>

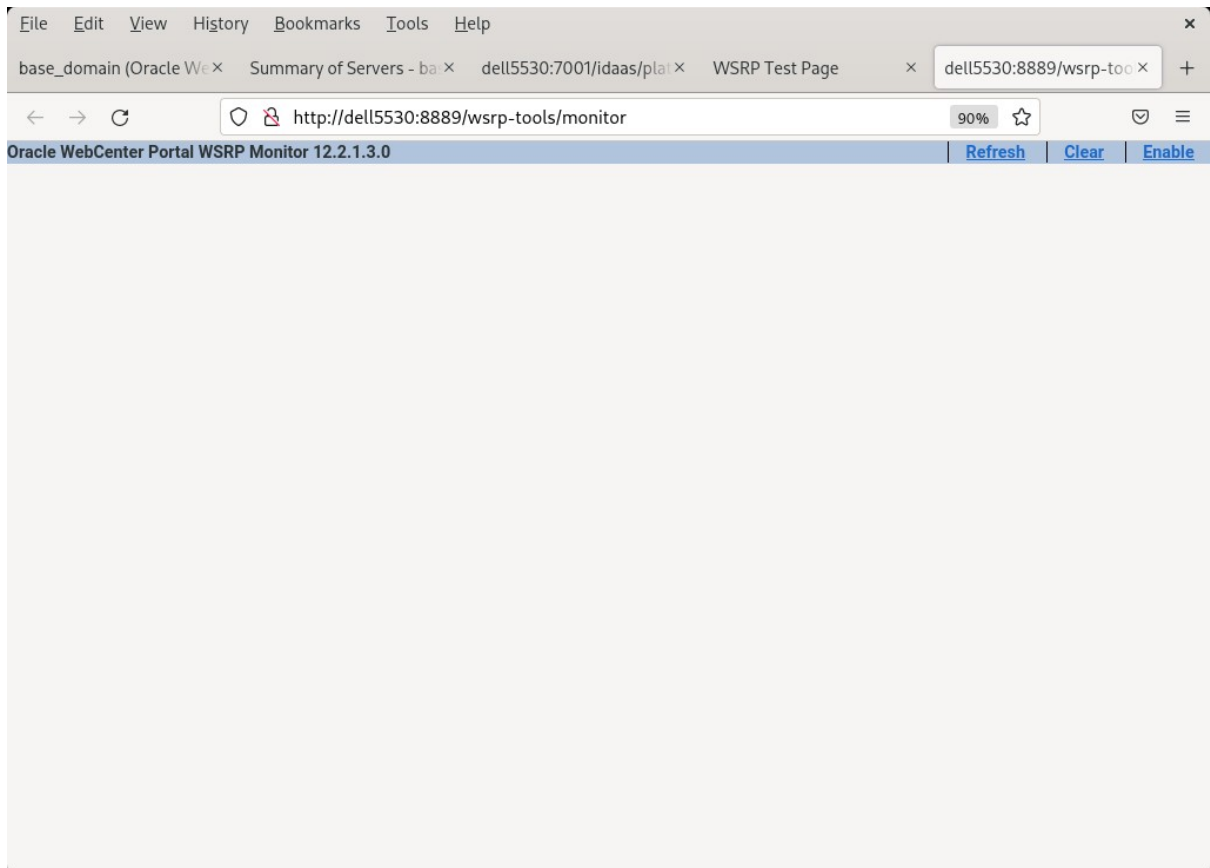
```

This XML file does not appear to have any style information associated with it. The document tree is shown below.

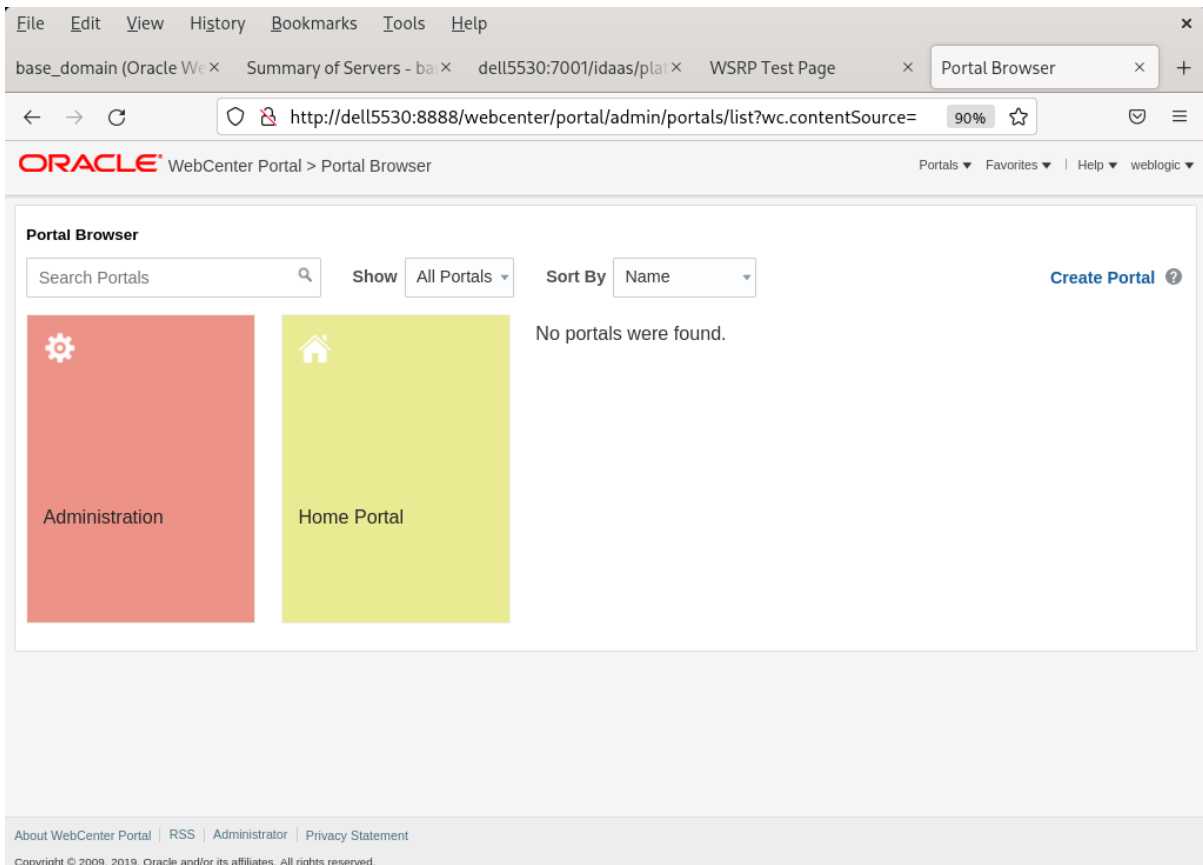
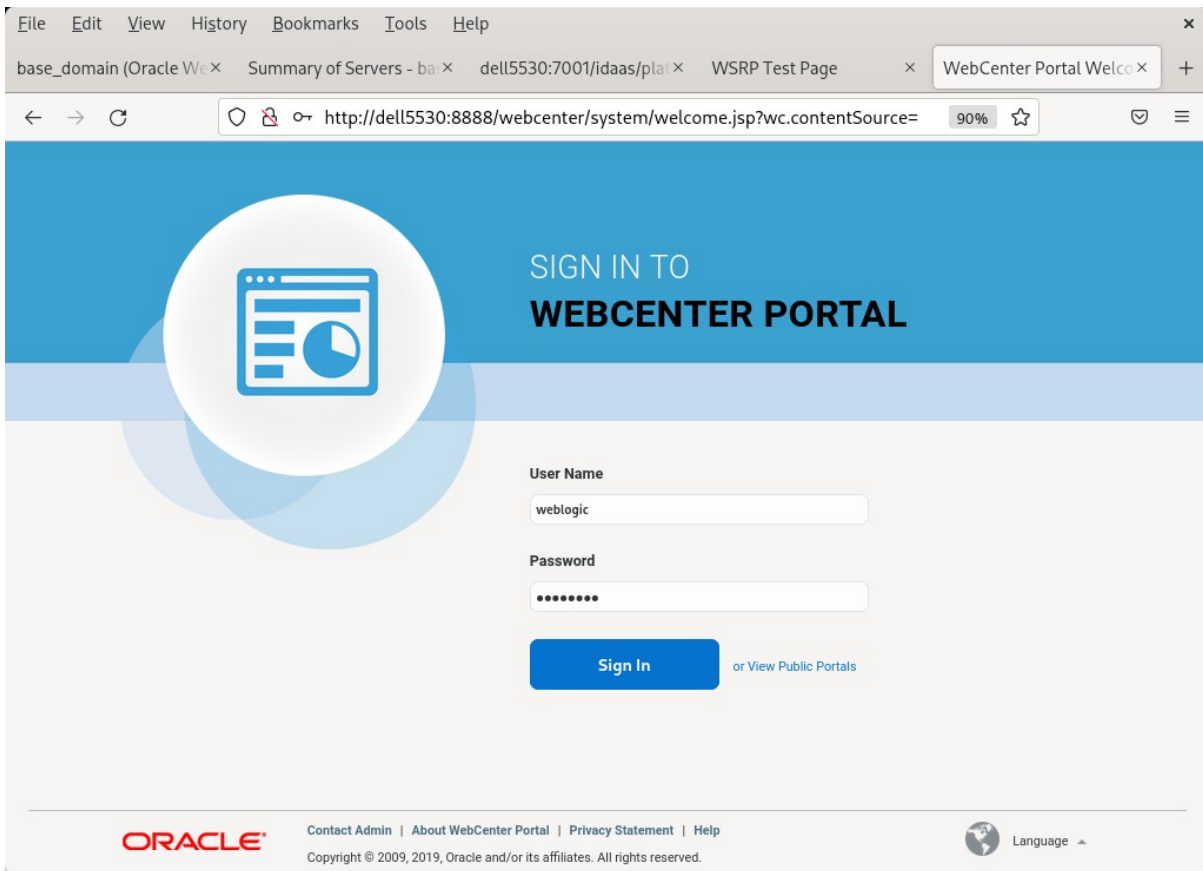
```

--<definitions targetNamespace="urn:oasis:names:tc:wsrp:v2:wsdl">
  <import namespace="urn:oasis:names:tc:wsrp:v2:bind" location="http://dell5530:8889/wsrp-tools/portlets/wsrp2?WSDL=wsrp_v2_bindings.wsdl"/>
  --<service name="WSRP_v2_Service">
    --<port name="WSRP_v2_ServiceDescription_Service" binding="bind:WSRP_v2_ServiceDescription_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_ServiceDescription_Service"/>
    </port>
    --<port name="WSRP_v2_Markup_Service" binding="bind:WSRP_v2_Markup_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_Markup_Service"/>
    </port>
    --<port name="WSRP_v2_Registration_Service" binding="bind:WSRP_v2_Registration_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_Registration_Service"/>
    </port>
    --<port name="WSRP_v2_PortletManagement_Service" binding="bind:WSRP_v2_PortletManagement_Binding_SOAP">
      <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_PortletManagement_Service"/>
    </port>
  </service>
</definitions>

```

c. **Application:** WebCenter Portal (URL:<http://host:8888/webcenter/portal>)



File Edit View History Bookmarks Tools Help

base_domain (Oracle We... Summary of Servers - ba... dell5530:7001/idaas/pla... WSRP Test Page Create Portal

← → ↻ http://dell5530:8888/webcenter/portal/admin/portals/newportal 90% ☆

ORACLE WebCenter Portal > Administration Portals Favorites Help weblogic

Create Portal Create Portal ?

Template Gallery

Portal Template: Portal

Portal Template: Portal

Preview Pages

Title: SuSE Linux Enterprise Server 15 SP4

Description: Oracle WebCenter on SLES15 SP4

Keywords: suse oracle portal

URL: SuSELinuxEnterpriseServer15SP4
http://dell5530:8888/webcenter/portal/SuSELinuxEnterpriseServer15SP4

Public Private Hidden

File Edit View History Bookmarks Tools Help

base_domain (Oracle We... Summary of Servers - ba... dell5530:7001/idaas/pla... WSRP Test Page Home

← → ↻ http://dell5530:8888/webcenter/portal/oracle/webcenter/page/scopedMD/s188... 90% ☆

SuSE Linux Enterprise Ser... > Home Edit Page View Portal Help

SuSE Linux Enterprise Server 1... Portals Favorites Administration Help weblogic

Home

About WebCenter Portal | RSS | Administrator | Privacy Statement

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The screenshot shows a web browser window with the following details:

- Browser Tabs:** base_domain (Oracle We..., Summary of Servers - ba..., dell5530:7001/idaas/plat..., WSRP Test Page, SuSE Linux Enterprise Se...
- Address Bar:** http://dell5530:8888/webcenter/portal/admin/portals/admin/SuSELinuxEnterpri...
- Page Title:** SuSE Linux Enterprise Ser... > General
- Navigation:** View Portal, Help
- Portal Information Section:**
 - Title:** SuSE Linux Enterprise Server 15 SP4
 - Acronym:** SLE
 - Description:** Oracle WebCenter on SLES15 SP4
 - Portal Color:** [Blue swatch] Choose Color
 - Keywords:** Enter Keywords (portal, suse, oracle)
 - Save:** [Save button]
- Portal Details Section:**
 - Name:** SuSELinuxEnterpriseServer15SP4 Rename
 - Portal URL:** http://dell5530:8888/webcenter/portal/SuSELinuxEnterpriseServer15SP4
 - Internal ID:** s18895fe4_4b6f_48ca_b1bd_c12a2d5f0fef
 - Members:** 1
 - Last Activity:** 39 seconds ago
 - Created:** 41 seconds ago by weblogic

d. **Application:** analytics-collector (URL:<http://host:8888/collector>)

Collector Information

Refresh

Configuration	Value
Collector Default Port	31314
Collector Max Port	31314
Collector Server Name	localhost
Broadcast Type	Multicast
Cluster Enabled	✘
Cluster Name	✘
Partitioning Enabled	✘
Time Dimension for this year	✔
Space Dimension Exists	✔

End of Oracle WebCenter Portal.

Oracle SOA Suite

1. Installing Oracle SOA Suite 12c

1-1. Prerequisites:

Installation of Oracle SOA Suite requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0_221 and later installed.

1-2. Log in to the target system (SLES 15 SP4 64-bit OS) as a non-admin user. Download the Oracle SOA Suite 12c (12.2.1.4.0) Quick Start installer zip file from <https://www.oracle.com/downloads/#category-middleware>. (**Note:** Please ensure the installation user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ('V983385-01_1of2.zip') files and launch the installation program by running '**java -jar fmw_12.2.1.4.0_soa_quickstart.jar** '

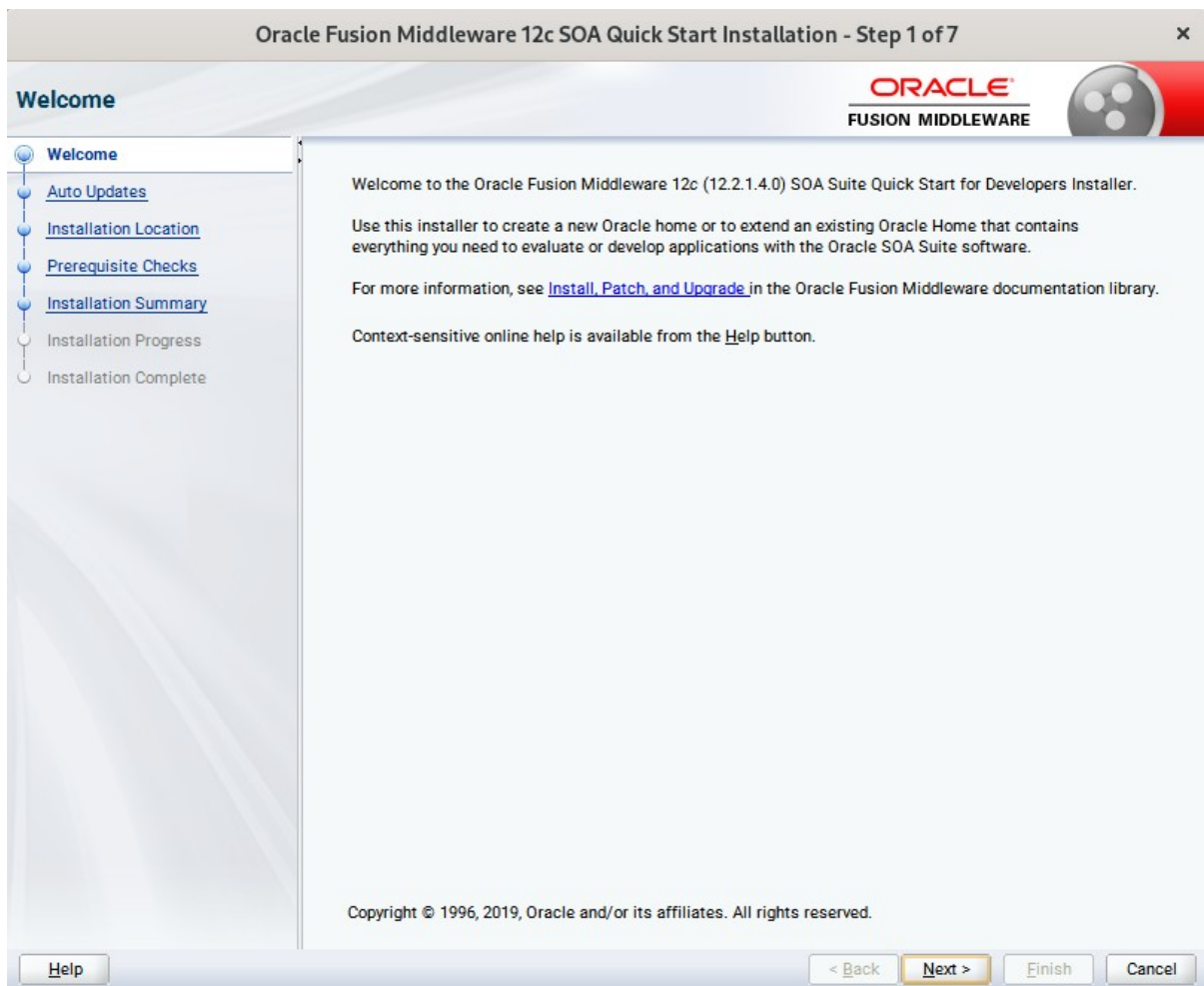
For the actual installation, follow the steps below:

- 1). Installation Inventory Setup.



Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

2). Welcome page.



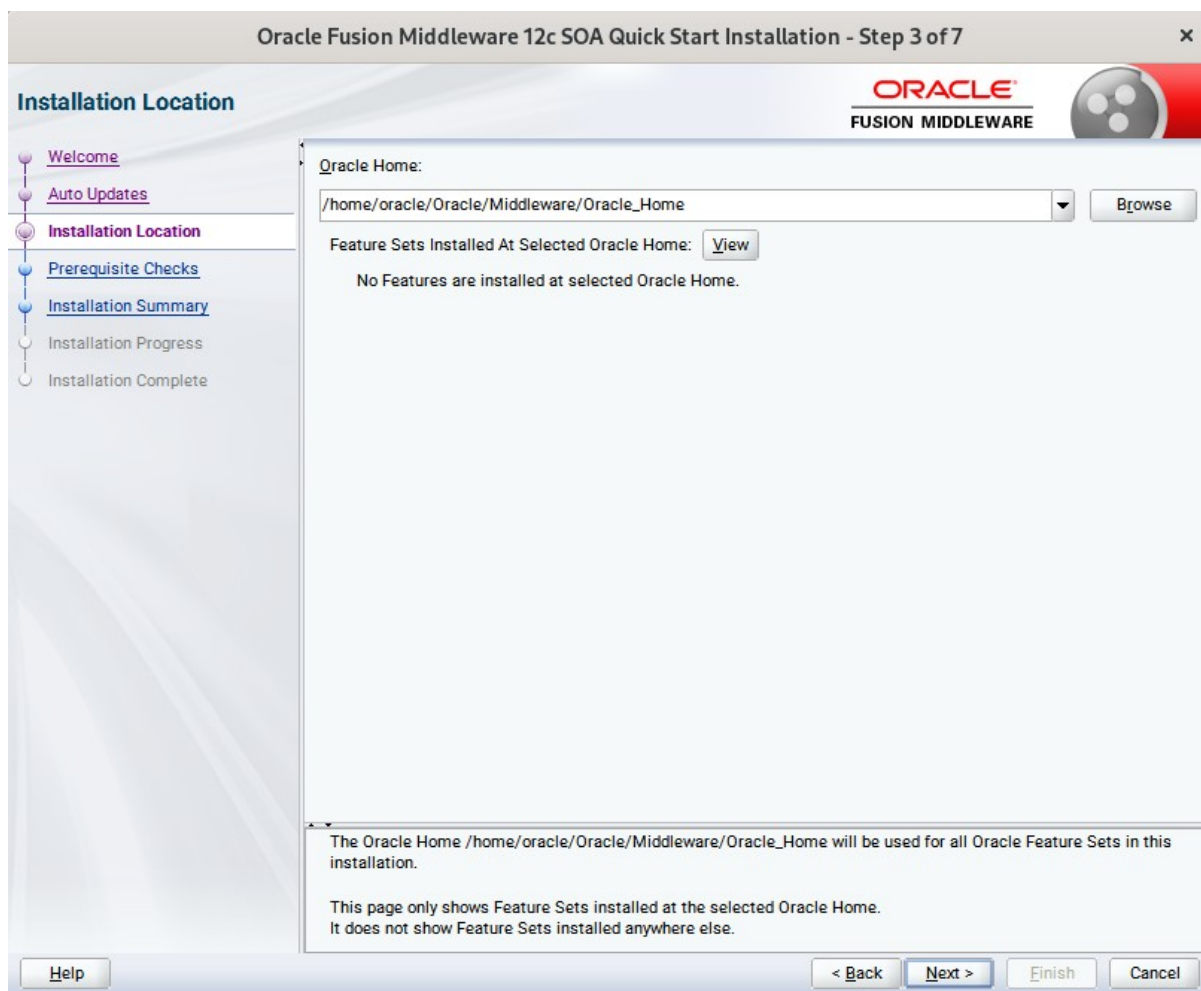
This page welcomes you to the installation. Click **Next** to continue.

3). The **Auto Updates** page appears.

The screenshot shows the 'Auto Updates' page in the Oracle Fusion Middleware 12c SOA Quick Start Installation wizard. The window title is 'Oracle Fusion Middleware 12c SOA Quick Start Installation - Step 2 of 7'. The page features the Oracle Fusion Middleware logo in the top right corner. On the left, a navigation pane lists the installation steps: Welcome, Auto Updates (current), Installation Location, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main content area has three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option includes a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option includes 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom of the window, there are buttons for '< Back', 'Next >', 'Finish', and 'Cancel', along with a 'Help' button in the bottom left corner.

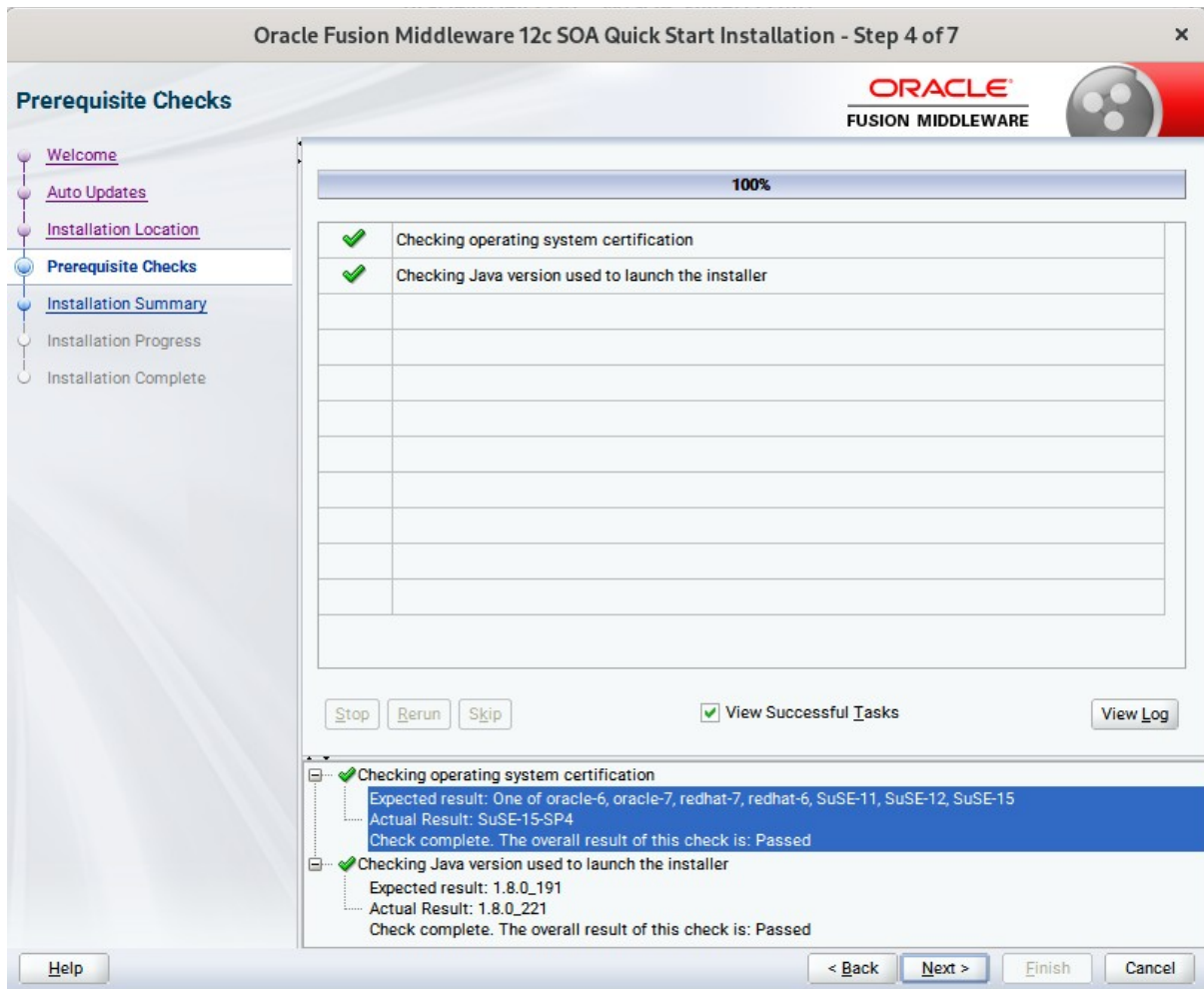
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

4). The **Installation Location** page appears.



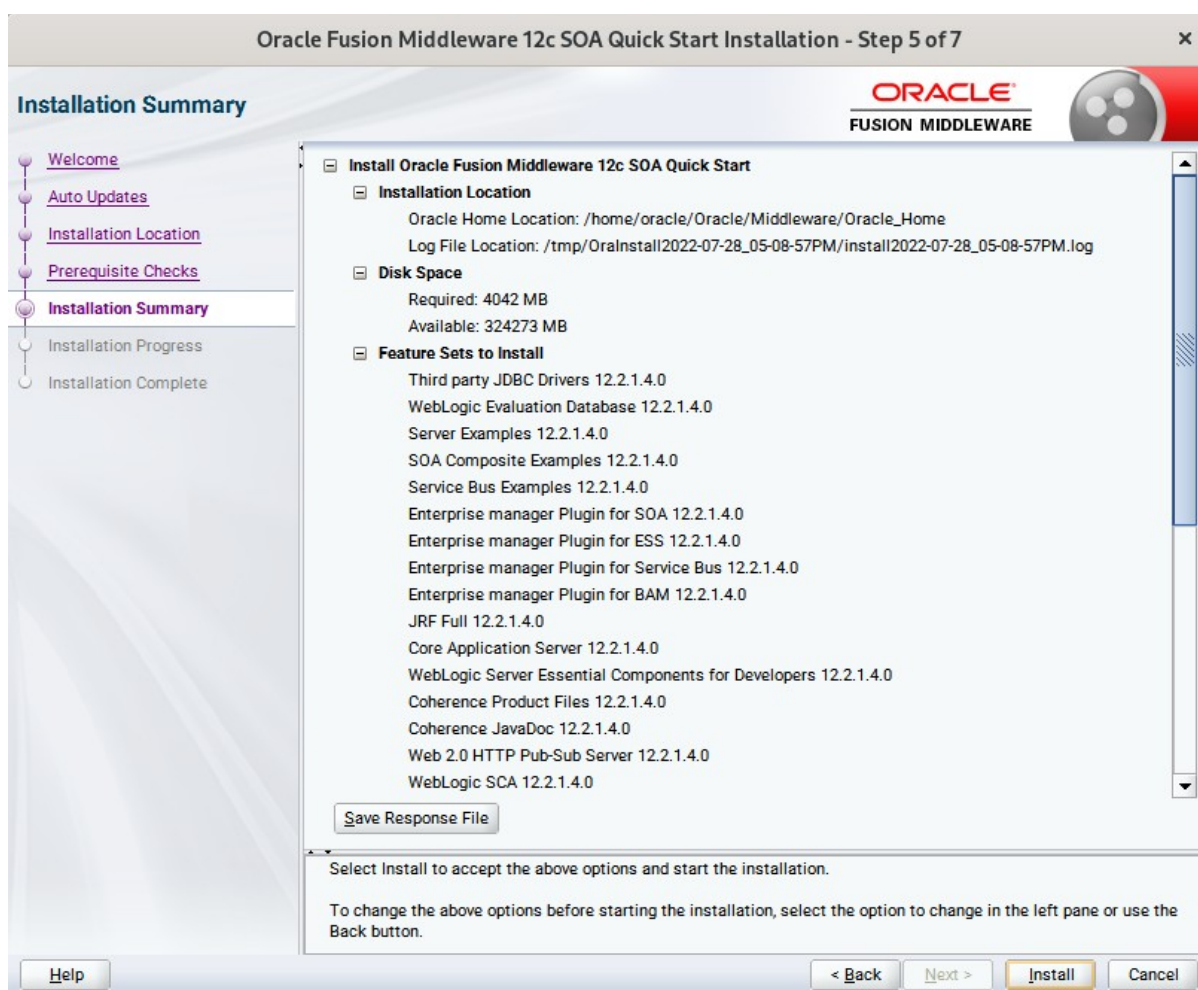
SPecify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

5). The **Prerequisites Checks** page appears.



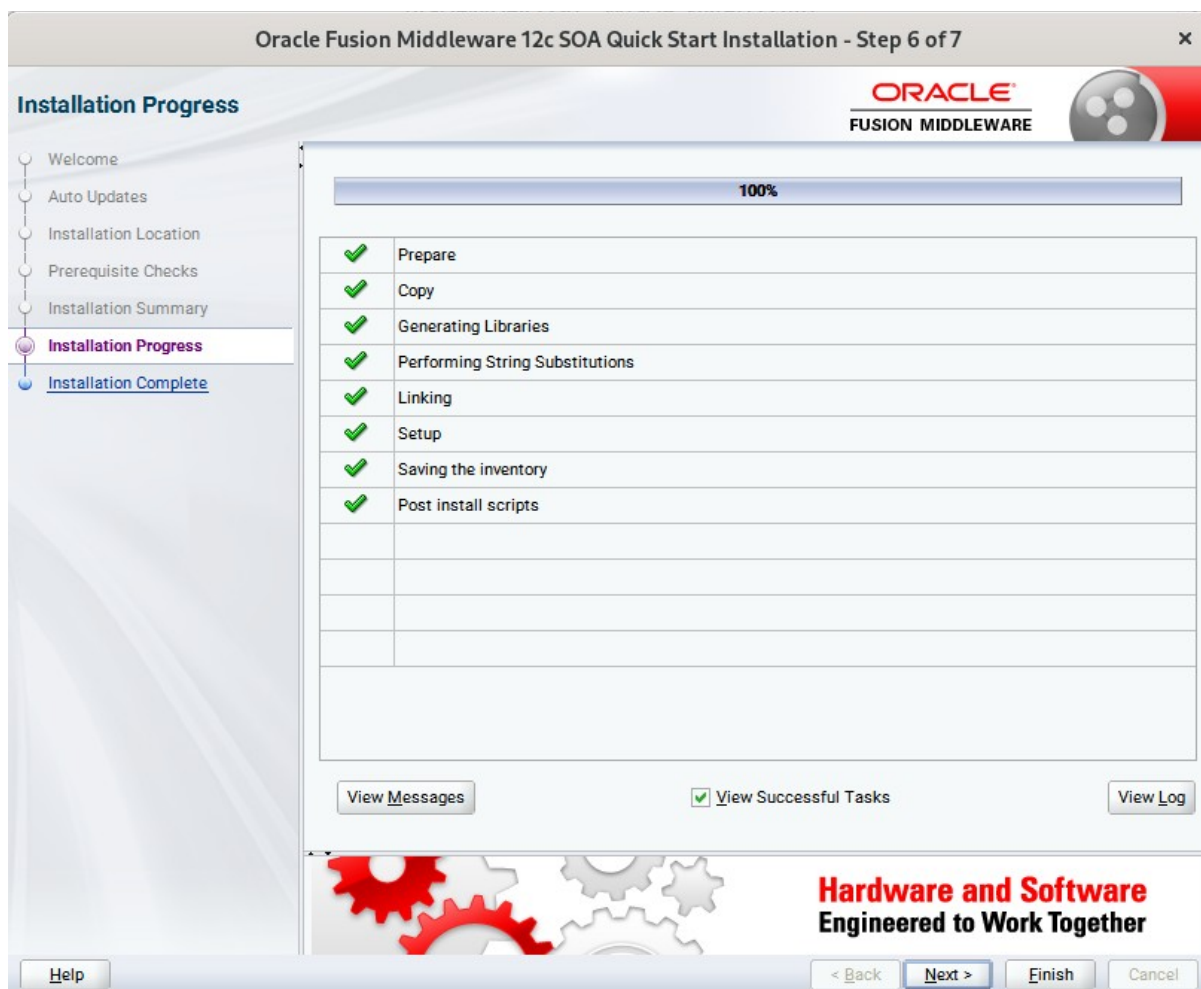
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

6). The **Installation Summary** page appears.



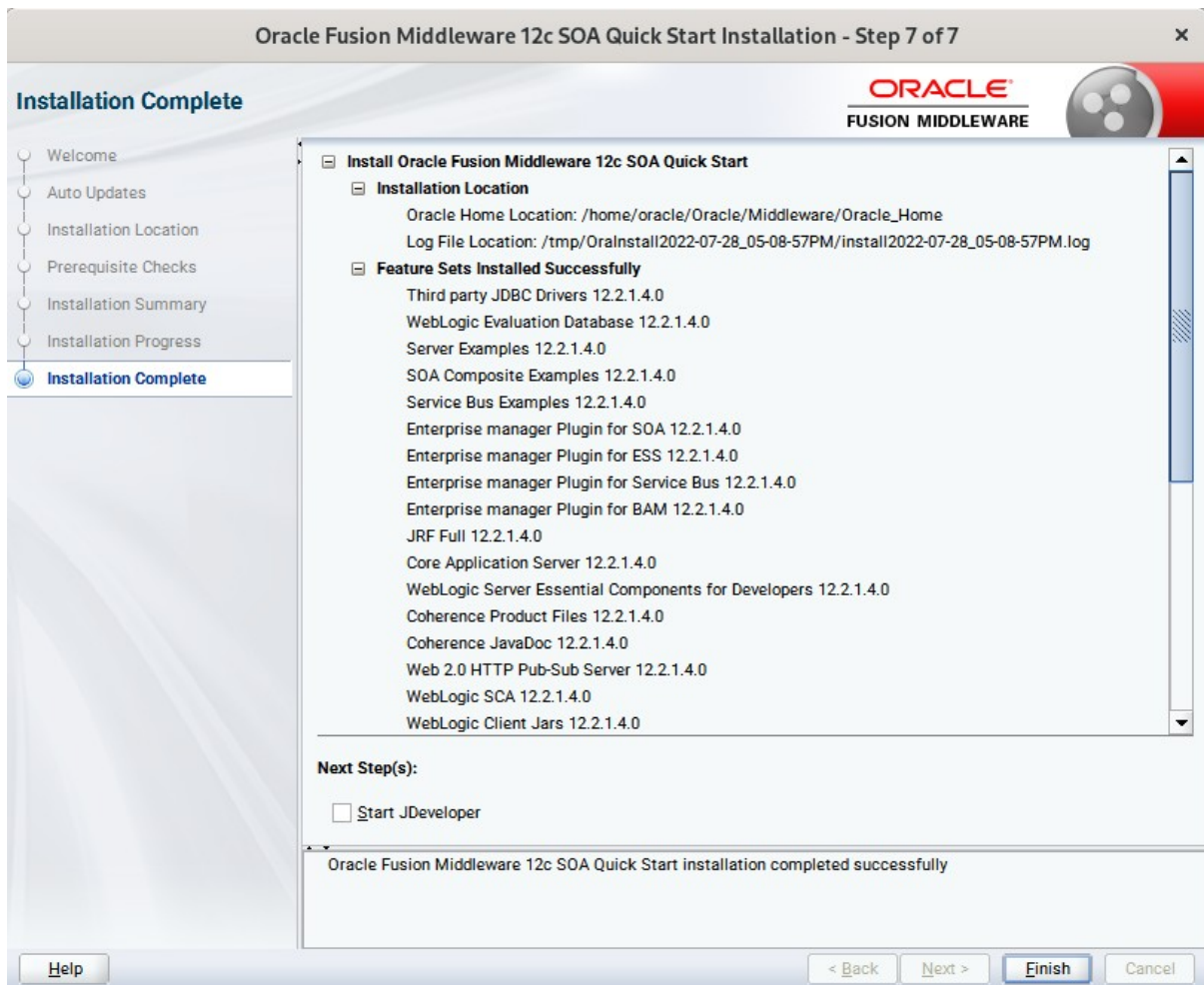
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

7). The **Installation Progress** page appears.



This page shows you the progress of the installation, and will warn you if there are any problems. You can view messages and logs from this page, but typically no action is required here. When progress is complete, click **Next** (go to a Summary page). Alternatively, you can click **Finish**.

8). If you clicked **Next**, the **Installation Complete** page appears, showing you the components that have been installed.

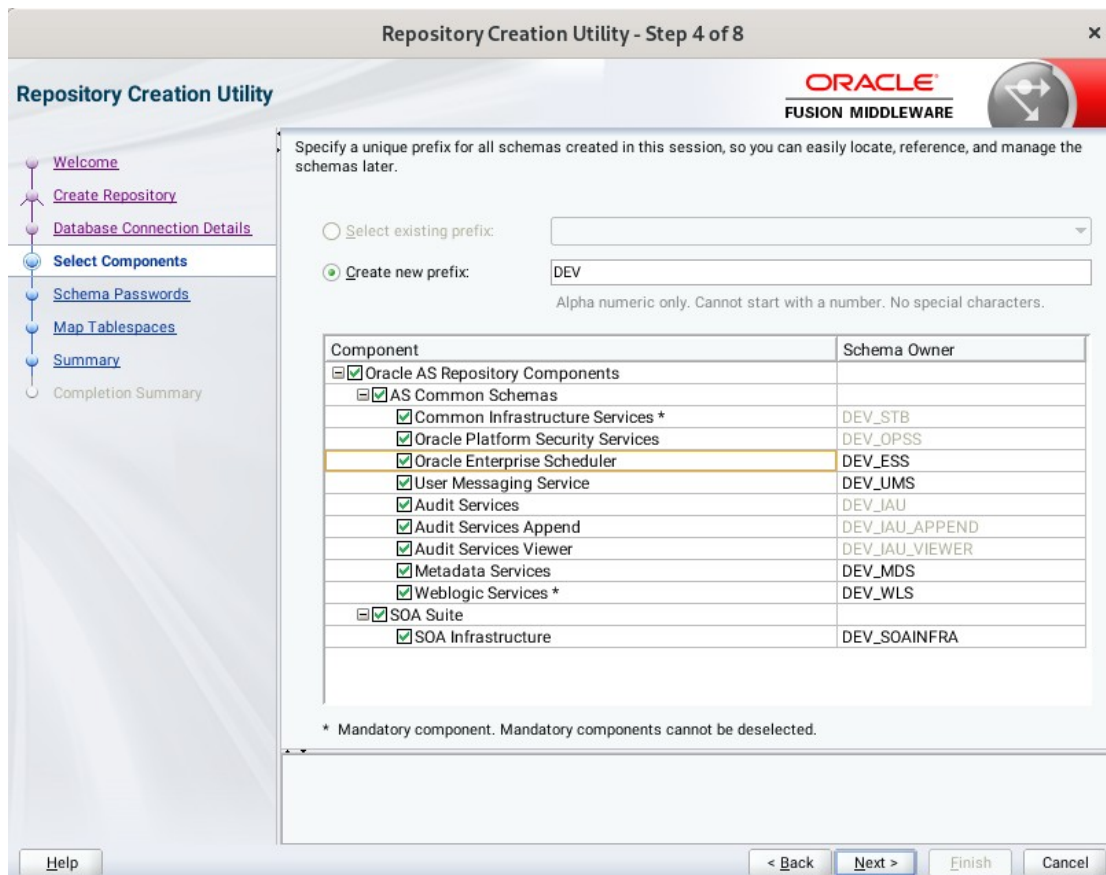


At the bottom of this screen, there is a checkbox to launch Oracle JDeveloper upon closing the installation wizard. This guide recommends that you uncheck this box. Click **Finish** to dismiss the installer.

2. Creating Oracle Database Schema through Repository Creation Utility(RCU)

2-1. Invoke the RCU packaged with your Quick Start installation to create schemas in your database. Do not download or use any other version of RCU to configure a database with Quick Start. Run **\$FMW_HOME/oracle_common/bin/rcu** and create required database schemas for Oracle SOA Suite.

Screenshot: Database schemas creating for Oracle SOA Suite.



Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above.

Ensure schema creation is successful.

Repository Creation Utility - Step 9 of 9

Repository Creation Utility ORACLE FUSION MIDDLEWARE

Database details:

Host Name: Dell5530
Port: 1521
Service Name: SUSE
Connected As: sys
Operation: System and Data Load concurrently
Execution Time: 2 minutes 23 seconds

RCU Logfile: /tmp/RCU2022-07-28_17-18_480650914/logs/rcu.log
Component Log Directory: /tmp/RCU2022-07-28_17-18_480650914/logs
View Log: rcu.log

Prefix for (prefixable) Schema DEV
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.378(sec)	stb.log
Oracle Platform Security Services	Success	00:14.681(sec)	opss.log
Oracle Enterprise Scheduler	Success	00:11.860(sec)	ess.log
SOA Infrastructure	Success	00:33.140(sec)	soainfra.log
User Messaging Service	Success	00:11.743(sec)	ucsums.log
Audit Services	Success	00:11.854(sec)	iau.log
Audit Services Append	Success	00:09.145(sec)	iau_append.log
Audit Services Viewer	Success	00:09.137(sec)	iau_viewer.log
Metadata Services	Success	00:11.890(sec)	mds.log
Weblogic Services	Success	00:13.708(sec)	wls.log

Help < Back Next > Create Close

3. Configuring a Compact Domain for Oracle SOA Suite using the Config Wizard

3-1. Go to **ORACLE_HOME/oracle_common/common/bin**. Set the environment variable **CONFIG_JVM_ARGS** to **-Dcom.oracle.cie.config.showProfile=true**. This will activate the compact domain option in the configuration wizard. Then launch the configuration wizard.

Example commands for this task are as follows:

```
cd ORACLE_HOME/oracle_common/common/bin
CONFIG_JVM_ARGS=-Dcom.oracle.cie.config.showProfile=true
export CONFIG_JVM_ARGS
./config.sh
```

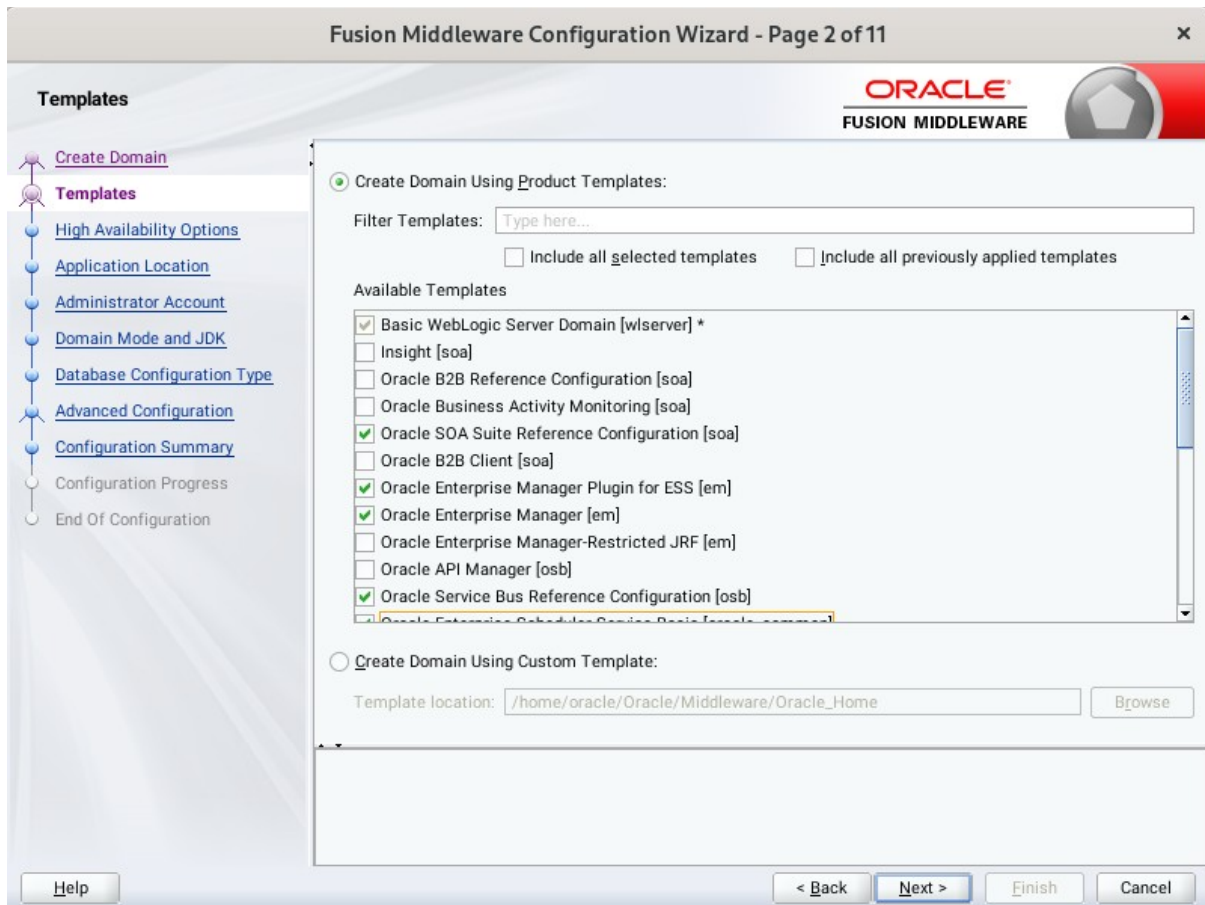
Follow these steps:

1). On the Configuration Type screen, select **Create a new domain**, and enter the desired domain home path.



Click **Next** to continue.

2). The **Templates** screen appears.

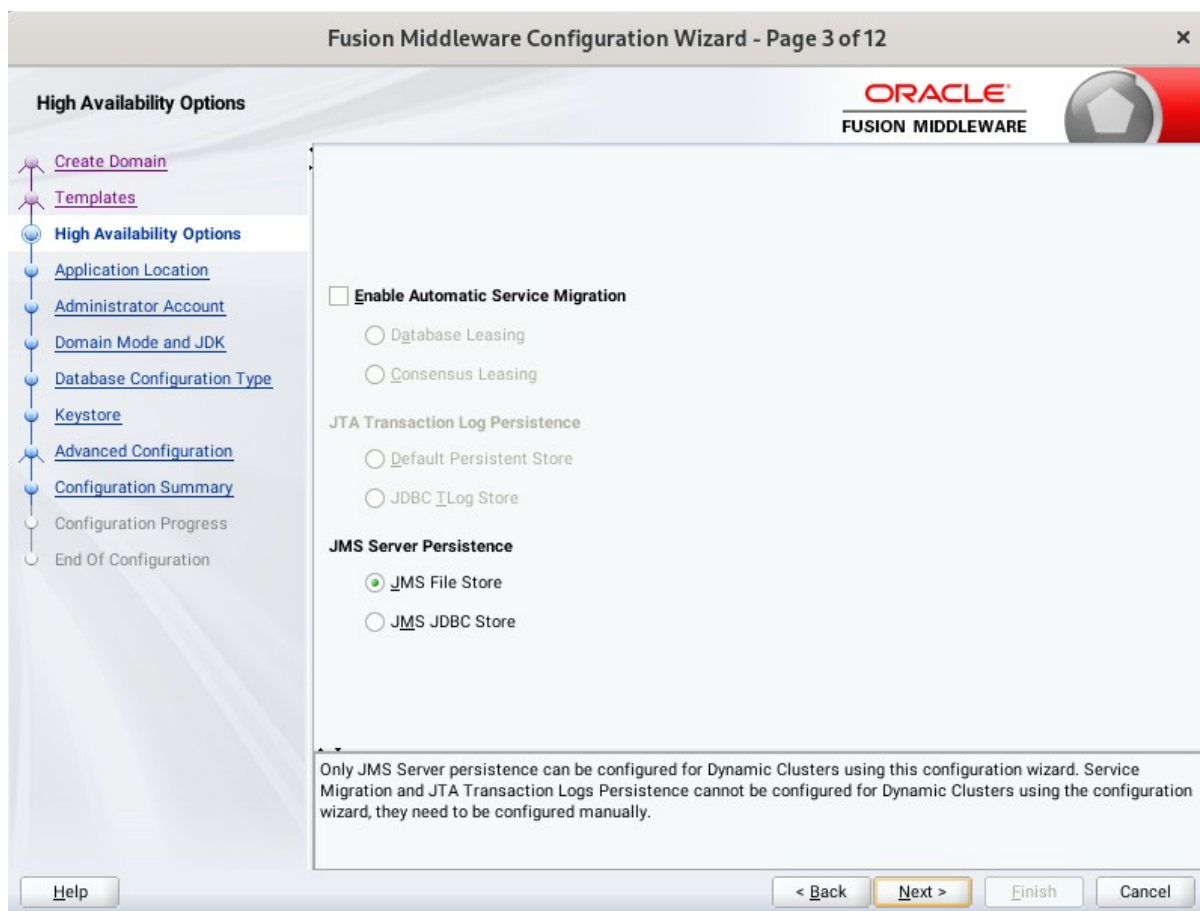


Use the **Templates** screen to select the templates you require. On the **Templates** screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

- Oracle SOA Suite Reference Configuration [soa]
Selecting this template automatically selects the following as dependencies:
 - Oracle Enterprise Manager [em]
 - Oracle WSM Policy Manager [oracle_common]
 - Oracle JRF [oracle_common]
 - WebLogic Coherence Cluster Extension [wlserver]
- Oracle Service Bus Reference Configuration [osb]
Selecting this template automatically selects the following as a dependency:
 - ODSI XQuery 2004 Components [oracle_common]
- WebLogic Advanced Web Services for JAX-RPC Extension [oracle_common]
- Oracle Enterprise Scheduler Service Basic [oracle_common]
- Oracle Enterprise Manager Plugin for ESS [em]

Click **Next** to continue.

3). The **High Availability Options** screen appears.



Keep the default value for Application location. Click **Next** to continue.

4). The **Application Location** screen appears.



Keep the default value for Application location. Click **Next** to continue.

5). The **Administrator Account** screen appears.

Fusion Middleware Configuration Wizard - Page 5 of 12

Administrator Account

ORACLE
FUSION MIDDLEWARE

Create Domain
Templates
High Availability Options
Application Location
Administrator Account
Domain Mode and JDK
Database Configuration Type
Keystore
Advanced Configuration
Configuration Summary
Configuration Progress
End Of Configuration

Name

Password

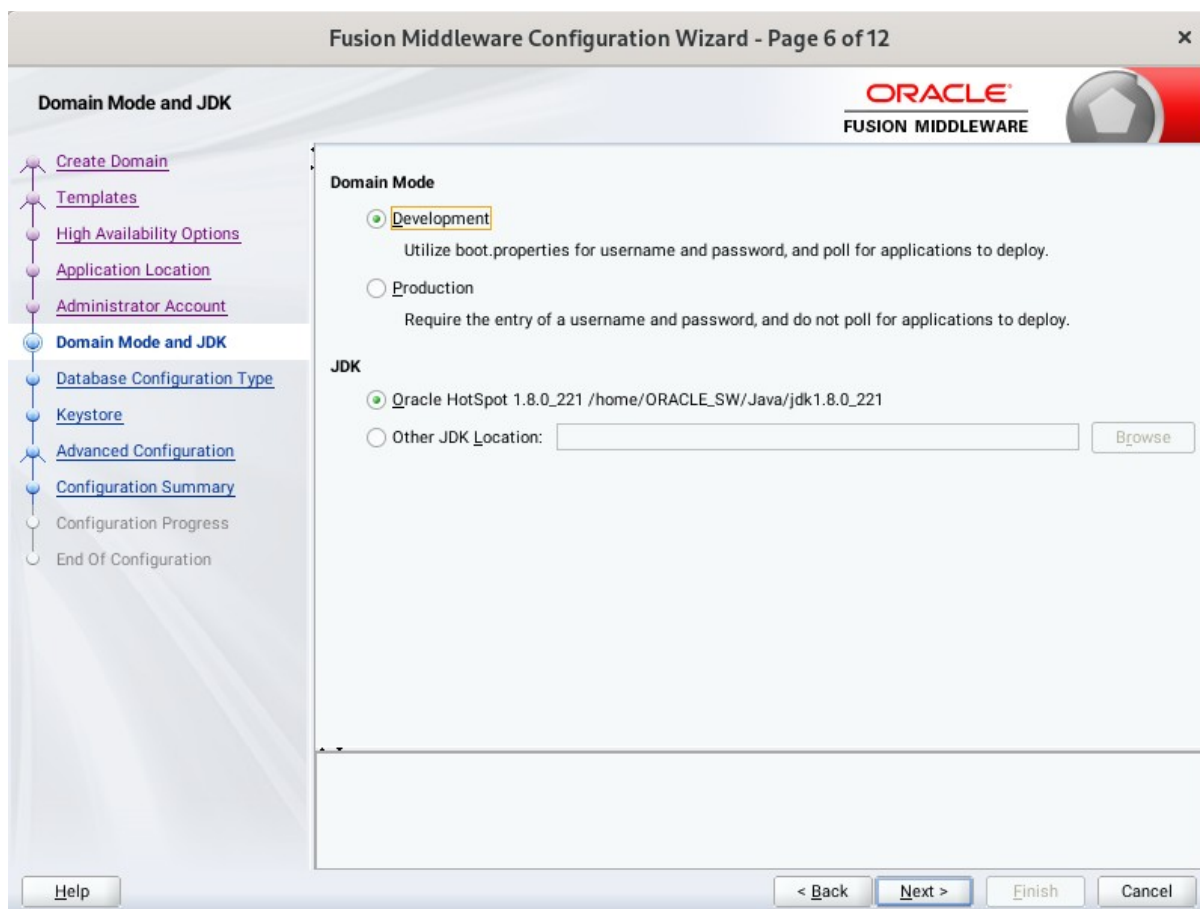
Confirm Password

Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

Help < Back Next > Finish Cancel

Enter the WebLogic Domain administration username and password. This information will be needed to access WebLogic Server Control and Fusion Middleware Control. Click **Next** to continue.

6). The **Domain Mode and JDK** screen appears.

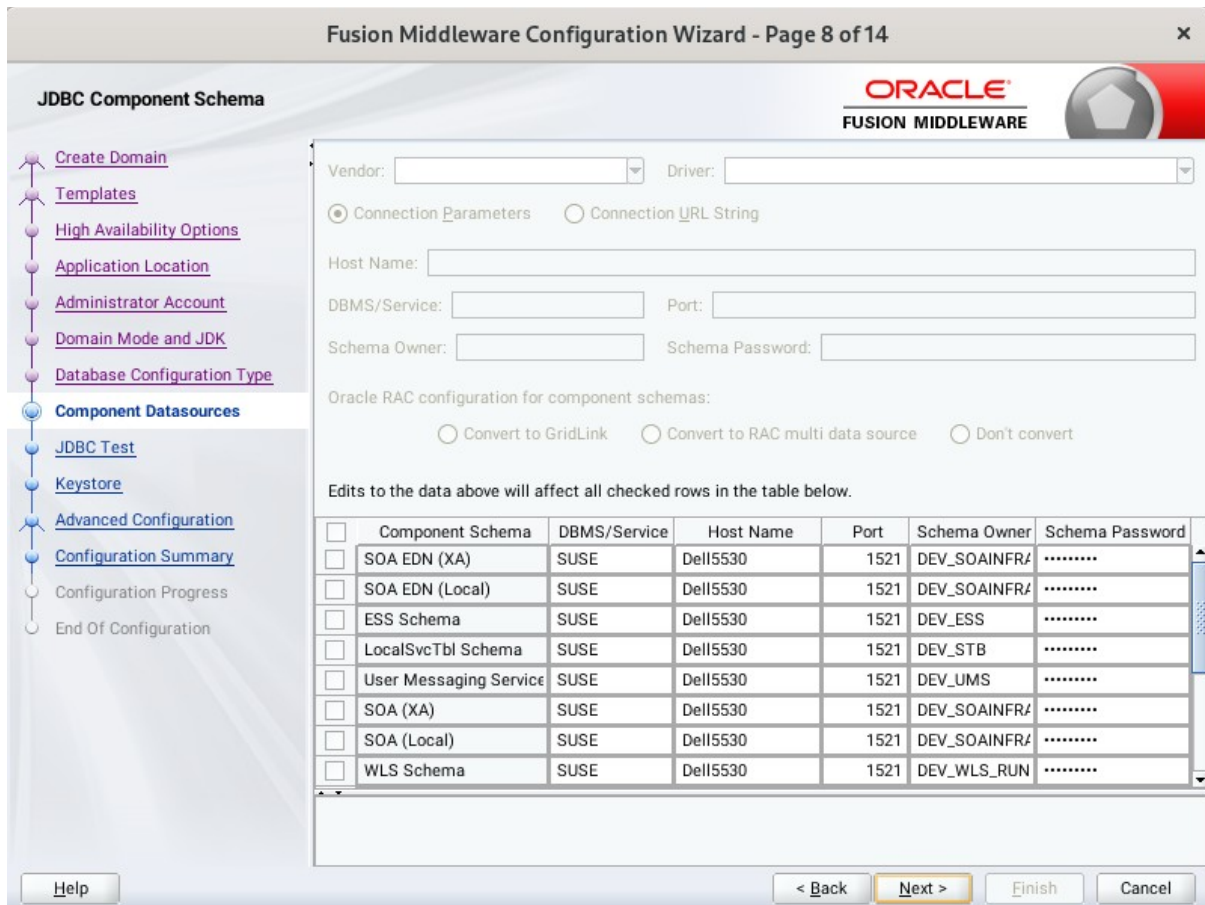


Select the Domain Mode (either **Development** or **Production**) as shown above. Click **Next** to continue.

7). The **Database Configuration Type** screen appears.

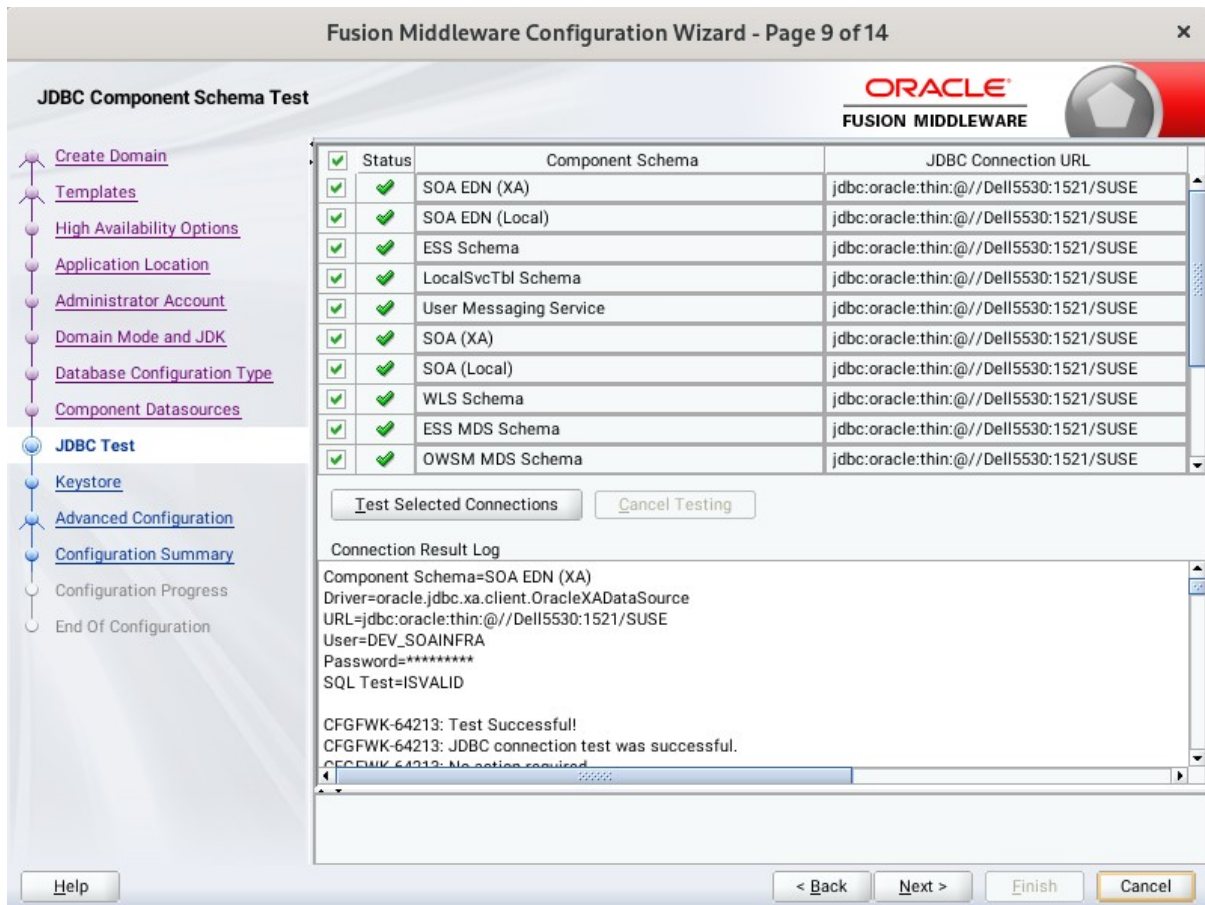
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

8). The **JDBC Component Schema** screen appears.



Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

9). The **JDBC Component Schema Test** screen appears.



The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

10). The **Keystore** screen appears.

The screenshot shows the 'Keystore' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 14'. The Oracle Fusion Middleware logo is in the top right corner. On the left, a navigation pane lists the following steps: Create Domain, Templates, High Availability Options, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Keystore (selected), Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains a 'Store Key Name' dropdown menu with 'ums/apns' selected and a 'Discard Changes' button. Below this are two empty tables for adding trusted certificates and private keys.

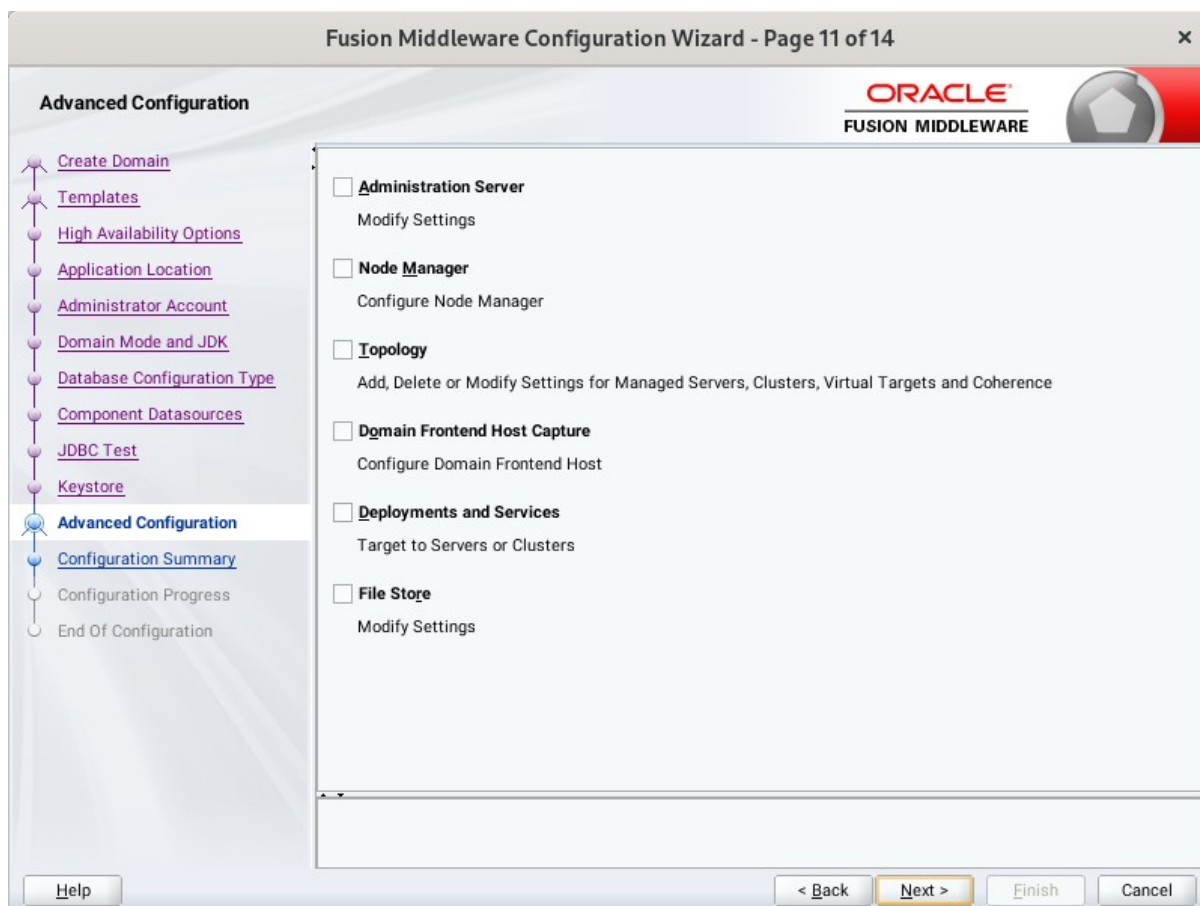
Alias	Trusted Certificate
-------	---------------------

Alias	Private Key	Password	Identity Certificate
-------	-------------	----------	----------------------

At the bottom of the wizard, there are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner.

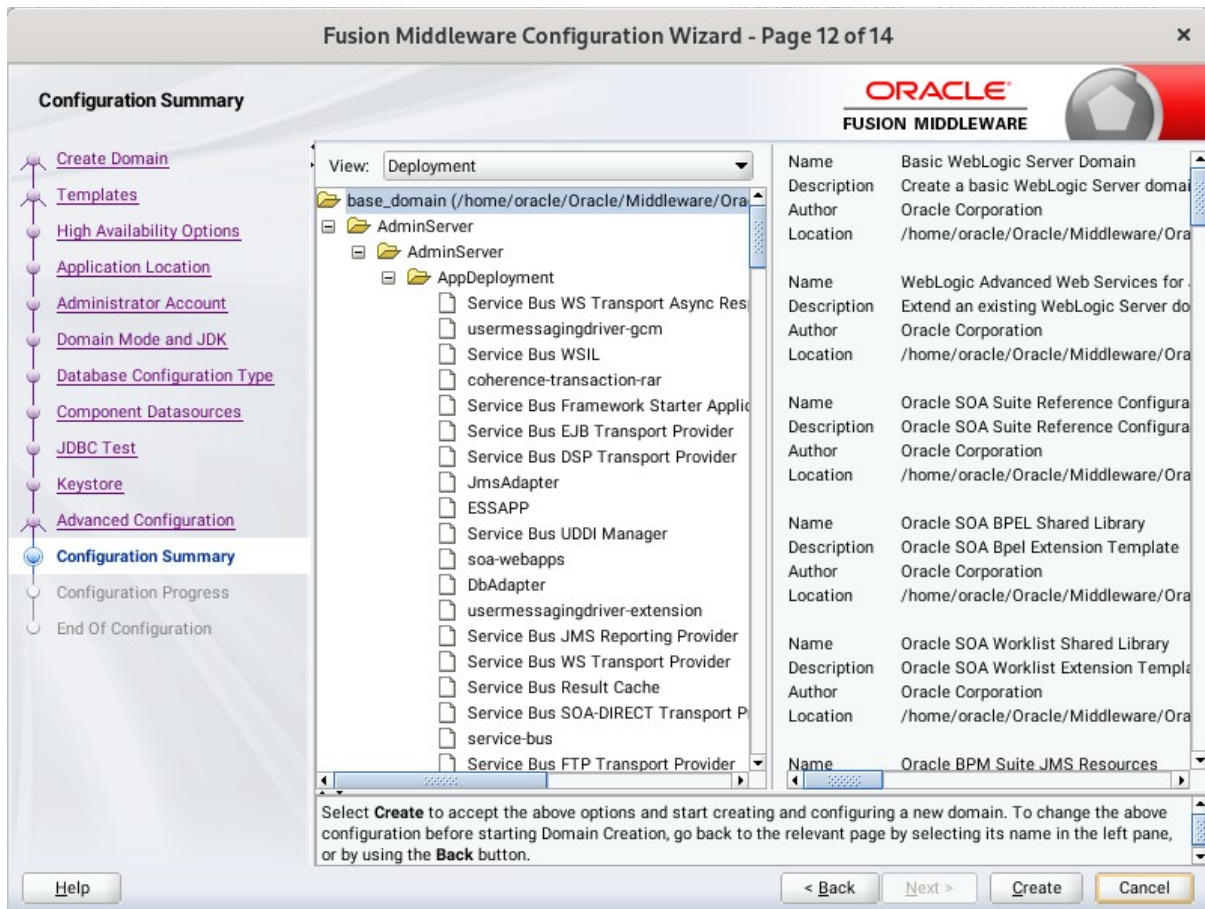
Accept the defaults and click **Next** to continue.

11). The **Advanced Configuration** screen appears.



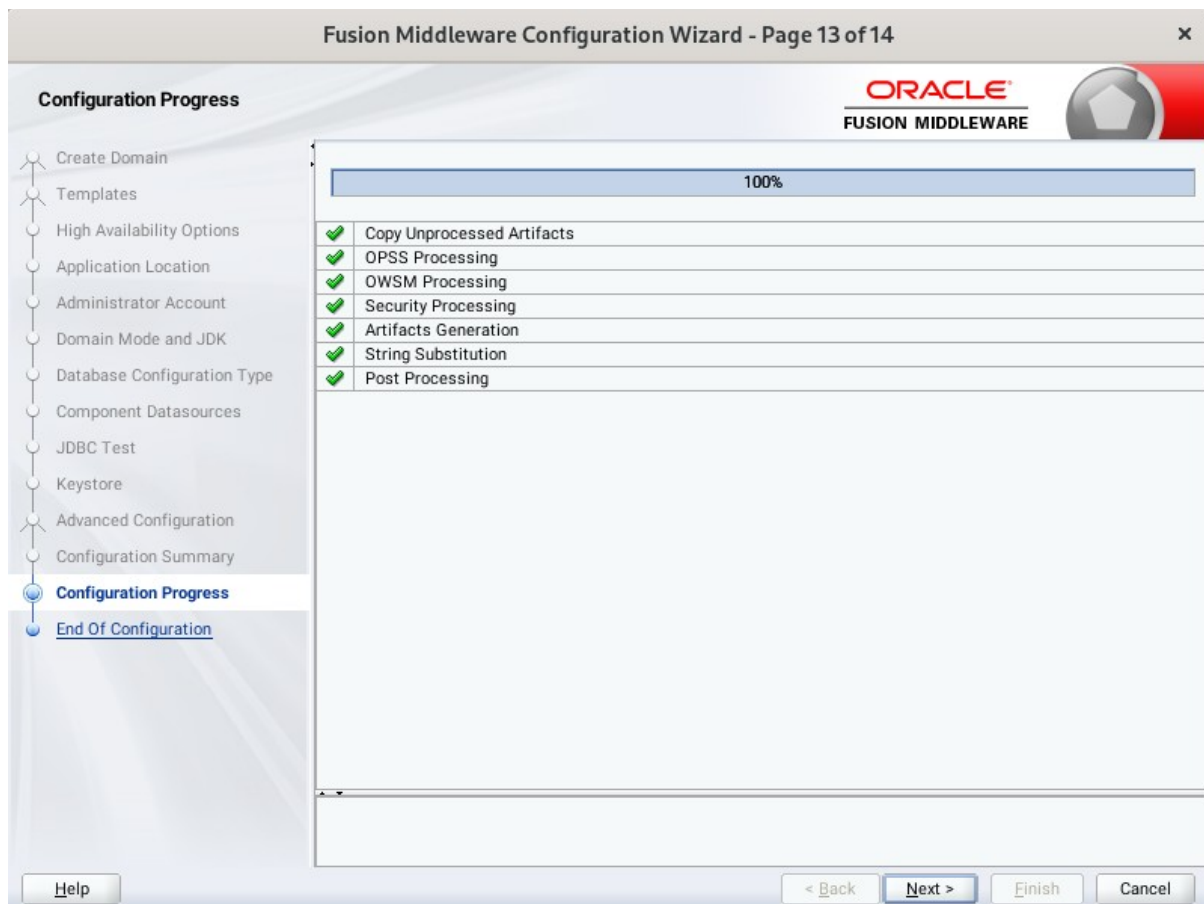
On the Advanced Configuration screen, you do not need any advanced configuration for a compact domain. You can skip through the Advanced Configuration screen without selecting anything. Click **Next** to continue.

12). The **Configuration Summary** screen appears.



Select **Create** to accept the above options and start creating and configuring a new domain.

13). The **Configuration Progress** screen appears.



Wait for this part of the configuration to complete. Depending on the location and performance of the Repository database, this process may take a few minutes. After the domain successful created, click **Next** to continue.

14). The **End of Configuration** screen appears.



Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

4. Verifying Oracle SOA Suite 12c Installation and Configuration

4-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

4-2. Navigate to your compact domain's home and start the administrator server.

Starting the Admin Server, go to the `DOMAIN_HOME/bin` directory and run `./startWebLogic.sh`.

```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:...W/SOA_suite/122... x oracle@Dell5530:..._common/commo... x oracle@Dell5530:...ns/base_domain/bin x
adminServer" for domain "base_domain" running in development mode.>
<Jul 28, 2022 5:40:38,141 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:1%lo:
7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 28, 2022 5:40:38,141 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 28, 2022 5:40:38,141 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Jul 28, 2022 5:40:38,141 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:1%lo:
7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 28, 2022 5:40:38,596 PM CST> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: ESSAPP, EJ
BComponent: ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdbms.suspendConnectionOnStart is ignored,
because it is not supported by JCA-Based Message-Driven Bean.>
<Jul 28, 2022 5:40:38,612 PM CST> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageReceiverBean(Application: userm
essagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJmsMessageReceiver. Property weblogi
c.mdbms.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jul 28, 2022 5:40:38,709 PM CST> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/oracle/apps/ess/cust
om" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<Jul 28, 2022 5:40:38,735 PM CST> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: EssNativeH
ostingApp, EJBComponent: native-ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdbms.suspendConnectio
nOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jul 28, 2022 5:40:38,739 PM CST> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageForwarderBean(Application: user
messagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJmsMessageReceiver. Property weblog
ic.mdbms.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jul 28, 2022 5:40:38,744 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
====> ResourceBundleListFromConfig topDirs : []
==> found 0 SOA composites to deploy in group 0 . Using 5 threads for composite load. composite count from dcManager : 0 Comp
ositeLazyLoading enabled. CompositeLazyDeployment disabled.
deploying 0 composites took 0 ms
----->deploying 0 composites took 4 ms
<Jul 28, 2022 5:40:38,762 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
Not fusion apps env
SOA Platform is running and accepting requests. Start up took 20991 ms, partition=DOMAIN

```

You know that the administrator server is running when you see the following output:

```

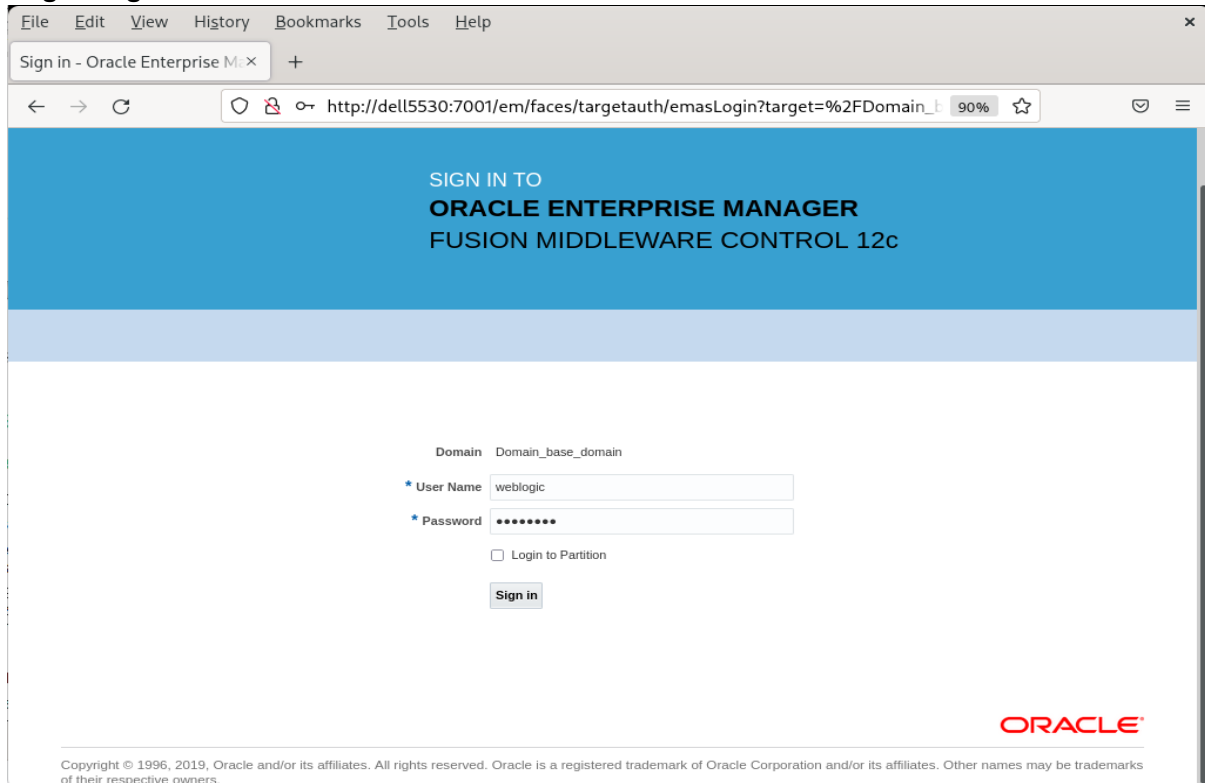
-----
Server state changed to RUNNING.
-----

```

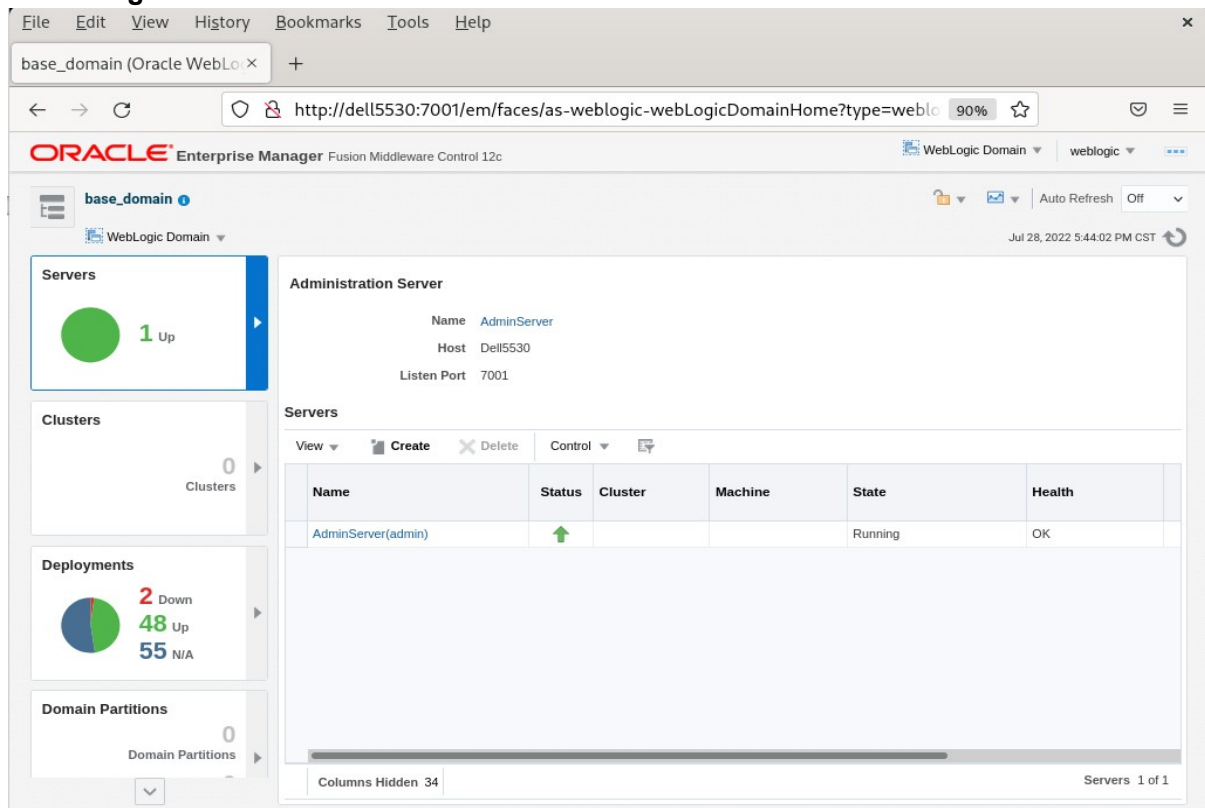
4-3. Checking Oracle SOA Suite 12c Product URLs.

1). Access to Enterprise Manager Console.

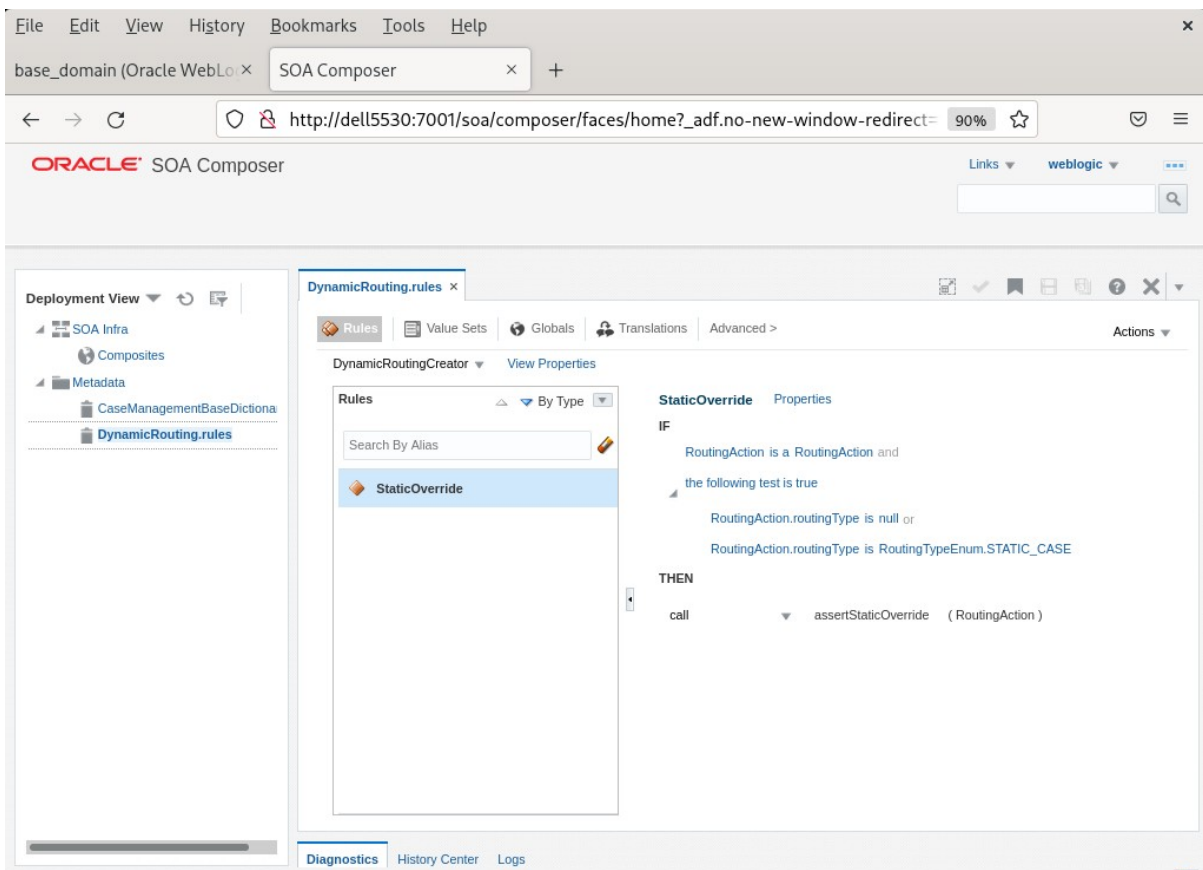
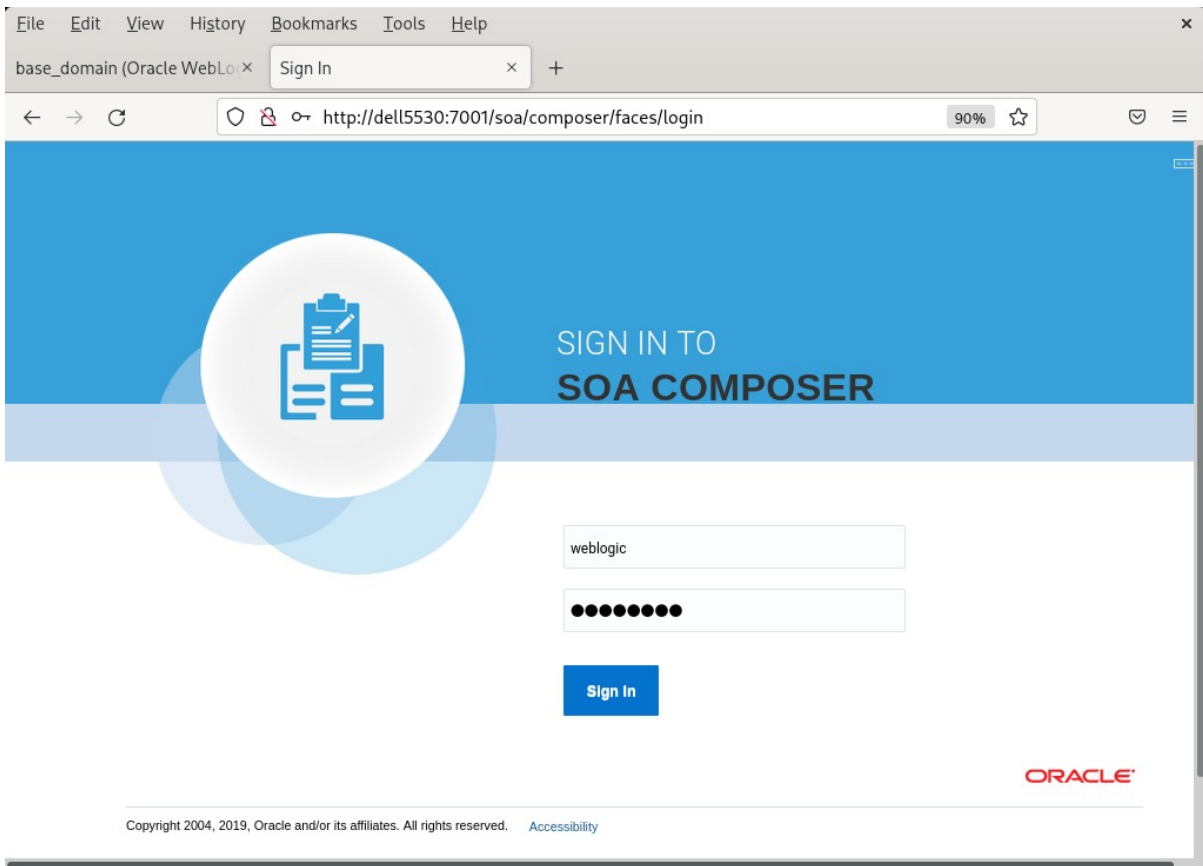
Login Page:



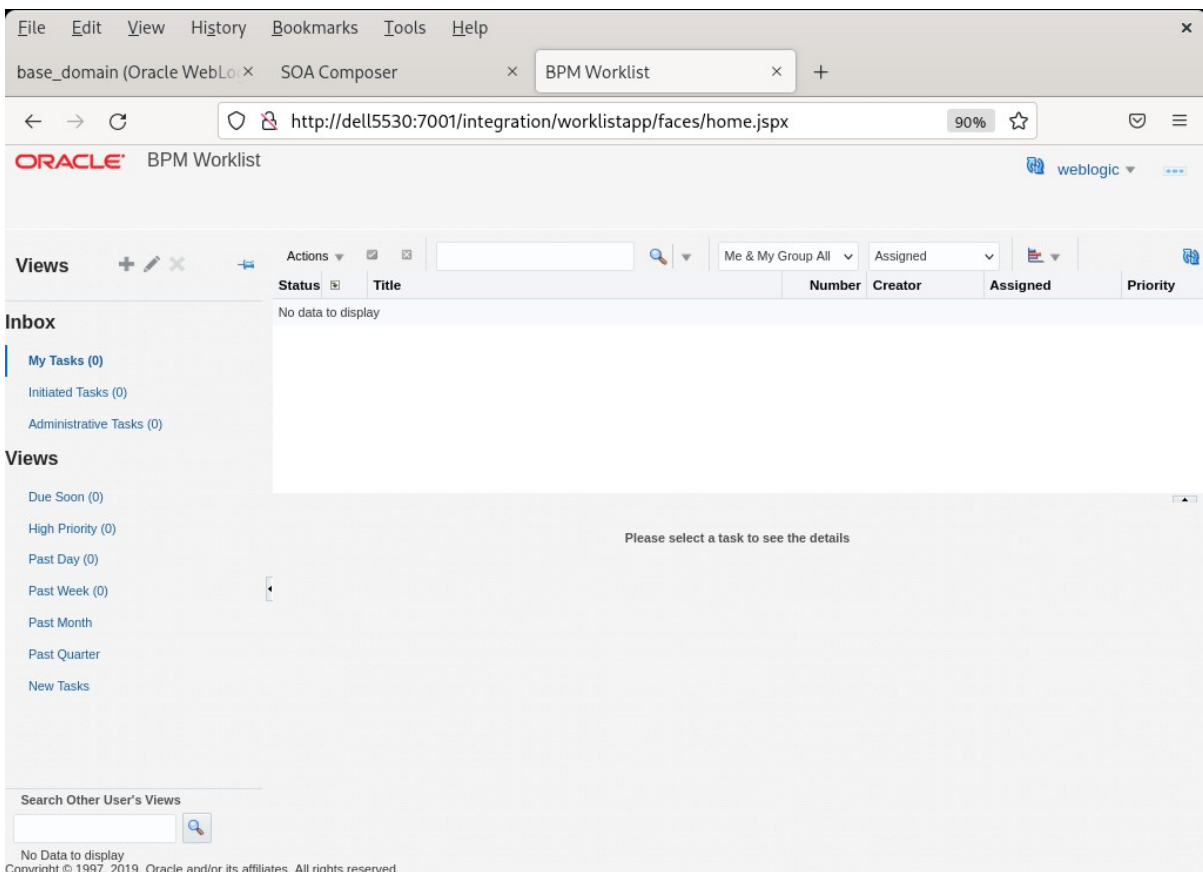
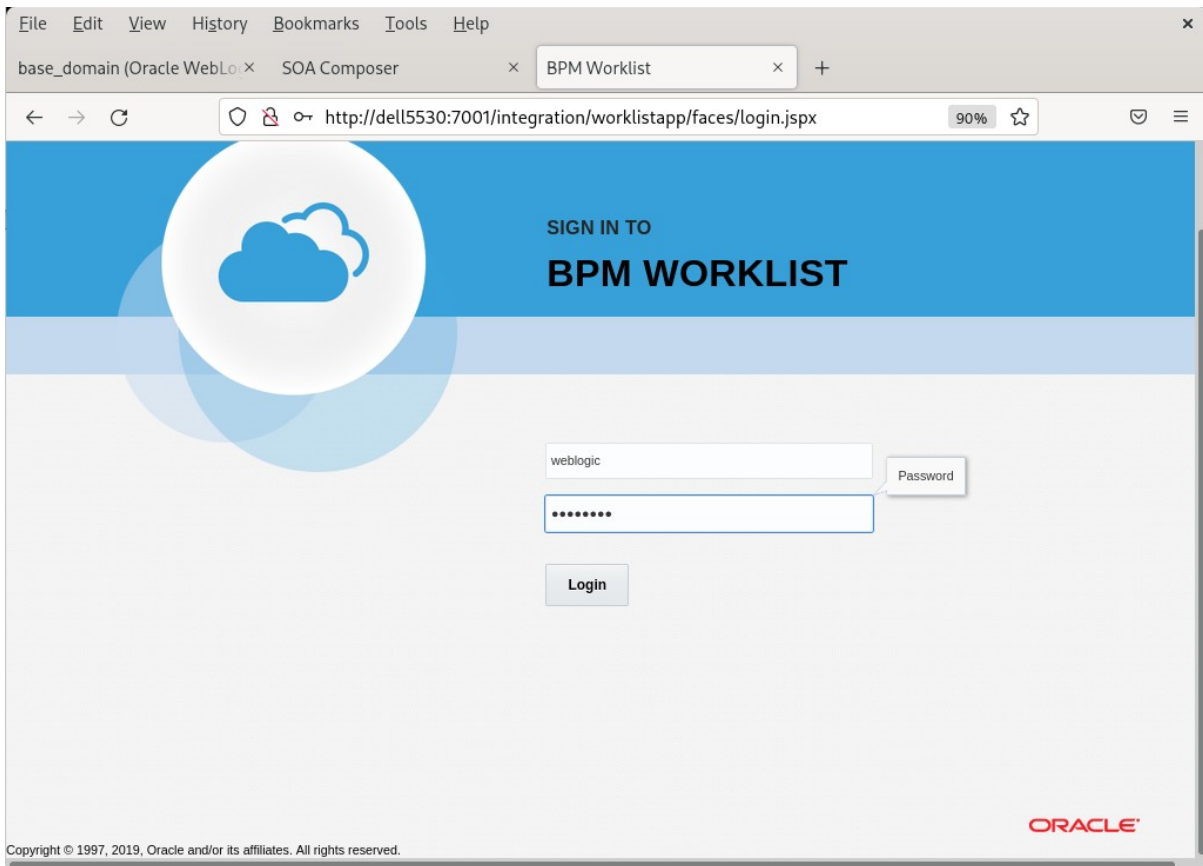
Home Page:



Access to soa-webapps(soa composer) - URL:<http://host:7001/soa/composer>

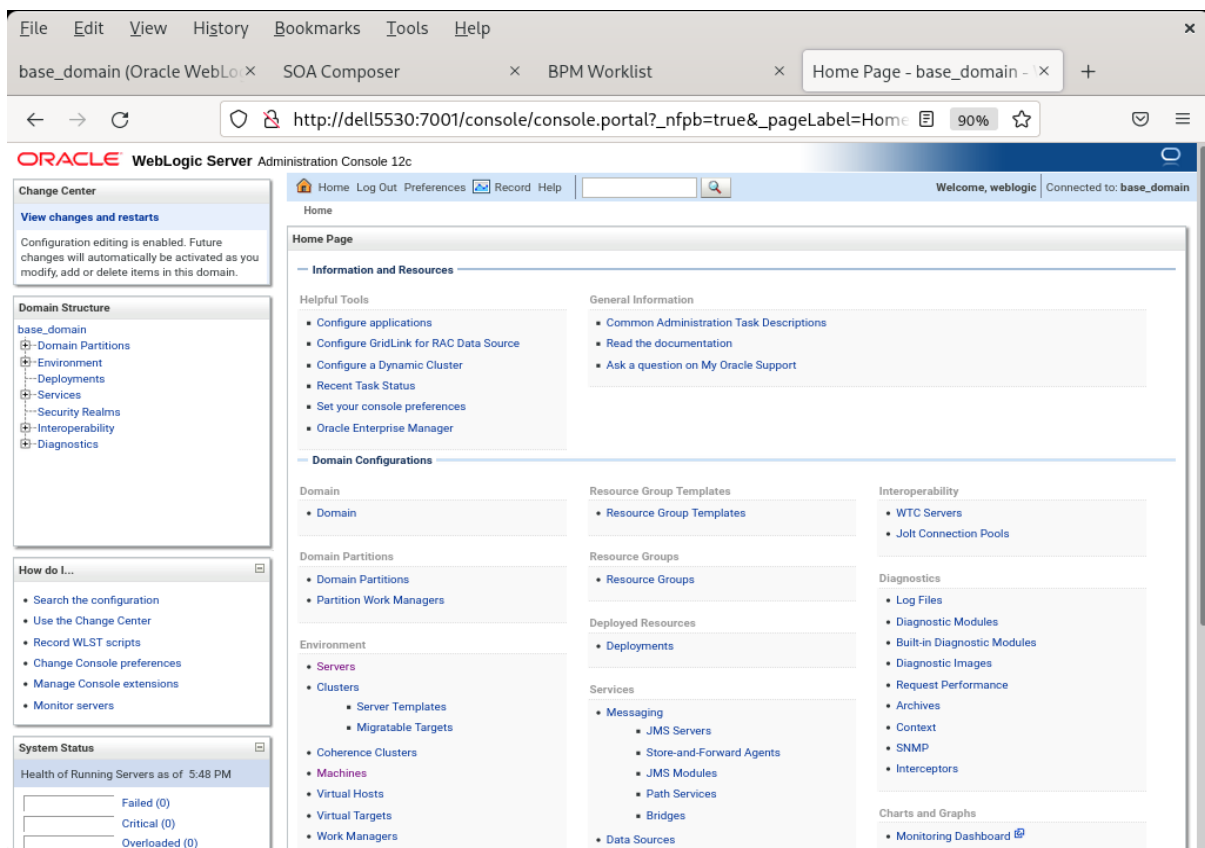
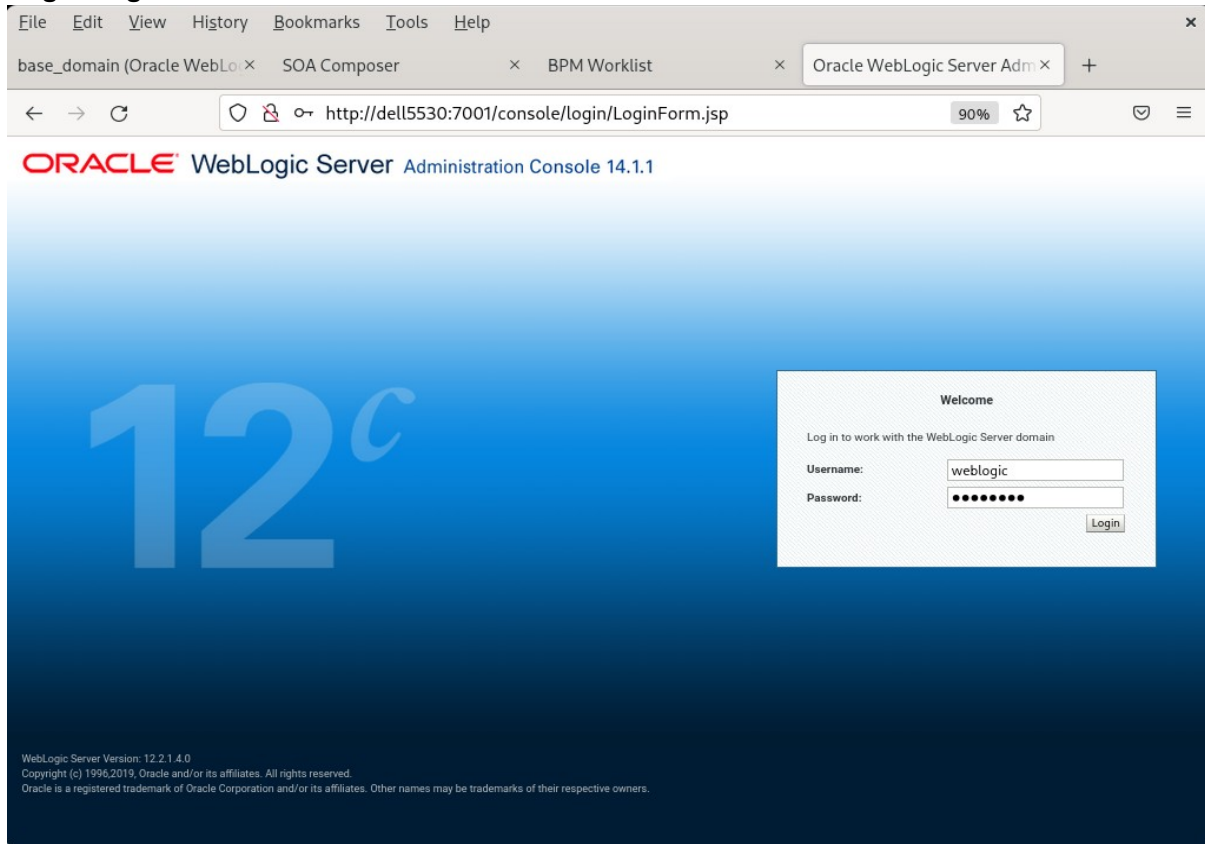


Access to BPM worklistapp - URL:<http://host:7001/integration/worklistapp>



2). Access to Administration Server Console

Login Page as shown below:



Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar indicates the URL: `http://dell5530:7001/console/console.portal?_nfpb=true&_pageLabel=CoreS`. The page title is "Summary of Servers".

Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure
base_domain
├─ Domain Partitions
├─ Environment
├─ Deployments
├─ Services
├─ Security Realms
├─ Interoperability
└─ Diagnostics

How do I...
• Create Managed Servers
• Clone servers
• Delete Managed Servers
• Delete the Administration Server
• Start and stop servers
• View objects in the JNDI tree

System Status
Health of Running Servers as of 5:48 PM
Failed (0)
Critical (0)
Overloaded (0)

Summary of Servers
Configuration Control
A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Servers (Filtered - More Columns Exist)
Showing 1 to 1 of 1 Previous | Next

<input type="checkbox"/>	Name	Type	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)	Configured			RUNNING	OK	7001

3). Connecting JDeveloper to the Compact Domain.

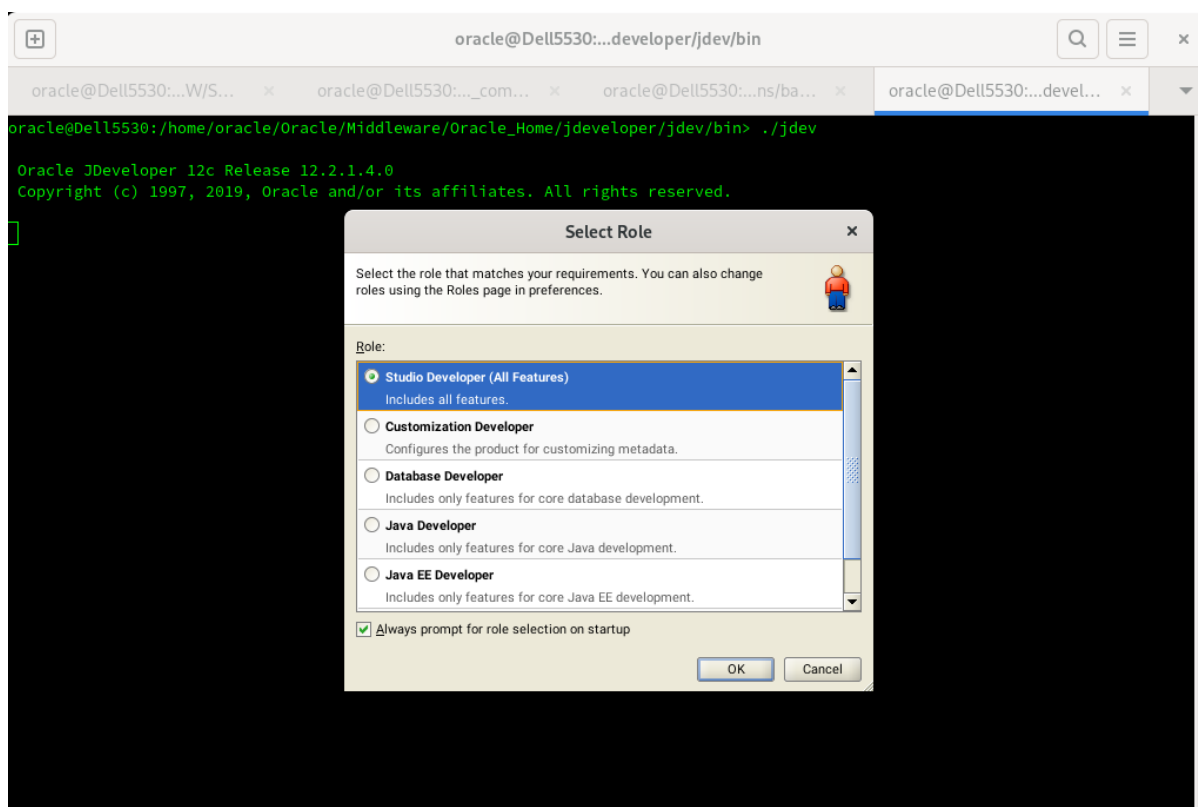
Launch Oracle JDeveloper with the appropriate command.

Ex:

```
-----  
cd $ORACLE_HOME/jdeveloper/jdev/bin  
./jdev  
-----
```

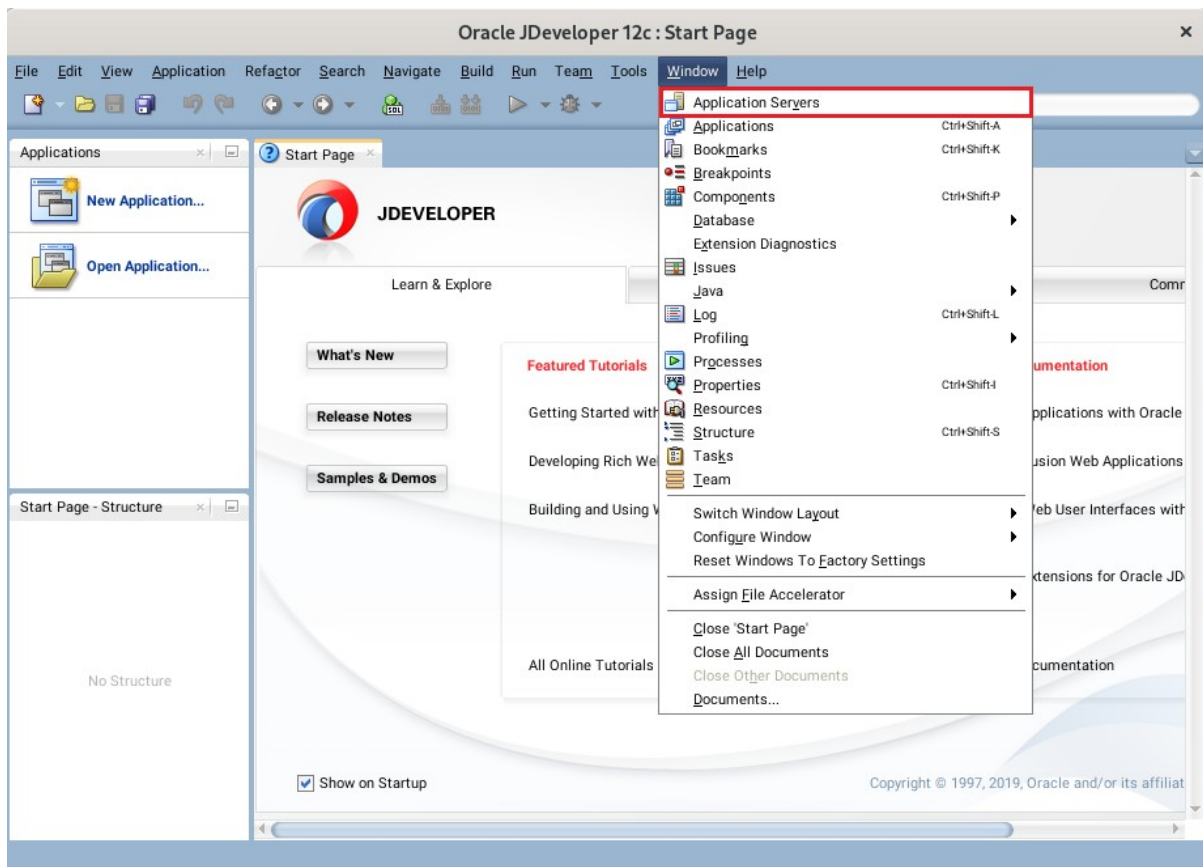
Follow these steps:

a1). Select Role.

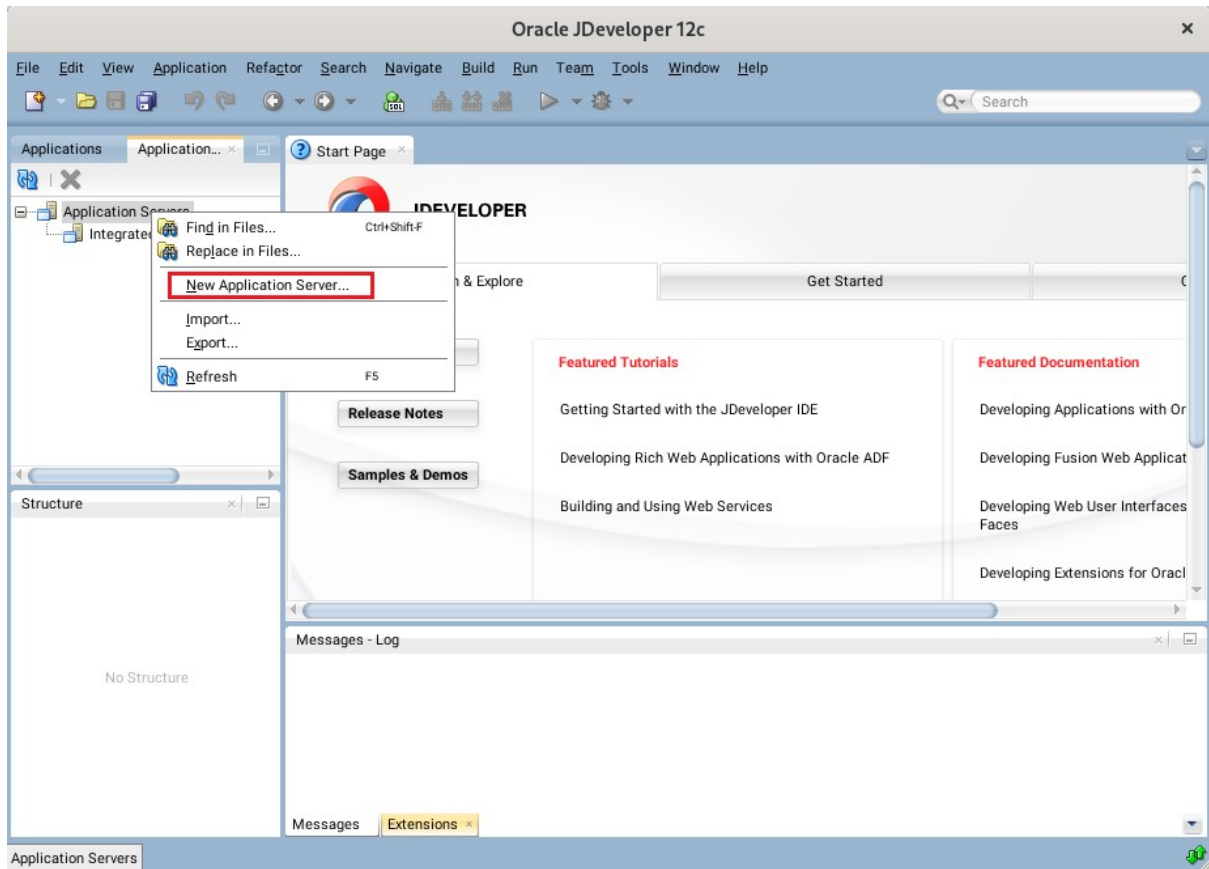


Select the role that matches your requirements. Click **OK** to continue.

a2). Select **Window** from the top menu, and then choose **Application Servers** from the drop-down menu. This will open the Application Server Navigator in the left-hand pane.

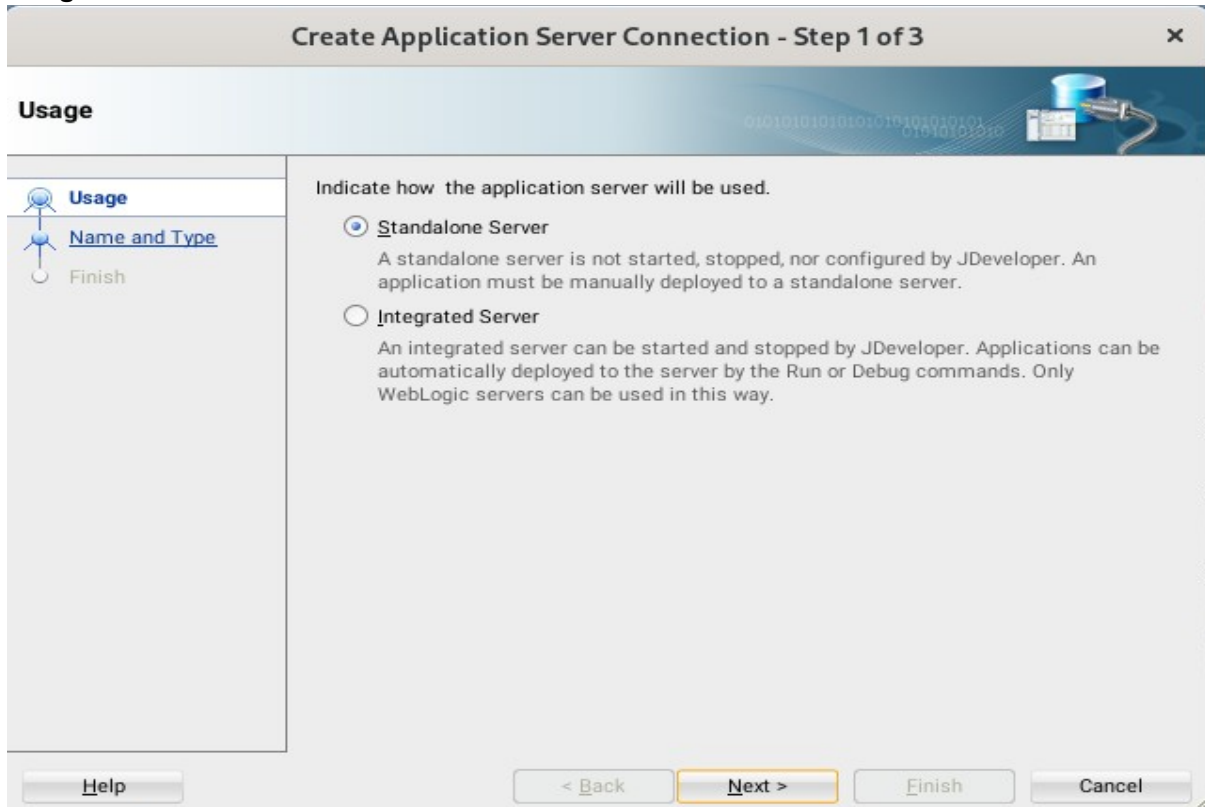


a3). Right-click on **Application Servers** in the Application Server Navigator. Select **New Application Server** from the drop-down menu to launch the **Create Application Server Connection** wizard.

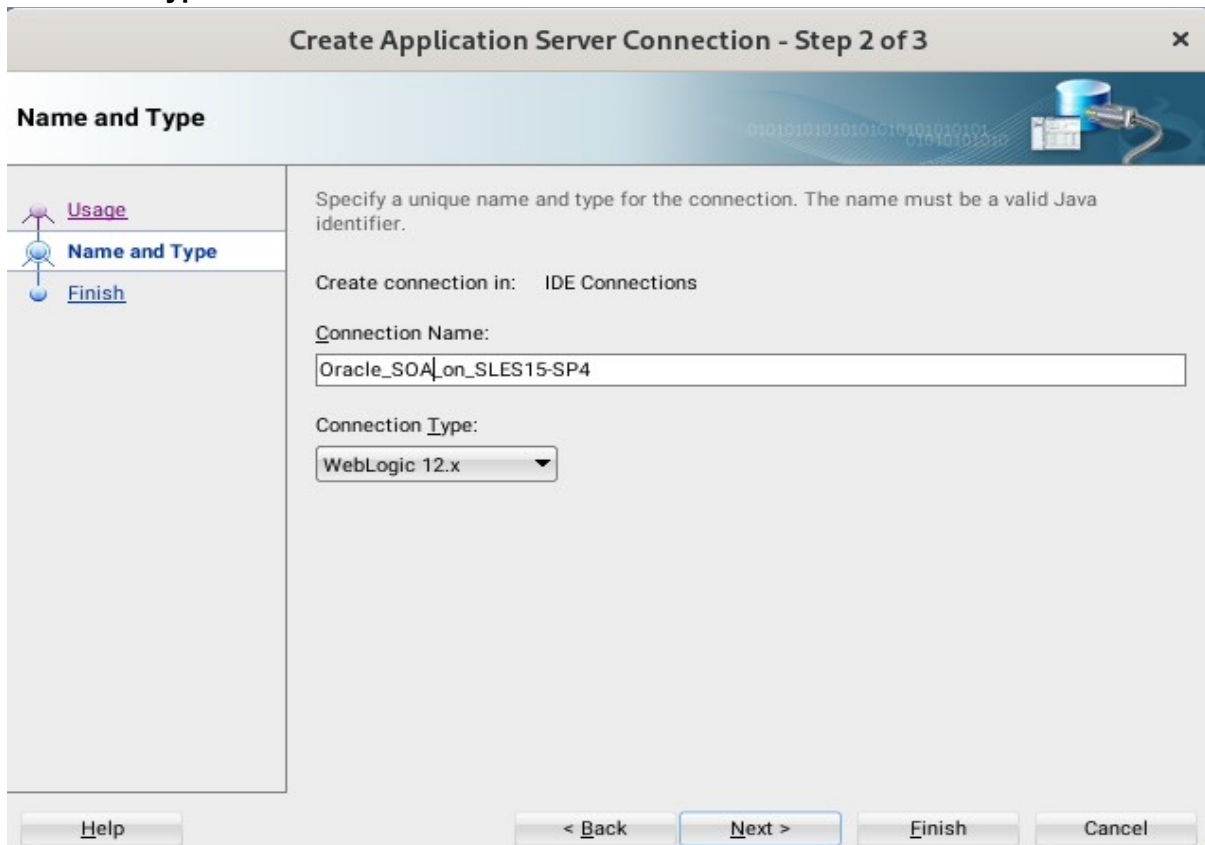


a4). Creating Application Server Connection steps as shown below.

Usage screen.



Name and Type screen.



Authentication screen.

Create Application Server Connection - Step 3 of 6

Authentication

Specify a username and password to authenticate the connection.

Username: weblogic

Password:

Help < Back Next > Finish Cancel

Configuration screen.

Create Application Server Connection - Step 4 of 6

Configuration

WebLogic Server connections use a host name and port to establish a connection. The Domain of the target will be verified

WebLogic Hostname (Administration Server): localhost

Port: 7001 SSL Port: 7002

Always use SSL

WebLogic Domain: base_domain

Help < Back Next > Finish Cancel

Test screen.

Test

Click Test Connection to determine if the information specified successfully establishes a connection with the application server.

Status:

Testing HTTP Authentication	...	success
Testing JSR-160 Runtime	...	success
Testing JSR-160 DomainRuntime	...	success
Testing JSR-88	...	success
Testing JSR-88-LOCAL	...	success
Testing Server MBeans Model	...	success
Testing App Controller	...	success
Testing JSR-88-DEP-MGR	...	success
Testing JSR-88-DEP-MGR-LOCAL	...	success
Testing JNDI	...	success
Testing JSR-160 Edit	...	success
Testing HTTP	...	success

12 of 12 tests successful.

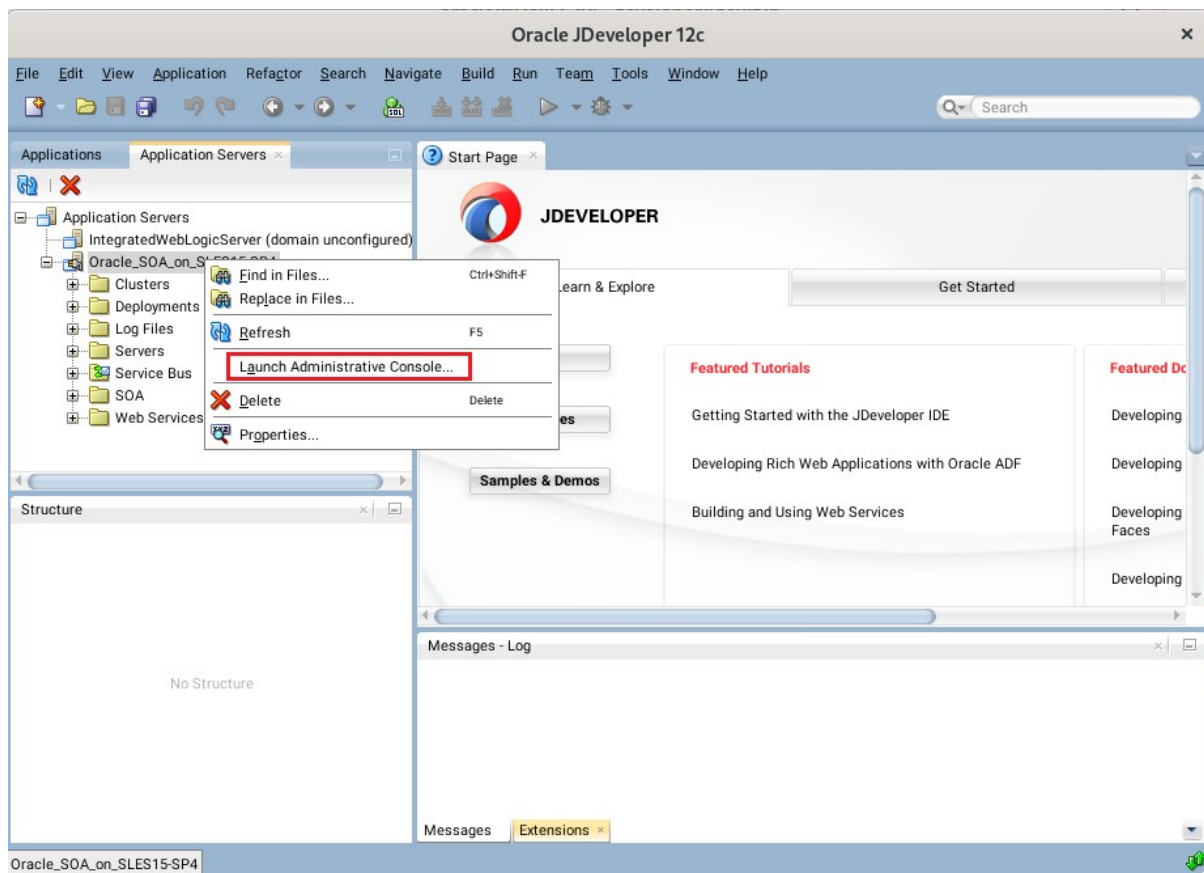
Finish screen.

Finish

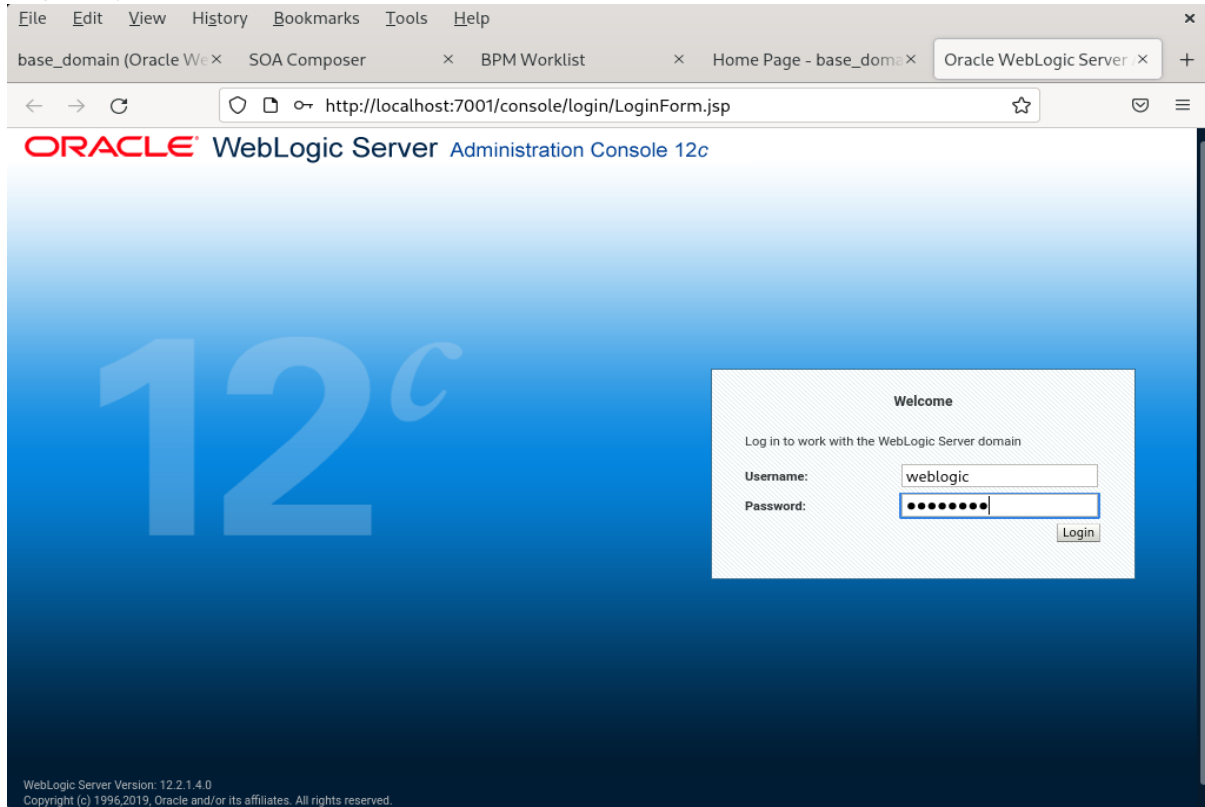
You have completed creating the connection.

To open your connection, expand the connection node in the Application Server Navigator.

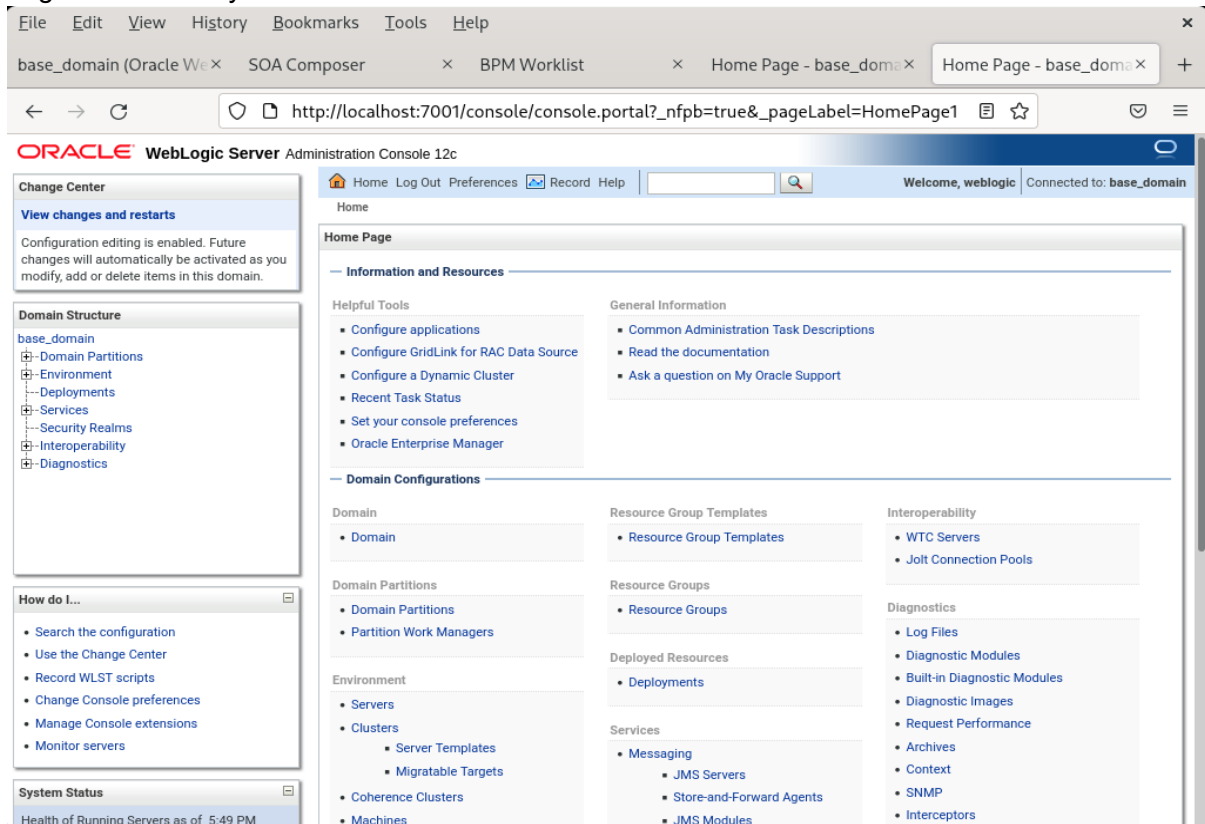
a5). Verifying Your Connection. Expand the connection node beside **Application Servers** in the Application Server Navigator. You should see your domain listed by the **Connection Name** you SPecified on the **Name and Type** screen. Right-click on your domain's name and choose **Launch Administrative Console**.



Log into your administrative console.



Log in successfully.



End of Oracle SOA Suite.

Oracle Access Manager

1. Installing Oracle Identity and Access Management 12cPS4 software

1-1. Prerequisites:

Installation of Oracle Identity and Access management requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.

(**Note:** Please make sure that database initialization parameter **OPEN_CURSORS** greater than or equal to 800; Login to database server as **root user** and execute the SQL command: "alter system set open_cursors=1600 scope=SPfile;" then restart the database)

```
SQL> show parameter open_cursors;

NAME                                TYPE        VALUE
-----
open_cursors                        integer     300
SQL> alter system set open_cursors=1600 scope=spfile;

System altered.

SQL> shutdown immediate;
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL> startup
ORACLE instance started.

Total System Global Area 9932111872 bytes
Fixed Size                12169800 bytes
Variable Size             2046823864 bytes
Database Buffers         7851737088 bytes
Redo Buffers              21381120 bytes
Database mounted.
Database opened.
SQL> show parameter open_cursors;

