

# *Oracle Fusion Middleware 12c on SUSE Linux Enterprise Server 15 (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 15 SP5. Details are provided for Intel x86-64 versions of both Oracle FMW 12c and SUSE Linux Enterprise Server 15 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 15 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

HP DL388 Gen9 Server

CPU: 2 \* Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz

RAM: 64 GB

NIC: 8

Local HDD: 2TB

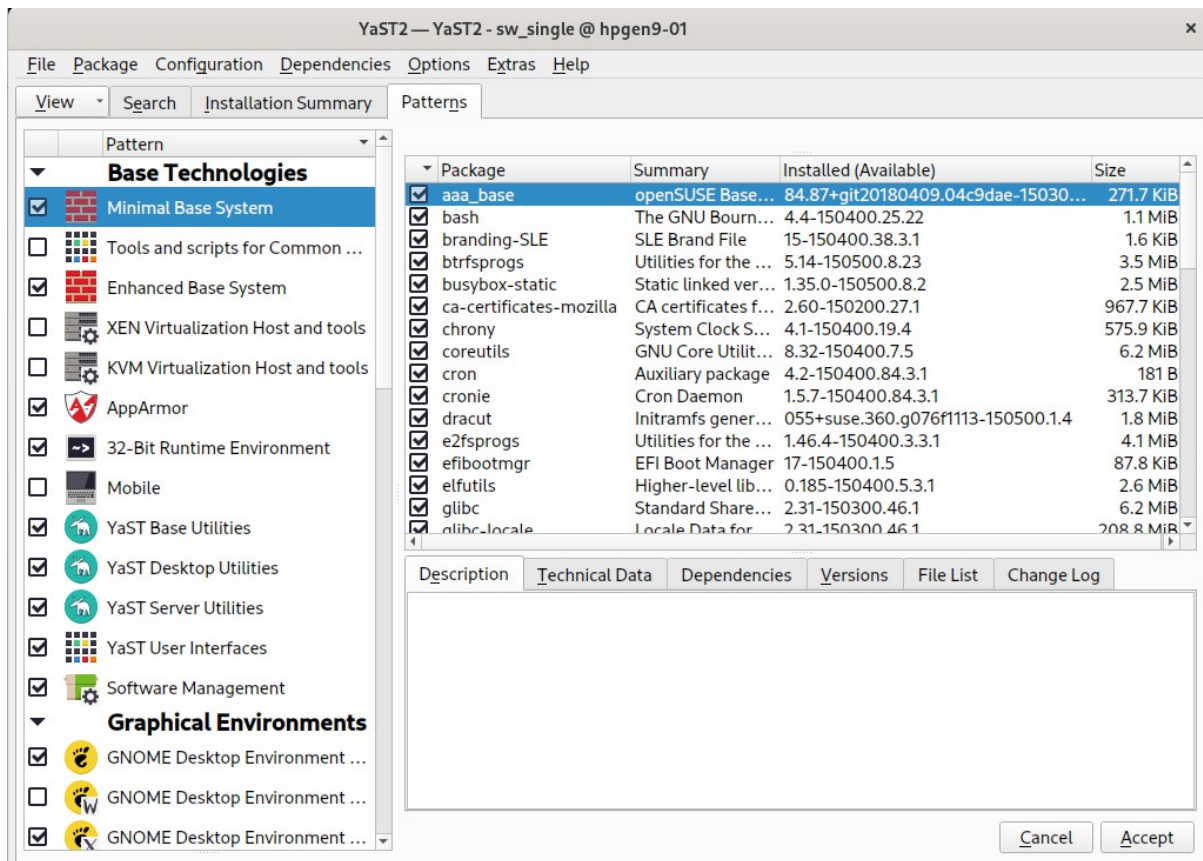
OS: SUSE Linux Enterprise Server 15 SP5 GM (x86-64) - Kernel version: 5.14.21-150500.53-default

# Prerequisites

## 1. Installing SUSE Linux Enterprise Server 15 SP5

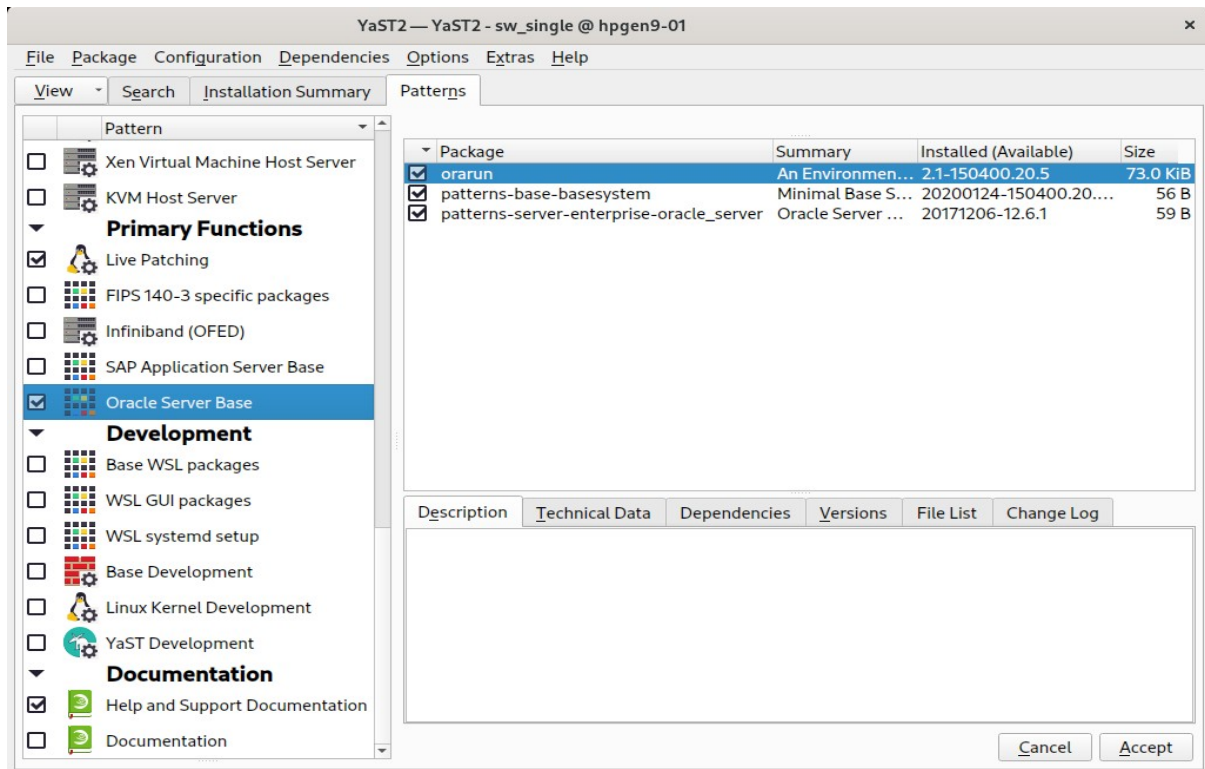
1-1. Install SUSE Linux Enterprise Server 15 SP5 on your testing machine. To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at: <https://www.suse.com/documentation/>.

**Figure 1-1 Software Installed as shown below**

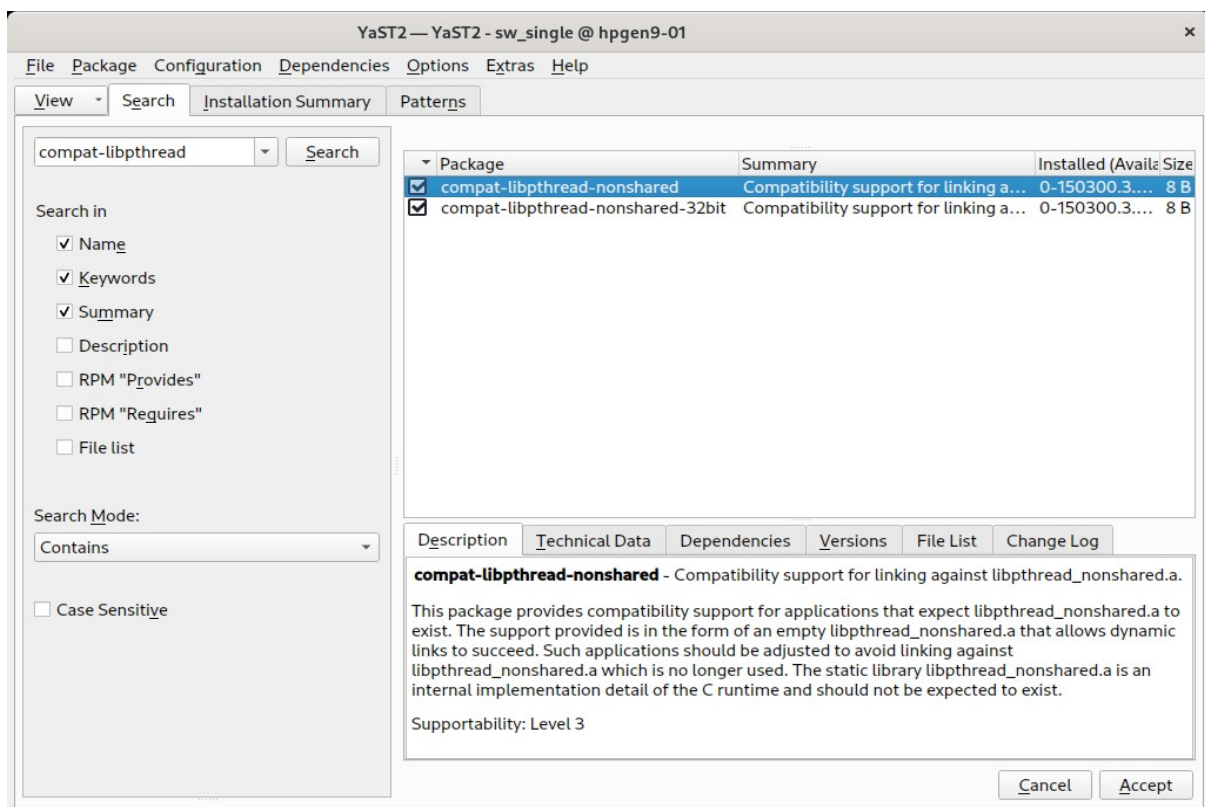


In Yast, select the patterns you need. Make sure you select the patterns and packages required to run Oracle products.

**Figure 1-2 Software Installed as shown below**



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



)

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

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

```
oracle@hpgen9-01:~> more /etc/os-release
NAME="SLES"
VERSION="15-SP5"
VERSION_ID="15.5"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP5"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp5"
DOCUMENTATION_URL="https://documentation.suse.com/"
oracle@hpgen9-01:~> uname -a
Linux hpgen9-01 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043/lp) x86_64 x86_64 x86_64 GNU/Linux
oracle@hpgen9-01:~> █
```

## 1-2. SPecial Startup Requirements.

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

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

```
kernel.shmmax = 16531791872
```

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

```
kernel.shmall = 9272480
```

Activate the new SHMMAX setting by running the command:

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

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

```
ulimit -a
```

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

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

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

```
oracle soft stack 10240
```

then reboot the machine.

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

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

## 2. Installing Oracle Database 12cR2

2-1. Log in to the target system (SUSE Linux Enterprise Server 15 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@hpgen9-01:~> export ORACLE_HOME=/home/oracle/app/product/12.2.0/dbhome_1/
oracle@hpgen9-01:~> export ORACLE_SID=suse
oracle@hpgen9-01:~> /home/oracle/app/product/12.2.0/dbhome_1/bin/sqlplus /nolog

SQL*Plus: Release 12.2.0.1.0 Production on Thu Jun 29 16:44:18 2023

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

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

Total System Global Area 2.0200E+10 bytes
Fixed Size 19247928 bytes
Variable Size 4362079432 bytes
Database Buffers 1.5771E+10 bytes
Redo Buffers 47857664 bytes
Database mounted.
Database opened.
SQL> show sga

Total System Global Area 2.0200E+10 bytes
Fixed Size 19247928 bytes
Variable Size 3623881928 bytes
Database Buffers 1.6509E+10 bytes
Redo Buffers 47857664 bytes
SQL> select name,open_mode from v$databases;

NAME          OPEN_MODE
-----
SUSE          READ WRITE

SQL> exec DBMS_XDB_CONFIG.SETHTTPPORT(5501);

PL/SQL procedure successfully completed.

SQL>
```

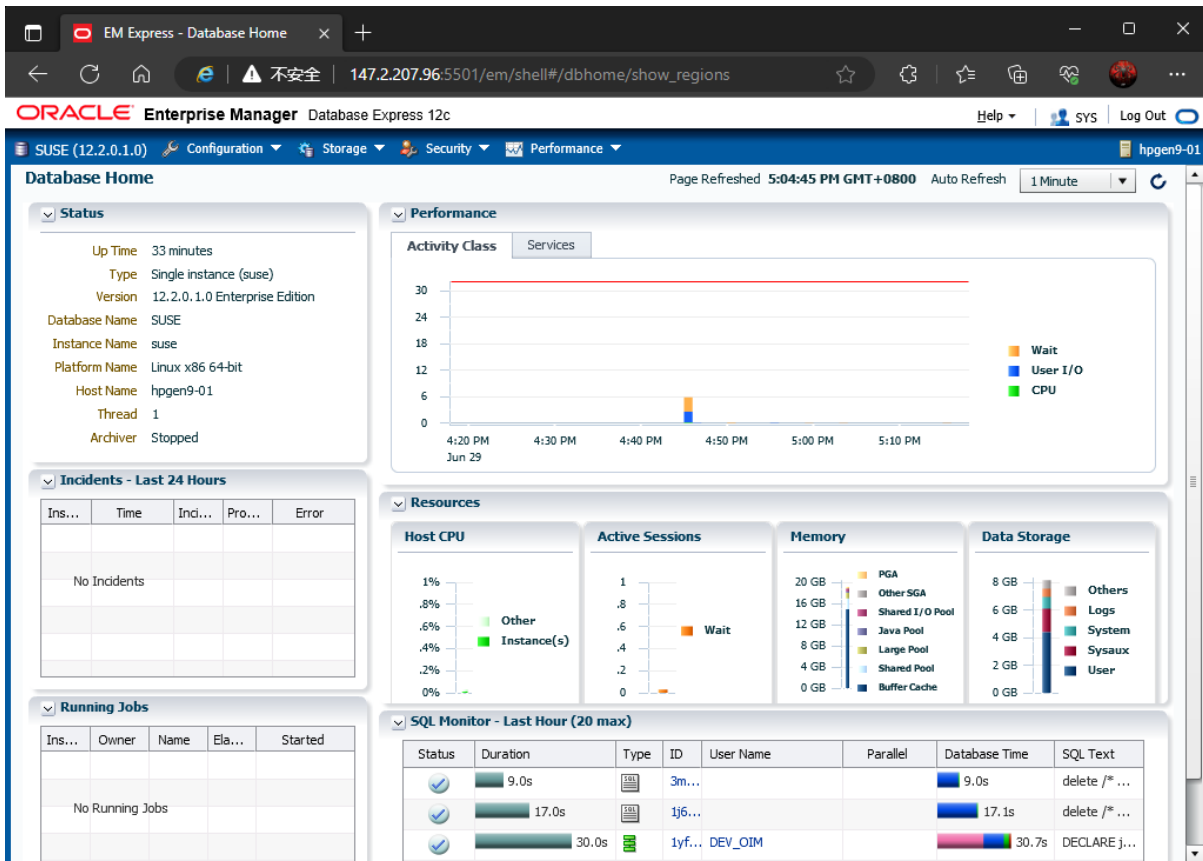
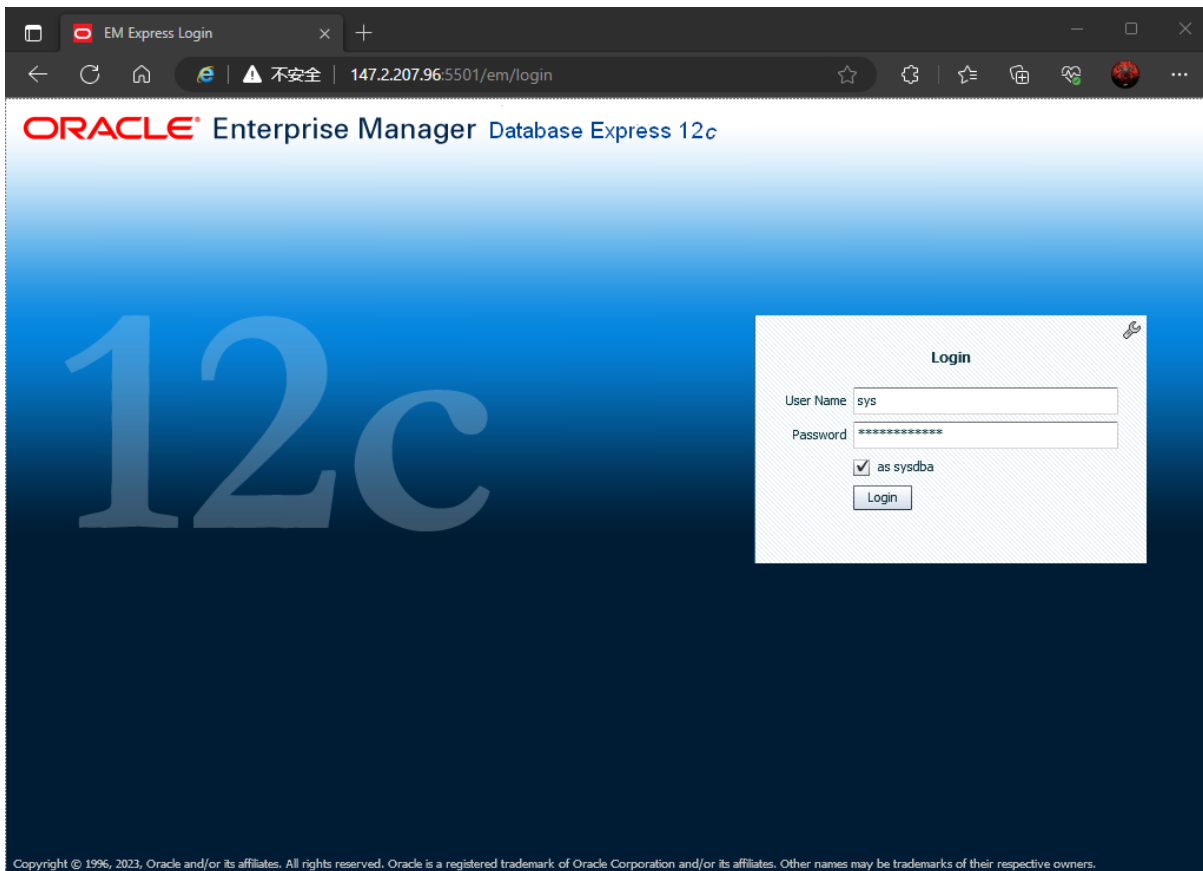
**Figure 2-2 Start the Database listener**

```
oracle@hpgen9-01:~> /home/oracle/app/product/12.2.0/dbhome_1/bin/lsnrctl status
LSNRCTL for Linux: Version 12.2.0.1.0 - Production on 29-JUN-2023 16:50:40

Copyright (c) 1991, 2016, Oracle. All rights reserved.

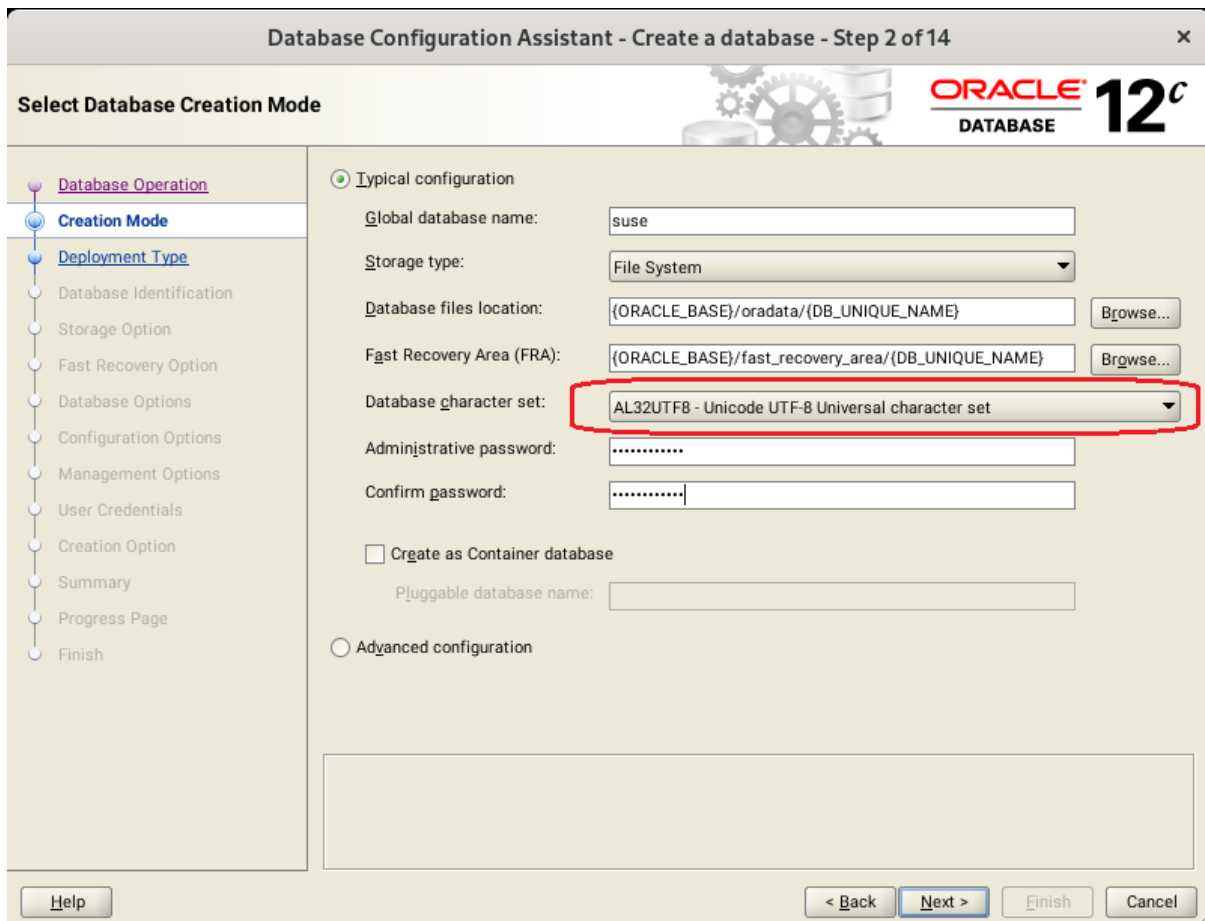
Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
-----
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 12.2.0.1.0 - Production
Start Date                29-JUN-2023 16:48:57
Uptime                    0 days 0 hr. 1 min. 43 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Log File         /home/oracle/app/diag/tnslsnr/hpgen9-01/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=hpgen9-01)(PORT=1521)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=hpgen9-01)(PORT=5501))(Presentation=HTTP)(Session=RAW))
Services Summary...
Service "suse" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
Service "suseXDB" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
The command completed successfully
oracle@hpgen9-01:~> █
```

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





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



)

### 3. Installing Java

3-1. Log in to the target system (SUSE Linux Enterprise Server 15 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@hpgen9-01:~' showing the following commands and output:

```
oracle@hpgen9-01:~> export JAVA_HOME=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221/
oracle@hpgen9-01:~> export PATH=$JAVA_HOME/bin:$PATH
oracle@hpgen9-01:~> 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@hpgen9-01:~>
```

# Oracle Fusion MiddleWare 12c Installation and Configuration

\*\*\*\*\*

## *Oracle WebLogic Server software*

\*\*\*\*\*

### 1. Installing Oracle WebLogic Server software

#### 1-1. Prerequisites:

Installation of Oracle WebLogic Server requires:

- Oracle JDK 1.8.0\_221 or later is installed.

1-2. Log in to the target system (SUSE Linux Enterprise Server 15 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:**

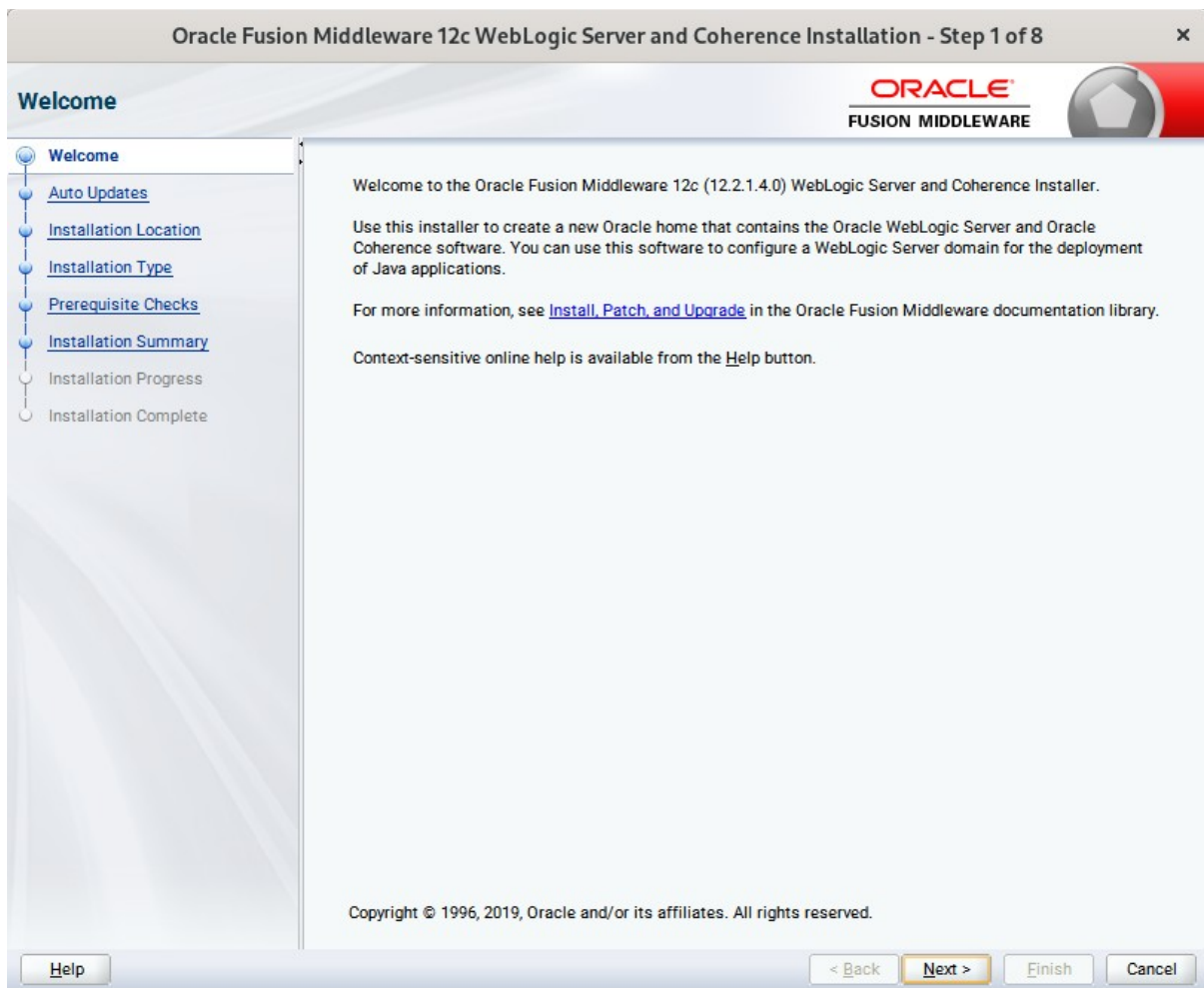
## 1). Installation Inventory Setup.



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" in blue. To the right of the heading is the Oracle logo and the text "ORACLE FUSION MIDDLEWARE". Below the heading, there is a section titled "Central Inventory Directory" with the following text: "Enter the Central inventory directory for all your oracle installations. The installer will create a new central inventory directory if it does not exist." There are two input fields: "Inventory Directory:" with a text box containing "/home/oracle/orainventory" and a "Browse" button to its right; and "Operating System Group:" with a dropdown menu showing "oinstall" and a downward arrow. Below the dropdown is the text "Specify a group with write permission to the inventory directory". A section titled "Central Inventory Pointer File" 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 are three buttons: "Help", "OK", and "Cancel".

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

## 2). Welcome.



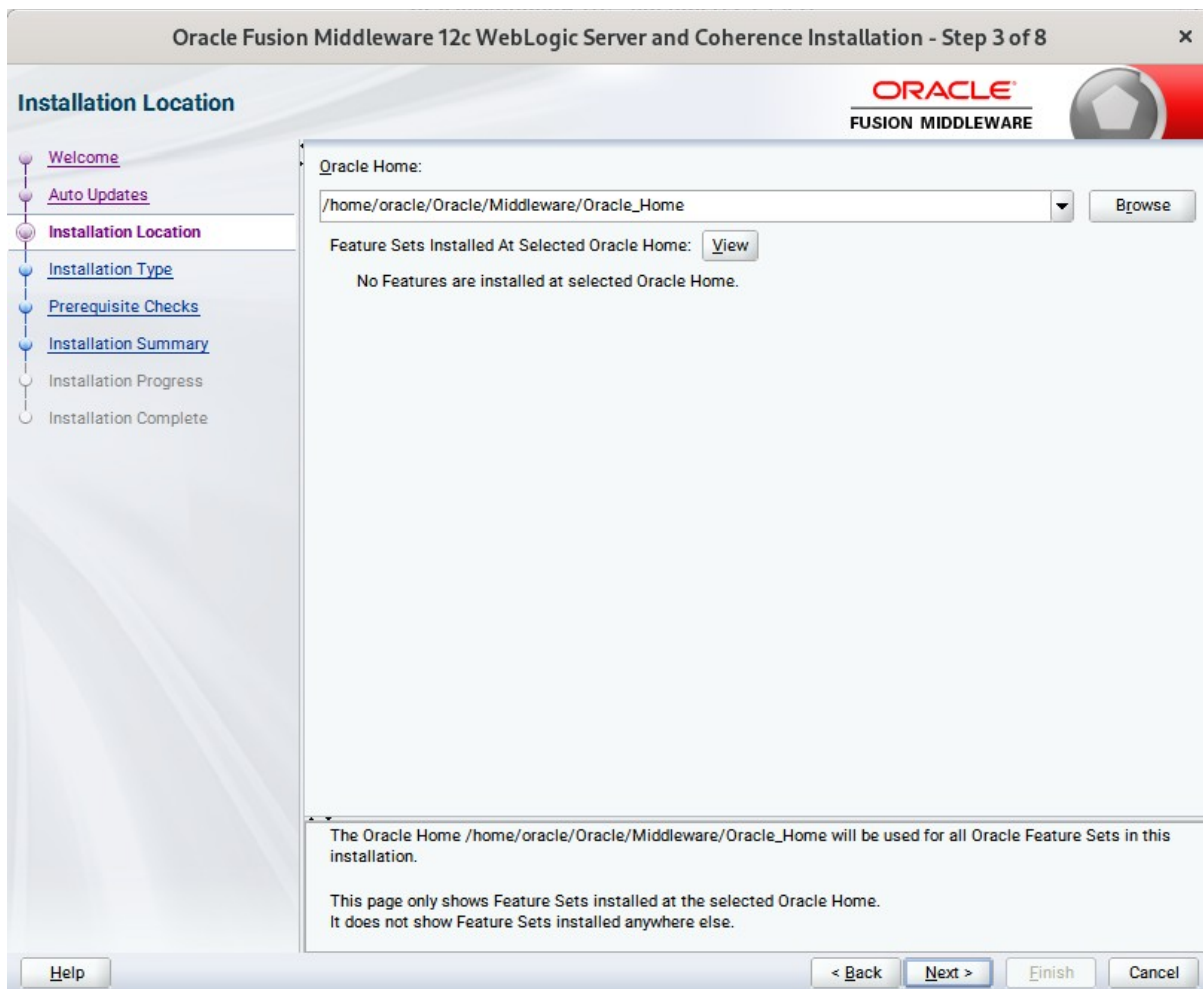
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

## 3). Auto Updates.

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

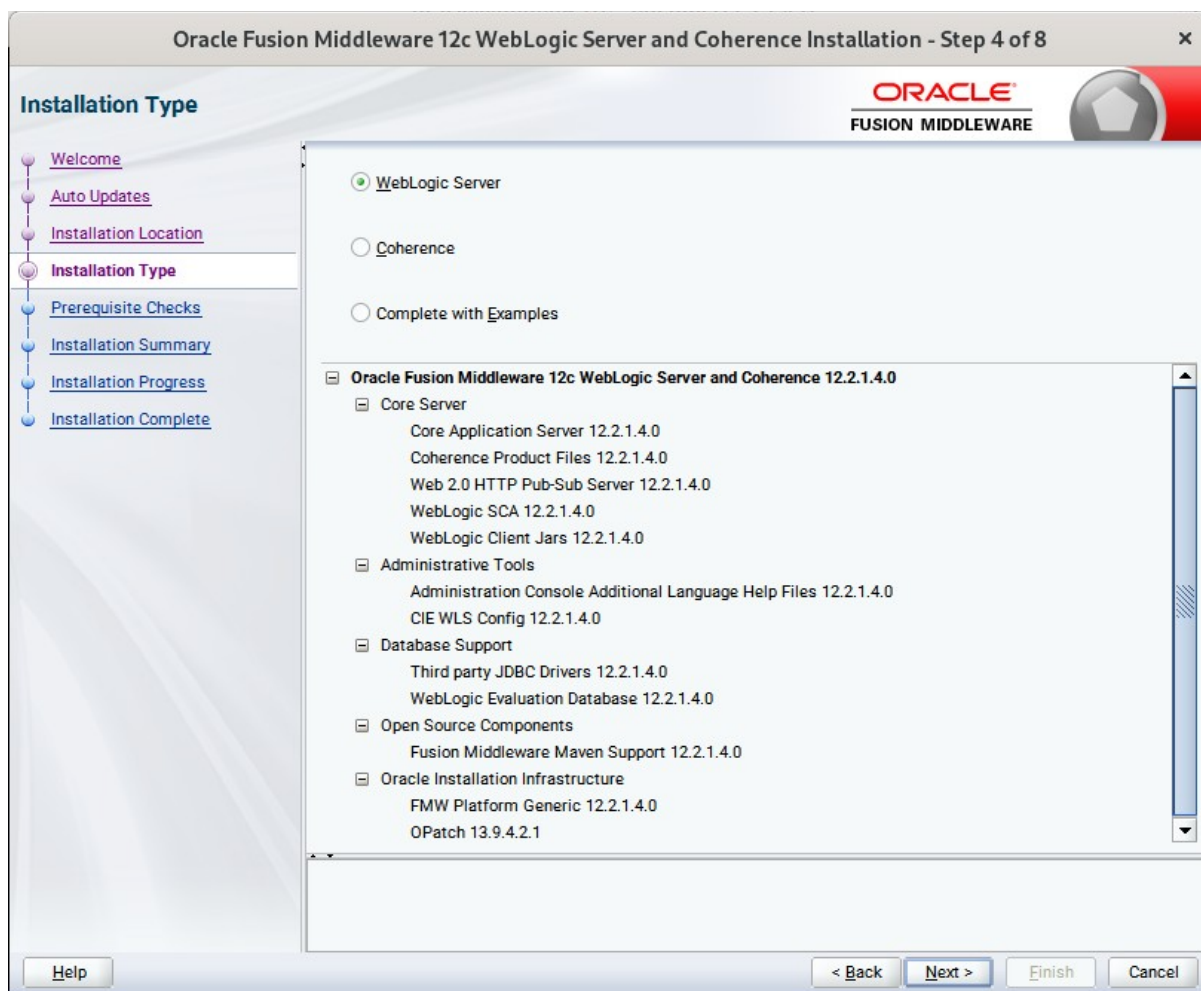
Select option "**Skip Auto Updates**" to skip this screen, then click **Next** to continue.

## 4). Installation Location.



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

## 5). Installation Type.

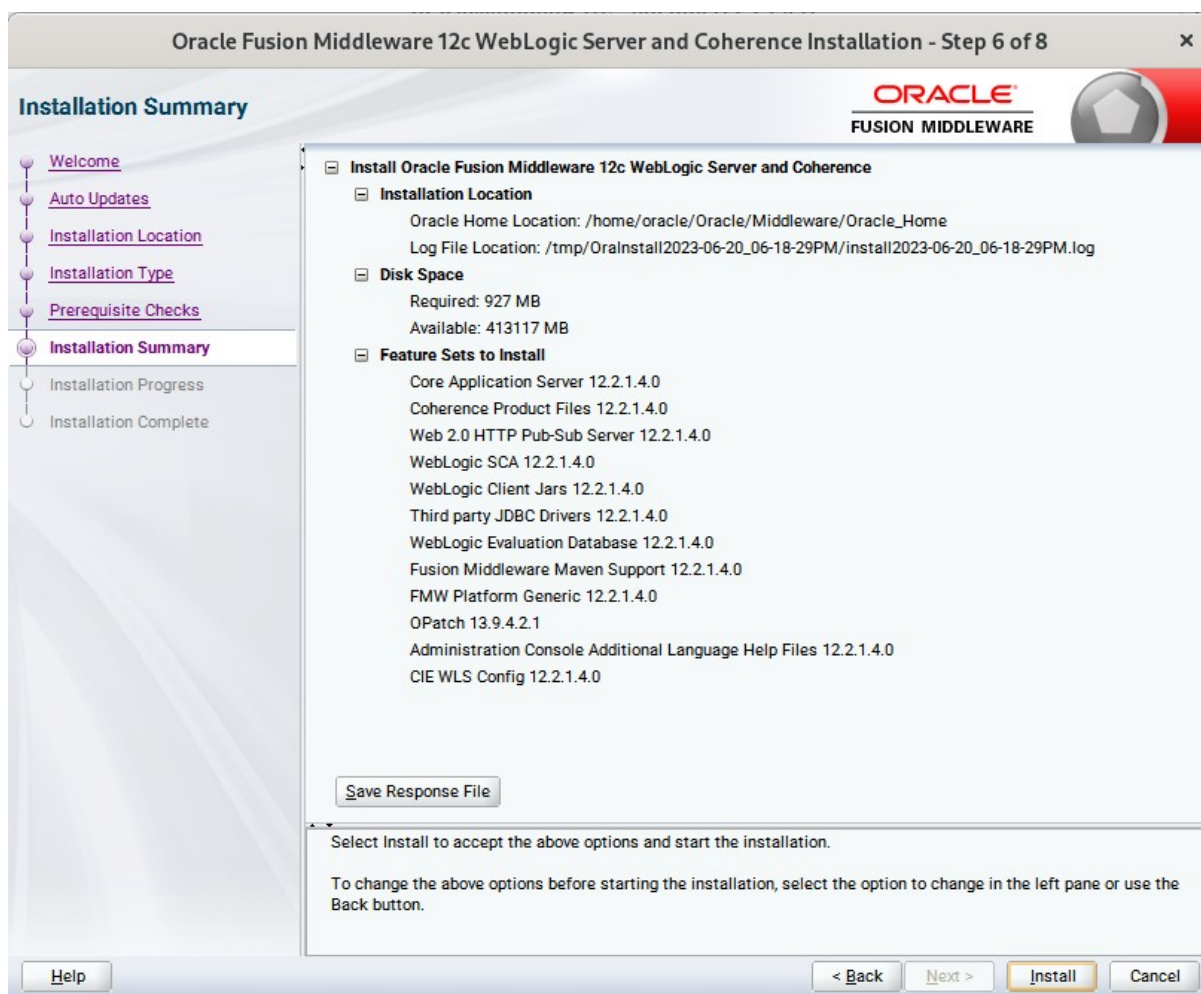


Use this screen to determine the type of installation you want to perform, then click **Next** to continue.



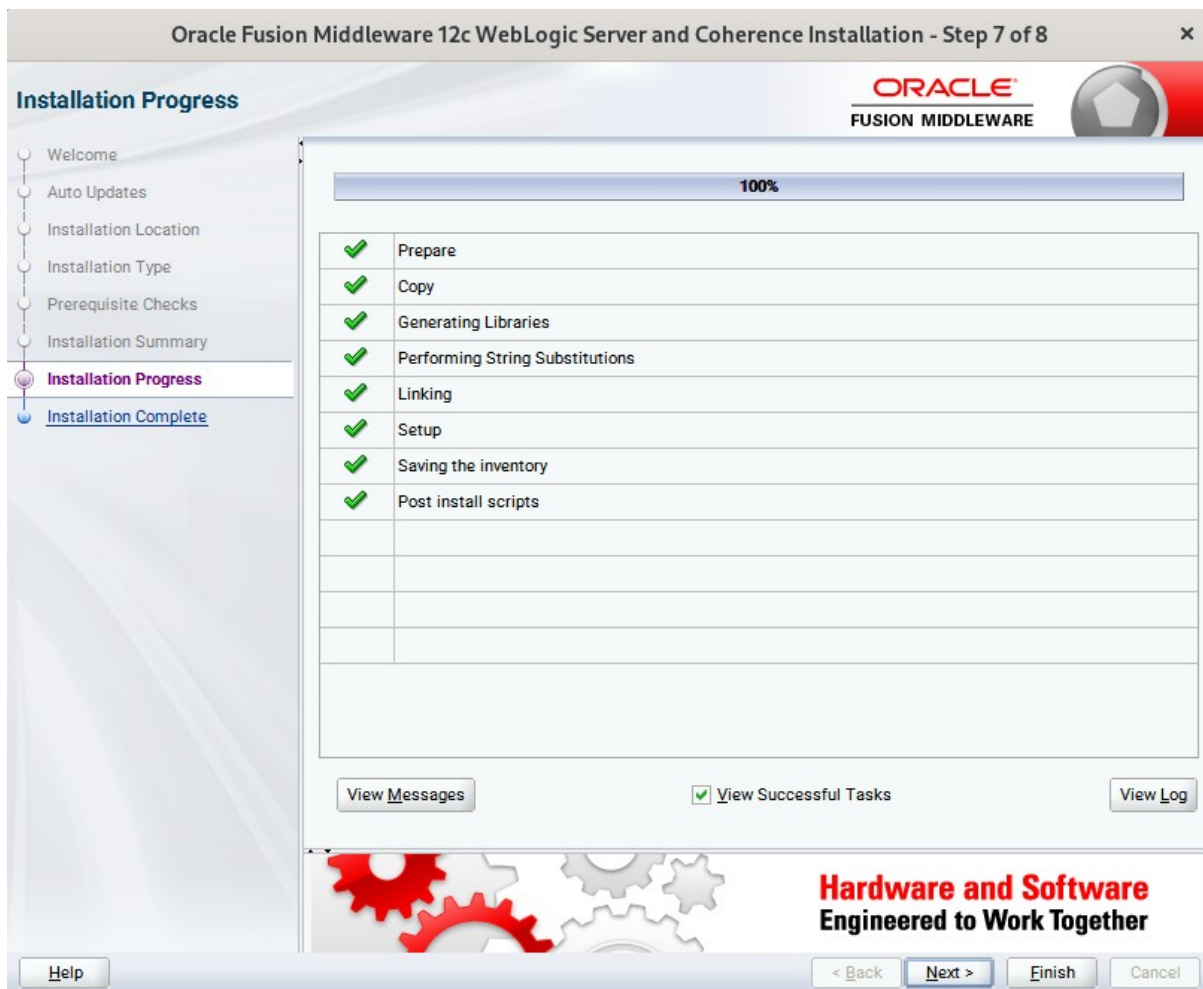


## 7). Installation Summary.



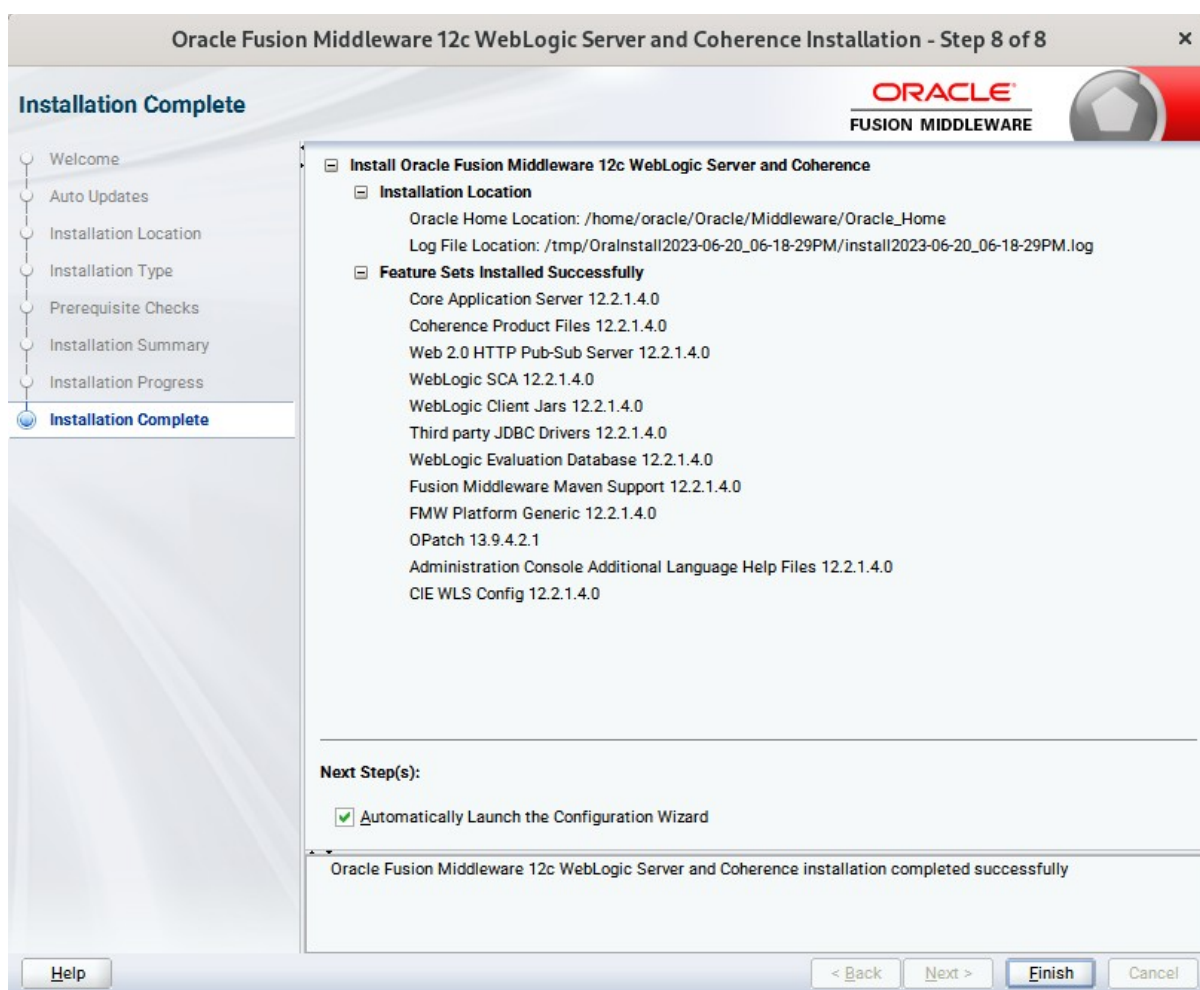
This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk SPace to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

## 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**.

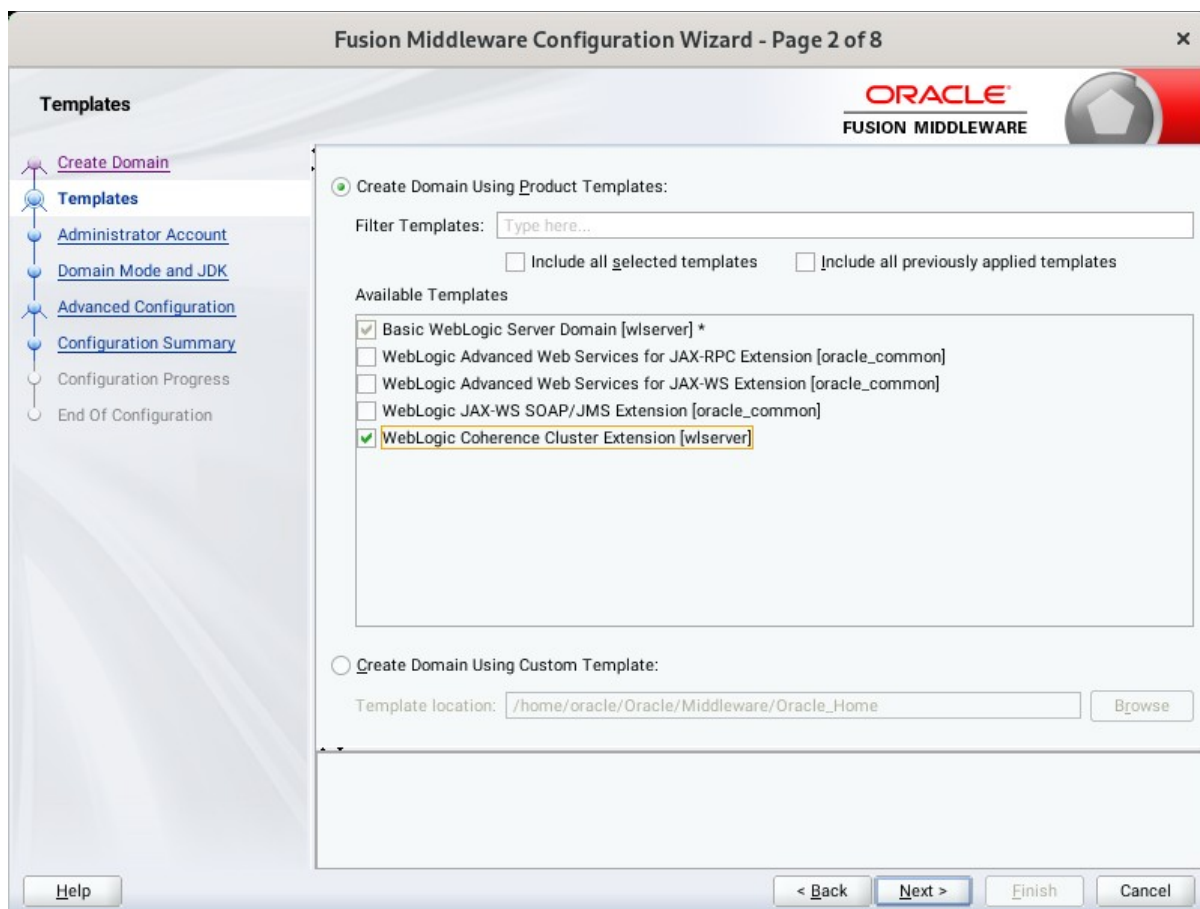
To set up your configuration, follow the steps below:

1). Configuration Type.



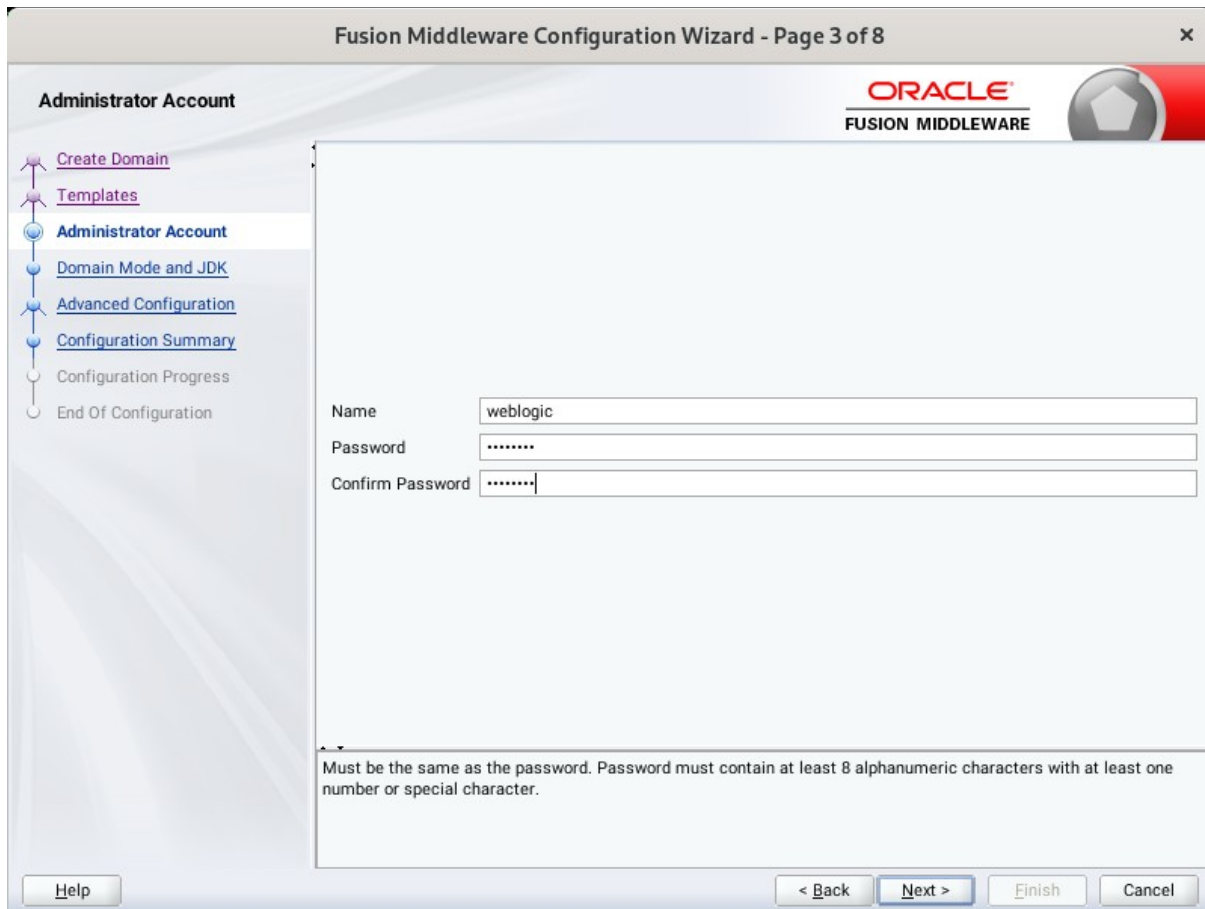
Select option "**Create a New Domain**" and specify the Domain home directory in the "**Domain Location**" field, then click **Next** to continue.

## 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.

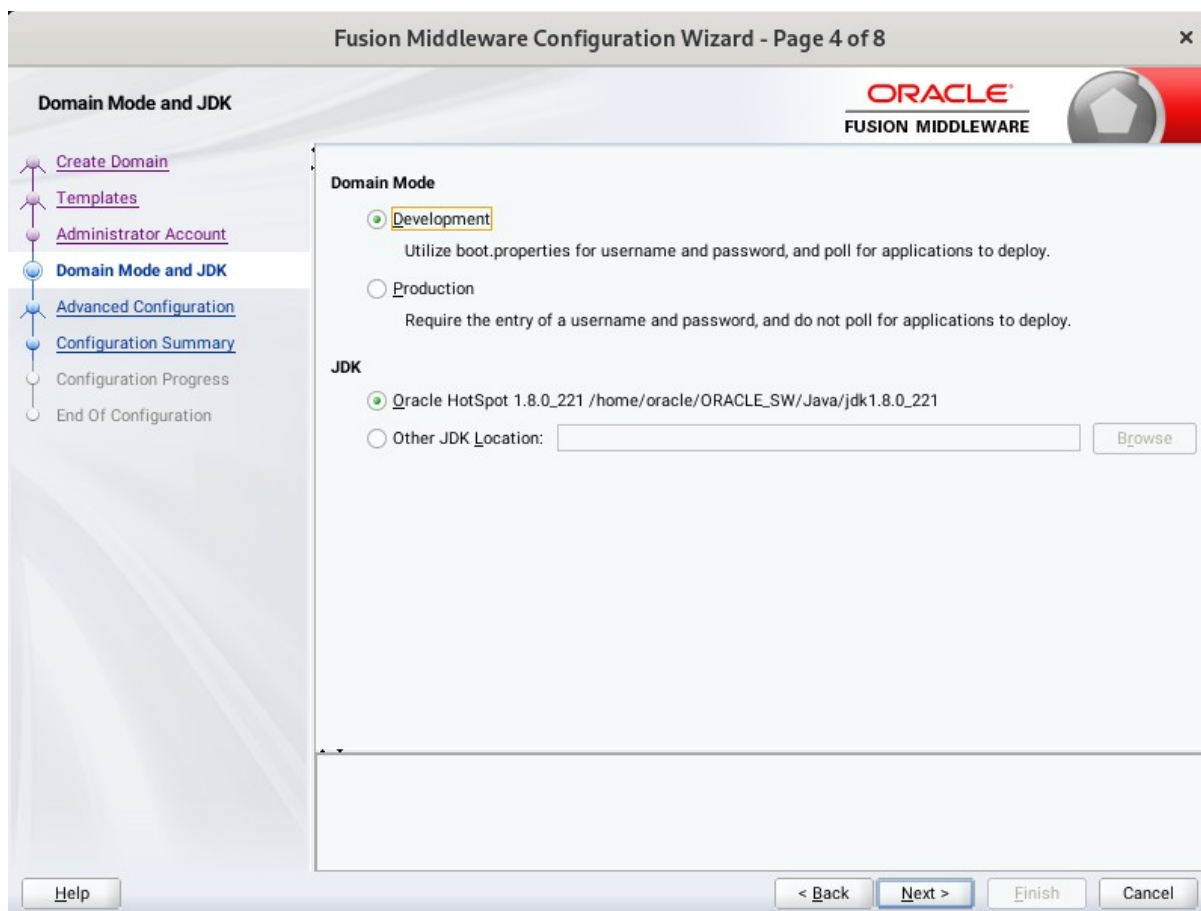


The screenshot shows the 'Administrator Account' configuration step in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 3 of 8'. The Oracle Fusion Middleware logo is visible in the top right corner. A navigation pane on the left lists the following steps: 'Create Domain', 'Templates', 'Administrator Account' (highlighted), '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 '.....'. 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'.

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.

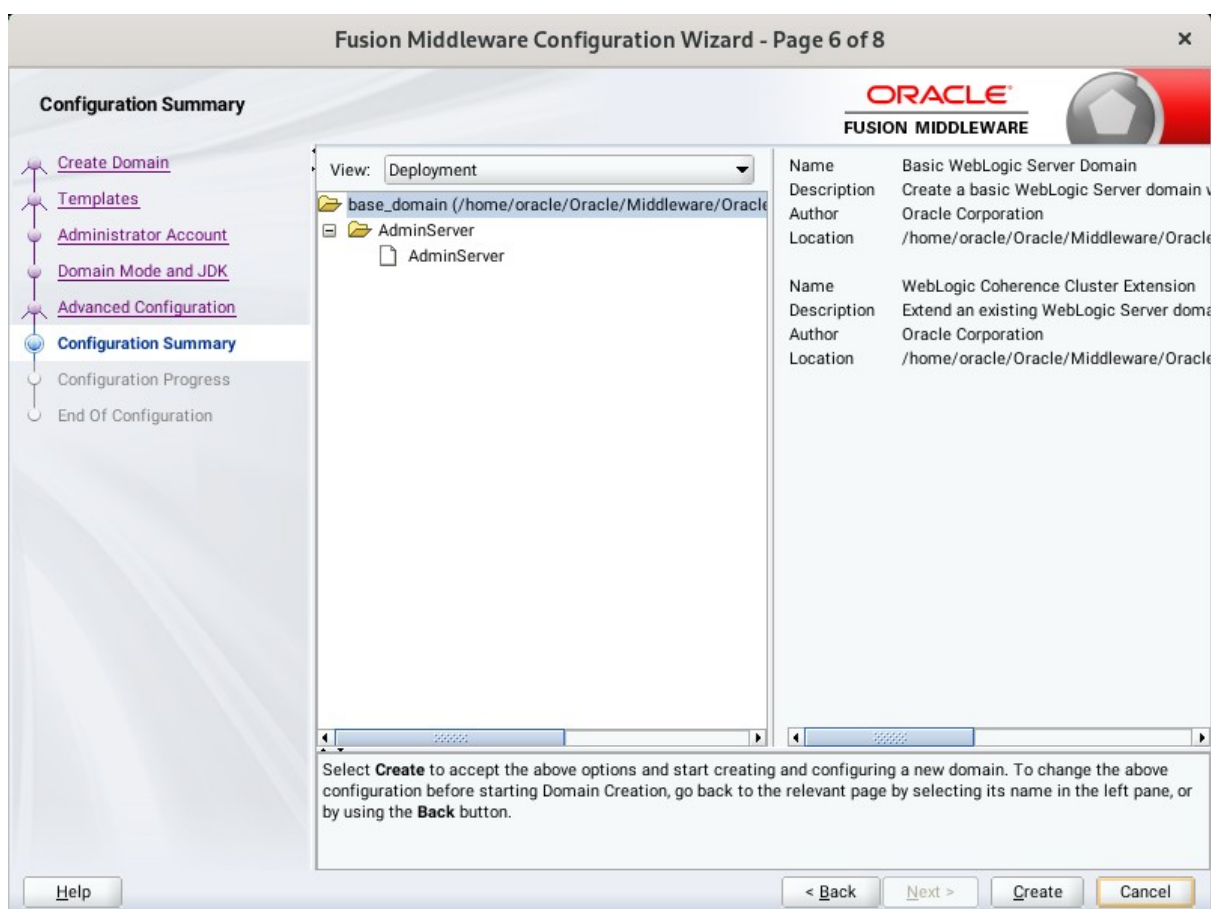


## 5). Advanced Configuration.



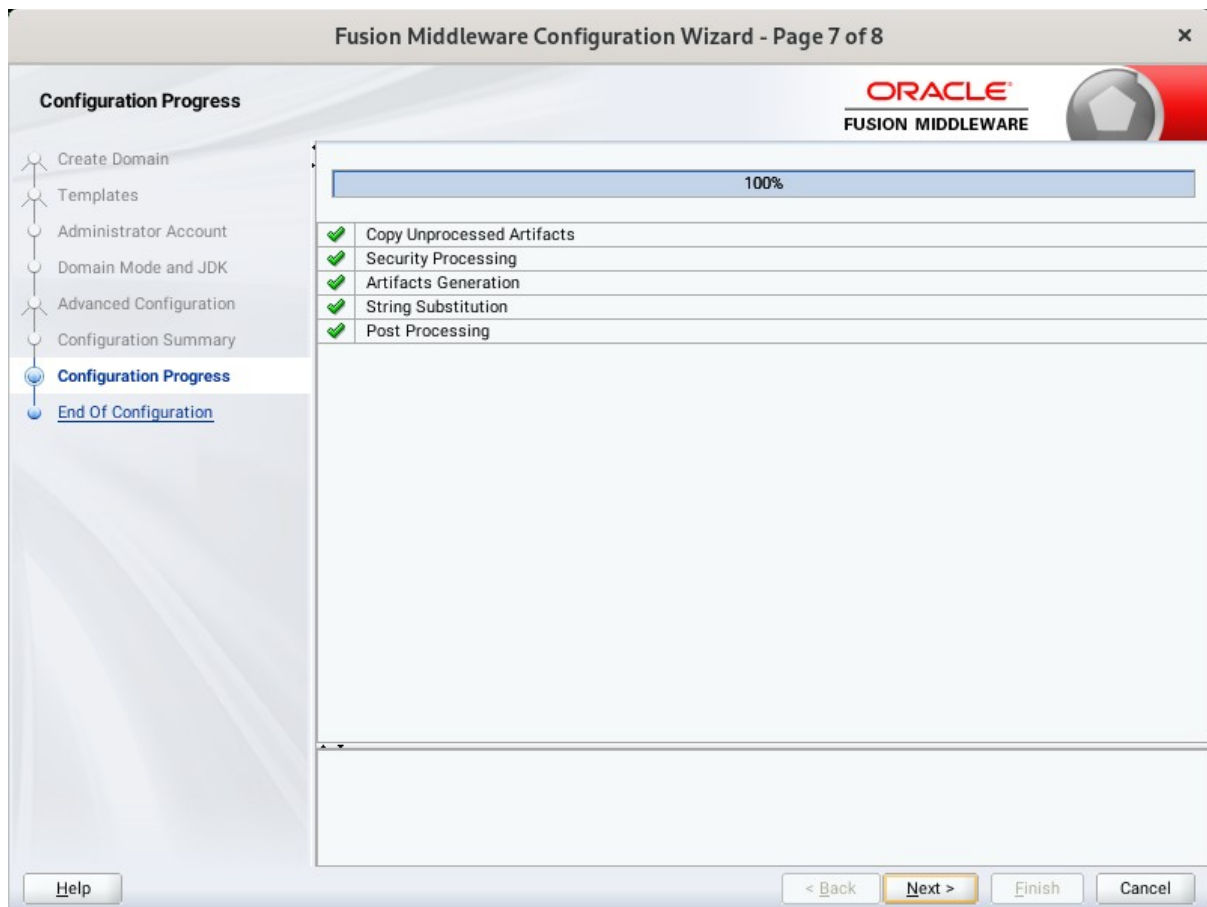
According to your requirements, select the desired options on the Advanced Configuration screen. Then click **Next** to continue.

## 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.

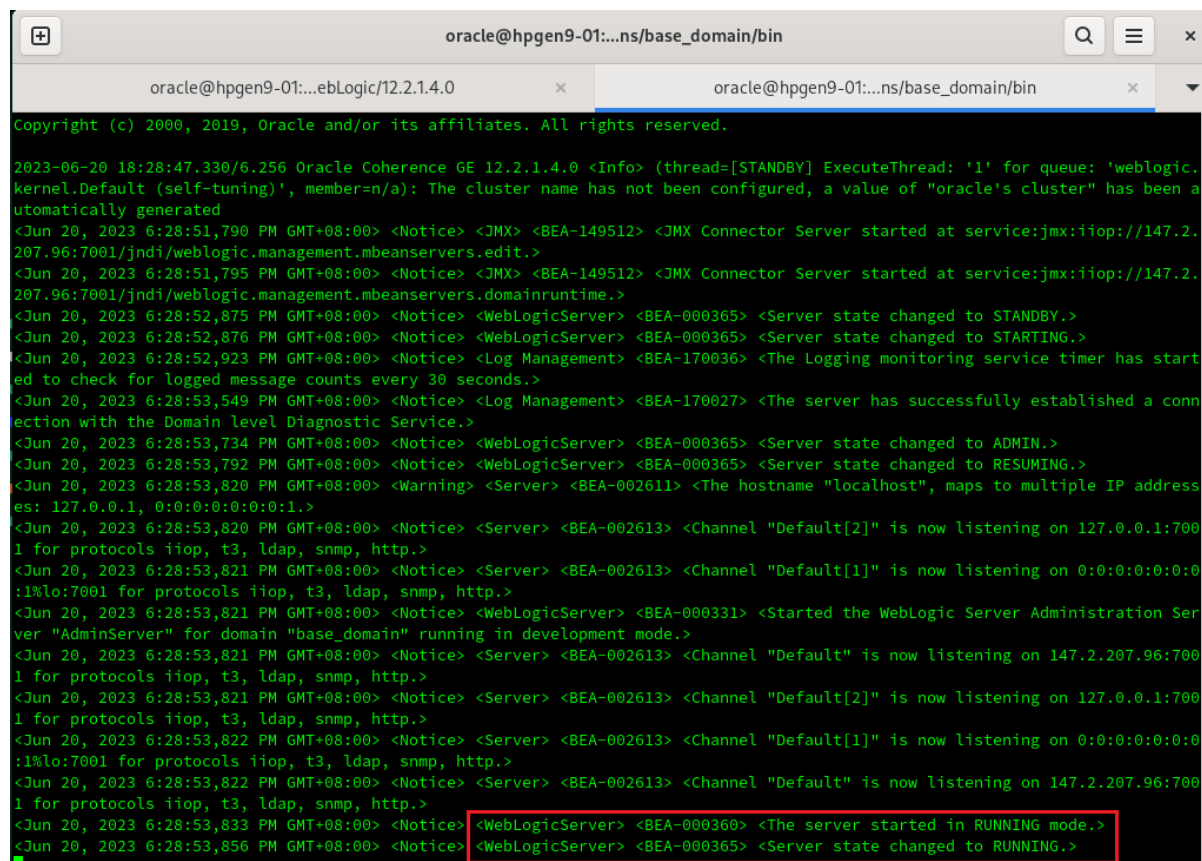


Once you see: "Oracle Weblogic Server Configuration Succeeded", record the "**Domain Location**" and "**Admin Server URL**", then click **Finish** to dismiss the Configuration Wizard.

### 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@hpgen9-01:...ns/base_domain/bin
oracle@hpgen9-01:...ebLogic/12.2.1.4.0
oracle@hpgen9-01:...ns/base_domain/bin

Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.

2023-06-20 18:28:47.330/6.256 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.
kernel.Default (self-tuning)', member=n/a): The cluster name has not been configured, a value of "oracle's cluster" has been a
utomatically generated
<Jun 20, 2023 6:28:51,790 PM GMT+08:00> <Notice> <JMX> <BEA-149512> <JMX Connector Server started at service:jmx:iiop://147.2.
207.96:7001/jndi/weblogic.management.mbeanservers.edit.>
<Jun 20, 2023 6:28:51,795 PM GMT+08:00> <Notice> <JMX> <BEA-149512> <JMX Connector Server started at service:jmx:iiop://147.2.
207.96:7001/jndi/weblogic.management.mbeanservers.domainruntime.>
<Jun 20, 2023 6:28:52,875 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STANDBY.>
<Jun 20, 2023 6:28:52,876 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STARTING.>
<Jun 20, 2023 6:28:52,923 PM GMT+08:00> <Notice> <Log Management> <BEA-170036> <The Logging monitoring service timer has start
ed to check for logged message counts every 30 seconds.>
<Jun 20, 2023 6:28:53,549 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conn
ection with the Domain Level Diagnostic Service.>
<Jun 20, 2023 6:28:53,734 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jun 20, 2023 6:28:53,792 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jun 20, 2023 6:28:53,820 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:0:1.>
<Jun 20, 2023 6:28:53,820 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.>
<Jun 20, 2023 6:28:53,821 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.>
<Jun 20, 2023 6:28:53,821 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base_domain" running in development mode.>
<Jun 20, 2023 6:28:53,821 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jun 20, 2023 6:28:53,821 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.>
<Jun 20, 2023 6:28:53,822 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.>
<Jun 20, 2023 6:28:53,822 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jun 20, 2023 6:28:53,833 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jun 20, 2023 6:28:53,856 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

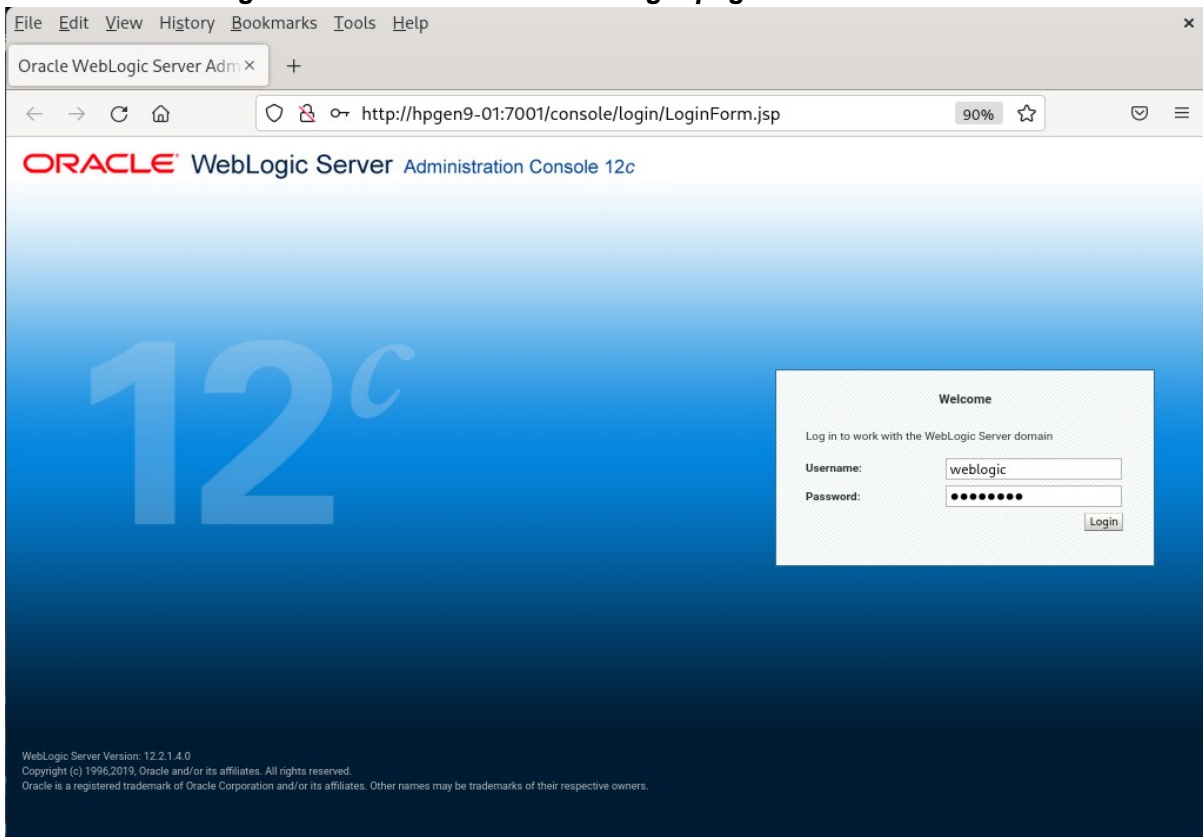
```

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

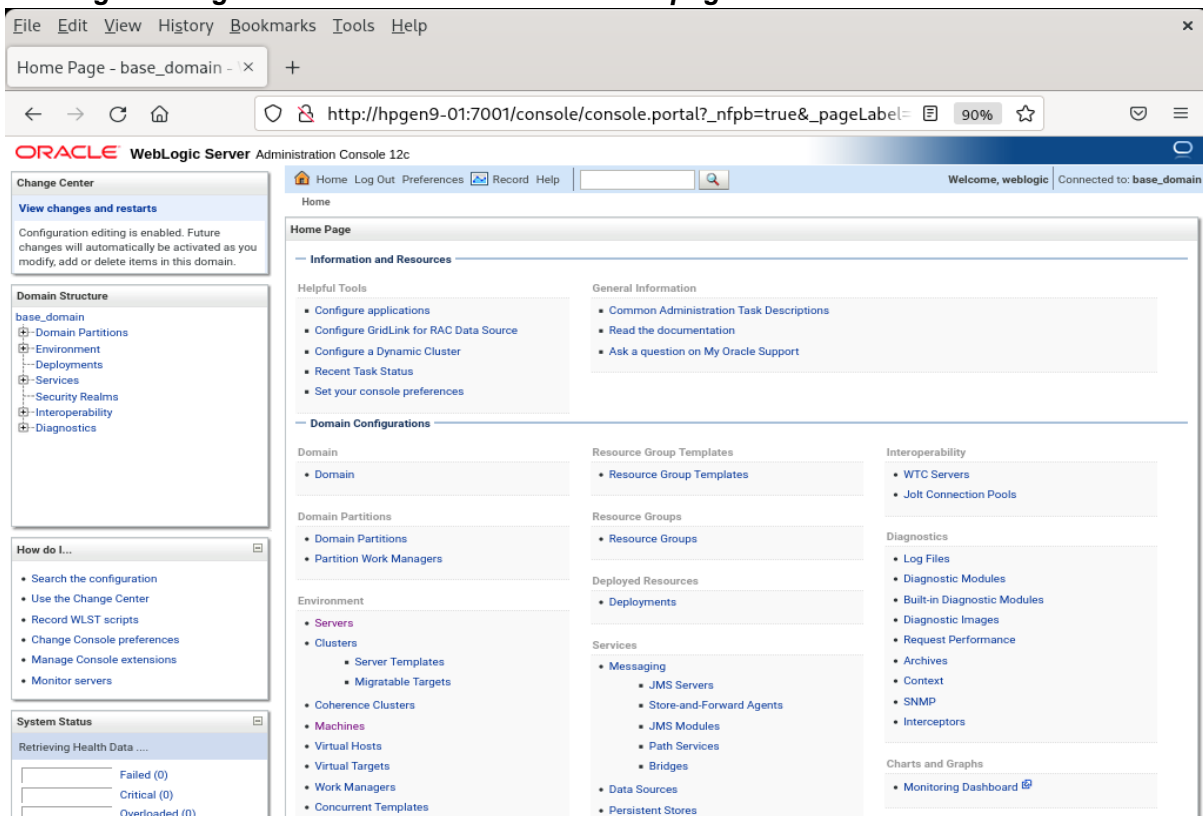
-----  
 Server state changed to RUNNING.  
 -----

### 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 main content area is titled "Summary of Servers" and contains a table of servers. The table has the following data:

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

On the left side of the console, there are several panels: "Change Center" with a "View changes and restarts" link; "Domain Structure" showing a tree view of the domain hierarchy; "How do I..." with a list of actions like "Create Managed Servers" and "Clone servers"; and "System Status" showing the health of running servers as of 6:32 PM, with 0 Failed, 0 Critical, and 0 Overloaded servers.

**End of Oracle WebLogic Server Software.**

\*\*\*\*\*

## Oracle Form and Reports

\*\*\*\*\*

### 1. Installing Oracle WebLogic Server software

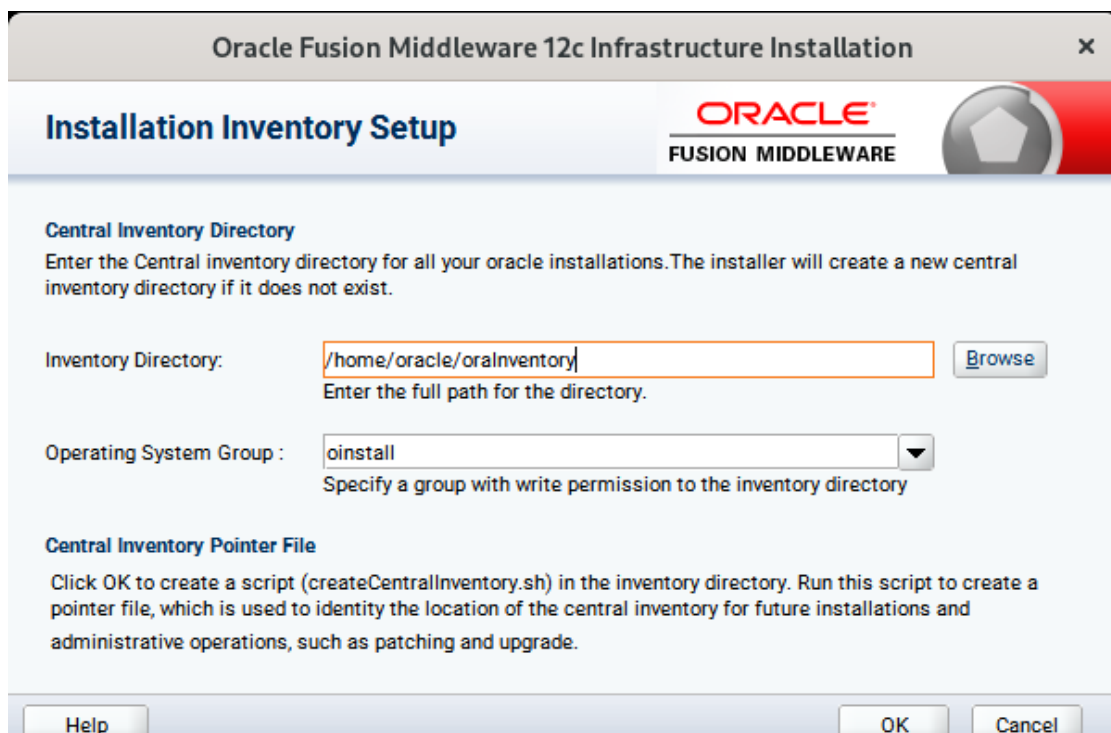
#### 1-1. Prerequisites:

Installation of Oracle Forms and Reports requires:

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

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

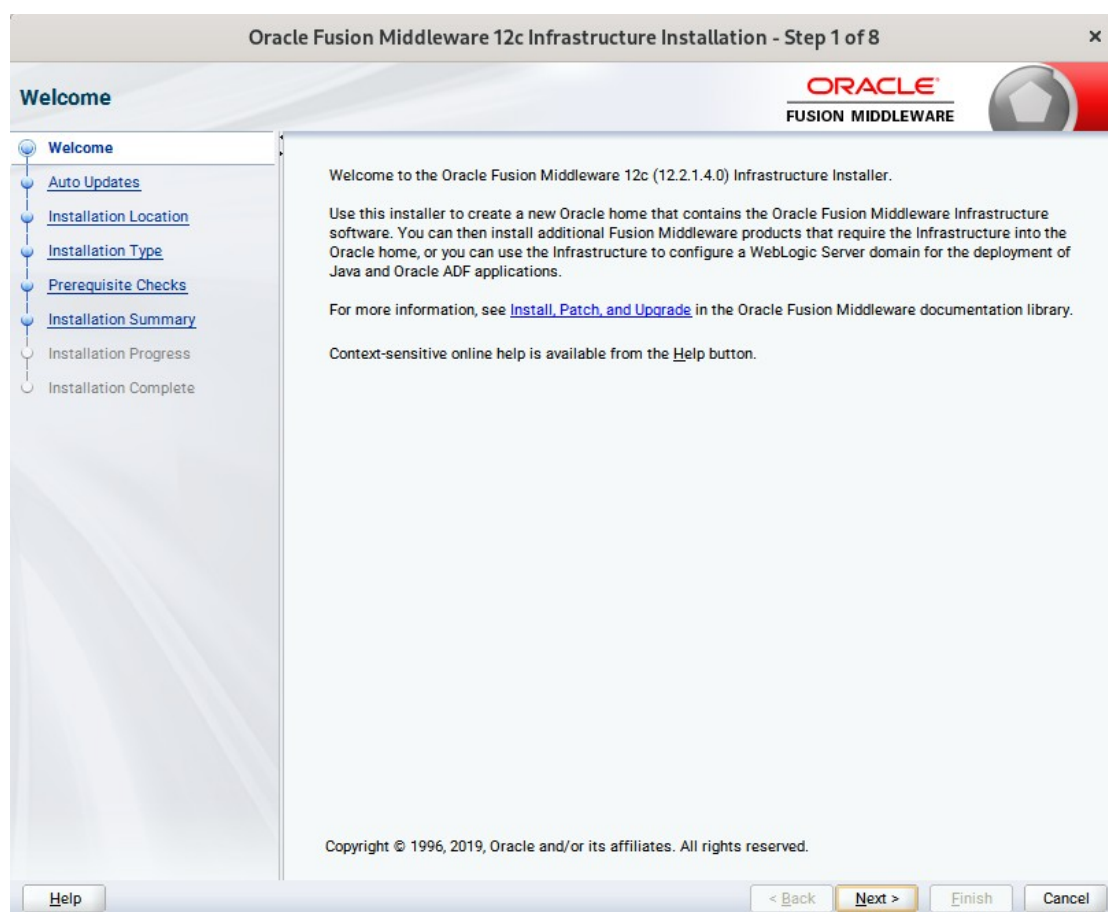
#### 3-1). Installation Inventory Setup.



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

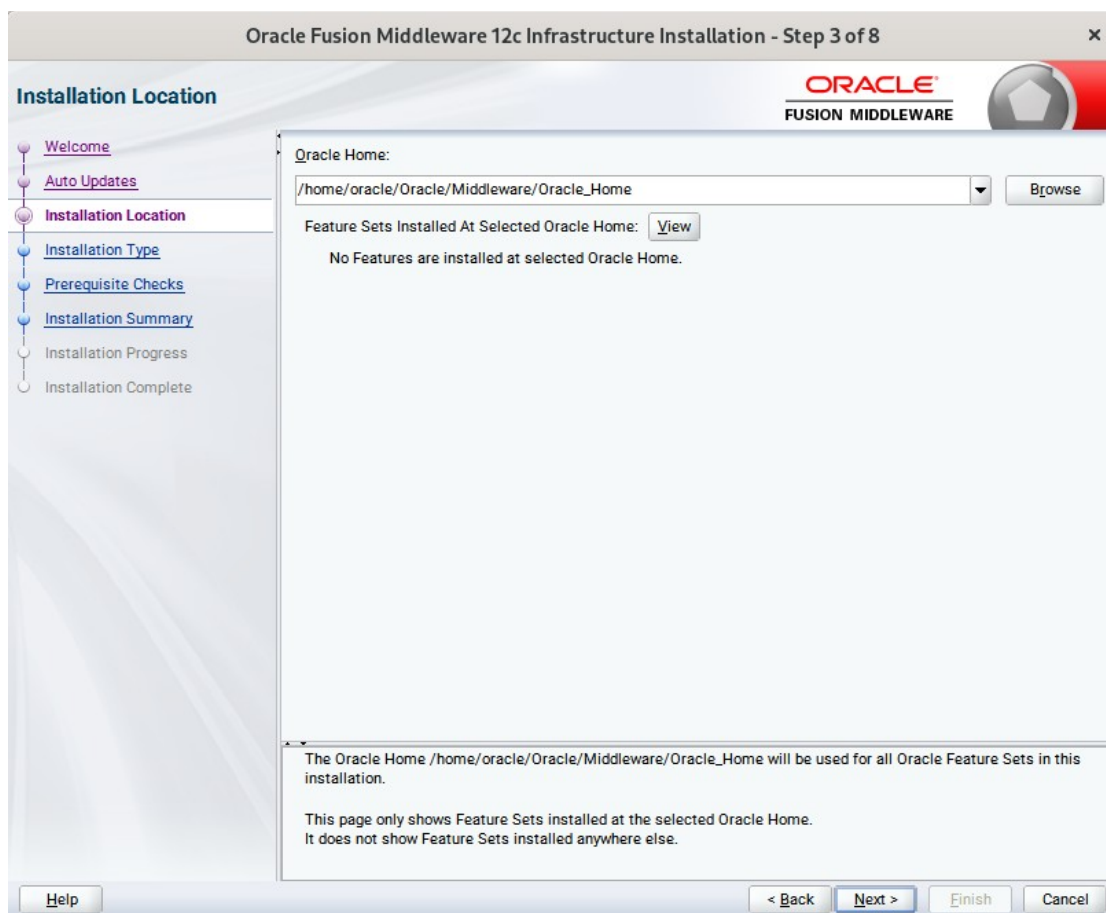


## 3-2). Welcome.



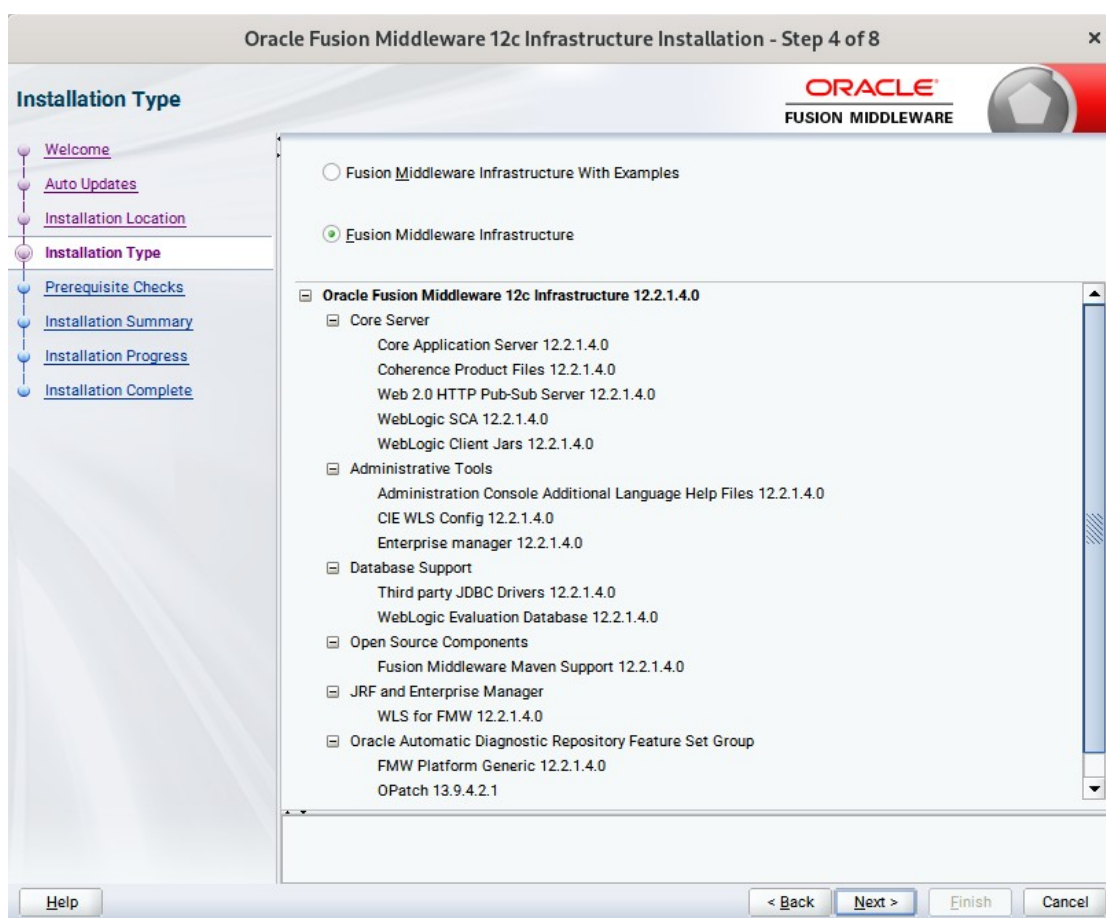
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

## 3-3). Installation Location.



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

## 3-4). Installation Type.



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

## 3-5). Installation Complete.



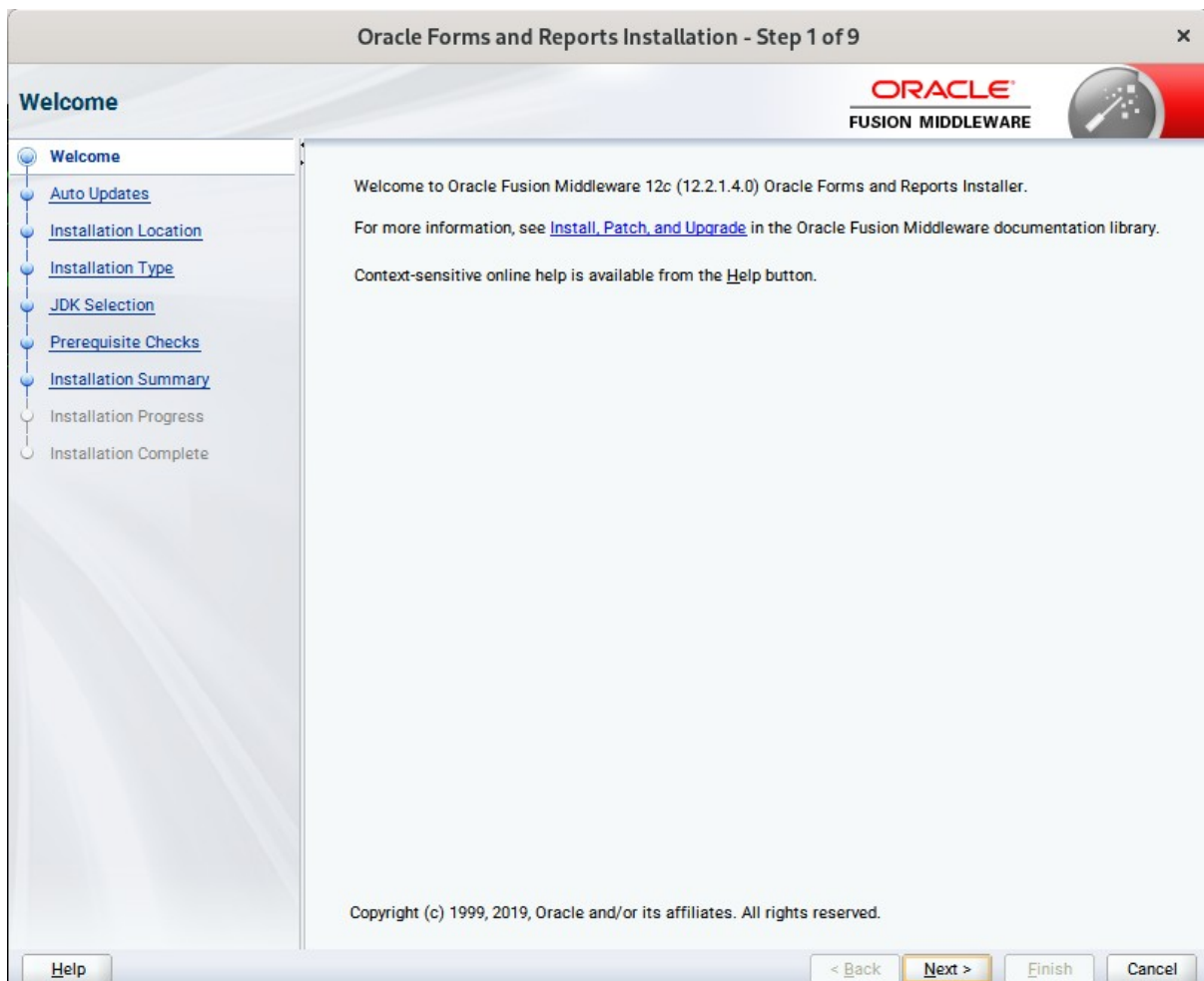
1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP5 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

(**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.



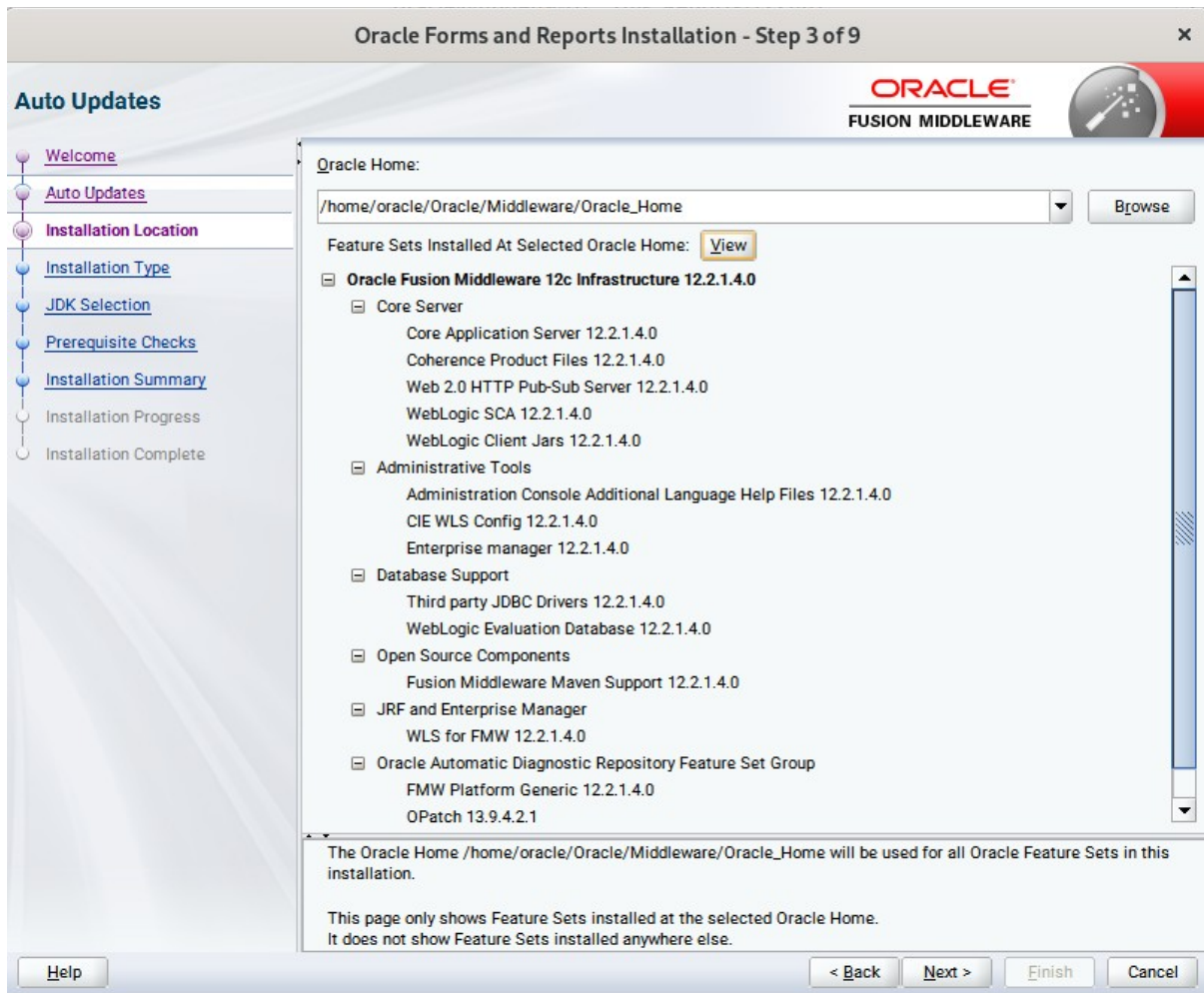
This page welcomes you to the installation. Click **Next** to continue.

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 page features the Oracle Fusion Middleware logo in the top right corner. On the left, a navigation pane lists the installation steps: Welcome, Auto Updates (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. At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >' (highlighted in yellow), 'Finish', and 'Cancel'.

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

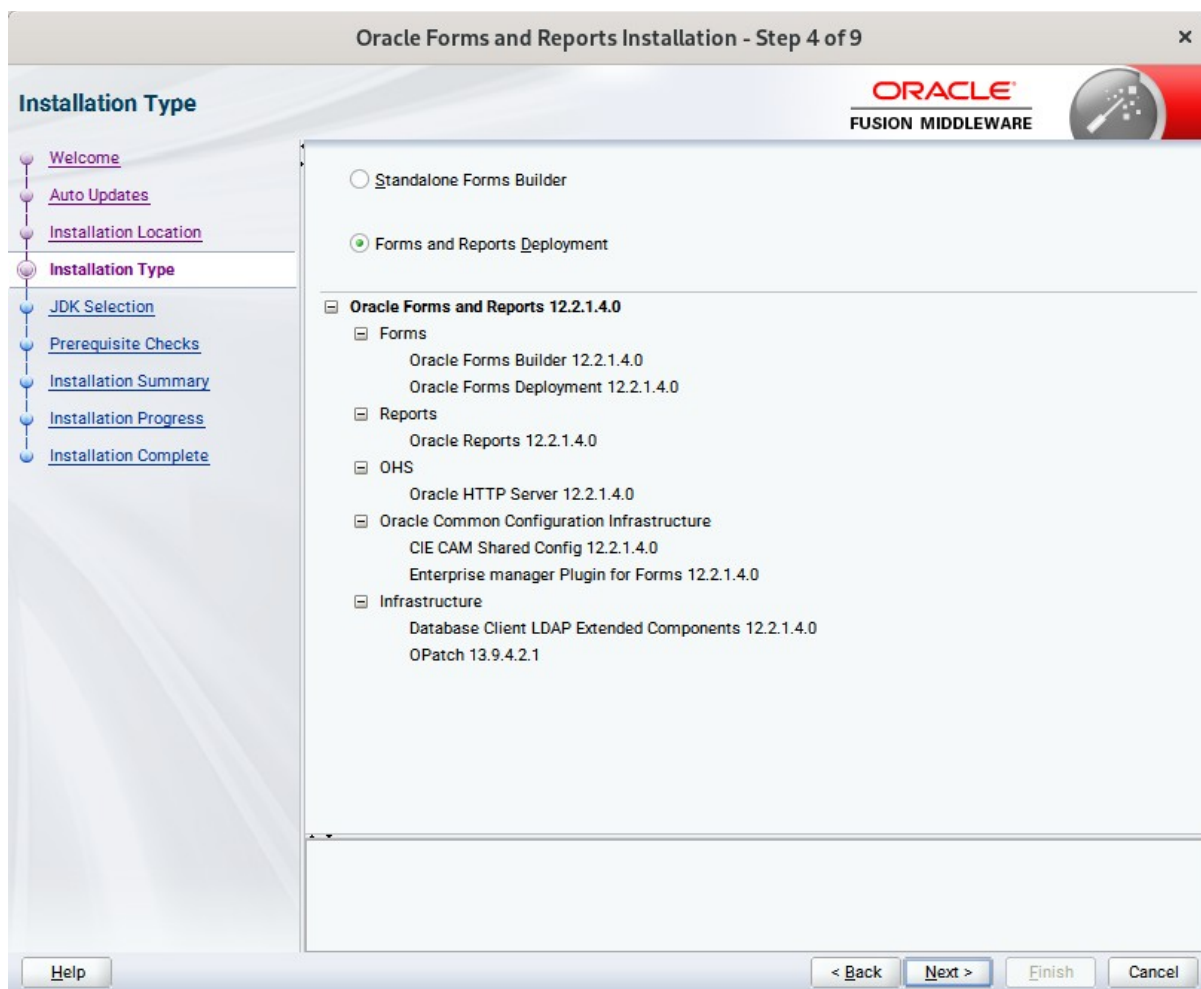
3). The **Installation Location** page appears.



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



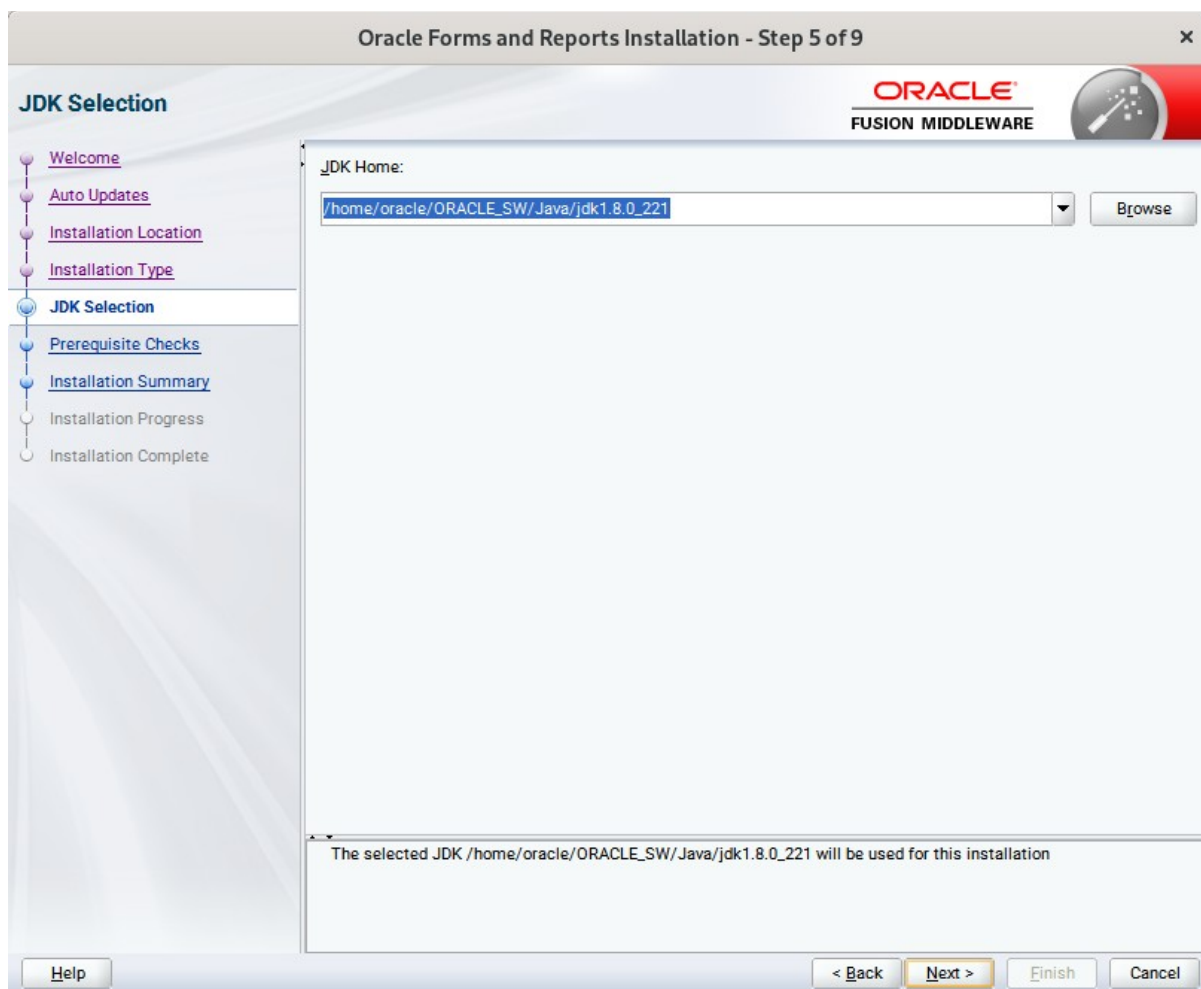
4). The **Installation Type** page appears.



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

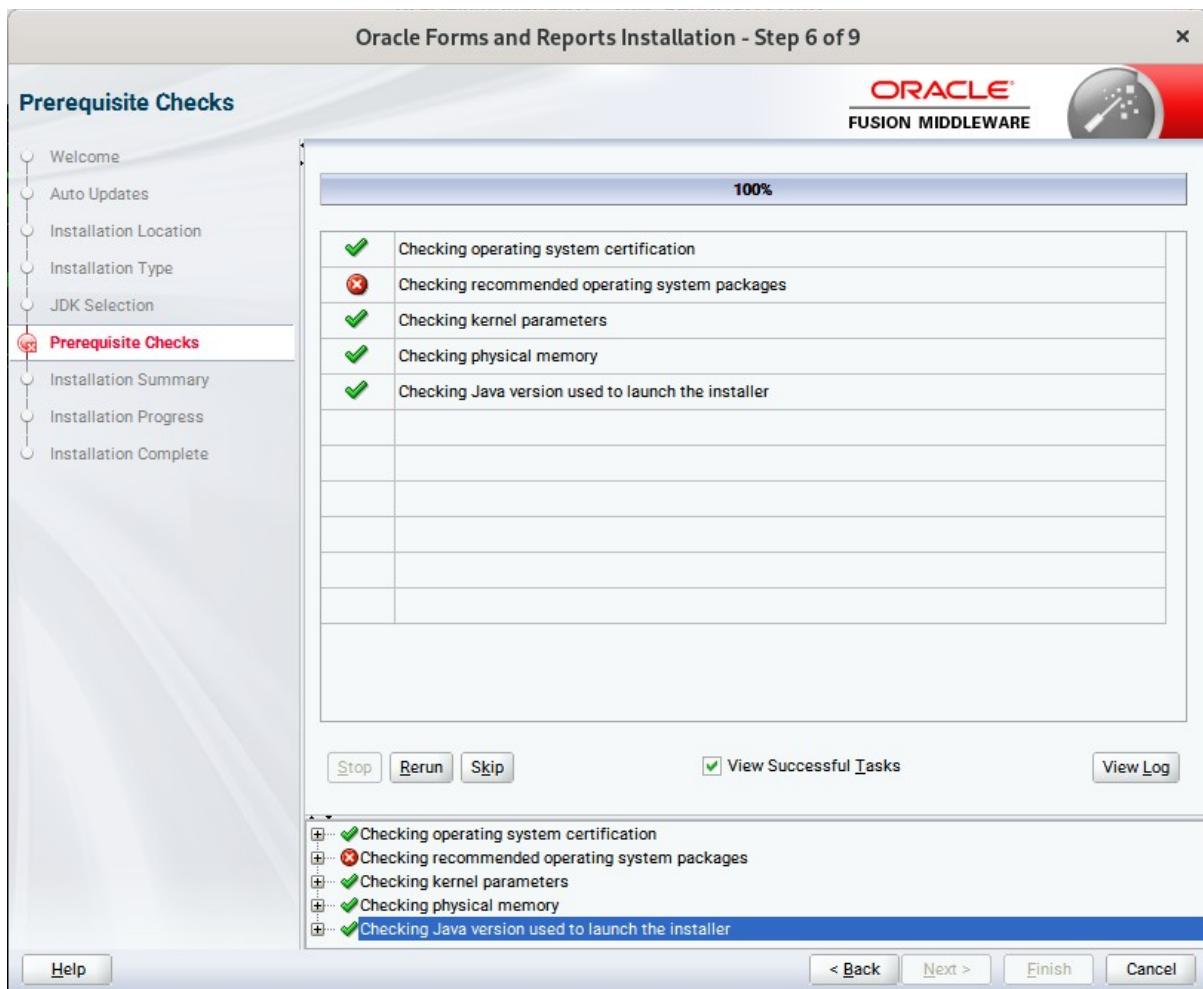


5). The **JDK Selection** page appears.



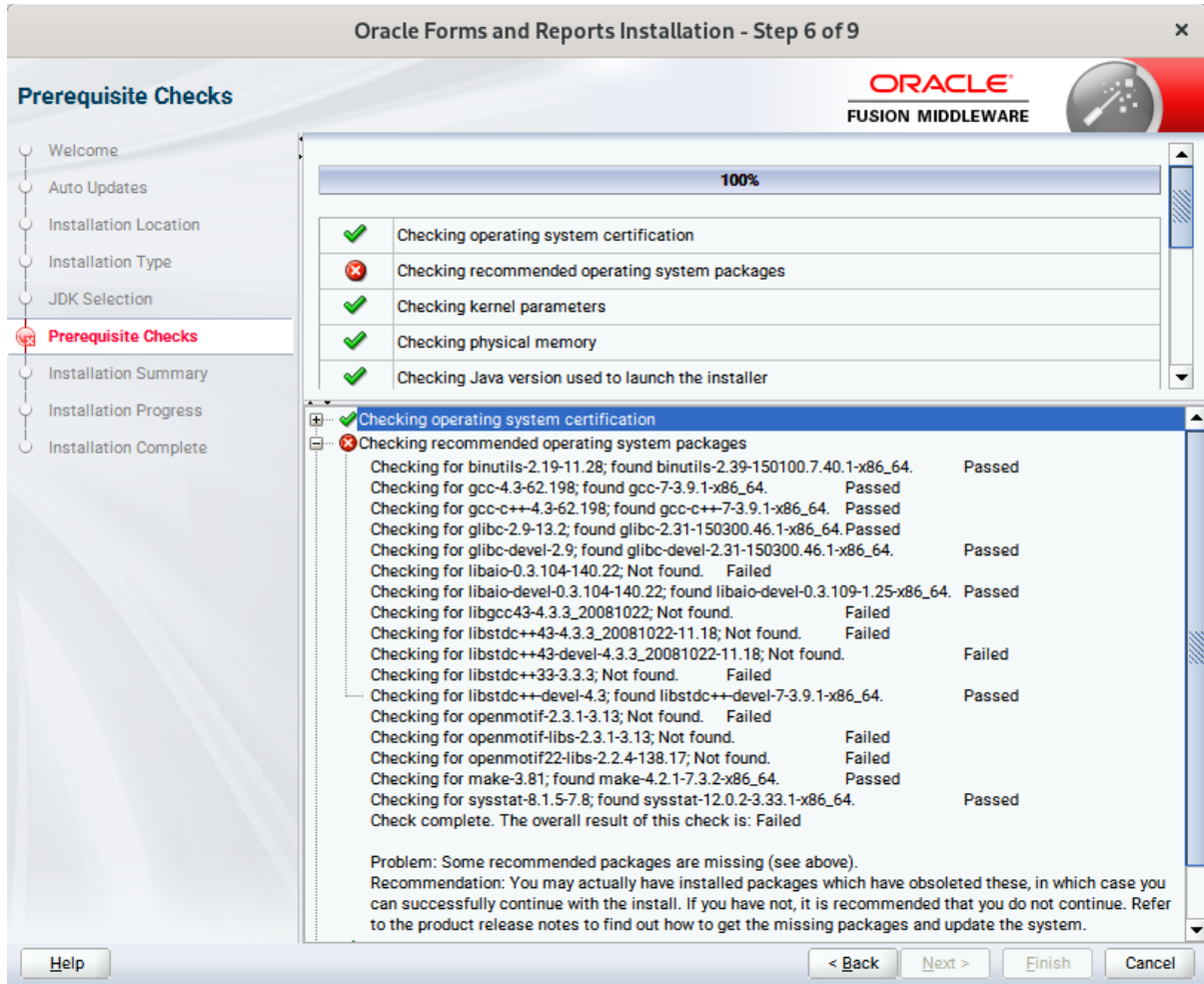
The selected JDK will be used for this installation. Click **Next** to continue.

