

# *Oracle Fusion Middleware 12c on SUSE Linux Enterprise Server 12 (SP5) for x86-64*

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## Introduction

This document provides details on installing and configuring Oracle Fusion Middleware 12c Components on SUSE Linux Enterprise Server 12 SP5. Details are provided for Intel x86-64 versions of both Oracle FMW 12c and SUSE Linux Enterprise Server 12 SP5. 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 12 SP5 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

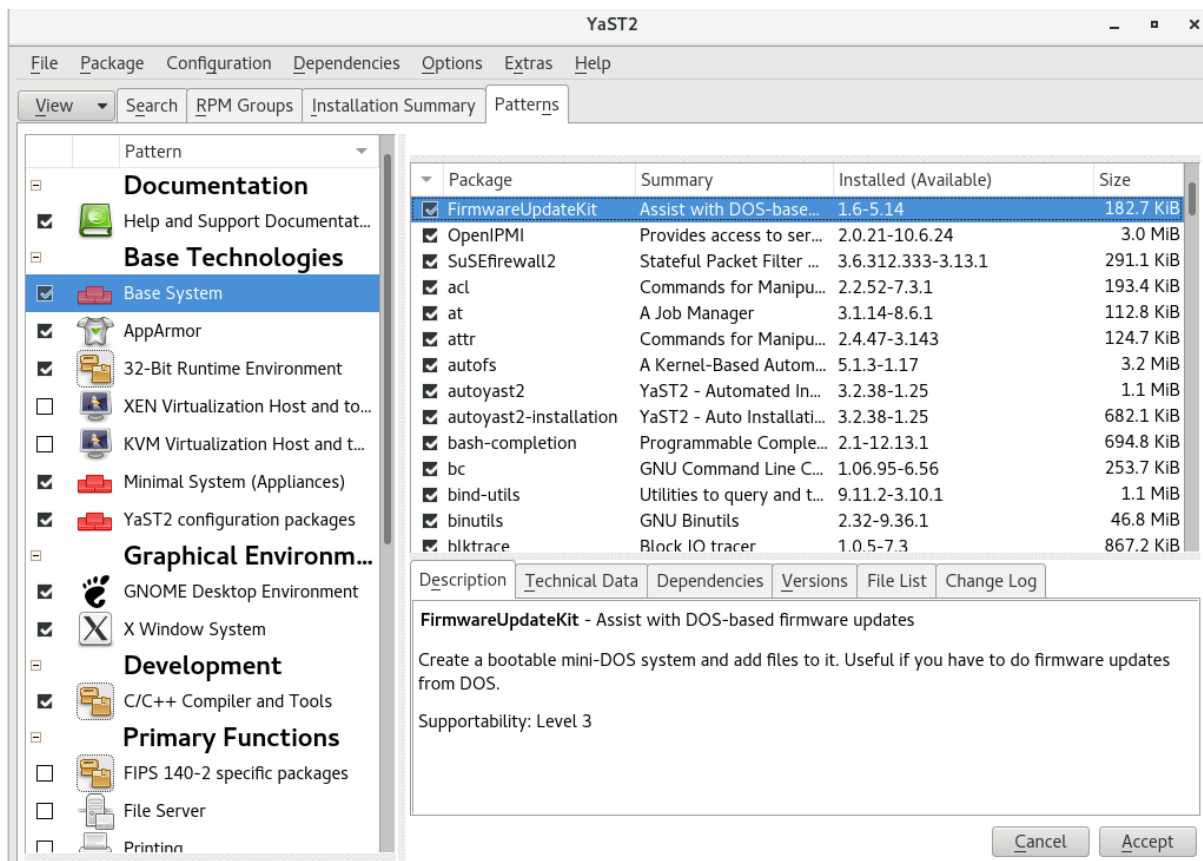
OS: SUSE Linux Enterprise Server 12 SP5 GM (x86-64) - Kernel version: 4.12.14-120-default

# Prerequisites

## 1. Installing SUSE Linux Enterprise Server 12 SP5

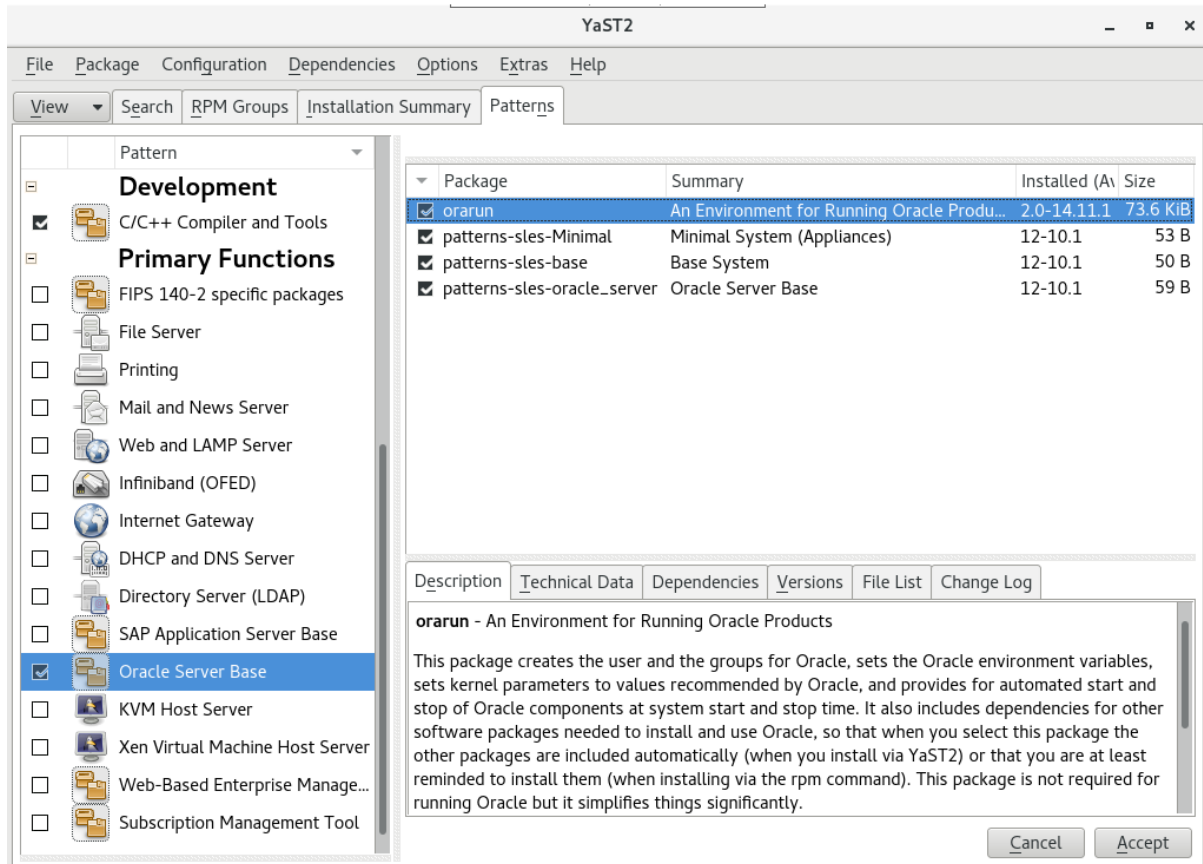
1-1. Install SUSE Linux Enterprise Server 12 SP5 on your testing machine. To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at <https://www.suse.com/documentation/>.

**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**



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

**Figure 1-3 OS release information and kernel version**

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

## 1-2. Special Startup Requirements.

### 1). To set the SHMMAX kernel parameter.

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

```
kernel.shmmax = 16531791872
```

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

```
kernel.shmall = 9272480
```

Activate the new SHMMAX setting by running the command:

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

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

```
ulimit -a
```

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

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

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

```
oracle soft stack 10240
```

then reboot the machine.

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

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



## 2. Installing Oracle Database 12cR2

2-1. Log in to the target system (SUSE Linux Enterprise Server 12 SP5 64-bit OS) as a non-admin user. Download Oracle Database 12cR2 (12.2.0.1.0) x86\_64 from <https://www.oracle.com/downloads/#category-database>.

2-2. Oracle Database 12cR2 (12.2.0.1.0) is officially certified for SUSE Linux Enterprise Server 12(x86\_64). For detailed instructions please use Official Oracle Install guides: <http://docs.oracle.com/en/database/database.html>.

### **Figure 2-1 Make sure the Database up and running**

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

SQL*Plus: Release 12.2.0.1.0 Production on Fri Feb 18 17:25:10 2022

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

SQL> conn /as sysdba
Connected.
SQL> show sga

Total System Global Area 9932111872 bytes
Fixed Size 12169800 bytes
Variable Size 1677725112 bytes
Database Buffers 8220835840 bytes
Redo Buffers 21381120 bytes
SQL> select name,open_mode from v$database;

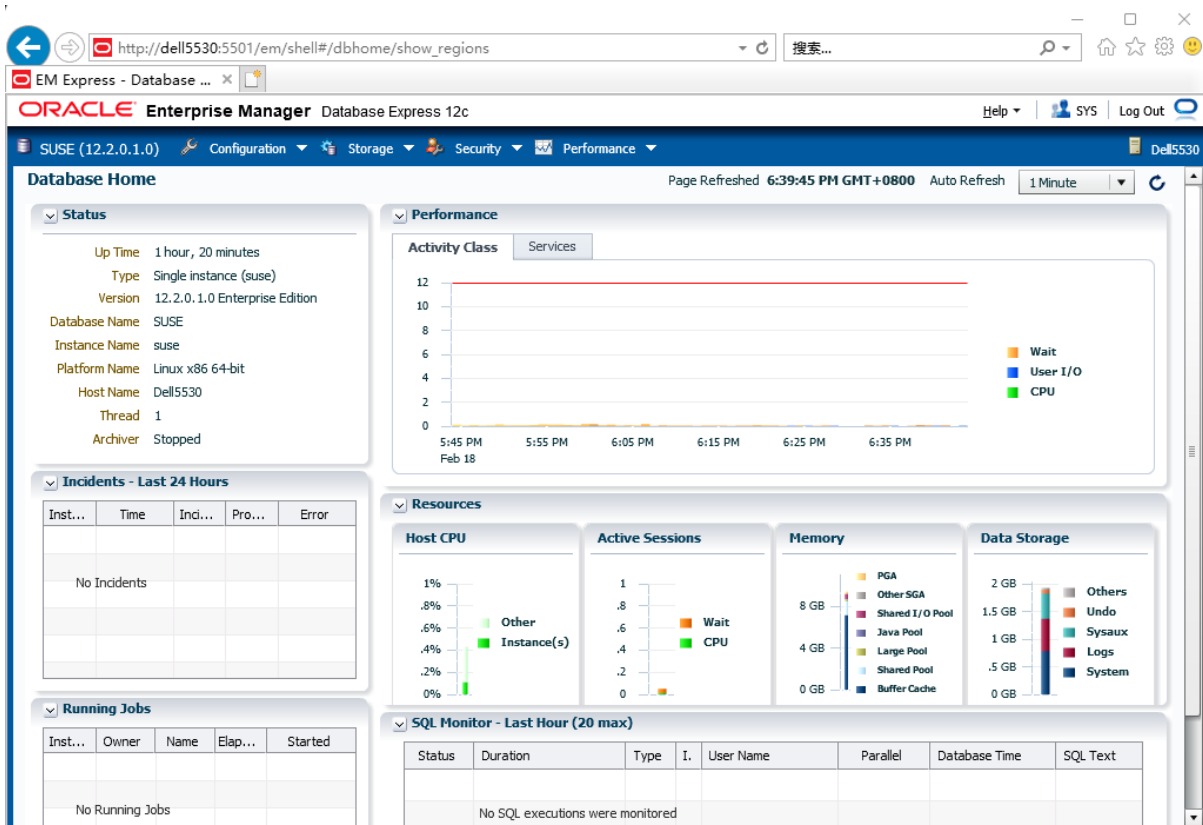
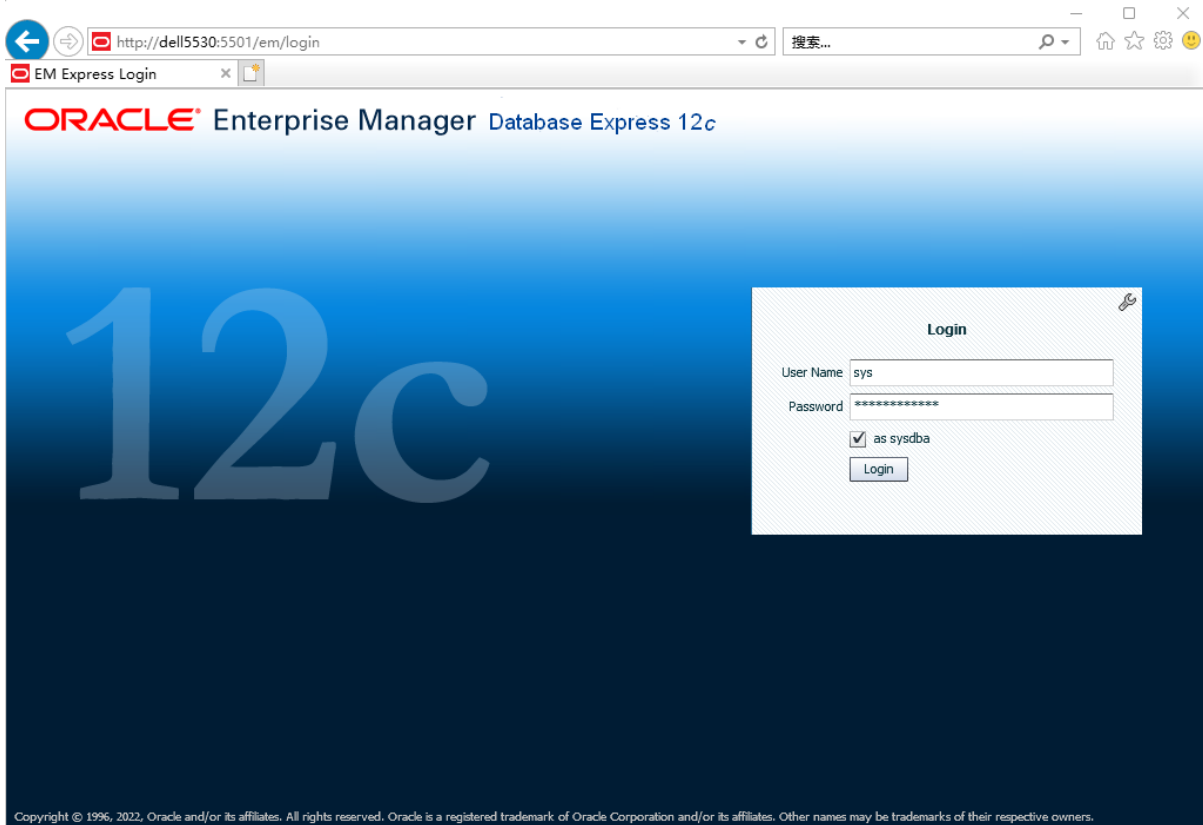
NAME          OPEN_MODE
-----
SUSE          READ WRITE

SQL> exec DBMS_XDB_CONFIG.SETHTTPPORT(5501);

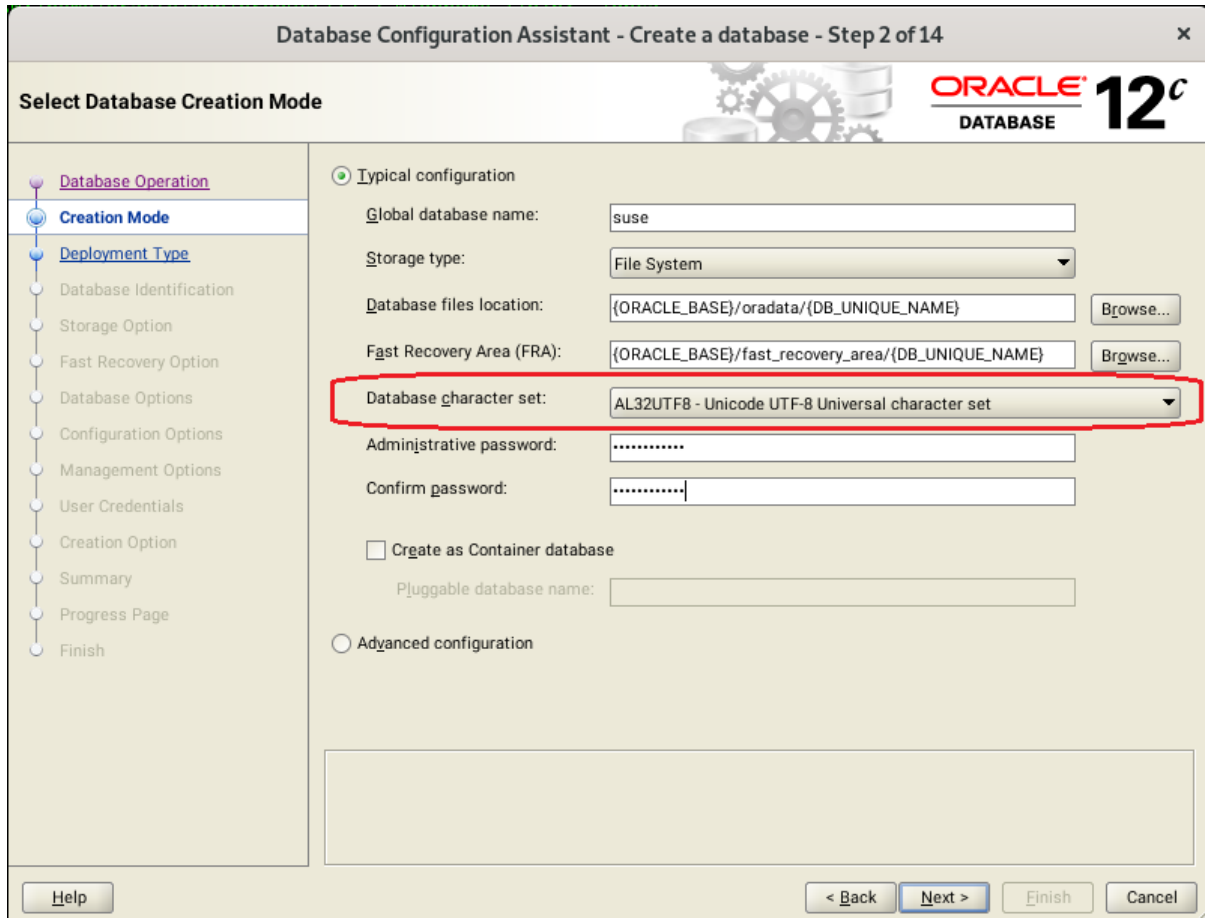
PL/SQL procedure successfully completed.

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

Figure 2-2 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.



)

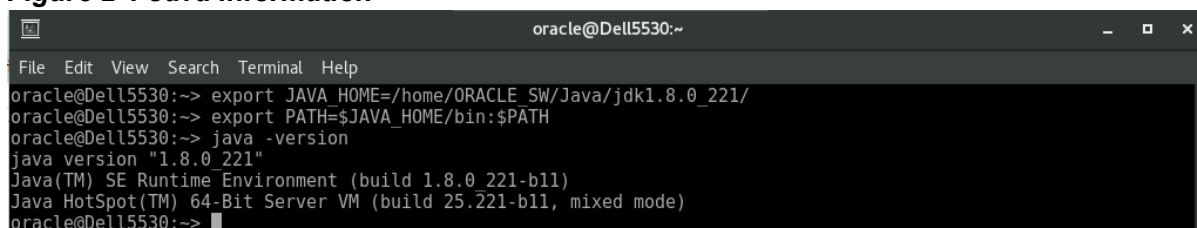
### 3. Installing Java

3-1. Log in to the target system (SUSE Linux Enterprise Server 12 SP5 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 a menu bar (File, Edit, View, Search, Terminal, Help). 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.

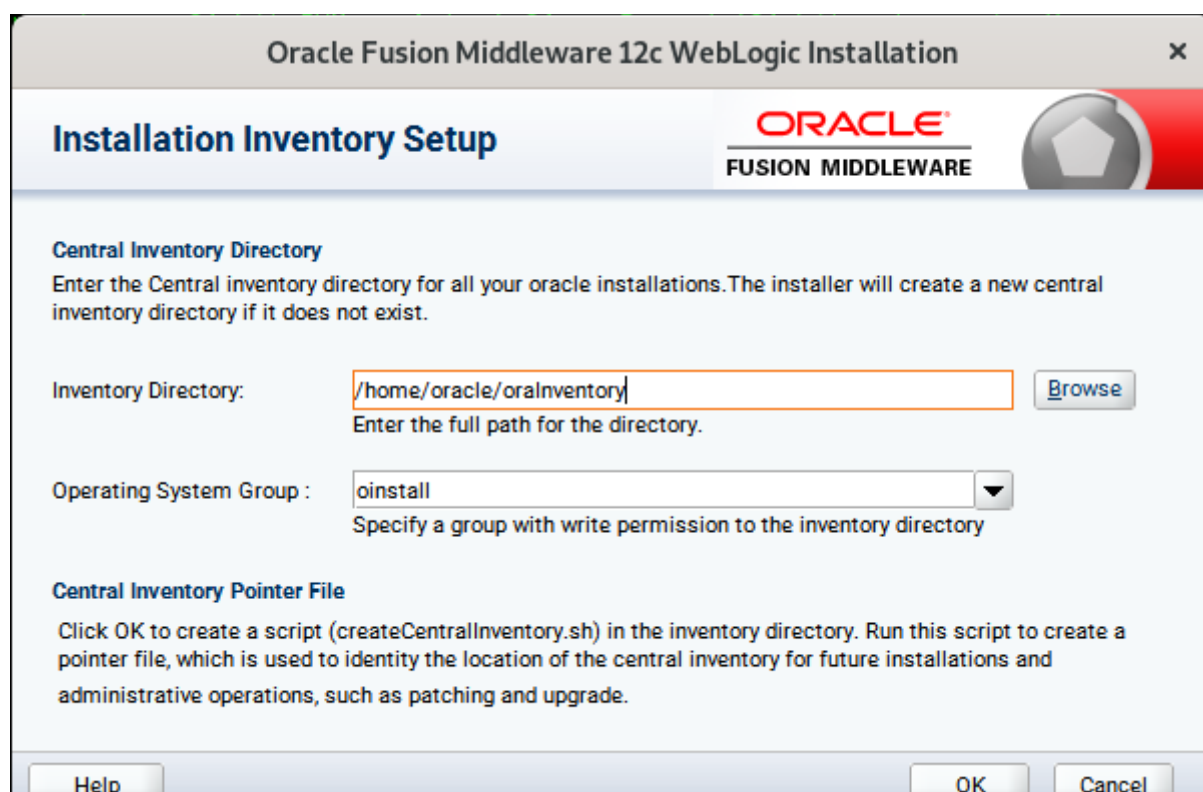
1-2. Log in to the target system (SUSE Linux Enterprise Server 12 SP5 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

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

1-3. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw\_12.2.1.4.0\_wls\_Disk1\_1of1.zip) file and launch the installation program by running `'java -jar fmw_12.2.1.4.0_wls.jar'`

**For the actual installation, follow the steps below:**

## 1). Installation Inventory Setup.



The screenshot shows a window titled "Oracle Fusion Middleware 12c WebLogic Installation" with a close button (X) in the top right corner. The main heading is "Installation Inventory Setup". To the right of the heading is the Oracle logo and the text "ORACLE FUSION MIDDLEWARE" 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.

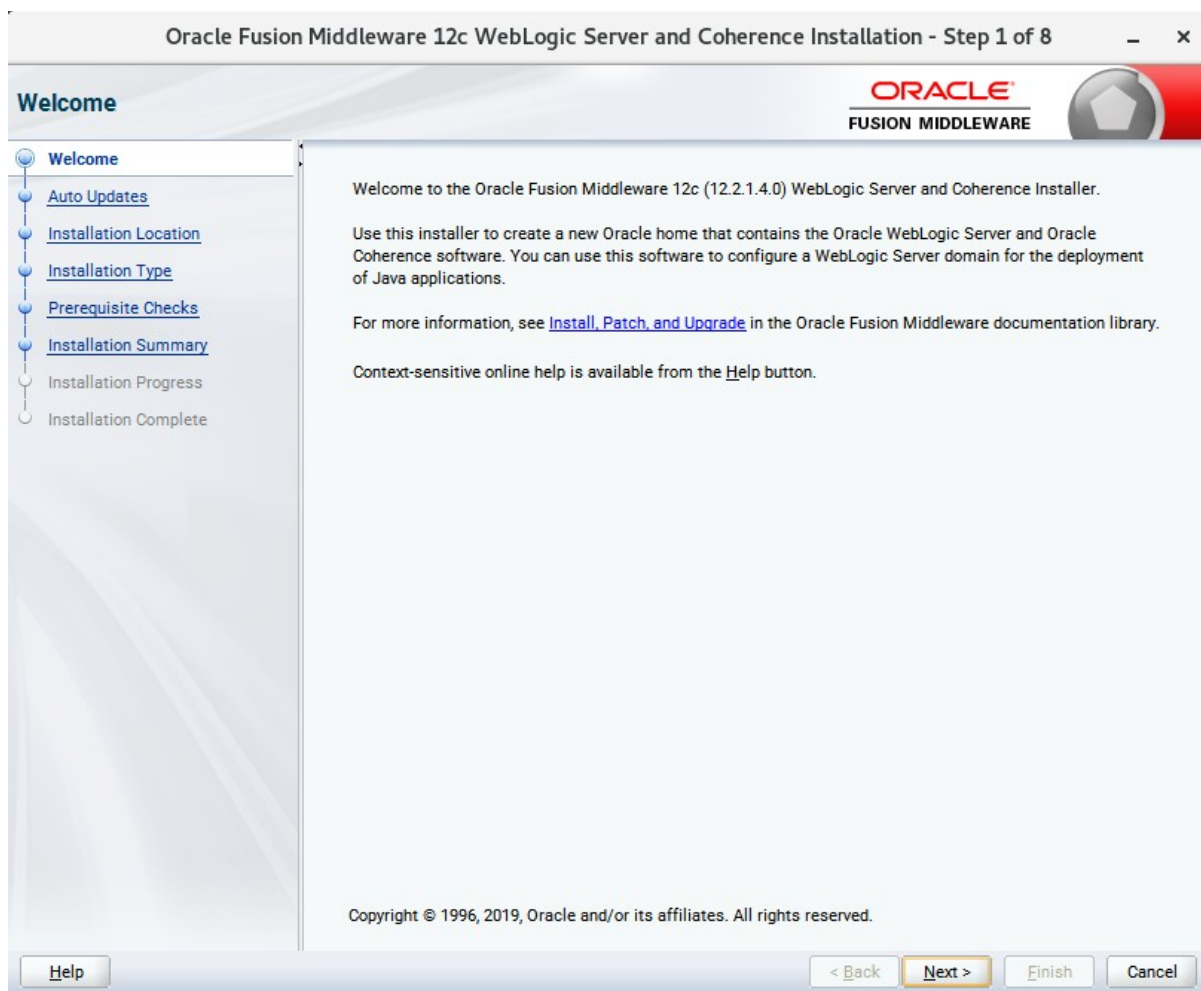
Operating System Group :    
Specify a group with write permission to the inventory directory

**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".

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**

ORACLE  
FUSION MIDDLEWARE

Welcome

**Auto Updates**

Installation Location

Installation Type

Prerequisite Checks

Installation Summary

Installation Progress

Installation Complete

Skip Auto Updates

Select patches from directory

Location:

Search My Oracle Support for Updates

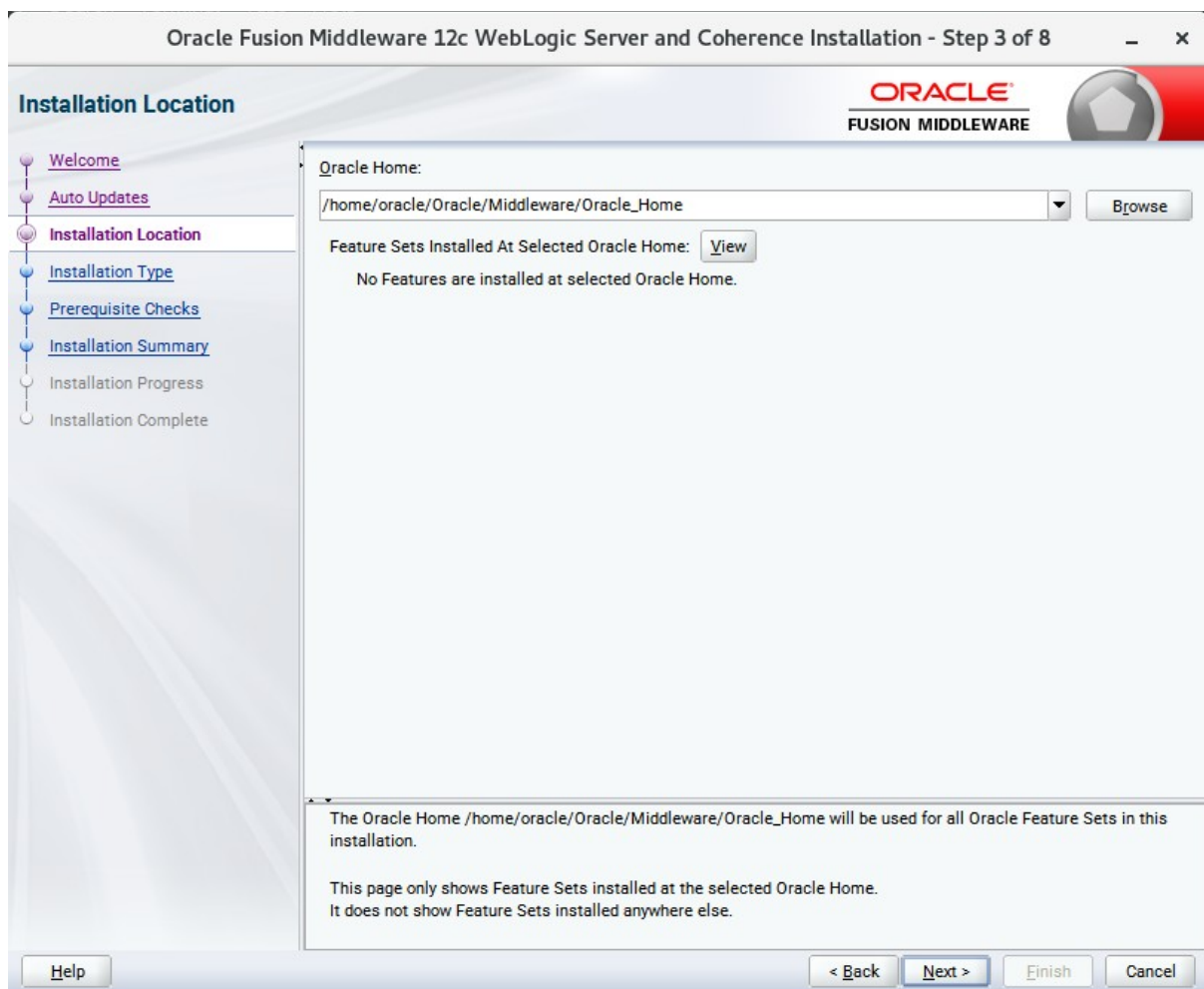
Username:

Password:

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

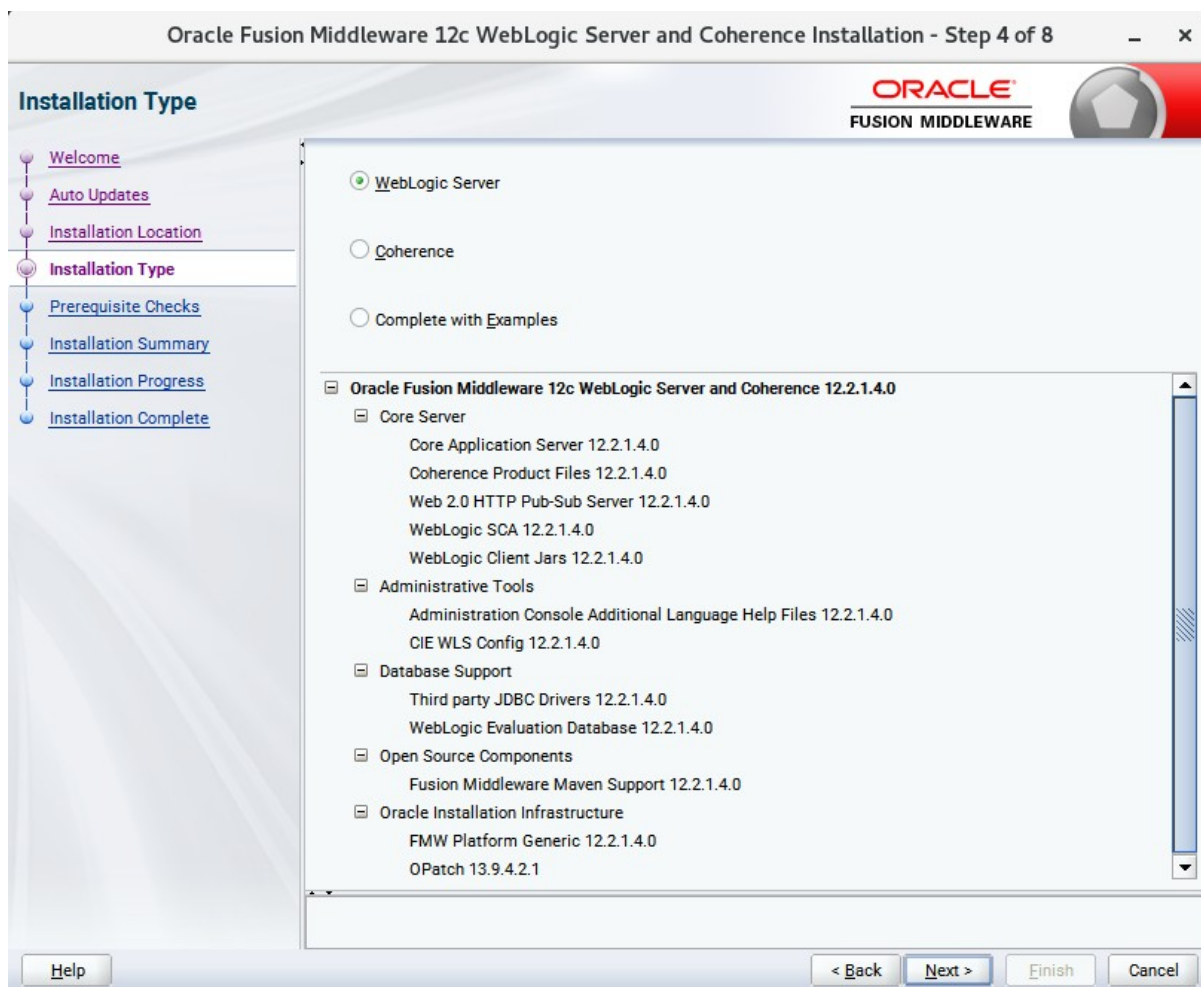


## 4). Installation Location.



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

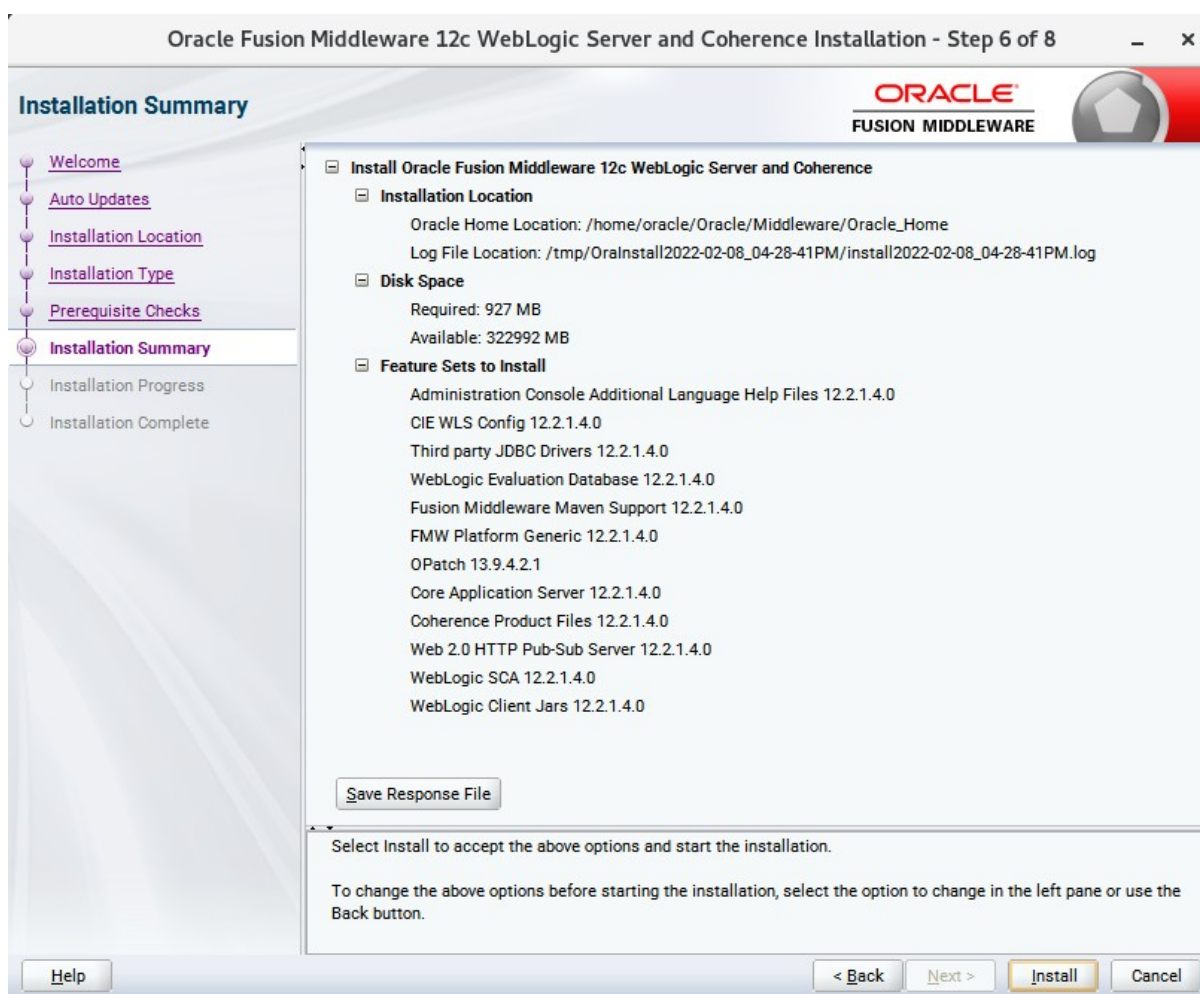
## 5). Installation Type.



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

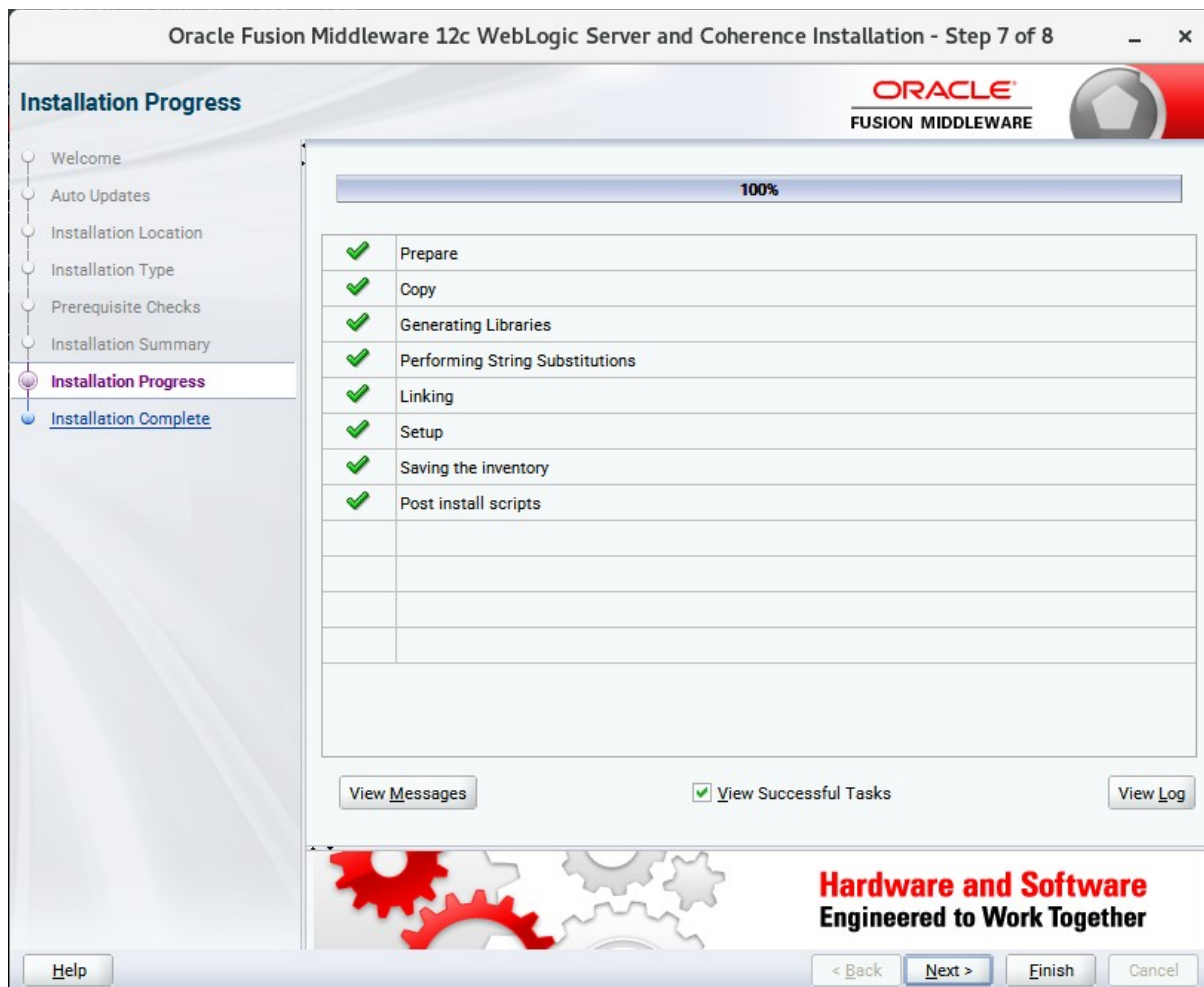


## 7). Installation Summary.



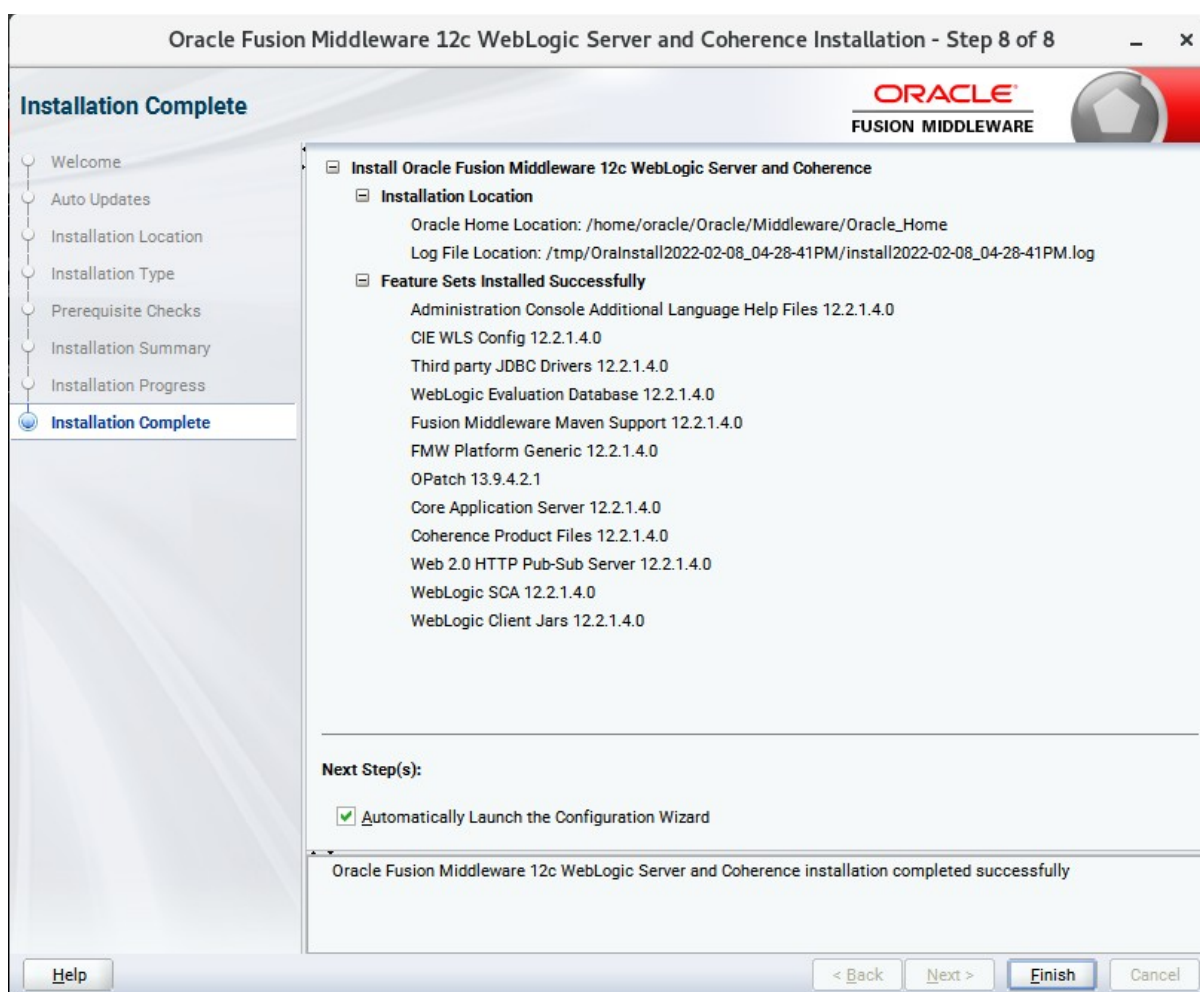
This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk space to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

## 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.

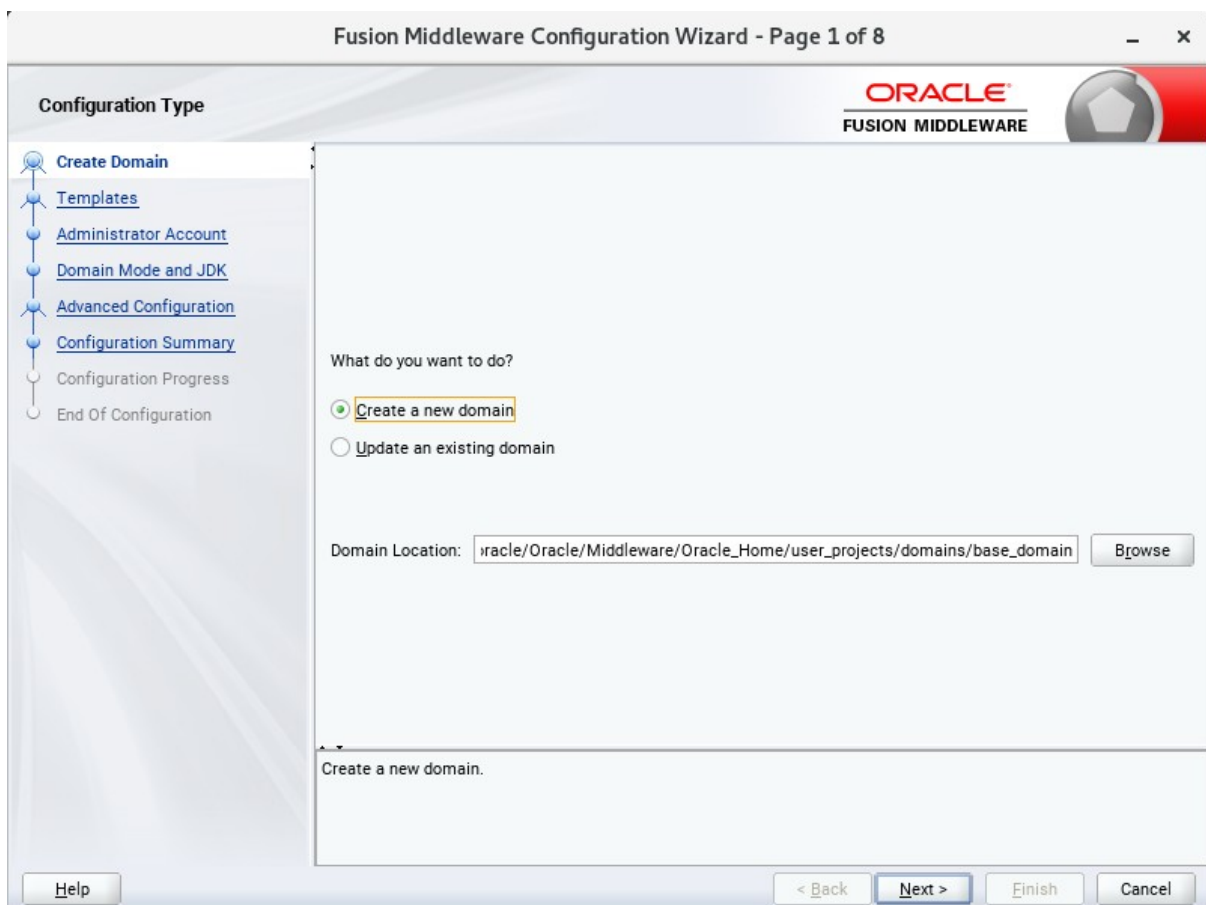
## 2. Creating and Configuring the WebLogic Domain

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**.

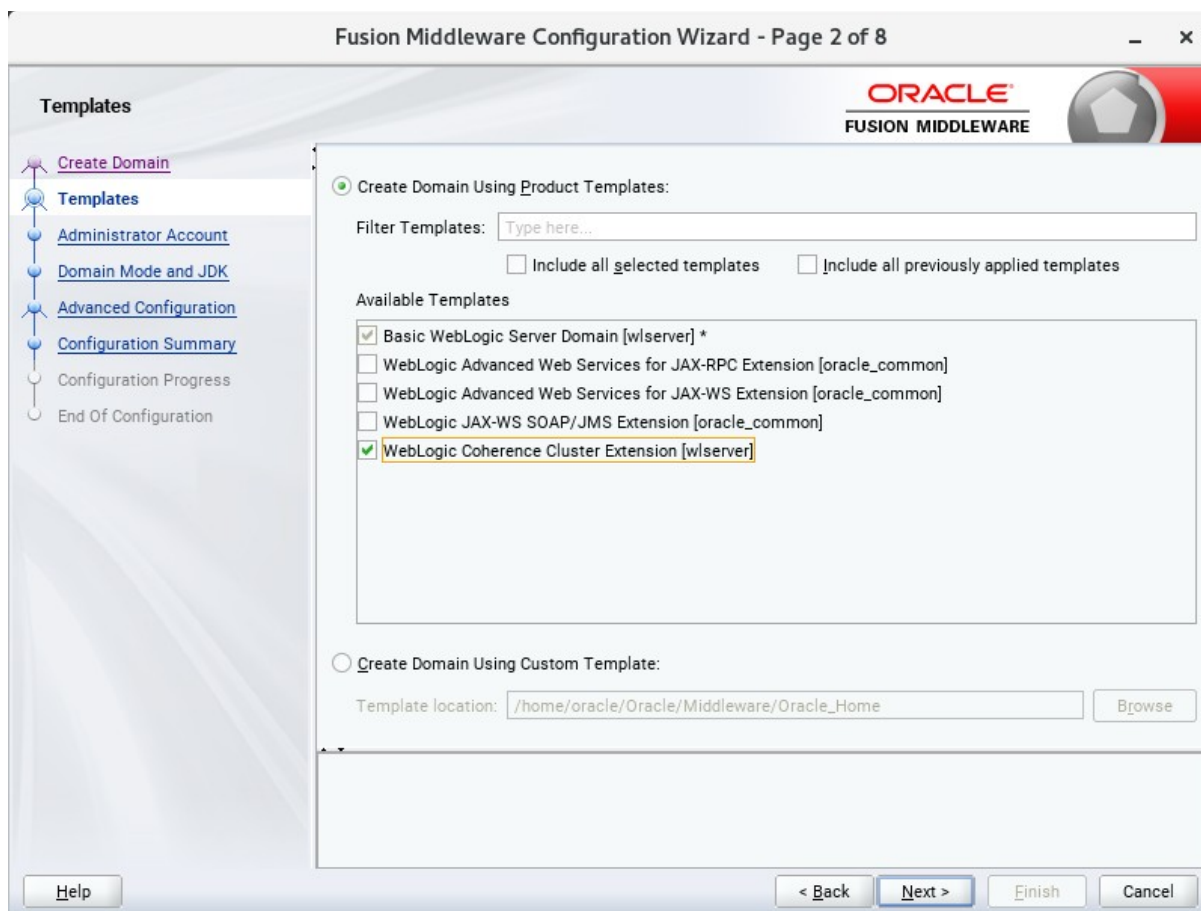
To set up your configuration, follow the steps below:

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.

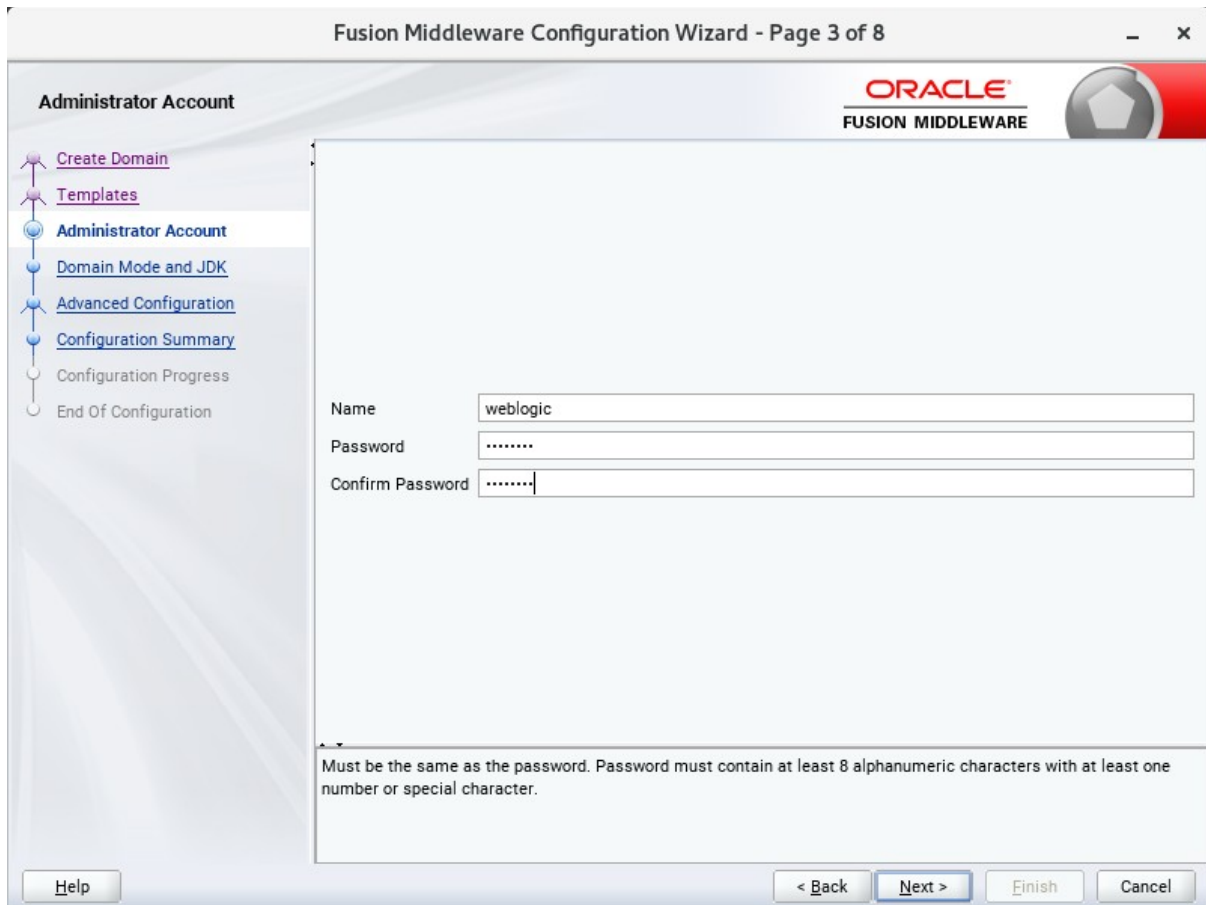
## 2). Templates.



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



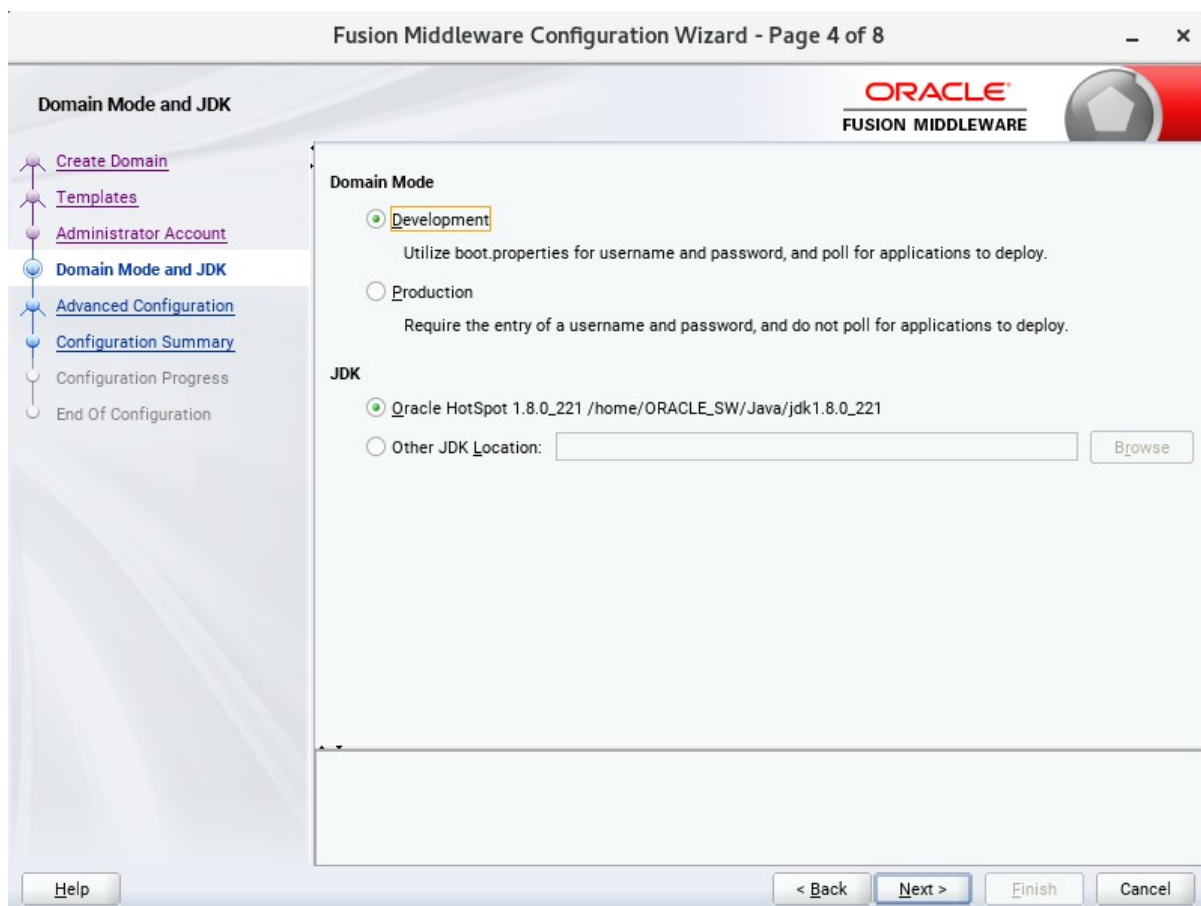
## 3). Administrator Account.



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 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', '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 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'.

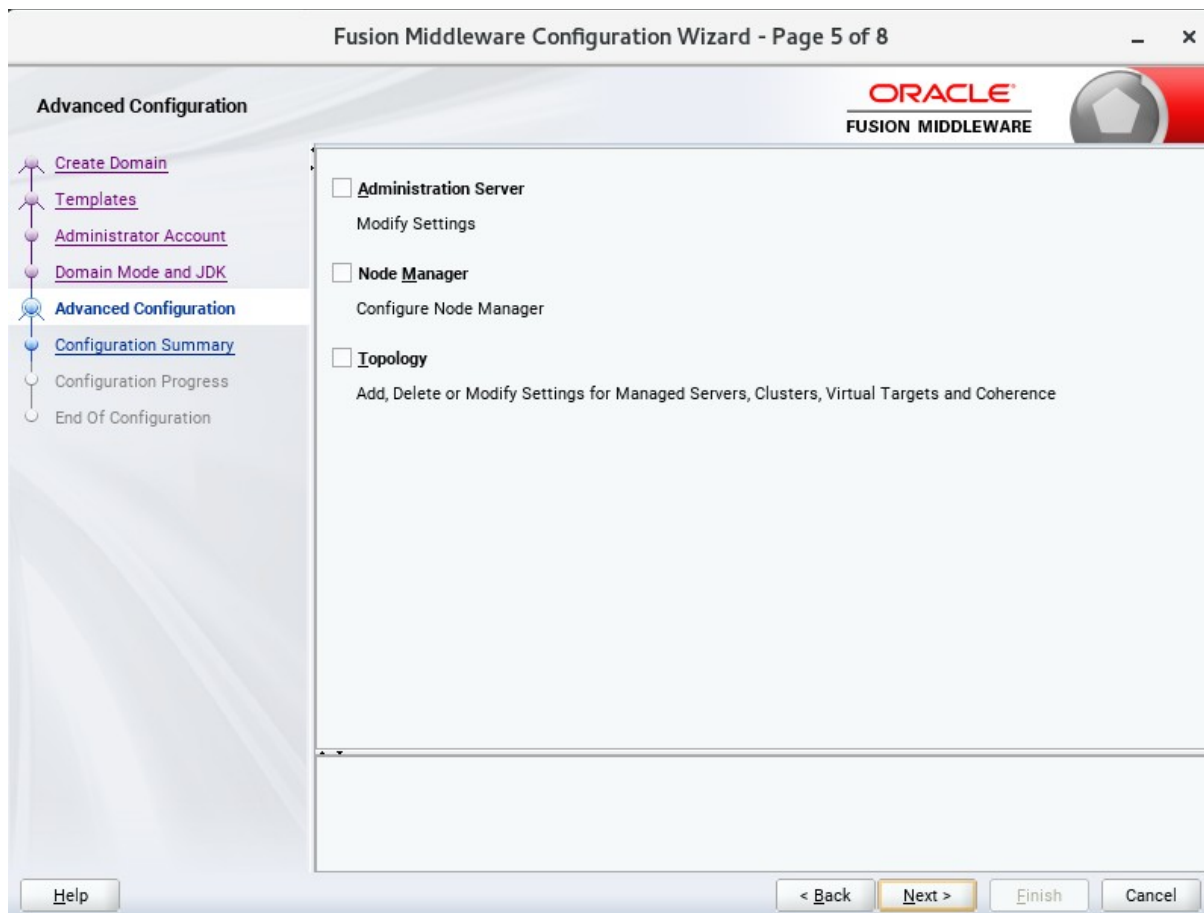
Specify the user name and password for the default WebLogic Administrator account for the domain, then click **Next** to continue.

## 4). Domain Mode and JDK.



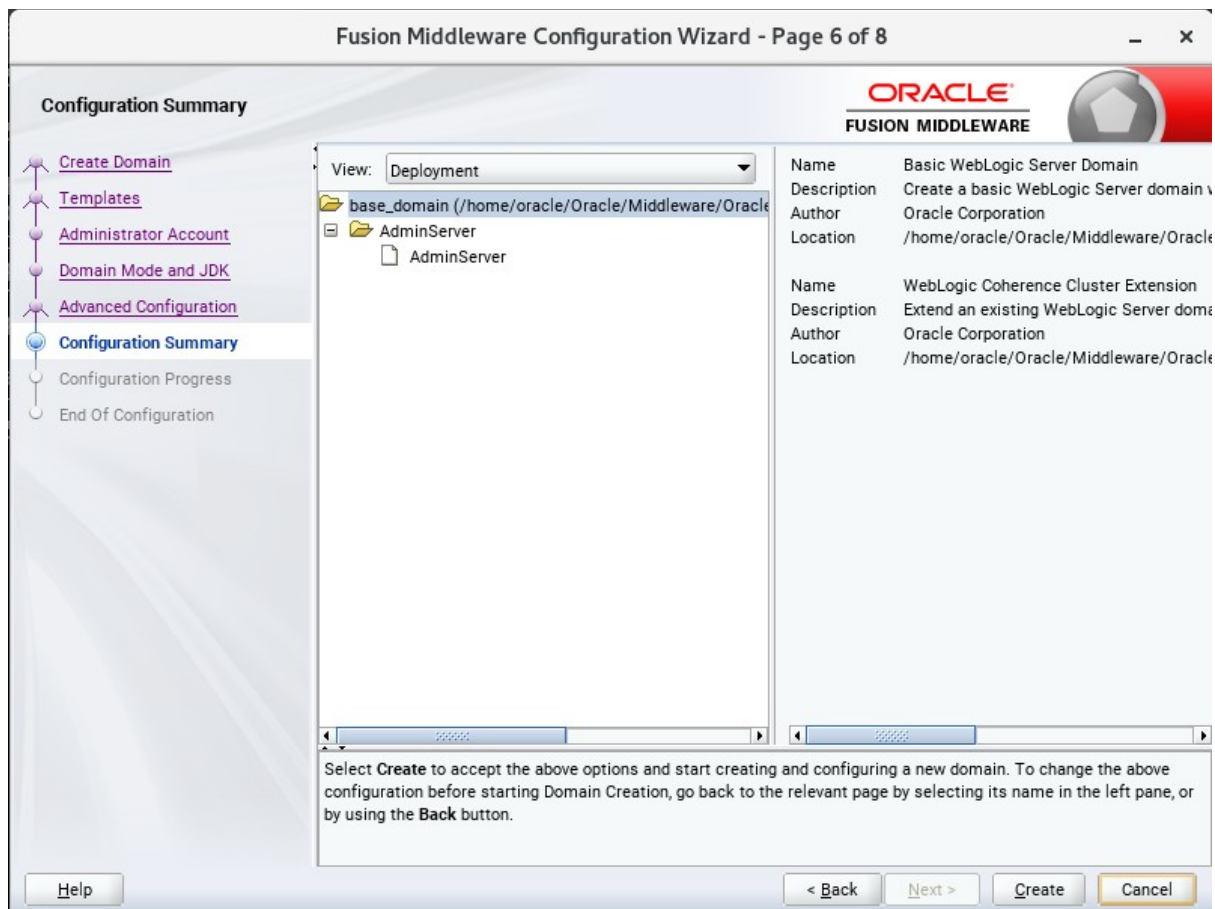
Select "**Development**" in the Domain Mode field, select the "**Oracle HotSpot**" in the JDK field. Then click **Next** to continue.

## 5). Advanced Configuration.



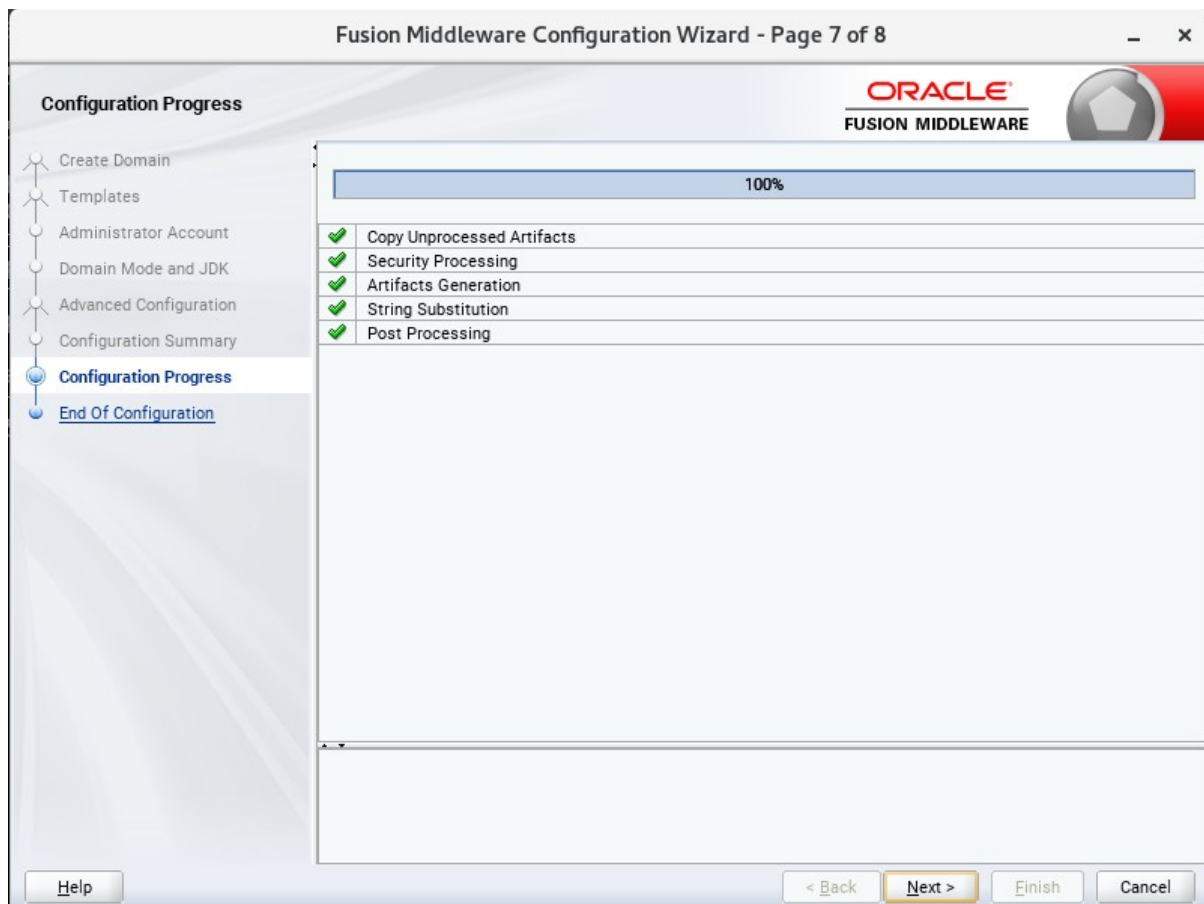
According to your requirements, select the desired options on the Advanced Configuration screen. Then click **Next** to continue.

## 6). Configuration Summary.



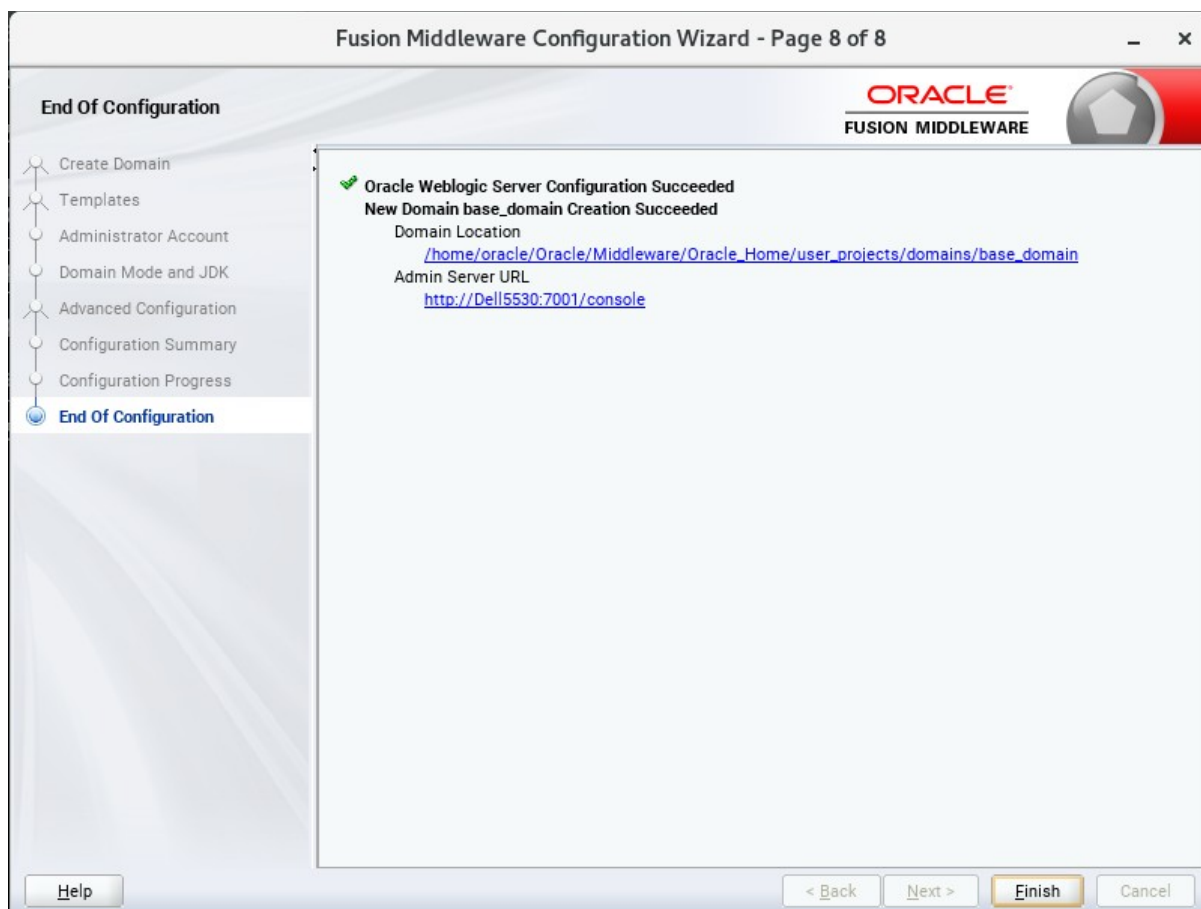
Review this screen to verify the information is correct, then click **Create** to continue.

## 7). Configuration Progress.



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

## 8). End Of Configuration.



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

### 3. Starting the Administration Server and verifying the Configuration

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

#### Starting the Administration Server through a terminal

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home/ORACLE_... x oracle@Dell5530:/mnt/ORACLE_SW x oracle@Dell5530:/home/oracle/Or... x
<Feb 8, 2022 4:38:47,913 PM GMT+08:00> <Notice> <JMX> <BEA-149512> <JMX Connector Server started at service:jmx:
iiop://192.168.0.100:7001/jndi/weblogic.management.mbeanservers.edit.>
<Feb 8, 2022 4:38:48,477 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STANDBY.>
<Feb 8, 2022 4:38:48,477 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STARTING.>
<Feb 8, 2022 4:38:48,505 PM GMT+08:00> <Notice> <Log Management> <BEA-170036> <The Logging monitoring service ti
mer has started to check for logged message counts every 30 seconds.>
<Feb 8, 2022 4:38:48,833 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully estab
lished a connection with the Domain level Diagnostic Service.>
<Feb 8, 2022 4:38:49,072 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Feb 8, 2022 4:38:49,110 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Feb 8, 2022 4:38:49,130 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multip
le IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<Feb 8, 2022 4:38:49,130 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.>
<Feb 8, 2022 4:38:49,131 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192
.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Feb 8, 2022 4:38:49,131 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Admin
istration Server "AdminServer" for domain "base_domain" running in development mode.>
<Feb 8, 2022 4:38:49,131 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.>
<Feb 8, 2022 4:38:49,131 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.>
<Feb 8, 2022 4:38:49,132 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192
.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Feb 8, 2022 4:38:49,132 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.>
<Feb 8, 2022 4:38:49,142 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mod
e.>
<Feb 8, 2022 4:38:49,482 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

