

Oracle Fusion Middleware 12c on SUSE Linux Enterprise Server 15 (SP3) for x86-64

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Table of Contents

Introduction.....	3
System Requirements and Specifications.....	4
Hardware Requirements.....	4
Software Requirements.....	4
Testing machine information.....	5
Prerequisites.....	6
Installing SUSE Linux Enterprise Server 15 SP3.....	6
Installing Oracle Database 12cR2.....	10
Installing Java.....	13
Oracle Fusion MiddleWare 12c Installation and Configuration.....	14
Oracle WebLogic Server.....	14
Oracle Forms and Reports.....	35
Oracle WebTier.....	89
Oracle WebCenter Portal.....	129
Oracle SOA Suite.....	178
Oracle Access Manager.....	215
Oracle Identity Manager.....	259
Appendix.....	312

Introduction

This document provides details on installing and configuring Oracle Fusion Middleware 12c Components on SUSE Linux Enterprise Server 15 SP3. Details are provided for Intel x86-64 versions of both Oracle FMW 12c and SUSE Linux Enterprise Server 15 SP3. 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 SP3 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

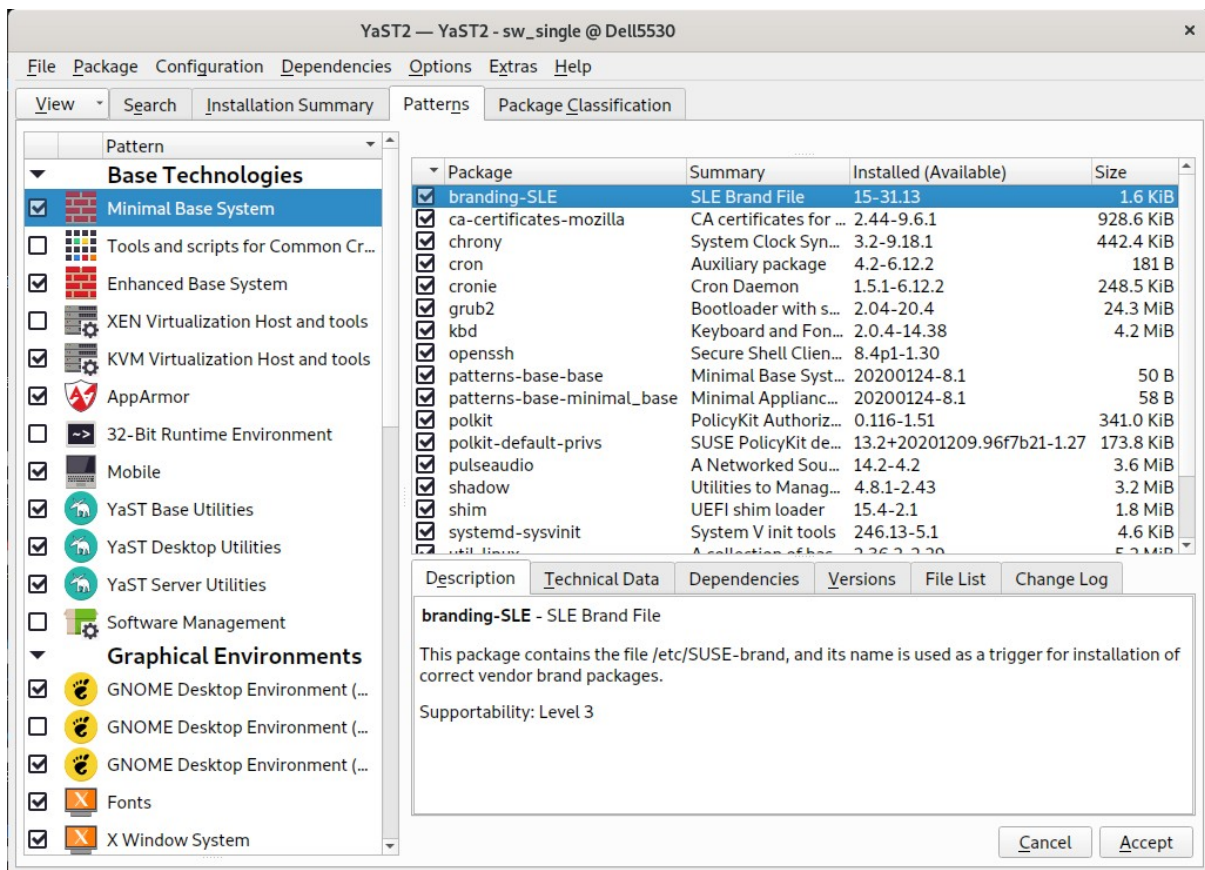
OS: SUSE Linux Enterprise Server 15 SP3 GM (x86-64) - Kernel version: 5.3.18-57-default

Prerequisites

1. Installing SUSE Linux Enterprise Server 15 SP3

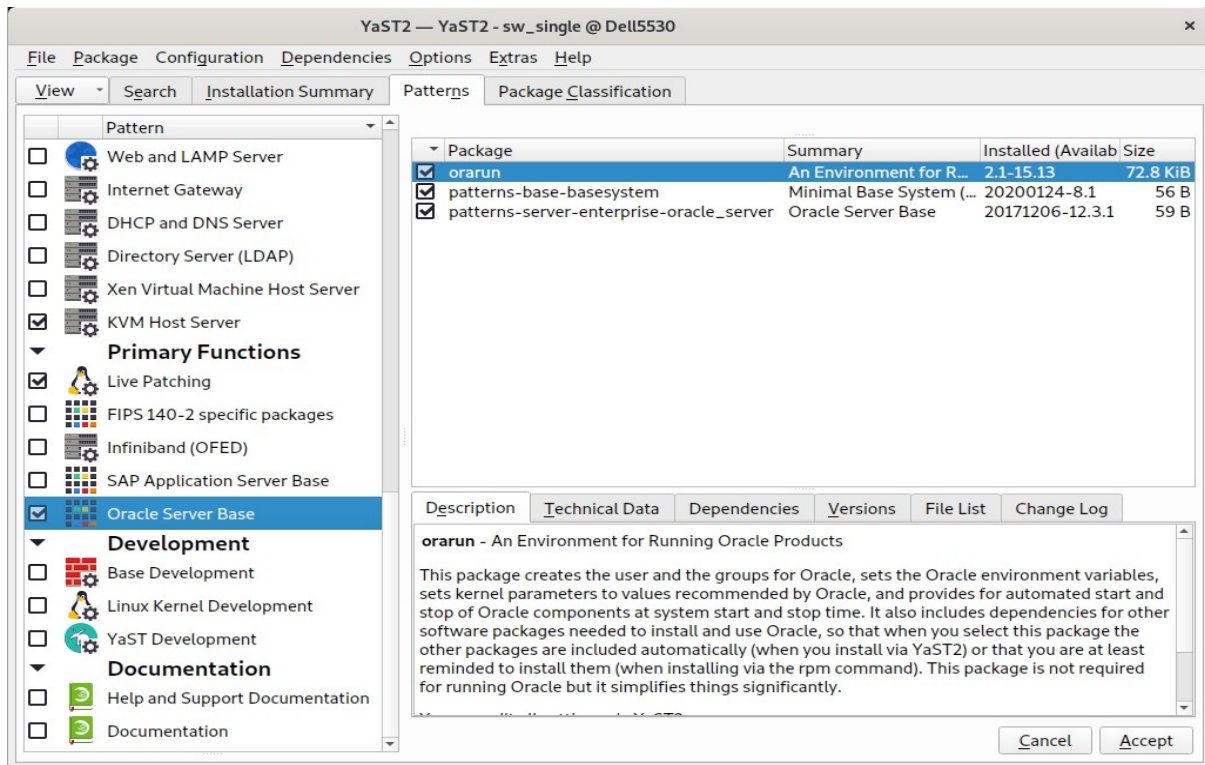
1-1. Install SUSE Linux Enterprise Server 15 SP3 on your testing machine. To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at <https://www.suse.com/documentation/>.

Figure 1-1 Software Installed as shown below

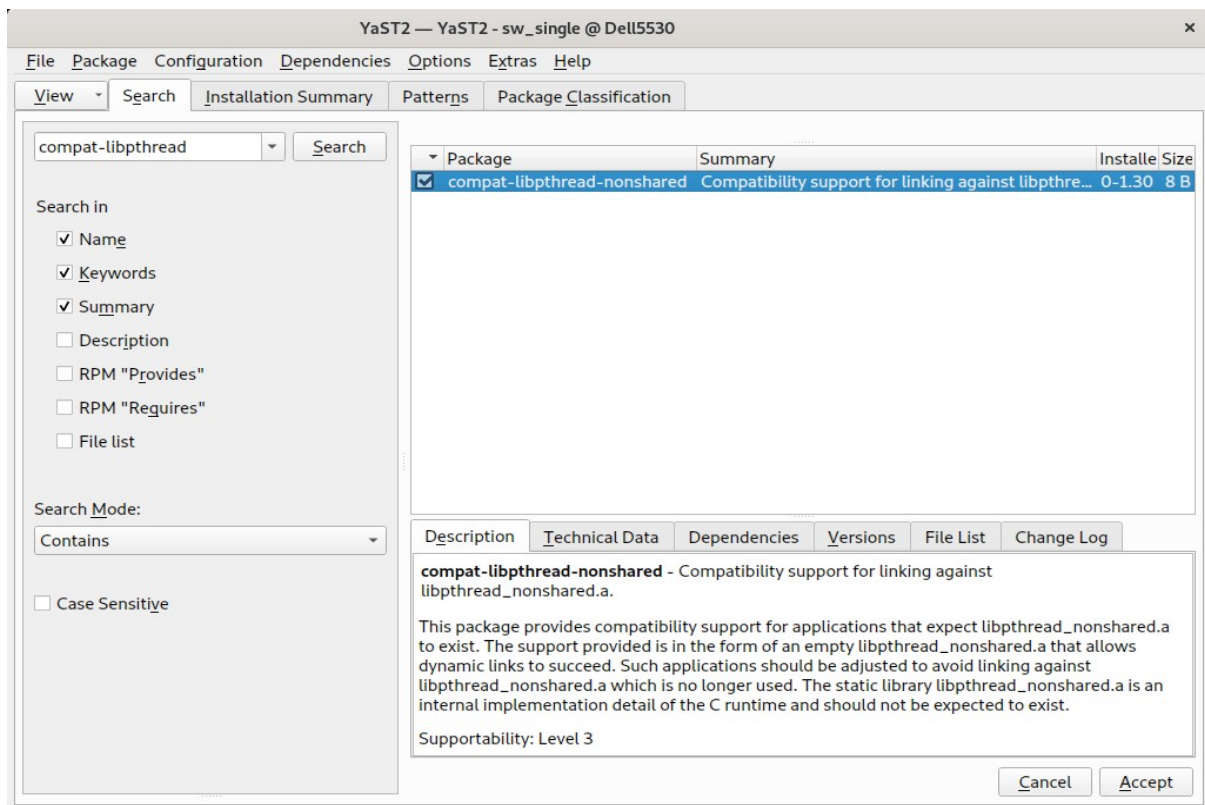


In Yast, select the patterns you need. Make sure you select the patterns and packages required to run Oracle products.

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="15-SP3"
VERSION_ID="15.3"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP3"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp3"
DOCUMENTATION_URL="https://documentation.suse.com/"
oracle@Dell5530:~> uname -a
Linux Dell5530 5.3.18-57-default #1 SMP Wed Apr 28 10:54:41 UTC 2021 (ba3c2e9/lp-5d9e8aa) 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 SP3 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 15(4.12.14-25-default or later) 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/app/oracle/product/12.2.0/dbhome_1/
oracle@Dell5530:~> export ORACLE_SID=suse
oracle@Dell5530:~> /home/app/oracle/product/12.2.0/dbhome_1/bin/sqlplus /nolog

SQL*Plus: Release 12.2.0.1.0 Production on Wed Jul 21 12:31:16 2021

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

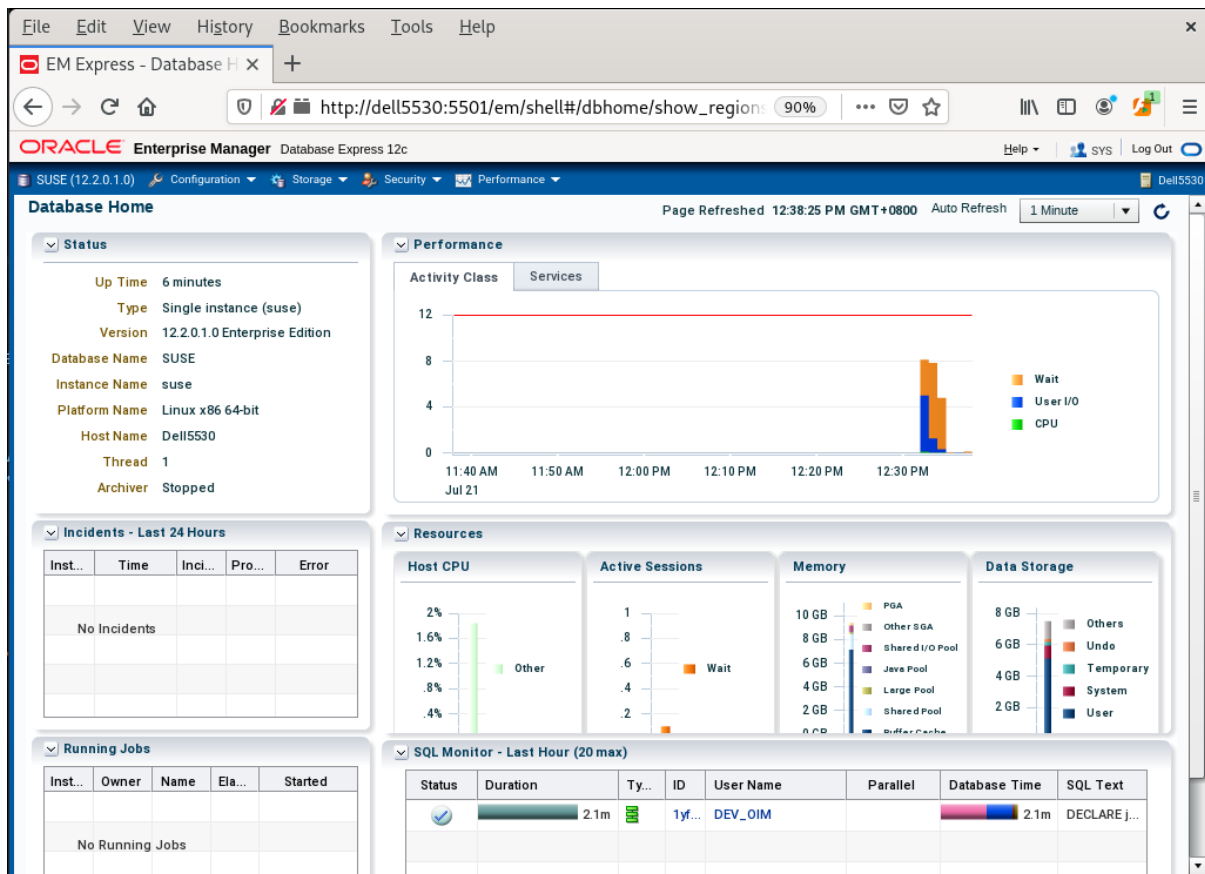
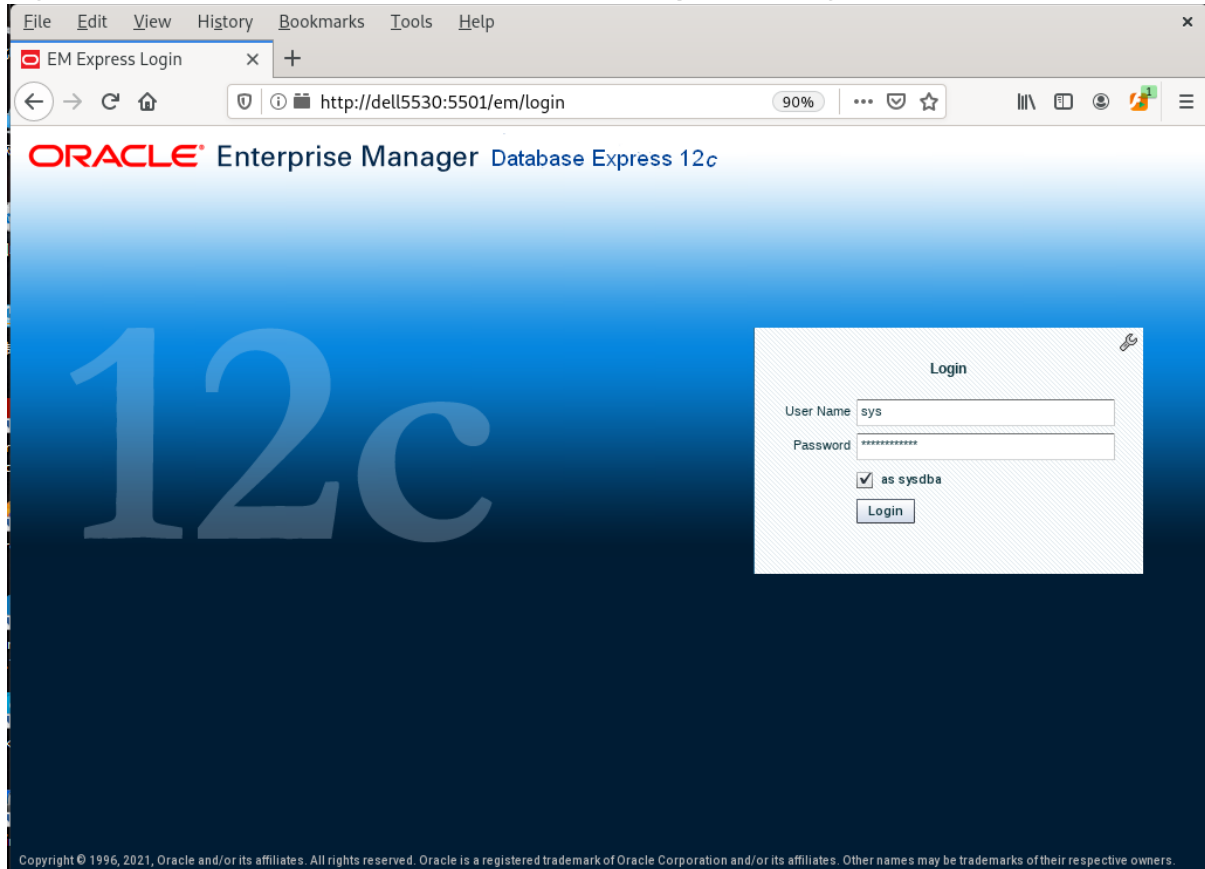
SQL> conn /as sysdba
Connected to an idle instance.
SQL> startup
ORACLE instance started.

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$databases;

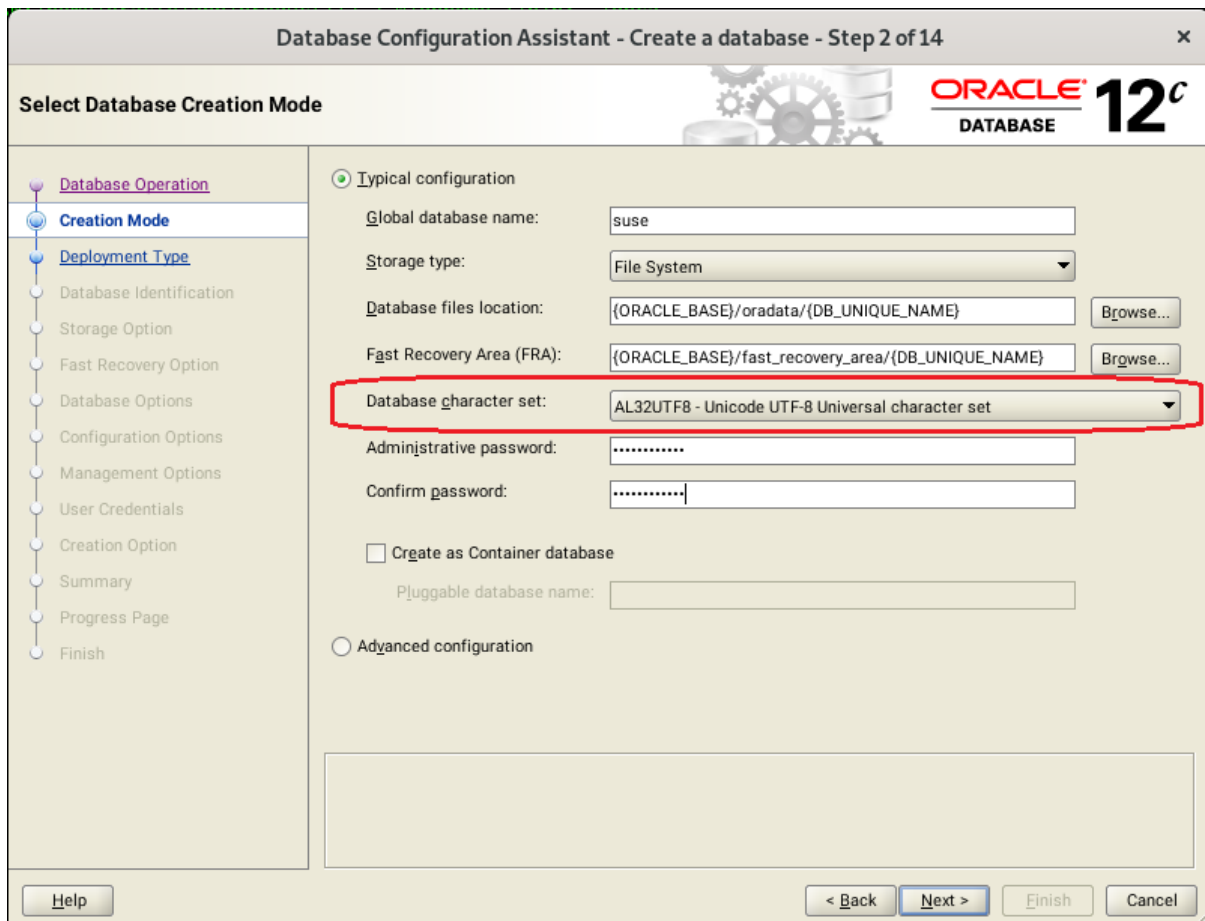
NAME          OPEN_MODE
-----
SUSE          READ WRITE

SQL> █
```

Figure 2-2 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.



)

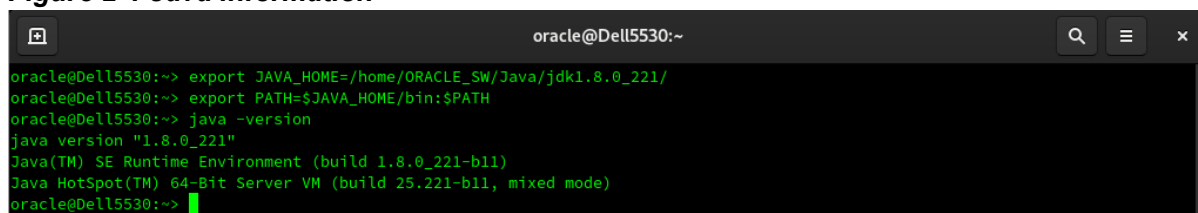
3. Installing Java

3-1. Log in to the target system (SUSE Linux Enterprise Server 15 SP3 64-bit OS) as a non-admin user. Download Java SE Development Kit 8 (jdk-8u221-linux-x64.tar.gz) from <https://www.oracle.com/downloads/#category-java>.

(Note: The classes in com.oracle.weblogic.management.tools.migration.jar are built with JDK8 and must be run with JDK8. For 12cR2(12.2.1.4.0), the certified JDK was jdk1.8.0_191 and later.)

3-2. Set environment variables JAVA_HOME and PATH to ensure the proper JDK version is installed and ready for use.

Figure 2-1 Java information

A terminal window titled 'oracle@Dell5530:~' with search, menu, and close icons. The terminal shows the following commands and output:

```
oracle@Dell5530:~> export JAVA_HOME=/home/ORACLE_SW/Java/jdk1.8.0_221/
oracle@Dell5530:~> export PATH=$JAVA_HOME/bin:$PATH
oracle@Dell5530:~> java -version
java version "1.8.0_221"
Java(TM) SE Runtime Environment (build 1.8.0_221-b11)
Java HotSpot(TM) 64-Bit Server VM (build 25.221-b11, mixed mode)
oracle@Dell5530:~>
```

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.

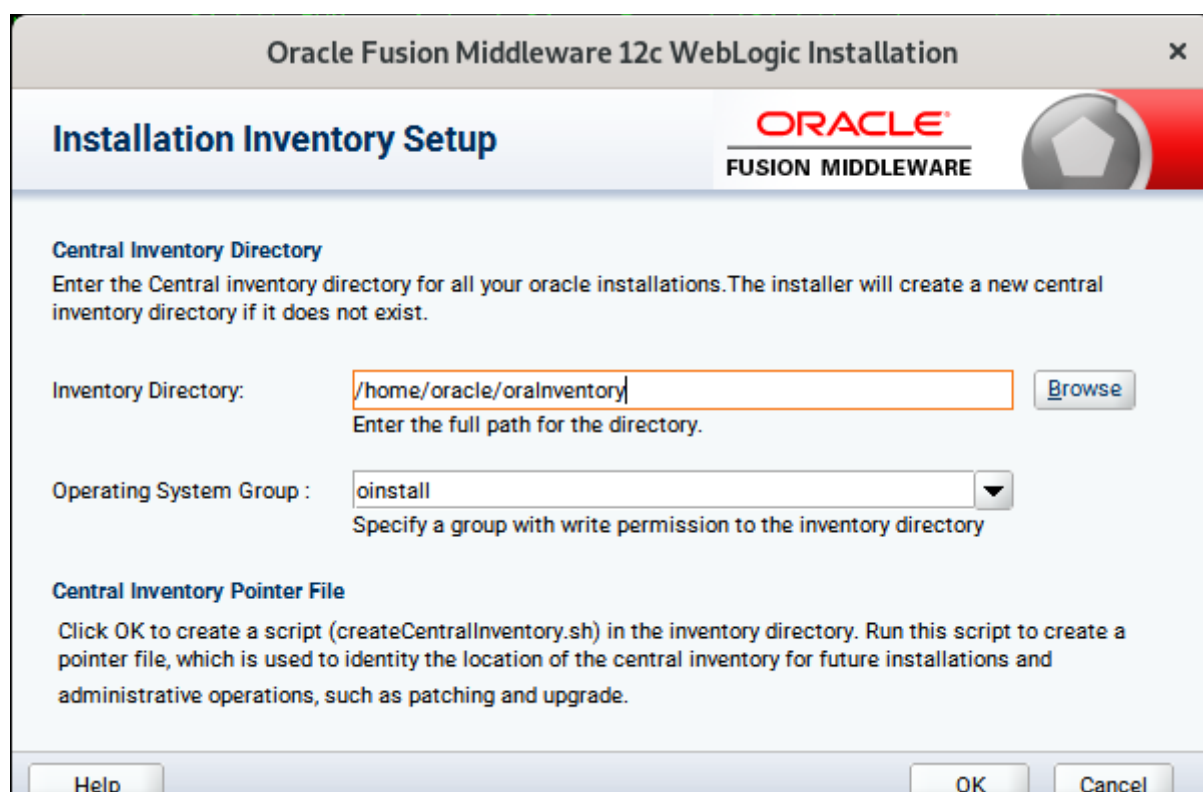
1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP3 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

(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". On the right side, there is the Oracle logo and the text "FUSION MIDDLEWARE" next to a globe icon.

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.

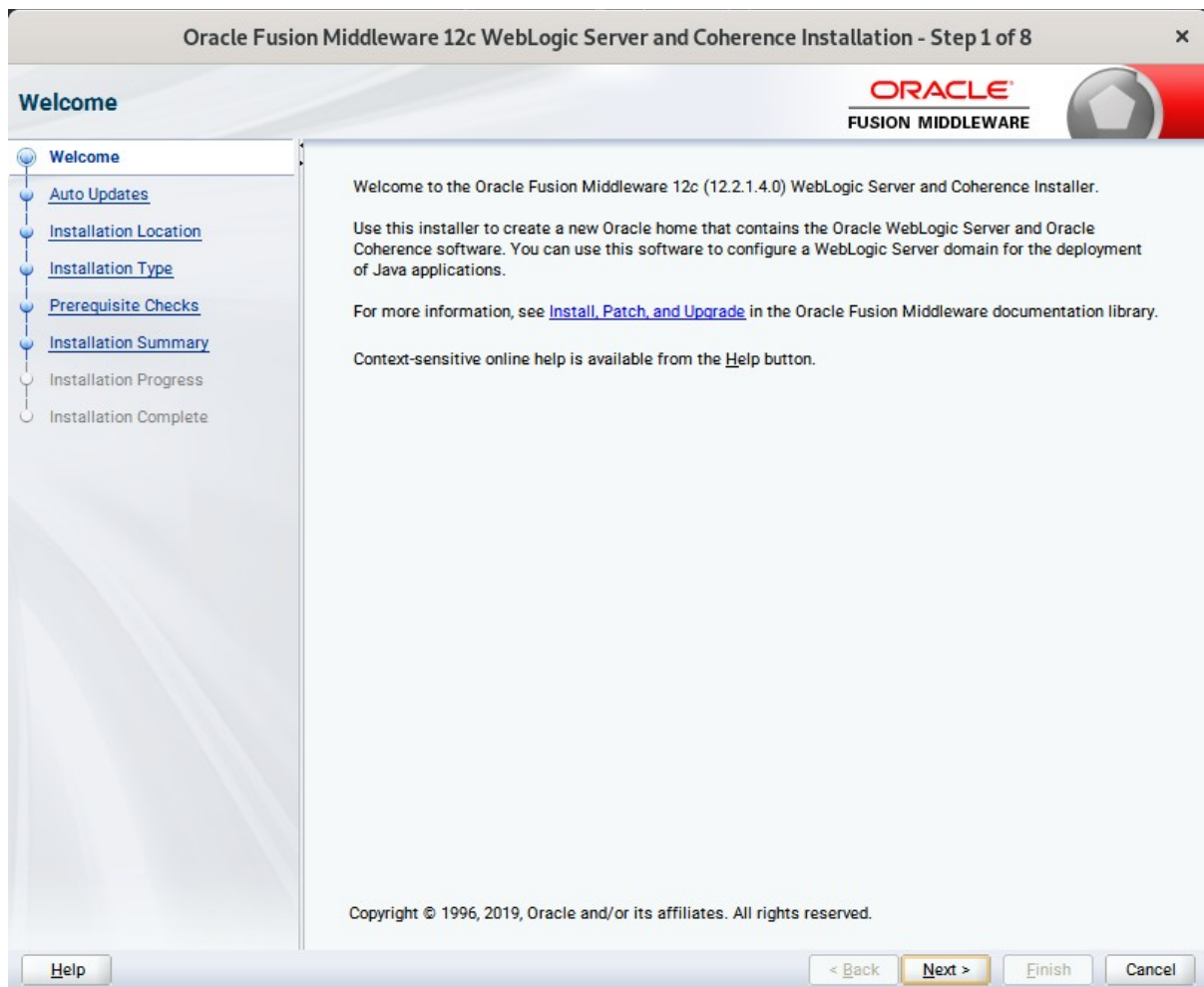
Operating System Group :
Specify a group with write permission to the inventory directory

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.

At the bottom, 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.

Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 2 of 8

Auto Updates

Welcome

Auto Updates

Installation Location

Installation Type

Prerequisite Checks

Installation Summary

Installation Progress

Installation Complete

Skip Auto Updates

Select patches from directory

Location:

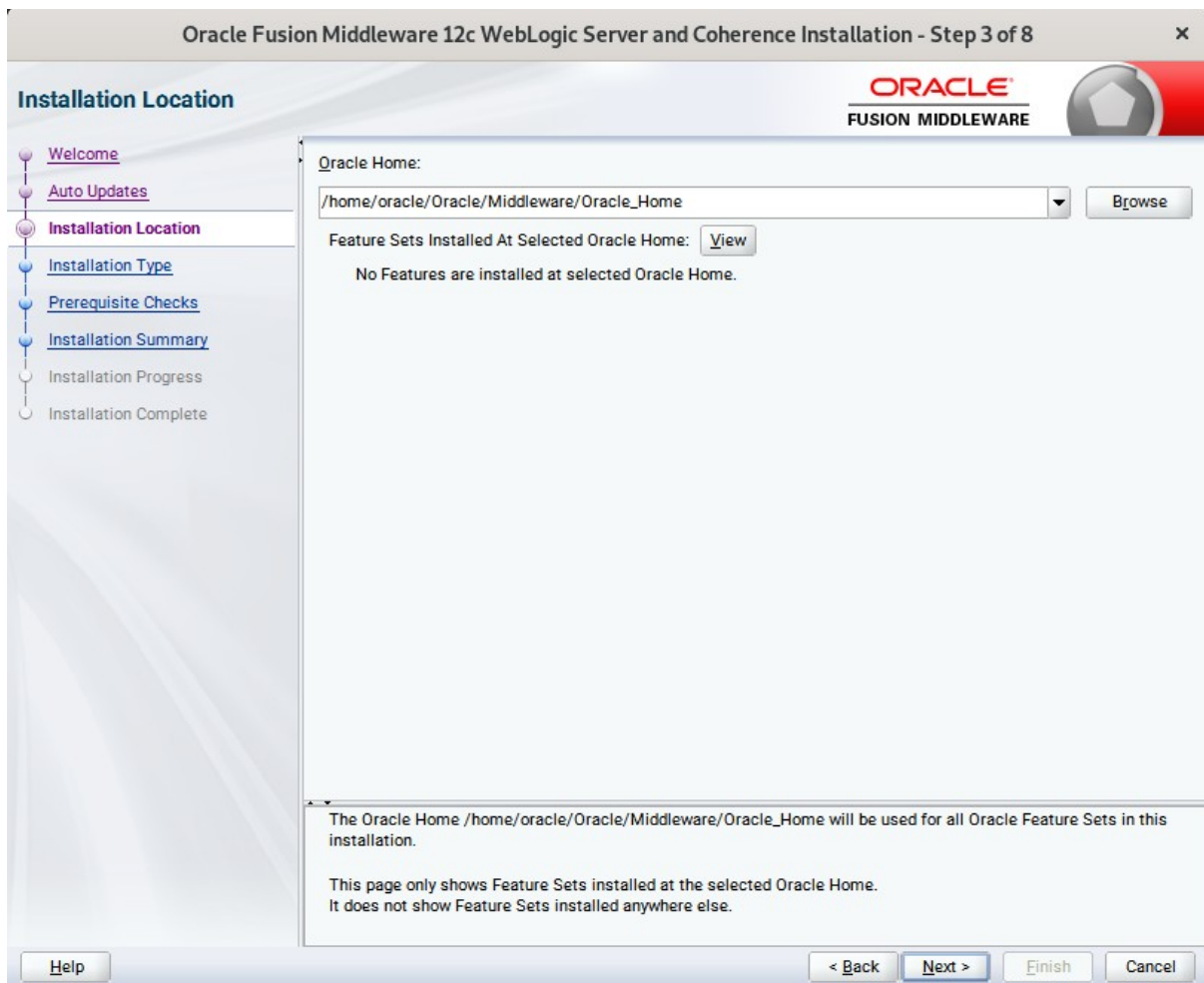
Search My Oracle Support for Updates

Username:

Password:

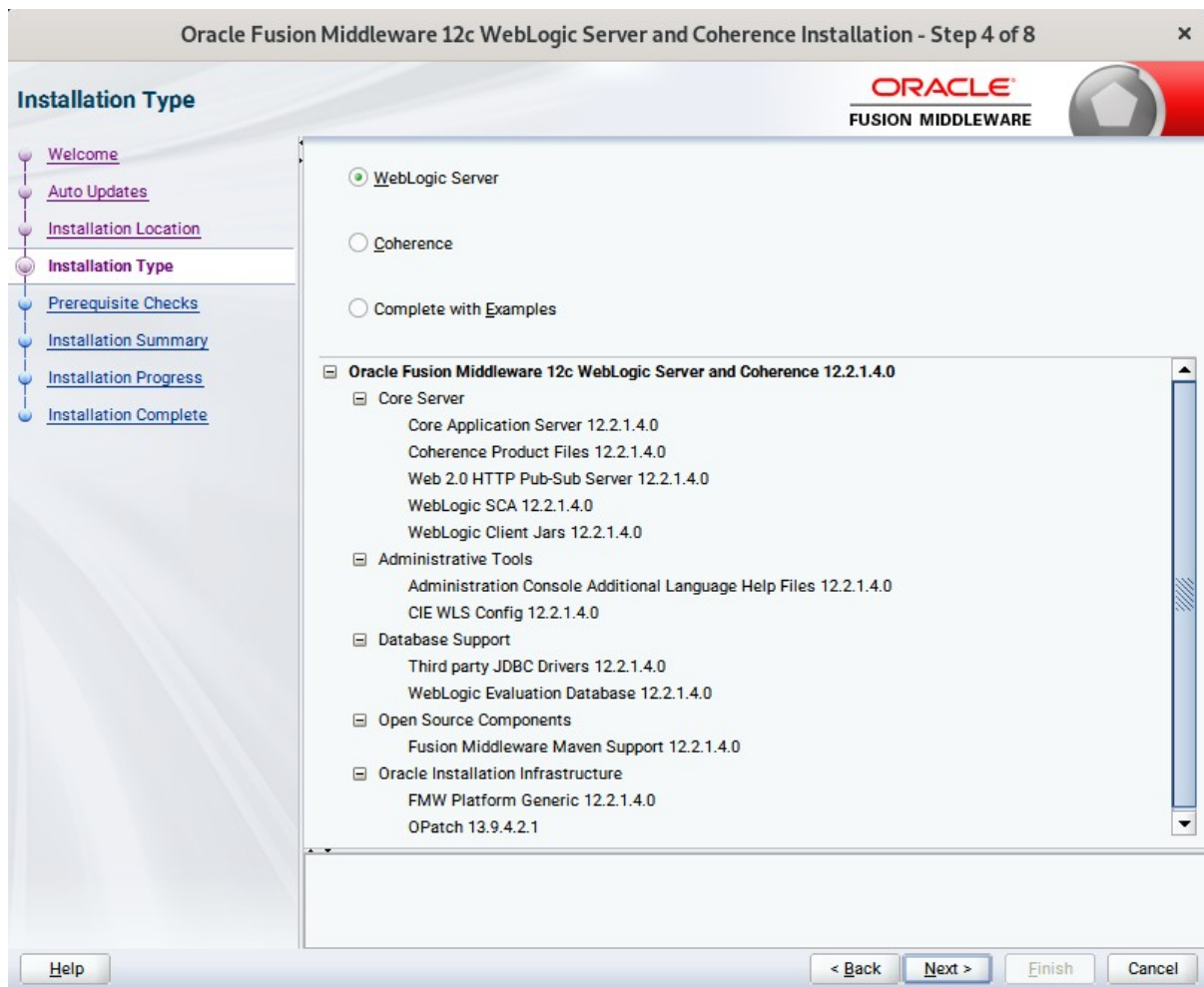
Select option "**Skip Auto Updates**" to skip this screen, then click **Next** to continue.

4). Installation Location.



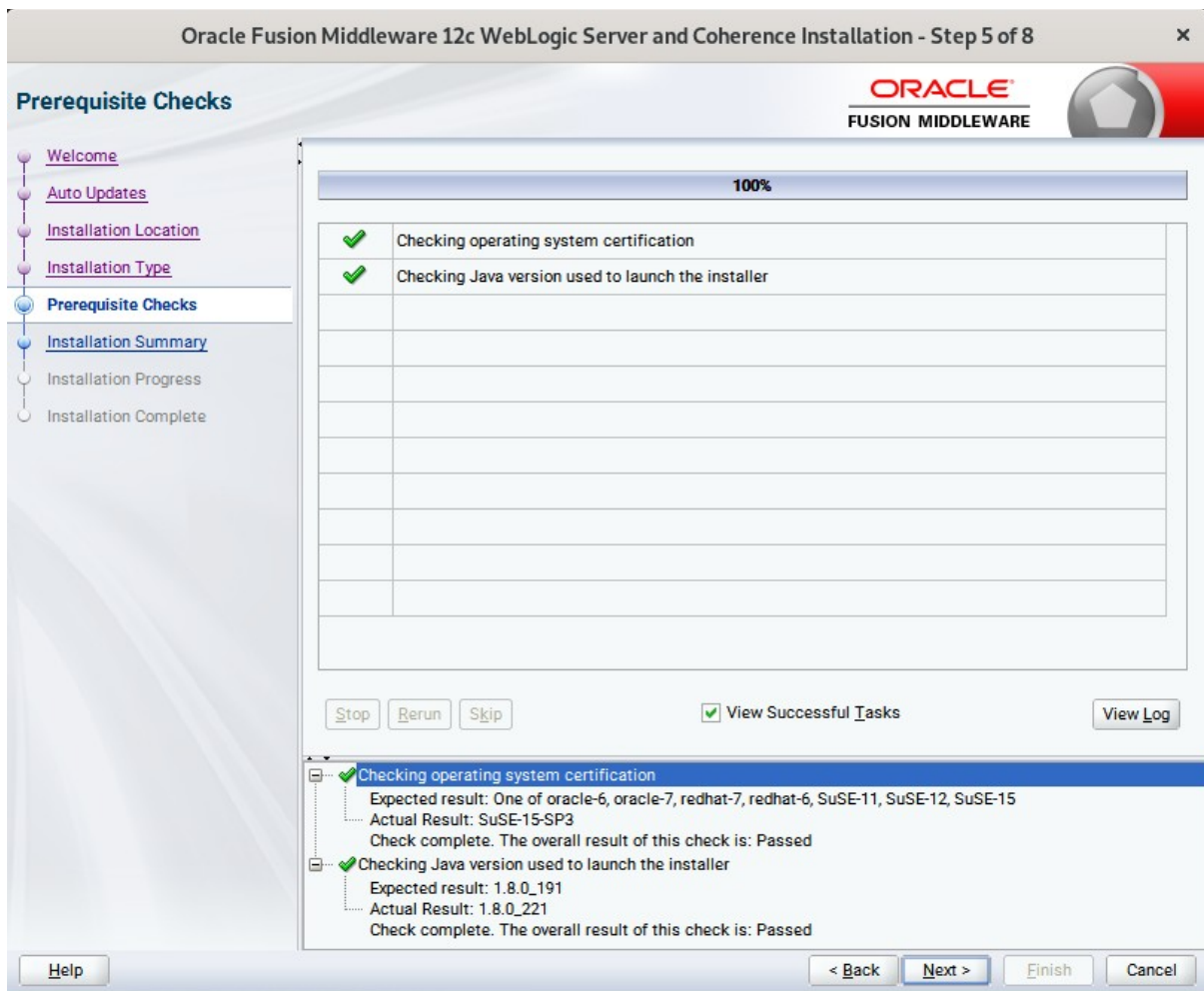
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

5). Installation Type.



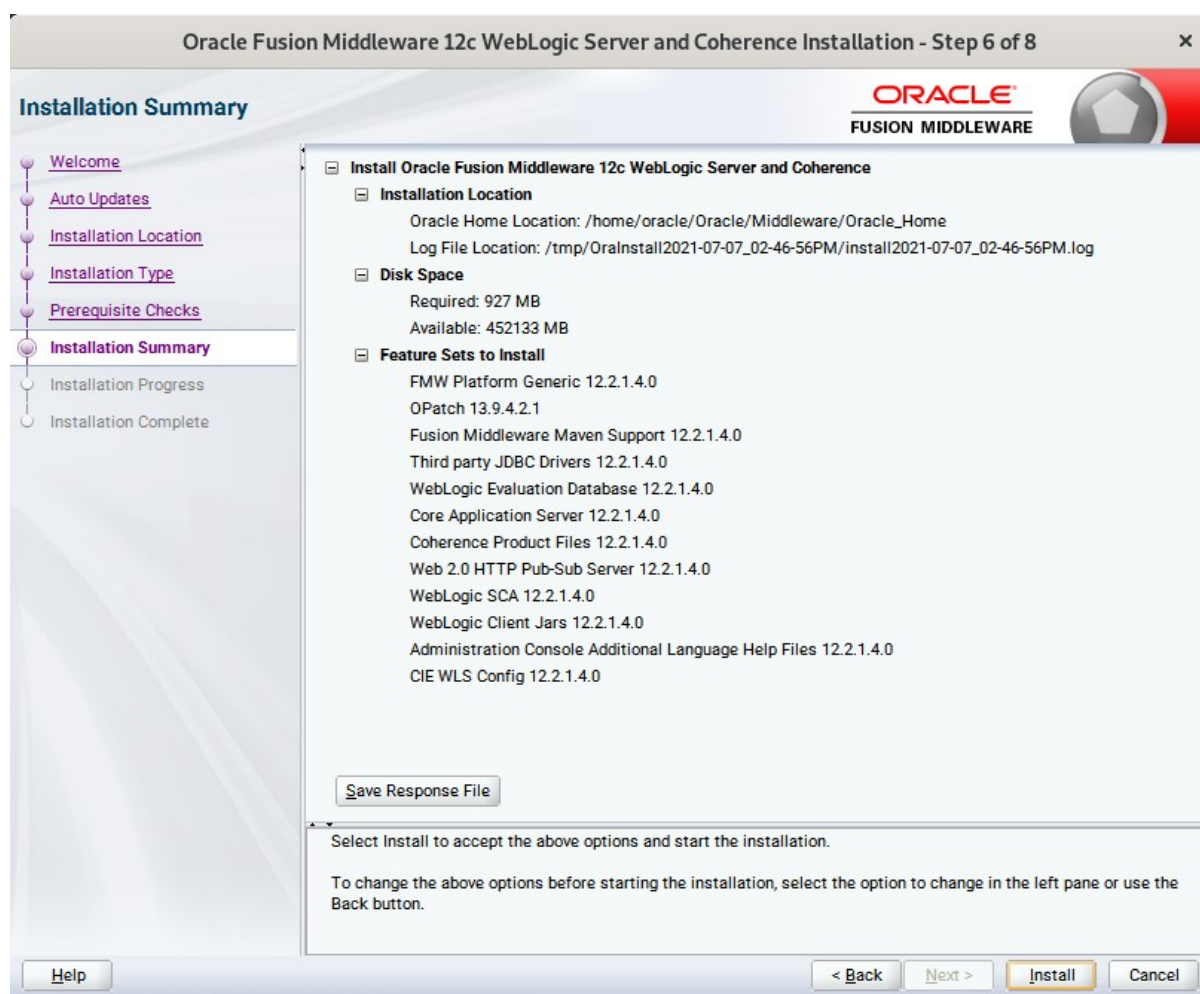
Use this screen to determine the type of installation you want to perform, then click **Next** to continue.

6). Prerequisite Checks.



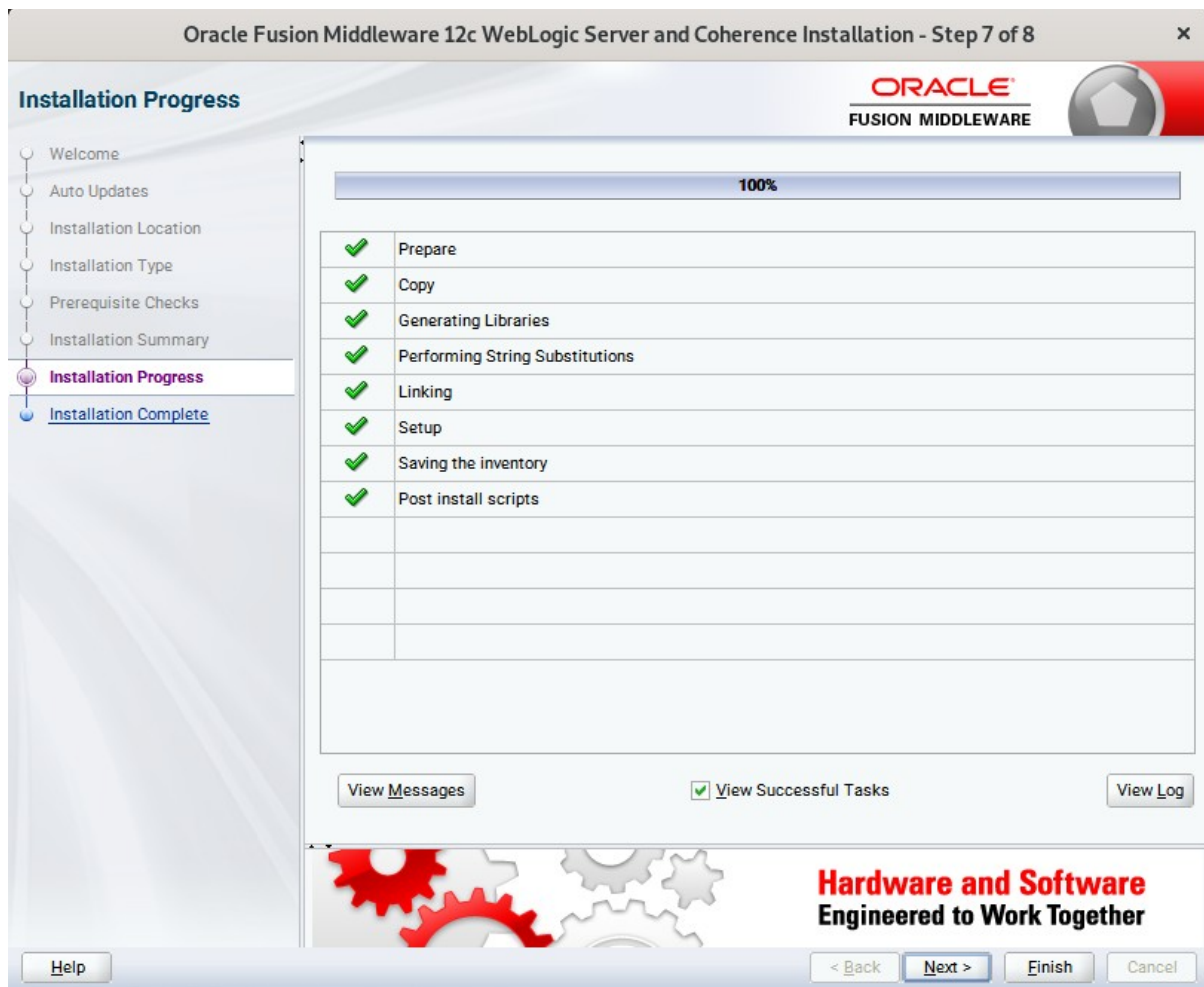
Prerequisite Checks results will be shown as above, click **Next** to continue.

7). Installation Summary.



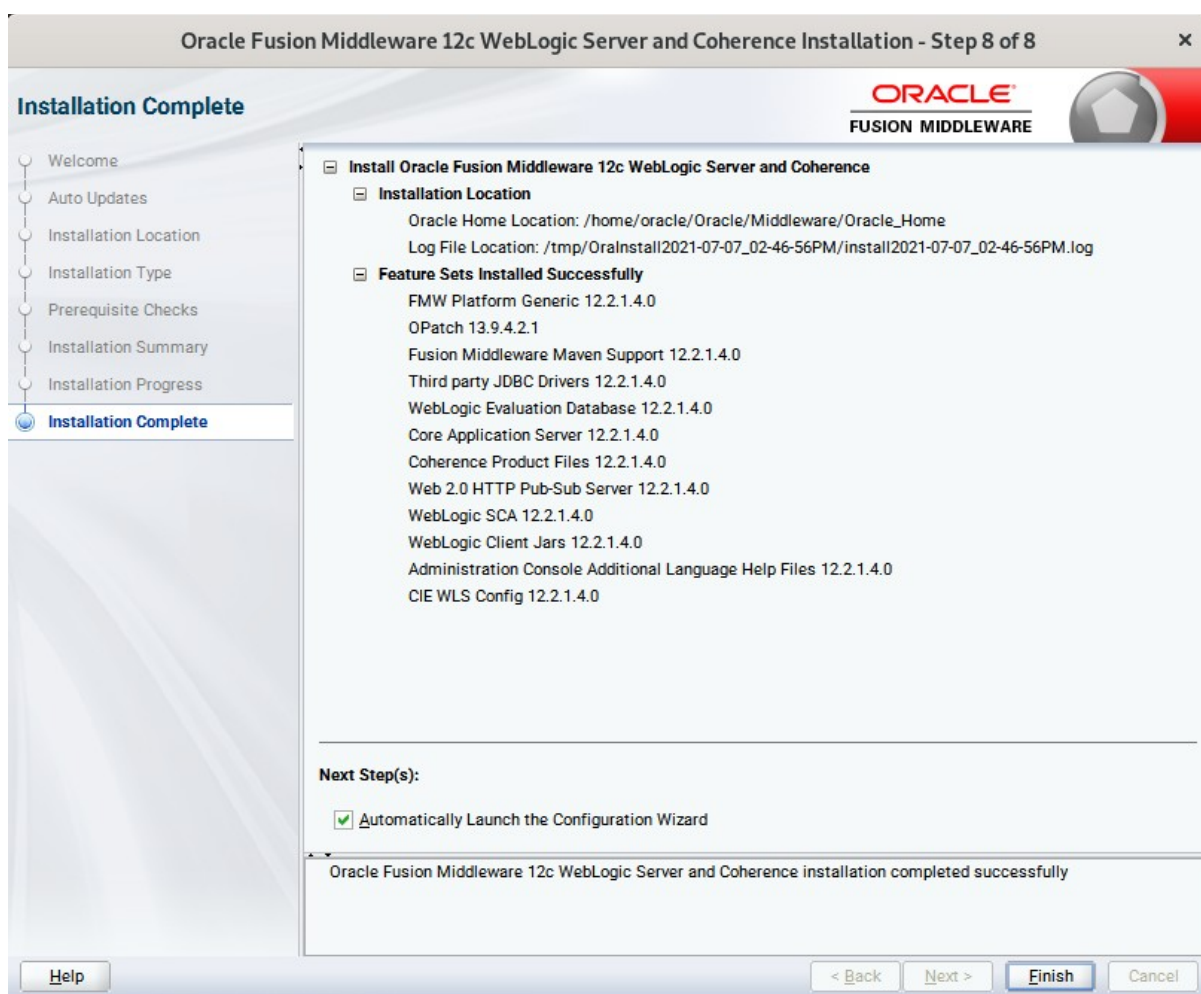
This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk space to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

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.

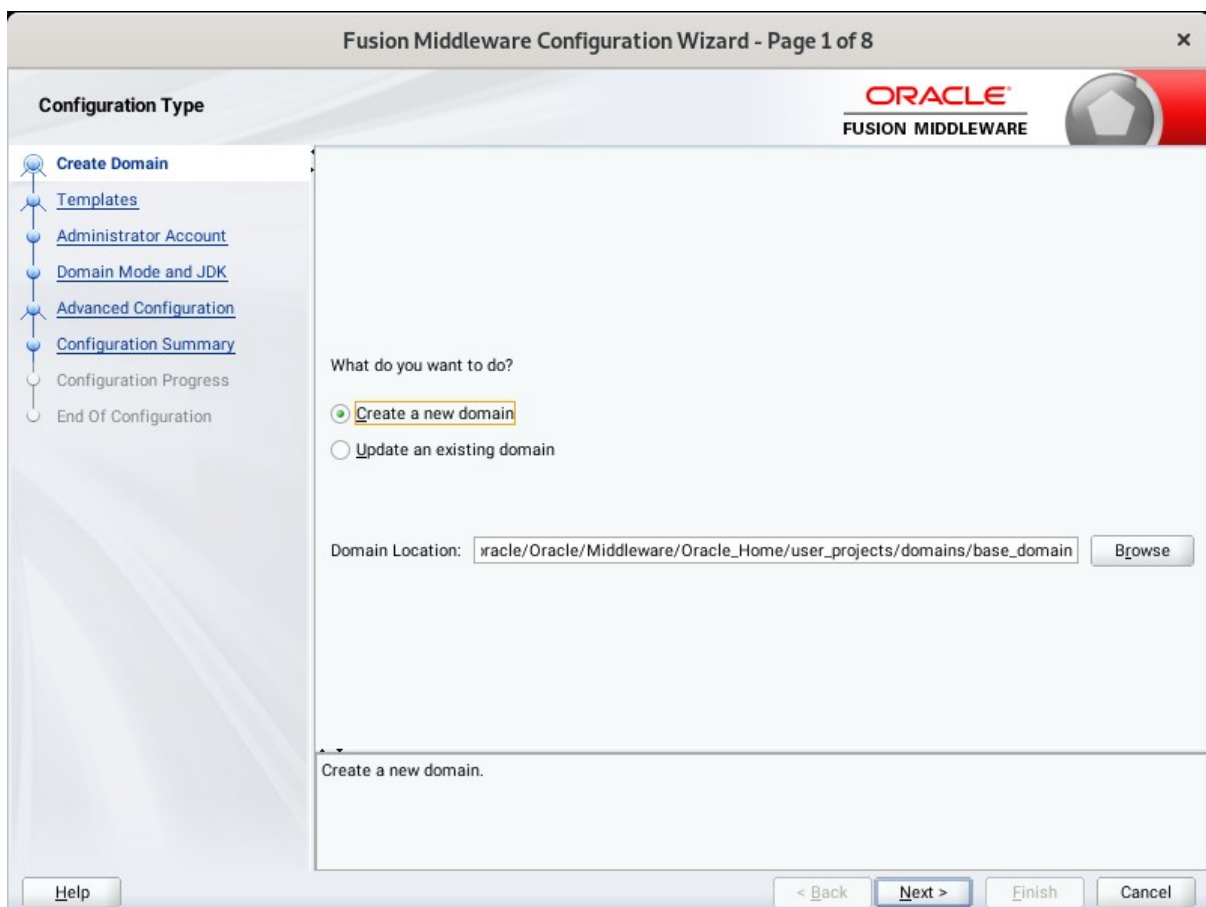
2. Creating and Configuring the WebLogic Domain

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**.

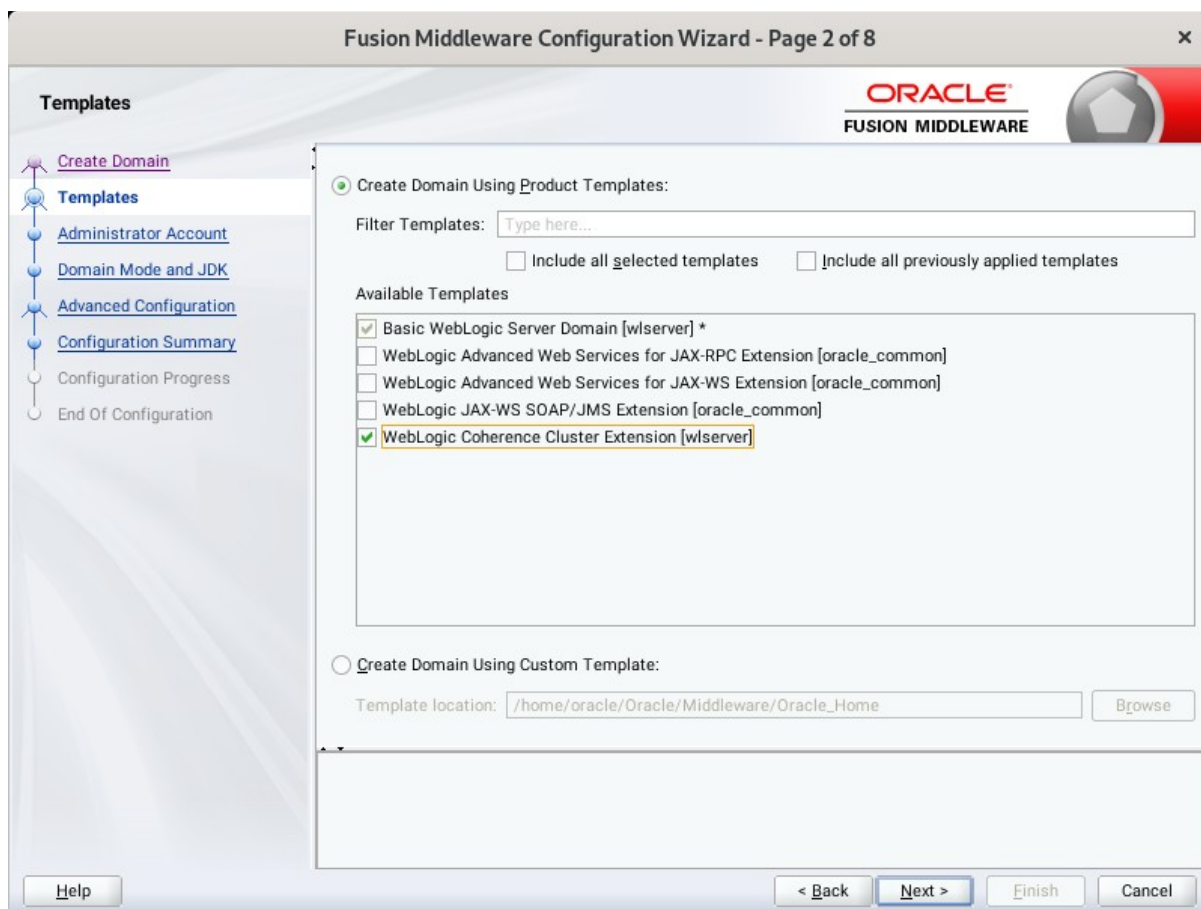
To set up your configuration, follow the steps below:

1). Configuration Type.



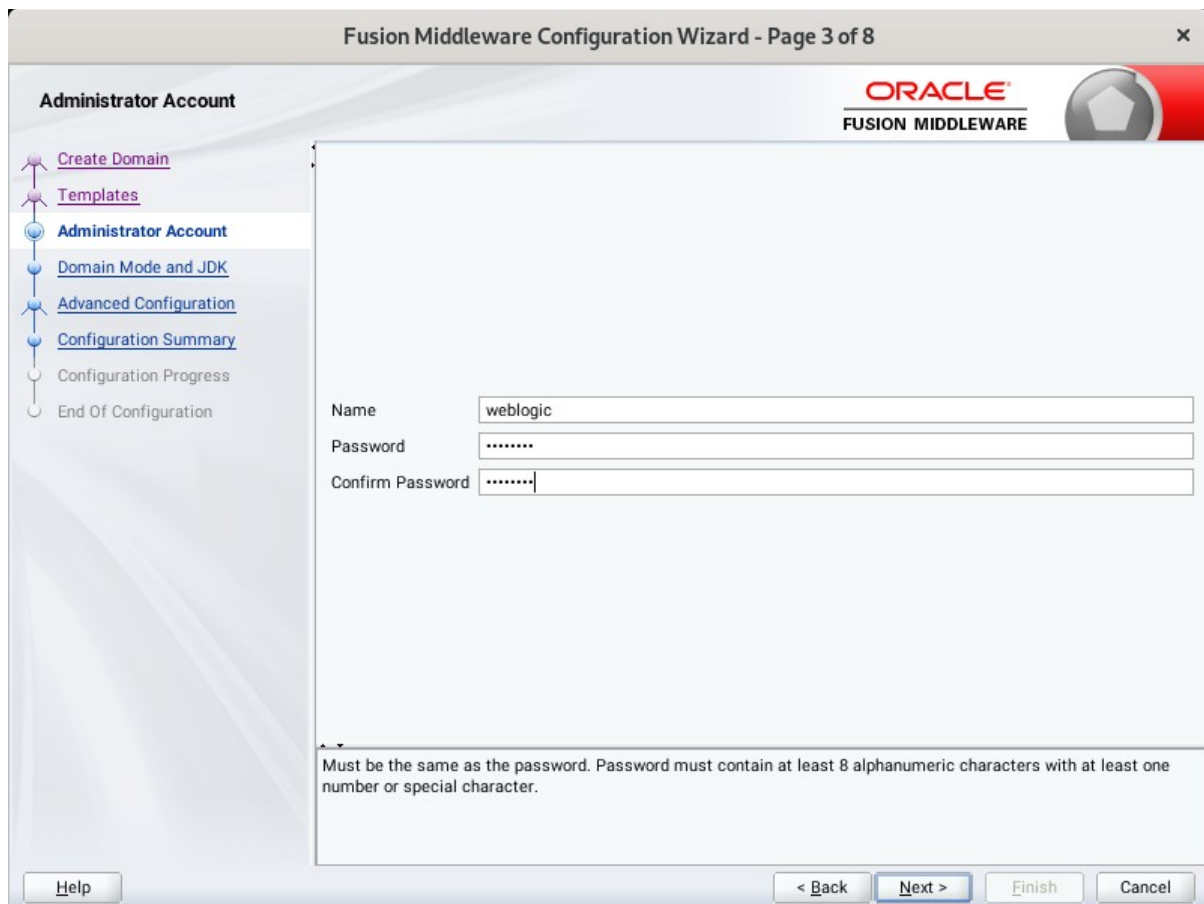
Select option "**Create a New Domain**" and specify the Domain home directory in the "**Domain Location**" field, then click **Next** to continue.

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.

Fusion Middleware Configuration Wizard - Page 4 of 8

ORACLE
FUSION MIDDLEWARE

Domain Mode and JDK

Create Domain
Templates
Administrator Account
Domain Mode and JDK
Advanced Configuration
Configuration Summary
Configuration Progress
End Of Configuration

Domain Mode

Development
Utilize boot.properties for username and password, and poll for applications to deploy.

Production
Require the entry of a username and password, and do not poll for applications to deploy.

JDK

Oracle HotSpot 1.8.0_221 /home/ORACLE_SW/Java/jdk1.8.0_221

Other JDK Location: Browse

Help < Back Next > Finish Cancel

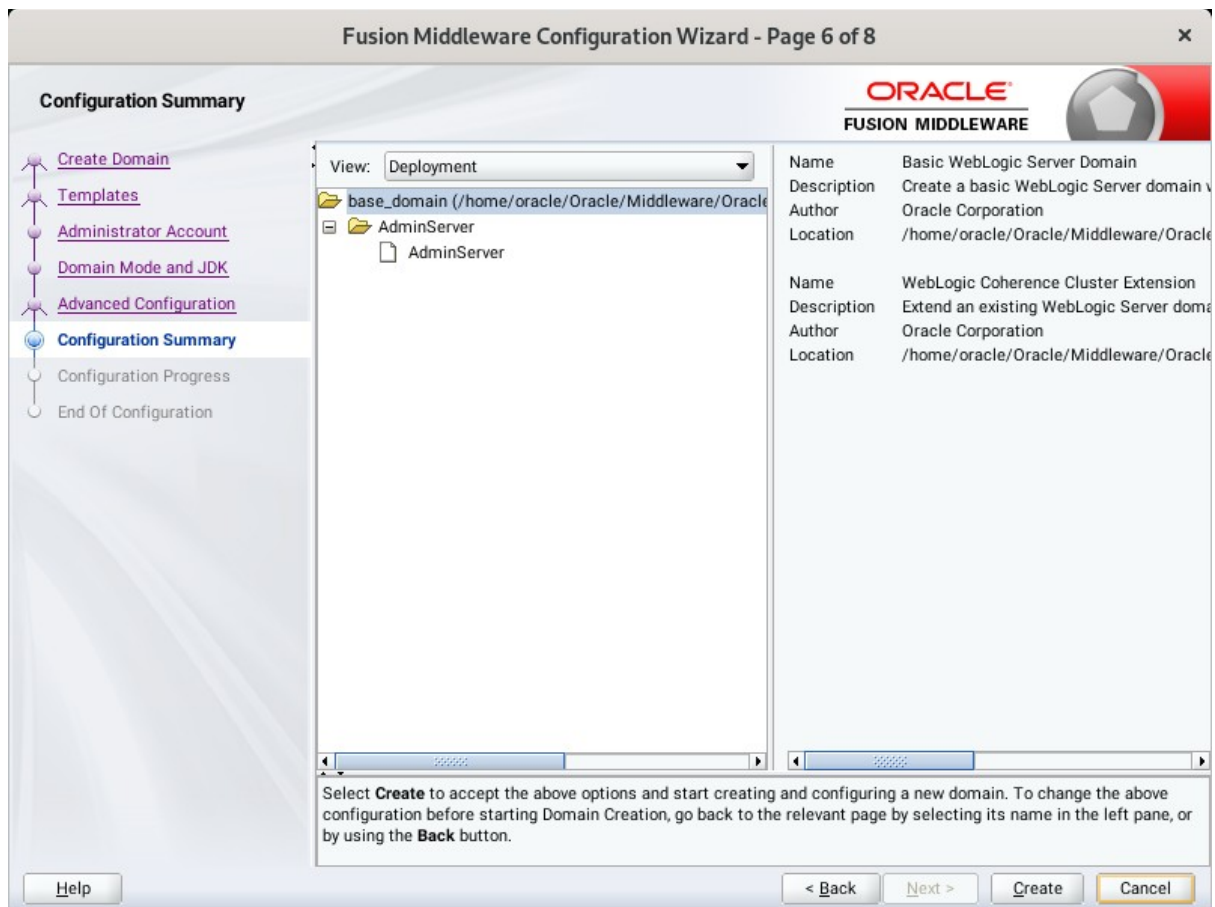
Select "**Development**" in the Domain Mode field, select the "**Oracle HotSpot**" in the JDK field. Then click **Next** to continue.

5). Advanced Configuration.



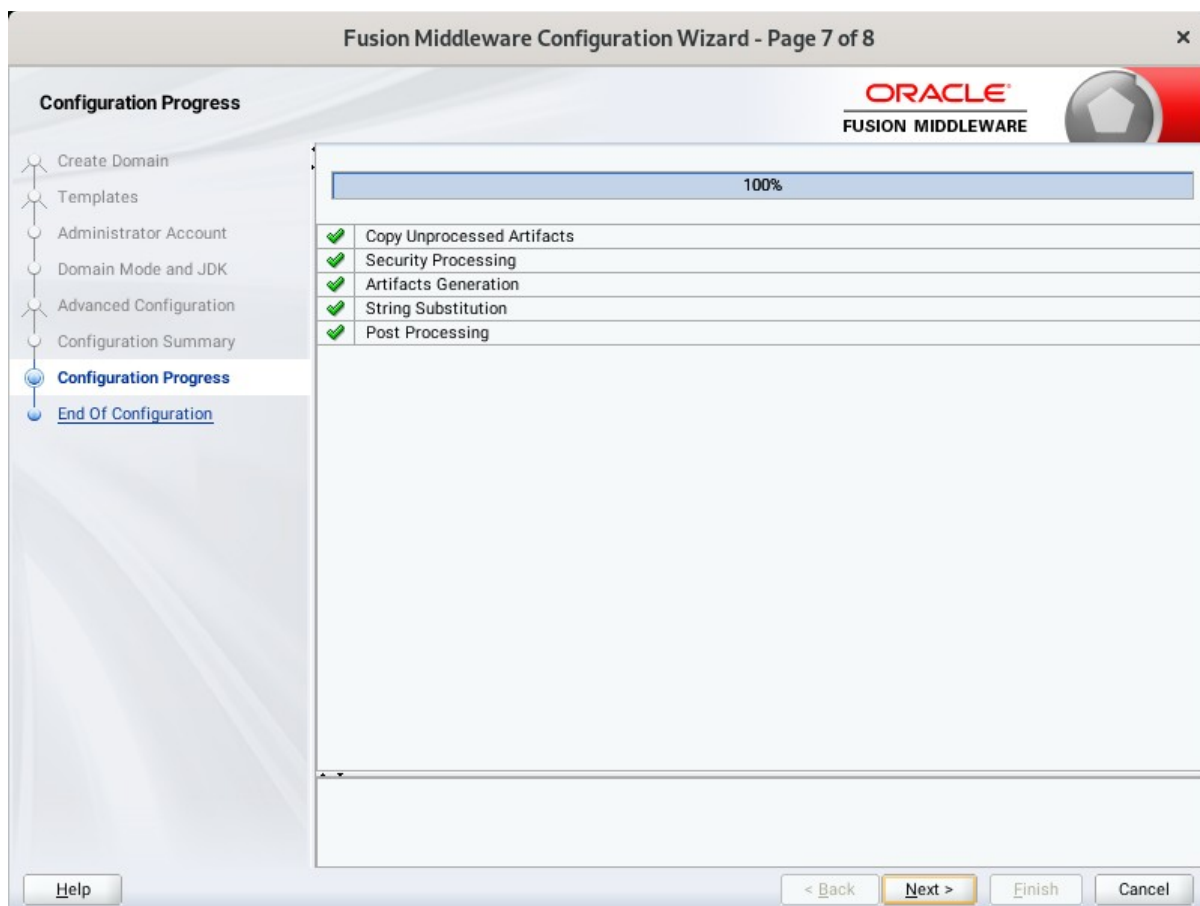
According to your requirements, select the desired options on the Advanced Configuration screen. Then click **Next** to continue.

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@Dell5530:...ns/base_domain/bin

2021-07-07 16:38:48.820/6.965 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 a
utomatically generated
<Jul 7, 2021 4:38:52,760 PM GMT+08:00> <Notice> <JMX> <BEA-149512> <JMX Connector Server started at service:jmx:iiop://192.168
.1.7:7001/jndi/weblogic.management.mbeanservers.domainruntime.>
<Jul 7, 2021 4:38:52,802 PM GMT+08:00> <Notice> <JMX> <BEA-149512> <JMX Connector Server started at service:jmx:iiop://192.168
.1.7:7001/jndi/weblogic.management.mbeanservers.edit.>
<Jul 7, 2021 4:38:53,937 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STANDBY.>
<Jul 7, 2021 4:38:53,938 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STARTING.>
<Jul 7, 2021 4:38:53,963 PM GMT+08:00> <Notice> <Log Management> <BEA-170036> <The Logging monitoring service timer has starte
d to check for logged message counts every 30 seconds.>
<Jul 7, 2021 4:38:54,328 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conne
ction with the Domain level Diagnostic Service.>
<Jul 7, 2021 4:38:54,955 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 7, 2021 4:38:55,003 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 7, 2021 4:38:55,025 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:1.>
<Jul 7, 2021 4:38:55,026 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Jul 7, 2021 4:38:55,027 PM GMT+08:00> <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 7, 2021 4:38:55,027 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Serv
er "AdminServer" for domain "base_domain" running in development mode.>
<Jul 7, 2021 4:38:55,027 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Jul 7, 2021 4:38:55,027 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Jul 7, 2021 4:38:55,027 PM GMT+08:00> <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 7, 2021 4:38:55,028 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Jul 7, 2021 4:38:55,036 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 7, 2021 4:38:56,371 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

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

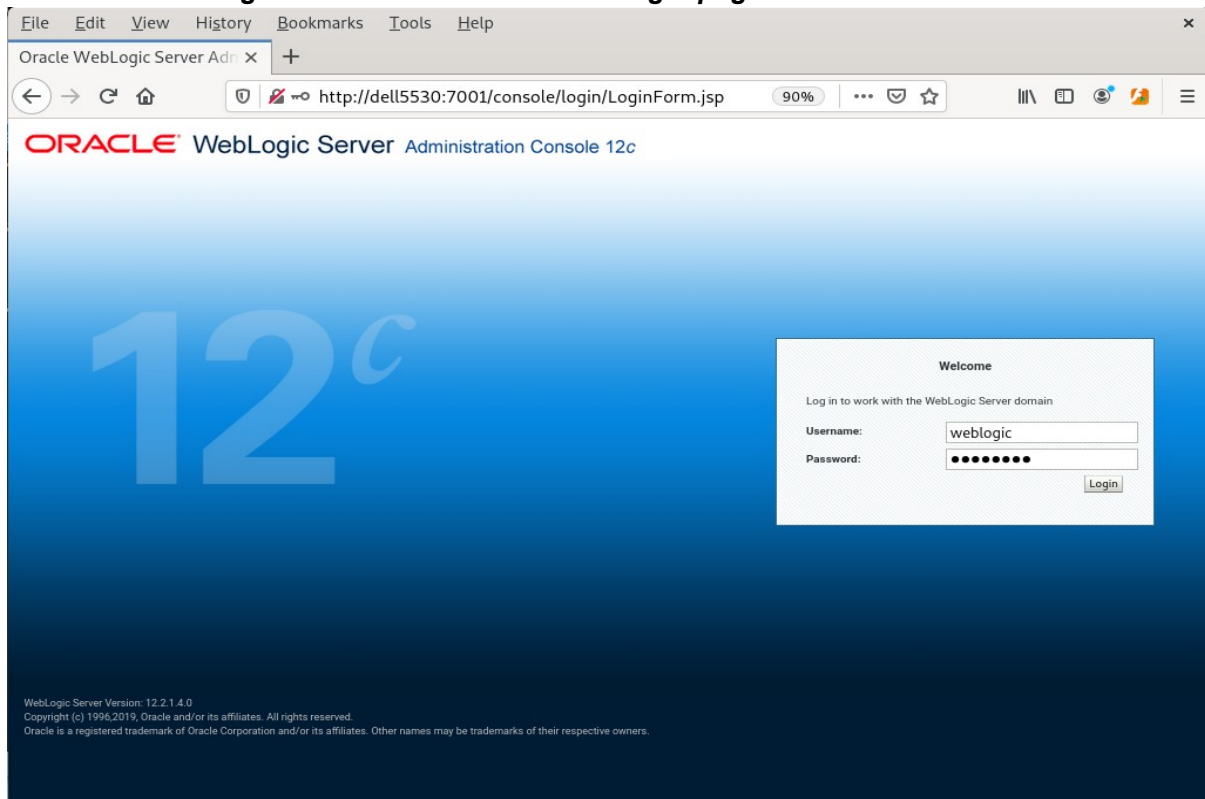
```

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

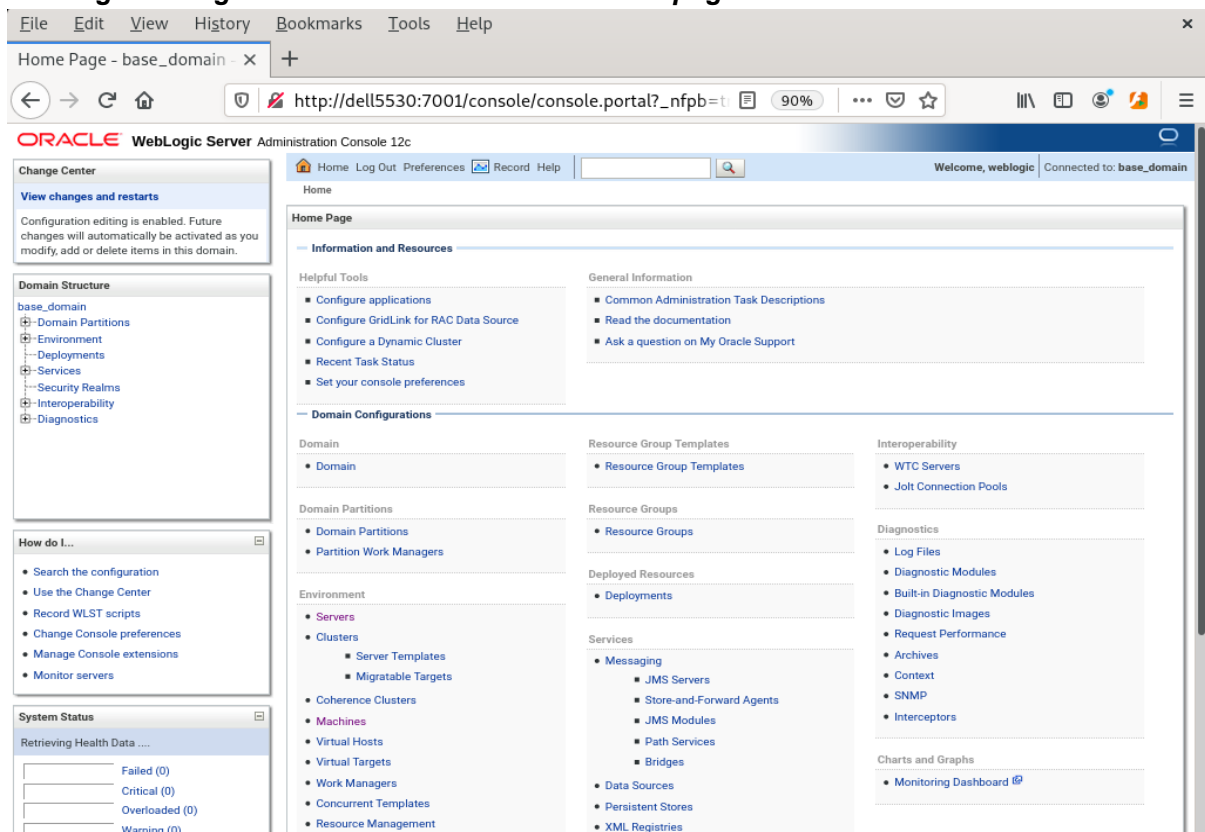
```

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=t`. The page title is "Summary of Servers - base_domain".

The main content area is titled "Summary of Servers" and includes a "Configuration" tab. Below the tab, there is a description: "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."

A table titled "Servers (Filtered - More Columns Exist)" displays the following data:

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

The left sidebar contains several sections: "Change Center" (View changes and restarts), "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), and "System Status" (Health of Running Servers as of 4:53 PM, Failed (0), Critical (0), Overloaded (0), Warning (0)).

End of Oracle WebLogic Server Software.

Oracle Form and Reports

1. Installing Oracle WebLogic Server software

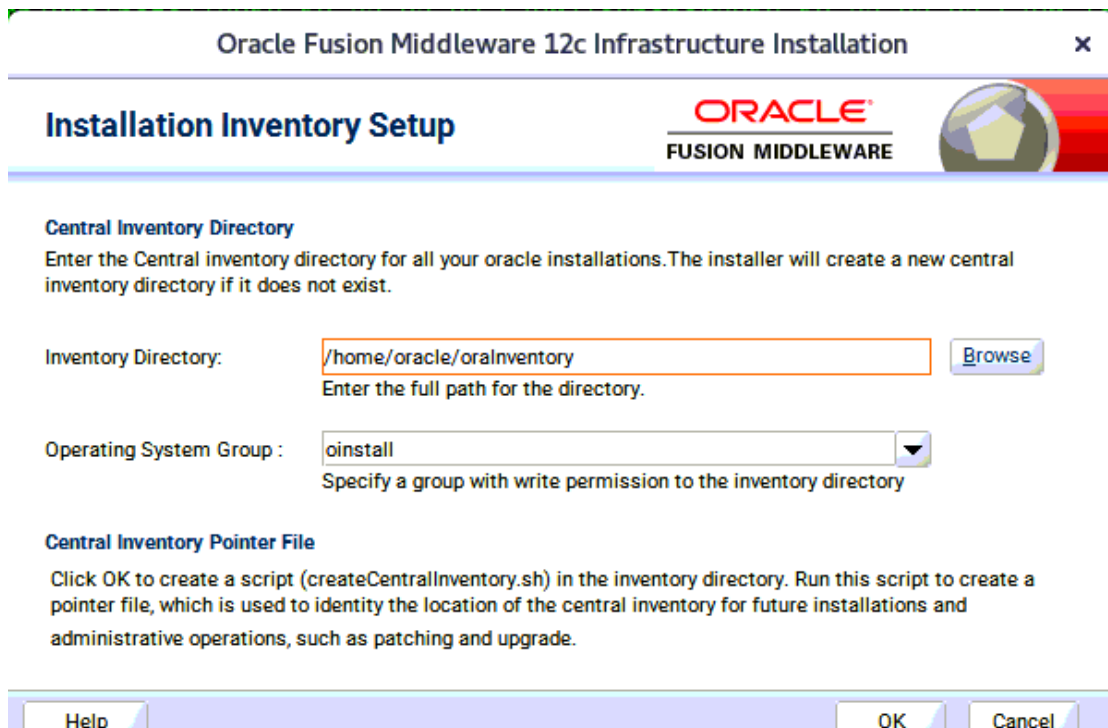
1-1. Prerequisites:

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)

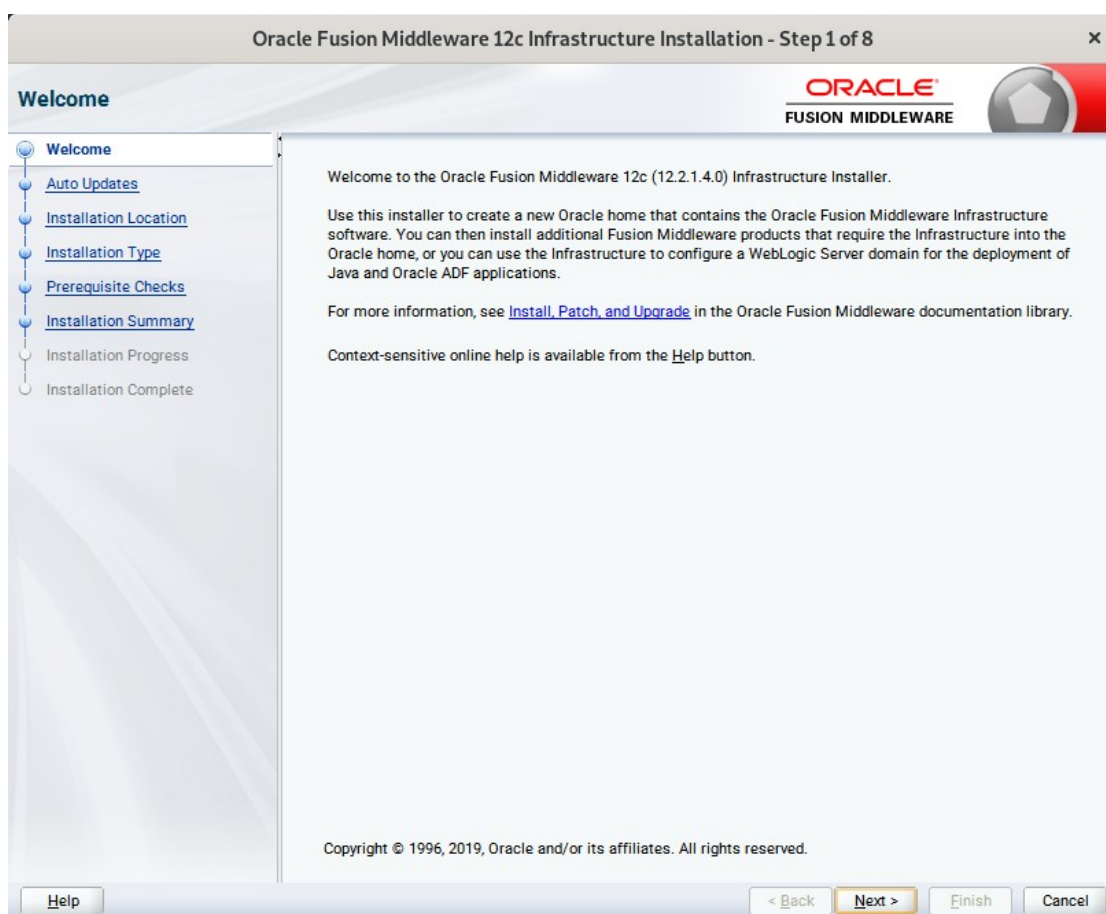
Screenshots: A brief installation setps for Fusion Middleware Infrastructure Installer is as follows:

3-1). Installation Inventory Setup.



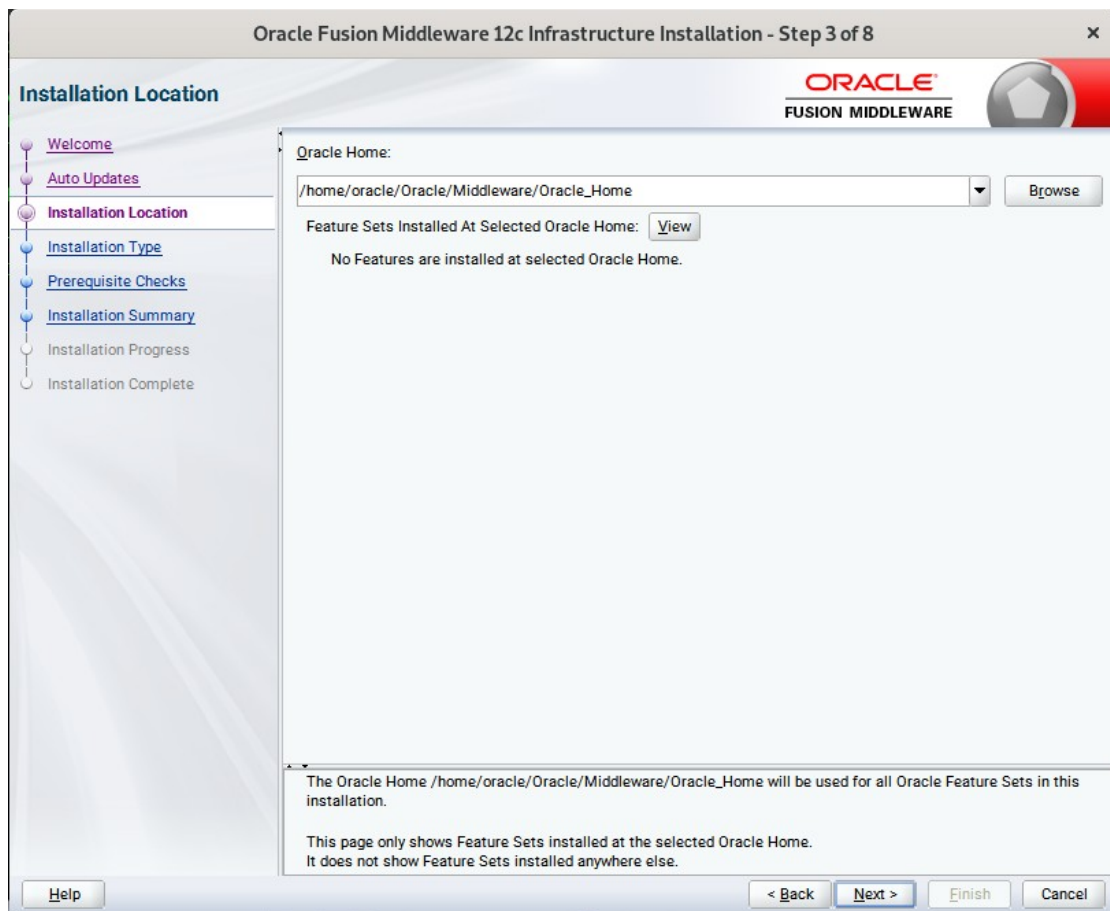
Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

3-2). Welcome.



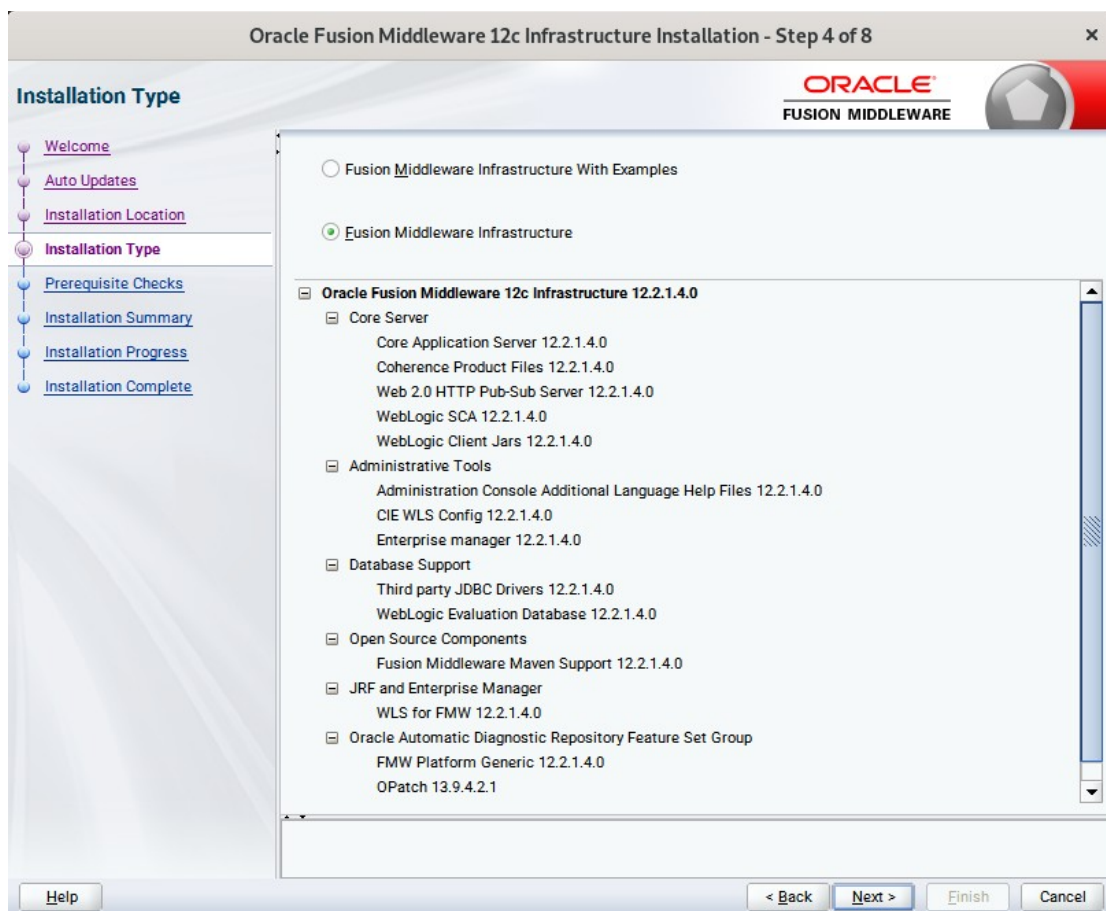
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3-3). Installation Location.



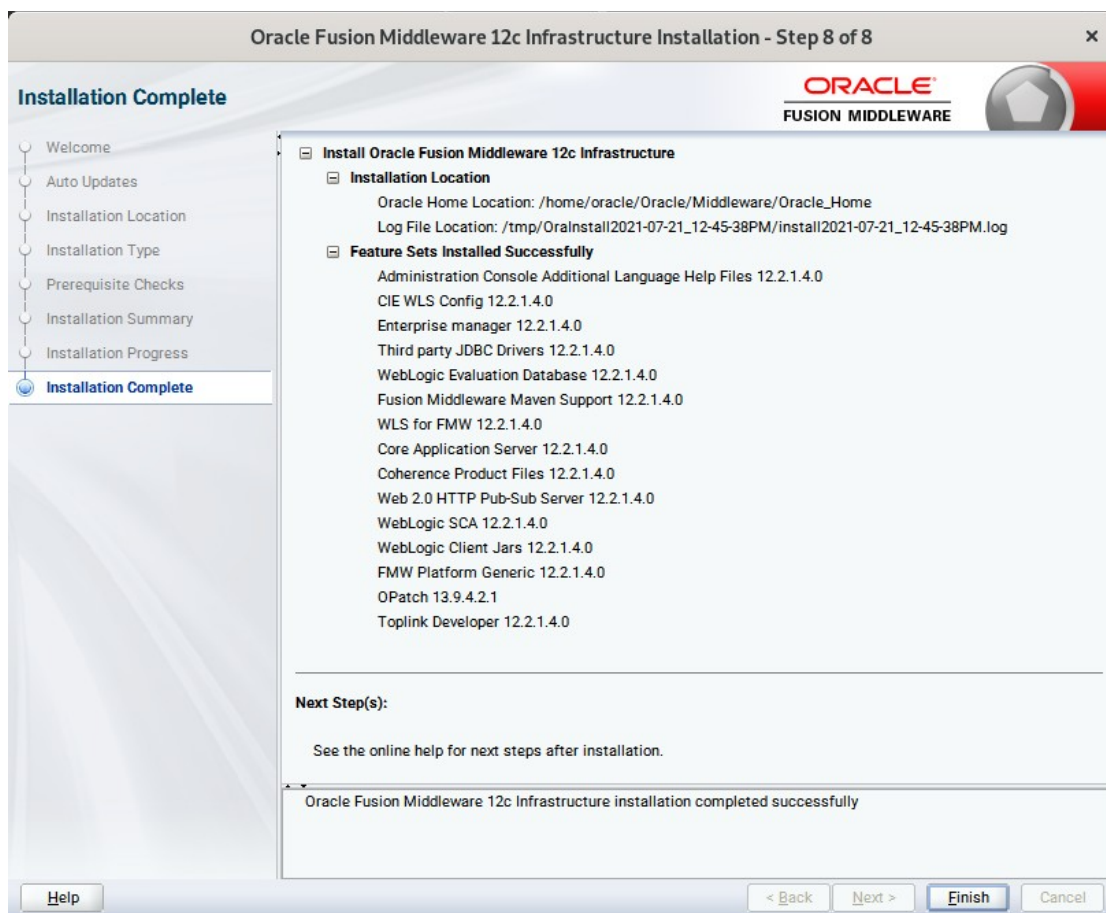
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

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.



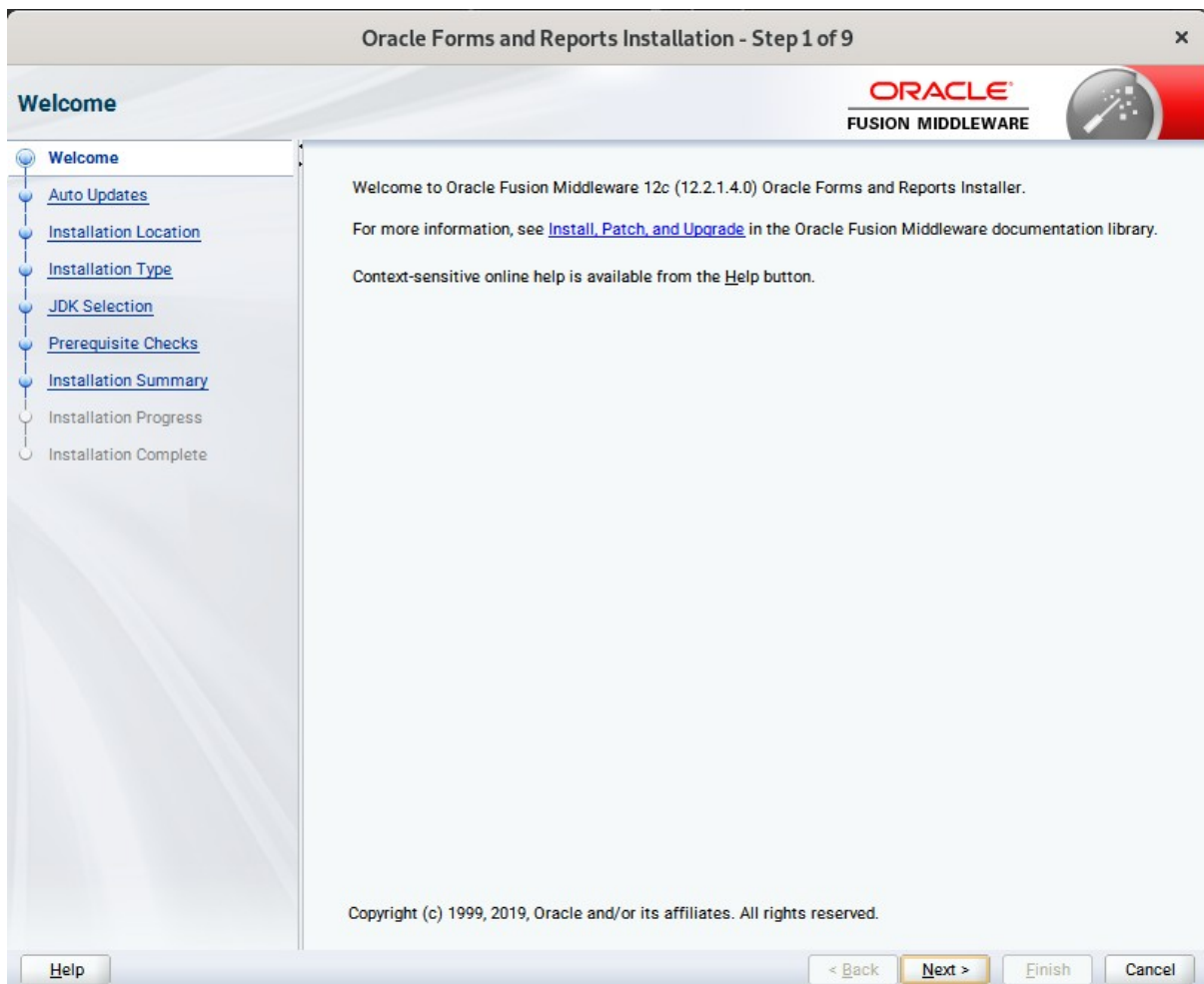
1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP3 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

(**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**'.

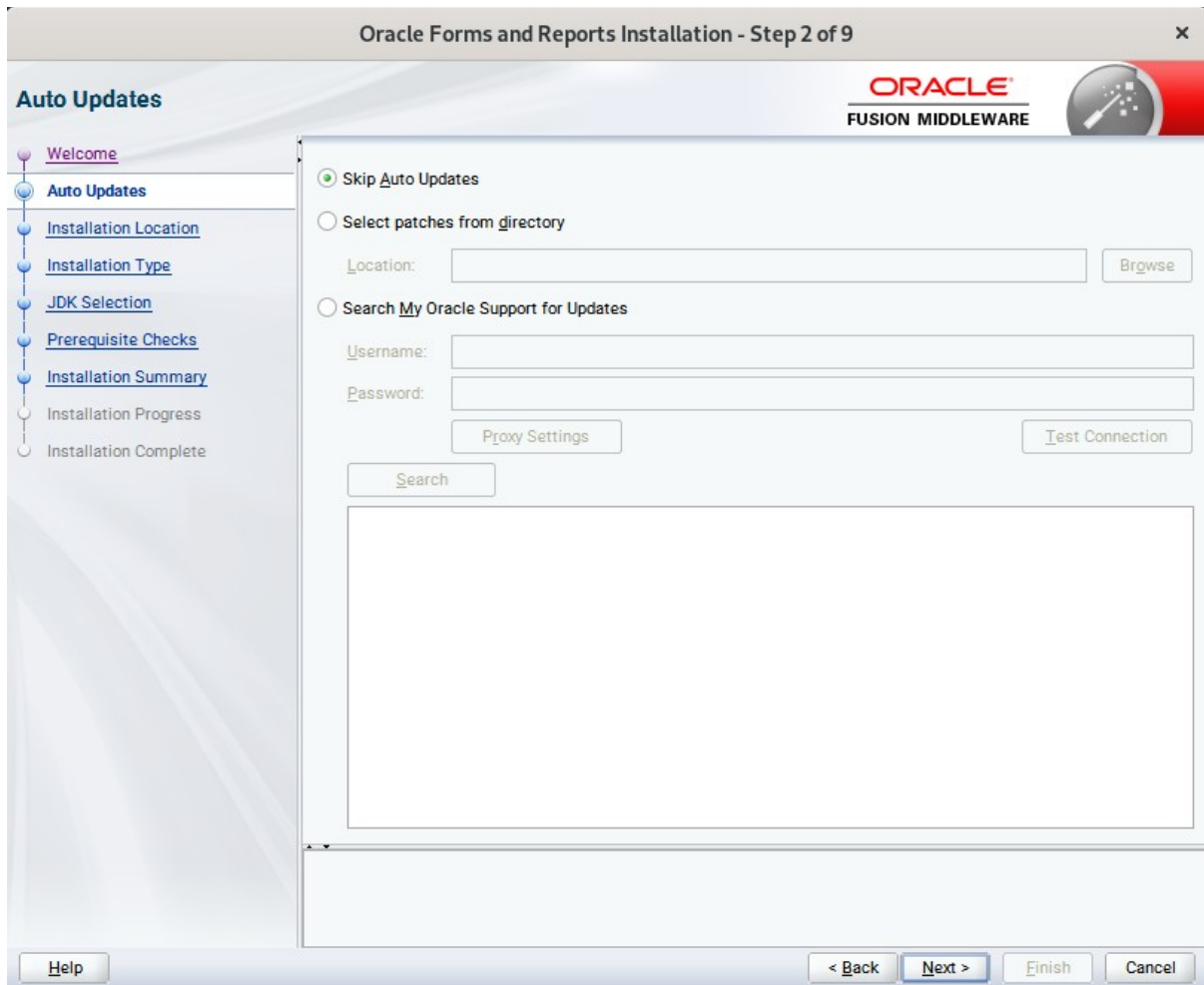
For the actual installation, follow the steps below:

1). Welcome page.



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

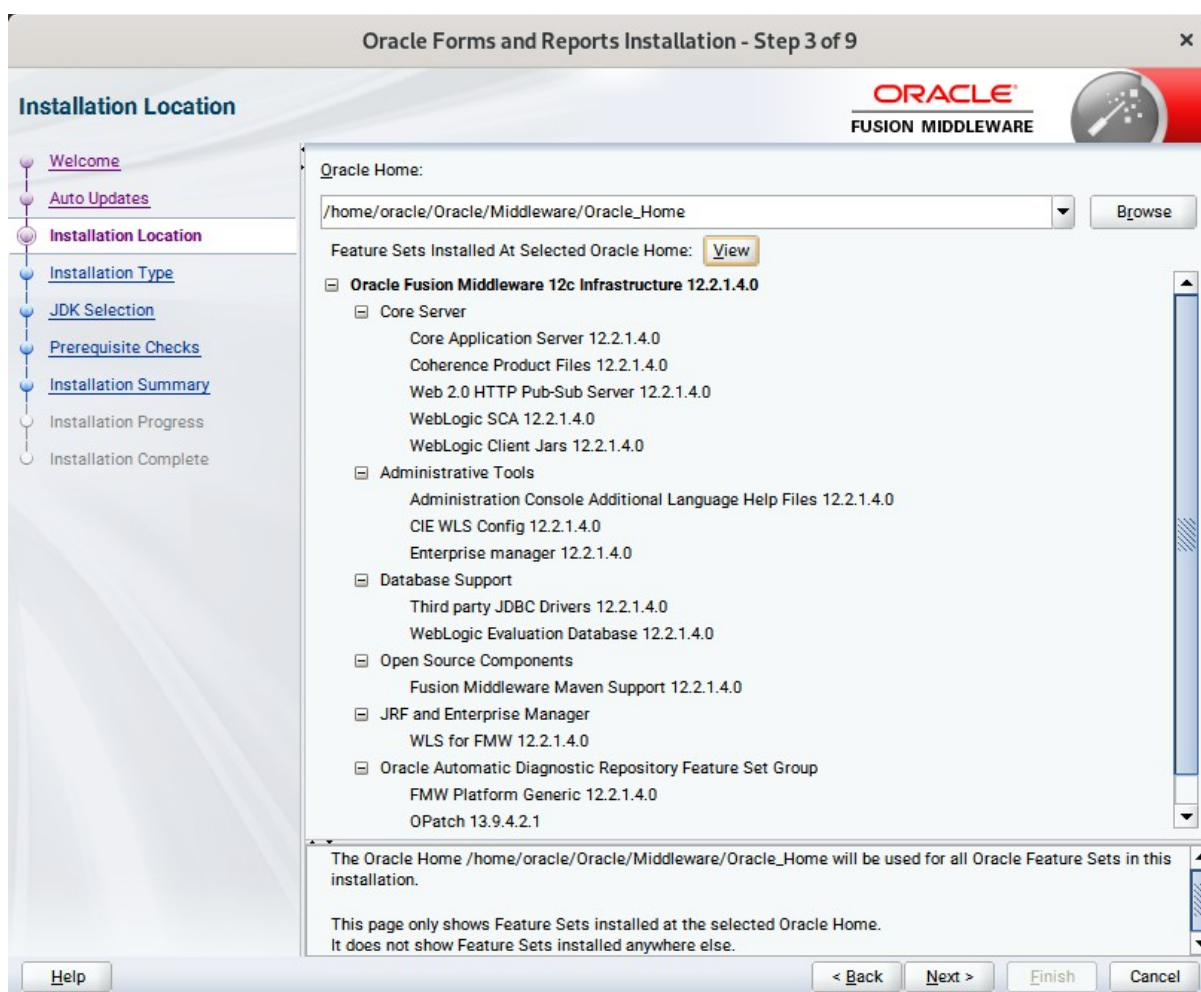
2). The **Auto Updates** page appears.



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 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 options 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.

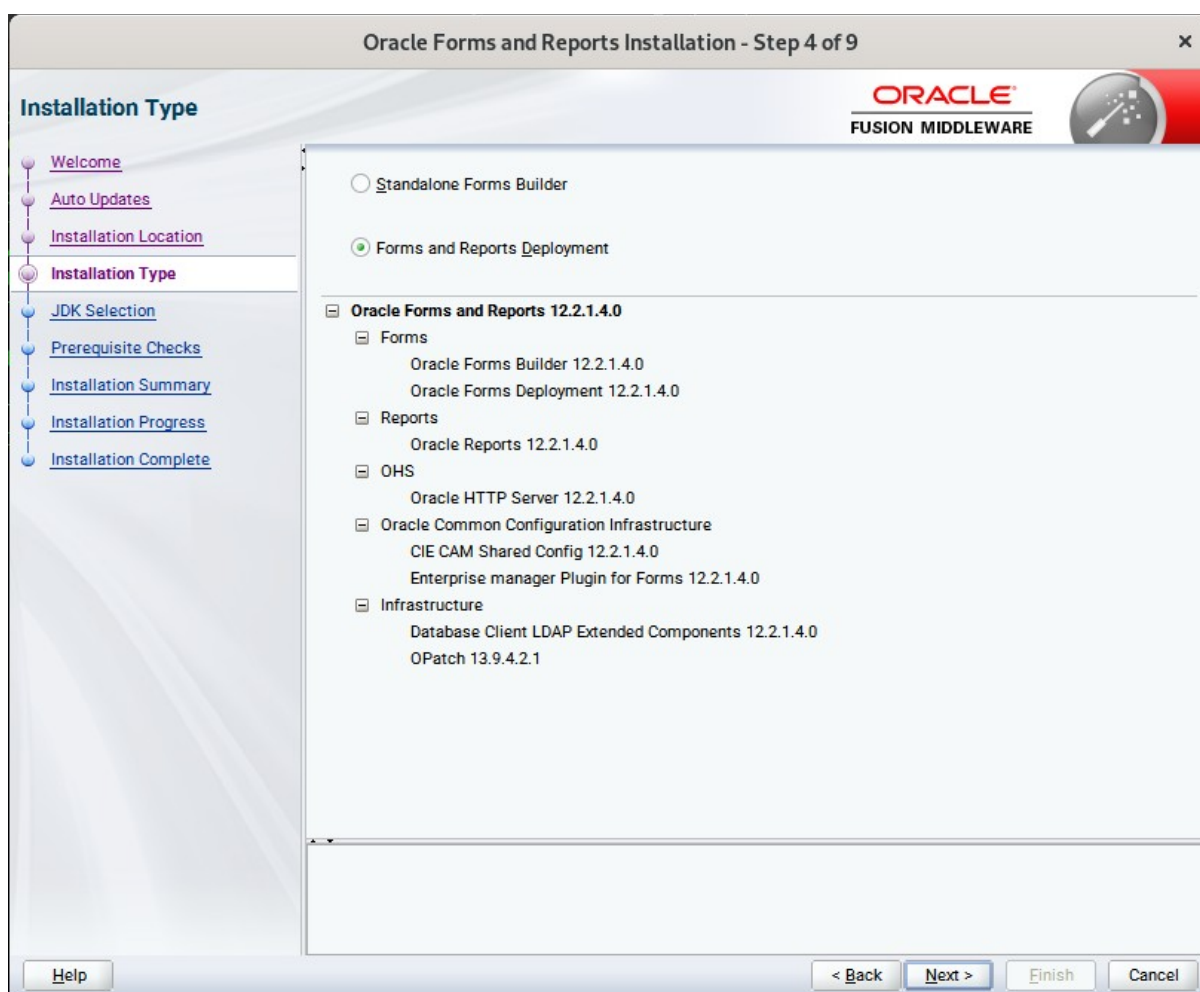
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



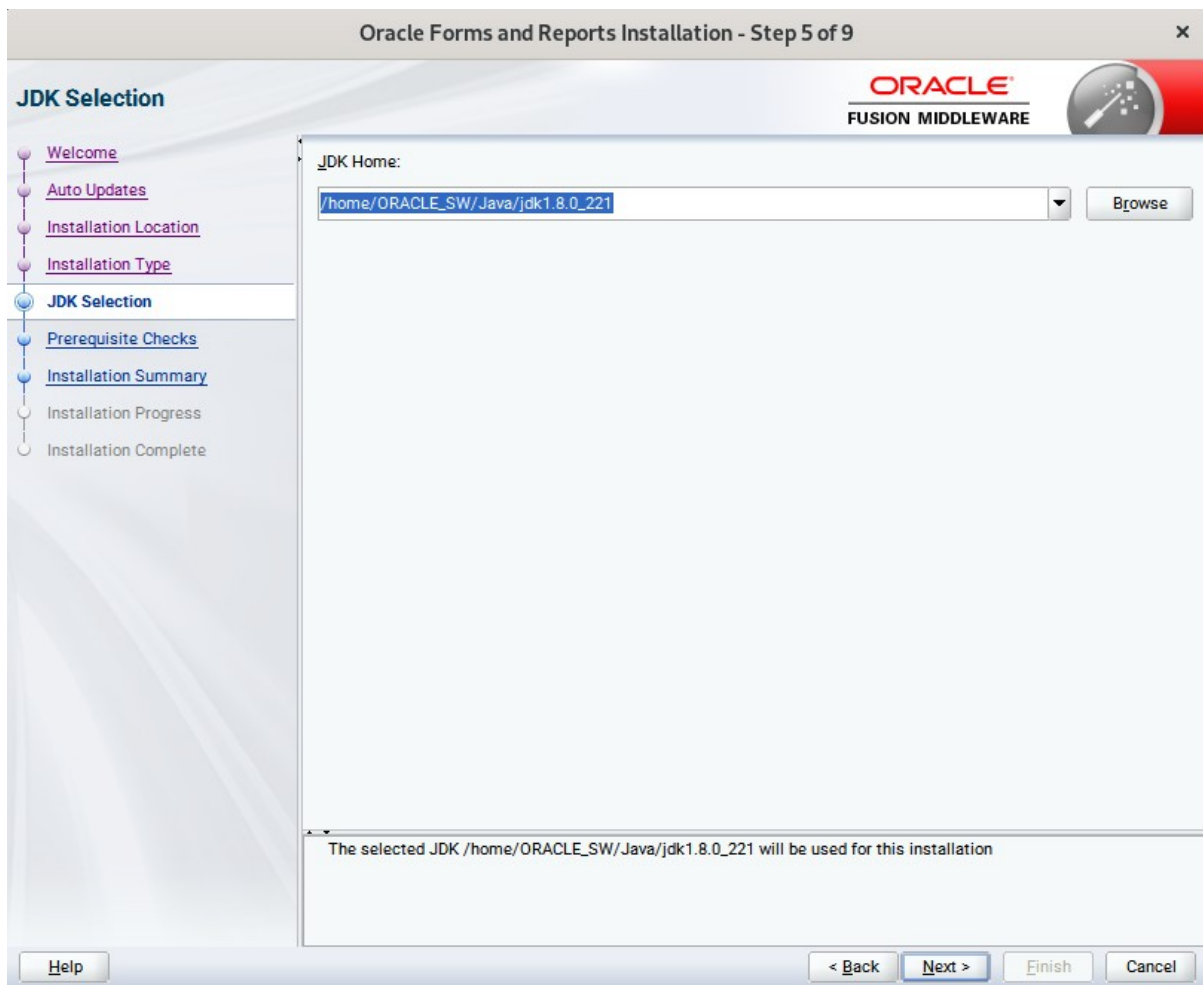
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



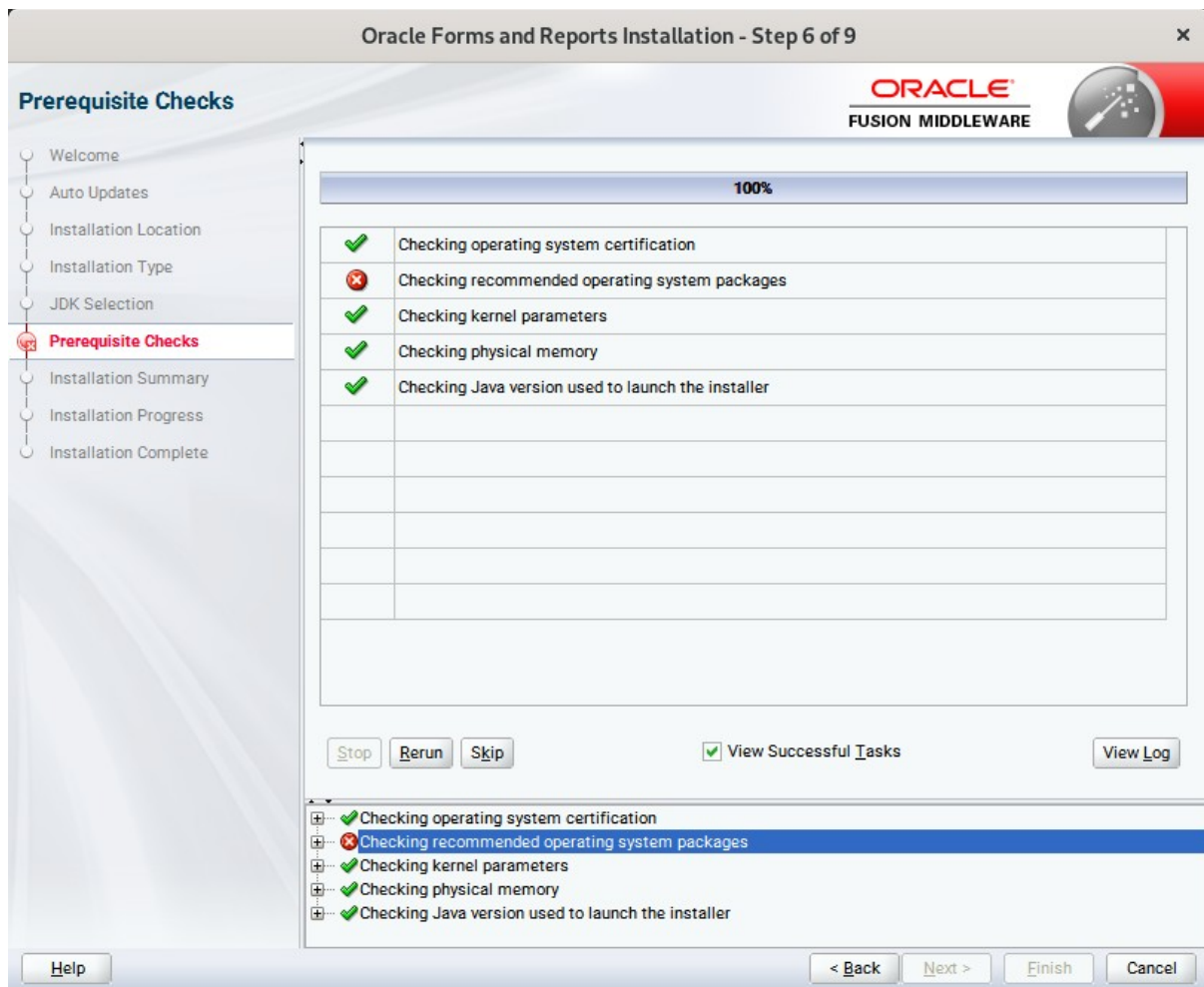
You can select **Standalone Forms Builder** if you want only that functionality, or choose **Forms and Reports Deployment** to install all of the products. Click **Next** to continue.

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



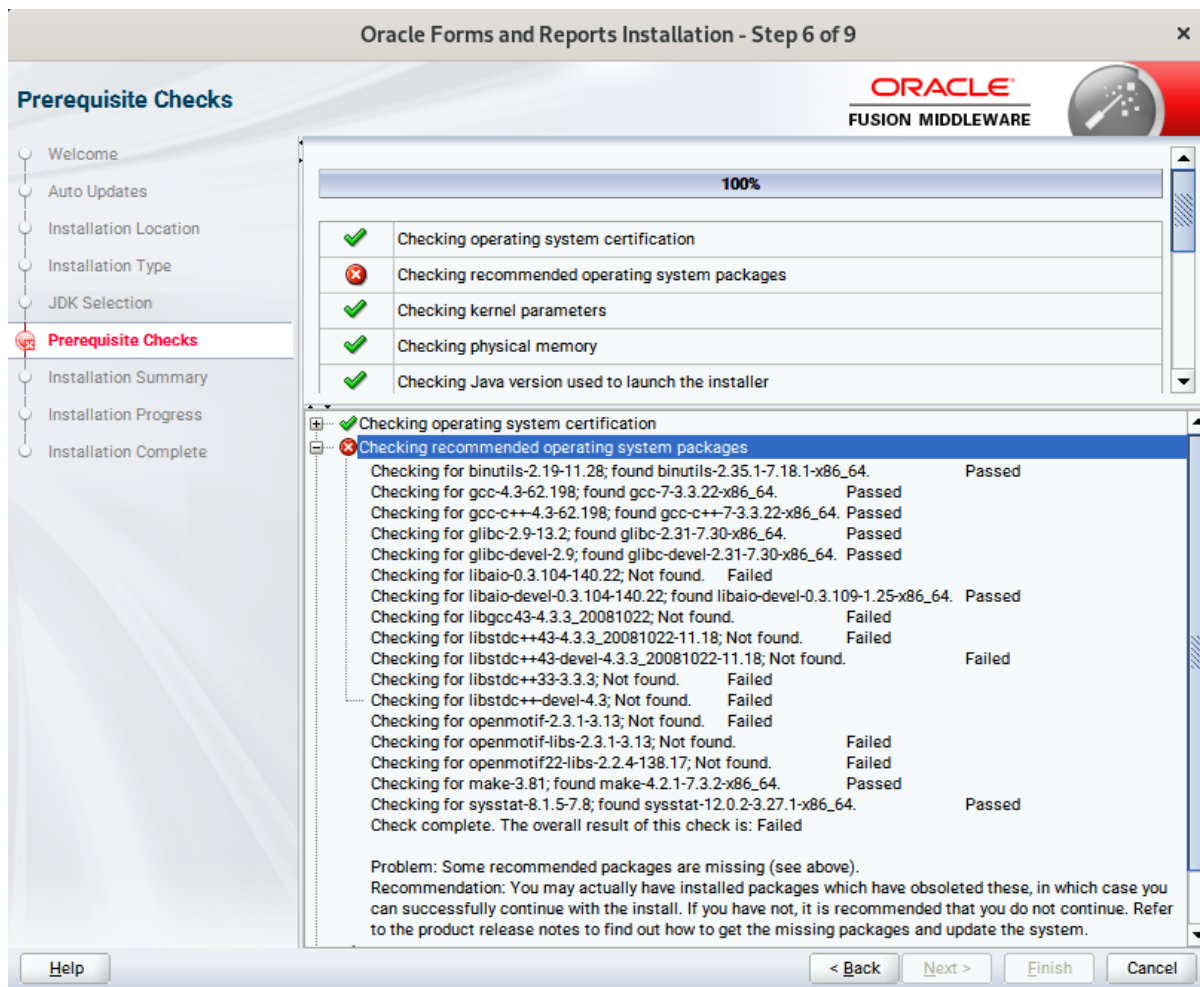
The selected JDK will be used for this installation. Click **Next** to continue.

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)

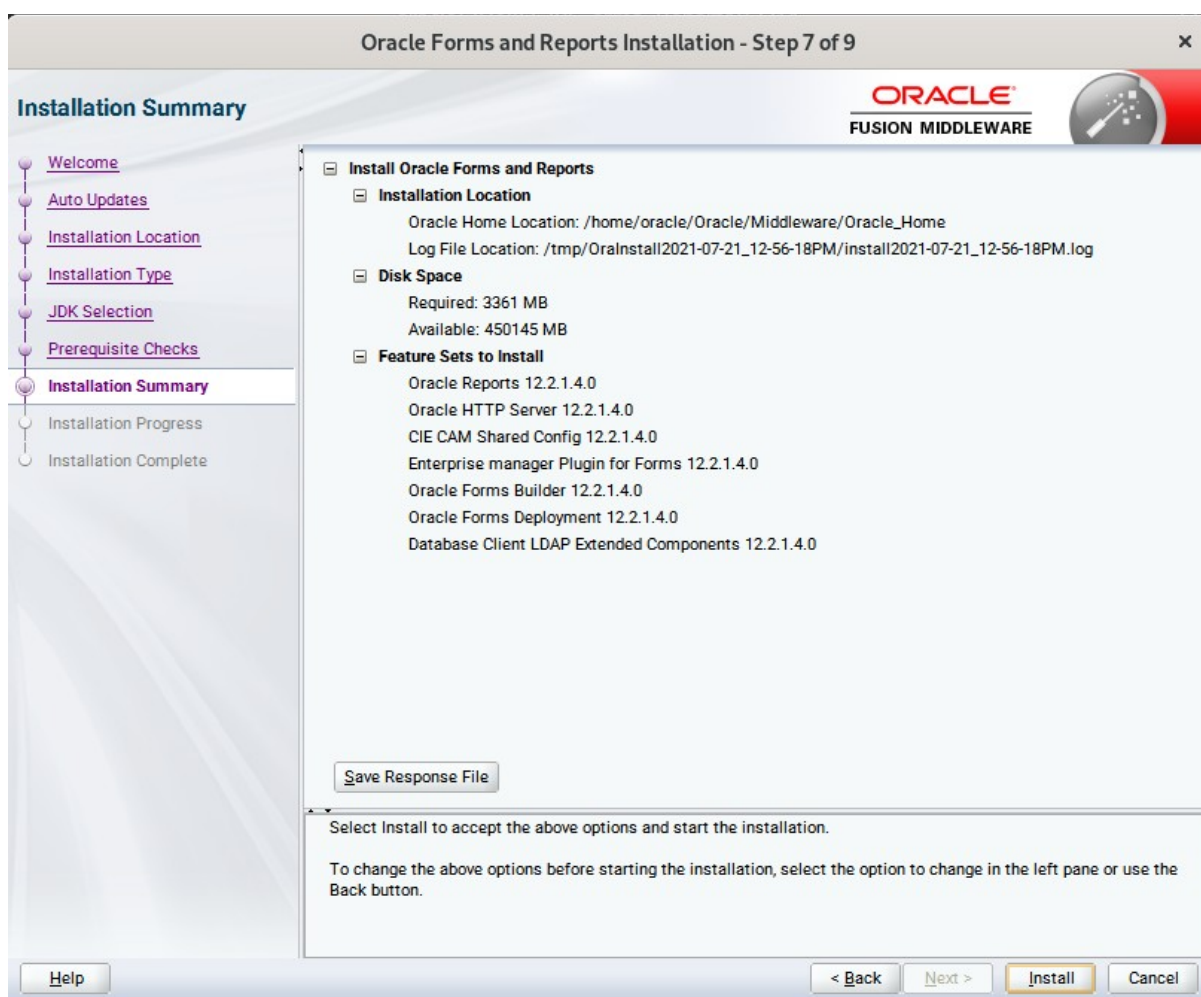
So, please ensure following updated packages are installed, then click 'Skip' in the 'Prerequisite Checks' page and continue installation.