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



Prerequisite Checks results will be shown as above.

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



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

eg:

- libaio-0.3 (new name is libaio1-xxx)*
- libgcc43-4.3.3 (new name is libgcc\_s1-xxx)*
- libstdc++43-4.3.3 (new name is libstdc++6-xxx)*
- libstdc++33-3.3.3 (deprecated since SLES15 SP1)*
- openmotif-2.3.1 (deprecated since SLES15 SP1)*

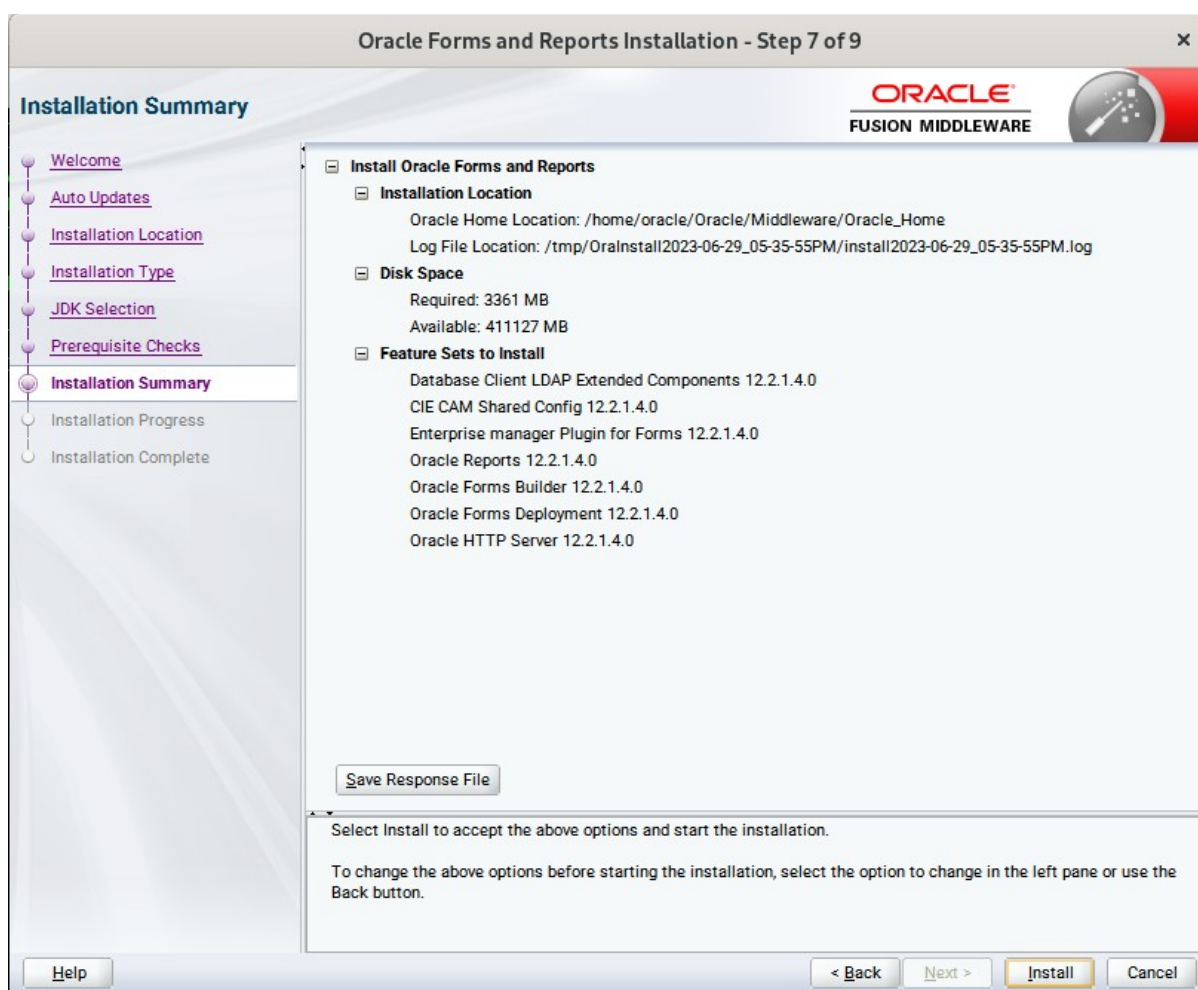
So, please ensure following updated packages(or later versions) are installed, then click '**Skip**' in the '**Prerequisite Checks**' page and continue installation.

```
binutils-2.31-6.3.1.x86_64
gcc-7-1.563.x86_64
glibc-2.26-13.8.1.x86_64
glibc-32bit-2.26-13.8.1.x86_64
glibc-devel-2.26-13.8.1.x86_64
libaio-devel-0.3.109-1.25.x86_64
libaio1-0.3.109-1.25.x86_64
libcap1-1.97-1.15.x86_64
libstdc++6-devel-gcc7-7.4.0+r266845-4.3.4.x86_64
libstdc++6-8.2.1+r264010-1.3.7.x86_64
```

```
libgcc_s1-8.2.1+r264010-1.3.7.x86_64  
libgcc_s1-32bit-8.2.1+r264010-1.3.7.x86_64  
make-4.2.1-7.3.2.x86_64  
mksh-56c-1.10.x86_64  
sysstat-12.0.2-3.3.1.x86_64  
xorg-x11-fonts-core-7.6-3.9.noarch  
xorg-x11-server-extra-1.19.6-8.6.1.x86_64  
xorg-x11-Xvnc-1.8.0-13.8.5.x86_64  
xorg-x11-server-1.19.6-8.6.1.x86_64  
xorg-x11-libs-7.6.1-1.16.noarch  
xorg-x11-essentials-7.6_1-1.22.noarch  
xorg-x11-fonts-7.6-3.9.noarch  
xorg-x11-7.6_1-1.22.noarch  
xorg-x11-driver-video-7.6_1-2.30.x86_64
```

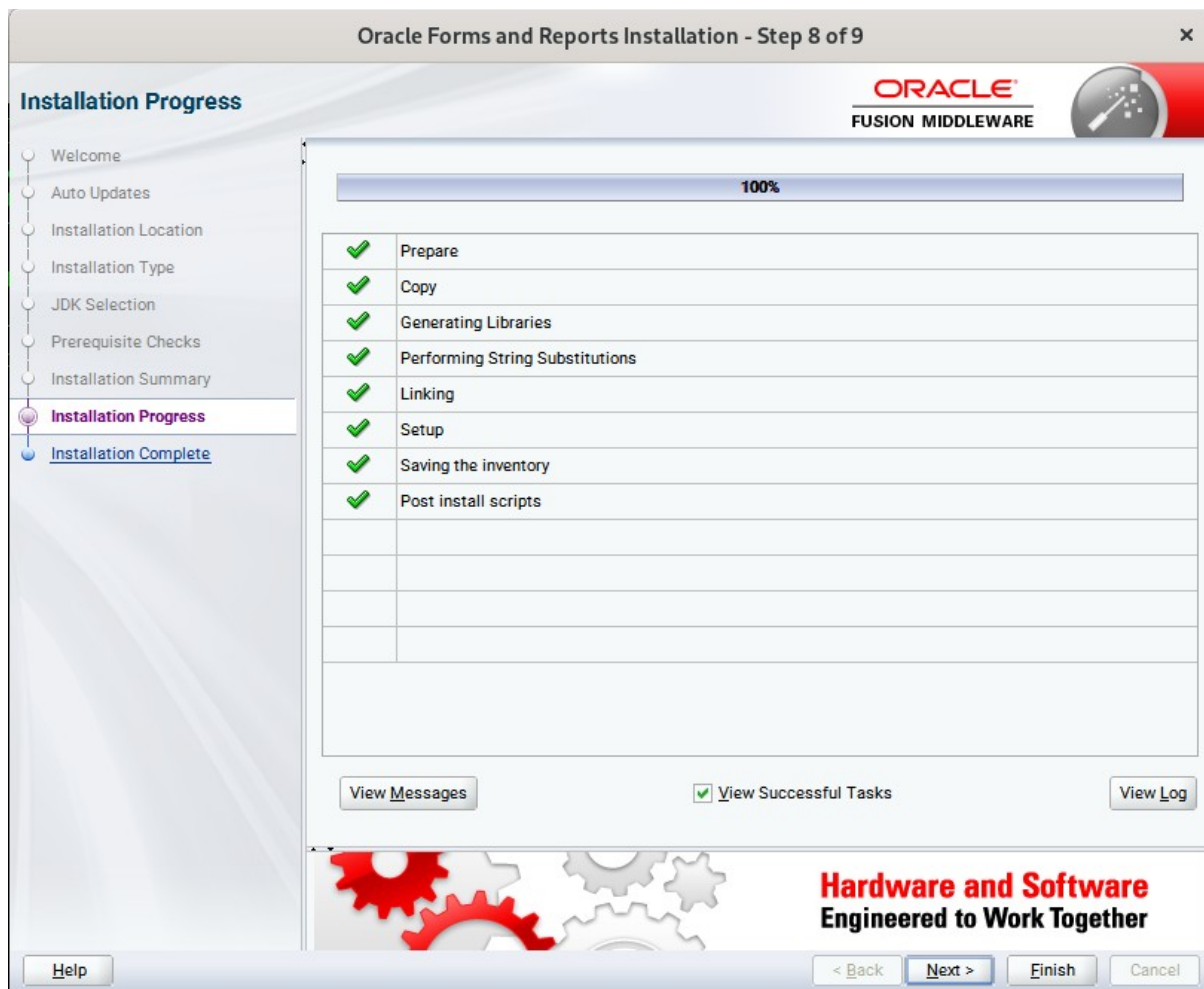
)

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



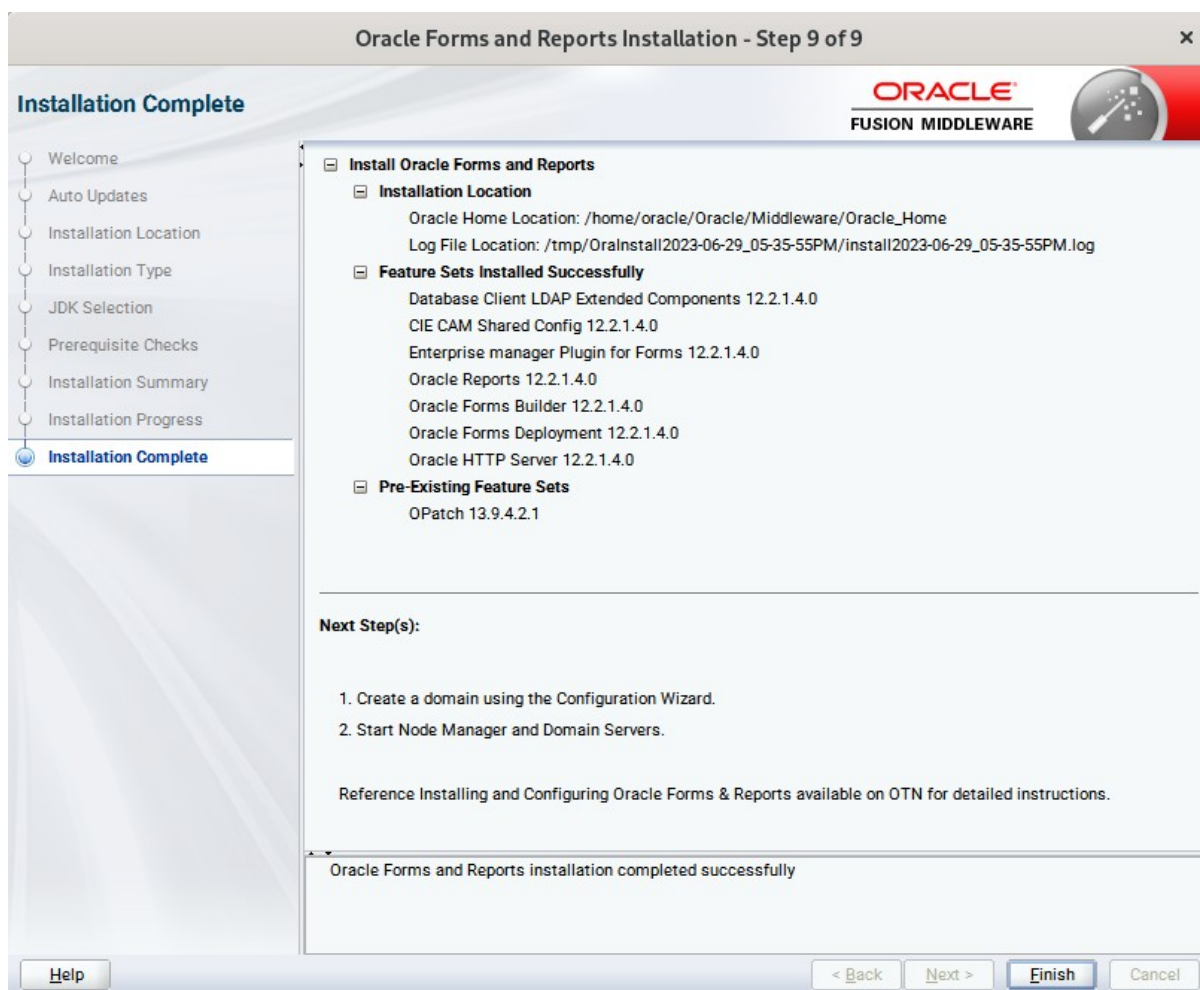
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



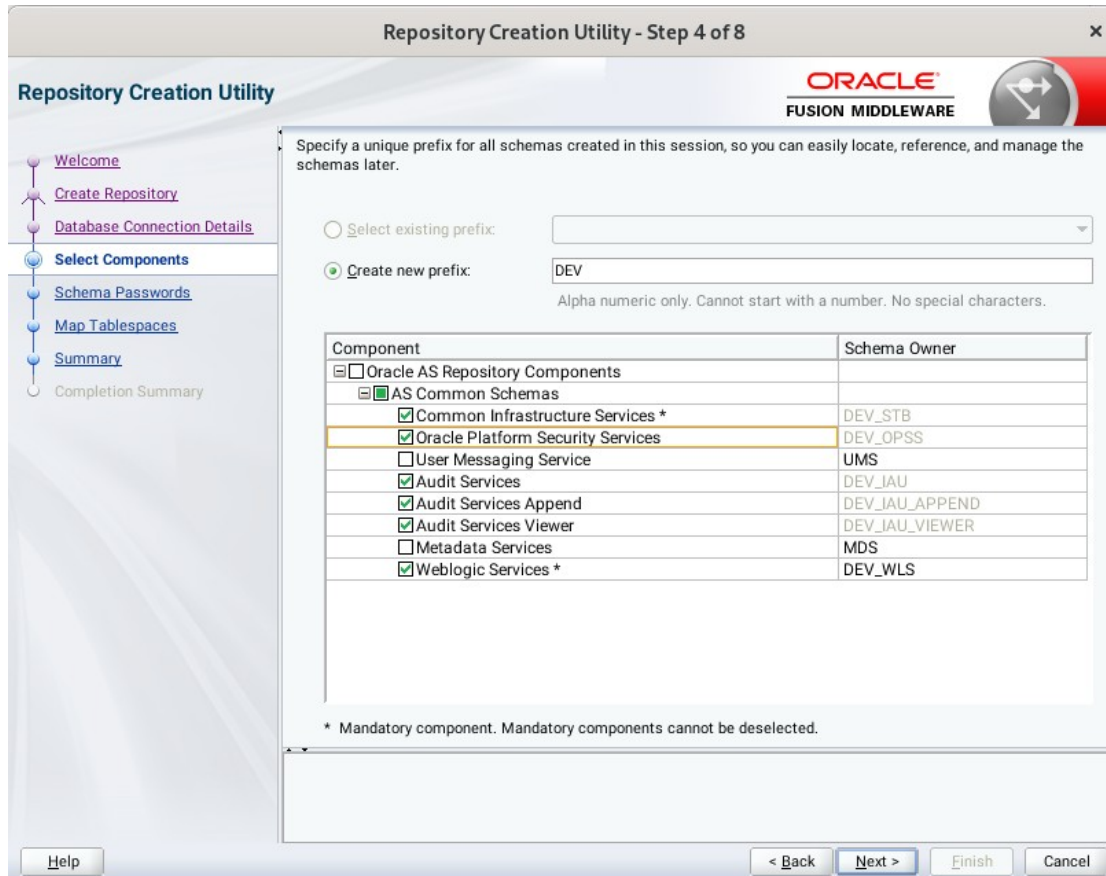
Click **Finish** to dismiss the installer.



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

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

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



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

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



Ensure the schema creation is successful.

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

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

Database details:

Host Name: hpgen9-01  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 2 minutes 2 seconds

RCU Logfile: /tmp/RCU2023-06-29\_18-08\_1534146664/logs/rcu.log  
Component Log Directory: /tmp/RCU2023-06-29\_18-08\_1534146664/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.938(sec)	stb.log
Oracle Platform Security Services	Success	00:35.600(sec)	opss.log
Audit Services	Success	00:22.461(sec)	iau.log
Audit Services Append	Success	00:09.333(sec)	iau_append.log
Audit Services Viewer	Success	00:09.369(sec)	iau_viewer.log
Weblogic Services	Success	00:19.231(sec)	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.

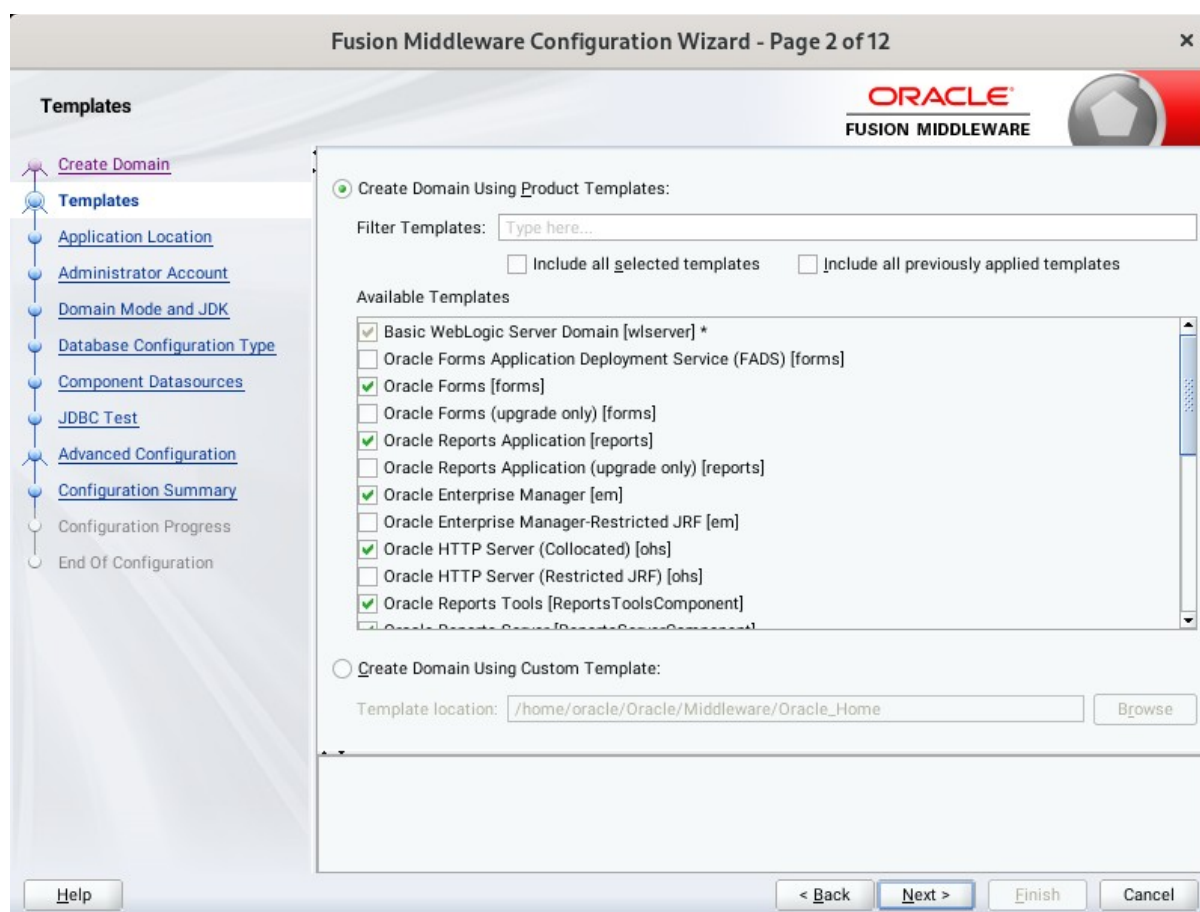
Follow these steps:

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



Click **Next** to continue.

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

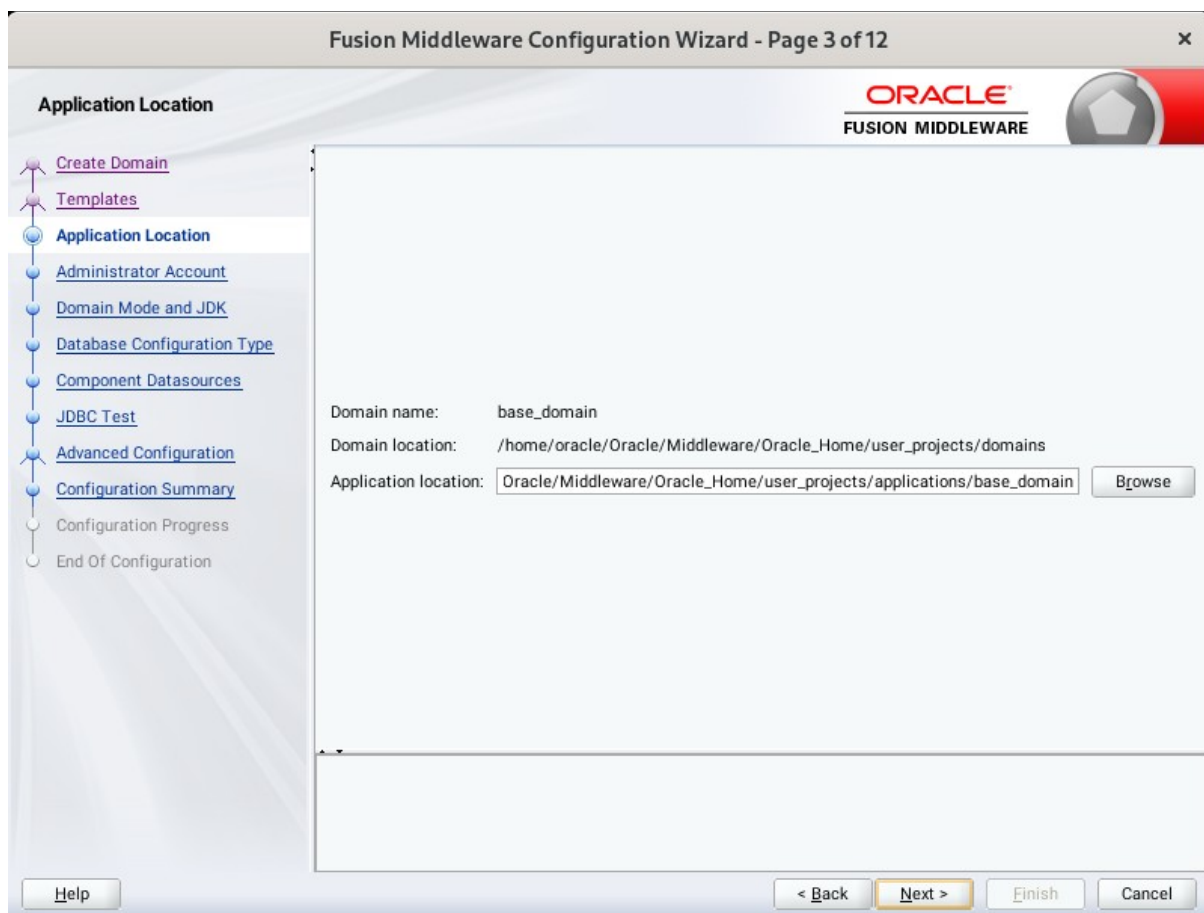


Keep the default selection (**Create Domain using Product Templates**). Selecting

**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]**.

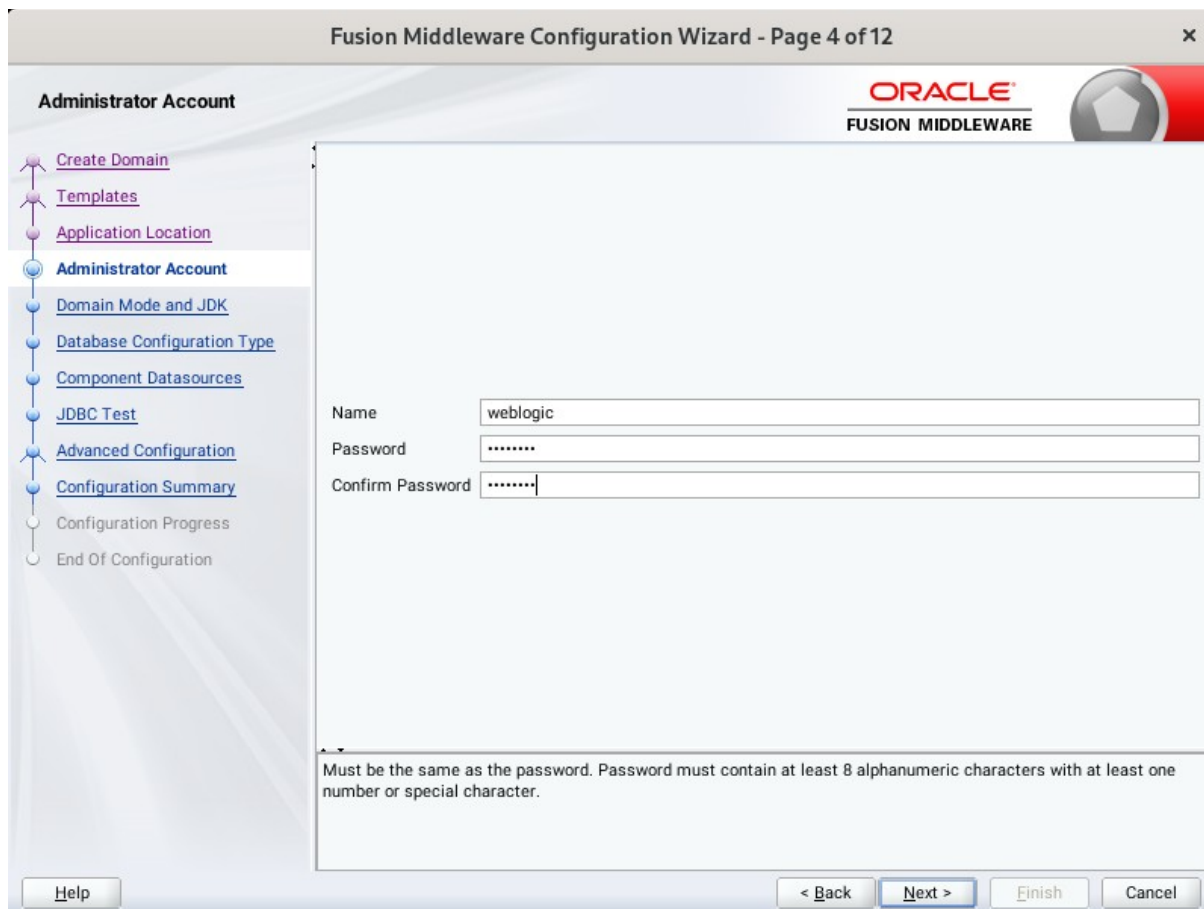
Any dependent templates will be automatically selected. Click **Next** to continue.

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



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

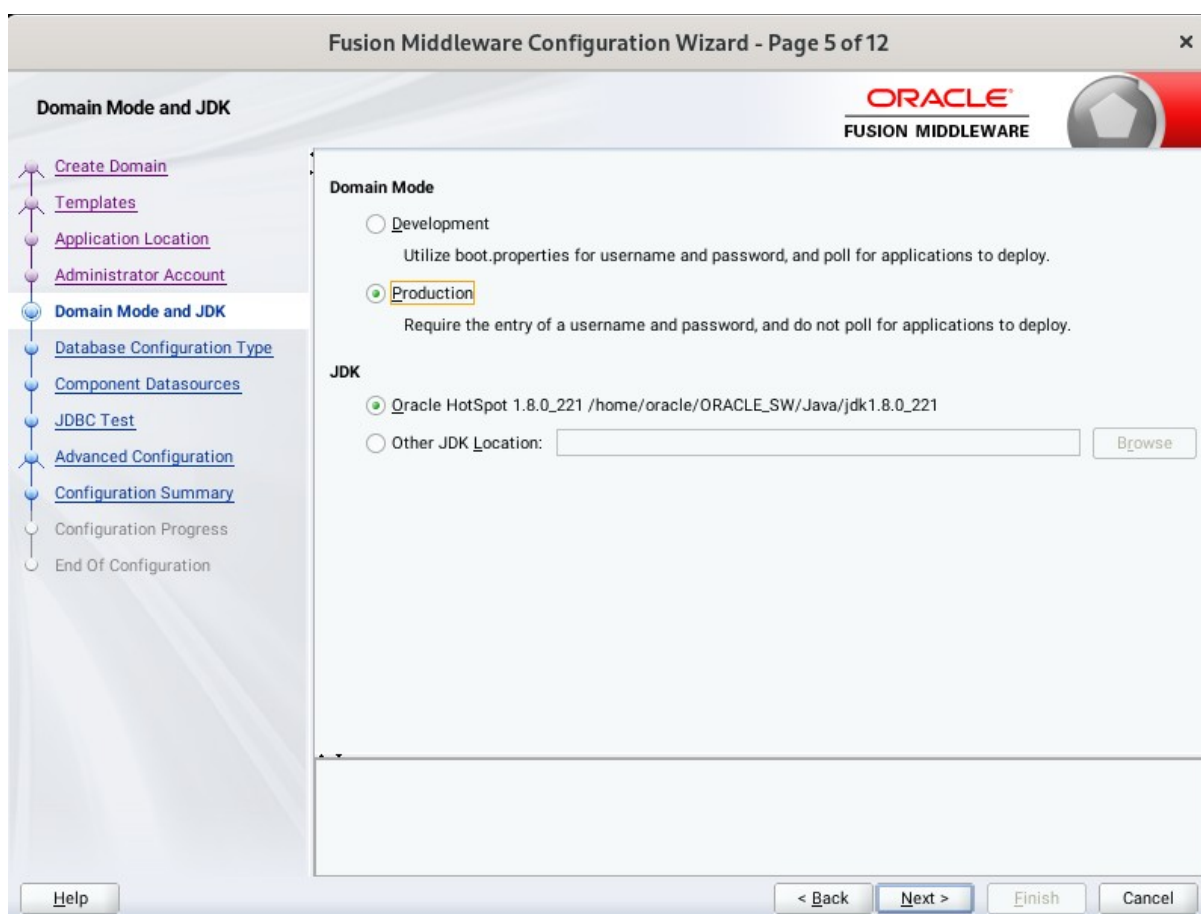
4). The **Administrator Account** screen appears.



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

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

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



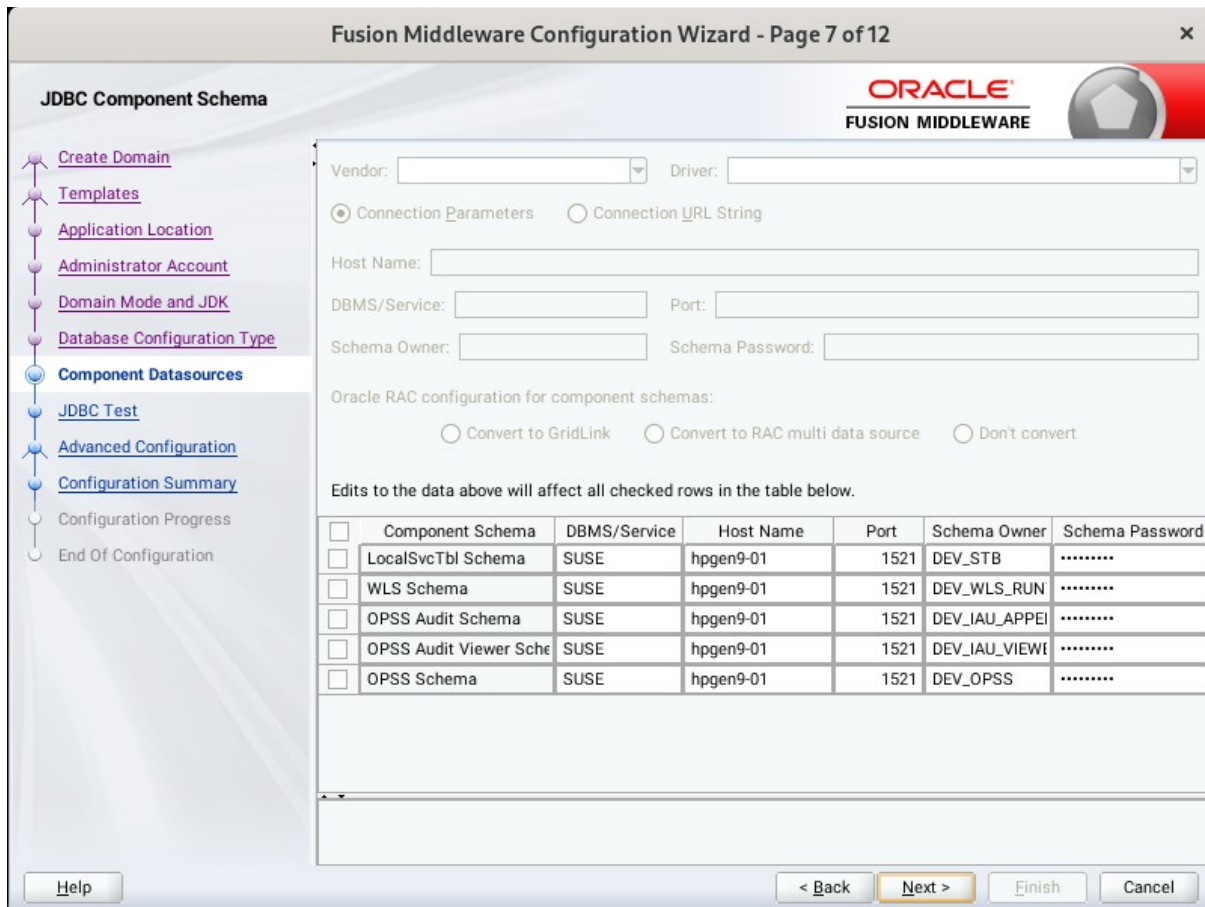
The Domain Mode and JDK screen appears. Select the Domain Mode (either **Development** or **Production**). To ensure the highest degree of security, selecting **Production** is recommended. Leave the default JDK selection as it appears, unless using another version of the JDK desired.

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

The screenshot shows the 'Database Configuration Type' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 6 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists steps: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type (selected), Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area is titled 'Specify AutoConfiguration Options Using:' and has two radio buttons: 'RCU Data' (selected) and 'Manual Configuration'. Below this, a text box explains: 'Enter the database connection details using the schema credentials corresponding to Common Infrastructure Services component in the Repository Creation Utility. The Wizard uses this connection to automatically configure the datasources required for components in this domain.' The 'Vendor' dropdown is set to 'Oracle' and the 'Driver' dropdown is '\*Oracle's Driver (Thin) for Service connections; Versions:...'. There are two radio buttons for 'Connection Parameters' (selected) and 'Connection URL String'. The 'Host Name' field contains 'hpgen9-01'. The 'DBMS/Service' field contains 'suse' and the 'Port' field contains '1521'. The 'Schema Owner' field contains 'DEV\_STB' and the 'Schema Password' field contains '.....'. There are 'Get RCU Configuration' and 'Cancel' buttons. Below is a 'Connection Result Log' section with the following text: 'Connecting to the database server...OK', 'Retrieving schema data from database server...OK', 'Binding local schema components with retrieved data...OK', 'Successfully Done.', and 'Click "Next" button to continue.' At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

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

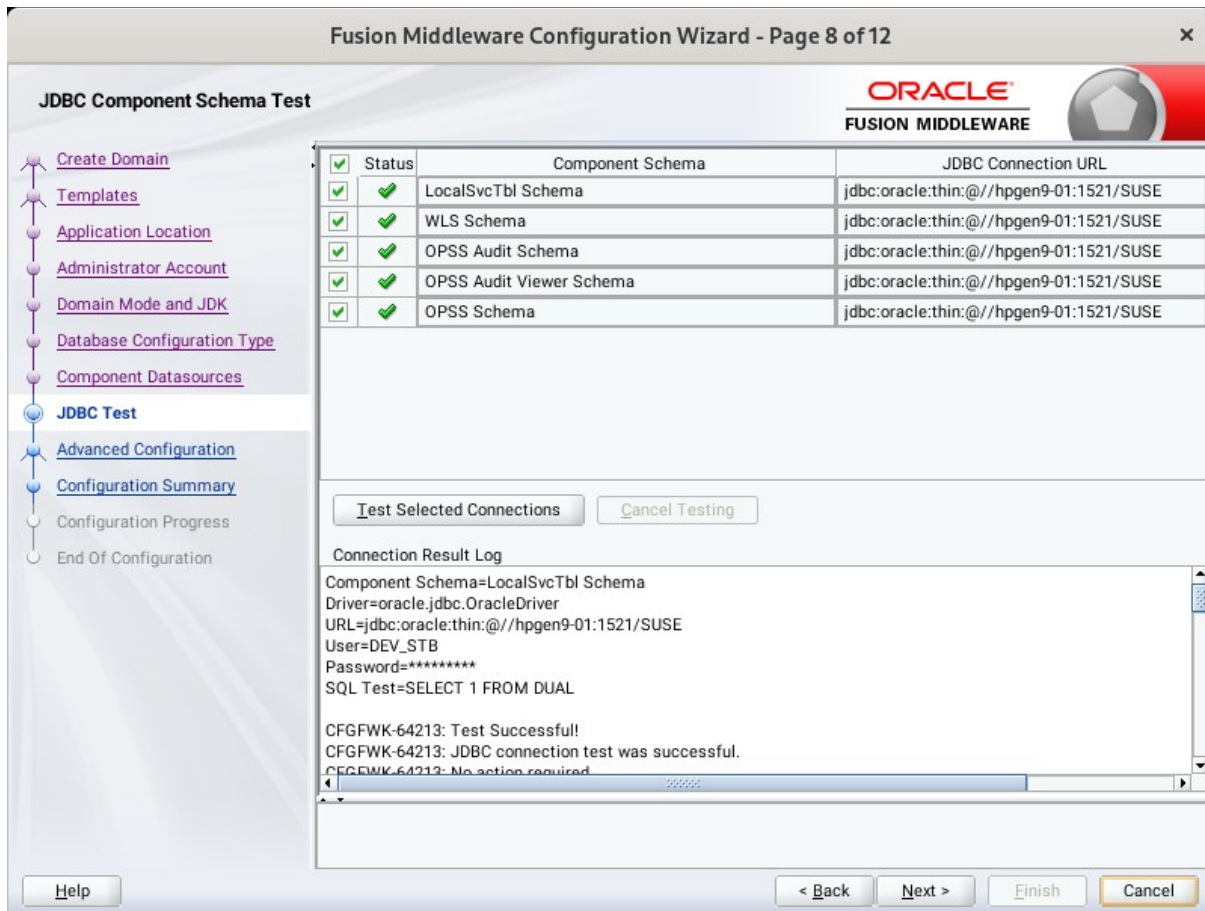
7). The **JDBC Component Schema** screen appears.



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



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



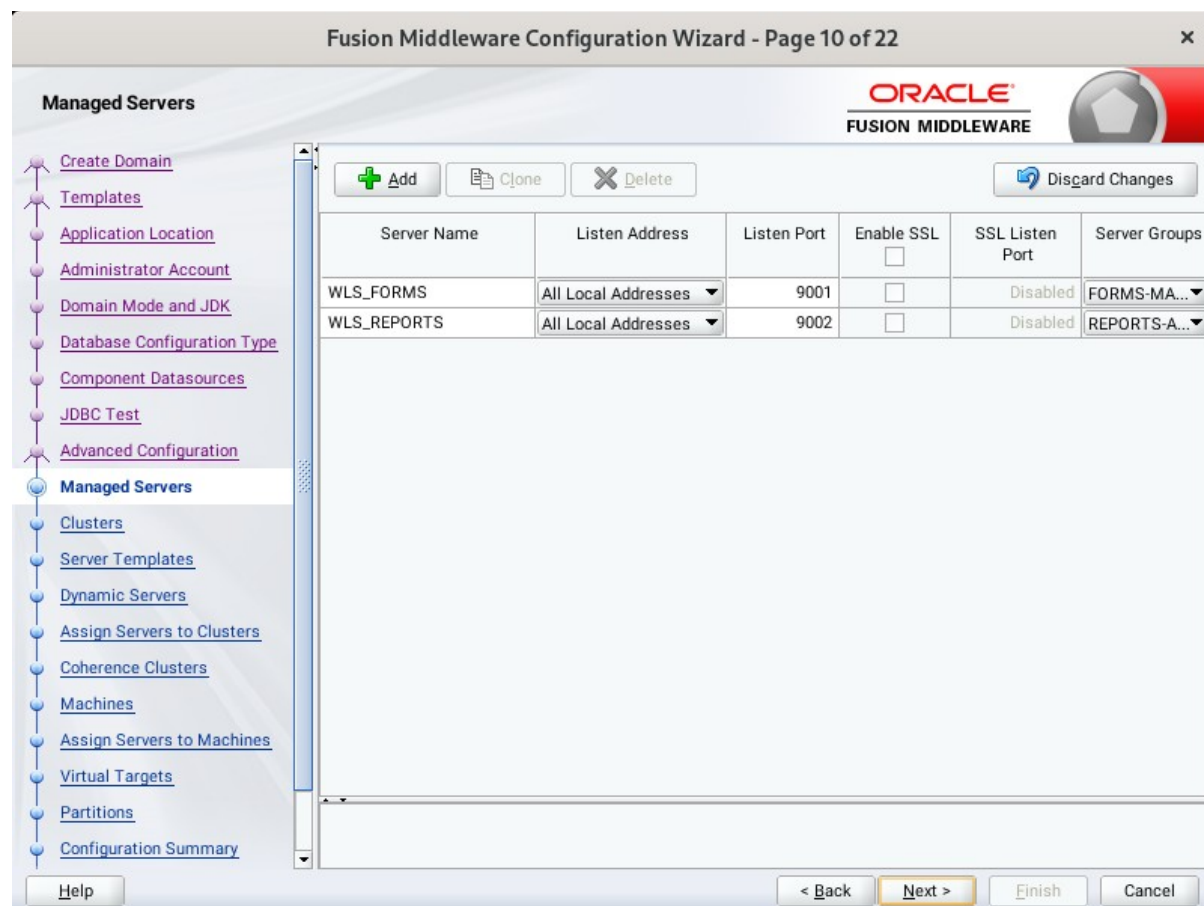
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



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

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



Fusion Middleware Configuration Wizard - Page 10 of 22

Managed Servers

ORACLE  
FUSION MIDDLEWARE

+ Add Clone Delete Disard Changes

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
WLS_FORMS	All Local Addresses	9001	<input type="checkbox"/>	Disabled	FORMS-MAN-SVR
WLS_REPORTS	All Local Addresses	9002	<input type="checkbox"/>	Disabled	REPORTS-APP-SERVERS

Help < Back Next > Finish Cancel

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

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

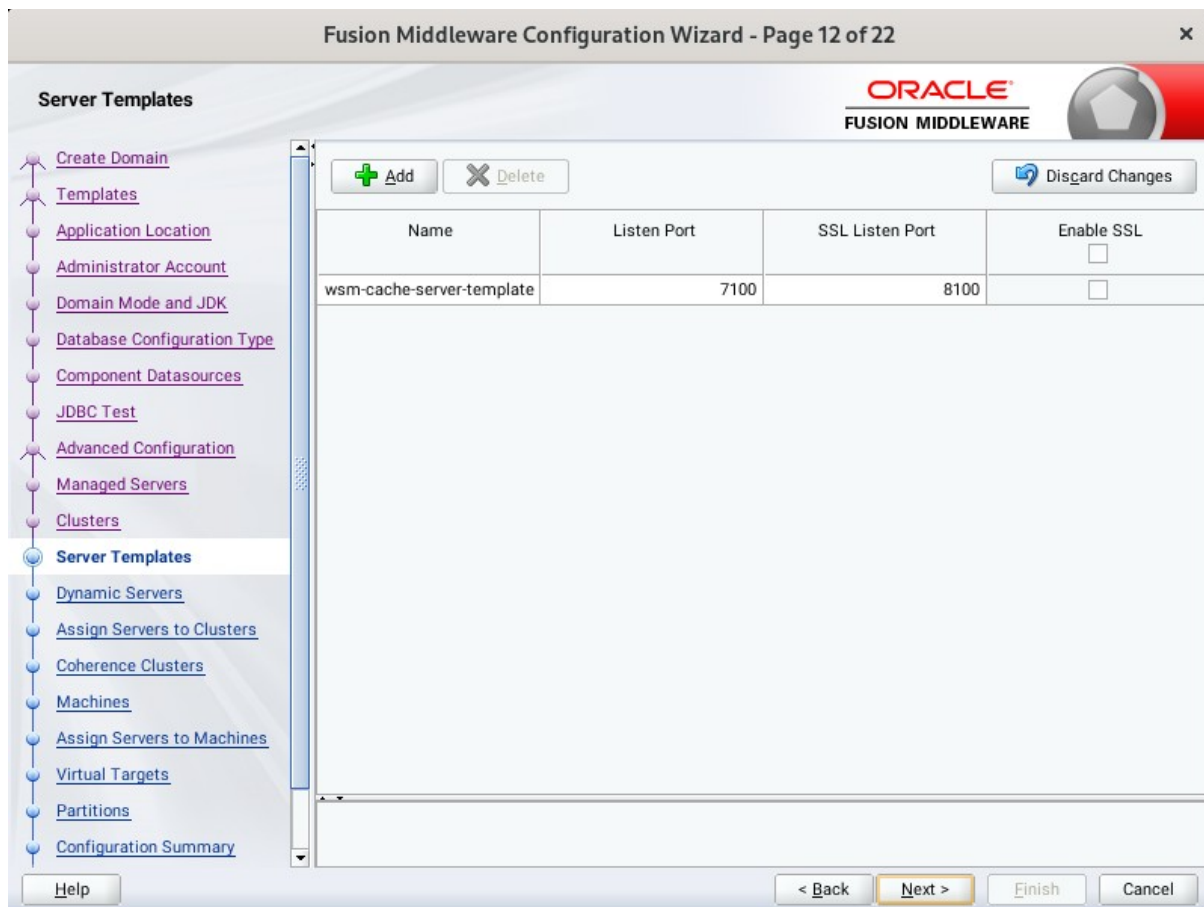
The screenshot shows the 'Clusters' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 11 of 22'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right. A navigation pane on the left lists various configuration steps, with 'Clusters' selected. The main area contains a table with the following data:

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

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

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.

Fusion Middleware Configuration Wizard - Page 13 of 22

**Dynamic Servers**

ORACLE  
FUSION MIDDLEWARE

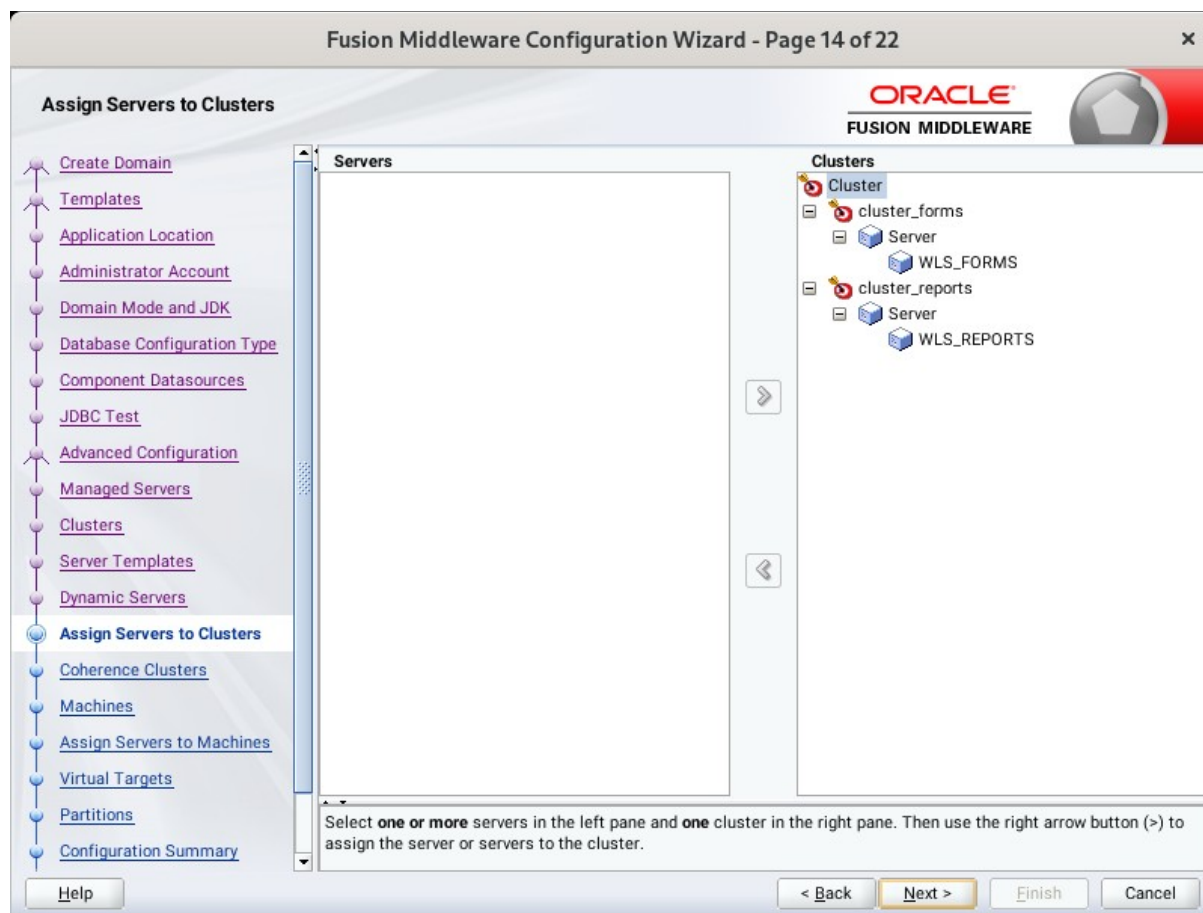
Disgard Changes

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

Help < Back Next > Finish Cancel

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.

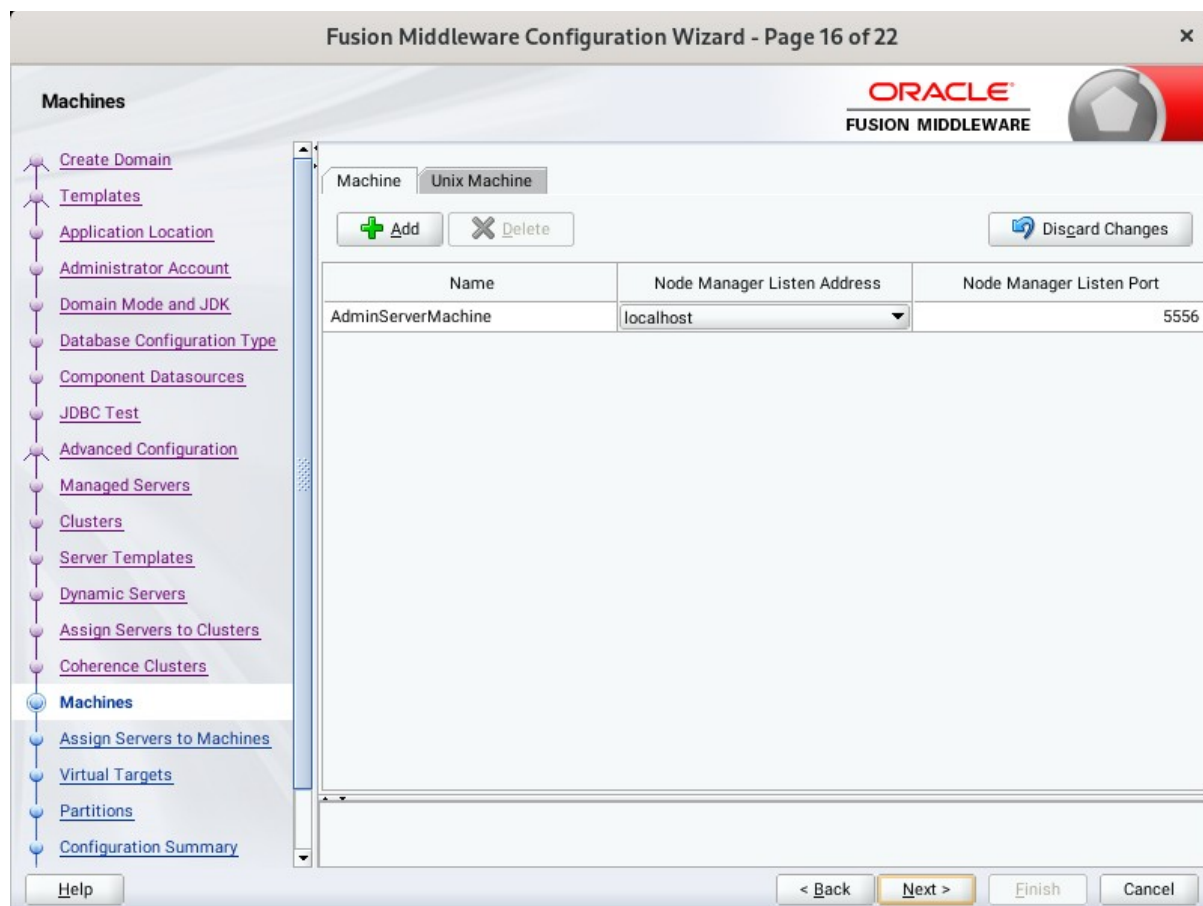
15). The **Coherence Clusters** screen appears.



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

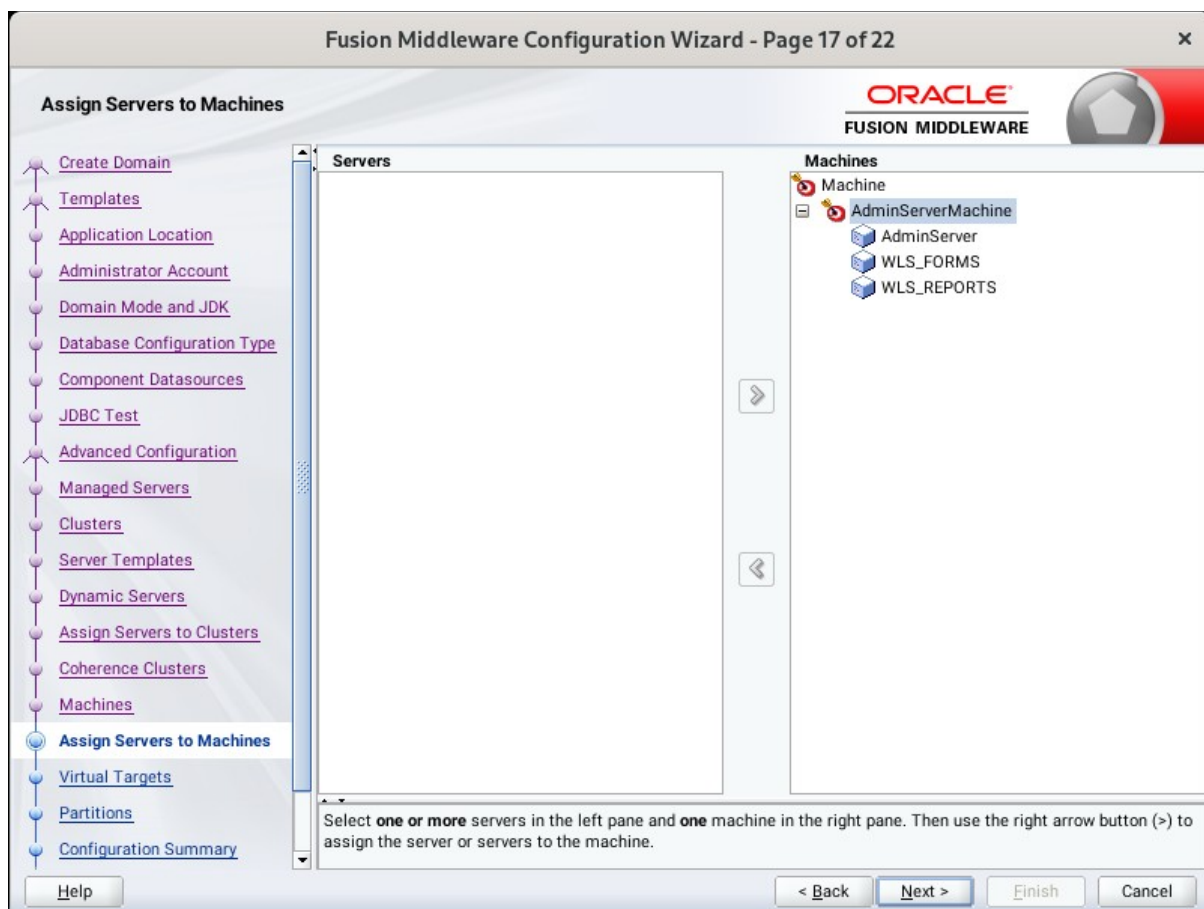


16). The **Machines** screen appears.



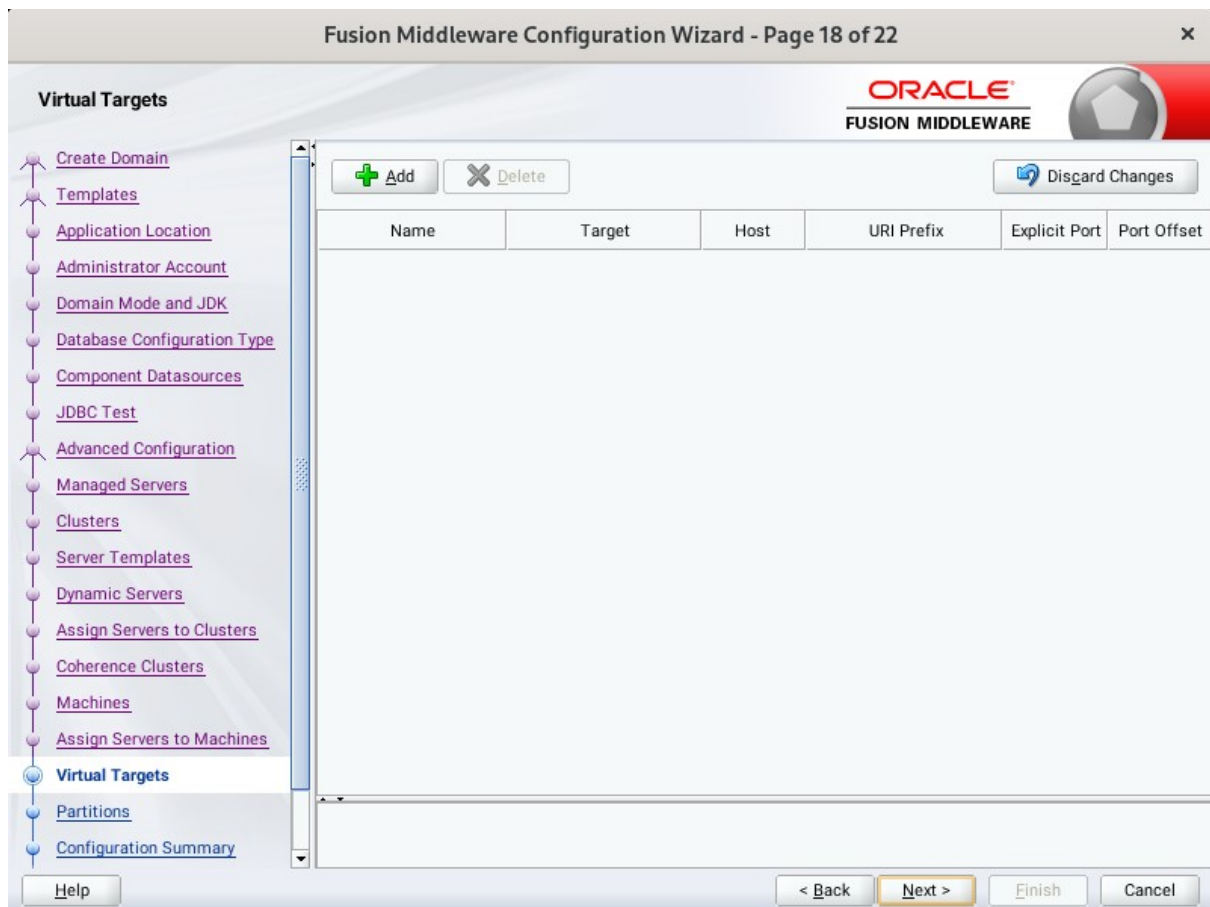
You can use this screen to override the machine name or add additional Machine names for extend domain. Click **Next** to continue.

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



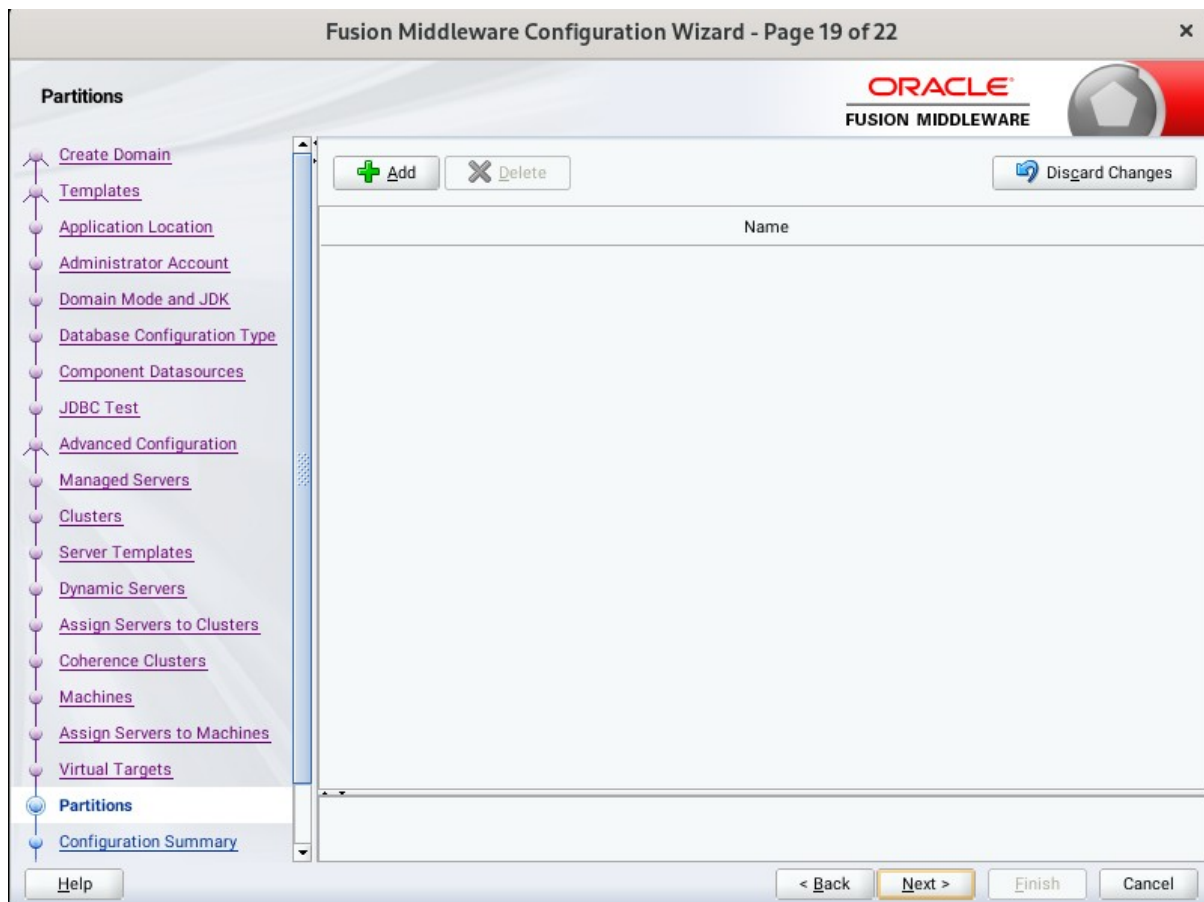
Move the AdminServer to the AdminServerMachine by clicking the '>' button. Click **Next** to continue.

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



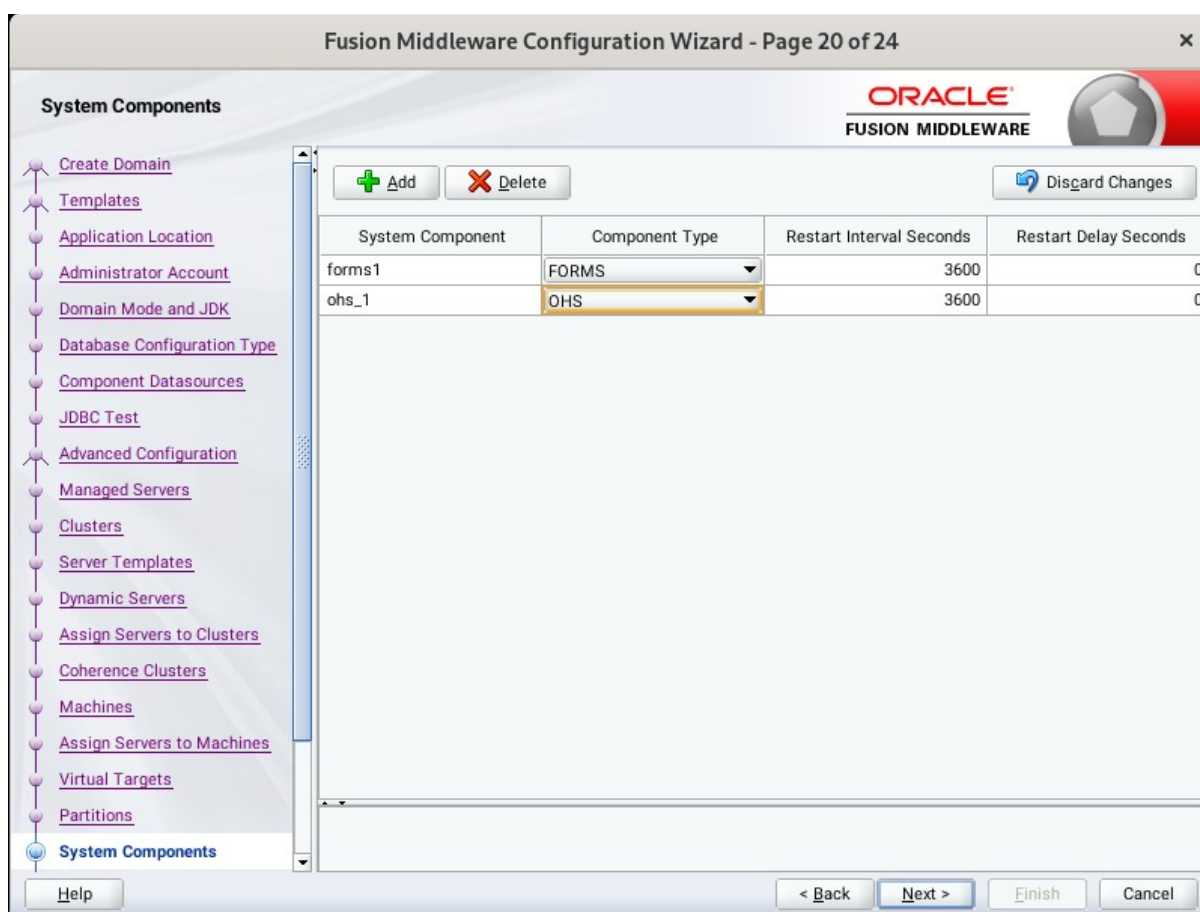
Used with WebLogic Server Partitions. Refer to the WebLogic Server documentation for details. Click **Next** to continue.

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



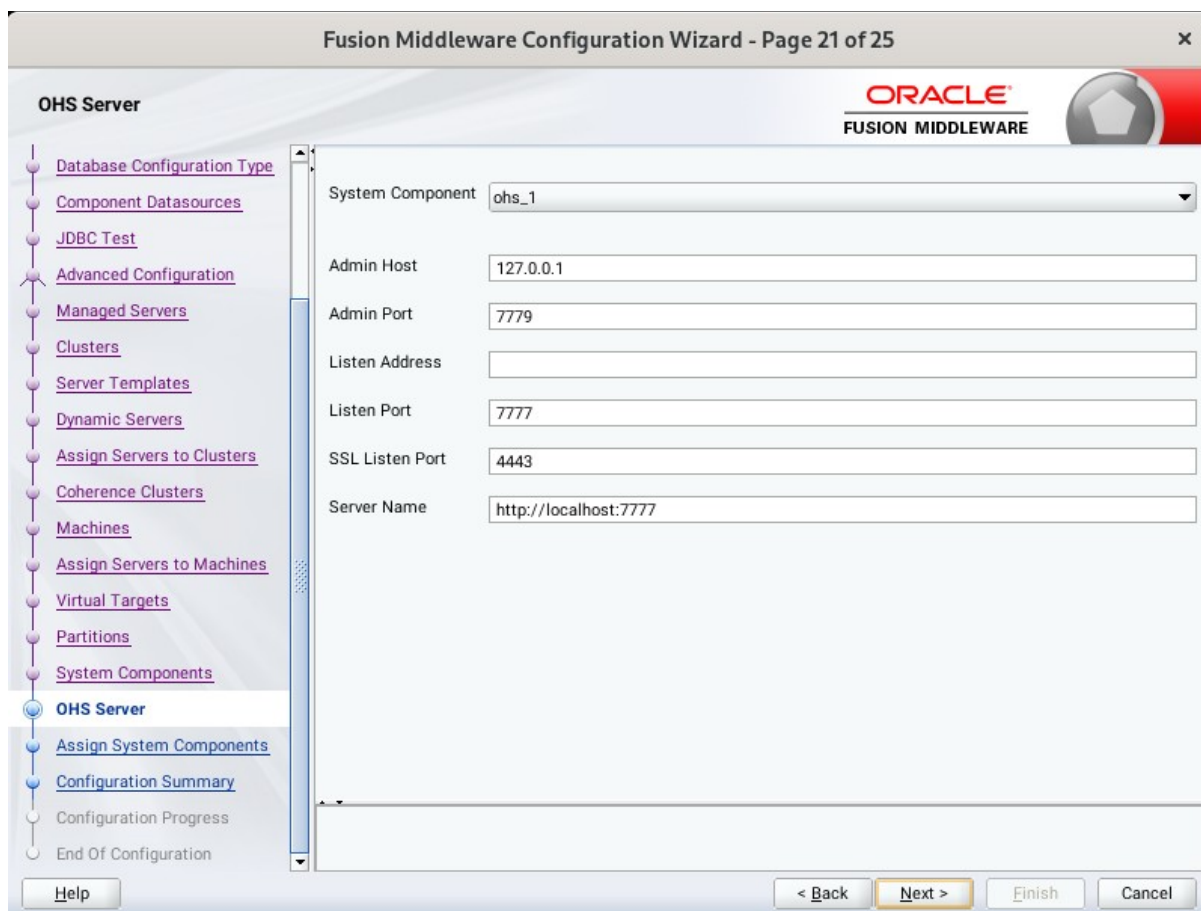
The Partitions screen appears. Use this screen to add Weblogic Partitions if desired. Refer to the WebLogic Server documentation for details on how to use Partitions. Click **Next** to continue.

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



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

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



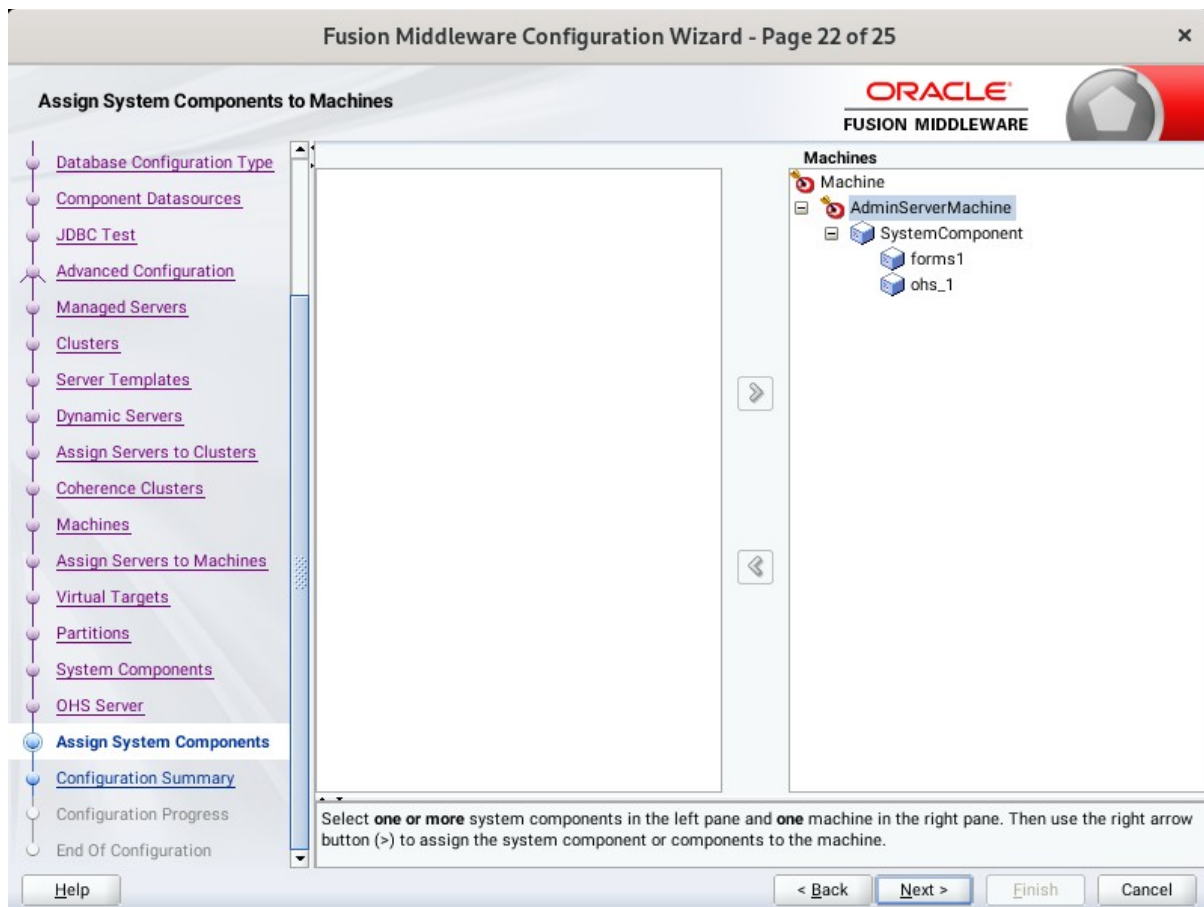
The screenshot displays the 'OHS Server' configuration screen within the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 21 of 25'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'OHS Server' selected. 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 screen, there are four buttons: 'Help', '< Back', 'Next >', 'Finish', 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.

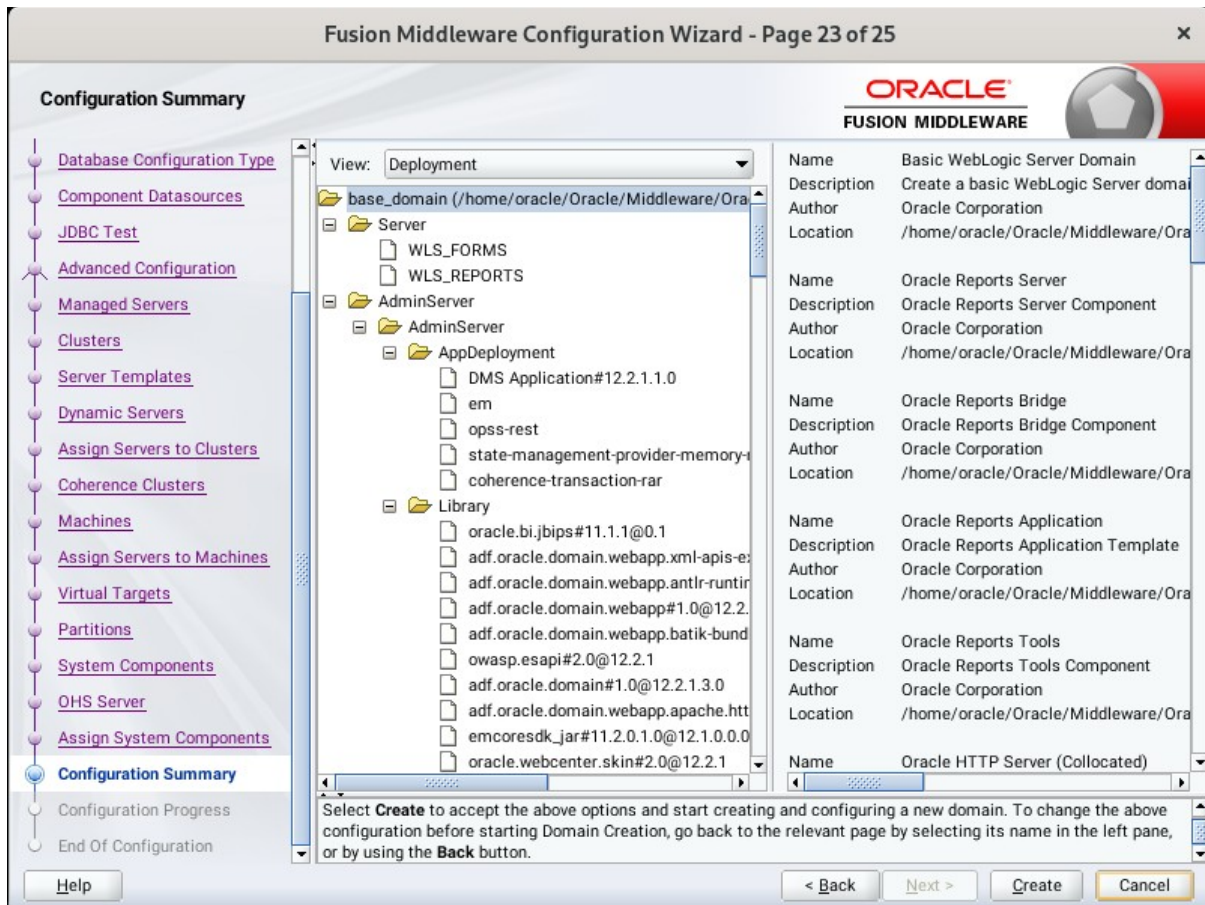
22). The **Assign System Components to Machines** screen appears.



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



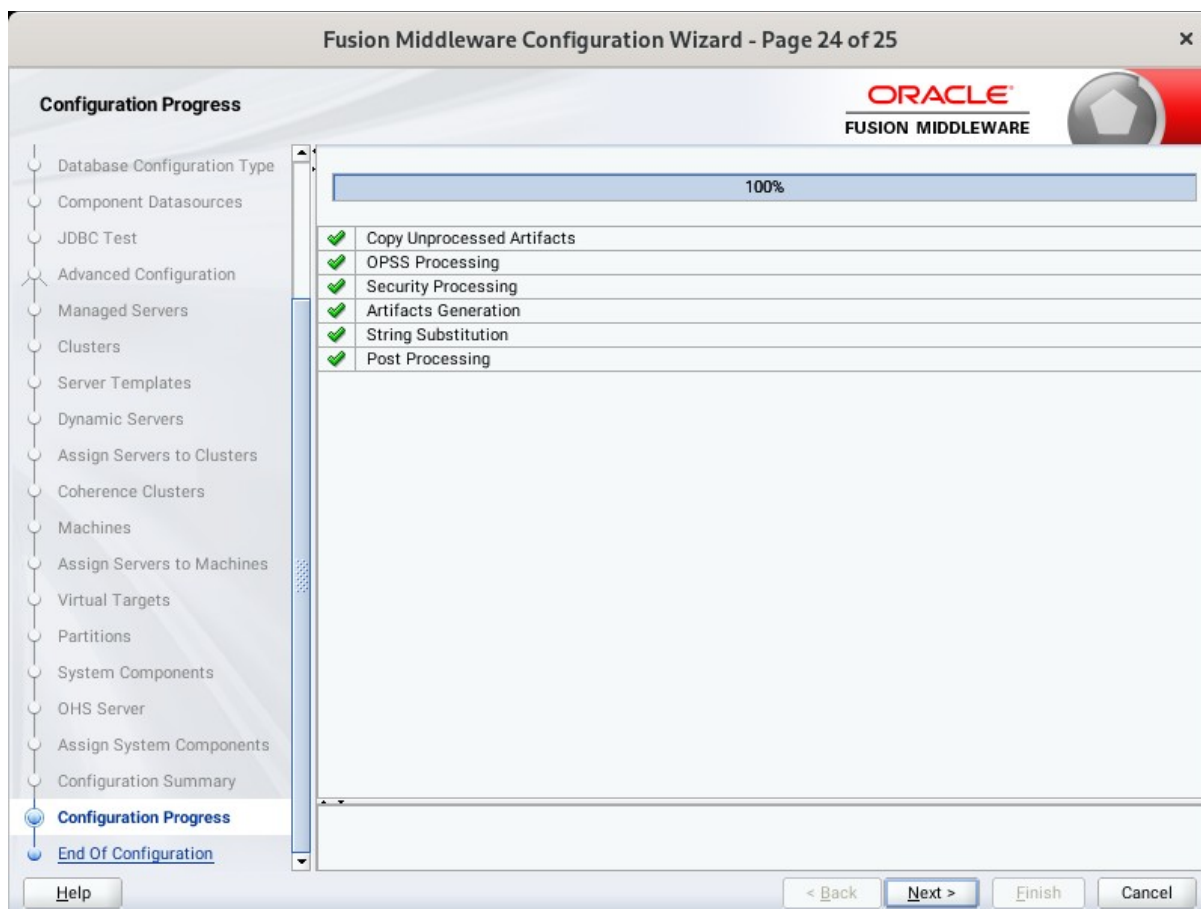
23). The **Configuration Summary** screen appears.



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

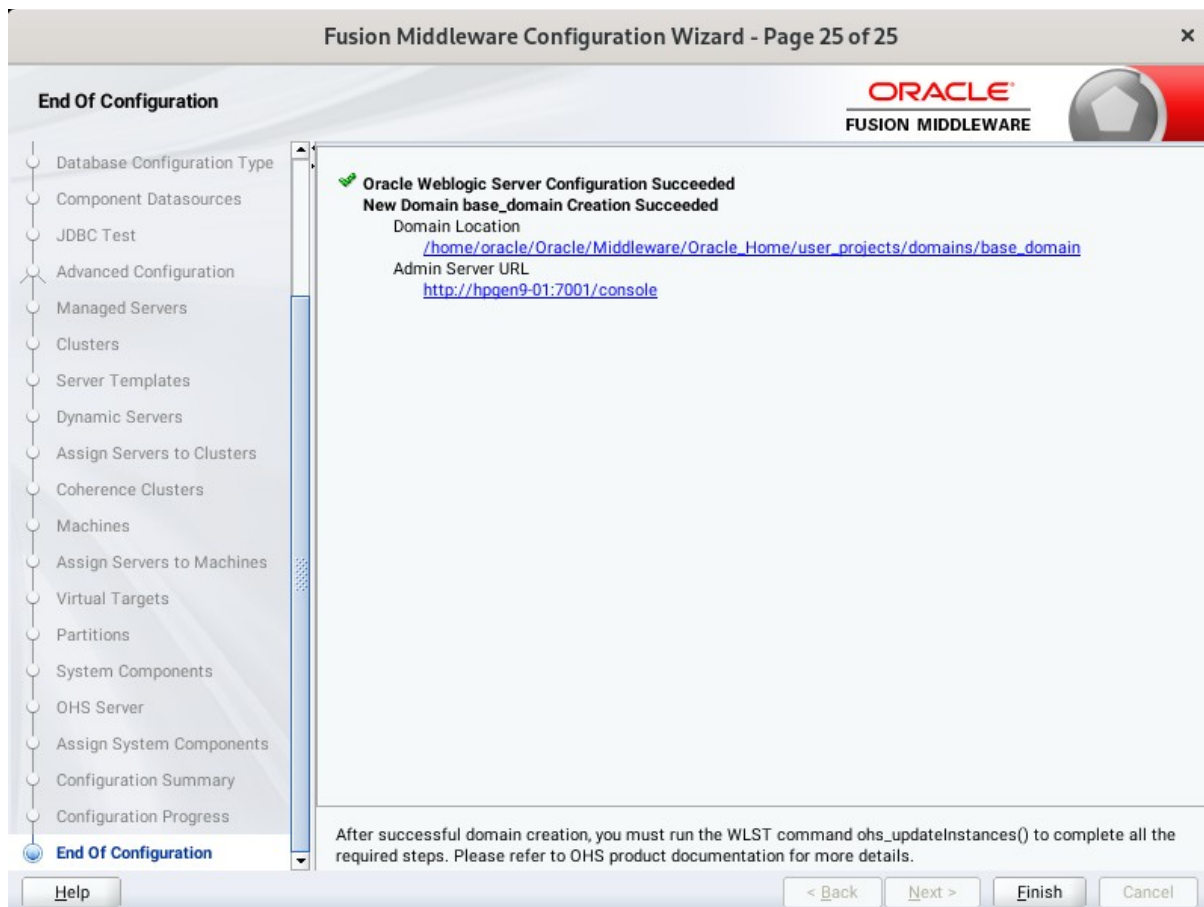


24). The **Configuration Progress** screen appears.



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 &'**

```

oracle@hpgen9-01:~/base_domain/bin
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> ./startNodeManager.sh > nm.out &
[1] 13795
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> + /home/oracle/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/.. -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/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Jun 29, 2023 6:32:57 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jun 29, 2023 6:32:58 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jun 29, 2023 6:32:58 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'>
<Jun 29, 2023 6:32:58 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jun 29, 2023 6:32:58 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jun 29, 2023 6:32:58 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Jun 29, 2023 6:32:59 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<Jun 29, 2023 6:32:59 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@hpgen9-01:~ns/base_domain/bin
oracle@hpgen9-01:~ns/base_domain/bin
oracle@hpgen9-01:~ns/base_domain/bin
<Jun 29, 2023 6:37:09,821 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jun 29, 2023 6:37:10,891 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain Level Diagnostic Service.>
2023-06-29 18:37:10.903/140.783 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '2' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2023-06-29 18:37:10.956/140.836 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '2' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jun 29, 2023 6:37:11,443 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jun 29, 2023 6:37:11,558 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jun 29, 2023 6:37:11,558 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connection list DomainRuntimeServiceMBean>
<Jun 29, 2023 6:37:12,350 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<Jun 29, 2023 6:37:12,352 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jun 29, 2023 6:37:12,352 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.>
<Jun 29, 2023 6:37:12,353 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.>
<Jun 29, 2023 6:37:12,353 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 29, 2023 6:37:12,353 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.>
<Jun 29, 2023 6:37:12,353 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.>
<Jun 29, 2023 6:37:12,353 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jun 29, 2023 6:37:12,438 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jun 29, 2023 6:37:12,459 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2023-06-29 18:37:13.107/142.987 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '21' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST

```

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

```

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

```

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

Confirmed that OPatch succeeded.

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

1). Access to Enterprise Manager Console.

### Login Page:

File Edit View History Bookmarks Tools Help

Sign in - Oracle Enterprise M: x +

← → ↻ 🏠 🔒 http://hpgen9-01:7001/em/faces/targetauth/emasLogin?target=%2FDom 90% ☆ 📧 ☰

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

Domain Domain\_base\_domain

\* User Name

\* Password

Login to Partition

**ORACLE**

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### Home Page:

base\_domain (Oracle WebLo...)

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHome?type=

ORACLE Enterprise Manager Fusion Middleware Control 12c

base\_domain

WebLogic Domain

Jun 29, 2023 6:45:51 PM GMT+08:00

Information

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

Servers

2 Down  
1 Up

Administration Server

Name AdminServer  
Host hpgen9-01  
Listen Port 7001

Servers

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

Columns Hidden 34 Servers 3 of 3

### Starting WLS\_FORMS

WLS\_FORMS (Oracle WebLo...)

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?type=w

ORACLE Enterprise Manager Fusion Middleware Control 12c

WLS\_FORMS

WebLogic Server

Start Up Shut Down

Jun 29, 2023 6:48:29 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 Jun 29, 2023 6:48:00 PM  
Version 12.2.1.4.0  
State Running  
Health OK ✓  
Server Type Configured  
Cluster cluster\_forms  
CPU Usage (%) 1.16  
Heap Usage (MB) 470.18  
Java Vendor Oracle Corporation  
Java Version 1.8.0\_221

Response and Load

Request Processing Time (ms) Requests (per minute)

Servlets and JSPs

Active Sessions 0  
Request Processing Time (ms) 0

EJBs

Beans in Use 0  
Bean Accesses (per minute) 0.00

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?typ...ogic\_j2eeserver&target=/Domain\_base\_domain/base\_domain/WLS\_FORMS#

### Starting WLS\_REPORTS

The screenshot shows the Oracle Enterprise Manager interface for the WLS\_REPORTS server. The browser address bar indicates the URL: http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?type=WLS\_REPORTS. The page title is "ORACLE Enterprise Manager Fusion Middleware Control 12c".

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

**Deployments:** 1 Up.

**Most Requested:** 0 Requests Processed.

**General Information:**

- Up Since: Jun 29, 2023 6:50:52 PM
- Version: 12.2.1.4.0
- State: Running
- Health: OK
- Server Type: Configured
- Cluster: cluster\_reports
- CPU Usage (%): 0.89
- Heap Usage (MB): 329.64
- Java Vendor: Oracle Corporation
- Java Version: 1.8.0\_221

**Response and Load:** A line graph showing Request Processing Time (ms) and Requests (per minute) from 06:37 PM to 06:49 PM on June 29, 2023. The y-axis ranges from 0.0 to 1.0. The x-axis shows time intervals.

**Servlets and JSPs:** Active Sessions: 0, Request Processing Time (ms): 0.

**EJBs:** Beans in Use: 0, Bean Accesses (per minute): 0.00.

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

The screenshot shows the Oracle Enterprise Manager interface for the Administration Server. The browser address bar indicates the URL: http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHome?type=AdministrationServer. The page title is "ORACLE Enterprise Manager Fusion Middleware Control 12c".

**Servers:** 3 Up.

**Clusters:** 2 Up.

**Deployments:** 3 Up.

**Administration Server:**

- Name: AdminServer
- Host: hpgen9-01
- Listen Port: 7001

**Servers Table:**

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

Columns Hidden: 34. Servers: 3 of 3.



### Starting ohs1

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The browser address bar displays `http://hpgen9-01:7001/em/faces/as_ohs_ohsHome?type=oracle_apache&tar`. The page title is "ORACLE Enterprise Manager Fusion Middleware Control 12c".

**Monitoring:** CPU Usage (%) is 0.00, Memory Usage (%) is 0.00.

**Virtual Hosts:** 0 Virtual Hosts.

**Modules:** 0 Modules.

**General:**

- Component Name: ohs\_1
- Version: 12.2.1.4.0
- State: Running
- Host: hpgen9-01
- Ports: 7777 4443 127.0.0.1:7779
- Machine Name: AdminServerMachine
- Auto Restart:
- Oracle Home: /home/oracle/Oracle/Middleware/Oracle\_Home

**Response and Load:** A line graph showing Request Processing Time (milli seconds) and Domain\_base\_domain/base\_domain/ohs\_1: Request Throughput over time (06:39 PM to 06:51 PM, June 29 2023).

**Key Statistics:**

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

**CPU and Memory Usage:** A line graph showing CPU Usage (%) and Memory Usage (MB) over time (06:39 PM to 06:51 PM, June 29 2023).

### Verified ohs1 URLs can be accessed.

The screenshot shows the Oracle HTTP Server 12c landing page. The browser address bar displays `http://hpgen9-01:7777/`. The page title is "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:

- 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.
- Local Content:** Represented by a folder icon.
- HTML, JS:** Represented by document icons.
- Audit Control:** Represented by a shield icon.
- Identity Management:** Represented by a server rack icon.
- Authentication Authorization:** Represented by a server rack icon.
- Load Balancing:** Represented by a server rack icon.
- Fusion Middleware Applications:** Represented by a server rack icon.
- FMW Lifecycle Tools:** Represented by a gear icon.
- Enterprise Manager:** Represented by a server rack icon.
- Manage, monitor, diagnose:** Represented by a server rack icon.

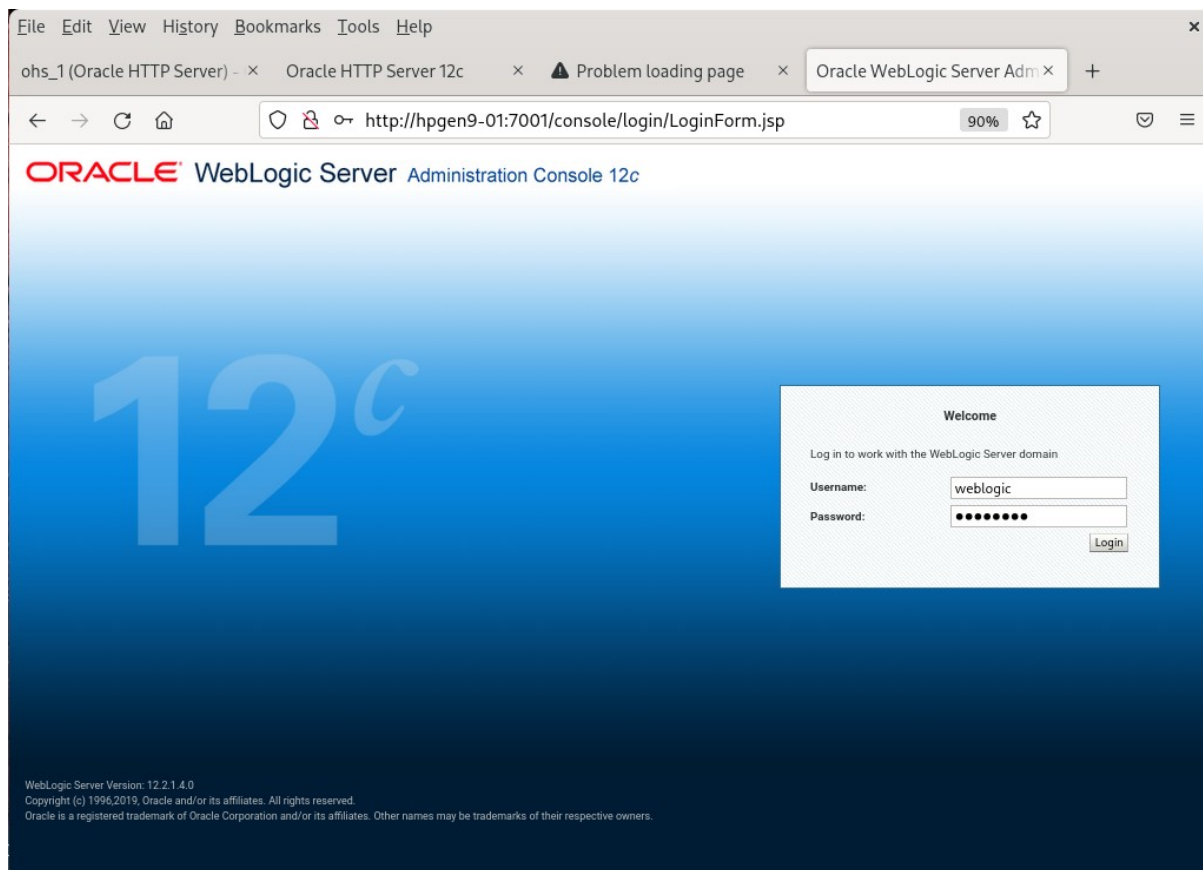


The screenshot shows a web browser window with the address bar containing `https://hpgen9-01:4443/`. The page header features the Oracle logo and the text "Oracle HTTP Server 12c". Below the header, a paragraph states: "Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications." The main content area contains a 3D architectural diagram of the Oracle HTTP Server 12c architecture. The diagram shows a central platform with components: "Local Content" (with JS and HTML icons), "OHS" (Oracle HTTP Server), "Load Balancing", "Auditing", "Authentication Authorization", "Audit Control", and "Identity Management". On the left, "Process Management and HA", "Certificate management", "Automation", and "Test to Production" are listed with gear icons. At the bottom, "FMW Lifecycle Tools" and "Enterprise Manager" (with the text "Manage, monitor, diagnose") are shown.

The screenshot shows a web browser window with the address bar containing `https://127.0.0.1:7779/`. The page header features the Oracle logo and the text "Oracle HTTP Server 12c". Below the header, a paragraph states: "Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications." The main content area contains a 3D architectural diagram of the Oracle HTTP Server 12c architecture, identical to the one in the first screenshot. The diagram shows a central platform with components: "Local Content" (with JS and HTML icons), "OHS" (Oracle HTTP Server), "Load Balancing", "Auditing", "Authentication Authorization", "Audit Control", and "Identity Management". On the left, "Process Management and HA", "Certificate management", "Automation", and "Test to Production" are listed with gear icons. At the bottom, "FMW Lifecycle Tools" and "Enterprise Manager" (with the text "Manage, monitor, diagnose") are shown.

## 2). Access to Administration Server Console

**Login Page as shown below:**



### Home Page:

### Viewing the summary of servers:

**Summary of Servers**

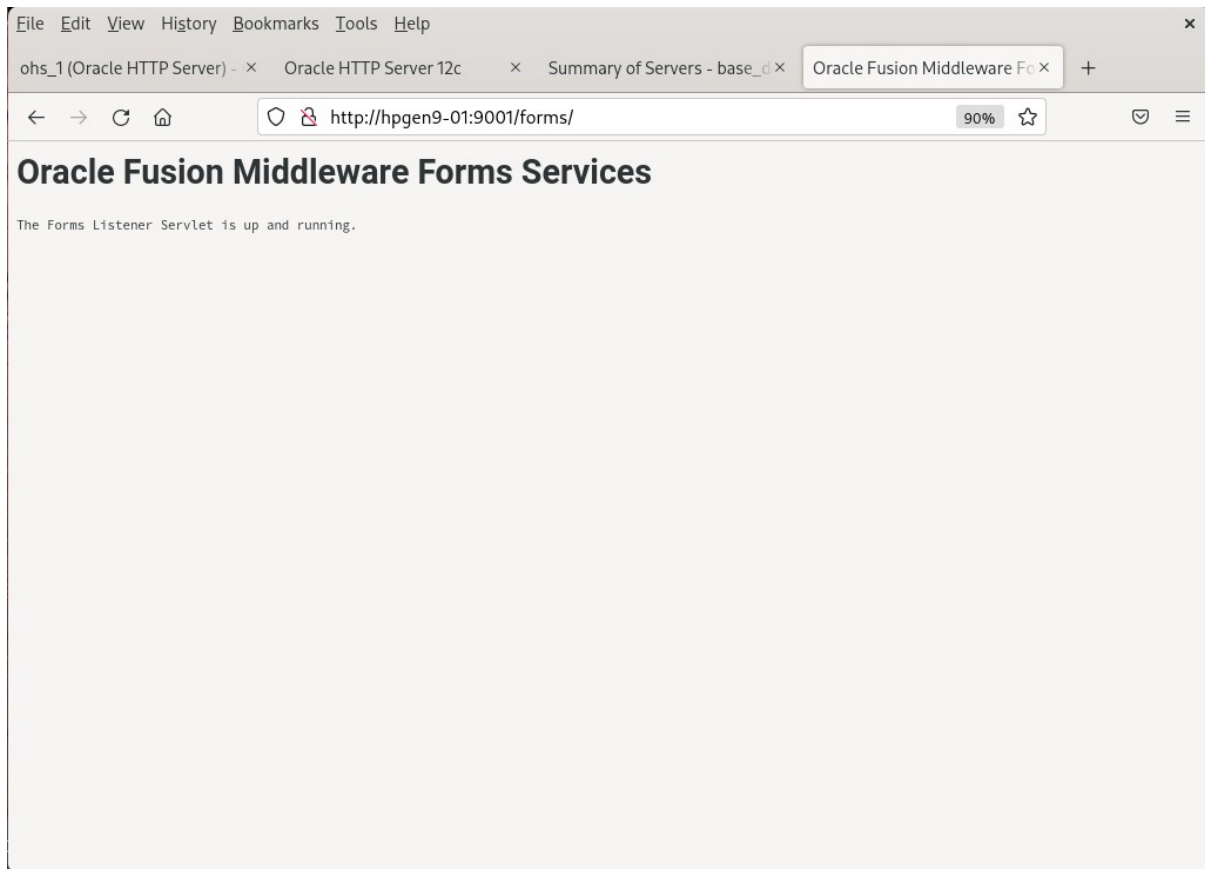
A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

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

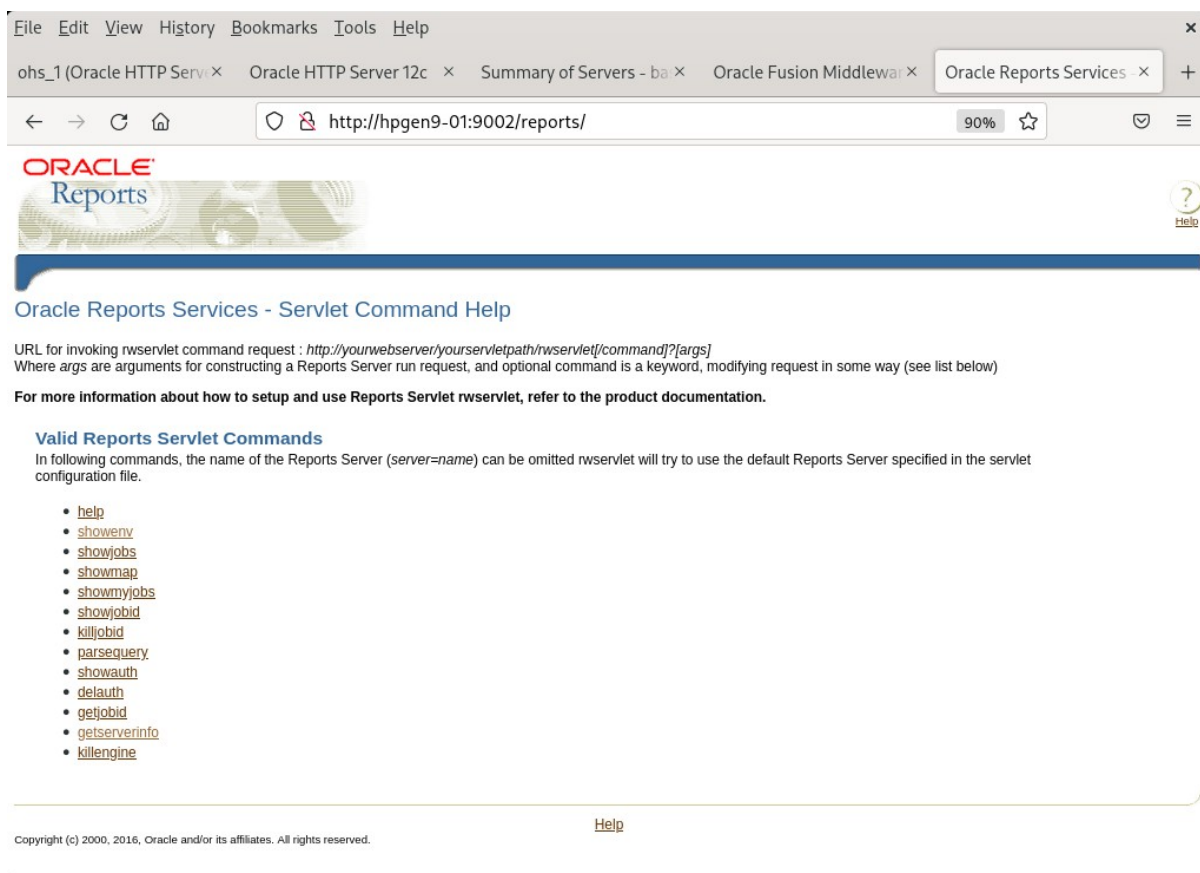
Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

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

### 3). Access to Oracle Forms Services.



#### 4). Access to Oracle Reports Services.



The screenshot shows a web browser window with the address bar displaying `http://hpgen9-01:9002/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:

Oracle Reports Services - Servlet Command Help

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

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

**Valid Reports Servlet Commands**

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

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

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

**End of Oracle Forms and Reports.**

\*\*\*\*\*

## Oracle WebTier OHS

\*\*\*\*\*

### 1. Installing Oracle WebTier 12cR2 OHS

#### 1-1. Prerequisites:

Installation of Oracle WebTier Http Server requires:

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

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

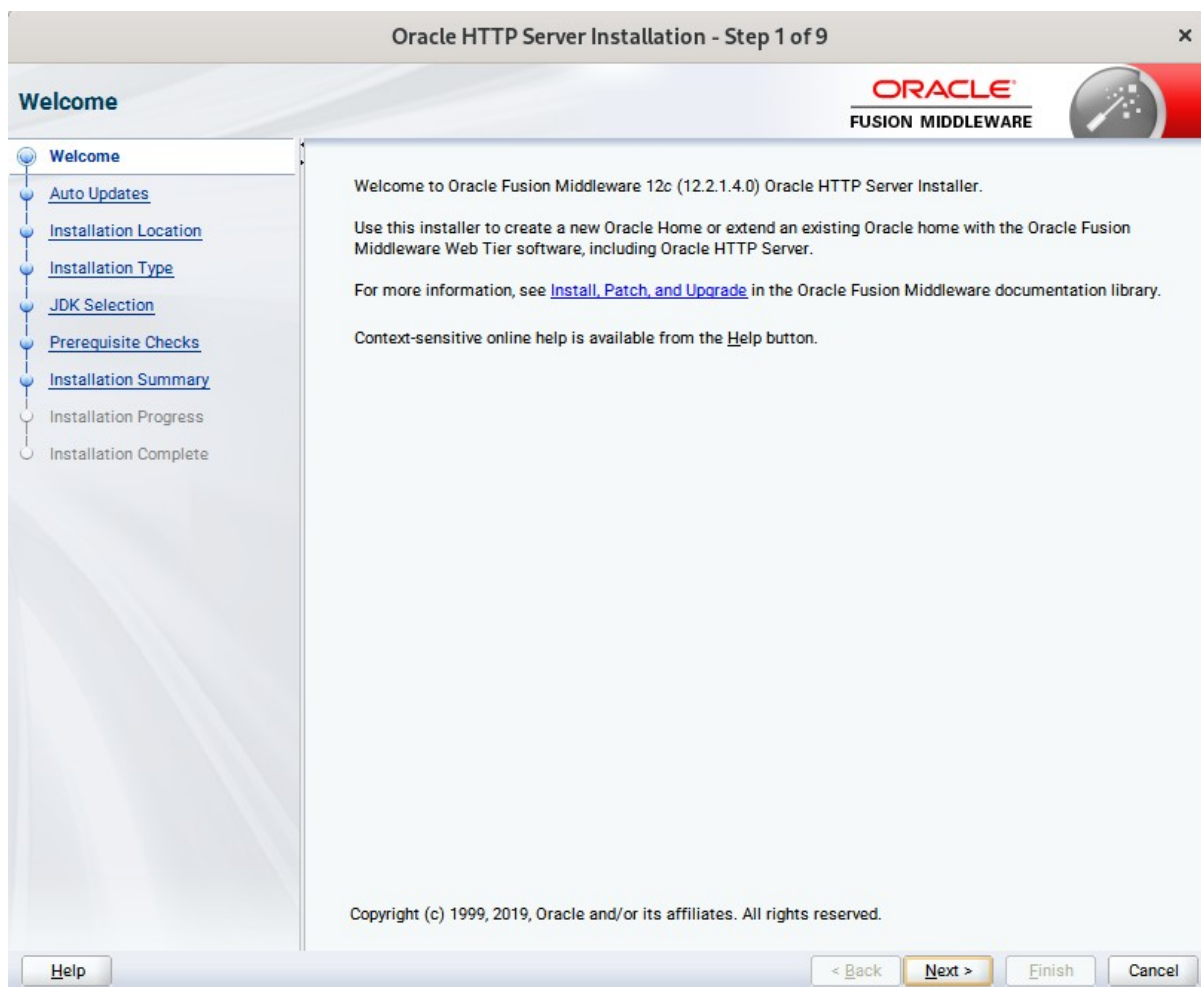
**For the actual installation, follow the steps below:**

#### 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, there is a text field for 'Inventory Directory' containing '/home/oracle/orainventory' and a 'Browse' button. Below the field, it says 'Enter the full path for the directory.' There is also a dropdown menu for 'Operating System Group' set to 'oinstall', with the instruction 'Specify a group with write permission to the inventory directory'. The 'Central Inventory Pointer File' section contains instructions to click OK to create a script (createCentralInventory.sh) in the inventory directory. At the bottom of the window, there are 'Help', 'OK', and 'Cancel' buttons.