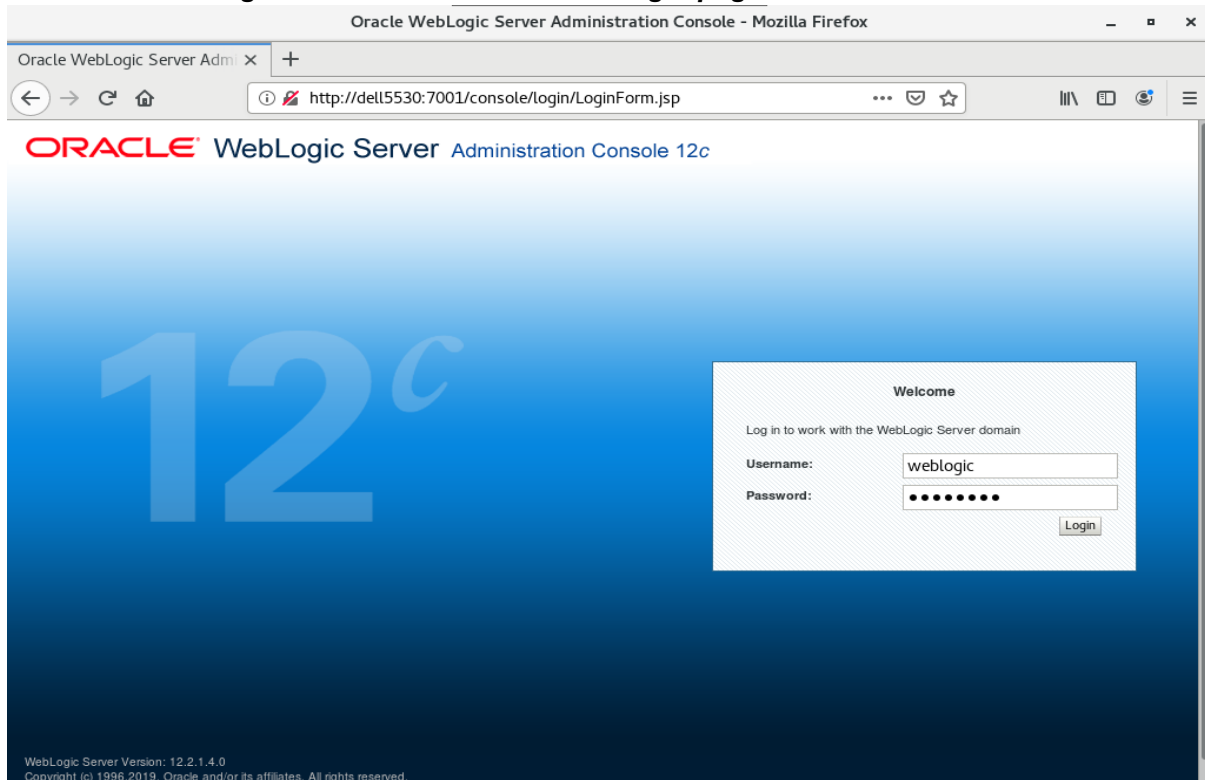
```

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

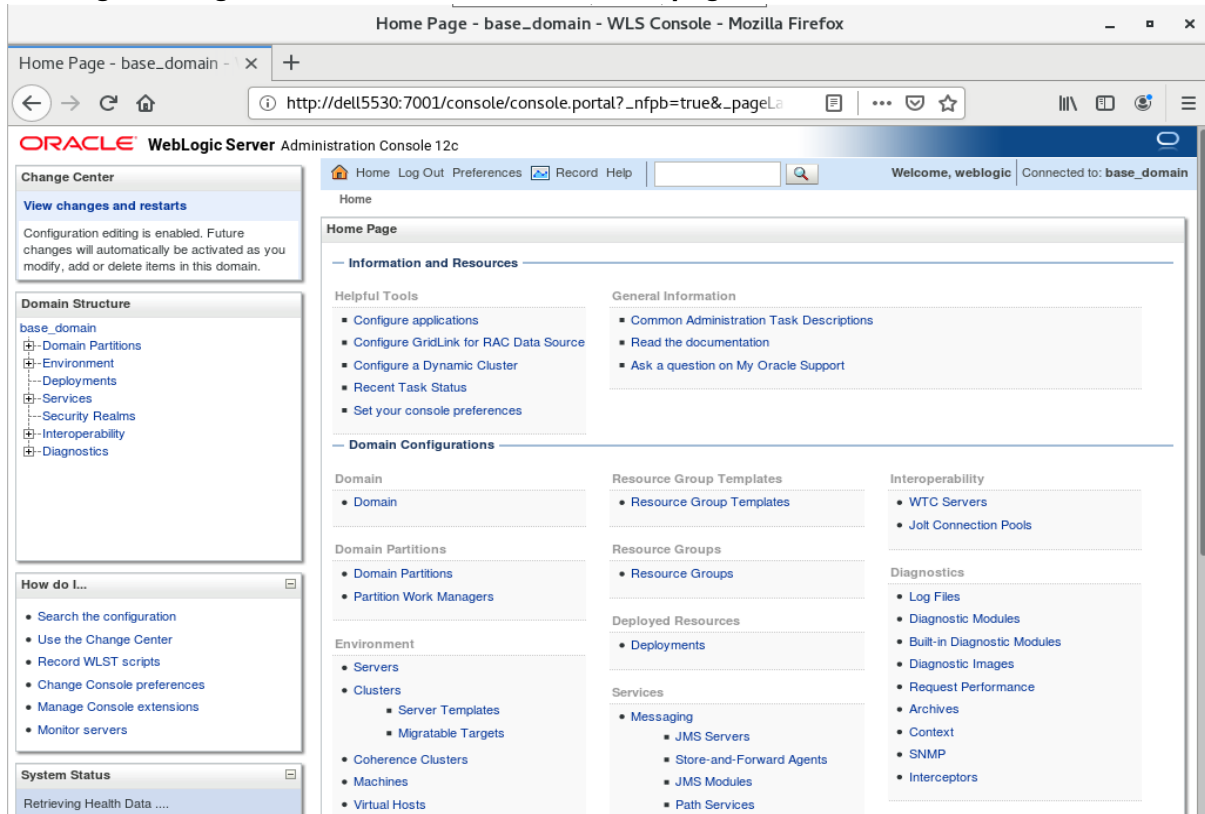
-----  
*Server state changed to RUNNING.*  
 -----

### 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 displays the Oracle WebLogic Server Administration Console interface. The browser window title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://dell5530:7001/console/console.portal?\_nfpb=true&\_pageLa". The console header shows "ORACLE WebLogic Server Administration Console 12c" and "Welcome, weblogic | Connected to: base\_domain".

The left sidebar contains several sections:

- Change Center**: View changes and restarts. Configuration editing is enabled.
- Domain Structure**: A tree view showing the hierarchy: base\_domain > Domain Partitions > Environment > Deployments > Services > Security Realms > Interoperability > Diagnostics.
- How do I...**: A list of tasks such as "Create Managed Servers", "Clone servers", "Delete Managed Servers", "Delete the Administration Server", "Start and stop servers", and "View objects in the JNDI tree".
- System Status**: Health of Running Servers as of 4:42 PM.

The main content area is titled "Summary of Servers" and has two tabs: "Configuration" (selected) and "Control". It contains the following text:

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

Below the text is a table of servers. The table has columns: Name, Type, Cluster, Machine, State, Health, and Listen Port. There is one server listed: AdminServer(admin).

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

**End of Oracle WebLogic Server Software.**

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## Oracle Form and Reports

\*\*\*\*\*

### 1. Installing Oracle WebLogic Server software

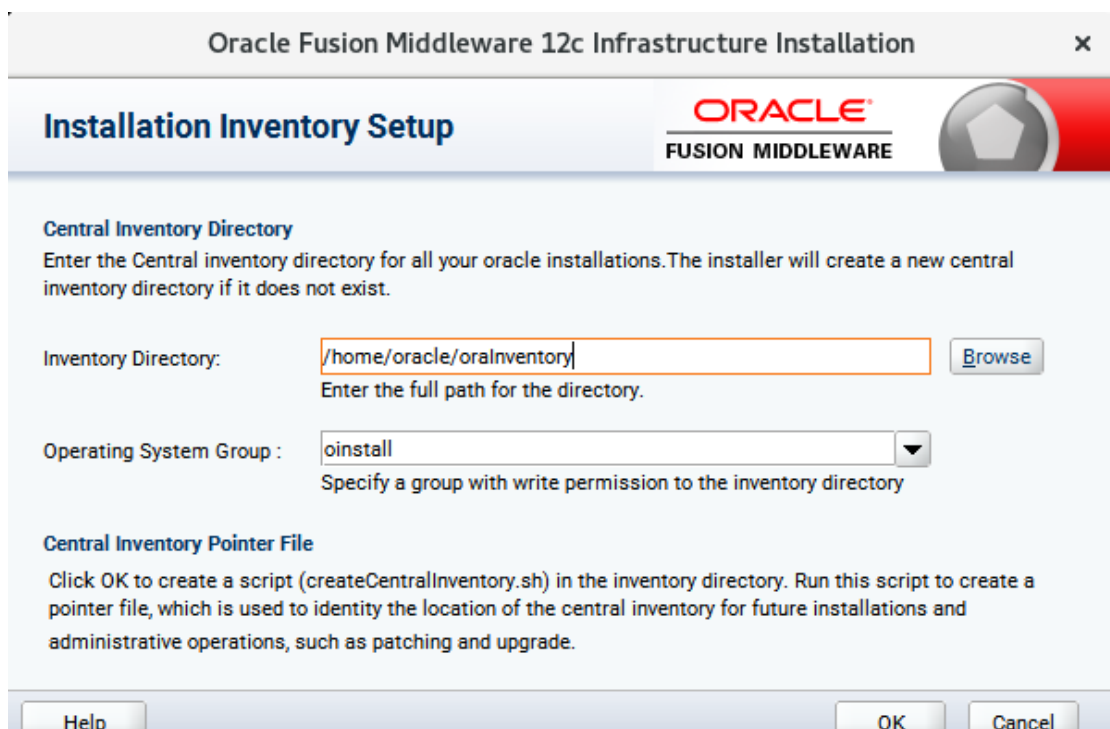
#### 1-1. Prerequisites:

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)

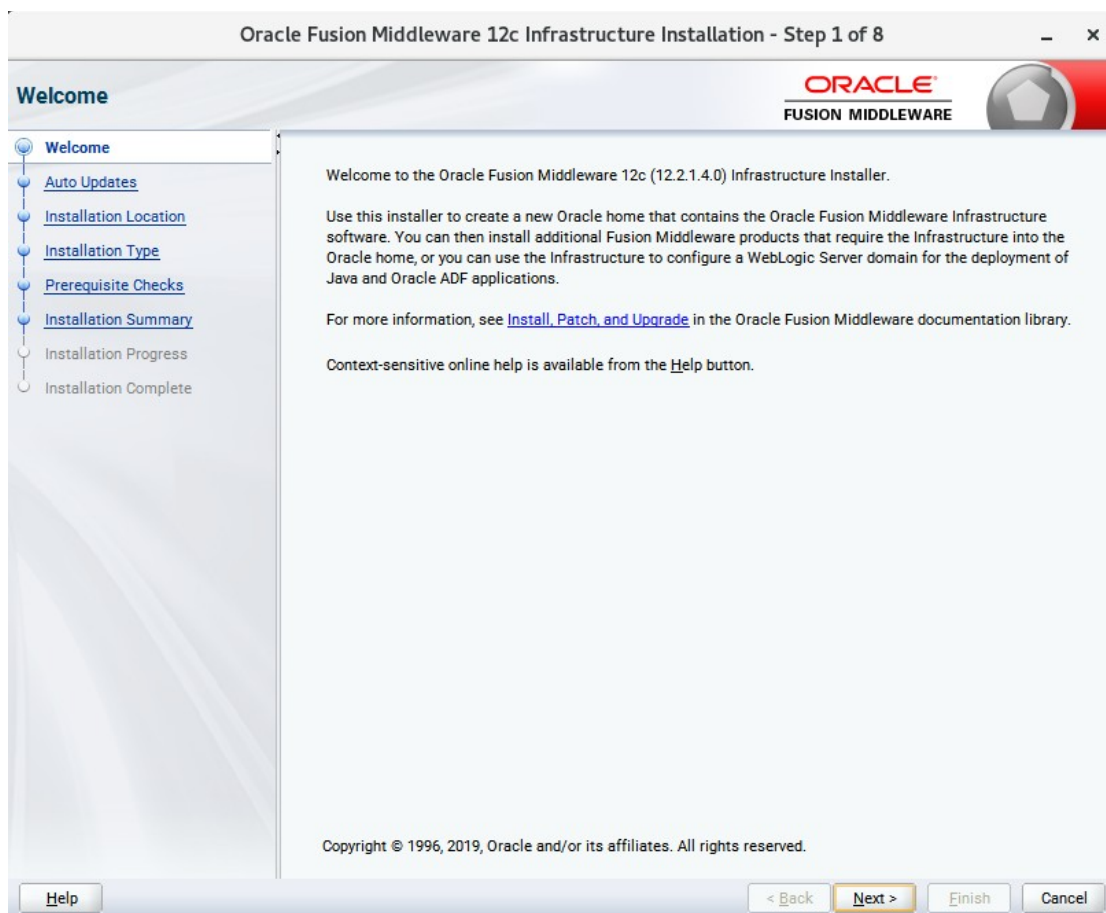
**Screenshots: A brief installation setps for Fusion Middleware Infrastructure Installer is as follows:**

#### 3-1). Installation Inventory Setup.



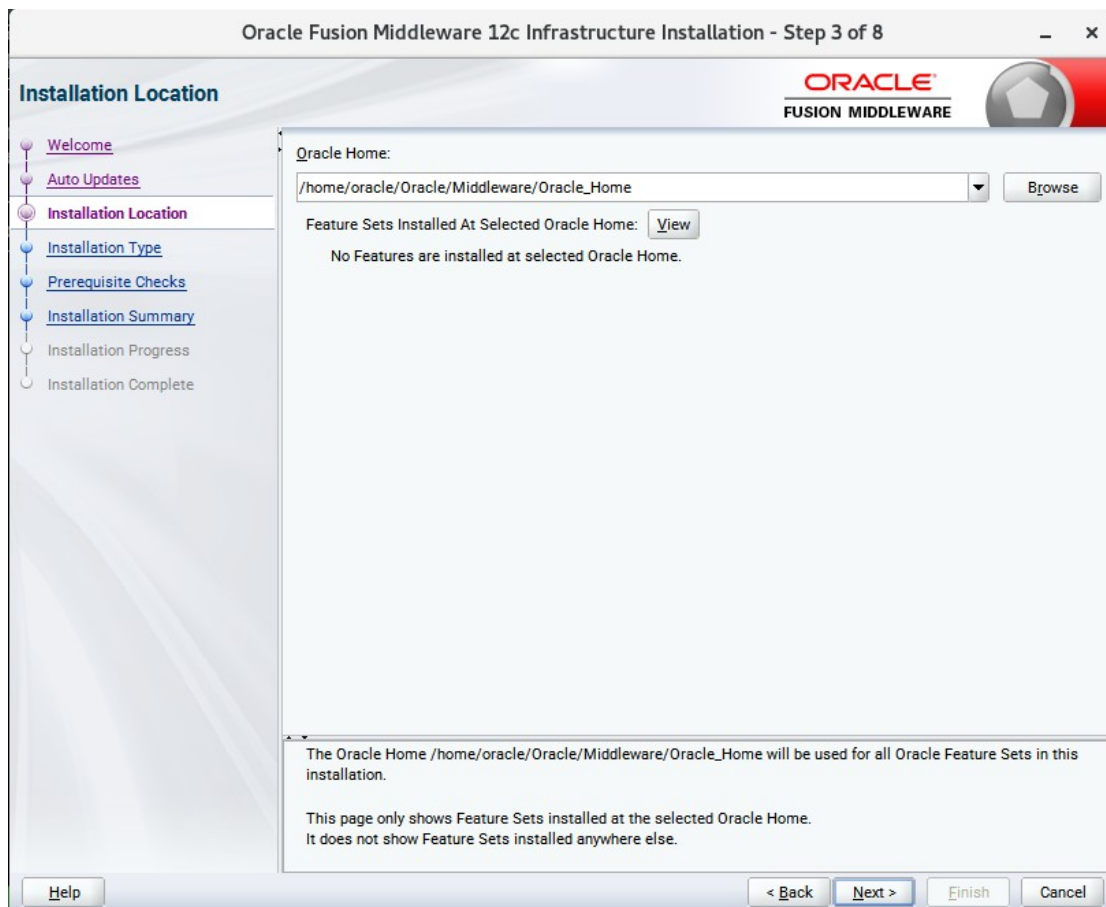
Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

## 3-2). Welcome.



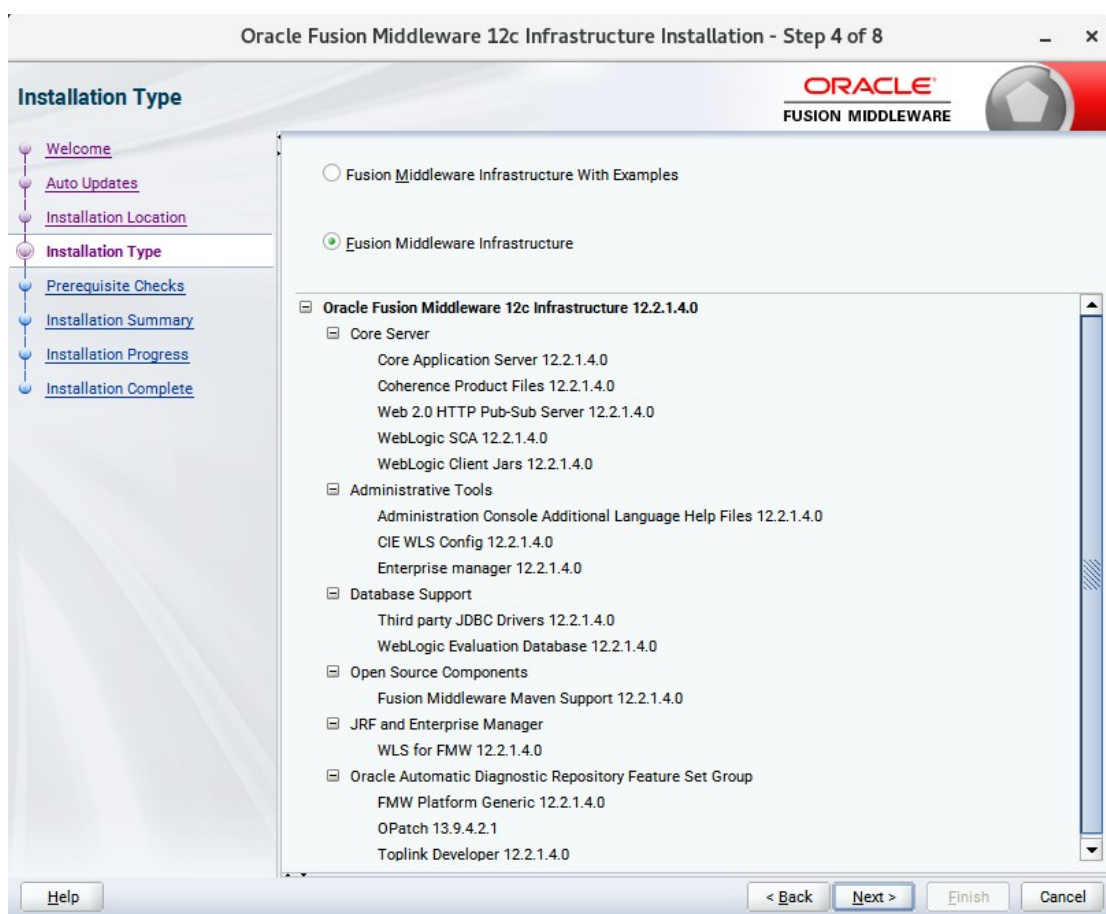
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

## 3-3). Installation Location.



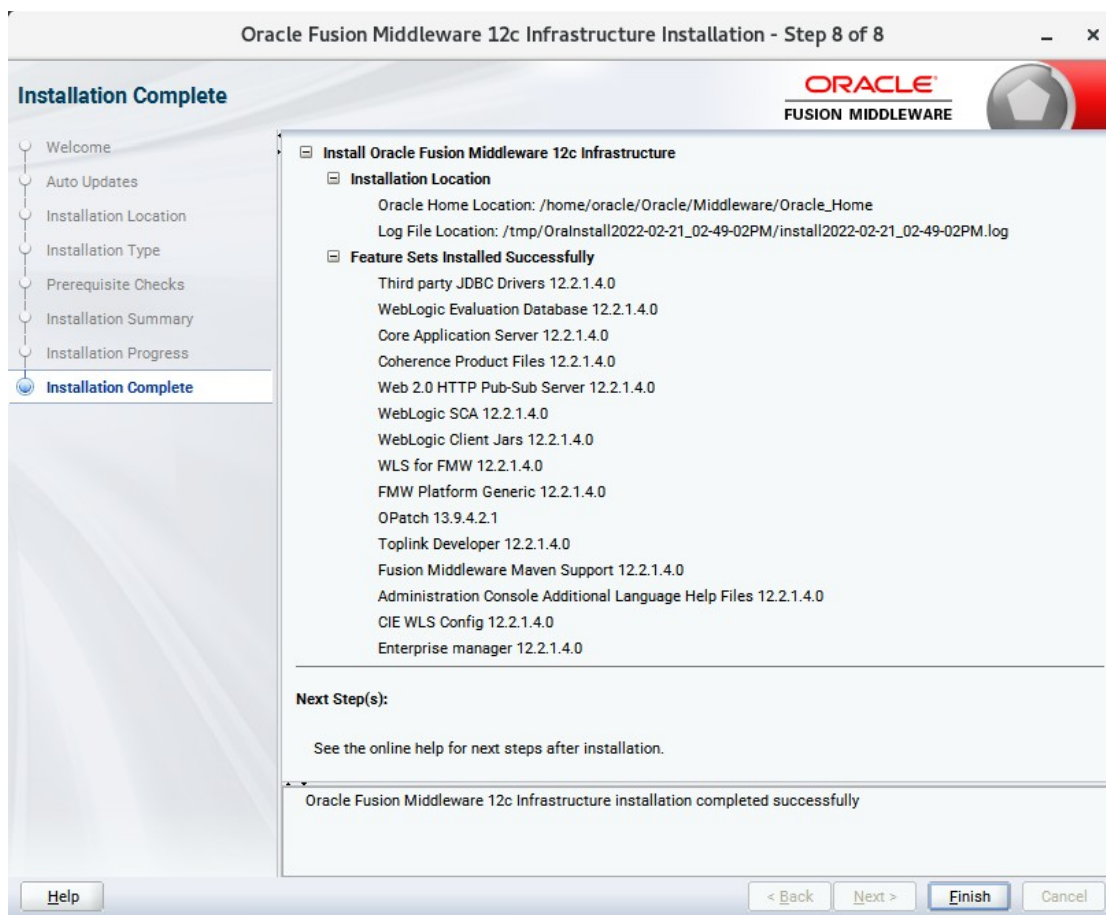
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

## 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.



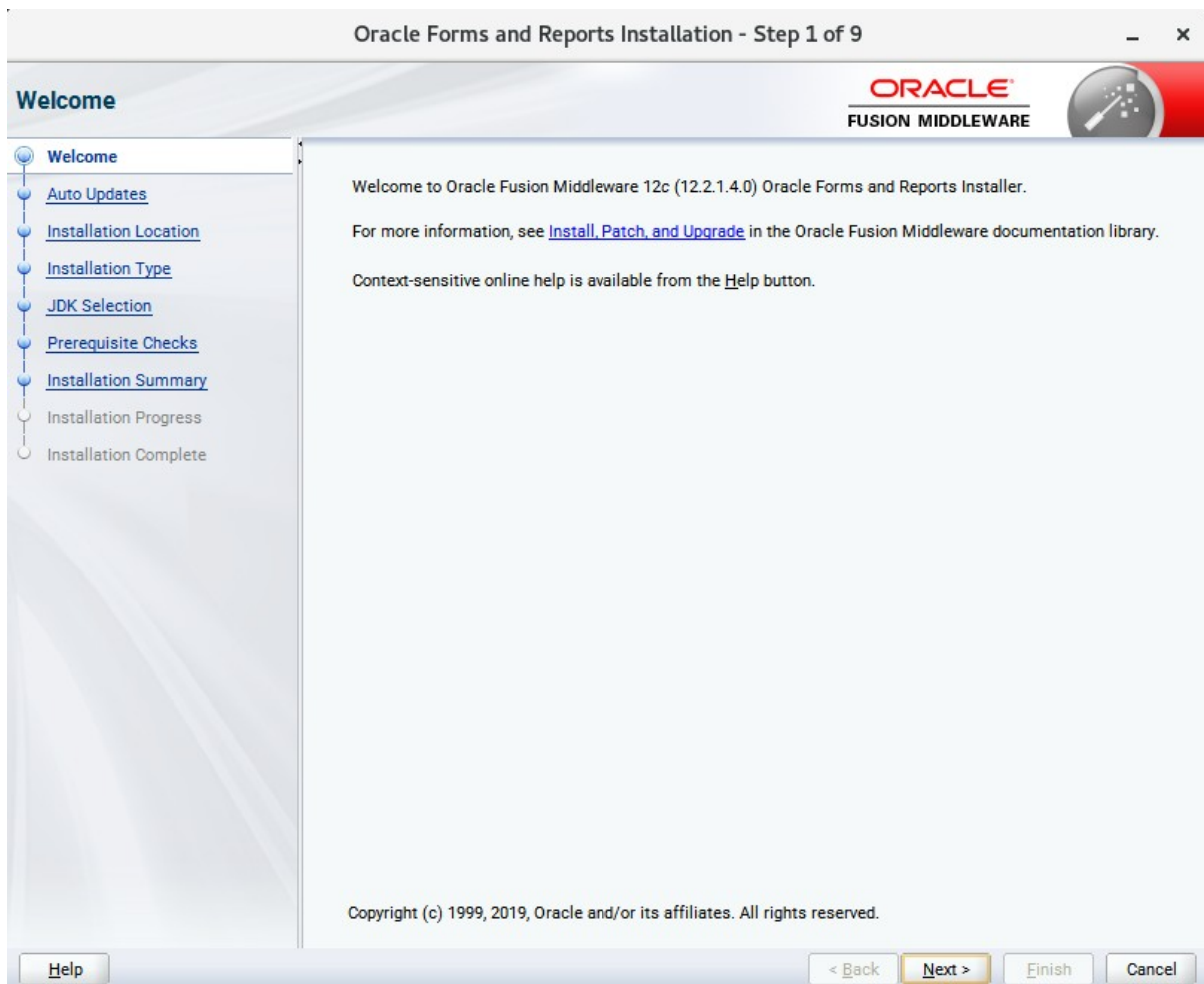
1-2. Log in to the target system (SUSE Linux Enterprise Server 12 SP5 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

(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.

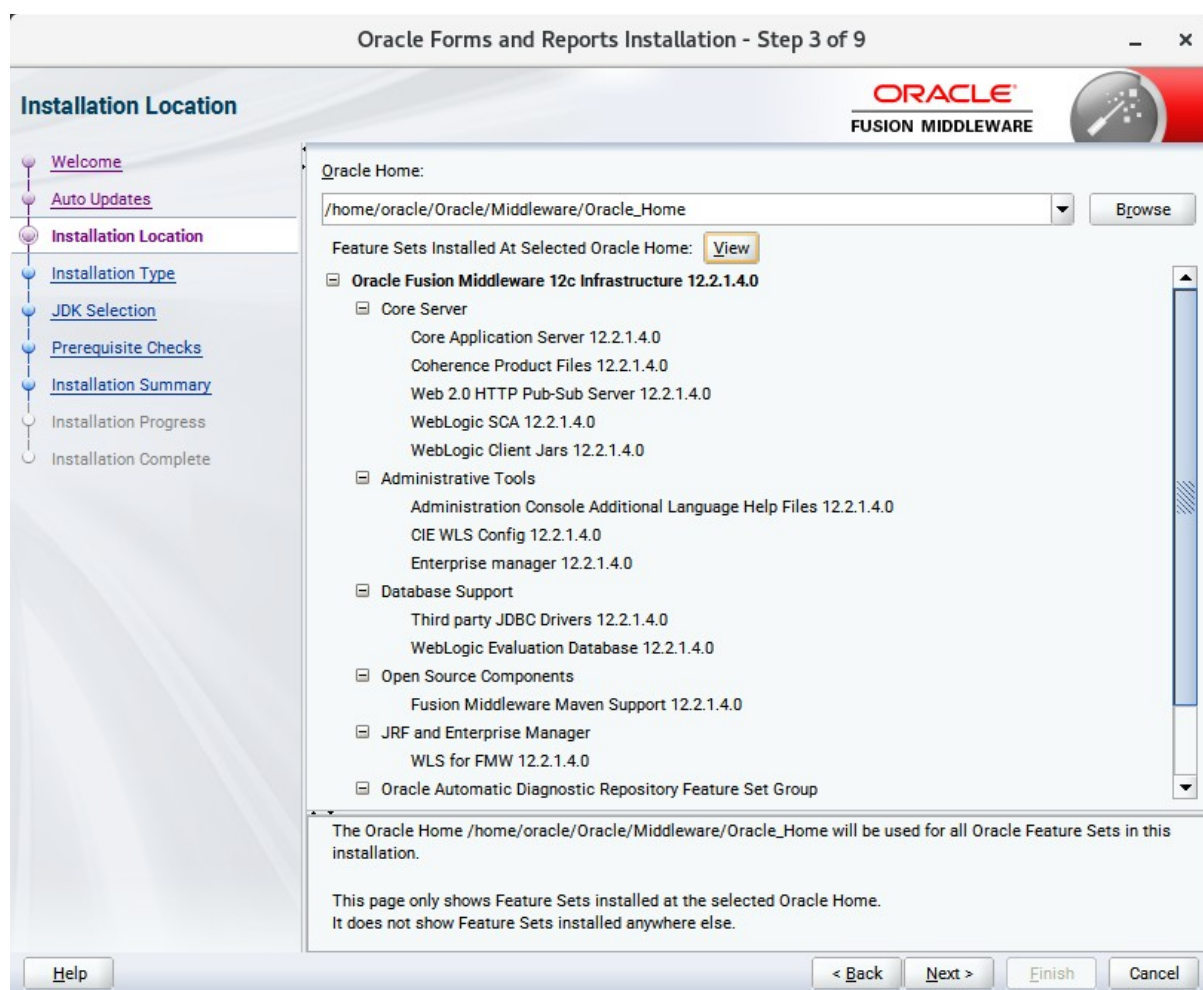
2). The **Auto Updates** page appears.

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 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. A 'Search' button is located below the search options. A large empty rectangular area is present below the search button. At the bottom of the window, there are four 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.

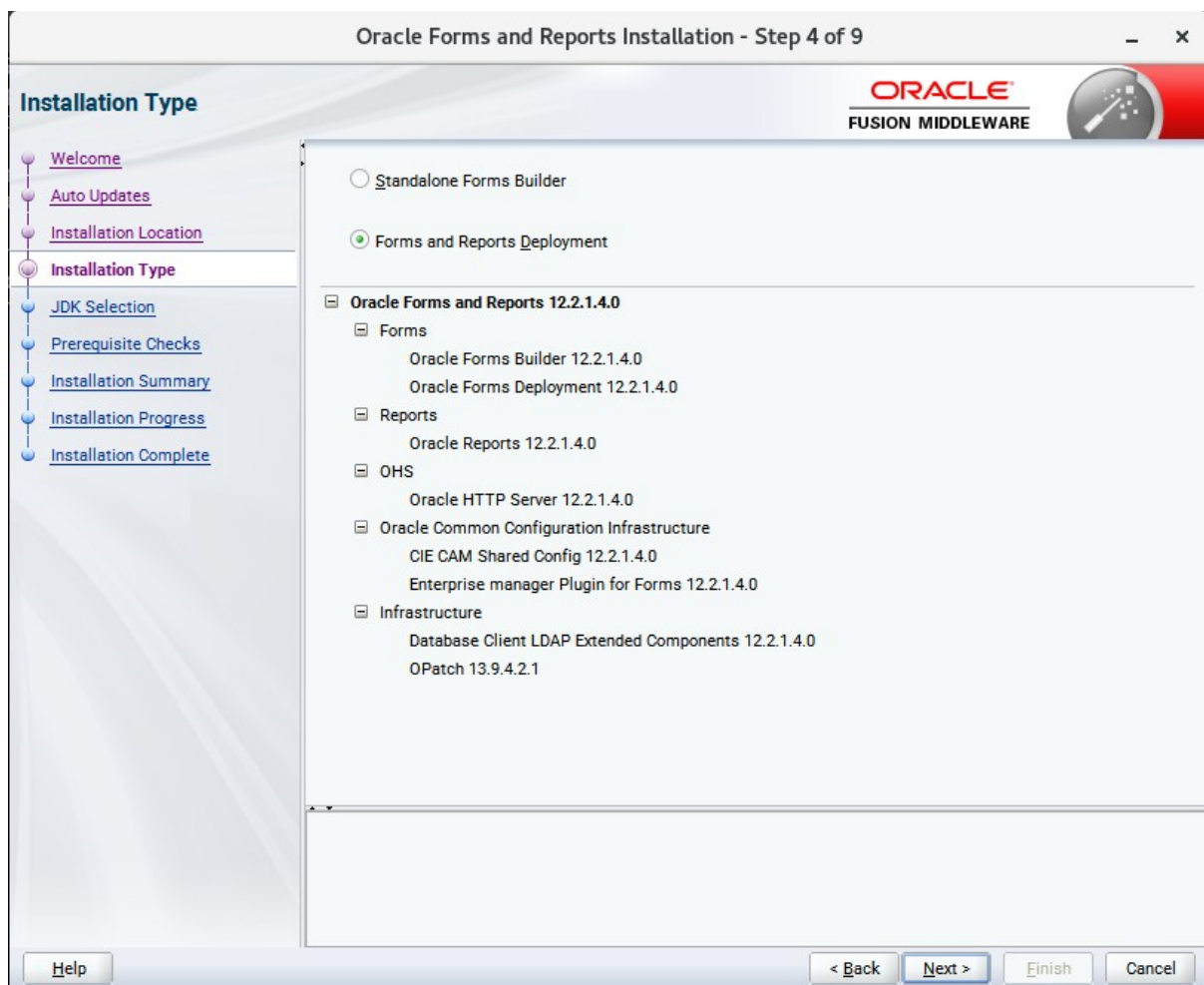


3). The **Installation Location** page appears.



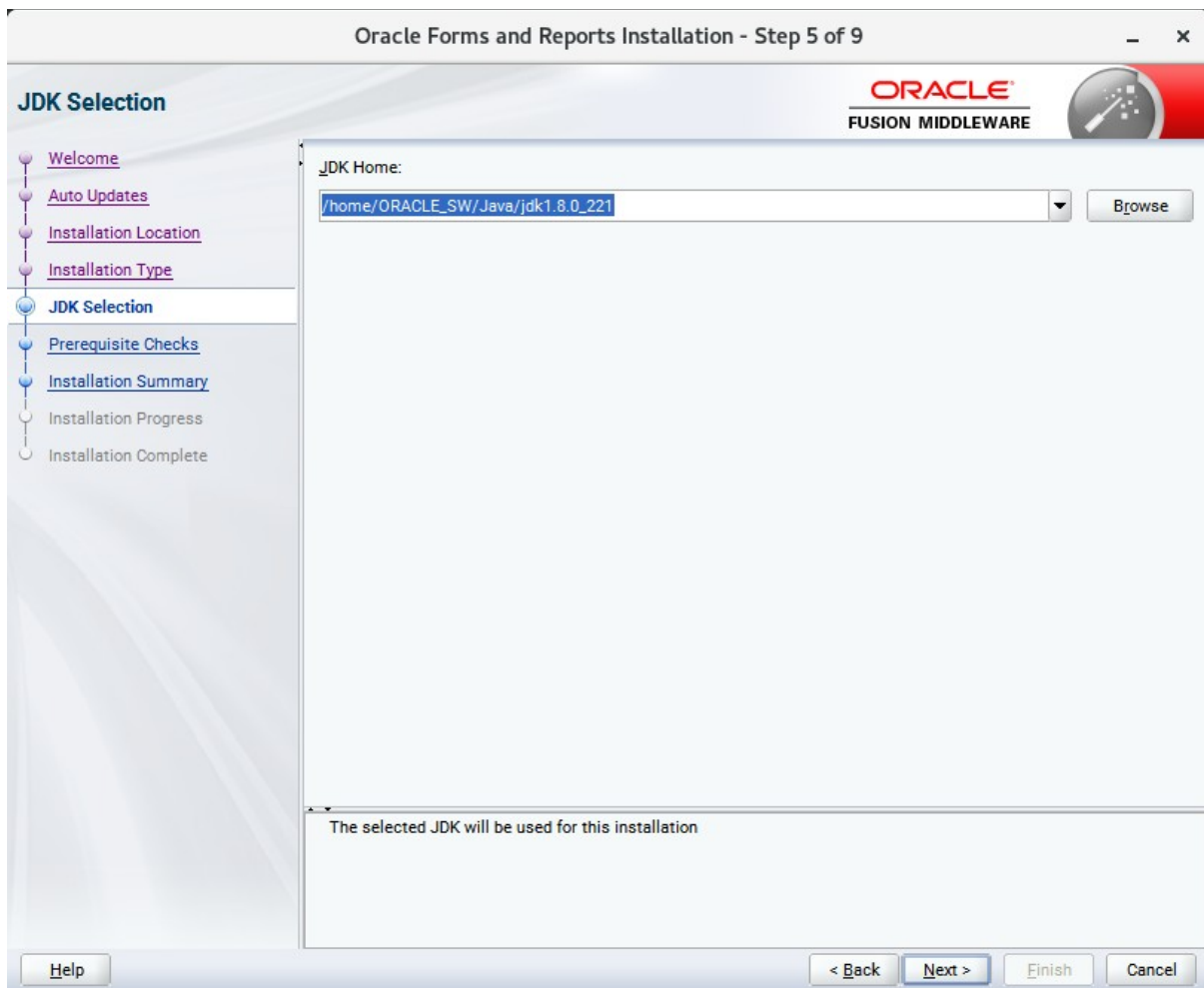
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



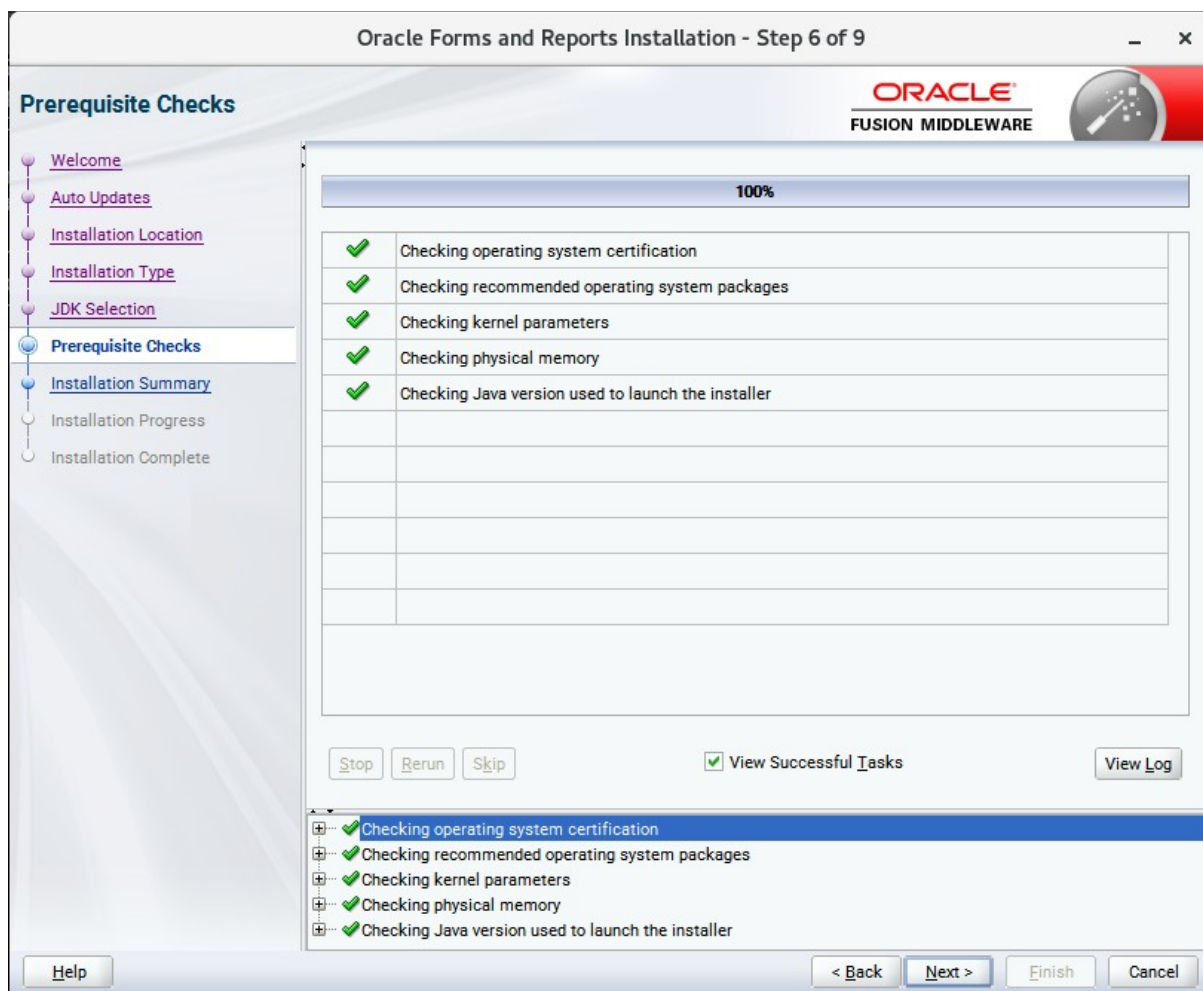
You can select **Standalone Forms Builder** if you want only that functionality, or choose **Forms and Reports Deployment** to install all of the products. Click **Next** to continue.

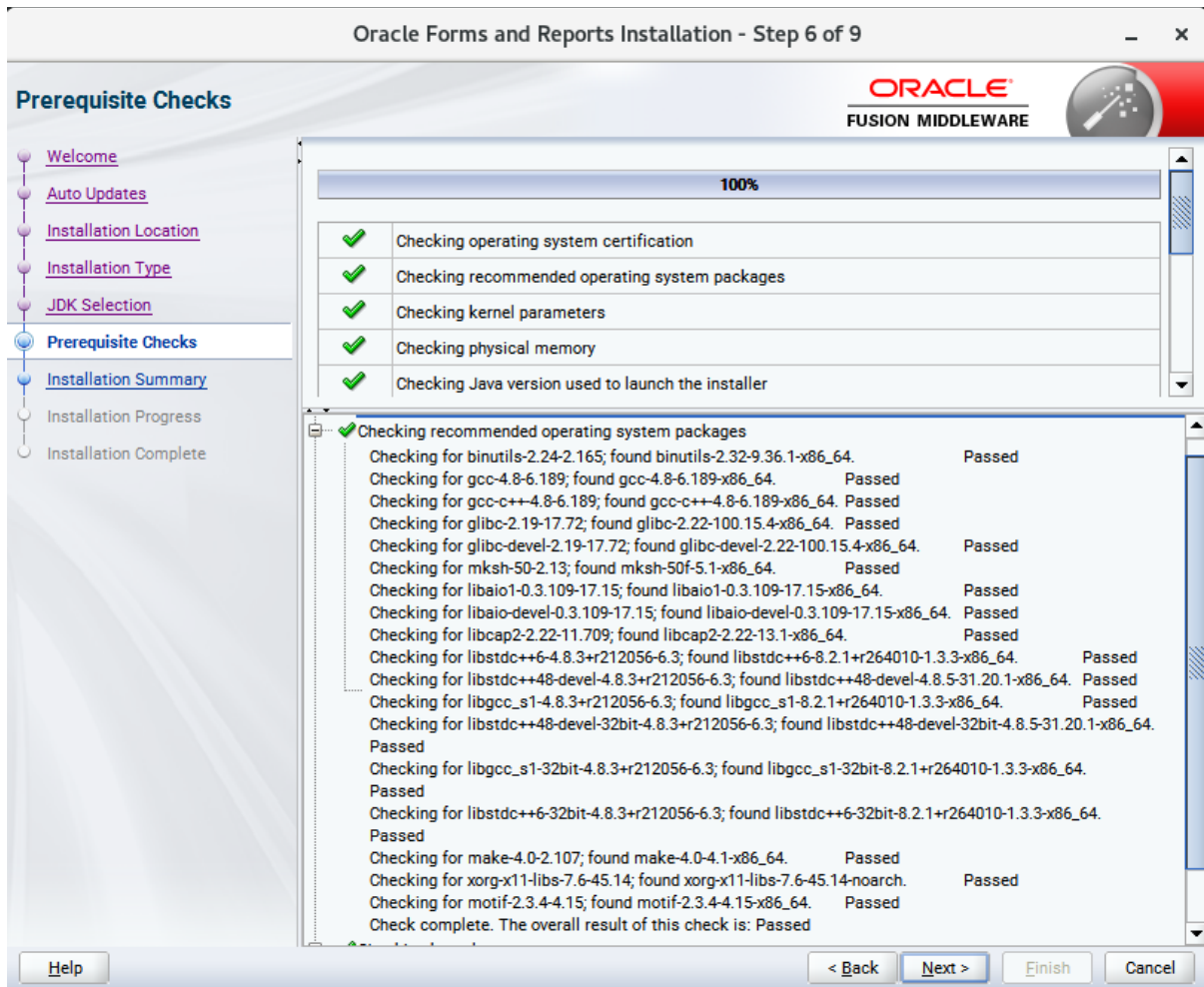
5). The **JDK Selection** page appears.



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

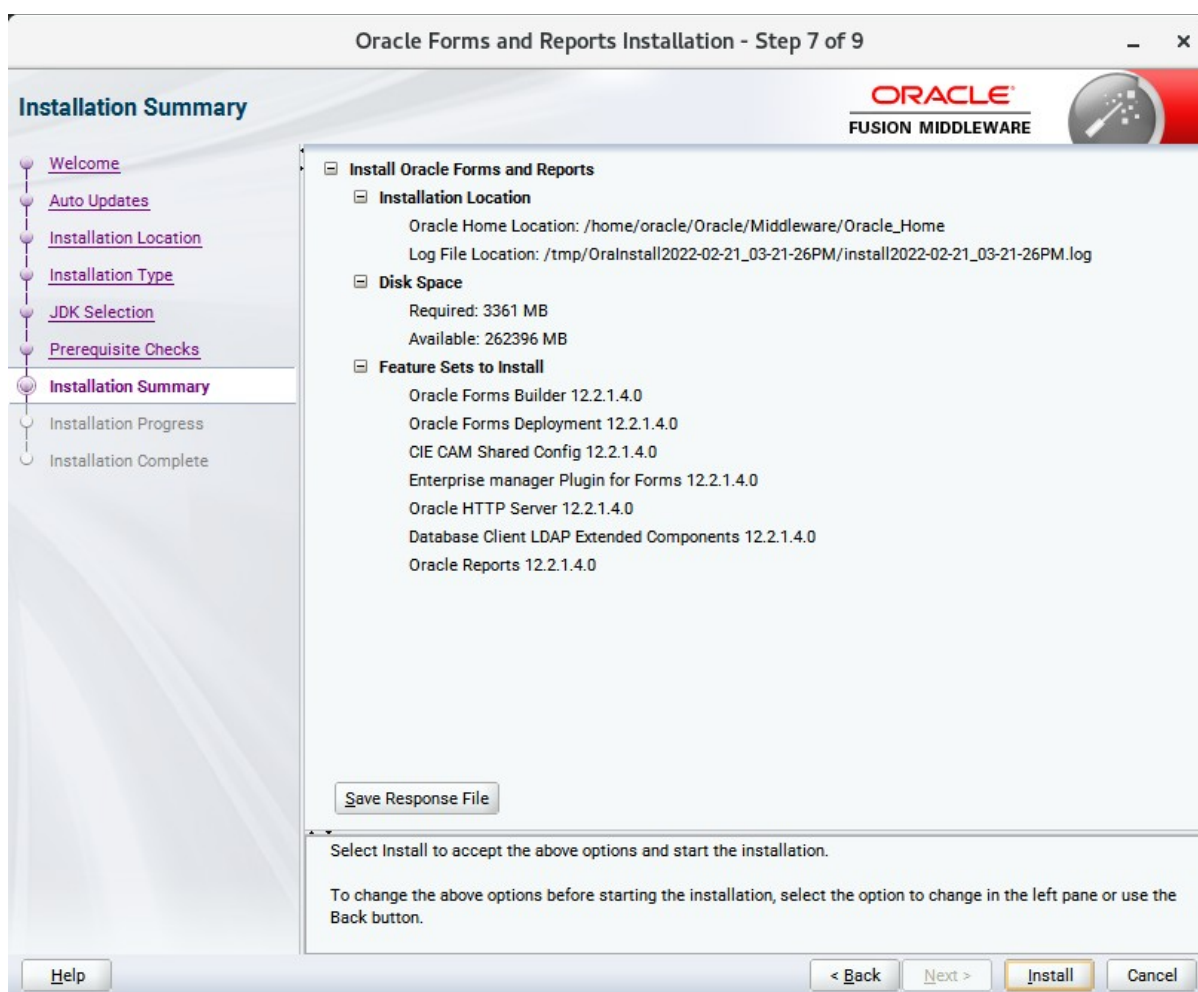
6). The **Prerequisite Checks** page appears.





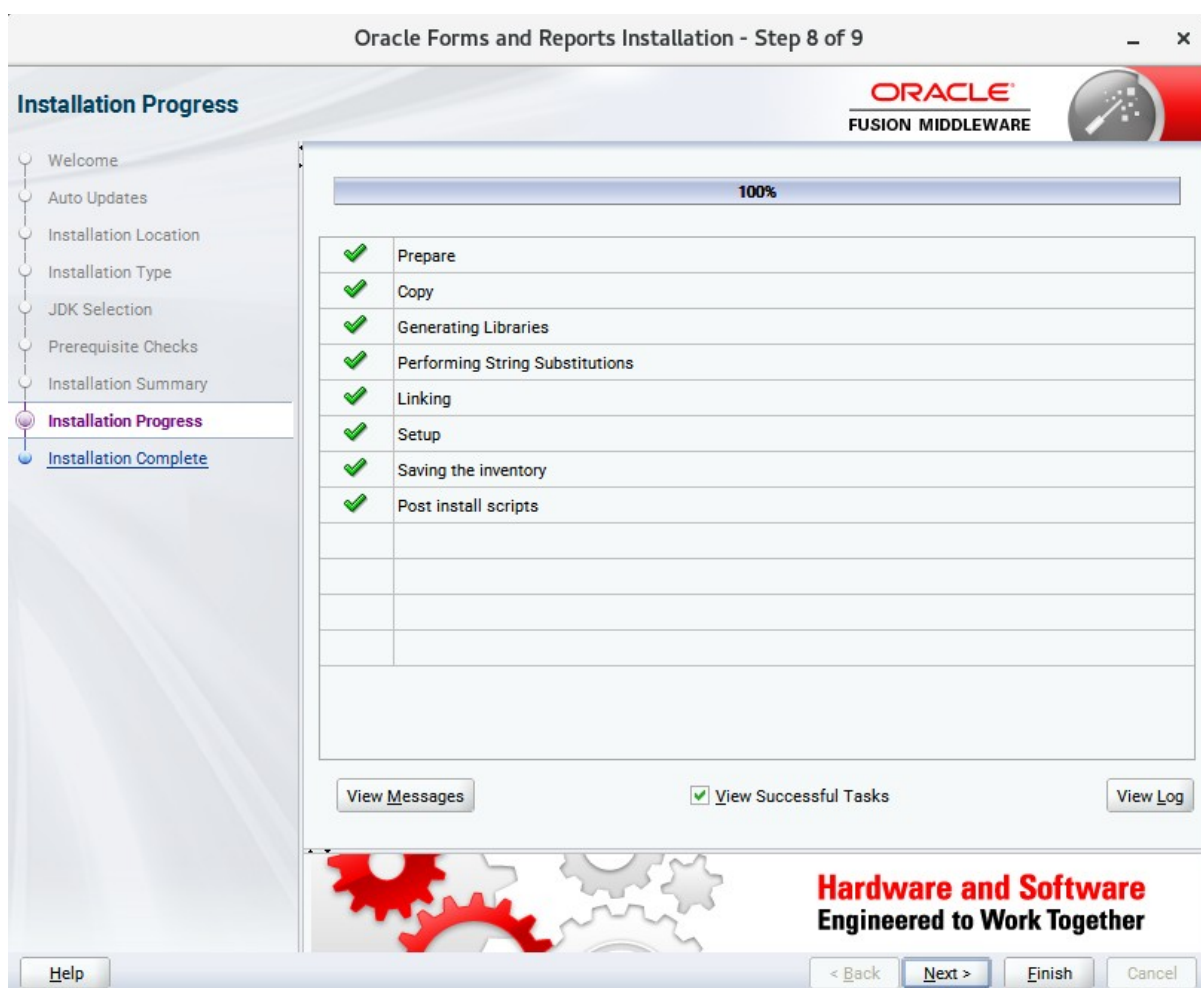
Checking recommended operating system packages as shown above. Please make sure that these packages are installed. Click **Next** to continue.

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



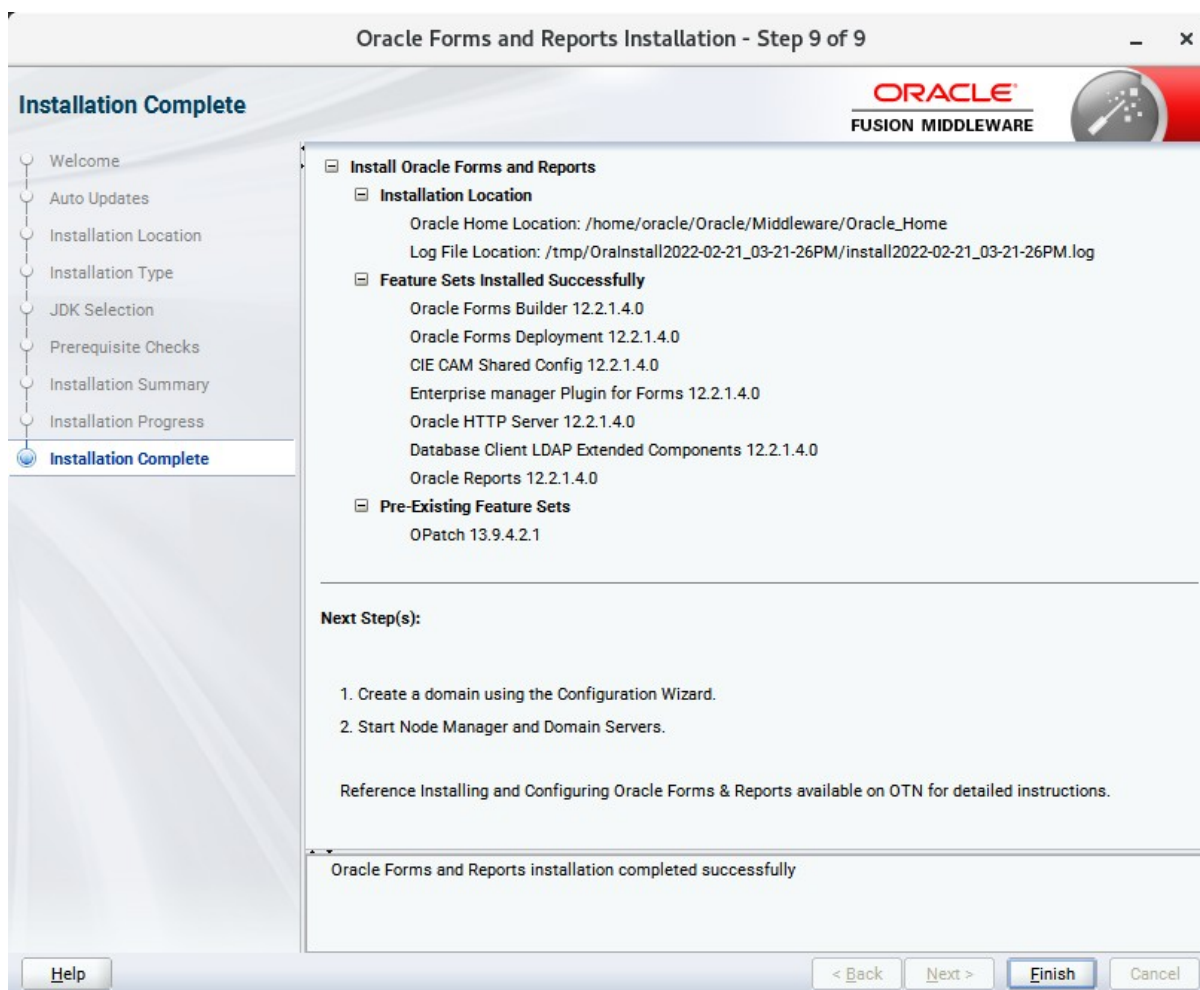
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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 Forms and Reports.

### Screenshot: Database schemas creating for Oracle Forms and Reports.

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_IJU
<input checked="" type="checkbox"/> Audit Services Append	DEV_IJU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	DEV_IJU_VIEWER
<input type="checkbox"/> Metadata Services	MDS
<input checked="" type="checkbox"/> Weblogic Services *	DEV_WLS

\* Mandatory component. Mandatory components cannot be deselected.

Buttons at the bottom: Help, < Back, Next >, Finish, Cancel.

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

Database details:

Host Name: Dell5530  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 6 minutes 48 seconds

RCU Logfile: /tmp/RCU2022-02-21\_16-06\_459979143/logs/rcu.log  
Component Log Directory: /tmp/RCU2022-02-21\_16-06\_459979143/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:11.723(sec)	stb.log
Oracle Platform Security Services	Success	02:57.832(min)	opss.log
Audit Services	Success	01:08.178(min)	iau.log
Audit Services Append	Success	00:09.669(sec)	iau_append.log
Audit Services Viewer	Success	00:09.615(sec)	iau_viewer.log
Weblogic Services	Success	01:34.871(min)	wls.log

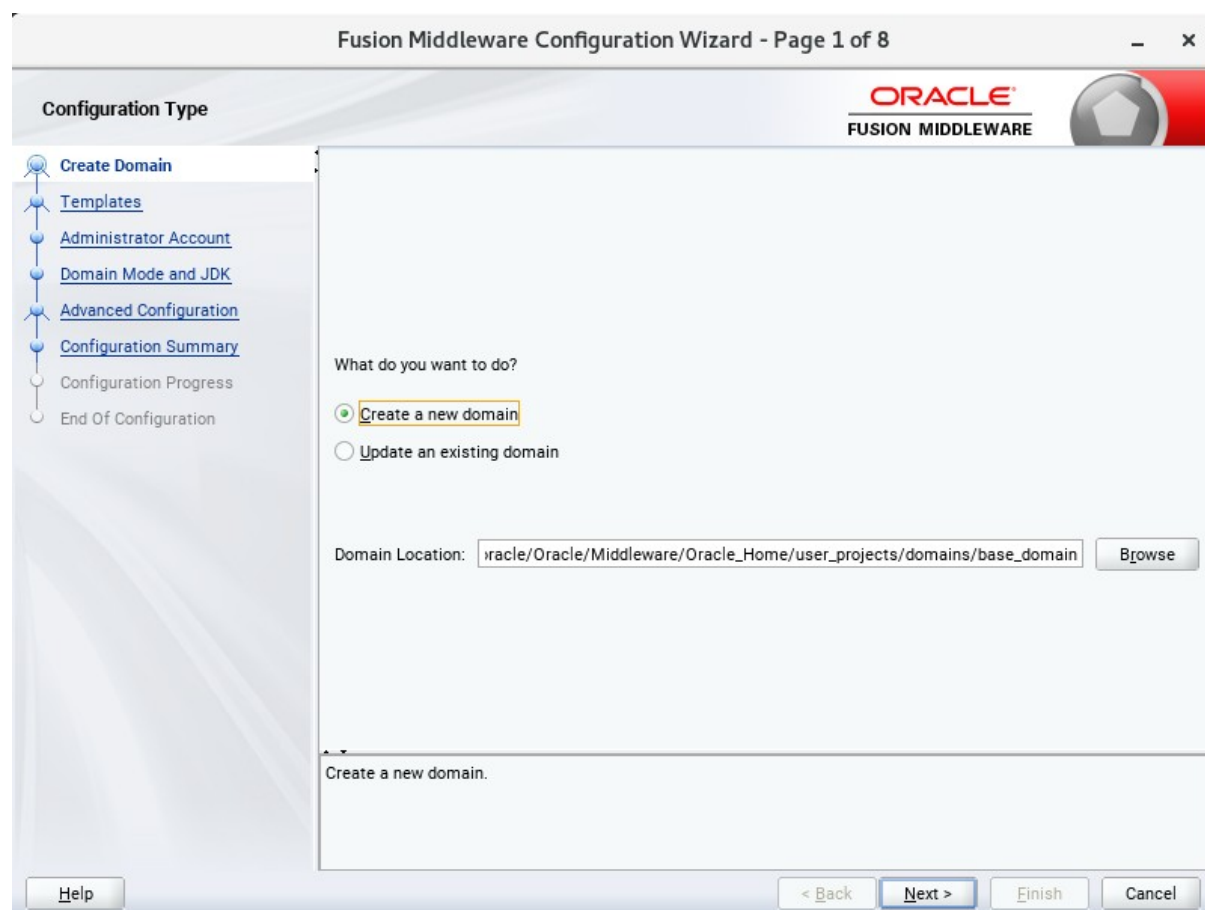
Help < Back Next > Create Close

### 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.

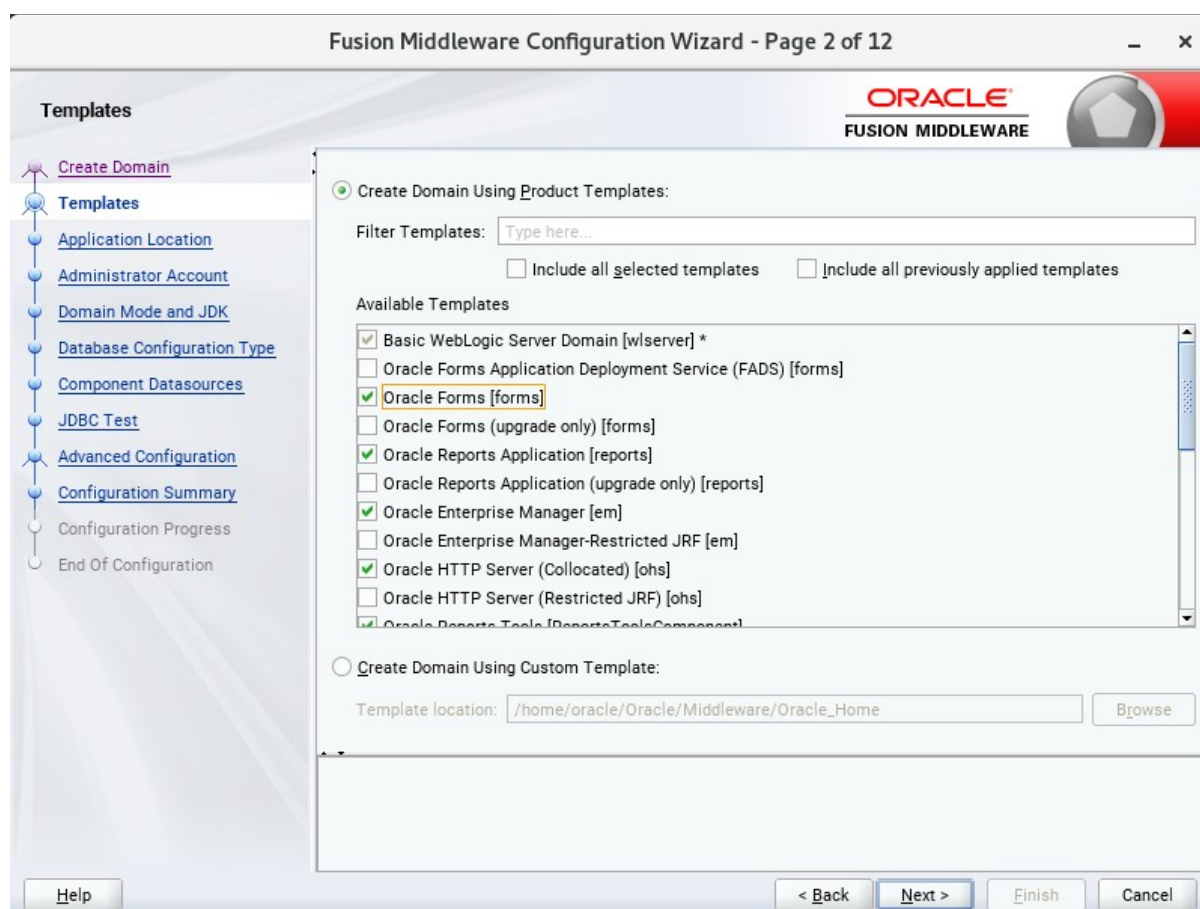
Follow these steps:

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



Click **Next** to continue.

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

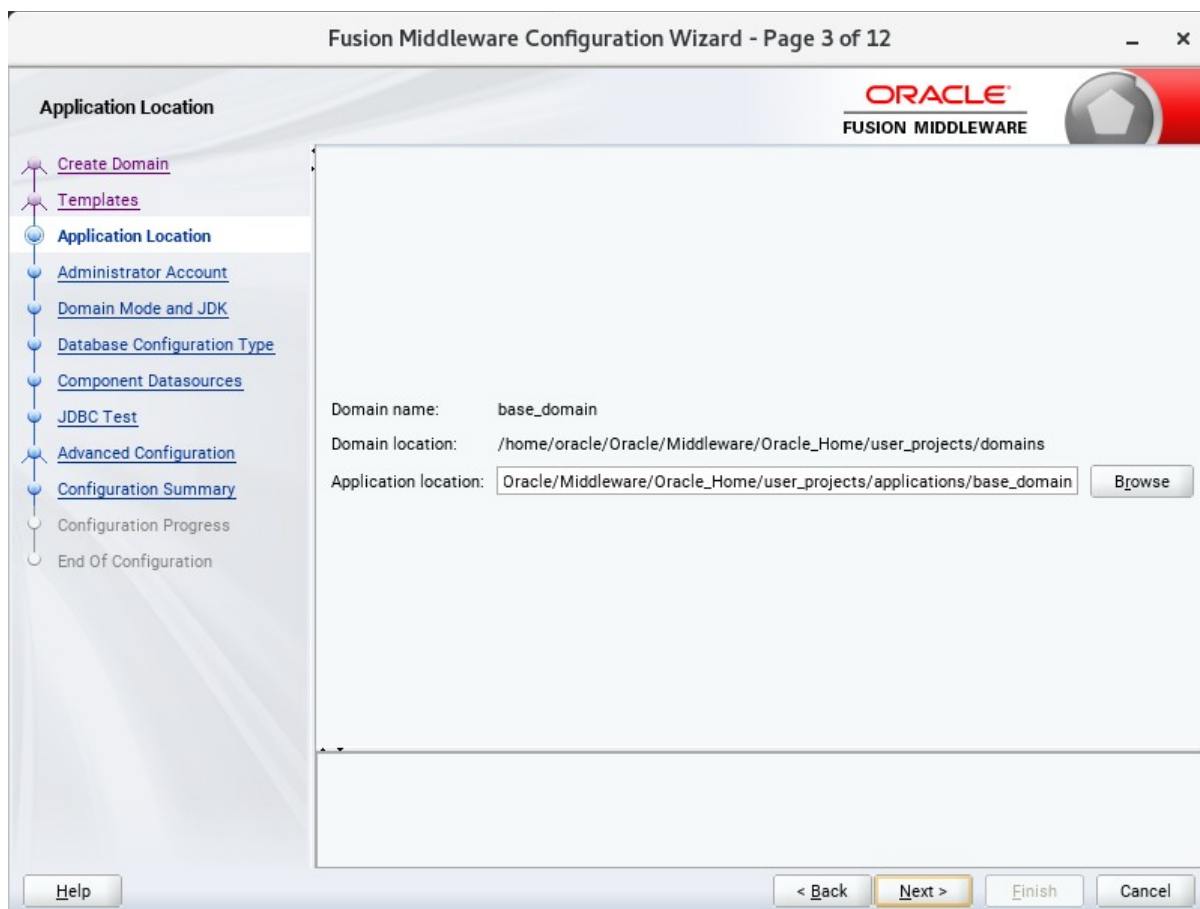


Keep the default selection (**Create Domain using Product Templates**). Selecting

**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:

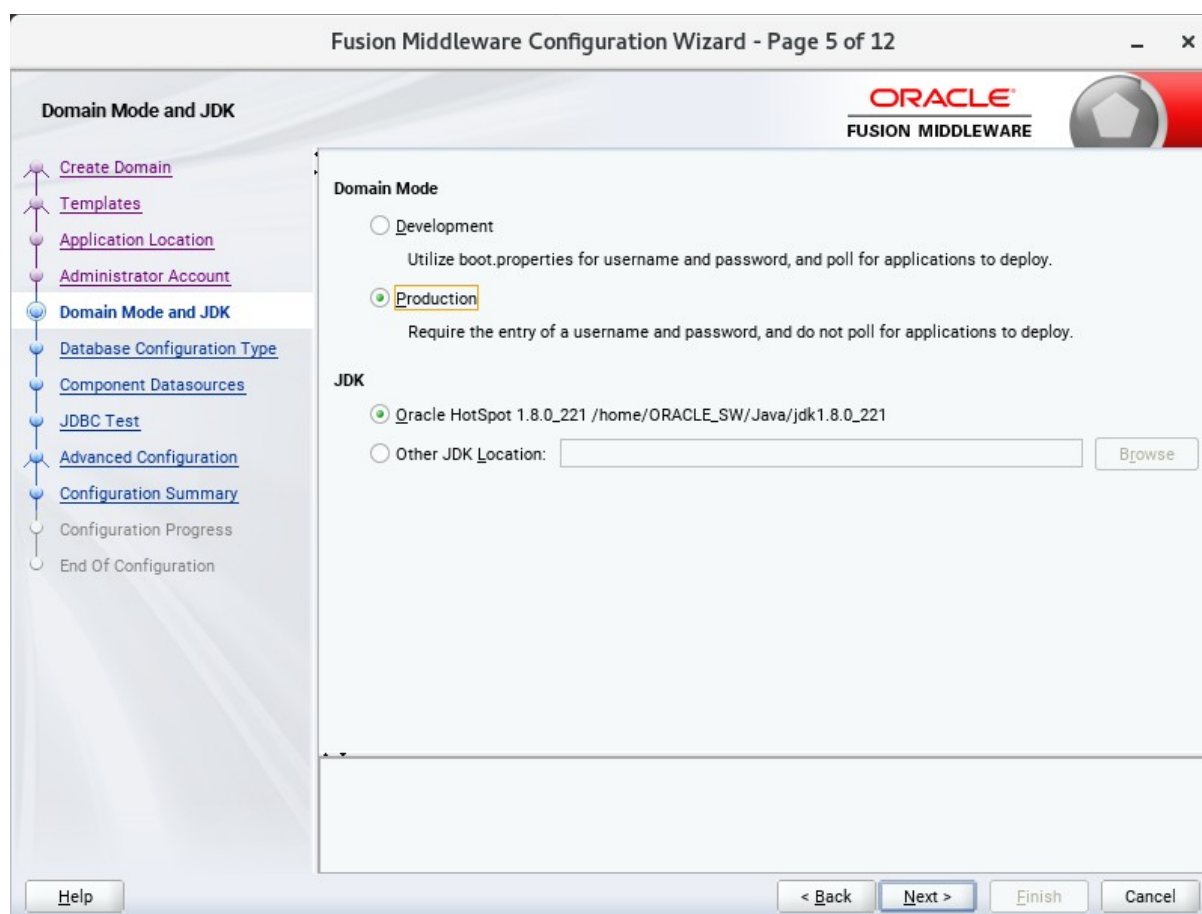
Confirm Password:

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.

Fusion Middleware Configuration Wizard - Page 6 of 12

**Database Configuration Type**

Specify AutoConfiguration Options Using:

RCU Data  Manual Configuration

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

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

Connection Parameters  Connection URL String

Host Name: Dell5530

DBMS/Service: suse Port: 1521

Schema Owner: DEV\_STB Schema Password: .....

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**

ORACLE  
FUSION MIDDLEWARE

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

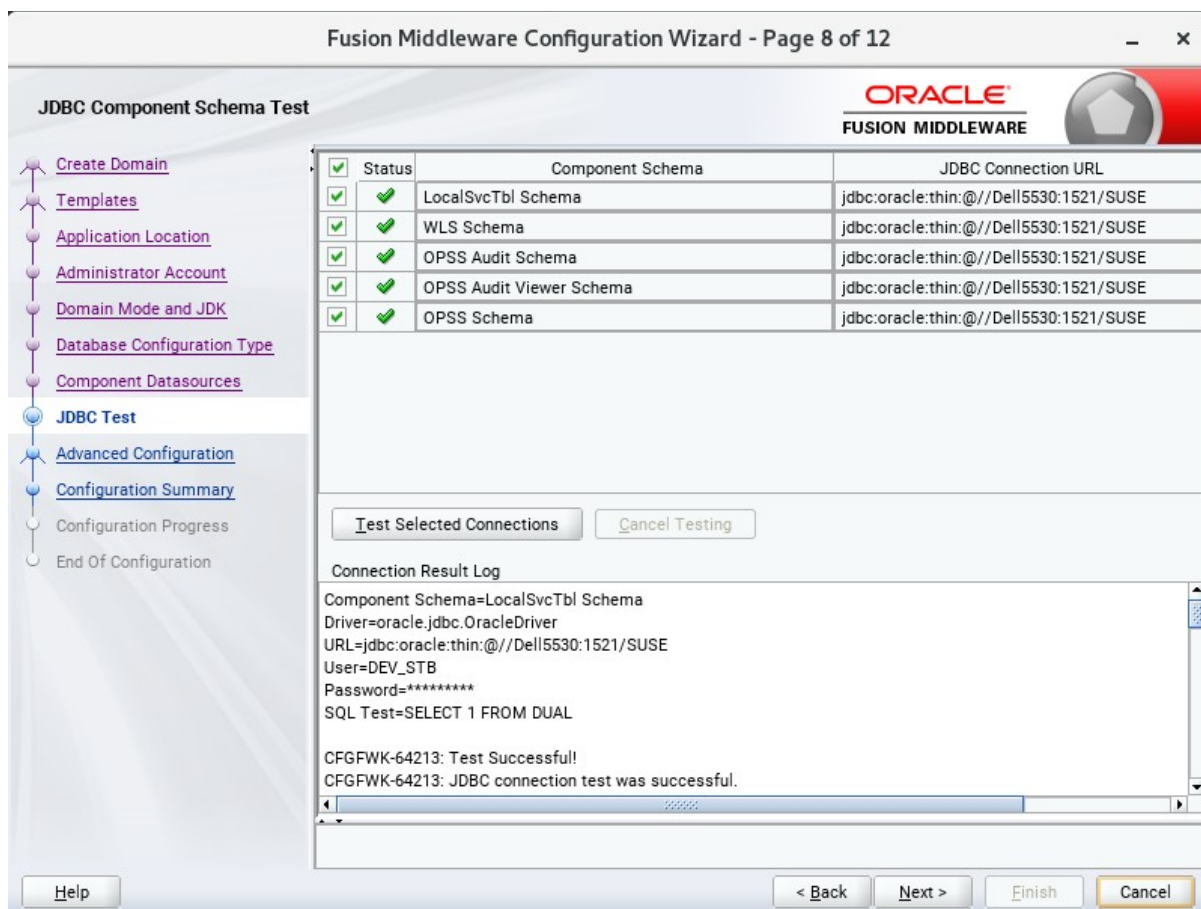
Edits to the data above will affect all checked rows in the table below.

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

Help

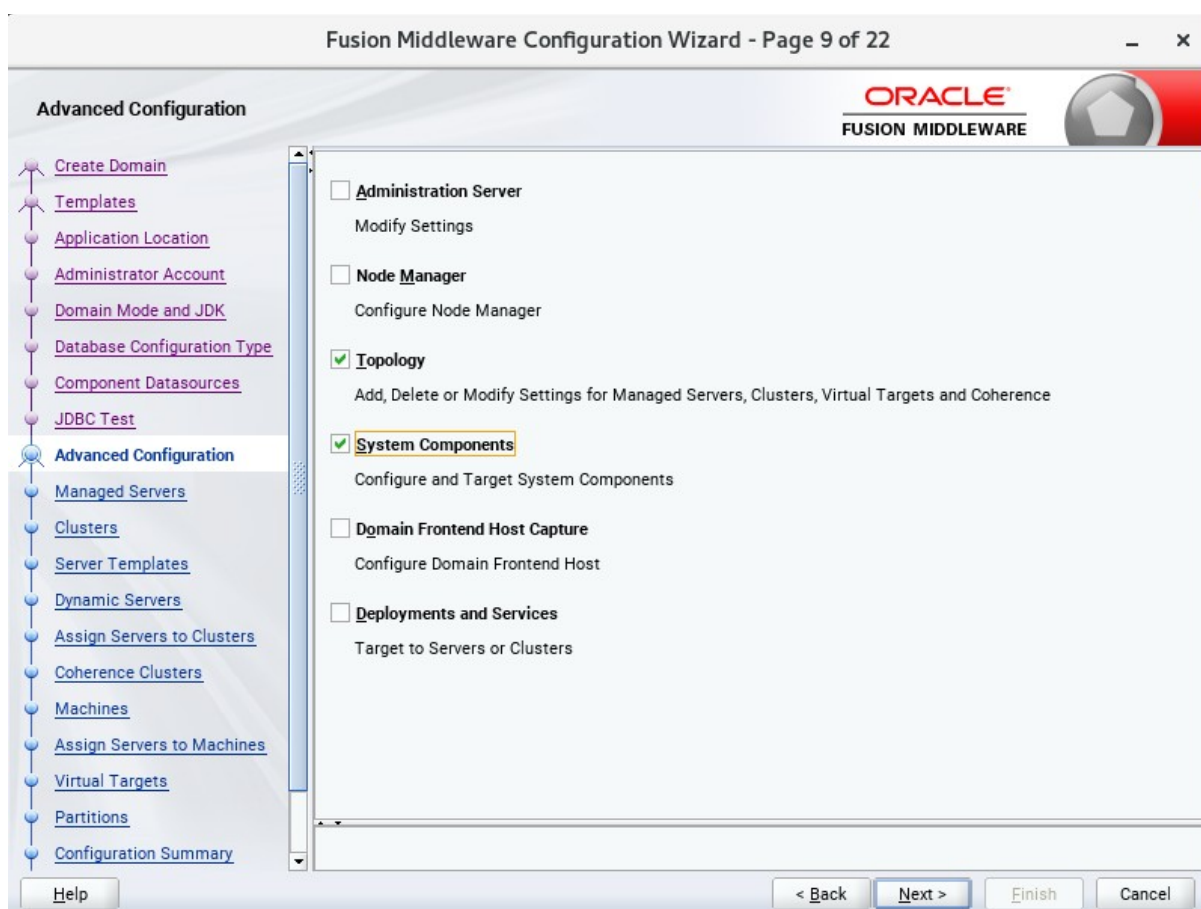
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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.



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

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

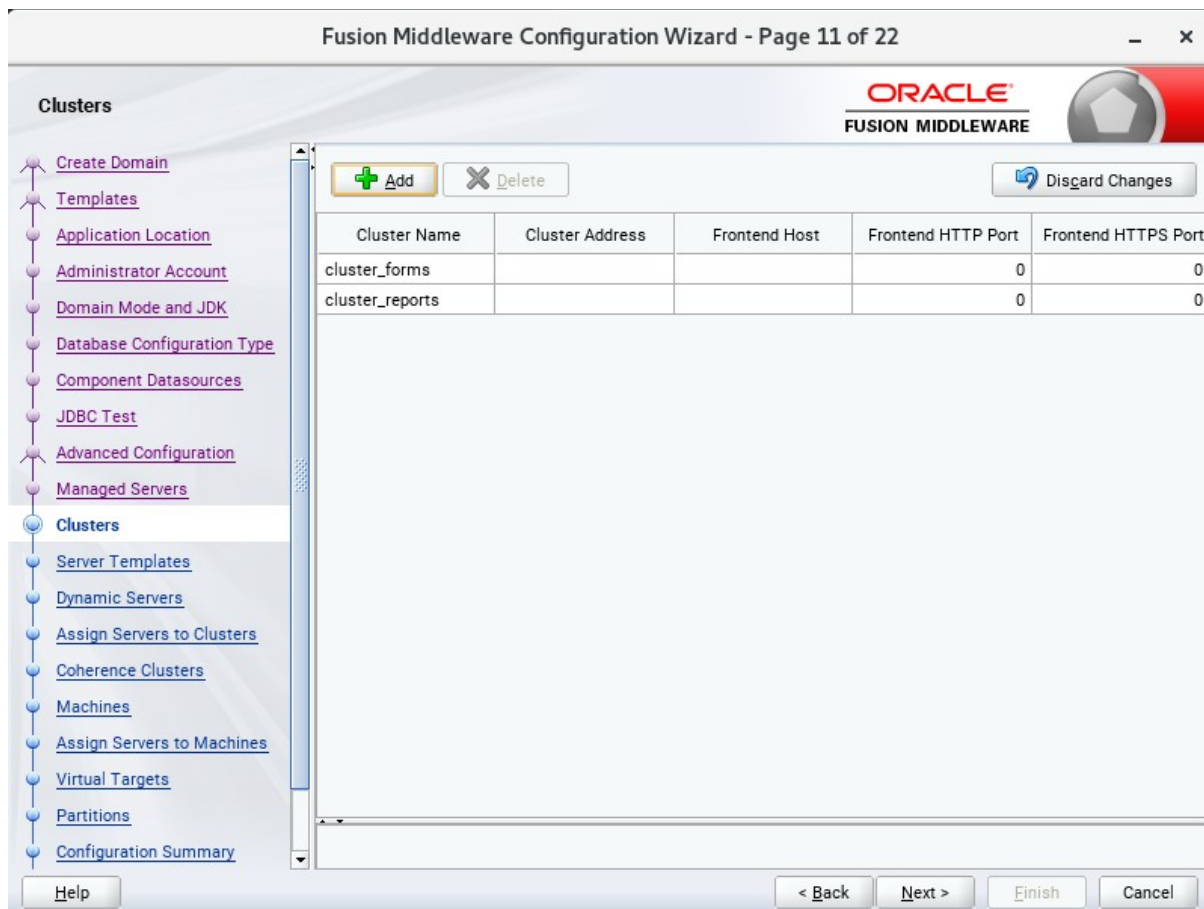
The screenshot shows the 'Managed Servers' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 22'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists various configuration steps, with '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
WLS_FORMS	All Local Addresses	9001	<input type="checkbox"/>	Disabled	FORMS-MA...
WLS_REPORTS	All Local Addresses	9002	<input type="checkbox"/>	Disabled	REPORTS-A...

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

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

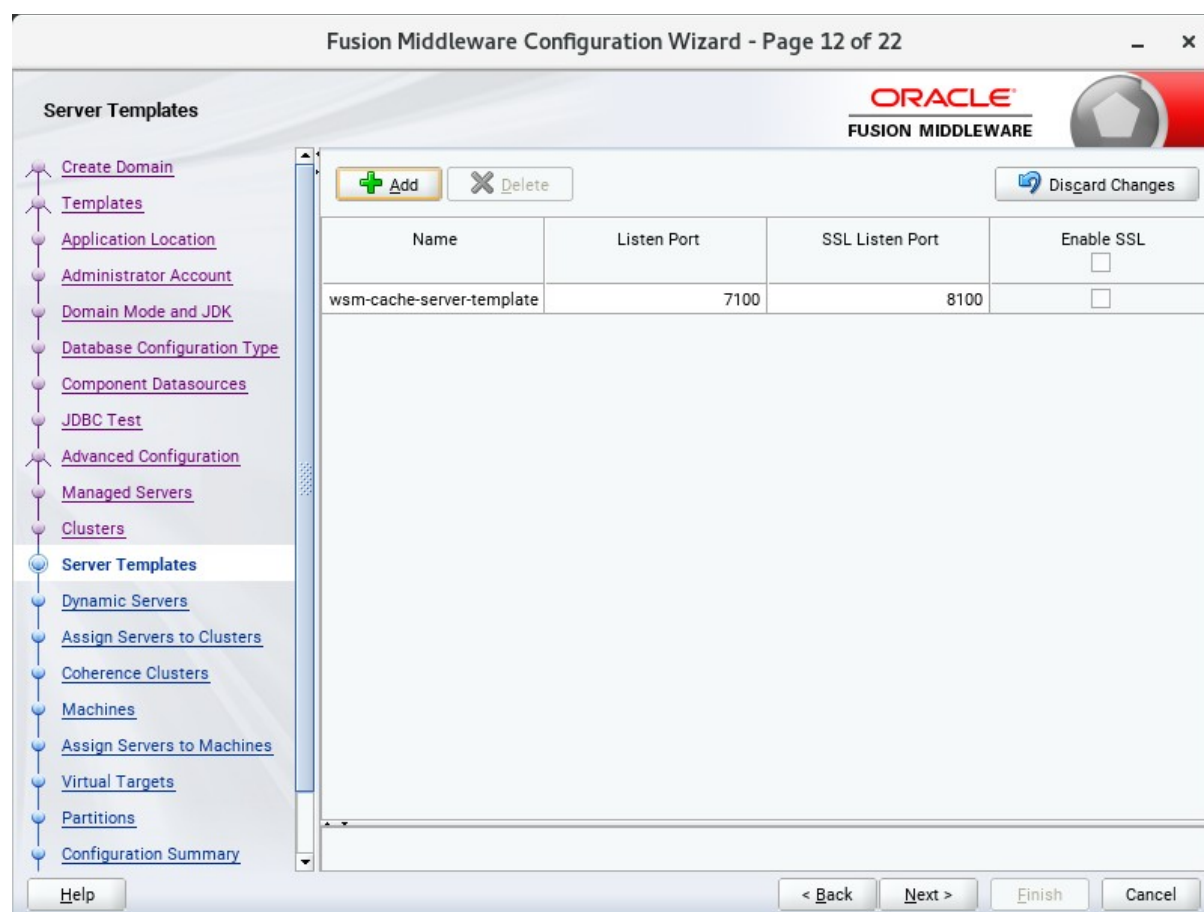
+ Add    X Delete    Discard Changes

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

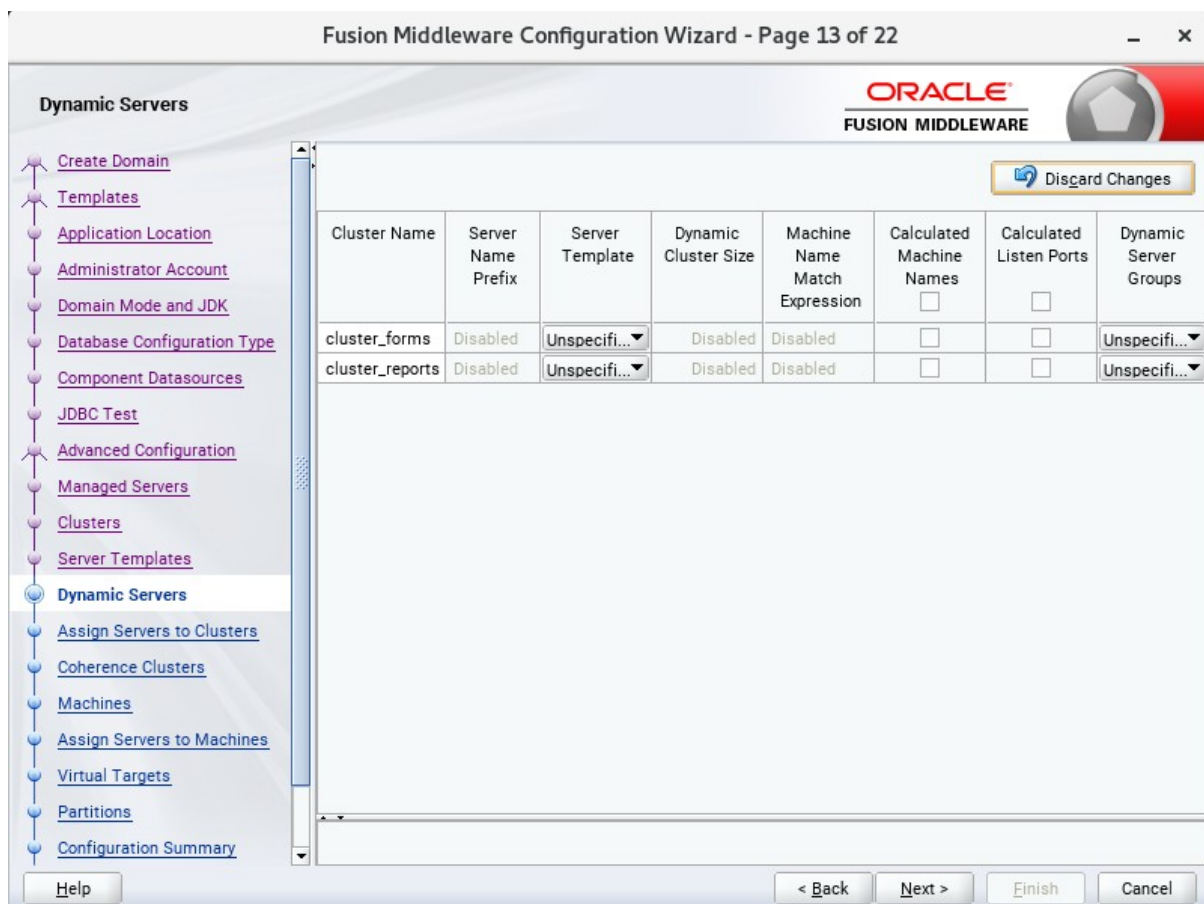
Default entries will be acceptable in most cases, unless adding new clusters is desirable. Click **Next** to continue.

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



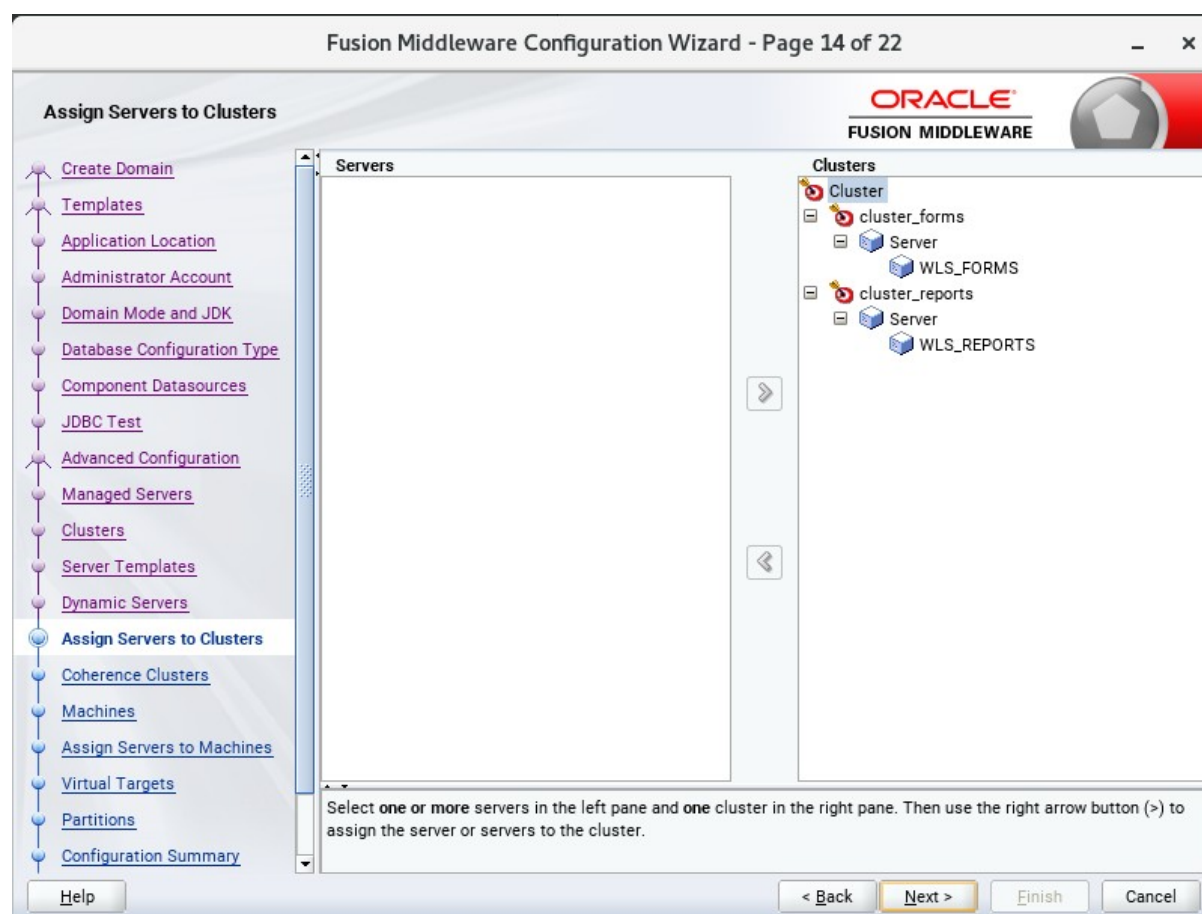
The default values will be appropriate for most cases. Click **Next** to continue.

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



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

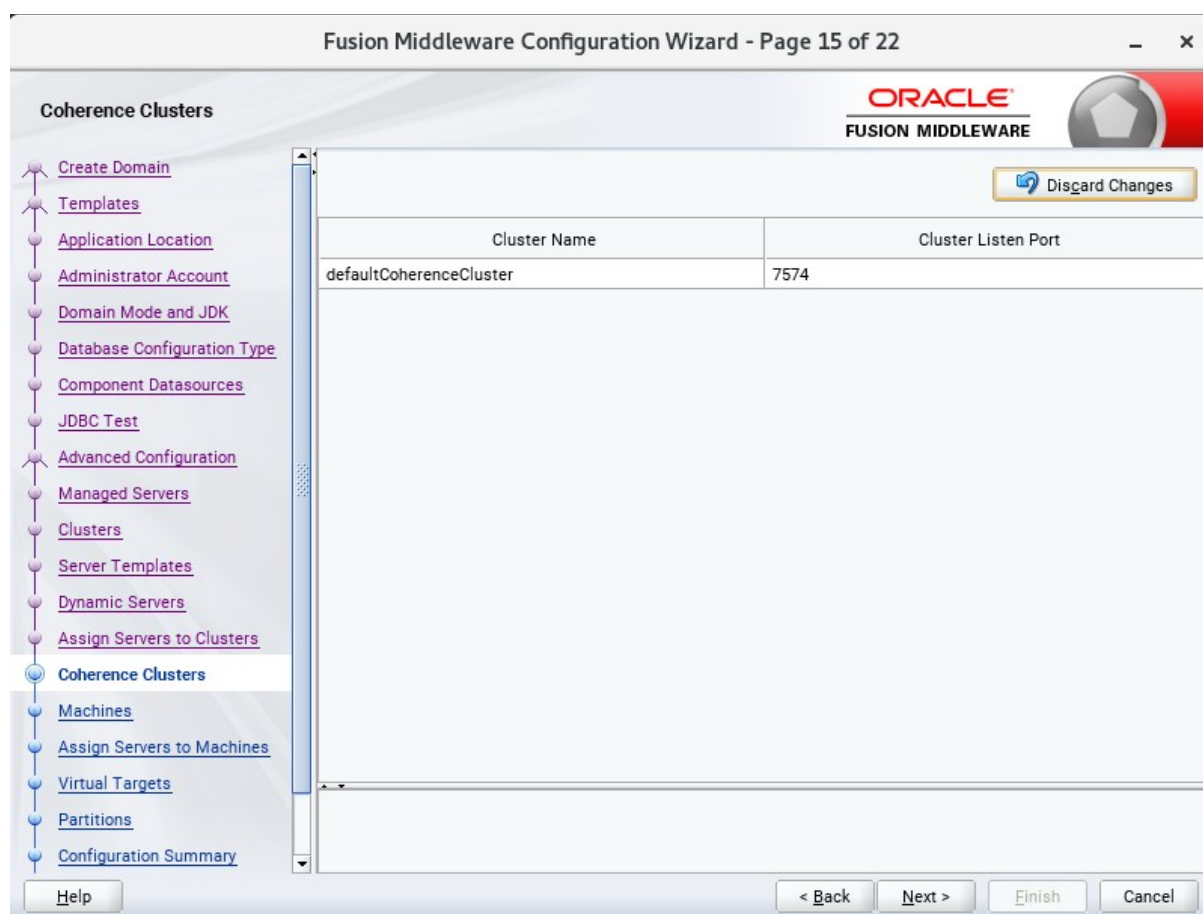
14). The **Assign Servers to Clusters** screen appears.



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.

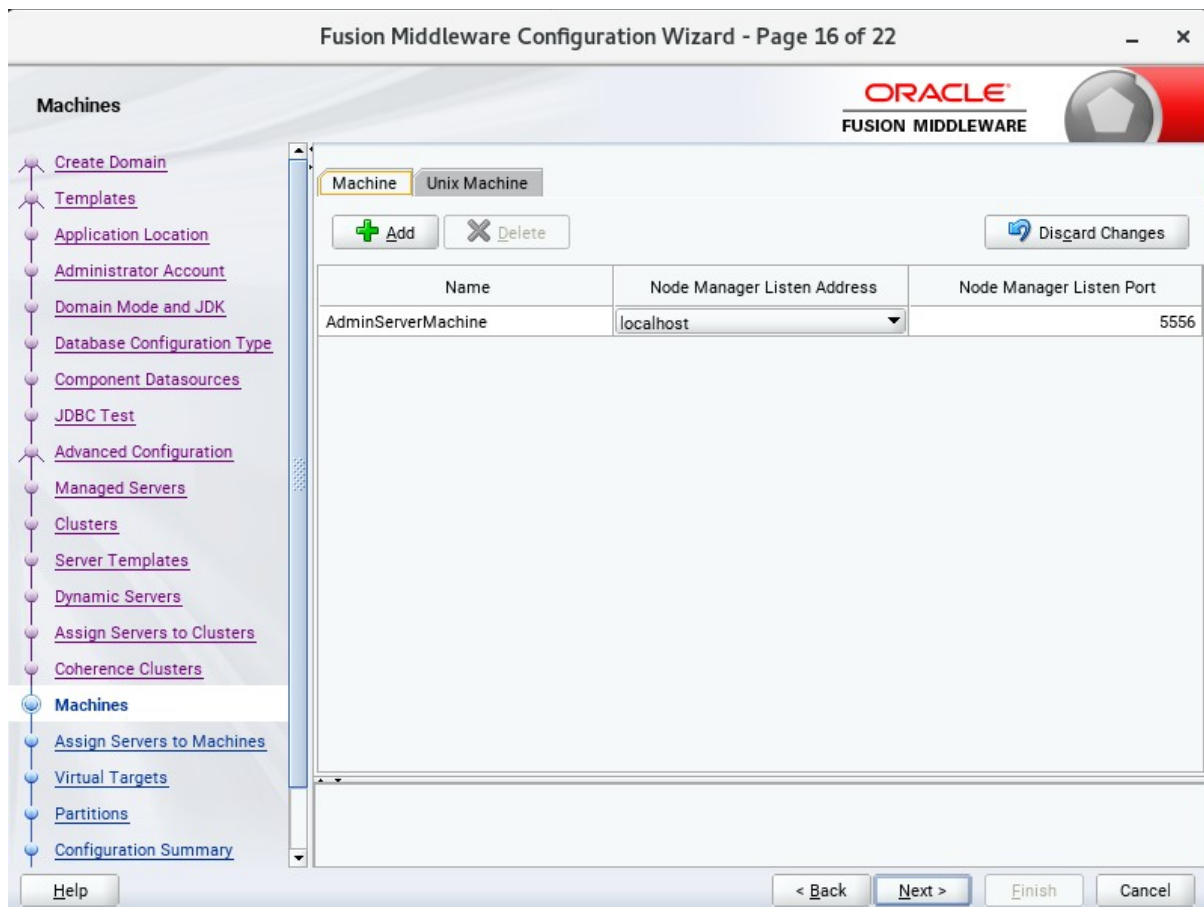


15). The **Coherence Clusters** screen appears.



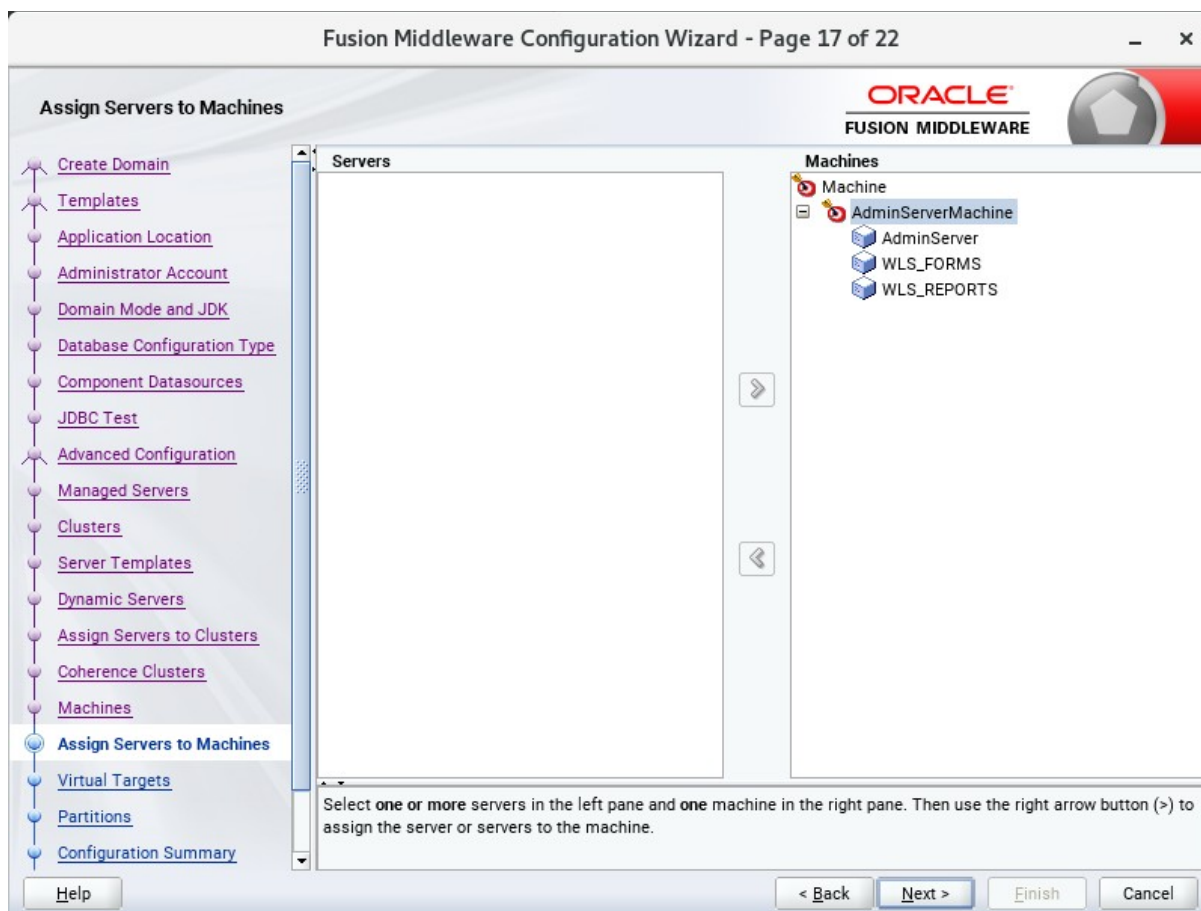
The default values will be appropriate for most cases. Click **Next** to continue.

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



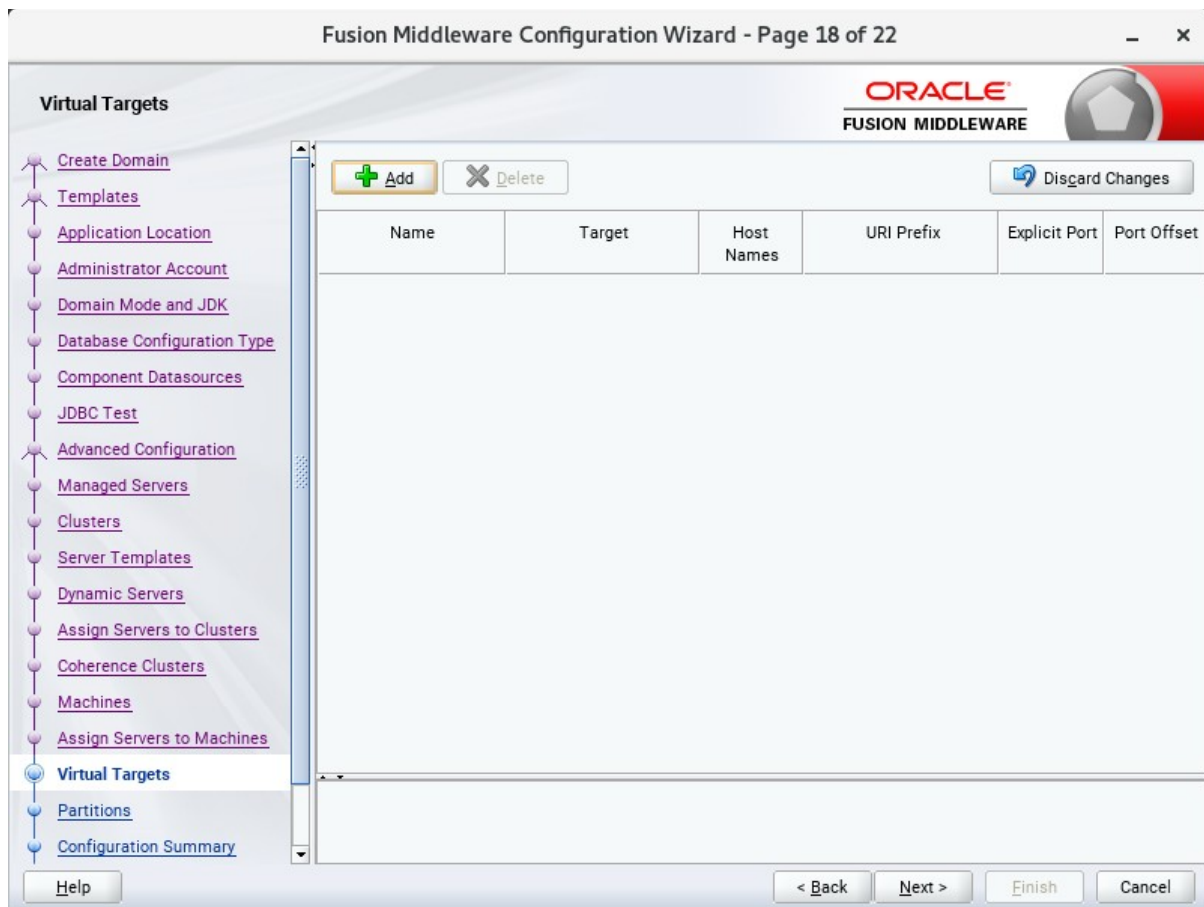
You can use this screen to override the machine name or add additional Machine names for the domain. Click **Next** to continue.

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



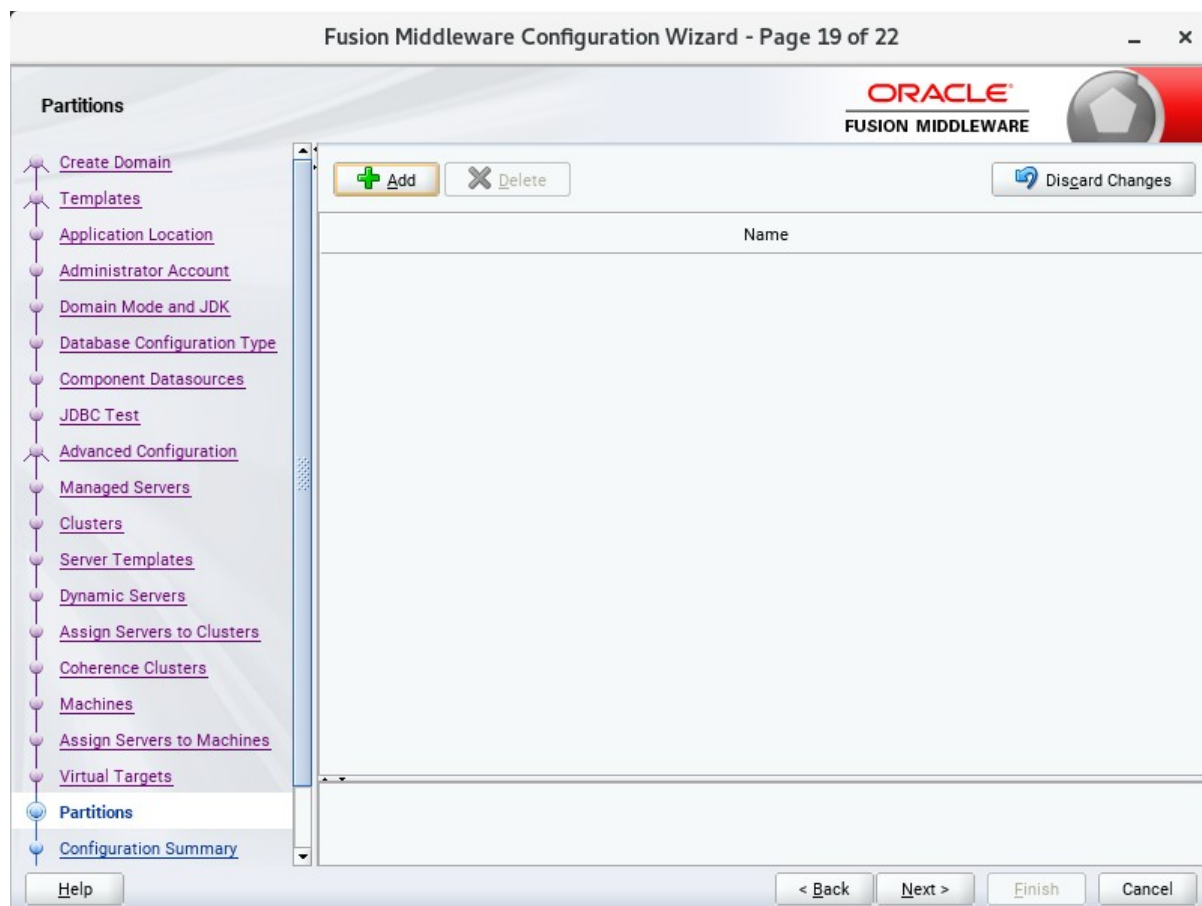
Move the AdminServer to the AdminServerMachine by clicking the '>' button. Click **Next** to continue.

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



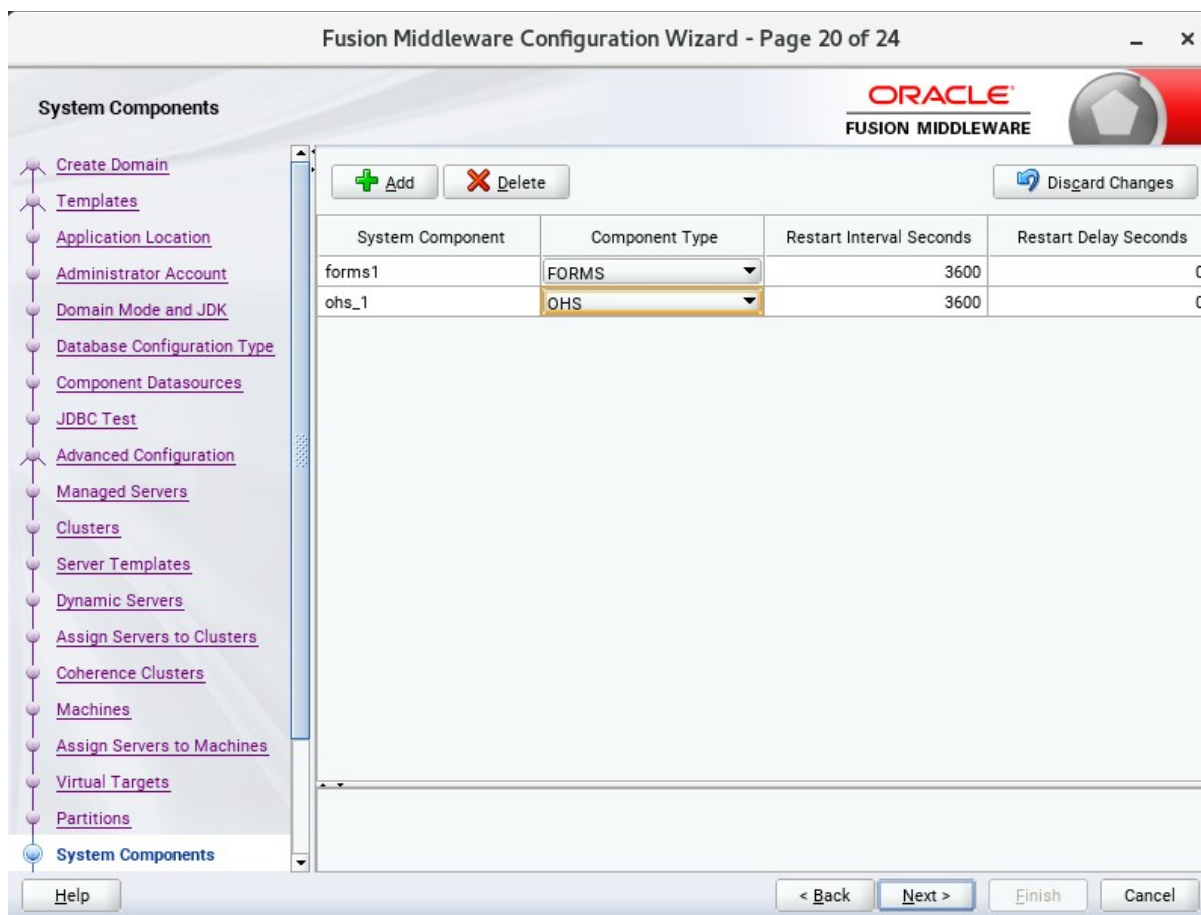
Used with WebLogic Server Partitions. Refer to the WebLogic Server documentation for details. Click **Next** to continue.

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.



Fusion Middleware Configuration Wizard - Page 20 of 24

System Components

ORACLE  
FUSION MIDDLEWARE

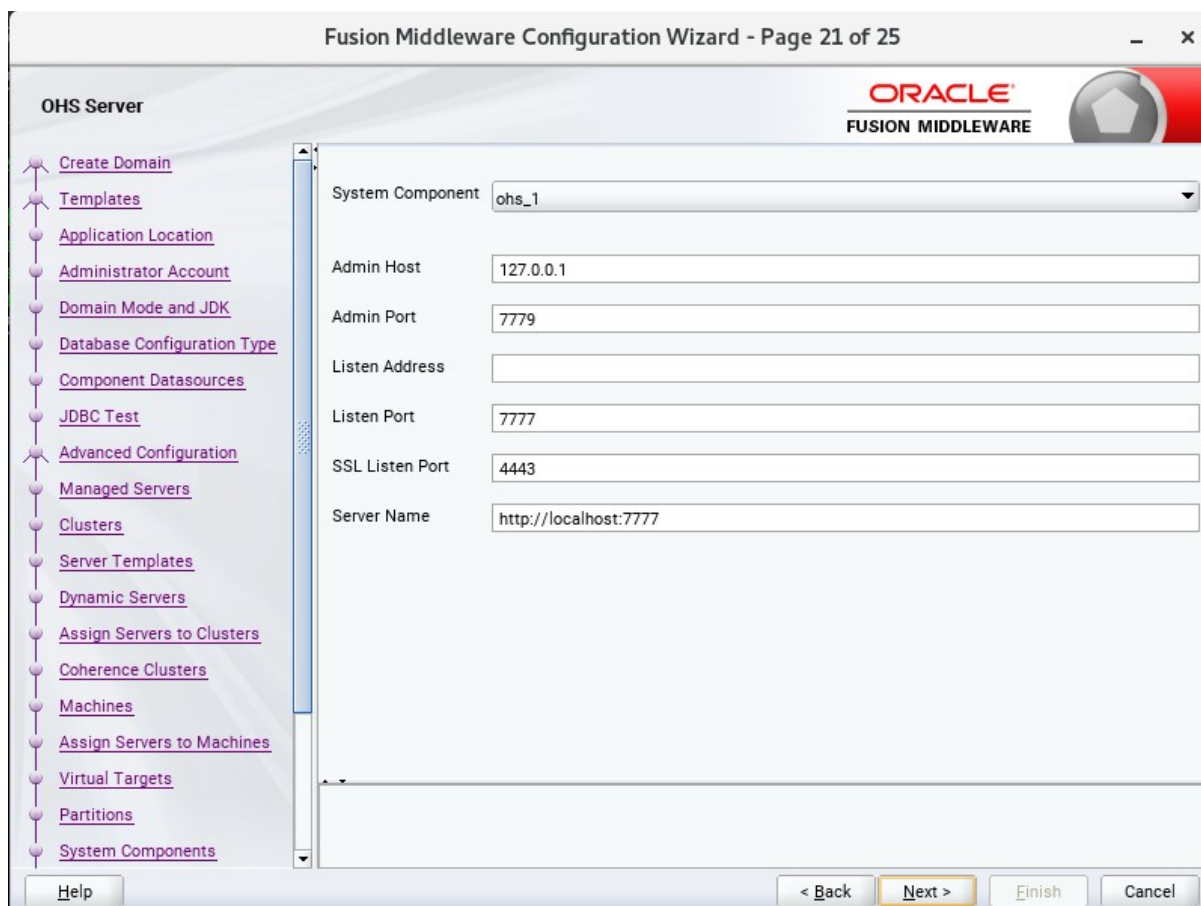
+ Add    X Delete    Discard Changes

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

Help    < Back    Next >    Finish    Cancel

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.



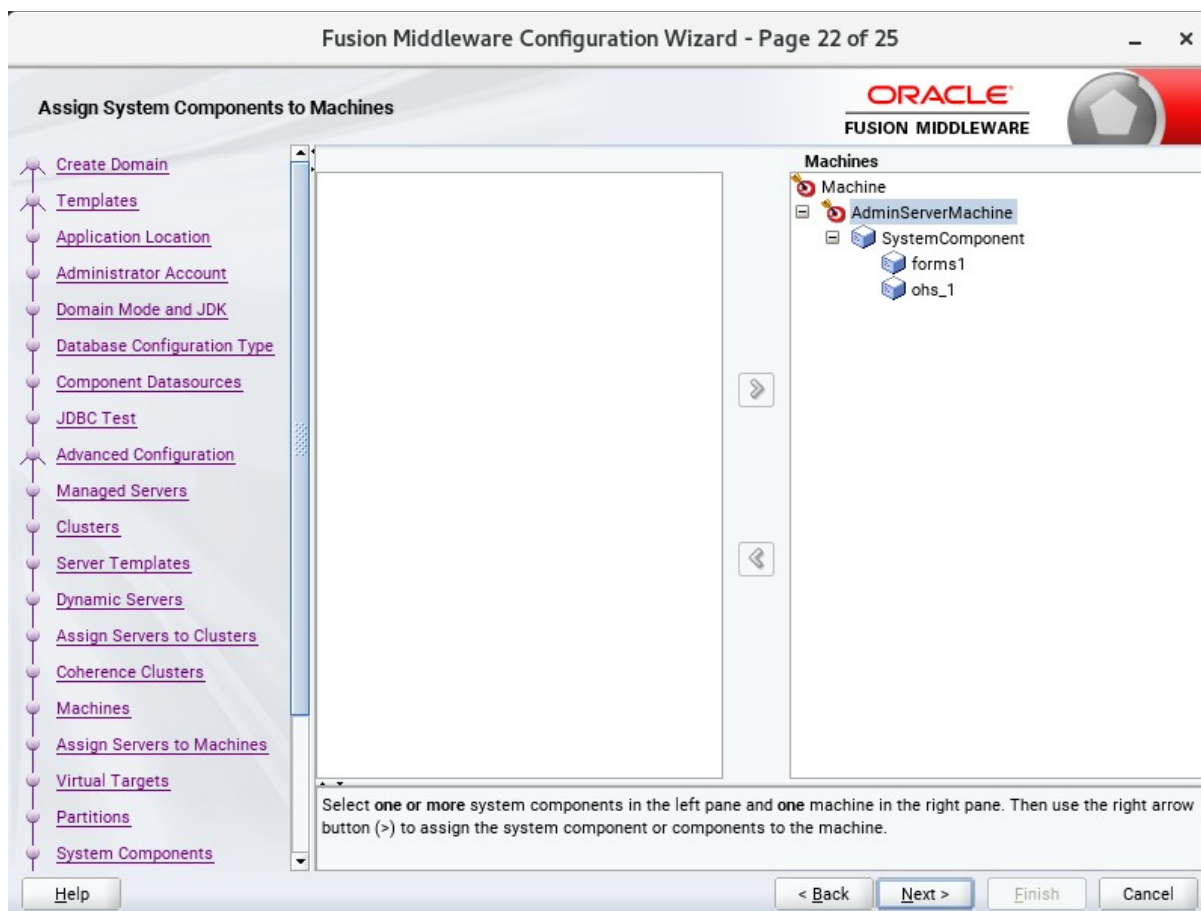
The screenshot displays the 'OHS Server' configuration screen within the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 21 of 25'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a vertical navigation pane lists various configuration steps, with 'OHS Server' being the current step. The main area contains several input fields for configuration parameters:

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

At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted in yellow, indicating it is the recommended action to proceed.

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

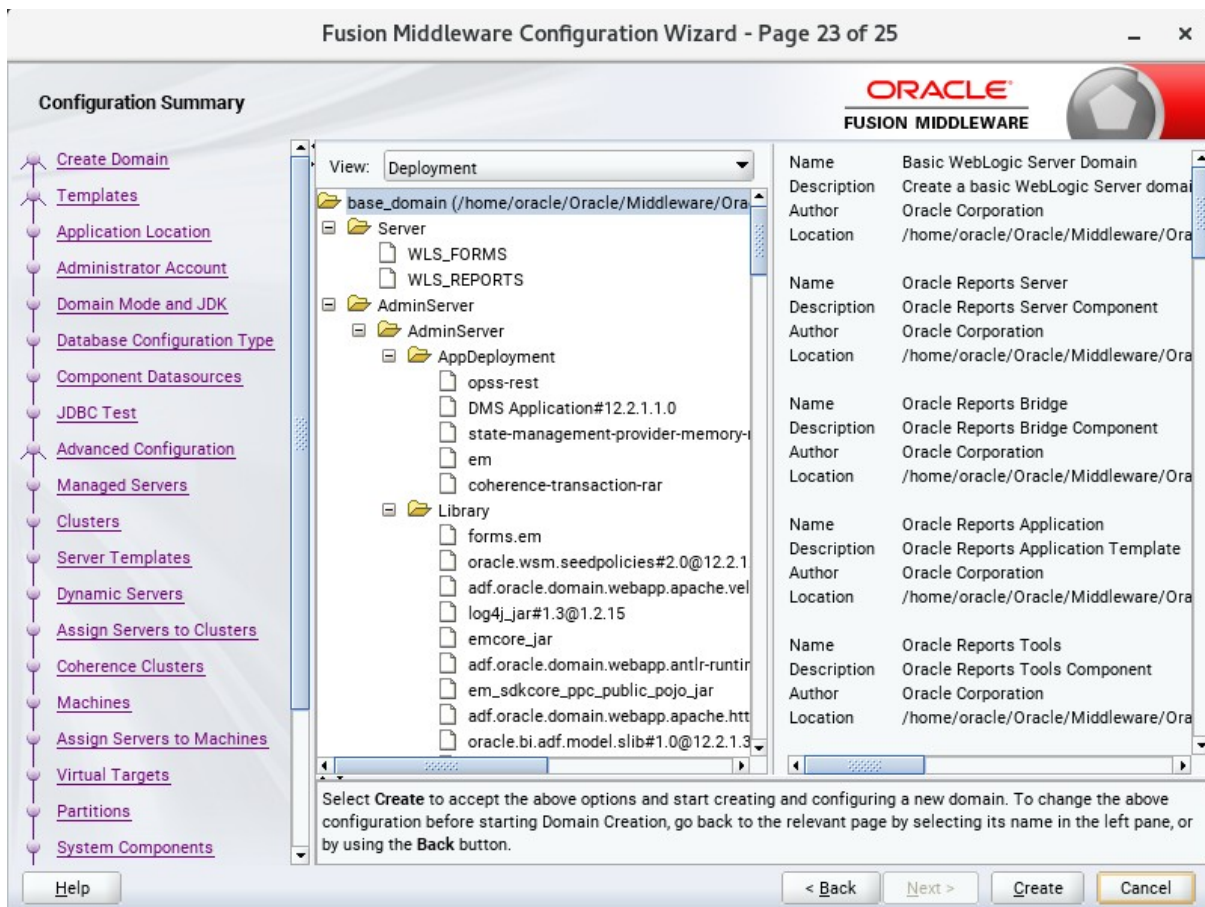
22). The **Assign System Components to Machines** screen appears.



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

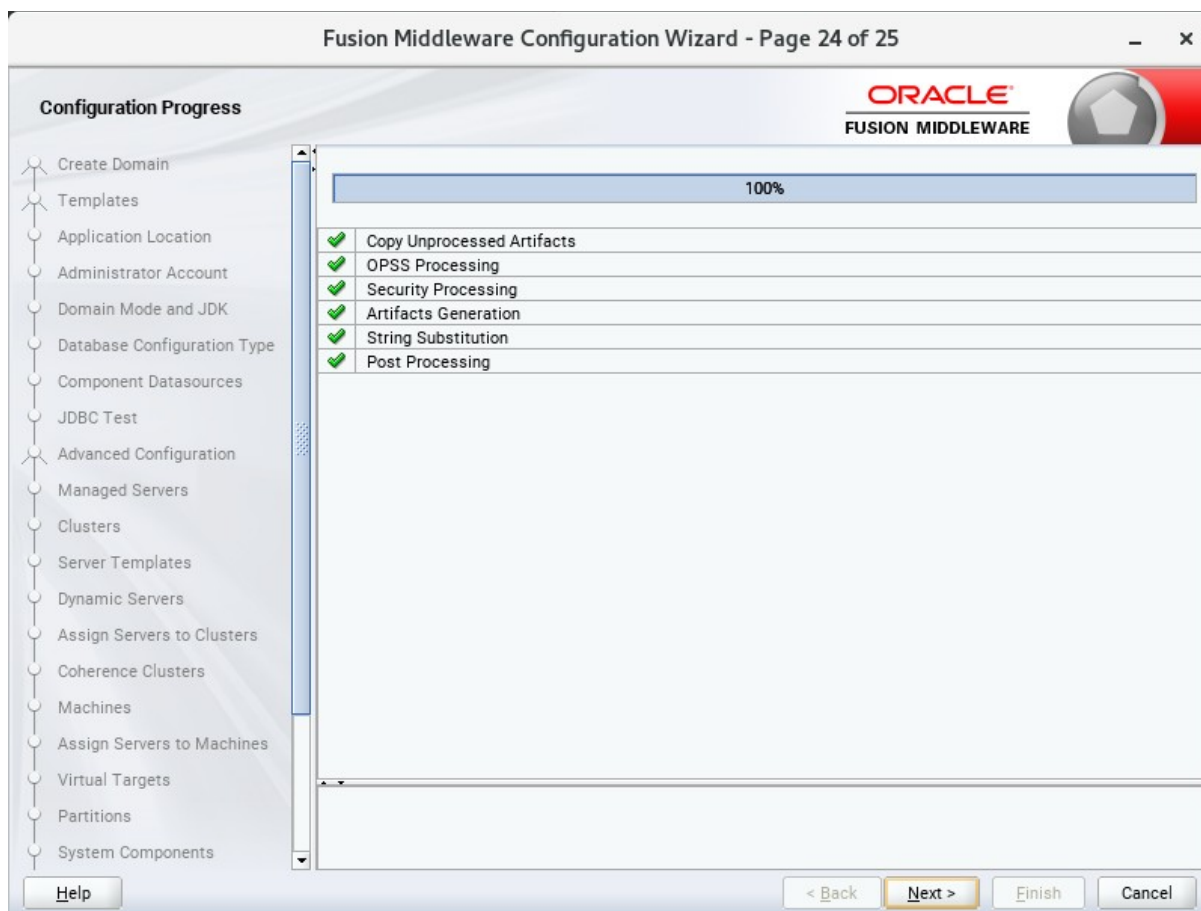


23). The **Configuration Summary** screen appears.



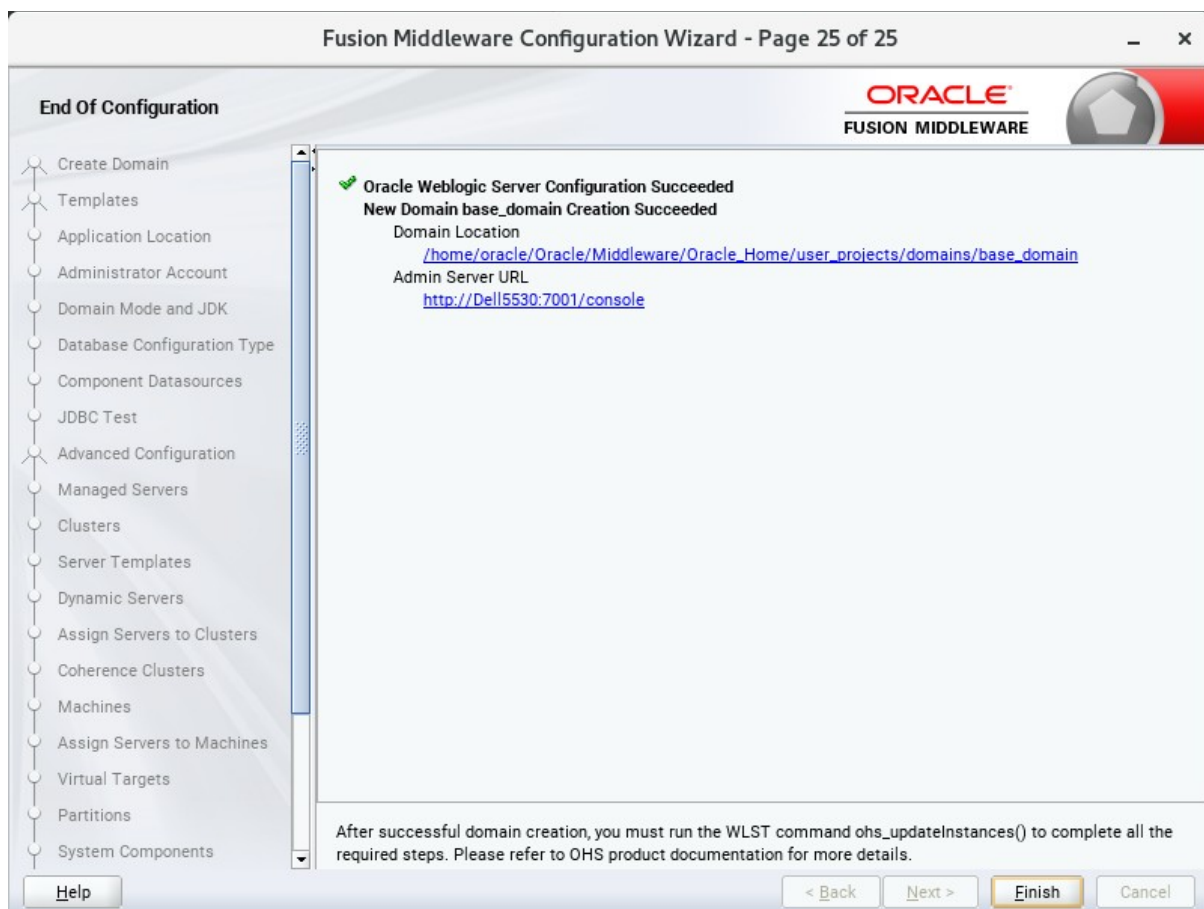
Select **Create** to accept the above options and start creating and configuring a new domain.

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 &`**

```
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home/ORACLE... x oracle@Dell5530:/home/oracle/Or... x oracle@Dell5530:/home/oracle/Or... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> ./startNodeManager.sh > nm.out &
[1] 13865
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
<Feb 21, 2022 4:41:10 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Feb 21, 2022 4:41:10 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Feb 21, 2022 4:41:10 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'>
<Feb 21, 2022 4:41:10 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Feb 21, 2022 4:41:10 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Feb 21, 2022 4:41:10 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
Feb 21, 2022 4:41:11 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.
<Feb 21, 2022 4:41:11 PM GMT+08:00> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1.4.0
```

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

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home... x oracle@Dell5530:/home... x oracle@Dell5530:/home... x oracle@Dell5530:/home... x
2022-02-21 16:47:04.672/271.662 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for q
ueue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/orac
le/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherenc
e-cache-config.xml"
2022-02-21 16:47:04.672/271.662 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for q
ueue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleCon
figurablesCacheFactory
<Feb 21, 2022 4:47:05,237 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Feb 21, 2022 4:47:05,375 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Feb 21, 2022 4:47:05,375 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Feb 21, 2022 4:47:07,522 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multi
ple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<Feb 21, 2022 4:47:07,525 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.>
<Feb 21, 2022 4:47:07,526 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Admi
nistration Server "AdminServer" for domain "base_domain" running in production mode.>
<Feb 21, 2022 4:47:07,527 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 19
2.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Feb 21, 2022 4:47:07,527 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.>
<Feb 21, 2022 4:47:07,528 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.>
<Feb 21, 2022 4:47:07,528 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 19
2.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Feb 21, 2022 4:47:07,528 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.>
<Feb 21, 2022 4:47:07,534 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mo
de.>
<Feb 21, 2022 4:47:07,662 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.
>
2022-02-21 16:47:08.407/275.396 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '12' for q
ueue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over
ReST

```

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

```

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

```

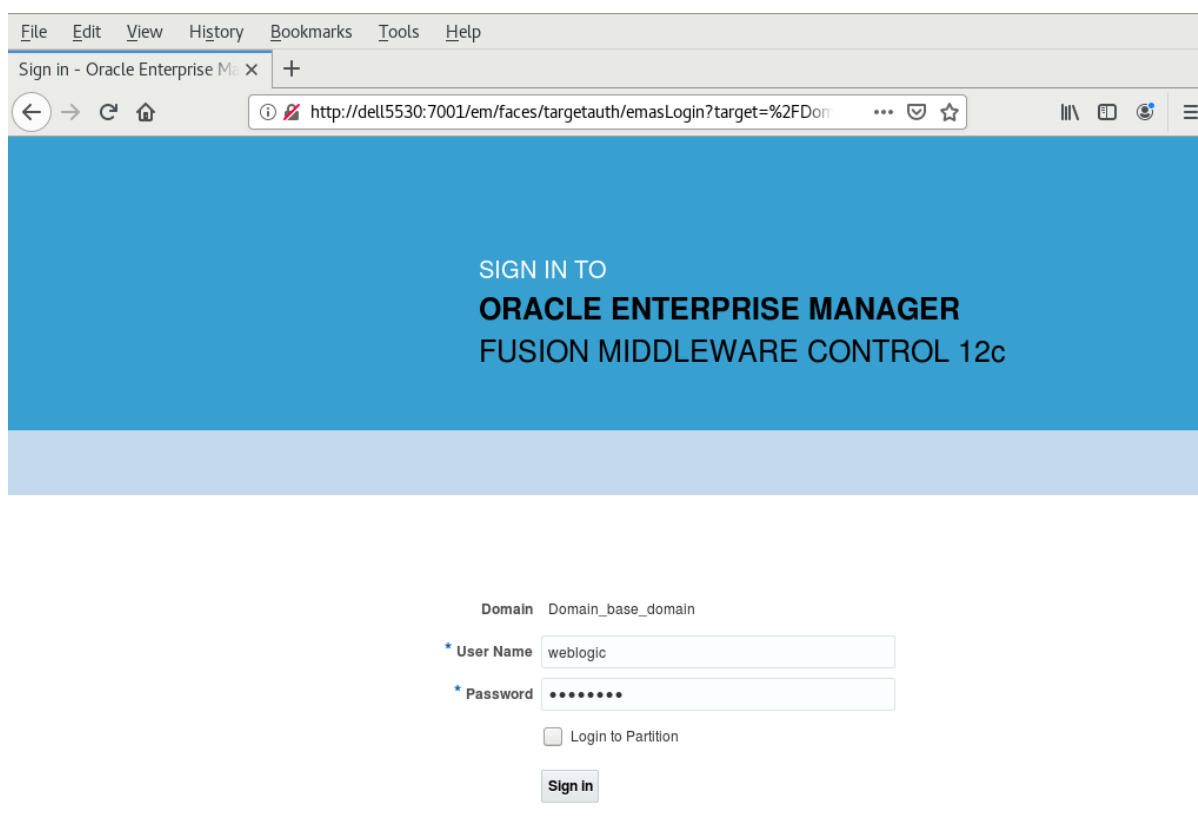
4-3. Verifying the Installed Products and Product Versions. Check the products and product version numbers by running the **opatch lsinventory -detail** command from the **ORACLE\_HOME/OPatch** directory.

Confirmed that OPatch succeeded.

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

1). Access to Enterprise Manager Console.

### Login Page:



File Edit View History Bookmarks Tools Help

Sign in - Oracle Enterprise M... x

http://del15530:7001/em/faces/targetauth/emasLogin?target=%2FDon

SIGN IN TO  
**ORACLE ENTERPRISE MANAGER**  
FUSION MIDDLEWARE CONTROL 12c

Domain Domain\_base\_domain

\* User Name weblogic

\* Password .....

Login to Partition

Sign in

### Home Page:

**ORACLE Enterprise Manager** Fusion Middleware Control 12c

base\_domain (Oracle WebLo...)

http://dell5530:7001/em/faces/as-weblogic-webLogicDomainH

WebLogic Domain | weblogic

base\_domain

WebLogic Domain

Feb 21, 2022 4:52:52 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.

**Serv...**

2 Down  
1 Up

**Administration Server**

Name AdminServer  
Host Dell5530  
Listen Port 7001

**Serv...**

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

**ORACLE Enterprise Manager** Fusion Middleware Control 12c

WLS\_FORMS (Oracle WebLo...)

http://dell5530:7001/em/faces/as-weblogic-webLogicServerHo

WebLogic Domain | weblogic

WLS\_FORMS

WebLogic Server

Start Up Shut Down

Feb 21, 2022 4:58:03 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**

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

**Deployments**

1 Up

**Most Requested**

0  
Requests Processed

**General**

Up Since Feb 21, 2022 4:57:39 PM  
Version 12.2.1.4.0  
State Running  
Health OK ✓  
Server Type Configured  
Cluster cluster\_forms  
CPU Usage (%) 2.22  
Heap Usage (MB) 348.02  
Java Vendor Oracle Corporation  
Java Version 1.8.0\_221

**Response and Load**

Graph showing Request Processing Time (ms) and Requests (per minute) over time.

**Servlets and JSPs**

Active Sessions 0

**EJBs**

Beans in Use 0

http://dell5530:7001/em/faces/as-weblogic-webLogicServerHome?type=weblogic\_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

Feb 21, 2022 5:02:08 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 Feb 21, 2022 5:01:44 PM  
Version 12.2.1.4.0  
State Shutdown  
Health OK ✓  
Server Type Configured  
Cluster cluster\_reports  
CPU Usage (%) 1.57  
Heap Usage (MB) 327.73  
Java Vendor Oracle Corporation  
Java Version 1.8.0\_221

**Response and Load**  
Graph showing Request Processing Time (ms) and Requests (per minute) from 04:48 PM to 05:00 PM on February 21, 2022.

**Servlets and JSPs**  
Active Sessions 0

**EJBs**  
Beans in Use 0

http://dell5530:7001/em/faces/as-weblogic-webLogicServerHome?type=w...ogic\_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

Feb 21, 2022 5:02:25 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

**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	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 component 'ohs\_1'. The page includes several sections:

- Monitoring:** Shows CPU Usage (%) at 0.00 and Memory Usage (%) at 0.00.
- Virtual Hosts:** Shows 0 Virtual Hosts.
- Modules:** Shows 0 Modules.
- General:**
  - Component Name: ohs\_1
  - Version: 12.2.1.4.0
  - State: Running
  - Host: Dell5530
  - Ports: 7777 4443 127.0.0.1:7779
  - Machine Name: AdminServerMachine
  - Auto Restart:
  - Oracle Home: /home/oracle/Oracle/Middleware/Oracle\_Home
- 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 and Load:** A line graph showing Request Processing Time (mili seconds) and Domain\_base\_domain/base\_domain/ohs\_1:Request Throu... over time.
- CPU and Memory Usage:** A line graph showing CPU and Memory usage over time.

### Verified ohs1 URLs can be accessed.

The screenshot shows the Oracle HTTP Server 12c landing page. It features a central diagram illustrating the architecture and components of the server:

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

File Edit View History Bookmarks Tools Help

ohs\_1 (Oracle HTTP Server) - x Oracle HTTP Server 12c x Oracle HTTP Server 12c x +

https://dell5530:4443/ 90%

---

**ORACLE** Oracle HTTP Server 12c

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

The diagram illustrates the Oracle HTTP Server 12c architecture. On the left, four categories of tools are listed: Process Management and HA, Certificate management, Automation, and Test to Production, all supported by FMW Lifecycle Tools. These tools feed into the Oracle HTTP Server (OHS) component. The OHS handles Local Content and is associated with JS and HTML. It connects to Audit Control, which in turn feeds into Authentication and Authorization. This is further supported by Identity Management. The server then serves Fusion Middleware Applications, with Load Balancing distributed across multiple server instances. The entire system is managed, monitored, and diagnosed by Enterprise Manager.

File Edit View History Bookmarks Tools Help

ohs\_1 (Oracle HTTP Server) - x Oracle HTTP Server 12c x Oracle HTTP Server 12c x Oracle HTTP Server 12c x +

https://127.0.0.1:7779/ ... ☆

---

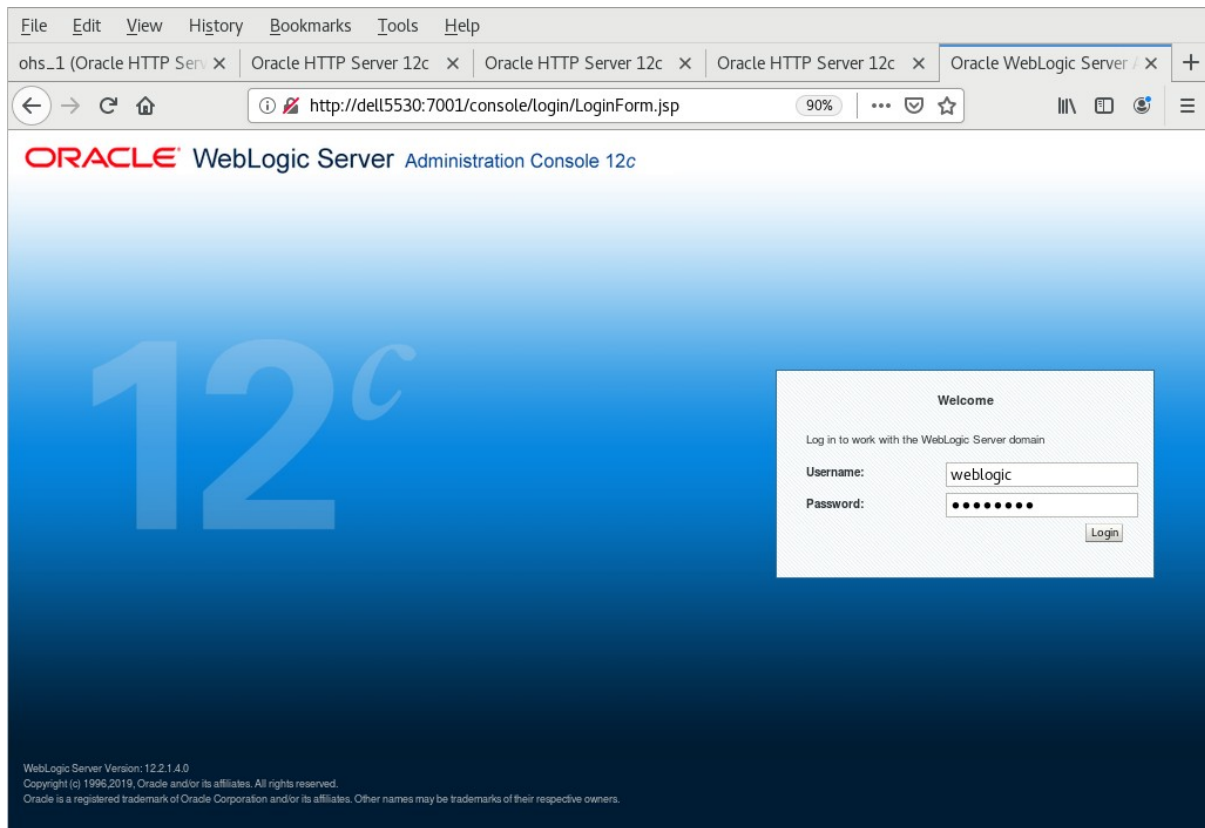
**ORACLE** Oracle HTTP Server 12c

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

This diagram is identical to the one above, showing the Oracle HTTP Server 12c architecture. It details the flow from FMW Lifecycle Tools through OHS, Audit Control, Authentication, and Identity Management to Fusion Middleware Applications, all managed by Enterprise Manager.

## 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 `http://del15530:7001/console/console.portal?_nfpb=true&`. The page title is "ORACLE WebLogic Server Administration Console 12c". The main content area is titled "Home Page" and includes sections for "Information and Resources", "Domain Configurations", "Environment", and "Services". A left sidebar contains "Change Center", "Domain Structure", "How do I...", and "System Status".

### Viewing the summary of servers:

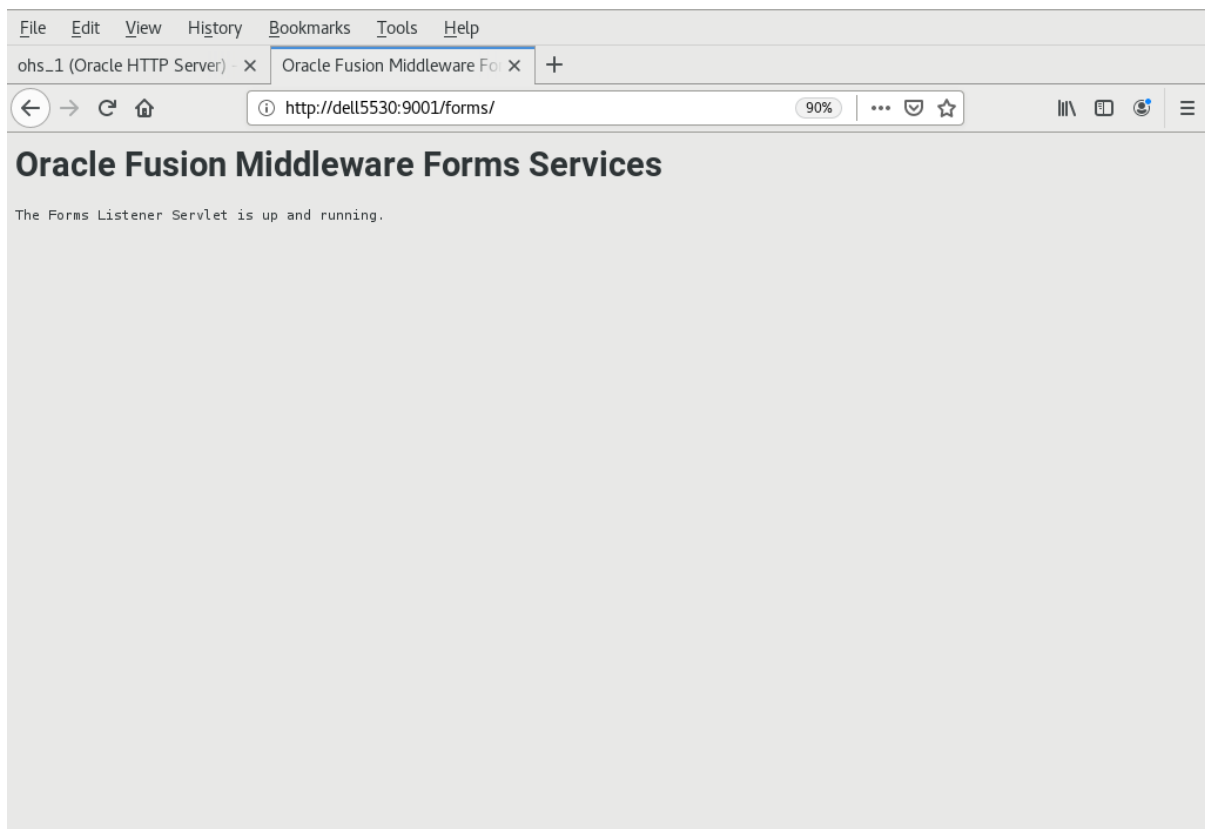
The screenshot shows the "Summary of Servers" page in the Oracle WebLogic Server Administration Console. The browser address bar displays `http://del15530:7001/console/console.portal?_nfpb=true&`. The page title is "ORACLE WebLogic Server Administration Console 12c". The main content area is titled "Summary of Servers" and includes a table of servers. A left sidebar contains "Change Center", "Domain Structure", "How do I...", and "System Status".

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.

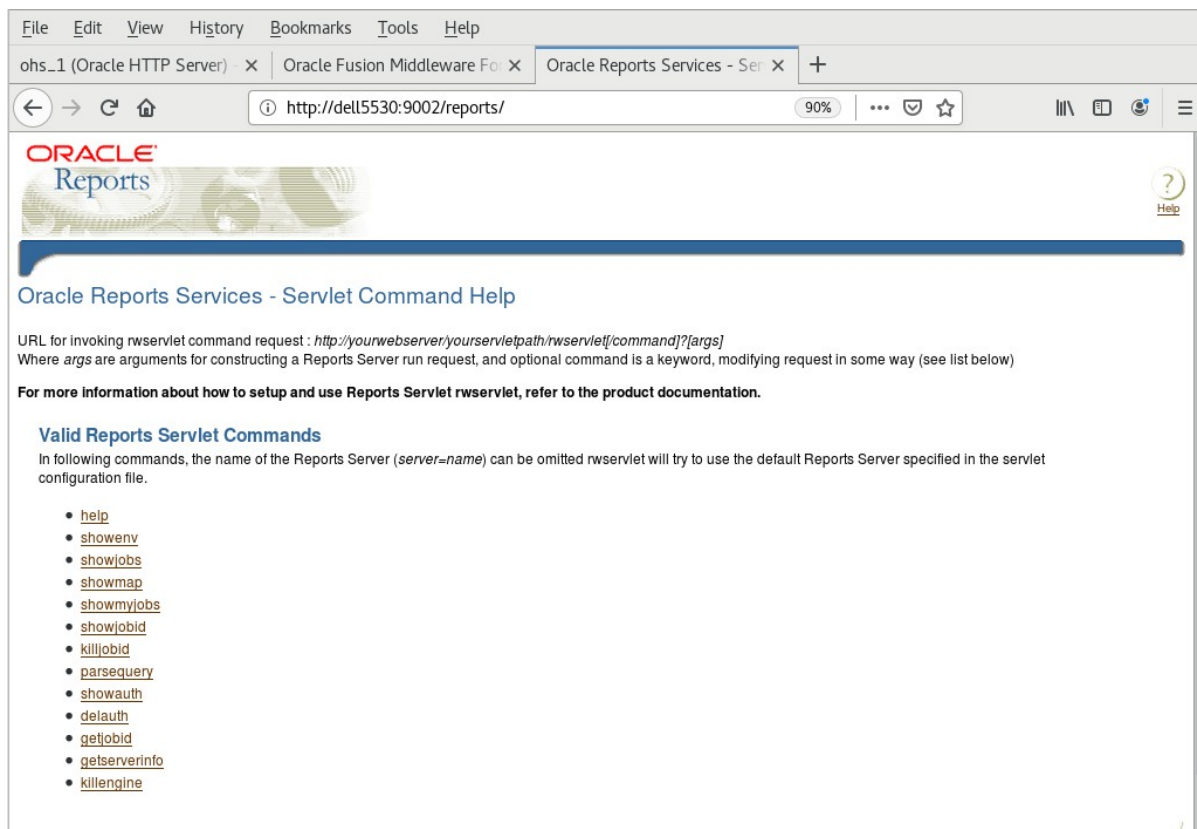
**Servers (Filtered - More Columns Exist)**

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 help icon, and the following text:

URL for invoking `rwsservlet` command request : `http://yourwebserver/yourervletpath/rwsservlet[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 `rwsservlet`, refer to the product documentation.**

**Valid Reports Servlet Commands**

In following commands, the name of the Reports Server (`server=name`) can be omitted `rwsservlet` 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](#)

**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 12 SP5 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'

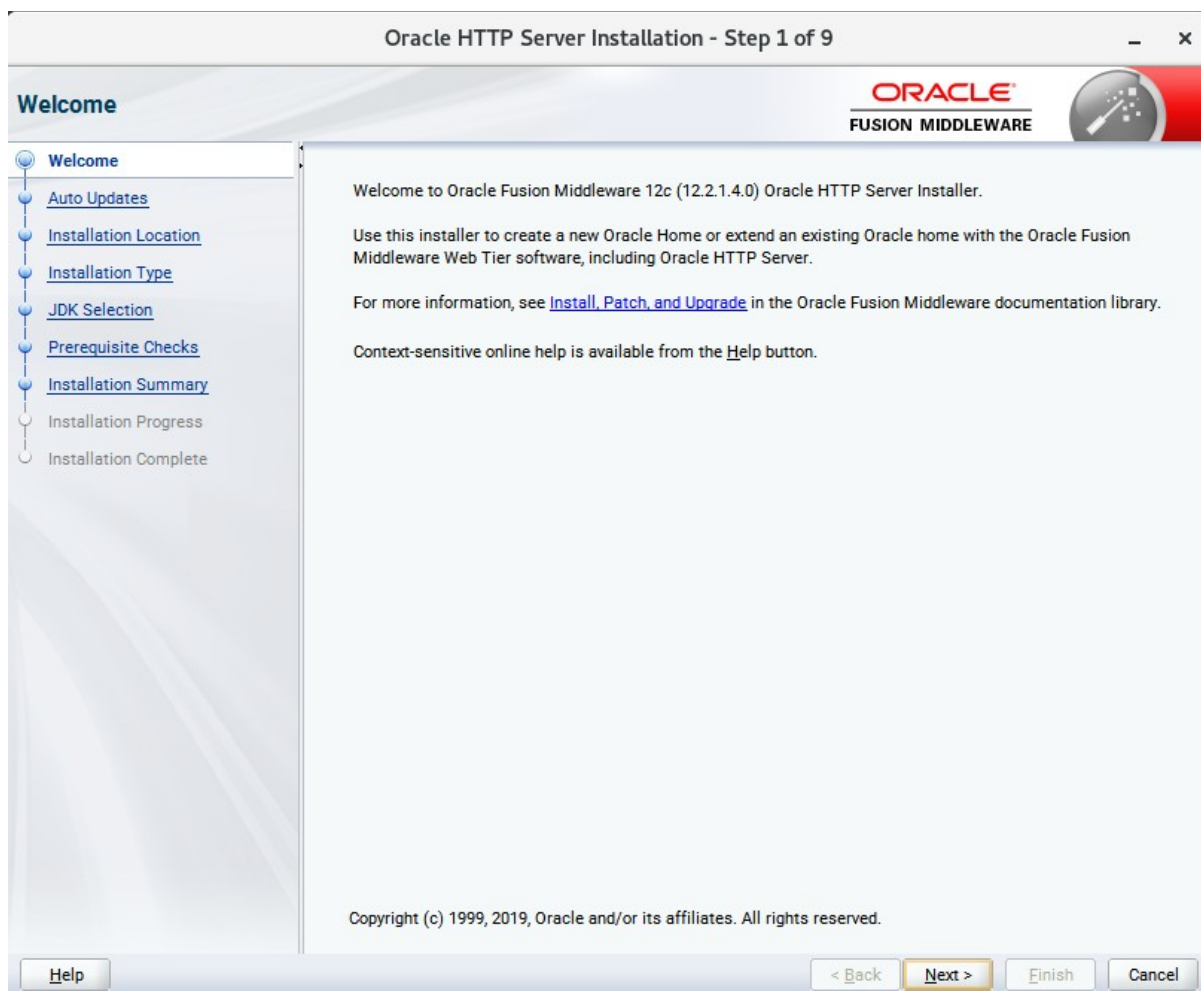
**For the actual installation, follow the steps below:**

#### 1). Installation Inventory Setup.

The screenshot shows the 'Installation Inventory Setup' window for Oracle Fusion Middleware 12c HTTP Server (OHS). The window title is 'Oracle Fusion Middleware 12c HTTP Server (OHS) Installation'. The main heading is 'Installation Inventory Setup' with the Oracle Fusion Middleware logo. Below the heading, there are two sections: 'Central Inventory Directory' and 'Central Inventory Pointer File'. In the 'Central Inventory Directory' section, the 'Inventory Directory' field is set to '/home/oracle/orainventory' and the 'Operating System Group' is set to 'oinstall'. A 'Browse' button is next to the directory field. The 'Central Inventory Pointer File' section contains instructions to click OK to create a script (createCentrallInventory.sh) in the inventory directory.

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.

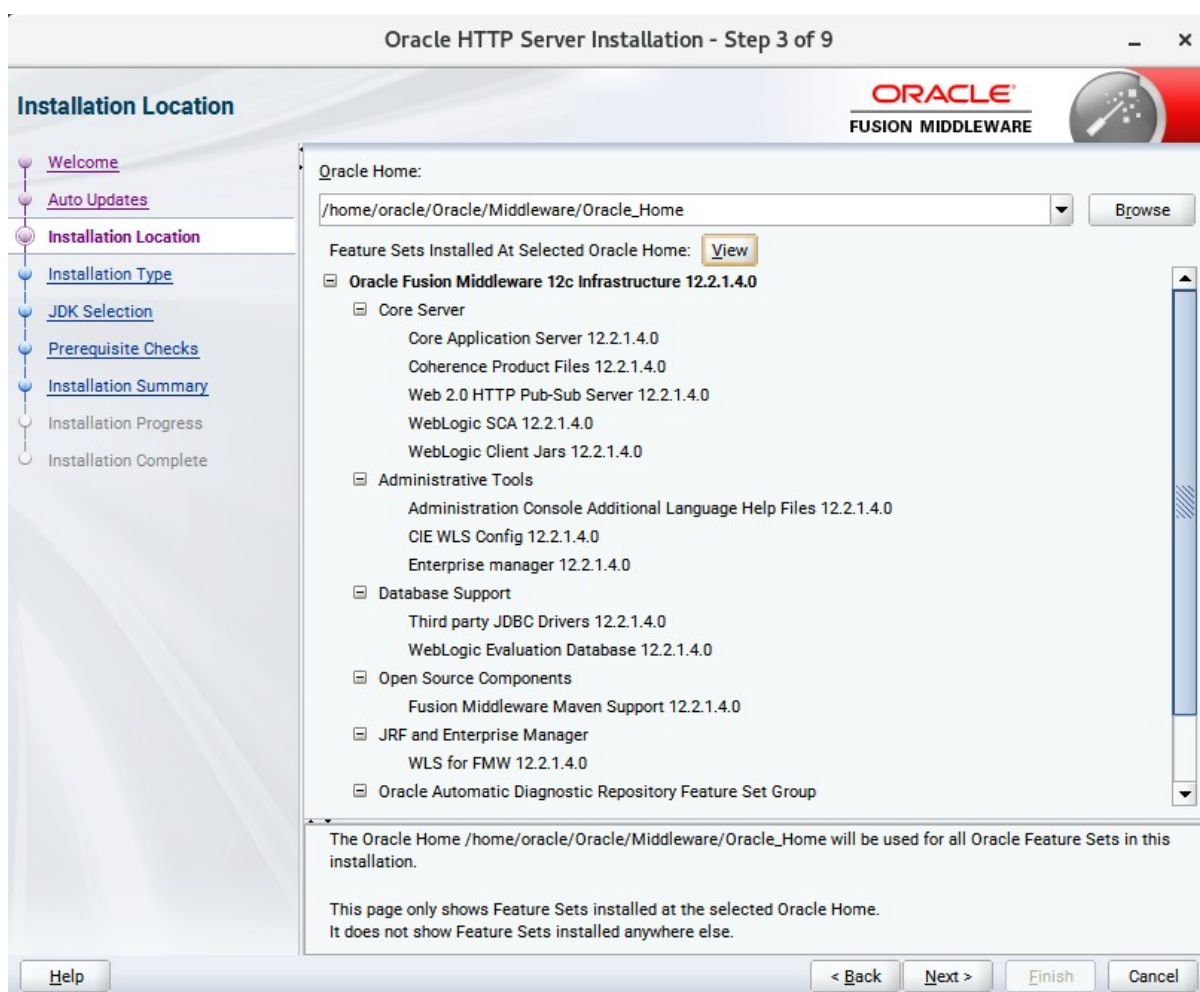


2). The **Auto Updates** page appears.

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

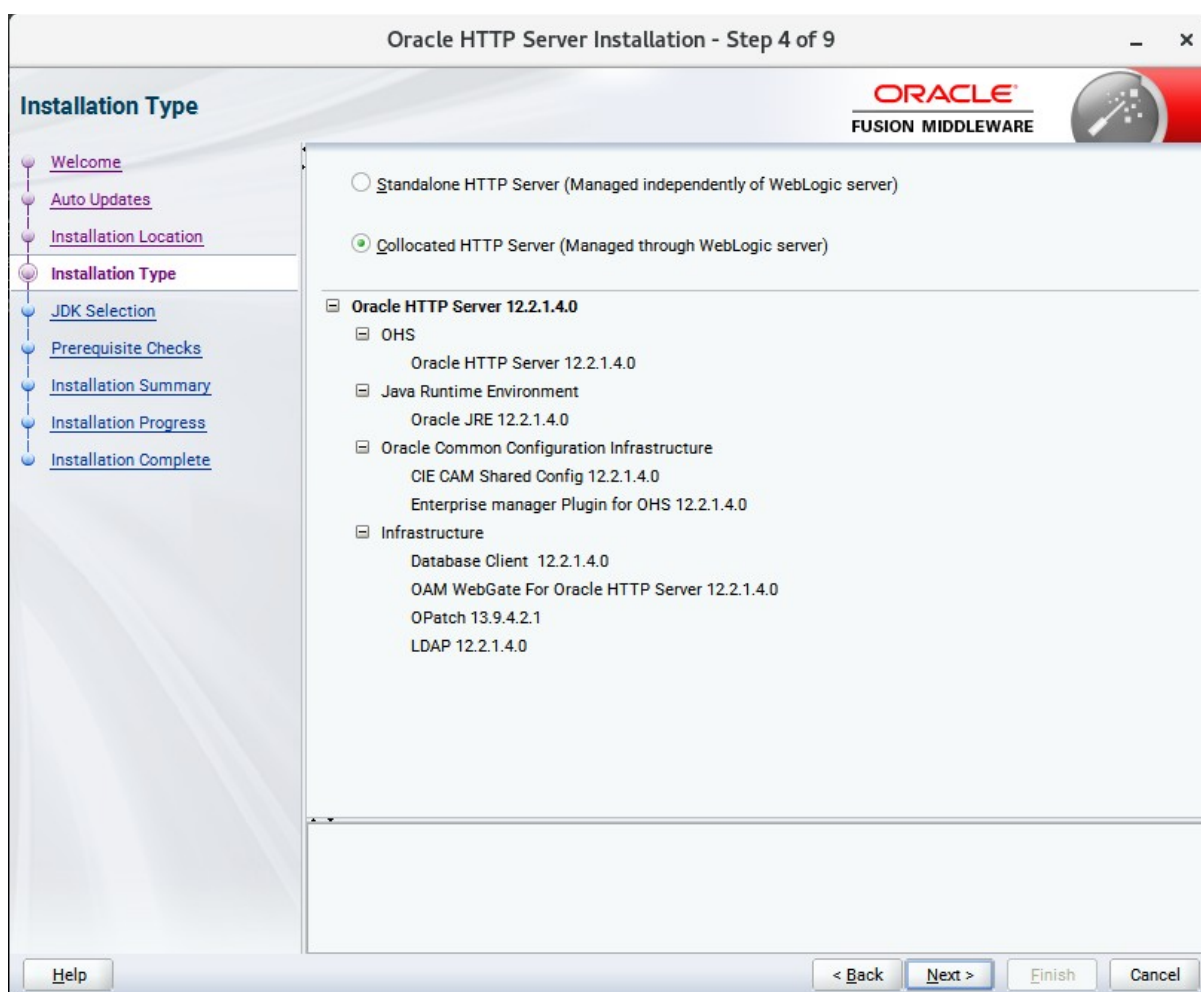
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



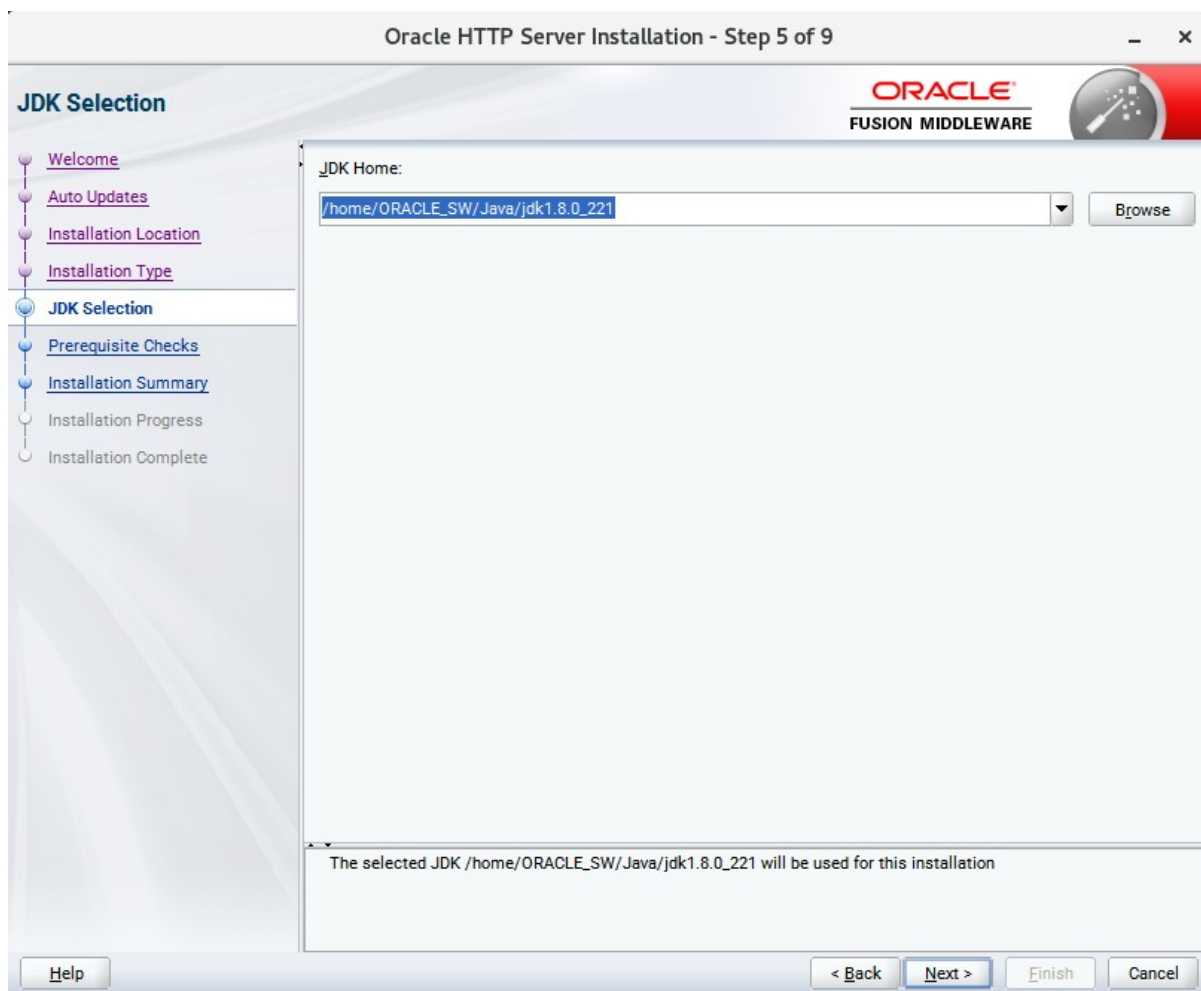
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



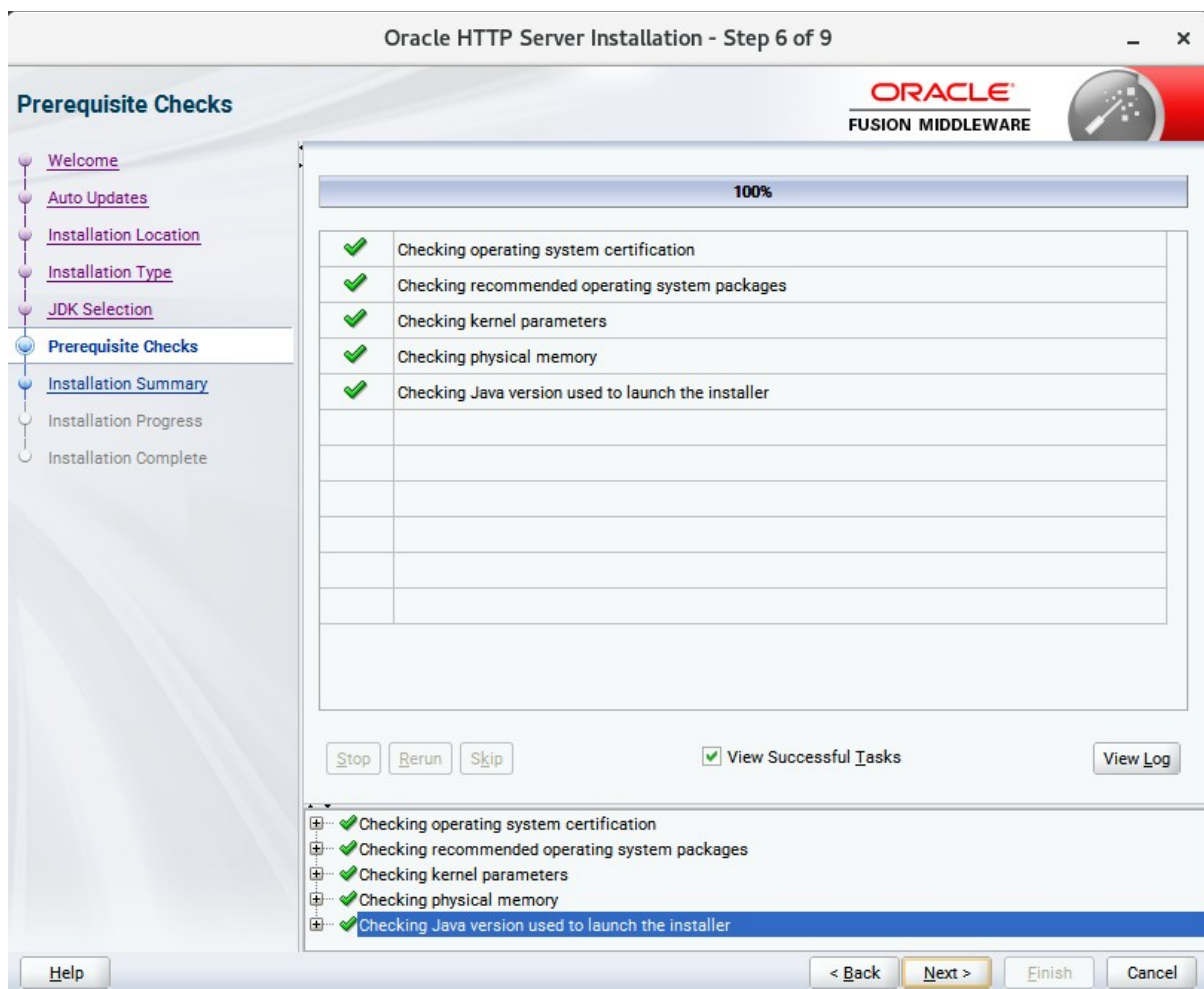
Selected **Collocated HTTP Server (Managed through WebLogic server)** to configure Oracle HTTP Server in a WebLogic Server Domain. (Alternative, select **Standalone HTTP Server (Managed independently of WebLogic server)** in the Installation Type screen to configure Oracle HTTP Server in a Standalone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

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



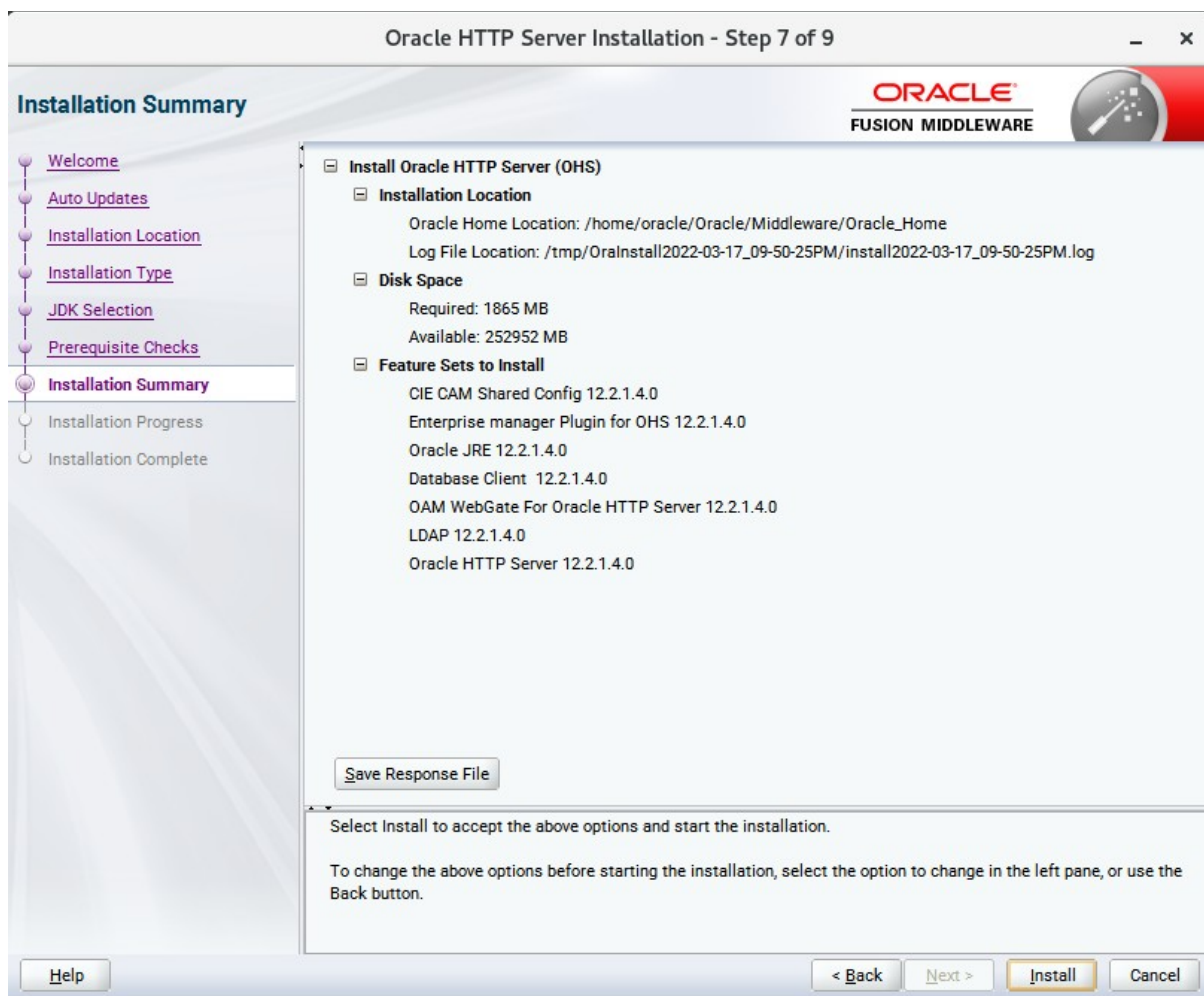
The selected JDK will be used for this installation. Click **Next** to continue.