```
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

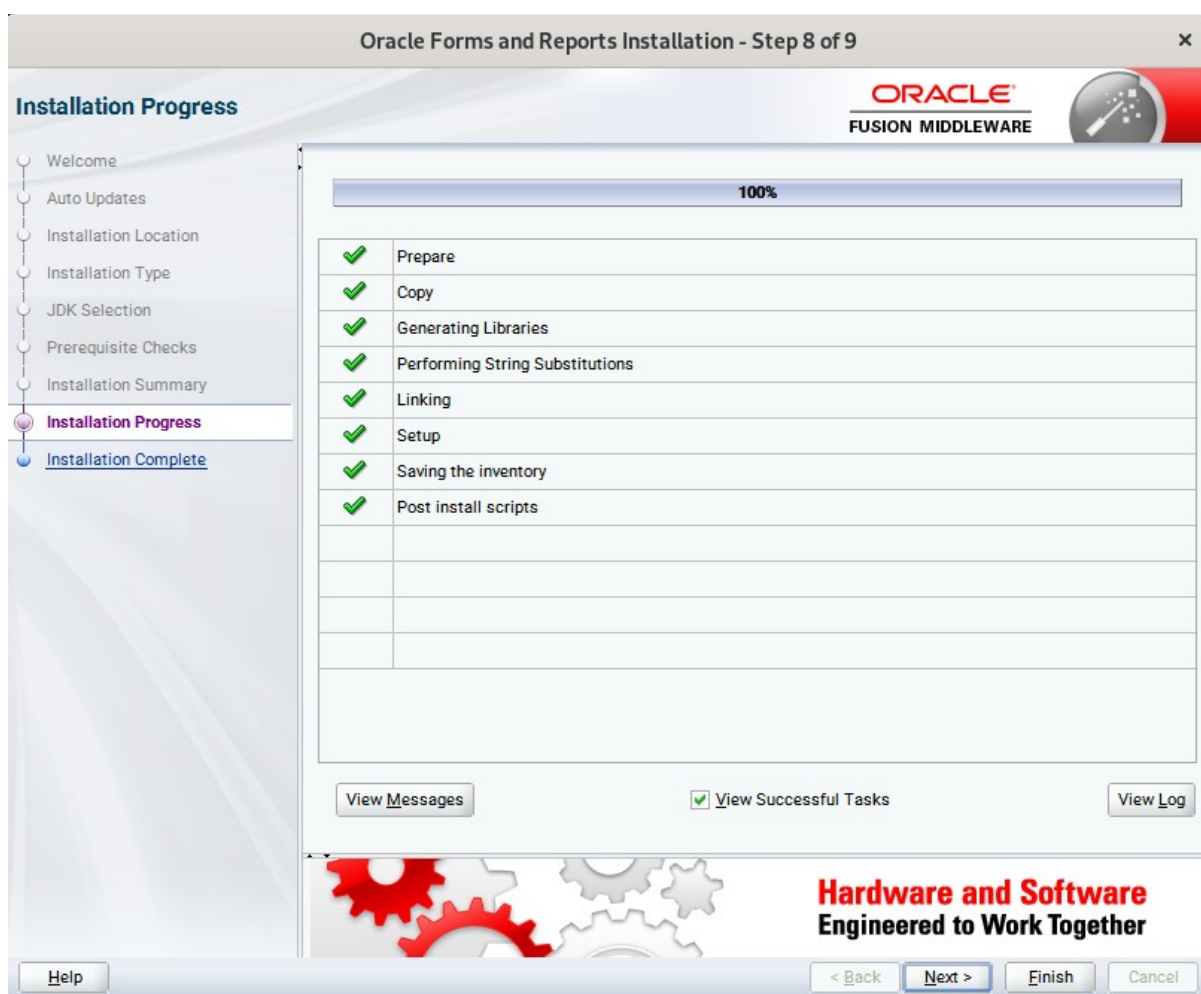
)

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



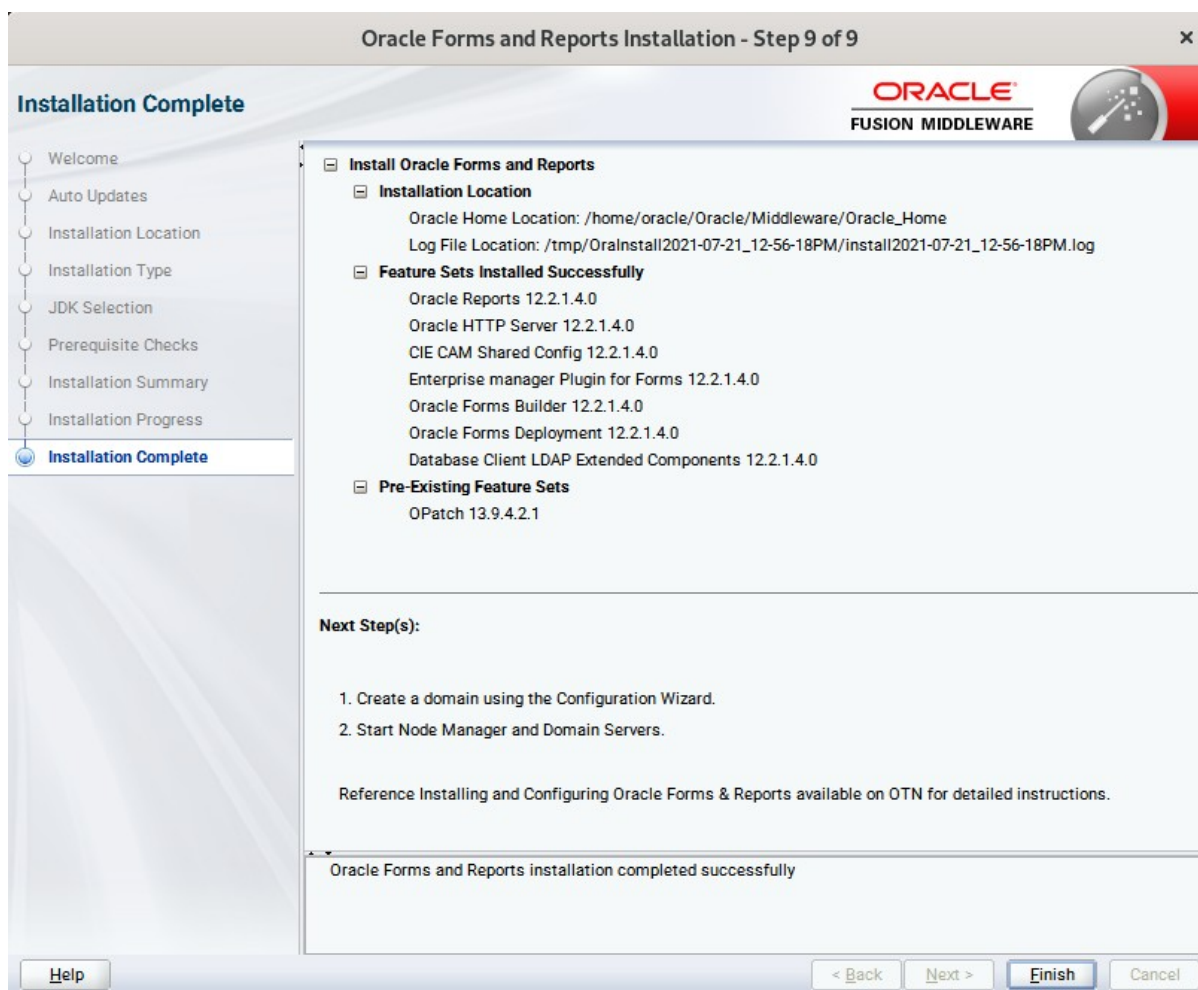
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

Specify a unique prefix for all schemas created in this session, so you can easily locate, reference, and manage the schemas later.

Select existing prefix:

Create new prefix:

Alpha numeric only. Cannot start with a number. No special characters.

Component	Schema Owner
<input type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Common Infrastructure Services *	DEV_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	DEV_OPSS
<input type="checkbox"/> User Messaging Service	UMS
<input checked="" type="checkbox"/> Audit Services	DEV_IAU
<input checked="" type="checkbox"/> Audit Services Append	DEV_IAU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	DEV_IAU_VIEWER
<input type="checkbox"/> Metadata Services	MDS
<input checked="" type="checkbox"/> Weblogic Services *	DEV_WLS

* Mandatory component. Mandatory components cannot be deselected.

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

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: 5 minutes 51 seconds

RCU Logfile: /tmp/RCU2021-07-21_14-11_606037632/logs/rcu.log
 Component Log Directory: /tmp/RCU2021-07-21_14-11_606037632/logs
 View Log: rcu.log

Prefix for (prefixable) Schema DEV
 Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:10.792(sec)	stb.log
Oracle Platform Security Services	Success	03:12.061(min)	opss.log
Audit Services	Success	01:04.754(min)	iau.log
Audit Services Append	Success	00:09.577(sec)	iau_append.log
Audit Services Viewer	Success	00:10.614(sec)	iau_viewer.log
Weblogic Services	Success	00:38.350(sec)	wls.log

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

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.

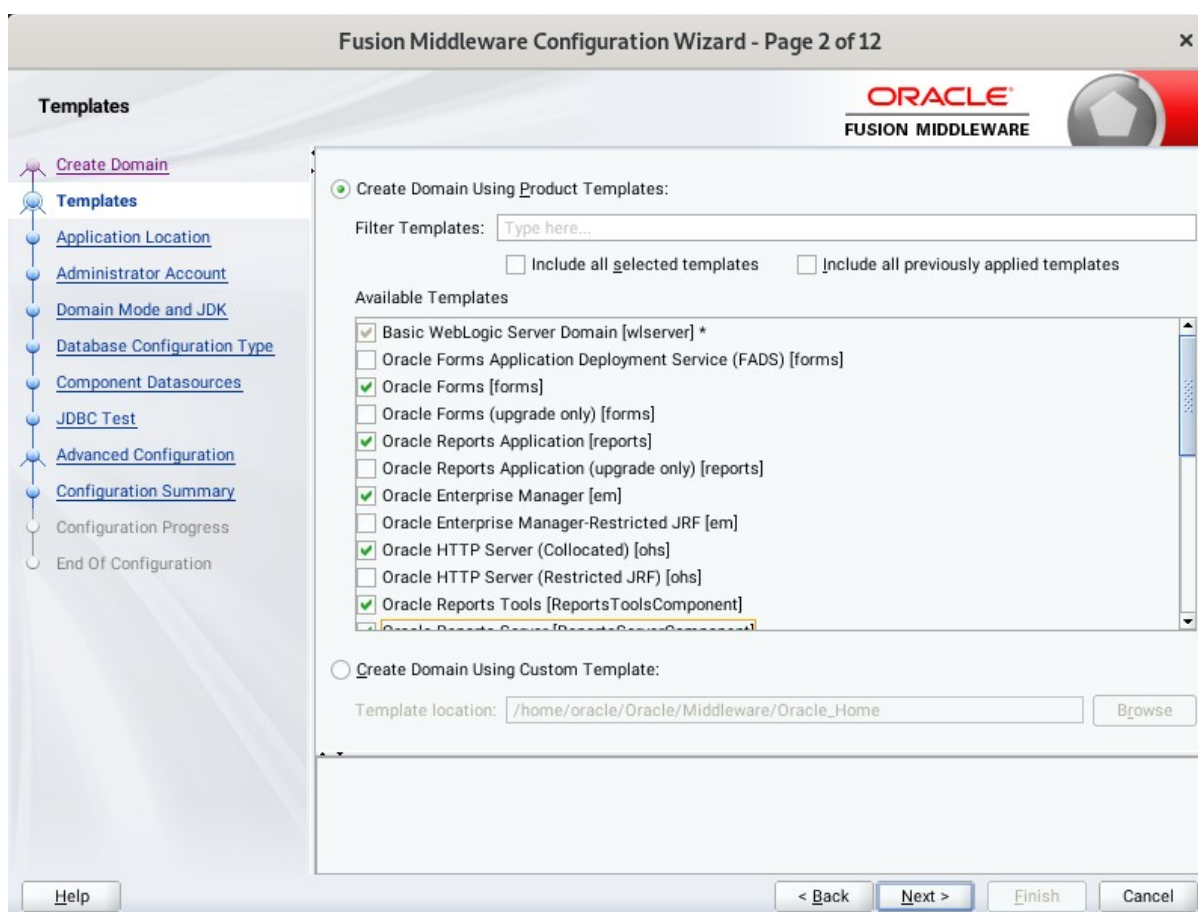
Follow these steps:

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



Click **Next** to continue.

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

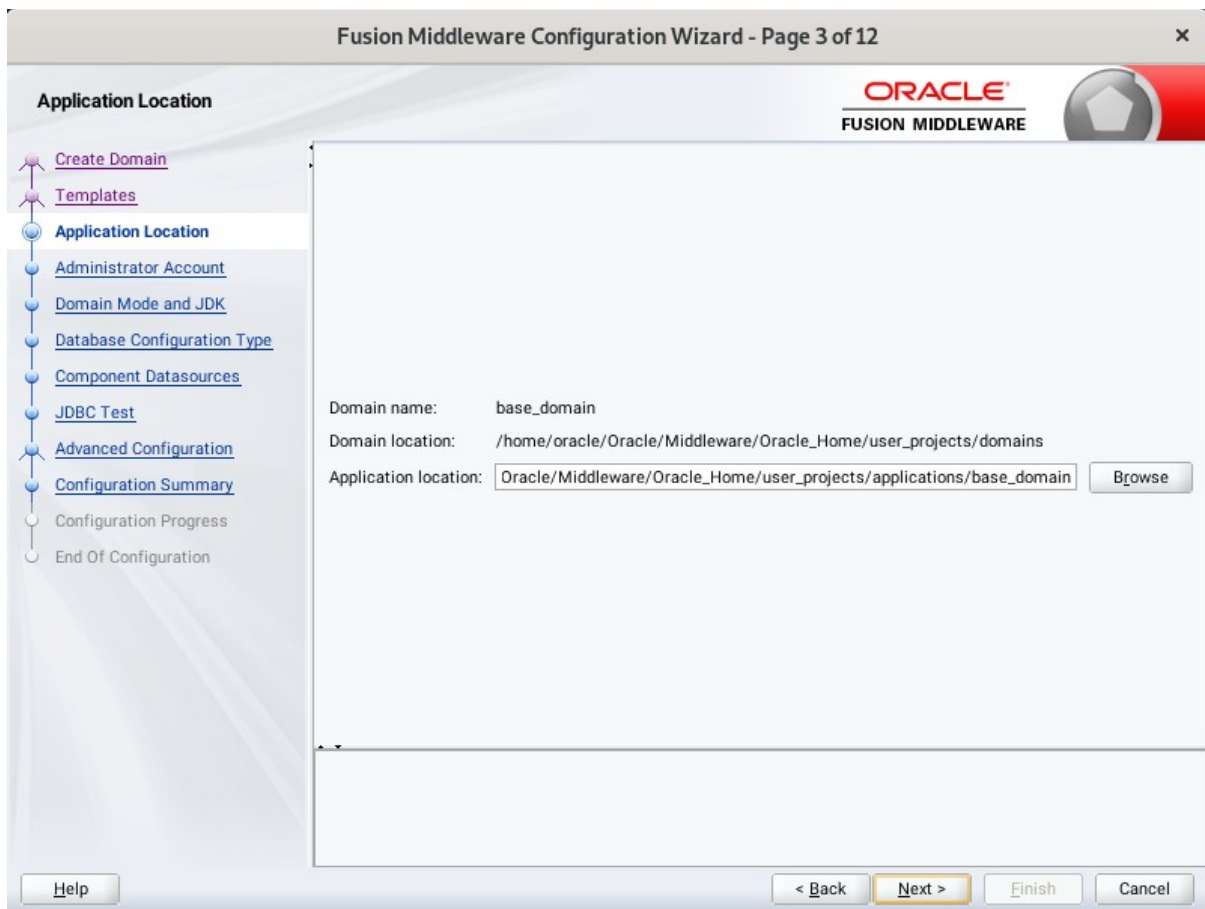


Keep the default selection (**Create Domain using Product Templates**). Selecting

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

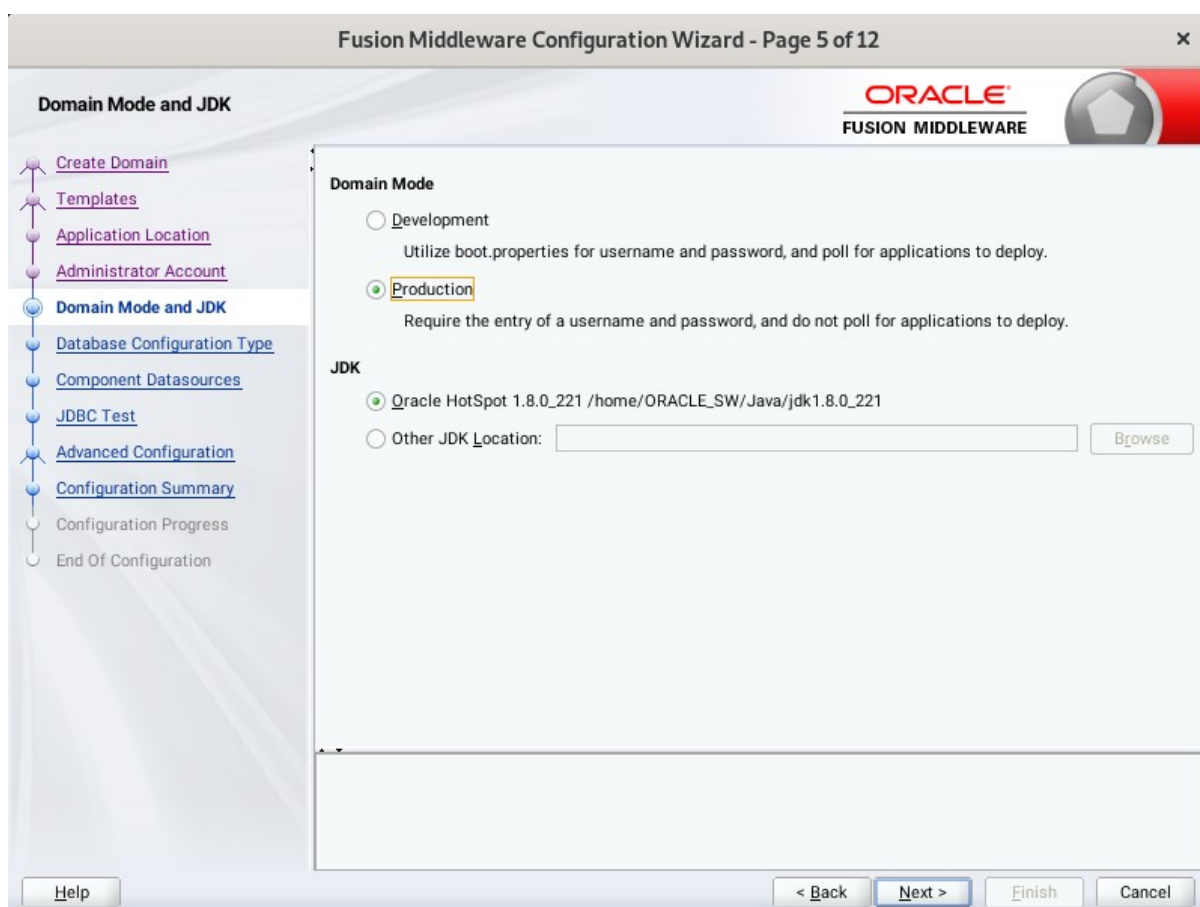
Confirm Password

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.



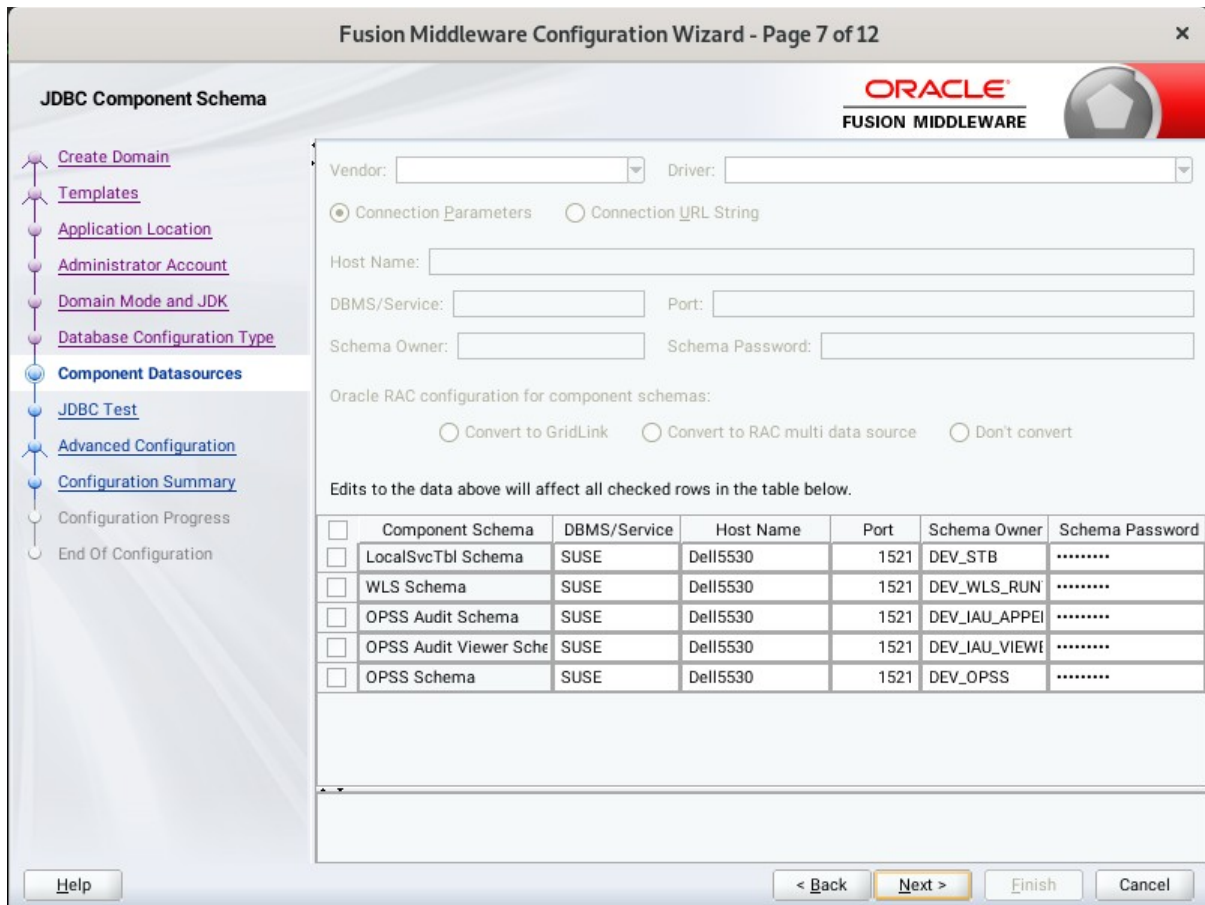
The Domain Mode and JDK screen appears. Select the Domain Mode (either **Development** or **Production**). To ensure the highest degree of security, selecting **Production** is recommended. Leave the default JDK selection as it appears, unless using another version of the JDK desired.

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 logo and 'FUSION MIDDLEWARE' text are visible 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: '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.' The 'Vendor' dropdown is set to 'Oracle' and the 'Driver' dropdown is set to '*Oracle's Driver (Thin) for Service connections; Versions:...'. There are two radio buttons for 'Connection Parameters' (selected) and 'Connection URL String'. The 'Host Name' field contains 'Dell5530'. The 'DBMS/Service' field contains 'suse' and the 'Port' field contains '1521'. The 'Schema Owner' field contains 'DEV_STB' and the 'Schema Password' field contains a masked password. There are 'Get RCU Configuration' and 'Cancel' buttons. Below the form is a 'Connection Result Log' section with a scrollable area containing the following text: '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 of the wizard, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

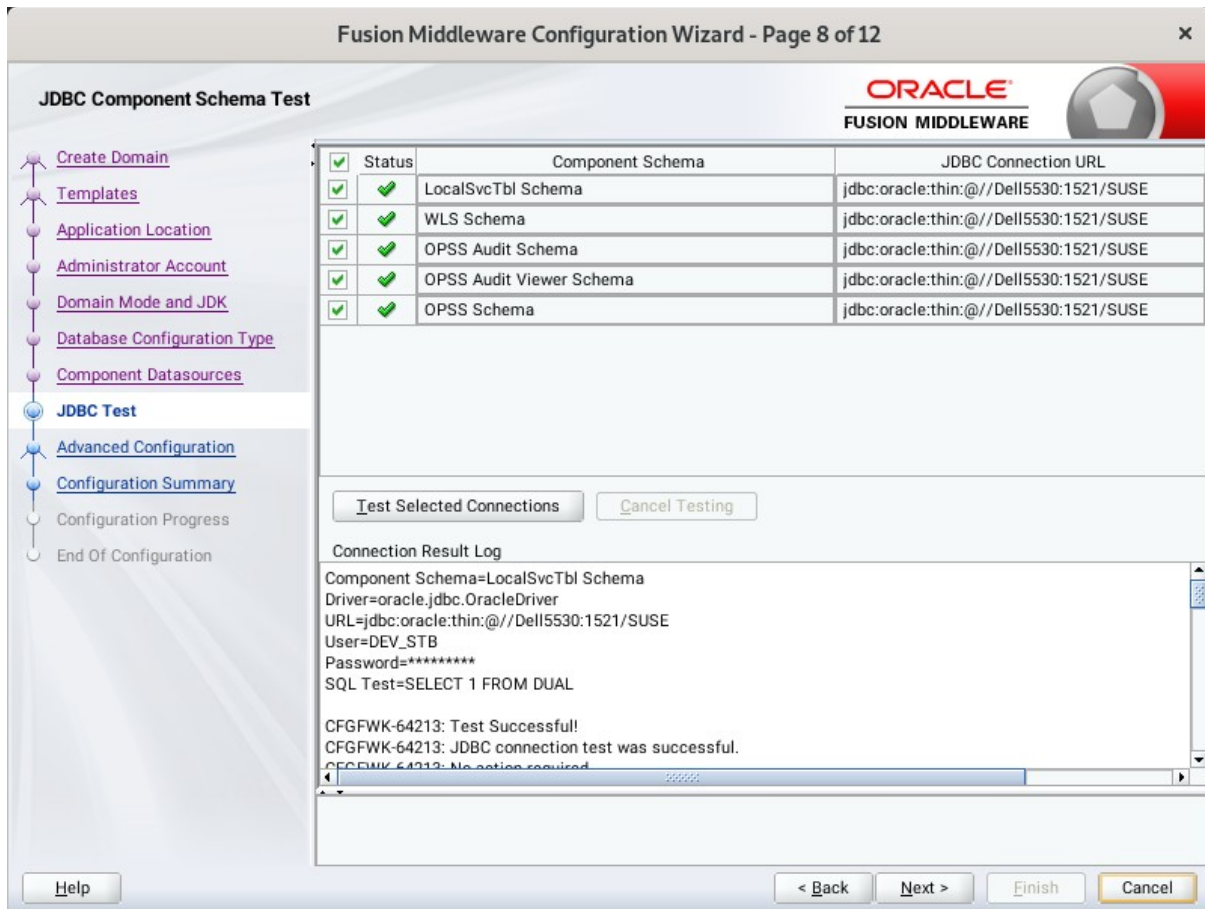
Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

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.

Fusion Middleware Configuration Wizard - Page 10 of 22

Managed Servers

ORACLE
FUSION MIDDLEWARE

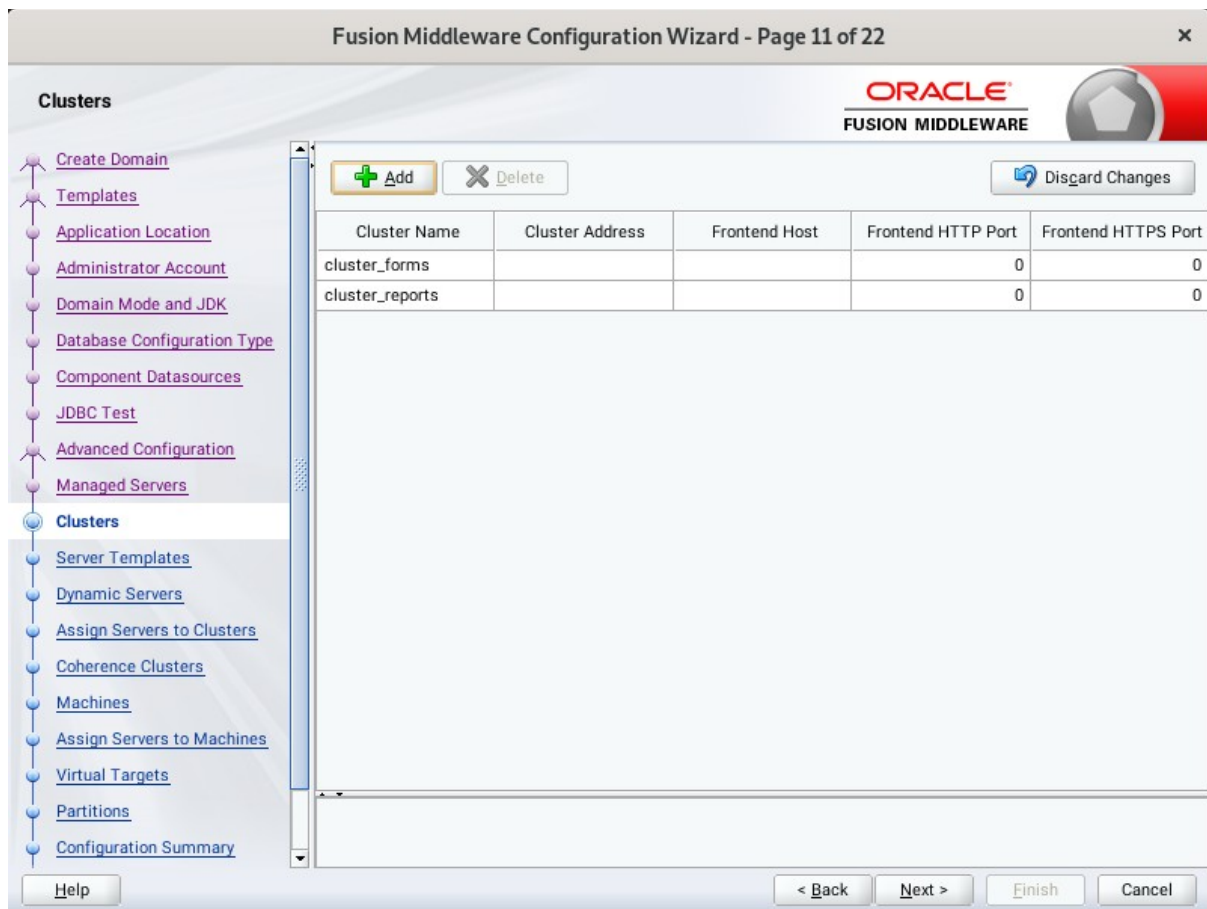
+ Add Clone Delete Disard Changes

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...

Help < Back Next > Finish Cancel

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

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

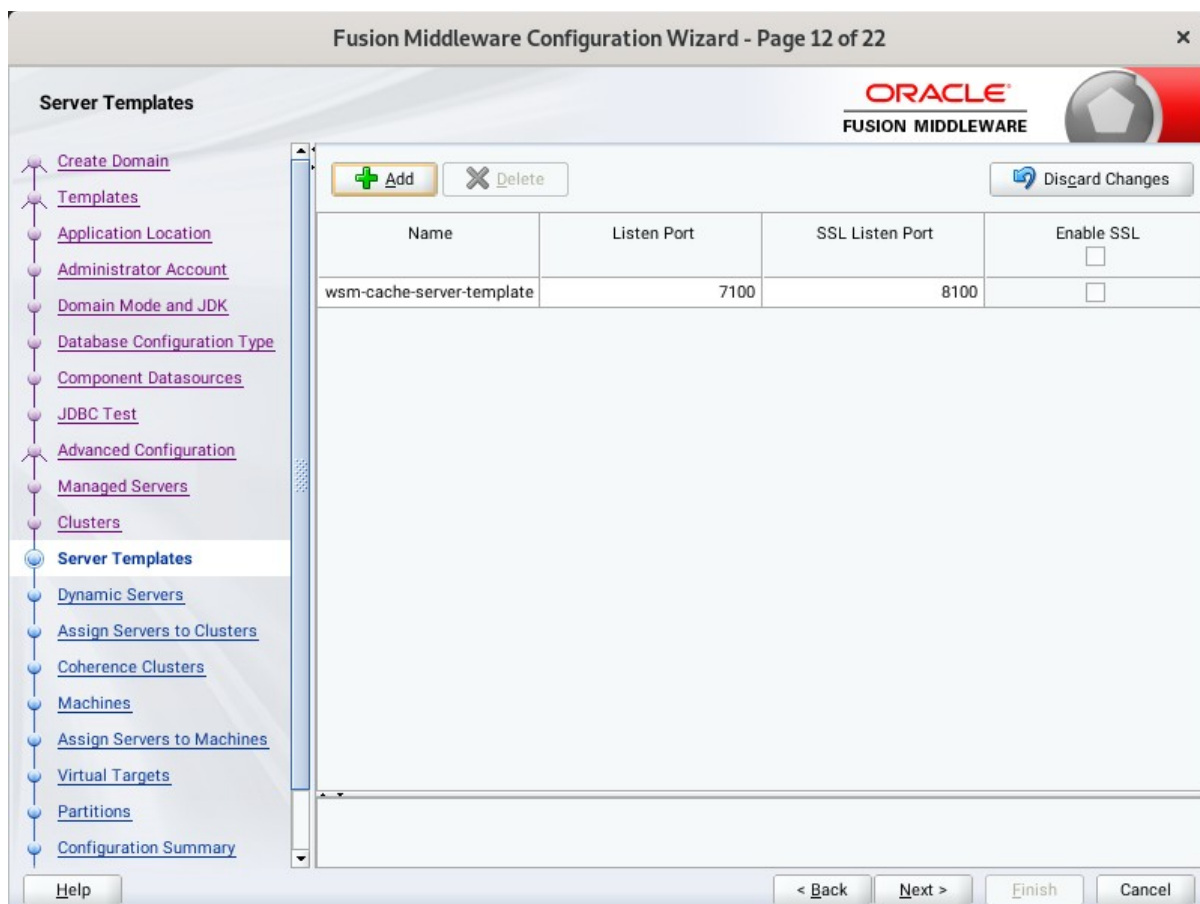
+ Add X Delete Discard Changes

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

Help < Back Next > Finish Cancel

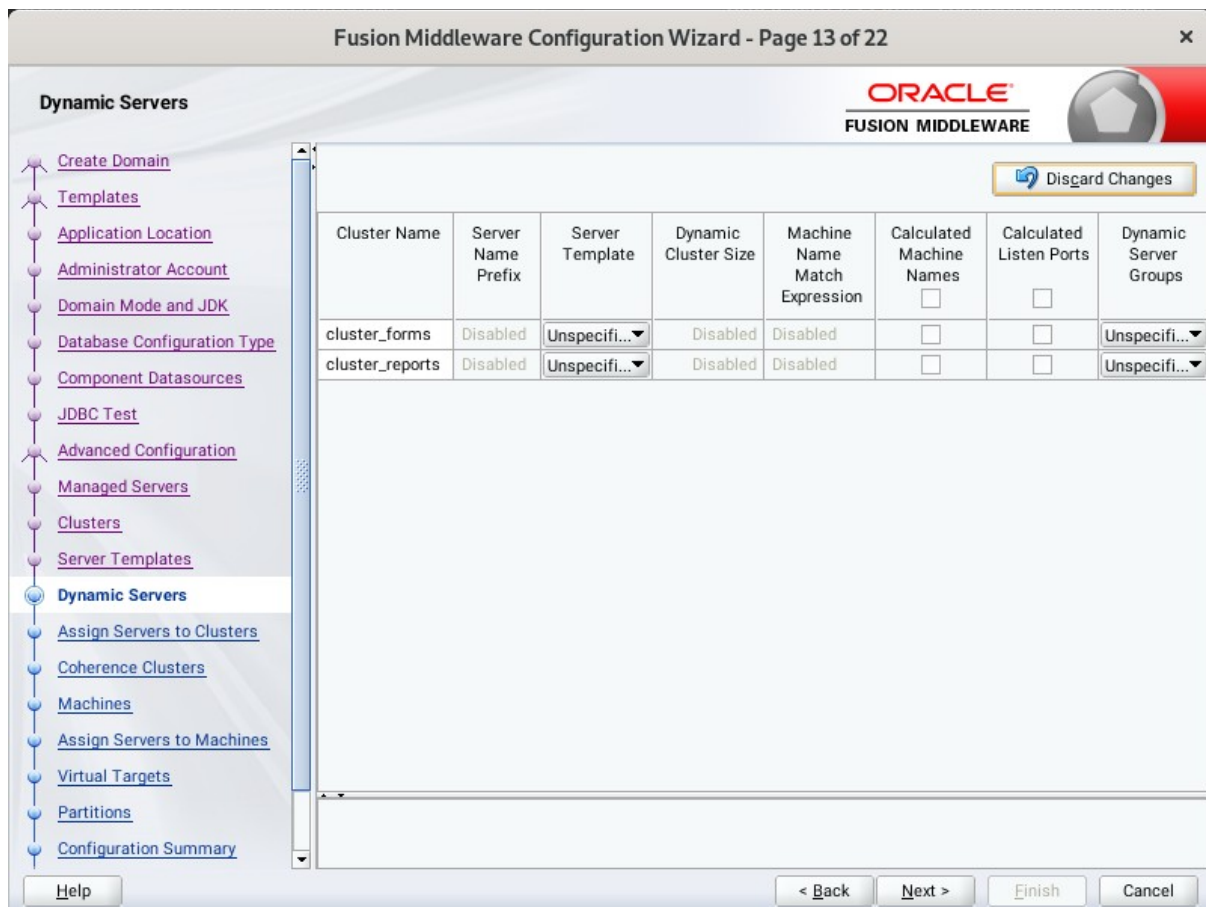
Default entries will be acceptable in most cases, unless adding new clusters is desirable. Click **Next** to continue.

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



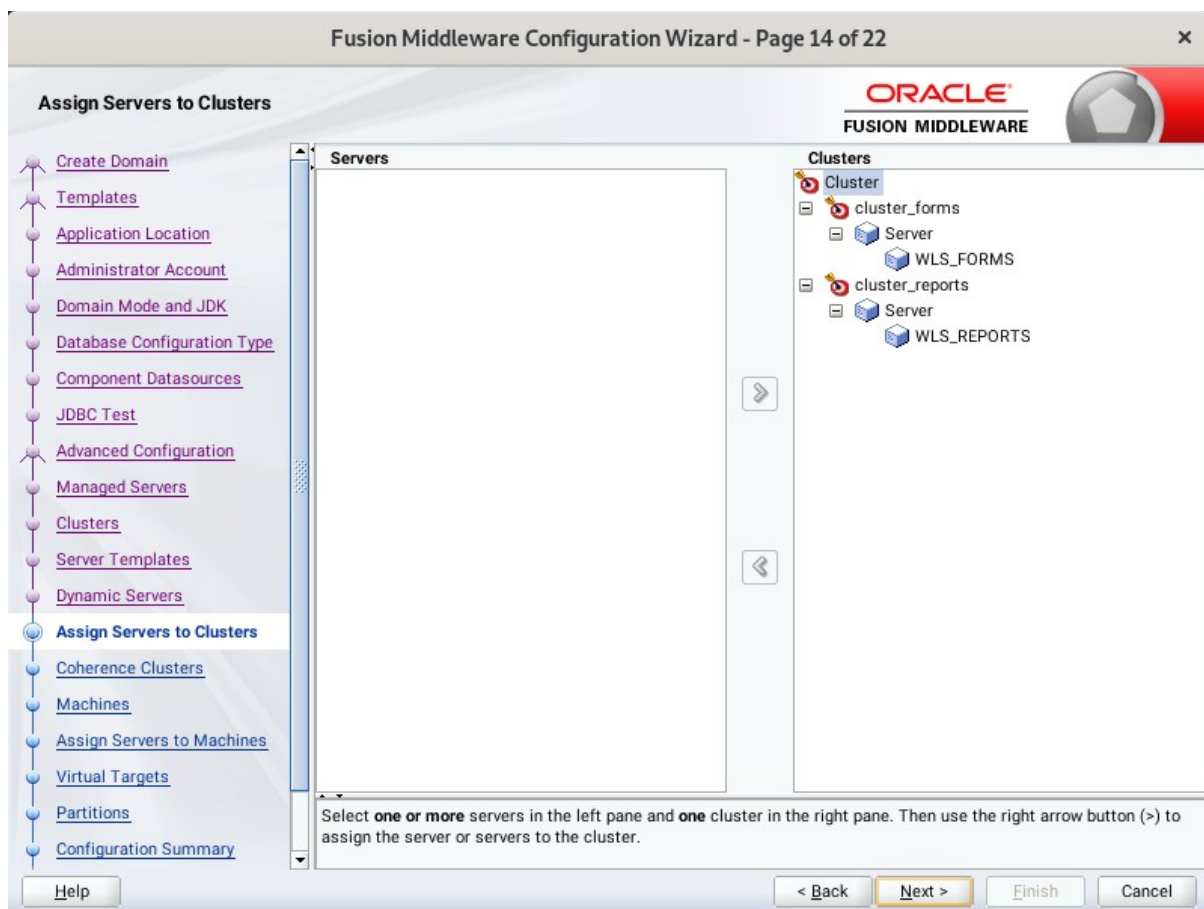
The default values will be appropriate for most cases. Click **Next** to continue.

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



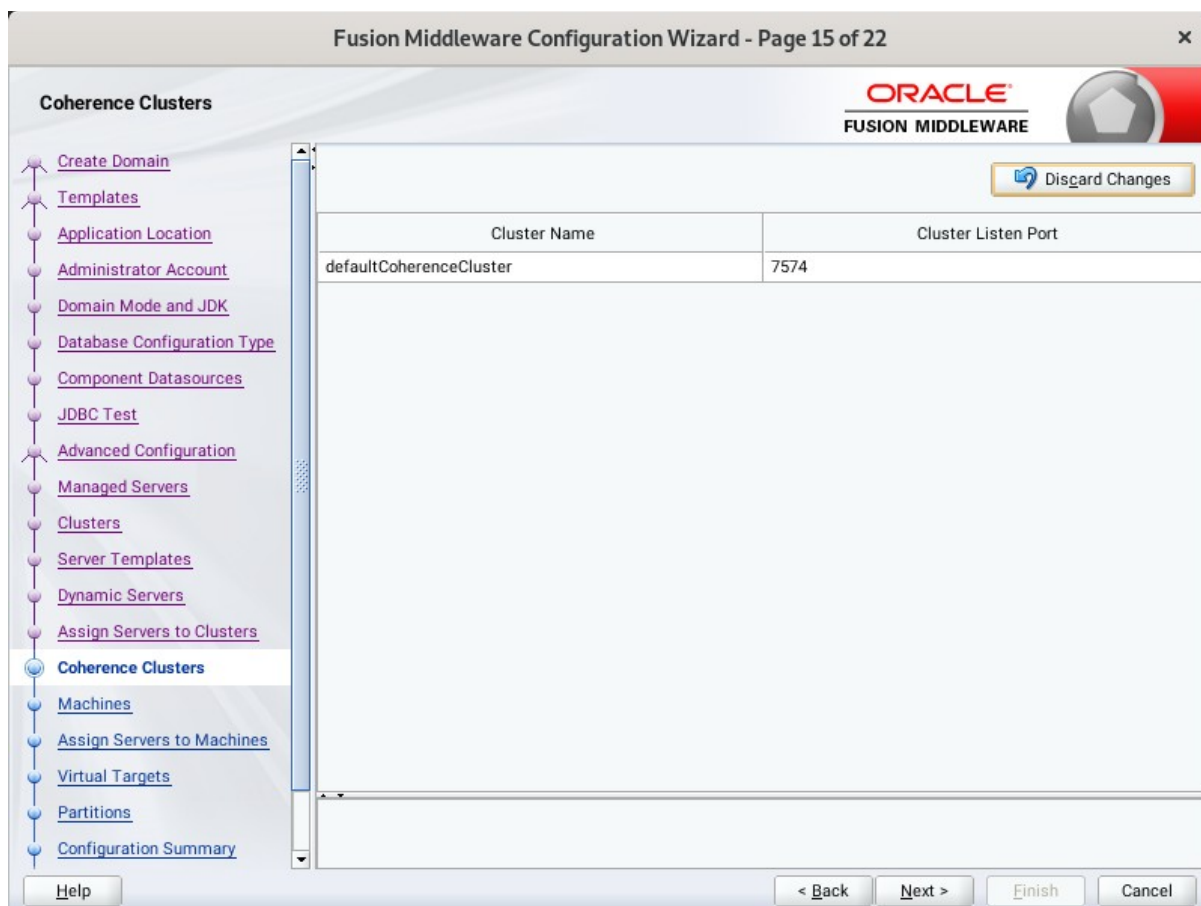
The default values will be appropriate for most cases. Click **Next** to continue.

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



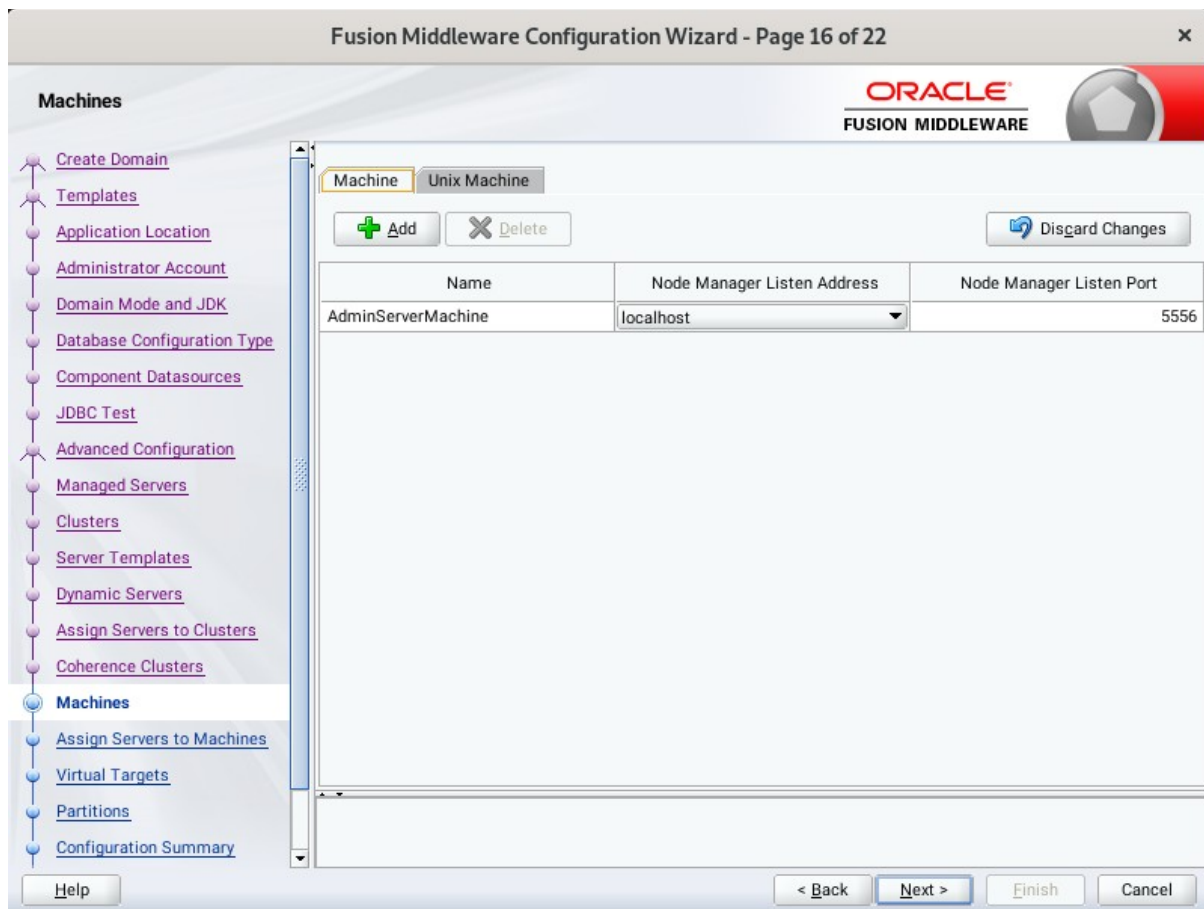
The default values will be appropriate for most cases. However, if new managed servers were added in the previous step, they should be added to the cluster here. Click **Next** to continue.

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



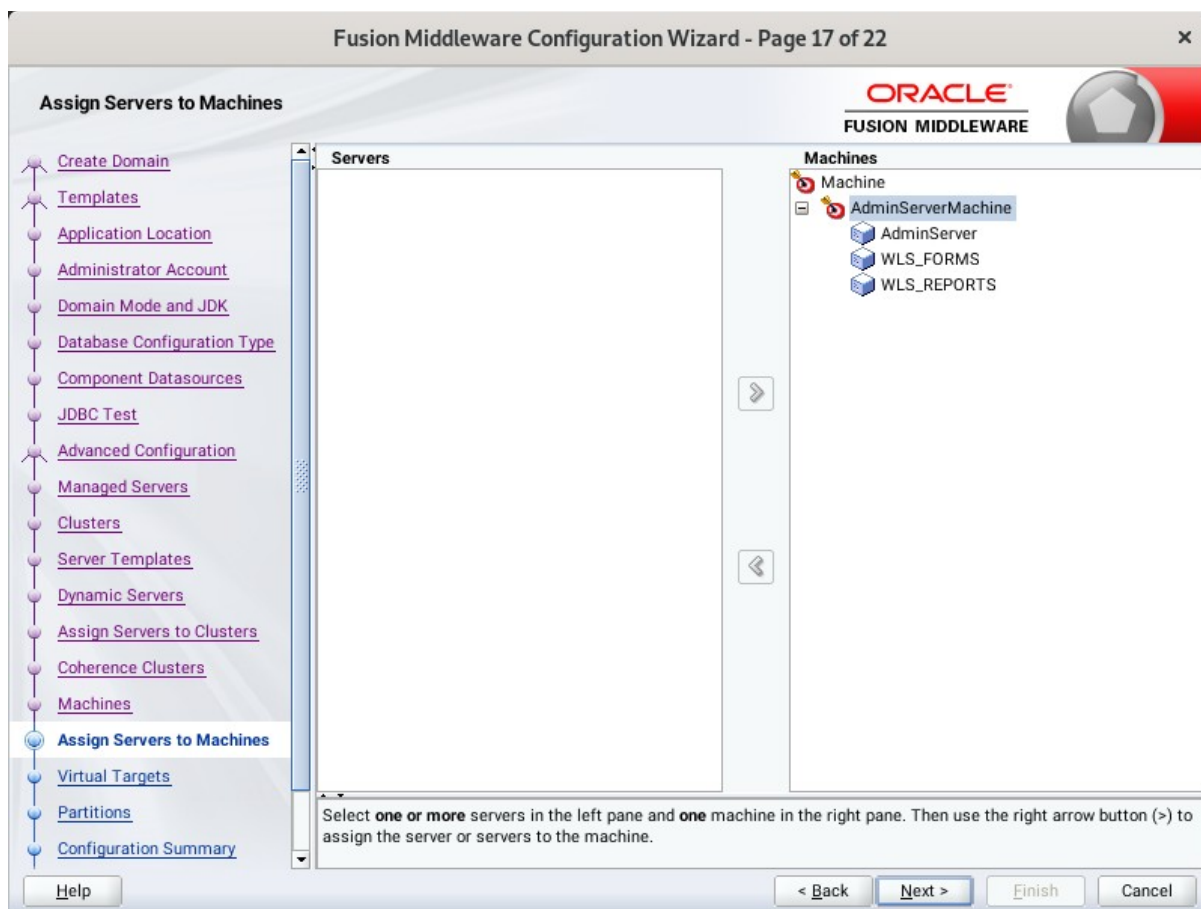
The default values will be appropriate for most cases. Click **Next** to continue.

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



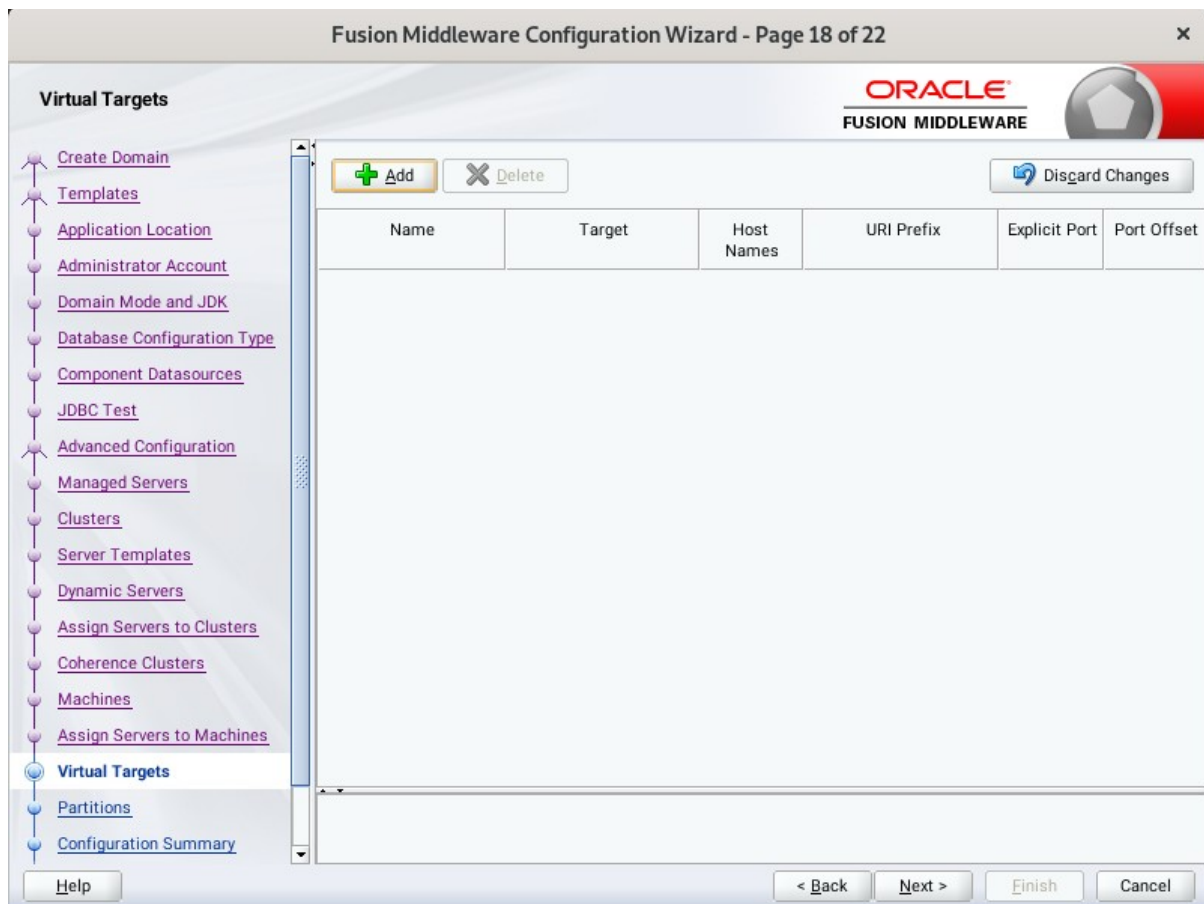
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

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



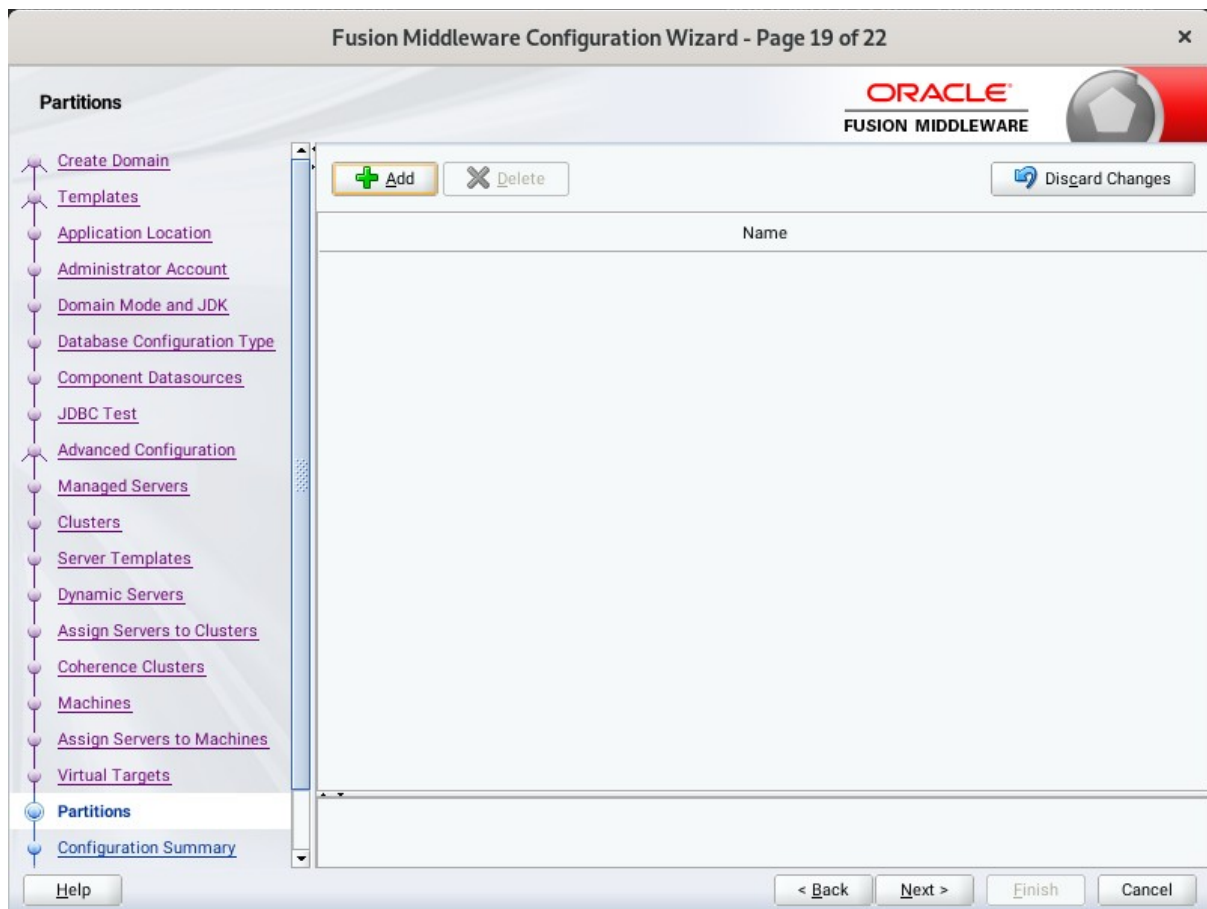
Move the AdminServer to the AdminServerMachine by clicking the '>' button. Click **Next** to continue.

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



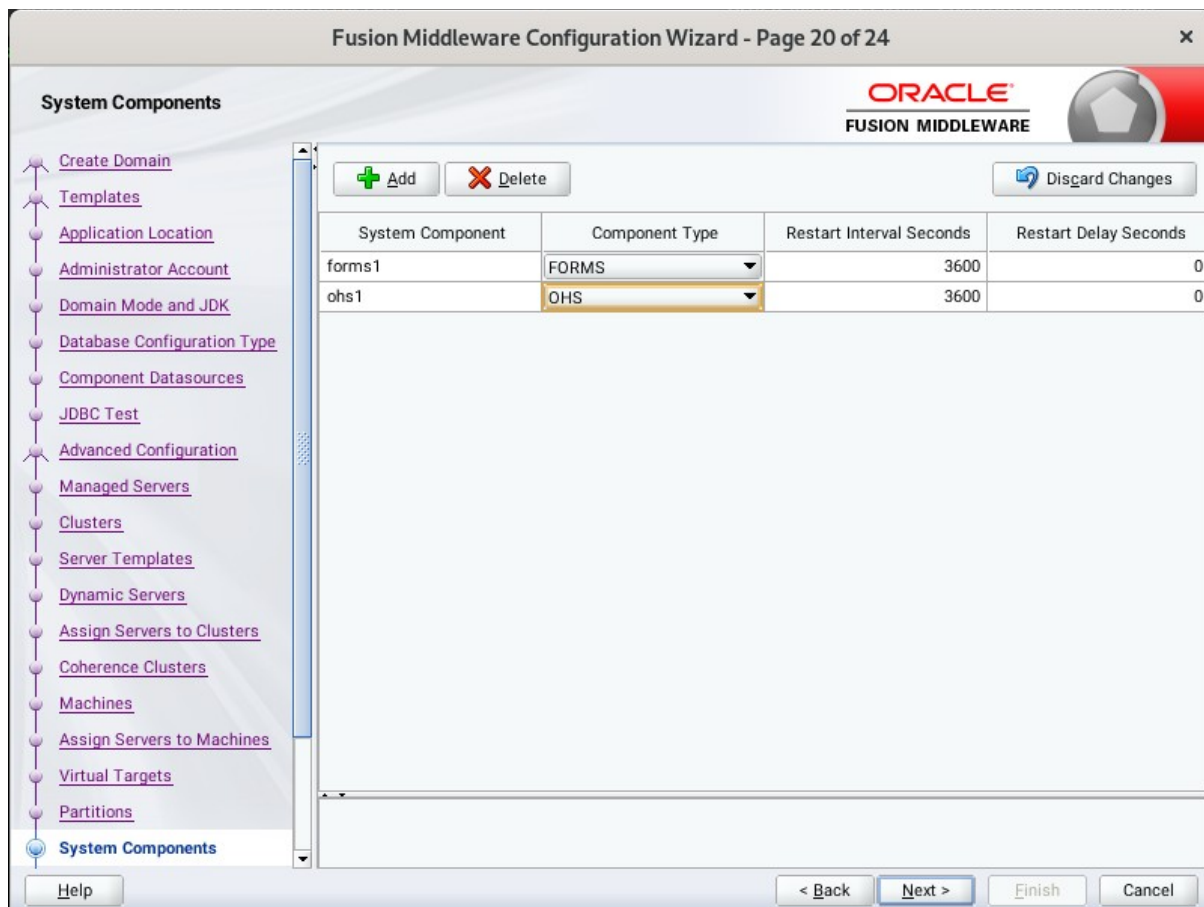
Used with WebLogic Server Partitions. Refer to the WebLogic Server documentation for details. Click **Next** to continue.

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



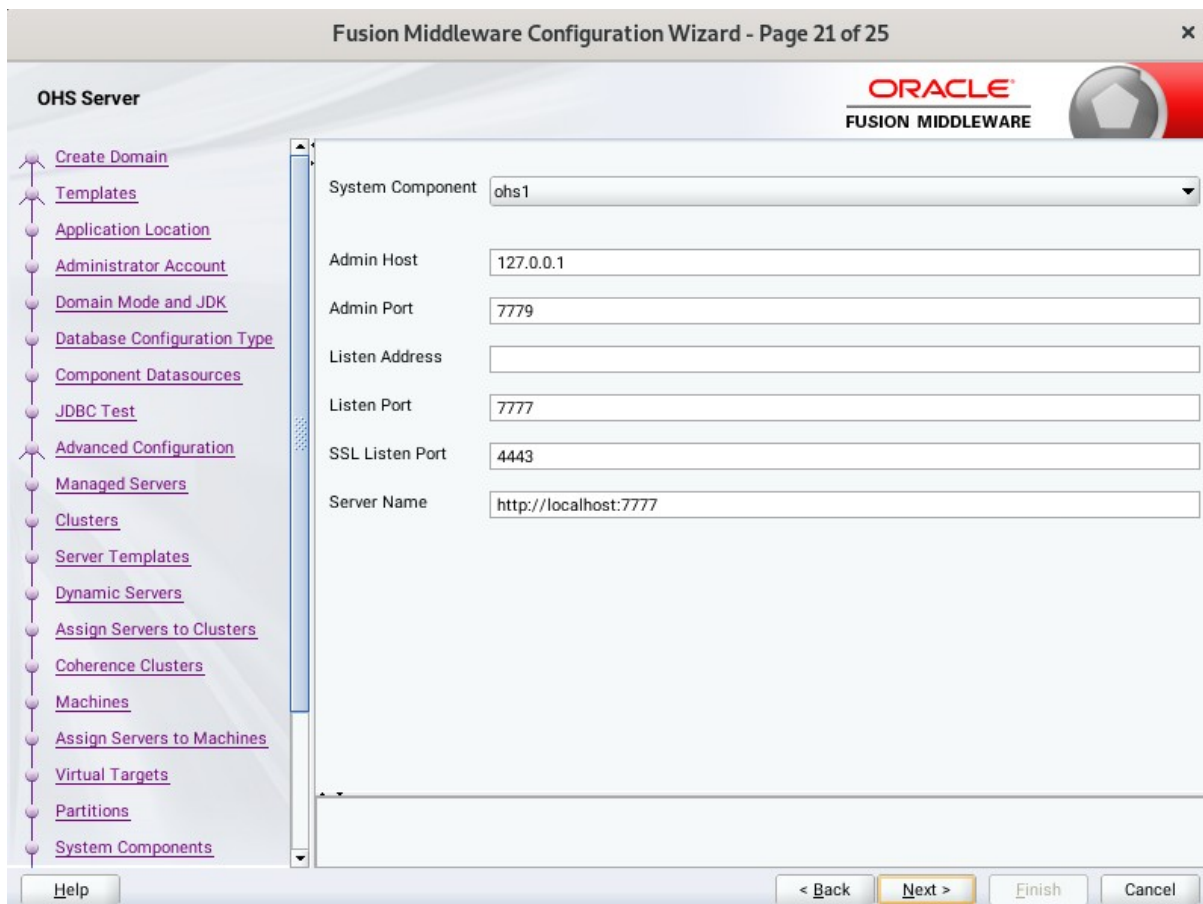
The Partitions screen appears. Use this screen to add Weblogic Partitions if desired. Refer to the WebLogic Server documentation for details on how to use Partitions. Click **Next** to continue.

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



The 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.

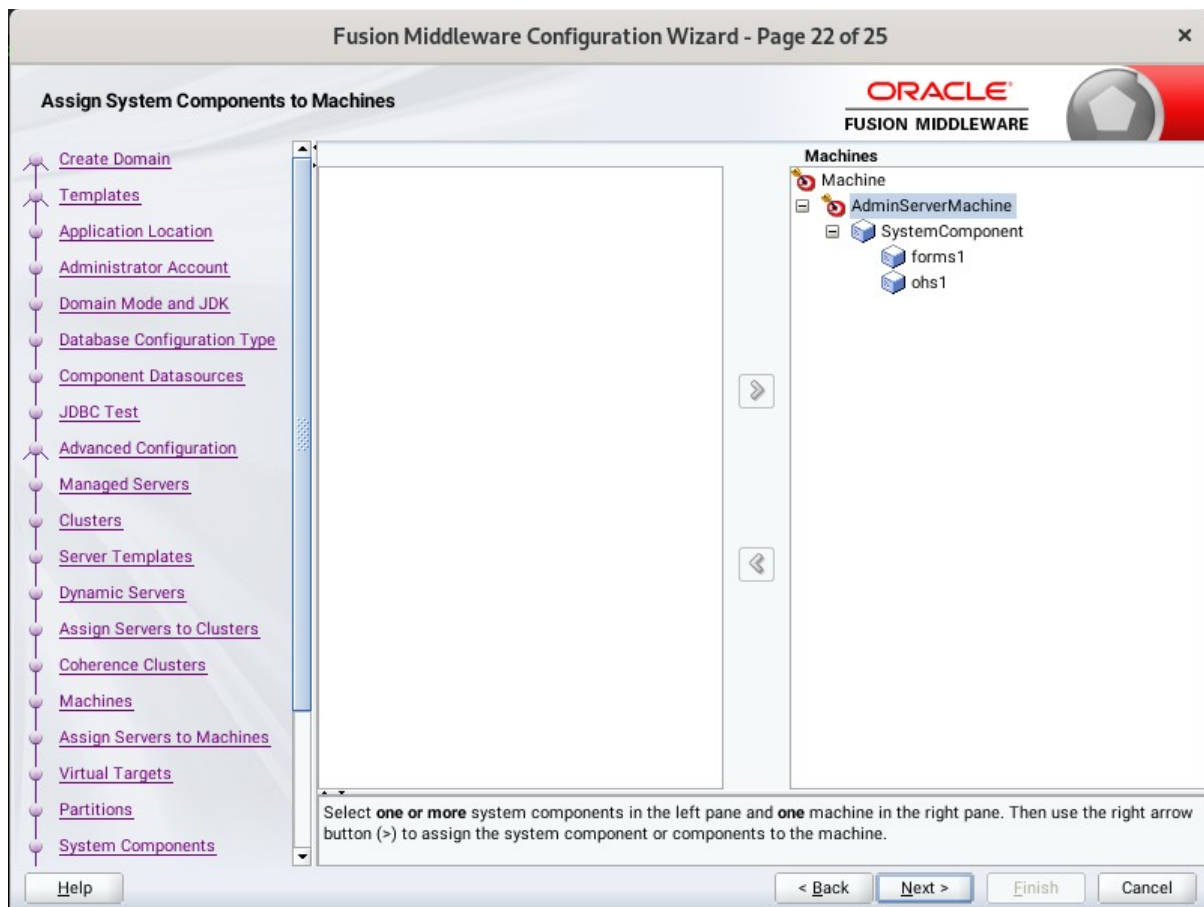


The screenshot displays the 'OHS Server' configuration screen within the 'Fusion Middleware Configuration Wizard - Page 21 of 25'. The interface includes a navigation pane on the left with various configuration steps, and a main configuration area on the right. The 'System Component' is set to 'ohs1'. The 'Admin Host' is '127.0.0.1', 'Admin Port' is '7779', 'Listen Address' is empty, 'Listen Port' is '7777', 'SSL Listen Port' is '4443', and 'Server Name' is 'http://localhost:7777'. The 'Next >' button is highlighted, indicating the next step in the wizard.

Field	Value
System Component	ohs1
Admin Host	127.0.0.1
Admin Port	7779
Listen Address	
Listen Port	7777
SSL Listen Port	4443
Server Name	http://localhost:7777

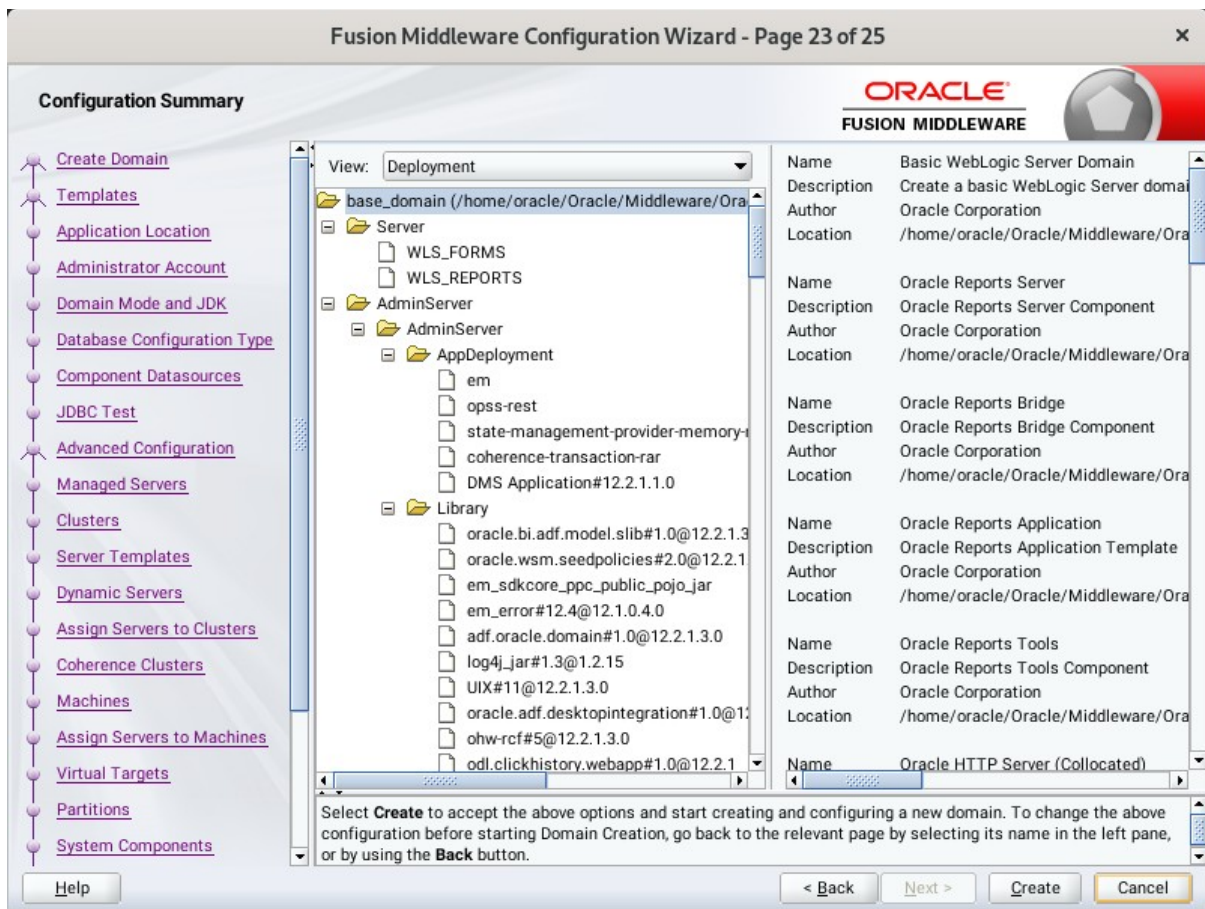
The default values will be appropriate for most cases. Click **Next** to continue.

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



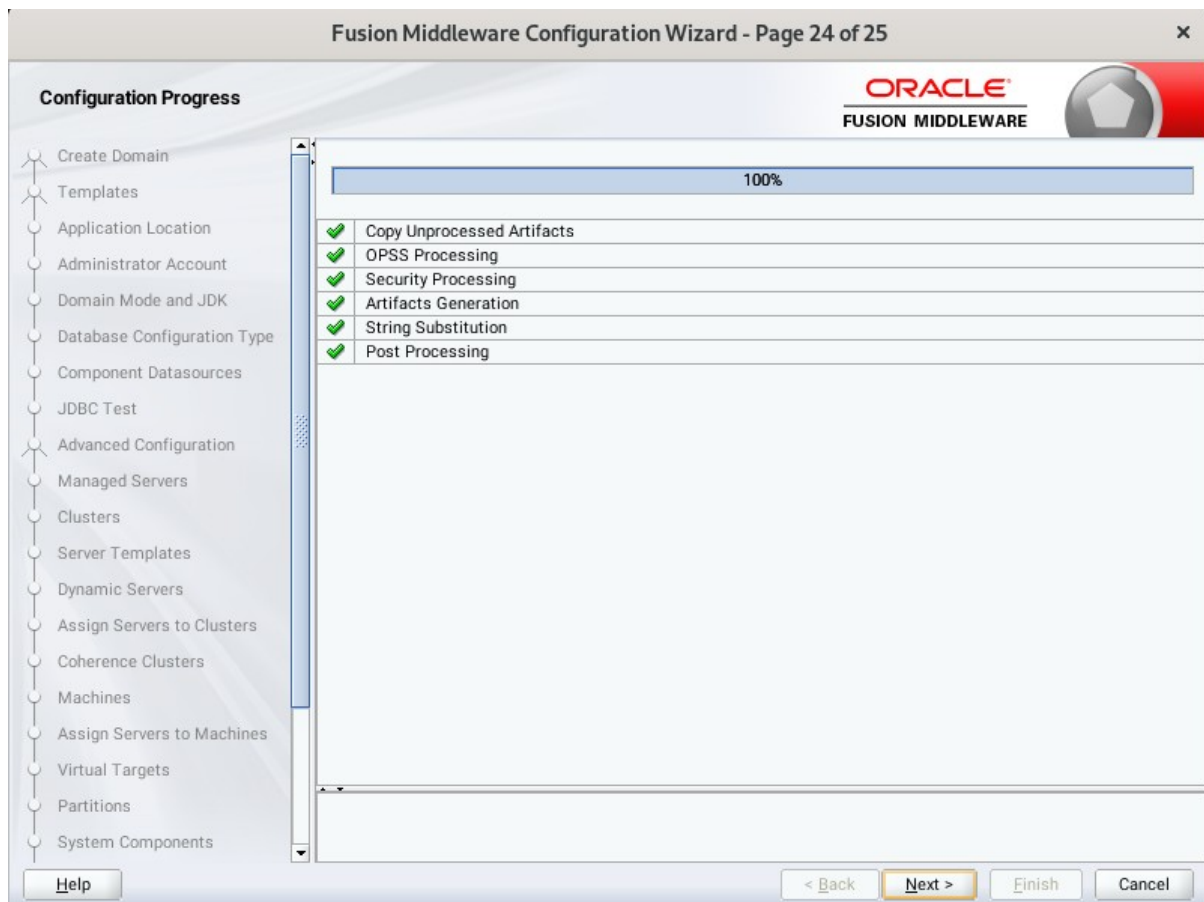
The default values will be appropriate for most cases. Click **Next** to continue.

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



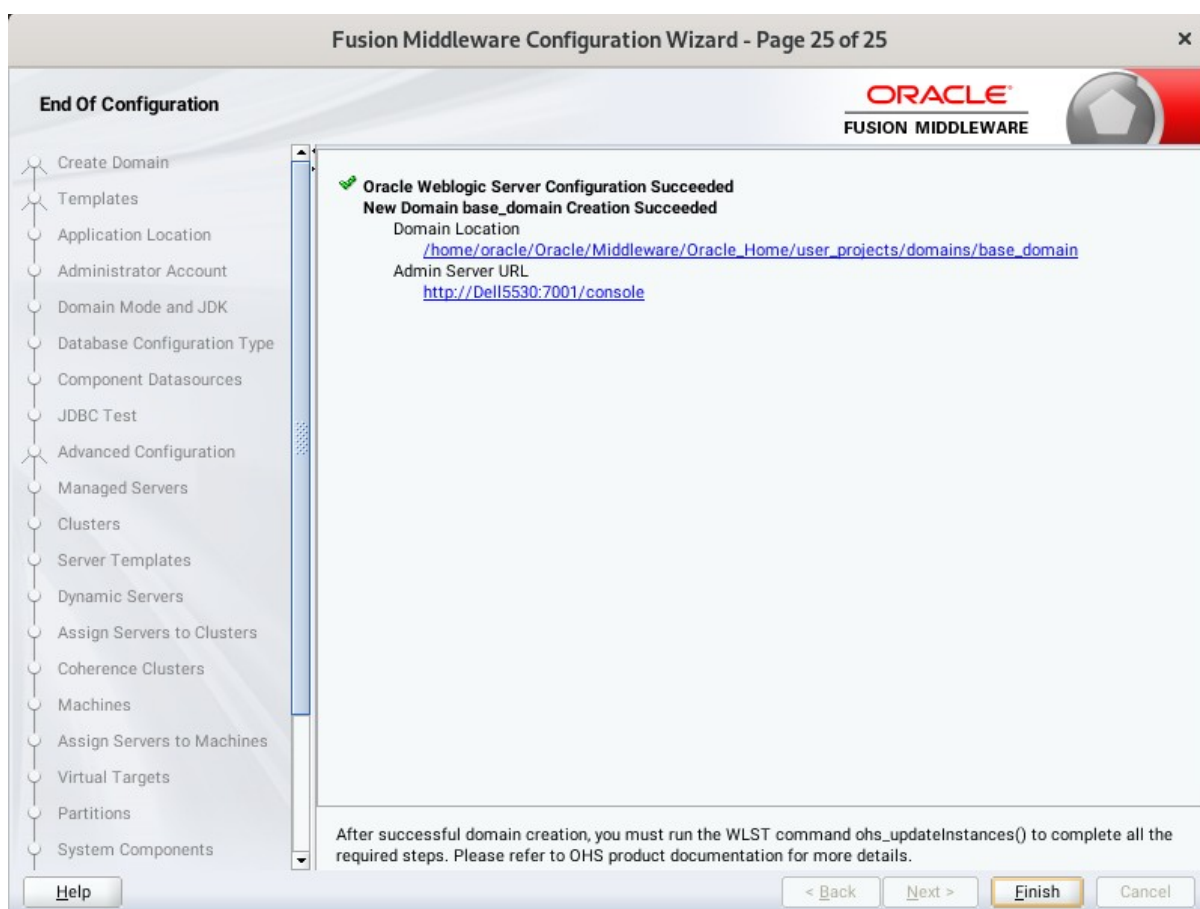
Select **Create** to accept the above options and start creating and configuring a new domain.

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.



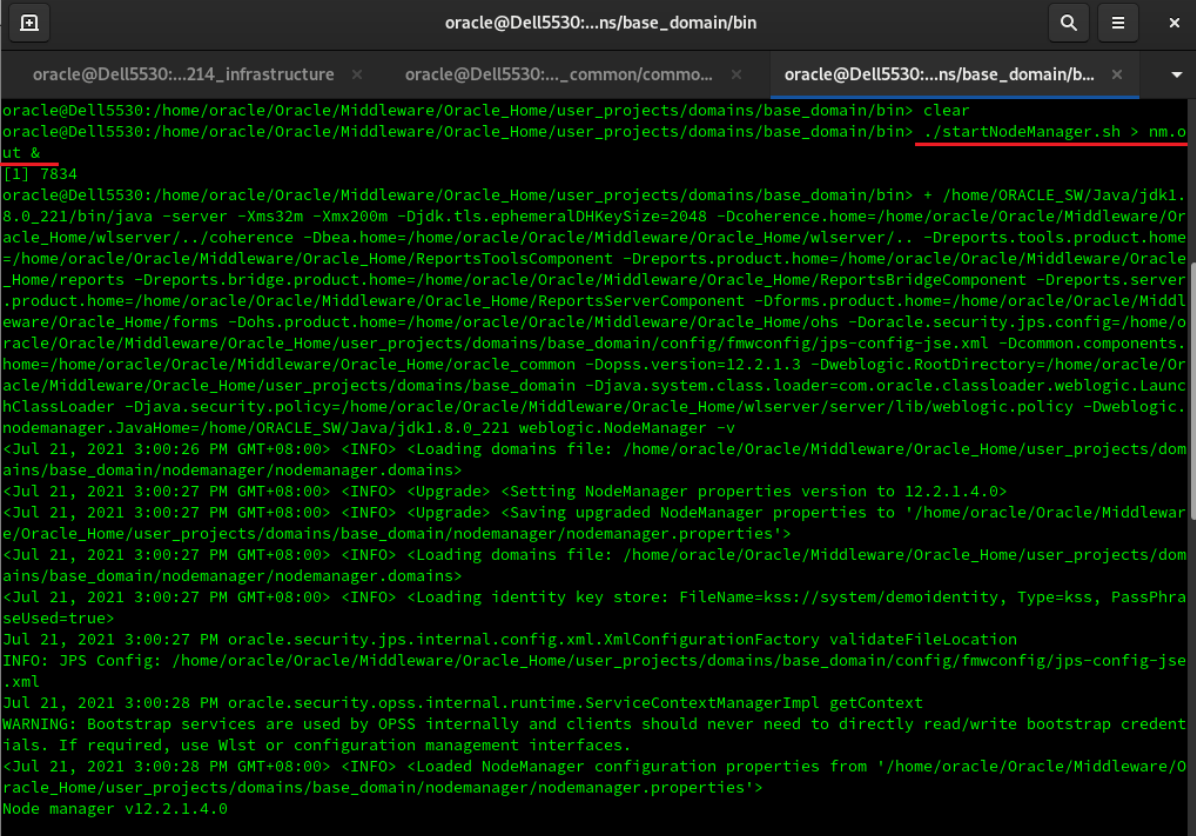
Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL**', then click **Finish** to dismiss the Configuration Wizard.

