

***Oracle Fusion Middleware 12c on  
SUSE Linux Enterprise Server 15  
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. Details are provided for Intel x86-64 versions of both Oracle FMW 12c and SUSE Linux Enterprise Server 15. Similar steps apply to other platforms (x86, ia64, System z, etc.). If you encounter issues or have general questions, please post your query to [suse-oracle@listx.novell.com](mailto:suse-oracle@listx.novell.com).

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 - (x86-64)  
(<http://download.suse.de/install>)

#### Oracle

- Database 12cR2 (12.2.0.1.0) - (x86\_64)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#database>)
- Java SE Development Kit 8 (jdk-8u161-linux-x64.tar.gz)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#java>)
- WebLogic Server 12cR2 (12.2.1.3) (fmw\_12.2.1.3.0\_wls\_Disk1\_1of1.zip)  
(<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>)
- WebLogic Server 12cR2 (12.2.1.3.0) - (Fusion Middleware Infrastructure Installer)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>)
- Forms and Reports 12c (12.2.1.3.0) - (x86\_64)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>)
- WebTier 12cR2 Oracle HTTP Server (12.2.1.3.0) - (x86\_64)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>)
- WebCenter Portal 12c (12.2.1.3.0) - (fmw\_12.2.1.3.0\_wcportal\_Disk1\_1of1.zip)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>)
- SOA Suite 12c (12.2.1.3.0) - (fmw\_12.2.1.3.0\_soasq\_Disk1\_1of2.zip)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>)
- Oracle Identity and Access Management 12cPS3 (12.2.1.3.0) – (Generic Quick Installer)  
(<http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>)

## **Testing machine information**

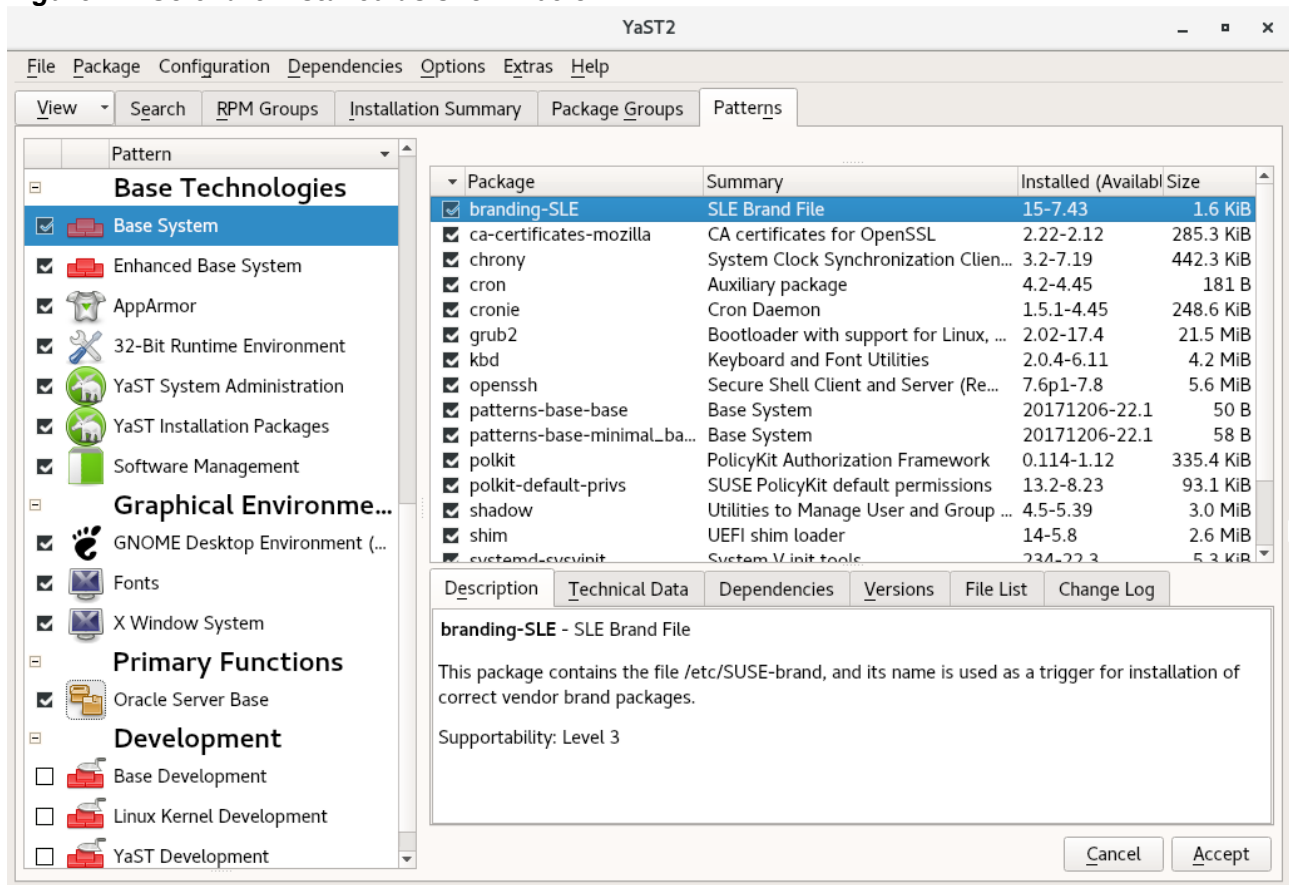
- HP DL388 Gen9 Server
- CPU: 2 \* Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz
- RAM: 64 GB
- NIC: 8
- Local HDD: 2 TB
- Operating System: SUSE Linux Enterprise Server 15 (x86\_64)
- Kernel version: 4.12.14-23-default

# Prerequisites

## 1. Installing SUSE Linux Enterprise Server 15

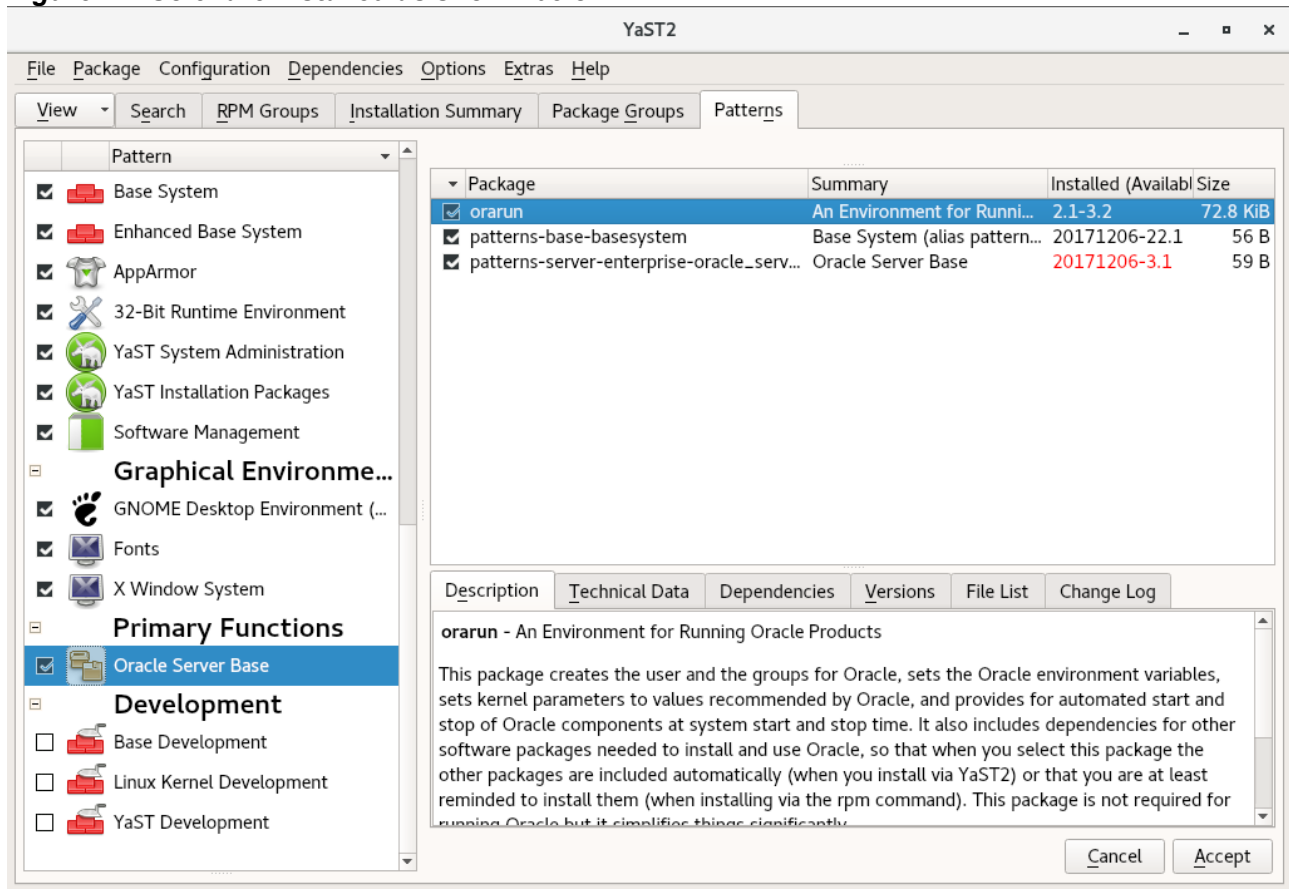
1-1. Install SUSE Linux Enterprise Server 15 on your testing machine. To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at <https://www.suse.com/documentation/sles-15/index.html>.

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



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

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



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

**Figure 1-3 Operating System information and kernel version**

```
oracle@hpgen9-01:~> more /etc/os-release
NAME="SLES"
VERSION="15"
VERSION_ID="15"
PRETTY_NAME="SUSE Linux Enterprise Server 15"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15"
oracle@hpgen9-01:~> uname -a
Linux hpgen9-01 4.12.14-23-default #1 SMP Tue May 29 21:04:44 UTC 2018 (cd0437b) x86_64 x86_64 x86_64 GNU/Linux
oracle@hpgen9-01:~> more /etc/issue

Welcome to SUSE Linux Enterprise Server 15 (x86_64) - Kernel \r (\l).
```

1-2. Special Startup Requirements.

1). Increase the value for kernel parameter.

Change the value of shmmax to 34359738360 by including the following line in '/etc/sysctl.conf'

```
kernel.shmmax = 34359738360
```

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 line:

```
oracle soft nofile 1024
```

Change the values from 1024 to 4096;

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.



## 2. Installing Oracle Database 12cR2

2-1. Log in to the target system (SUSE Linux Enterprise Server 15 64-bit OS) as a non-admin user. Download Oracle Database 12cR2 (12.2.0.1.0) x86\_64 from <http://www.oracle.com/technetwork/indexes/downloads/index.html#database>.

2-2. Oracle Database 12cR2 (12.2.0.1.0) is officially certified for SUSE Linux Enterprise Server 15. For detailed instructions please use Official Oracle Install guides: <http://docs.oracle.com/en/database/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 Mon Jul 30 16:06:44 2018

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

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

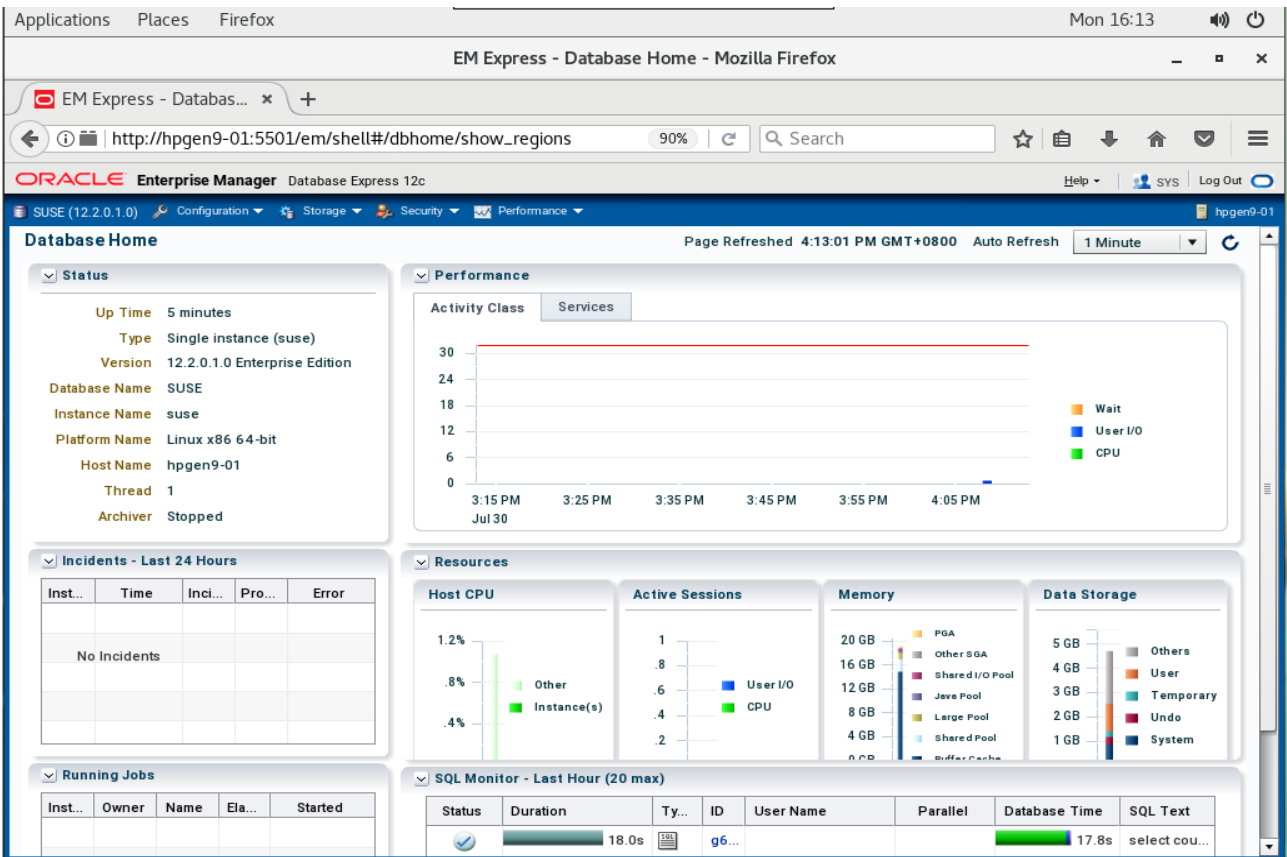
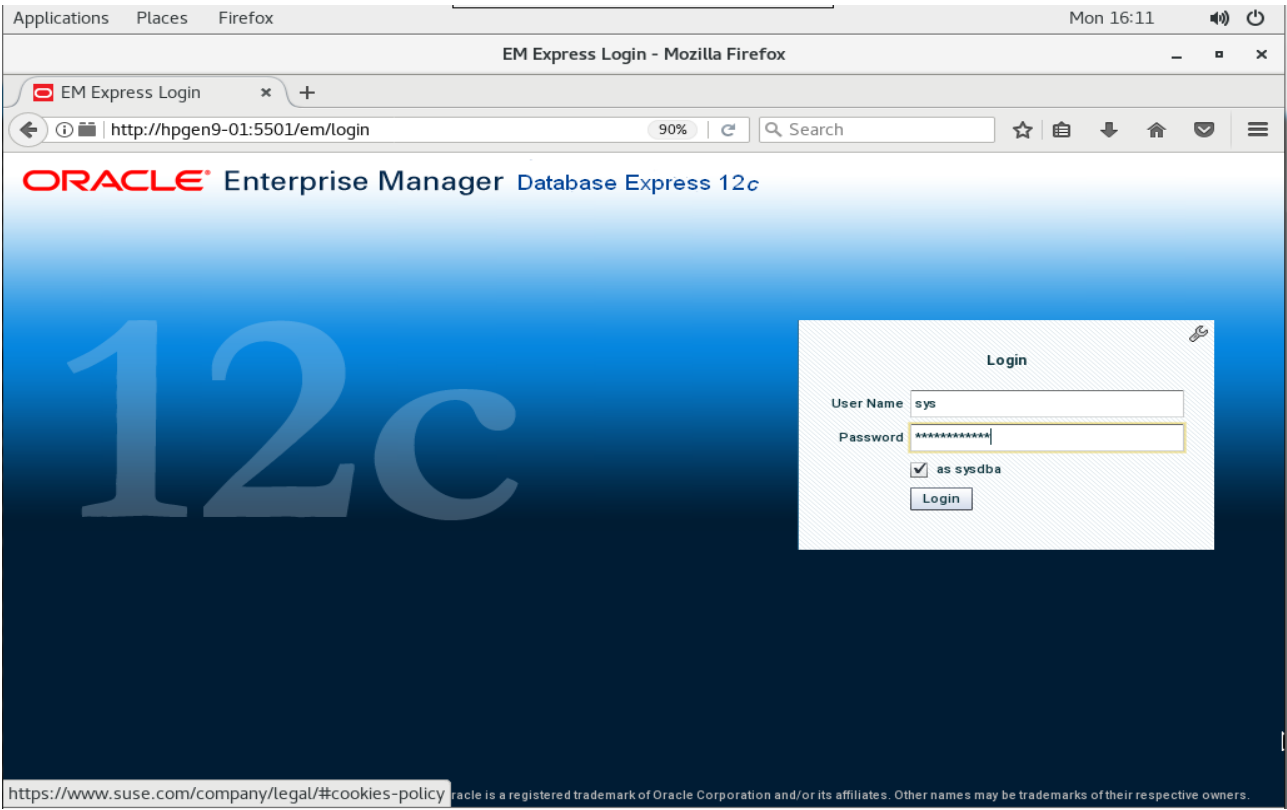
Total System Global Area 2.0200E+10 bytes
Fixed Size 19247928 bytes
Variable Size 4362079432 bytes
Database Buffers 1.5771E+10 bytes
Redo Buffers 47857664 bytes
Database mounted.
Database opened.
SQL> select name,open_mode from v$databases;

NAME          OPEN_MODE
-----
SUSE          READ WRITE

SQL> exit
Disconnected from Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production
oracle@hpgen9-01:~> █

```

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



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

The screenshot shows the 'Database Configuration Assistant - Create a database - Step 2 of 14' window. The 'Select Database Creation Mode' section is active. The 'Typical configuration' radio button is selected. The 'Database character set' dropdown menu is highlighted with a red circle and shows 'AL32UTF8 - Unicode UTF-8 Universal character set'. Other fields include 'Global database name' (suse), 'Storage type' (File System), 'Database files location', 'Fast Recovery Area (FRA)', 'Administrative password', and 'Confirm password'. There are also checkboxes for 'Create as Container database' and 'Advanced configuration'. Navigation buttons at the bottom include '< Back', 'Next >', 'Finish', and 'Cancel'.

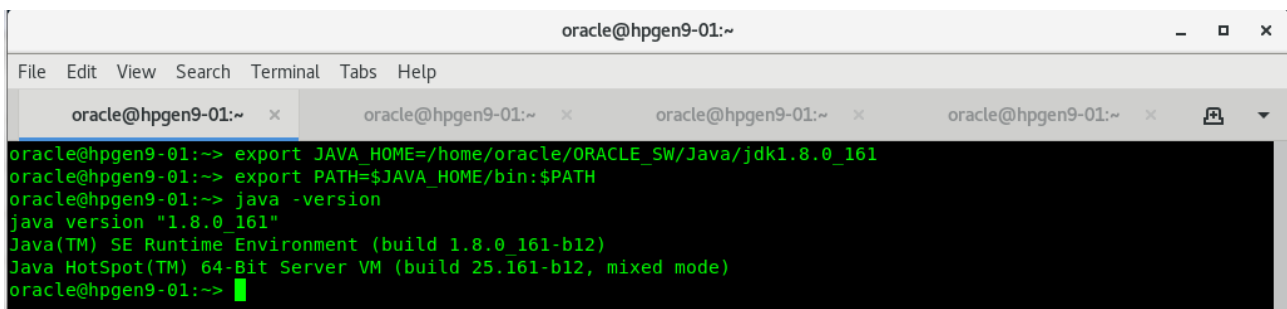
)

### 3. Installing Java

3-1. For Oracle FMW components 12c (12.2.1.3.0), the certified JDK is 1.8.0\_131 and later. Log in to the target system (SUSE Linux Enterprise Server 15 64-bit operating system) as a non-administration user. Download the Java SE Development Kit 8 (jdk-8u161-linux-x64.tar.gz) from <http://www.oracle.com/technetwork/indexes/downloads/index.html#java>

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

**Figure 3-1 Java information**

A terminal window titled 'oracle@hpgen9-01:~' with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help) and four tabs. The terminal shows the following commands and output:

```
oracle@hpgen9-01:~> export JAVA_HOME=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161
oracle@hpgen9-01:~> export PATH=$JAVA_HOME/bin:$PATH
oracle@hpgen9-01:~> java -version
java version "1.8.0_161"
Java(TM) SE Runtime Environment (build 1.8.0_161-b12)
Java HotSpot(TM) 64-Bit Server VM (build 25.161-b12, 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:

- 1). Oracle JDK 1.8.0\_131 and later is installed.

1-2. Log in to the target system (SUSE Linux Enterprise Server 15 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1.3.0) from

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>.

(**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 the .zip archive(fmw\_12.2.1.3.0\_wls\_Disk1\_1of1.zip) and launch the installation program by running '**java -jar fmw\_12.2.1.3.0\_wls.jar**'

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

1). Installation Inventory Setup.

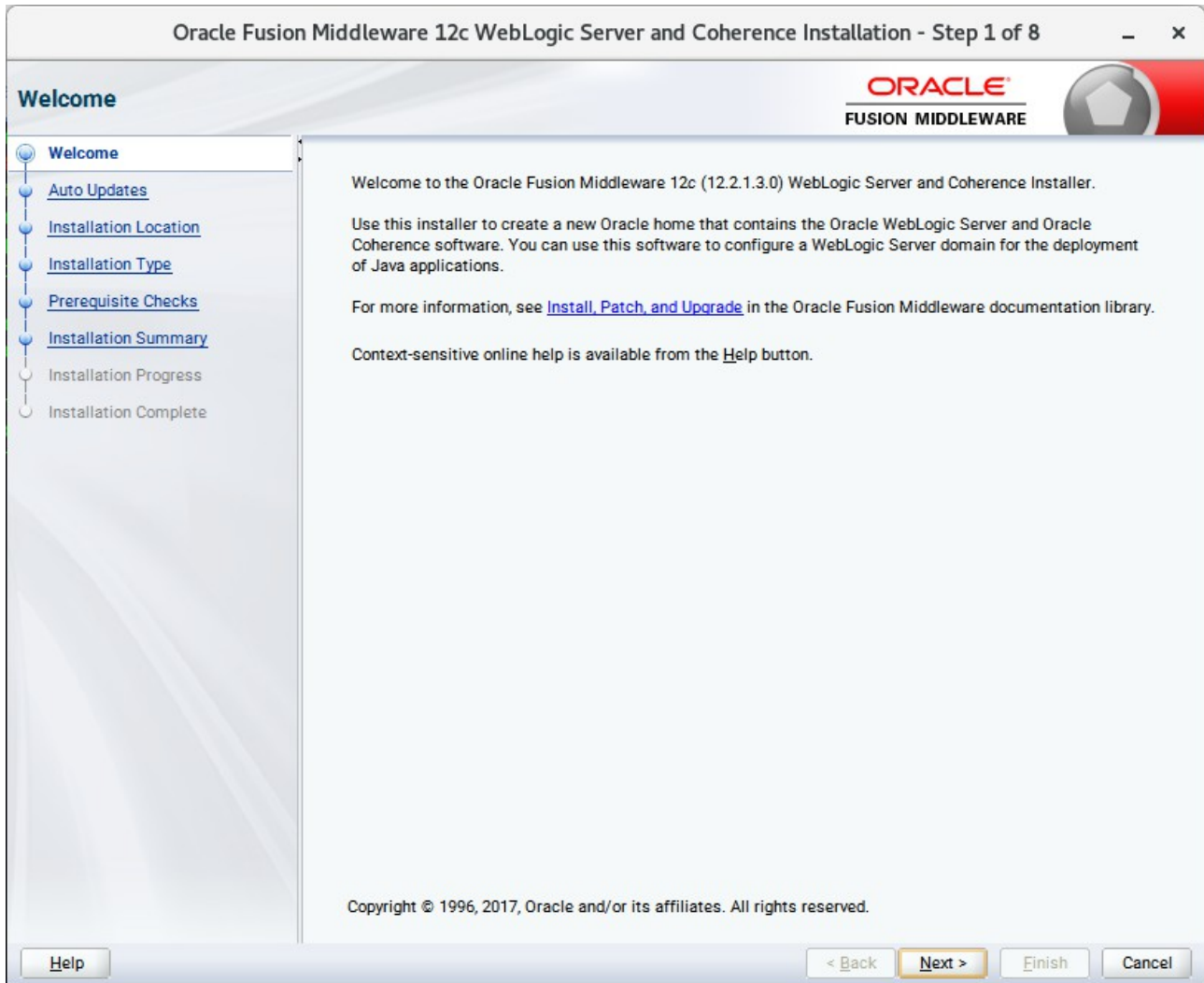
If this is your first Oracle installation on a host that is running SLES, please use this screen to specify the location of the Oracle central inventory directory and Operating System Group Name, then click **OK** to continue.

The screenshot shows a window titled "Oracle Fusion Middleware 12c WebLogic Installation" with a close button (X) in the top right corner. The window has a header bar with the "ORACLE FUSION MIDDLEWARE" logo and a home icon. The main content area is titled "Installation Inventory Setup" and contains the following sections:

- Central Inventory Directory**: A text box with the value "/home/oracle/orainventory" and a "Browse" button. Below the text box is the instruction: "Enter the full path for the directory."
- Operating System Group**: A dropdown menu with the value "oinstall" and a downward arrow. Below the dropdown is the instruction: "Specify a group with write permission to the inventory directory"
- Central Inventory Pointer File**: A paragraph of text: "Click OK to create a script (createCentralInventory.sh) in the inventory directory. Run this script to create a pointer file, which is used to identify the location of the central inventory for future installations and administrative operations, such as patching and upgrade."

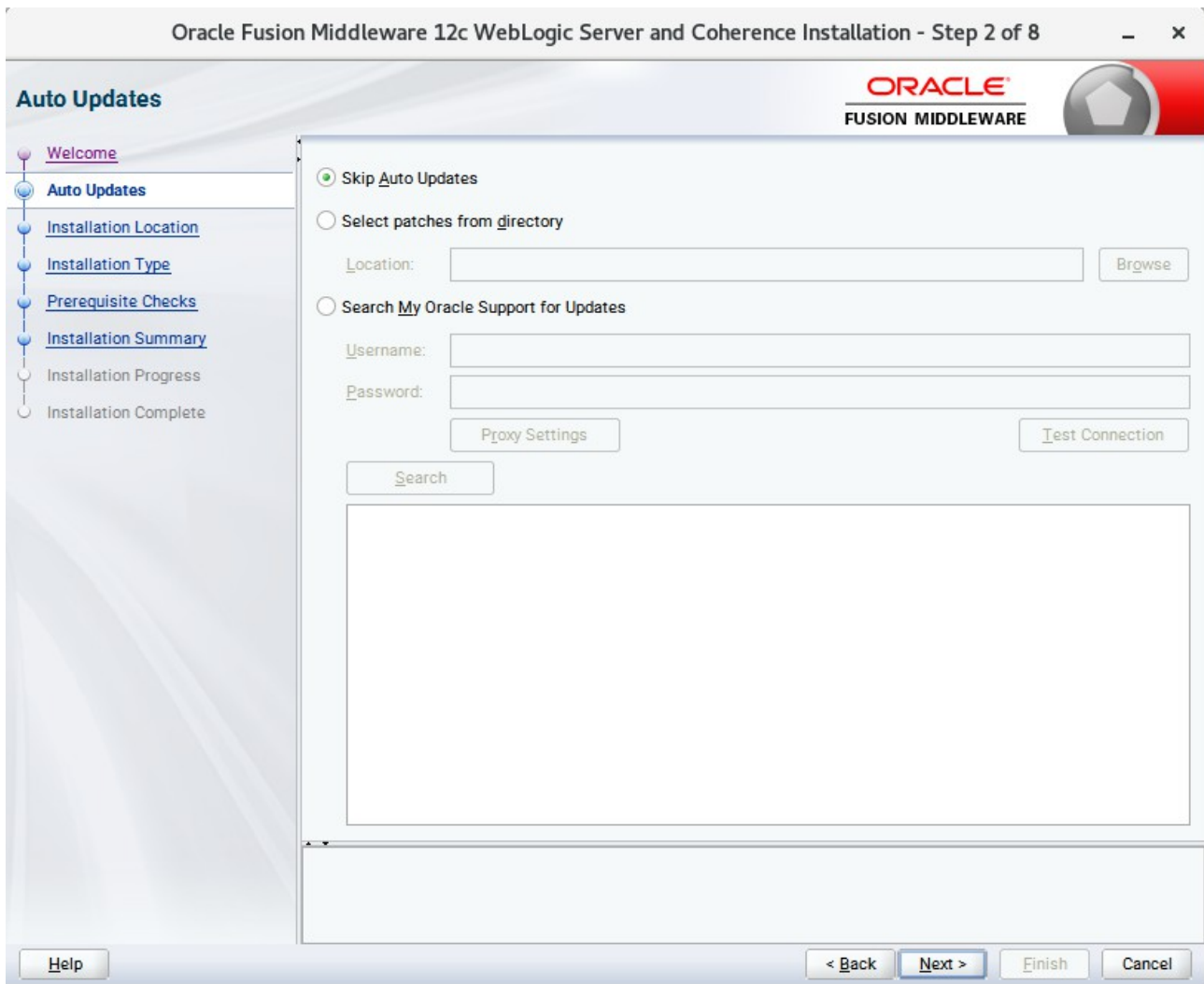
At the bottom of the window, there are three buttons: "Help", "OK", and "Cancel".

2). Welcome.



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

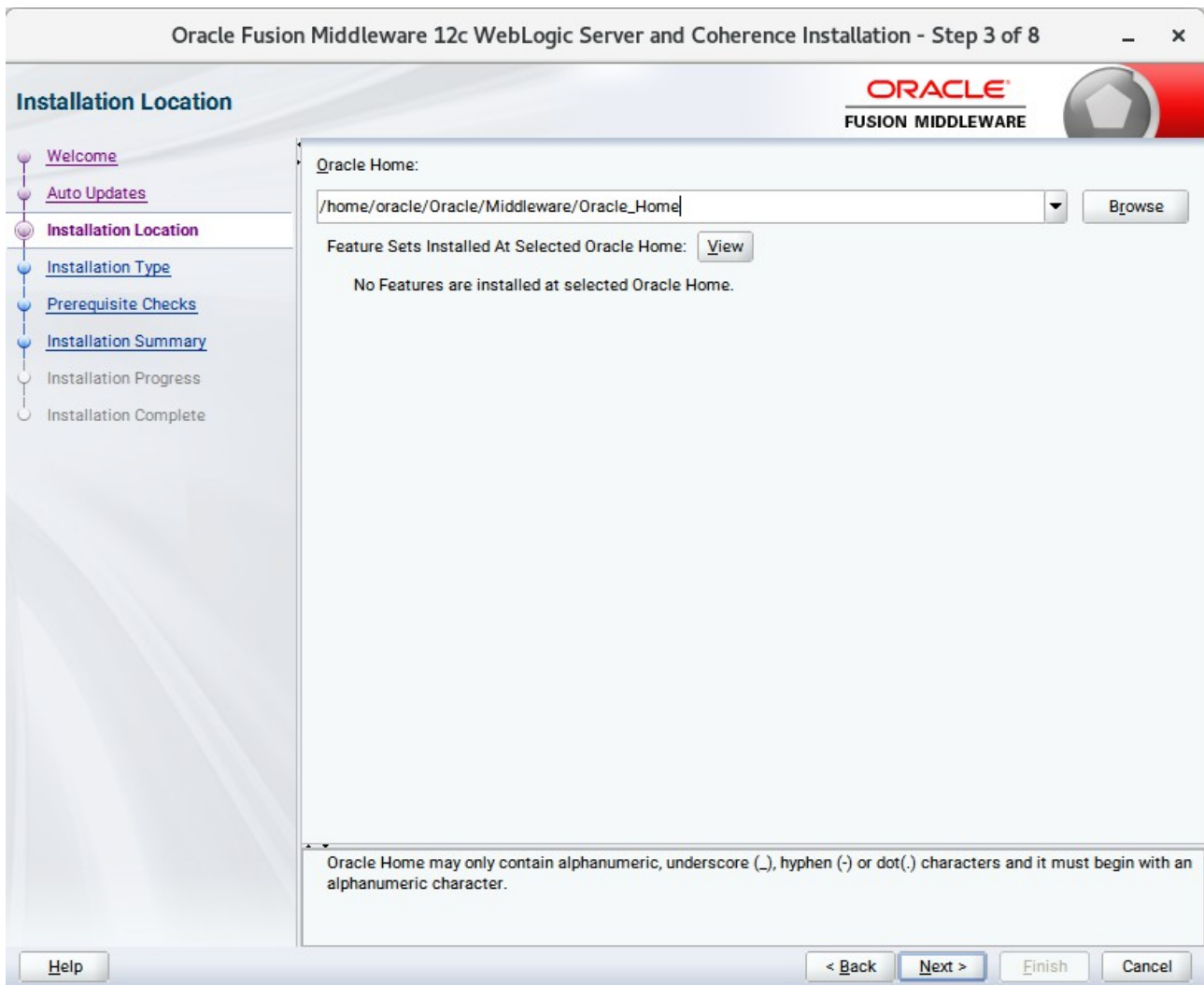
3). Auto Updates.