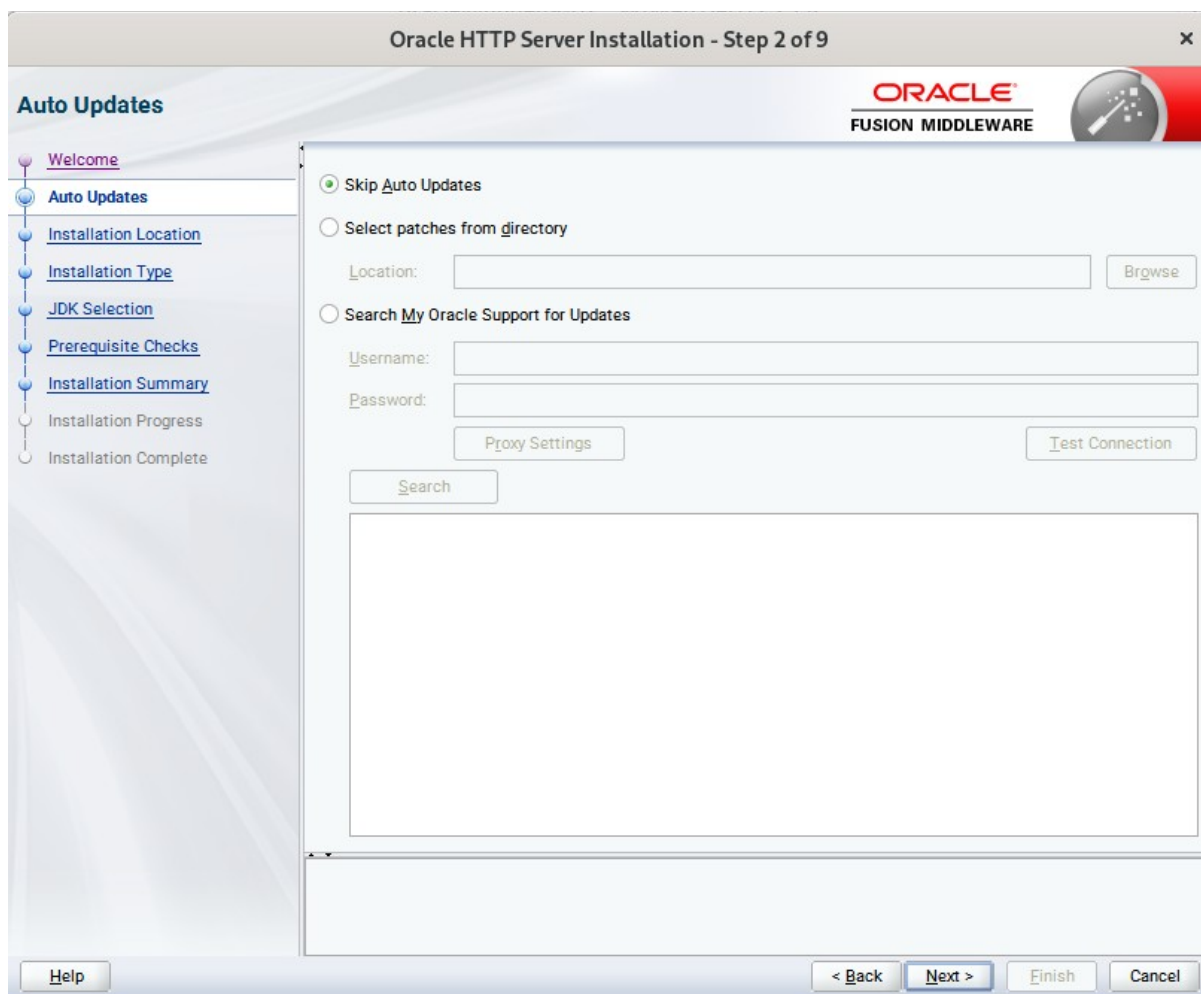
Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

## 2). Welcome page.



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

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

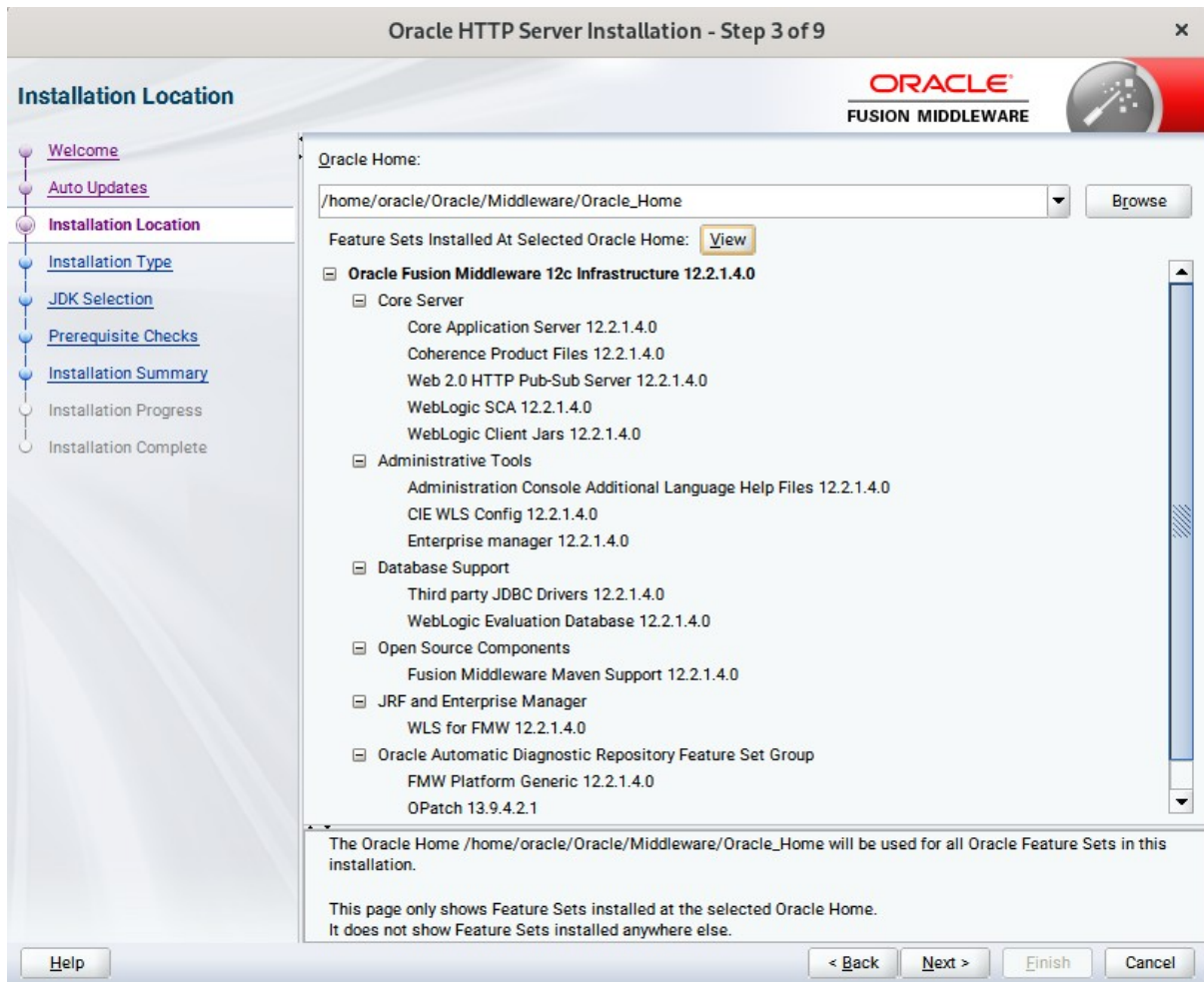


The screenshot shows the 'Auto Updates' page in the Oracle HTTP Server installation wizard. The window title is 'Oracle HTTP Server Installation - Step 2 of 9'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists the installation steps: Welcome, 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. Below these options 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 page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

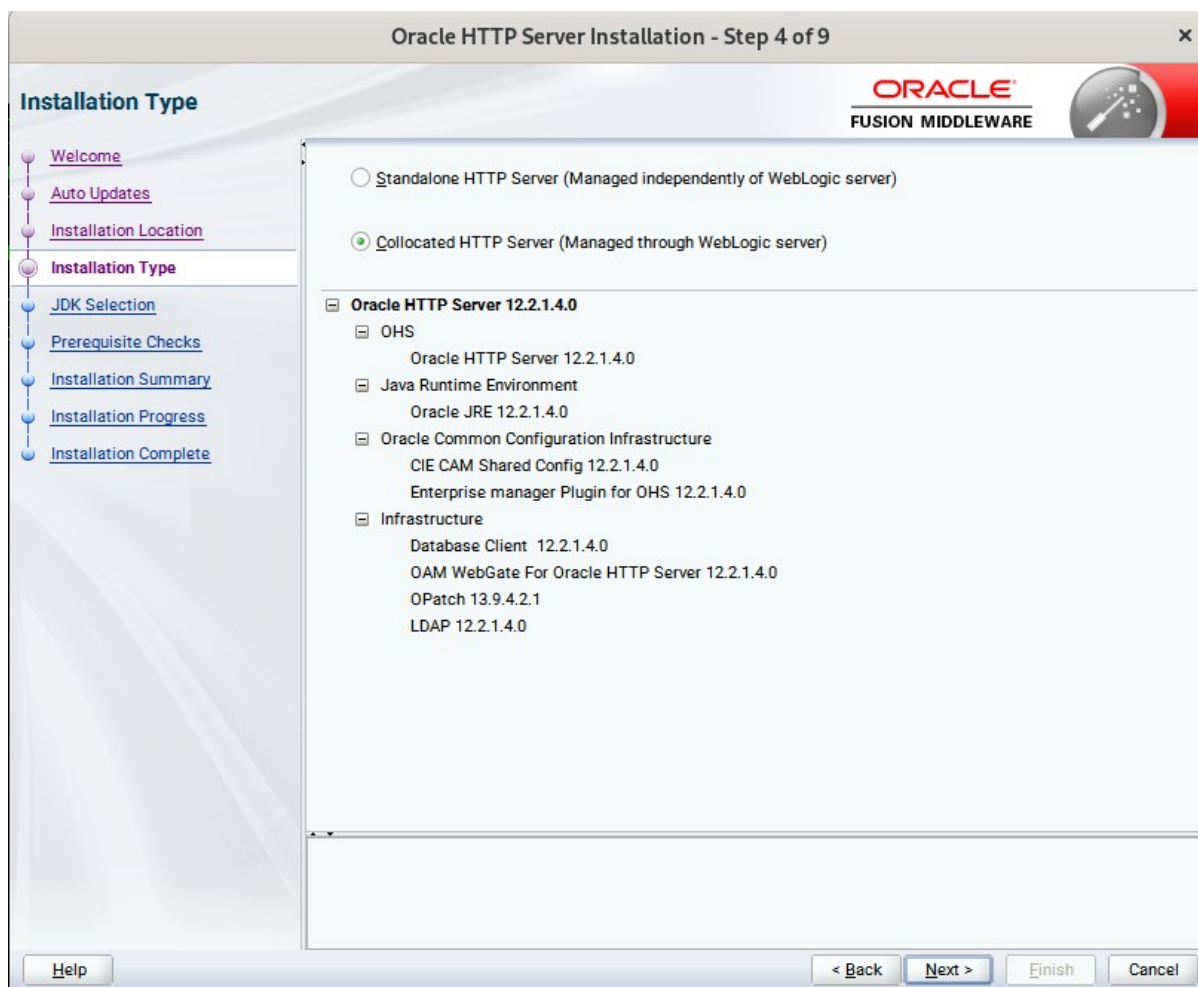


3). The **Installation Location** page appears.



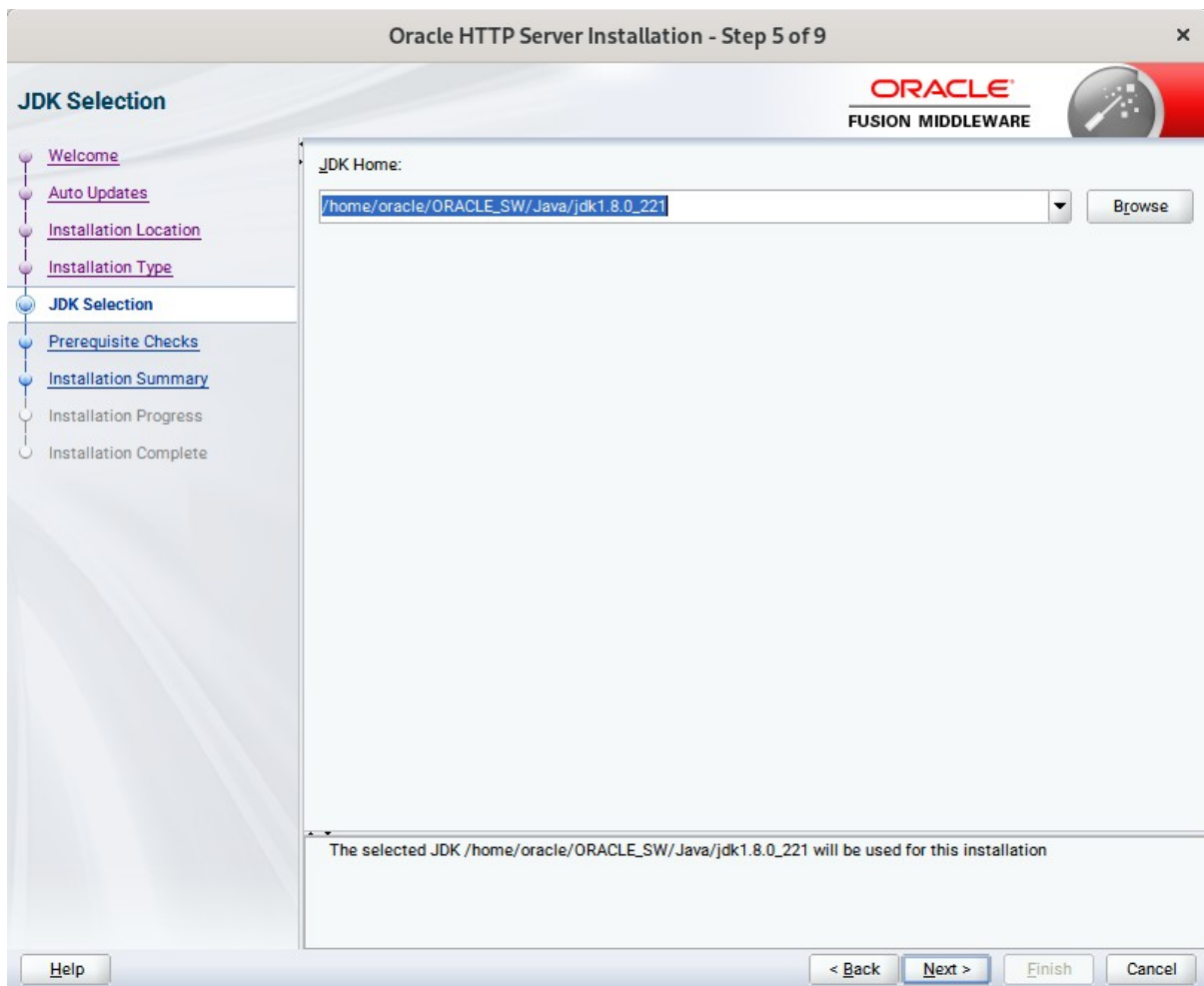
SPecify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



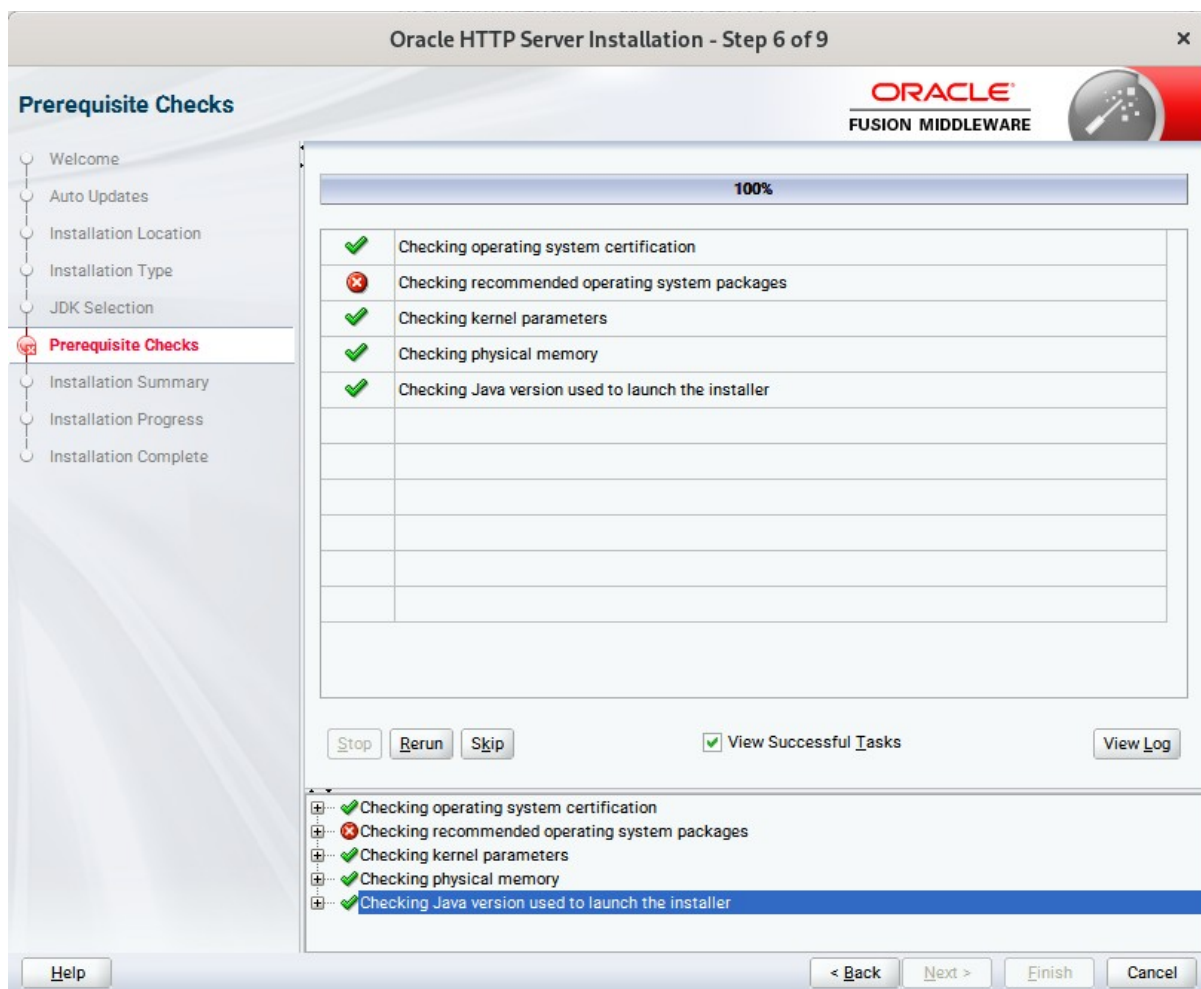
Selected **Collocated HTTP Server (Managed through WebLogic server)** to configure Oracle HTTP Server in a WebLogic Server Domain. (Alternative, select **Standalone HTTP Server (Managed independently of WebLogic server)** in the Installation Type screen to configure Oracle HTTP Server in a Standalone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

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



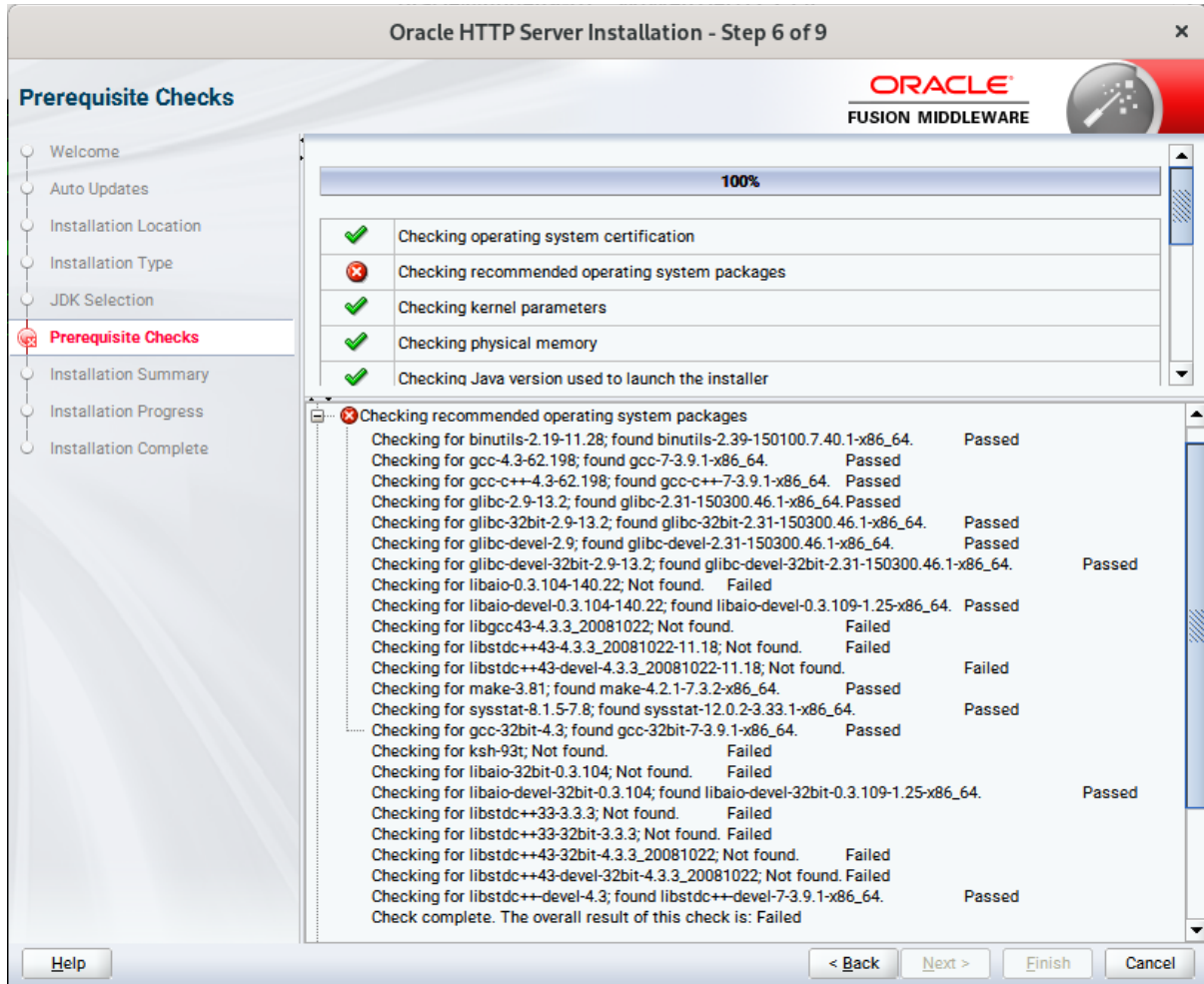
The selected JDK will be used for this installation. Click **Next** to continue.

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



Prerequisite Checks results will be shown as above.

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



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

eg:

*libaio-0.3 (new name is libaio1-xxx)*  
*libgcc43-4.3.3 (new name is libgcc\_s1-xxx)*  
*libstdc++43-4.3.3 (new name is libstdc++6-xxx)*  
*libstdc++33-3.3.3 (deprecated since SLES15 SP1)*  
*openmotif-2.3.1 (deprecated since SLES15 SP1)*

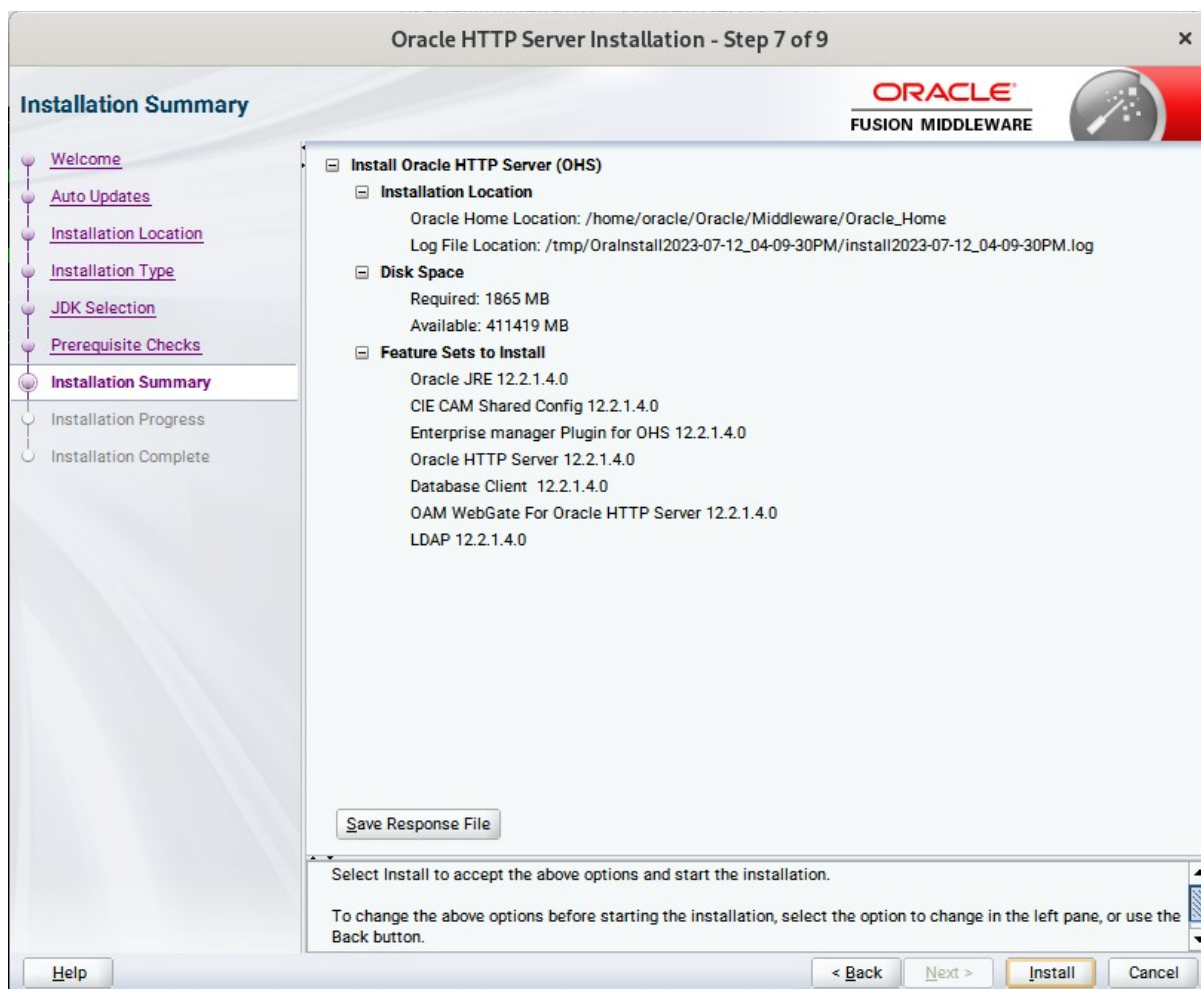
So, please ensure following updated packages(or later versions) are installed, then click '**Skip**' in the '**Prerequisite Checks**' page and continue installation.

```
binutils-2.31-6.3.1.x86_64
gcc-7-1.563.x86_64
glibc-2.26-13.8.1.x86_64
glibc-32bit-2.26-13.8.1.x86_64
glibc-devel-2.26-13.8.1.x86_64
libaio-devel-0.3.109-1.25.x86_64
libaio1-0.3.109-1.25.x86_64
libcap1-1.97-1.15.x86_64
libstdc++6-devel-gcc7-7.4.0+r266845-4.3.4.x86_64
libstdc++6-8.2.1+r264010-1.3.7.x86_64
libgcc_s1-8.2.1+r264010-1.3.7.x86_64
```

```
libgcc_s1-32bit-8.2.1+r264010-1.3.7.x86_64  
make-4.2.1-7.3.2.x86_64  
mksh-56c-1.10.x86_64  
sysstat-12.0.2-3.3.1.x86_64  
xorg-x11-fonts-core-7.6-3.9.noarch  
xorg-x11-server-extra-1.19.6-8.6.1.x86_64  
xorg-x11-Xvnc-1.8.0-13.8.5.x86_64  
xorg-x11-server-1.19.6-8.6.1.x86_64  
xorg-x11-libs-7.6.1-1.16.noarch  
xorg-x11-essentials-7.6_1-1.22.noarch  
xorg-x11-fonts-7.6-3.9.noarch  
xorg-x11-7.6_1-1.22.noarch  
xorg-x11-driver-video-7.6_1-2.30.x86_64
```

)

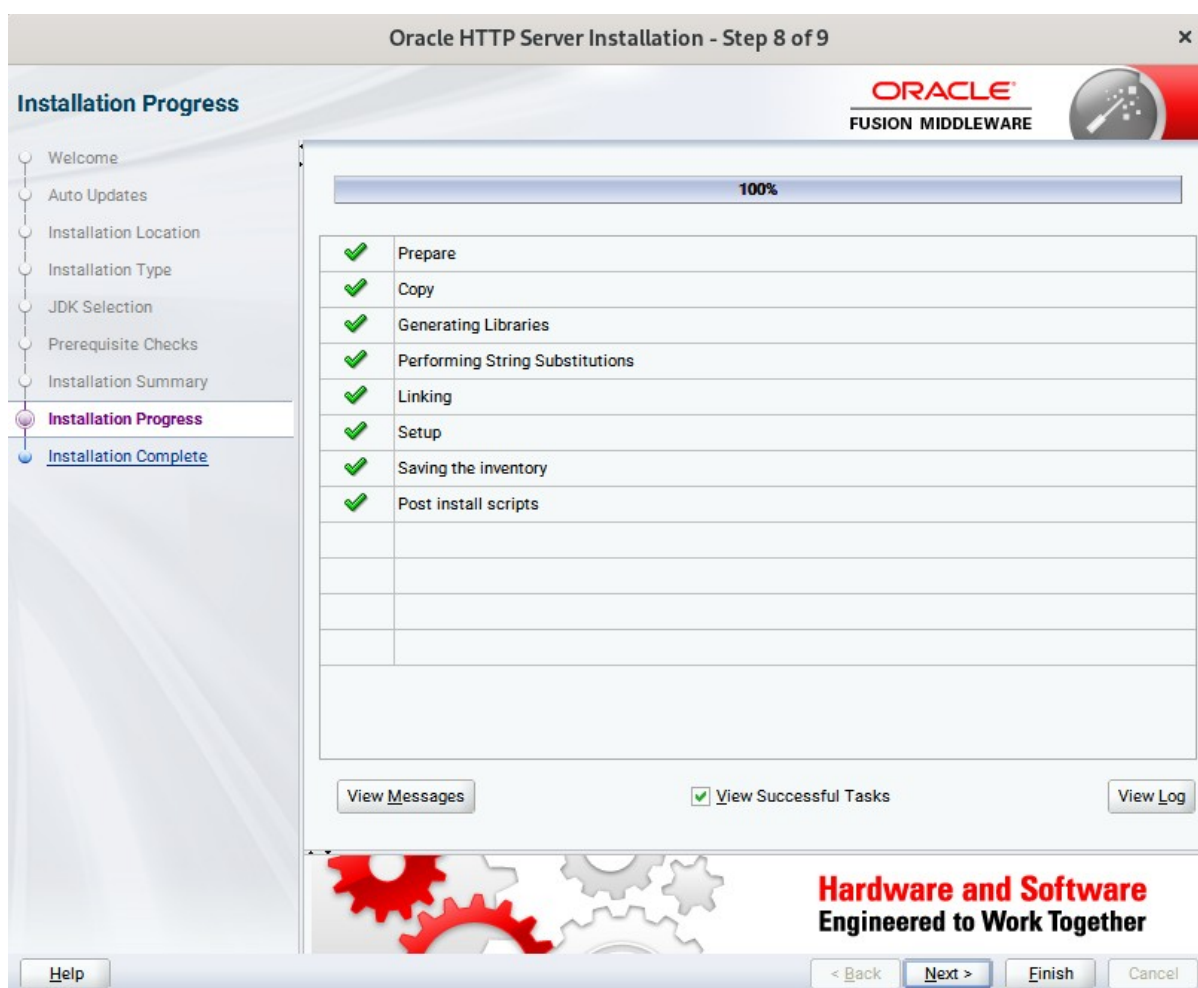
7). The **Installation Summary** page appears.



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.



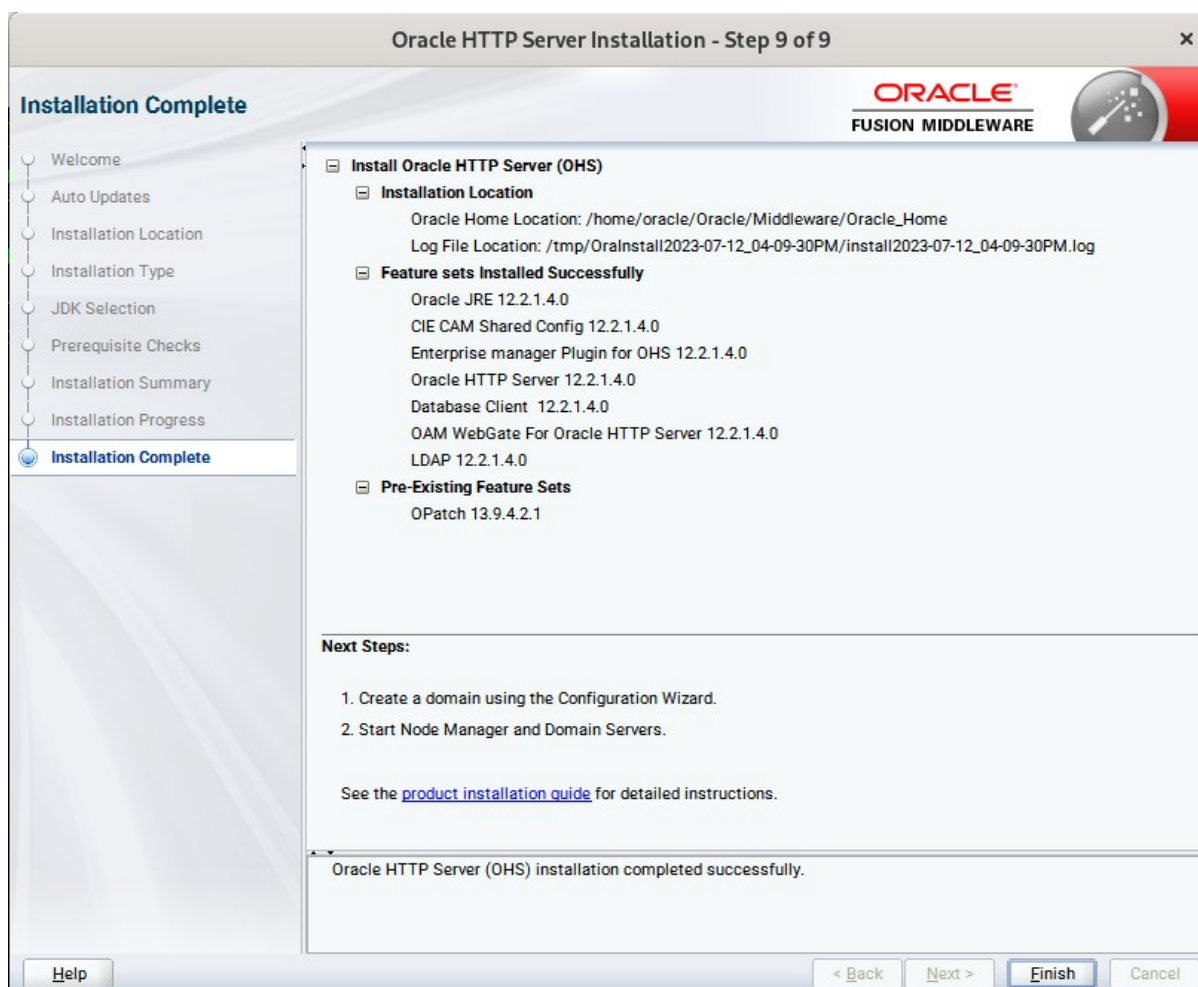
8). The **Installation Progress** page appears.



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.

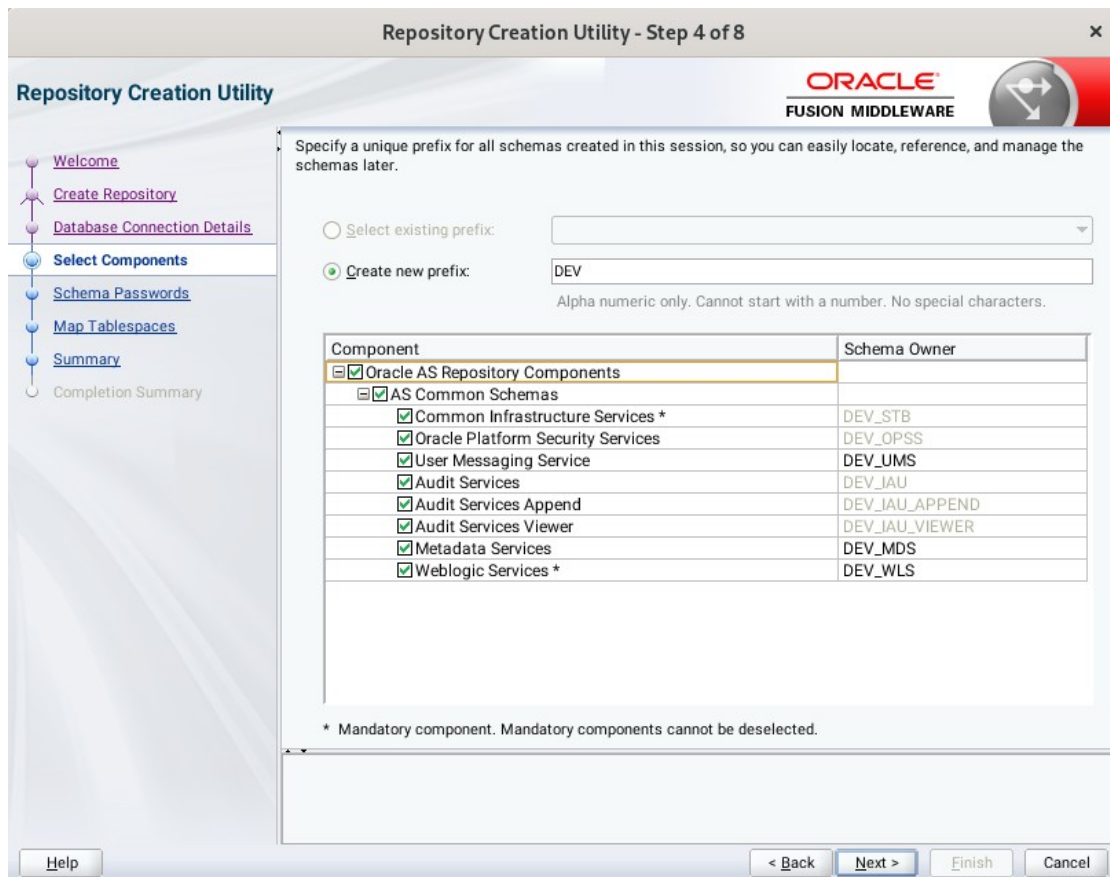


Click **Finish** to dismiss the installer.

## 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

Database details:

Host Name: hpgen9-01  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 2 minutes 38 seconds

RCU Logfile: /tmp/RCU2023-07-12\_16-36\_502776040/logs/rcu.log  
Component Log Directory: /tmp/RCU2023-07-12\_16-36\_502776040/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.992(sec)	stb.log
Oracle Platform Security Services	Success	00:36.240(sec)	opss.log
User Messaging Service	Success	00:18.468(sec)	ucsums.log
Audit Services	Success	00:21.657(sec)	iau.log
Audit Services Append	Success	00:09.339(sec)	iau_append.log
Audit Services Viewer	Success	00:09.347(sec)	iau_viewer.log
Metadata Services	Success	00:16.557(sec)	mds.log
Weblogic Services	Success	00:18.221(sec)	wls.log

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.

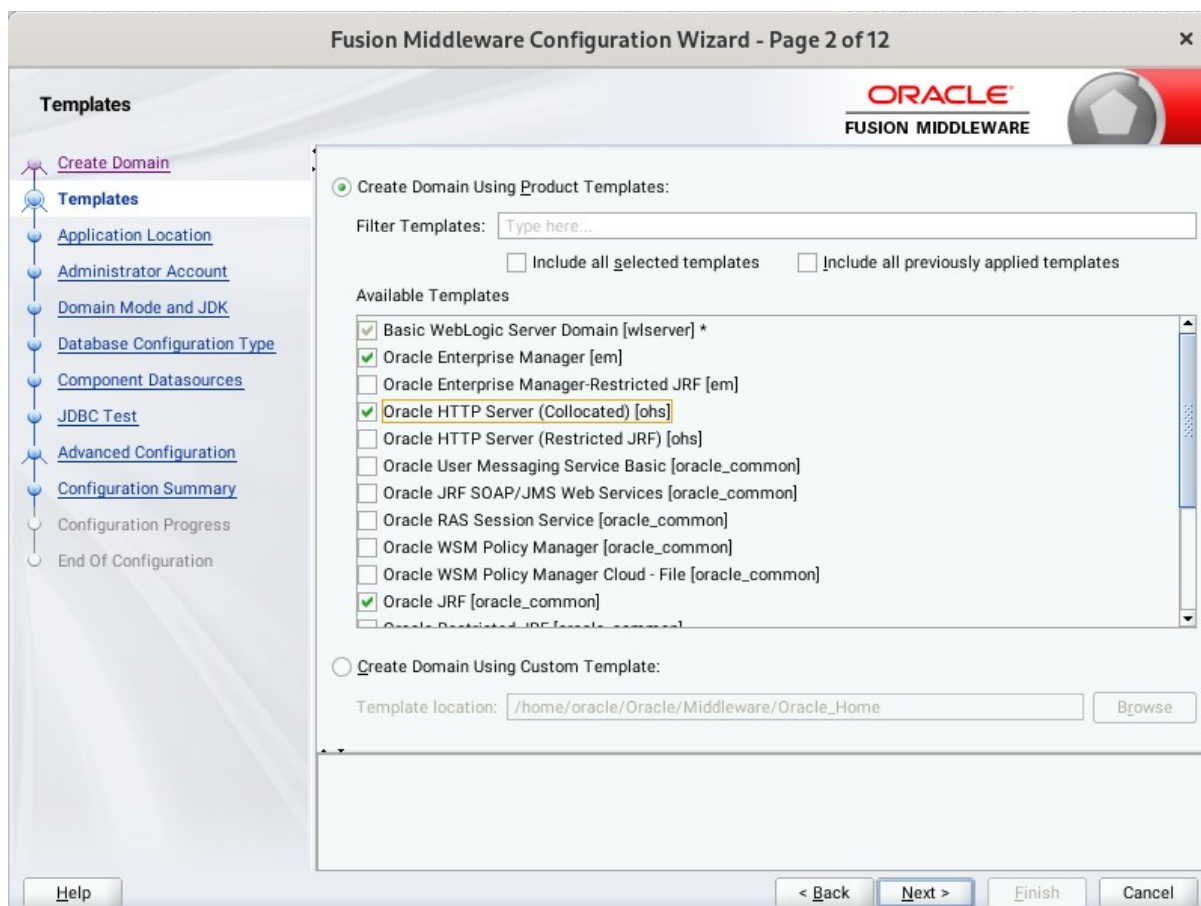
Follow these steps:

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



Click **Next** to continue.

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



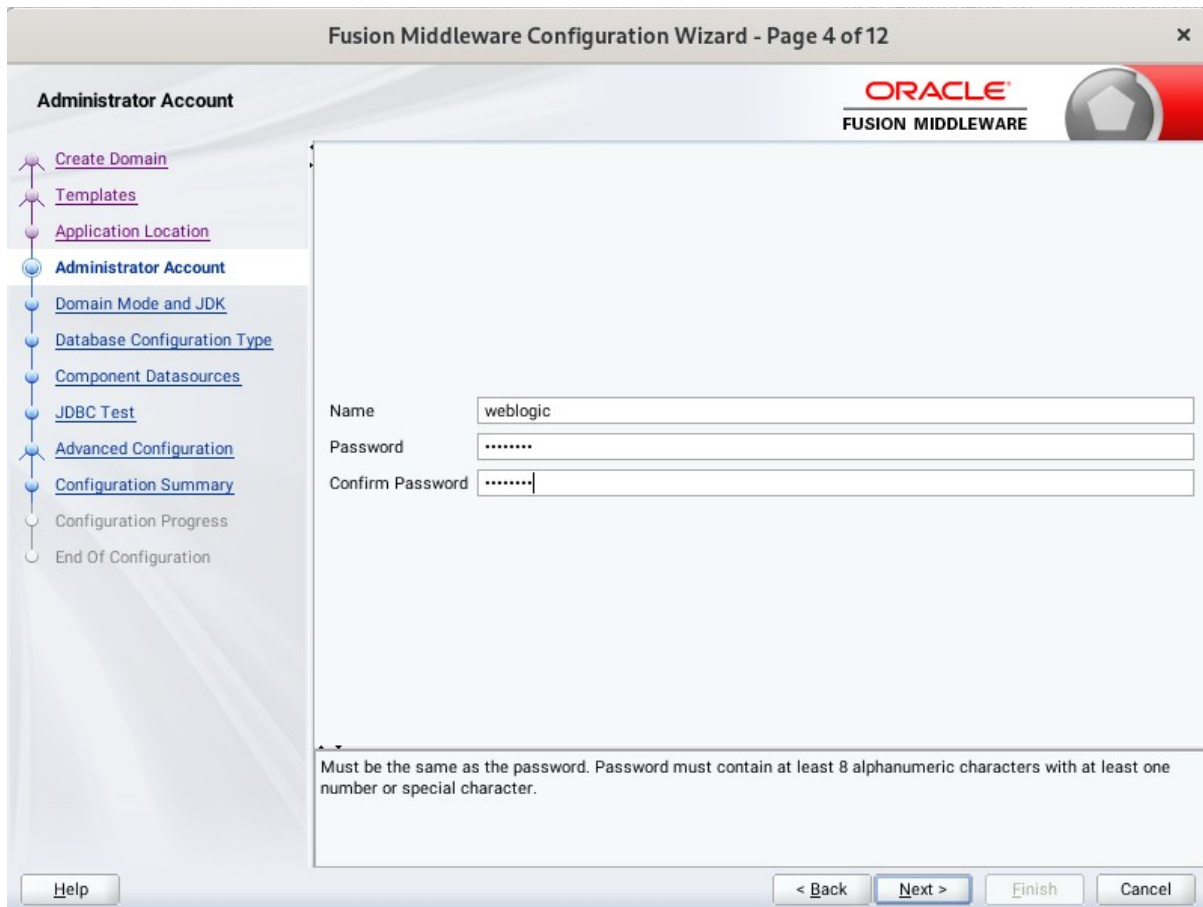
Keep the default selection (**Create Domain using Product Templates**), and select **Oracle HTTP Server (Collocated) [ohs]** component. This automatically selects **Oracle Enterprise Manager [em]** and so on. Click **Next** to continue.

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



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

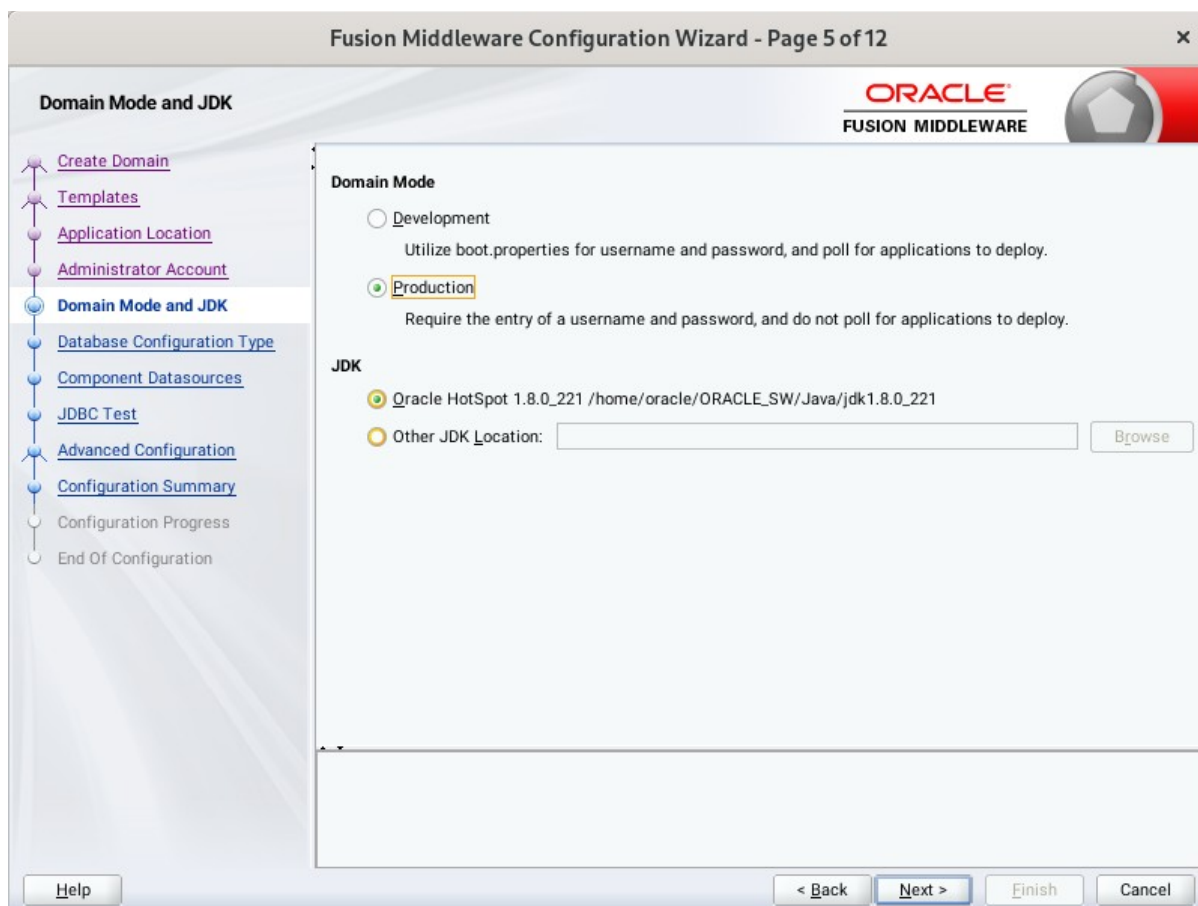
4). The **Administrator Account** screen appears.



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

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

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



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

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



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

The screenshot shows the 'Database Configuration Type' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 6 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists steps: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type (selected), Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area is titled 'Specify AutoConfiguration Options Using:' and has two radio buttons: 'RCU Data' (selected) and 'Manual Configuration'. Below this, a text box explains: 'Enter the database connection details using the schema credentials corresponding to Common Infrastructure Services component in the Repository Creation Utility. The Wizard uses this connection to automatically configure the datasources required for components in this domain.' There are two options for connection: 'Connection Parameters' (selected) and 'Connection URL String'. The 'Connection Parameters' section includes fields for: Vendor (Oracle), Driver (\*Oracle's Driver (Thin) for Service connections; Versions:...), Host Name (hpgen9-01), DBMS/Service (suse), Port (1521), Schema Owner (DEV\_STB), and Schema Password (masked with dots). There are 'Get RCU Configuration' and 'Cancel' buttons. Below this is a 'Connection Result Log' section with a scrollable area containing the text: 'Connecting to the database server...OK', 'Retrieving schema data from database server...OK', 'Binding local schema components with retrieved data...OK', and 'Successfully Done.'. At the bottom, there is a 'Help' button on the left and '< Back', 'Next >', 'Finish', and 'Cancel' buttons on the right.

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

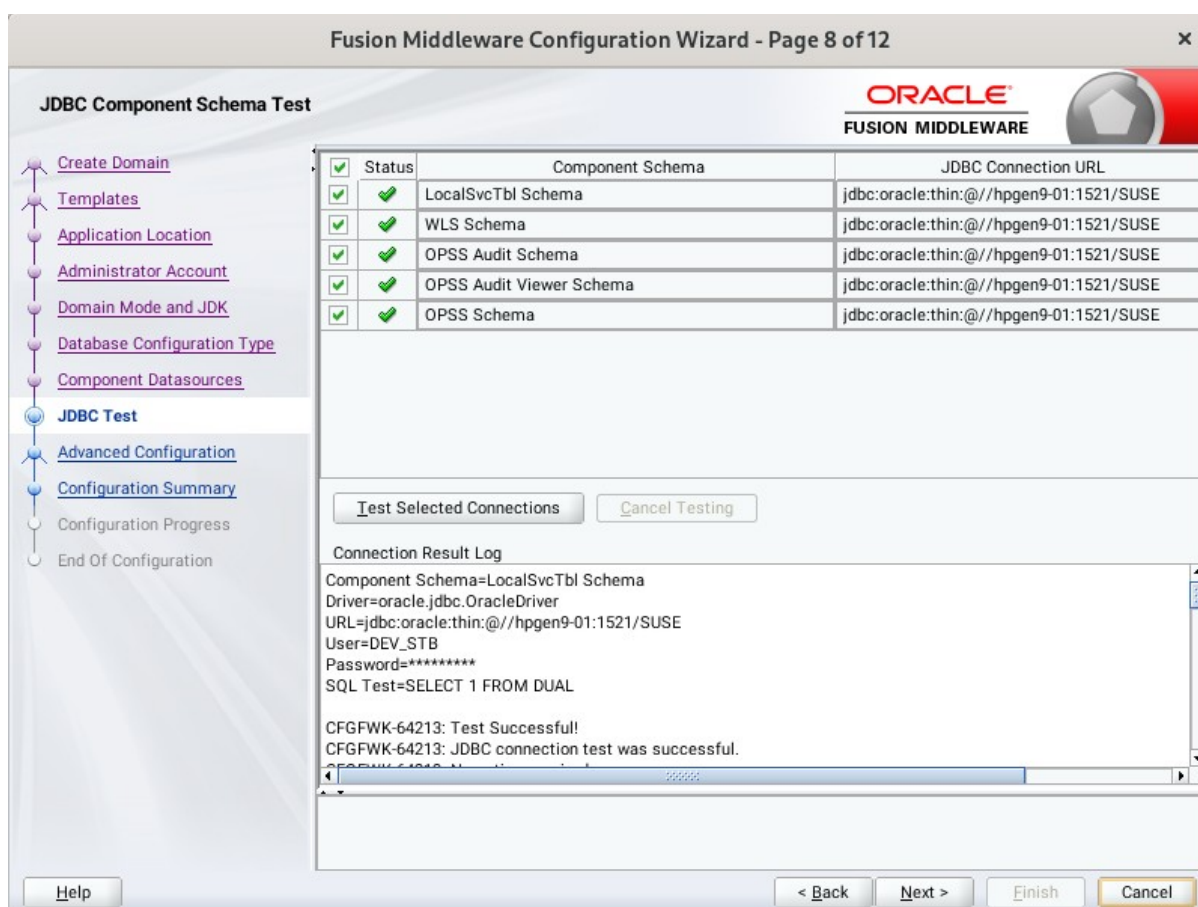
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	DEV_STB	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUN	.....
<input type="checkbox"/>	OPSS Audit Schema	SUSE	hpgen9-01	1521	DEV_IAU_APPEI	.....
<input type="checkbox"/>	OPSS Audit Viewer Sche	SUSE	hpgen9-01	1521	DEV_IAU_VIEWI	.....
<input type="checkbox"/>	OPSS Schema	SUSE	hpgen9-01	1521	DEV_OPSS	.....

Help

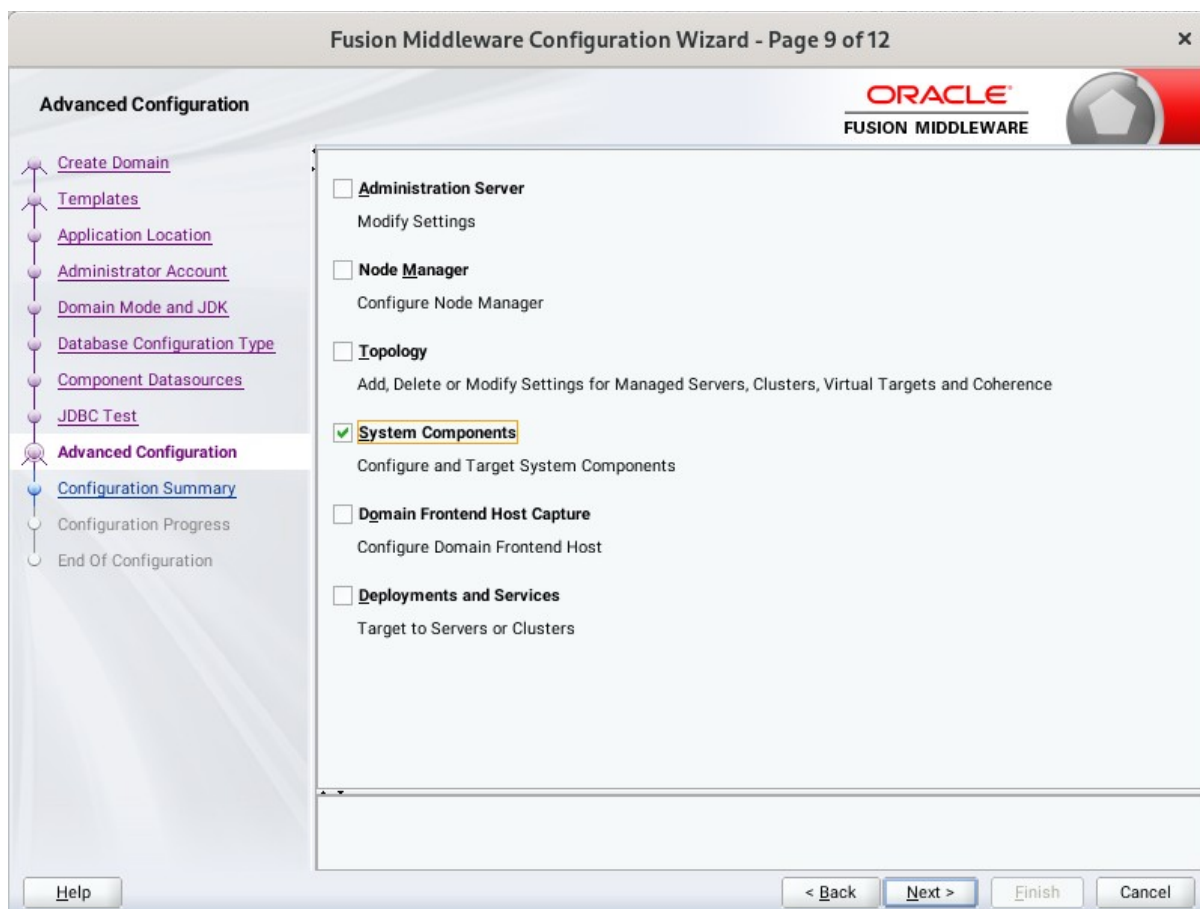
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



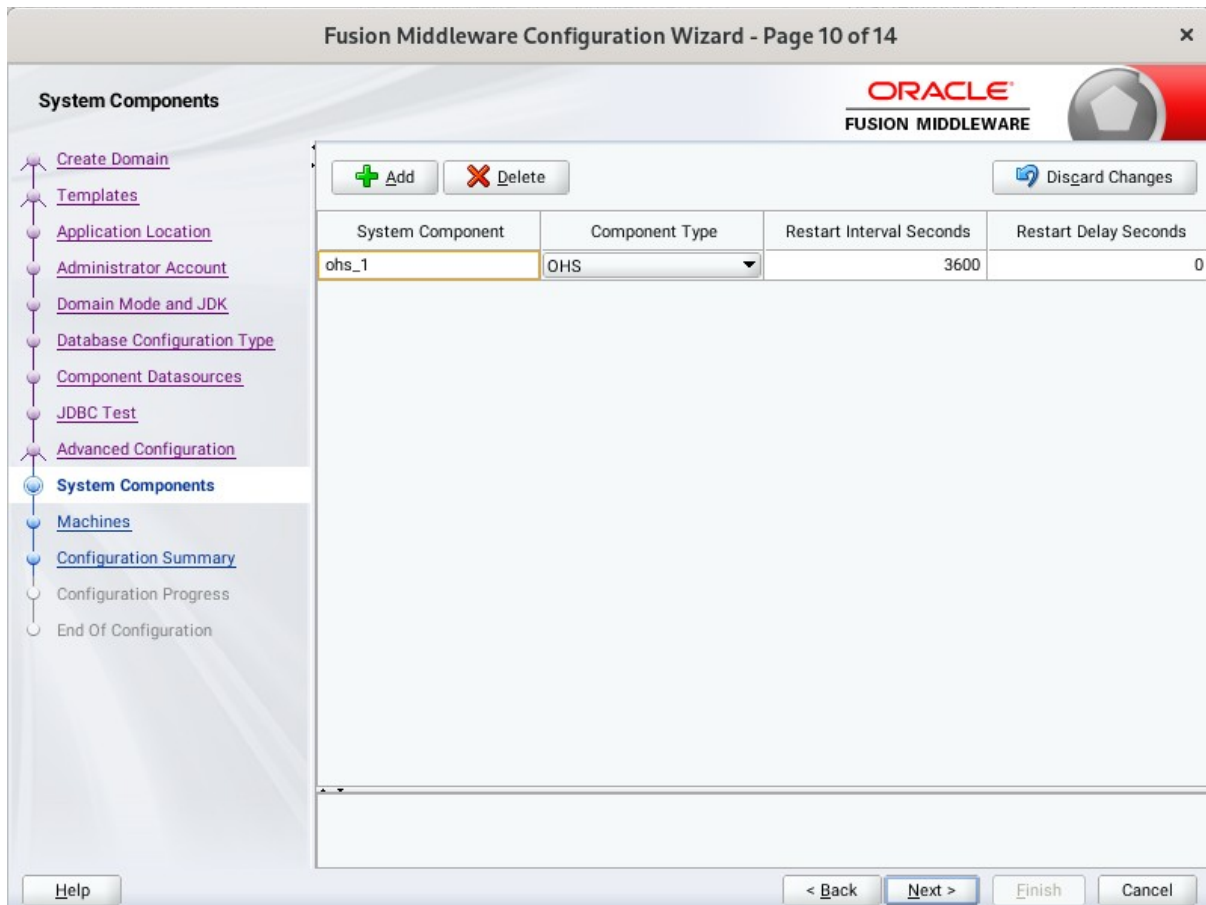
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



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

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



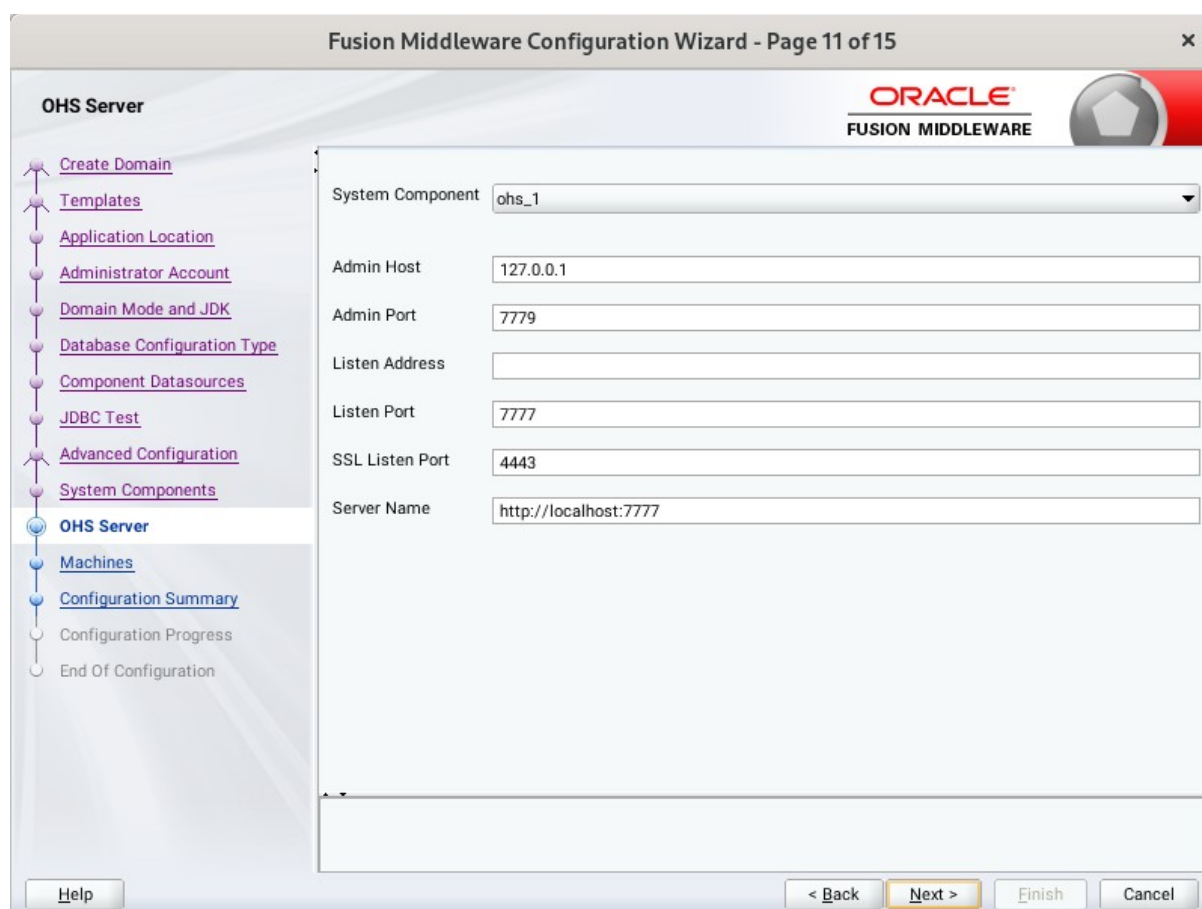
The screenshot shows the 'System Components' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 14'. The Oracle Fusion Middleware logo is in the top right. The left navigation pane shows the following steps: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, **System Components** (selected), Machines, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains a table with the following data:

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

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

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.



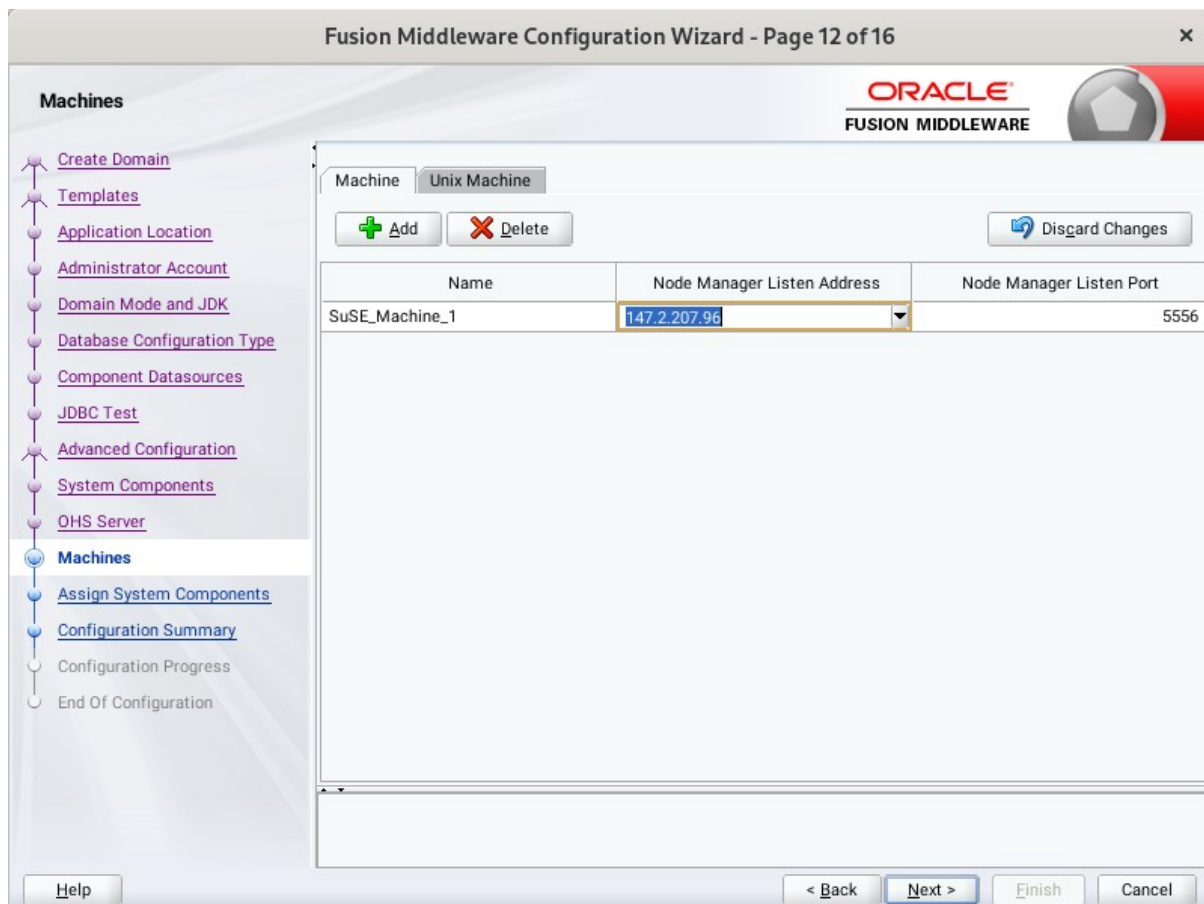
The screenshot shows the 'OHS Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 11 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists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

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

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

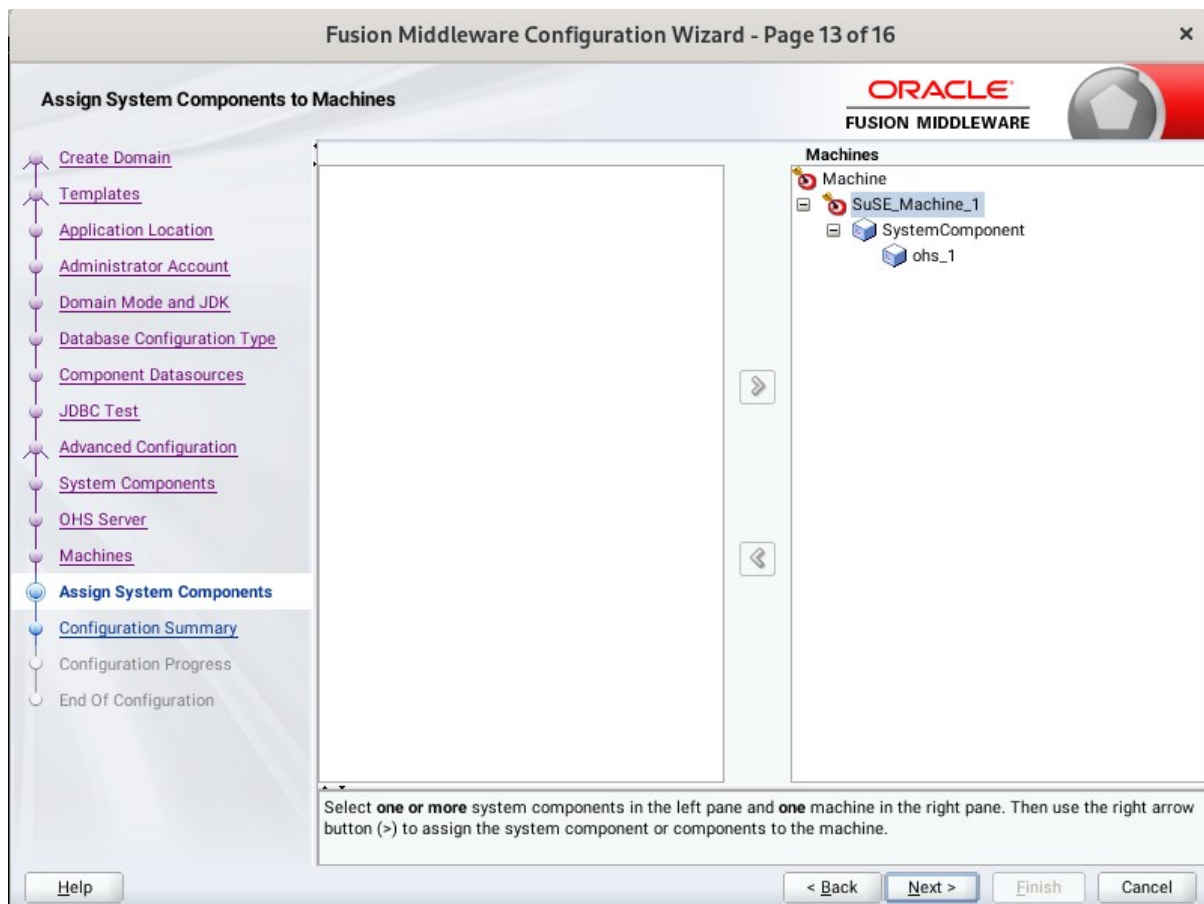
Use the **OHS Server** screen to configure the Oracle HTTP Server servers in your domain. In the System Component field SPecify the IP address of the host on which the Oracle HTTP Server instance will reside. Do not use "localhost". Click **Next** to continue.

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.

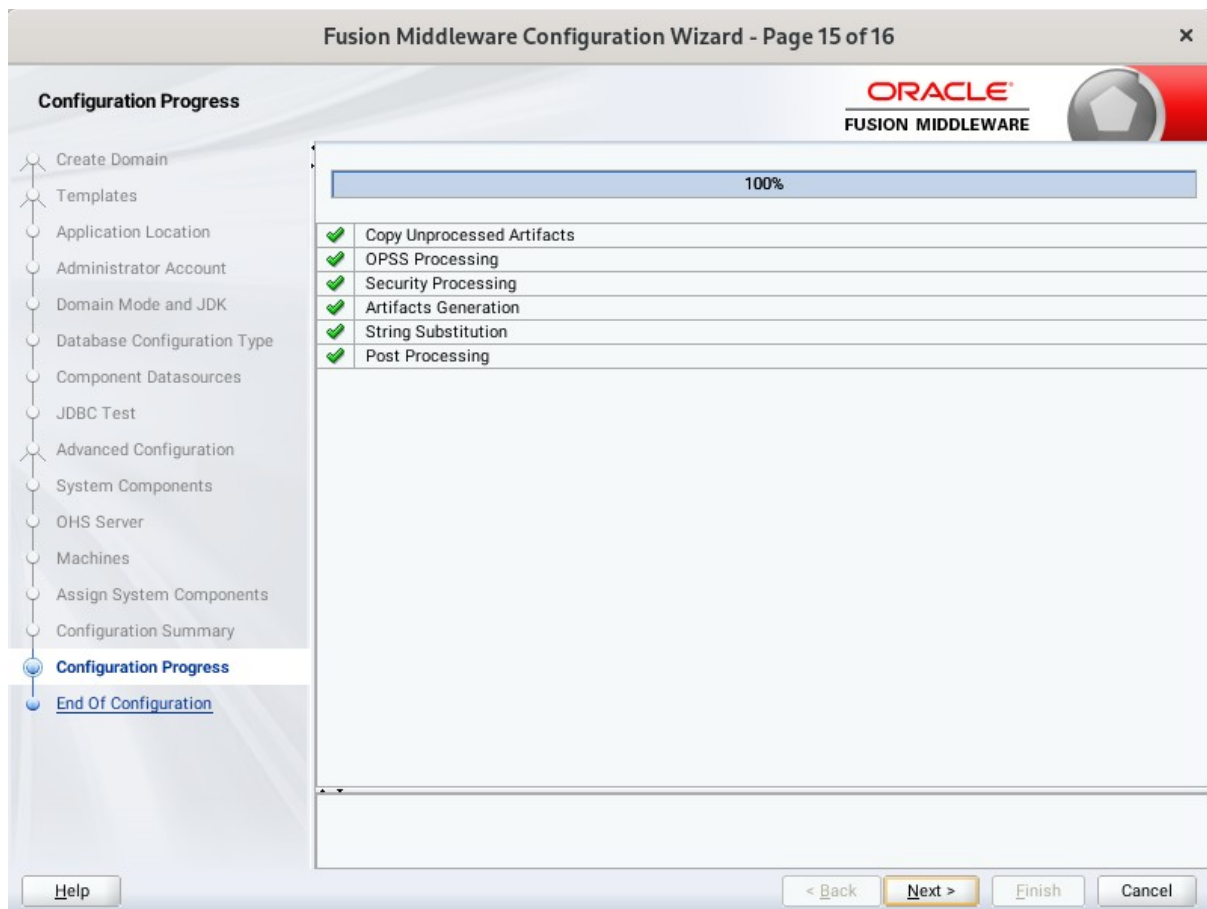


Select the '**ohs\_1**' in the System Component list box and click the right arrow. Click **Next** to continue.



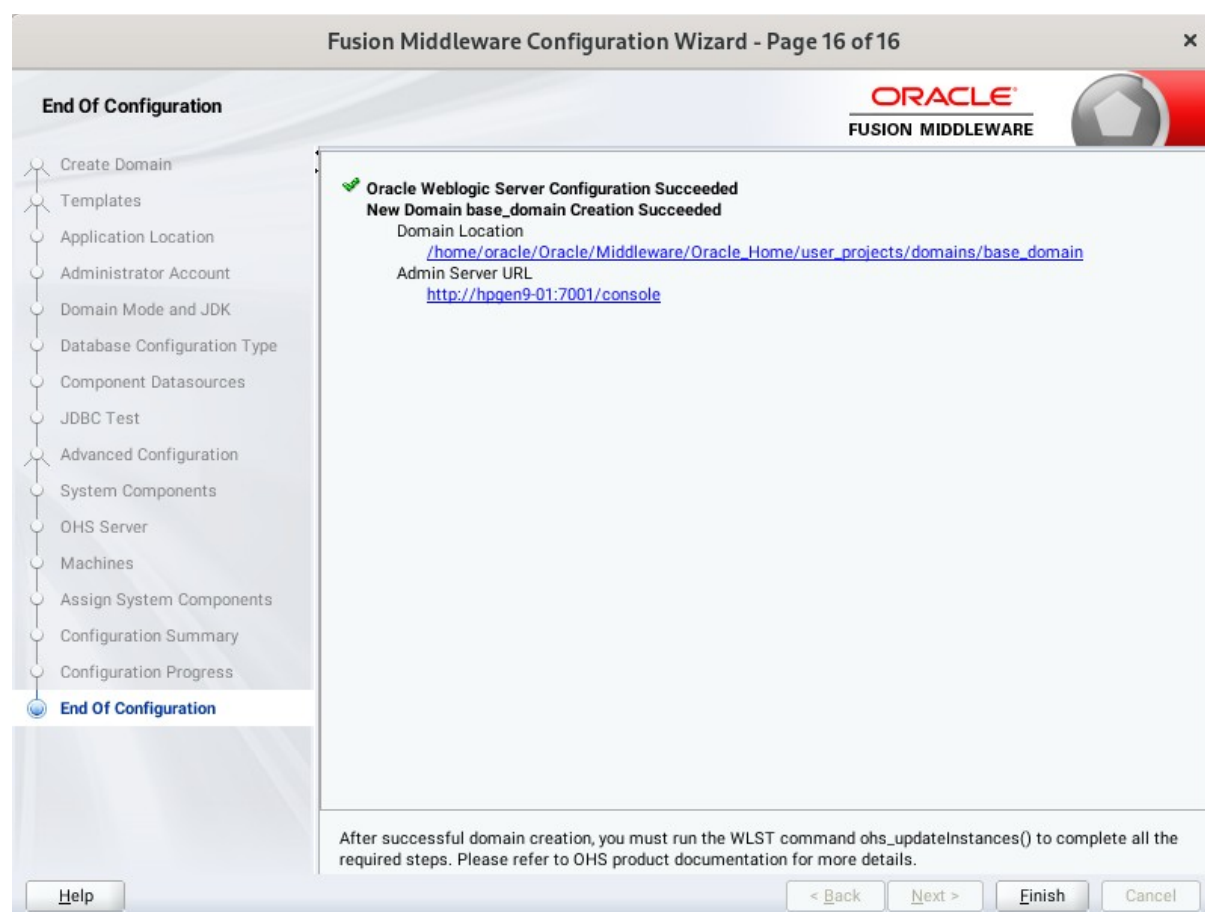


15). The **Configuration Progress** screen appears.



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

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



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

## 4. Verifying Oracle WebTier 12cR2 OHS Installation and Configuration

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

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

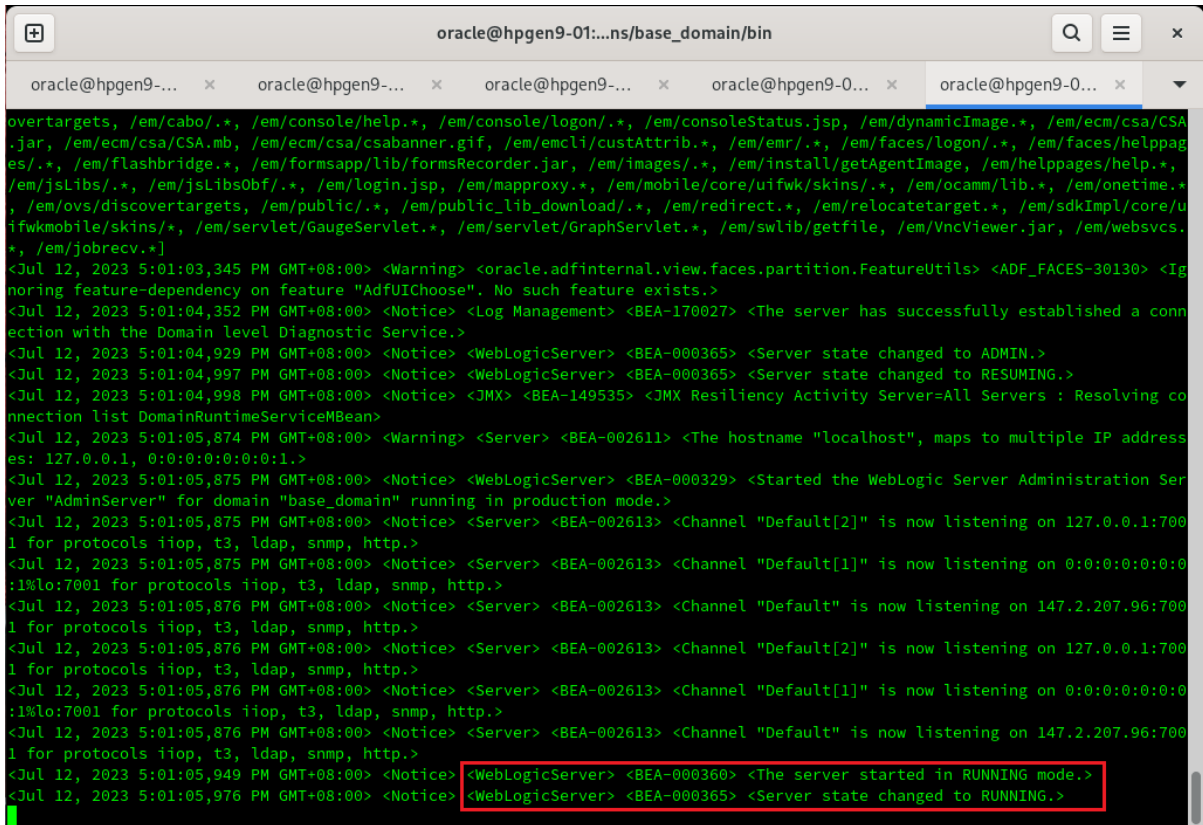
**Starting the Node Manager, go to the `DOMAIN_HOME/bin` directory and run `'nohup ./startNodeManager.sh > nm.out&'`**

```

oracle@hpngen9-01:~/base_domain/bin
oracle@hpngen9-01:~/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 20272
oracle@hpngen9-01:~/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_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/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/ORACLE_SW/Java/jdk1.8.0_221/weblogic.NodeManager -v
<Jul 12, 2023 4:56:37 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 12, 2023 4:56:37 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jul 12, 2023 4:56:37 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 12, 2023 4:56:37 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 12, 2023 4:56:38 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jul 12, 2023 4:56:38 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Jul 12, 2023 4:56:39 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext

```

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



```
oracle@hpngen9-01:~/base_domain/bin
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/jslibs0bf/.*, /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.*)
<Jul 12, 2023 5:01:03,345 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ig
noring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jul 12, 2023 5:01:04,352 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conn
ection with the Domain Level Diagnostic Service.>
<Jul 12, 2023 5:01:04,929 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 12, 2023 5:01:04,997 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 12, 2023 5:01:04,998 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving co
nnection list DomainRuntimeServiceMBean>
<Jul 12, 2023 5:01:05,874 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP address
es: 127.0.0.1, 0:0:0:0:0:0:0:1.>
<Jul 12, 2023 5:01:05,875 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base_domain" running in production mode.>
<Jul 12, 2023 5:01:05,875 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2023 5:01:05,875 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0
:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2023 5:01:05,876 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2023 5:01:05,876 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2023 5:01:05,876 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0
:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2023 5:01:05,876 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2023 5:01:05,949 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 12, 2023 5:01:05,976 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@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/common/bin> ./wlst.sh
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

wls:/offline> connect('weblogic','welcome1','hpgen9-01:7001')
Connecting to t3://hpgen9-01:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

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

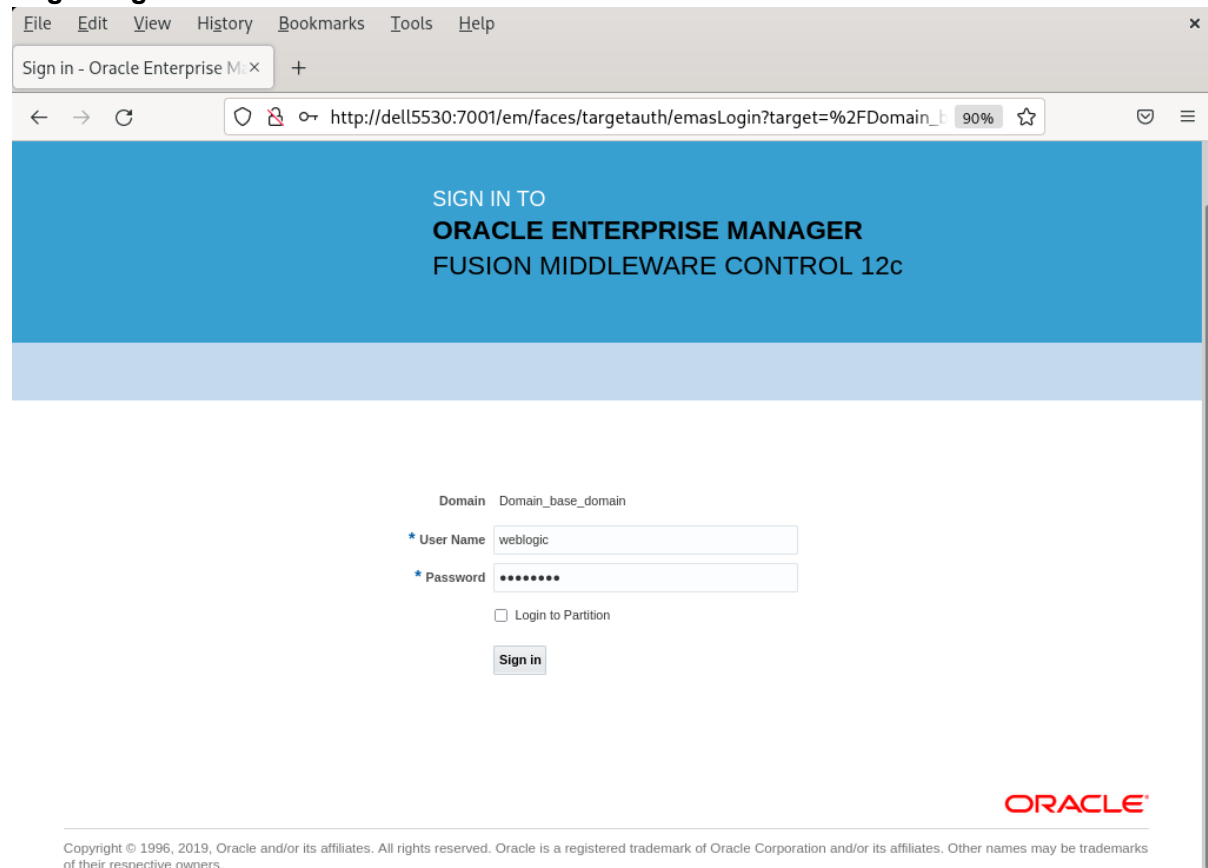
wls:/base_domain/serverConfig/> ohs_updateInstances()
Location changed to edit custom tree. This is a writable tree with No root.
For more help, use help('editCustom')

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

#### 4-4. Checking Oracle WebTier Product URLs.

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

##### Login Page:



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

- Browser tabs: "Sign in - Oracle Enterprise M..."
- Address bar: "http://dell5530:7001/em/faces/targetauth/emasLogin?target=%2FDomain\_..."
- Page content:
  - Header: "SIGN IN TO ORACLE ENTERPRISE MANAGER FUSION MIDDLEWARE CONTROL 12c"
  - Form fields:
    - Domain: "Domain\_base\_domain"
    - \* User Name: "weblogic"
    - \* Password: "\*\*\*\*\*"
    - Login to Partition
    - Sign in button
  - Oracle logo at the bottom right.
  - Copyright notice at the bottom: "Copyright © 1996, 2019, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners."

### Home Page:

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The browser address bar shows the URL: `http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHome?type=`. The page title is "base\_domain (Oracle WebLogic Domain)".

On the left sidebar, there are several monitoring cards: "Servers" with a green circle and "1 Up", "Clusters" with "0 Clusters", "Deployments" with a green circle and "1 Up", and "Domain Partitions".

The main content area is titled "Administration Server". It shows the following details:

- Name: AdminServer
- Host: hpgen9-01
- Listen Port: 7001

Below this, there is a "Servers" table with the following columns: Name, Status, Cluster, Machine, State, and Health. The table contains one entry:

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

At the bottom of the table, it says "Columns Hidden 34" and "Servers 1 of 1".

### Starting Oracle HTTP Server (ohs\_1)

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface for the Oracle HTTP Server component "ohs\_1". The browser address bar shows the URL: `http://hpgen9-01:7001/em/faces/as_ohs_ohsHome?type=oracle_apache&tar`. The page title is "ohs\_1 (Oracle HTTP Server)".

On the left sidebar, there are monitoring cards: "Monitoring" with a red arrow and "Metrics Unavailable", "Virtual Hosts" with "0 Virtual Hosts", and "Modules" with "0 Modules".

The main content area is titled "General" and "Response and Load".

**General**

- Component Name: ohs\_1
- Version: 12.2.1.4.0
- State: Shutdown
- Host: 147.2.207.96
- 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**

This section contains a line graph showing metrics over time. The x-axis represents time from 05:07 PM to 05:19 PM on July 12, 2023. The y-axis represents the value of the metrics. The legend indicates two data series: "Request Processing Time (milli seconds)" and "Domain\_base\_domain/base\_domain/ohs\_1: Request Throughput".

**Key Statistics**

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

**CPU and Memory Usage**

This section contains a line graph showing CPU and memory usage over time. The x-axis represents time from 05:06 PM to 05:18 PM on July 12, 2023. The y-axis represents the percentage of usage. The legend indicates two data series: "CPU Usage (%)" and "Memory Usage (MR)".



**ohs\_1 is up.**

Monitoring

CPU Usage (%) 0.00

Memory Usage (%) 0.00

Virtual Hosts 2

Modules 52

General

Component Name ohs\_1

Version 12.2.1.4.0

State Running

Host 147.2.207.96

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 3

Busy Processes 0

Error Rate (%) 0.00

Connection Duration (seconds) 0

Request Processing Time (seconds) 0

Request Throughput (per second) 0.00

Response and Load

CPU and Memory Usage

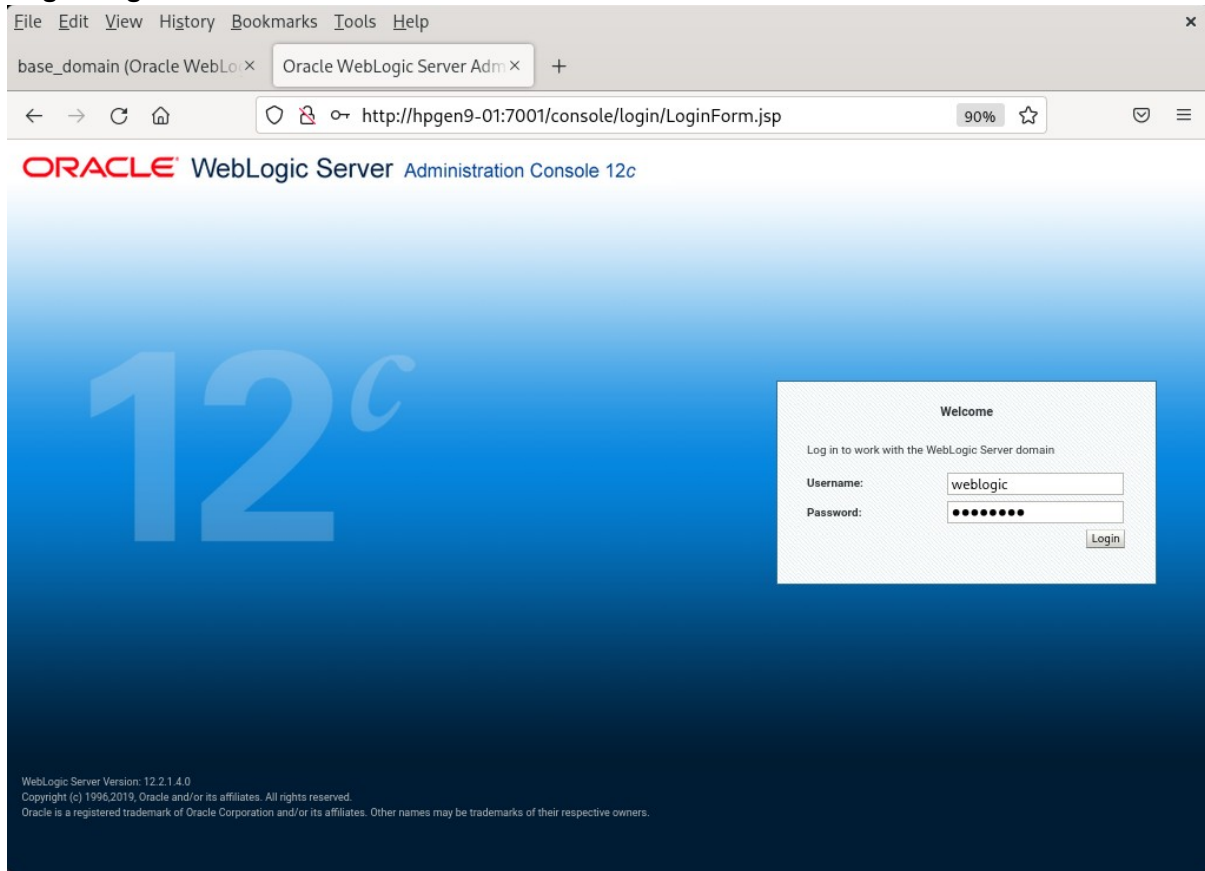
**OHS Ports Configuration as shown below.**

Port Usage

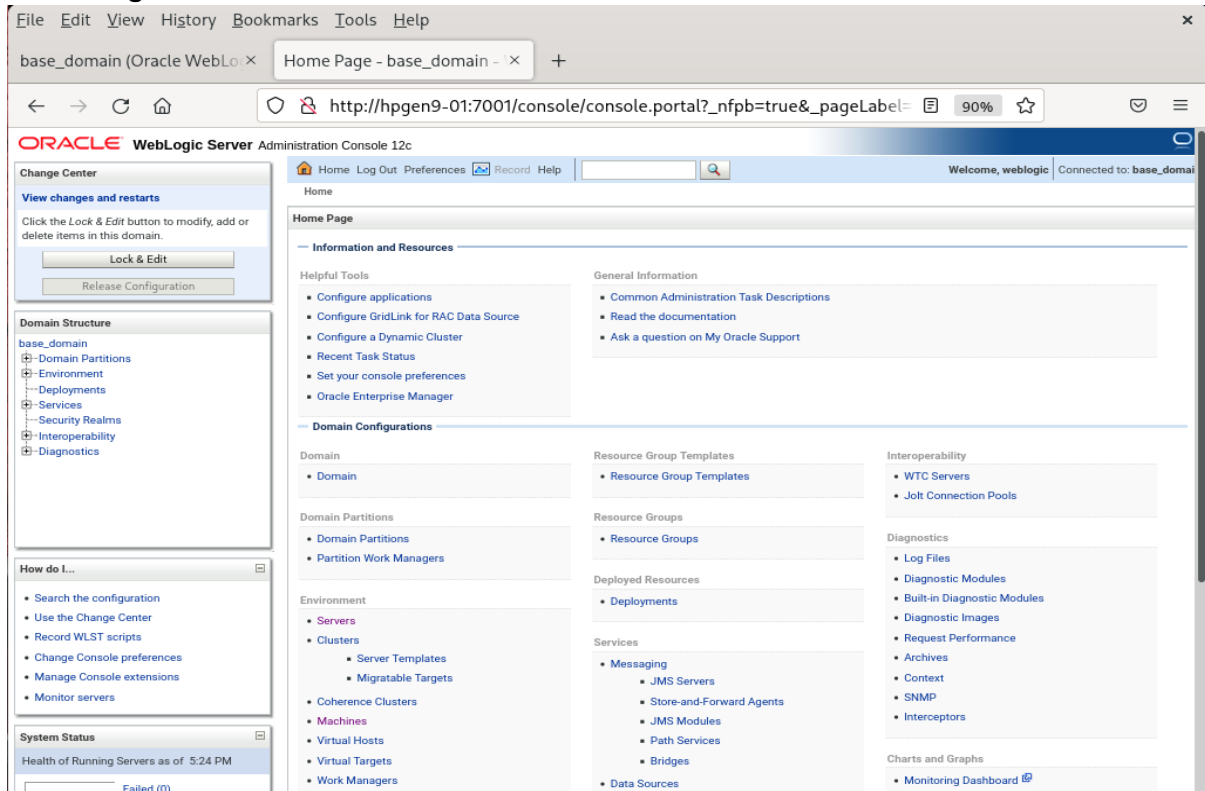
Port in Use	IP Address	Component	Protocol
7779	127.0.0.1	ohs_1	HTTPS
4443	ALL	ohs_1	HTTPS
7777	ALL	ohs_1	HTTP

## 2). Access to Administration Server Console

### Login Page as shown below:



### Home Page:



### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar displays the URL: `http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=`. The page title is "Summary of Servers".

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

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

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

**System Status:** "Health of Running Servers as of 5:25 PM" with a bar chart showing "Failed (0)".

**Summary of Servers:**

- Configuration tab selected.
- Text: "A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain."
- Buttons: "New", "Clone", "Delete".
- Text: "Showing 1 to 1 of 1 Previous | Next".
- Table:

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

### Viewing the summary of Machines:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar displays the URL: `http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=`. The page title is "Summary of Machines".

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

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

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

**System Status:** "Health of Running Servers as of 5:26 PM" with a bar chart showing "Failed (0)", "Critical (0)", and "Overloaded (0)".

**Summary of Machines:**

- Text: "A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). WebLogic Server uses configured machine names to determine the optimum server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers. This page displays key information about each machine that has been configured in the current WebLogic Server domain."
- Buttons: "New", "Clone", "Delete".
- Text: "Showing 1 to 1 of 1 Previous | Next".
- Table:

Name	Type
SuSE_Machine_1	Machine

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

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

**ORACLE** Oracle HTTP Server 12c

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

Process Management and HA  
Certificate management  
Automation  
Test to Production

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

FMW Lifecycle Tools  
Manage, monitor, diagnose  
Enterprise Manager

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

**ORACLE** Oracle HTTP Server 12c

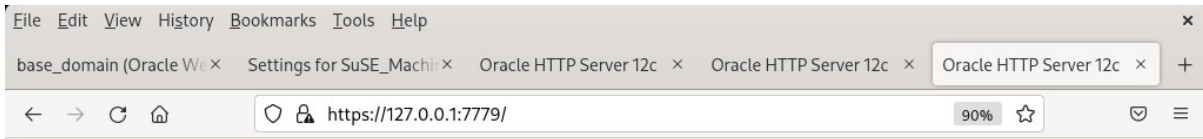
Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Fusion Middleware Applications.

Process Management and HA  
Certificate management  
Automation  
Test to Production

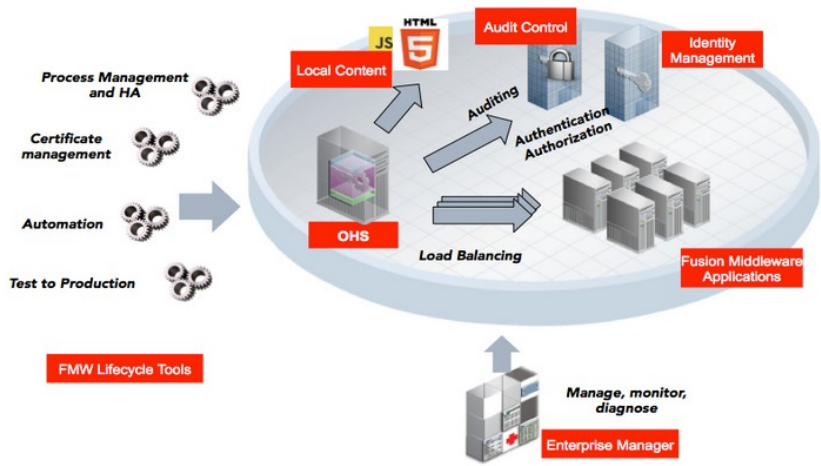
Local Content  
OHS  
Load Balancing  
Auditing  
Authentication Authorization  
Audit Control  
Identity Management  
Fusion Middleware Applications

FMW Lifecycle Tools  
Manage, monitor, diagnose  
Enterprise Manager

### Admin Host SSL URL: https://host:7779/



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.



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

```
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/common/bin> ./wlst.sh
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

wls:/offline> connect('weblogic','welcome1','hpgen9-01:7001')
Connecting to t3://hpgen9-01:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

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

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

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

***End of Oracle WebTier Http Server.***



\*\*\*\*\*

## Oracle WebCenter Portal

\*\*\*\*\*

### 1. Installing Oracle WebCenter Portal 12c

#### 1-1. Prerequisites:

Installation of Oracle WebCenter Portal requires:

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

1-2. Log in to the target system (SLES 15 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'**

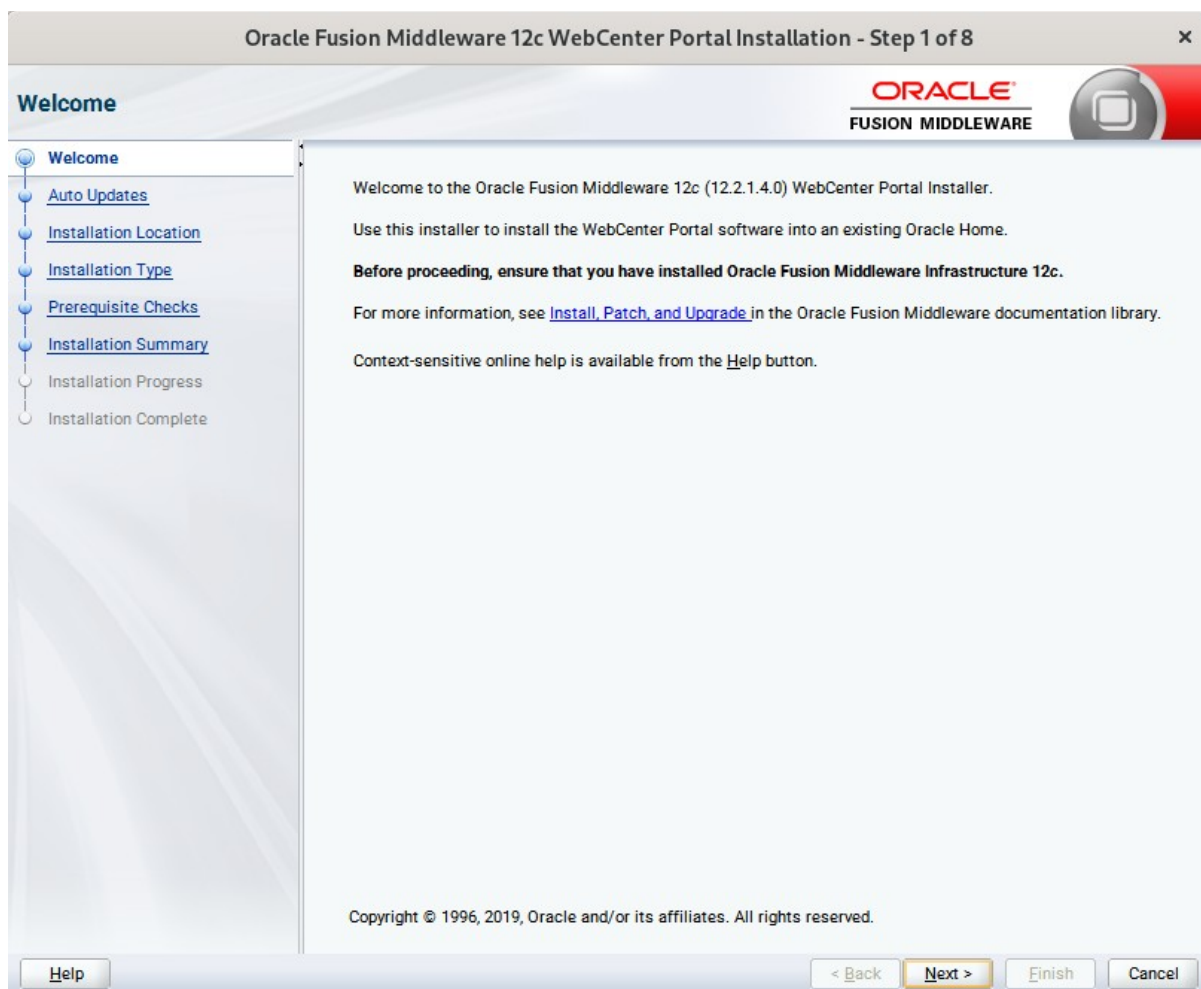
**For the actual installation, follow the steps below:**

#### 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 a section for 'Central Inventory Directory' with the instruction: 'Enter the Central inventory directory for all your oracle installations. The installer will create a new central inventory directory if it does not exist.' There is a text input field for 'Inventory Directory' containing '/home/oracle/orainventory' and a 'Browse' button. Below this is a dropdown menu for 'Operating System Group' with 'oinstall' selected and a note: 'Specify a group with write permission to the inventory directory'. At the bottom, there is a section for 'Central Inventory Pointer File' with instructions: '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.' The window has 'Help', 'OK', and 'Cancel' buttons at the bottom.

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.

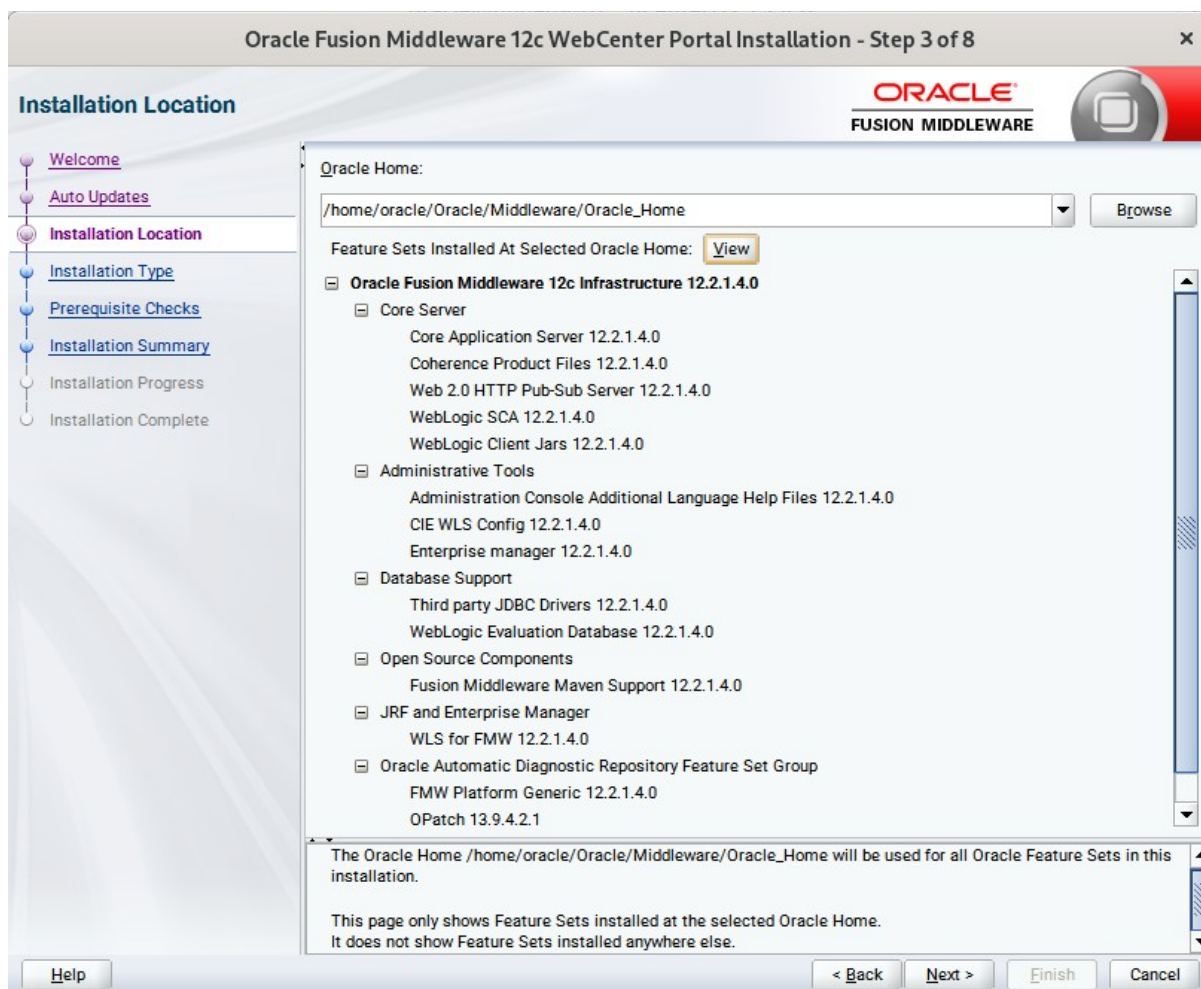


3). The **Auto Updates** page appears.