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:...ns/base_domain/bin
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> clear
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> ./startNodeManager.sh > nm.out &
[1] 7834
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/.. -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
<Jul 21, 2021 3:00:26 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 21, 2021 3:00:27 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jul 21, 2021 3:00:27 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 21, 2021 3:00:27 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 21, 2021 3:00:27 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jul 21, 2021 3:00:27 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 21, 2021 3:00:28 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 21, 2021 3:00:28 PM GMT+08:00> <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`

```

oracle@Dell5530:...ns/base_domain/bin
oracle@Dell5530:...214_i... x oracle@Dell5530:..._com... x oracle@Dell5530:...ns/ba... x oracle@Dell5530:...ns/ba... x
.c.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 21, 2021 3:05:50,490 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ig
noring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jul 21, 2021 3:05:51,605 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conn
ection with the Domain level Diagnostic Service.>
2021-07-21 15:05:51.699/221.628 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '4' for queue: 'weblogi
c.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"
2021-07-21 15:05:51.727/221.656 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '4' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 21, 2021 3:05:52,052 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 21, 2021 3:05:52,112 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 21, 2021 3:05:52,112 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving co
nnection list DomainRuntimeServiceMBean>
2021-07-21 15:05:55.174/225.103 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '61' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST
<Jul 21, 2021 3:05:56,667 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:1.>
<Jul 21, 2021 3:05:56,671 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base_domain" running in production mode.>
<Jul 21, 2021 3:05:56,671 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jul 21, 2021 3:05:56,672 PM GMT+08:00> <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 21, 2021 3:05:56,672 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Jul 21, 2021 3:05:56,673 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jul 21, 2021 3:05:56,673 PM GMT+08:00> <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 21, 2021 3:05:56,673 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Jul 21, 2021 3:05:56,676 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 21, 2021 3:05:56,754 PM GMT+08:00> <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.

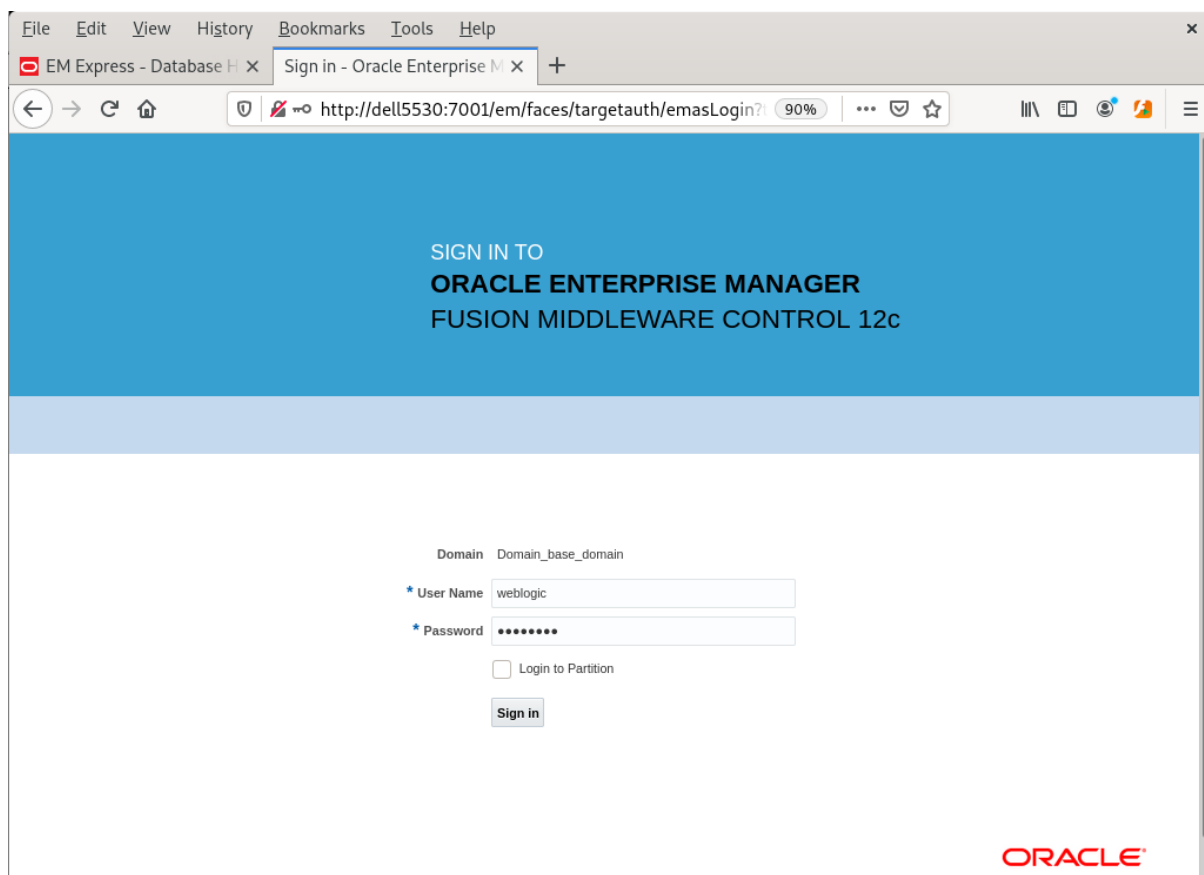
4-3. Verifying the Installed Products and Product Versions. Check the products and product version numbers by running the **opatch lsinventory -detail** command from the **ORACLE_HOME/OPatch** directory.

Confirmed that OPatch succeeded.

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

1). Access to Enterprise Manager Console.

Login Page:



The screenshot shows a web browser window displaying the Oracle Enterprise Manager login page. The browser's address bar shows the URL: `http://dell5530:7001/em/faces/targetauth/emasLogin?i=90%`. The page has a blue header with the text "SIGN IN TO ORACLE ENTERPRISE MANAGER FUSION MIDDLEWARE CONTROL 12c". Below the header, there is a login form with the following fields and options:

- Domain: Domain_base_domain
- * User Name: weblogic
- * Password: [masked with dots]
- Login to Partition
- Sign in button

The Oracle logo is visible in the bottom right corner of the page.

Home Page:

base_domain WebLogic Domain

Jul 21, 2021 3:13:05 PM GMT+08:00

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 WebLogic Server

Jul 21, 2021 3:16:35 PM GMT+08:00

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: Jul 21, 2021 3:15:59 PM
Version: 12.2.1.4.0
State: Shutdown
Health: OK ✓
Server Type: Configured
Cluster: cluster_forms
CPU Usage (%): 0.24
Heap Usage (MB): 326.99
Java Vendor: Oracle Corporation
Java Version: 1.8.0_221

Response and Load

Graph showing Request Processing Time (ms) and Requests (per minute) from 03:02 PM to 03:14 PM on July 21, 2021.

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

http://dell5530:7001/em/faces/as-weblogic-webLogicServerHome?type...gic_j2eeserver&target=/Domain_base_domain/base_domain/WLS_FORMS#

Starting WLS_REPORTS

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

WLS_REPORTS

WebLogic Server | Start Up | Shut Down

Jul 21, 2021 3:19:42 PM GMT+08:00

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 Jul 21, 2021 3:19:05 PM
Version 12.2.1.4.0
State Starting
Health OK ✓
Server Type Configured
Cluster cluster_reports
CPU Usage (%) 0.43
Heap Usage (MB) 344.69
Java Vendor Oracle Corporation
Java Version 1.8.0_221

Response and Load
Graph showing Request Processing Time (ms) and Requests (per minute) from 03:05 PM to 03:17 PM on July 21, 2021.

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

http://dell5530:7001/em/faces/as-weblogic-webLogicServerHome?type...c_j2eeserver&target=/Domain_base_domain/base_domain/WLS_REPORTS#

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

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

base_domain

WebLogic Domain

Jul 21, 2021 3:20:14 PM GMT+08:00

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
3 Up

Clusters
2 Up

Deployments
3 Up

Domain Partitions

Administration Server
Name AdminServer
Host Dell5530
Listen Port 7001

Servers
View | Create | Delete | Control

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 interface for the Oracle HTTP Server 12c component 'ohs1'. The page is divided into several sections:

- Monitoring:** Shows 0.00% CPU Usage and 7.14% Memory Usage.
- Virtual Hosts:** Shows 2 Virtual Hosts.
- Modules:** Shows 52 Modules.
- General:**
 - Component Name: ohs1
 - 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
- Response and Load:** A line graph showing request processing time and request throughput over time.
- 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
 - Response Data Throughput: 0.00
- CPU and Memory Usage:** A line graph showing CPU usage and memory usage over time.

Verified ohs1 URLs can be accessed.

The screenshot shows a web browser displaying the Oracle HTTP Server 12c page. Below the browser, a diagram illustrates the architecture and components of the Oracle HTTP Server 12c:

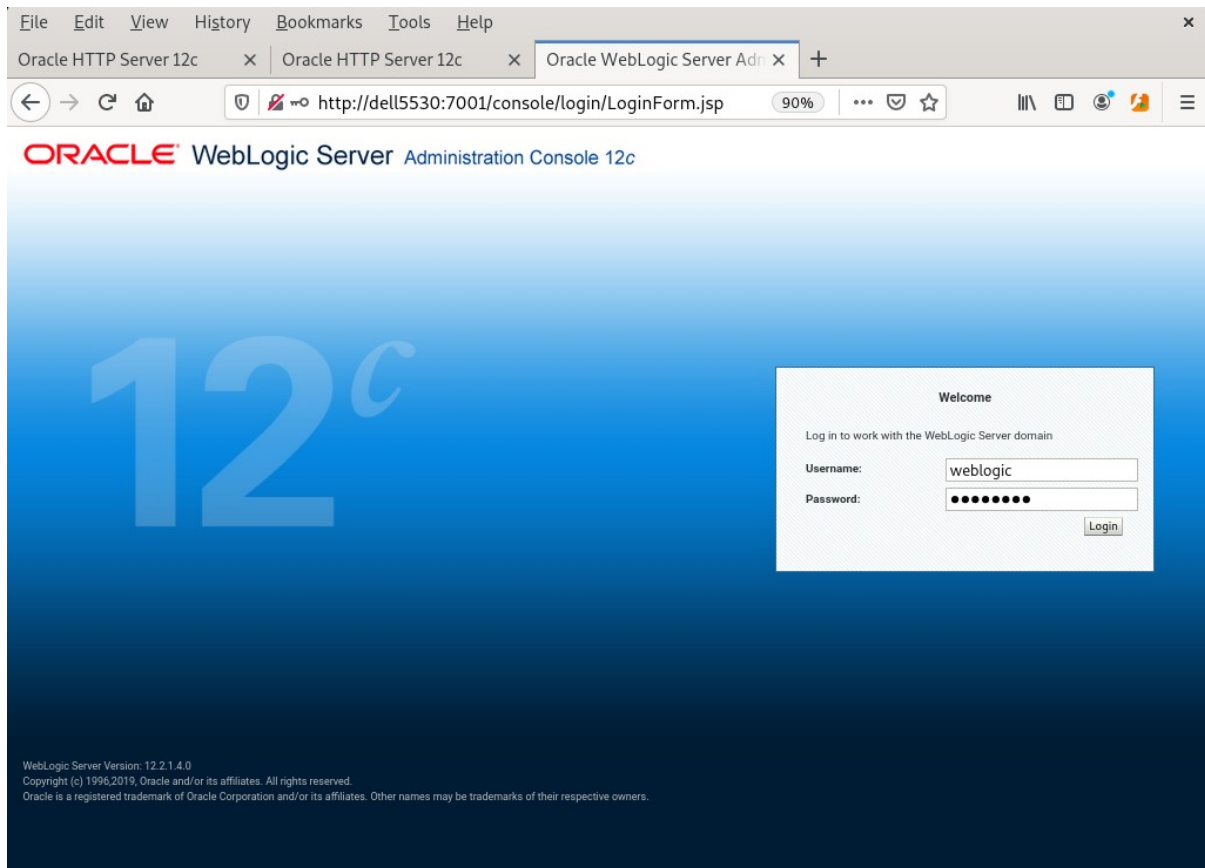
- Process Management and HA:** Represented by interlocking gears.
- Certificate management:** Represented by a gear.
- Automation:** Represented by a gear.
- Test to Production:** Represented by a gear.
- FMW Lifecycle Tools:** A red box at the bottom left.
- Enterprise Manager:** A red box at the bottom right, labeled "Manage, monitor, diagnose".
- Core Components:**
 - OHS:** The central component.
 - Local Content:** A box containing JS and HTML icons.
 - Audit Control:** A box with a padlock icon.
 - Identity Management:** A box with a padlock icon.
 - Authentication Authorization:** A box with a padlock icon.
 - Load Balancing:** A box with a double-headed arrow icon.
 - Fusion Middleware Applications:** A box with server rack icons.

The screenshot shows a web browser window with the address bar containing `https://dell5530:4443/`. The page header features the Oracle logo and the text "Oracle HTTP Server 12c". Below the header, a paragraph 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." The main content is a 3D diagram illustrating the architecture. On the left, four gear icons represent "Process Management and HA", "Certificate management", "Automation", and "Test to Production". These lead to a central platform containing "Local Content" (with JS and HTML icons), "OHS" (Oracle HTTP Server), "Auditing", "Authentication Authorization", "Load Balancing", and "Fusion Middleware Applications". Above this platform are "Audit Control" and "Identity Management". Below the platform, "FMW Lifecycle Tools" and "Enterprise Manager" (with the text "Manage, monitor, diagnose") are shown.

The screenshot shows a web browser window with the address bar containing `https://127.0.0.1:7779/`. The page header features the Oracle logo and the text "Oracle HTTP Server 12c". Below the header, a paragraph 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." The main content is a 3D diagram illustrating the architecture, identical to the one in the first screenshot. It shows the flow from management tools (Process Management and HA, Certificate management, Automation, Test to Production) through OHS and various services (Local Content, Auditing, Authentication Authorization, Load Balancing, Fusion Middleware Applications) to Enterprise Manager for management and diagnosis.

2). Access to Administration Server Console

Login Page as shown below:



Home Page:

Viewing the summary of servers:

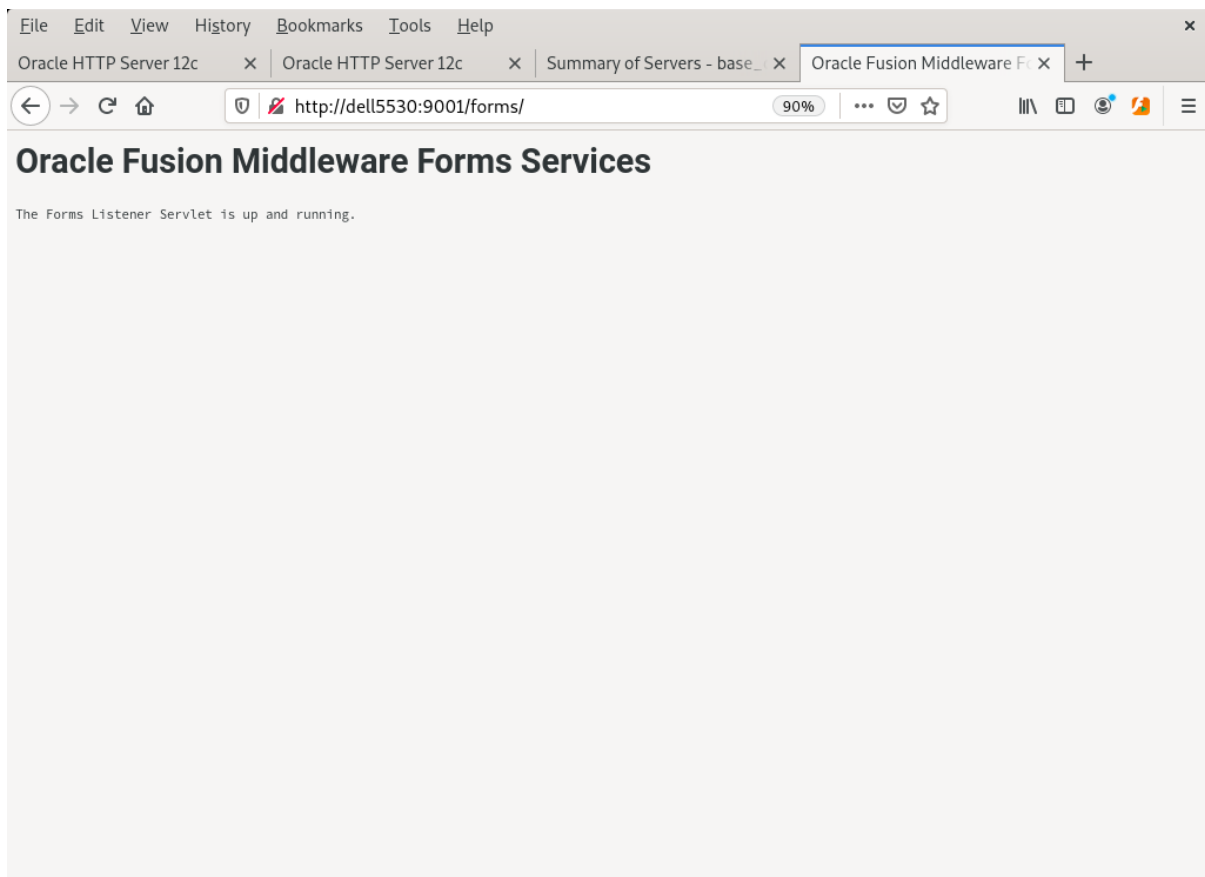
Summary of Servers

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.

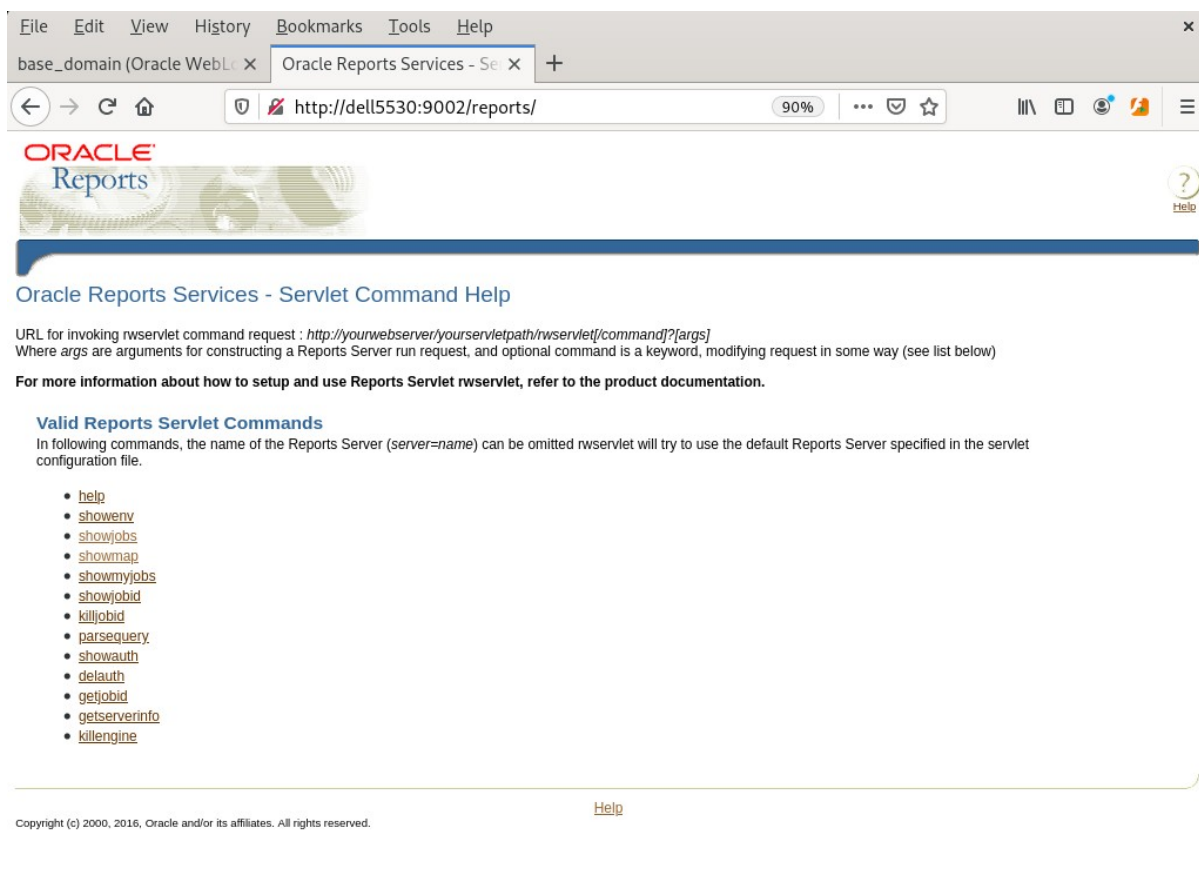
Servers (Filtered - More Columns Exist)

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 page content includes the Oracle Reports logo, a blue header bar, and the following text:

Oracle Reports Services - Servlet Command Help

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](#)

Copyright (c) 2000, 2016, Oracle and/or its affiliates. All rights reserved. [Help](#)

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:

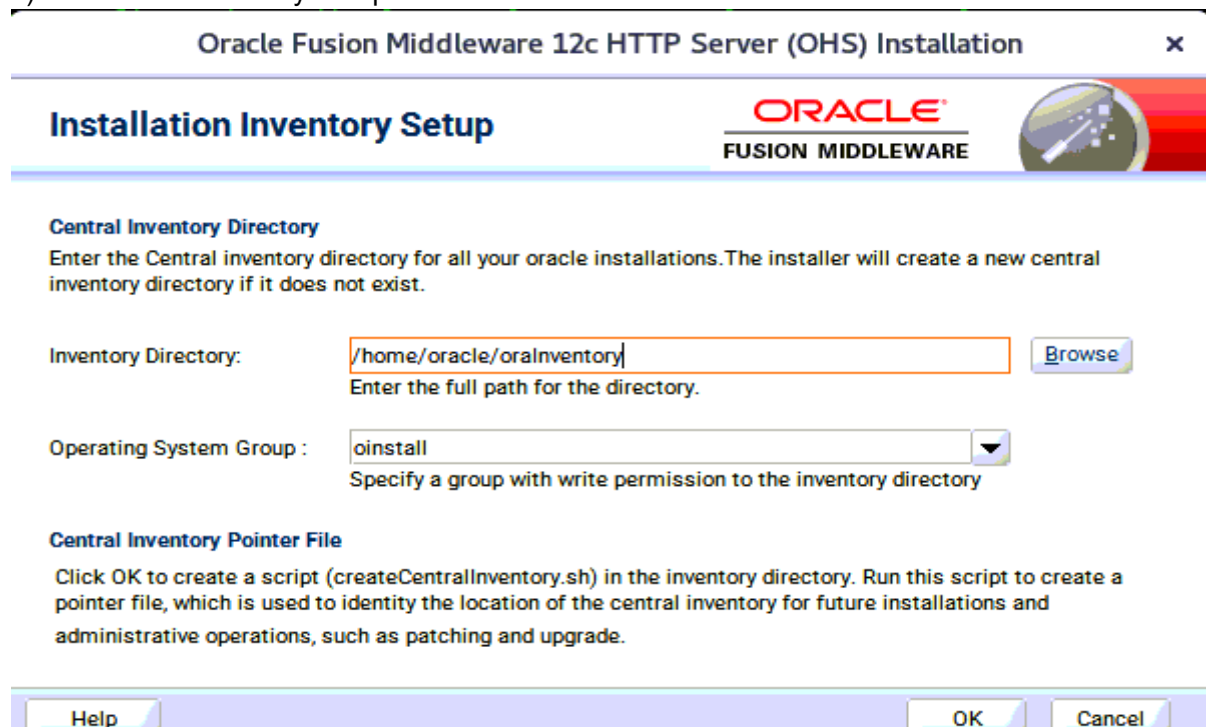
- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0_221 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

1-2. Login to the target system (SLES 15 SP3 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'

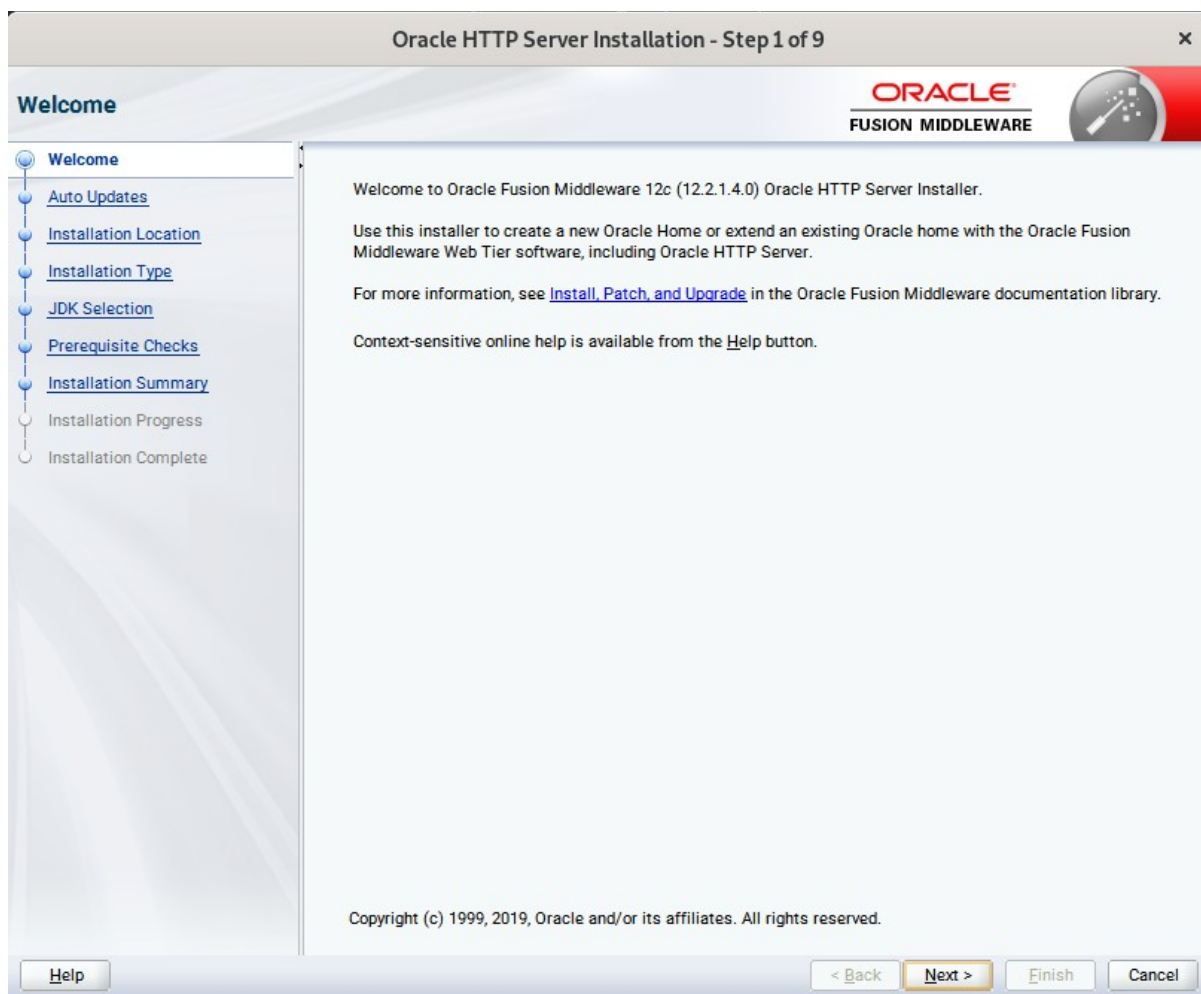
For the actual installation, follow the steps below:

1). Installation Inventory Setup.



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.



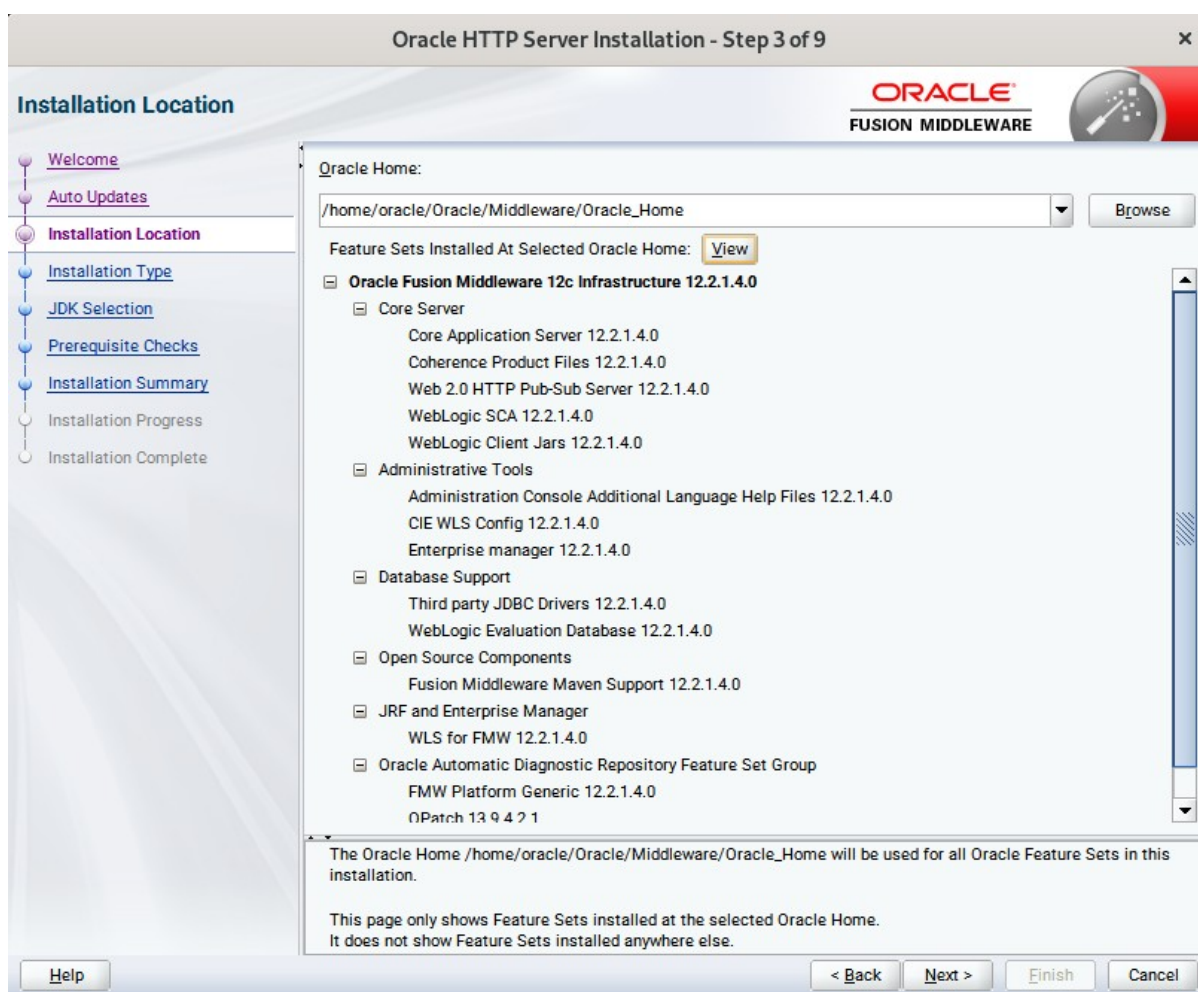
This page welcomes you to the installation. Click **Next** to continue.

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

The screenshot shows the 'Auto Updates' page in the Oracle HTTP Server installation wizard. The window title is 'Oracle HTTP Server Installation - Step 2 of 9'. The Oracle Fusion Middleware logo is in the top right. A navigation pane on the left lists steps: Welcome, Auto Updates (selected), Installation Location, Installation Type, JDK Selection, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main 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. A 'Search' button is below the search options, followed by a large empty text area. At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

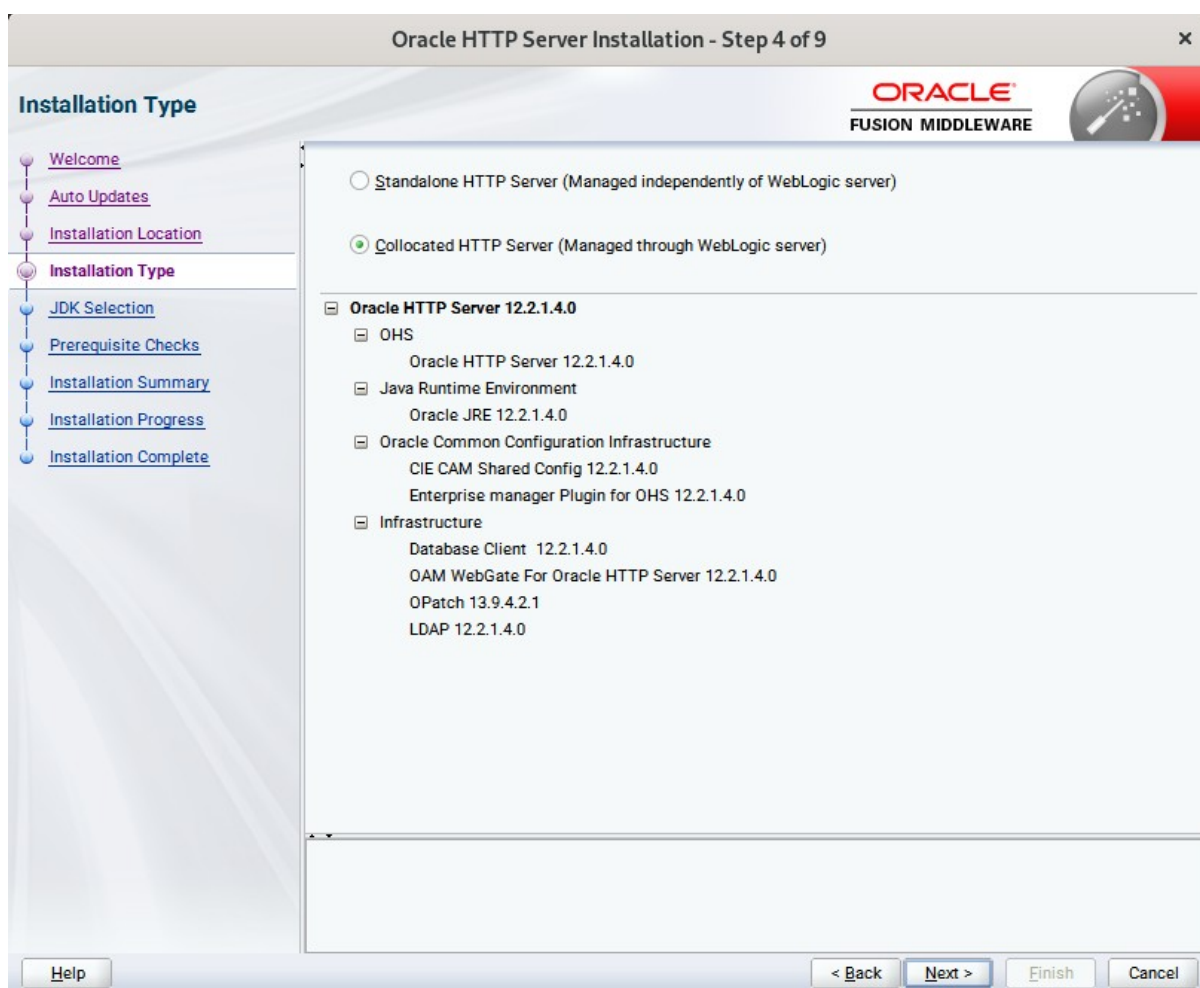
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



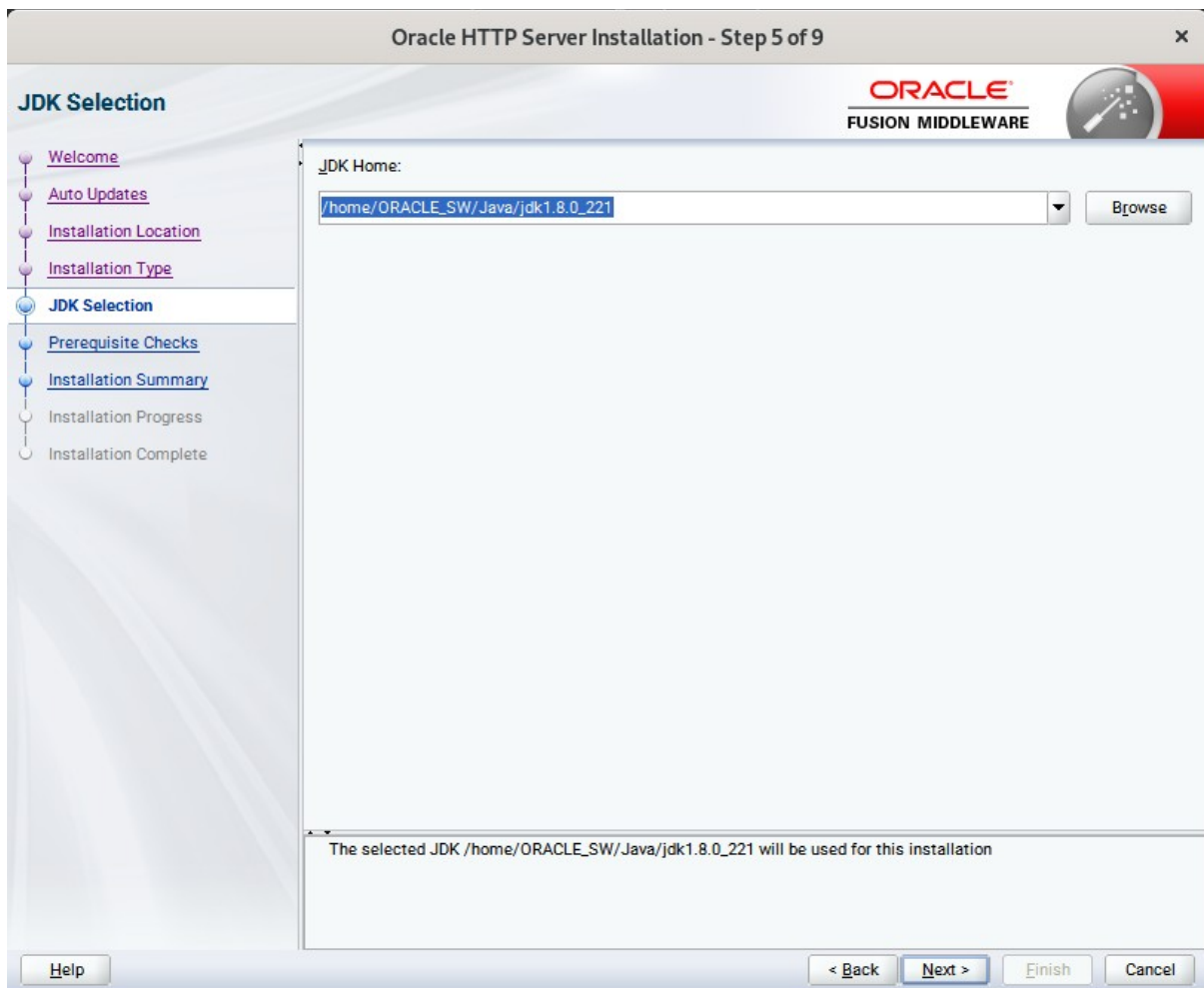
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



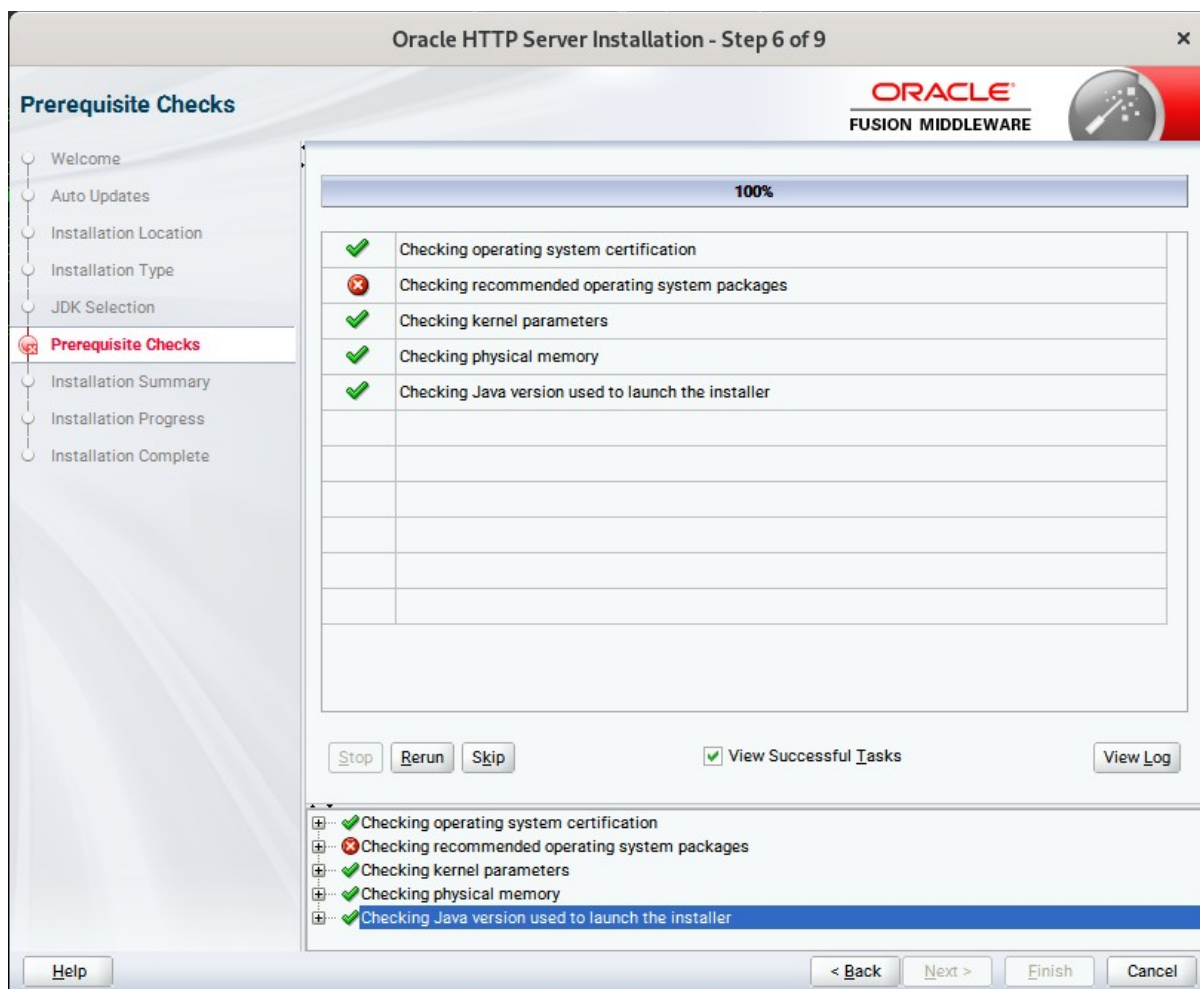
Selected **Collocated HTTP Server (Managed through WebLogic server)** to configure Oracle HTTP Server in a WebLogic Server Domain. (Alternative, select **Standalone HTTP Server (Managed independently of WebLogic server)** in the Installation Type screen to configure Oracle HTTP Server in a Standalone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

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



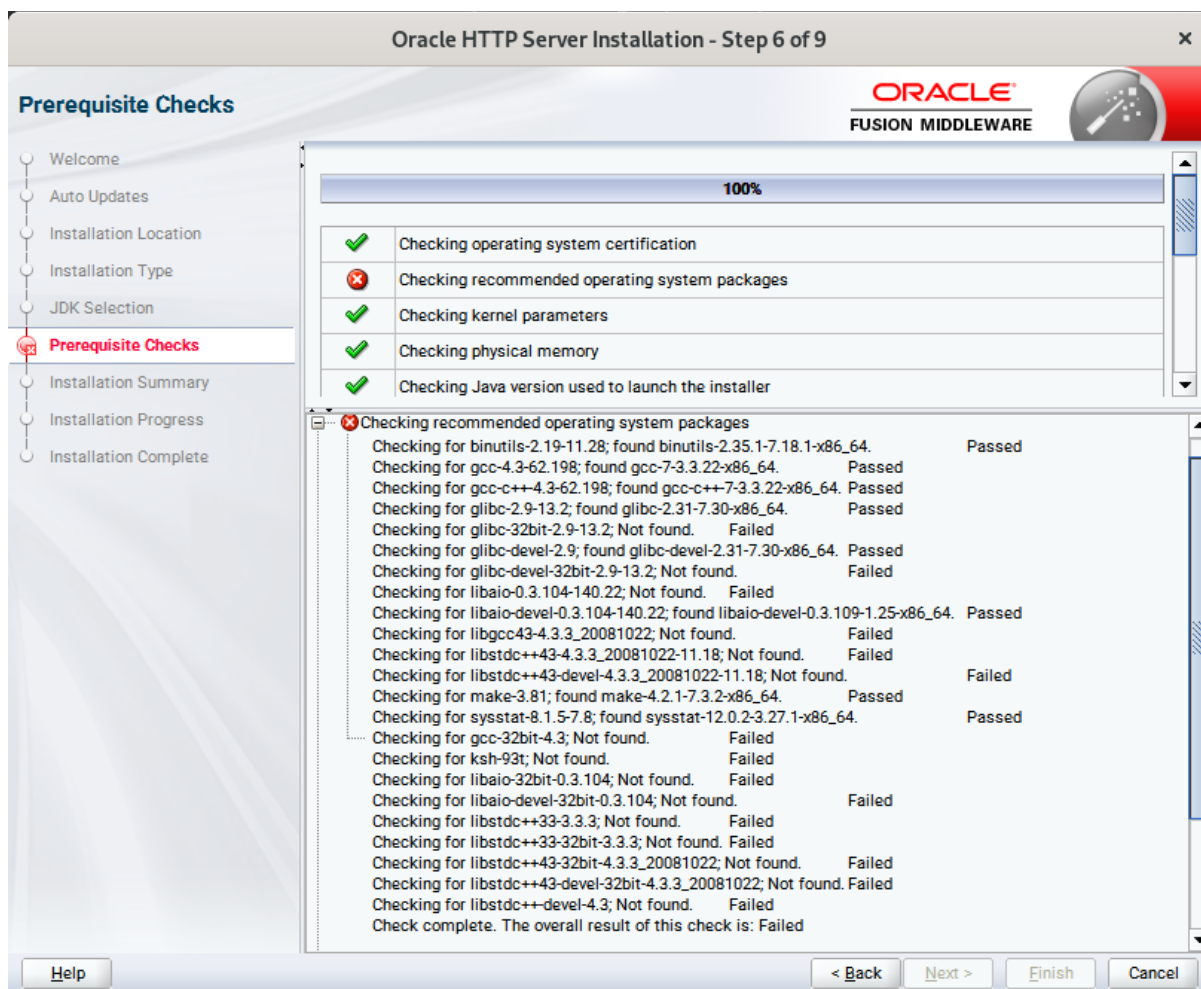
The selected JDK will be used for this installation. Click **Next** to continue.

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)

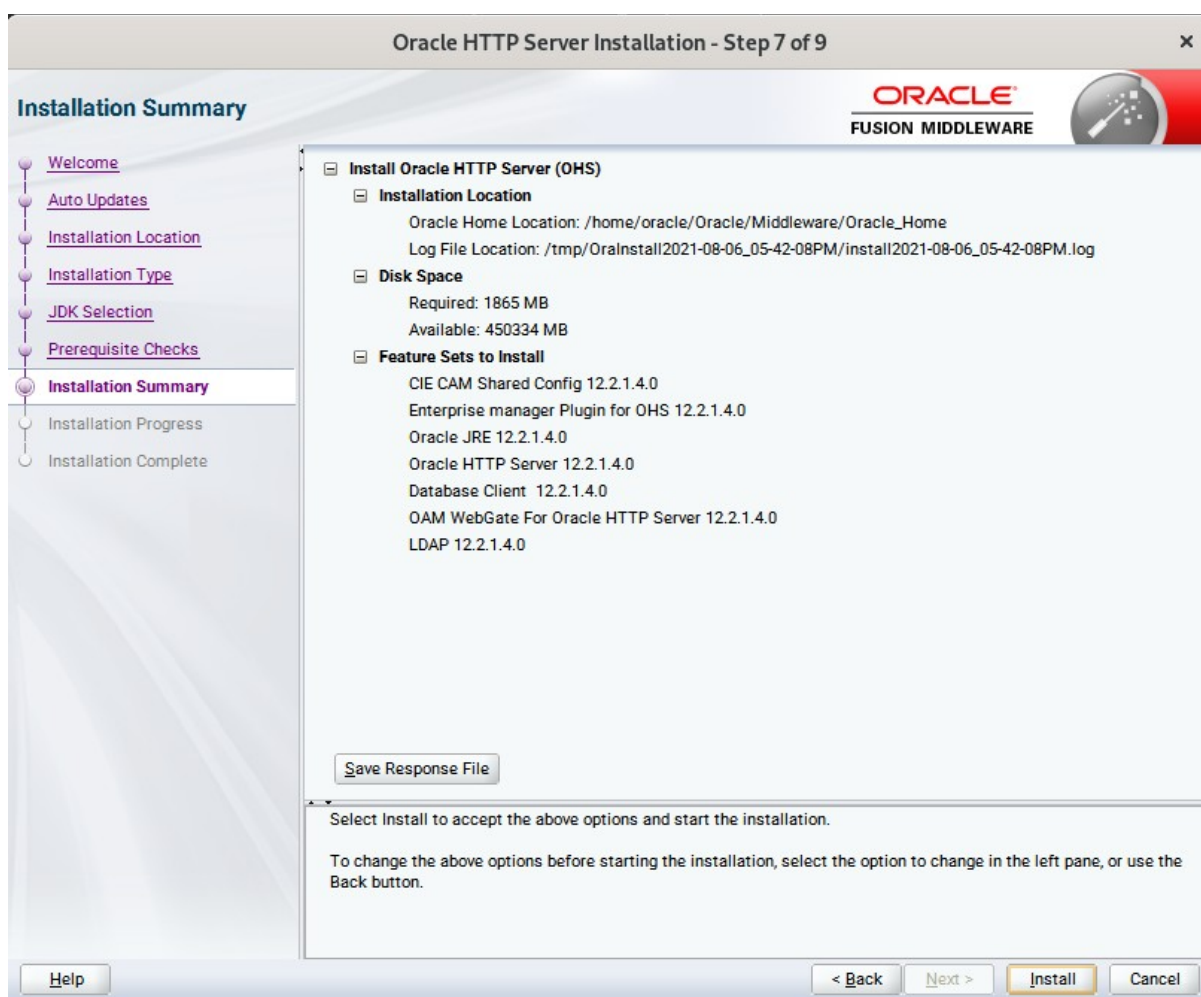
So, please ensure following updated packages are installed, then click 'Skip' in the 'Prerequisite Checks' page and continue installation.

```
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

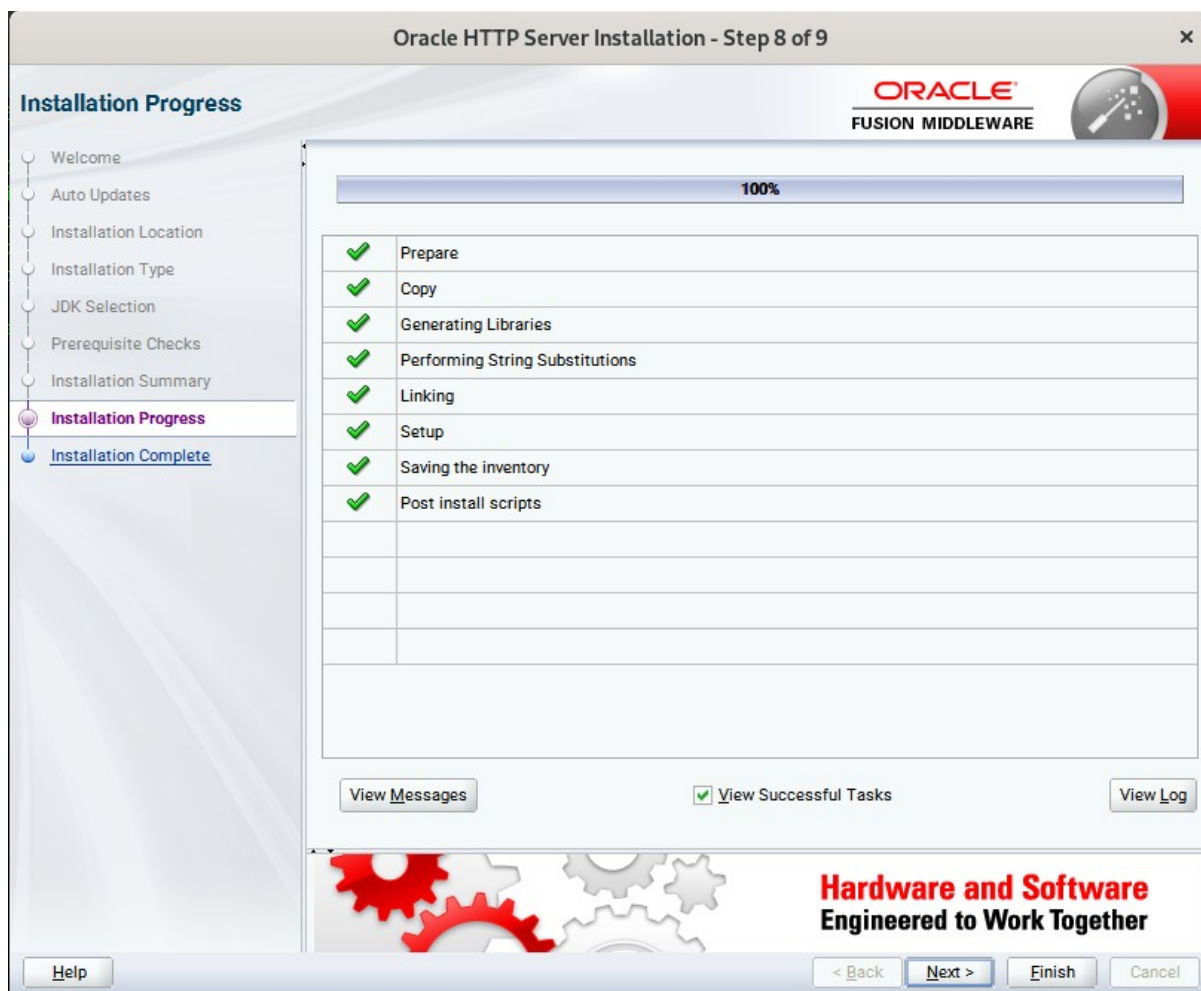
)

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



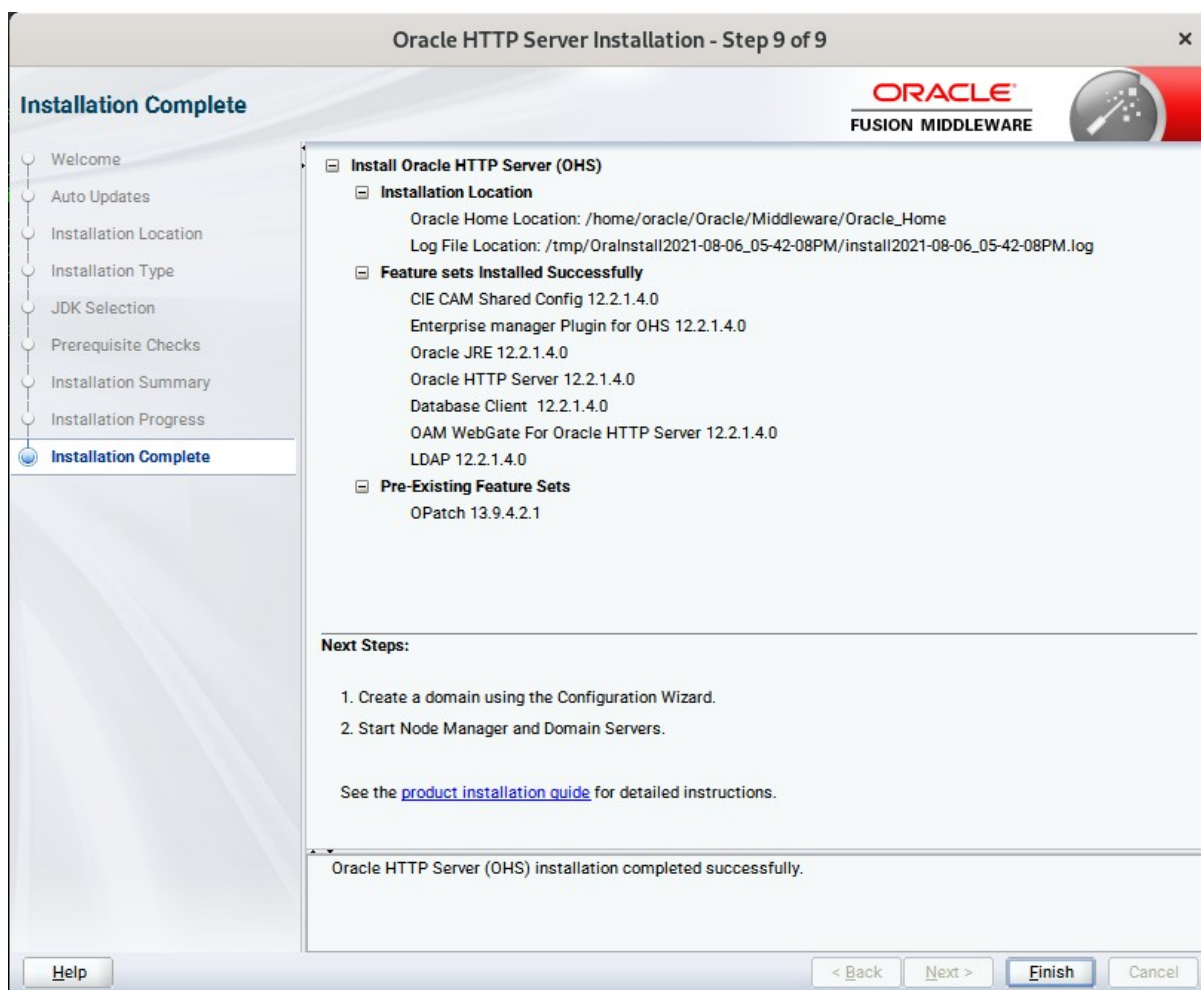
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

Component	Schema Owner
<input checked="" type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Common Infrastructure Services *	DEV_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	DEV_OPSS
<input checked="" type="checkbox"/> User Messaging Service	DEV_UMS
<input checked="" type="checkbox"/> Audit Services	DEV_JAU
<input checked="" type="checkbox"/> Audit Services Append	DEV_JAU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	DEV_JAU_VIEWER
<input checked="" type="checkbox"/> Metadata Services	DEV_MDS
<input checked="" type="checkbox"/> Weblogic Services *	DEV_WLS

* Mandatory component. Mandatory components cannot be deselected.

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

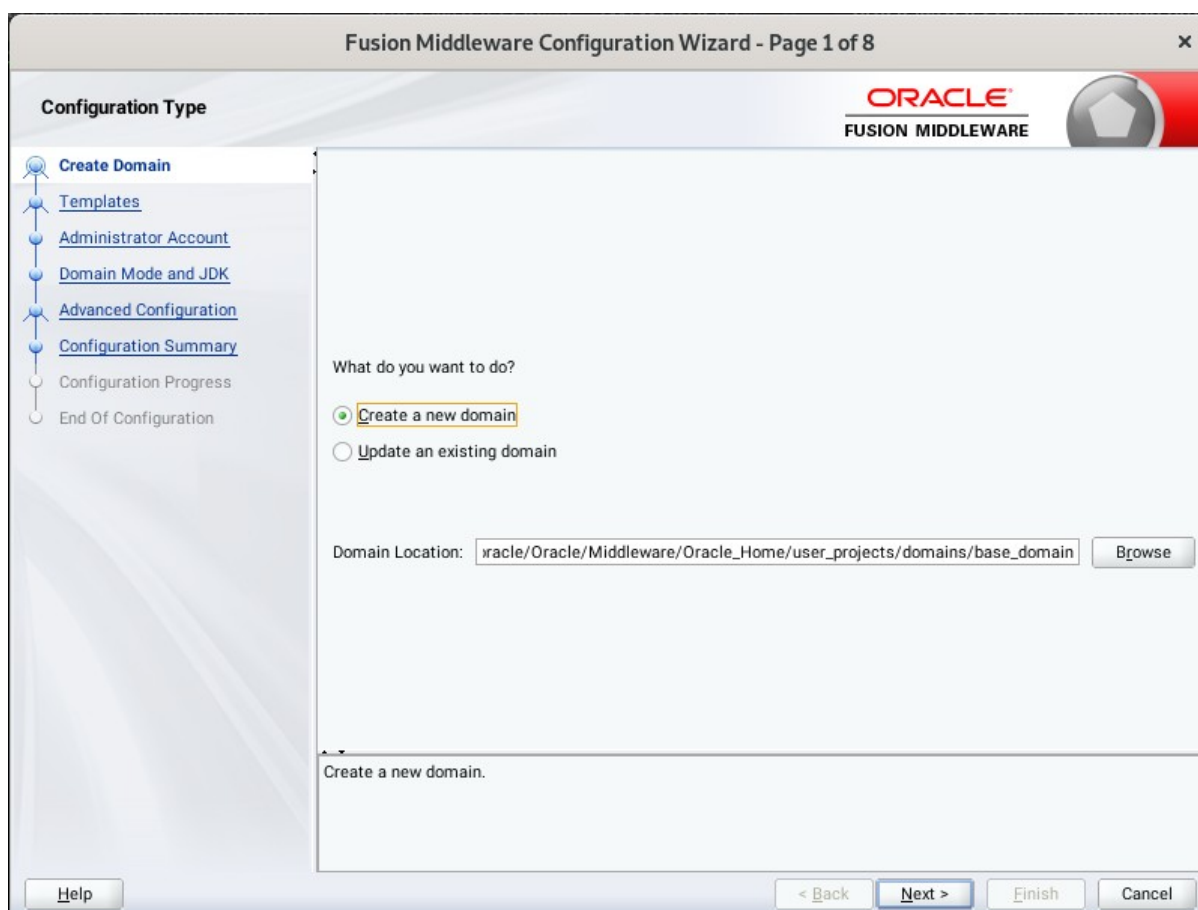
Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above, and ensure the schema creation is successful.

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.

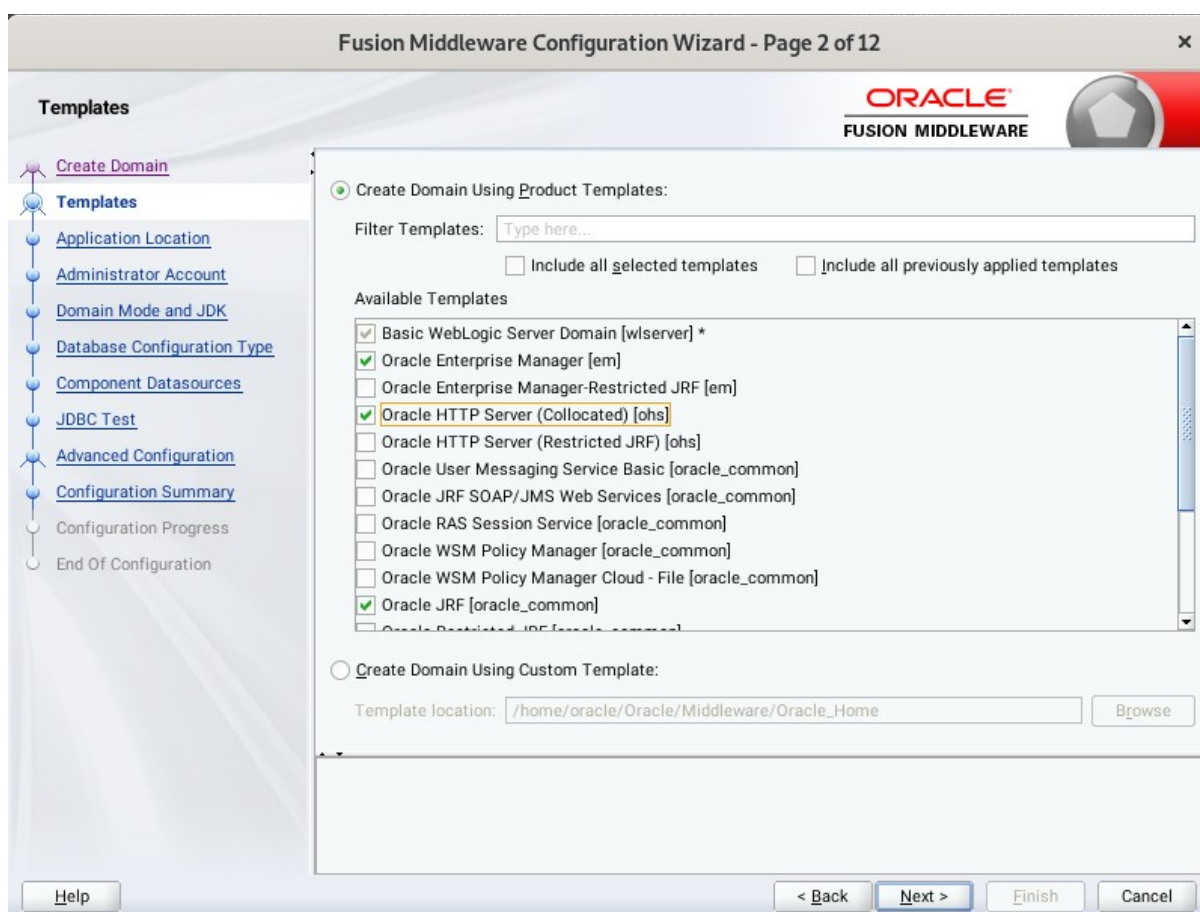
Follow these steps:

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



Click **Next** to continue.

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



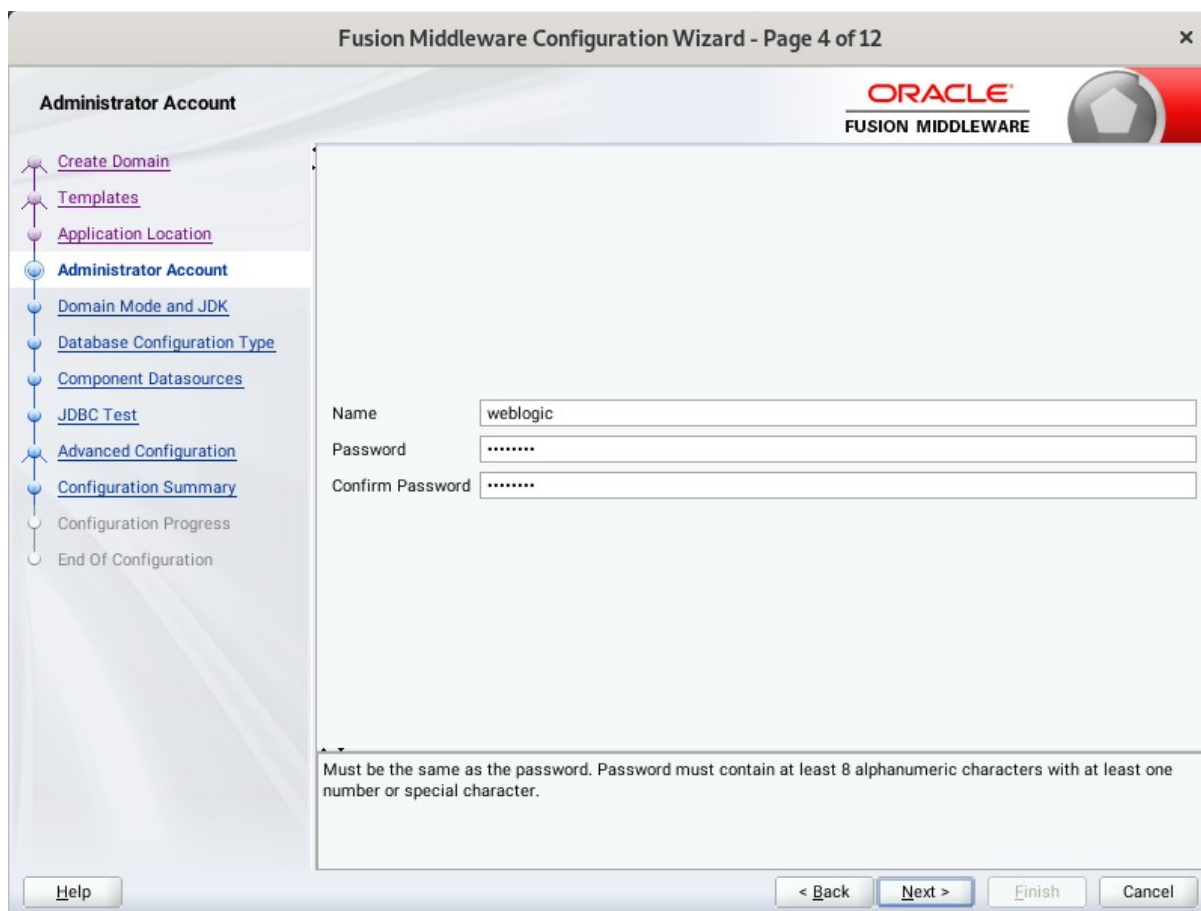
Keep the default selection (**Create Domain using Product Templates**), and select **Oracle HTTP Server (Collocated) [ohs]** component. This automatically selects **Oracle Enterprise Manager [em]** and so on. Click **Next** to continue.

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



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

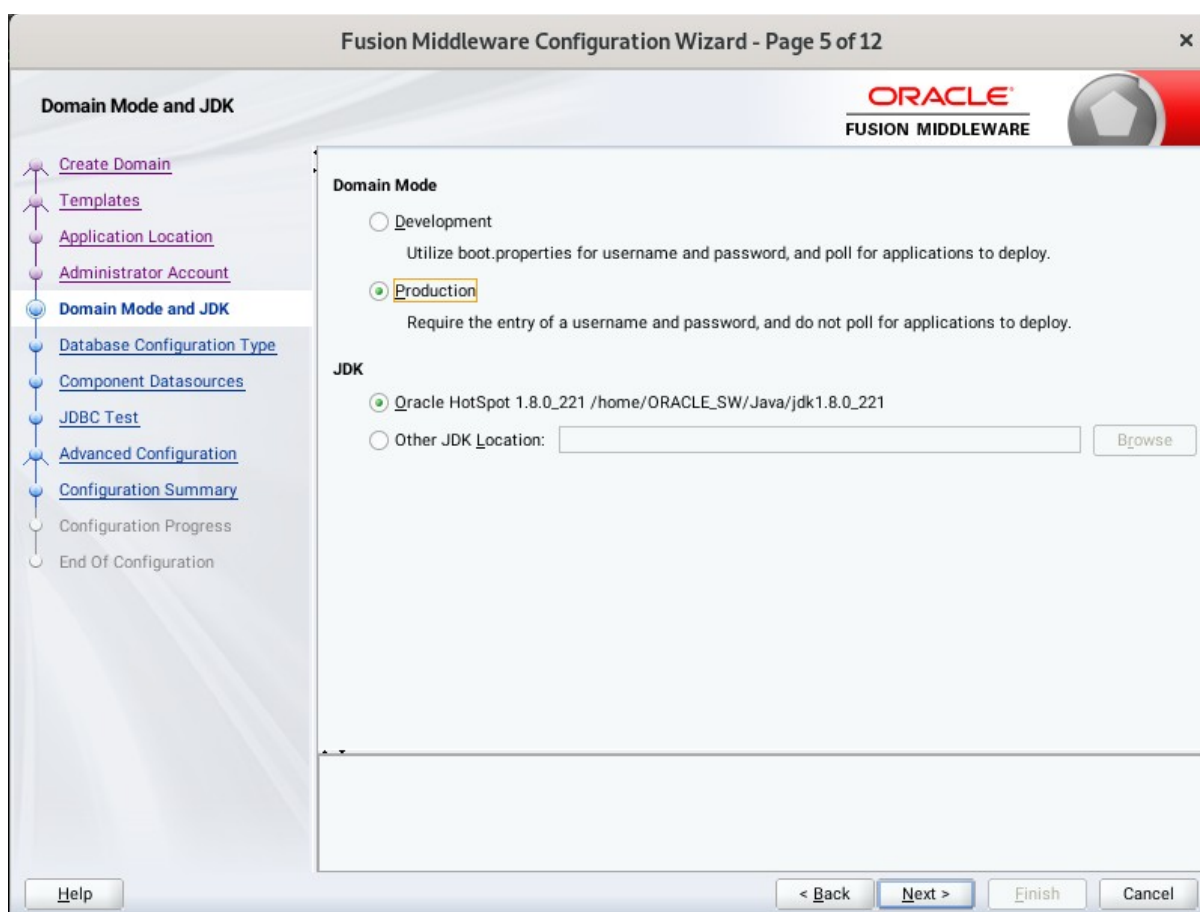
4). The **Administrator Account** screen appears.



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.

Fusion Middleware Configuration Wizard - Page 6 of 12

Database Configuration Type

ORACLE
FUSION MIDDLEWARE

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:

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.

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_IJU_APPEI	.....
<input type="checkbox"/>	OPSS Audit Viewer Sche	SUSE	Dell5530	1521	DEV_IJU_VIEWI	.....
<input type="checkbox"/>	OPSS Schema	SUSE	Dell5530	1521	DEV_OPSS	.....

Help

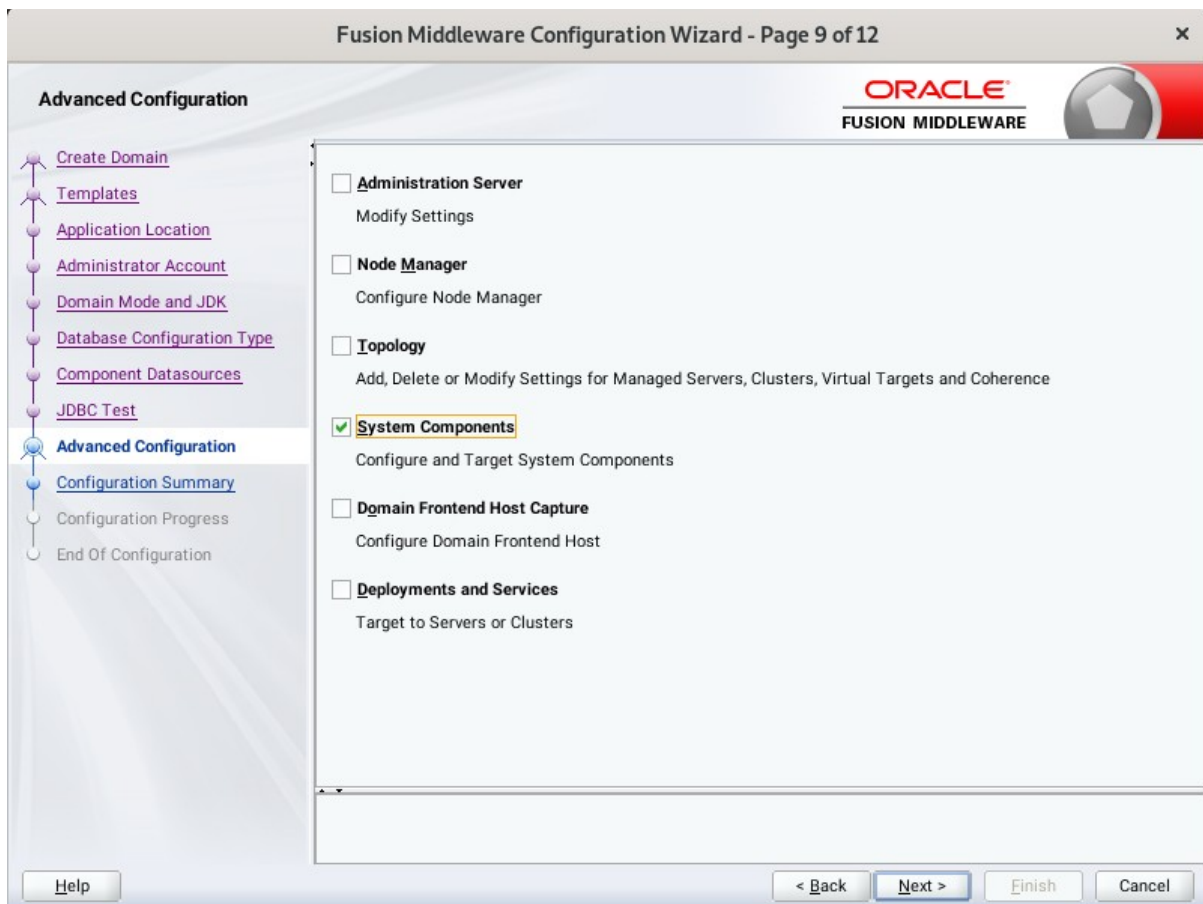
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



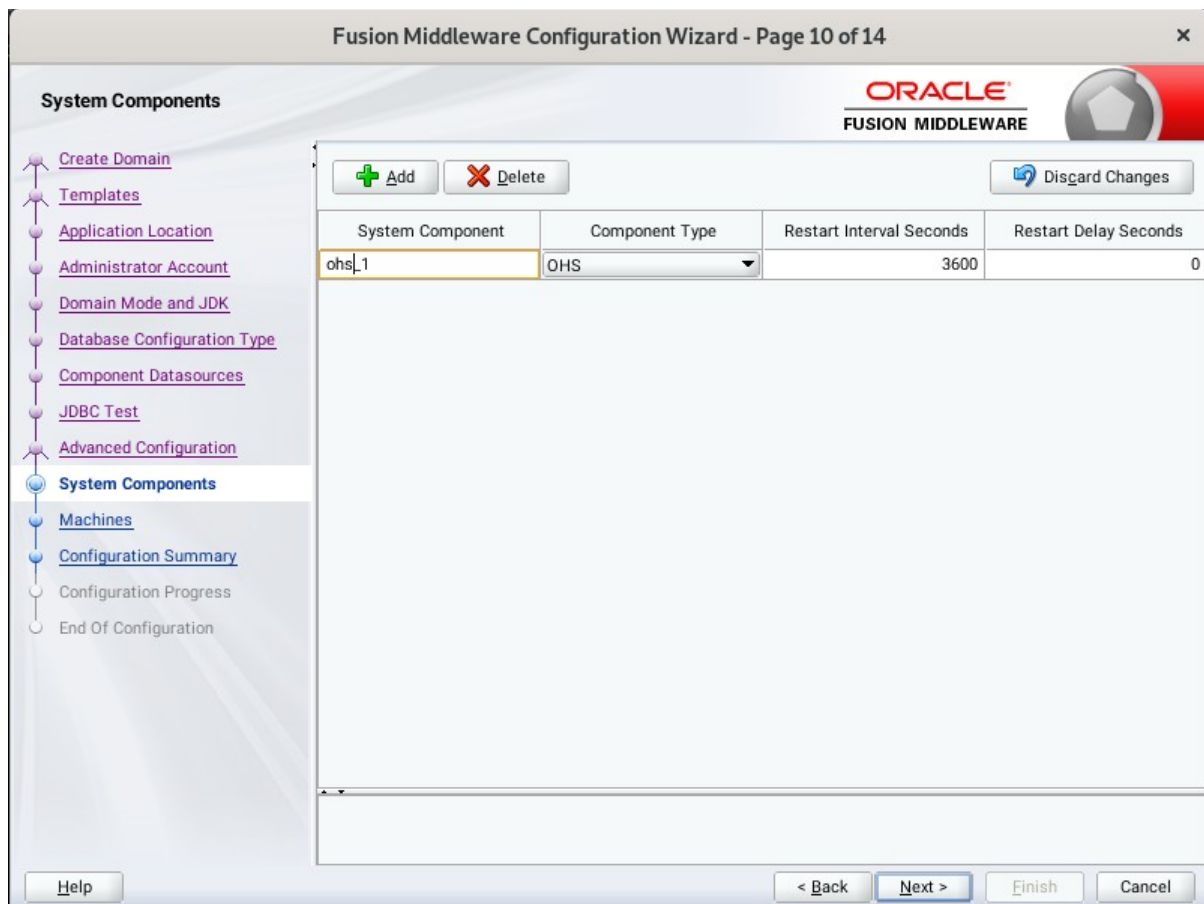
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



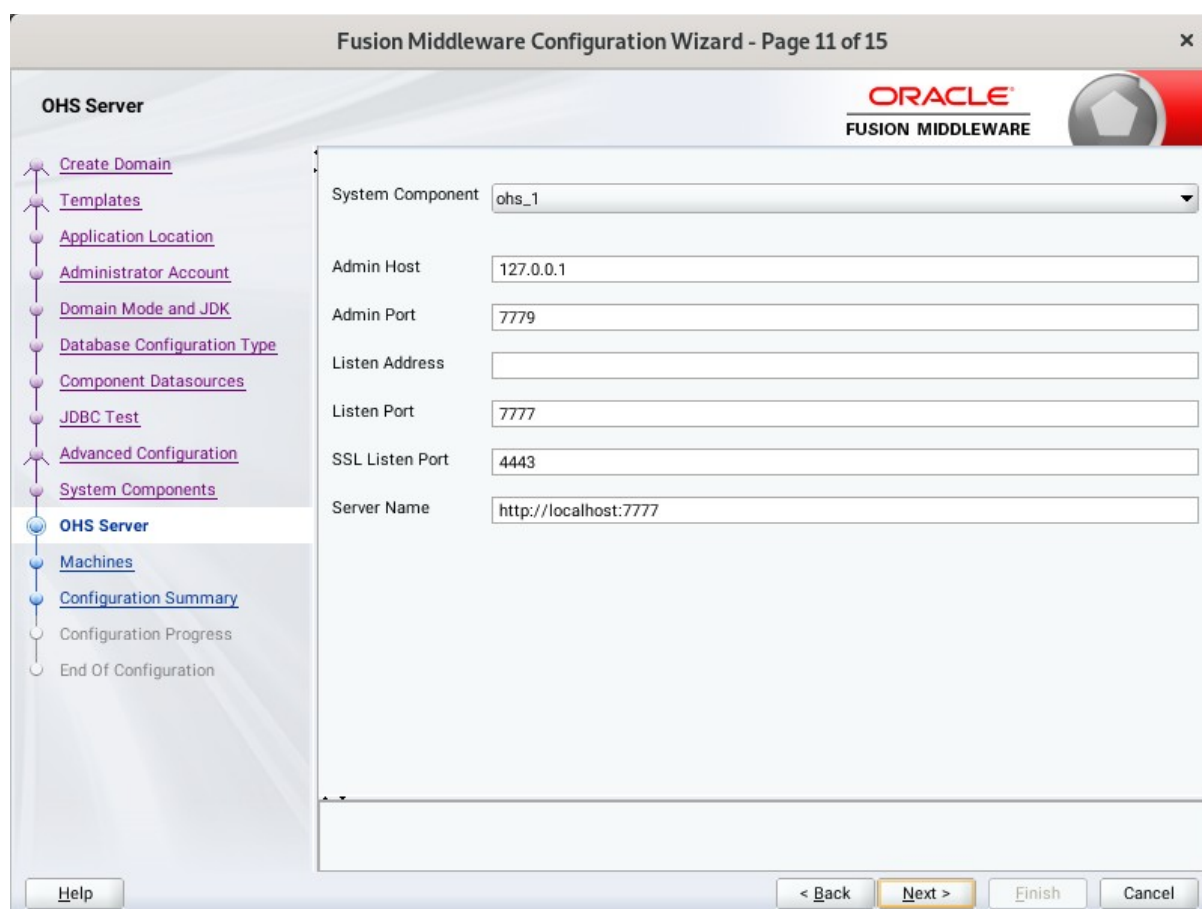
Choose the services on your requirements, then click **Next** to continue.

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



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.



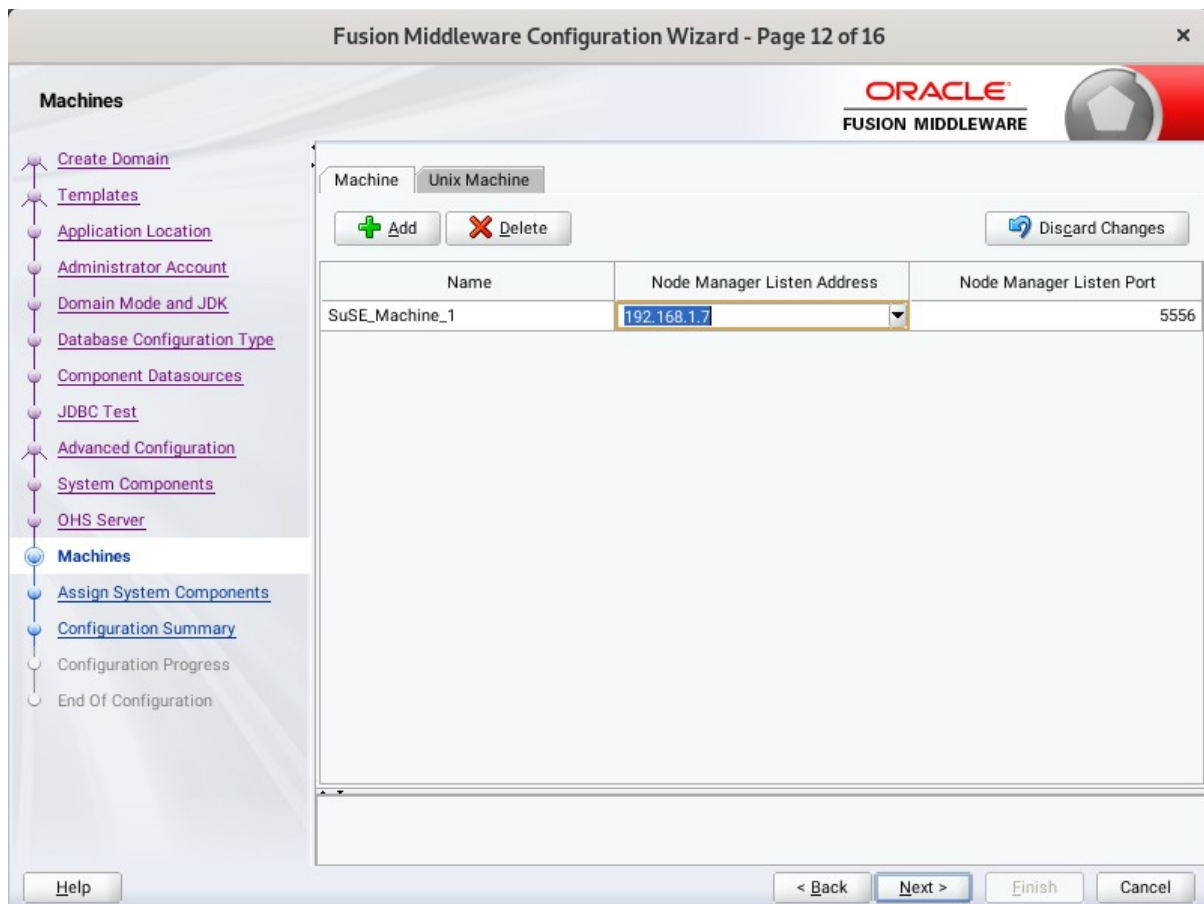
The screenshot displays the 'OHS Server' configuration screen within the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 11 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists various steps: 'Create Domain', 'Templates', 'Application Location', 'Administrator Account', 'Domain Mode and JDK', 'Database Configuration Type', 'Component Datasources', 'JDBC Test', 'Advanced Configuration', 'System Components', 'OHS Server' (highlighted), 'Machines', 'Configuration Summary', 'Configuration Progress', and 'End Of Configuration'. The main area contains the following configuration 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 >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted in yellow.

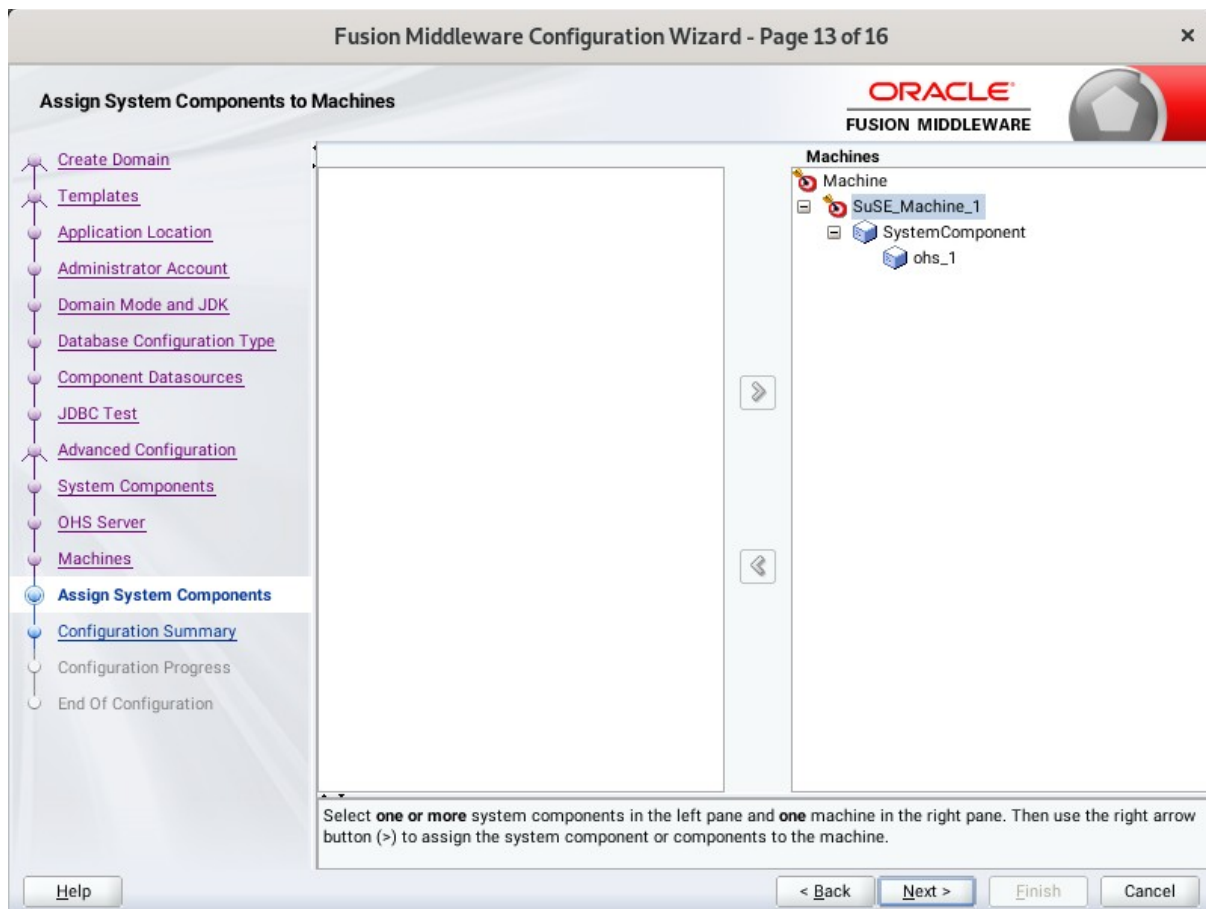
Use the **OHS Server** screen to configure the Oracle HTTP Server servers in your domain. In the System Component field specify the IP address of the host on which the Oracle HTTP Server instance will reside. Do not use "localhost". Click **Next** to continue.

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



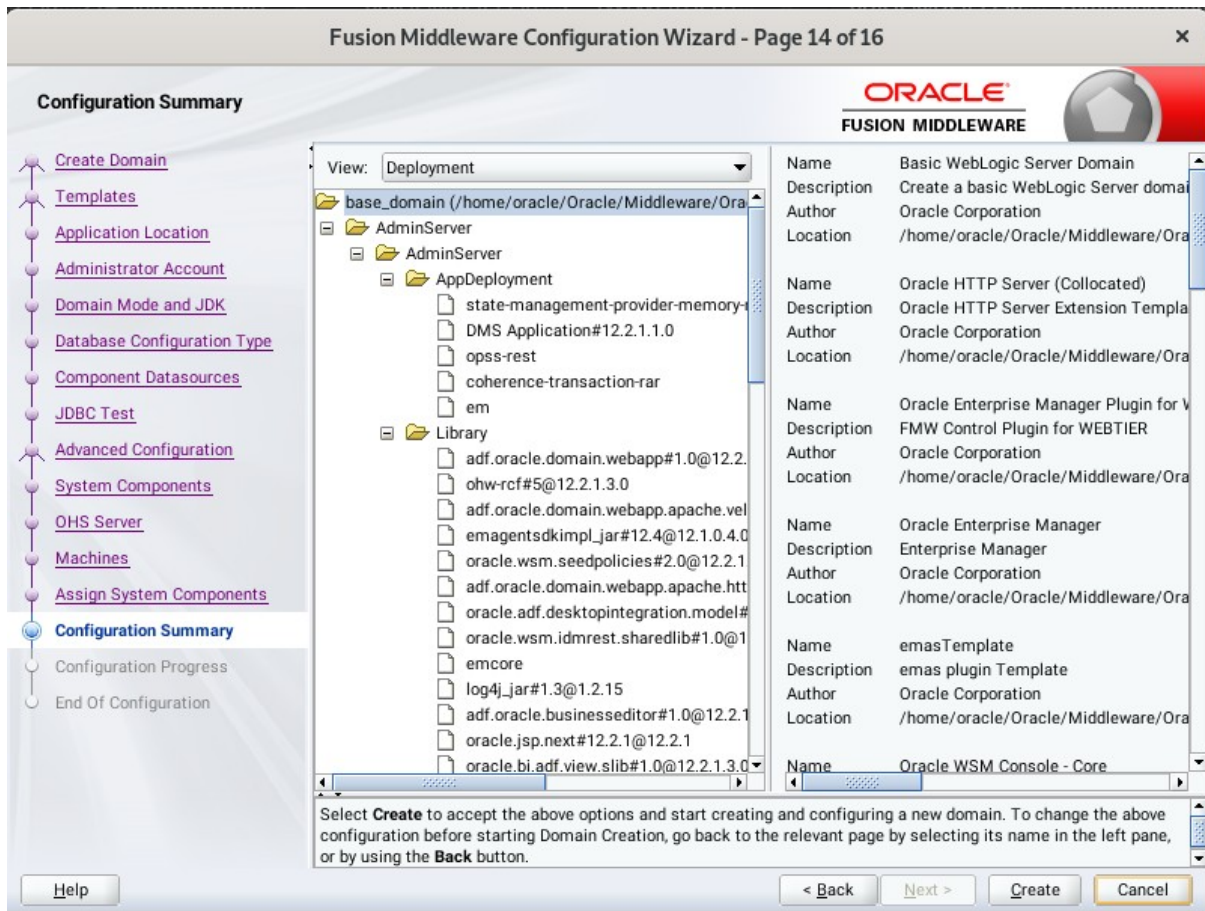
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

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



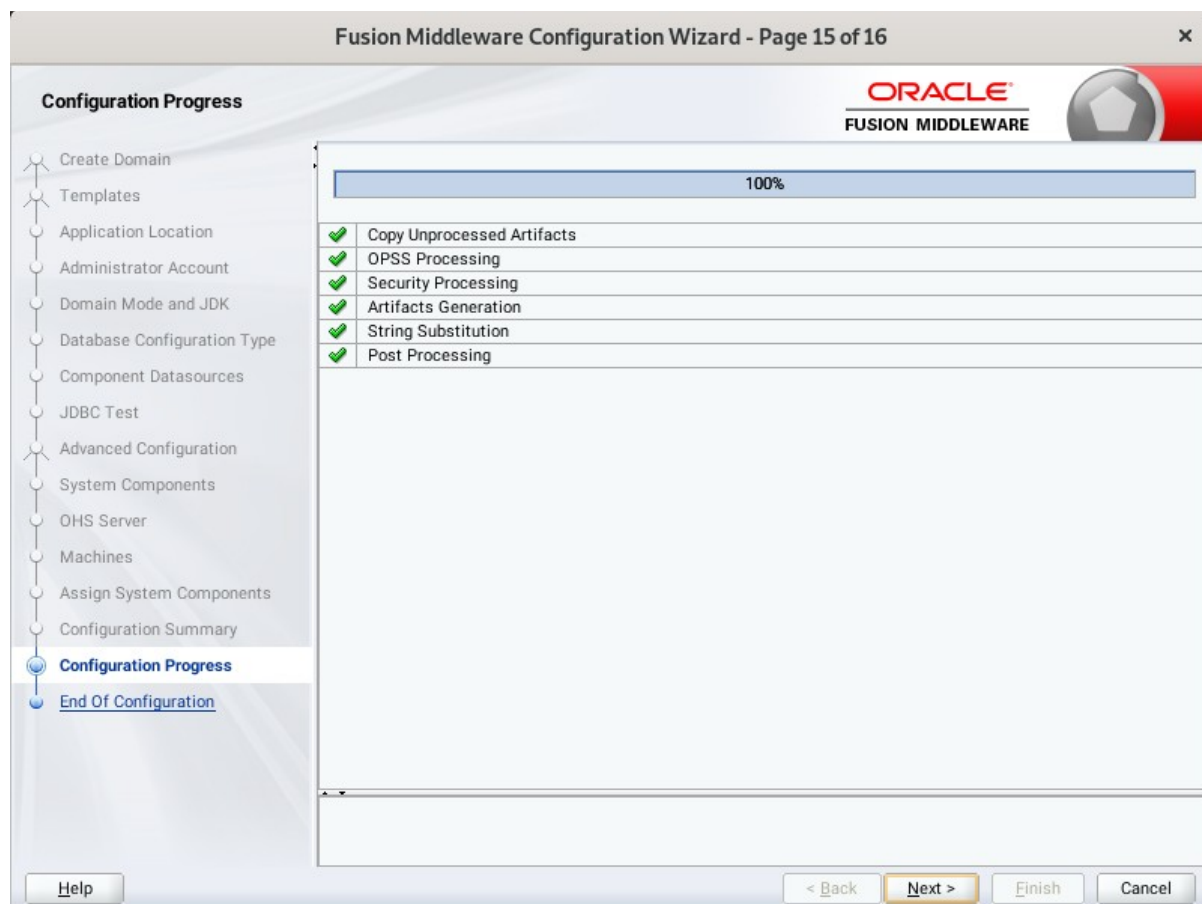
Select the 'ohs_1' in the System Component list box and click the right arrow. Click **Next** to continue.

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



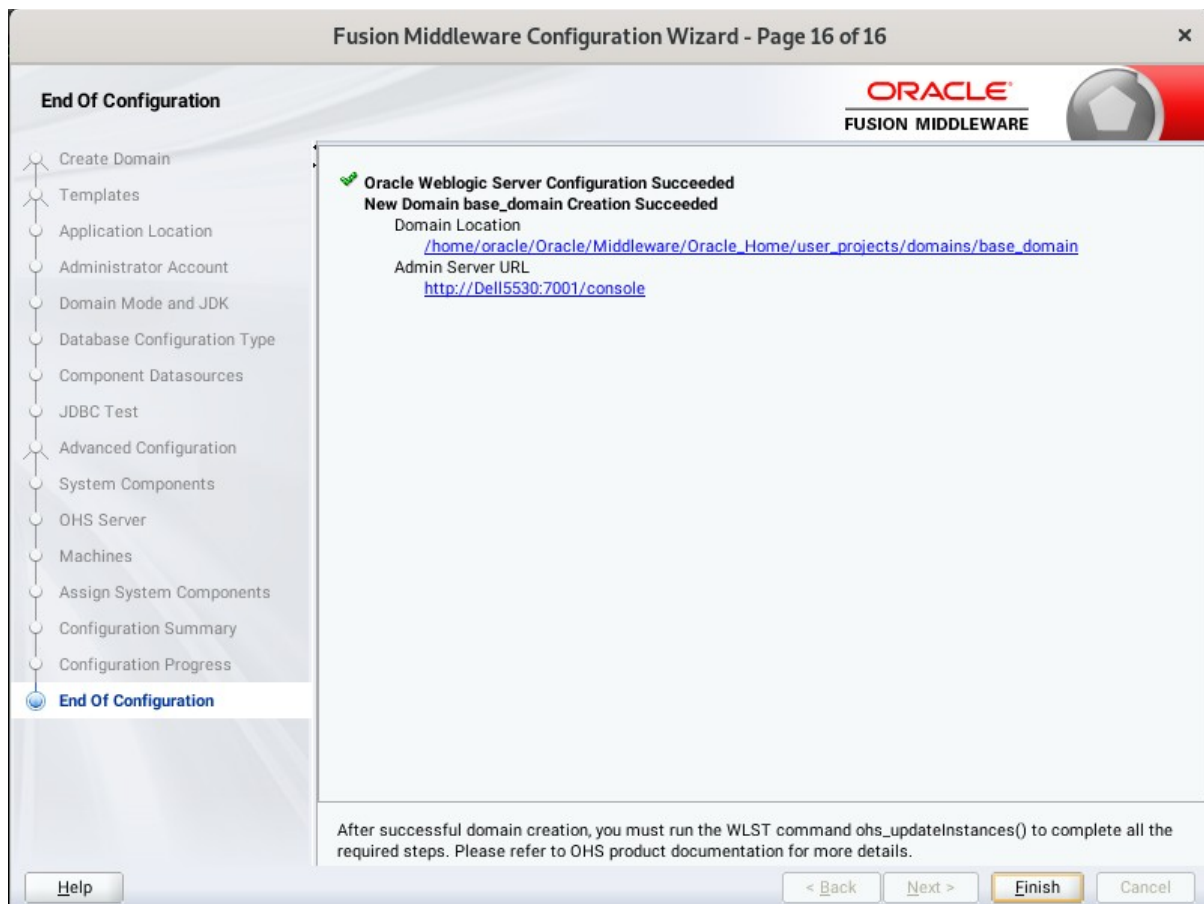
Select **Create** to accept the above options and start creating and configuring a new domain.

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:...E_SW/WebTier/1... x oracle@Dell5530:...ns/base_domain/b... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 725
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> 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/.. -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
<Aug 6, 2021 6:35:37 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Aug 6, 2021 6:35:38 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Aug 6, 2021 6:35:38 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Aug 6, 2021 6:35:38 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Aug 6, 2021 6:35:38 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Aug 06, 2021 6:35:38 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 06, 2021 6:35:38 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.

```

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

```

oracle@Dell5530:...ns/base_domain/bin
Anonymous-urls:[/em/IEsvdetect.js.*, /em/LoginStatusServlet.*, /em/adf.*, /em/adflib.*, /em/afmr.*, /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 6, 2021 6:40:54,607 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ign
oring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Aug 6, 2021 6:40:56,678 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conne
ction with the Domain level Diagnostic Service.>
<Aug 6, 2021 6:40:57,119 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Aug 6, 2021 6:40:57,198 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Aug 6, 2021 6:40:57,199 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving con
nection list DomainRuntimeServiceMBean>
<Aug 6, 2021 6:41:15,236 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:1.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Serv
er "AdminServer" for domain "base_domain" running in production mode.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <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.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <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.>
<Aug 6, 2021 6:41:15,237 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Aug 6, 2021 6:41:15,239 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Aug 6, 2021 6:41:15,418 PM GMT+08:00> <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) ...

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.

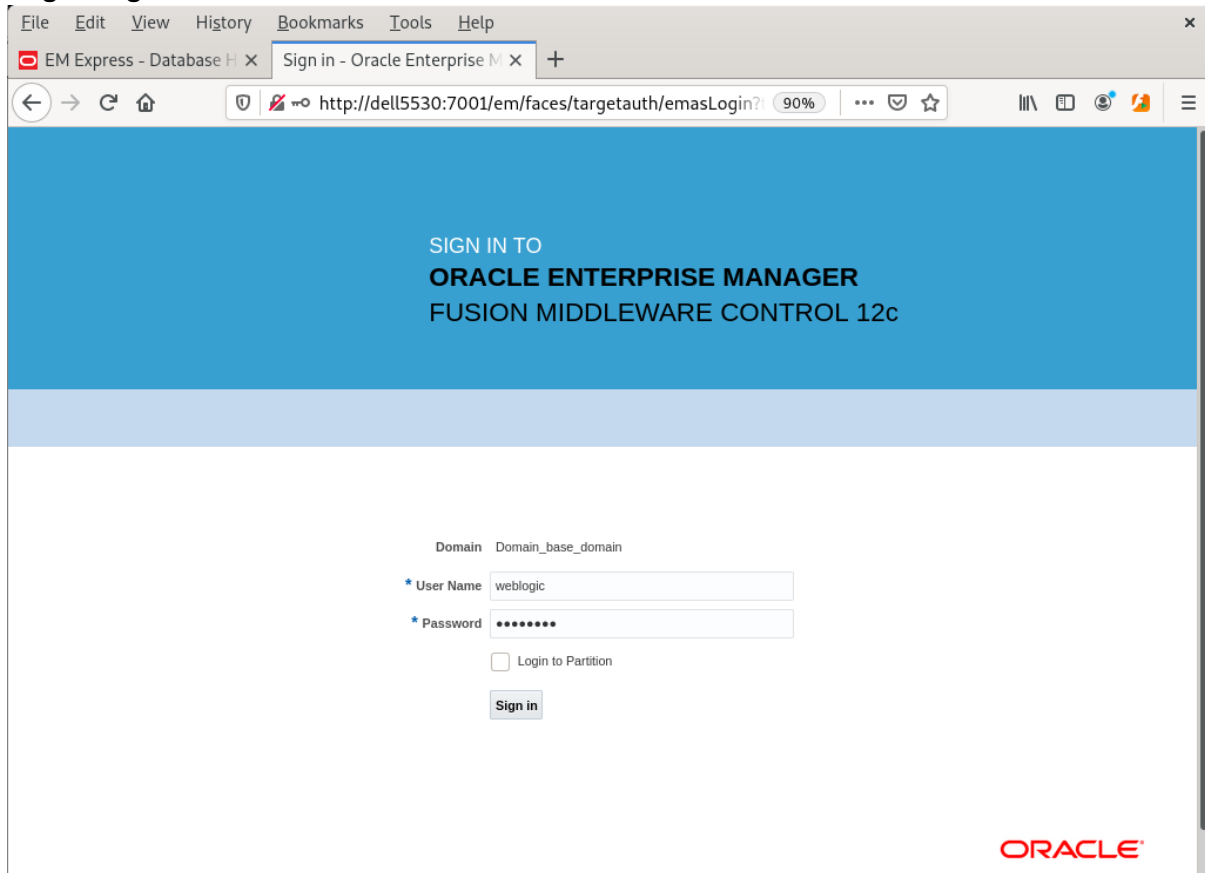
wls:/base_domain/serverConfig/> ohs_updateInstances()
Location changed to edit custom tree. This is a writable tree with No root.
For more help, use help('editCustom')

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 tabs: "EM Express - Database H x" and "Sign in - Oracle Enterprise M x".
- Address bar: "http://dell5530:7001/em/faces/targetauth/emasLogin?i=90%".
- Page content: A blue header with the text "SIGN IN TO ORACLE ENTERPRISE MANAGER FUSION MIDDLEWARE CONTROL 12c".
- Form fields: "Domain" (value: "Domain_base_domain"), "* User Name" (value: "weblogic"), and "* Password" (masked with "*****").
- Additional options: A checkbox for "Login to Partition" (unchecked) and a "Sign in" button.
- Oracle logo: Located in the bottom right corner of the page.

Home Page:

ORACLE Enterprise Manager Fusion Middleware Control 12c

base_domain

WebLogic Domain

Aug 6, 2021 6:46:56 PM GMT+08:00

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
1 Up

Administration Server
Name AdminServer
Host Dell5530
Listen Port 7001

Servers

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

Columns Hidden 34 Servers 1 of 1

Starting Oracle HTTP Server (ohs_1)

ORACLE Enterprise Manager Fusion Middleware Control 12c

ohs_1

Oracle HTTP Server

Aug 6, 2021 6:47:27 PM GMT+08:00

Monitoring
Metrics Unavailable

General

Component Name ohs_1
Version 12.2.1.4.0
State Shutdown
Host 192.168.1.7
Ports 7777 4443 127.0.0.1:7779
Machine Name SuSE_Machine_1
Auto Restart
Oracle Home /home/oracle/Oracle/Middleware/Oracle_Home

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

06:34 PM 06:37 06:40 06:43 06:46
August 06 2021

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

CPU and Memory Usage

06:33 PM 06:36 06:39 06:42 06:45
August 06 2021

CPU Usage (%) Memory Usage (MB)

ohs_1 is up.

Monitoring

- CPU Usage (%) 0.00
- Memory Usage (%) 7.14

Virtual Hosts

- 2 Virtual Hosts

Modules

- 52 Modules

General

- Component Name: ohs_1
- Version: 12.2.1.4.0
- State: Running
- Host: 192.168.1.7
- 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

Graph showing Request Processing Time (milli seconds) and /Domain_base_domain/base_domain/ohs_1: Request Throu... over time.

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): 0.79

CPU and Memory Usage

Graph showing CPU Usage (%) and Memory Usage (MB) over time.

URL: http://dell5530:7001/em/faces/as_ohs_ohsHome?type=oracle_apache&target=/Domain_base_domain/base_domain/ohs_1#

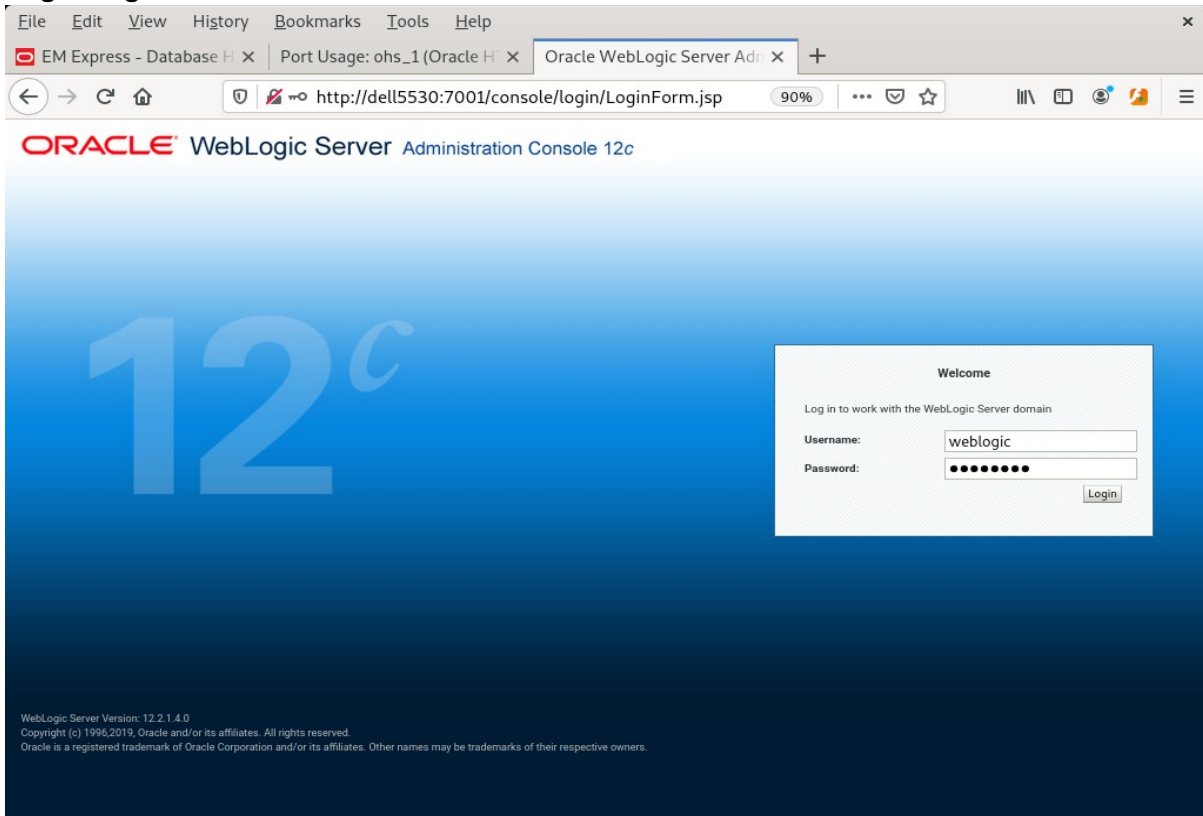
OHS Ports Configuration as shown below.

Port Usage

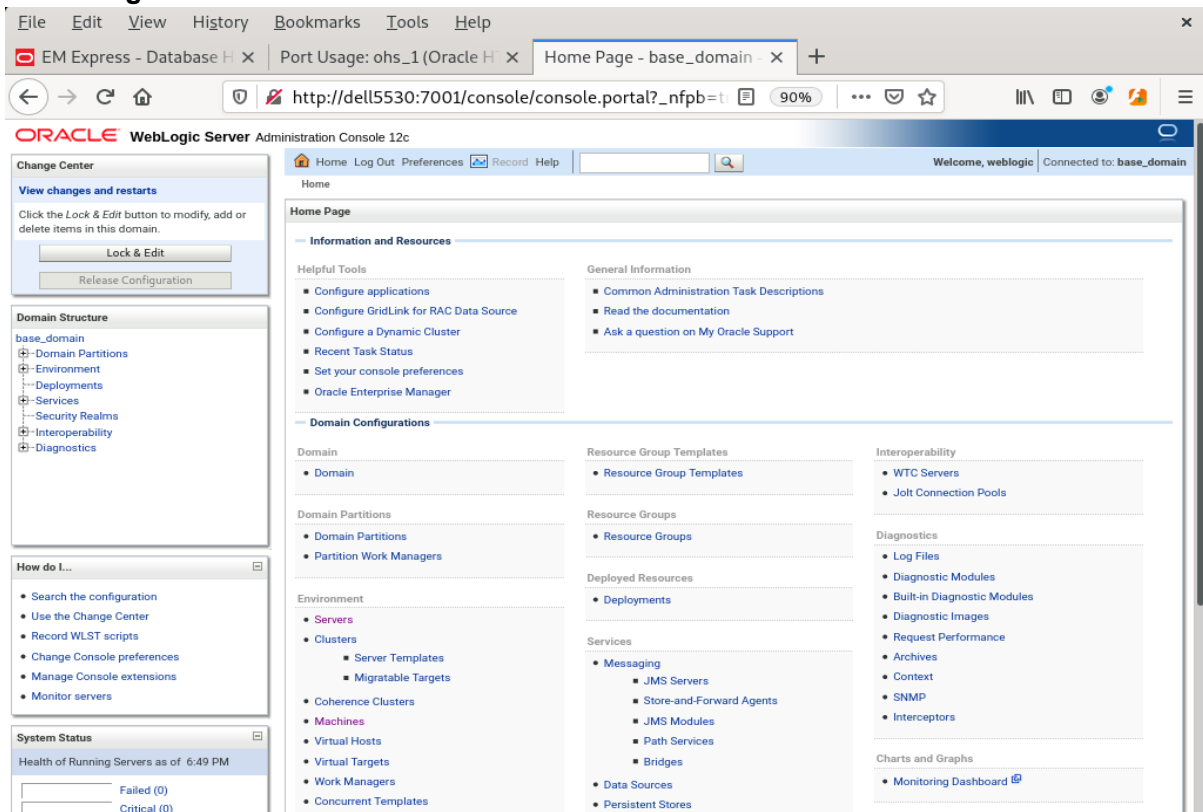
Port in Use	IP Address	Component	Protocol
7779	127.0.0.1	ohs_1	HTTPS
4443	ALL	ohs_1	HTTPS
7777	ALL	ohs_1	HTTP

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 main content area is titled "Summary of Servers" and includes a "Configuration" tab. Below the tab, there is a descriptive paragraph and a table of servers. The table has columns for Name, Type, Cluster, Machine, State, Health, and Listen Port. One server, "AdminServer(admin)", is listed with a state of "RUNNING" and a health of "OK".

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, specifically the "Summary of Machines" page. It includes a "Machines" section with a table listing machine details. The table has columns for Name and Type. One machine, "SuSE_Machine_1", is listed with a type of "Machine".

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.

The diagram illustrates the architecture of Oracle HTTP Server 12c, showing its integration with various components and tools. Key elements include:

- Local Content**: Serves static content.
- HTML** and **JS**: Support for dynamic content.
- Audit Control** and **Auditing**: For security and performance monitoring.
- Authentication Authorization** and **Identity Management**: For user access control.
- Fusion Middleware Applications**: The core applications being served.
- Process Management and HA**, **Certificate management**, **Automation**, and **Test to Production**: Operational and lifecycle management tools.
- FMW Lifecycle Tools**: For overall system management.
- Enterprise Manager**: For monitoring, diagnosis, and management.

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.

The diagram illustrates the architecture of Oracle HTTP Server 12c, showing its integration with various components and tools. Key elements include:

- Local Content**: Serves static content.
- HTML** and **JS**: Support for dynamic content.
- Audit Control** and **Auditing**: For security and performance monitoring.
- Authentication Authorization** and **Identity Management**: For user access control.
- Fusion Middleware Applications**: The core applications being served.
- Process Management and HA**, **Certificate management**, **Automation**, and **Test to Production**: Operational and lifecycle management tools.
- FMW Lifecycle Tools**: For overall system management.
- Enterprise Manager**: For monitoring, diagnosis, and management.

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.

The diagram illustrates the Oracle HTTP Server 12c architecture, showing its integration with various components and tools. Key elements include:

- Core Components:** OHS (Oracle HTTP Server), Local Content, Auditing, Authentication Authorization, Load Balancing, HTML, JS, Audit Control, and Identity Management.
- Management and Operations:** Process Management and HA, Certificate management, Automation, and Test to Production.
- Tools and Integration:** FMW Lifecycle Tools and Enterprise Manager (Manage, monitor, diagnose).

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) ...

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 SP3 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 x

Installation Inventory Setup **ORACLE**
FUSION MIDDLEWARE

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.

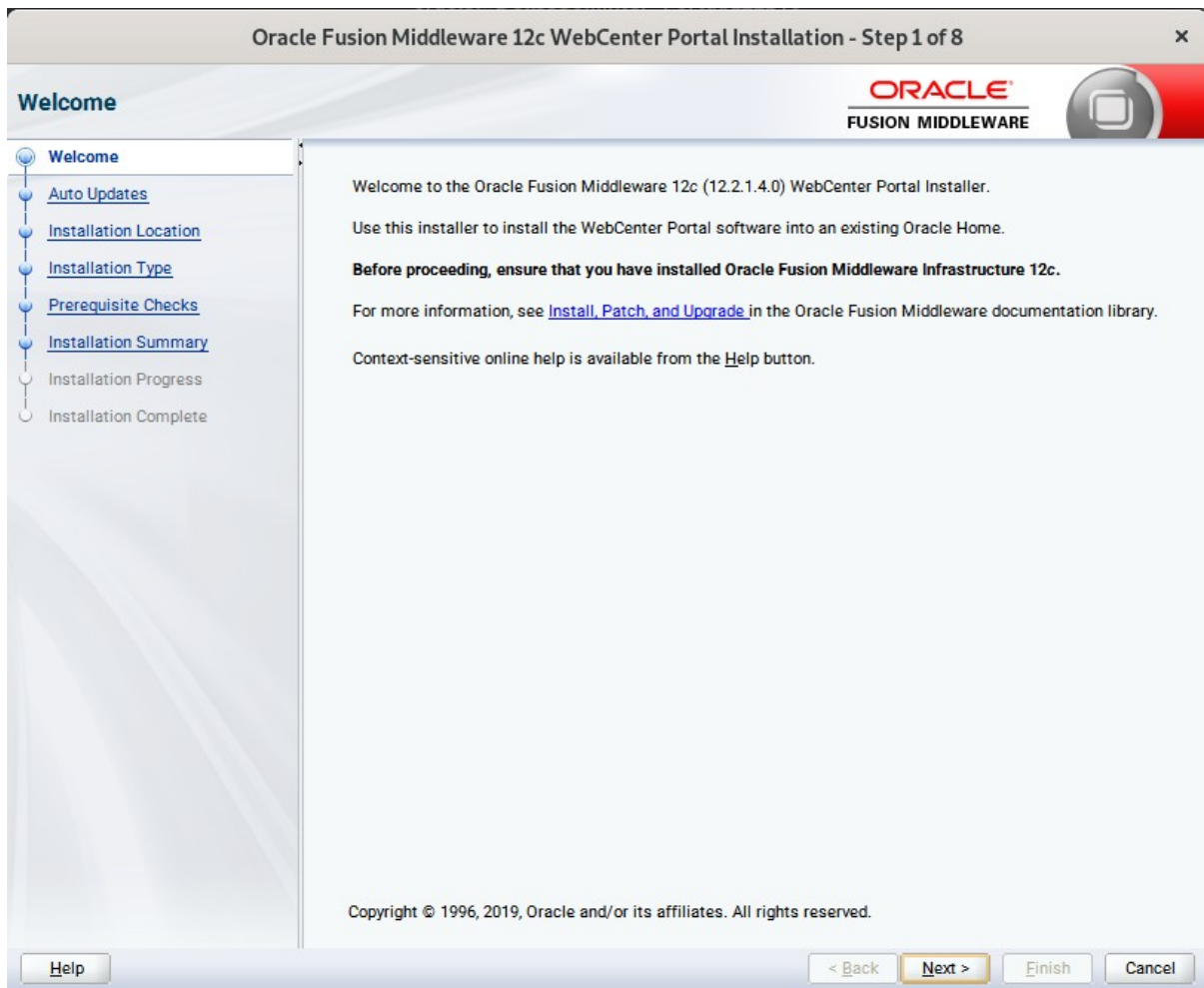
Inventory Directory:
Enter the full path for the directory.

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.