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

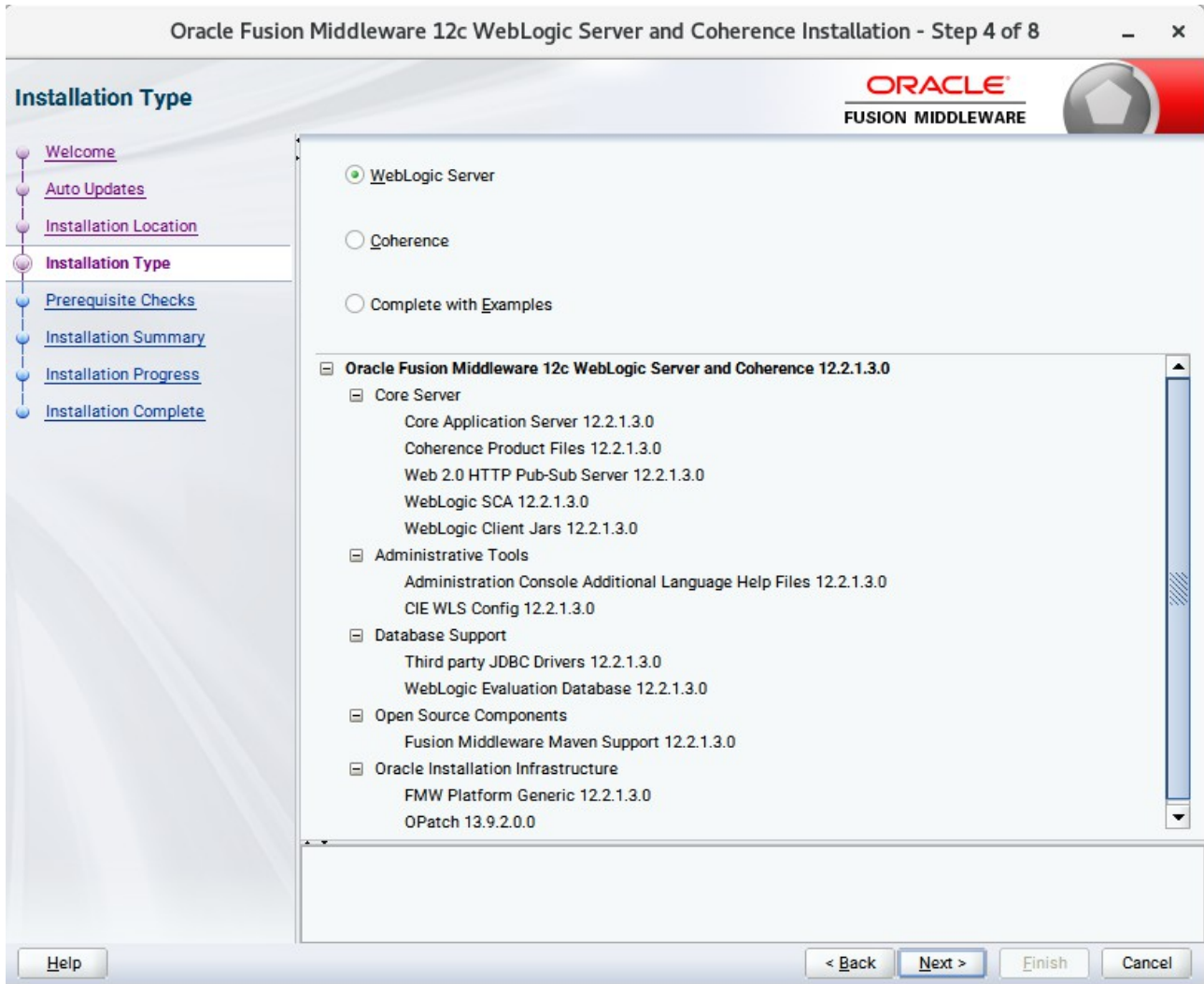


4). Installation Location.



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

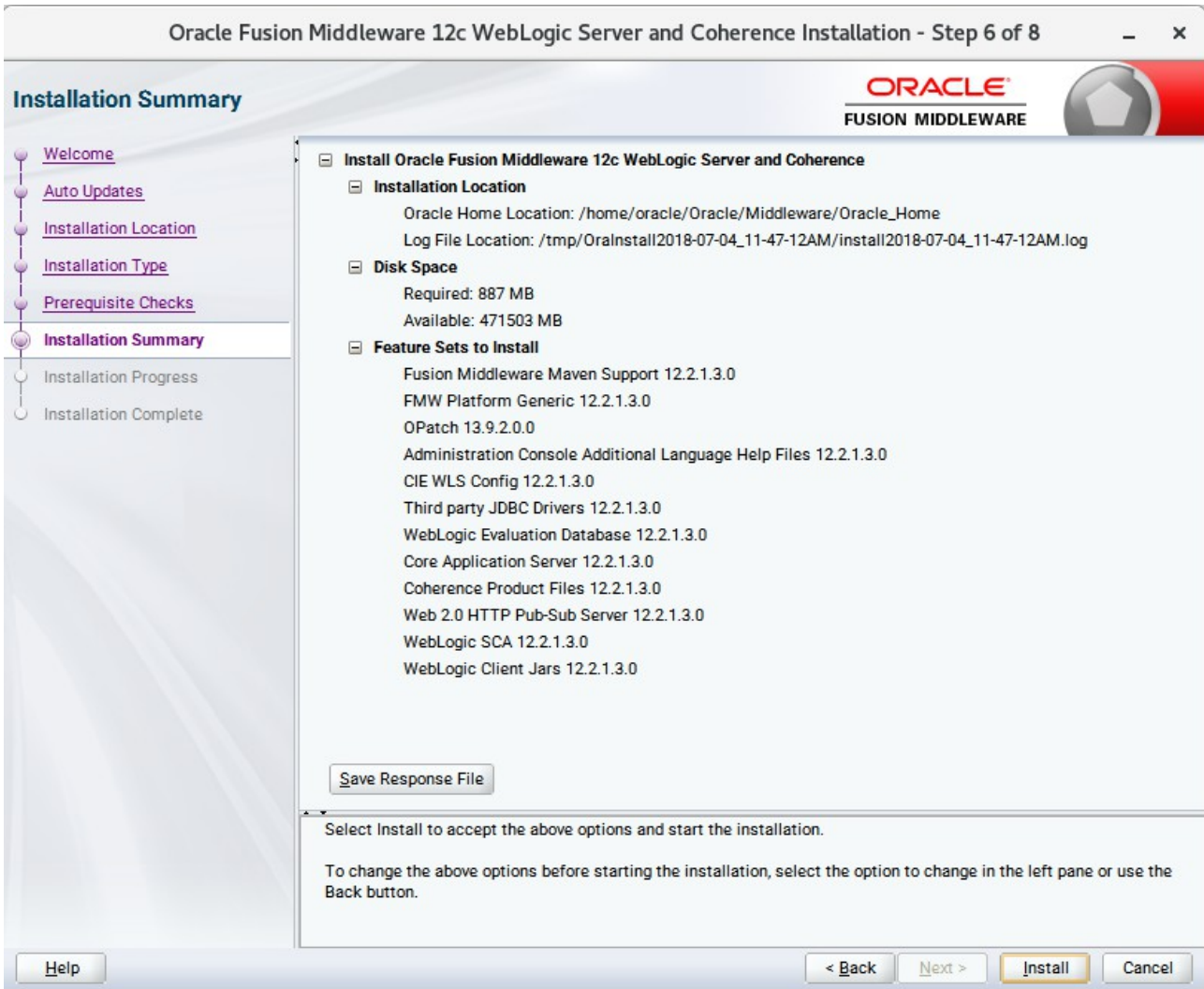
5). Installation Type.



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

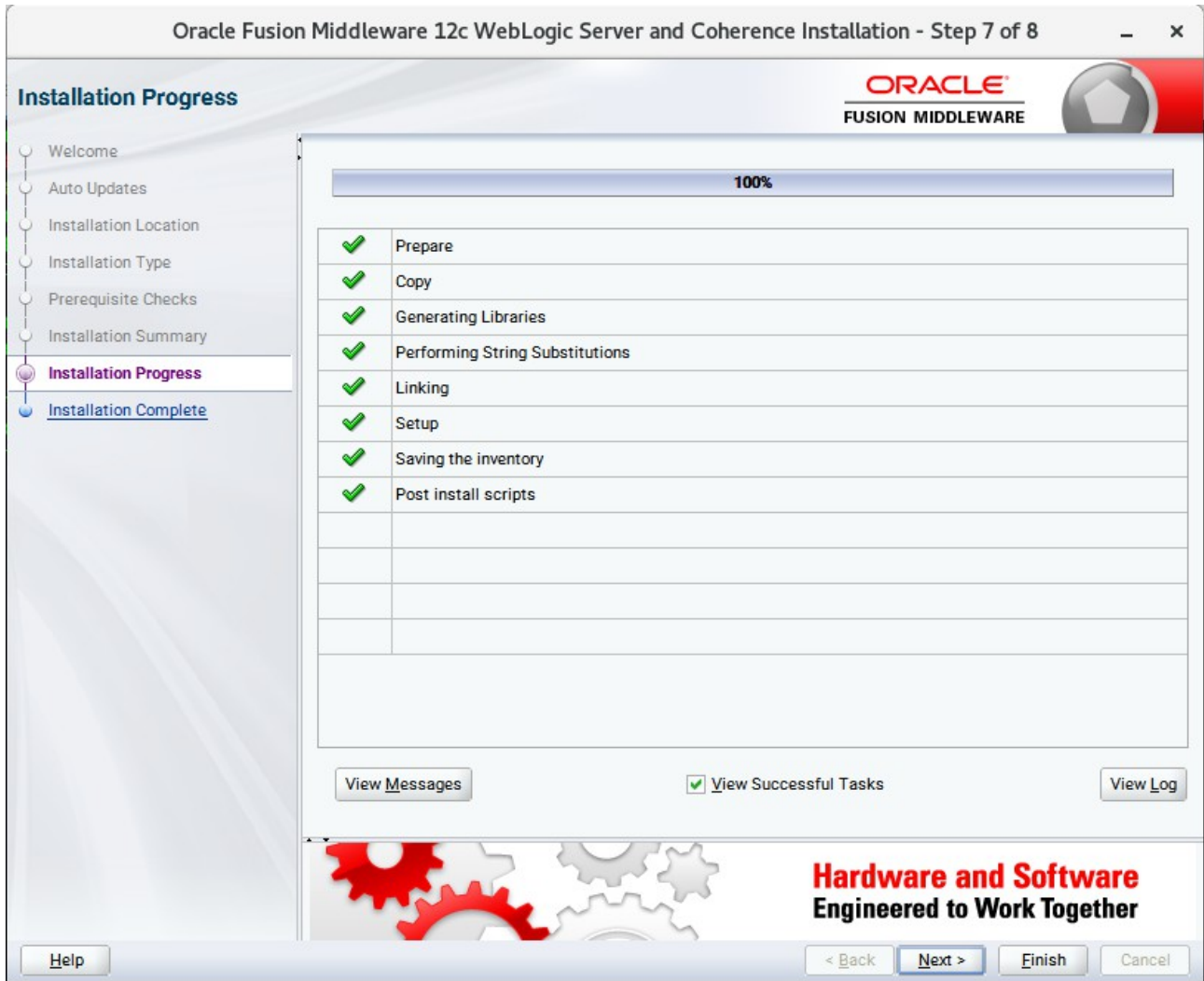


7). Installation Summary.



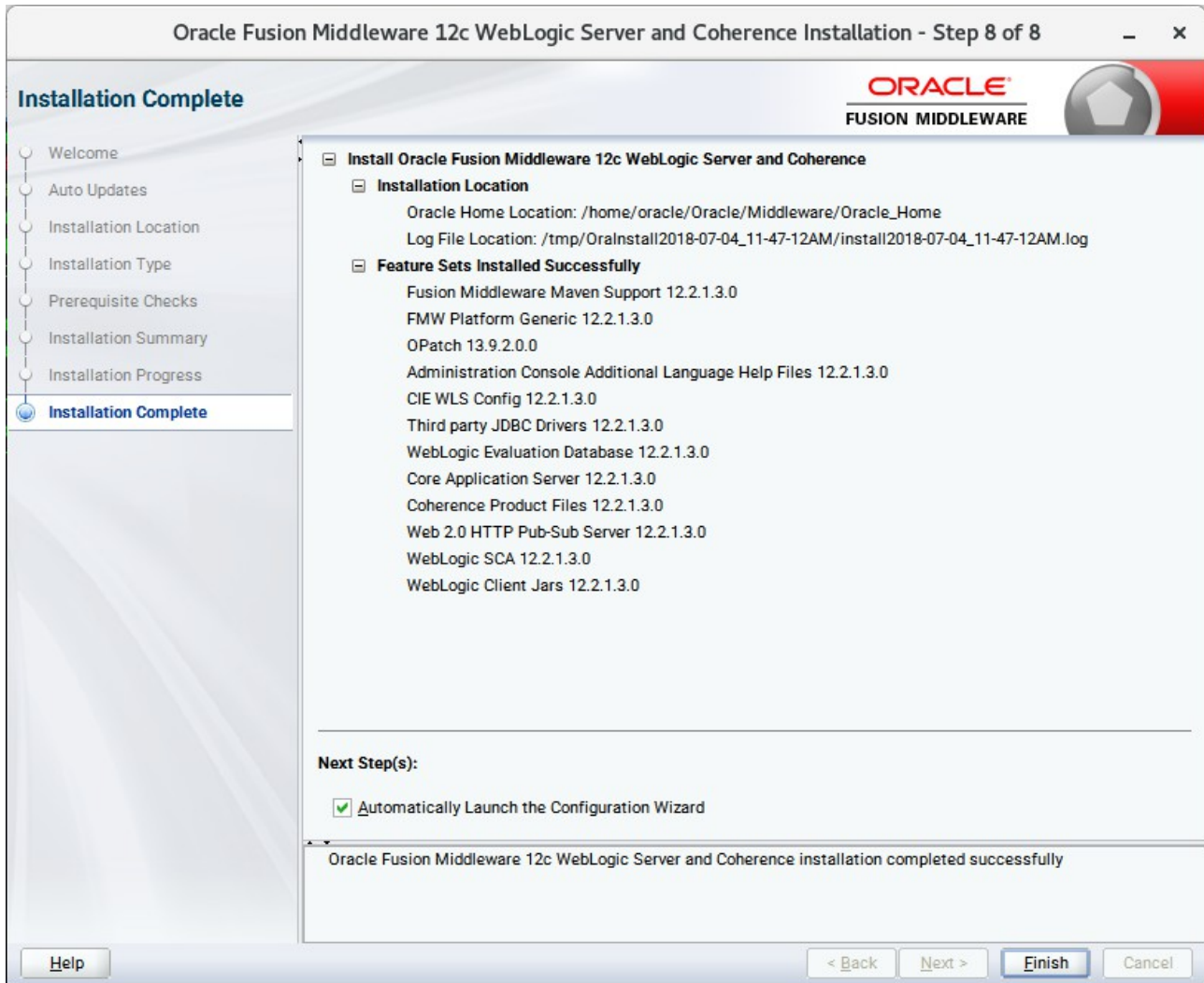
This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk space to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

8). Installation Progress.



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

9). Installation Complete.



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

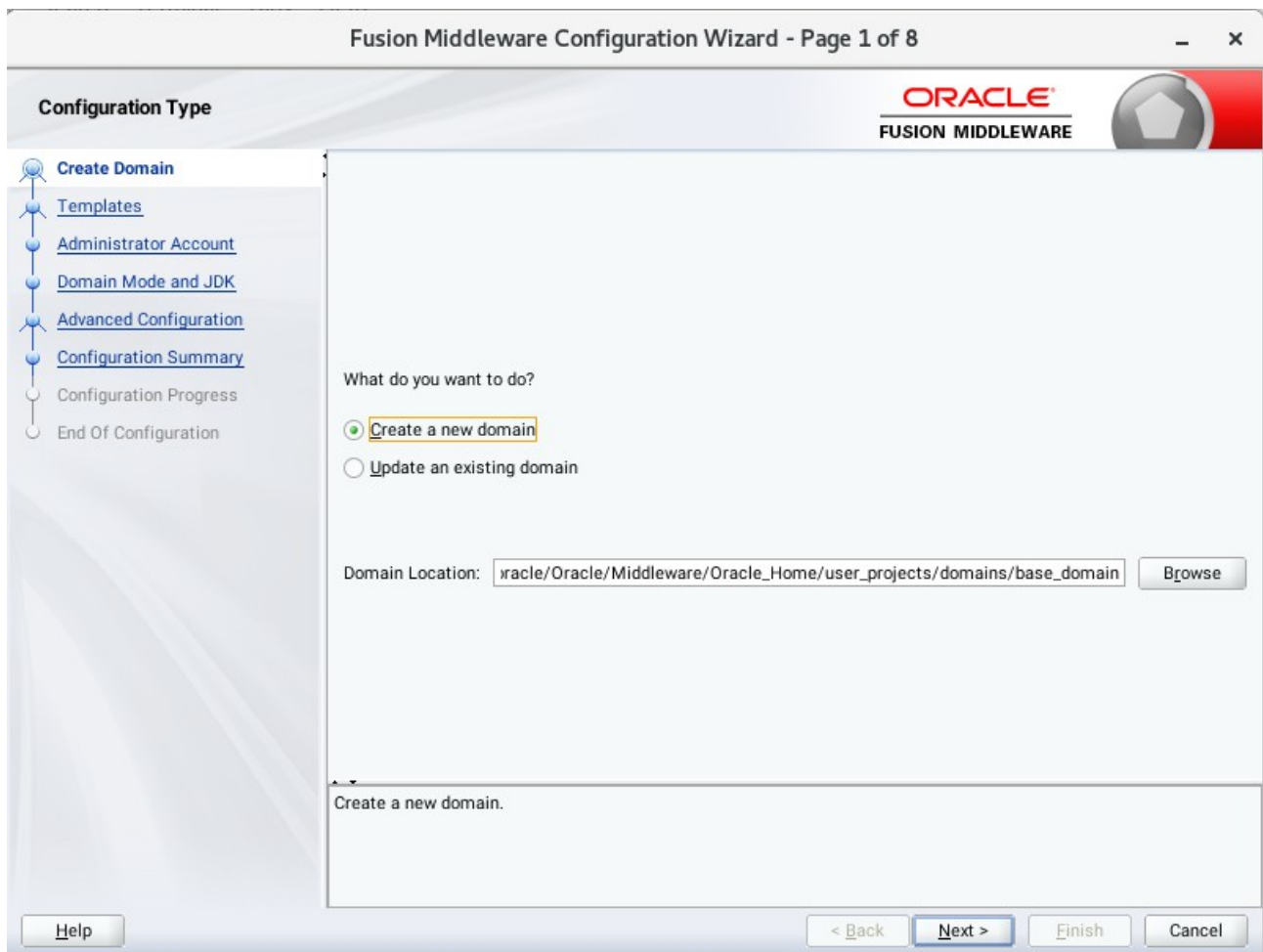
## 2. Creating and Configuring the WebLogic Domain

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

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

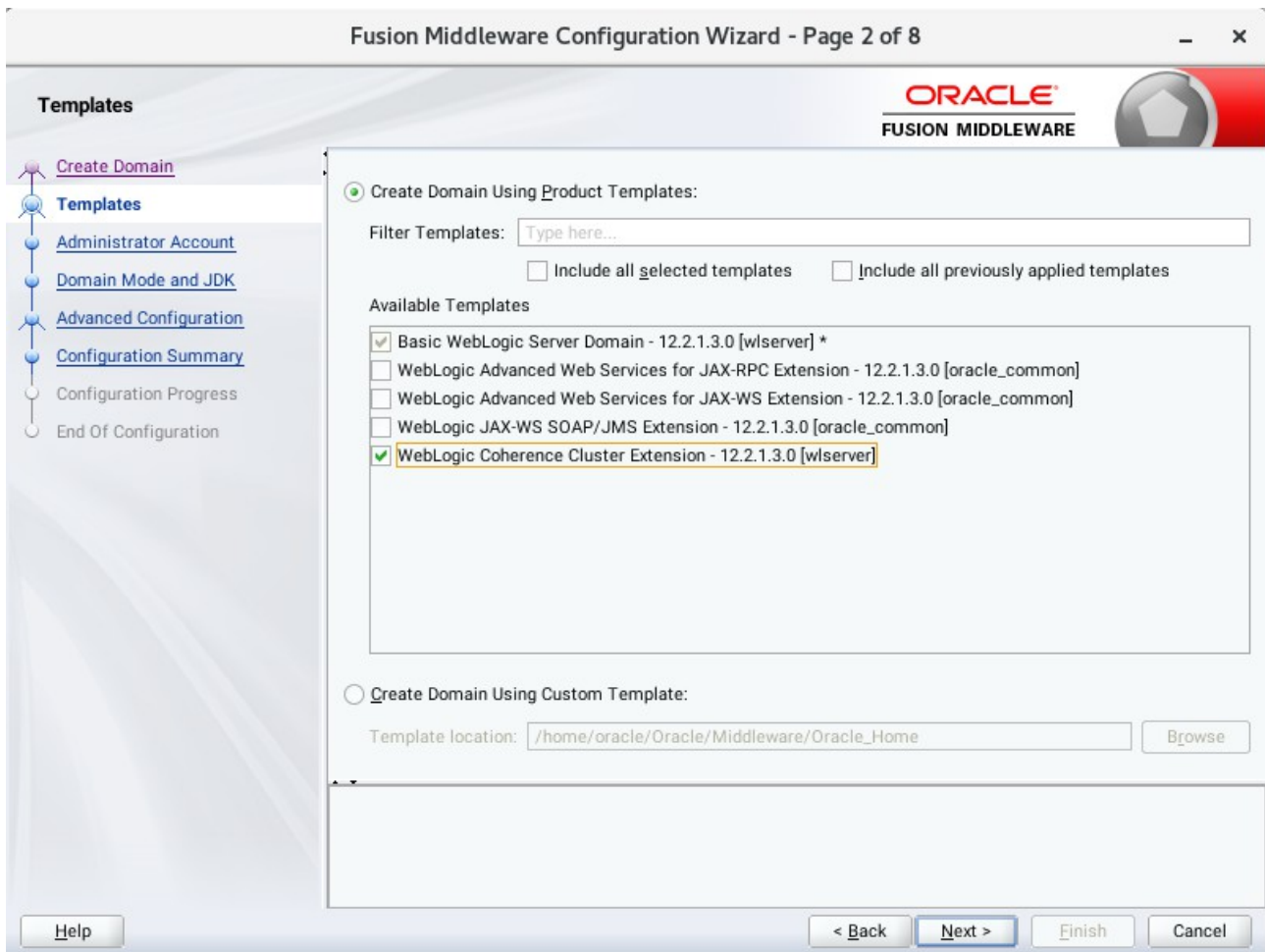
To set up your configuration, follow the steps below:

1). Configuration Type.



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

## 2). Templates.



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

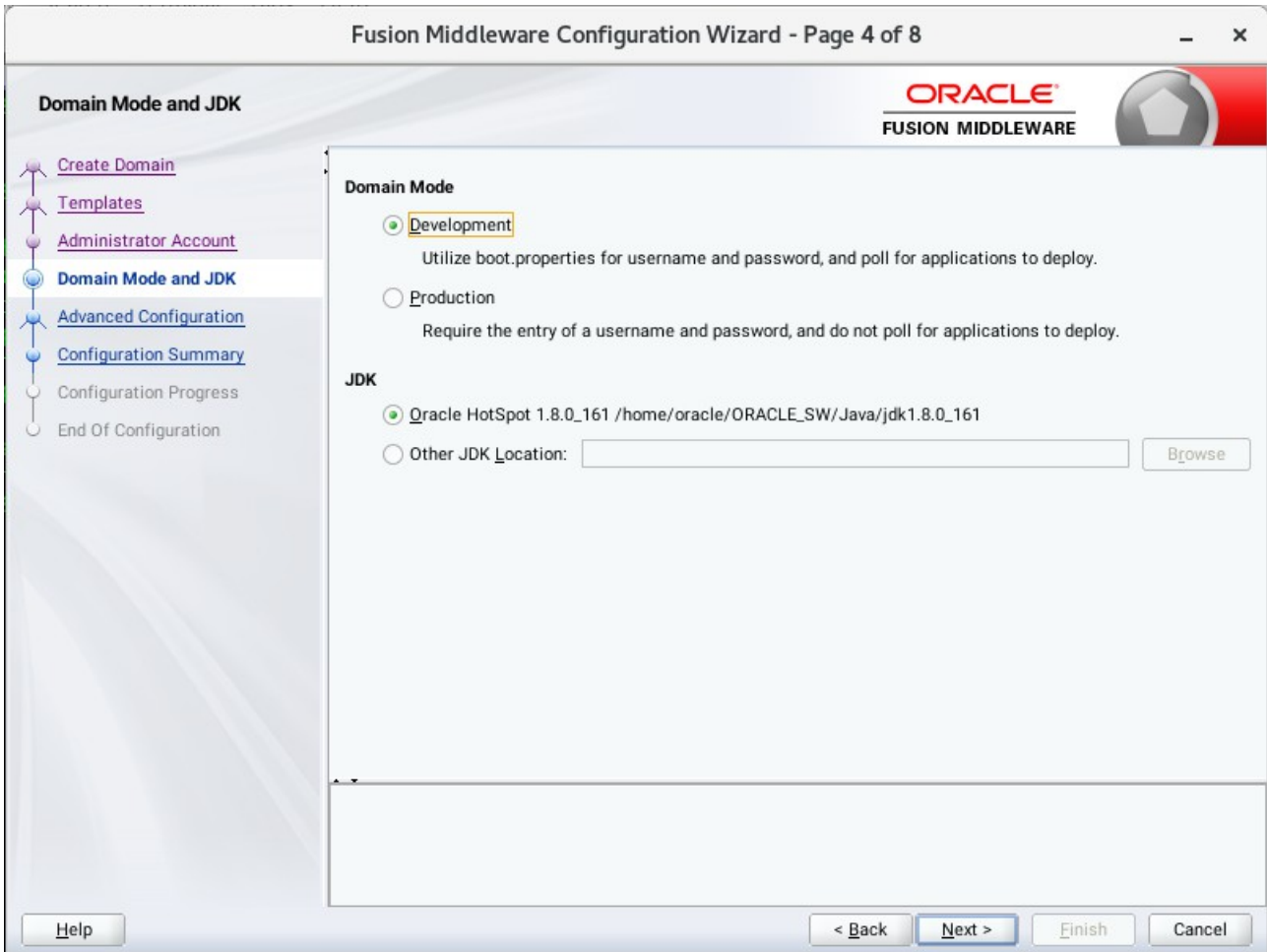


3). Administrator Account.

The screenshot shows the 'Administrator Account' configuration step in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 3 of 8'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane 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 four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

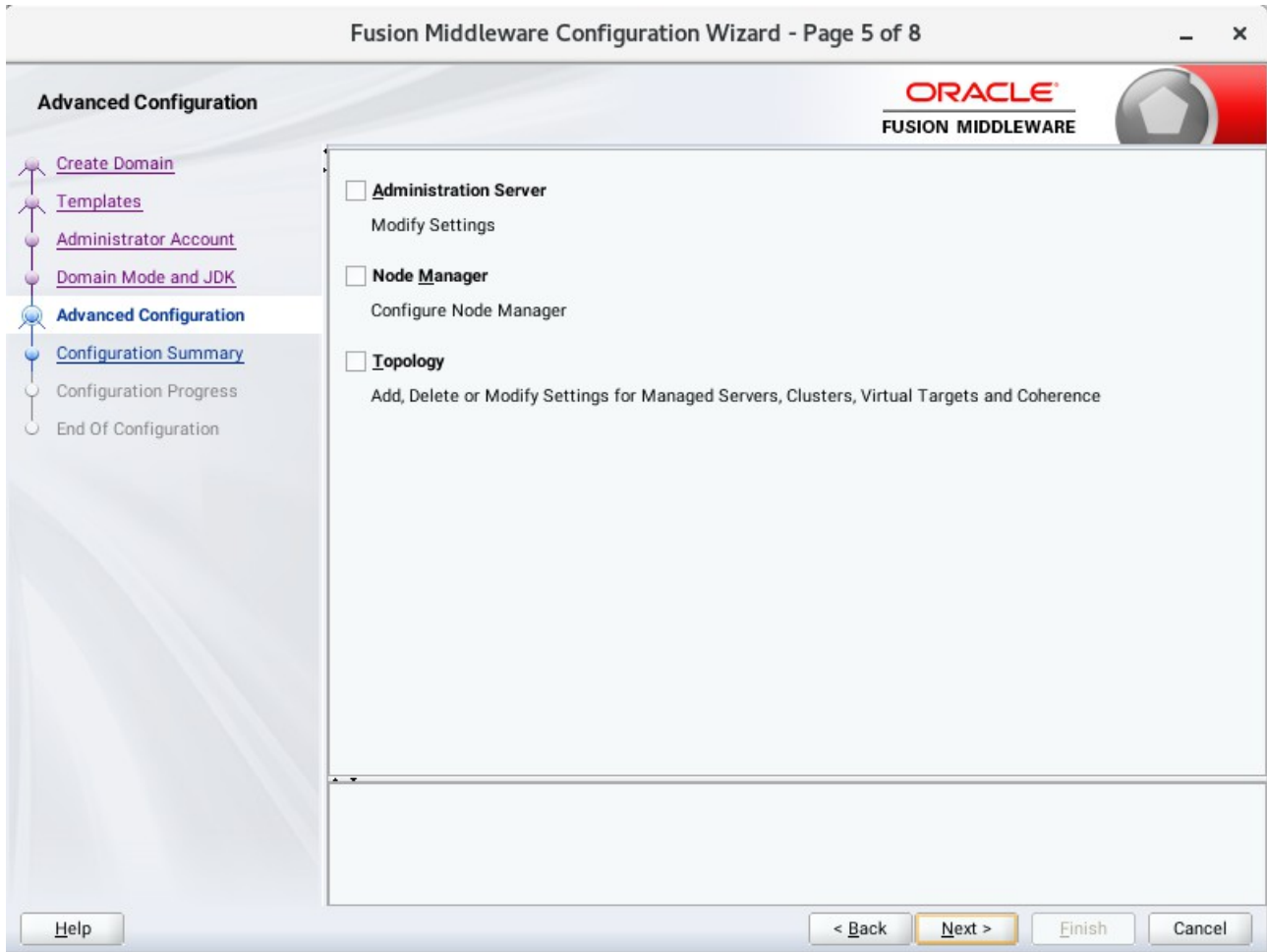
Specify the user name and password for the default WebLogic Administrator account for the domain, then click **Next** to continue.

4). Domain Mode and JDK.