NAME                                TYPE        VALUE
-----
open_cursors                        integer     1600
SQL> █
```

- 2). Oracle jdk1.8.0_221 and later installed.

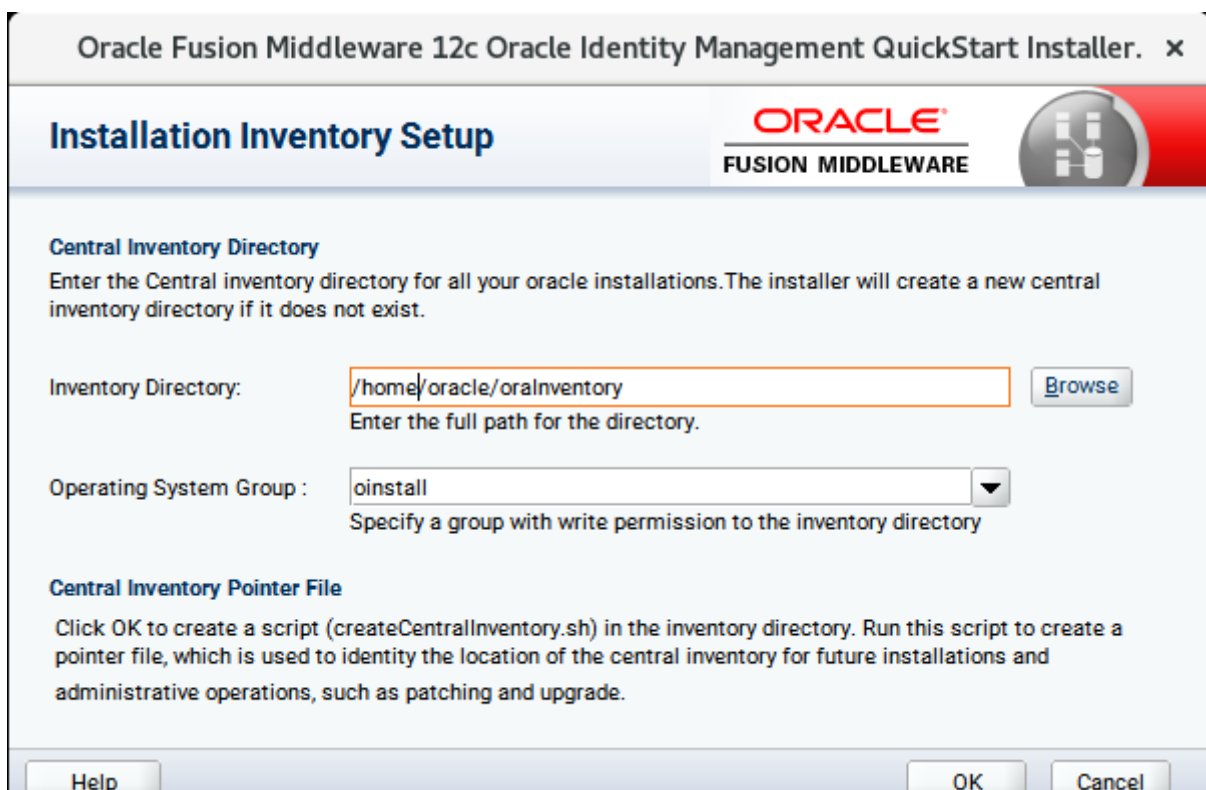
1-2. Log in to the target system (SLES 15 SP4 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <https://www.oracle.com/downloads/#category-middleware>.

(Note: Please ensure the installation user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ("fmw_12.2.1.4.0_idmqs_Disk1_1of2.zip" and "fmw_12.2.1.4.0_idmqs_Disk1_2of2.zip") files and launch the installation program by running 'fmw_12.2.1.4.0_idmquickstart.jar'

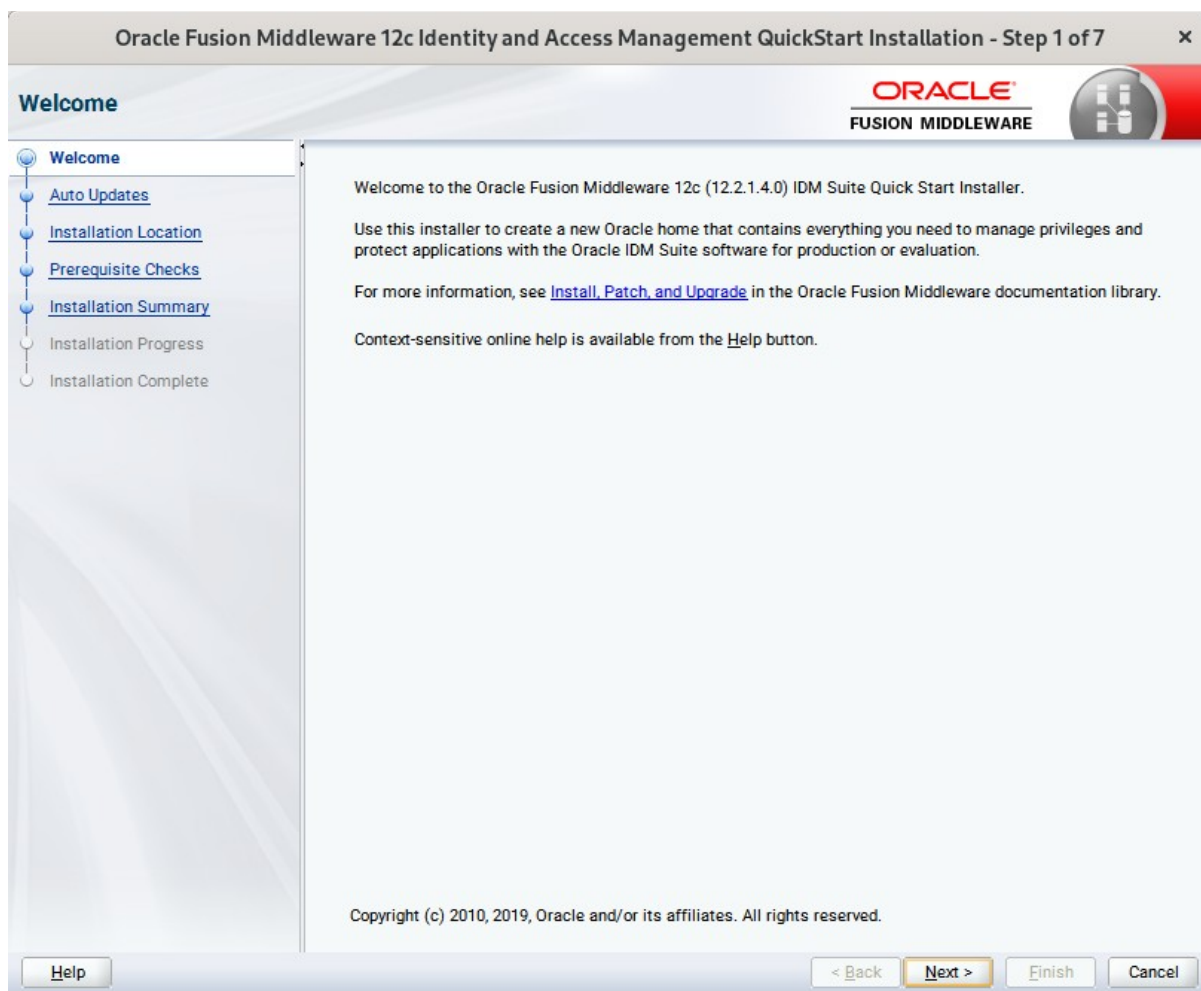
For the actual installation, follow the steps below:

1). Installation Inventory Setup.



If this is your first Oracle installation on a host that is running SLES, please use this screen to SPecify the location of the Oracle central inventory directory and Operating System Group Name, then click **OK** to continue.

2). **Welcome** page appears.



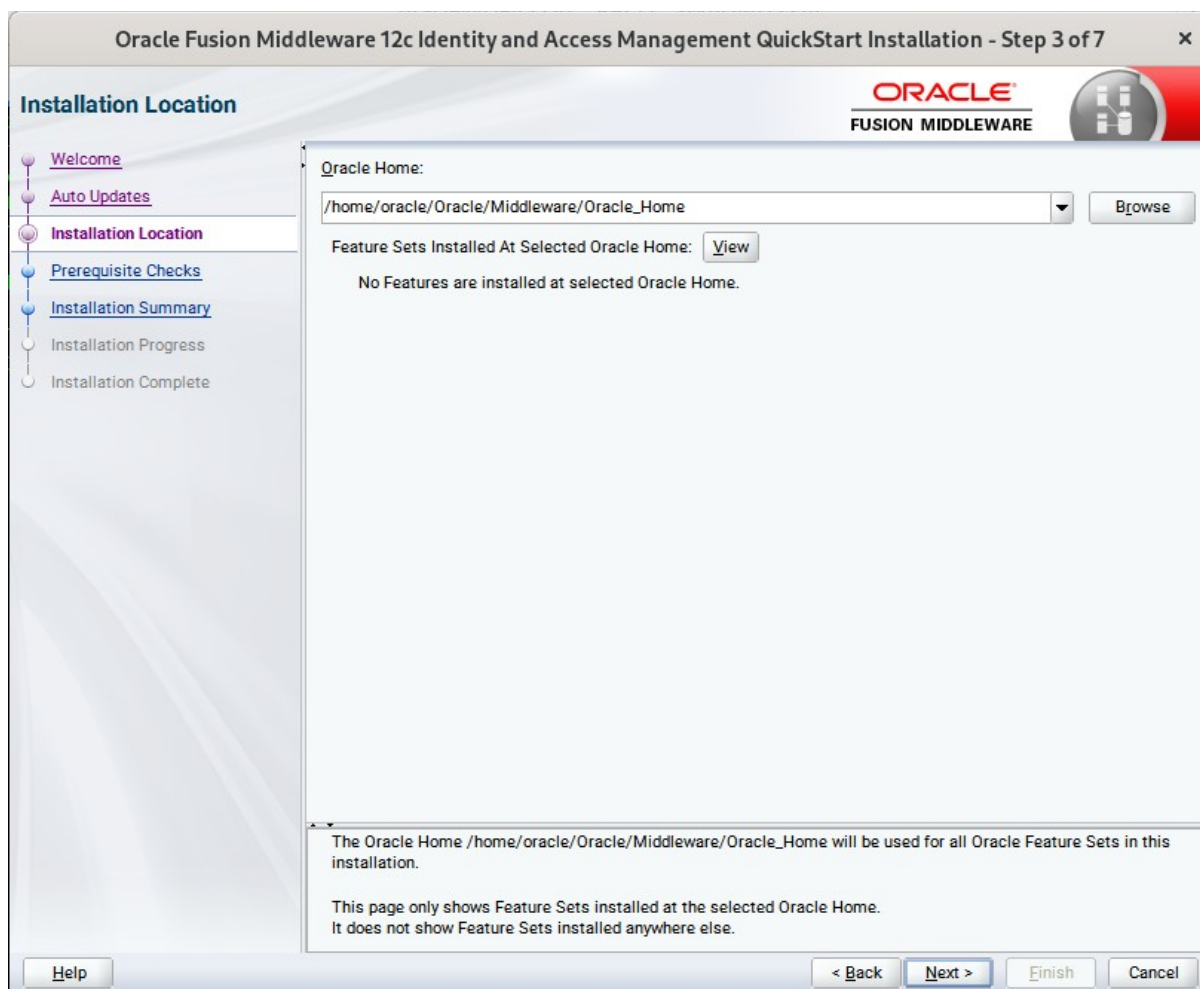
This page welcomes you to the installation. Click **Next** to continue.

3). The **Auto Updates** page appears.

The screenshot shows the 'Auto Updates' page in the Oracle Fusion Middleware 12c Identity and Access Management QuickStart Installation. The window title is 'Oracle Fusion Middleware 12c Identity and Access Management QuickStart Installation - Step 2 of 7'. The page has a sidebar with navigation links: Welcome, Auto Updates (selected), Installation Location, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main content area has the Oracle Fusion Middleware logo and a navigation pane. The 'Auto Updates' section is active, showing three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option has a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option has 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom of the window are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

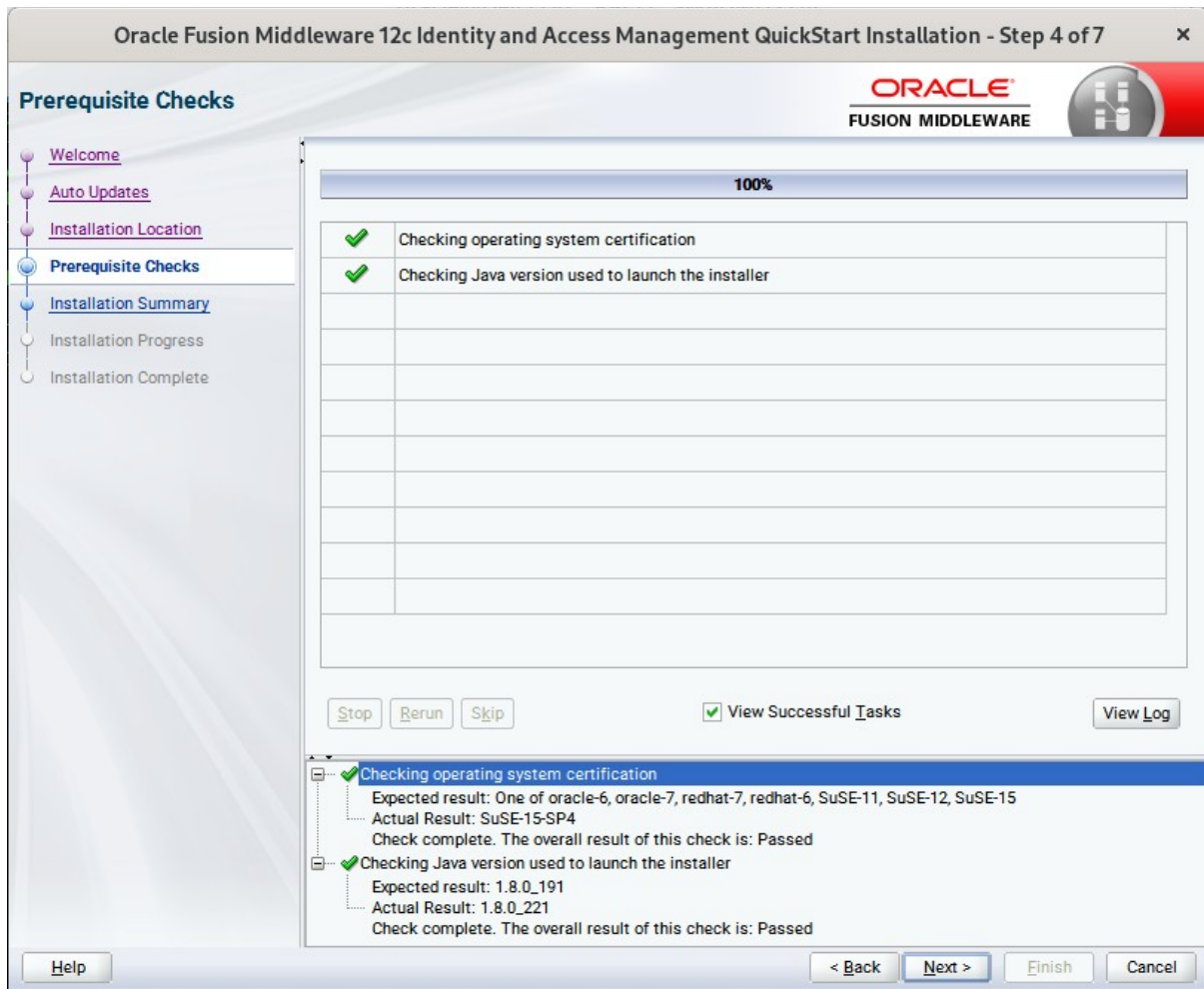
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

4). The **Installation Location** page appears.



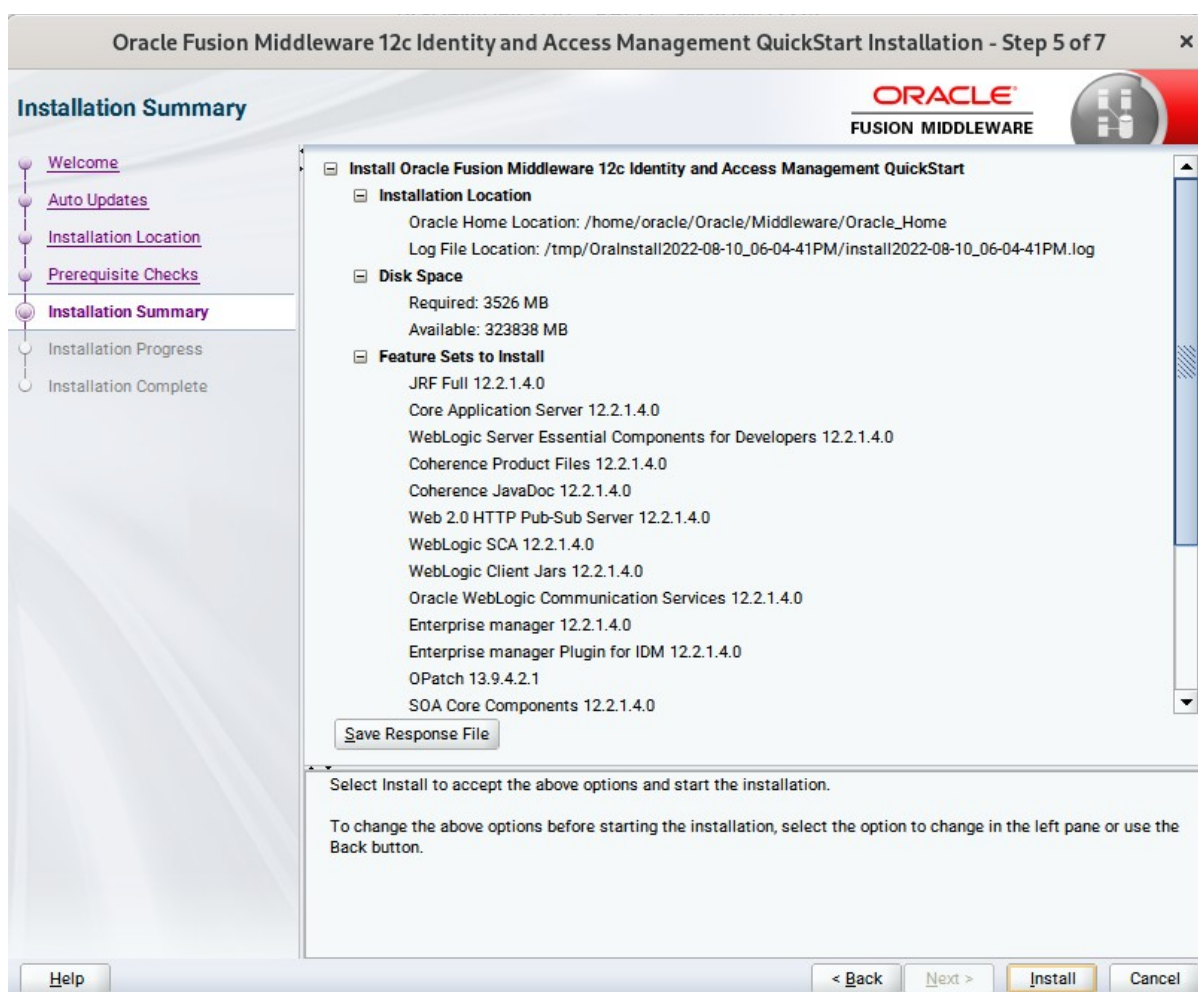
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

5). The **Prerequisites Checks** page appears.



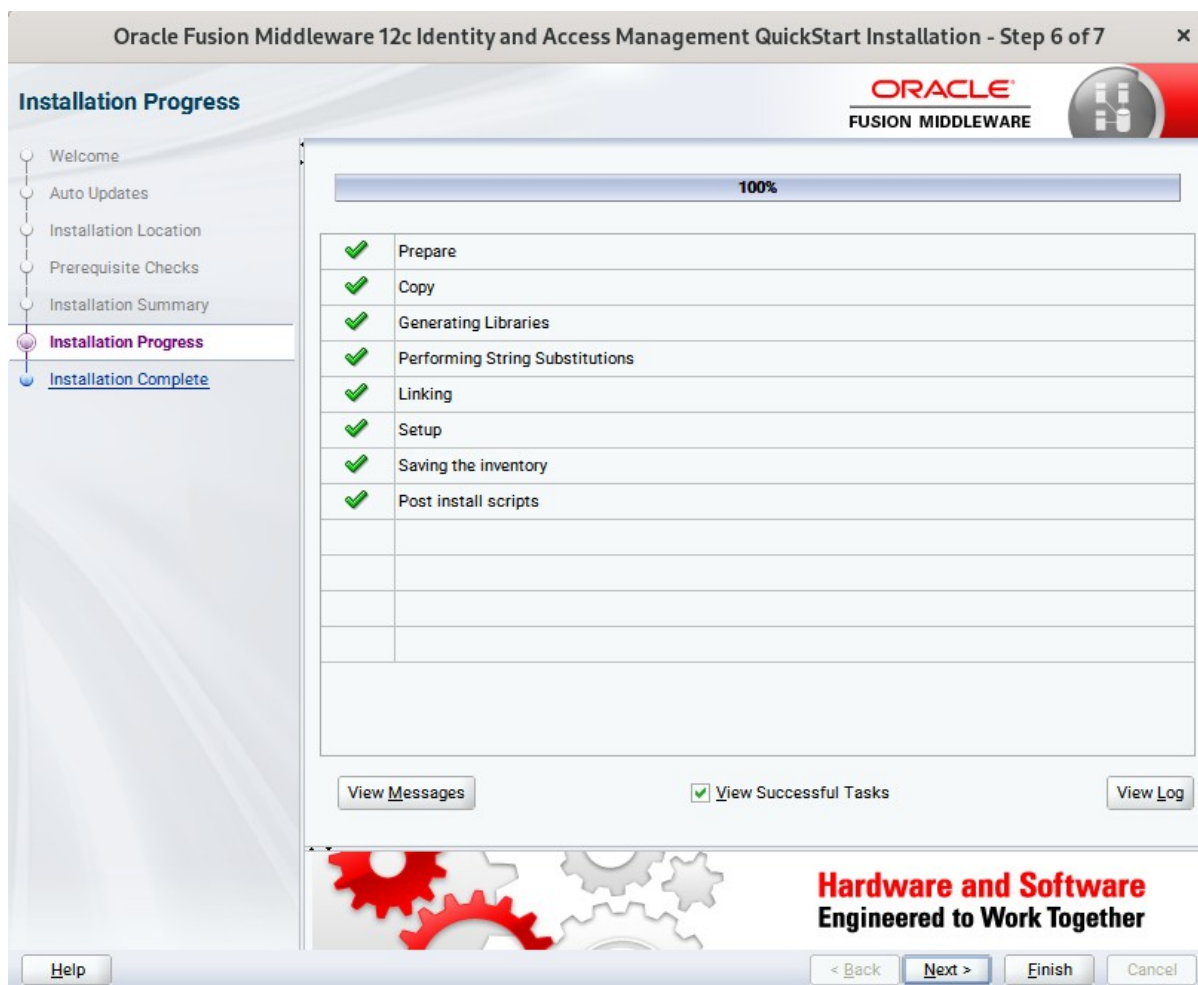
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

6). The **Installation Summary** page appears.



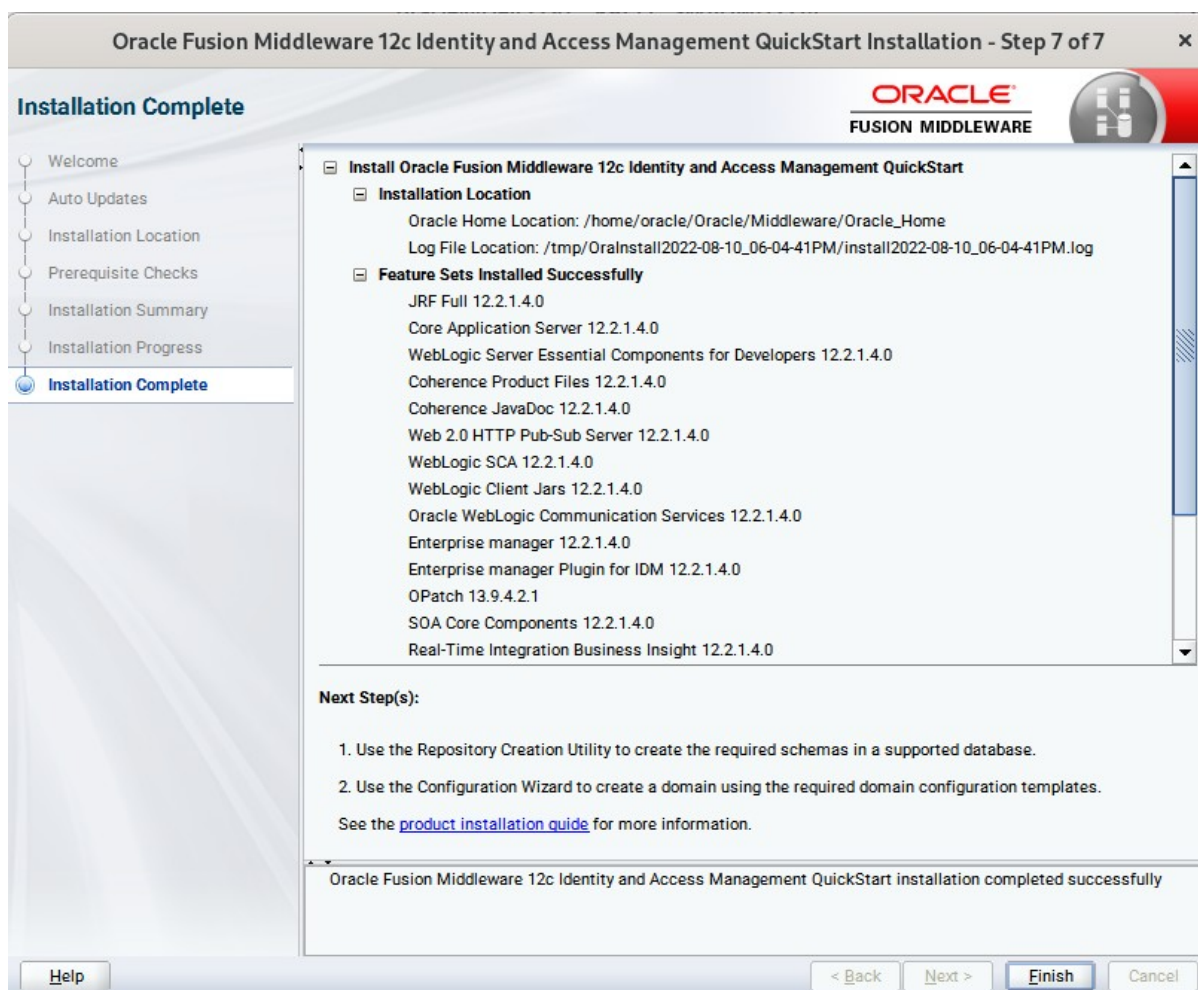
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

7). The **Installation Progress** page appears.



This page shows you the progress of the installation, and will warn you if there are any problems. You can view messages and logs from this page, but typically no action is required here. When progress is complete, click **Next** (go to a Summary page). Alternatively, you can click **Finish**.

8). If you clicked **Next**, the **Installation Complete** page appears, showing you the components that have been installed.



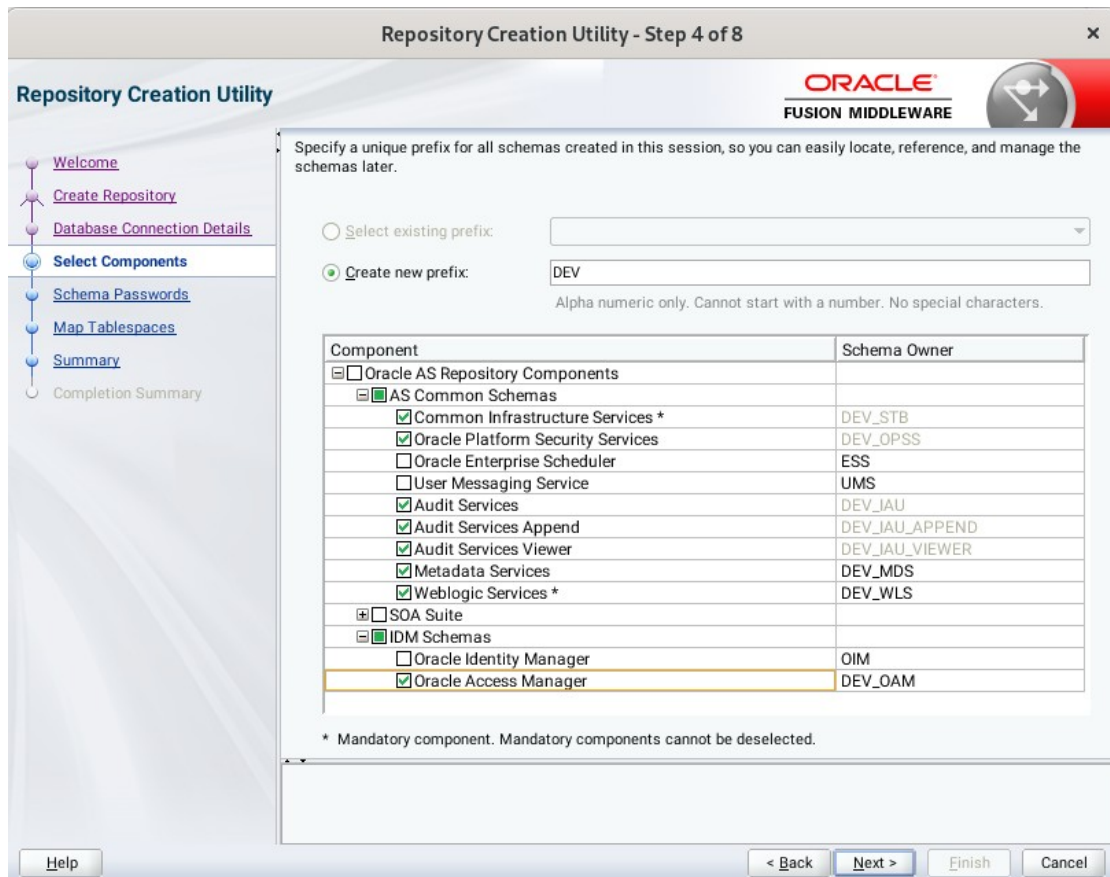
This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

2. Configuring the Oracle Access Manager Domain

2-1. Creating Database Schema through Repository Creation Utility for OAM.

Repository Creation Utility (RCU) is available with the Oracle Fusion Middleware Infrastructure 12c distribution. Run `$FMW_HOME/oracle_common/bin/rcu` and create required database schemas for Oracle Access Manager.

Screenshot: Database schemas creating for Oracle Access Manager.



Select the **Create new prefix** radio button and specify a custom prefix (such as DEV). Select the **Oracle Access Manager** schema, this action automatically selects the schemas as dependencies.

Ensure the schema creation is successful.

Repository Creation Utility - Step 8 of 8

Repository Creation Utility ORACLE FUSION MIDDLEWARE

Database details:

Host Name: Dell5530
Port: 1521
Service Name: SUSE
Connected As: sys
Operation: System and Data Load concurrently
Execution Time: 1 minute 42 seconds

RCU Logfile: /tmp/RCU2022-08-10_18-16_2102799114/logs/rcu.log
Component Log Directory: /tmp/RCU2022-08-10_18-16_2102799114/logs
View Log: rcu.log

Prefix for (prefixable) Schema DEV
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.384(sec)	stb.log
Oracle Platform Security Services	Success	00:14.769(sec)	opss.log
Oracle Access Manager	Success	00:15.248(sec)	oam.log
Audit Services	Success	00:11.866(sec)	iau.log
Audit Services Append	Success	00:09.148(sec)	iau_append.log
Audit Services Viewer	Success	00:09.151(sec)	iau_viewer.log
Metadata Services	Success	00:11.936(sec)	mds.log
Weblogic Services	Success	00:13.751(sec)	wls.log

Help < Back Next > Create Close

2-2. Configuring a Domain for Oracle Access Manager(OAM) using the Config Wizard

In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE_HOME/oracle_common/common/bin** directory.

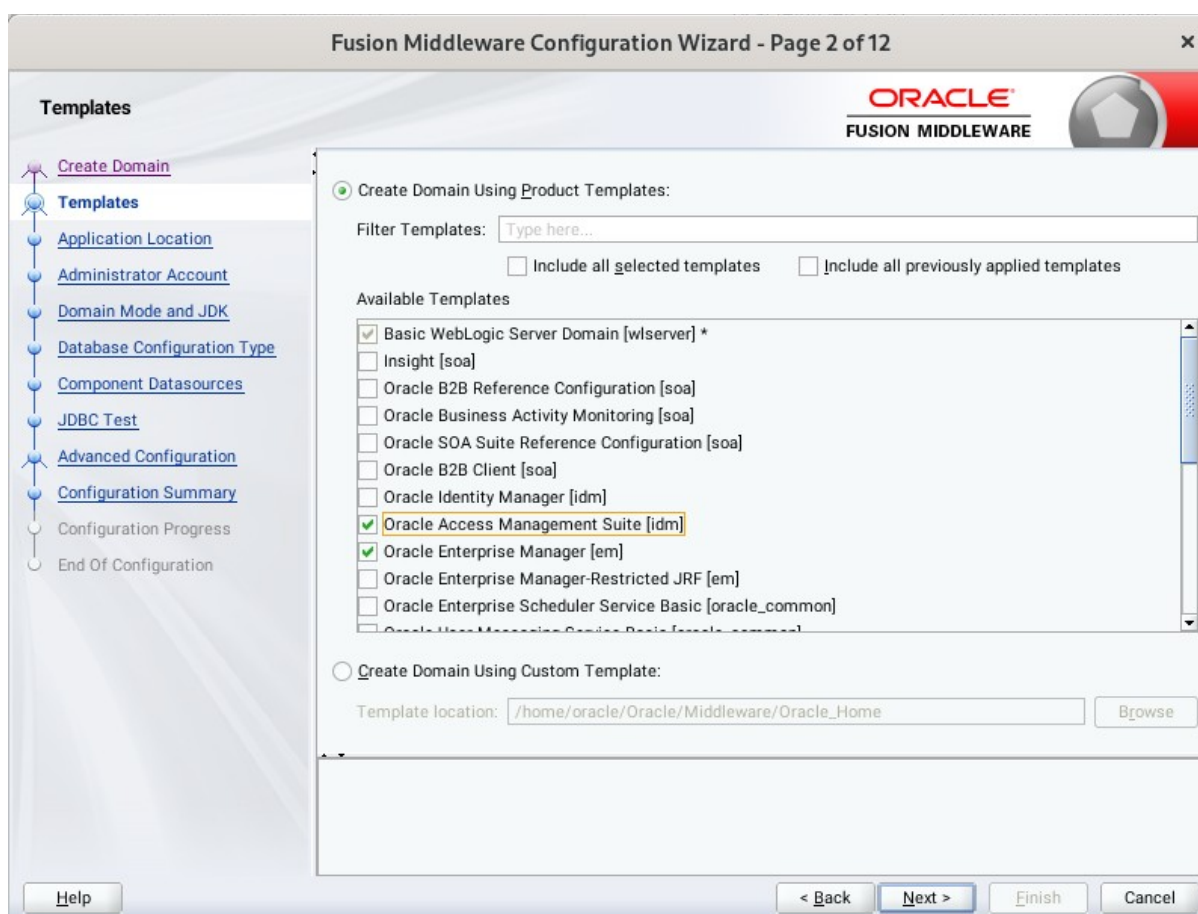
Follow these steps:

1). On the Configuration Type screen, select **Create a new domain**, and enter the desired domain home path.



Click **Next** to continue.

2). The **Templates** screen appears.



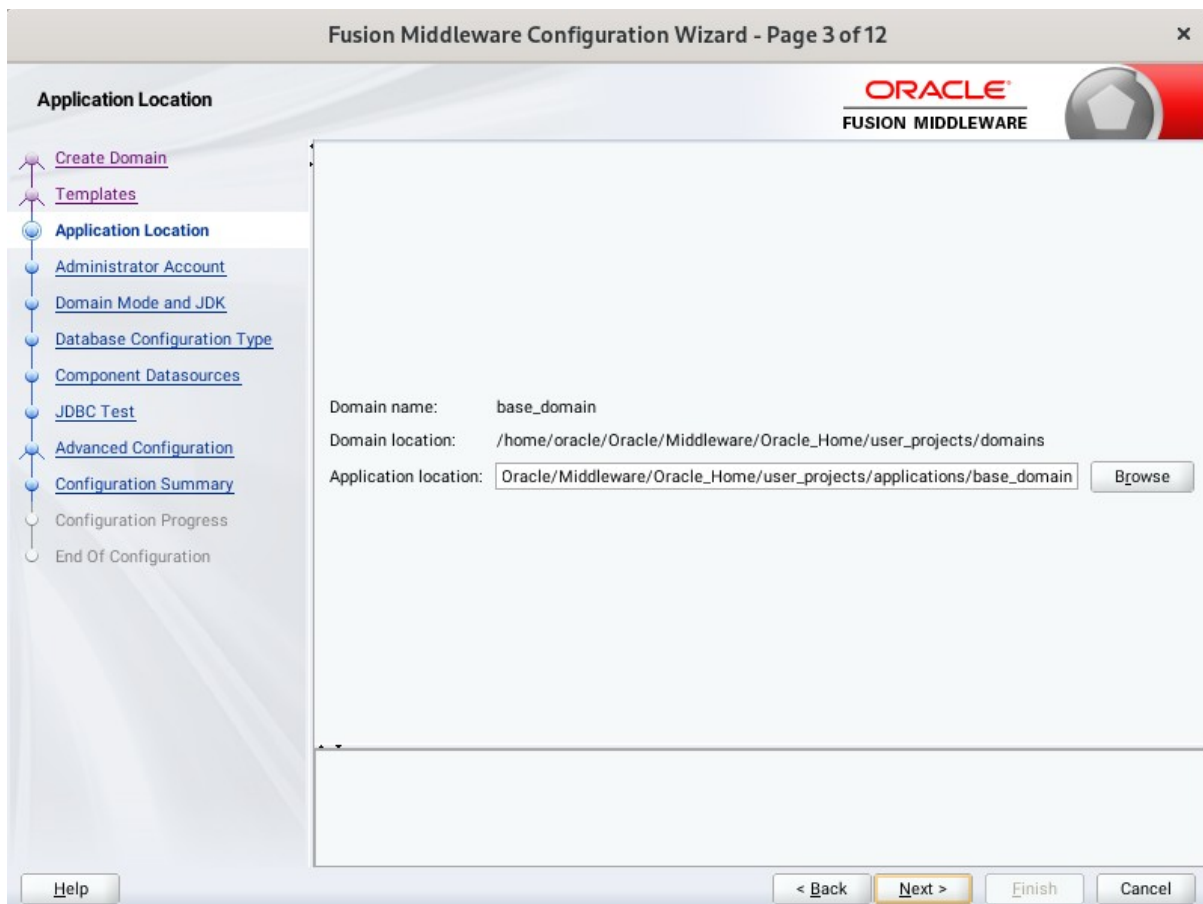
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Access Management Suite [idm]**.

Selecting these templates automatically selects the following as dependencies:

- Oracle Enterprise Manager [em]
- Oracle JRF [oracle_common]
- WebLogic Coherence Cluster Extension [wlserver]

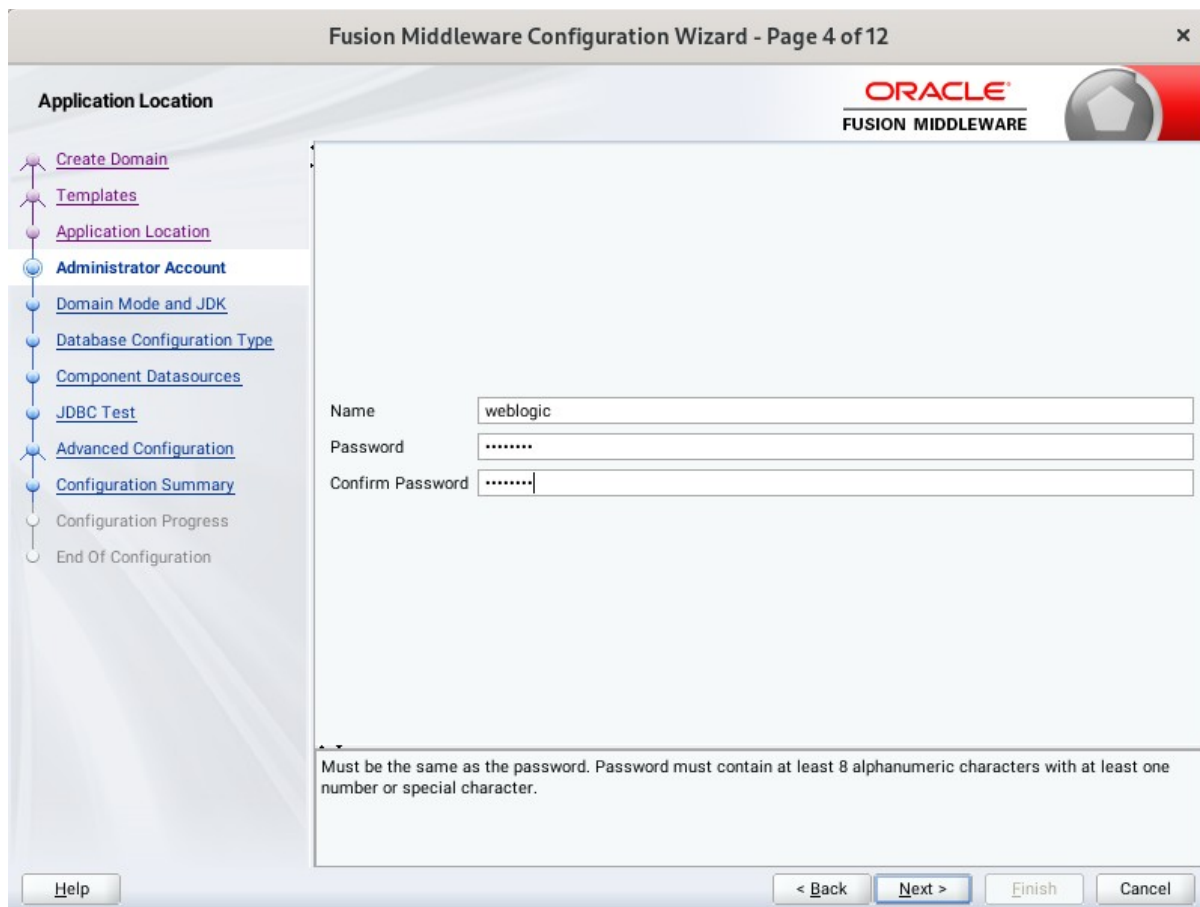
You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

3). The **Application Location** screen appears.



Keep the default value for Application location. Click **Next** to continue.

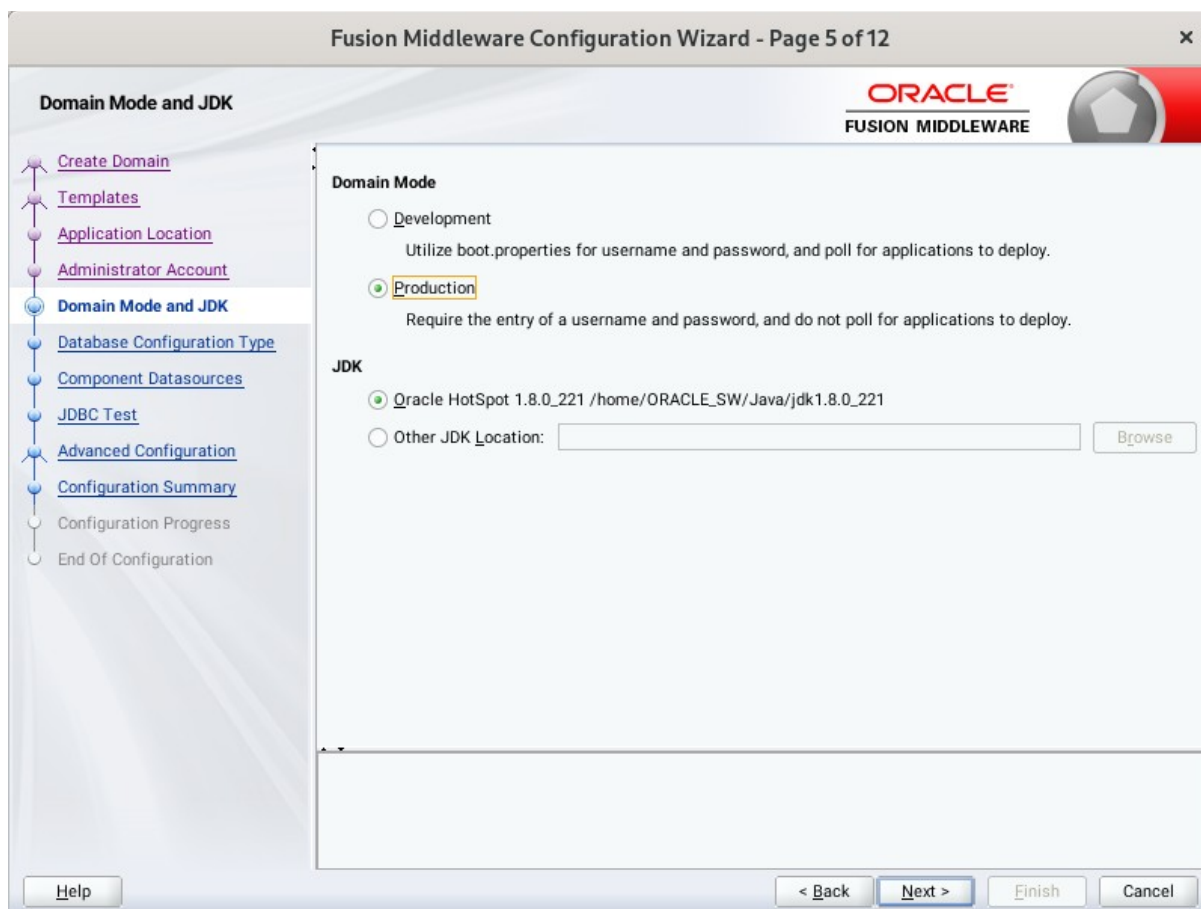
4). The **Administrator Account** screen appears.



The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 4 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists the following steps: Create Domain, Templates, Application Location, Administrator Account (highlighted), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters, and 'Confirm Password' with masked characters. Below the fields is a note: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

Enter the WebLogic Domain administration username and password. This information will be needed to access WebLogic Server Control and Fusion Middleware Control. Click **Next** to continue.

5). The **Domain Mode and JDK** screen appears.



Select **Production** in the **Domain Mode** field and select the **Oracle HotSpot JDK** in the **JDK** field. Click **Next** to continue.

6). The **Database Configuration Type** screen appears.

Fusion Middleware Configuration Wizard - Page 6 of 12

Database Configuration Type

Specify AutoConfiguration Options Using:

RCU Data Manual Configuration

Enter the database connection details using the schema credentials corresponding to Common Infrastructure Services component in the Repository Creation Utility. The Wizard uses this connection to automatically configure the datasources required for components in this domain.

Vendor: Oracle Driver: *Oracle's Driver (Thin) for Service connections; Versions:...

Connection Parameters Connection URL String

Host Name: Dell5530

DBMS/Service: suse Port: 1521

Schema Owner: DEV_STB Schema Password:

Get RCU Configuration Cancel

Connection Result Log

Connecting to the database server...OK
Retrieving schema data from database server...OK
Binding local schema components with retrieved data...OK

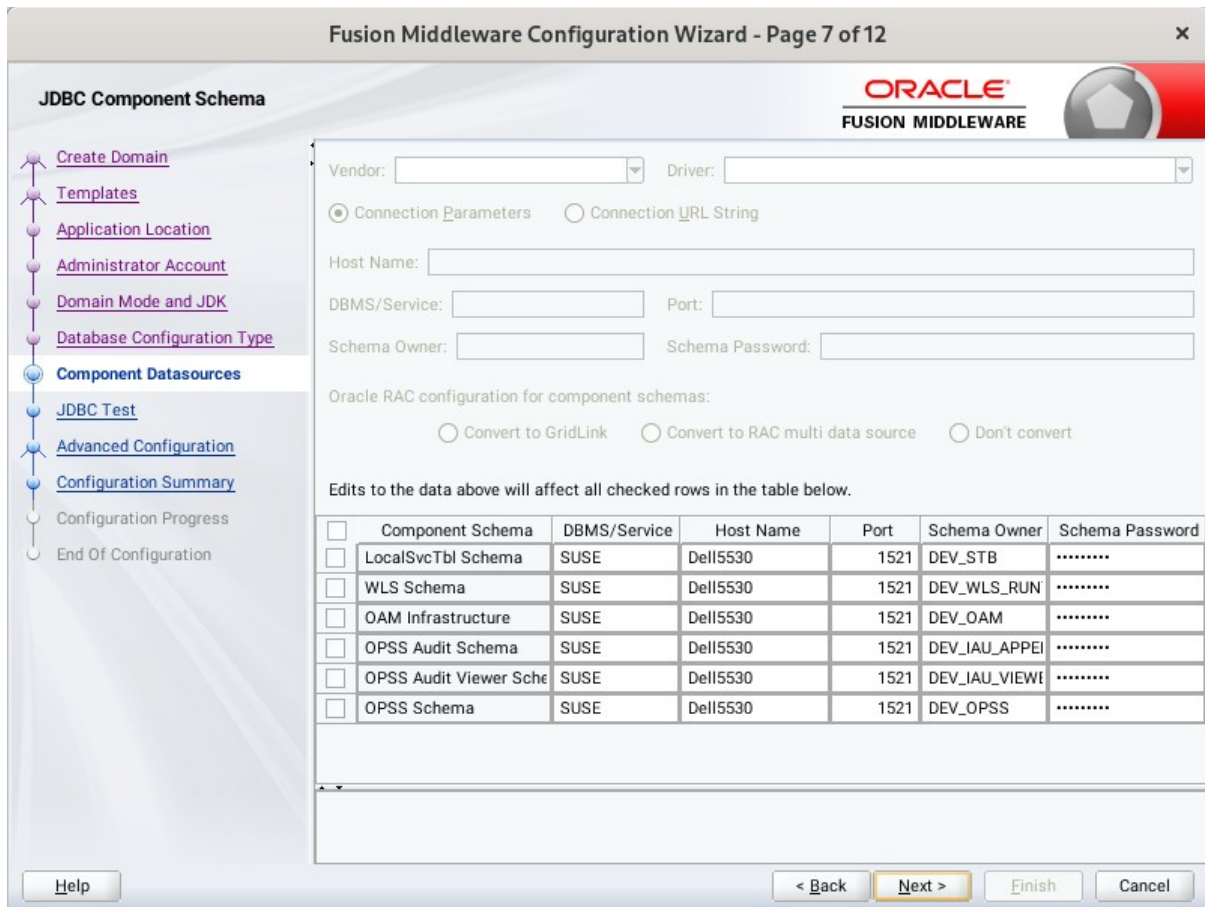
Successfully Done.

Click "Next" button to continue.

Help < Back Next > Finish Cancel

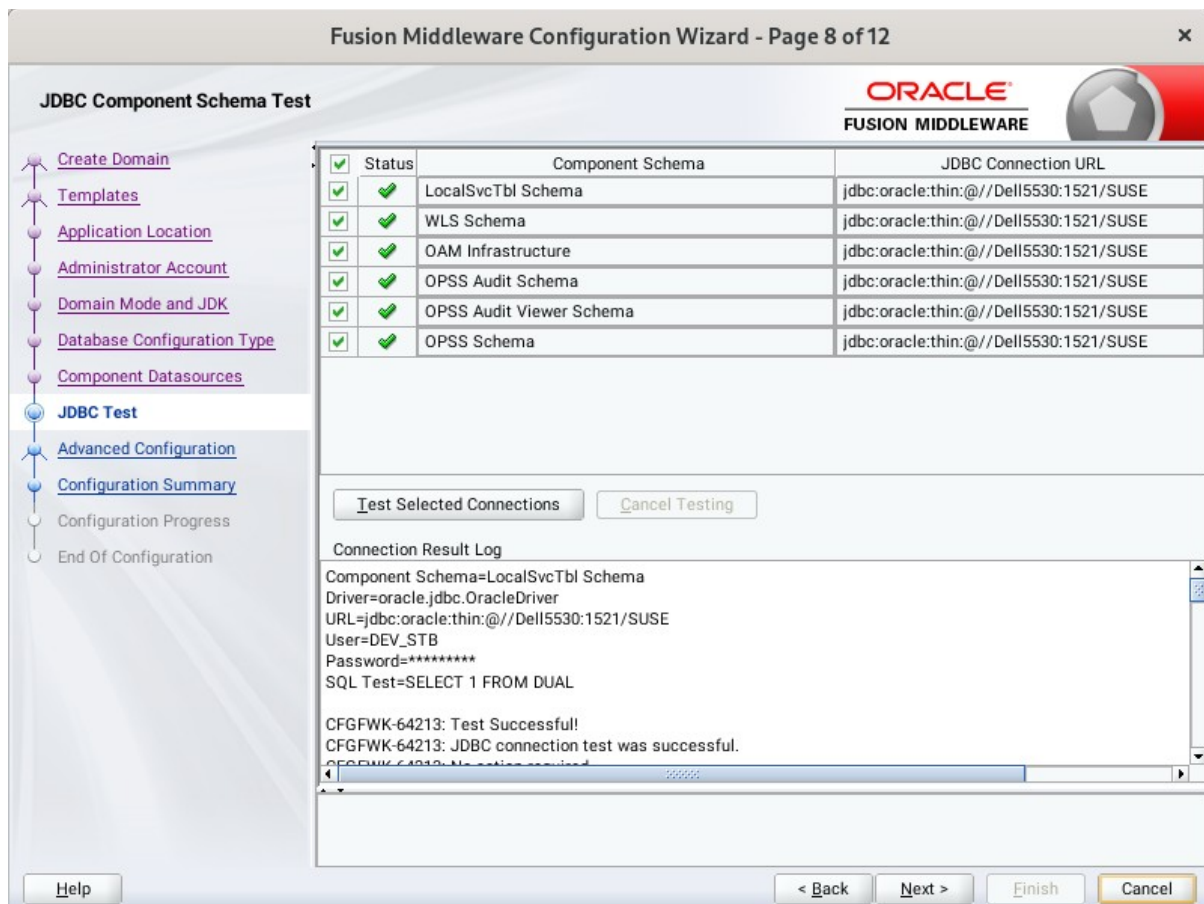
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

7). The **JDBC Component Schema** screen appears.



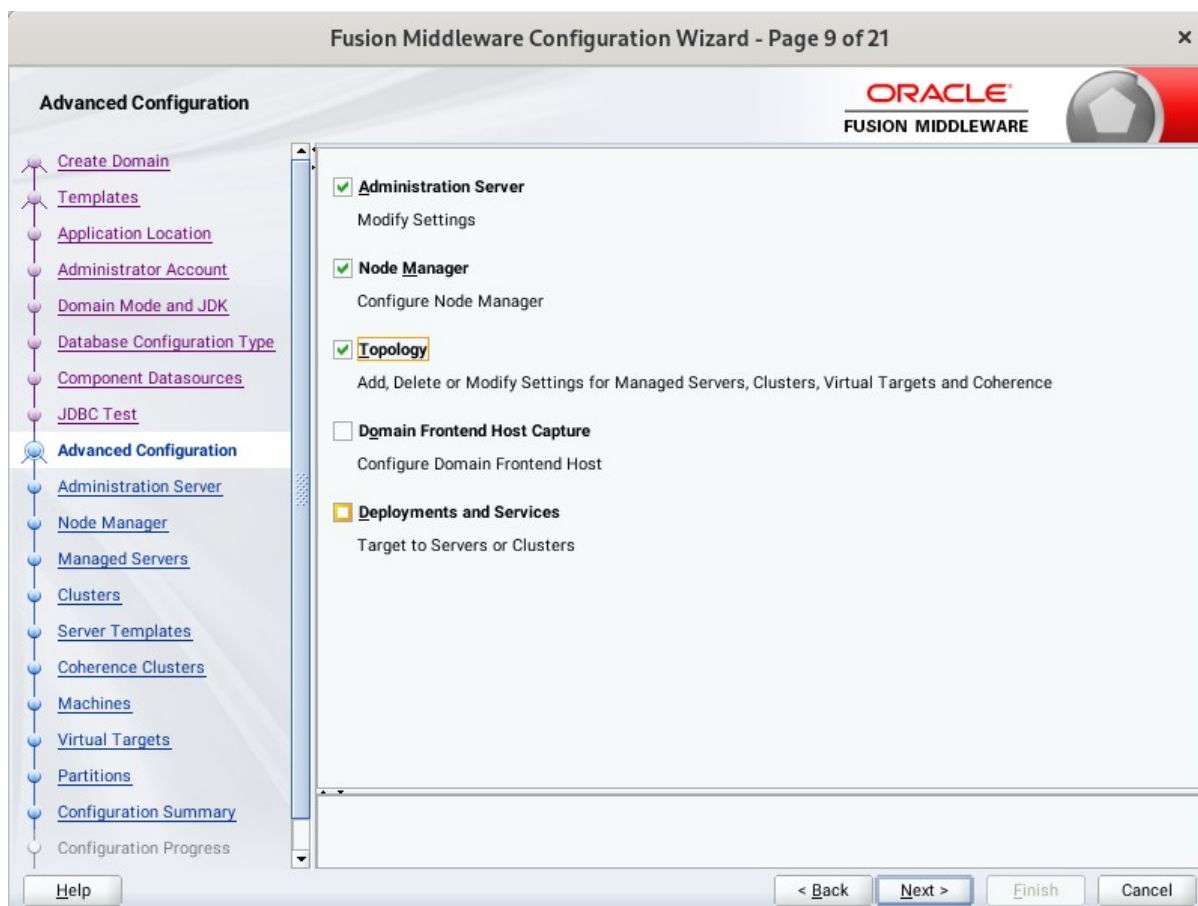
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

8). The **JDBC Component Schema Test** screen appears.



The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

9). The **Advanced Configuration** screen appears.



On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

10). The **Administration Server** screen appears.

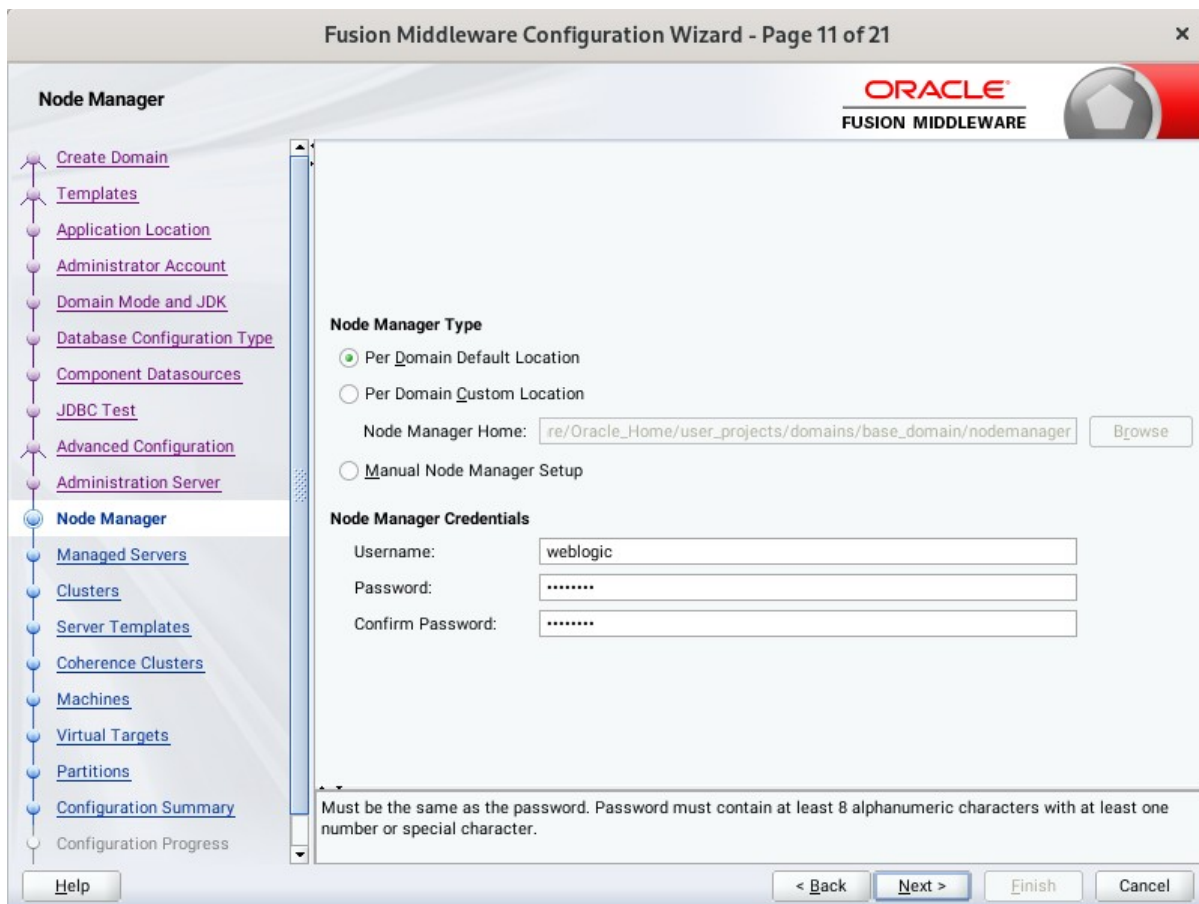
The screenshot shows the 'Administration Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 21'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'Administration Server' selected and highlighted in blue. The main area contains the following fields:

- Server Name: AdminServer
- Listen Address: 192.168.0.100 (selected in a dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty field)
- Server Groups: Unspecified (selected in a dropdown menu)

At the bottom, there is a validation message: 'The name must not be null or empty and may not contain any : , * ? % / _cloned.' Below this, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located at the bottom left of the window.

Use the **Administration Server** screen to select the IP address of the host. Select the drop-down list next to **Listen Address** and select the IP address of the host where the Administration Server will reside, or use the system name or DNS name that maps to a single IP address. Click **Next** to continue.

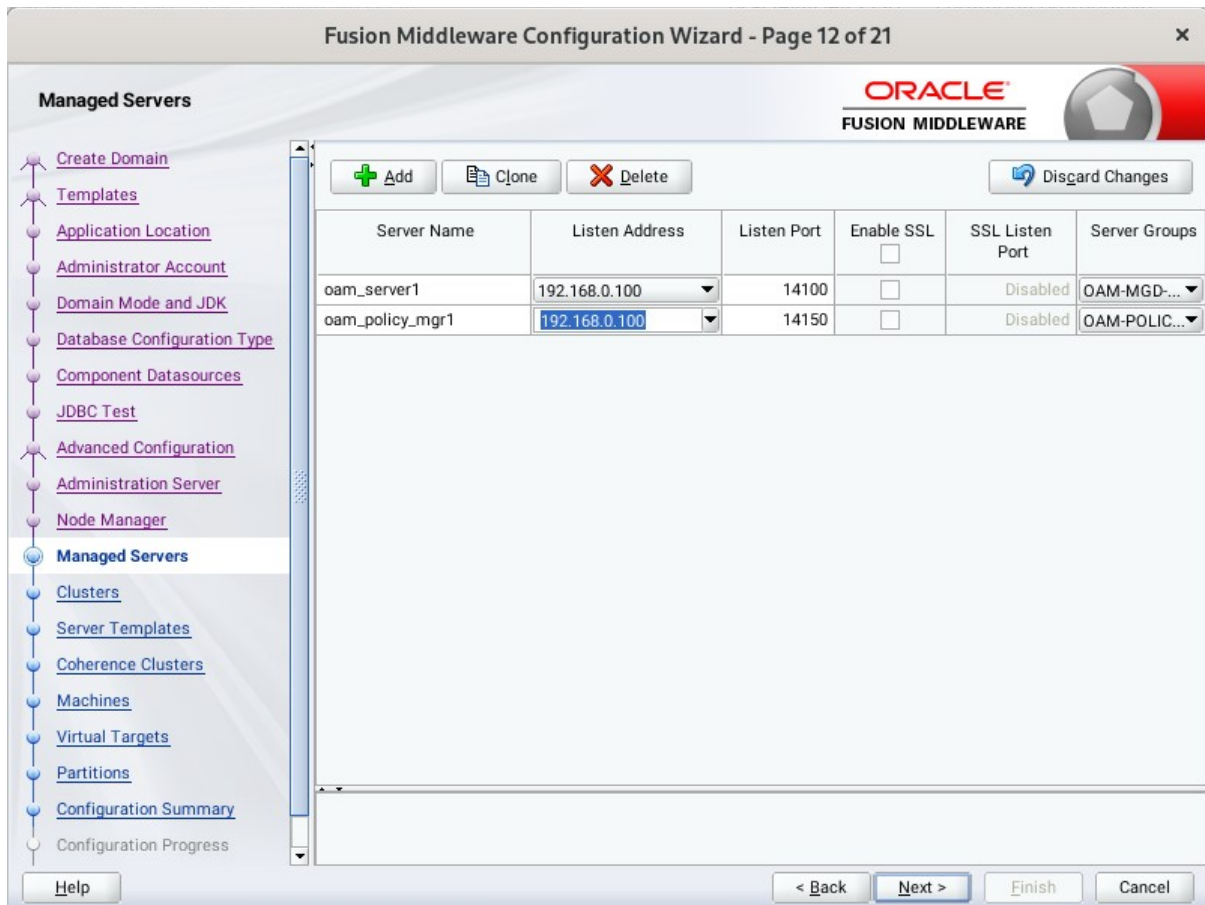
11). Configuring **Node Manager** screen appears.



The screenshot shows the "Fusion Middleware Configuration Wizard - Page 11 of 21" window. The "Node Manager" section is selected in the left-hand navigation pane. The main content area is titled "Node Manager" and features the Oracle Fusion Middleware logo. The "Node Manager Type" section has three radio button options: "Per Domain Default Location" (selected), "Per Domain Custom Location", and "Manual Node Manager Setup". The "Per Domain Custom Location" option has a text field for "Node Manager Home" containing the path "/re/Oracle_Home/user_projects/domains/base_domain/nodemanager" and a "Browse" button. The "Node Manager Credentials" section includes three text fields: "Username" (containing "weblogic"), "Password" (containing "*****"), and "Confirm Password" (containing "*****"). A note below these fields states: "Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character." At the bottom of the window, there are four buttons: "Help", "< Back", "Next >", "Finish", and "Cancel".

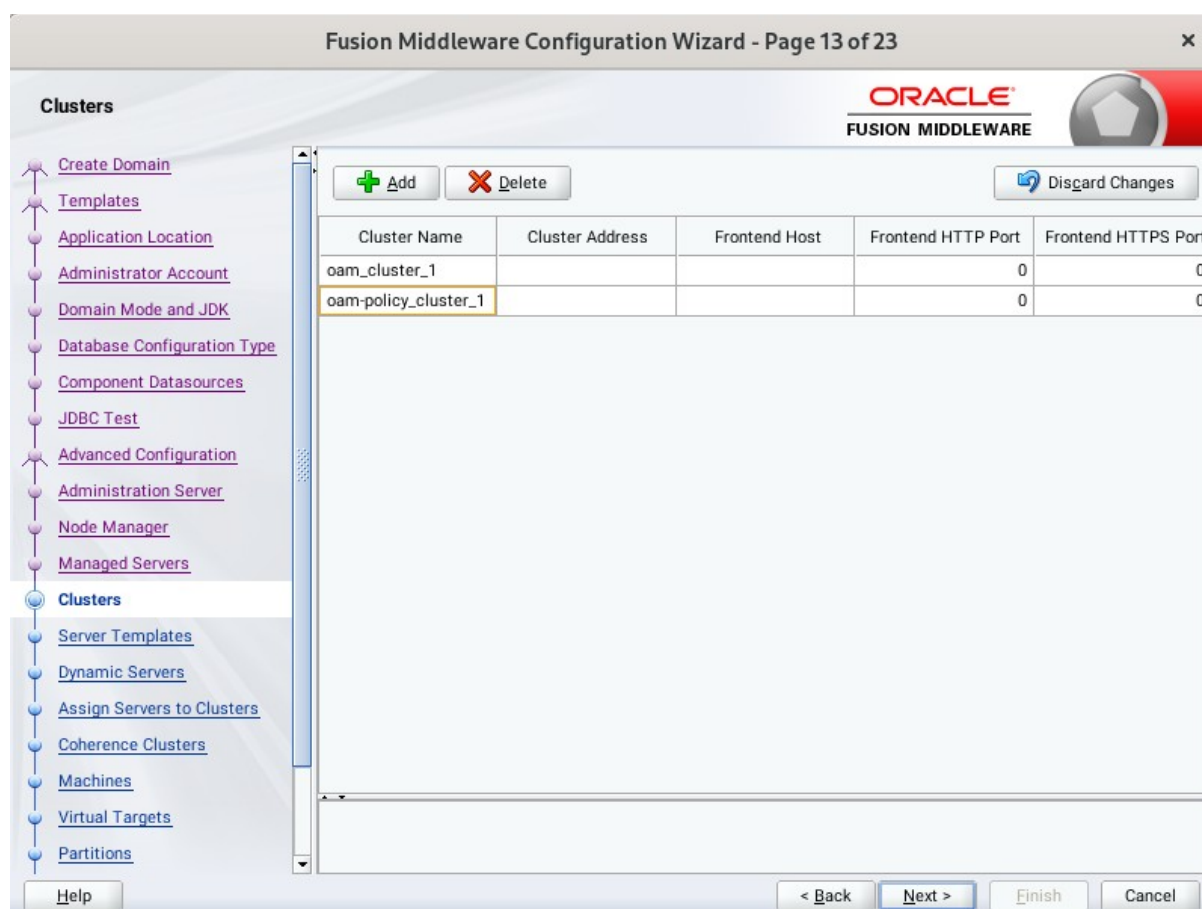
Select **Per Domain Default Location** as the Node Manager type, then Specify Node Manager credentials. Click **Next** to continue.

12). The **Managed Servers** screen appears.



On the **Managed Servers** screen, new Managed Servers named: *oam_server1* and *oam_policy_mgr1* are automatically created. In the **Listen Address** drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. The default **Server Groups** have already been selected for each server. Click **Next** to continue.

13). The **Clusters** screen appears.



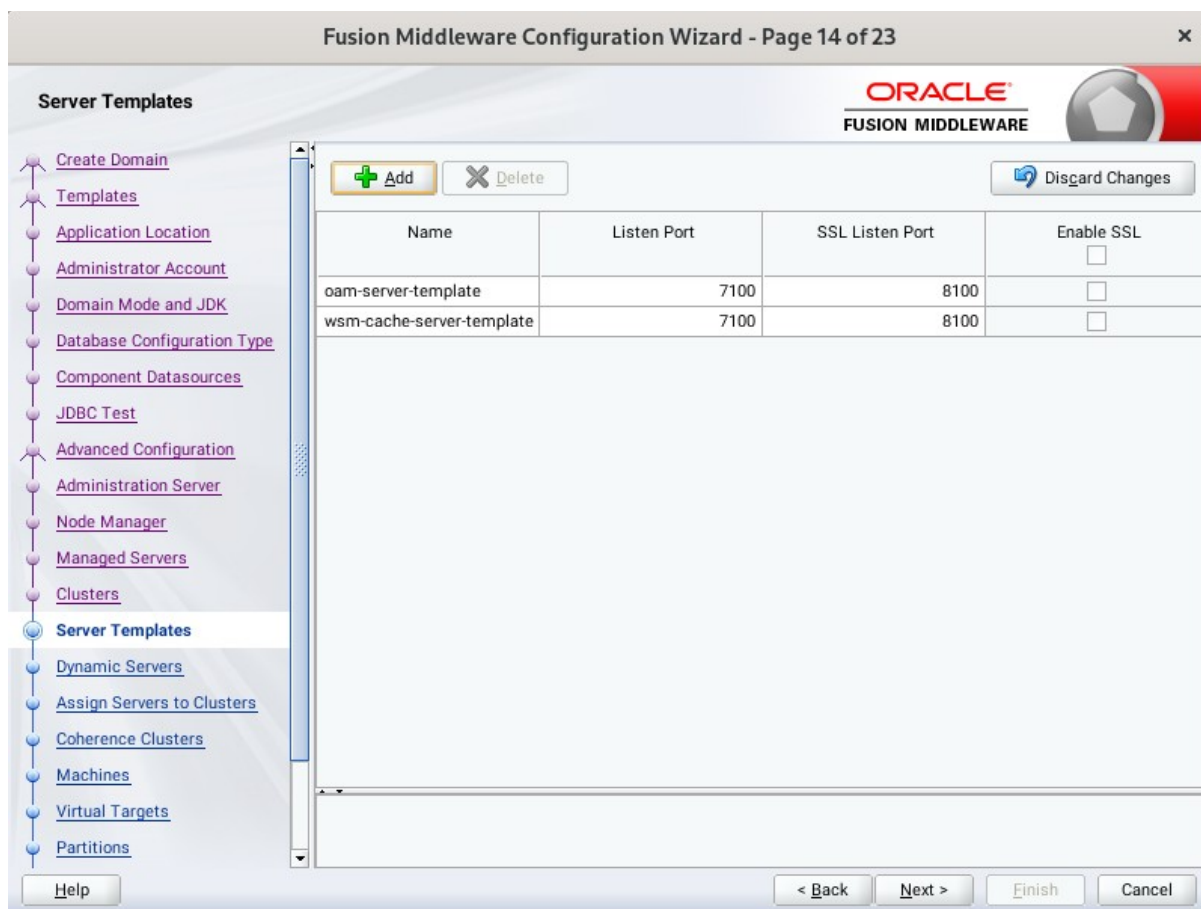
On the Clusters screen:

1. Click **Add**.
2. Specify *oam_cluster_1* in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create *oam-policy_cluster_1* cluster.

Click **Next** to continue.

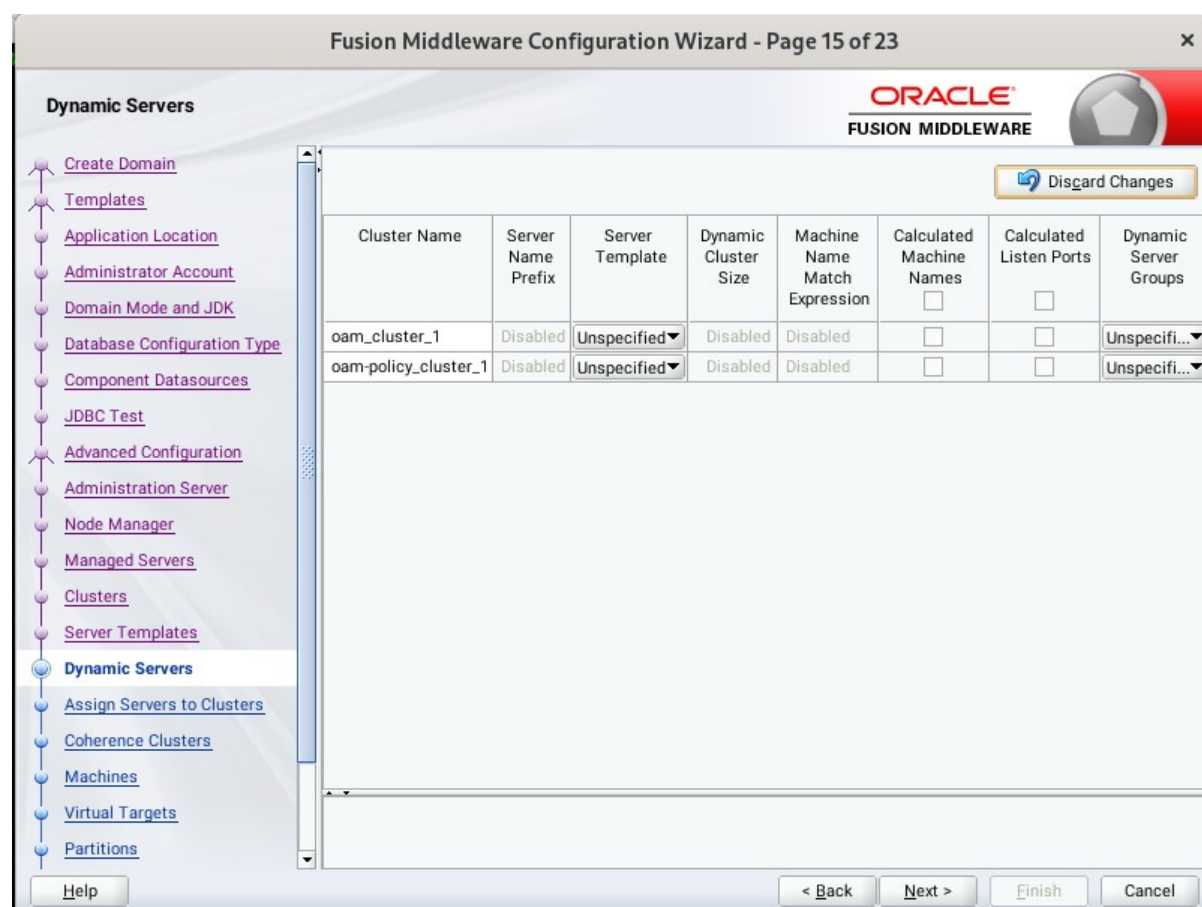
(Note: Configuring a non-clustered setup on a single node, skip this screen.)

14). The **Server templates** screen appears.



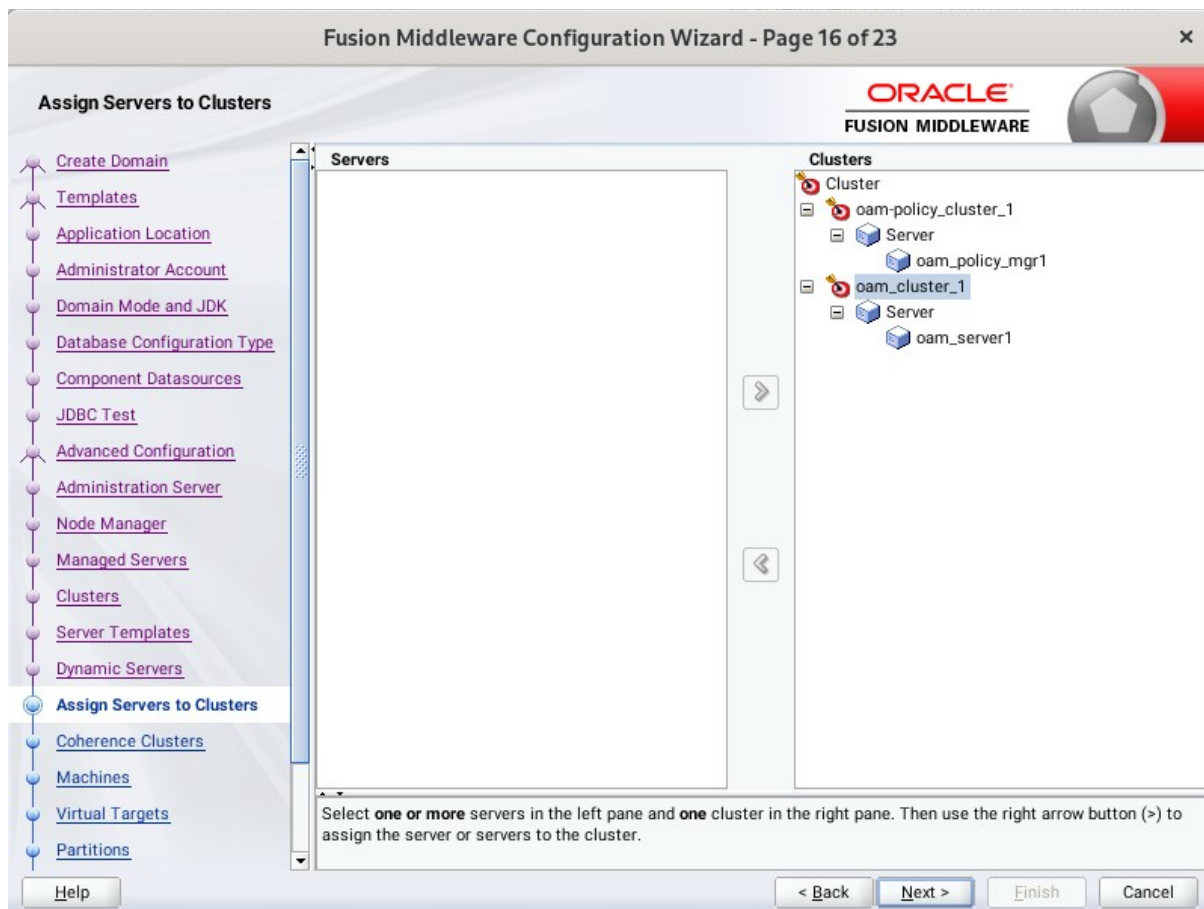
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

15). The **Dynamic Servers** screen appears.



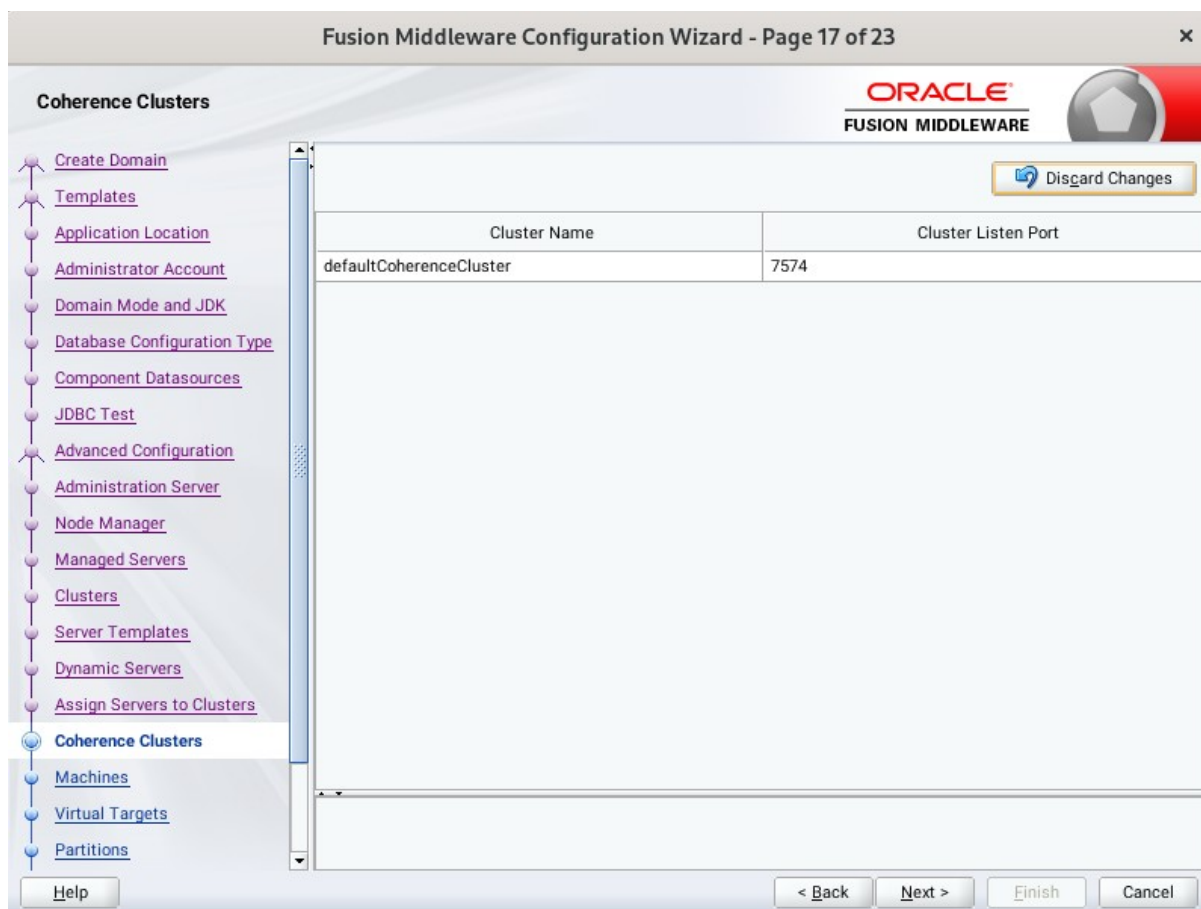
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

16). The **Assign Servers to Clusters** screen appears.



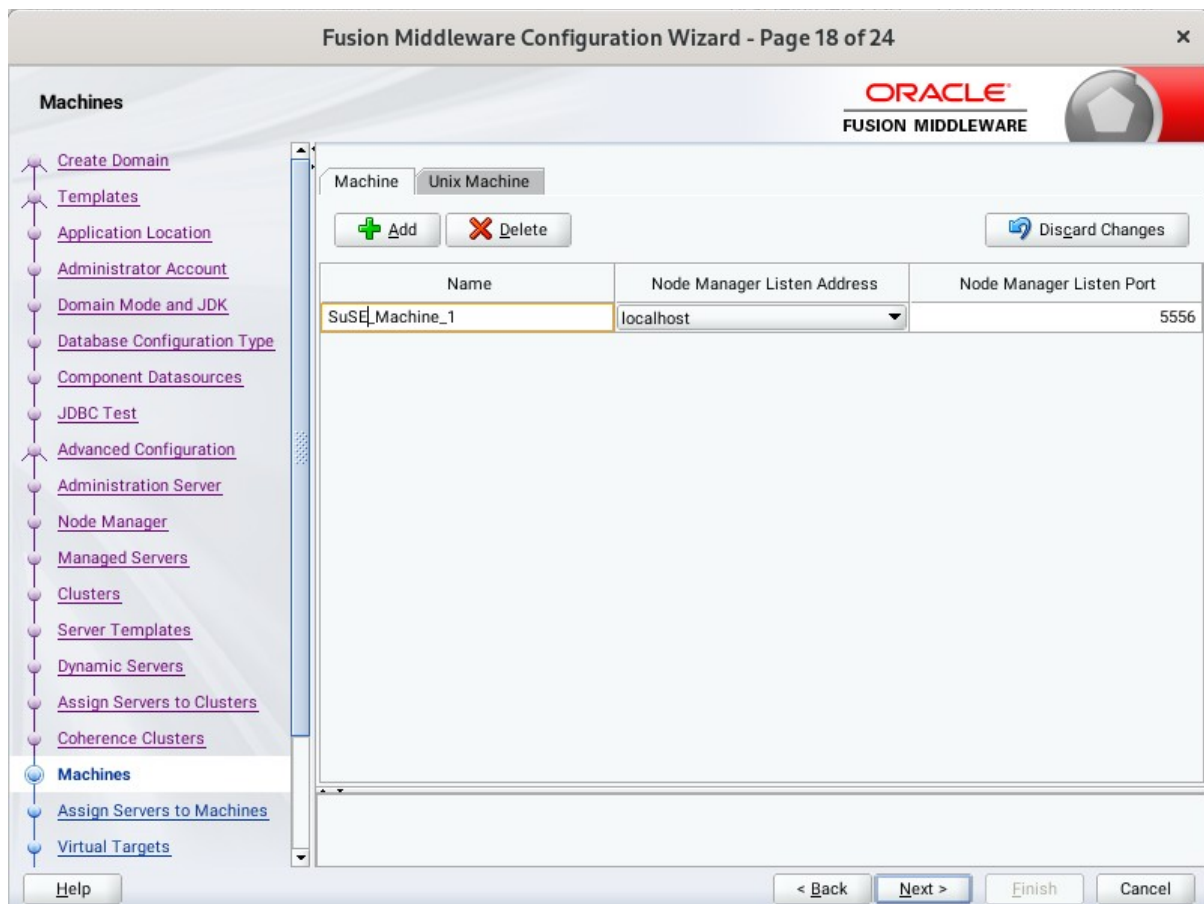
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

17). The **Coherence Clusters** screen appears.



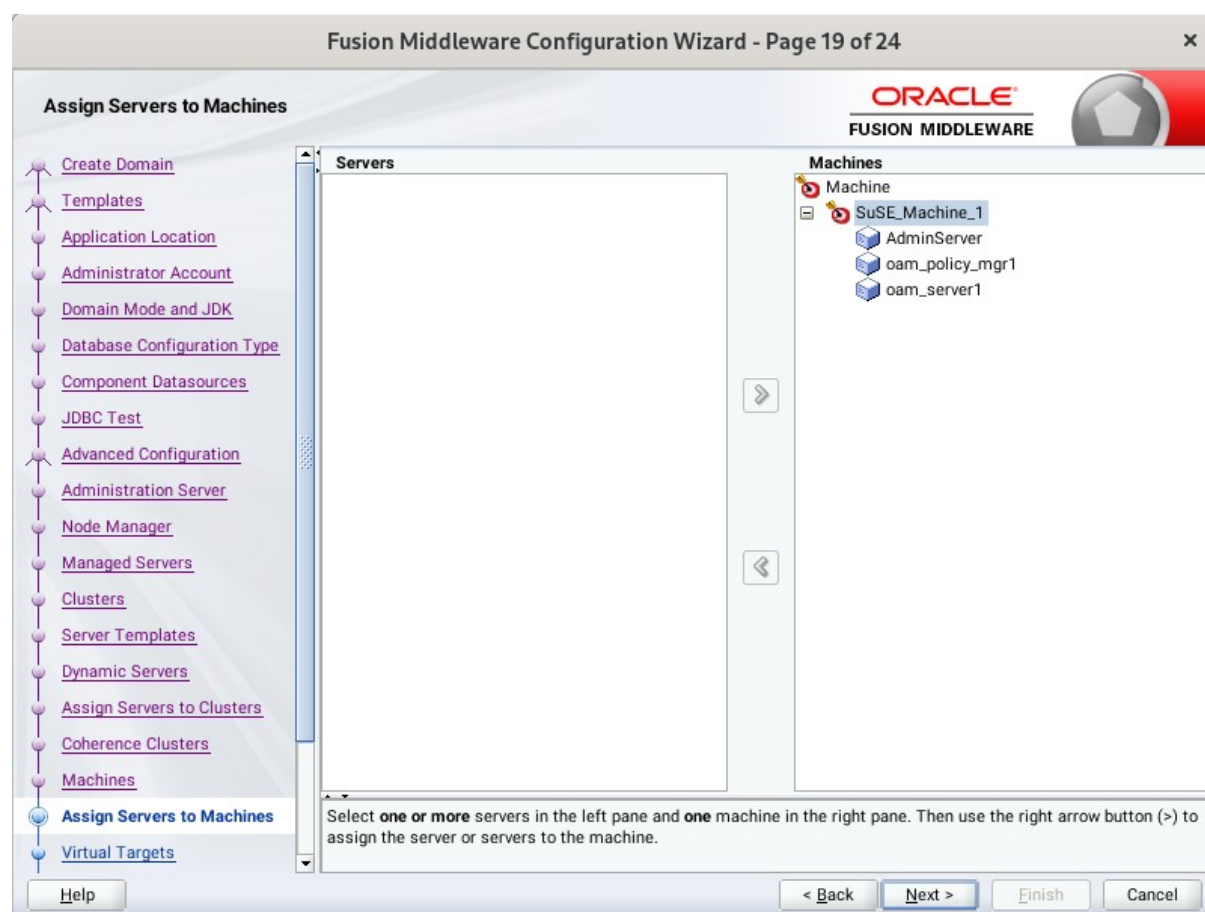
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

18). The **Machines** screen appears.



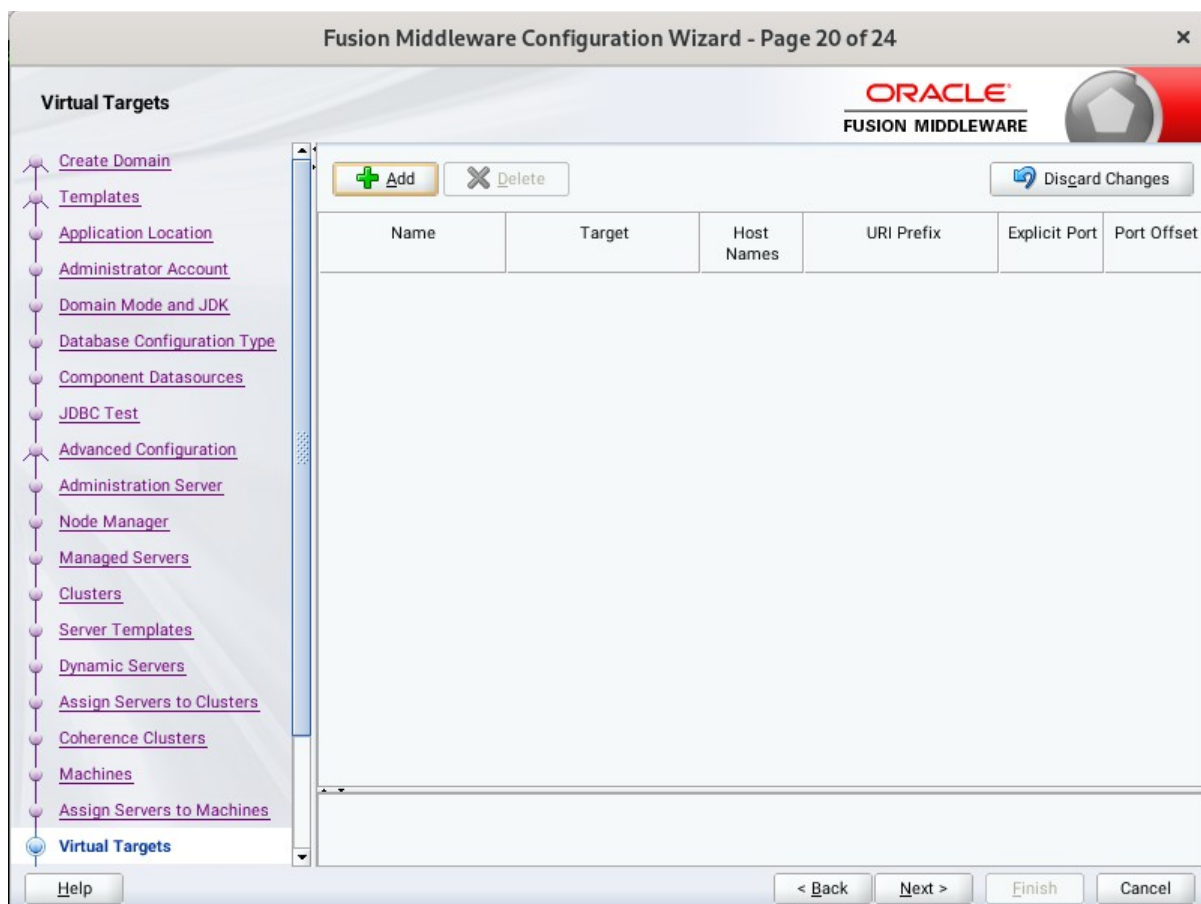
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

19). The **Assign Servers to Machines** screen appears.



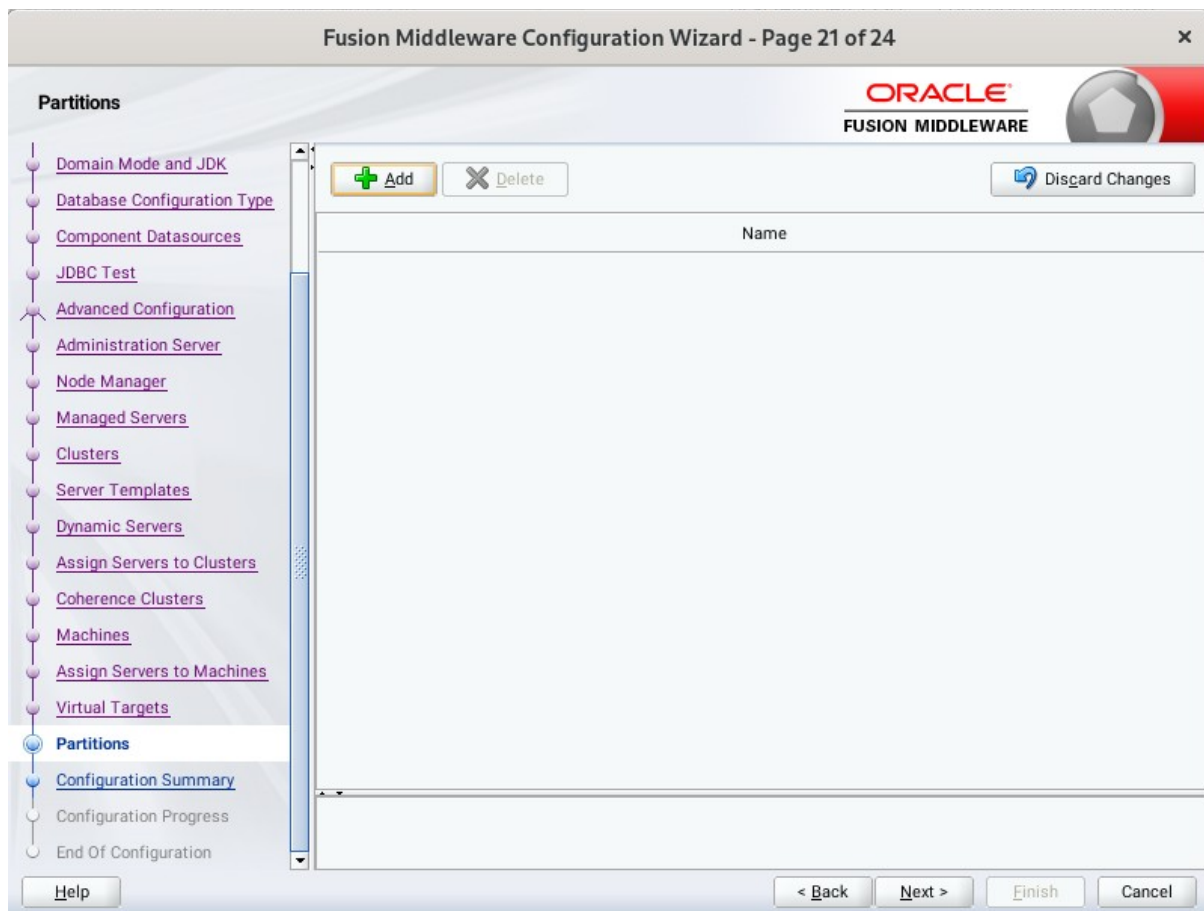
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

20). The **Virtual Targets** screen appears.



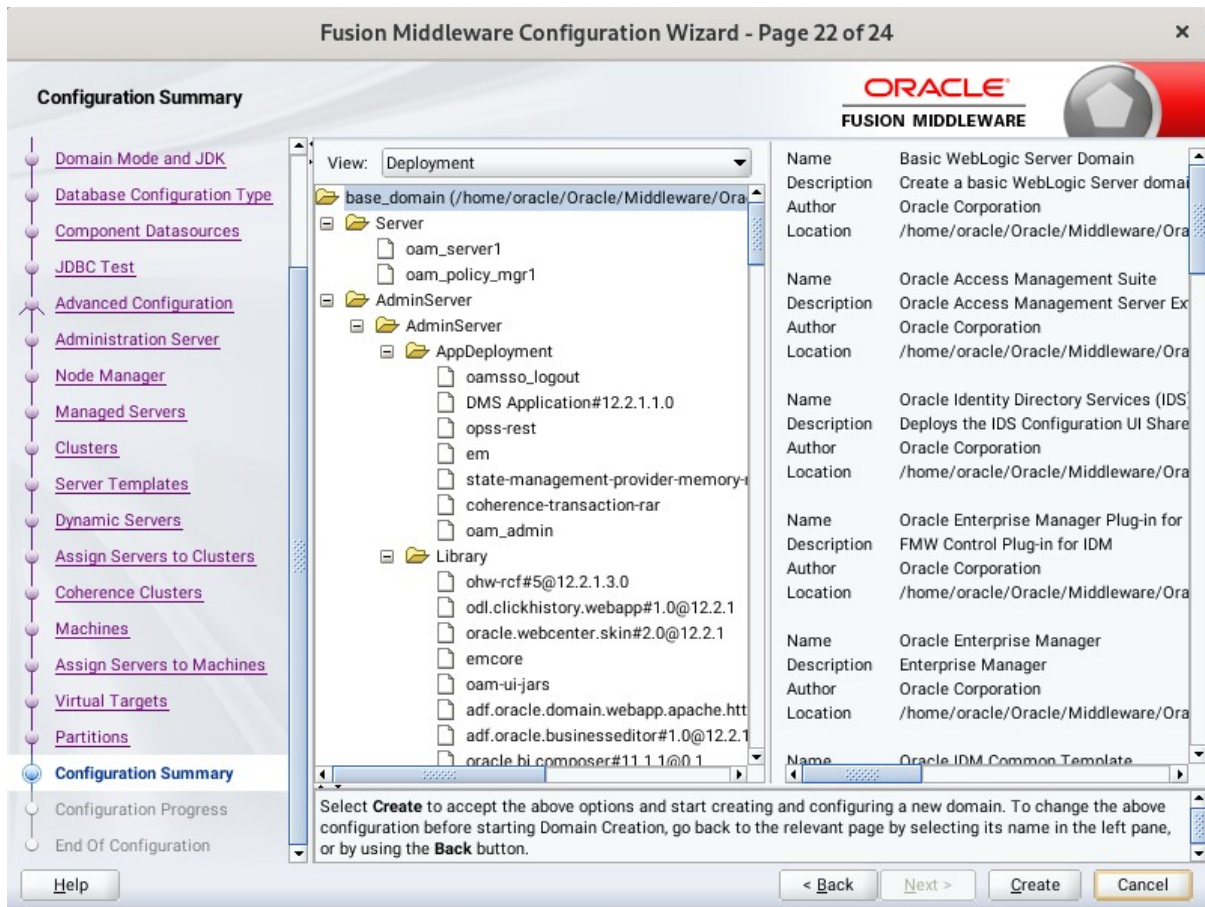
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next** to continue.

21). The **Partitions** screen appears.



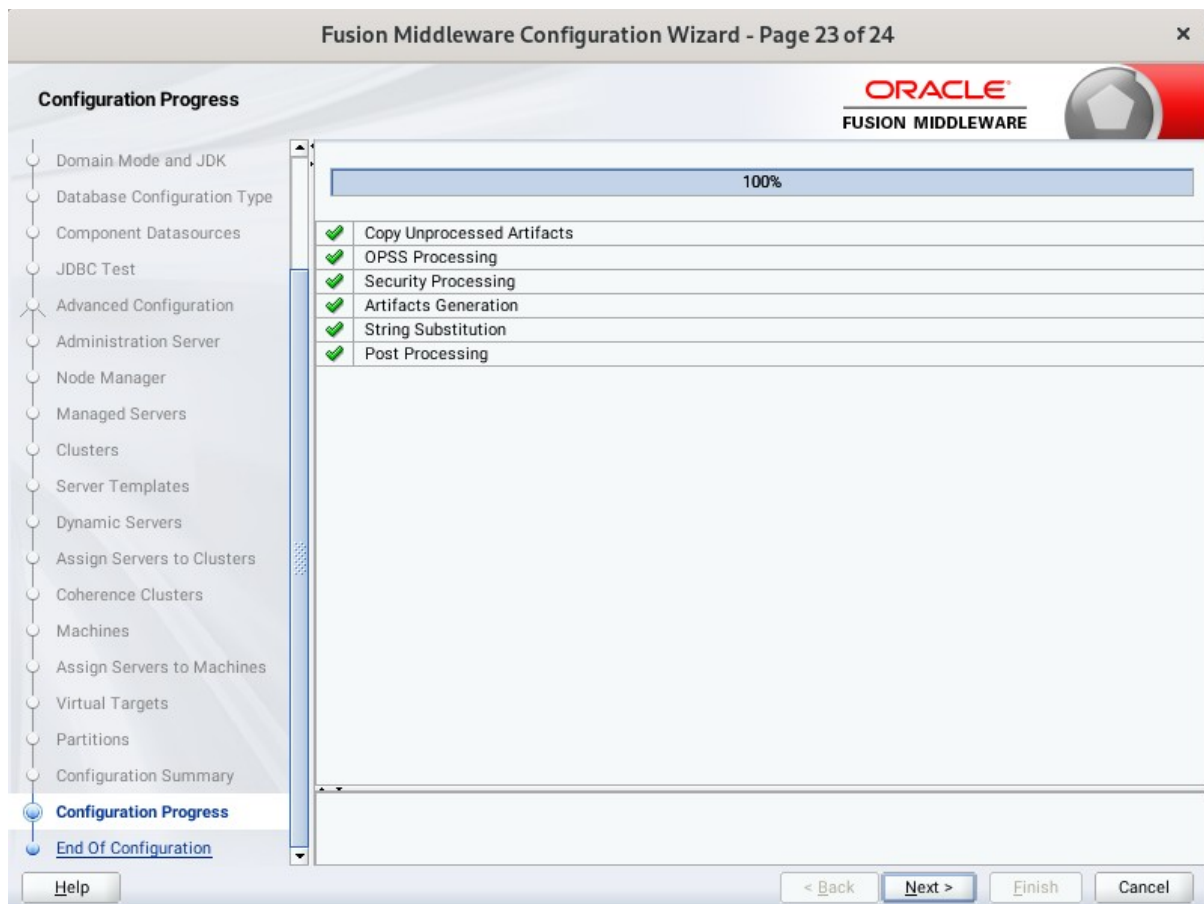
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

22). The **Configuration Summary** screen appears.



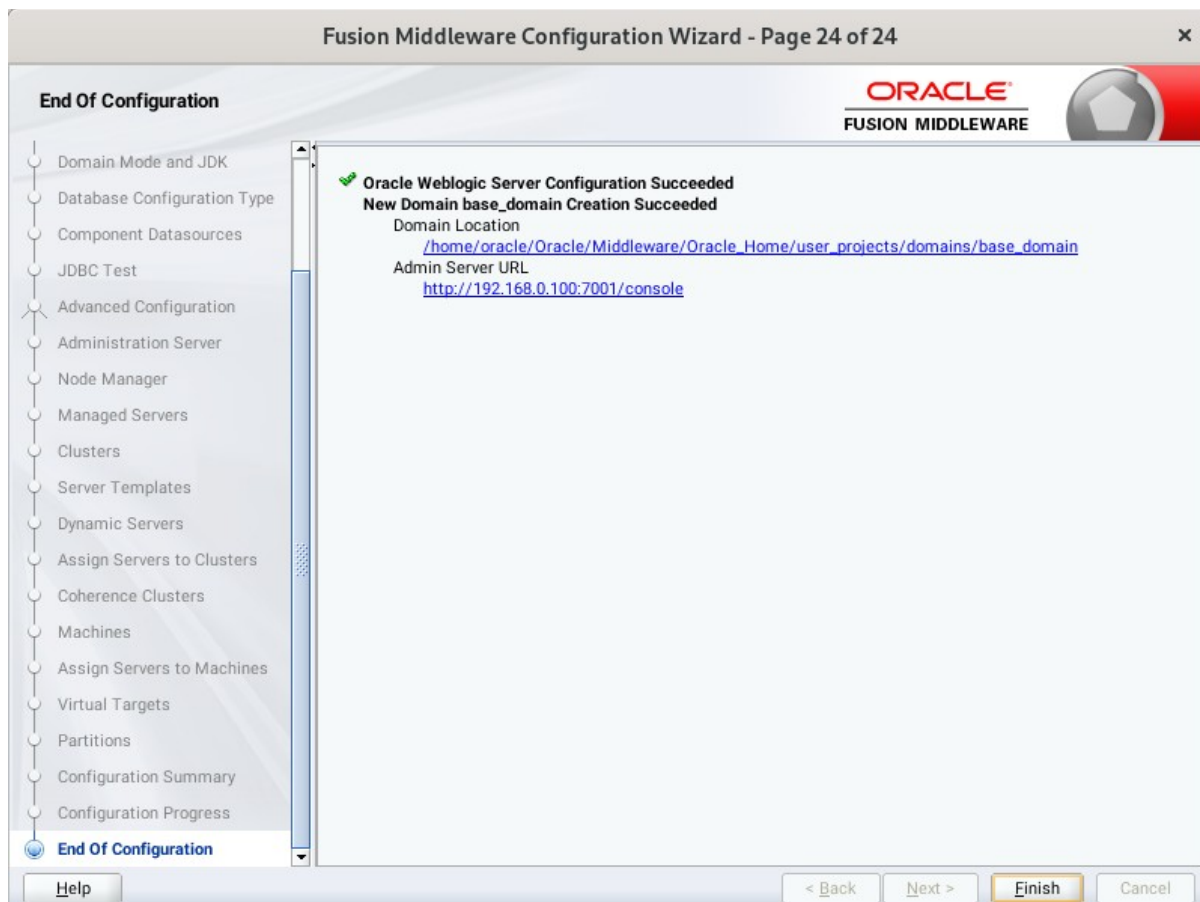
Select **Create** to accept the above options and start creating and configuring a new domain.

23). The **Configuration Progress** screen appears.



Wait for this part of the configuration to complete. Depending on the location and performance of the Repository database, this process may take a few minutes. After the domain successful created, click **Next** to continue.

24). The **End of Configuration** screen appears.



Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

3. Verifying Oracle Access Manager(OAM) Installation and Configuration

3-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

3-2. Starting the Node Manager and the Admin Server.

Starting the Node Manager, go to the DOMAIN_HOME/bin directory and run 'nohup ./startNodeManager.sh > nm.out&'