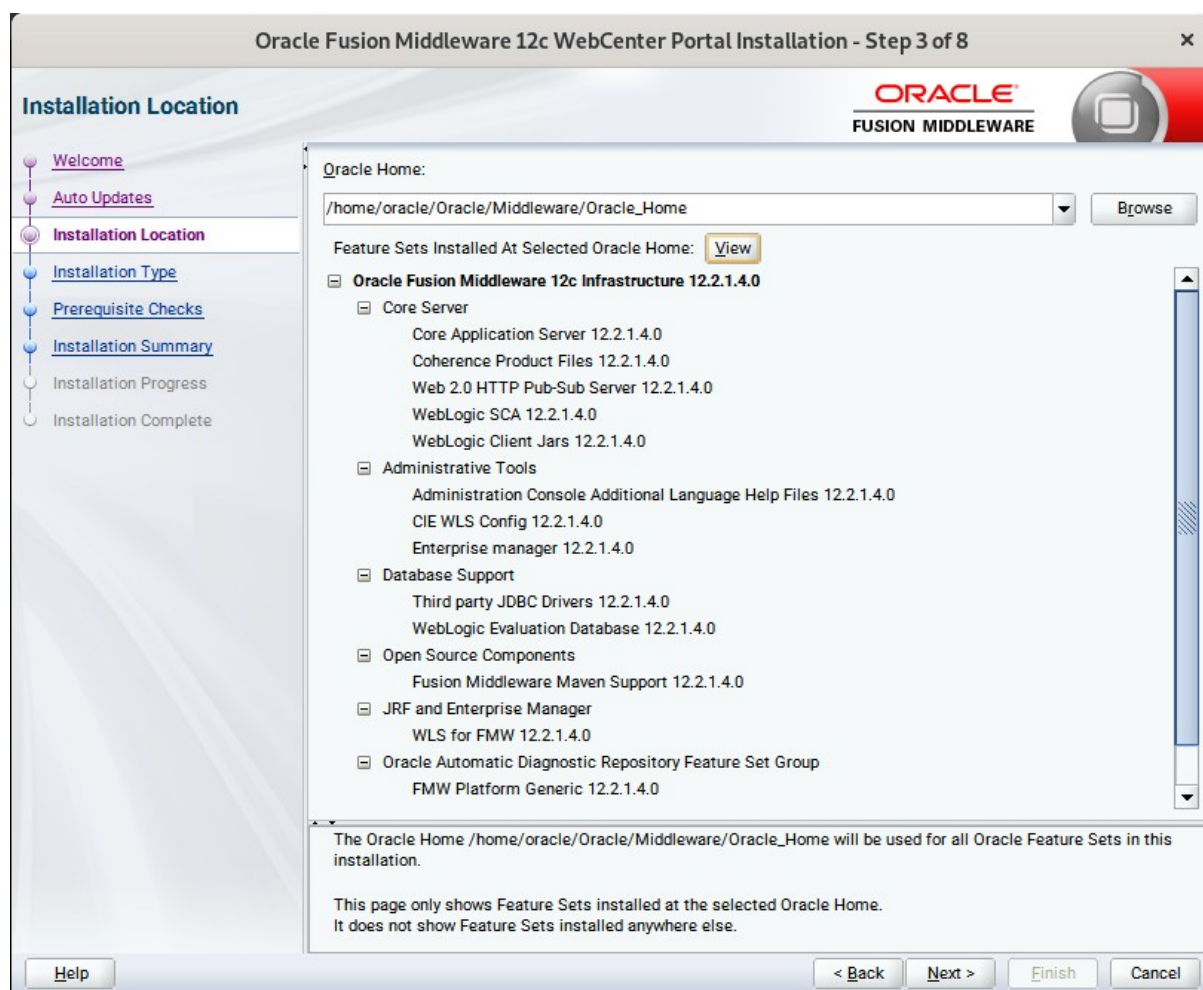
The screenshot shows the 'Auto Updates' configuration page for Oracle Fusion Middleware 12c WebCenter Portal. The window title is 'Oracle Fusion Middleware 12c WebCenter Portal Installation - Step 2 of 8'. The page features a navigation sidebar on the left with links for 'Welcome', 'Auto Updates' (selected), 'Installation Location', 'Installation Type', 'Prerequisite Checks', 'Installation Summary', 'Installation Progress', and 'Installation Complete'. The main content area has the Oracle Fusion Middleware logo in the top right. The configuration options are:

- Skip Auto Updates
- Select patches from directory
 - Location:
- Search My Oracle Support for Updates
 - Username:
 - Password:
 -
 -
 -

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

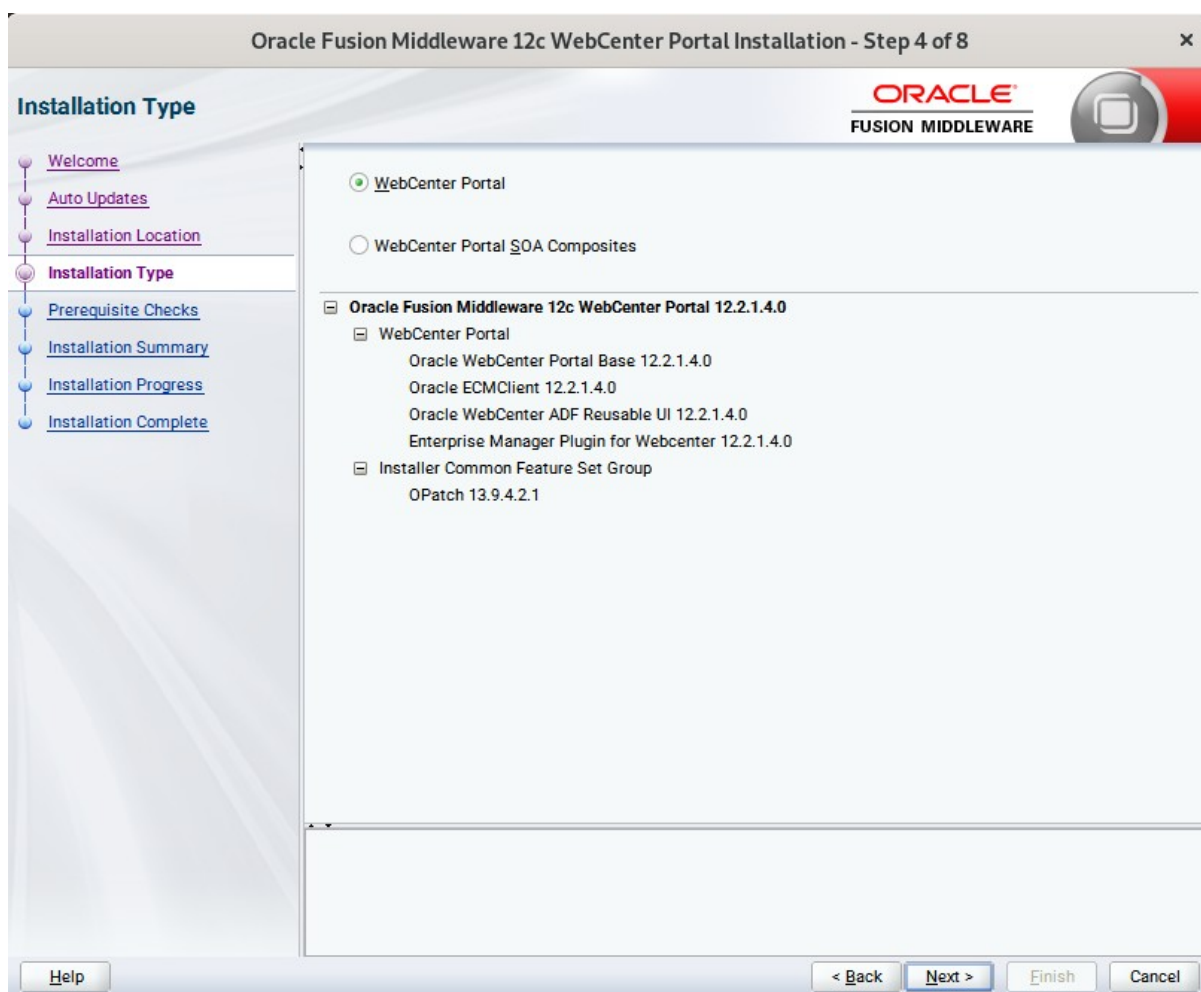
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



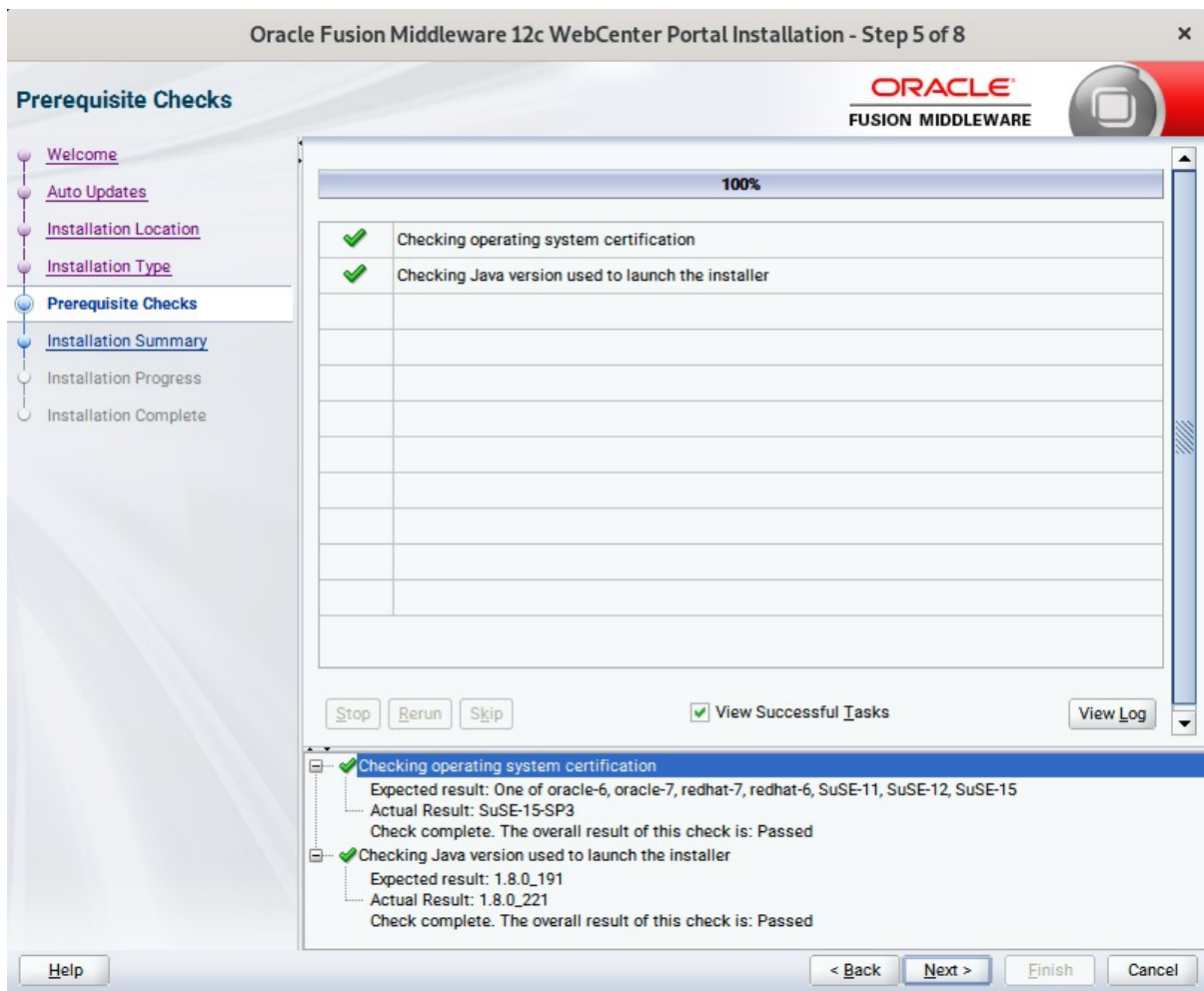
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



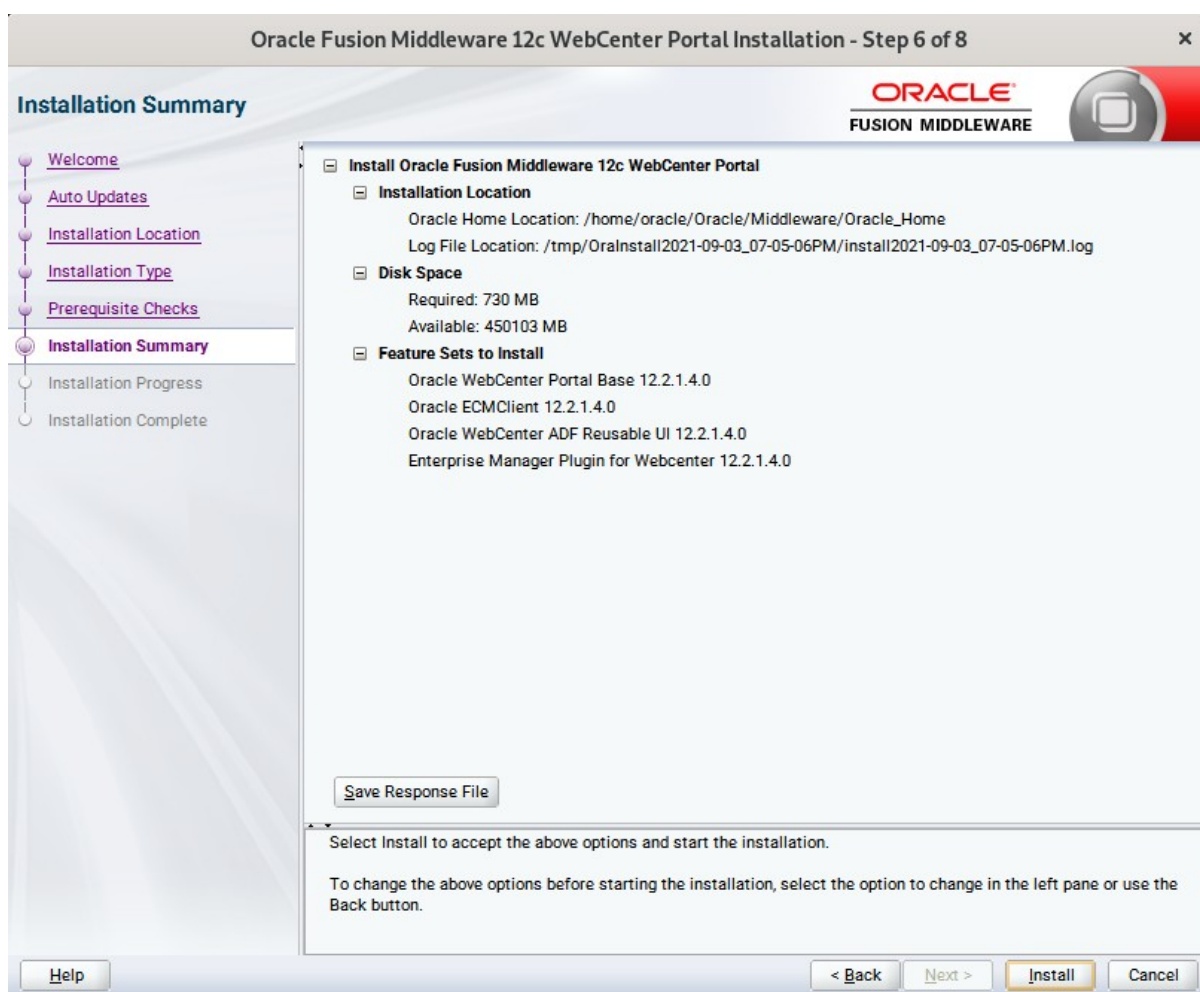
Use this screen to select the installation type and then products or feature sets you want to install. Selected the **WebCenter Portal** install type to install the WebCenter product. Click **Next** to continue.

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



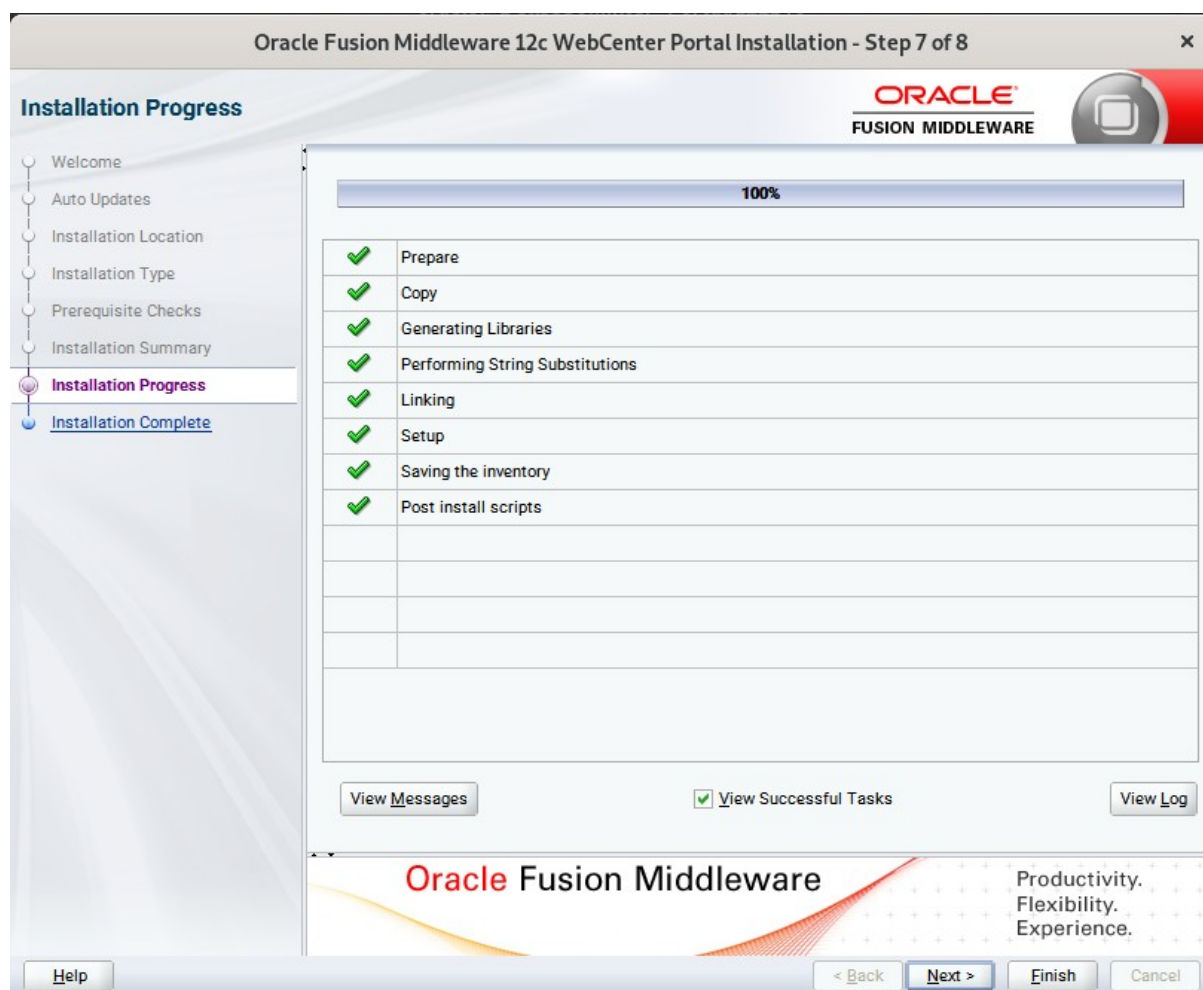
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



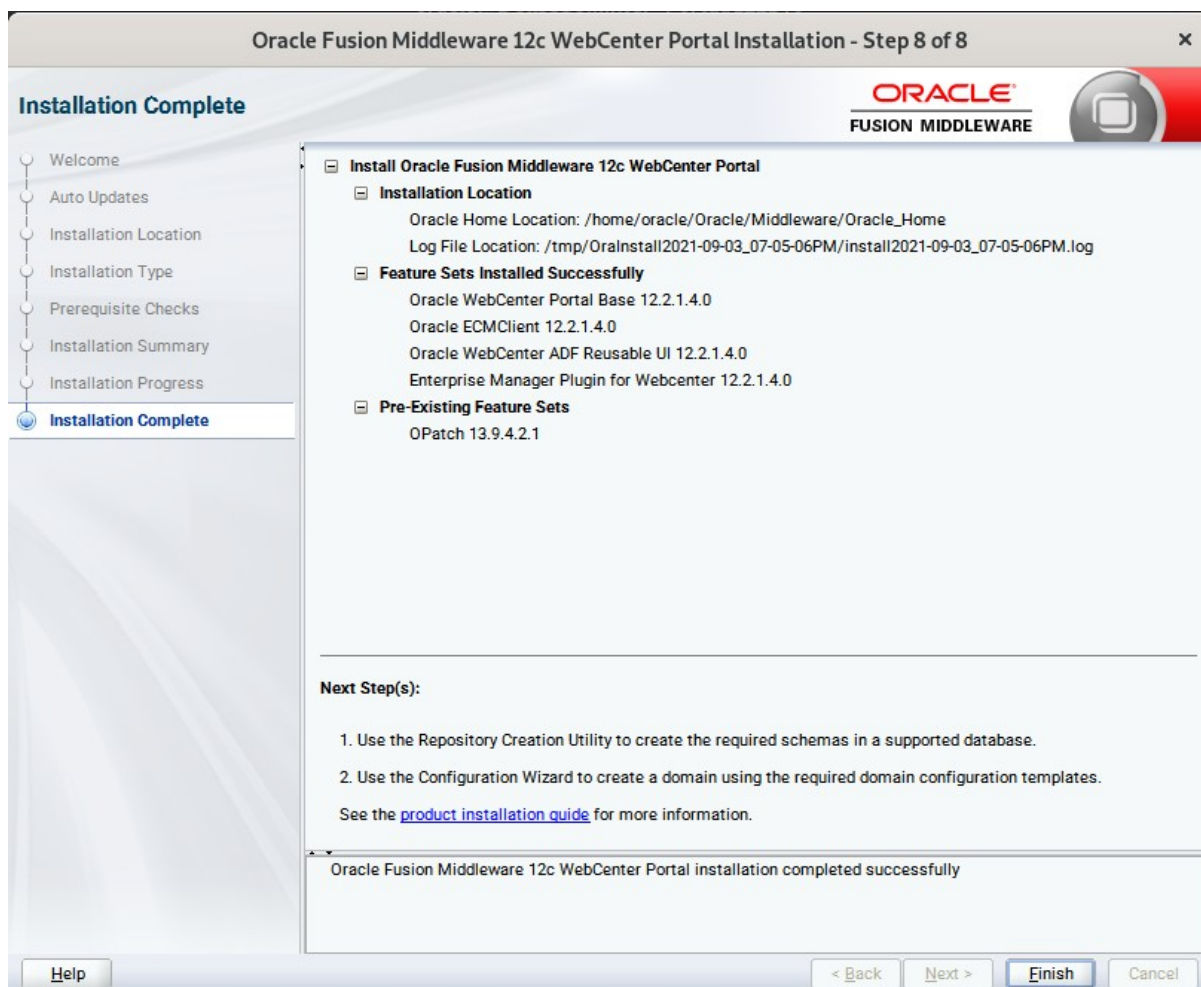
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

Specify a unique prefix for all schemas created in this session, so you can easily locate, reference, and manage the schemas later.

Select existing prefix:

Create new prefix:

Alpha numeric only. Cannot start with a number. No special characters.

Component	Schema Owner
<input type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Common Infrastructure Services *	DEV_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	DEV_OPSS
<input type="checkbox"/> User Messaging Service	UMS
<input checked="" type="checkbox"/> Audit Services	DEV_JAU
<input checked="" type="checkbox"/> Audit Services Append	DEV_JAU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	DEV_JAU_VIEWER
<input checked="" type="checkbox"/> Metadata Services	DEV_MDS
<input checked="" type="checkbox"/> Weblogic Services *	DEV_WLS
<input checked="" type="checkbox"/> WebCenter Portal	
<input checked="" type="checkbox"/> Portal and Services	DEV_WEBCENTER
<input checked="" type="checkbox"/> Portlet Producers	DEV_PORTLET
<input checked="" type="checkbox"/> Analytics	DEV_ACTIVITIES

* Mandatory component. Mandatory components cannot be deselected.

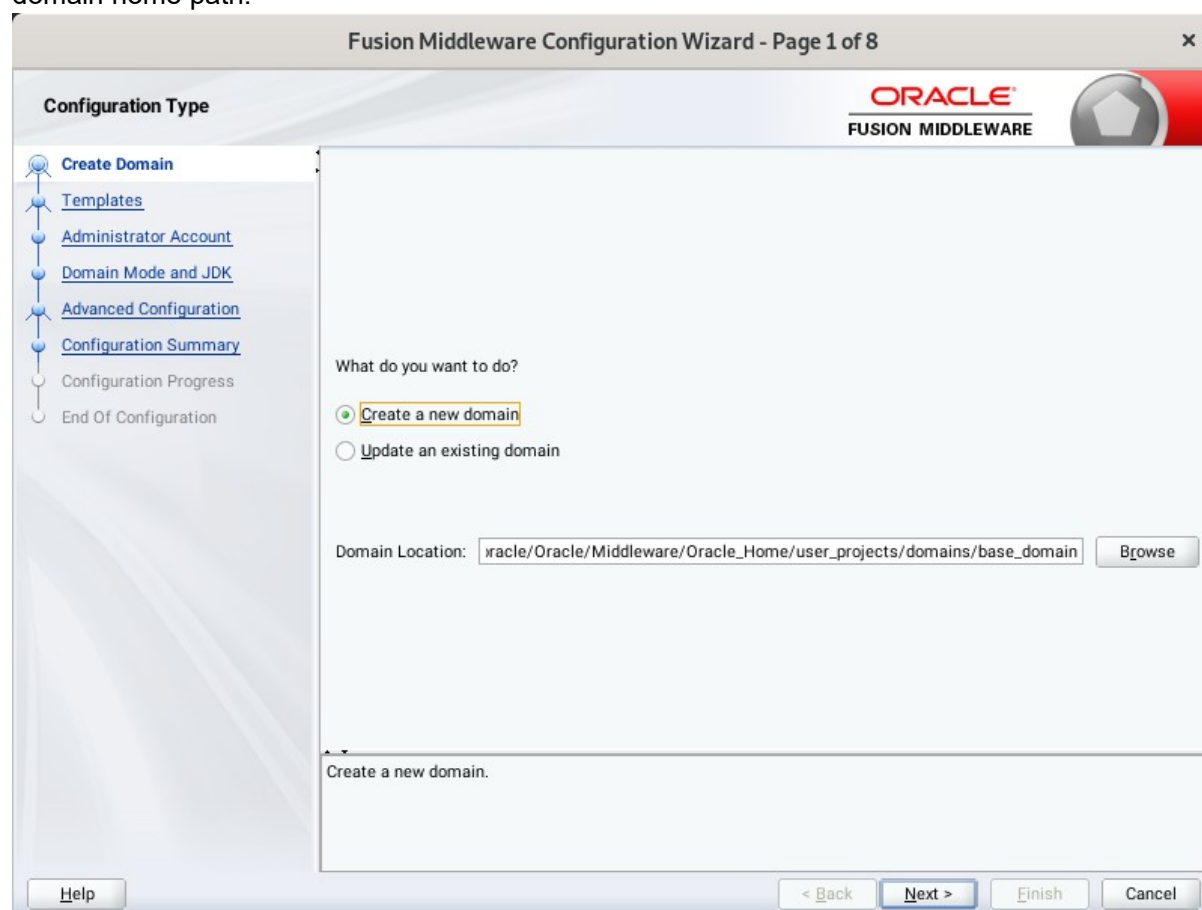
Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above, and ensure schema creation is successful.

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.

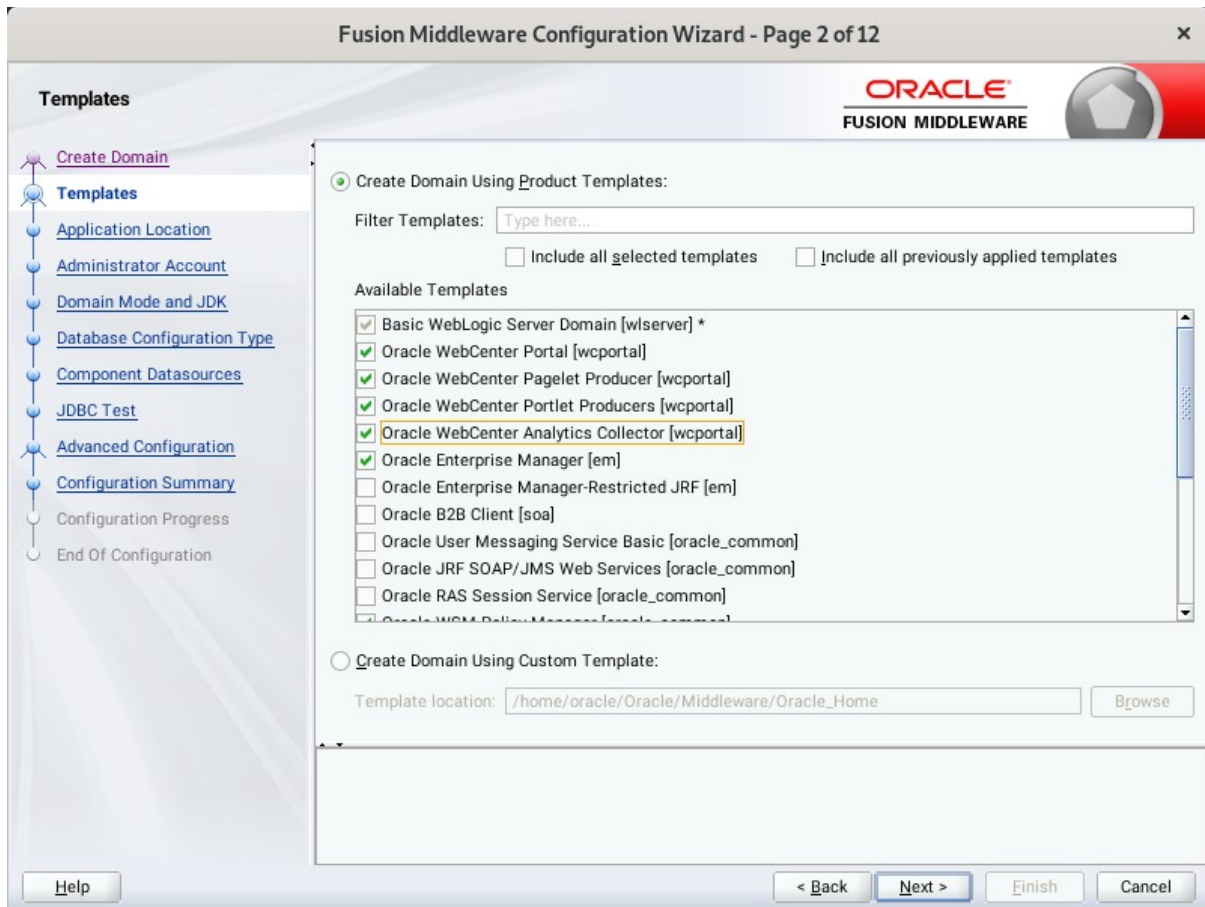
Follow these steps:

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:

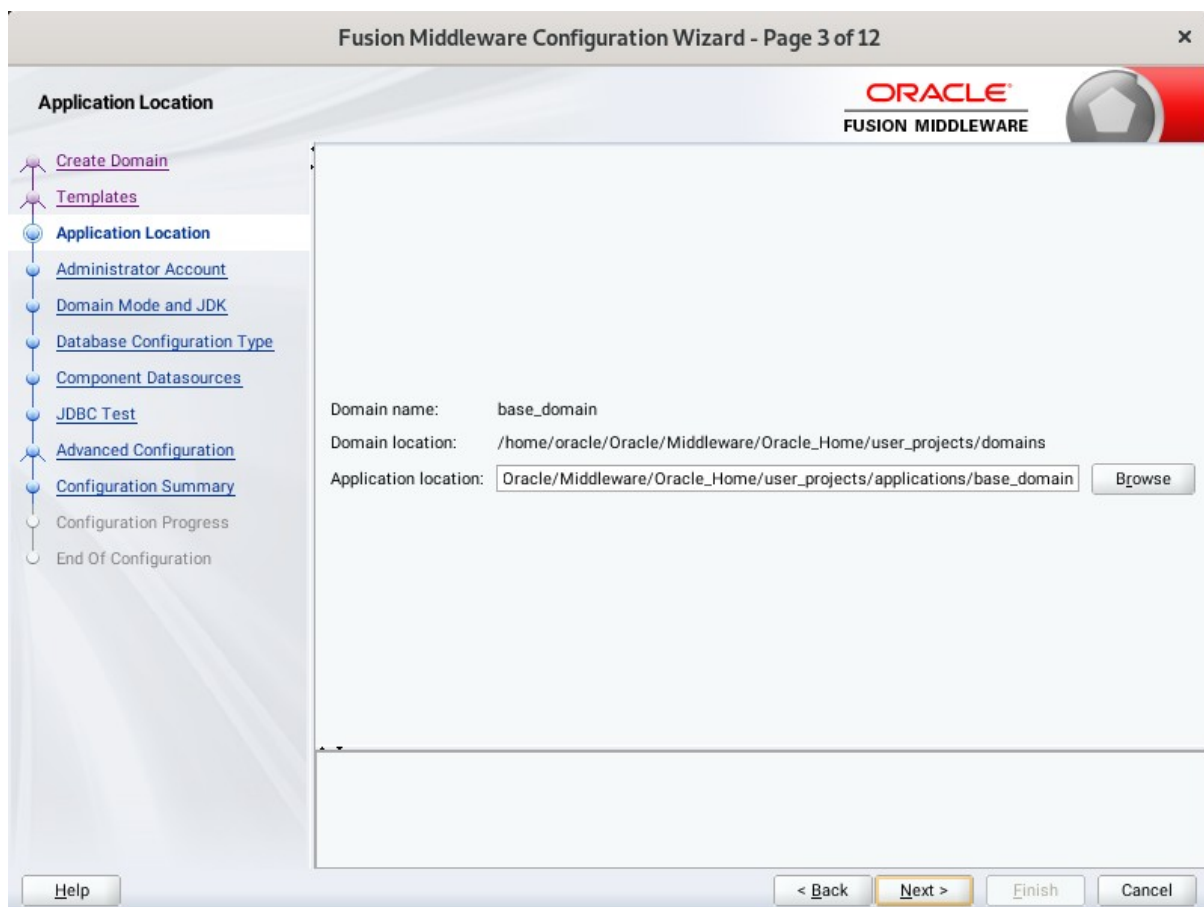
- Oracle WebCenter Portal [wcportal]

Selecting this template automatically selects the following as dependencies:

- Oracle Enterprise Manager
- Oracle WSM Policy Manager
- Oracle JRF
- WebLogic Coherence Cluster Extension

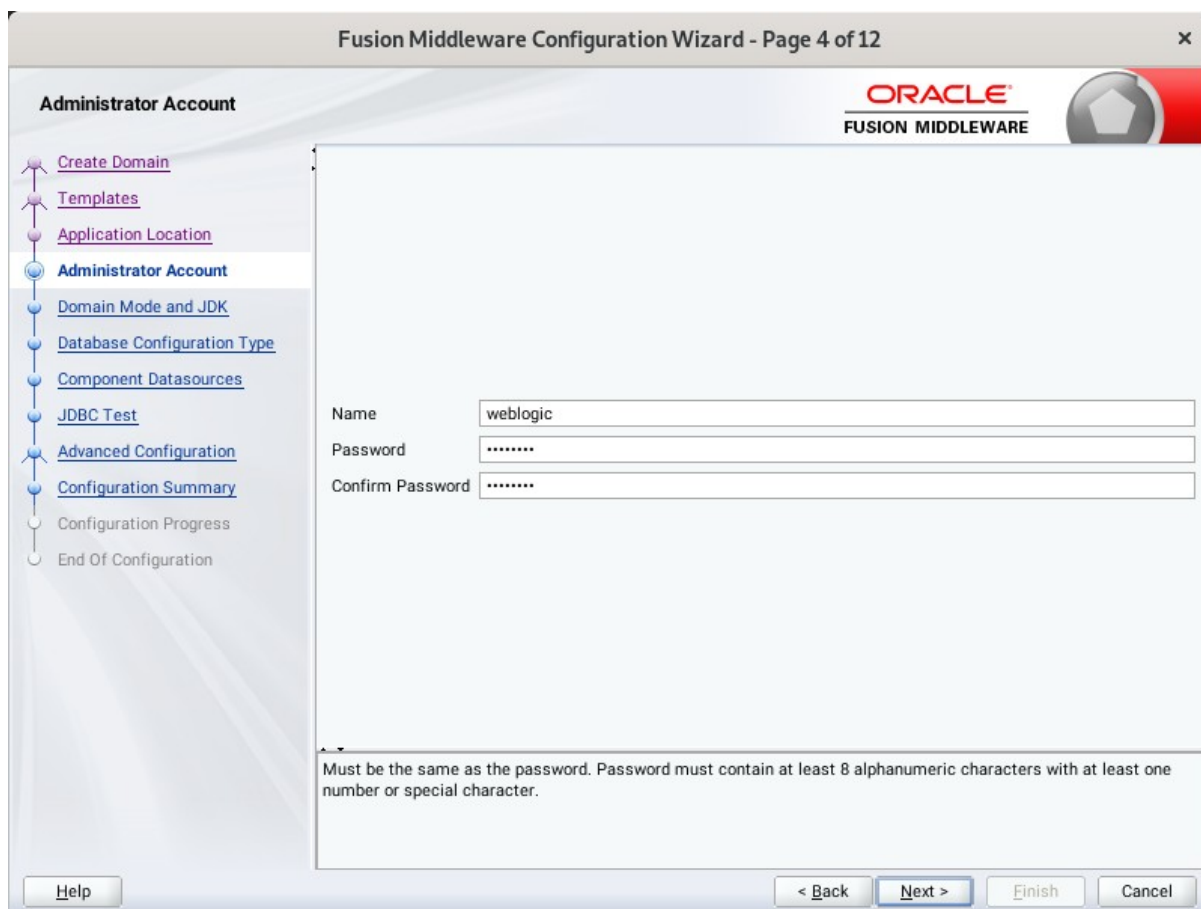
You can also select any of the Oracle WebCenter Portal products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



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

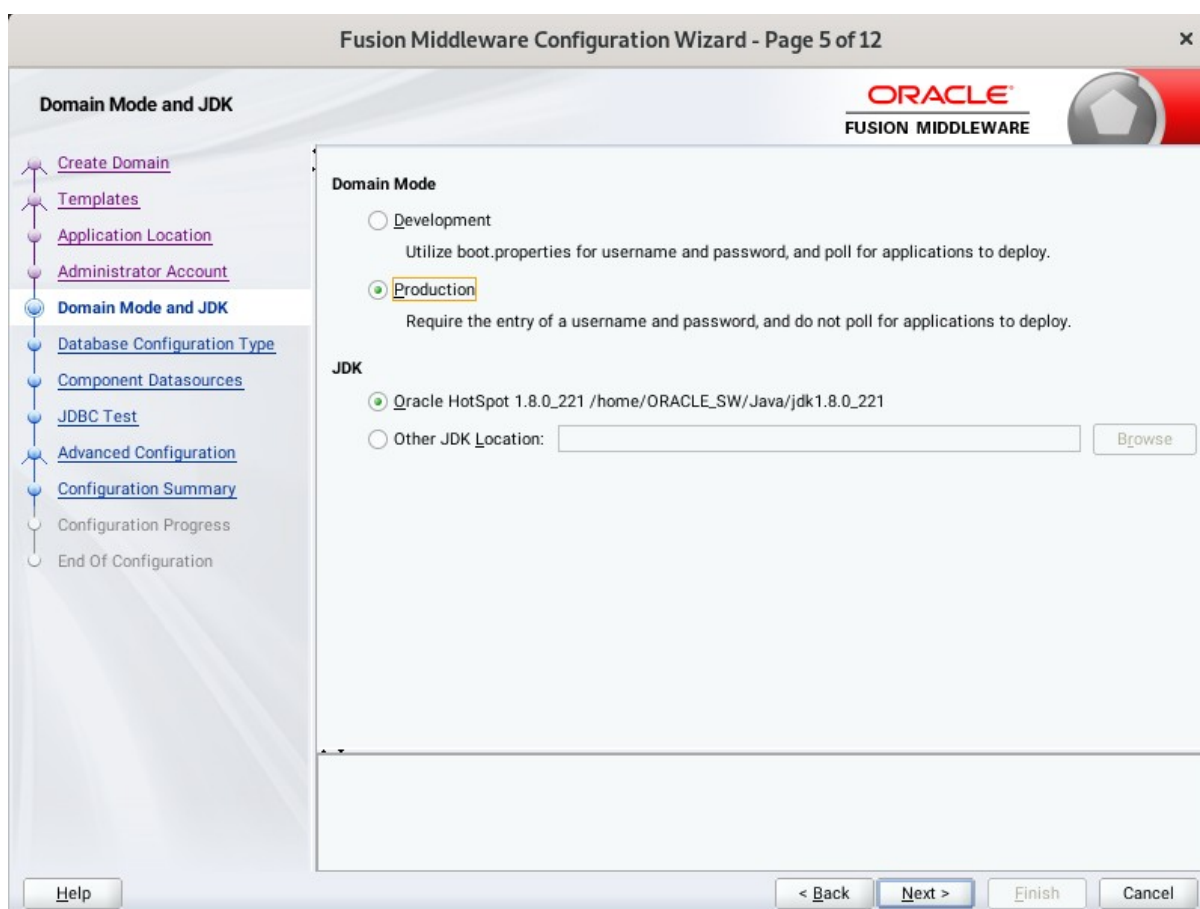
4). The **Administrator Account** screen appears.



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 Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane 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 these 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.

Fusion Middleware Configuration Wizard - Page 6 of 12

Database Configuration Type

ORACLE
FUSION MIDDLEWARE

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

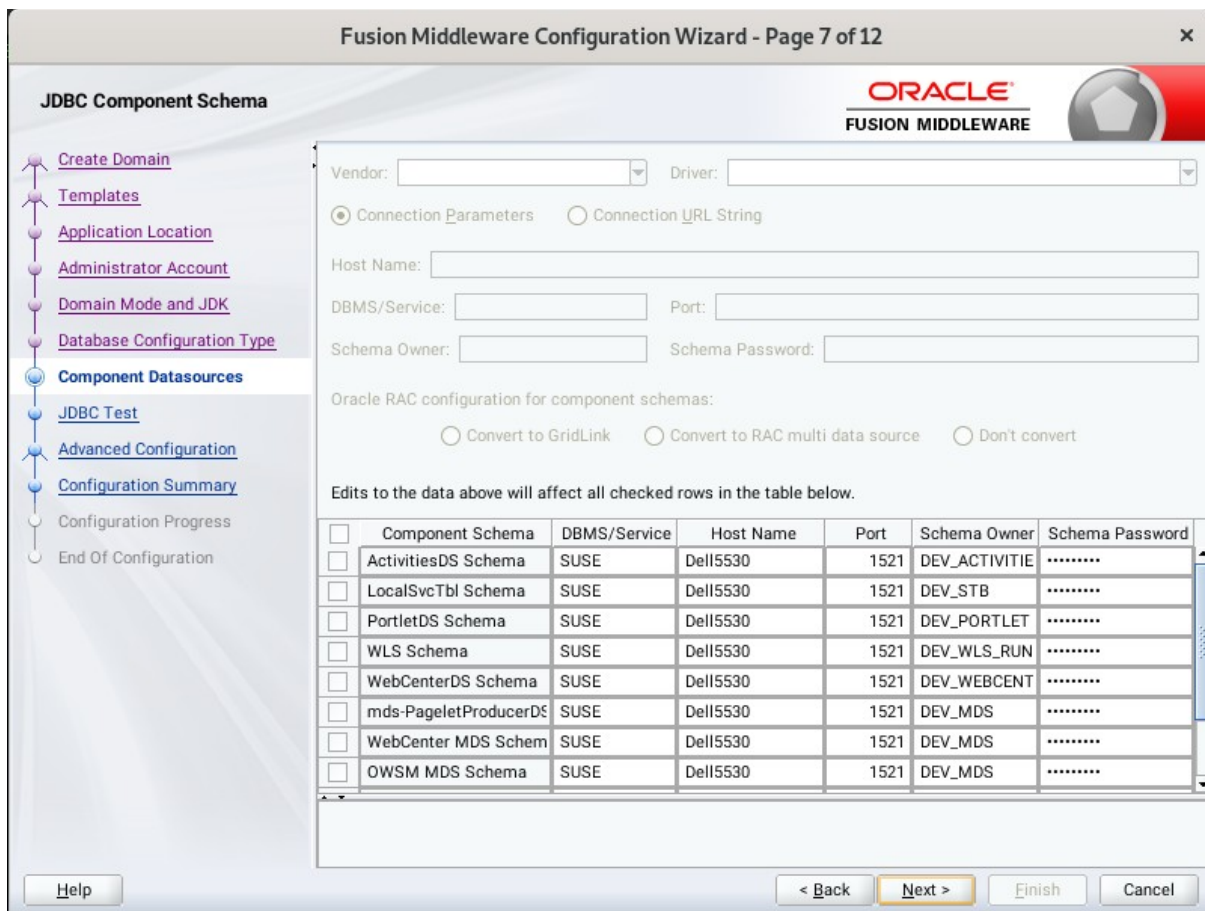
Successfully Done.

Click "Next" button to continue.

Help < Back Next > Finish Cancel

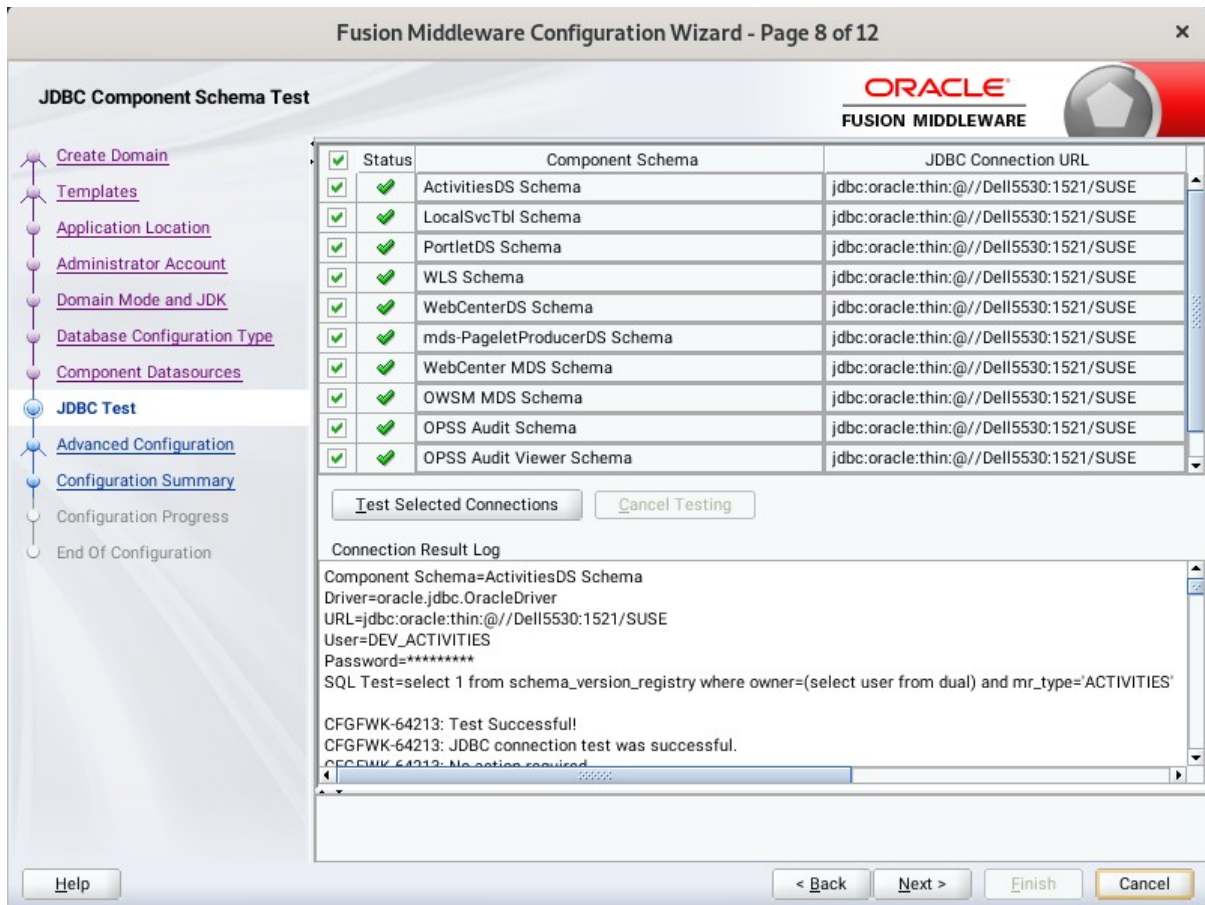
Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

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



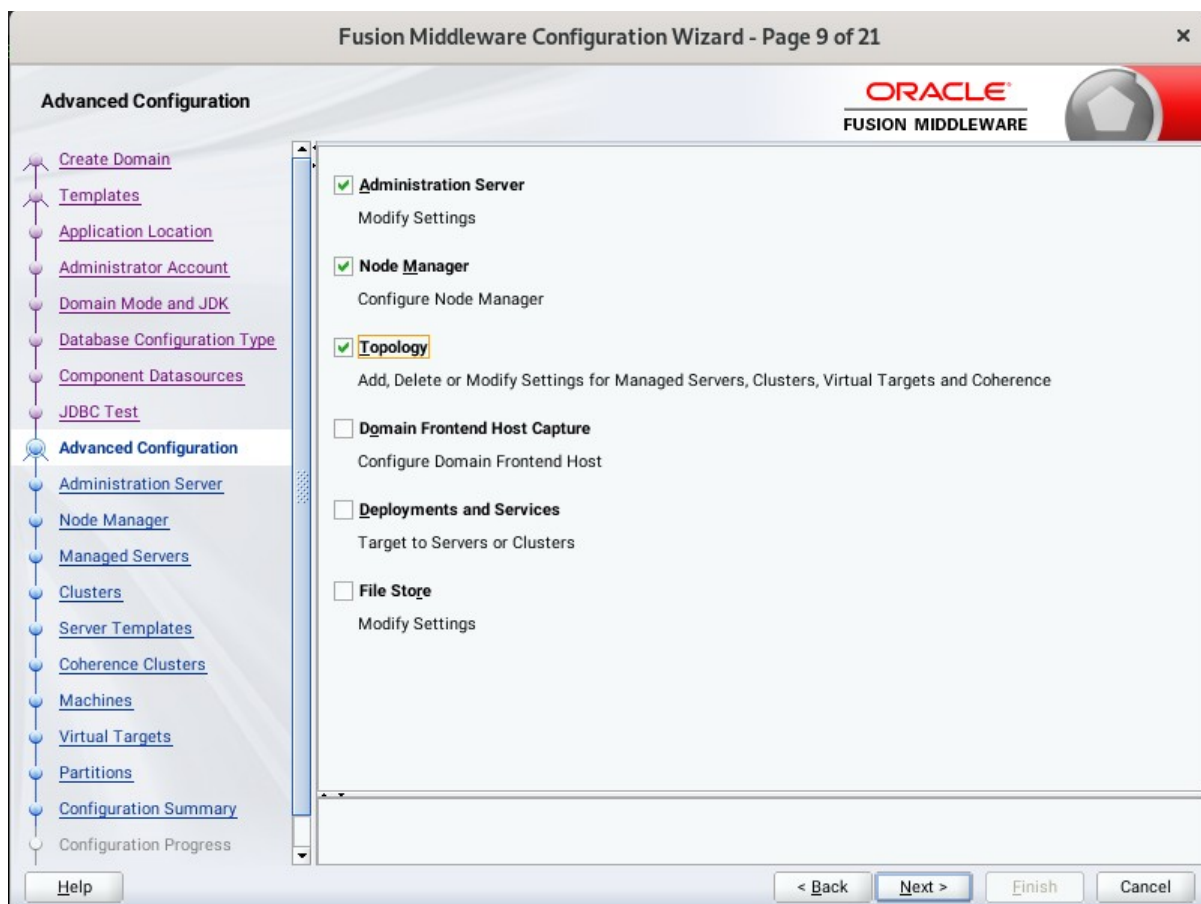
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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.

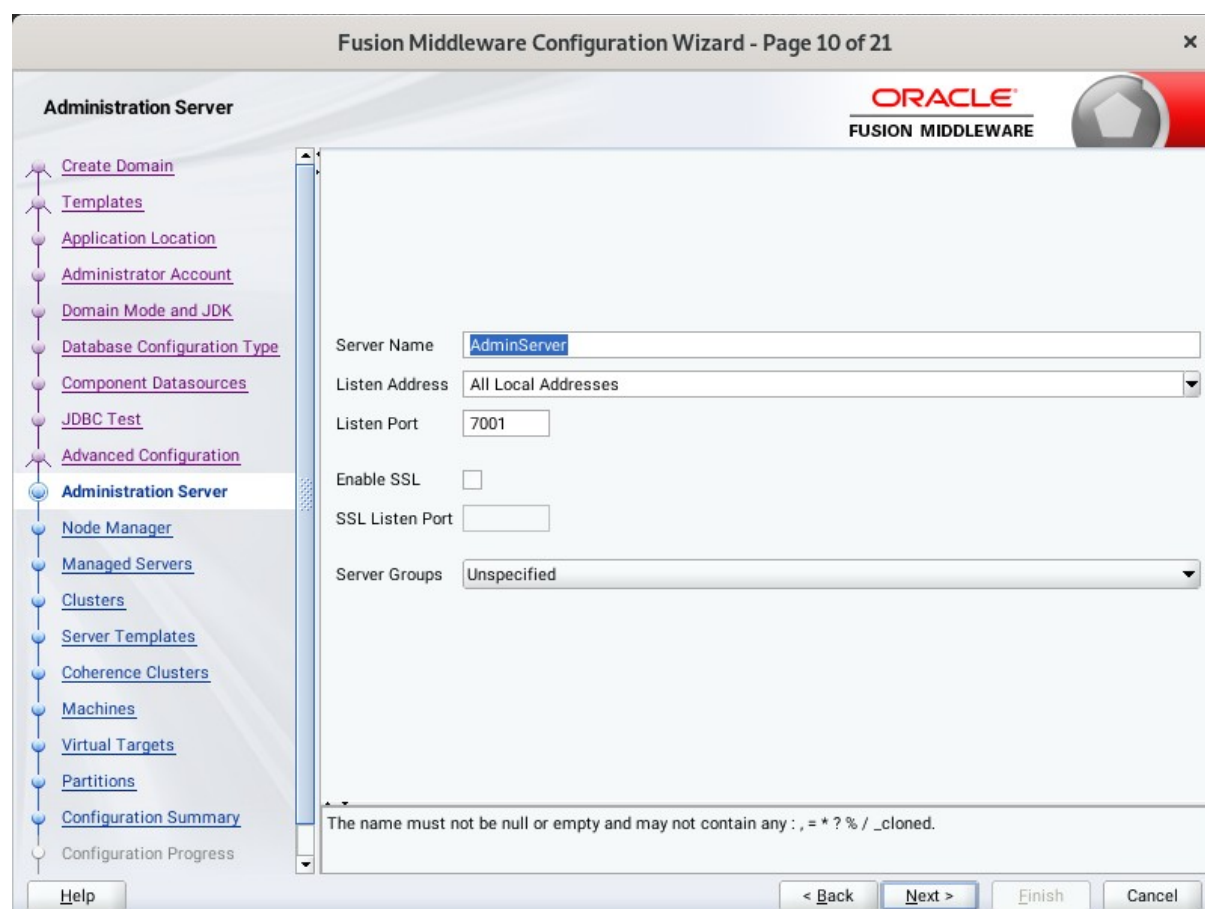


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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



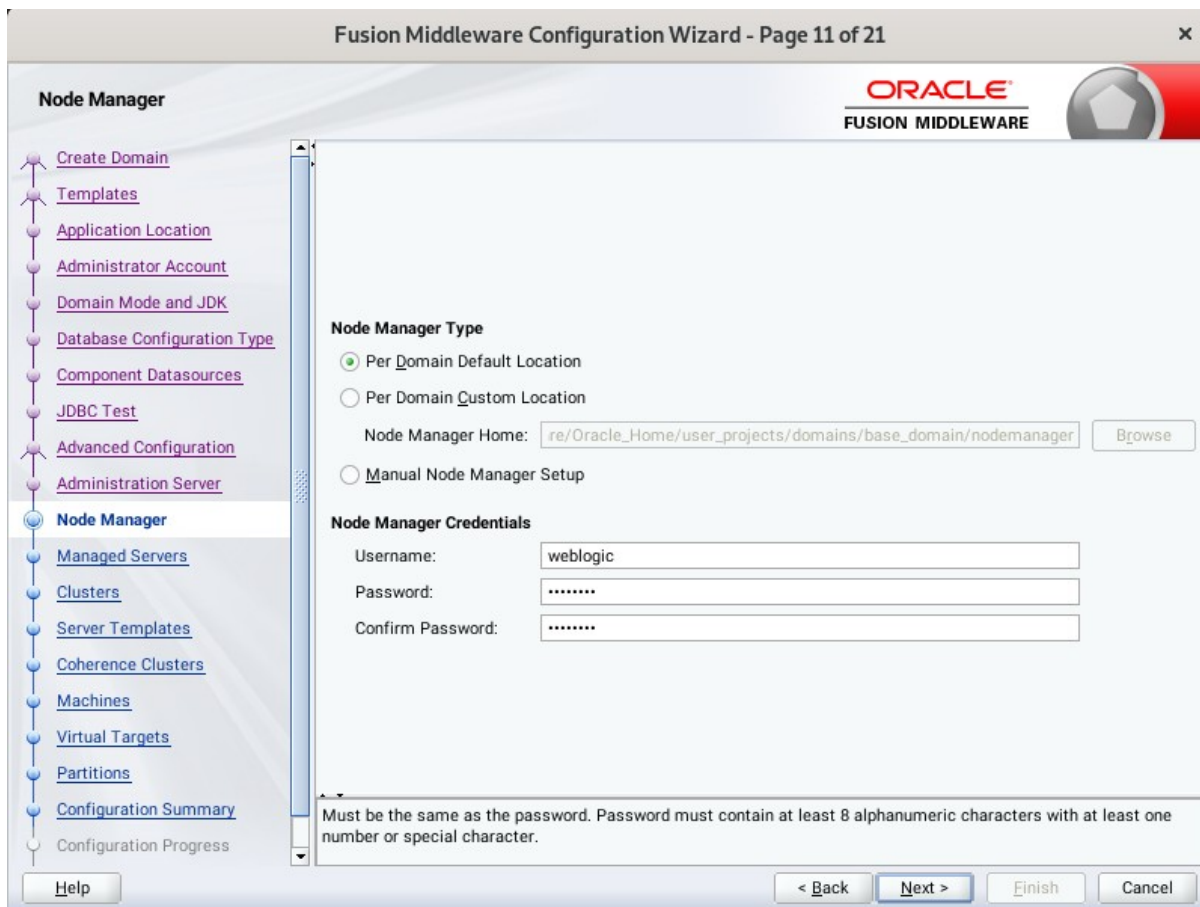
The screenshot shows the 'Administration Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 21'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists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

- Server Name:
- Listen Address:
- Listen Port:
- Enable SSL:
- SSL Listen Port:
- Server Groups:

At the bottom, there is a validation message: 'The name must not be null or empty and may not contain any : , * ? % / _cloned.' Below this message are four buttons: '< 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.



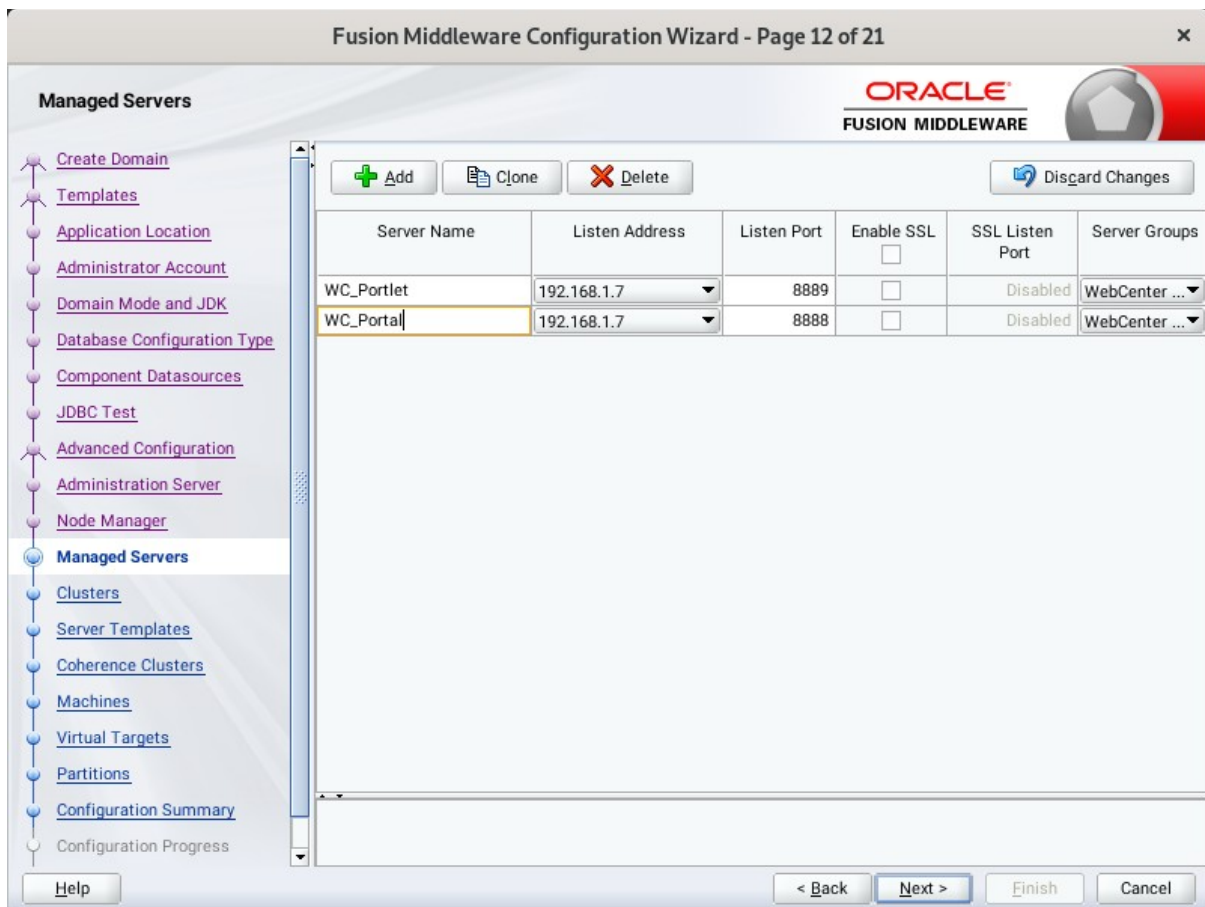
The screenshot shows the "Node Manager" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 11 of 21". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with "Node Manager" selected and highlighted in blue. The main area contains the following sections:

- Node Manager Type**:
 - Per Domain Default Location
 - Per Domain Custom Location
- Node Manager Home**: A text field containing the path `/re/Oracle_Home/user_projects/domains/base_domain/nodemanager` and a "Browse" button.
- Node Manager Credentials**:
 - Username: `weblogic`
 - Password: `*****`
 - Confirm Password: `*****`

A warning message 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 "< Back", "Next >", "Finish", and "Cancel". A "Help" button is located at the bottom left.

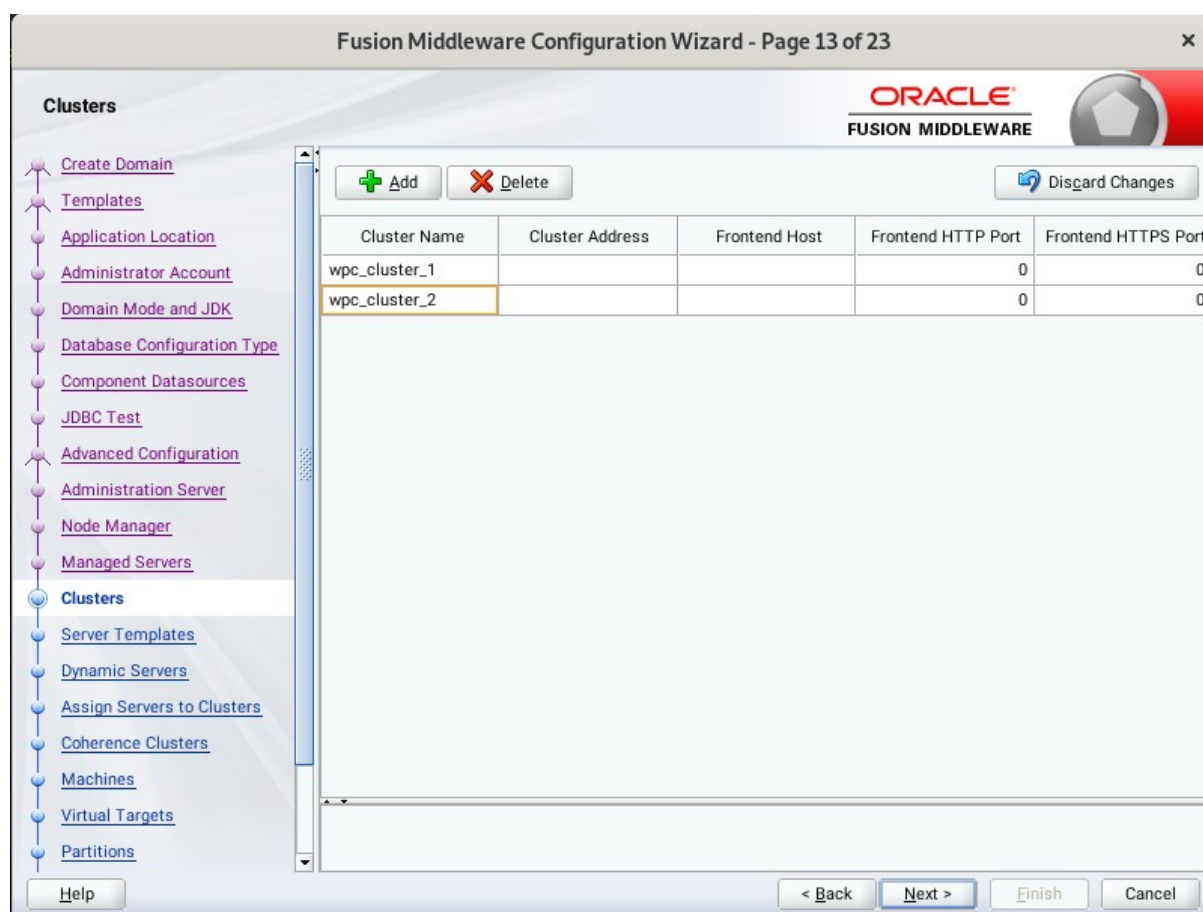
Select **Per Domain Default Location** as the Node Manager type, then specify Node Manager credentials. Click **Next** to continue.

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



On the **Managed Servers** screen, new Managed Servers named *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.

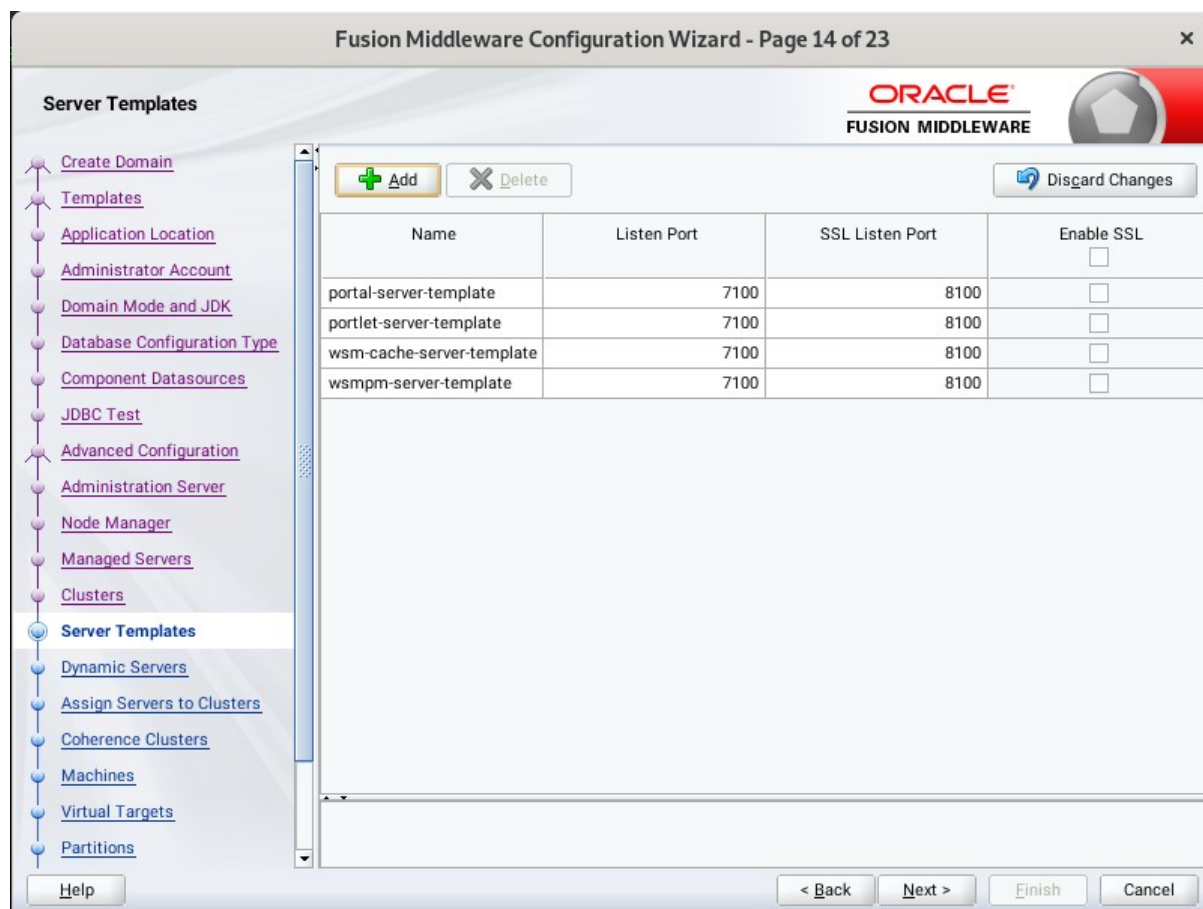


On the Clusters screen:

1. Click **Add**.
2. Specify **wcp_cluster_1** in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create one more clusters: **wcp_cluster_2**.

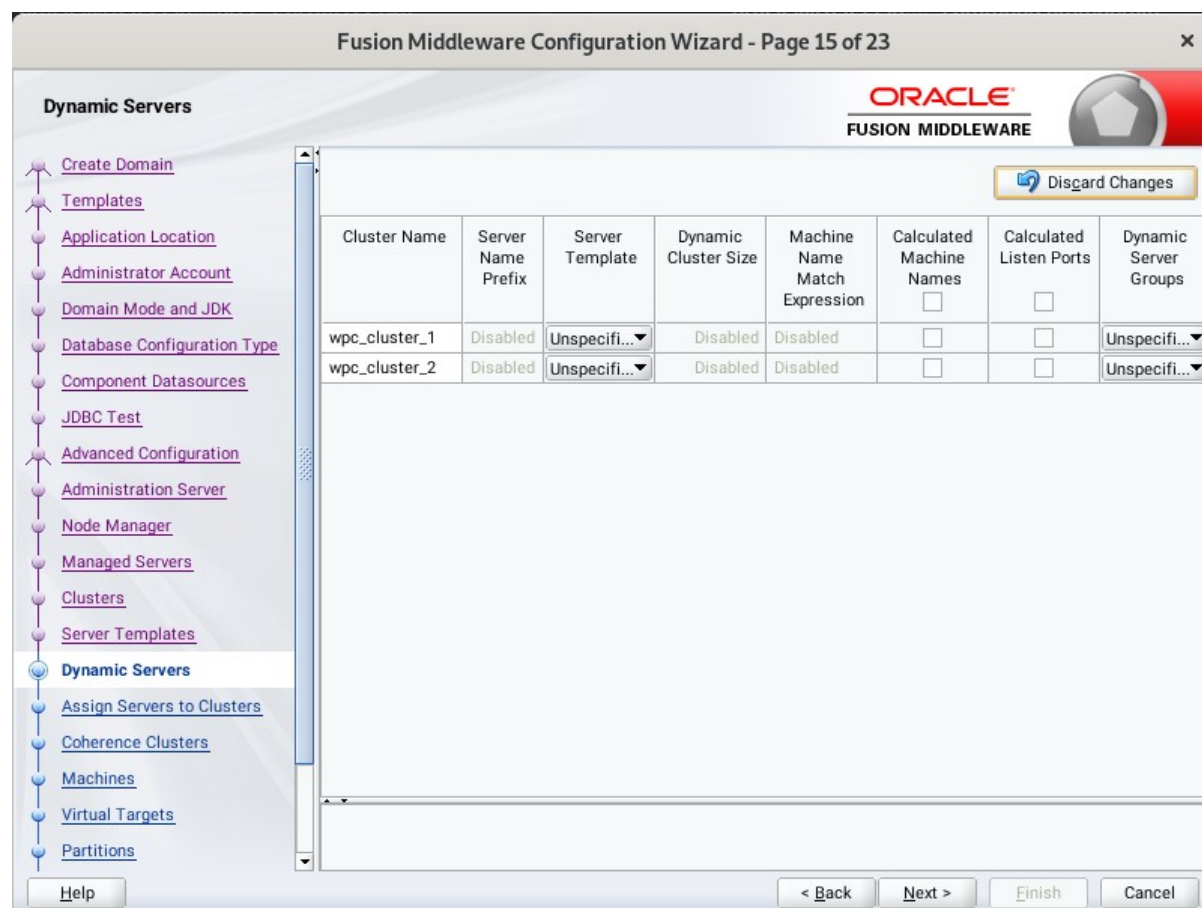
Click **Next** to continue.

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



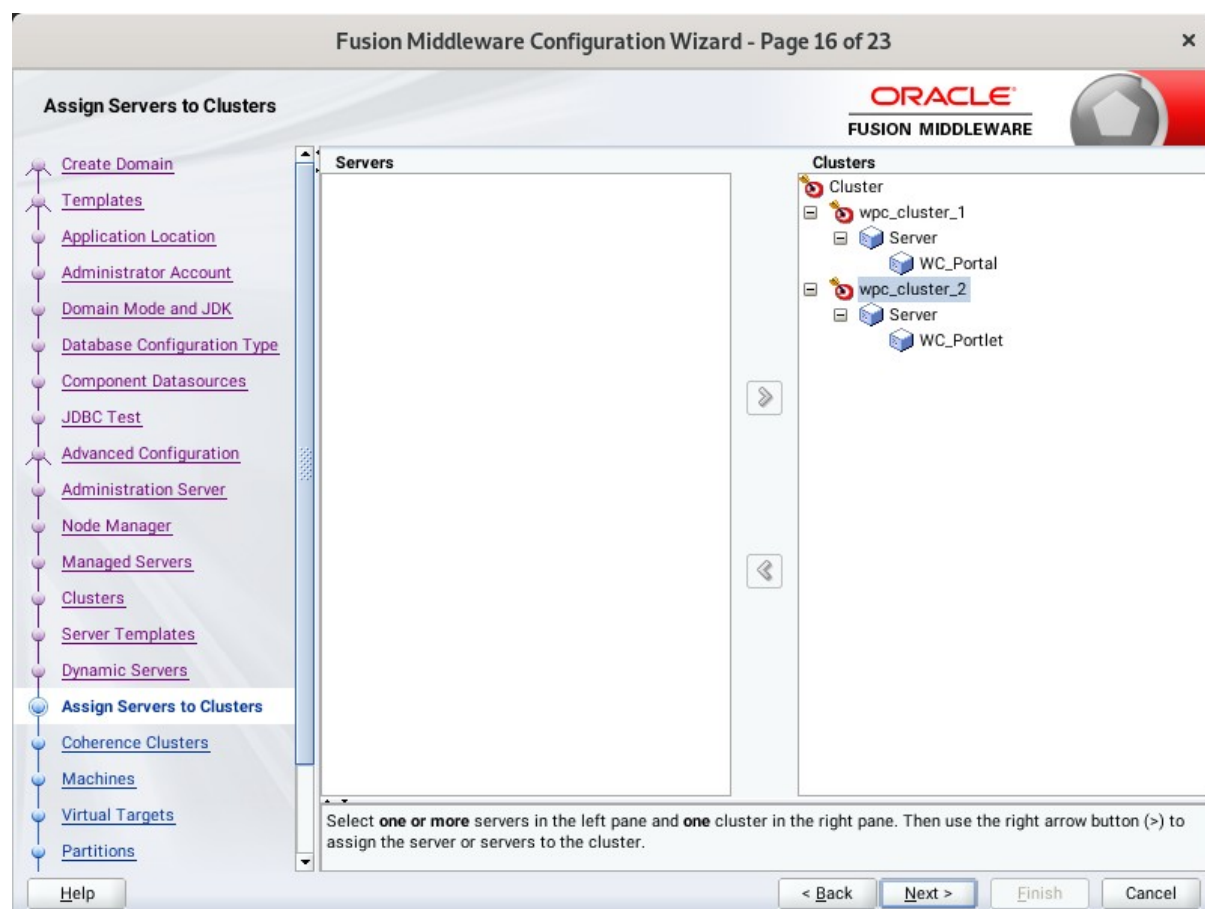
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



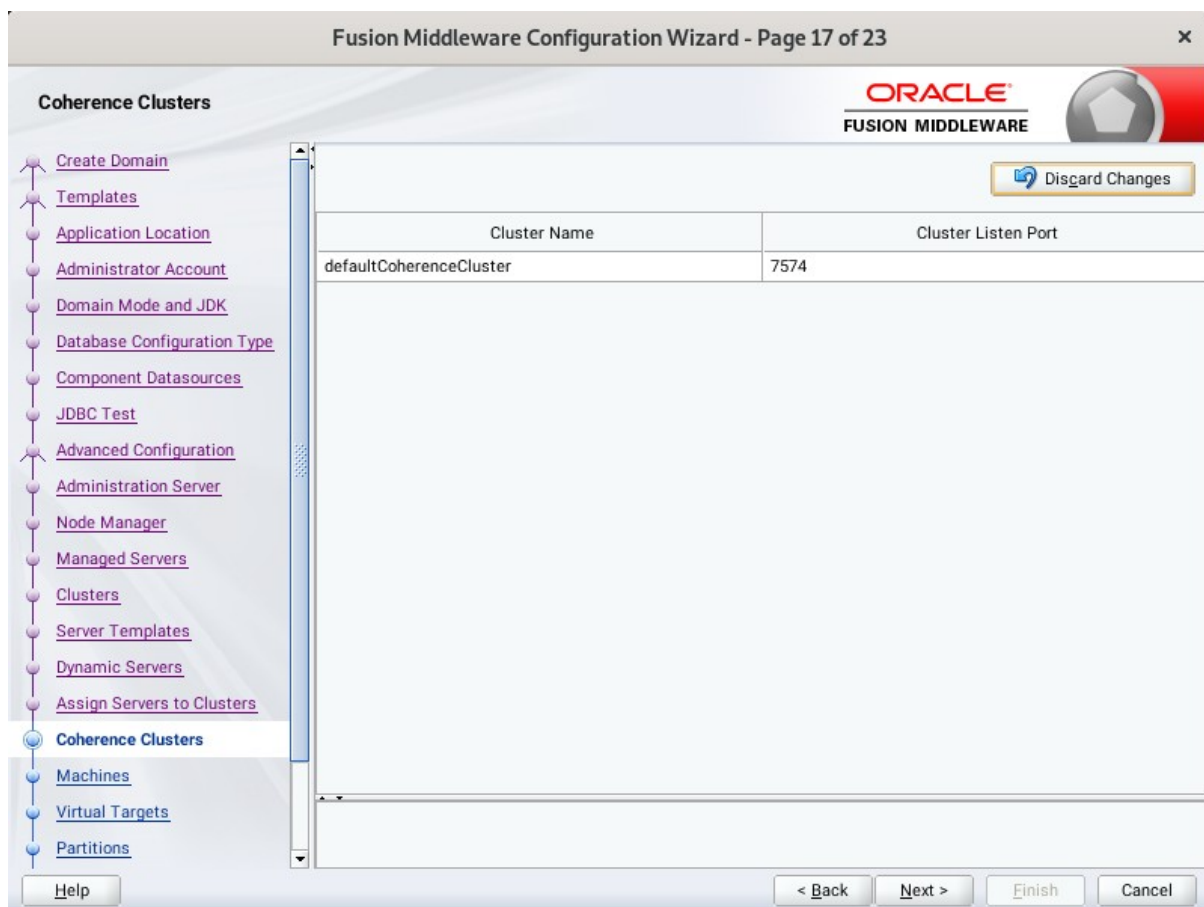
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



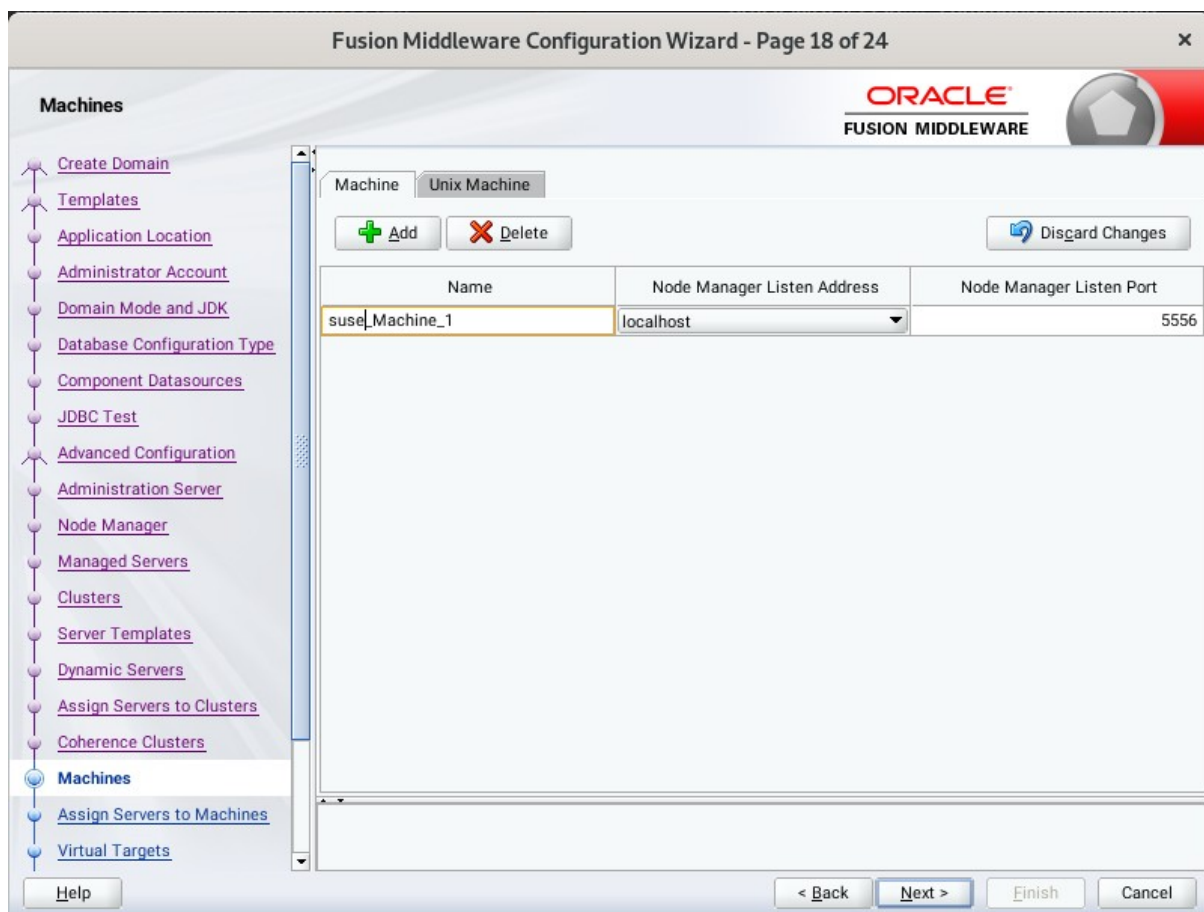
In the Clusters pane, select the cluster to which you want to assign the servers; in this case, **wcp_cluster_1**. In the Servers pane, assign **WC_Portal** to **wcp_cluster_1**, then repeat to assign **WC_Portlet** to **wcp_cluster_2**. Click **Next** to continue.

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



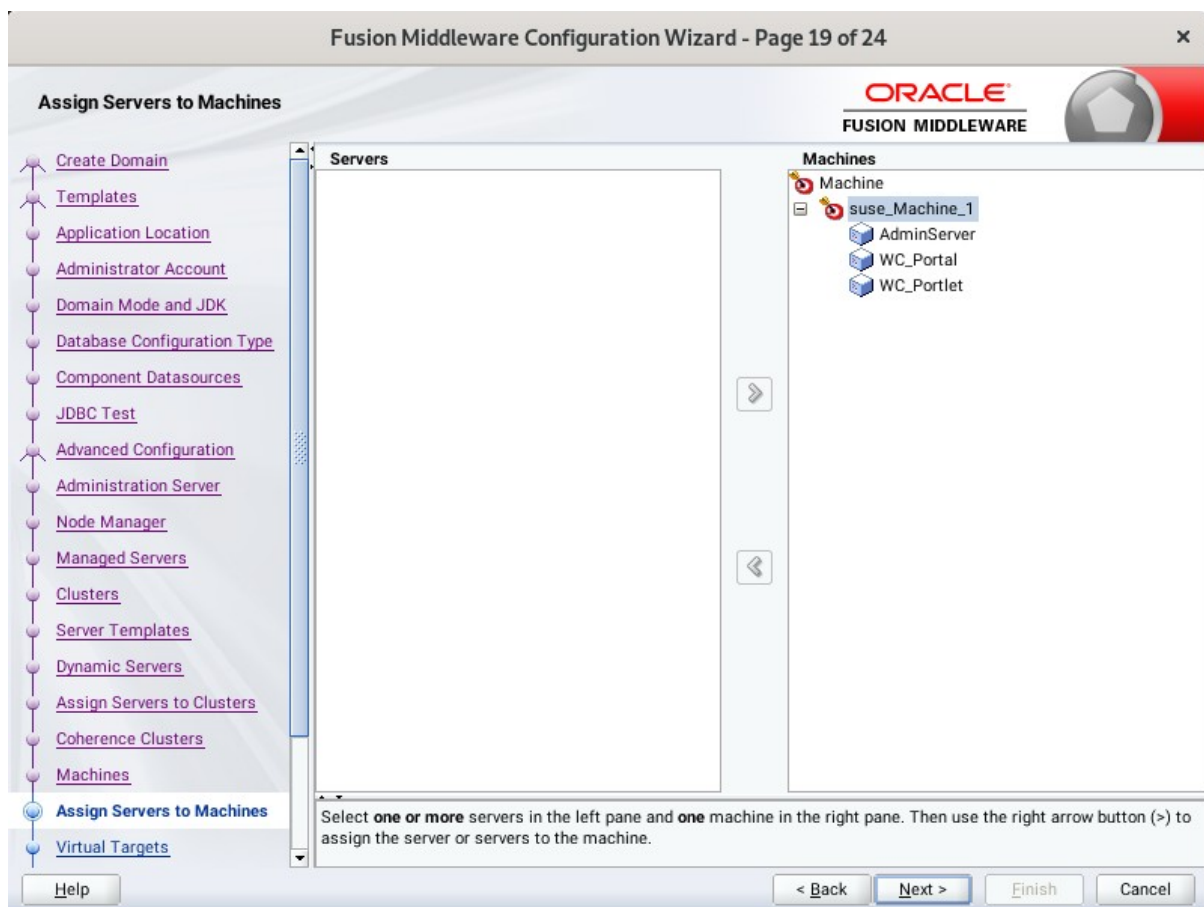
Leave the default port number as the Coherence cluster listen port. Click **Next** to continue.

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



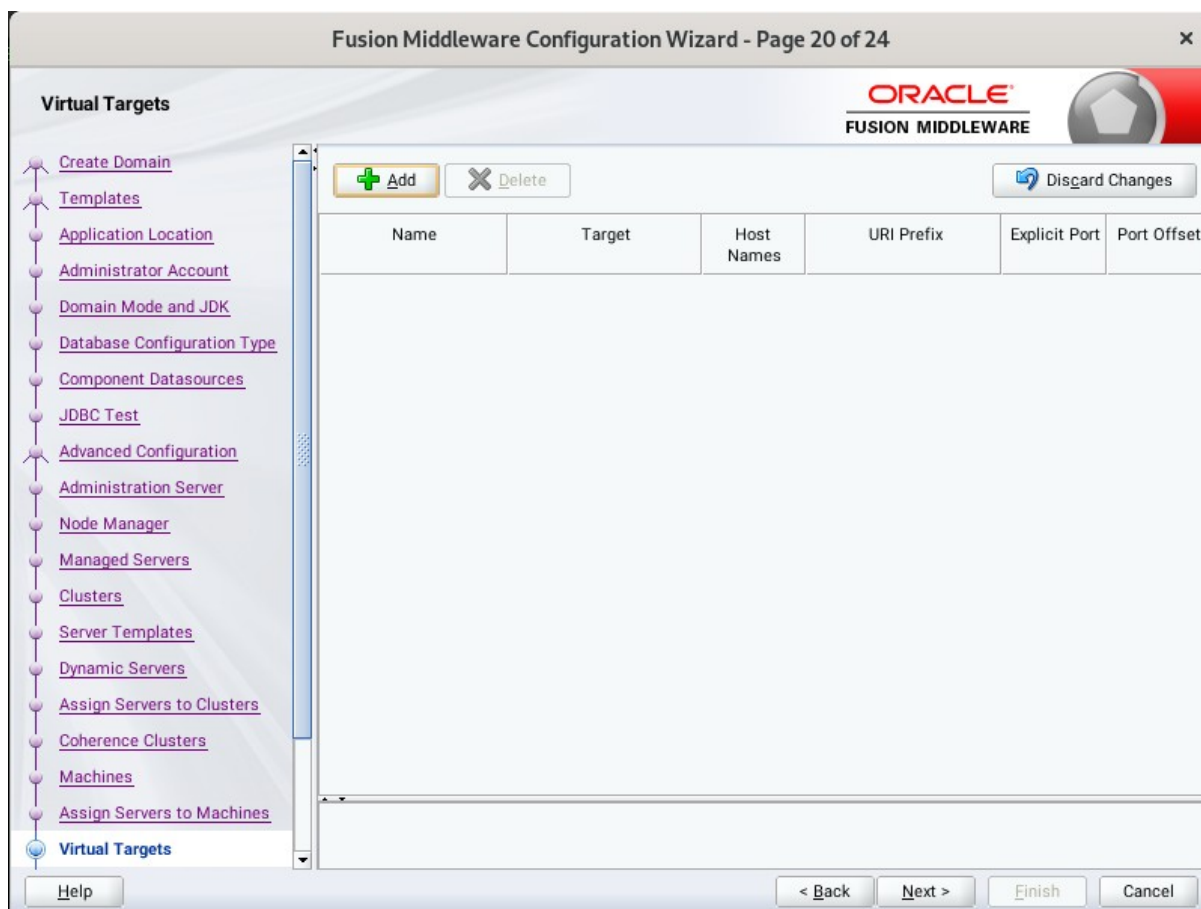
To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



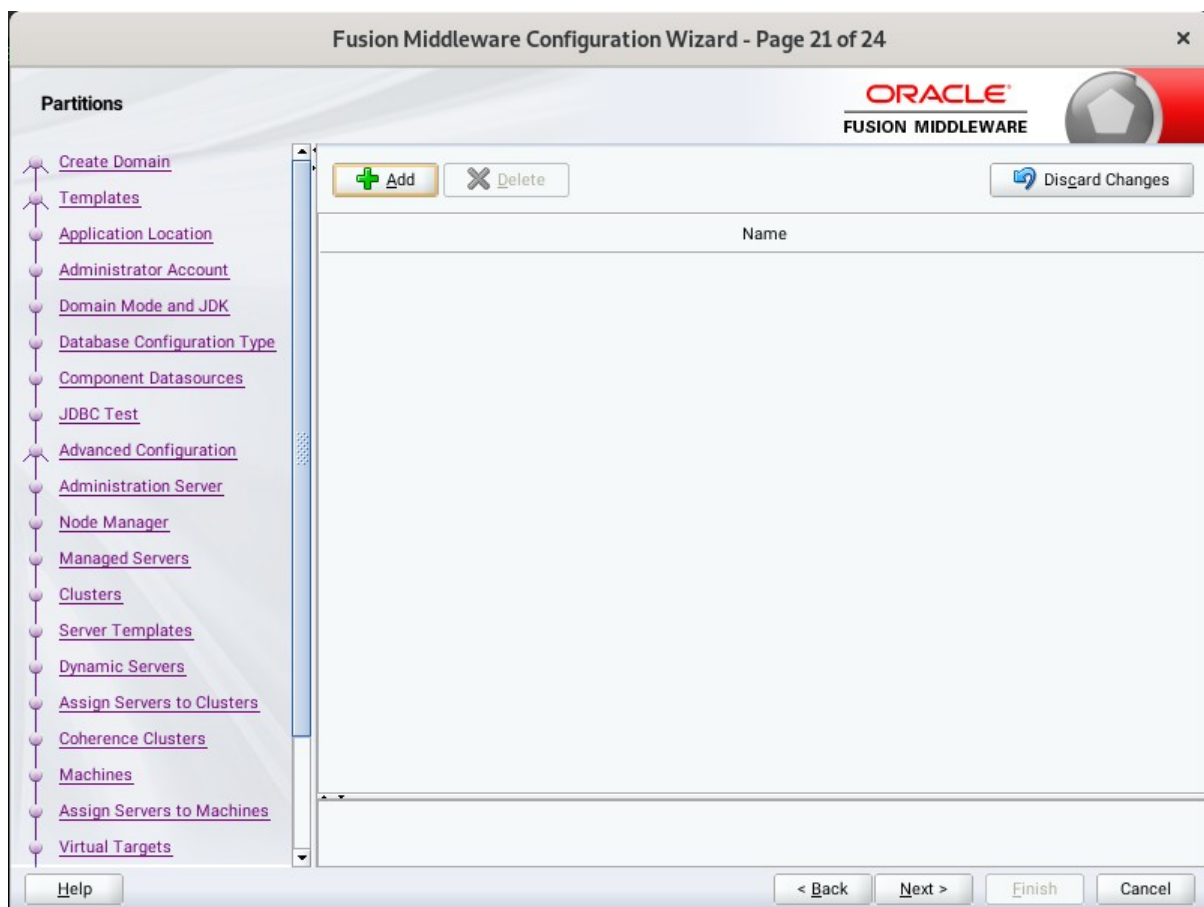
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



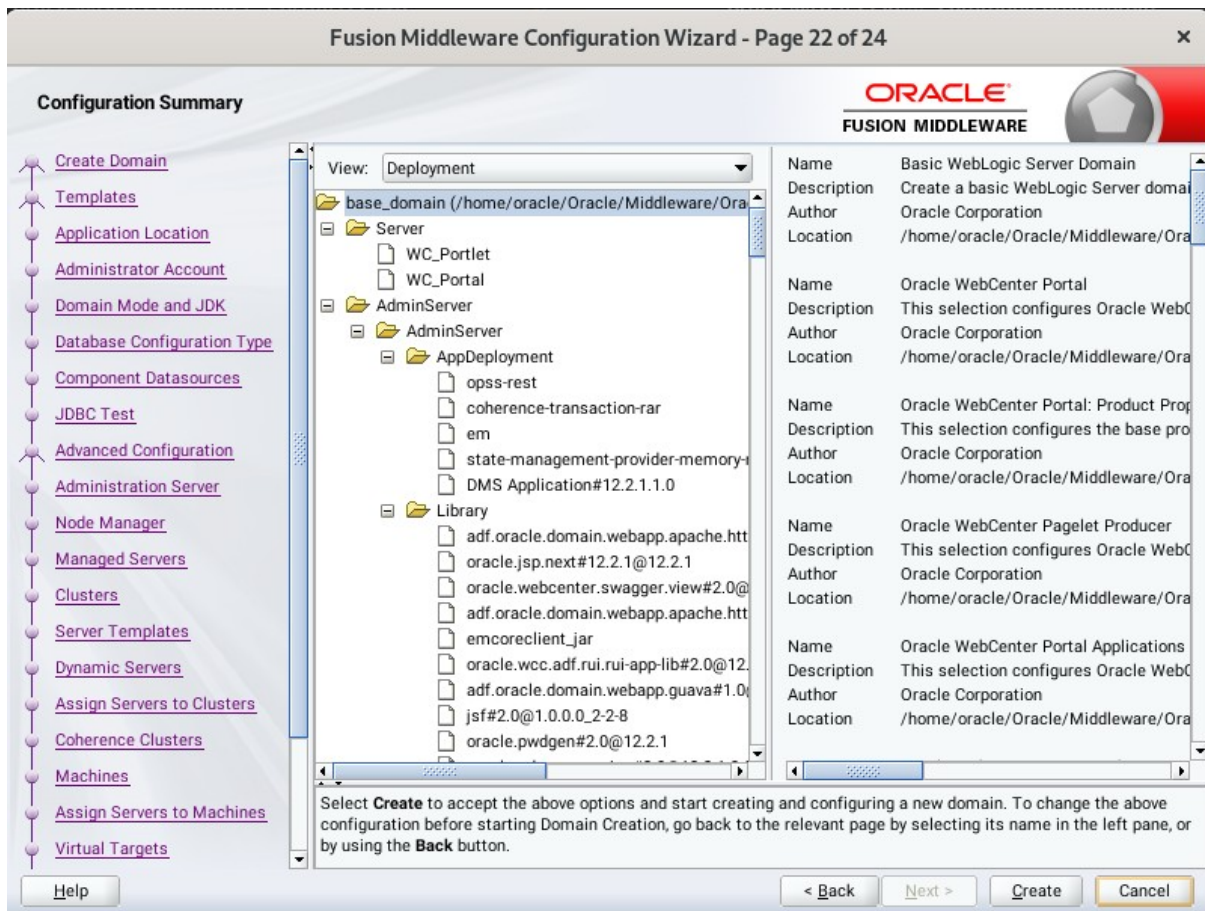
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



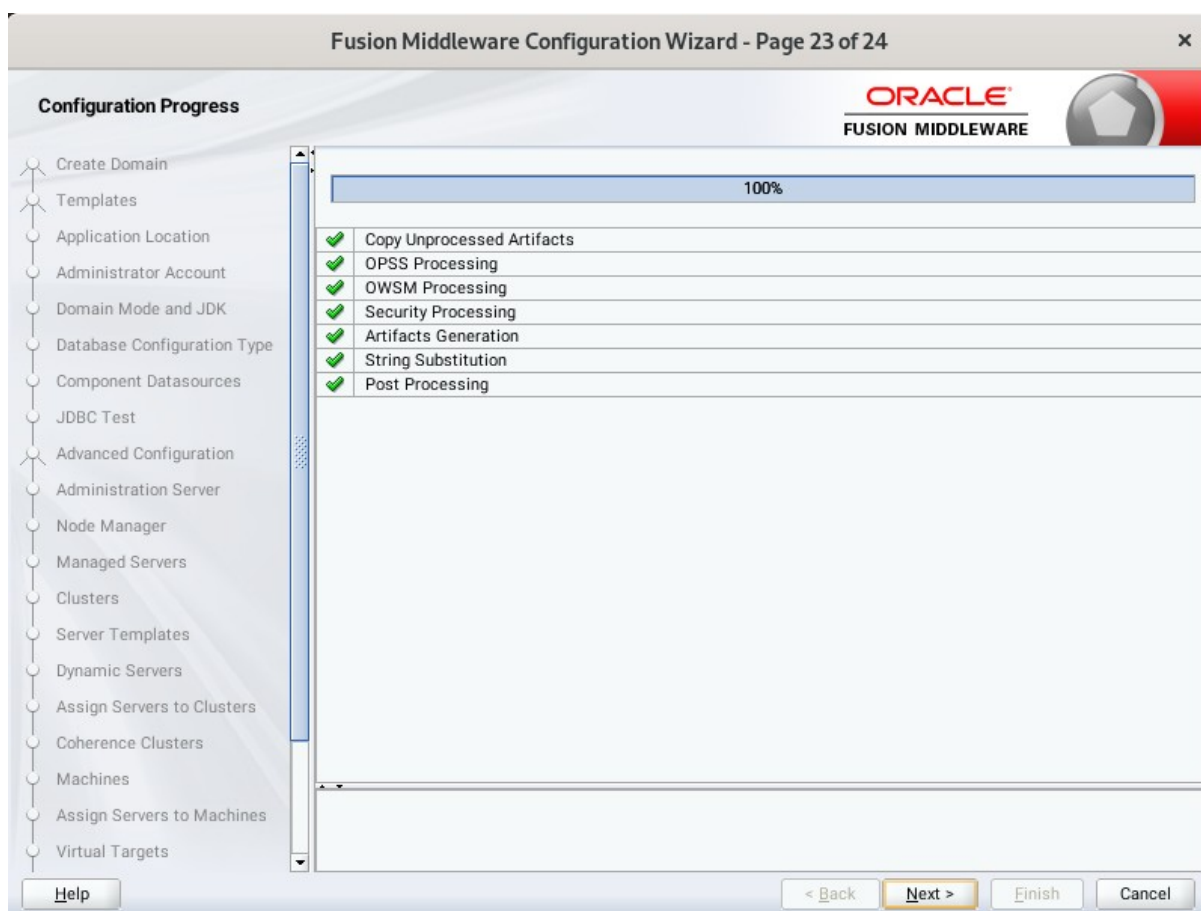
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



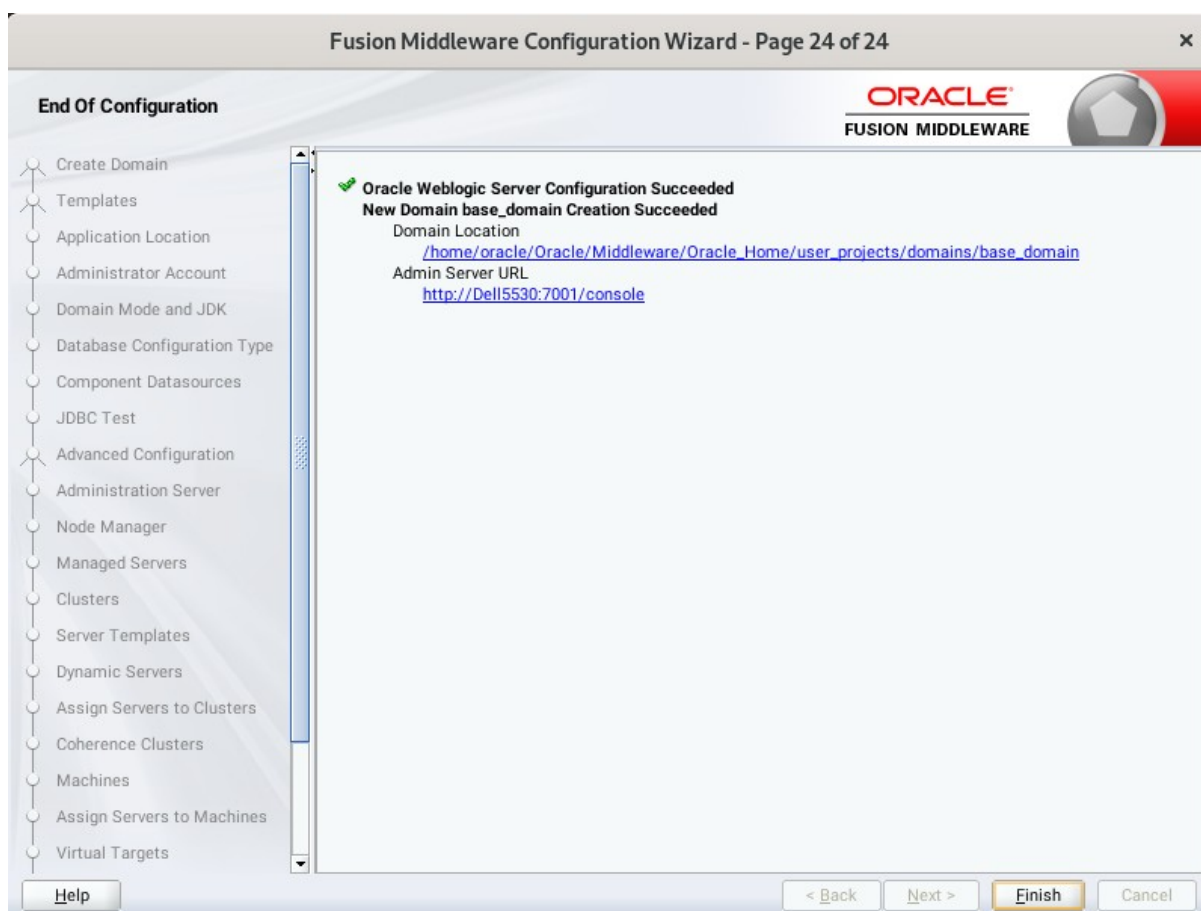
Select **Create** to accept the above options and start creating and configuring a new domain.

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/b... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh
> nm.out&
[1] 12378
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup: ignoring input and re
directing 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/Oracle/Middleware/Oracle_Home/wlserver/..:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblo
gic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..:/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 -Dwe
blogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=c
om.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/se
rver/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Sep 3, 2021 8:12:21 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/doma
ins/base_domain/nodemanager/nodemanager.domains>
<Sep 3, 2021 8:12:22 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Sep 3, 2021 8:12:22 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware
/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Sep 3, 2021 8:12:22 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/doma
ins/base_domain/nodemanager/nodemanager.domains>
<Sep 3, 2021 8:12:22 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhras
eUsed=true>
Sep 03, 2021 8:12:22 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
Sep 03, 2021 8:12:22 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 credent
ials. If required, use Wlst or configuration management interfaces.
<Sep 3, 2021 8:12:22 PM GMT+08:00> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Or
acle_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
2021-09-03 20:17:29.355/231.156 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Sep 3, 2021 8:17:32,390 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ign
oring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Sep 3, 2021 8:17:33,210 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conne
ction with the Domain level Diagnostic Service.>
2021-09-03 20:17:33.220/235.021 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '2' for queue: 'weblogi
c.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"
2021-09-03 20:17:33.264/235.065 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '2' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Sep 3, 2021 8:17:33,740 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Sep 3, 2021 8:17:33,785 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Sep 3, 2021 8:17:33,785 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving con
nection list DomainRuntimeServiceMBean>
2021-09-03 20:17:36.744/238.545 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '0' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST
<Sep 3, 2021 8:17:37,661 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:1.>
<Sep 3, 2021 8:17:37,664 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Sep 3, 2021 8:17:37,664 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Serv
er "AdminServer" for domain "base_domain" running in production mode.>
<Sep 3, 2021 8:17:37,664 PM GMT+08:00> <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.>
<Sep 3, 2021 8:17:37,665 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Sep 3, 2021 8:17:37,665 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Sep 3, 2021 8:17:37,665 PM GMT+08:00> <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.>
<Sep 3, 2021 8:17:37,665 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Sep 3, 2021 8:17:37,672 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Sep 3, 2021 8:17:37,726 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

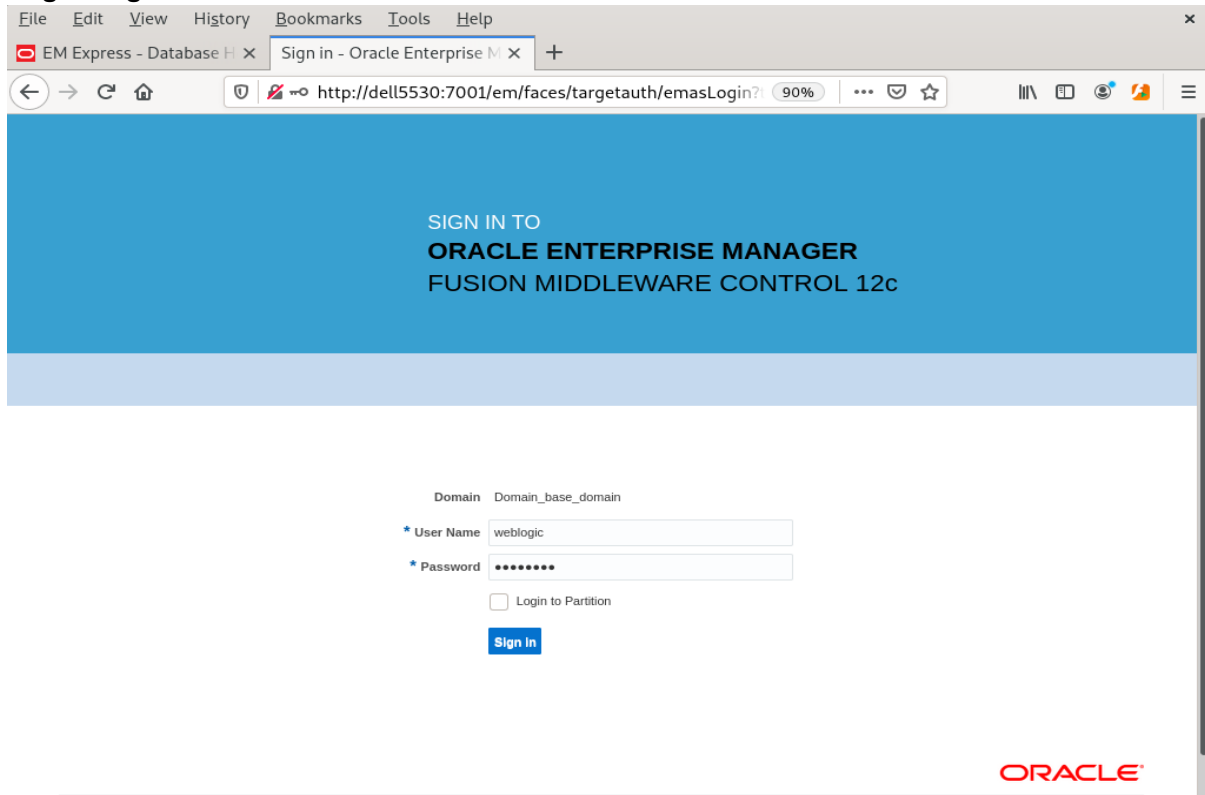
You know that the administrator server is running when you see the following output:

The server started in RUNNING mode.

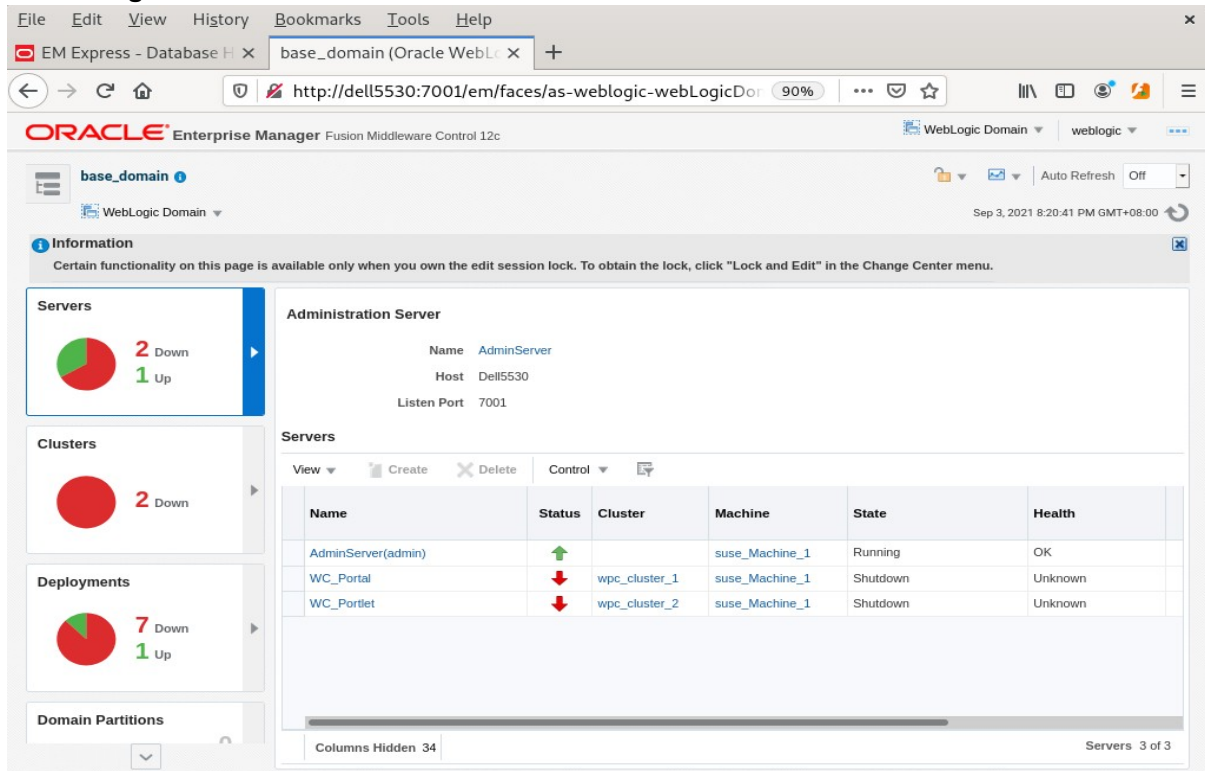
4-3. Checking Oracle WebCenter Product URLs.

1). Access to Enterprise Manager Console.