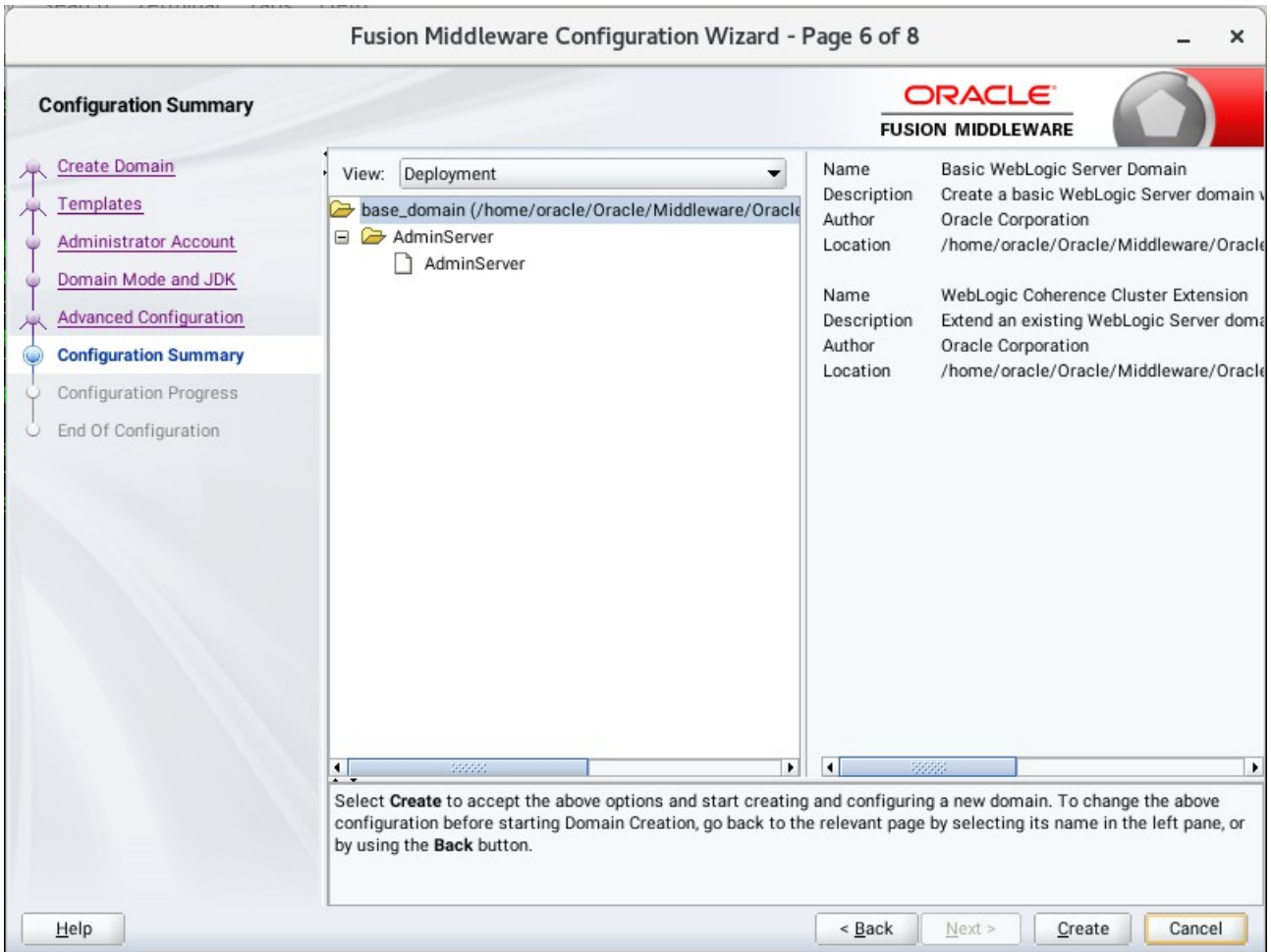
Select "**Development**" in the Domain Mode field, select the "**Oracle HotSpot**" in the JDK field. Then click **Next** to continue.

5). Advanced Configuration.



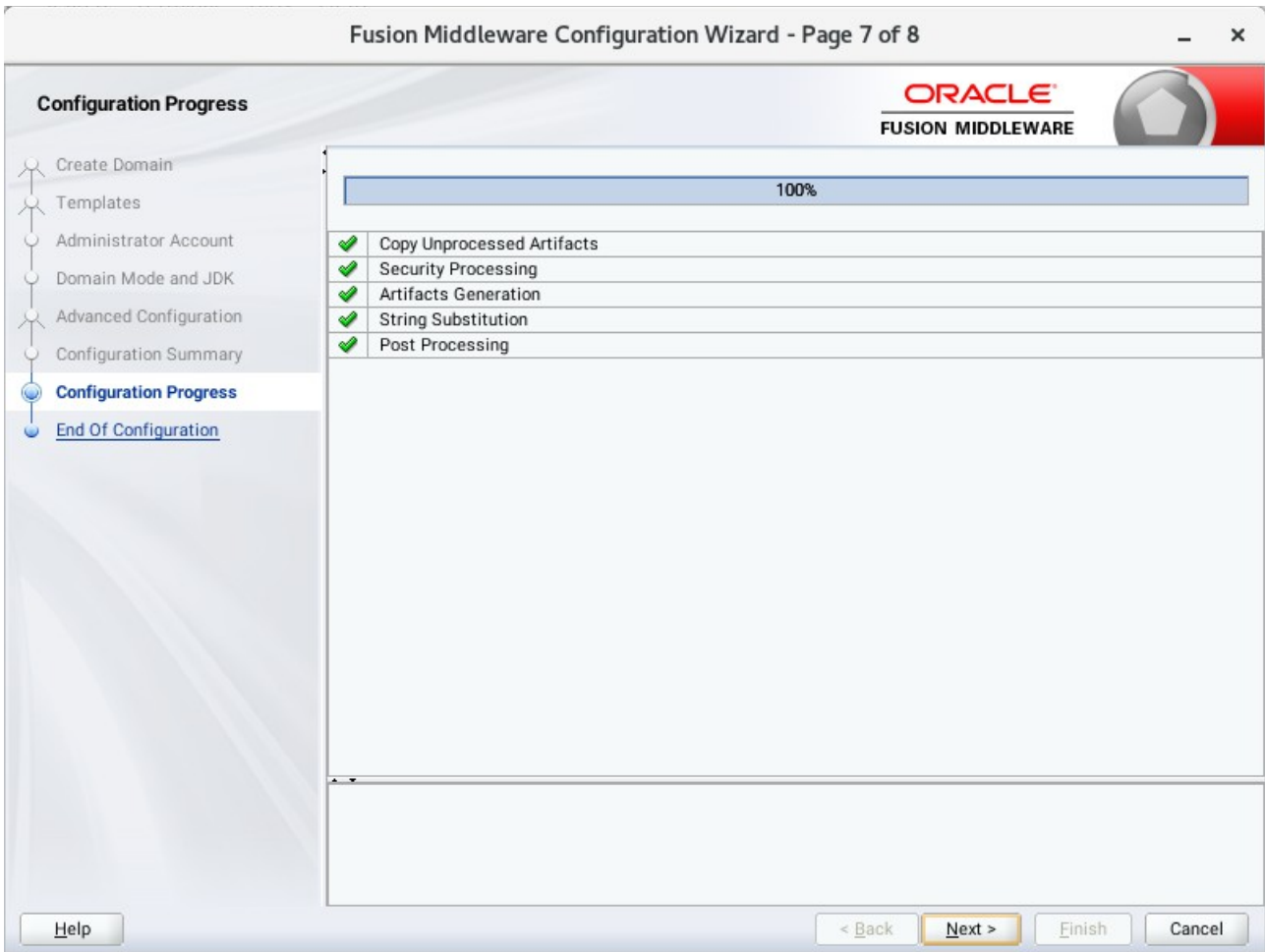
According to your requirements, select the desired options on the Advanced Configuration screen. Then click **Next** to continue.

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:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/ORACLE_SW/WebLogic/... x oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracl... x
<Jul 4, 2018 11:56:41,209 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STANDBY.>
>
<Jul 4, 2018 11:56:41,211 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STARTING>
>
<Jul 4, 2018 11:56:41,269 AM GMT+08:00> <Notice> <Log Management> <BEA-170036> <The Logging monitoring service timer has started to check for logged message counts every 30 seconds.>
<Jul 4, 2018 11:56:41,757 AM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
<Jul 4, 2018 11:56:45,299 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 4, 2018 11:56:45,384 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING>
>
<Jul 4, 2018 11:56:45,439 AM 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 4, 2018 11:56:45,440 AM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 4, 2018 11:56:45,440 AM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 4, 2018 11:56:45,440 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Server "AdminServer" for domain "base domain" running in development mode.>
<Jul 4, 2018 11:56:45,441 AM 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.>
<Jul 4, 2018 11:56:45,442 AM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 4, 2018 11:56:45,443 AM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 4, 2018 11:56:45,444 AM 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.>
<Jul 4, 2018 11:56:45,450 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 4, 2018 11:56:45,463 AM 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:

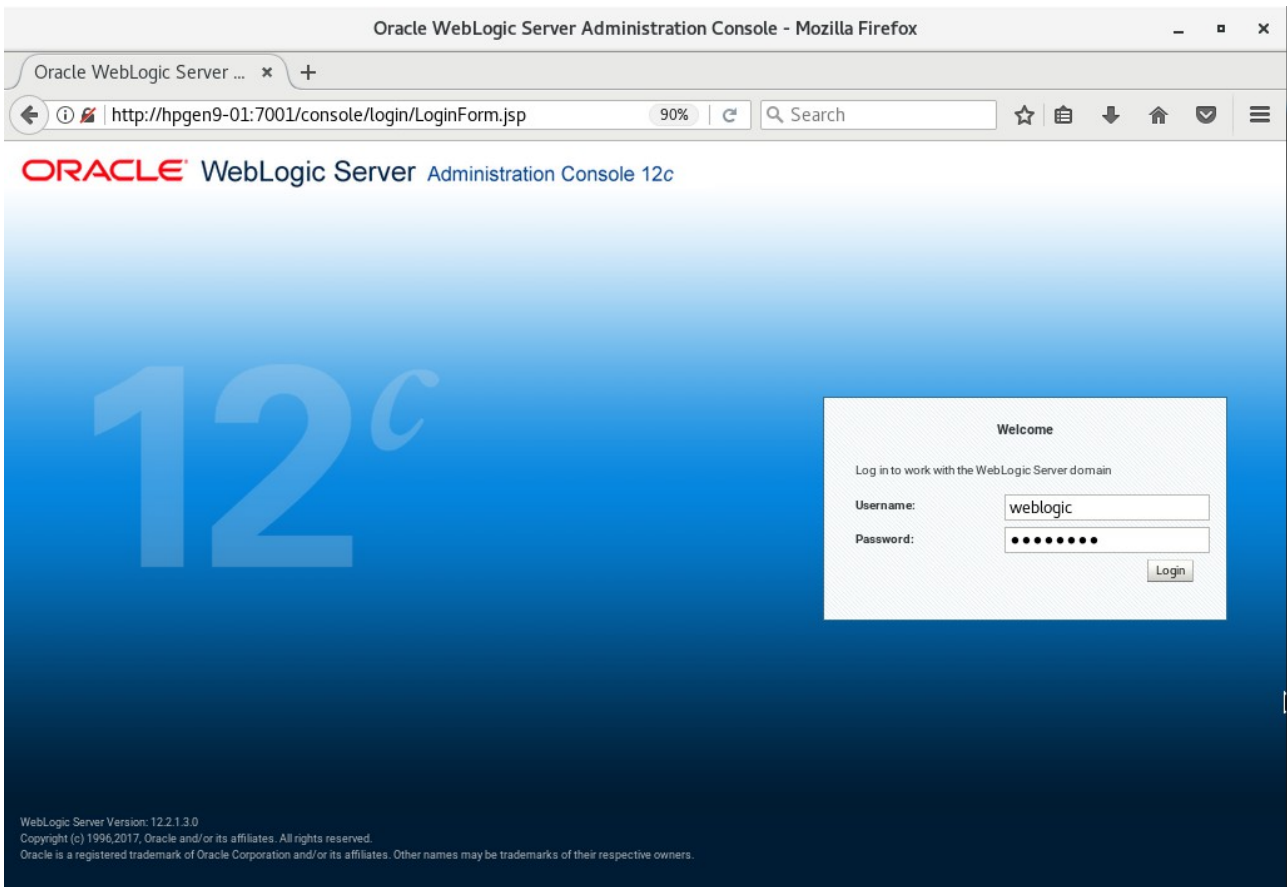
---

*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**

Summary of Servers - base\_domain - WLS Console - Mozilla Firefox

Summary of Servers - ba... x +

http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p 90% Search

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help Welcome, weblogic Connected to: base\_domain

Home > Summary of Servers

**Summary of Servers**

Configuration Control

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

Customize this table

Servers (Filtered - More Columns Exist)

New Clone Delete Showing 1 to 1 of 1 Previous | Next

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

New Clone Delete Showing 1 to 1 of 1 Previous | Next

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 12:00 PM

Failed (0)

Critical (0)

**End of Oracle WebLogic Server Software.**

\*\*\*\*\*  
**Oracle Forms and Reports**  
\*\*\*\*\*

## 1. Installing Oracle Forms and Reports

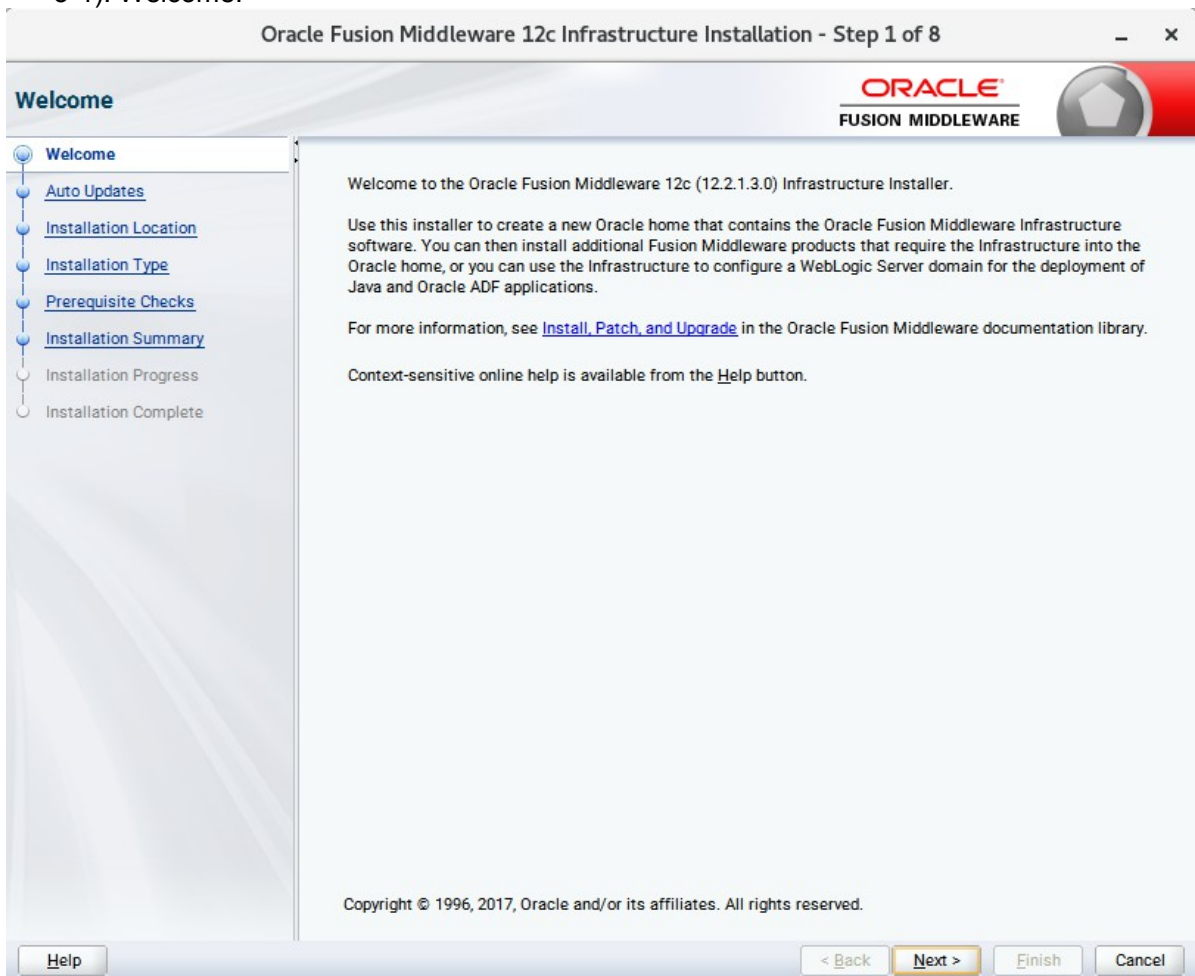
### 1-1. Prerequisites:

Installation of Oracle Forms and Reports requires:

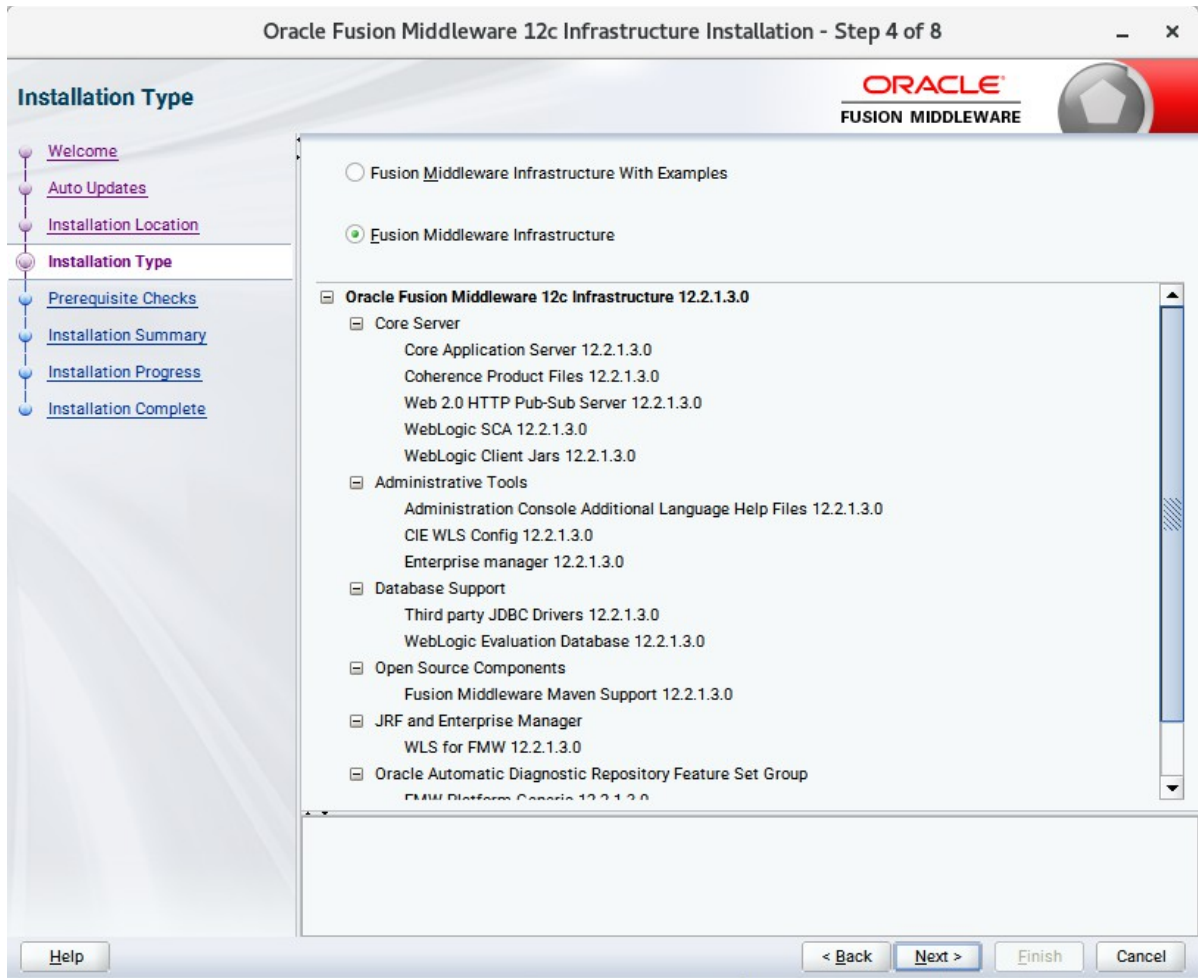
- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0\_131 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.3.0) (Fusion Middleware Infrastructure Installer)

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

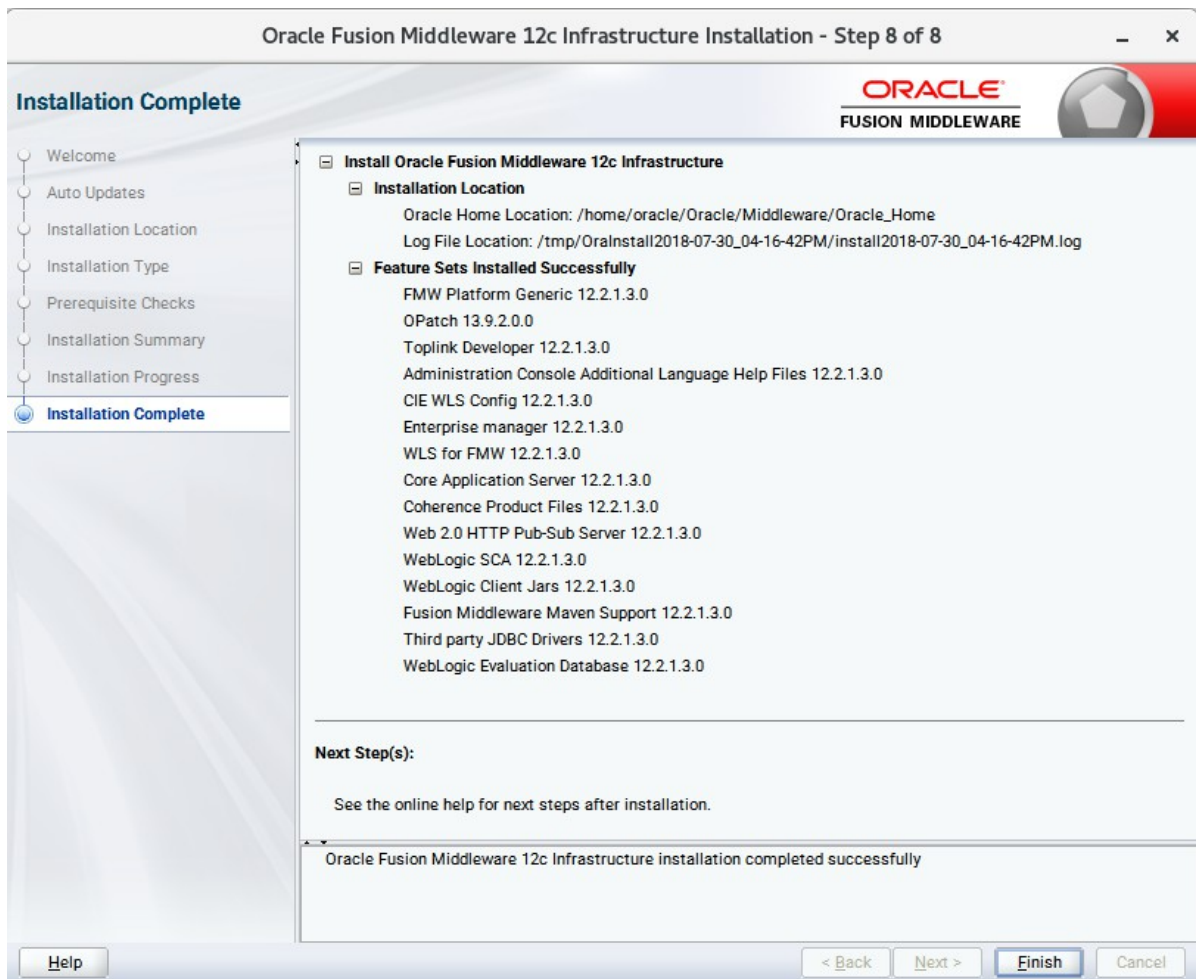
#### 3-1). Welcome.



3-2). Installation Type.



## 3-3). Installation Complete.

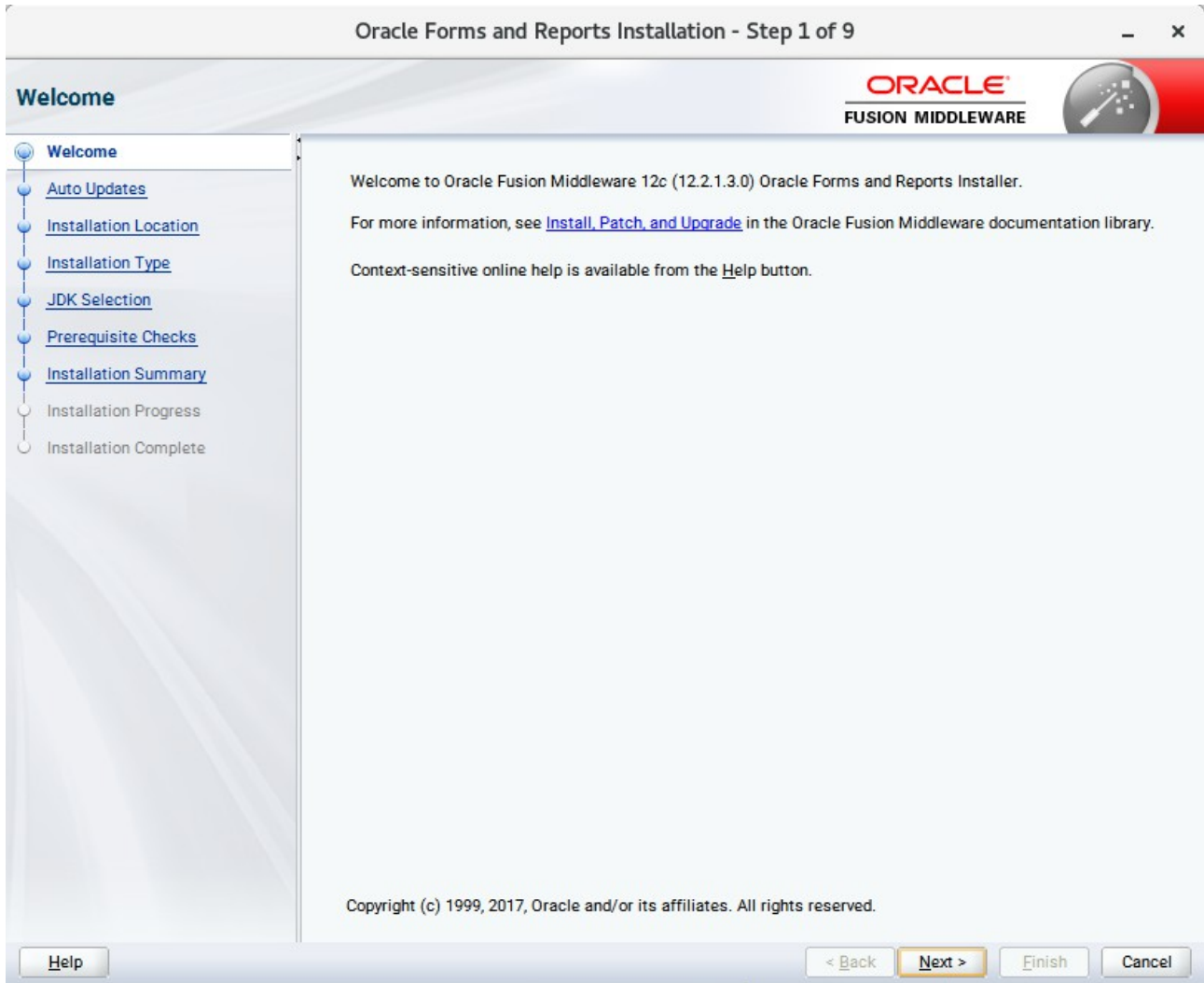


1-2. Log in to the target system (SUSE Linux Enterprise Server 15 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.3.0) from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>. (**Note:** Please ensure the installation user has the proper permissions 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\_12.2.1.3.0\_fr\_linux64\_Disk1\_1of1.zip and fmw\_12.2.1.3.0\_fr\_linux64\_Disk1\_2of2.zip) files and launch the installation program by running '**fmw\_12.2.1.3.0\_fr\_linux64.bin**'.

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

1). Welcome page.



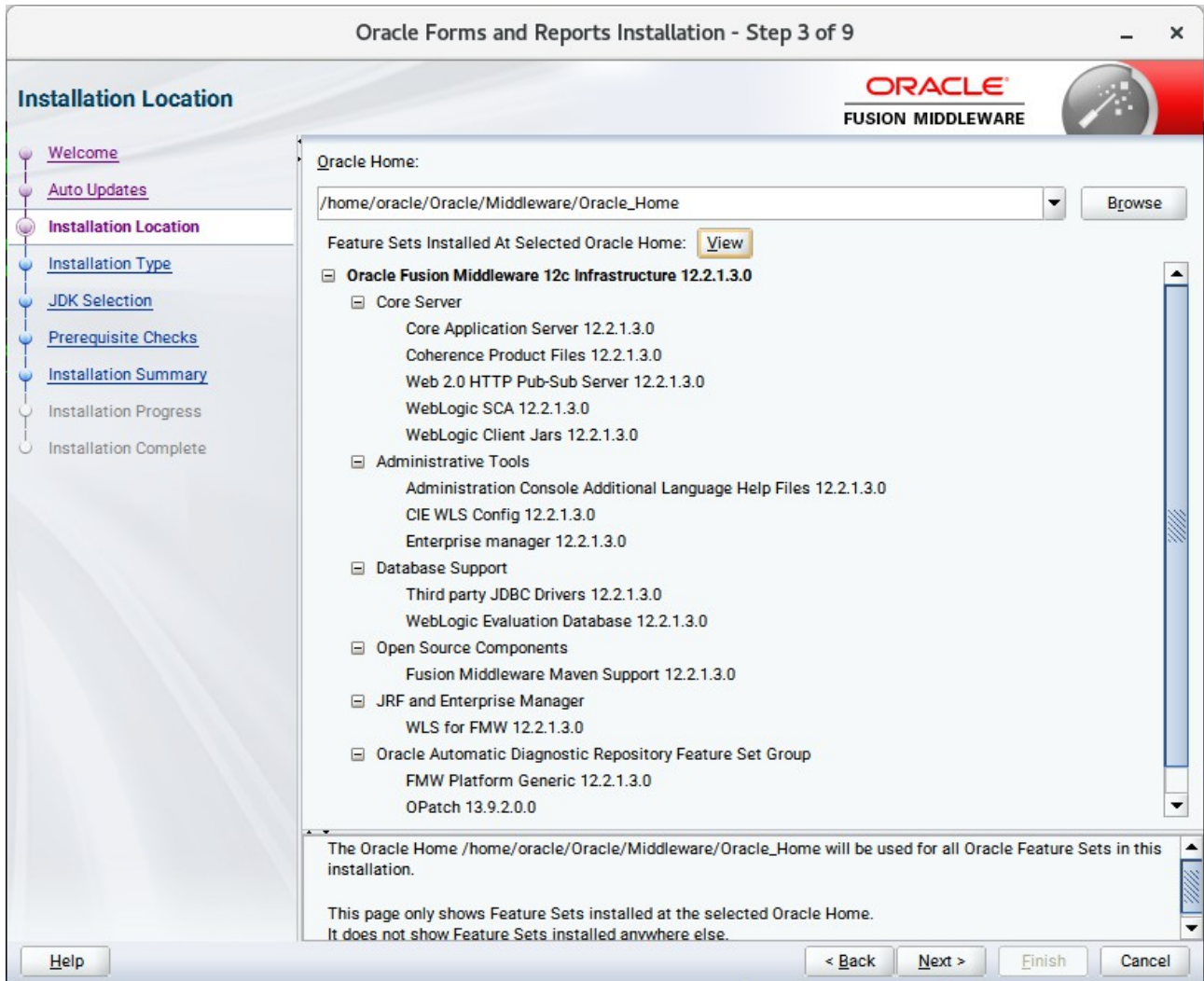
This page welcomes you to the installation. Click **Next** to continue.