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



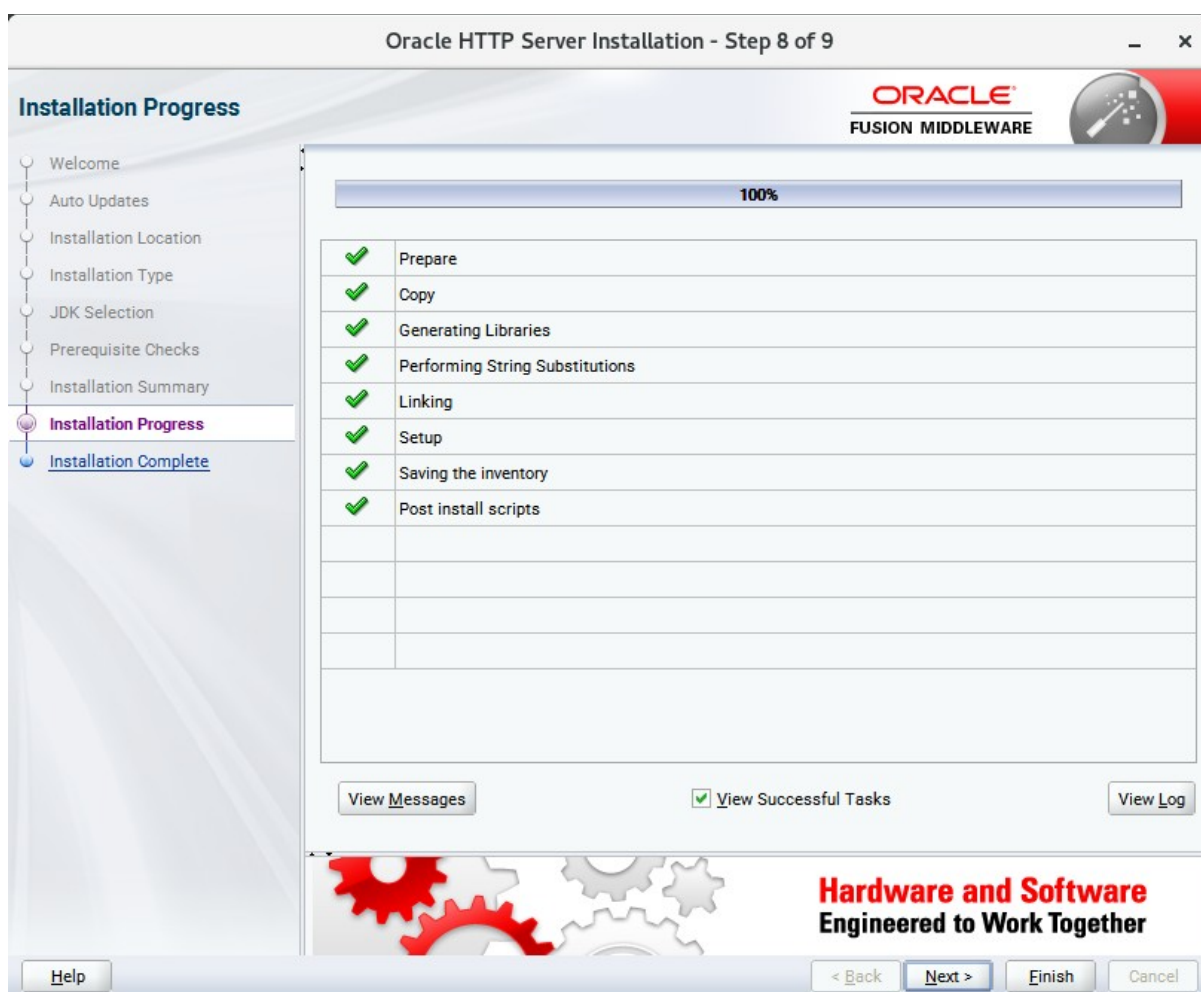
Prerequisite Checks results will be shown as above,click **Next** to continue.

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



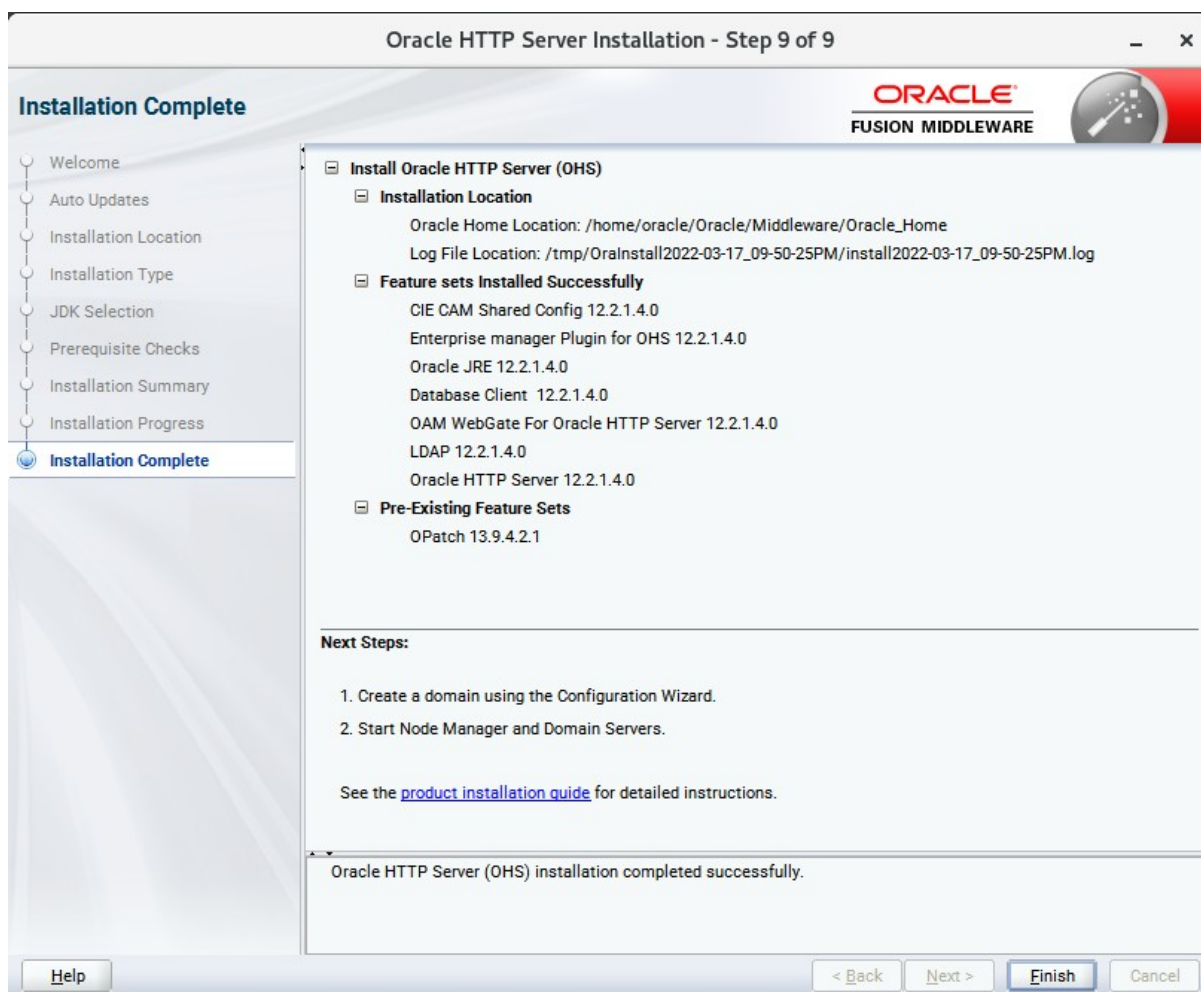
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.



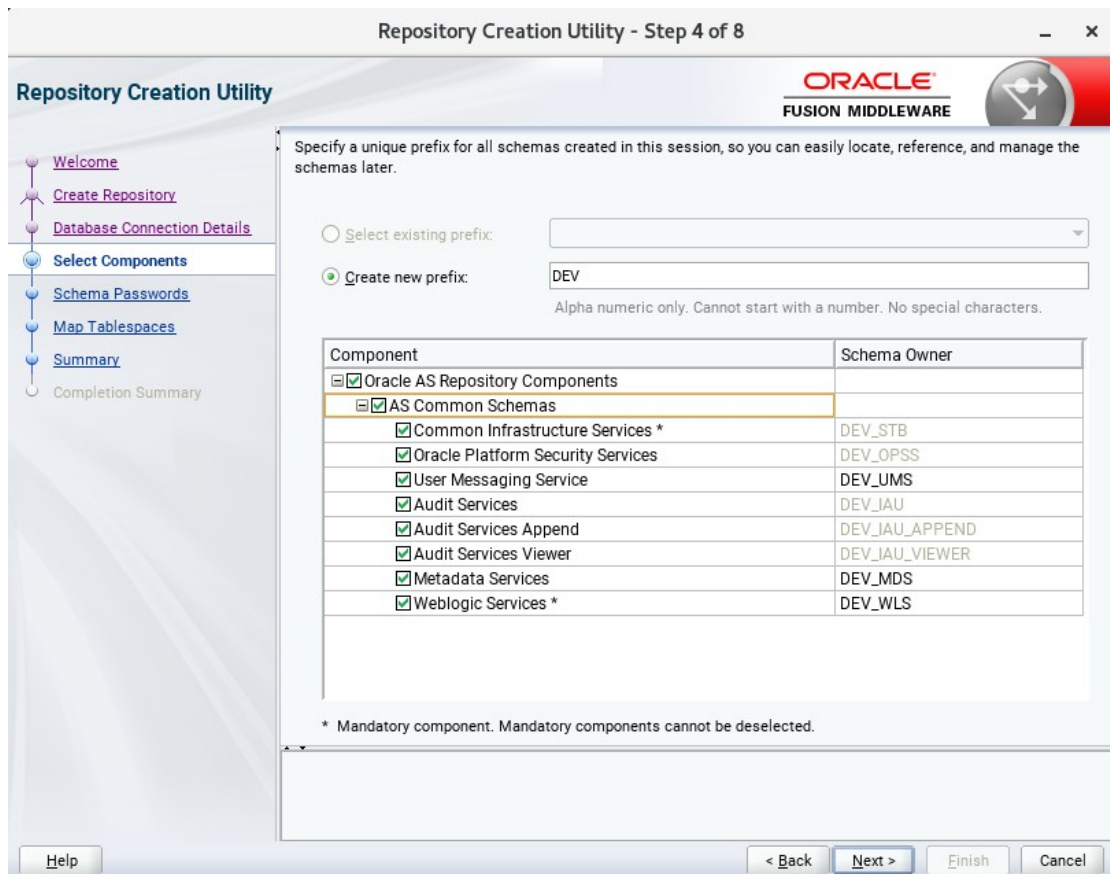
Click **Finish** to dismiss the installer.



## 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 WebTier Http Server.

**Screenshot: Database schemas creating for Oracle WebTier Http Server.**



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

Ensure the schema creation is successful.

**Repository Creation Utility - Step 8 of 8**

---

**Repository Creation Utility**
**ORACLE**  
FUSION MIDDLEWARE

- 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: 6 minutes 21 seconds

RCU Logfile: /tmp/RCU2022-03-17\_22-15\_1207960419/logs/rcu.log  
 Component Log Directory: /tmp/RCU2022-03-17\_22-15\_1207960419/logs  
 View Log: [rcu.log](#)

Prefix for (prefixable) Schema DEV  
 Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:10.758(sec)	<a href="#">stb.log</a>
Oracle Platform Security Services	Success	02:09.273(min)	<a href="#">opss.log</a>
User Messaging Service	Success	00:34.752(sec)	<a href="#">ucsums.log</a>
Audit Services	Success	01:00.726(min)	<a href="#">iau.log</a>
Audit Services Append	Success	00:09.627(sec)	<a href="#">iau_append.log</a>
Audit Services Viewer	Success	00:09.668(sec)	<a href="#">iau_viewer.log</a>
Metadata Services	Success	00:25.325(sec)	<a href="#">mds.log</a>
Weblogic Services	Success	01:06.873(min)	<a href="#">wls.log</a>

[Help](#)

[< Back](#)
[Next >](#)
[Create](#)
[Close](#)

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

3-1. In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE\_HOME/oracle\_common/common/bin** directory.

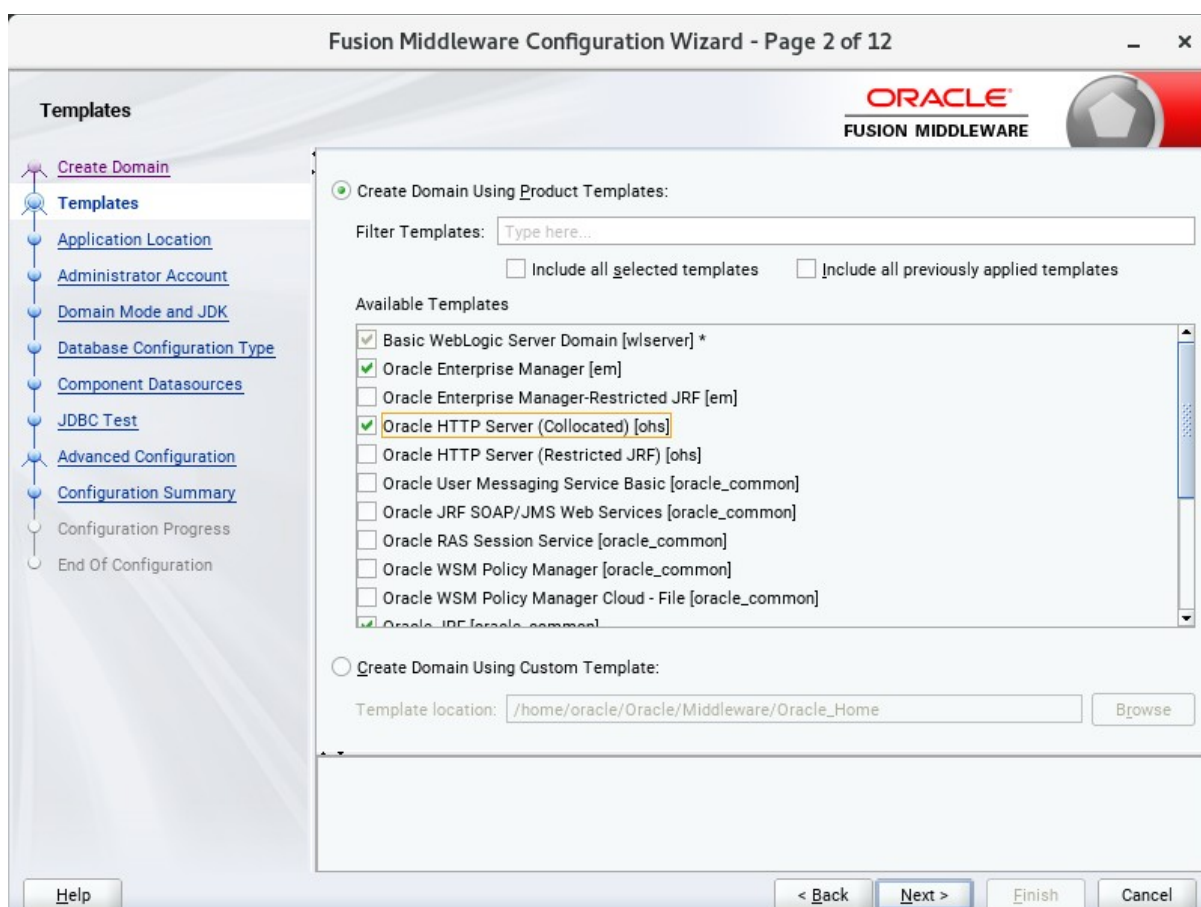
Follow these steps:

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



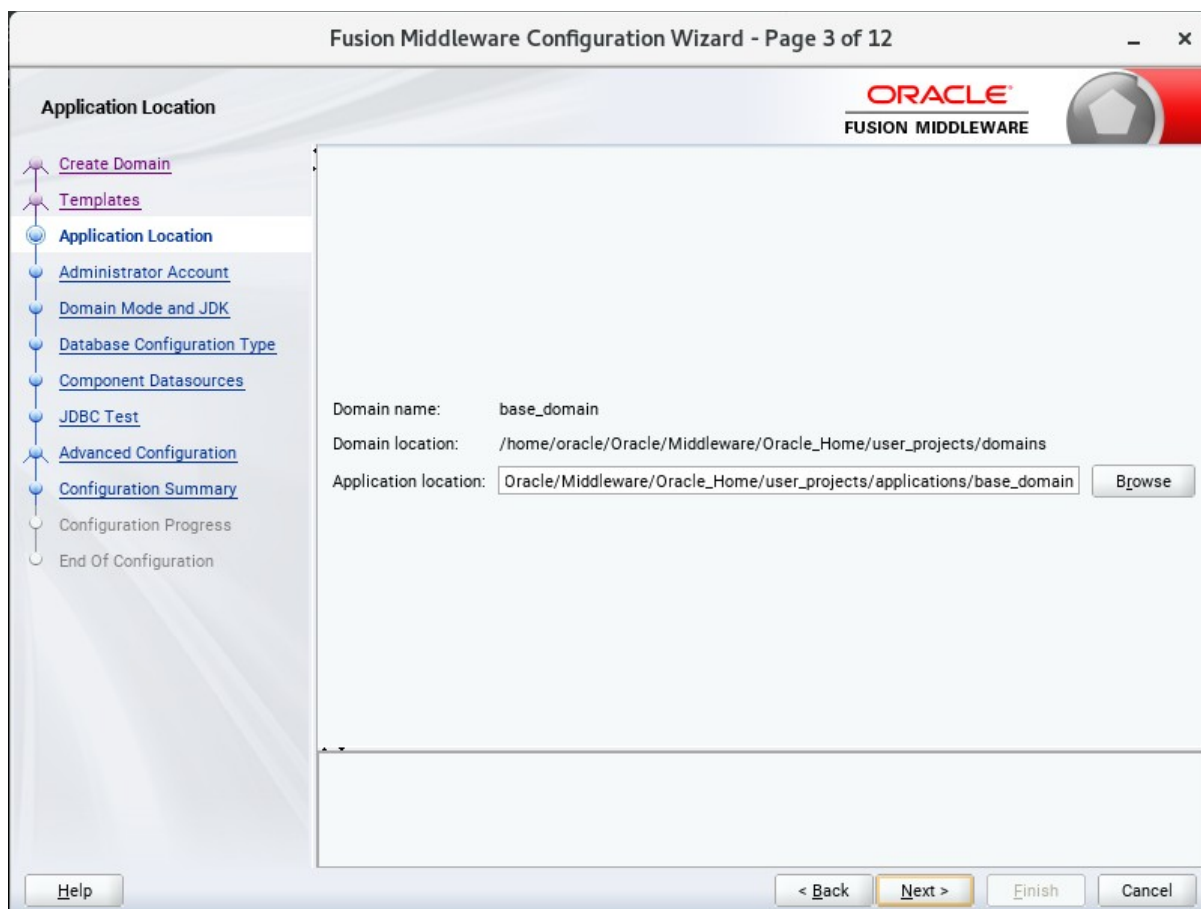
Click **Next** to continue.

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



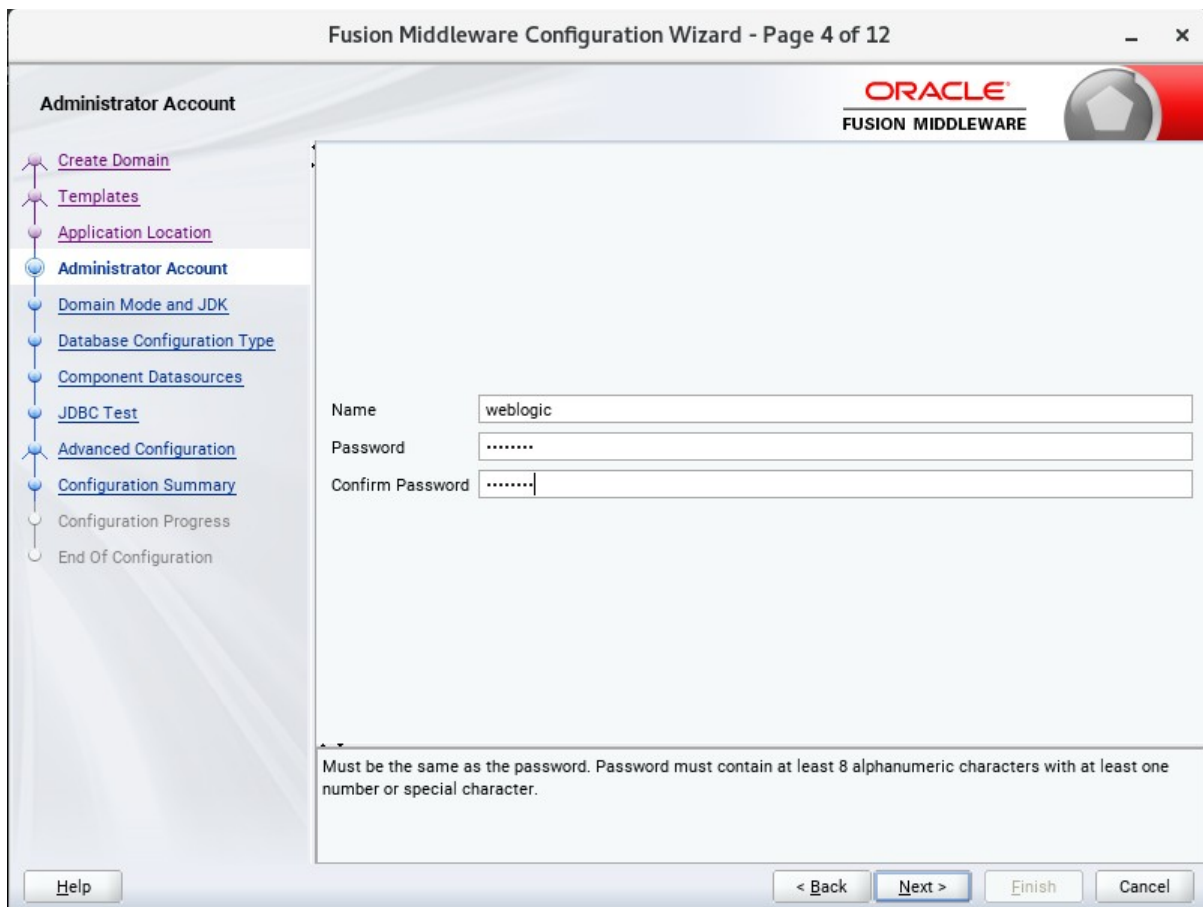
Keep the default selection (**Create Domain using Product Templates**), and select **Oracle HTTP Server (Collocated) [ohs]** component. This automatically selects **Oracle Enterprise Manager [em]** and so on. Click **Next** to continue.

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



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

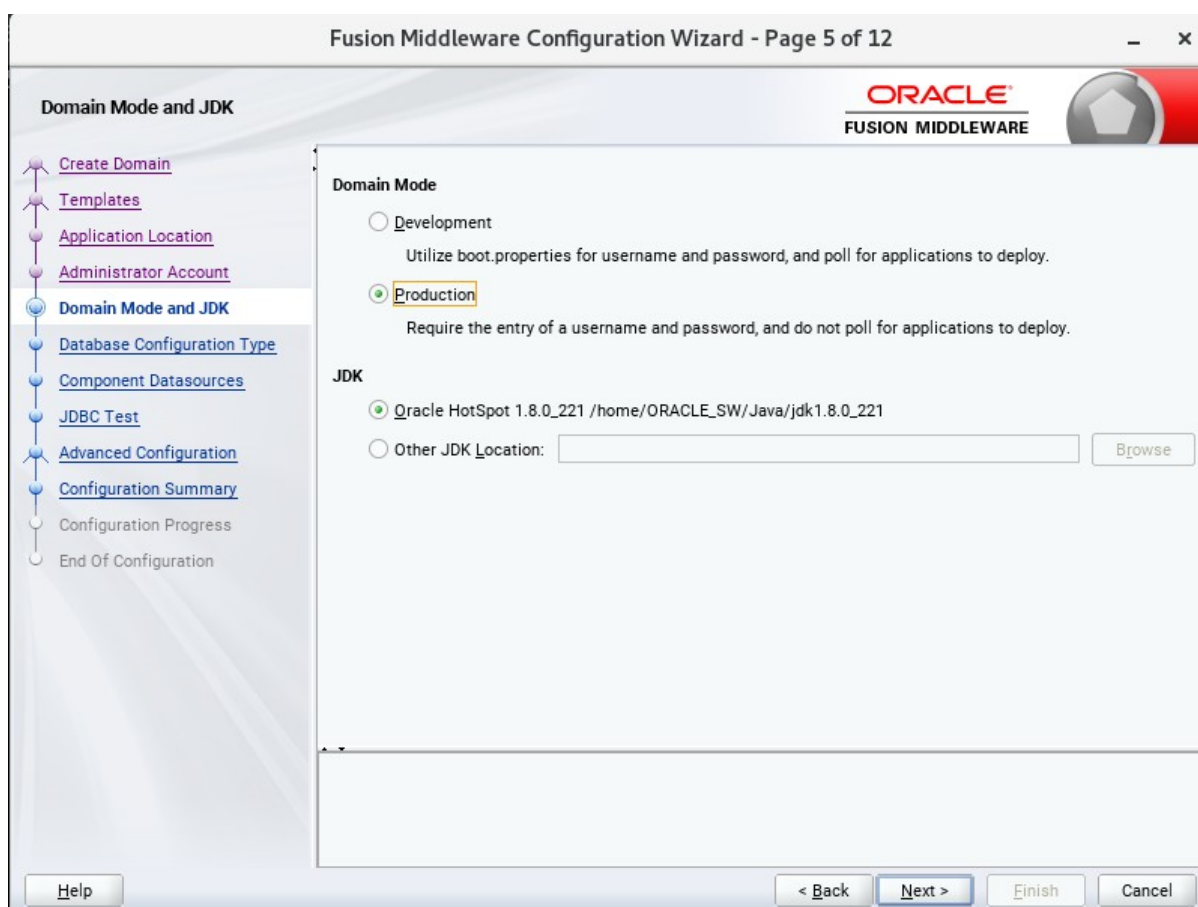
4). The **Administrator Account** screen appears.



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 validation message: '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**

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.

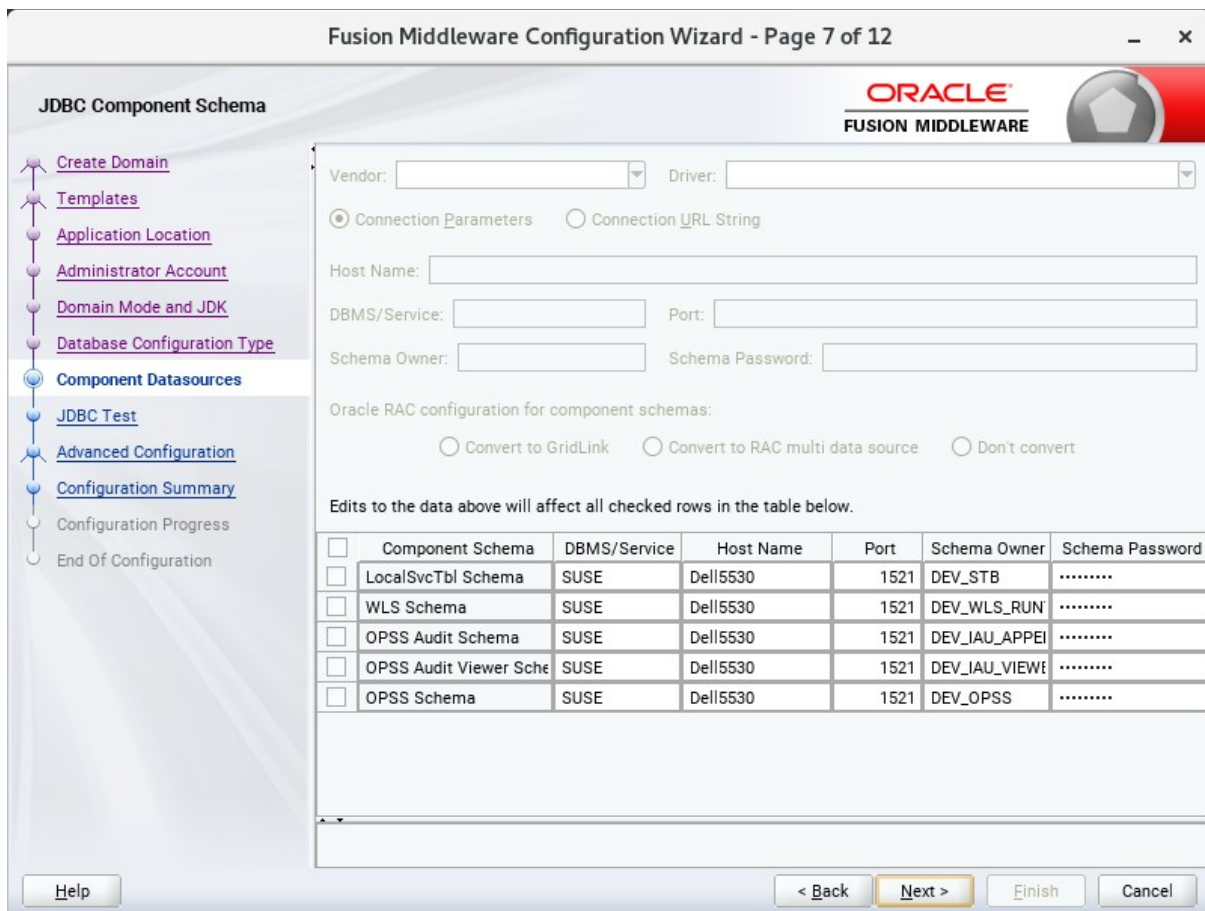
Click "Next" button to continue.

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.

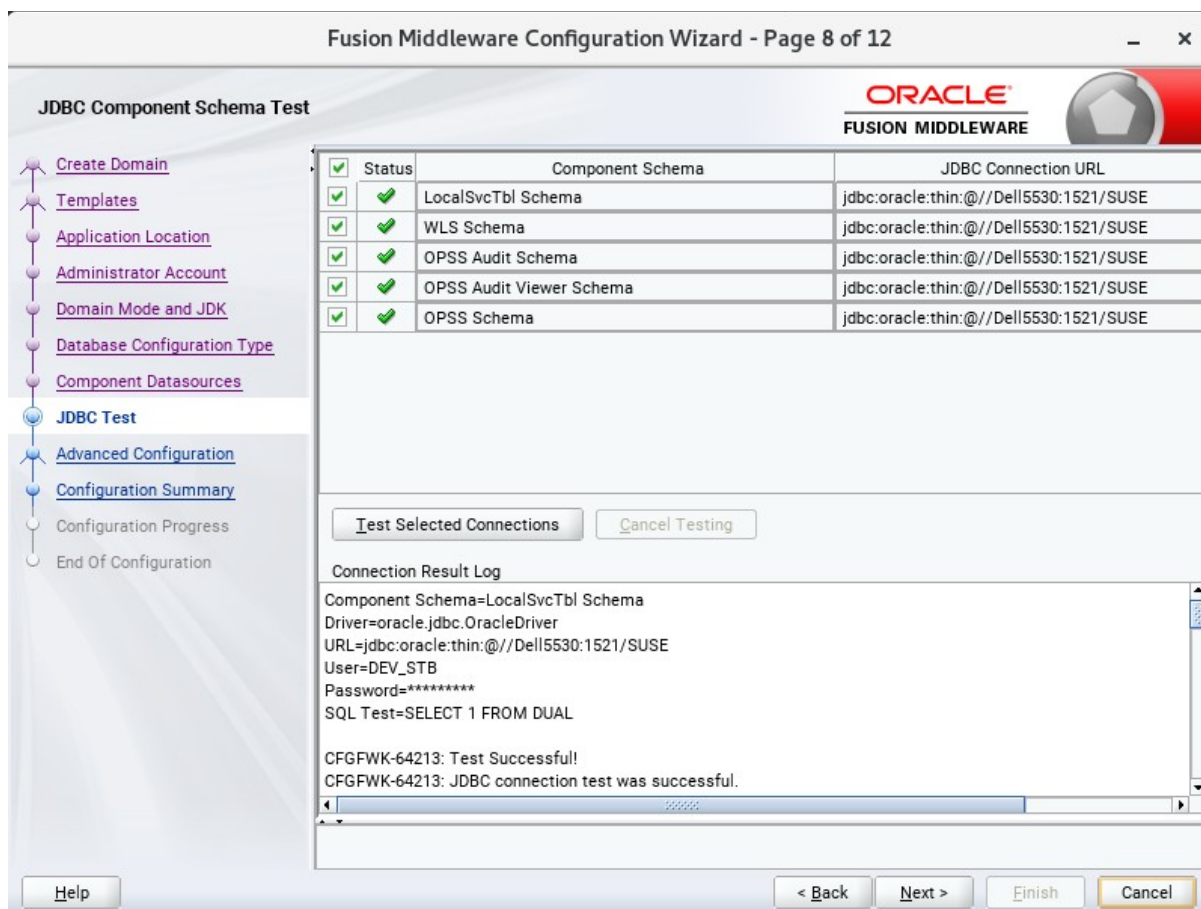


7). The **JDBC Component Schema** screen appears.



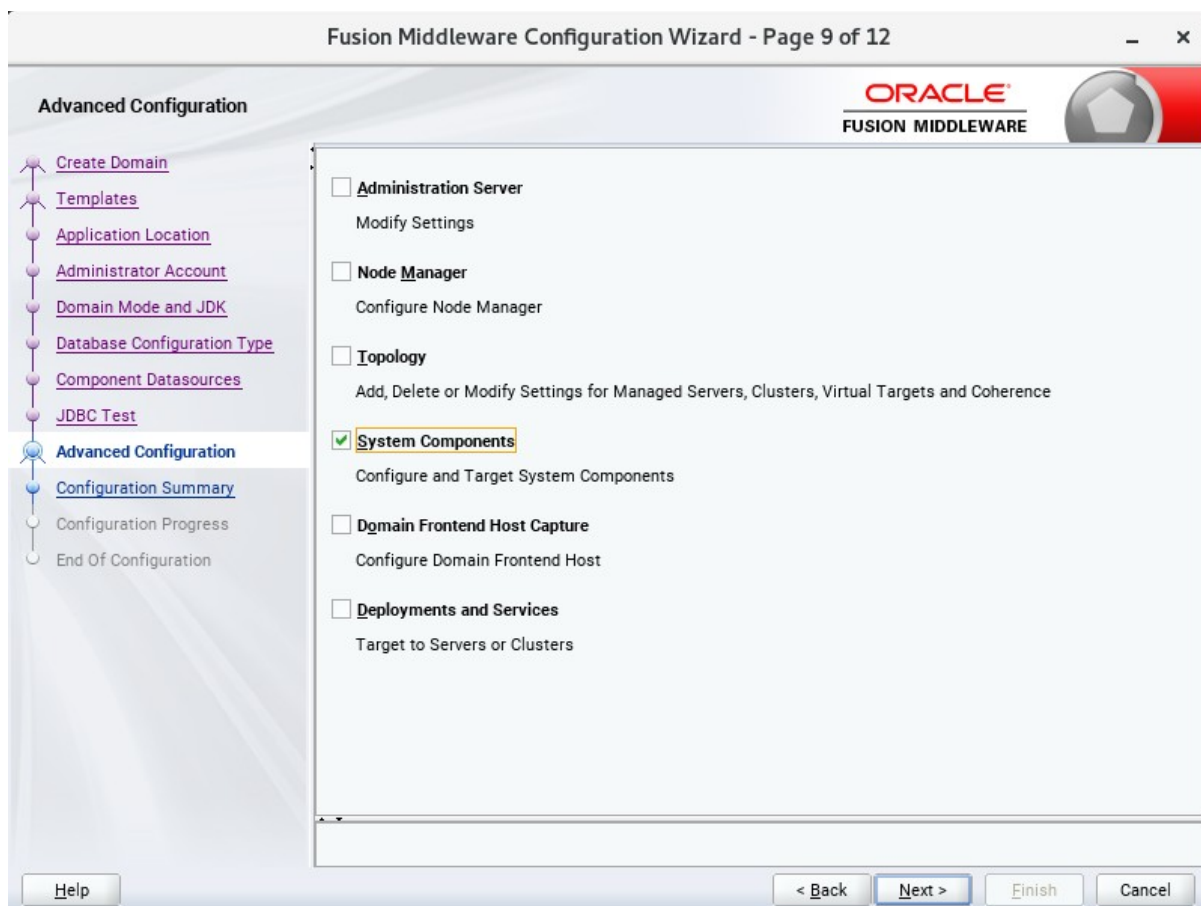
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



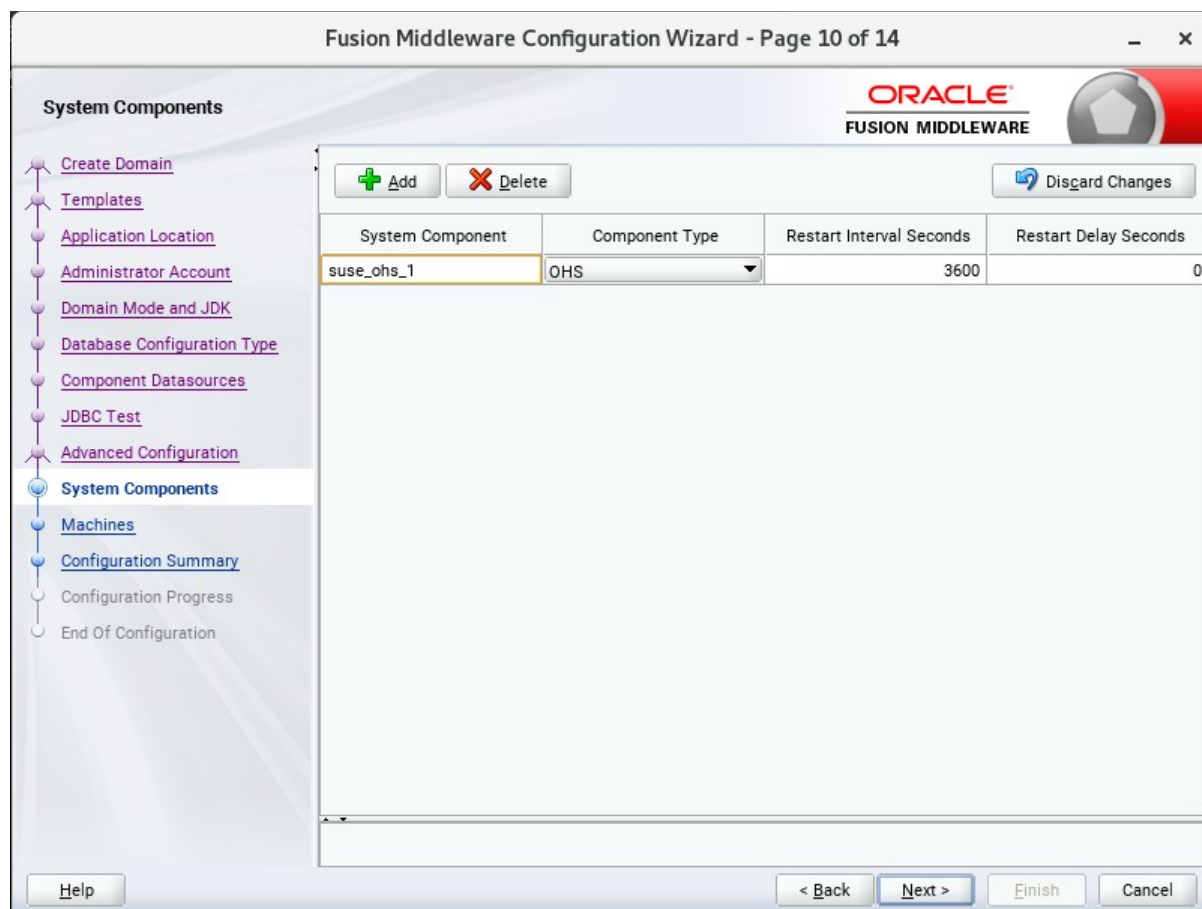
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



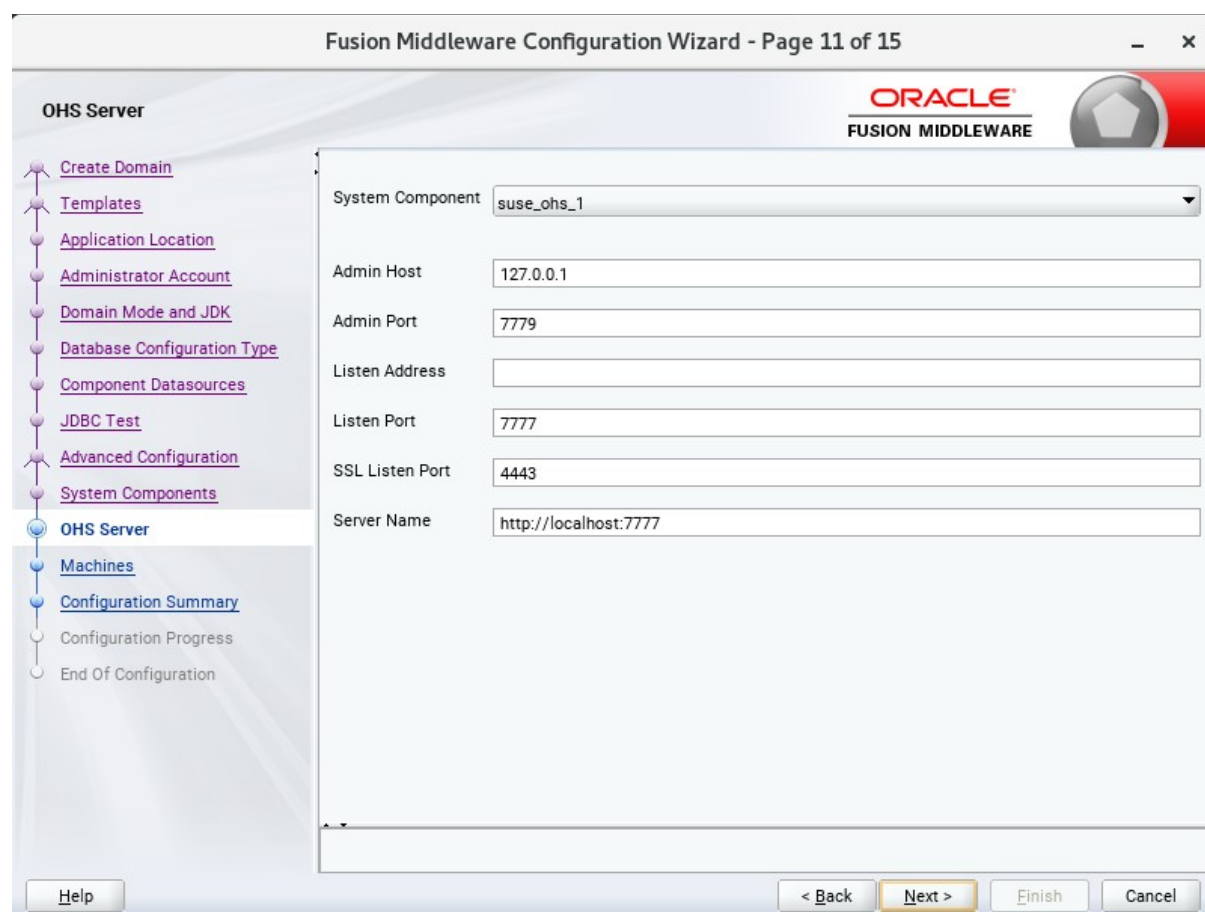
Choose the services on your requirements, then click **Next** to continue.

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.



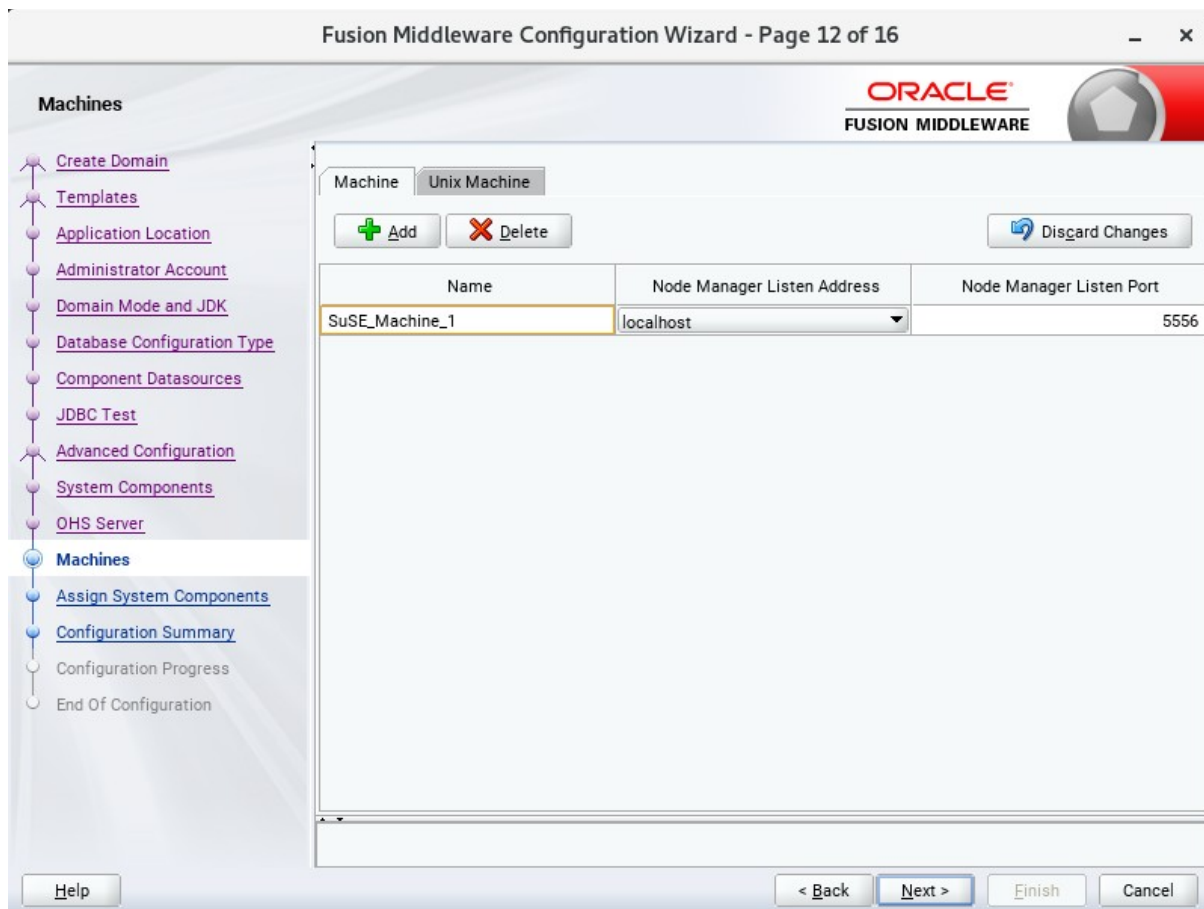
The screenshot displays the 'OHS Server' configuration screen within the 'Fusion Middleware Configuration Wizard - Page 11 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists various configuration steps, with 'OHS Server' currently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

Field	Value
System Component	suse_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 wizard, there are four buttons: 'Help', '< Back', 'Next >' (highlighted in yellow), 'Finish', and 'Cancel'.

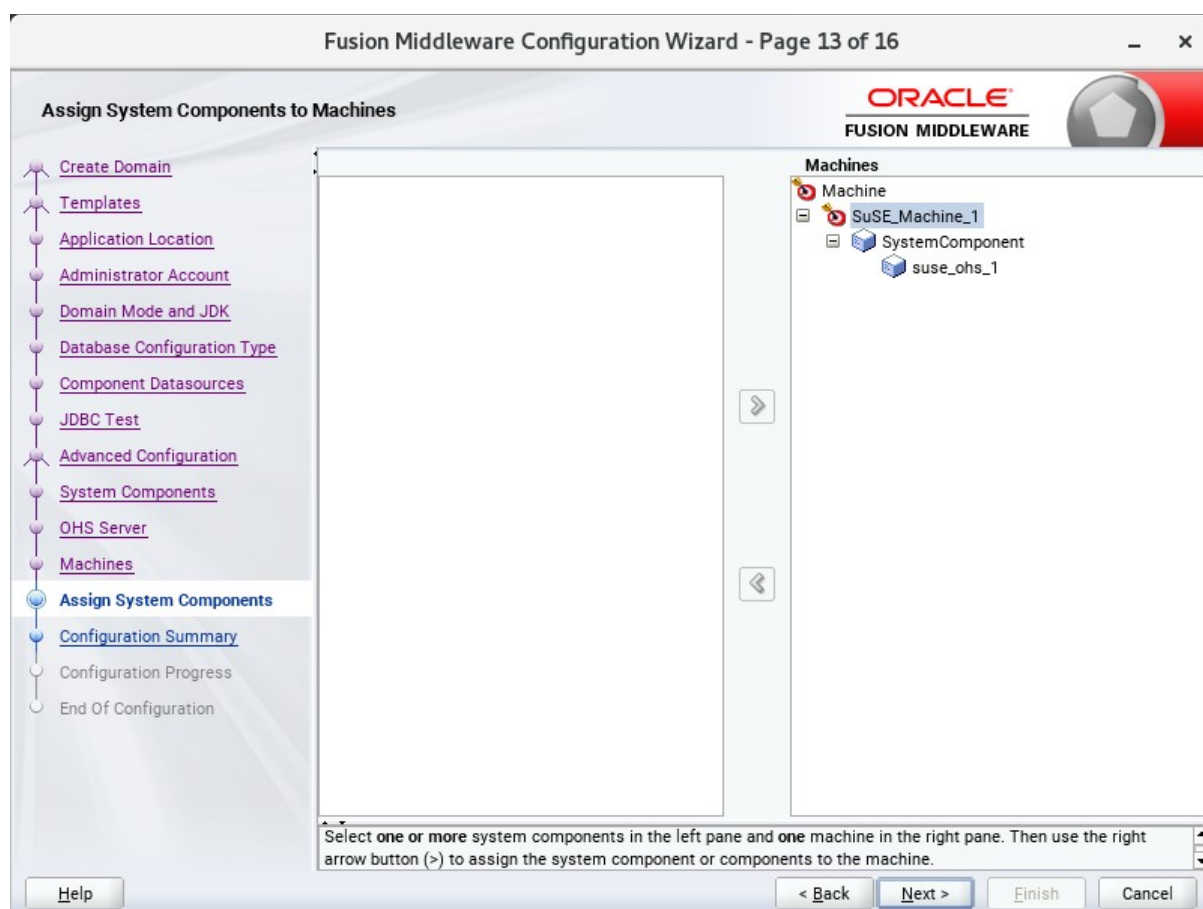
Use the **OHS Server** screen to configure the Oracle HTTP Server servers in your domain. In the System Component field specify the IP address of the host on which the Oracle HTTP Server instance will reside. Do not use "localhost". Click **Next** to continue.

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



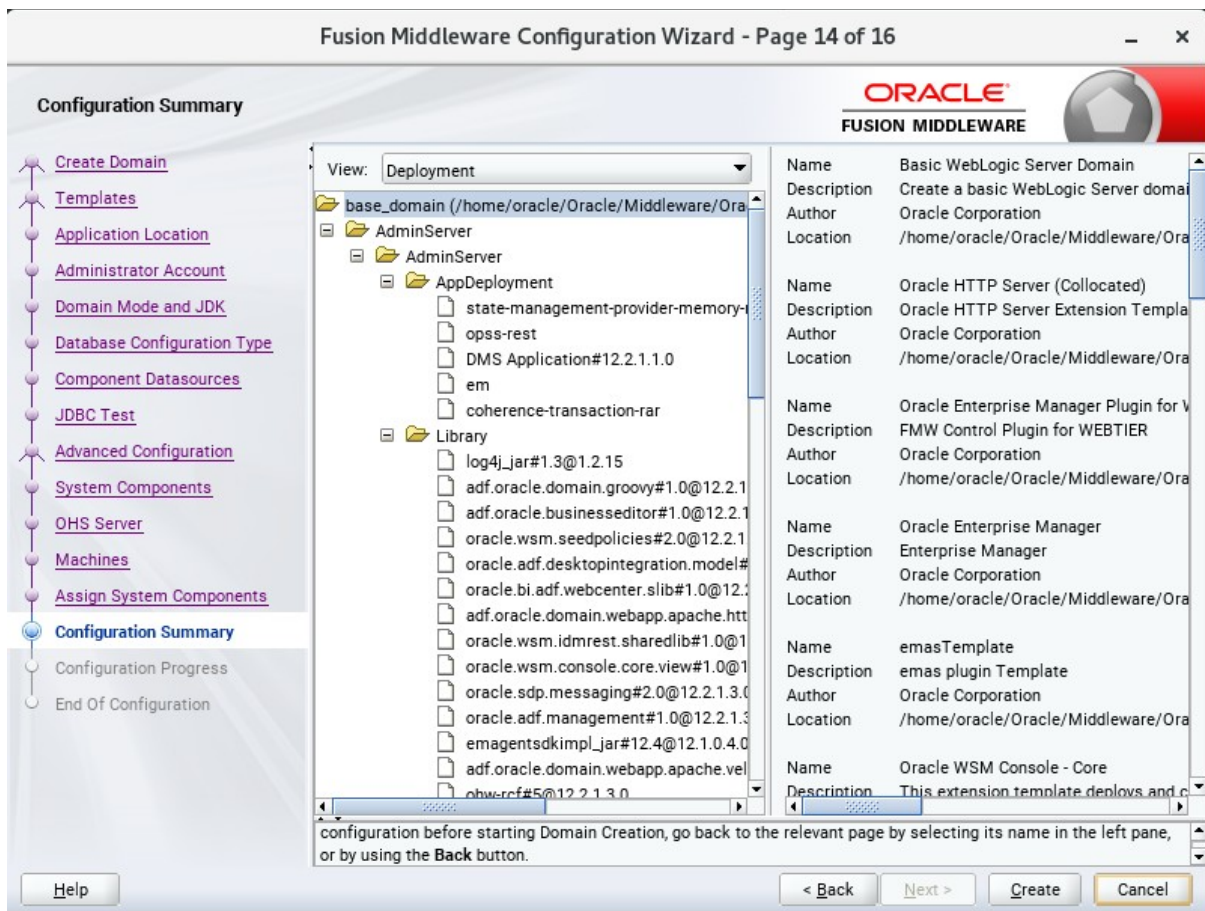
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

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.

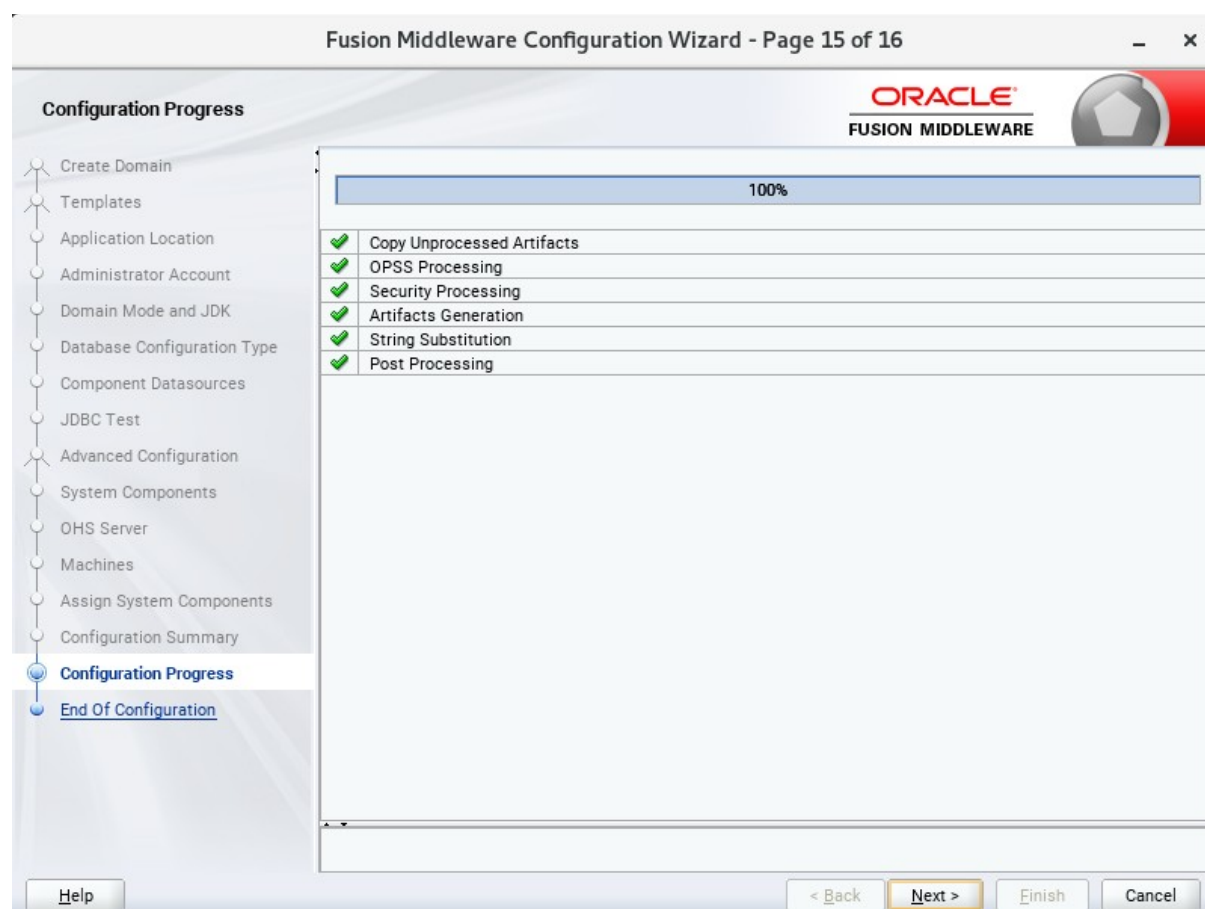
14). The **Configuration Summary** screen appears.



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

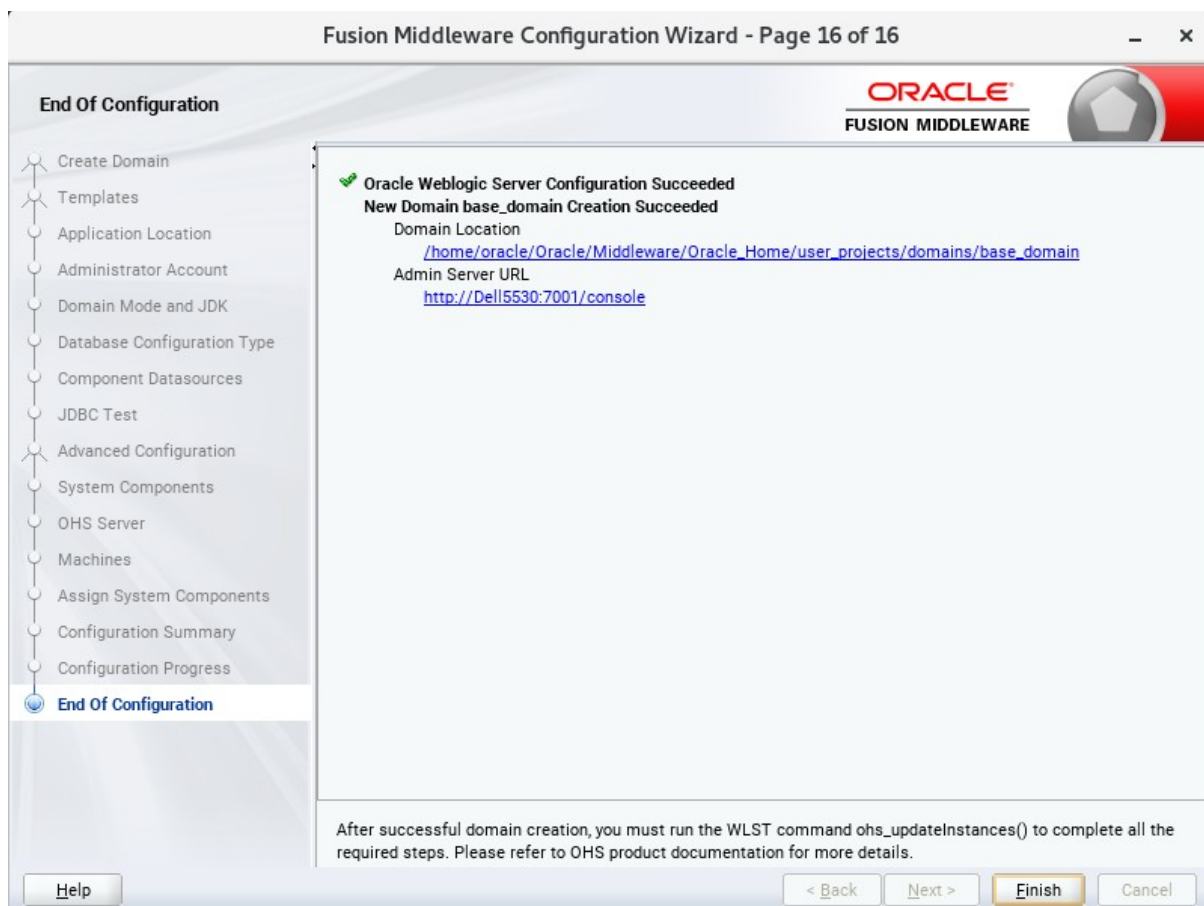


15). The **Configuration Progress** screen appears.



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&'**

```
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home... x oracle@Dell5530:/home... x oracle@Dell5530:/home... x oracle@Dell5530:/home... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 4455
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
<Mar 17, 2022 10:56:56 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Mar 17, 2022 10:56:56 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Mar 17, 2022 10:56:56 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'>
<Mar 17, 2022 10:56:56 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Mar 17, 2022 10:56:56 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Mar 17, 2022 10:56:56 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
```

**Starting Admin Server, go to the DOMAIN\_HOME/bin directory and run './startWebLogic.sh.'**

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x
roxy.*, /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/uifwkmobile/skins/*.*, /em/serv
let/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs.*, /em/jobrecv
.*]
<Mar 17, 2022 11:02:44,990 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_F
ACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Mar 17, 2022 11:02:46,740 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully est
ablished a connection with the Domain level Diagnostic Service.>
<Mar 17, 2022 11:02:47,333 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Mar 17, 2022 11:02:47,381 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMIN
G.>
<Mar 17, 2022 11:02:47,381 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Mar 17, 2022 11:02:50,572 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to mult
iple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening o
n 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 1
92.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Adm
inistration Server "AdminServer" for domain "base_domain" running in production mode.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening o
n 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening o
n 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 1
92.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 17, 2022 11:02:50,573 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening o
n 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 17, 2022 11:02:50,576 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING m
ode.>
<Mar 17, 2022 11:02:50,613 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/oracle_common/common/bin> ./wlst.sh
Initializing WebLogic Scripting Tool (WLST) ...

[INFO] Unable to bind key for unsupported operation: backward-delete-word
[INFO] Unable to bind key for unsupported operation: backward-delete-word
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
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.

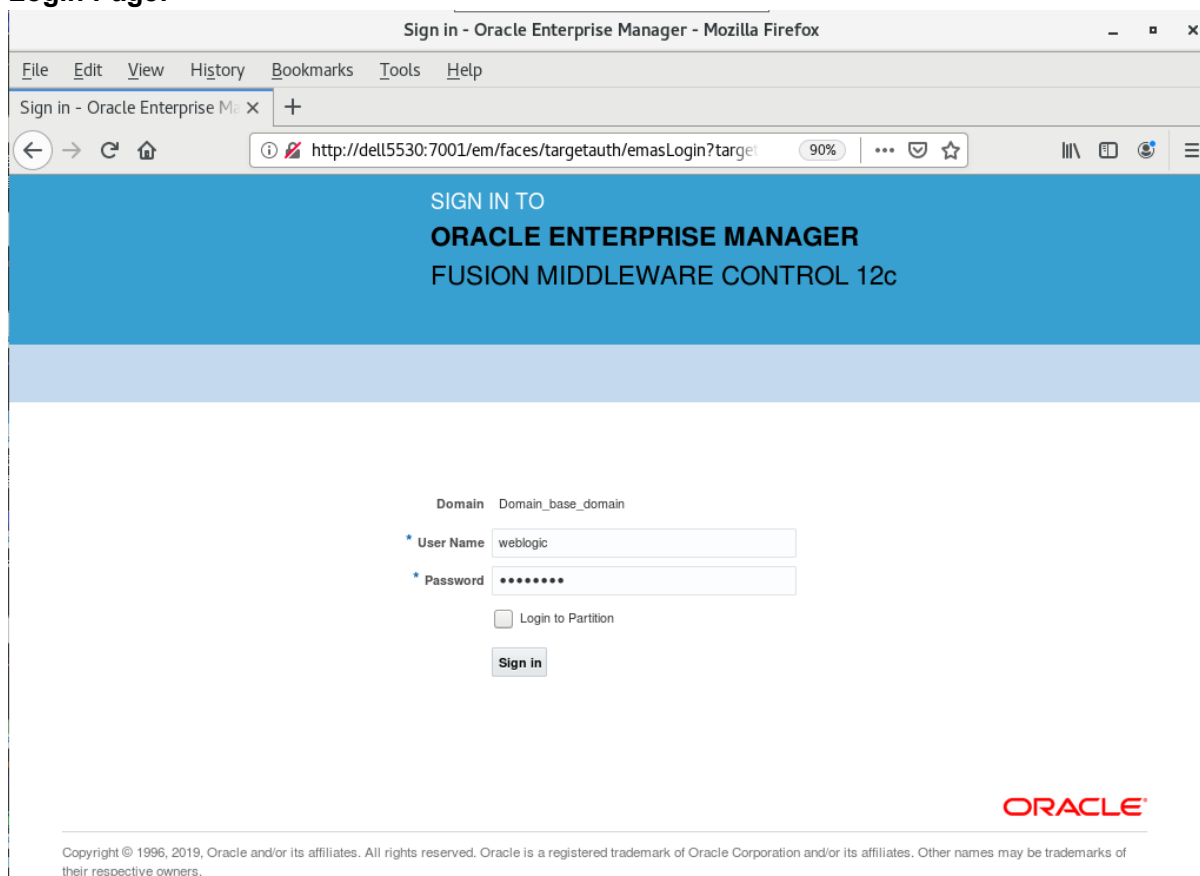
wls:/base_domain/serverConfig/> ohs_updateInstances()
Location changed to edit custom tree. This is a writable tree with No root.
For more help, use help('editCustom')

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:



Home Page:

base\_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox

base\_domain (Oracle WebLogic Domain) | http://dell5530:7001/em/faces/as-weblogic-webLogicDomainH | 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c | WebLogic Domain | weblogic

base\_domain | Auto Refresh Off | Mar 17, 2022 11:10:53 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

**Clusters** 0 Clusters

**Deployments** 1 Up

**Administration Server**

Name AdminServer  
Host Dell5530  
Listen Port 7001

**Servers**

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

Columns Hidden 34 | Servers 1 of 1

Starting Oracle HTTP Server (ohs\_1)

suse\_ohs\_1 (Oracle HTTP Server) - Oracle Enterprise Manager - Mozilla Firefox

suse\_ohs\_1 (Oracle HTTP Server) | http://dell5530:7001/em/faces/as\_ohs\_ohsHome?type=oracle | 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c | WebLogic Domain | weblogic

suse\_ohs\_1 | Oracle HTTP Server | Start Up | Shut Down | Restart... | Mar 17, 2022 11:11:29 PM GMT+08:00

**Monitoring** Metrics Unavailable

**Virtual Hosts** 0 Virtual Hosts

**Modules** 0 Modules

**General**

Component Name suse\_ohs\_1  
Version 12.2.1.4.0  
State Shutdown  
Host Dell5530  
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**

10:57 PM 11:00 11:03 11:06 11:09  
March 17 2022

Request Processing Time (milli seconds)  
/Domain\_base\_domain/base\_domain/suse\_ohs\_1:Request ...

**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

**CPU and Memory Usage**

10:57 PM 11:00 11:03 11:06 11:09  
March 17 2022

ohs\_1 is up.

**Monitoring**

CPU Usage (%) 0.00

Memory Usage (%) 0.00

**Virtual Hosts**

Virtual Hosts 0

**Modules**

Modules 0

**General**

Component Name suse\_ohs\_1

Version 12.2.1.4.0

State Running

Host Dell5530

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) Unavailable

**Response and Load**

10:58 PM 11:01 11:04 11:07 11:10  
March 17, 2022

Request Processing Time (milli seconds)

/Domain\_base\_domain/base\_domain/suse\_ohs\_1:Request...

**CPU and Memory Usage**

10:58 PM 11:01 11:04 11:07 11:10  
March 17, 2022

OHS Ports Configuration as shown below.

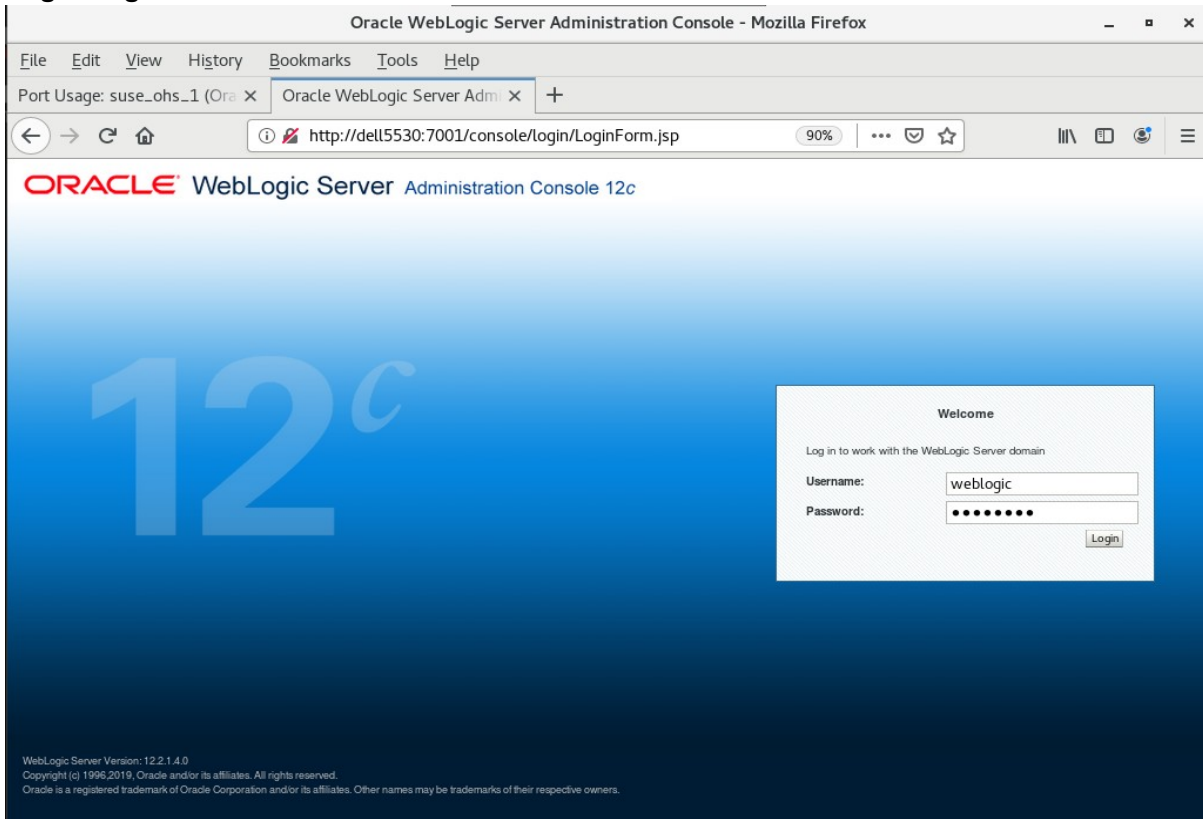
**Port Usage**

Port in Use	IP Address	Component	Protocol
7777	ALL	suse_ohs_1	HTTP
7779	127.0.0.1	suse_ohs_1	HTTPS
4443	ALL	suse_ohs_1	HTTPS

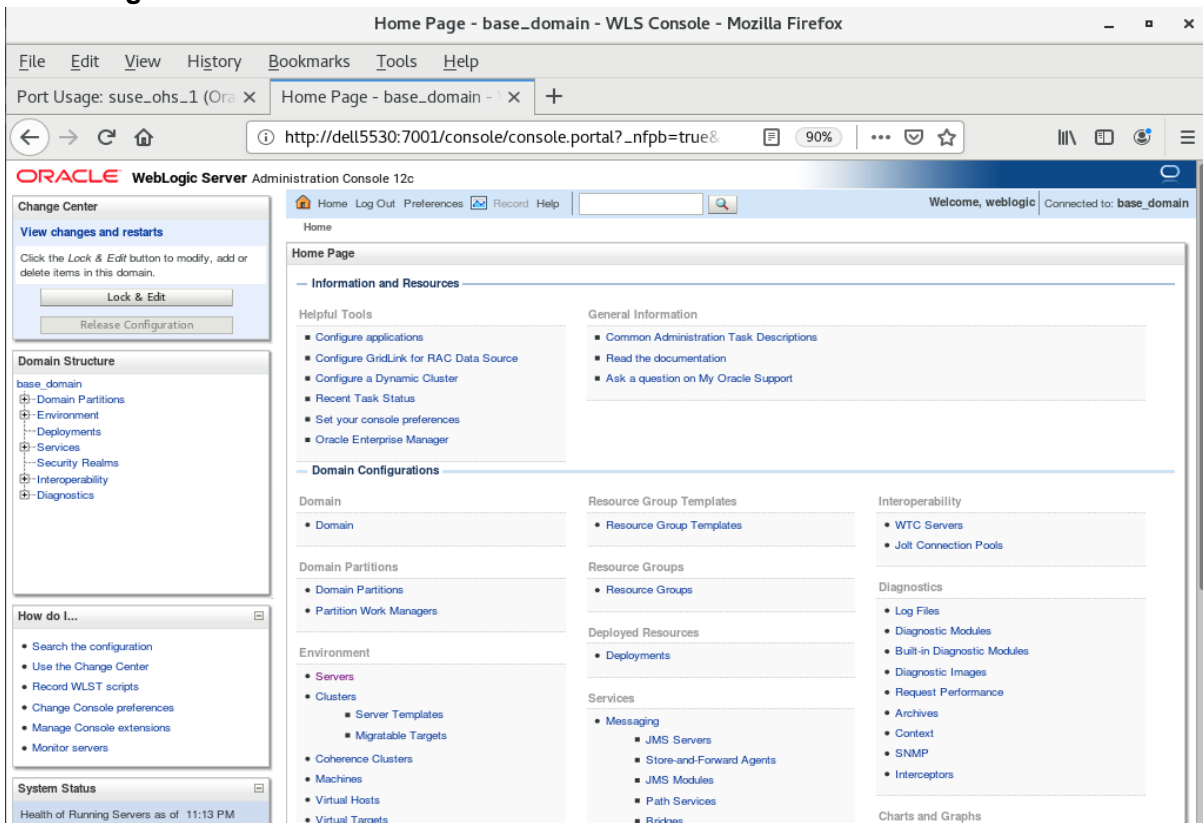


## 2). Access to Administration Server Console

Login Page as shown below:



## Home Page:



### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser window title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://dell5530:7001/console/console.portal?\_nfpb=true&". The page content includes a "Change Center" sidebar with "Lock & Edit" and "Release Configuration" buttons. The main area is titled "Summary of Servers" and contains a table of servers. Below the table are "New", "Clone", and "Delete" buttons. The system status at the bottom indicates "Health of Running Servers as of 11:14 PM".

**Summary of Servers**

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

**Servers (Filtered - More Columns Exist)**

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

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

Showing 1 to 1 of 1 Previous | Next

### Viewing the summary of Machines:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser window title is "Summary of Machines - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://dell5530:7001/console/console.portal?\_nfpb=true&". The page content includes a "Change Center" sidebar with "Lock & Edit" and "Release Configuration" buttons. The main area is titled "Summary of Machines" and contains a table of machines. Below the table are "New", "Clone", and "Delete" buttons. The system status at the bottom indicates "Health of Running Servers as of 11:14 PM" with "Failed (0)" and "Critical (0)" counts.

**Summary of Machines**

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

**Machines**

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

Name	Type
SUSE_Machine_1	Machine

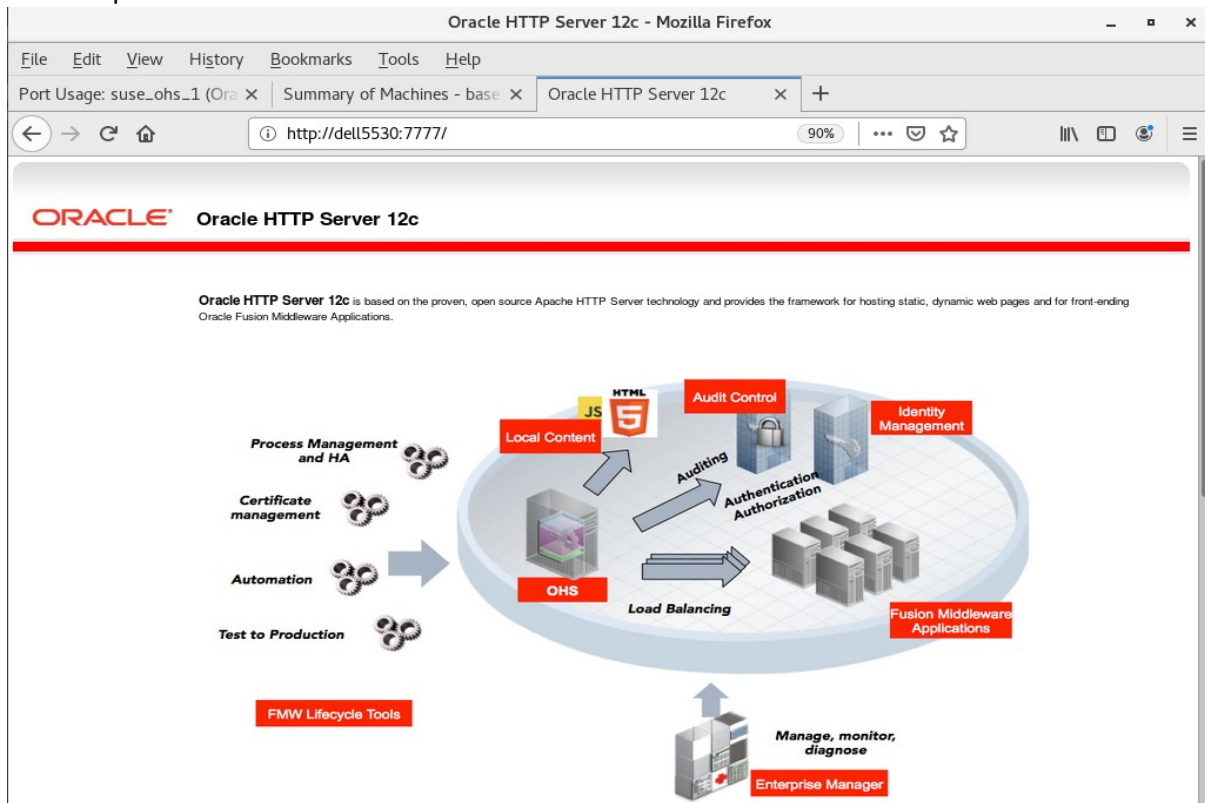
Showing 1 to 1 of 1 Previous | Next

Health of Running Servers as of 11:14 PM

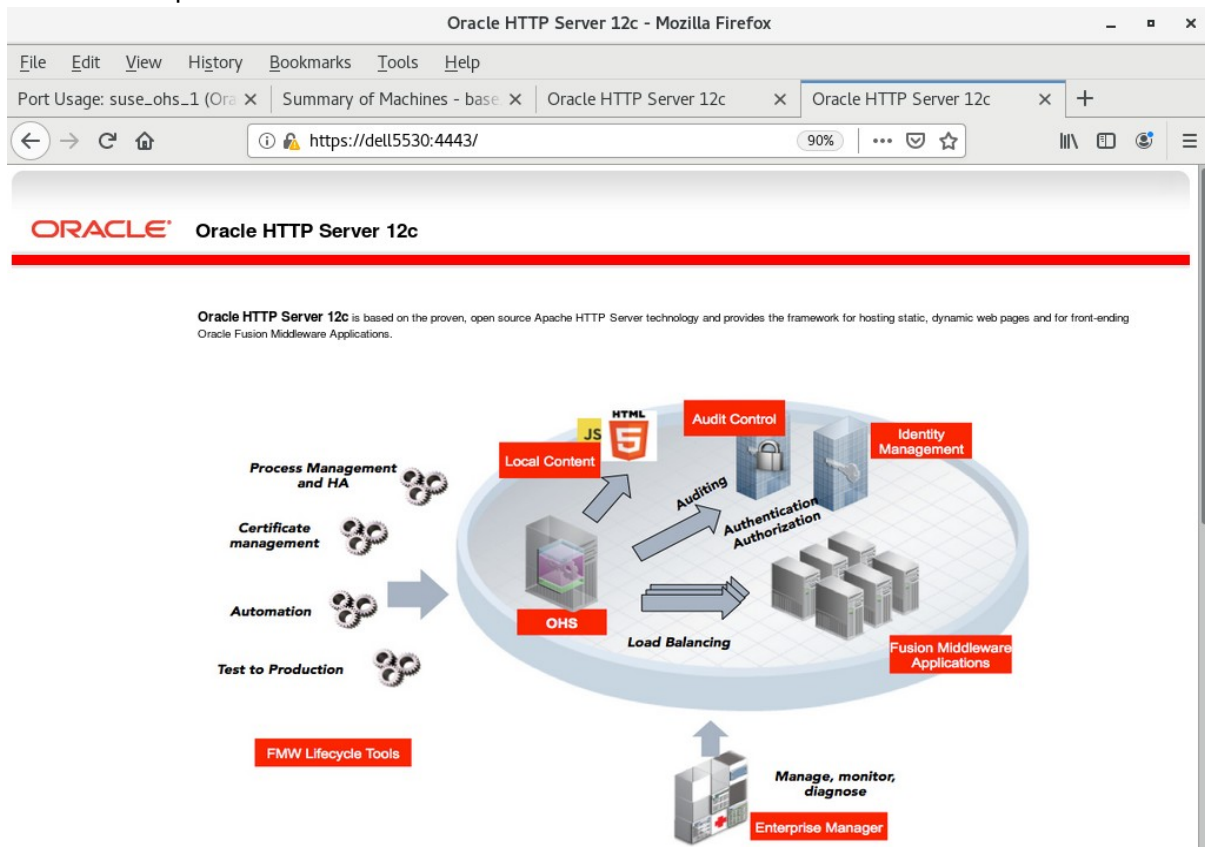
Failed (0)  
Critical (0)

### 3). Access to Oracle HTTP Server listening address

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



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



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 architecture and capabilities of Oracle HTTP Server 12c. It features a central platform with several key components and features:

- Local Content**: Serves static content.
- OHS**: Oracle HTTP Server core.
- Auditing**: Provides detailed logs and reports.
- Authentication**: Manages user access and security.
- Fusion Middleware Applications**: Hosts various Oracle applications.
- Process Management and HA**: Ensures high availability and efficient resource use.
- Certificate management**: Simplifies SSL certificate handling.
- Automation**: Streamlines deployment and configuration tasks.
- Test to Production**: Facilitates safe deployment of updates.
- FMW Lifecycle Tools**: Provides a unified management interface.
- Manage, monitor**: Offers real-time monitoring and control.