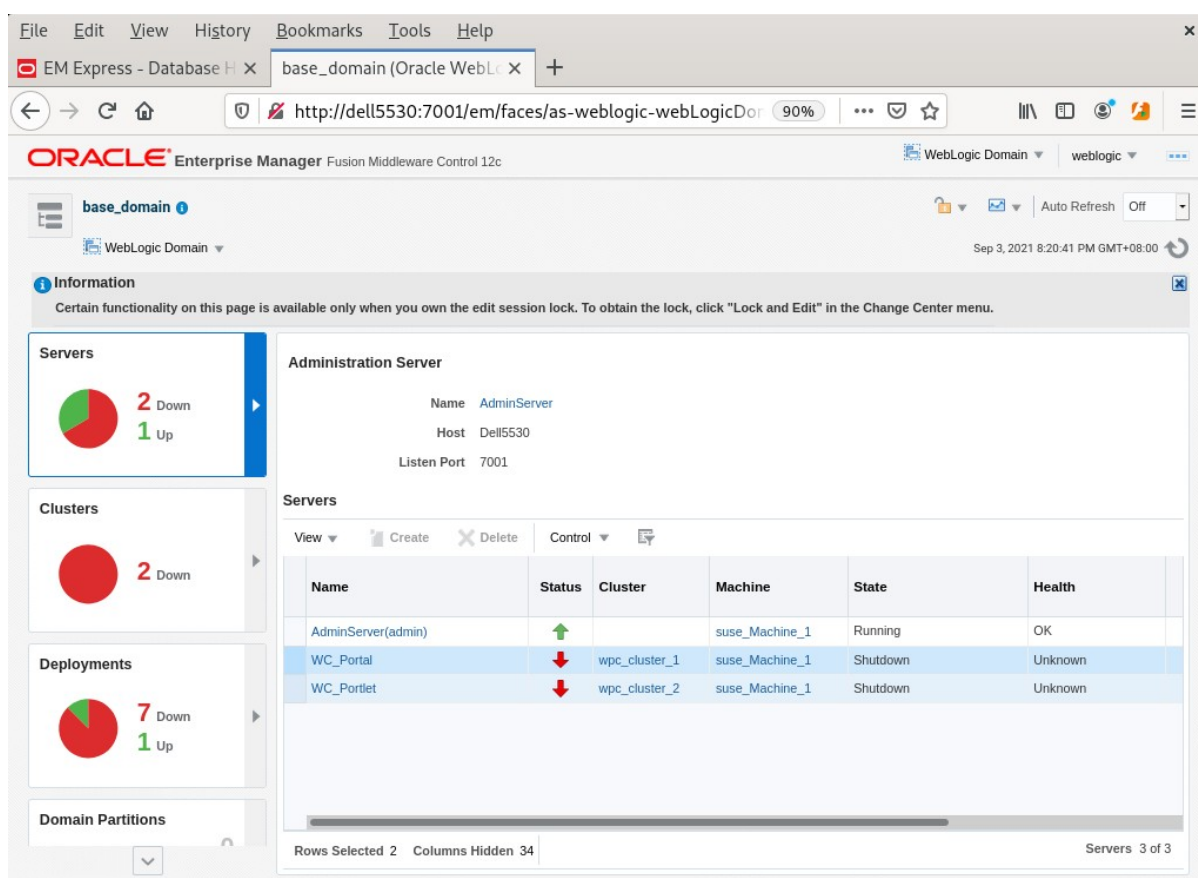
Login Page:



Home Page:



Starting the Oracle WebCenter Portal Managed Servers:



The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface for the 'base_domain'. The 'Servers' section is active, displaying a table of managed servers. The 'WC_Portal' and 'WC_Portlet' servers are selected, indicated by blue highlighting. The 'WC_Portal' server is in a 'Shutdown' state with 'Unknown' health, and the 'WC_Portlet' server is also in a 'Shutdown' state with 'Unknown' health. The 'AdminServer' is in a 'Running' state with 'OK' health.

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

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.

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain. On the left, there are summary cards for Servers (2 Down, 1 Up), Clusters (2 Down), Deployments (7 Down, 1 Up), and Domain Partitions. The main area displays the 'Administration Server' details and a table of managed servers. A 'Control' dropdown menu is open over the table, showing options: Start, Resume, Suspend, Shutdown, and Restart SSL. The table data is as follows:

Name	Machine	State	Health
AdminServer(admin)	suse_Machine_1	Running	OK
WC_Portal	suse_Machine_1	Shutdown	Unknown
WC_Portlet	suse_Machine_1	Shutdown	Unknown

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

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 7 Up deployments. The table of managed servers is updated as follows:

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_Machine_1	Running	OK
WC_Portal	↑	wpc_cluster_1	suse_Machine_1	Running	OK
WC_Portlet	↑	wpc_cluster_2	suse_Machine_1	Running	OK

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

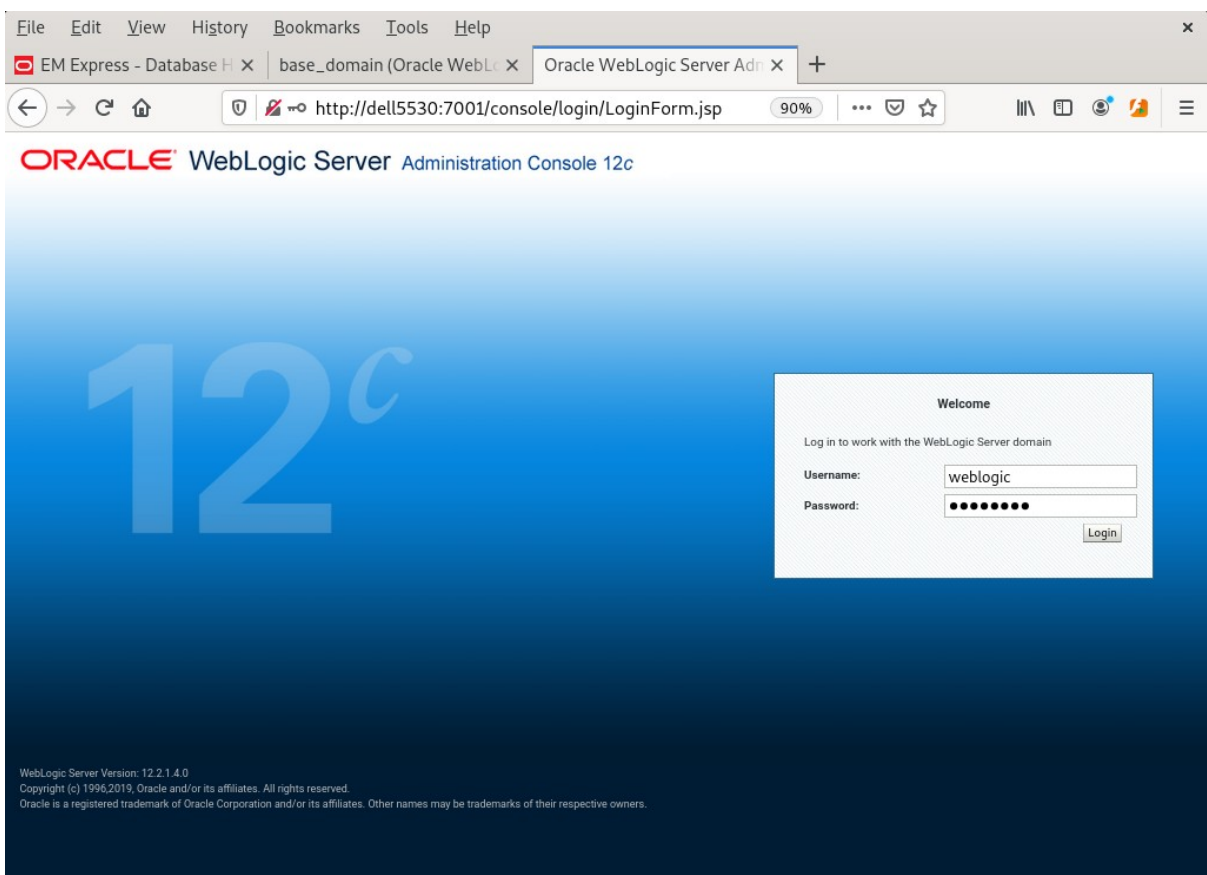
wls:/offline> connect ('weblogic','welcome1','Dell5530:7001')
Connecting to t3://Dell5530:7001 with userid weblogic ..
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

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=t`. The console interface includes a top navigation bar with 'Home', 'Log Out', 'Preferences', 'Record', and 'Help'. A search bar and user information 'Welcome, weblogic' and 'Connected to: base_domain' are also present. The main content area is titled 'Home Page' and is divided into several sections: 'Information and Resources' (Helpful Tools and General Information), 'Domain Configurations' (Domain, Domain Partitions, Environment, and Services), 'Resource Group Templates', 'Resource Groups', 'Deployed Resources', 'Interoperability', 'Diagnostics', and 'Charts and Graphs'. On the left side, there are panels for 'Change Center', 'Domain Structure', 'How do I...', and 'System Status'.

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=t`. The console interface includes a top navigation bar with 'Home', 'Log Out', 'Preferences', 'Record', and 'Help'. A search bar and user information 'Welcome, weblogic' and 'Connected to: base_domain' are also present. The main content area is titled 'Summary of Servers' and includes a 'Configuration' tab. Below the tab, there is a table of servers. The table has columns for Name, Type, Cluster, Machine, State, Health, and Listen Port. The table contains three rows of data. On the left side, there are panels for 'Change Center', 'Domain Structure', 'How do I...', and 'System Status'.

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

3). Test Oracle WebCenter Portal Web Service

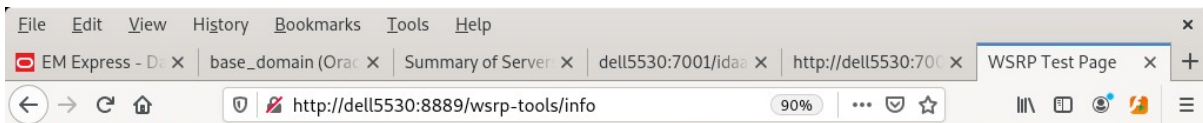
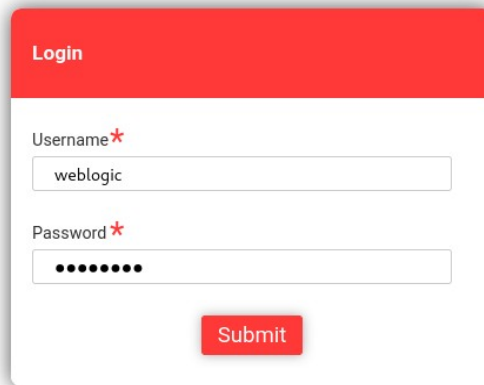
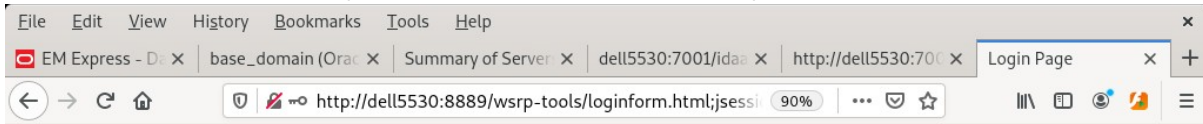
a. Application: opss-rest (URL:<http://host:7001/idaas/platform/application.wadl>)

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <ns0:application xmlns:ns0="http://wadl.dev.java.net/2009/02">
3   <ns0:doc title="Oracle Identity API Definition" xml:lang="en">
4     Oracle Identity Manager exposes a set of URI resources providing RESTful
5     APIs for product functionality. This file contains the definition for a
6     single API. Refer to the Developer's Guide for the complete list of
7     supported APIs and more information about each.
8   </ns0:doc>
9 </ns0:application>
10 <ns0:doc xmlns:ns1="http://jersey.java.net/" ns1:generatedBy="Jersey: 2.22.4 2016-11-30 13:33:53"/>
11 <ns0:doc xmlns:ns2="http://jersey.java.net/" ns2:hint="This is simplified WADL with user and core resources only. To get full WADL v
12 <ns0:grammars>
13   <ns0:include href="Configuration.xsd"/>
14 </ns0:grammars>
15 <ns0:resources base="http://dell5530:7001/idaas/platform/">
16   <ns0:resource path="/admin/v1">
17     <ns0:doc>Platform Security and Web Service Resources.
18     Key store management for JKS format
19     - Upload server signing/encrypting certificate to domain OWSM keystore (JKS, KSS).
20     - Upload trusted CA certificate chain to domain OWSM keystore (JKS,KSS).
21     - Download trusted CA certificates from domain OWSM keystore (JKS, KSS).
22     - Search certificates by alias or entire domain OWSM keystore.
23     Credential Store Management
24     - Create an entry in domain CSF with user, map, key, credential.
25     - Update an existing entry in domain CSF with new credential.
26     - Delete an entry from domain CSF for a given map, key information.
27     - Search entire domain CSF for maps and keys.
28     Trust Configuration Management
29     - Upload a Collection of SAML and JWT issuer, subject DN, and its attributes.
30     to configure Policy Accessor Configuration.
31     - Download a list of Trust Configuration.
32     - Upload a Collection of Trust Token Attributes and DNSs.
33     - Download a list of Trust Token Attribute Information.
34     Key Store Service (KSS)
35     - Create keystore
36     - List keystore per stripe
37     - Delete keystore
38     - Change keystore password
39     - Import certificate in X509 PKCS#7 for (TrustedCertificate, Certificate, or PKCS#7)

```

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



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

```

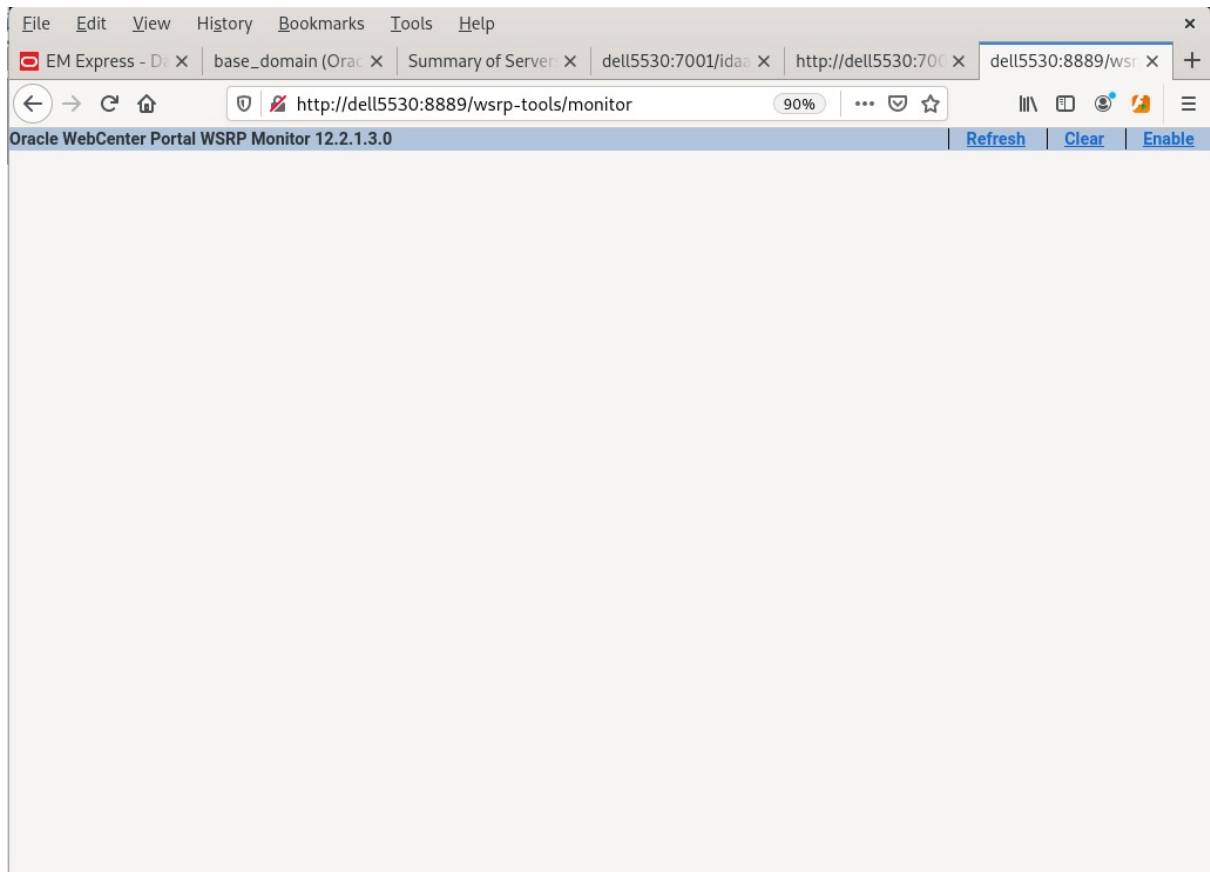
File Edit View History Bookmarks Tools Help
EM Express base_domain (C Summary of Ser dell5530:7001/ http://dell5530 WSRP Test Pag dell5530:8889/ http://dell55 x +
view-source:http://dell5530:8889/wsrp-tools/portlets/wsrp1?WSDL ... ☆
1 <?xml version="1.0" encoding="UTF-8" ?>
2 <definitions
3
4   targetNamespace="urn:oasis:names:tc:wsrp:v1:wsdl"
5   xmlns="http://schemas.xmlsoap.org/wsdl/"
6   xmlns:bind="urn:oasis:names:tc:wsrp:v1:bind"
7   xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
8   xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
9 >
10 <import namespace="urn:oasis:names:tc:wsrp:v1:bind" location="http://dell5530:8889/wsrp-tools/portlets/wsrp1?WSDL=wsrp_v1_bindings.w
11 <service name="WSRP_v1_Service">
12   <port name="WSRPBaseService" binding="bind:WSRP_v1_Markup_Binding_SOAP">
13     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPBaseService"/>
14   </port>
15   <port name="WSRPServiceDescriptionService" binding="bind:WSRP_v1_ServiceDescription_Binding_SOAP">
16     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPServiceDescriptionService"/>
17   </port>
18   <port name="WSRPRegistrationService" binding="bind:WSRP_v1_Registration_Binding_SOAP">
19     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPRegistrationService"/>
20   </port>
21   <port name="WSRPPortletManagementService" binding="bind:WSRP_v1_PortletManagement_Binding_SOAP">
22     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRPPortletManagementService"/>
23   </port>
24 </service>
25 </definitions>
26

```

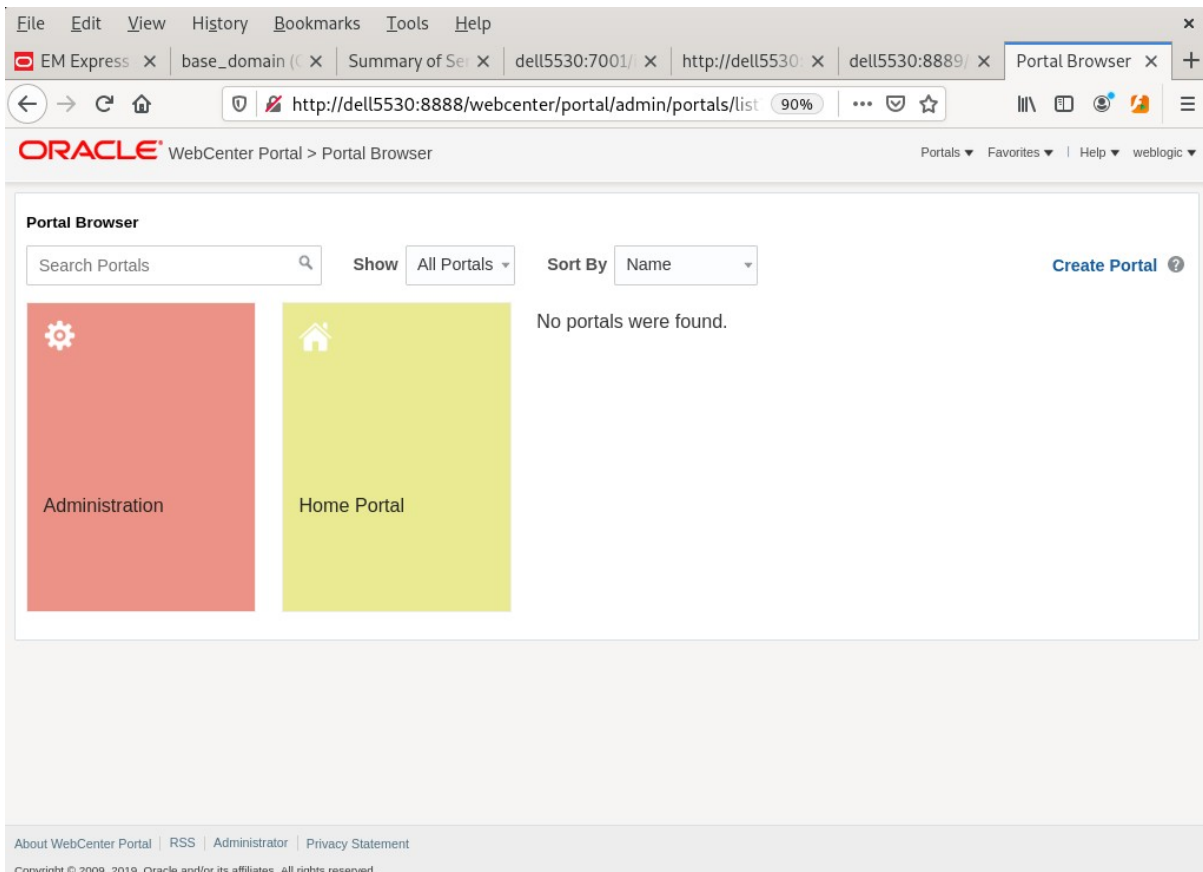
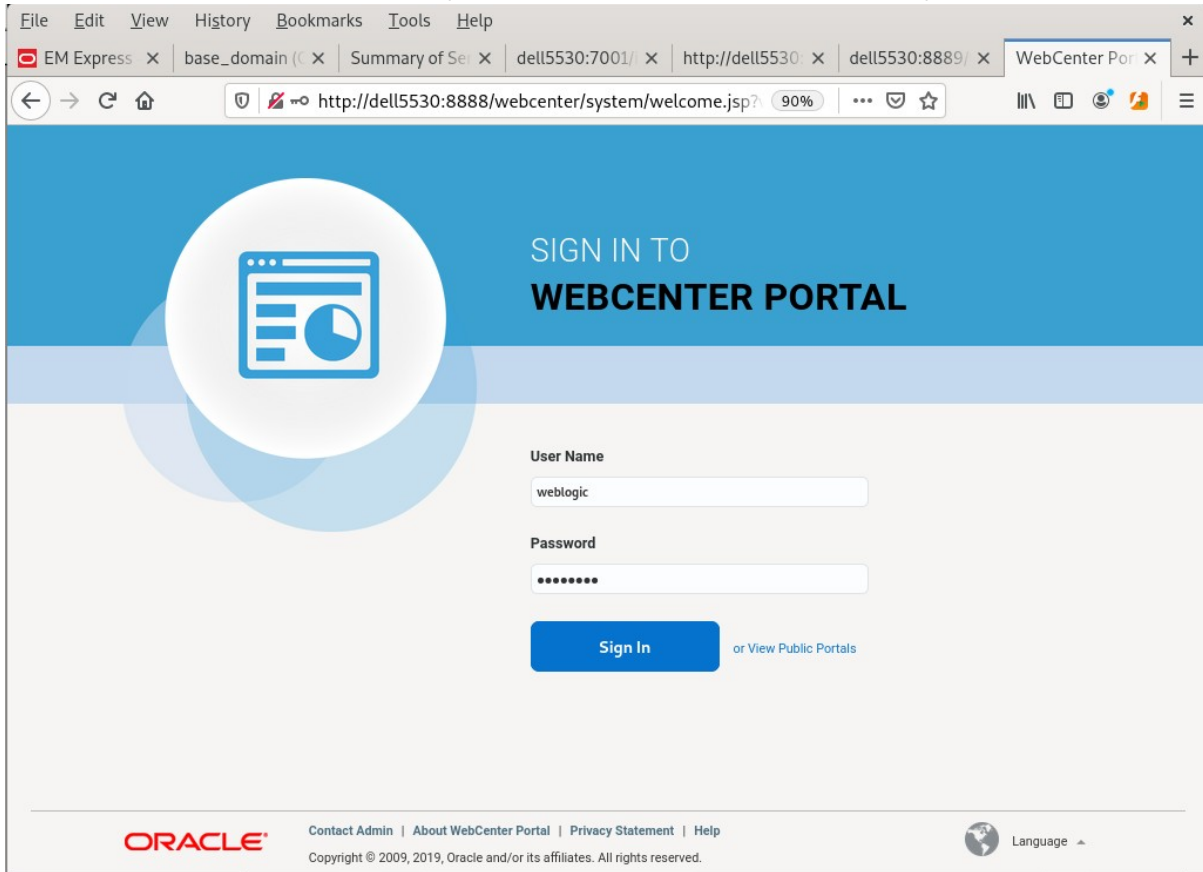
```

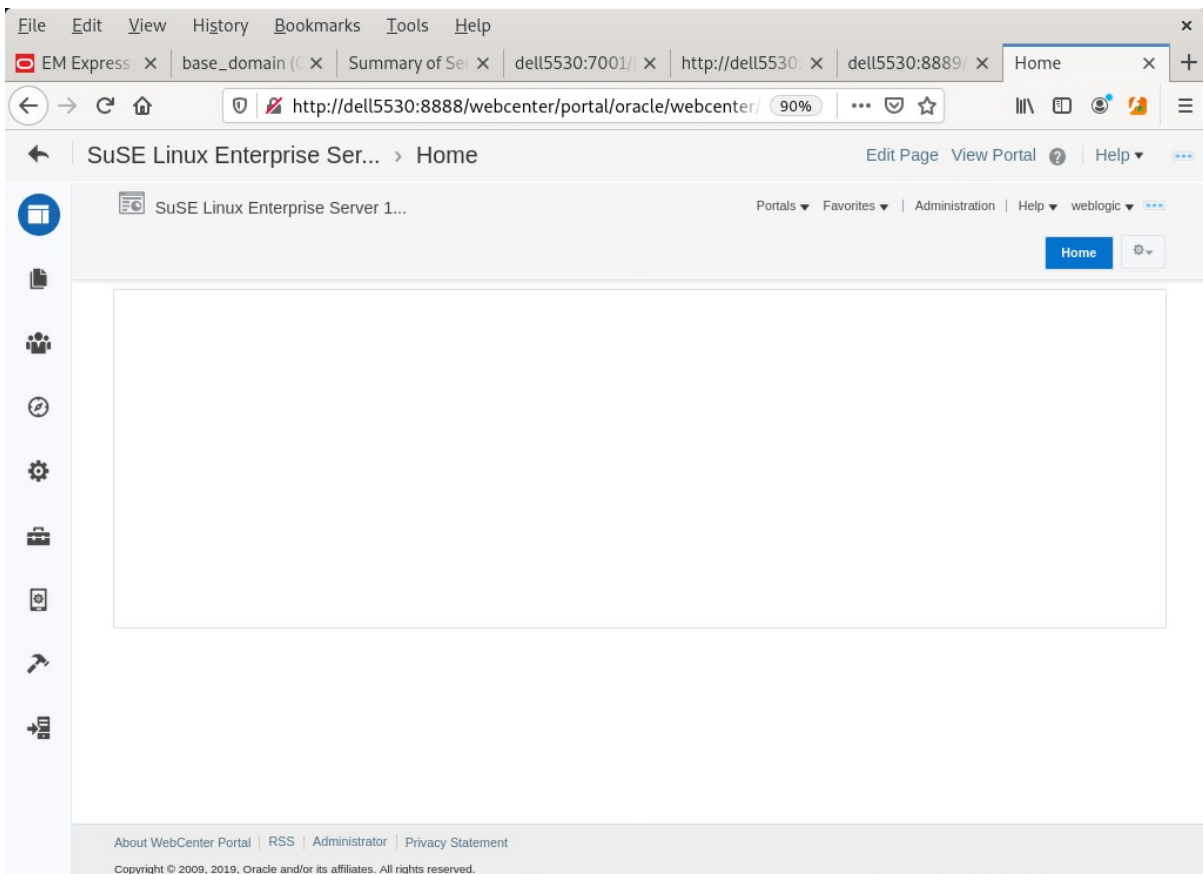
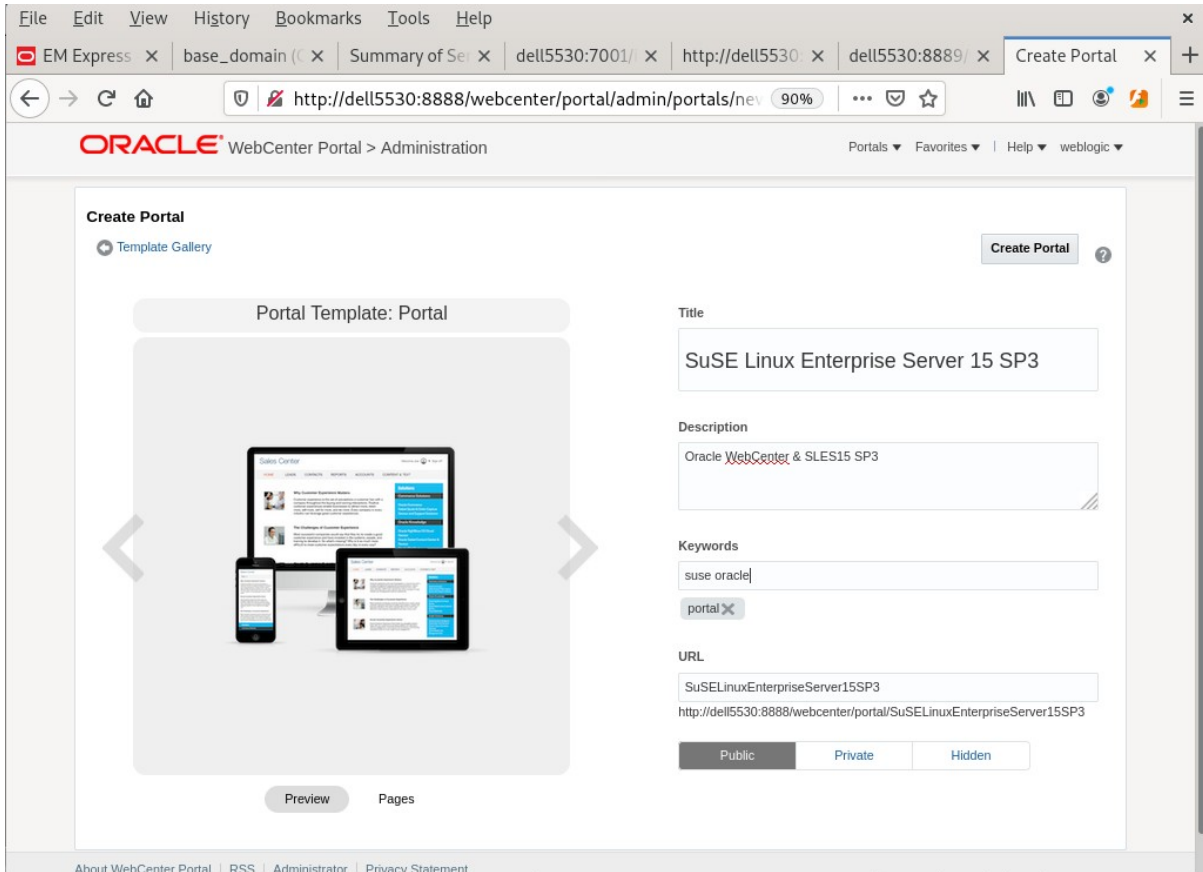
File Edit View History Bookmarks Tools Help
EM Express base_domain (C Summary of Ser dell5530:7001/ http://dell5530 WSRP Test Pag dell5530:8889/ http://dell55 x +
view-source:http://dell5530:8889/wsrp-tools/portlets/wsrp2?WSDL ... ☆
1 <?xml version="1.0" encoding="UTF-8" ?>
2 <definitions
3
4   targetNamespace="urn:oasis:names:tc:wsrp:v2:wsdl"
5   xmlns="http://schemas.xmlsoap.org/wsdl/"
6   xmlns:bind="urn:oasis:names:tc:wsrp:v2:bind"
7   xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
8   xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
9 >
10 <import namespace="urn:oasis:names:tc:wsrp:v2:bind" location="http://dell5530:8889/wsrp-tools/portlets/wsrp2?WSDL=wsrp_v2_bindings.w
11 <service name="WSRP_v2_Service">
12   <port name="WSRP_v2_ServiceDescription_Service" binding="bind:WSRP_v2_ServiceDescription_Binding_SOAP">
13     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_ServiceDescription_Service"/>
14   </port>
15   <port name="WSRP_v2_Markup_Service" binding="bind:WSRP_v2_Markup_Binding_SOAP">
16     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_Markup_Service"/>
17   </port>
18   <port name="WSRP_v2_Registration_Service" binding="bind:WSRP_v2_Registration_Binding_SOAP">
19     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_Registration_Service"/>
20   </port>
21   <port name="WSRP_v2_PortletManagement_Service" binding="bind:WSRP_v2_PortletManagement_Binding_SOAP">
22     <soap:address location="http://dell5530:8889/wsrp-tools/portlets/WSRP_v2_PortletManagement_Service"/>
23   </port>
24 </service>
25 </definitions>
26

```



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





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

- Browser Tabs:** EM Express, base_domain, Summary of Ser, dell5530:7001/, http://dell5530, dell5530:8889/, SuSE Linux Ent.
- Address Bar:** http://dell5530:8888/webcenter/portal/admin/portals/adr
- Page Title:** SuSE Linux Enterprise Ser... > General
- Navigation:** View Portal, Help
- Portal Information Section:**
 - Title:** SuSE Linux Enterprise Server 15 SP3
 - Acronym:** SLE
 - Description:** Oracle WebCenter & SLES15 SP3
 - Portal Color:** A yellow color swatch with a 'Choose Color' button.
 - Keywords:** A text input field containing 'portal', 'suse', and 'oracle' as tags.
 - Buttons:** A 'Save' button is located below the keywords.
- Portal Details Section:**
 - Name:** SuSELinuxEnterpriseServer15SP3 [Rename](#)
 - Portal URL:** http://dell5530:8888/webcenter/portal/SuSELinuxEnterpriseServer15SP3
 - Internal ID:** s949cabf2_9534_4193_87e5_dd7dd9680585
 - Members:** 1
 - Last Activity:** 9 seconds ago
 - Created:** 55 seconds ago by weblogic
- Status:** A section header at the bottom of the page.

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

The screenshot shows a web browser window with the address bar displaying `http://del15530:8888/collector/analytics-collector-diagno`. The page content includes a header for 'Analytics Collector' and a section titled 'Collector Information'. Below this is a 'Refresh' button and a table with configuration details.

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 SP3 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.

The screenshot shows a window titled "Oracle Fusion Middleware 12c SOA Quick Start Installation" with a close button (X) in the top right corner. The main title is "Installation Inventory Setup". On the right side, there is the Oracle logo and the text "FUSION MIDDLEWARE" above a globe icon.

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.

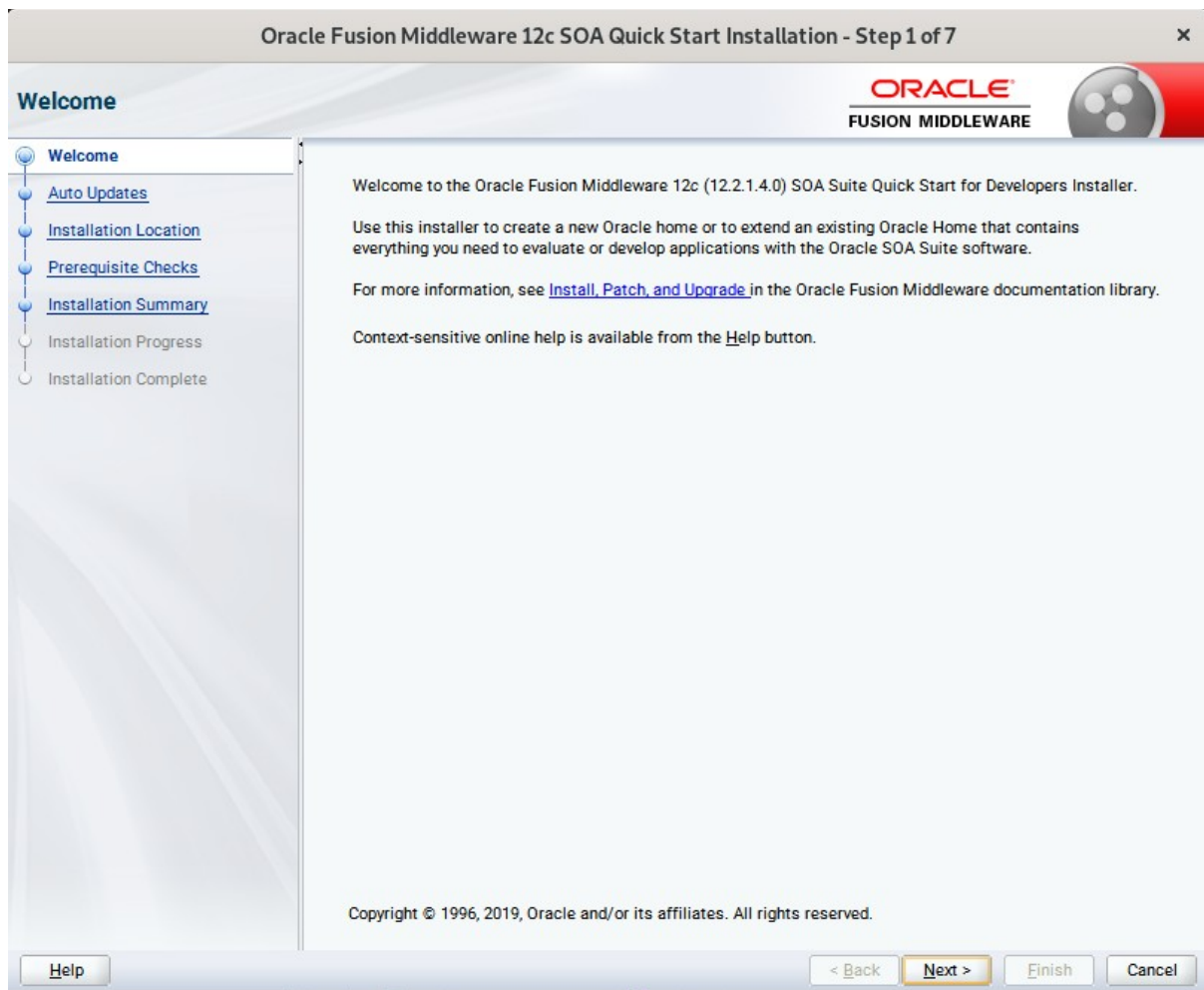
Operating System Group :
 Specify a group with write permission to the inventory directory

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.

At the bottom, there are three buttons: "Help", "OK", and "Cancel".

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.



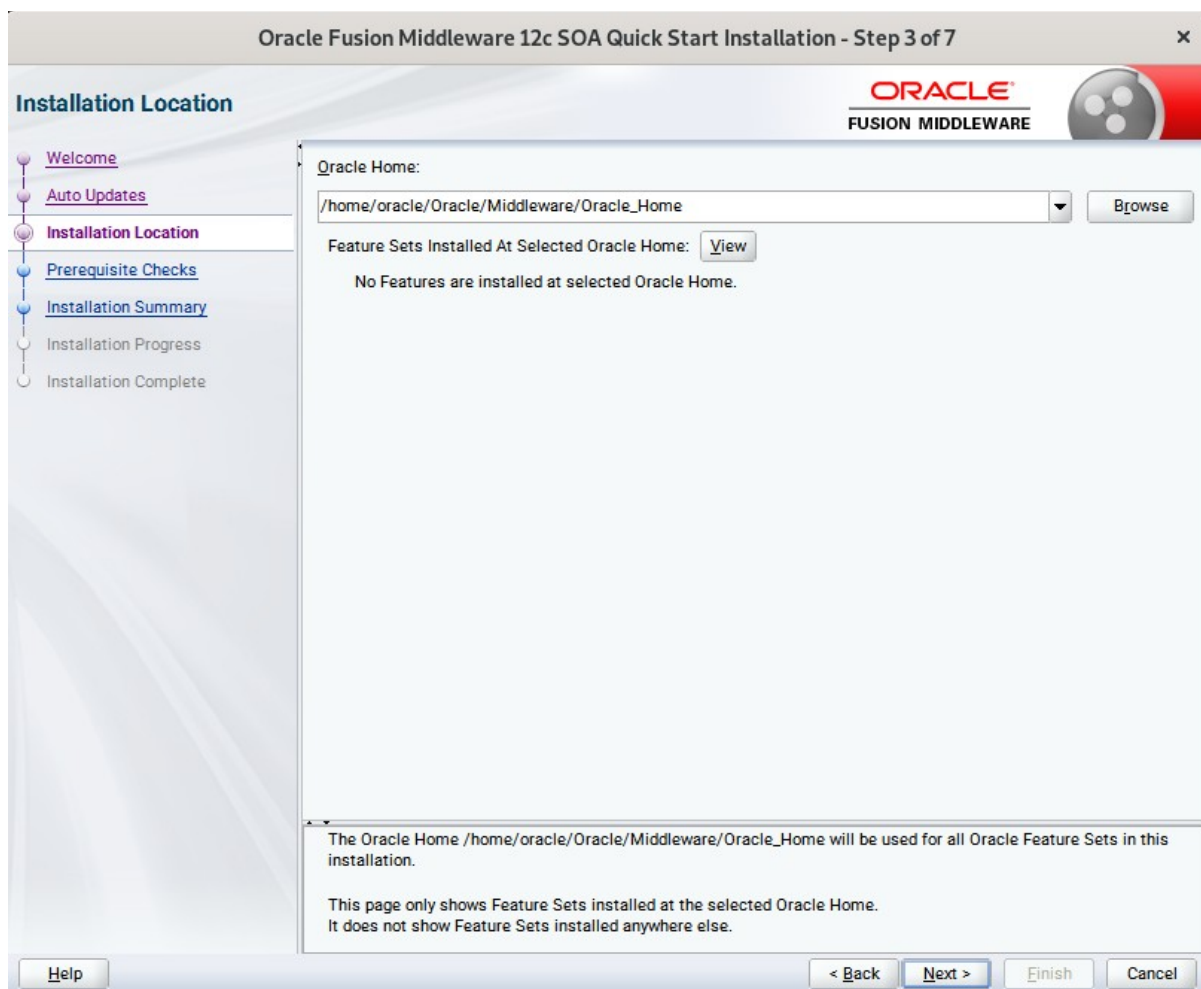
This page welcomes you to the installation. Click **Next** to continue.

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

The screenshot shows the 'Auto Updates' configuration window for Oracle Fusion Middleware 12c SOA Quick Start Installation, Step 2 of 7. The window title is 'Oracle Fusion Middleware 12c SOA Quick Start Installation - Step 2 of 7'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists the installation steps: Welcome, Auto Updates (selected), 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 are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

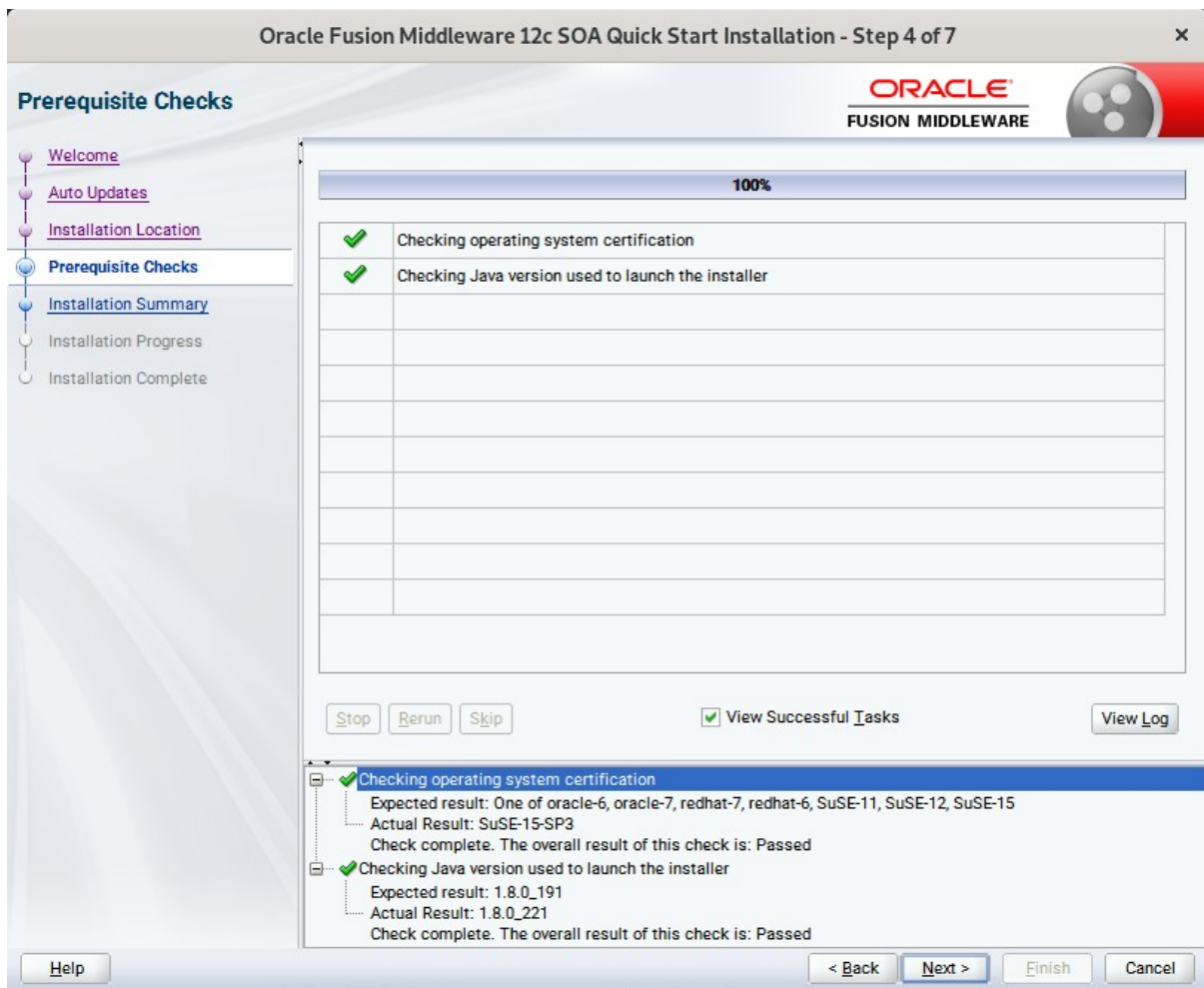
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



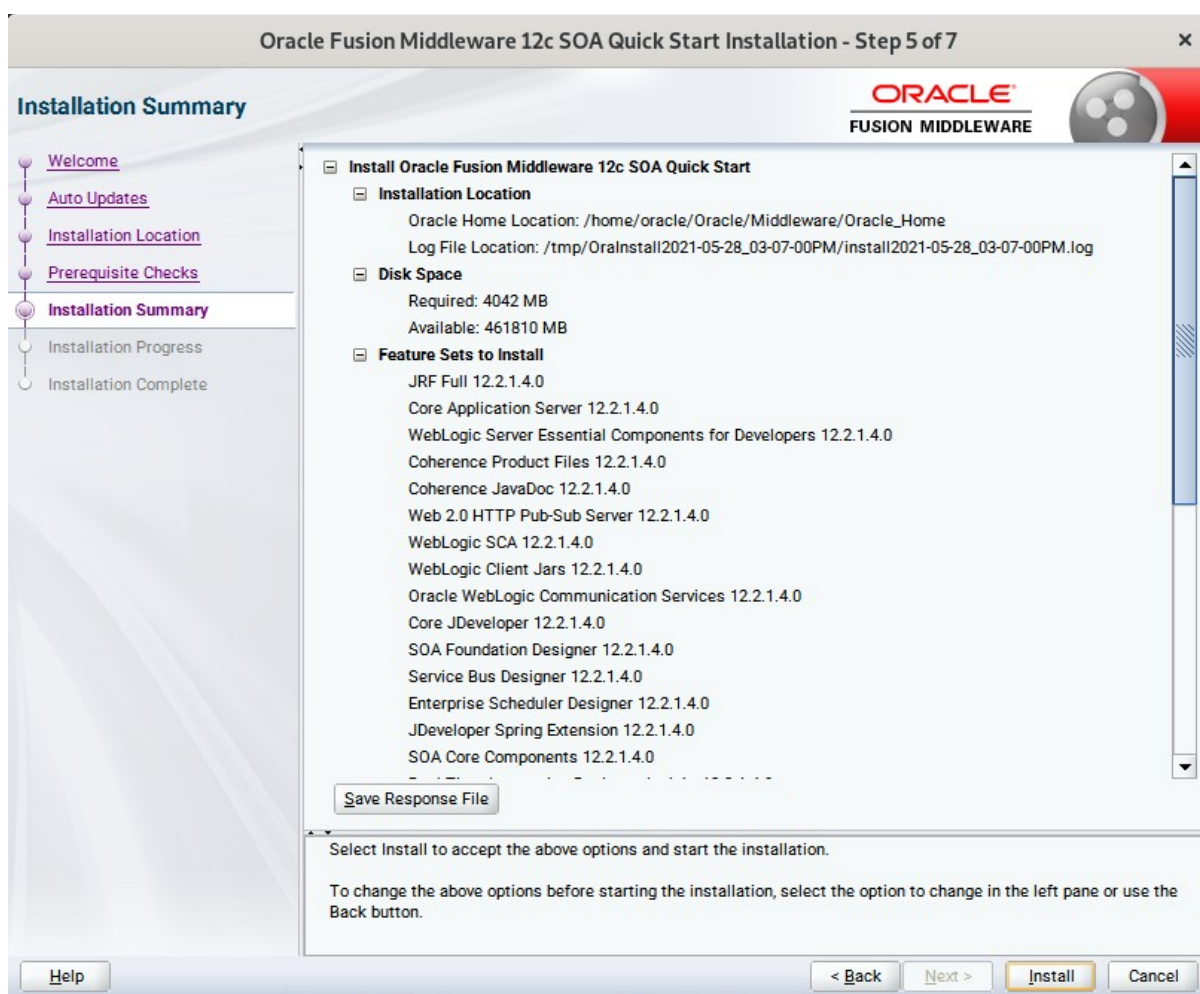
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



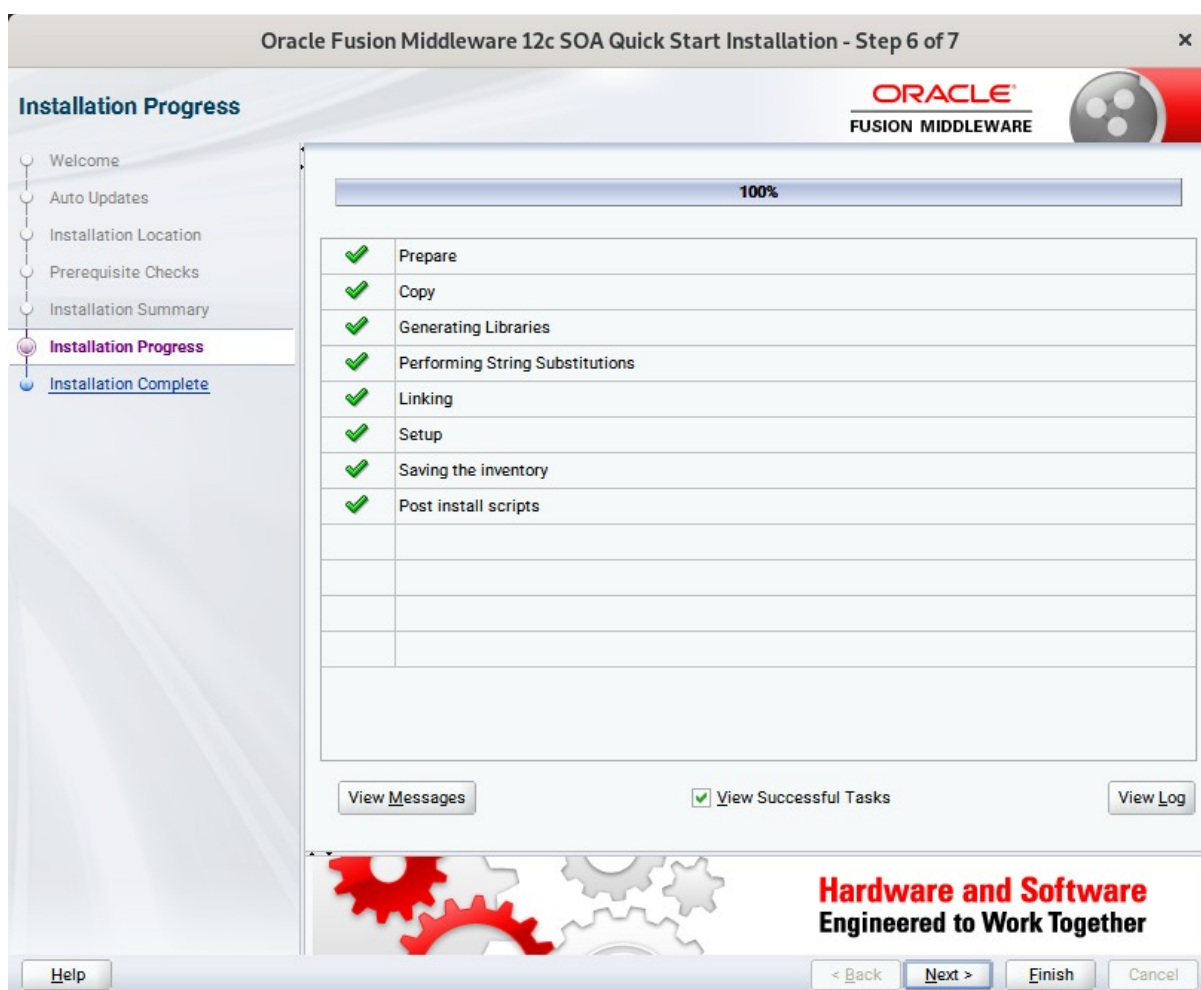
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



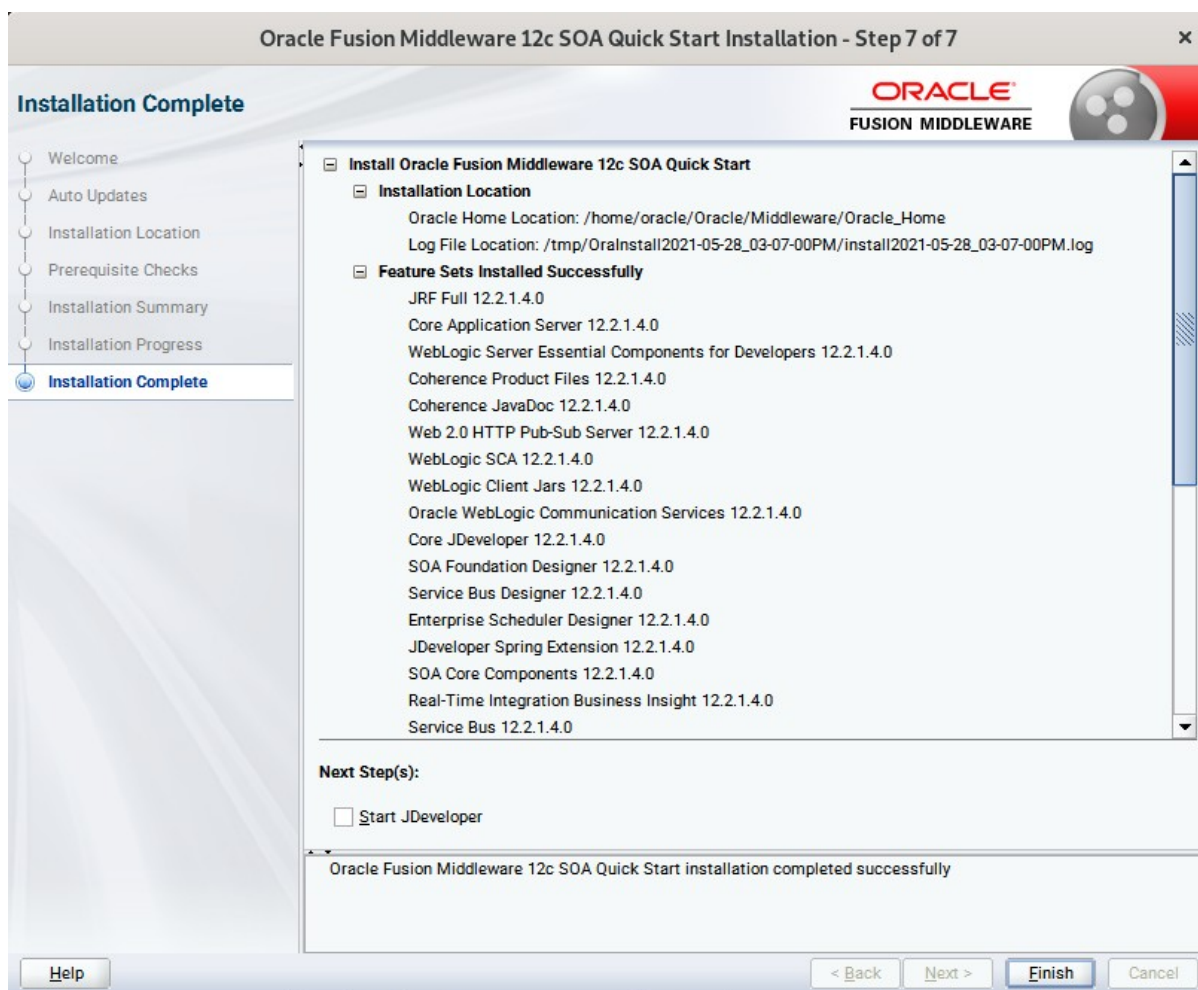
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

Specify a unique prefix for all schemas created in this session, so you can easily locate, reference, and manage the schemas later.

Select existing prefix:

Create new prefix:

Alpha numeric only. Cannot start with a number. No special characters.

Component	Schema Owner
<input checked="" type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Common Infrastructure Services *	DEV_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	DEV_OPSS
<input checked="" type="checkbox"/> Oracle Enterprise Scheduler	DEV_ESS
<input checked="" type="checkbox"/> User Messaging Service	DEV_UMS
<input checked="" type="checkbox"/> Audit Services	DEV_JAU
<input checked="" type="checkbox"/> Audit Services Append	DEV_JAU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	DEV_JAU_VIEWER
<input checked="" type="checkbox"/> Metadata Services	DEV_MDS
<input checked="" type="checkbox"/> Weblogic Services *	DEV_WLS
<input checked="" type="checkbox"/> SOA Suite	
<input checked="" type="checkbox"/> SOA Infrastructure	DEV_SOAINFRA

* Mandatory component. Mandatory components cannot be deselected.

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

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  
-----
```

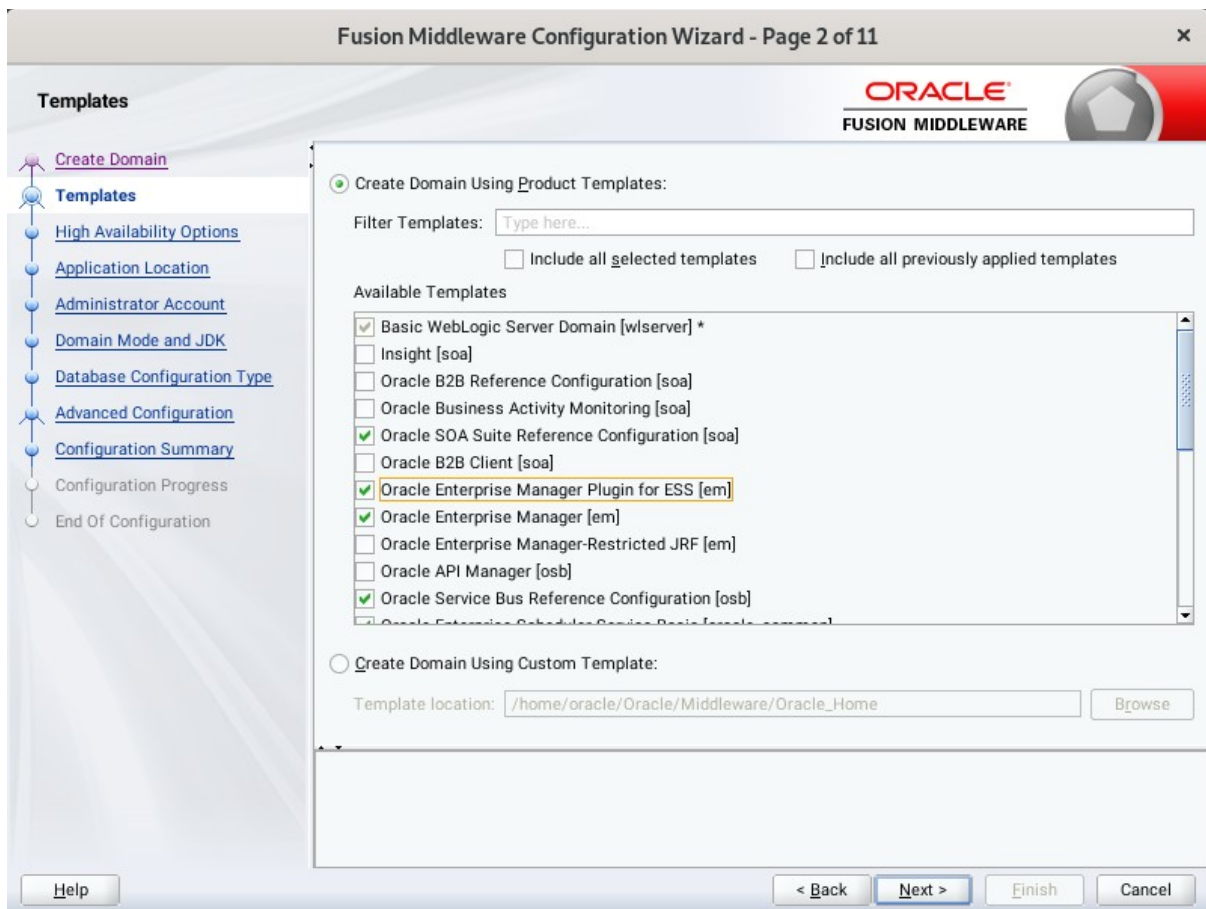
Follow these steps:

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]

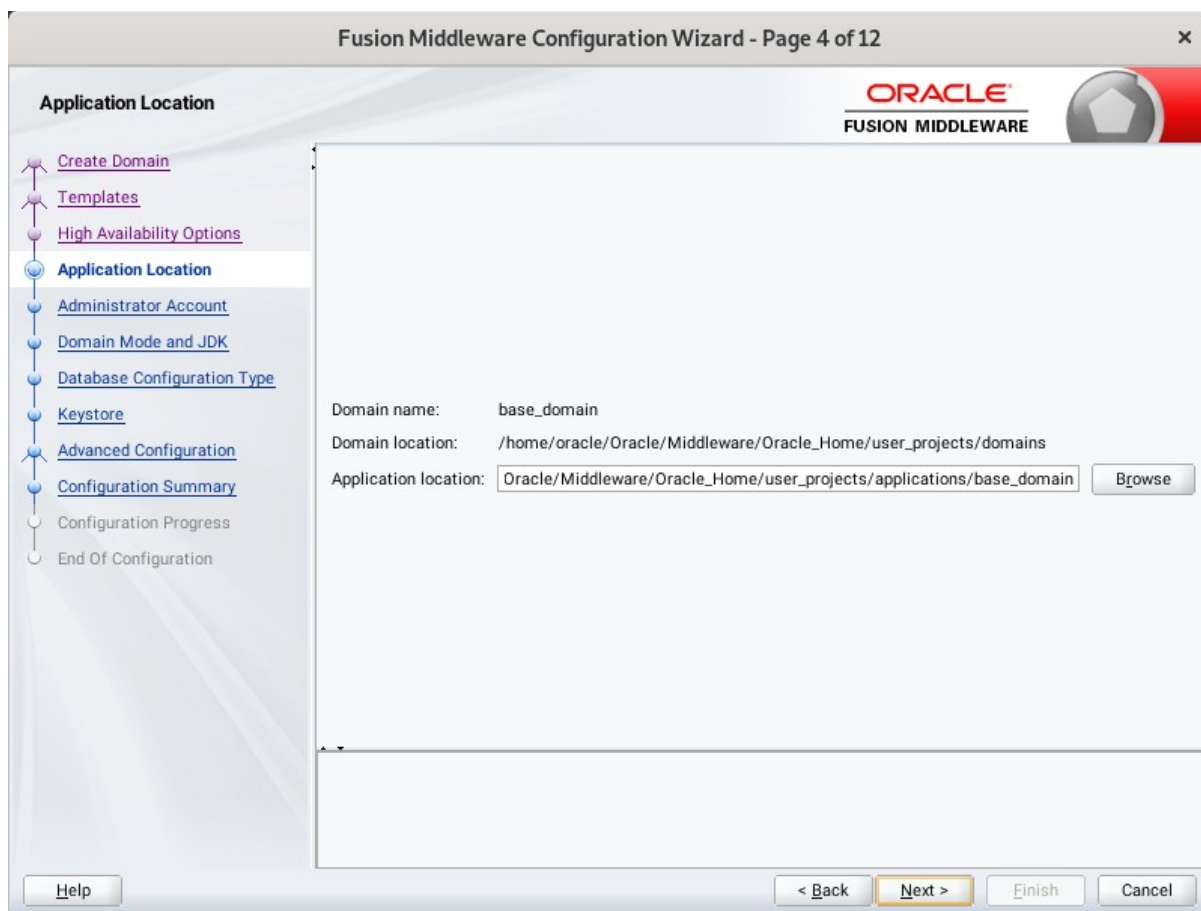
Click **Next** to continue.

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



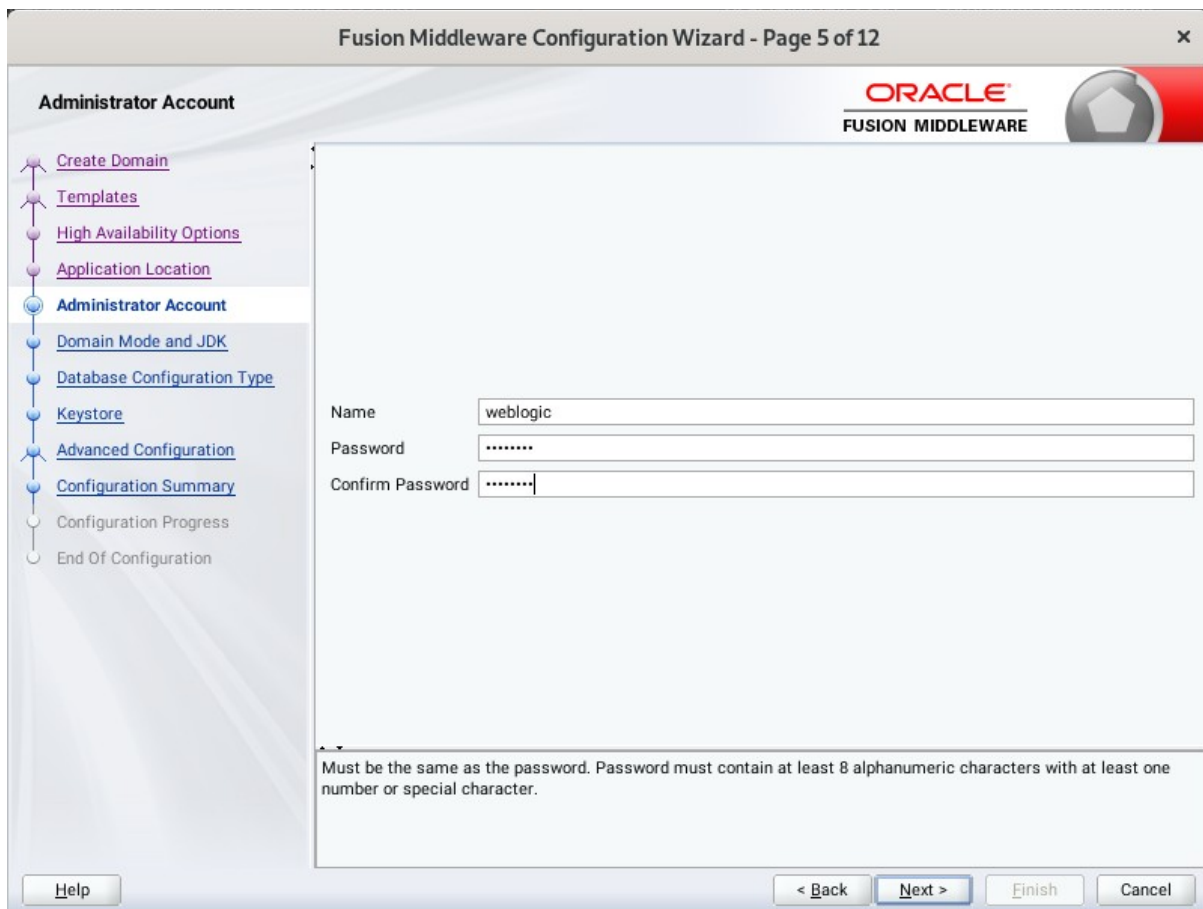
Keep the default value for Application location. Click **Next** to continue.

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



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

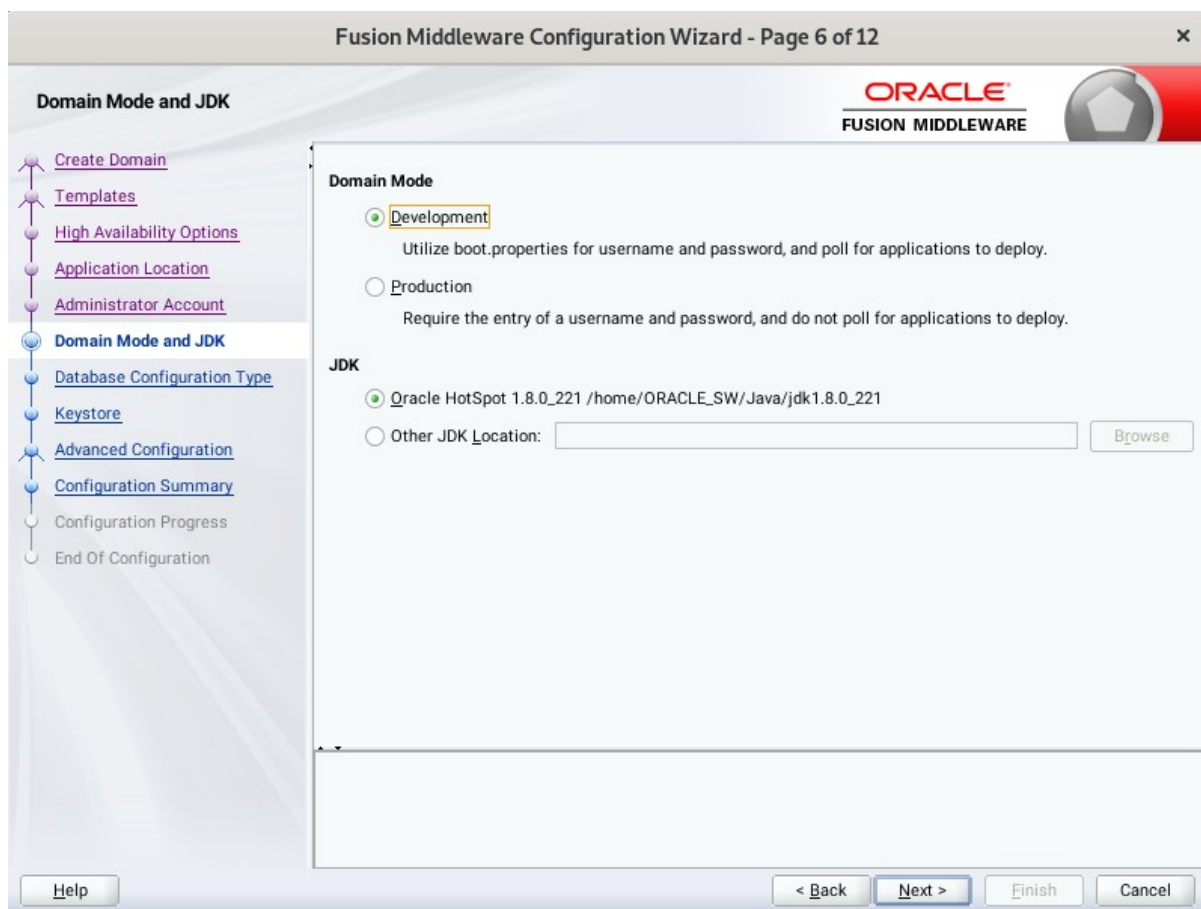
5). The **Administrator Account** screen appears.



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 12". The Oracle Fusion Middleware logo is visible 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 (selected), Domain Mode and JDK, Database Configuration Type, 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 >", "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 the Domain Mode (either **Development** or **Production**) as shown above. Click **Next** to continue.

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

Fusion Middleware Configuration Wizard - Page 7 of 14

Database Configuration Type

Specify AutoConfiguration Options Using:

RCU Data Embedded Database (JavaDB) 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:

Connection Result Log

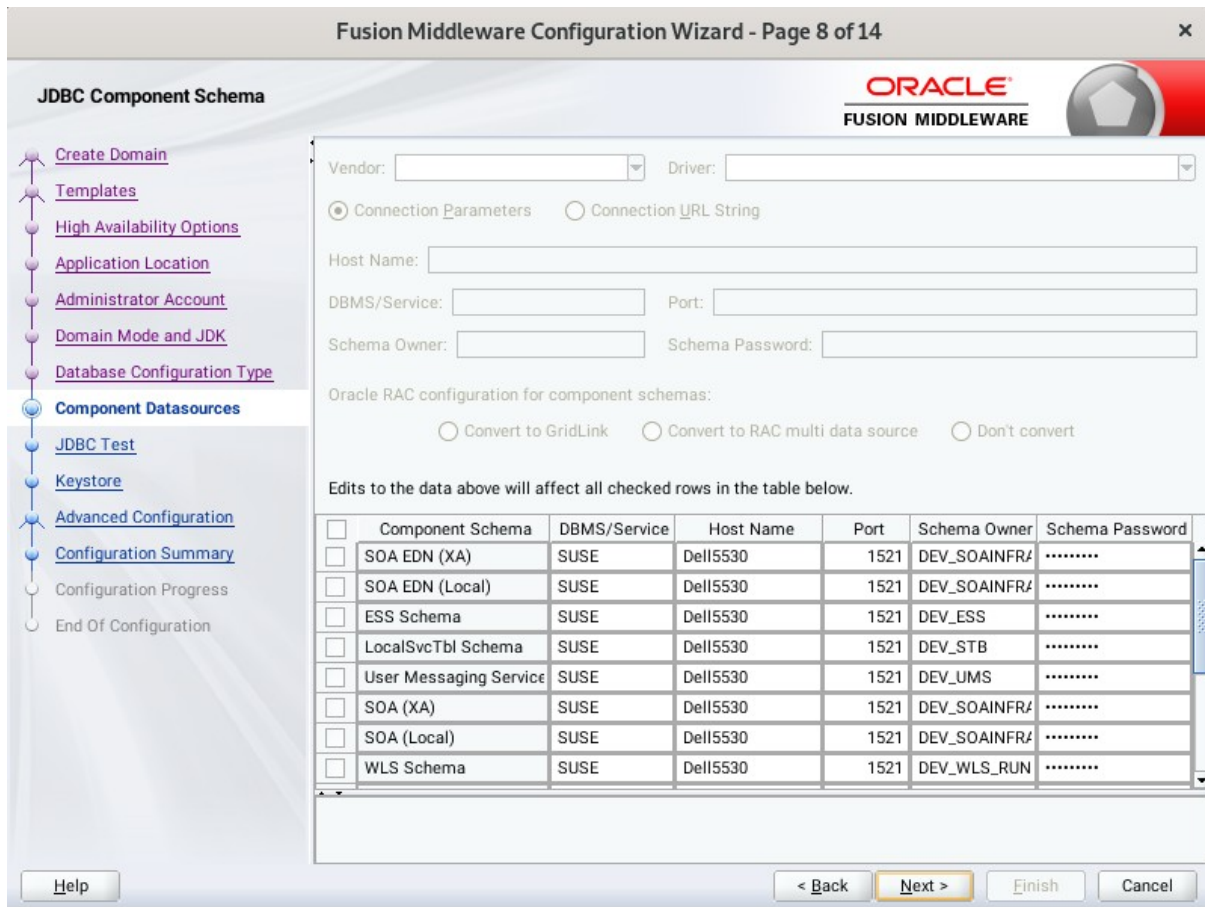
Connecting to the database server...OK
Retrieving schema data from database server...OK
Binding local schema components with retrieved data...OK

Successfully Done.

Click "Next" button to continue.

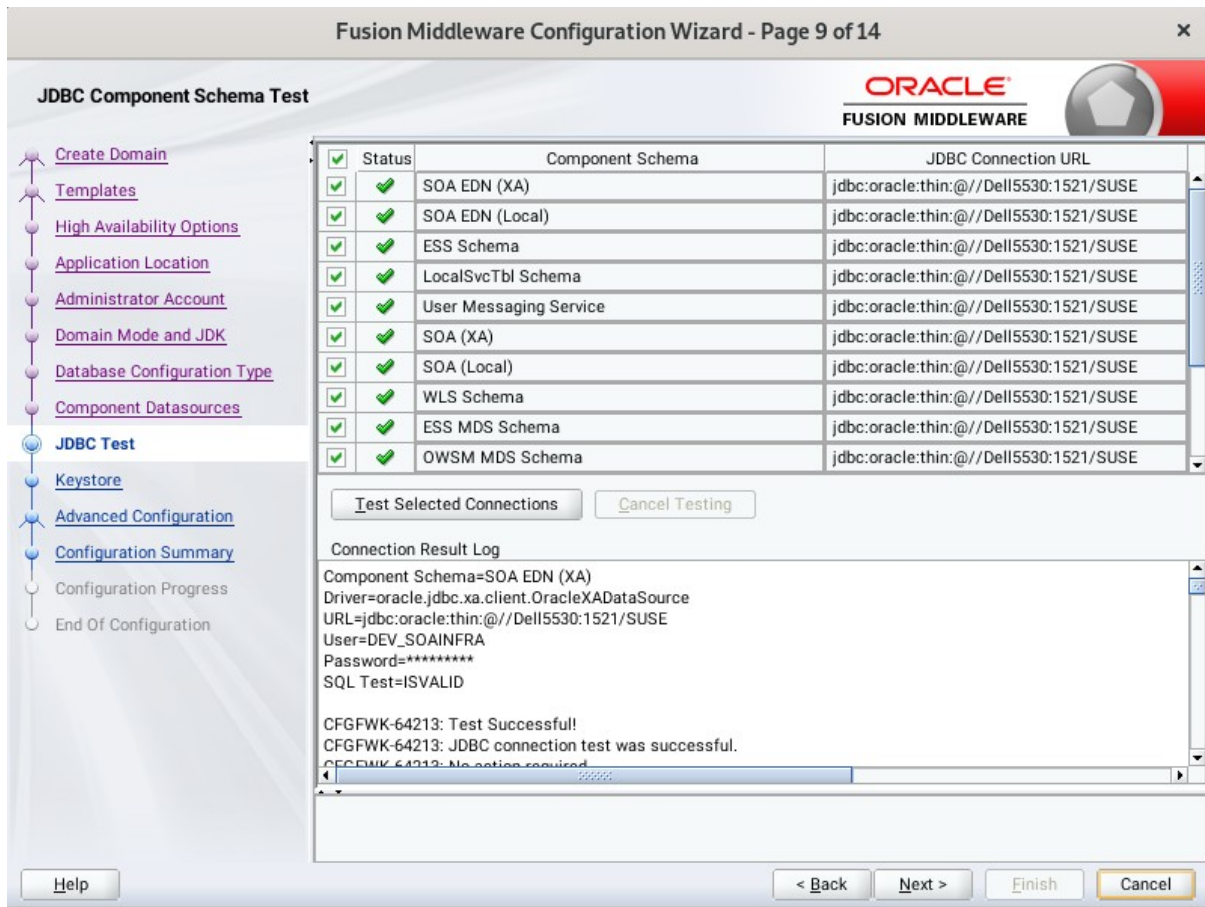
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



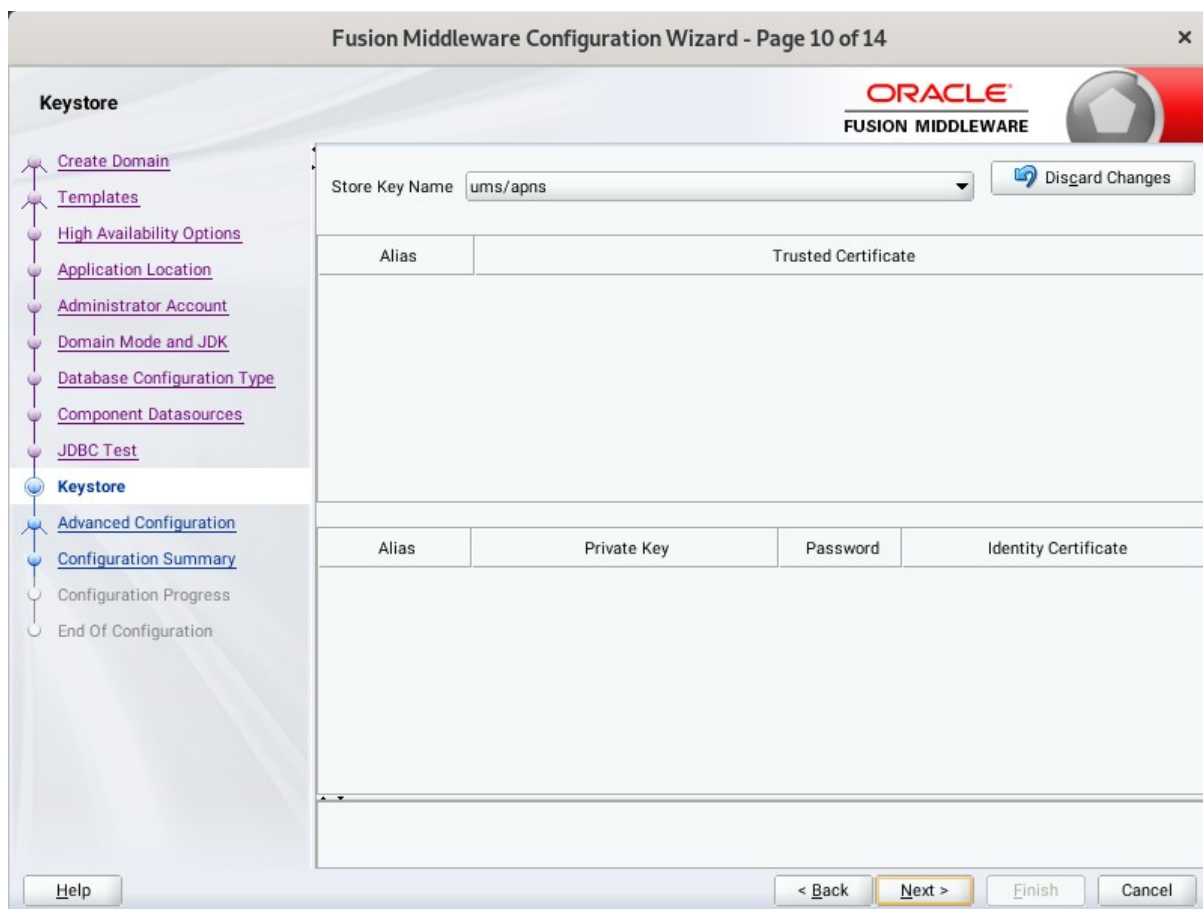
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



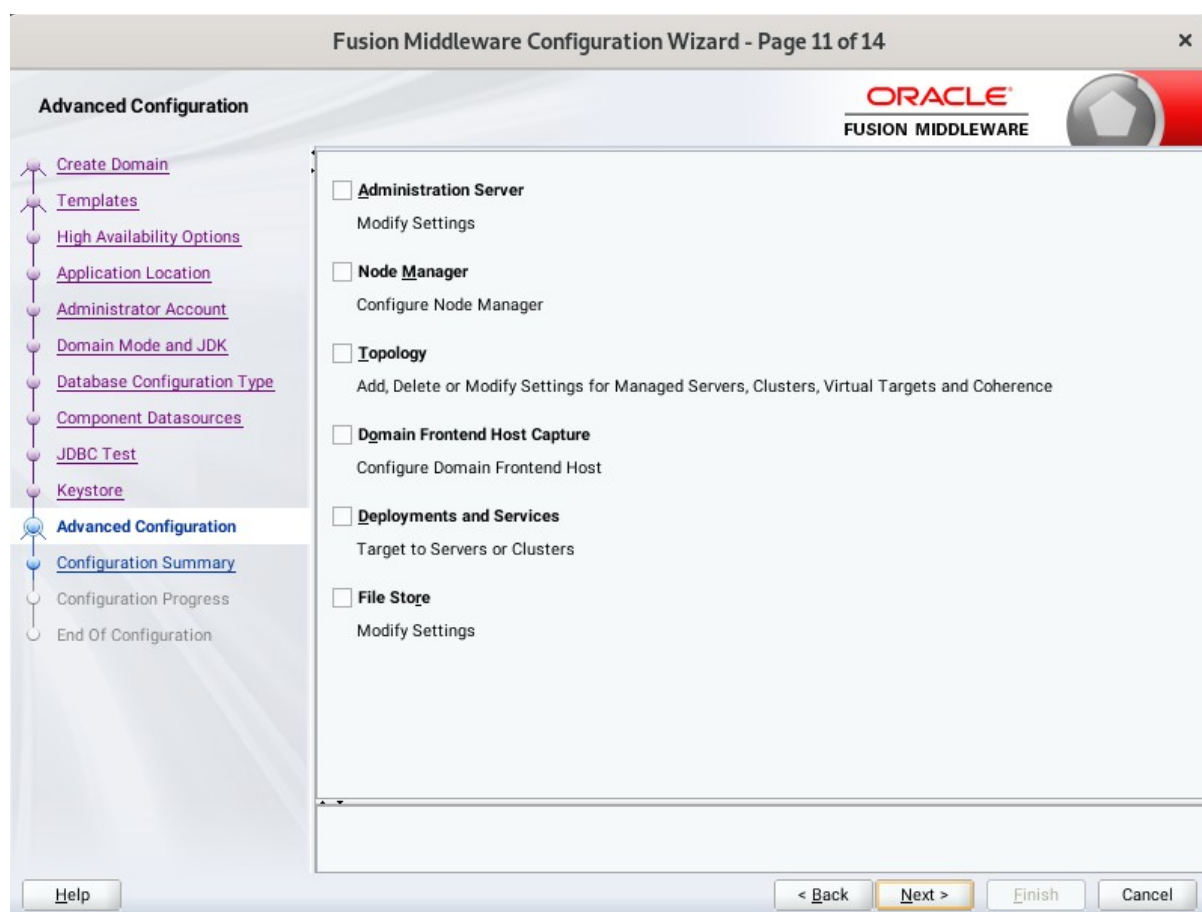
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



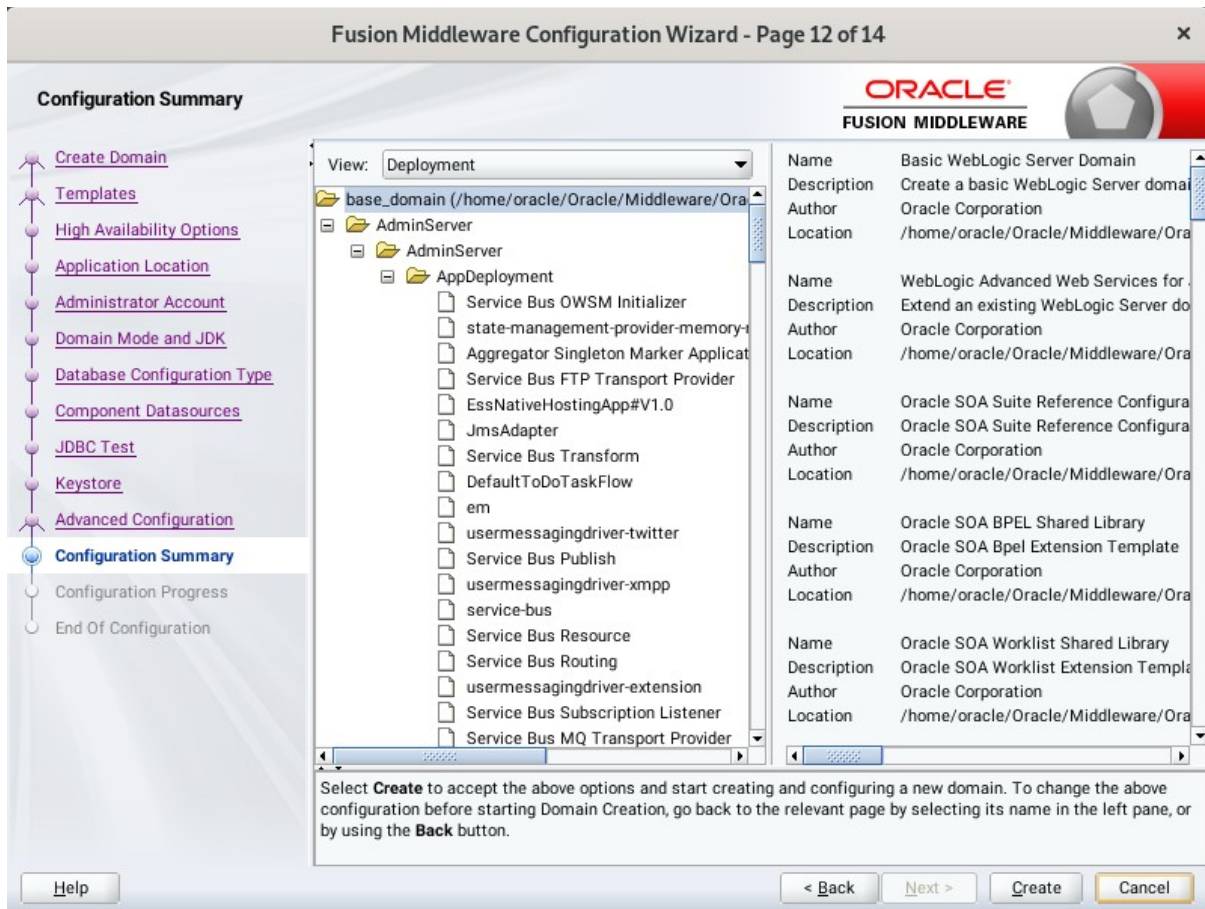
Accept the defaults and click **Next** to continue.

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



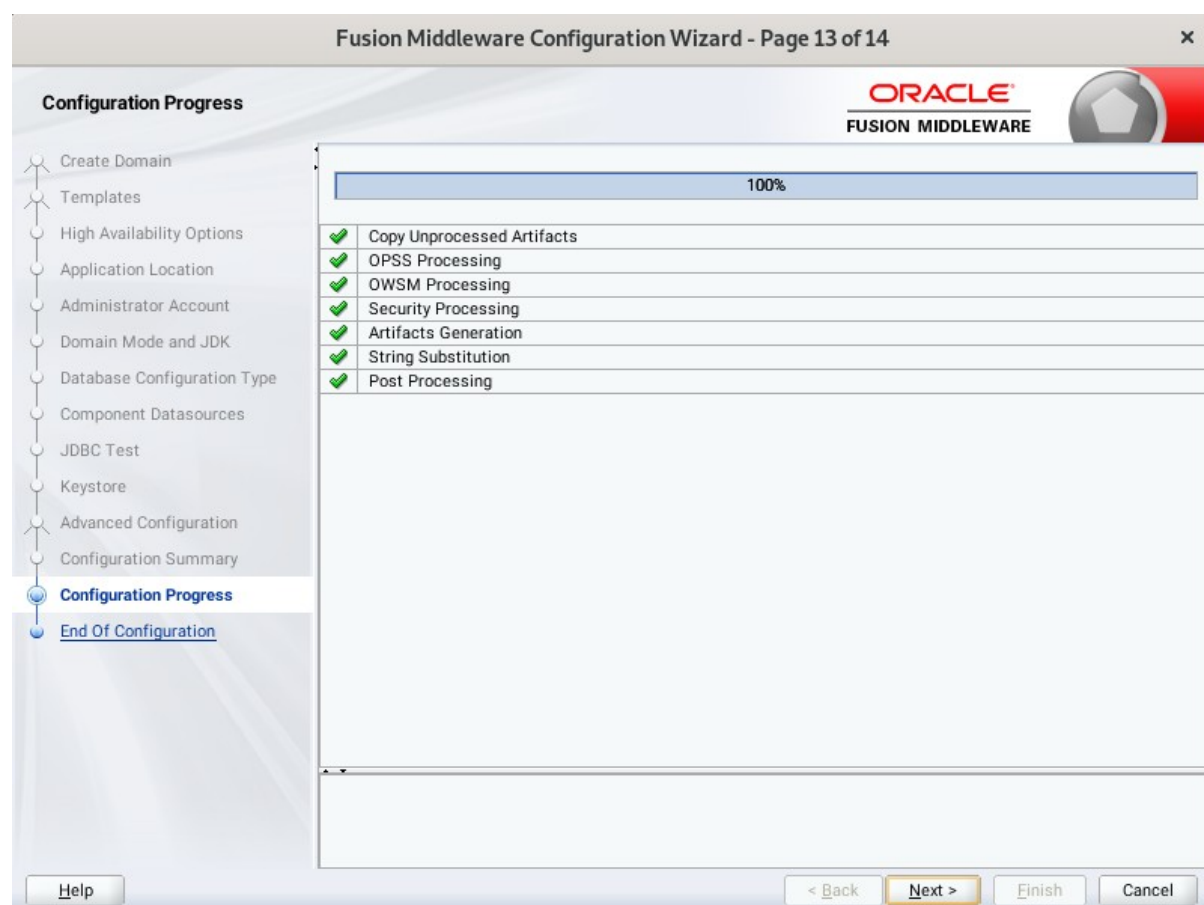
On the Advanced Configuration screen, you do not need any advanced configuration for a compact domain. You can skip through the Advanced Configuration screen without selecting anything. Click **Next** to continue.