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

The screenshot shows the 'Auto Updates' page in the Oracle Forms and Reports installation wizard. The window title is 'Oracle Forms and Reports Installation - Step 2 of 9'. The Oracle Fusion Middleware logo is in the top right. A navigation pane on the left 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, 'Proxy Settings' and 'Test Connection' buttons, and a 'Search' button above a large empty text area. At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

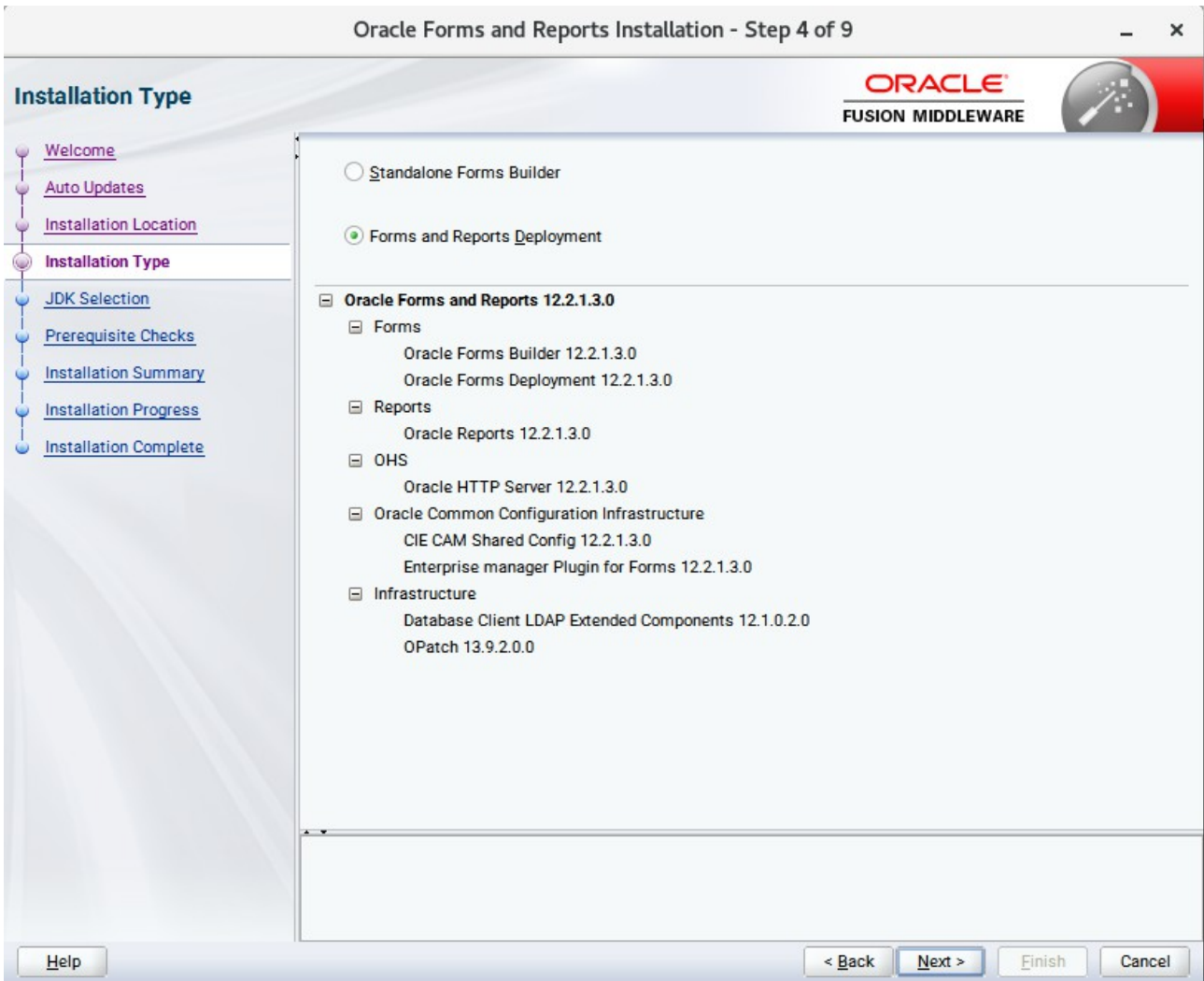
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



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

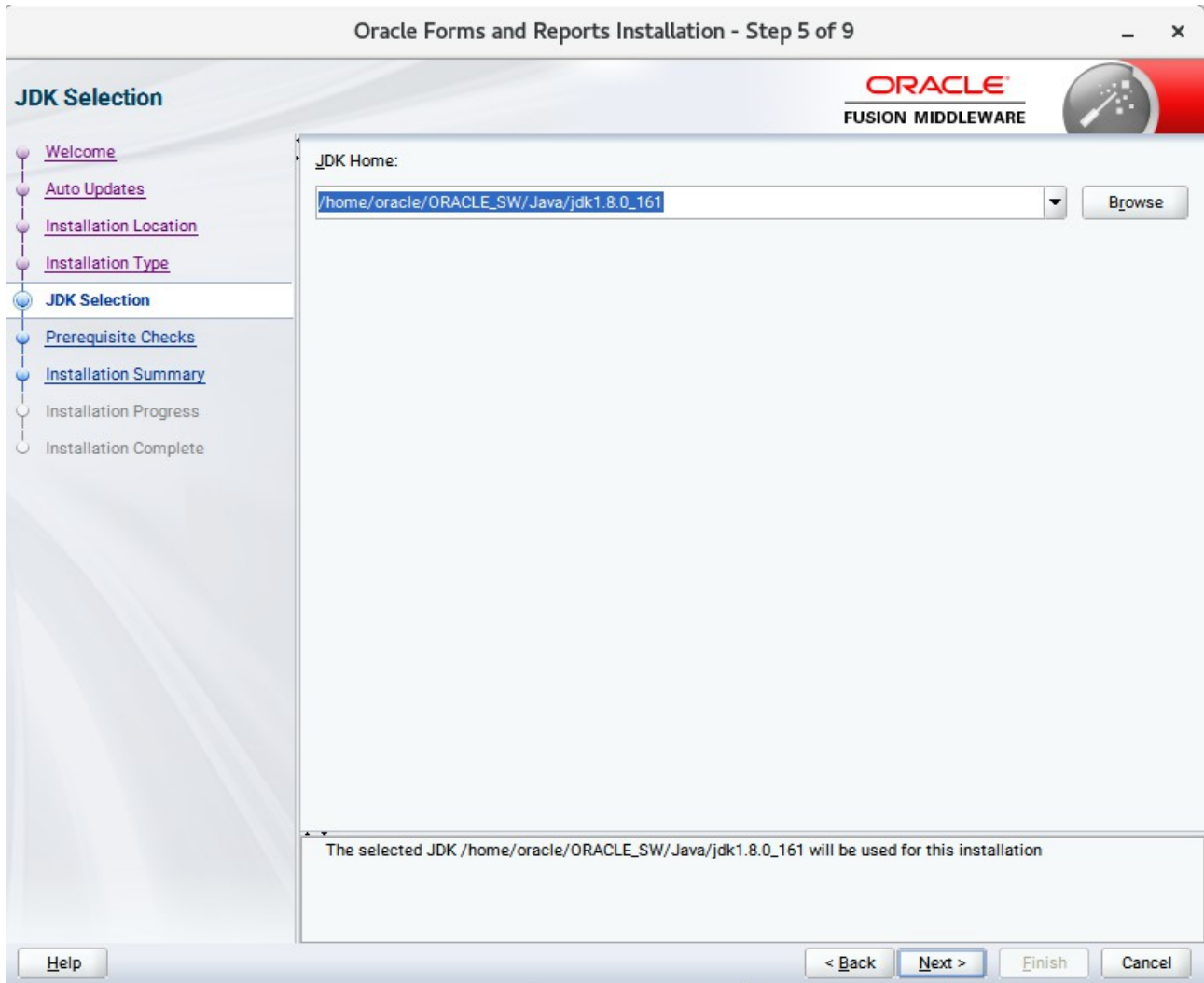
4). The **Installation Type** page appears.



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.

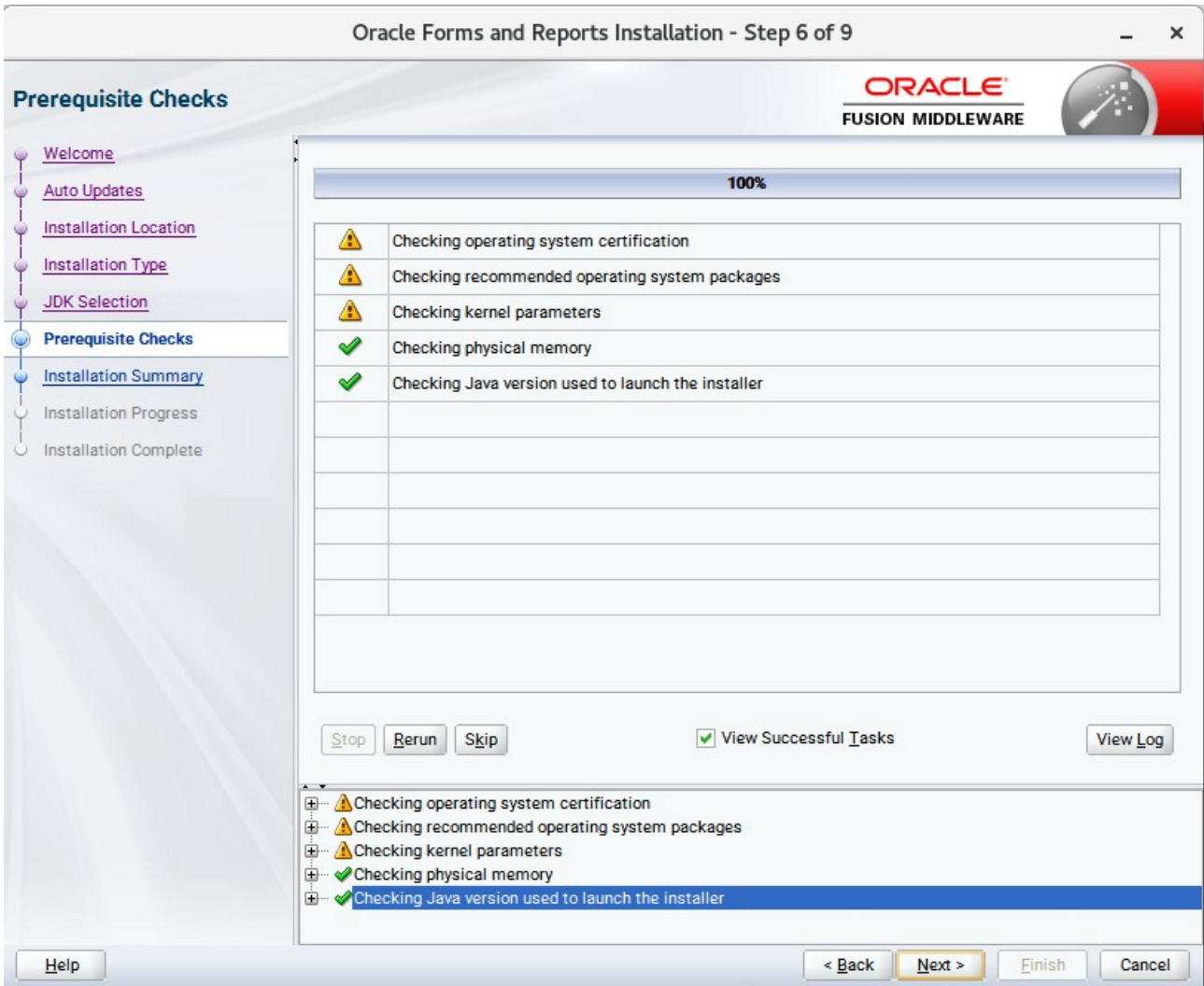


5). The **JDK Selection** page appears.



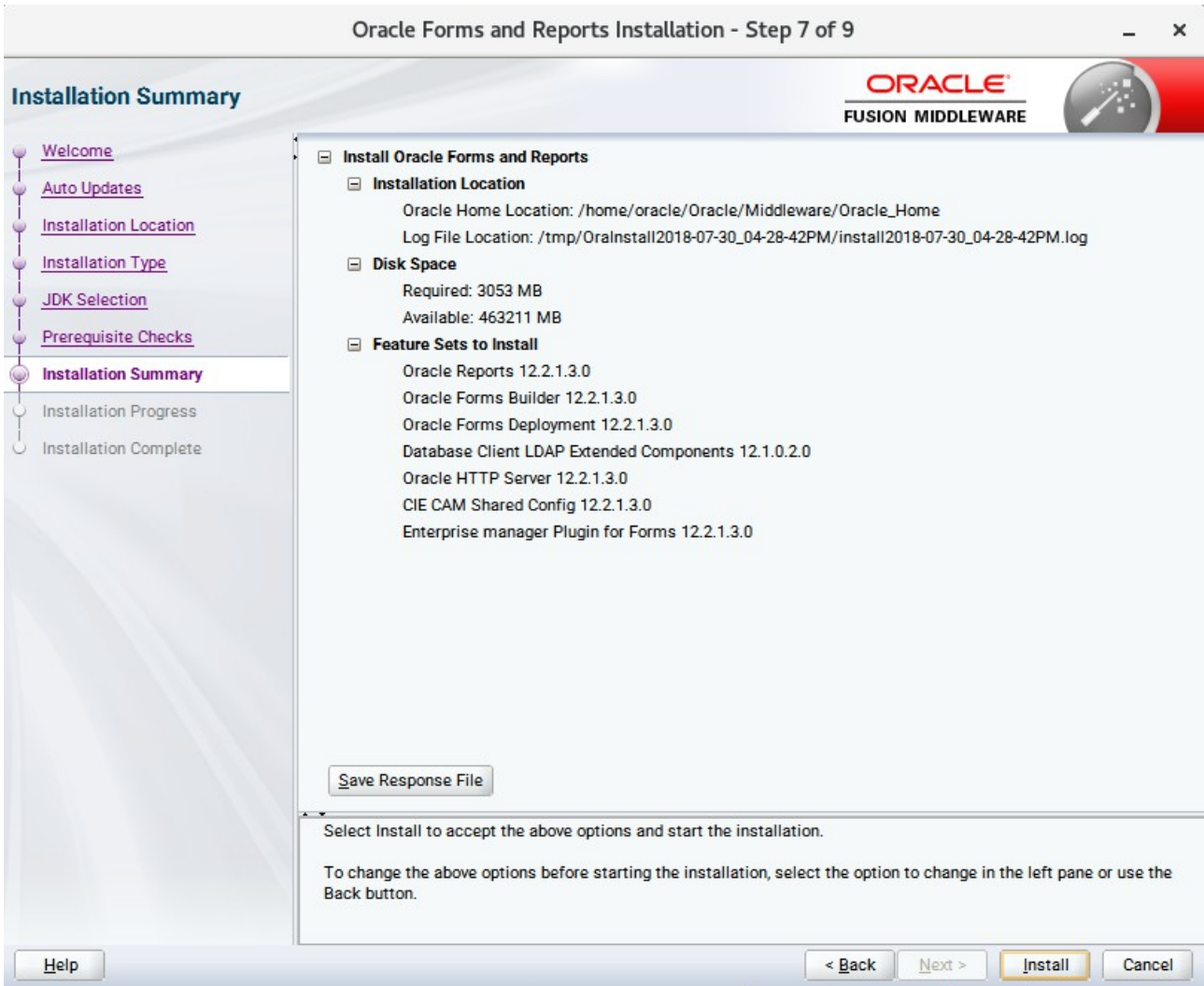
The selected JDK will be used for this installation. Click **Next** to continue.

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



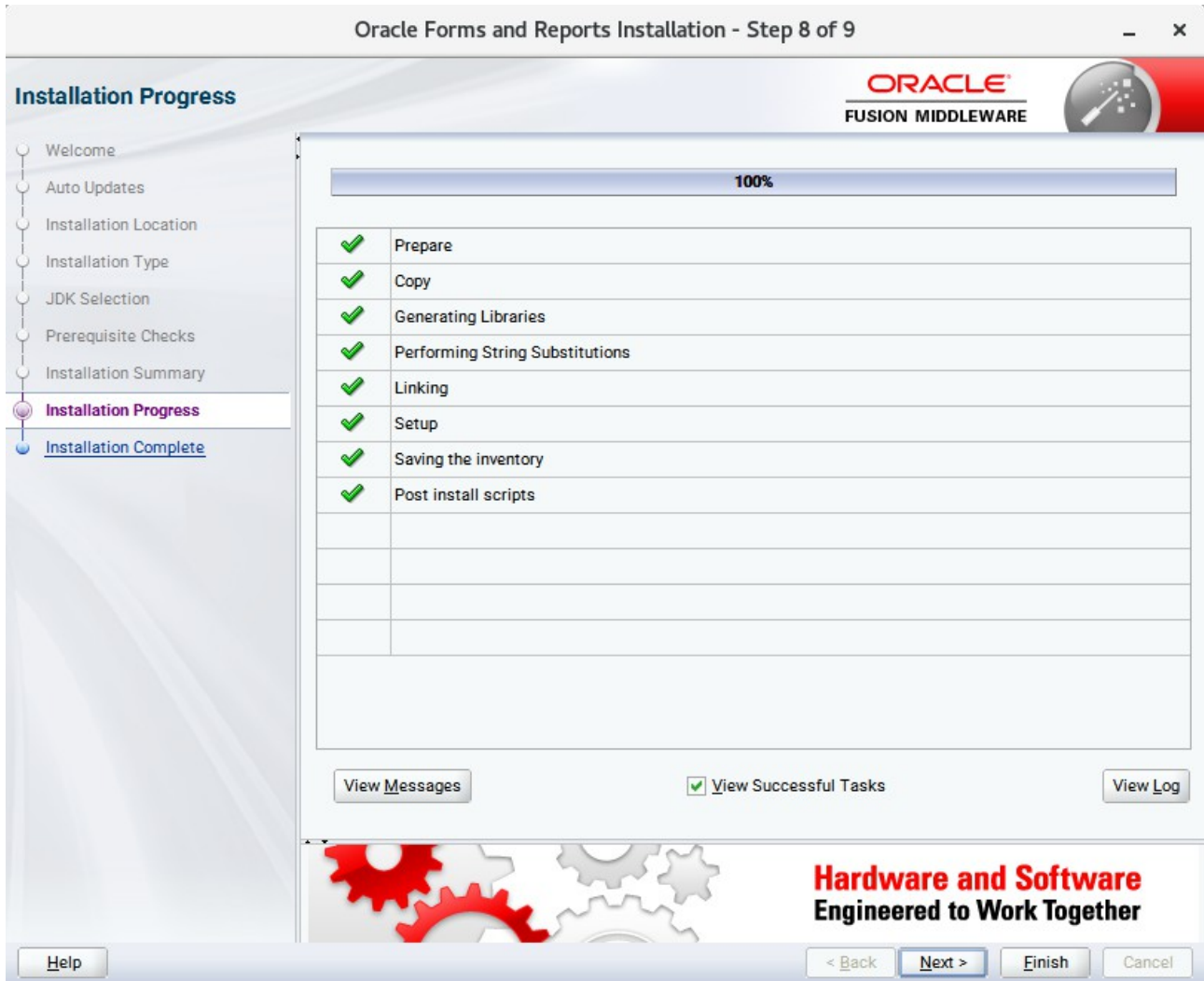
Prerequisite Checks results will be shown as above, click **Next** to continue.

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



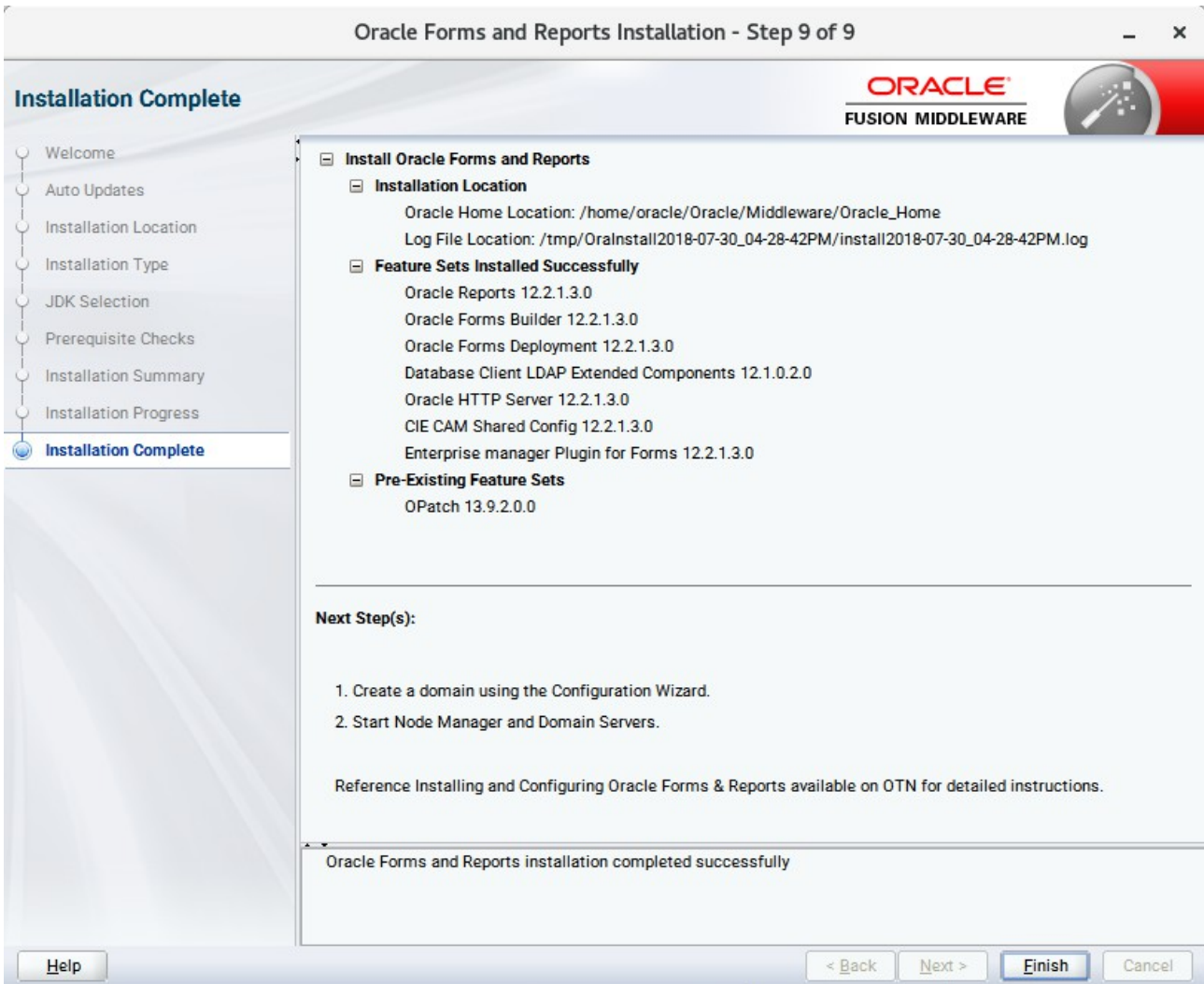
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



Click **Finish** to dismiss the installer.

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

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

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

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

\* Mandatory component. Mandatory components cannot be deselected.

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

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

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

### 3. Configuring Oracle Forms and Reports using the Config Wizard

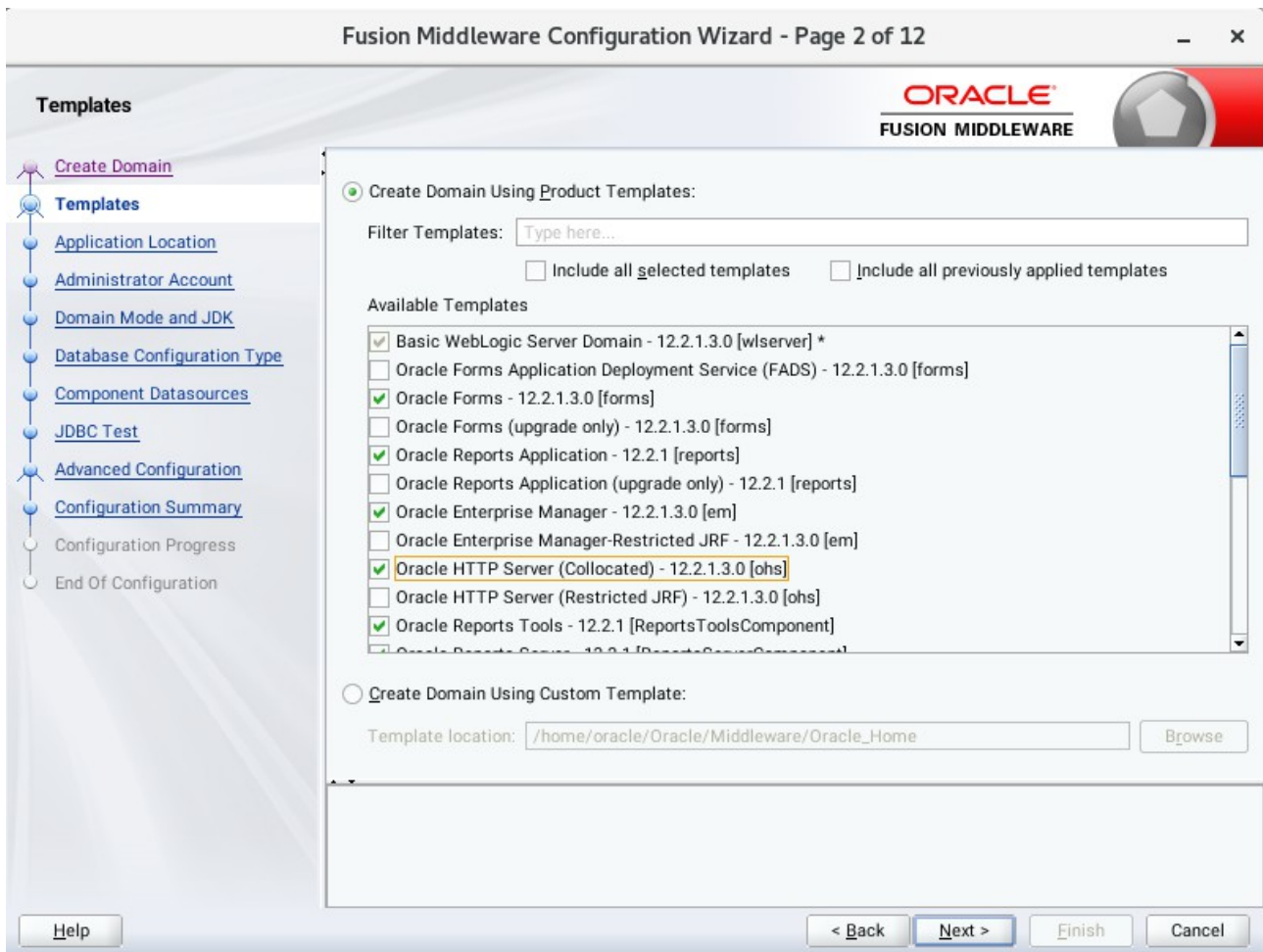
3-1. In order to complete the configuration. Run the config wizard using **config.sh** located in the **ORACLE\_HOME/oracle\_common/common/bin** directory.

**Follow these steps:**

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



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



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

**Oracle Forms – 12.2.1.3.0 [forms],**  
**Oracle Reports Server – 12.2.1 [ReportsServerComponent],**  
**Oracle Reports Tools – 12.2.1 [ReportsServerComponent],**  
**Oracle Reports Bridge – 12.2.1 [ReportsServerComponent],**  
**Oracle Reports Application – 12.2.1 [reports]**  
 and **Oracle HTTP Server(Collocated) – 12.2.1.3.0 [ohs]**.

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



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



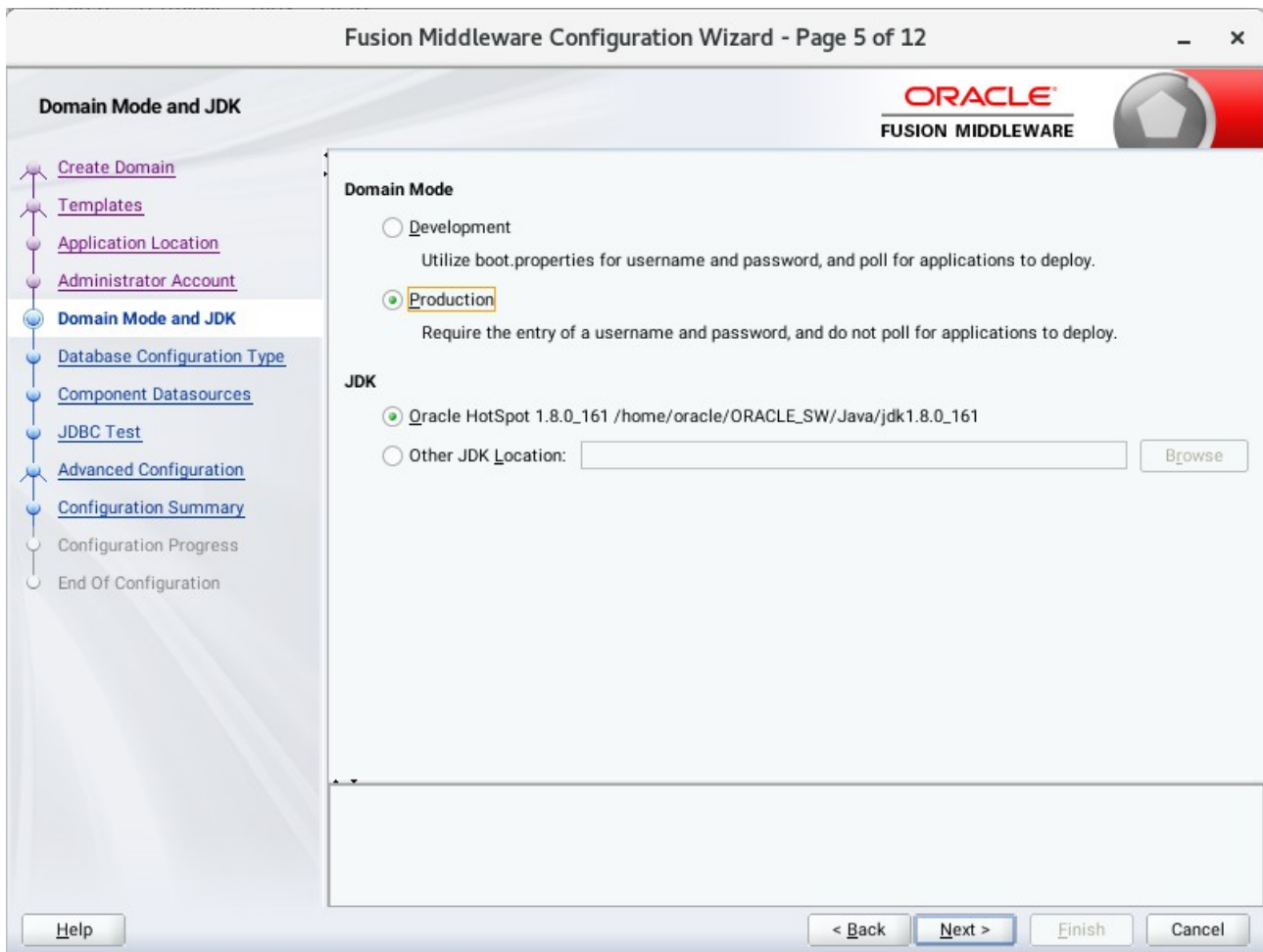
Keep the default value for Application location. Click **Next** to continue.

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

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

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



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

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

**Fusion Middleware Configuration Wizard - Page 6 of 12**

**Database Configuration Type**

Specify AutoConfiguration Options Using:

RCU Data     Manual Configuration

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

Vendor:     Driver:

Connection Parameters     Connection URL String

Host Name:

DBMS/Service:     Port:

Schema Owner:     Schema Password:

Connection Result Log

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

Successfully Done.

Click "Next" button to continue.

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

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

**JDBC Component Schema**

ORACLE  
FUSION MIDDLEWARE

Vendor:  Driver:

Connection Parameters  Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

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

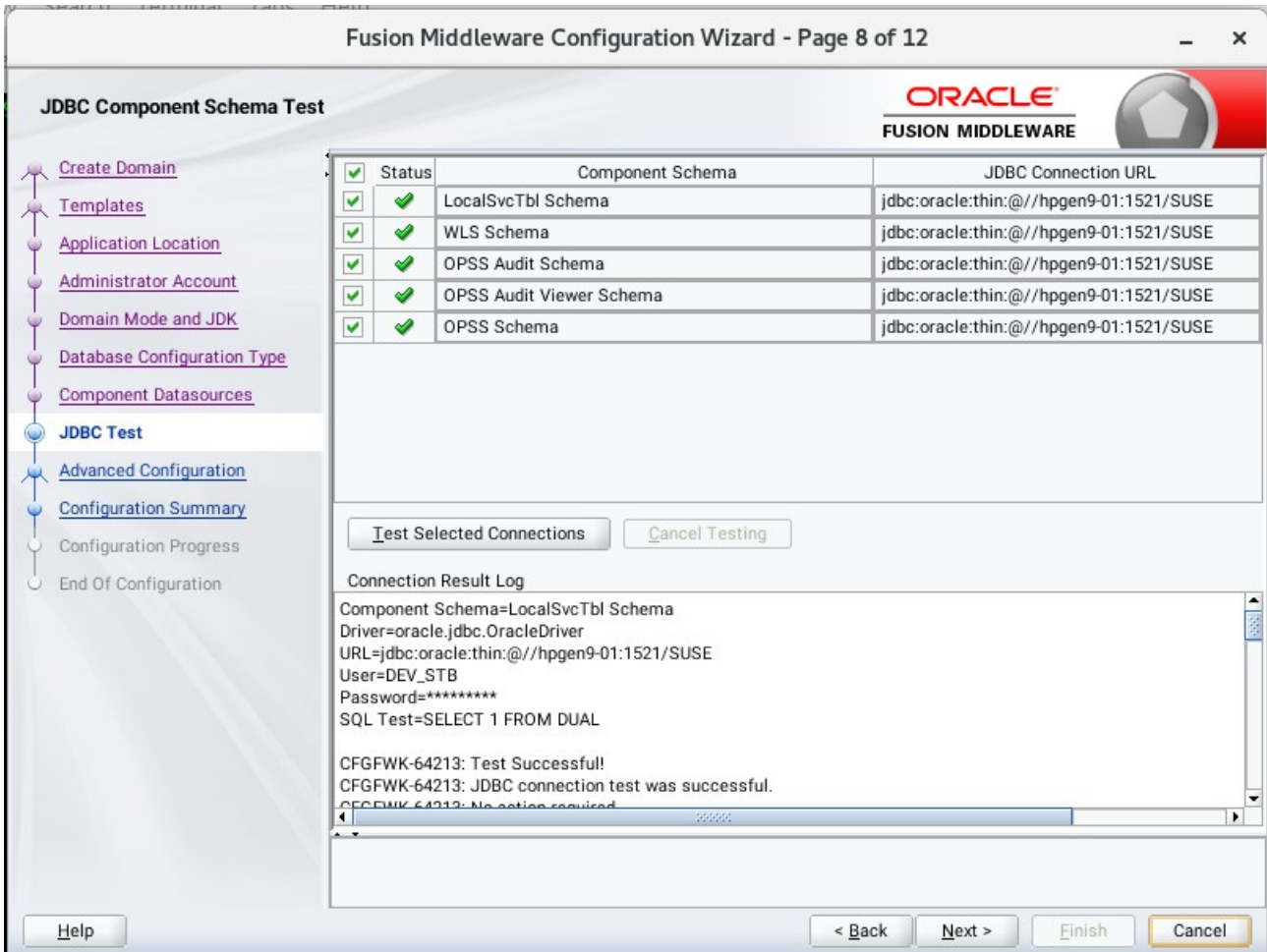
Edits to the data above will affect all checked rows in the table below.