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

```
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/common/bin> ./wlst.sh

Initializing WebLogic Scripting Tool (WLST) ...

[INFO] Unable to bind key for unsupported operation: backward-delete-word
[INFO] Unable to bind key for unsupported operation: backward-delete-word
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
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('suse_ohs_1')
Current state of "suse_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 12 SP5 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**'

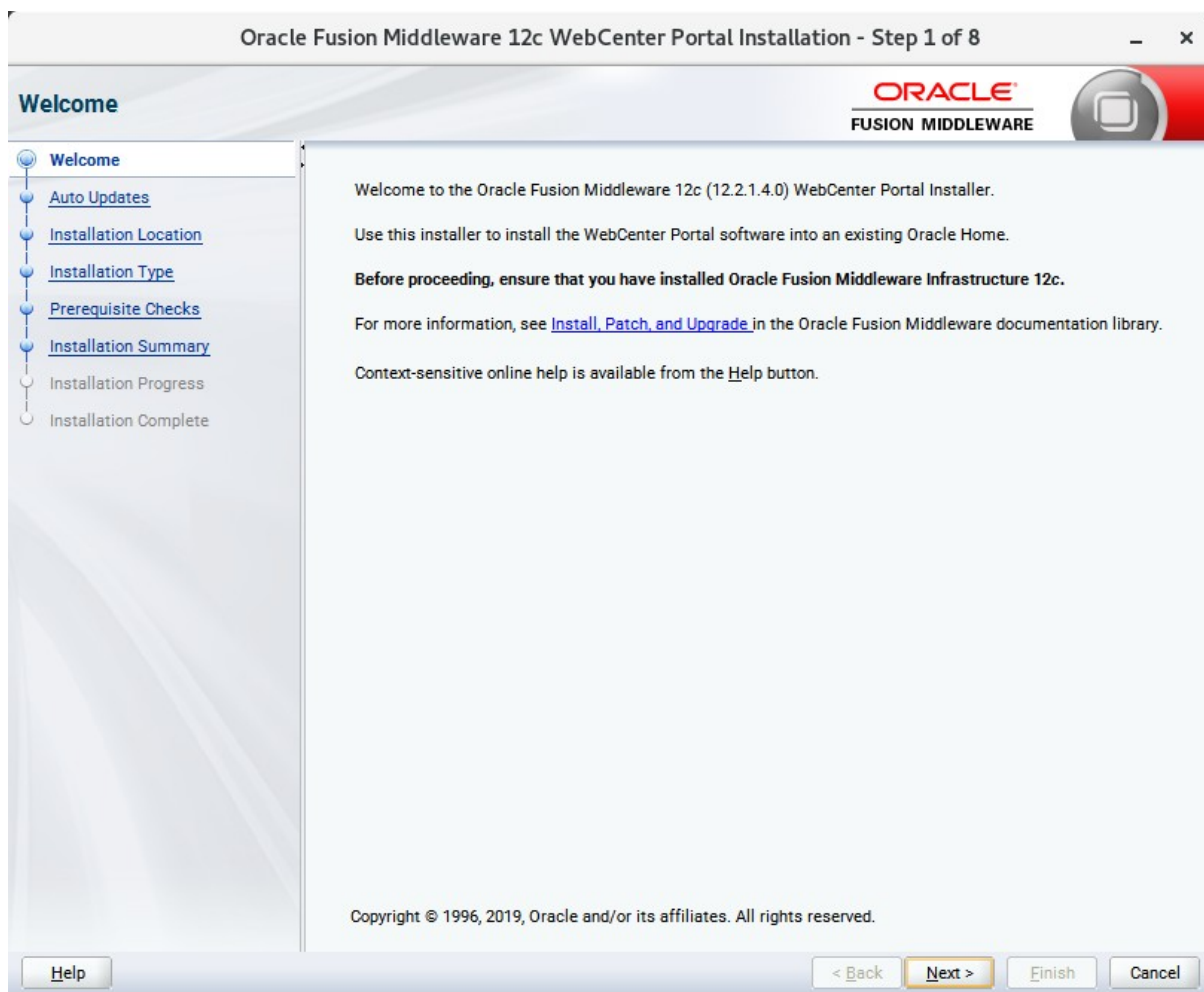
**For the actual installation, follow the steps below:**

#### 1). Installation Inventory Setup

The screenshot shows the 'Installation Inventory Setup' window for Oracle Fusion Middleware 12c WebCenter Portal. The window title is 'Oracle Fusion Middleware 12c WebCenter Portal Installation'. The main heading is 'Installation Inventory Setup'. Below the heading, there is an Oracle logo and the text 'FUSION MIDDLEWARE'. The 'Central Inventory Directory' section contains the text: 'Enter the Central inventory directory for all your oracle installations. The installer will create a new central inventory directory if it does not exist.' Below this, there is a text input field for 'Inventory Directory' containing '/home/oracle/orainventory' and a 'Browse' button. Below the input field is the text: 'Enter the full path for the directory.' The 'Operating System Group' section has a dropdown menu with 'oinstall' selected and the text: 'Specify a group with write permission to the inventory directory'. The 'Central Inventory Pointer File' section contains the text: 'Click OK to create a script (createCentralInventory.sh) in the inventory directory. Run this script to create a pointer file, which is used to identify the location of the central inventory for future installations and administrative operations, such as patching and upgrade.' At the bottom of the window, there are three buttons: 'Help', 'OK', and 'Cancel'.

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

## 2). Welcome page.



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

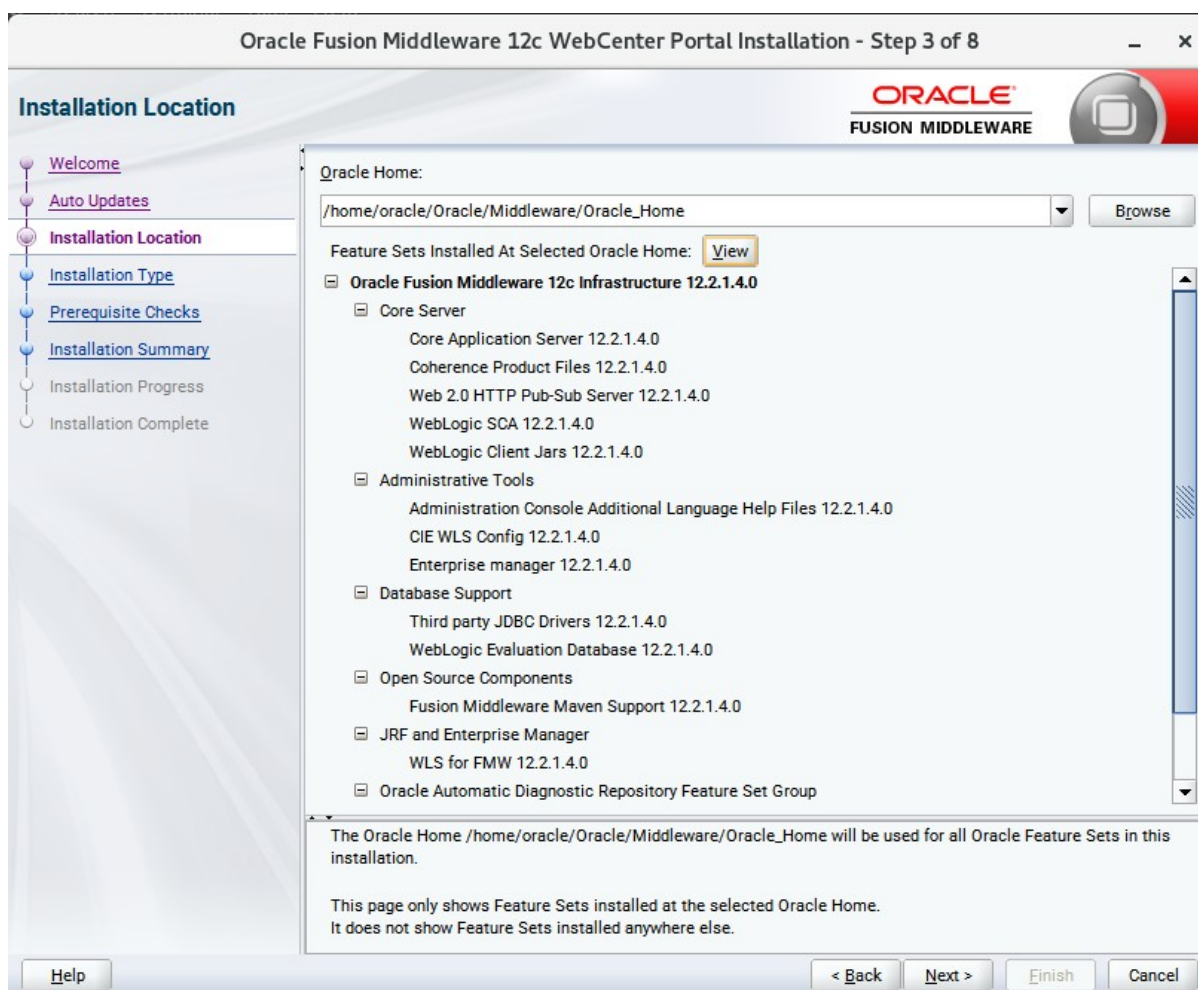
3). The **Auto Updates** page appears.

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

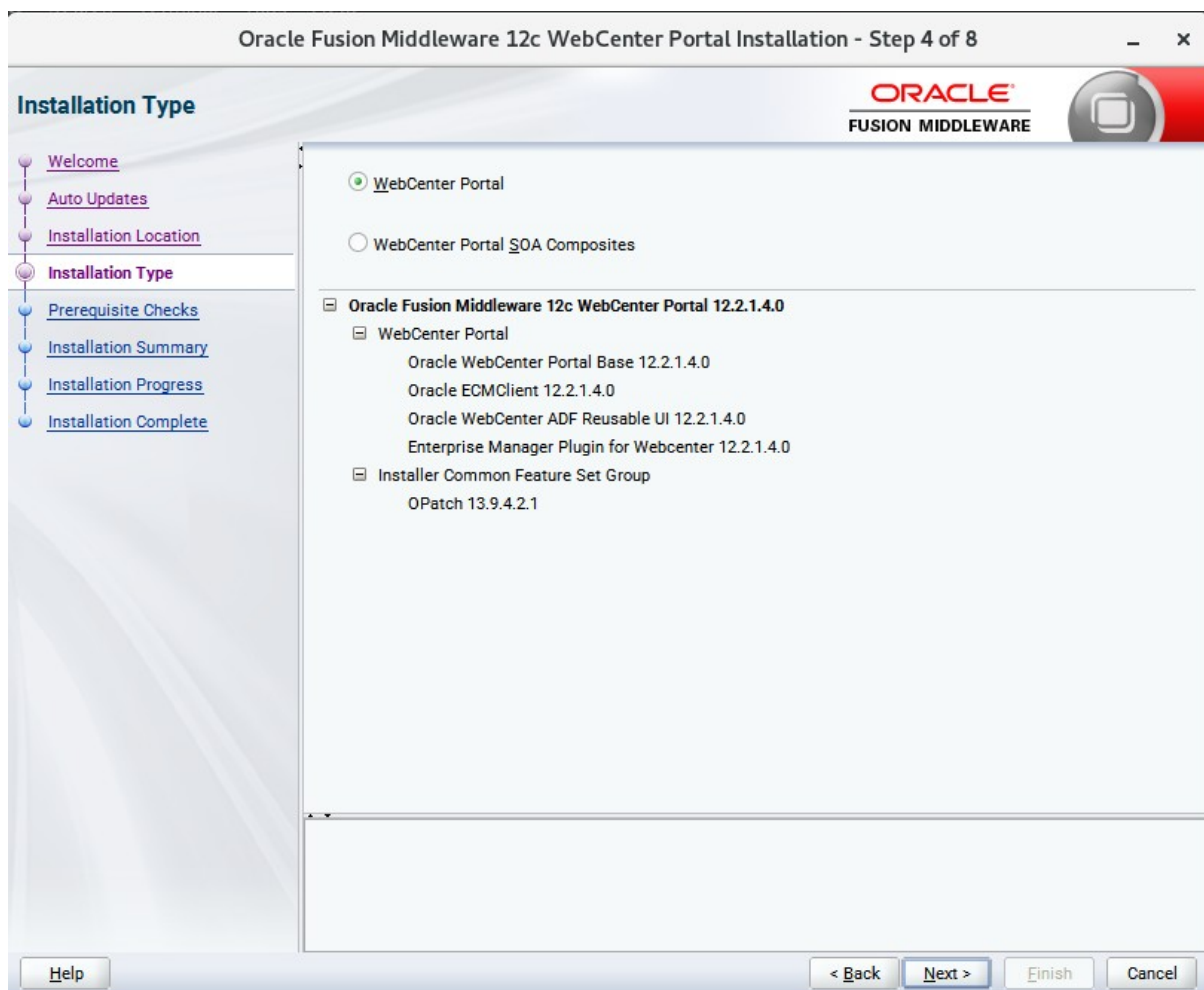


4). The **Installation Location** page appears.



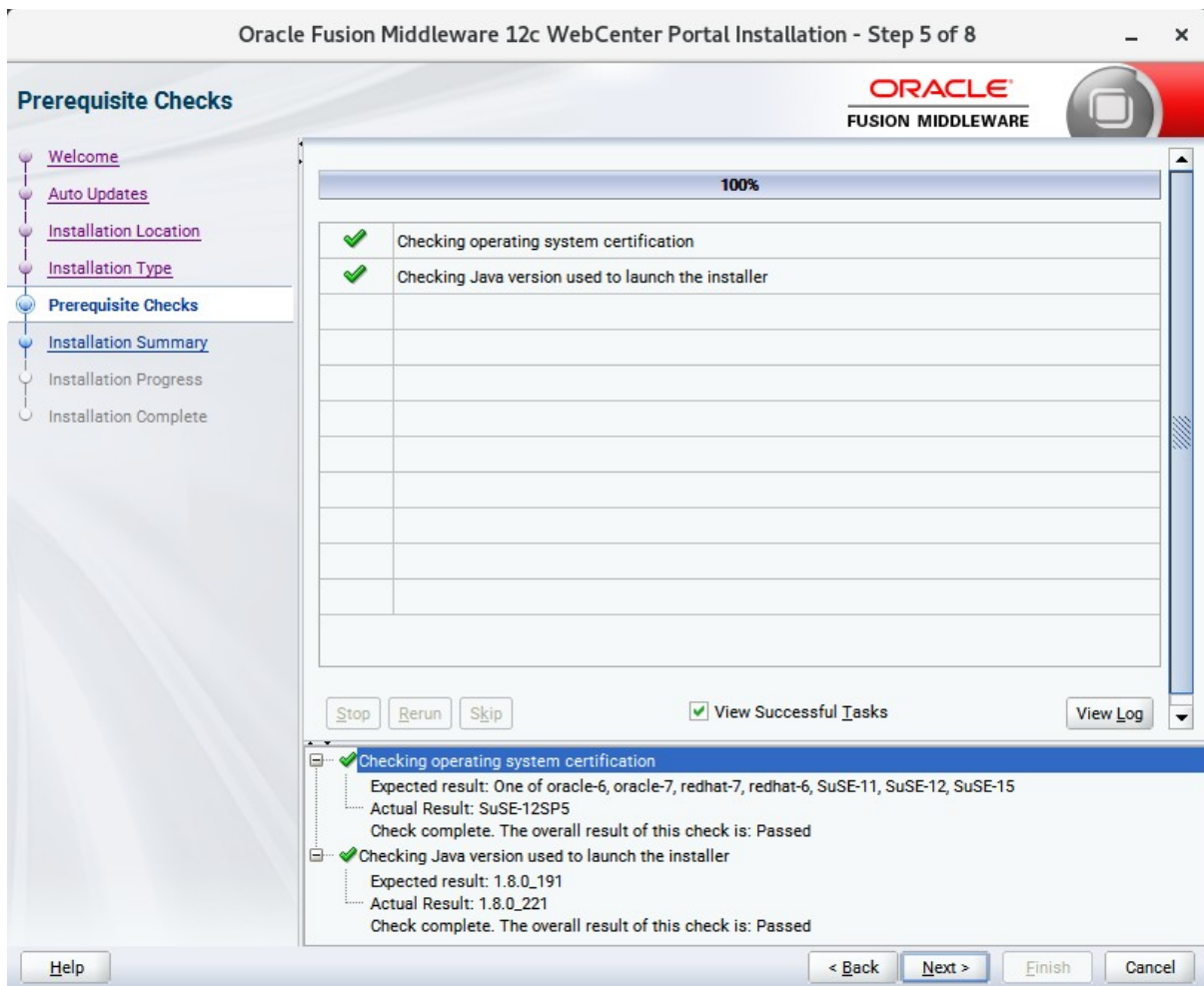
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



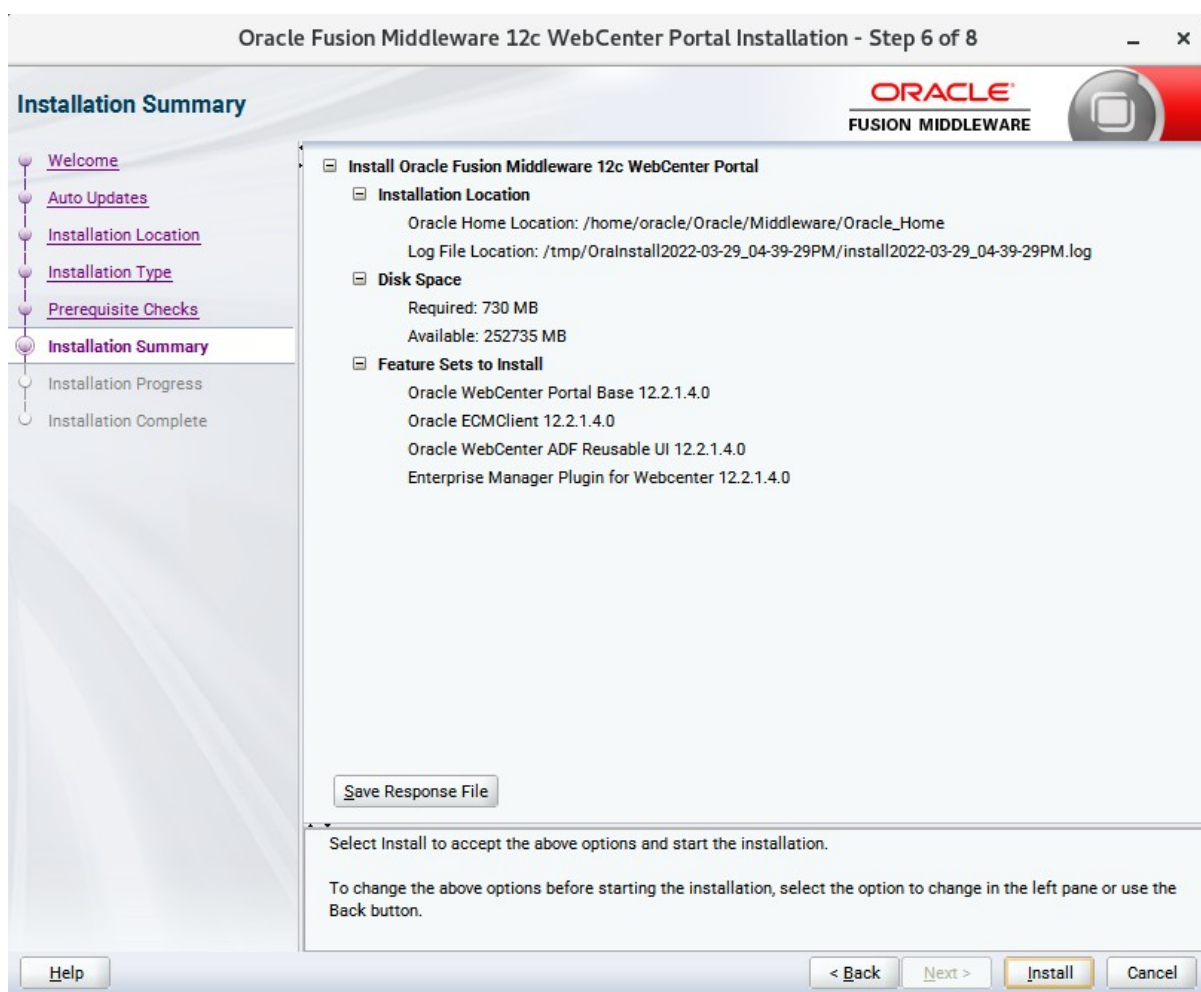
Use this screen to select the installation type and then products or feature sets you want to install. Selected the **WebCenter Portal** install type to install the WebCenter product. Click **Next** to continue.

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



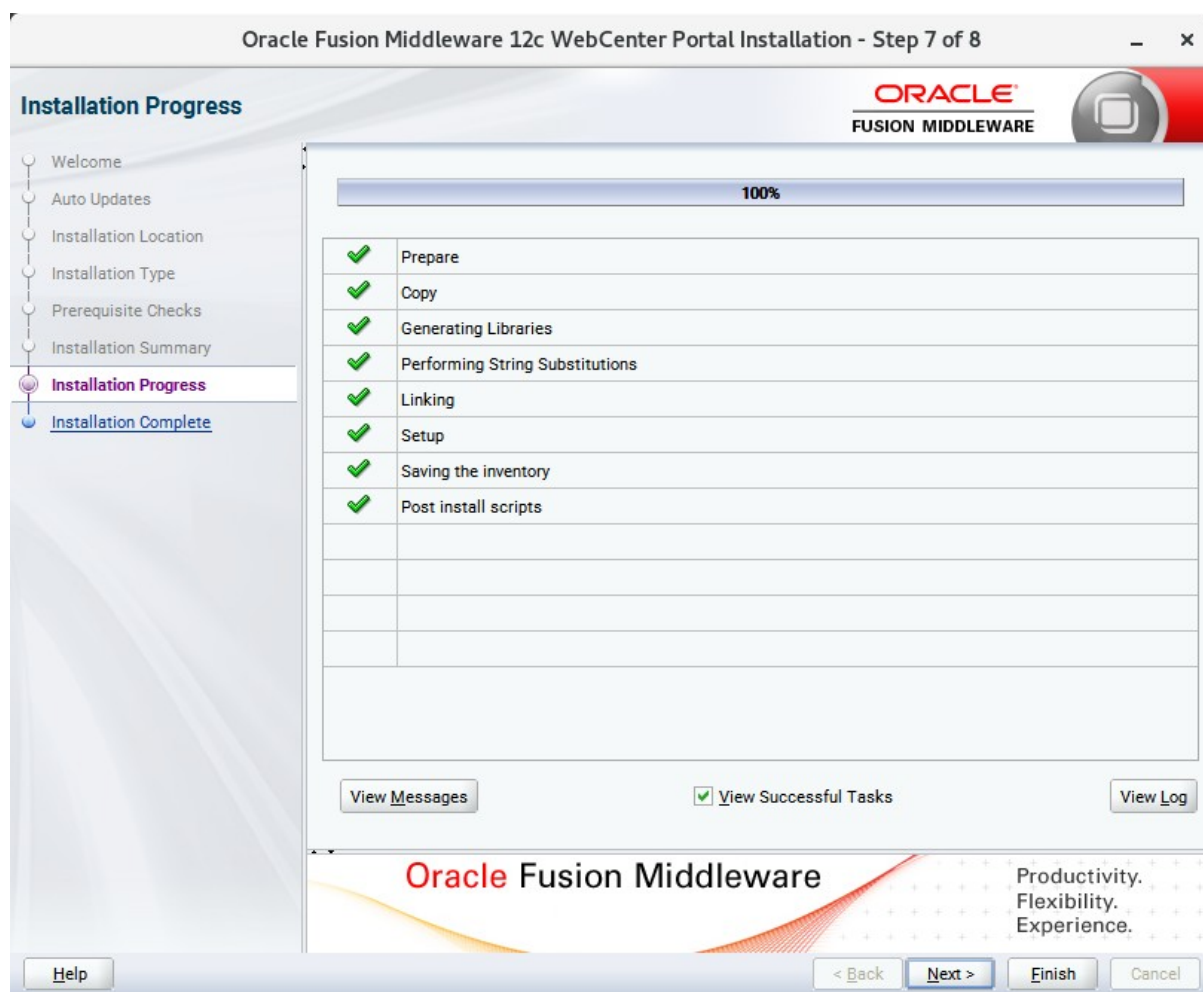
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



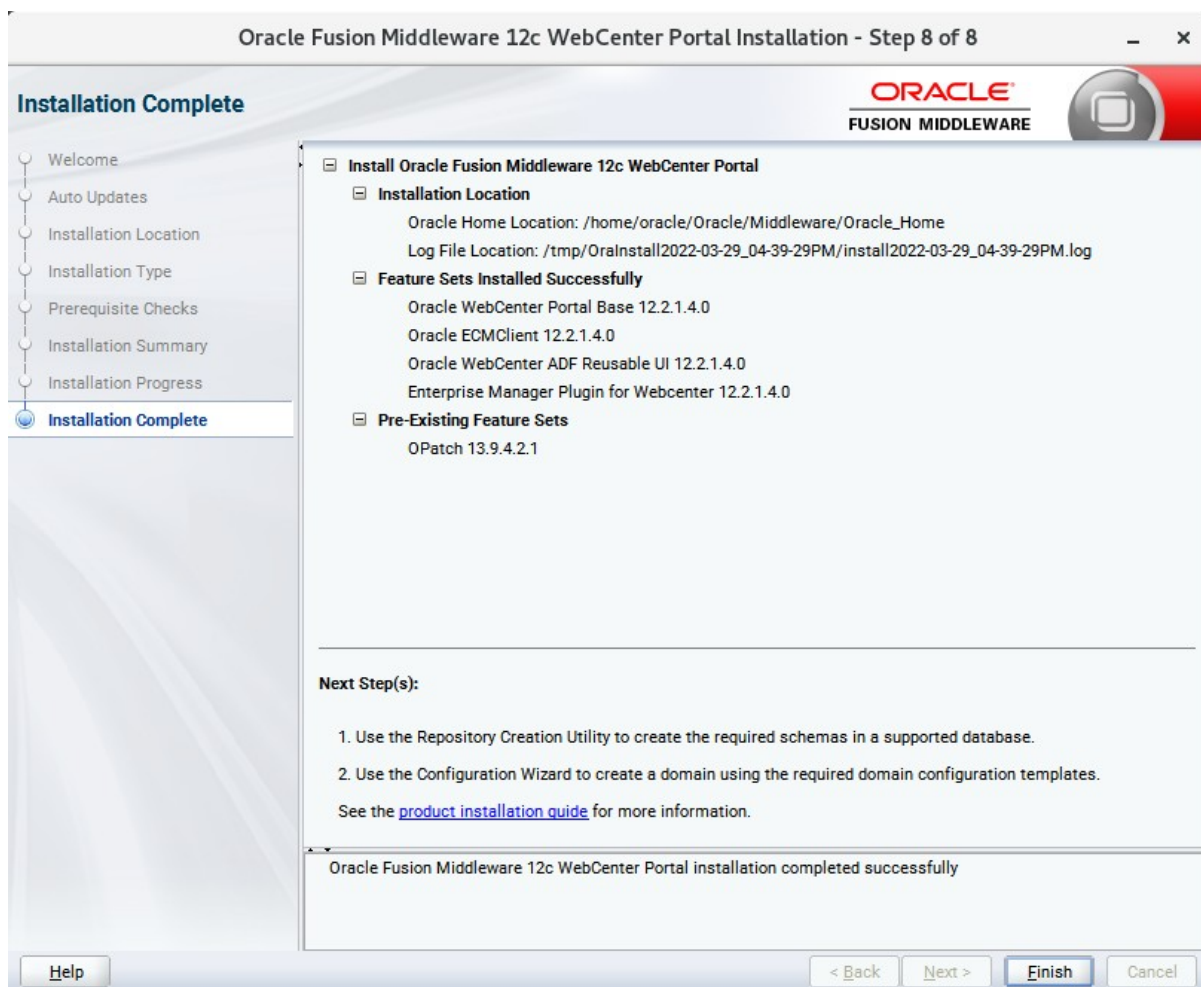
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.

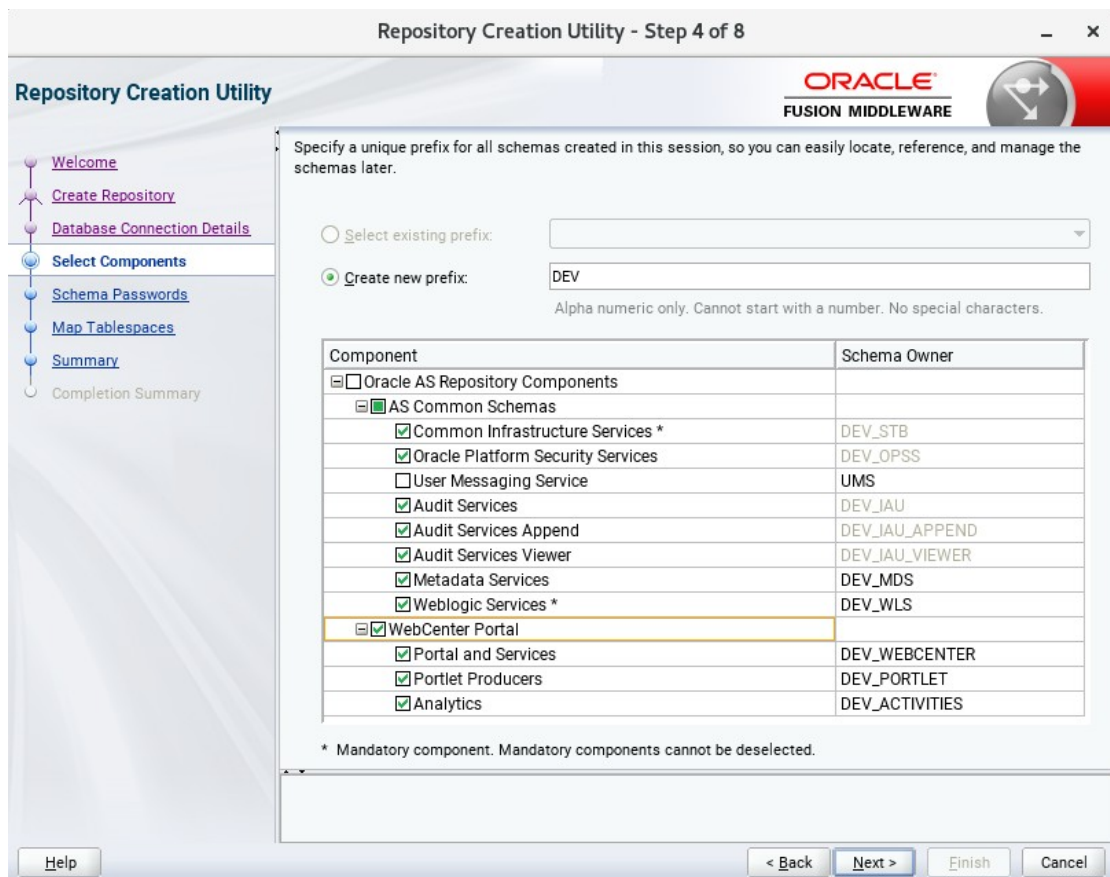


Click **Finish** to dismiss the installer.

## 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.**



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

Ensure schema creation is successful.

**Repository Creation Utility - Step 9 of 9**

**Repository Creation Utility** **ORACLE FUSION MIDDLEWARE**

Database details:

Host Name: Dell5530  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 10 minutes 15 seconds

RCU Logfile: /tmp/RCU2022-03-29\_16-52\_2138375009/logs/rcu.log  
Component Log Directory: /tmp/RCU2022-03-29\_16-52\_2138375009/logs  
View Log: [rcu.log](#)

Prefix for (prefixable) Schema DEV Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:13.258(sec)	<a href="#">stb.log</a>
Oracle Platform Security Services	Success	02:13.590(min)	<a href="#">opss.log</a>
Audit Services	Success	00:53.022(sec)	<a href="#">iau.log</a>
Audit Services Append	Success	00:10.524(sec)	<a href="#">iau_append.log</a>
Audit Services Viewer	Success	00:10.762(sec)	<a href="#">iau_viewer.log</a>
Metadata Services	Success	00:25.705(sec)	<a href="#">mds.log</a>
Weblogic Services	Success	01:20.324(min)	<a href="#">wls.log</a>
Portal and Services	Success	02:45.701(min)	<a href="#">webcenter.log</a>
Portlet Producers	Success	00:33.509(sec)	<a href="#">portlet.log</a>
Analytics	Success	00:37.655(sec)	<a href="#">activities.log</a>

Help < Back Next > Create Close

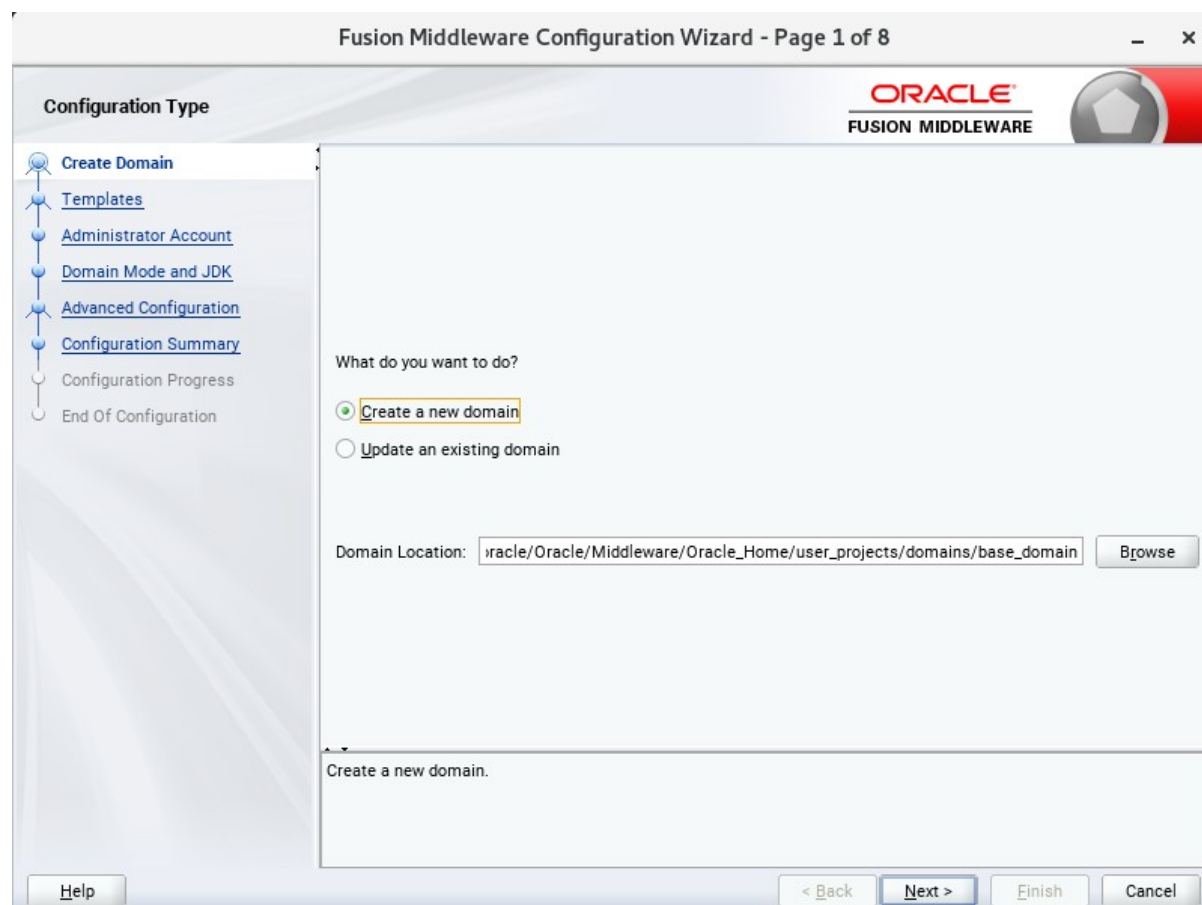


### 3. Configuring Oracle WebCenter Portal 12c using the Config Wizard

3-1. In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE\_HOME/oracle\_common/common/bin** directory.

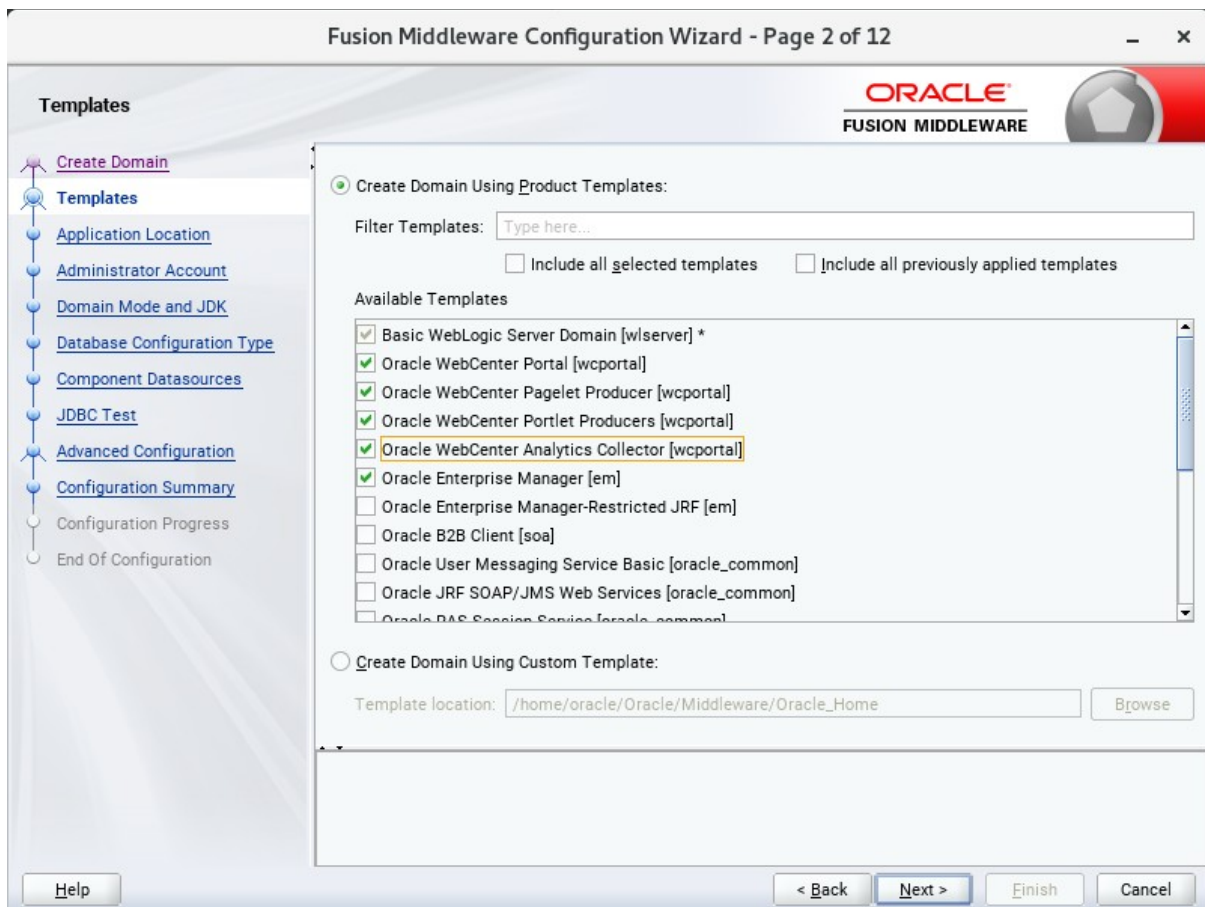
**Follow these steps:**

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



Click **Next** to continue.

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



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

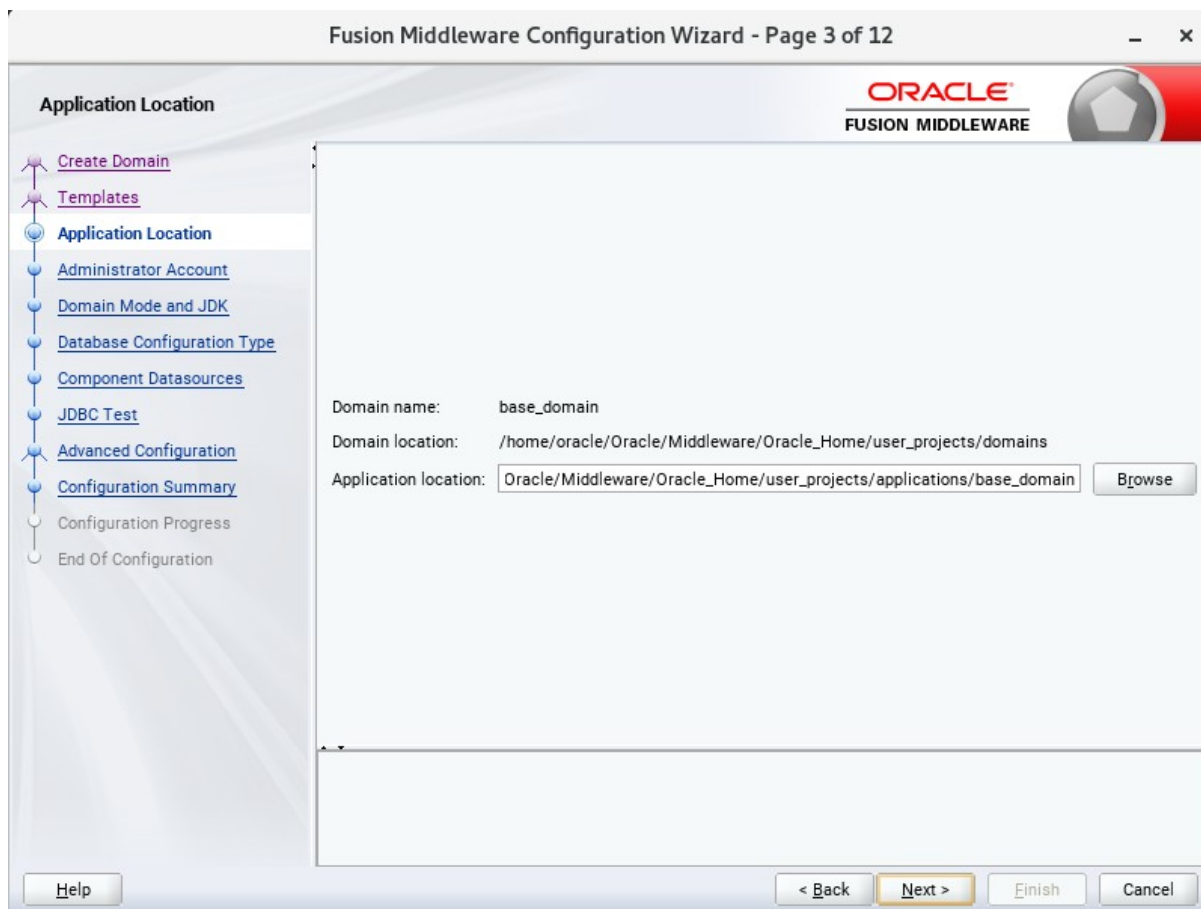
- Oracle WebCenter Portal [wcportal]

Selecting this template automatically selects the following as dependencies:

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

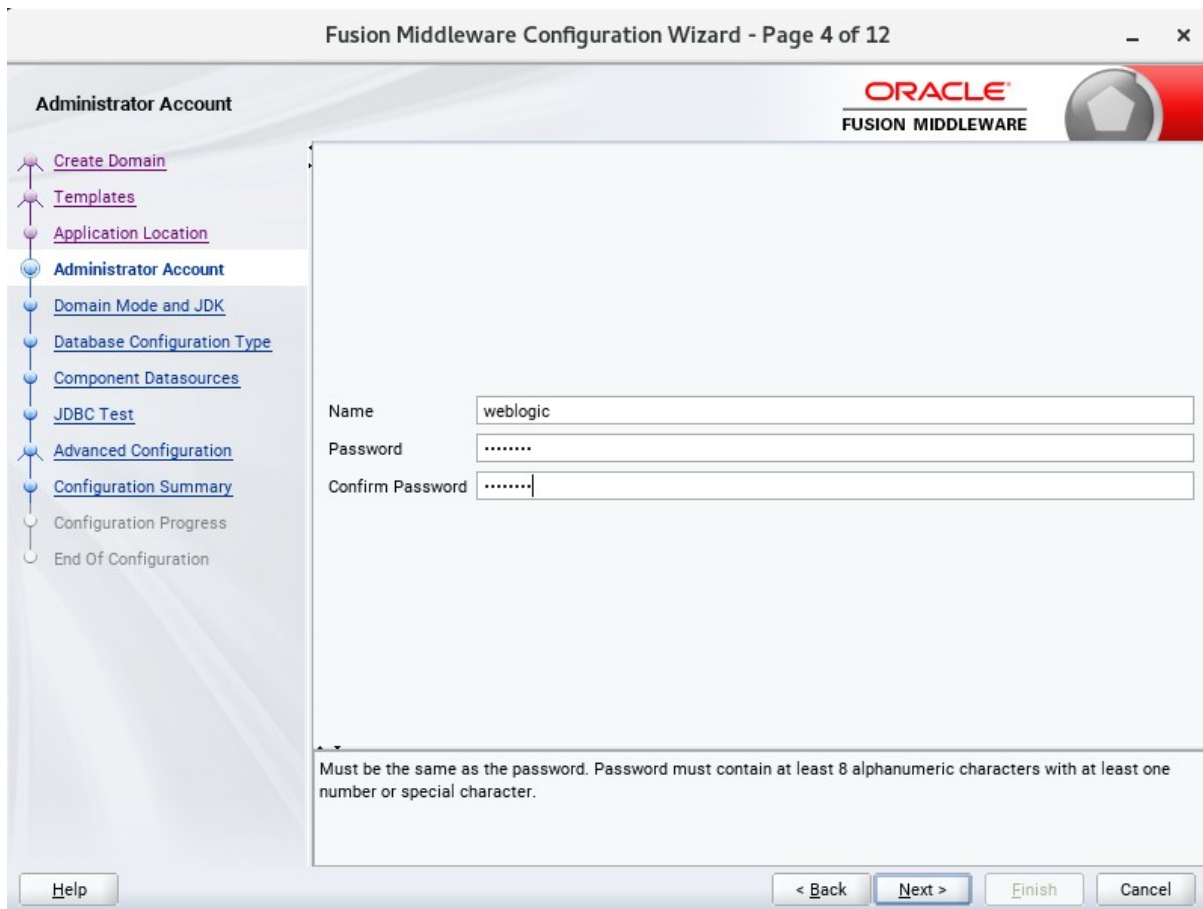
You can also select any of the Oracle WebCenter Portal products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



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

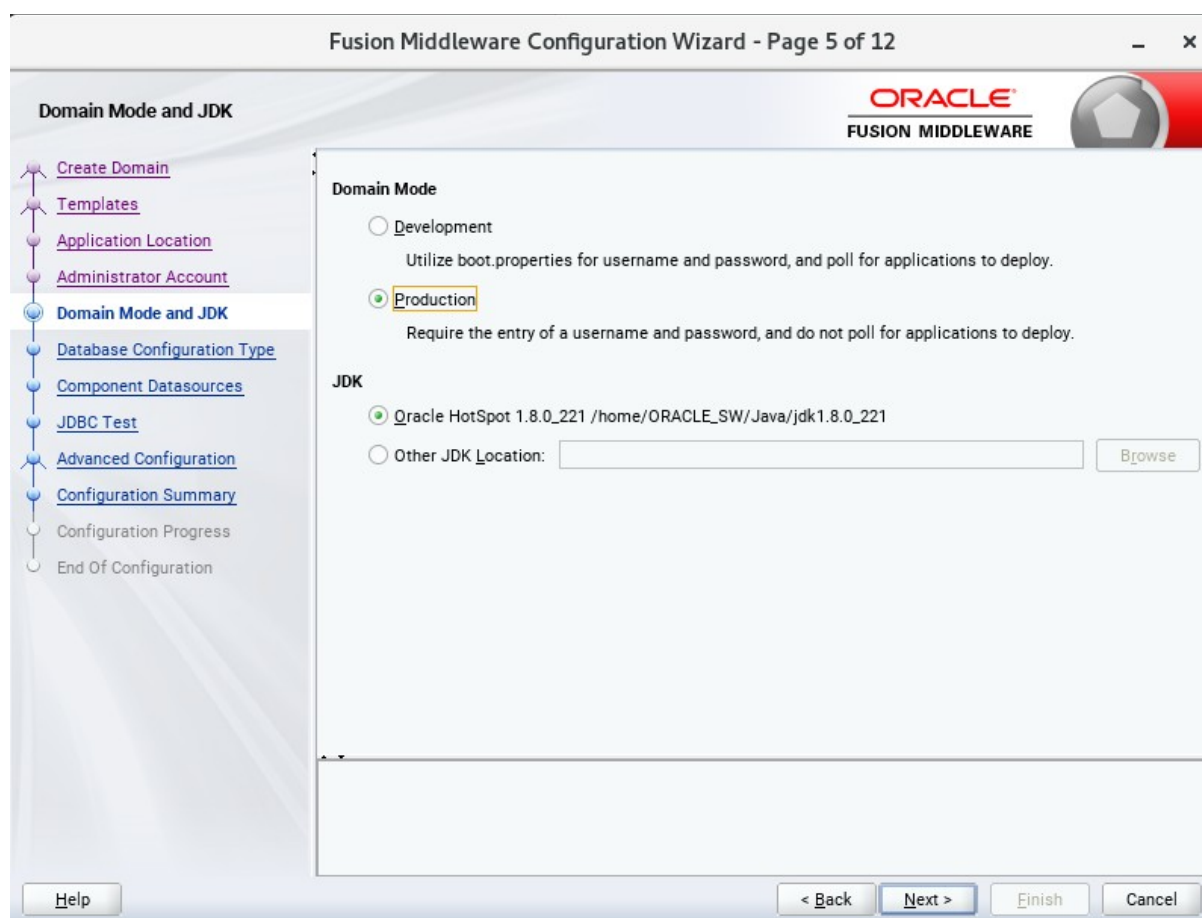
4). The **Administrator Account** screen appears.



The screenshot shows the "Administrator Account" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 4 of 12". The Oracle 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 (highlighted), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: "Name" with the value "weblogic", "Password" with masked characters ".....", and "Confirm Password" with masked characters ".....". Below the fields is a validation message: "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 four buttons: "Help", "< Back", "Next >" (highlighted), "Finish", and "Cancel".

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

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.

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. The left navigation pane lists several 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, there is a text box explaining that the wizard uses the schema credentials from the Repository Creation Utility. The configuration fields include: 'Vendor' (Oracle), 'Driver' (\*Oracle's Driver (Thin) for Service connections; Versions:...), 'Connection Parameters' (selected) and 'Connection URL String' (unselected), 'Host Name' (Dell5530), 'DBMS/Service' (suse), 'Port' (1521), 'Schema Owner' (DEV\_STB), and 'Schema Password' (masked with dots). There are 'Get RCU Configuration' and 'Cancel' buttons. A 'Connection Result Log' section shows the following messages: '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, there is a 'Help' button and navigation buttons: '< Back', 'Next >', 'Finish', and '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.

**Fusion Middleware Configuration Wizard - Page 7 of 12**

**JDBC Component Schema**

ORACLE  
FUSION MIDDLEWARE

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

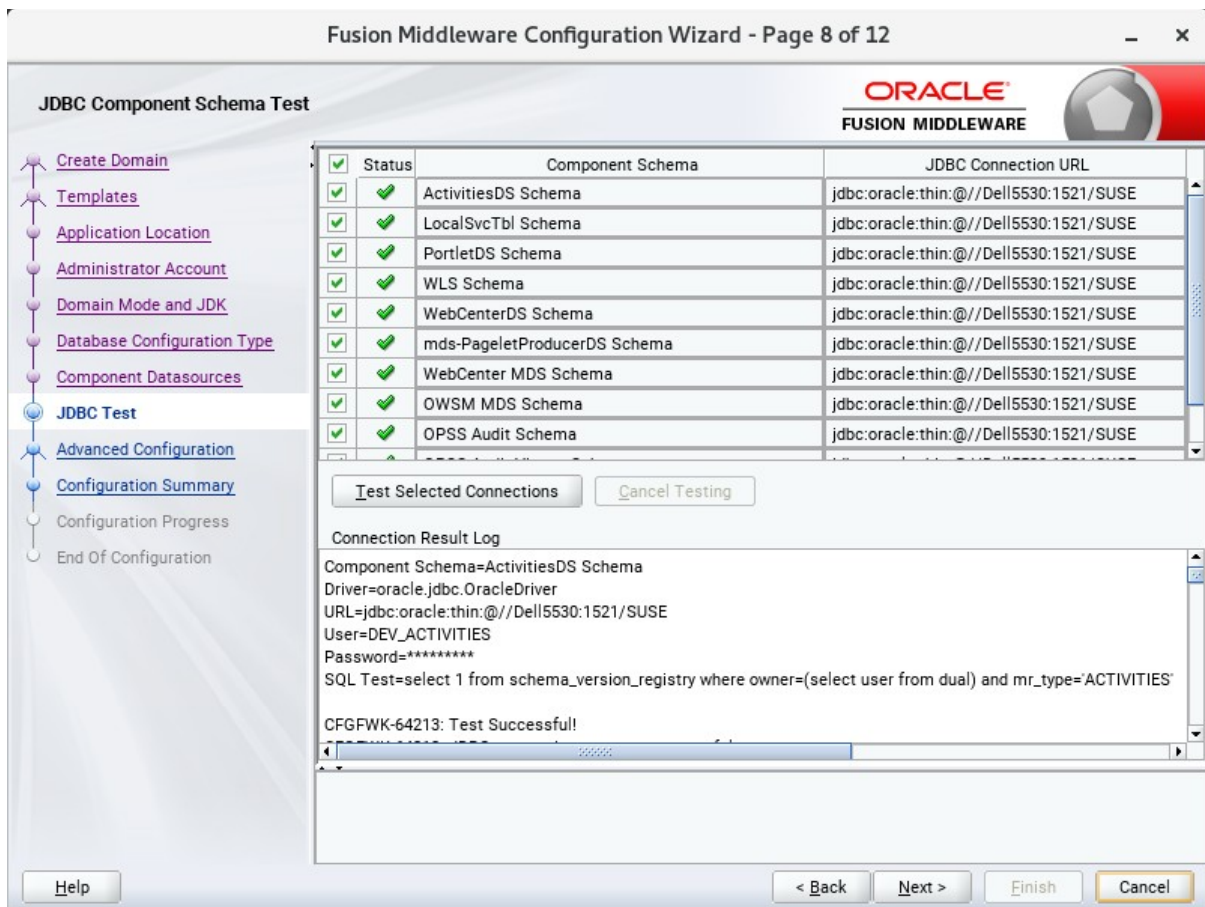
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	ActivitiesDS Schema	SUSE	Dell5530	1521	DEV_ACTIVITIE	.....
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	Dell5530	1521	DEV_STB	.....
<input type="checkbox"/>	PortletDS Schema	SUSE	Dell5530	1521	DEV_PORTLET	.....
<input type="checkbox"/>	WLS Schema	SUSE	Dell5530	1521	DEV_WLS_RUN	.....
<input type="checkbox"/>	WebCenterDS Schema	SUSE	Dell5530	1521	DEV_WEBCENT	.....
<input type="checkbox"/>	mds-PageletProducerDS	SUSE	Dell5530	1521	DEV_MDS	.....
<input type="checkbox"/>	WebCenter MDS Schem	SUSE	Dell5530	1521	DEV_MDS	.....

Help < Back **Next >** Finish Cancel

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

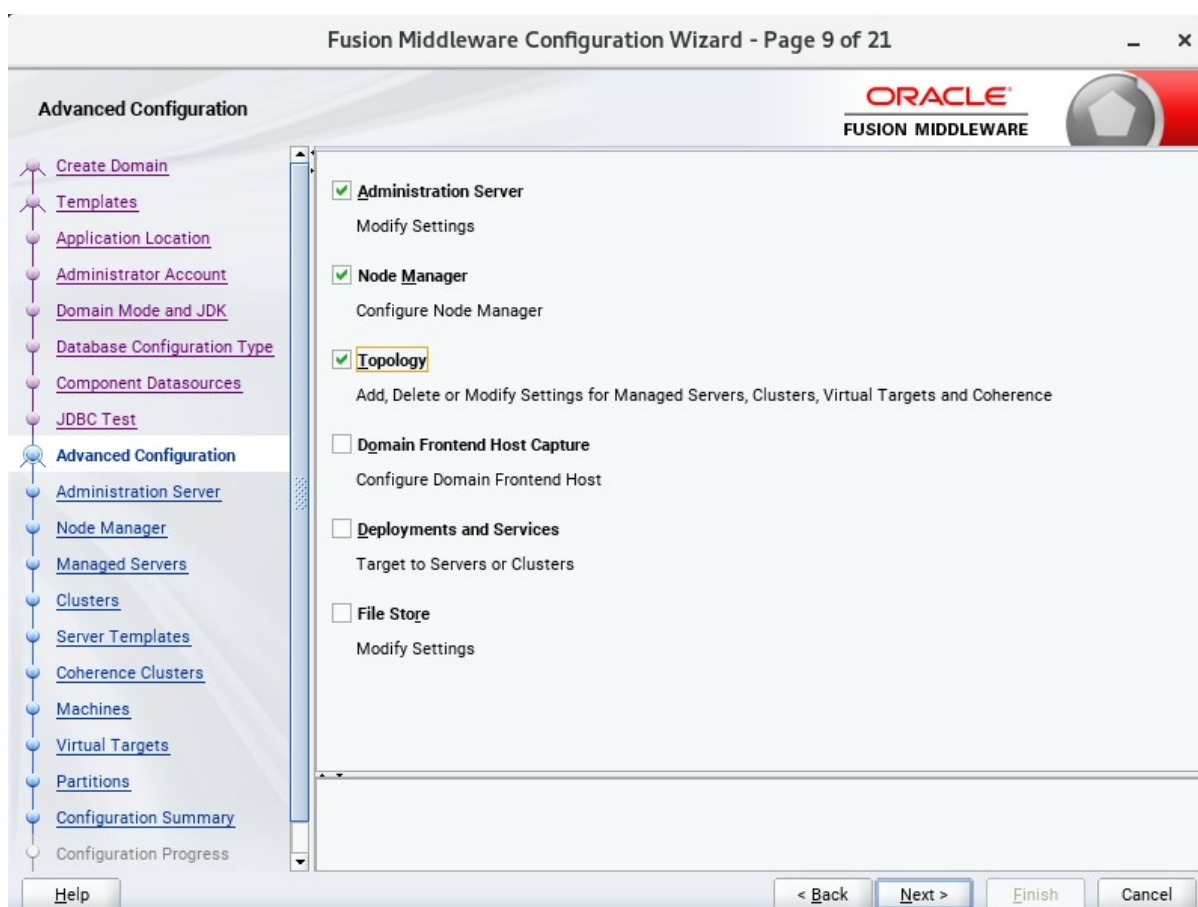
8). The **JDBC Component Schema Test** screen appears.



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



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

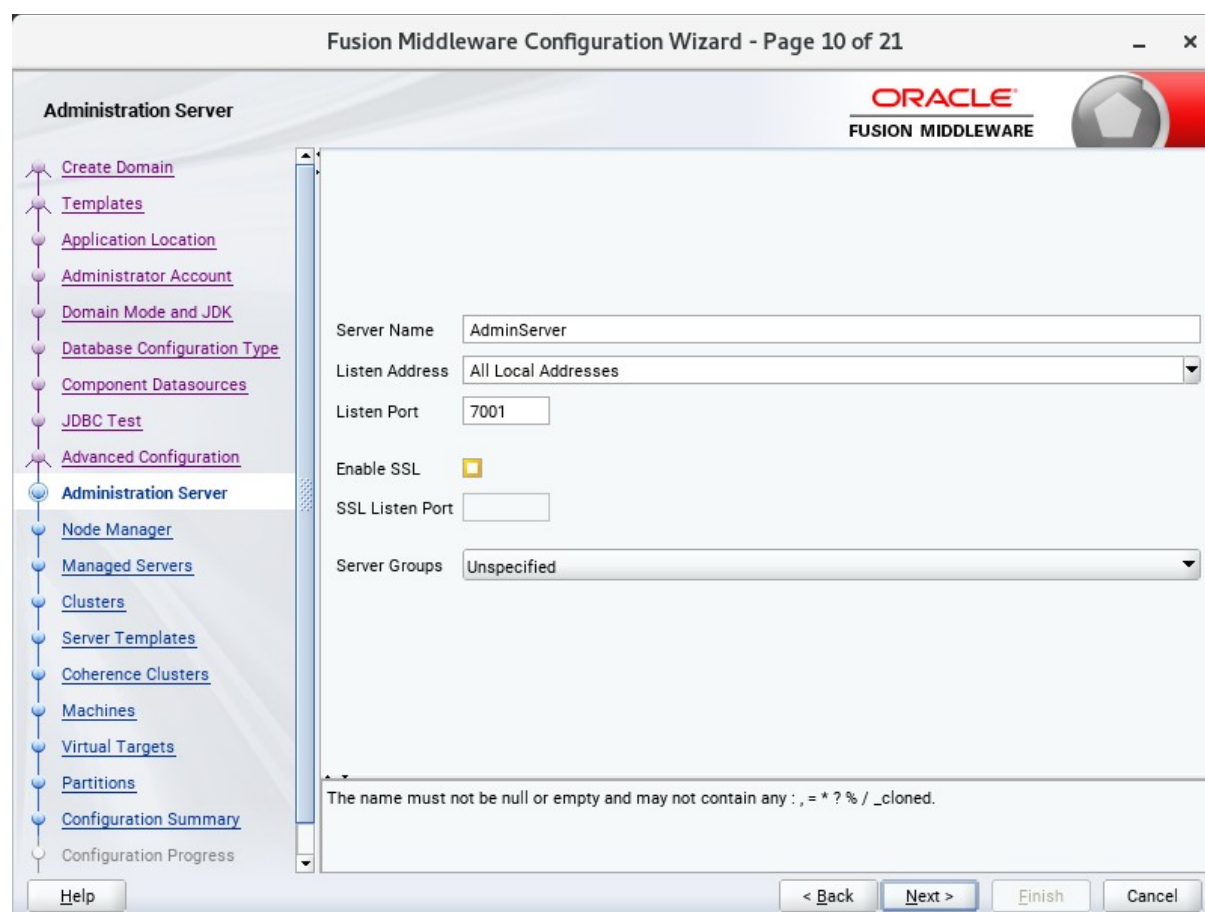


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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



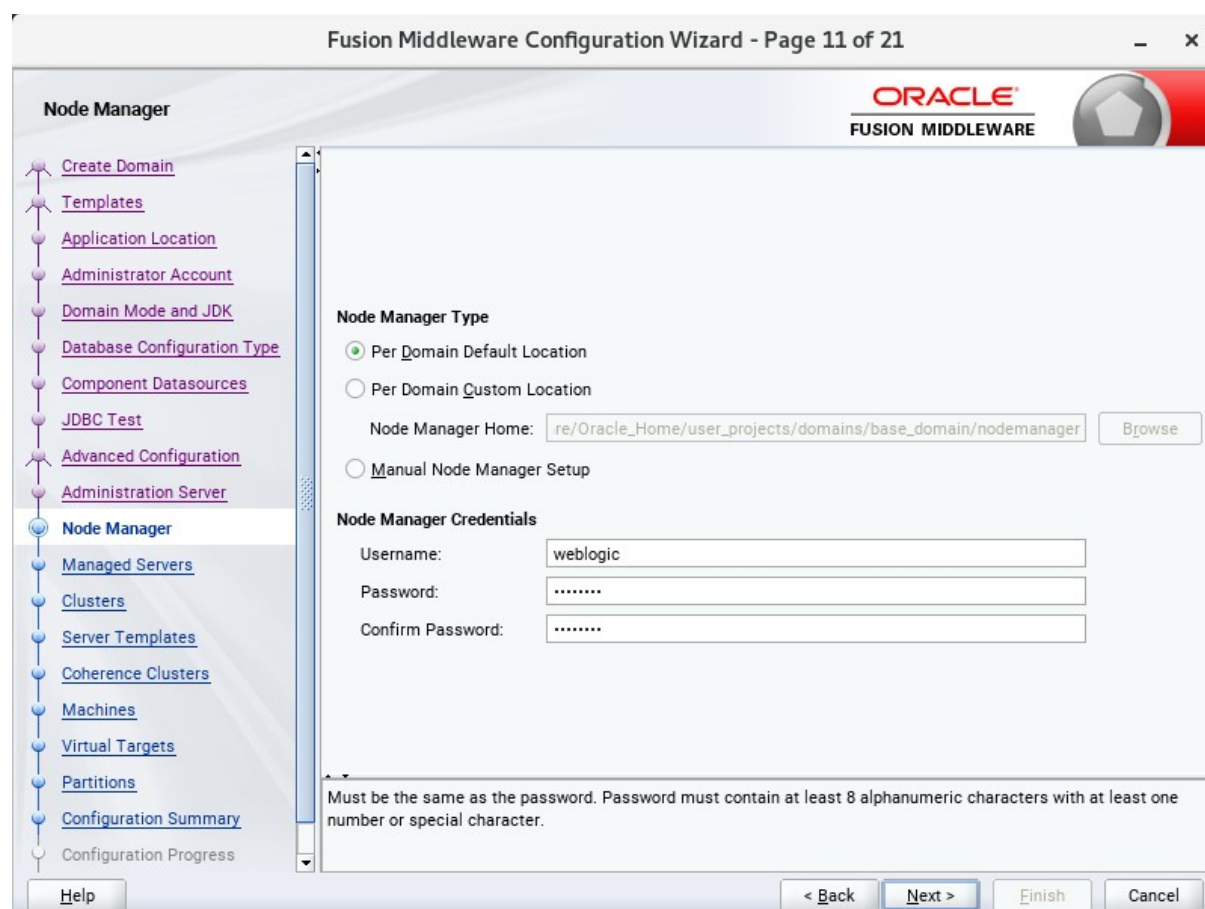
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 10 of 21". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation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

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

At the bottom, 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: "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 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 content area is divided into two sections: "Node Manager Type" and "Node Manager Credentials".

**Node Manager Type**

- Per Domain Default Location
- Per Domain Custom Location

Node Manager Home:

Manual Node Manager Setup

**Node Manager Credentials**

Username:

Password:

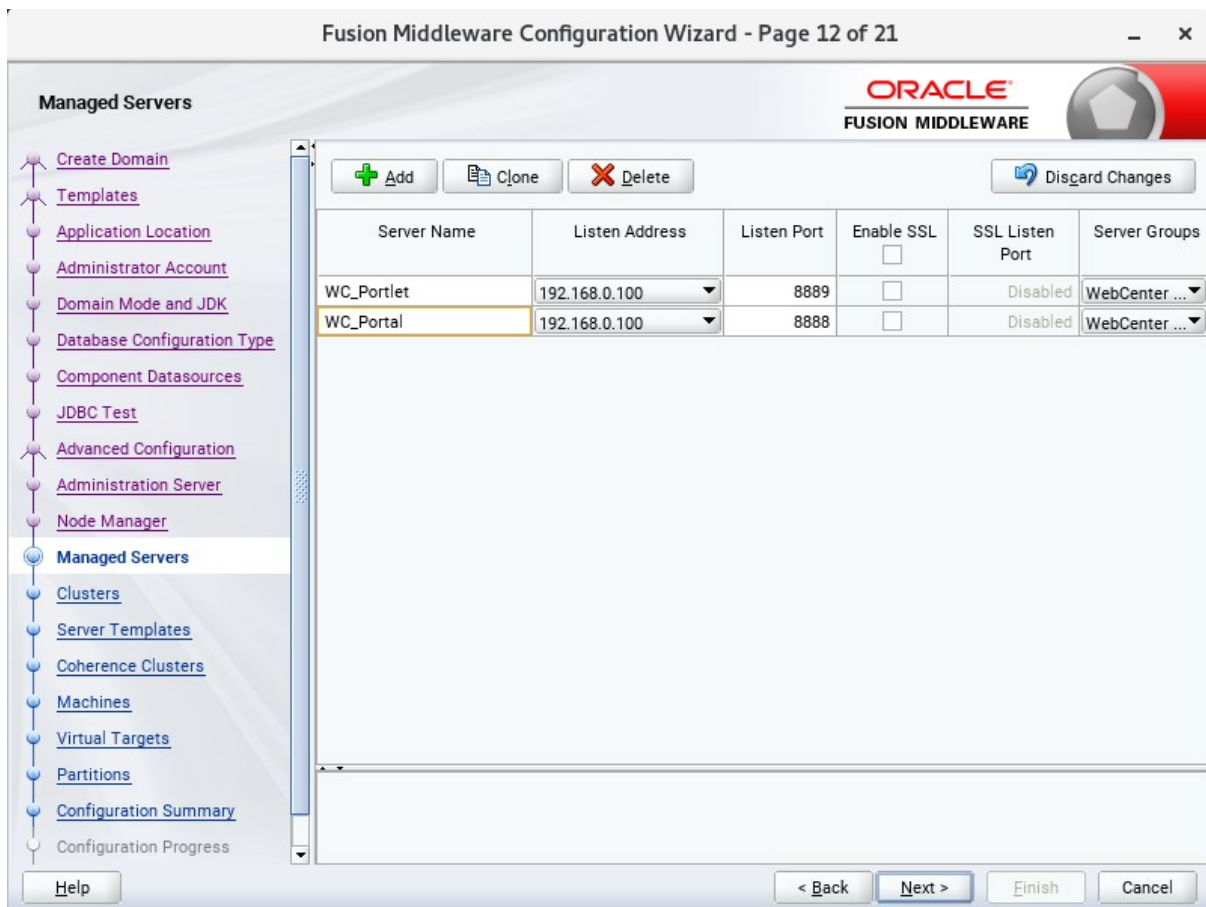
Confirm Password:

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

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

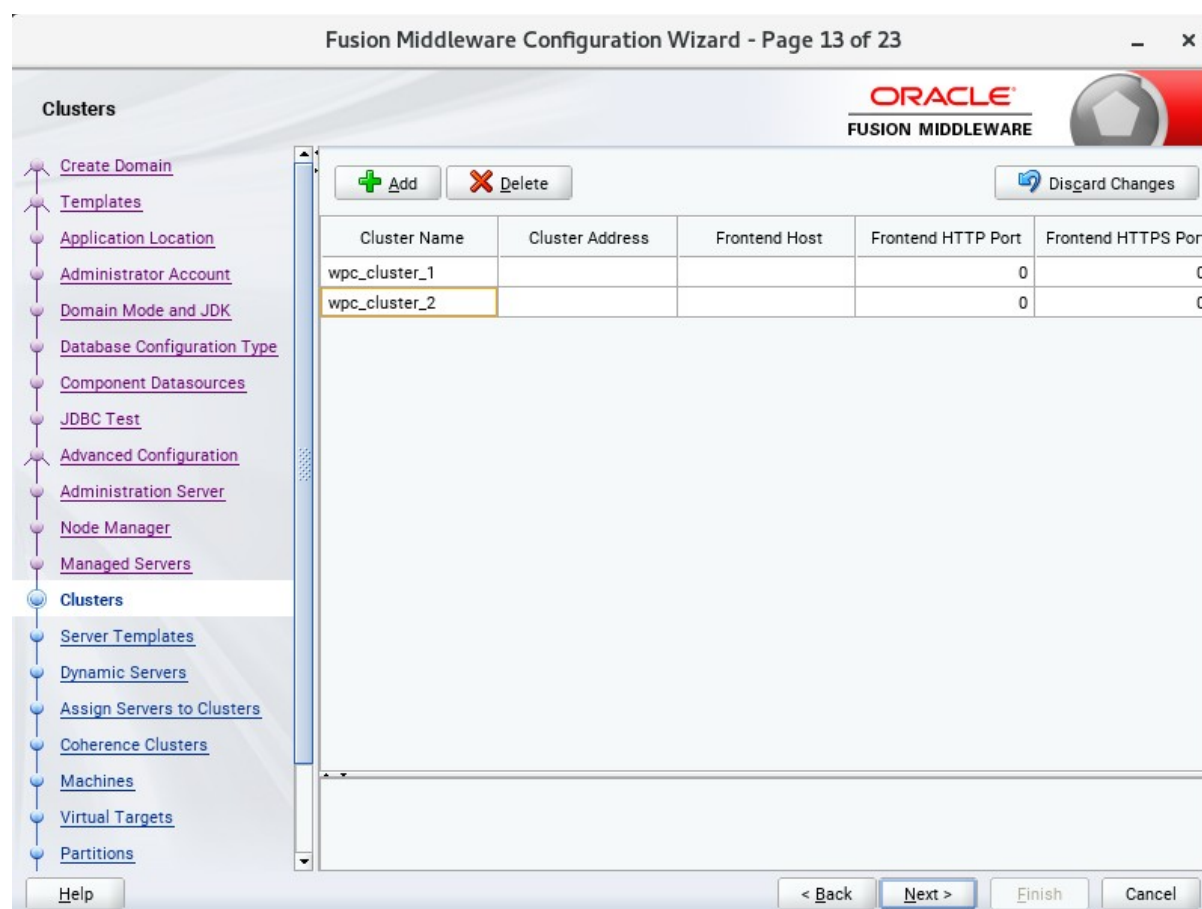
Select **Per Domain Default Location** as the Node Manager type, then specify Node Manager credentials. Click **Next** to continue.

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



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.

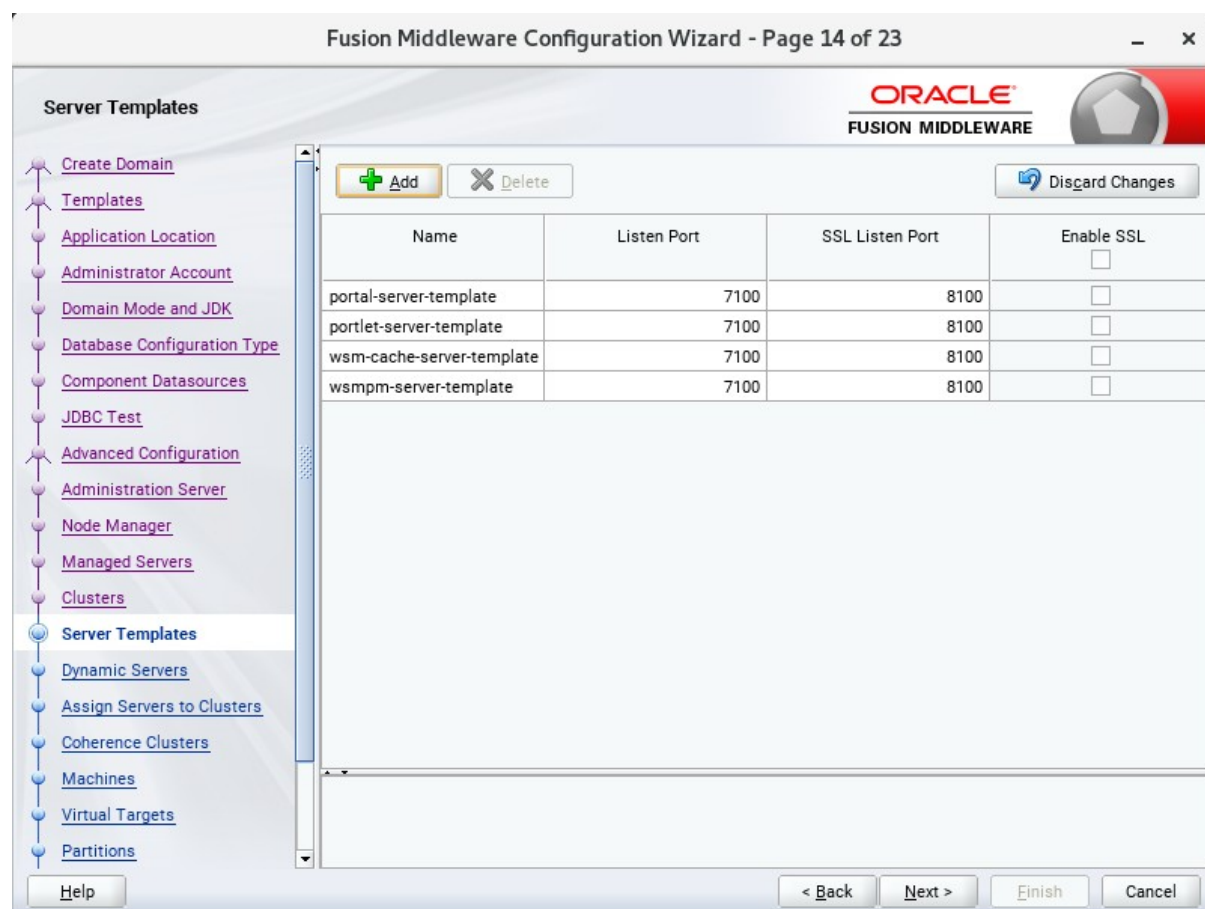


On the Clusters screen:

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**.

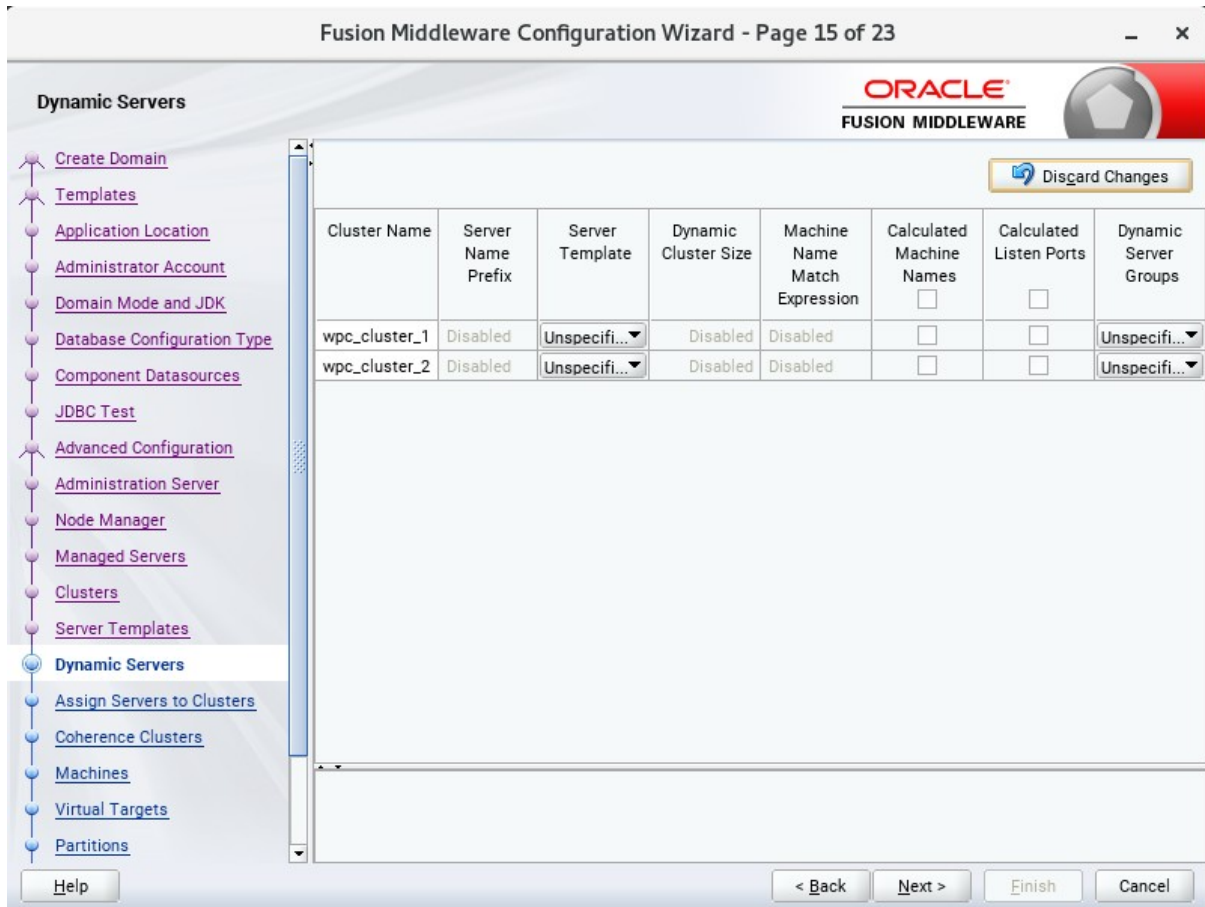
Click **Next** to continue.

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



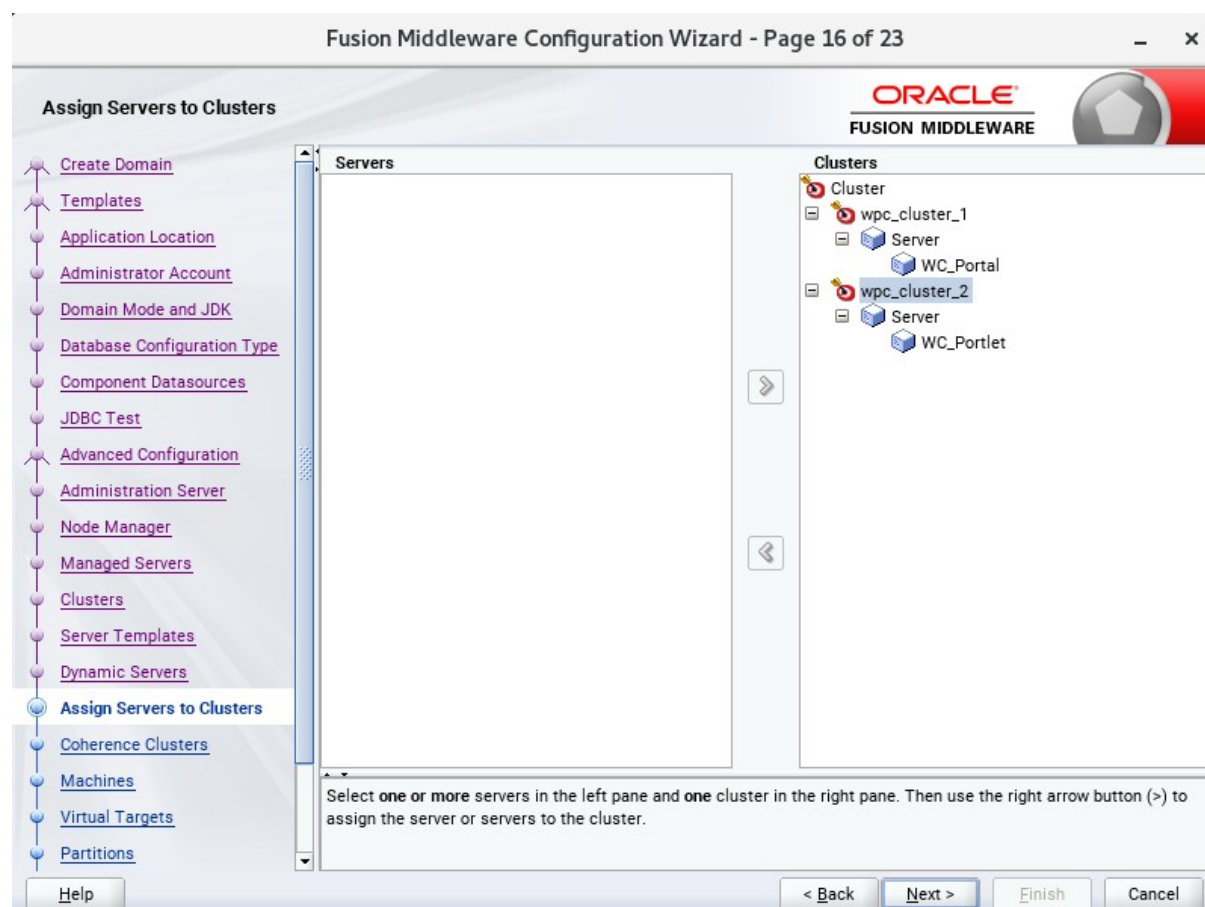
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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.

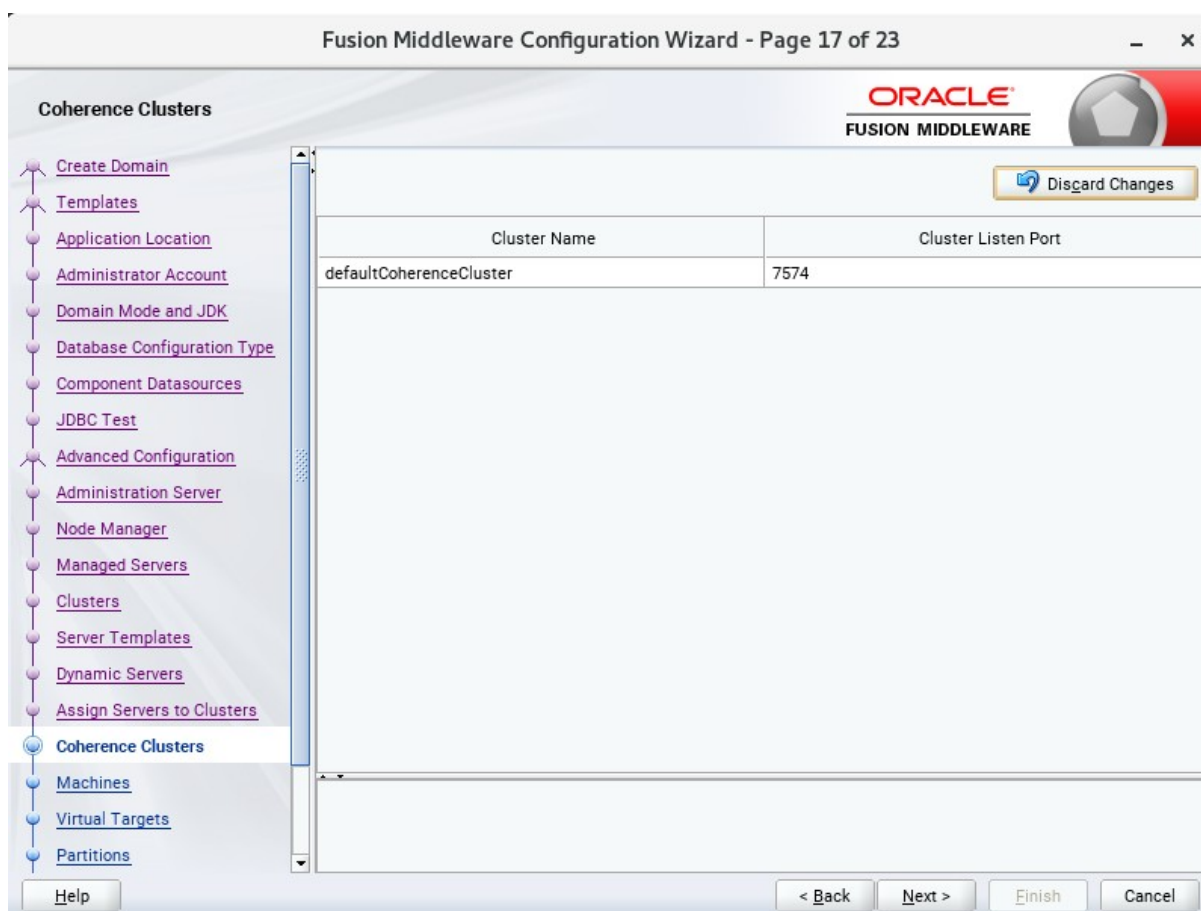
16). The **Assign Servers to Clusters** screen appears.



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.

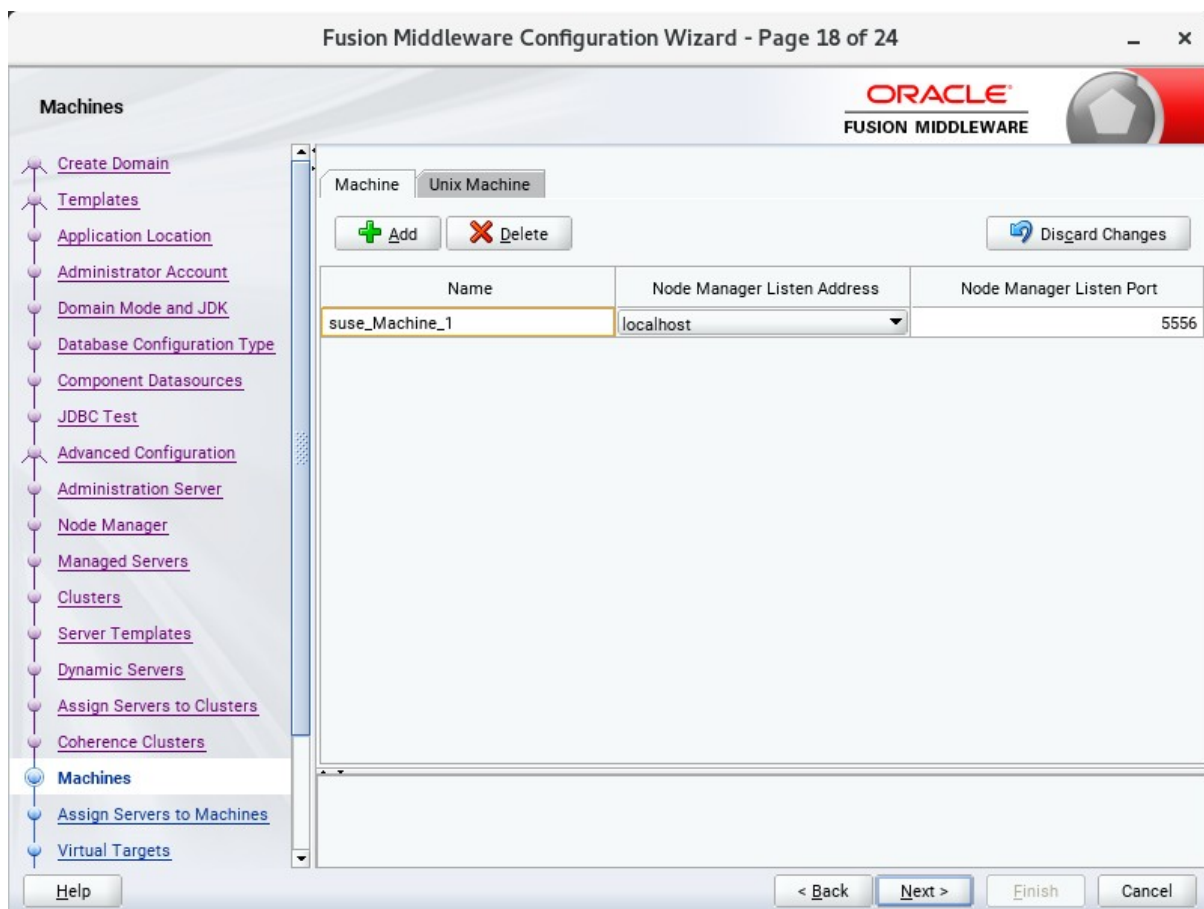


17). The **Coherence Clusters** screen appears.



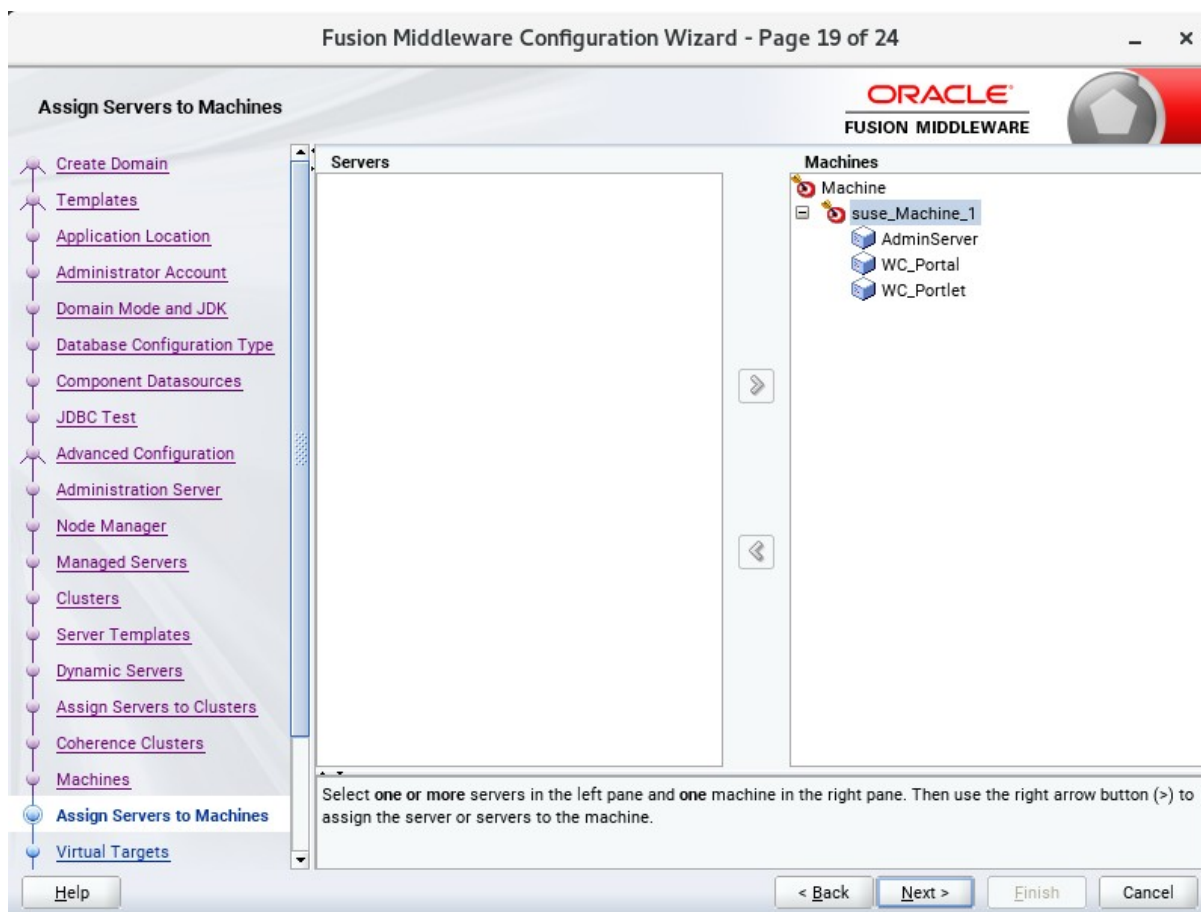
Leave the default port number as the Coherence cluster listen port. Click **Next** to continue.

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



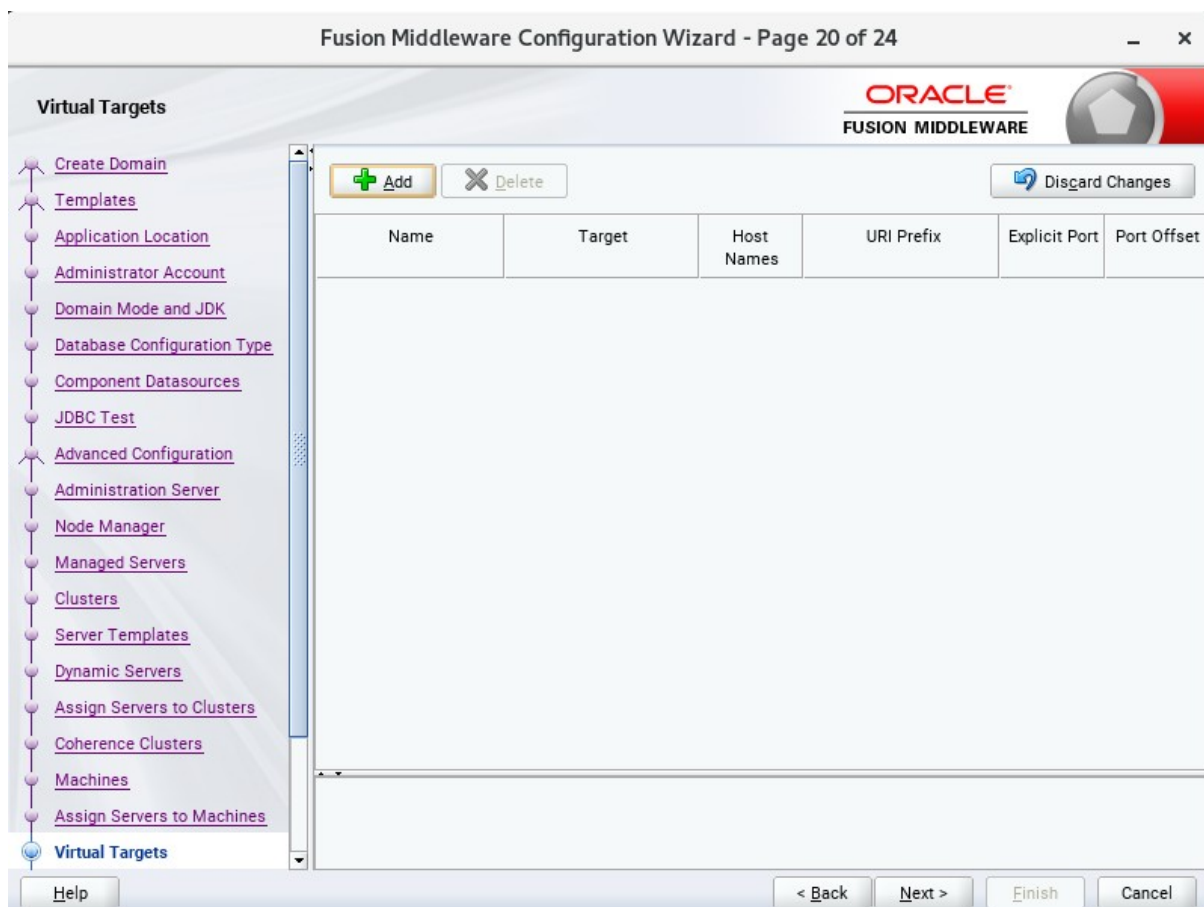
To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



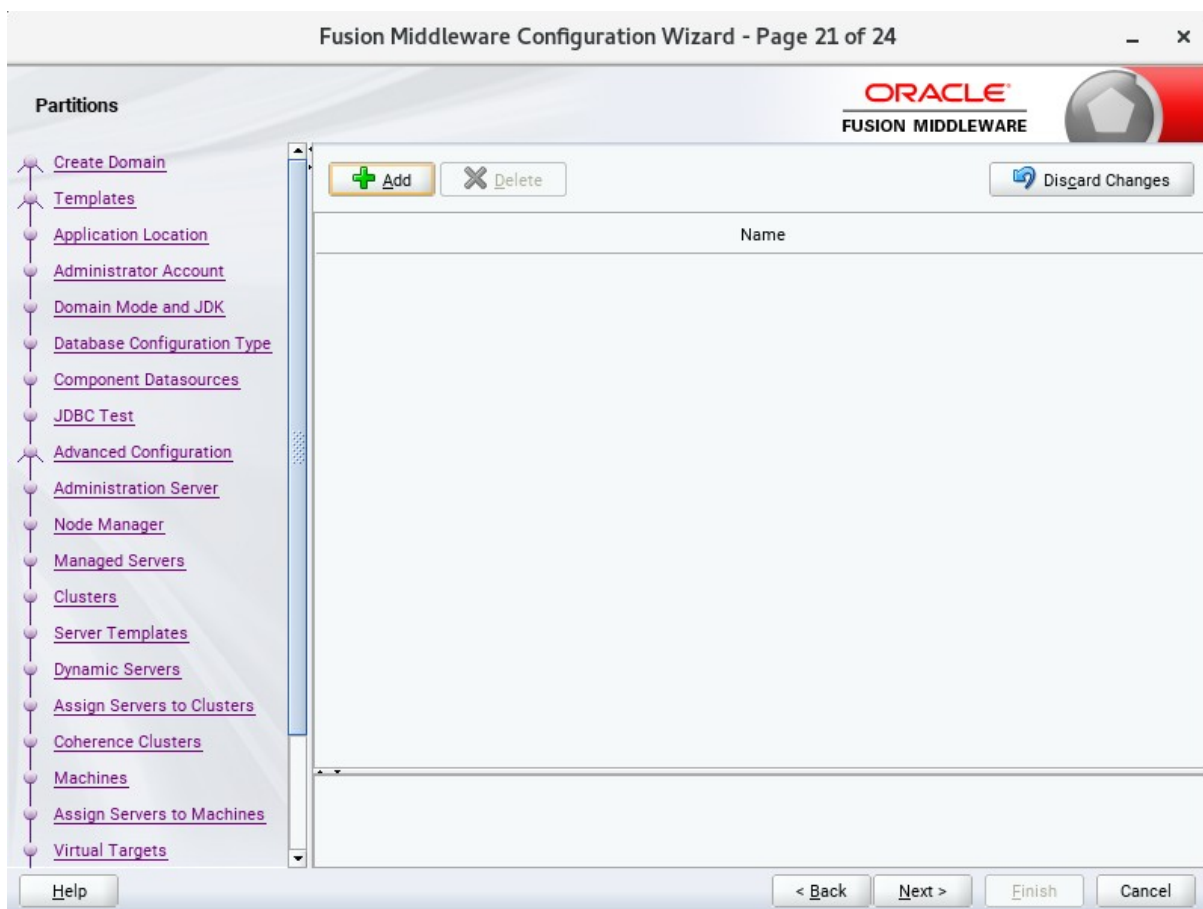
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



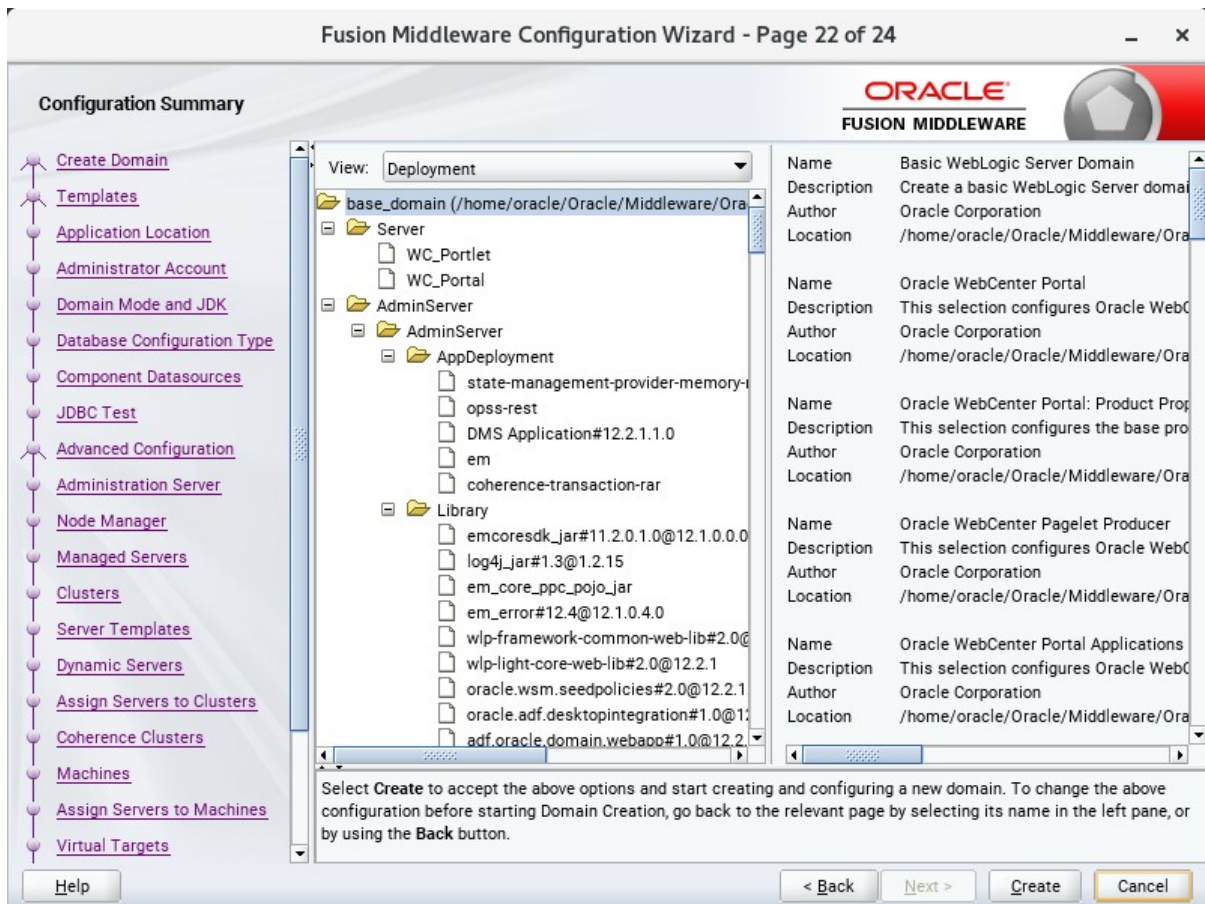
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



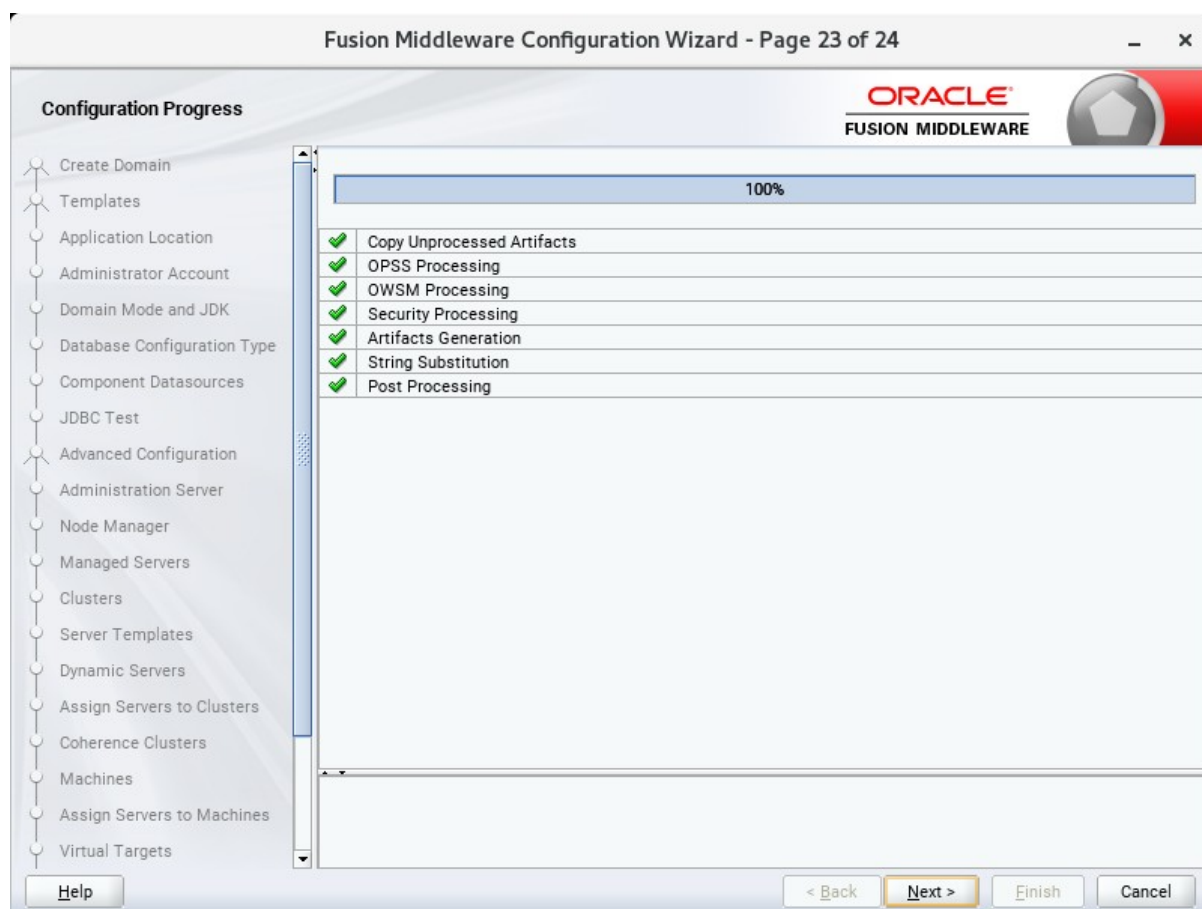
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



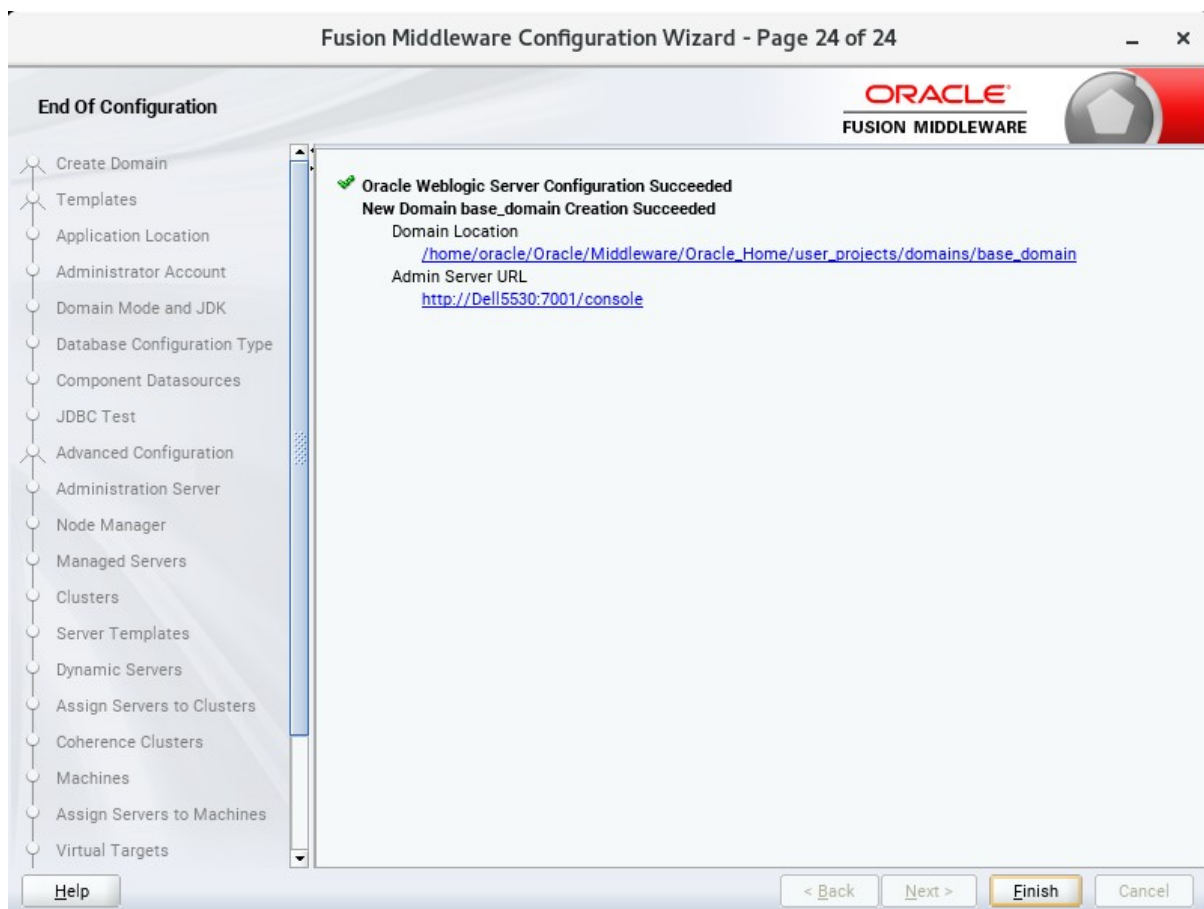
Select **Create** to accept the above options and start creating and configuring a new domain.

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:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home/ORACLE_SW/WebCenter_Portal... x oracle@Dell5530:/home/oracle/Oracle/Middleware/Orac... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh
> nm.out&
[1] 28061
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_SW/Java/jdk1.8.0_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/ser/lib/weblo
gic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/or
acle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware
/Oracle_Home/wlserver/./home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home
/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./
-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
<Mar 29, 2022 5:45:08 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/dom
ains/base_domain/nodemanager/nodemanager.domains>
<Mar 29, 2022 5:45:08 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Mar 29, 2022 5:45:08 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Midde
lware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Mar 29, 2022 5:45:08 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/dom
ains/base_domain/nodemanager/nodemanager.domains>
<Mar 29, 2022 5:45:08 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhra
seUsed=true>
Mar 29, 2022 5:45:08 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
Mar 29, 2022 5:45:09 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.
<Mar 29, 2022 5:45:09 PM GMT+08:00> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/O
racle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1.4.0

Configuration settings:

DomainsFile=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains
LogLimit=0

```

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

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home/ORACLE... x oracle@Dell5530:/home/oracle/Or... x oracle@Dell5530:/home/oracle/Or... x
gic.kernel.Default (self-tuning)', member=n/a): The cluster name has not been configured, a value of "oracle's cluster" has been automatically generated
2022-03-29 17:50:22.347/225.901 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
2022-03-29 17:50:22.595/226.149 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
2022-03-29 17:50:23.152/226.706 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Mar 29, 2022 5:50:26,160 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Mar 29, 2022 5:50:27,223 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain Level Diagnostic Service.>
2022-03-29 17:50:27.233/230.786 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '5' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2022-03-29 17:50:27.247/230.801 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '5' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Mar 29, 2022 5:50:27,711 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Mar 29, 2022 5:50:27,757 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Mar 29, 2022 5:50:27,757 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connection list DomainRuntimeServiceMBean>
2022-03-29 17:50:30.754/234.308 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '9' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST
<Mar 29, 2022 5:50:32,653 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 127.0.0.1, 0:0:0:0:0:0:0:1.>
<Mar 29, 2022 5:50:32,654 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base domain" running in production mode.>
<Mar 29, 2022 5:50:32,654 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.>
<Mar 29, 2022 5:50:32,654 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 29, 2022 5:50:32,654 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 29, 2022 5:50:32,654 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.>
<Mar 29, 2022 5:50:32,654 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 29, 2022 5:50:32,654 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Mar 29, 2022 5:50:32,656 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Mar 29, 2022 5:50:32,694 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:

```

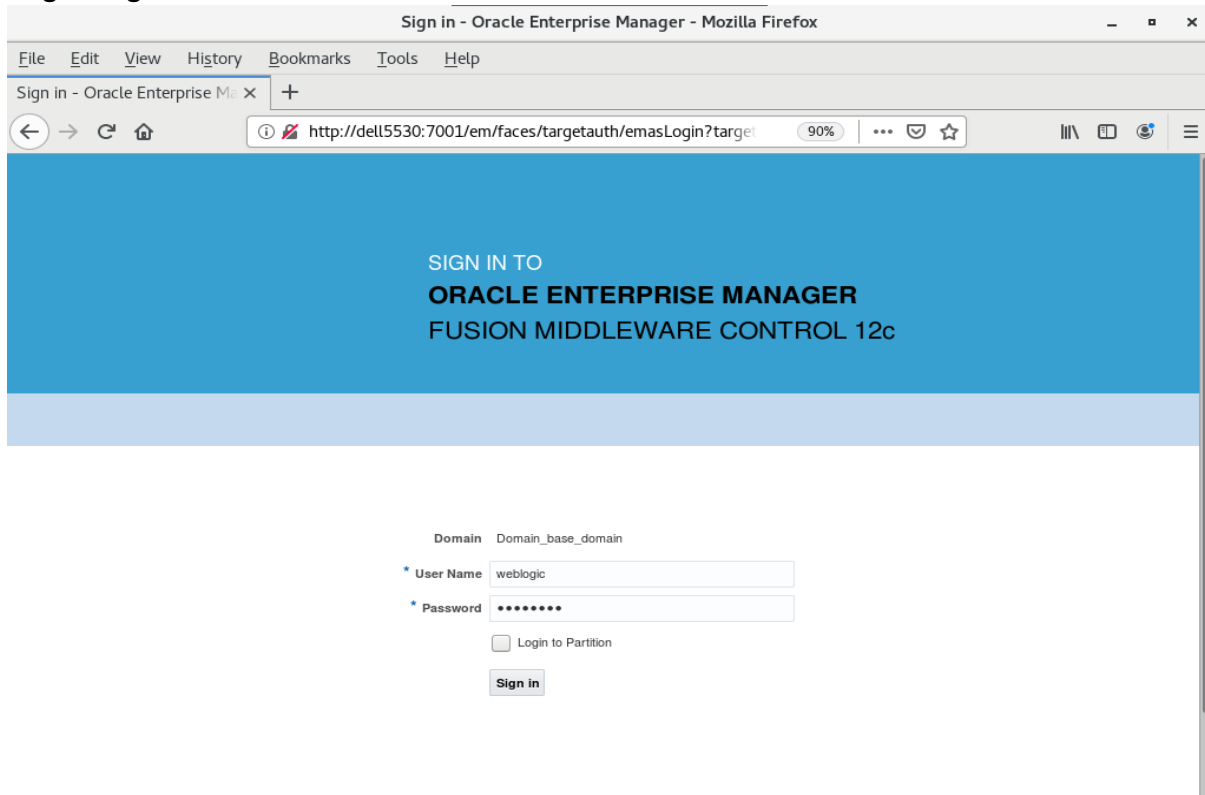
-----
The server started in RUNNING mode.
-----

```

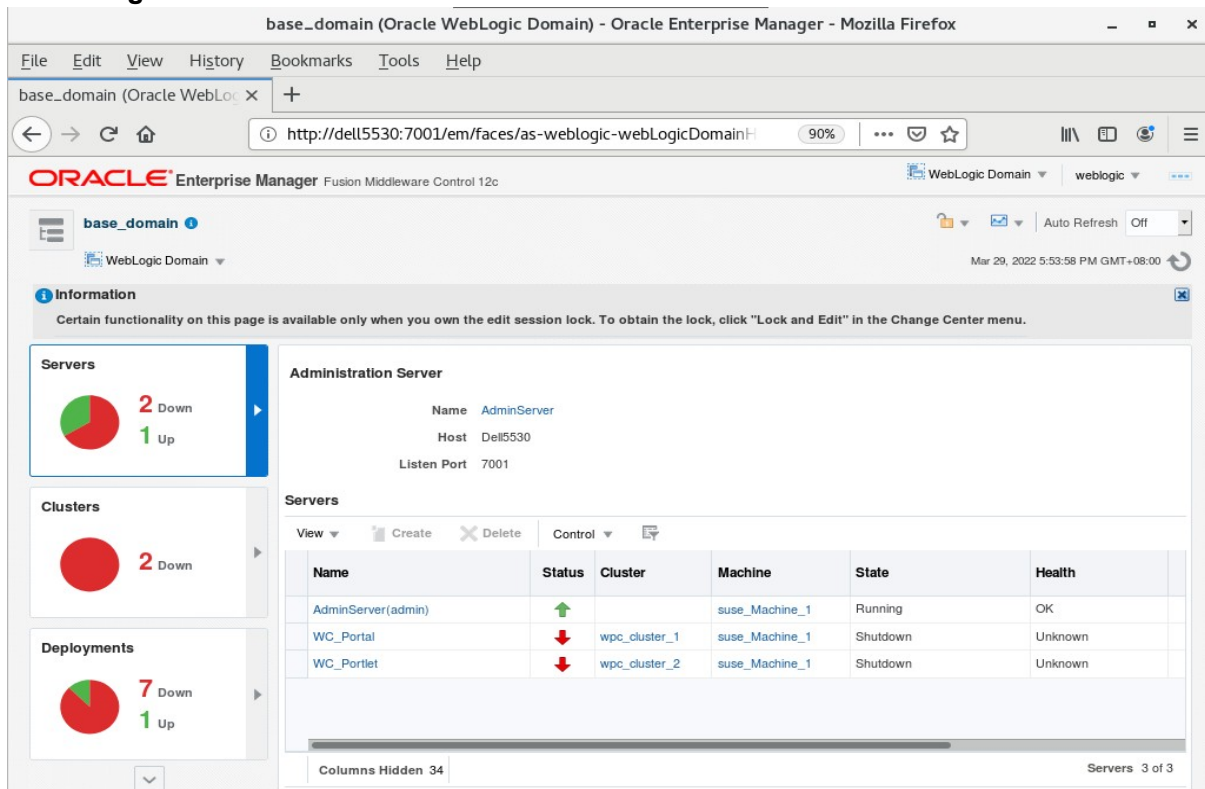
### 4-3. Checking Oracle WebCenter Product URLs.

#### 1). Access to Enterprise Manager Console.

#### Login Page:



#### Home Page:



## Starting the Oracle WebCenter Portal Managed Servers:

The screenshot displays the Oracle Enterprise Manager interface for a WebLogic Domain. The left sidebar shows summary statistics for Servers (2 Down, 1 Up), Clusters (2 Down), and Deployments (7 Down, 1 Up). The main content area shows the Administration Server details and a table of managed servers.

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), and Deployments (7 Down, 1 Up). The main area displays the 'Administration Server' details and a table of managed servers. A 'Control' menu is open over the table, with 'Start' selected. The table shows the following data:

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 started. The summary cards now show 3 Up Servers, 2 Up Clusters, and 7 Up Deployments. The table of managed servers is updated to show all servers in a 'Running' state:

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) ...

[INFO] Unable to bind key for unsupported operation: backward-delete-word
[INFO] Unable to bind key for unsupported operation: backward-delete-word
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

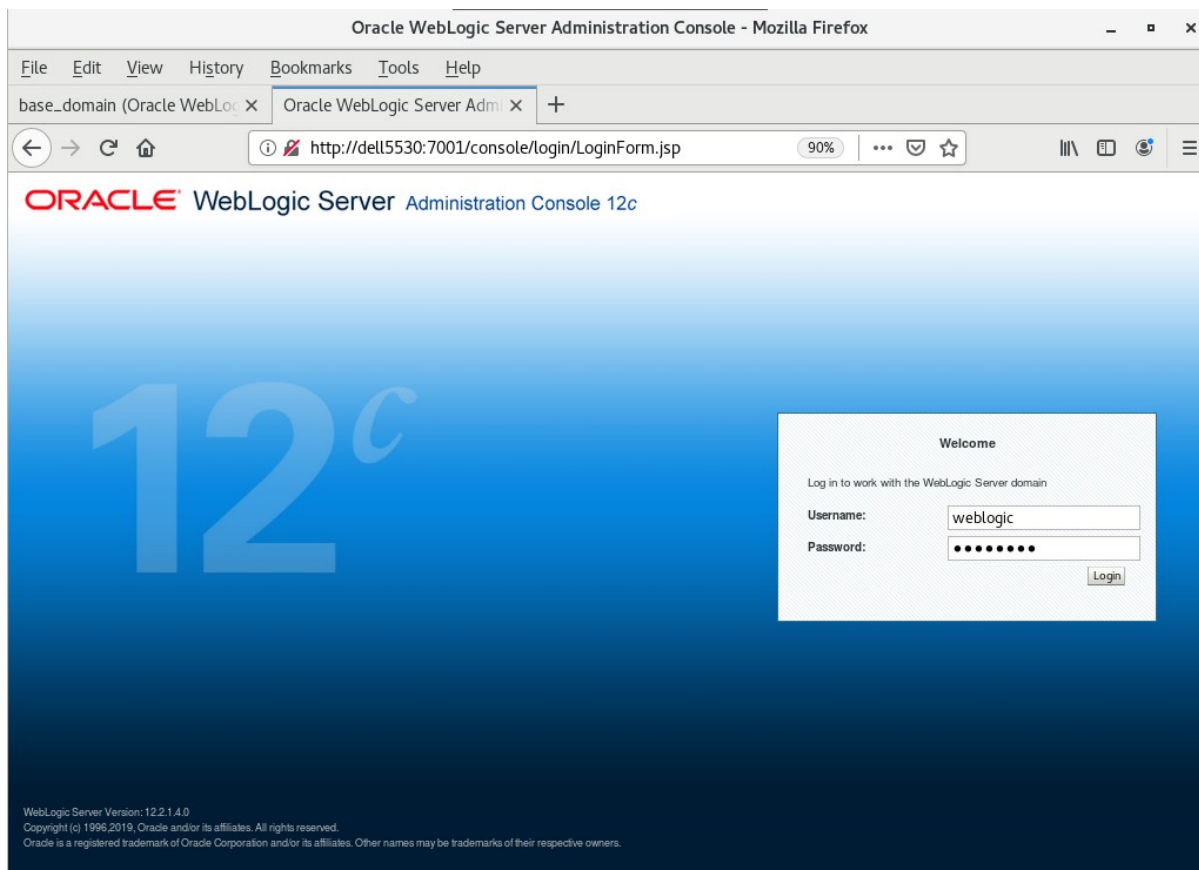
wls:/offline> connect('weblogic','welcome1','Dell5530:7001')
Connecting to t3://Dell5530:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

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:

### Viewing the summary of servers:

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

**Servers (Filtered - More Columns Exist)**

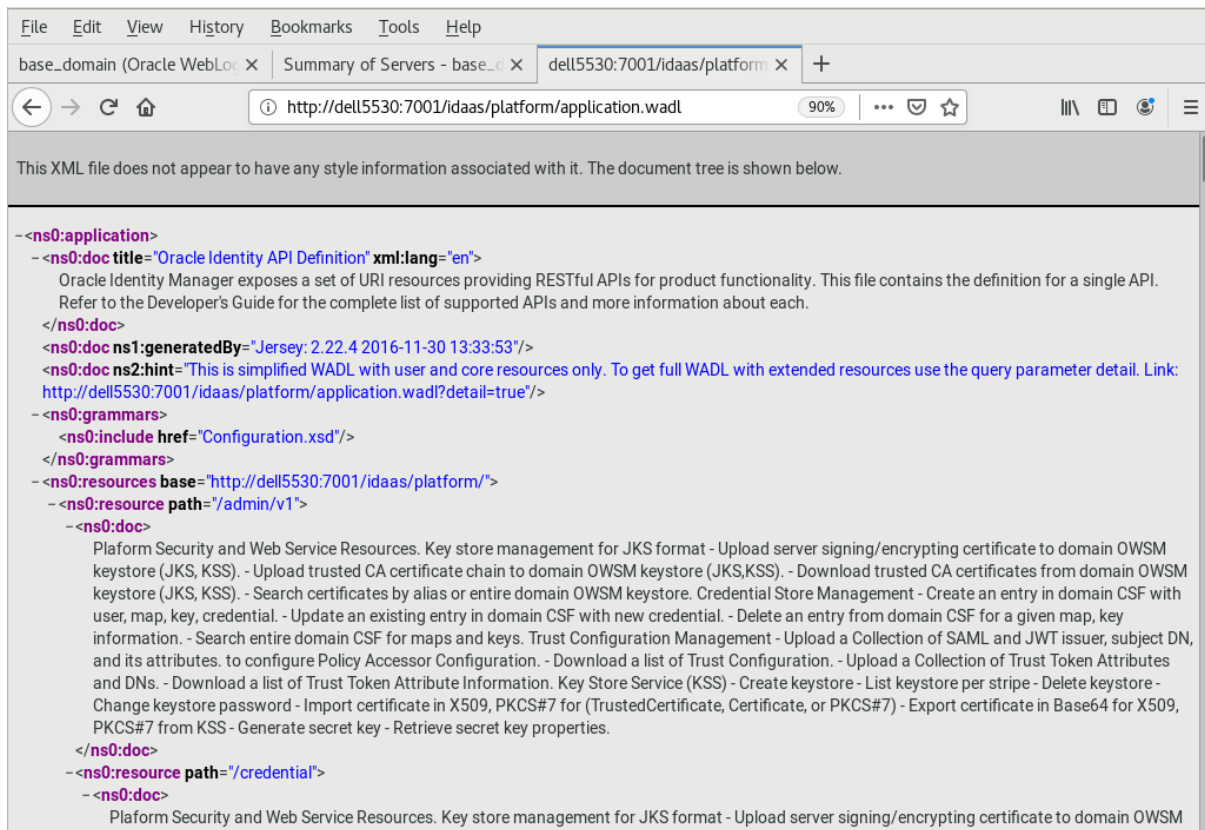
Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

	Name	Type	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)	Configured		suse_Machine_1	RUNNING	OK	7001
<input type="checkbox"/>	WC_Portlet	Configured	wpc_cluster_1	suse_Machine_1	RUNNING	OK	8888
<input type="checkbox"/>	WC_Portlet	Configured	wpc_cluster_2	suse_Machine_1	RUNNING	OK	8889



### 3). Test Oracle WebCenter Portal Web Service

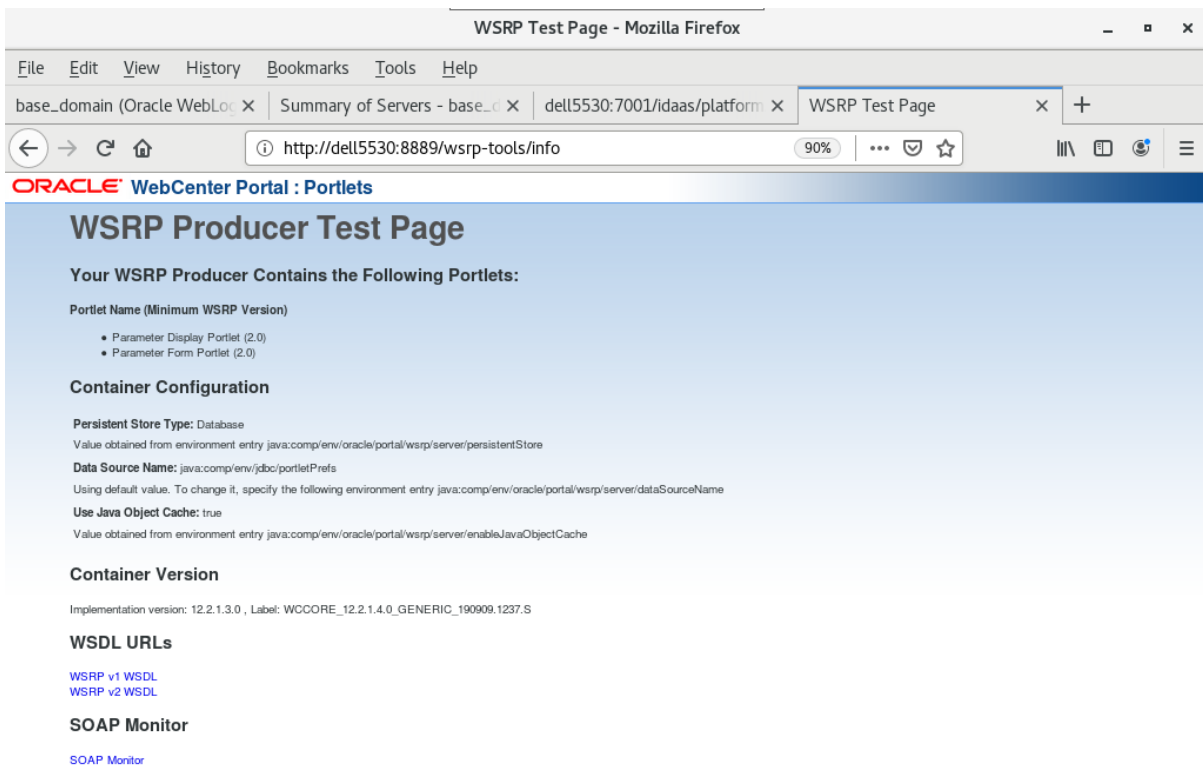
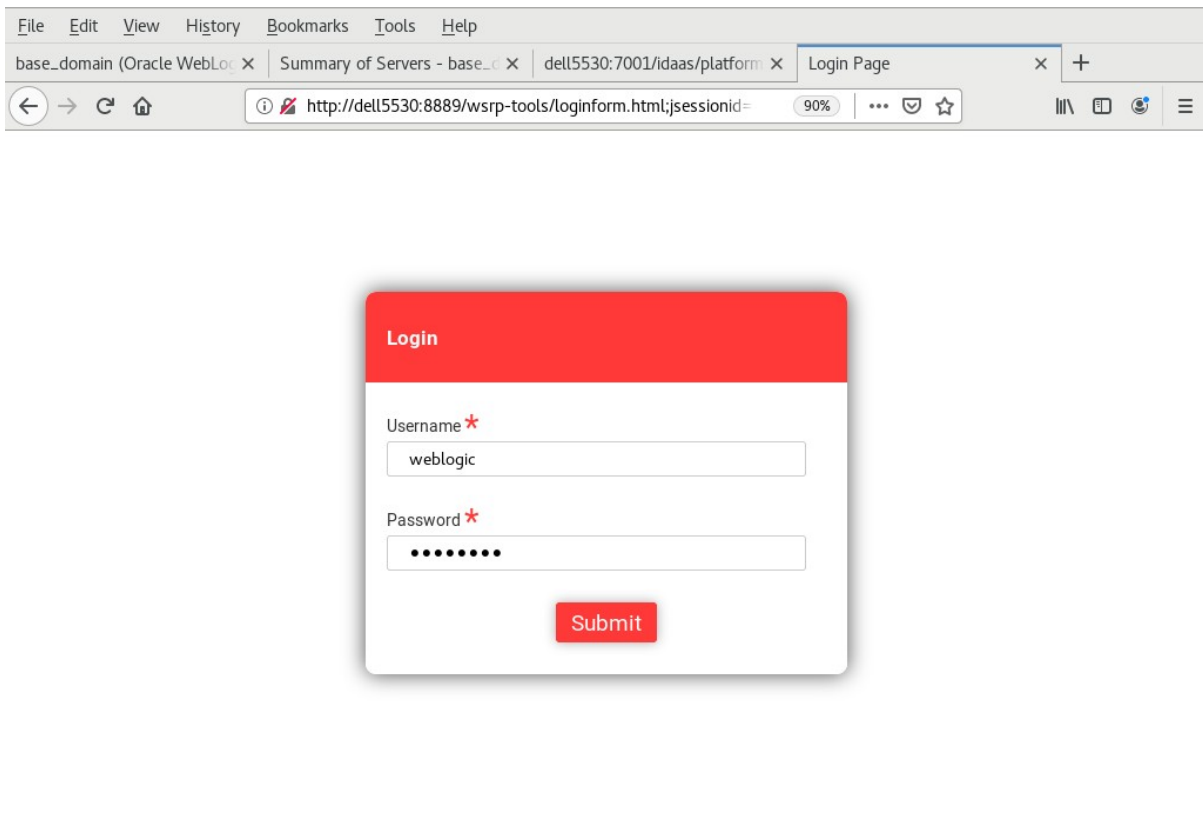
#### a. **Application:** opss-rest (URL:<http://host:7001/idaas/platform/application.wadl>)



```

File Edit View History Bookmarks Tools Help
base_domain (Oracle WebLoc x Summary of Servers - base_c x del5530:7001/idaas/platform x +
http://del5530:7001/idaas/platform/application.wadl 90%
This XML file does not appear to have any style information associated with it. The document tree is shown below.
- <ns0:application>
- <ns0:doc title="Oracle Identity API Definition" xml:lang="en">
  Oracle Identity Manager exposes a set of URI resources providing RESTful APIs for product functionality. This file contains the definition for a single API.
  Refer to the Developer's Guide for the complete list of supported APIs and more information about each.
</ns0:doc>
<ns0:doc ns1:generatedBy="Jersey: 2.22.4 2016-11-30 13:33:53"/>
<ns0:doc ns2:hint="This is simplified WADL with user and core resources only. To get full WADL with extended resources use the query parameter detail. Link:
http://del5530:7001/idaas/platform/application.wadl?detail=true/>
- <ns0:grammars>
  <ns0:include href="Configuration.xsd"/>
</ns0:grammars>
- <ns0:resources base="http://del5530:7001/idaas/platform/">
  - <ns0:resource path="/admin/v1">
    - <ns0:doc>
      Platform Security and Web Service Resources. Key store management for JKS format - Upload server signing/encrypting certificate to domain OWSM
      keystore (JKS, KSS). - Upload trusted CA certificate chain to domain OWSM keystore (JKS,KSS). - Download trusted CA certificates from domain OWSM
      keystore (JKS, KSS). - Search certificates by alias or entire domain OWSM keystore. Credential Store Management - Create an entry in domain CSF with
      user, map, key, credential. - Update an existing entry in domain CSF with new credential. - Delete an entry from domain CSF for a given map, key
      information. - Search entire domain CSF for maps and keys. Trust Configuration Management - Upload a Collection of SAML and JWT issuer, subject DN,
      and its attributes. to configure Policy Accessor Configuration. - Download a list of Trust Configuration. - Upload a Collection of Trust Token Attributes
      and DNs. - Download a list of Trust Token Attribute Information. Key Store Service (KSS) - Create keystore - List keystore per stripe - Delete keystore -
      Change keystore password - Import certificate in X509, PKCS#7 for (TrustedCertificate, Certificate, or PKCS#7) - Export certificate in Base64 for X509,
      PKCS#7 from KSS - Generate secret key - Retrieve secret key properties.
    </ns0:doc>
  - <ns0:resource path="/credential">
    - <ns0:doc>
      Platform Security and Web Service Resources. Key store management for JKS format - Upload server signing/encrypting certificate to domain OWSM
  
```

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



File Edit View History Bookmarks Tools Help

base\_domain (Oracle We X Summary of Servers - ba X dell5530:7001/idaas/plat X WSRP Test Page X dell5530:8889/wsrp-tool X +

← → ↻ 🏠 <http://dell5530:8889/wsrp-tools/portlets/wsrp1?WSDL> 90% ... 📄 🌐 🌟 ☰

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

```

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

```

File Edit View History Bookmarks Tools Help

base\_domain (Oracle We X Summary of Servers - ba X dell5530:7001/idaas/plat X WSRP Test Page X dell5530:8889/wsrp-tool X +

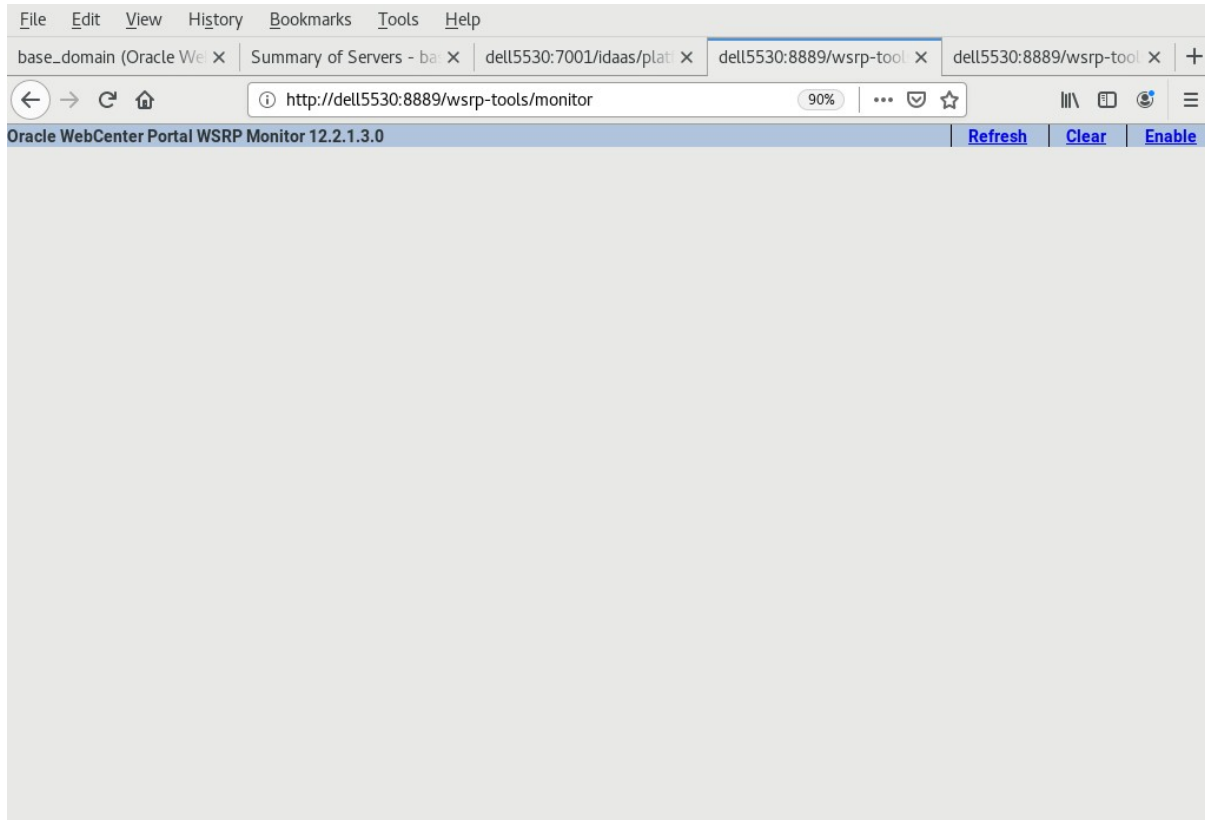
← → ↻ 🏠 <http://dell5530:8889/wsrp-tools/portlets/wsrp2?WSDL> 90% ... 📄 🌐 🌟 ☰

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

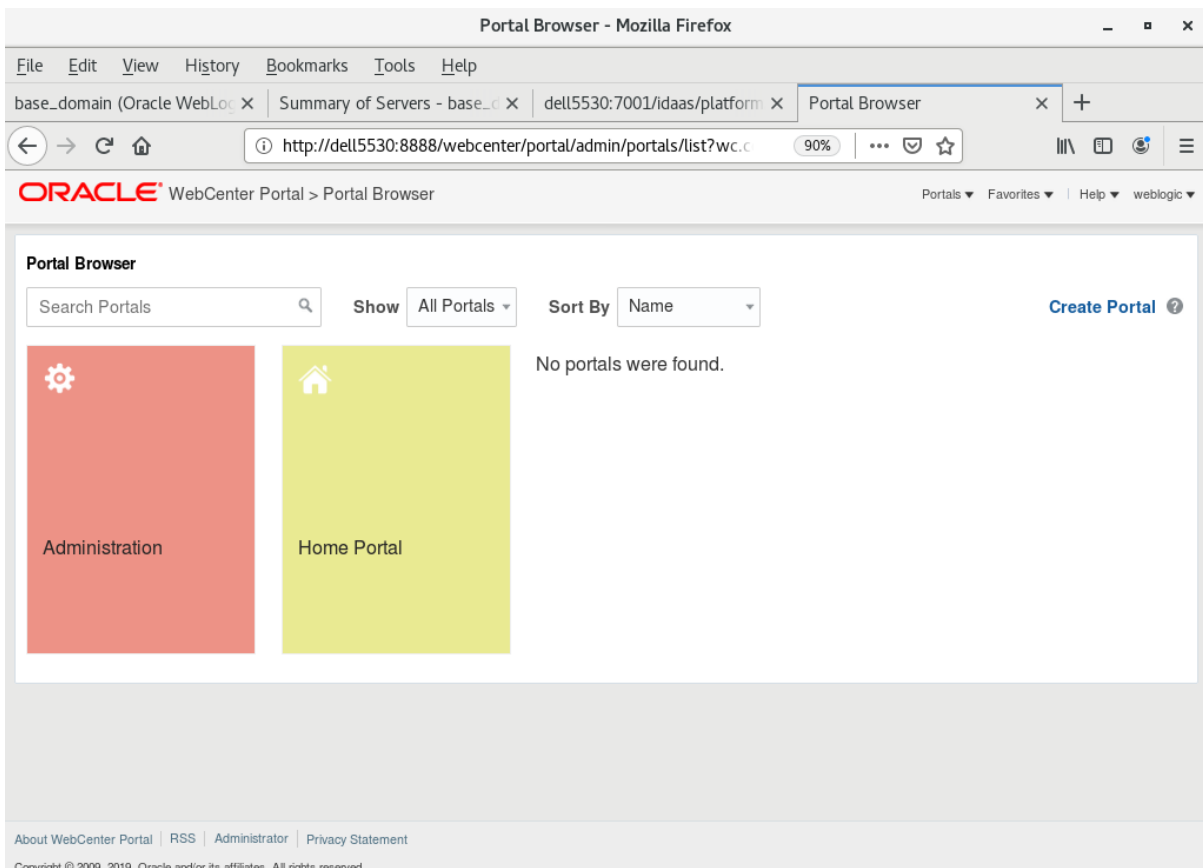
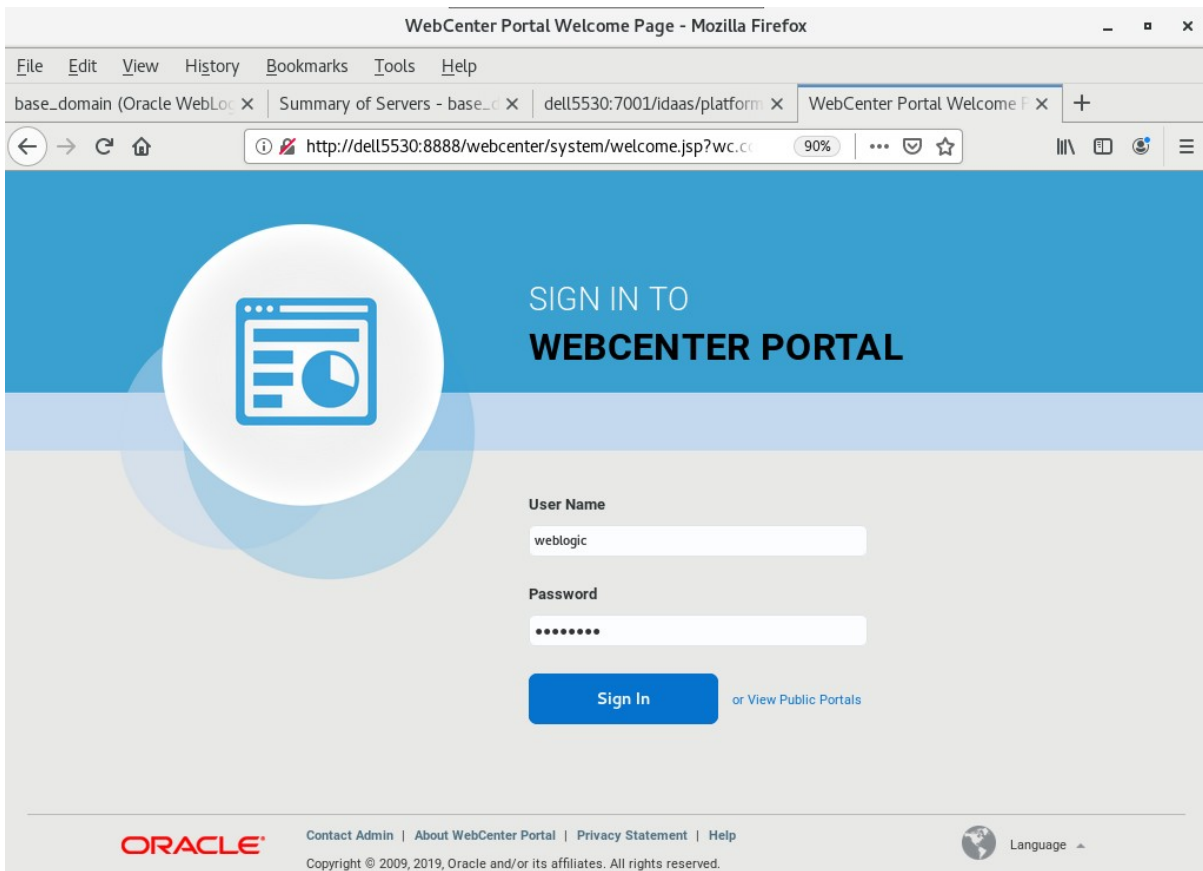
```

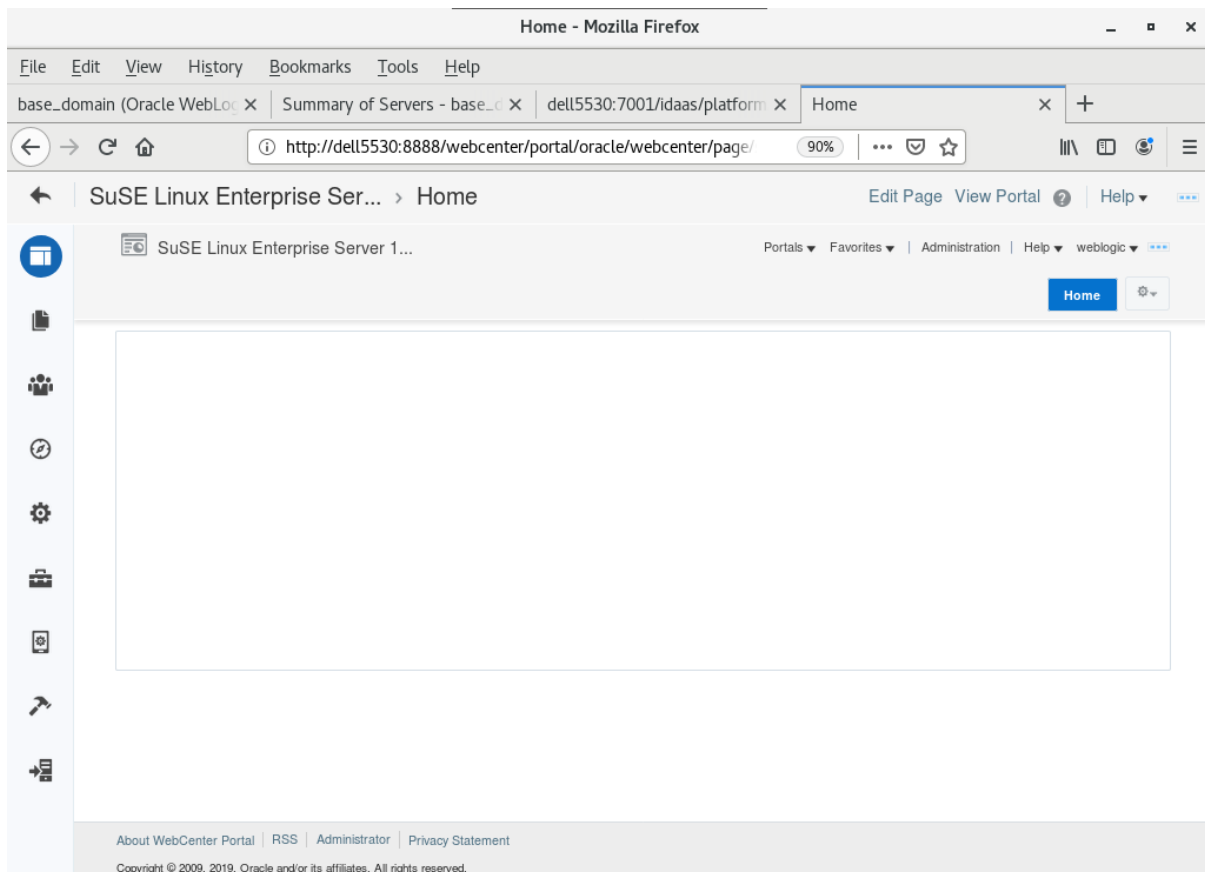
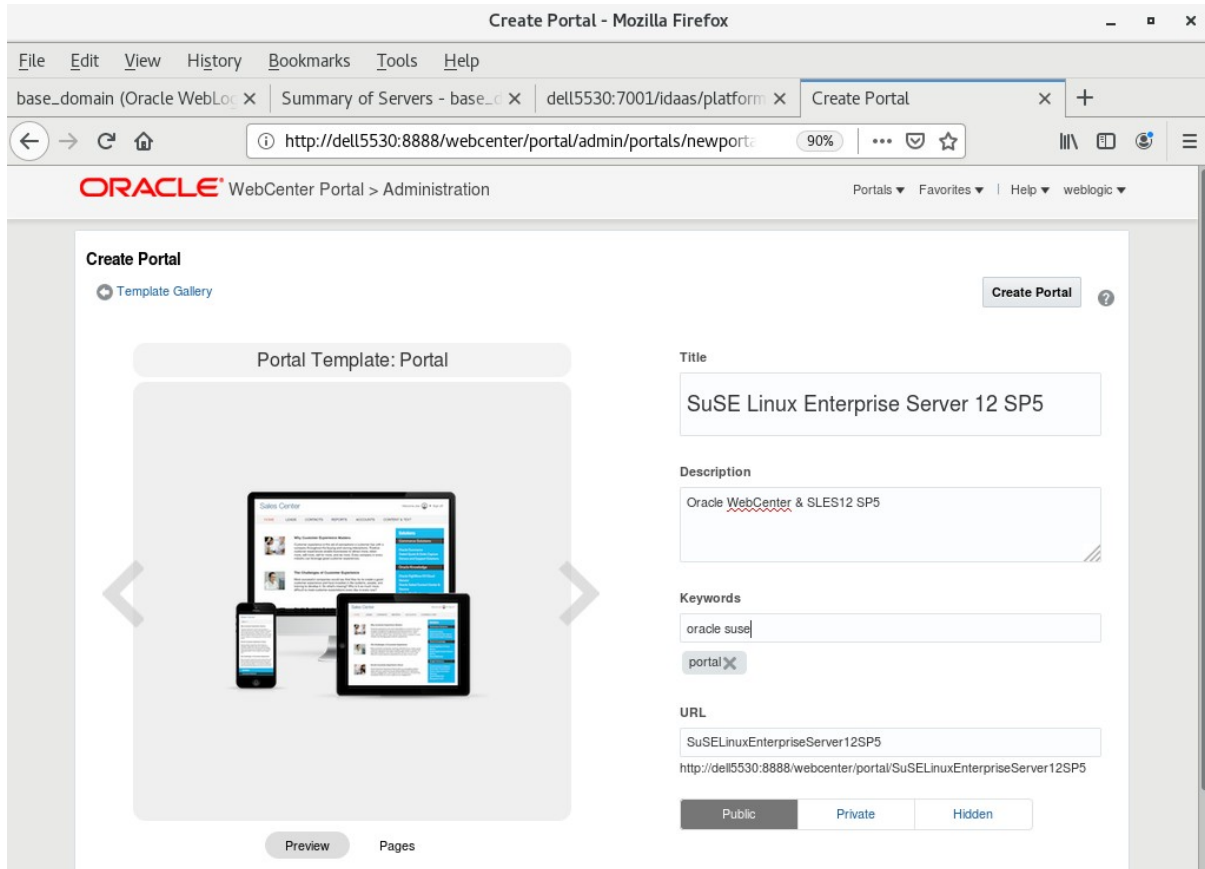
- <definitions targetNamespace="urn:oasis:names:tc:wsrp:v2:wsdl">
  <import namespace="urn:oasis:names:tc:wsrp:v2:bind" location="http://dell5530:8889/wsrp-tools/portlets/wsrp2?WSDL=wsrp_v2_bindings.wsdl"/>
  <service name="WSRP_v2_Service">
    <port name="WSRP_v2_ServiceDescription_Service" binding="bind:WSRP_v2_ServiceDescription_Binding_SOAP">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

```



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





The screenshot shows a Mozilla Firefox browser window displaying the configuration page for a SuSE Linux Enterprise Server 12 SP5 portal. The browser's address bar shows the URL: `http://dell5530:8888/webcenter/portal/admin/portals/admin/SuSELinuxEnterpriseServer12SP5`. The page title is "SuSE Linux Enterprise Server 12 SP5 - General".

The main content area is divided into two sections:

- Portal Information:** This section contains several input fields and a "Save" button. The fields are: "Title" (SuSE Linux Enterprise Server 12 SP5), "Acronym" (SLE), "Description" (Oracle WebCenter & SLES12 SP5), "Portal Color" (a yellow color swatch with a "Choose Color" button), and "Keywords" (portal, oracle, suse). A "Save" button is located below the keywords.
- Portal Details:** This section displays the following information:
  - Name: SuSELinuxEnterpriseServer12SP5 Rename
  - Portal URL: `http://dell5530:8888/webcenter/portal/SuSELinuxEnterpriseServer12SP5`
  - Internal ID: `sa85bcf07_5053_4695_8d2b_06670885847f`
  - Members: 1
  - Last Activity: 1 minute ago
  - Created: 1 minute ago by weblogic

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

Collector Information

Refresh

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

**End of Oracle WebCenter Portal.**



\*\*\*\*\*

## Oracle SOA Suite

\*\*\*\*\*

### 1. Installing Oracle SOA Suite 12c

#### 1-1. Prerequisites:

Installation of Oracle SOA Suite requires:


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

1-2. Log in to the target system (SLES 12 SP5 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.



Oracle Fusion Middleware 12c SOA Quick Start Installation

### 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.

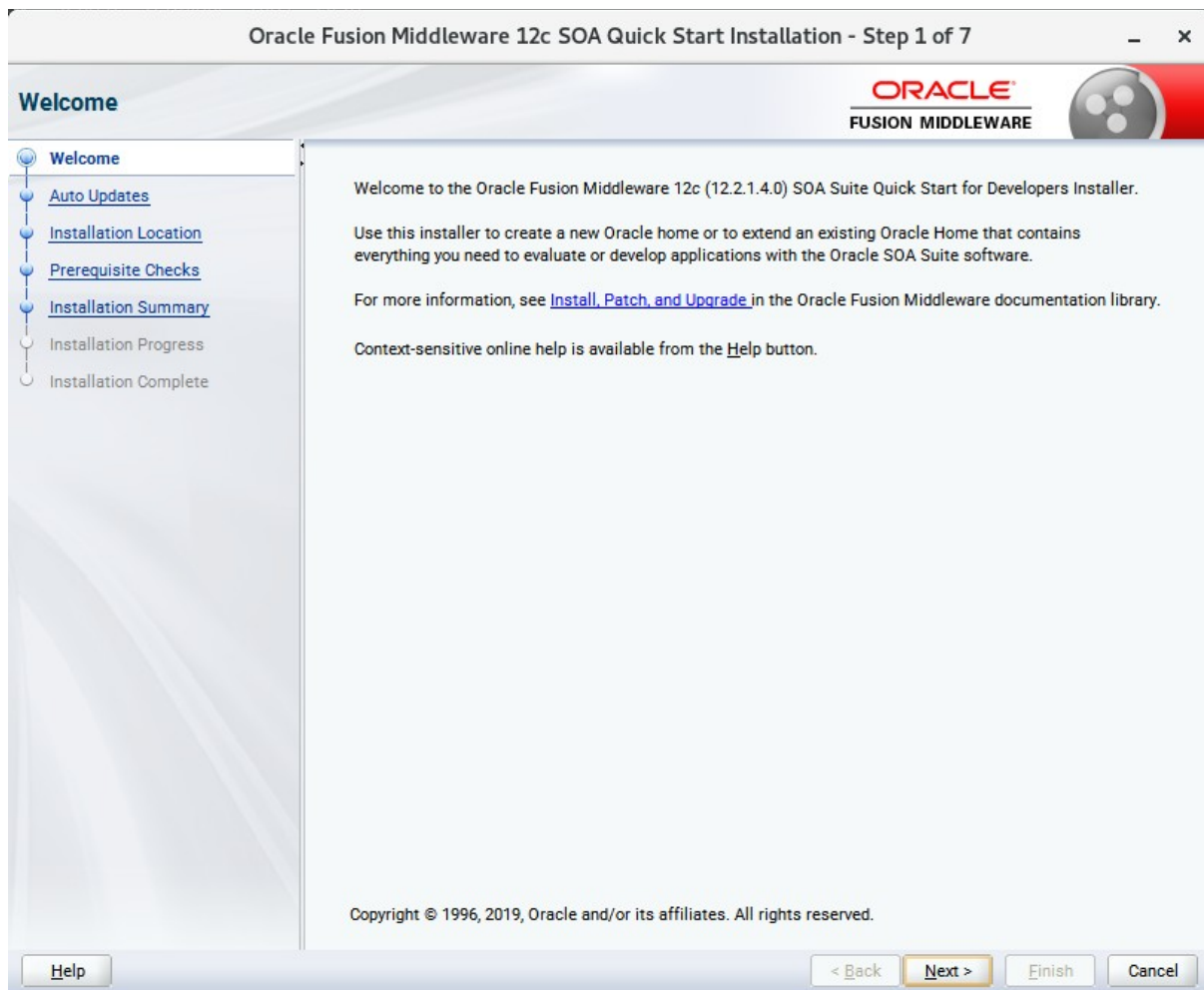
Inventory Directory:    
Enter the full path for the directory.