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:...omains/base_domain
oracle@Dell5530:...W/soa_suite/122... x oracle@Dell5530:..._common/commo... x oracle@Dell5530:...omains/base_dom... x
s/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<May 28, 2021 4:27:25,916 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: EssN
ativeHostingApp, EJBComponent: native-ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mds.suspendCon
nectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<May 28, 2021 4:27:27,099 PM GMT+08:00> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/oracle/apps/ess
s/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<May 28, 2021 4:27:30,840 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: ESSA
PP, EJBComponent: ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mds.suspendConnectionOnStart is ig
nored, because it is not supported by JCA-Based Message-Driven Bean.>
<May 28, 2021 4:27:34,938 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:1.>
<May 28, 2021 4:27:34,939 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:700
1 for protocols iiop, t3, ldap, snmp, http.>
<May 28, 2021 4:27:34,940 PM GMT+08:00> <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.>
<May 28, 2021 4:27:34,941 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<May 28, 2021 4:27:34,941 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base_domain" running in development mode.>
<May 28, 2021 4:27:34,942 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:700
1 for protocols iiop, t3, ldap, snmp, http.>
<May 28, 2021 4:27:34,942 PM GMT+08:00> <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.>
<May 28, 2021 4:27:34,942 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
 for protocols iiop, t3, ldap, snmp, http.>
<May 28, 2021 4:27:34,948 PM GMT+08:00> <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 12 ms
<May 28, 2021 4:27:35,017 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
Not fusion apps env
SOA Platform is running and accepting requests. Start up took 97464 ms, partition=DOMAIN

```

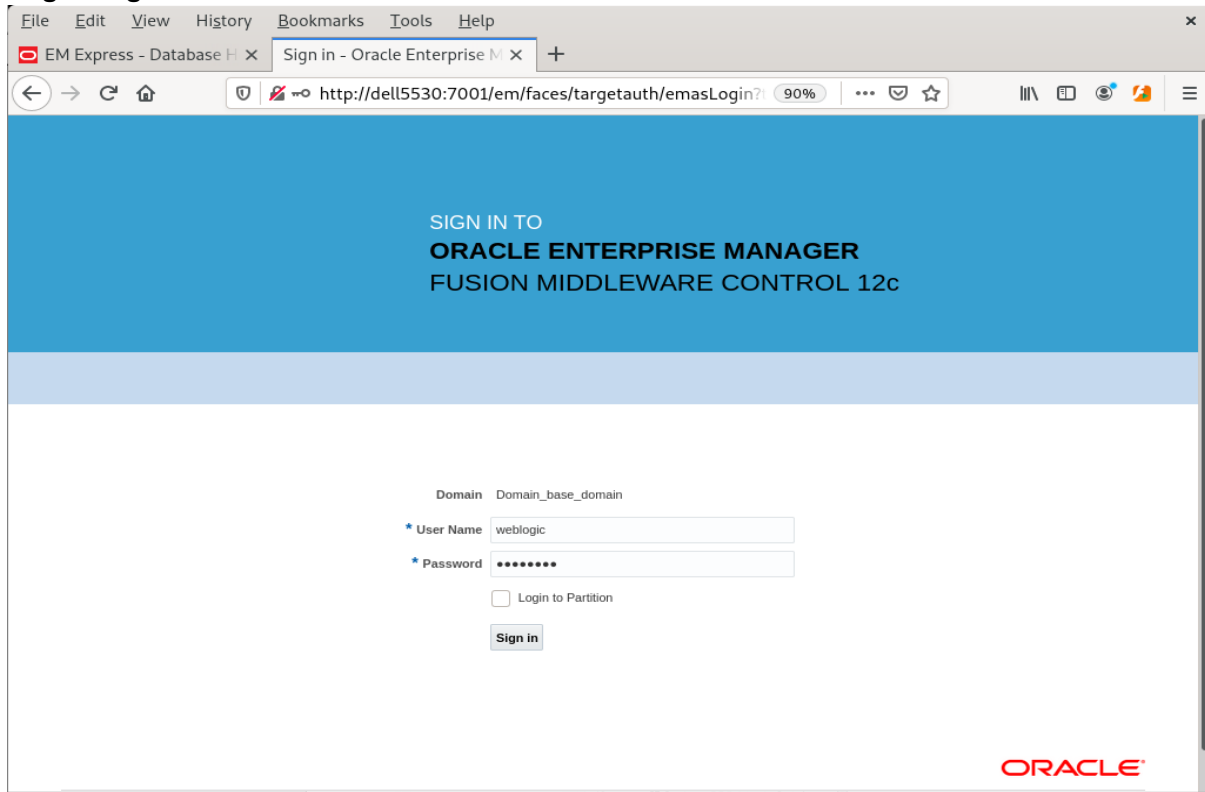
You know that the administrator server is running when you see the following output:

Server state changed to RUNNING.

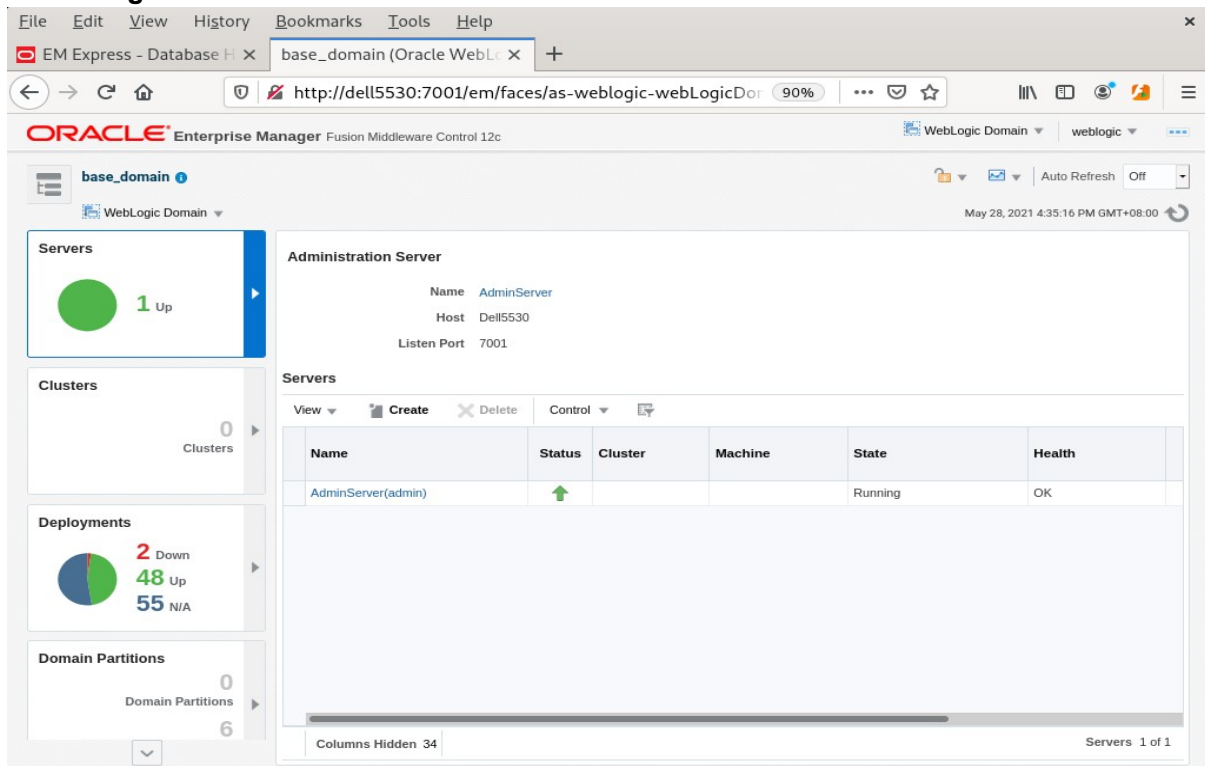
4-3. Checking Oracle SOA Suite 12c Product URLs.

1). Access to Enterprise Manager Console.

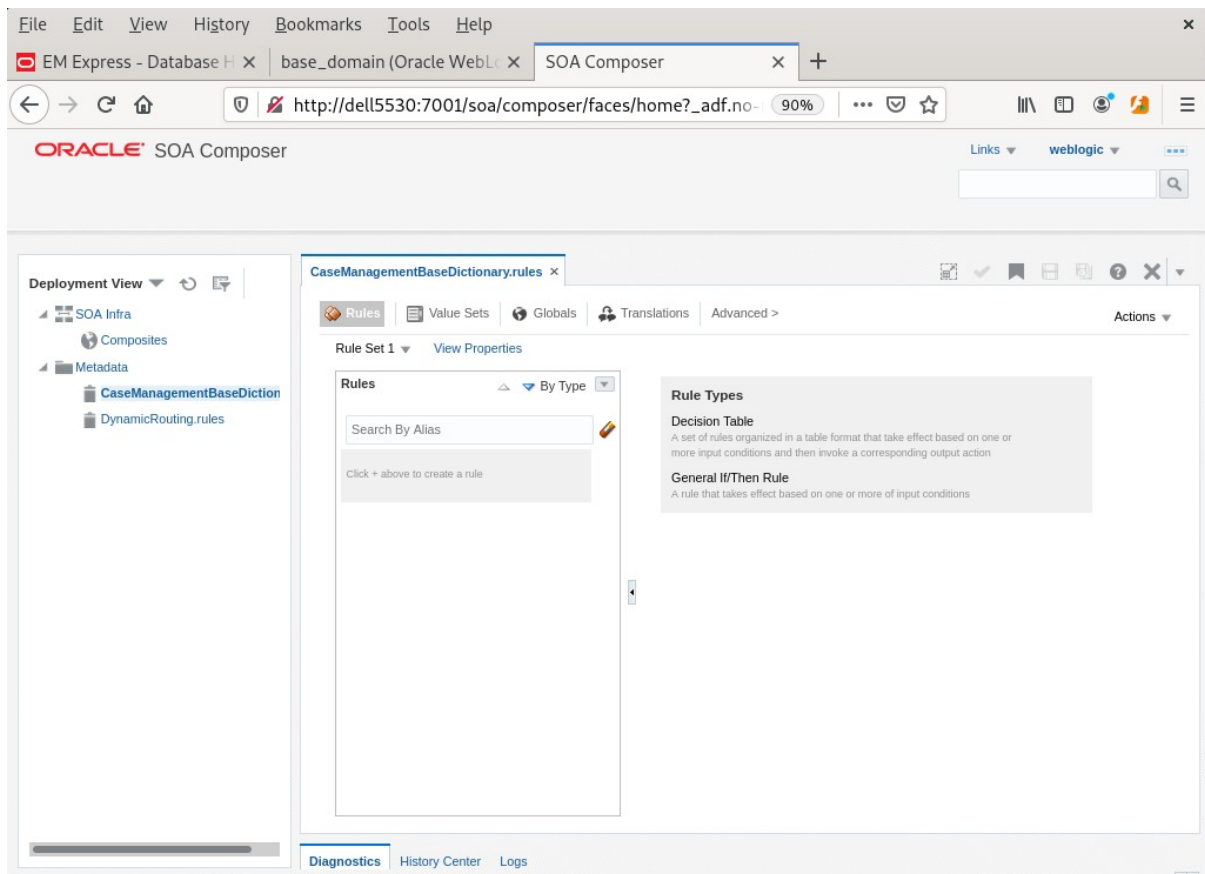
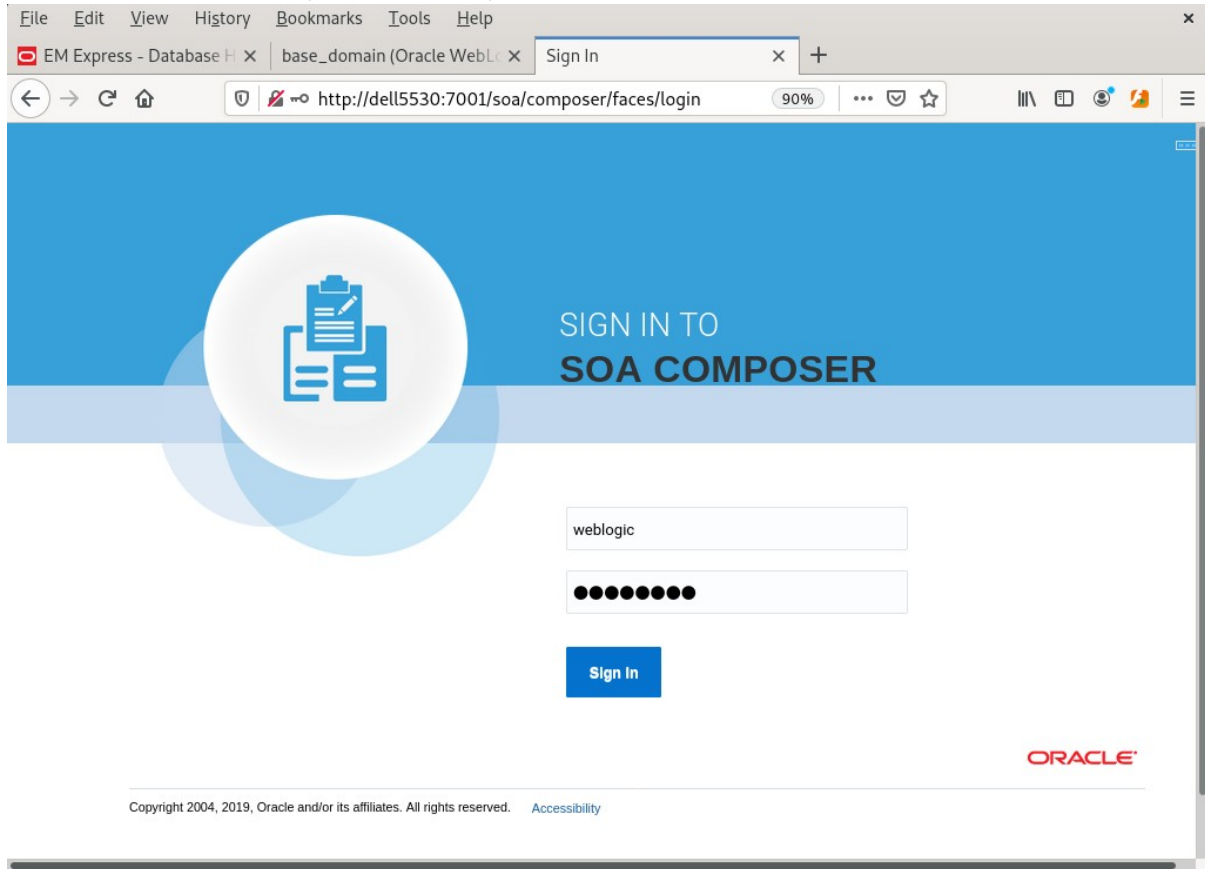
Login Page:



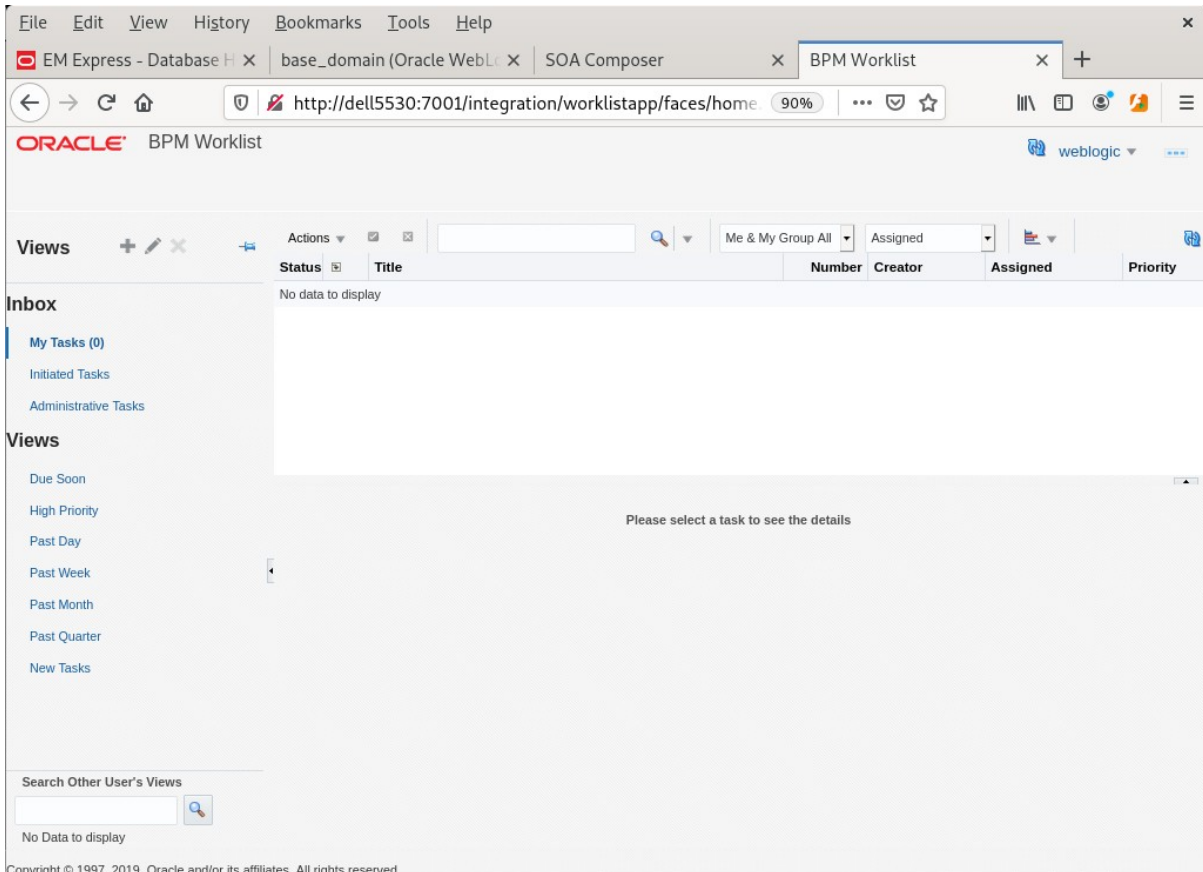
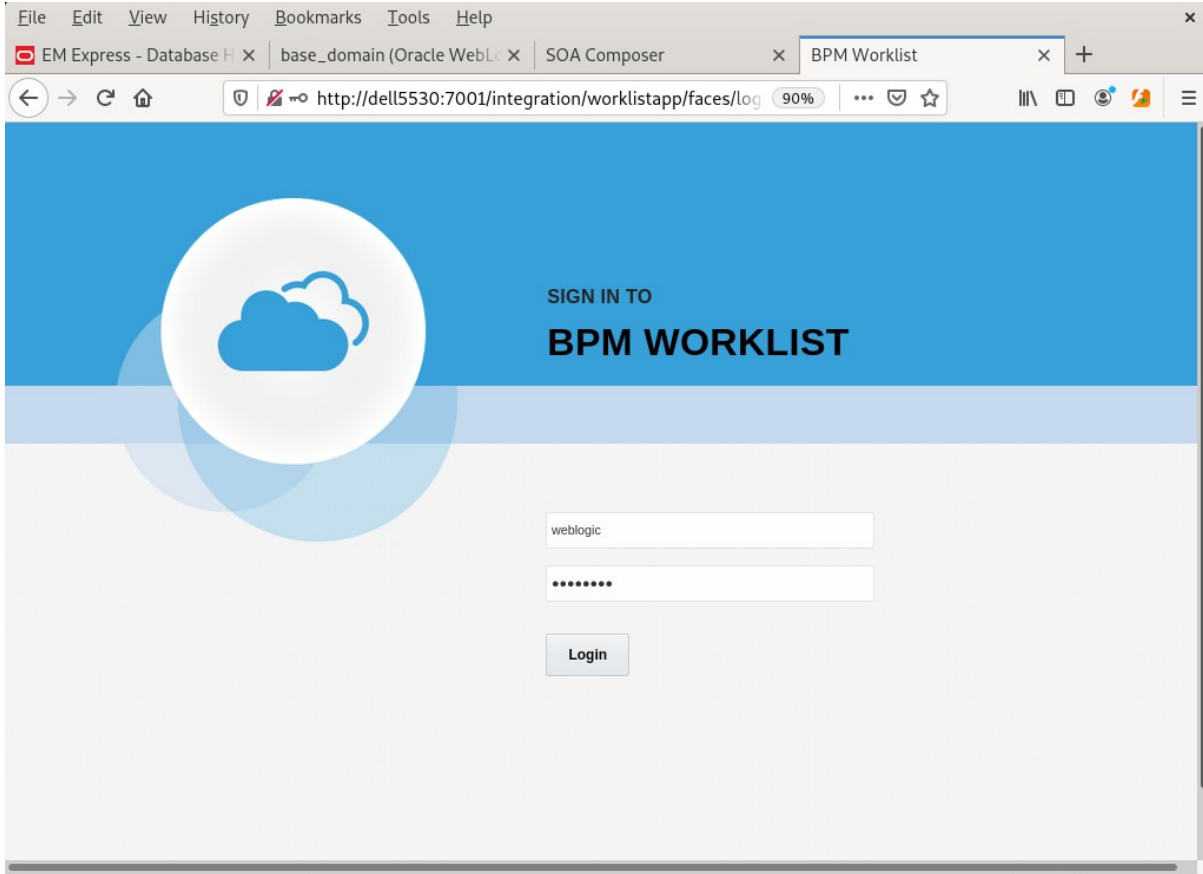
Home Page:



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



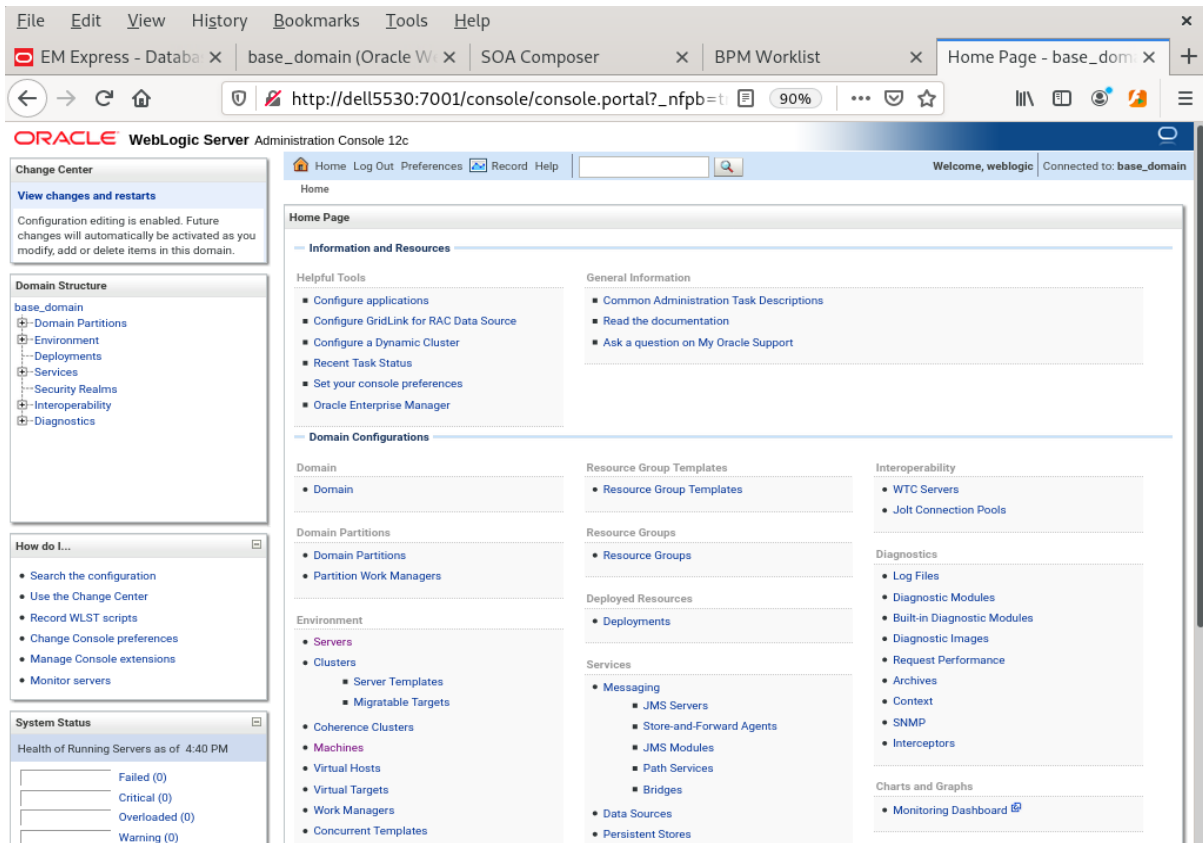
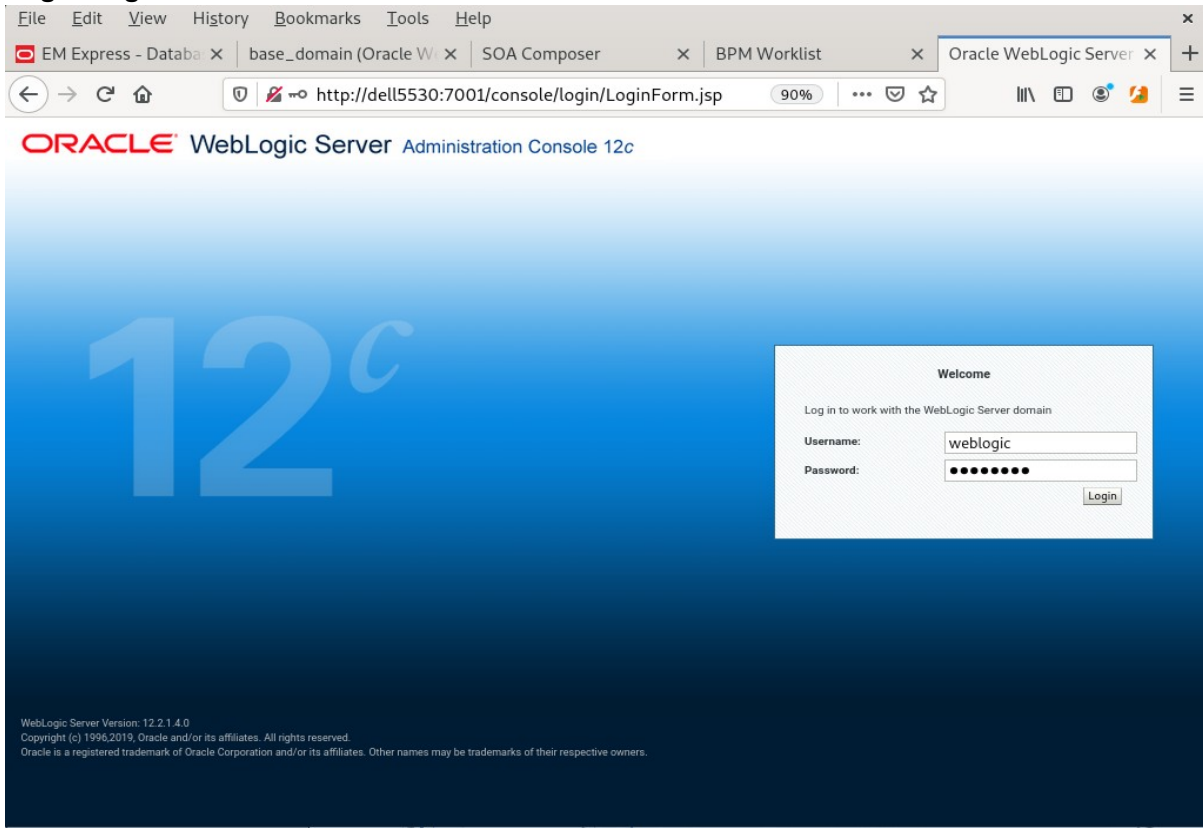
Access to BPM worklistapp - URL:<http://host:7001/integration/worklistapp>



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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 window title is "Summary of Servers - ba". The URL is "http://dell5530:7001/console/console.portal?_nfpb=t". The page header includes "ORACLE WebLogic Server Administration Console 12c" and "Welcome, weblogic Connected to: base_domain".

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 4:41 PM
Failed (0)
Critical (0)
Overloaded (0)
Warning (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

New Clone Delete

3). Connecting JDeveloper to the Compact Domain.

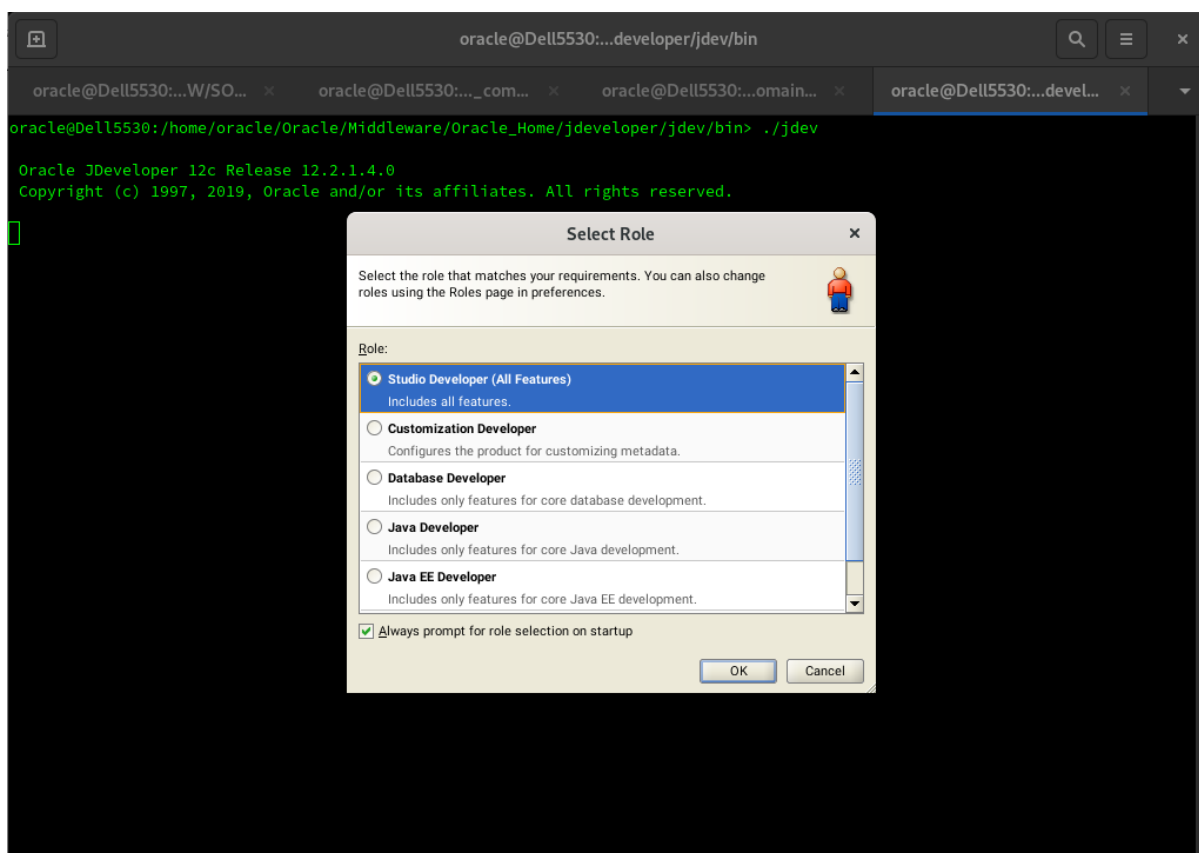
Launch Oracle JDeveloper with the appropriate command.

Ex:

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

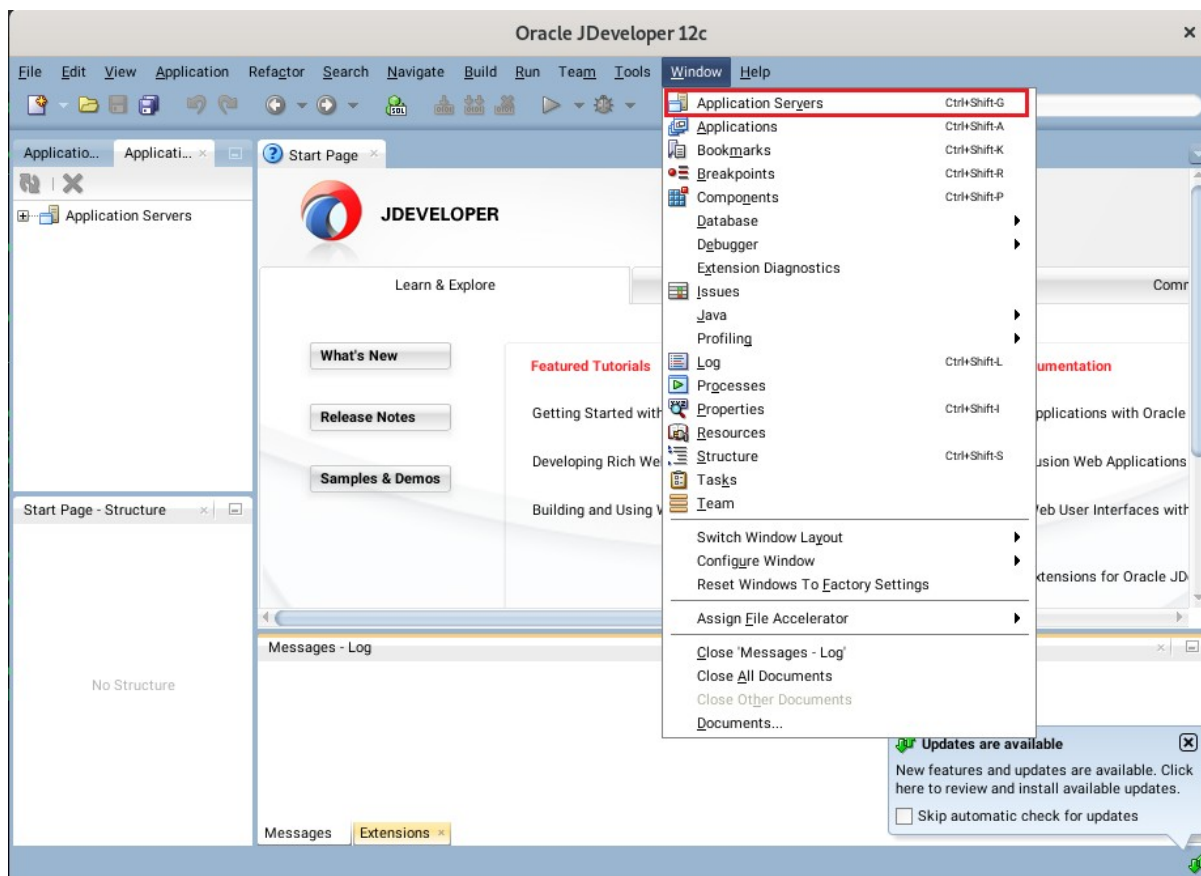
Follow these steps:

a1). Select Role.

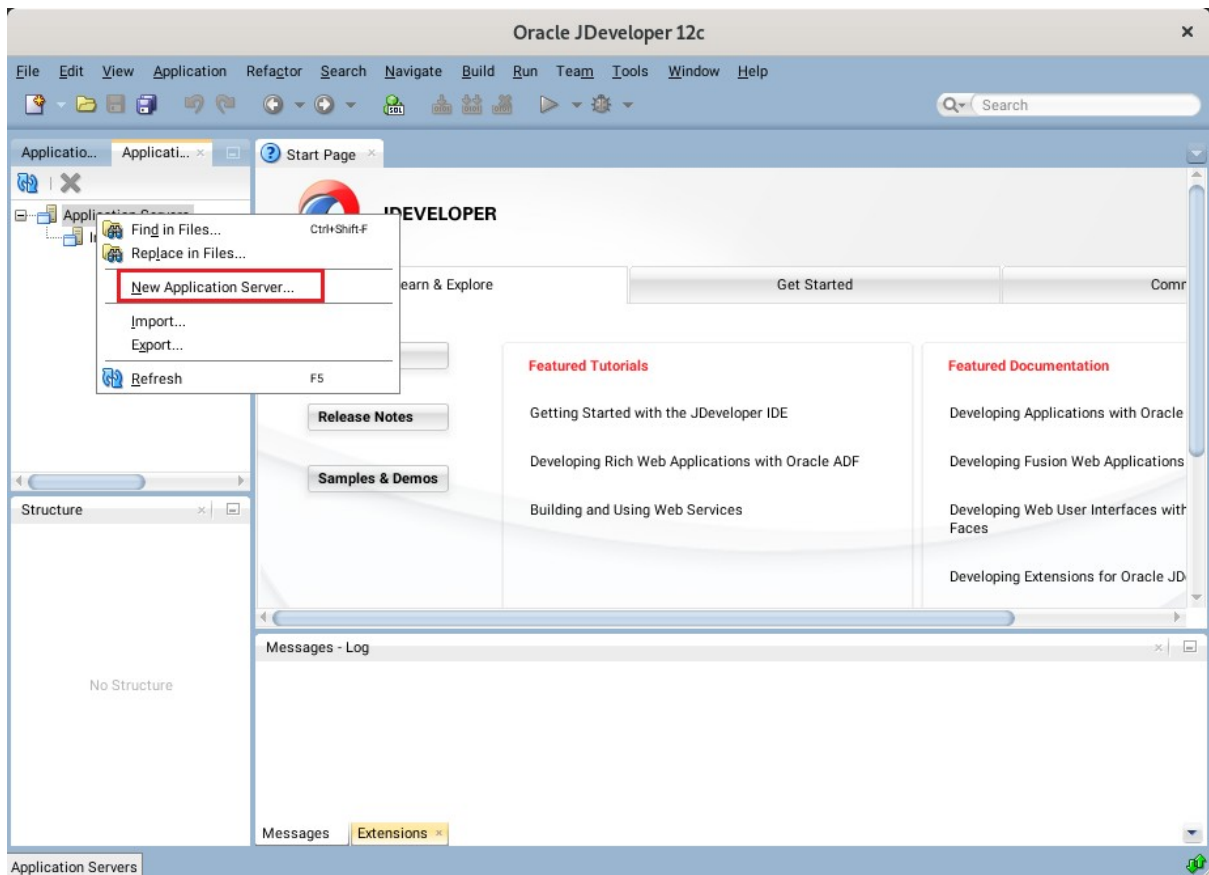


Select the role that matches your requirements. Click **OK** to continue.

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.

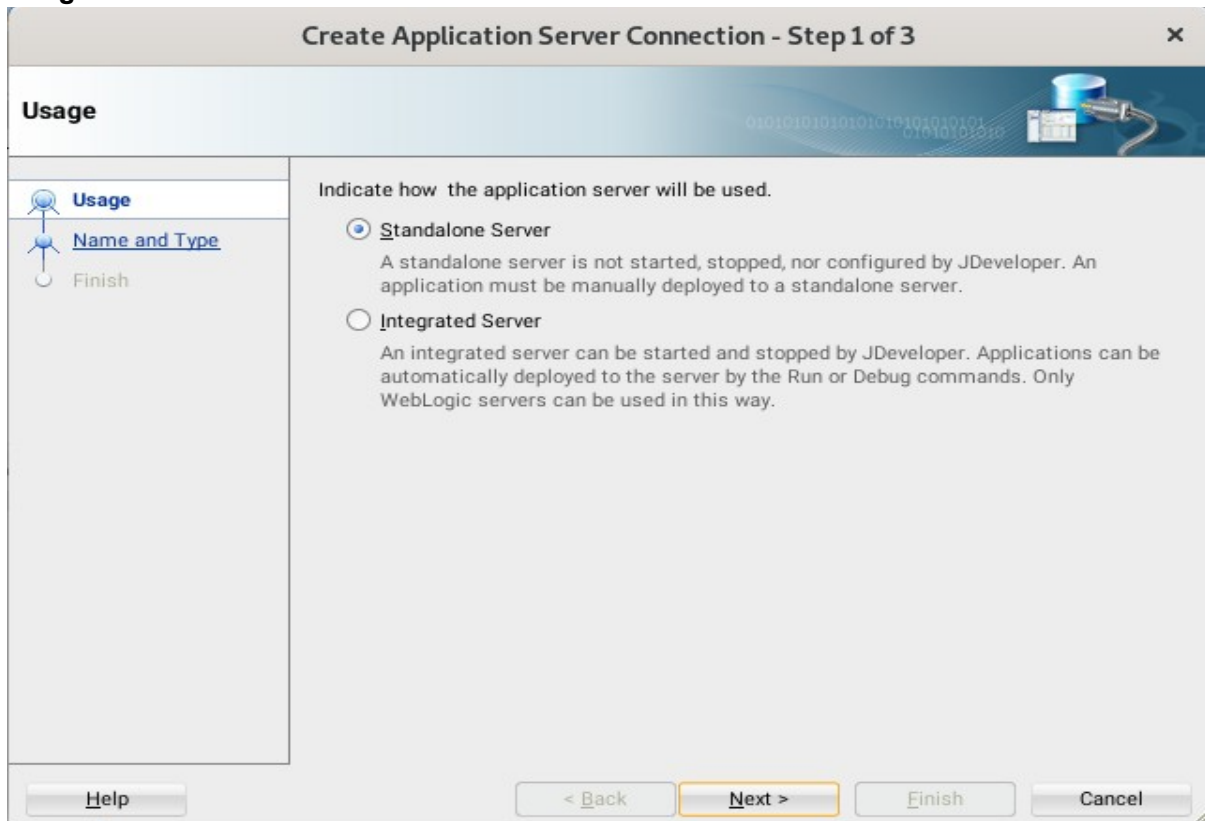


a3). Right-click on **Application Servers** in the Application Server Navigator. Select **New Application Server** from the drop-down menu to launch the **Create Application Server Connection** wizard.

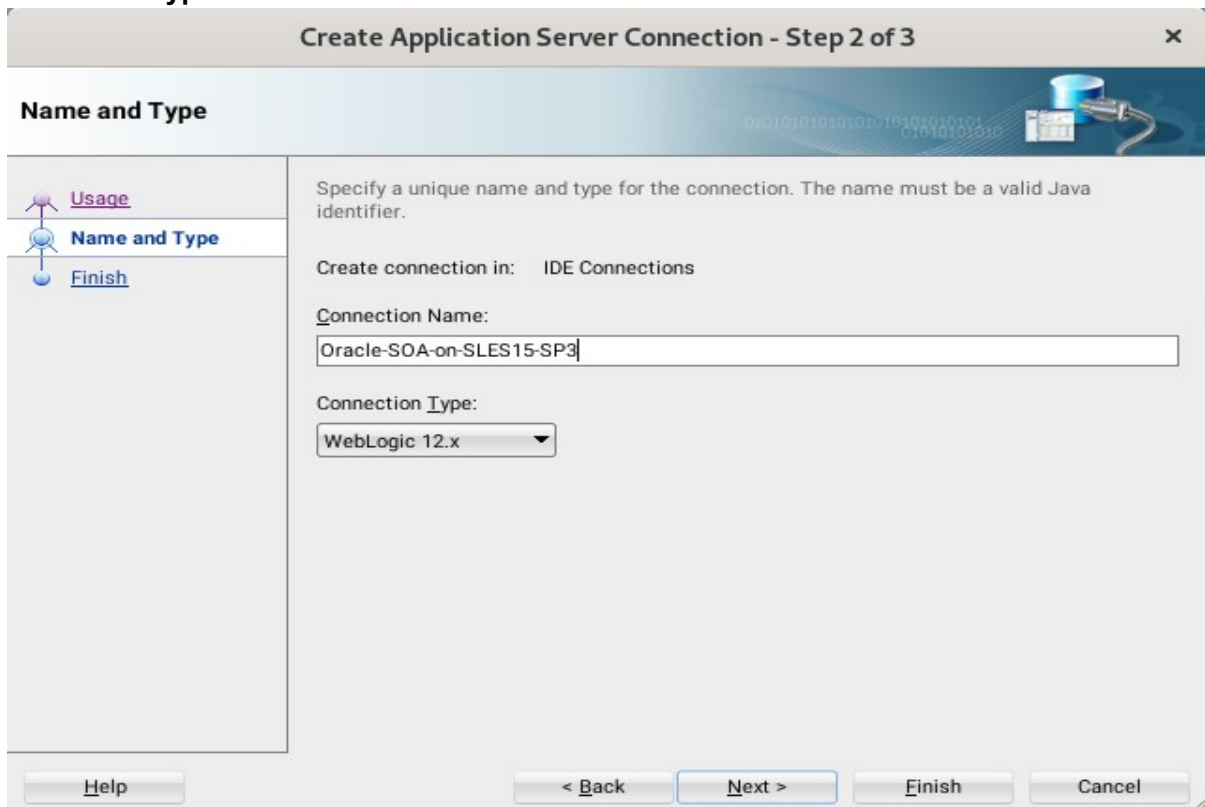


a4). Creating Application Server Connection steps as shown below.

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

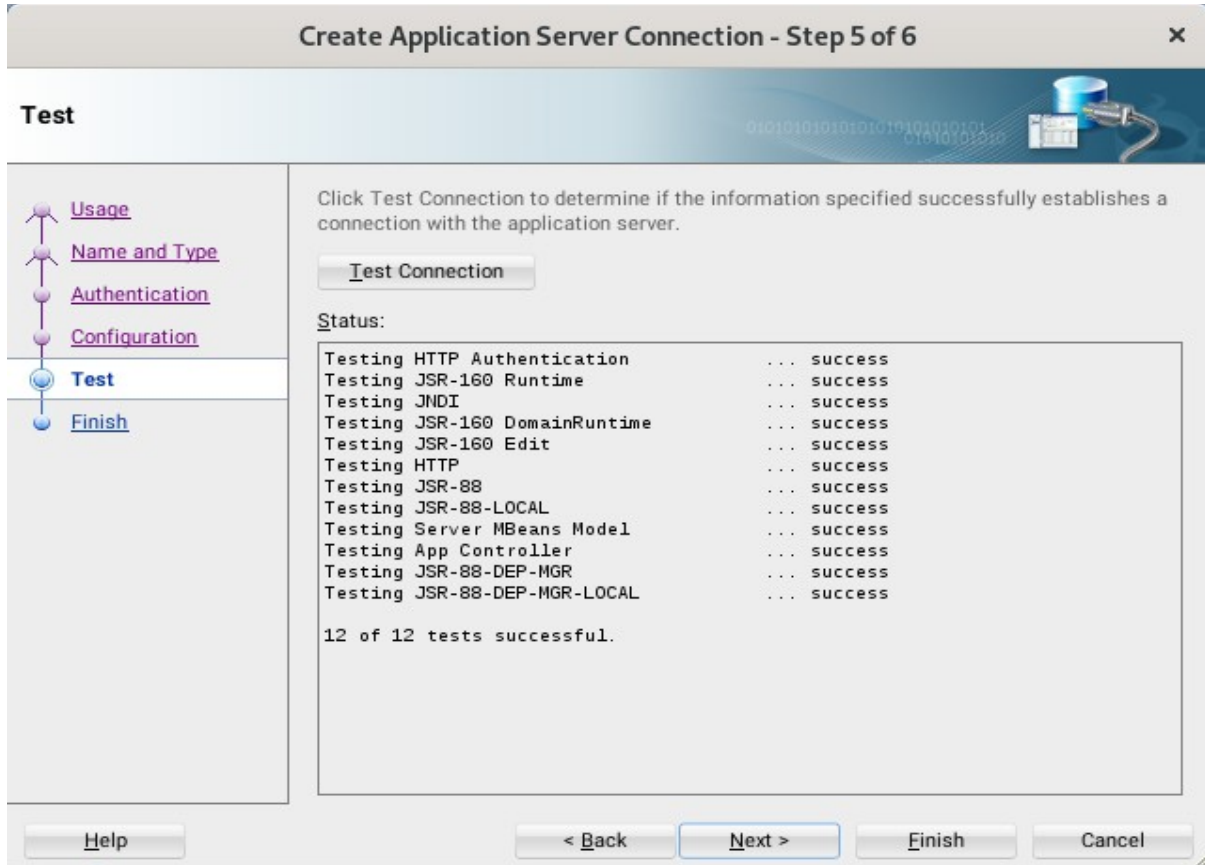
Port: 7001 SSL Port: 7002

Always use SSL

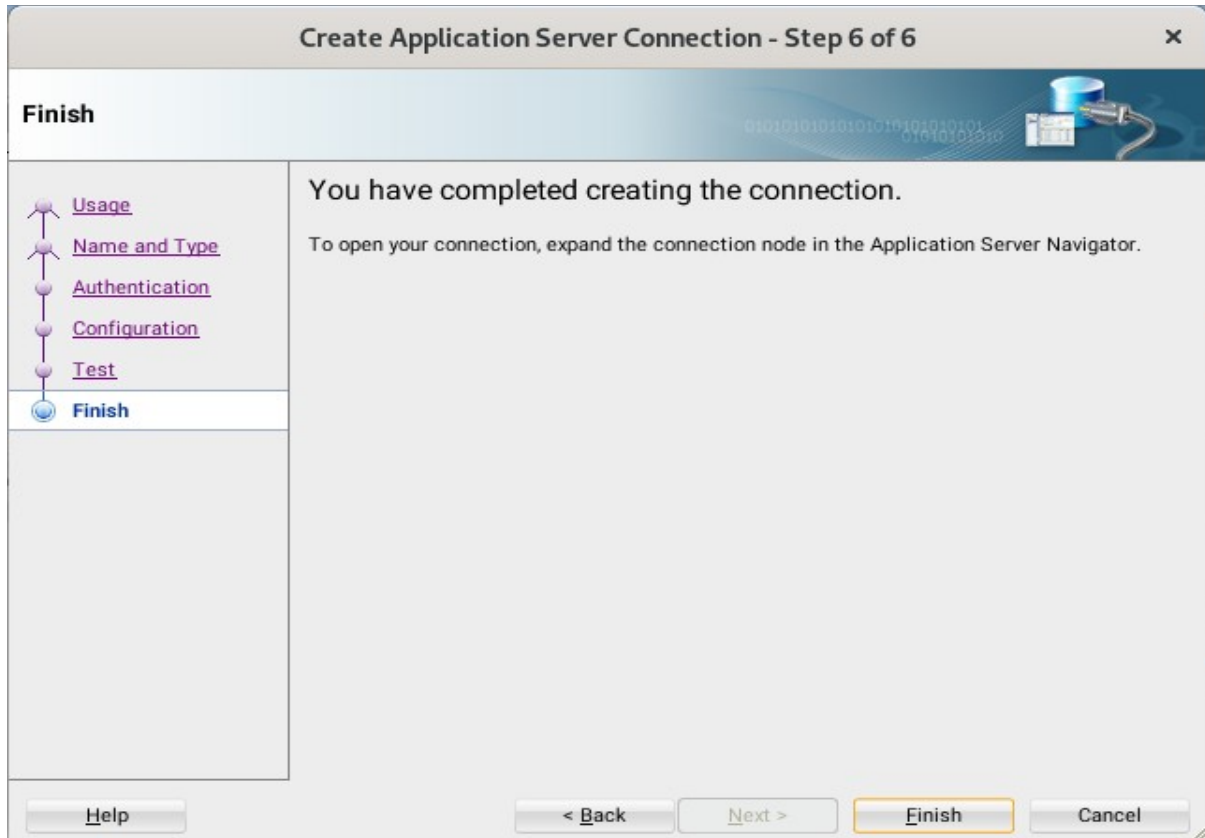
WebLogic Domain: base_domain

Help < Back Next > Finish Cancel

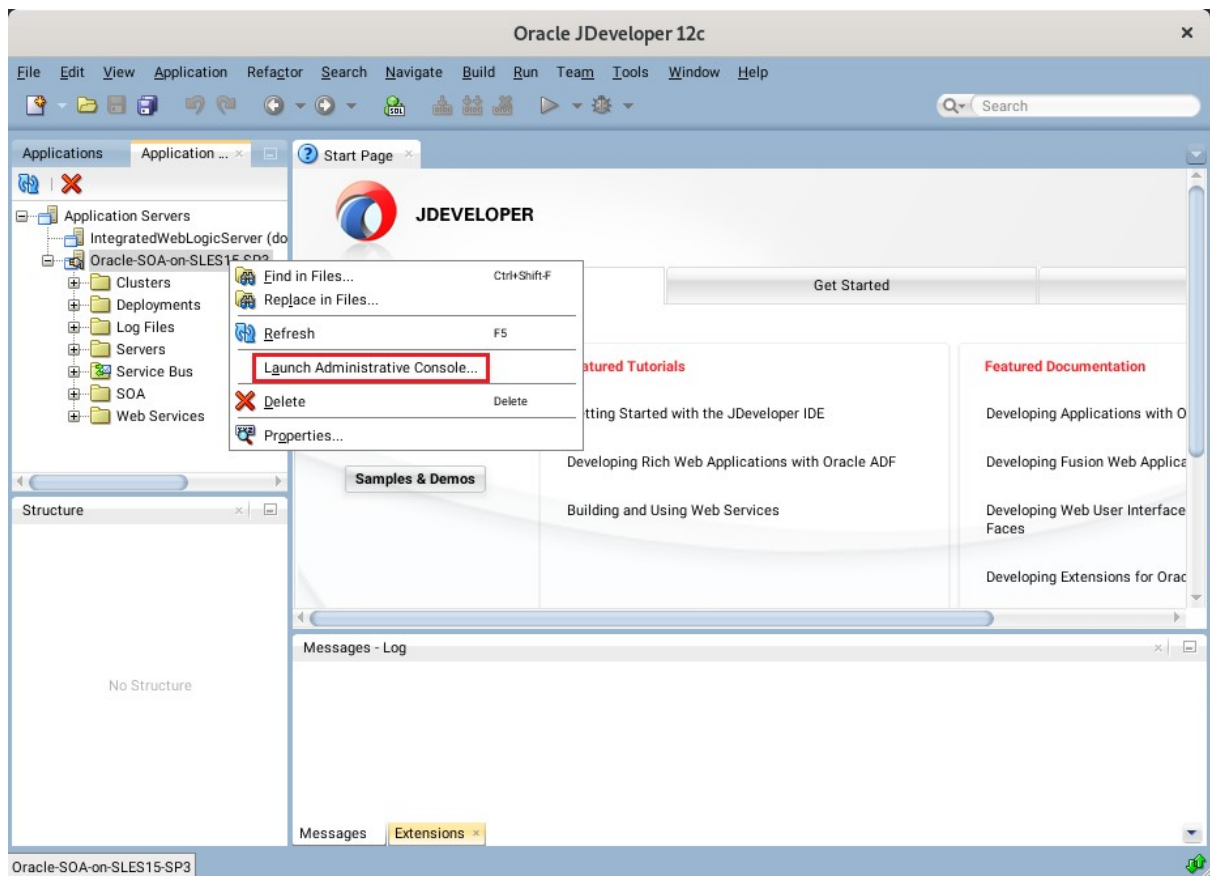
Test screen.



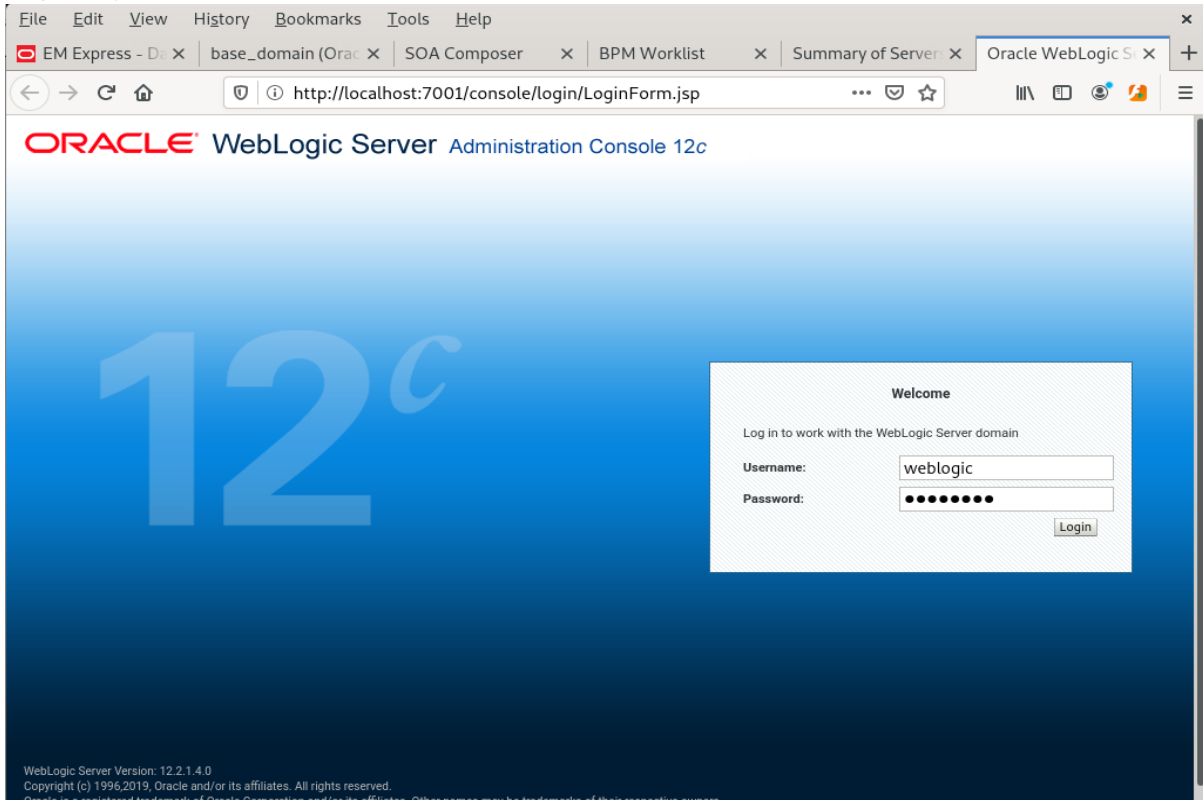
Finish screen.



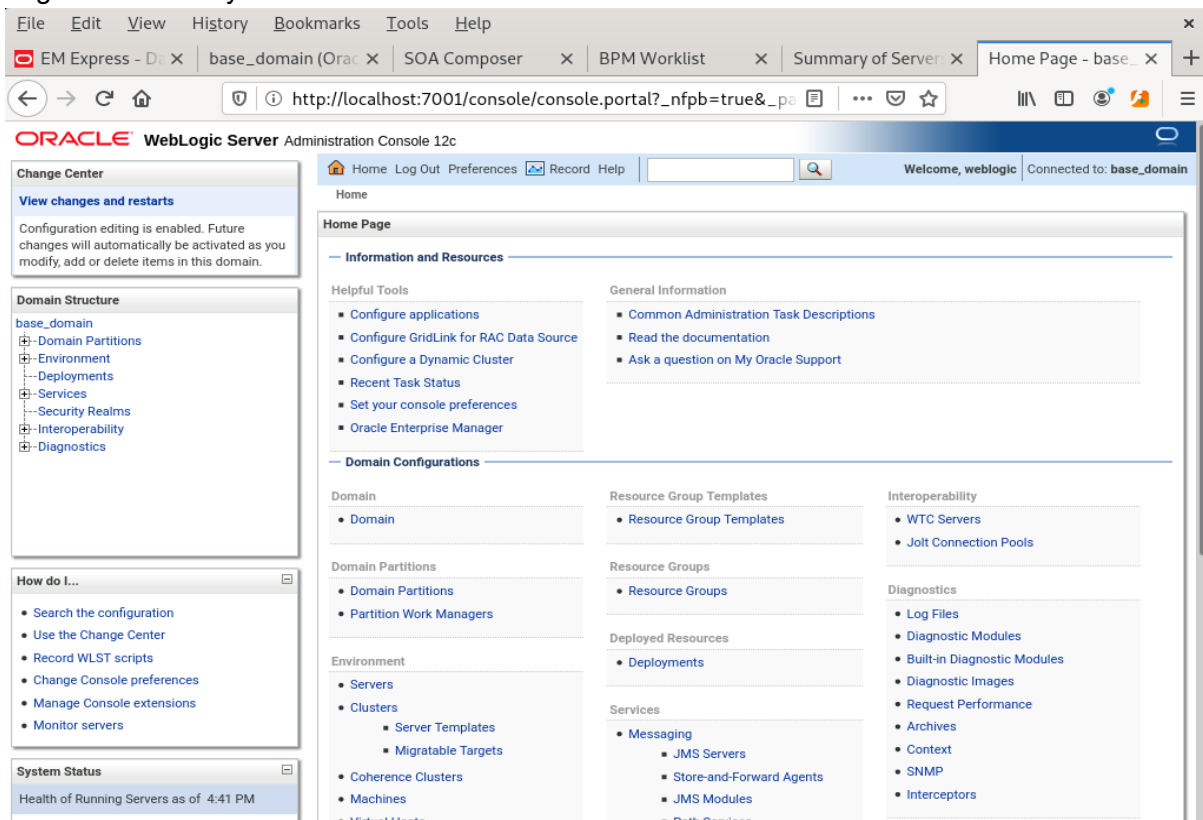
a5). Verifying Your Connection. Expand the connection node beside **Application Servers** in the Application Server Navigator. You should see your domain listed by the **Connection Name** you specified on the **Name and Type** screen. Right-click on your domain's name and choose **Launch Administrative 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 9898557440 bytes
Fixed Size                12169752 bytes
Variable Size             2013269480 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
```

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

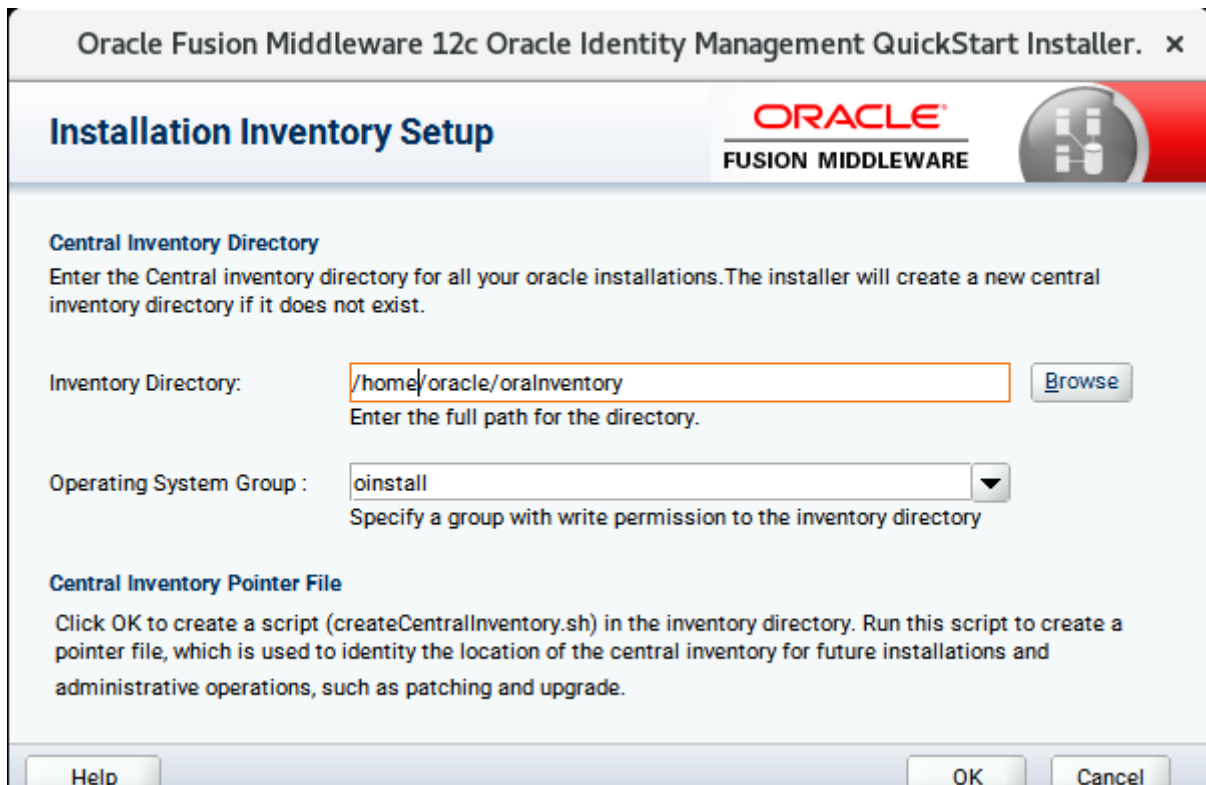
1-2. Log in to the target system (SLES 15 SP3 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <https://www.oracle.com/downloads/#category-middleware>.

(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.



Oracle Fusion Middleware 12c Oracle Identity Management QuickStart Installer. x

Installation Inventory Setup

ORACLE
FUSION MIDDLEWARE

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.

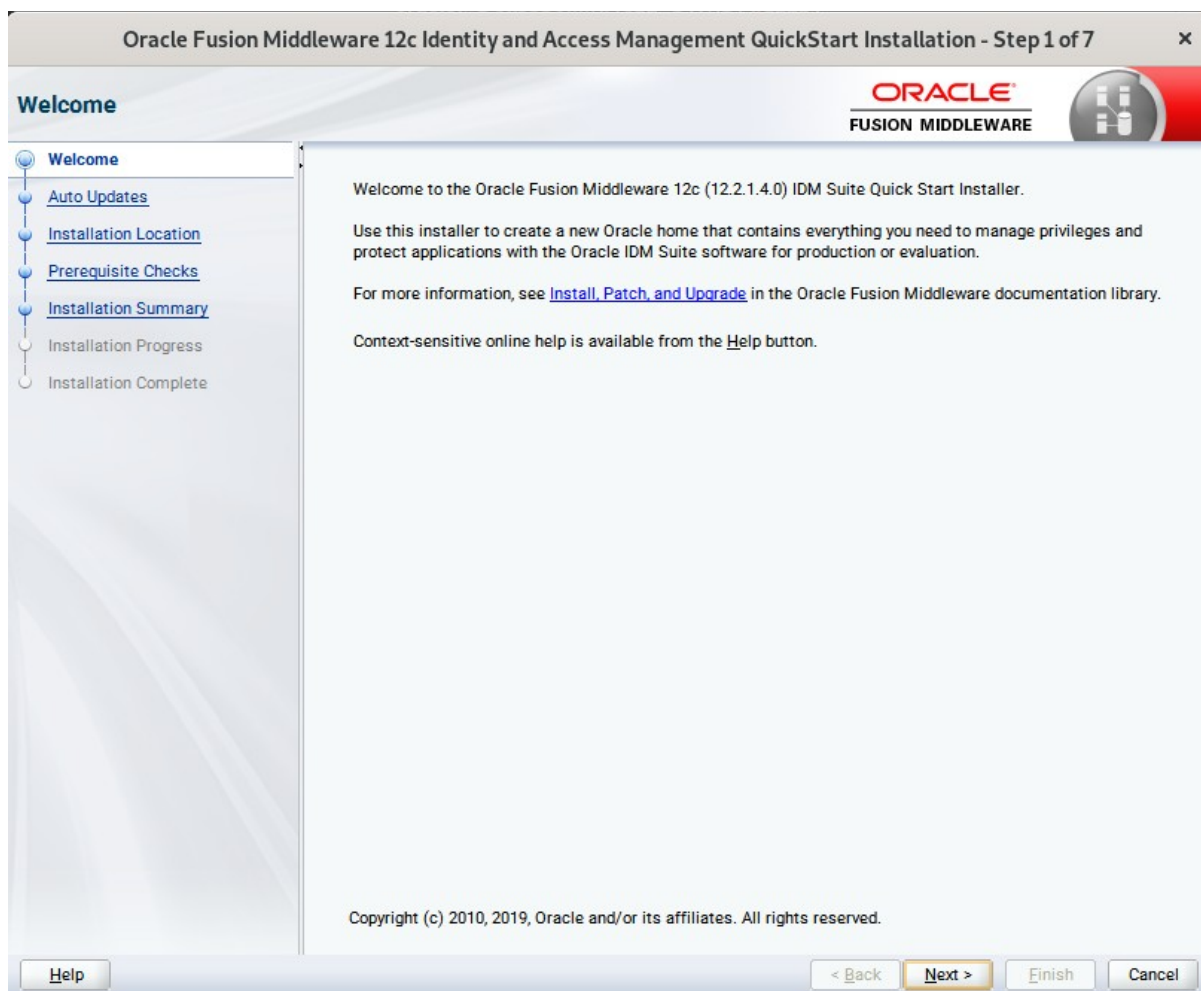
Inventory Directory:
Enter the full path for the directory.

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.

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.



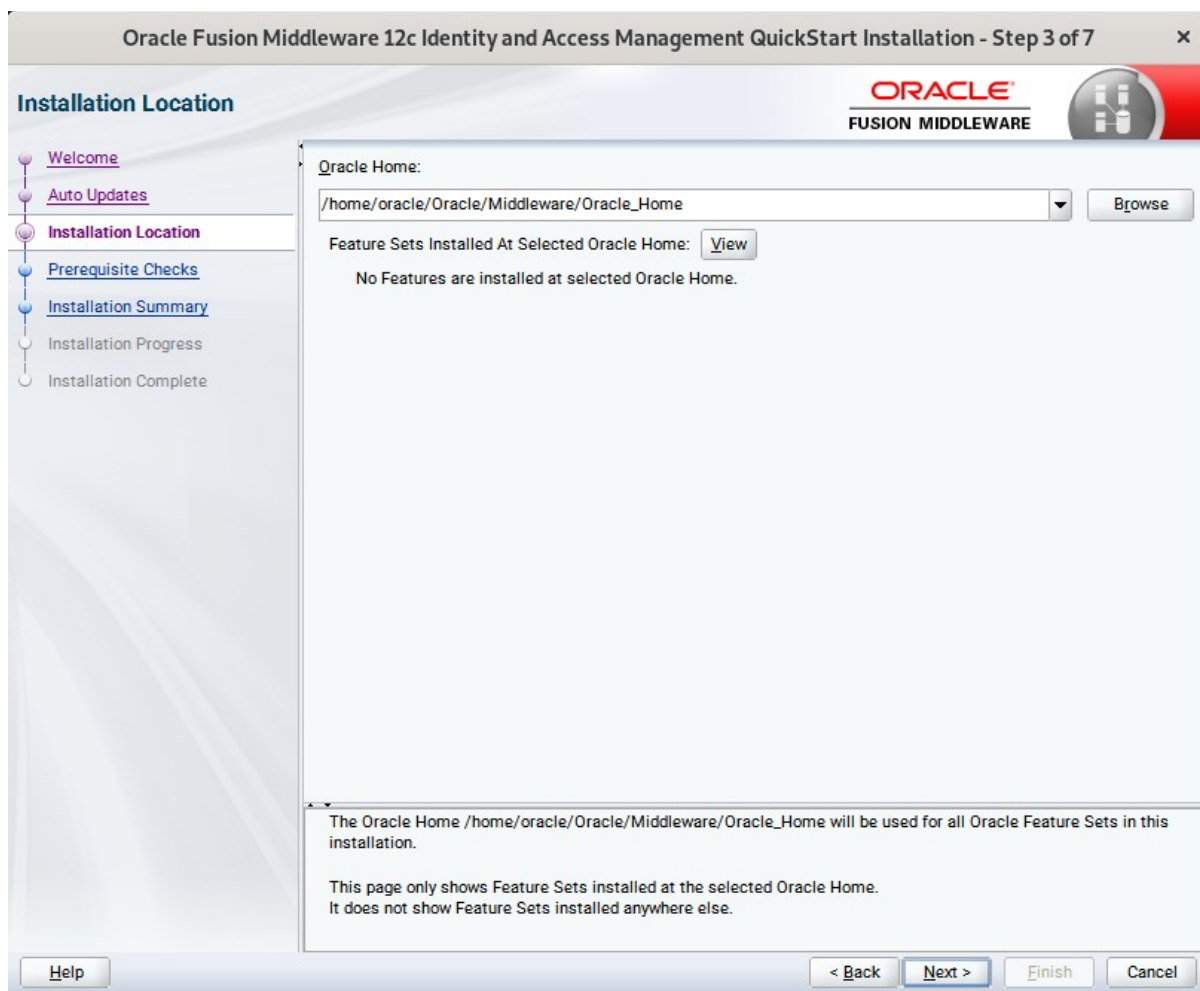
This page welcomes you to the installation. Click **Next** to continue.

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 navigation pane on the left with the following items: 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 at the top right. Below the logo, there are 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 options is a 'Search' button and a large empty text box. At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

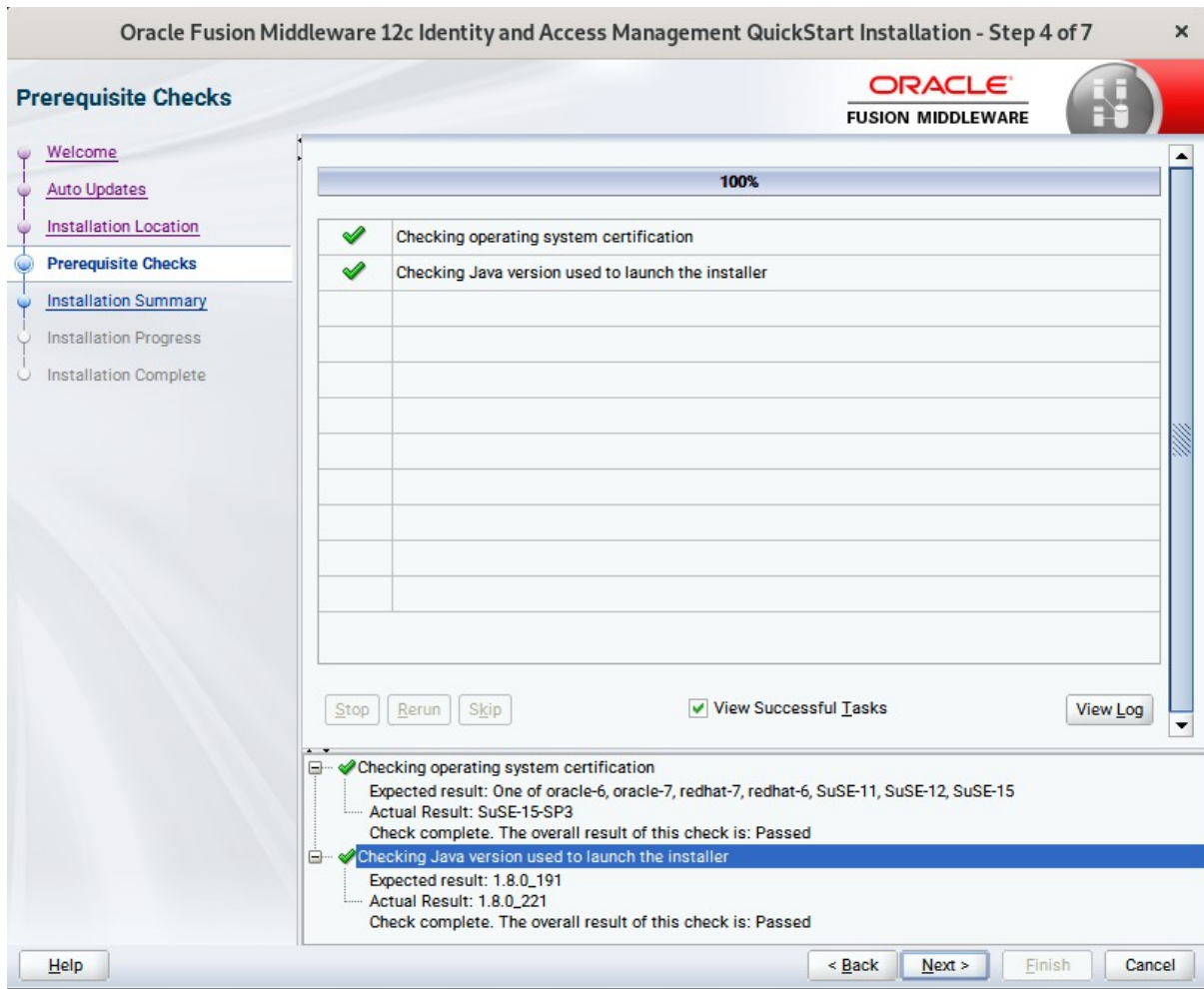
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



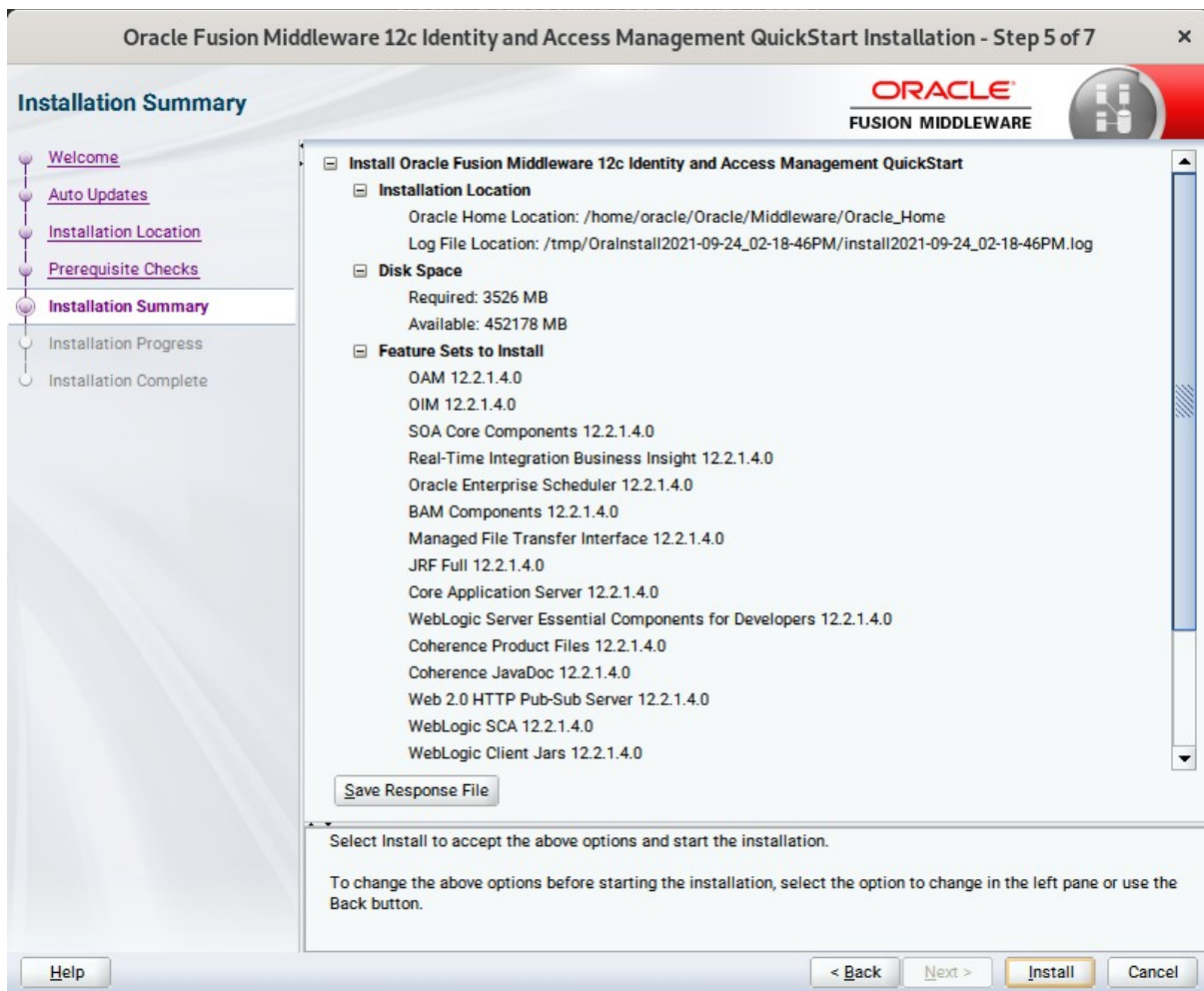
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



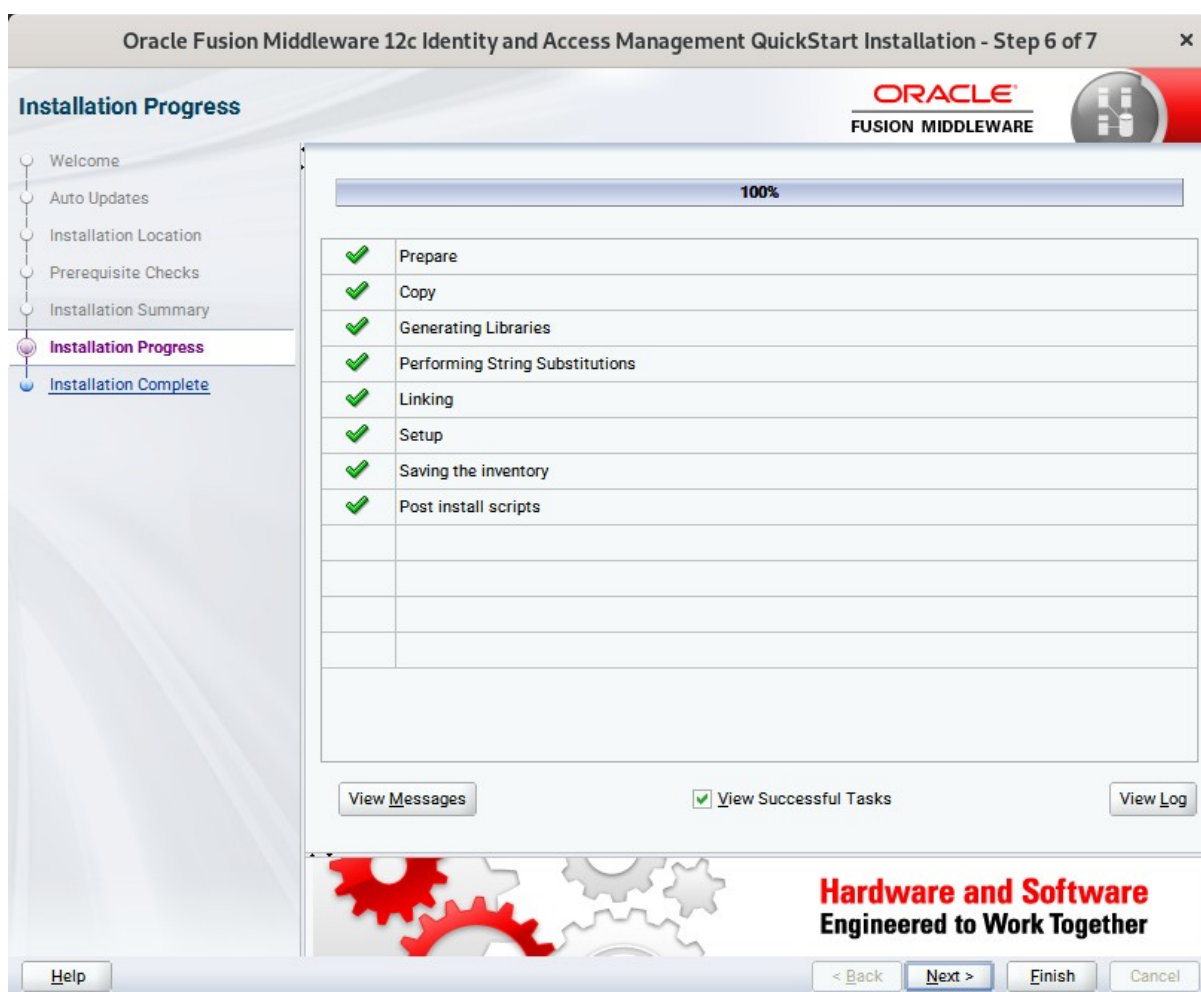
This page shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



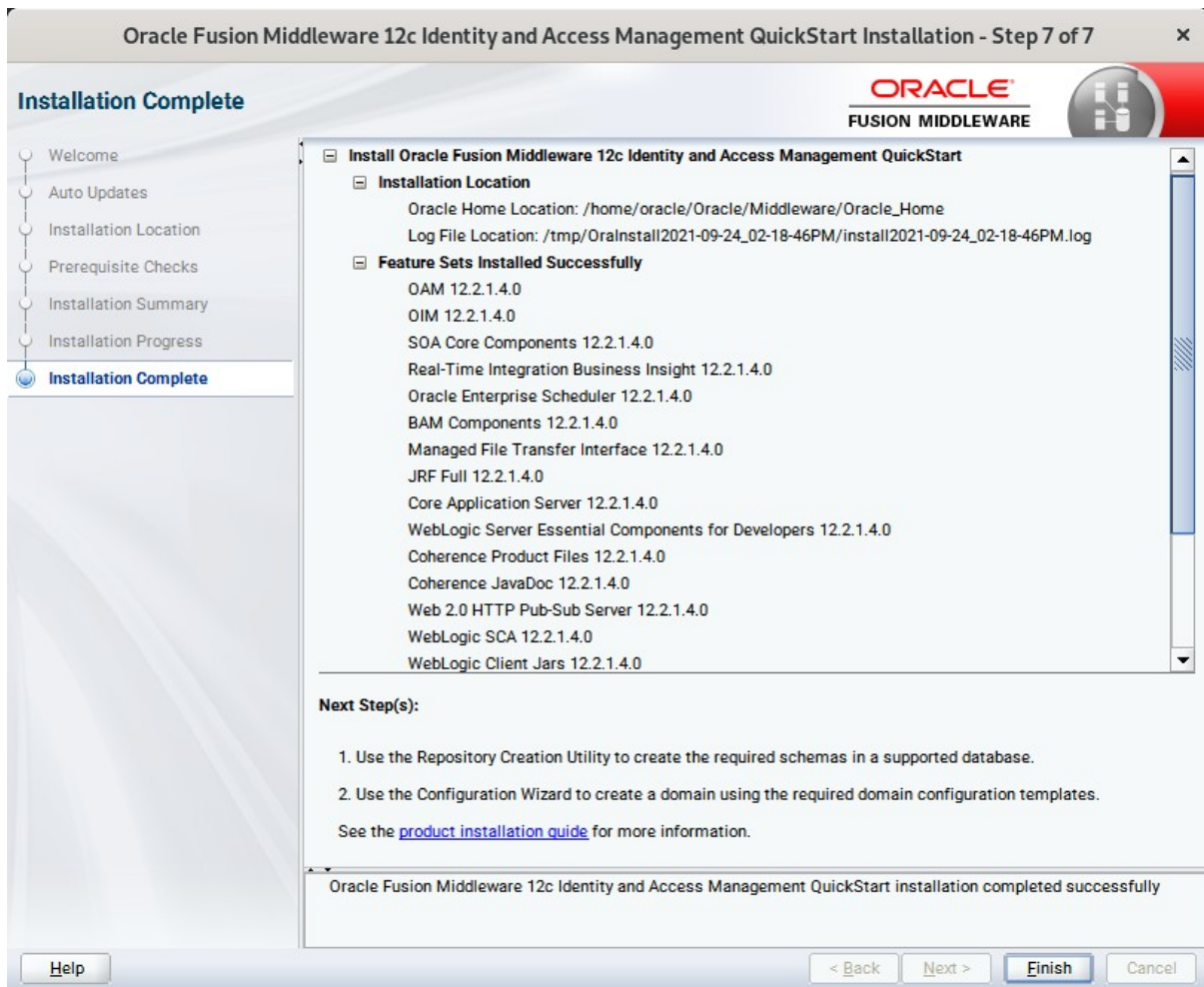
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

Specify a unique prefix for all schemas created in this session, so you can easily locate, reference, and manage the schemas later.

Select existing prefix:

Create new prefix:

Alpha numeric only. Cannot start with a number. No special characters.

Component	Schema Owner
<input type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Common Infrastructure Services *	DEV_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	DEV_OPSS
<input type="checkbox"/> Oracle Enterprise Scheduler	ESS
<input type="checkbox"/> User Messaging Service	UMS
<input checked="" type="checkbox"/> Audit Services	DEV_IAU
<input checked="" type="checkbox"/> Audit Services Append	DEV_IAU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	DEV_IAU_VIEWER
<input checked="" type="checkbox"/> Metadata Services	DEV_MDS
<input checked="" type="checkbox"/> Weblogic Services *	DEV_WLS
<input type="checkbox"/> SOA Suite	
<input checked="" type="checkbox"/> IDM Schemas	
<input type="checkbox"/> Oracle Identity Manager	OIM
<input checked="" type="checkbox"/> Oracle Access Manager	DEV_OAM

* Mandatory component. Mandatory components cannot be deselected.

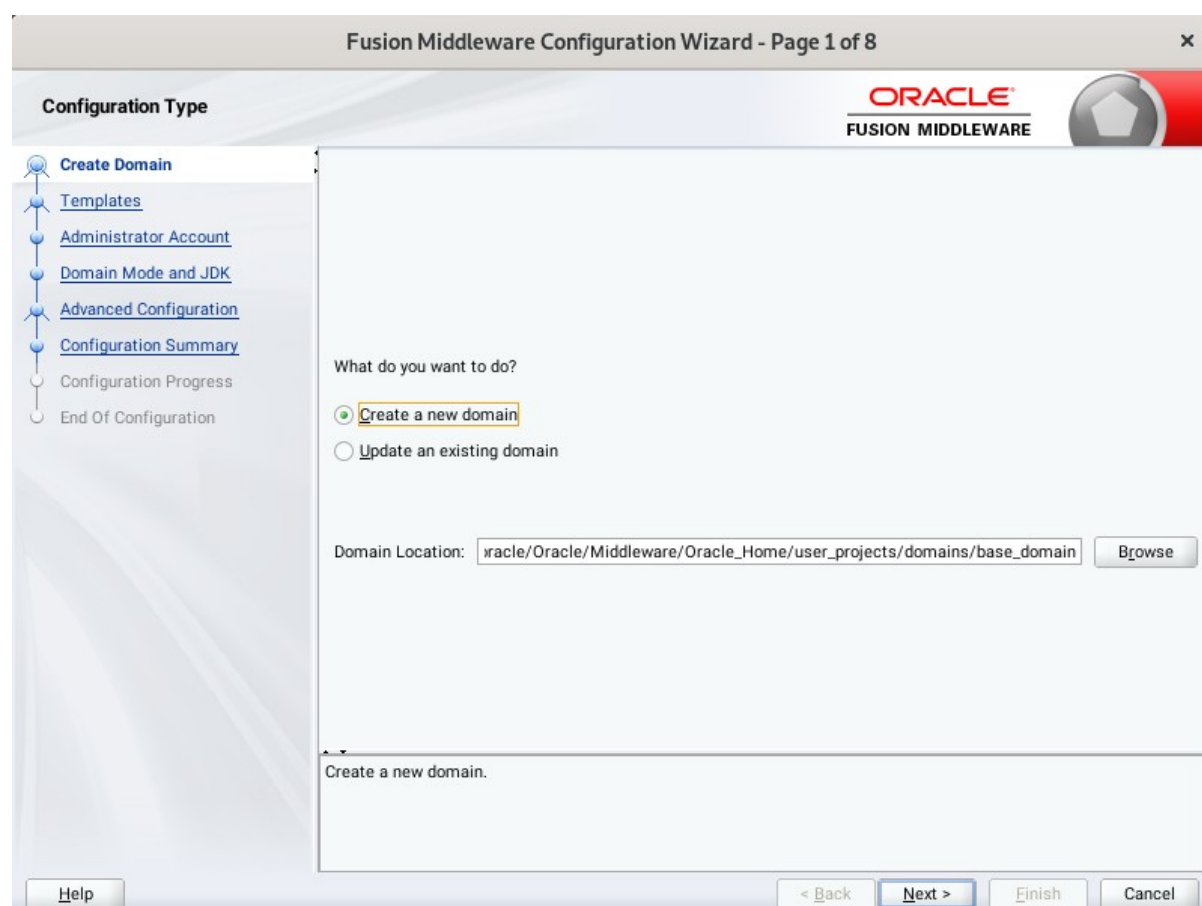
Select the **Create new prefix** radio button and specify a custom prefix (such as DEV). Select the **Oracle Access Manager** schema, this action automatically selects the schemas as dependencies, and ensure the schema creation is successful.

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.

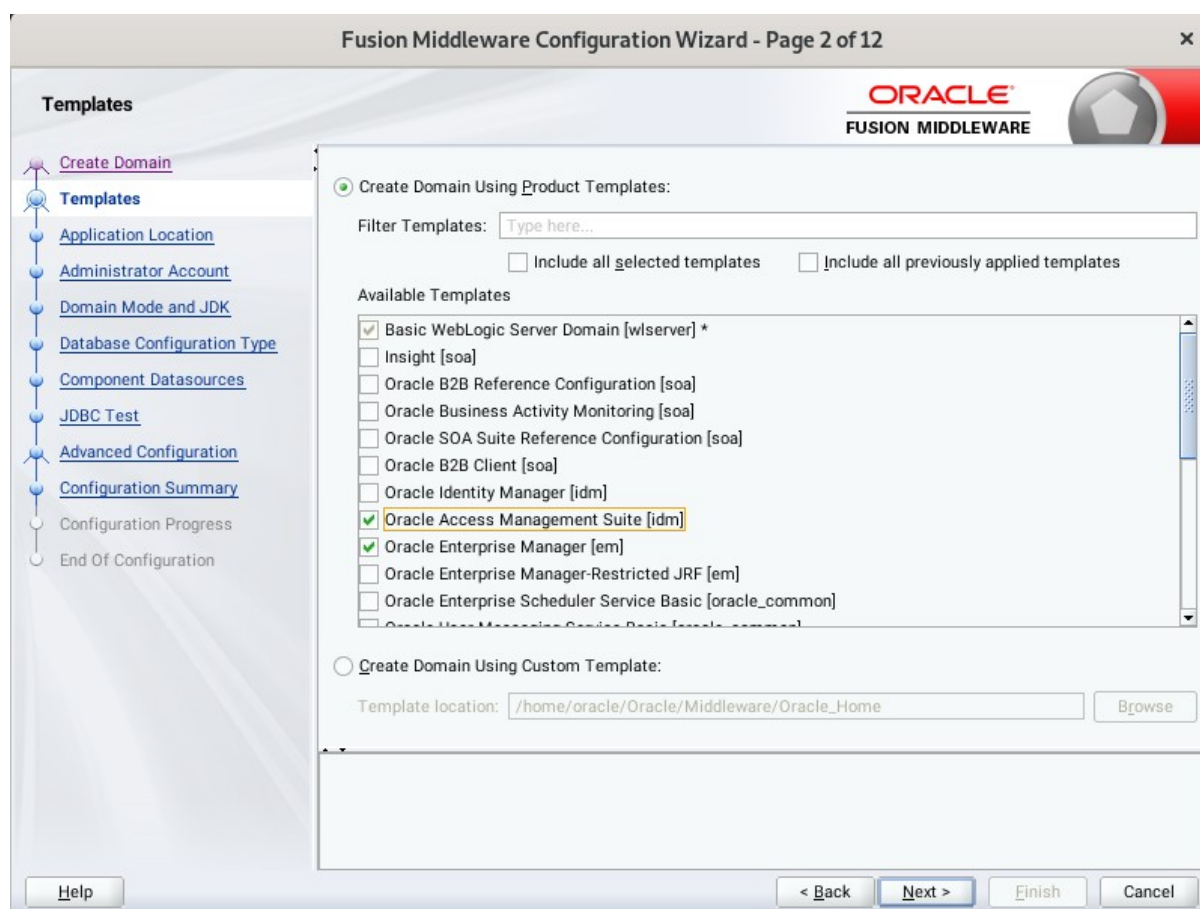
Follow these steps:

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.

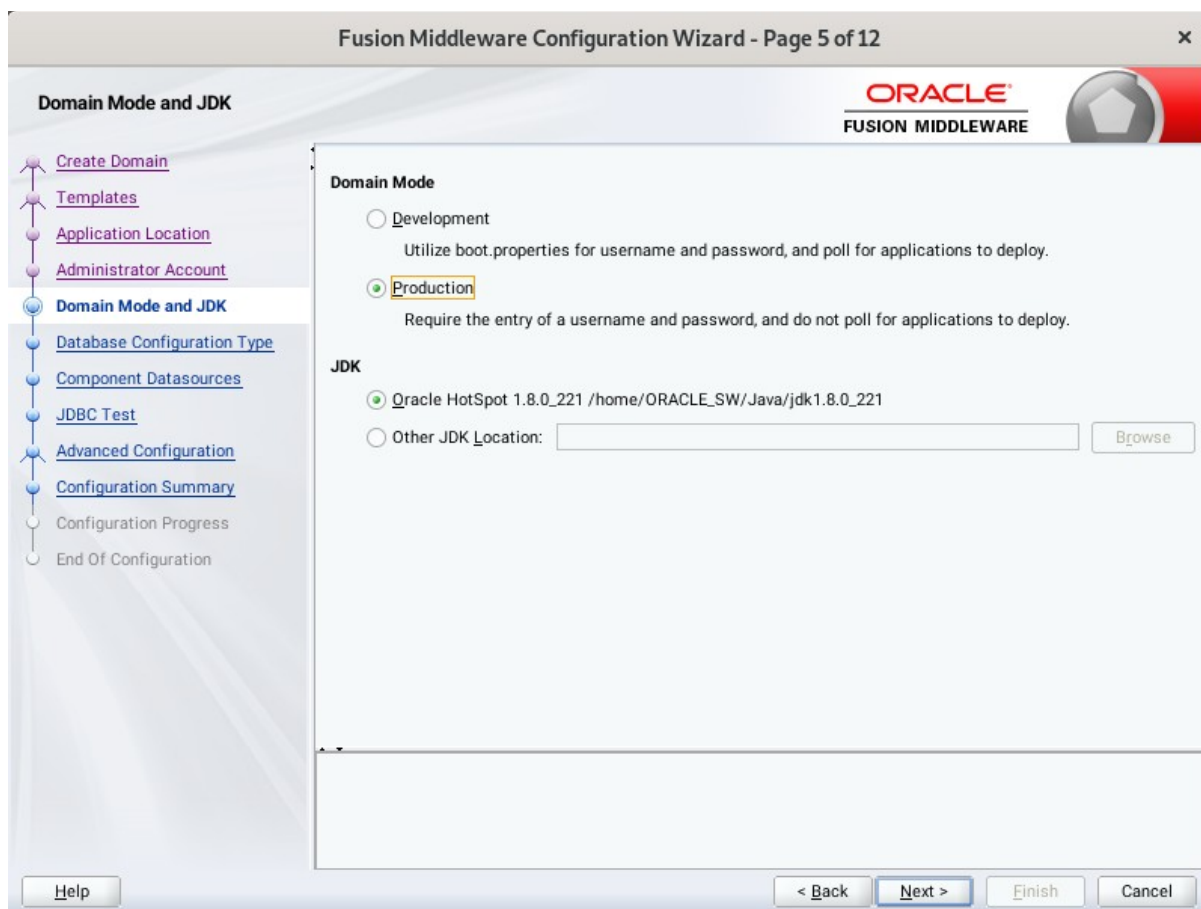
4). The **Administrator Account** screen appears.



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 Fusion Middleware logo is in the top right corner. On the left, a navigation pane 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.

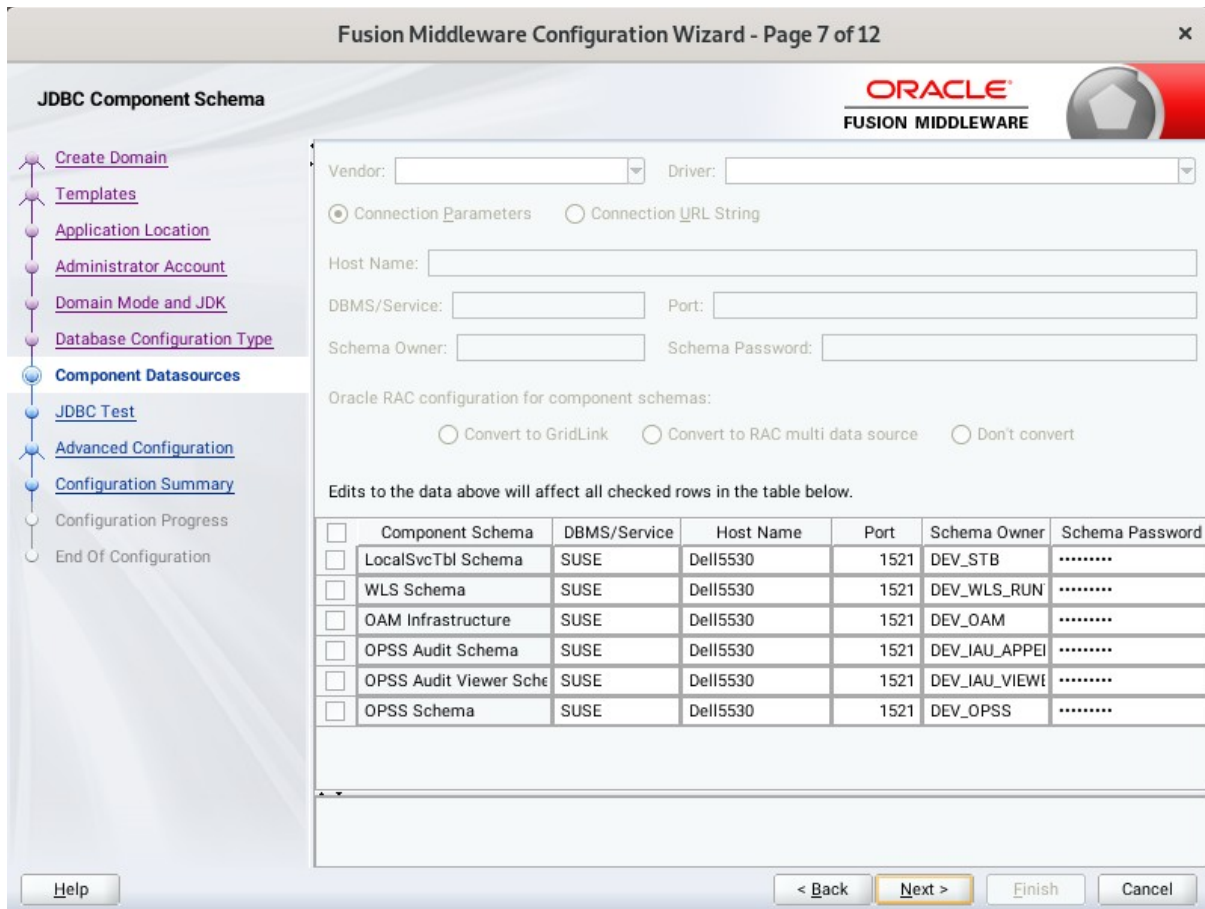


Select **Production** in the **Domain Mode** field and select the **Oracle HotSpot JDK** in the **JDK** field. Click **Next** to continue.

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

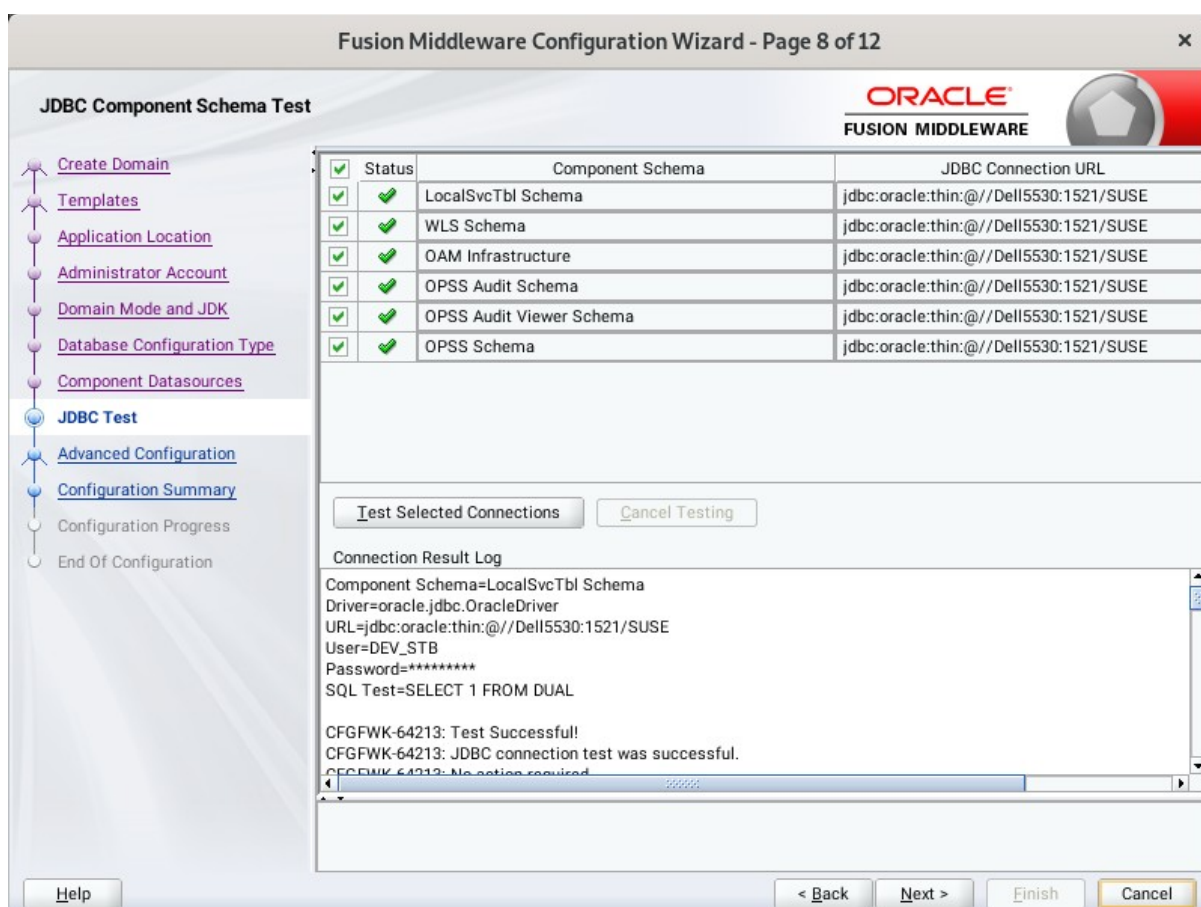
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



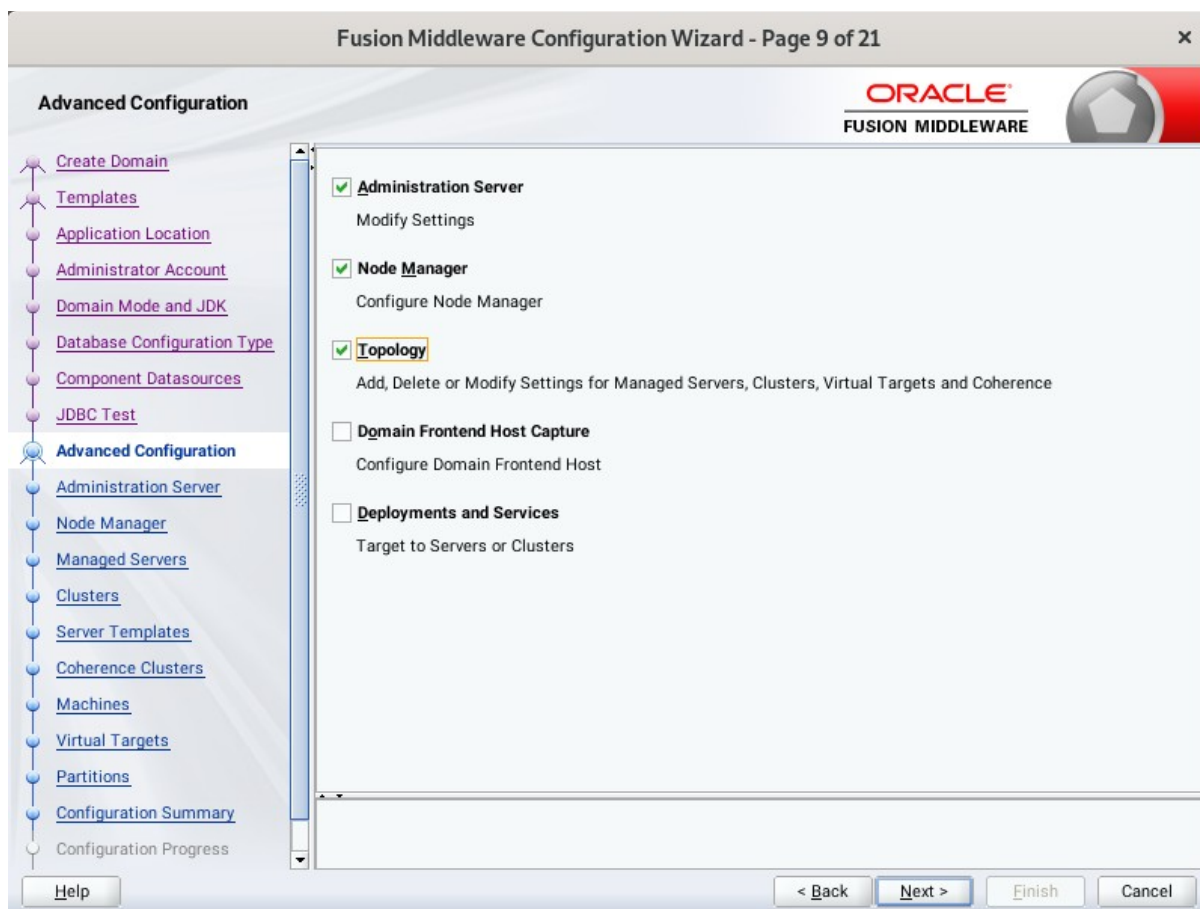
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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.

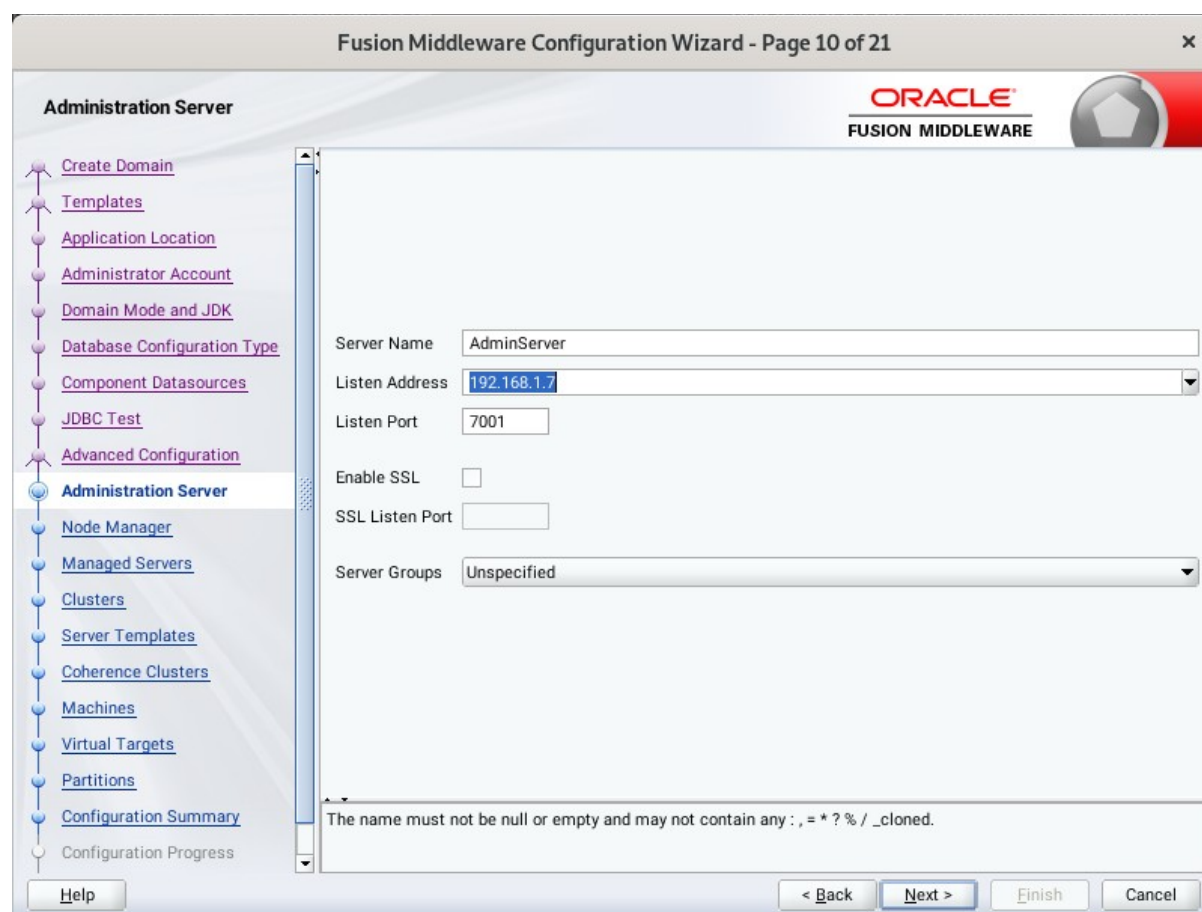


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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



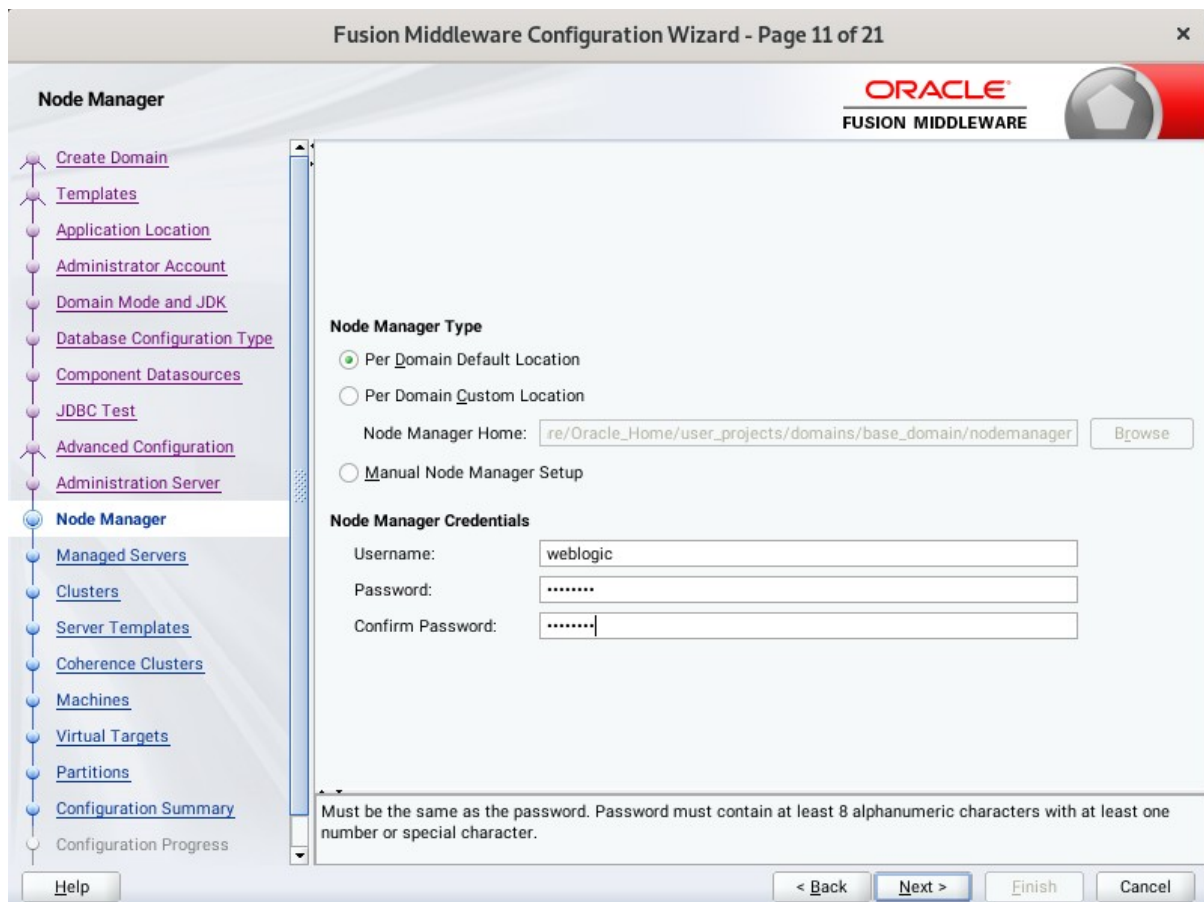
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 10 of 21". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation 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: 192.168.1.7 (selected from a dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty text box)
- Server Groups: Unspecified (selected from 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." Navigation buttons include "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.

Navigation buttons at the bottom:

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.

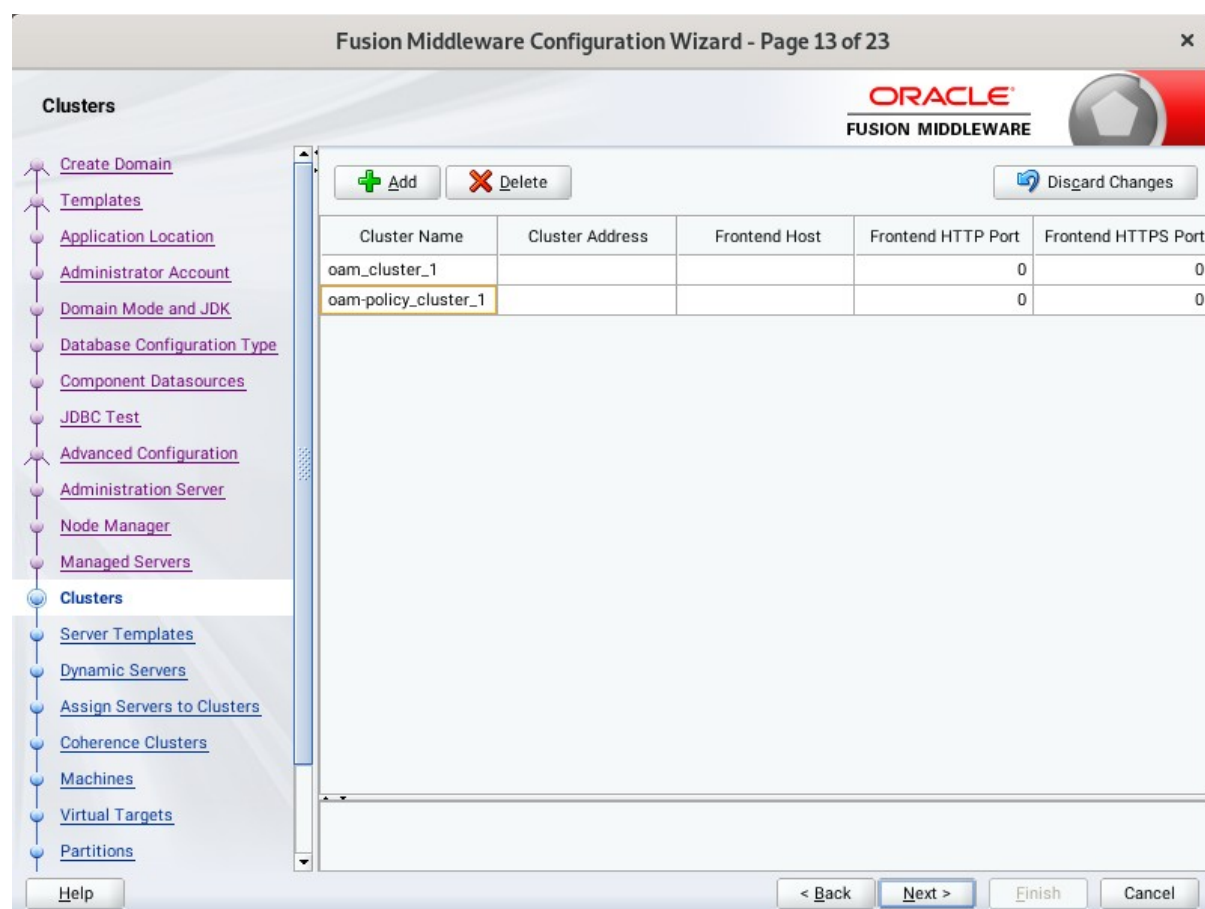
The screenshot shows the 'Managed Servers' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 12 of 21'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right. A navigation pane on the left lists various configuration steps, with 'Managed Servers' selected. The main area contains a table with the following data:

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
oam_server1	192.168.1.7	14100	<input type="checkbox"/>	Disabled	OAM-MGD-...
oam_policy_mgr1	192.168.1.7	14150	<input type="checkbox"/>	Disabled	OAM-POLIC-...

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

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.



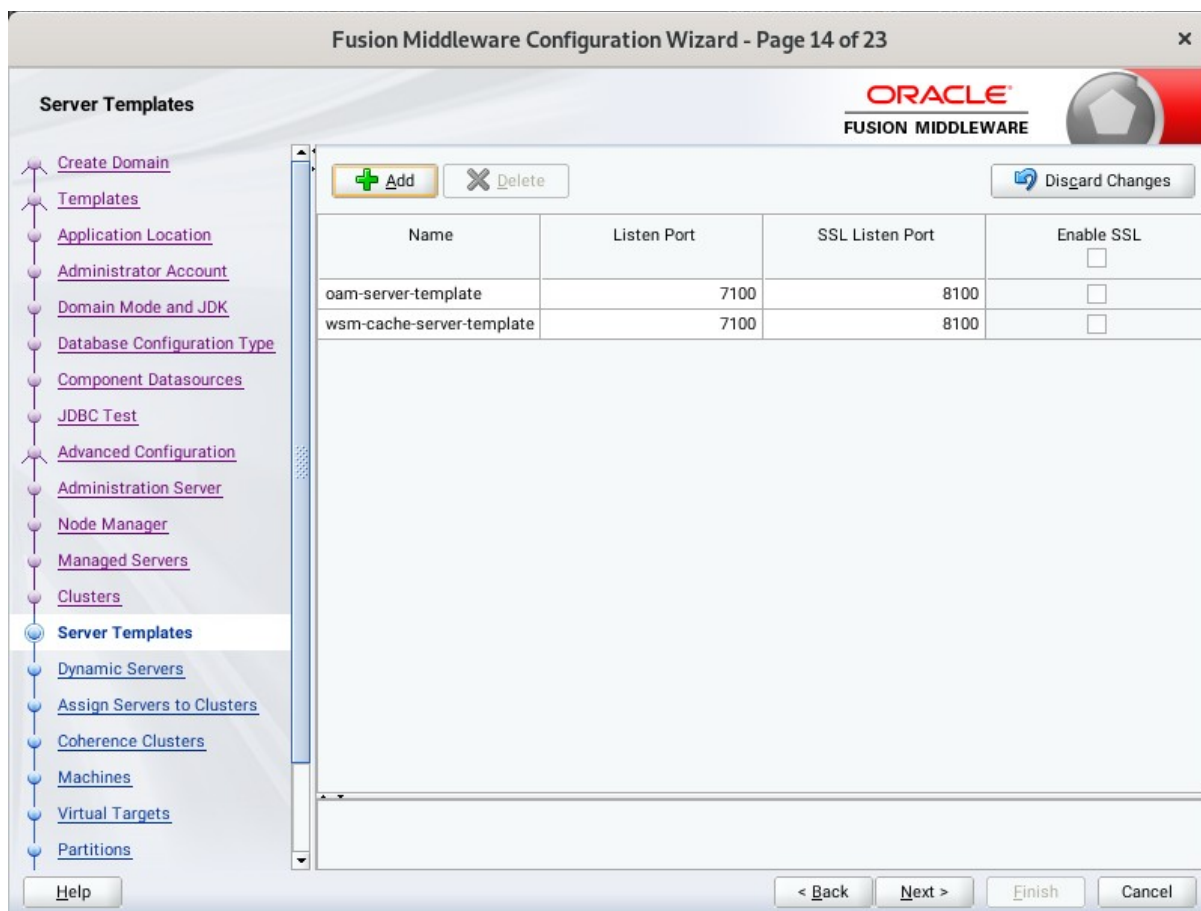
On the Clusters screen:

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.

Fusion Middleware Configuration Wizard - Page 15 of 23

Dynamic Servers

ORACLE
FUSION MIDDLEWARE

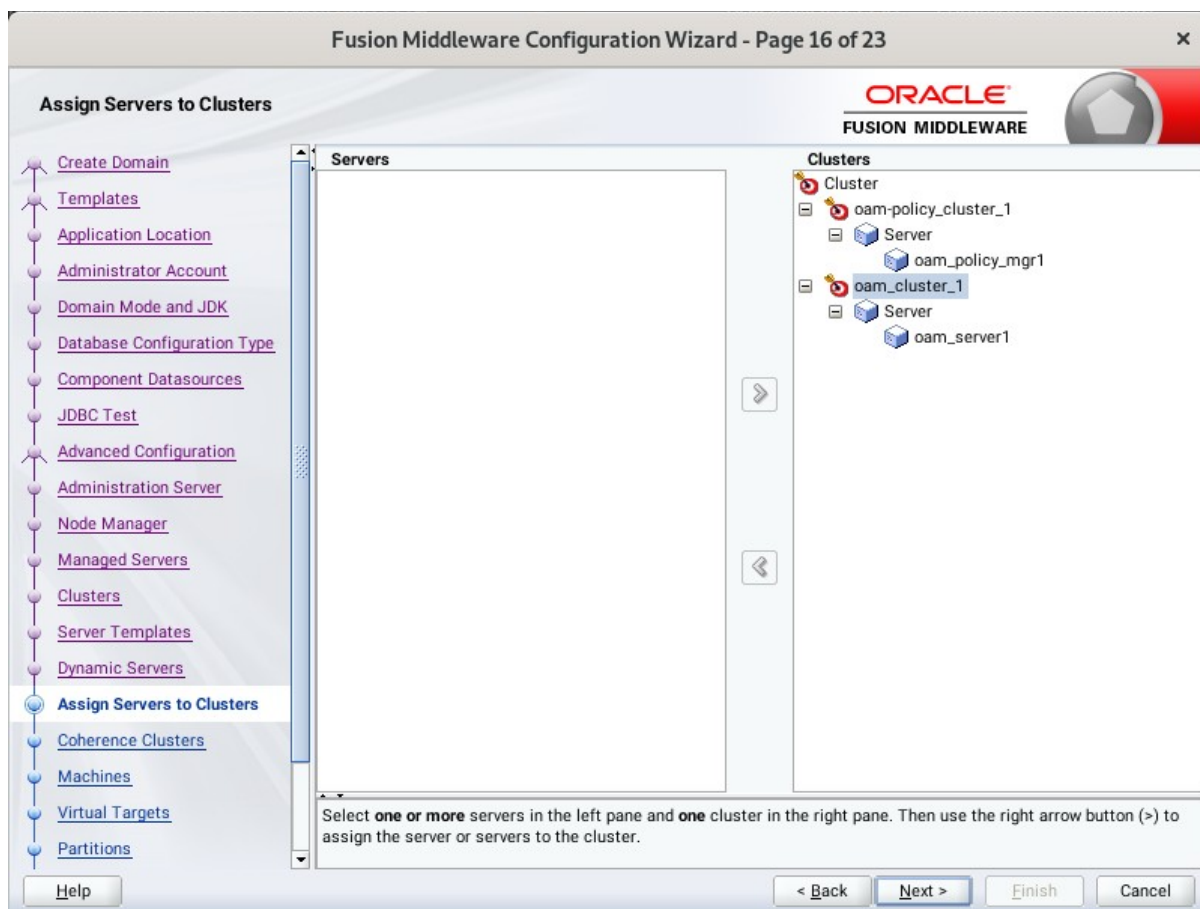
Disgard Changes

Cluster Name	Server Name Prefix	Server Template	Dynamic Cluster Size	Machine Name Match Expressior	Calculated Machine Names	Calculated Listen Ports	Dynamic Server Groups
oam_cluster_1	Disabled	Unspecified	Disabled	Disabled	<input type="checkbox"/>	<input type="checkbox"/>	Unspecifi...
oam-policy_cluster_1	Disabled	Unspecified	Disabled	Disabled	<input type="checkbox"/>	<input type="checkbox"/>	Unspecifi...