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 the following items: Welcome, Auto Updates (selected), Installation Location, Installation Type, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main content area has the Oracle Fusion Middleware logo at the top right. Below the logo, there are three radio button options: 'Skip Auto Updates' (which is 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. At the bottom of the page, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

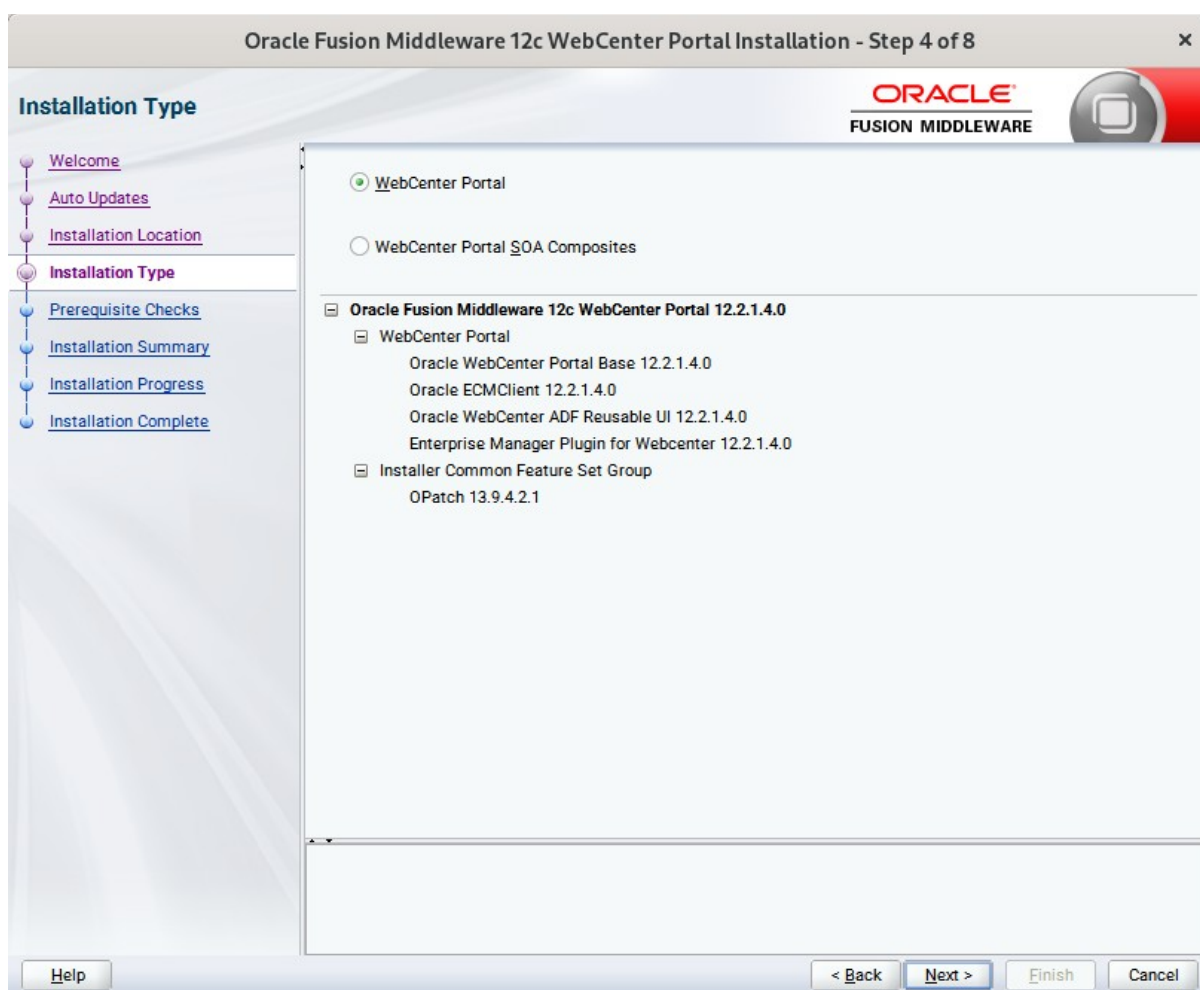
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



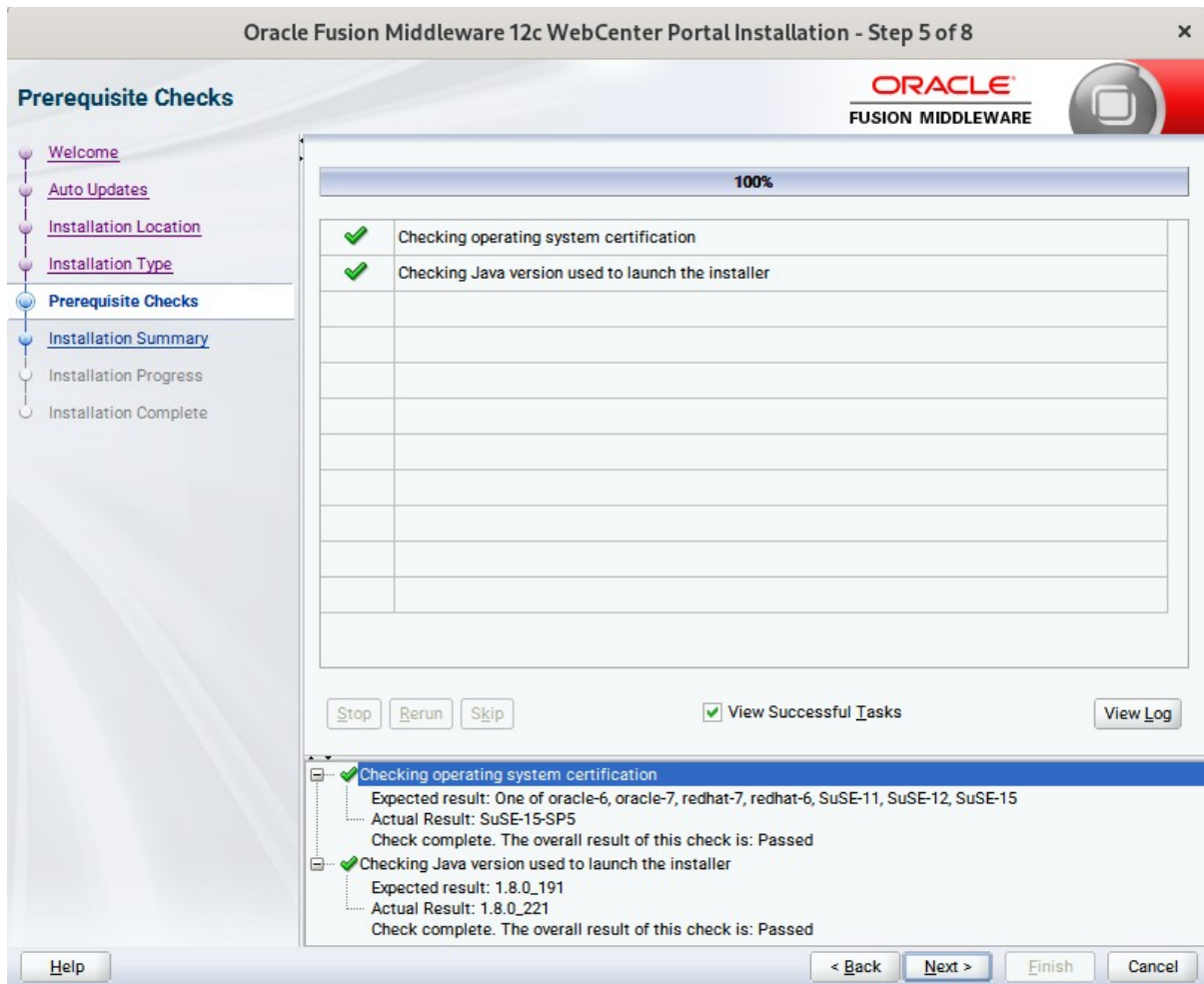
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



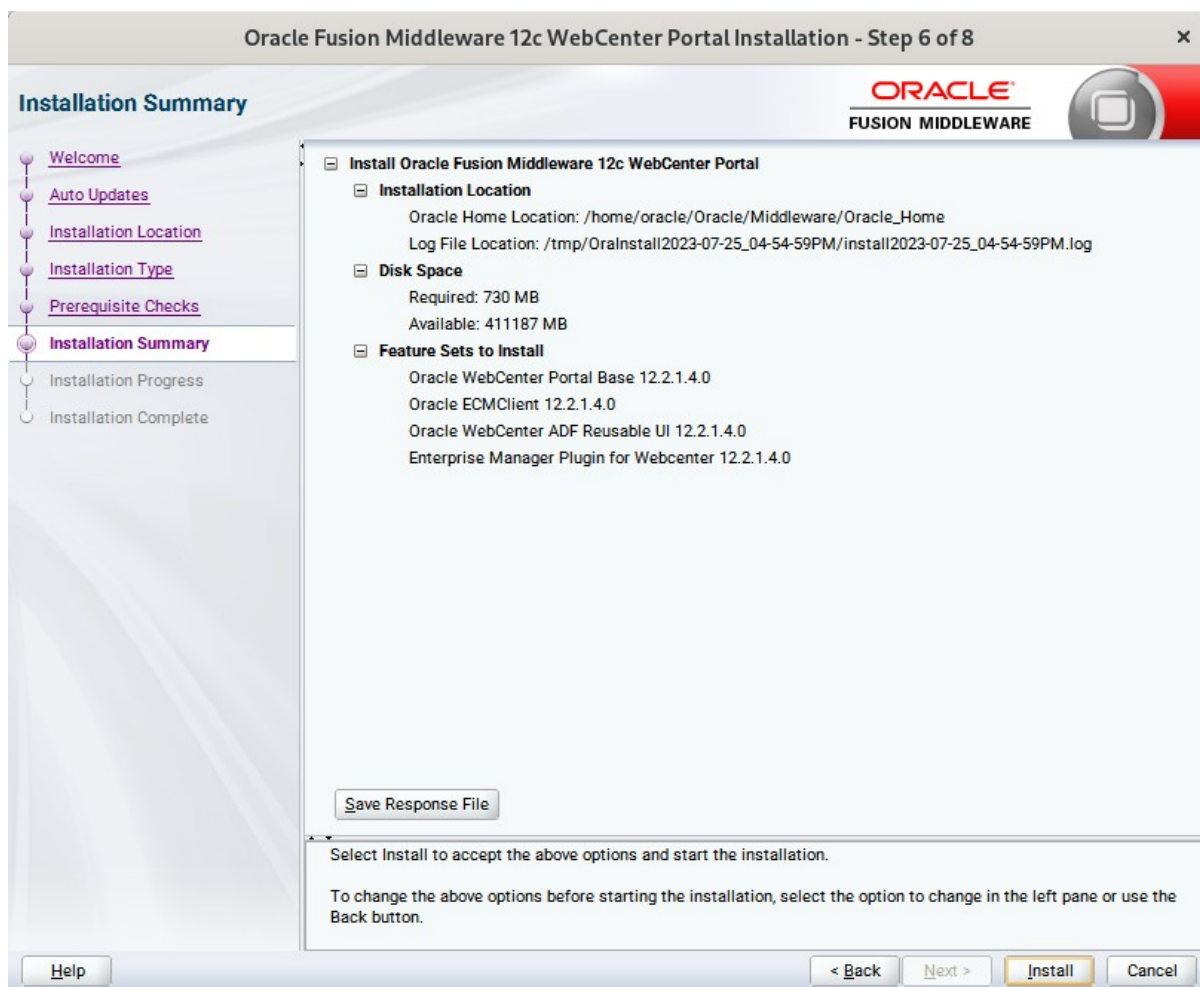
Use this screen to select the installation type and then products or feature sets you want to install. Selected the **WebCenter Portal** install type to install the WebCenter product. Click **Next** to continue.

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



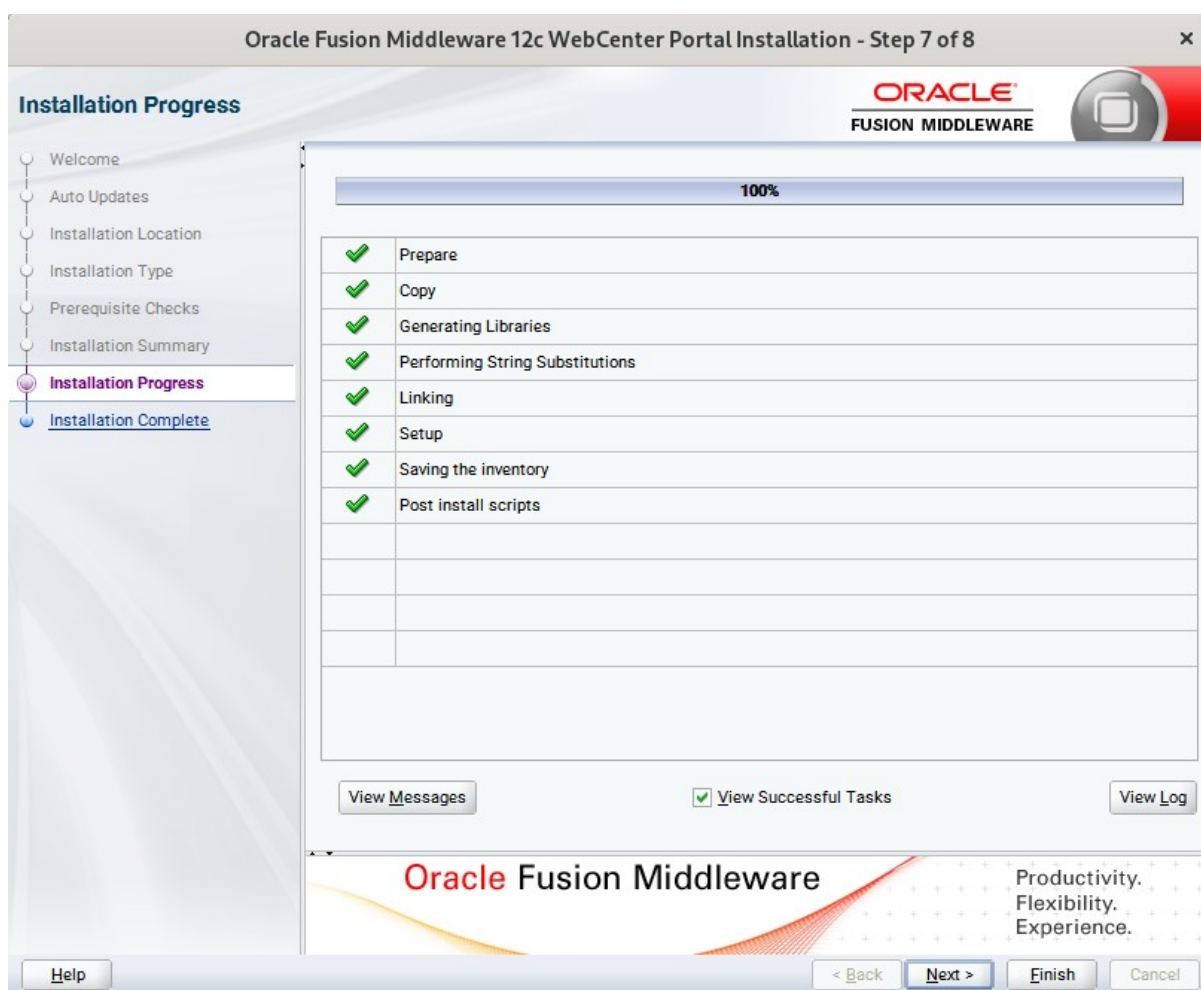
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



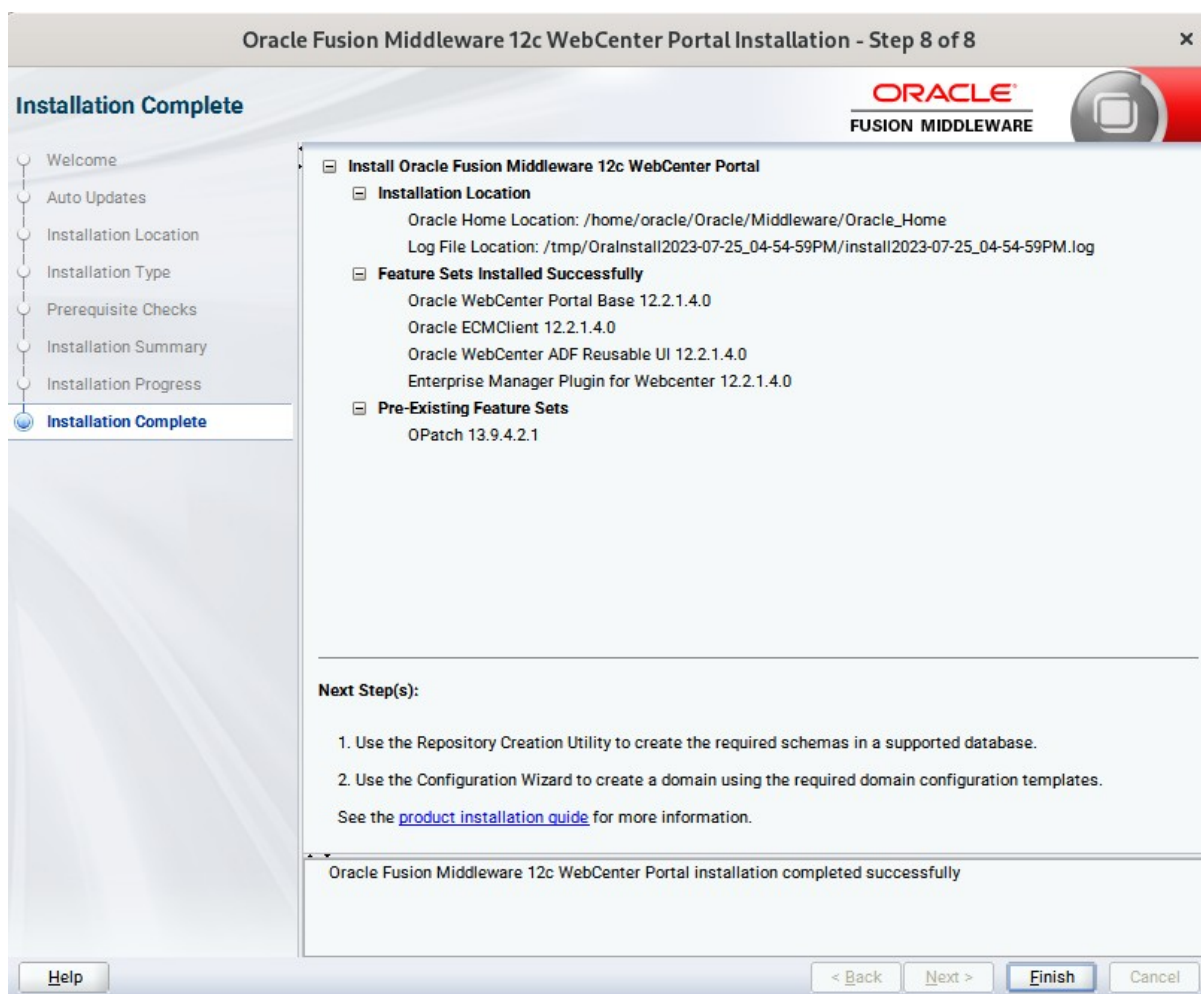
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.



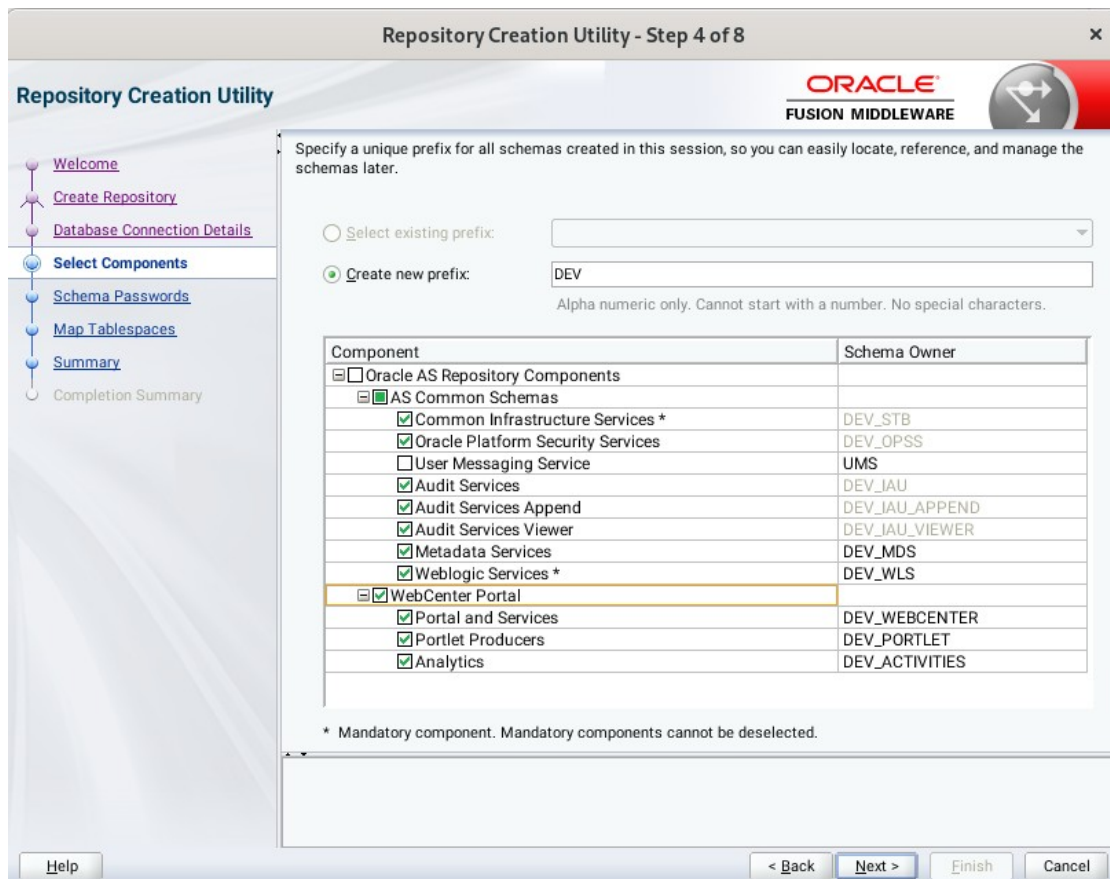
Click **Finish** to dismiss the installer.



## 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: hpgen9-01  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 4 minutes 11 seconds

RCU Logfile: /tmp/RCU2023-07-25\_17-03\_1424734193/logs/rcu.log  
Component Log Directory: /tmp/RCU2023-07-25\_17-03\_1424734193/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.870(sec)	stb.log
Oracle Platform Security Services	Success	00:45.418(sec)	opss.log
Audit Services	Success	00:24.985(sec)	iau.log
Audit Services Append	Success	00:09.471(sec)	iau_append.log
Audit Services Viewer	Success	00:09.397(sec)	iau_viewer.log
Metadata Services	Success	00:17.070(sec)	mds.log
Weblogic Services	Success	00:18.984(sec)	wls.log
Portal and Services	Success	00:58.371(sec)	webcenter.log
Portlet Producers	Success	00:16.021(sec)	portlet.log
Analytics	Success	00:17.660(sec)	activities.log

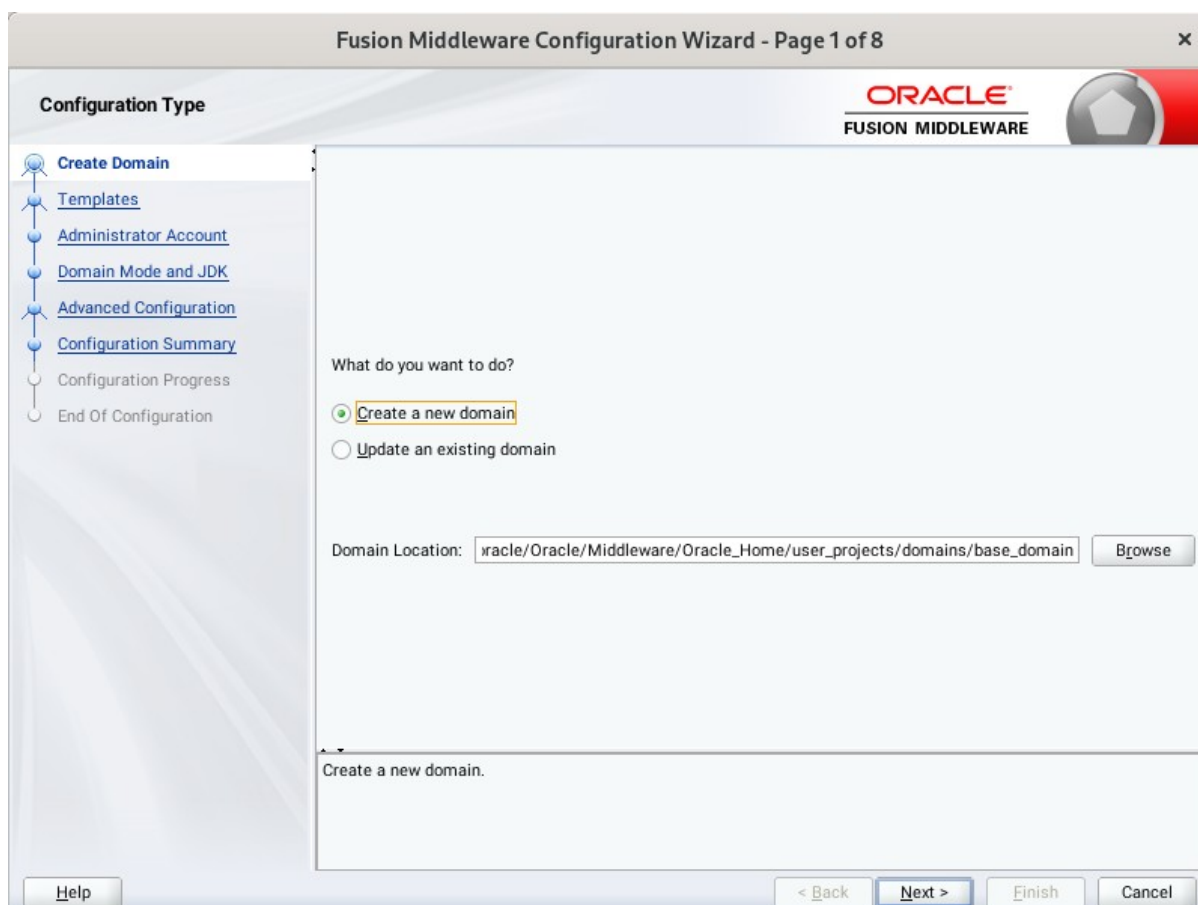
Help < Back Next > Create Close

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

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

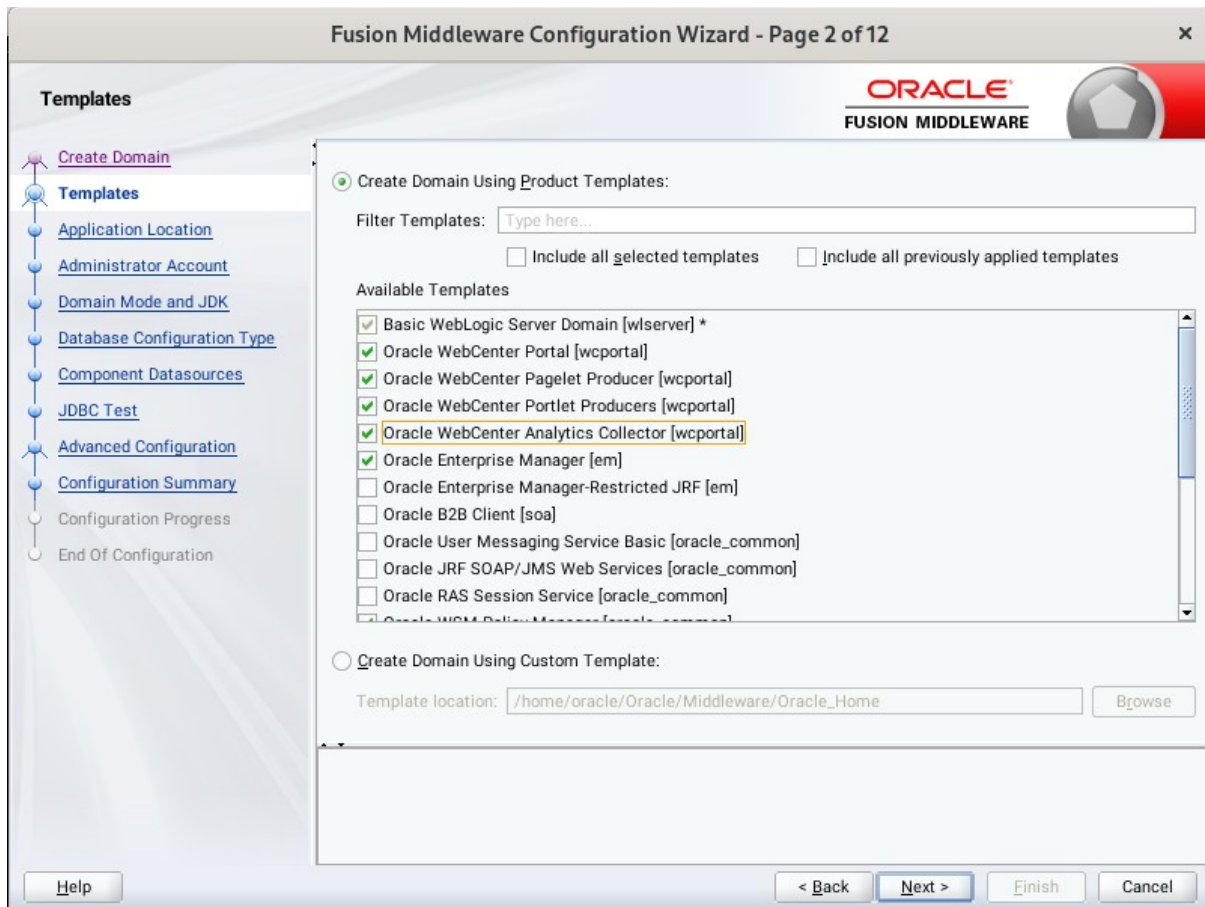
Follow these steps:

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



Click **Next** to continue.

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



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

- Oracle WebCenter Portal [wcportal]

Selecting this template automatically selects the following as dependencies:

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

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

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



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

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

Fusion Middleware Configuration Wizard - Page 4 of 12

**Administrator Account**

ORACLE  
FUSION MIDDLEWARE

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

Name

Password

Confirm Password

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

Help < Back Next > Finish Cancel

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

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



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

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

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

Fusion Middleware Configuration Wizard - Page 6 of 12

**Database Configuration Type**

ORACLE  
FUSION MIDDLEWARE

Specify AutoConfiguration Options Using:

RCU Data     Manual Configuration

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

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

Connection Parameters     Connection URL String

Host Name: hpgen9-01

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.

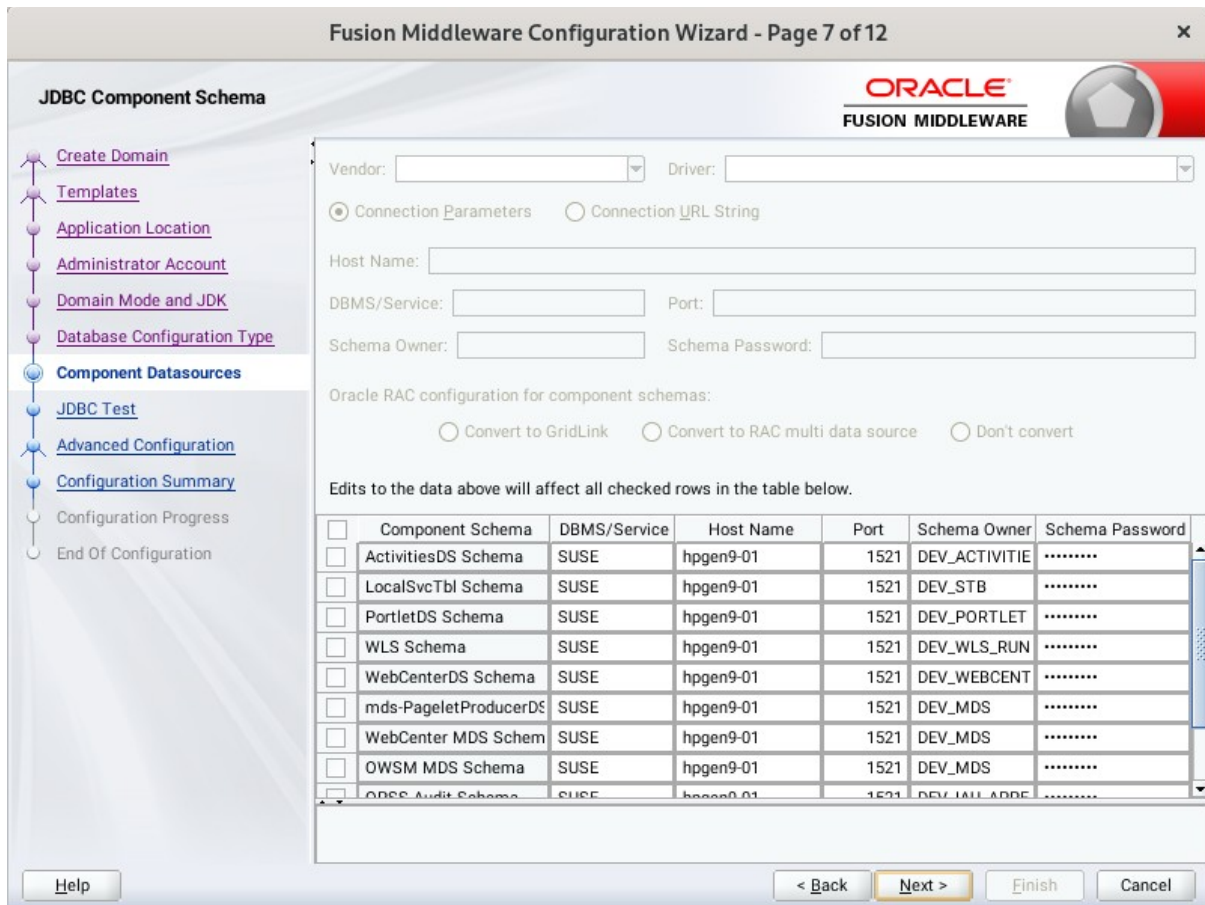
Click "Next" button to continue.

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



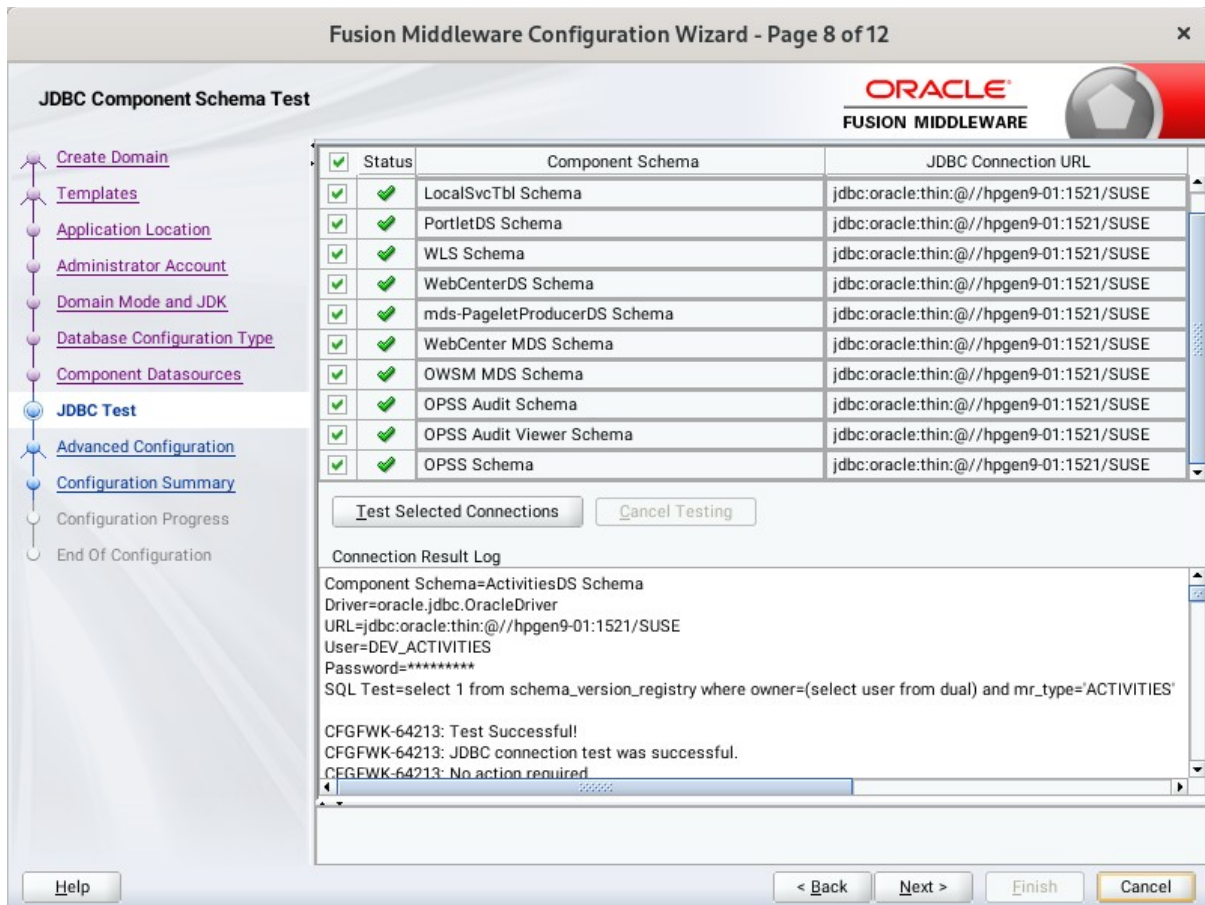
7). The **JDBC Component Schema** screen appears.



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

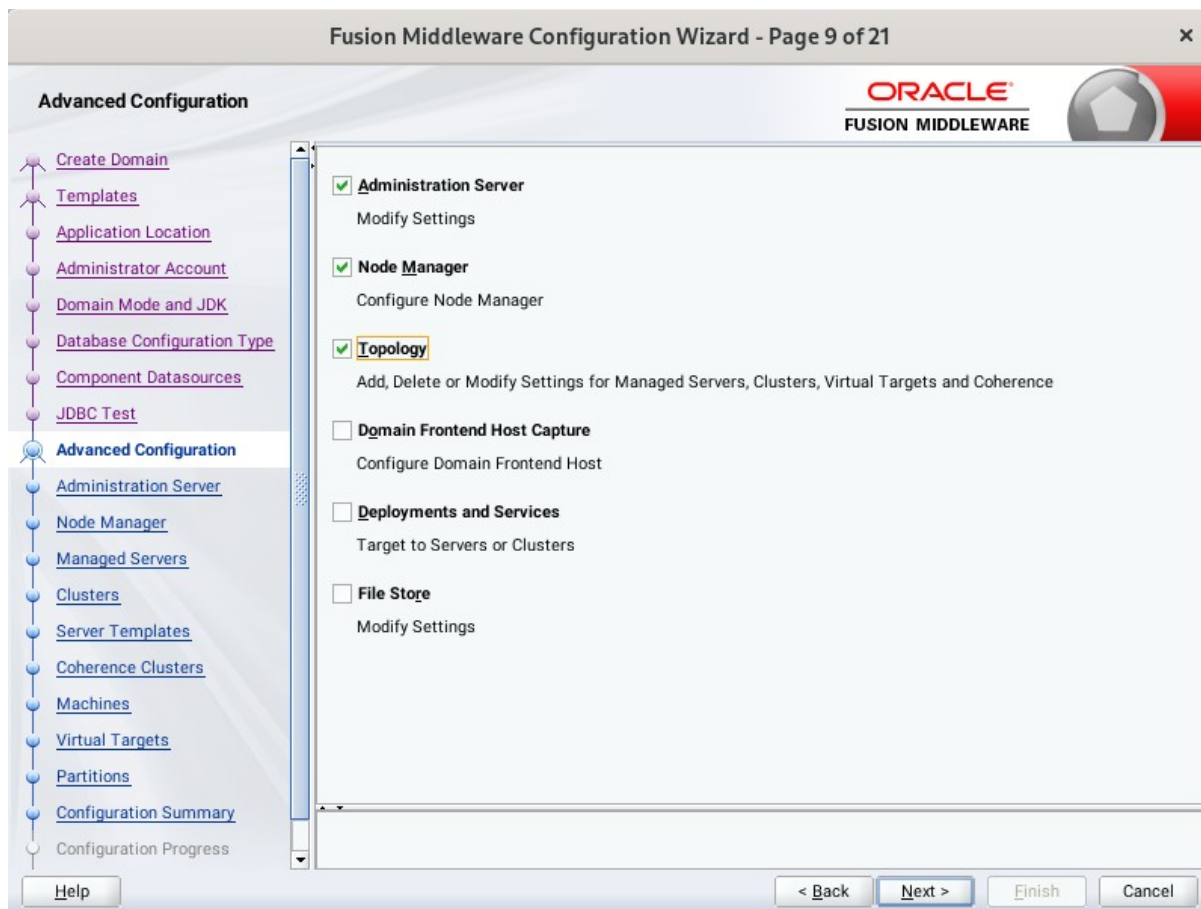


8). The **JDBC Component Schema Test** screen appears.



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

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



On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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

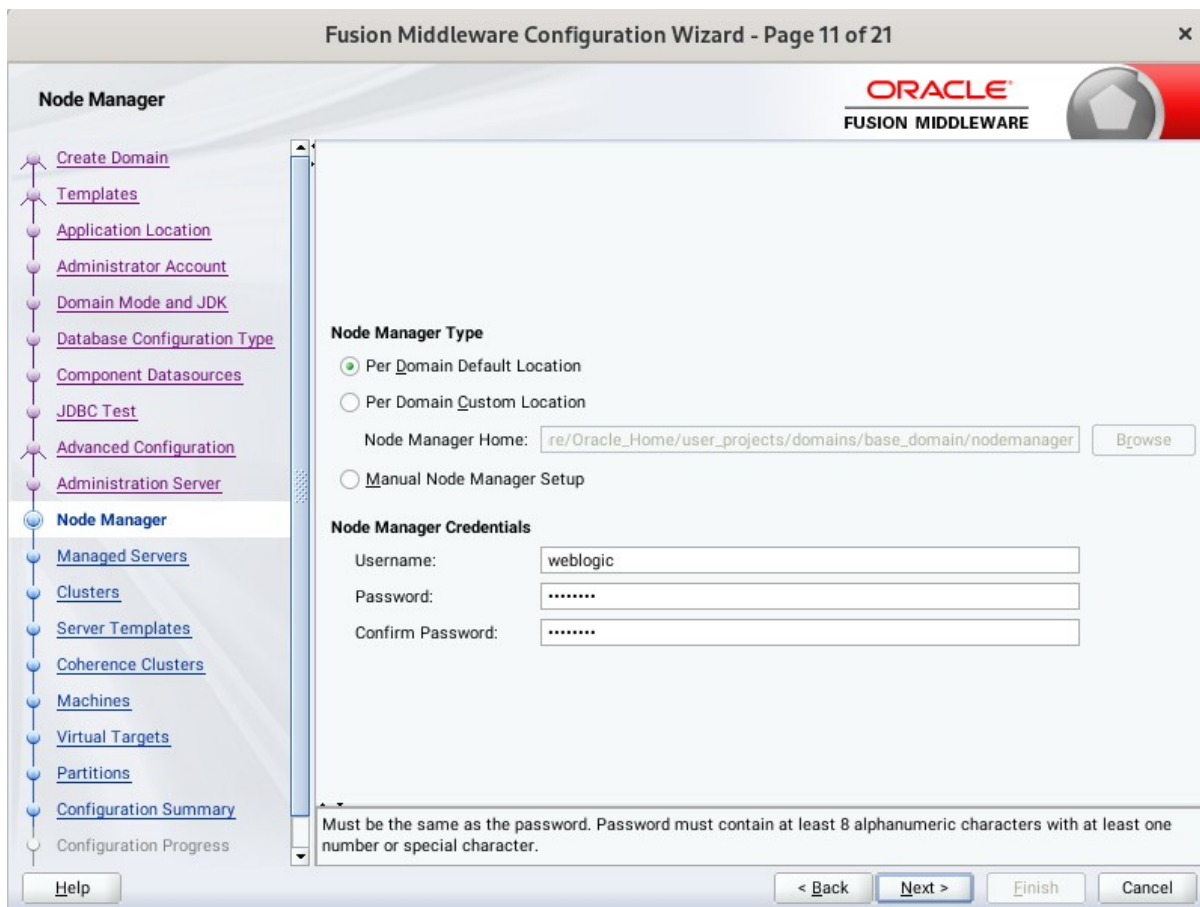
The screenshot shows the 'Administration Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 21'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation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

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

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

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

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



The screenshot shows the "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:

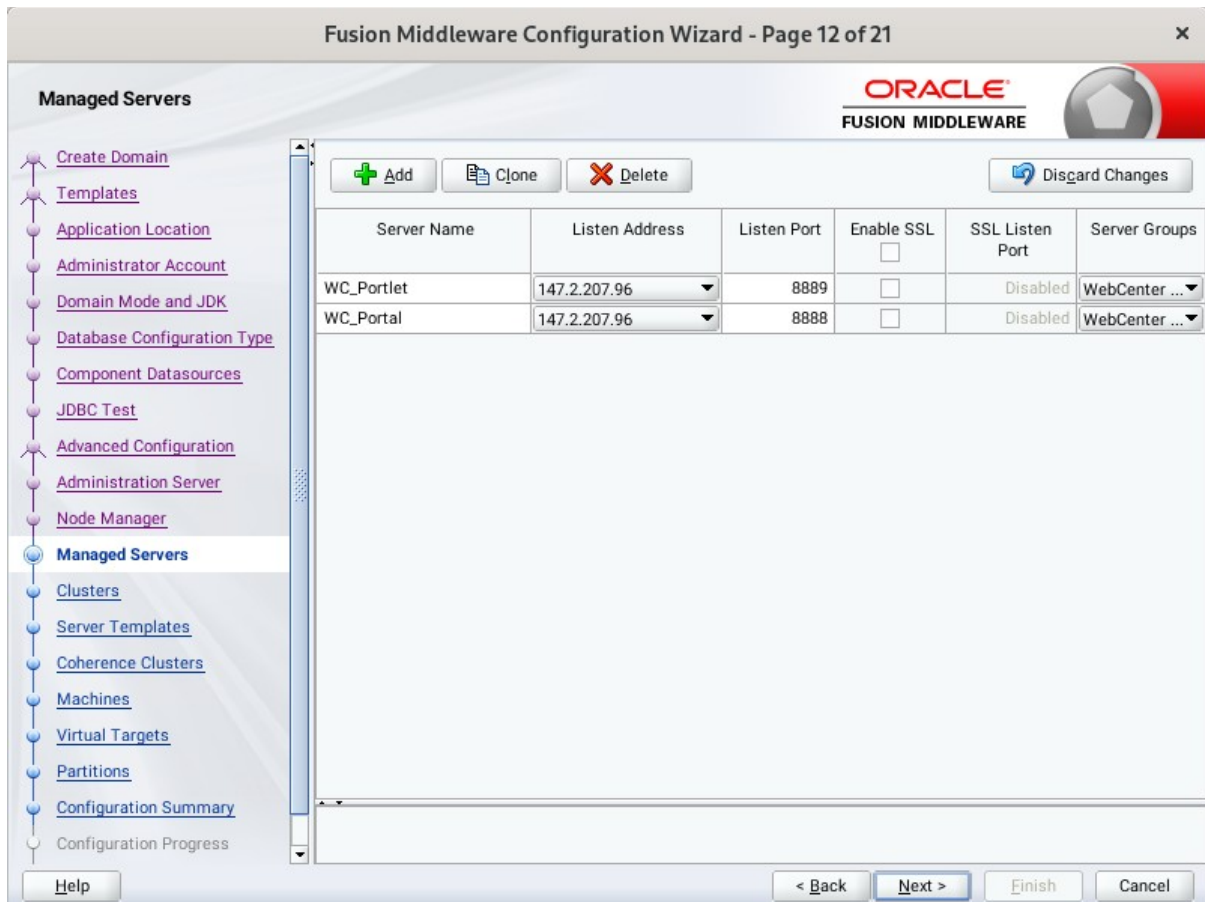
Confirm Password:

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".

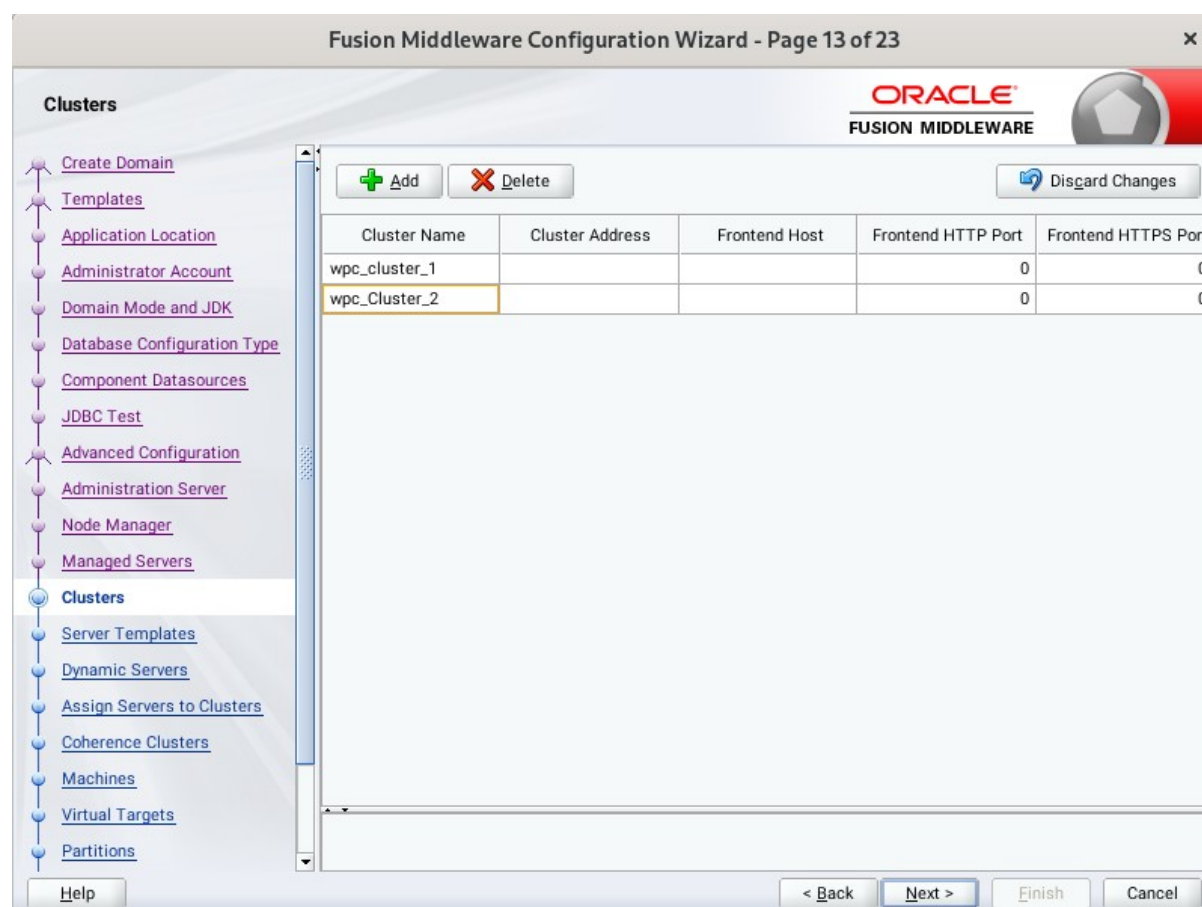
Select **Per Domain Default Location** as the Node Manager type, then Specify Node Manager credentials. Click **Next** to continue.

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 **wpc\_cluster\_1** in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create one more clusters: **wpc\_cluster\_2**.

Click **Next** to continue.

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

**Fusion Middleware Configuration Wizard - Page 14 of 23**

**Server Templates**

ORACLE  
FUSION MIDDLEWARE

+ Add    X Delete    Discard Changes

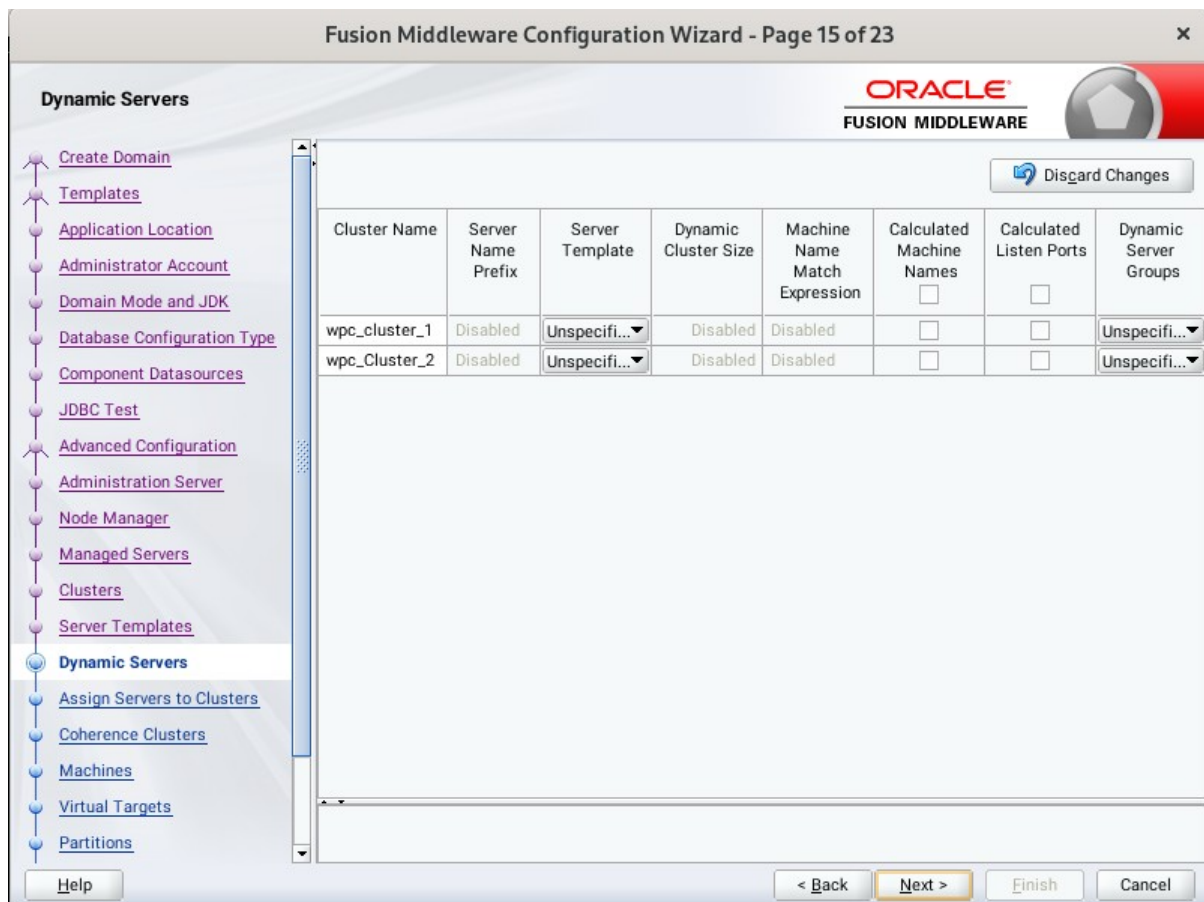
Name	Listen Port	SSL Listen Port	Enable SSL
portal-server-template	7100	8100	<input type="checkbox"/>
portlet-server-template	7100	8100	<input type="checkbox"/>
wsm-cache-server-template	7100	8100	<input type="checkbox"/>
wsmpm-server-template	7100	8100	<input type="checkbox"/>

Help    < Back    **Next >**    Finish    Cancel

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



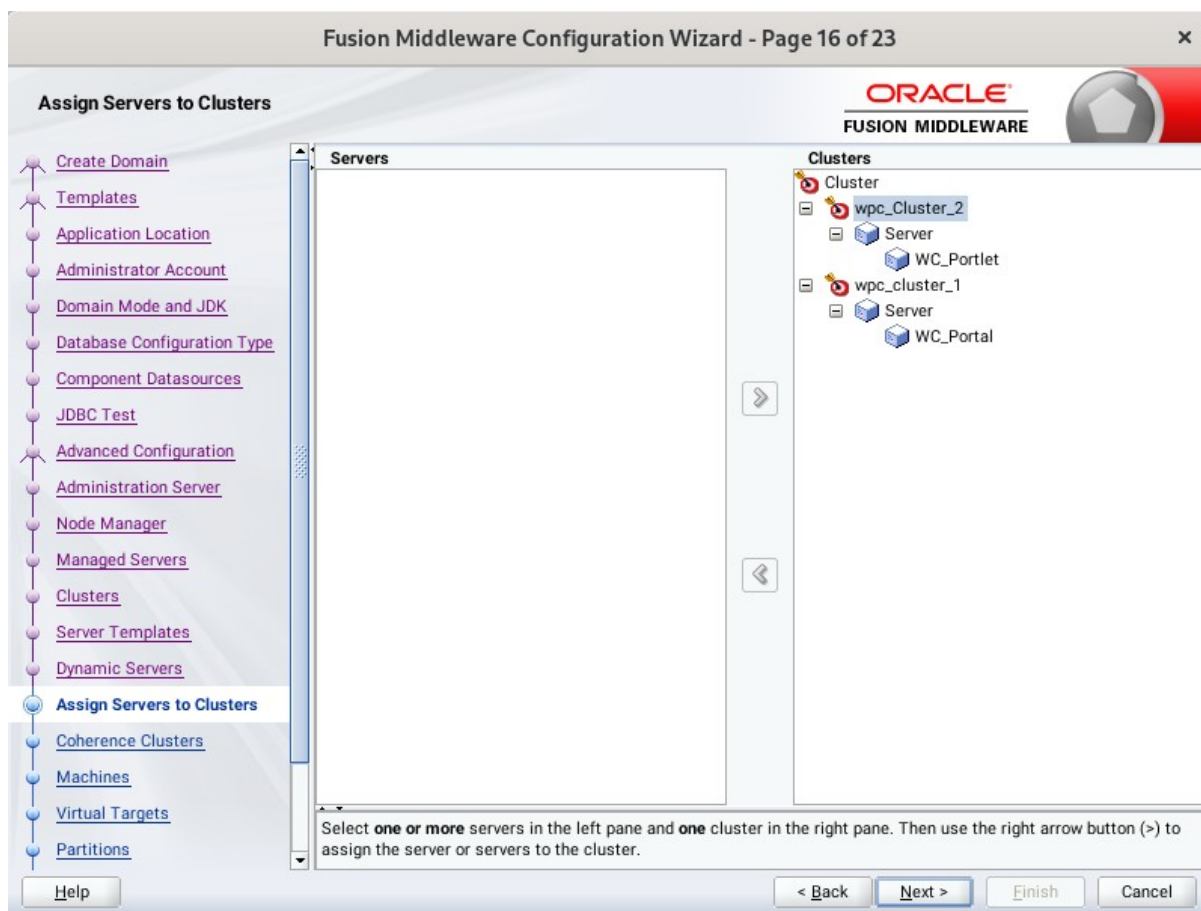
15). The **Dynamic Servers** screen appears.



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

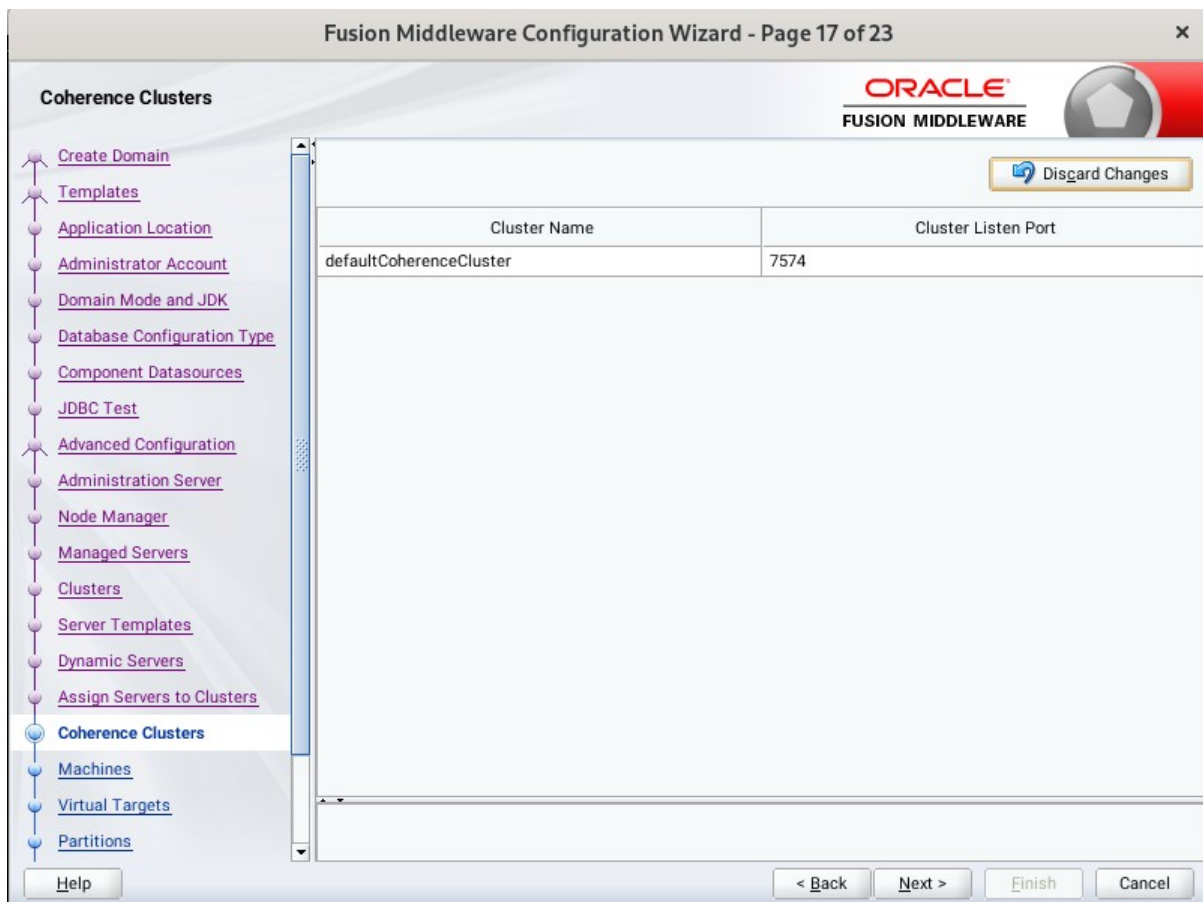


16). The **Assign Servers to Clusters** screen appears.



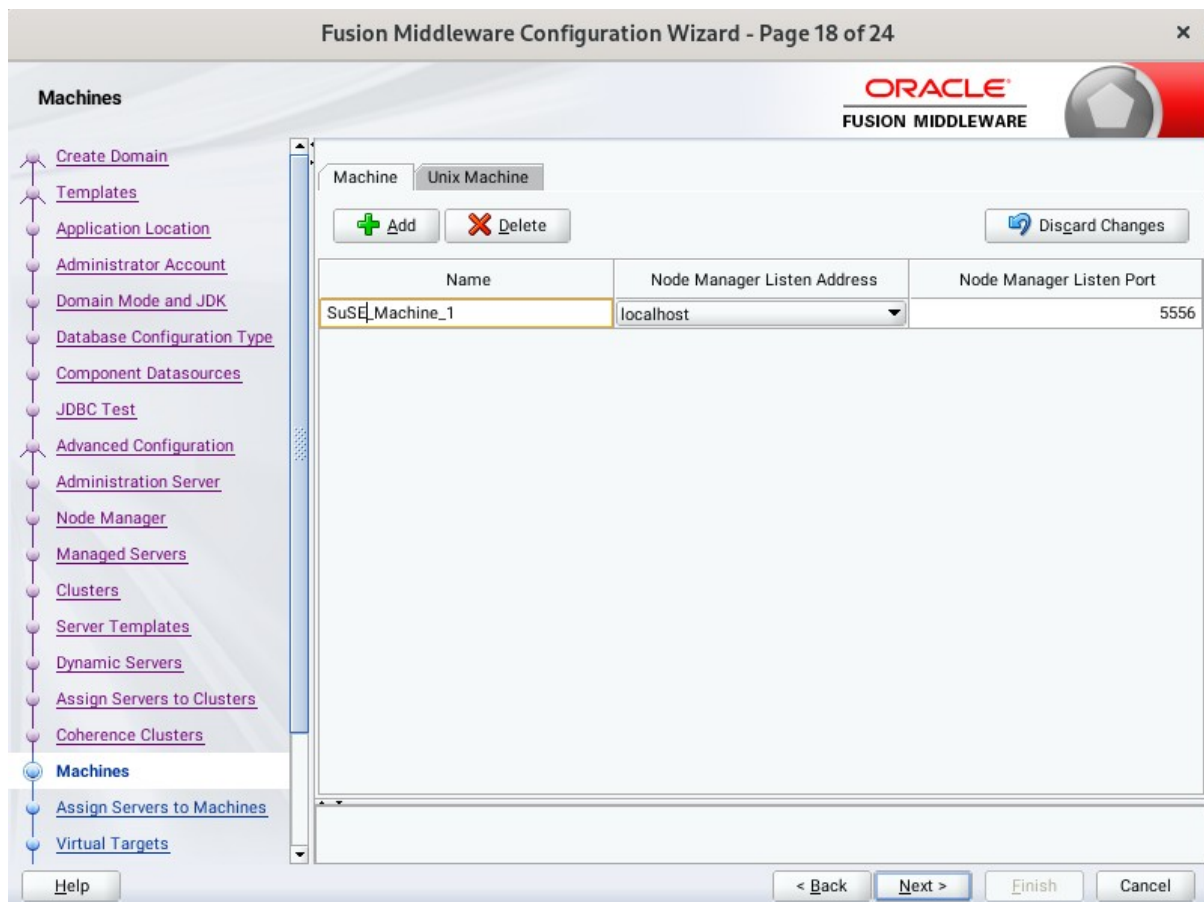
In the Clusters pane, select the cluster to which you want to assign the servers; in this case, **wpc\_cluster\_1**. In the Servers pane, assign **WC\_Portal** to **wpc\_cluster\_1**, then repeat to assign **WC\_Portlet** to **wpc\_cluster\_2**. Click **Next** to continue.

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.



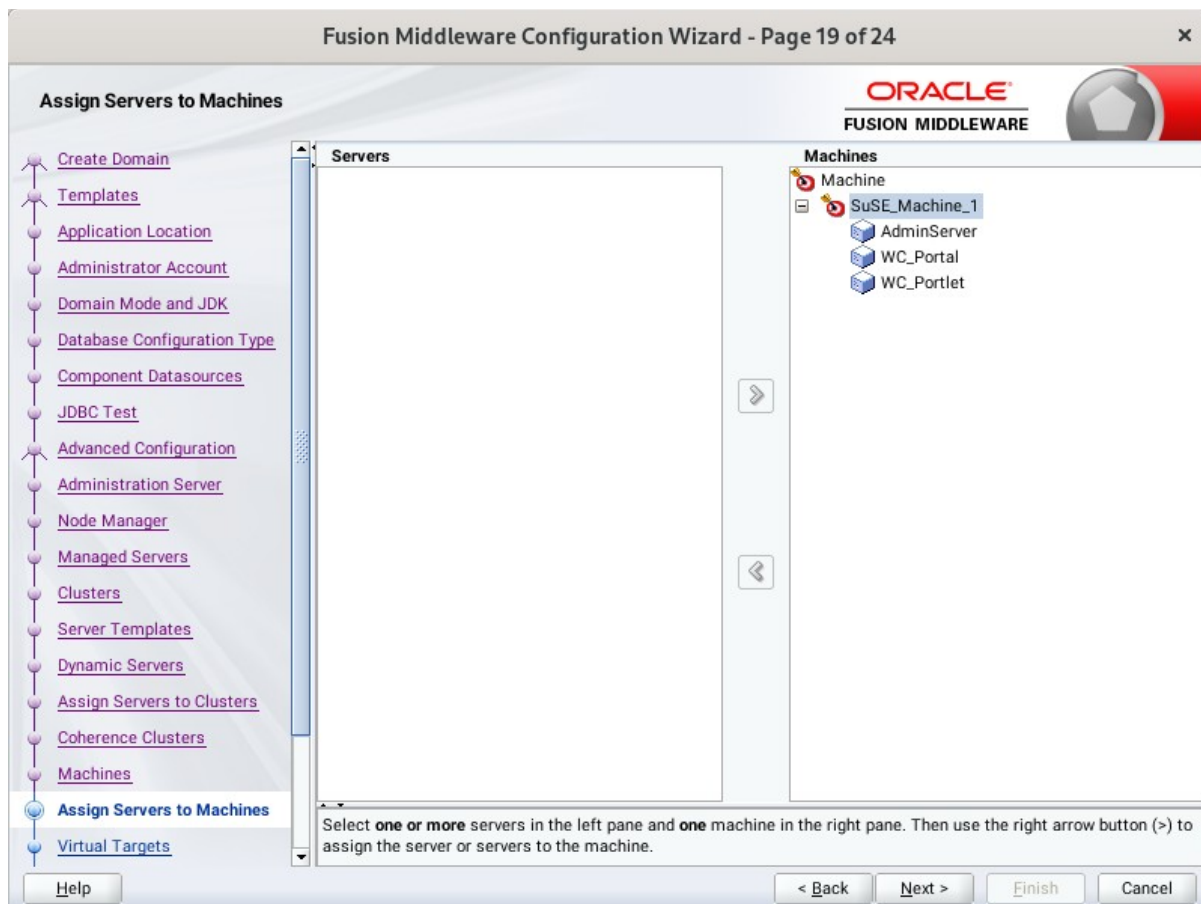
The screenshot shows the "Machines" screen in the Fusion Middleware Configuration Wizard. The title bar indicates "Fusion Middleware Configuration Wizard - Page 18 of 24". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. The left sidebar contains a list of configuration steps, with "Machines" selected. The main area shows a table with the following data:

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

Buttons for "Add", "Delete", and "Disgard Changes" are located above the table. At the bottom of the wizard, there are buttons for "< Back", "Next >", "Finish", and "Cancel".

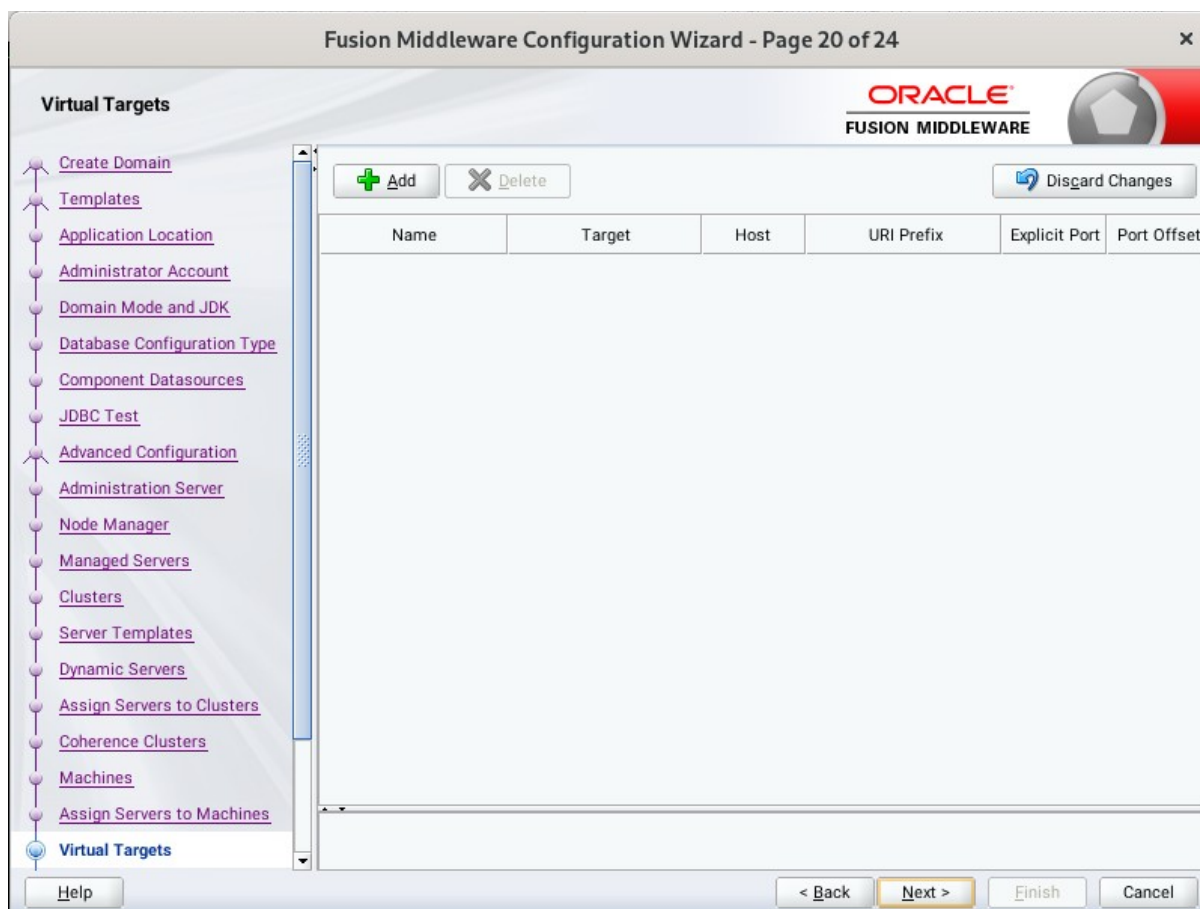
To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



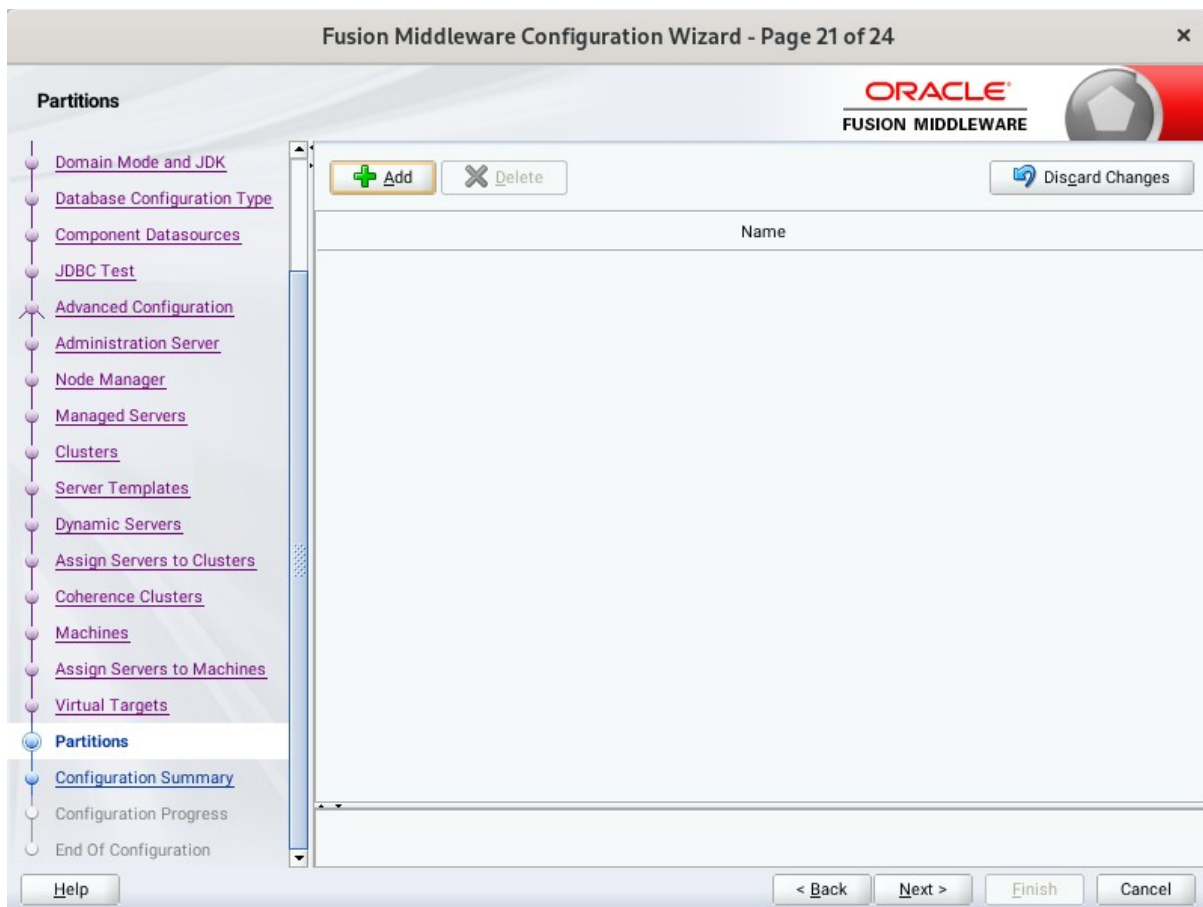
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



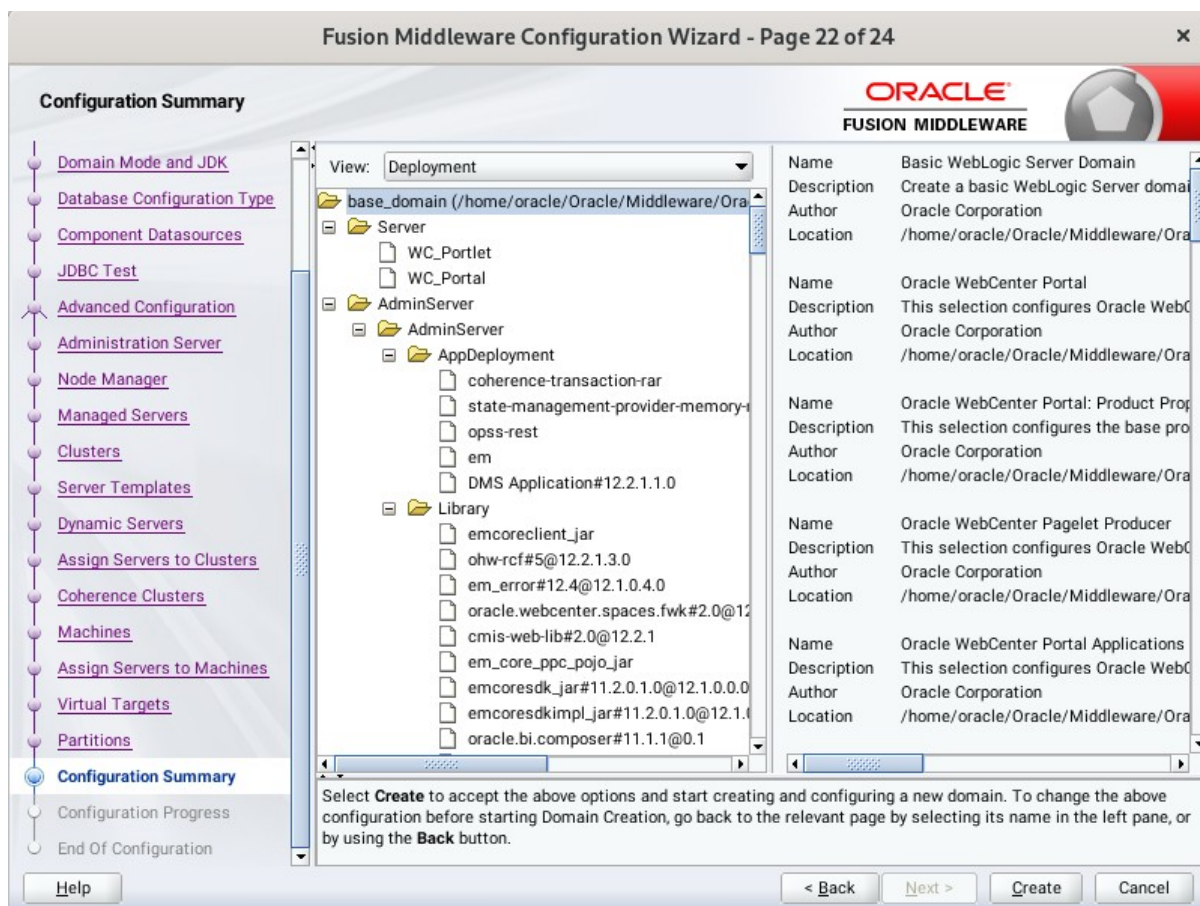
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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.

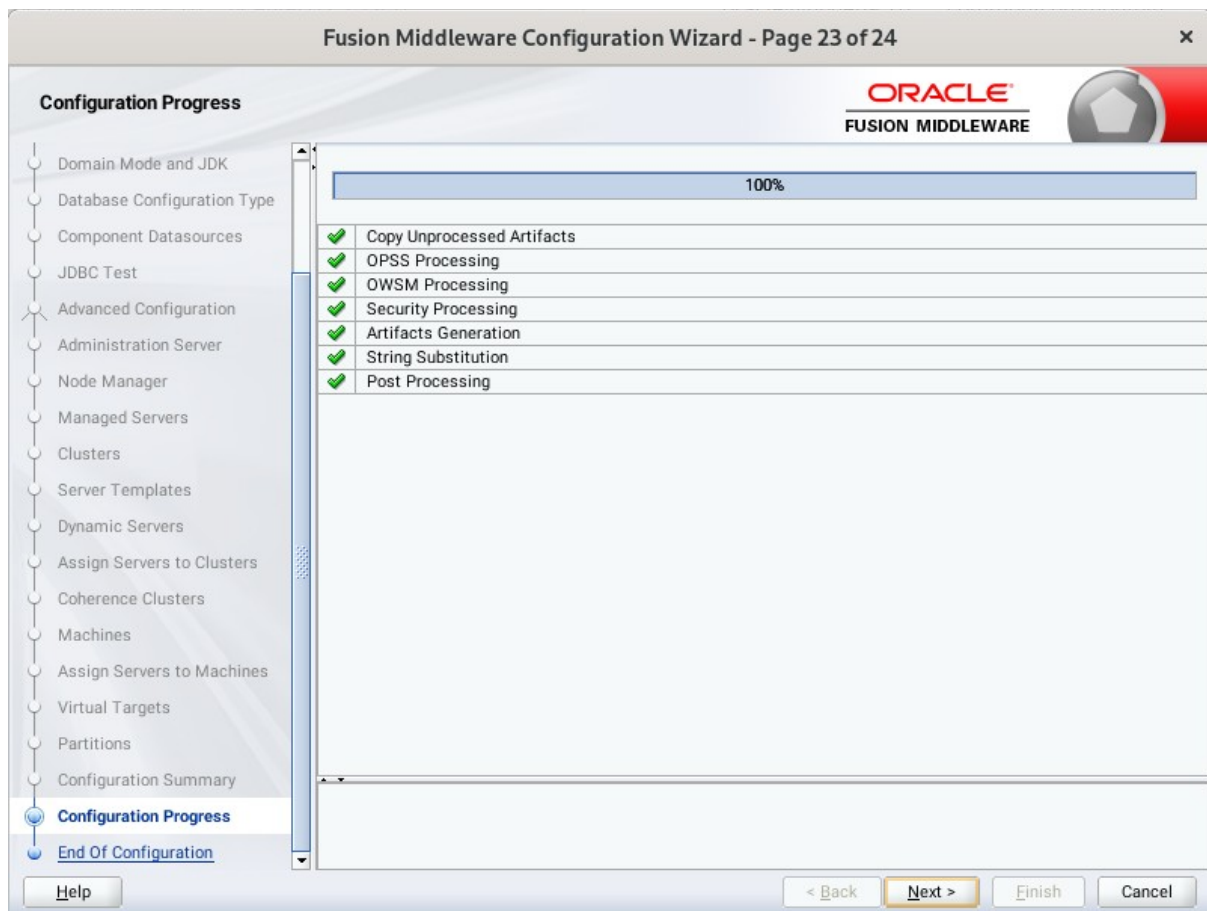
22). The **Configuration Summary** screen appears.



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



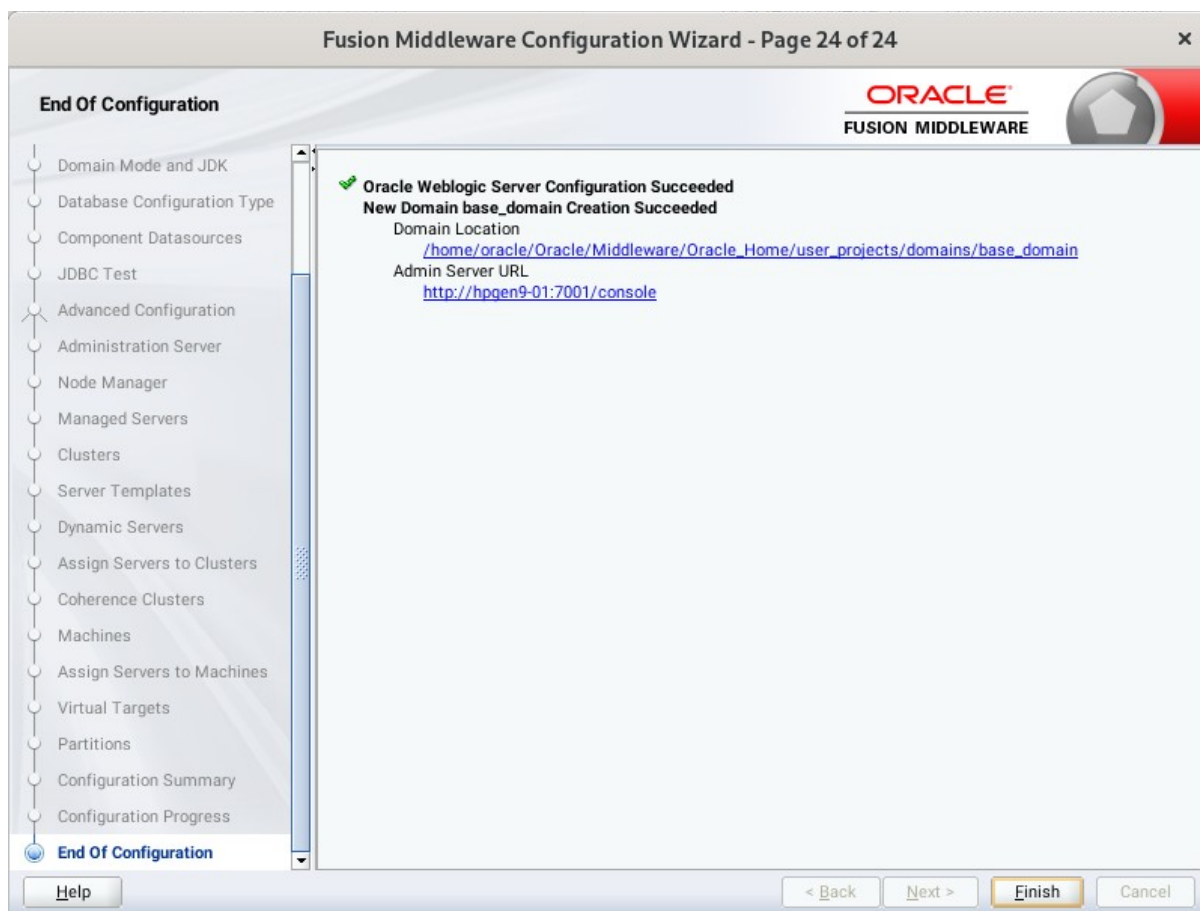
23). The **Configuration Progress** screen appears.



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.

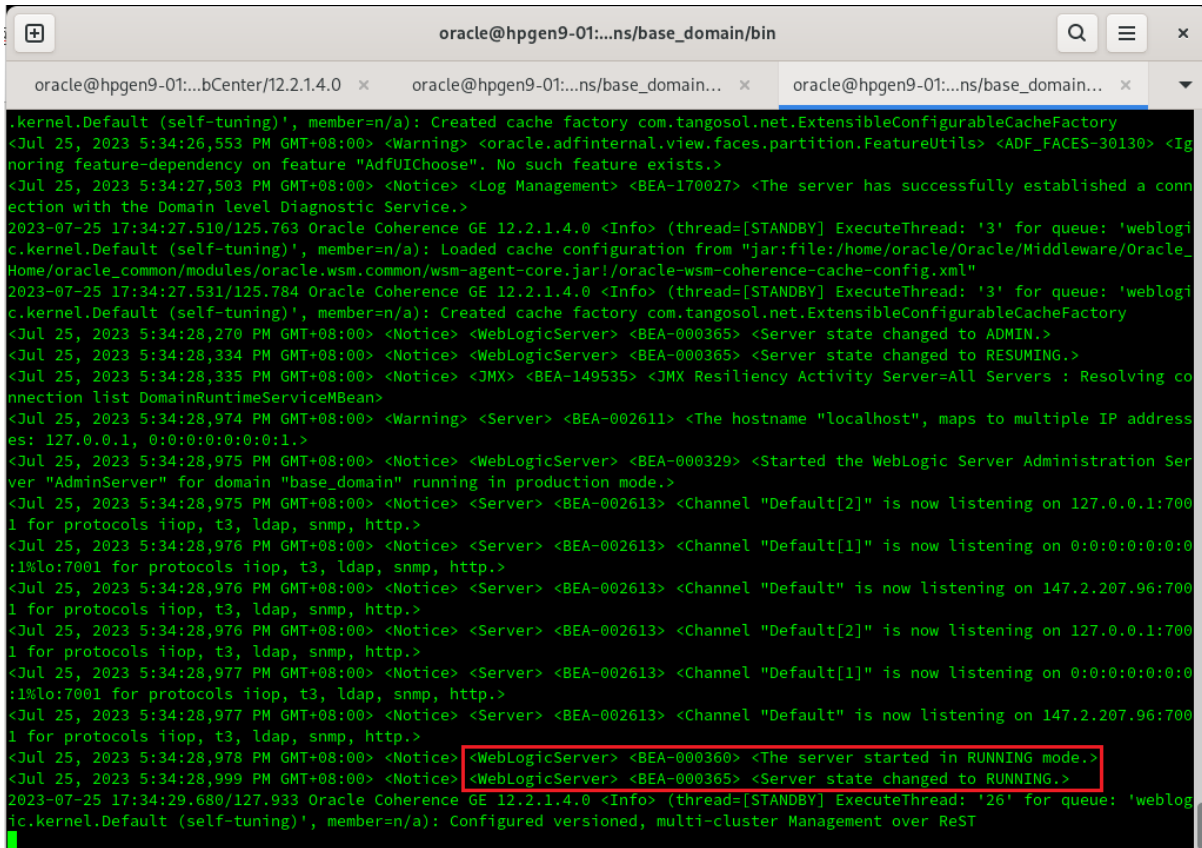
**Starting the Node Manager, go to the `DOMAIN_HOME/bin` directory and run `'nohup ./startNodeManager.sh > nm.out&'`**

```

oracle@hpgen9-01:~/base_domain/bin
oracle@hpgen9-01:~/base_domain/bin
oracle@hpgen9-01:~/base_domain/bin nohup ./startNodeManager.sh > nm.out &
[1] 31272
oracle@hpgen9-01:~/base_domain/bin nohup: ignoring input and redirecting stderr to stdout

oracle@hpgen9-01:~/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_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/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/.. -Dcoherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/.. -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/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Jul 25, 2023 5:30:49 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 25, 2023 5:30:49 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jul 25, 2023 5:30:49 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 25, 2023 5:30:49 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 25, 2023 5:30:49 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jul 25, 2023 5:30:49 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Jul 25, 2023 5:30:50 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
  
```

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



```
.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 25, 2023 5:34:26,553 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jul 25, 2023 5:34:27,503 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
2023-07-25 17:34:27.510/125.763 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2023-07-25 17:34:27.531/125.784 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 25, 2023 5:34:28,270 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 25, 2023 5:34:28,334 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 25, 2023 5:34:28,335 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server-All Servers : Resolving connection list DomainRuntimeServiceMBean>
<Jul 25, 2023 5:34:28,974 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.>
<Jul 25, 2023 5:34:28,975 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jul 25, 2023 5:34:28,975 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iioop, t3, ldap, snmp, http.>
<Jul 25, 2023 5:34:28,976 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 iioop, t3, ldap, snmp, http.>
<Jul 25, 2023 5:34:28,976 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001 for protocols iioop, t3, ldap, snmp, http.>
<Jul 25, 2023 5:34:28,976 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iioop, t3, ldap, snmp, http.>
<Jul 25, 2023 5:34:28,977 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 iioop, t3, ldap, snmp, http.>
<Jul 25, 2023 5:34:28,977 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001 for protocols iioop, t3, ldap, snmp, http.>
<Jul 25, 2023 5:34:28,978 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 25, 2023 5:34:28,999 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2023-07-25 17:34:29.680/127.933 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '26' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST
```

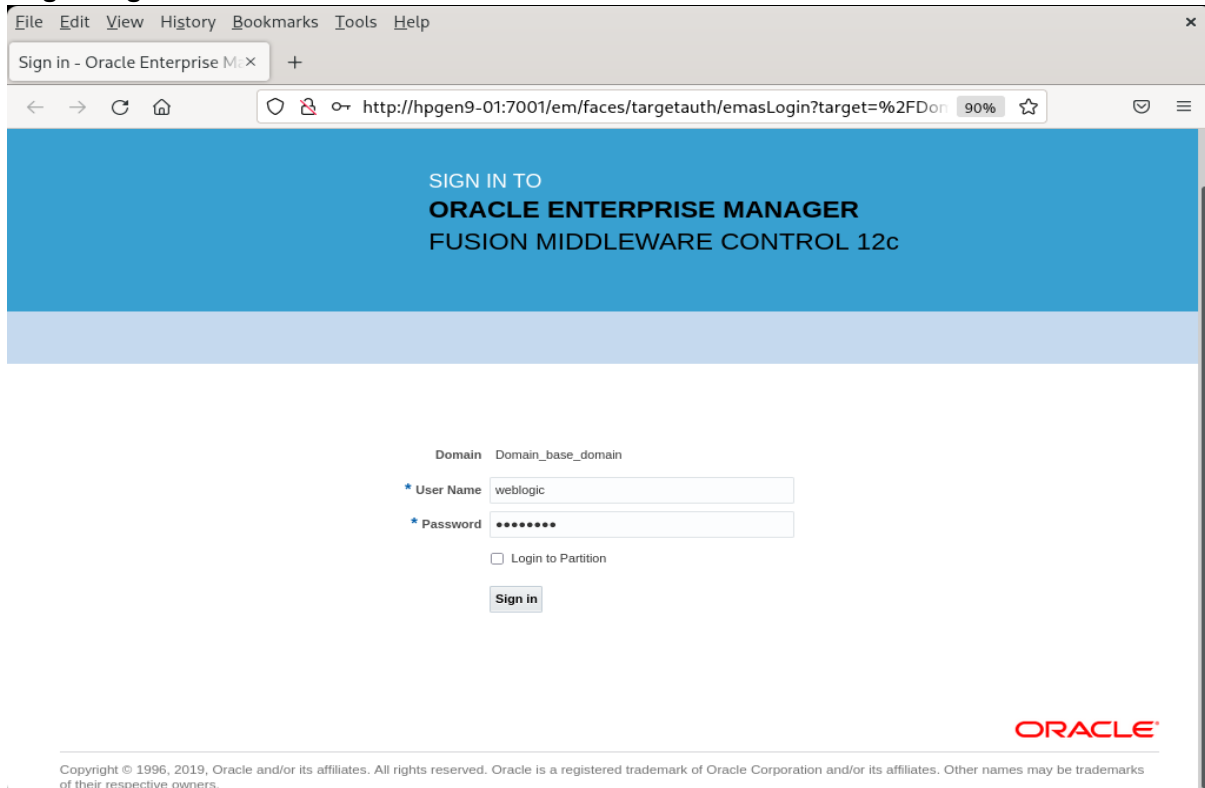
You know that the administrator server is running when you see the following output:

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

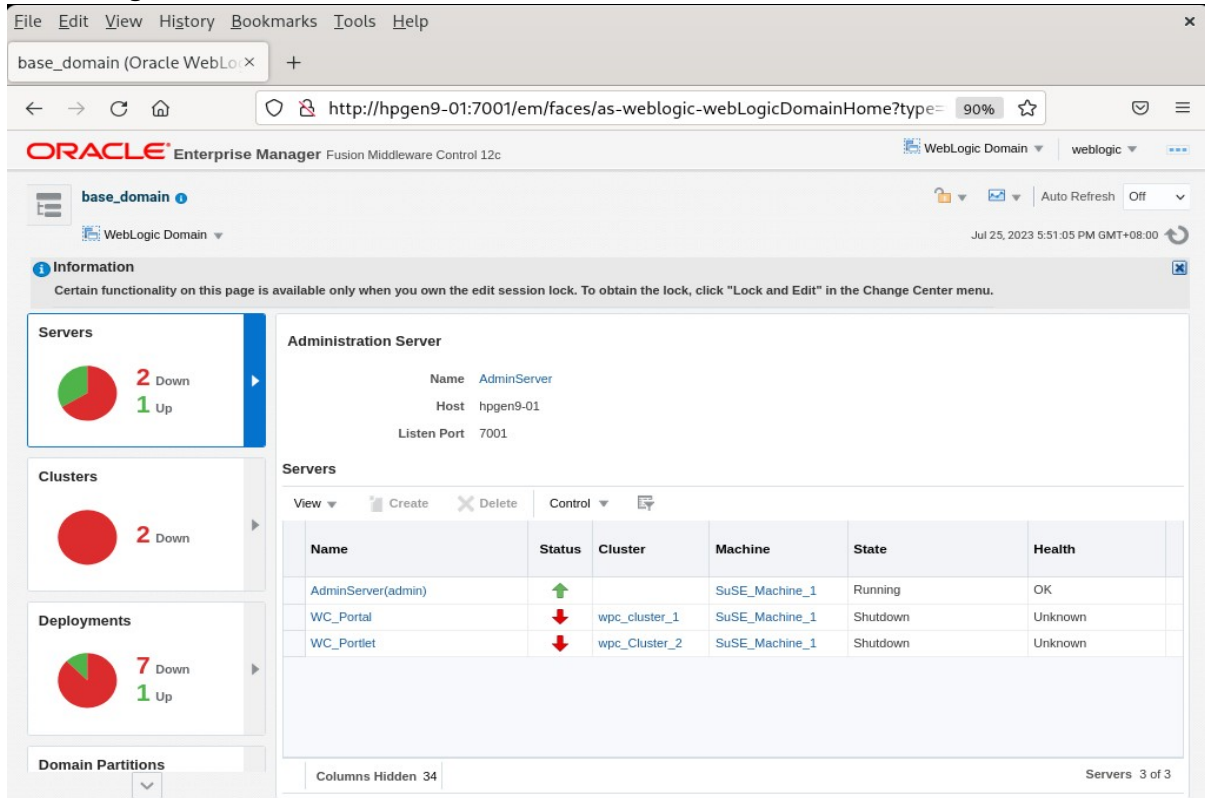
### 4-3. Checking Oracle WebCenter Product URLs.

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

##### Login Page:



##### Home Page:



## Starting the Oracle WebCenter Portal Managed Servers:

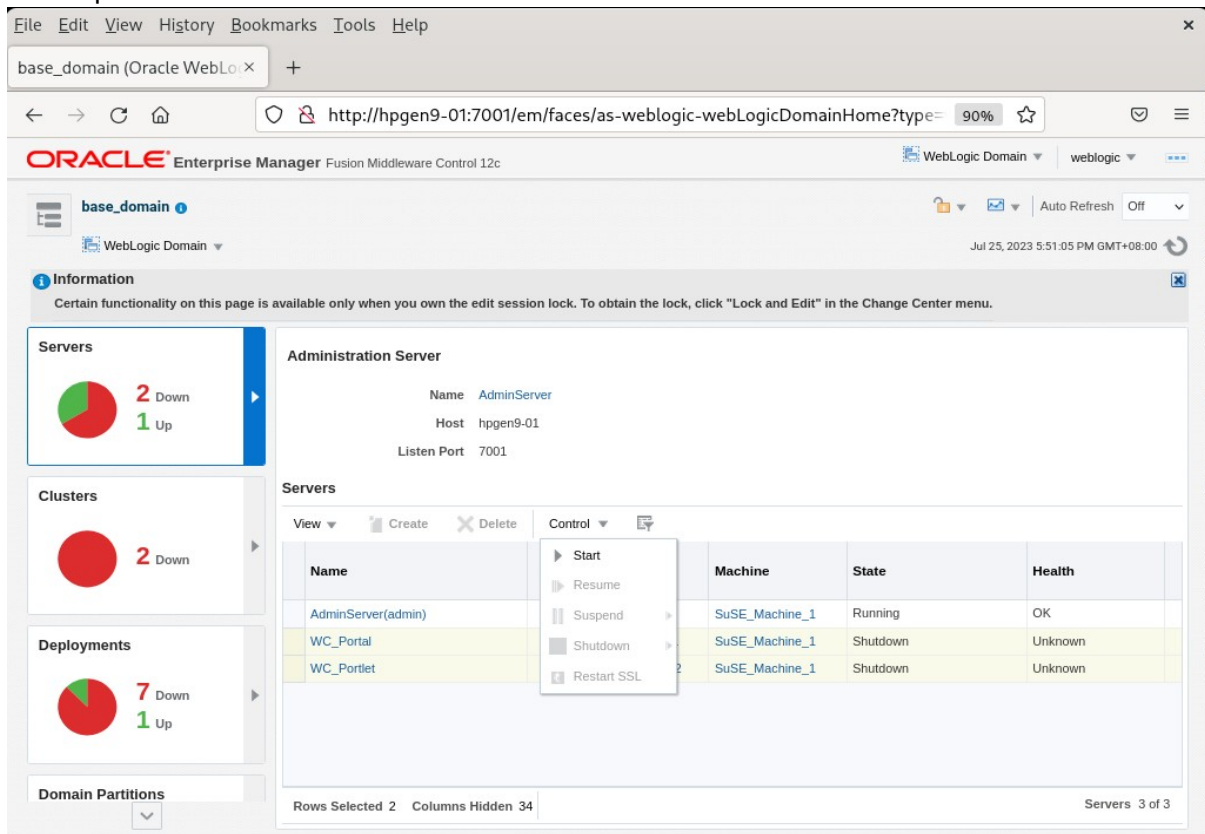
The screenshot displays the Oracle Enterprise Manager console for a WebLogic Domain. The left sidebar shows summary statistics: Servers (2 Down, 1 Up), Clusters (2 Down), Deployments (7 Down, 1 Up), and Domain Partitions. The main content area shows the 'Administration Server' details and a table of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

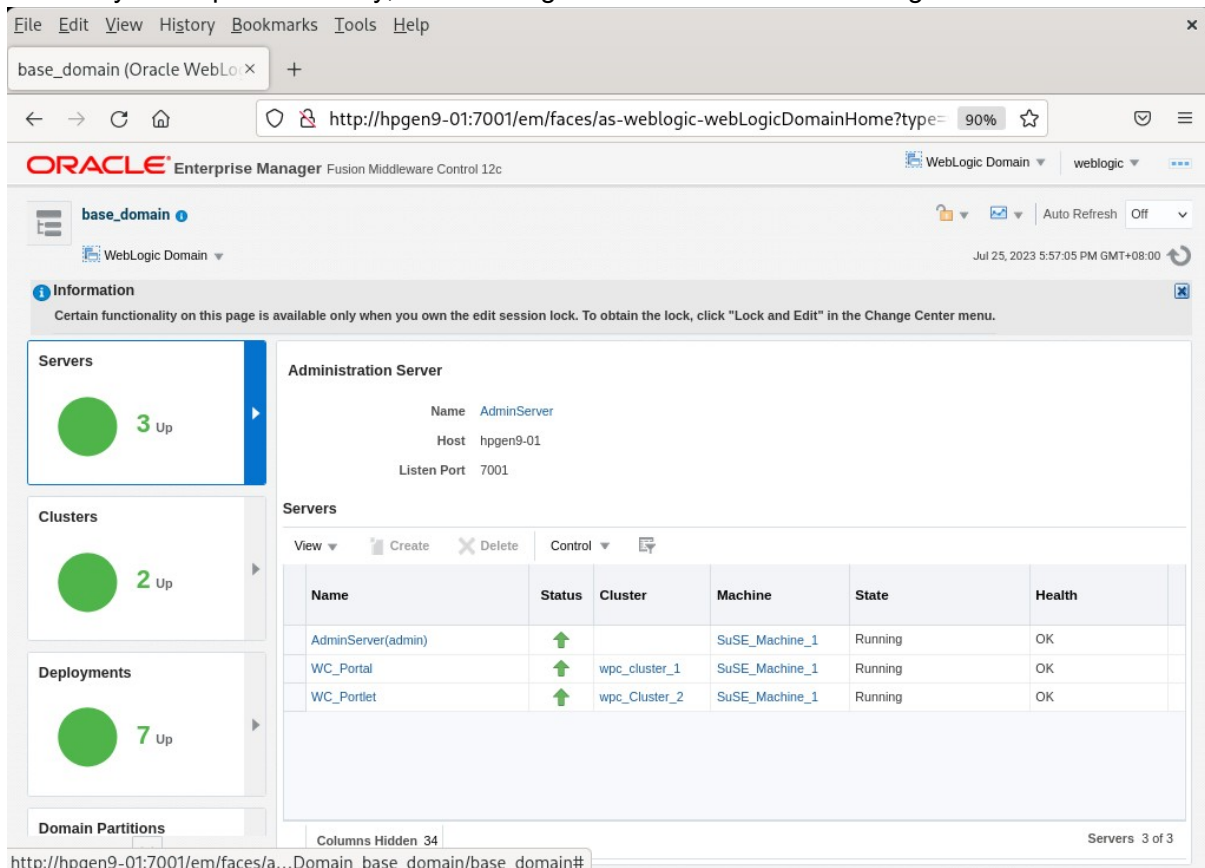
Select **WC\_Portal**, and **WC\_Portlet**.

- 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.