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

Help < Back Next > Finish Cancel

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

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



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

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



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

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

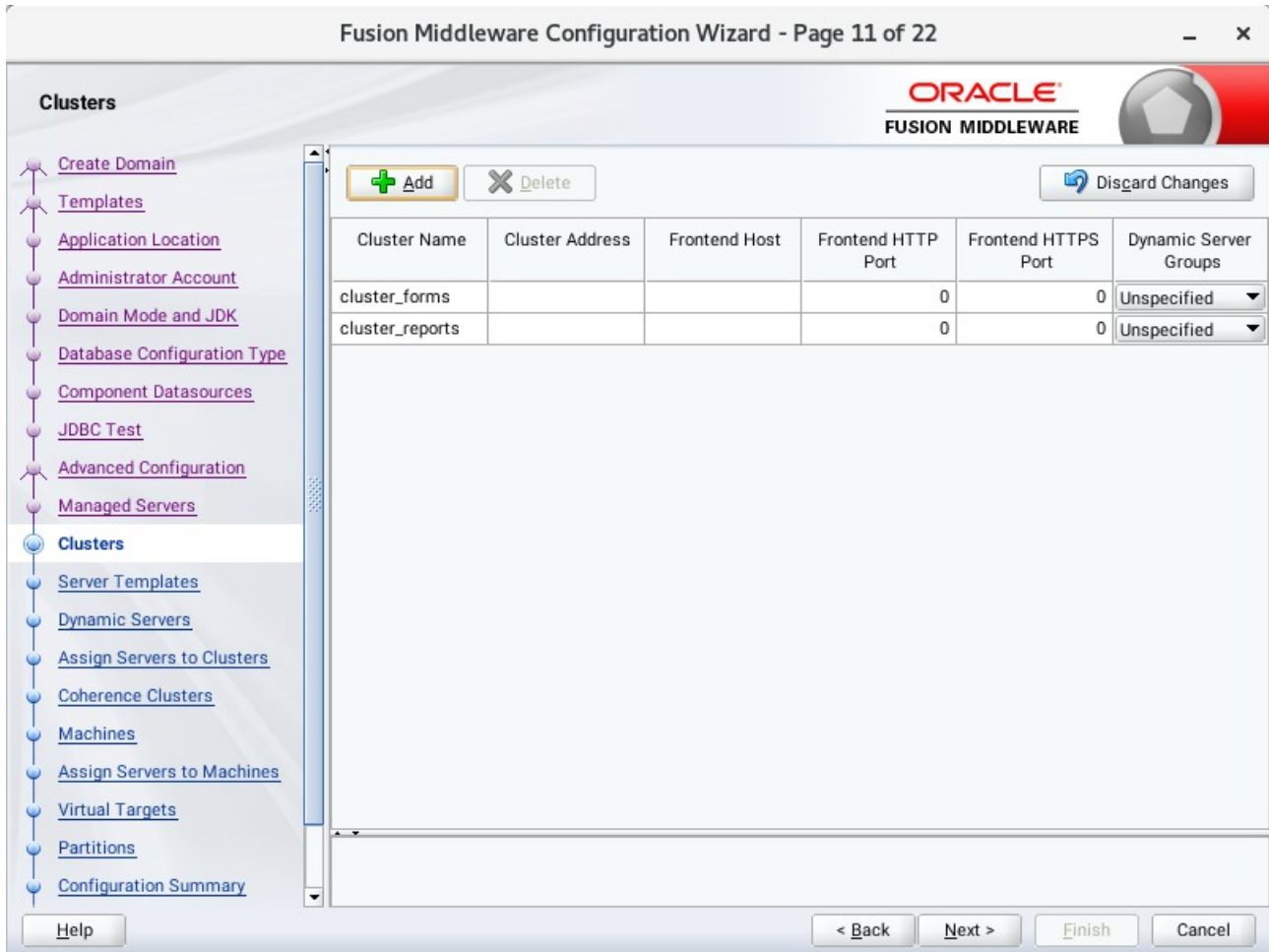
**Managed Servers**

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

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

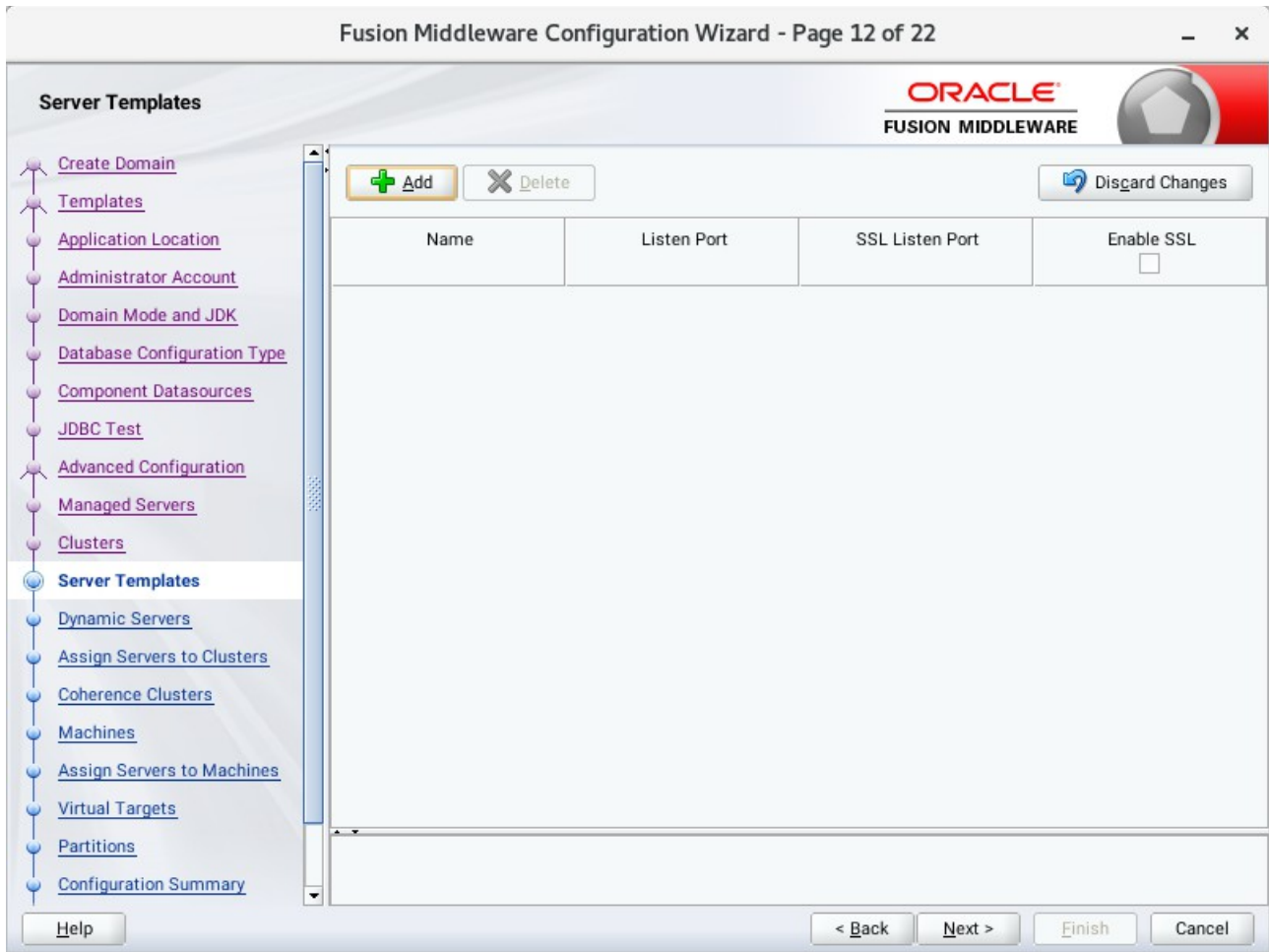


11). The **Clusters** screen appears.



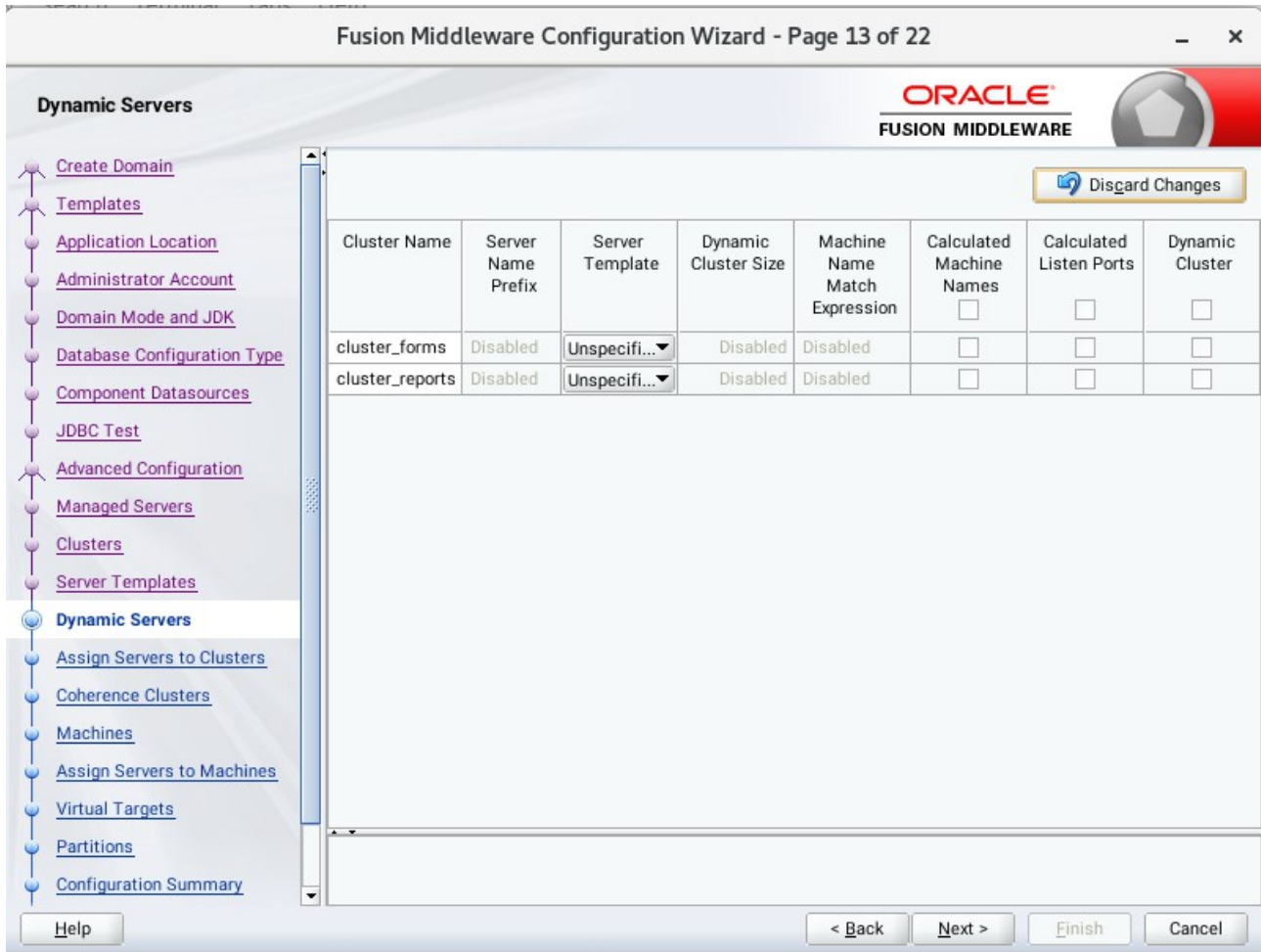
Default entries will be acceptable in most cases, unless adding new clusters is desirable. Click **Next** to continue.

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



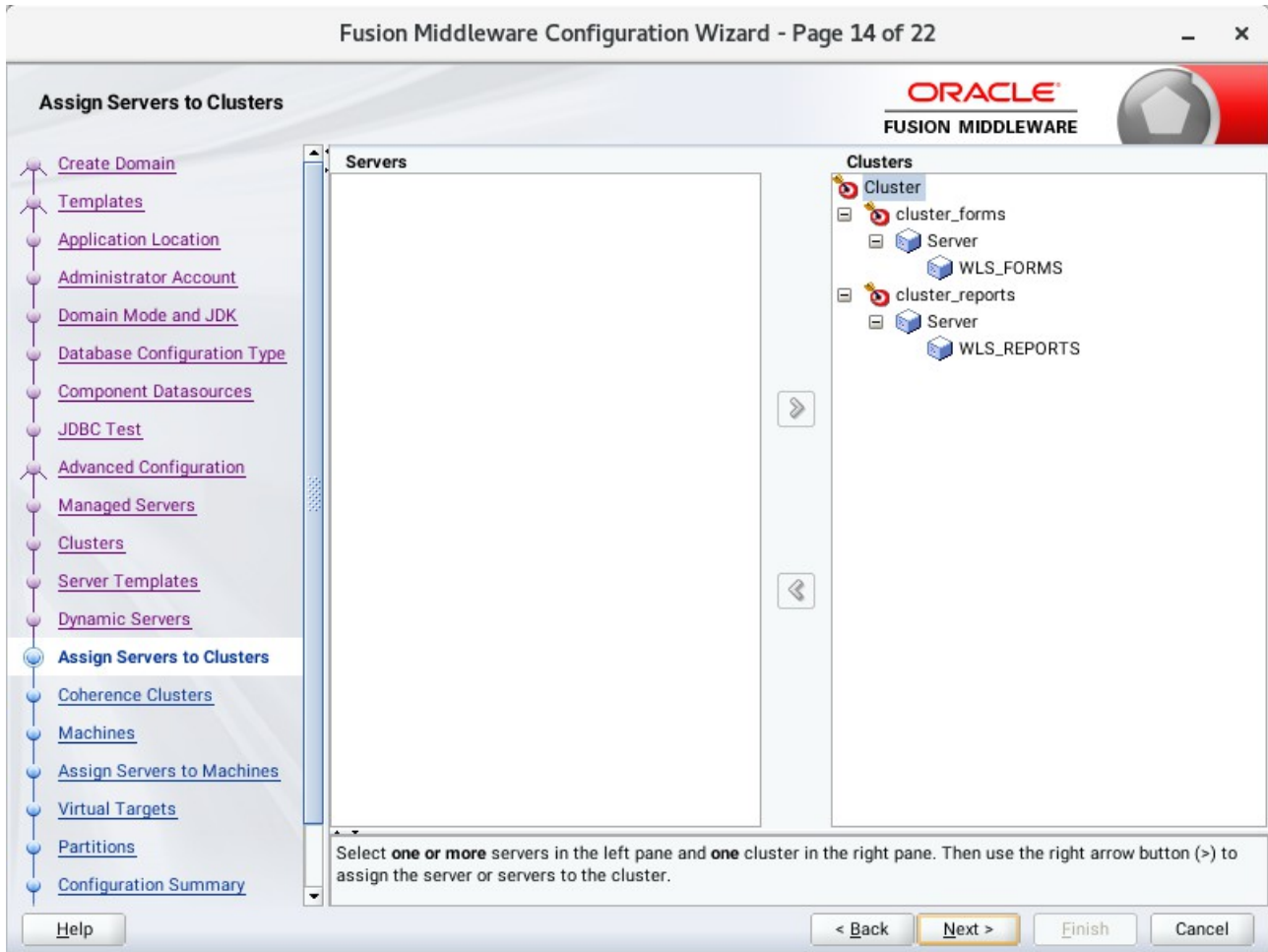
The default values will be appropriate for most cases. Click **Next** to continue.

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



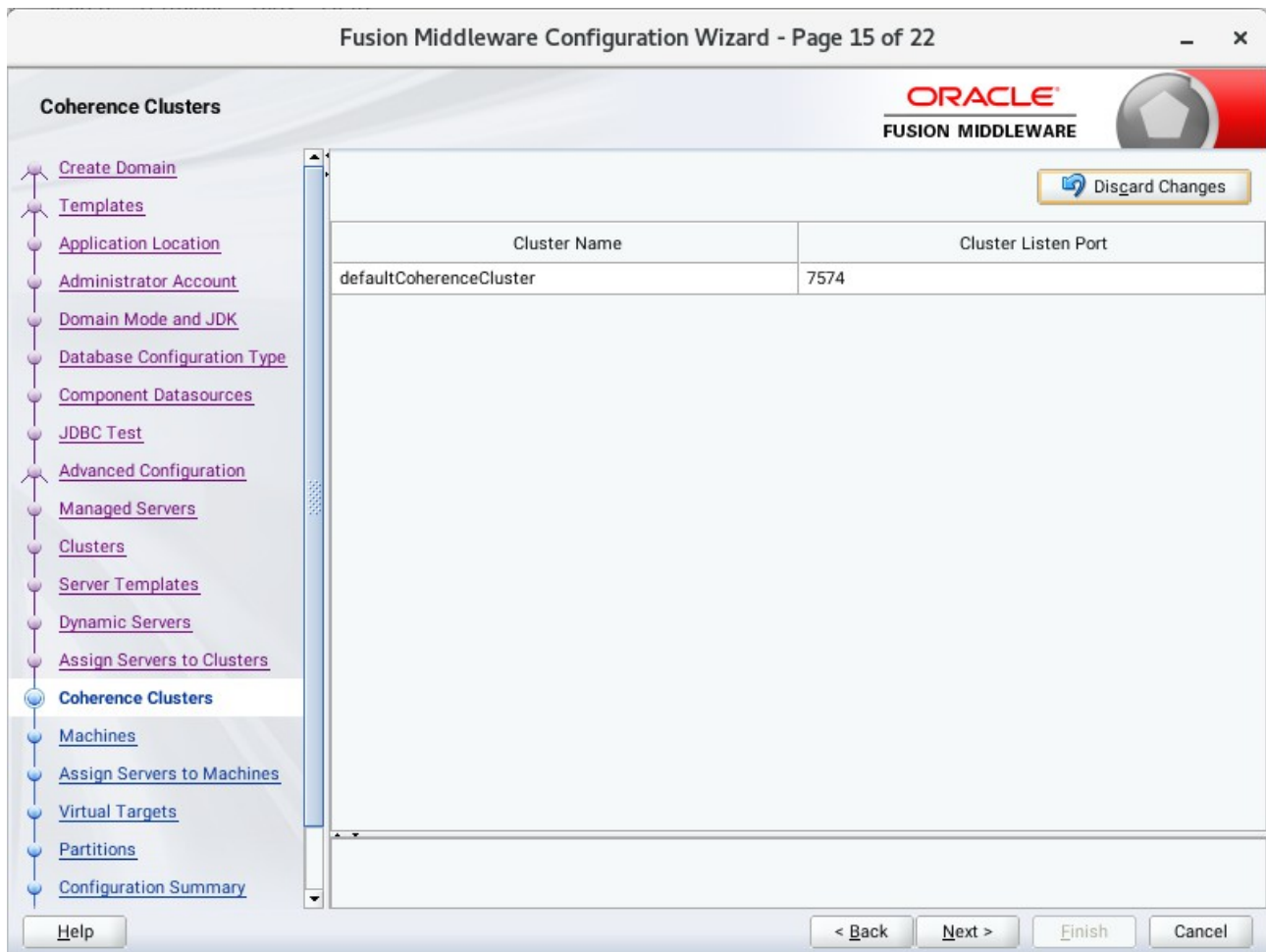
The default values will be appropriate for most cases. Click **Next** to continue.

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



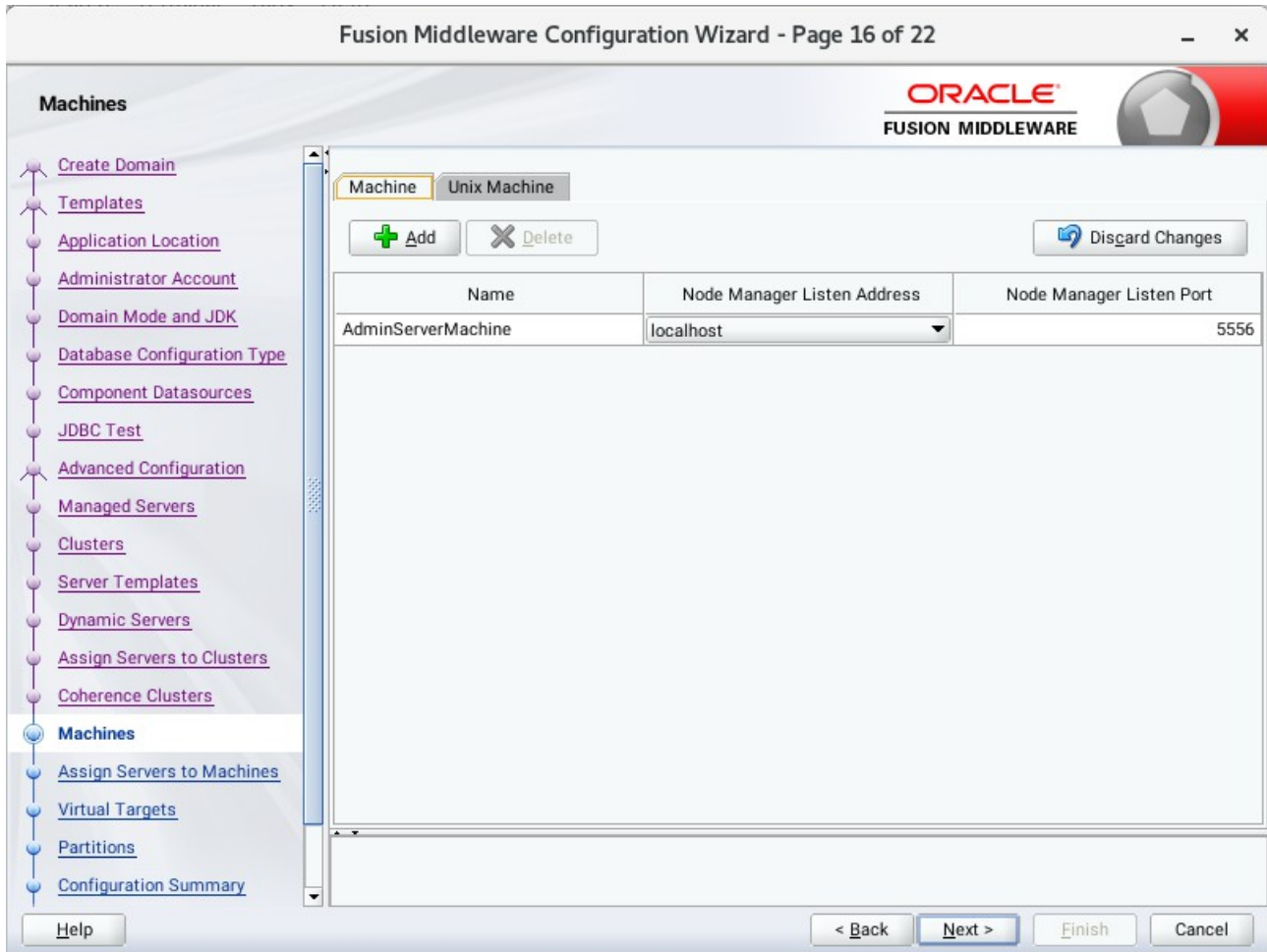
The default values will be appropriate for most cases. However, if new managed servers were added in the previous step, they should be added to the cluster here. Click **Next** to continue.

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



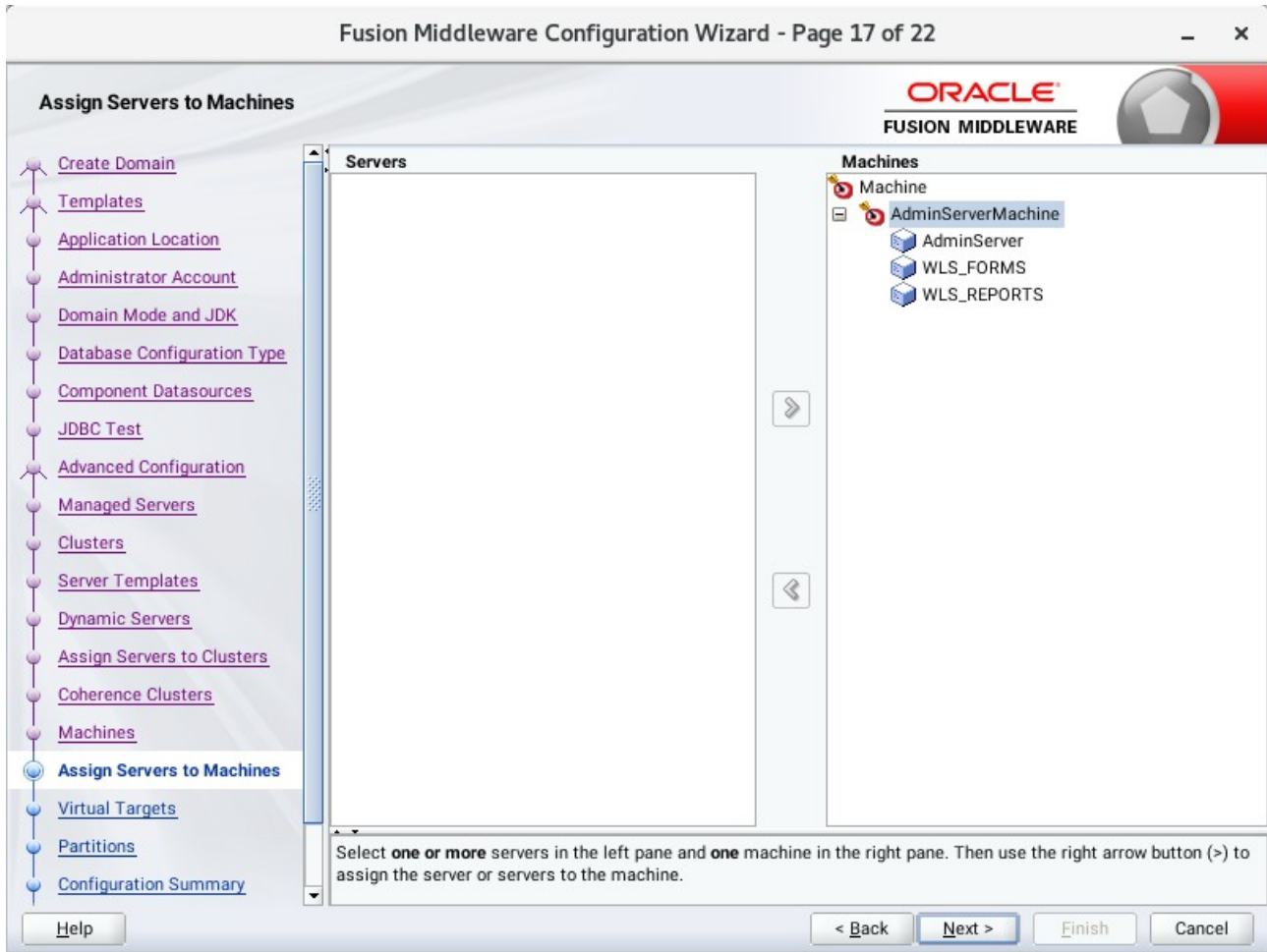
The default values will be appropriate for most cases. Click **Next** to continue.

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



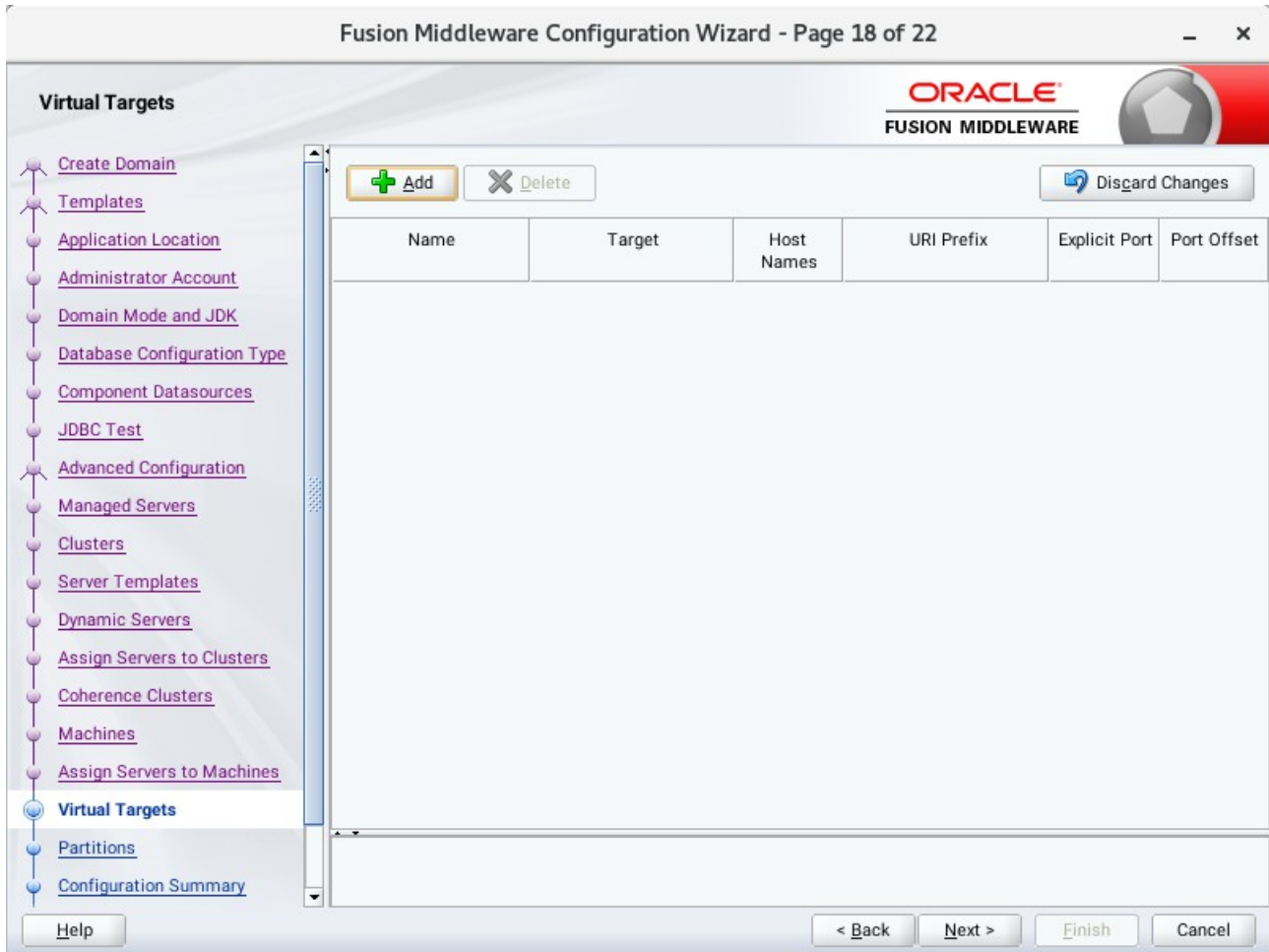
You can use this screen to override the machine name or add additional Machine names for extended domain. Click **Next** to continue.