Help < Back Next > Finish Cancel

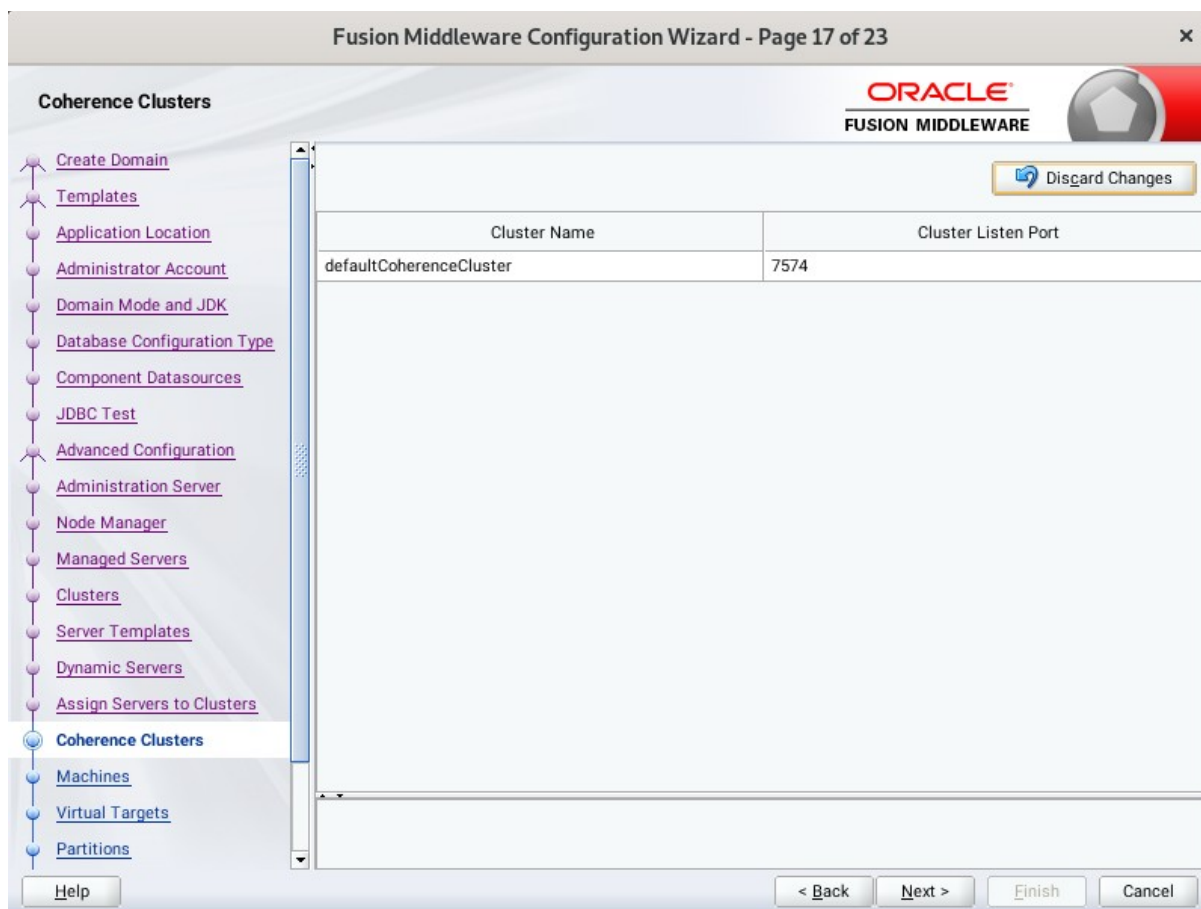
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



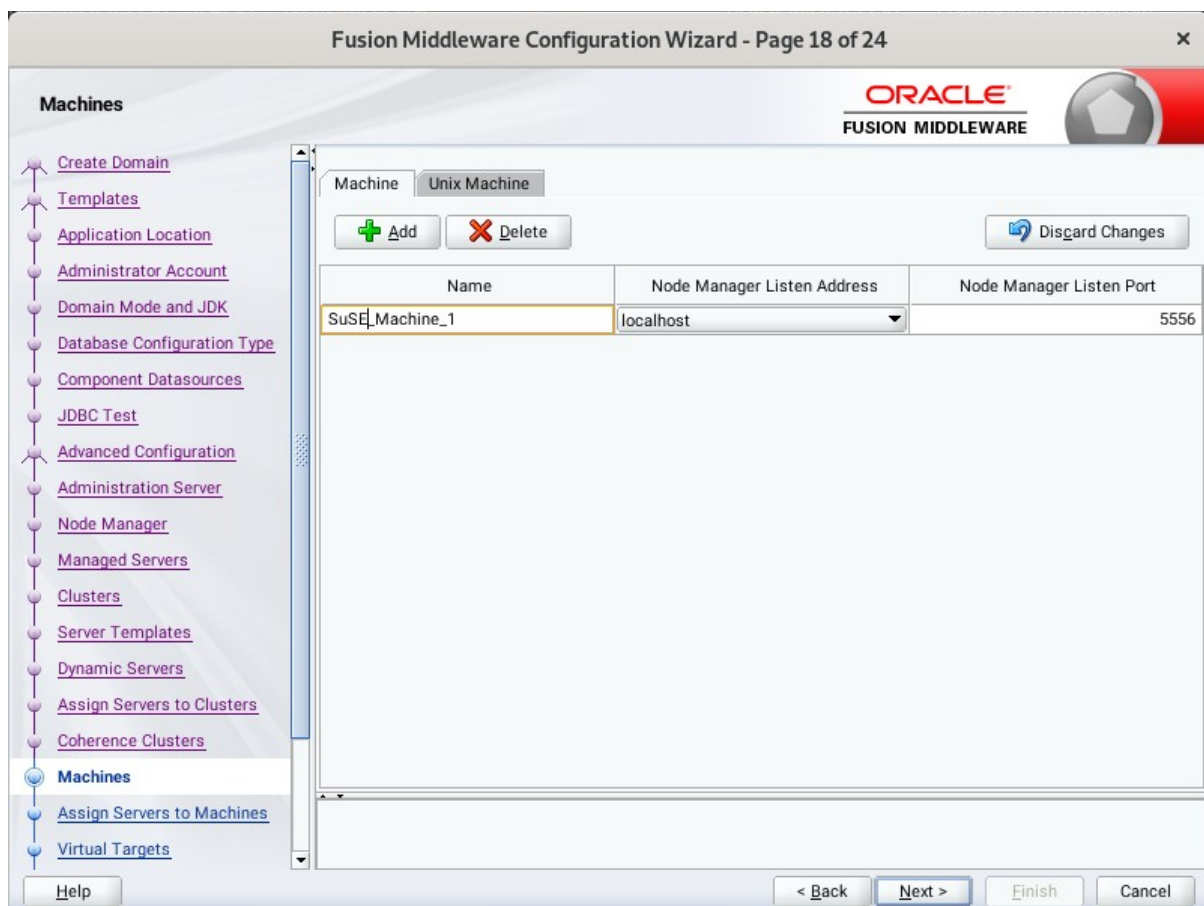
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



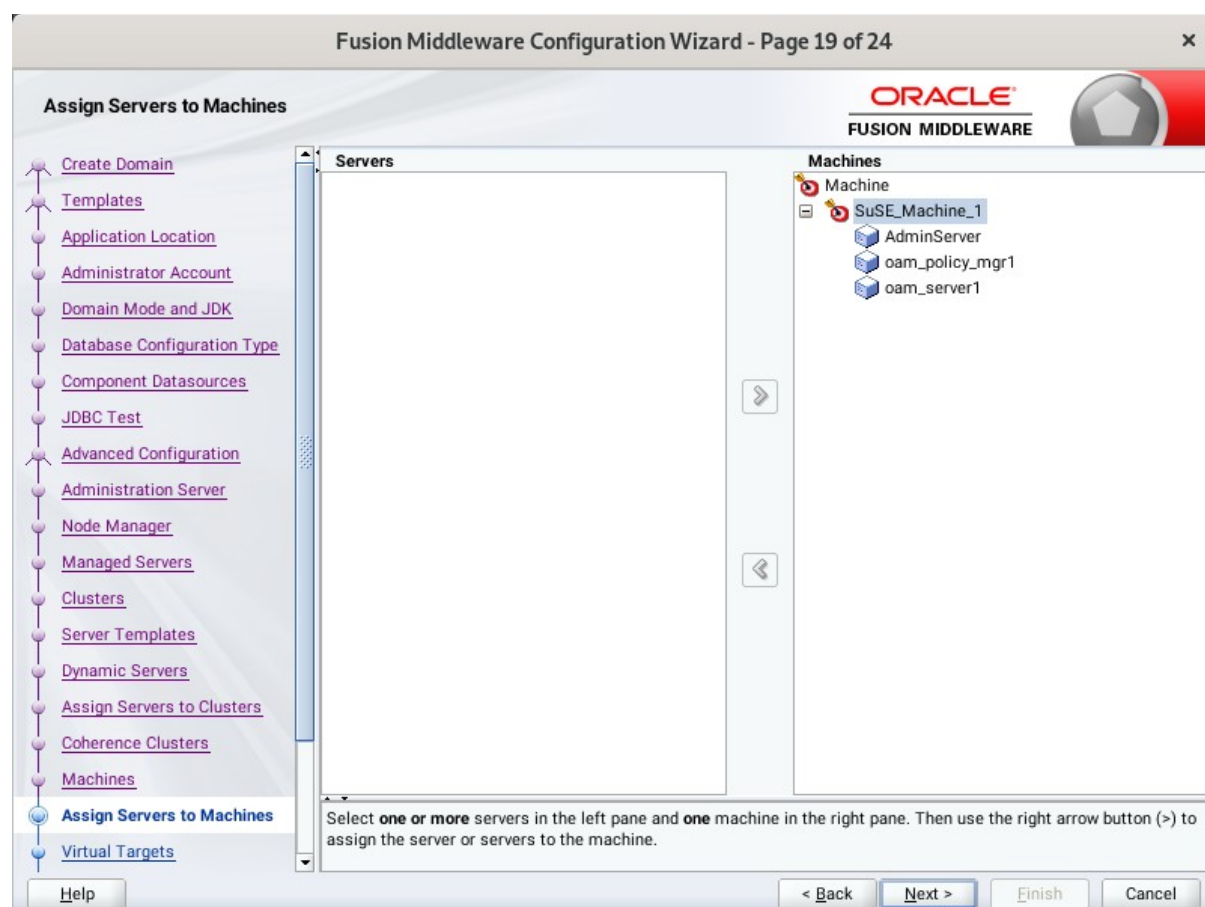
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



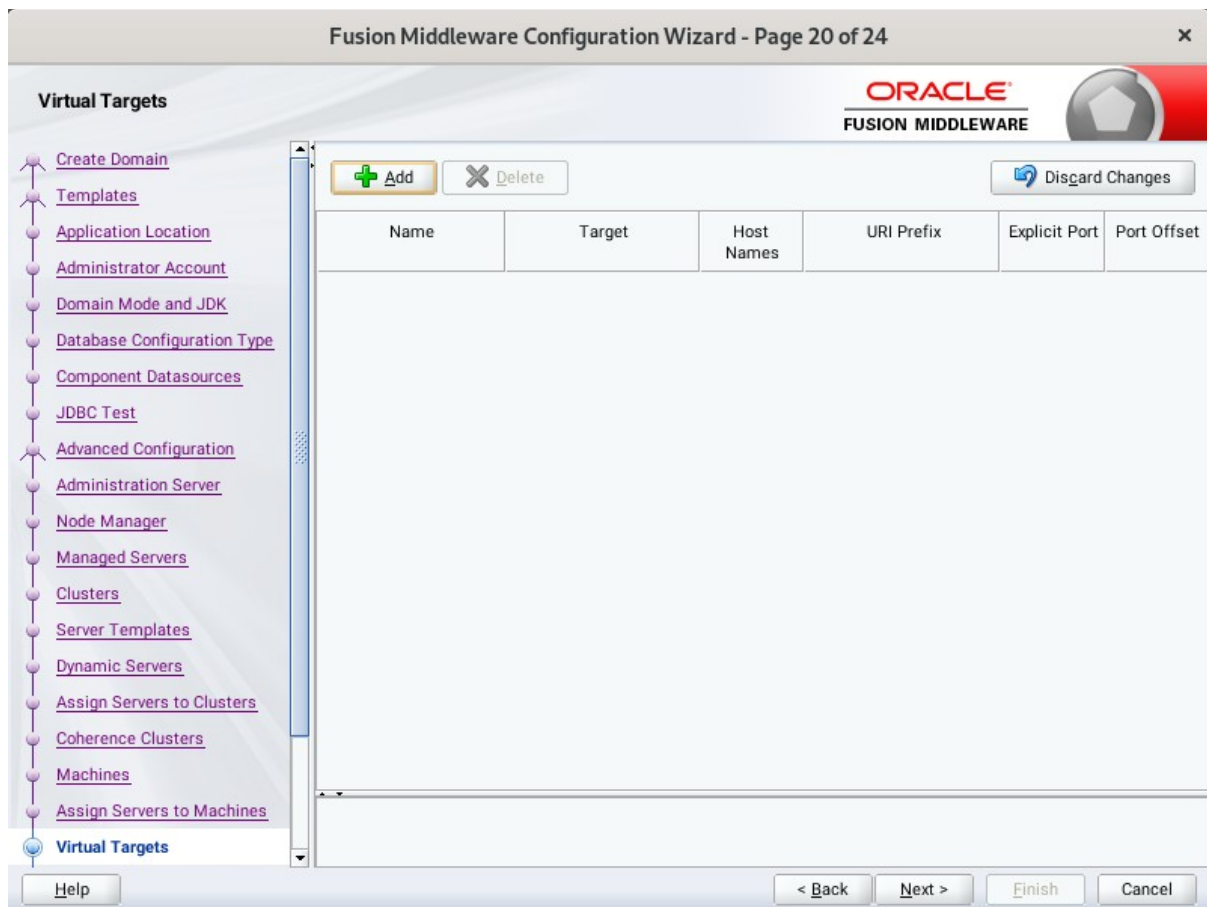
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



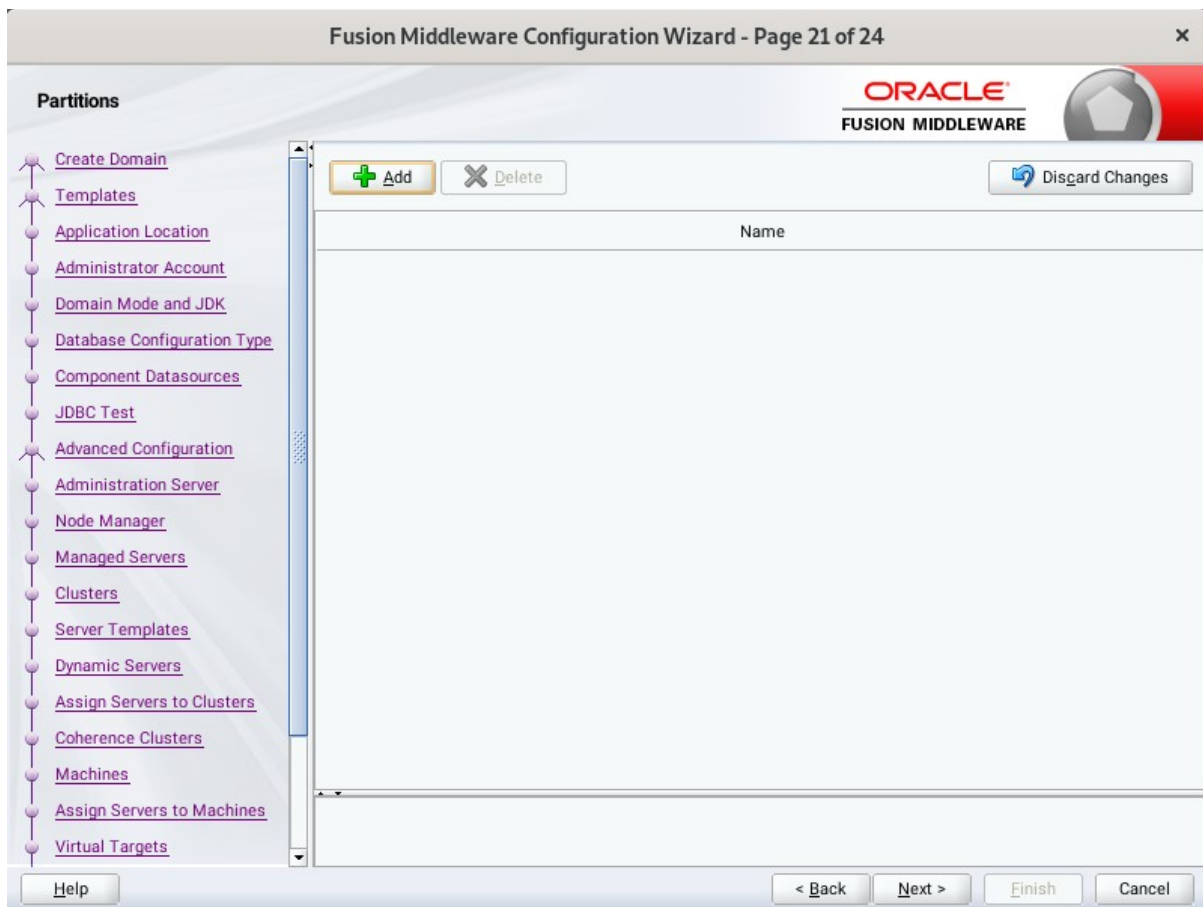
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



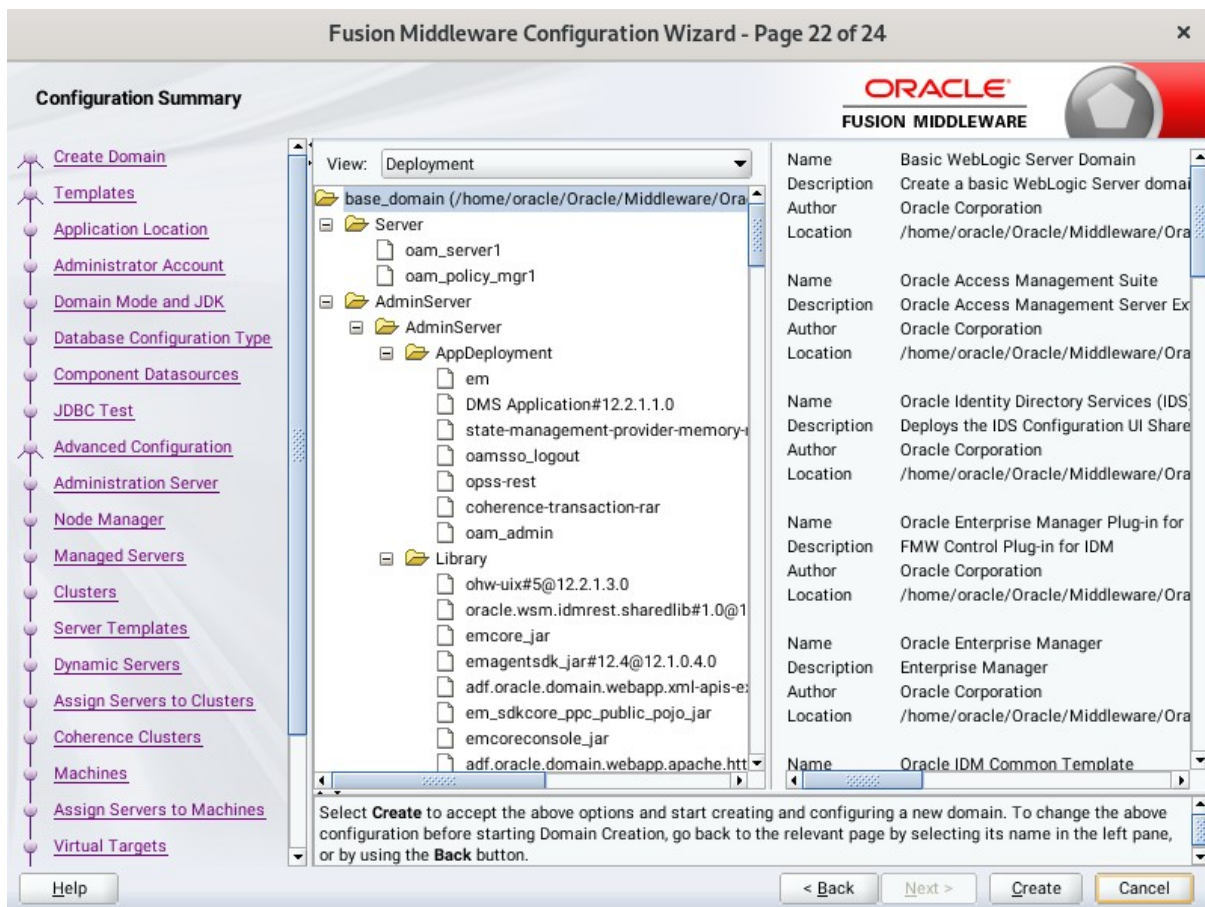
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next** to continue.

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



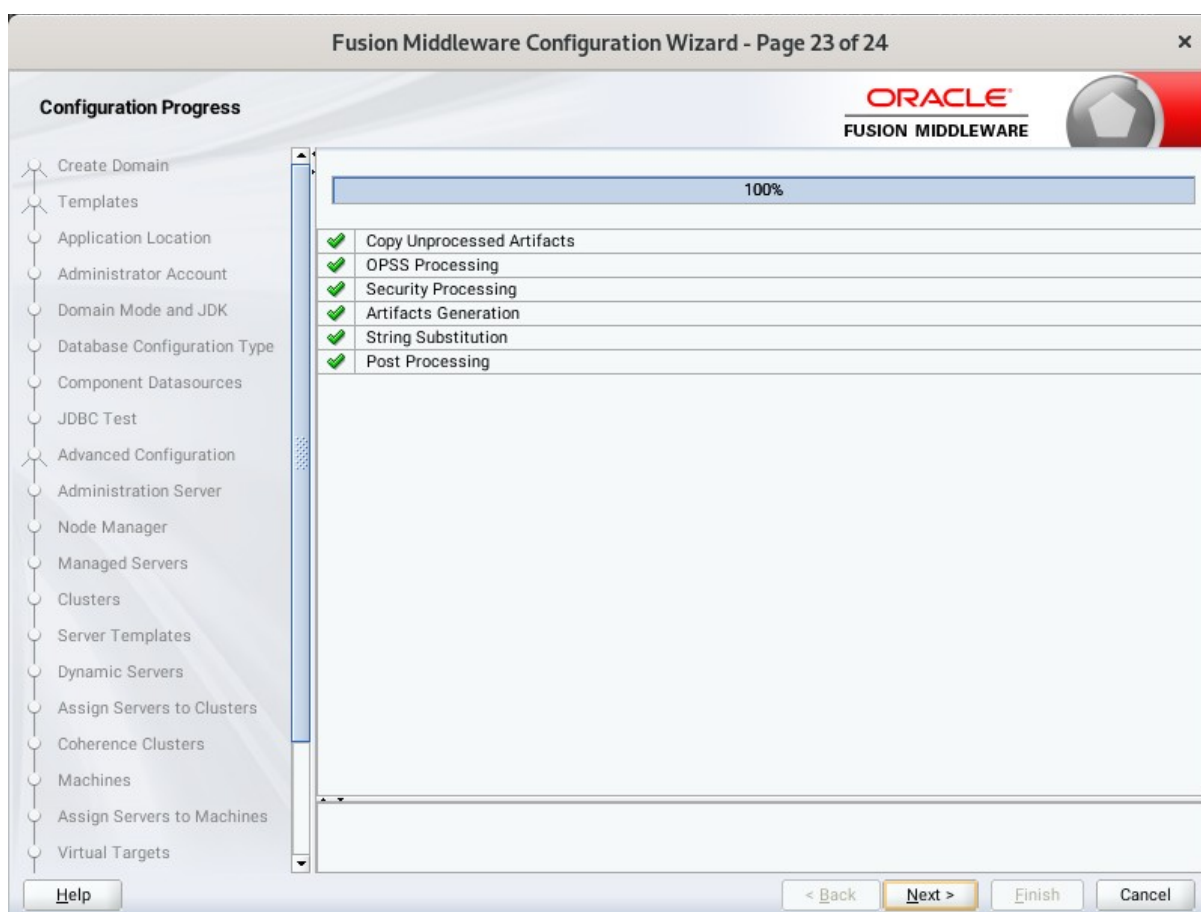
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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:...ns/base_domain/bin
oracle@Dell5530:...RACLE_SW/IDM/... x oracle@Dell5530:..._common/commo... x oracle@Dell5530:...ns/base_domain/b... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 11965
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> 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
<Sep 24, 2021 3:54:10 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Sep 24, 2021 3:54:10 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Sep 24, 2021 3:54:10 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Sep 24, 2021 3:54:10 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Sep 24, 2021 3:54:11 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Sep 24, 2021 3:54:11 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
Sep 24, 2021 3:54:11 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.
<Sep 24, 2021 3:54:11 PM GMT+08:00> <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:...RACL... x oracle@Dell5530:..._com... x oracle@Dell5530:...ns/ba... x oracle@Dell5530:...ns/ba... x
<Sep 24, 2021 4:03:52,928 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Sep 24, 2021 4:03:55,540 PM GMT+08:00> <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.>
>
<Sep 24, 2021 4:03:55,652 PM GMT+08:00> <Error> <oracle.oam.foundation.access> <BEA-000000> <Failed to init Context path:/idaas/am/esso>
<Sep 24, 2021 4:03:56,095 PM GMT+08:00> <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.>
>
<Sep 24, 2021 4:03:58,293 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Sep 24, 2021 4:03:58,579 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
2021-09-24 16:03:58.589/477.416 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_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2021-09-24 16:03:58.612/477.439 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
<Sep 24, 2021 4:04:00,505 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Sep 24, 2021 4:04:00,554 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Sep 24, 2021 4:04:00,554 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connection list DomainRuntimeServiceMBean>
2021-09-24 16:04:05.890/484.717 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '62' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST
<Sep 24, 2021 4:04:15,316 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Sep 24, 2021 4:04:15,316 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001 for protocols iiop, t3, ldap, snmp, http.>
<Sep 24, 2021 4:04:15,316 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001 for protocols iiop, t3, ldap, snmp, http.>
<Sep 24, 2021 4:04:15,317 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Sep 24, 2021 4:04:15,647 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

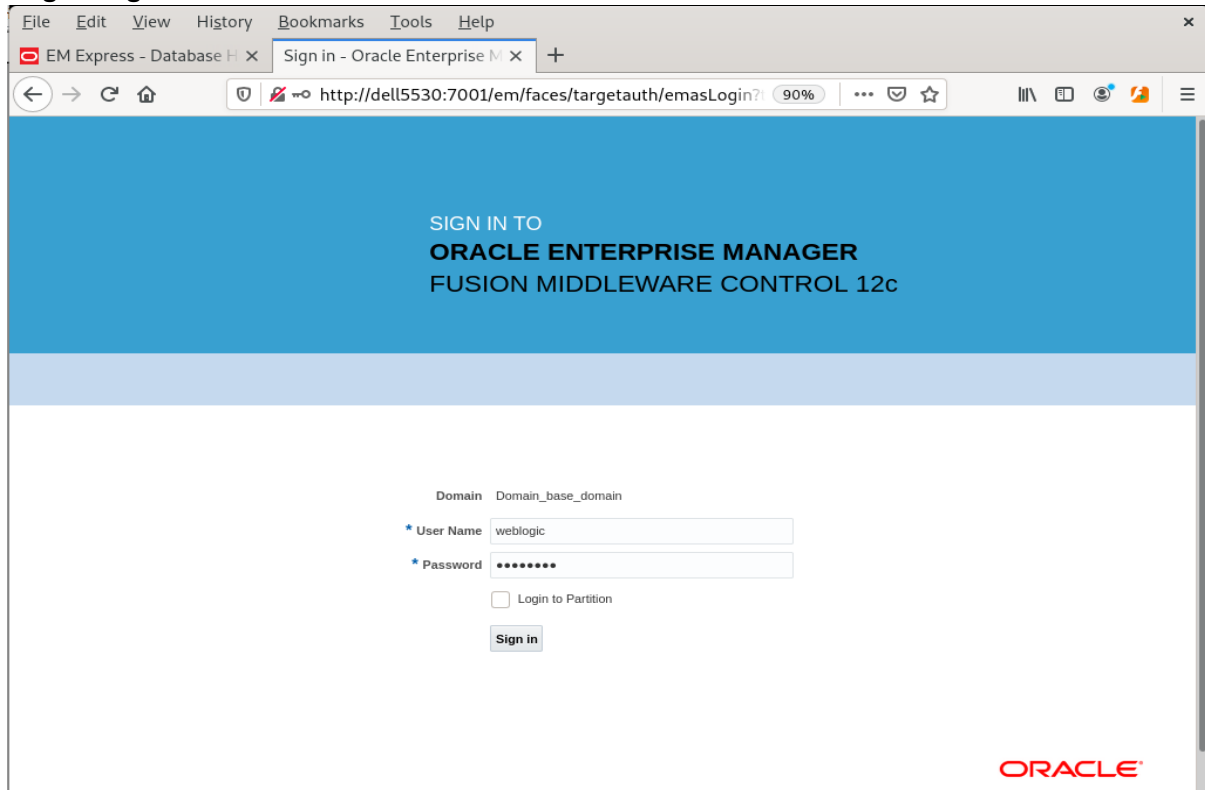
You know that the administrator server is running when you see the following output:

Server state changed to RUNNING.

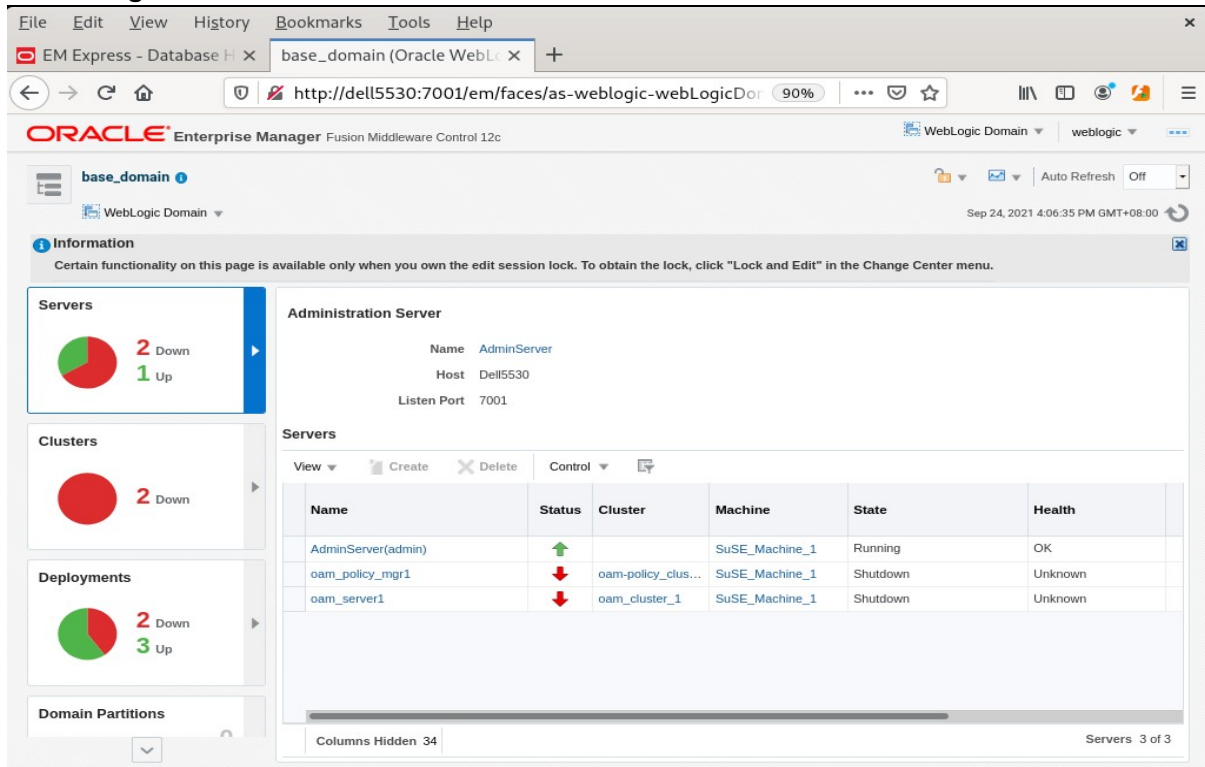
3-3. Checking Oracle Identity and Access Management 12c Product URLs.

1). Access to Enterprise Manager Console.

Login Page:



Home Page:



Starting the managed 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 named 'base_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 (Name: AdminServer, Host: Dell5530, Listen Port: 7001) and a table of servers. The table shows that 'AdminServer(admin)' is in a 'Running' state with 'OK' health, 'oam_policy_mgr1' is in a 'Shutdown' state with 'Unknown' health, and 'oam_server1' is in a 'Running' state with 'OK' health.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine...	Running	OK
oam_policy_mgr1	↓	oam-policy_cluster_1	SuSE_Machine...	Shutdown	Unknown
oam_server1	↑	oam_cluster_1	SuSE_Machine...	Running	OK

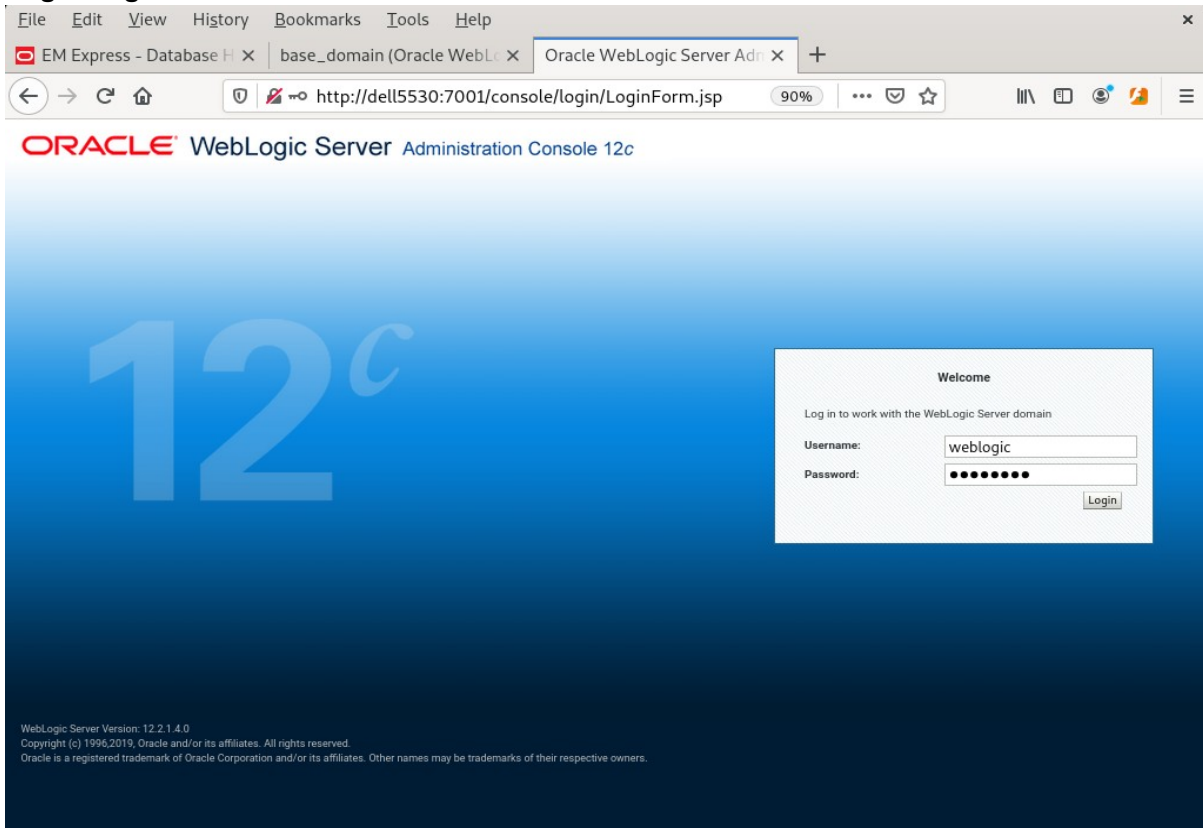
The screenshot shows the Oracle Enterprise Manager interface for the same 'base_domain'. The 'Servers' summary now shows 3 Up. The 'Administration Server' details remain the same. The 'Servers' table now shows that 'oam_policy_mgr1' has moved to a 'Running' state with 'OK' health, and 'oam_server1' remains in a 'Running' state with 'OK' health.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine...	Running	OK
oam_policy_mgr1	↑	oam-policy_cluster_1	SuSE_Machine...	Running	OK
oam_server1	↑	oam_cluster_1	SuSE_Machine...	Running	OK

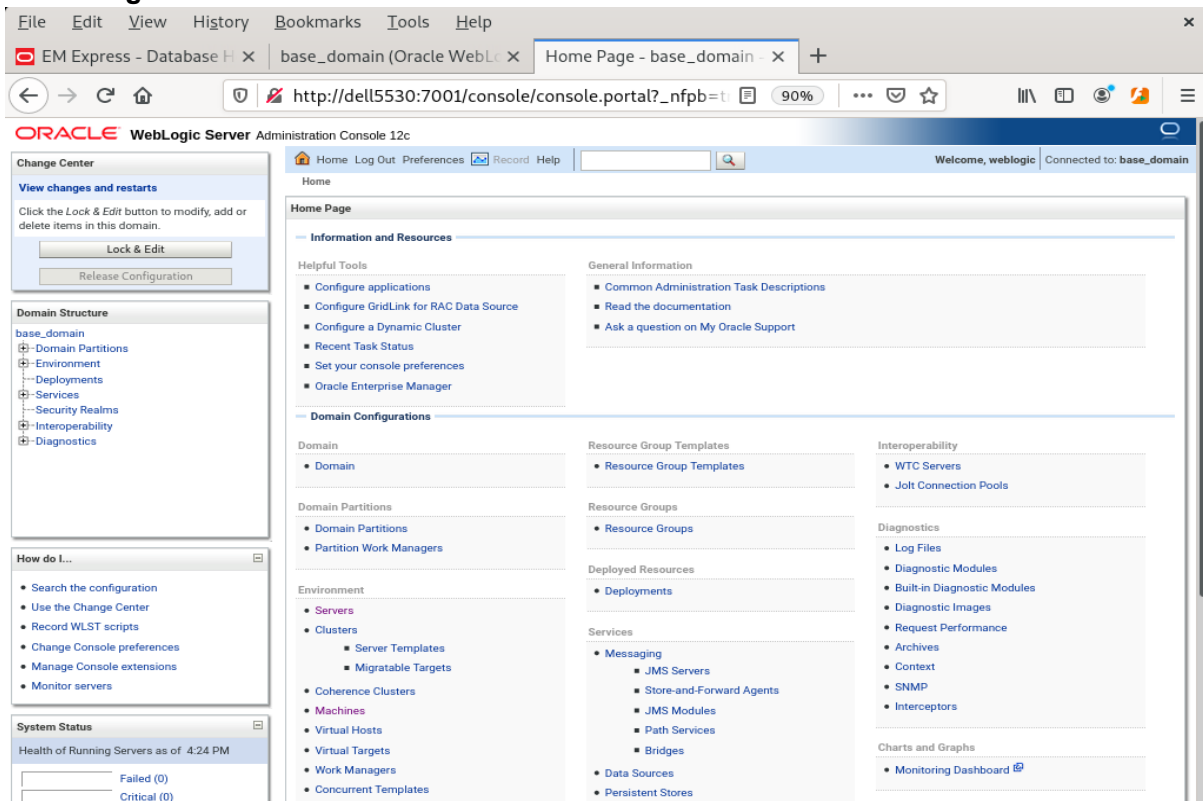
After they start up successfully, each managed server is listed as Running.

2). Access to Administration Server Console

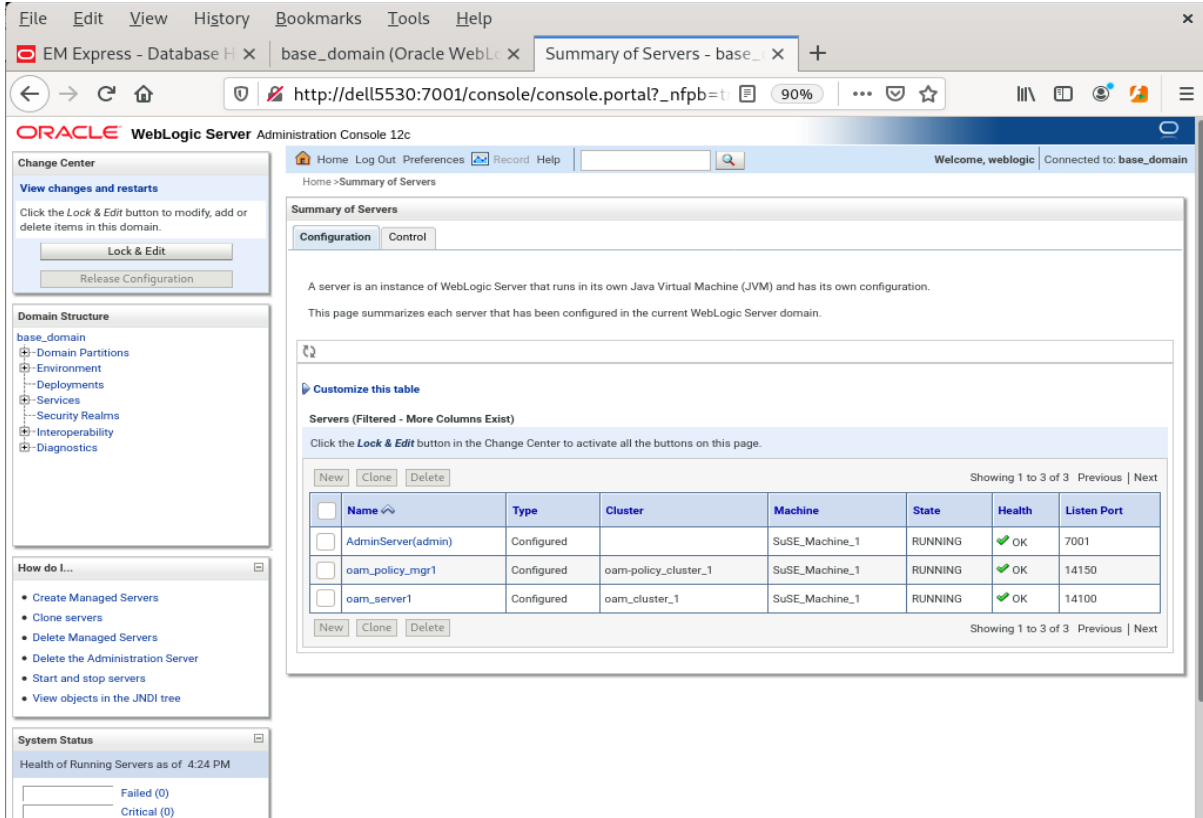
Login Page:



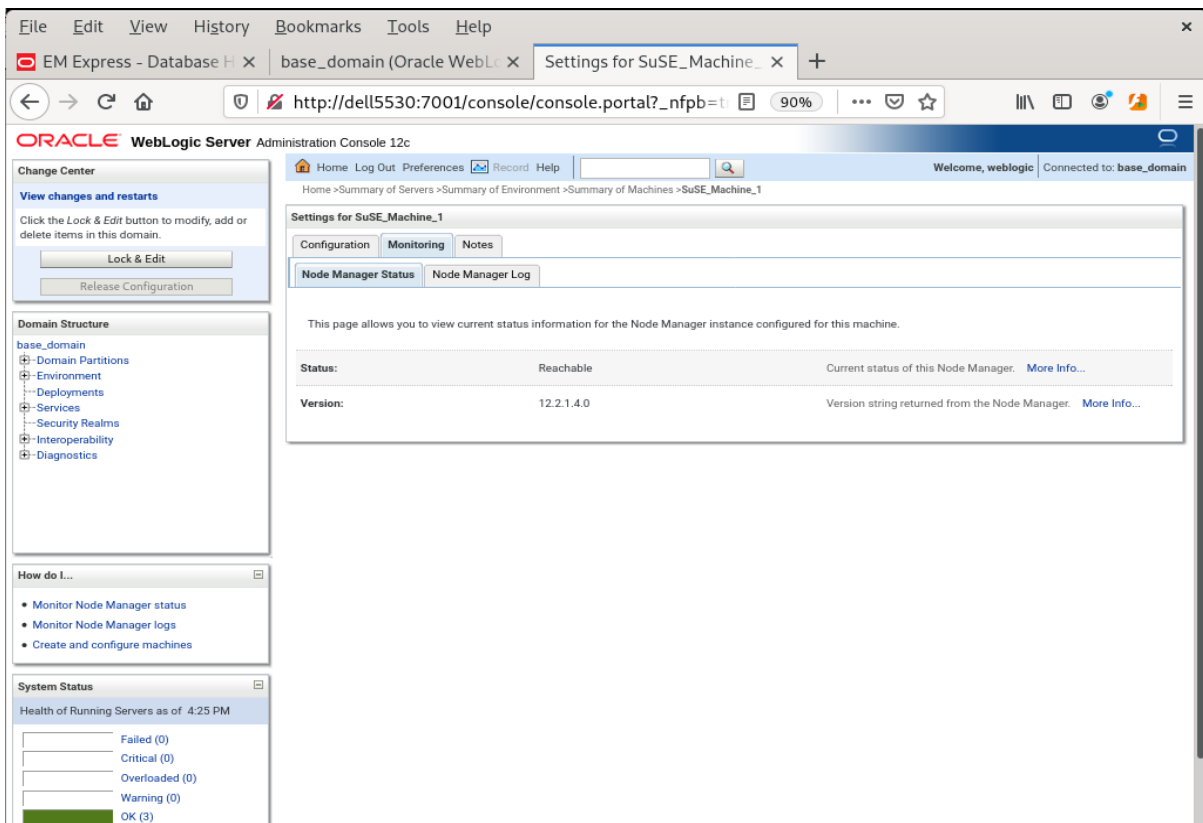
Home Page:



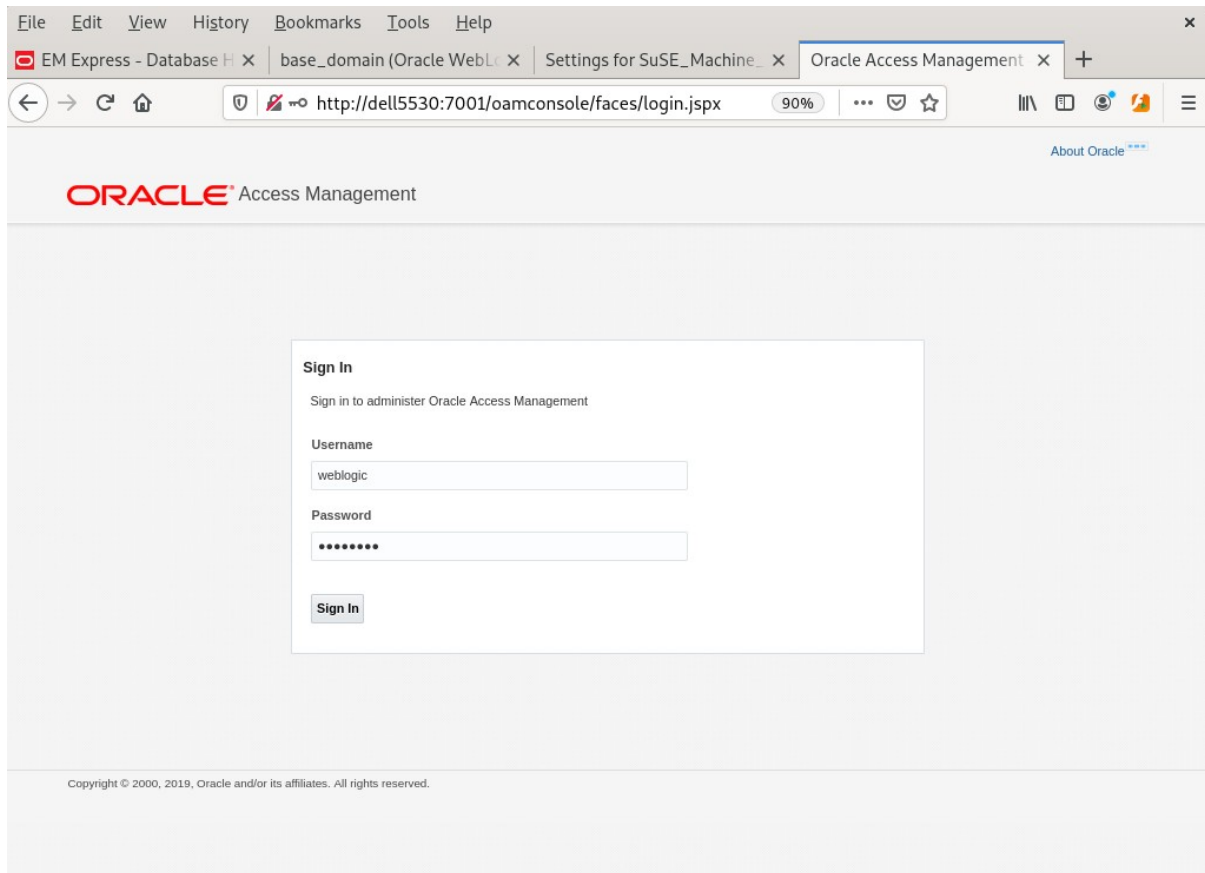
Viewing the summary of servers:

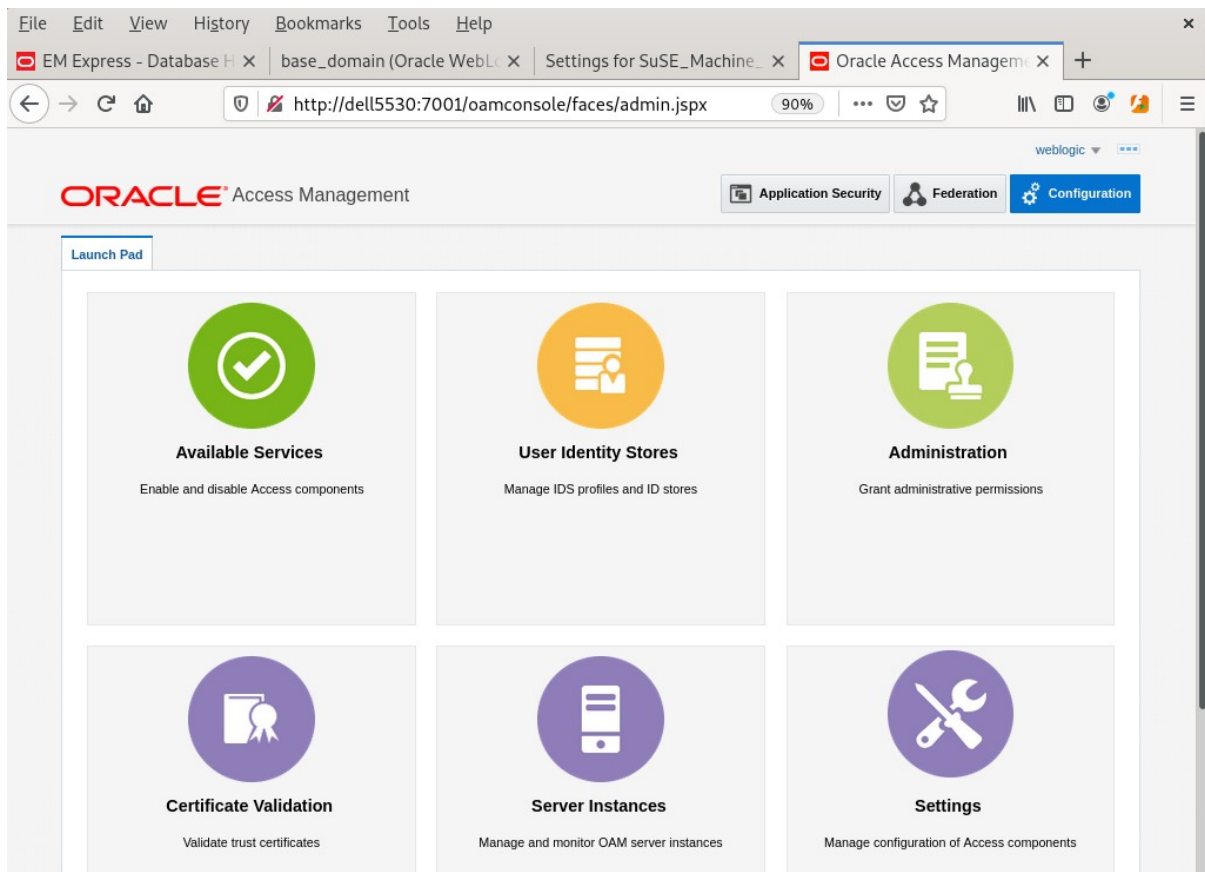
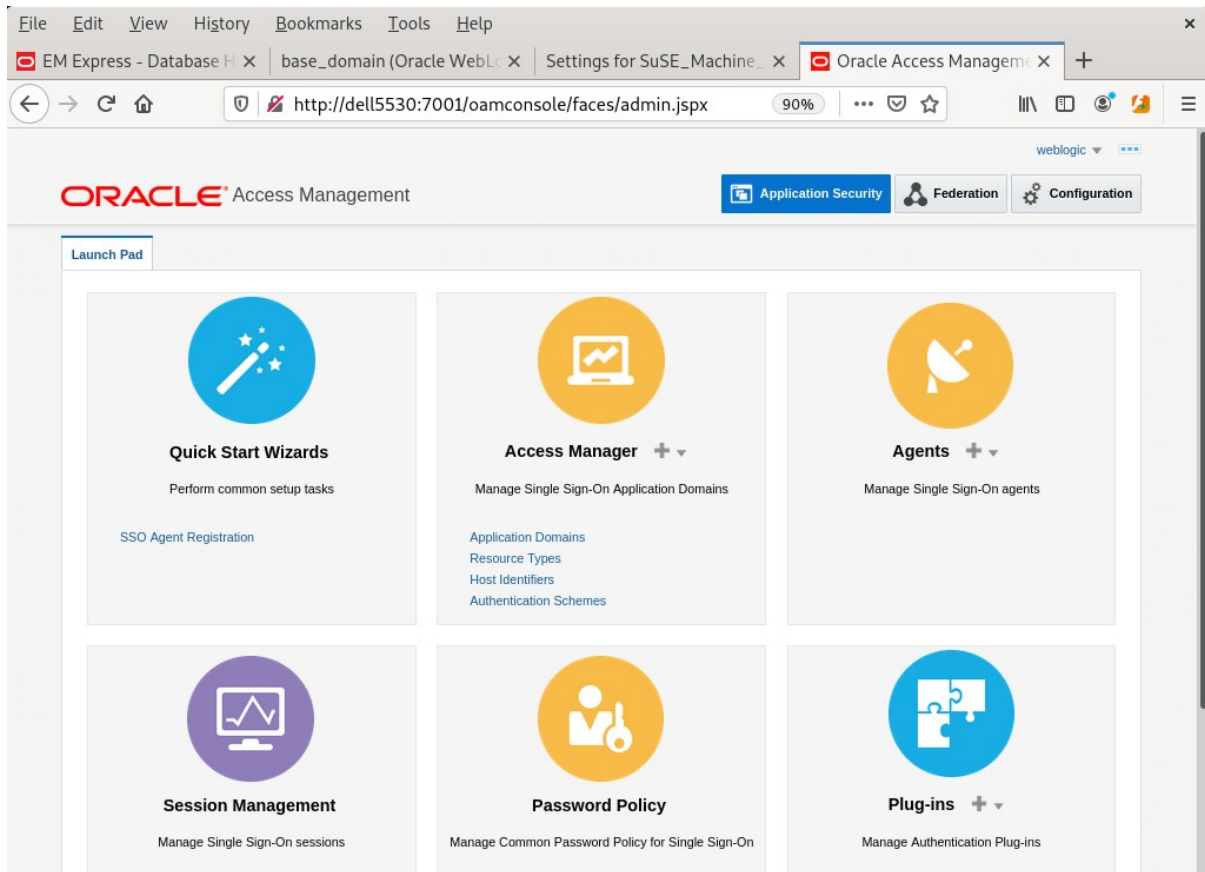


Verify that the Admin Server can connect to the node manager running on your machine. **Environments -> Machines -> <your machine> -> Monitoring.** The status should show: **Reachable**

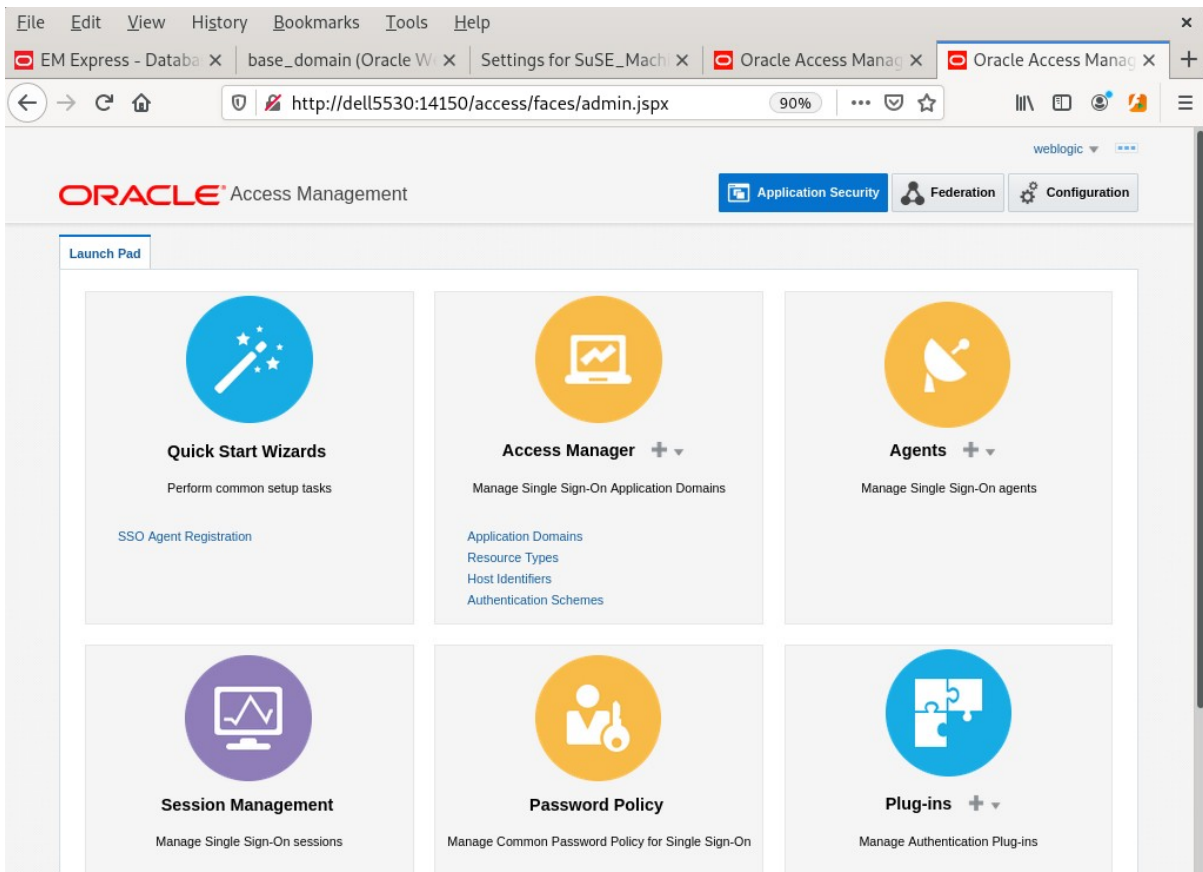
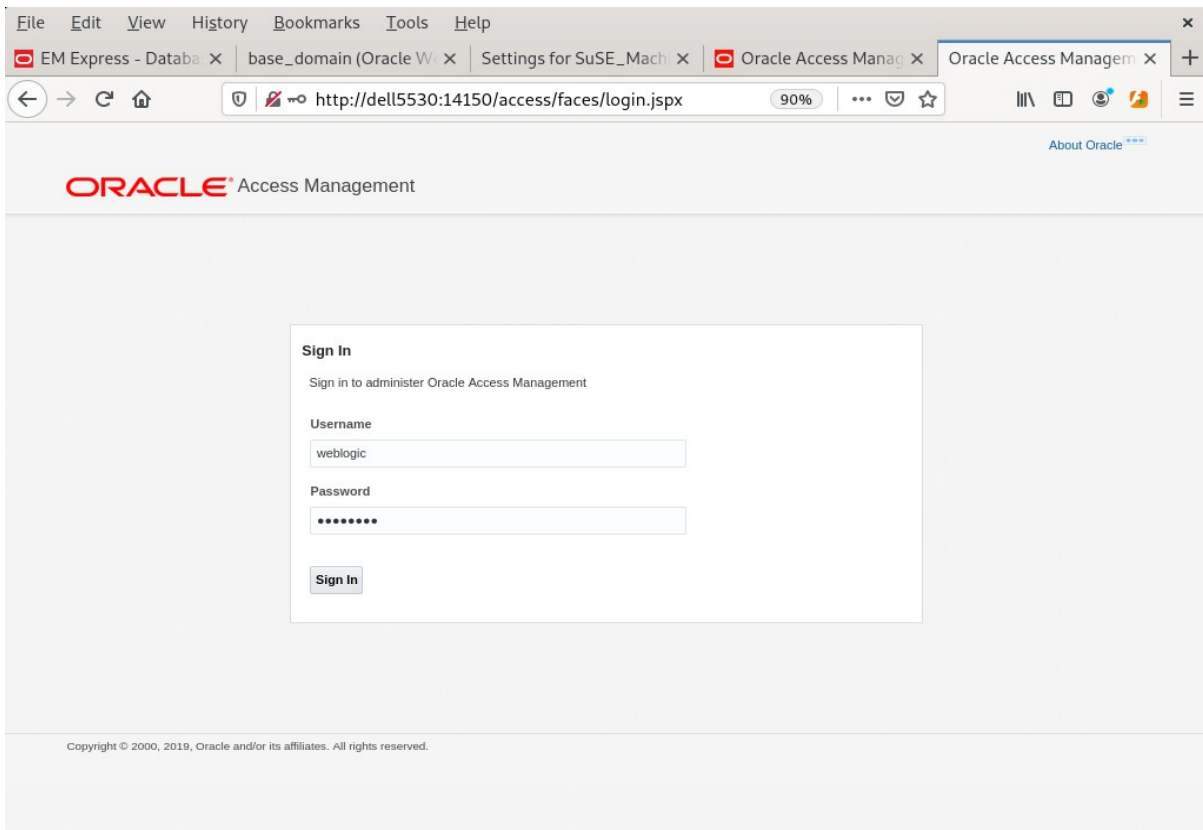


3). Access to Oracle Access Management Console - URL:<http://host:port/oamconsole>





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 "ORACLE Access Management". The navigation menu includes "Application Security", "Federation", and "Configuration". The main content area is titled "Create Application Domain" and includes a "Summary" tab. The form contains the following fields: "Name" (Oracle Access Manager on SLES15 SP3), "Description" (empty text area), "Session Idle Timeout (minutes)" (0), and "Enable Policy Ordering" (checkbox). An "Apply" button is located at the bottom right of the form.

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 Management". The navigation menu includes "Application Security", "Federation", and "Configuration". The main content area is titled "Oracle Access Manager on SLES15 SP3" and includes a "Summary" tab. A confirmation message is displayed: "Confirmation: Application Domain, Oracle Access Manager on SLES15 SP3, created successfully". The form fields are identical to the previous screenshot: "Name" (Oracle Access Manager on SLES15 SP3), "Description" (empty text area), "Session Idle Timeout (minutes)" (0), and "Enable Policy Ordering" (checkbox). An "Apply" button is located at the bottom right of the form.

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/app/oracle/product/12.2.0/dbhome_1/javavm/install/initxa.sql

PL/SQL procedure successfully completed.

JVIRMACTION
-----
FULL_REMOVAL

PL/SQL procedure successfully completed.

Package created.

Package body created.

Synonym created.

Grant succeeded.

SQL> █
```

```

SQL> @/home/app/oracle/product/12.2.0/dbhome_1/rdbms/admin/xaview.sql

View dropped.

View dropped.