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



Checking WebCenter Servers state through Oracle WLST tool.

```
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/common/bin> ./wlst.sh
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

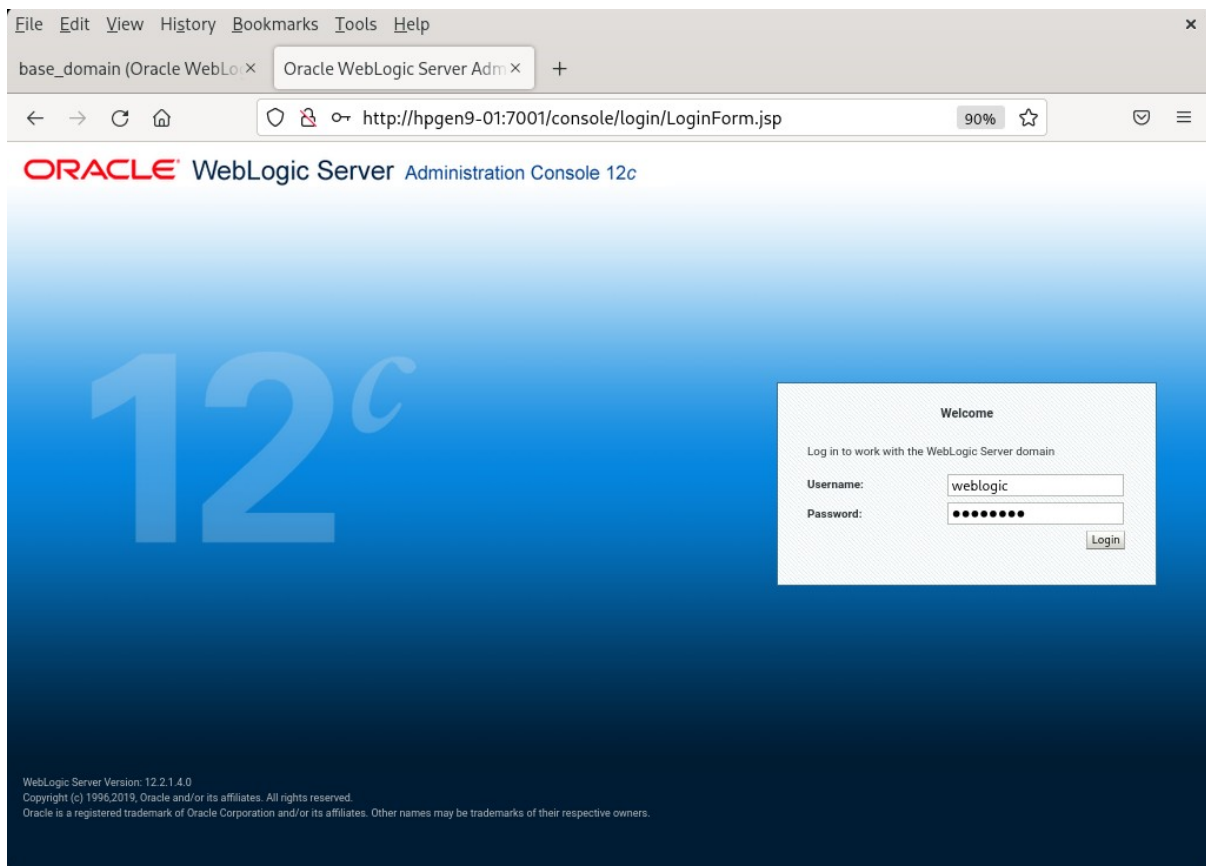
wls:/offline> connect('weblogic','welcome1','hpgen9-01:7001')
Connecting to t3://hpgen9-01:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

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

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

## 2). Access to Administration Server Console

**Login Page as shown below:**





### Home Page:

The screenshot shows the Oracle WebLogic Server Administration Console Home Page. The browser address bar displays the URL: `http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=-`. The page title is "ORACLE WebLogic Server Administration Console 12c". The main content area is titled "Home Page" and contains several sections:

- Information and Resources:** Includes "Helpful Tools" (Configure applications, Configure GridLink for RAC Data Source, Configure a Dynamic Cluster, Recent Task Status, Set your console preferences, Oracle Enterprise Manager) and "General Information" (Common Administration Task Descriptions, Read the documentation, Ask a question on My Oracle Support).
- Domain Configurations:** Includes "Domain" (Domain), "Domain Partitions" (Domain Partitions, Partition Work Managers), "Resource Group Templates" (Resource Group Templates), "Resource Groups" (Resource Groups), "Deployed Resources" (Deployments), "Environment" (Servers, Clusters, Server Templates, Migratable Targets, Coherence Clusters, Machines, Virtual Hosts, Virtual Targets, Work Managers), "Services" (Messaging, JMS Servers, Store-and-Forward Agents, JMS Modules, Path Services, Bridges, Data Sources), "Interoperability" (WTC Servers, Jolt Connection Pools), "Diagnostics" (Log Files, Diagnostic Modules, Built-in Diagnostic Modules, Diagnostic Images, Request Performance, Archives, Context, SNMP, Interceptors), and "Charts and Graphs" (Monitoring Dashboard).

The left sidebar contains:

- Change Center:** View changes and restarts, Lock & Edit, Release Configuration.
- Domain Structure:** base\_domain, Domain Partitions, Environment, Deployments, Services, Security Realms, Interoperability, Diagnostics.
- How do I...:** Search the configuration, Use the Change Center, Record WLST scripts, Change Console preferences, Manage Console extensions, Monitor servers.
- System Status:** Health of Running Servers as of 6:04 PM, Failed (0).

### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console Summary of Servers page. The browser address bar displays the URL: `http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=-`. The page title is "ORACLE WebLogic Server Administration Console 12c". The main content area is titled "Summary of Servers" and contains a table of servers.

The left sidebar contains:

- Change Center:** View changes and restarts, Lock & Edit, Release Configuration.
- Domain Structure:** base\_domain, Domain Partitions, Environment, Deployments, Services, Security Realms, Interoperability, Diagnostics.
- How do I...:** Create Managed Servers, Clone servers, Delete Managed Servers, Delete the Administration Server, Start and stop servers, View objects in the JNDI tree.
- System Status:** Health of Running Servers as of 6:05 PM, Failed (0).

The main content area is titled "Summary of Servers" and contains a table of servers:

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

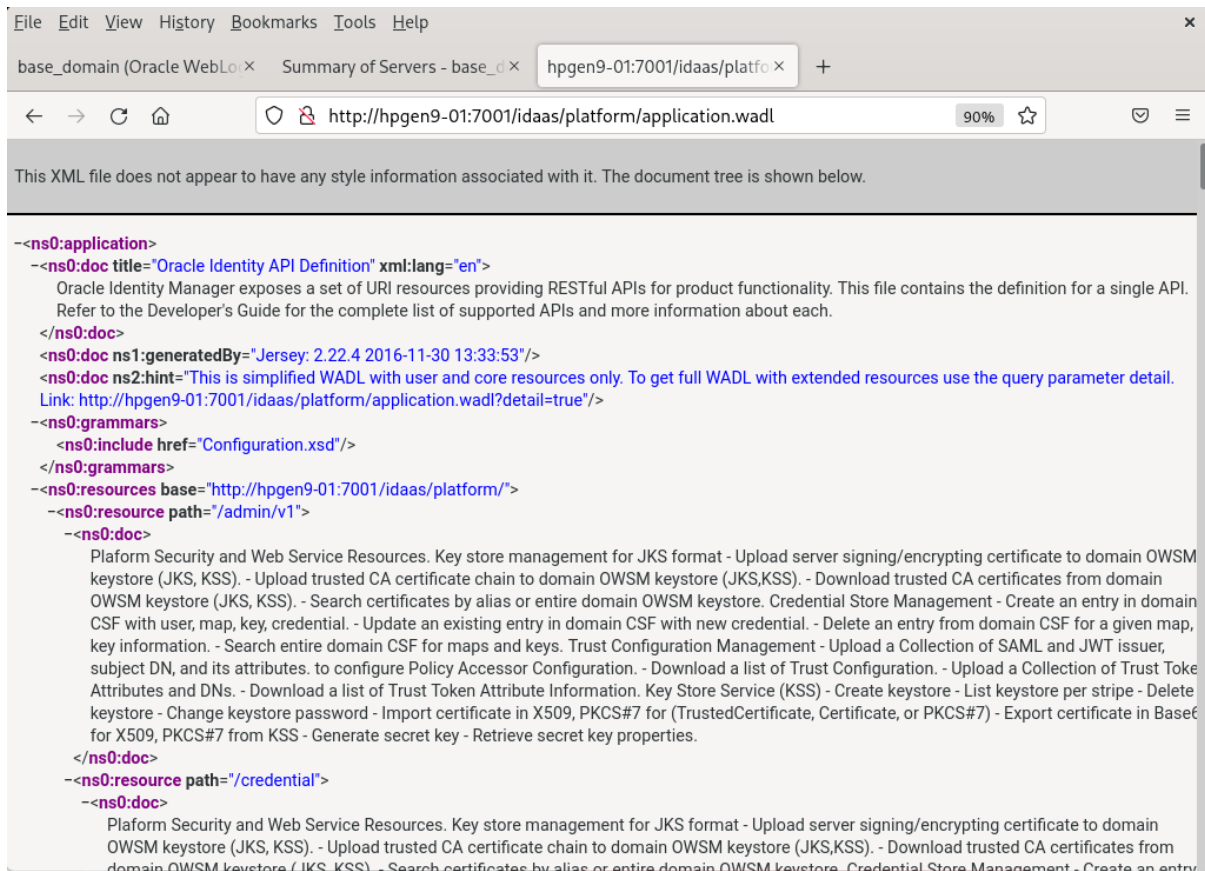
**Servers (Filtered - More Columns Exist)**

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

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

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

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



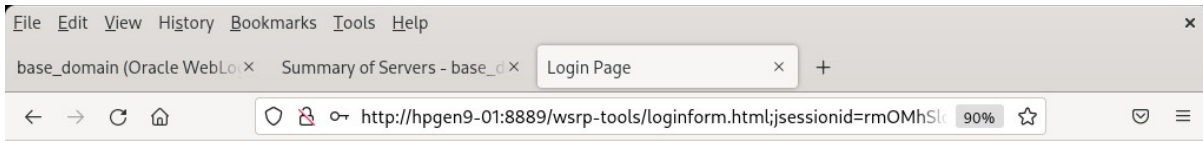
This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

<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://hpgen9-01:7001/idaas/platform/application.wadl?detail=true"/>
  <ns0:grammars>
    <ns0:include href="Configuration.xsd"/>
  </ns0:grammars>
  <ns0:resources base="http://hpgen9-01:7001/idaas/platform/">
    <ns0:resource path="/admin/v1">
      <ns0:doc>
        Platform Security and Web Service Resources. Key store management for JKS format - Upload server signing/encrypting certificate to domain OWSM keystore (JKS, KSS). - Upload trusted CA certificate chain to domain OWSM keystore (JKS,KSS). - Download trusted CA certificates from domain OWSM keystore (JKS, KSS). - Search certificates by alias or entire domain OWSM keystore. Credential Store Management - Create an entry in domain CSF with user, map, key, credential. - Update an existing entry in domain CSF with new credential. - Delete an entry from domain CSF for a given map, key information. - Search entire domain CSF for maps and keys. Trust Configuration Management - Upload a Collection of SAML and JWT issuer, subject DN, and its attributes. to configure Policy Accessor Configuration. - Download a list of Trust Configuration. - Upload a Collection of Trust Token Attributes and DNs. - Download a list of Trust Token Attribute Information. Key Store Service (KSS) - Create keystore - List keystore per stripe - Delete keystore - Change keystore password - Import certificate in X509, PKCS#7 for (TrustedCertificate, Certificate, or PKCS#7) - Export certificate in Base64 for X509, PKCS#7 from KSS - Generate secret key - Retrieve secret key properties.
      </ns0:doc>
    <ns0:resource path="/credential">
      <ns0:doc>
        Platform Security and Web Service Resources. Key store management for JKS format - Upload server signing/encrypting certificate to domain OWSM keystore (JKS, KSS). - Upload trusted CA certificate chain to domain OWSM keystore (JKS,KSS). - Download trusted CA certificates from domain OWSM keystore (JKS, KSS). - Search certificates by alias or entire domain OWSM keystore. Credential Store Management - Create an entry
    </ns0:doc>
  </ns0:resources>
</ns0:application>

```

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



### Login

Username\*

Password\*



**ORACLE WebCenter Portal : Portlets**

## WSRP Producer Test Page

Your WSRP Producer Contains the Following Portlets:

Portlet Name (Minimum WSRP Version)

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

**Container Configuration**

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

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

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

**Container Version**

Implementation version: 12.2.1.3.0 , Label: WCCORE\_12.2.1.4.0\_GENERIC\_190909.1237.S

**WSDL URLs**

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

**SOAP Monitor**

[SOAP Monitor](#)

File Edit View History Bookmarks Tools Help

base\_domain (Oracle WebLo... Summary of Servers - base\_d... WSRP Test Page × hpgen9-01:8889/wsrp-tools/ × +

← → ↻ 🏠 🔍 http://hpgen9-01:8889/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://hpgen9-01:8889/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://hpgen9-01:8889/wsrp-tools/portlets/WSRPBaseService"/>
    </port>
    <port name="WSRPServiceDescriptionService" binding="bind:WSRP_v1_ServiceDescription_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRPServiceDescriptionService"/>
    </port>
    <port name="WSRPRegistrationService" binding="bind:WSRP_v1_Registration_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRPRegistrationService"/>
    </port>
    <port name="WSRPPortletManagementService" binding="bind:WSRP_v1_PortletManagement_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRPPortletManagementService"/>
    </port>
  </service>
</definitions>

```

File Edit View History Bookmarks Tools Help

base\_domain (Oracle WebLo... Summary of Servers - base\_d... WSRP Test Page × hpgen9-01:8889/wsrp-tools/ × +

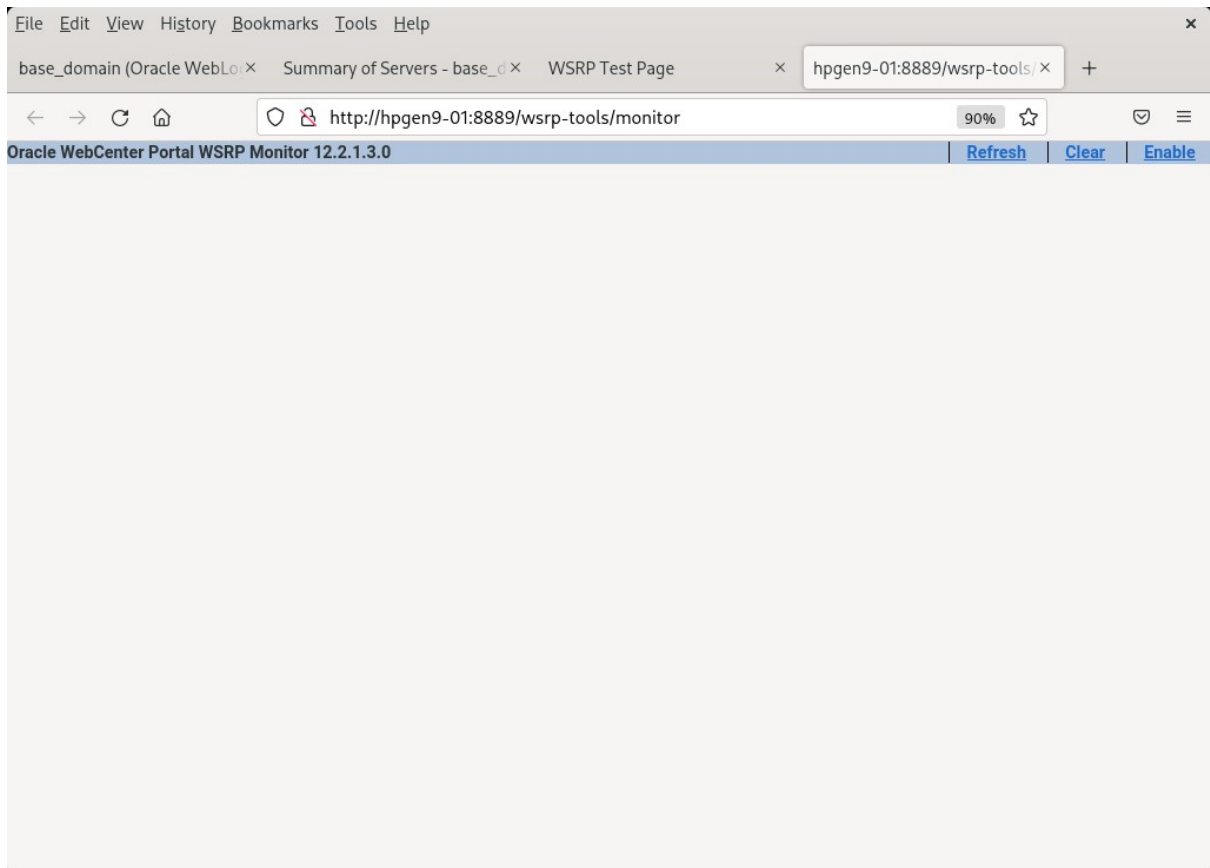
← → ↻ 🏠 🔍 http://hpgen9-01:8889/wsrp-tools/portlets/wsrp2?WSDL 90% ☆ 📄 ☰

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

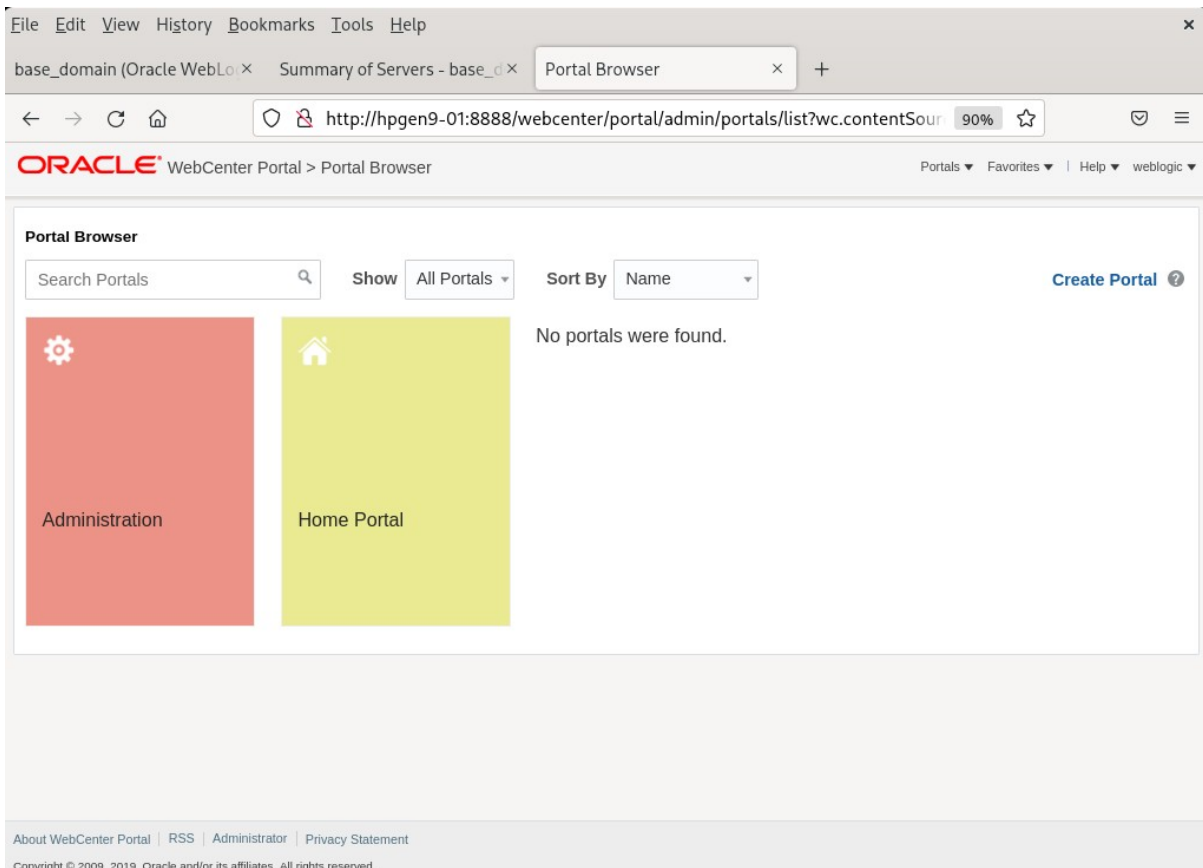
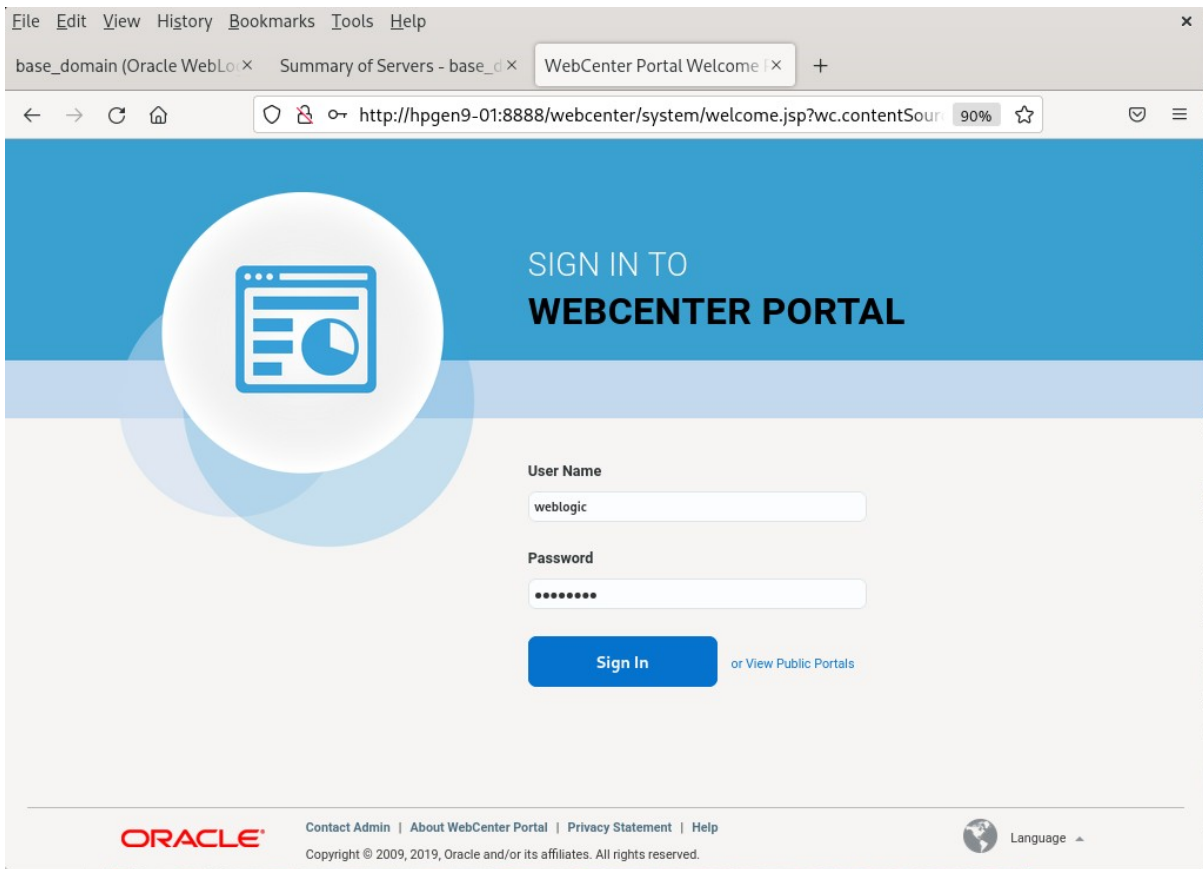
```

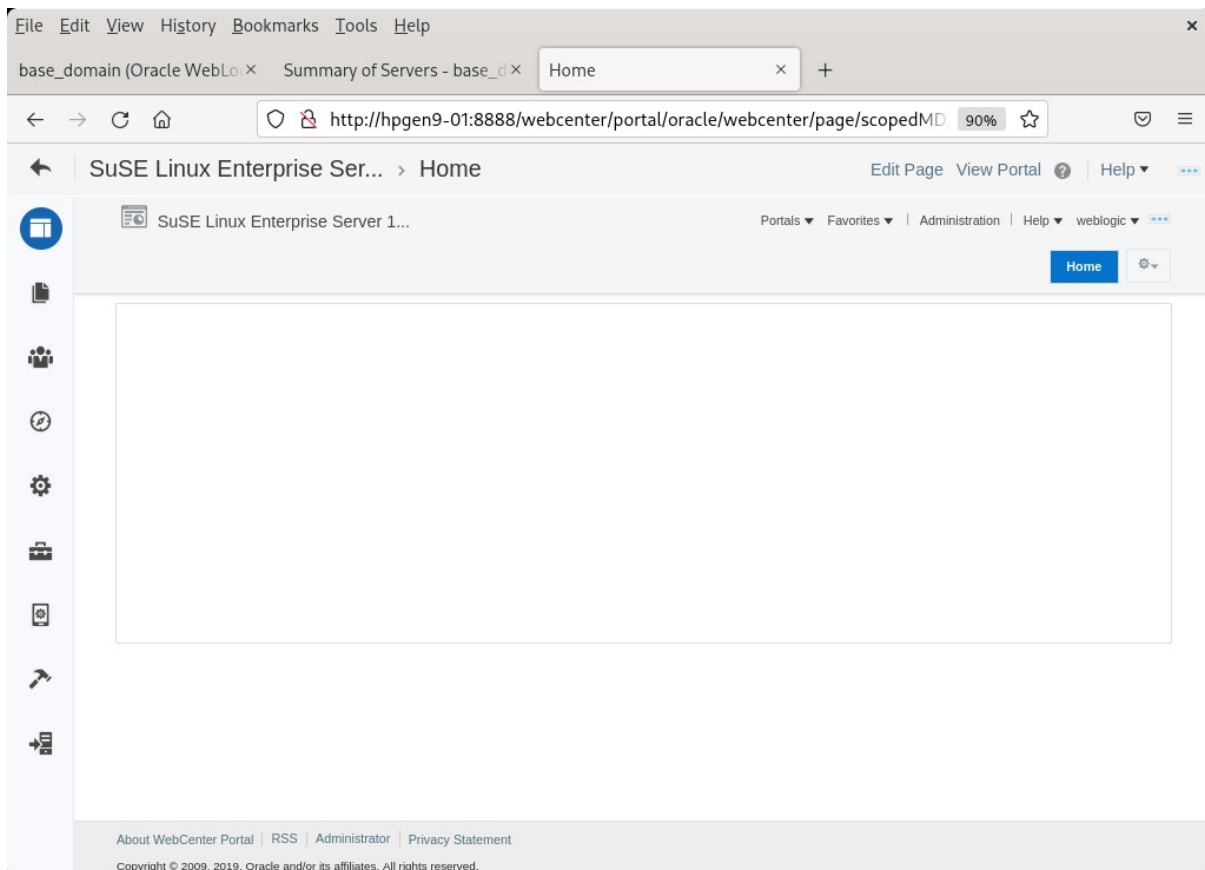
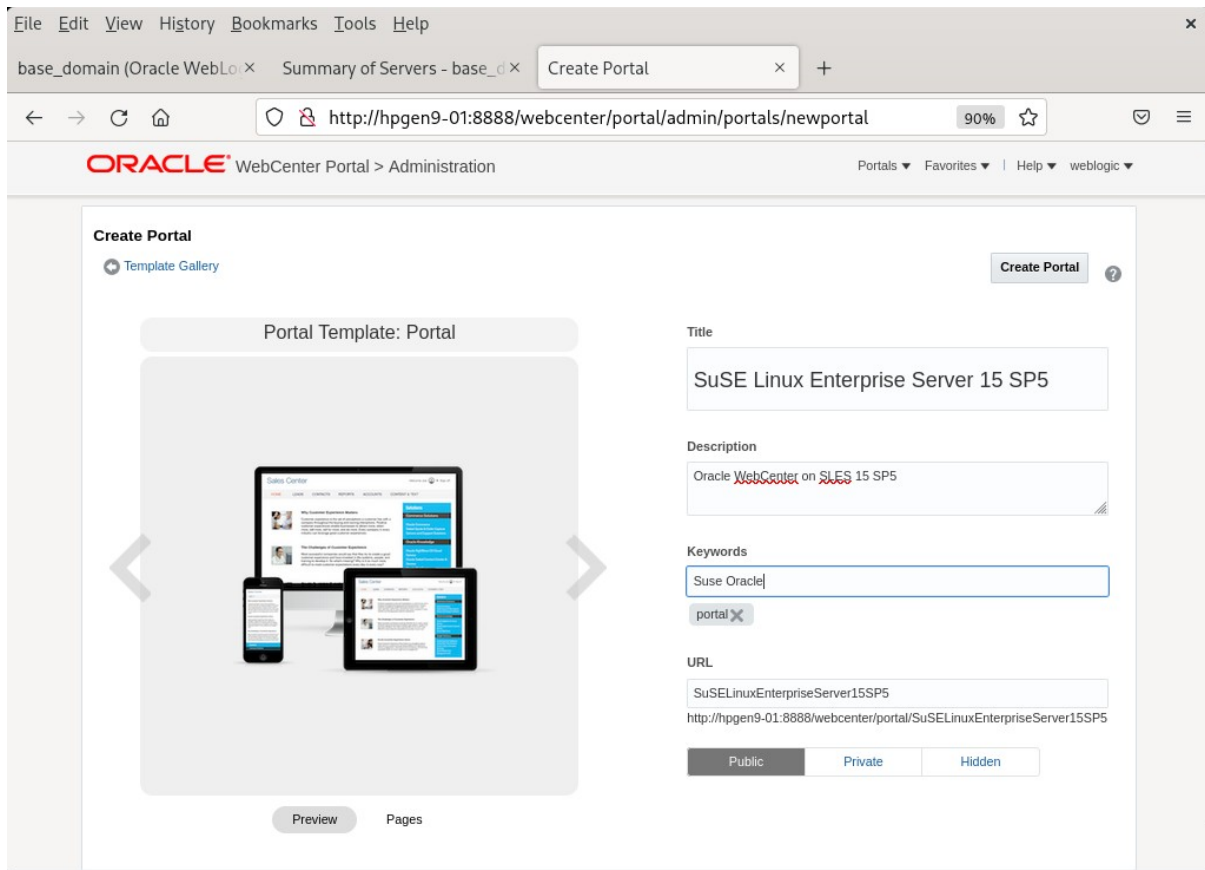
-<definitions targetNamespace="urn:oasis:names:tc:wsrp:v2:wsdl">
  <import namespace="urn:oasis:names:tc:wsrp:v2:bind" location="http://hpgen9-01:8889/wsrp-tools/portlets/wsrp2?WSDL=wsrp_v2_bindings.wsdl"/>
  <service name="WSRP_v2_Service">
    <port name="WSRP_v2_ServiceDescription_Service" binding="bind:WSRP_v2_ServiceDescription_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/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://hpgen9-01:8889/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://hpgen9-01:8889/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://hpgen9-01:8889/wsrp-tools/portlets/WSRP_v2_PortletManagement_Service"/>
    </port>
  </service>
</definitions>

```



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

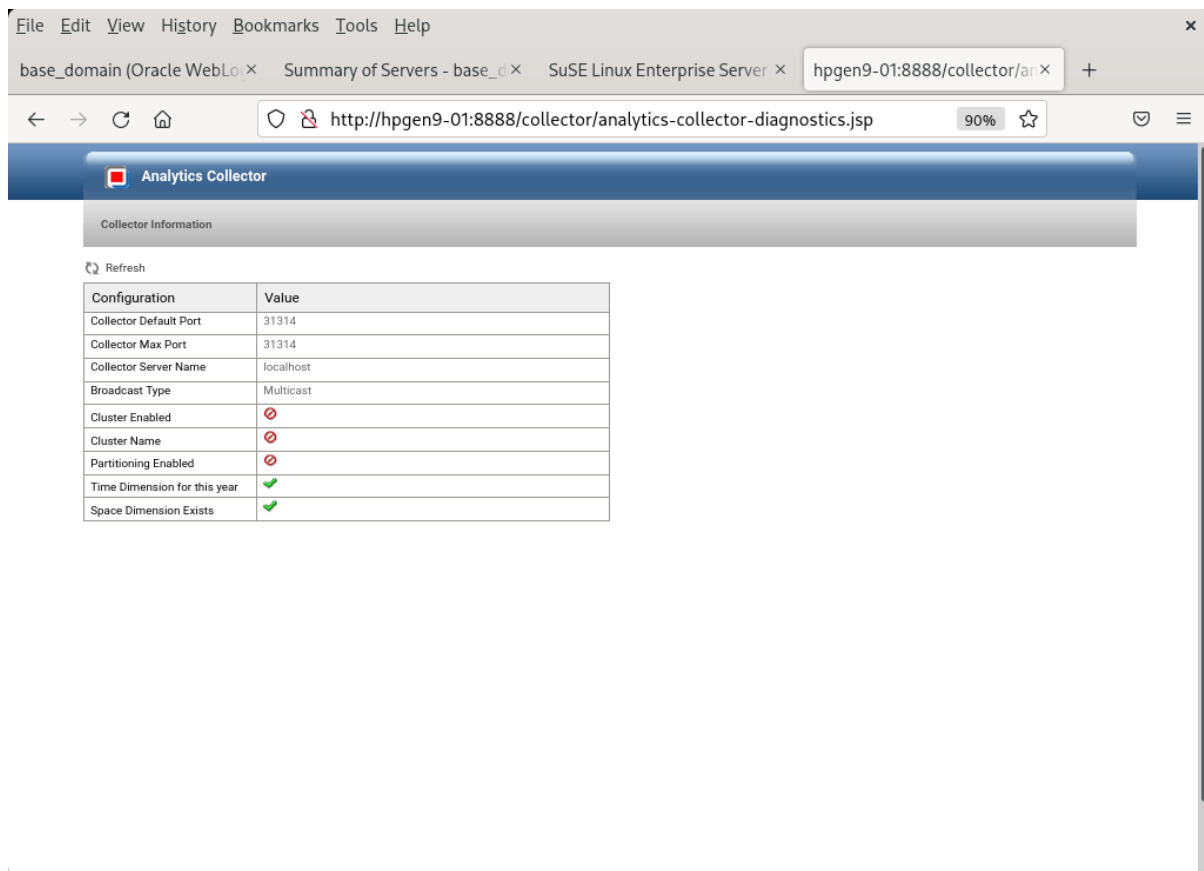




The screenshot shows a web browser window with the following details:

- Browser Tabs:** base\_domain (Oracle WebLo..., Summary of Servers - base\_d..., SuSE Linux Enterprise Server
- Address Bar:** http://hpgen9-01:8888/webcenter/portal/admin/portals/admin/SuSELinuxEn
- Page Title:** SuSE Linux Enterprise Ser... > General
- Navigation:** View Portal, Help
- Portal Information:**
  - Title:** SuSE Linux Enterprise Server 15 SP5
  - Acronym:** SLE
  - Description:** Oracle WebCenter on SLES 15 SP5
  - Portal Color:** Choose Color
  - Keywords:** portal, Suse, Oracle
- Portal Details:**
  - Name:** SuSELinuxEnterpriseServer15SP5 Rename
  - Portal URL:** http://hpgen9-01:8888/webcenter/portal/SuSELinuxEnterpriseServer15SP5
  - Internal ID:** s29efa2c3\_7704\_4cbd\_a9d6\_bff4e26615f7
  - Members:** 1
  - Last Activity:** 22 seconds ago
  - Created:** 26 seconds ago by weblogic








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

Analytics Collector

Collector Information

Refresh

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

***End of Oracle WebCenter Portal.***

\*\*\*\*\*

## Oracle SOA Suite

\*\*\*\*\*

### 1. Installing Oracle SOA Suite 12c

#### 1-1. Prerequisites:

Installation of Oracle SOA Suite requires:

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

1-2. Log in to the target system (SLES 15 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**

**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 :

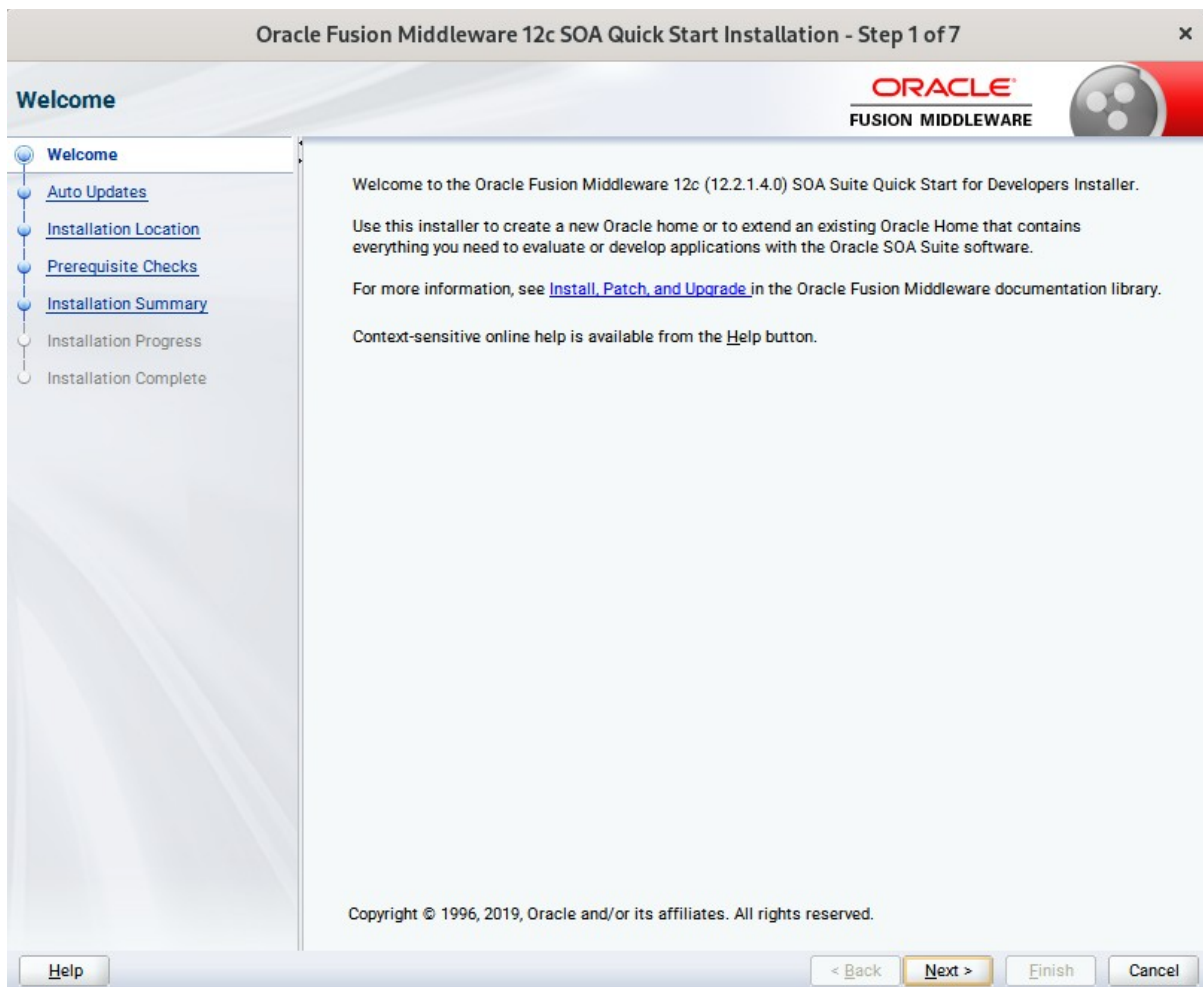
Specify a group with write permission to the inventory directory

**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.



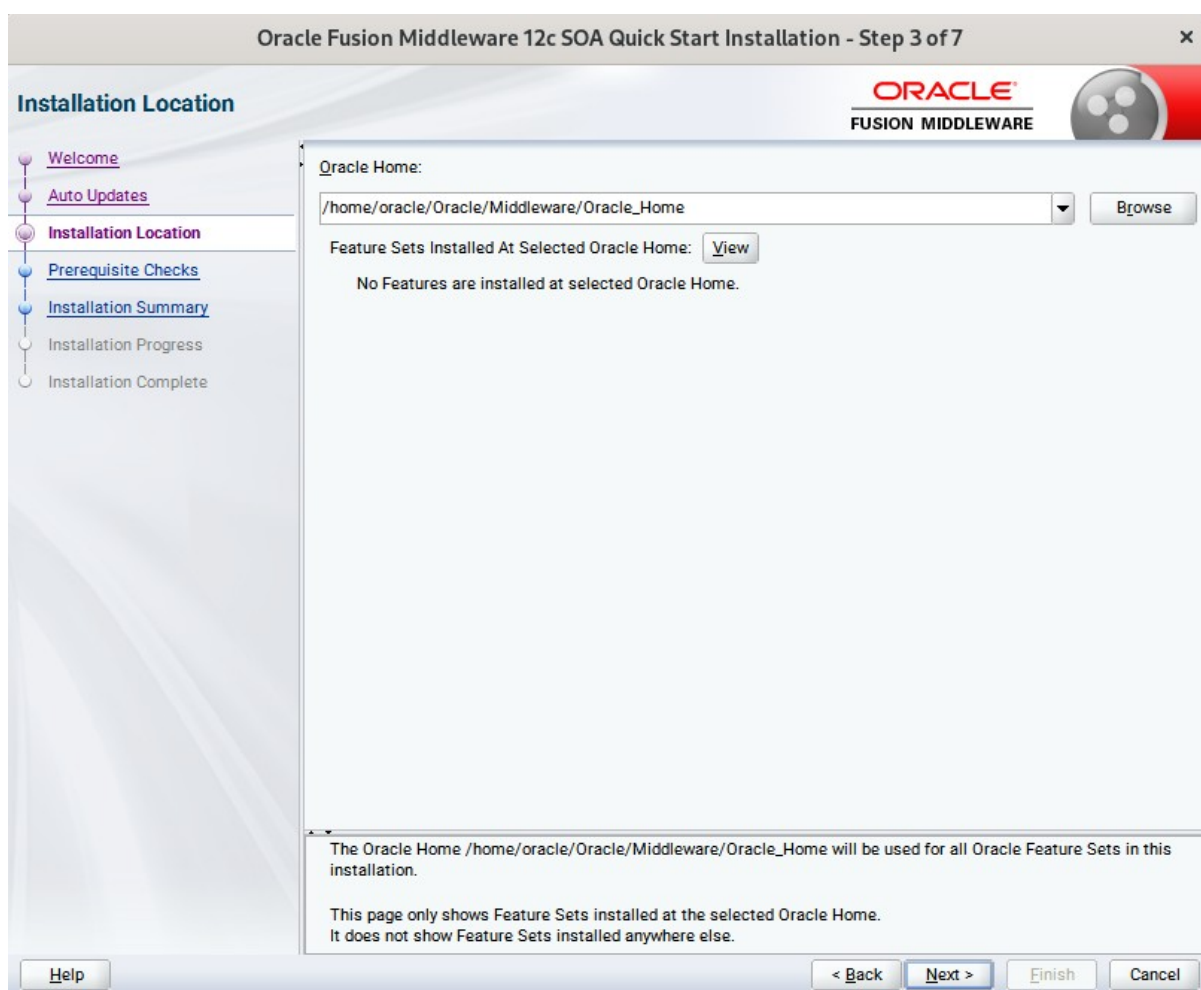
This page welcomes you to the installation. Click **Next** to continue.

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

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

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

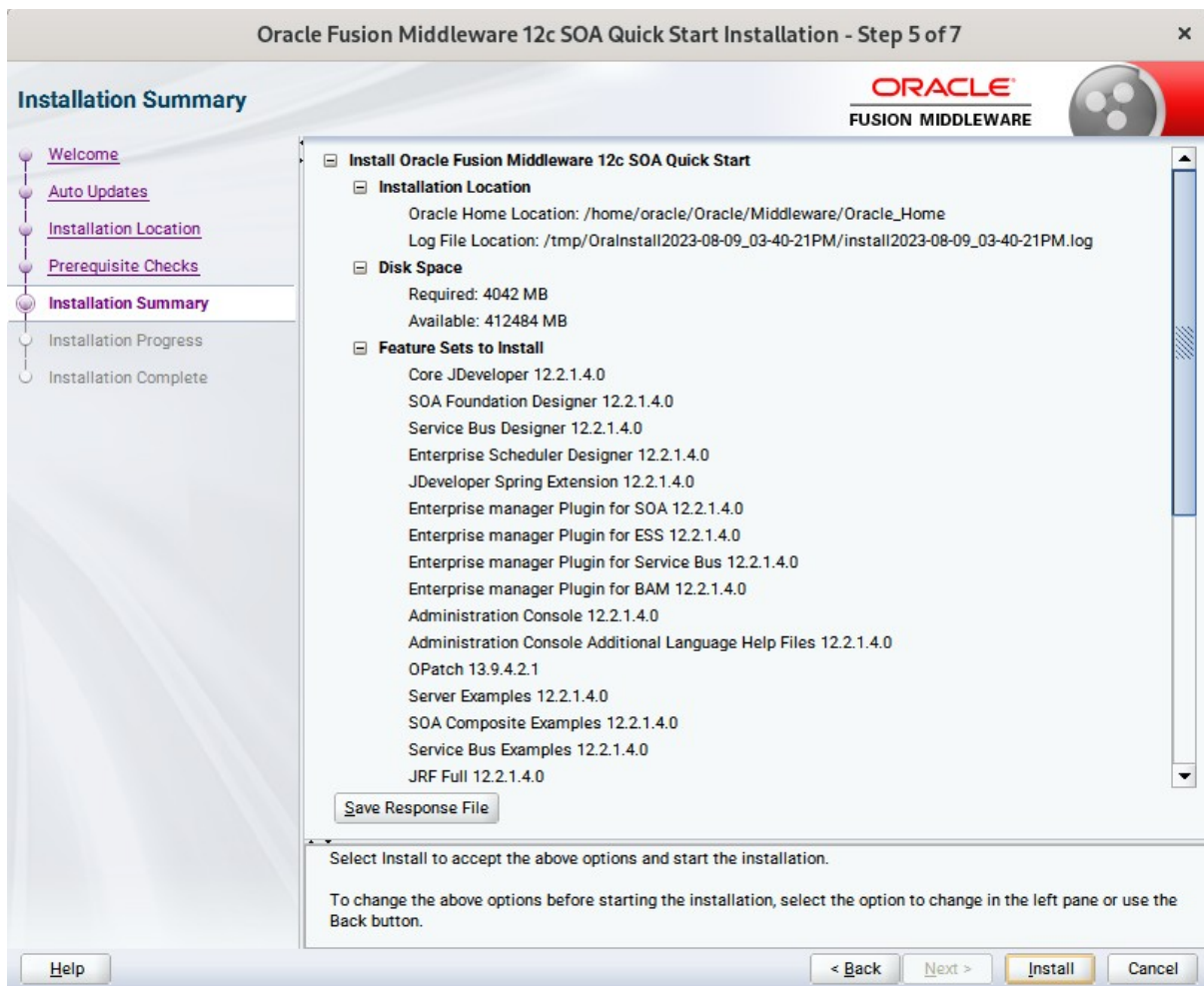
4). The **Installation Location** page appears.



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

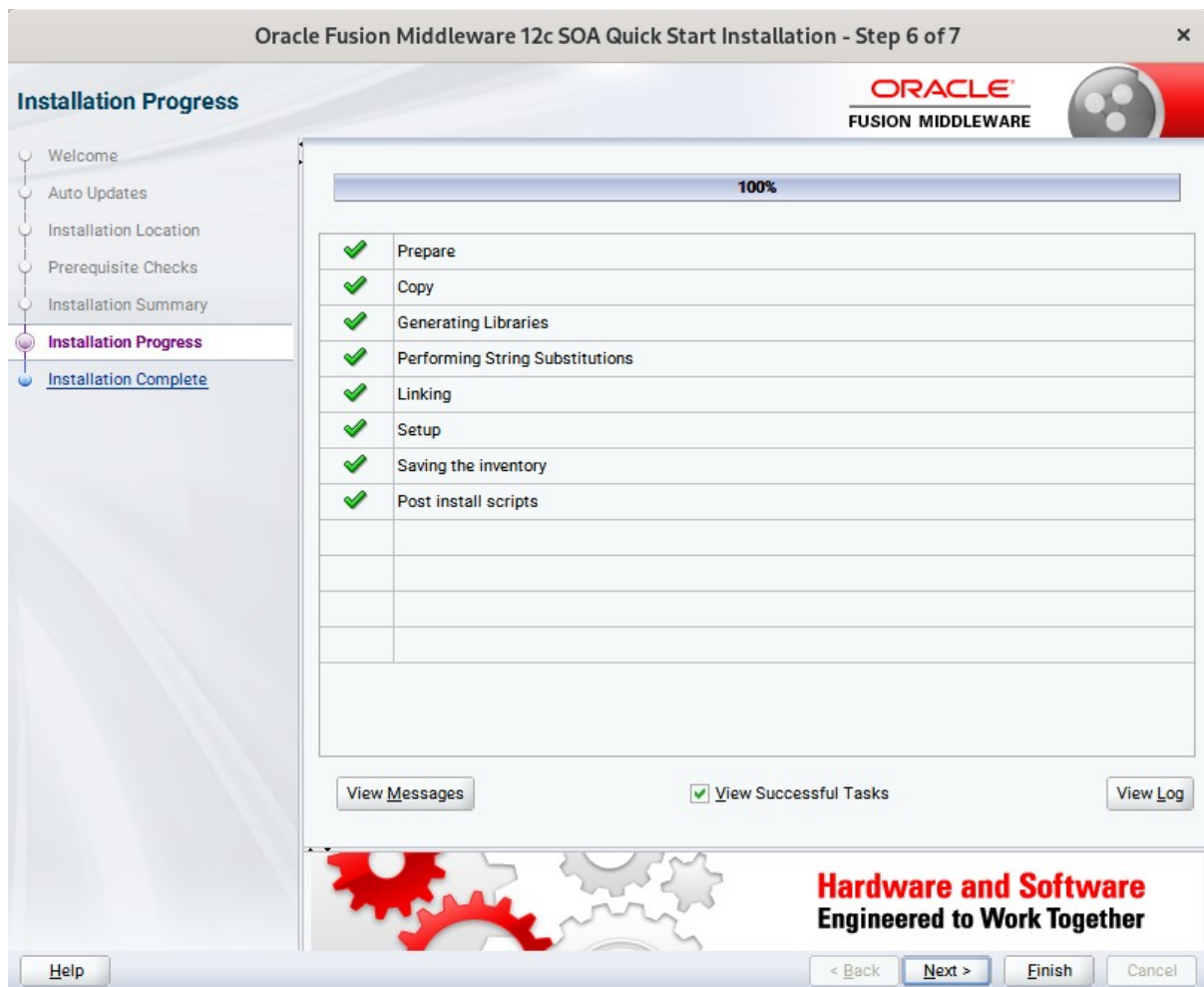


6). The **Installation Summary** page appears.



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.

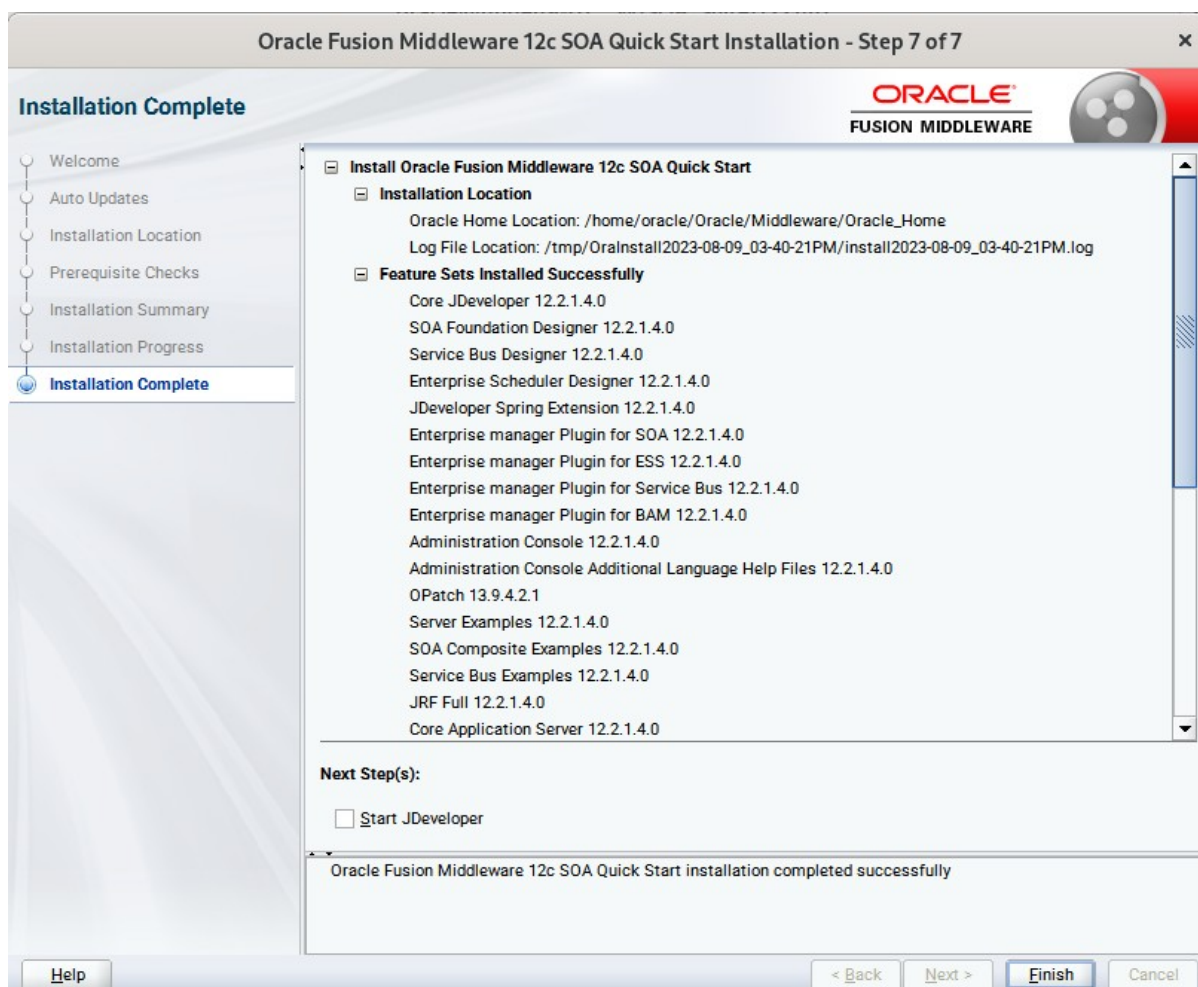
7). The **Installation Progress** page appears.



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.

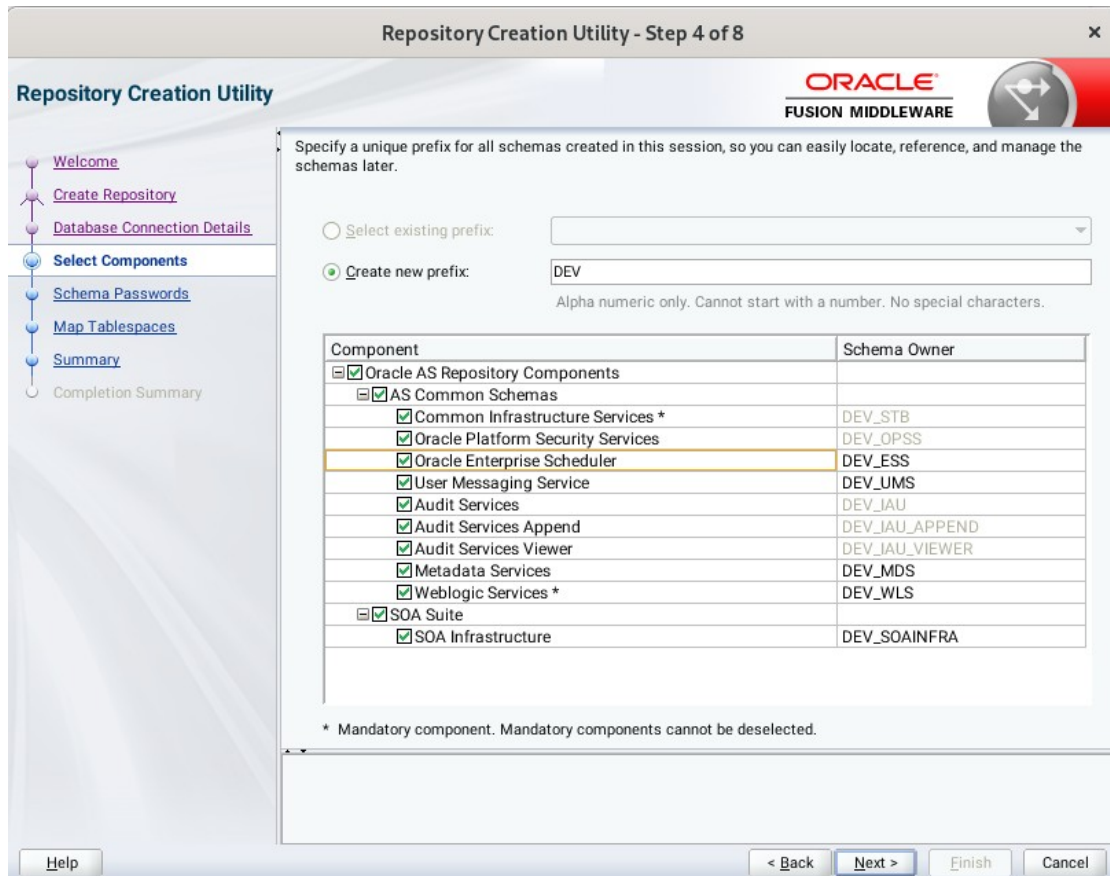


At the bottom of this screen, there is a checkbox to launch Oracle JDeveloper upon closing the installation wizard. This guide recommends that you uncheck this box. Click **Finish** to dismiss the installer.

## 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: hpgen9-01  
 Port: 1521  
 Service Name: SUSE  
 Connected As: sys  
 Operation: System and Data Load concurrently  
 Execution Time: 5 minutes 11 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	00:10.042(sec)	<input type="button" value="stb.log"/>
Oracle Platform Security Services	Success	00:37.463(sec)	<input type="button" value="opss.log"/>
Oracle Enterprise Scheduler	Success	00:20.789(sec)	<input type="button" value="ess.log"/>
SOA Infrastructure	Success	02:08.086(min)	<input type="button" value="soainfra.log"/>
User Messaging Service	Success	00:17.590(sec)	<input type="button" value="ucsums.log"/>
Audit Services	Success	00:21.324(sec)	<input type="button" value="iau.log"/>
Audit Services Append	Success	00:09.386(sec)	<input type="button" value="iau_append.log"/>
Audit Services Viewer	Success	00:09.435(sec)	<input type="button" value="iau_viewer.log"/>
Metadata Services	Success	00:16.511(sec)	<input type="button" value="mds.log"/>
Weblogic Services	Success	00:18.310(sec)	<input type="button" value="wls.log"/>

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

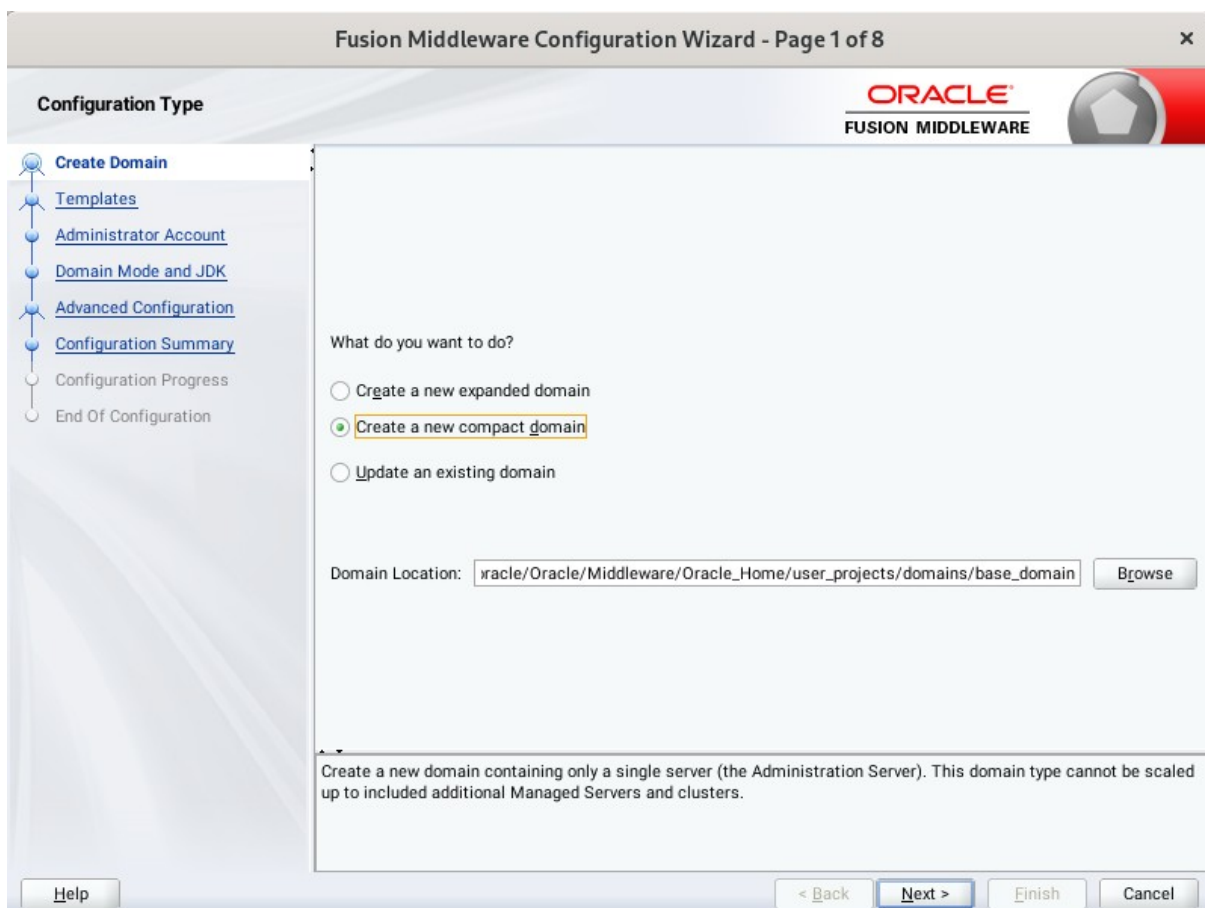
3-1. Go to **ORACLE\_HOME/oracle\_common/common/bin**. Set the environment variable **CONFIG\_JVM\_ARGS** to **-Dcom.oracle.cie.config.showProfile=true**. This will activate the compact domain option in the configuration wizard. Then launch the configuration wizard.

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
```

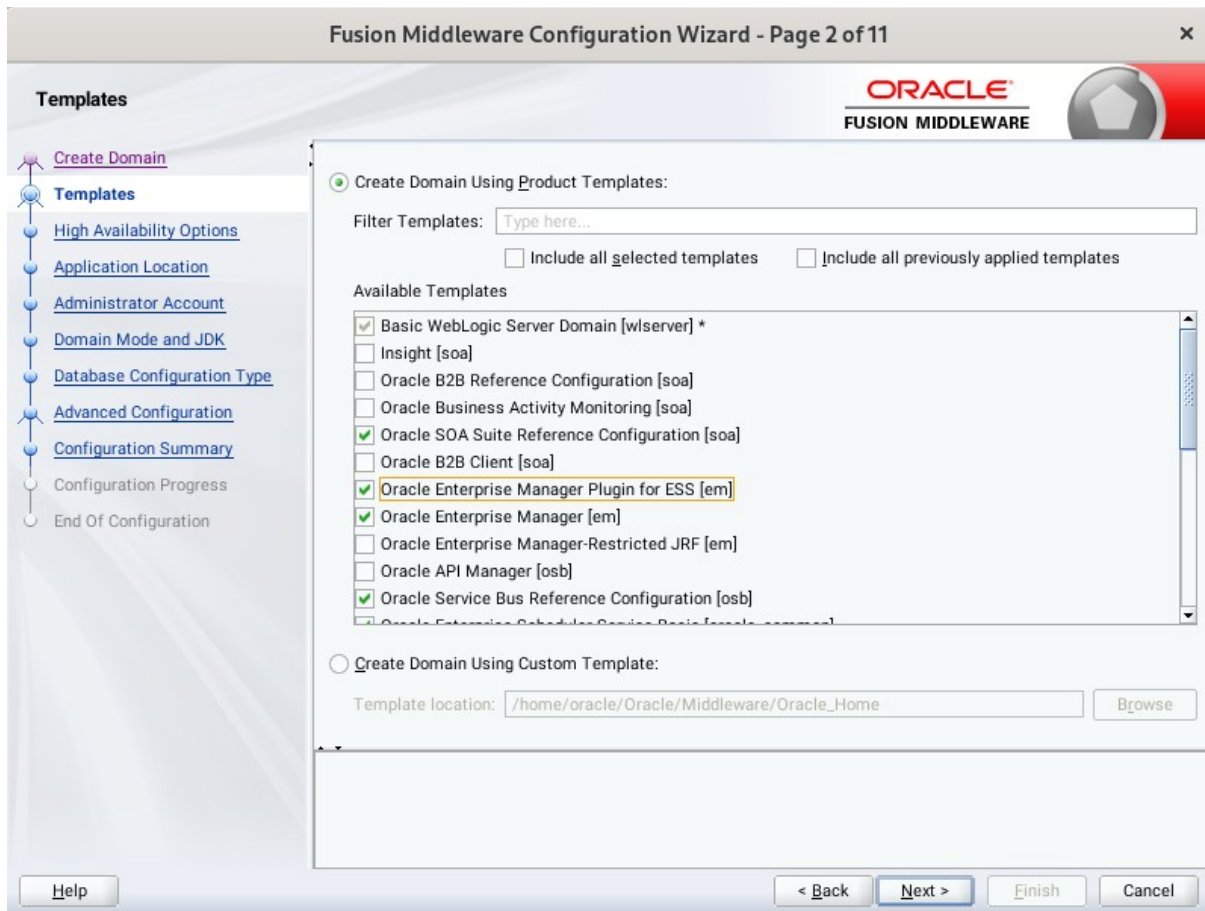
Follow these steps:

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.

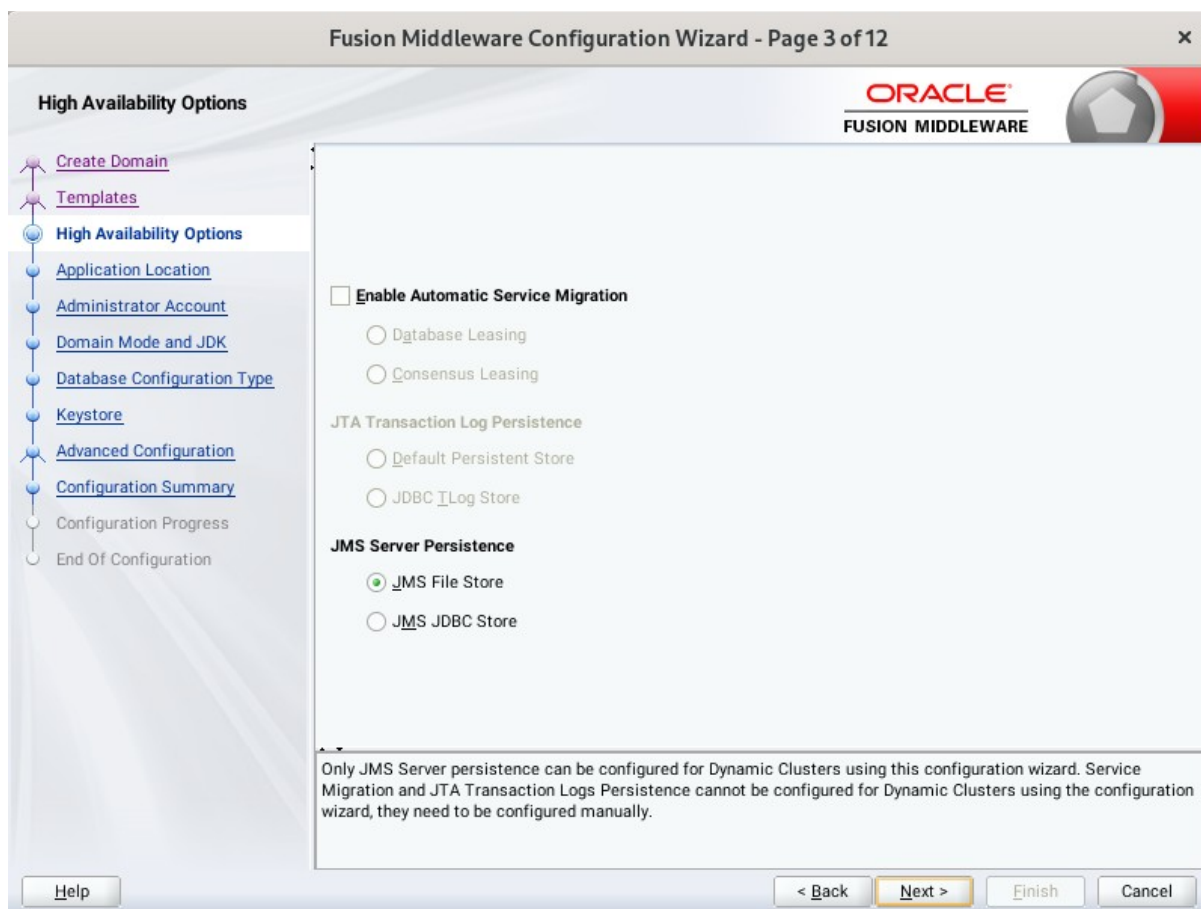


Use the **Templates** screen to select the templates you require. On the **Templates** screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

- 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]

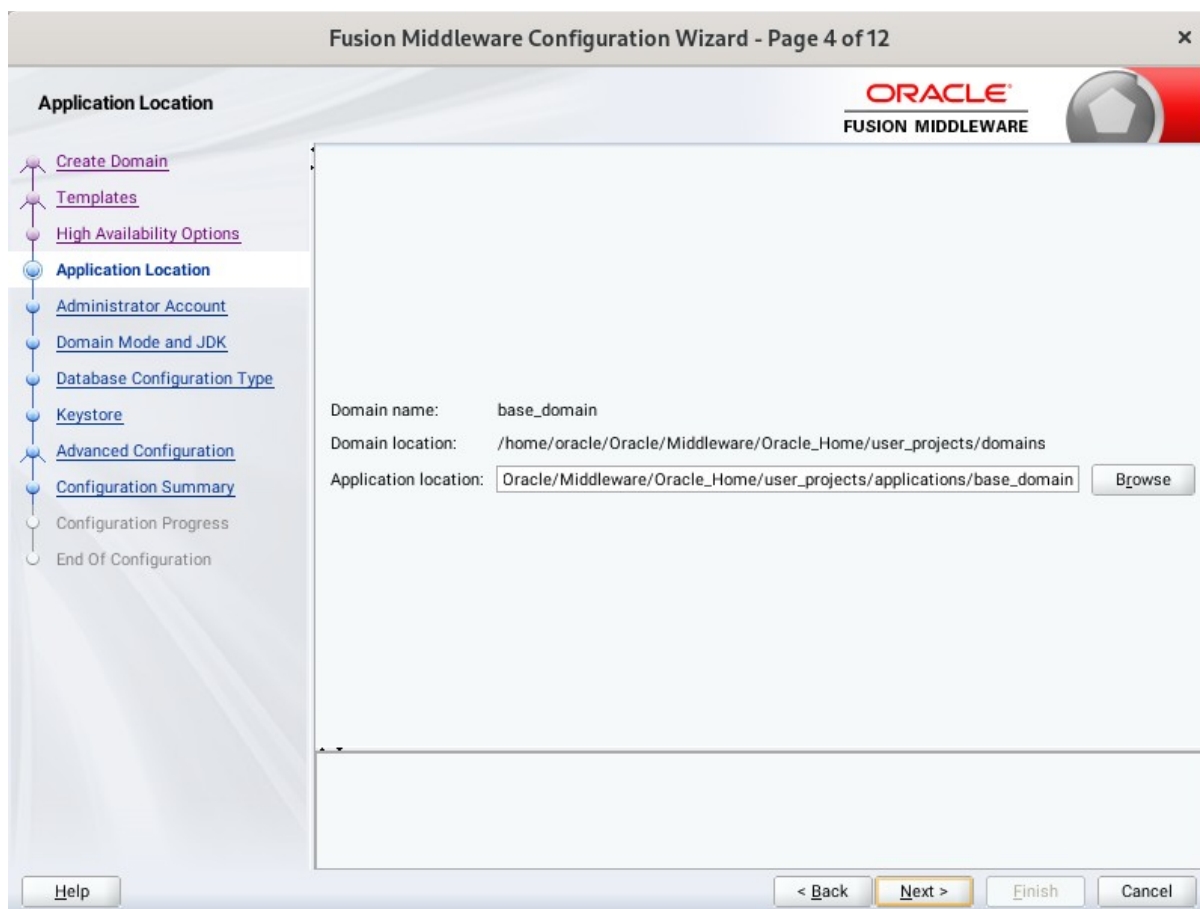
Click **Next** to continue.

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



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

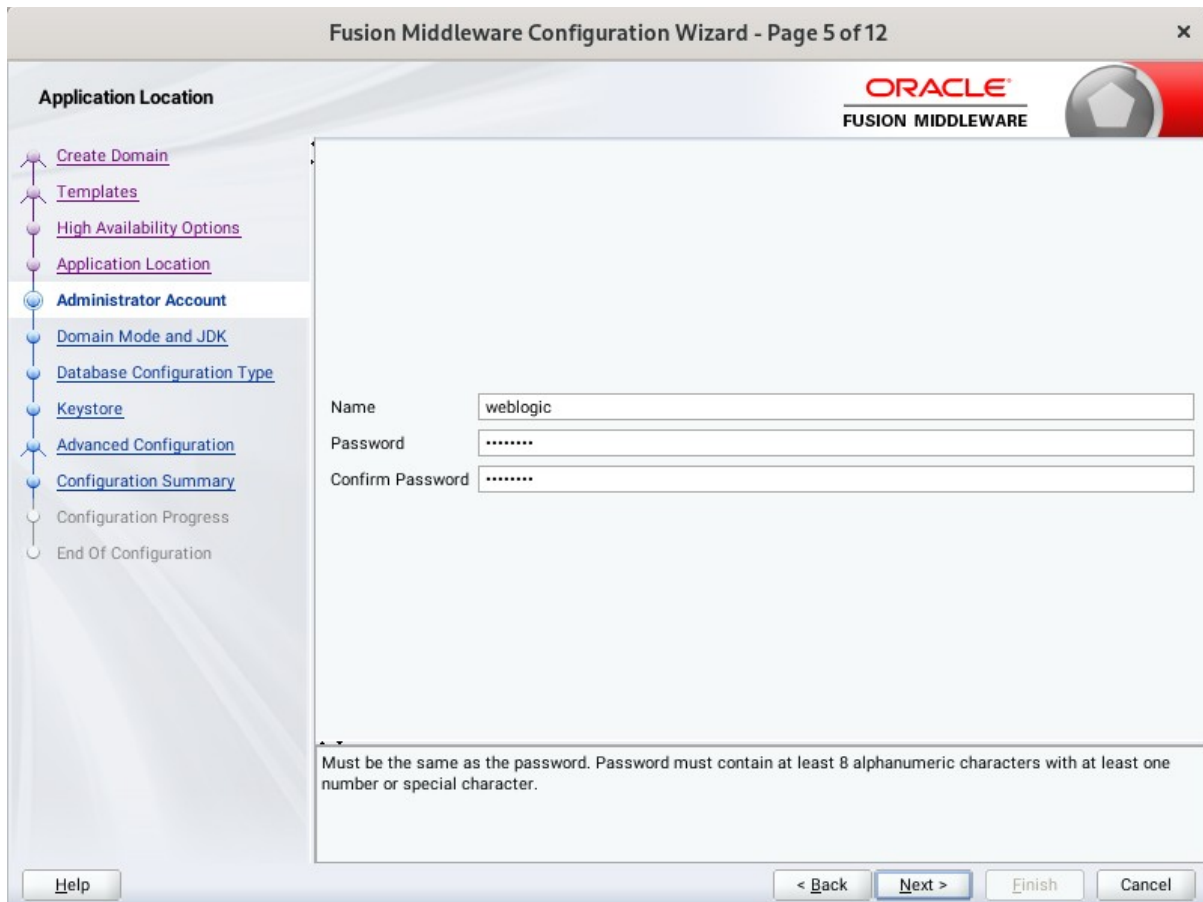
4). The **Application Location** screen appears.



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



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

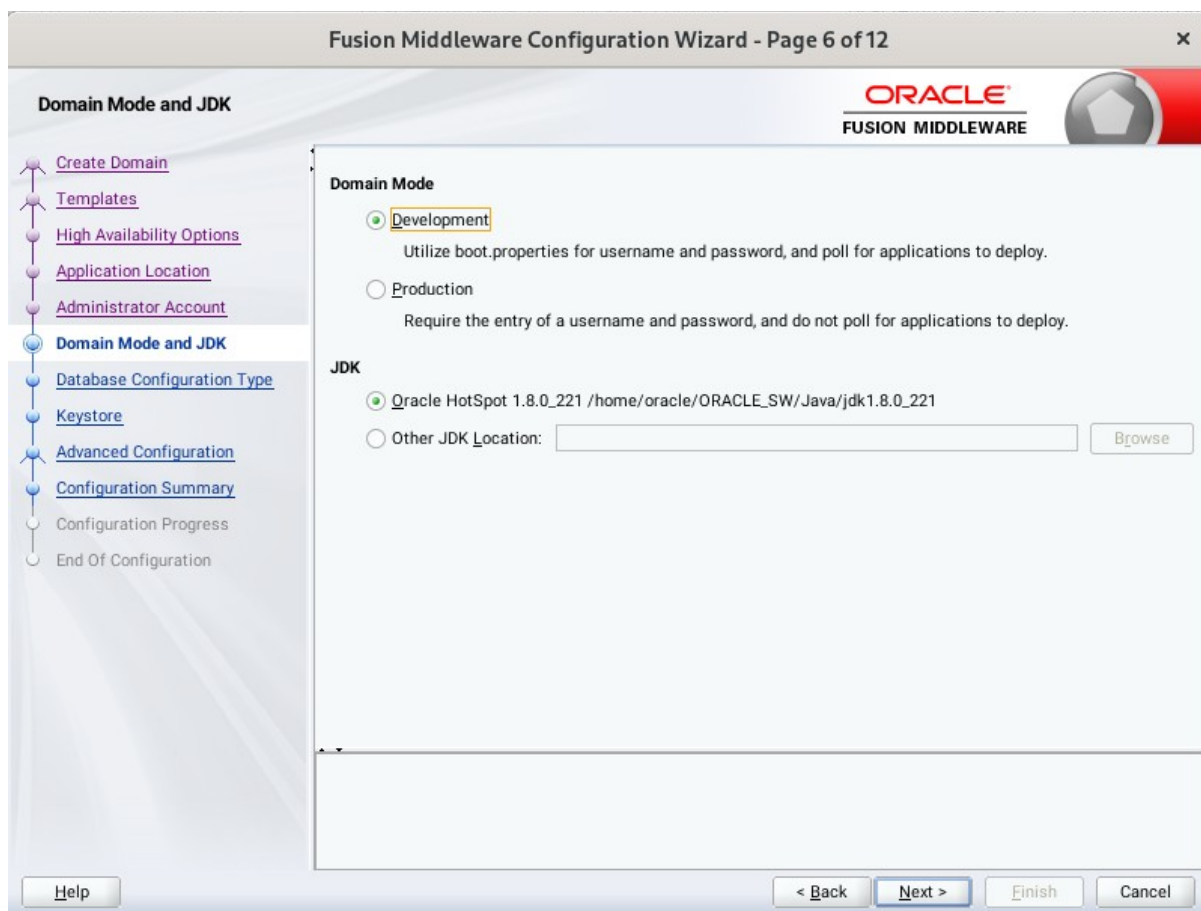


The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 5 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists the following steps: Create Domain, Templates, High Availability Options, Application Location, Administrator Account (highlighted), 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 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.



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

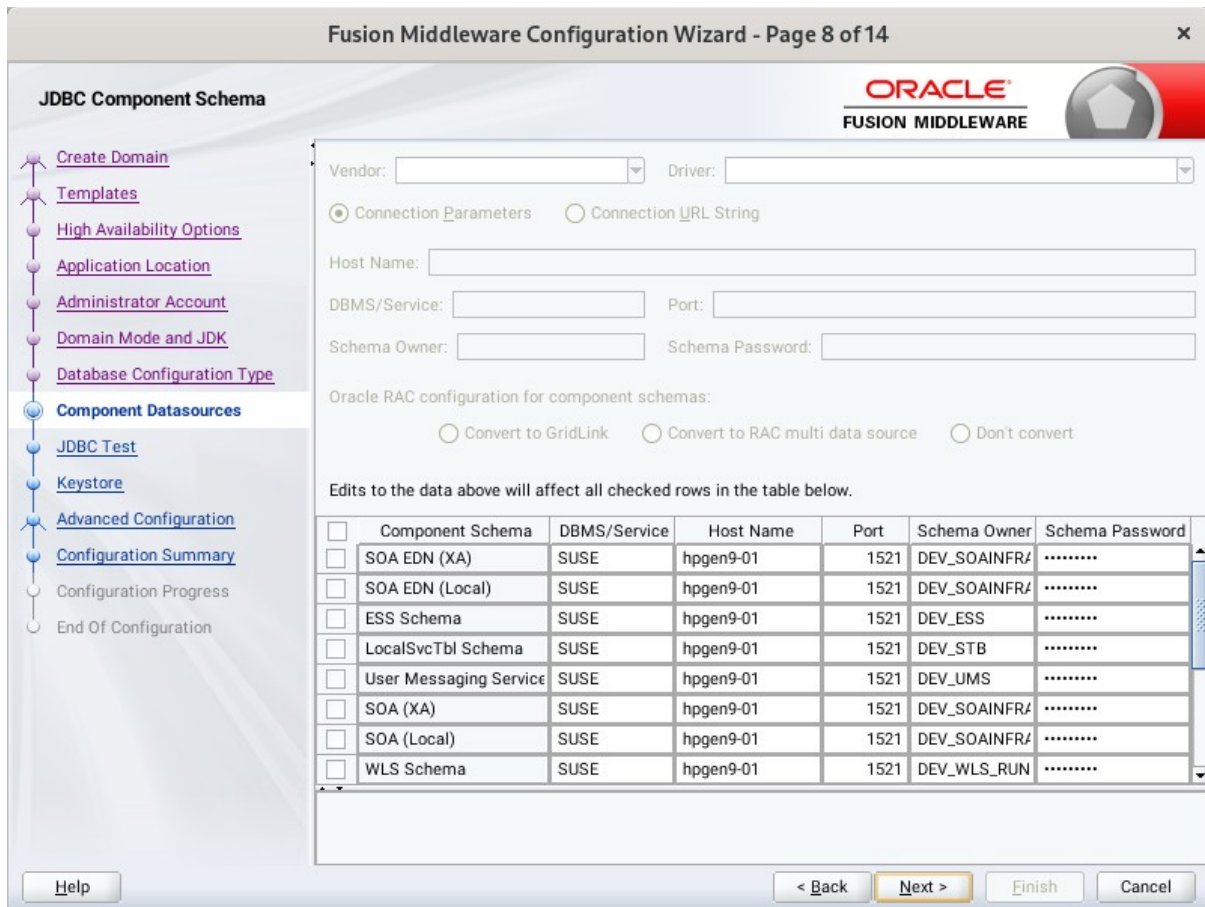


Select the Domain Mode (either **Development** or **Production**) as shown above. Click **Next** to continue.

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

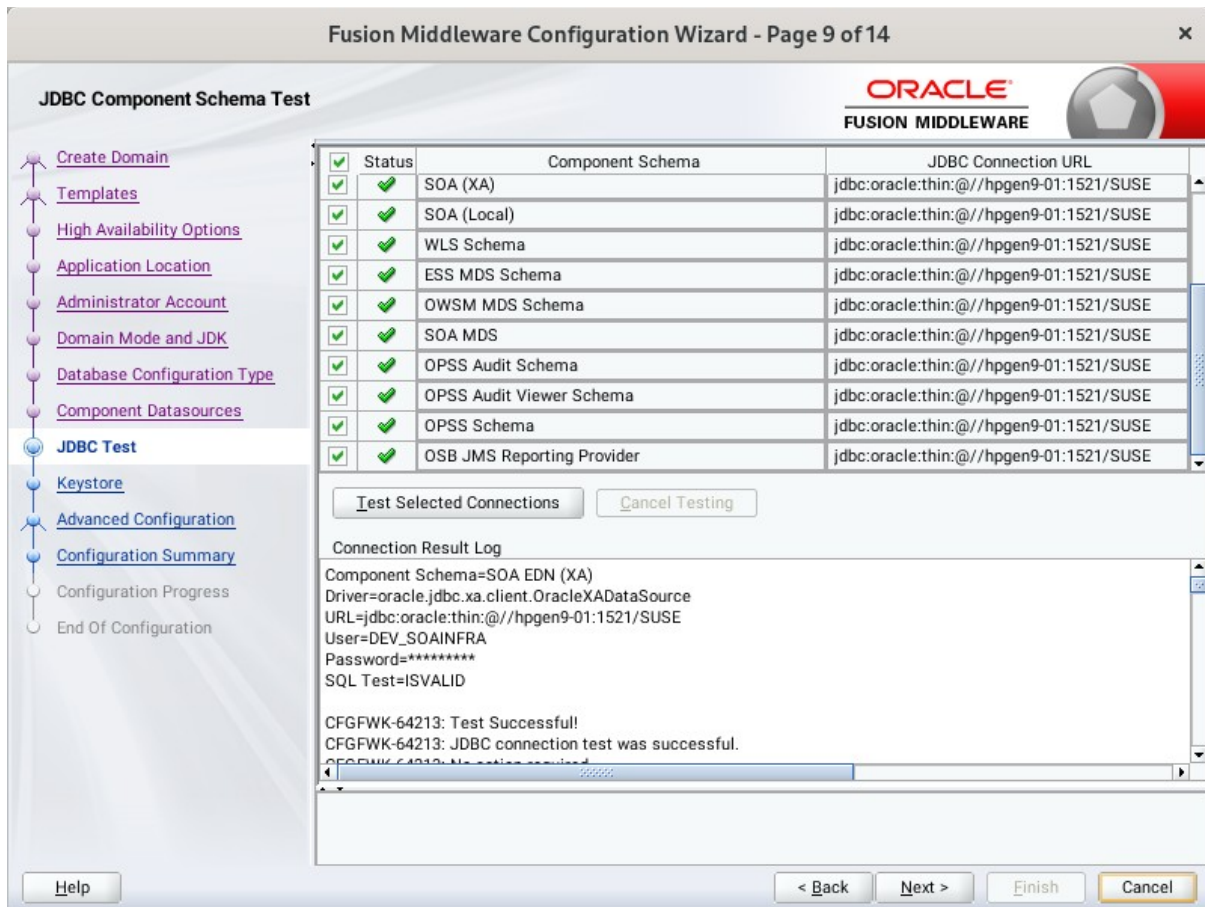
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



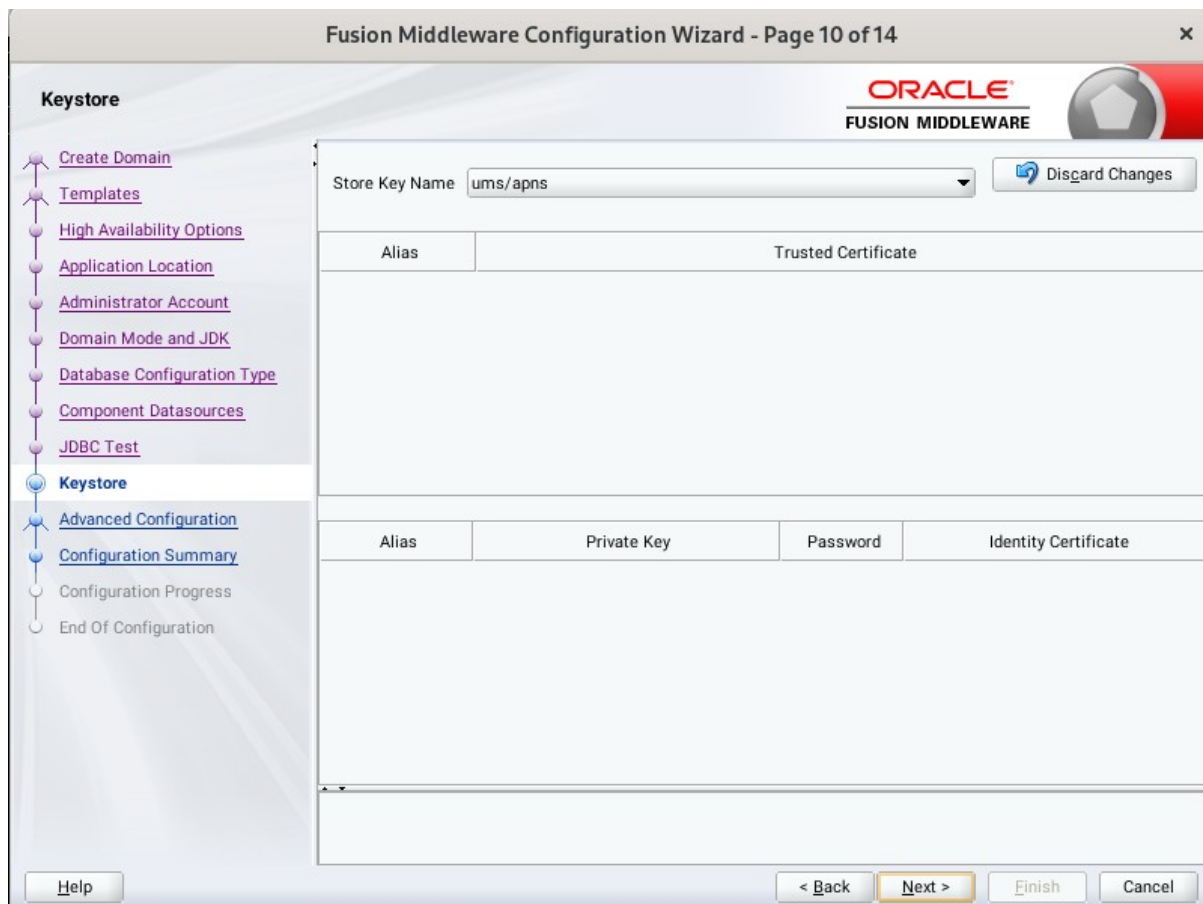
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



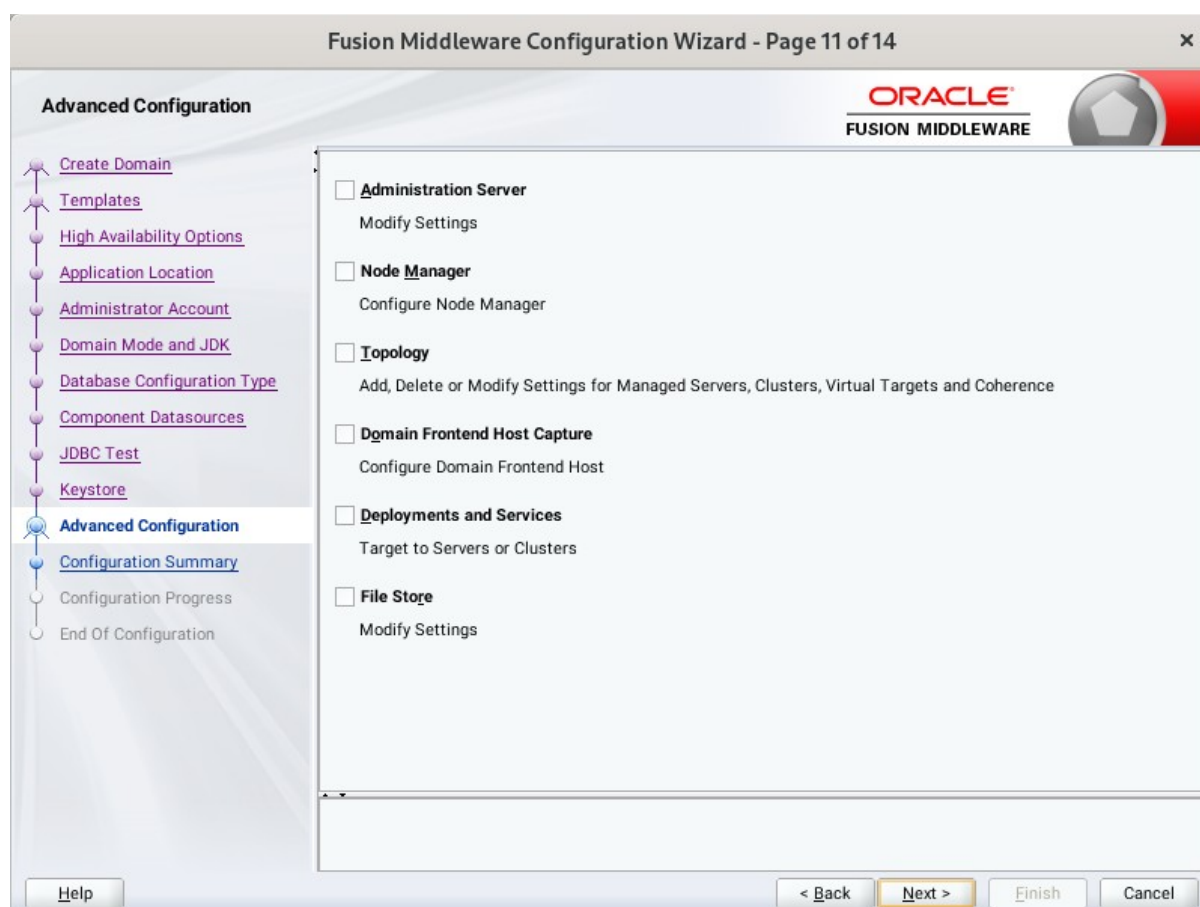
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



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

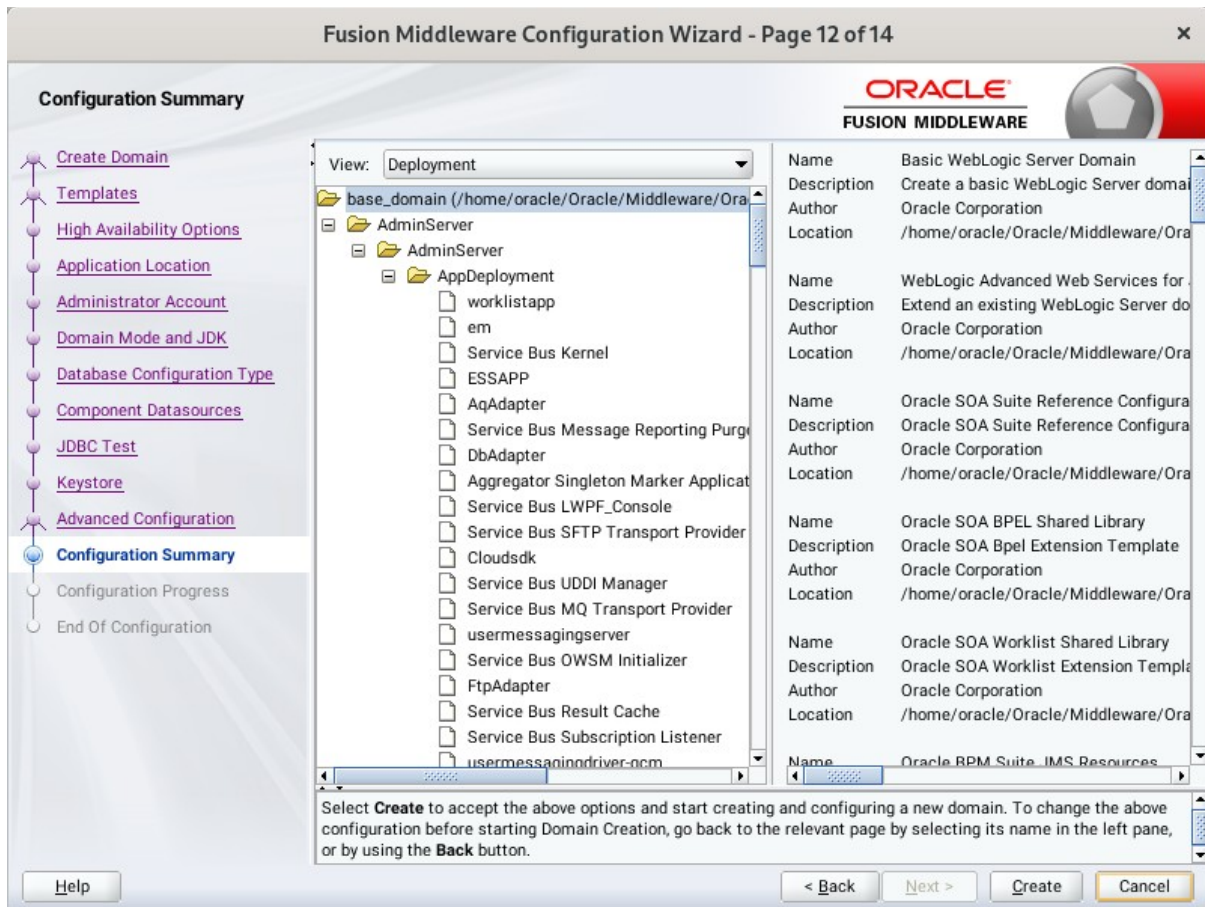
11). The **Advanced Configuration** screen appears.



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.

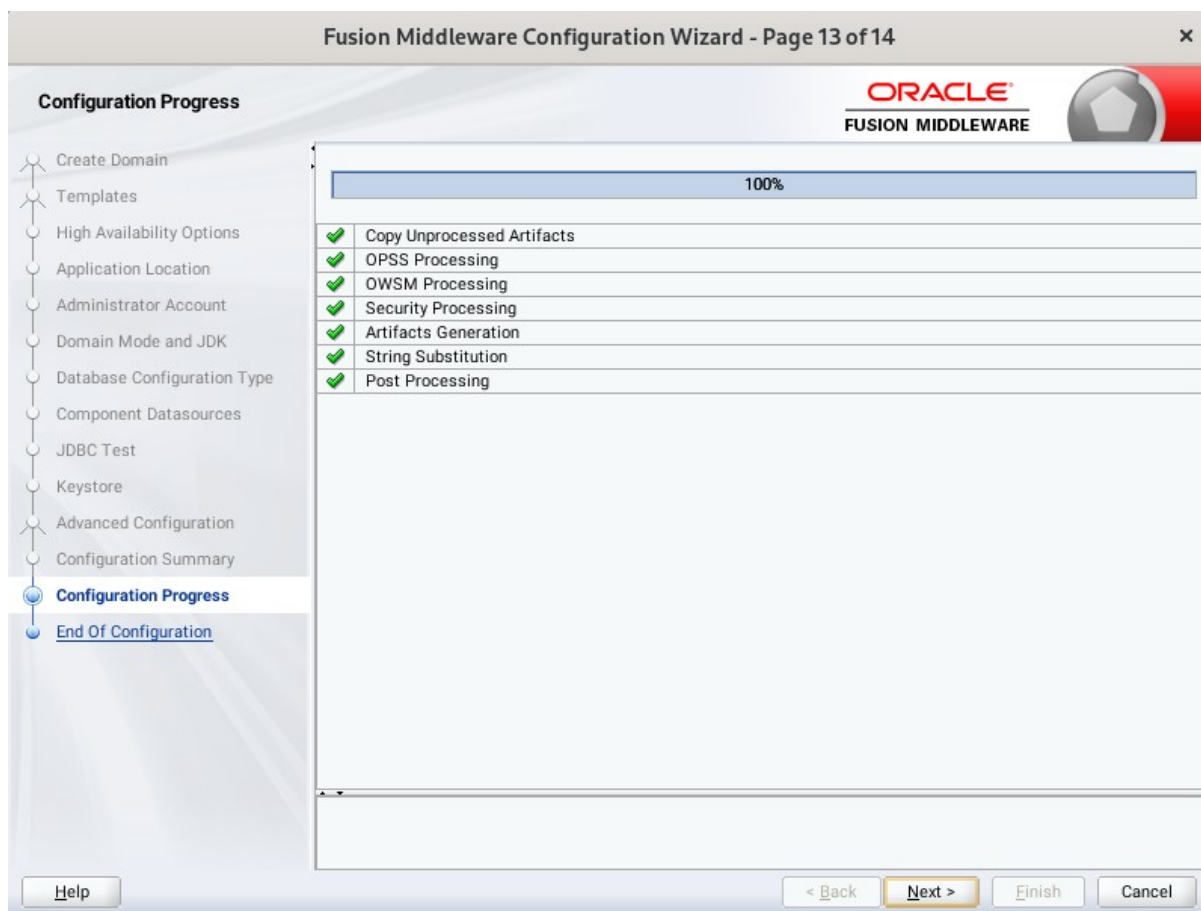


12). The **Configuration Summary** screen appears.



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@hpgen9-01:...ns/base_domain/bin
oracle@hpgen9-01:...W/... x oracle@hpgen9-01:.../or... x oracle@hpgen9-01:..._co... x oracle@hpgen9-01:...ns/... x
1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Aug 9, 2023 4:18:44,885 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001
for protocols iiop, t3, ldap, snmp, http.>
<Aug 9, 2023 4:18:44,886 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001
for protocols iiop, t3, ldap, snmp, http.>
<Aug 9, 2023 4:18:44,886 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:0:
1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Aug 9, 2023 4:18:44,886 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001
for protocols iiop, t3, ldap, snmp, http.>
<Aug 9, 2023 4:18:45,077 PM GMT+08:00> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/oracle/apps/ess
/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<Aug 9, 2023 4:18:46,548 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: ESSAP
P, EJBComponent: ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdb.suspendConnectionOnStart is ign
ored, because it is not supported by JCA-Based Message-Driven Bean.>
<Aug 9, 2023 4:18:46,561 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 w
eblogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Aug 9, 2023 4:18:46,691 PM GMT+08:00> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/oracle/apps/ess
/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<Aug 9, 2023 4:18:46,744 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: EssNa
tiveHostingApp, EJBComponent: native-ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdb.suspendConn
ectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Aug 9, 2023 4:18:46,750 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageReceiverBean(Application:
usermessagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJmsMessageReceiver. Property we
blogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Aug 9, 2023 4:18:46,756 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 1 ms
----->deploying 0 composites took 10 ms
<Aug 9, 2023 4:18:46,796 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 48313 ms, partition=DOMAIN

```

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