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.



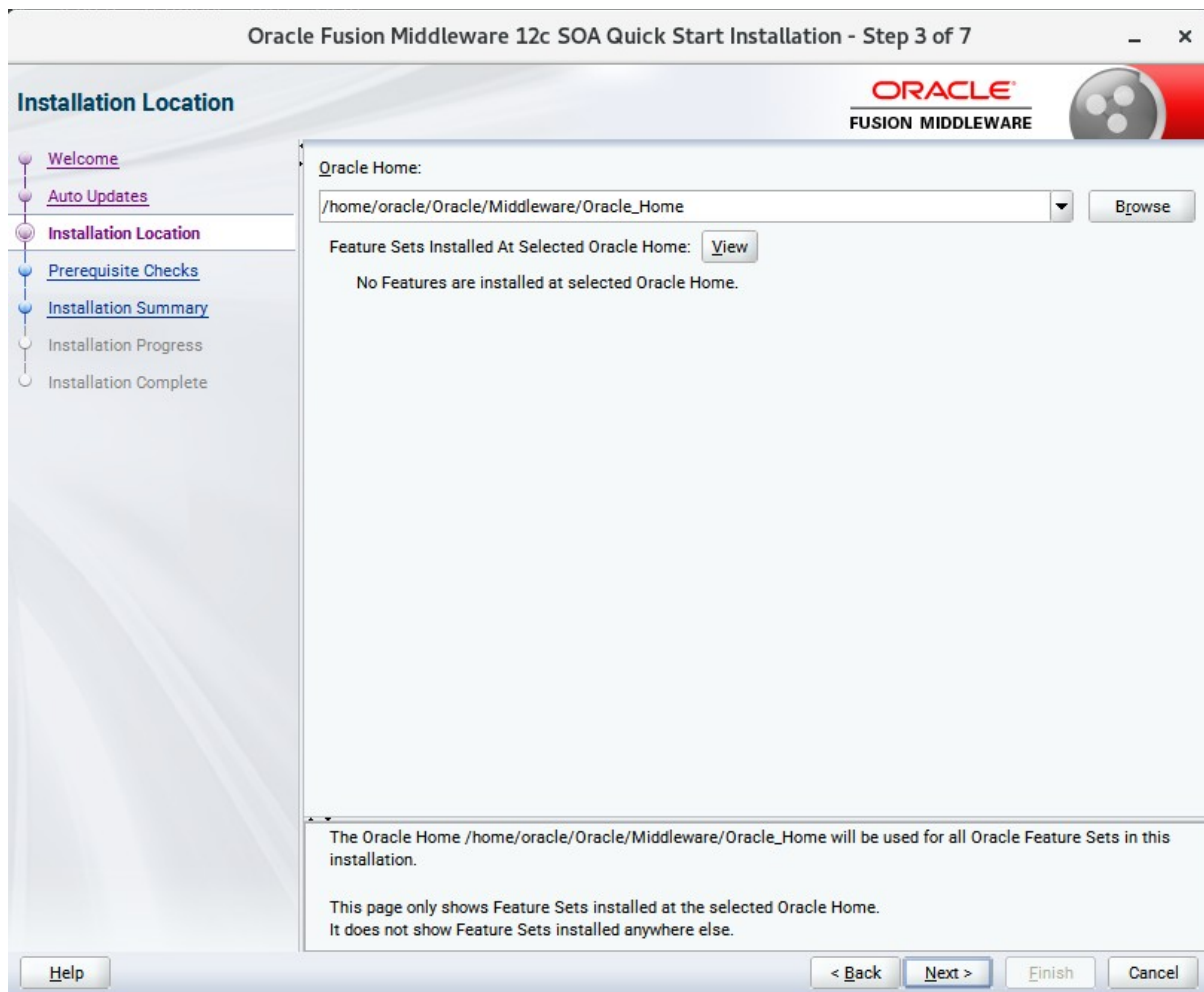
This page welcomes you to the installation. Click **Next** to continue.

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

The screenshot shows the 'Auto Updates' page in the Oracle Fusion Middleware 12c SOA Quick Start Installation. The window title is 'Oracle Fusion Middleware 12c SOA Quick Start 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 in the top right. The 'Auto Updates' section contains three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option has a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option has 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom of the window are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner of the window.

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.

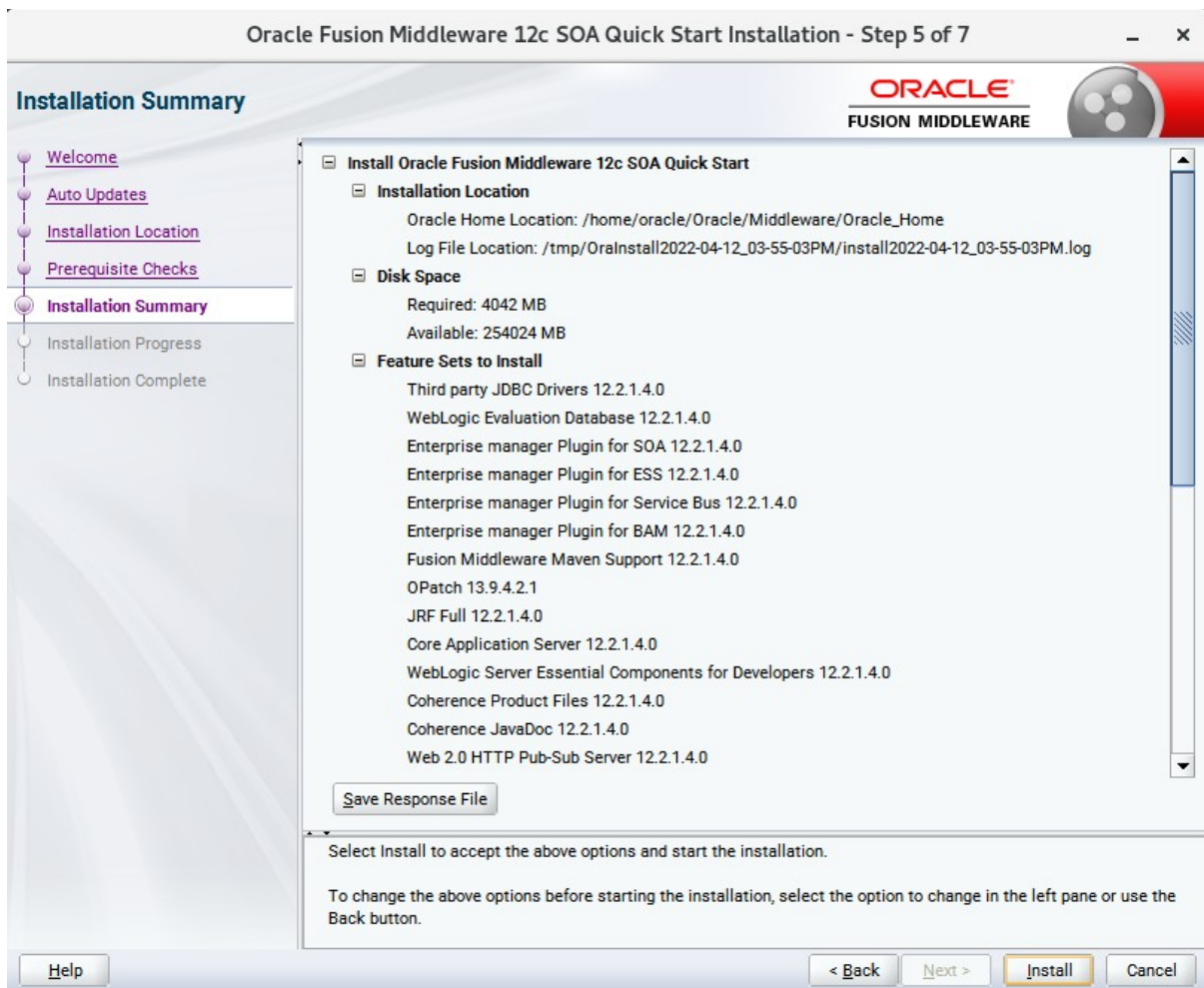
4). The **Installation Location** page appears.



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

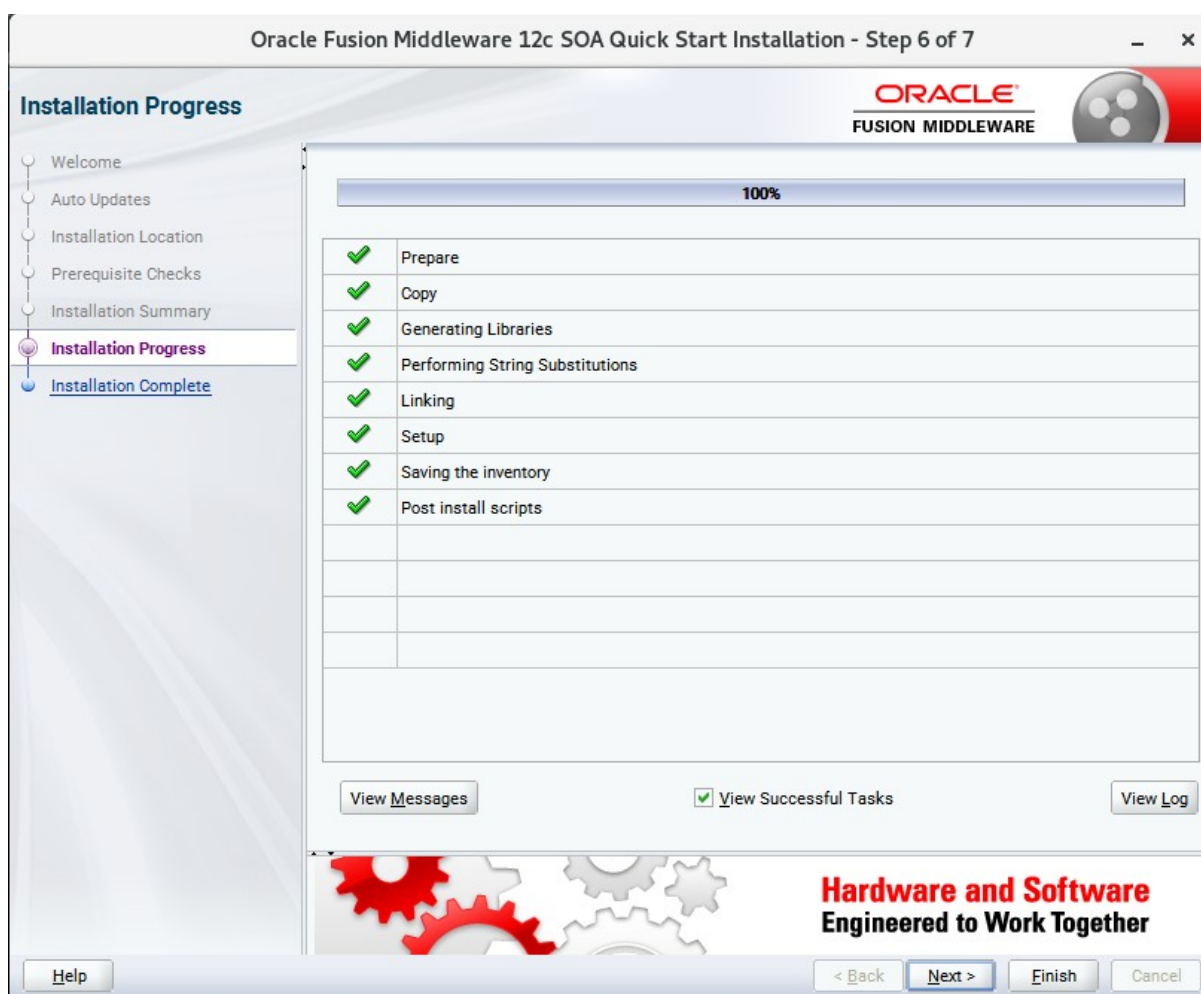


6). The **Installation Summary** page appears.



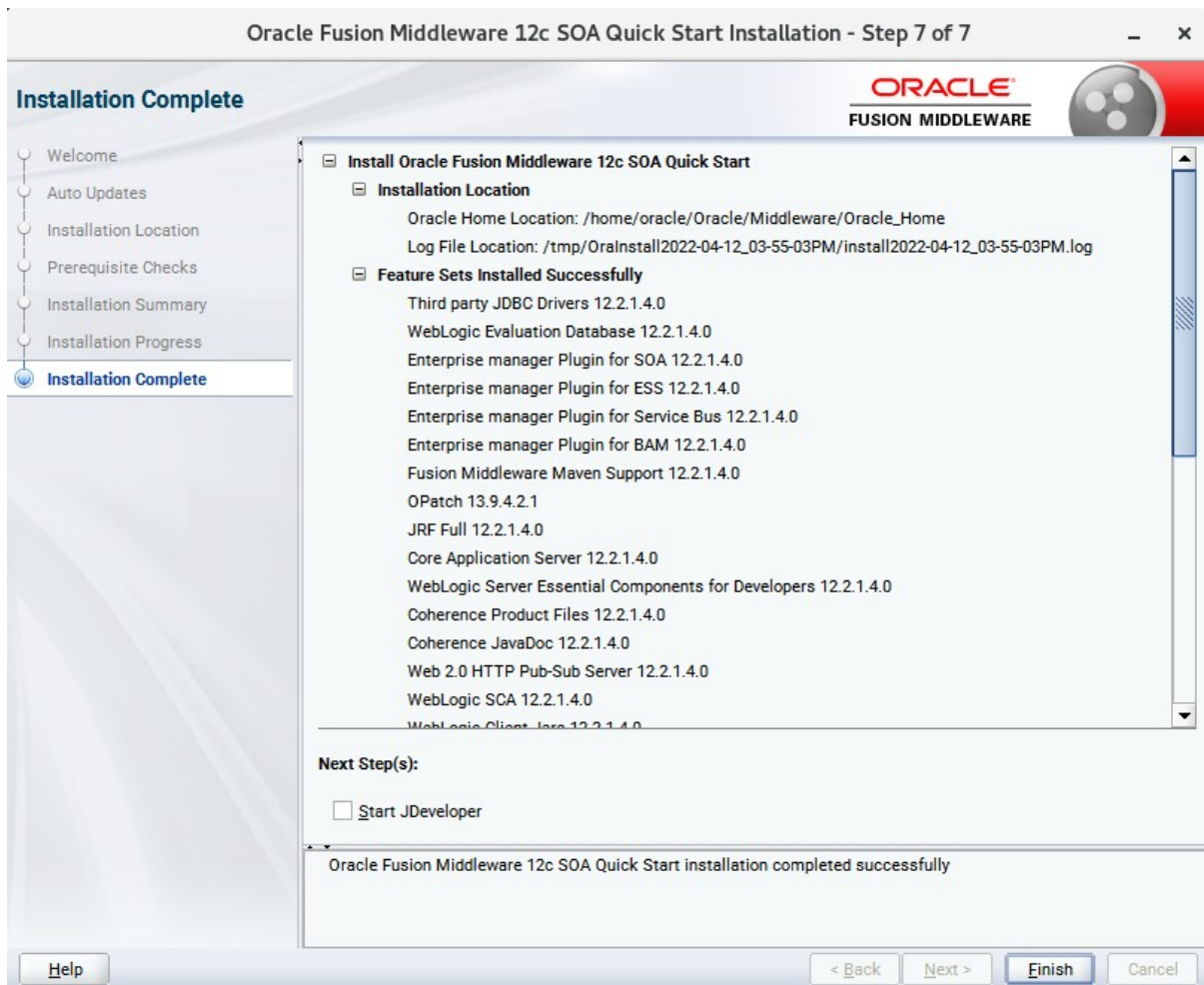
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



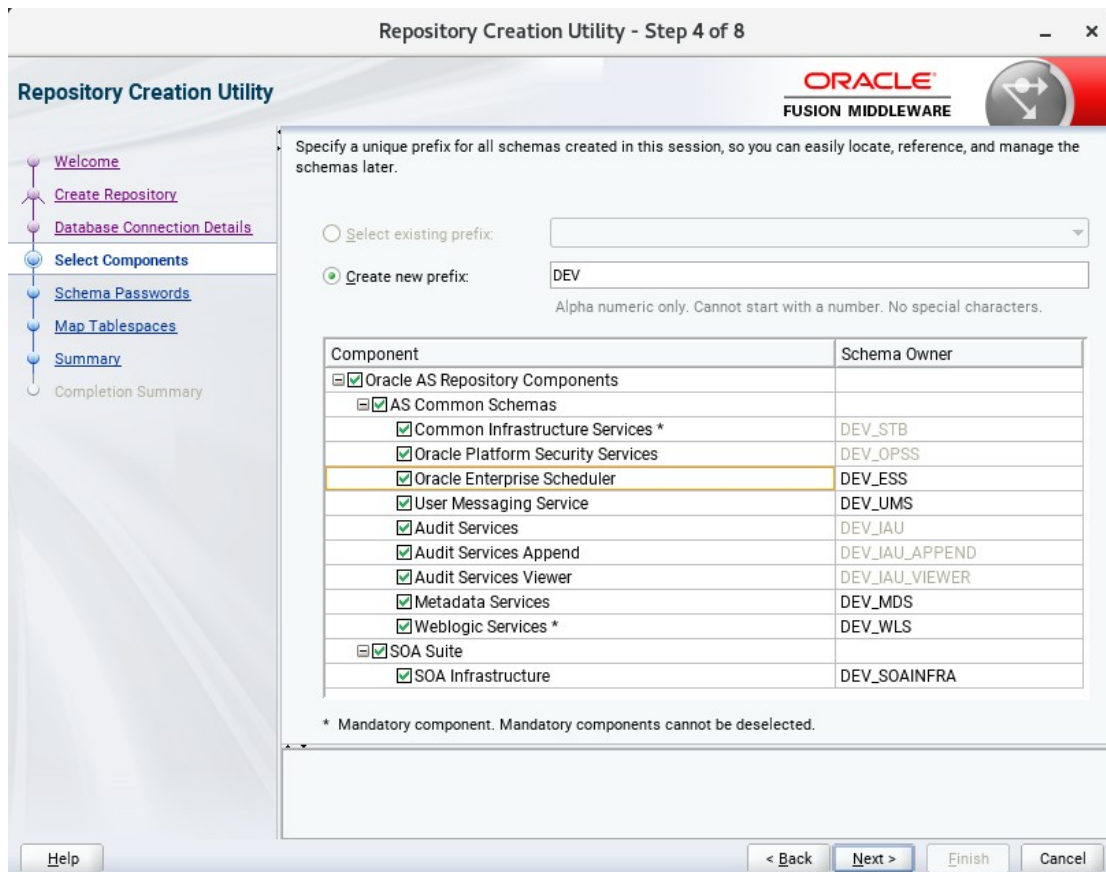
At the bottom of this screen, there is a checkbox to launch Oracle JDeveloper upon closing the installation wizard. This guide recommends that you uncheck this box. Click **Finish** to dismiss the installer.



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

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

**Screenshot: Database schemas creating for Oracle SOA Suite.**



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

Ensure schema creation is successful.

Repository Creation Utility - Step 9 of 9

**Repository Creation Utility**

- Welcome
- Create Repository
- Database Connection Details
- Select Components
- Schema Passwords
- Custom Variables
- 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: 15 minutes 10 seconds

RCU Logfile:   
 Component Log Directory:   
 View Log:

Prefix for (prefixable) Schema DEV  
 Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:11.354(sec)	<input type="button" value="stb.log"/>
Oracle Platform Security Services	Success	02:21.308(min)	<input type="button" value="opss.log"/>
Oracle Enterprise Scheduler	Success	00:54.570(sec)	<input type="button" value="ess.log"/>
SOA Infrastructure	Success	07:29.842(min)	<input type="button" value="soainfra.log"/>
User Messaging Service	Success	00:39.373(sec)	<input type="button" value="ucsums.log"/>
Audit Services	Success	00:59.619(sec)	<input type="button" value="iau.log"/>
Audit Services Append	Success	00:10.587(sec)	<input type="button" value="iau_append.log"/>
Audit Services Viewer	Success	00:09.821(sec)	<input type="button" value="iau_viewer.log"/>
Metadata Services	Success	00:24.646(sec)	<input type="button" value="mds.log"/>
Weblogic Services	Success	01:08.895(min)	<input type="button" value="wls.log"/>

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

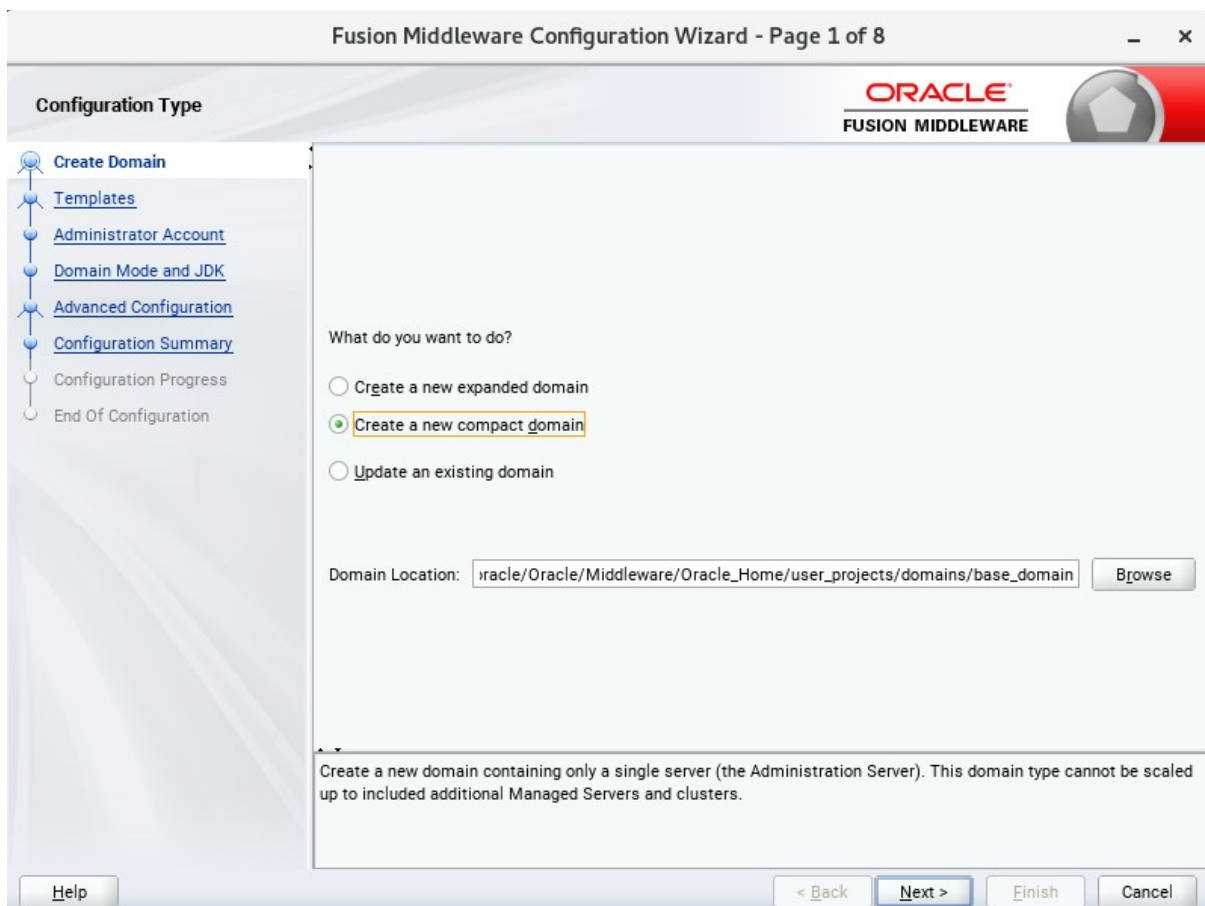
3-1. Go to **ORACLE\_HOME/oracle\_common/common/bin**. Set the environment variable **CONFIG\_JVM\_ARGS** to **-Dcom.oracle.cie.config.showProfile=true**. This will activate the compact domain option in the configuration wizard. Then launch the configuration wizard.

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
```

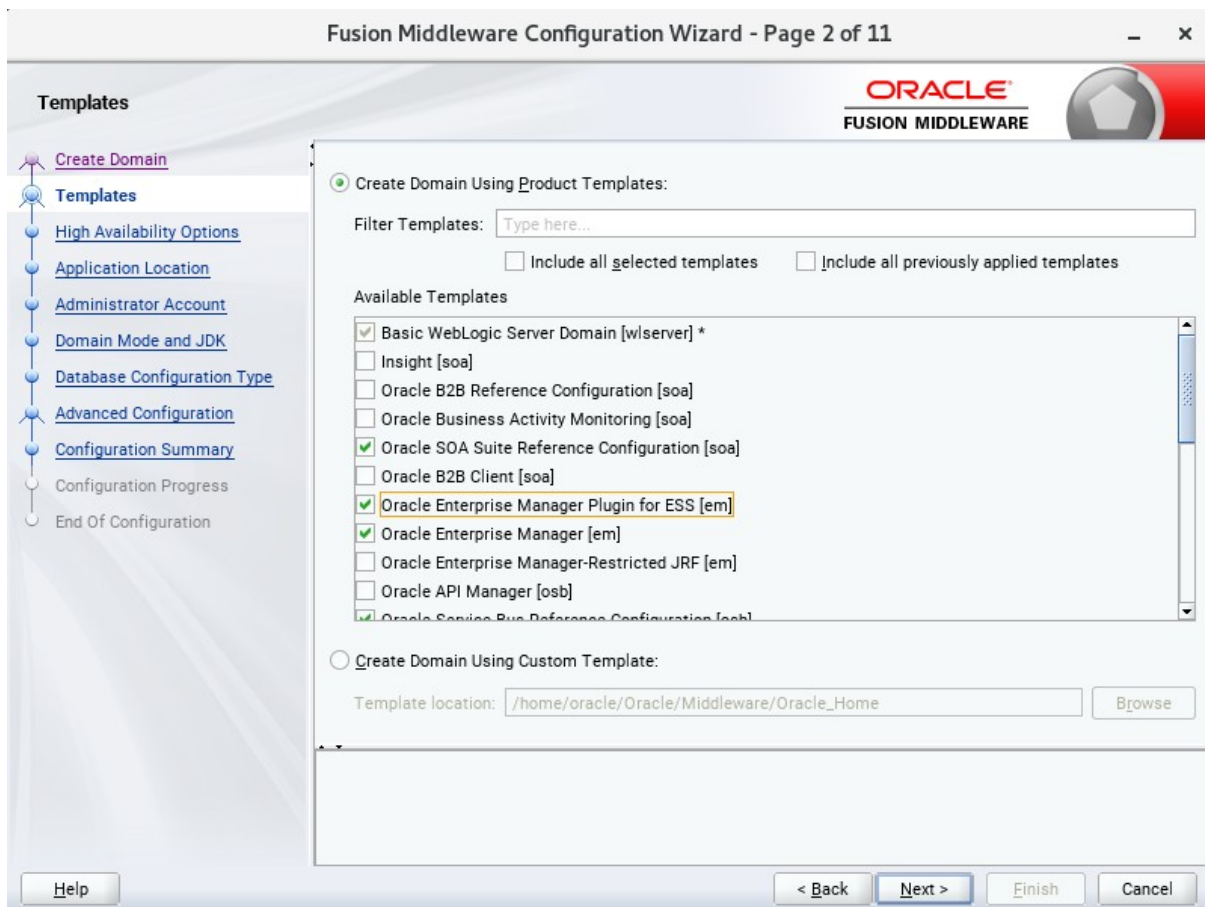
Follow these steps:

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.

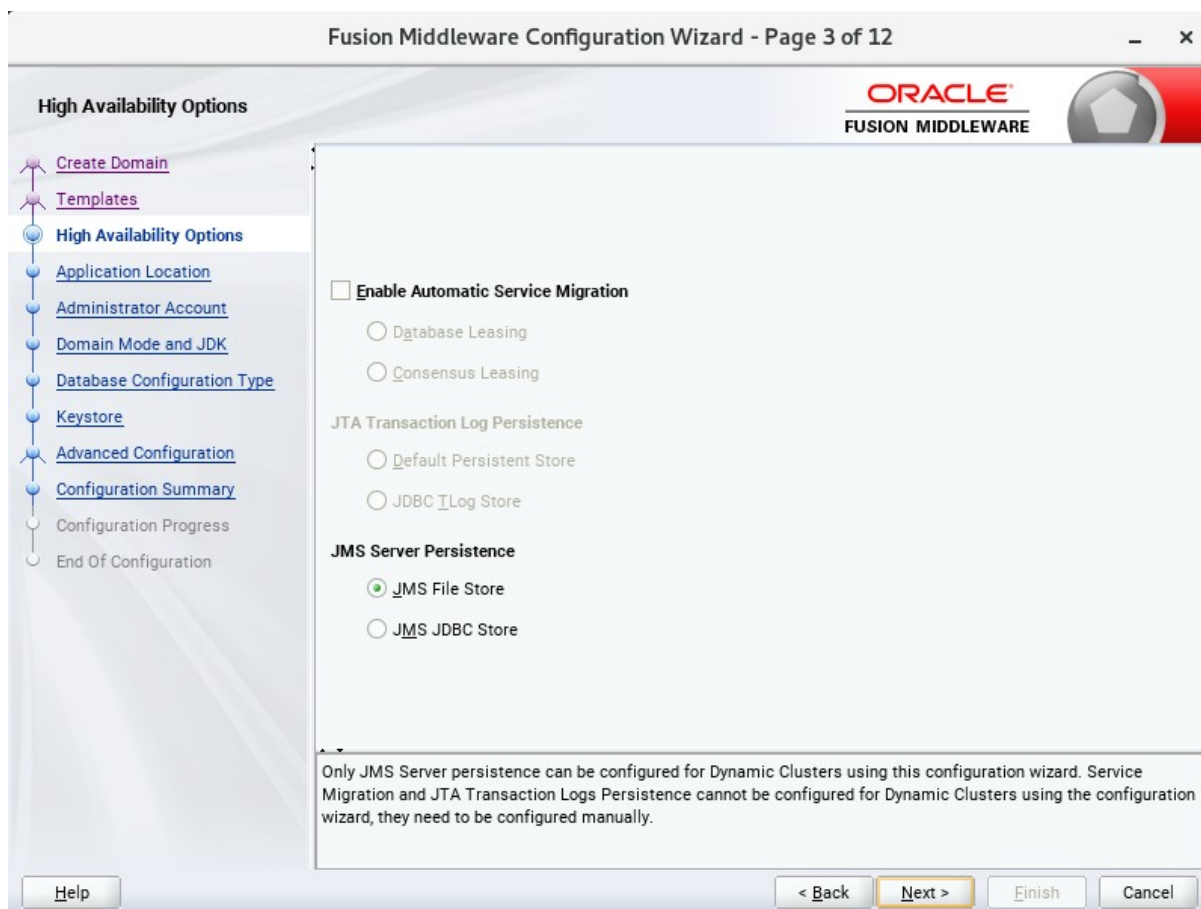


Use the **Templates** screen to select the templates you require. On the **Templates** screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

- 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]

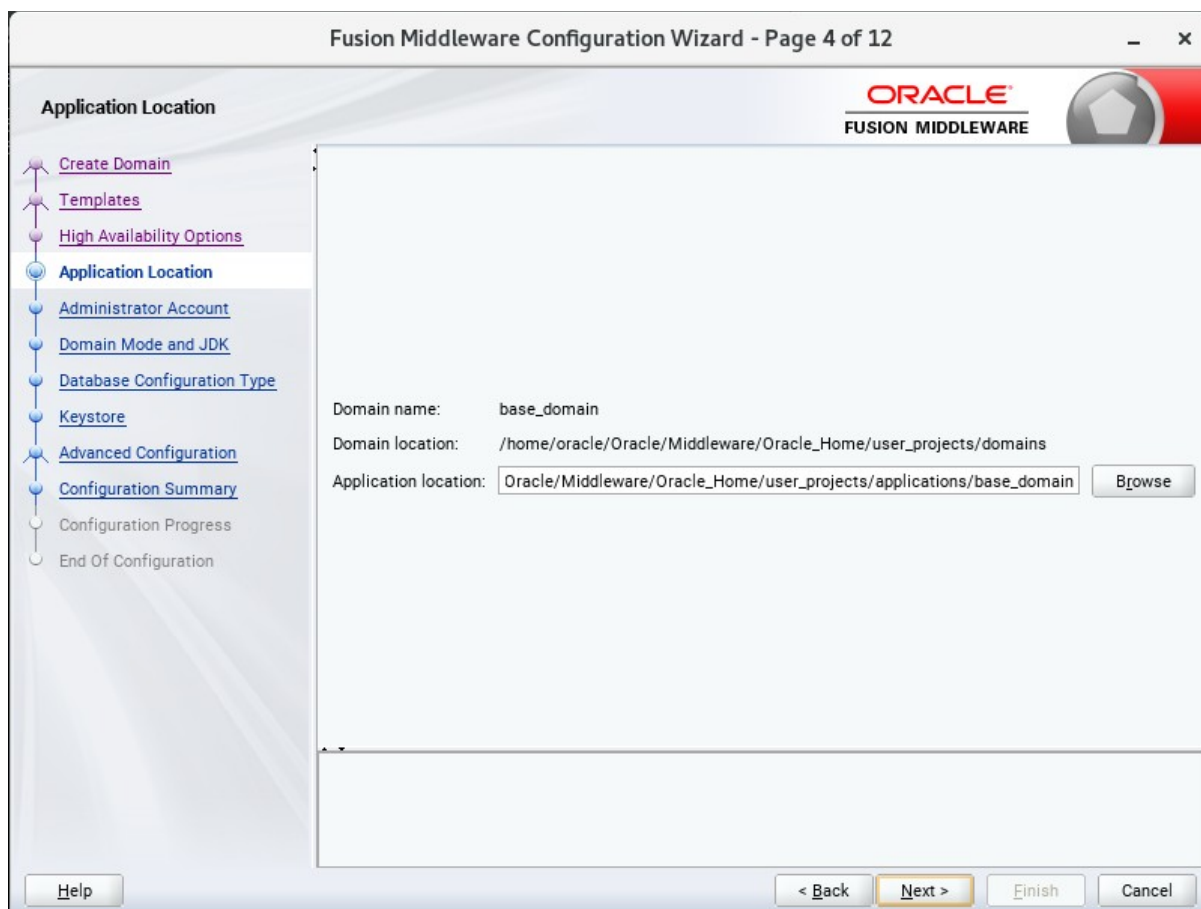
Click **Next** to continue.

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



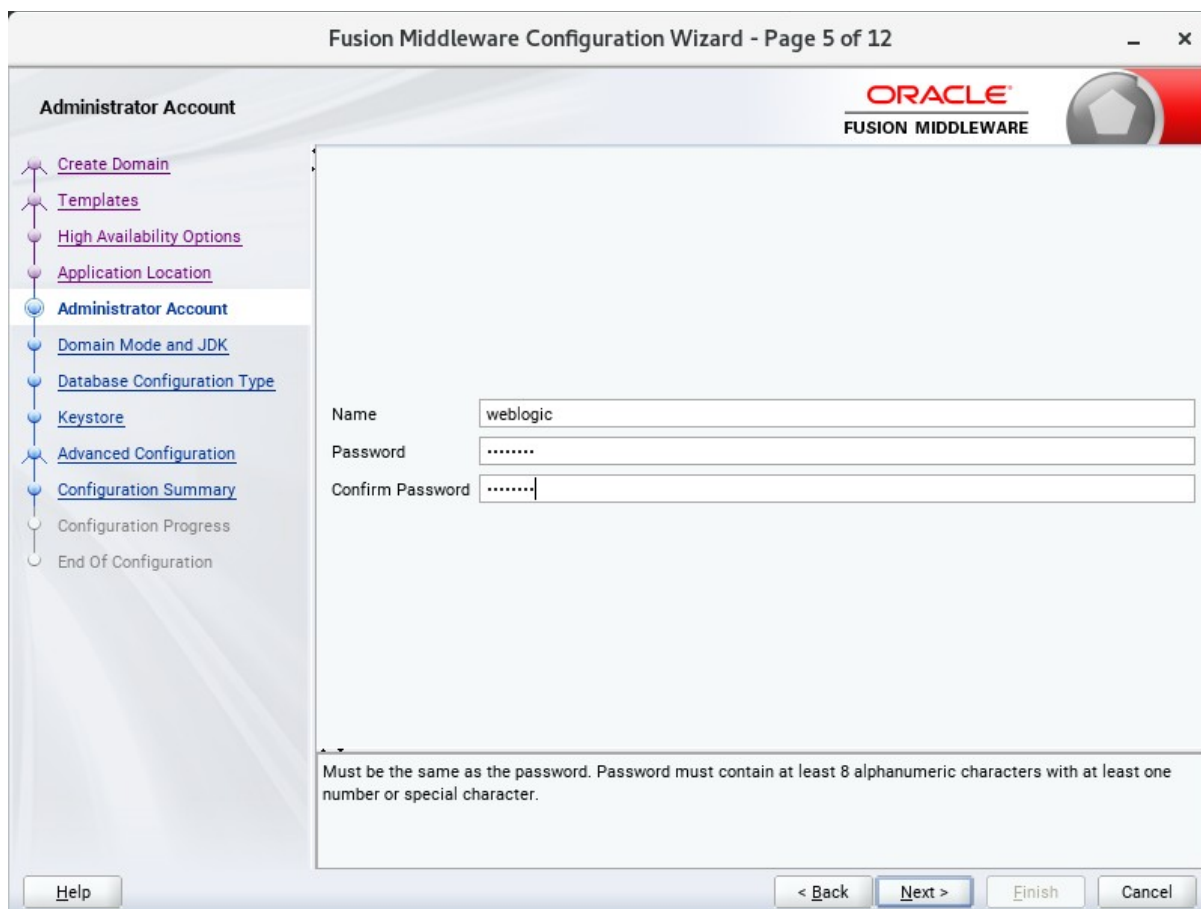
Keep the default value for Application location. Click **Next** to continue.

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



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

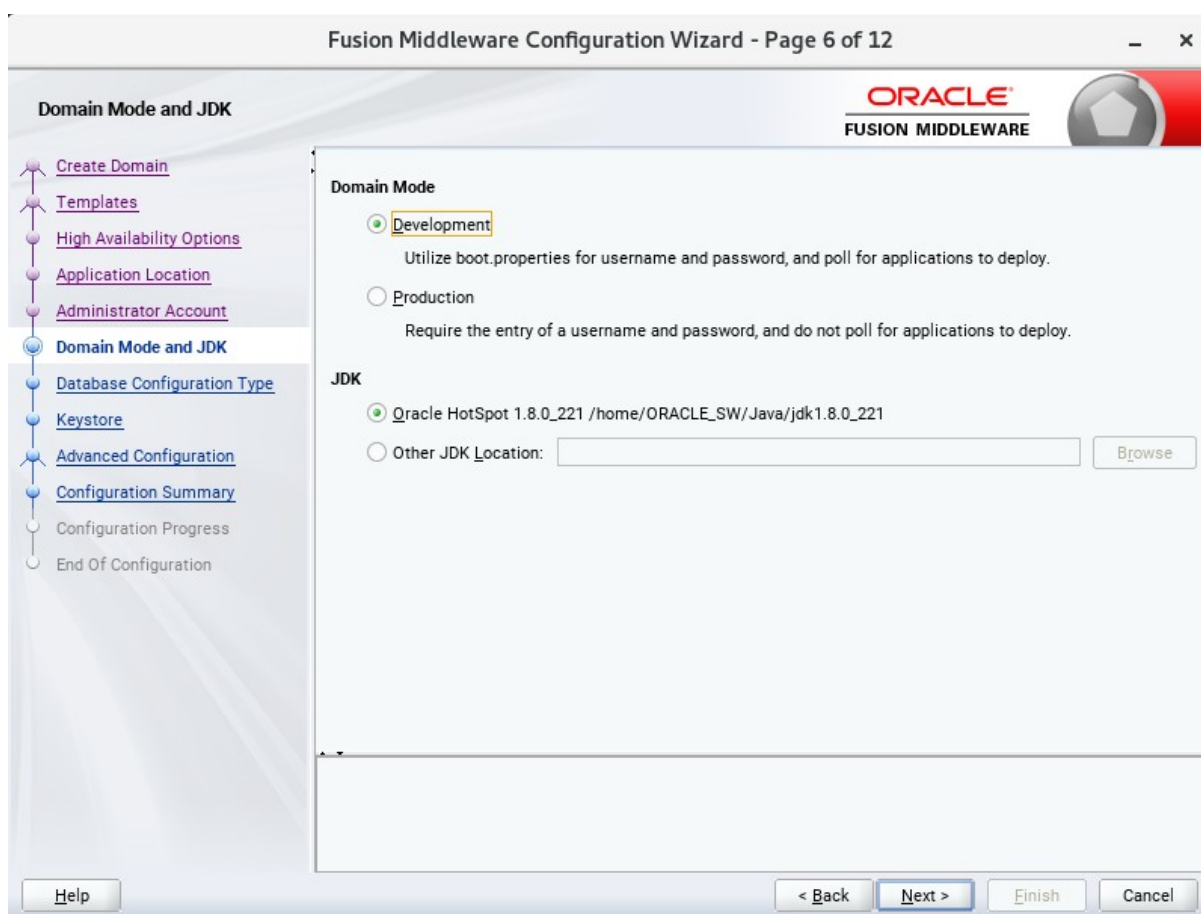
5). The **Administrator Account** screen appears.



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.



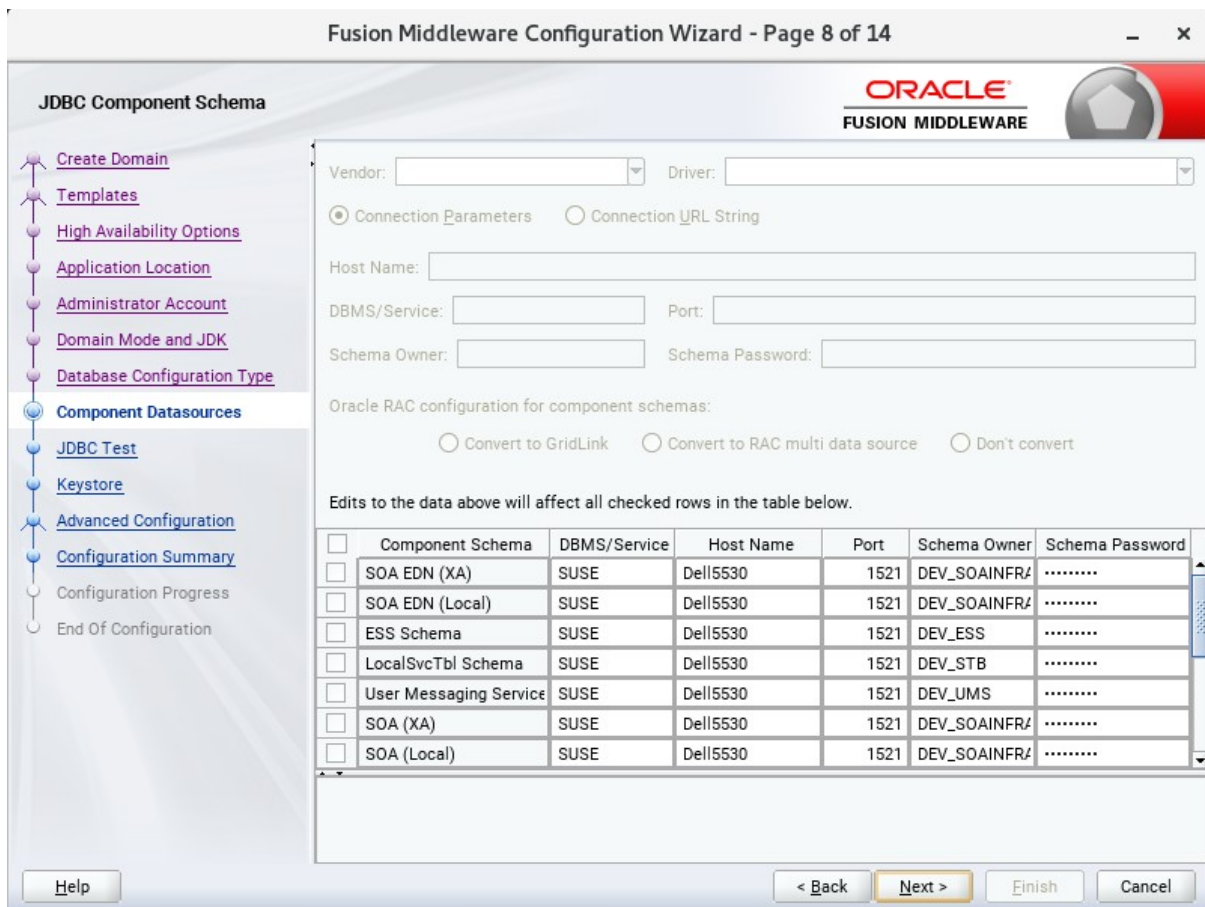
Select the Domain Mode (either **Development** or **Production**) as shown above. Click **Next** to continue.



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

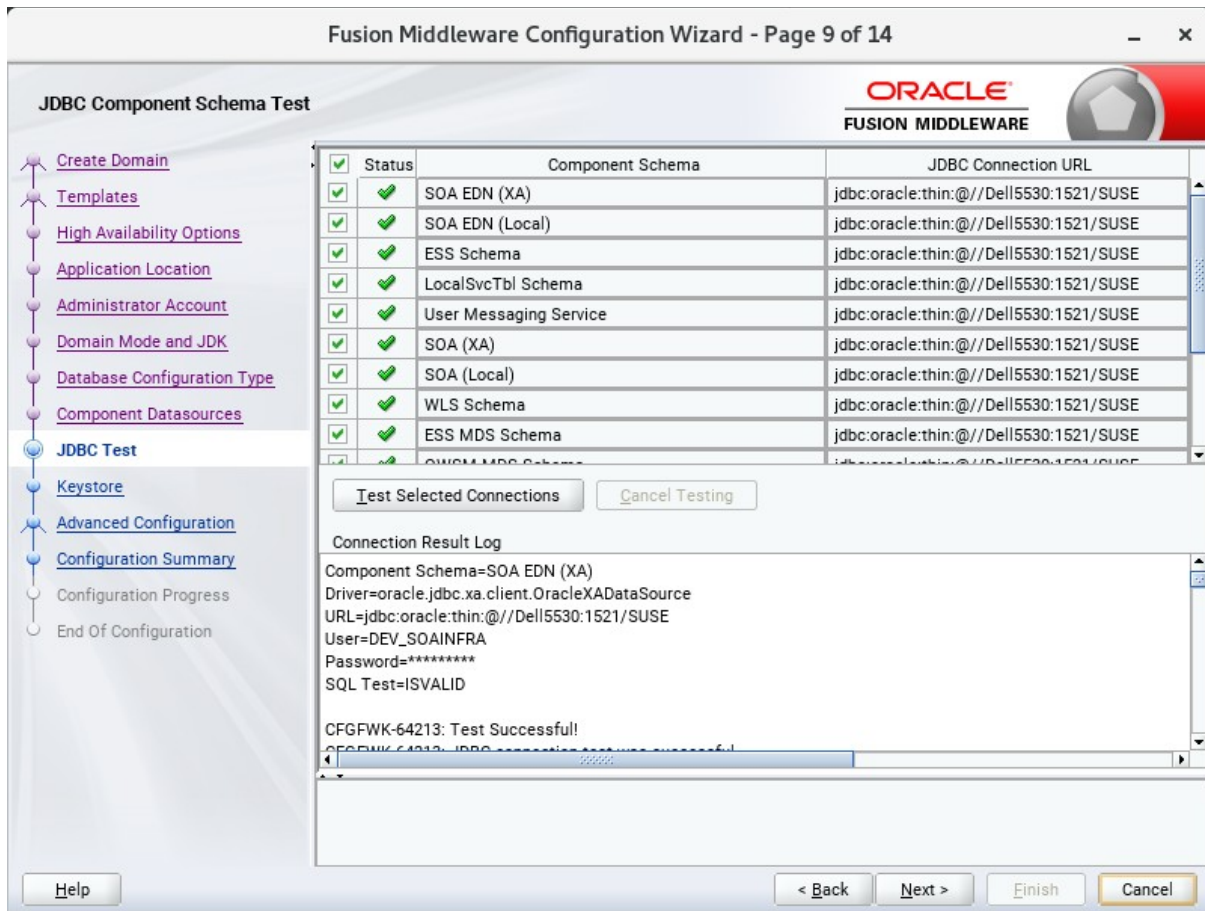
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



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

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



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

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

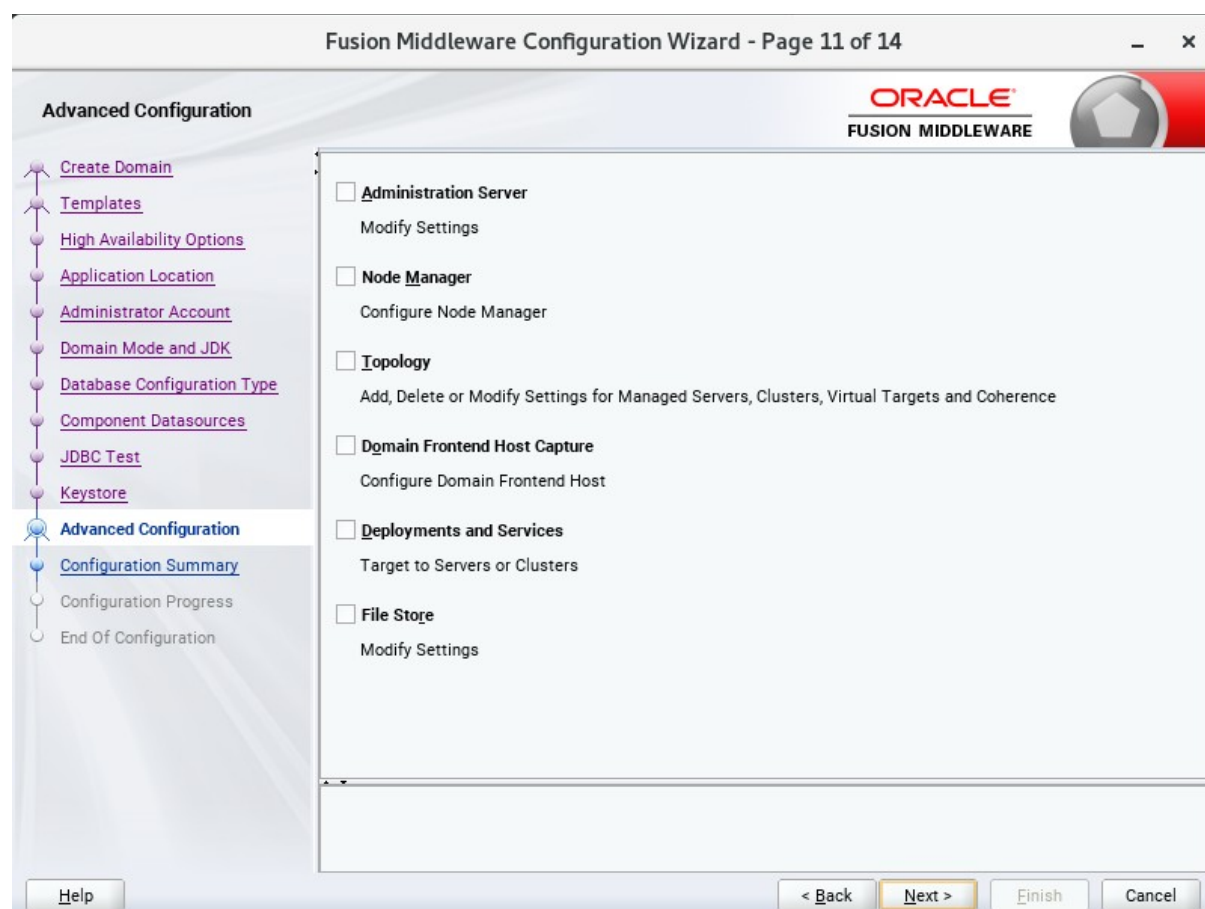
The screenshot shows the 'Keystore' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 14'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'Keystore' selected and highlighted in blue. The main area contains a 'Store Key Name' dropdown menu set to 'ums/apns' and a 'Disgard Changes' button. Below this are two tables for managing keystore entries. The first table has columns for 'Alias' and 'Trusted Certificate'. The second table has columns for 'Alias', 'Private Key', 'Password', and 'Identity Certificate'. At the bottom, there are navigation buttons: '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner.

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

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

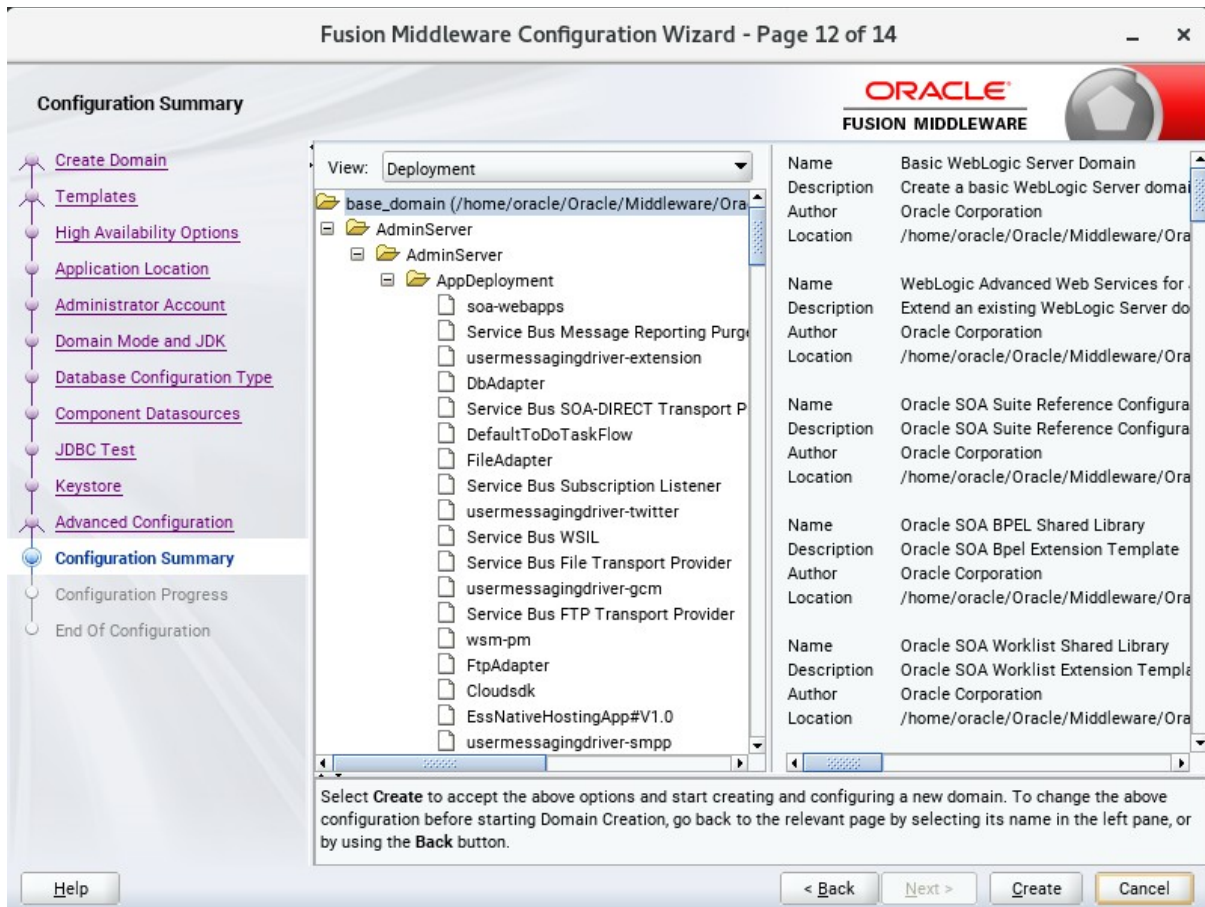
Accept the defaults and click **Next** to continue.

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



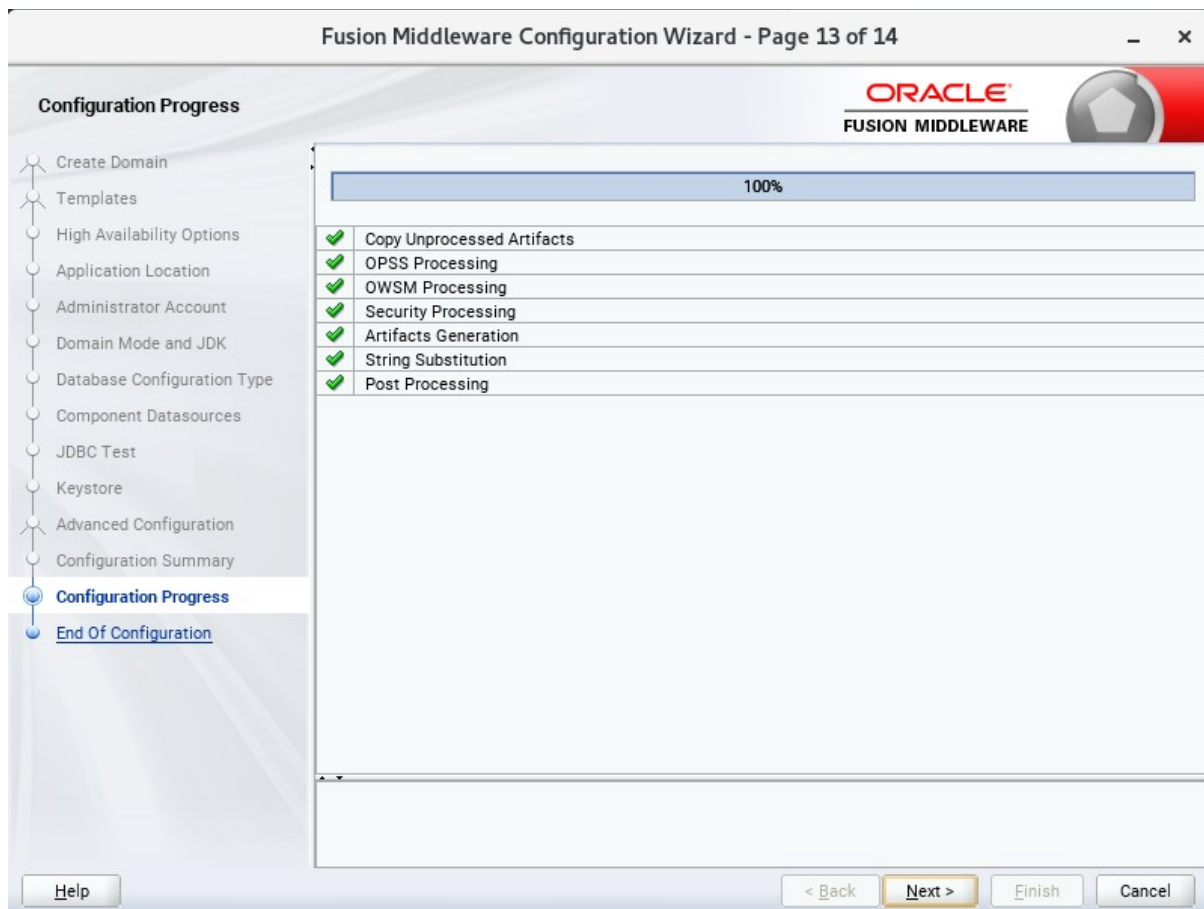
On the Advanced Configuration screen, you do not need any advanced configuration for a compact domain. You can skip through the Advanced Configuration screen without selecting anything. Click **Next** to continue.

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:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell5530:/home... x oracle@Dell5530:/etc x oracle@Dell5530:/home... x oracle@Dell5530:/home... x
usermessagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJmsMessageReceiver. Property w
ebllogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Apr 12, 2022 5:05:40,226 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageForwarderBean(Application
: usermessagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJmsMessageReceiver. Property
weblogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Apr 12, 2022 5:05:40,823 PM GMT+08:00> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/oracle/apps/es
s/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<Apr 12, 2022 5:05:44,203 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.mdb.suspendConnectionOnStart is ig
nored, because it is not supported by JCA-Based Message-Driven Bean.>
<Apr 12, 2022 5:05:45,308 PM GMT+08:00> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/oracle/apps/es
s/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<Apr 12, 2022 5:05:45,377 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.mdb.suspendCon
nectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Apr 12, 2022 5:05:49,845 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.>
<Apr 12, 2022 5:05:49,846 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.>
<Apr 12, 2022 5:05:49,847 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:70
01 for protocols iiop, t3, ldap, snmp, http.>
<Apr 12, 2022 5:05:49,847 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.>
<Apr 12, 2022 5:05:49,847 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base domain" running in development mode.>
<Apr 12, 2022 5:05:49,848 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.>
<Apr 12, 2022 5:05:49,848 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:70
01 for protocols iiop, t3, ldap, snmp, http.>
<Apr 12, 2022 5:05:49,848 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.>
<Apr 12, 2022 5:05:49,852 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 6 ms
<Apr 12, 2022 5:05:49,900 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 85127 ms, partition=DOMAIN

```

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

```

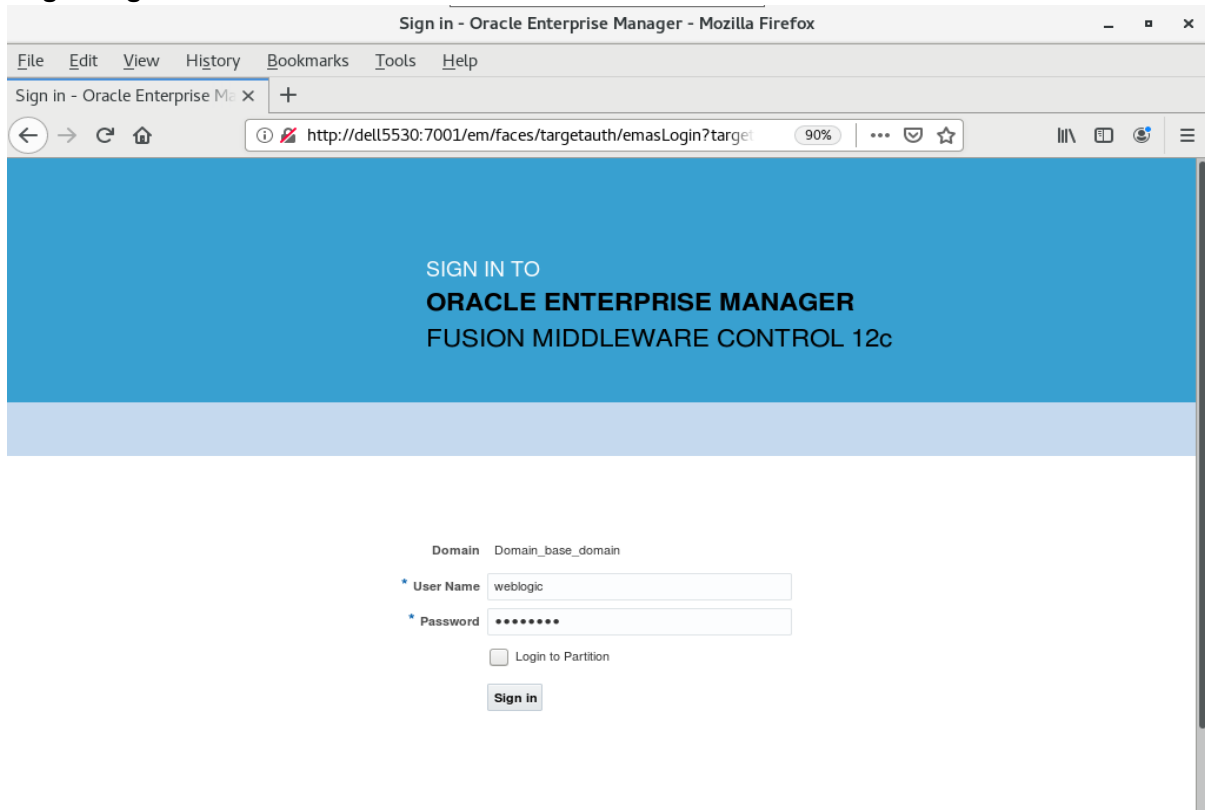
-----
Server state changed to RUNNING.
-----

```

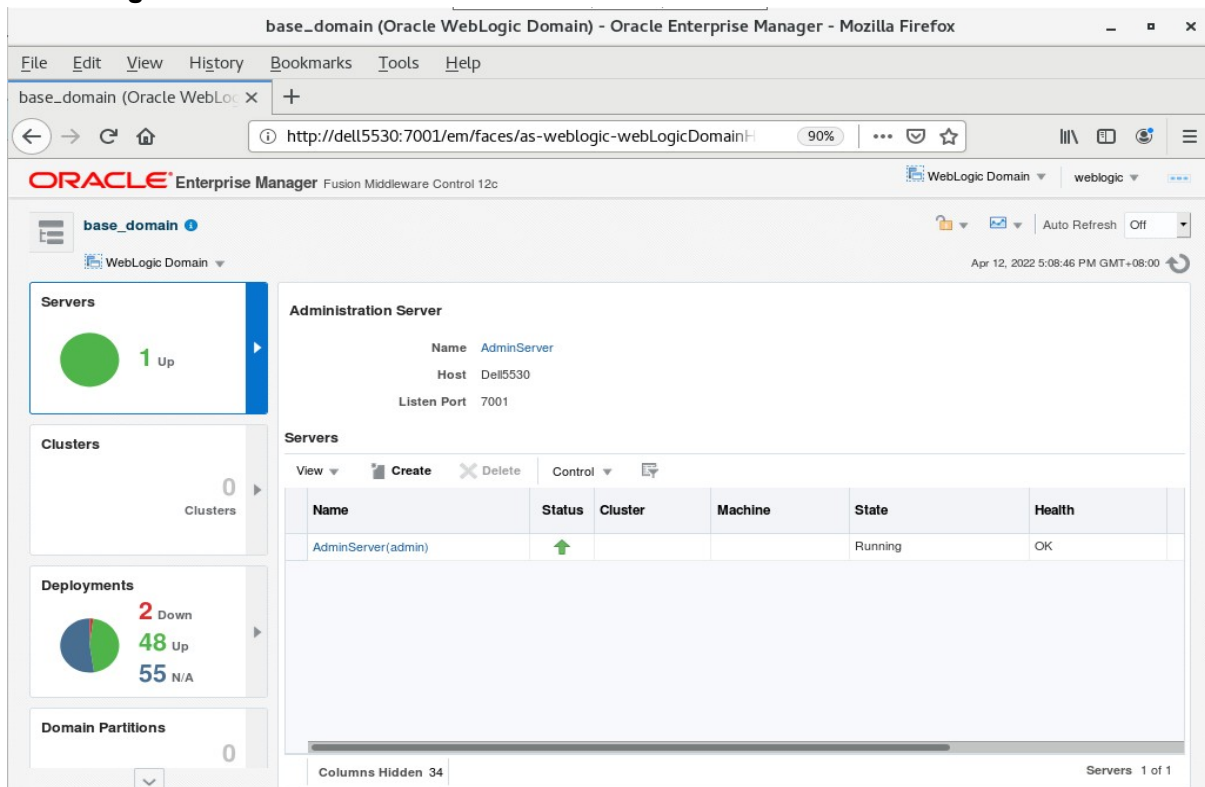
### 4-3. Checking Oracle SOA Suite 12c Product URLs.

#### 1). Access to Enterprise Manager Console.

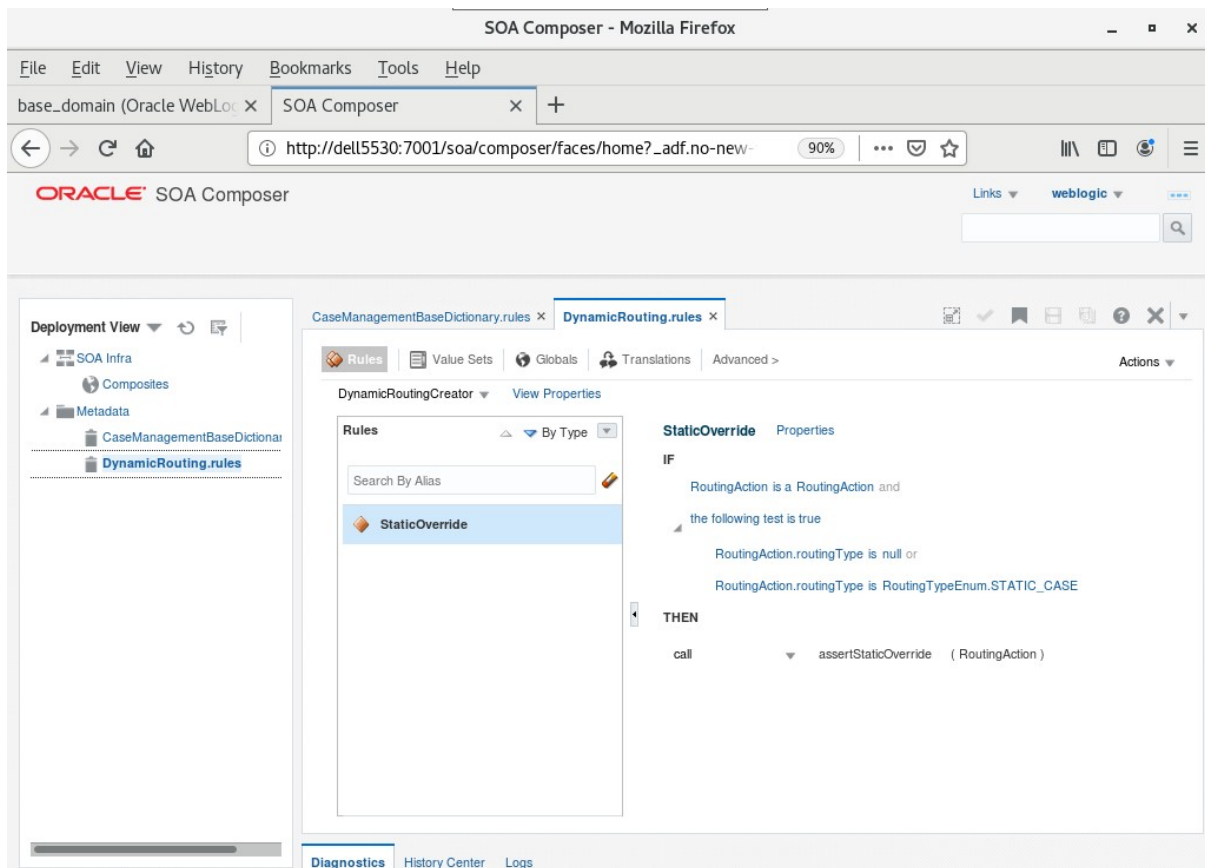
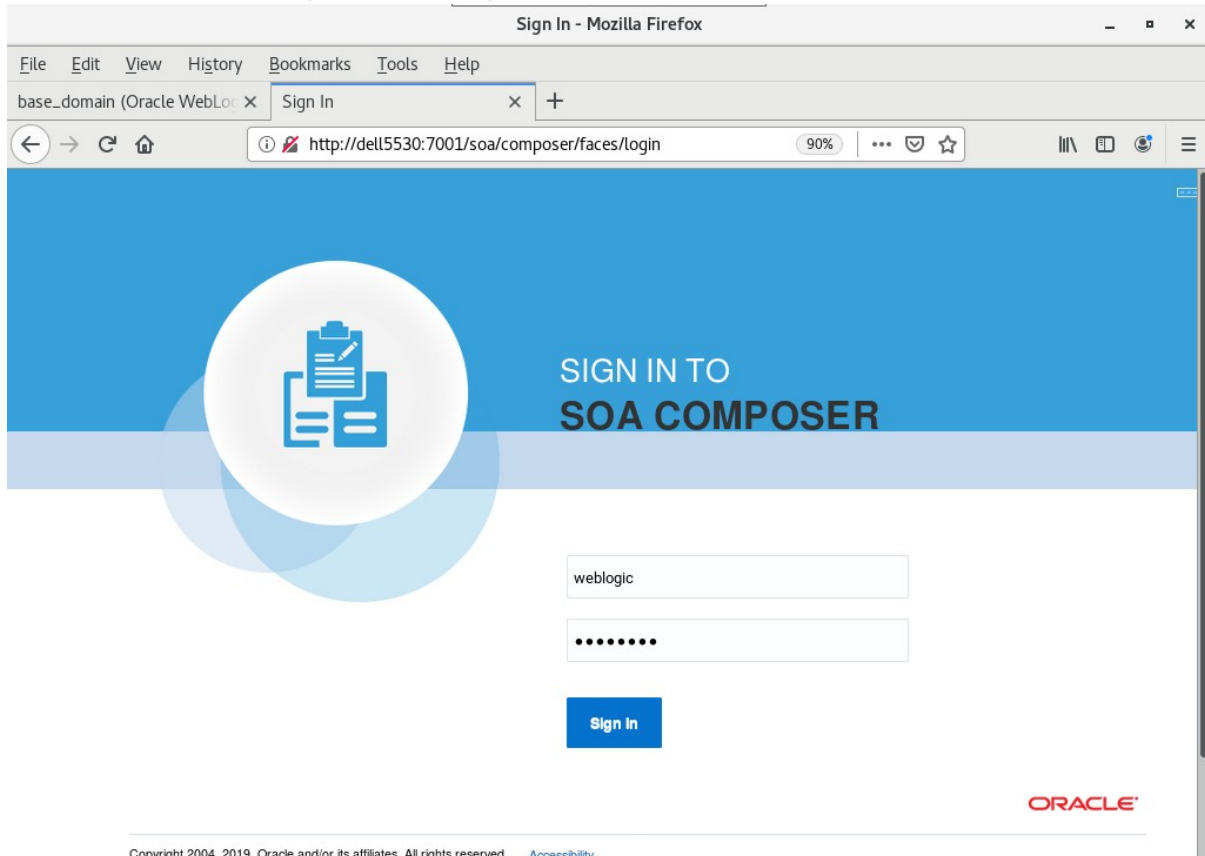
#### Login Page:



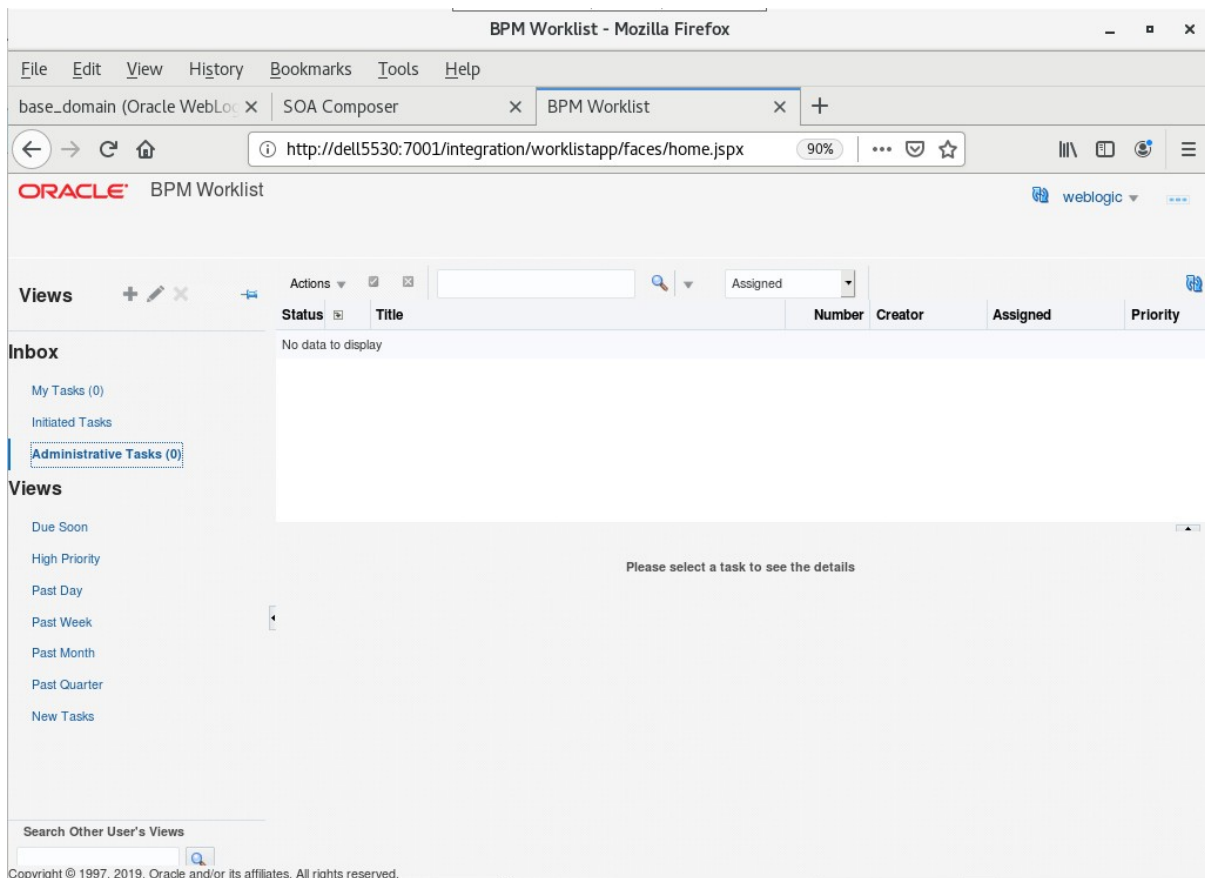
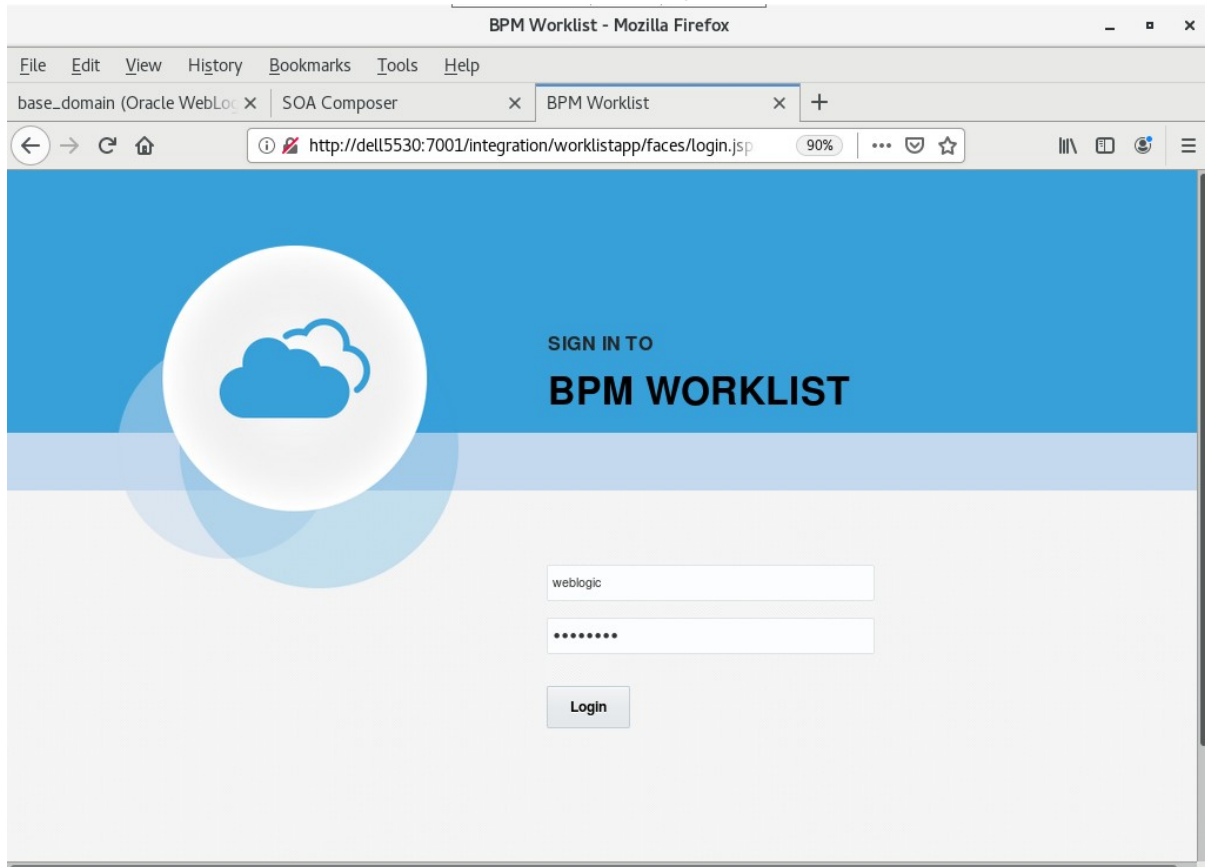
#### Home Page:



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

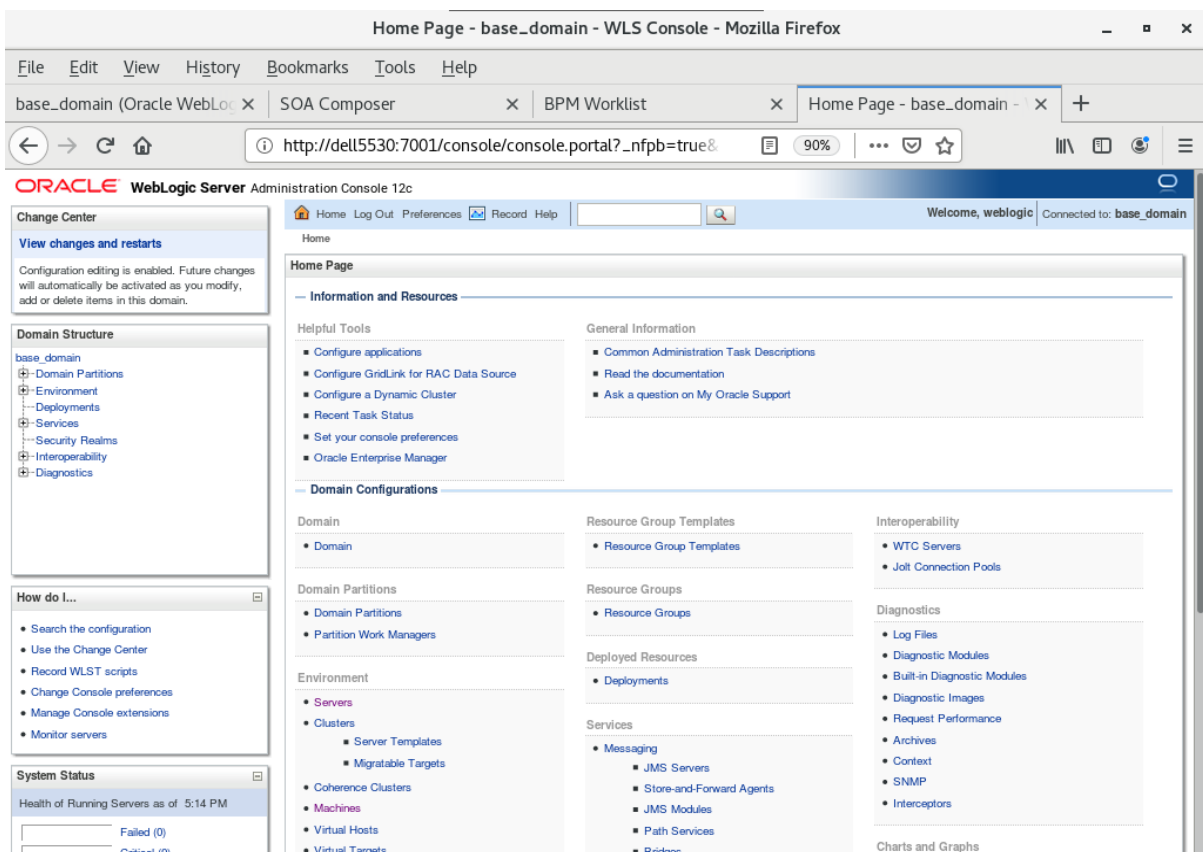
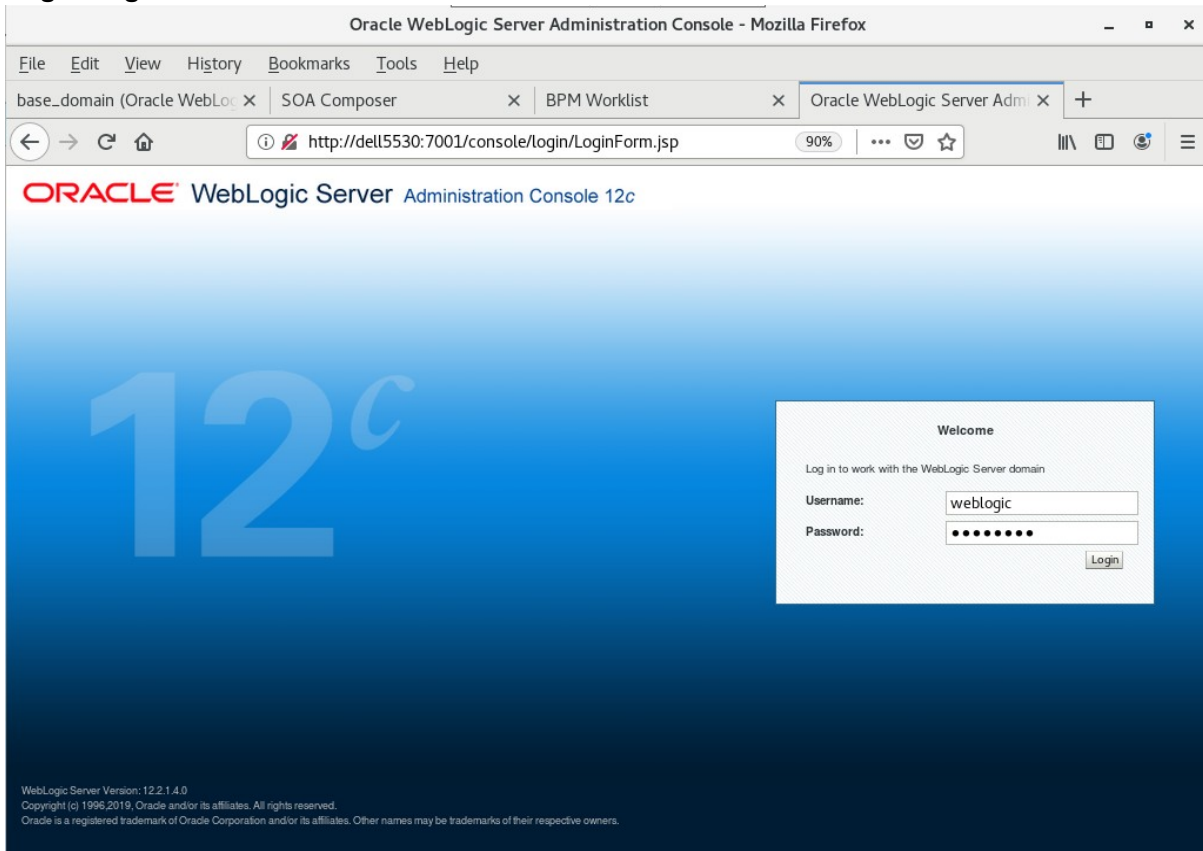


Access to BPM worklistapp - URL:<http://host:7001/integration/worklistapp>



## 2). Access to Administration Server Console

Login Page as shown below:



### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area is titled "Summary of Servers" and includes a "Configuration" tab. Below the tab, there is a table listing the servers in the domain. The table has columns for Name, Type, Cluster, Machine, State, Health, and Listen Port. One server is listed: AdminServer(admin), which is Configured, in a RUNNING state, with a Health of OK and a Listen Port of 7001.

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

### 3). Connecting JDeveloper to the Compact Domain.

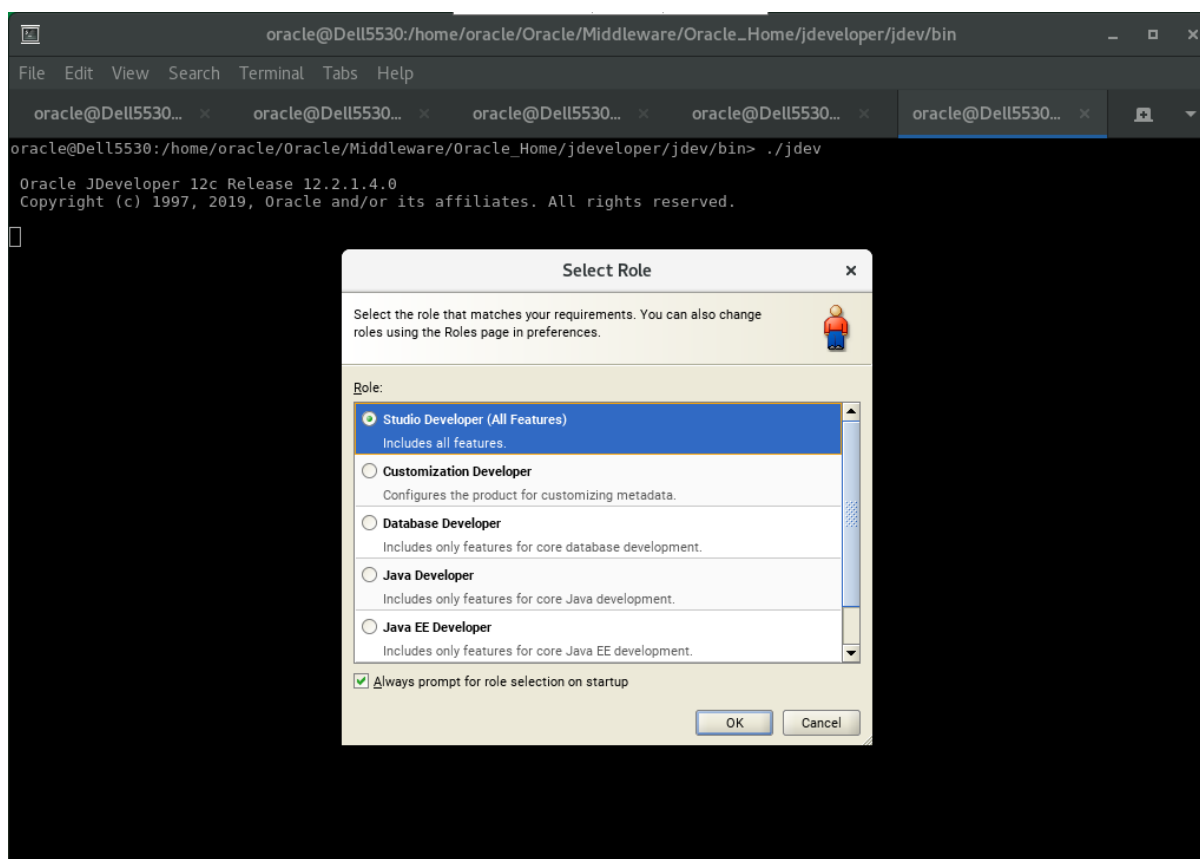
Launch Oracle JDeveloper with the appropriate command.

Ex:

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

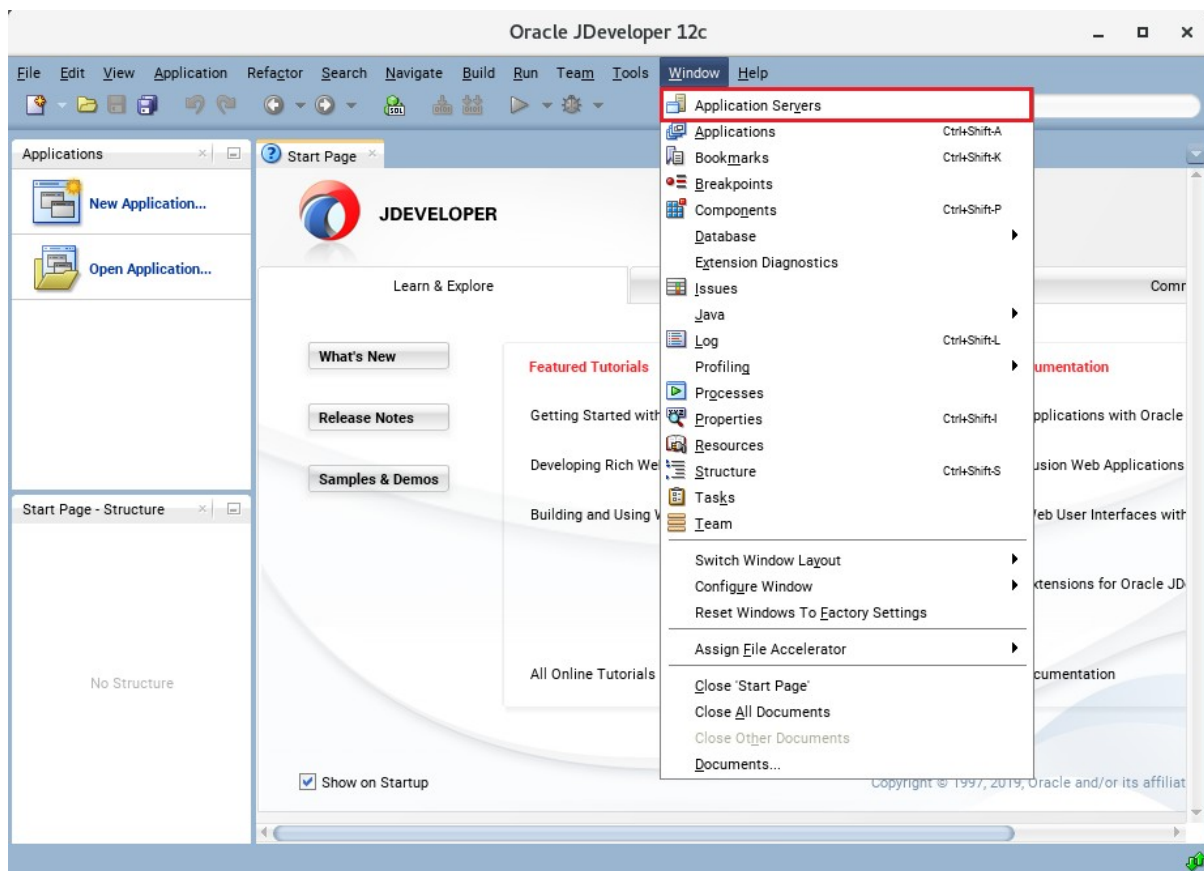
**Follow these steps:**

a1). Select Role.



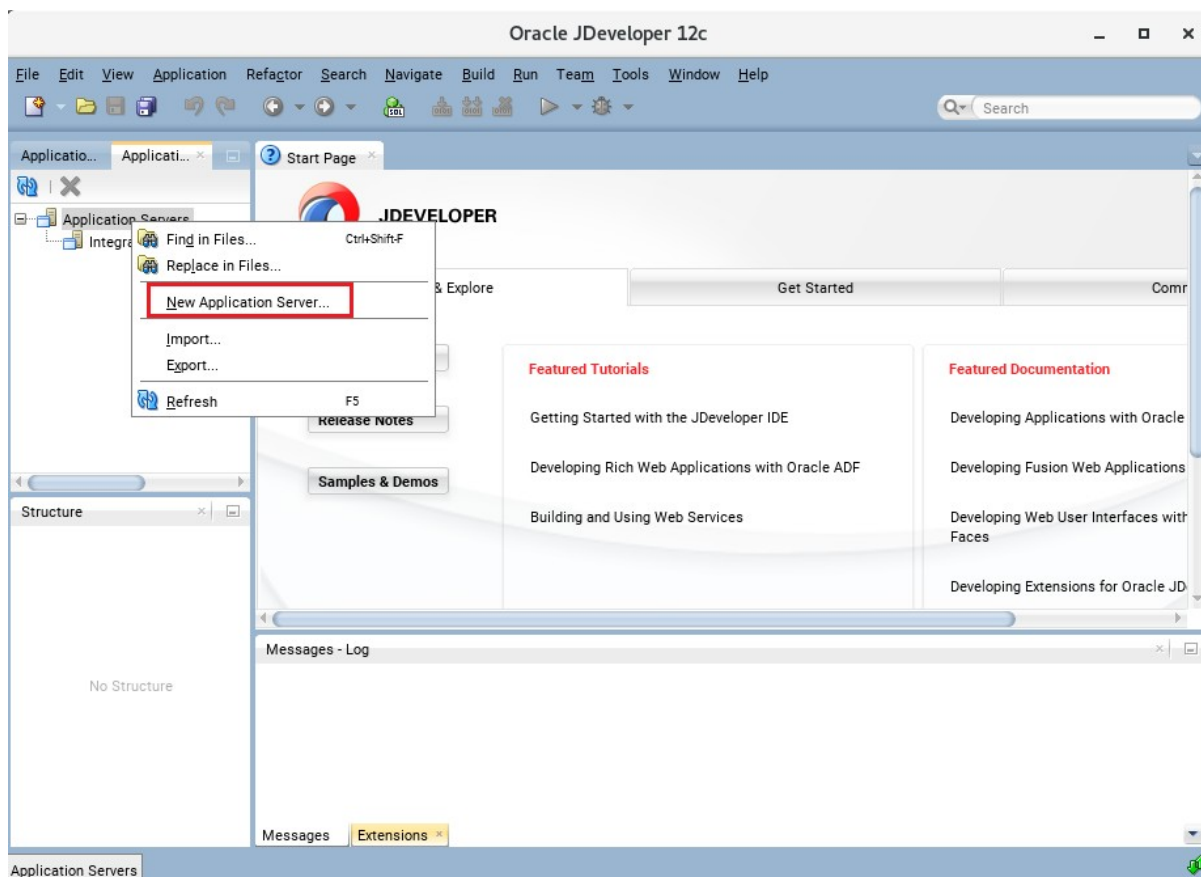
Select the role that matches your requirements. Click **OK** to continue.

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



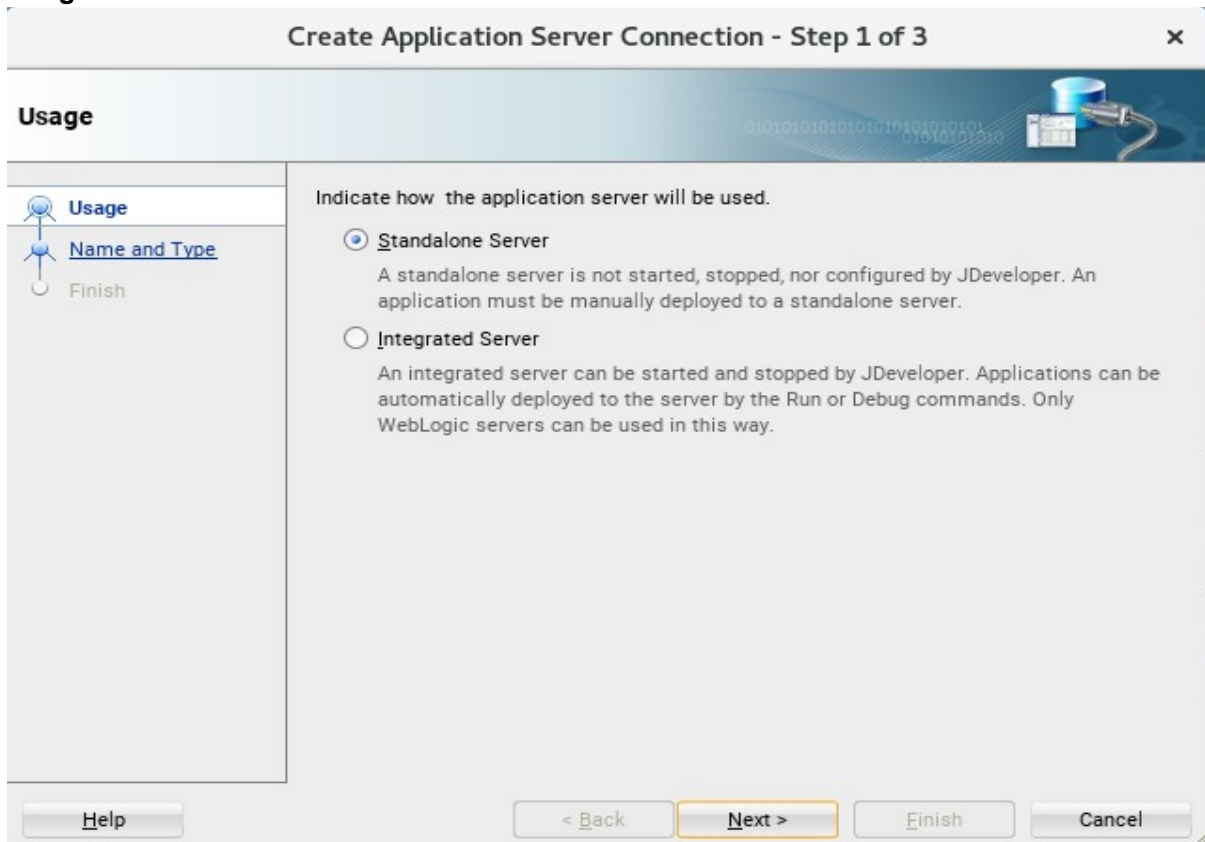


a3). Right-click on **Application Servers** in the Application Server Navigator. Select **New Application Server** from the drop-down menu to launch the **Create Application Server Connection** wizard.

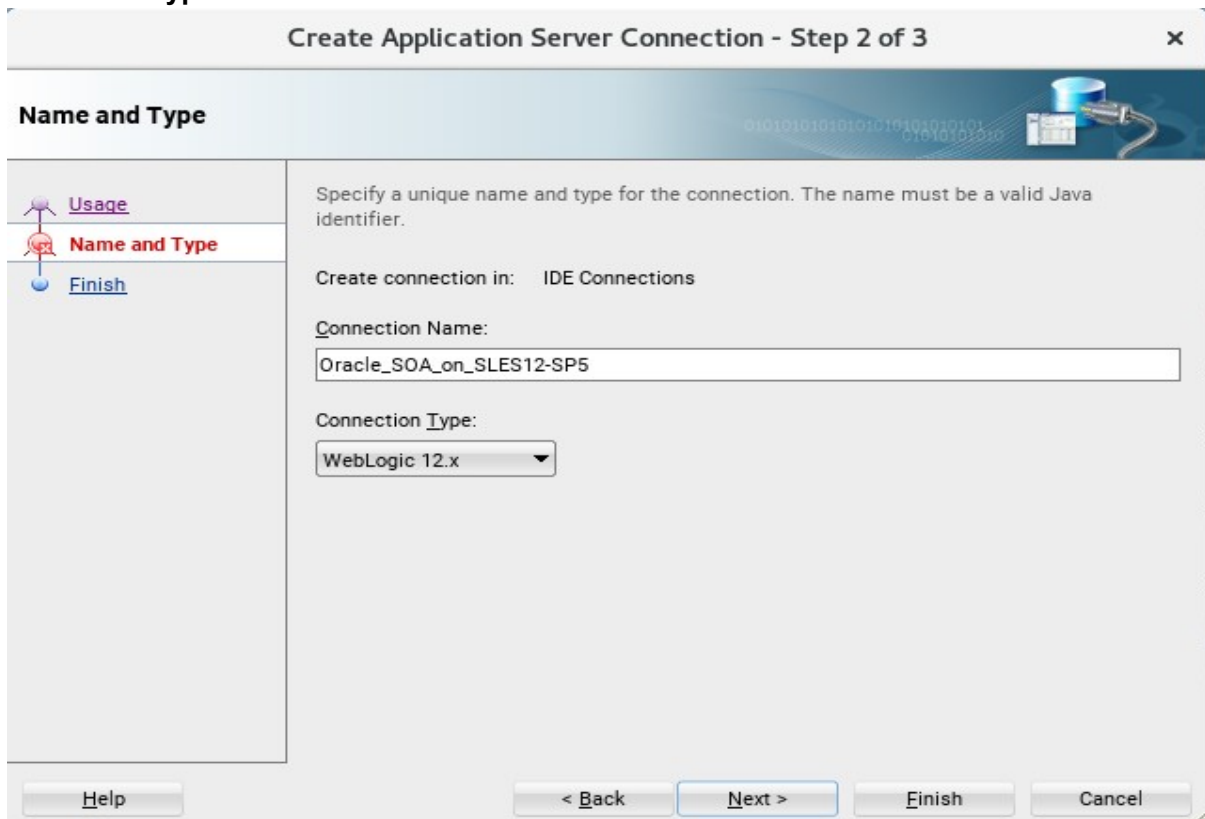


a4). Creating Application Server Connection steps as shown below.

Usage screen.



Name and Type screen.



Authentication screen.

**Create Application Server Connection - Step 3 of 6**

**Authentication**

Specify a username and password to authenticate the connection.

Username: weblogic

Password: .....

Help < Back Next > Finish Cancel

Configuration screen.

**Create Application Server Connection - Step 4 of 6**

**Configuration**

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

WebLogic Hostname (Administration Server): localhost

Port: 7001 SSL Port: 7002

Always use SSL

WebLogic Domain: base\_domain

Help < Back Next > Finish Cancel

Test screen.

**Create Application Server Connection - Step 5 of 6**

**Test**

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

Status:

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

12 of 12 tests successful.

Finish screen.

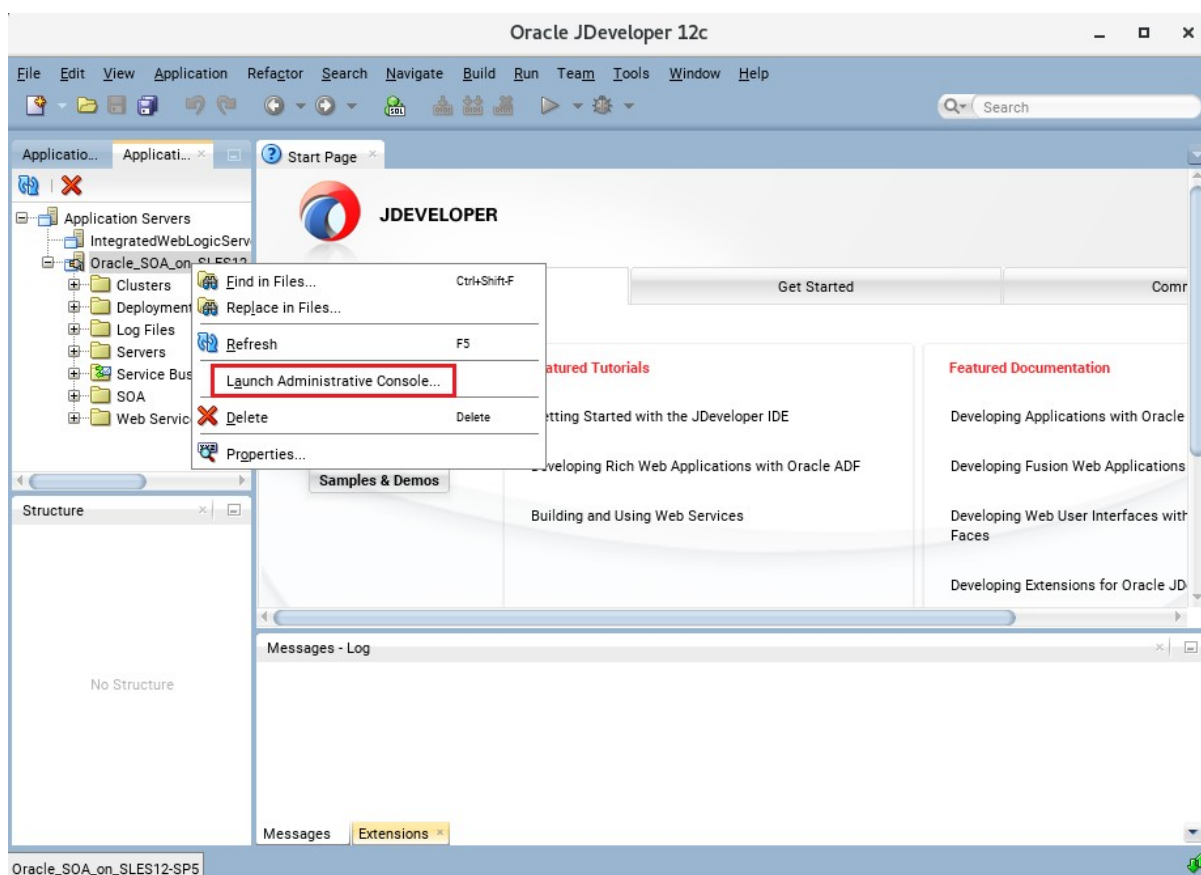
**Create Application Server Connection - Step 6 of 6**

**Finish**

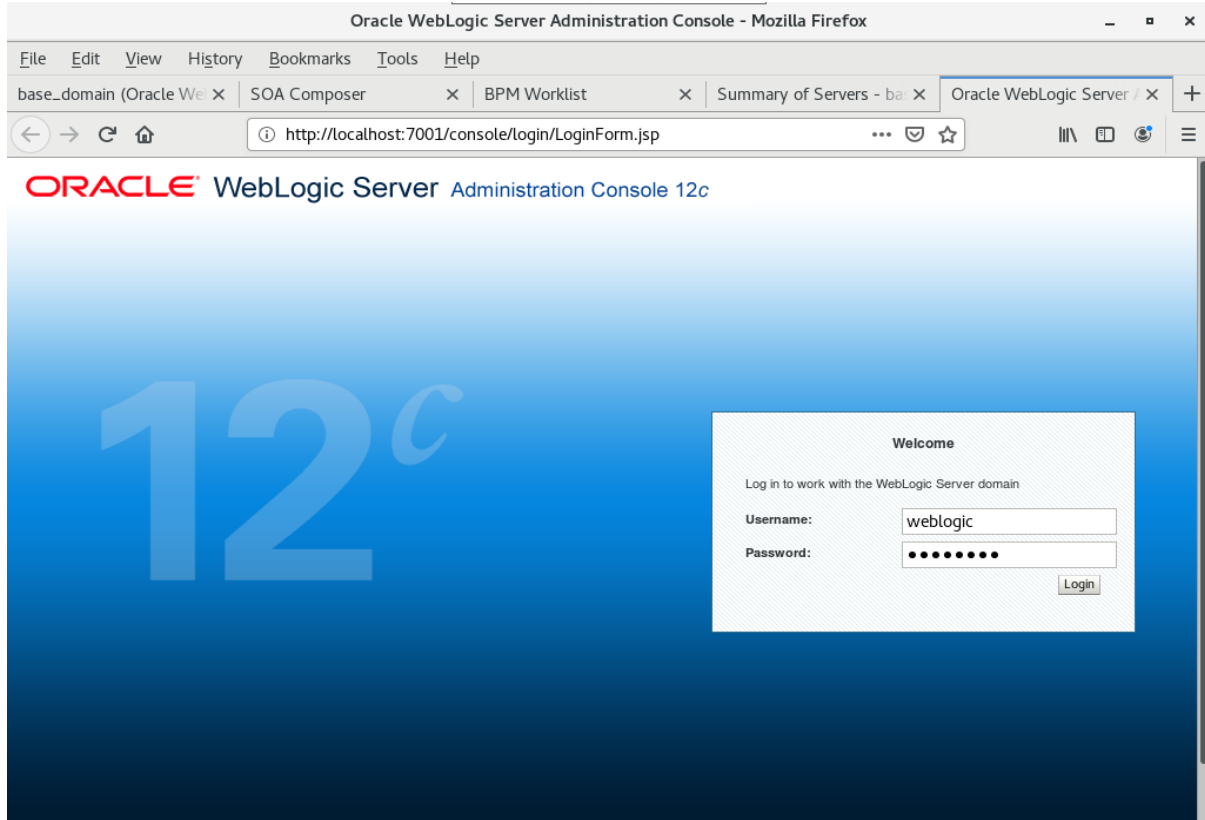
You have completed creating the connection.

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

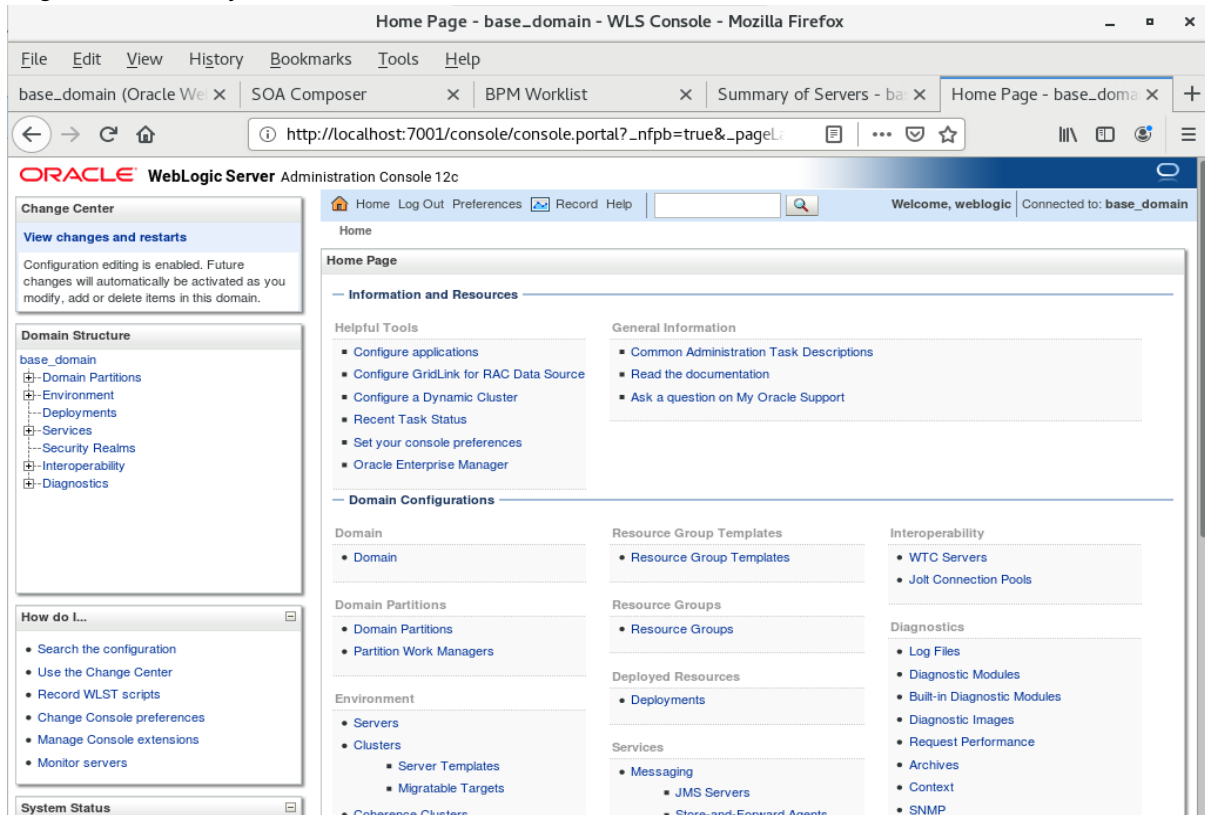
a5). Verifying Your Connection. Expand the connection node beside **Application Servers** in the Application Server Navigator. You should see your domain listed by the **Connection Name** you specified on the **Name and Type** screen. Right-click on your domain's name and choose **Launch Administrative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



Log into your administrative console.



Log in successfully.