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



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

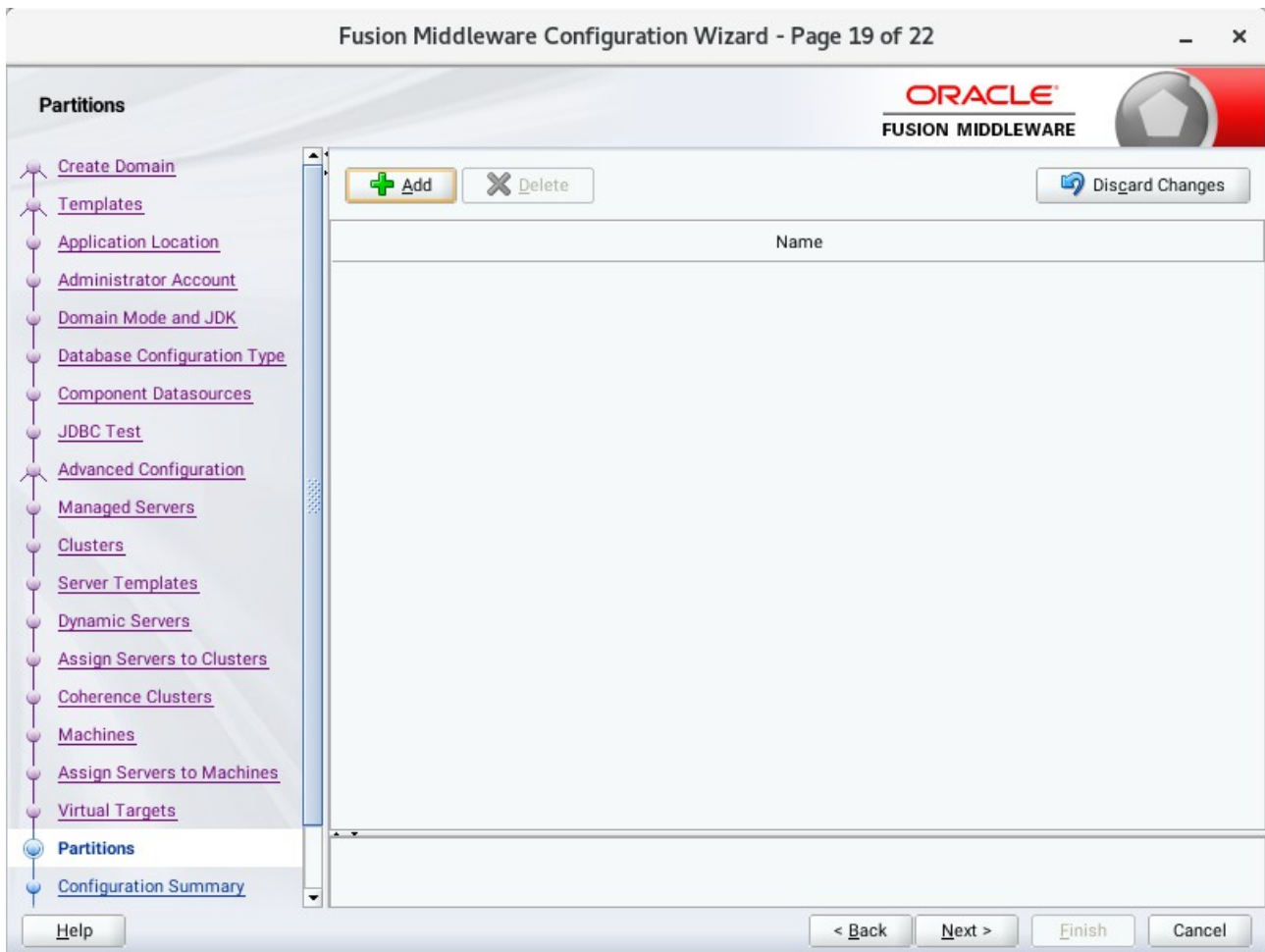
18). The **Virtual Targets** screen appears.



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

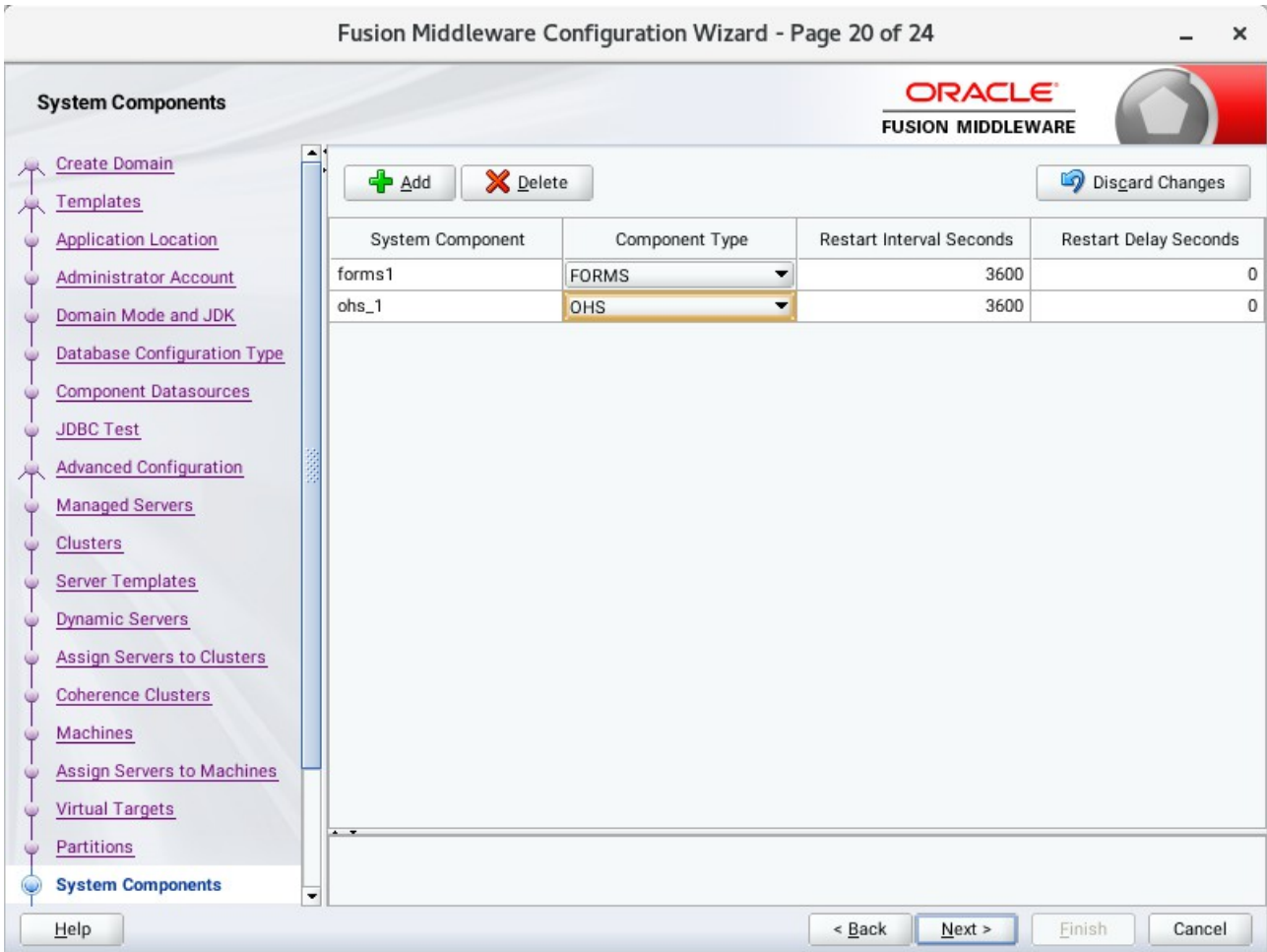


19). The **Partitions** screen appears.



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.

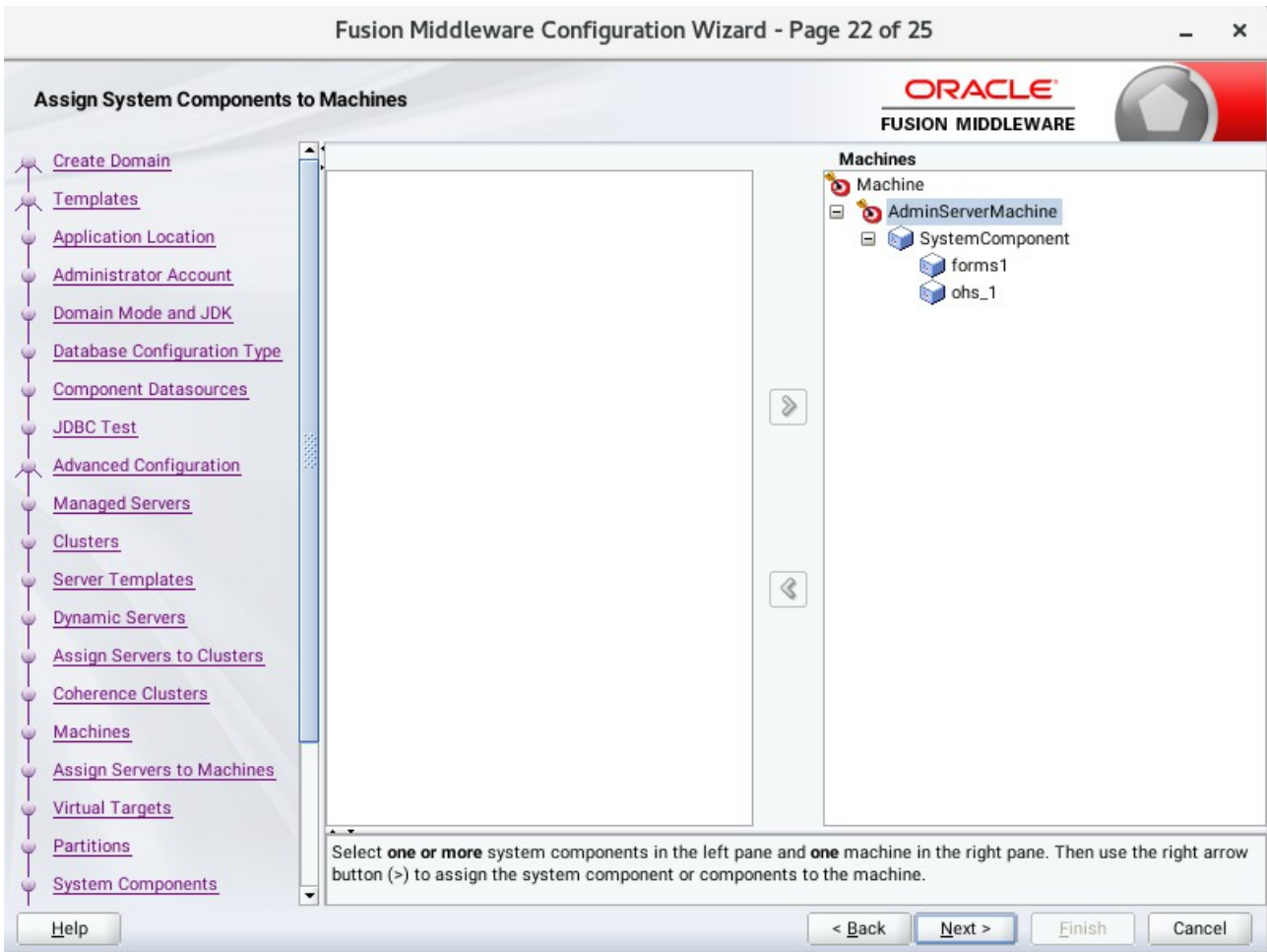
The screenshot shows the 'OHS Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 21 of 25'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a vertical navigation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

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

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

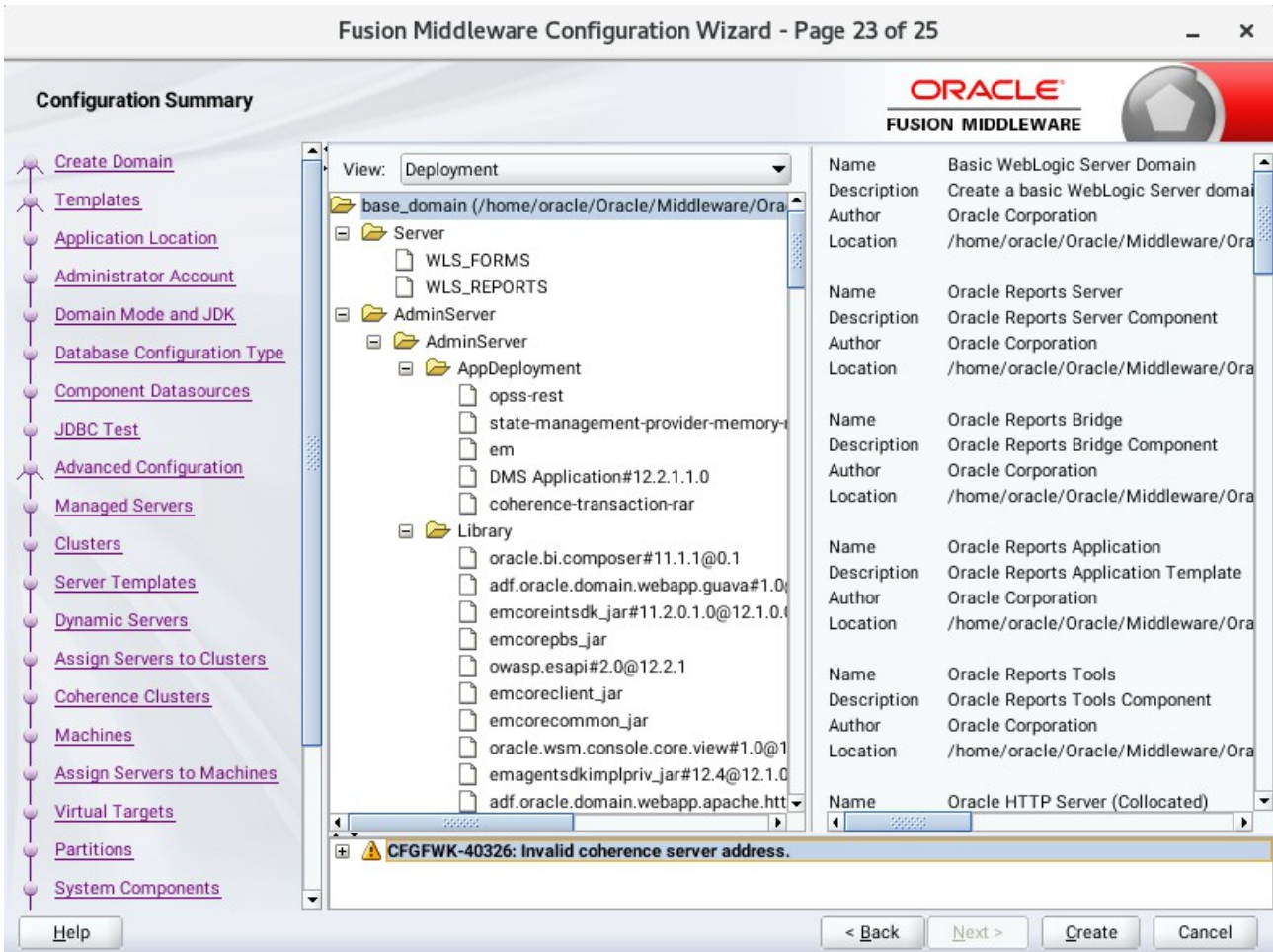
The default values will be appropriate for most cases. Click **Next** to continue.

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



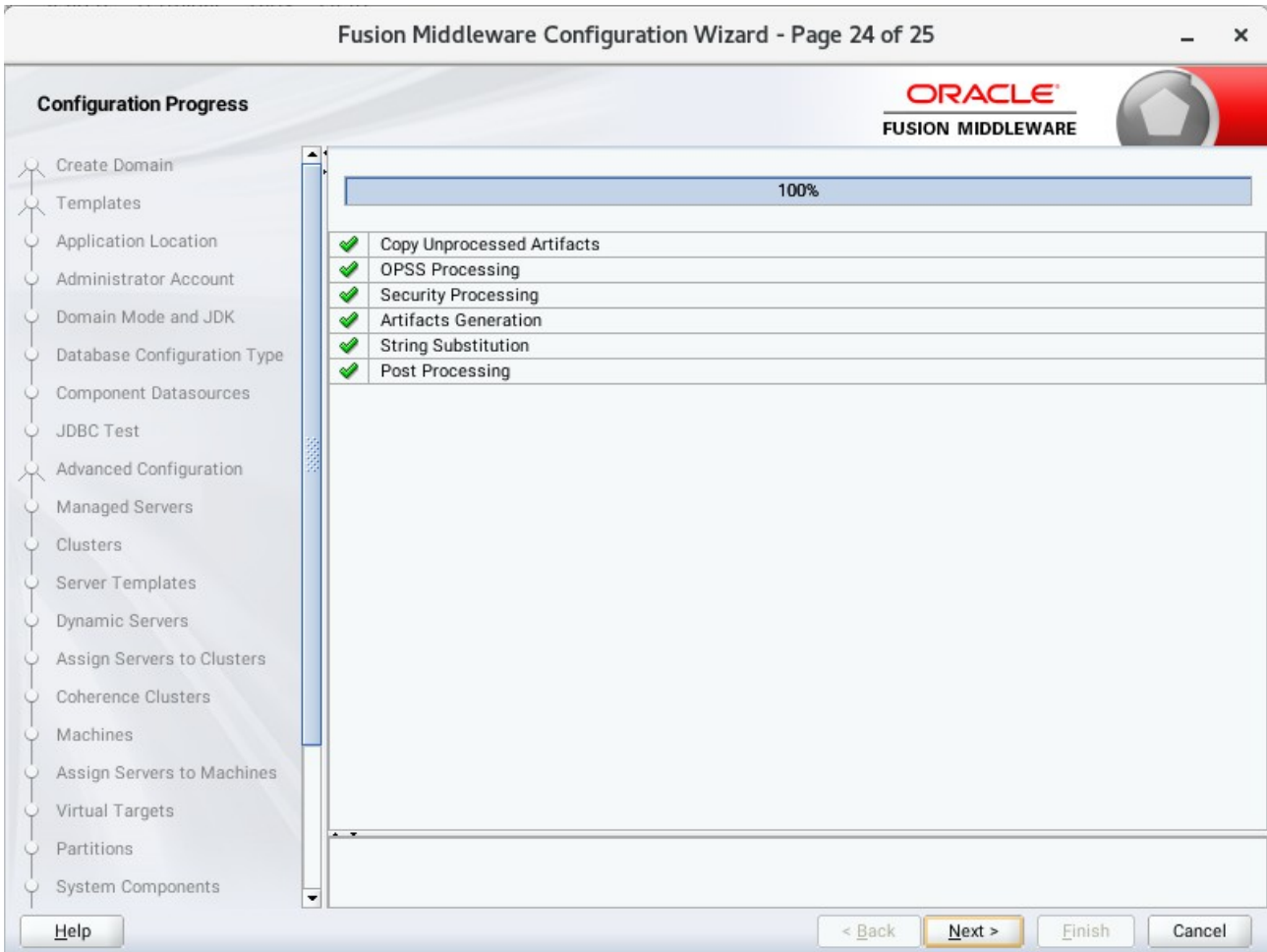
The default values will be appropriate for most cases. Click **Next** to continue.

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



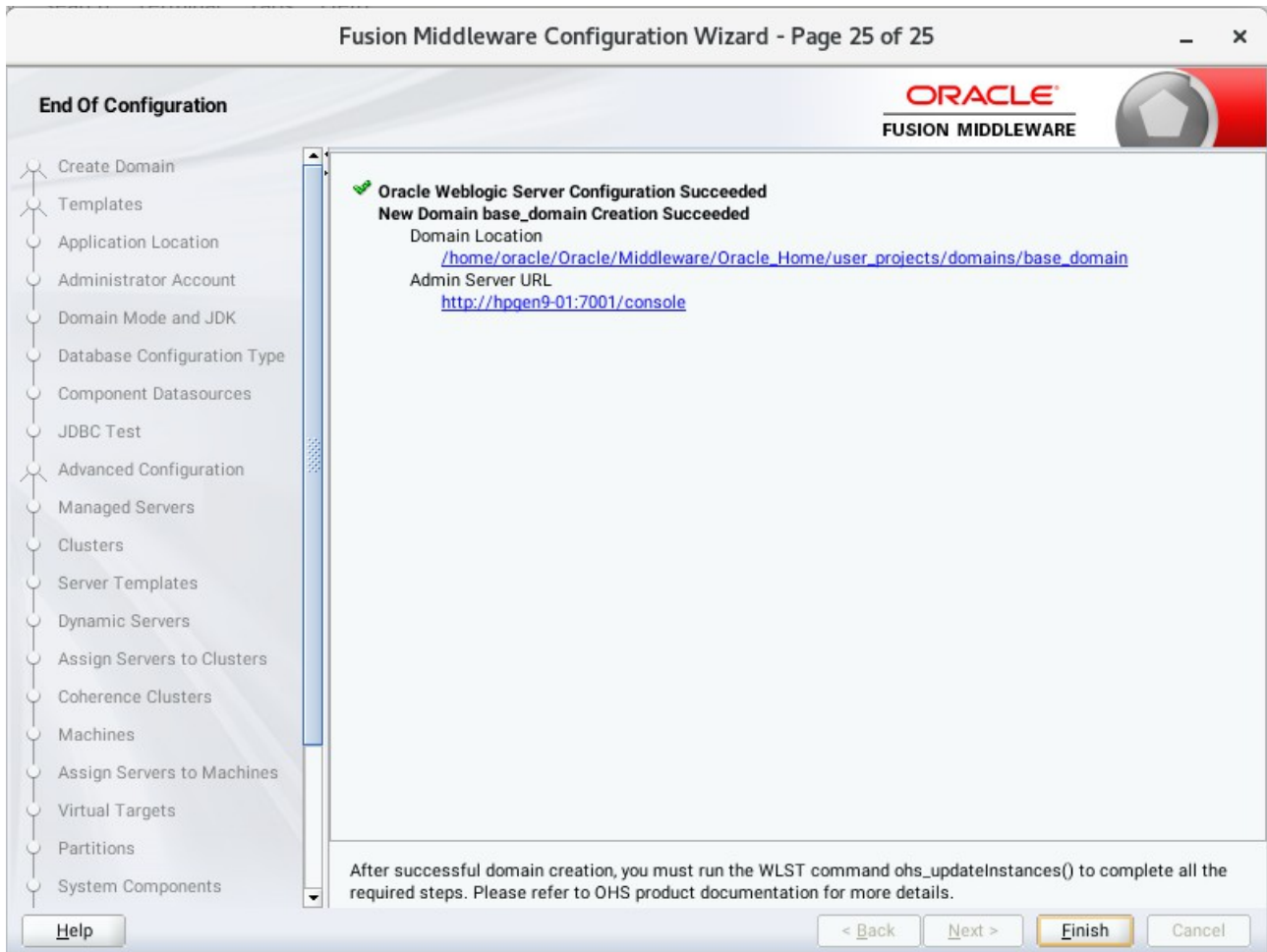
Select **Create** to accept the above options and start creating and configuring a new domain.

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:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> ./startNodeManager.sh > nm.out&
[1] 2764
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> + /home/oracle/
ORACLE_SW/Java/jdk1.8.0_161/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/Or
acle_Home/wlserver/.. -Dohs.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ohs -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/Reports
BridgeComponent -Dreports.server.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsServerComponent
-Dforms.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/forms -Doracle.security.jps.config=/home/oracle/
Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.com
ponents.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDir
ectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=c
om.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Ho
me/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161
weblogic.NodeManager -v
<Jul 30, 2018 6:53:53 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 30, 2018 6:53:53 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.3.0>
<Jul 30, 2018 6:53:53 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Or
acle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 30, 2018 6:53:53 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 30, 2018 6:53:53 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type
=kss, PassPhraseUsed=true>
Jul 30, 2018 6:53:54 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 boo
tstrap credentials. If required, use Wlst or configuration management interfaces.
<Jul 30, 2018 6:53:54 PM GMT+08:00> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracl
e/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1.3.0

```



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

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-0... x oracle@hpgen9-0... x
eue: '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"
2018-07-30 18:57:07.264/102.419 Oracle Coherence GE 12.2.1.3.0 <Info> (thread=[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 30, 2018 6:57:07,815 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 30, 2018 6:57:07,884 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 30, 2018 6:57:07,885 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers>: Resolving connection list DomainRuntimeServiceMBean>
<Jul 30, 2018 6:57:07,994 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 30, 2018 6:57:07,997 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jul 30, 2018 6:57:07,998 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 30, 2018 6:57:07,999 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 30, 2018 6:57:07,999 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.>
<Jul 30, 2018 6:57:07,999 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 30, 2018 6:57:07,999 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 30, 2018 6:57:08,000 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.>
<Jul 30, 2018 6:57:08,001 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 30, 2018 6:57:08,016 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

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