```

oracle@Dell5530:~/base_domain/bin
oracle@Dell5530:~/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 14729
nohup: ignoring input and redirecting stderr to stdout
oracle@Dell5530:~/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager
CLASSPATH=/home/ORACLE_SW/Java/jdk1.8.0_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..-Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Aug 10, 2022 7:10:21 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Aug 10, 2022 7:10:21 PM CST> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Aug 10, 2022 7:10:21 PM CST> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Aug 10, 2022 7:10:21 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Aug 10, 2022 7:10:21 PM CST> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Aug 10, 2022 7:10:21 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Aug 10, 2022 7:10:22 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<Aug 10, 2022 7:10:22 PM CST> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1.4.0
  
```

Starting the Admin Server, go to the `DOMAIN_HOME/bin` directory and run `./startWebLogic.sh`.

```

feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Aug 10, 2022 7:13:38,064 PM CST> <Warning> <org.glassfish.jersey.internal.Errors> <BEA-000000> <The following warnings have been detected: WARNING: A HTTP GET method, public java.lang.Object oracle.security.am.common.rest.agent.registration.AgentRegistrationService.getService(java.lang.String,java.lang.String), should not consume any entity.>
>
<Aug 10, 2022 7:13:38,180 PM CST> <Error> <oracle.oam.foundation.access> <BEA-000000> <Failed to init Context path:/idaas/am/essso>
<Aug 10, 2022 7:13:38,696 PM CST> <Warning> <org.glassfish.jersey.internal.Errors> <BEA-000000> <The following warnings have been detected: WARNING: A HTTP GET method, public java.lang.Object oracle.security.am.common.rest.agent.registration.AgentRegistrationService.getService(java.lang.String,java.lang.String), should not consume any entity.>
>
<Aug 10, 2022 7:13:40,895 PM CST> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Aug 10, 2022 7:13:41,148 PM CST> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
2022-08-10 19:13:41.161/110.705 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2022-08-10 19:13:41.183/110.726 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Aug 10, 2022 7:13:42,395 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Aug 10, 2022 7:13:42,445 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Aug 10, 2022 7:13:42,445 PM CST> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connection list DomainRuntimeServiceMBean>
<Aug 10, 2022 7:13:42,605 PM CST> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Aug 10, 2022 7:13:42,606 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iioop, t3, ldap, snmp, http.>
<Aug 10, 2022 7:13:42,606 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iioop, t3, ldap, snmp, http.>
<Aug 10, 2022 7:13:42,629 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Aug 10, 2022 7:13:42,638 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2022-08-10 19:13:43.174/112.718 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '44' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST

```

You know that the administrator server is running when you see the following output:

```

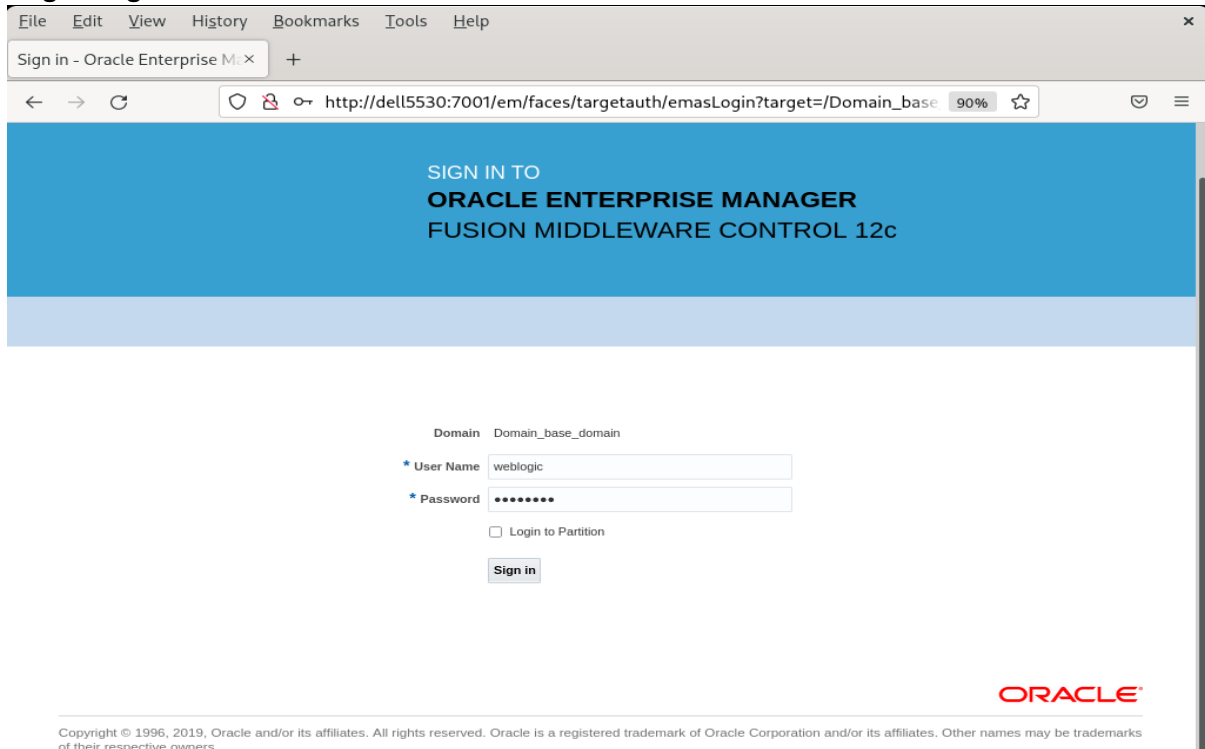
-----
Server state changed to RUNNING.
-----

```

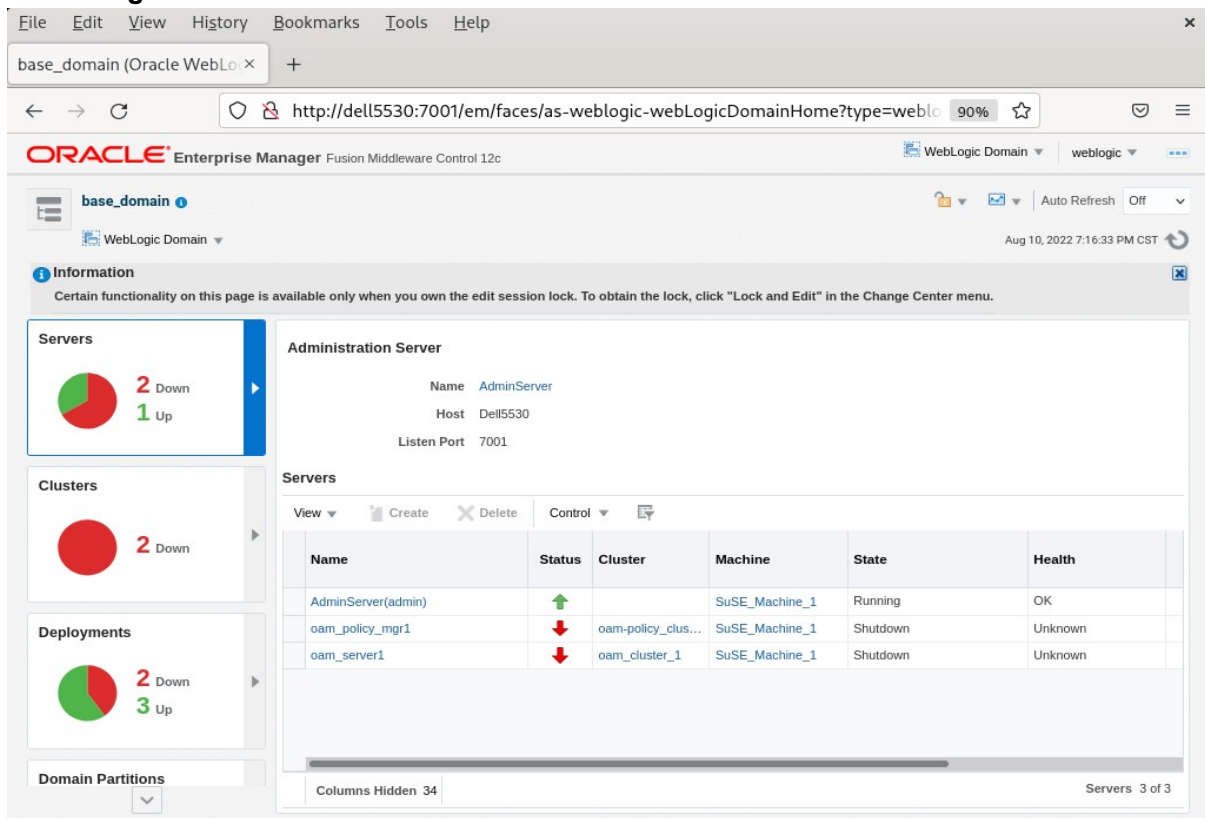

3-3. Checking Oracle Identity and Access Management 12c Product URLs.

1). Access to Enterprise Manager Console.

Login Page:



Home Page:



Starting the managed oam server and oam policy server defined in domain, wait until these servers come up into RUNNING state:

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain. On the left, there are summary cards for Servers (1 Down, 2 Up), Clusters (1 Down, 1 Up), and Deployments (1 Down, 4 Up). The main area displays the 'Administration Server' details and a table of servers.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
oam_policy_mgr1	↓	oam-policy_clus...	SuSE_Machine_1	Shutdown	Unknown
oam_server1	↑	oam_cluster_1	SuSE_Machine_1	Running	OK

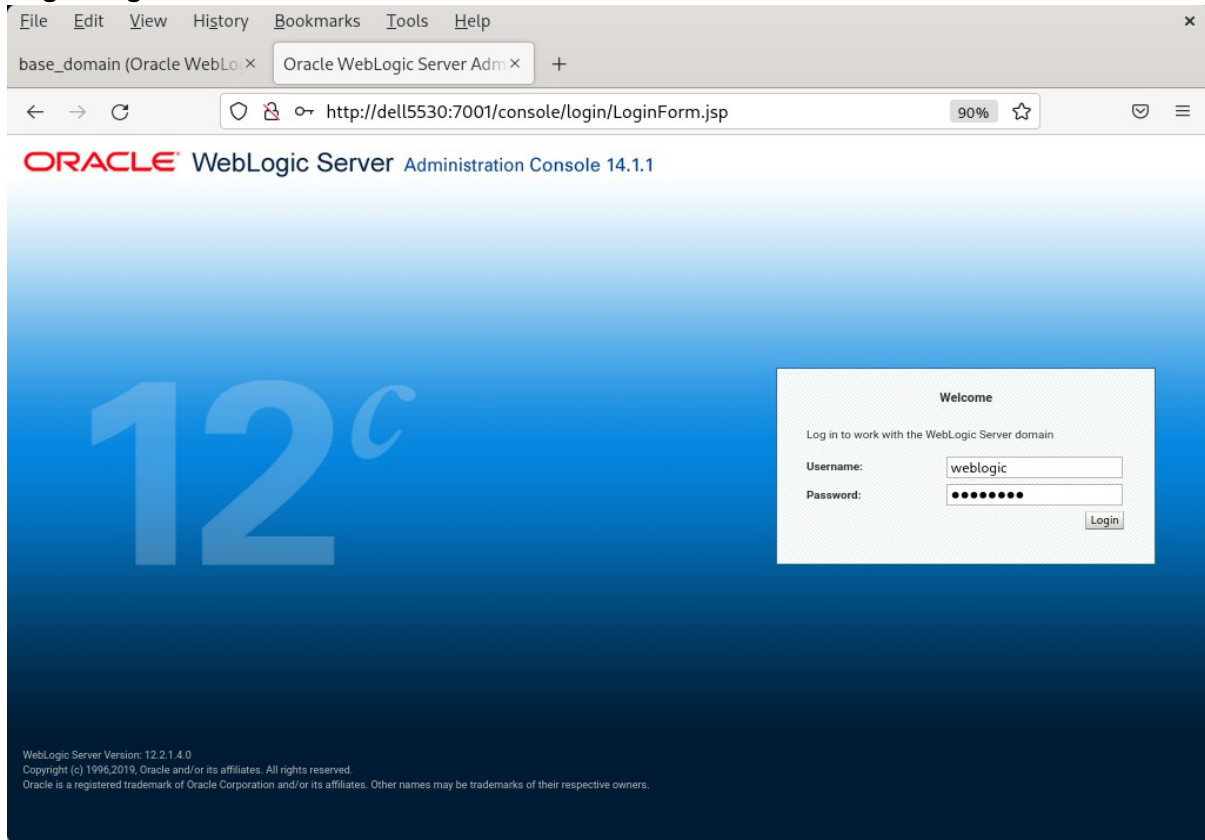
The screenshot shows the Oracle Enterprise Manager interface after the servers have started successfully. The 'Servers' summary now shows 3 Up. The 'Administration Server' details remain the same. The 'Servers' table now shows all three servers in a 'Running' state.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
oam_policy_mgr1	↑	oam-policy_clus...	SuSE_Machine_1	Running	OK
oam_server1	↑	oam_cluster_1	SuSE_Machine_1	Running	OK

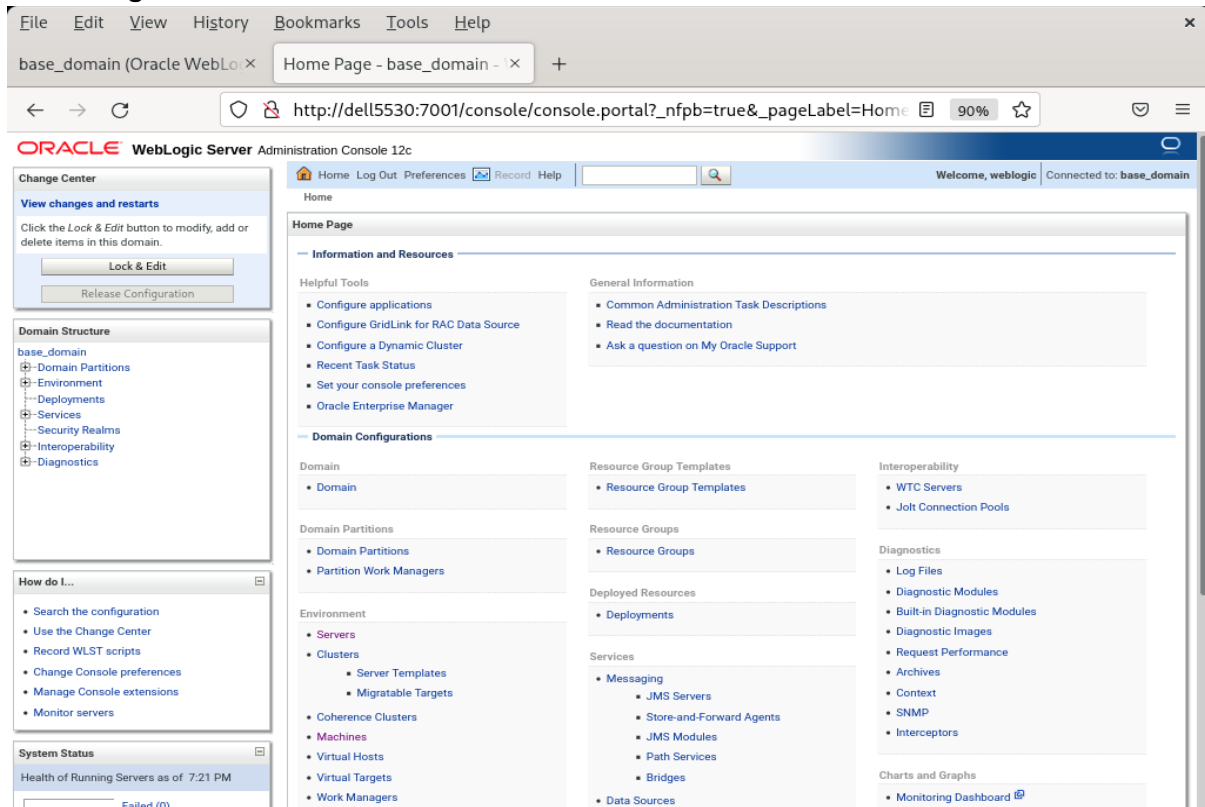
After they start up successfully, each managed server is listed as Running.

2). Access to Administration Server Console

Login Page:



Home Page:



Viewing the summary of servers:

Summary of Servers

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		SuSE_Machine_1	RUNNING	OK	7001
oam_policy_mgr1	Configured	oam-policy_cluster_1	SuSE_Machine_1	RUNNING	OK	14150
oam_server1	Configured	oam_cluster_1	SuSE_Machine_1	RUNNING	OK	14100

Verify that the Admin Server can connect to the node manager running on your machine.
Environments -> Machines -> <your machine> -> Monitoring. The status should show: **Reachable**

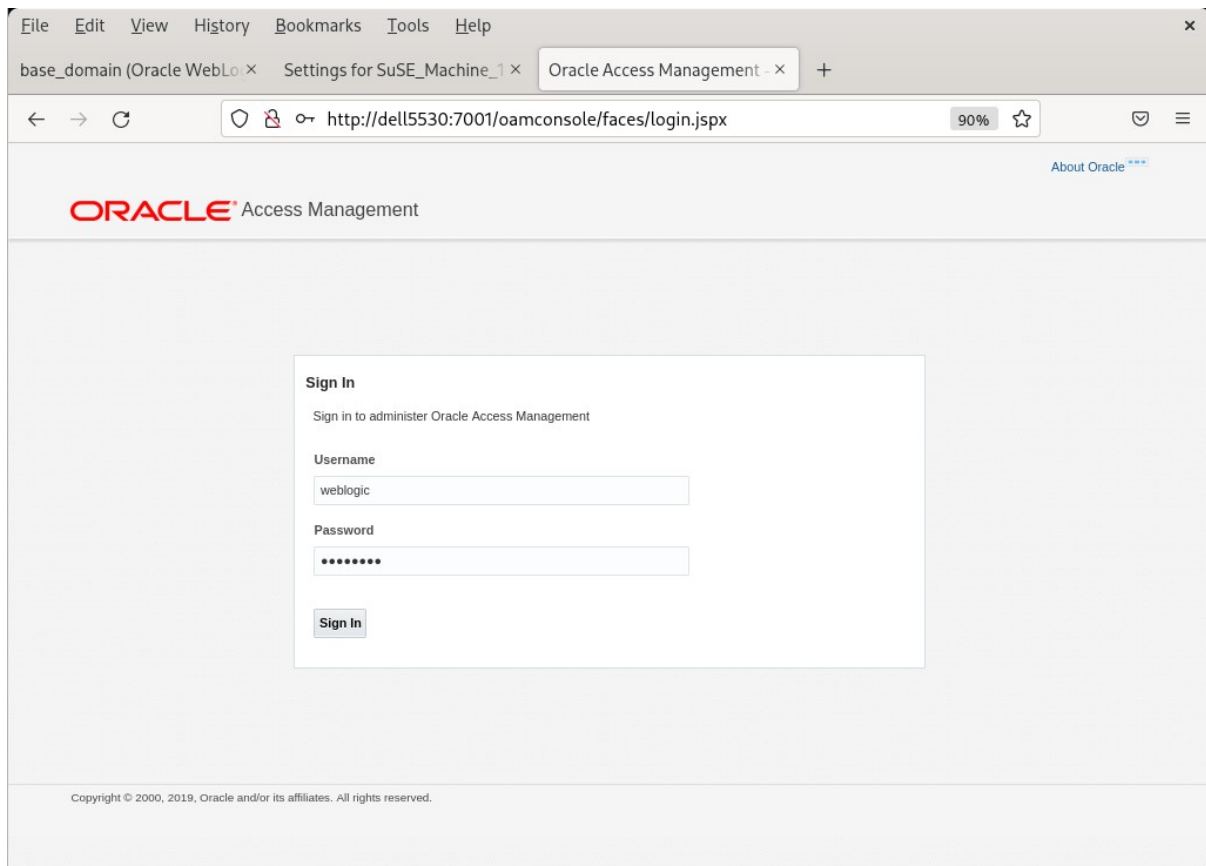
Settings for SuSE_Machine_1

Node Manager Status

This page allows you to view current status information for the Node Manager instance configured for this machine.

Status:	Reachable	Current status of this Node Manager. More Info...
Version:	12.2.1.4.0	Version string returned from the Node Manager. More Info...

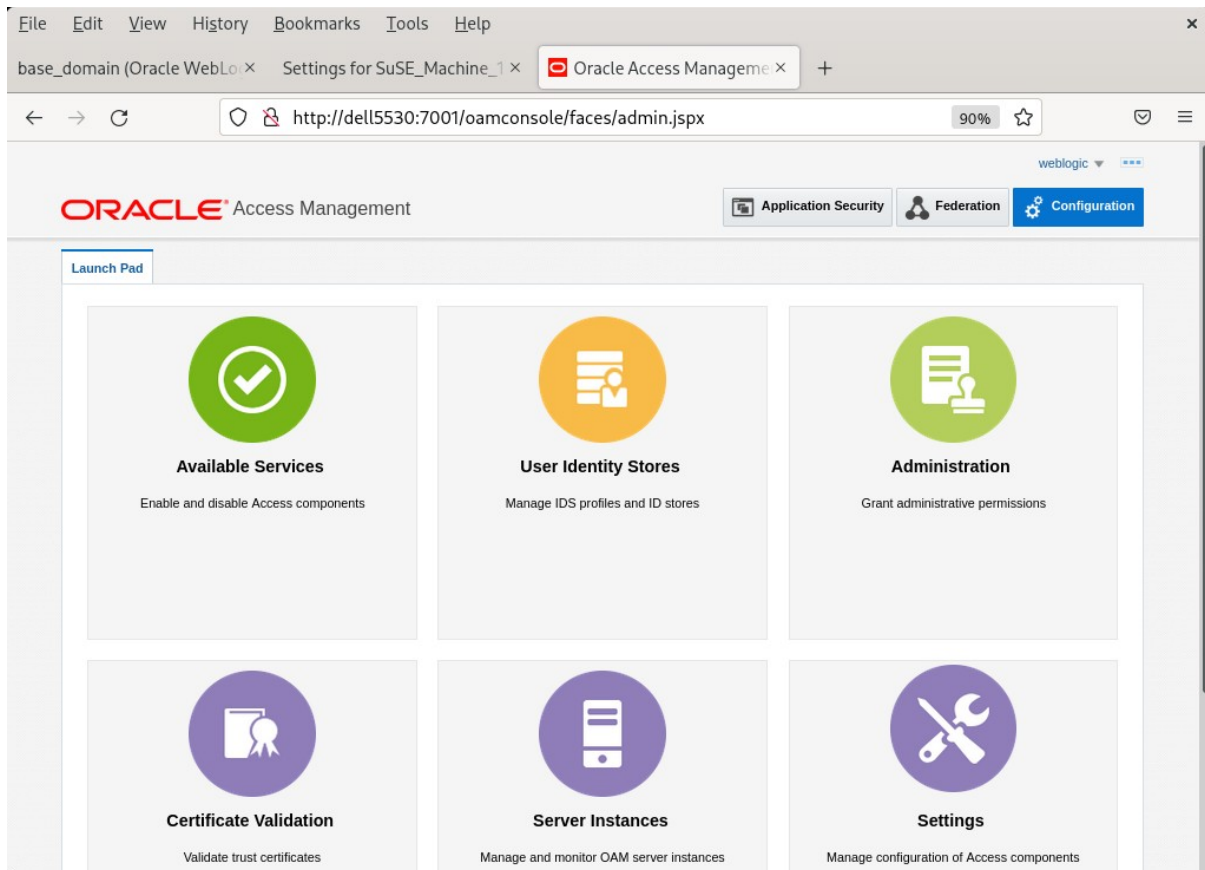
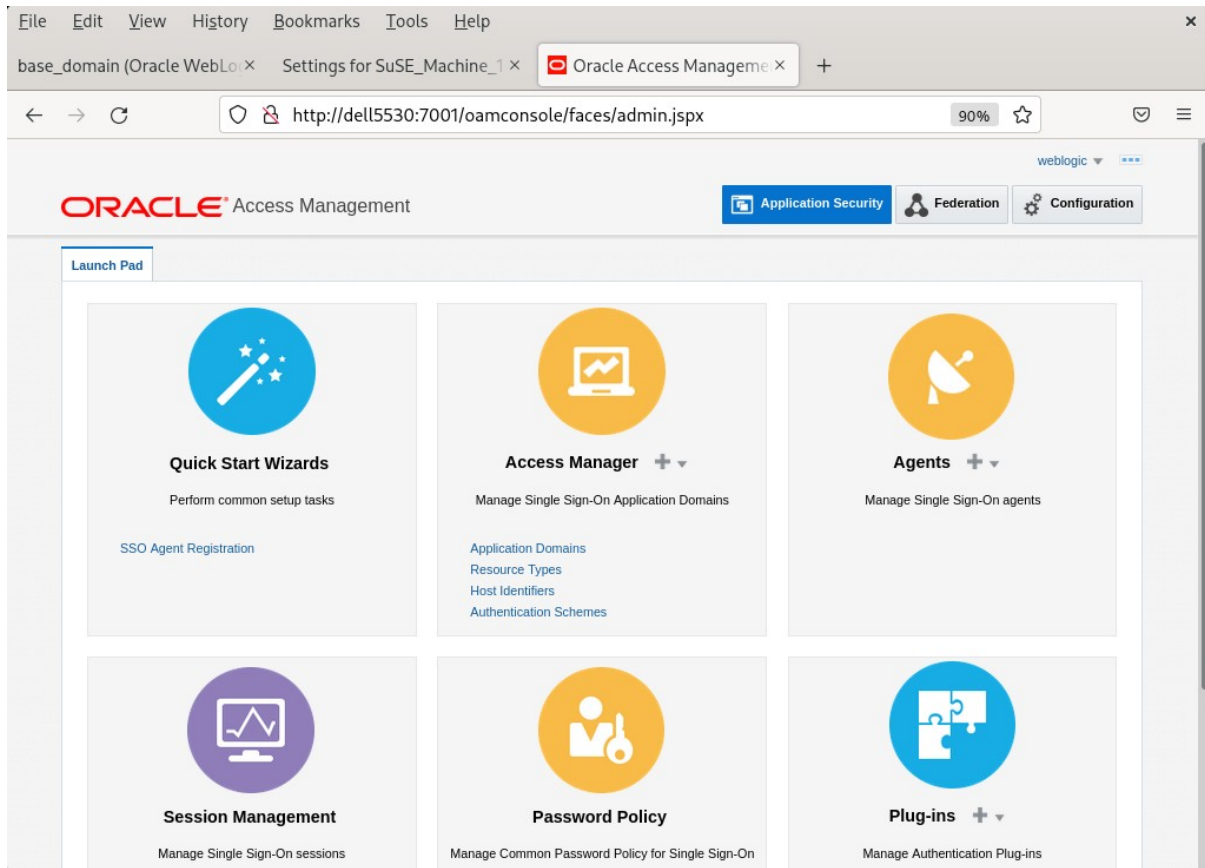
3). Access to Oracle Access Management Console - URL:<http://host:port/oamconsole>



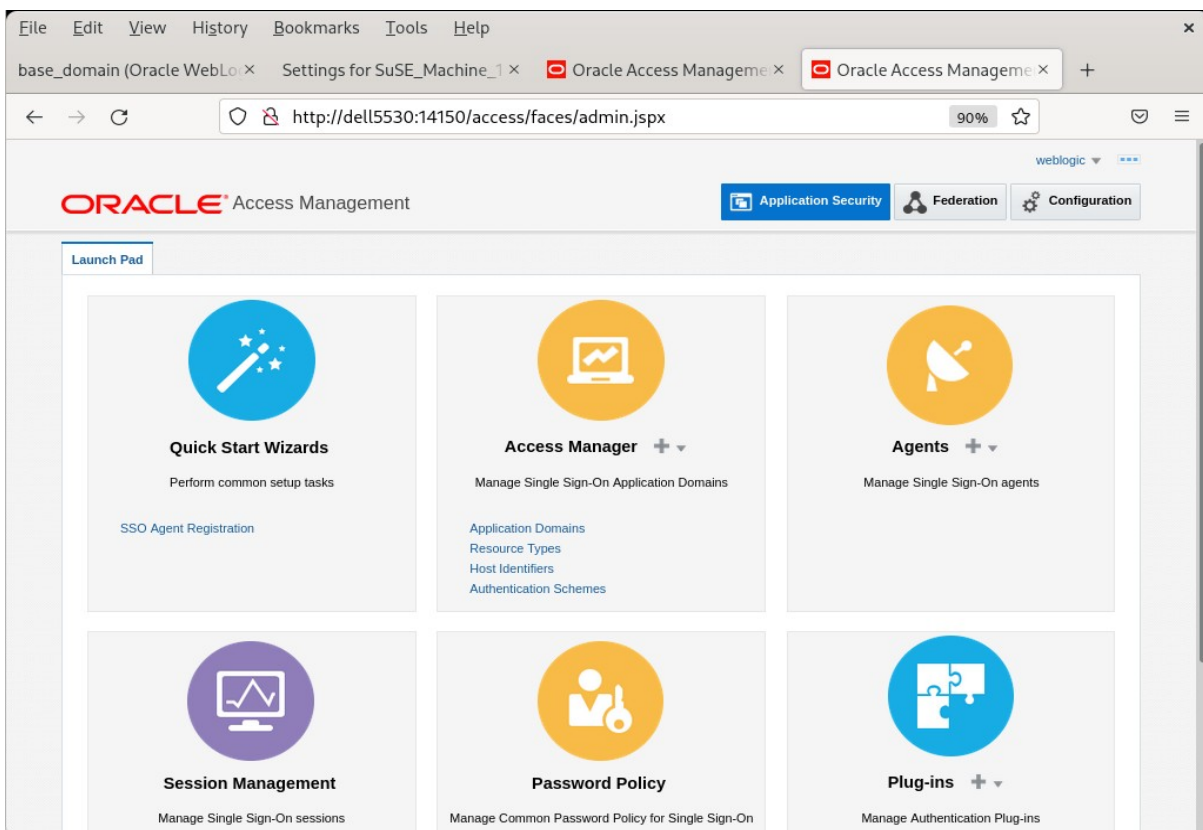
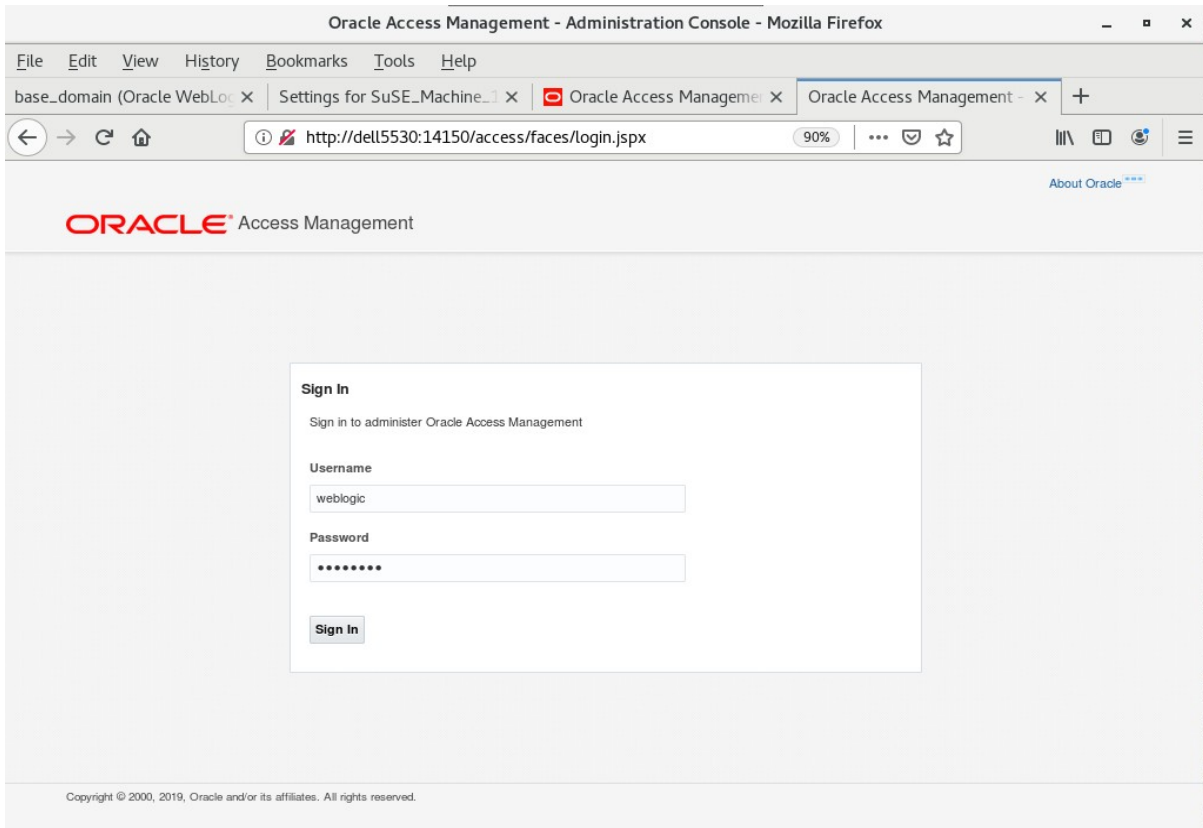
The screenshot shows a web browser window with the Oracle Access Management console login page. The browser's address bar displays the URL `http://dell5530:7001/oamconsole/faces/login.jspx`. The page header includes the Oracle logo and the text "Access Management". The main content area features a "Sign In" form with the following fields and elements:

- Sign In** (Section Header)
- Sign in to administer Oracle Access Management
- Username** field containing the text "weblogic"
- Password** field containing masked characters "*****"
- Sign In** button

At the bottom of the page, there is a copyright notice: "Copyright © 2000, 2019, Oracle and/or its affiliates. All rights reserved."



4). Access to Policy Manager Console - URL:<http://host:port/access>



The screenshot shows the Oracle Access Management web interface. The browser address bar displays `http://dell5530:14150/access/faces/admin.jspx`. The page title is "Create Application Domain". Below the title, there is a description: "Application Domain provides a logical container for resources or sets of resources, and the associated policies that dictate who can access specific protected resources." The "Summary" tab is active, showing a form with the following fields: "Name" (Oracle Access Manager on SLES15 SP4), "Description" (empty text area), "Session Idle Timeout (minutes)" (0), and "Enable Policy Ordering" (checkbox). An "Apply" button is located at the top right of the form area.

The screenshot shows the Oracle Access Management web interface after successful creation. The browser address bar displays `http://dell5530:14150/access/faces/admin.jspx`. The page title is "Oracle Access Manager on SLES15 SP4". A green confirmation message is displayed: "Confirmation: Application Domain, Oracle Access Manager on SLES15 SP4, created successfully". Below the message, the "Summary" tab is active, showing the same form as in the previous screenshot. The "Apply" button is now disabled.

End of Oracle Access Manager.

Oracle Identity Manager

1. Installing Oracle Identity and Access Management 12cPS4 software

1-1. Prerequisites:

Installation of Oracle Identity and Access Management requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.

(Note: With DB version 12, XA transaction recovery views/synonyms are required by the OIM Schema. To install these views/synonyms via the `initxa.sql` and `xaview.sql` scripts.

```
SQL> @/home/oracle/app/product/12.2.0/dbhome_1/javavm/install/initxa.sql
PL/SQL procedure successfully completed.

JVMRMACTION
-----
FULL_REMOVAL

PL/SQL procedure successfully completed.

Package created.

Package body created.

Synonym created.

Grant succeeded.
```

```

SQL> @/home/oracle/app/product/12.2.0/dbhome_1/rdbms/admin/xaview.sql
DROP VIEW d$xastrans$
*
ERROR at line 1:
ORA-00942: table or view does not exist

DROP VIEW d$pending_xastrans$
*
ERROR at line 1:
ORA-00942: table or view does not exist

View created.

Synonym created.

View created.

Synonym created.

SQL> █

```

Please make sure that database initialization parameter **OPEN_CURSORS** greater than or equal to 800; Login to database server as **root user** and execute the SQL command: "**alter system set open_cursors=1600 scope=SPfile;**" then restart the database.

```

SQL> show parameter open_cursors;

NAME                                TYPE        VALUE
-----
open_cursors                        integer     300
SQL> alter system set open_cursors=1600 scope=spfile;

System altered.

SQL> shutdown immediate;
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL> startup
ORACLE instance started.