**End of Oracle SOA Suite.**

\*\*\*\*\*

## Oracle Access Manager

\*\*\*\*\*

### 1. Installing Oracle Identity and Access Management 12cPS4 software

#### 1-1. Prerequisites:

Installation of Oracle Identity and Access management requires:

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

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

```
SQL> show parameter open_cursors;

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

System altered.

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

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

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

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

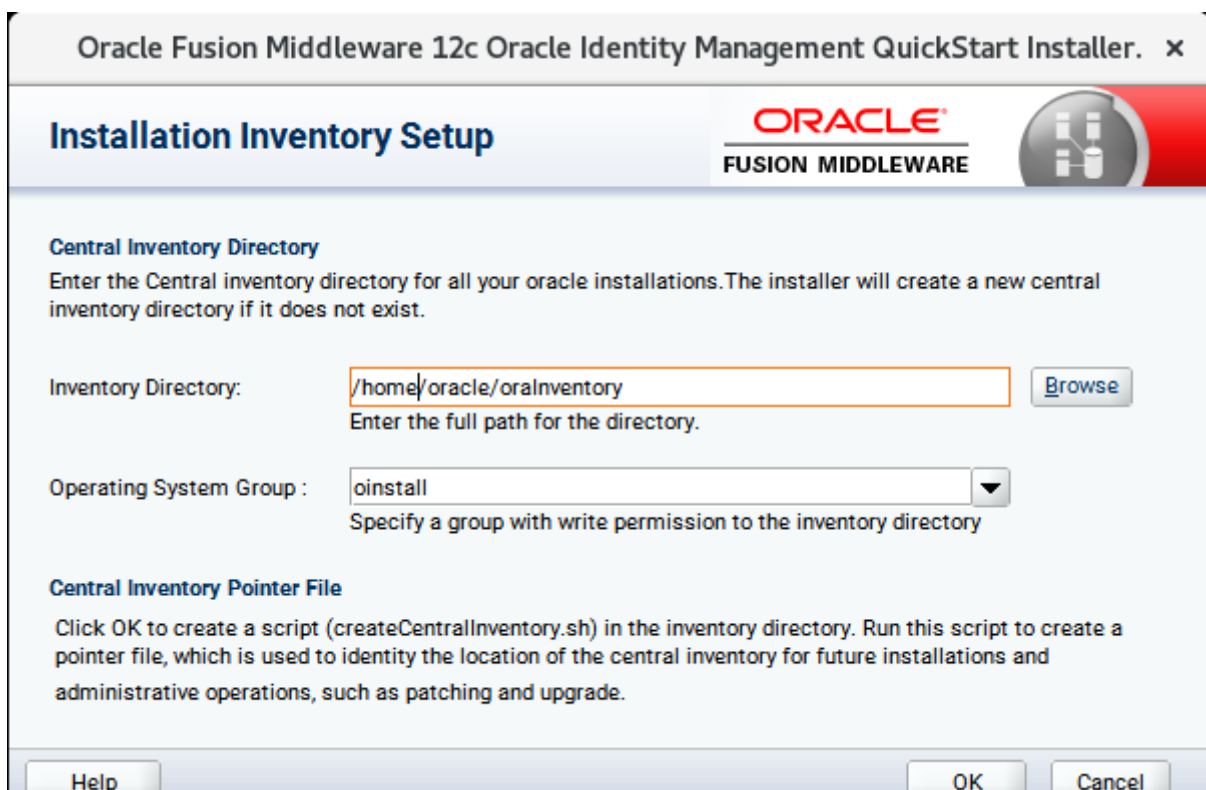
1-2. Log in to the target system (SLES 12 SP5 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <https://www.oracle.com/downloads/#category-middleware>.

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

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ("fmw\_12.2.1.4.0\_idmqs\_Disk1\_1of2.zip" and "fmw\_12.2.1.4.0\_idmqs\_Disk1\_2of2.zip") files and launch the installation program by running 'fmw\_12.2.1.4.0\_idmquickstart.jar'

**For the actual installation, follow the steps below:**

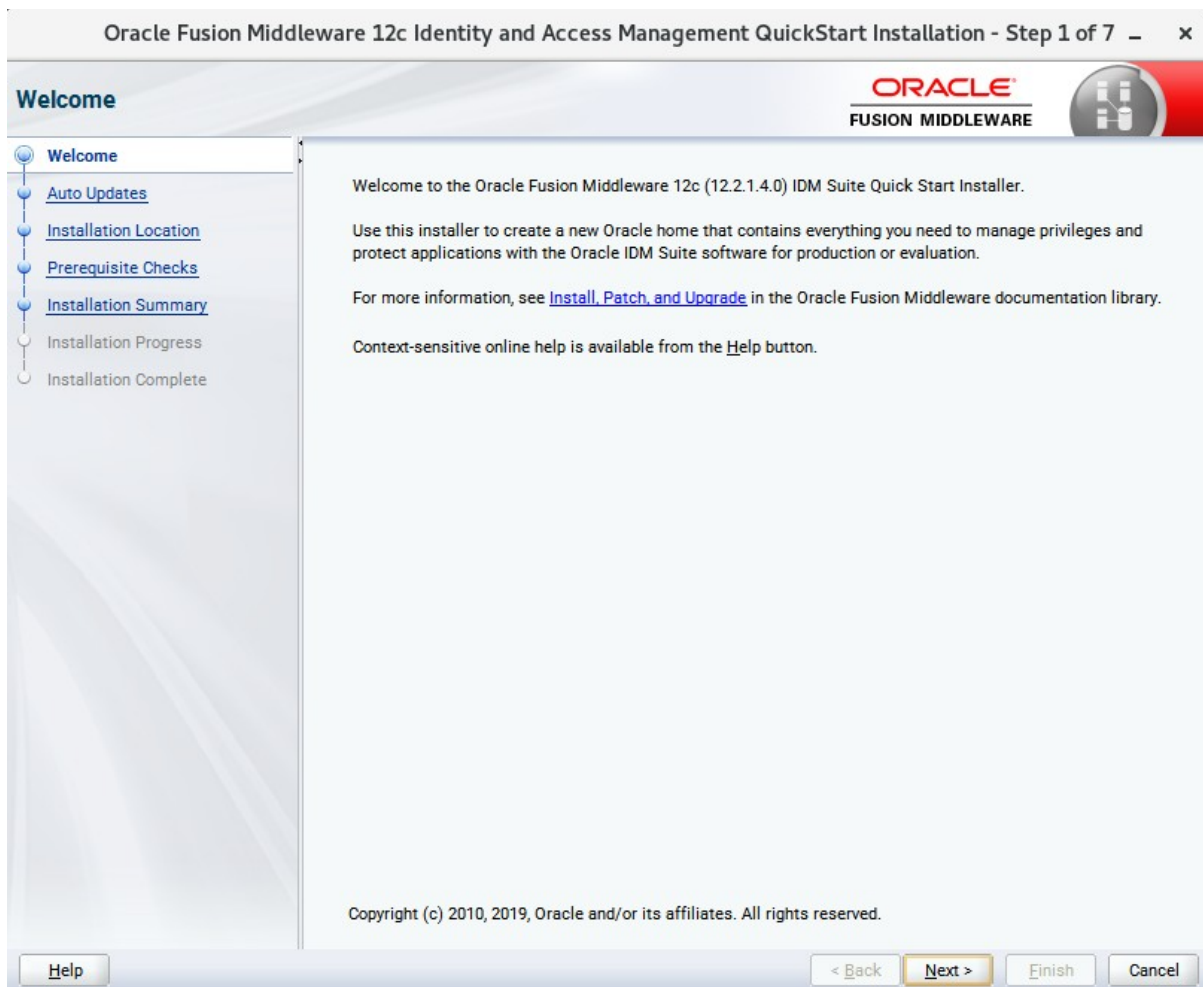
1). Installation Inventory Setup.



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

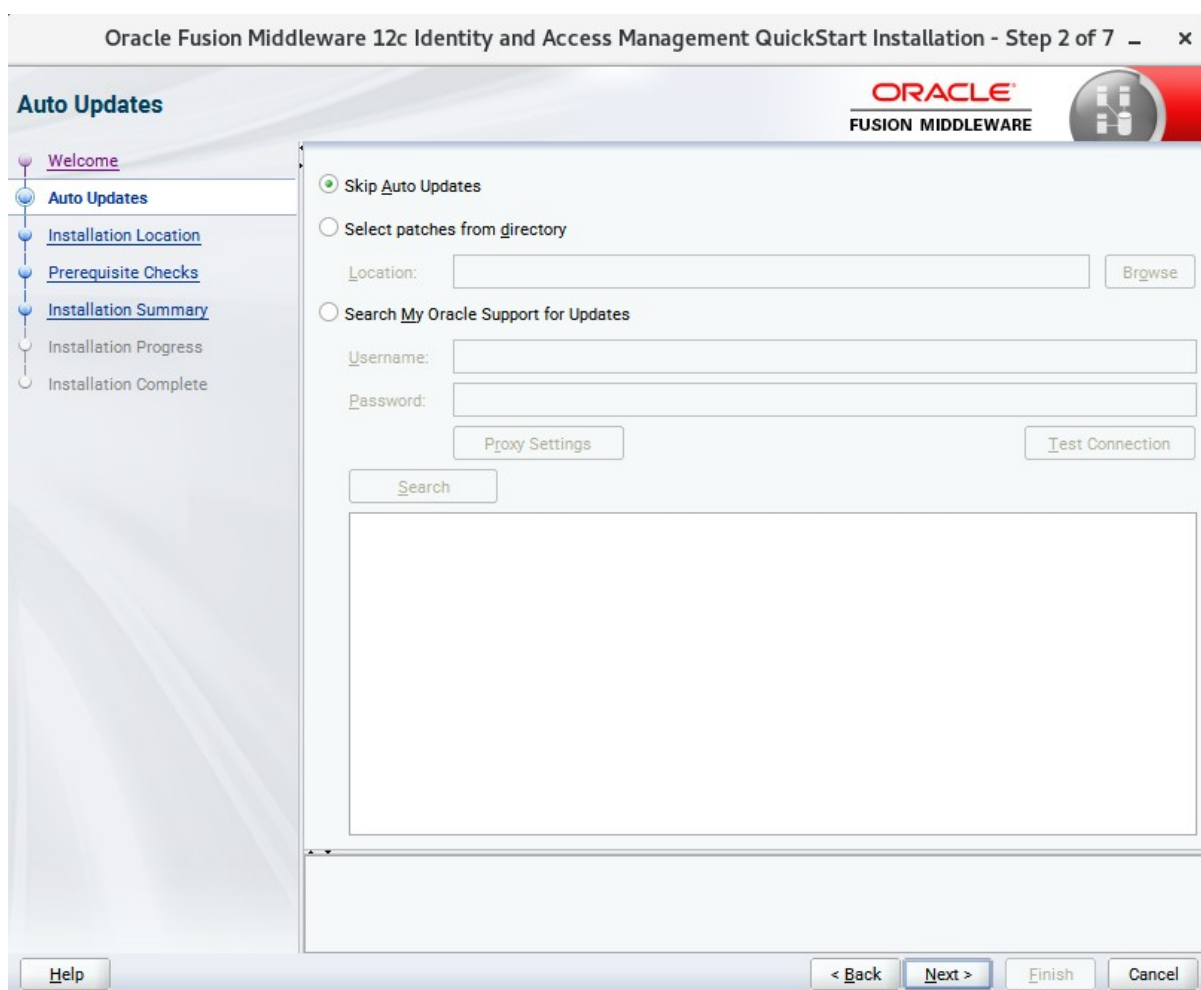


2). **Welcome** page appears.



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

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



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

### Auto Updates

ORACLE  
FUSION MIDDLEWARE

- Welcome
- Auto Updates**
- Installation Location
- Prerequisite Checks
- Installation Summary
- Installation Progress
- Installation Complete

Skip Auto Updates

Select patches from directory

Location:

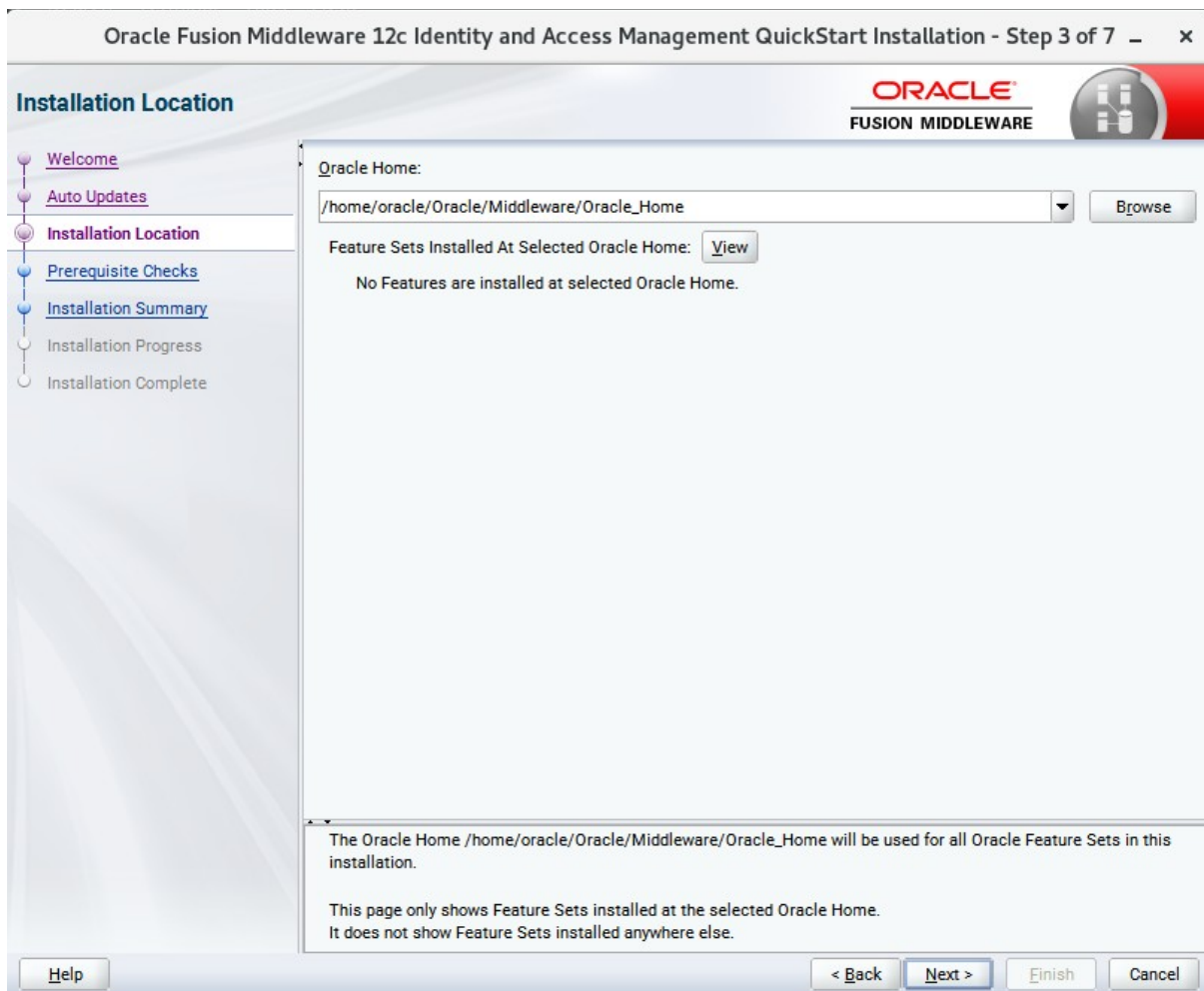
Search My Oracle Support for Updates

Username:

Password:

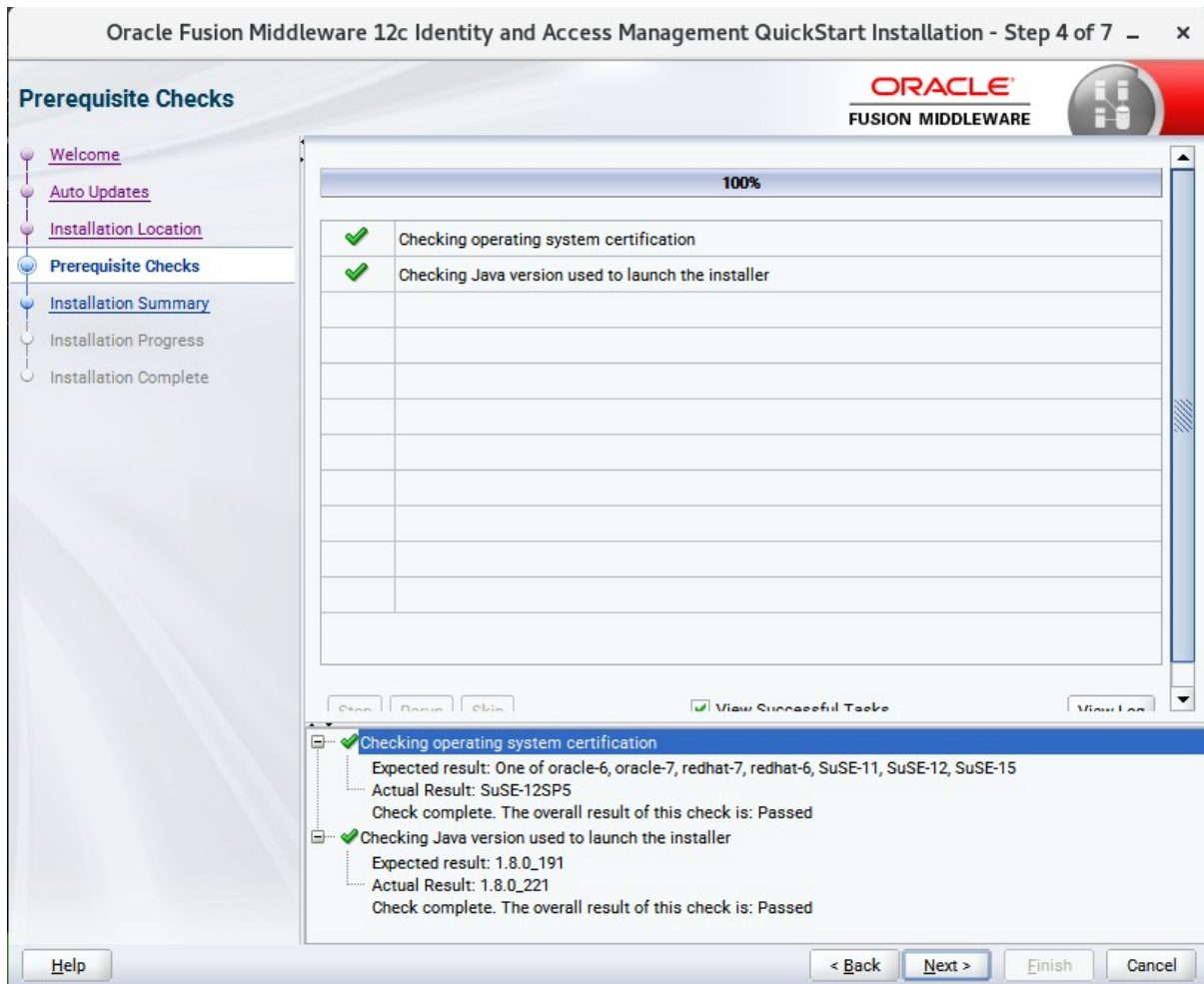
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



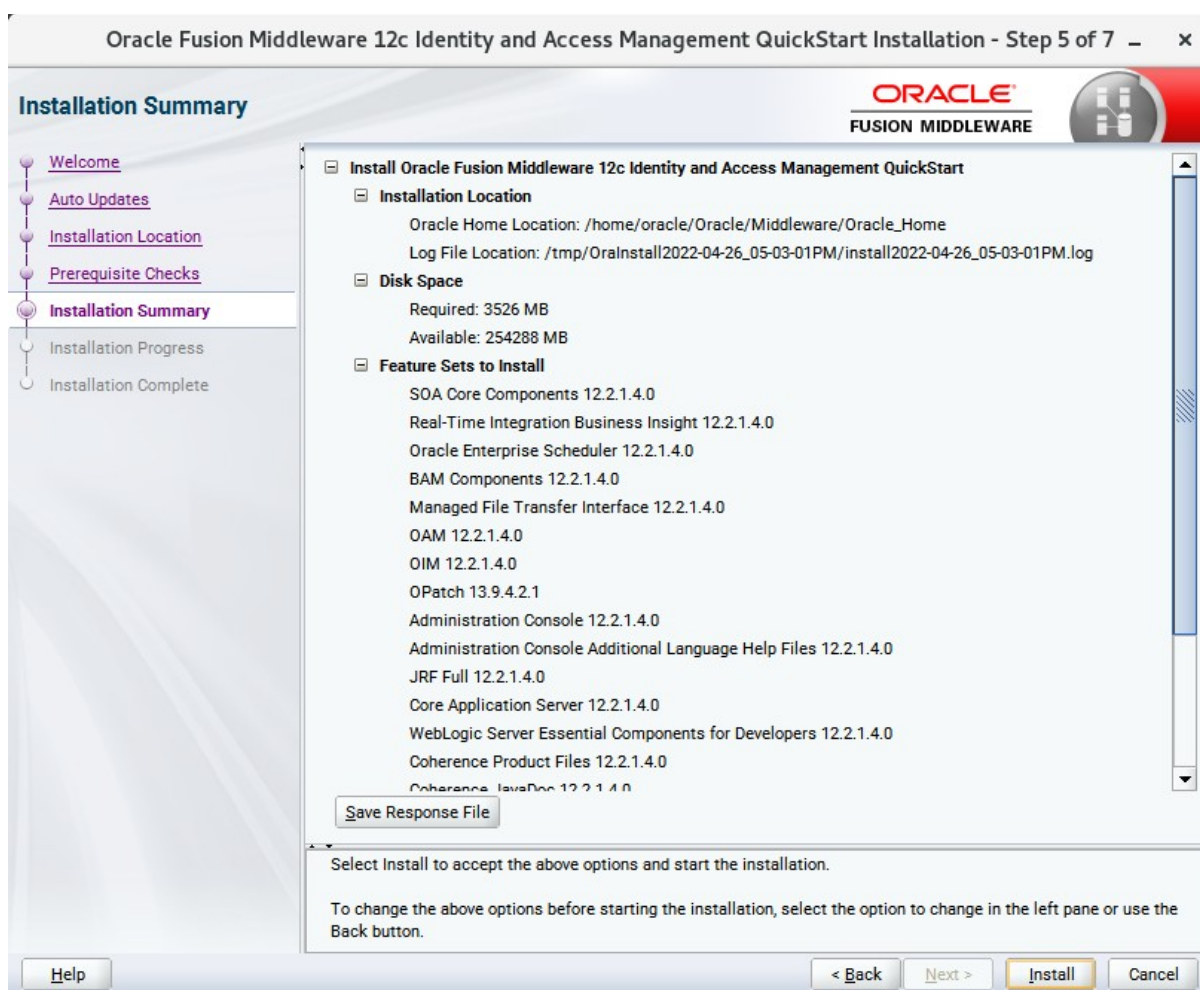
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



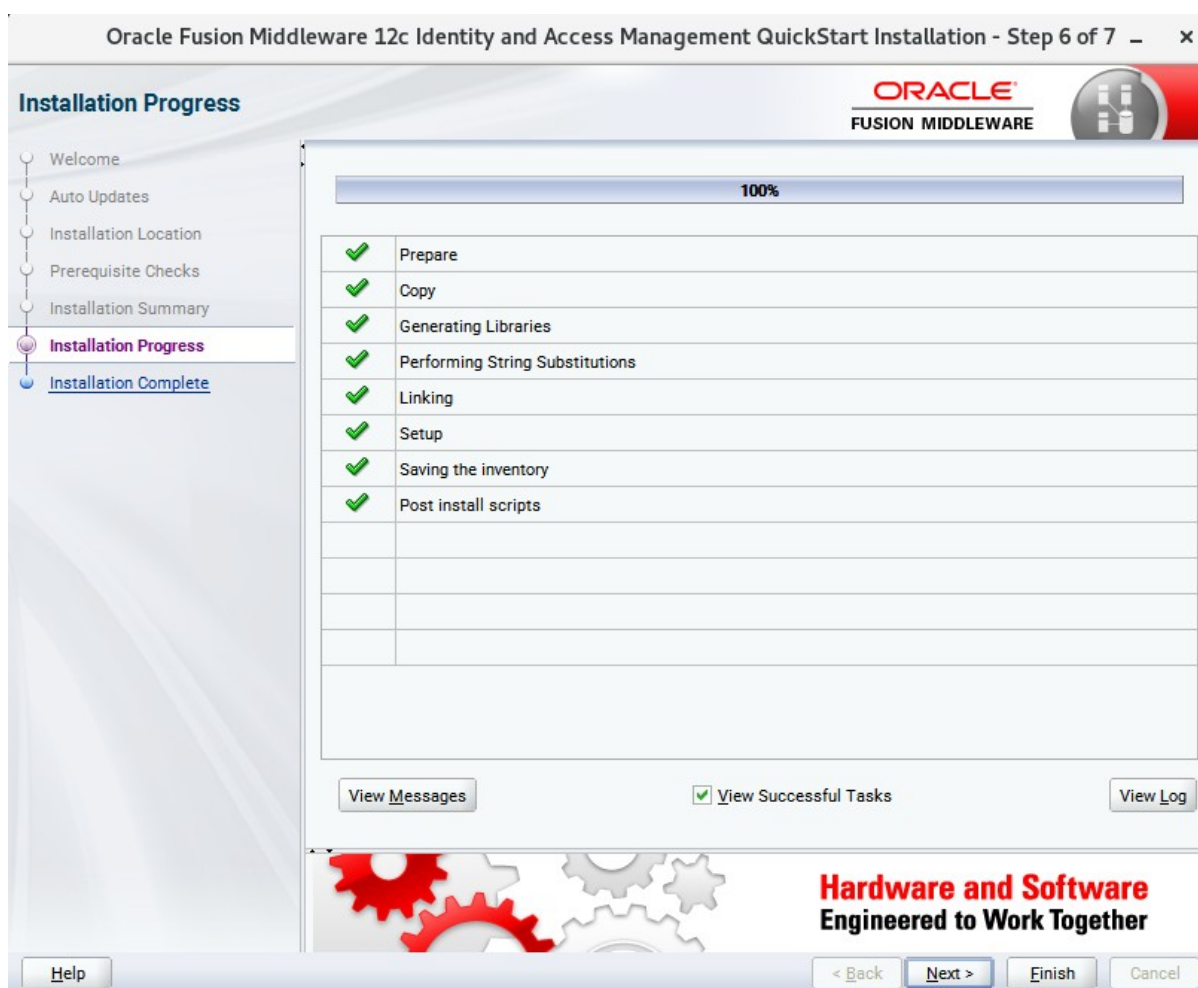
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



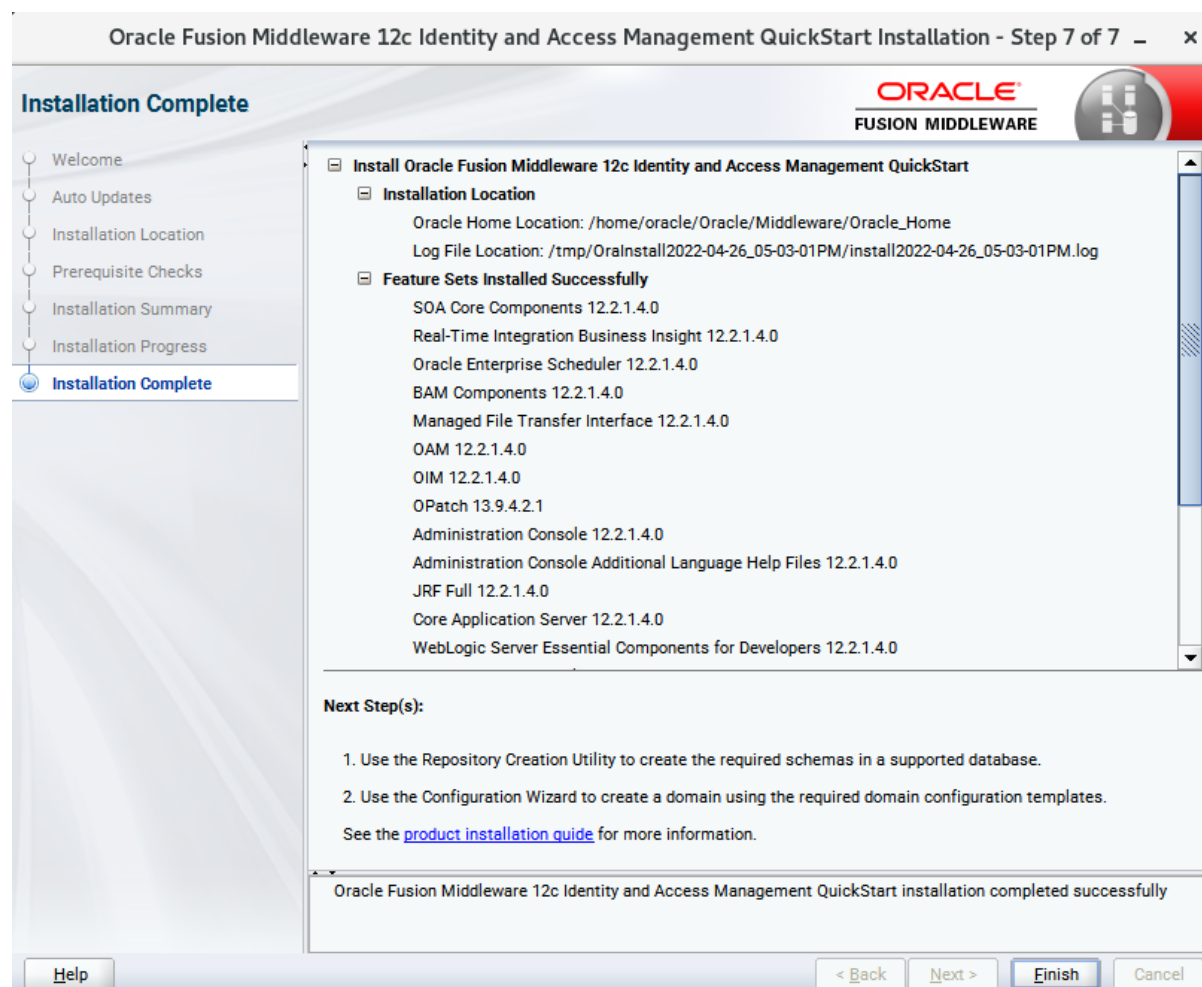
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



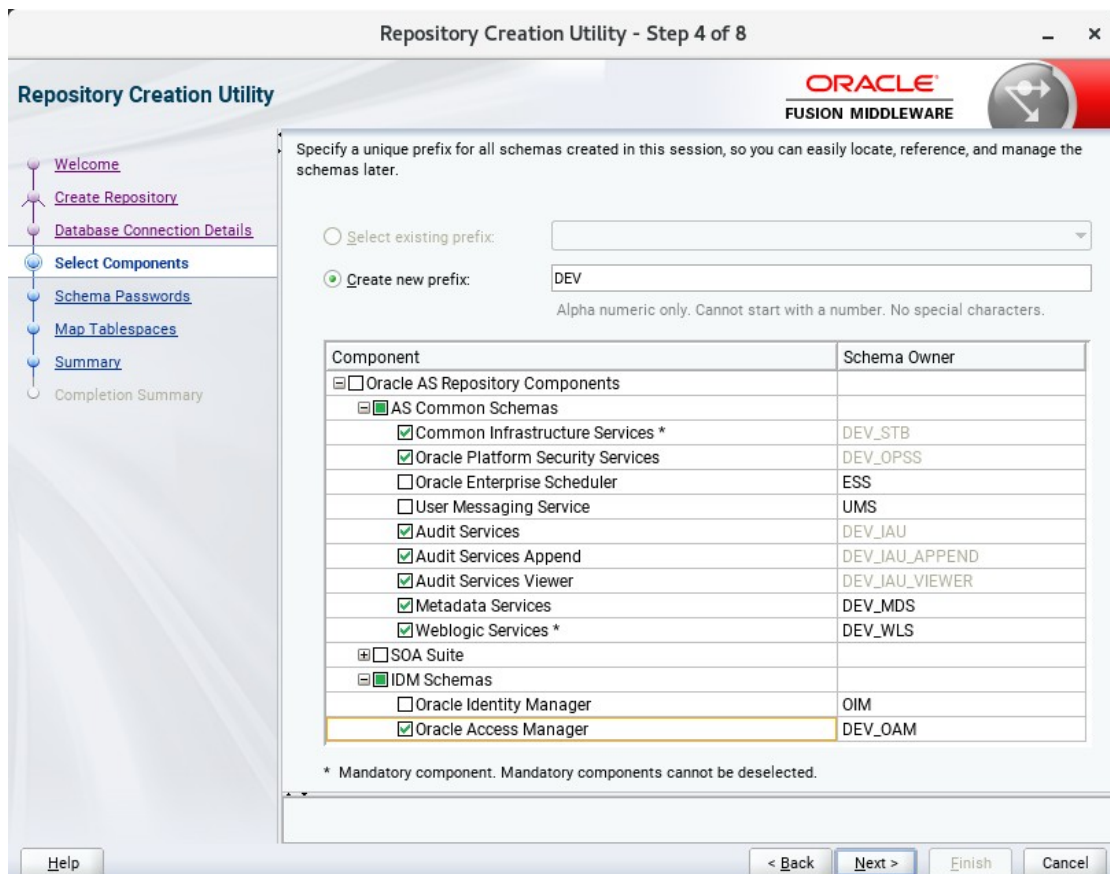
This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

## 2. Configuring the Oracle Access Manager Domain

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

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

**Screenshot: Database schemas creating for Oracle Access Manager.**





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



Ensure the schema creation is successful.

Repository Creation Utility - Step 8 of 8

**Repository Creation Utility**



- 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: 6 minutes 56 seconds

RCU Logfile: /tmp/RCU2022-04-26\_17-13\_1161941924/logs/rcu.log  
 Component Log Directory: /tmp/RCU2022-04-26\_17-13\_1161941924/logs  
 View Log: [rcu.log](#)

Prefix for (prefixable) Schema DEV  
 Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:11.153(sec)	<a href="#">stb.log</a>
Oracle Platform Security Services	Success	02:34.691(min)	<a href="#">opss.log</a>
Oracle Access Manager	Success	00:50.491(sec)	<a href="#">oam.log</a>
Audit Services	Success	00:52.734(sec)	<a href="#">iau.log</a>
Audit Services Append	Success	00:10.714(sec)	<a href="#">iau_append.log</a>
Audit Services Viewer	Success	00:09.647(sec)	<a href="#">iau_viewer.log</a>
Metadata Services	Success	00:23.868(sec)	<a href="#">mds.log</a>
Weblogic Services	Success	01:04.436(min)	<a href="#">wls.log</a>

[Help](#)

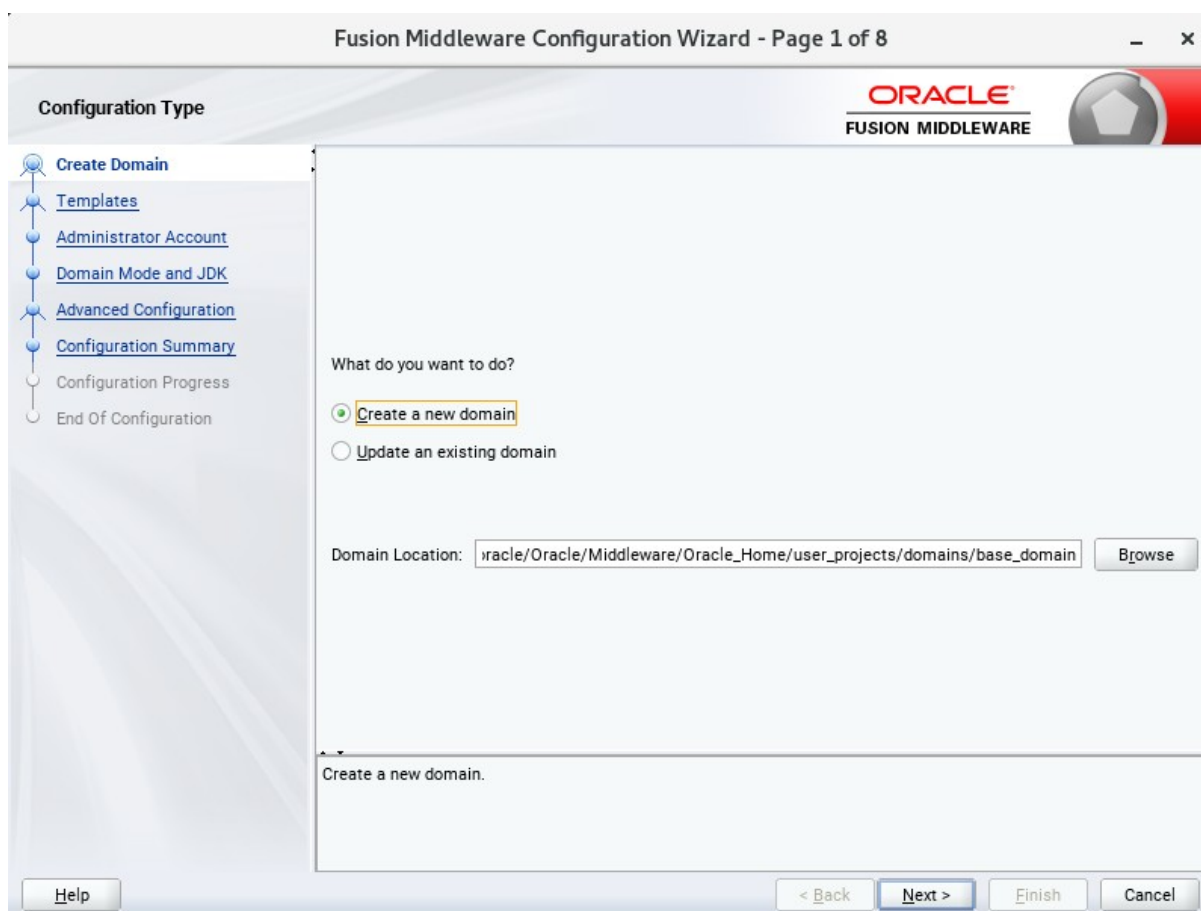
[< Back](#)
[Next >](#)
[Create](#)
[Close](#)

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

In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE\_HOME/oracle\_common/common/bin** directory.

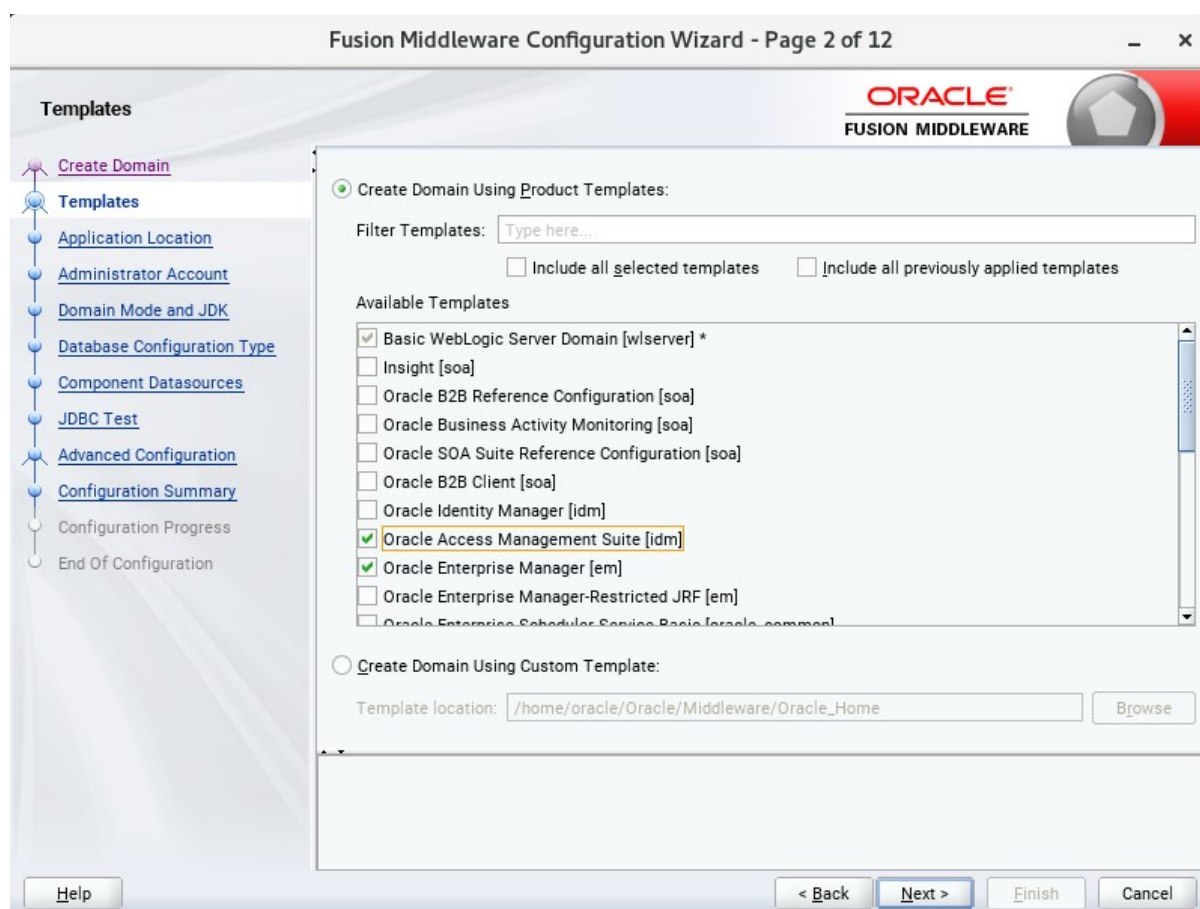
### Follow these steps:

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



Click **Next** to continue.

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



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

Selecting these templates automatically selects the following as dependencies:

- Oracle Enterprise Manager [em]
- Oracle JRF [oracle\_common]
- WebLogic Coherence Cluster Extension [wlserver]

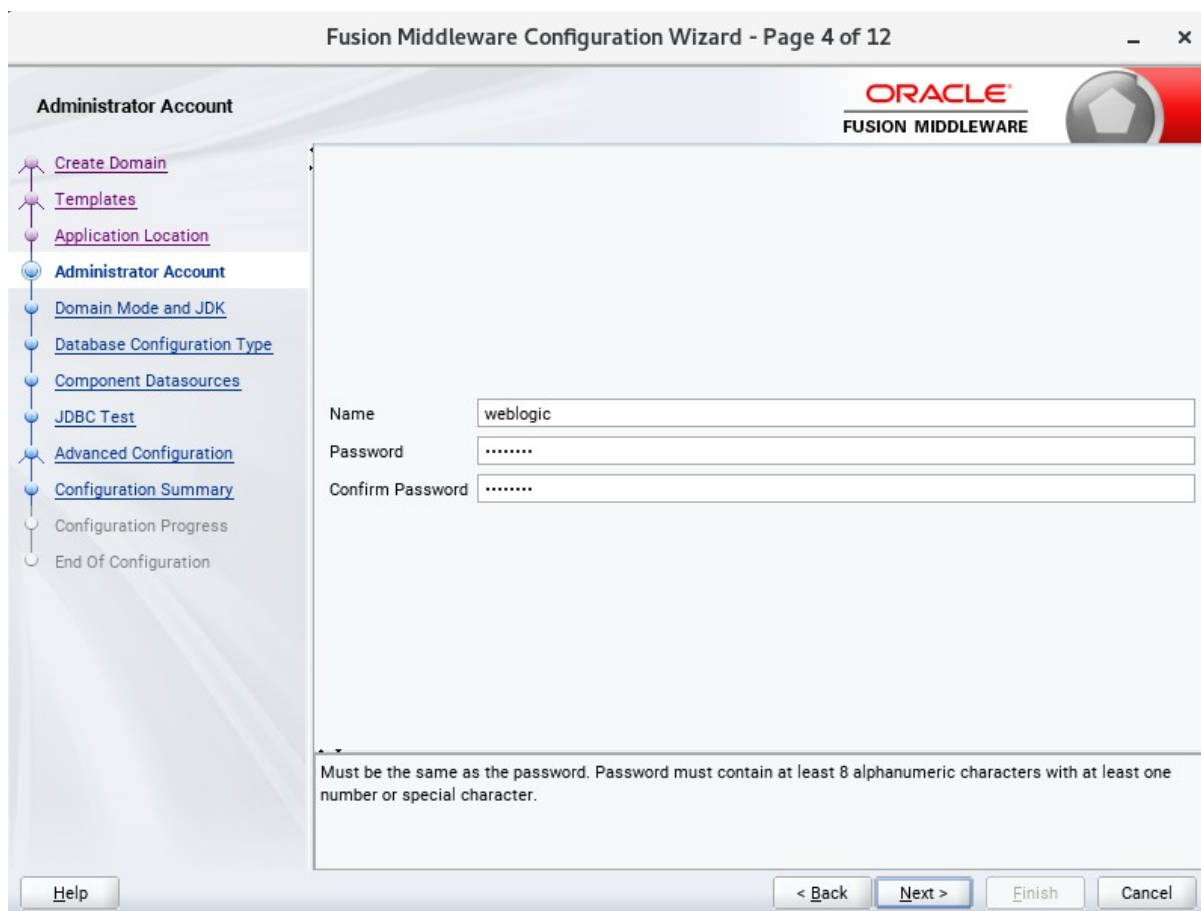
You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



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

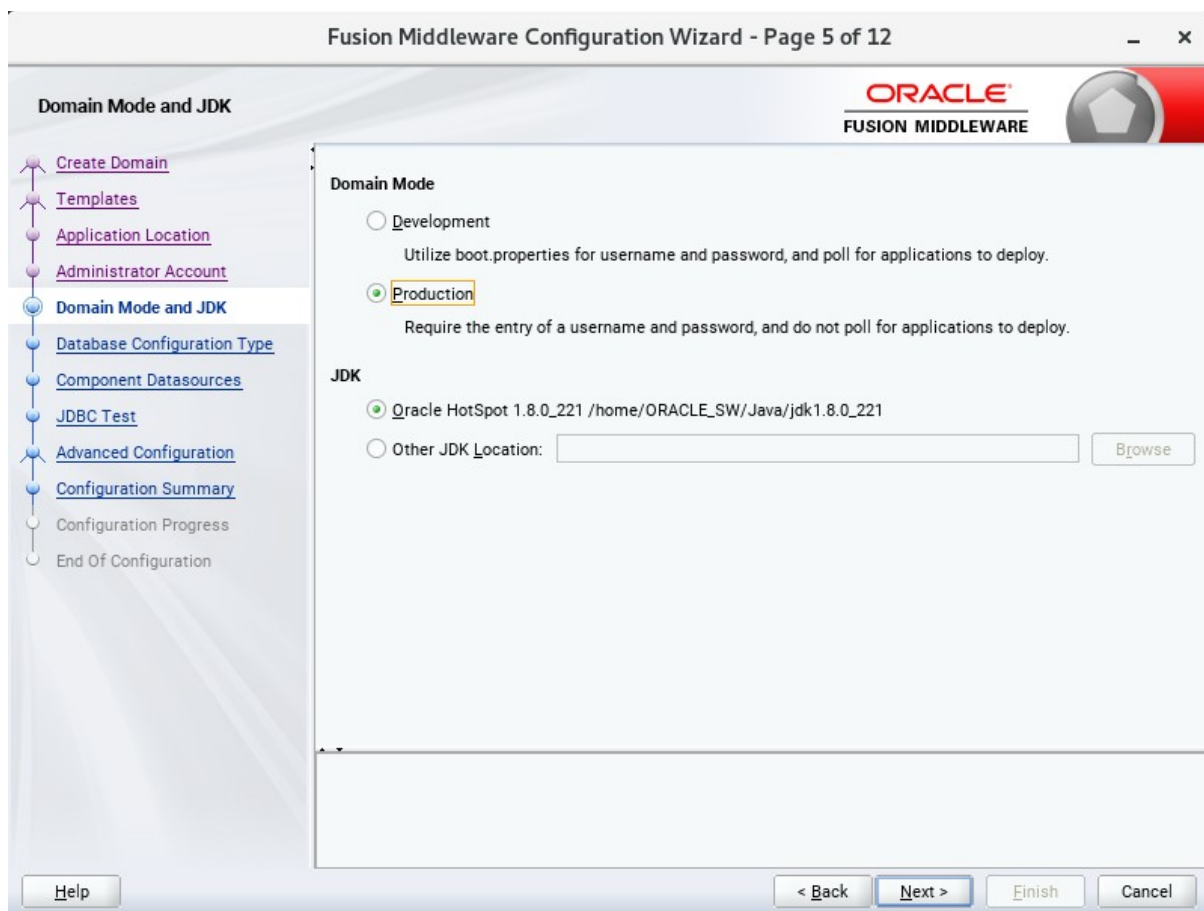
4). The **Administrator Account** screen appears.



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

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

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



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

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

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.

**JDBC Component Schema**

ORACLE  
FUSION MIDDLEWARE

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.

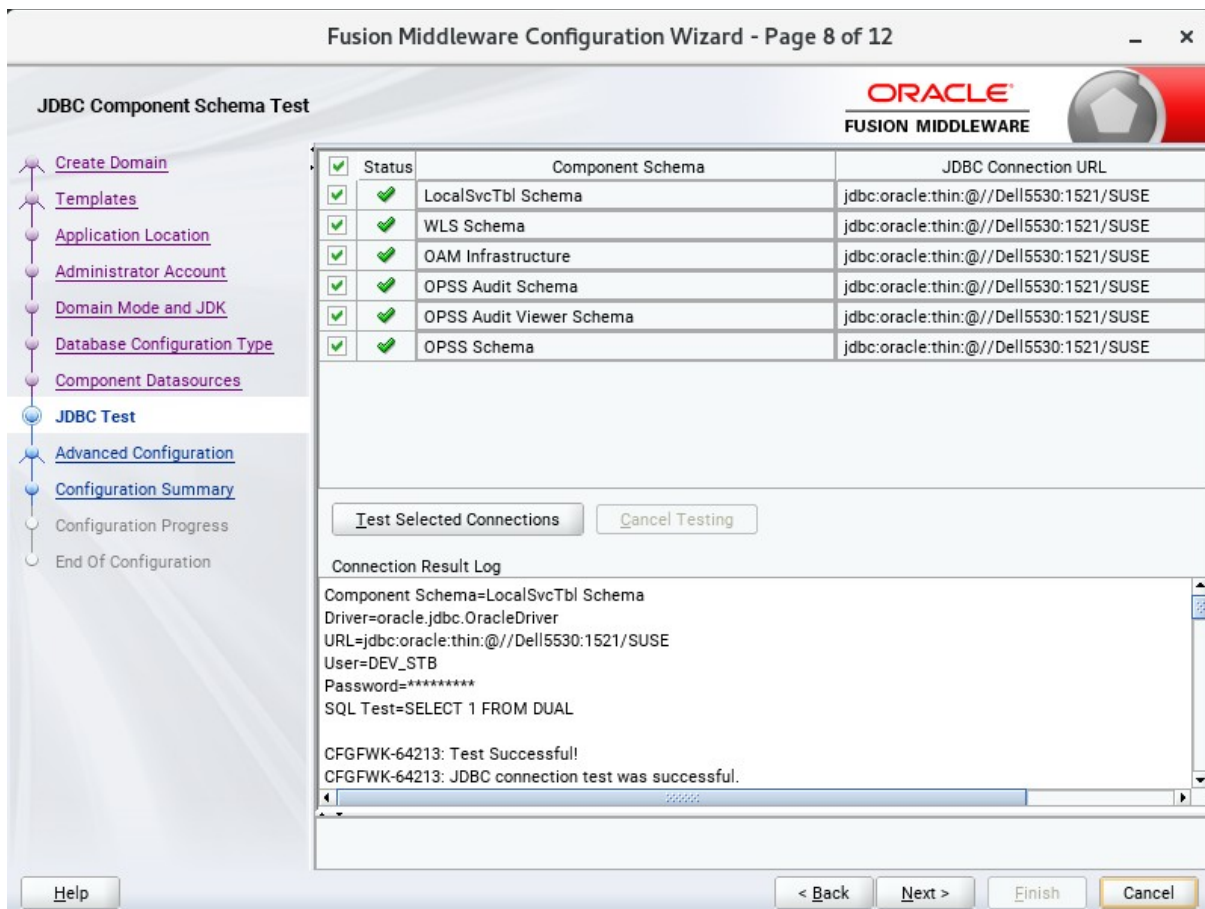
<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	Dell5530	1521	DEV_STB	.....
<input type="checkbox"/>	WLS Schema	SUSE	Dell5530	1521	DEV_WLS_RUN	.....
<input type="checkbox"/>	OAM Infrastructure	SUSE	Dell5530	1521	DEV_OAM	.....
<input type="checkbox"/>	OPSS Audit Schema	SUSE	Dell5530	1521	DEV_IAU_APPEI	.....
<input type="checkbox"/>	OPSS Audit Viewer Sche	SUSE	Dell5530	1521	DEV_IAU_VIEWE	.....
<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.

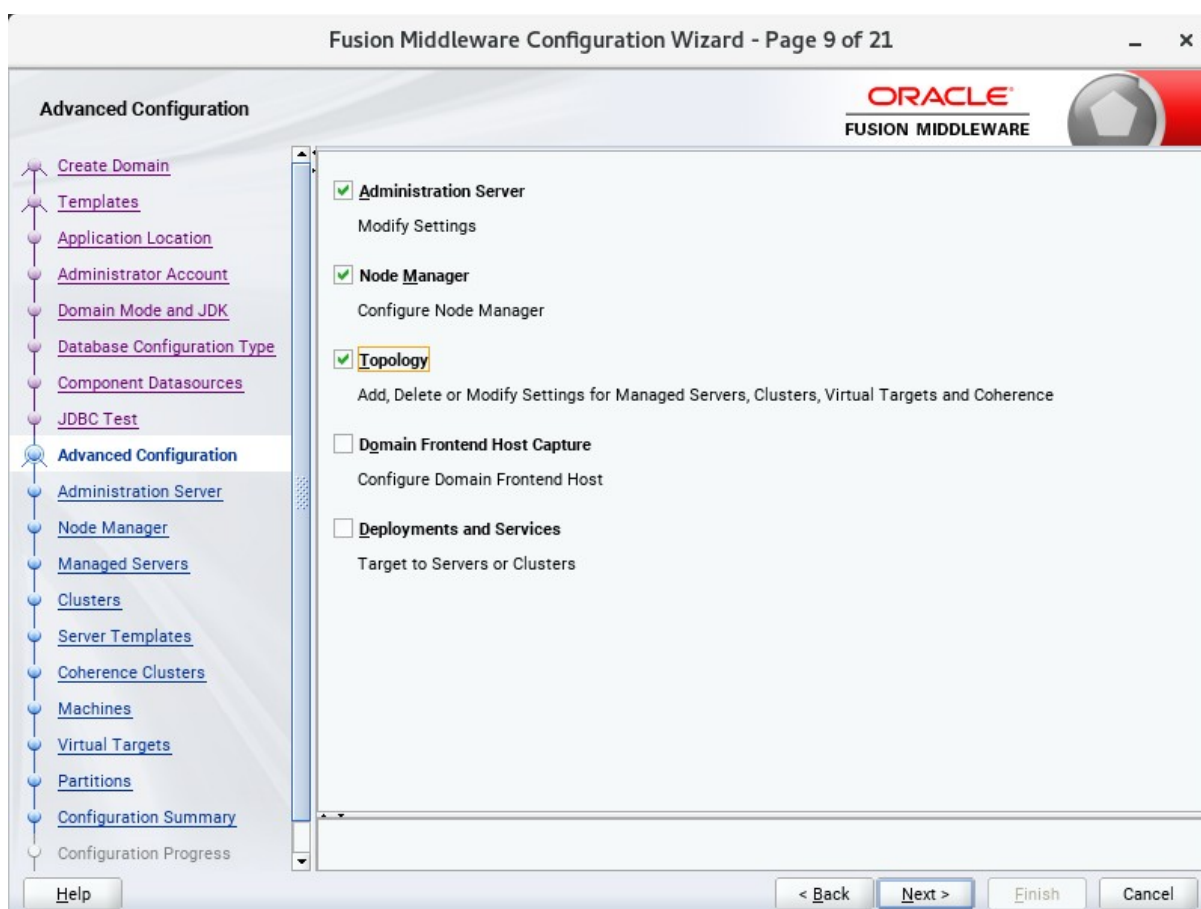


8). The **JDBC Component Schema Test** screen appears.



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

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

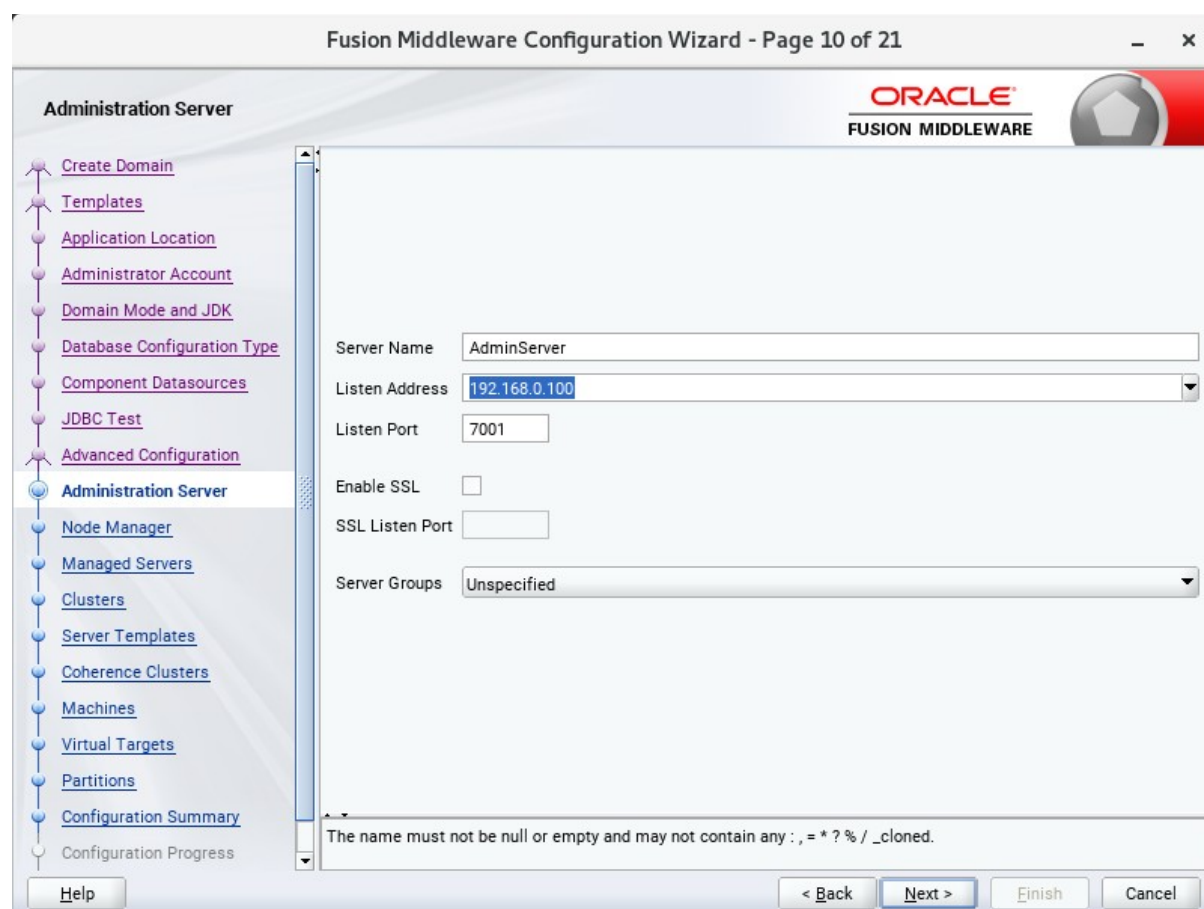


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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



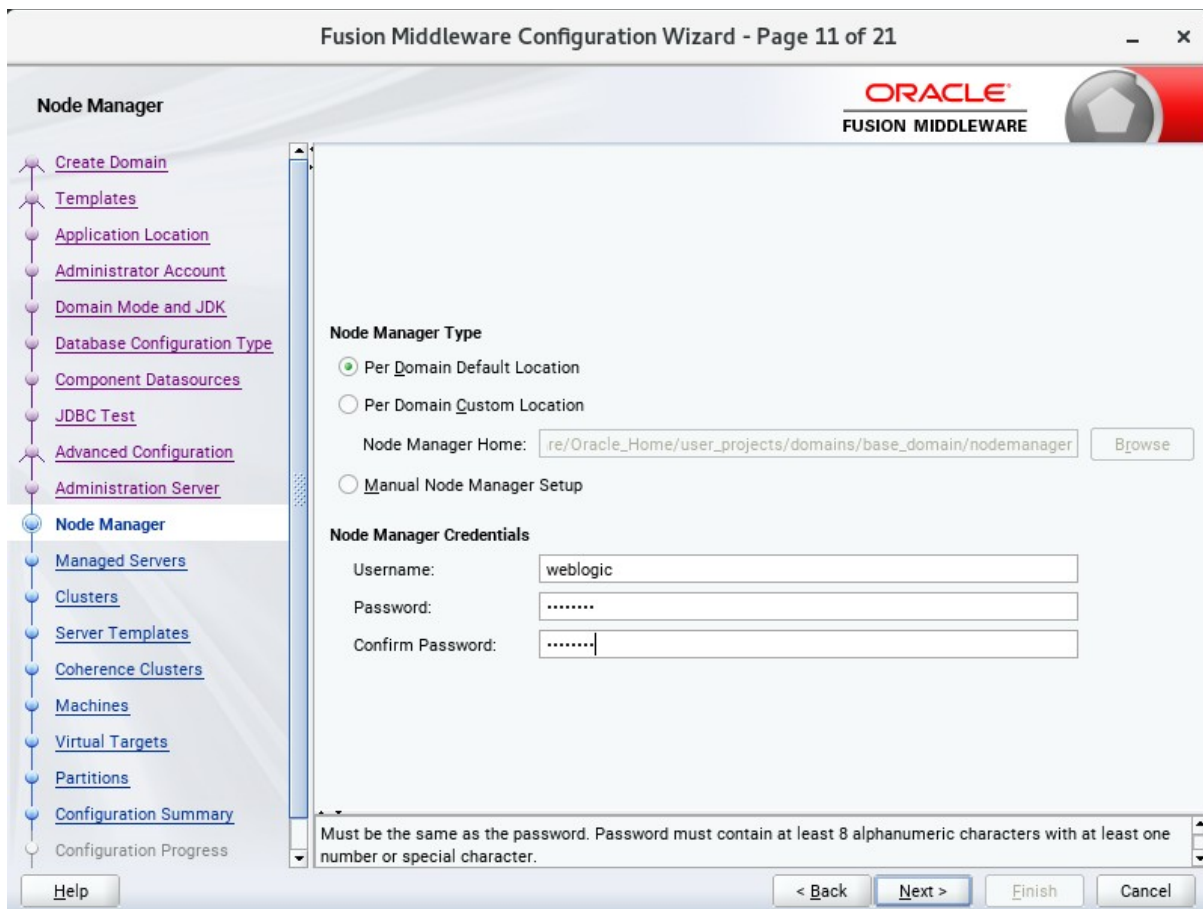
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 10 of 21". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation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

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

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

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

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



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

**Node Manager Type**

- Per Domain Default Location
- Per Domain Custom Location

Node Manager Home:

Manual Node Manager Setup

**Node Manager Credentials**

Username:

Password:

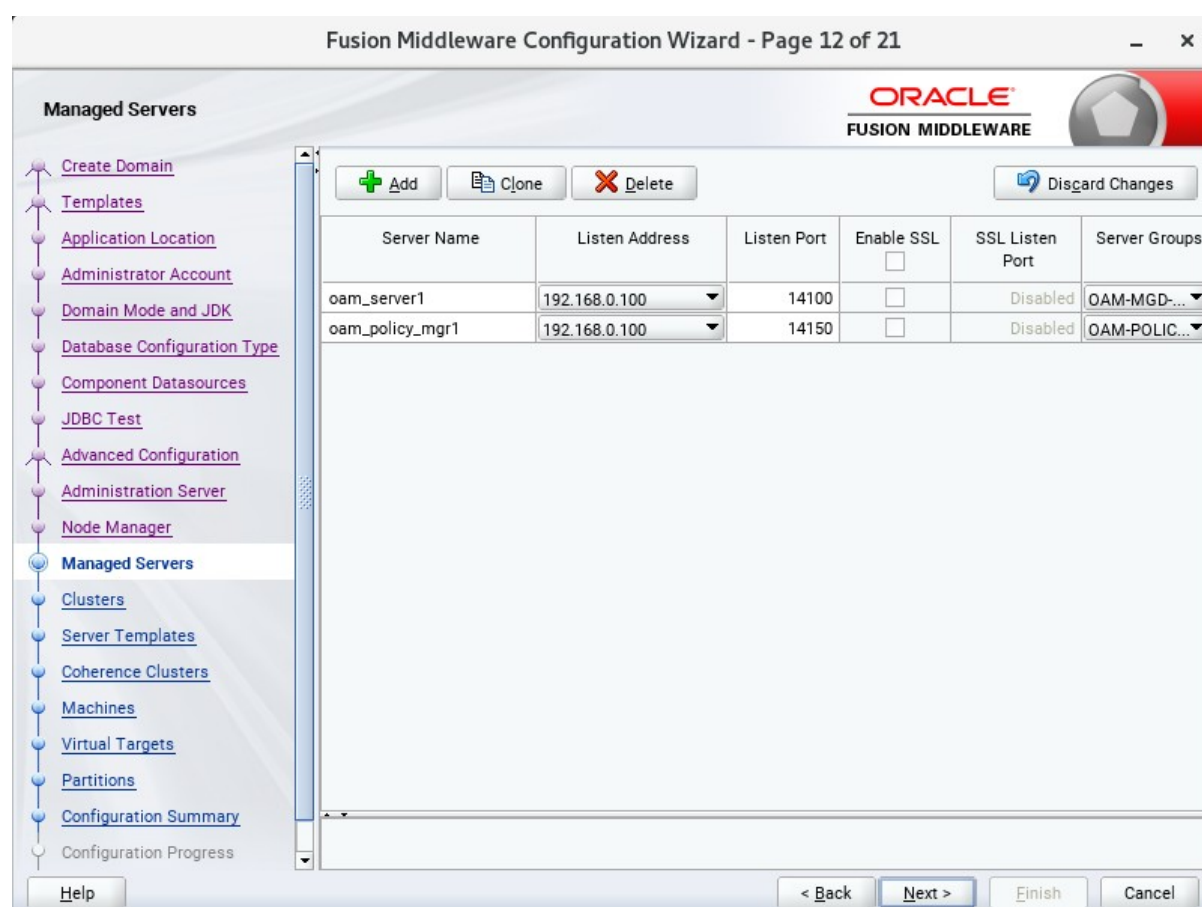
Confirm Password:

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

Buttons at the bottom: Help, < Back, Next >, Finish, Cancel.

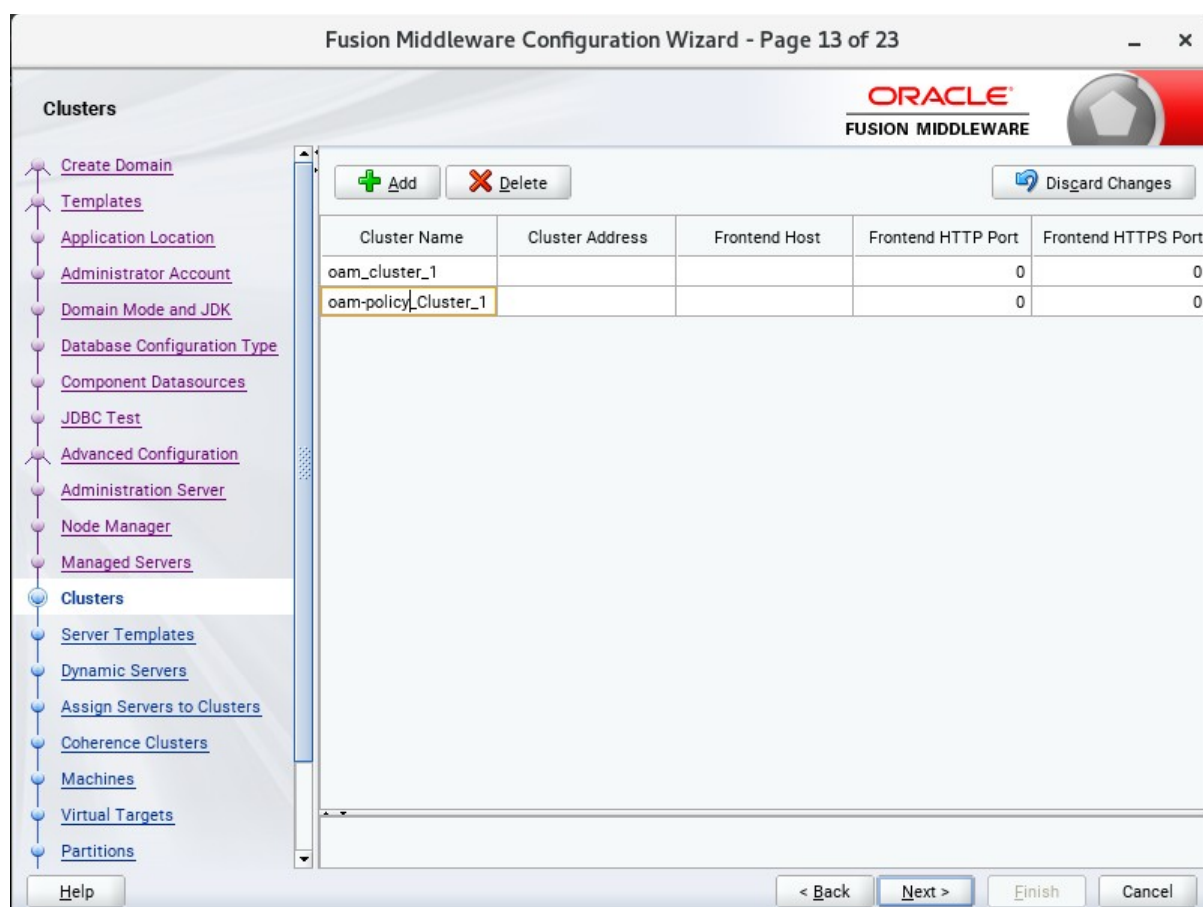
Select **Per Domain Default Location** as the Node Manager type, then specify Node Manager credentials. Click **Next** to continue.

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



On the **Managed Servers** screen, new Managed Servers named: *oam\_server1* and *oam\_policy\_mgr1* are automatically created. In the **Listen Address** drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. The default **Server Groups** have already been selected for each server. Click **Next** to continue.

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



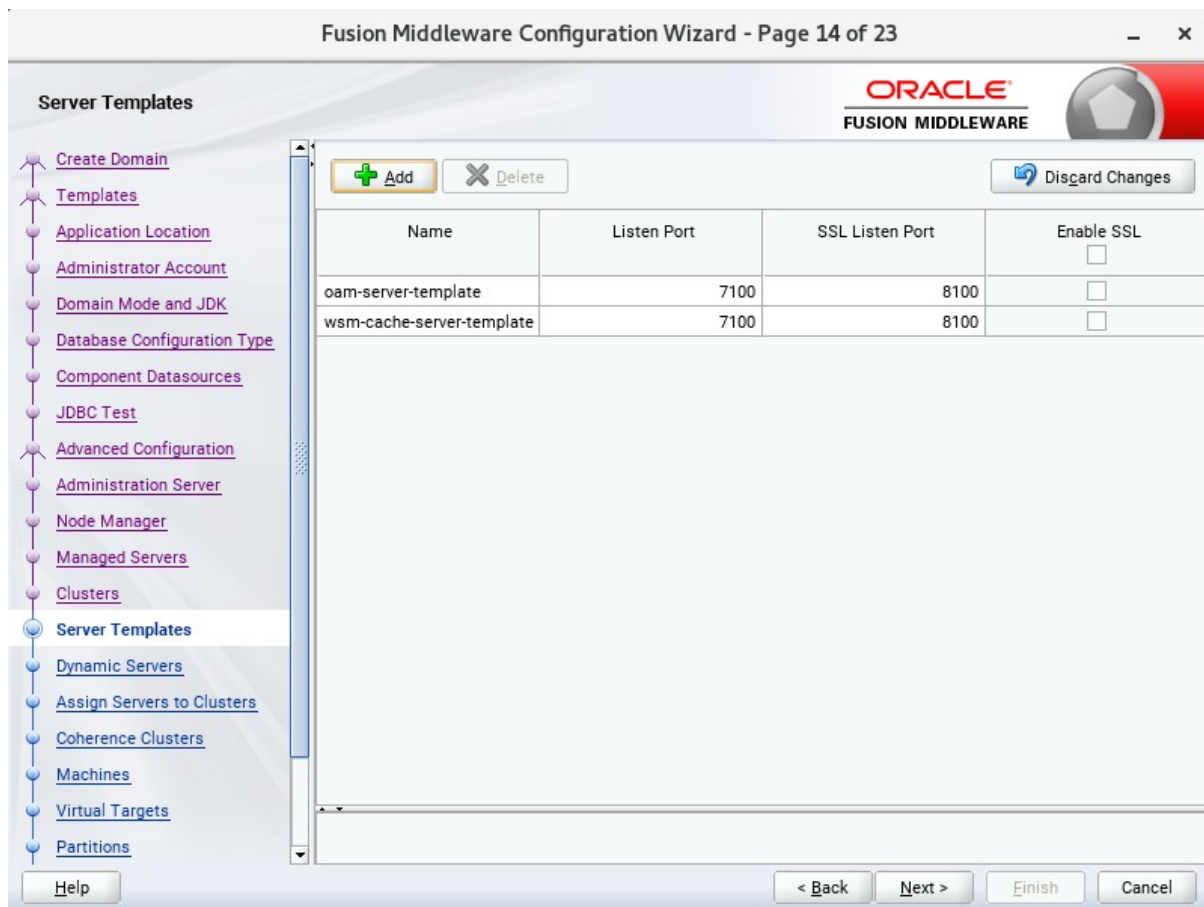
On the Clusters screen:

1. Click **Add**.
2. Specify *oam\_cluster\_1* in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create *oam-policy\_cluster\_1* cluster.

Click **Next** to continue.

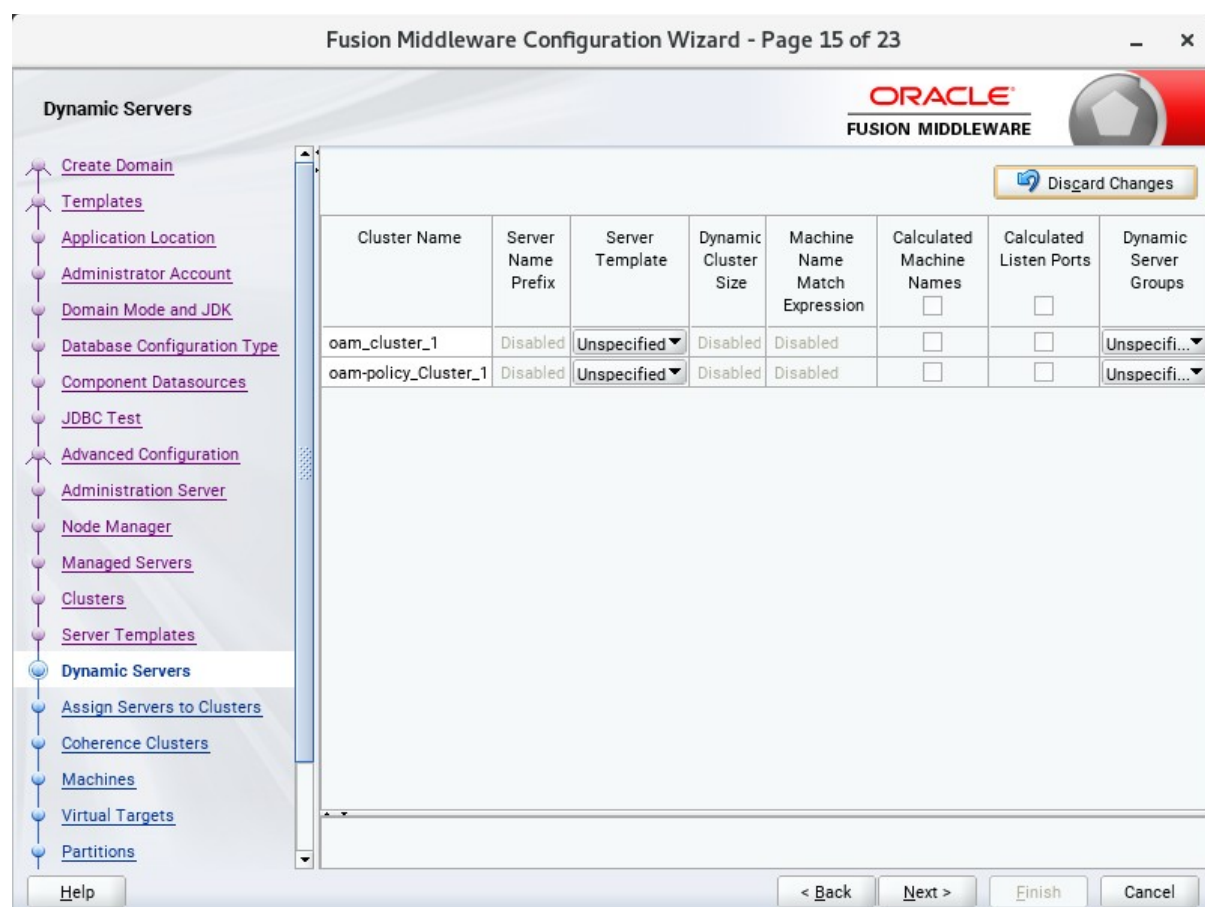
**(Note:** Configuring a non-clustered setup on a single node, skip this screen.)

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



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

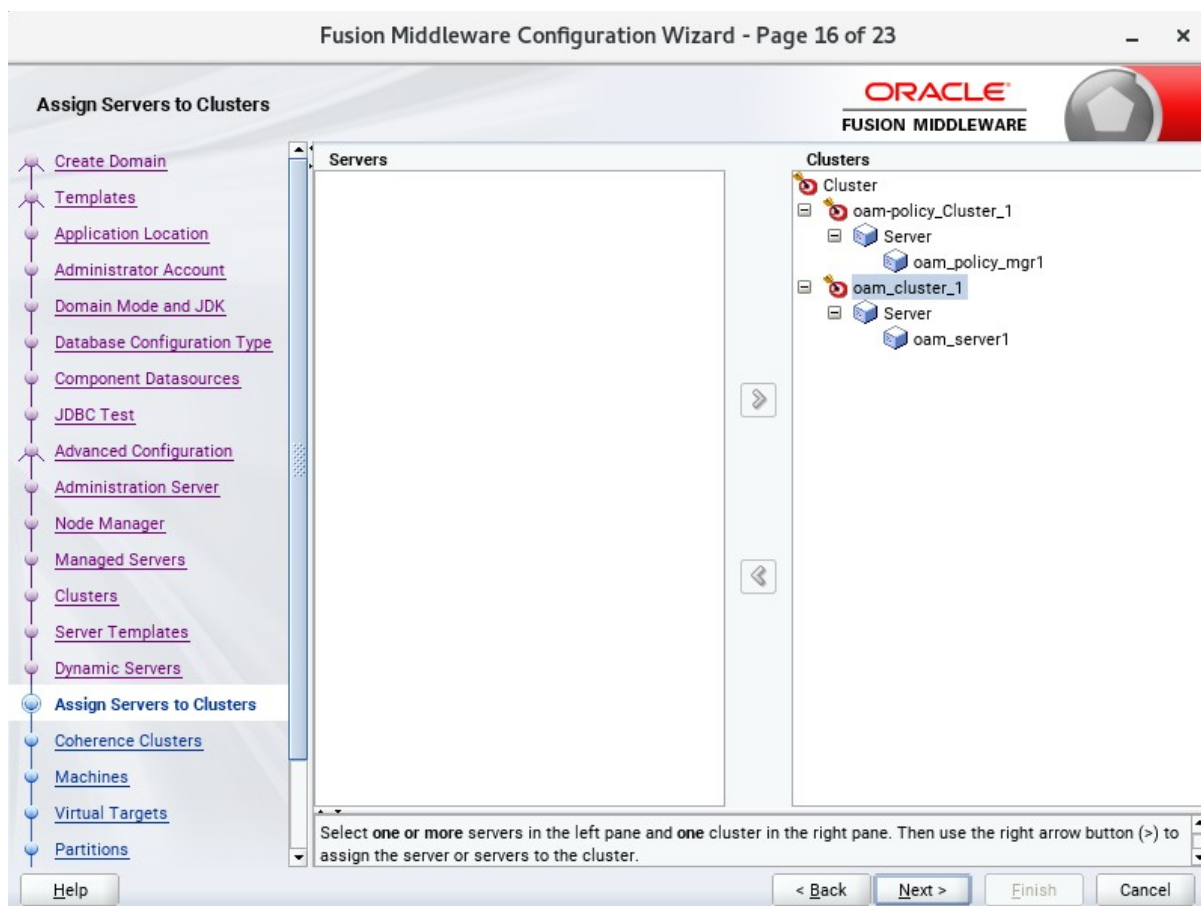
15). The **Dynamic Servers** screen appears.



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

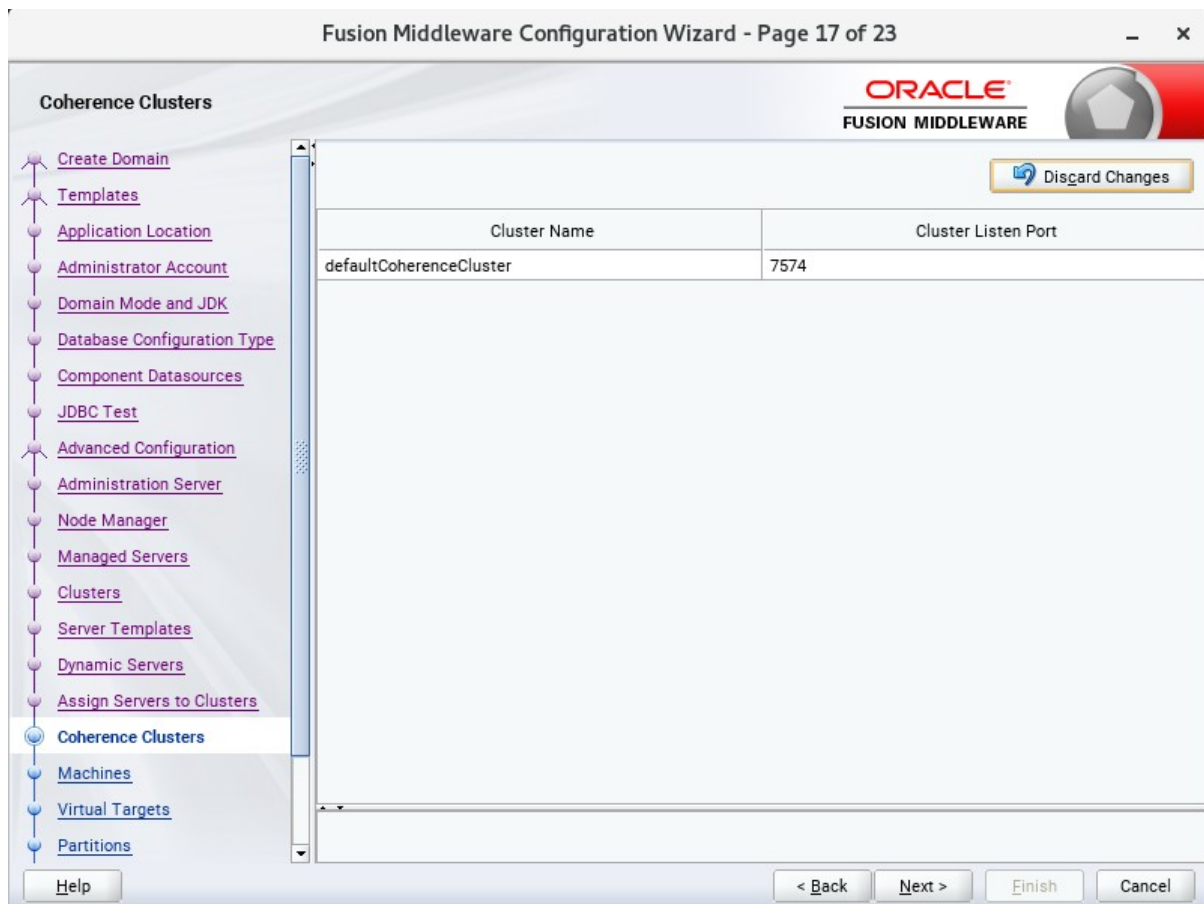


16). The **Assign Servers to Clusters** screen appears.



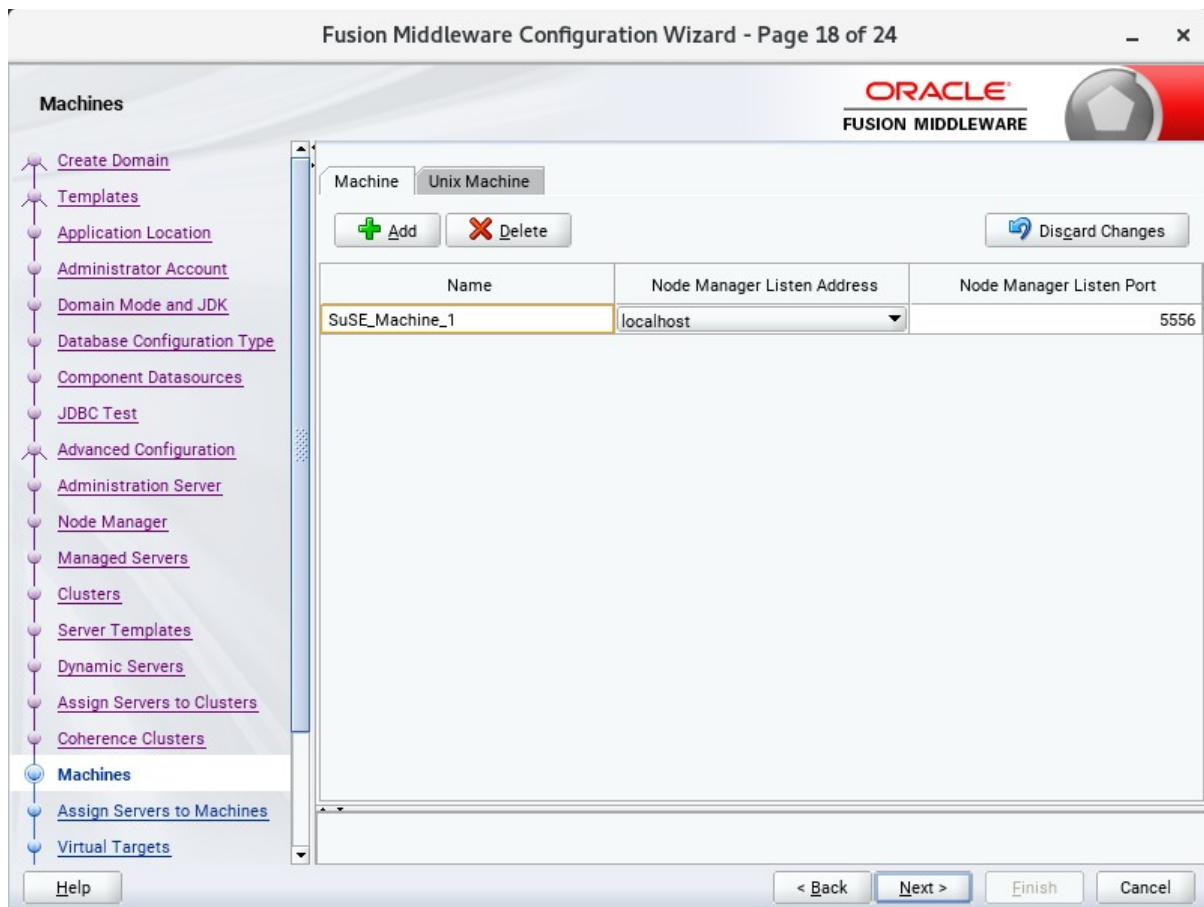
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



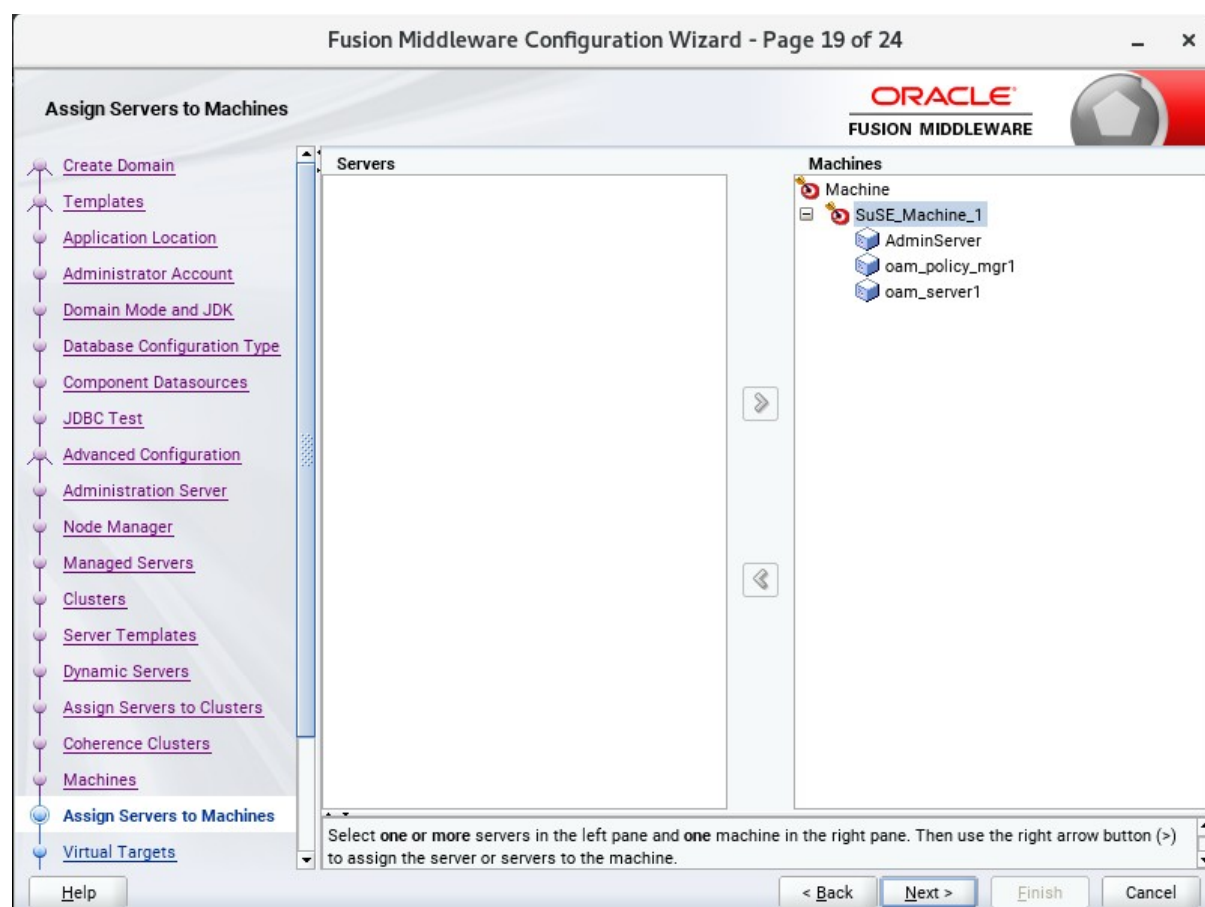
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



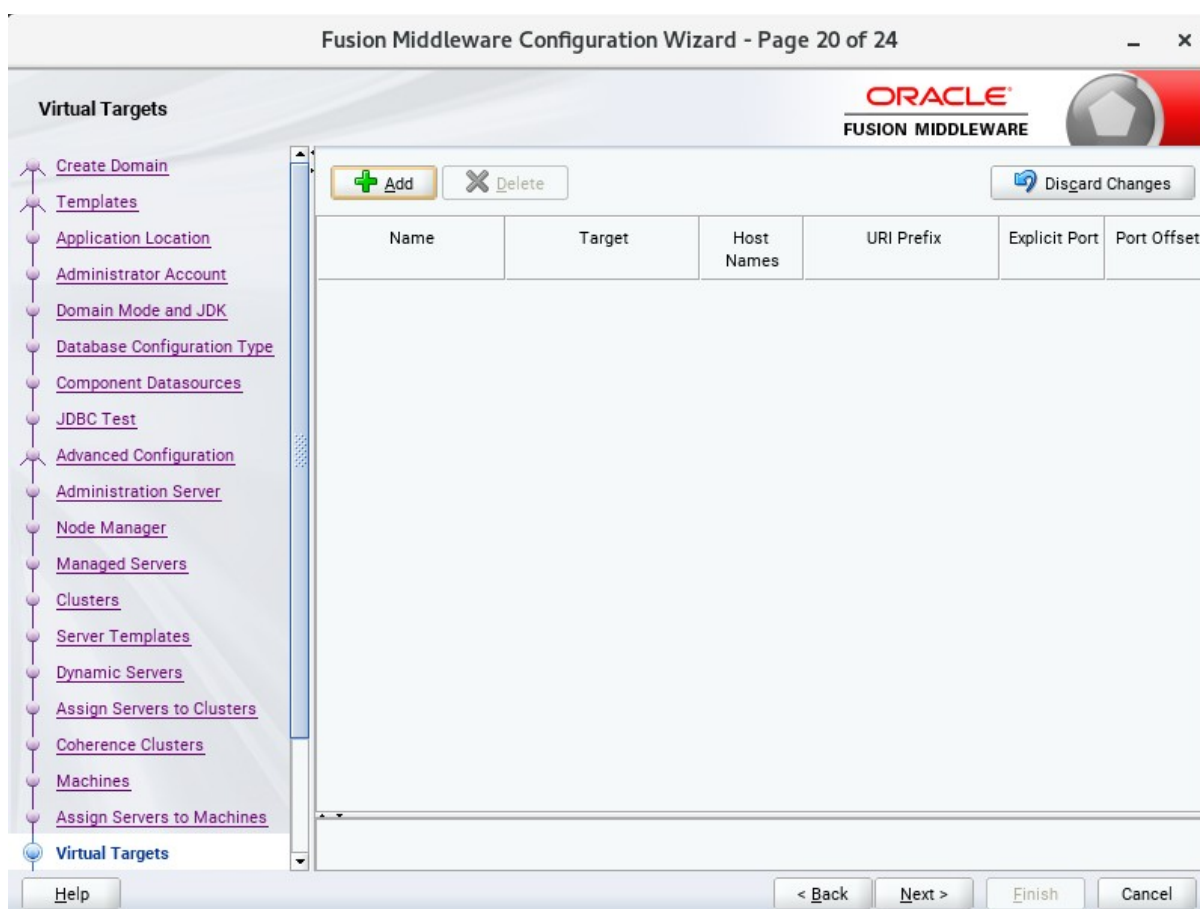
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



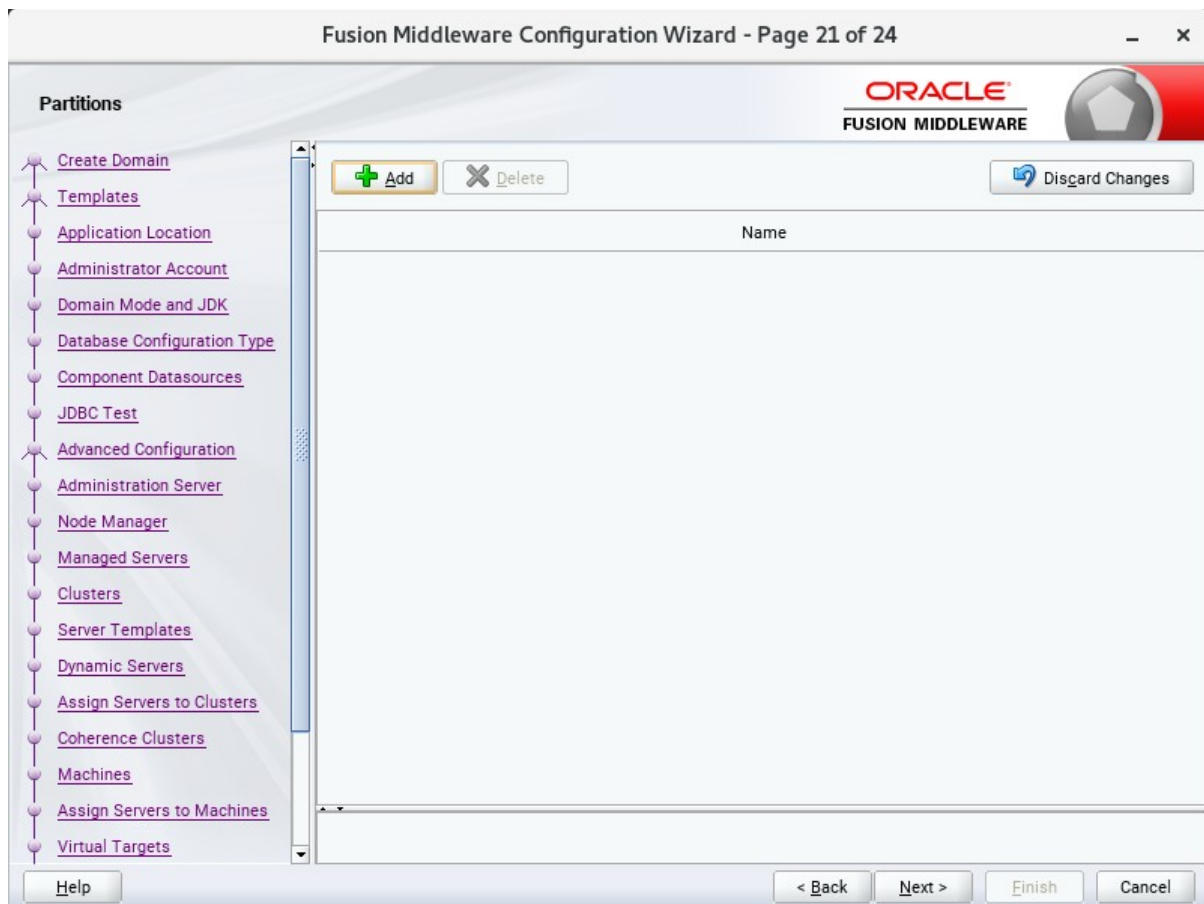
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



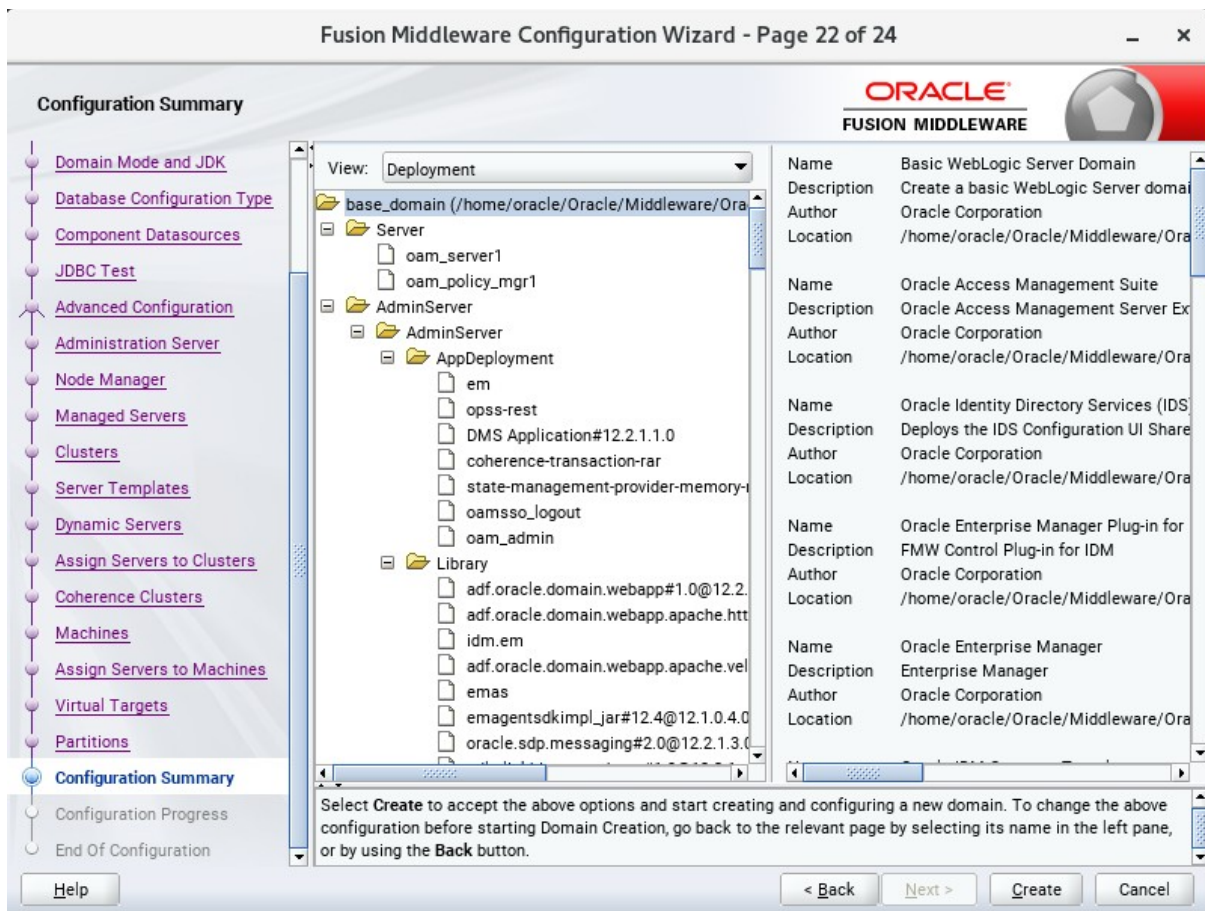
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next** to continue.

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



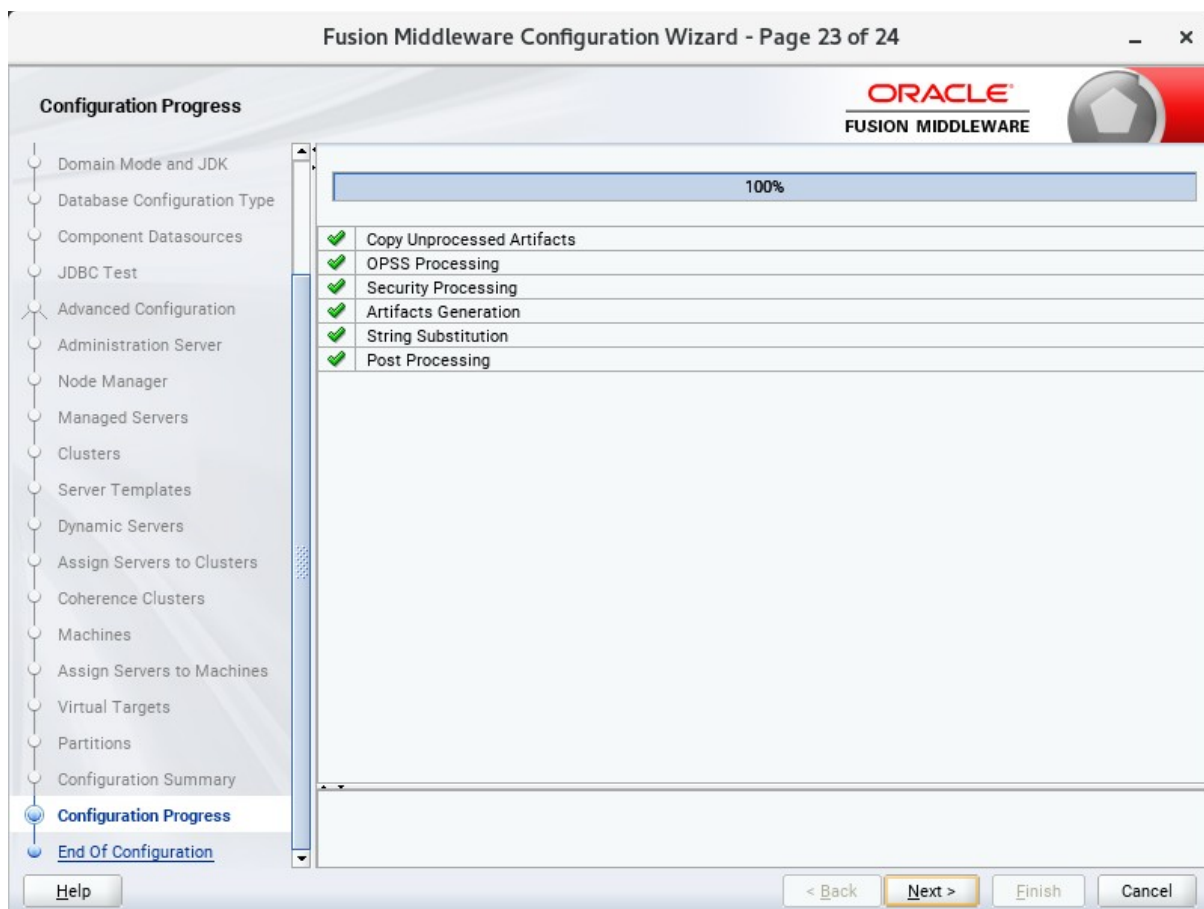
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



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

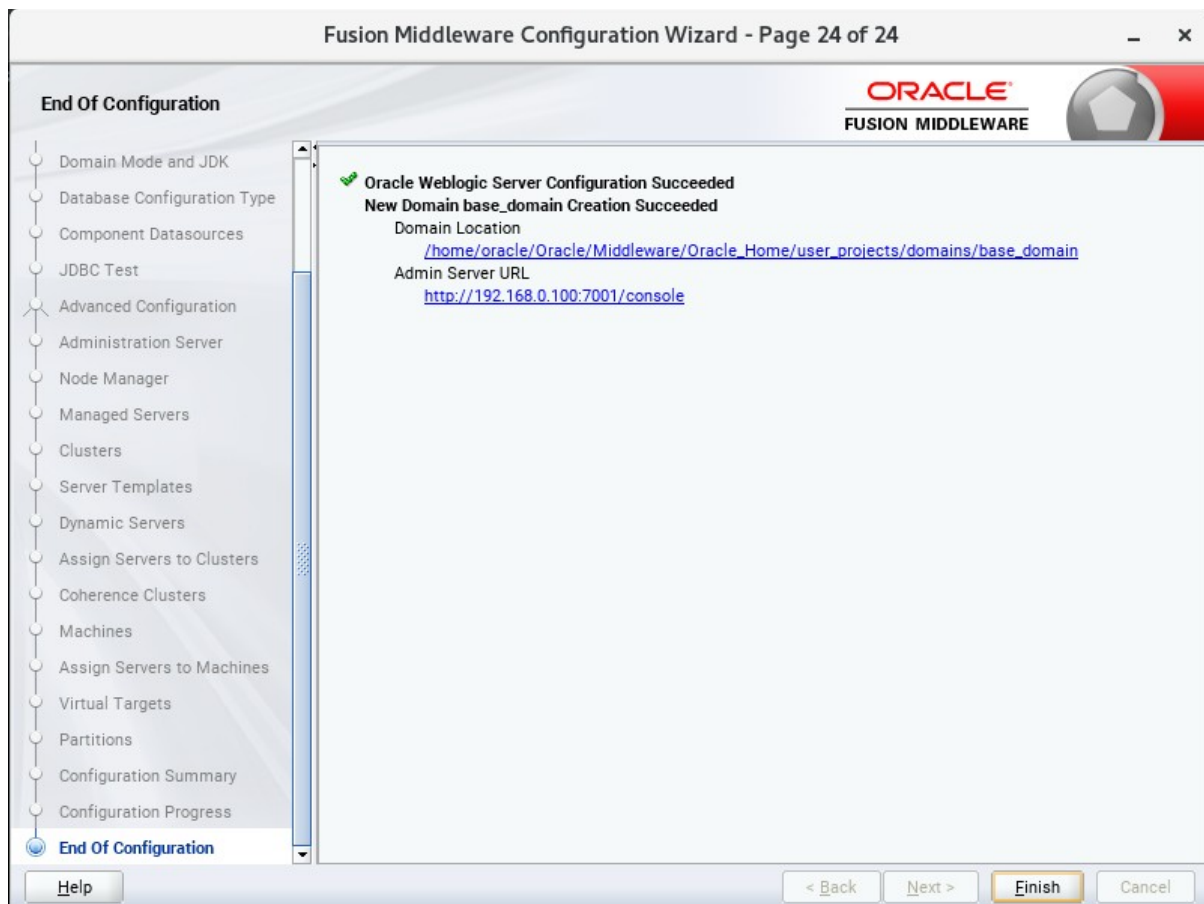
23). The **Configuration Progress** screen appears.



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



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



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

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

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

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

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

```

oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh
> nm.out&
[1] 26069
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/server/lib/weblo
gic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/or
acle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware
/Oracle_Home/wlserver/./home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home
/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./
-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
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/do
mains/base_domain/nodemanager/nodemanager.domains>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middlewa
re/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/do
mains/base_domain/nodemanager/nodemanager.domains>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhr
aseUsed=true>
May 16, 2022 10:24:48 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
May 16, 2022 10:24:49 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.
<May 16, 2022 10:24:49 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

Configuration settings:
DomainsFile=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains

```

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

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Help
<Apr 26, 2022 5:53:50,868 PM GMT+08:00> <Warning> <oracle.as.jmx.framework.MessageLocalizationHelper> <J2EE JMX-46041> <The resource for bundle "oracle.security.am.wlst.management.FoundationConfigBeanResources" with key "oam_updateAgentPassword" cannot be found.>
<Apr 26, 2022 5:53:51,417 PM GMT+08:00> <Warning> <javax.enterprise.resource.webcontainer.jsf.managedbean> <jsf.managed.bean.duplicate> <JSF1074: Managed bean named 'TreeRefresh' has already been registered. Replacing existing managed bean class type oracle.am.security.TreeRefresh with oracle.security.fed.admin.sts.ui.model.TreeRefresh.>
<Apr 26, 2022 5:53:52,282 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Apr 26, 2022 5:53:55,454 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.>
>
<Apr 26, 2022 5:53:55,570 PM GMT+08:00> <Error> <oracle.oam.foundation.access> <BEA-000000> <Failed to init Context path:/idaas/am/esso>
<Apr 26, 2022 5:53:56,066 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.>
>
<Apr 26, 2022 5:53:58,380 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Apr 26, 2022 5:53:59,255 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain Level Diagnostic Service.>
2022-04-26 17:53:59.270/416.481 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2022-04-26 17:53:59.296/416.507 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Apr 26, 2022 5:54:00,617 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Apr 26, 2022 5:54:00,667 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Apr 26, 2022 5:54:00,667 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connection list DomainRuntimeServiceMBean>
2022-04-26 17:54:02.757/419.968 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '27' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST
<Apr 26, 2022 5:54:04,373 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Apr 26, 2022 5:54:04,373 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Apr 26, 2022 5:54:04,373 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7001 for protocols iiop, t3, ldap, snmp, http.>
<Apr 26, 2022 5:54:04,374 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Apr 26, 2022 5:54:04,421 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:

```

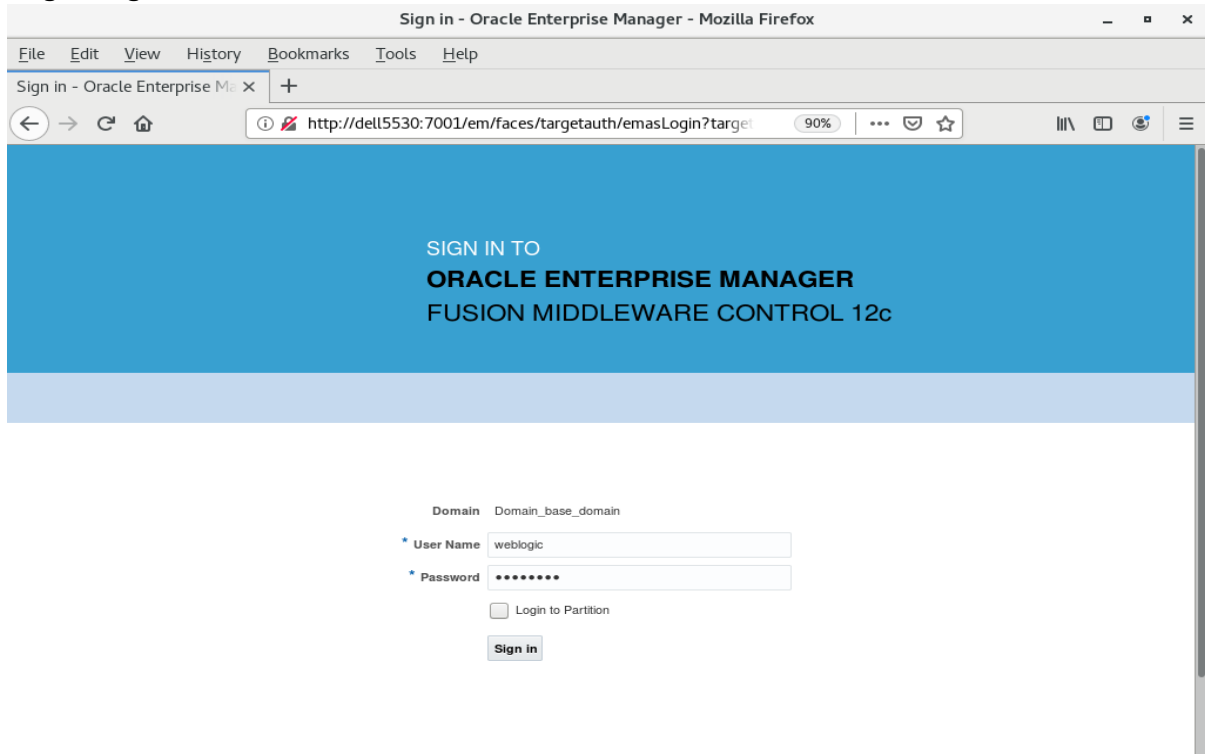
-----
Server state changed to RUNNING.
-----

```

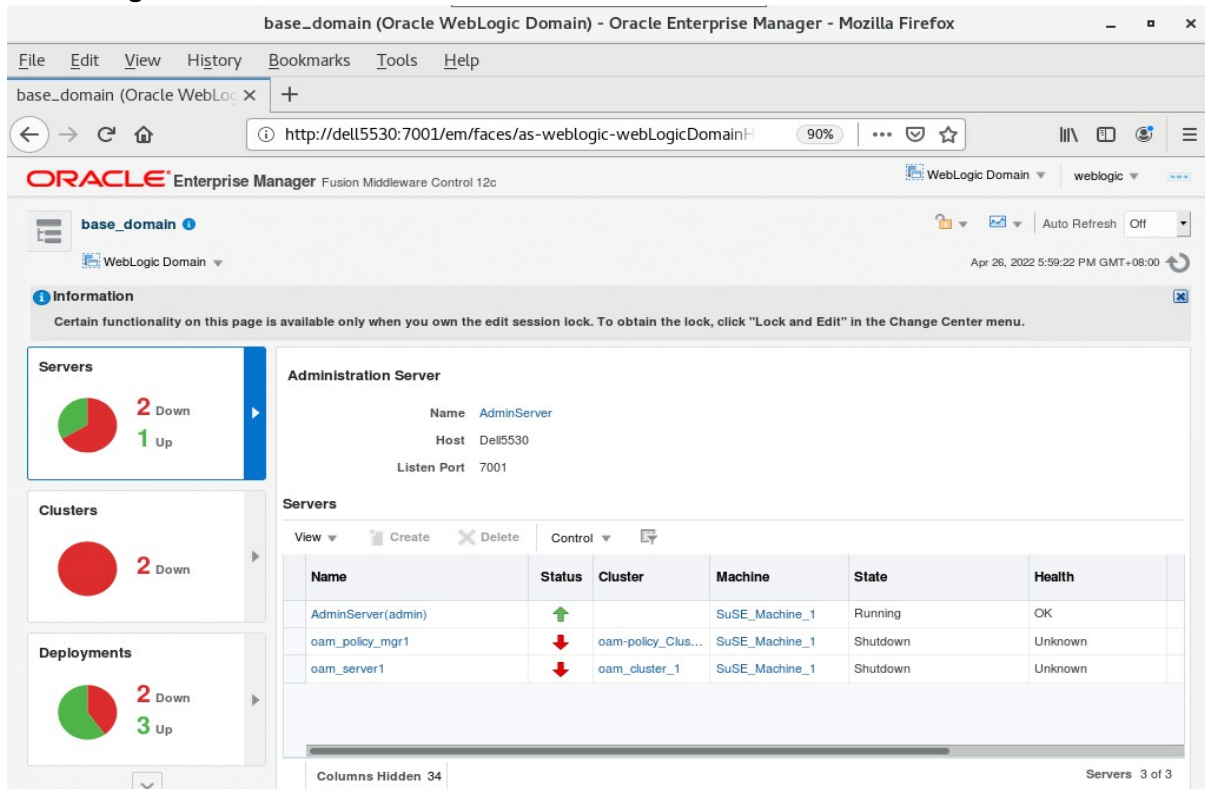
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

#### 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, summary cards indicate: 1 Down, 2 Up for Servers; 1 Down, 1 Up for Clusters; and 1 Down, 4 Up for Deployments. The 'Administration Server' details show Name: AdminServer, Host: Dell5530, Listen Port: 7001. The 'Servers' table below shows:

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

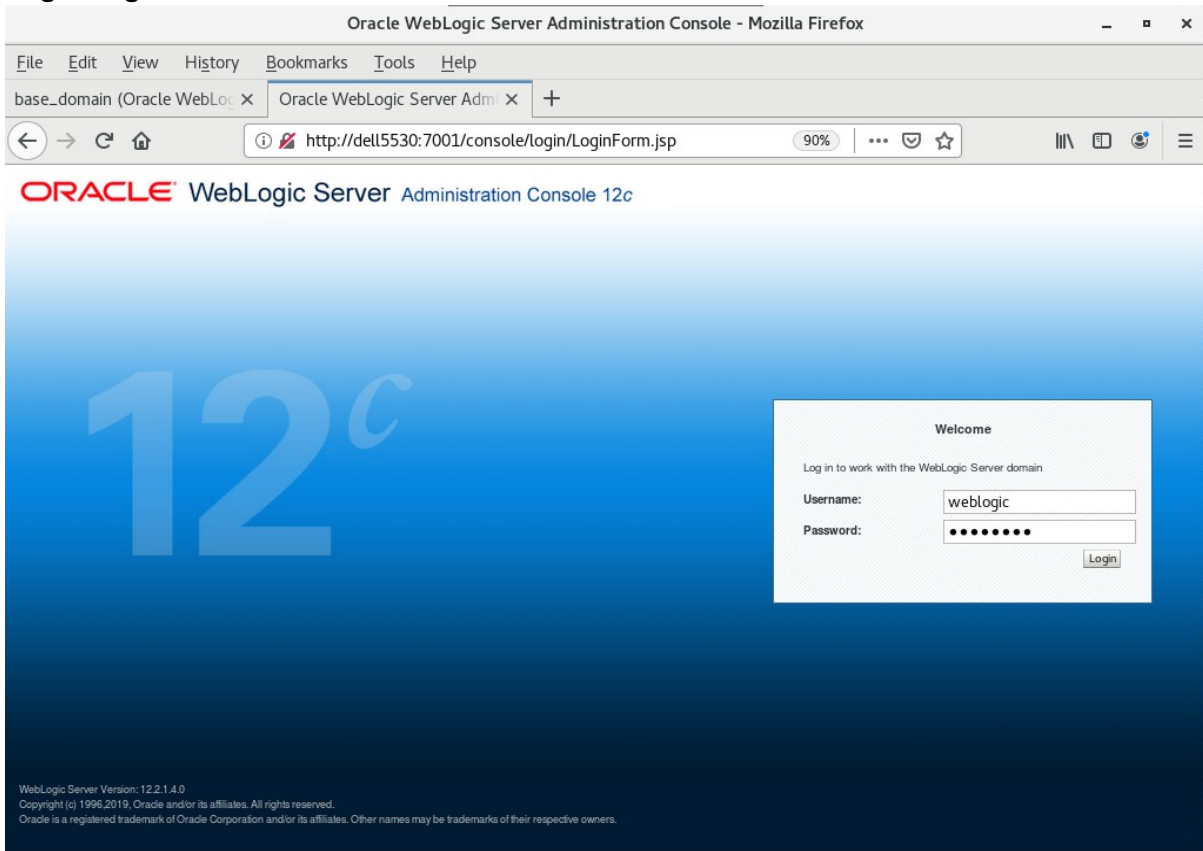
The screenshot shows the Oracle Enterprise Manager interface after the servers have started. The summary cards now indicate: 3 Up for Servers; 2 Up for Clusters; and 5 Up for Deployments. The 'Administration Server' details remain the same. The 'Servers' table now shows all servers in a 'Running' state:

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

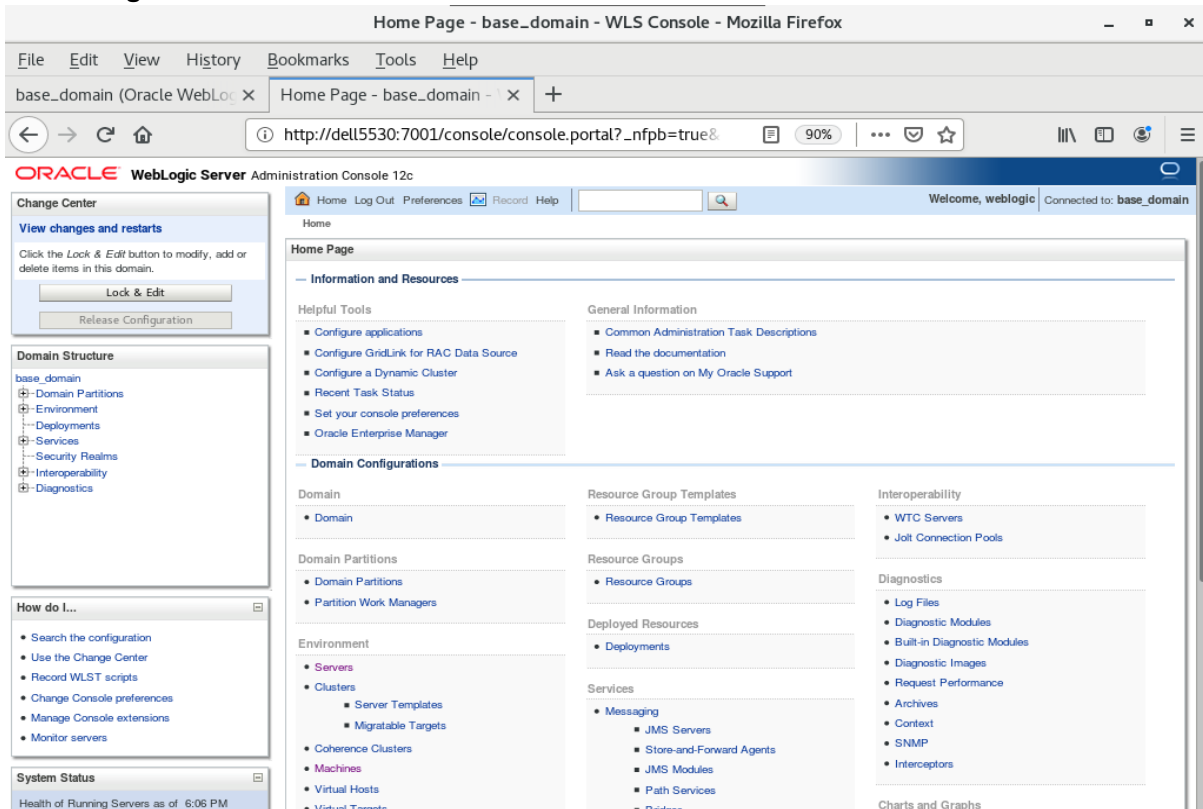
After they start up successfully, each managed server is listed as Running.

## 2). Access to Administration Server Console

### Login Page:



### Home Page:



### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console in Mozilla Firefox. The page title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The browser address bar shows the URL: http://dell5530:7001/console/console.portal?\_nfpb=true&... The console interface includes a "Change Center" sidebar with "View changes and restarts" and "Lock & Edit" buttons. The main content area is titled "Summary of Servers" and contains a table of servers. The table has columns for Name, Type, Cluster, Machine, State, Health, and Listen Port. The servers listed are AdminServer(admin), oam\_policy\_mgr1, and oam\_server1, all in a RUNNING state with OK health.

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		SuSE_Machine_1	RUNNING	OK	7001
oam_policy_mgr1	Configured	oam-policy_Cluster_1	SuSE_Machine_1	RUNNING	OK	14150
oam_server1	Configured	oam_cluster_1	SuSE_Machine_1	RUNNING	OK	14100

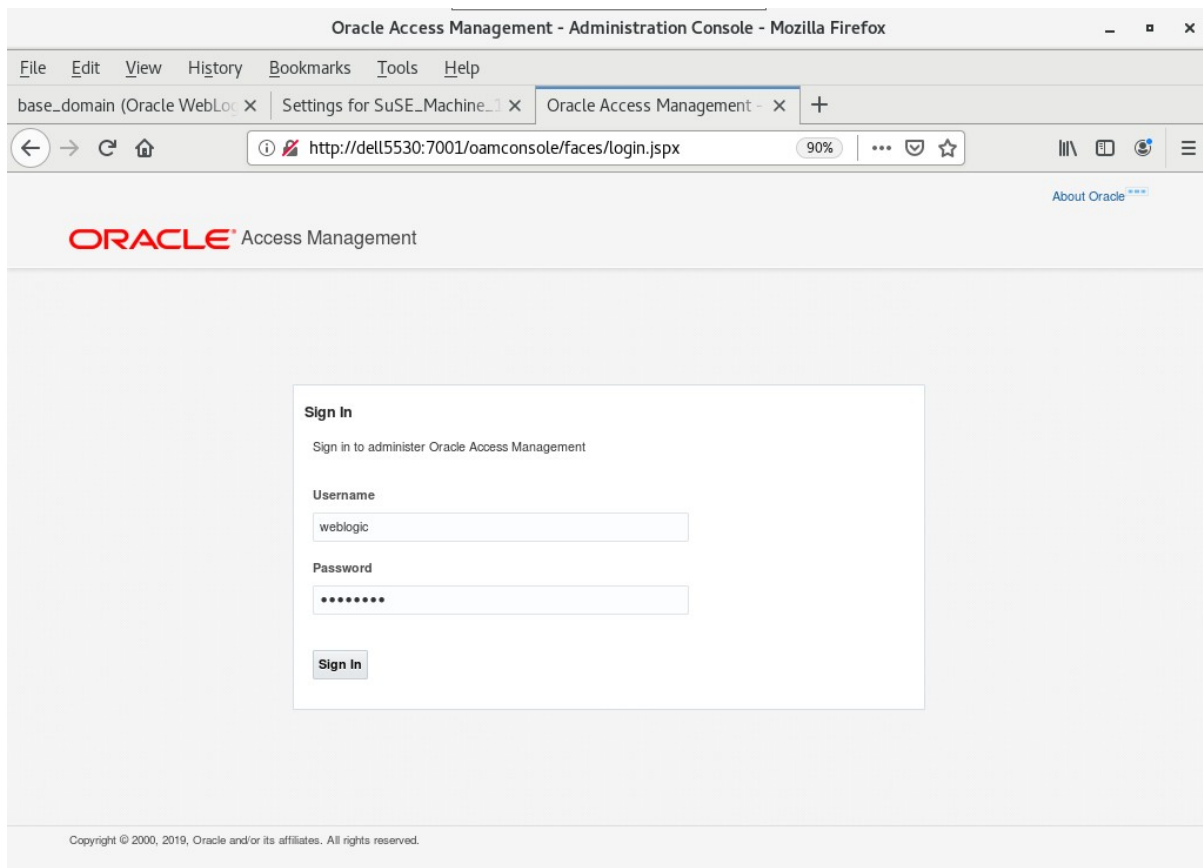
Verify that the Admin Server can connect to the node manager running on your machine. **Environments -> Machines -> <your machine> -> Monitoring**. The status should show: **Reachable**

The screenshot shows the Oracle WebLogic Server Administration Console in Mozilla Firefox, displaying the "Settings for SuSE\_Machine\_1" page. The browser address bar shows the URL: http://dell5530:7001/console/console.portal?\_nfpb=true&... The console interface includes a "Change Center" sidebar with "View changes and restarts" and "Lock & Edit" buttons. The main content area is titled "Settings for SuSE\_Machine\_1" and contains a "Monitoring" tab. The "Node Manager Status" section shows the current status of the Node Manager instance.

**Status:** Reachable  
 Current status of this Node Manager. [More Info...](#)

**Version:** 12.2.1.4.0  
 Version string returned from the Node Manager. [More Info...](#)

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

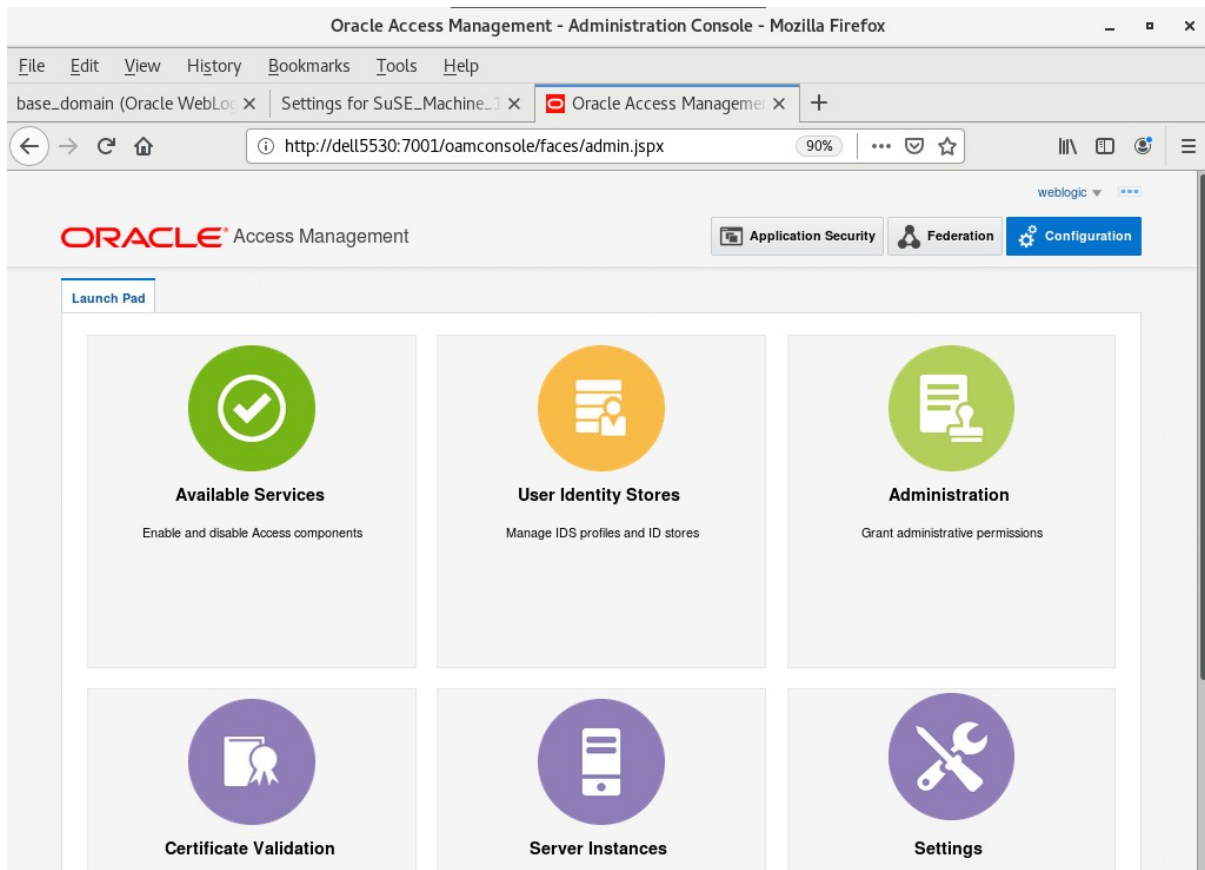
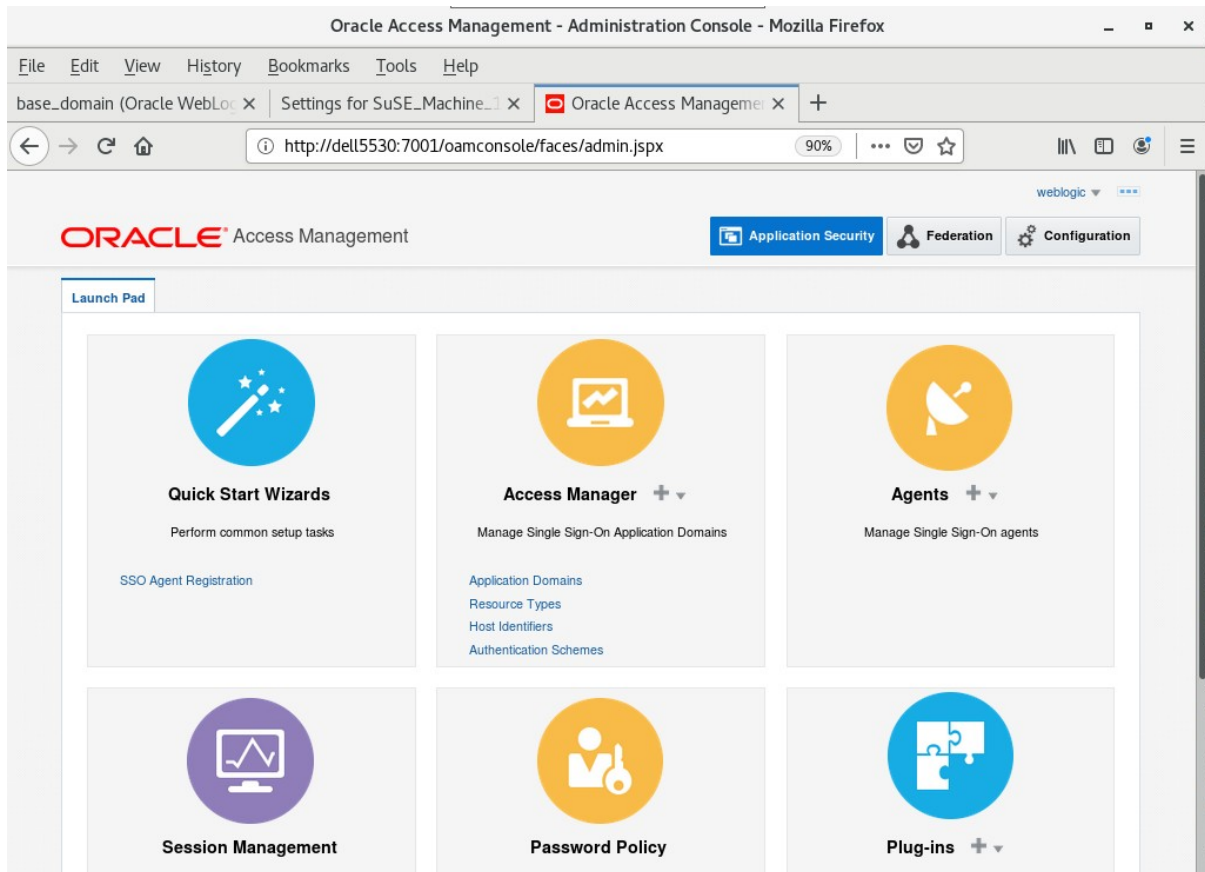


The screenshot shows a Mozilla Firefox browser window titled "Oracle Access Management - Administration Console". The address bar displays the URL `http://dell5530:7001/oamconsole/faces/login.jspx`. The page content includes the Oracle logo and the text "ORACLE Access Management". A central "Sign In" form is visible, containing the following fields and elements:

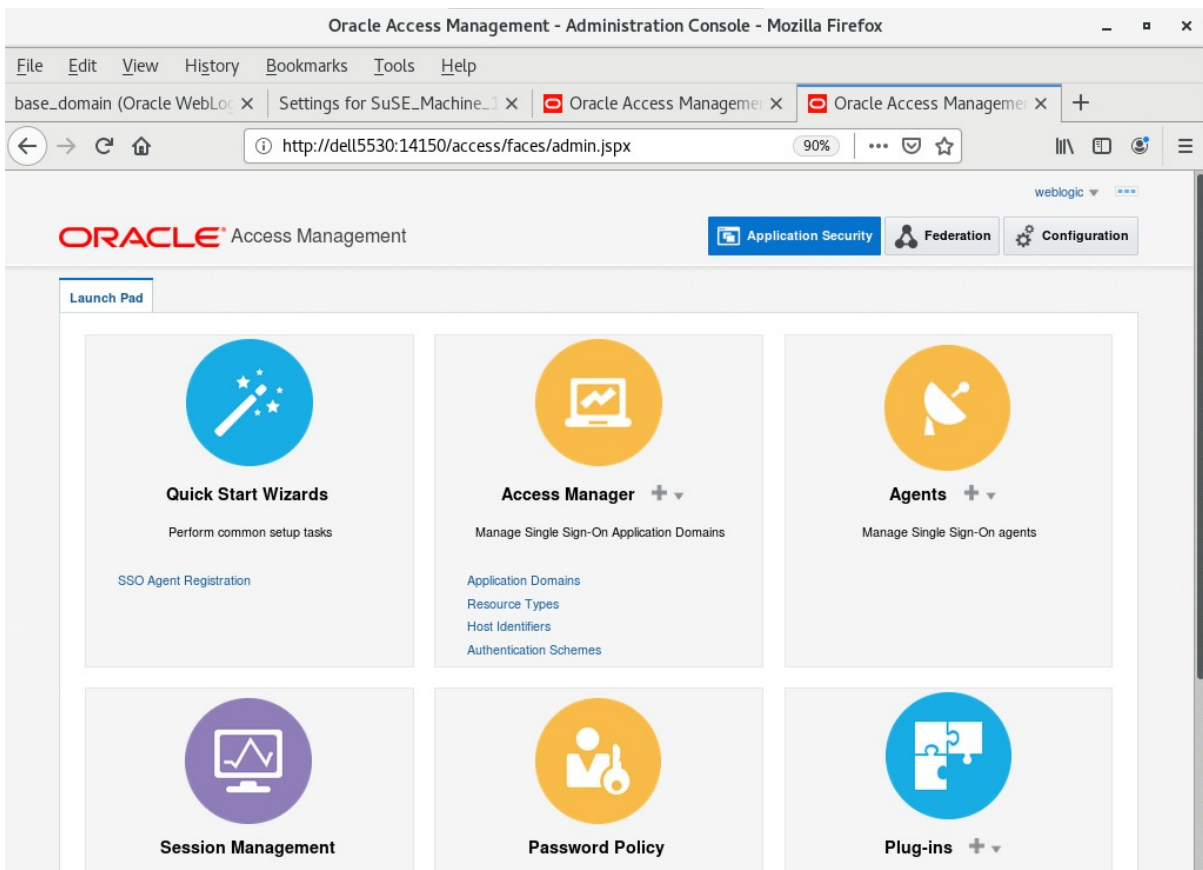
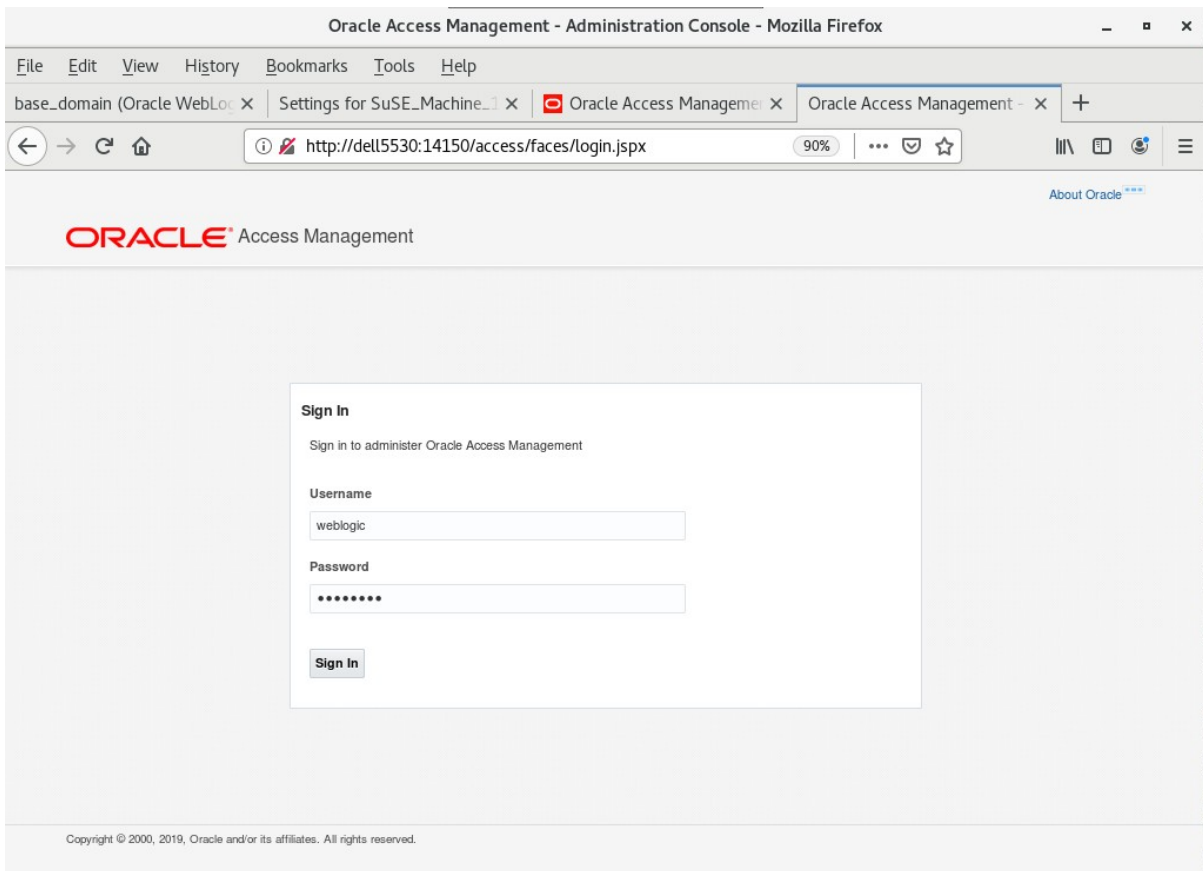
- Sign In** (Section Header)
- Sign in to administer Oracle Access Management
- Username** field with the value "weblogic"
- Password** field with masked characters "\*\*\*\*\*"
- Sign In** button

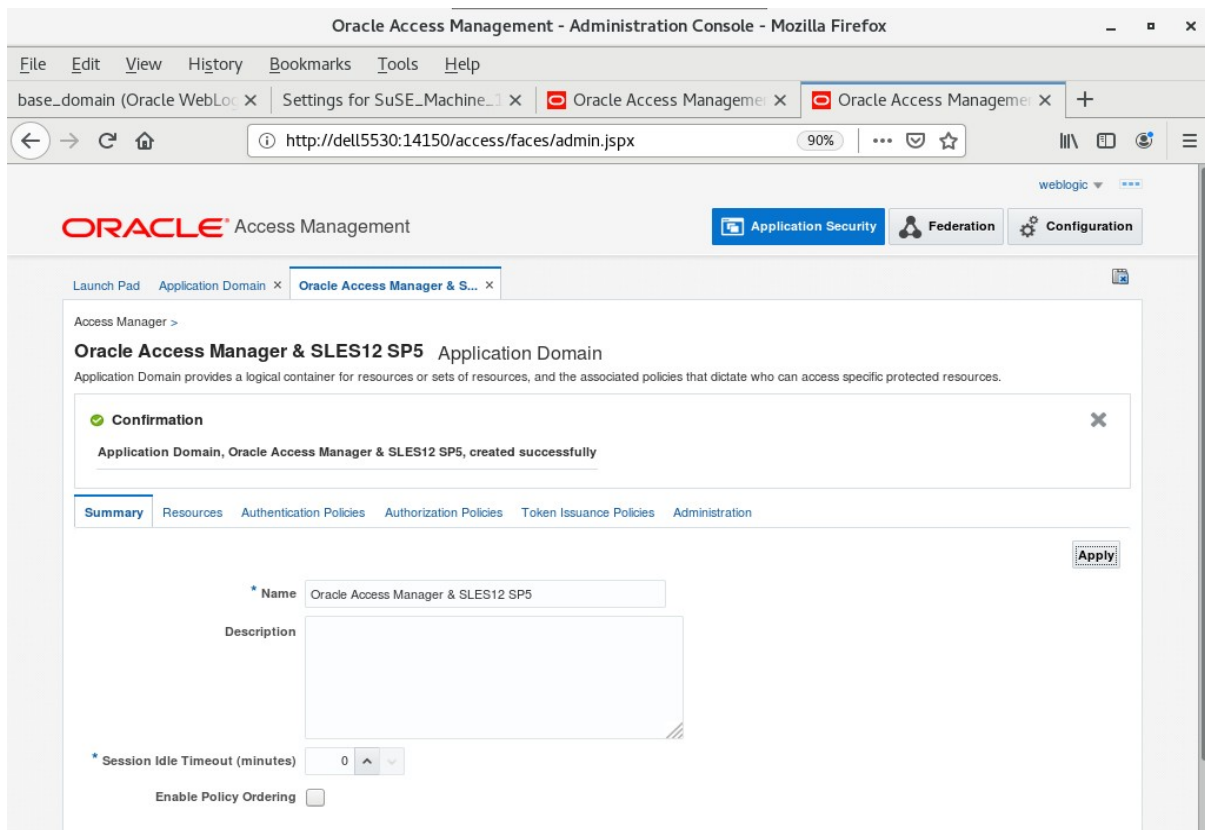
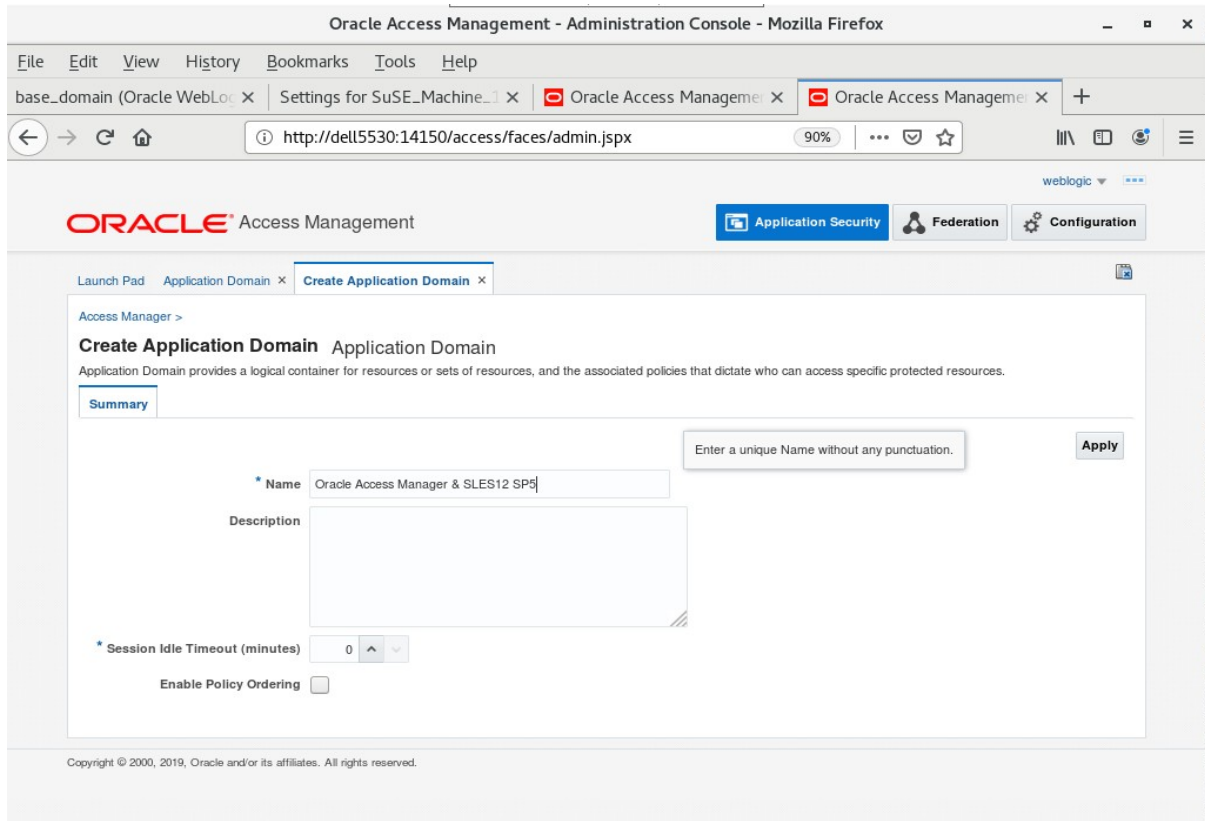
At the bottom of the page, the copyright notice reads: "Copyright © 2000, 2019, Oracle and/or its affiliates. All rights reserved."





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





**End of Oracle Access Manager.**

\*\*\*\*\*

## Oracle Identity Manager

\*\*\*\*\*

### 1. Installing Oracle Identity and Access Management 12cPS4 software

#### 1-1. Prerequisites:

Installation of Oracle Identity and Access Management requires:

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

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

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

JVMRMACTION
-----
FULL_REMOVAL

PL/SQL procedure successfully completed.

Package created.

Package body created.

Synonym created.

Grant succeeded.
```

```

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

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

View created.

Synonym created.

View created.

Synonym created.

SQL> █