```

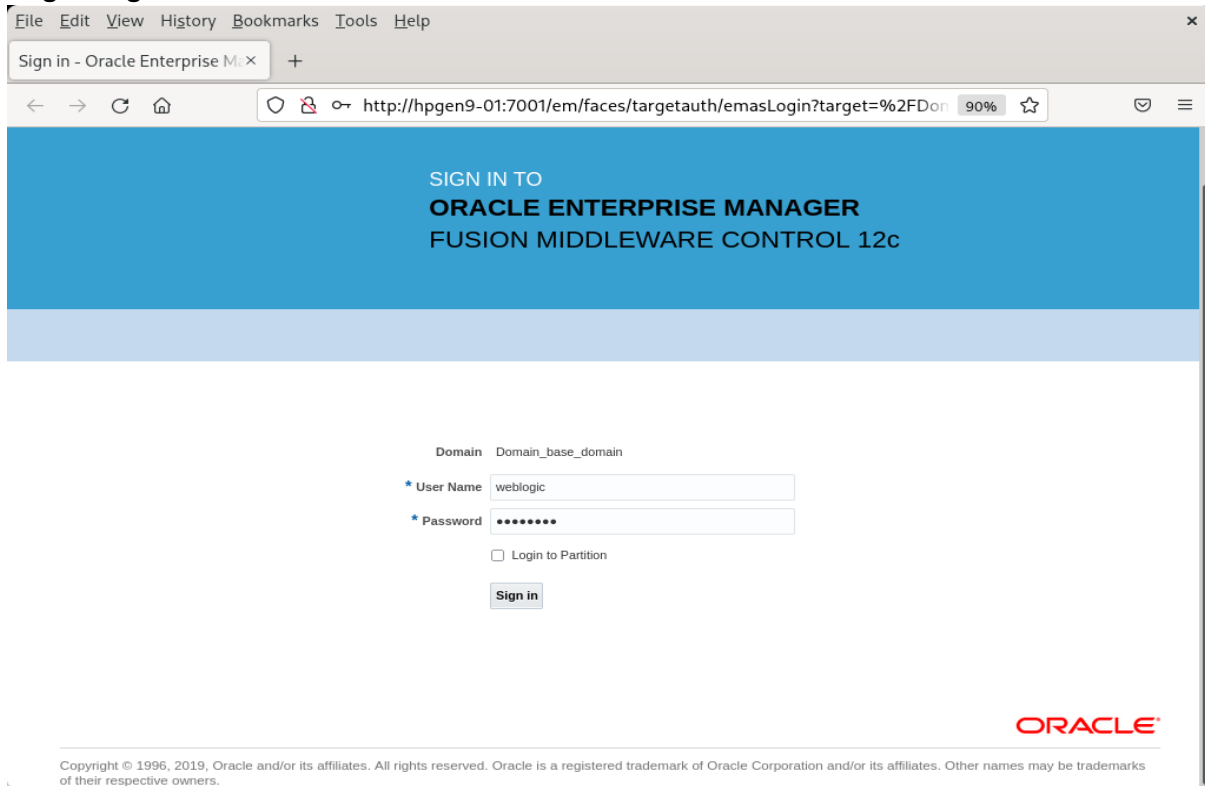
-----
Server state changed to RUNNING.
-----

```

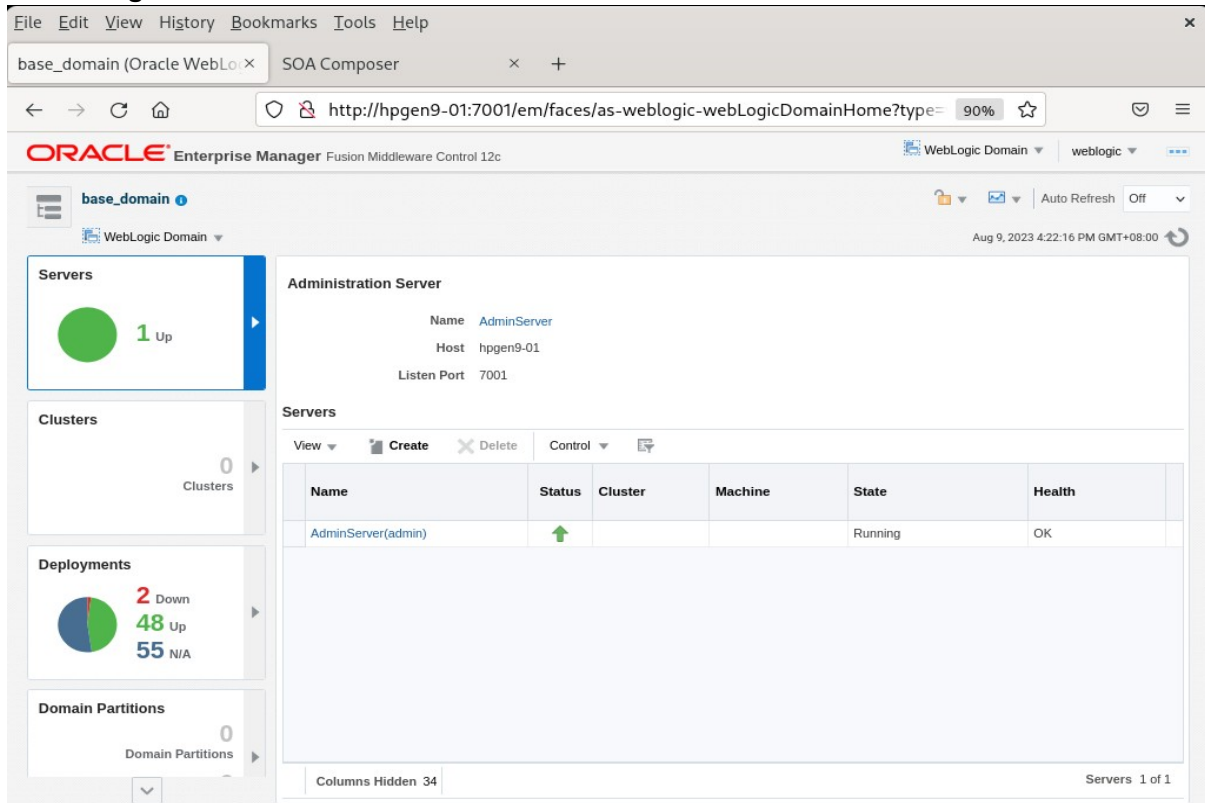
### 4-3. Checking Oracle SOA Suite 12c Product URLs.

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

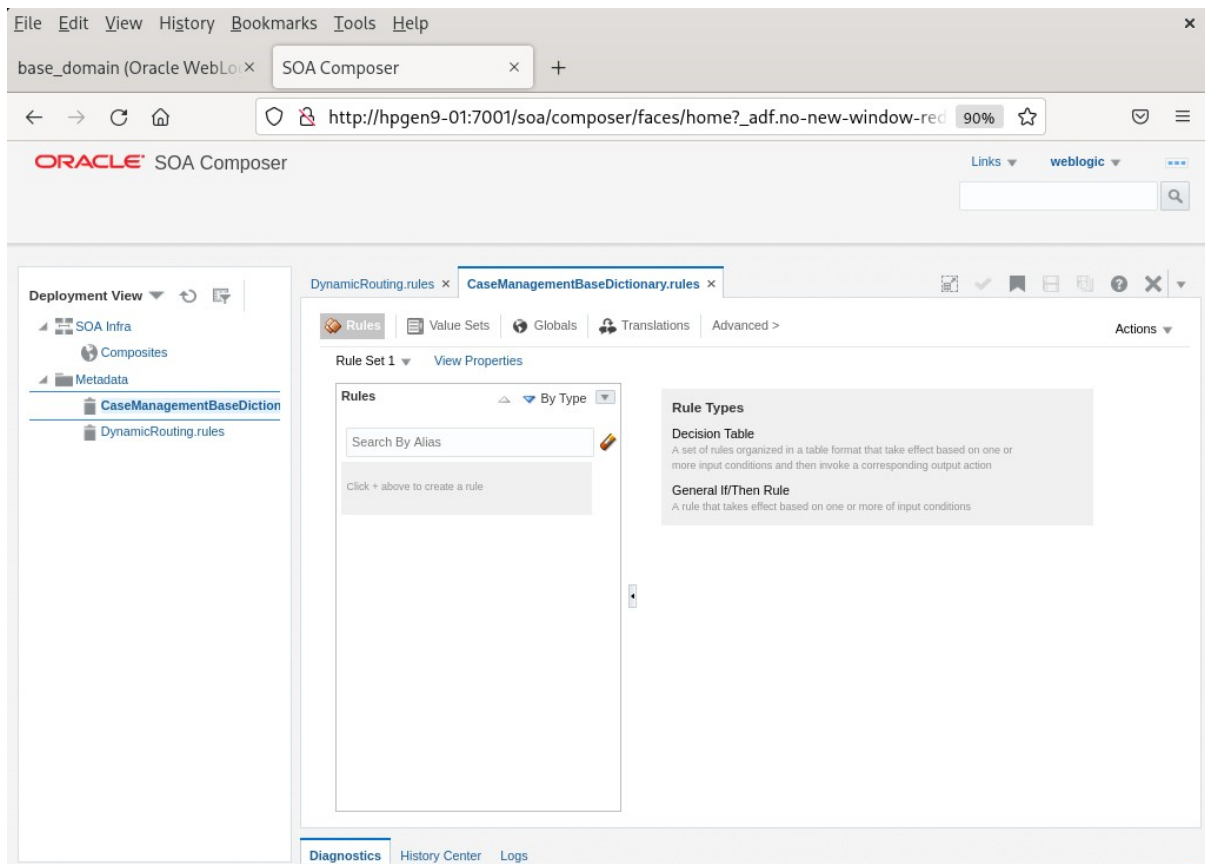
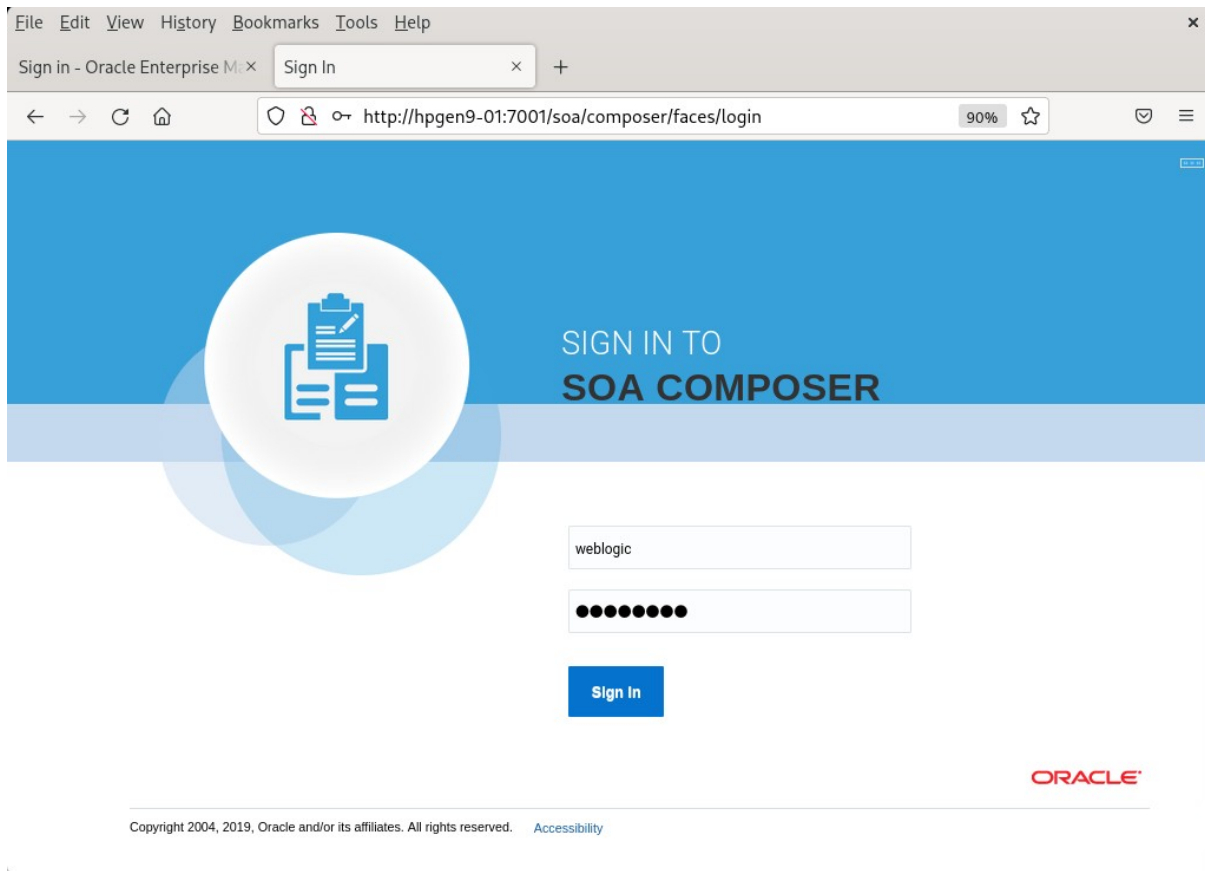
#### Login Page:



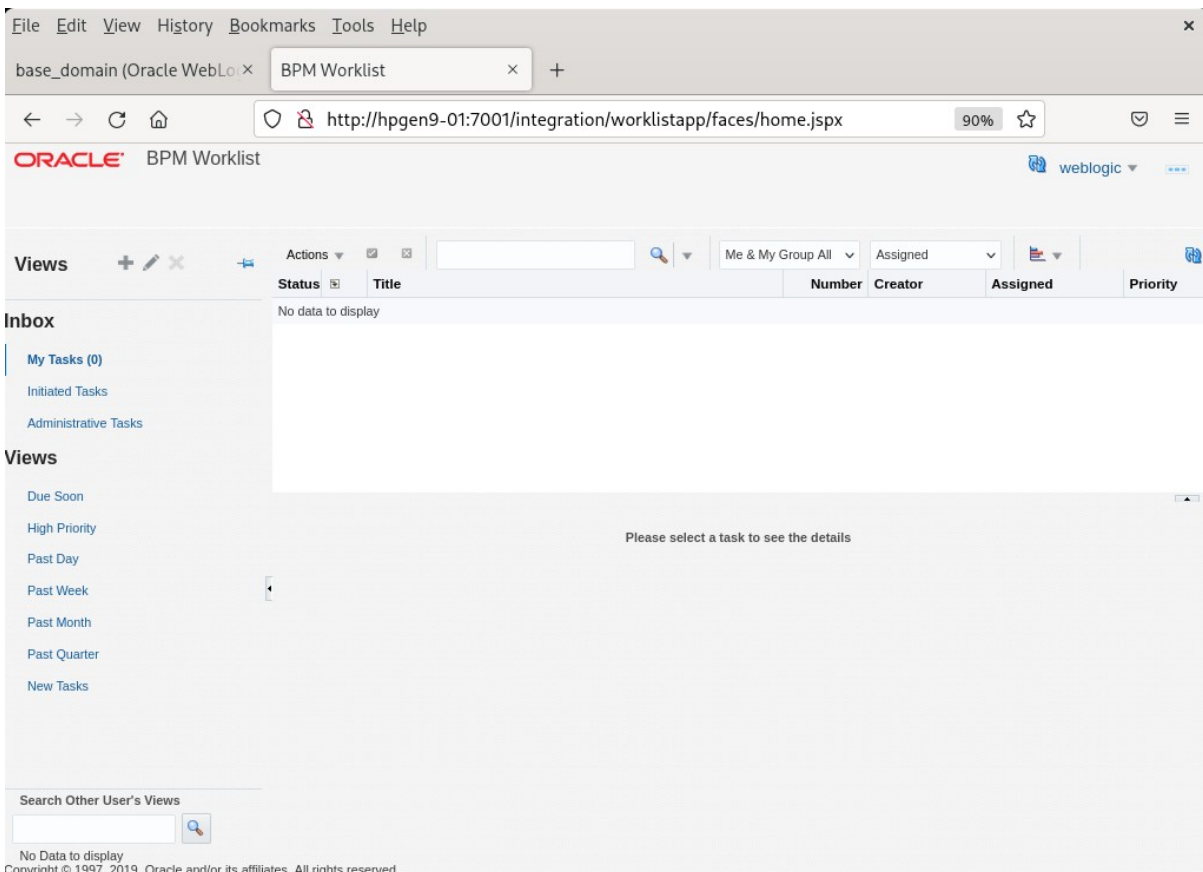
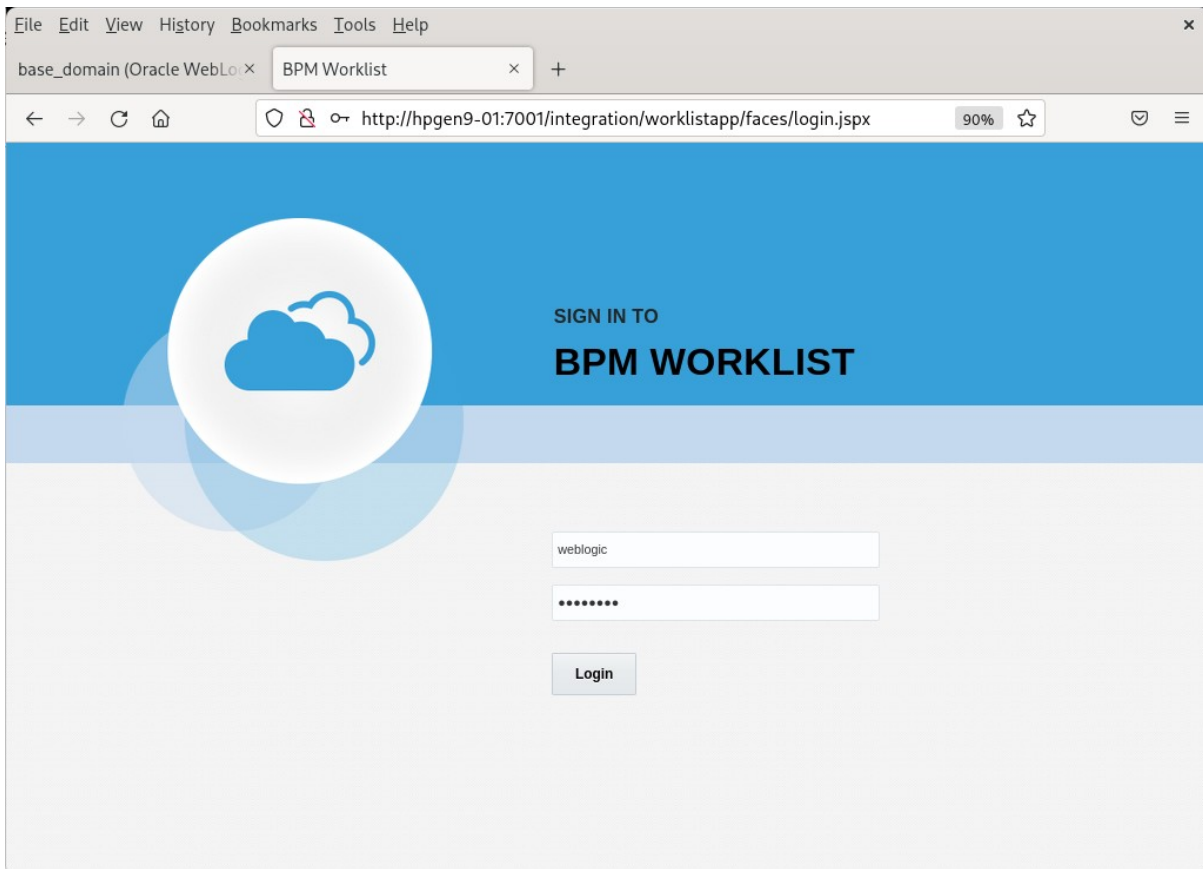
#### Home Page:



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

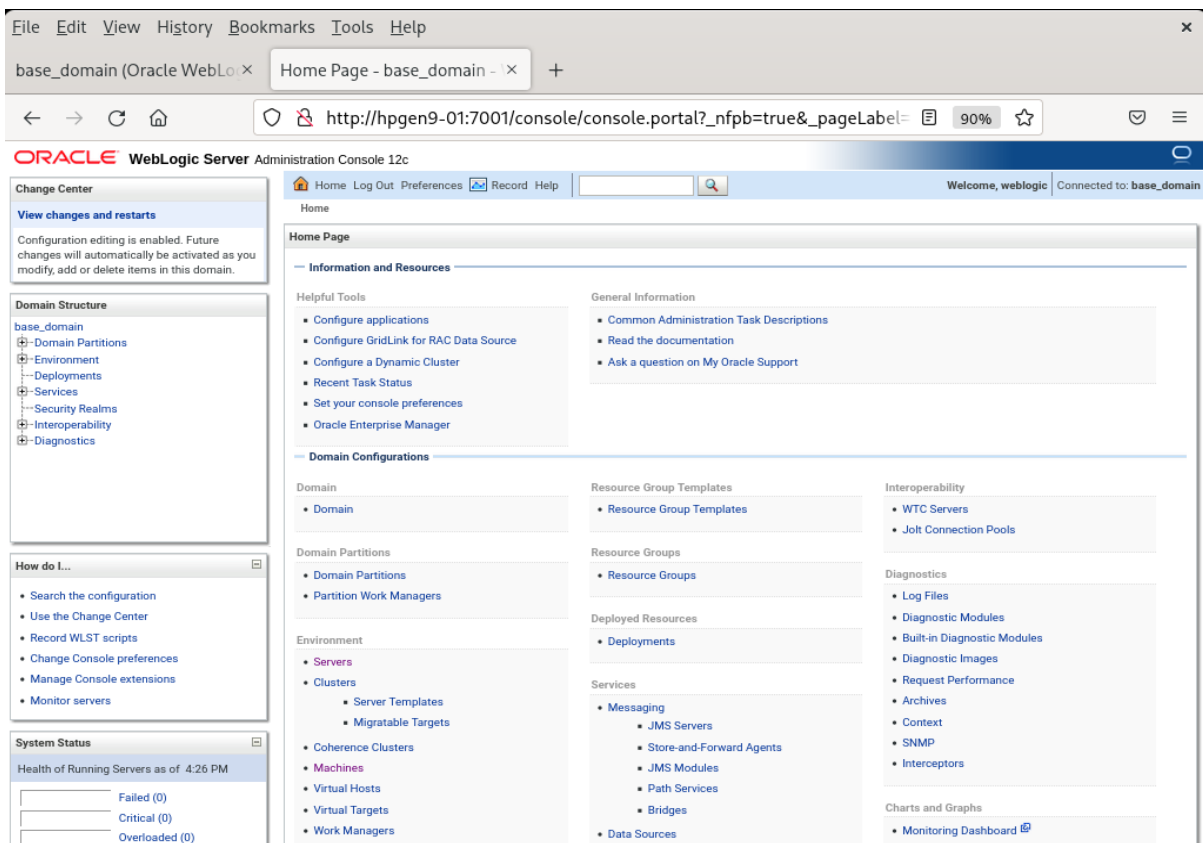
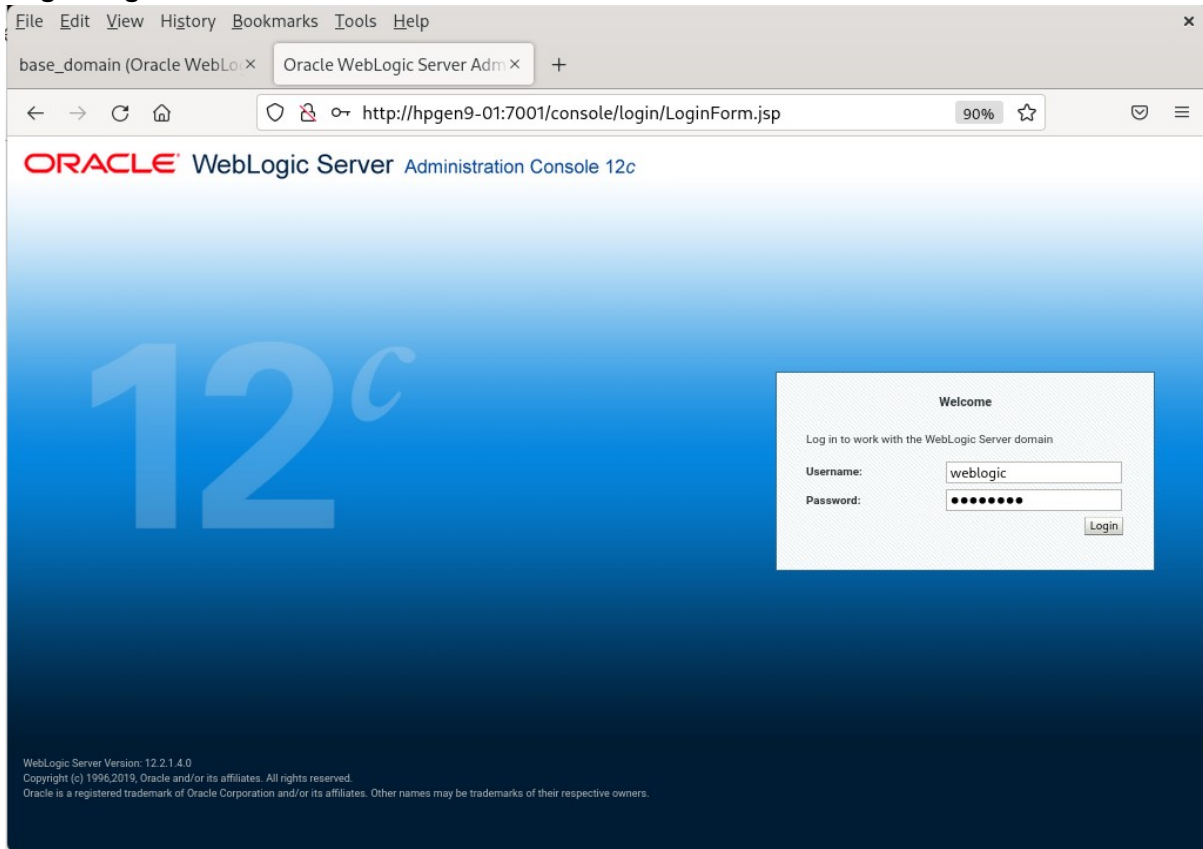


Access to BPM worklistapp - URL:<http://host:7001/integration/worklistapp>



## 2). Access to Administration Server Console

Login Page as shown below:



### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser address bar displays the URL: `http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=`. The page title is "Summary of Servers".

On the left sidebar, there are several panels:

- 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 actions 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 4:27 PM. It shows bars for Failed (0), Critical (0), and Overloaded (0).

The main content area is titled "Summary of Servers" and has tabs for "Configuration" 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 titled "Servers (Filtered - More Columns Exist)". 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

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

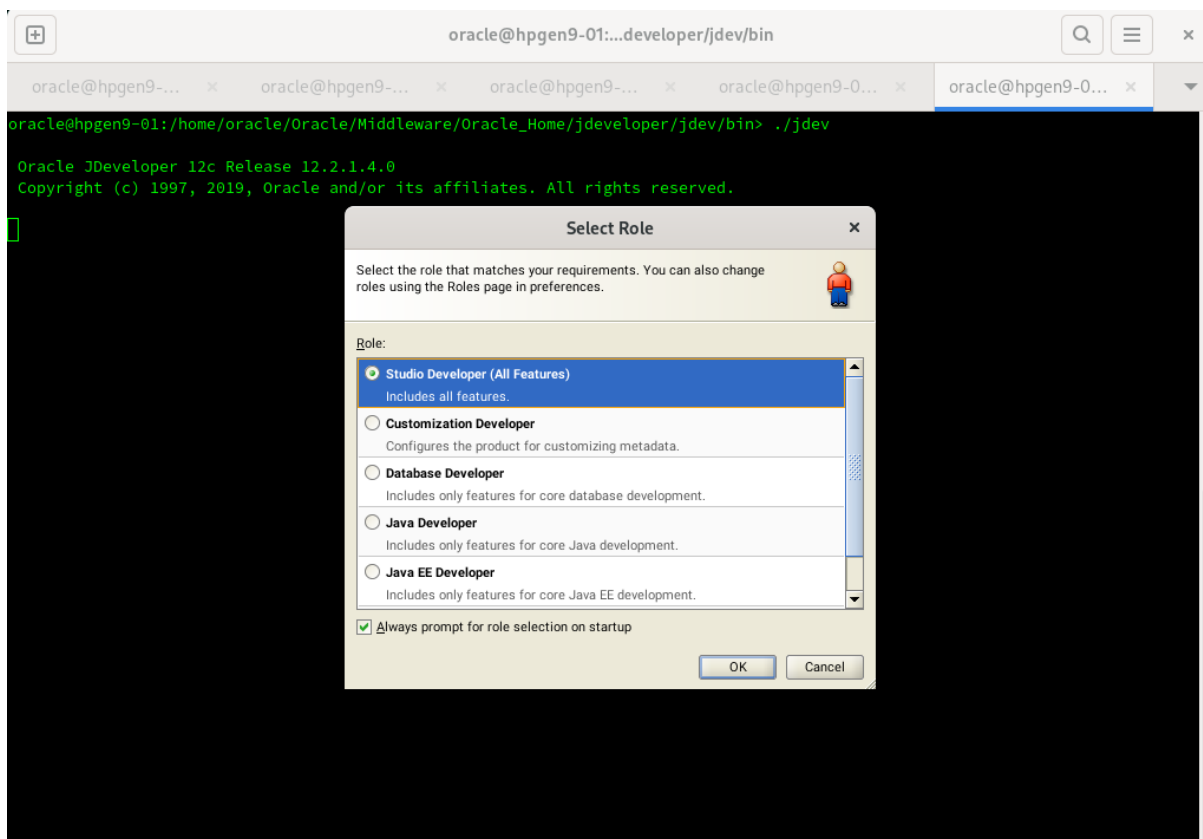
Launch Oracle JDeveloper with the appropriate command.

Ex:

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

Follow these steps:

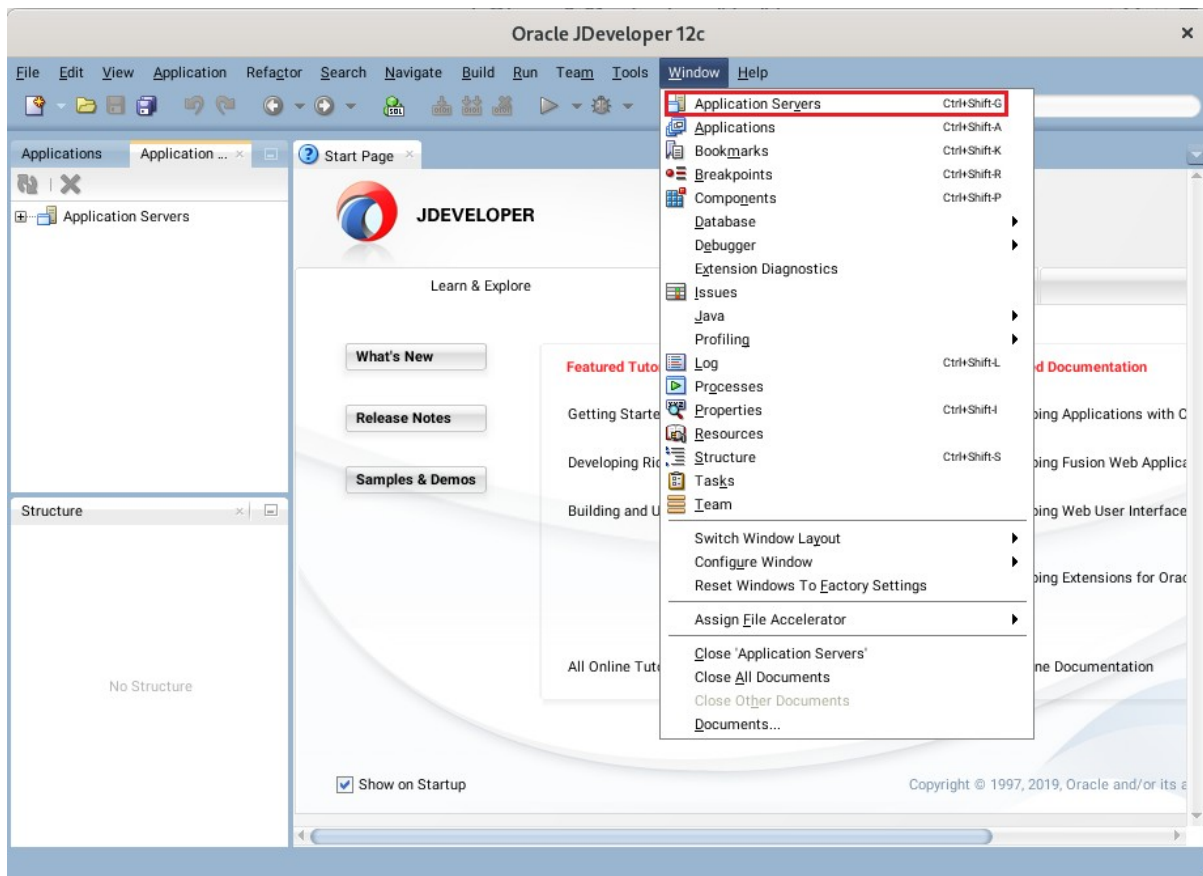
a1). Select Role.



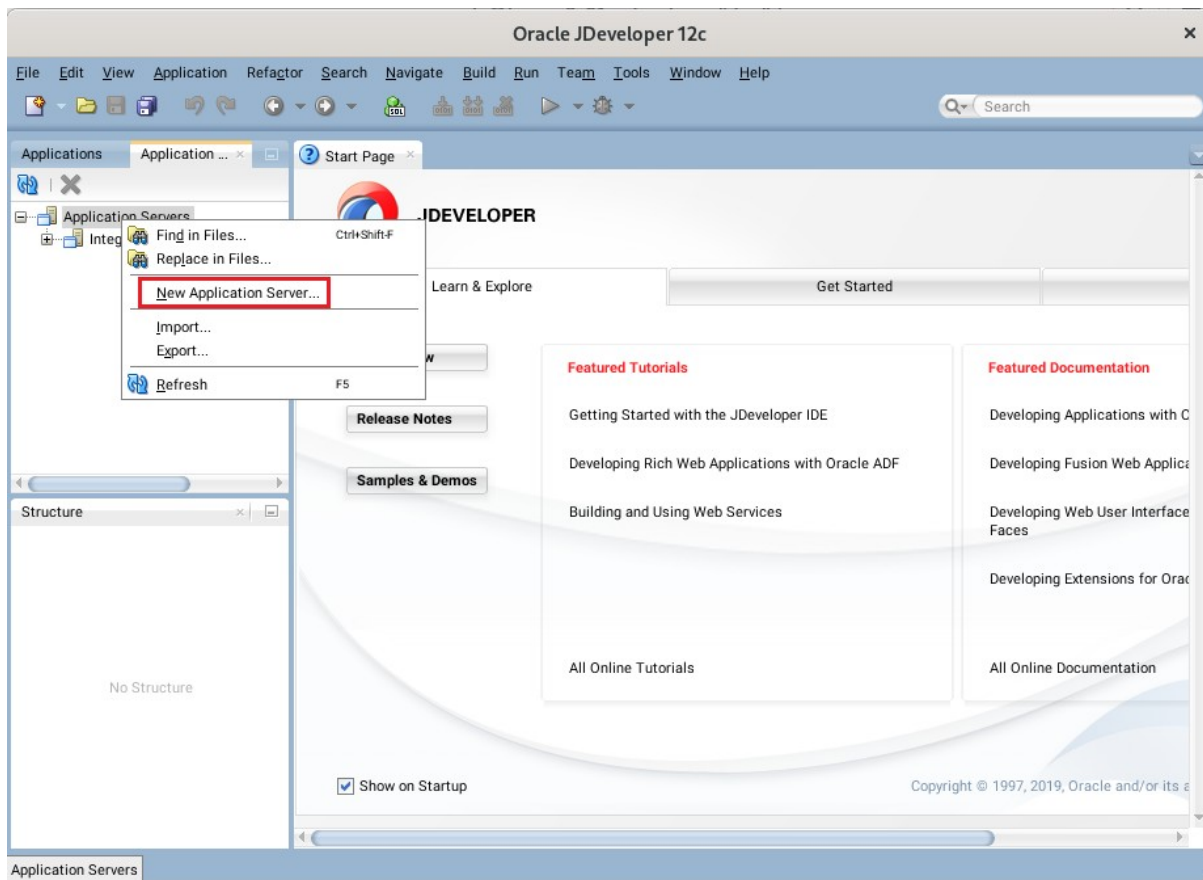
Select the role that matches your requirements. Click **OK** to continue.



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.

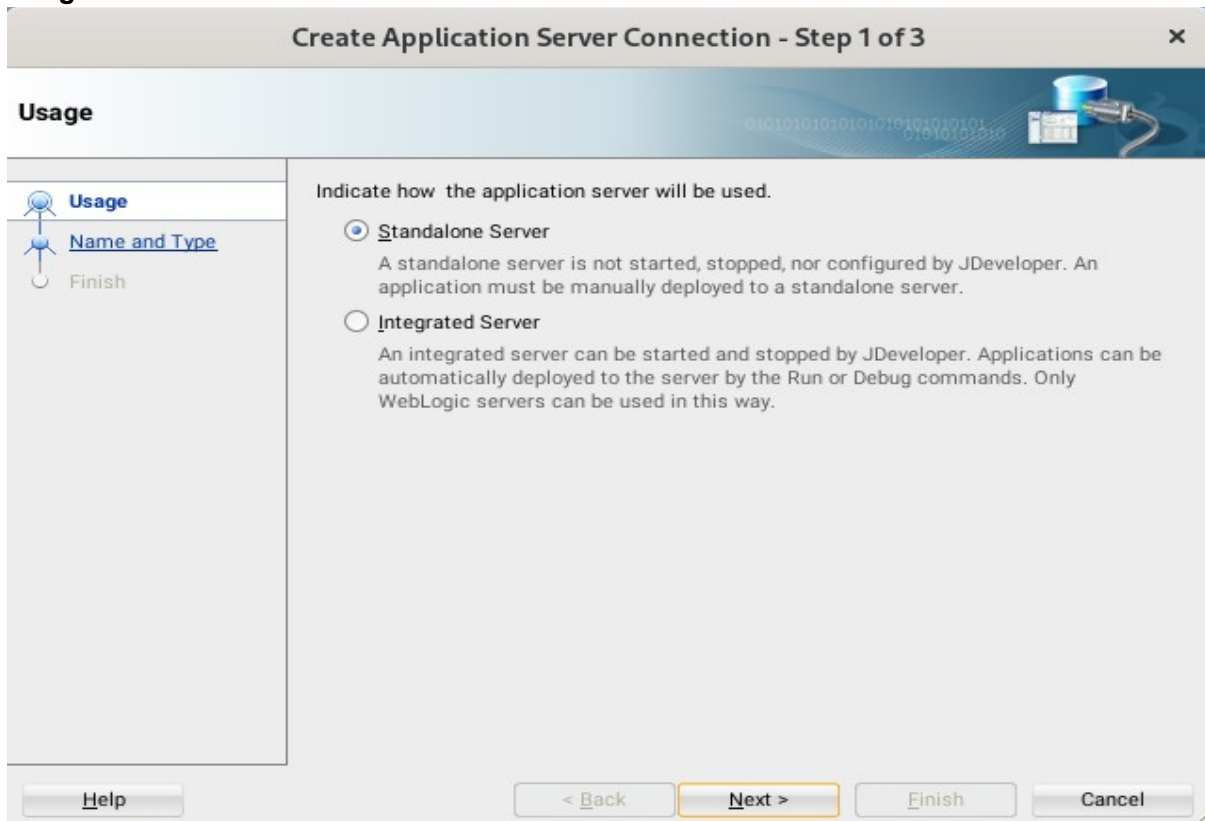


a3). Right-click on **Application Servers** in the Application Server Navigator. Select **New Application Server** from the drop-down menu to launch the **Create Application Server Connection** wizard.

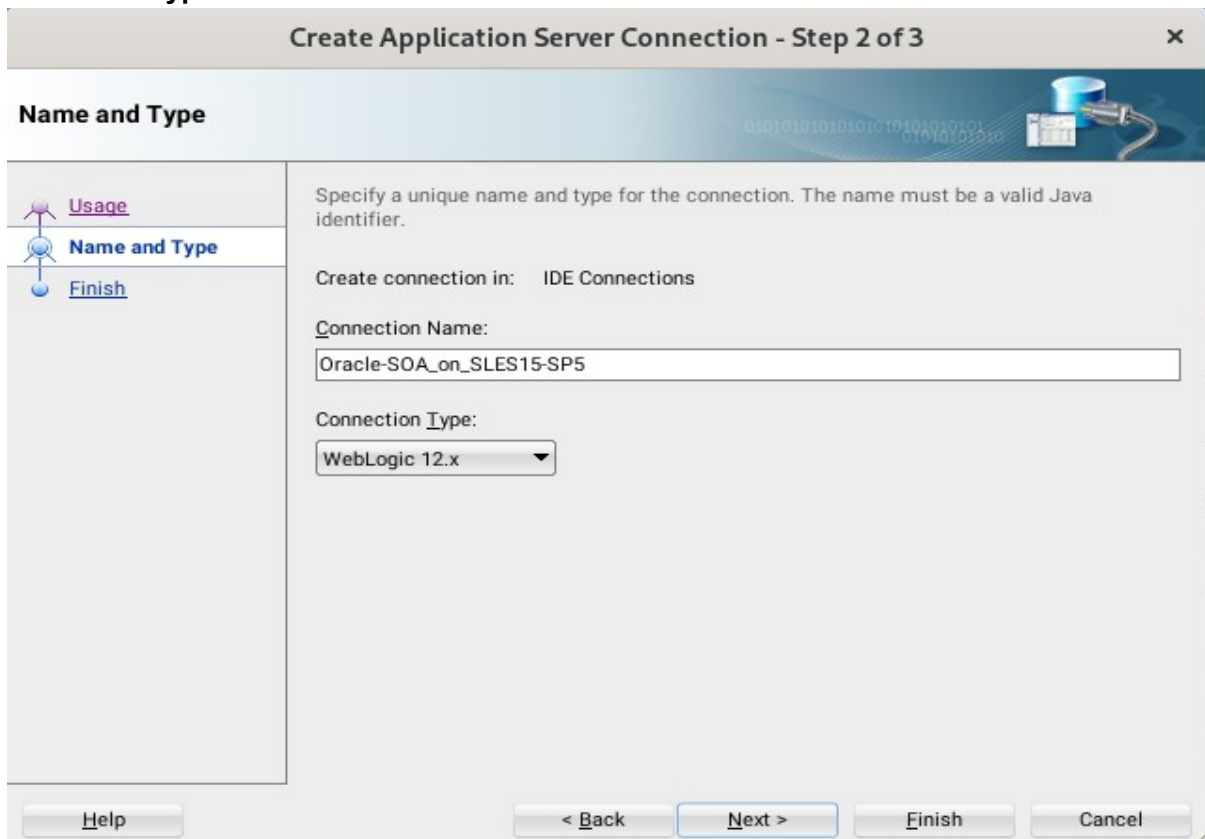


a4). Creating Application Server Connection steps as shown below.

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.

Usage  
Name and Type  
**Authentication**  
Configuration  
Test  
Finish

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

Usage  
Name and Type  
Authentication  
**Configuration**  
Test  
Finish

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**

- [Usage](#)
- [Name and Type](#)
- [Authentication](#)
- [Configuration](#)
- [Test](#)
- [Finish](#)

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 ✕

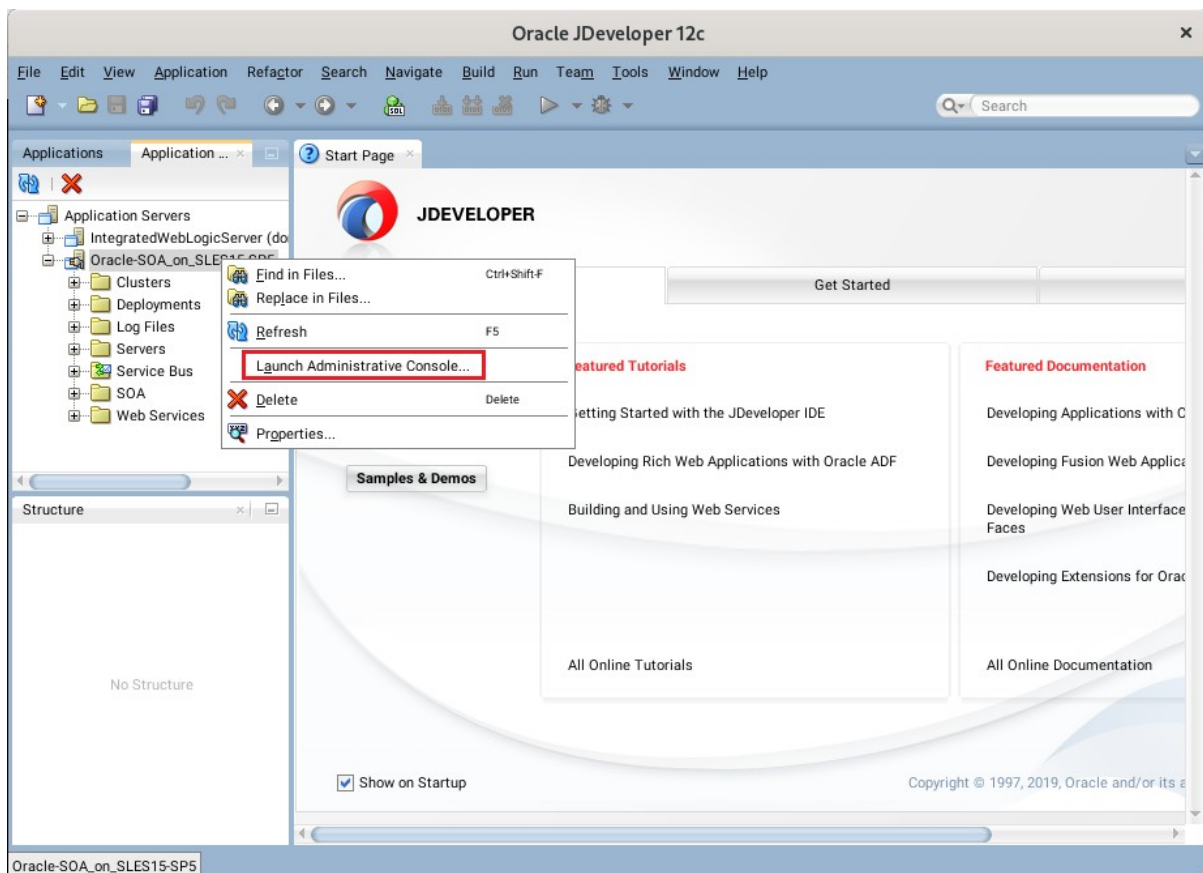
**Finish**

- [Usage](#)
- [Name and Type](#)
- [Authentication](#)
- [Configuration](#)
- [Test](#)
- [Finish](#)

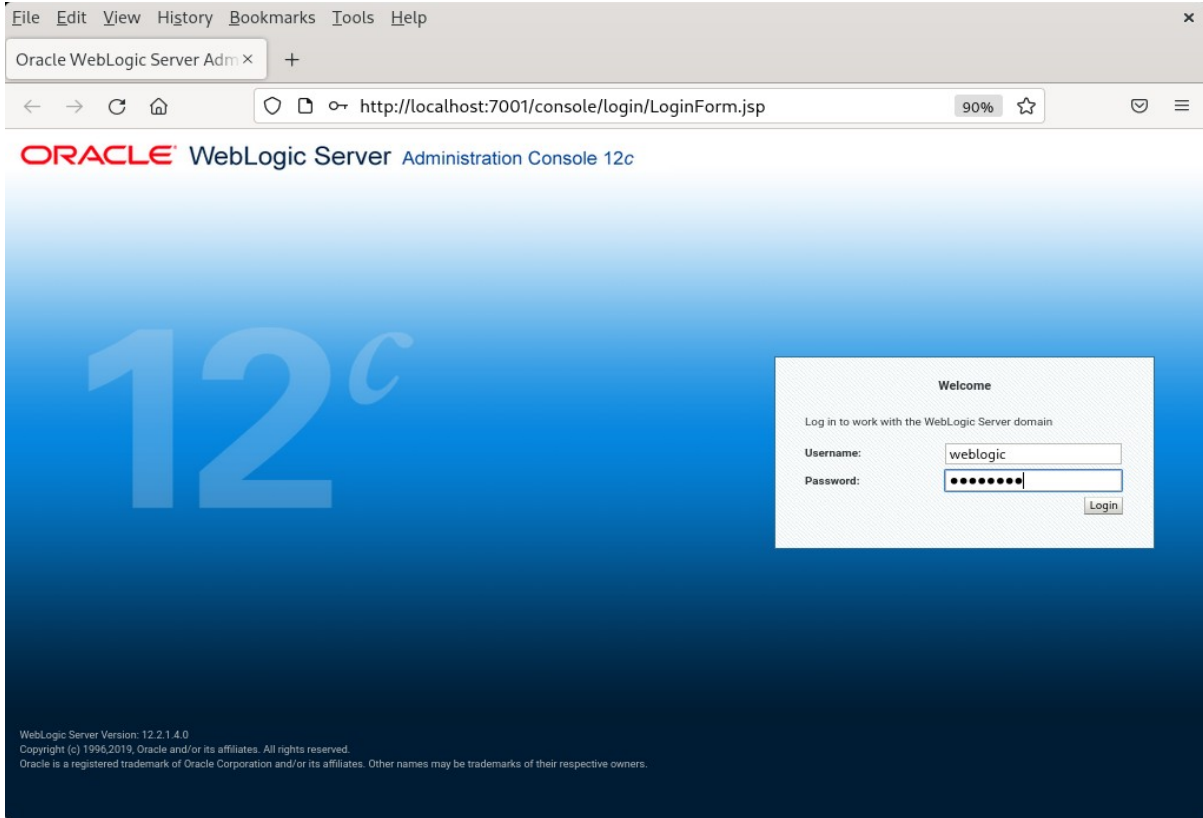
**You have completed creating the connection.**

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

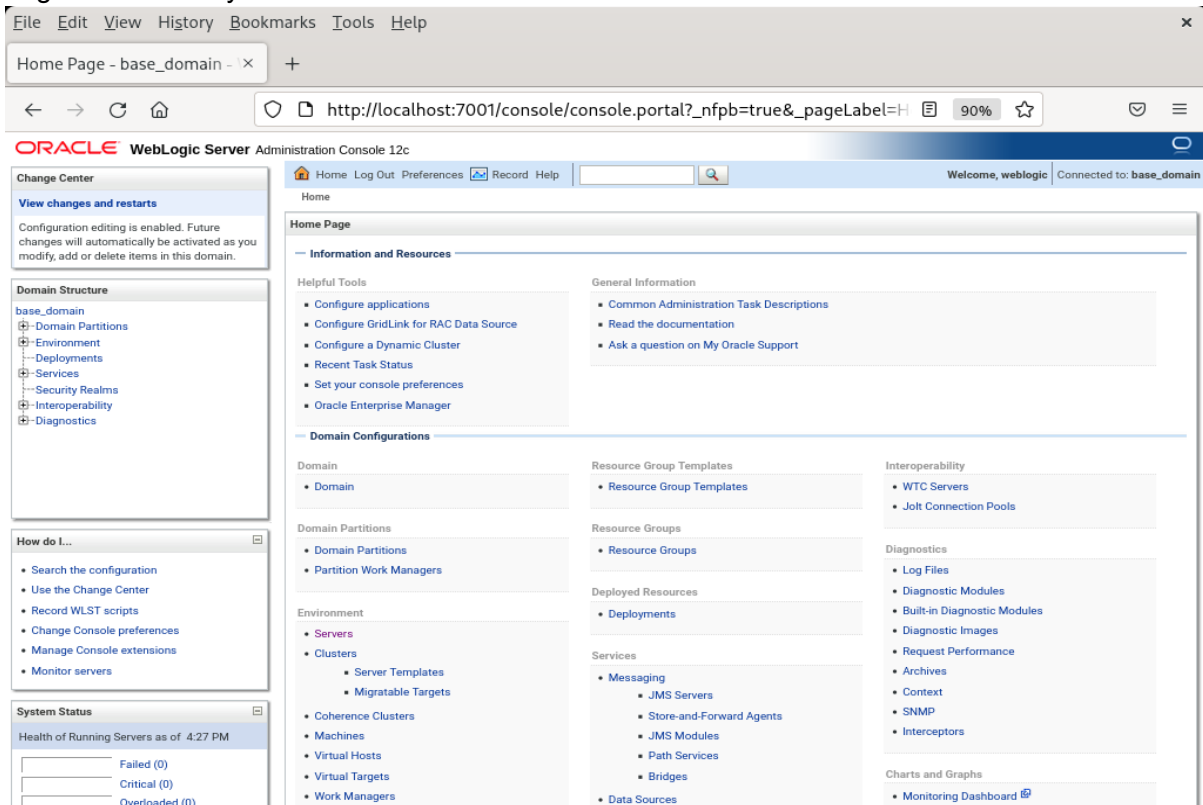
a5). Verifying Your Connection. Expand the connection node beside **Application Servers** in the Application Server Navigator. You should see your domain listed by the **Connection Name** you SPecified on the **Name and Type** screen. Right-click on your domain's name and choose **Launch Administrative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



### Log into your administrative console.



### Log in successfully.



**End of Oracle SOA Suite.**



\*\*\*\*\*

## Oracle Access Manager

\*\*\*\*\*

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

#### 1-1. Prerequisites:

Installation of Oracle Identity and Access management requires:

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

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

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

System altered.

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

Total System Global Area 9932111872 bytes
Fixed Size                12169800 bytes
Variable Size             2046823864 bytes
Database Buffers         7851737088 bytes
Redo Buffers              21381120 bytes
Database mounted.
Database opened.
SQL> show parameter open_cursors;
NAME                                TYPE        VALUE
-----
open_cursors                        integer     1600
SQL> █
```

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



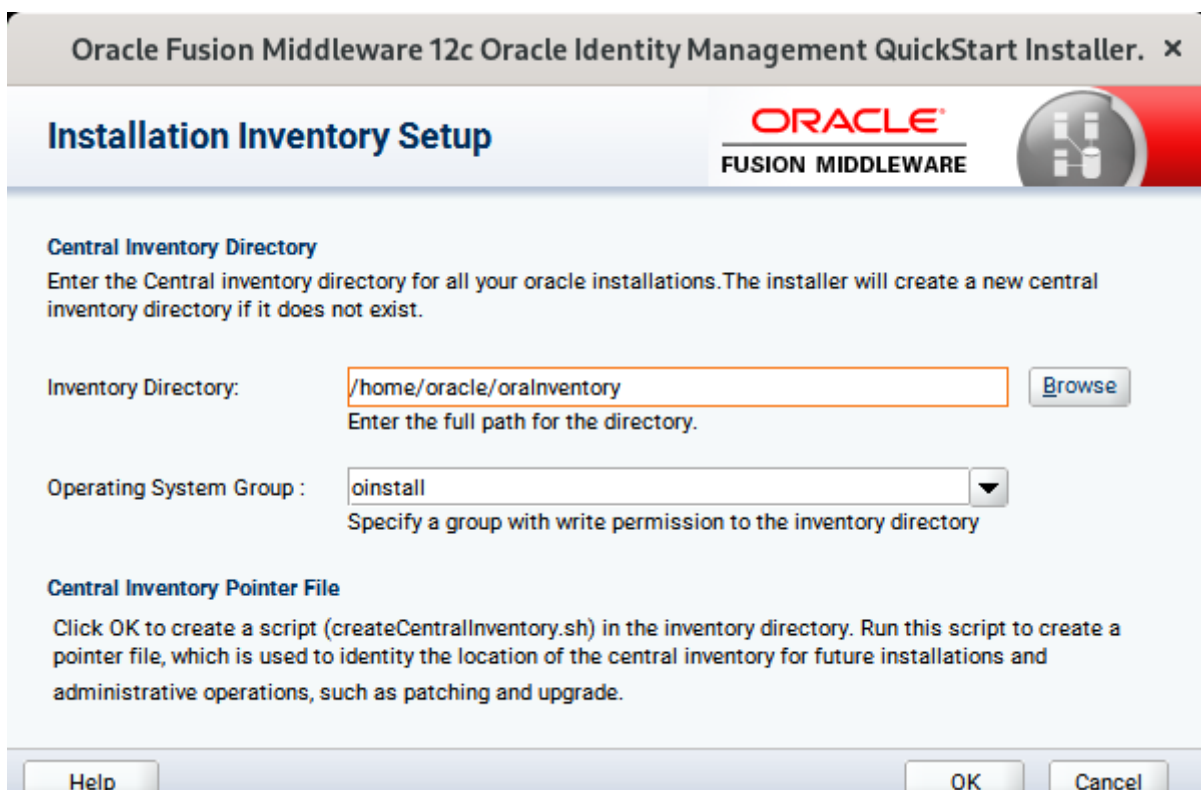
1-2. Log in to the target system (SLES 15 SP5 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <https://www.oracle.com/downloads/#category-middleware>.

(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'

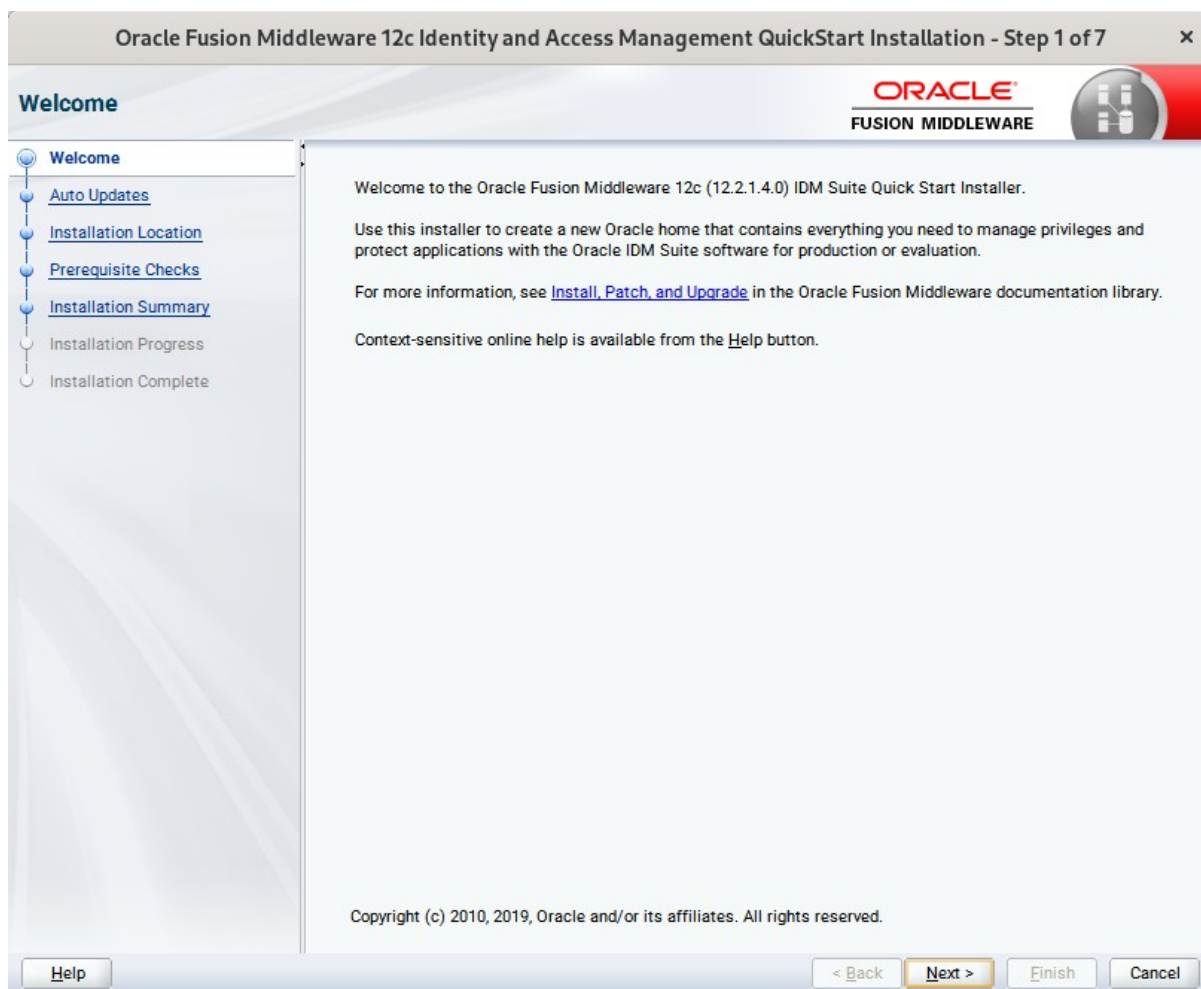
**For the actual installation, follow the steps below:**

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.



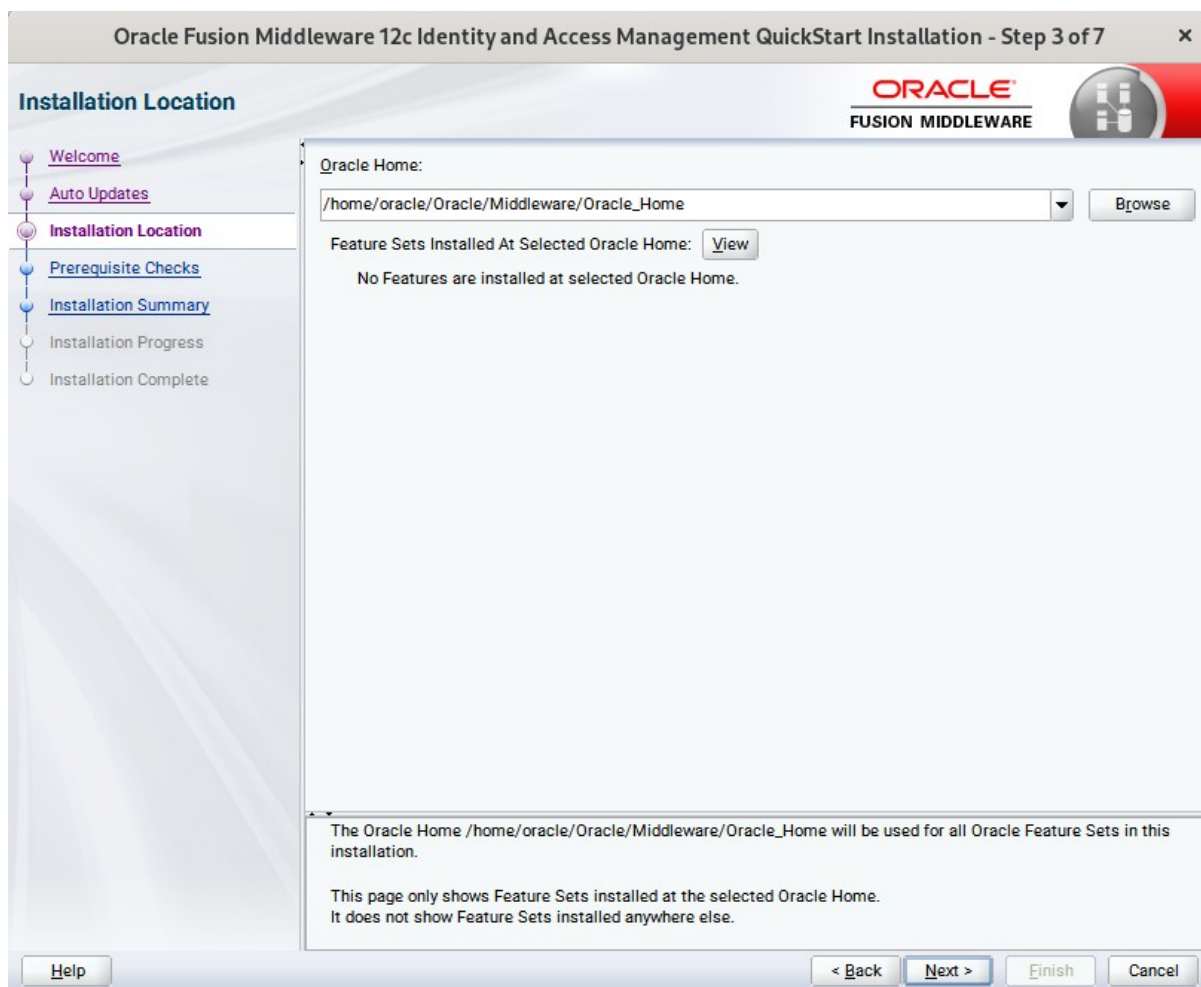
This page welcomes you to the installation. Click **Next** to continue.

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

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

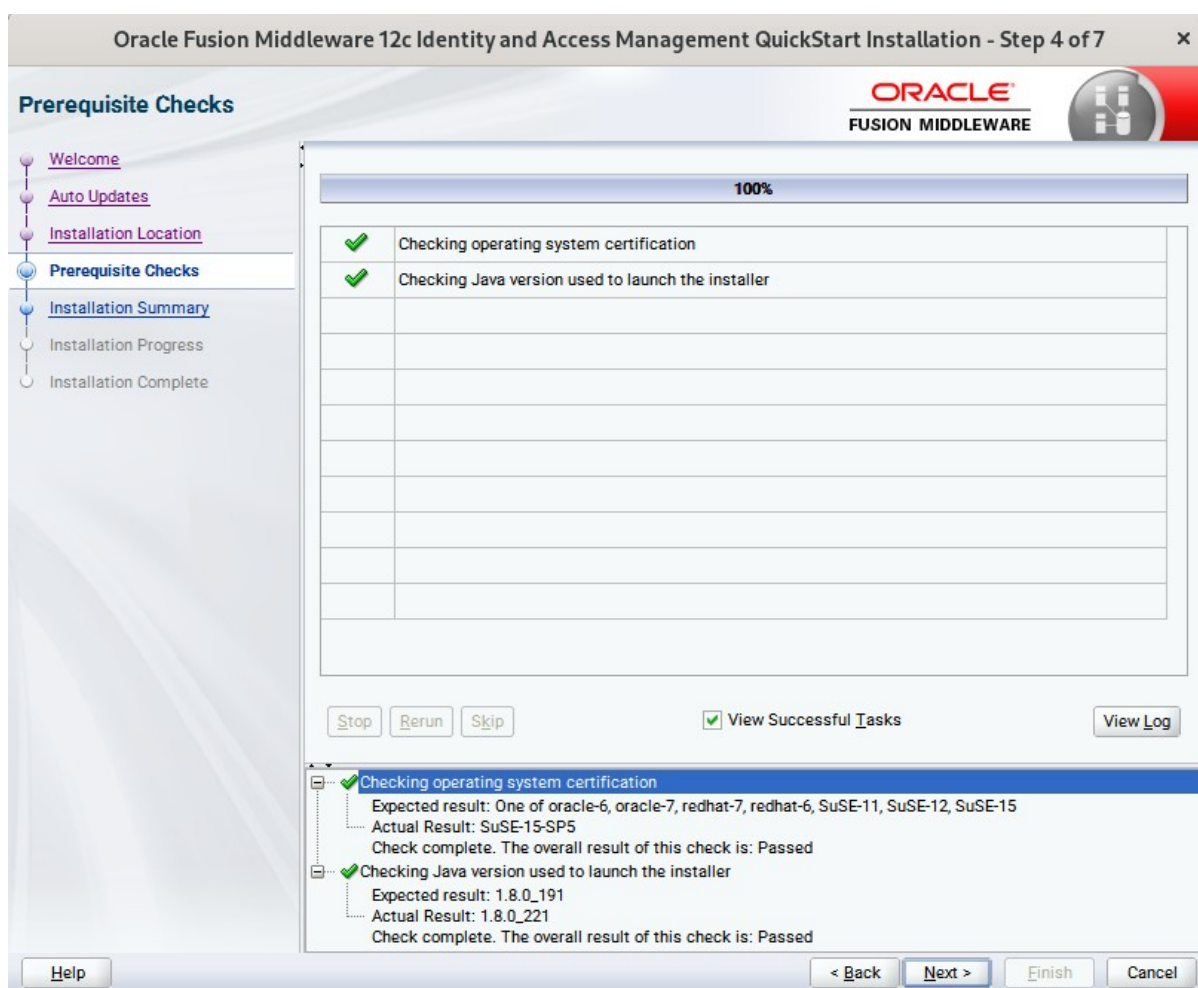
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



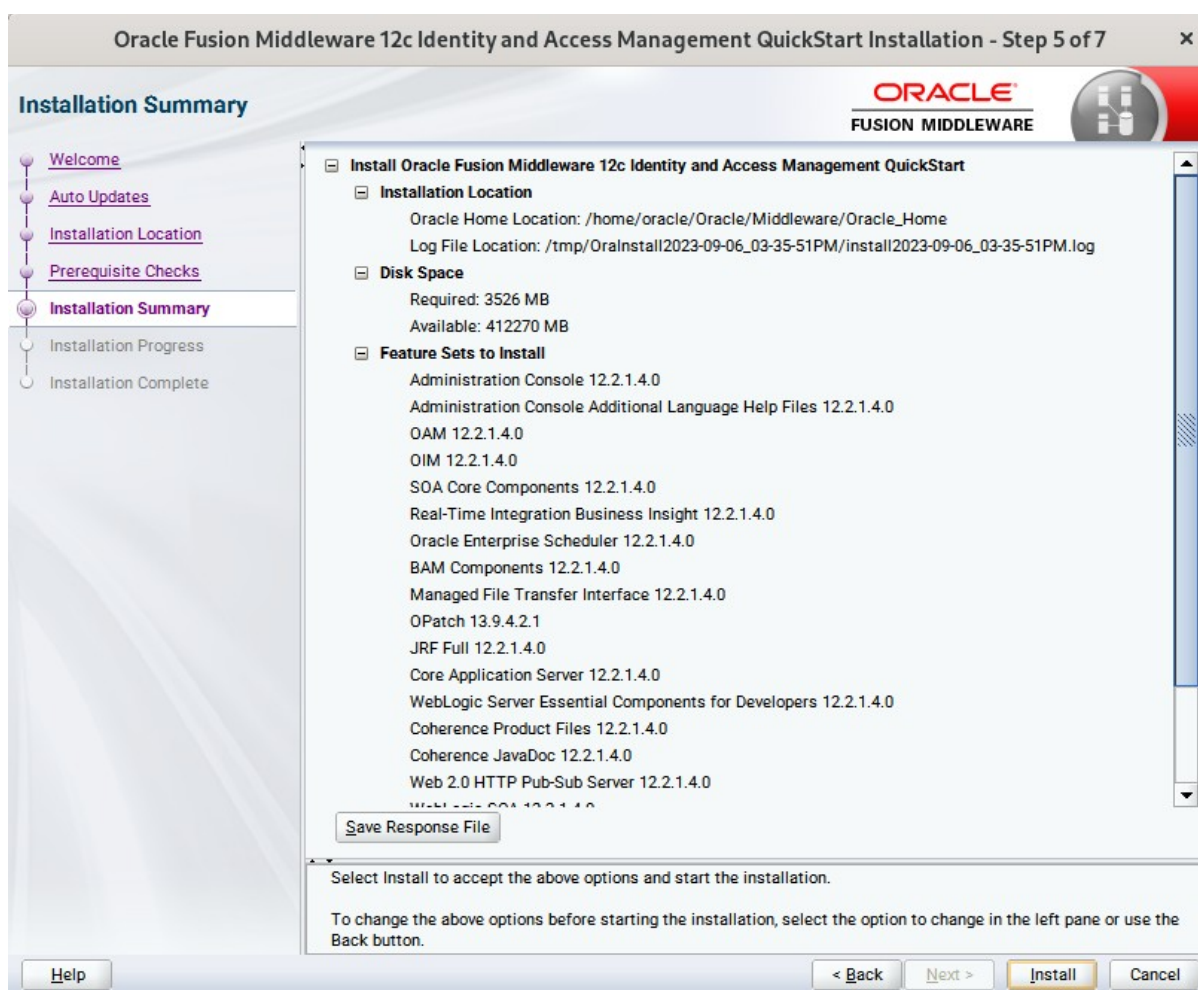
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



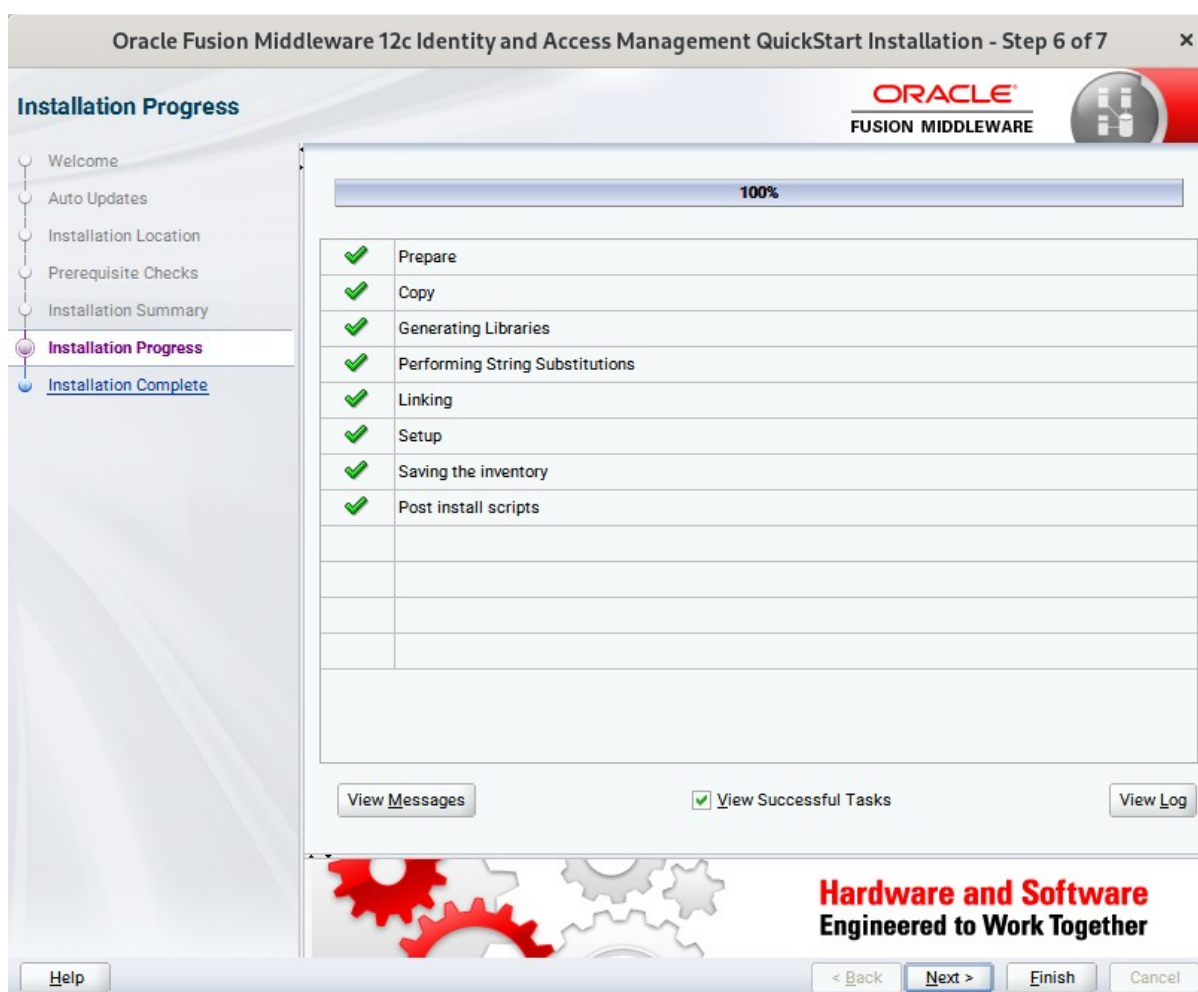
This page shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



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

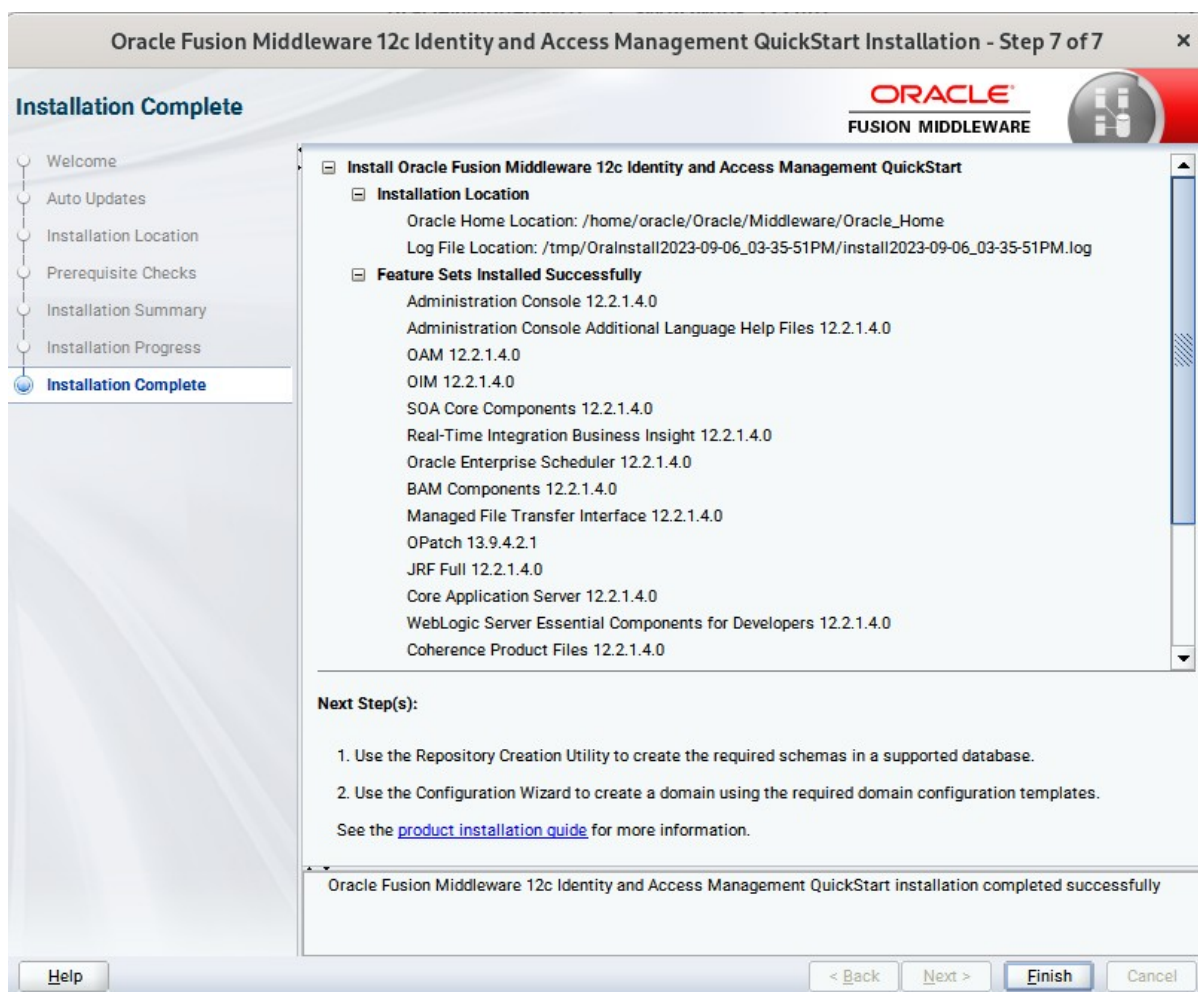
7). The **Installation Progress** page appears.



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



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



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

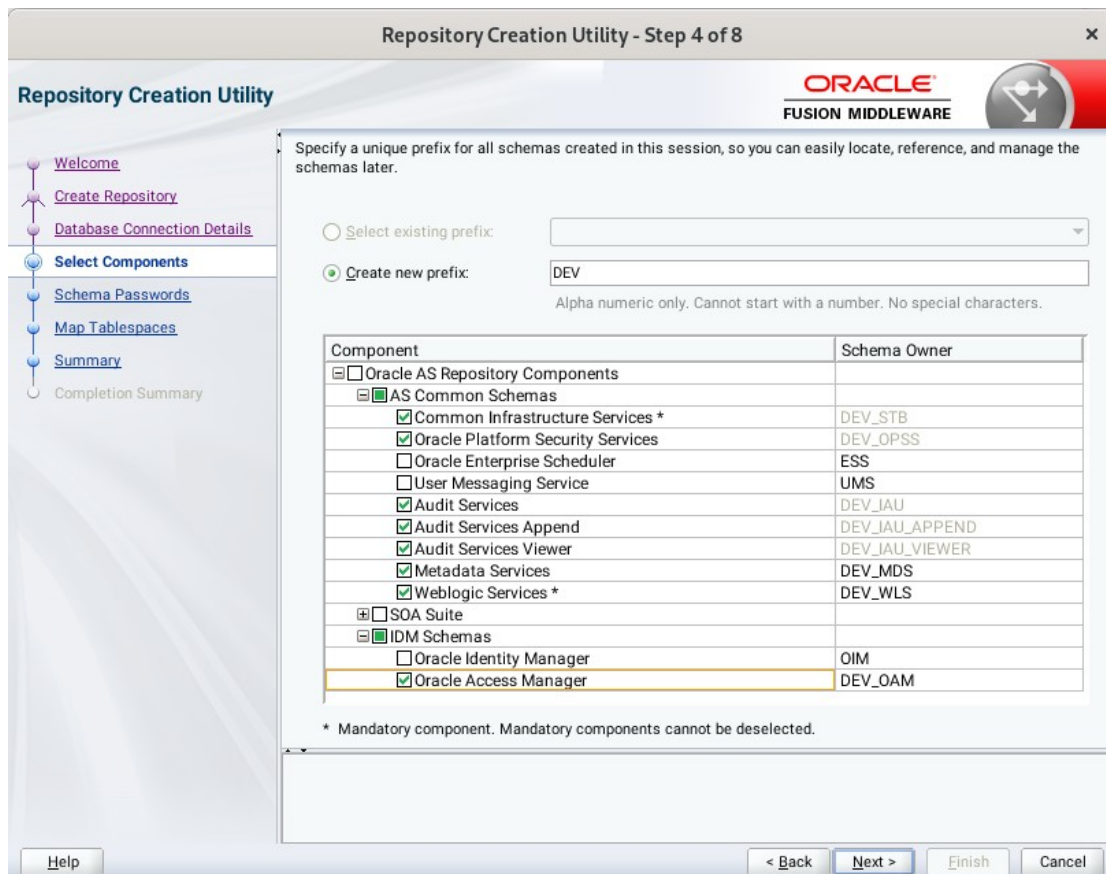


## 2. Configuring the Oracle Access Manager Domain

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

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

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



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

Ensure the schema creation is successful.

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

**Repository Creation Utility** ORACLE FUSION MIDDLEWARE

Database details:

Host Name: hpgen9-01  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 2 minutes 52 seconds

RCU Logfile: /tmp/RCU2023-09-06\_16-52\_1166985443/logs/rcu.log  
Component Log Directory: /tmp/RCU2023-09-06\_16-52\_1166985443/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:10.130(sec)	stb.log
Oracle Platform Security Services	Success	00:36.972(sec)	opss.log
Oracle Access Manager	Success	00:29.830(sec)	oam.log
Audit Services	Success	00:21.222(sec)	iau.log
Audit Services Append	Success	00:09.536(sec)	iau_append.log
Audit Services Viewer	Success	00:09.410(sec)	iau_viewer.log
Metadata Services	Success	00:15.780(sec)	mds.log
Weblogic Services	Success	00:19.137(sec)	wls.log

Help < Back Next > Create Close

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

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

### Follow these steps:

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

Fusion Middleware Configuration Wizard - Page 1 of 8

Configuration Type

ORACLE  
FUSION MIDDLEWARE

Create Domain

Templates

Administrator Account

Domain Mode and JDK

Advanced Configuration

Configuration Summary

Configuration Progress

End Of Configuration

What do you want to do?

Create a new domain

Update an existing domain

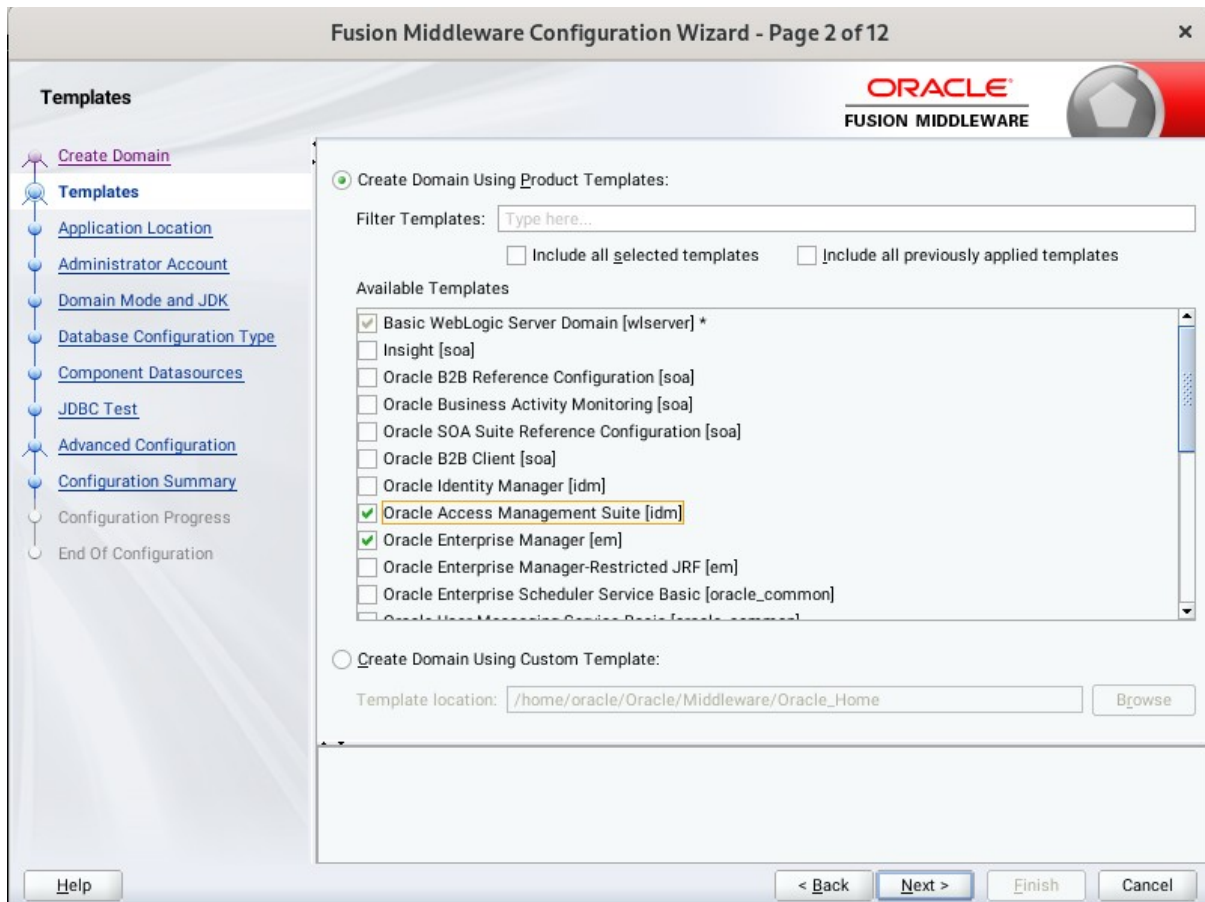
Domain Location: oracle/Oracle/Middleware/Oracle\_Home/user\_projects/domains/base\_domain Browse

Create a new domain.

Help < Back Next > Finish Cancel

Click **Next** to continue.

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



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 [wlsrserver]

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.

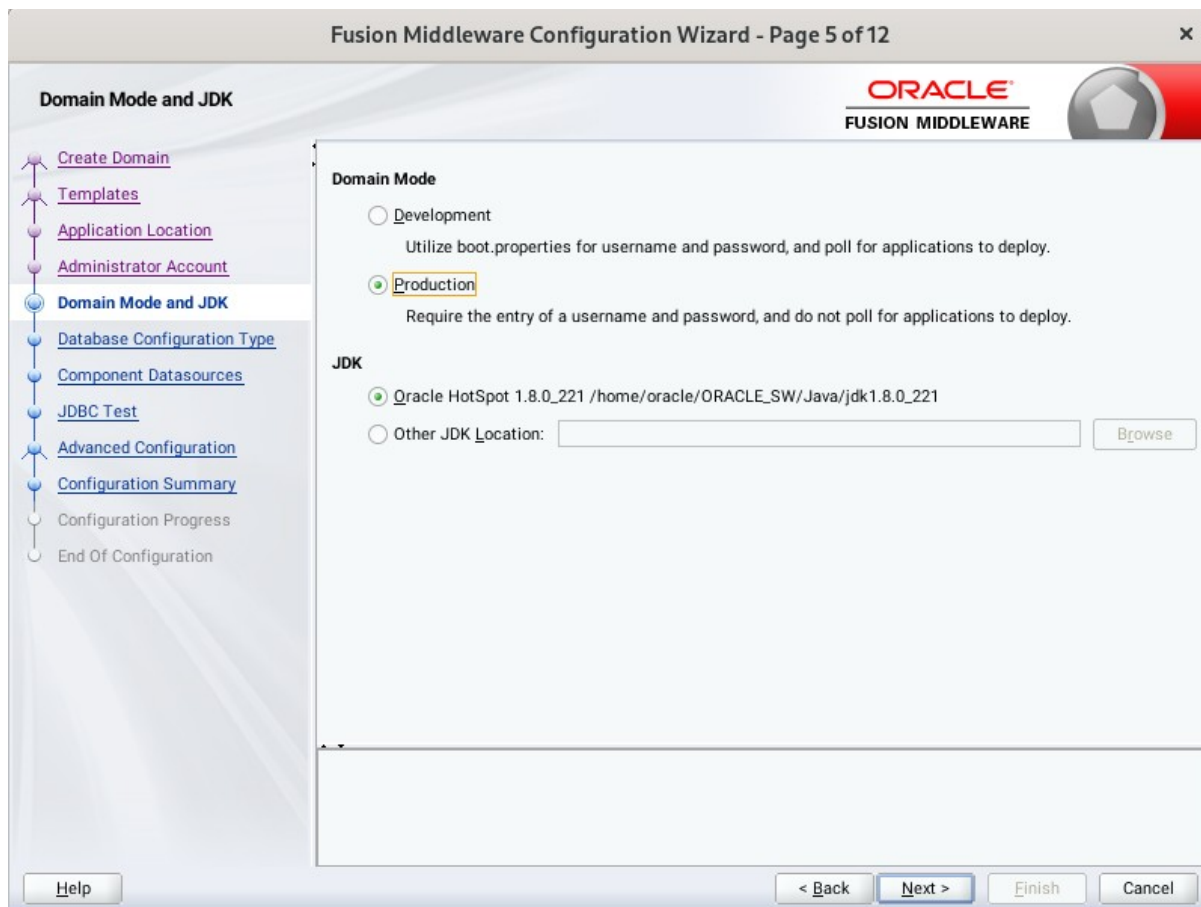
4). The **Administrator Account** screen appears.



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. 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 '.....'. A note at the bottom states: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' Navigation buttons at the bottom include '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located in the bottom left corner.

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

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



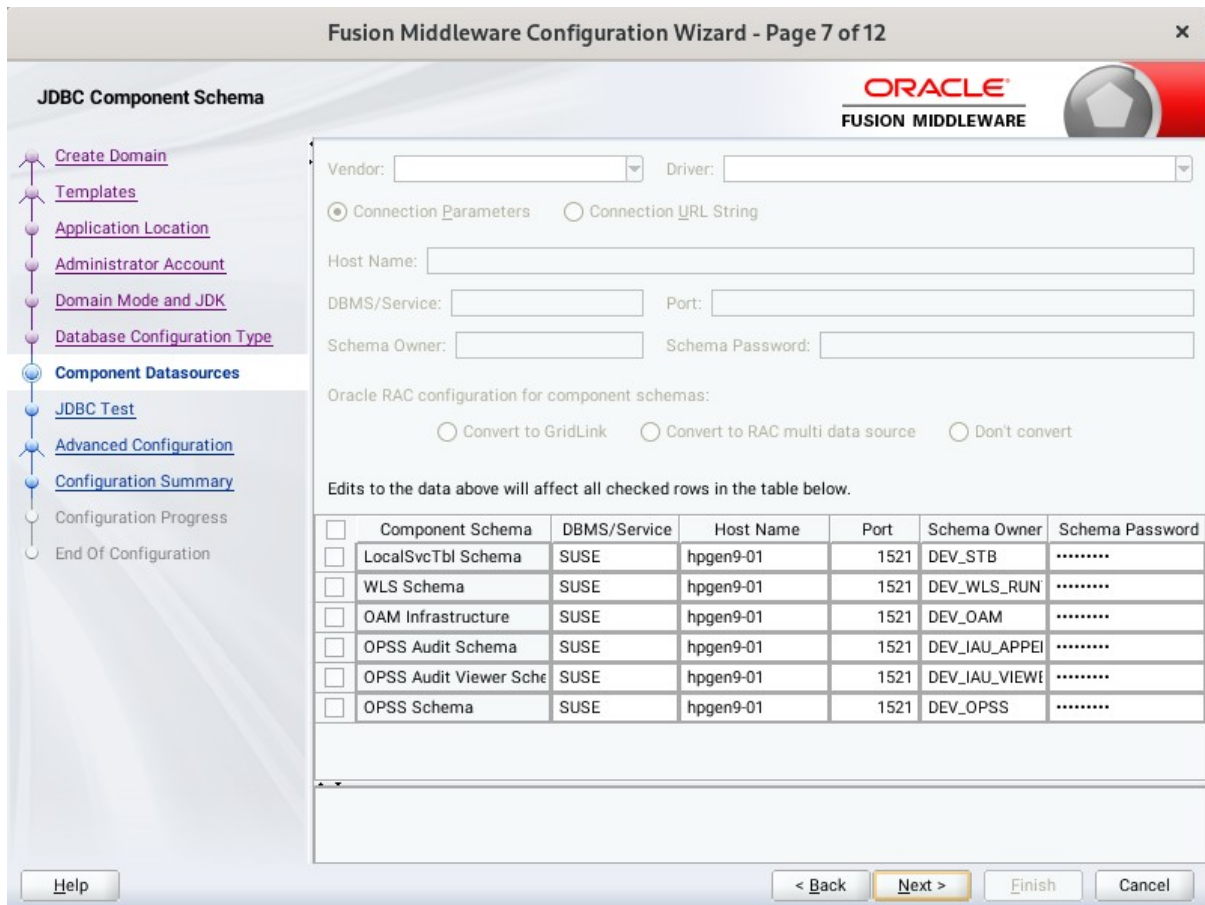
Select **Production** in the **Domain Mode** field and select the **Oracle HotSPot JDK** in the **JDK** field. Click **Next** to continue.

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

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

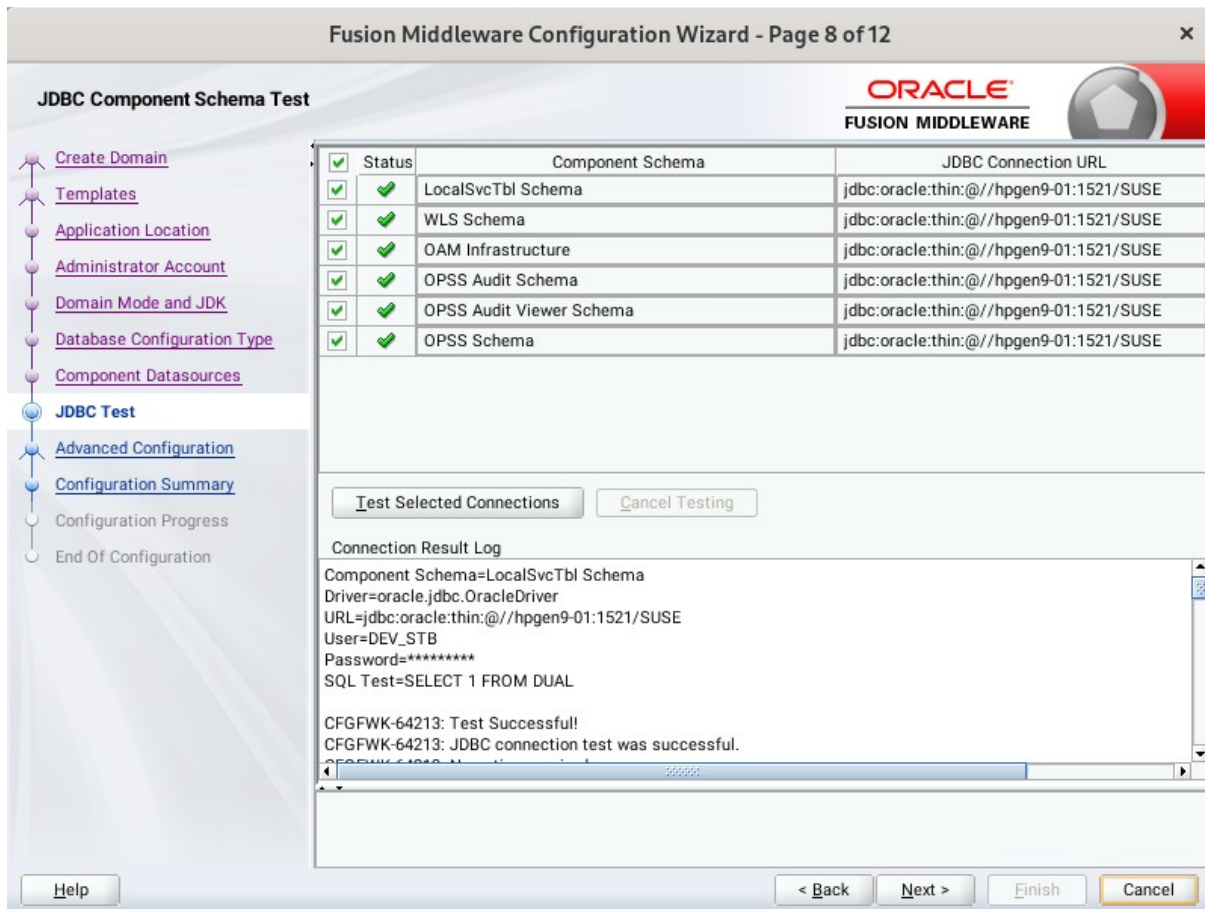


7). The **JDBC Component Schema** screen appears.



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

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



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

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

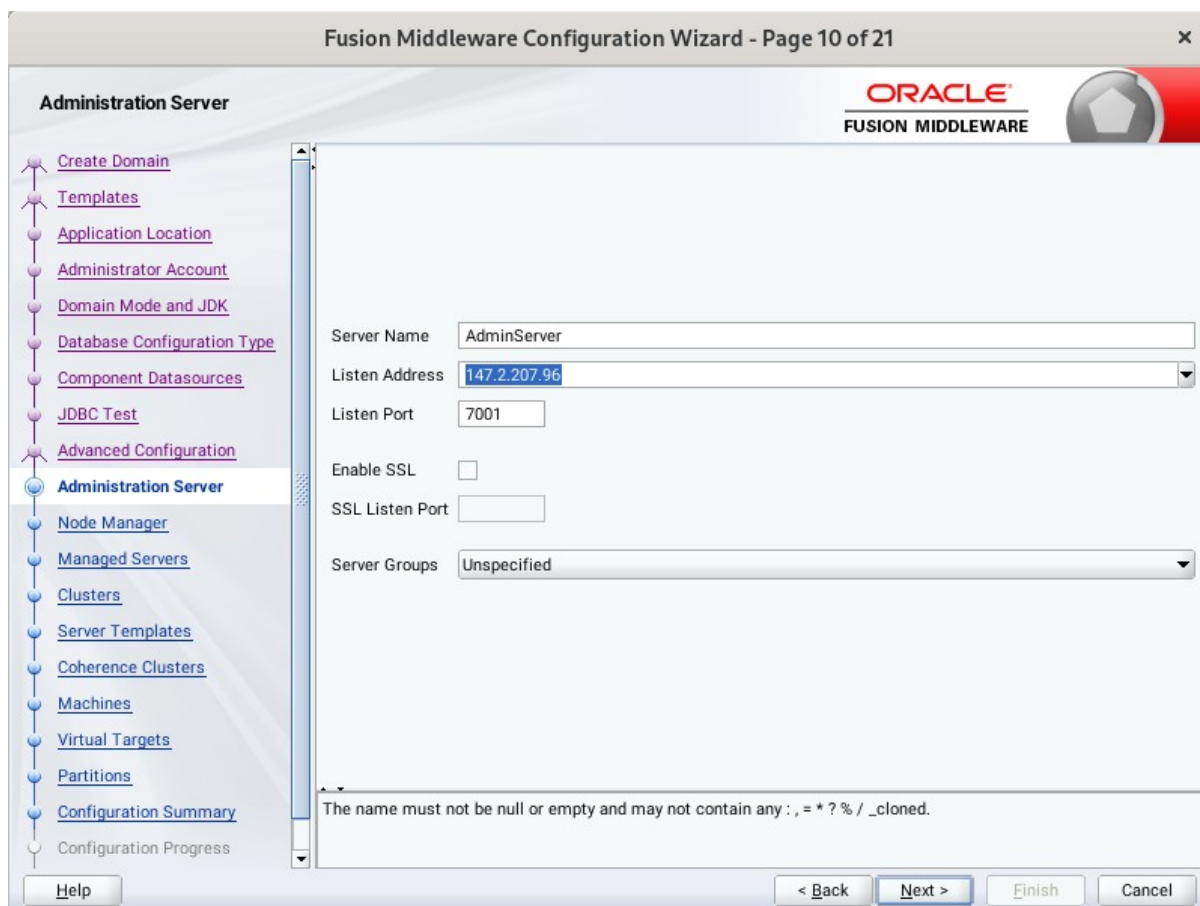


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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



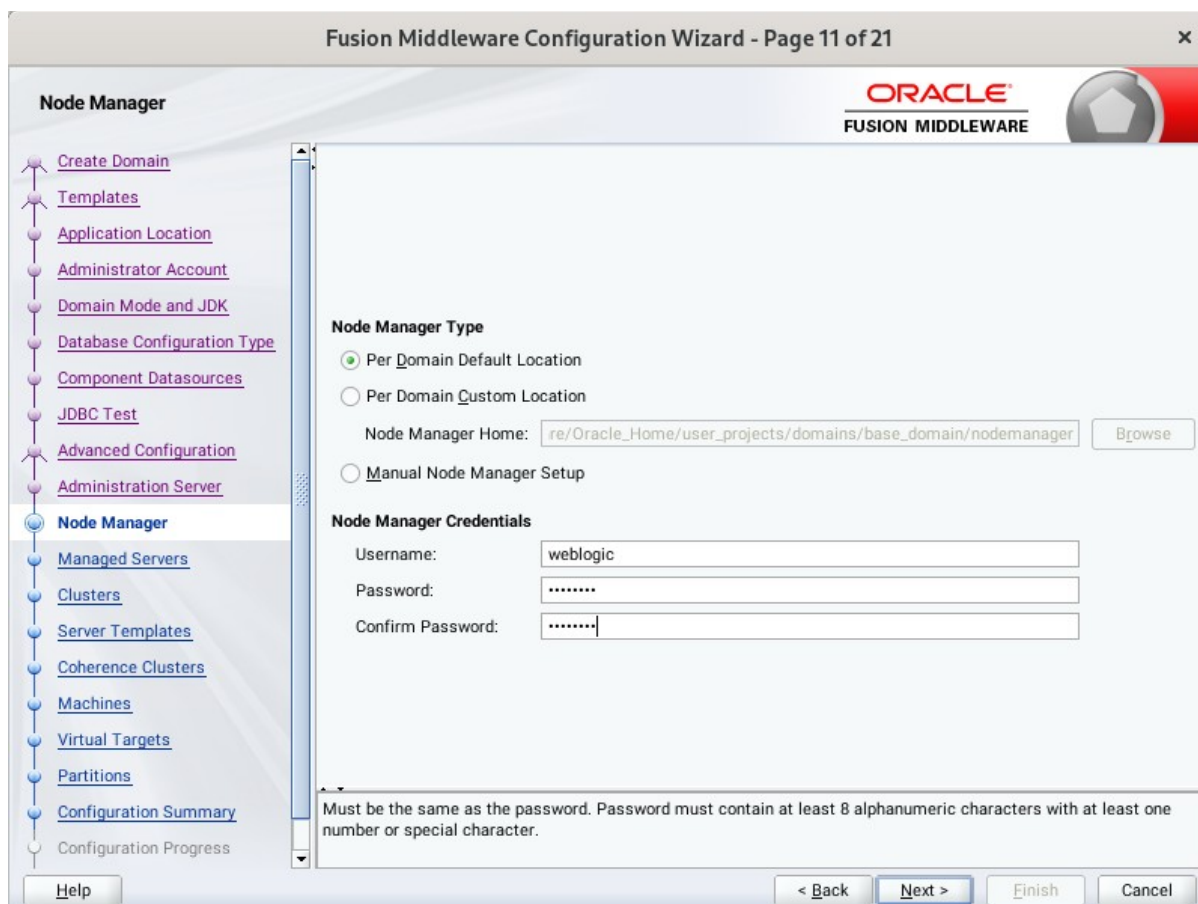
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 10 of 21". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation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

- Server Name: AdminServer
- Listen Address: 147.2.207.96 (selected from a dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty field)
- Server Groups: Unspecified (selected from 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: "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 "Fusion Middleware Configuration Wizard - Page 11 of 21" window. The title bar includes the Oracle logo and "FUSION MIDDLEWARE". The left sidebar contains a navigation tree with the following items: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Administration Server, **Node Manager** (highlighted), Managed Servers, Clusters, Server Templates, Coherence Clusters, Machines, Virtual Targets, Partitions, Configuration Summary, and Configuration Progress. 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:

Below the credentials section, a note states: "Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character." At the bottom of the window, there are four buttons: "Help", "< Back", "Next >", "Finish", and "Cancel".

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

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

Fusion Middleware Configuration Wizard - Page 12 of 21

ORACLE  
FUSION MIDDLEWARE

Managed Servers

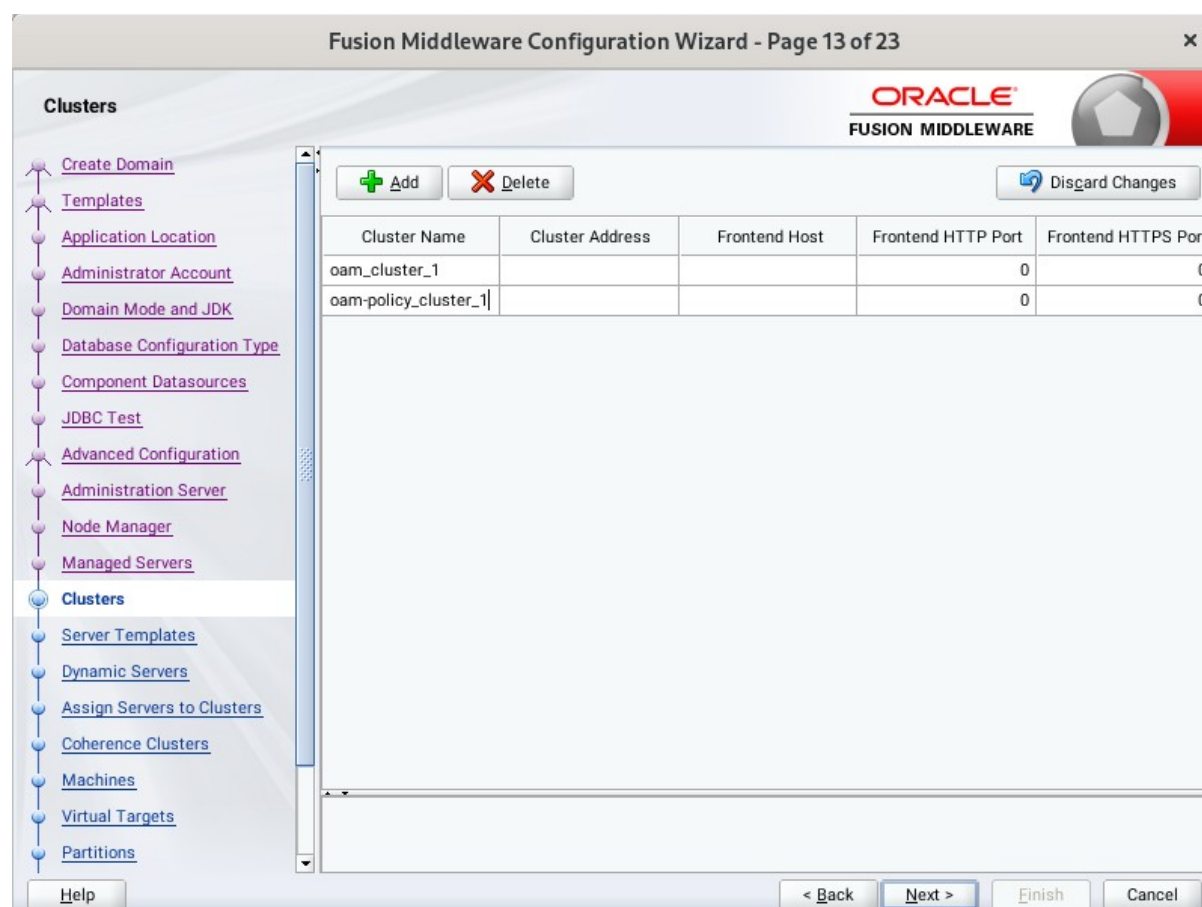
+ Add Clone Delete Disgard Changes

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
oam_server1	147.2.207.96	14100	<input type="checkbox"/>	Disabled	OAM-MGD...
oam_policy_mgr1	147.2.207.96	14150	<input type="checkbox"/>	Disabled	OAM-POLIC...

Help < Back Next > Finish Cancel

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:

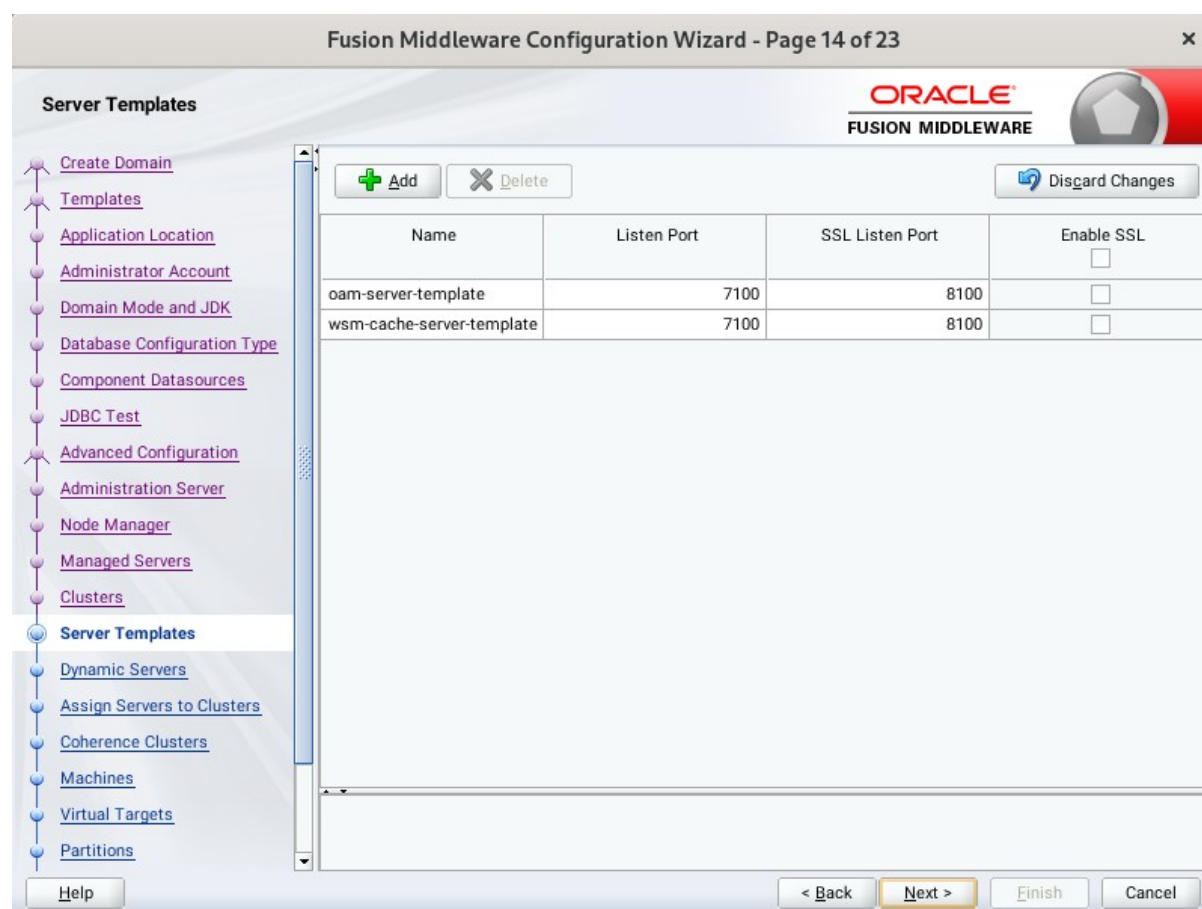
1. Click **Add**.
2. Specify *oam\_cluster\_1* in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create *oam-policy\_cluster\_1* cluster.

Click **Next** to continue.

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



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



The screenshot shows the 'Server Templates' screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 14 of 23'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists various configuration steps, with 'Server Templates' selected. The main area contains a table with the following data:

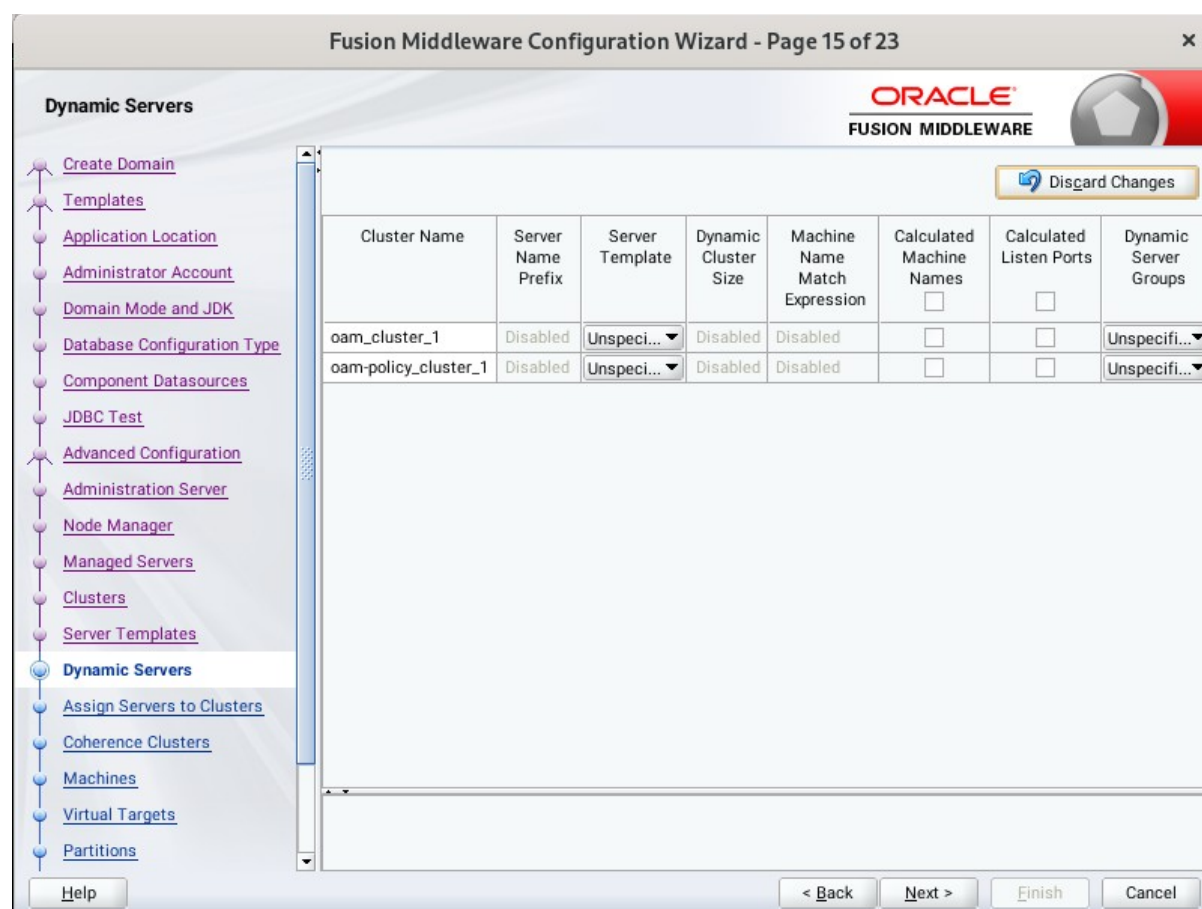
Name	Listen Port	SSL Listen Port	Enable SSL
oam-server-template	7100	8100	<input type="checkbox"/>
wsm-cache-server-template	7100	8100	<input type="checkbox"/>

Buttons for '+ Add', 'X Delete', and 'Disgard Changes' are located above the table. At the bottom of the window, there are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted.

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**.

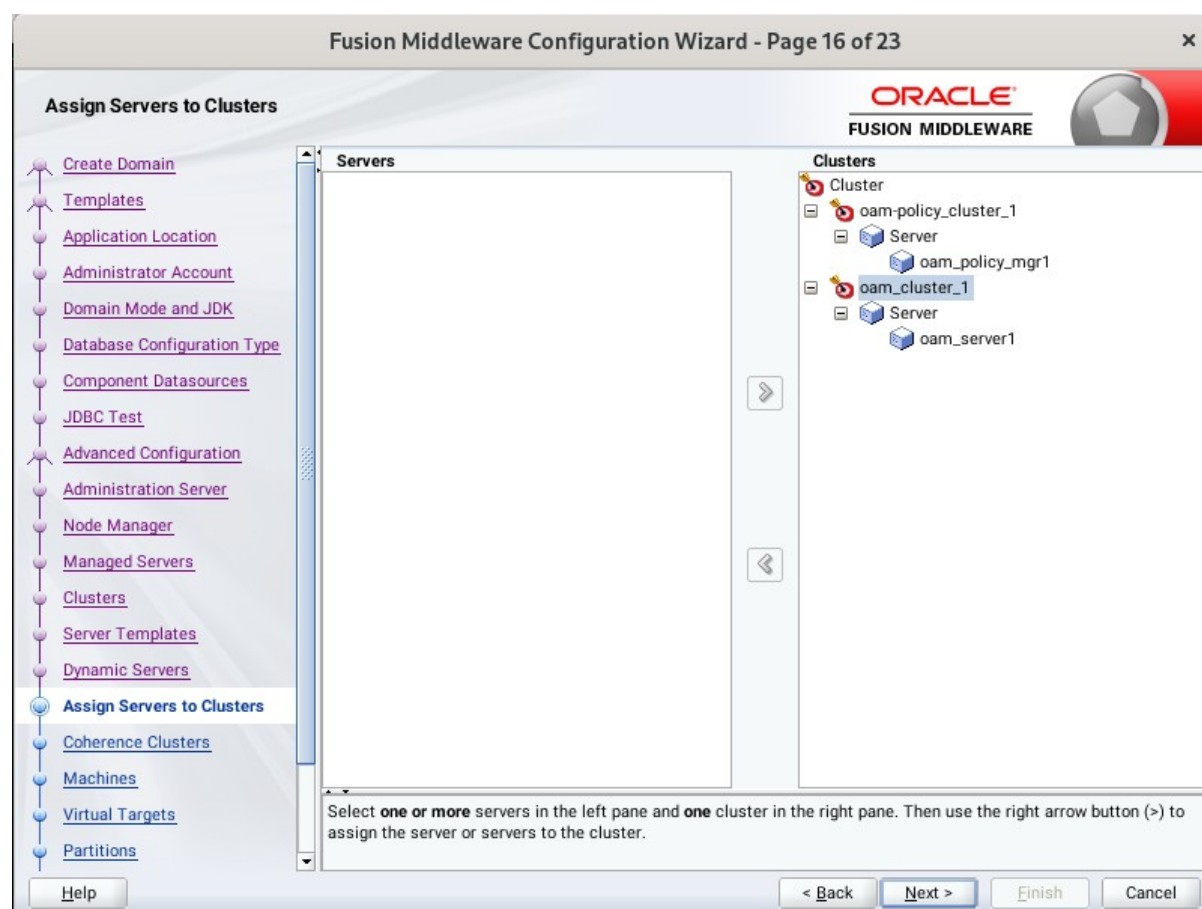


15). The **Dynamic Servers** screen appears.