Total System Global Area 9932111872 bytes
Fixed Size                12169800 bytes
Variable Size             2046823864 bytes
Database Buffers         7851737088 bytes
Redo Buffers              21381120 bytes
Database mounted.
Database opened.
SQL> show parameter open_cursors;

NAME                                TYPE        VALUE
-----
open_cursors                        integer     1600
SQL> █

```

)

2). Oracle JDK 1.8.0_221 or later installed.

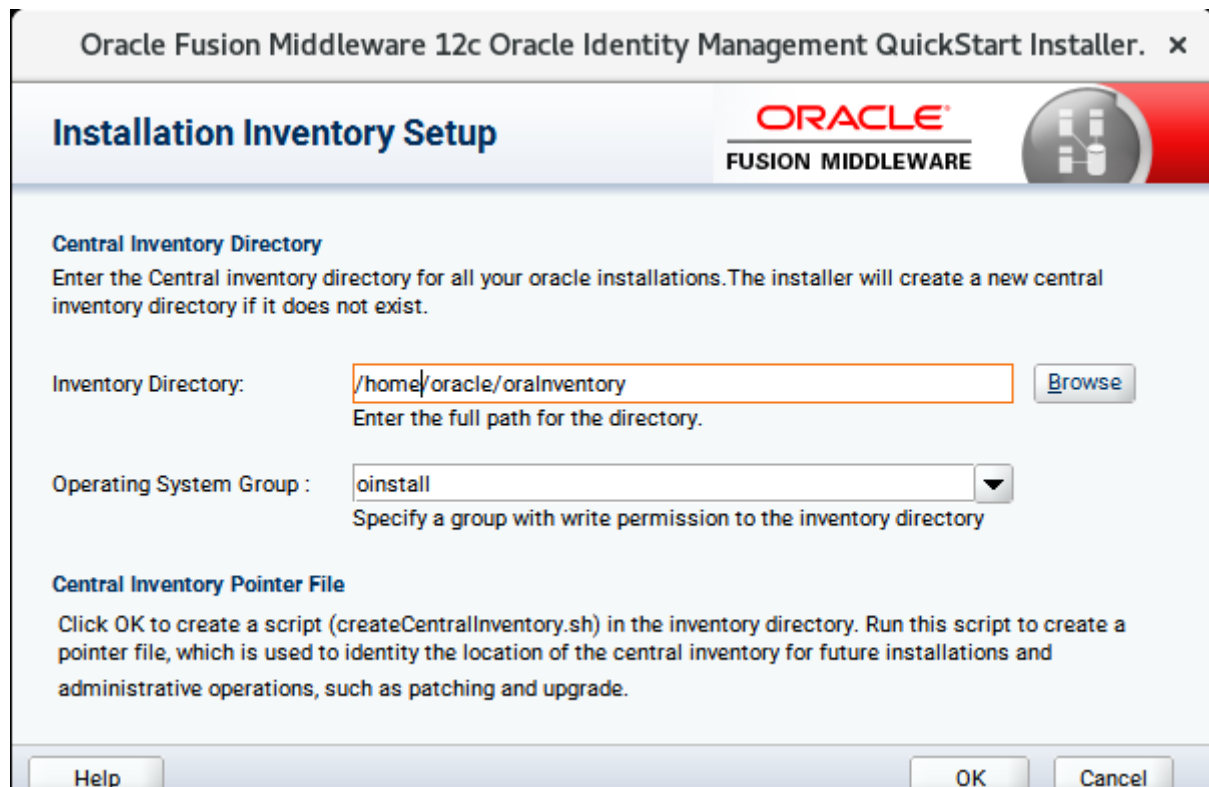
1-2. Log in to the target system (SLES 15 SP4 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

(Note: Please ensure the installation user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ("fmw_12.2.1.4.0_idmqs_Disk1_1of2.zip" and "fmw_12.2.1.4.0_idmqs_Disk1_2of2.zip") files and launch the installation program by running `'java -jar fmw_12.2.1.4.0_idmquickstart.jar'`

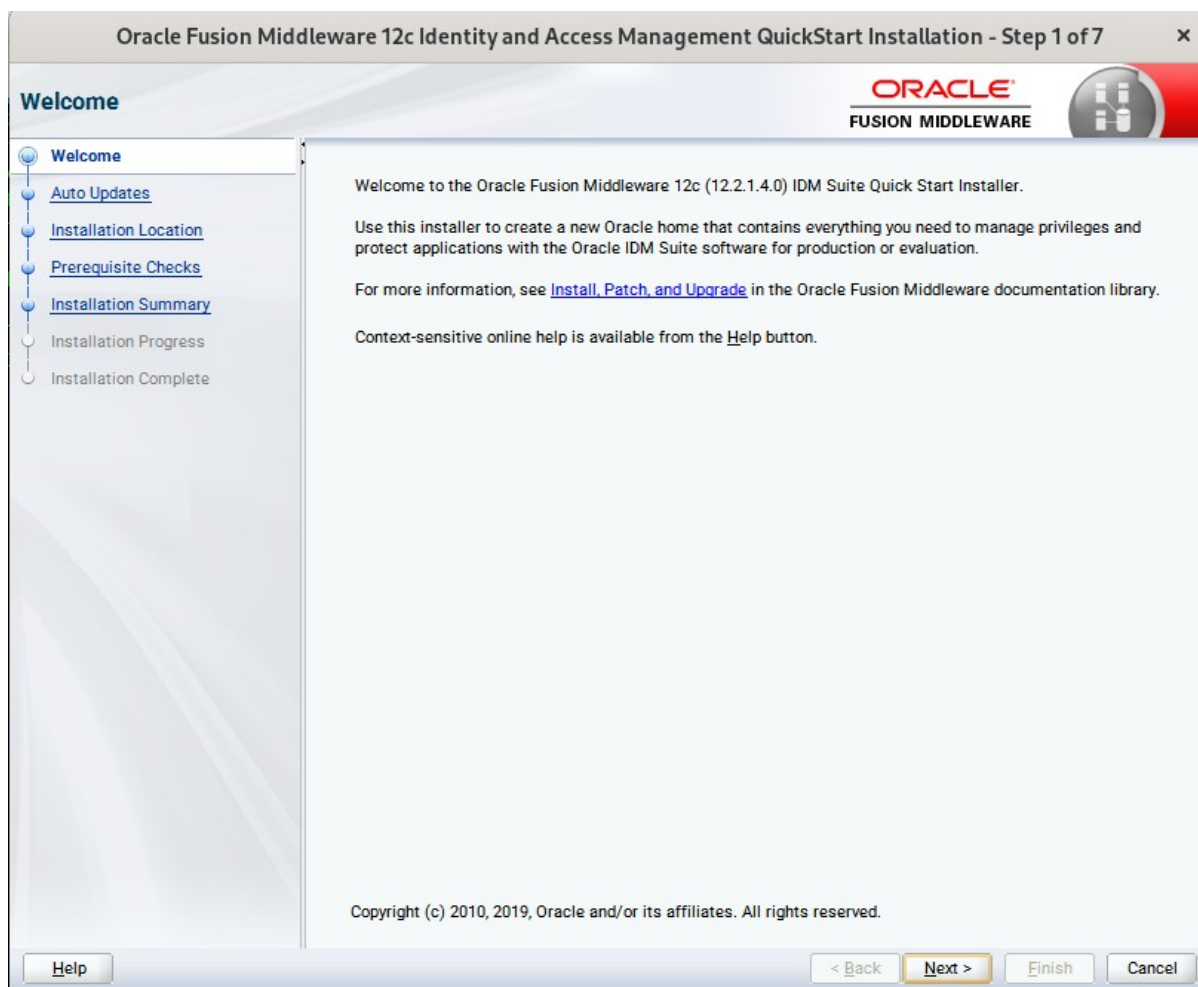
For the actual installation, follow the steps below:

1). Installation Inventory Setup.



Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

2). **Welcome** page appears.



This page welcomes you to the installation. Click **Next** to continue.

3). The **Auto Updates** page appears.

Oracle Fusion Middleware 12c Identity and Access Management QuickStart Installation - Step 2 of 7

Welcome

ORACLE
FUSION MIDDLEWARE

Welcome

Auto Updates

Installation Location

Prerequisite Checks

Installation Summary

Installation Progress

Installation Complete

Skip Auto Updates

Select patches from directory

Location:

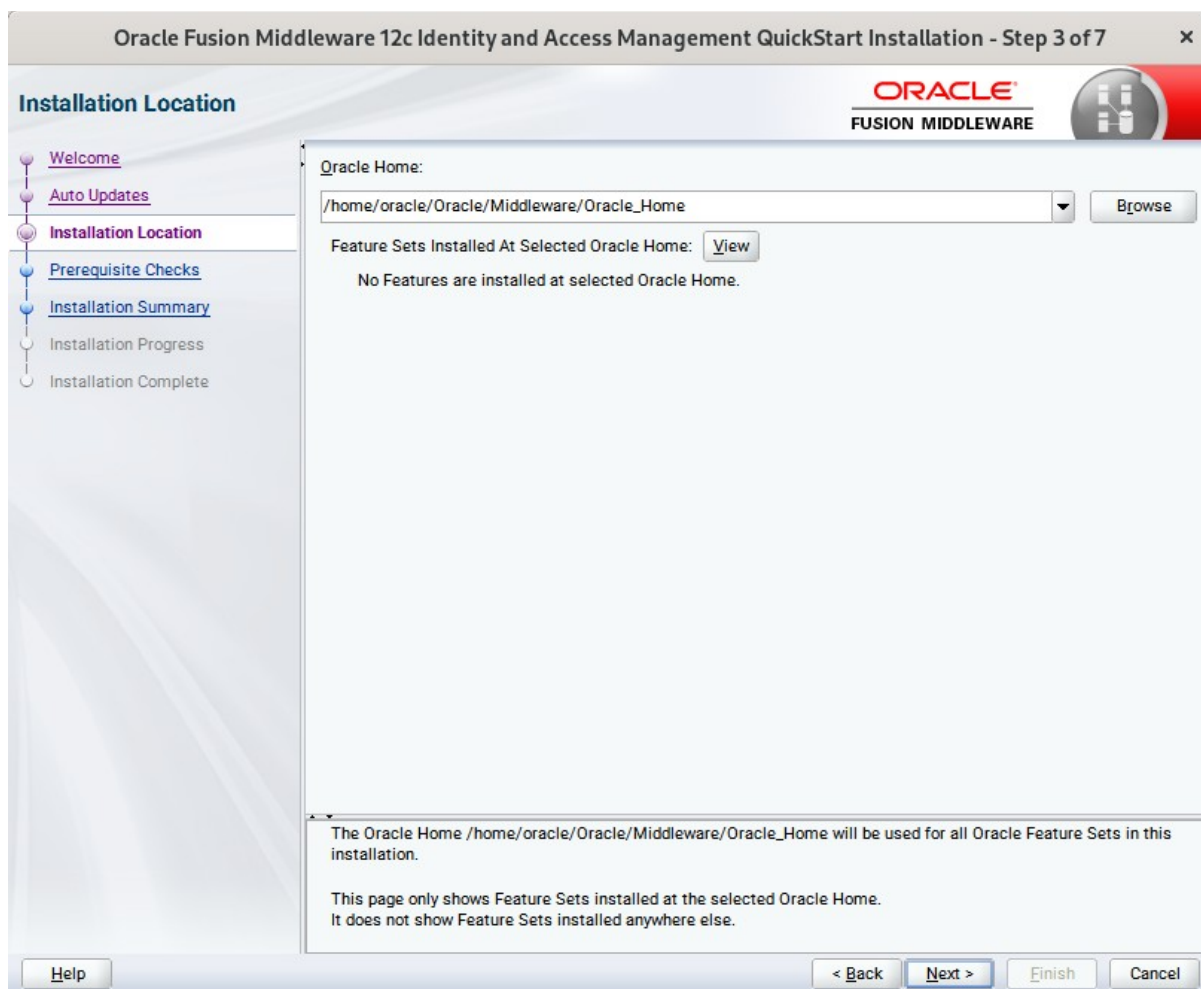
Search My Oracle Support for Updates

Username:

Password:

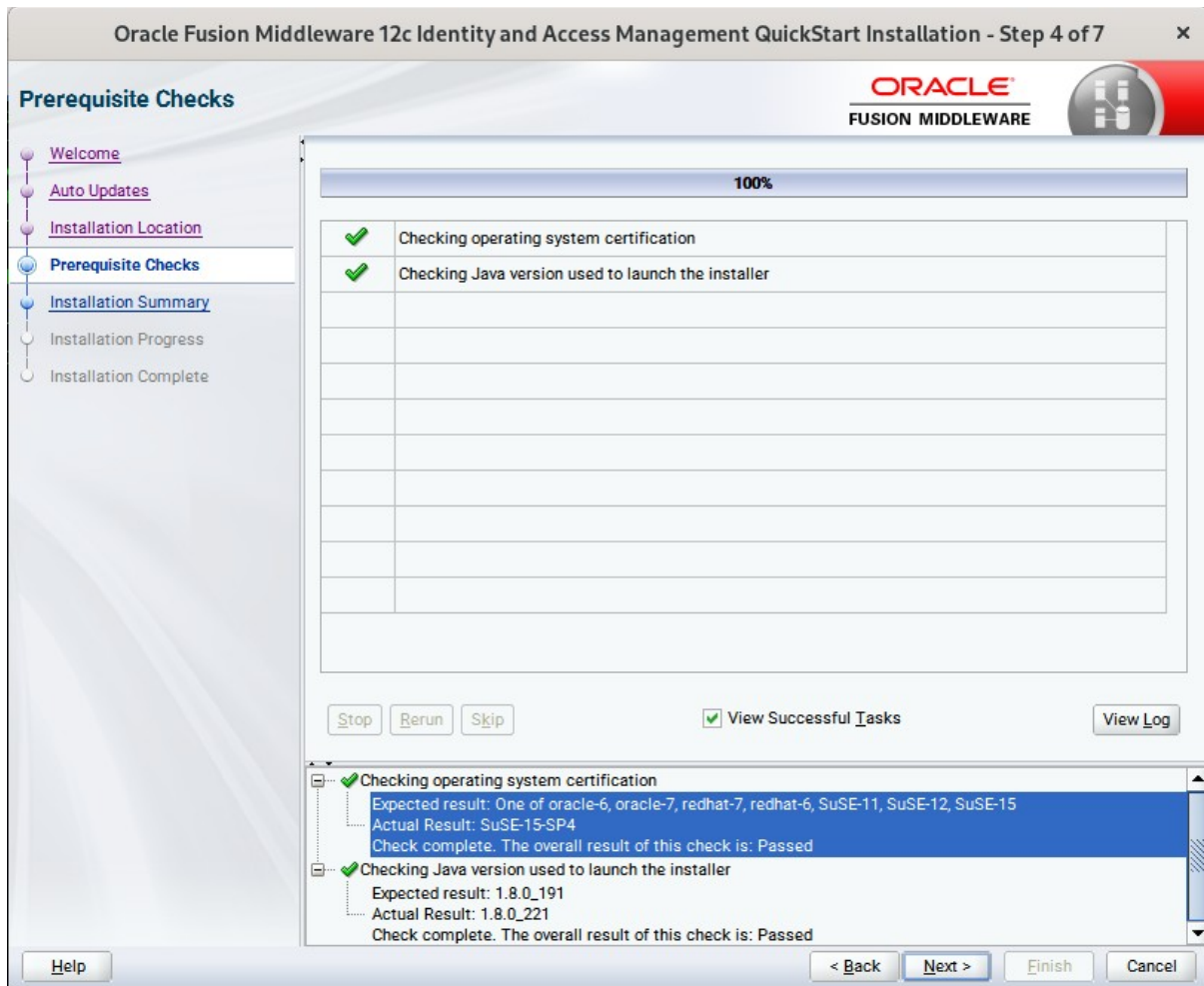
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

4). The **Installation Location** page appears.



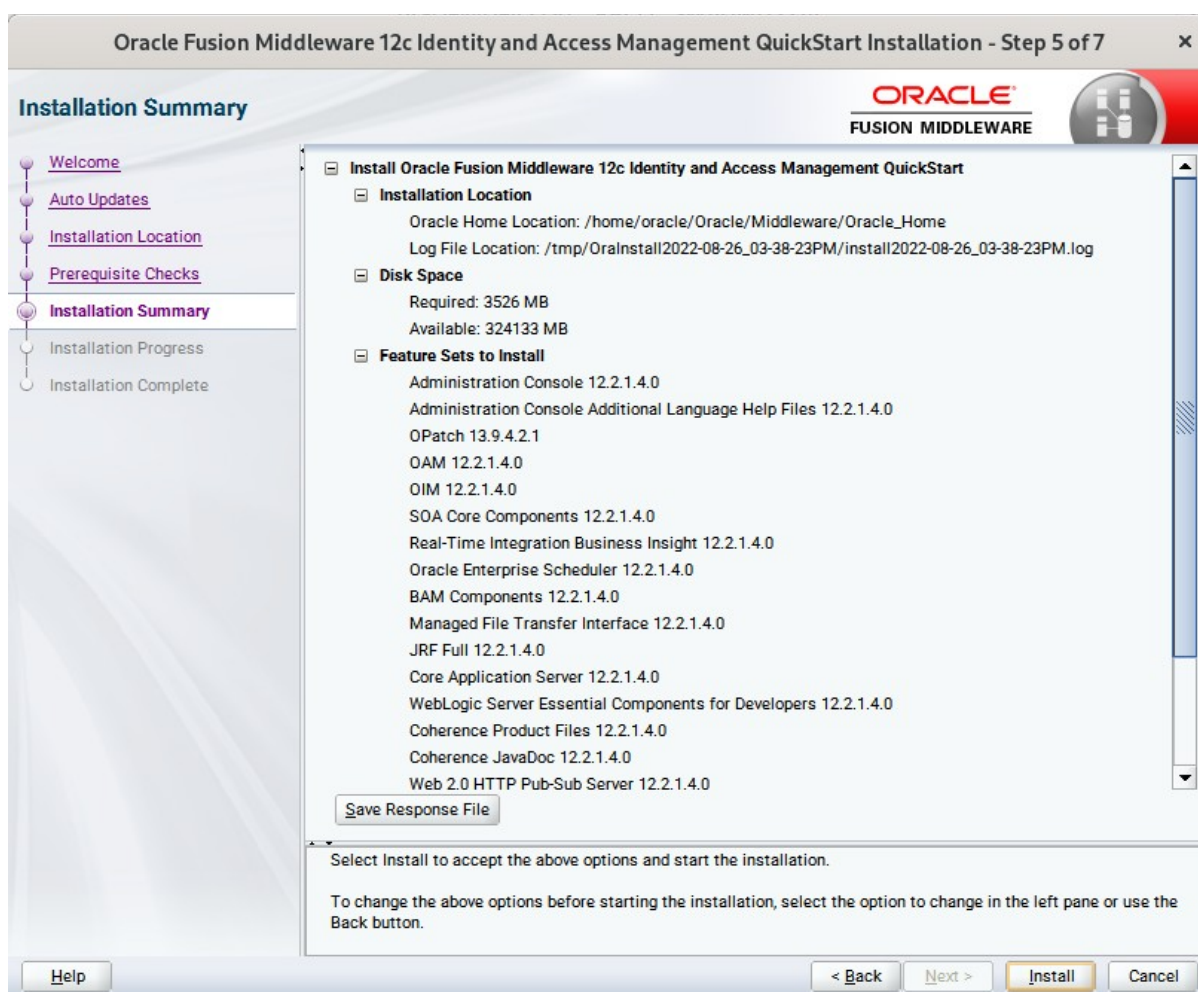
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

5). The **Prerequisites Checks** page appears.



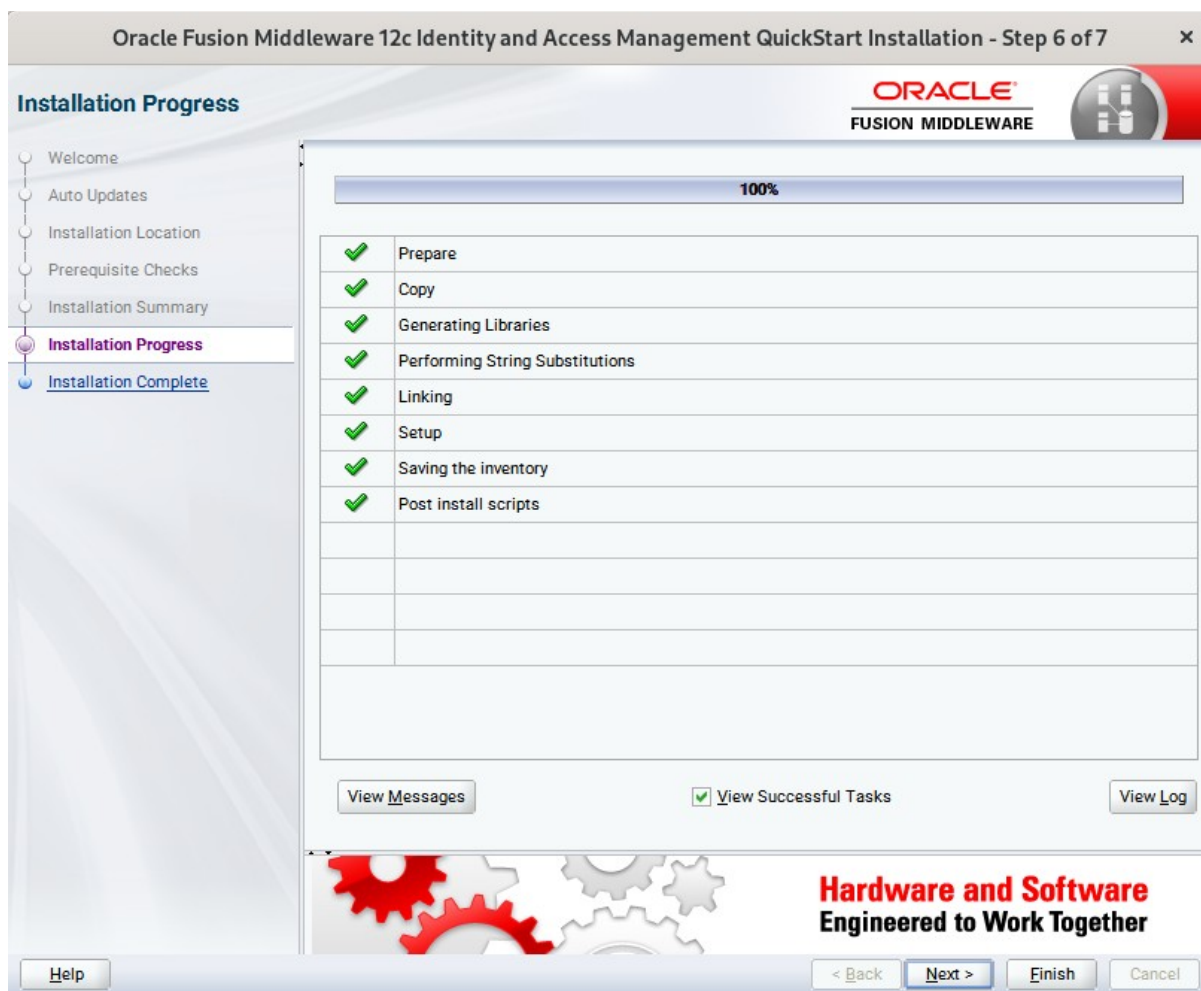
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

6). The **Installation Summary** page appears.



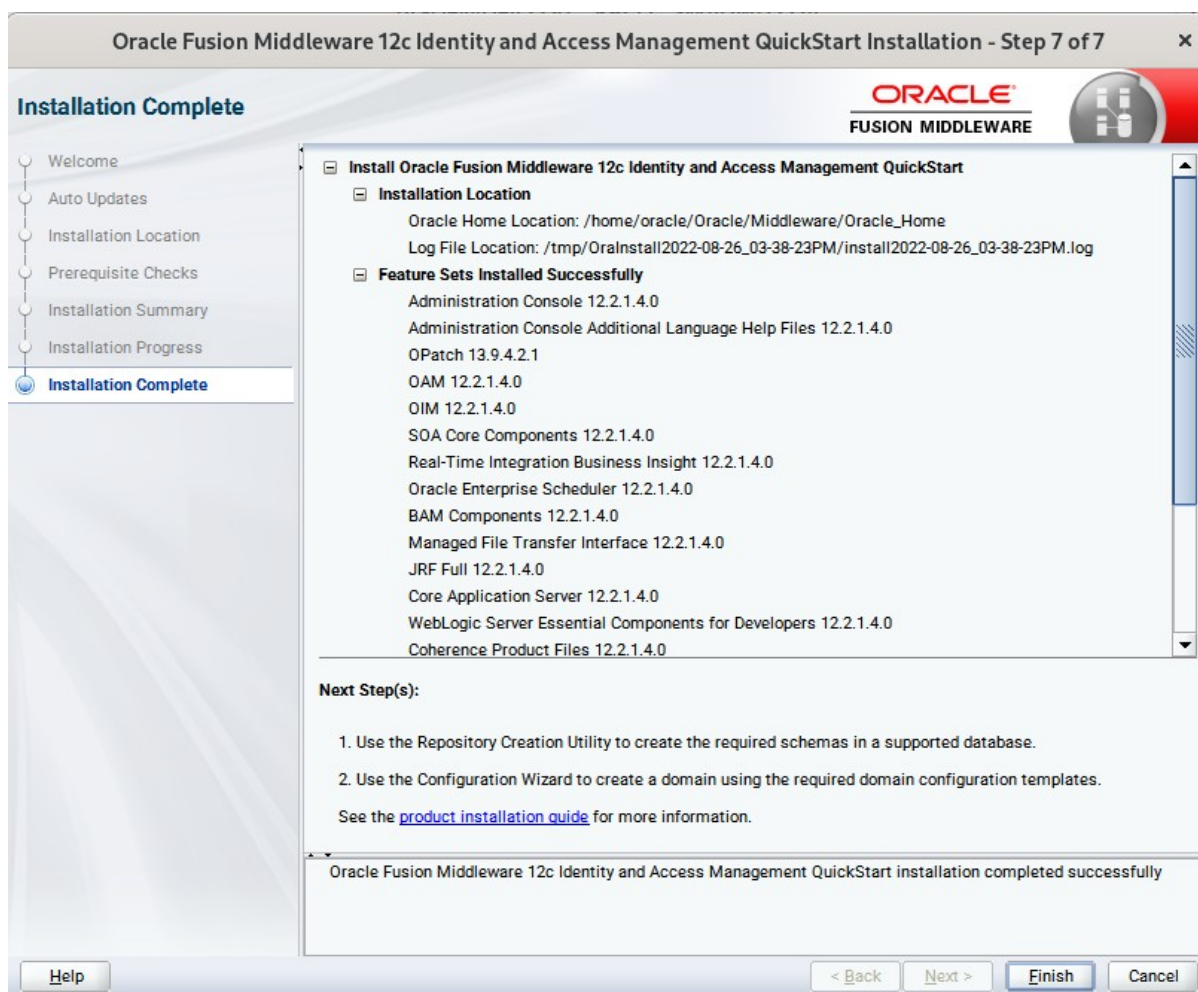
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

7). The **Installation Progress** page appears.



This page shows you the progress of the installation, and will warn you if there are any problems. You can view messages and logs from this page, but typically no action is required here. When progress is complete, click **Next** (go to a Summary page). Alternatively, you can click **Finish**.

8). If you clicked **Next**, the **Installation Complete** page appears, showing you the components that have been installed.



This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

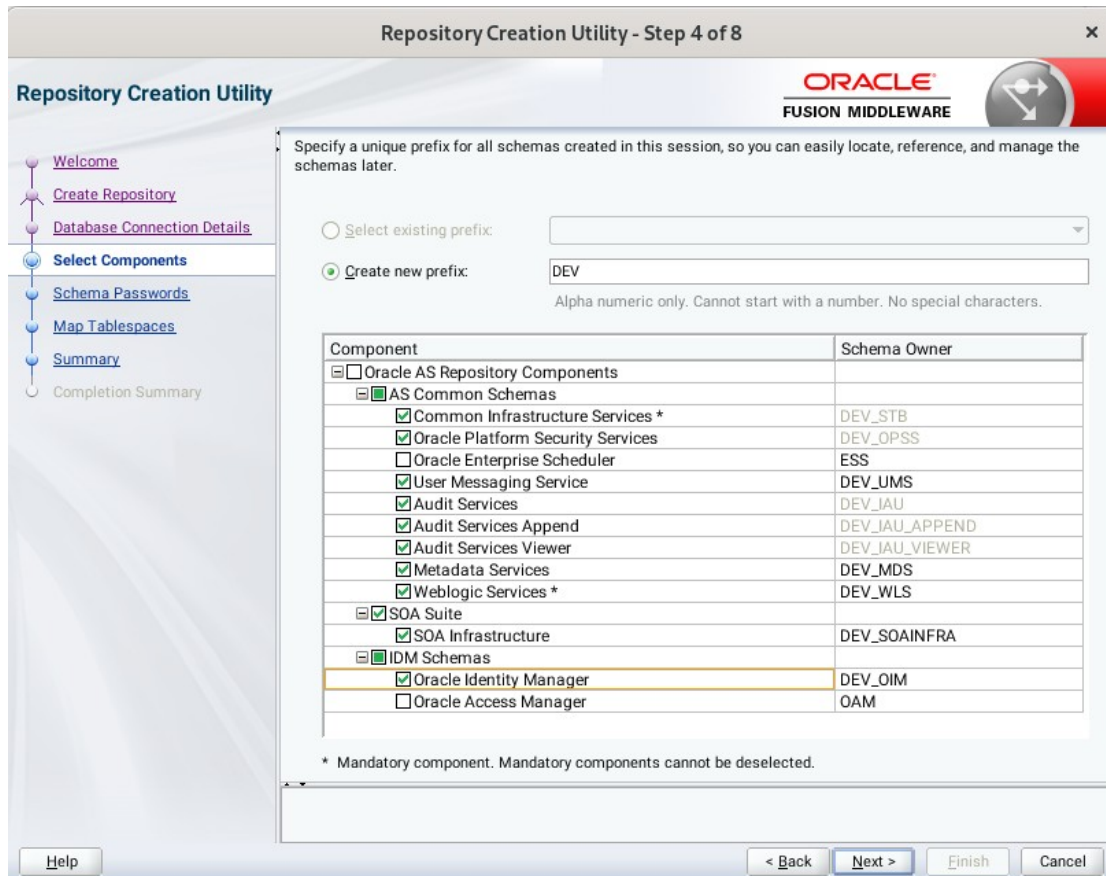
2. Configuring the Oracle Identity Manager Domain

2-1. Creating Database Schema through Repository Creation Utility for OIM.

Repository Creation Utility (RCU) is available with the Oracle Fusion Middleware Infrastructure 12c

distribution. Run `$FMW_HOME/oracle_common/bin/rcu` and create required database schemas for Oracle Identity Manager.

Screenshot: Database schemas creating for Oracle Identity Manager.



Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the **Oracle Identity Manager** schema, this action automatically selects the schemas as dependencies.

Ensure the schema creation is successful.

Repository Creation Utility - Step 9 of 9

Repository Creation Utility ORACLE FUSION MIDDLEWARE

Database details:

Host Name: Dell5530
Port: 1521
Service Name: SUSE
Connected As: sys
Operation: System and Data Load concurrently
Execution Time: 3 minutes 7 seconds

RCU Logfile: /tmp/RCU2022-08-26_15-53_615500060/logs/rcu.log
Component Log Directory: /tmp/RCU2022-08-26_15-53_615500060/logs
View Log: rcu.log

Prefix for (prefixable) Schema DEV
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.273(sec)	stb.log
Oracle Platform Security Services	Success	00:14.641(sec)	opss.log
SOA Infrastructure	Success	00:33.987(sec)	soainfra.log
Oracle Identity Manager	Success	00:48.311(sec)	oim.log
User Messaging Service	Success	00:11.757(sec)	ucsums.log
Audit Services	Success	00:11.881(sec)	iau.log
Audit Services Append	Success	00:09.132(sec)	iau_append.log
Audit Services Viewer	Success	00:09.153(sec)	iau_viewer.log
Metadata Services	Success	00:11.905(sec)	mds.log
Weblogic Services	Success	00:13.701(sec)	wls.log

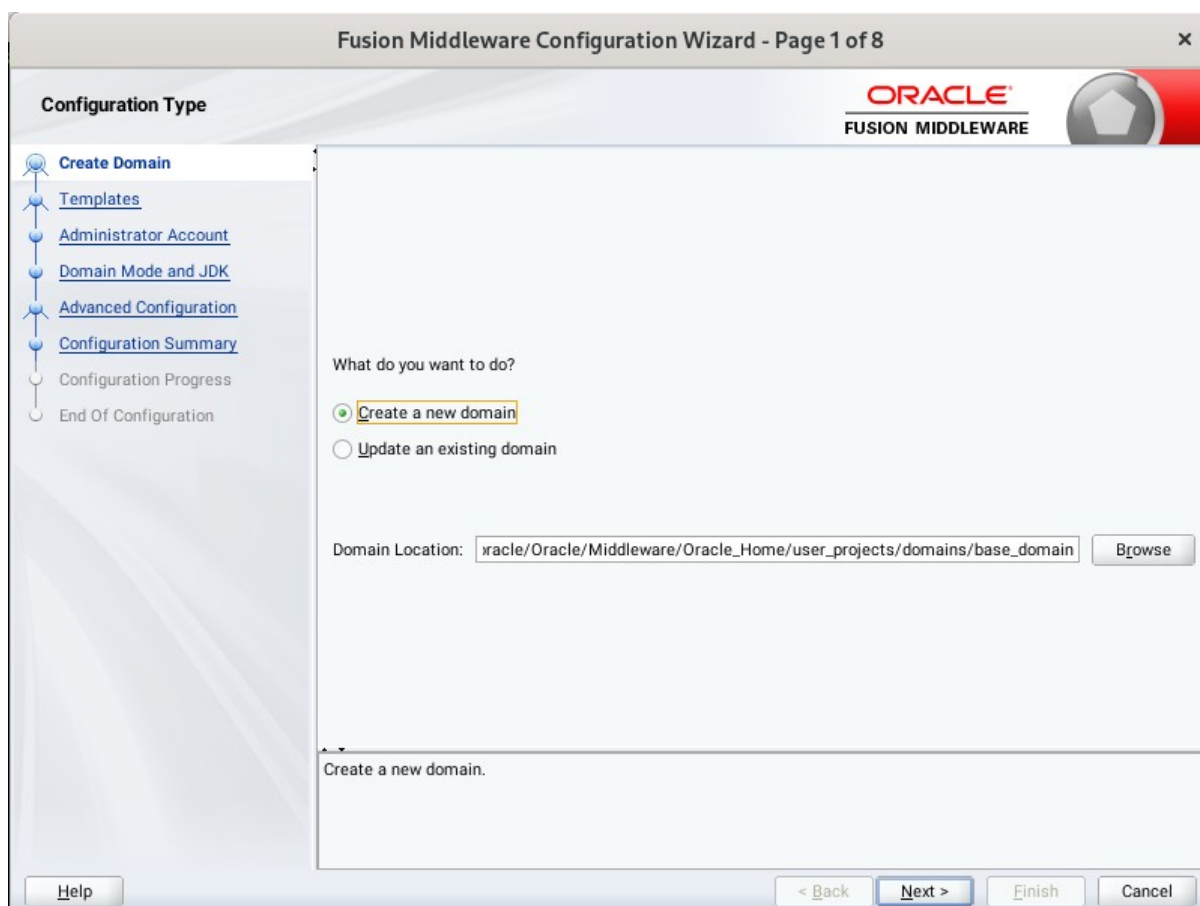
Help < Back Next > Create Close

2-2. Configuring a Domain for Oracle Identity Manager(OIM) using the Config Wizard

In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE_HOME/oracle_common/common/bin** directory.

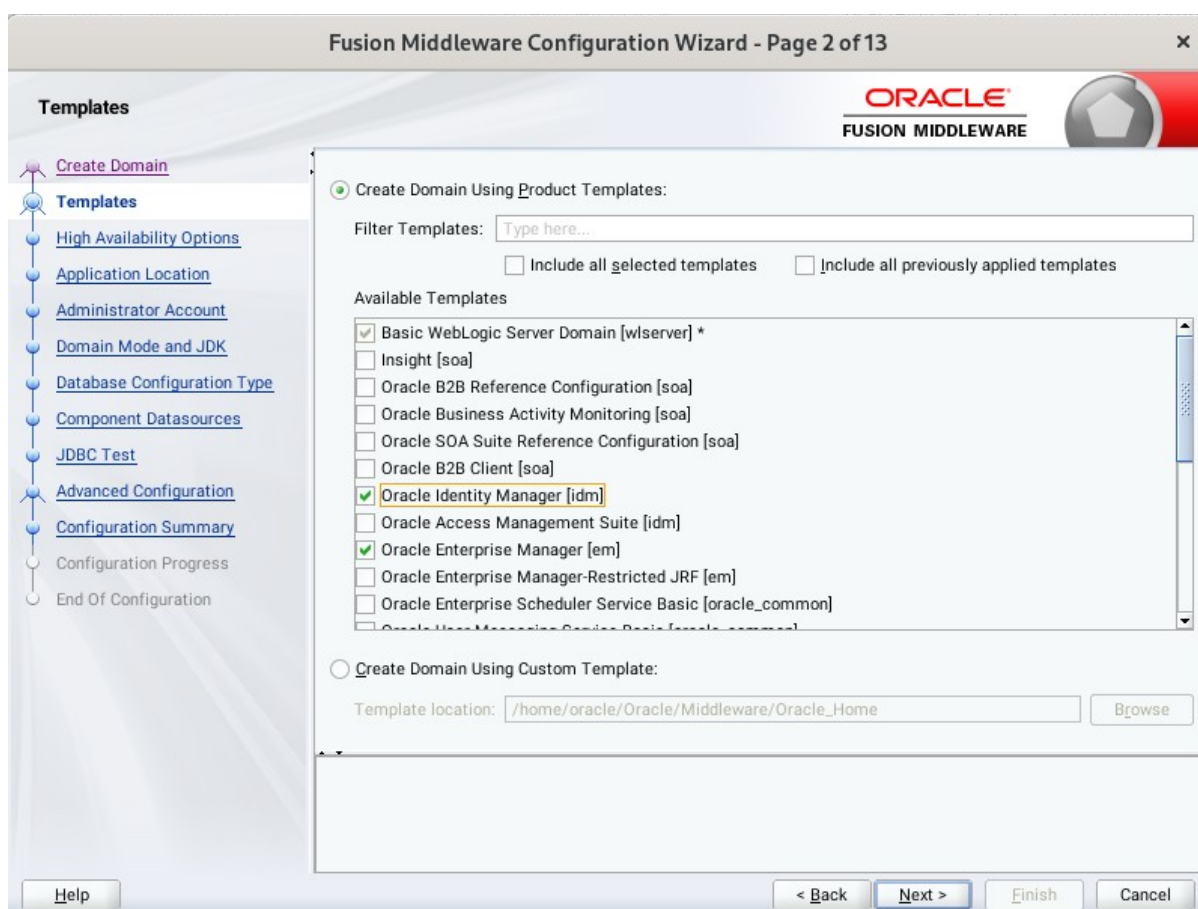
Follow these steps:

1). On the Configuration Type screen, select **Create a new domain**, and enter the desired domain home path.



Click **Next** to continue.

2). The **Templates** screen appears.



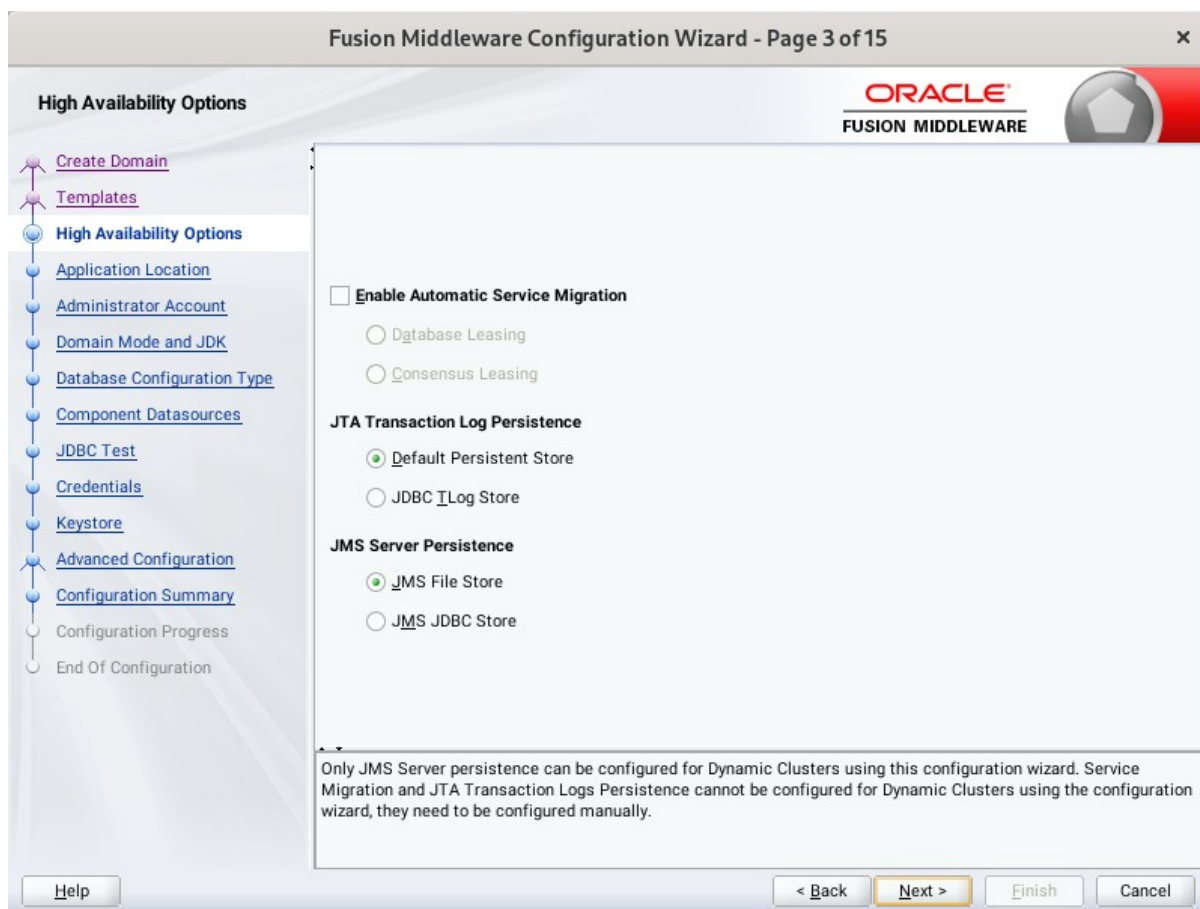
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Identity Manager [idm]**.

Selecting this template automatically selects the following as dependencies:

- Oracle Enterprise Manager [em]
- Oracle JRF [oracle_common]
- Oracle WSM Policy Manager [oracle_common]
- WebLogic Coherence Cluster Extension [wlserver]

You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

3). The **High Availability Options** screen appears.



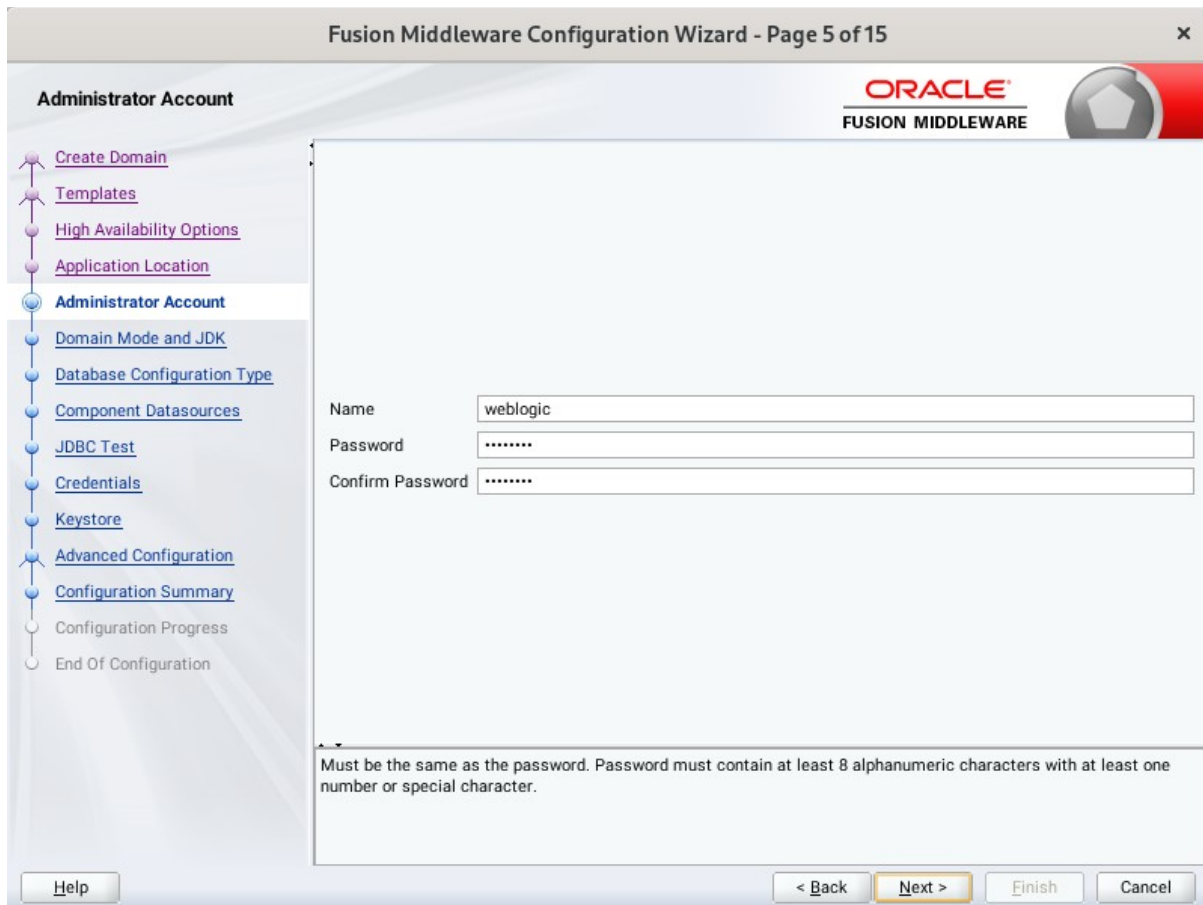
Keep the default value for Application location. Click **Next** to continue.

4). The **Application Location** screen appears.



Keep the default value for Application location. Click **Next** to continue.

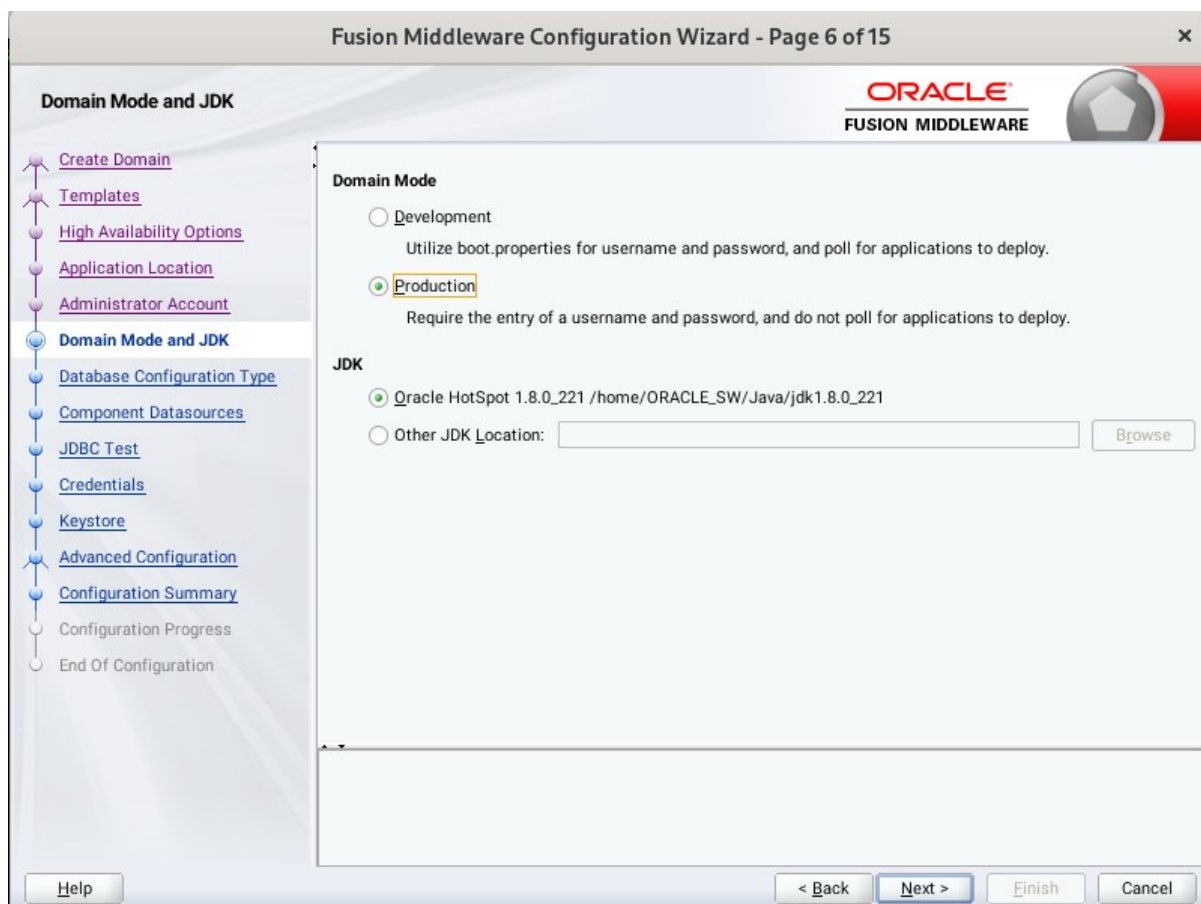
5). The **Administrator Account** screen appears.



The screenshot shows the "Administrator Account" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 5 of 15". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. A navigation pane on the left lists the following steps: Create Domain, Templates, High Availability Options, Application Location, Administrator Account (selected), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Credentials, Keystore, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: "Name" with the value "weblogic", "Password" with masked characters ".....", and "Confirm Password" with masked characters ".....". Below the fields is a note: "Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character." At the bottom, there are buttons for "Help", "< Back", "Next >" (highlighted), "Finish", and "Cancel".

Enter the WebLogic Domain administration username and password. This information will be needed to access WebLogic Server Control and Fusion Middleware Control. Click **Next** to continue.

6). The **Domain Mode and JDK** screen appears.

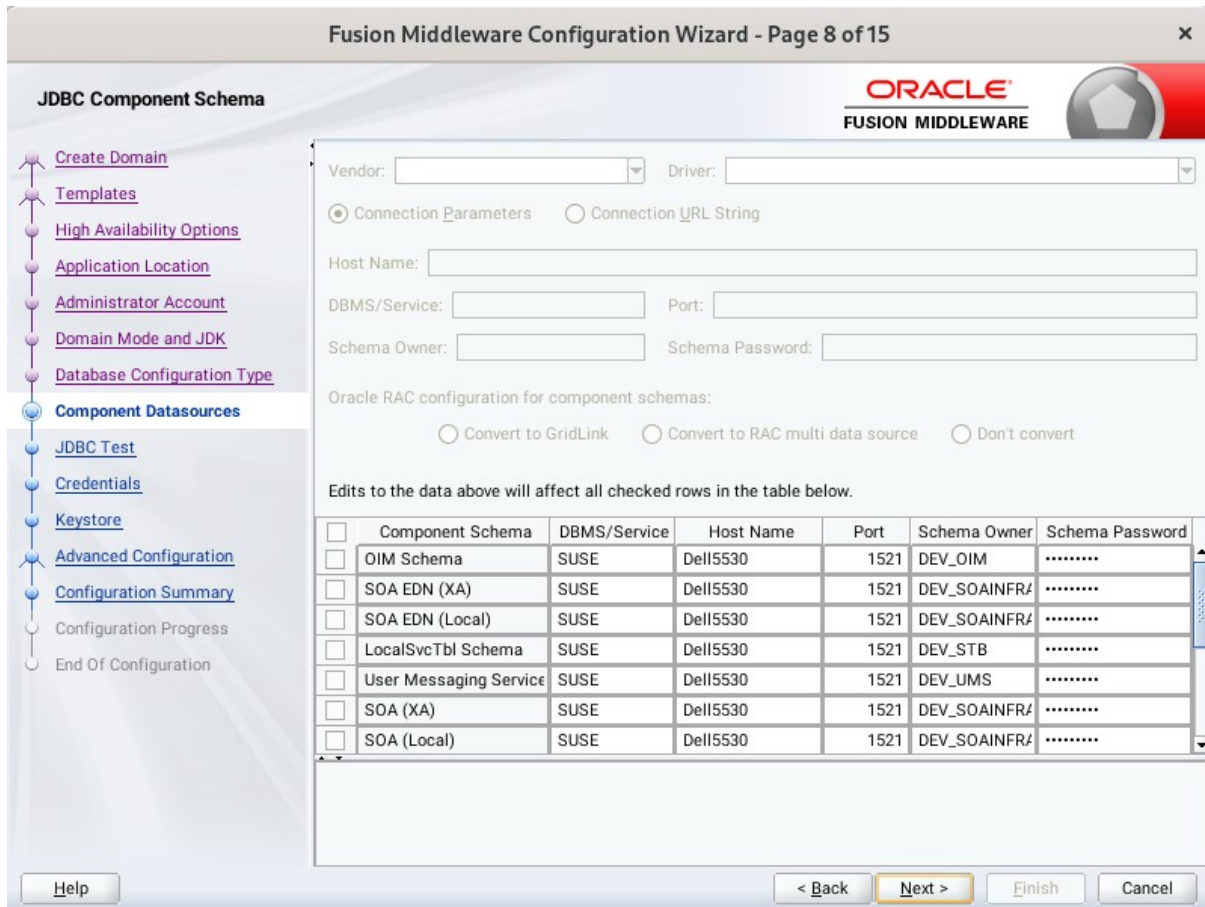


Select **Production** in the **Domain Mode** field and select the **Oracle HotSPot JDK** in the **JDK** field. Click **Next** to continue.

7). The **Database Configuration Type** screen appears.

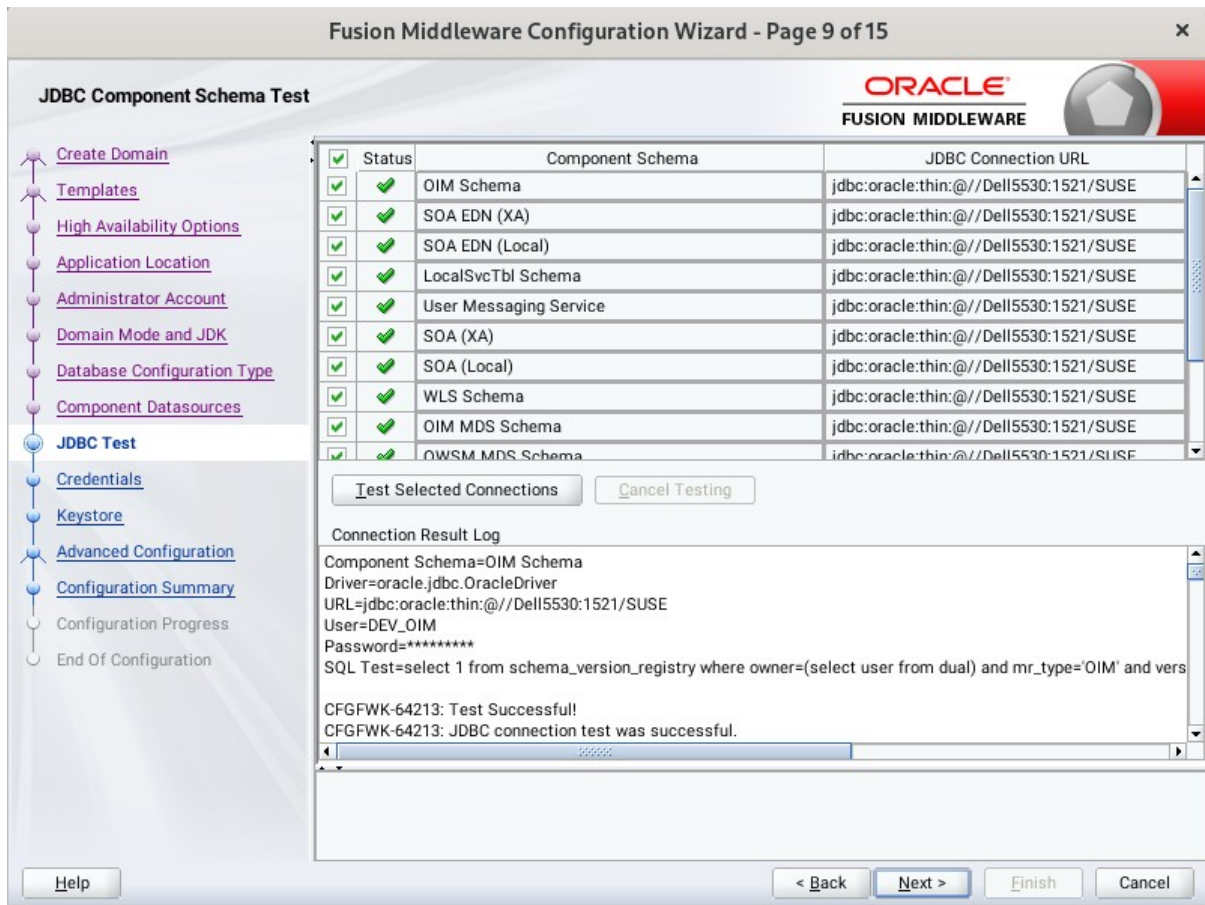
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

8). The **JDBC Component Schema** screen appears.



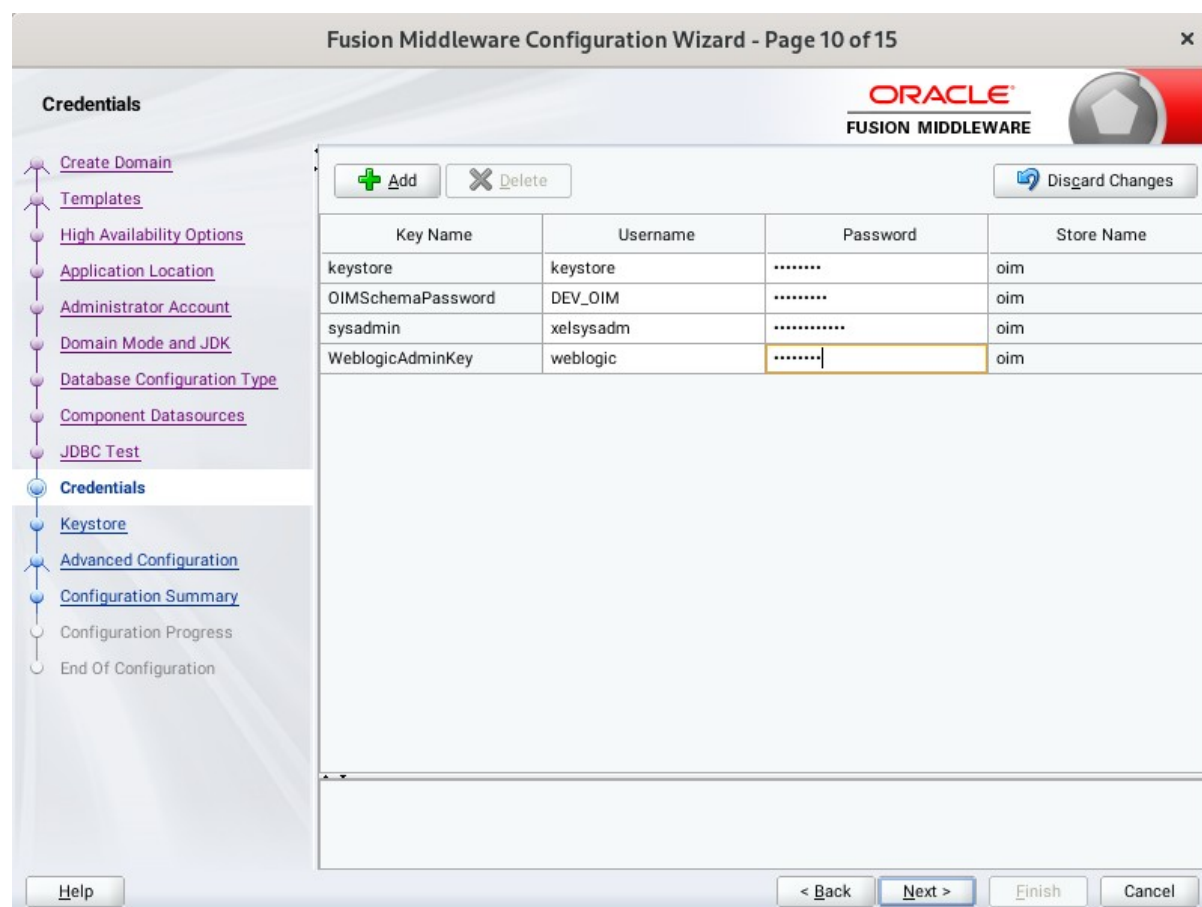
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

9). The **JDBC Component Schema Test** screen appears.



The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

10). The **Credentials** screen appears.



Fusion Middleware Configuration Wizard - Page 10 of 15

ORACLE
FUSION MIDDLEWARE

Credentials

Create Domain
Templates
High Availability Options
Application Location
Administrator Account
Domain Mode and JDK
Database Configuration Type
Component Datasources
JDBC Test
Credentials
Keystore
Advanced Configuration
Configuration Summary
Configuration Progress
End Of Configuration

+ Add X Delete Disgard Changes

Key Name	Username	Password	Store Name
keystore	keystore	.....	oim
OIMSchemaPassword	DEV_OIM	.....	oim
sysadmin	xelsysadm	.....	oim
WeblogicAdminKey	weblogic	.....	oim

Help < Back Next > Finish Cancel

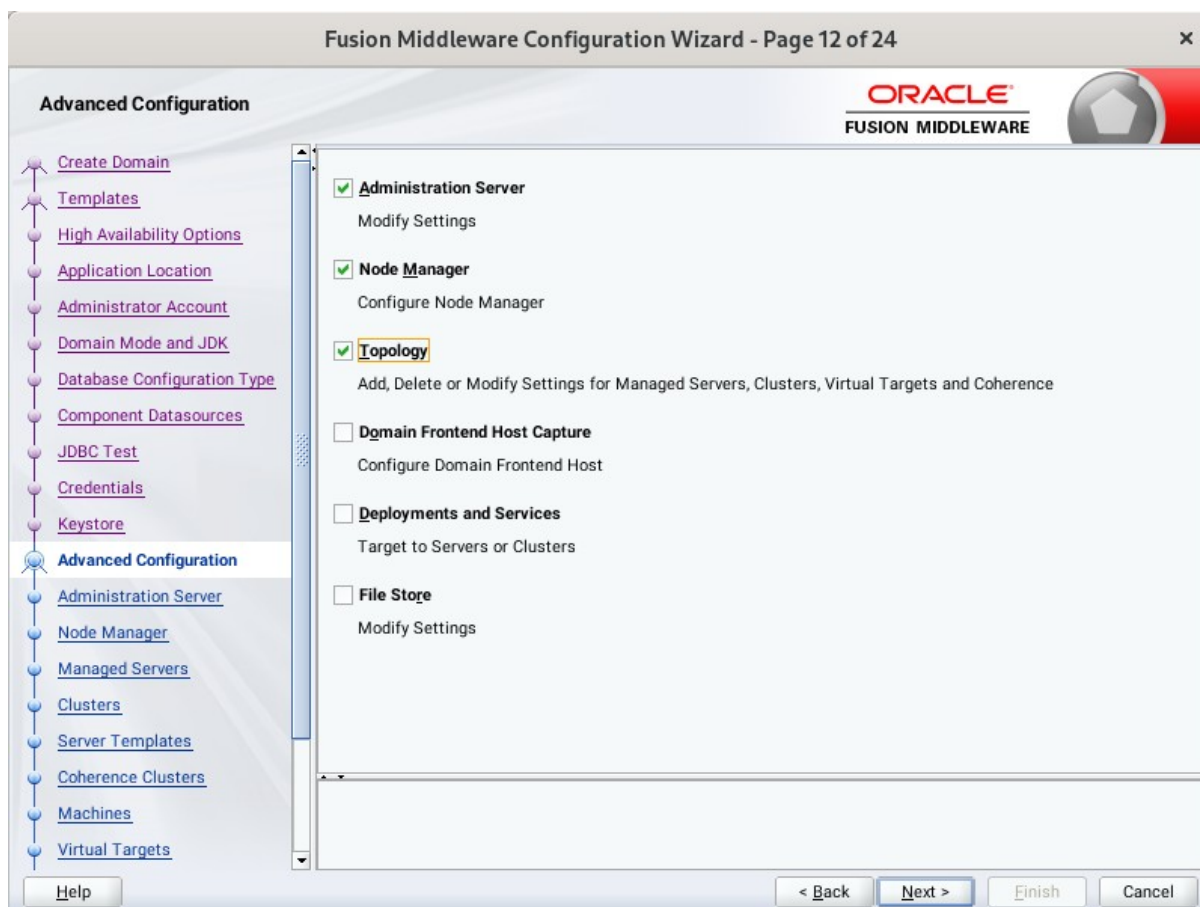
Use the Credentials screen to set credentials for each key in the domain. Ensure that you specify 'keystore' as the username for the key **Keystore**, and 'xelsysadm' as the username for the key **sysadmin**.

11). The **Keystore** screen appears.

The screenshot shows the 'Keystore' configuration screen in the Oracle Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 11 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'Keystore' selected and highlighted in blue. Below the navigation pane, the main content area contains a 'Store Key Name' dropdown menu set to 'ums/apns' and a 'Disgard Changes' button. Below this, there are two tables for configuring keystore entries. The first table has columns for 'Alias' and 'Trusted Certificate'. The second table has columns for 'Alias', 'Private Key', 'Password', and 'Identity Certificate'. At the bottom of the window, there are navigation buttons: '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner.

Accept the defaults and click **Next** to continue.

12). The **Advanced Configuration** screen appears.

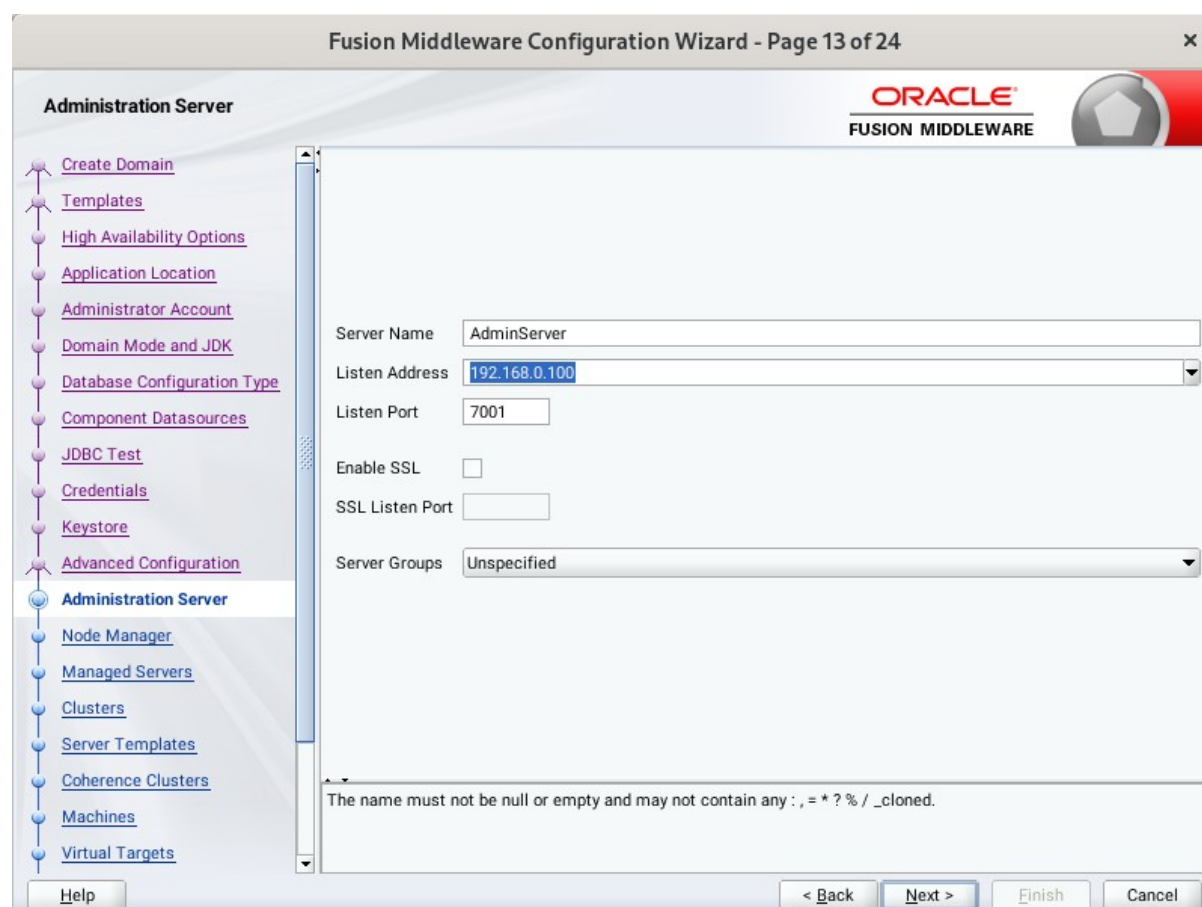


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

13). The **Administration Server** screen appears.



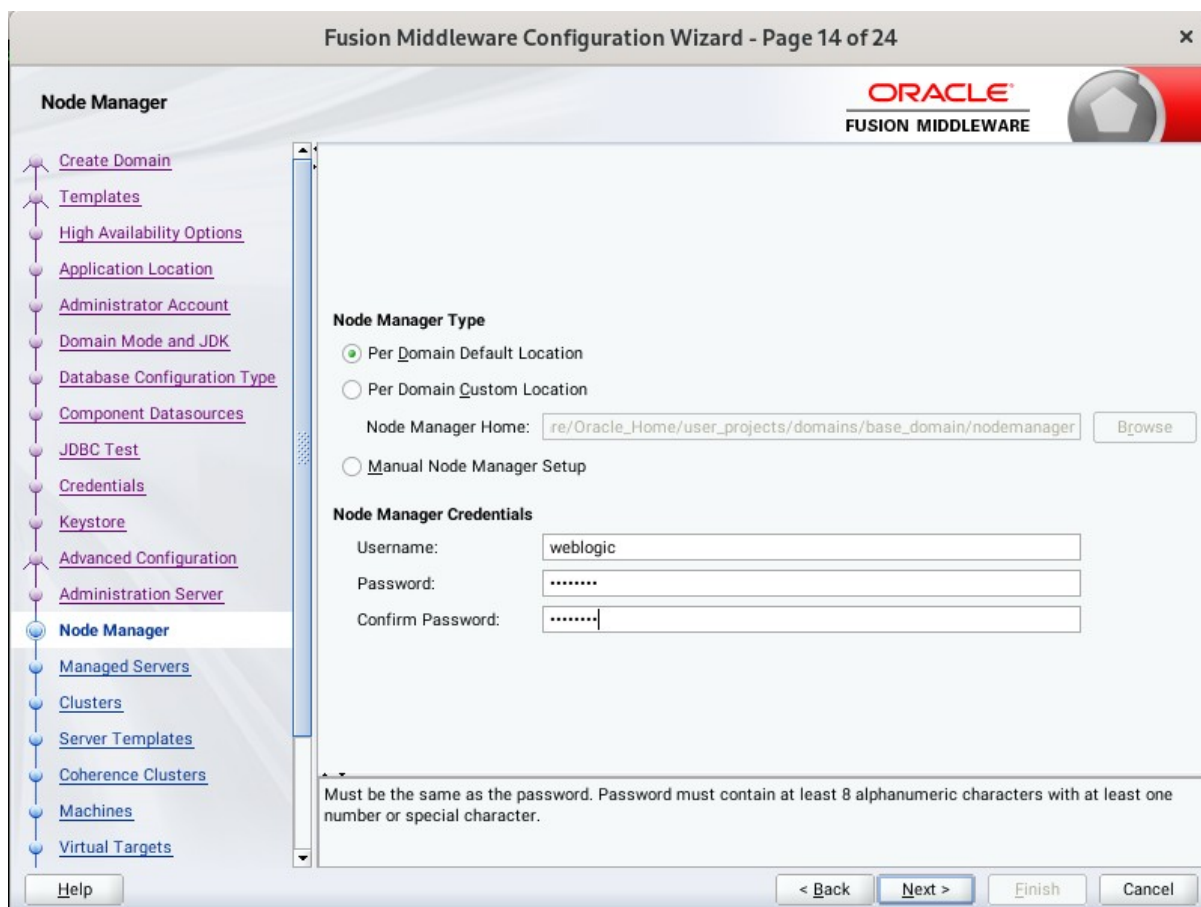
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 13 of 24". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with "Administration Server" selected and highlighted in blue. The main area contains the following fields:

- Server Name: AdminServer
- Listen Address: 192.168.0.100 (selected in a dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty field)
- Server Groups: Unspecified (selected in a dropdown menu)

At the bottom of the main area, there is a validation message: "The name must not be null or empty and may not contain any : , * ? % / _ cloned." Below the main area are four buttons: "Help", "< Back", "Next >", "Finish", and "Cancel".

Use the **Administration Server** screen to select the IP address of the host. Select the drop-down list next to **Listen Address** and select the IP address of the host where the Administration Server will reside, or use the system name or DNS name that maps to a single IP address. Click **Next** to continue.

14). Configuring **Node Manager** screen appears.



The screenshot shows the "Node Manager" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 14 of 24". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with "Node Manager" selected and highlighted. The main content area is divided into two sections: "Node Manager Type" and "Node Manager Credentials".

Node Manager Type

- Per Domain Default Location
- Per Domain Custom Location

Node Manager Home:

Manual Node Manager Setup

Node Manager Credentials

Username:

Password:

Confirm Password:

Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

At the bottom, there are navigation buttons: "Help", "< Back", "Next >", "Finish", and "Cancel".

Select **Per Domain Default Location** as the Node Manager type, then Specify Node Manager credentials. Click **Next** to continue.

15). The **Managed Servers** screen appears.

Fusion Middleware Configuration Wizard - Page 15 of 24

Managed Servers

ORACLE
FUSION MIDDLEWARE

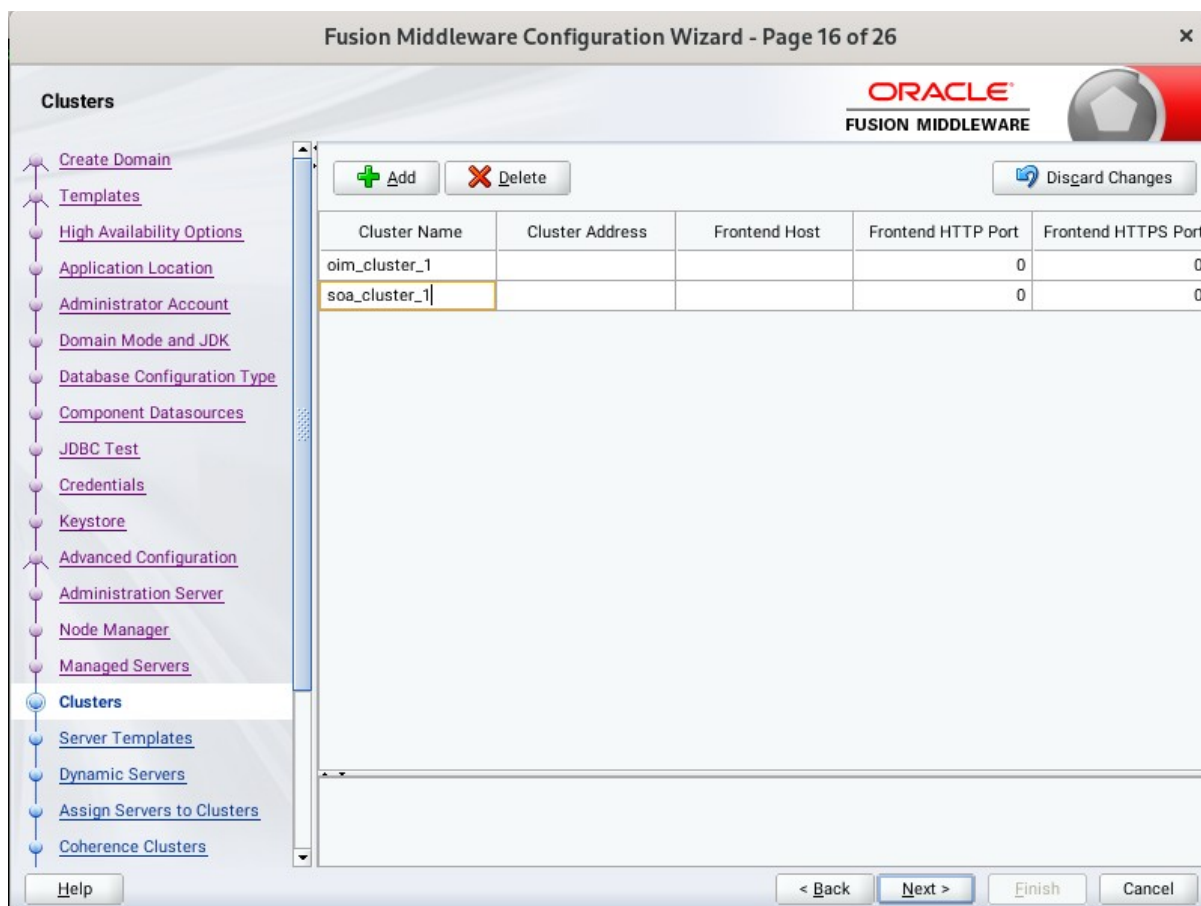
+ Add Clone Delete Disgard Changes

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
oim_server1	192.168.0.100	14000	<input type="checkbox"/>	Disabled	OIM-MGD-S...
soa_server1	192.168.0.100	7003	<input type="checkbox"/>	Disabled	SOA-MGD-...

Help < Back Next > Finish Cancel

On the **Managed Servers** screen, new Managed Servers named: *oim_server1* and *soa_server1* are automatically created. In the **Listen Address** drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. The default **Server Groups** have already been selected for each server. Click **Next** to continue.

16). The **Clusters** screen appears.



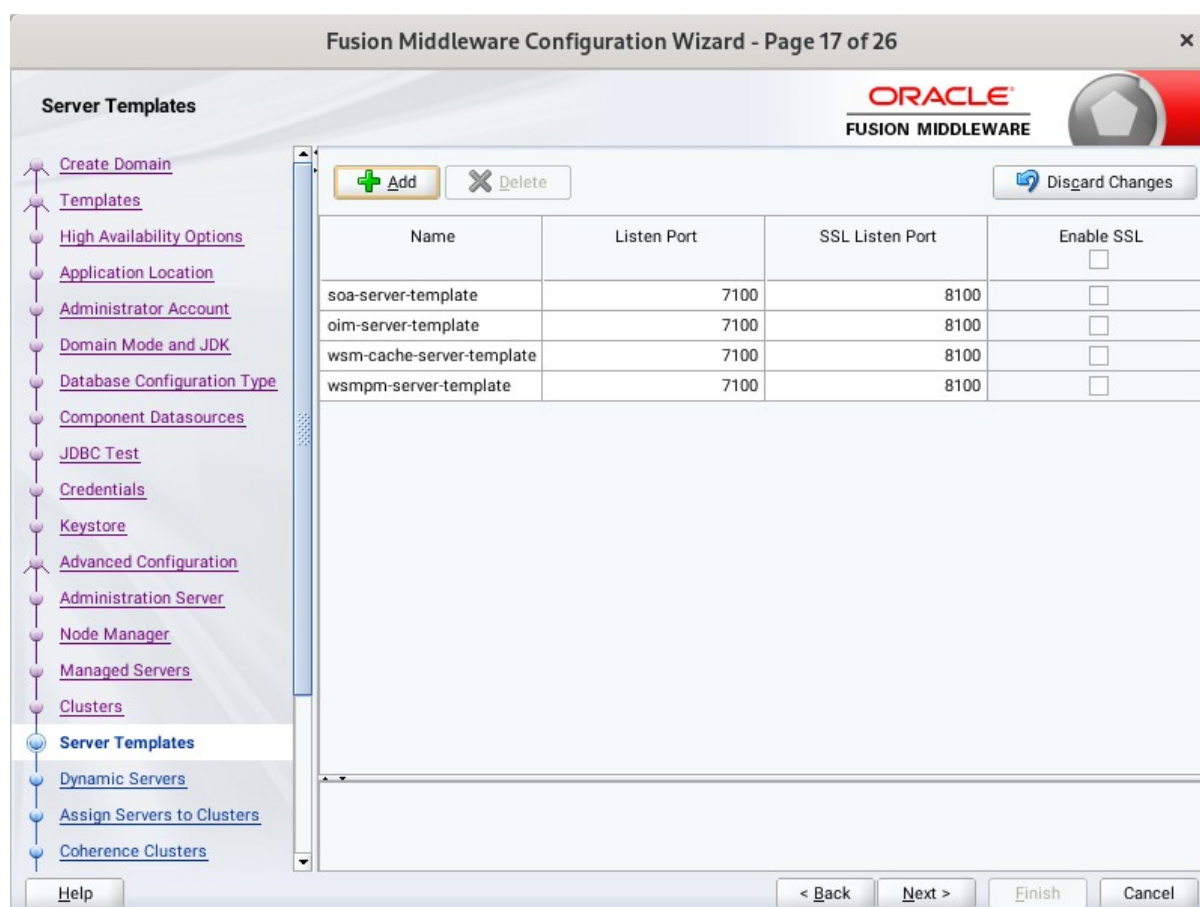
On the Clusters screen:

1. Click **Add**.
2. Specify *oim_cluster_1* in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create *soa_cluster_1* cluster.

Click **Next** to continue.

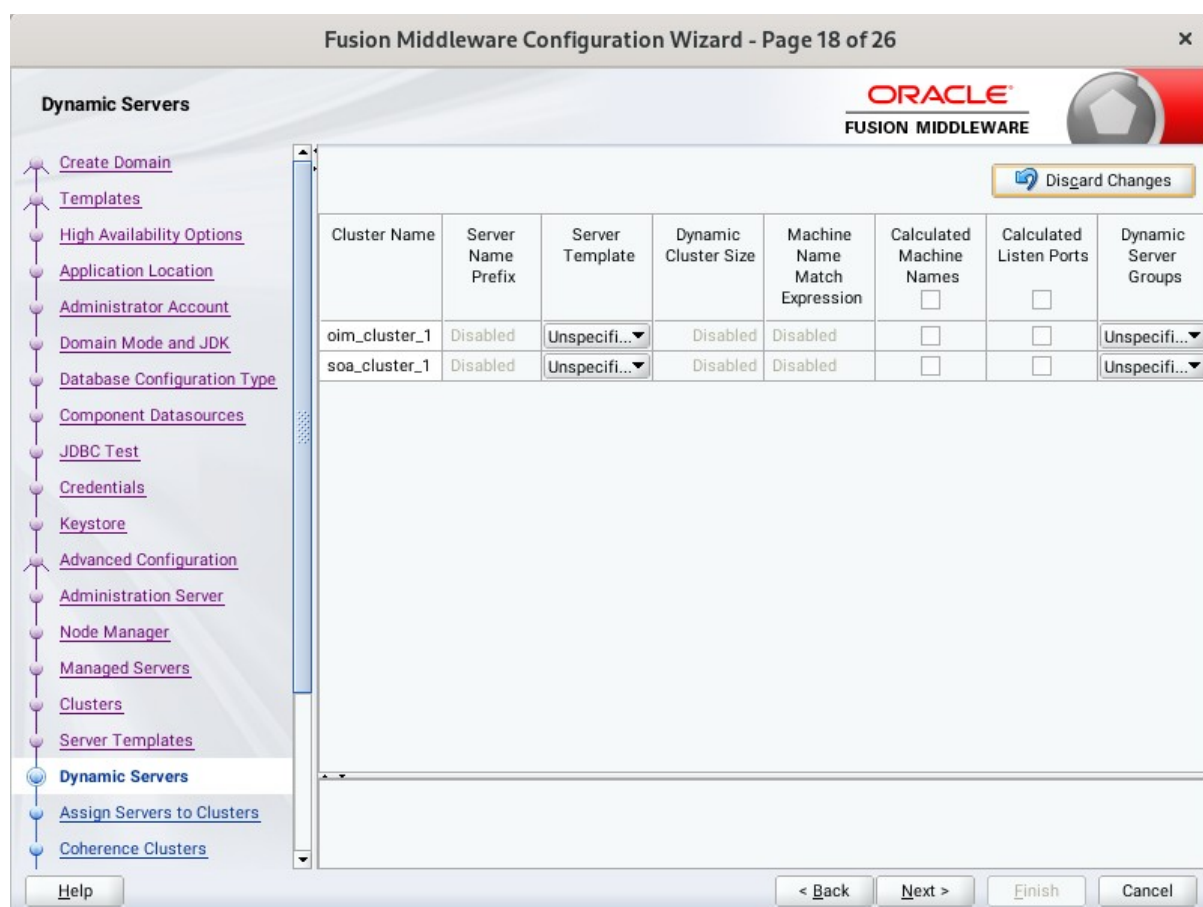
(Note: Configuring a non-clustered setup on a single node, skip this screen.)

17). The **Server templates** screen appears.



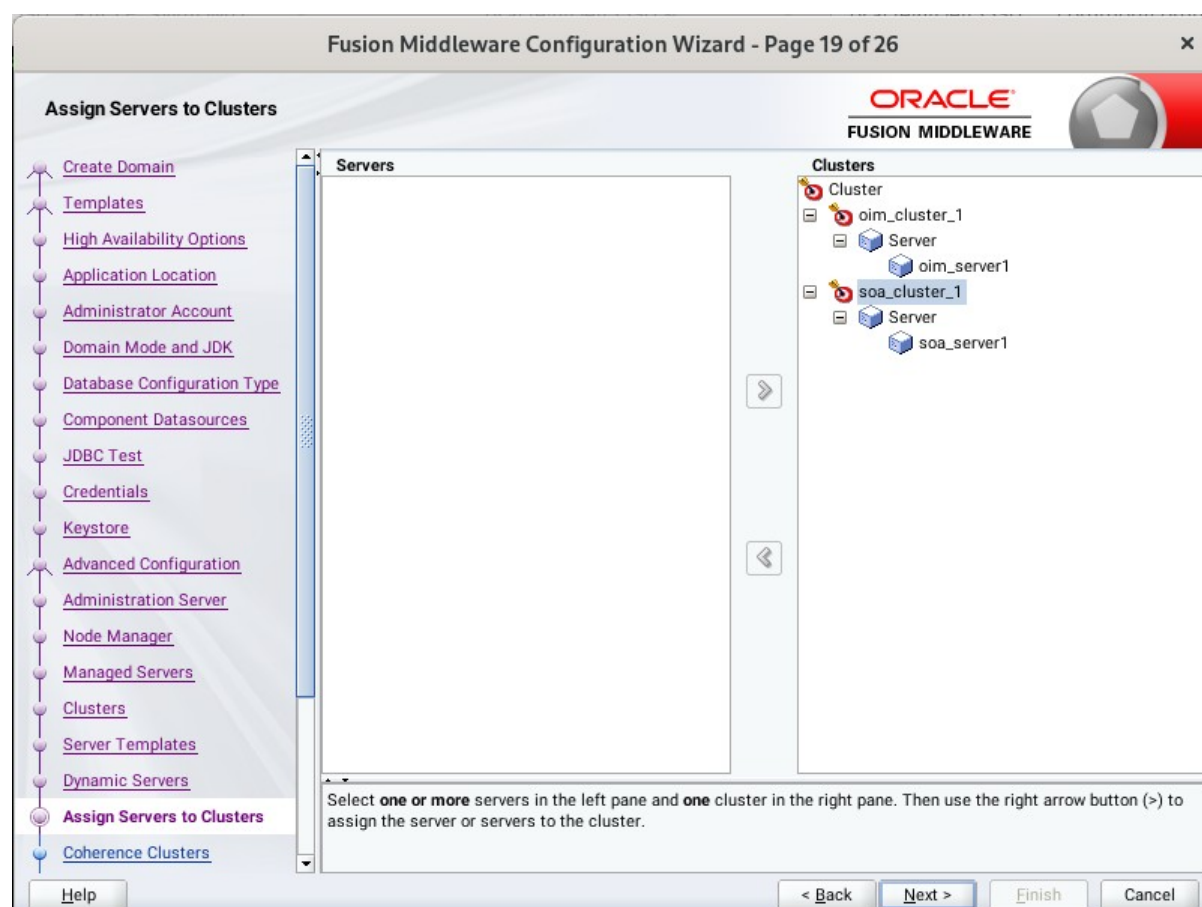
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

18). The **Dynamic Servers** screen appears.



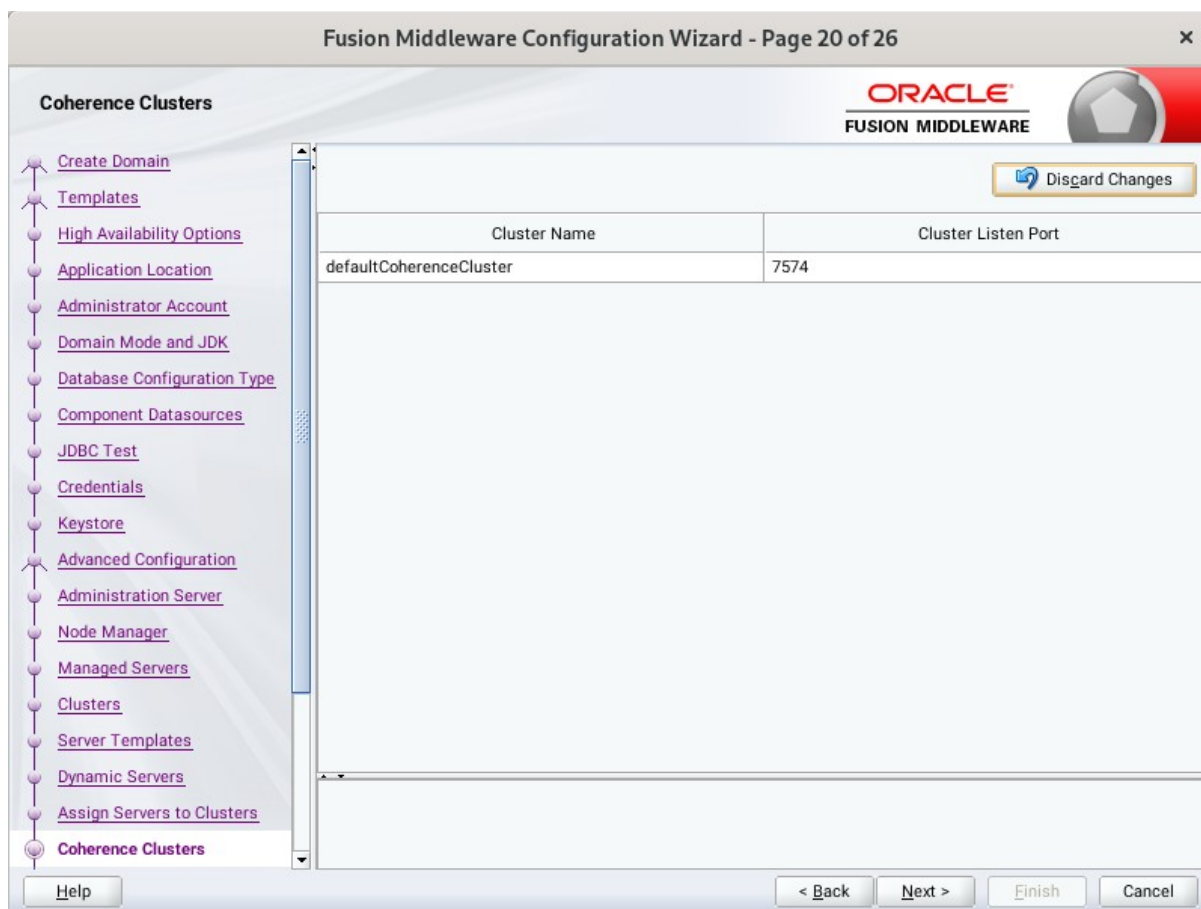
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

19). The **Assign Servers to Clusters** screen appears.



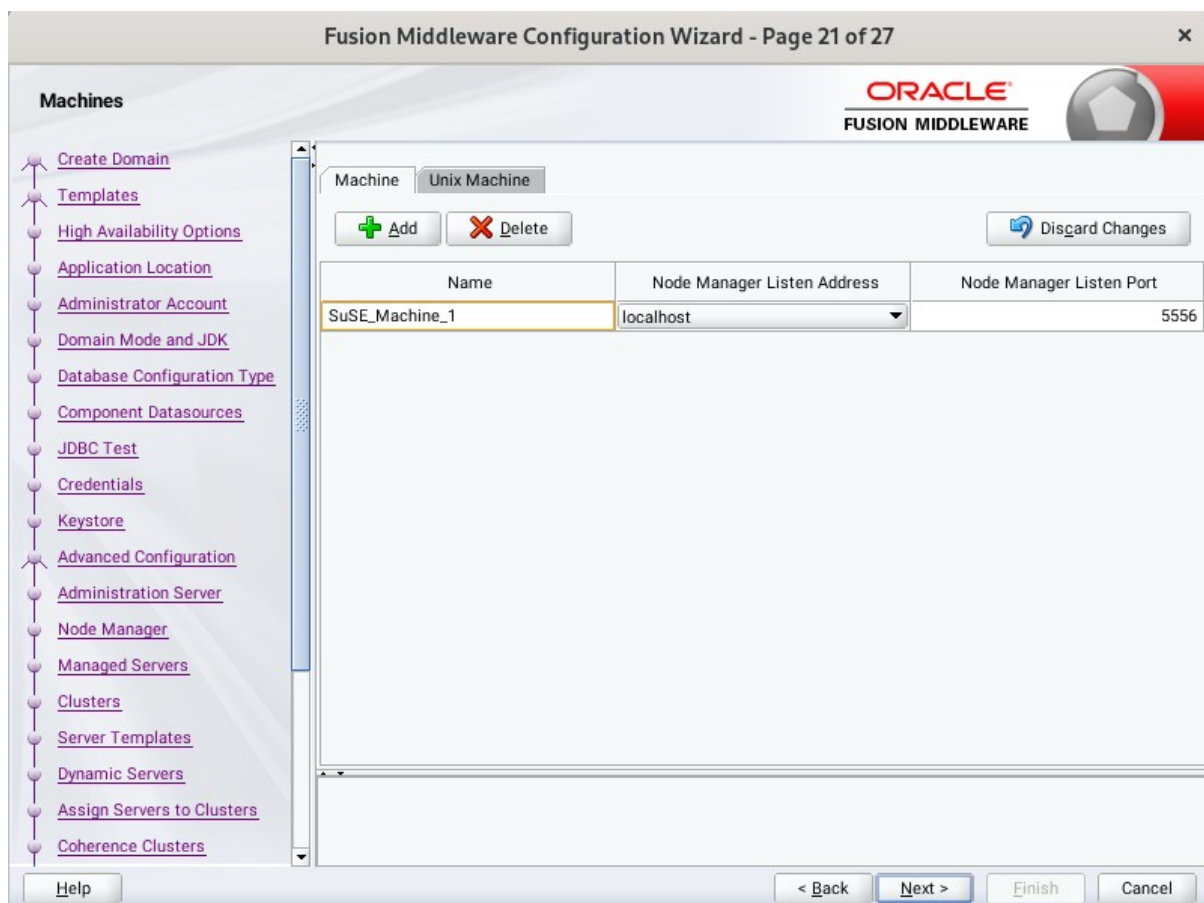
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

20). The **Coherence Clusters** screen appears.



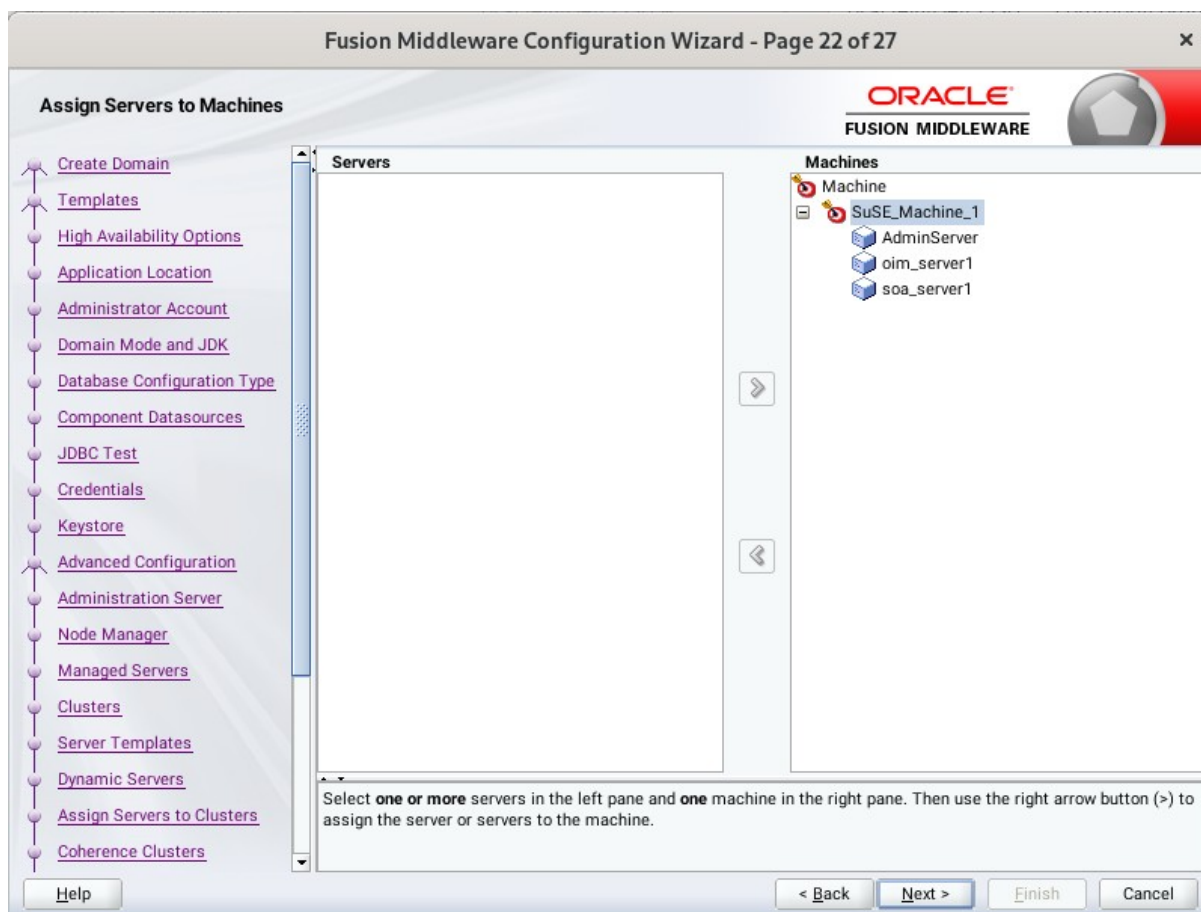
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

21). The **Machines** screen appears.



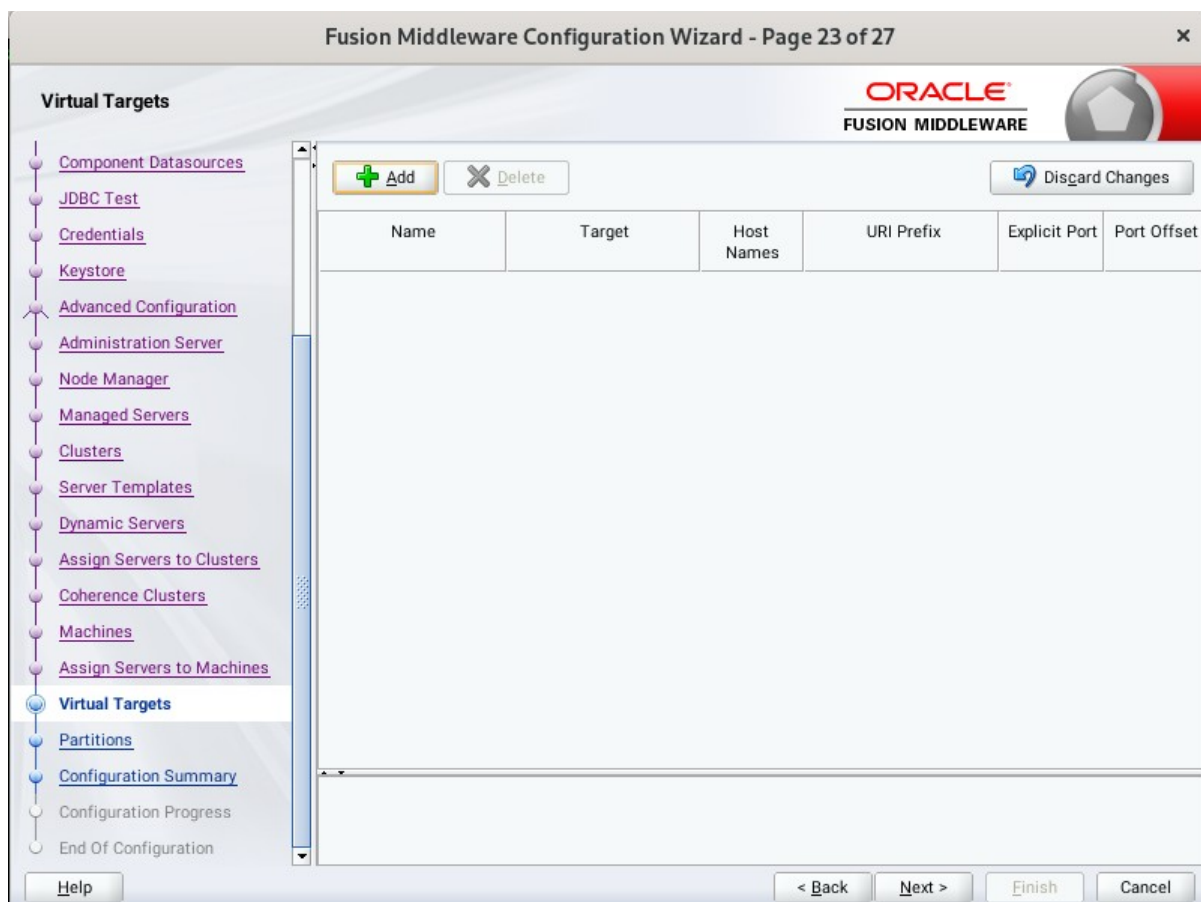
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

22). The **Assign Servers to Machines** screen appears.



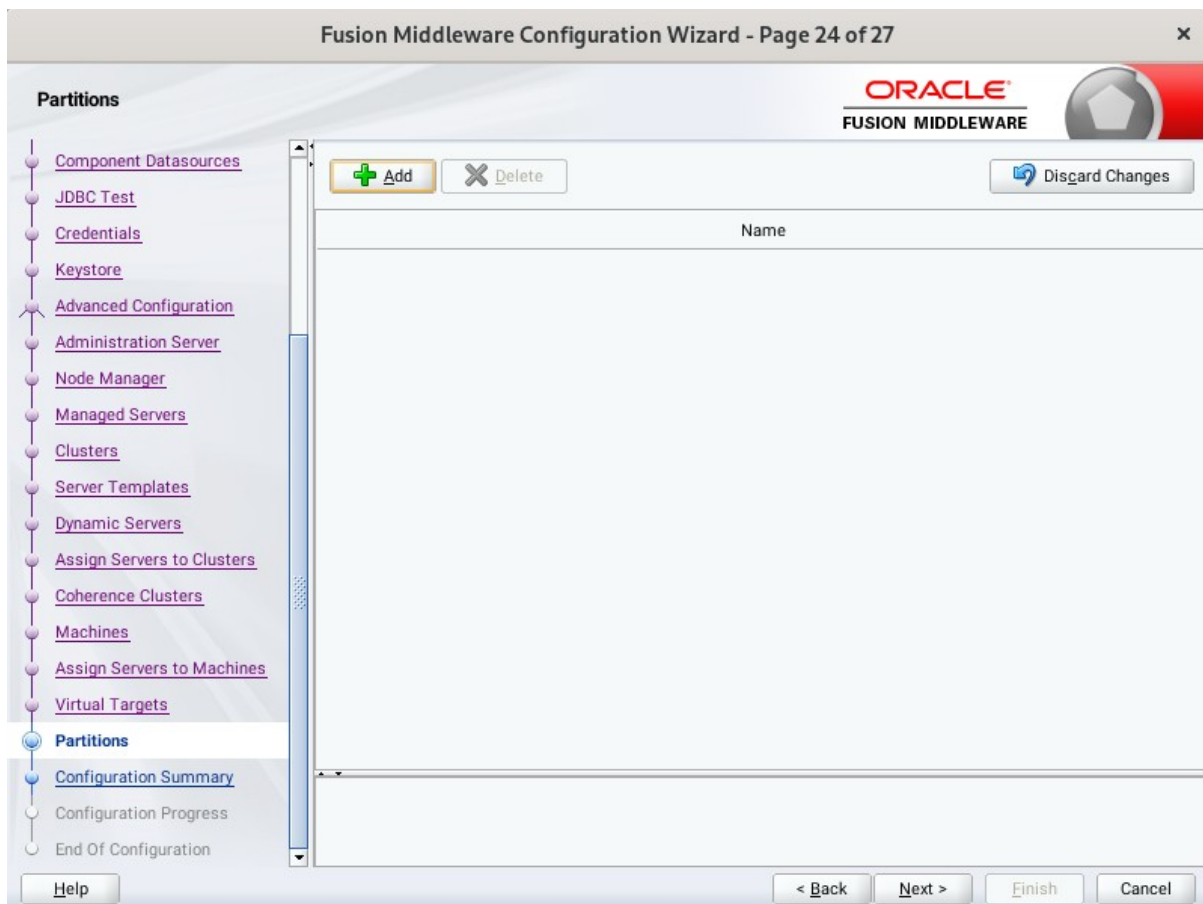
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

23). The **Virtual Targets** screen appears.



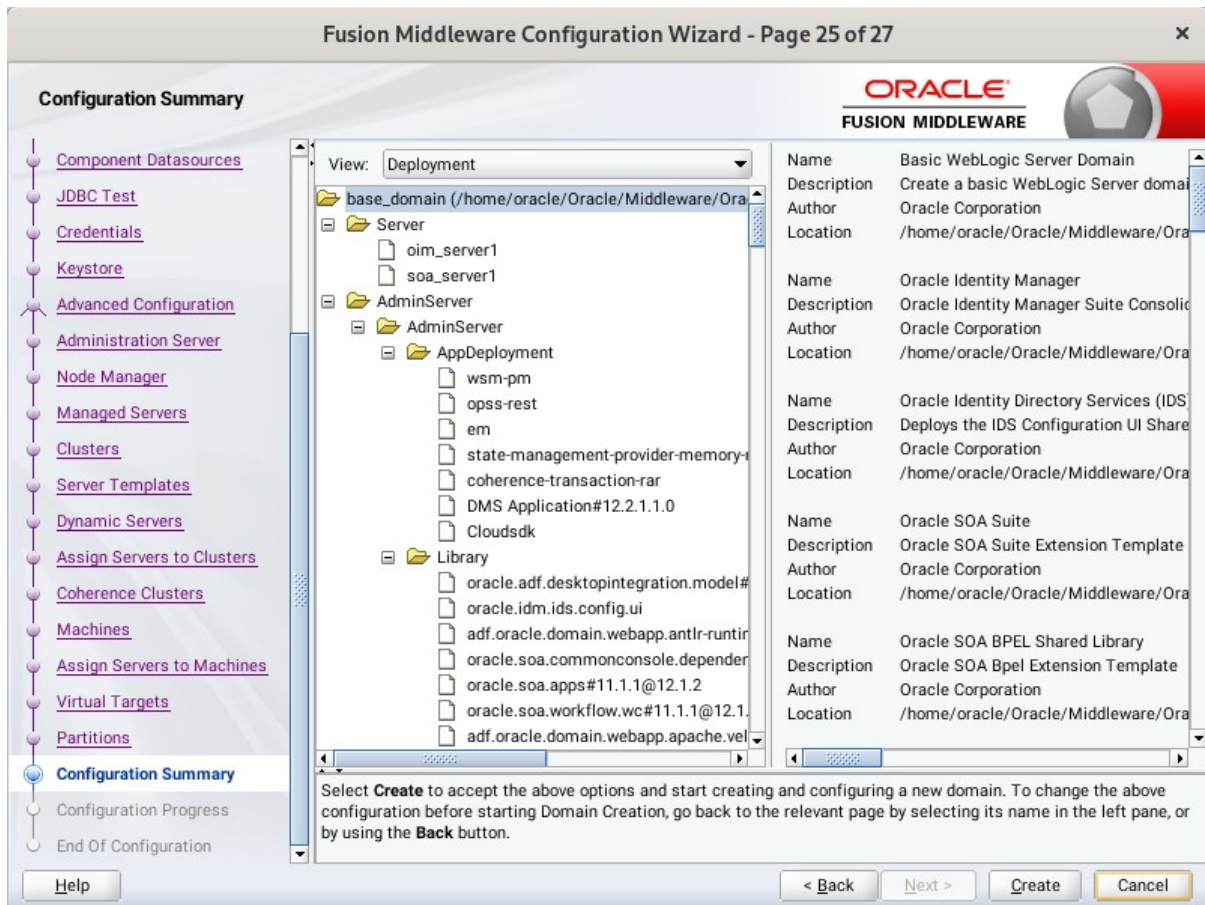
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

24). The **Partitions** screen appears.



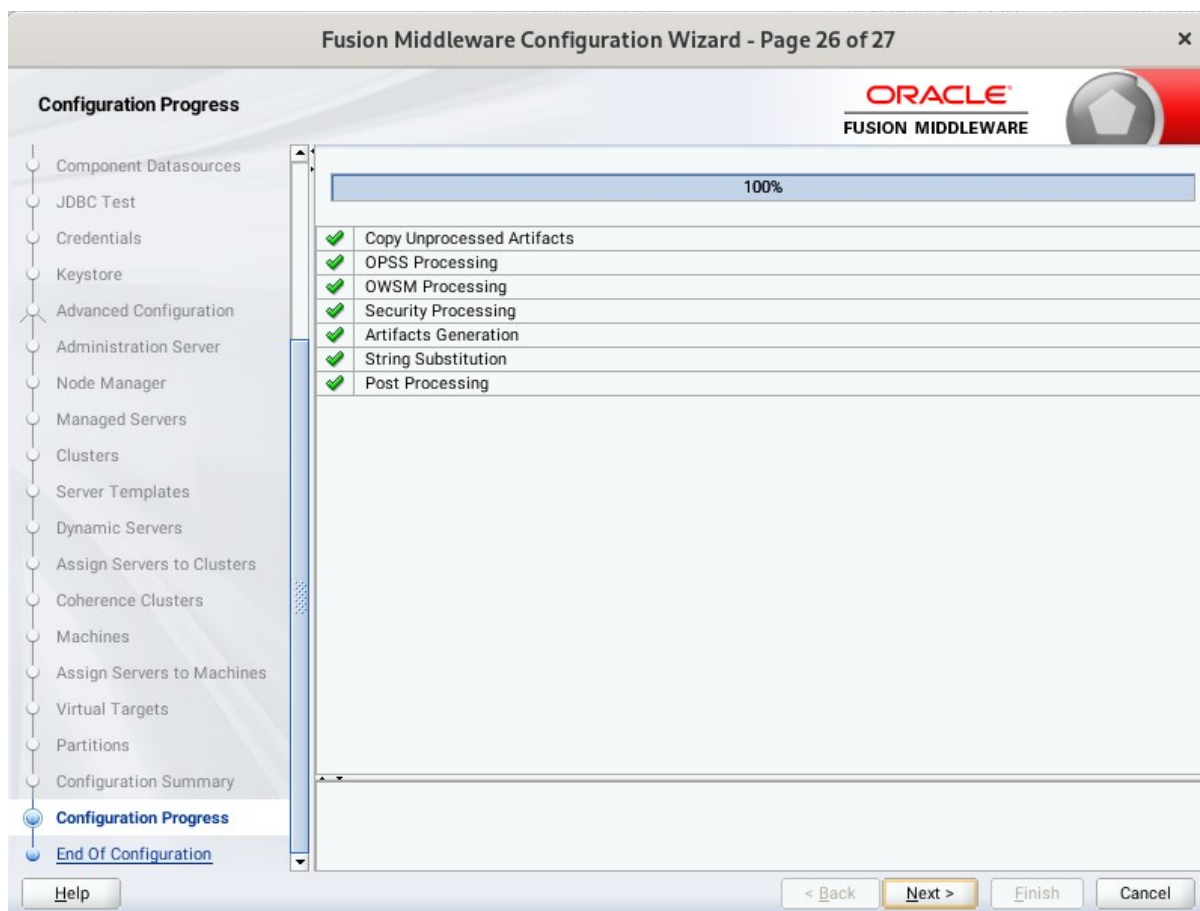
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

25). The **Configuration Summary** screen appears.



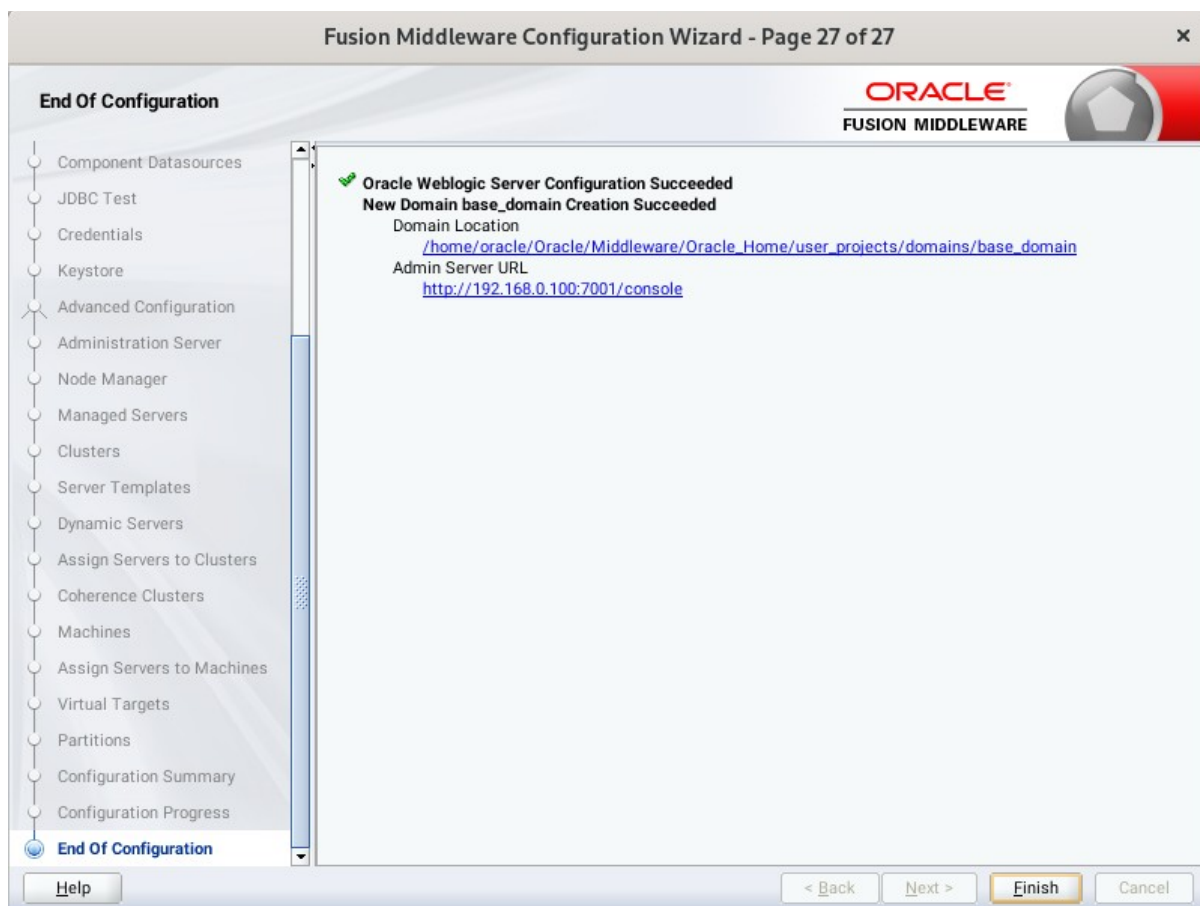
Select **Create** to accept the above options and start creating and configuring a new domain.

26). The **Configuration Progress** screen appears.



Wait for this part of the configuration to complete. Depending on the location and performance of the Repository database, this process may take a few minutes. After the domain successful created, click **Next** to continue.

27). The **End of Configuration** screen appears.



Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

2-3. Performing Post-Configuration Tasks

After you configure the Oracle IDM domain, perform the necessary post-configuration tasks.

1). Running the Offline Configuration Command.

To run the `offlineConfigManager` command, do the following:

- Set the following environment variables to the right values.

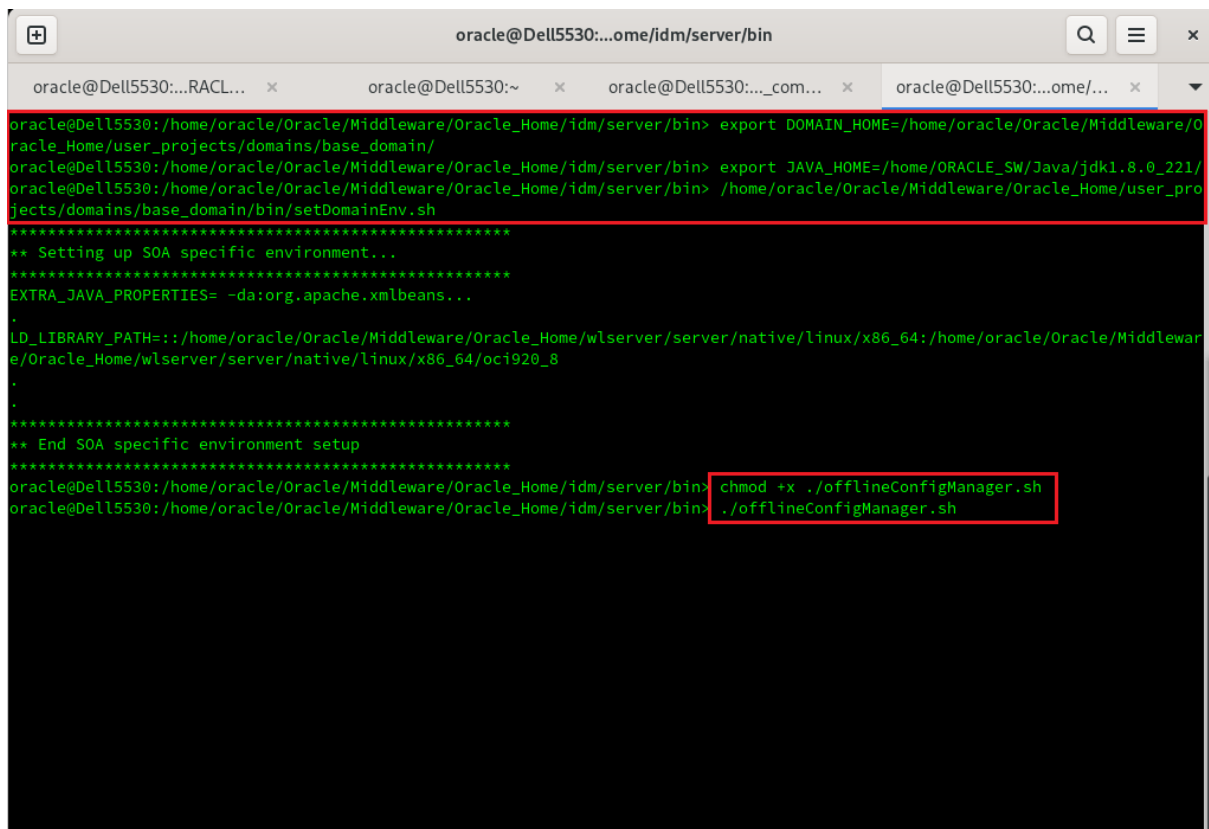
```
DOMAIN_HOME
JAVA_HOME
```

- Run the `setDomainEnv` script from `%DOMAIN_HOME%\bin`, in order to set up all of the required environment variables.