```

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

```

SQL> show parameter open_cursors;

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

System altered.

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

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

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

```

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

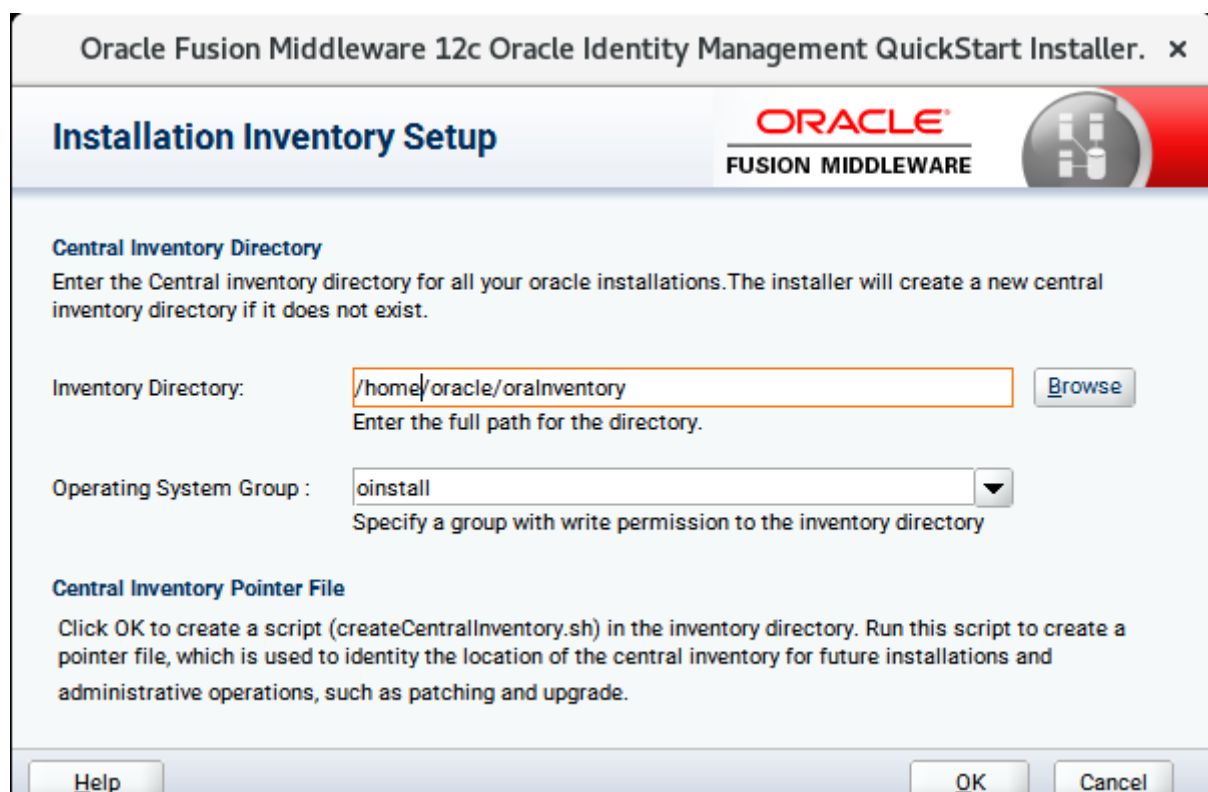
1-2. Log in to the target system (SLES 12 SP5 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

(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'`

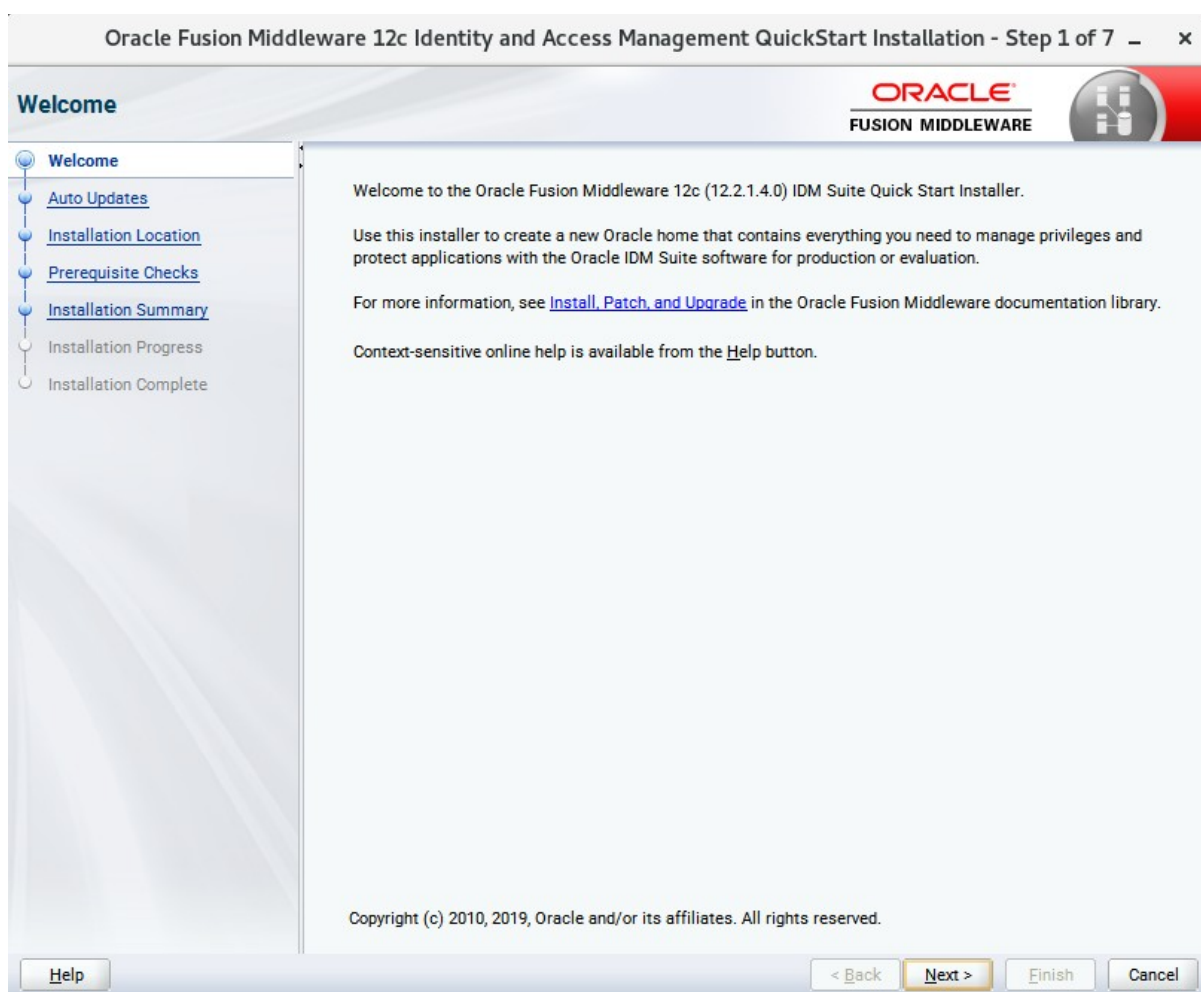
**For the actual installation, follow the steps below:**

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.

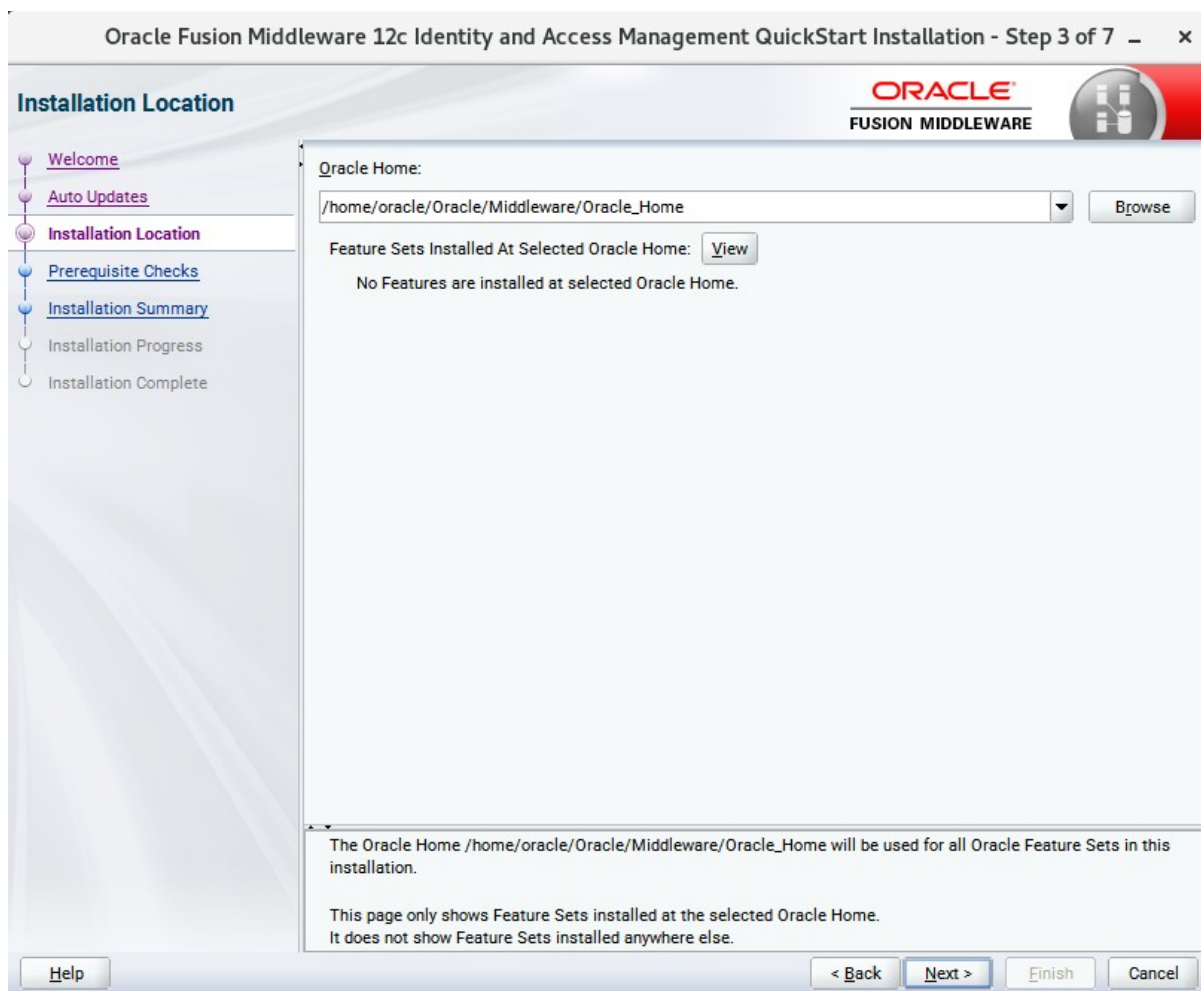
3). The **Auto Updates** page appears.

The screenshot shows the 'Auto Updates' 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 sidebar on the left with links for 'Welcome', 'Auto Updates', 'Installation Location', 'Prerequisite Checks', 'Installation Summary', 'Installation Progress', and 'Installation Complete'. The main content area is titled 'Auto Updates' and features the Oracle Fusion Middleware 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 includes a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option includes 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom of the window, there are buttons for '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.



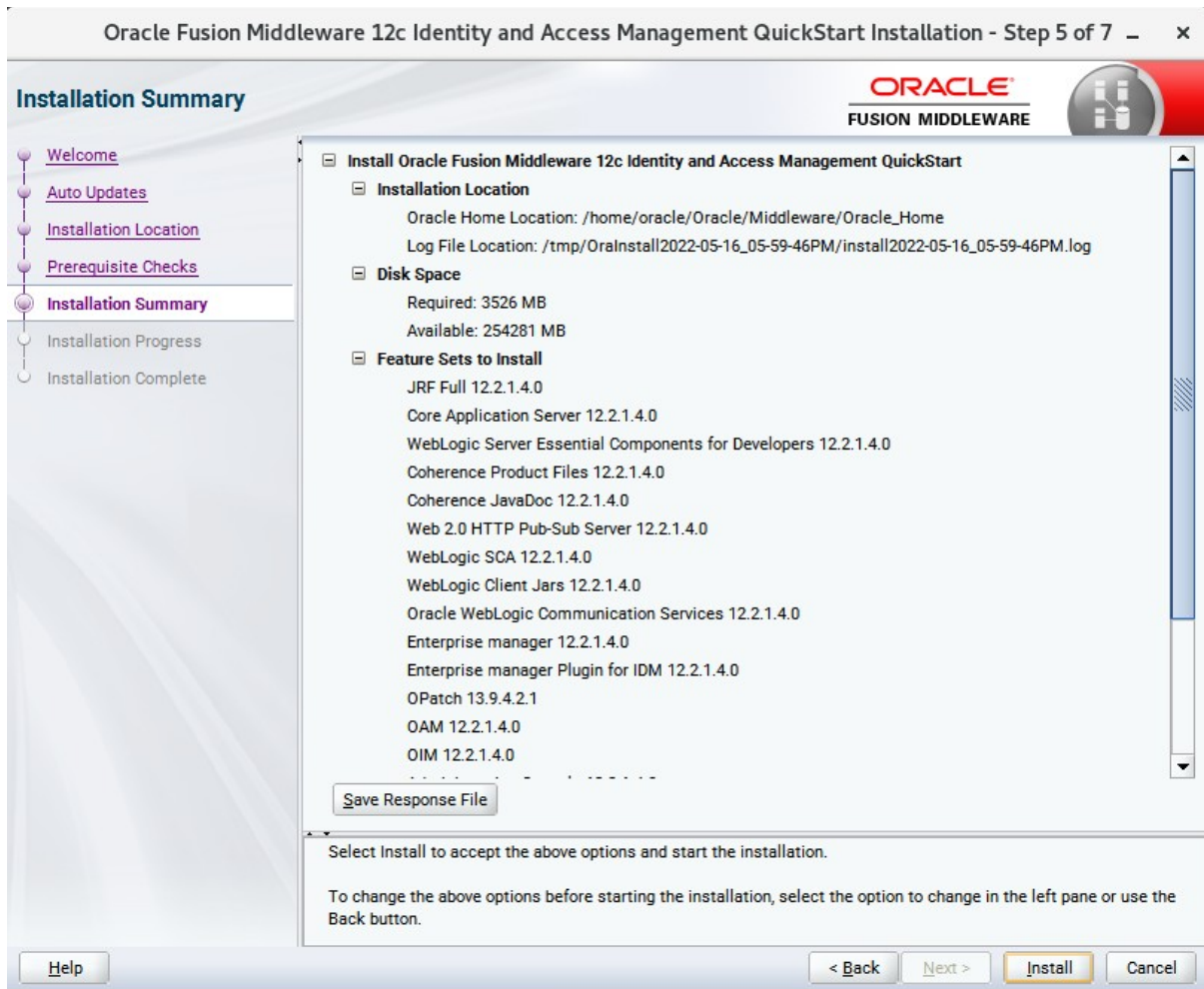
4). The **Installation Location** page appears.



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

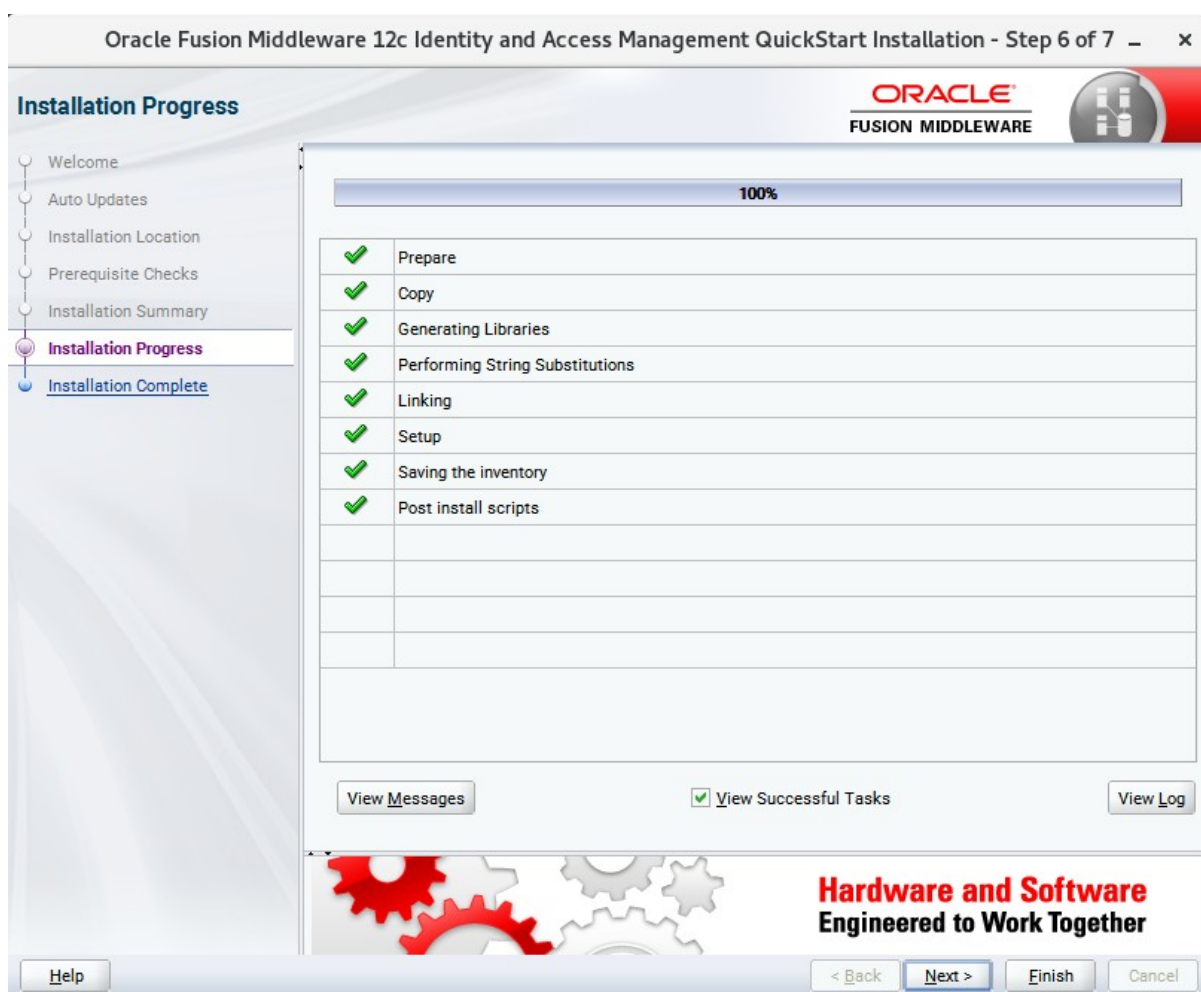


6). The **Installation Summary** page appears.



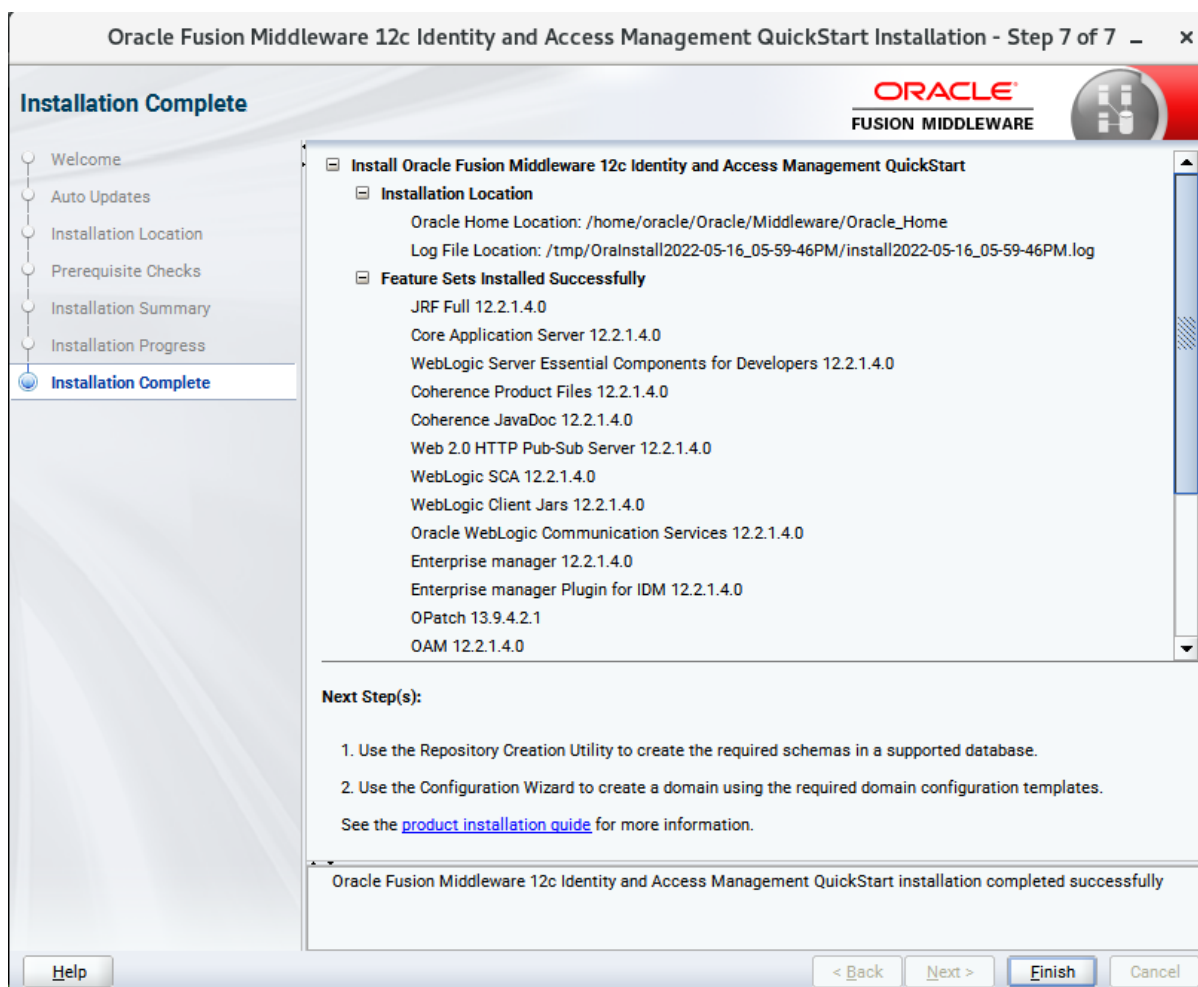
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



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

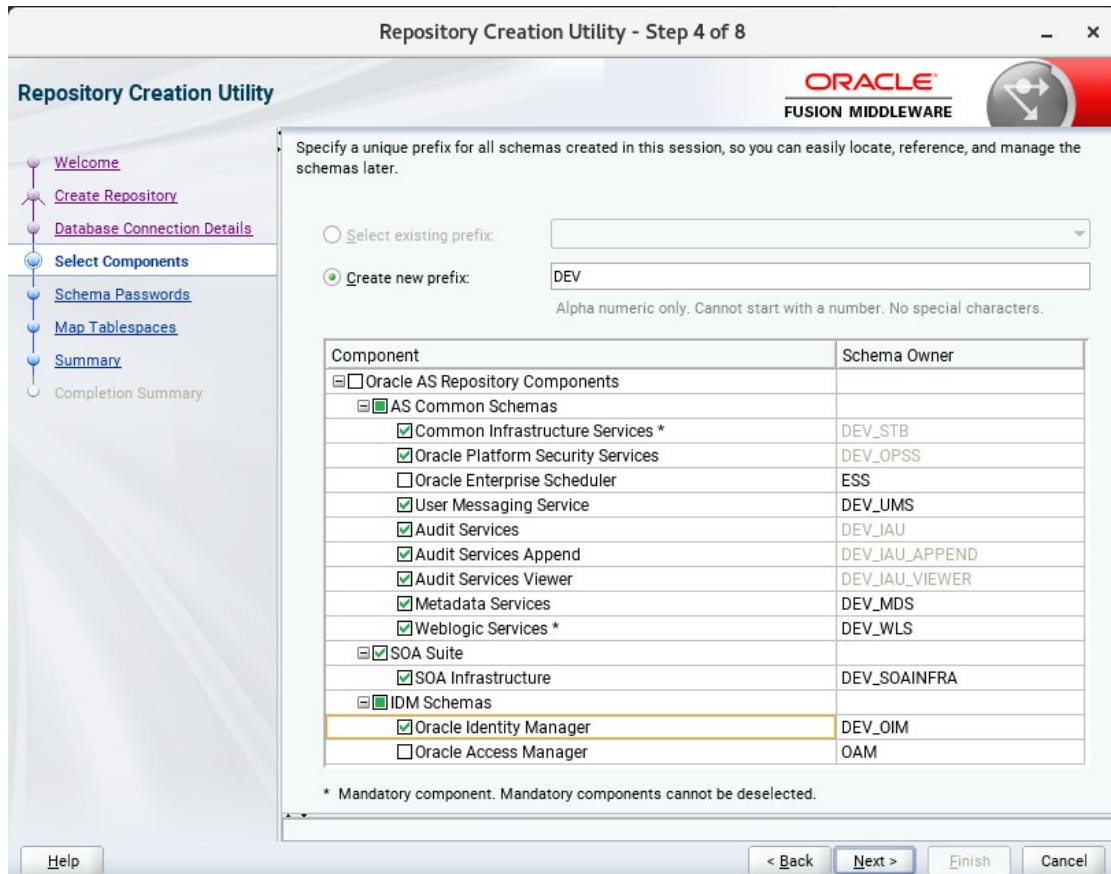
## 2. Configuring the Oracle Identity Manager Domain

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

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

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

#### Screenshot: Database schemas creating for Oracle Identity Manager.



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

Ensure the schema creation is successful.

**Repository Creation Utility - Step 9 of 9**

**Repository Creation Utility** ORACLE FUSION MIDDLEWARE

Database details:

Host Name: Dell5530  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 32 minutes 18 seconds

RCU Logfile: /tmp/RCU2022-05-16\_18-11\_56271944/logs/rcu.log  
Component Log Directory: /tmp/RCU2022-05-16\_18-11\_56271944/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:10.949(sec)	stb.log
Oracle Platform Security Services	Success	03:01.014(min)	opss.log
SOA Infrastructure	Success	10:39.778(min)	soainfra.log
Oracle Identity Manager	Success	12:21.167(min)	oim.log
User Messaging Service	Success	00:37.920(sec)	ucsums.log
Audit Services	Success	01:08.870(min)	iau.log
Audit Services Append	Success	00:10.535(sec)	iau_append.log
Audit Services Viewer	Success	00:09.502(sec)	iau_viewer.log
Metadata Services	Success	00:25.921(sec)	mds.log
Weblogic Services	Success	01:32.882(min)	wls.log

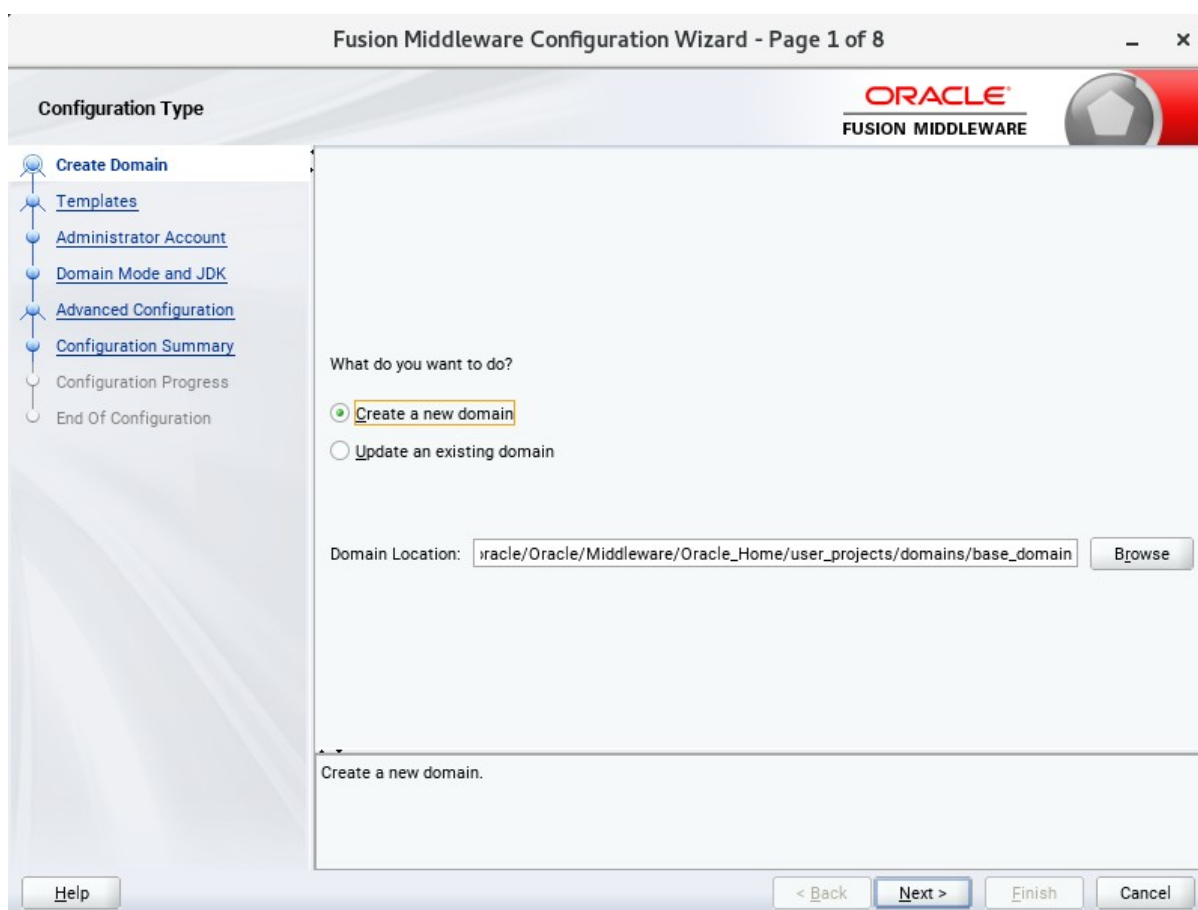
Help < Back Next > Create Close

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

In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE\_HOME/oracle\_common/common/bin** directory.

### Follow these steps:

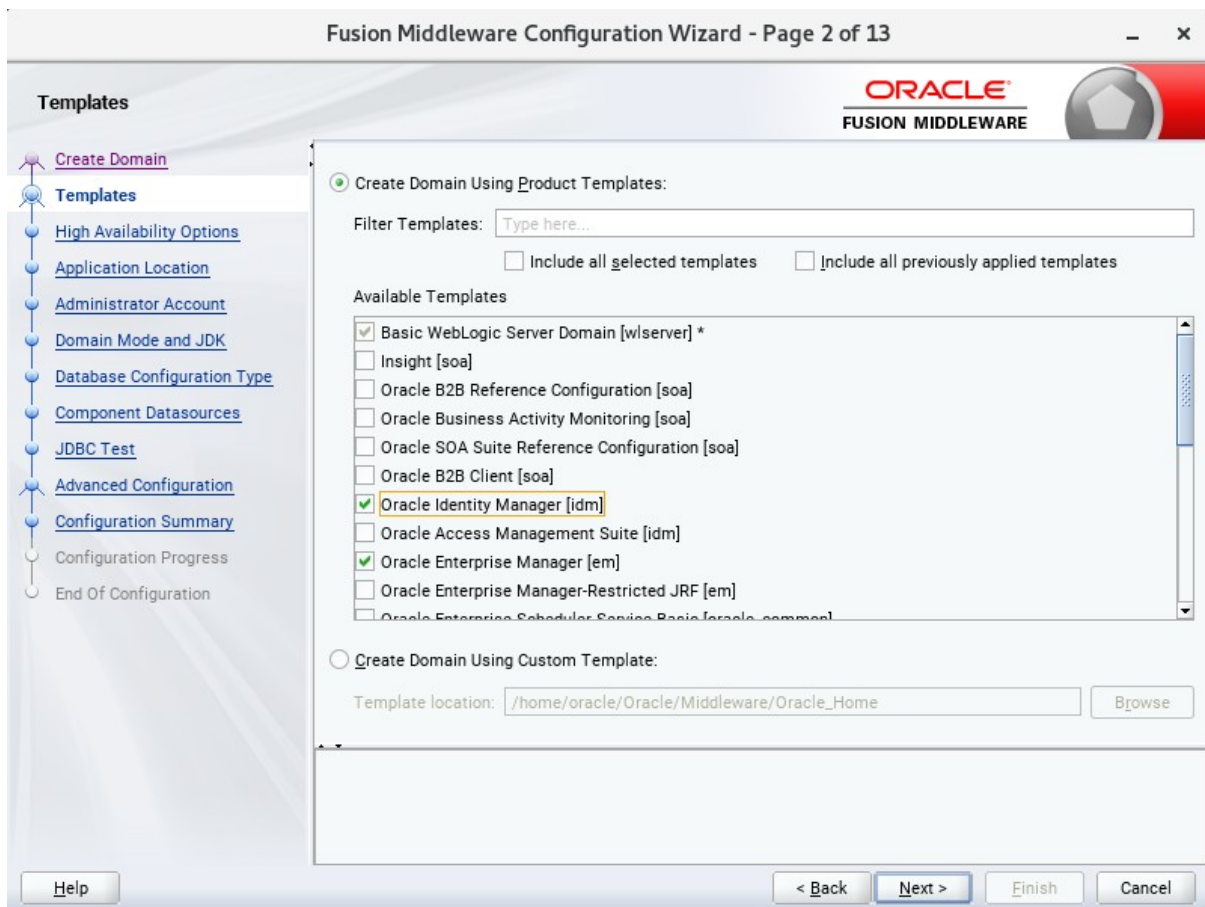
1). On the Configuration Type screen, select **Create a new domain**, and enter the desired domain home path.



Click **Next** to continue.



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



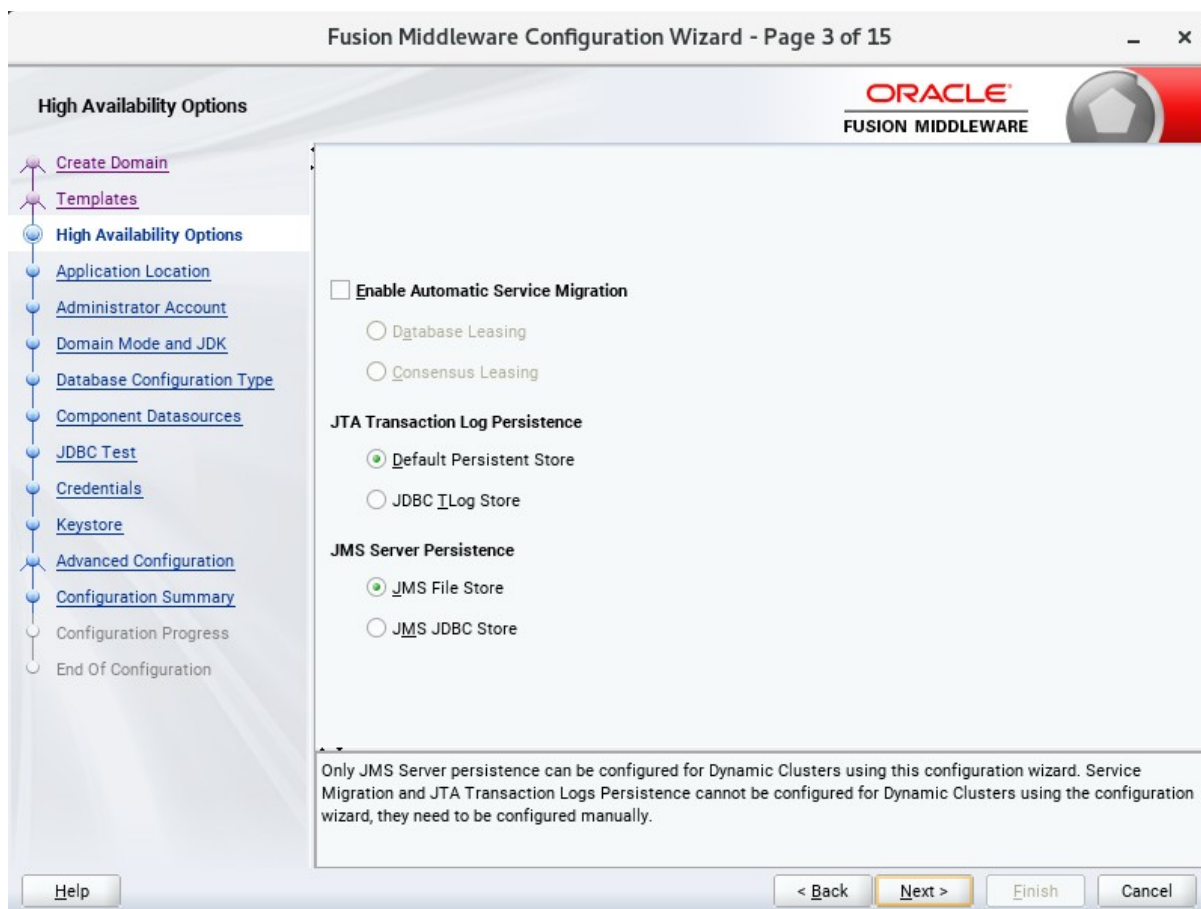
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Identity Manager [idm]**.

Selecting this template automatically selects the following as dependencies:

- Oracle Enterprise Manager [em]
- Oracle JRF [oracle\_common]
- Oracle WSM Policy Manager [oracle\_common]
- WebLogic Coherence Cluster Extension [wlserver]

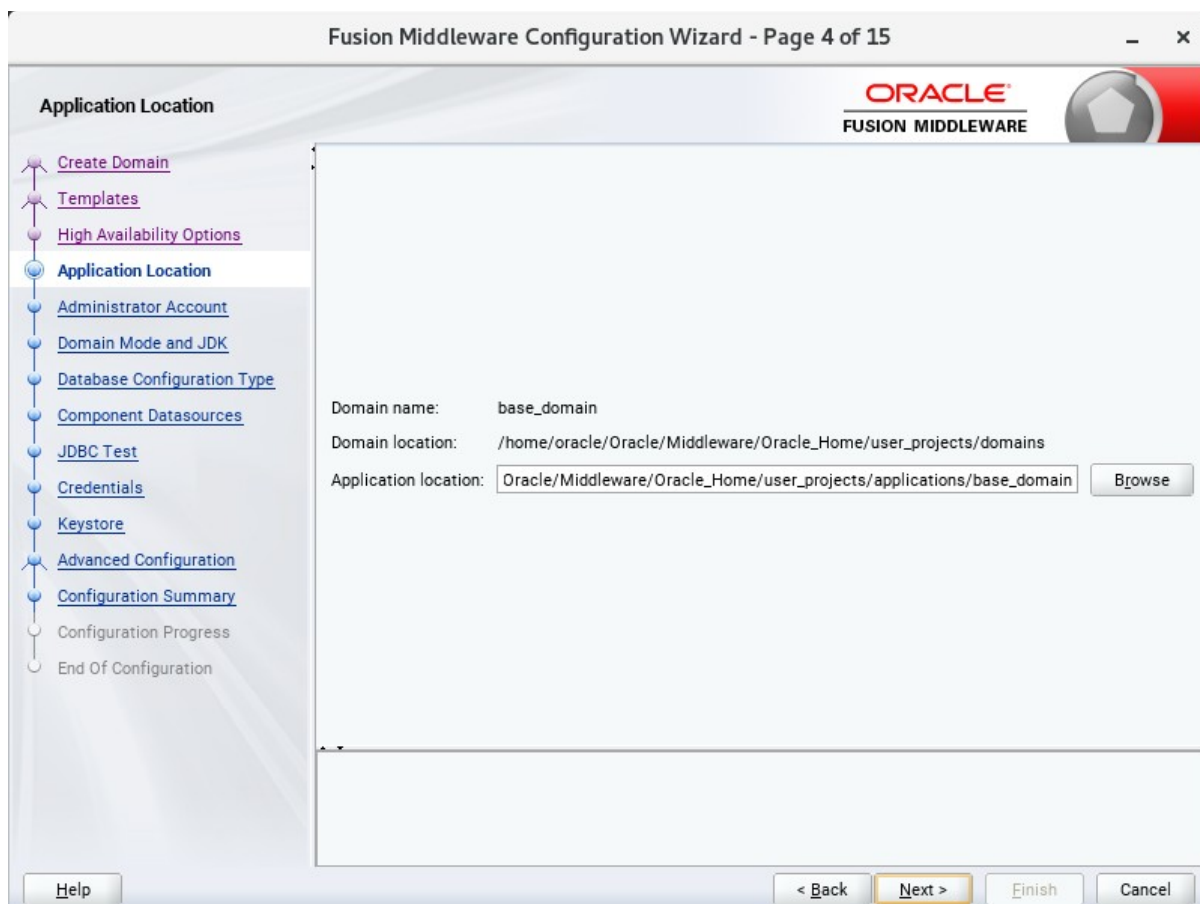
You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



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

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



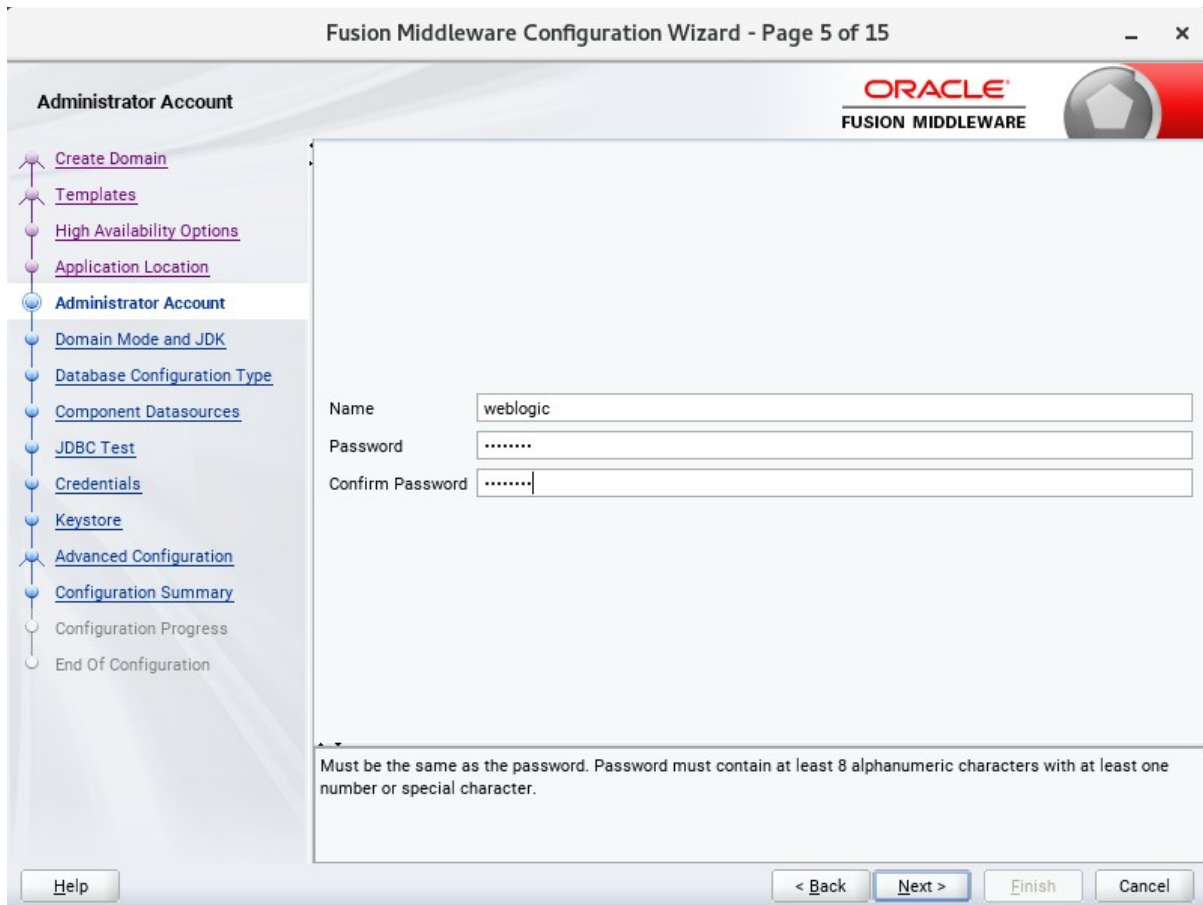
The screenshot shows the 'Application Location' screen of the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 4 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists the following steps: Create Domain, Templates, High Availability Options, Application Location (selected), Administrator Account, 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 the following configuration fields:

- Domain name: base\_domain
- Domain location: /home/oracle/Oracle/Middleware/Oracle\_Home/user\_projects/domains
- Application location: Oracle/Middleware/Oracle\_Home/user\_projects/applications/base\_domain (with a 'Browse' button)

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

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

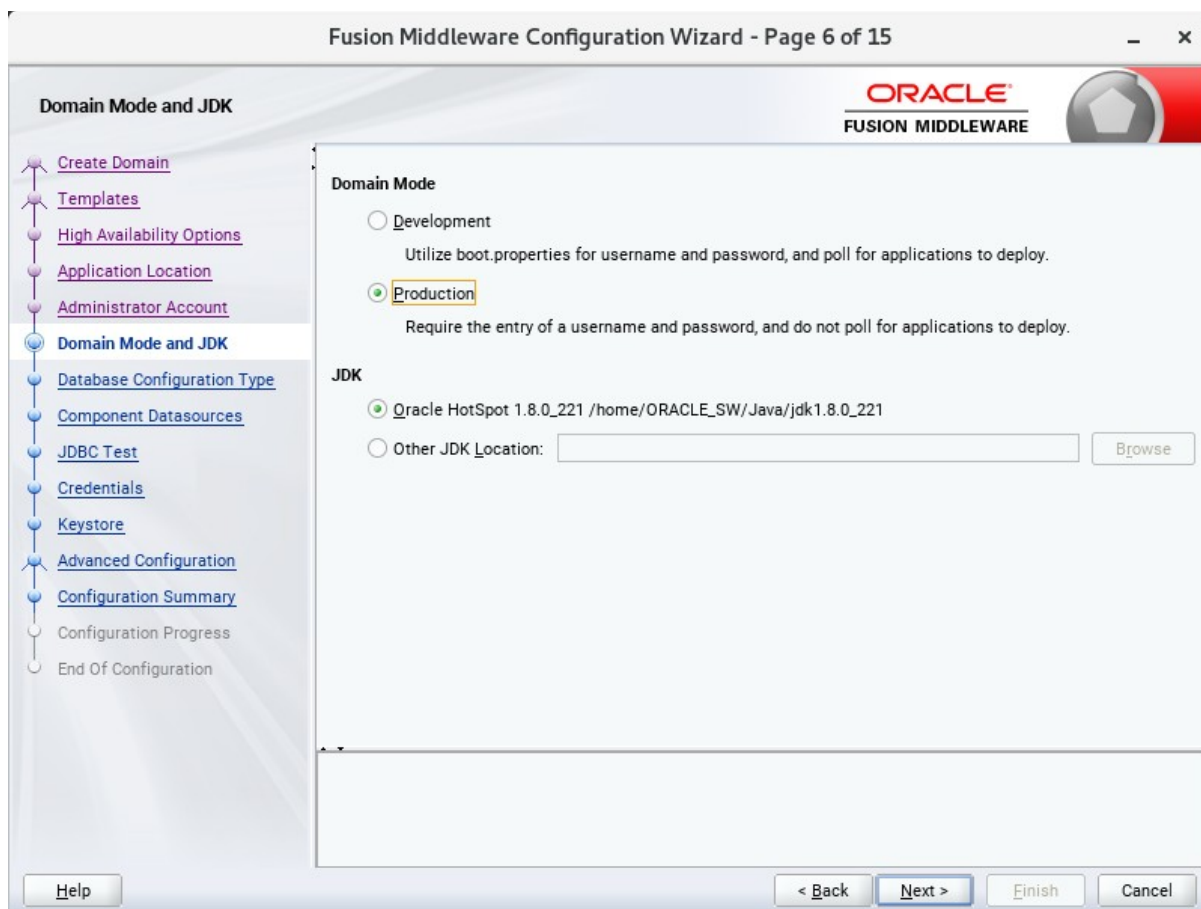
5). The **Administrator Account** screen appears.



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 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, Component Datasources, JDBC Test, Credentials, Keystore, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters, and 'Confirm Password' with masked characters. Below the fields is a note: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

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

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

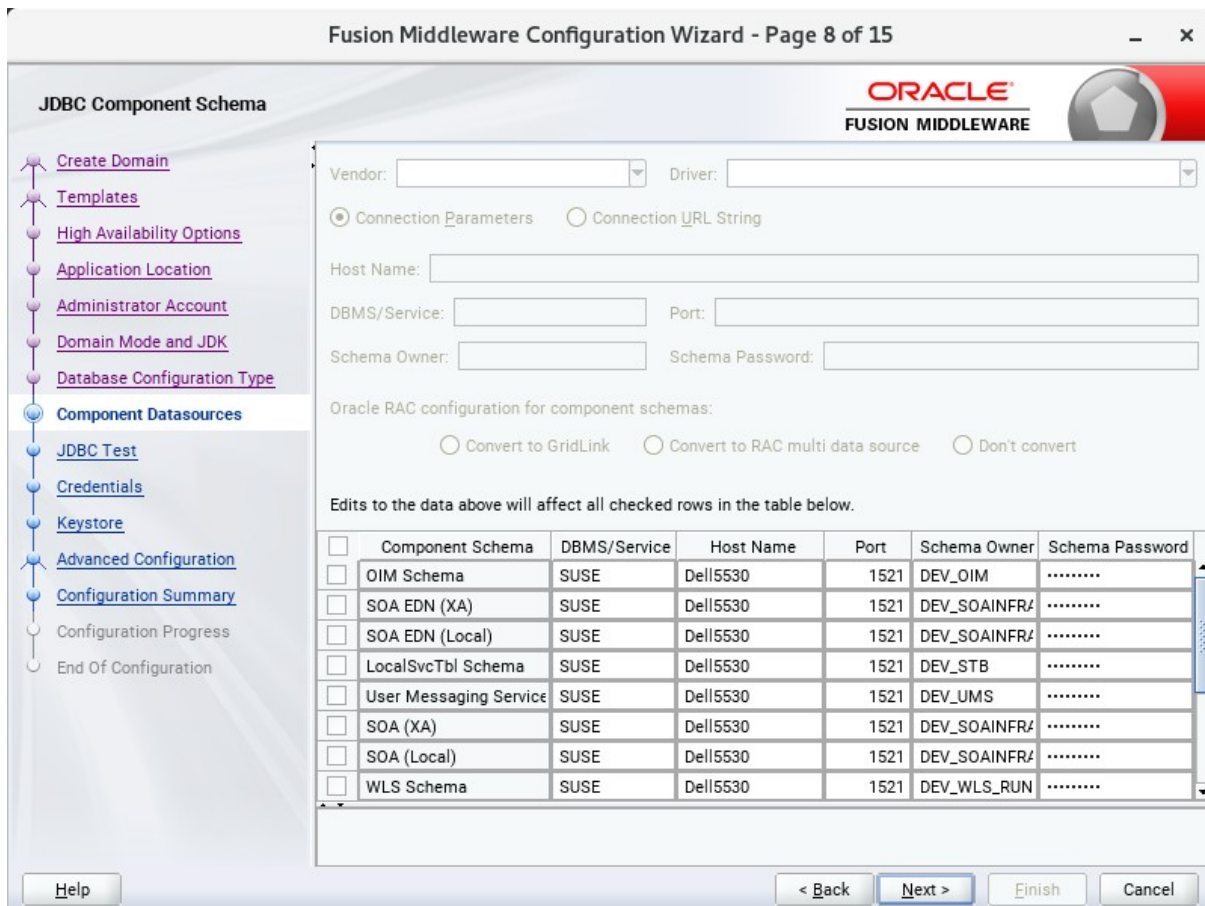


Select **Production** in the **Domain Mode** field and select the **Oracle HotSpot JDK** in the **JDK** field. Click **Next** to continue.

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

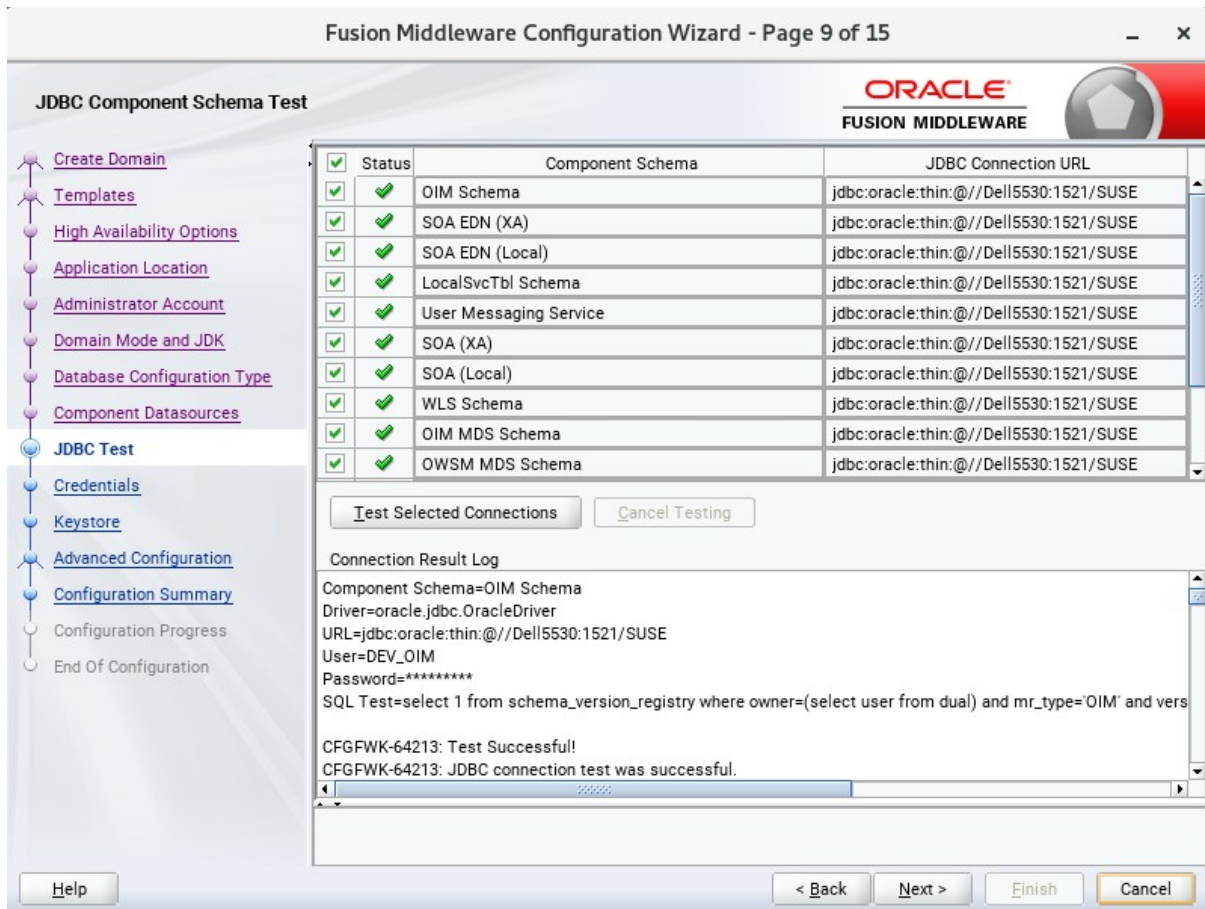
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



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

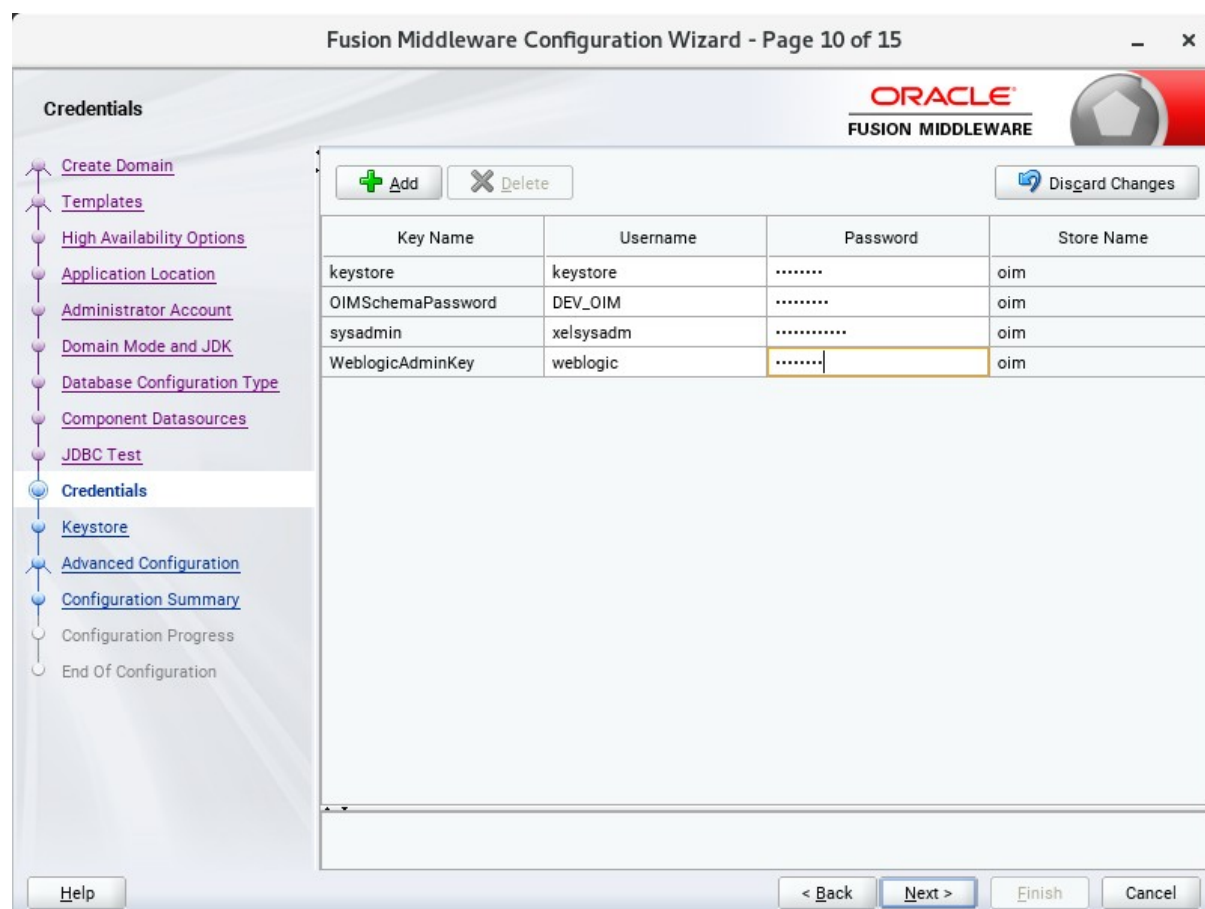
9). The **JDBC Component Schema Test** screen appears.



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



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



The screenshot shows the 'Credentials' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists various configuration steps, with 'Credentials' selected. The main area contains a table with the following data:

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

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

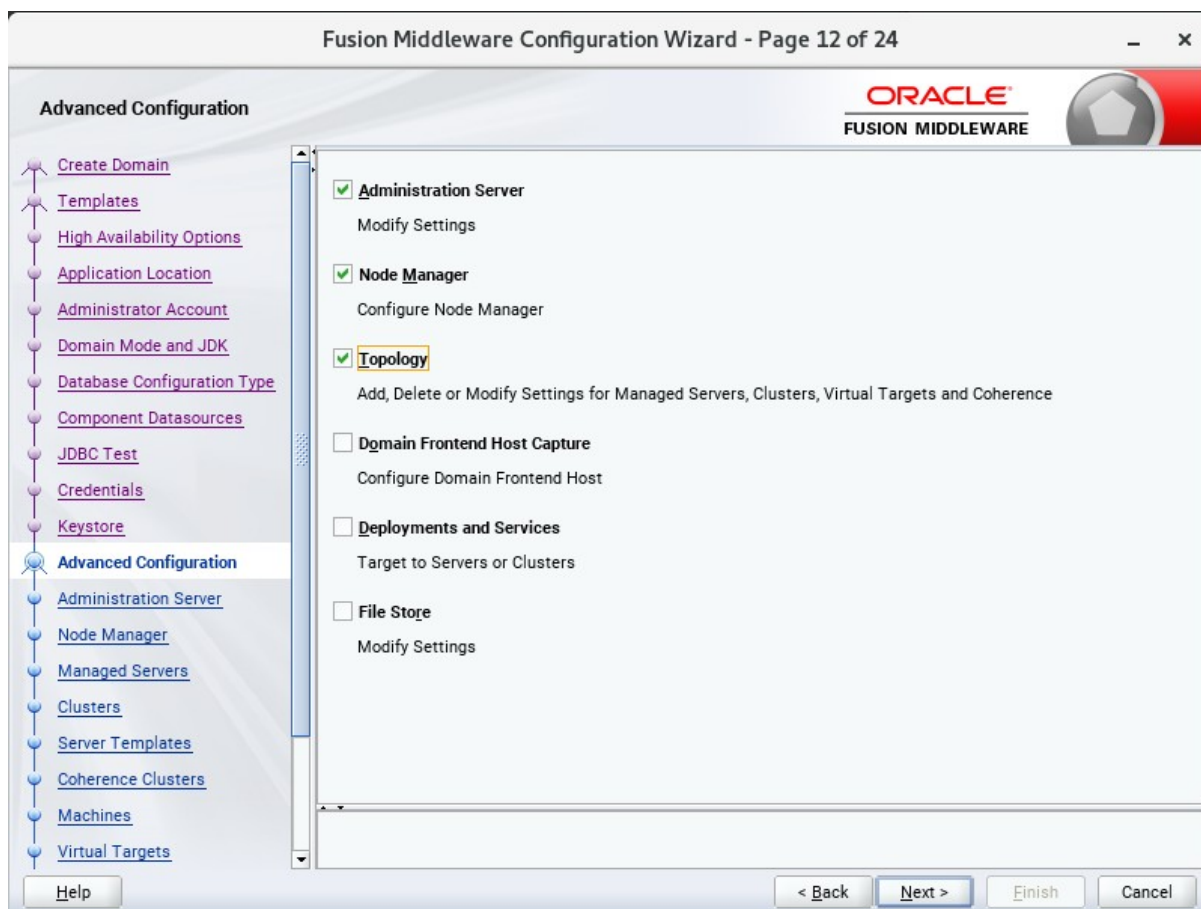
Use the Credentials screen to set credentials for each key in the domain. Ensure that you specify 'keystore' as the username for the key **Keystore**, and 'xelsysadm' as the username for the key **sysadmin**.

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

The screenshot shows the Oracle Fusion Middleware Configuration Wizard, Page 11 of 15, titled "Keystore". The interface includes a navigation pane on the left with the following steps: Create Domain, Templates, High Availability Options, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Credentials, Keystore (selected), Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area displays the "Keystore" configuration. At the top right, there is the Oracle Fusion Middleware logo and a "Disgard Changes" button. Below this, a "Store Key Name" dropdown menu is set to "ums/apns". The main configuration area is divided into two sections. The first section has a table with two columns: "Alias" and "Trusted Certificate". The second section has a table with four columns: "Alias", "Private Key", "Password", and "Identity Certificate". At the bottom of the wizard, there are buttons for "Help", "< Back", "Next >" (highlighted), "Finish", and "Cancel".

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.

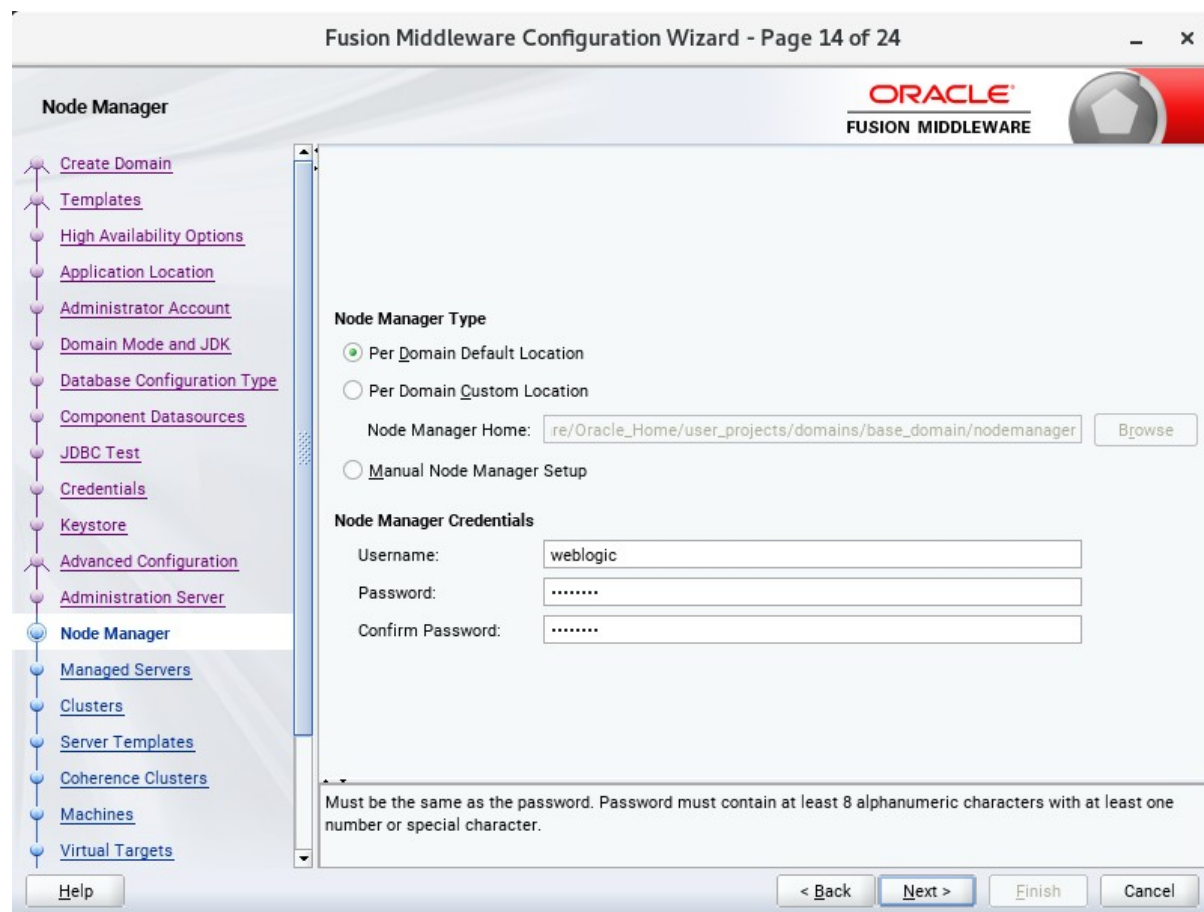
The screenshot shows the 'Administration Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 13 of 24'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the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

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

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

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

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



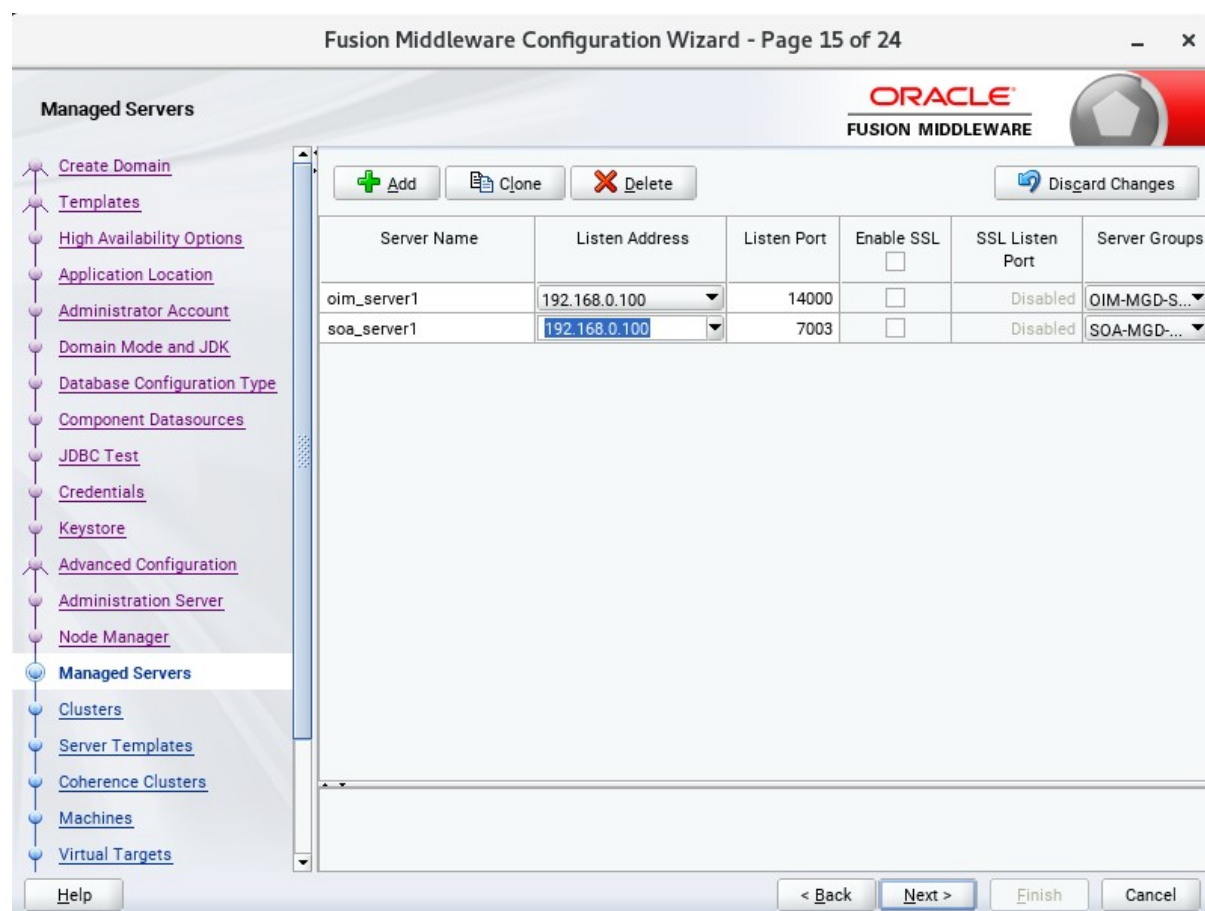
The screenshot shows the "Fusion Middleware Configuration Wizard - Page 14 of 24" window. The title bar includes the Oracle logo and "FUSION MIDDLEWARE". The left sidebar contains a navigation tree with "Node Manager" selected. The main content area is titled "Node Manager" and contains the following sections:

- 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 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." The bottom navigation bar includes buttons for "< Back", "Next >", "Finish", and "Cancel".

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

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



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.

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

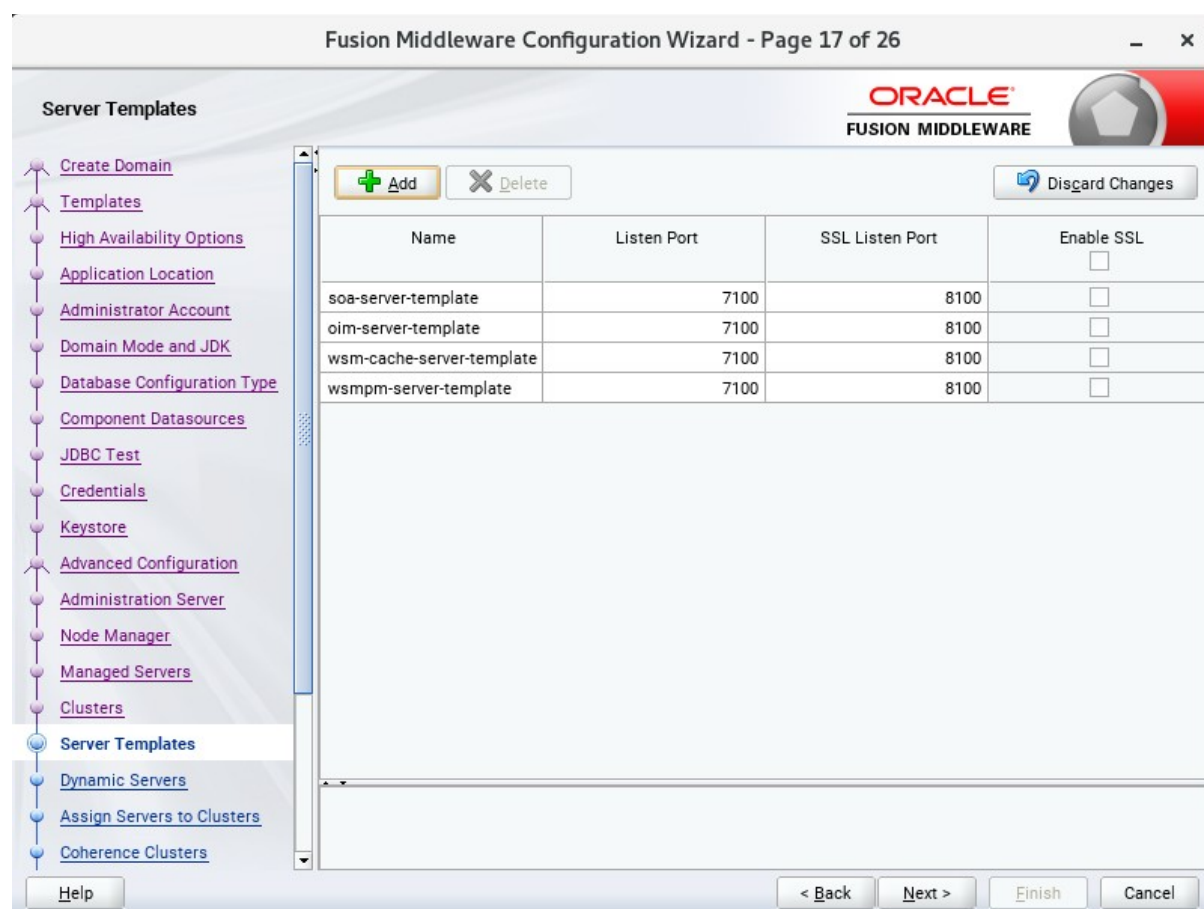
On the Clusters screen:

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.



Fusion Middleware Configuration Wizard - Page 17 of 26

ORACLE  
FUSION MIDDLEWARE

Server Templates

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

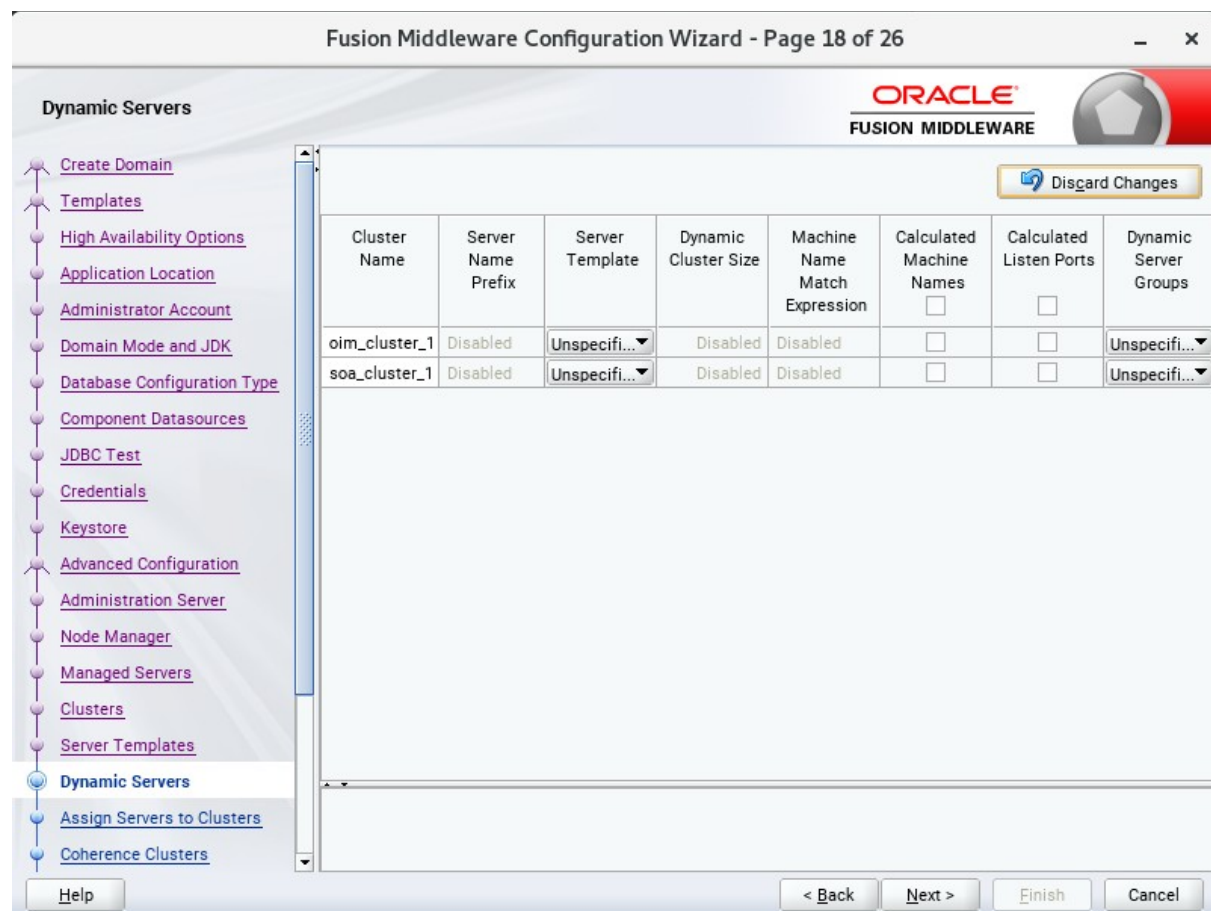
Name	Listen Port	SSL Listen Port	Enable SSL
soa-server-template	7100	8100	<input type="checkbox"/>
oim-server-template	7100	8100	<input type="checkbox"/>
wsm-cache-server-template	7100	8100	<input type="checkbox"/>
wsmmpm-server-template	7100	8100	<input type="checkbox"/>

Help    < Back    Next >    Finish    Cancel

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

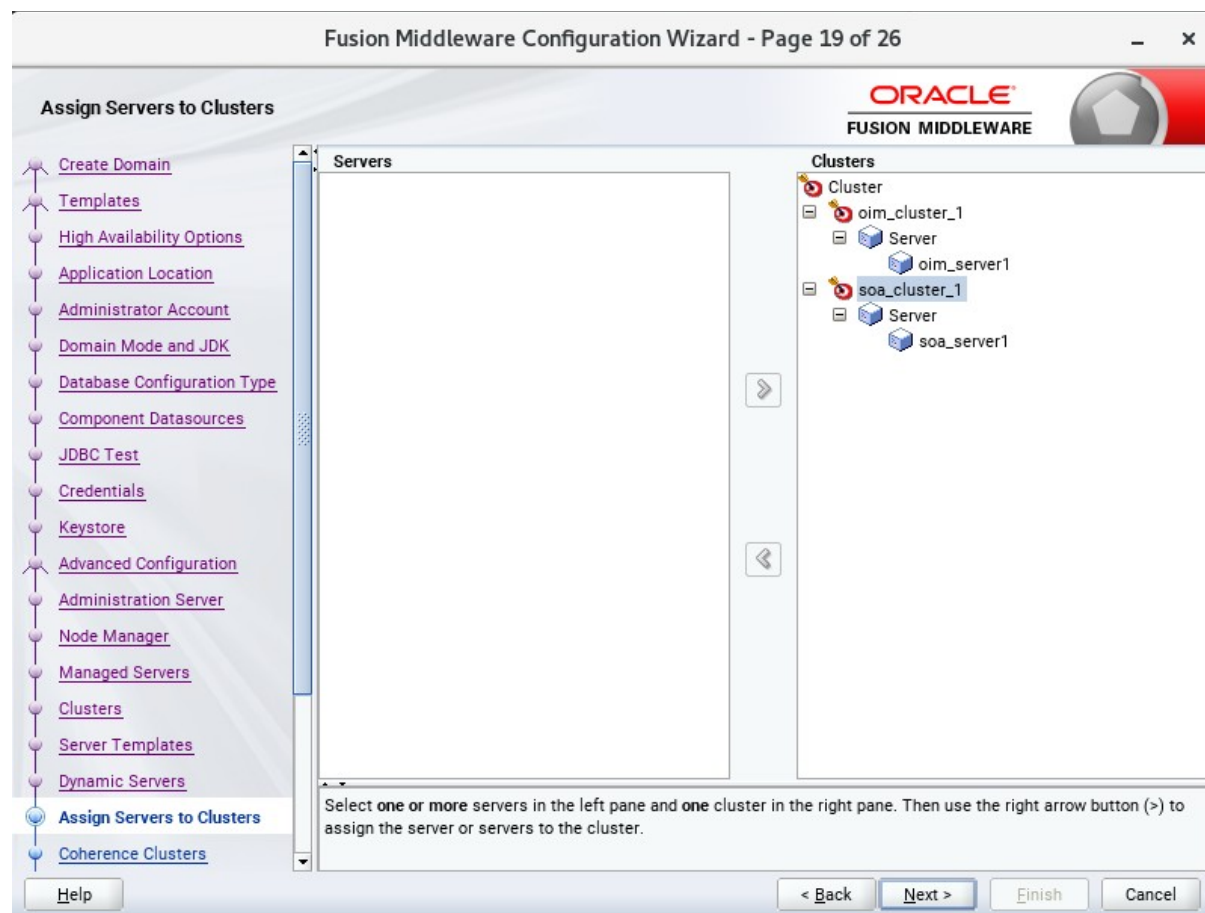


18). The **Dynamic Servers** screen appears.



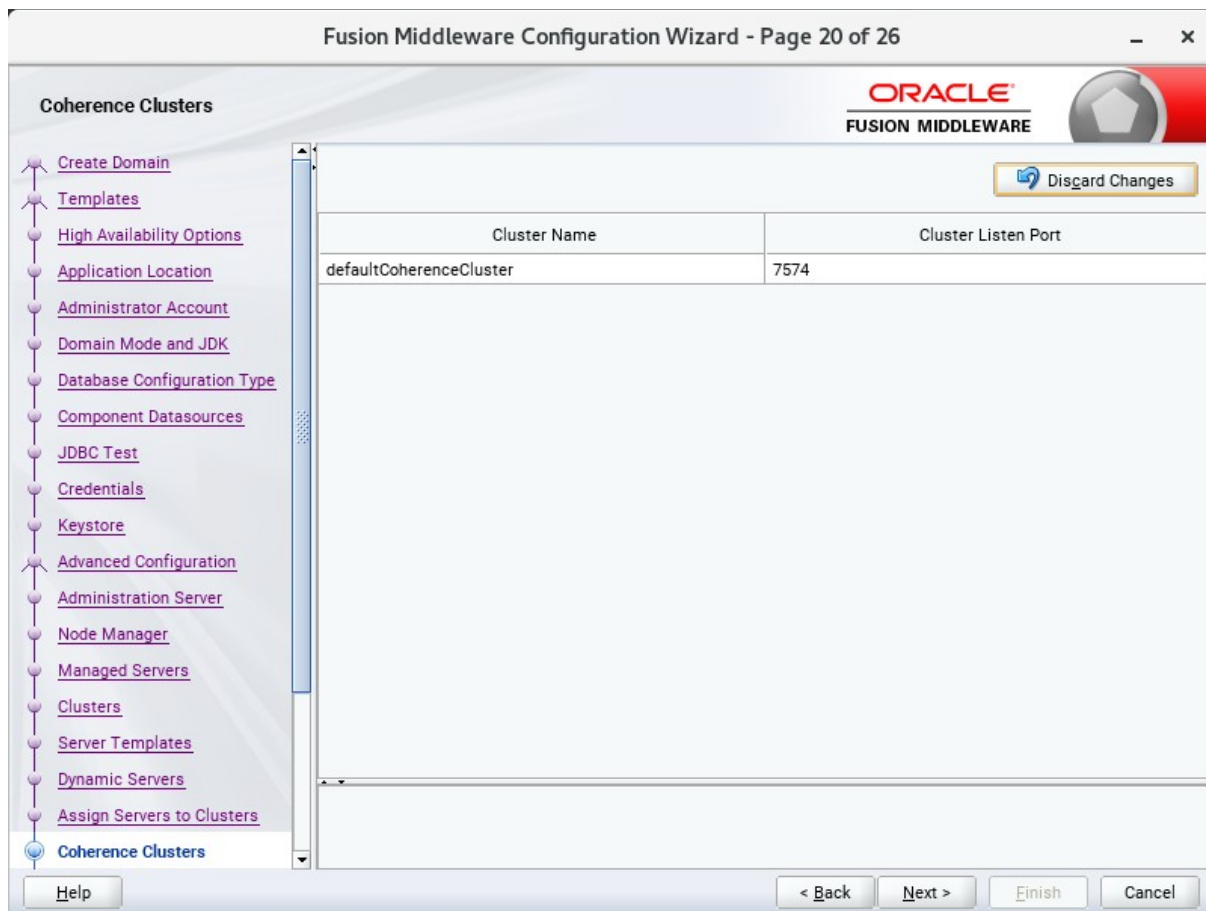
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



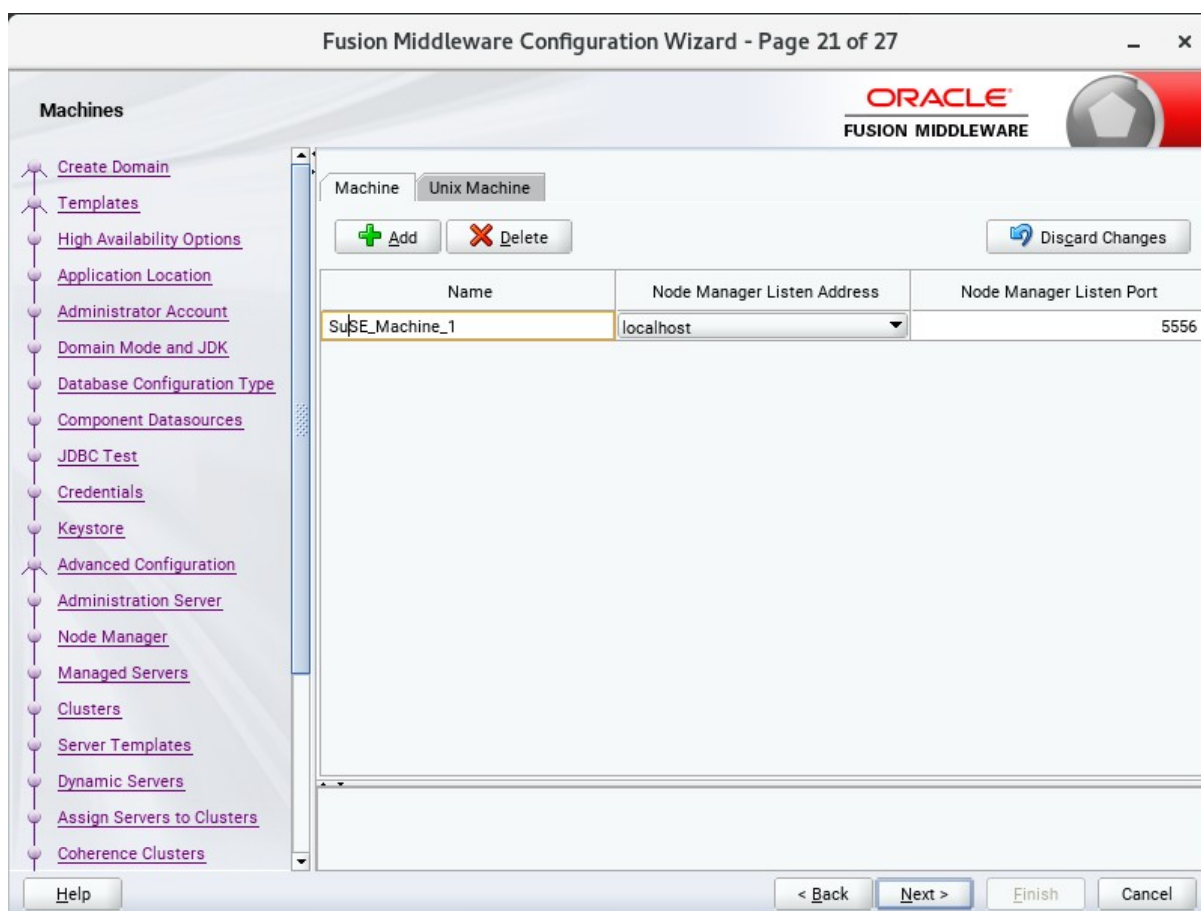
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



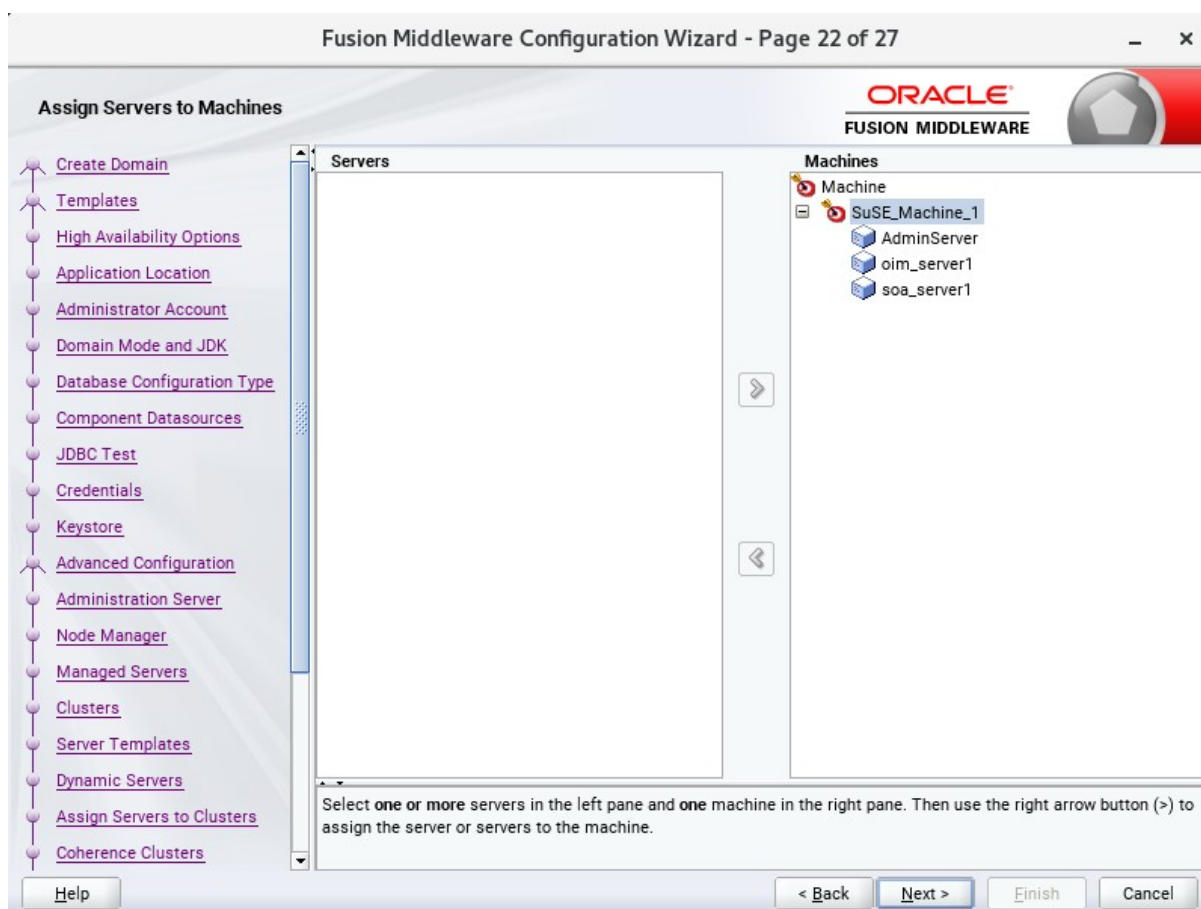
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



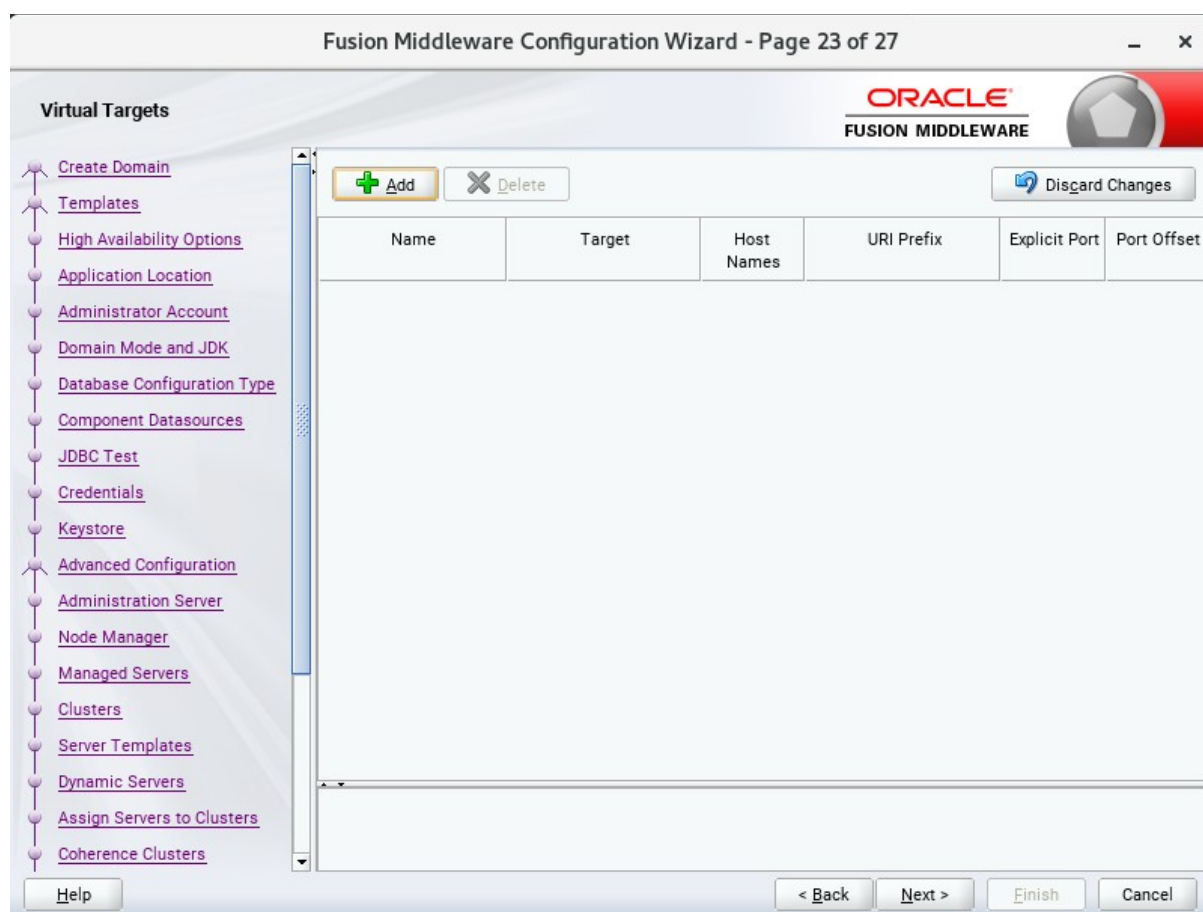
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



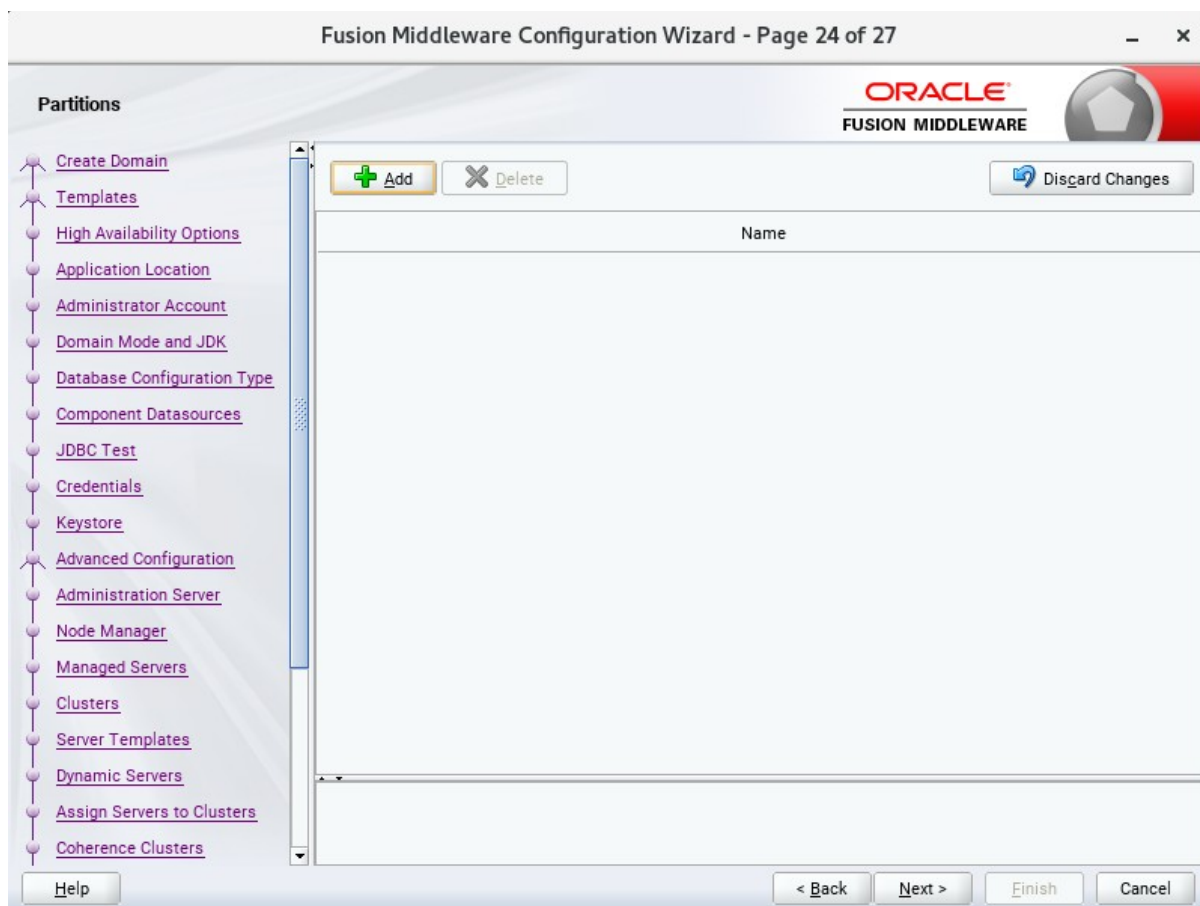
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



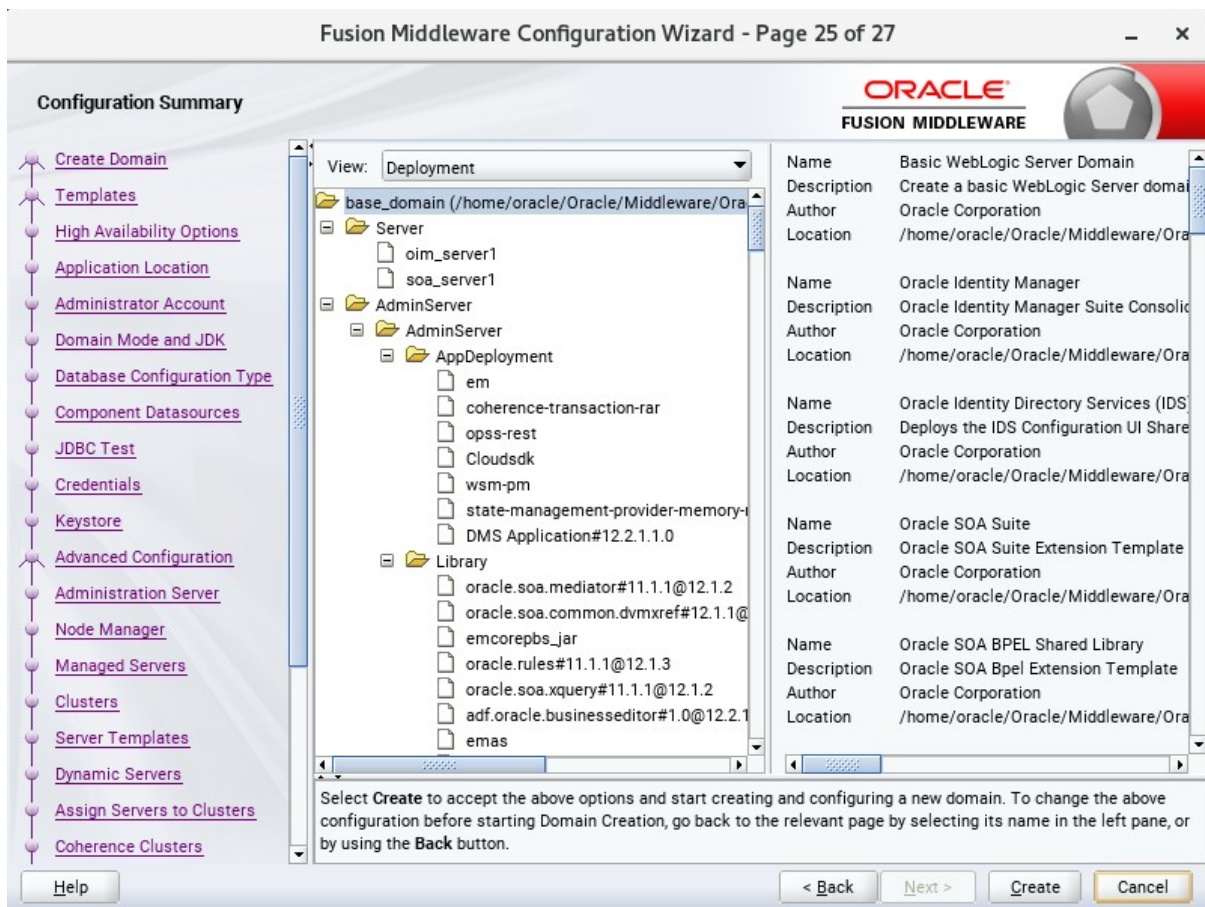
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



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

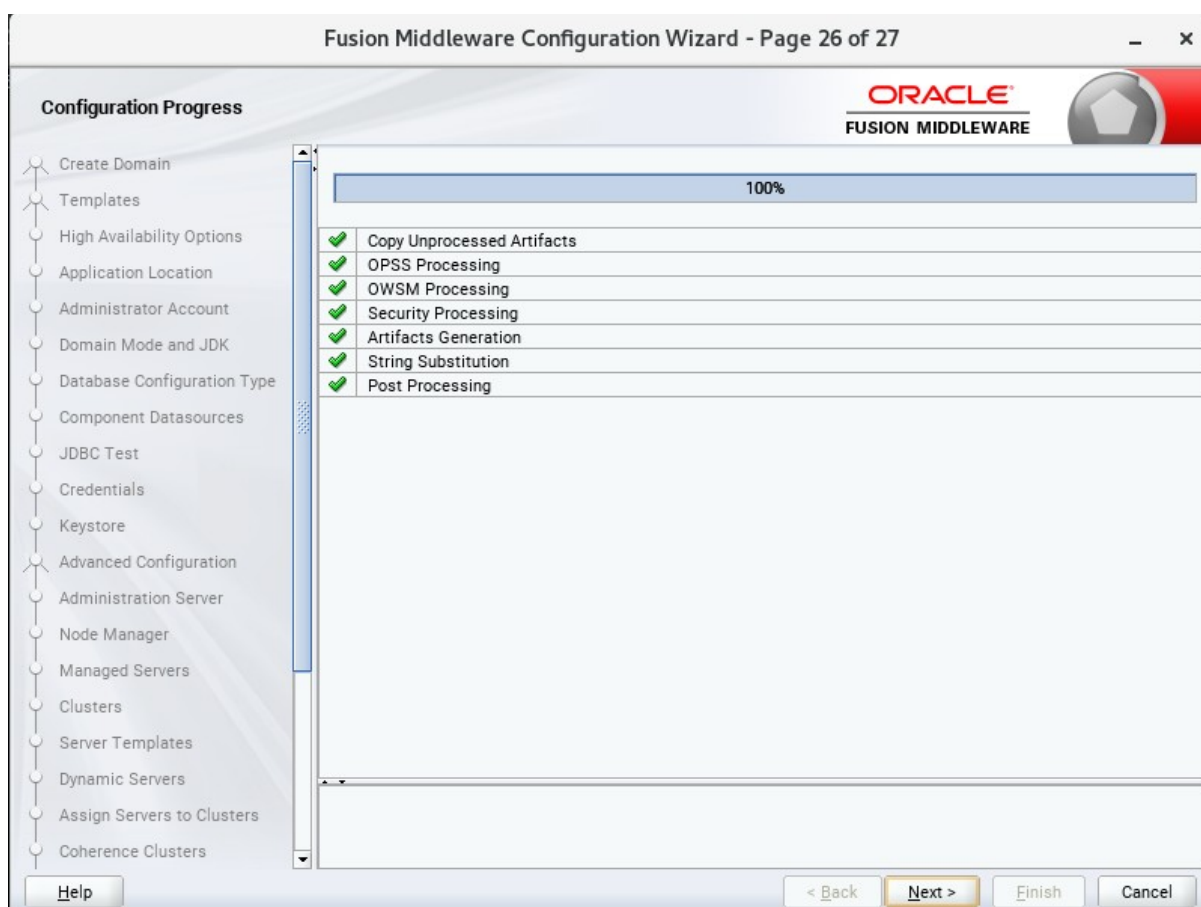
25). The **Configuration Summary** screen appears.