```

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

```

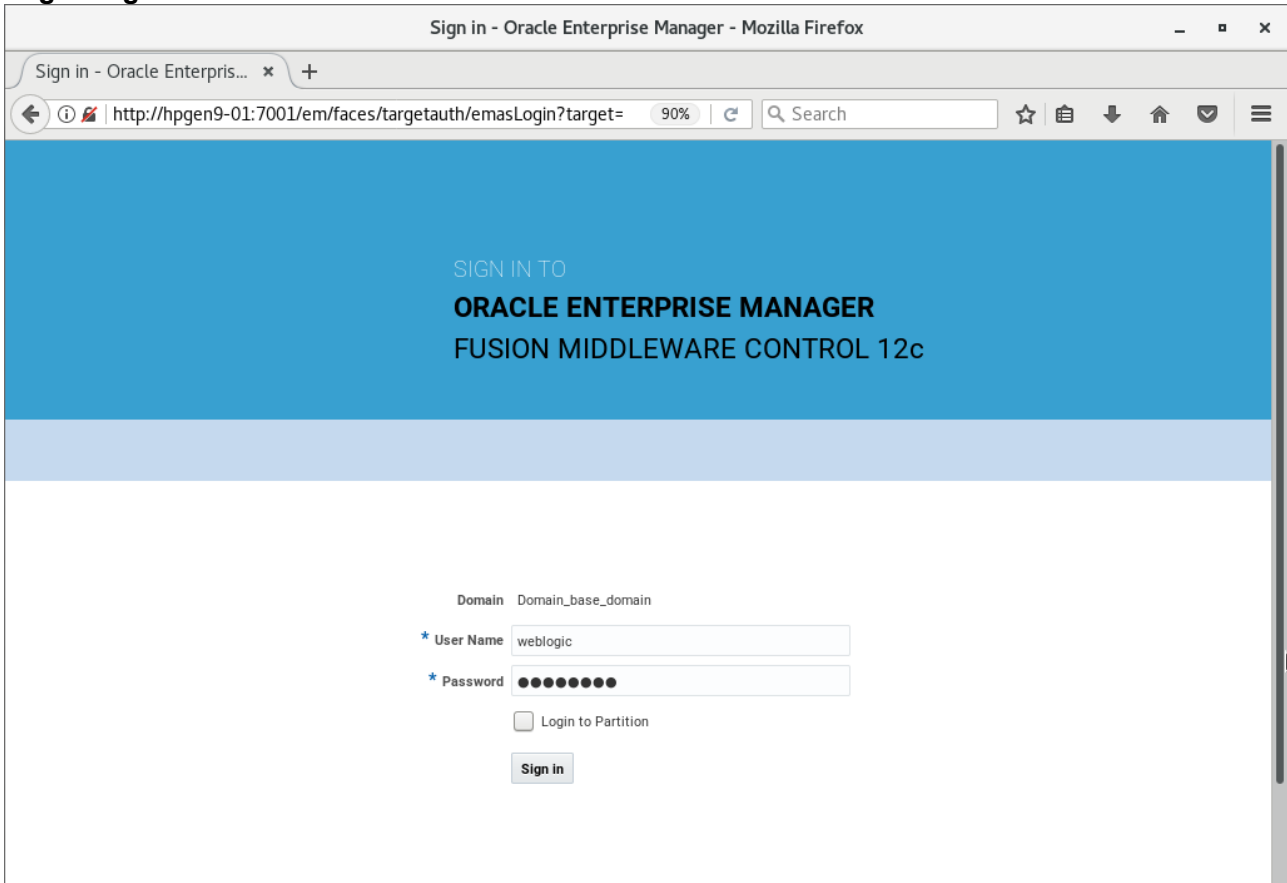
4-3. Verifying the Installed Products and Product Versions. Check the products and product version numbers by running the **opatch lsinventory -detail** command from the **ORACLE\_HOME/OPatch** directory.

Confirmed that OPatch succeeded.

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

1). Access to Enterprise Manager Console.

**Login Page:**



Home Page:

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

base\_domain (Oracle We... x +

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHo 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

base\_domain

WebLogic Domain

Jul 30, 2018 7:03:36 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

**Clusters**

2 Down

**Deployments**

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 WebLogic Server) - Oracle Enterprise Manager - Mozilla Firefox

WLS\_FORMS (Oracle W... x +

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHon 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

WLS\_FORMS

WebLogic Server Start Up Shut Down

Jul 30, 2018 7:06:05 PM GMT+08:00

Information

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

**Monitoring**

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

**Deployments**

1 Up

**Most Requested**

0  
Requests Processed

**General**

Up Since Jul 30, 2018 7:05:39 PM  
Version 12.2.1.3.0  
State Running  
Health OK ✓  
Server Type Configured  
Cluster cluster\_forms  
CPU Usage (%) 0.79  
Heap Usage (MB) 242.46  
Java Vendor Oracle Corporation  
Java Version 1.8.0\_161

**Response and Load**

1.0  
0.8  
0.6  
0.4  
0.2  
0.0

06:52 PM 06:55 06:58 07:01 07:04  
July 30 2018

Request Processing Time (ms) Requests (per minute)

**EJBs**

Beans in Use 0

Table View

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

## Starting WLS\_REPORTS

WLS\_REPORTS (Oracle WebLogic Server) - Oracle Enterprise Manager - Mozilla Firefox

WLS\_REPORTS (Oracle ... x +)

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHon 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

WLS\_REPORTS

WebLogic Server | Start Up | Shut Down

Jul 30, 2018 7:09:07 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

0.00

Requests (per minute)

**Deployments**

1 Up

**Most Requested**

0

Requests Processed

**General**

Up Since Jul 30, 2018 7:08:44 PM

Version 12.2.1.3.0

State Running

Health OK ✓

Server Type Configured

Cluster cluster\_reports

CPU Usage (%) 1.22

Heap Usage (MB) 350.36

Java Vendor Oracle Corporation

Java Version 1.8.0\_161

**Response and Load**

Graph showing Request Processing Time (ms) and Requests (per minute) from 06:55 PM to 07:07 PM on July 30, 2018.

**EJBs**

Beans in Use 0

**Servlets and JSPs**

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

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

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

base\_domain (Oracle We... x +)

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHo 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

base\_domain

WebLogic Domain

Jul 30, 2018 7:09:33 PM GMT+08:00

**Information**

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

**Servers**

3 Up

**Clusters**

2 Up

**Deployments**

3 Up

**Administration Server**

Name AdminServer

Host hpgen9-01

Listen Port 7001

**Servers**

View Create Delete Control

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

Columns Hidden 34

Servers 3 of 3

Starting ohs1

The screenshot shows the Oracle Enterprise Manager interface for the ohs\_1 component. The browser address bar shows the URL: `http://hpgen9-01:7001/em/faces/as_ohs_ohsHome?type=oracle...`. The page title is "ohs\_1 (Oracle HTTP Server) - Oracle Enterprise Manager - Mozilla Firefox".

On the left sidebar, there are sections for Monitoring (CPU Usage: 0.00%, Memory Usage: 0.00%), Virtual Hosts (2), and Modules (52). The main content area is divided into several sections:

- General:** Component Name: ohs\_1, Version: 12.2.1.3.0, 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 Throu... over time (07:11 PM to 07:23 July 30 2018).
- CPU and Memory Usage:** A line graph showing CPU and memory usage over time.
- Key Statistics:** Idle Processes: Unavailable, Busy Processes: Unavailable, Error Rate (%): -1.00.

At the bottom, the browser address bar shows the URL: `http://hpgen9-01:7001/em/faces/as_ohs_ohsHome?type=oracle_apache&target=/Domain_base_domain/base_domain/ohs_1#`.

Verified ohs1 URLs can be accessed.

The screenshot shows the Oracle HTTP Server 12c landing page in a browser. The browser title is "Oracle HTTP Server 12c - Mozilla Firefox" and the address bar shows `http://hpgen9-01:7777/`. The page features the Oracle logo and the text "Oracle HTTP Server 12c".

Below the header, there is a paragraph: "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."

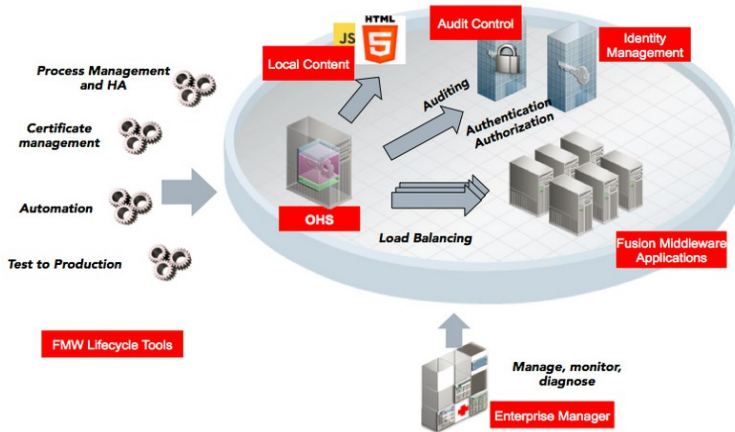
The main part of the page is a diagram illustrating the architecture of Oracle HTTP Server 12c. It shows a central "OHS" component (represented by a server rack) connected to various services and tools:

- 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.
- Audit Control:** Represented by a padlock icon.
- Identity Management:** Represented by a server rack icon.
- Authentication Authorization:** Represented by a server rack icon.
- Load Balancing:** Represented by a server rack icon.
- Fusion Middleware Applications:** Represented by a server rack icon.
- FMW Lifecycle Tools:** Represented by a server rack icon.
- Enterprise Manager:** Represented by a server rack icon with the text "Manage, monitor, diagnose".

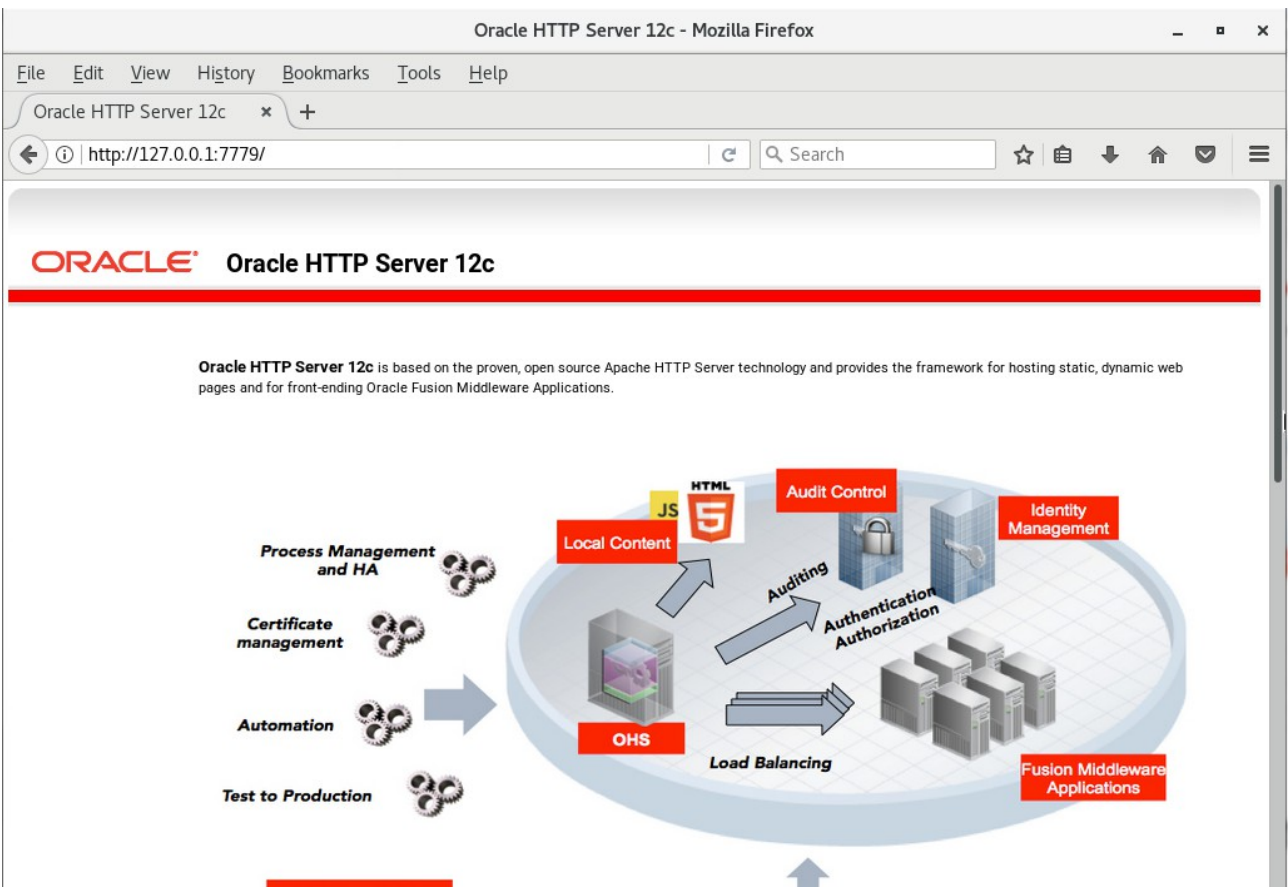


**ORACLE** Oracle HTTP Server 12c

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.

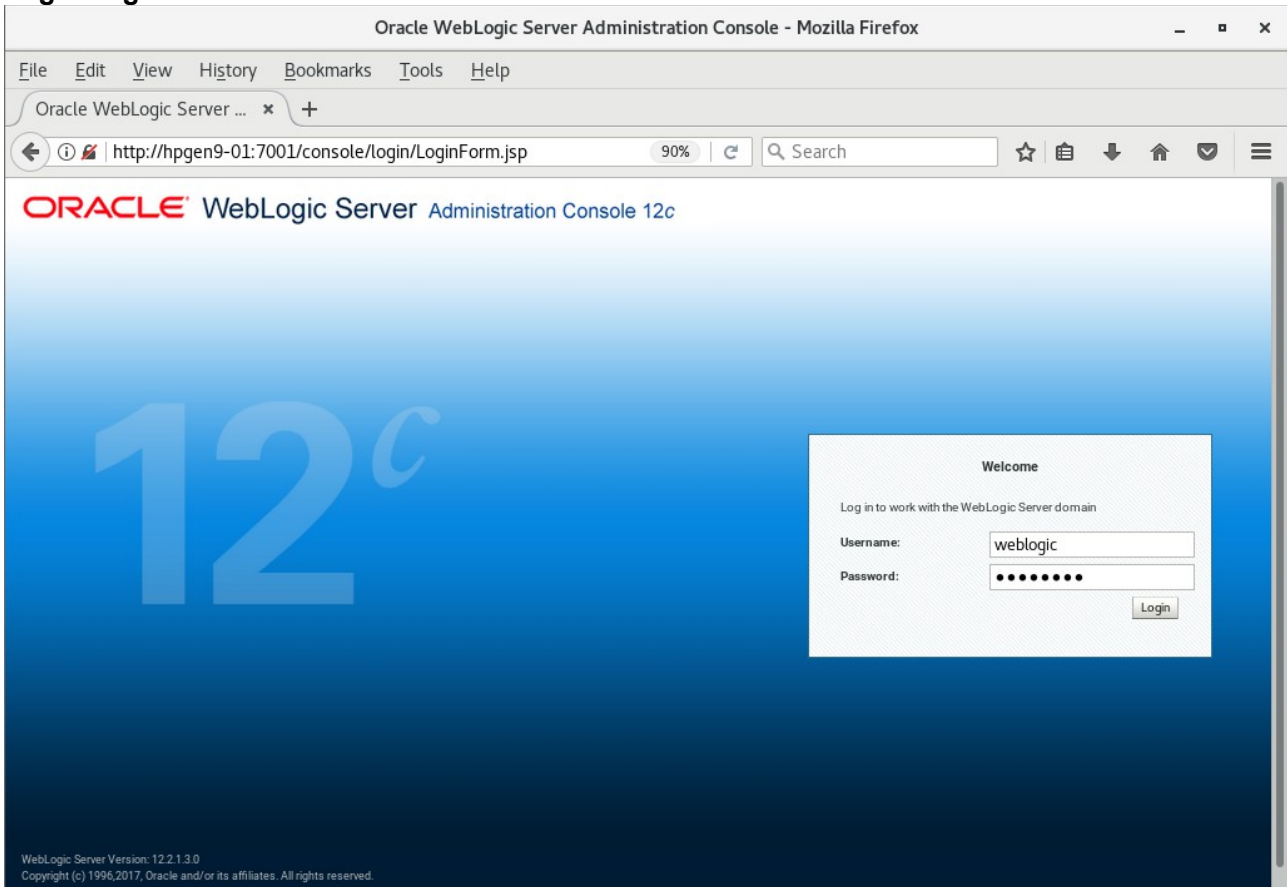


Features



2). Access to Administration Server Console

Login Page as shown below:



Home Page:

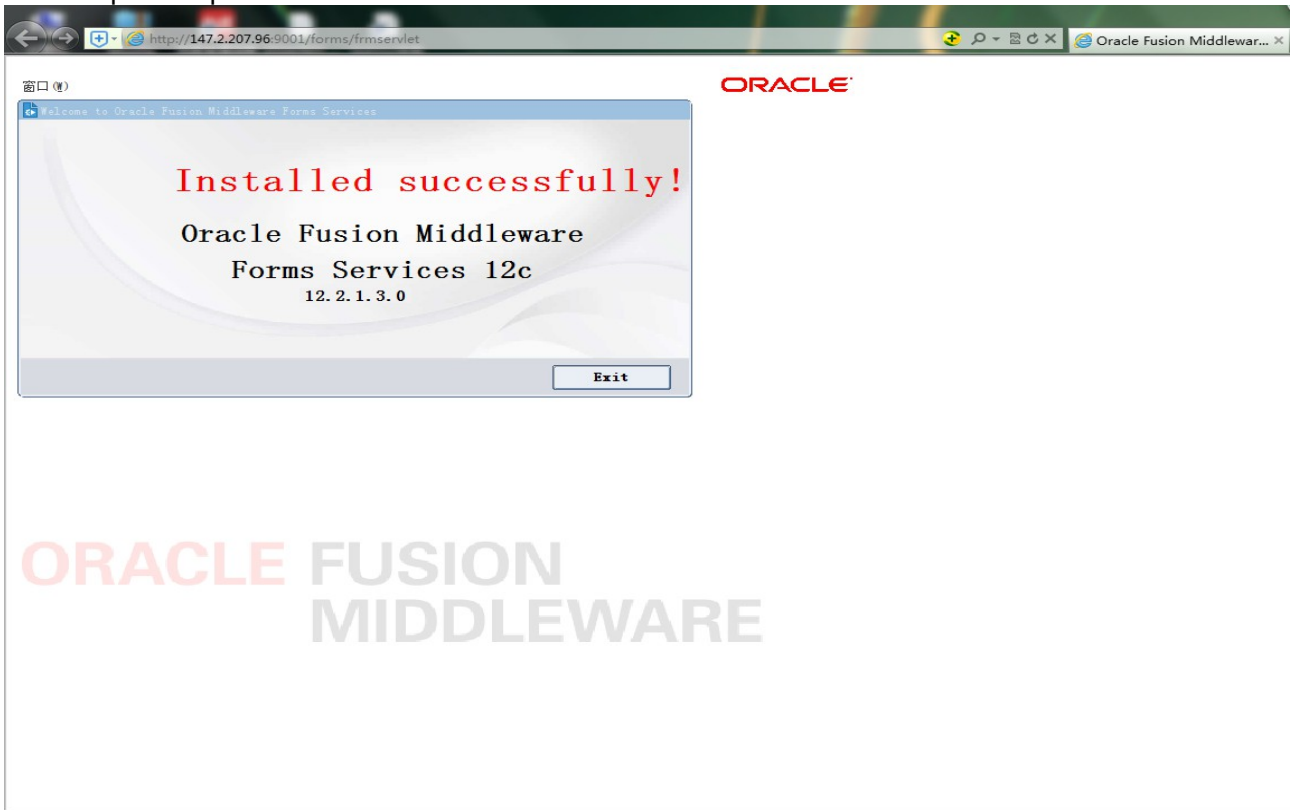
Viewing the summary of servers:

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

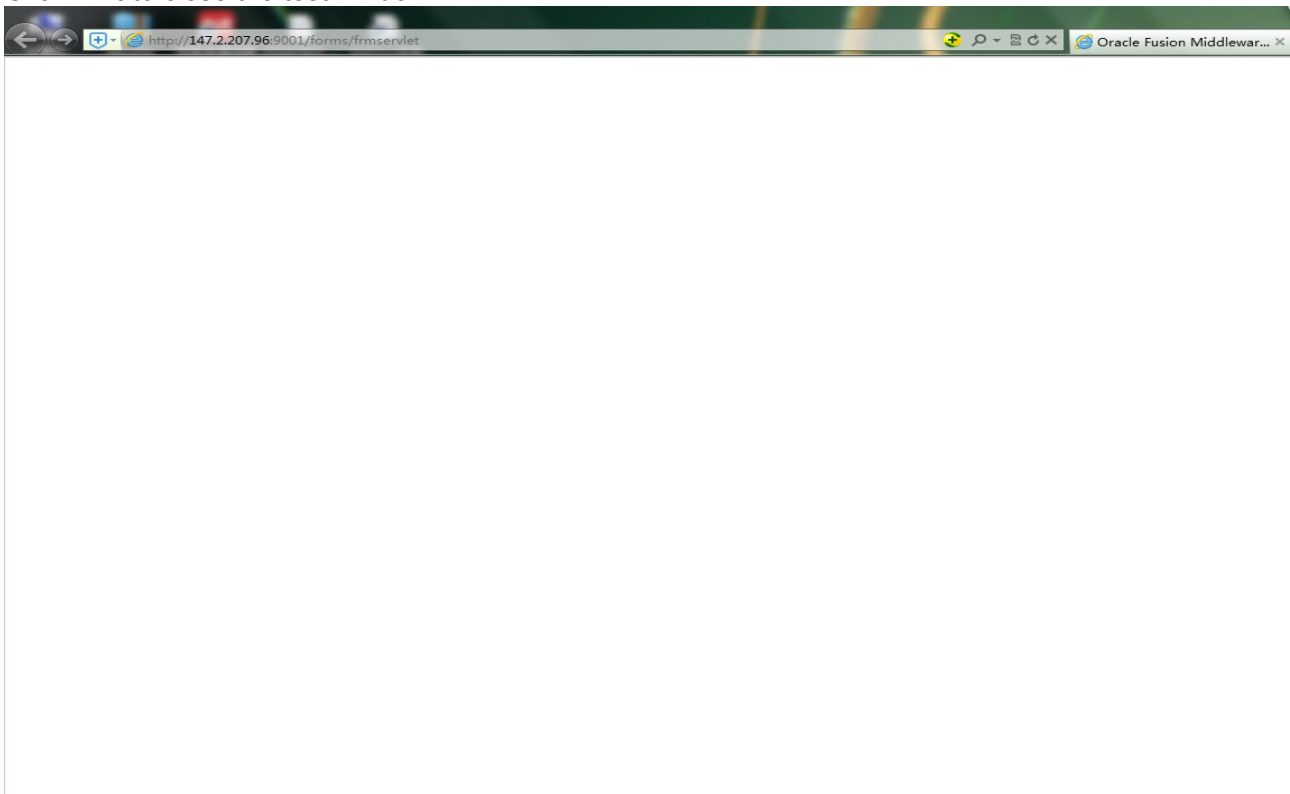


3). Access to Oracle Forms Services.

URL: <http://host:port/forms/frmservlet>



Click **Exit** to close the test window.



## 4). Access to Oracle Reports Services.

URL: <http://host:port/reports/rwservlet>

Oracle Reports Services - Servlet - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Summary of Servers - ba... x Oracle Reports Services ... x +

http://hpgen9-01:9002/reports/rwservlet 90% Search

ORACLE Reports