```
./setDomainEnv.sh
```

- Run the following command from the location `OIM_HOME/server/bin/`:

```
./offlineConfigManager.sh
```



```
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin> export DOMAIN_HOME=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin> export JAVA_HOME=/home/Oracle_SW/Java/jdk1.8.0_221/
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin> /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin/setDomainEnv.sh
*****
** Setting up SOA specific environment...
*****
EXTRA_JAVA_PROPERTIES= -da:org.apache.xmlbeans...
.
LD_LIBRARY_PATH=:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/native/linux/x86_64:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/native/linux/x86_64/oci920_8
.
*****
** End SOA specific environment setup
*****
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin> chmod +x ./offlineConfigManager.sh
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin> ./offlineConfigManager.sh
```



```

oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin$ chmod +x ./offlineConfigManager.sh
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin$ ./offlineConfigManager.sh
pwd==> /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin
OIM Home==> /home/oracle/Oracle/Middleware/Oracle_Home
MW Home==> /home/oracle/Oracle/Middleware/Oracle_Home
cp: -r not specified; omitting directory '/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema'
copied jars from /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/ to /home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/mbeantypes/ dir
copied /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema/* to /home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/lib/schematypes/ dir

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

reading Domain --> base_domainat path --> /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/
Session started for modification.
New Token Issuer Trust document named tokenissuertrustWLSbase_domain created.
To use the new document in the domain configuration, you must run the setWSMConfiguration command where category = "TokenIssuerTrust", property name = "name" and value = "tokenissuertrustWLSbase_domain".
A new property "name" within category "TokenIssuerTrust" has been added.
The values "[tokenissuertrustWLSbase_domain]" have been added to property "name" within category "TokenIssuerTrust".
Configuration properties associated with the context "/WLS/base_domain" has been created.
Token Issuer Trust document named "tokenissuertrustWLSbase_domain" selected in the session.
New issuer - "www.oracle.com" added to the document.
The issuer and trusted DN values have been updated successfully.