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



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



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

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



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

## 2-3. Performing Post-Configuration Tasks

After you configure the Oracle IDM domain, perform the necessary post-configuration tasks.

### 1). Running the Offline Configuration Command.

To run the `offlineConfigManager` command, do the following:

- Set the following environment variables to the right values.

```
DOMAIN_HOME
JAVA_HOME
```

- Run the `setDomainEnv` script from `%DOMAIN_HOME%\bin`, in order to set up all of the required environment variables.

```
./setDomainEnv.sh
```

- Run the following command from the location `OIM_HOME/server/bin/`:

```
./offlineConfigManager.sh
```

```
oracle@Dell5530:~/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> export DOMAIN_HOME=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/
oracle@Dell5530:~/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> export JAVA_HOME=/home/ORACLE_SW/Java/jdk1.8.0_221/
oracle@Dell5530:~/home/oracle/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:~/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
```

```

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: 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".

Successfully configured property "keystore.enc.csf.key".
The tokenissuertrust tokenissuertrustWLSbase_domain is valid.
Creating tokenissuertrust tokenissuertrustWLSbase_domain in repository.

Session committed successfully.
Seeding OWSM Policies for SCIM starts

```

```

May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.util.JPSCfgXMLUpdate updateJPSCfgXMLForWLS
INFO: Changed the ID Store Provider from LDAP to OIM : <serviceInstanceRef ref="idstore.oim"/>
<May 16, 2022 9:29:33,091 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
[OIM_CONFIG]The file /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain//config/fmwconfig/jps-config-jse.xml is updated.>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.util.JPSCfgXMLUpdate updateJPSCfgXMLForWLS
INFO:
[OIM_CONFIG]The file /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain//config/fmwconfig/jps-config-jse.xml is updated.
<May 16, 2022 9:29:33,091 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.util.JPSCfgXMLUpdate updateJPSCfgXMLForWLS
INFO: Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class
<May 16, 2022 9:29:33,091 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
Updated jps-config-jse.xml Details.>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO:
Updated jps-config-jse.xml Details.
<May 16, 2022 9:29:33,092 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfg() method of OIMConfigManager class>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO: Exiting updateJPSCfg() method of OIMConfigManager class
<May 16, 2022 9:29:33,092 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
[OIM_CONFIG] Copying the mbean Files>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
[OIM_CONFIG] Copying the mbean Files
<May 16, 2022 9:29:33,093 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Entering copyMbeanFiles() method of OIMConfigManager class>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Entering copyMbeanFiles() method of OIMConfigManager class
<May 16, 2022 9:29:33,093 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <
Copying mbean files are successful>
May 16, 2022 9:29:33 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
Copying mbean files are successful
<May 16, 2022 9:29:33,094 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting copyMbeanFiles() method of OIMConfigManager class>
May 16, 2022 9:29:33 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... x oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x oracle@Dell5530... x
oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh
> nm.out&
[1] 26069
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/server/lib/weblo
gic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/or
acle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware
/Oracle_Home/wlserver/./home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home
/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./
-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
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/do
mains/base_domain/nodemanager/nodemanager.domains>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middlewa
re/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/do
mains/base_domain/nodemanager/nodemanager.domains>
<May 16, 2022 10:24:48 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhr
aseUsed=true>
May 16, 2022 10:24:48 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
May 16, 2022 10:24:49 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.
<May 16, 2022 10:24:49 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

Configuration settings:
DomainsFile=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains

```

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

```

oracle@Dell5530:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@Dell... x oracle@Dell... x oracle@Dell... x oracle@Dell... x oracle@Dell... x oracle@Dell... x
ORACLE HOME : === [/home/oracle/Oracle/Middleware/Oracle_Home/mft]
prodDir.toString : === /home/oracle/Oracle/Middleware/Oracle_Home/mft
ORACLE HOME : === [/home/oracle/Oracle/Middleware/Oracle_Home/OPatch]
prodDir.toString : === /home/oracle/Oracle/Middleware/Oracle_Home/OPatch
ORACLE HOME : === [/home/oracle/Oracle/Middleware/Oracle_Home/osb]
prodDir.toString : === /home/oracle/Oracle/Middleware/Oracle_Home/osb
PAF Integration init BEGIN
PAF Integration init END
ProvCommonIntegration.init, registering the Page Handlers and Page Segment Handlers
inside MultiOMSIntegration
FMWProv: Integration Class called and was reloaded for me
PostInstallConfigIntegration:oracle_ias_farm target auth registration is done.
CompositesProvIntegration init..
getAllPluginOracleHomes: ConnectionService is null
getAllPluginOracleHomes: ConnectionService is null
Anonymous url config processing:/WEB-INF/config/anonymous-access-emcore.config
Anonymous-urls:[/em/IESvgdetect.js.*, /em/LoginStatusServlet.*, /em/adf/.*, /em/adflib/.*, /em/afr/.*, /em/bi/.*, /em/bmp/disc
overtargets, /em/cabo/.*, /em/console/help.*, /em/console/logon.*, /em/consoleStatus.jsp, /em/dynamicImage.*, /em/ecm/csa/CSA
.jar, /em/ecm/csa/CSA.mb, /em/ecm/csa/csabanner.gif, /em/emcli/custAttrib.*, /em/emr/.*, /em/faces/logon.*, /em/faces/helppag
es.*, /em/flashbridge.*, /em/formsapp/lib/formsRecorder.jar, /em/images/.*, /em/install/getAgentImage, /em/helppages/help.*,
/em/jsLibs/.*, /em/jsLibsObf/.*, /em/login.jsp, /em/mapproxy.*, /em/mobile/core/uifwk/skins/.*, /em/ocamm/lib.*, /em/onetime.*
, /em/ovs/discovertargets, /em/public/.*, /em/public lib download/.*, /em/redirect.*, /em/relocatetarget.*, /em/sdkImpl/core/u
ifwkmobile/skins/.*, /em/servlet/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs
.*, /em/jobrecv.*]
<May 16, 2022 10:39:32,501 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <I
gnoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<May 16, 2022 10:39:33,343 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a con
nection with the Domain level Diagnostic Service.>
<May 16, 2022 10:39:33,875 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<May 16, 2022 10:39:33,923 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<May 16, 2022 10:39:33,923 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving c
onnection list DomainRuntimeServiceMBean>
<May 16, 2022 10:39:37,905 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Se
rver "AdminServer" for domain "base domain" running in production mode.>
<May 16, 2022 10:39:37,905 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7
001 for protocols iiop, t3, ldap, snmp, http.>
<May 16, 2022 10:39:37,906 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 192.168.0.100:7
001 for protocols iiop, t3, ldap, snmp, http.>
<May 16, 2022 10:39:37,907 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<May 16, 2022 10:39:37,954 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

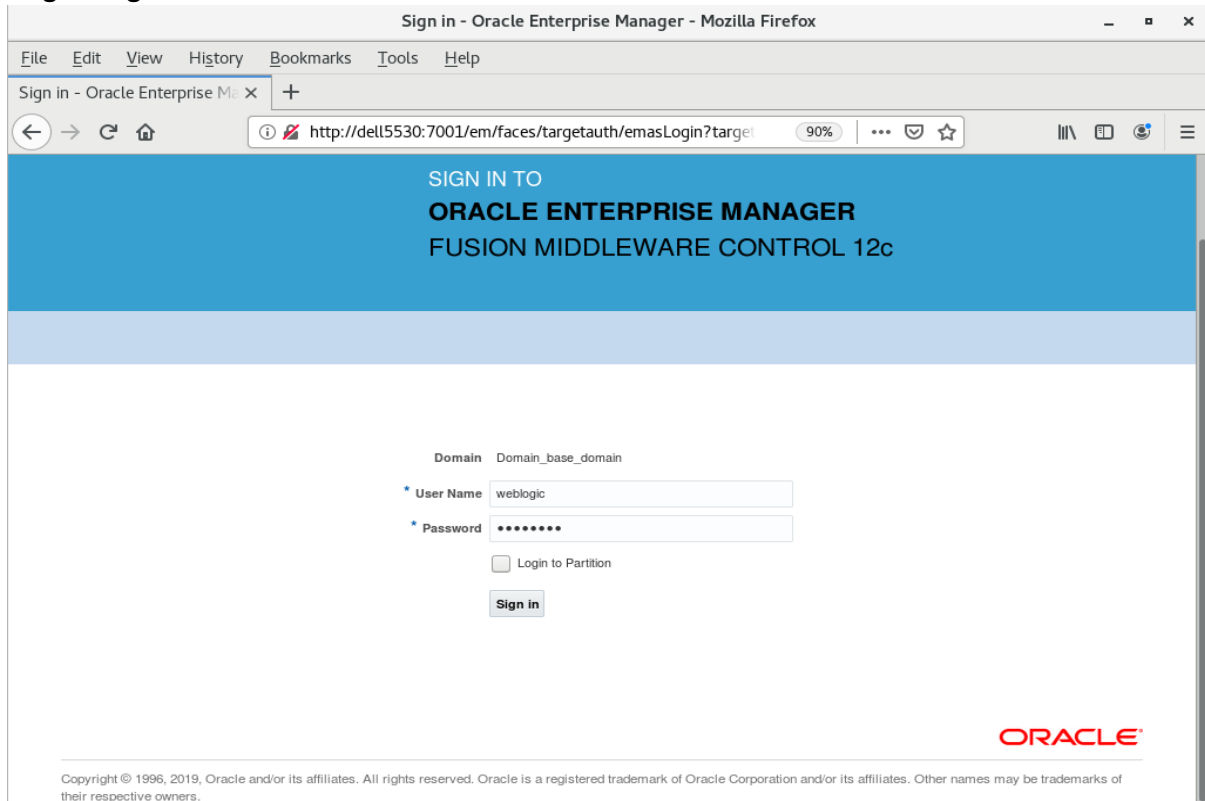
You know that the administrator server is running when you see the following output:

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

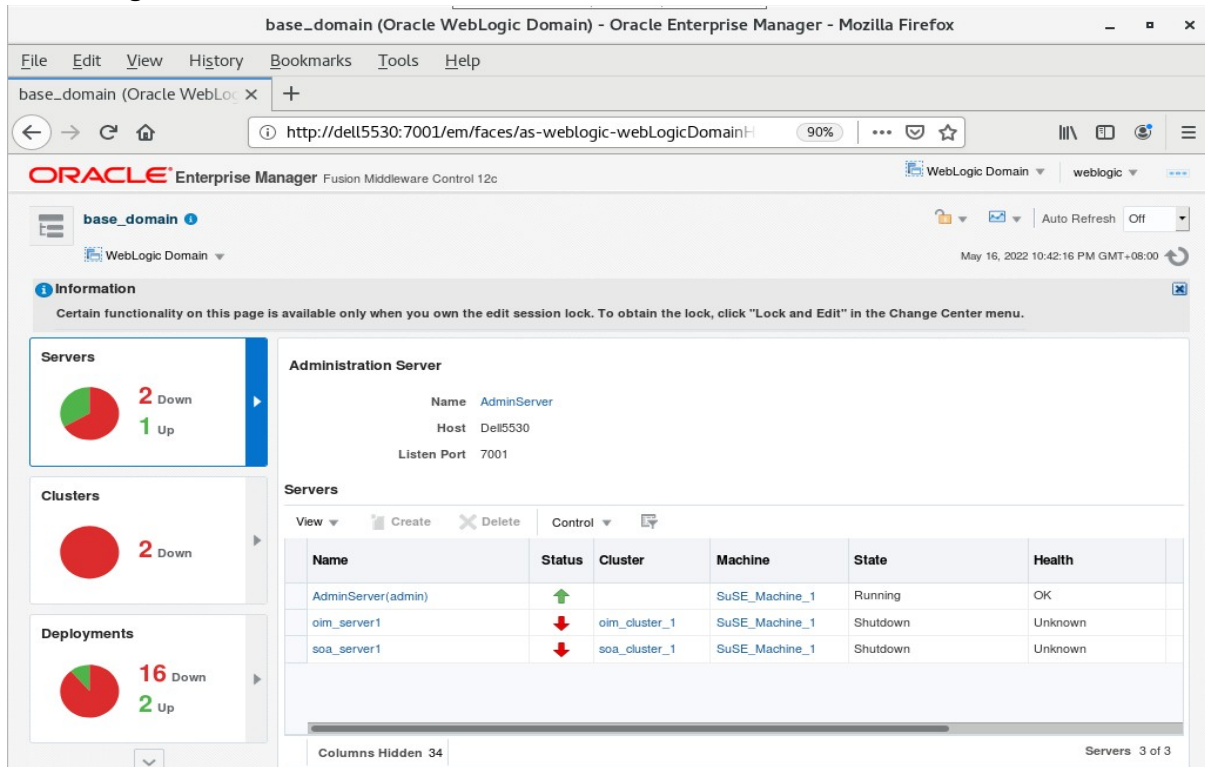
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

#### 1). Access to Enterprise Manager Console.

#### Login Page:



#### Home Page:



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

base\_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox

base\_domain (Oracle WebLogic Domain) | http://del15530:7001/em/faces/as-weblogic-webLogicDomainH | 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c | WebLogic Domain | weblogic

base\_domain | Auto Refresh Off | May 16, 2022 10:48:18 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 Down  
2 Up

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

**Servers**  
View | Create | Delete | Control

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

Columns Hidden 34 | Servers 3 of 3

base\_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox

base\_domain (Oracle WebLogic Domain) | http://del15530:7001/em/faces/as-weblogic-webLogicDomainH | 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c | WebLogic Domain | weblogic

base\_domain | Auto Refresh Off | May 17, 2022 12:30:53 AM 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.

**Serv...**  
3 Up

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

**Serv...**  
View | Create | Delete | Control

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

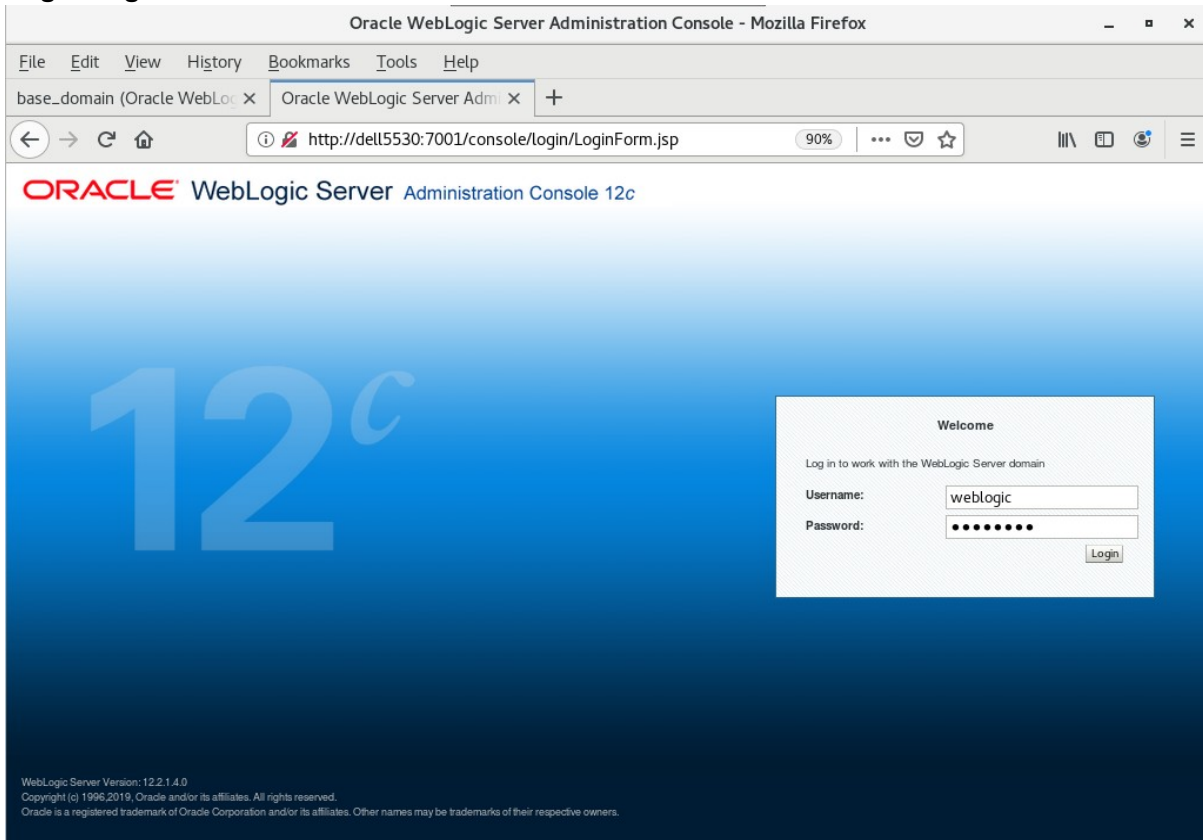
Columns Hidden 34 | Servers 3 of 3

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

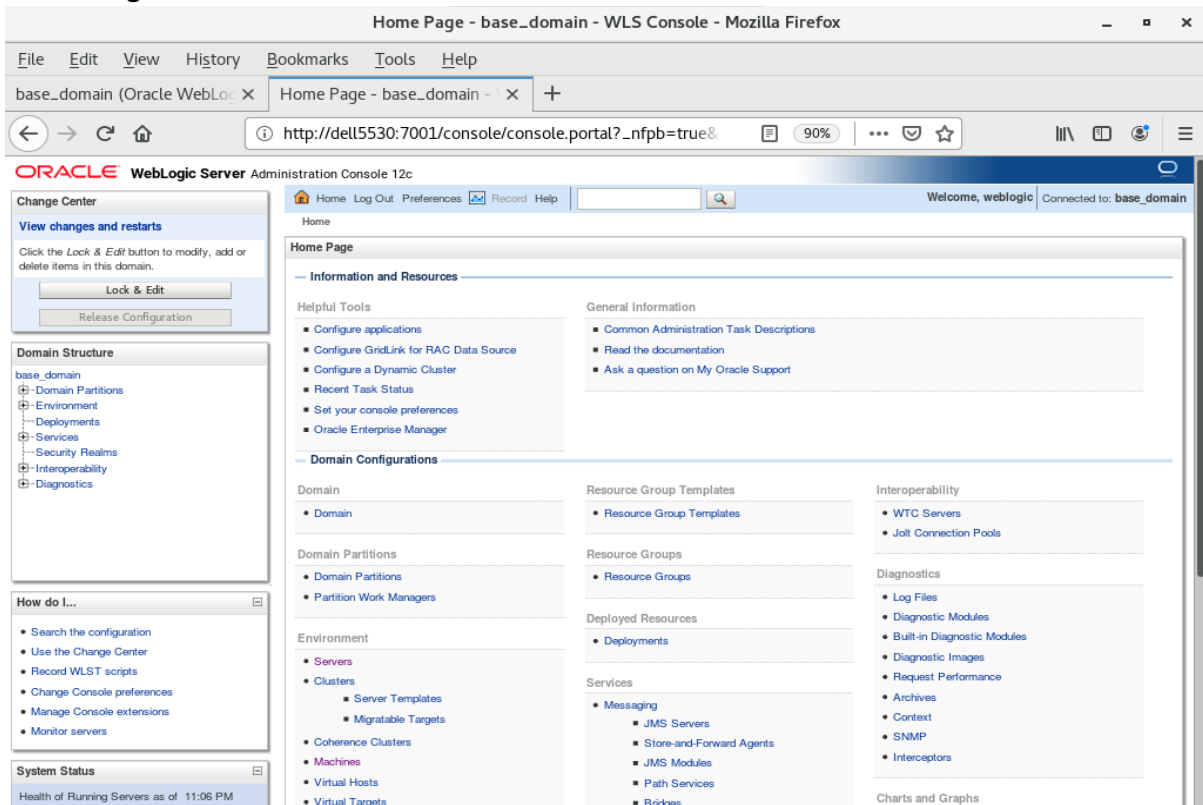


## 2). Access to Administration Server Console

### Login Page:



### Home Page:



### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console 12c interface. The browser title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://dell5530:7001/console/console.portal?\_nfpb=true&\_pageL...". The page title is "Summary of Servers".

On the left, there is a "Change Center" section with "View changes and restarts" and buttons for "Lock & Edit" and "Release Configuration". Below it is the "Domain Structure" tree showing "base\_domain" with sub-items like "Domain Partitions", "Environment", "Deployments", "Services", "Security Realms", "Interoperability", and "Diagnostics". At the bottom left is a "How do I..." section with links like "Create Managed Servers", "Clone servers", etc.

The main content area has tabs for "Configuration" and "Control". Below the tabs, there is a "Summary of Servers" section with 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." There is a "Customize this table" link and a "Servers (Filtered - More Columns Exist)" section with a "Lock & Edit" button.

A table lists the servers:

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

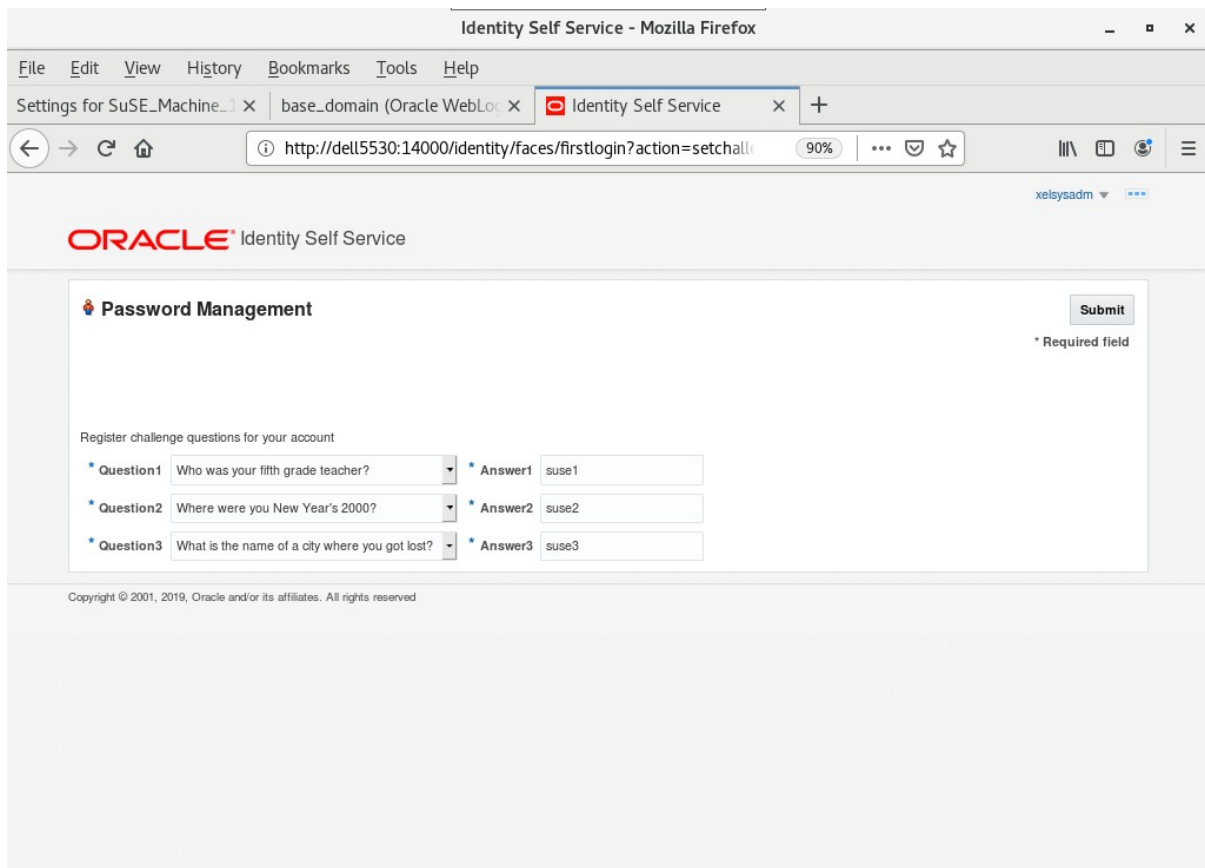
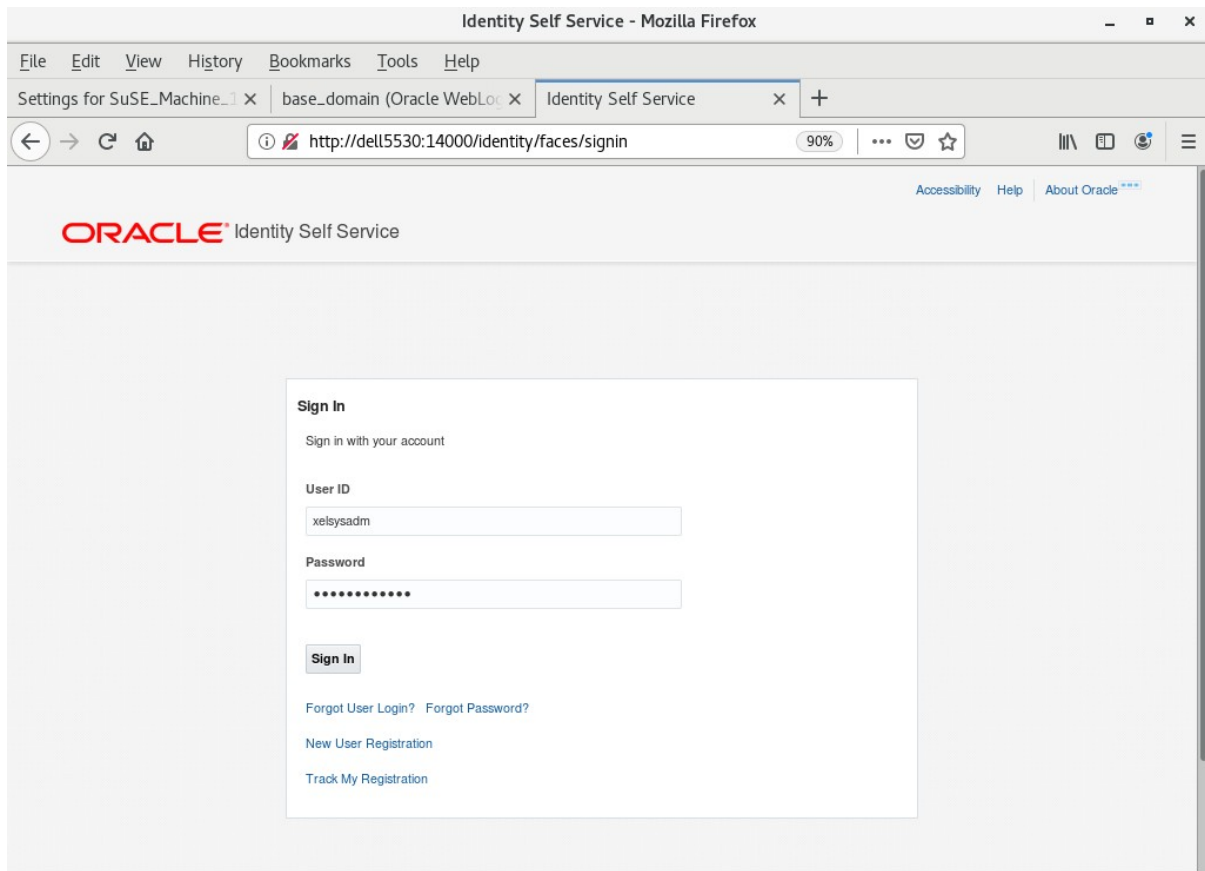
Verify that the Admin Server can connect to the node manager running on your machine. **Environments -> Machines -> <your machine> -> Monitoring**. The status should show: **Reachable**

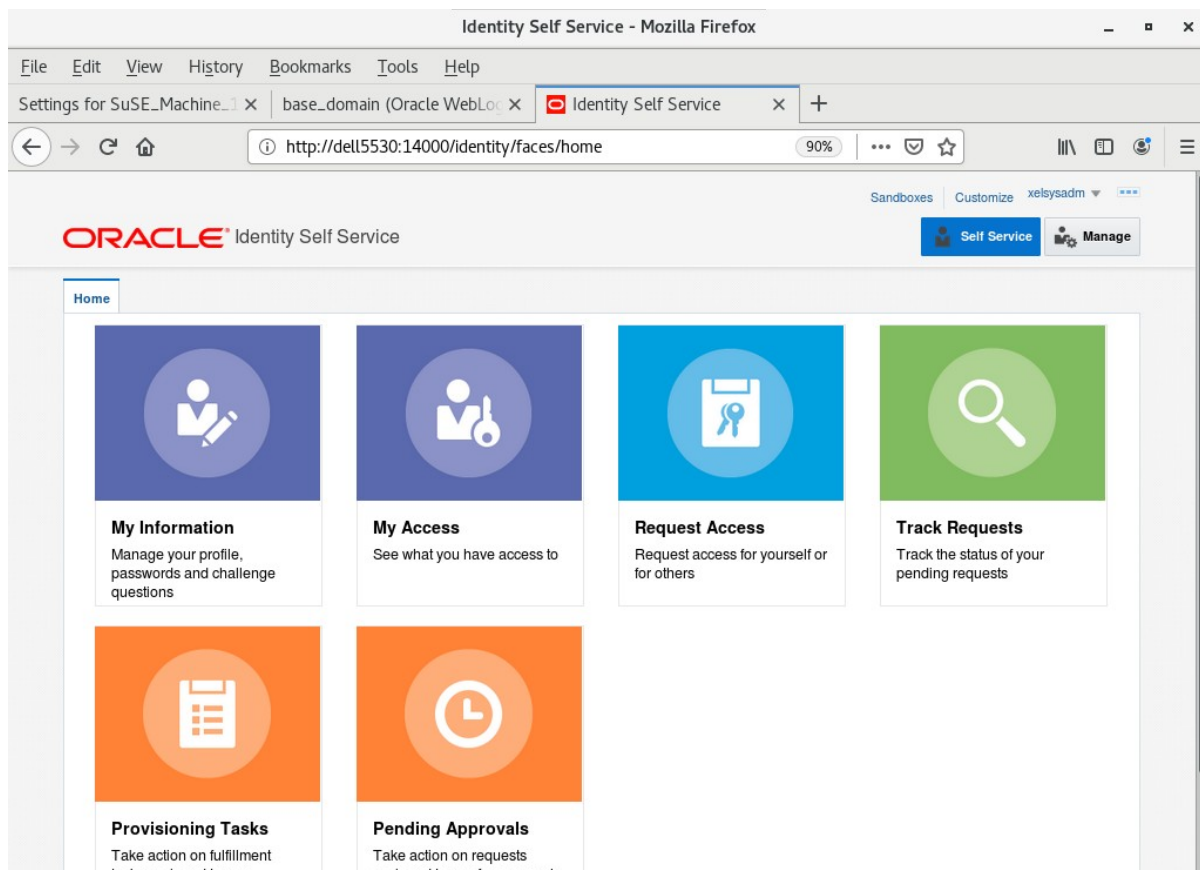
The screenshot shows the Oracle WebLogic Server Administration Console 12c interface. The browser title is "Settings for SuSE\_Machine\_1 - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://dell5530:7001/console/console.portal?\_nfpb=true&\_pageL...". The page title is "Settings for SuSE\_Machine\_1".

On the left, there is a "Change Center" section with "View changes and restarts" and buttons for "Lock & Edit" and "Release Configuration". Below it is the "Domain Structure" tree showing "base\_domain" with sub-items like "Domain Partitions", "Environment", "Deployments", "Services", "Security Realms", "Interoperability", and "Diagnostics". At the bottom left is a "How do I..." section with links like "Monitor Node Manager status", "Monitor Node Manager logs", and "Create and configure machines".

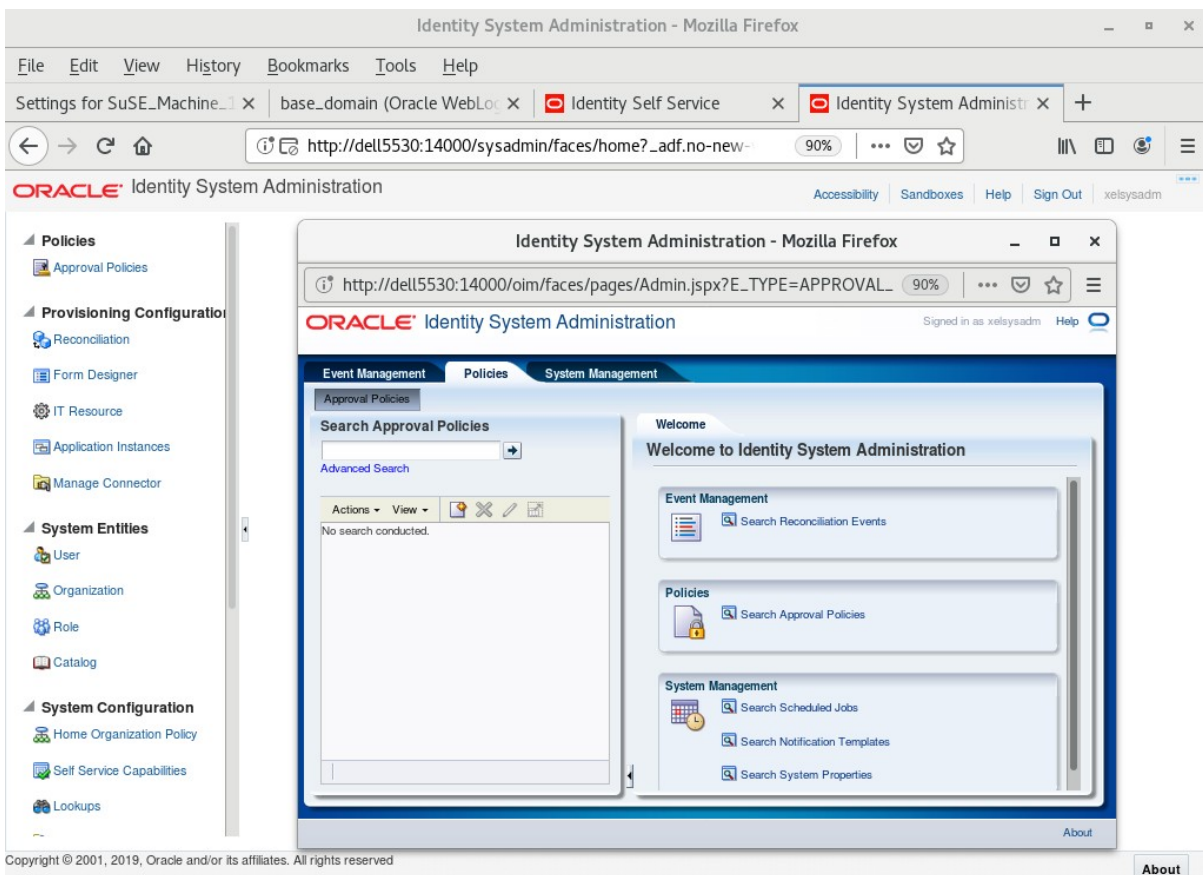
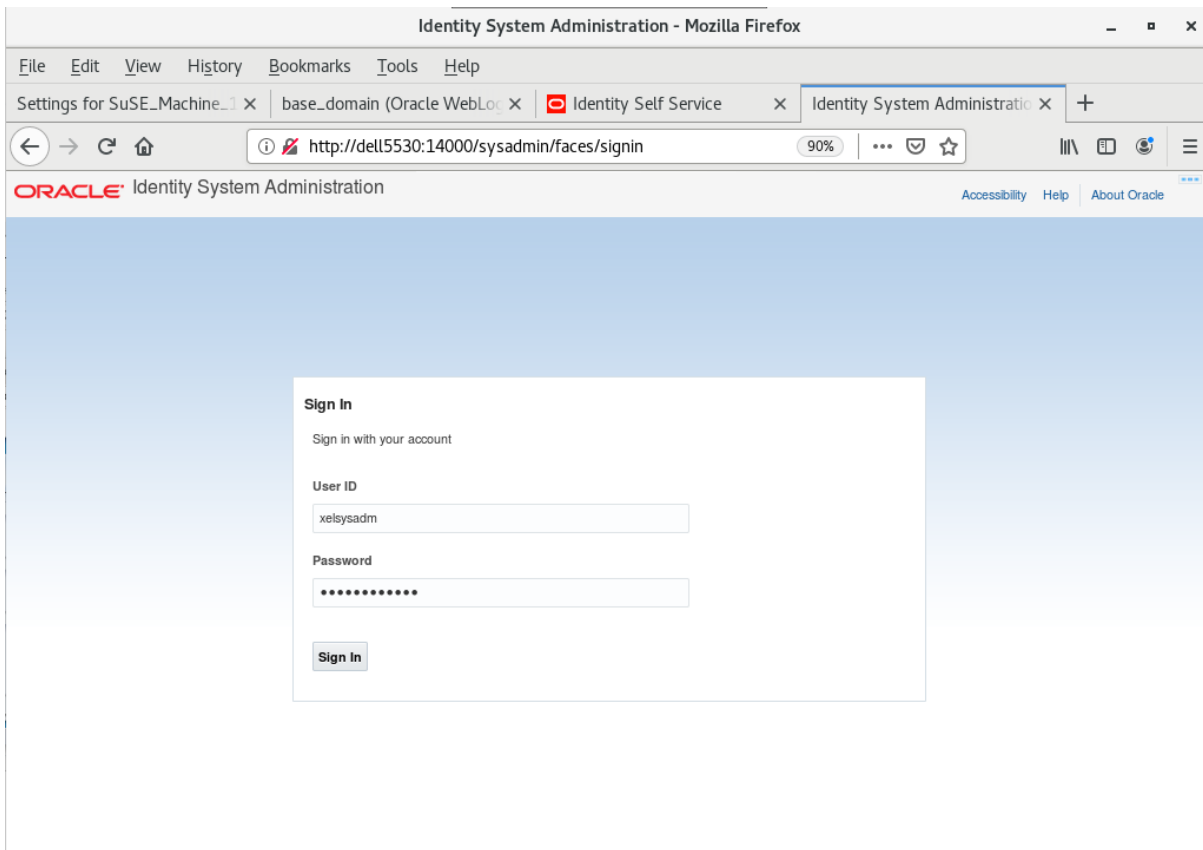
The main content area has tabs for "Configuration", "Monitoring", and "Notes". The "Monitoring" tab is active, showing "Node Manager Status" and "Node Manager Log" sub-tabs. Below the tabs, there is a "Settings for SuSE\_Machine\_1" section with a description: "This page allows you to view current status information for the Node Manager instance configured for this machine." There is a "Status:" field showing "Reachable" and a "Version:" field showing "12.2.1.4.0".

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>

Welcome to the Oracle SOA Platform on WebLogic - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Settings for SuSE\_Machine\_1 x base\_domain (Oracle WebLo... x Welcome to the Oracle SOA... x +

← → ↻ 🏠 ⓘ http://del15530:7003/soa-infra/ 90% ... 📄 🌐 ☰

## Welcome to the Oracle SOA Platform on WebLogic

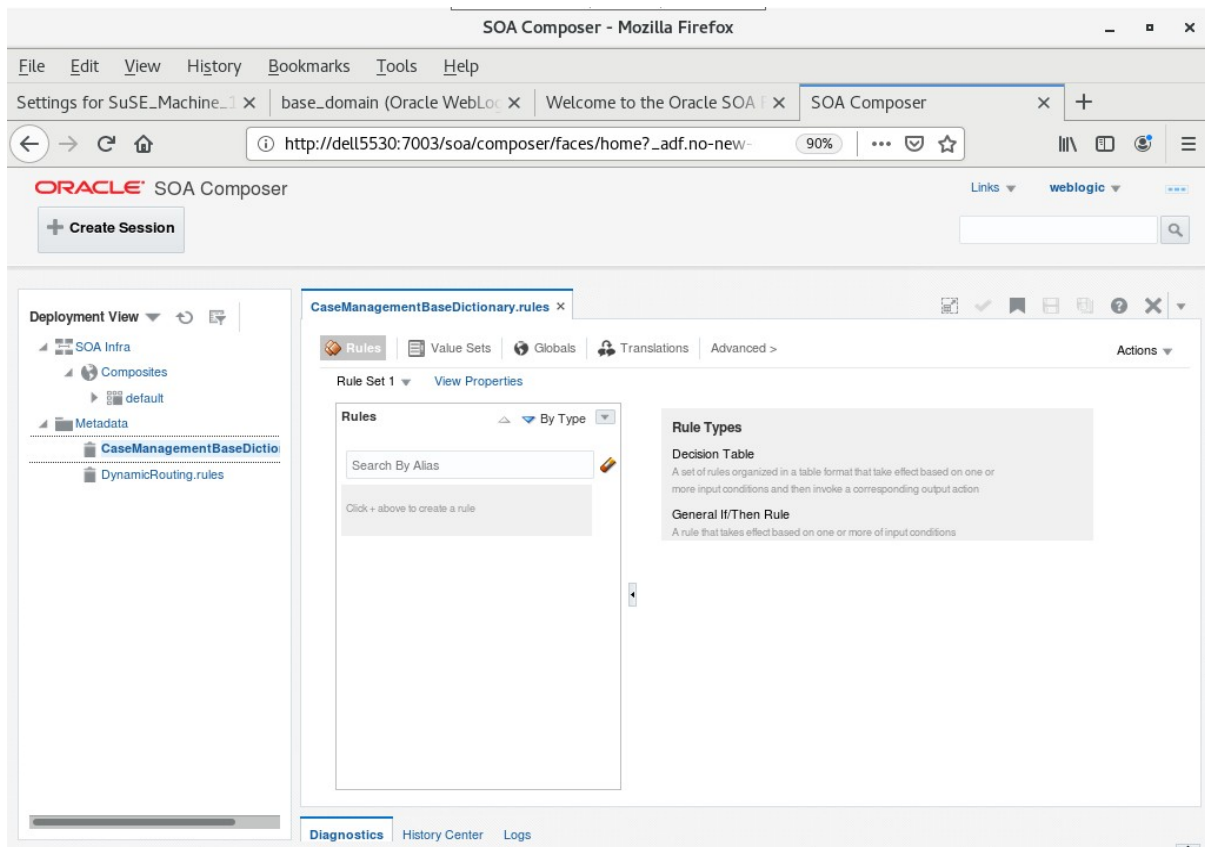
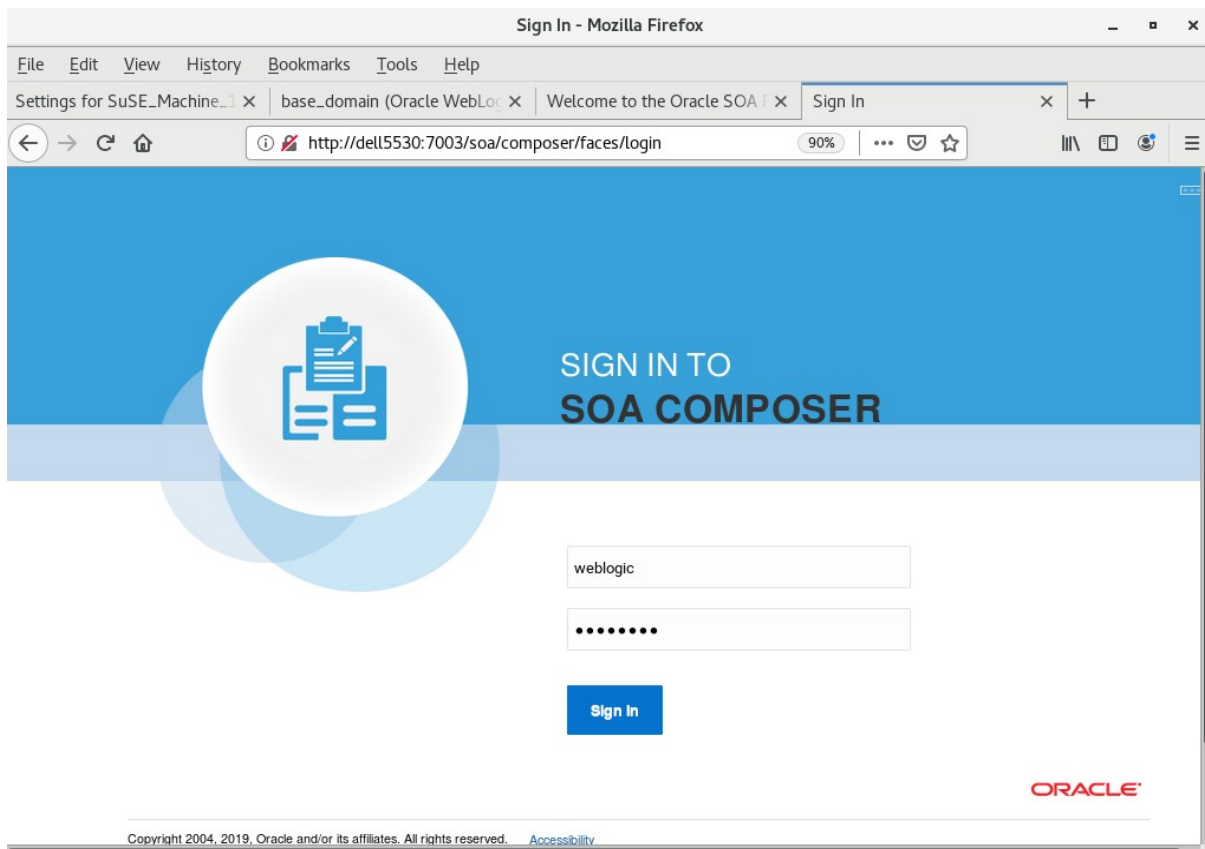
SOA Version: v12.2.1.4.0 - MAIN\_190828.0353.3300  
 WebLogic Server 12.2.1.4.0 (12.2.1.4.0)  
 Running on: soa\_server1

The following composites are currently deployed:

1. default/AutoApproval!1.0\*soa\_23c1593a-7ccb-4683-b41f-eb854740c4e9
  - [Test RequestApprovalService](#)
2. default/BeneficiaryManagerApproval!4.0\*soa\_becca18d-c1f6-45b6-a28f-001d35d8c3a2
  - [Test RequestApprovalService](#)
2. default/CertificationOverseerProcess!2.0\*soa\_e7c2c436-1305-44bf-b3b6-586e1a0cf919
  - [Test CertificationTaskService](#)
2. default/CertificationProcess!2.0\*soa\_930f7bcf-0edb-4cfc-852c-9f1dceaed924
  - [Test CertificationTaskService](#)
2. default/DefaultOperationalApproval!5.0\*soa\_f59e2f29-f241-4ddc-882c-586eab274f06
  - [Test RequestApprovalService](#)
2. default/DefaultRequestApproval!6.0\*soa\_be00dc82-bd6a-470a-9a67-2e82934385ae
  - [Test RequestApprovalService](#)
2. default/DefaultRoleApproval!3.0\*soa\_870861b0-8b7b-4e3e-8dc0-73436cddb008
  - [Test RequestApprovalService](#)
2. default/DefaultSODApproval!2.0\*soa\_ec71d30f-1f6f-49a0-9472-864de0005a28
  - [Test RequestApprovalService](#)
2. default/DisconnectedProvisioning!2.0\*soa\_325bc5b7-6519-4921-965e-b18dbc7ece9f
  - [Test manualprovisioningprocess\\_client](#)
2. default/IdentityAuditRemediation!1.0\*soa\_bfc54c4a-92ff-472c-9406-2c200141f34b
  - [Test IdentityAuditRemediationService](#)
2. default/OACGRoleAssignSODCheck!1.0\*soa\_fd1b35b1-d115-43e4-848f-c4b30dca3dcb
  - [Test RequestApprovalService](#)
2. default/ProvideInformation!3.0\*soa\_2b7a71a0-3b37-4af5-aeab-704c536b4276

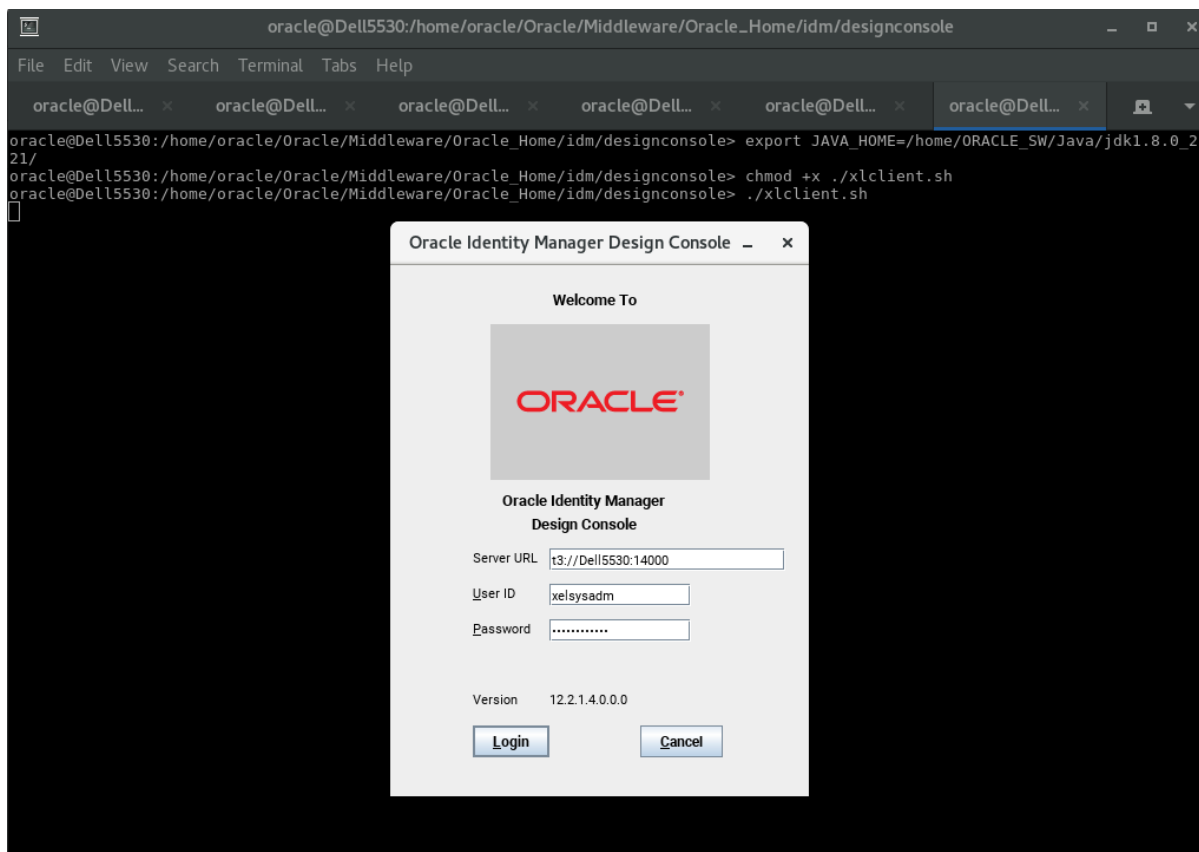
Links  
[SOA Composer](#)  
[BPM Worklist](#)

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



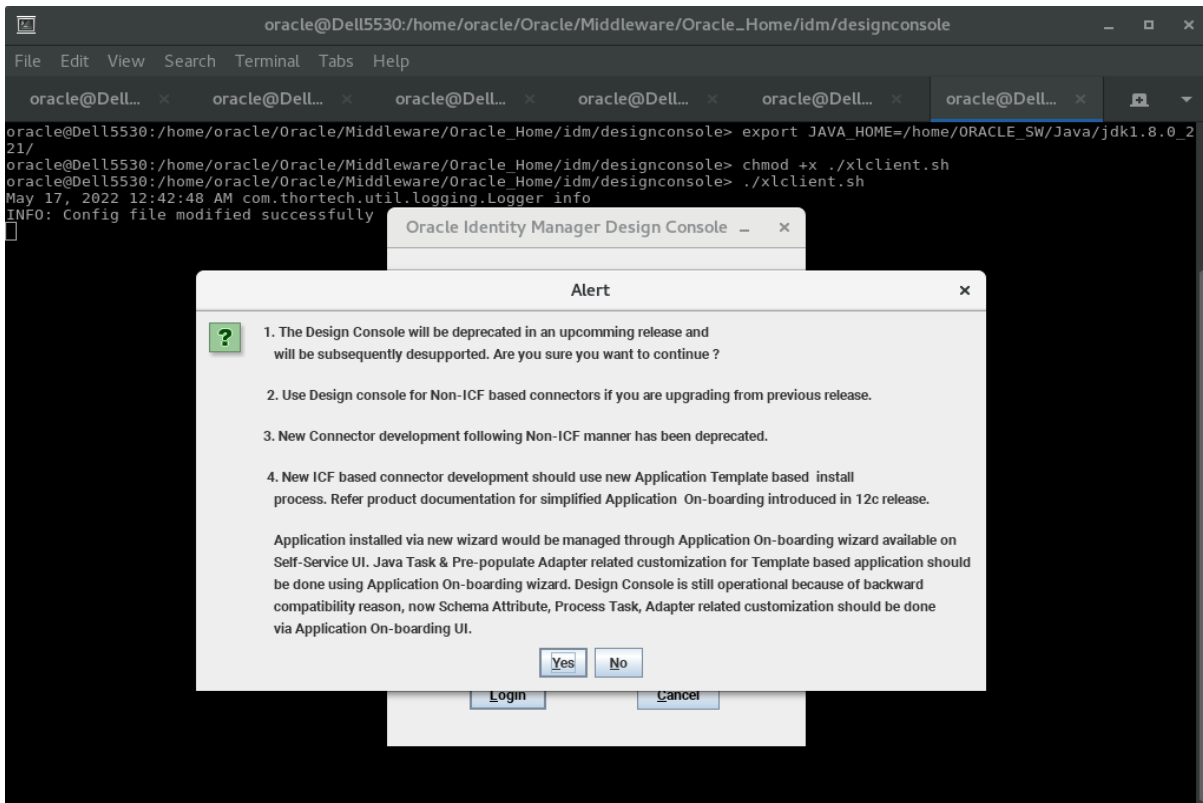
7). Verifying connection for OIM design console. Launch the Design Console (via the xlclient.sh script in \$MW\_HOME/idm/designconsole)

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

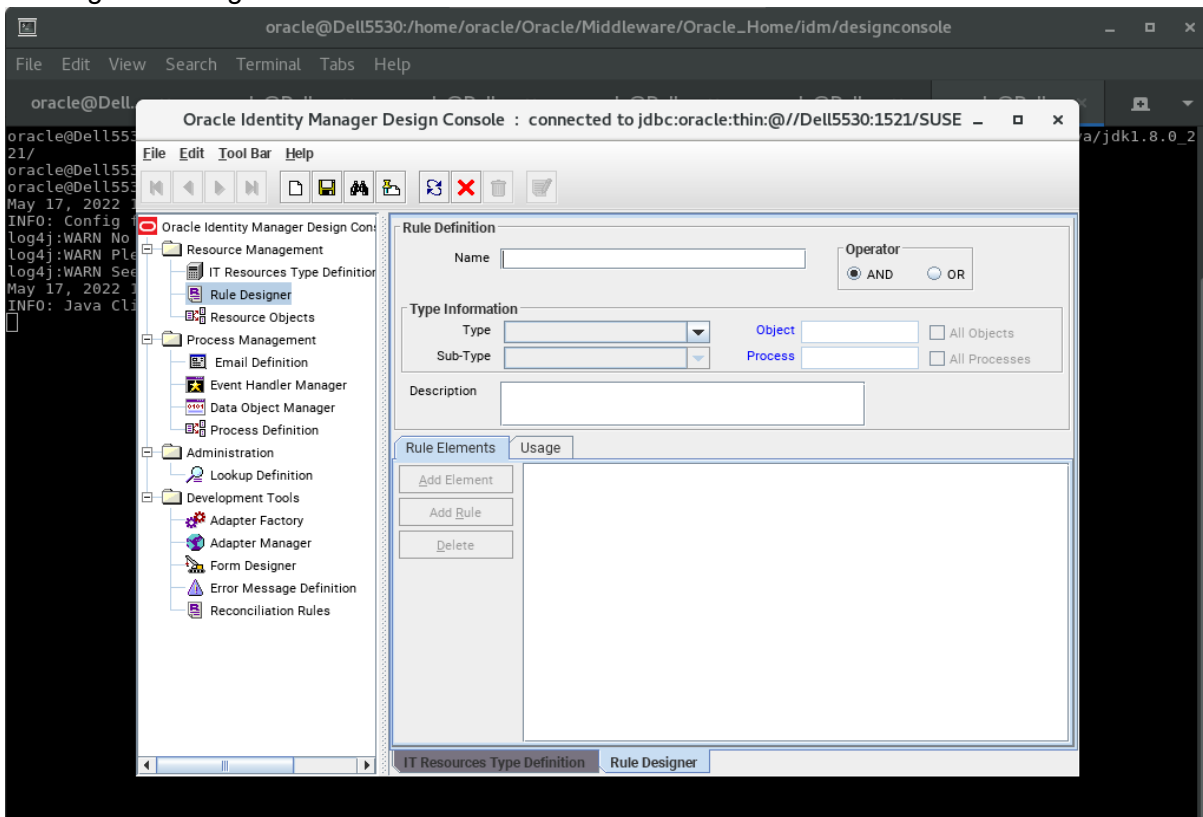




Click on **Login**. Then click **Yes** to confirm.



Viewing OIM Design Console.



**End of Oracle Identity Manager.**

# Additional Test - Oracle Database Client (x86-64 & x86)

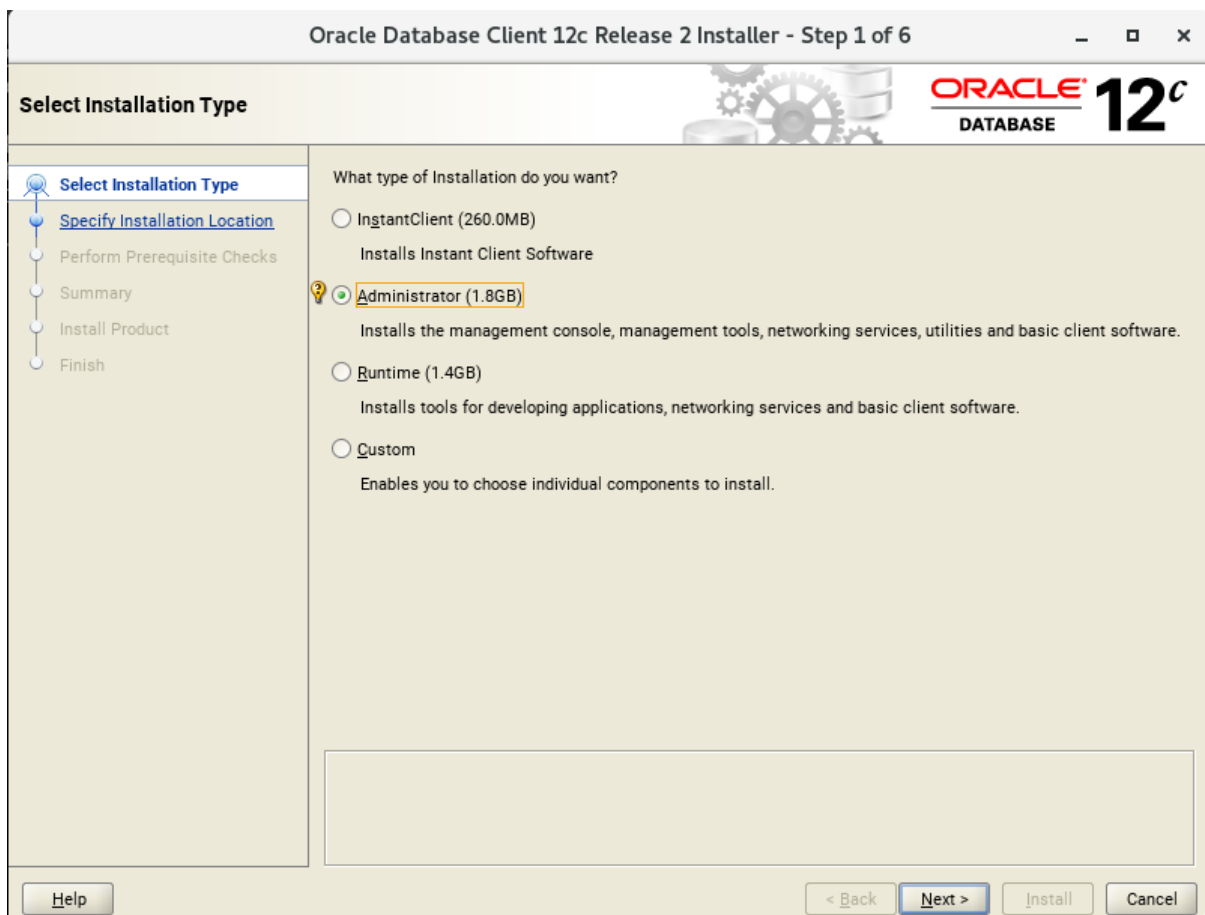
## 1. Installing Oracle Database Client(x86-64).

1-1. Log in to the target system (SUSE Linux Enterprise Server 12 SP5 64-bit OS) as a non-admin user. Download Oracle Database Client 12cR2(12.2.0.1.0) from <https://www.oracle.com/downloads/#category-database>.

1-2. Go to the directory where you have downloaded the installation binaries, extract the contents of the .zip ('V839967-01.zip') file and run the `./runInstaller` command to start Oracle Universal Installer.

### Install Flow:

1). Select Installation Type.



Installation screens vary depending on the installation option you select. Respond to the configuration prompts as needed. Then click **Next** to continue.

## 2). Specify Installation Location.

Oracle Database Client 12c Release 2 Installer - Step 2 of 6

### Specify Installation Location

Select Installation Type

**Specify Installation Location**

Perform Prerequisite Checks

Summary

Install Product

Finish

Specify an Oracle base path to place all Oracle software and configuration-related files. This location is the Oracle base directory.

Oracle base:  Browse...

Specify a location for storing Oracle software files. This location is the Oracle home directory.

Software location:  Browse...

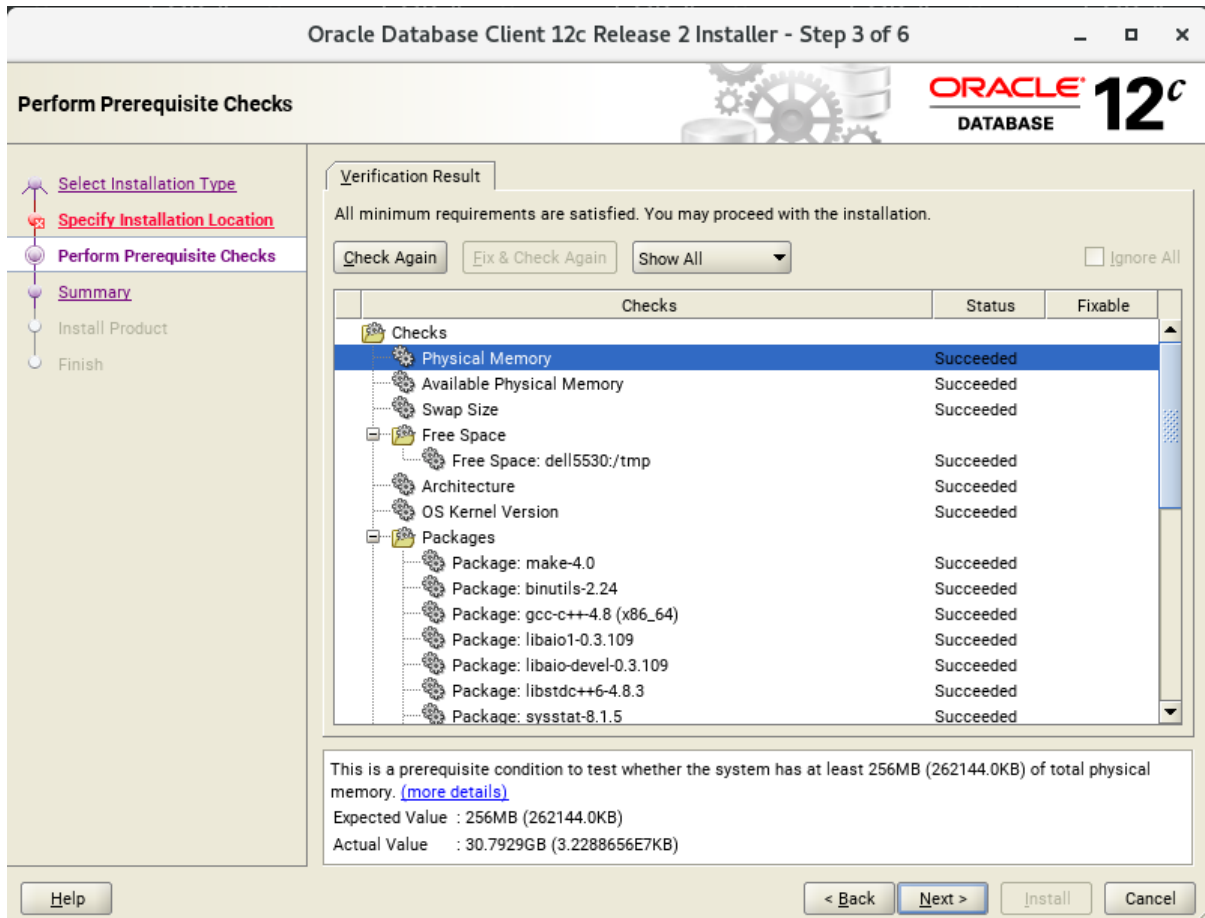
Messages:

[INS-32056] The specified Oracle Base contains the existing Central Inventory location: /home/oracle/orainventory.

Help < Back Next > Install Cancel

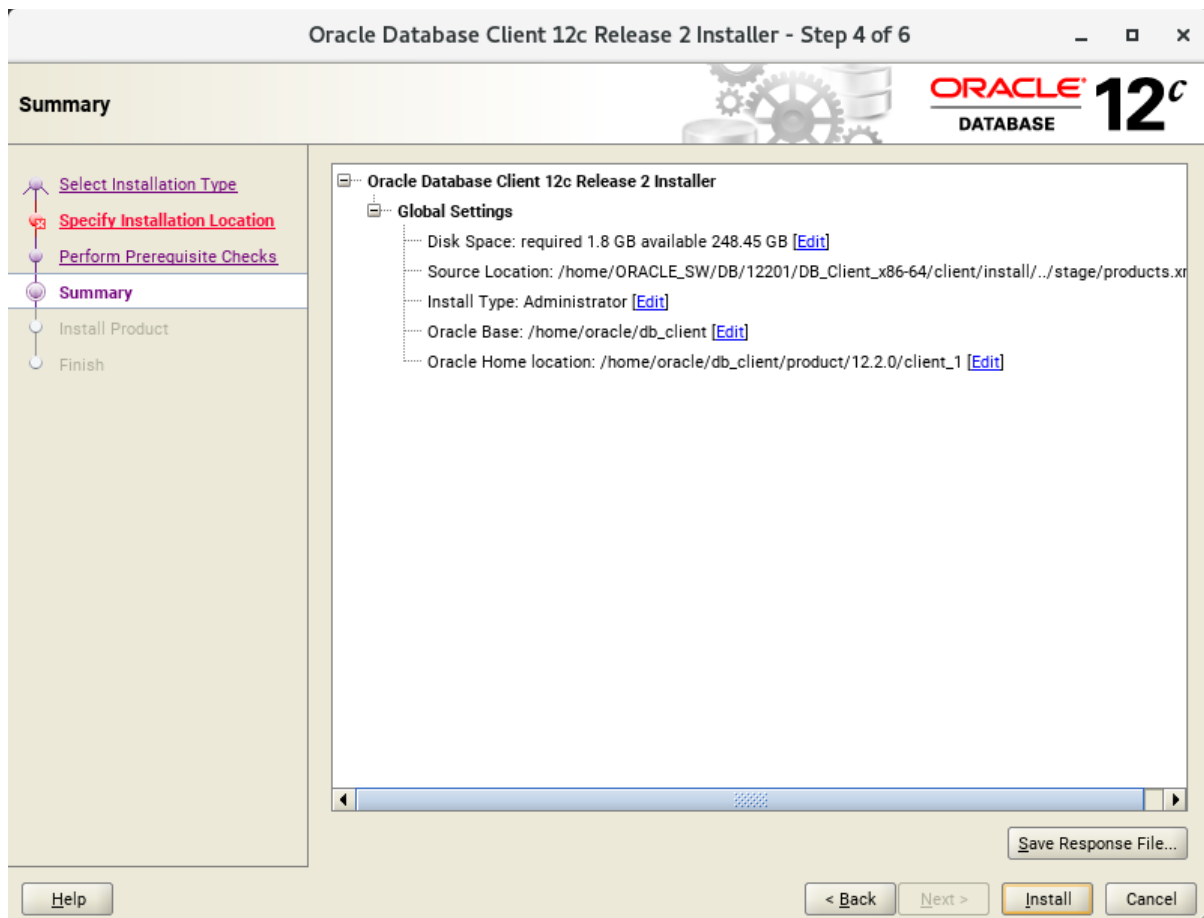
Type the full path of the directory in the Oracle base field, then click **Next** to continue.

3). Perform Prerequisite Checks.



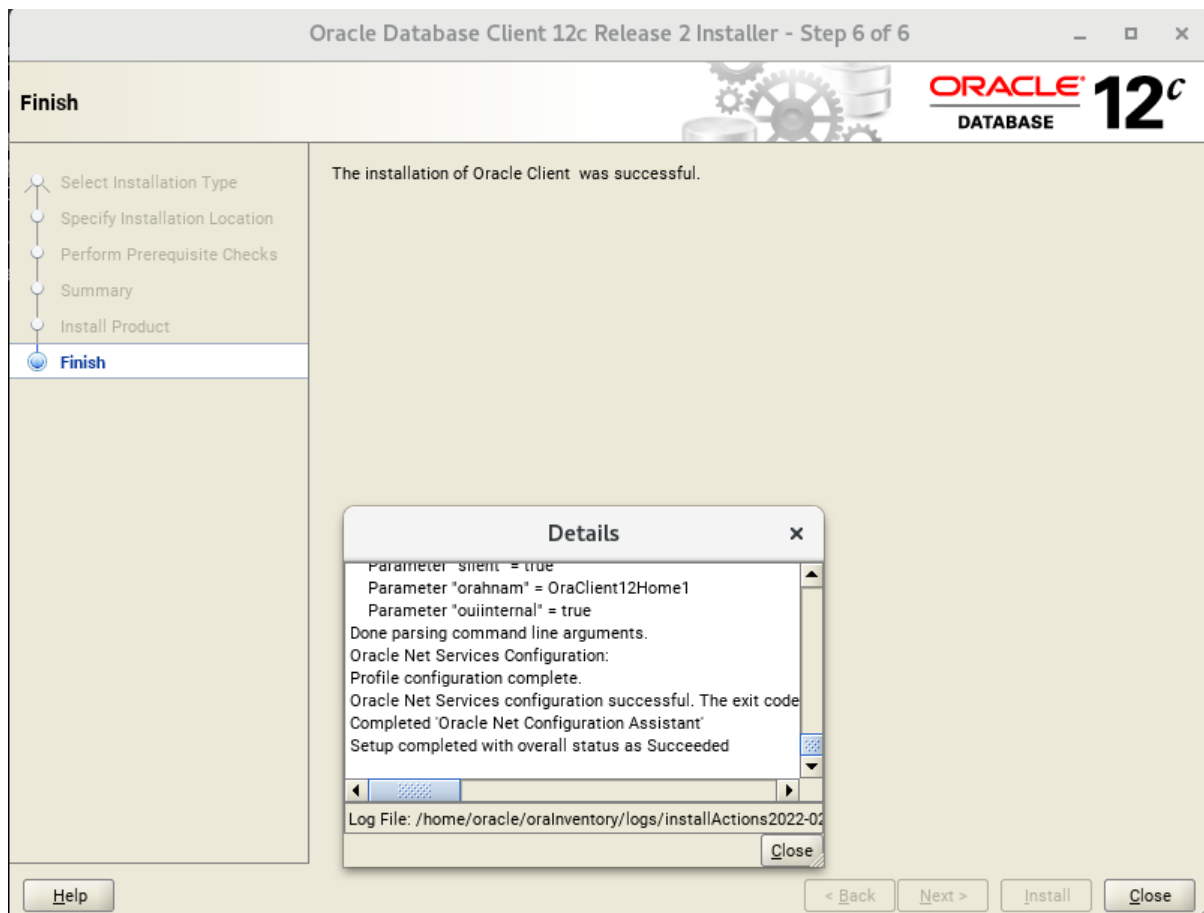
Prerequisite Checks results will be shown as above, make sure all requirements are satisfied. Click **Next** to continue.

## 4). 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.

## 5). Finish.

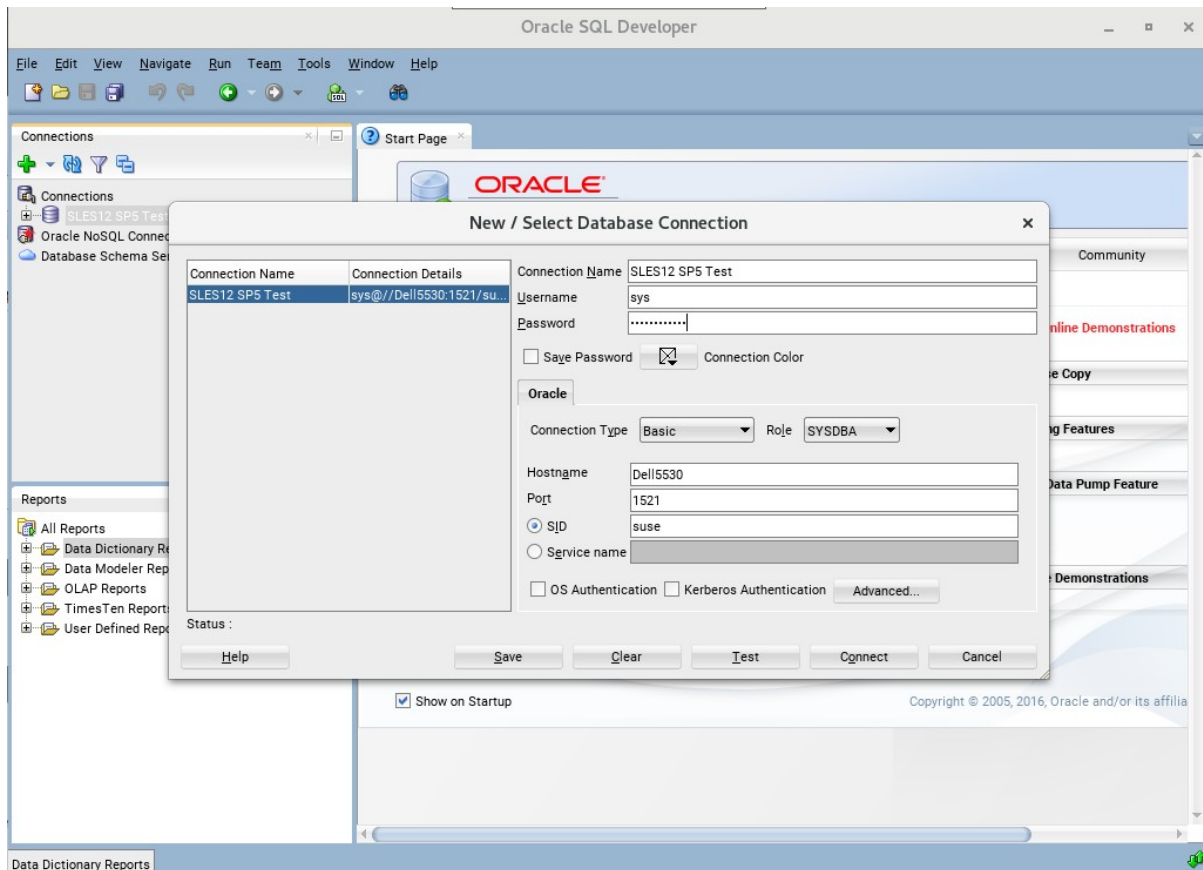


The installation of Oracle client was successful. Click **Finish** to dismiss the installer.

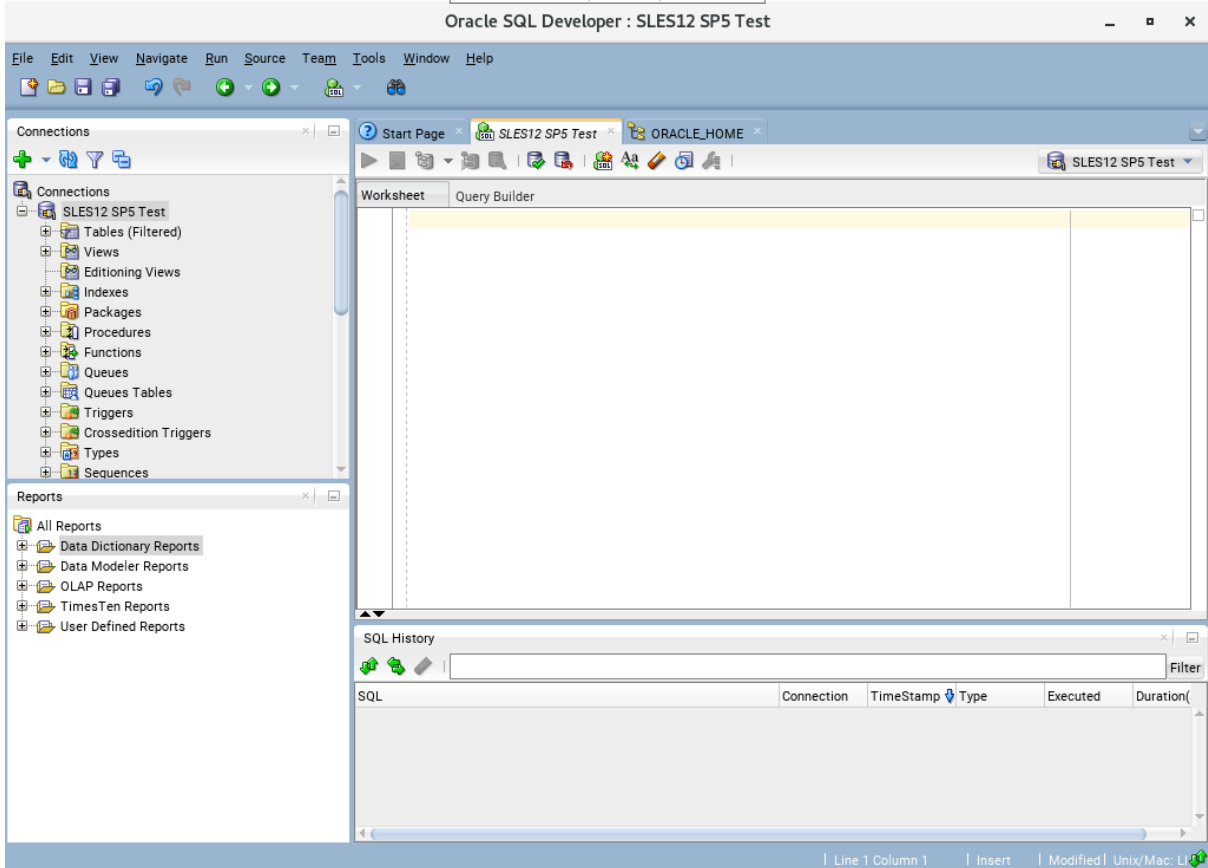
## 2. Oracle Database Client(x86-64) Postinstallation Tests.

2-1. Run **sqldeveloper.sh** located in the **CLIENT\_HOME/bin** directory.

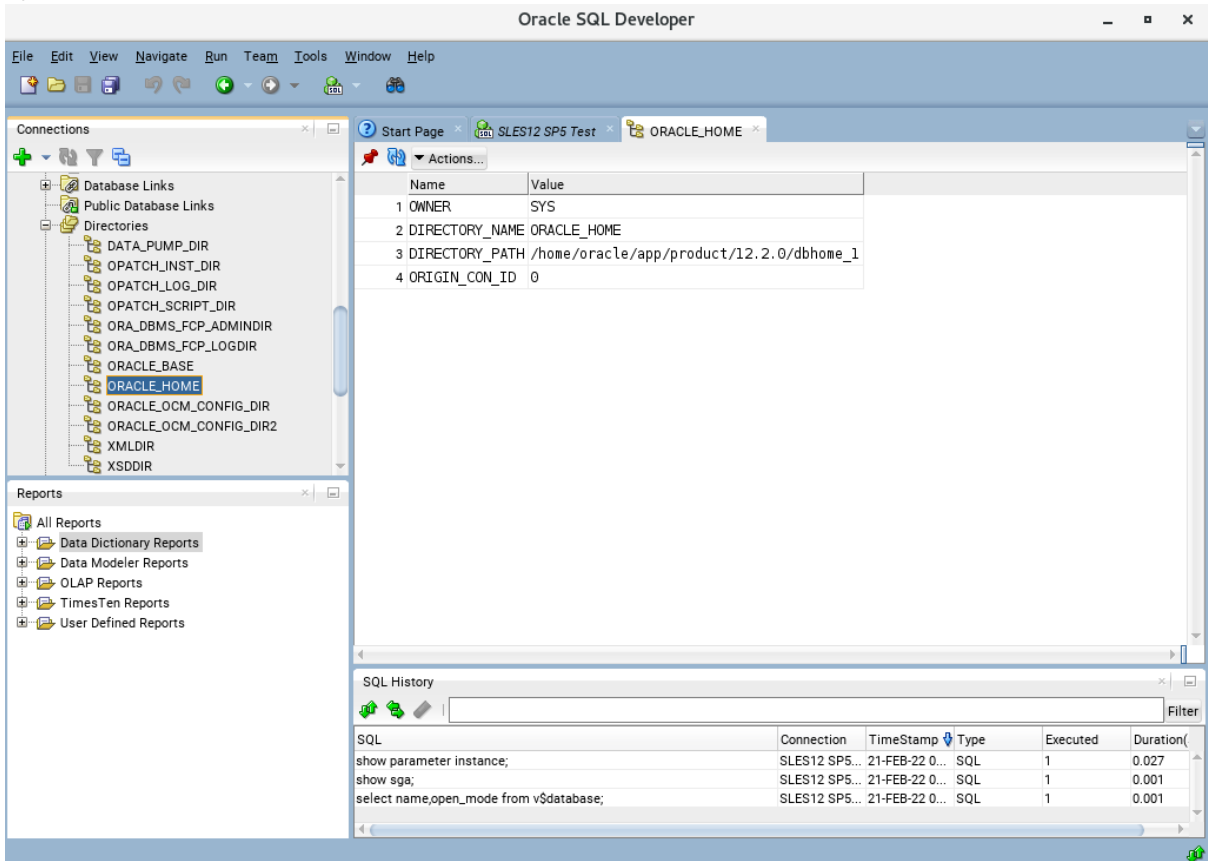
1). Create a new database connection.



2). Connect to database.



3). View Oracle database related information - ORACLE\_HOME





Checking oracle database version.

The screenshot shows the Oracle SQL Developer interface. The main window displays a worksheet with the SQL query: `select * from v$version;`. Below the worksheet, the Query Result window shows the output of the query:

BANNER	CON_ID
1 Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production	0
2 PL/SQL Release 12.2.0.1.0 - Production	0
3 CORE12.2.0.1.0Production	0
4 TNS for Linux: Version 12.2.0.1.0 - Production	0
5 NLSRTL Version 12.2.0.1.0 - Production	0

The SQL History window at the bottom shows the execution details for the query:

SQL	Connection	TimeStamp	Type	Executed	Duration
select * from v\$version;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.002
show parameter instance;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.027
show sga;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.001
select name.open mode from v\$database;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.001

Retrieve database users.

The screenshot shows the Oracle SQL Developer interface. The main window displays a worksheet with the SQL query: `select * from v$version; select * from all_users where username='DEV_STB'; show parameter db;`. Below the worksheet, the Query Result window shows the output of the query:

USERNAME	USER_ID	CREATED	COMMON	ORACLE_MAINTAINED	INHERITED	DEFAULT_COLLATION	IMPLIC
1 DEV_STB	107	21-FEB-22	NO	N	NO	USING_NLS_COMP	NO

The SQL History window at the bottom shows the execution details for the queries:

SQL	Connection	TimeStamp	Type	Executed	Duration
show parameter db;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.023
select * from all_users where username='DEV_STB';	SLES12 SP5...	21-FEB-22 0...	SQL	2	0.0
select * from v\$version;	SLES12 SP5...	21-FEB-22 0...	SQL	2	0.001
select * from all users;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.003

View database instance.

The screenshot shows the Oracle SQL Developer interface for a connection named 'SLES12 SP5 Test'. The worksheet contains the following SQL query:

```
select * from v$version;
select * from all_users where username='DEV_STB';
show parameter db;
show user;
select instance_name from v$instance;
```

The 'Query Result' pane displays the following data:

INSTANCE_NAME
1 suse

The 'SQL History' pane shows the execution details for the queries:

SQL	Connection	TimeStamp	Type	Executed	Duration
select instance_name from v\$instance;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.002
show user;	SLES12 SP5...	21-FEB-22 0...	SQL	2	0.001
show parameter db;	SLES12 SP5...	21-FEB-22 0...	SQL	3	0.002
desc DEV_STB;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.006

View database ID and mode.

The screenshot shows the Oracle SQL Developer interface for the same connection. The worksheet contains the following SQL query:

```
select * from v$version;
select * from all_users where username='DEV_STB';
show parameter db;
show user;
select instance_name from v$instance;
select name,open_mode,dbid from v$database;
```

The 'Query Result' pane displays the following data:

NAME	OPEN_MODE	DBID
1 SUSE	READ WRITE	758919362

The 'SQL History' pane shows the execution details for the queries:

SQL	Connection	TimeStamp	Type	Executed	Duration
select name,open_mode,dbid from v\$database;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.002
show parameter db;	SLES12 SP5...	21-FEB-22 0...	SQL	4	0.025
select instance_name from v\$instance;	SLES12 SP5...	21-FEB-22 0...	SQL	1	0.002
show user;	SLES12 SP5...	21-FEB-22 0...	SQL	2	0.001

### 3. Installing Oracle Database Client(x86).

3-1. Log in to the target system (SUSE Linux Enterprise Server 12 SP5 64-bit OS) as a non-admin user. Download Oracle Database Client 12cR2(12.2.0.1.0) from <https://www.oracle.com/downloads/#category-database>.

3-2. Go to the directory where you have downloaded the installation binaries, extract the contents of the .zip ('V839968-01.zip') file and run the `./runInstaller` command to start Oracle Universal Installer.

(Note: Before that please make sure the following packages are installed.

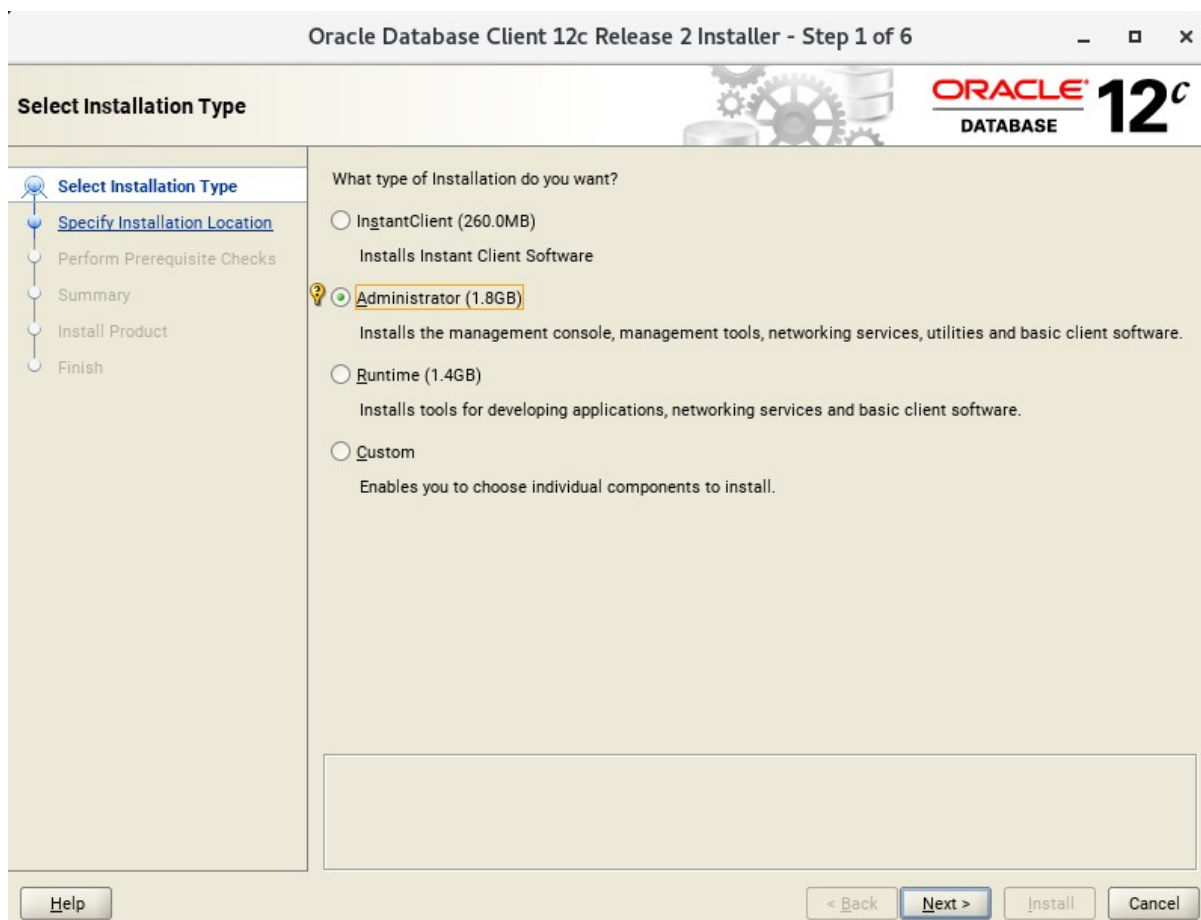
```
Dell5530:/opt/oracle # zypper se libaio
Loading repository data...
Reading installed packages...

S | Name | Summary | Type
---+---+---+---
i | libaio | Linux-Native Asynchronous I/O Access Library | srcpackage
i | libaio-devel | Development Files for Linux-native Asynchronous I/O Access | package
i | libaio1 | Linux-Native Asynchronous I/O Access Library | package
i+ | libaio1-32bit | Linux-Native Asynchronous I/O Access Library | package
Dell5530:/opt/oracle # rpm -qa | grep libaio
libaio-devel-0.3.109-17.15.x86_64
libaio1-0.3.109-17.15.x86_64
libaio1-32bit-0.3.109-17.15.x86_64
Dell5530:/opt/oracle # rpm -qa | grep xorg-x11-libs
xorg-x11-libs-7.6-45.14.noarch
```

)

**Install Flow:**

1). Select Installation Type.



Installation screens vary depending on the installation option you select. Respond to the configuration prompts as needed. Then click **Next** to continue.

## 2). Specify Installation Location.

Oracle Database Client 12c Release 2 Installer - Step 2 of 6

### Specify Installation Location

Select Installation Type

Specify Installation Location

Perform Prerequisite Checks

Summary

Install Product

Finish

Specify an Oracle base path to place all Oracle software and configuration-related files. This location is the Oracle base directory.

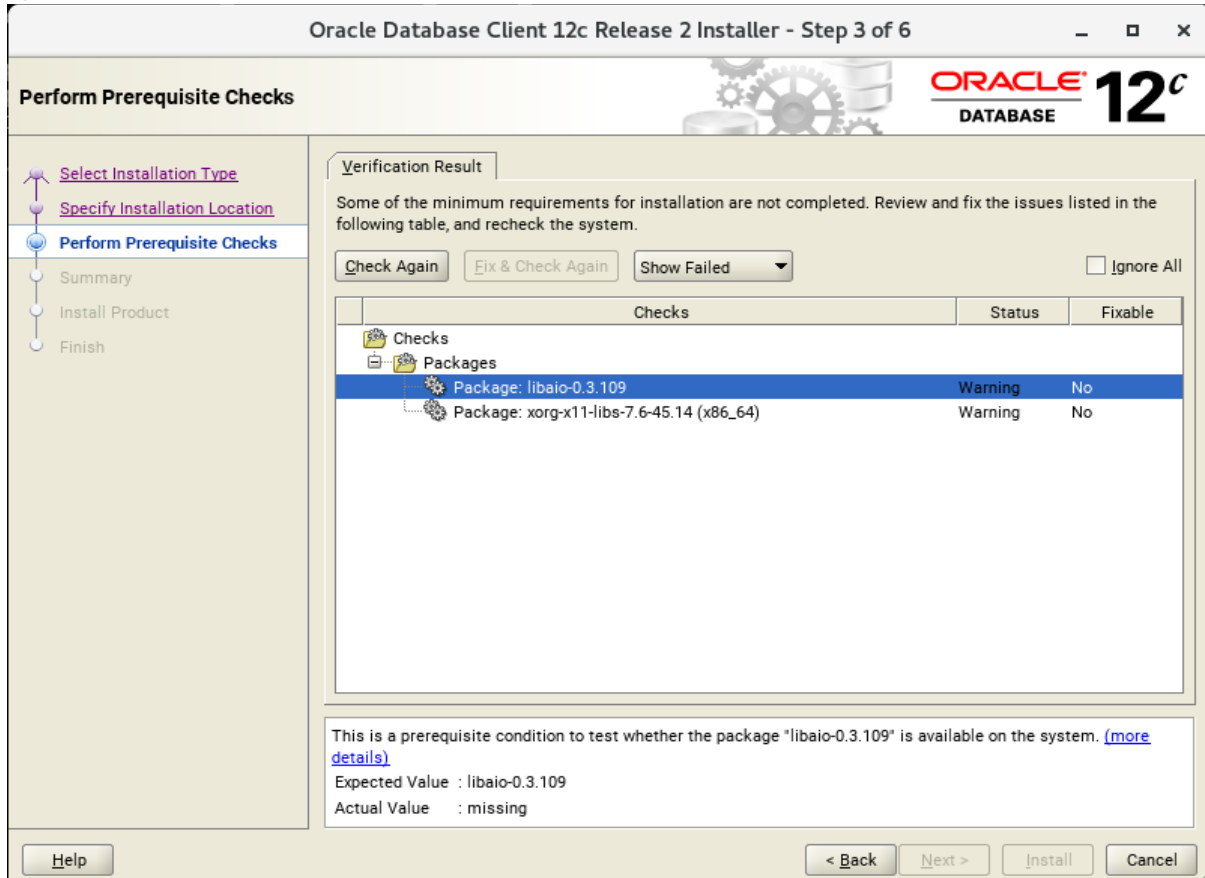
Oracle base:

Specify a location for storing Oracle software files. This location is the Oracle home directory.

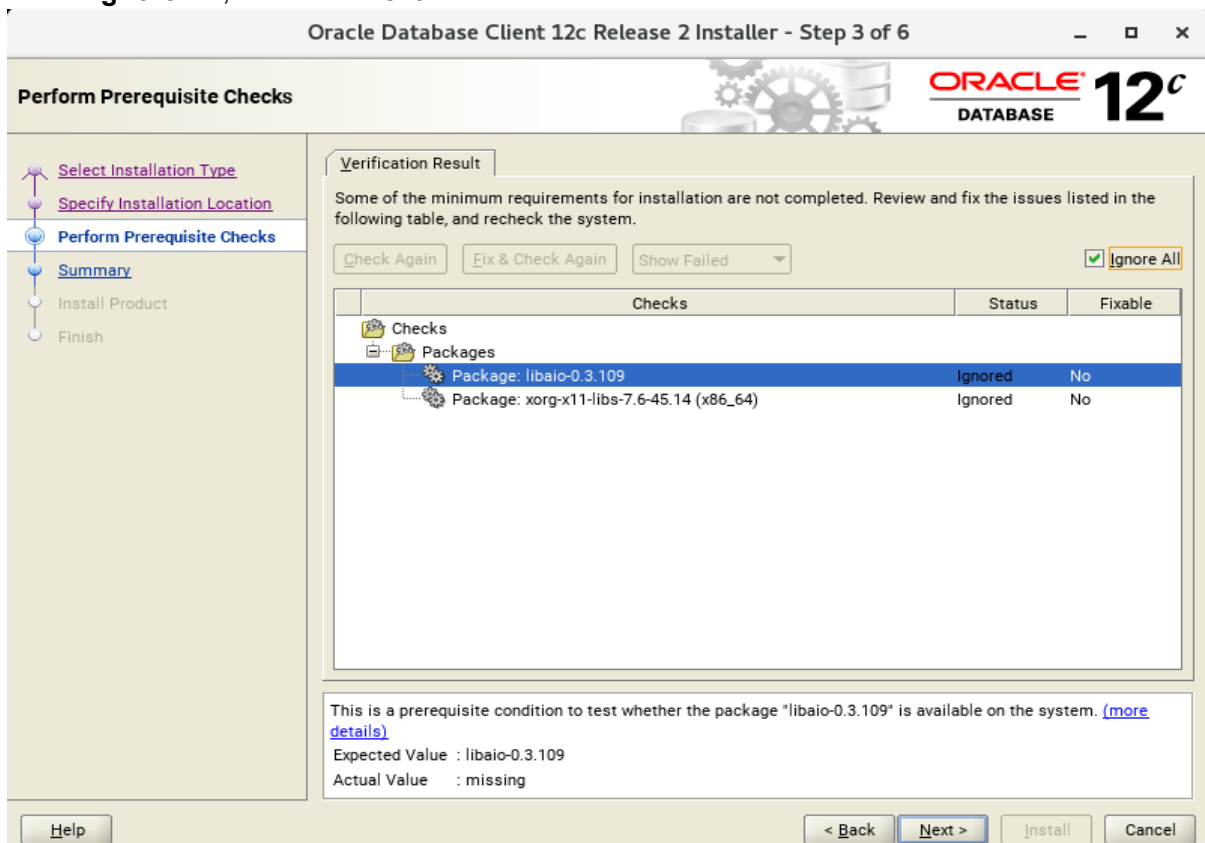
Software location:

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

3). Perform Prerequisite Checks.



Select **Ignore All**, then click **Next** to continue.



Oracle Database Client 12c Release 2 Installer - Step 3 of 6

Perform Prerequisite Checks

ORACLE DATABASE 12<sup>c</sup>

Select Installation Type  
Specify Installation Location  
**Perform Prerequisite Checks**  
Summary  
Install Product  
Finish

Verification Result

Some of the minimum requirements for installation are not completed. Review and fix the issues listed in the following table, and recheck the system.

Check Again    Fix & Check Again    Show All     Ignore All

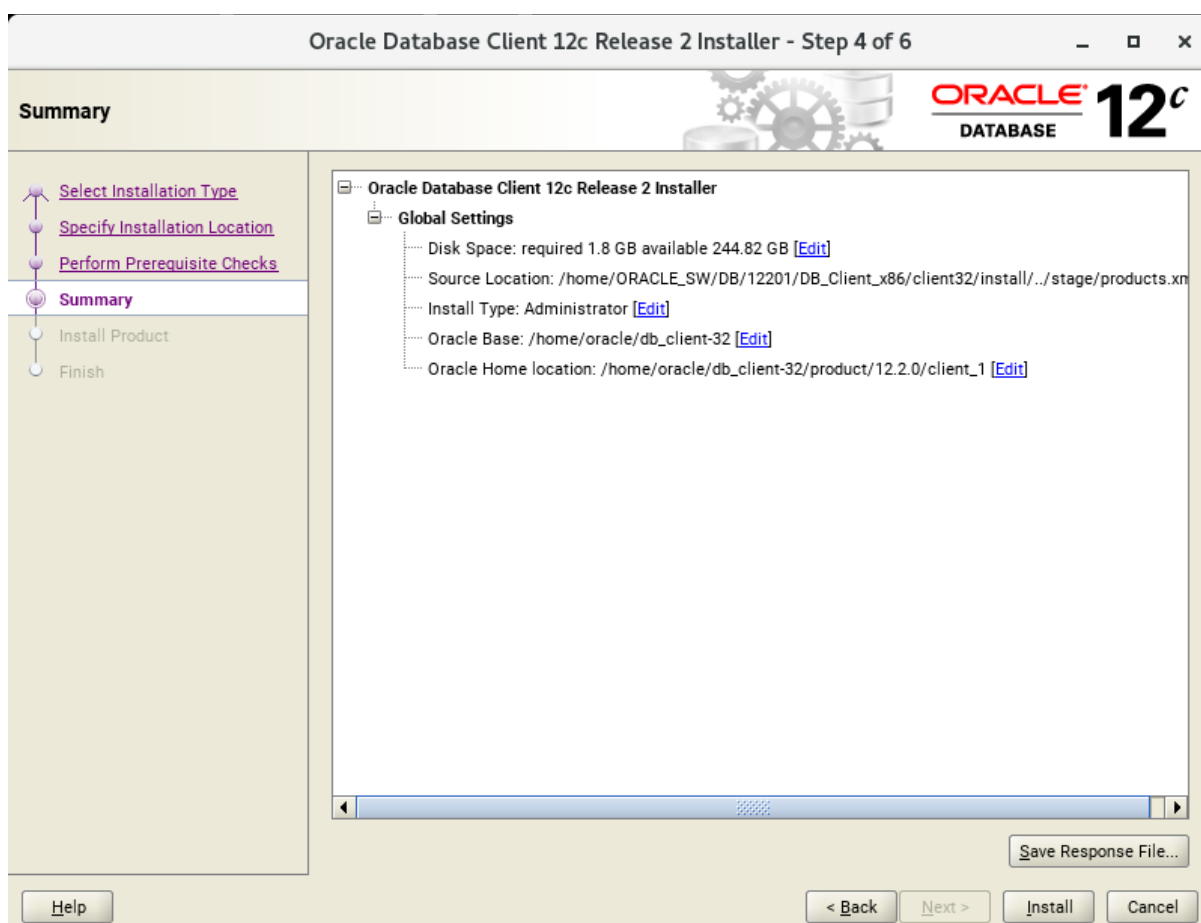
Checks	Status	Fixable
Checks		
Physical Memory	Succeeded	
Available Physical Memory	Succeeded	
Swap Size	Succeeded	
Free Space		
Free Space: dell5530:/tmp	Succeeded	
Architecture	Succeeded	
OS Kernel Version	Succeeded	
Packages		
Package: make-4.0	Succeeded	
Package: binutils-2.24	Succeeded	
Package: gcc-4.8 (x86_64)	Succeeded	
Package: gcc-c++-4.8 (x86_64)	Succeeded	
Package: libaio-0.3.109	Ignored	No
Package: libaio-devel-0.3.109	Succeeded	

This is a prerequisite condition to test whether the package "xorg-x11-libs-7.6-45.14 (x86\_64)" is available on the system. [more details](#)  
Expected Value : xorg-x11-libs(x86\_64)-7.6-45.14  
Actual Value : missing

Help    < Back    Next >    Install    Cancel

Prerequisite Checks results will be shown as above, make sure all requirements are satisfied.

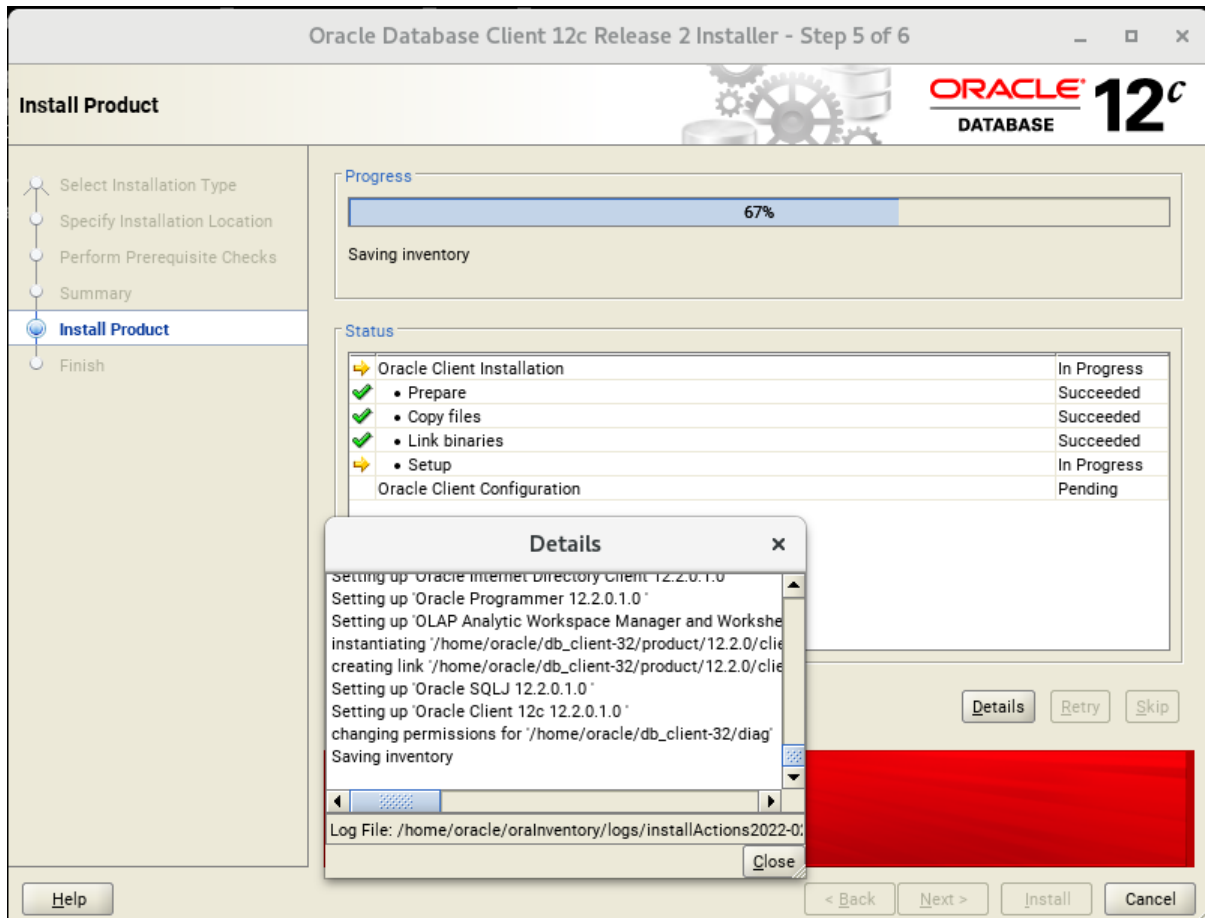
## 4). Summary.



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.

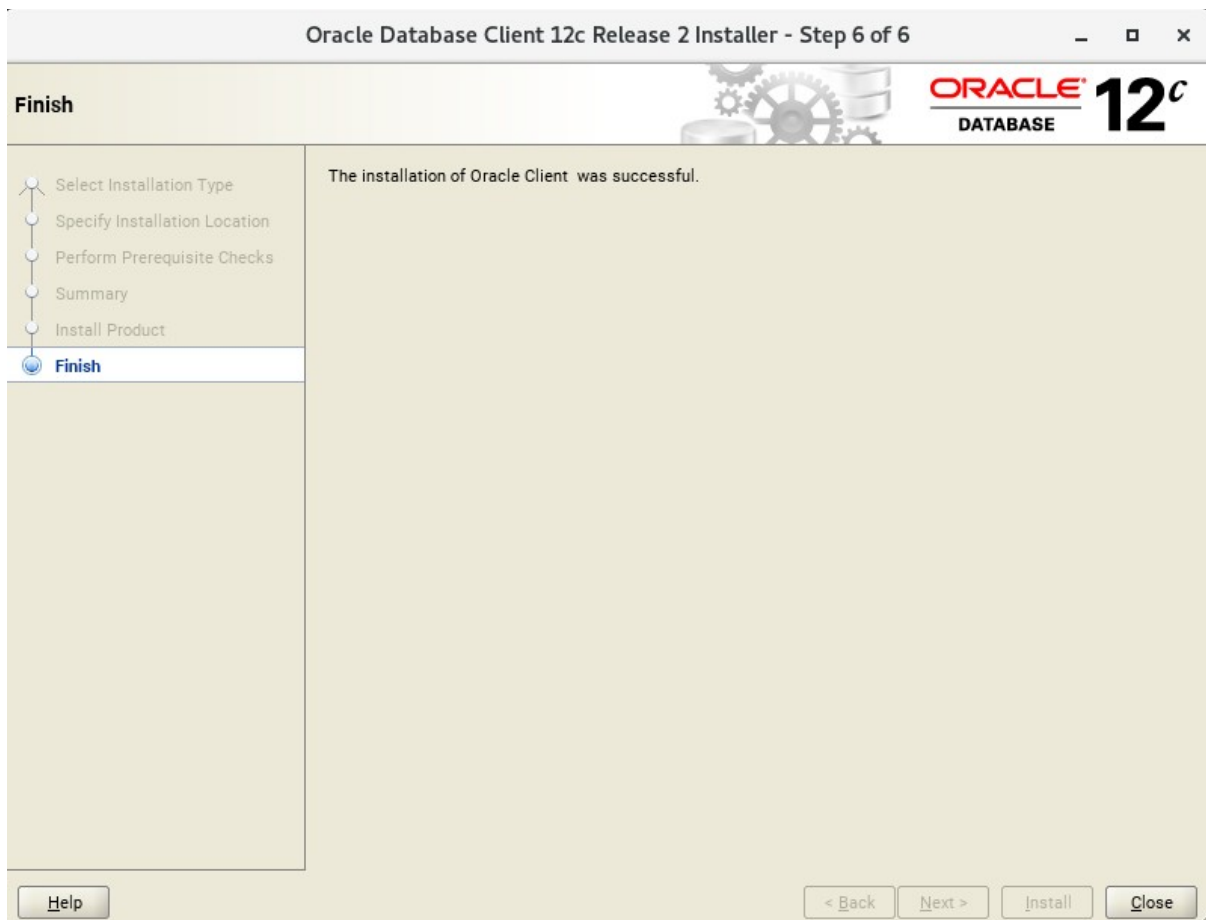


5). Install Product.



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. Wait for the installation process to complete.

## 6). Finish

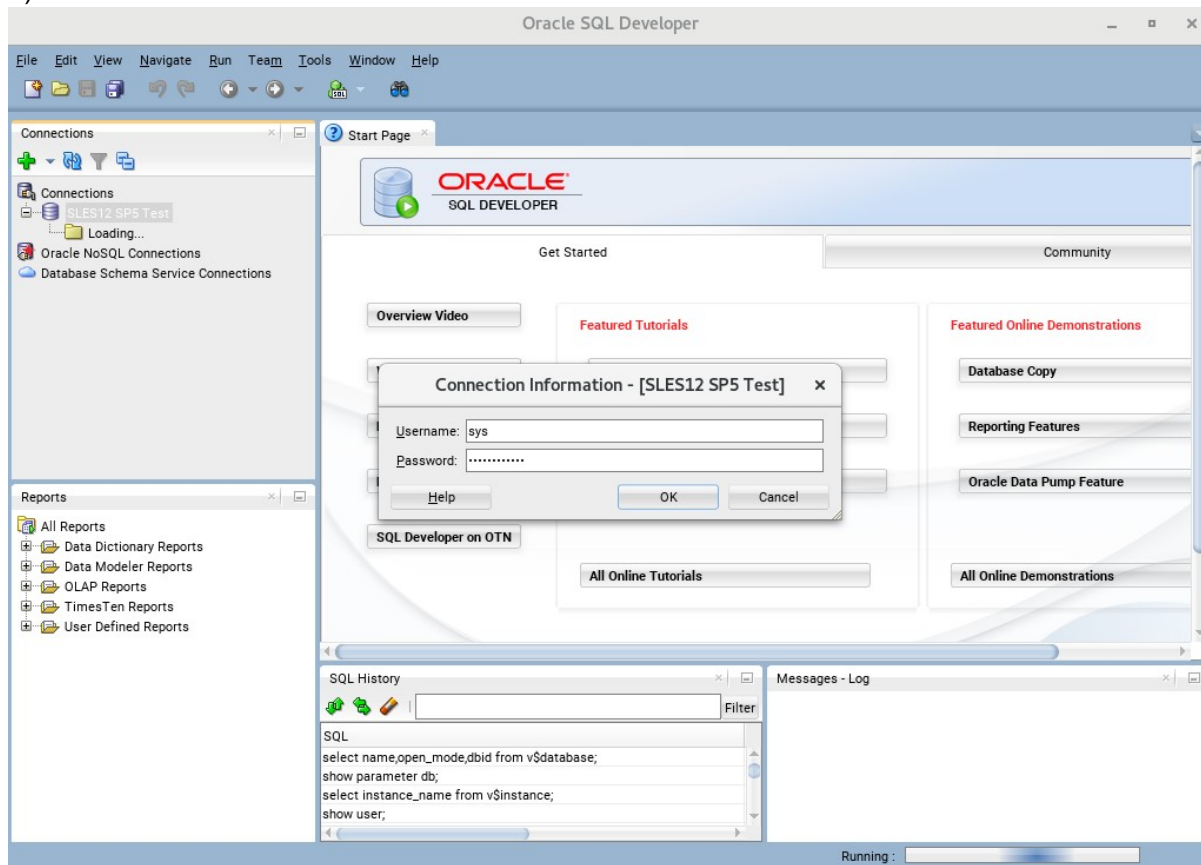


The installation of Oracle client was successful. Click **Finish** to dismiss the installer.

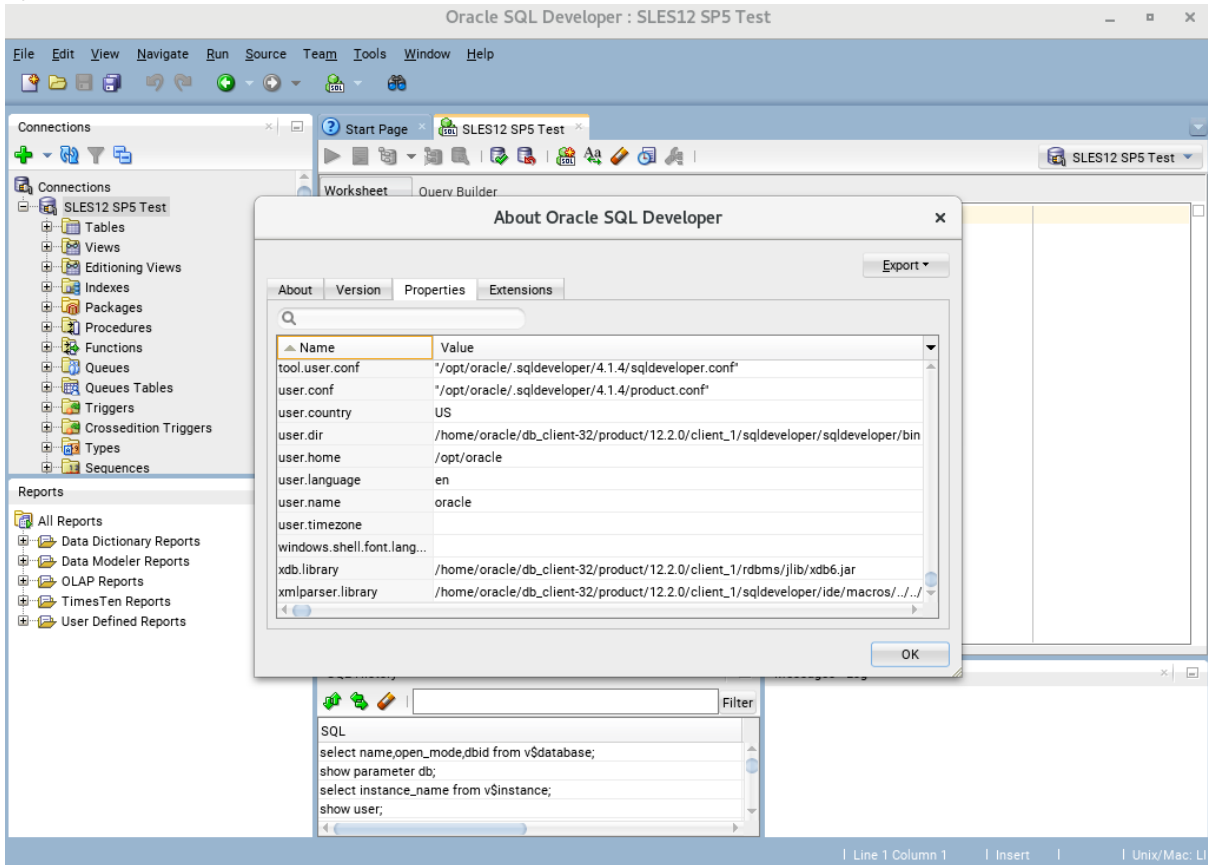
## 4. Oracle Database Client(x86) Postinstallation Tests.

2-1. Run **sqldeveloper.sh** located in the **CLIENT\_HOME(32bit)/bin** directory.

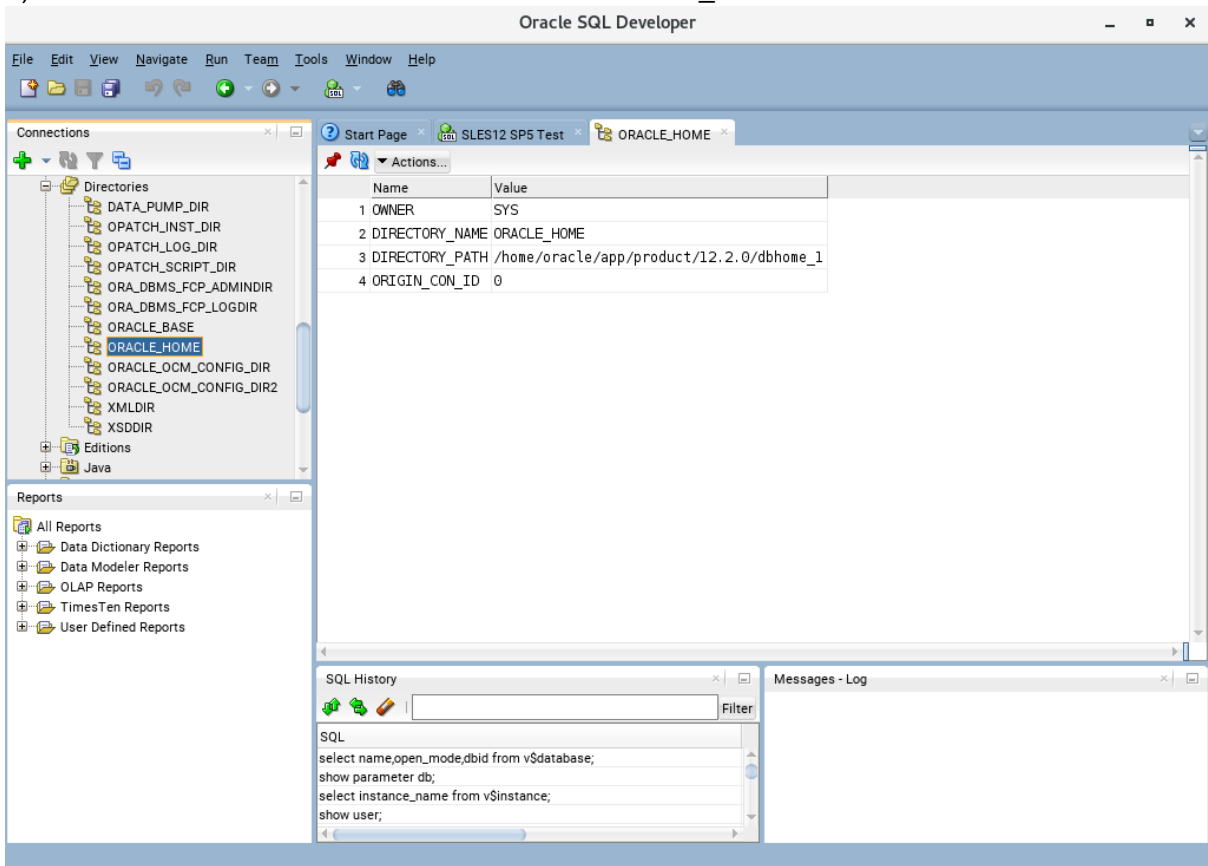
1). Enter the authentication information and connect to the database.



## 2). Connect to database.



## 3). View Oracle database related information - ORACLE\_HOME



### Checking oracle database version.

The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left shows a tree view of directories including ORACLE\_HOME. The main 'Worksheet' area contains the SQL query: `select * from v$version;`. Below the worksheet, the 'Query Result' pane displays the following data:

BANNER	CON_ID
1 Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production	0
2 PL/SQL Release 12.2.0.1.0 - Production	0
3 CORE12.2.0.1.0Production	0
4 TNS for Linux: Version 12.2.0.1.0 - Production	0
5 NLSRTL Version 12.2.0.1.0 - Production	0

The 'SQL History' pane at the bottom shows the executed query: `select * from v$version;`. The 'Messages - Log' pane is empty.

### Retrieve database users.

The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left shows a tree view of directories including ORACLE\_HOME. The main 'Worksheet' area contains the SQL query: `select * from all_users where username='DEV_STB';`. Below the worksheet, the 'Query Result' pane displays the following data:

USERNAME	USER_ID	CREATED	COMMON	ORACLE...	INHERITED	DEFAULT_COLLATION	IMPLICIT	ALL_SHARD
1 DEV_STB	107	21-FEB-22	NO	N	NO	USING_NLS_COMP	NO	NO

The 'SQL History' pane at the bottom shows the executed query: `select * from all_users where username='DEV_STB';`. The 'Messages - Log' pane is empty.

### View database instance.

The screenshot shows the Oracle SQL Developer interface for a connection named 'SLES12 SP5 Test'. The 'Connections' tree on the left shows the directory structure. The 'Worksheet' contains the SQL query: `select instance_name from v$instance;`. The 'Query Result' pane shows a single row with the instance name 'suse'. The 'SQL History' pane shows a list of recent queries, including `select * from all_users where username='DEV_STB';`, `select * from v$version;`, `select name,open_mode,dbid from v$database;`, `show user;`, `desc DEV_STB;`, and `select * from all_users;`. The 'Messages - Log' pane is empty.

### View database ID and mode.

The screenshot shows the Oracle SQL Developer interface for the same connection. The 'Connections' tree on the left shows the 'Tables' folder expanded. The 'Worksheet' contains the SQL query: `select name, open_mode, dbid from v$database;`. The 'Query Result' pane shows a single row with columns 'NAME', 'OPEN\_MODE', and 'DBID', and values 'SUSE', 'READ WRITE', and '758919362'. The 'SQL History' pane shows a list of recent queries, including `show parameter db;`, `select * from all_users where username='DEV_STB';`, `select * from v$version;`, `show user;`, `desc DEV_STB;`, and `select * from all_users;`. The 'Messages - Log' pane is empty.

## Appendix

This document shows how to create a standard topology for Oracle Fusion Middleware components 12c on SLES 12 SP5. 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!*