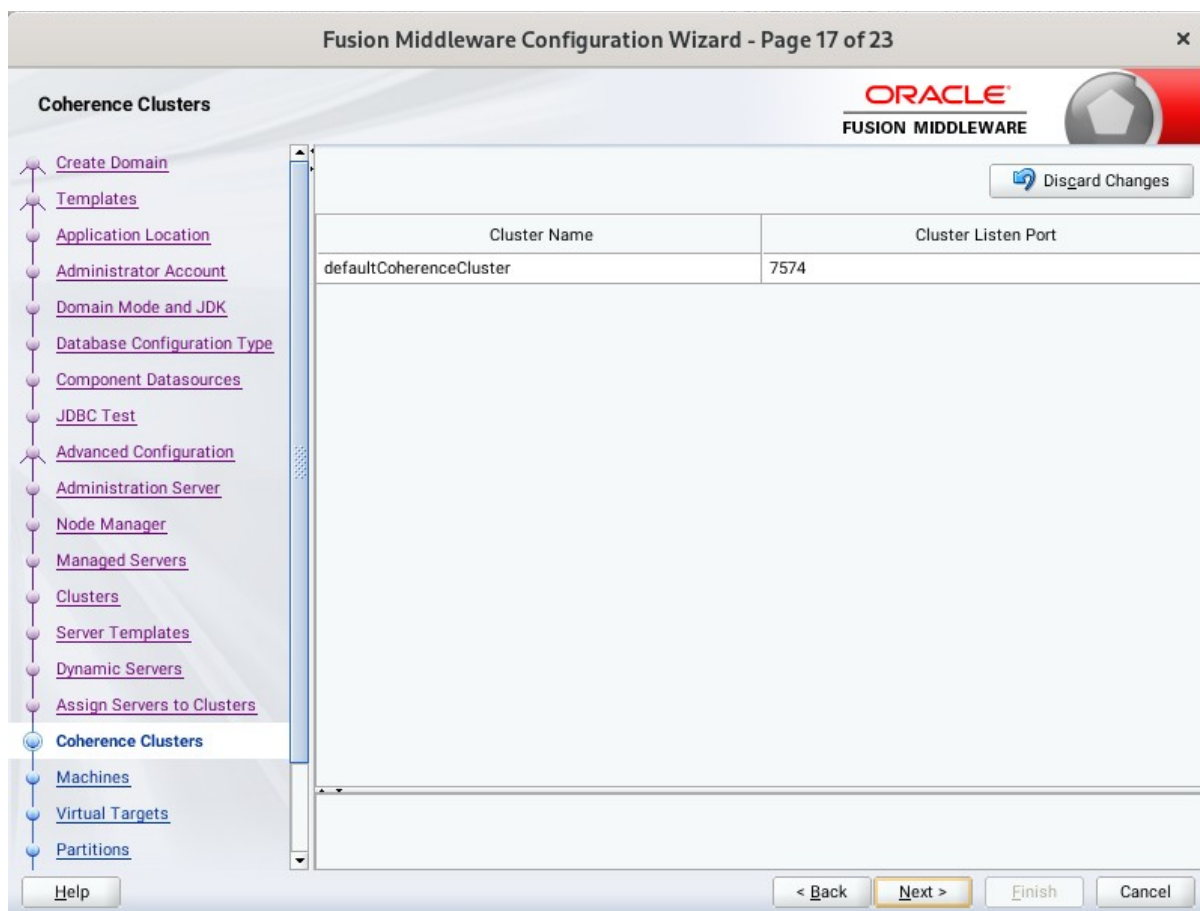
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



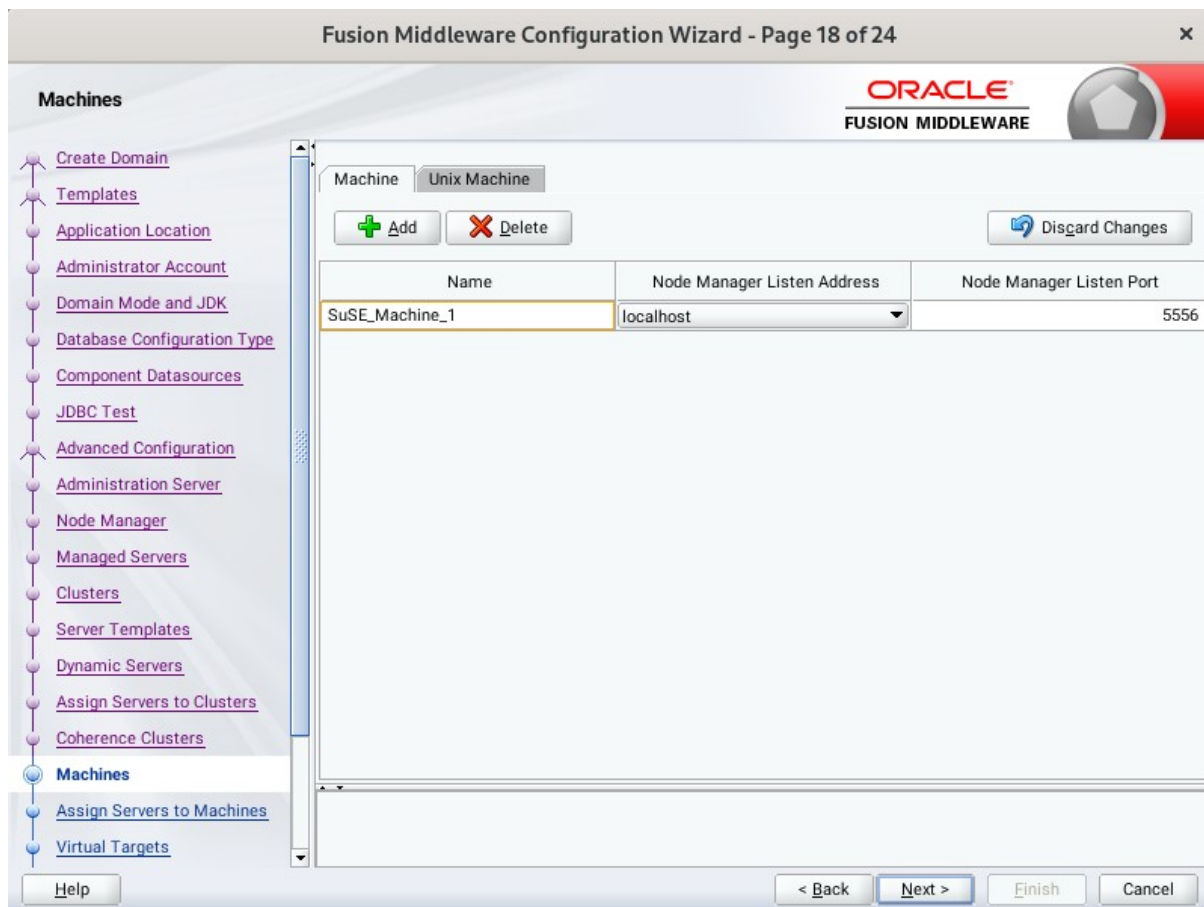
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



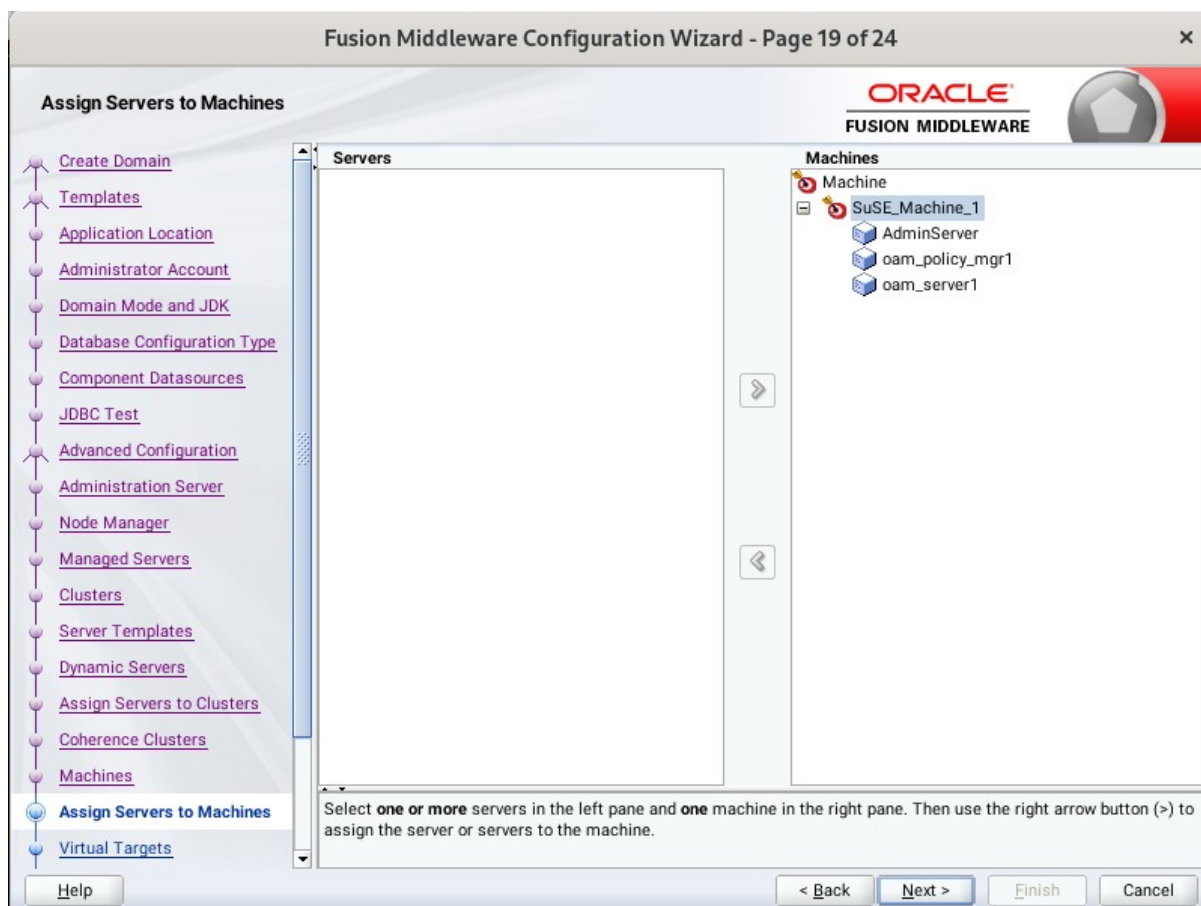
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



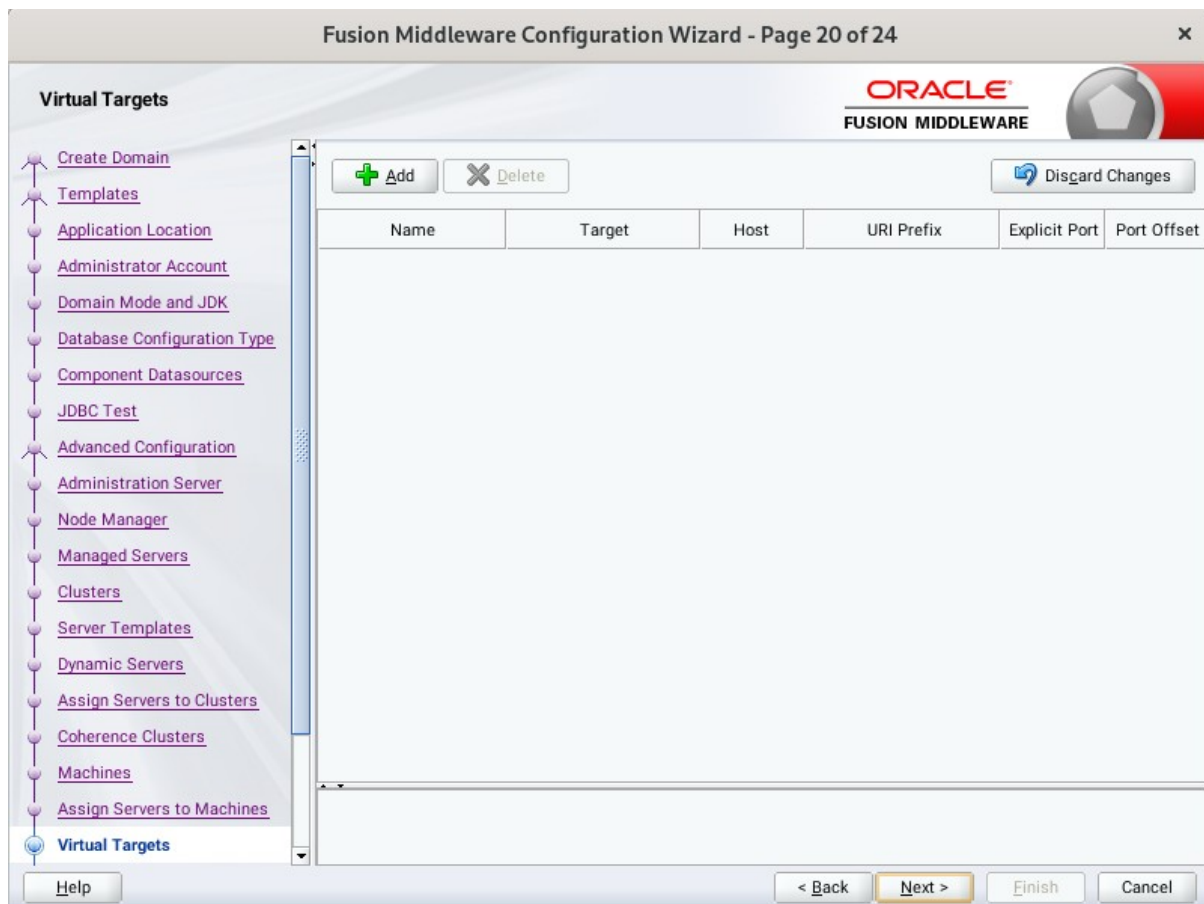
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



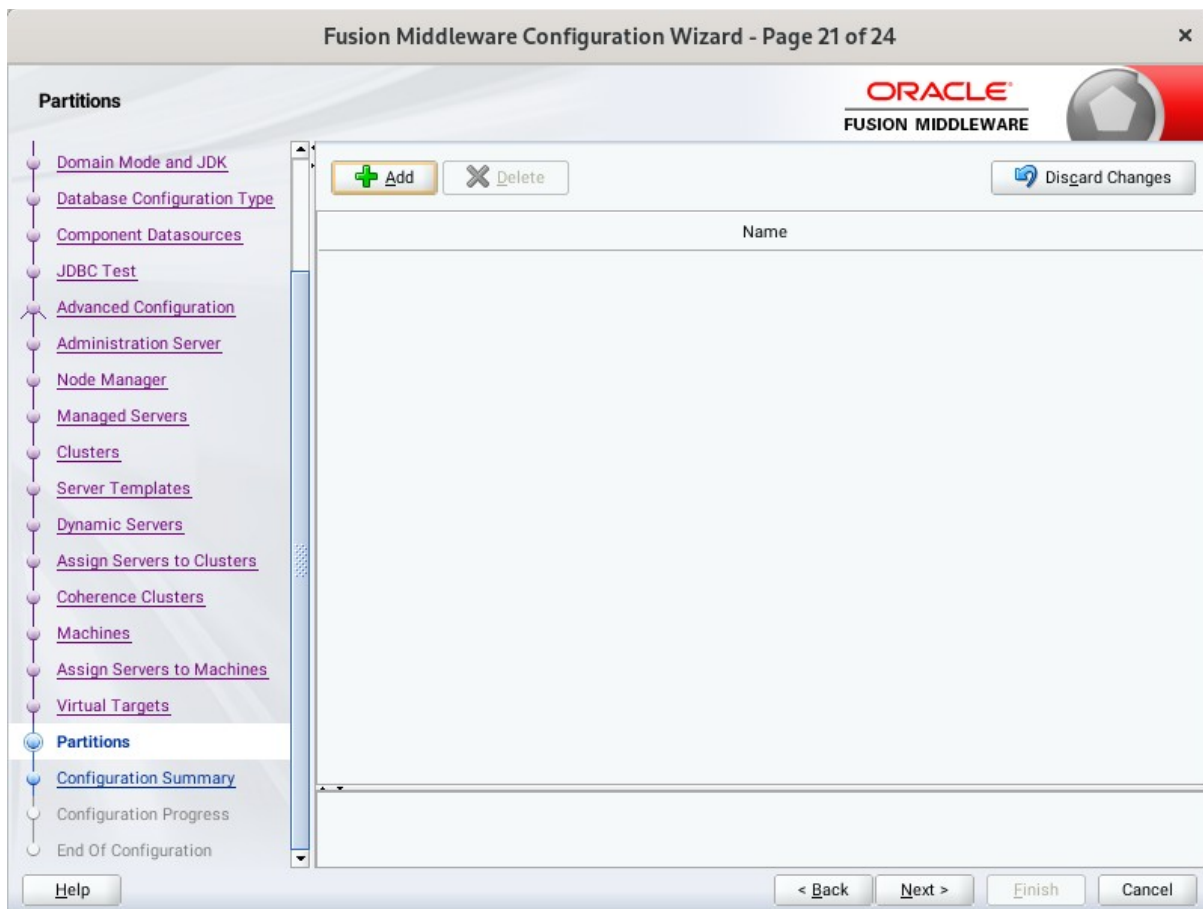
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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.

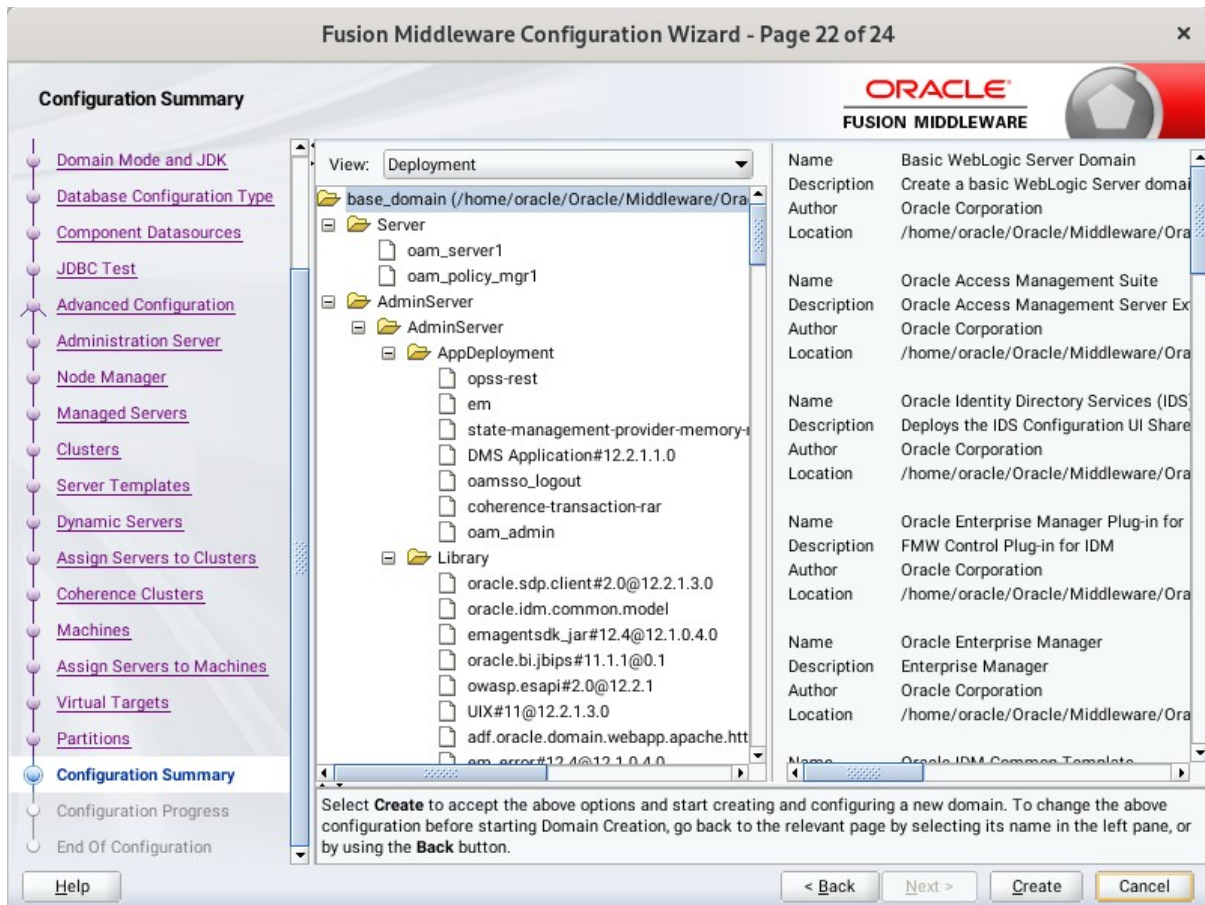
21). The **Partitions** screen appears.



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



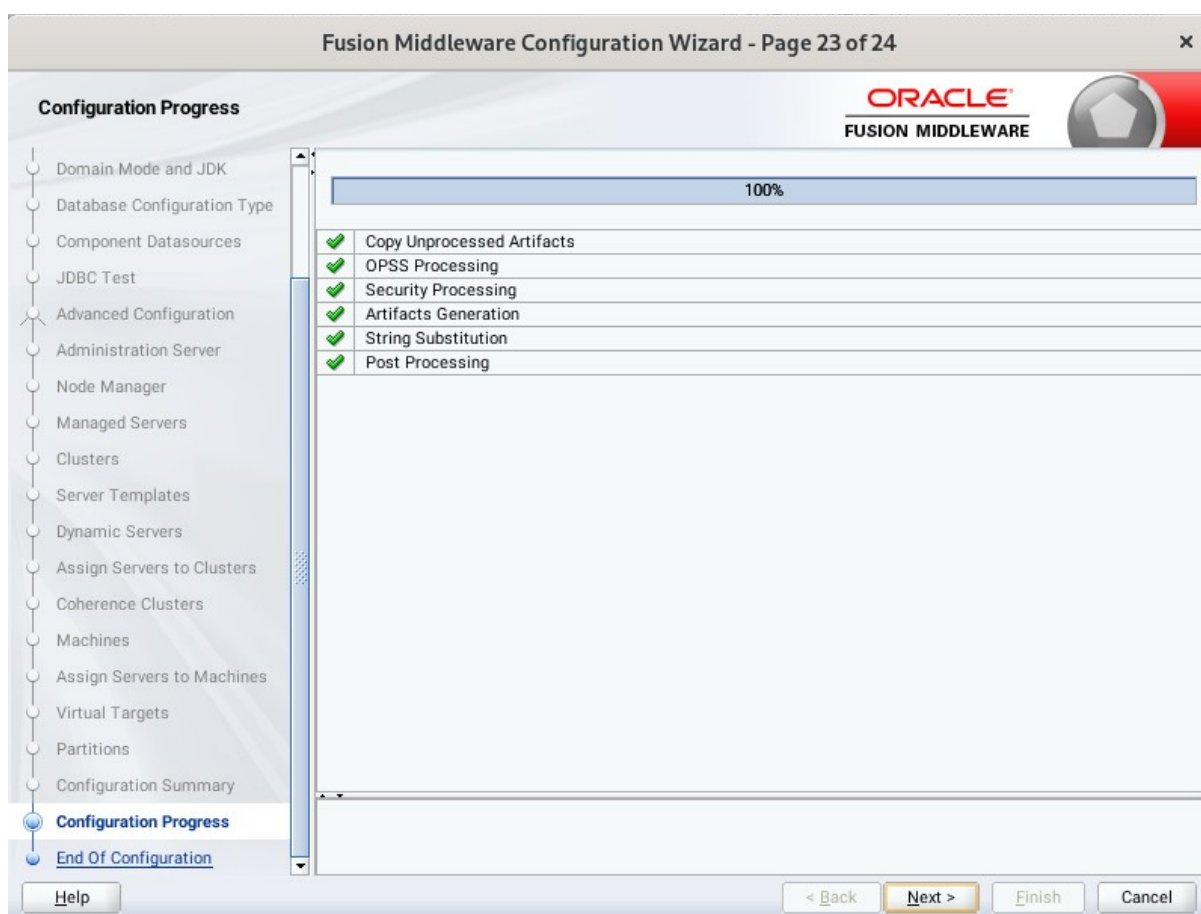
22). The **Configuration Summary** screen appears.



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

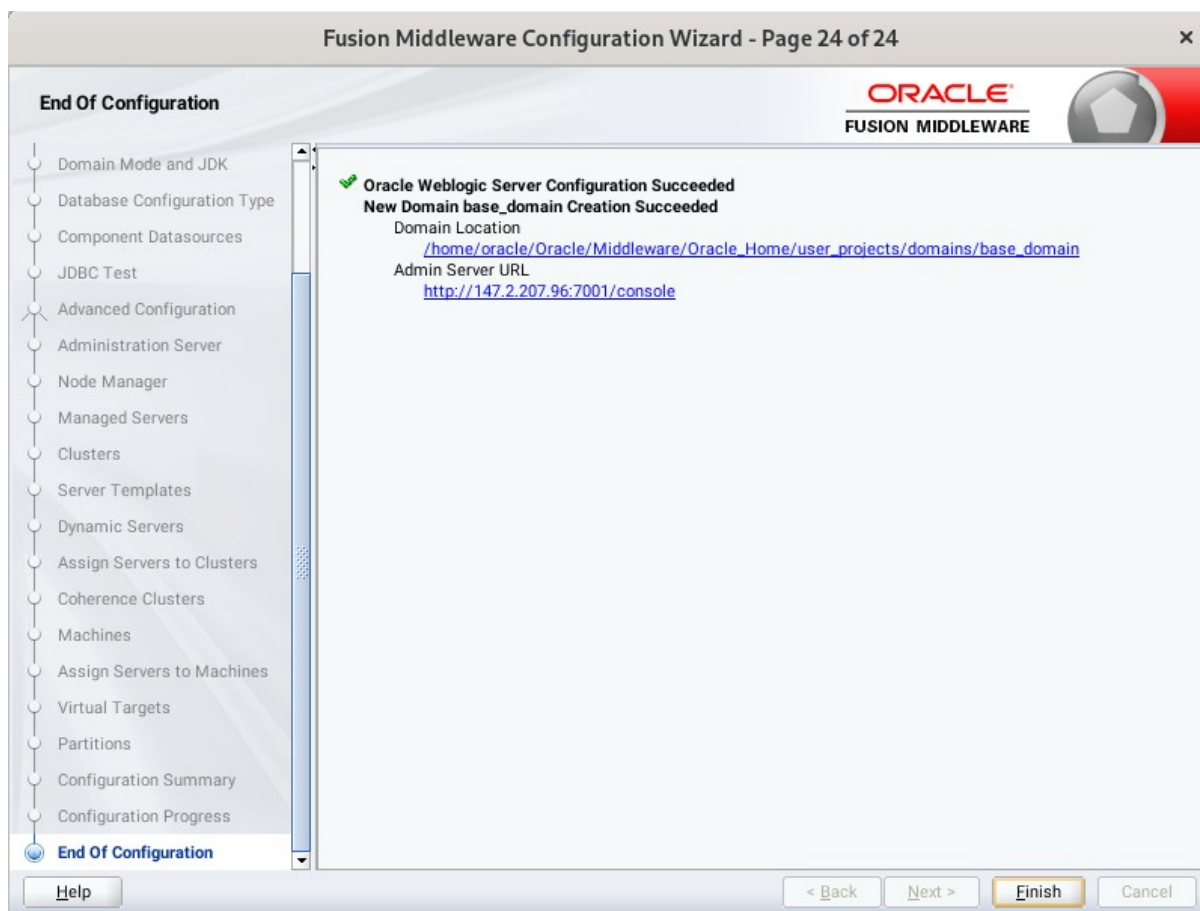


23). The **Configuration Progress** screen appears.



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@hpgen9-01:~/ns/base_domain/bin
oracle@hpgen9-01:~/ns/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 30490
nohup: ignoring input and redirecting stderr to stdout
oracle@hpgen9-01:~/ns/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_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/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/.. -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Sep 6, 2023 5:27:19 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Sep 6, 2023 5:27:19 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Sep 6, 2023 5:27:19 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Sep 6, 2023 5:27:19 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Sep 6, 2023 5:27:19 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Sep 06, 2023 5:27:19 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml
Sep 06, 2023 5:27:20 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<Sep 6, 2023 5:27:20 PM GMT+08:00> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Or

```

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

```

oracle@hpgen9-01:...ns/base_domain/bin
oracle@hpgen9-01:...E_SW/IDM/qs_1... x oracle@hpgen9-01:...E_SW/IDM/qs_1... x oracle@hpgen9-01:...ns/base_domain... x
oring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Sep 6, 2023 5:35:56,134 PM GMT+08:00> <Warning> <org.glassfish.jersey.internal.Errors> <BEA-000000> <The following warnings h
ave been detected: WARNING: A HTTP GET method, public java.lang.Object oracle.security.am.common.rest.agent.registration.Agent
RegistrationService.getService(java.lang.String,java.lang.String), should not consume any entity.
>
<Sep 6, 2023 5:35:56,272 PM GMT+08:00> <Error> <oracle.oam.foundation.access> <BEA-000000> <Failed to init Context path:/idaas
/am/esso>
<Sep 6, 2023 5:35:56,855 PM GMT+08:00> <Warning> <org.glassfish.jersey.internal.Errors> <BEA-000000> <The following warnings h
ave been detected: WARNING: A HTTP GET method, public java.lang.Object oracle.security.am.common.rest.agent.registration.Agent
RegistrationService.getService(java.lang.String,java.lang.String), should not consume any entity.
>
<Sep 6, 2023 5:35:59,514 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ign
oring feature-dependency on feature "AdfUIChoose". No such feature exists.>
2023-09-06 17:35:59.819/252.671 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_
Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2023-09-06 17:35:59.844/252.695 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogi
c.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Sep 6, 2023 5:35:59,860 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conne
ction with the Domain level Diagnostic Service.>
<Sep 6, 2023 5:36:01,367 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Sep 6, 2023 5:36:01,429 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Sep 6, 2023 5:36:01,430 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving con
nection list DomainRuntimeServiceMBean>
<Sep 6, 2023 5:36:02,347 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Serv
er "AdminServer" for domain "base_domain" running in production mode.>
<Sep 6, 2023 5:36:02,348 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Sep 6, 2023 5:36:02,348 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:7001
 for protocols iiop, t3, ldap, snmp, http.>
<Sep 6, 2023 5:36:02,350 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Sep 6, 2023 5:36:02,375 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2023-09-06 17:36:03.107/255.958 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '61' for queue: 'weblog
ic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST

```

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

```

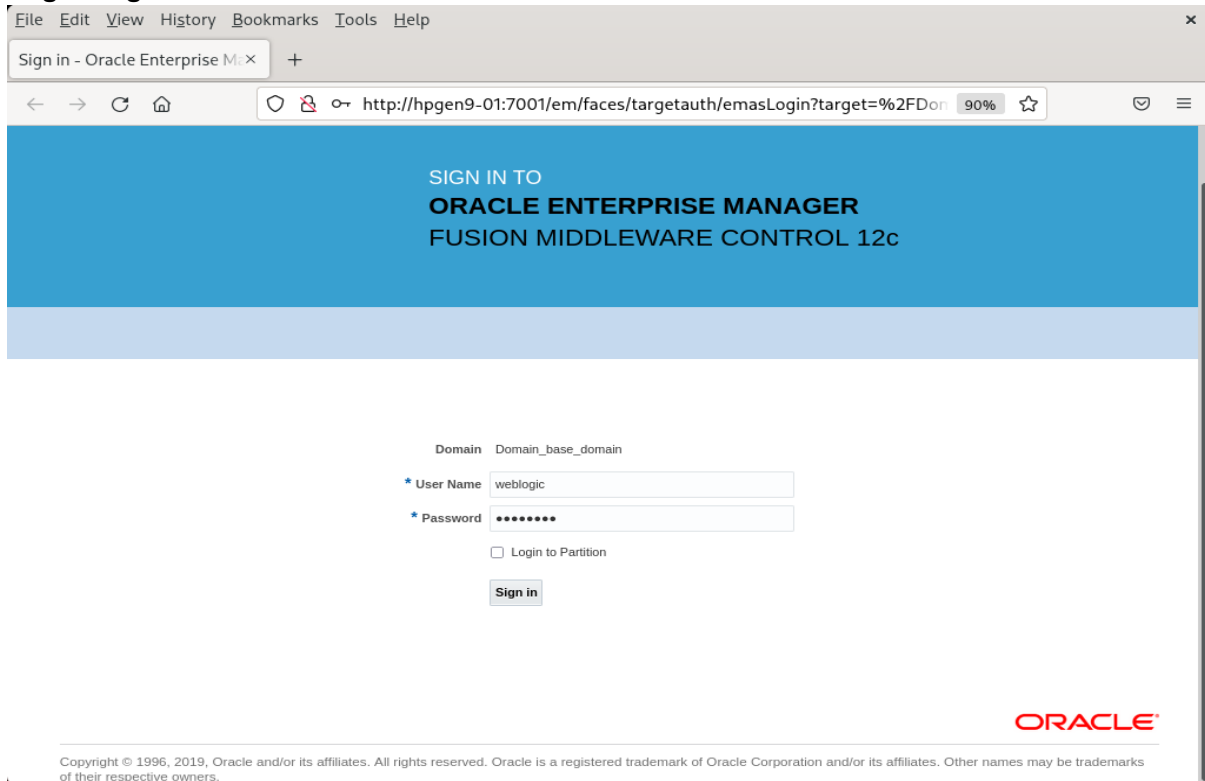
-----
Server state changed to RUNNING.
-----

```

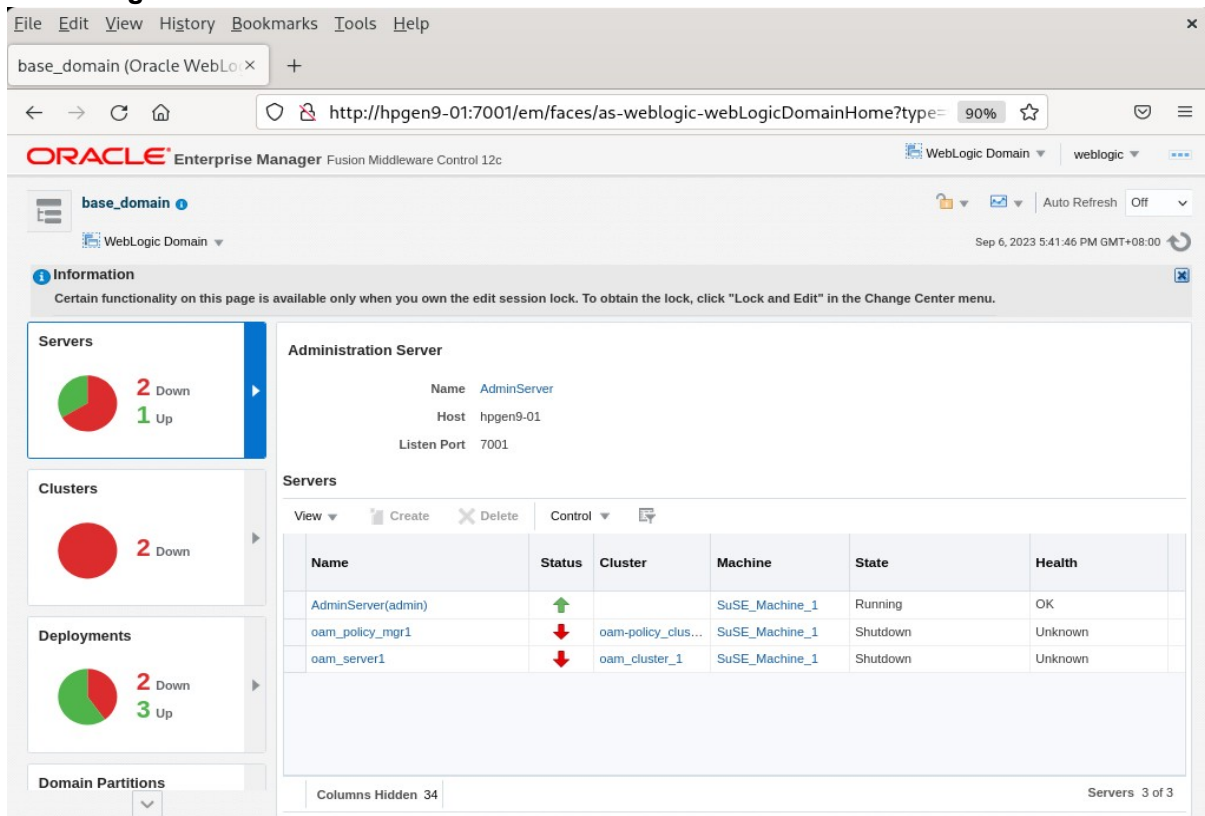
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

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

##### Login Page:



##### Home Page:



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

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

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

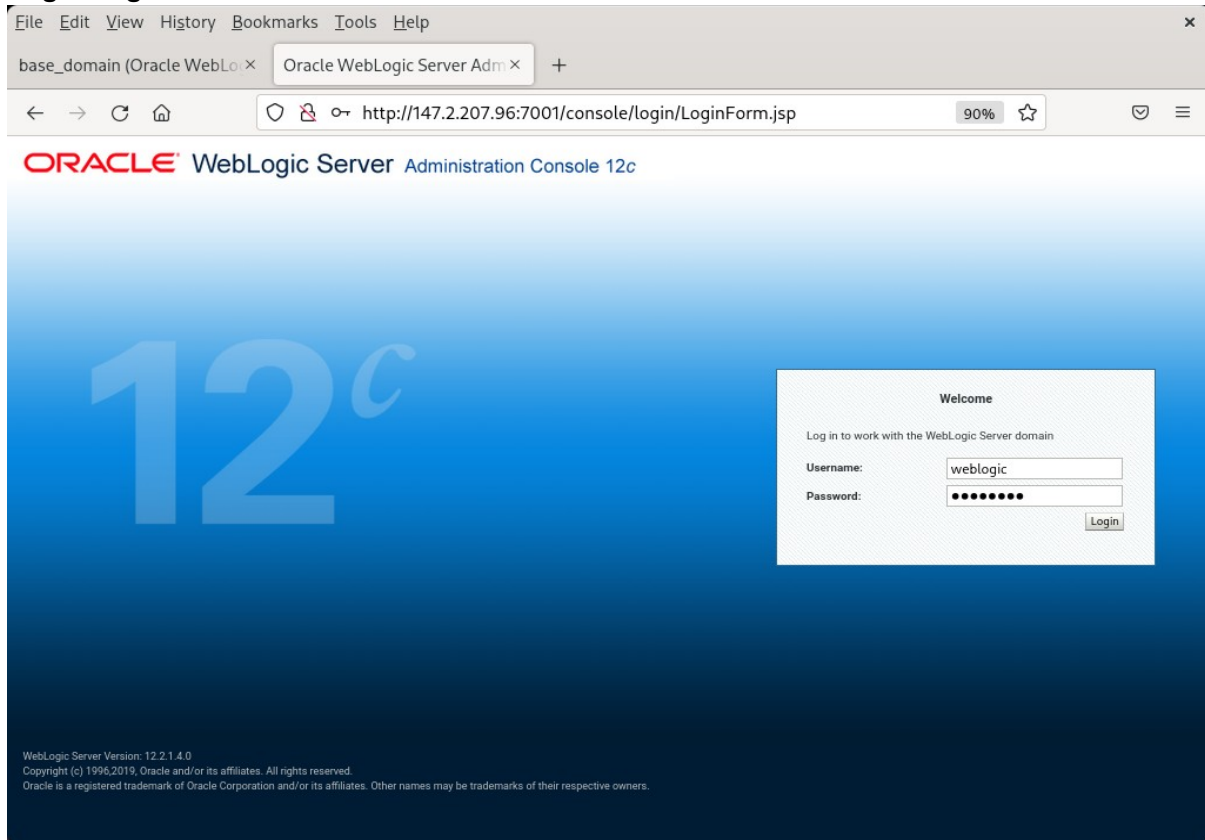
The screenshot shows the Oracle Enterprise Manager interface after the servers have started successfully. The 'Servers' widget now shows 3 Up. The 'Administration Server' details remain the same. The 'Servers' table shows that all three servers (AdminServer(admin), oam\_policy\_mgr1, and oam\_server1) are now in a 'Running' state with 'OK' health.

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

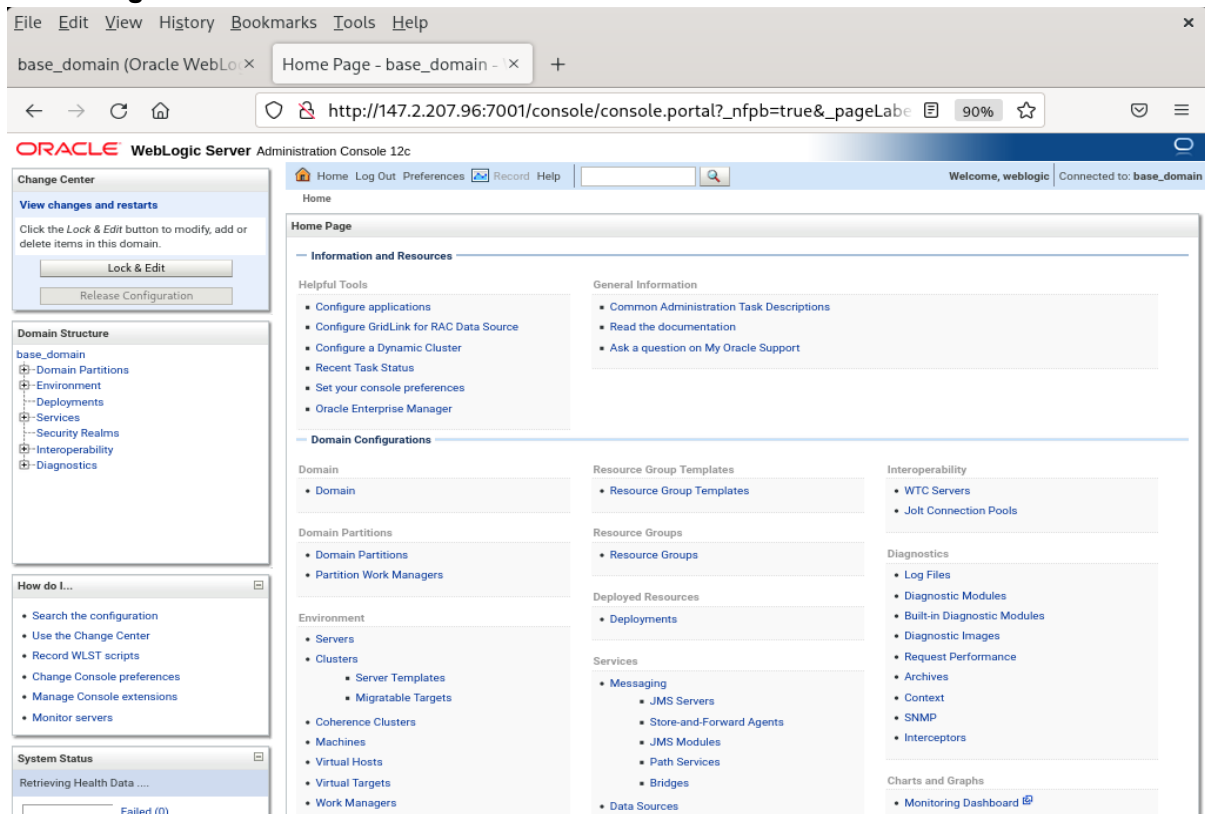
After they start up successfully, each managed server is listed as Running.

## 2). Access to Administration Server Console

### Login Page:



### Home Page:





### Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area is titled "Summary of Servers" and includes a "Configuration" tab. Below the tabs, there is a table of servers. The table has columns for Name, Type, Cluster, Machine, State, Health, and Listen Port. Three servers are listed: AdminServer(admin), oam\_policy\_mgr1, and oam\_server1. All are in a "Configured" state and running on SuSE\_Machine\_1.

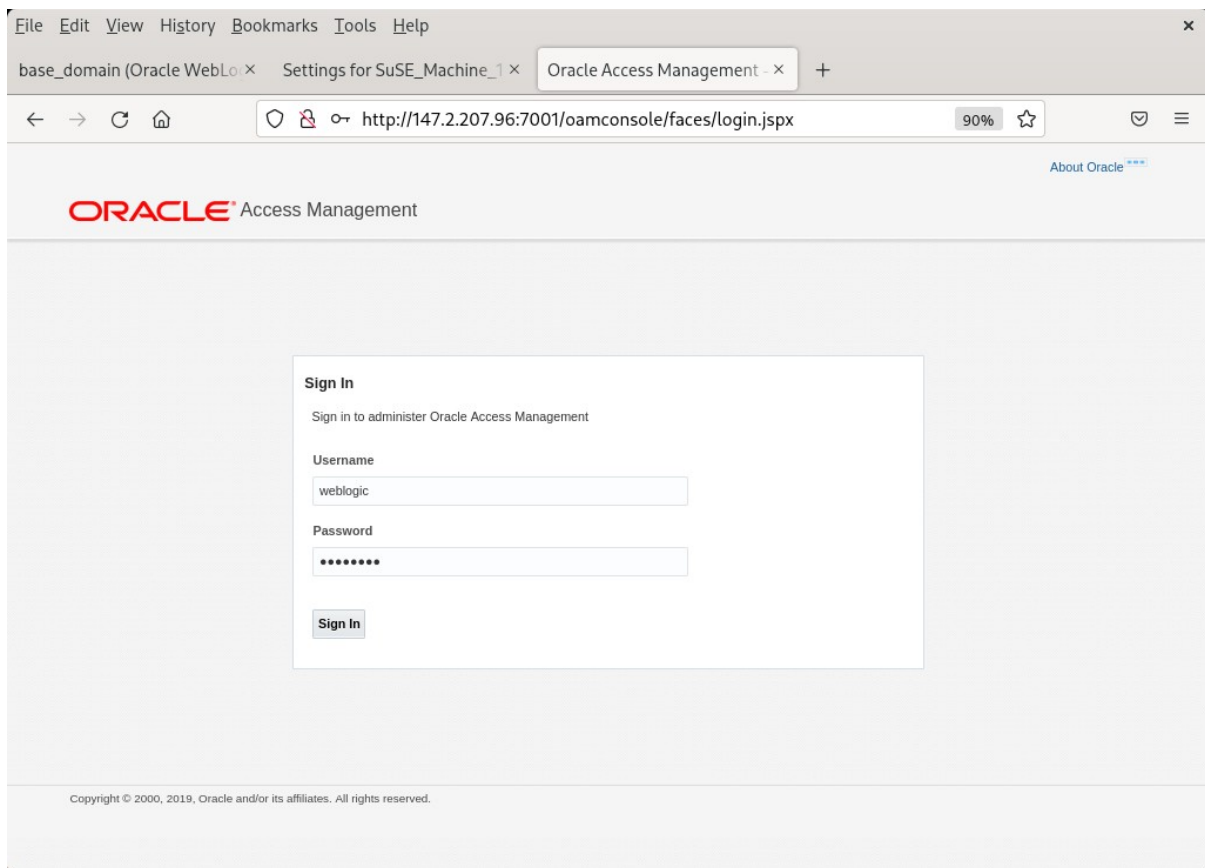
Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		SuSE_Machine_1	RUNNING	OK	7001
oam_policy_mgr1	Configured	oam-policy_cluster_1	SuSE_Machine_1	RUNNING	OK	14150
oam_server1	Configured	oam_cluster_1	SuSE_Machine_1	RUNNING	OK	14100

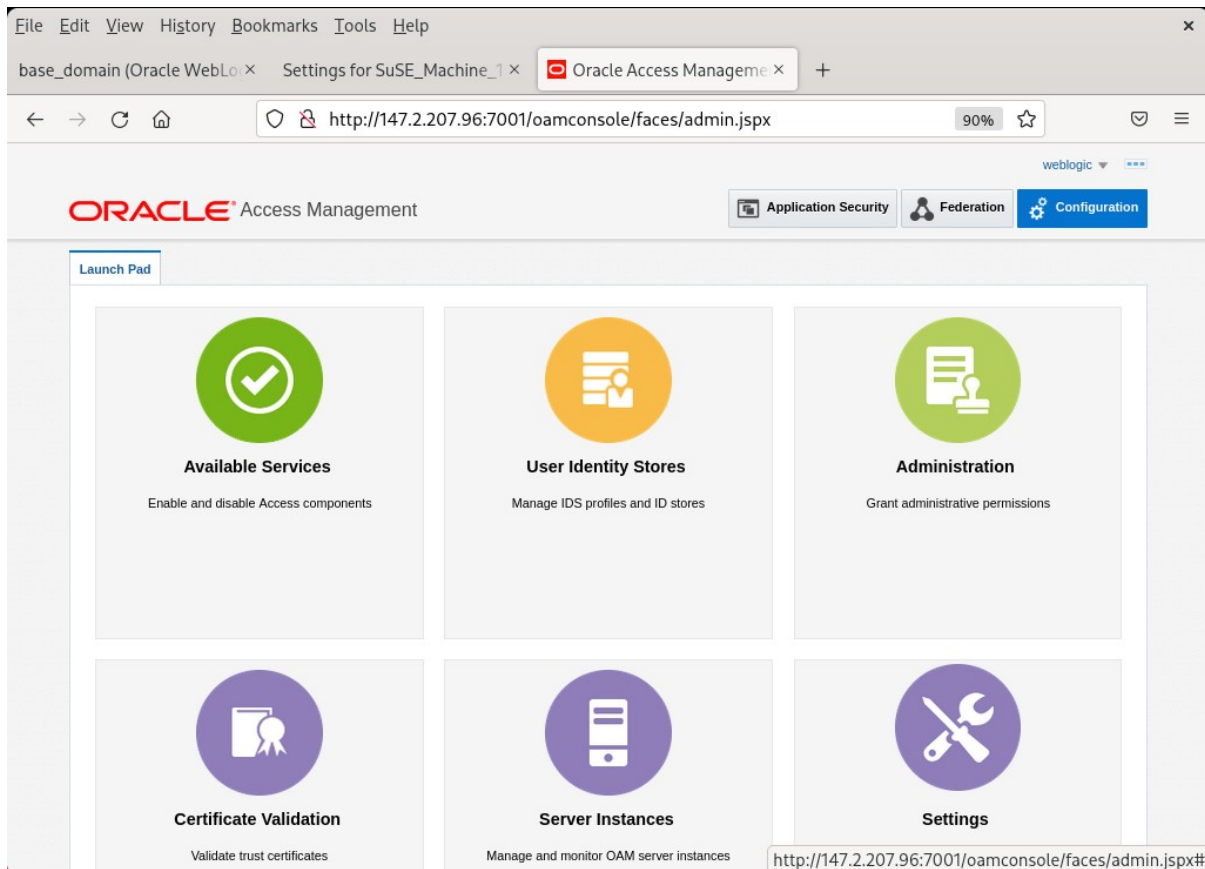
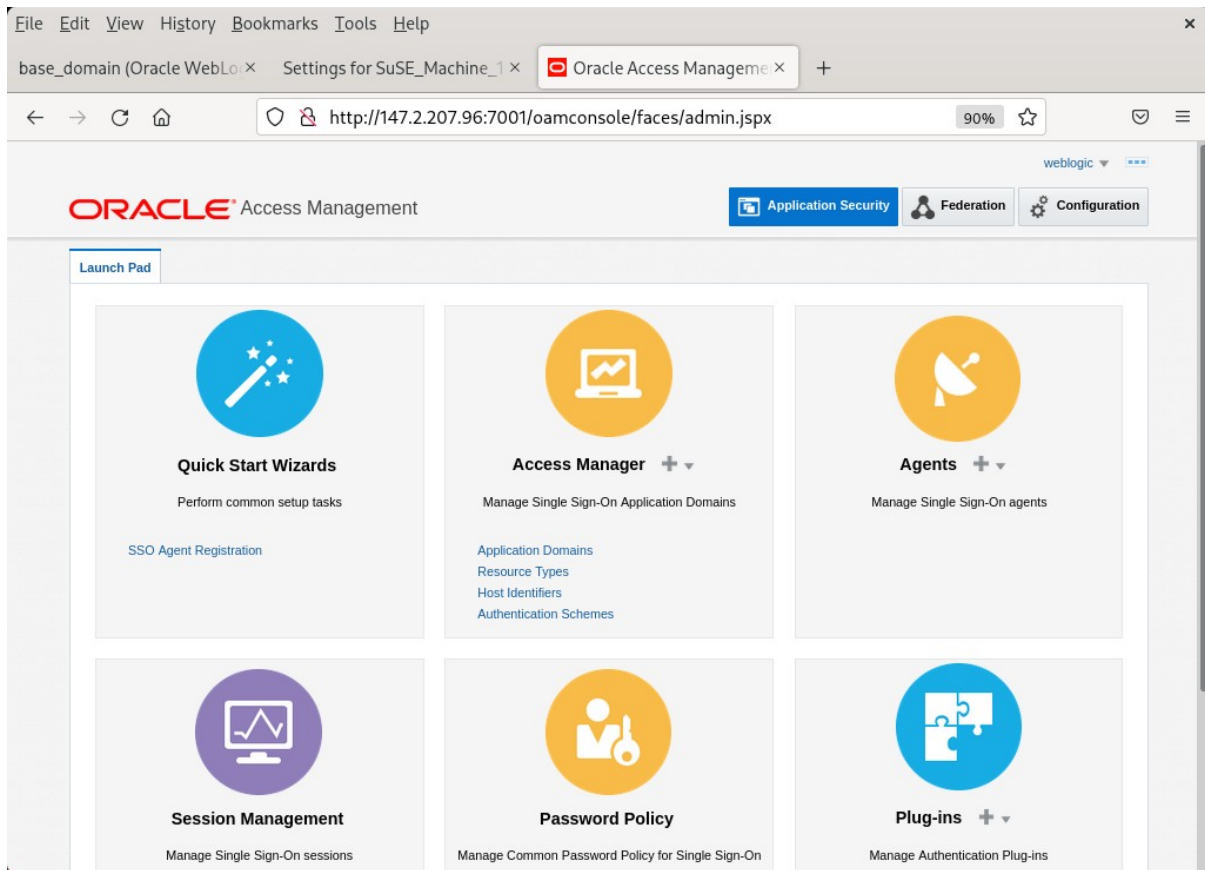
Verify that the Admin Server can connect to the node manager running on your machine. **Environments -> Machines -> <your machine> -> Monitoring.** The status should show: **Reachable**

The screenshot shows the "Node Manager Status" page in the Oracle WebLogic Server Administration Console. The page title is "Settings for SuSE\_Machine\_1" and it has a "Monitoring" tab selected. The "Node Manager Status" section shows the current status as "Reachable" and the version as "12.2.1.4.0".

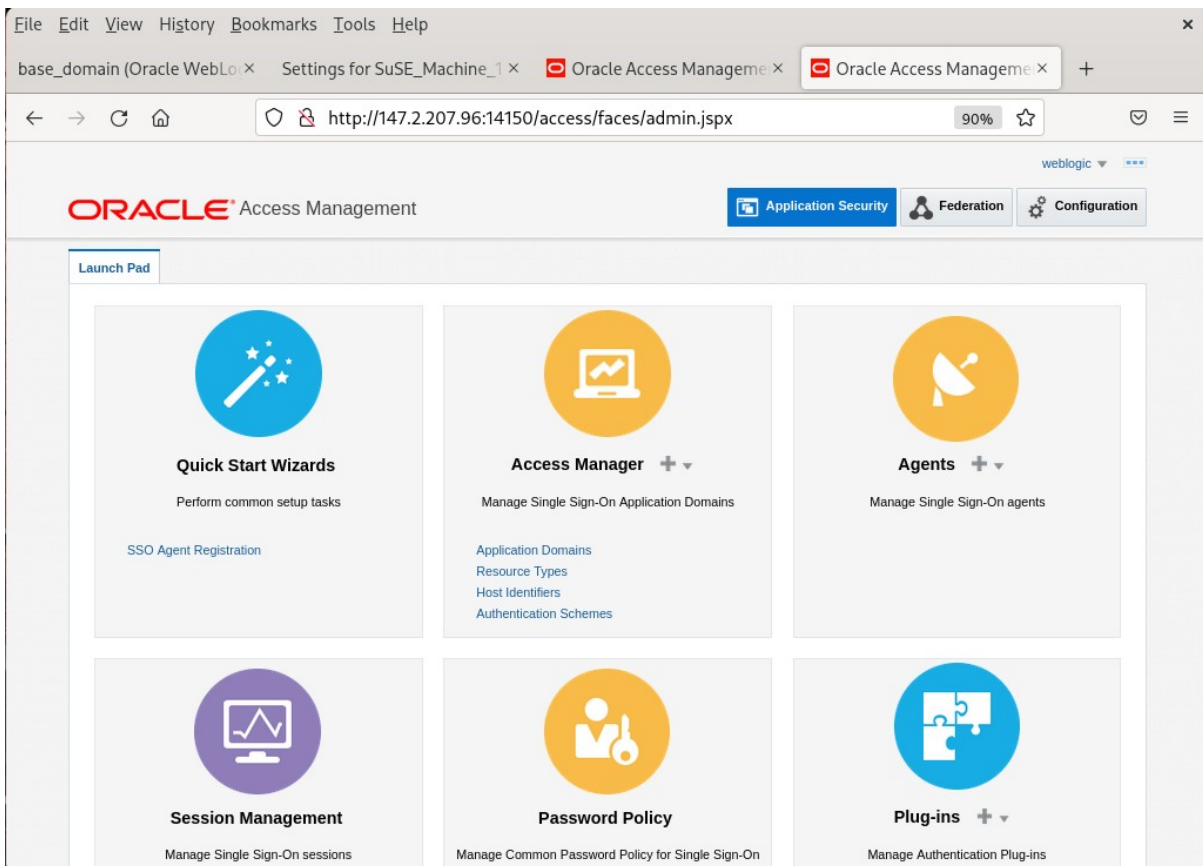
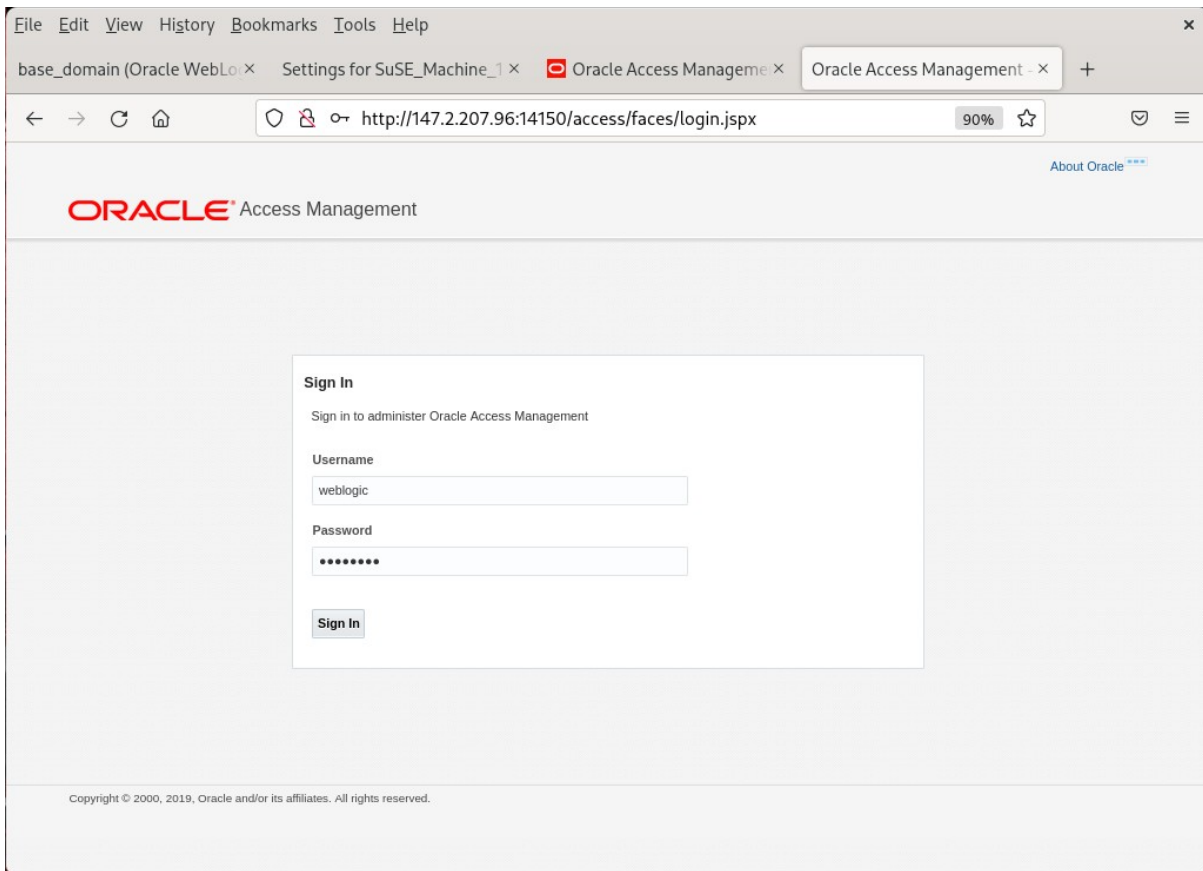
Property	Value	Description
Status:	Reachable	Current status of this Node Manager. <a href="#">More Info...</a>
Version:	12.2.1.4.0	Version string returned from the Node Manager. <a href="#">More Info...</a>

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





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



The screenshot shows the Oracle Access Management web interface. The browser address bar displays `http://147.2.207.96:14150/access/faces/admin.jspx`. The page title is "Create Application Domain" under the "Application Domain" section. A sub-header reads "Application Domain provides a logical container for resources or sets of resources, and the associated policies that dictate who can access specific protected resources." The "Summary" tab is active, showing a form with the following fields: "Name" (Oracle Access Management on SLES 15 SP5), "Description" (empty), "Session Idle Timeout (minutes)" (0), and "Enable Policy Ordering" (unchecked). An "Apply" button is located in the top right corner of the form area. The footer contains the copyright notice: "Copyright © 2000, 2019, Oracle and/or its affiliates. All rights reserved."

This screenshot shows the Oracle Access Management web interface after the application domain has been created. The browser address bar is the same. The page title is "Oracle Access Management on SLES 15 SP5" under the "Application Domain" section. A green confirmation message is displayed: "Confirmation: Application Domain, Oracle Access Management on SLES 15 SP5, created successfully". Below the message, the "Summary" tab is active, showing the same form as in the previous screenshot. The "Apply" button is now disabled. The footer contains the copyright notice: "Copyright © 2000, 2019, Oracle and/or its affiliates. All rights reserved."

**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> █
```

```

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

View dropped.

View dropped.

View created.

Synonym created.

View created.

Synonym created.

SQL> █

```

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

```

SQL> show parameter open_cursors;

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

System altered.

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

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

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

```

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



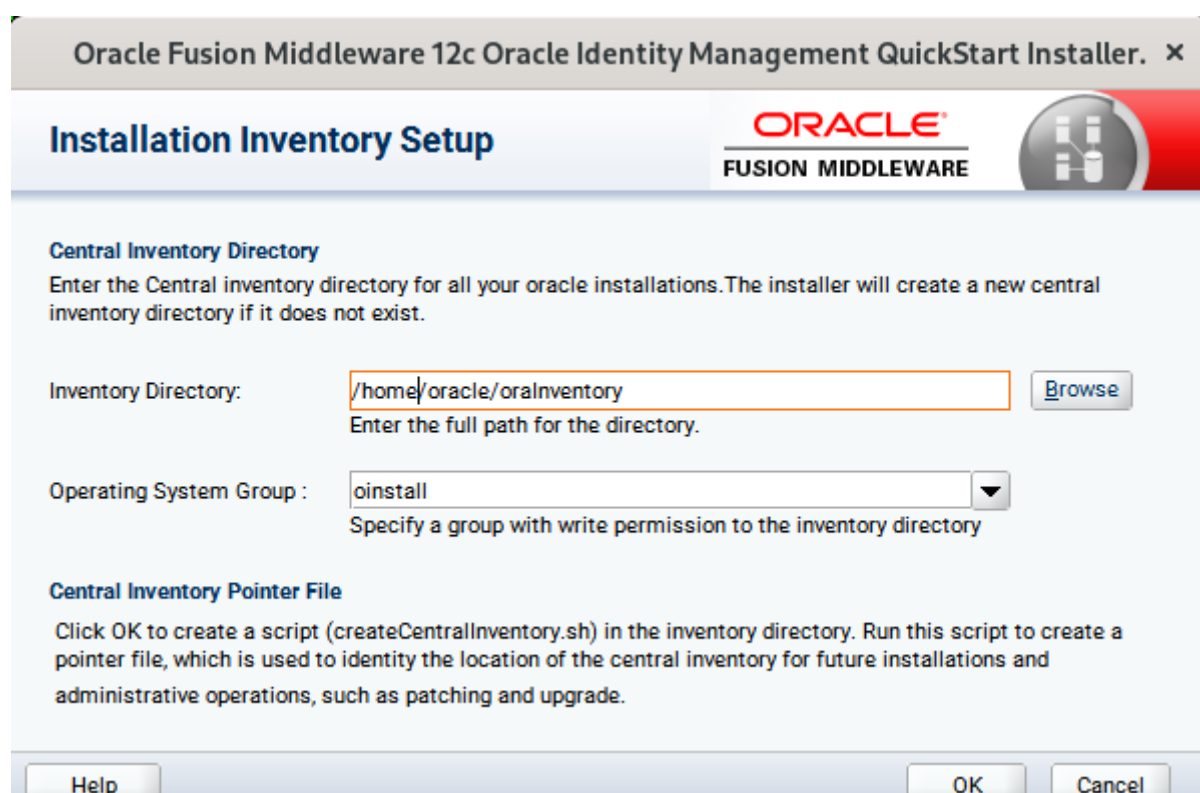
1-2. Log in to the target system (SLES 15 SP5 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

(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.



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

### Installation Inventory Setup

**ORACLE**  
FUSION MIDDLEWARE

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

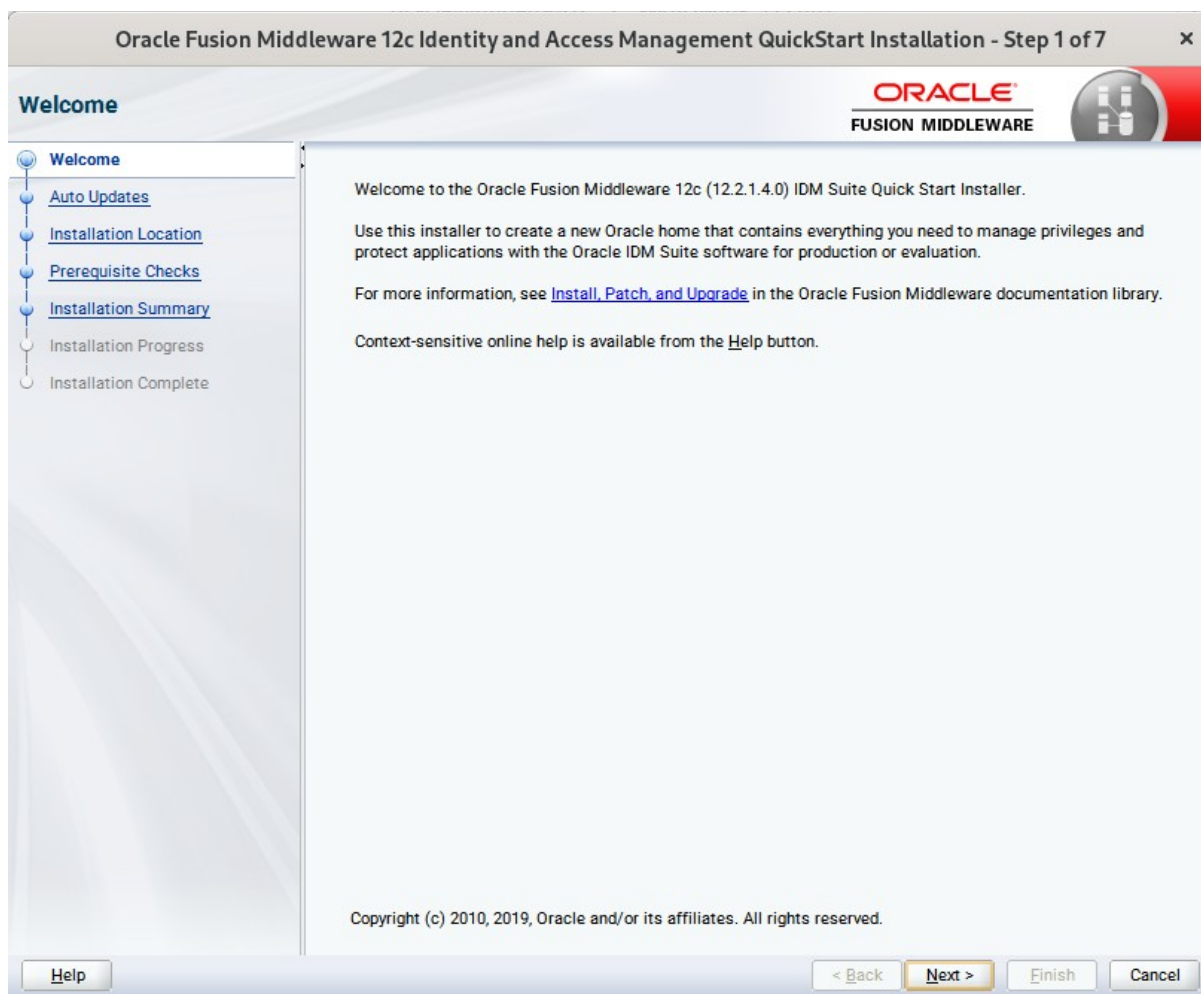
Inventory Directory:    
Enter the full path for the directory.

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

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

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.



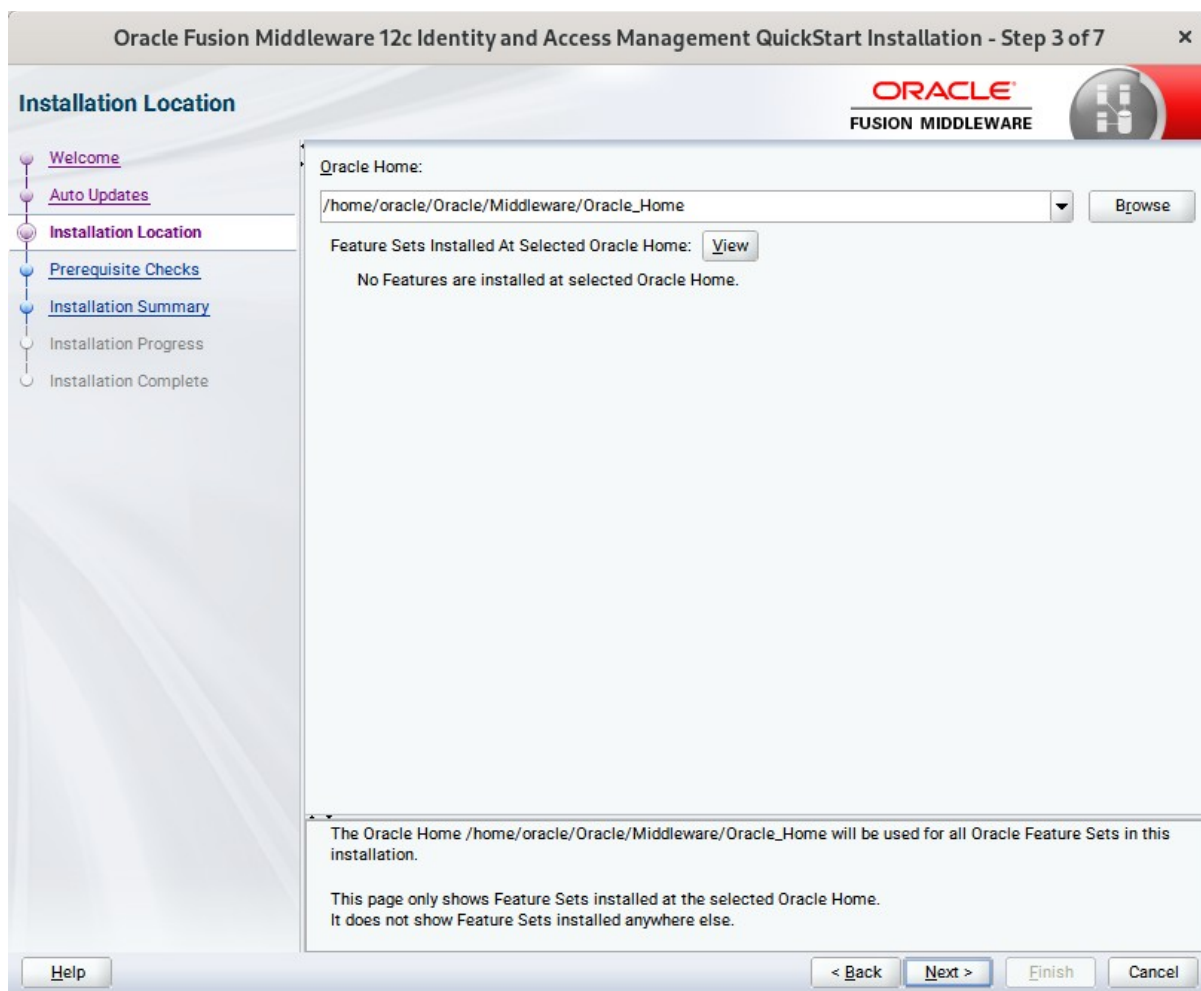
This page welcomes you to the installation. Click **Next** to continue.

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 features the Oracle Fusion Middleware logo and a navigation pane on the left with the following items: Welcome, Auto Updates (selected), Installation Location, Prerequisite Checks, Installation Summary, Installation Progress, and Installation Complete. The main content area has three radio button options: 'Skip Auto Updates' (selected), 'Select patches from directory', and 'Search My Oracle Support for Updates'. The 'Select patches from directory' option includes a 'Location:' text box and a 'Browse' button. The 'Search My Oracle Support for Updates' option includes 'Username:' and 'Password:' text boxes, a 'Proxy Settings' button, and a 'Test Connection' button. Below these is a 'Search' button and a large empty text area. At the bottom of the window are buttons for '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.

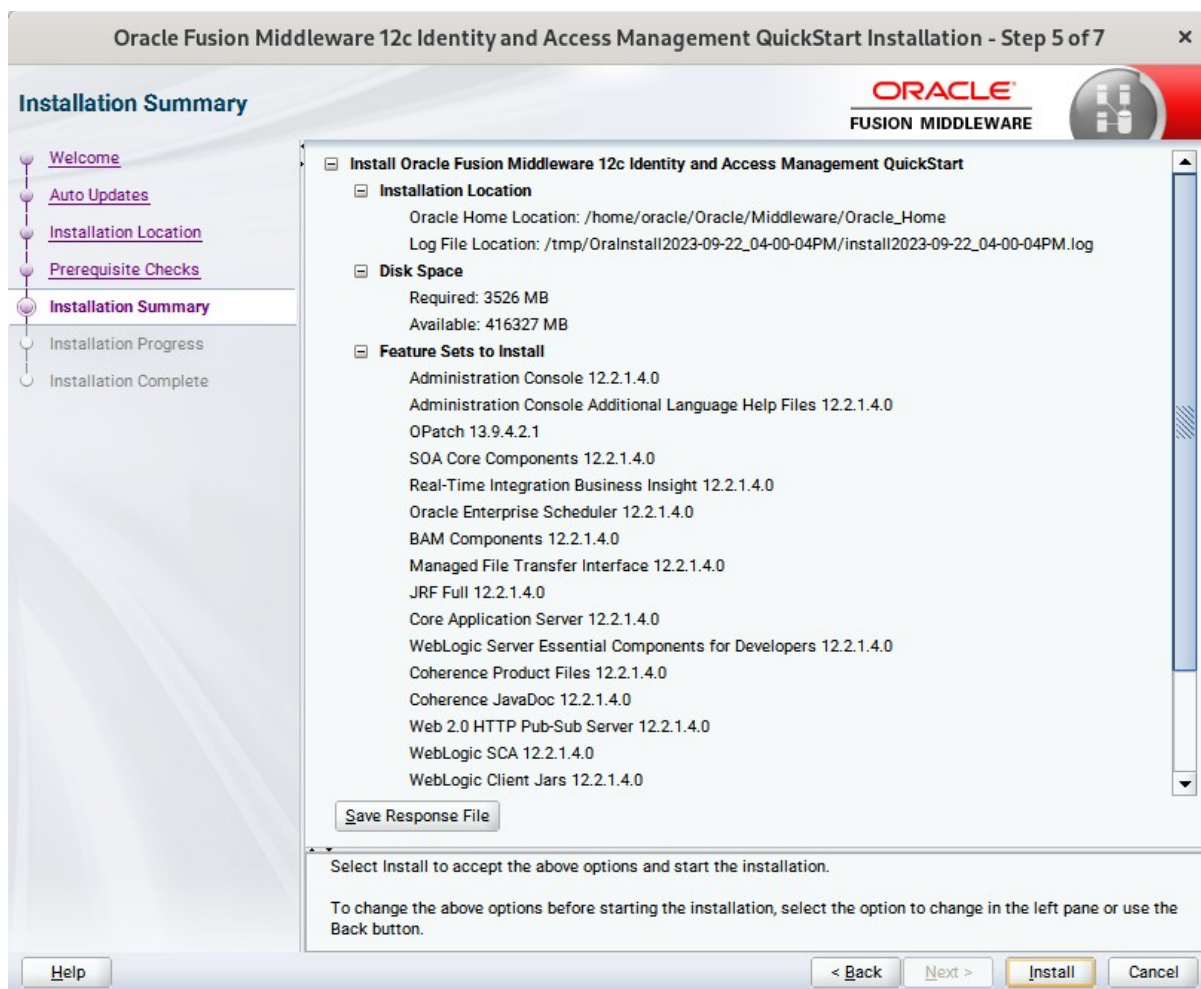
4). The **Installation Location** page appears.



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

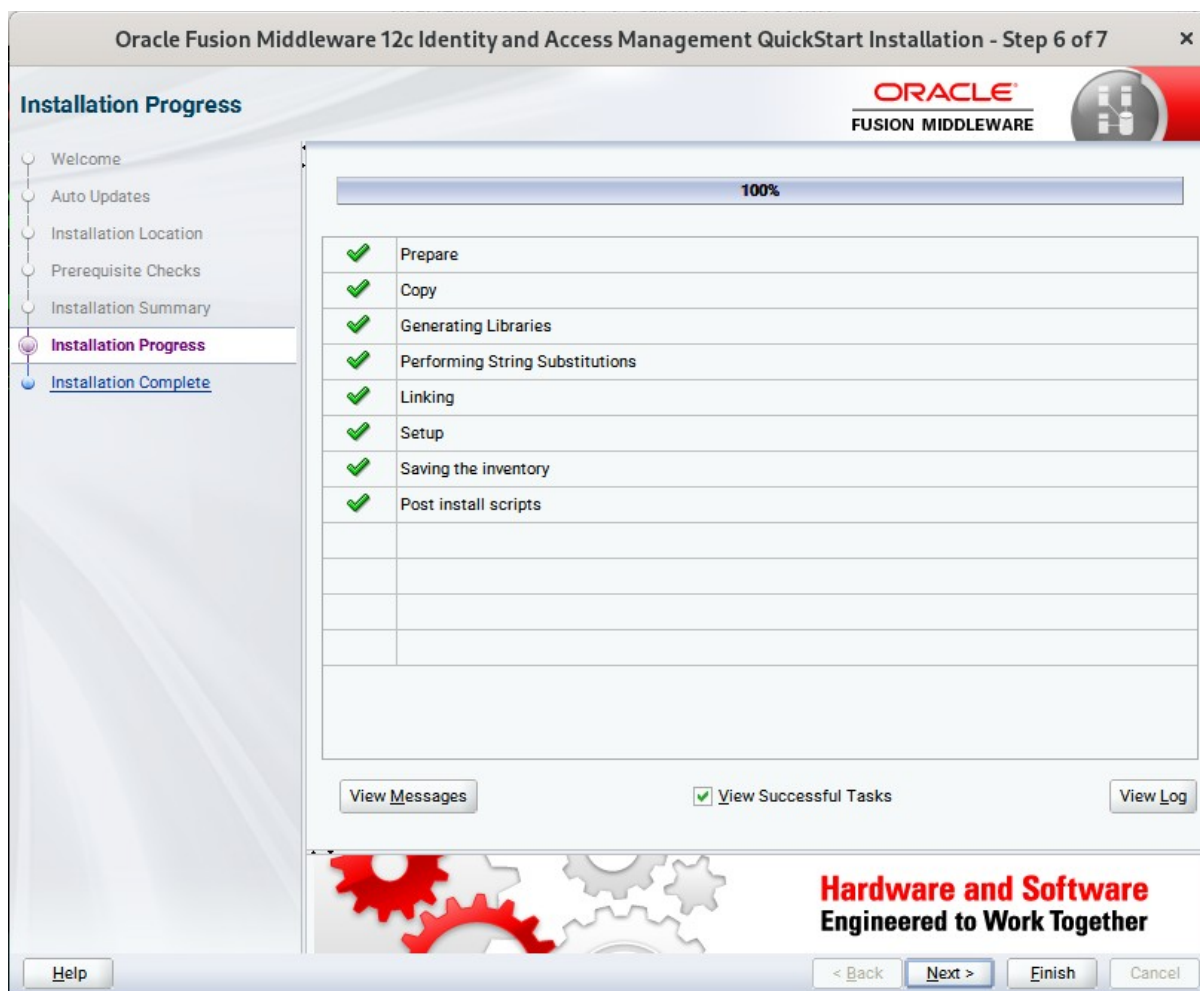


6). The **Installation Summary** page appears.



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.

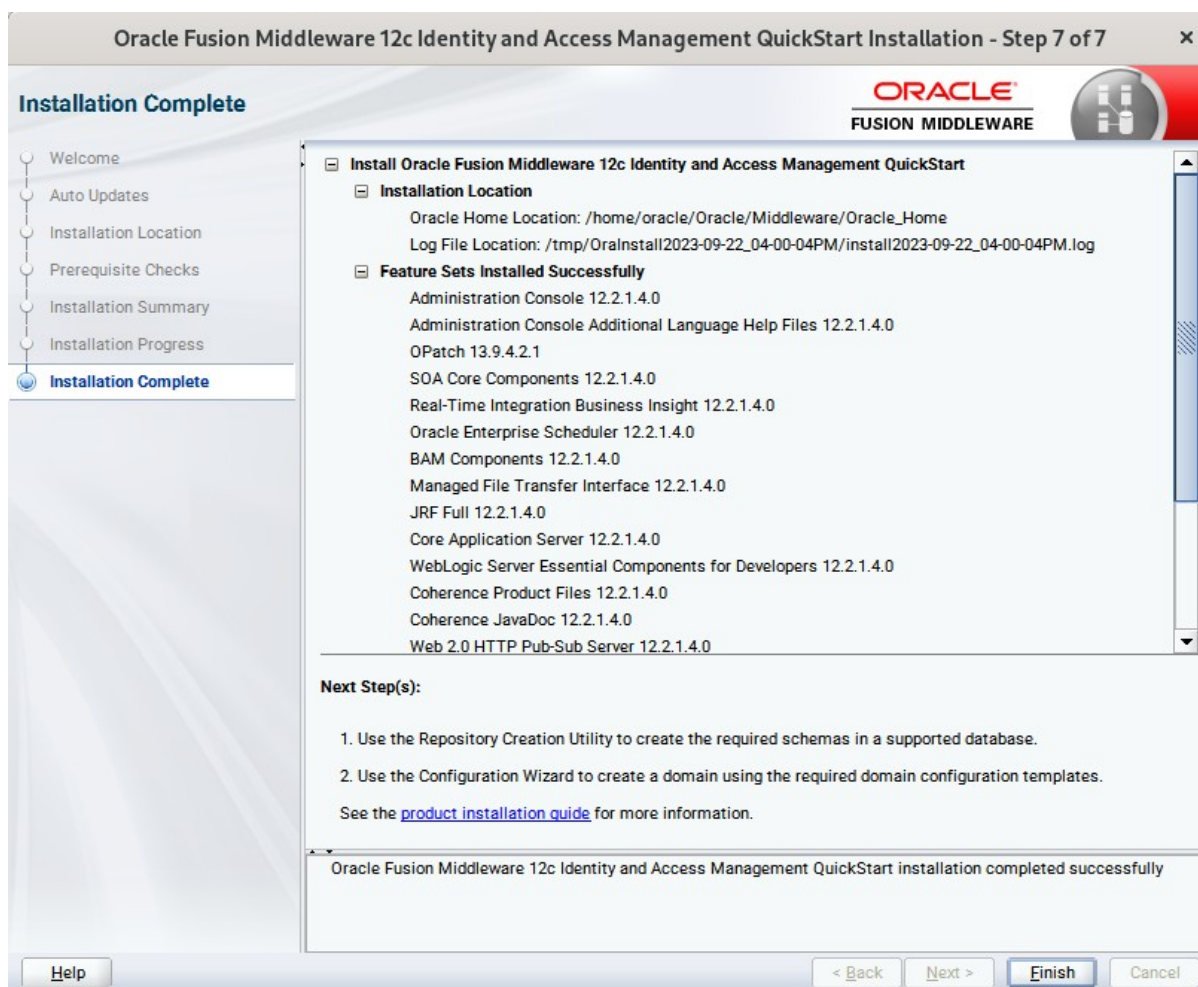
7). The **Installation Progress** page appears.



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.

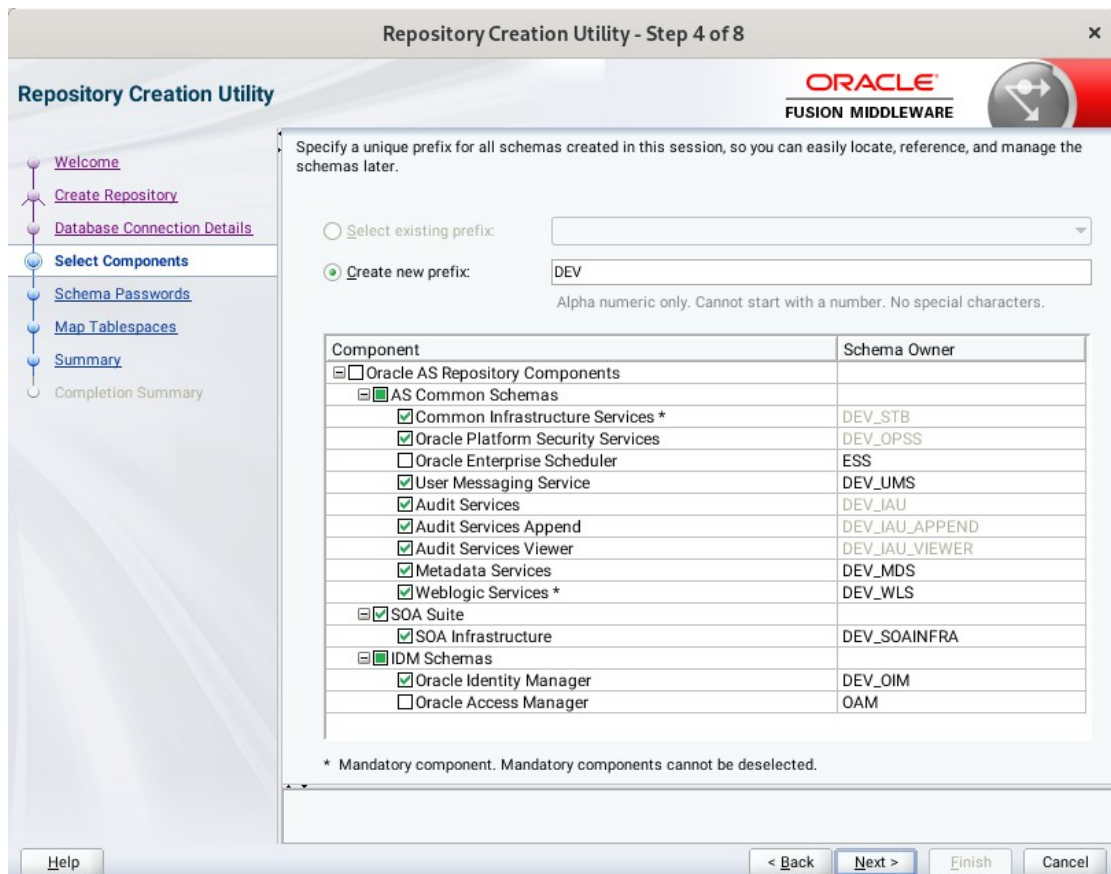
## 2. Configuring the Oracle Identity Manager Domain

### 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: hpgen9-01  
Port: 1521  
Service Name: SUSE  
Connected As: sys  
Operation: System and Data Load concurrently  
Execution Time: 7 minutes 32 seconds

RCU Logfile: /tmp/RCU2023-09-22\_16-14\_229727447/logs/rcu.log  
Component Log Directory: /tmp/RCU2023-09-22\_16-14\_229727447/logs  
View Log: rcu.log

Prefix for (prefixable) Schema DEV  
Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:10.043(sec)	stb.log
Oracle Platform Security Services	Success	00:36.474(sec)	opss.log
SOA Infrastructure	Success	01:47.624(min)	soainfra.log
Oracle Identity Manager	Success	02:22.351(min)	oim.log
User Messaging Service	Success	00:18.152(sec)	ucsums.log
Audit Services	Success	00:21.368(sec)	iau.log
Audit Services Append	Success	00:09.382(sec)	iau_append.log
Audit Services Viewer	Success	00:09.354(sec)	iau_viewer.log
Metadata Services	Success	00:17.264(sec)	mds.log
Weblogic Services	Success	00:27.855(sec)	wls.log

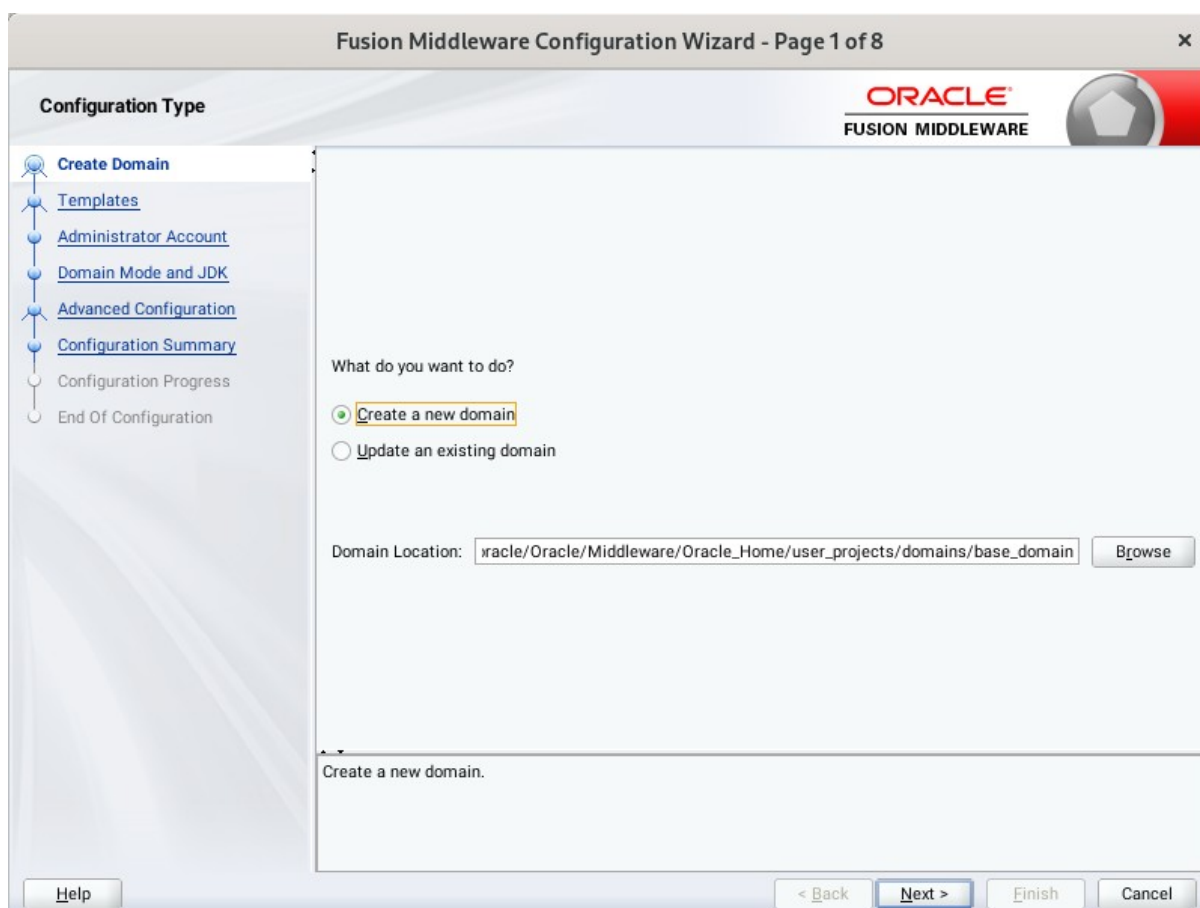
Help < Back Next > Create Close

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

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

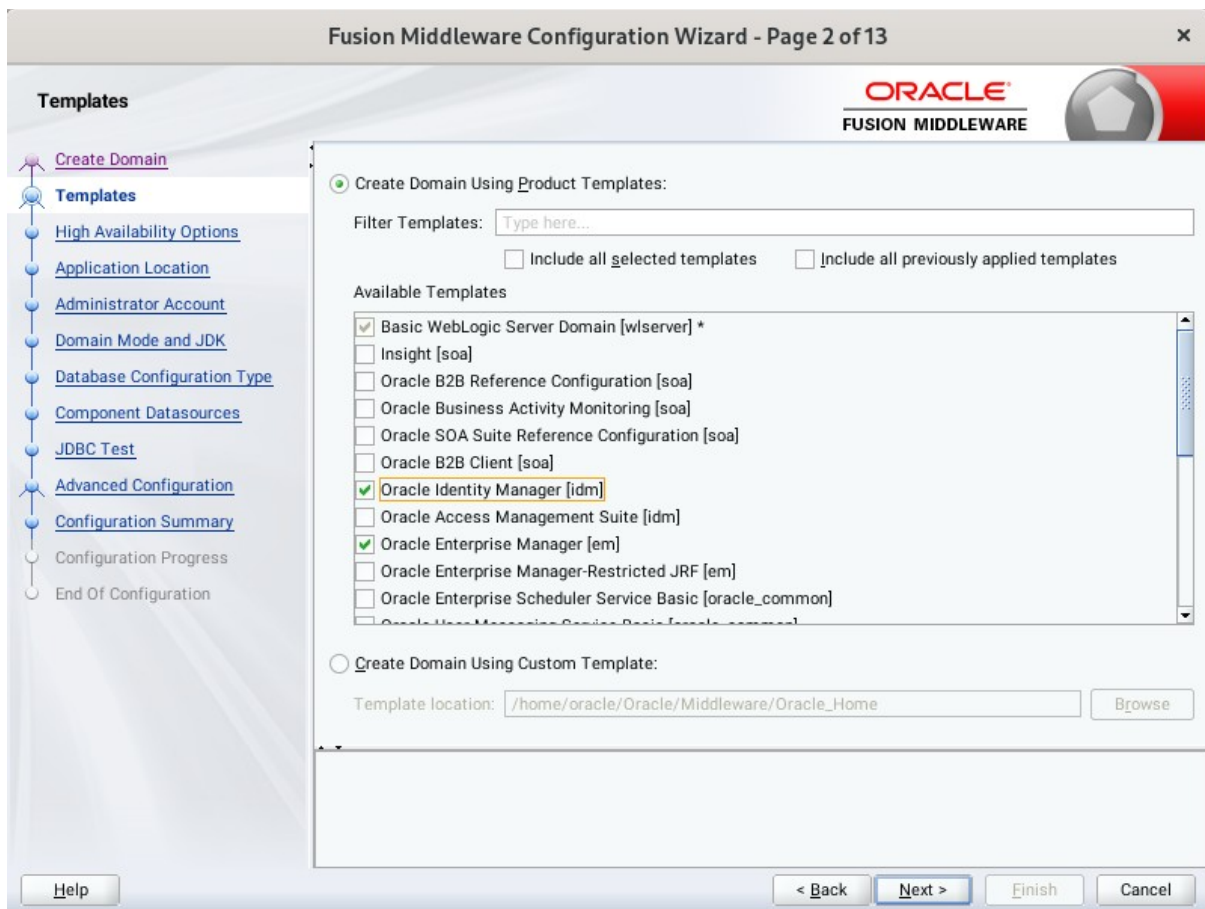
### Follow these steps:

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



Click **Next** to continue.

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



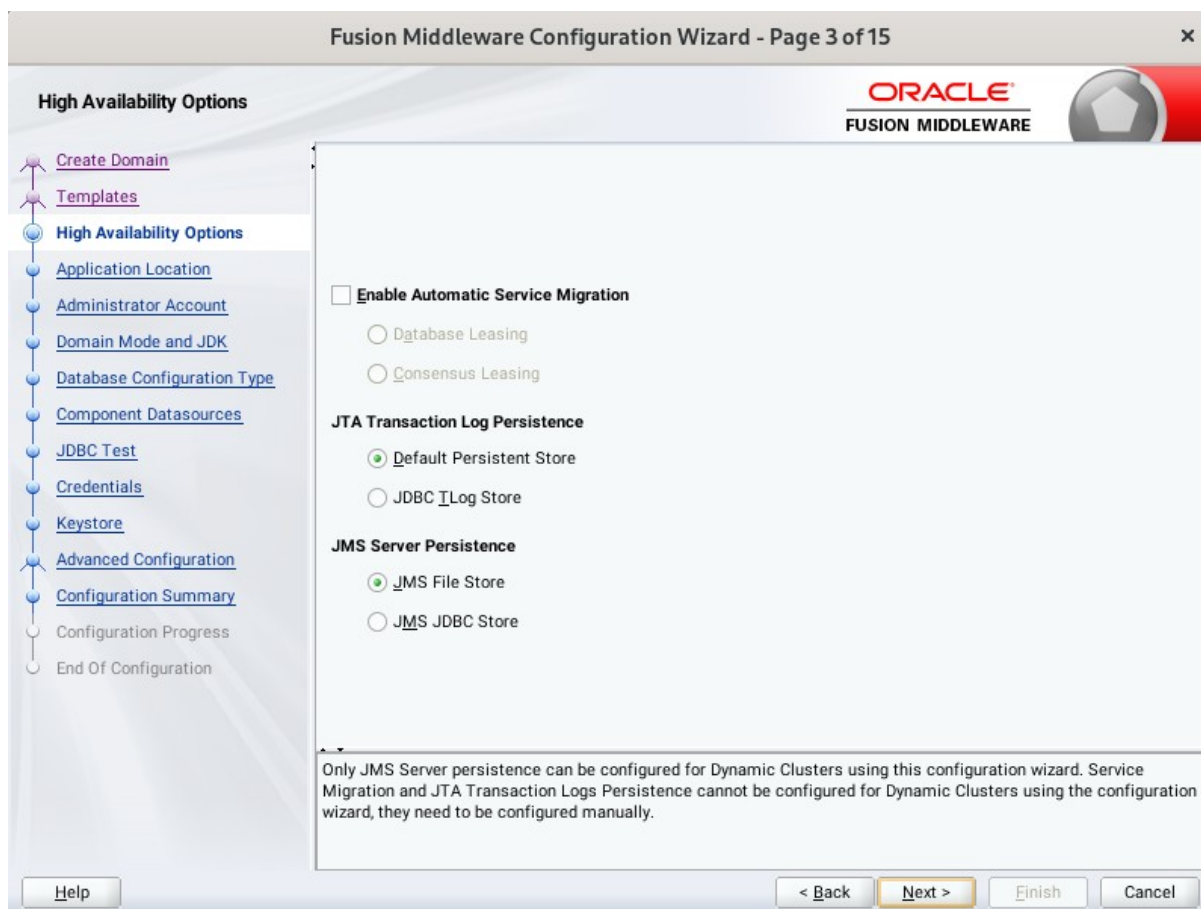
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Identity Manager [idm]**.

Selecting this template automatically selects the following as dependencies:

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

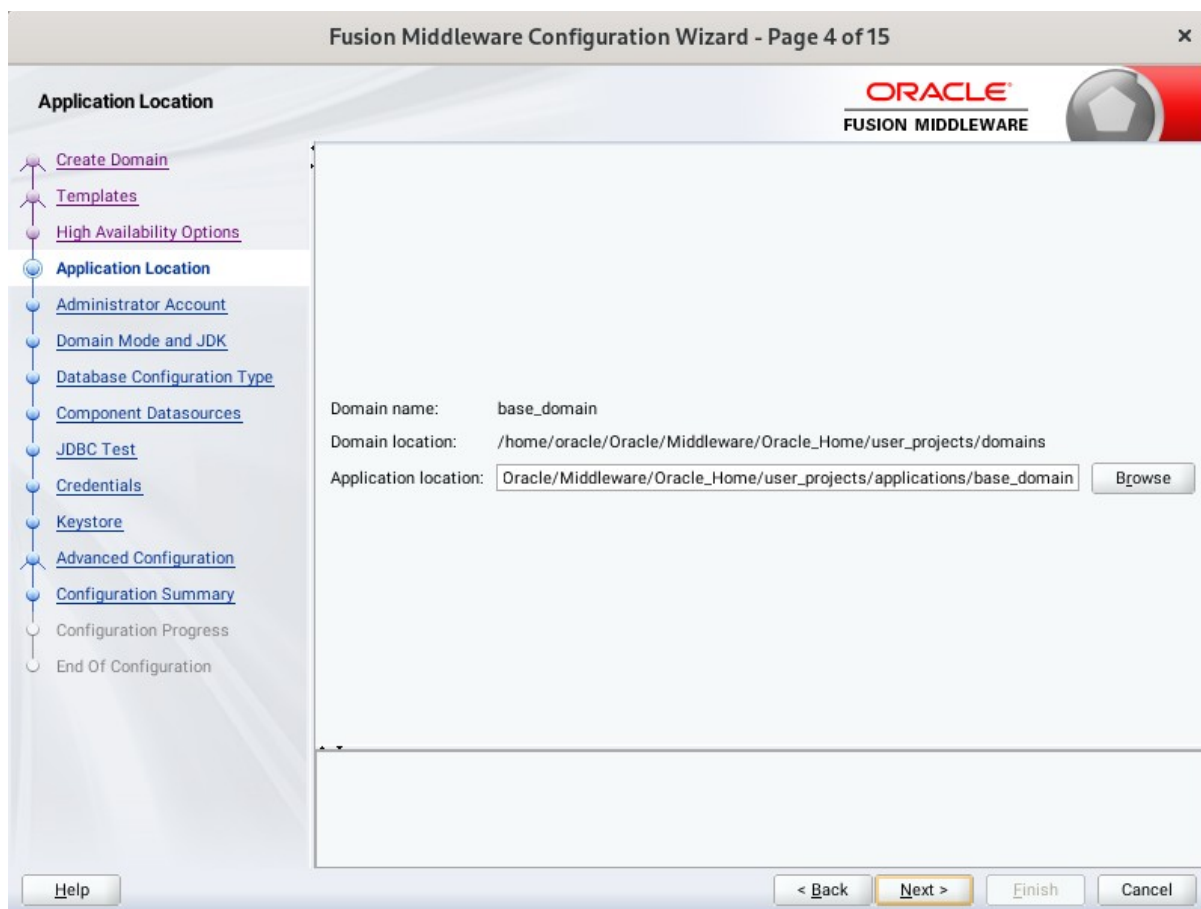
You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



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

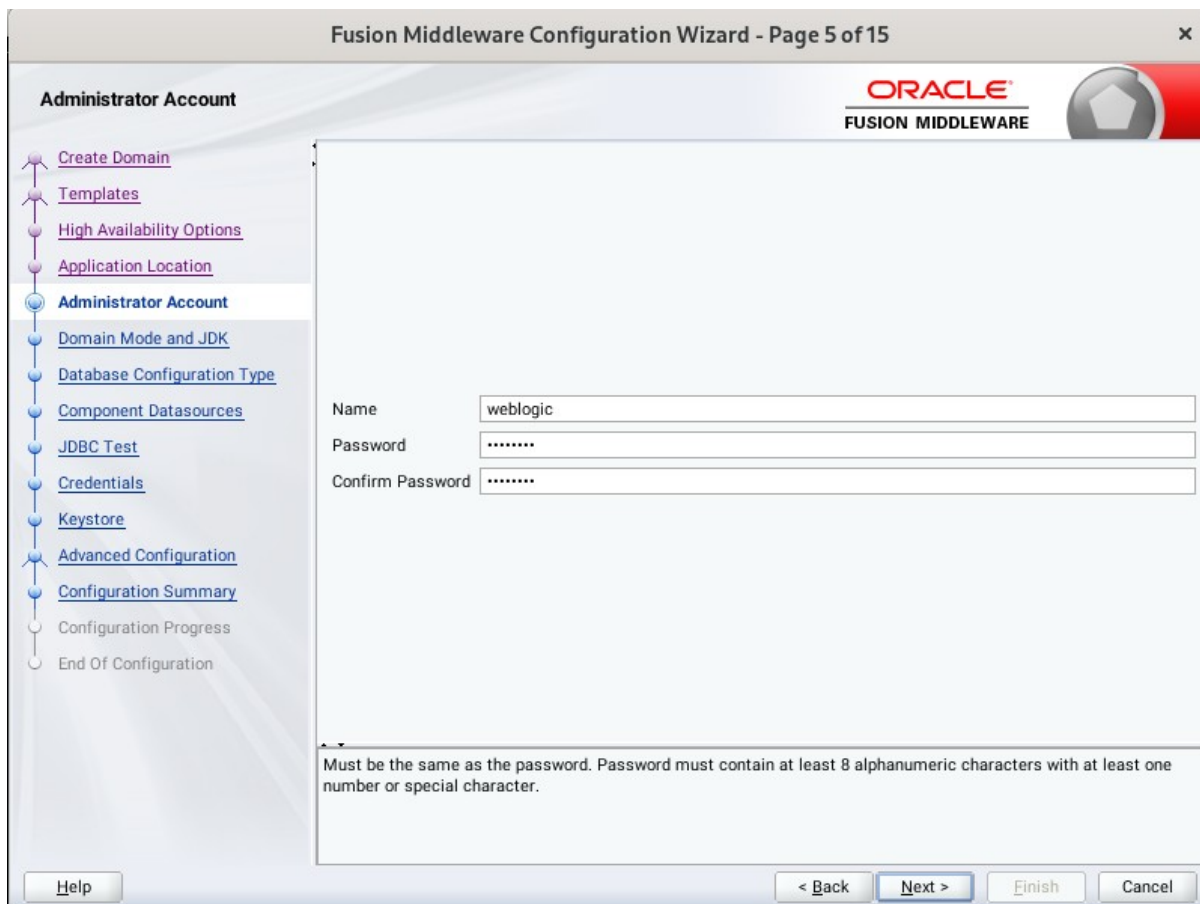
4). The **Application Location** screen appears.



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



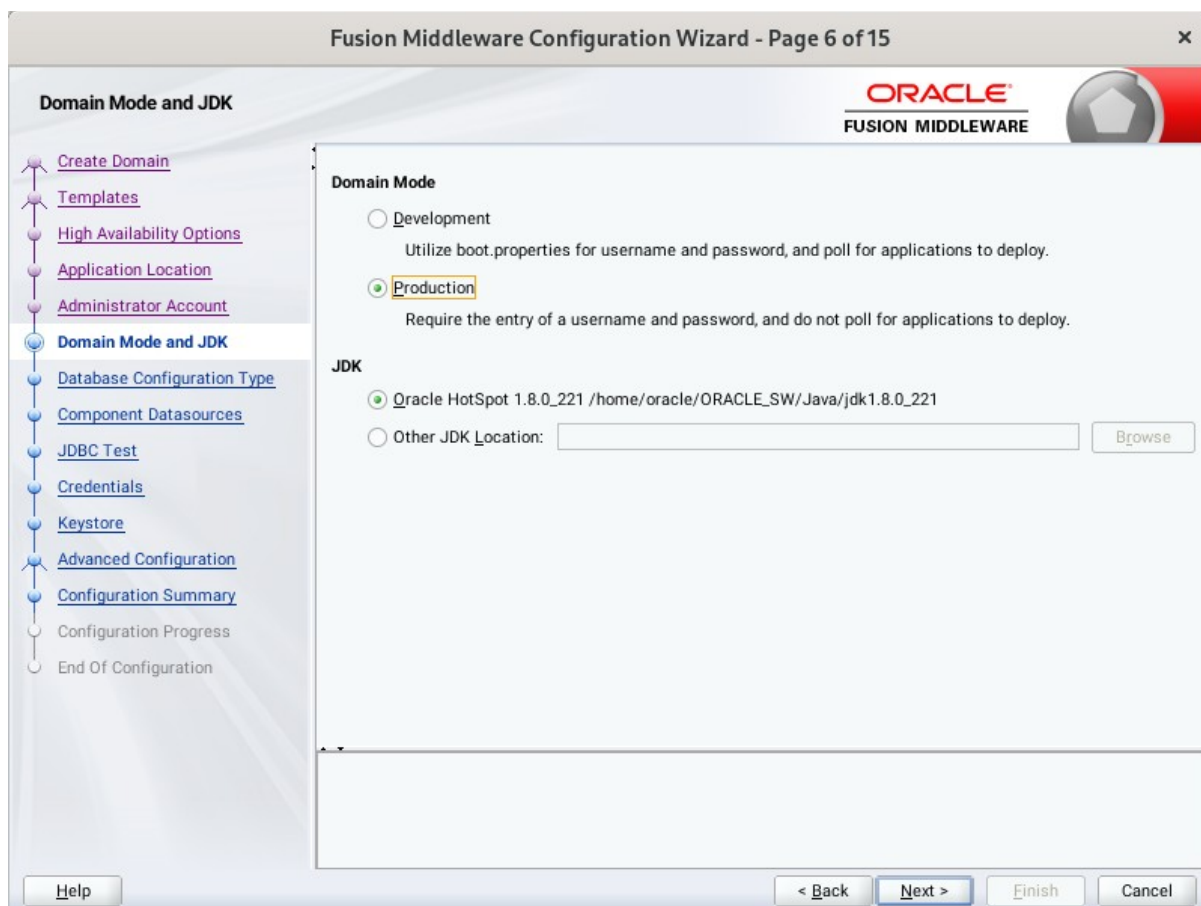
5). The **Administrator Account** screen appears.



The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 5 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists the following steps: Create Domain, Templates, High Availability Options, Application Location, Administrator Account (selected), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Credentials, Keystore, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters '.....', and 'Confirm Password' with masked characters '.....'. Below the fields is a 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.

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

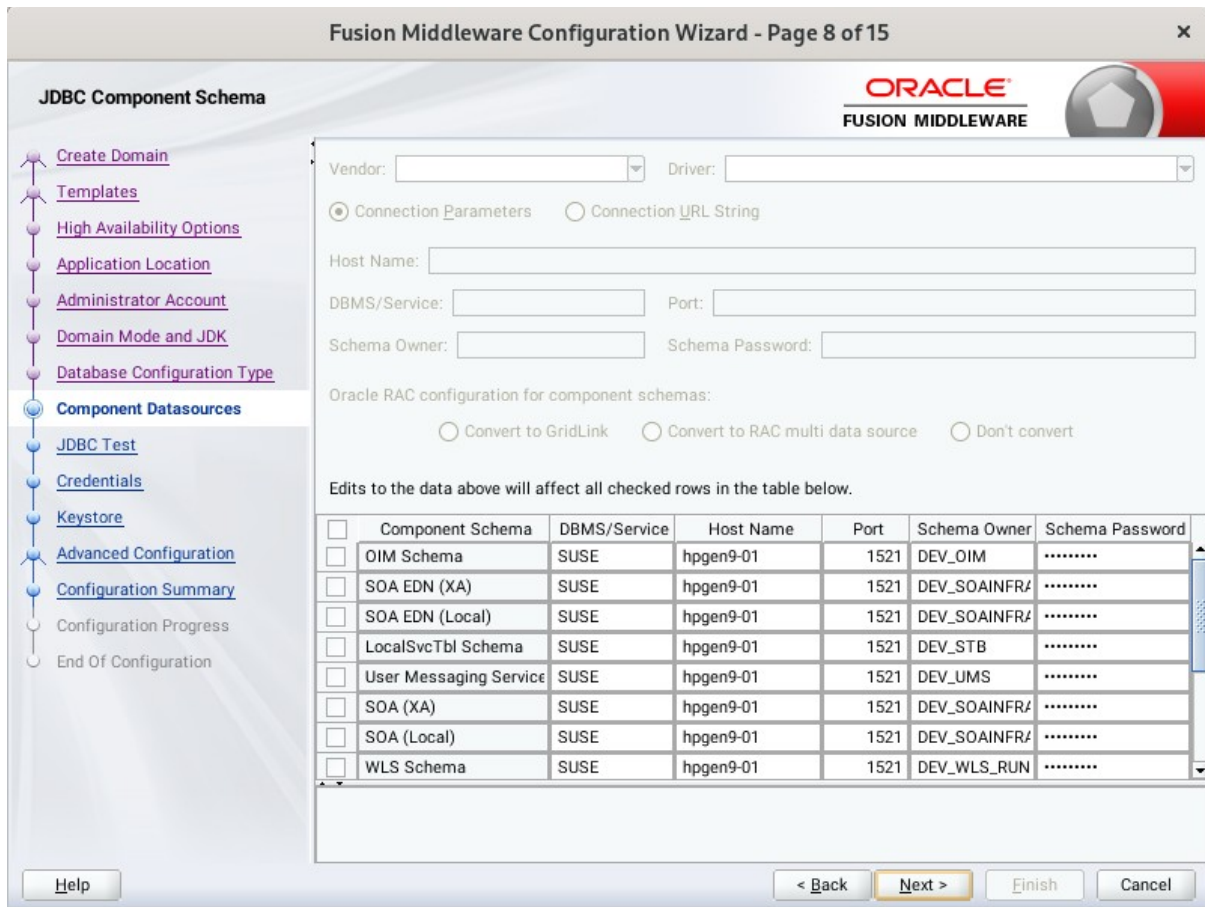


Select **Production** in the **Domain Mode** field and select the **Oracle HotSpot JDK** in the **JDK** field. Click **Next** to continue.