Successfully configured property "keystore.type".

Successfully configured property "location".

Successfully configured property "keystore.sig.csf.key".

```

```

[OIM_CONFIG] The file /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain//config/fmwconfig/jps-config-jse.xml is updated.
<Aug 26, 2022 4:24:59,595 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.util.JPSCfgXMLUpdate updateJPSCfgXMLForWLS
INFO: Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class
<Aug 26, 2022 4:24:59,596 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
Updated jps-config-jse.xml Details.>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO:
Updated jps-config-jse.xml Details.
<Aug 26, 2022 4:24:59,596 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfg() method of OIMConfigManager class>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO: Exiting updateJPSCfg() method of OIMConfigManager class
<Aug 26, 2022 4:24:59,596 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
[OIM_CONFIG] Copying the mbean Files>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
[OIM_CONFIG] Copying the mbean Files
<Aug 26, 2022 4:24:59,597 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Entering copyMbeanFiles() method of OIMConfigManager class>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Entering copyMbeanFiles() method of OIMConfigManager class
<Aug 26, 2022 4:24:59,597 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
Copying mbean files are successful>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
Copying mbean files are successful
<Aug 26, 2022 4:24:59,597 PM CST> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting copyMbeanFiles() method of OIMConfigManager class>
Aug 26, 2022 4:24:59 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Exiting copyMbeanFiles() method of OIMConfigManager class
oracle@Dell5530:~/Oracle/Middleware/Oracle_Home/idm/server/bin$

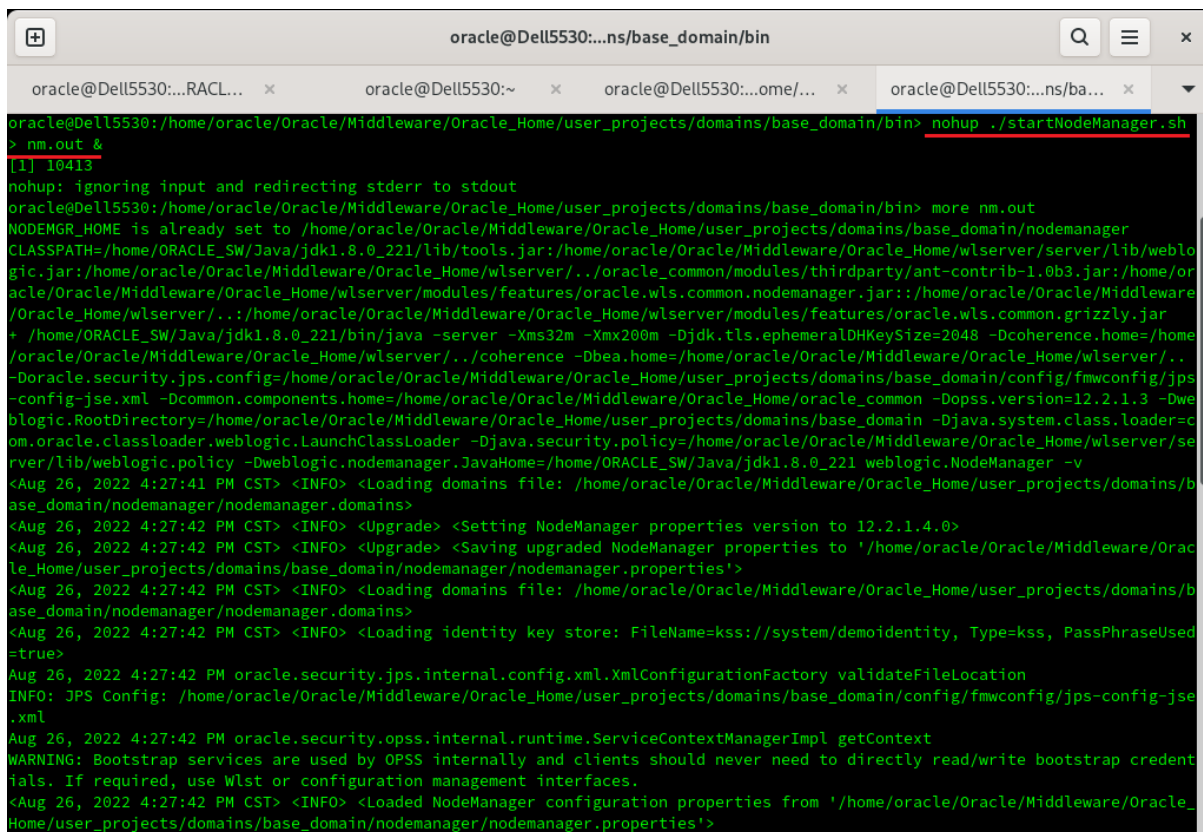
```

3. Verifying Oracle Identity Manager(OIM) Installation and Configuration

3-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

3-2. Starting the Node Manager and the Admin Server.

Starting the Node Manager, go to the DOMAIN_HOME/bin directory and run 'nohup ./startNodeManager.sh > nm.out&'



```

oracle@Dell5530:~/base_domain/bin
oracle@Dell5530:~/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 10413
nohup: ignoring input and redirecting stderr to stdout
oracle@Dell5530:~/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager
CLASSPATH=/home/ORACLE_SW/Java/jdk1.8.0_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..-Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Aug 26, 2022 4:27:41 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Aug 26, 2022 4:27:42 PM CST> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Aug 26, 2022 4:27:42 PM CST> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Aug 26, 2022 4:27:42 PM CST> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Aug 26, 2022 4:27:42 PM CST> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Aug 26, 2022 4:27:42 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Aug 26, 2022 4:27:42 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<Aug 26, 2022 4:27:42 PM CST> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>

```

Starting the Admin Server, go to the `DOMAIN_HOME/bin` directory and run `./startWebLogic.sh`.

```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:... x oracle@Dell5530:~ x oracle@Dell5530:... x oracle@Dell5530:... x oracle@Dell5530:... x
PAF Integration init END
ProvCommonIntegration.init, registering the Page Handlers and Page Segment Handlers
inside MultiOMSIntegration
FMWProv: Integration Class called and was reloaded for me
PostInstallConfigIntegration:oracle_ias_farm target auth registration is done.
CompositesProvIntegration init...
getAllPluginOracleHomes: ConnectionService is null
getAllPluginOracleHomes: ConnectionService is null
Anonymous url config processing:/WEB-INF/config/anonymous-access-emcore.config
Anonymous-urls:[/em/IEsvgdetect.js.*, /em/LoginStatusServlet.*, /em/adf/.*, /em/adflib/.*, /em/afr/.*, /em/bi/.*, /em/bmp/disc
overtargets, /em/cabo/.*, /em/console/help.*, /em/console/logon.*, /em/consoleStatus.jsp, /em/dynamicImage.*, /em/ecm/csa/CSA
.jar, /em/ecm/csa/CSA.mb, /em/ecm/csa/csabanner.gif, /em/emcli/custAttrib.*, /em/emr/.*, /em/faces/logon/.*, /em/faces/helppag
es/.*, /em/flashbridge.*, /em/formsapp/lib/formsRecorder.jar, /em/images/.*, /em/install/getAgentImage, /em/helppages/help.*,
/em/jslibs/.*, /em/jslibsObf/.*, /em/login.jsp, /em/mapproxy.*, /em/mobile/core/uifwk/skins/.*, /em/ocamm/lib.*, /em/onetime.*
, /em/ovs/discovertargets, /em/public/.*, /em/public_lib_download/.*, /em/redirect.*, /em/relocatetarget.*, /em/sdkImpl/core/U
ifwkmobile/skins/.*, /em/servlet/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs
.*, /em/jobrecv.*]
<Aug 26, 2022 4:30:30,944 PM CST> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring
feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Aug 26, 2022 4:30:31,621 PM CST> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection
with the Domain level Diagnostic Service.>
<Aug 26, 2022 4:30:32,086 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Aug 26, 2022 4:30:32,141 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Aug 26, 2022 4:30:32,141 PM CST> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connecti
on list DomainRuntimeServiceMBean>
<Aug 26, 2022 4:30:32,347 PM CST> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "A
dminServer" for domain "base_domain" running in production mode.>
<Aug 26, 2022 4:30:32,347 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Aug 26, 2022 4:30:32,348 PM CST> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for
protocols iiop, t3, ldap, snmp, http.>
<Aug 26, 2022 4:30:32,519 PM CST> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Aug 26, 2022 4:30:32,528 PM CST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

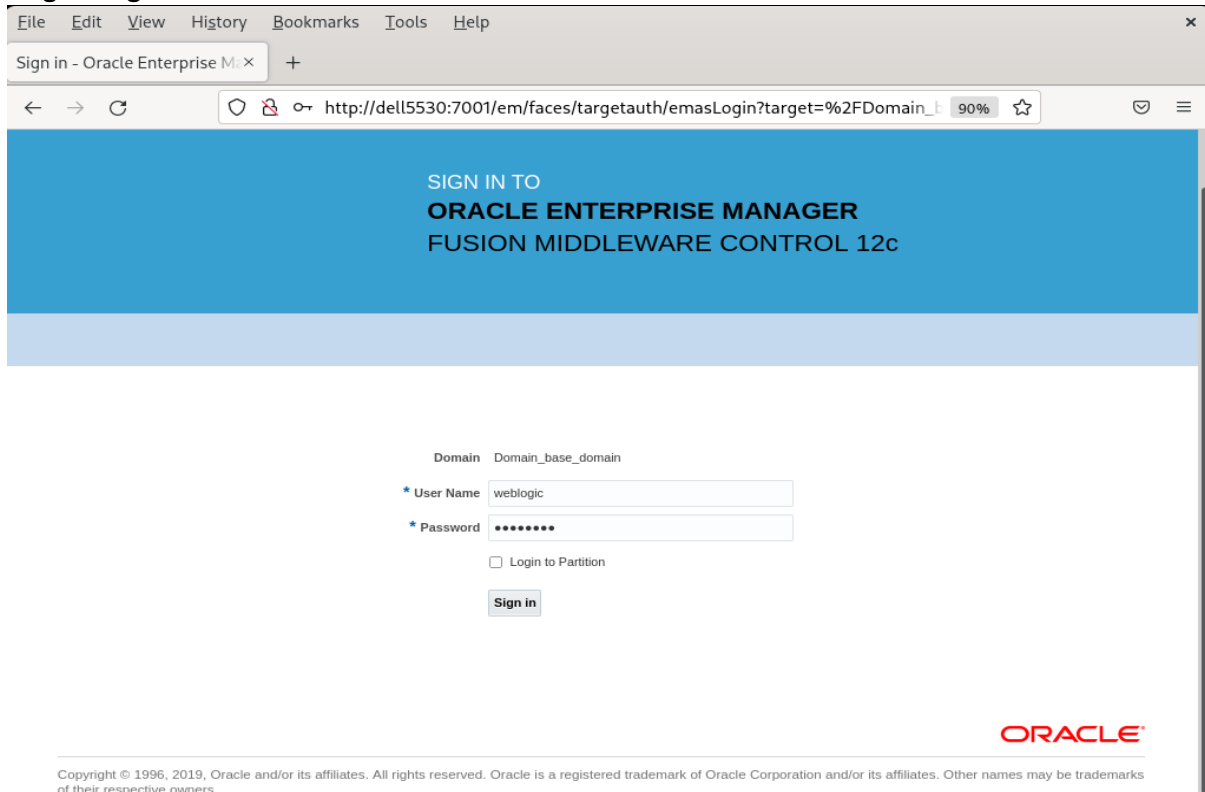
You know that the administrator server is running when you see the following output:

Server state changed to RUNNING.

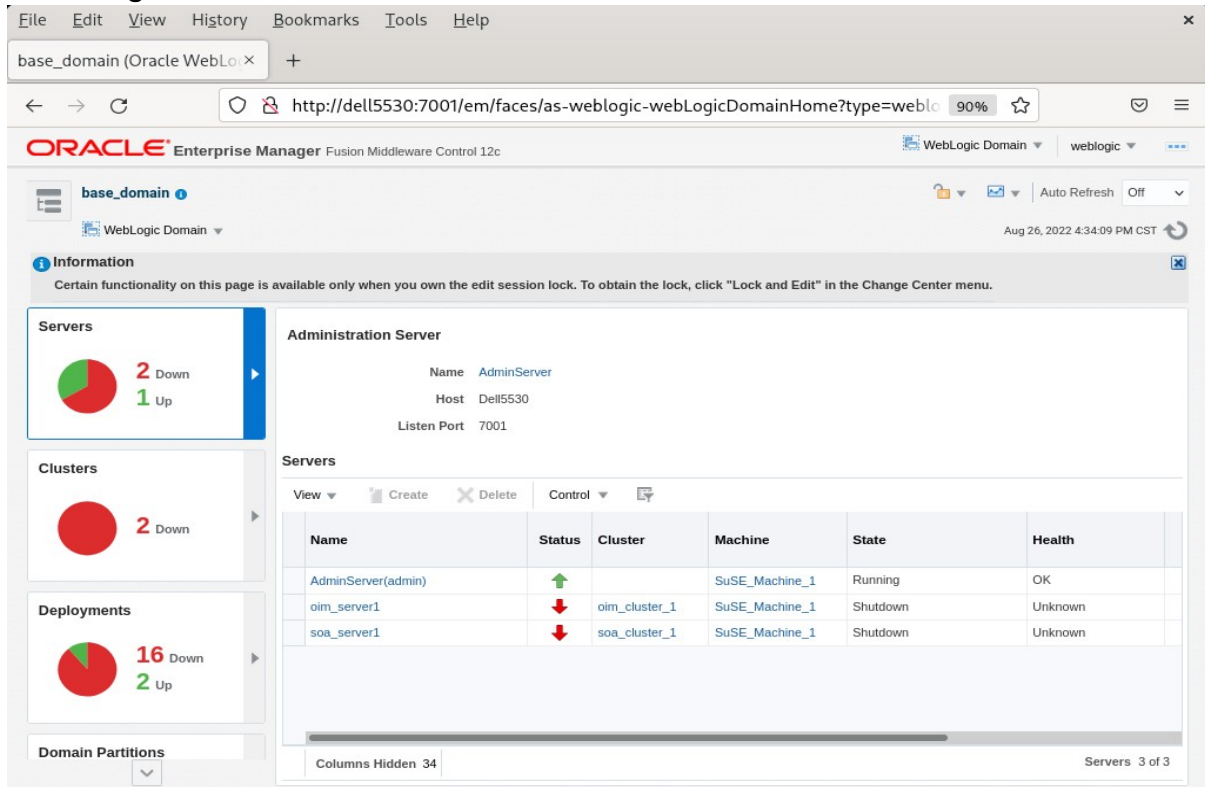
3-3. Checking Oracle Identity and Access Management 12c Product URLs.

1). Access to Enterprise Manager Console.

Login Page:



Home Page:



Starting the managed soa server defined in domain, wait until it comes up into RUNNING state and then starting oim server:

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain. On the left, there are summary cards for Servers (1 Down, 2 Up), Clusters (1 Down, 1 Up), and Deployments (10 Down, 8 Up). The main area displays the 'Administration Server' details and a table of servers.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
oim_server1	↓	oim_cluster_1	SuSE_Machine_1	Shutdown	Unknown
soa_server1	↑	soa_cluster_1	SuSE_Machine_1	Running	OK

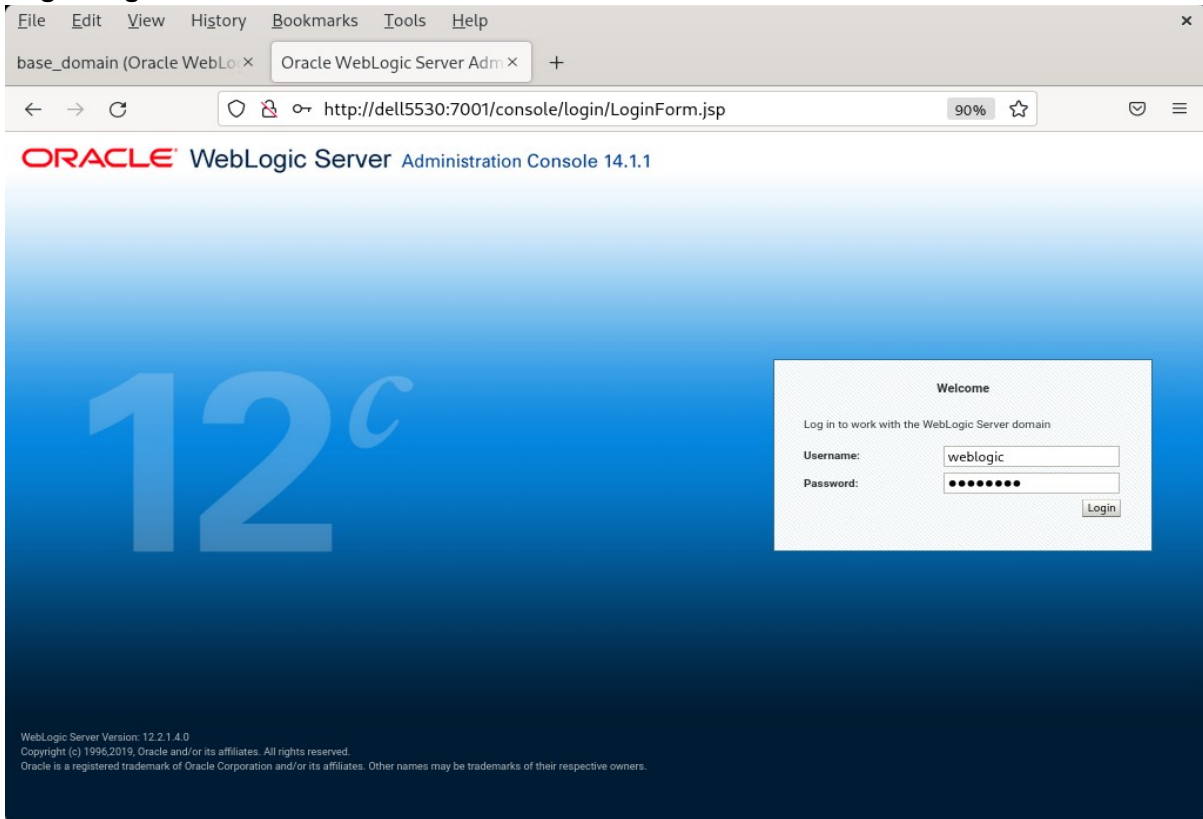
The screenshot shows the Oracle Enterprise Manager interface after the servers have been started. The summary cards now show 3 Up servers, 2 Up clusters, and 11 Up deployments. The server table shows that 'oim_server1' is now 'Running'.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
oim_server1	↑	oim_cluster_1	SuSE_Machine_1	Running	OK
soa_server1	↑	soa_cluster_1	SuSE_Machine_1	Running	OK

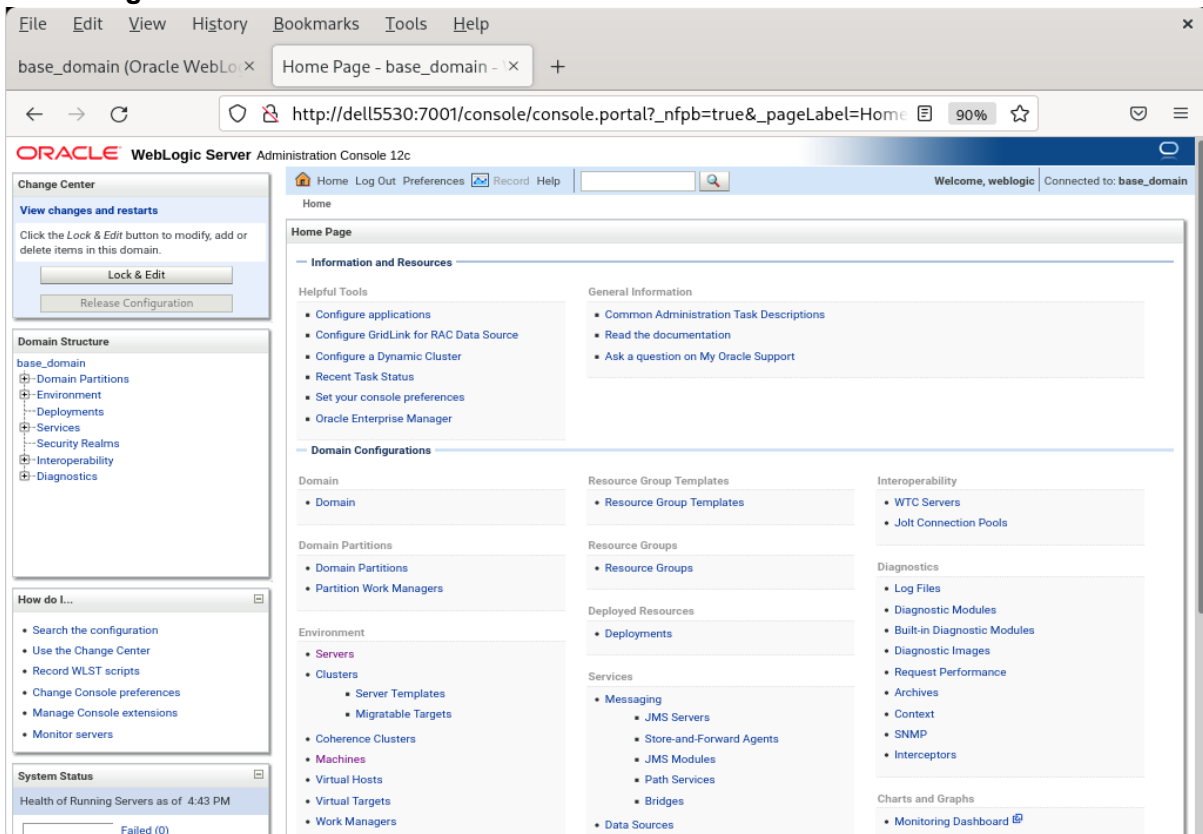
After they start up successfully, each managed server is listed as Running.

2). Access to Administration Server Console

Login Page:



Home Page:



Viewing the summary of servers:

Summary of Servers

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		SuSE_Machine_1	RUNNING	OK	7001
oim_server1	Configured	oim_cluster_1	SuSE_Machine_1	RUNNING	OK	14000
soa_server1	Configured	soa_cluster_1	SuSE_Machine_1	RUNNING	OK	7003

Verify that the Admin Server can connect to the node manager running on your machine. **Environments -> Machines -> <your machine> -> Monitoring.** The status should show: **Reachable**

Settings for SuSE_Machine_1

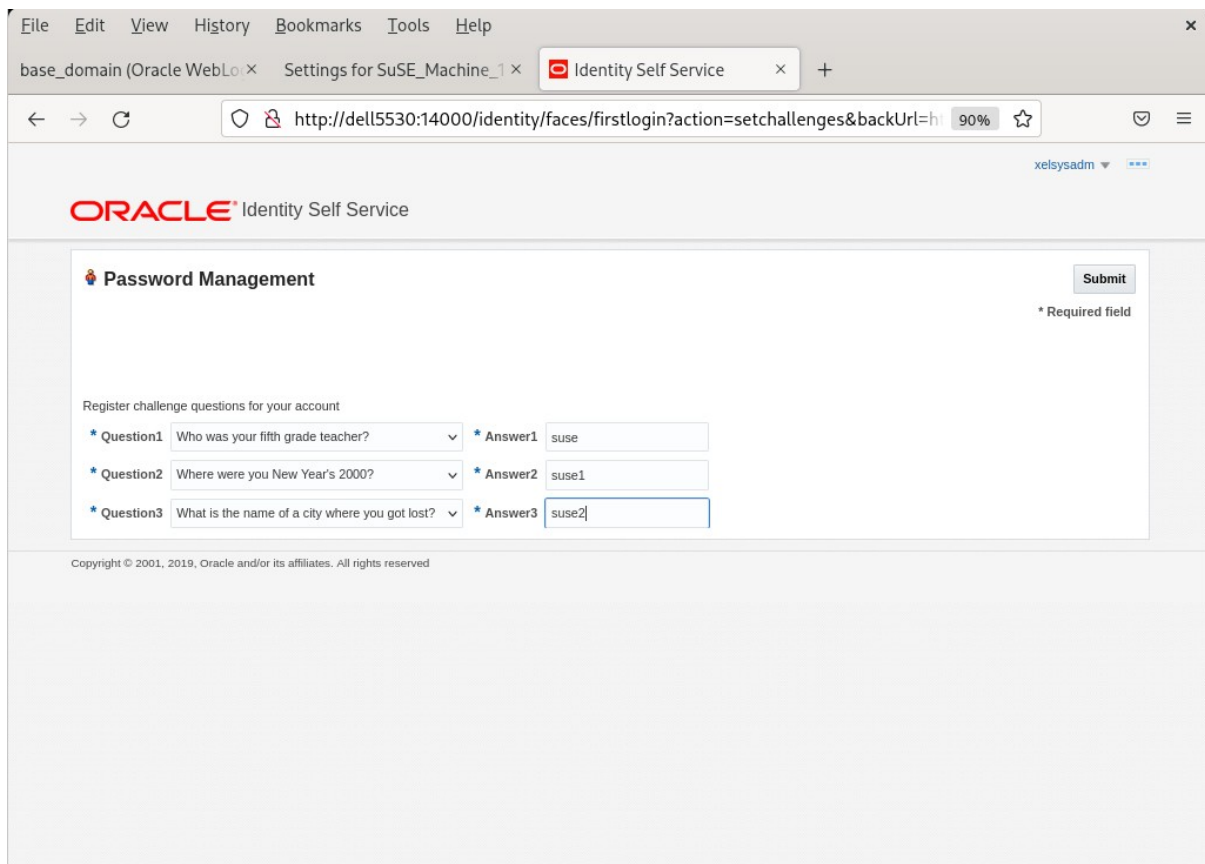
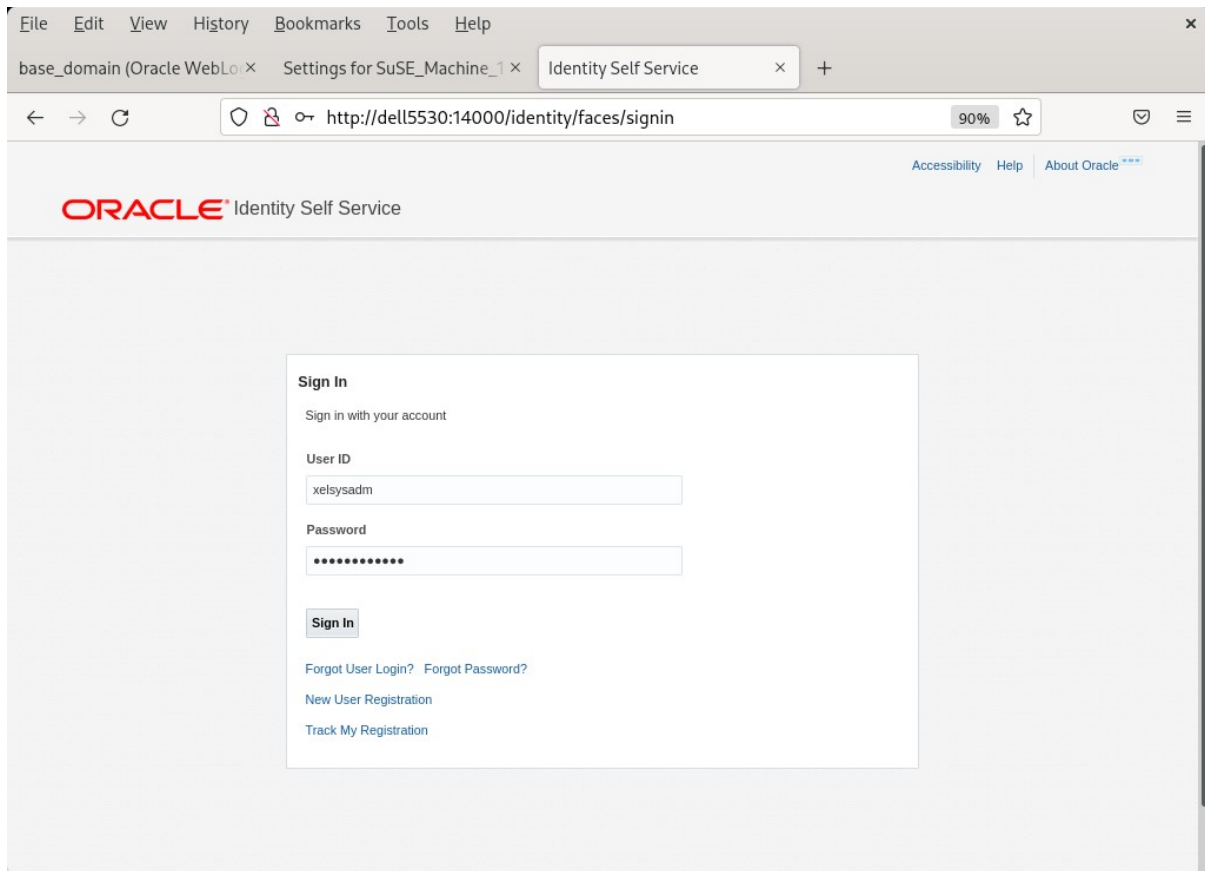
Configuration | **Monitoring** | Notes

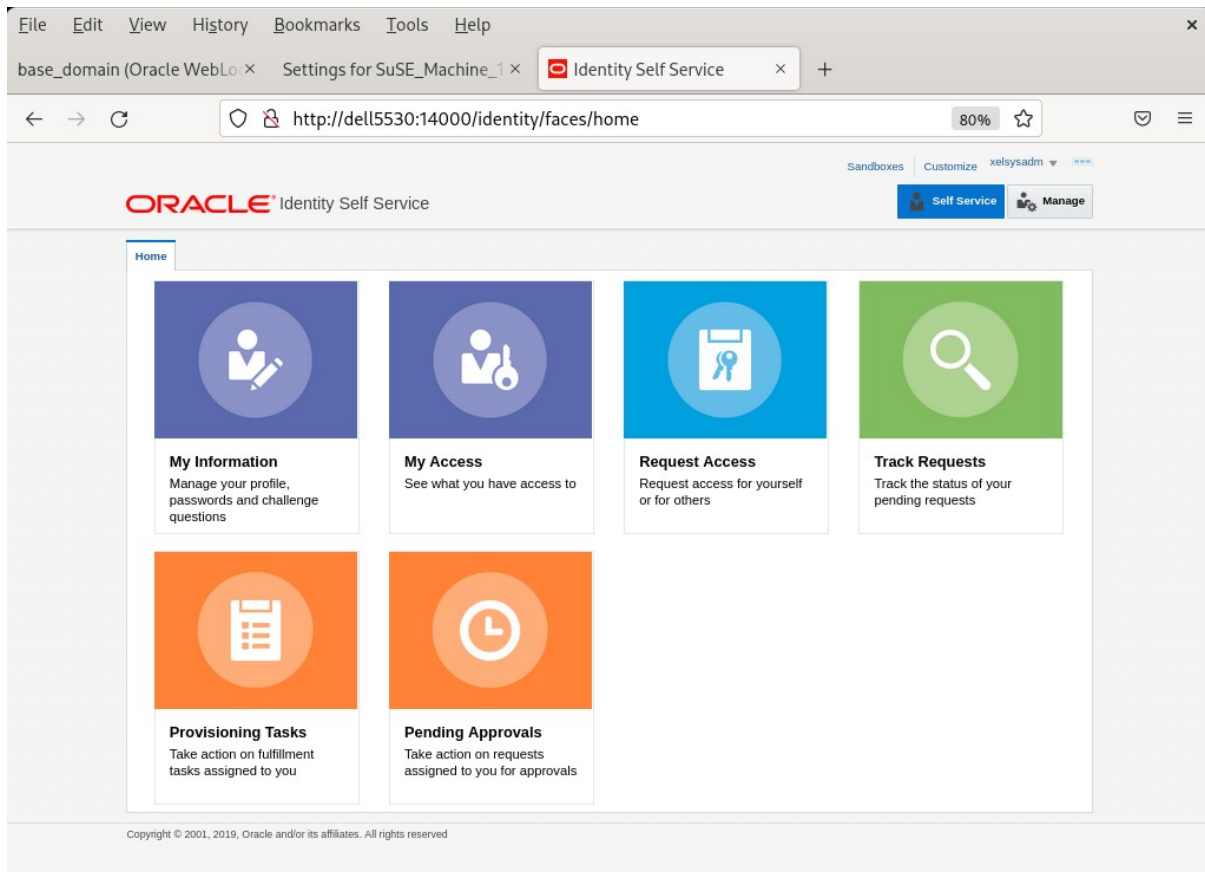
Node Manager Status | Node Manager Log

This page allows you to view current status information for the Node Manager instance configured for this machine.

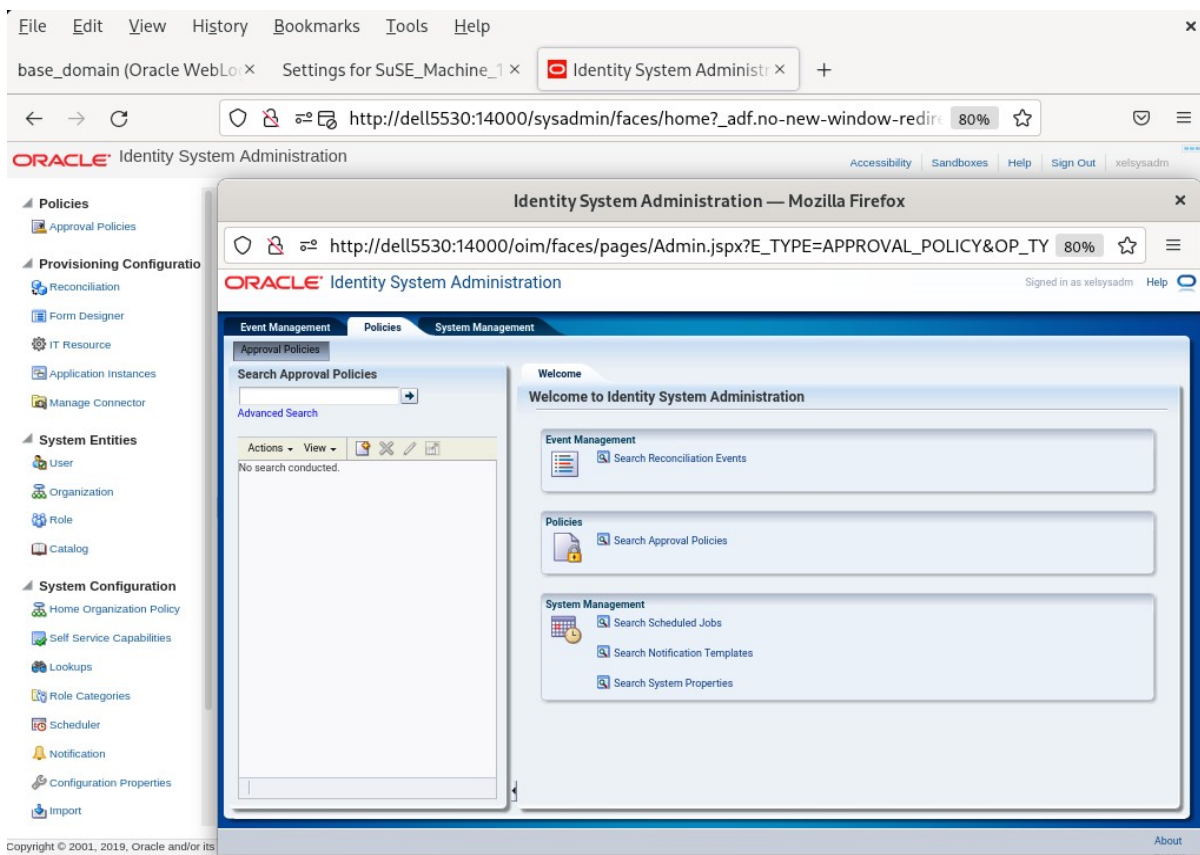
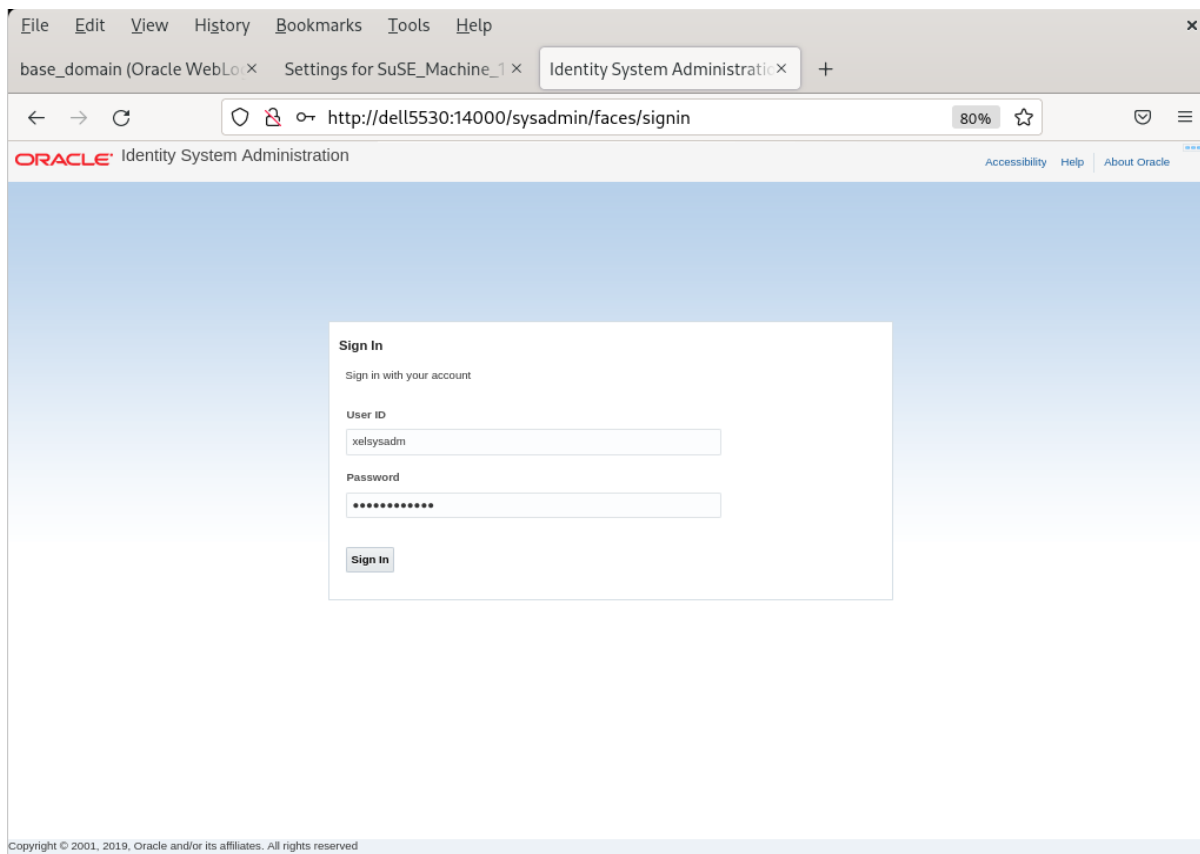
Status:	Reachable	Current status of this Node Manager. More Info...
Version:	12.2.1.4.0	Version string returned from the Node Manager. More Info...

3). Access to OIM Identity Self Service – URL: <http://host:port/identity>





4). Access to OIM Identity System Administration Console – URL:<http://host:port/sysadmin>



5). Access to Oracle SOA infrastructure Main Page – URL:<http://host:port/soa-infra>

File Edit View History Bookmarks Tools Help

base_domain (Oracle WebLo... Settings for SuSE_Machine_1 x Identity System Administr... Welcome to the Oracle SOA P x +

← → ↻ <http://dell5530:7003/soa-infra/> 67% ☆

Welcome to the Oracle SOA Platform on WebLogic

SOA Version: v12.2.1.4.0 - MAIN_190828.0353.3300
WebLogic Server 12.2.1.4.0 (12.2.1.4.0)
Running on: soa_server1

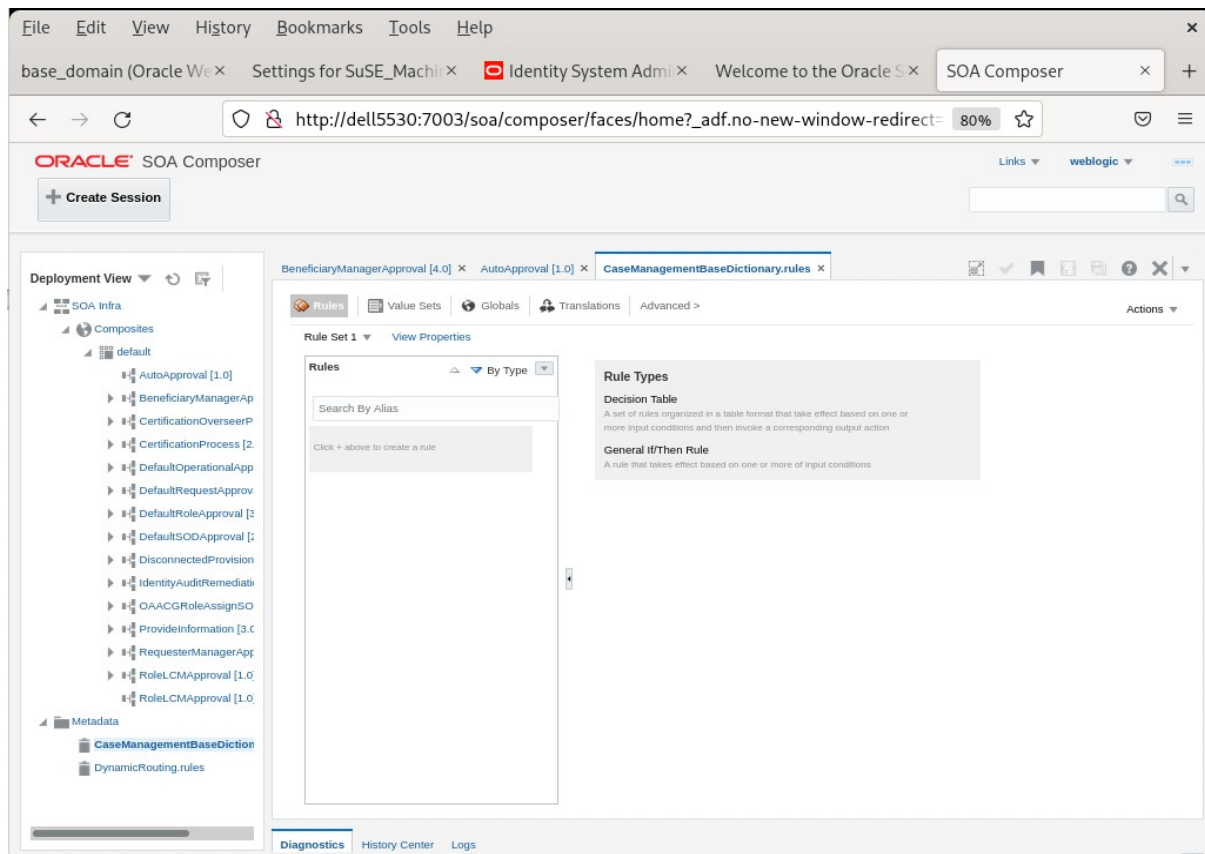
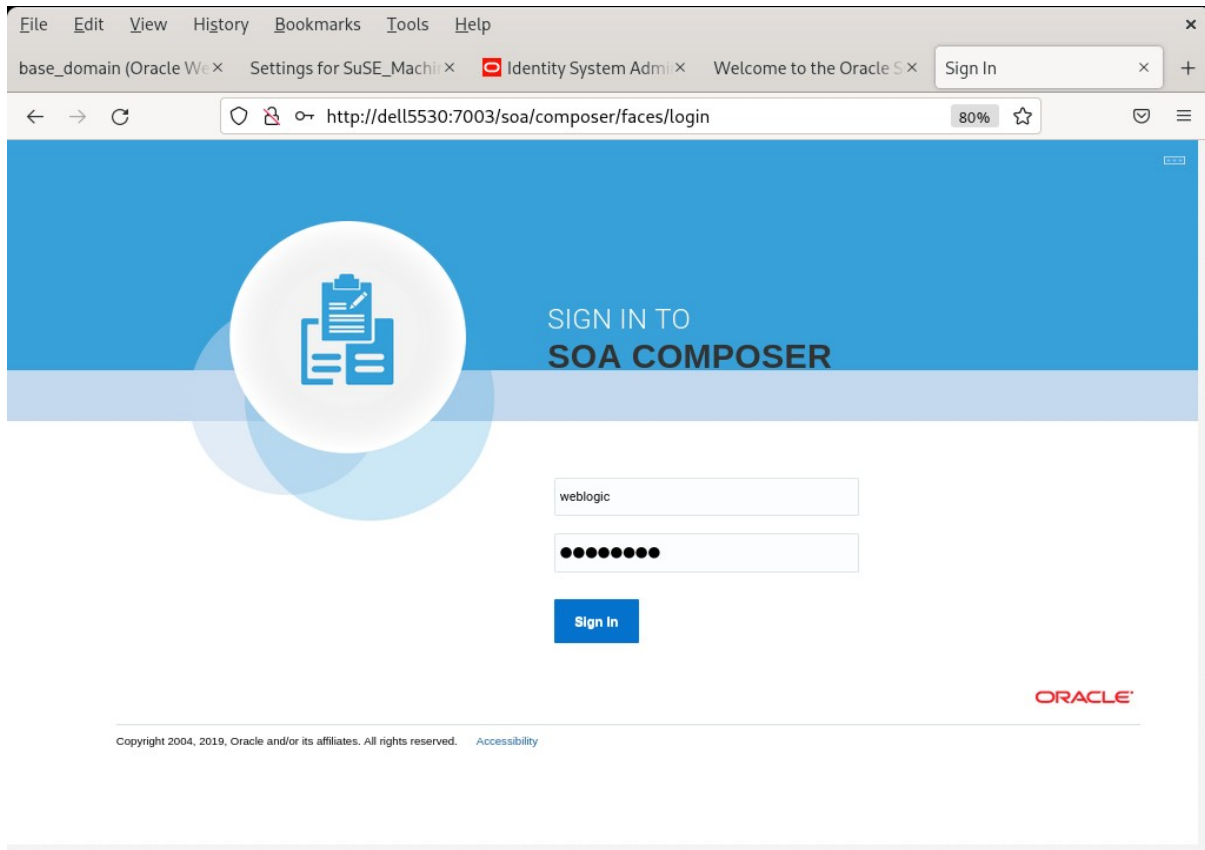
The following composites are currently deployed:

- default/AutoApproval!1.0*soa_08370649-7436-4fad-803b-255e970c8cde
 - [Test RequestApprovalService](#)
- default/BeneficiaryManagerApproval!4.0*soa_40465e70-c534-4b3d-8497-7847bbefbed
 - [Test RequestApprovalService](#)
- default/CertificationOverseerProcess!2.0*soa_e177ea34-5c16-4216-aaee-a9fb0fae768a
 - [Test CertificationTaskService](#)
- default/CertificationProcess!2.0*soa_al63a975-281f-4c4a-9453-d325c93b11f8
 - [Test CertificationTaskService](#)
- default/DefaultOperationalApproval!5.0*soa_44a899f6-5369-41ca-8377-206e3c0d17ca
 - [Test RequestApprovalService](#)
- default/DefaultRequestApproval!6.0*soa_e951102a-778b-4091-bf36-704e933181b7
 - [Test RequestApprovalService](#)
- default/DefaultRoleApproval!3.0*soa_01ccd274-14af-461a-9094-c6c7b5920833
 - [Test RequestApprovalService](#)
- default/DefaultSODApproval!2.0*soa_a00ff23b-61e8-445d-afcd-d4250733b269
 - [Test RequestApprovalService](#)
- default/DisconnectedProvisioning!2.0*soa_a05c7029-7da7-457d-b61a-ed14f1aal2e4
 - [Test manualprovisioningprocess_client](#)
- default/IdentityAuditRemediation!1.0*soa_347f8975-c89e-4225-8f05-a04cad47efc7
 - [Test IdentityAuditRemediationService](#)
- default/OAACGRoleAssignSODCheck!1.0*soa_4a7f980a-605e-425f-acb4-11e476fe8f8d
 - [Test RequestApprovalService](#)
- default/ProvideInformation!3.0*soa_b561d97c-ea08-4f68-ad8d-1674d2599046
 - [Test RequestApprovalService](#)
- default/RequesterManagerApproval!3.0*soa_86d939ac-5788-4bab-93cf-f7ba5a9afee9
 - [Test RequestApprovalService](#)
- default/RoleLCMApproval!1.0*soa_49a9fe74-8ec0-4960-a928-5493087bb578
 - [Test RequestApprovalService](#)

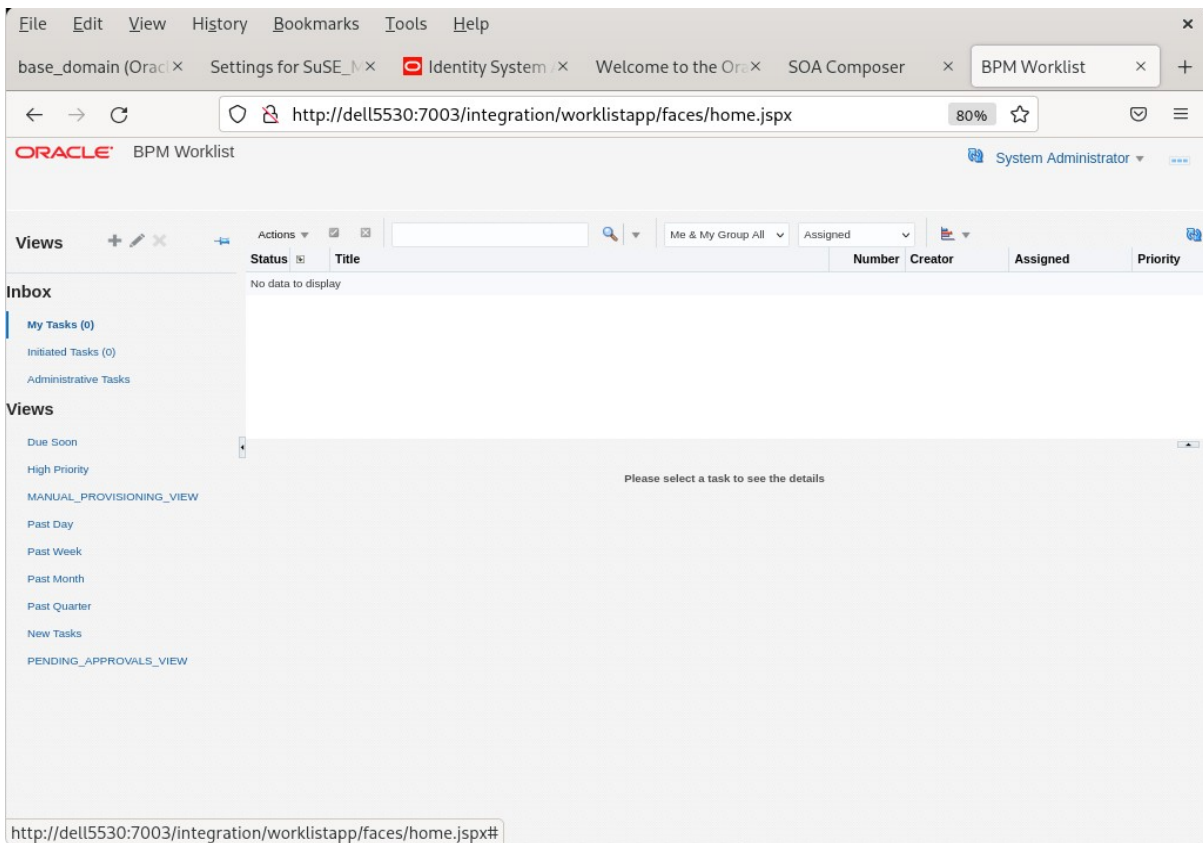
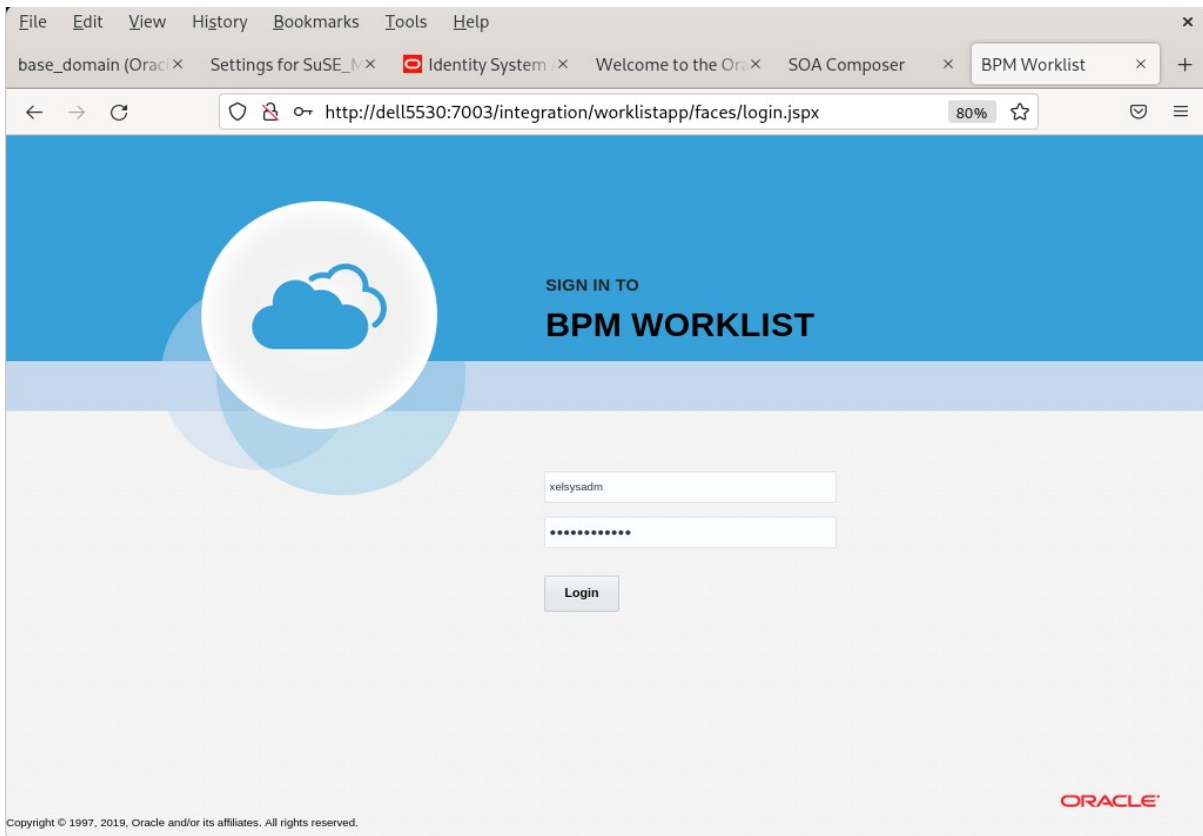
Links

[SOA Composer](#)
[BPM Worklist](#)

6). Access to Oracle SOA composer - URL:<http://host:port/soa/composer>



7). Access to Oracle BPM Worklist – URL:<http://dell5530:7003/integration/worklistapp>



End of Oracle Identity Manager.

Appendix

This document shows how to create a standard topology for Oracle Fusion Middleware components 12c on SLES 15 SP4. You can extend this topology to make it highly available and secure so it is suitable for a production system.

*Thanks for selecting **SUSE Linux Enterprise Server** as your Linux platform of choice!*