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 9898557440 bytes
Fixed Size                 12169752 bytes
Variable Size              2013269480 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

```

-)
- 2). Oracle JDK 1.8.0_221 or later installed.

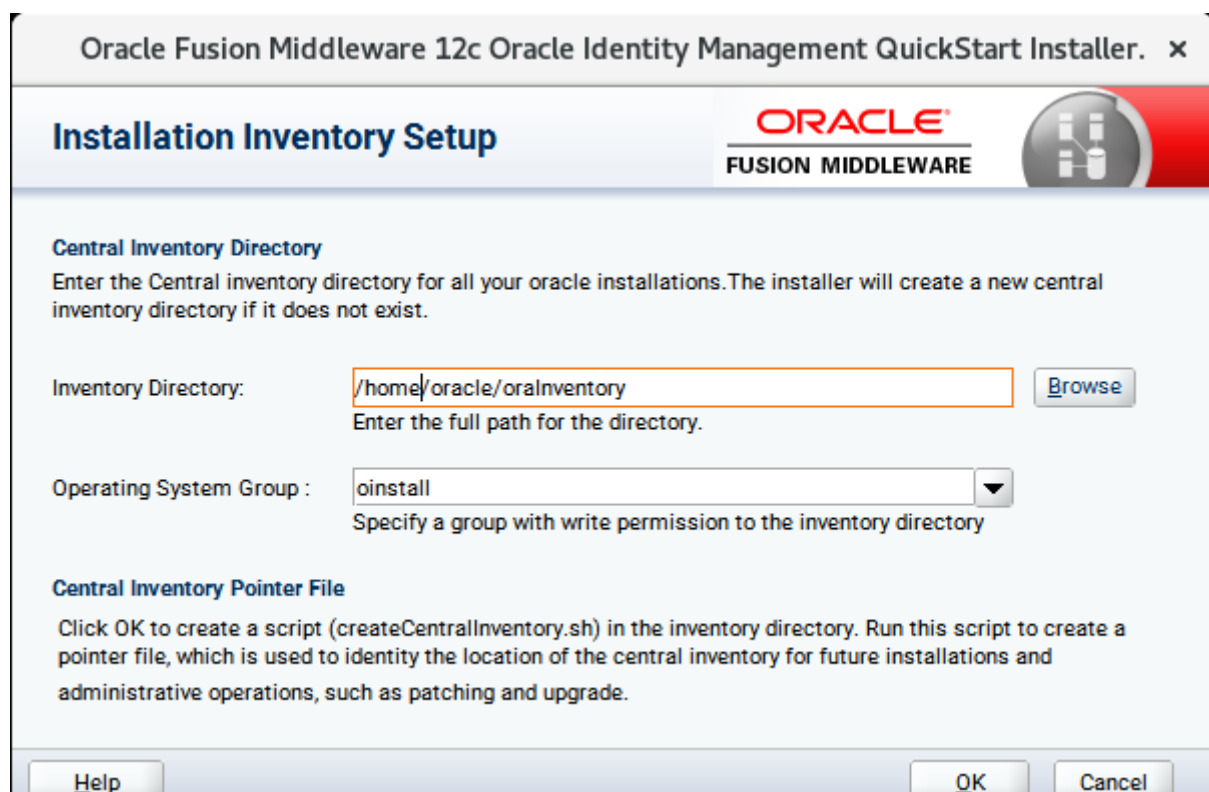
1-2. Log in to the target system (SLES 15 SP3 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

(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'`

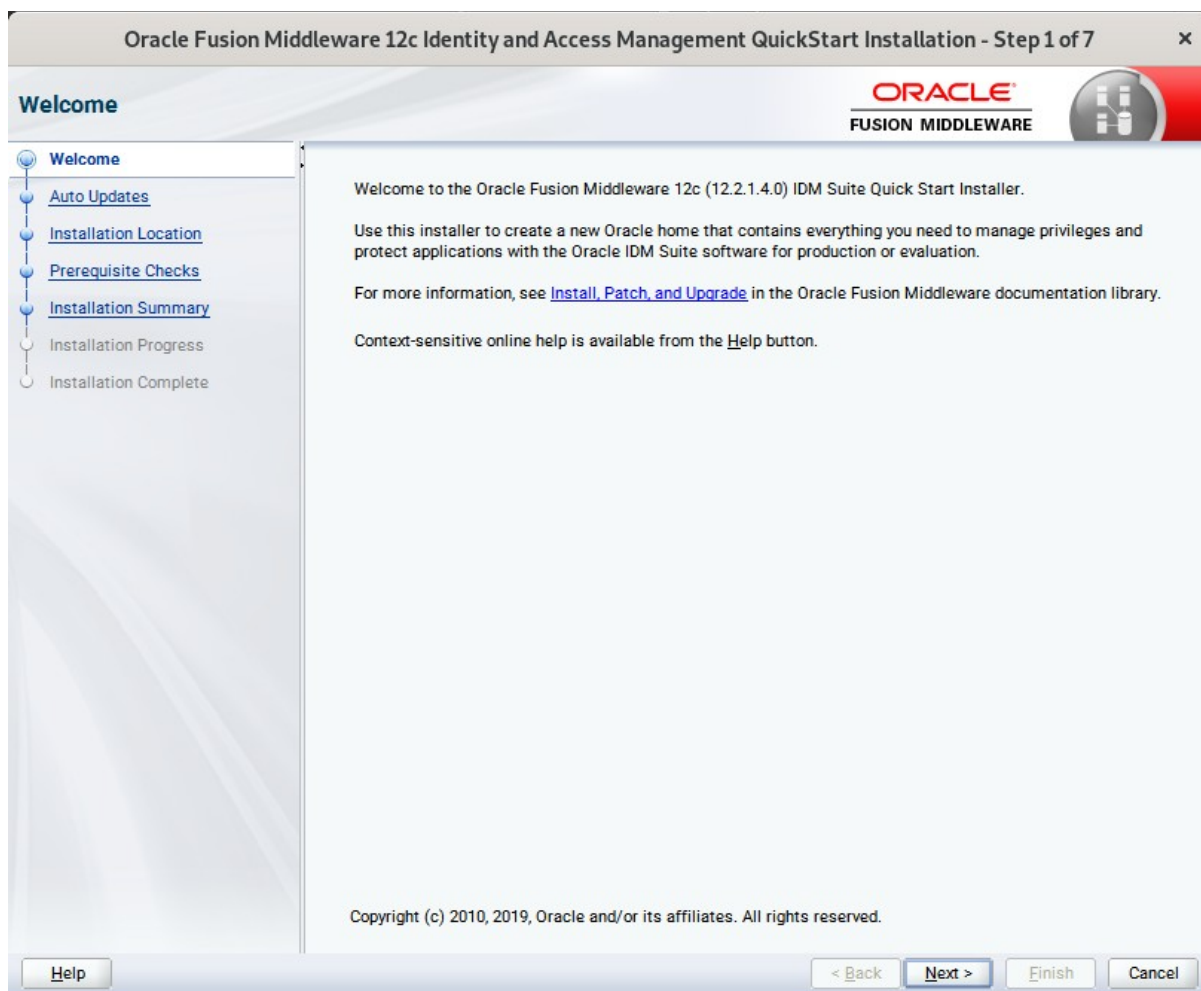
For the actual installation, follow the steps below:

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.



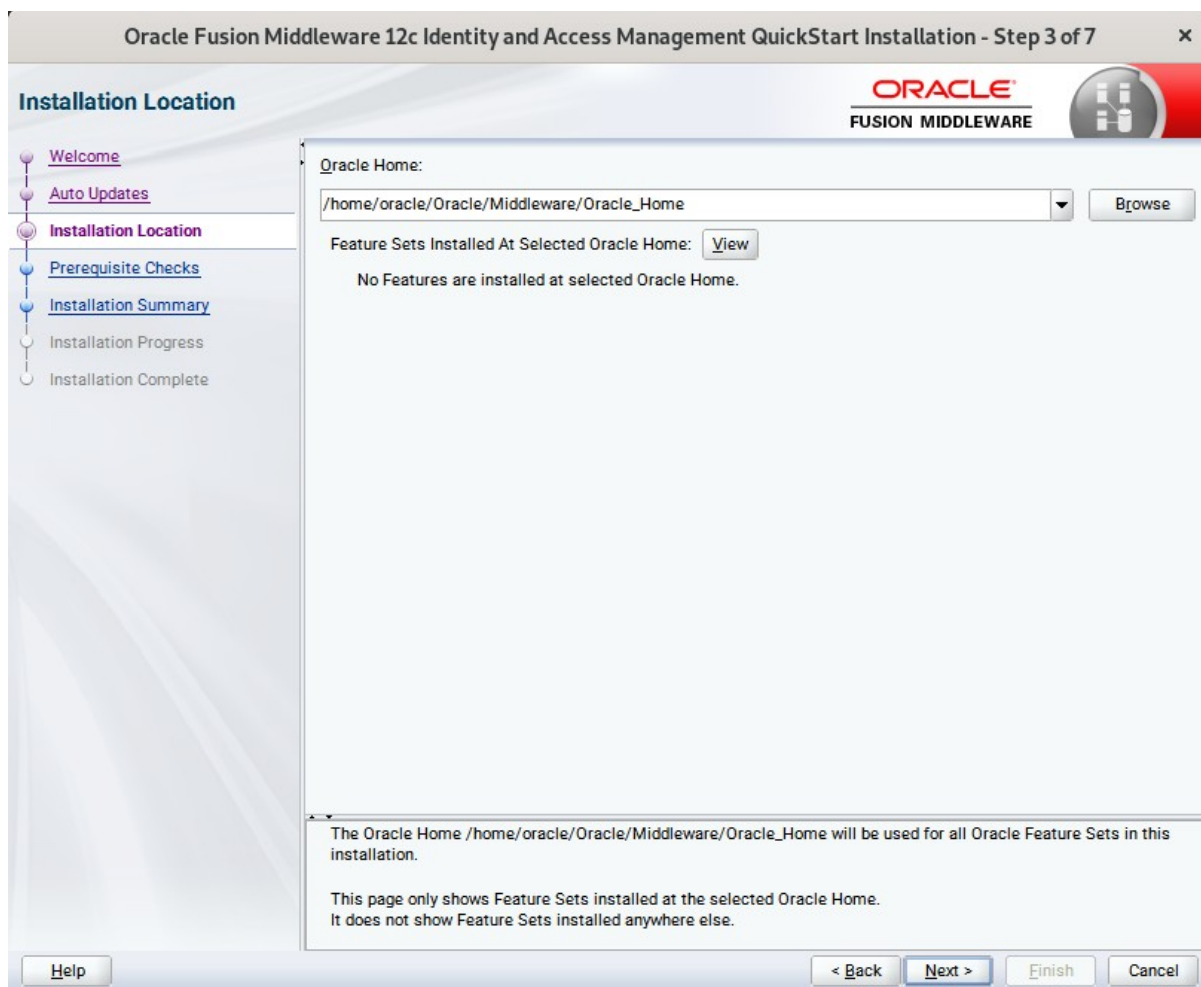
This page welcomes you to the installation. Click **Next** to continue.

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

The screenshot shows the 'Auto Updates' configuration window. The title bar reads 'Oracle Fusion Middleware 12c Identity and Access Management QuickStart Installation - Step 2 of 7'. The window features the Oracle Fusion Middleware logo and a navigation pane on the left with the following items: Welcome, Auto Updates (selected), 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 are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom-left corner.

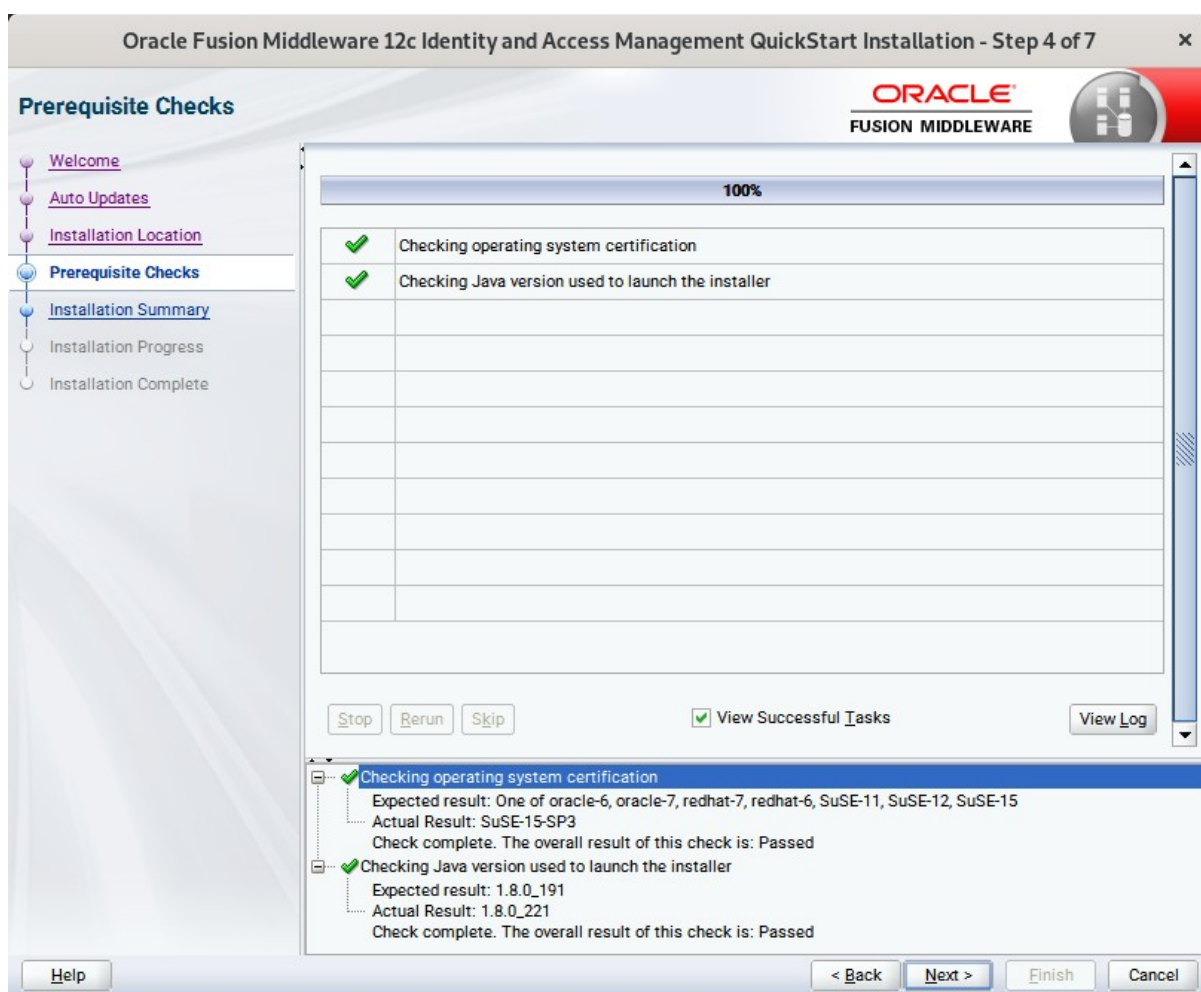
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



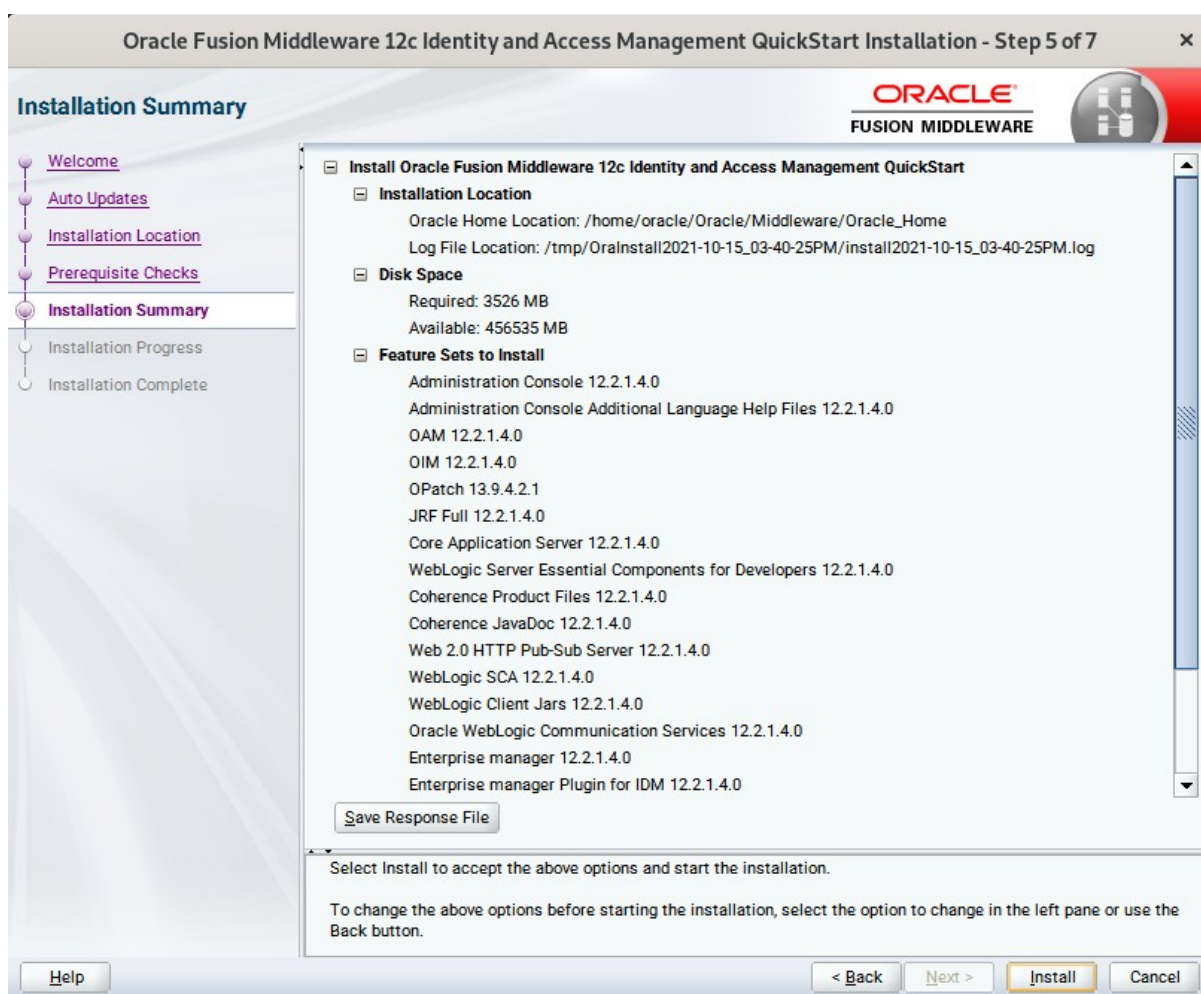
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



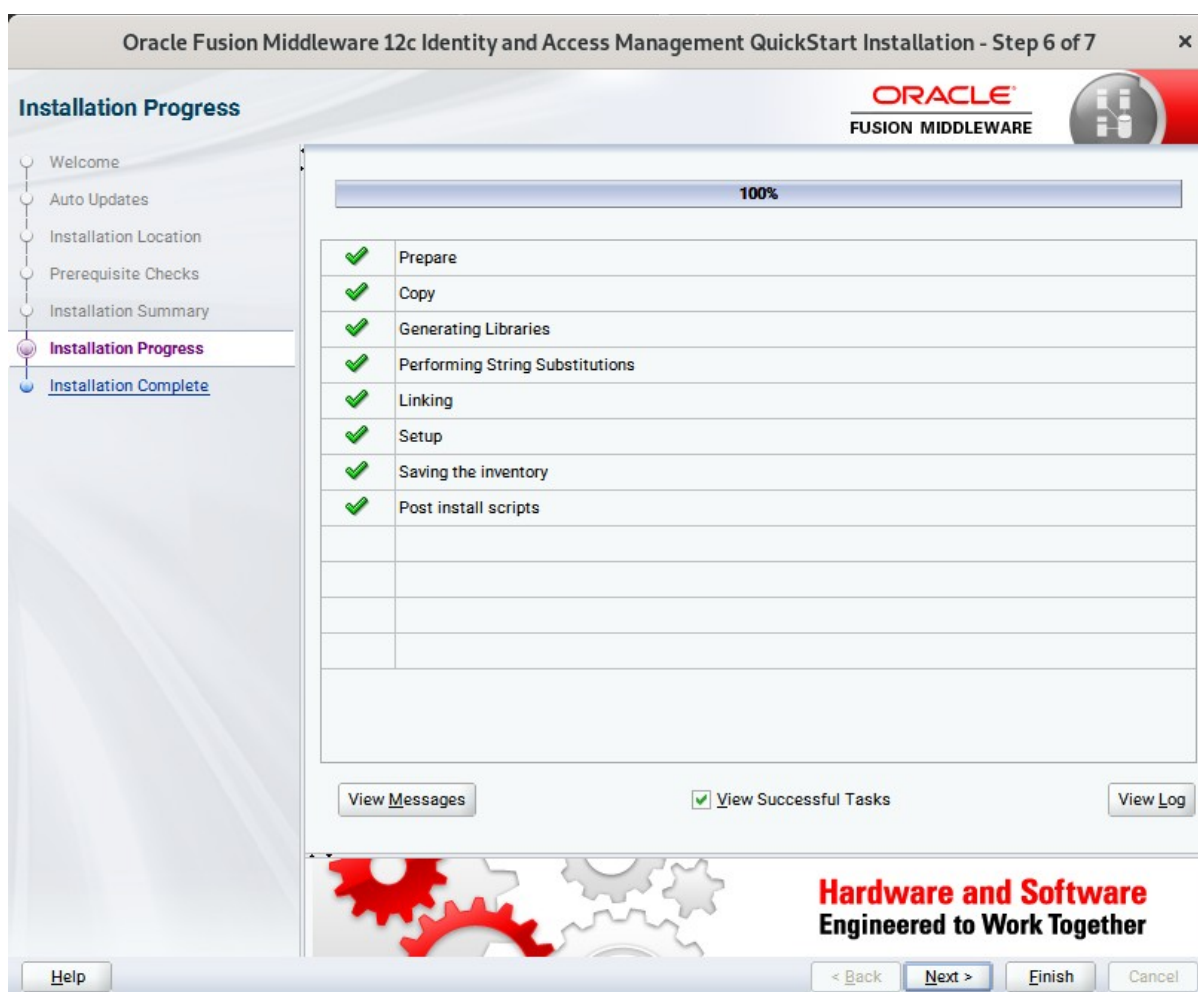
This page shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



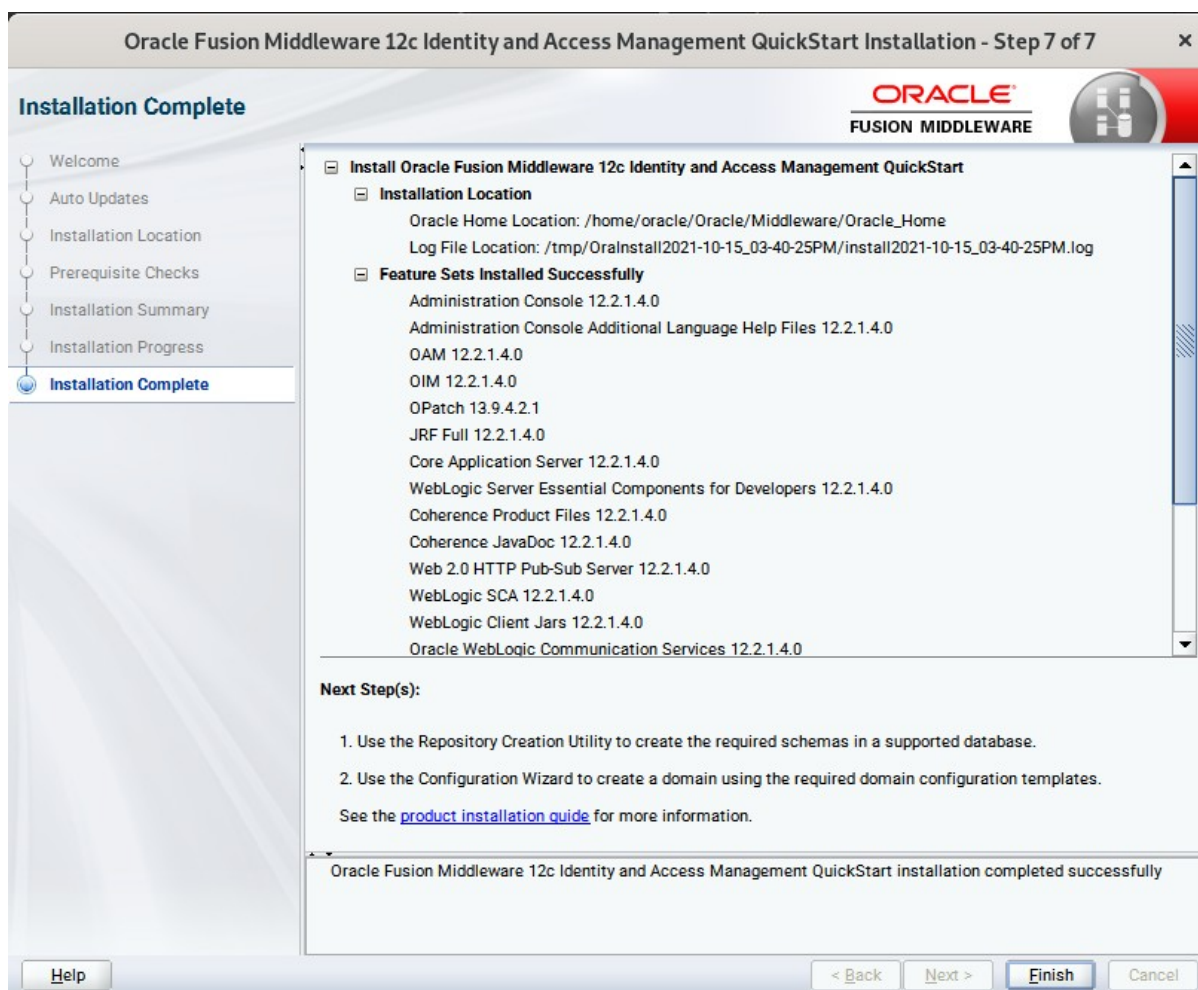
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

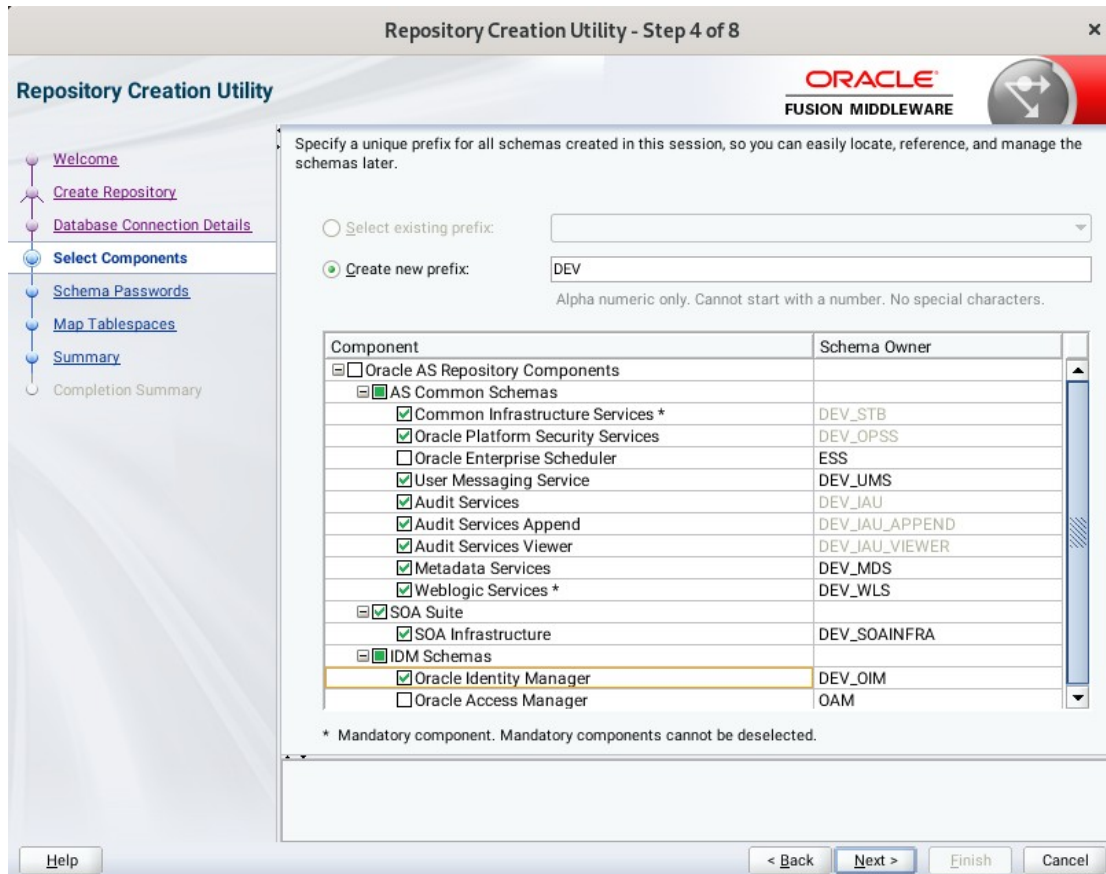
2. Configuring the Oracle Identity Manager Domain

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.



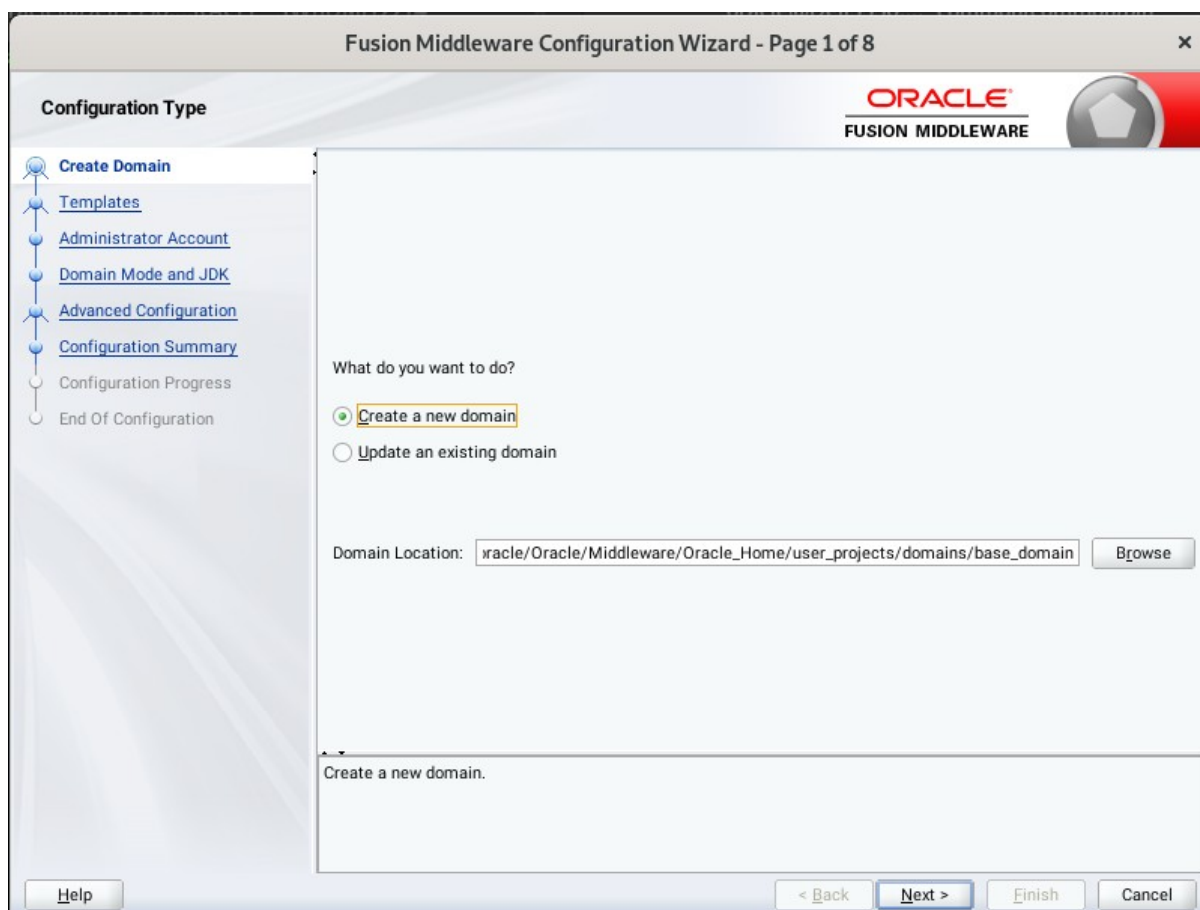
Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the **Oracle Identity Manager** schema, this action automatically selects the schemas as dependencies, and ensure the schema creation is successful.

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.

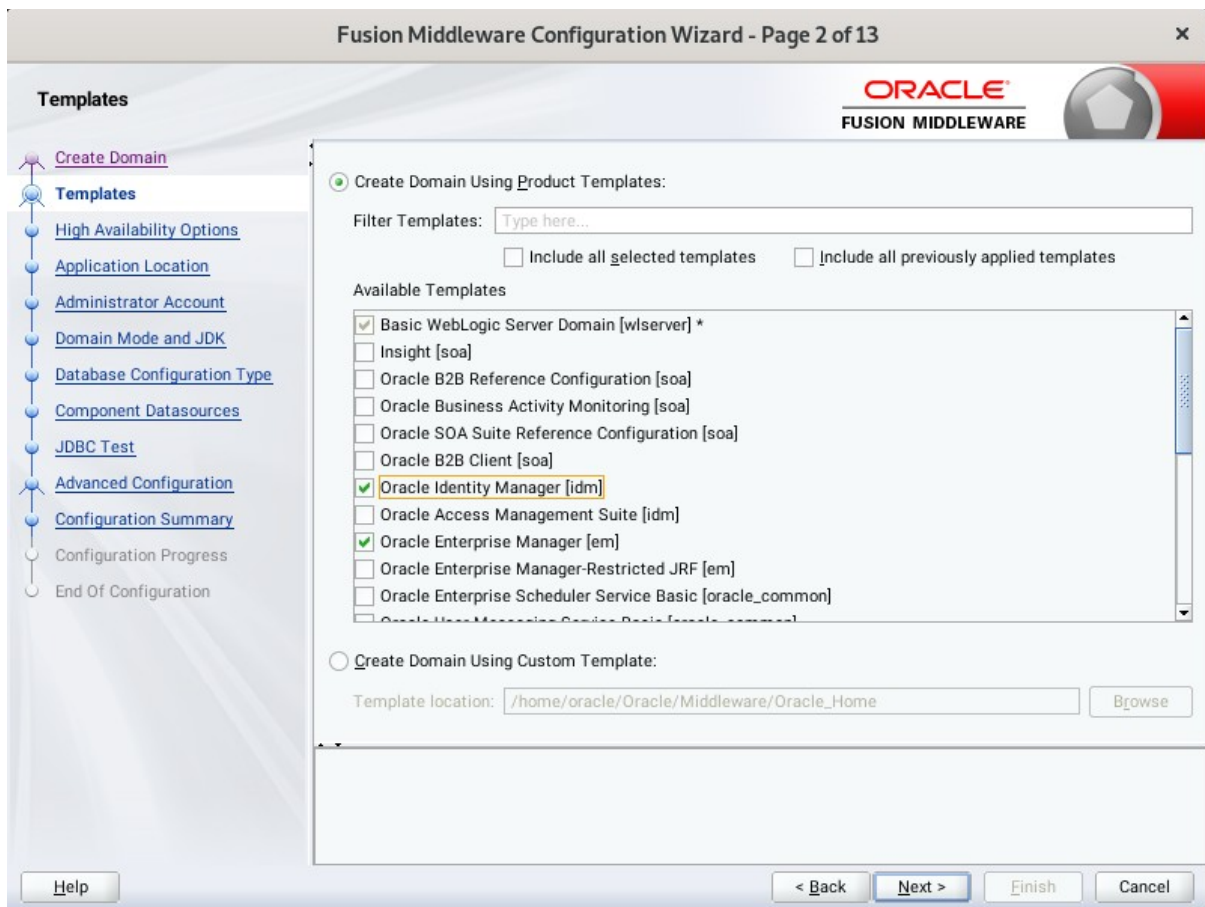
Follow these steps:

- 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]

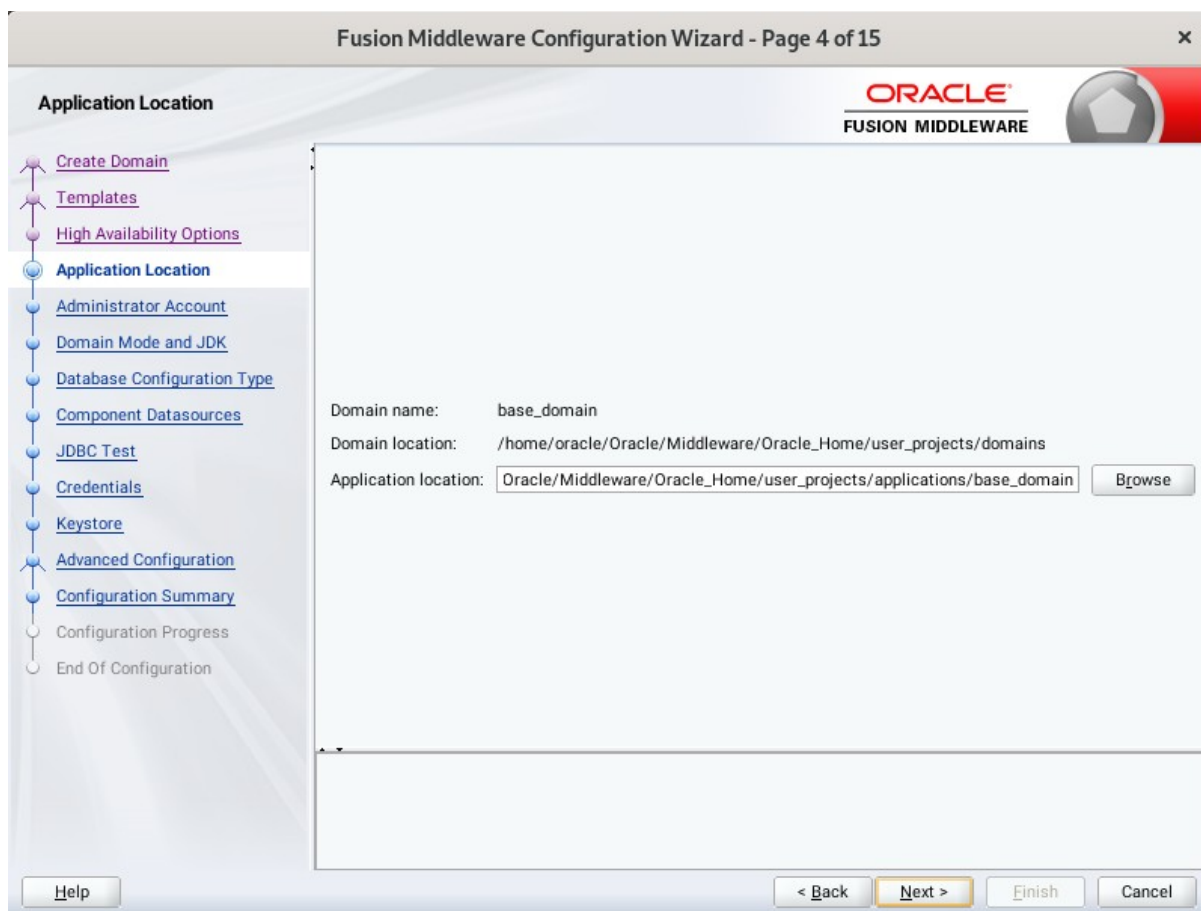
You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



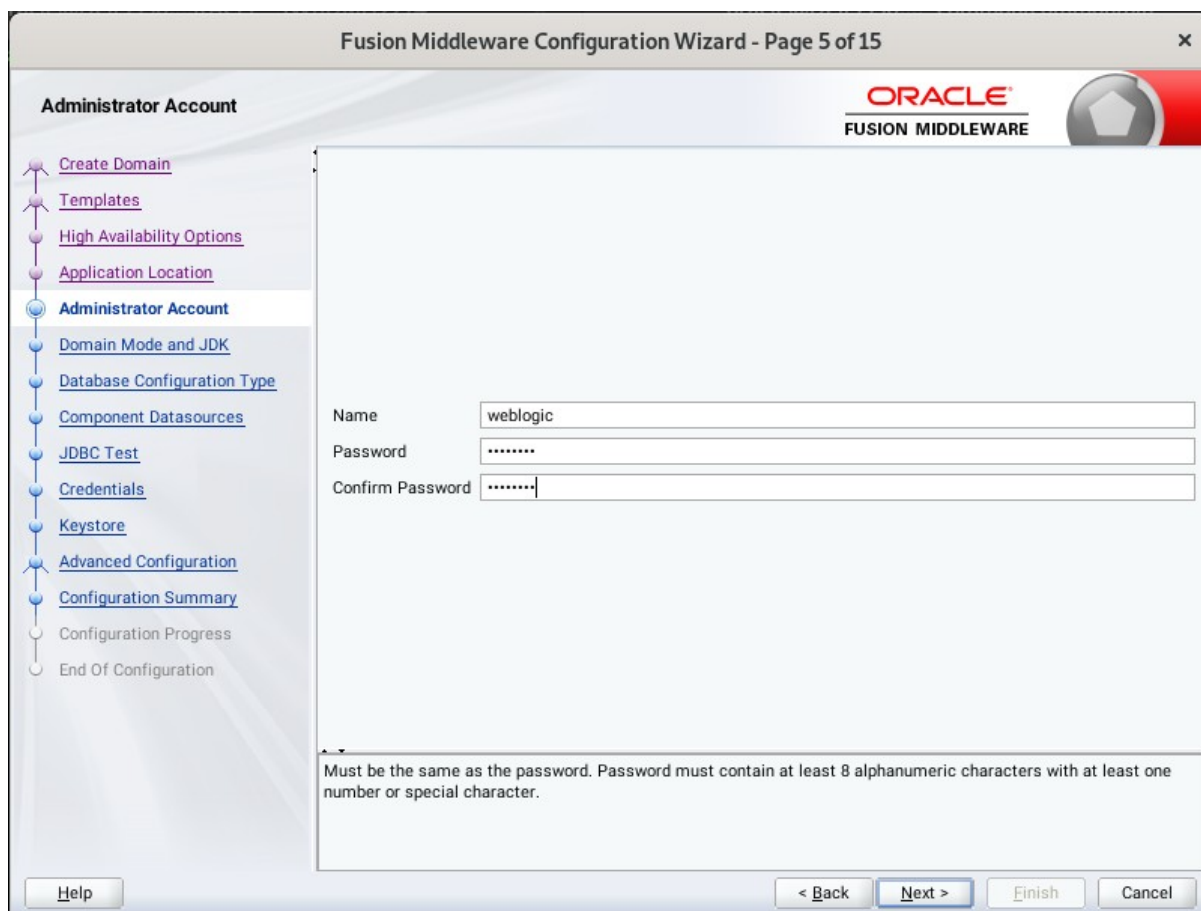
Keep the default value for Application location. Click **Next** to continue.

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



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

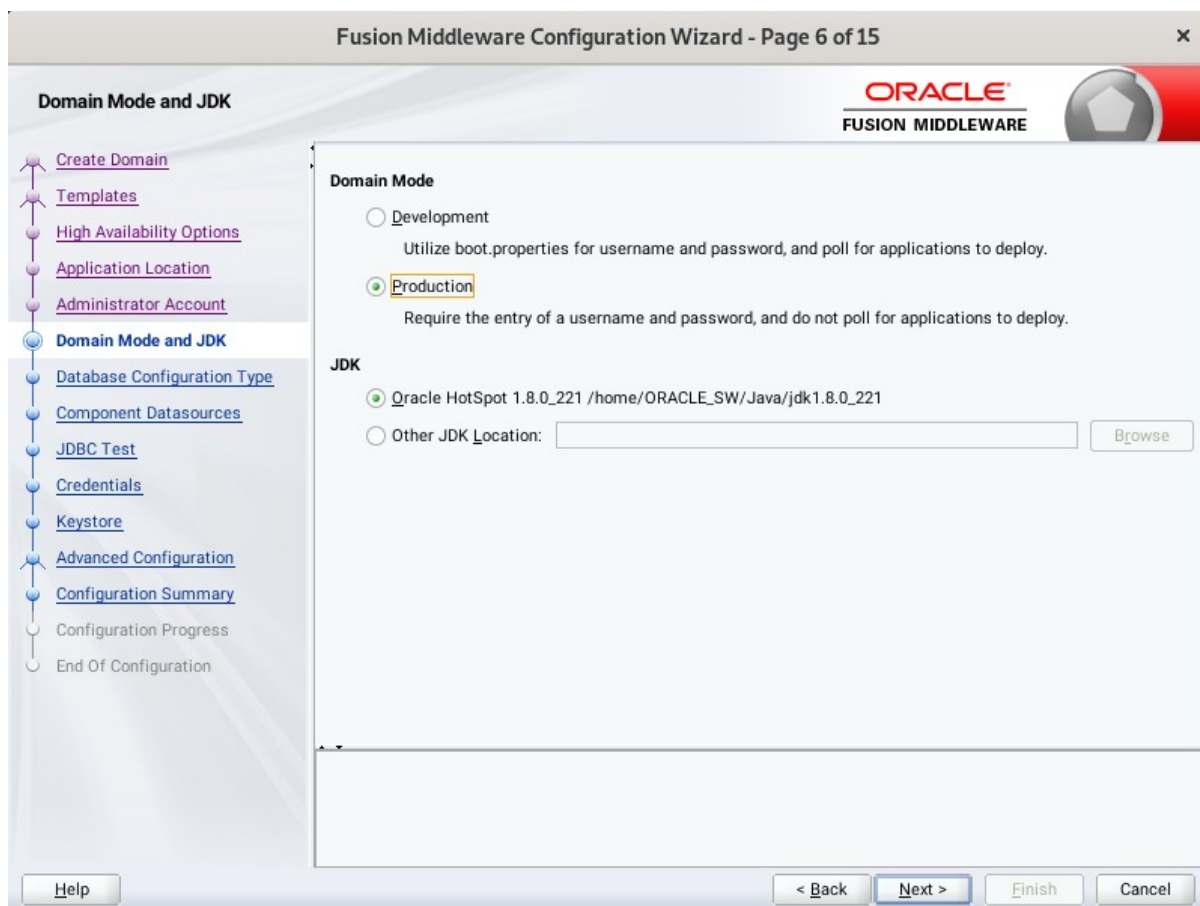
5). The **Administrator Account** screen appears.



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. A note at the bottom of the main area 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 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.

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



The screenshot shows the "Fusion Middleware Configuration Wizard - Page 6 of 15" window. The title bar includes the Oracle logo and "FUSION MIDDLEWARE". The main content area is titled "Domain Mode and JDK". On the left, a navigation pane lists steps: "Create Domain", "Templates", "High Availability Options", "Application Location", "Administrator Account", "Domain Mode and JDK" (highlighted), "Database Configuration Type", "Component Datasources", "JDBC Test", "Credentials", "Keystore", "Advanced Configuration", "Configuration Summary", "Configuration Progress", and "End Of Configuration". The "Domain Mode" section has two radio buttons: "Development" (unselected) and "Production" (selected). Below "Production" is the text: "Require the entry of a username and password, and do not poll for applications to deploy." The "JDK" section has two radio buttons: "Oracle HotSpot 1.8.0_221 /home/ORACLE_SW/Java/jdk1.8.0_221" (selected) and "Other JDK Location:" followed by a text input field and a "Browse" button. At the bottom, there are buttons for "Help", "< Back", "Next >", "Finish", and "Cancel".

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.

Fusion Middleware Configuration Wizard - Page 7 of 15

Database Configuration Type

ORACLE
FUSION MIDDLEWARE

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

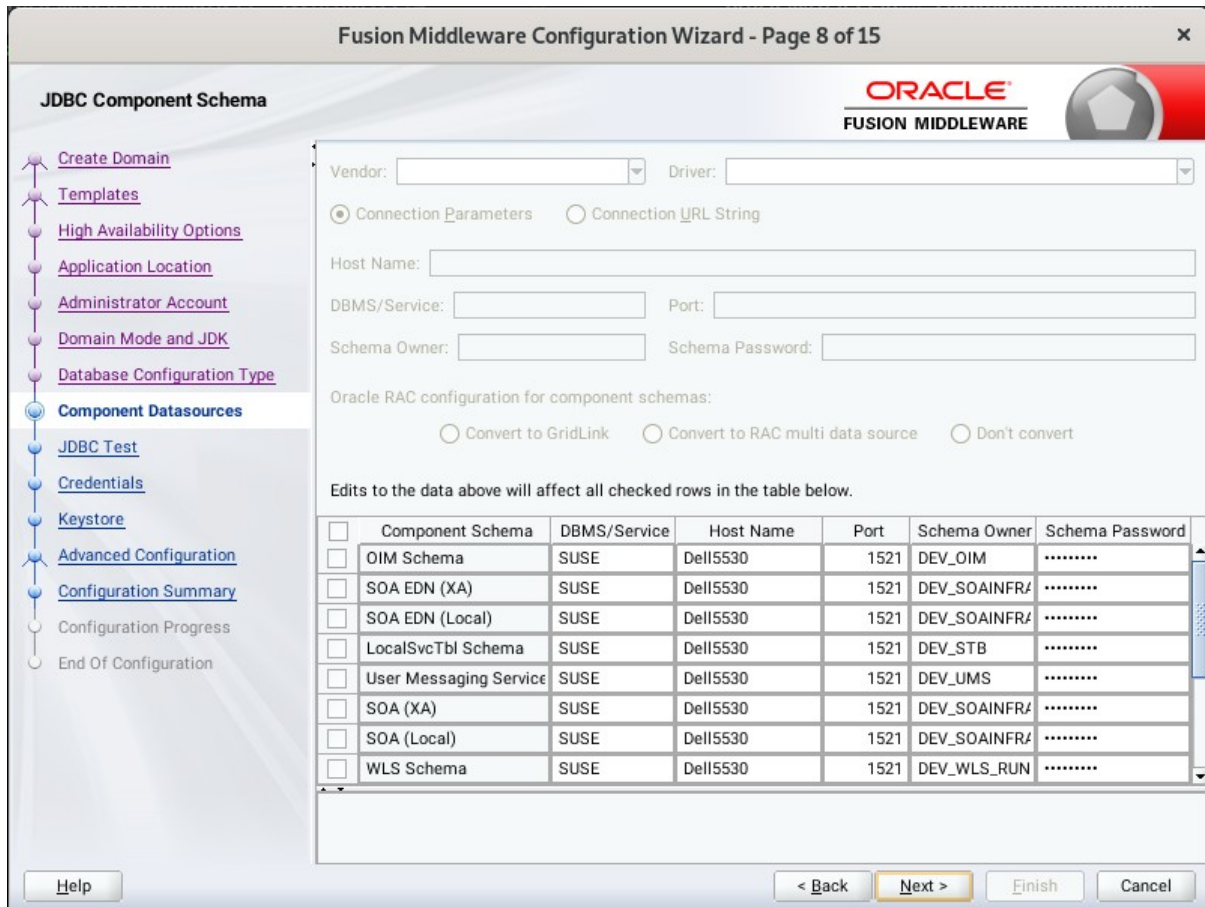
Successfully Done.

Click "Next" button to continue.

Help < Back Next > Finish Cancel

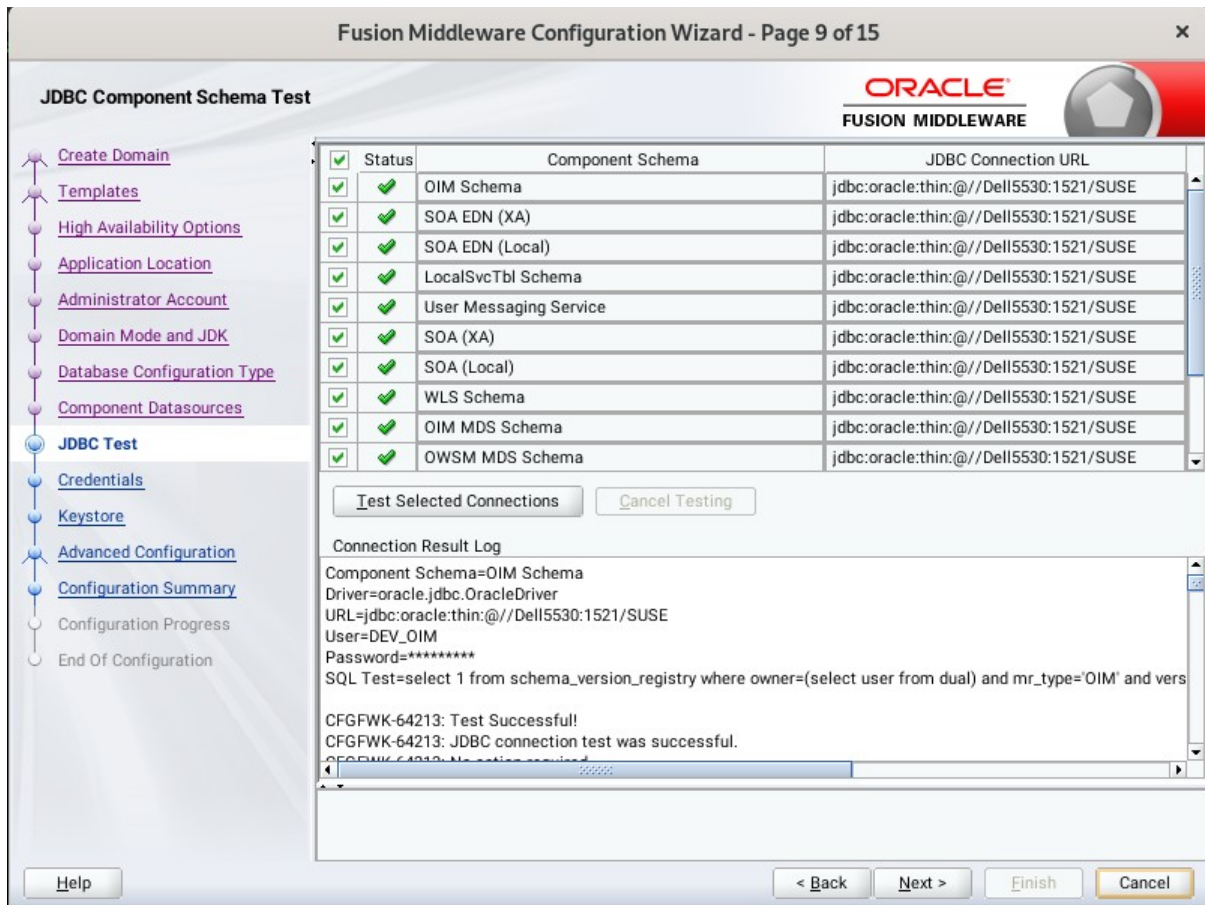
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



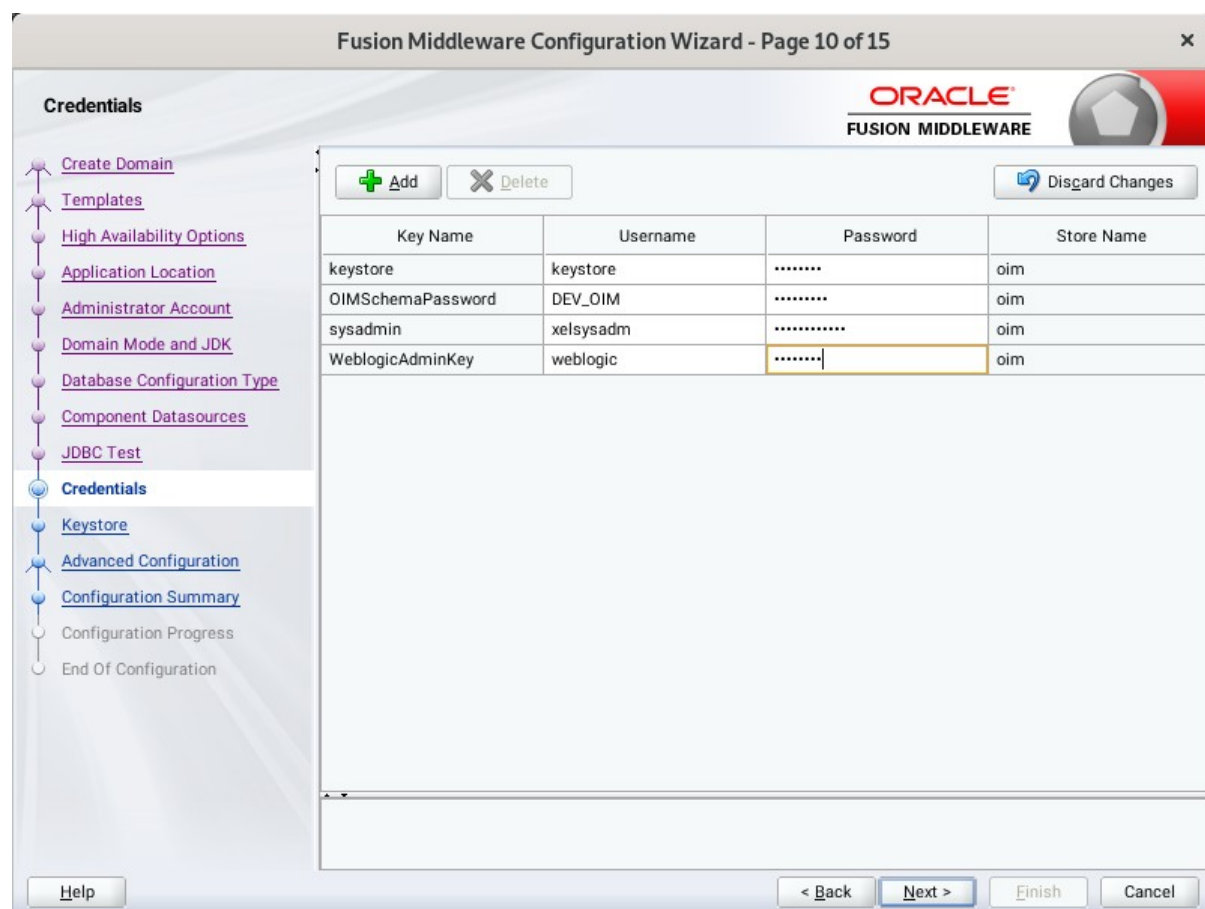
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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

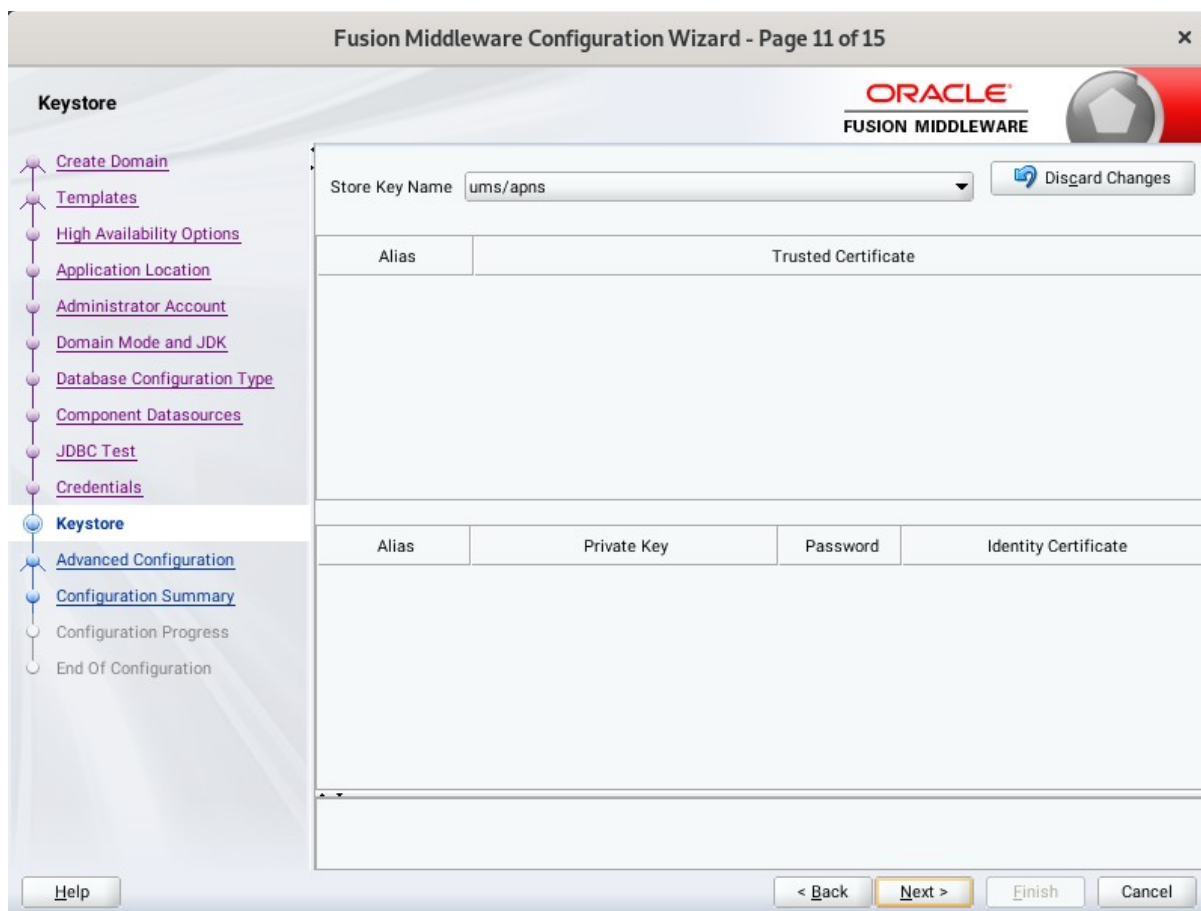
+ Add X Delete Disgard Changes

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

Help < Back Next > Finish Cancel

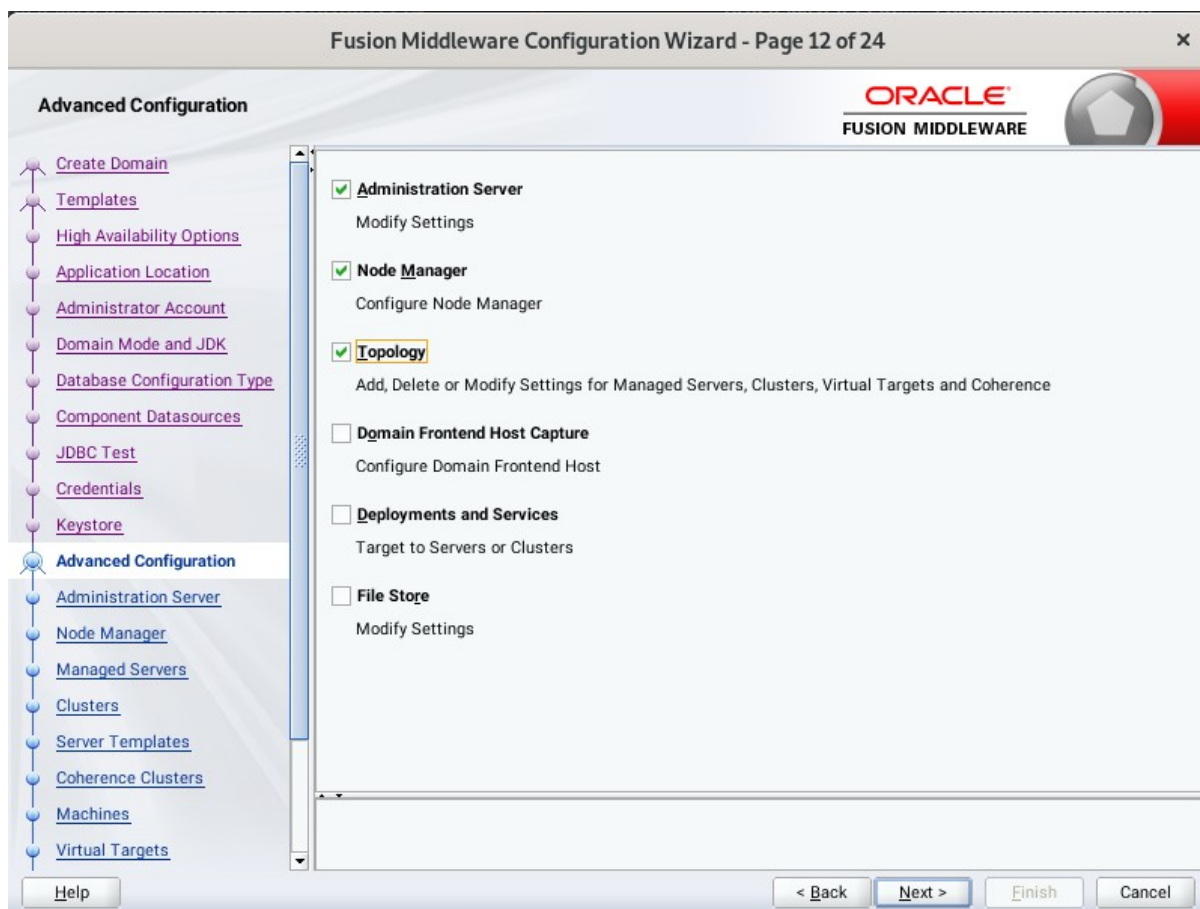
Use the Credentials screen to set credentials for each key in the domain. Ensure that you specify 'keystore' as the username for the key **Keystore**, and 'xelsysadm' as the username for the key **sysadmin**.

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



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.

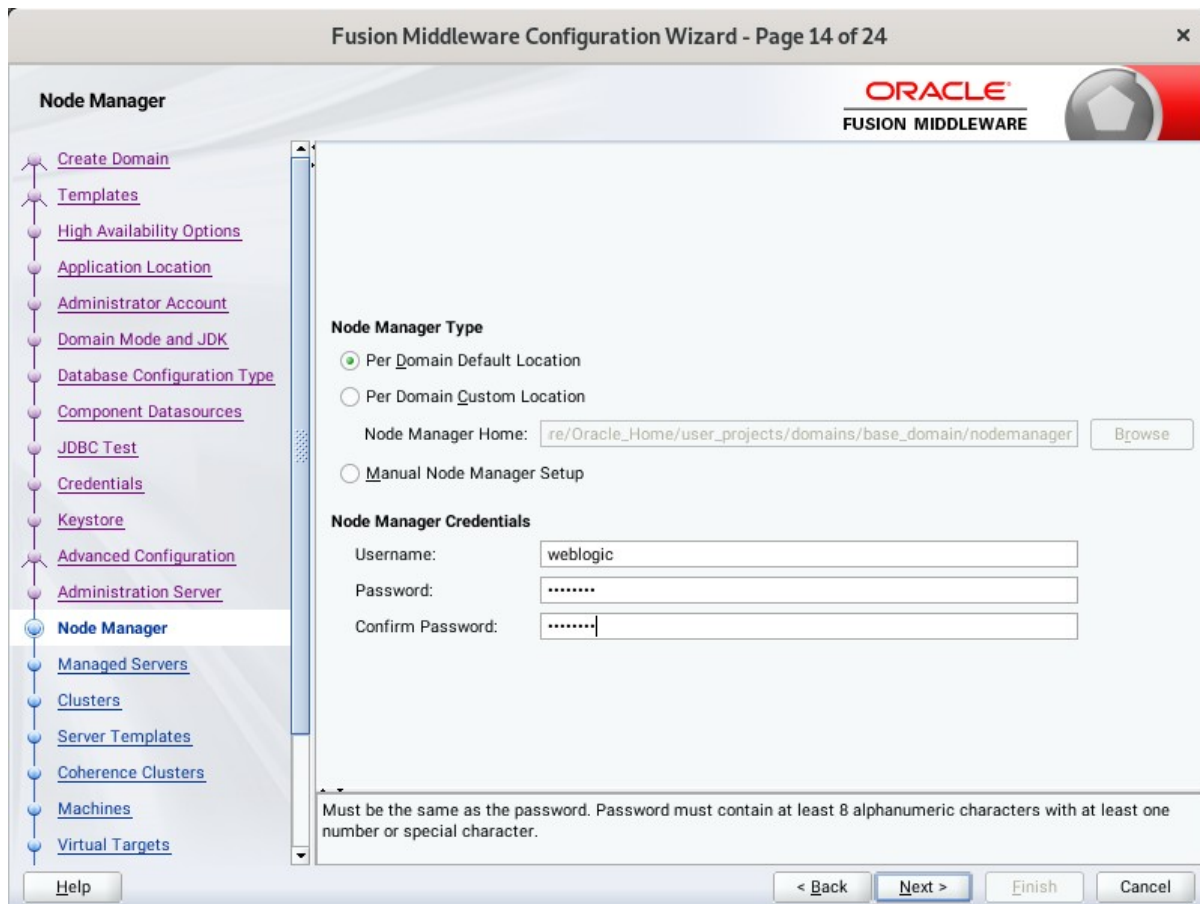
The screenshot shows the 'Administration Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 13 of 24'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'Administration Server' selected and highlighted. The main area contains the following configuration fields:

- Server Name: AdminServer
- Listen Address: 192.168.1.7 (selected from a dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty text box)
- Server Groups: Unspecified (selected from a dropdown menu)

At the bottom of the main area, there is a warning 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.

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



The screenshot shows the "Fusion Middleware Configuration Wizard - Page 14 of 24" window. The title bar includes the Oracle logo and "FUSION MIDDLEWARE". The left sidebar contains a navigation tree with the following items: 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, Administration Server, **Node Manager** (highlighted), Managed Servers, Clusters, Server Templates, Coherence Clusters, Machines, and Virtual Targets. The main content area is titled "Node Manager" and contains the following configuration options:

- 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:

A note at the bottom of the main area states: "Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character." The bottom of the window features a "Help" button on the left and "< Back", "Next >", "Finish", and "Cancel" buttons on the right.

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 X Delete Disgard Changes

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
oim_server1	192.168.1.7	14000	<input type="checkbox"/>	Disabled	OIM-MGD-S...
soa_server1	192.168.1.7	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.

Fusion Middleware Configuration Wizard - Page 16 of 26

ORACLE
FUSION MIDDLEWARE

Clusters

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
Administration Server
Node Manager
Managed Servers
Clusters
Server Templates
Dynamic Servers
Assign Servers to Clusters
Coherence Clusters

+ Add X Delete Disgard Changes

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port
oim_cluster_1			0	0
soa_cluster_1			0	0

Help < Back Next > Finish Cancel

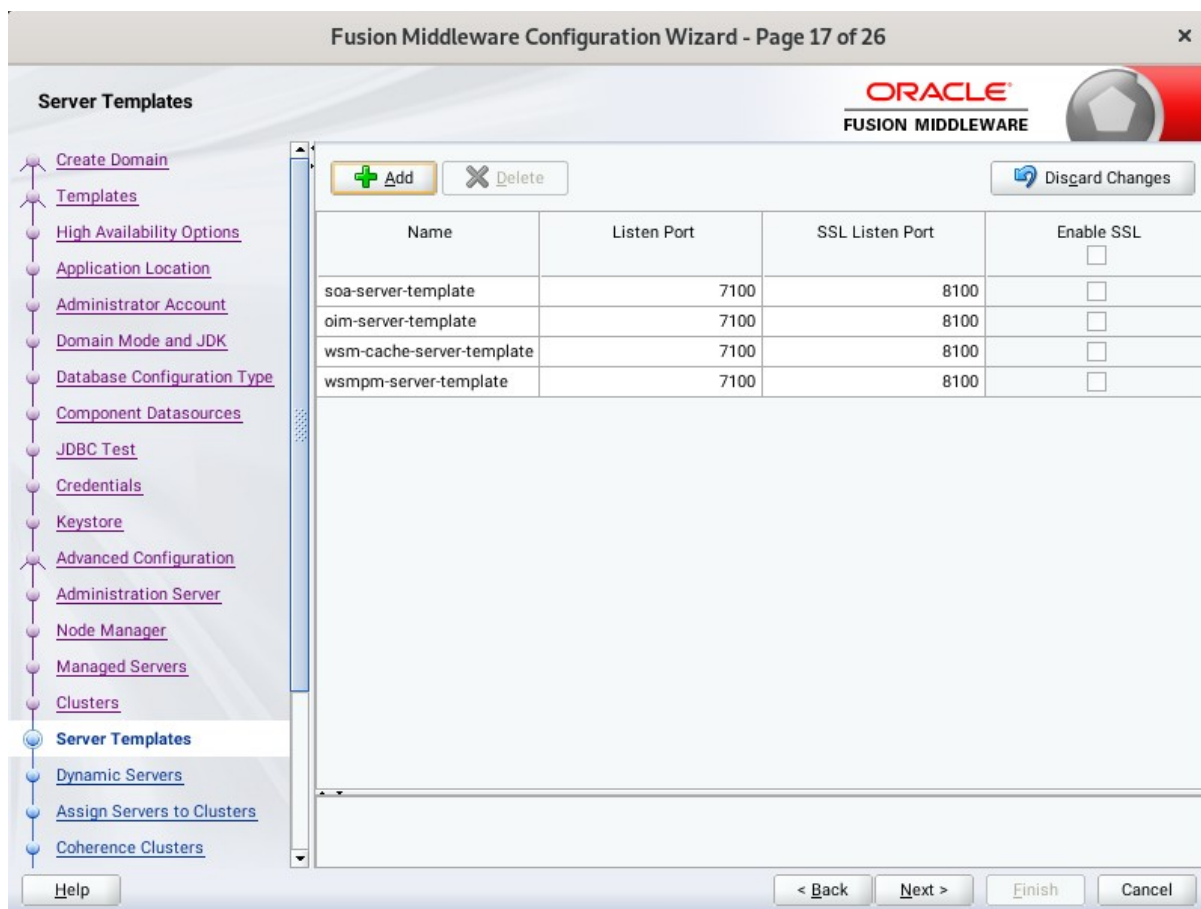
On the Clusters screen:

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.

Fusion Middleware Configuration Wizard - Page 18 of 26

Dynamic Servers

ORACLE
FUSION MIDDLEWARE

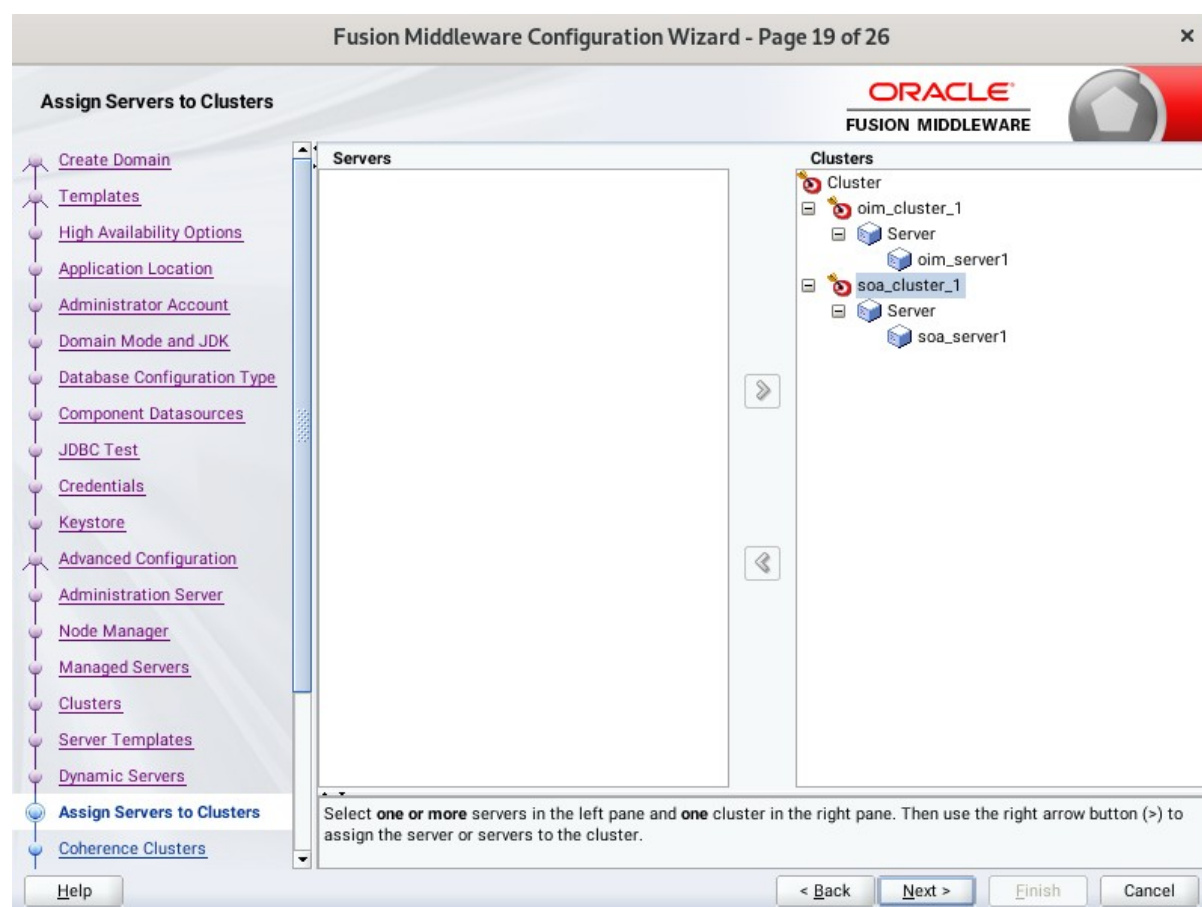
Disgard Changes

Cluster Name	Server Name Prefix	Server Template	Dynamic Cluster Size	Machine Name Match Expression	Calculated Machine Names	Calculated Listen Ports	Dynamic Server Groups
oim_cluster_1	Disabled	Unspecifi...	Disabled	Disabled	<input type="checkbox"/>	<input type="checkbox"/>	Unspecifi...
soa_cluster_1	Disabled	Unspecifi...	Disabled	Disabled	<input type="checkbox"/>	<input type="checkbox"/>	Unspecifi...

Help < Back Next > Finish Cancel

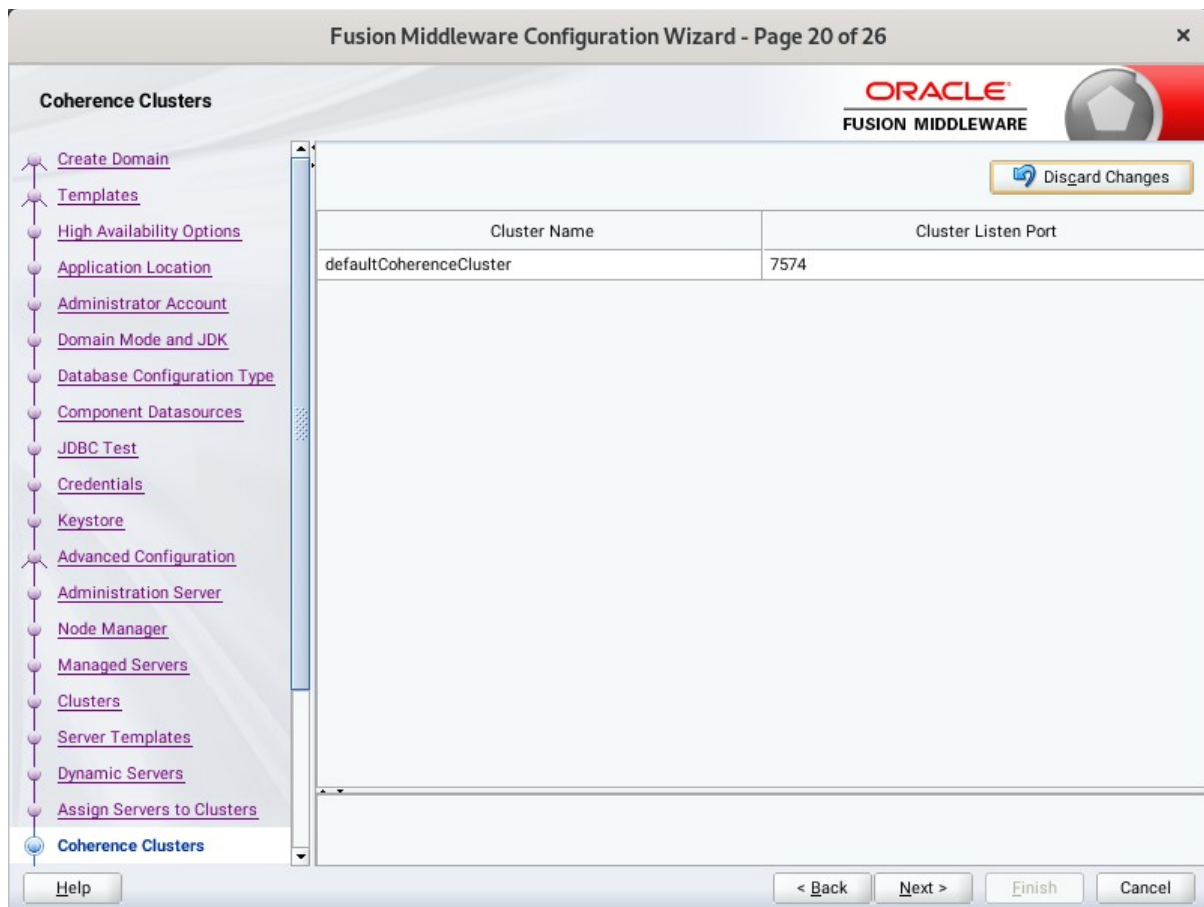
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



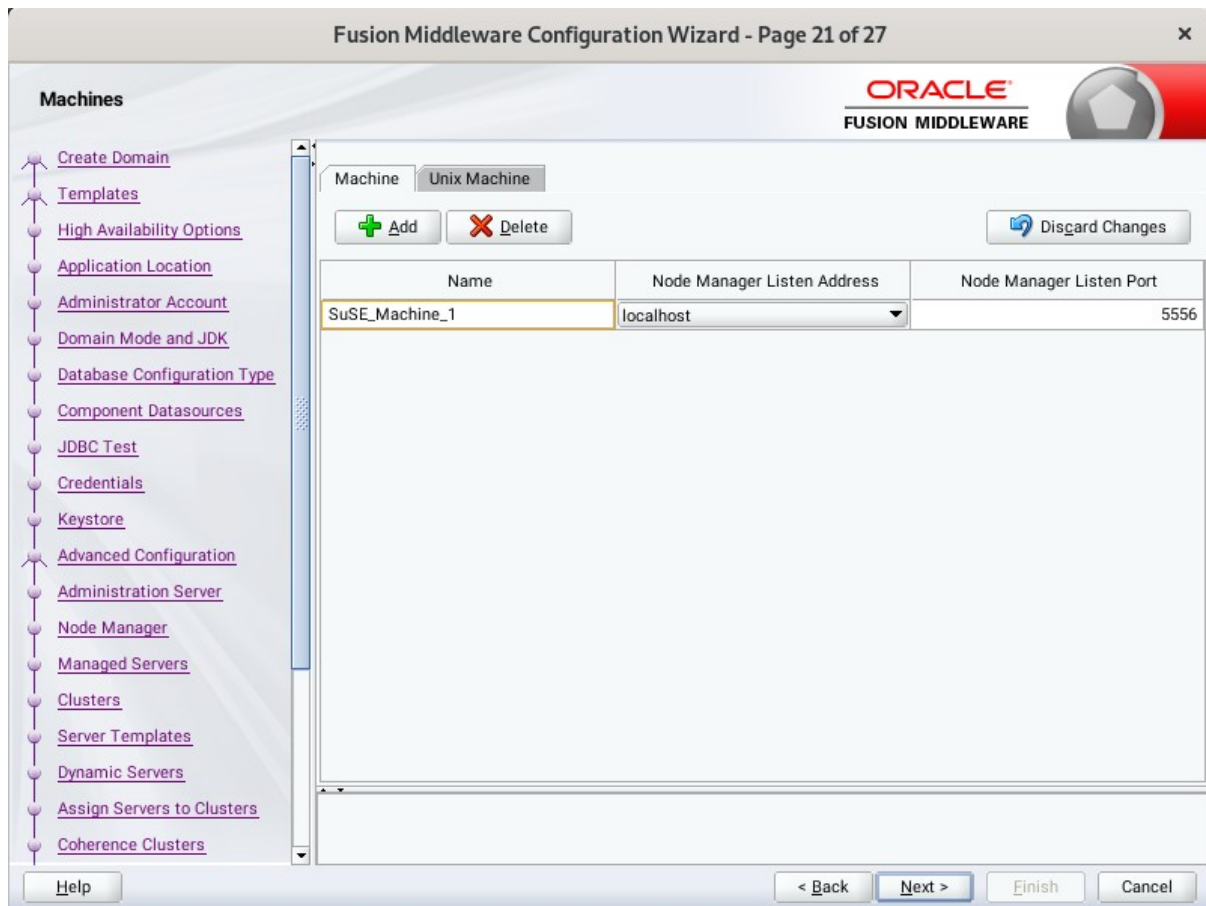
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



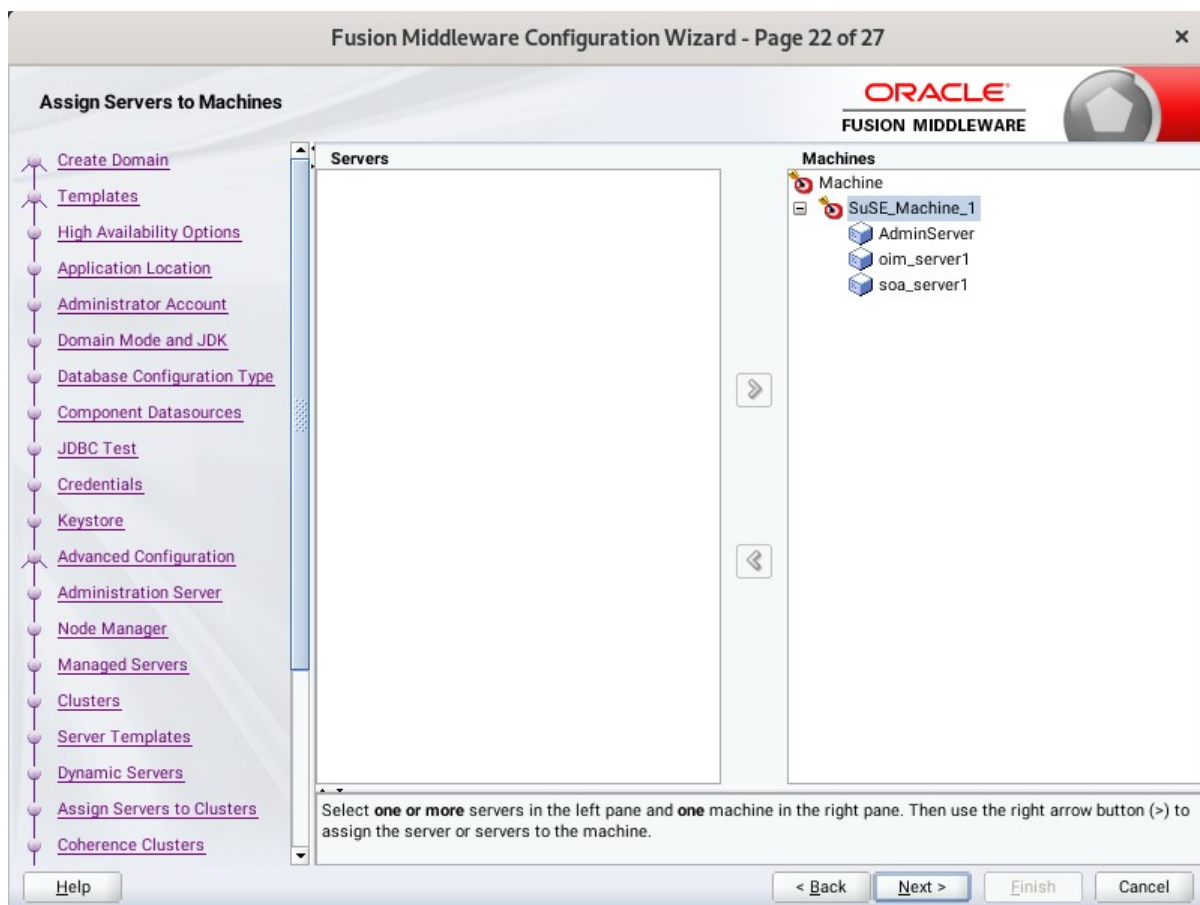
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

21). The **Machines** screen appears.



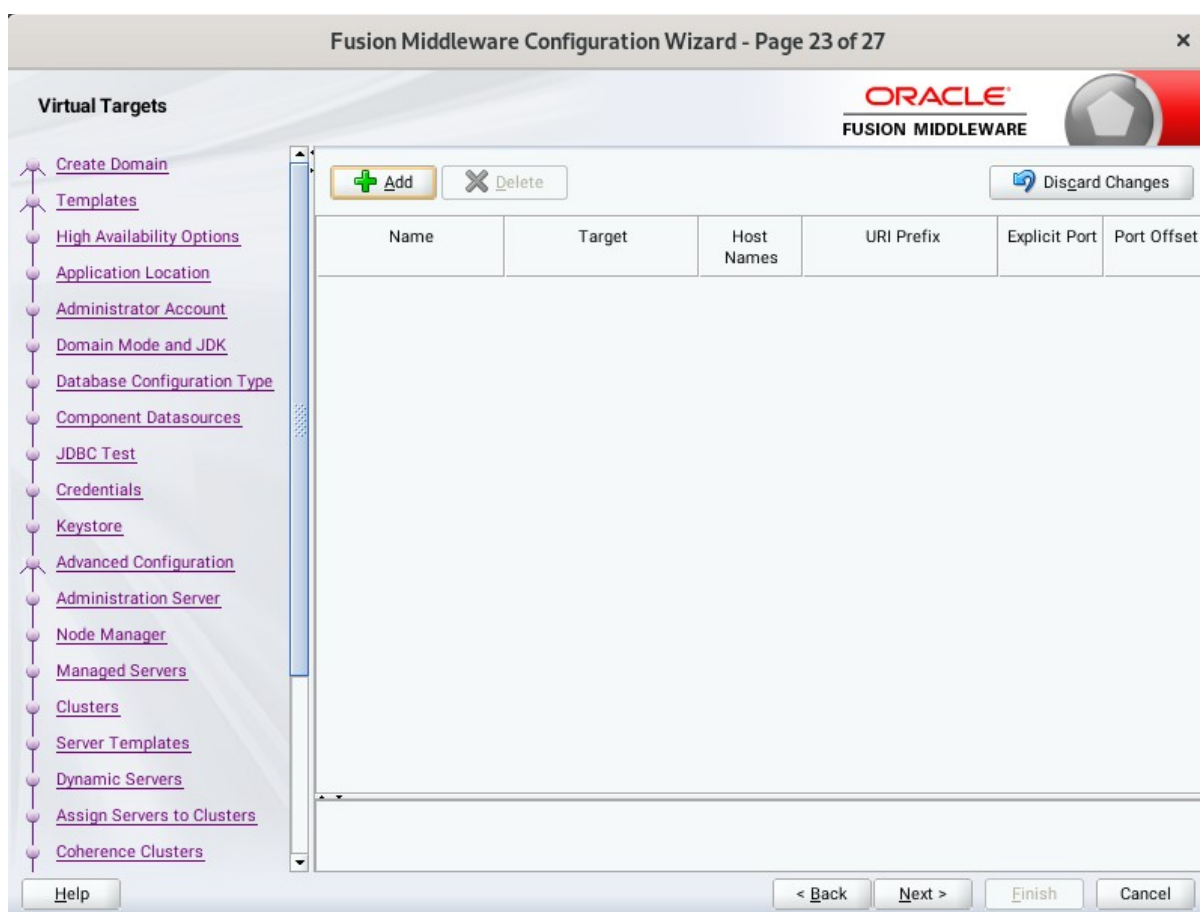
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



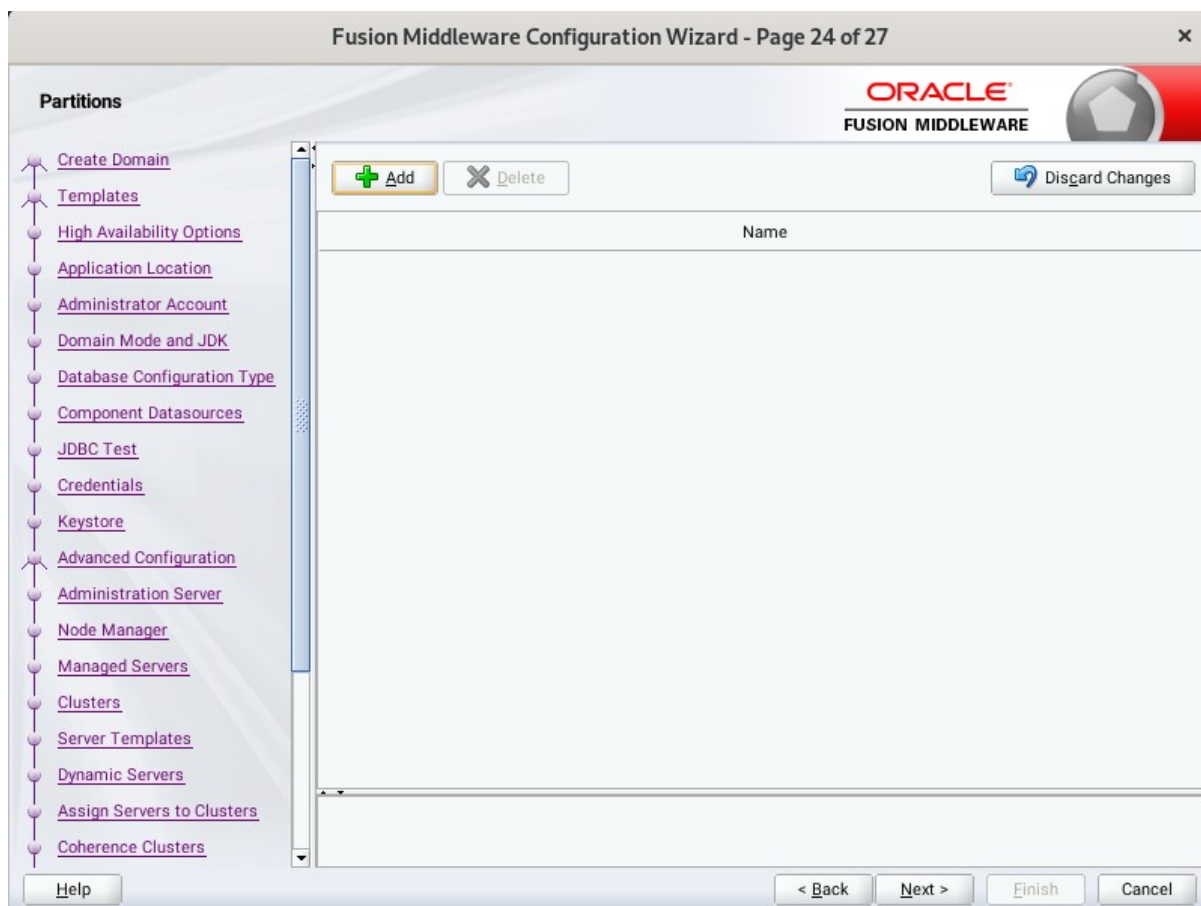
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



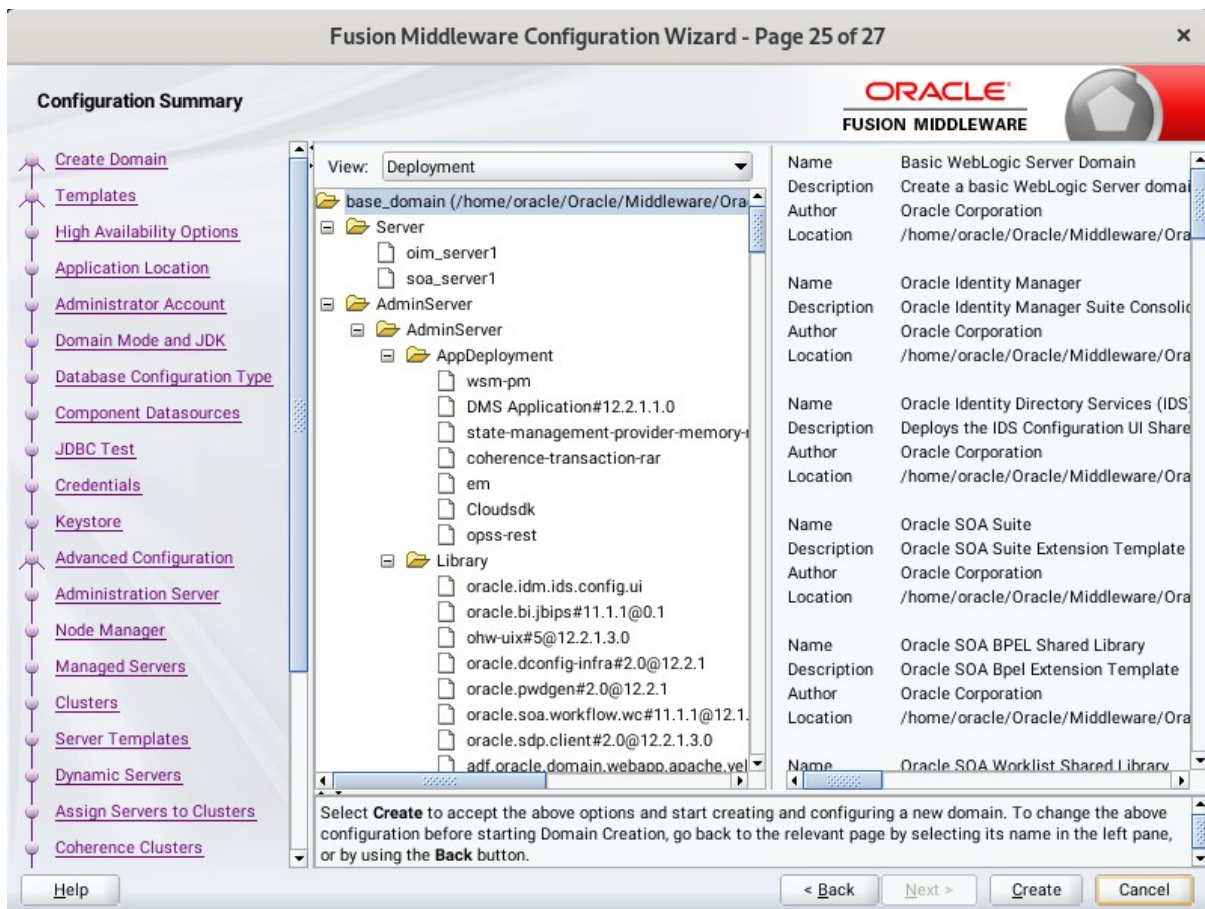
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

24). The **Partitions** screen appears.



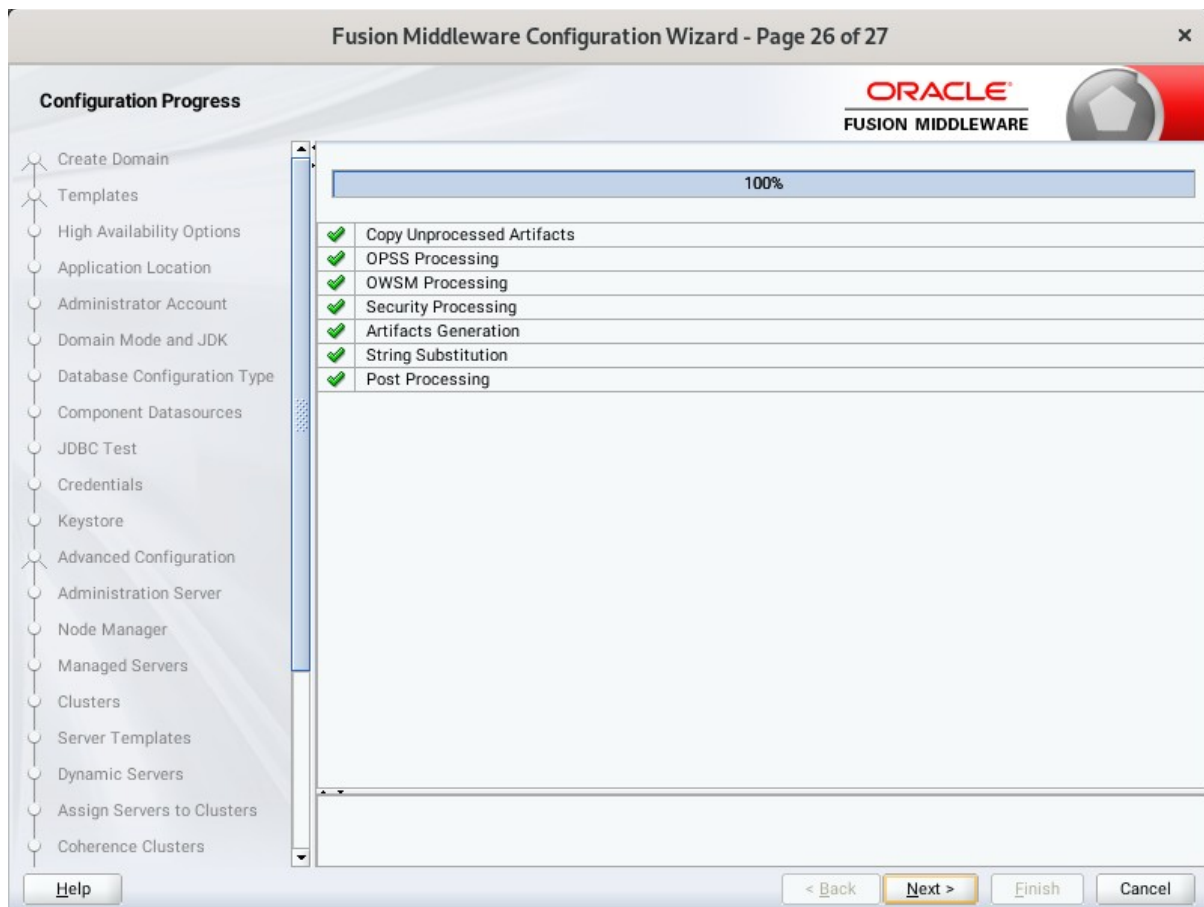
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



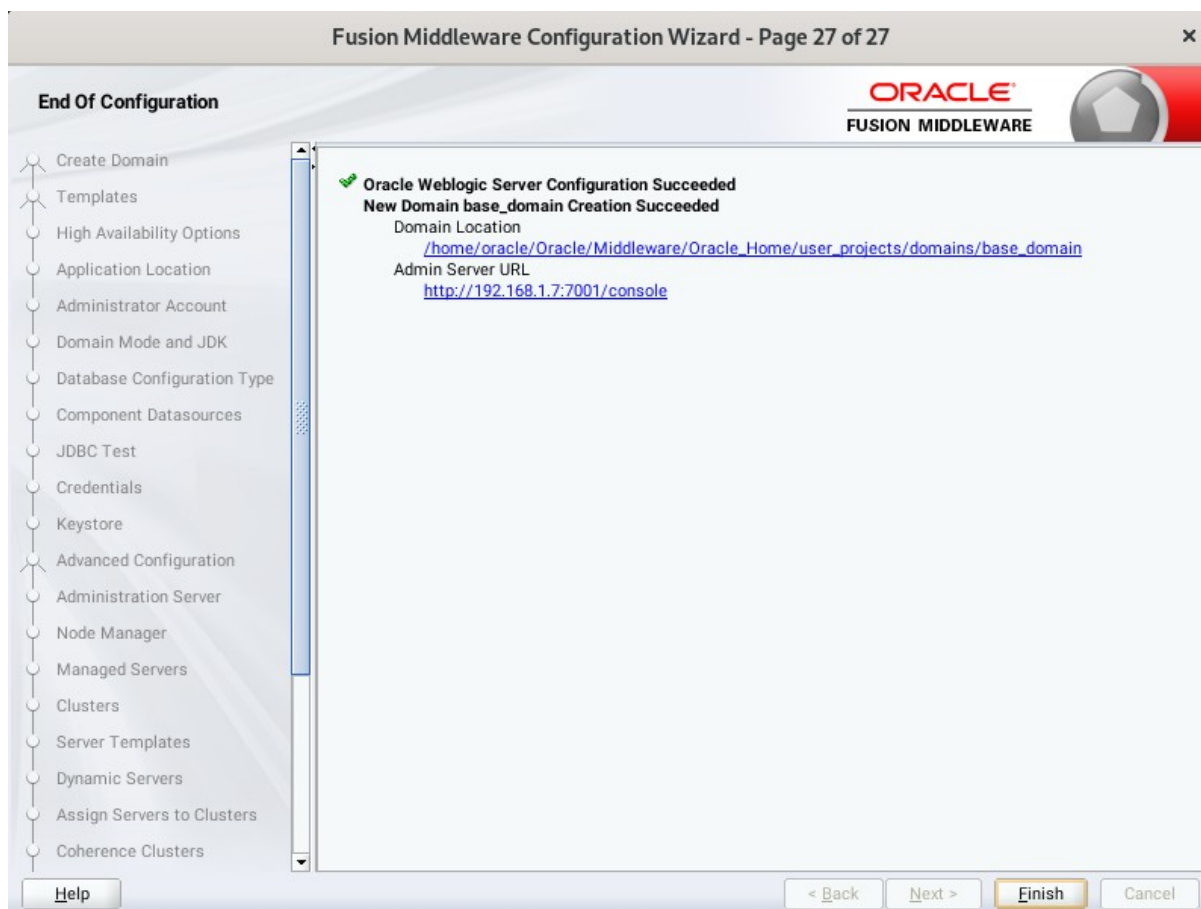
Select **Create** to accept the above options and start creating and configuring a new domain.

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.

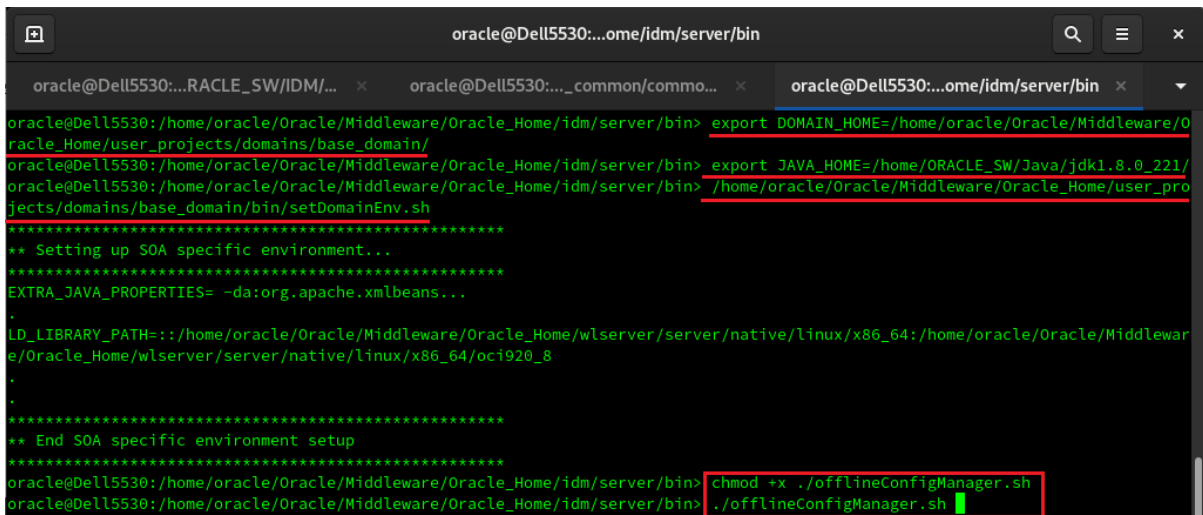
```
DOMAIN_HOME
JAVA_HOME
```

- 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:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> chmod +x ./offlineConfigManager.sh
oracle@Dell5530:/home/oracle/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/idm
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_domain at 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".

```

```

INFO:
[OIM_CONFIG]The file /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain//config/fmwconfig/jps-config-jse.xml is updated.
<Oct 15, 2021 5:18:42,411 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.util.JPSCfgXMLUpdate updateJPSCfgXMLForWLS
INFO: Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class
<Oct 15, 2021 5:18:42,411 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Updated jps-config-jse.xml Details.>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO:
Updated jps-config-jse.xml Details.
<Oct 15, 2021 5:18:42,412 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfg() method of OIMConfigManager class>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO: Exiting updateJPSCfg() method of OIMConfigManager class
<Oct 15, 2021 5:18:42,412 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <[OIM_CONFIG] Copying the mbean Files>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
[OIM_CONFIG] Copying the mbean Files
<Oct 15, 2021 5:18:42,412 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Entering copyMbeanFiles() method of OIMConfigManager class>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Entering copyMbeanFiles() method of OIMConfigManager class
<Oct 15, 2021 5:18:42,413 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Copying mbean files are successful>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
Copying mbean files are successful
<Oct 15, 2021 5:18:42,413 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting copyMbeanFiles() method of OIMConfigManager class>
Oct 15, 2021 5:18:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Exiting copyMbeanFiles() method of OIMConfigManager class
oracle@Dell5530:/home/oracle/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.

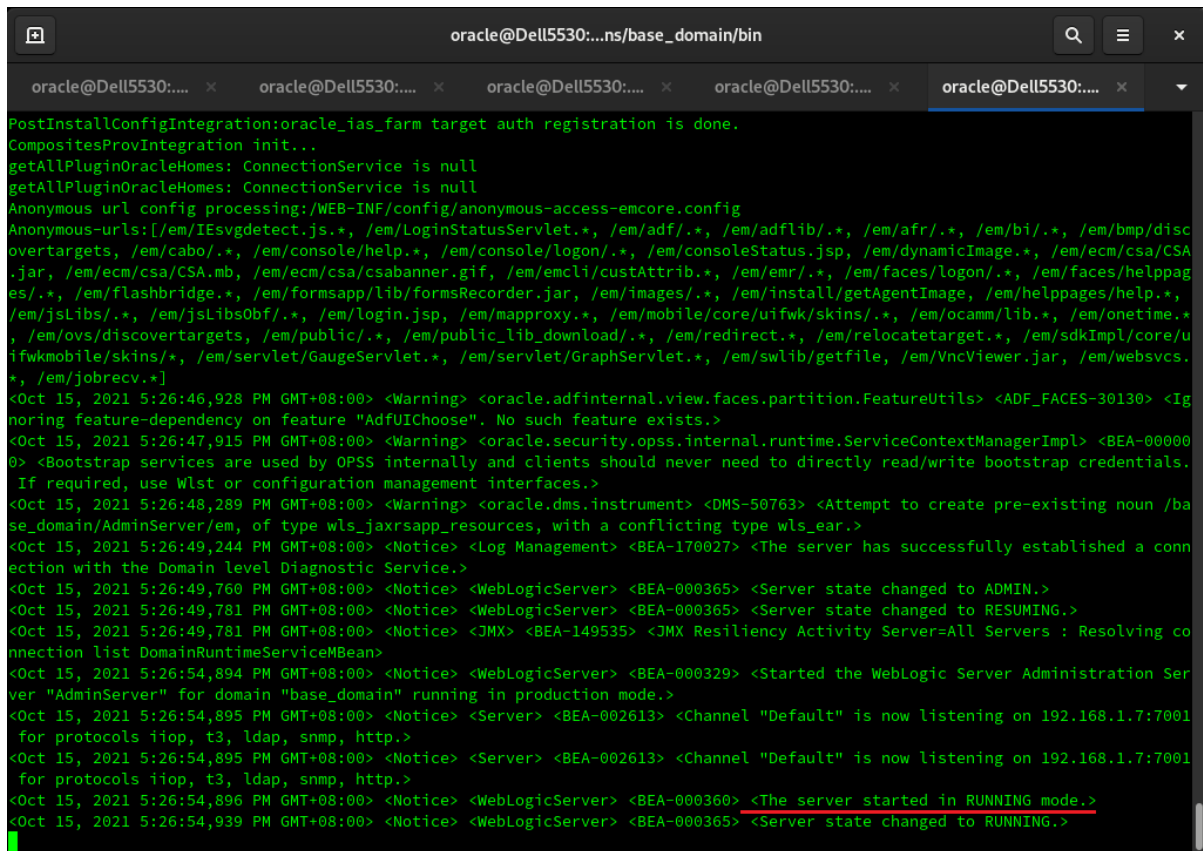
Starting the Node Manager, go to the DOMAIN_HOME/bin directory and run 'nohup ./startNodeManager.sh > nm.out&'

```

oracle@Dell5530:~/base_domain/bin
oracle@Dell5530:~/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 7498
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
<Oct 15, 2021 5:21:20 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Oct 15, 2021 5:21:20 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Oct 15, 2021 5:21:20 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Oct 15, 2021 5:21:20 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Oct 15, 2021 5:21:20 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Oct 15, 2021 5:21:21 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
Oct 15, 2021 5:21:21 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.
<Oct 15, 2021 5:21:21 PM GMT+08:00> <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`.



```

oracle@Dell5530:~/...ns/base_domain/bin
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.*]
<Oct 15, 2021 5:26:46,928 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ign
oring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Oct 15, 2021 5:26:47,915 PM GMT+08:00> <Warning> <oracle.security.opss.internal.runtime.ServiceContextManagerImpl> <BEA-00000
0> <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.>
<Oct 15, 2021 5:26:48,289 PM GMT+08:00> <Warning> <oracle.dms.instrument> <DMS-50763> <Attempt to create pre-existing noun /ba
se_domain/AdminServer/em, of type wls_jaxrsapp_resources, with a conflicting type wls_ear.>
<Oct 15, 2021 5:26:49,244 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conn
ection with the Domain level Diagnostic Service.>
<Oct 15, 2021 5:26:49,760 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Oct 15, 2021 5:26:49,781 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Oct 15, 2021 5:26:49,781 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving co
nnection list DomainRuntimeServiceMBean>
<Oct 15, 2021 5:26:54,894 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base_domain" running in production mode.>
<Oct 15, 2021 5:26:54,895 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
for protocols iiop, t3, ldap, snmp, http.>
<Oct 15, 2021 5:26:54,895 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.1.7:7001
for protocols iiop, t3, ldap, snmp, http.>
<Oct 15, 2021 5:26:54,896 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Oct 15, 2021 5:26:54,939 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

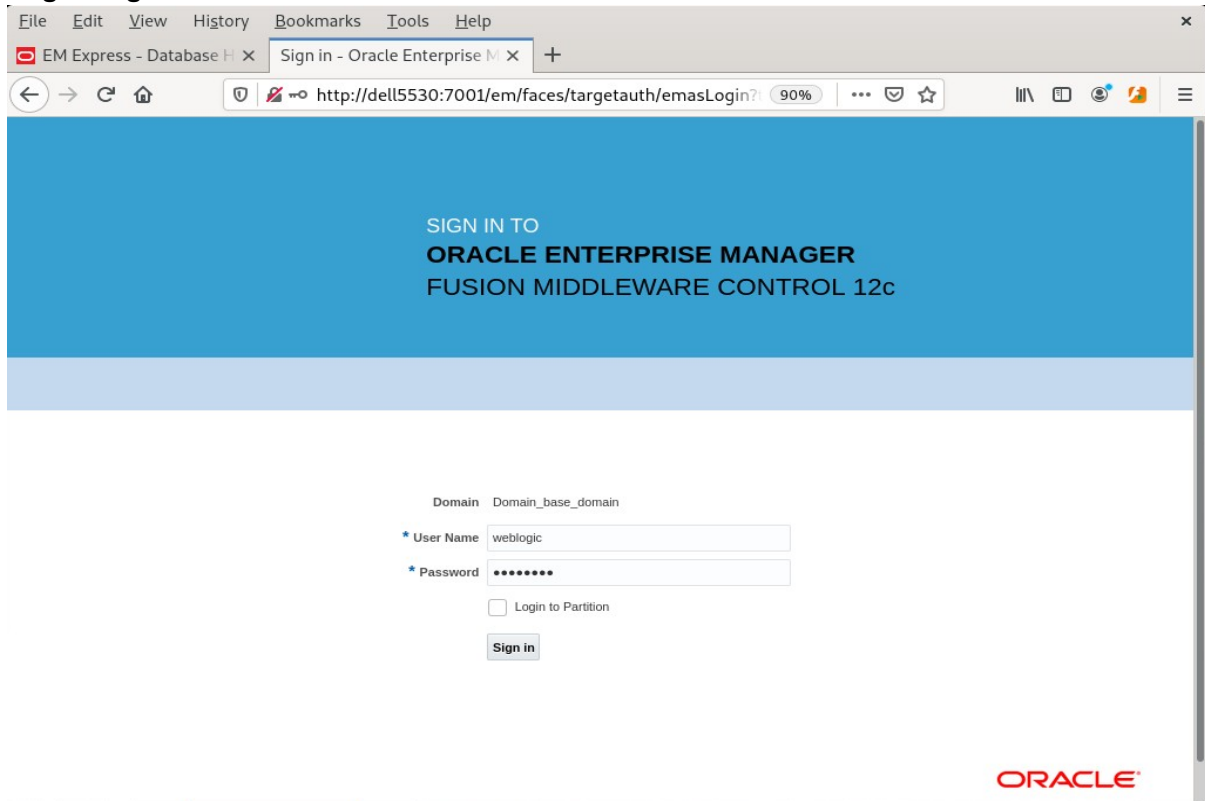
You know that the administrator server is running when you see the following output:

Server state changed to RUNNING.

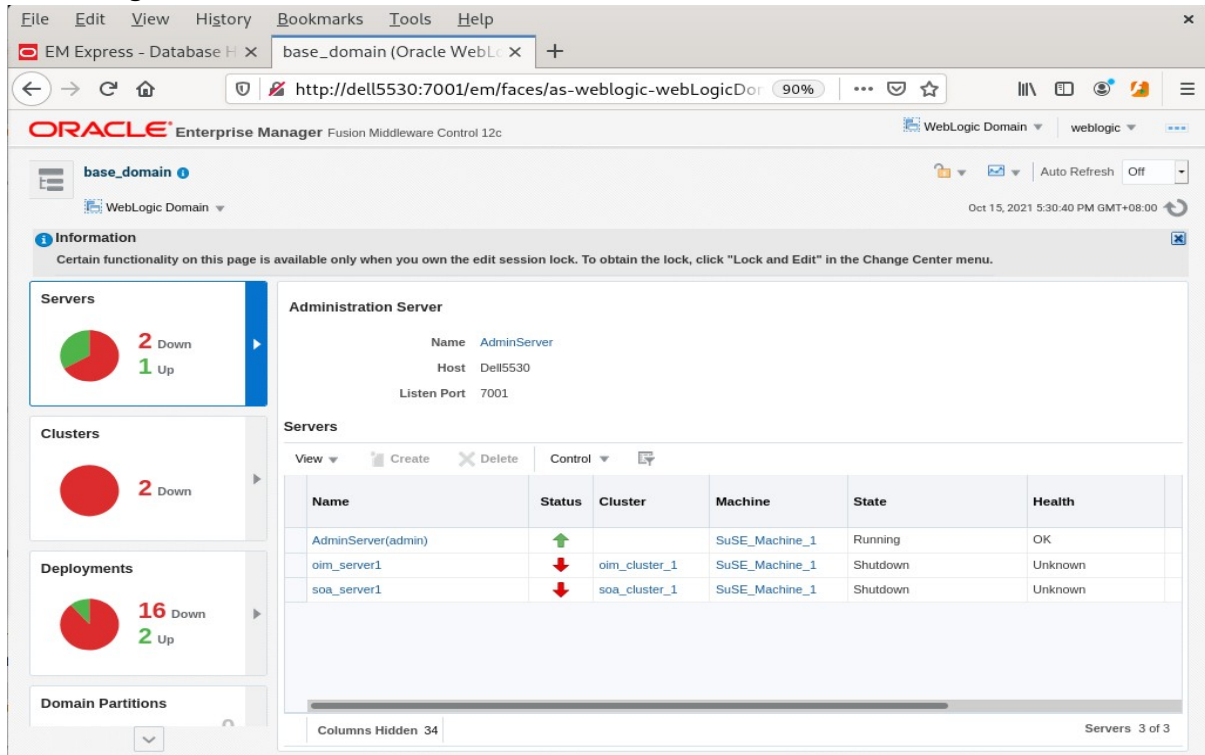
3-3. Checking Oracle Identity and Access Management 12c Product URLs.

1). Access to Enterprise Manager Console.

Login Page:



Home Page:



Starting the managed soa server defined in domain, wait until is comes up into RUNNING state and then starting oim server:

The screenshot shows the Oracle Enterprise Manager interface for a domain named 'base_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: Name: AdminServer, Host: Dell5530, Listen Port: 7001. Below this is 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

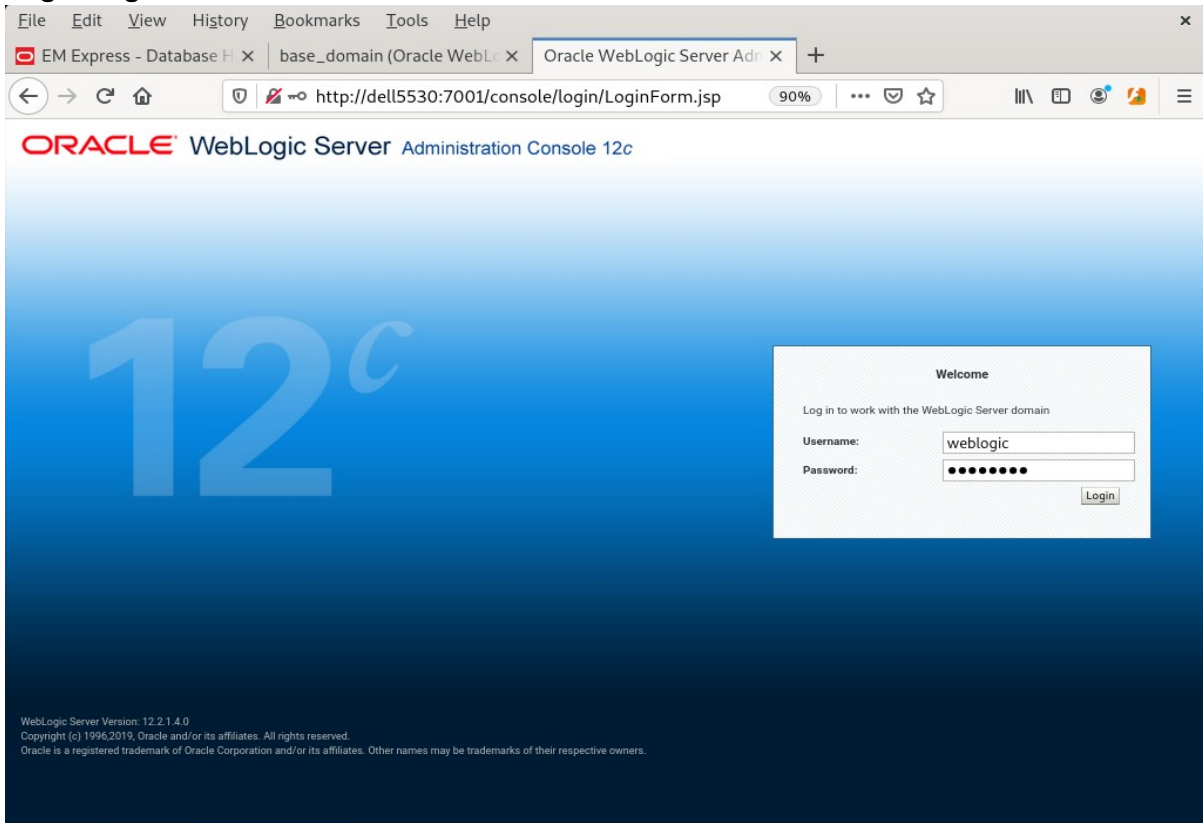
The screenshot shows the Oracle Enterprise Manager interface for the same domain 'base_domain'. The summary cards now show Servers (3 Up), Clusters (2 Up), and Deployments (7 Down, 11 Up). The 'Administration Server' details remain the same. The server table now shows that 'oim_server1' has started:

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

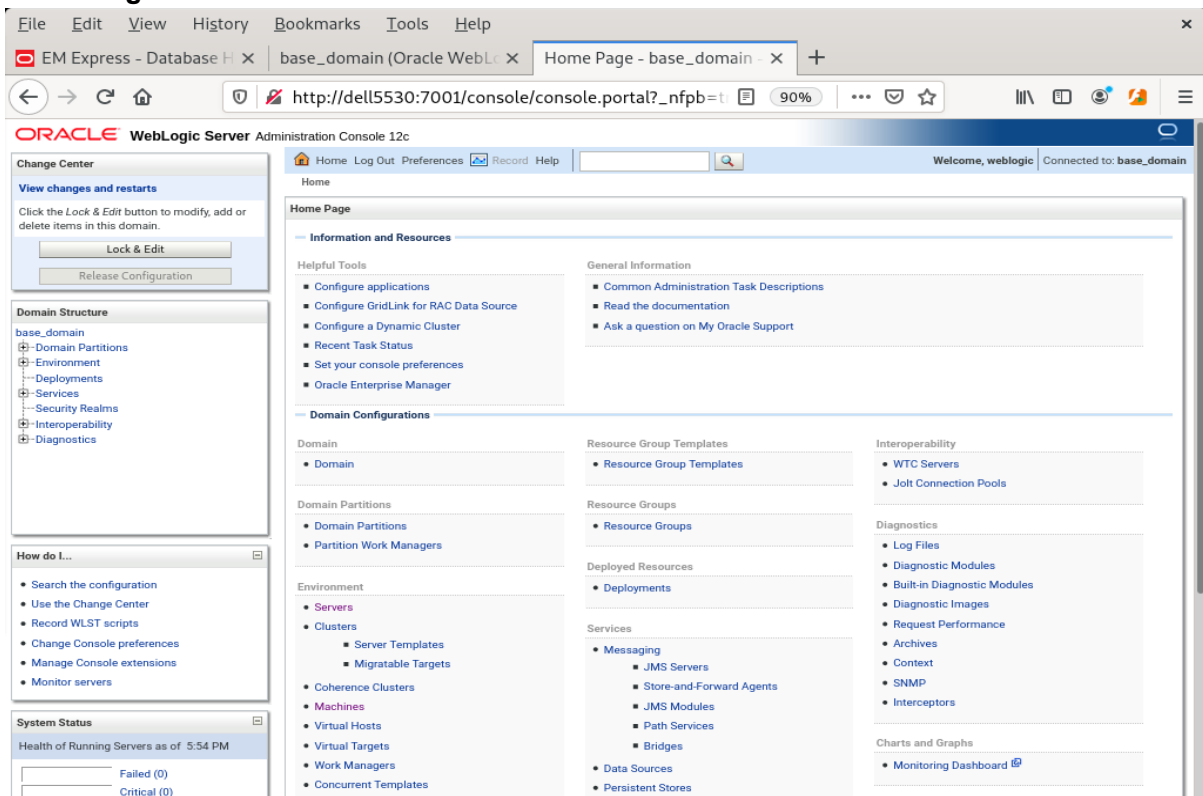
After they start up successfully, each managed server is listed as Running.

2). Access to Administration Server Console

Login Page:



Home Page:



Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area is titled "Summary of Servers" and includes a "Configuration" tab. Below the tab, there is a table of servers. The table has columns for Name, Type, Cluster, Machine, State, Health, and Listen Port. The servers listed are AdminServer(admin), oim_server1, and soa_server1, all in a "Configured" state and "RUNNING" on "SuSE_Machine_1".

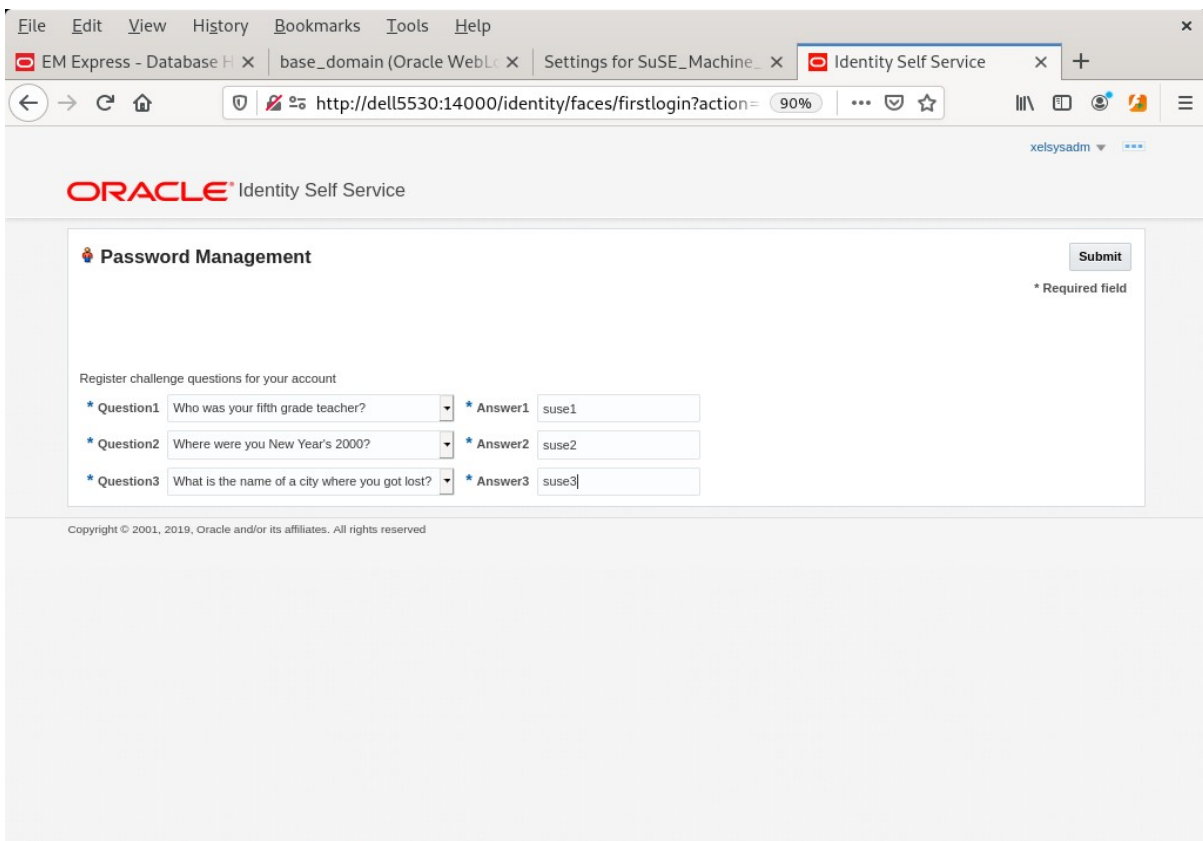
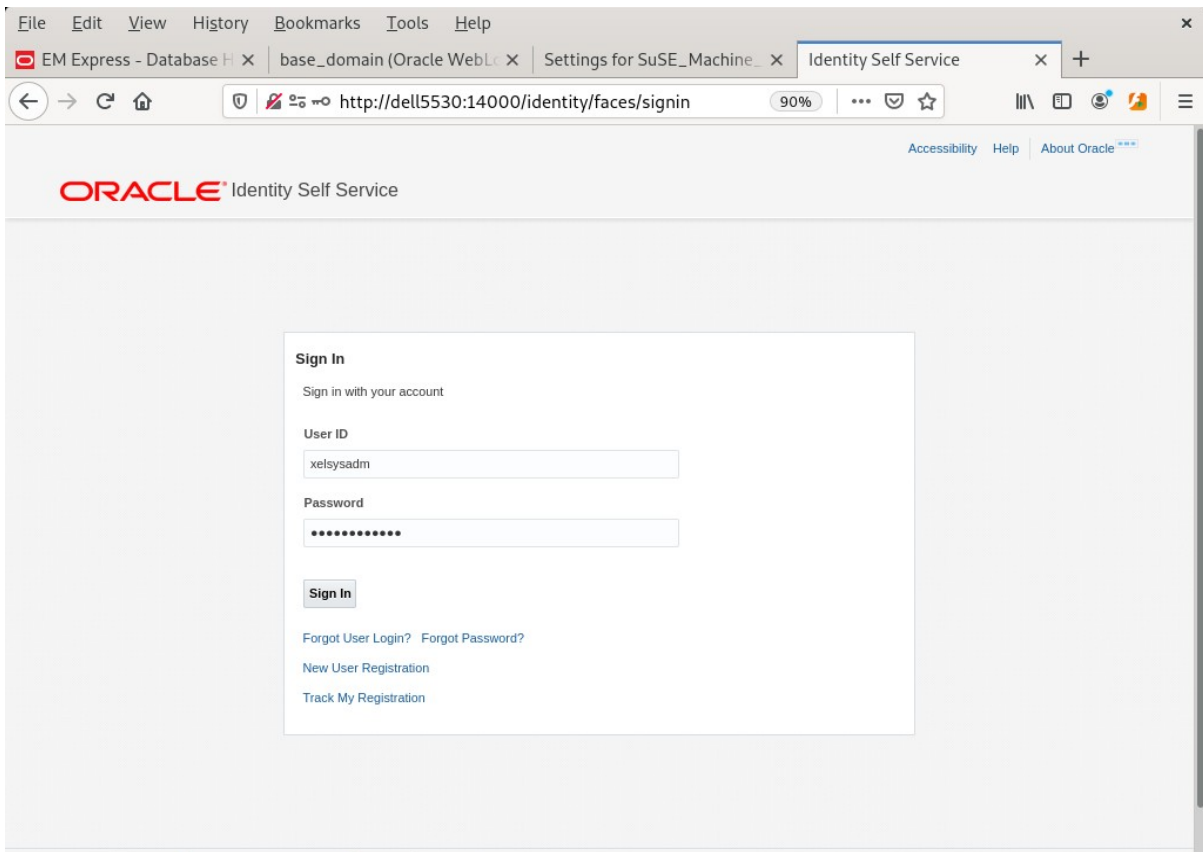
Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		SuSE_Machine_1	RUNNING	OK	7001
oim_server1	Configured	oim_cluster_1	SuSE_Machine_1	RUNNING	OK	14000
soa_server1	Configured	soa_cluster_1	SuSE_Machine_1	RUNNING	OK	7003

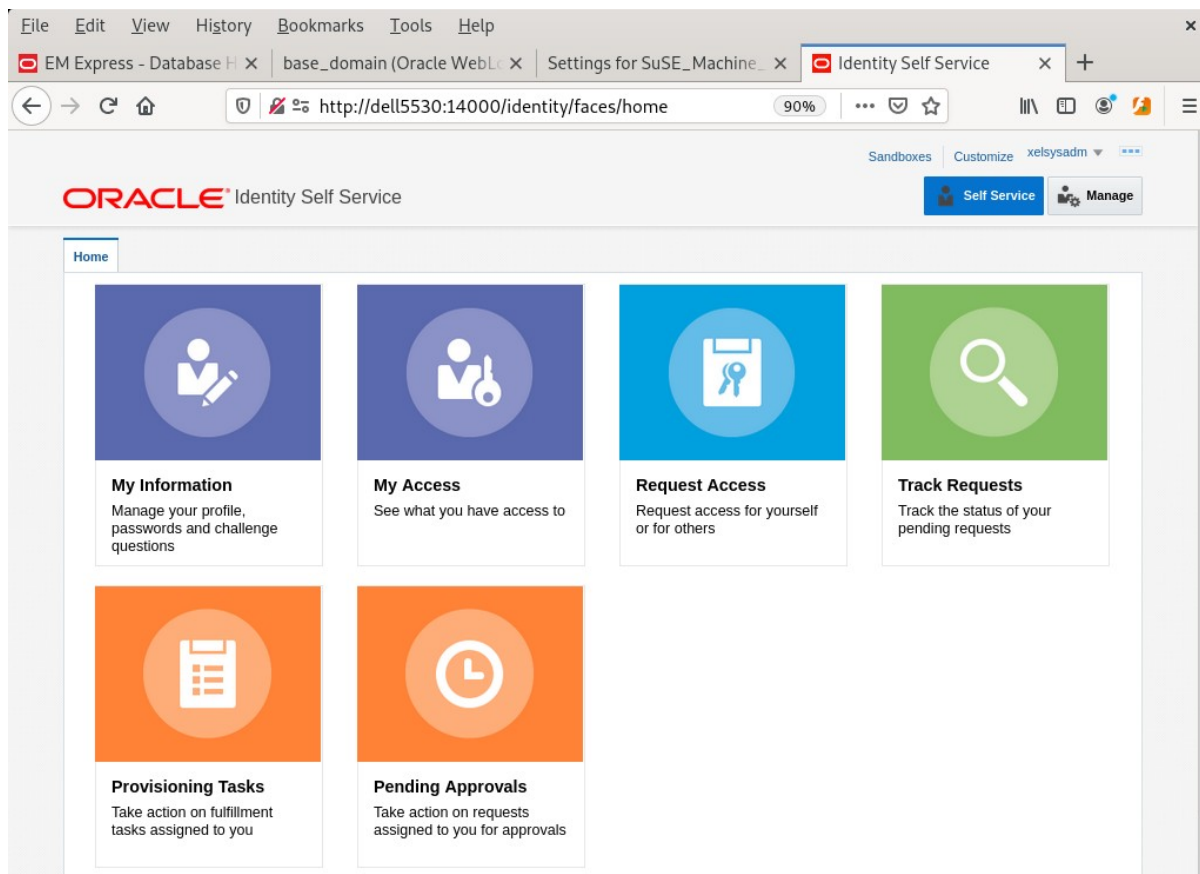
Verify that the Admin Server can connect to the node manager running on your machine. **Environments -> Machines -> <your machine> -> Monitoring**. The status should show: **Reachable**

The screenshot shows the Oracle WebLogic Server Administration Console interface, specifically the "Node Manager Status" page for "SuSE_Machine_1". The "Monitoring" tab is active, and the "Node Manager Status" section shows the current status as "Reachable".

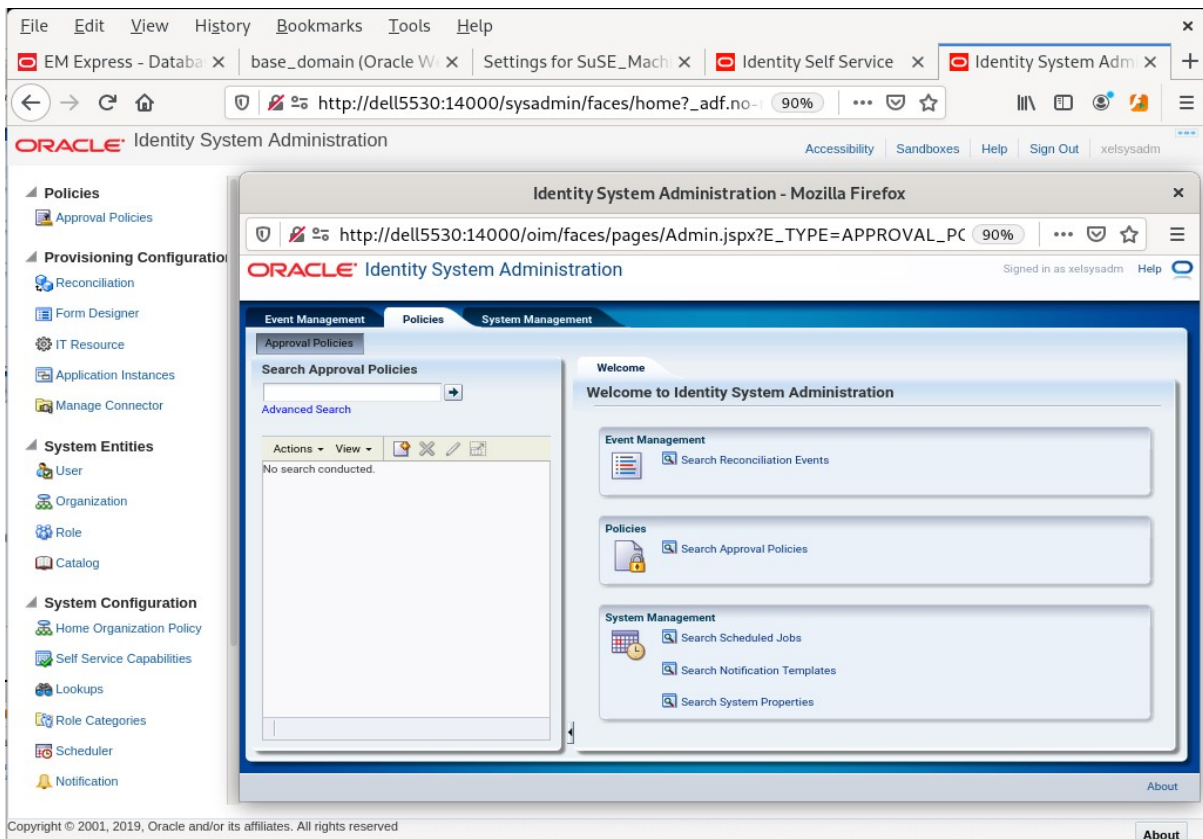
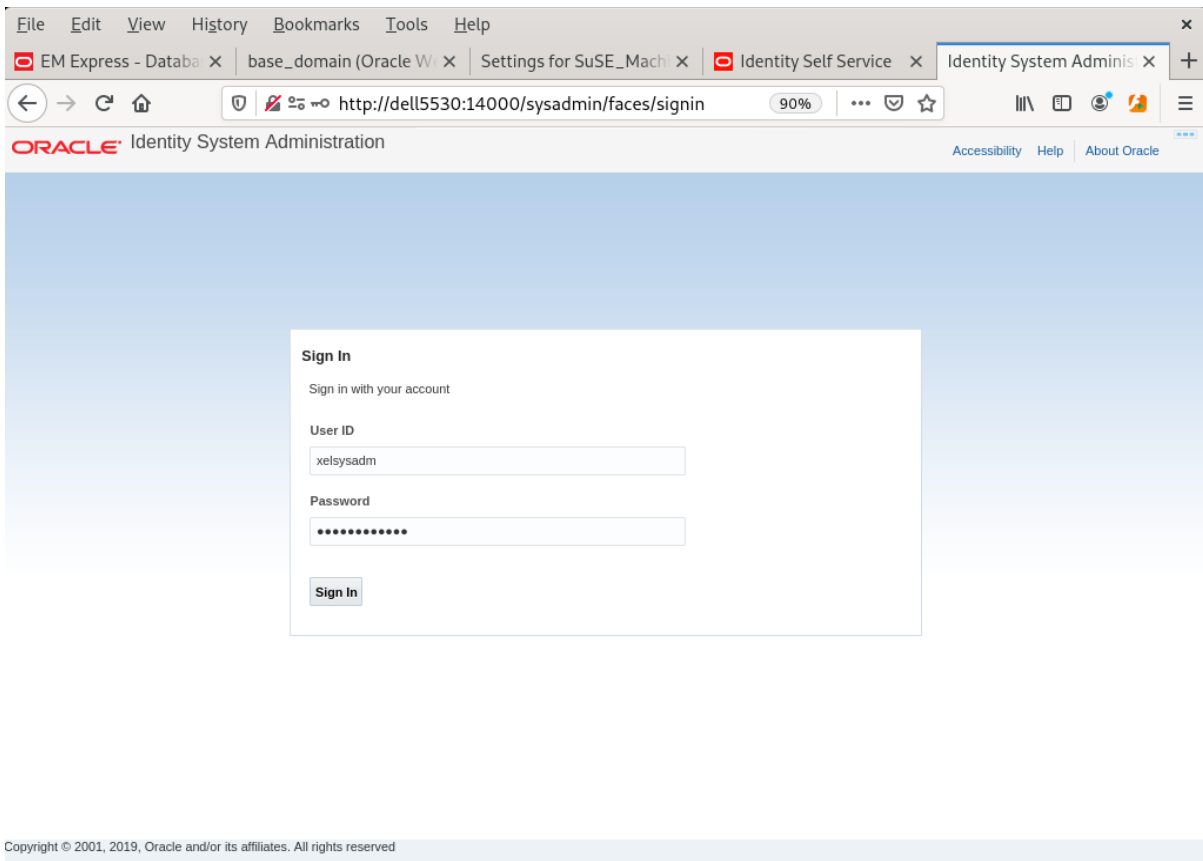
Property	Value	Description
Status	Reachable	Current status of this Node Manager. More Info...
Version	12.2.1.4.0	Version string returned from the Node Manager. More Info...

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

EM Express - D: X | base_domain (Orac X | Settings for SuSE X | Identity Self Ser X | Identity System X | Welcome to the Or X +

← → ↻ 🏠 <http://dell5530:7003/soa-infra/> 67% ... 🛡️ ☆ 📄 📱 📺 ☰

Welcome to the Oracle SOA Platform on WebLogic

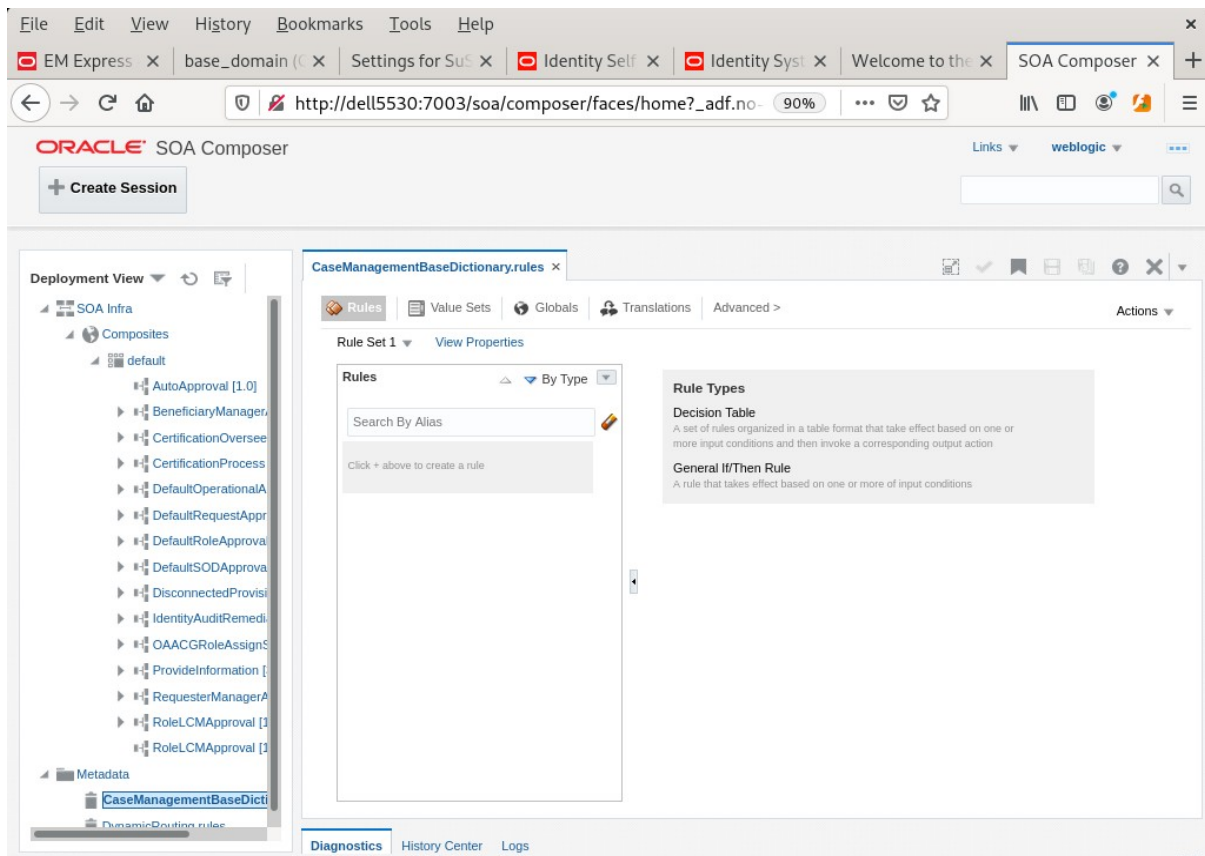
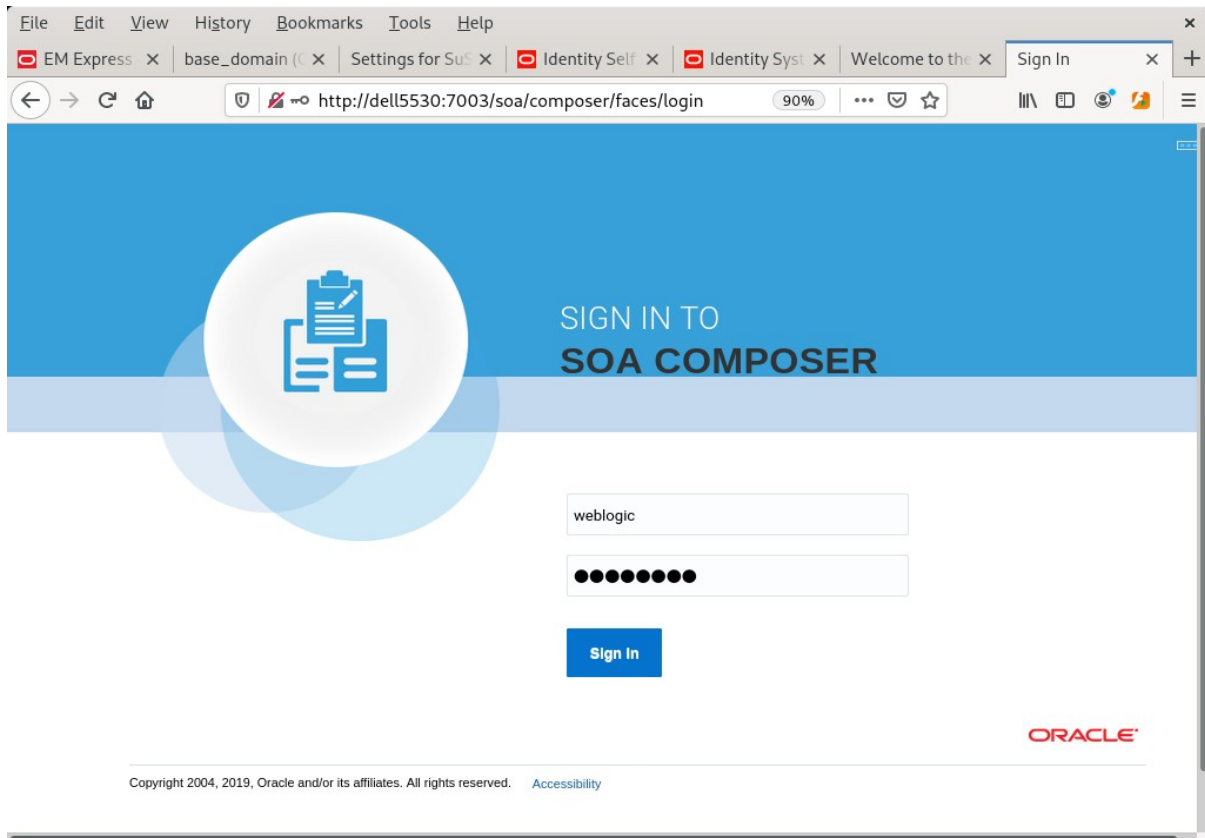
SOA Version: v12.2.1.4.0 - MAIN_190828.0353.3300
WebLogic Server 12.2.1.4.0 (12.2.1.4.0)
Running on: soa_server1

[SOA Composer](#)
[BPM Worklist](#)

The following composites are currently deployed:

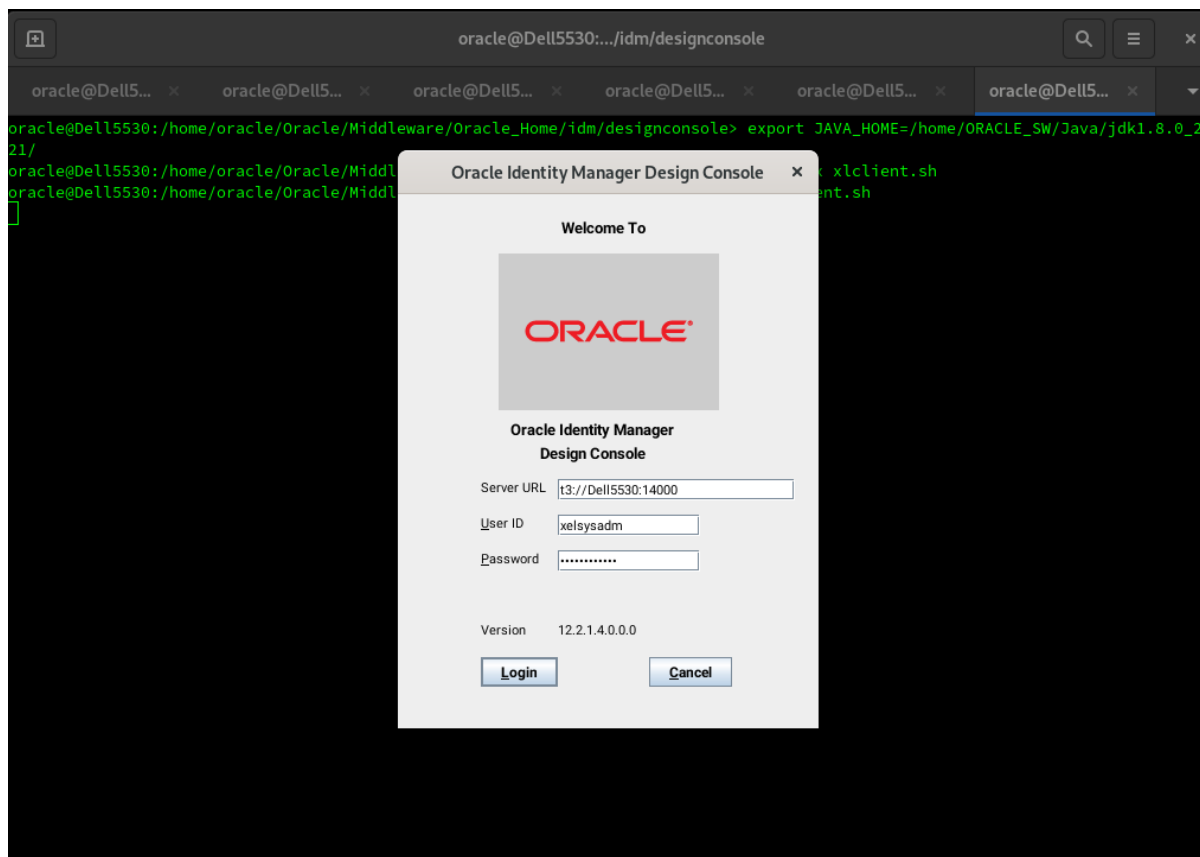
1. default/AutoApproval1.0*soa_cb4d0215-4697-4874-a117-9b457afb6695
 - [Test RequestApprovalService](#)
2. default/BeneficiaryManagerApproval4.0*soa_6db66386-eld1-4b38-8133-2ab1db6a7d28
 - [Test RequestApprovalService](#)
2. default/CertificationOverseerProcess2.0*soa_91e9acle-cde9-4001-b648-4cd6ac121a71
 - [Test CertificationTaskService](#)
2. default/CertificationProcess2.0*soa_c4586060-3f2b-4957-a6b5-9c6e8d58f7ce
 - [Test CertificationTaskService](#)
2. default/DefaultOperationalApproval5.0*soa_95b1e46b-6815-4646-9129-6a79e4932cee
 - [Test RequestApprovalService](#)
2. default/DefaultRequestApproval6.0*soa_17ef1efd-3d65-42f7-8fa9-cf573932b142
 - [Test RequestApprovalService](#)
2. default/DefaultRoleApproval3.0*soa_89723d39-431e-4fcf-a52f-9fc538a02f62
 - [Test RequestApprovalService](#)
2. default/DefaultSODApproval2.0*soa_55001699-64b6-4f9f-9a16-eb2622ad012b
 - [Test RequestApprovalService](#)
2. default/DisconnectedProvisioning2.0*soa_7199724b-abf4-4cdd-863b-e6c4843a9b41
 - [Test manualprovisioningprocess_client](#)
2. default/IdentityAuditRemediation1.0*soa_f9569088-bd16-4792-bb58-1809e85ab619
 - [Test IdentityAuditRemediationService](#)
2. default/OAACGRoleAssignSODCheck1.0*soa_cc8dec70-1295-4480-b733-2df044d0726e
 - [Test RequestApprovalService](#)
2. default/ProvideInformation3.0*soa_b7f3109a-2a82-44ff-8418-87b761d17d7b
 - [Test RequestApprovalService](#)
2. default/RequesterManagerApproval3.0*soa_415b1588-2e66-4b36-8467-511564203fe0
 - [Test RequestApprovalService](#)
2. default/RoleLCMApproval1.0*soa_dfa470f0-efc1-4a19-af37-d8260a651cc5
 - [Test RequestApprovalService](#)

6). Access to Oracle SOA composer - URL:<http://host:port/soa/composer>

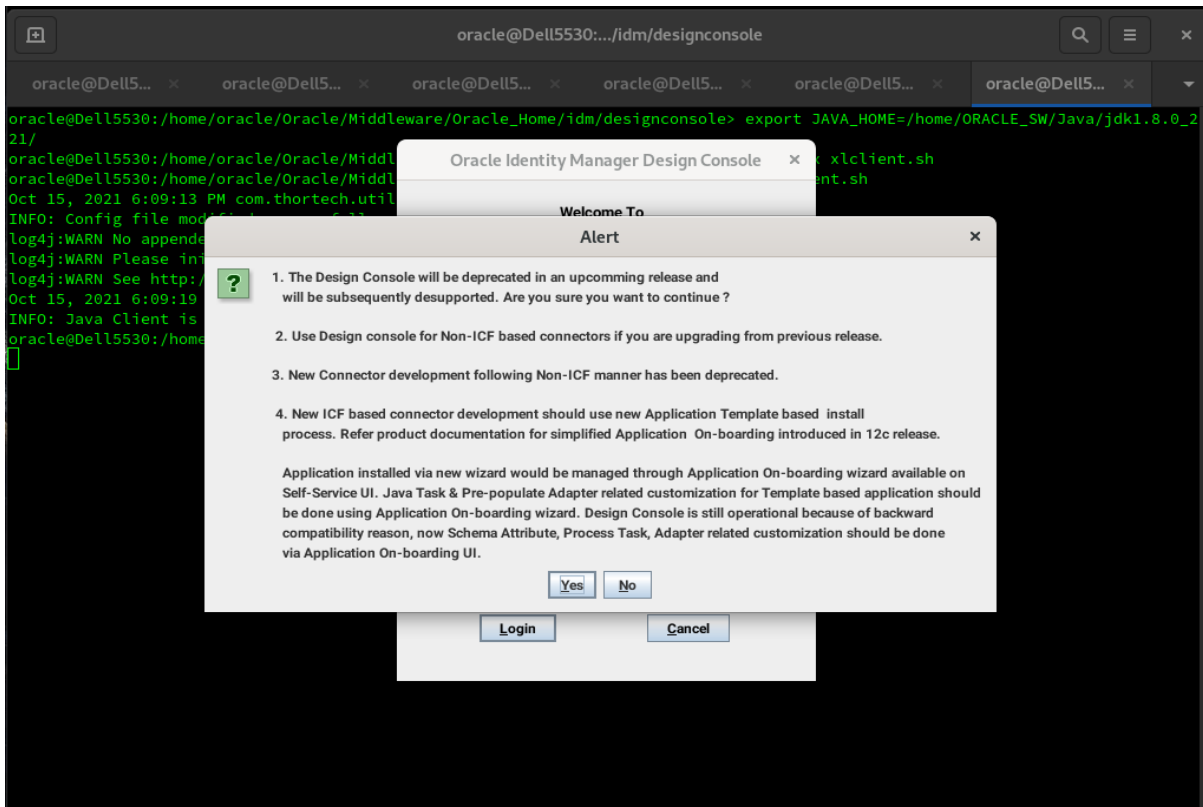


7). Verifying connection for OIM design console. Launch the Design Console (via the xlclient.sh script in \$MW_HOME/idm/designconsole)

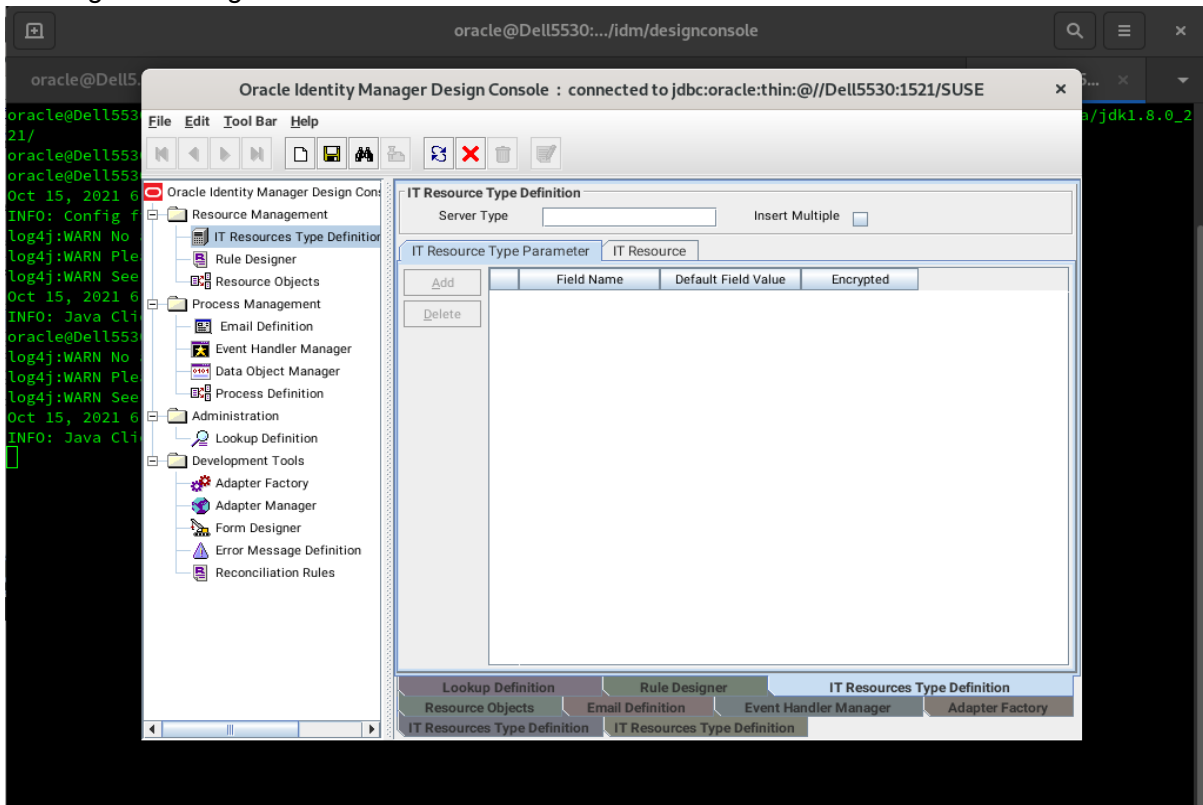
```
export JAVA_HOME=xxx
chmod +x xlclient.sh
./xlclient.sh
```



Click on **Login**. Then click **Yes** to confirm.



Viewing OIM Design Console.



End of Oracle Identity Manager.

Appendix

This document shows how to create a standard topology for Oracle Fusion Middleware components 12c on SLES 15 SP3. 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!*