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

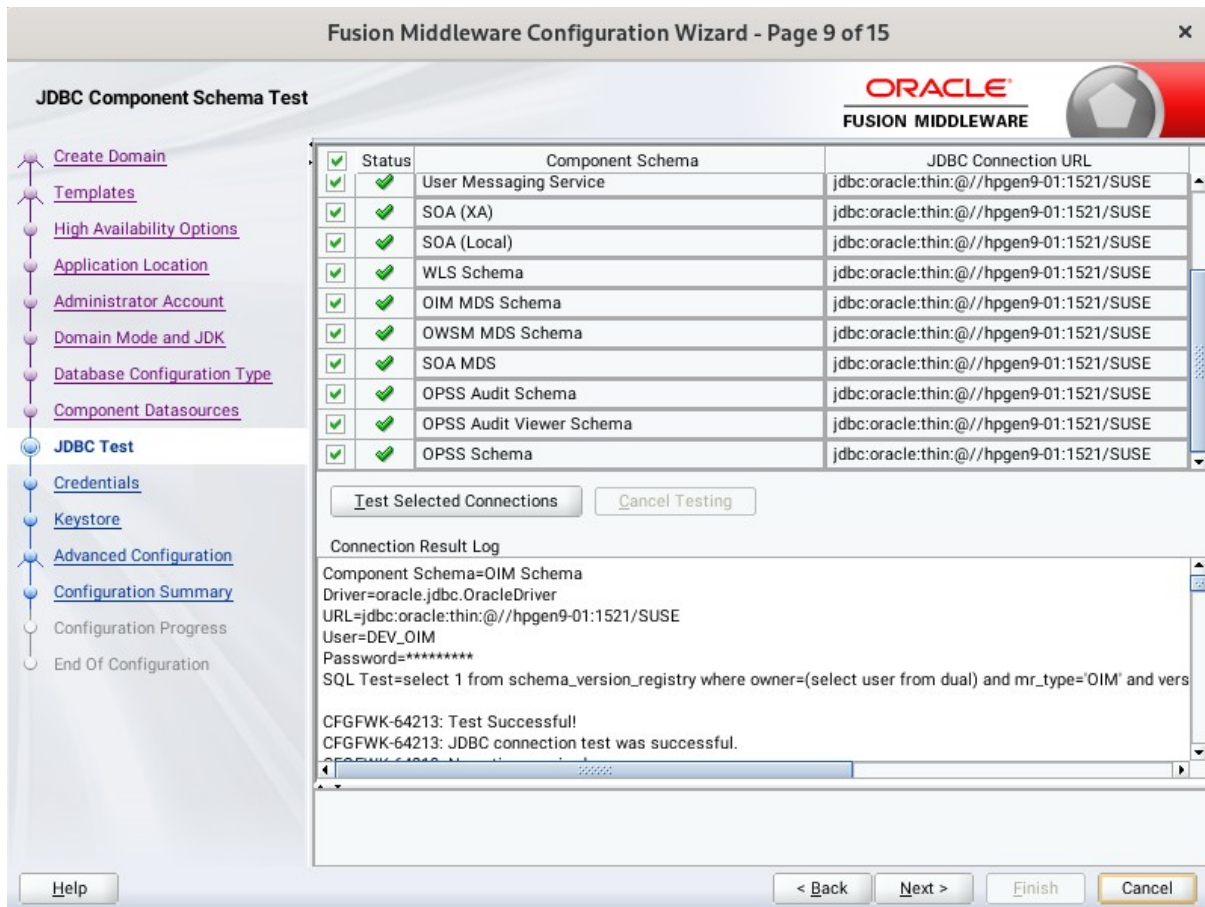
Select **RCU Data** to activate the fields. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain. Enter the RCU DB connection information, then click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

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



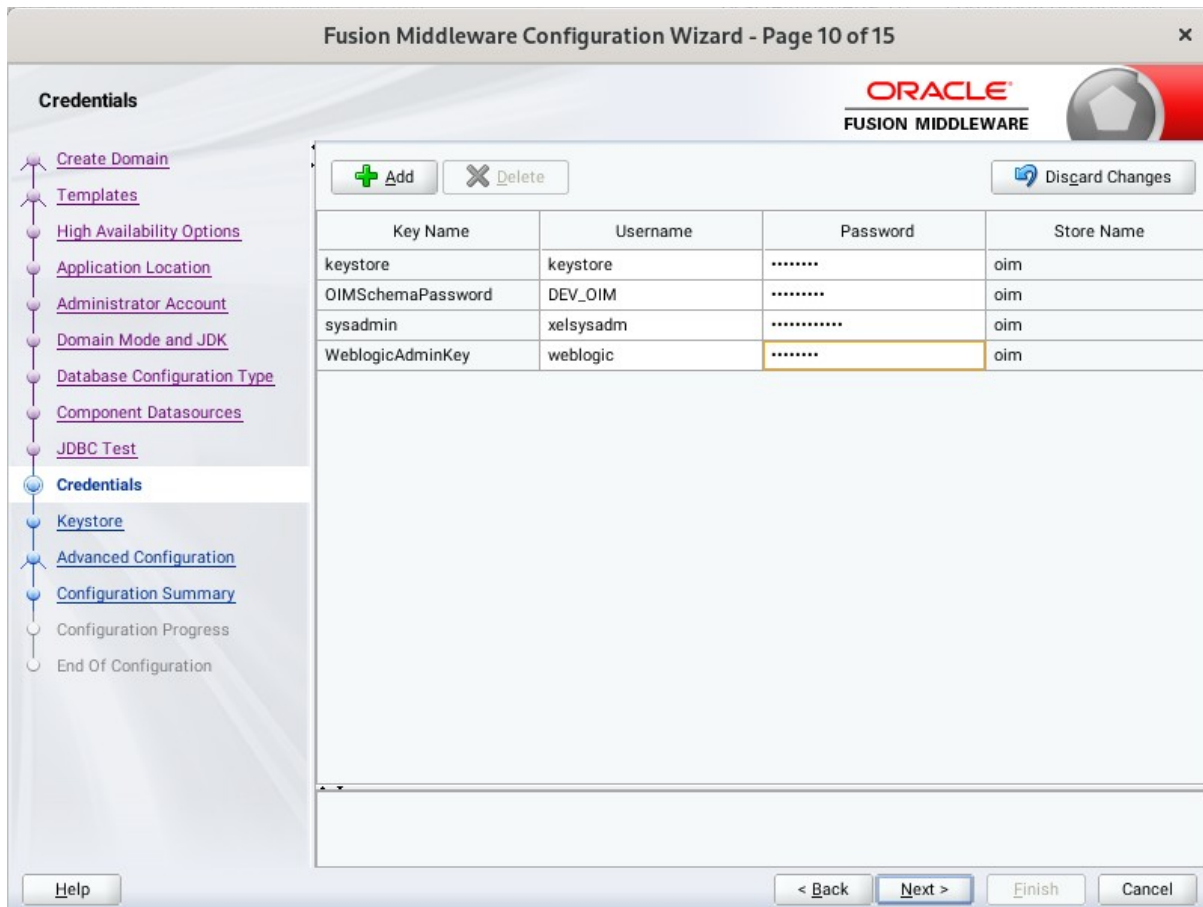
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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 window, 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 features the Oracle Fusion Middleware logo and a "Disard Changes" button. Below this is a "Store Key Name" dropdown menu set to "ums/apns". The main content area contains two tables for configuring keystore entries:

Alias	Trusted Certificate		

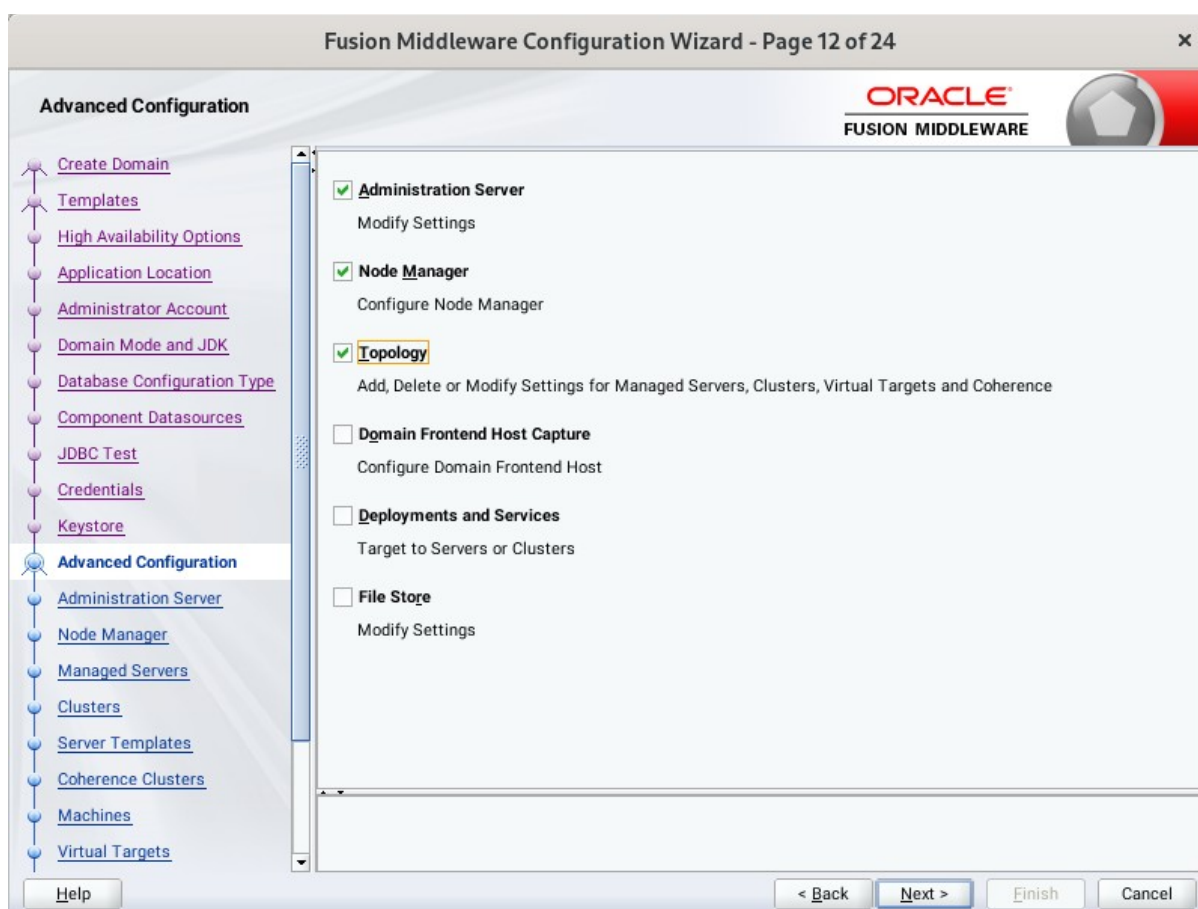
Alias	Private Key	Password	Identity Certificate

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

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



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

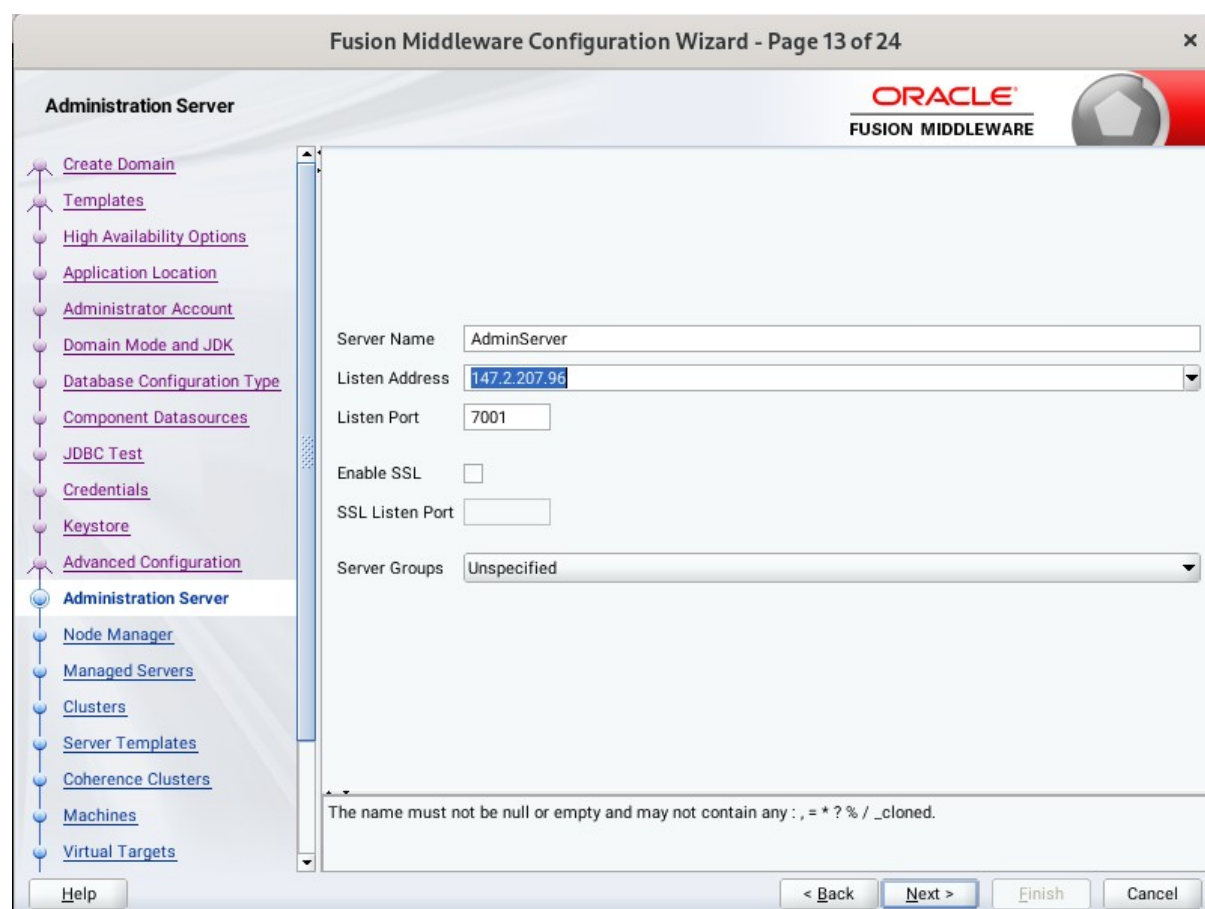


On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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



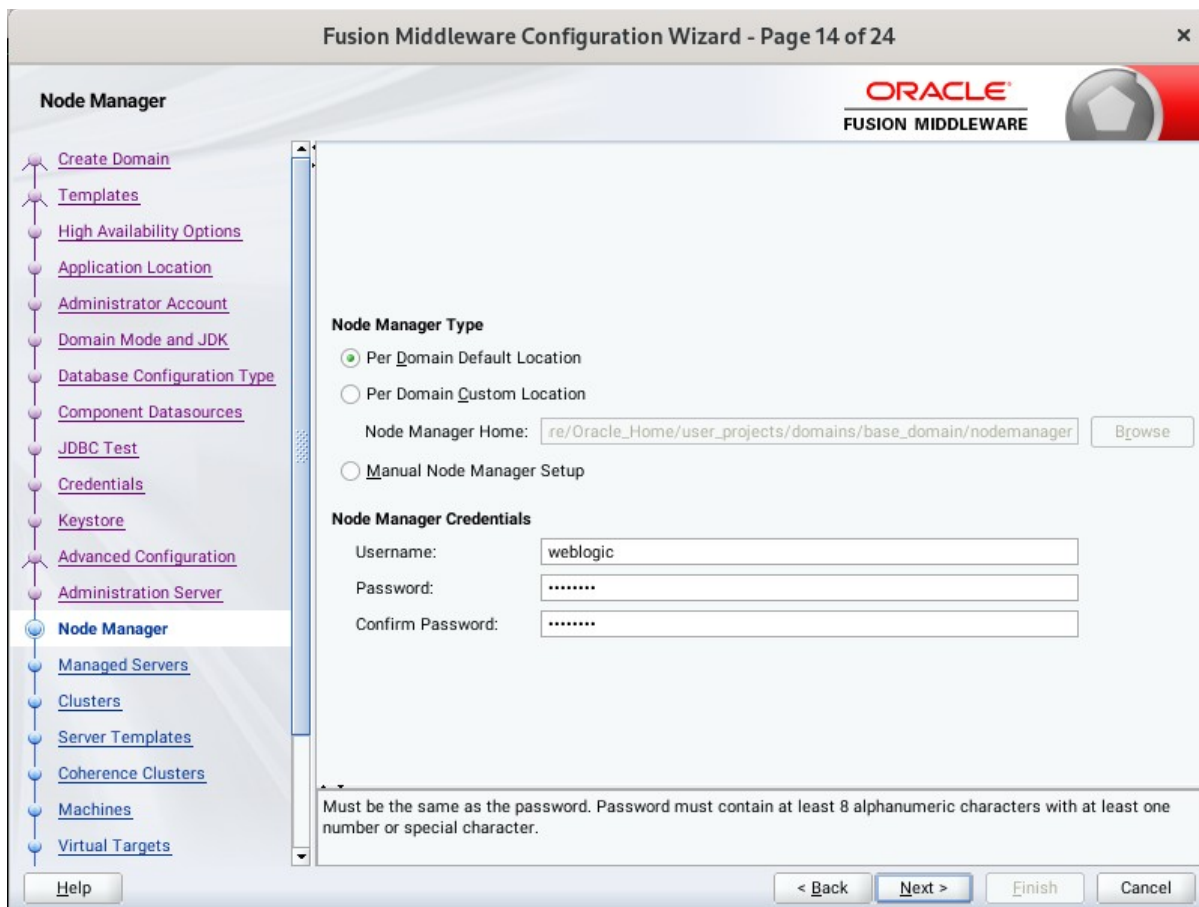
The screenshot shows the "Administration Server" configuration screen in the Fusion Middleware Configuration Wizard. The window title is "Fusion Middleware Configuration Wizard - Page 13 of 24". The Oracle logo and "FUSION MIDDLEWARE" text are visible in the top right corner. On the left, a navigation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

- Server Name: AdminServer
- Listen Address: 147.2.207.96 (selected from a dropdown menu)
- Listen Port: 7001
- Enable SSL:
- SSL Listen Port: (empty text box)
- Server Groups: Unspecified (selected from a dropdown menu)

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

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

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



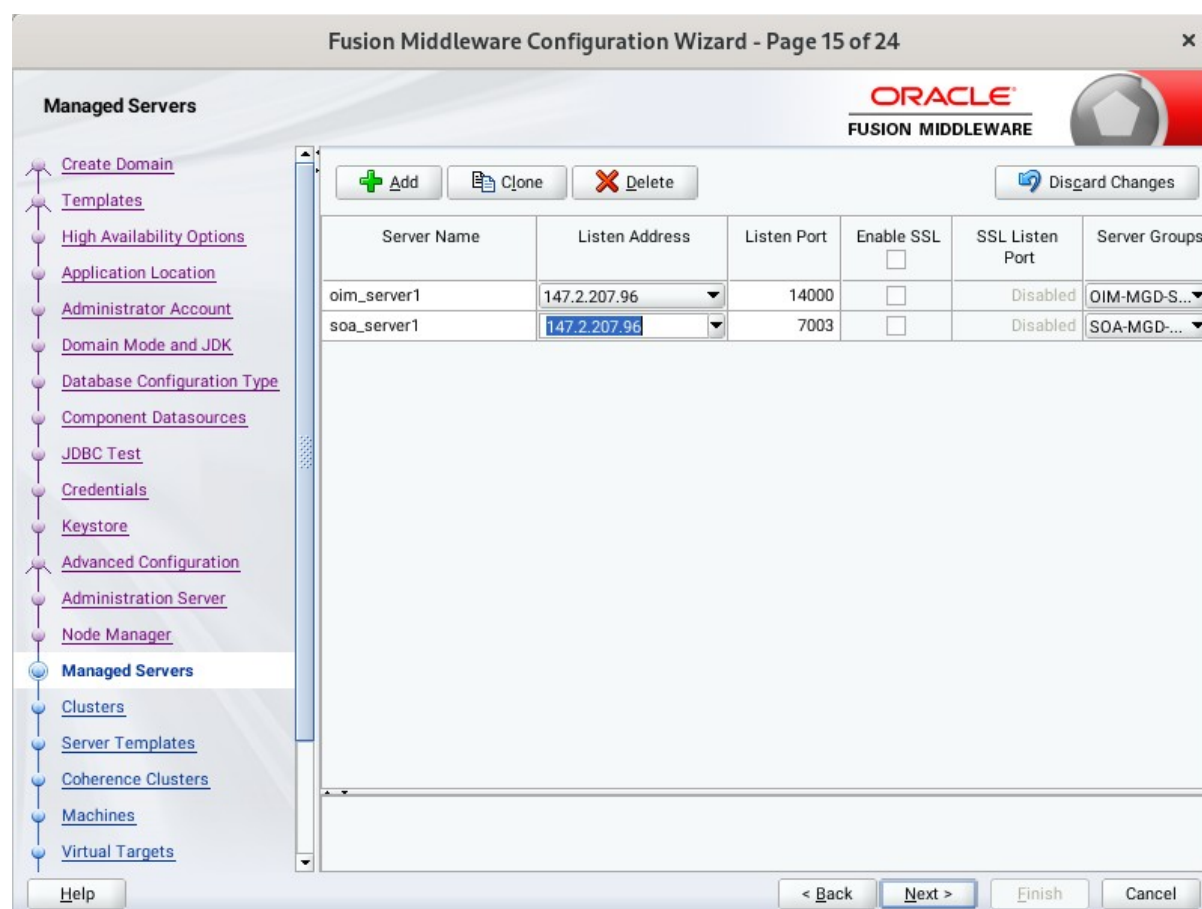
The screenshot shows the "Fusion Middleware Configuration Wizard - Page 14 of 24" window. The title bar includes the Oracle logo and "FUSION MIDDLEWARE". The left sidebar contains a navigation tree with the following items: Create Domain, Templates, High Availability Options, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Credentials, Keystore, Advanced Configuration, Administration Server, **Node Manager** (highlighted), Managed Servers, Clusters, Server Templates, Coherence Clusters, Machines, and Virtual Targets. The main content area is titled "Node Manager" and contains the following 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 note at the bottom of the main area states: "Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character." The bottom of the window features a navigation bar with buttons: Help, < Back, Next >, Finish, and Cancel.

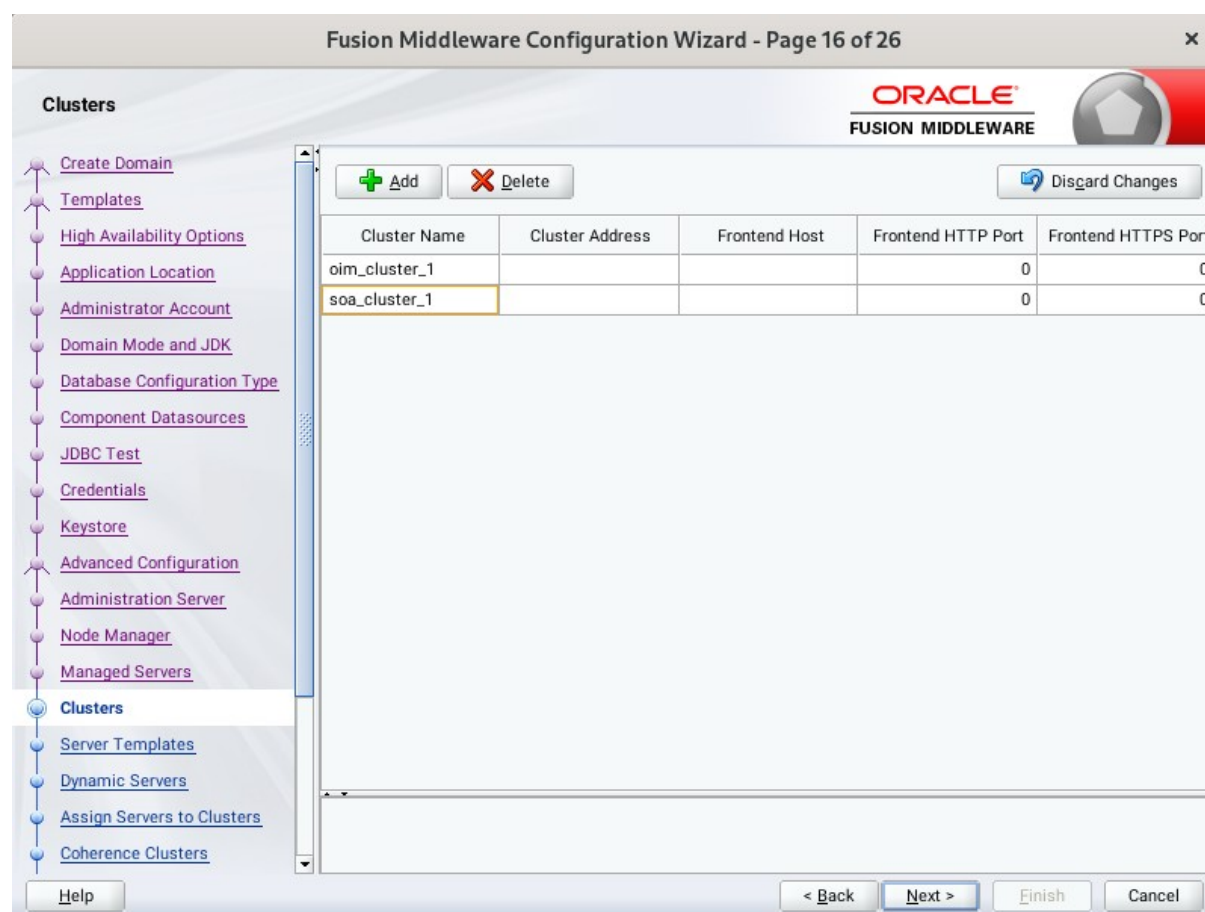
Select **Per Domain Default Location** as the Node Manager type, then Specify Node Manager credentials. Click **Next** to continue.

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



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

16). The **Clusters** screen appears.



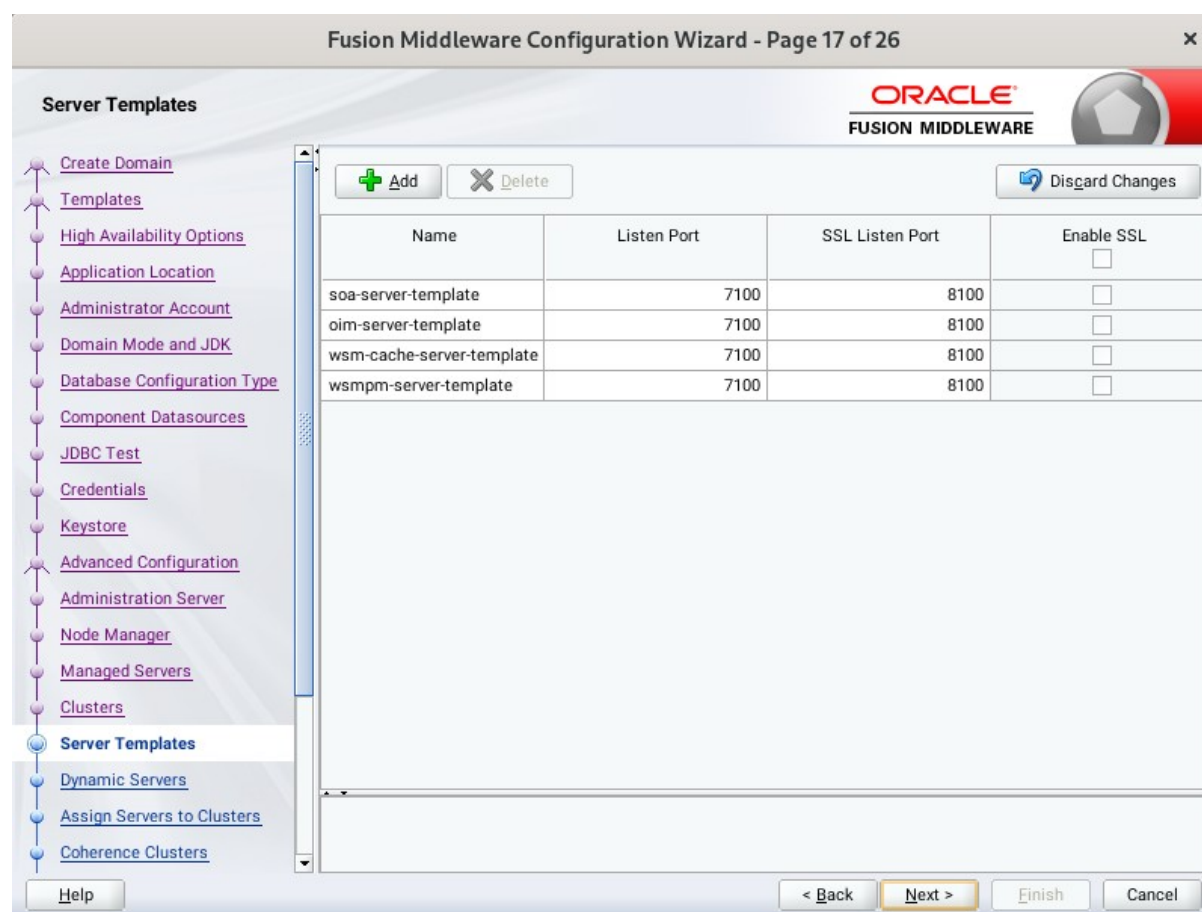
On the Clusters screen:

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

Click **Next** to continue.

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

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



Fusion Middleware Configuration Wizard - Page 17 of 26

Server Templates

ORACLE  
FUSION MIDDLEWARE

+ Add    X Delete    Discard 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"/>
wsm-pm-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.

Fusion Middleware Configuration Wizard - Page 18 of 26

**Dynamic Servers**

ORACLE  
FUSION MIDDLEWARE

Disgard Changes

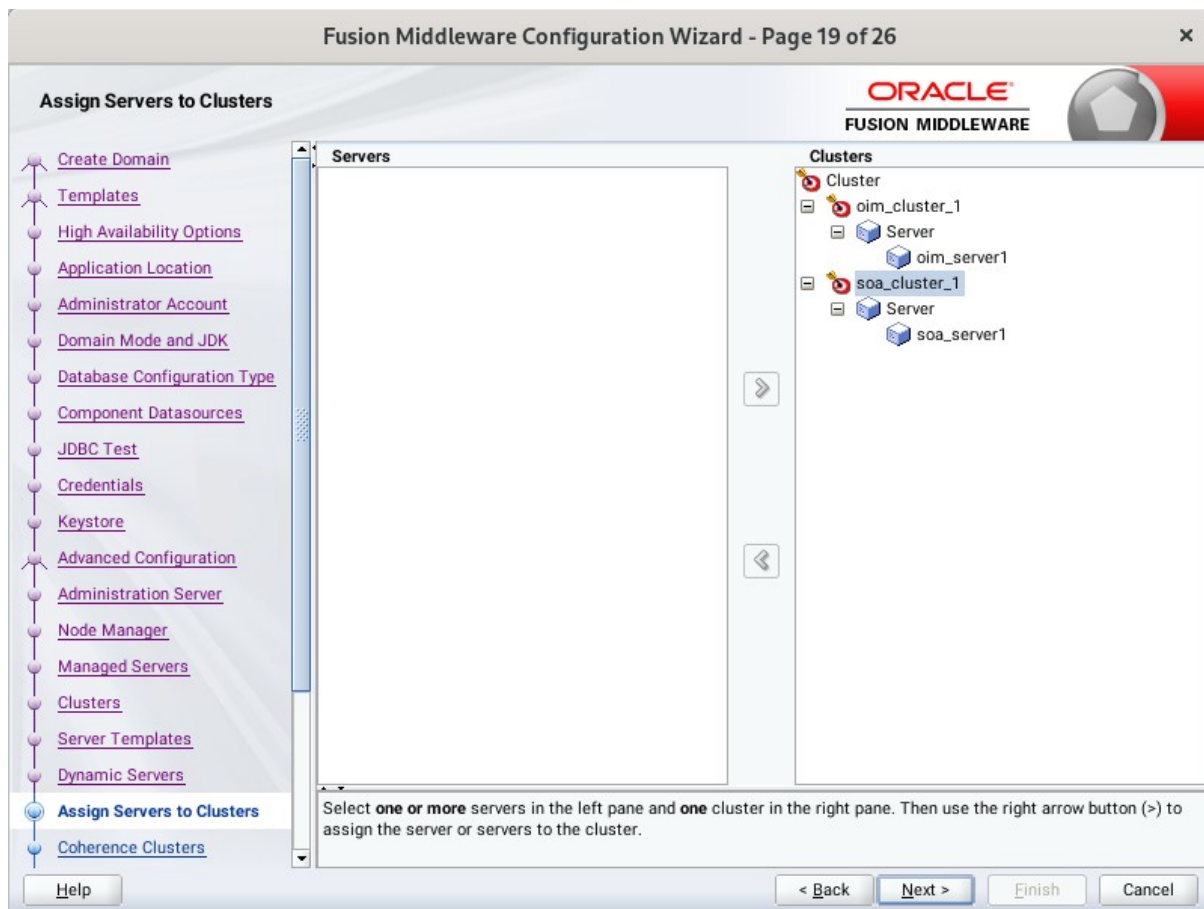
Cluster Name	Server Name Prefix	Server Template	Dynamic Cluster Size	Machine Name Match Expression	Calculated Machine Names	Calculated Listen Ports	Dynamic Server Groups
oim_cluster_1	Disabled	Unspecifi...	Disabled	Disabled	<input type="checkbox"/>	<input type="checkbox"/>	Unspecifi...
soa_cluster_1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

Help < Back Next > Finish Cancel

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

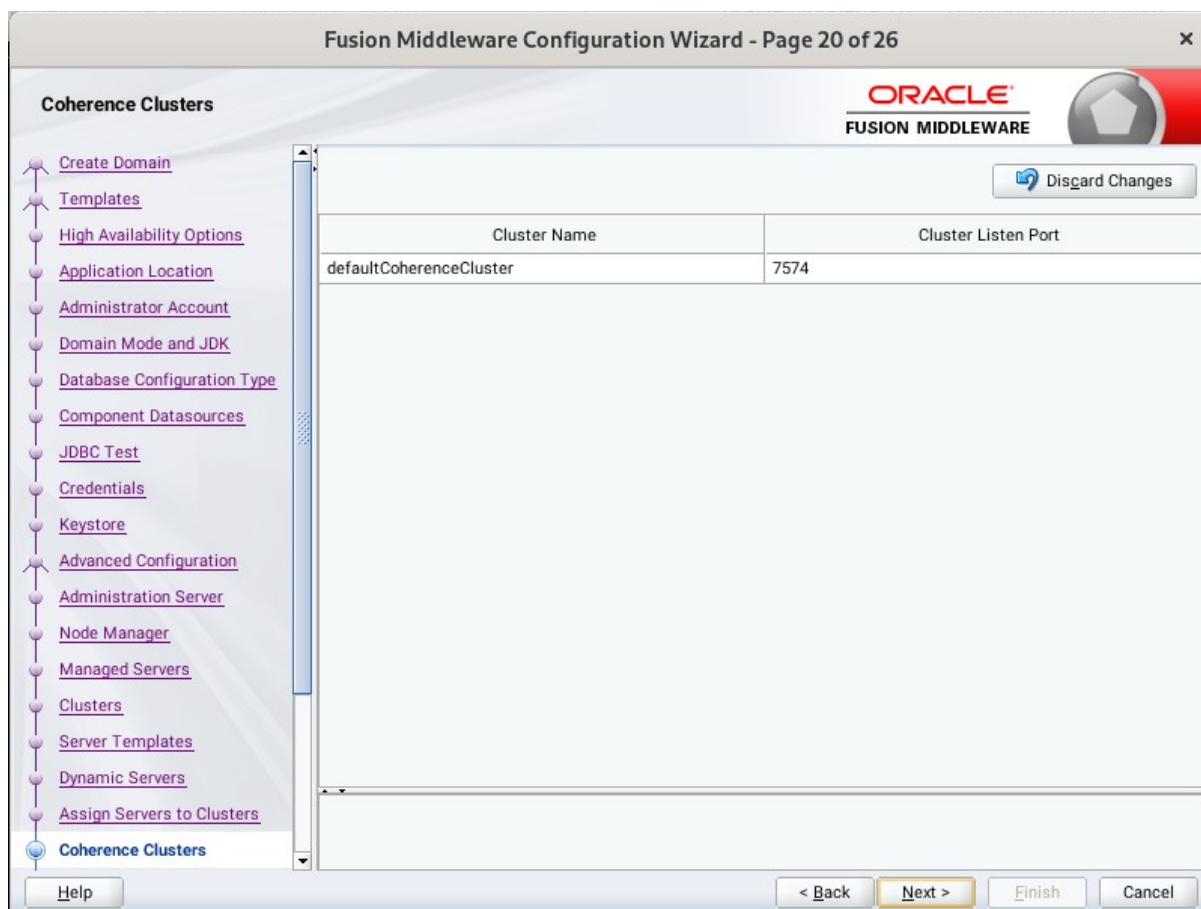


19). The **Assign Servers to Clusters** screen appears.



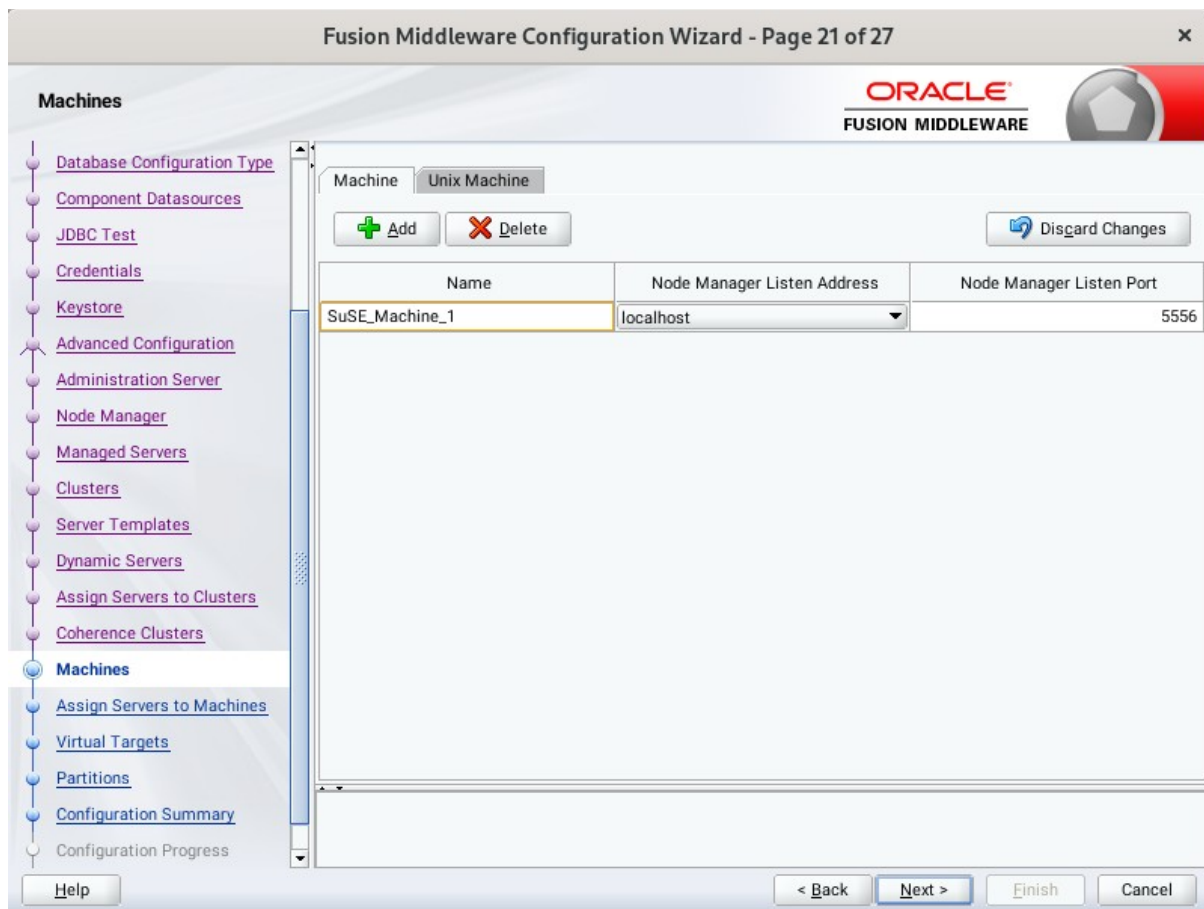
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



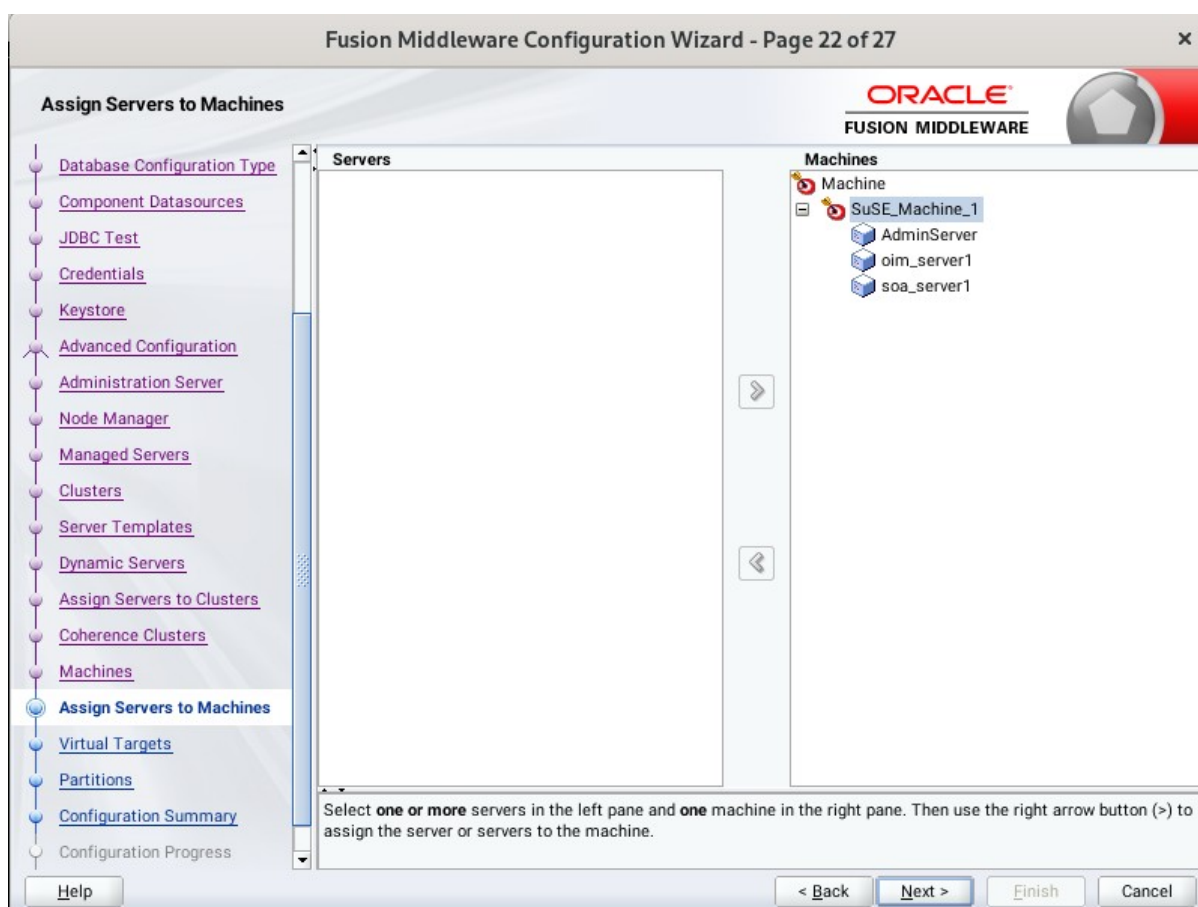
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



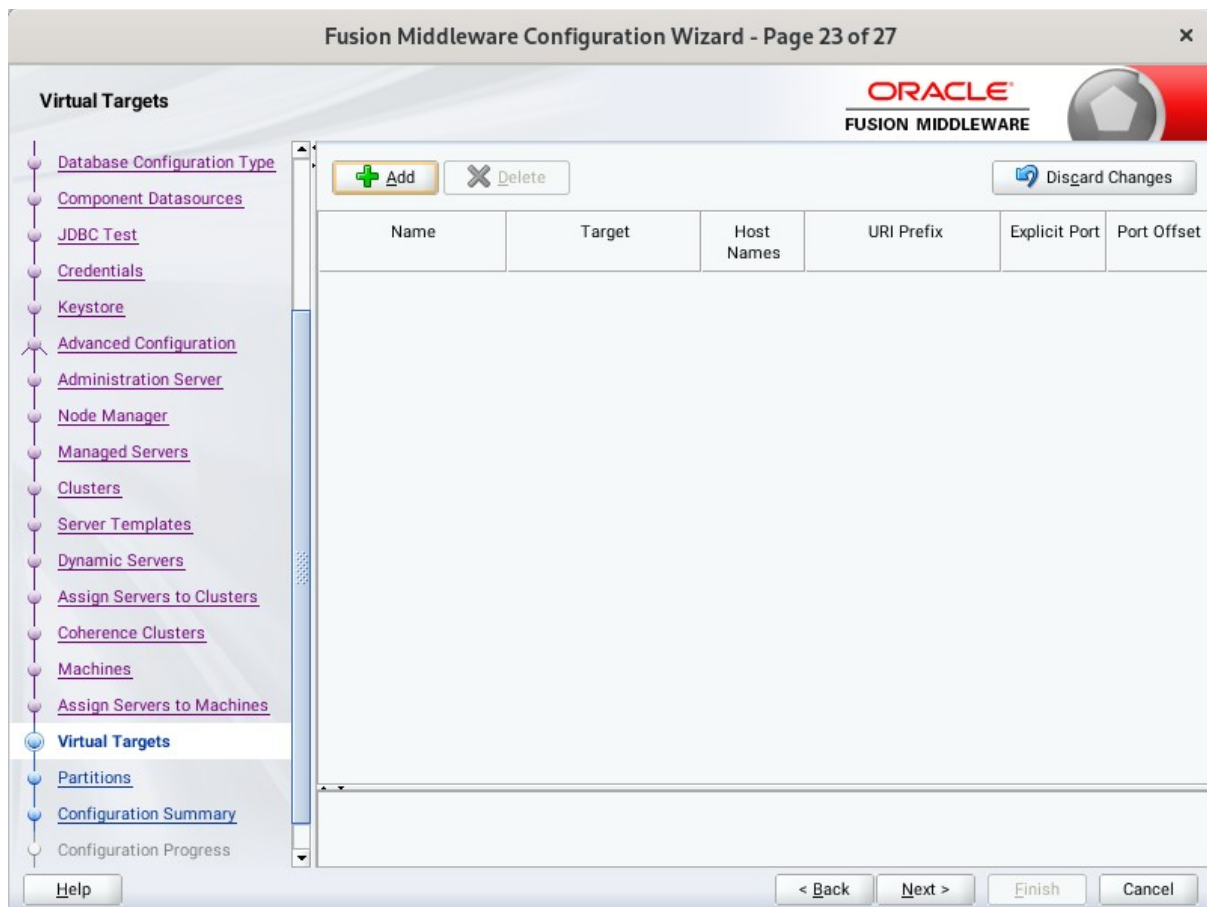
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



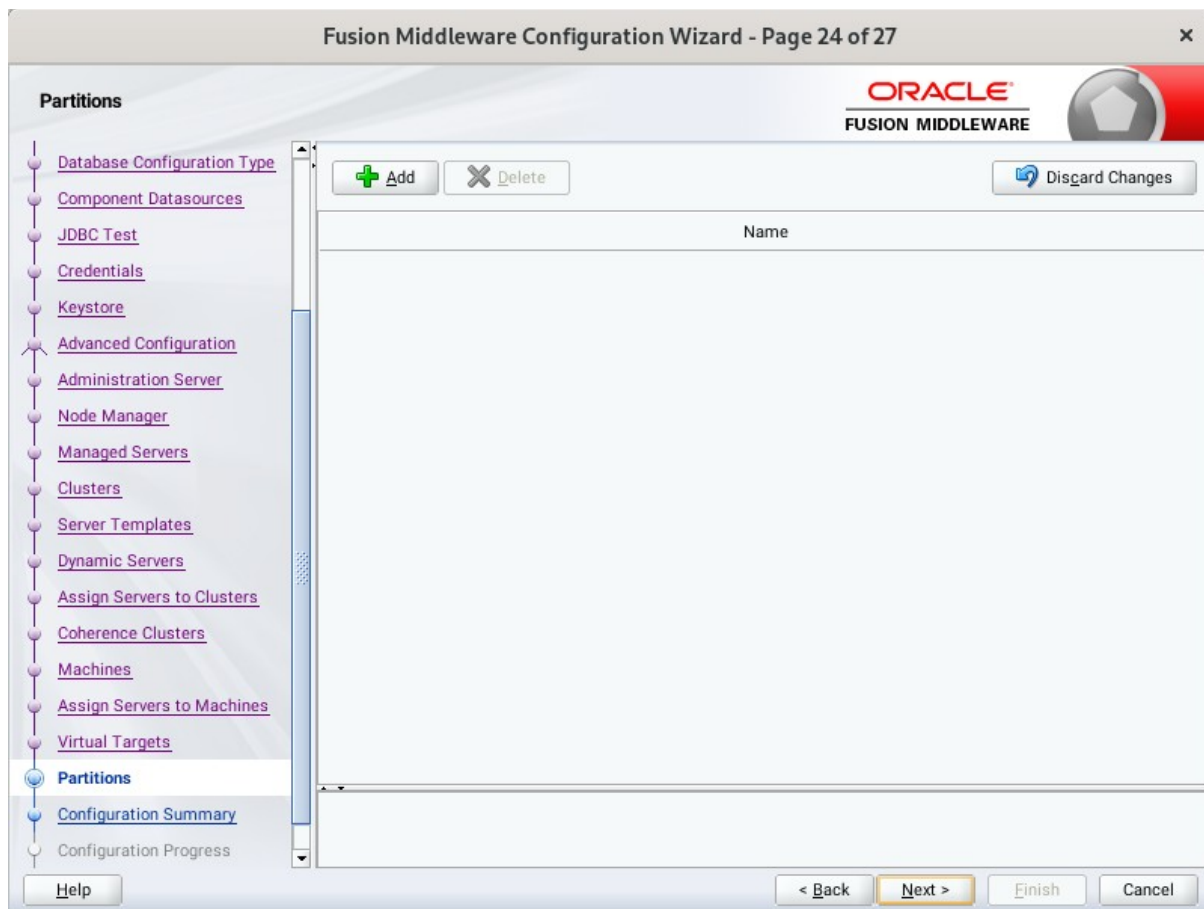
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



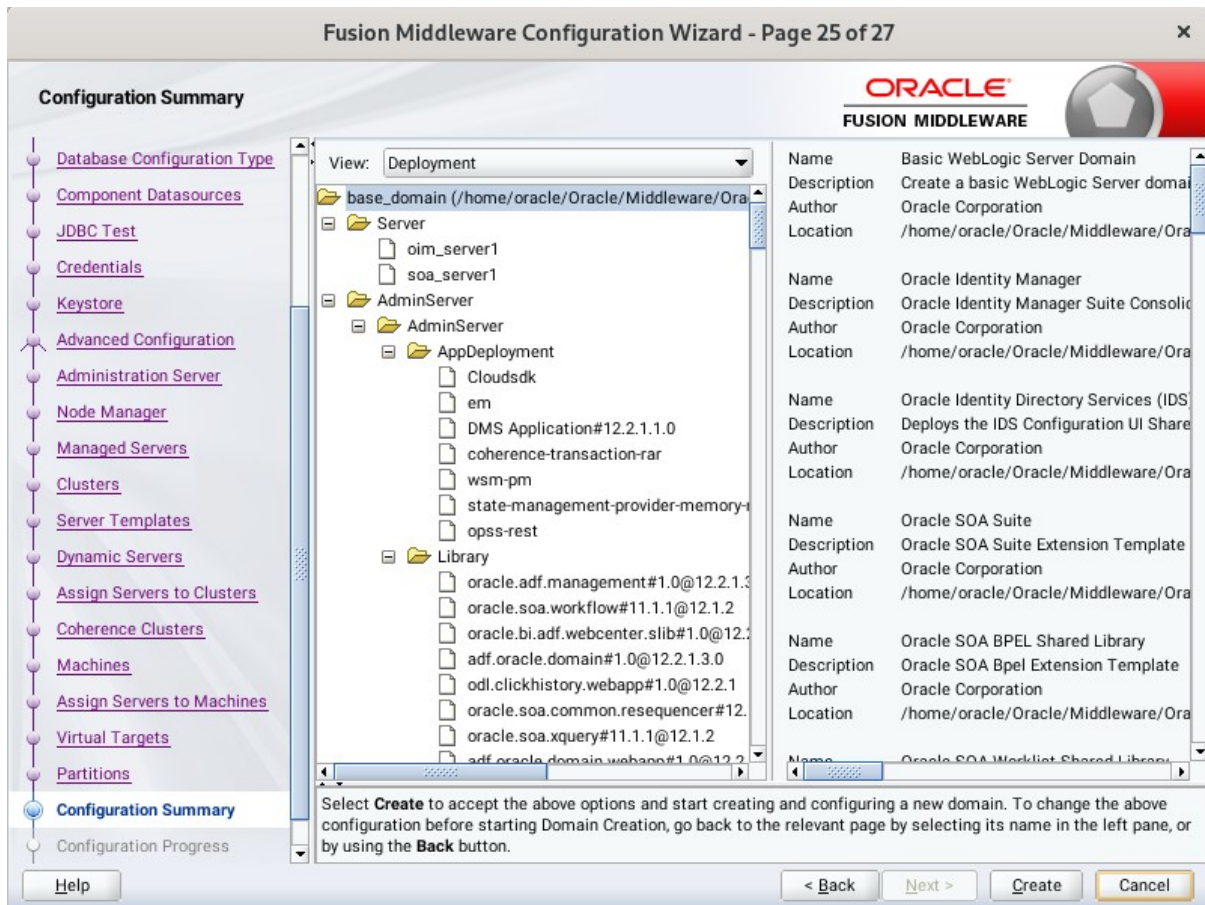
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



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

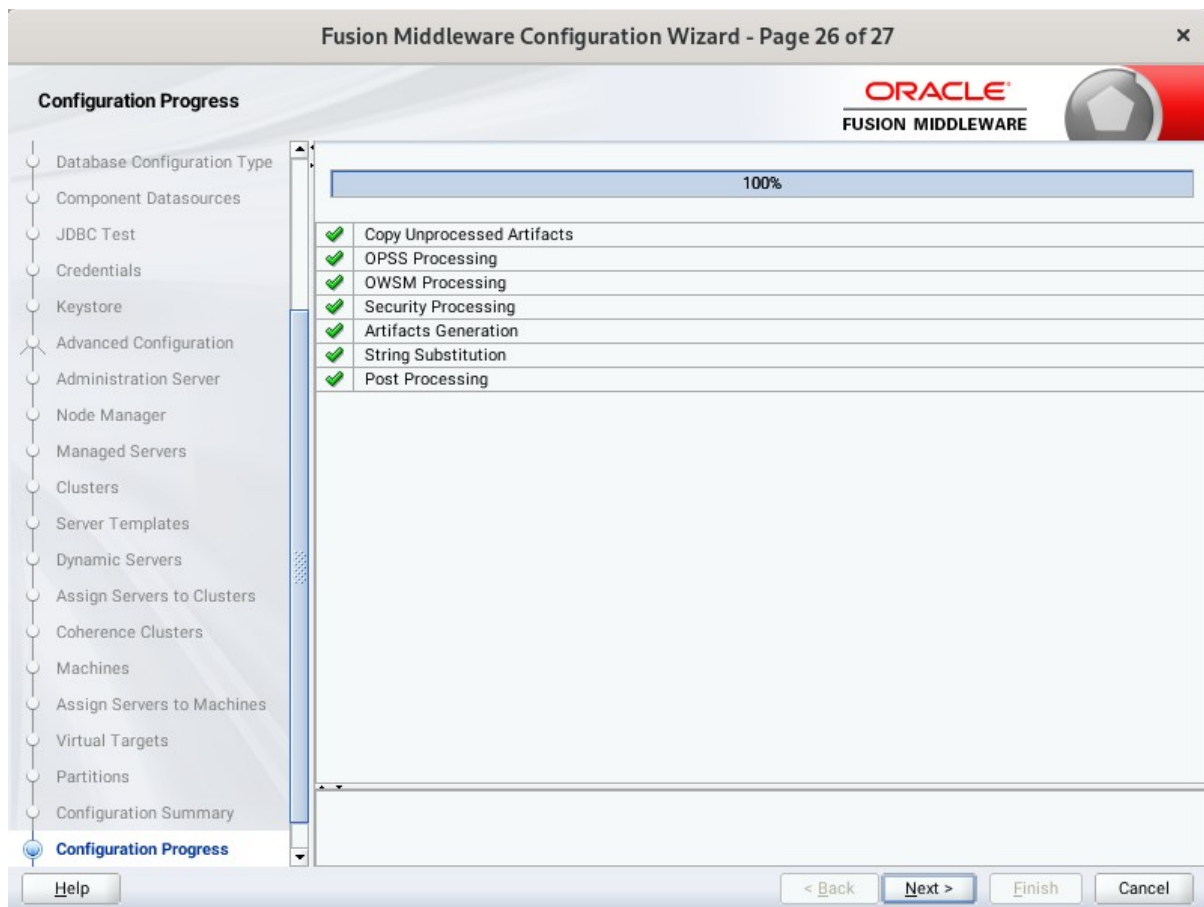
25). The **Configuration Summary** screen appears.



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

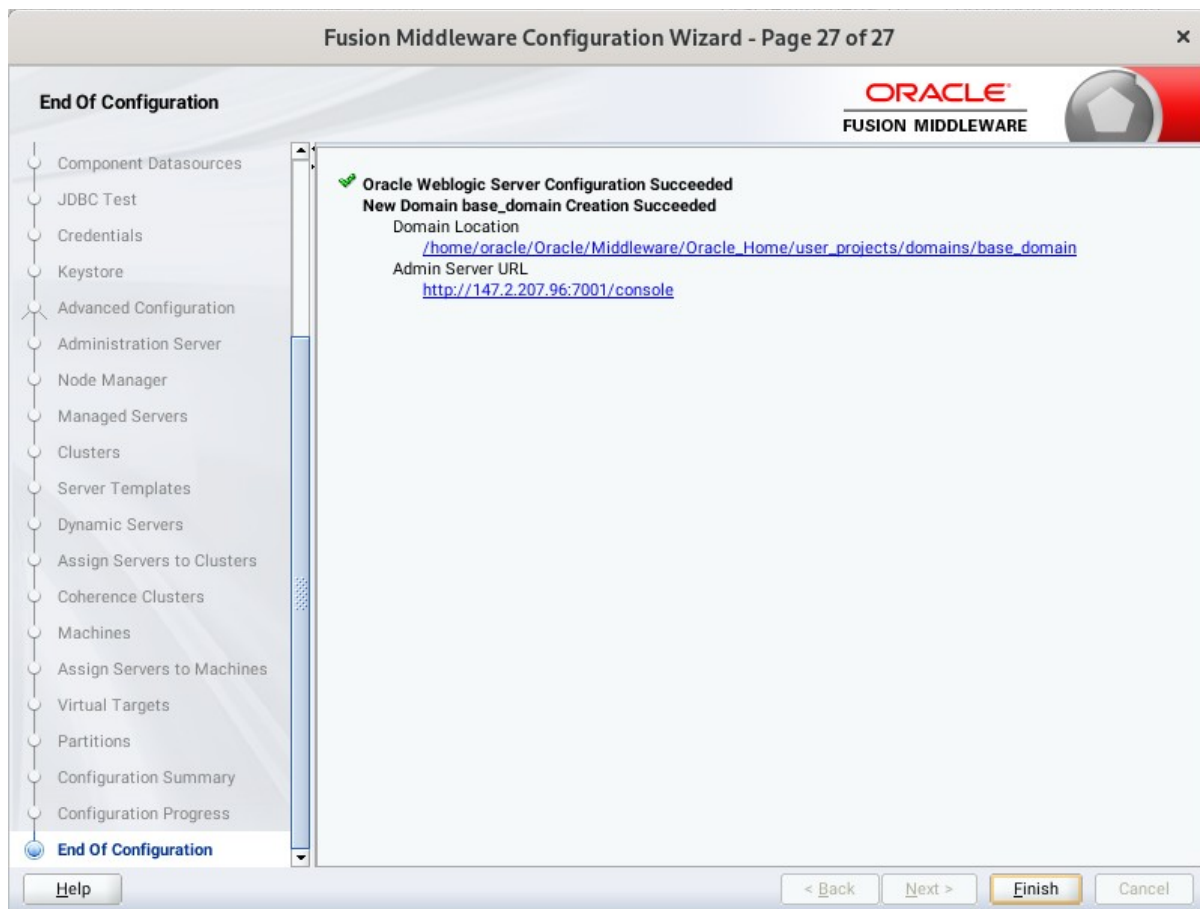


26). The **Configuration Progress** screen appears.



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

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



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

## 2-3. Performing Post-Configuration Tasks

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

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

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

- Set the following environment variables to the right values.

```
DOMAIN_HOME
JAVA_HOME
```

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

```
./setDomainEnv.sh
```

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

```
./offlineConfigManager.sh
```

```

oracle@hpgen9-01:~/...ome/idm/server/bin
oracle@hpgen9-01:~> export DOMAIN_HOME=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/
oracle@hpgen9-01:~> export JAVA_HOME=/home/oracle/Oracle/Oracle_SW/Java/jdk1.8.0_221/
oracle@hpgen9-01:~> /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@hpgen9-01:~> cd /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin/
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> chmod +x ./offlineConfigManager.sh
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> ./offlineConfigManager.sh

```

```

oracle@hpgen9-01:~> export DOMAIN_HOME=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/
oracle@hpgen9-01:~> export JAVA_HOME=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221/
oracle@hpgen9-01:~> /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@hpgen9-01:~> cd /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin/
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> chmod +x ./offlineConfigManager.sh
oracle@hpgen9-01:/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
MW Home==> /home/oracle/Oracle/Middleware/Oracle_Home
cp: -r not specified; omitting directory '/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema'
copied jars from /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/ to /home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/mbeanTypes/ dir
copied /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema/* to /home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/lib/schematypes/ dir

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

```

```

-jse.xml is updated.
<Sep 22, 2023 4:57:28,329 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.util.JPSCfgXMLUpdate updateJPSCfgXMLForWLS
INFO: Exiting updateJPSCfgXMLForWLS() method of JPSCfgXMLUpdate class
<Sep 22, 2023 4:57:28,329 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Updated jps-config-jse.xml Details.>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO:
Updated jps-config-jse.xml Details.
<Sep 22, 2023 4:57:28,330 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSCfg() method of OIMConfigManager class>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSCfg
INFO: Exiting updateJPSCfg() method of OIMConfigManager class
<Sep 22, 2023 4:57:28,331 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <[OIM_CONFIG] Copying the mbean Files>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
[OIM_CONFIG] Copying the mbean Files
<Sep 22, 2023 4:57:28,332 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Entering copyMbeanFiles() method of OIMConfigManager class>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Entering copyMbeanFiles() method of OIMConfigManager class
<Sep 22, 2023 4:57:28,332 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Copying mbean files are successful>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
Copying mbean files are successful
<Sep 22, 2023 4:57:28,333 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting copyMbeanFiles() method of OIMConfigManager class>
Sep 22, 2023 4:57:28 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Exiting copyMbeanFiles() method of OIMConfigManager class
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin>

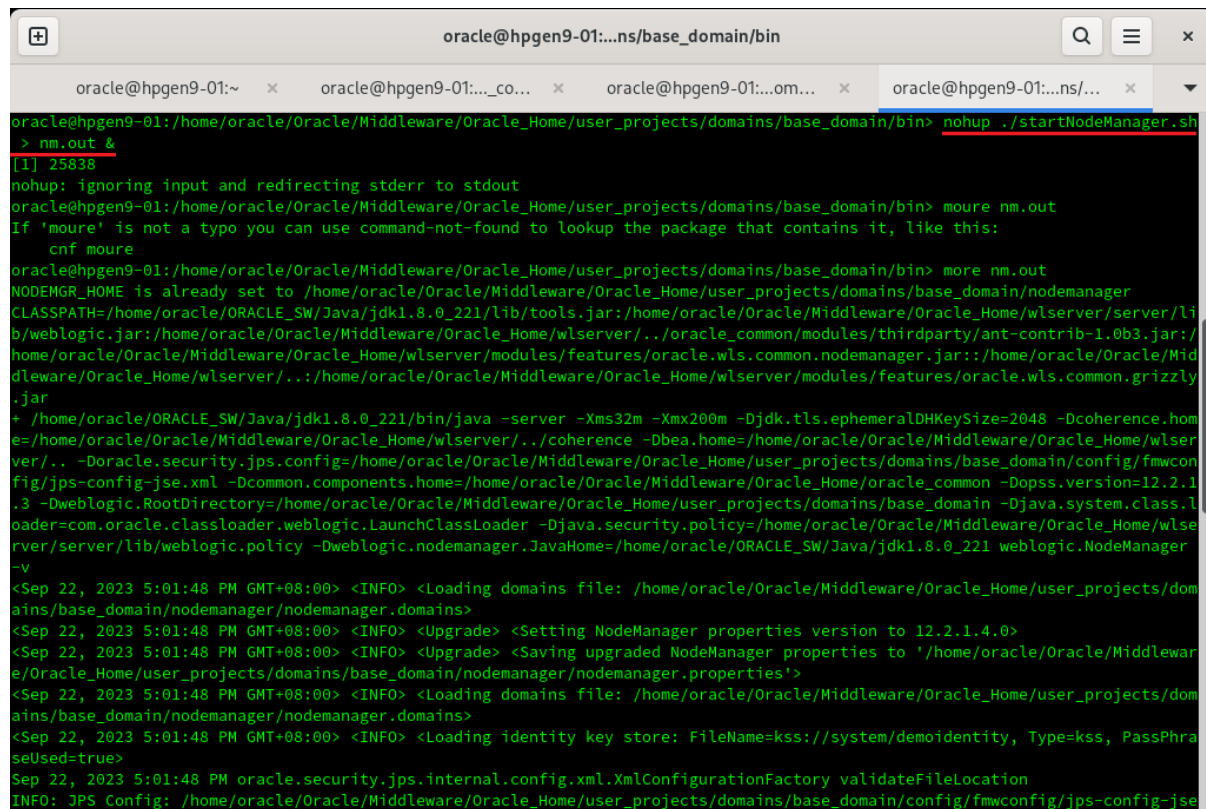
```

### 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@hpgen9-01:~/...ns/base_domain/bin
oracle@hpgen9-01:~/...ns/base_domain/bin> nohup ./startNodeManager.sh > nm.out &
[1] 25838
nohup: ignoring input and redirecting stderr to stdout
oracle@hpgen9-01:~/...ns/base_domain/bin> more nm.out
If 'more' is not a typo you can use command-not-found to lookup the package that contains it, like this:
  cnf more
oracle@hpgen9-01:~/...ns/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_SW/Java/jdk1.8.0_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/ser
ver/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/Mid
dleware/Oracle_Home/wlserver/..:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly
.jar
+ /home/oracle/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.ho
me=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlser
ver/.. -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwcon
fig/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.l
oader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlse
rver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager
-v
<Sep 22, 2023 5:01:48 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/dom
ains/base_domain/nodemanager/nodemanager.domains>
<Sep 22, 2023 5:01:48 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Sep 22, 2023 5:01:48 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'>
<Sep 22, 2023 5:01:48 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/dom
ains/base_domain/nodemanager/nodemanager.domains>
<Sep 22, 2023 5:01:48 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhra
seUsed=true>
Sep 22, 2023 5:01:48 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

```

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

```

oracle@hpgen9-01:~$ cd base_domain/bin
oracle@hpgen9-01:~/base_domain/bin$ ./startWebLogic.sh
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.*]
<Sep 22, 2023 5:06:39,488 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ign
oring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Sep 22, 2023 5:06:40,956 PM GMT+08:00> <Warning> <oracle.security.opss.internal.runtime.ServiceContextManagerImpl> <BEA-00000
0> <Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials.
If required, use Wlst or configuration management interfaces.>
<Sep 22, 2023 5:06:41,419 PM GMT+08:00> <Warning> <oracle.dms.instrument> <DMS-50763> <Attempt to create pre-existing noun /ba
se_domain/AdminServer/em, of type wls_jaxrsapp_resources, with a conflicting type wls_ear.>
<Sep 22, 2023 5:06:41,712 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a conn
ection with the Domain level Diagnostic Service.>
<Sep 22, 2023 5:06:42,430 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Sep 22, 2023 5:06:42,466 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Sep 22, 2023 5:06:42,466 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving co
nnection list DomainRuntimeServiceMBean>
<Sep 22, 2023 5:06:43,185 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Ser
ver "AdminServer" for domain "base_domain" running in production mode.>
<Sep 22, 2023 5:06:43,186 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Sep 22, 2023 5:06:43,186 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 147.2.207.96:700
1 for protocols iiop, t3, ldap, snmp, http.>
<Sep 22, 2023 5:06:43,706 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Sep 22, 2023 5:06:43,737 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

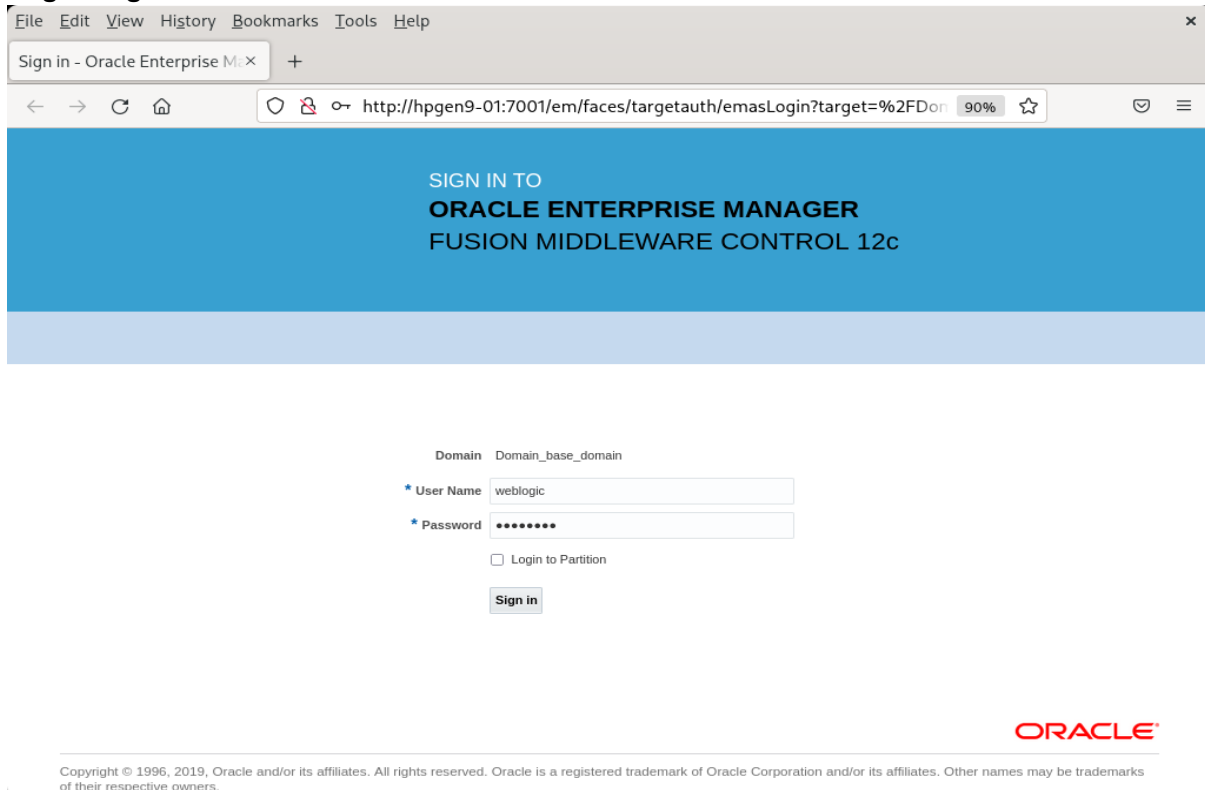
You know that the administrator server is running when you see the following output:

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

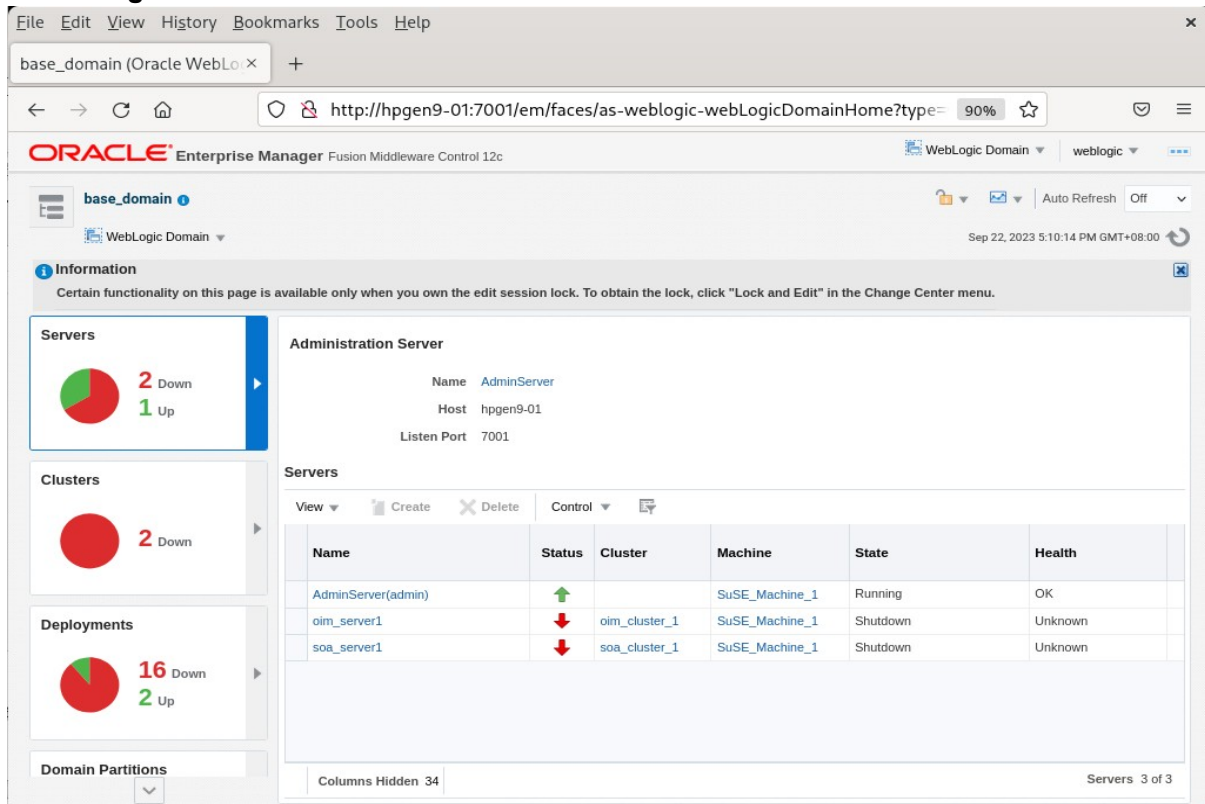
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

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

##### Login Page:



##### Home Page:





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

base\_domain (Oracle WebLo...)

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHome?type= 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

base\_domain

WebLogic Domain | Auto Refresh Off

Sep 22, 2023 5:16:59 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 hpgen9-01  
Listen Port 7001

Servers

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
oim_server1	↓	oim_cluster_1	SuSE_Machine_1	Shutdown	Unknown
soa_server1	↑	soa_cluster_1	SuSE_Machine_1	Running	OK

Columns Hidden 34 Servers 3 of 3

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHome?type=weblogic\_domain&target=/Domain\_base\_domain/base\_domain#

base\_domain (Oracle WebLo...)

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHome?type= 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

base\_domain

WebLogic Domain | Auto Refresh Off

Sep 22, 2023 5:22:58 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

Administration Server

Name AdminServer  
Host hpgen9-01  
Listen Port 7001

Servers

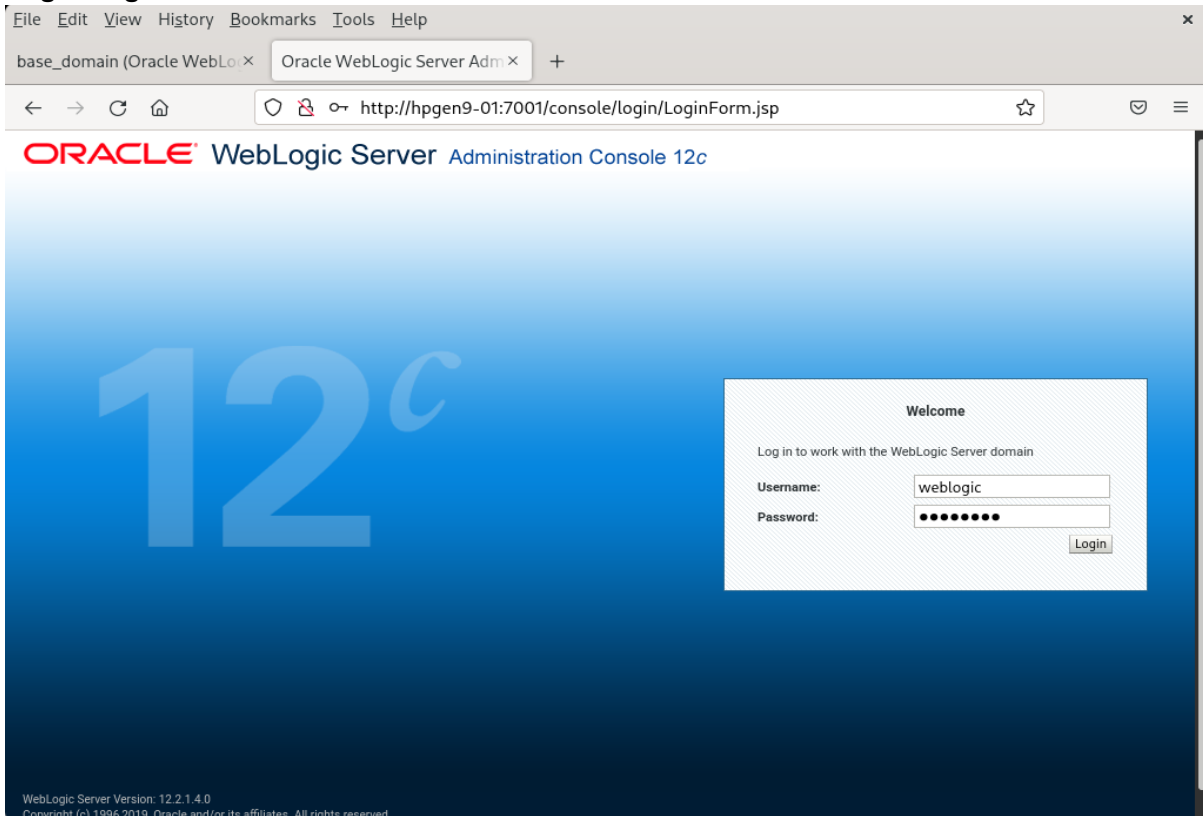
Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		SuSE_Machine_1	Running	OK
oim_server1	↑	oim_cluster_1	SuSE_Machine_1	Running	OK
soa_server1	↑	soa_cluster_1	SuSE_Machine_1	Running	OK

Columns Hidden 34 Servers 3 of 3

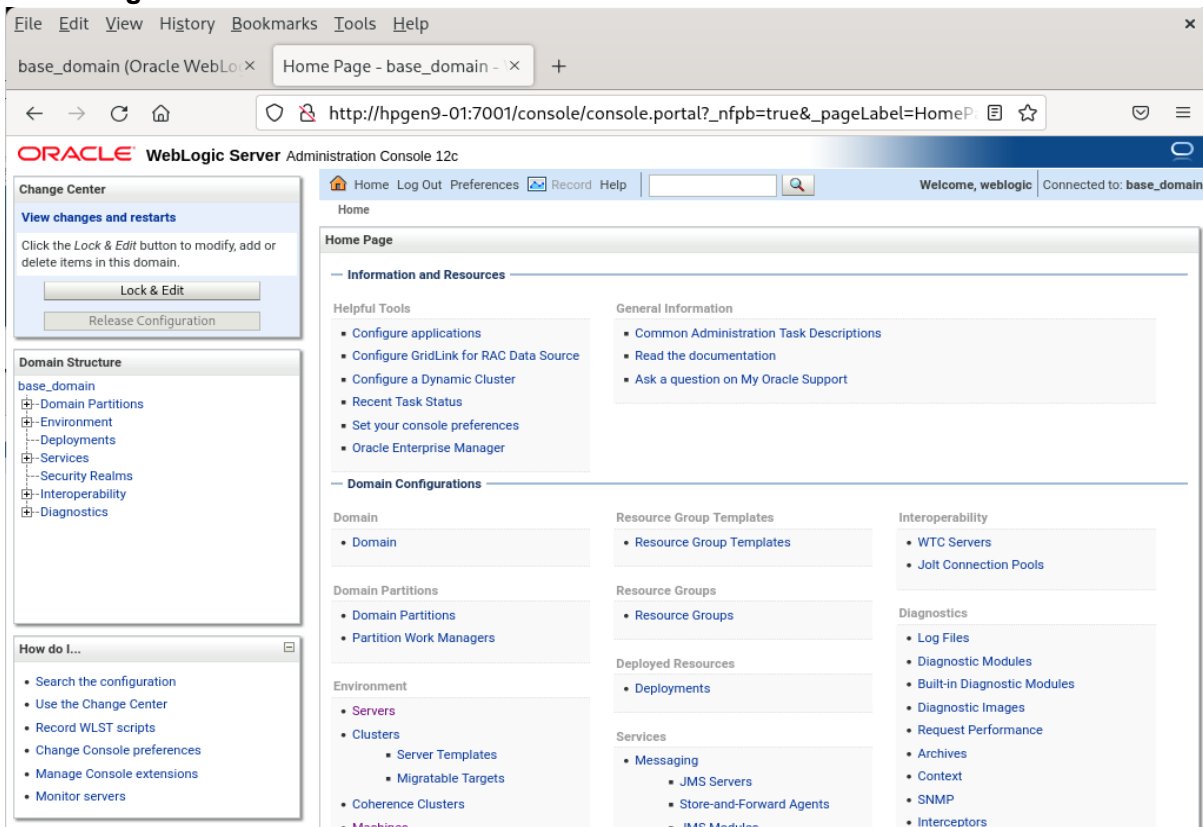
After they start up successfully, each managed server is listed as Running.

## 2). Access to Administration Server Console

### Login Page:



### Home Page:



### Viewing the summary of servers:

**Summary of Servers**

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

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

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

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

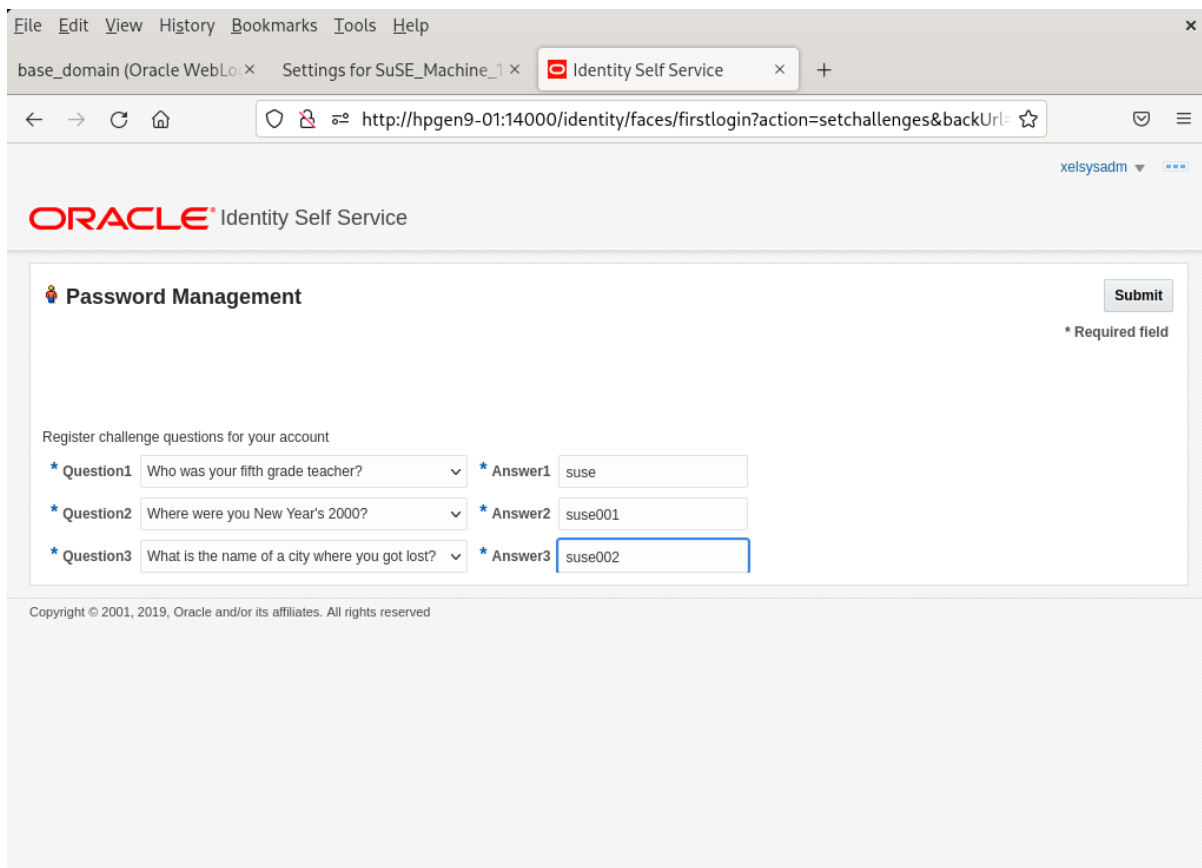
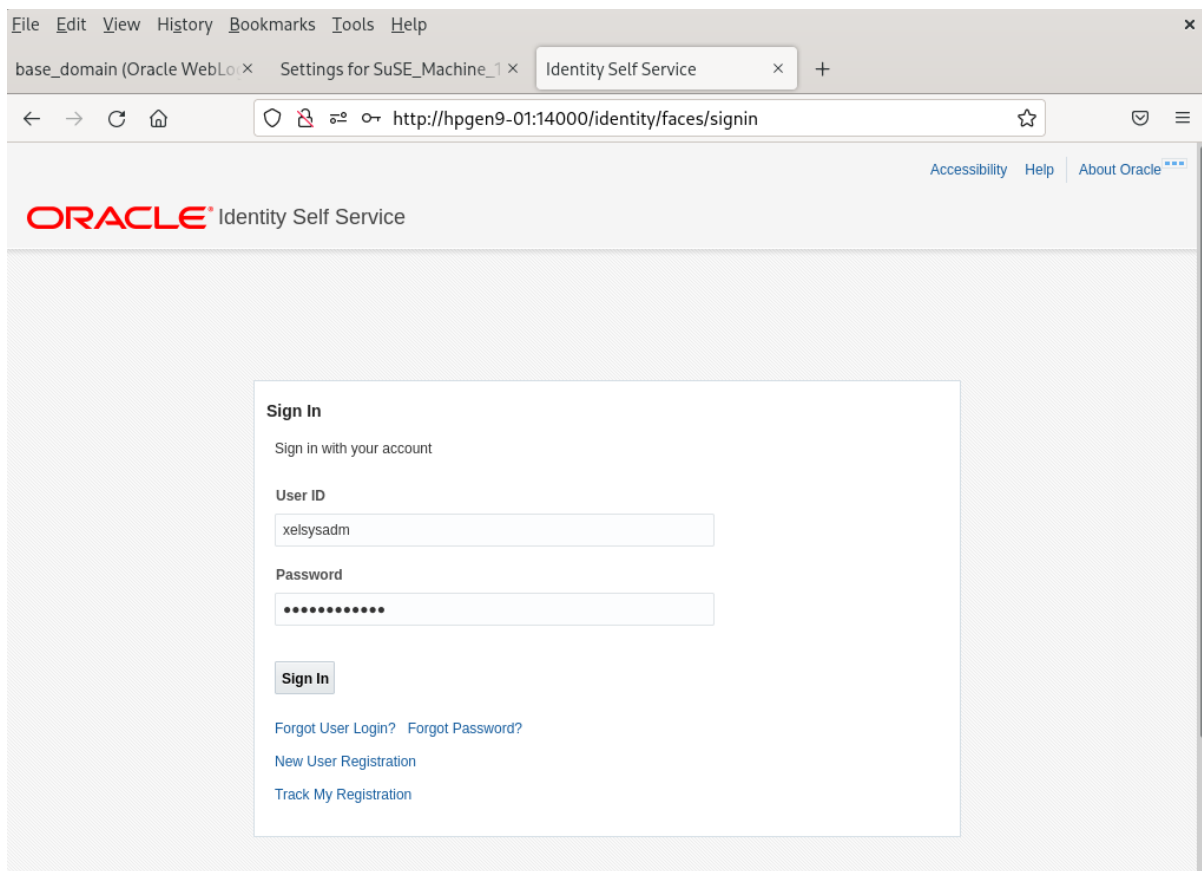
**Settings for SuSE\_Machine\_1**

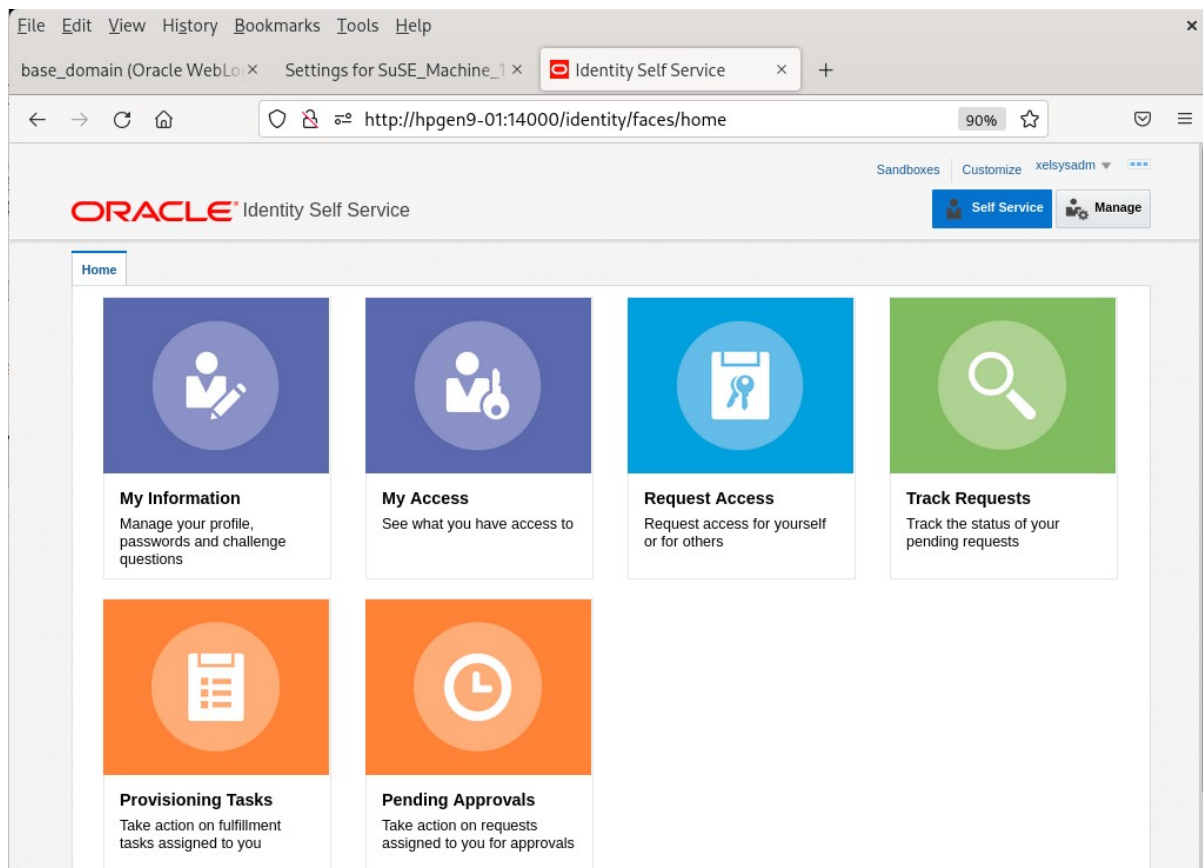
**Node Manager Status**

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

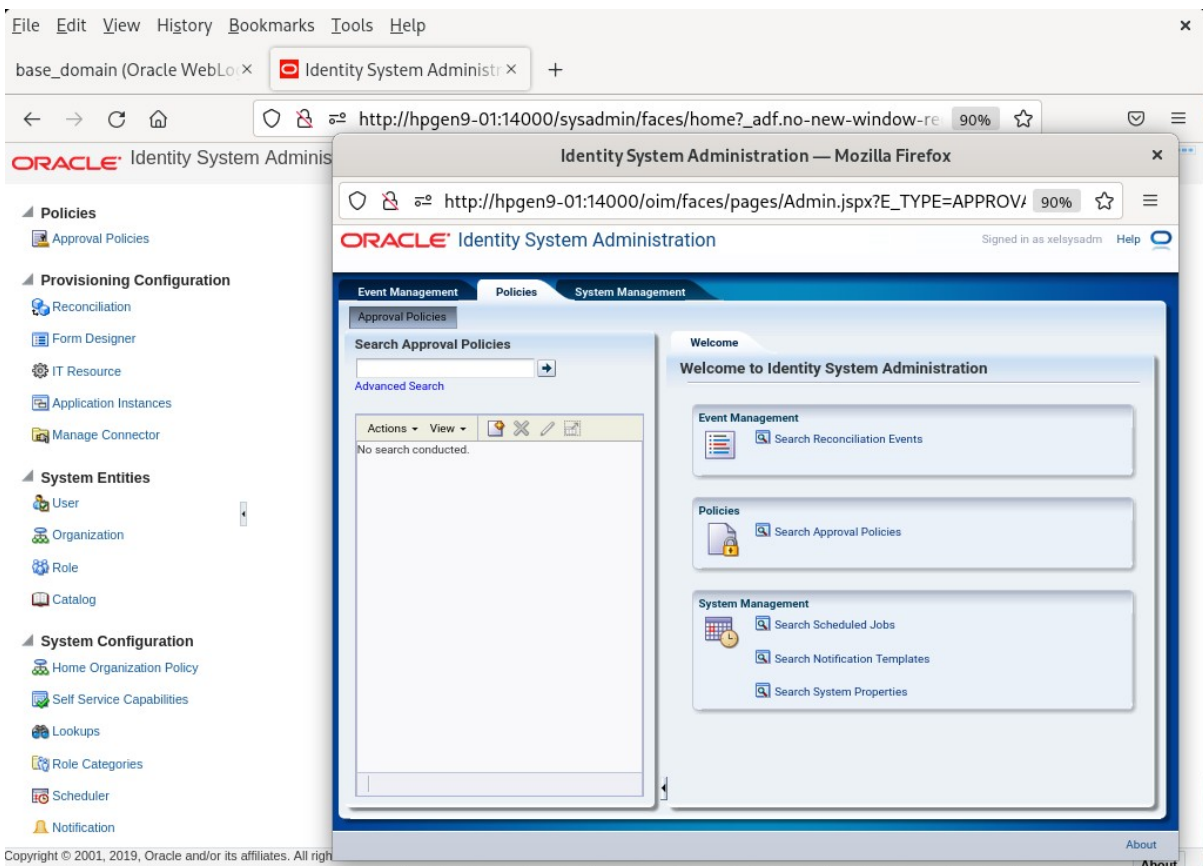
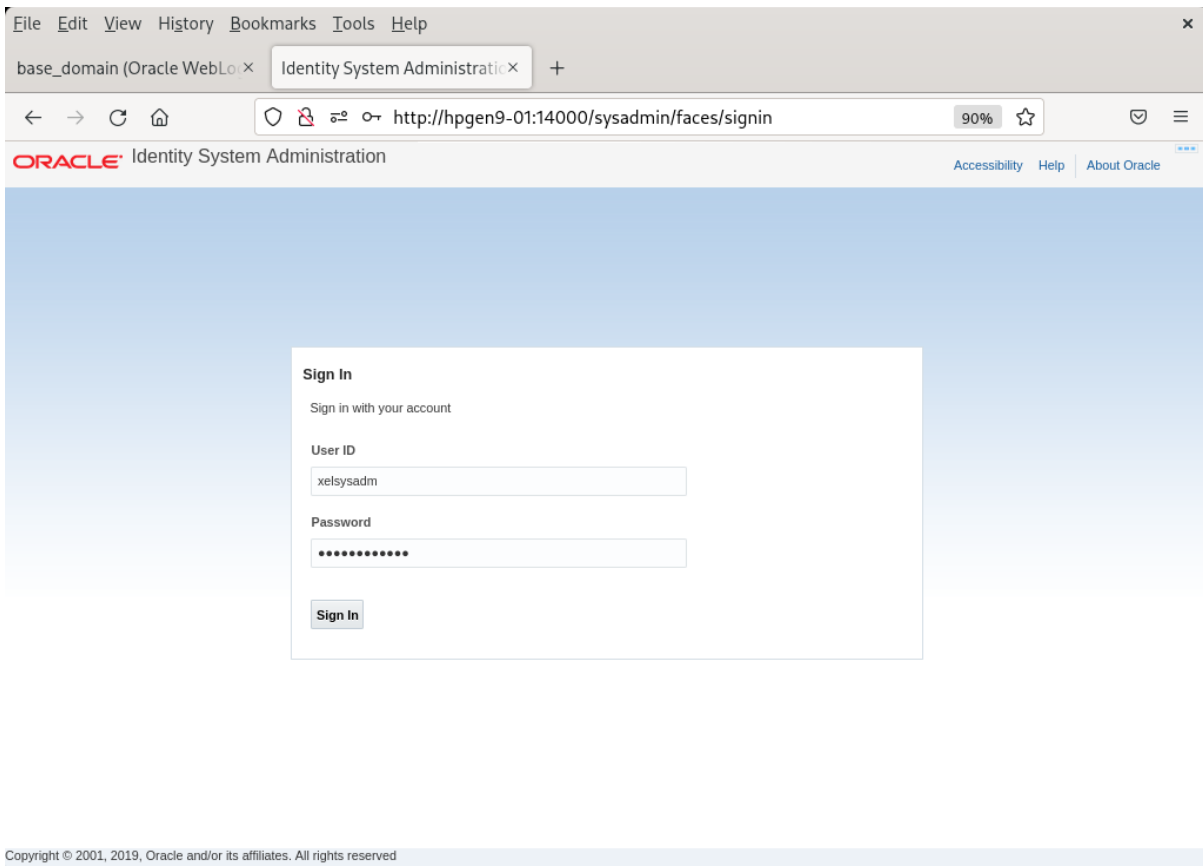
<b>Status:</b>	Reachable	Current status of this Node Manager. <a href="#">More Info...</a>
<b>Version:</b>	12.2.1.4.0	Version string returned from the Node Manager. <a href="#">More Info...</a>

3). Access to OIM Identity Self Service – URL: <http://host:port/identity>





4). Access to OIM Identity System Administration Console – URL:<http://host:port/sysadmin>



5). Access to Oracle SOA infrastructure Main Page – URL:<http://host:port/soa-infra>

File Edit View History Bookmarks Tools Help

base\_domain (Oracle WebLo... Identity System Administr... Welcome to the Oracle SOA I... +

← → ↻ 🏠 <http://hpgen9-01:7003/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

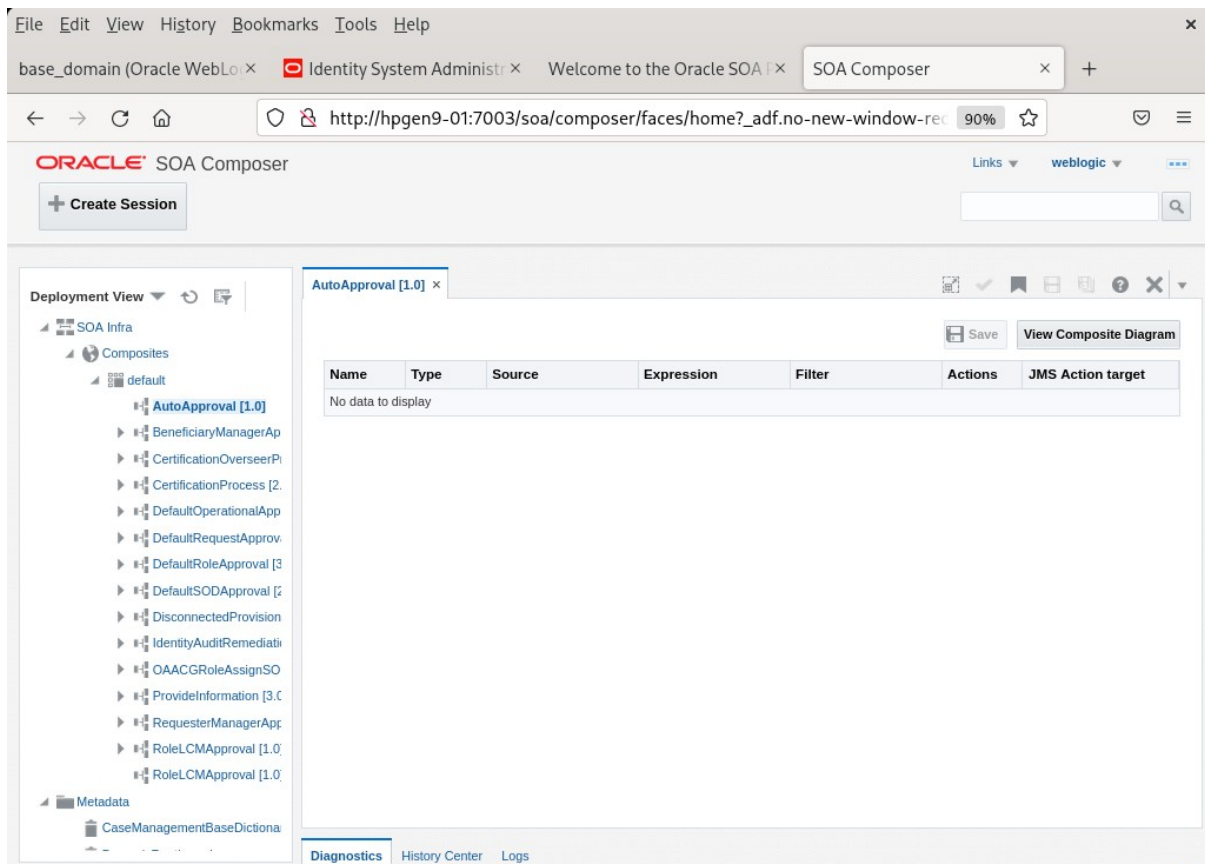
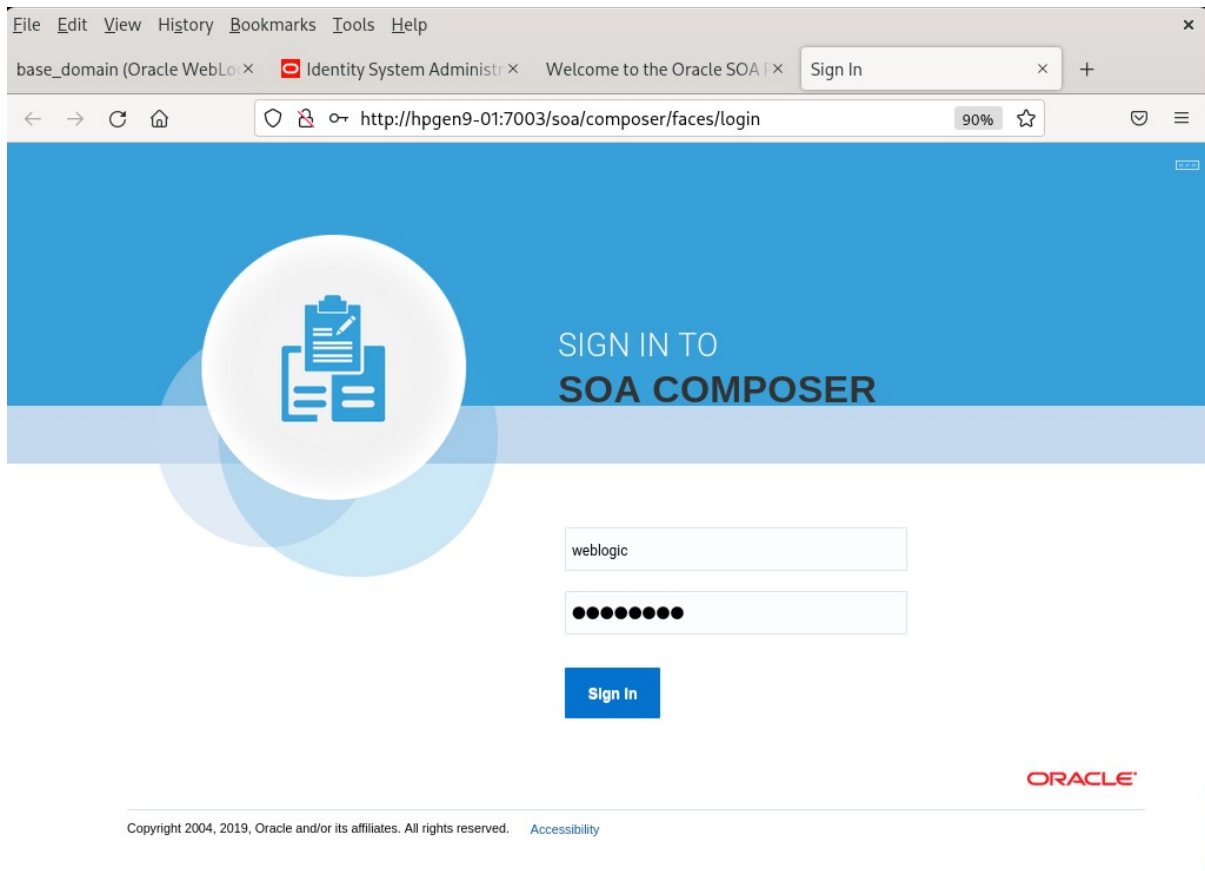
**Links**  
[SOA Composer](#)  
[BPM Worklist](#)

The following composites are currently deployed:

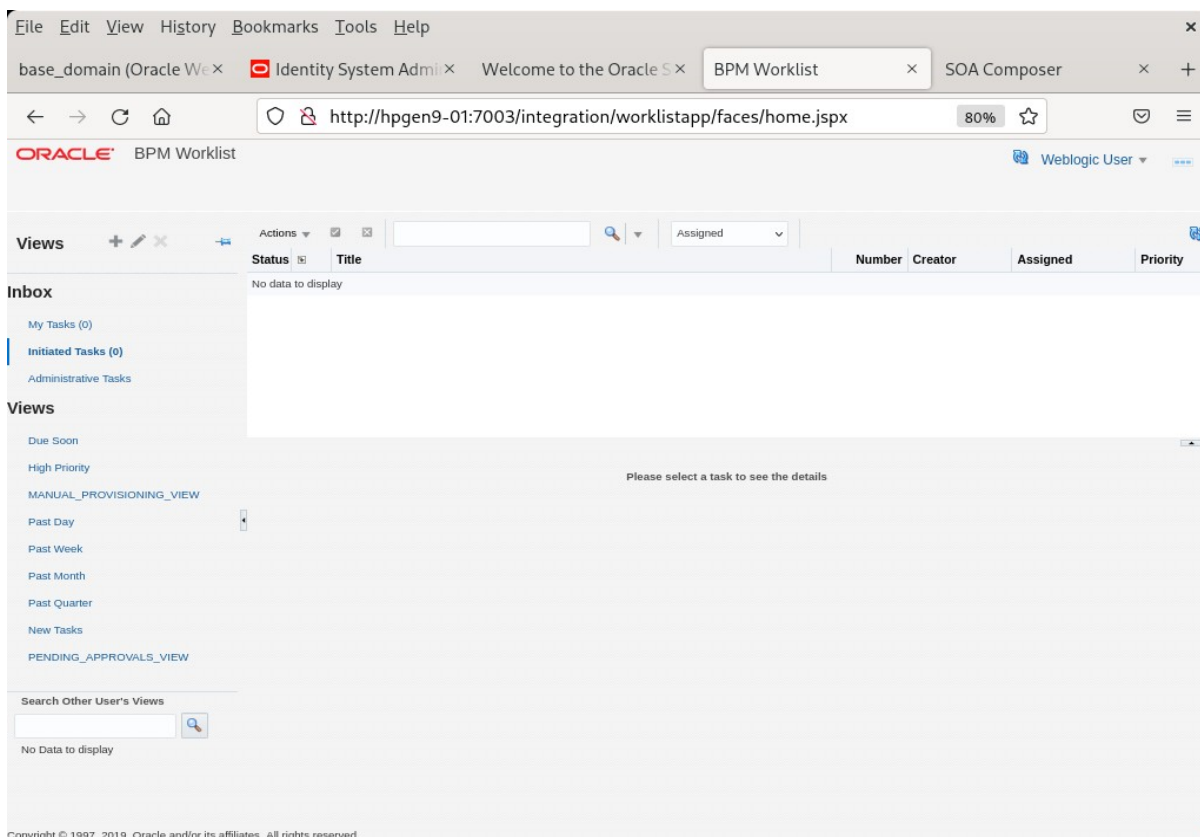
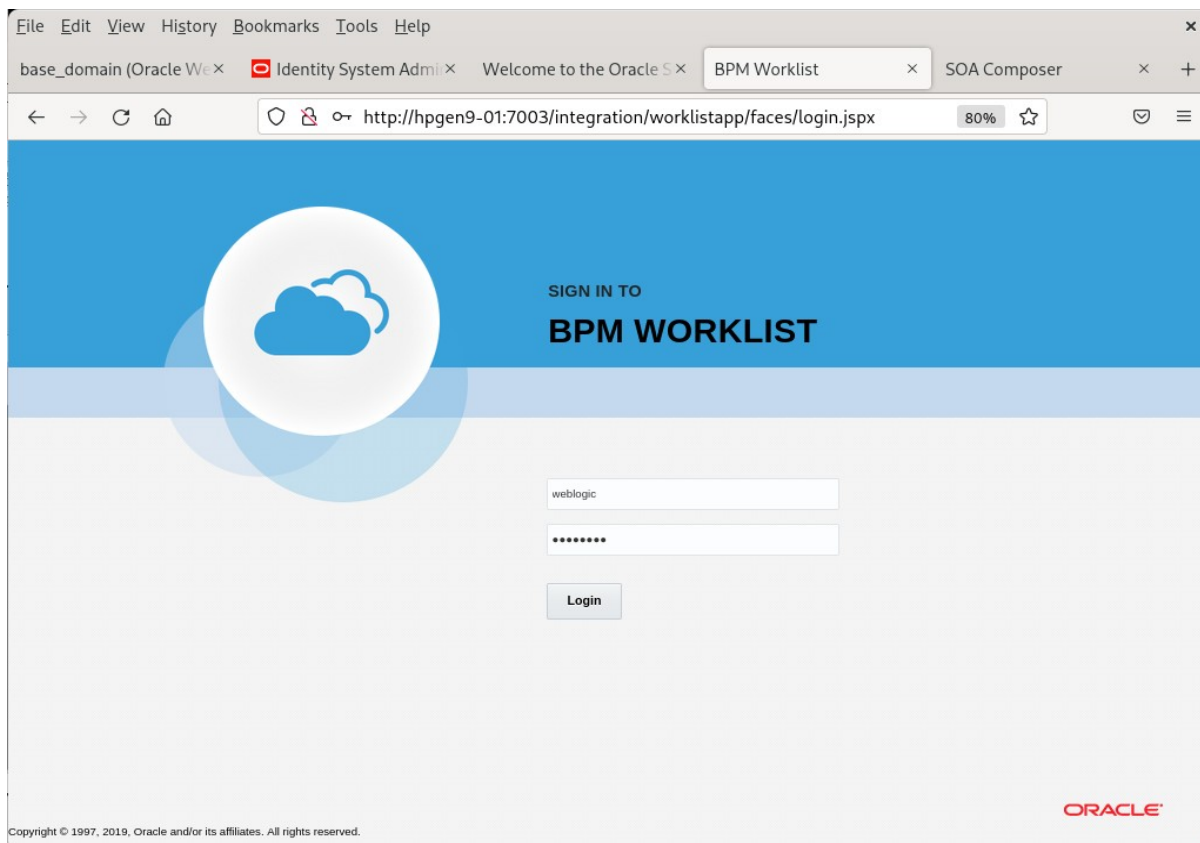
- default/AutoApproval!1.0\*soa\_57adc357-5350-42d3-bc63-ca2e05733b97
  - [Test RequestApprovalService](#)
- default/BeneficiaryManagerApproval!4.0\*soa\_40ffb09e-eb73-4e25-be4e-4fe8490c6a92
  - [Test RequestApprovalService](#)
- default/CertificationOverseerProcess!2.0\*soa\_ef06a696-507e-4def-891c-dbb1c047690e
  - [Test CertificationTaskService](#)
- default/CertificationProcess!2.0\*soa\_36bec91d-114b-493e-ae4-ca568ffea906
  - [Test CertificationTaskService](#)
- default/DefaultOperationalApproval!5.0\*soa\_38739553-6c1a-4c5f-a92b-214af5287346
  - [Test RequestApprovalService](#)
- default/DefaultRequestApproval!6.0\*soa\_f27870ee-6e18-4d97-aa42-8c000eee6161
  - [Test RequestApprovalService](#)
- default/DefaultRoleApproval!3.0\*soa\_766c1872-21ae-4c7c-9098-789de2bd0307
  - [Test RequestApprovalService](#)
- default/DefaultSODApproval!2.0\*soa\_303e9138-39c2-4302-a934-8734e0847f29
  - [Test RequestApprovalService](#)
- default/DisconnectedProvisioning!2.0\*soa\_b25a9230-1dc6-4869-9be2-f4e8e55504b0
  - [Test manualprovisioningprocess\\_client](#)
- default/IdentityAuditRemediation!1.0\*soa\_7031f9df-d480-4c80-89e4-b15636851eae
  - [Test IdentityAuditRemediationService](#)
- default/OACGRoleAssignSODCheck!1.0\*soa\_60d0386d-47de-4002-8a17-f5025c04dc08
  - [Test RequestApprovalService](#)
- default/ProvideInformation!3.0\*soa\_a6bc3743-80aa-4e5a-b3c9-45de71986544



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



7). Access to Oracle BPM Worklist – URL:<http://dell5530:7003/integration/worklistapp>



**End of Oracle Identity Manager.**

## Appendix

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