Oracle Reports Services - Servlet Command Help

URL for invoking rwservlet command request : [http://yourwebserver/yourervletpath/rwservlet/\[command\]?\[args\]](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](#)

**End of Oracle Forms and Reports.**

\*\*\*\*\*  
**Oracle WebTier**  
 \*\*\*\*\*

## 1. Installing Oracle WebTier 12cR2 OHS

### 1-1. Prerequisites:

Installation of Oracle WebTier Http Server requires:

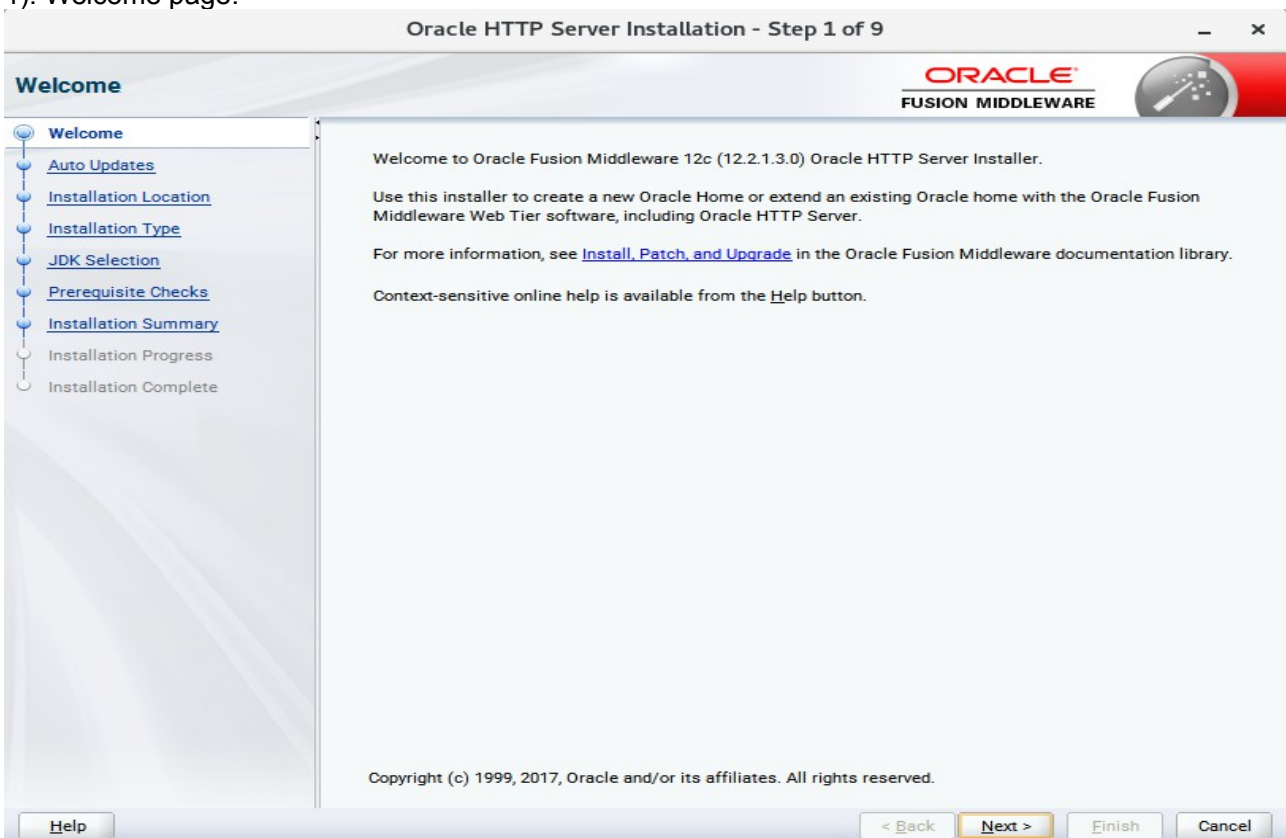
- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0\_131 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.3.0) (Fusion Middleware Infrastructure Installer)

1-2. Log in to the target system (SLES 15 64-bit OS) as a non-admin user. Download the Oracle WebTier 12cR2 OHS (12.2.1.3.0) 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 this .zip (fmw\_12.2.1.3.0\_ohs\_linux64\_Disk1\_1of1.zip) file and launch the installation program by running 'fmw\_12.2.1.3.0\_ohs\_linux64.bin'

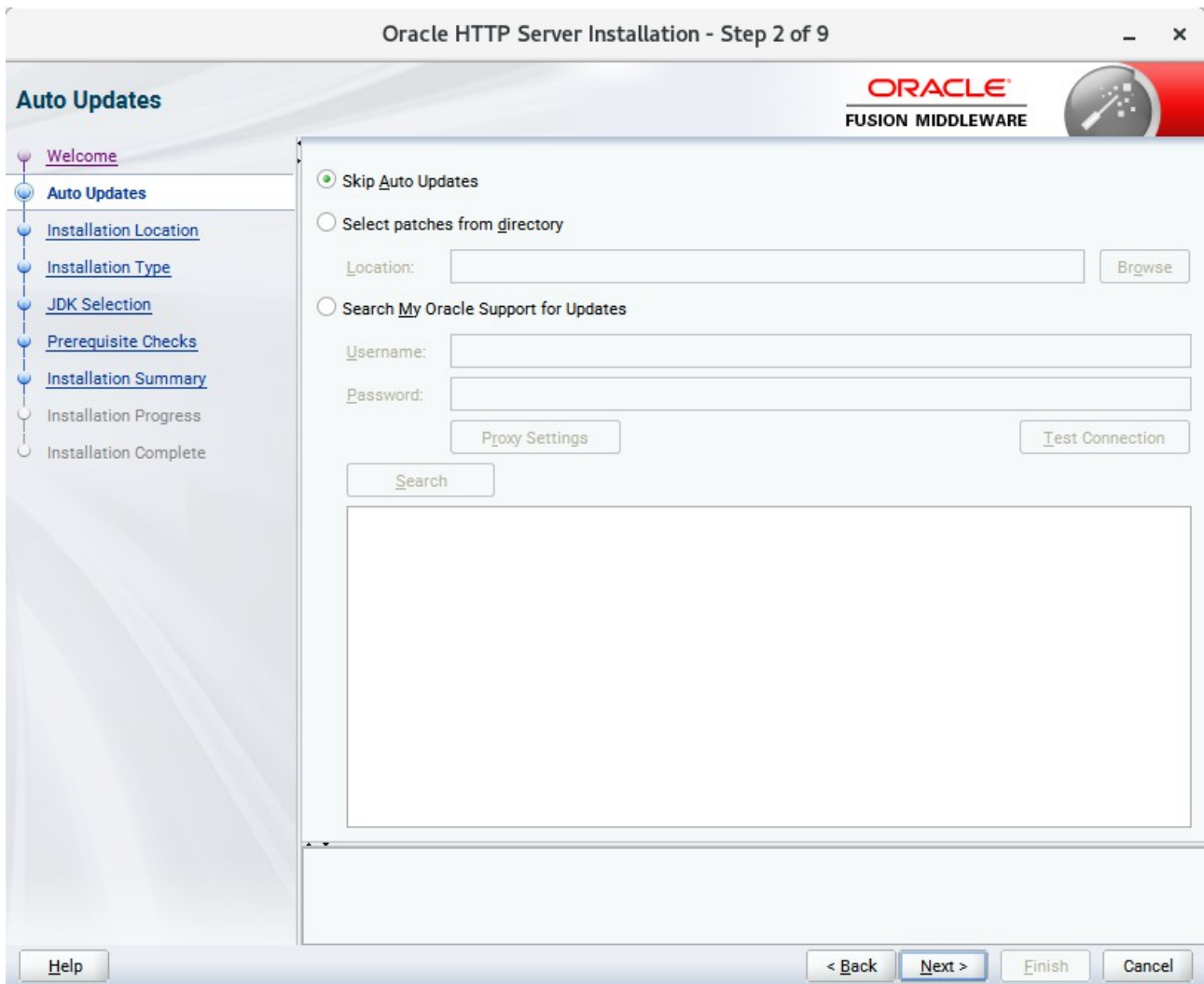
**For the actual installation, follow the steps below:**

### 1). Welcome page.



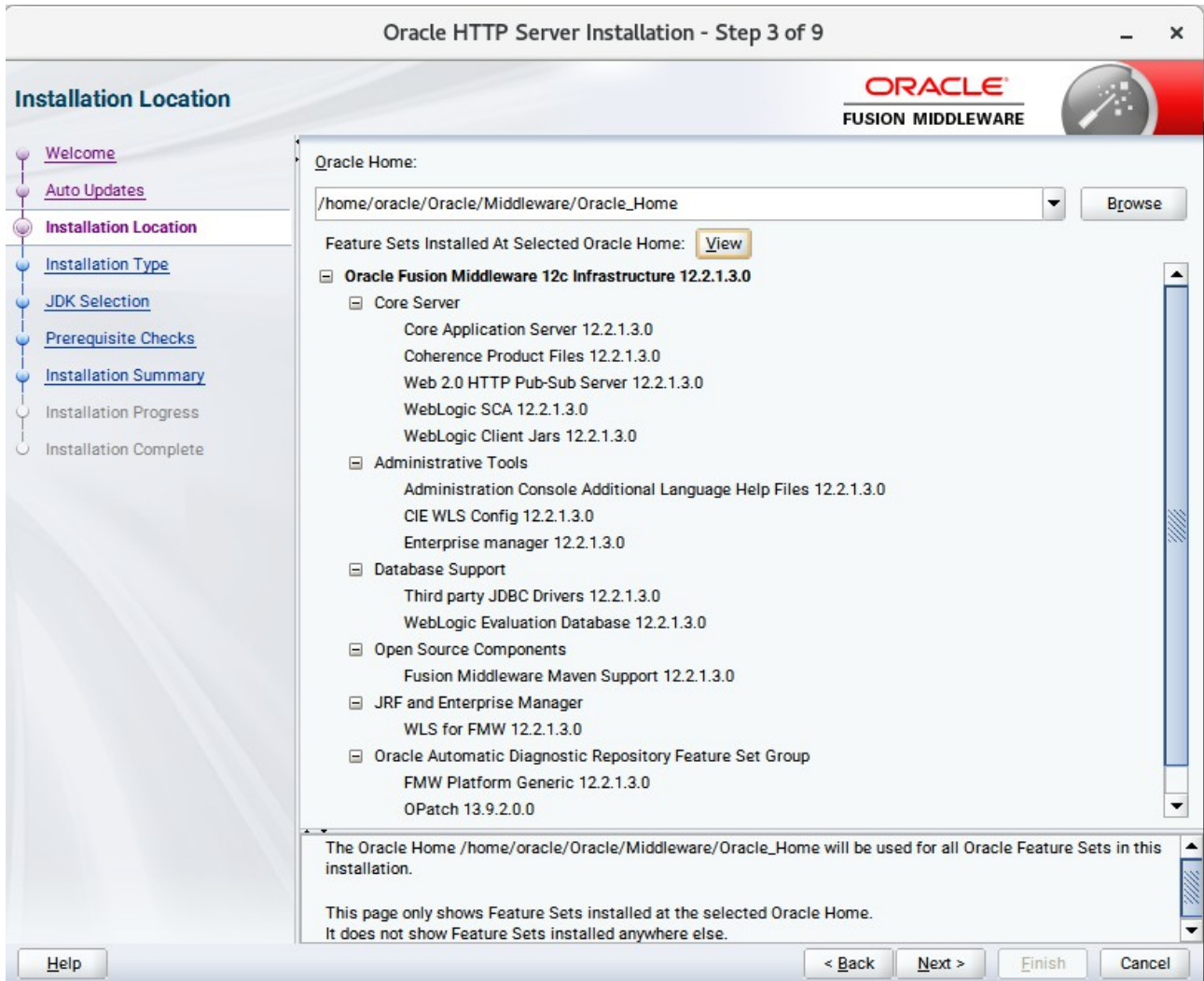
This page welcomes you to the installation. Click **Next** to continue.

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



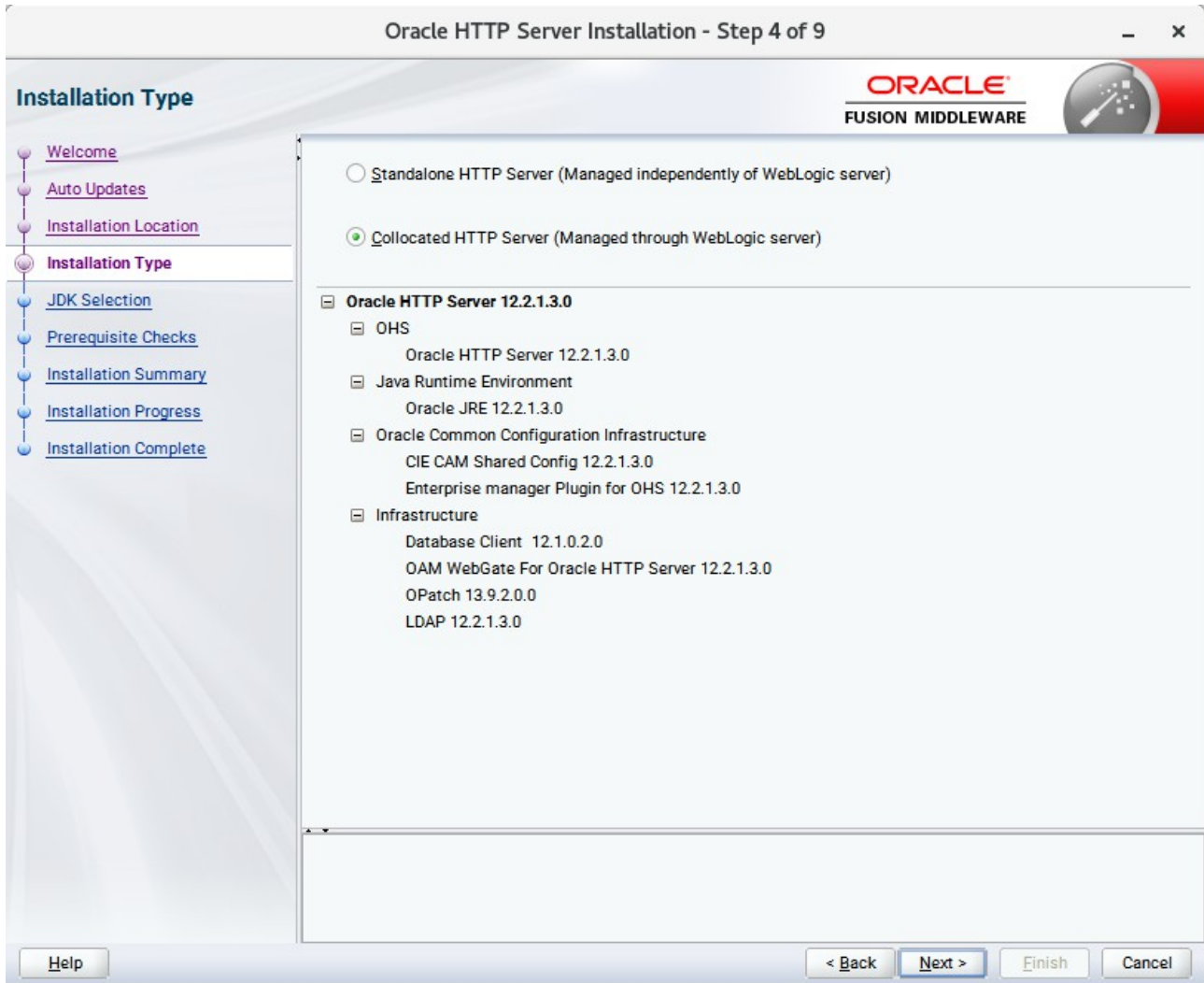
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



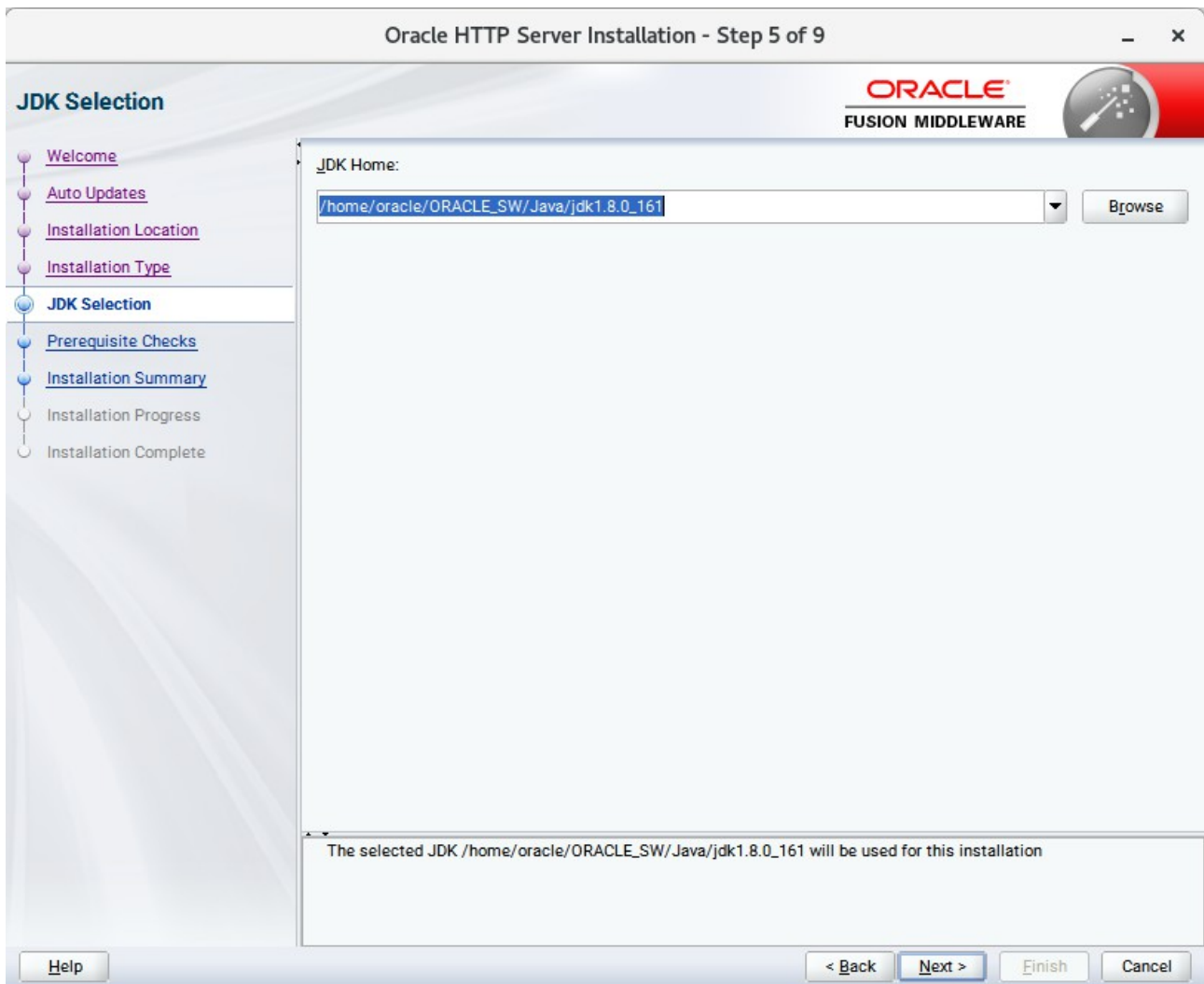
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



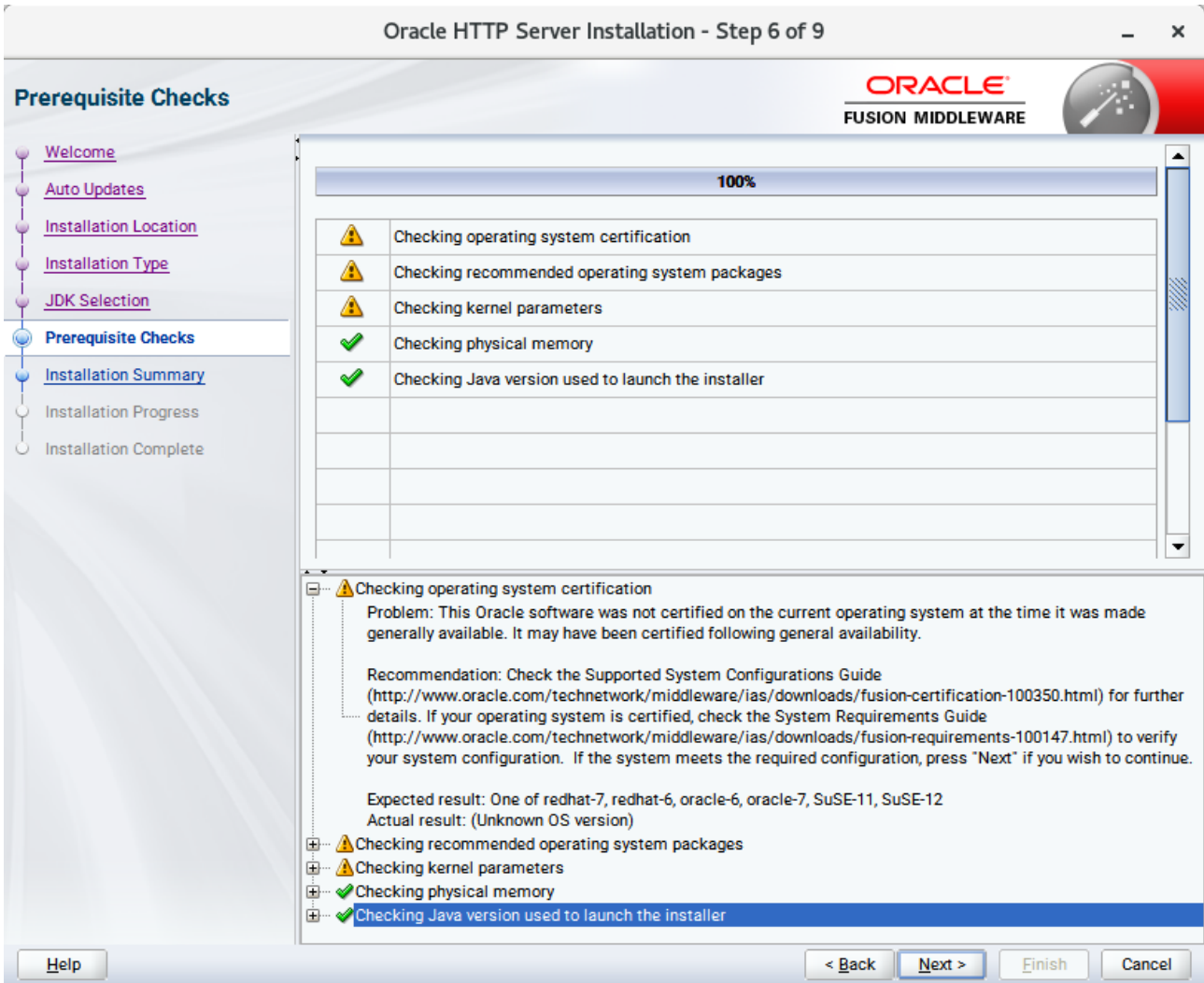
Selected **Collocated HTTP Server (Managed through WebLogic server)** to configure Oracle HTTP Server in a WebLogic Server Domain. (Alternative, select **Standalone HTTP Server (Managed independently of WebLogic server)** in the Installation Type screen to configure Oracle HTTP Server in a Standalone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

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



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

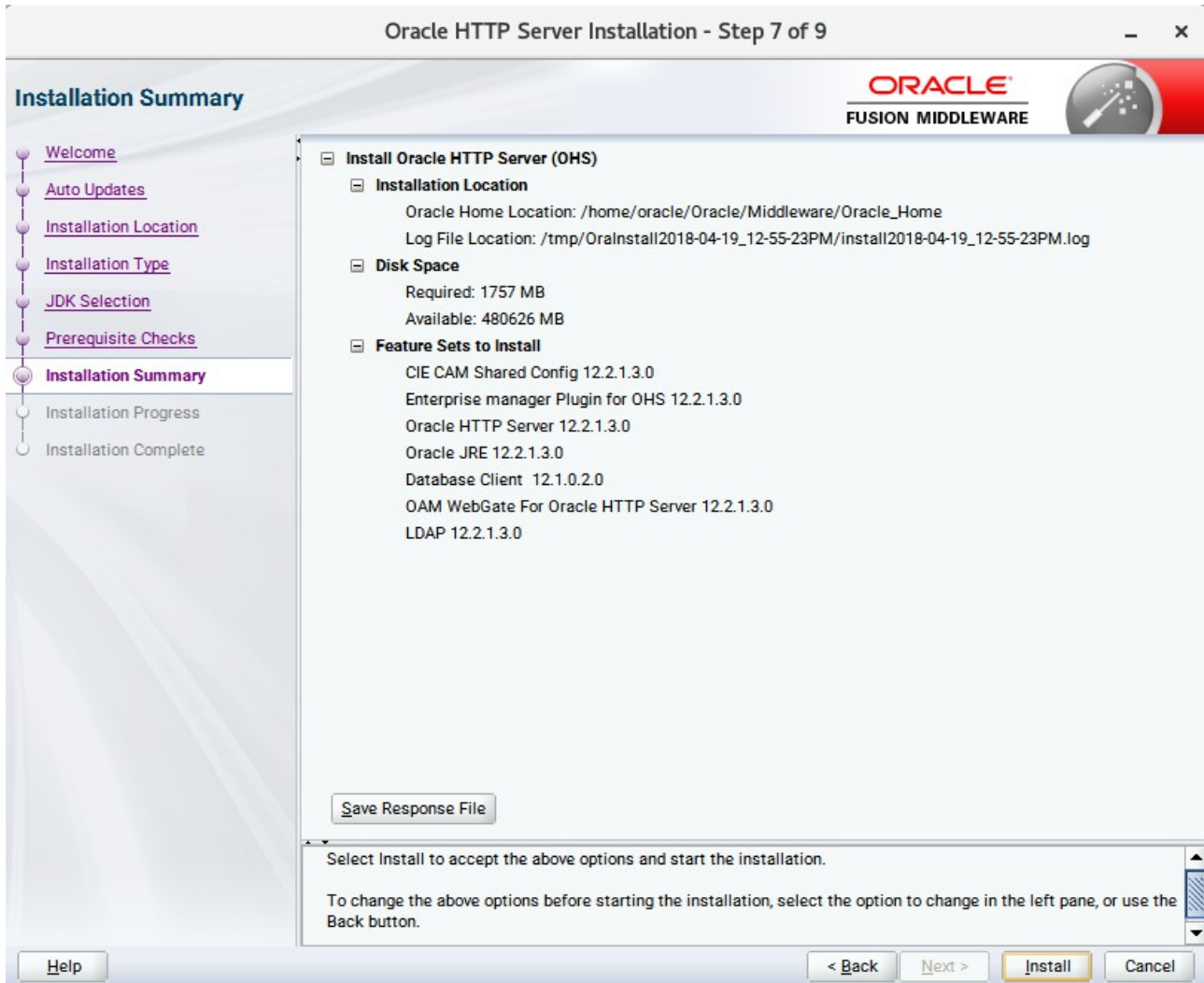
6). The **Prerequisites Checks** page appears.



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.

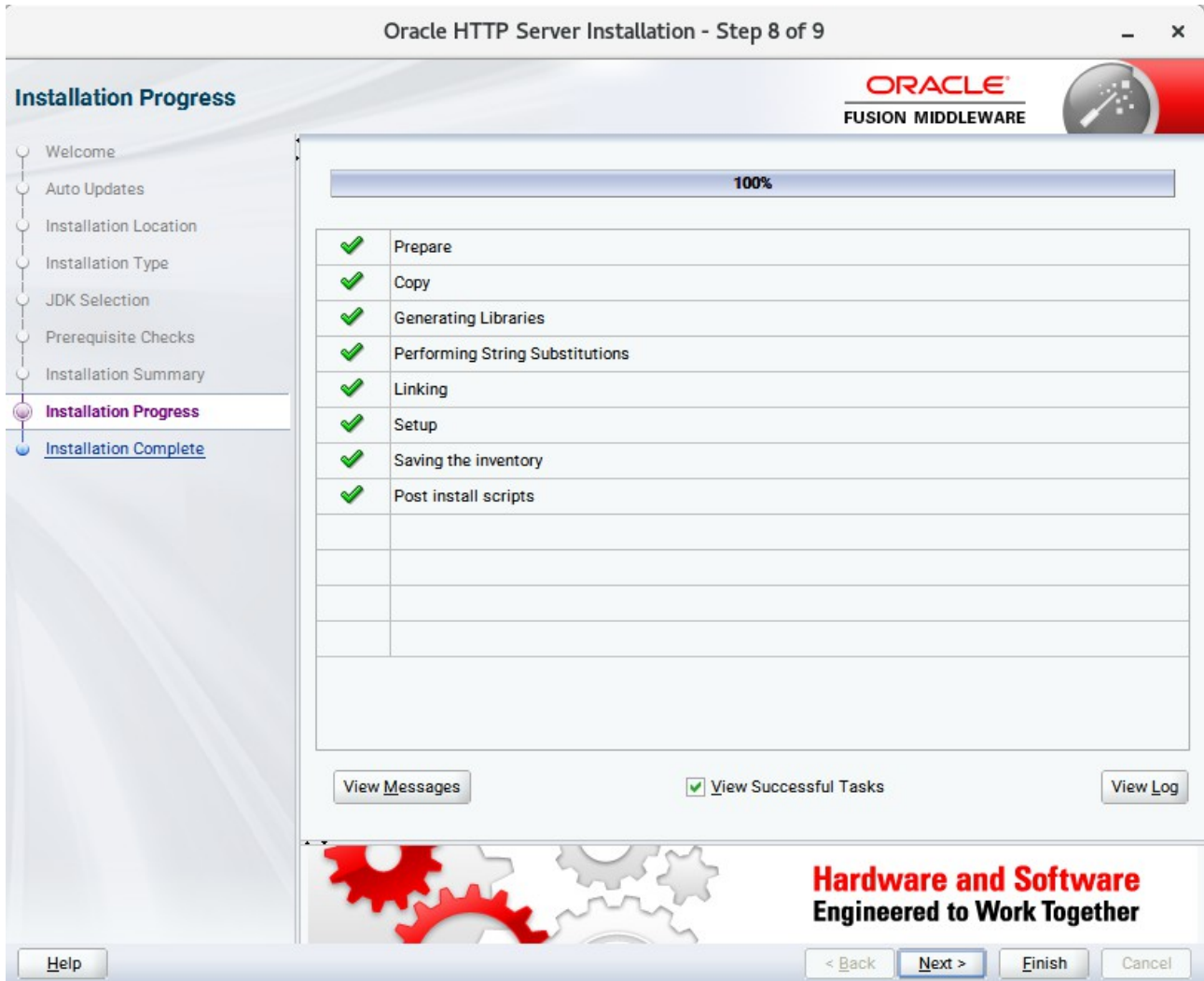


7). The **Installation Summary** page appears.



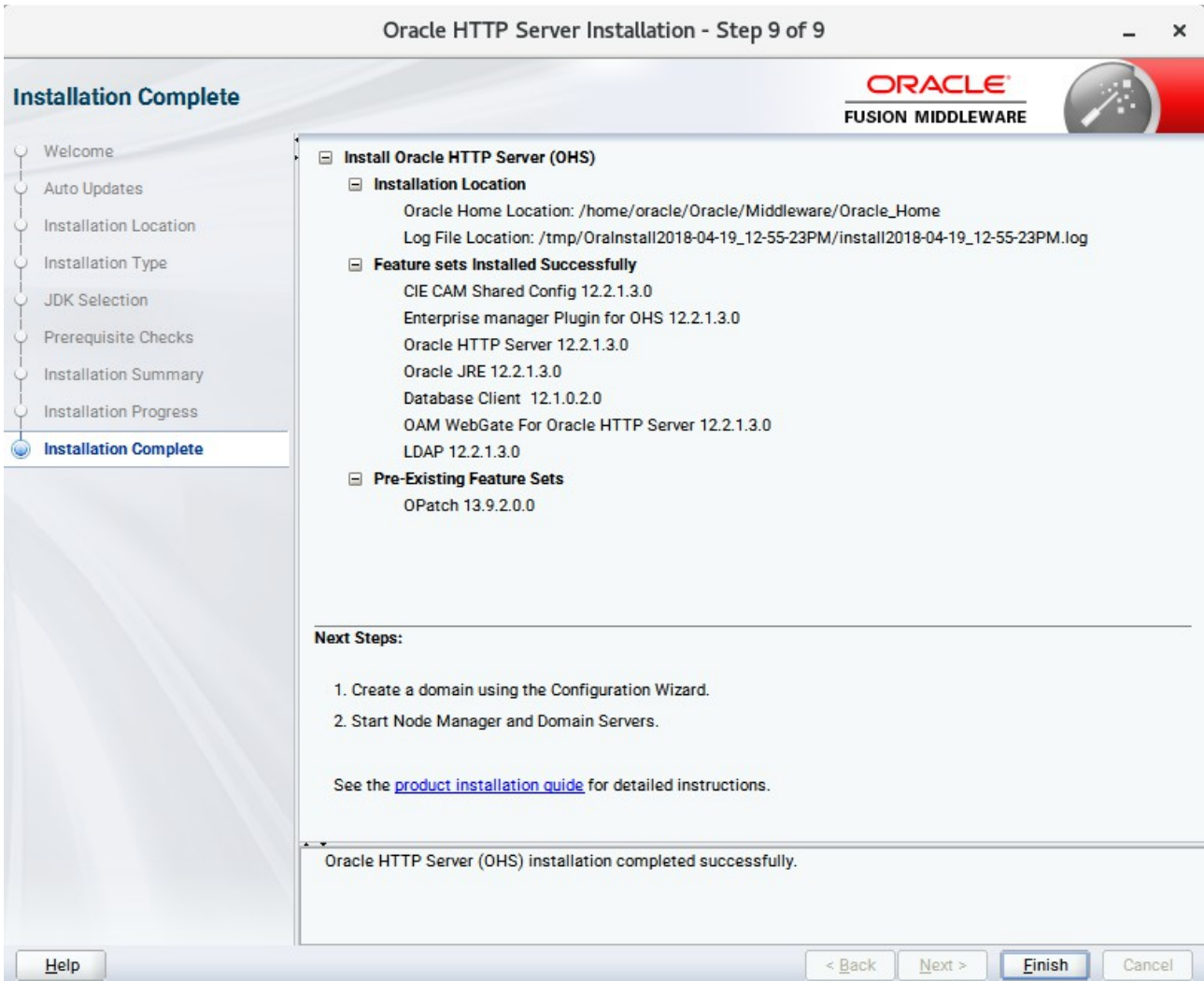
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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 WebTier Http Server.

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

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

Select existing prefix:

Create new prefix:

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

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

\* Mandatory component. Mandatory components cannot be deselected.

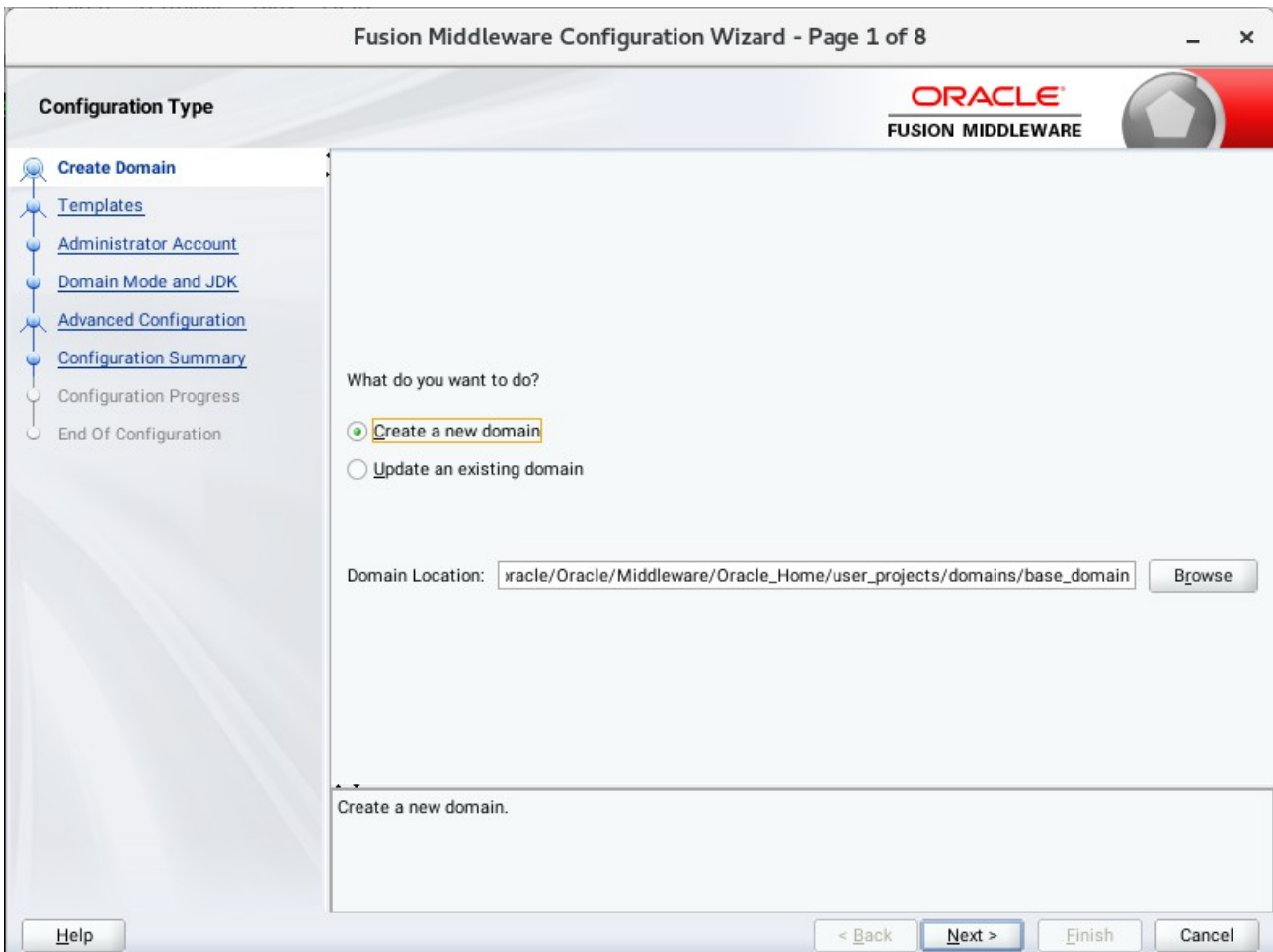
Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above, and ensure the schema creation is successful.

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

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

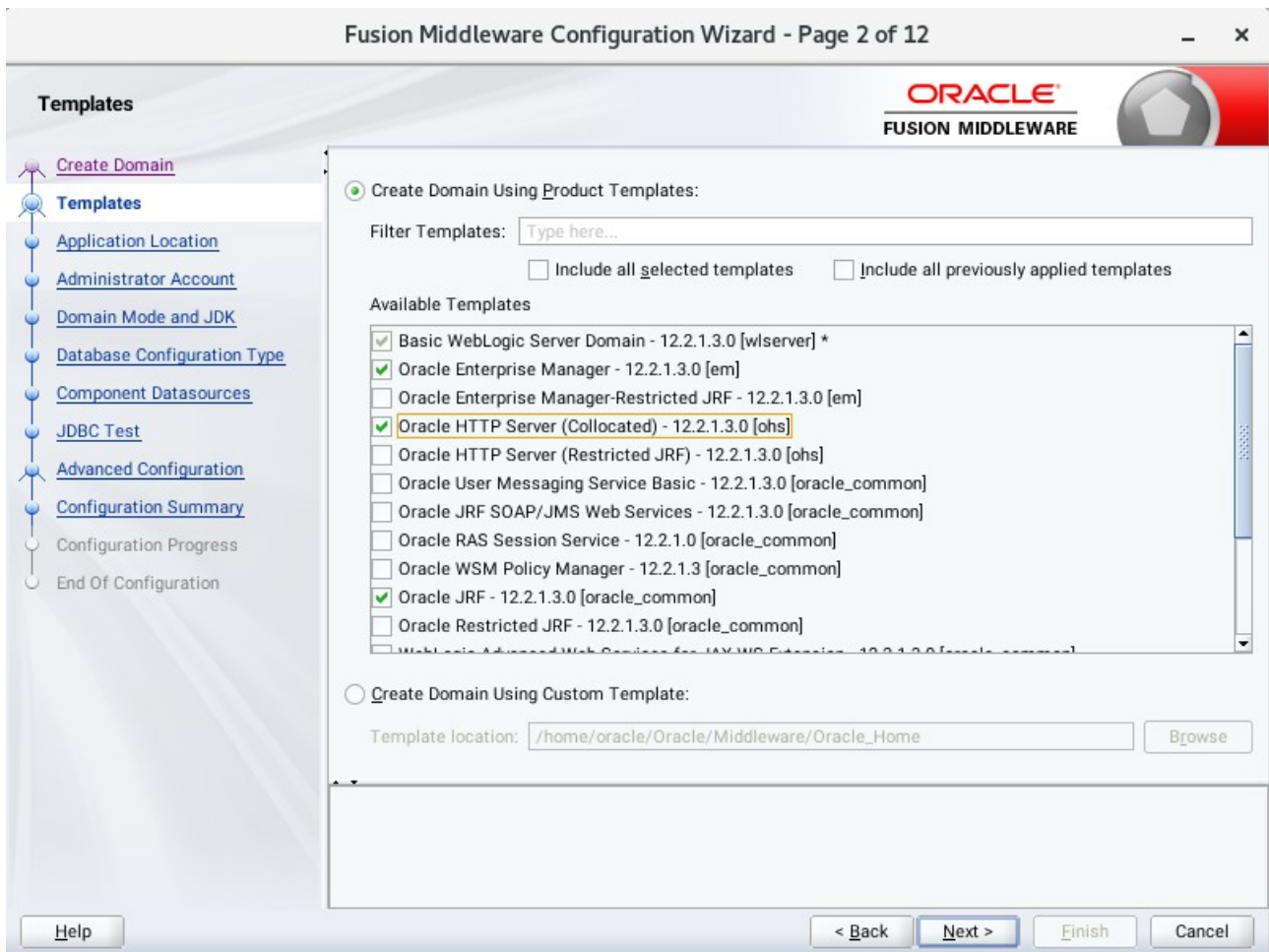
**Follow these steps:**

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



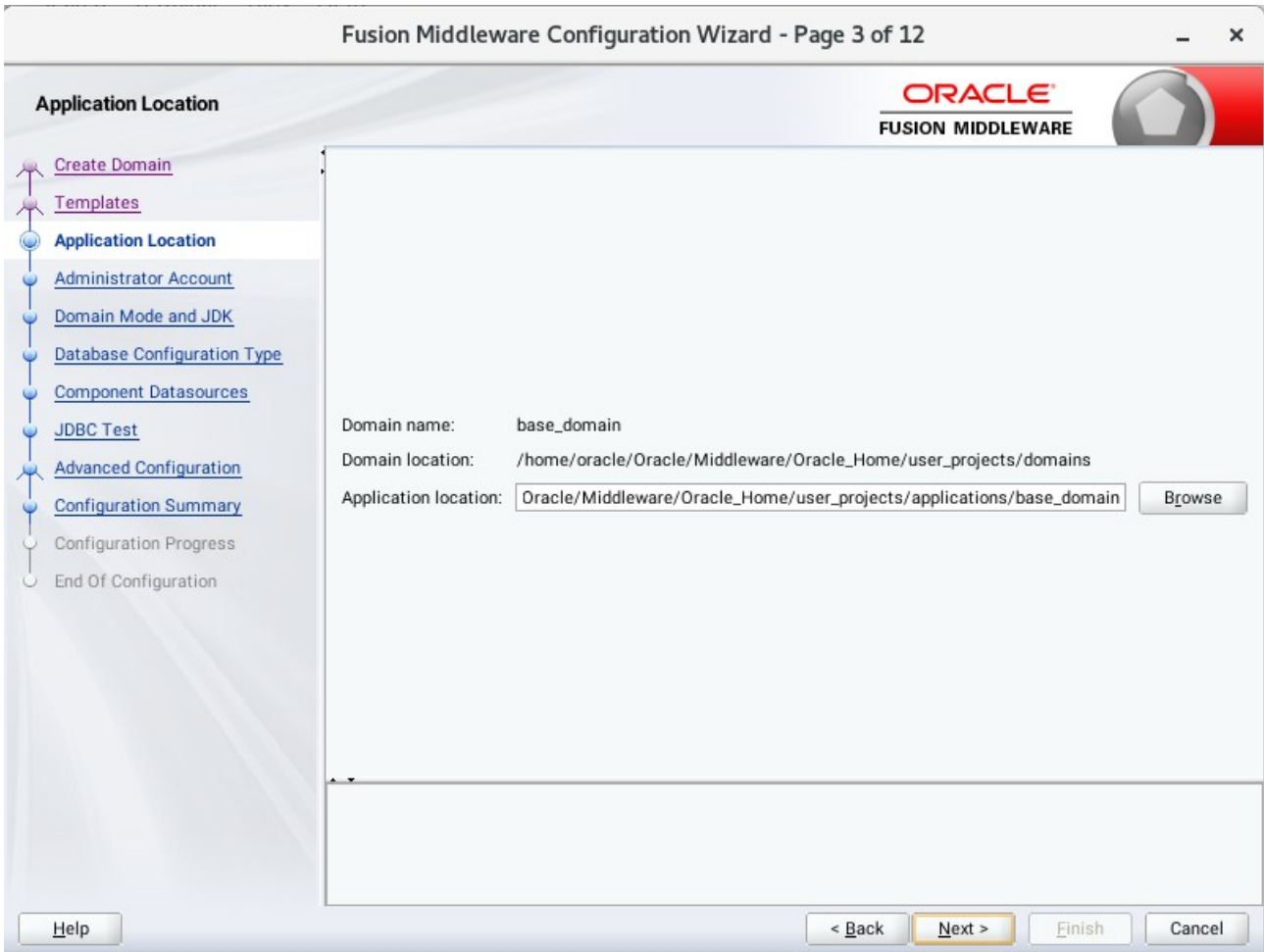
Click **Next** to continue.

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



Keep the default selection (**Create Domain using Product Templates**), and select **Oracle HTTP Server (Collocated) – 12.2.1.3.0 [ohs]** component. This automatically selects **Oracle Enterprise Manager – 12.2.1.3.0 [em]** and so on. Click **Next** to continue.

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



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

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

The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 4 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists the following steps: 'Create Domain', 'Templates', 'Application Location', 'Administrator Account' (highlighted), 'Domain Mode and JDK', 'Database Configuration Type', 'Component Datasources', 'JDBC Test', 'Advanced Configuration', 'Configuration Summary', 'Configuration Progress', and 'End Of Configuration'. The main content area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters '.....', and 'Confirm Password' with masked characters '.....'. Below these fields is a validation message: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom, there are four buttons: 'Help', '< Back', 'Next >', '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 screenshot shows the 'Fusion Middleware Configuration Wizard - Page 5 of 12' window. The title bar includes the Oracle logo and 'FUSION MIDDLEWARE'. The main content area is titled 'Domain Mode and JDK'. On the left, a navigation pane lists the following steps: 'Create Domain', 'Templates', 'Application Location', 'Administrator Account', 'Domain Mode and JDK' (highlighted), 'Database Configuration Type', 'Component Datasources', 'JDBC Test', 'Advanced Configuration', 'Configuration Summary', 'Configuration Progress', and 'End Of Configuration'. The main area contains two sections: 'Domain Mode' and 'JDK'. Under 'Domain Mode', there are two radio buttons: 'Development' (unselected) and 'Production' (selected). Below 'Production' is a text description: 'Require the entry of a username and password, and do not poll for applications to deploy.' Under 'JDK', there are two radio buttons: 'Oracle HotSpot 1.8.0\_161 /home/oracle/ORACLE\_SW/Java/jdk1.8.0\_161' (selected) and 'Other JDK Location: [text input field] [Browse button]'. At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

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:** Your 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

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

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: .....

Get RCU Configuration    Cancel

Connection Result Log

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

Successfully Done.

Click "Next" button to continue.

Help    < Back    Next >    Finish    Cancel

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

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

**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

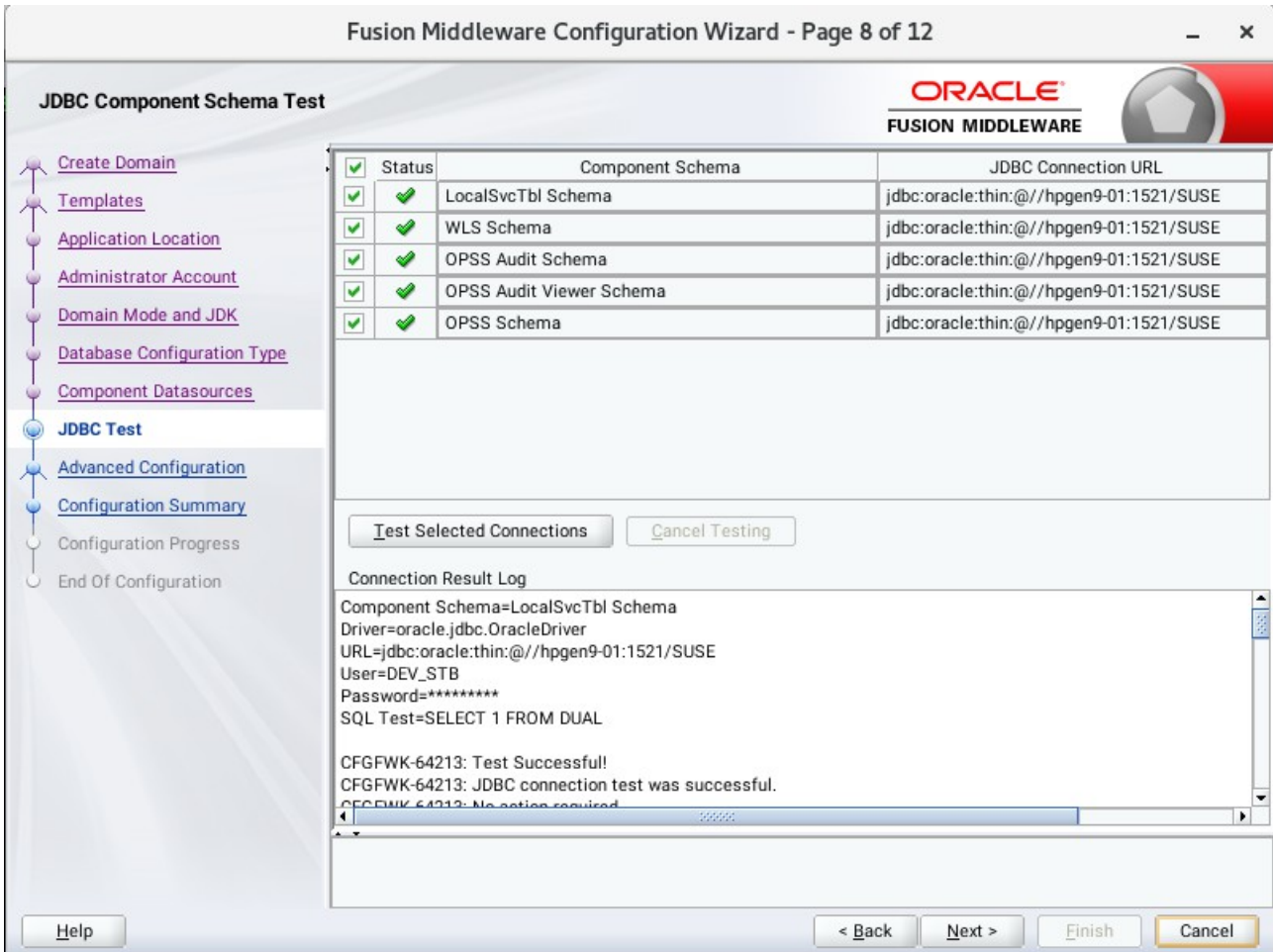
Edits to the data above will affect all checked rows in the table below.

<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_RUNTIM	.....
<input type="checkbox"/>	OPSS Audit Schema	SUSE	hpgen9-01	1521	DEV_IAU_APPEND	.....
<input type="checkbox"/>	OPSS Audit Viewer Schema	SUSE	hpgen9-01	1521	DEV_IAU_VIEWER	.....
<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.



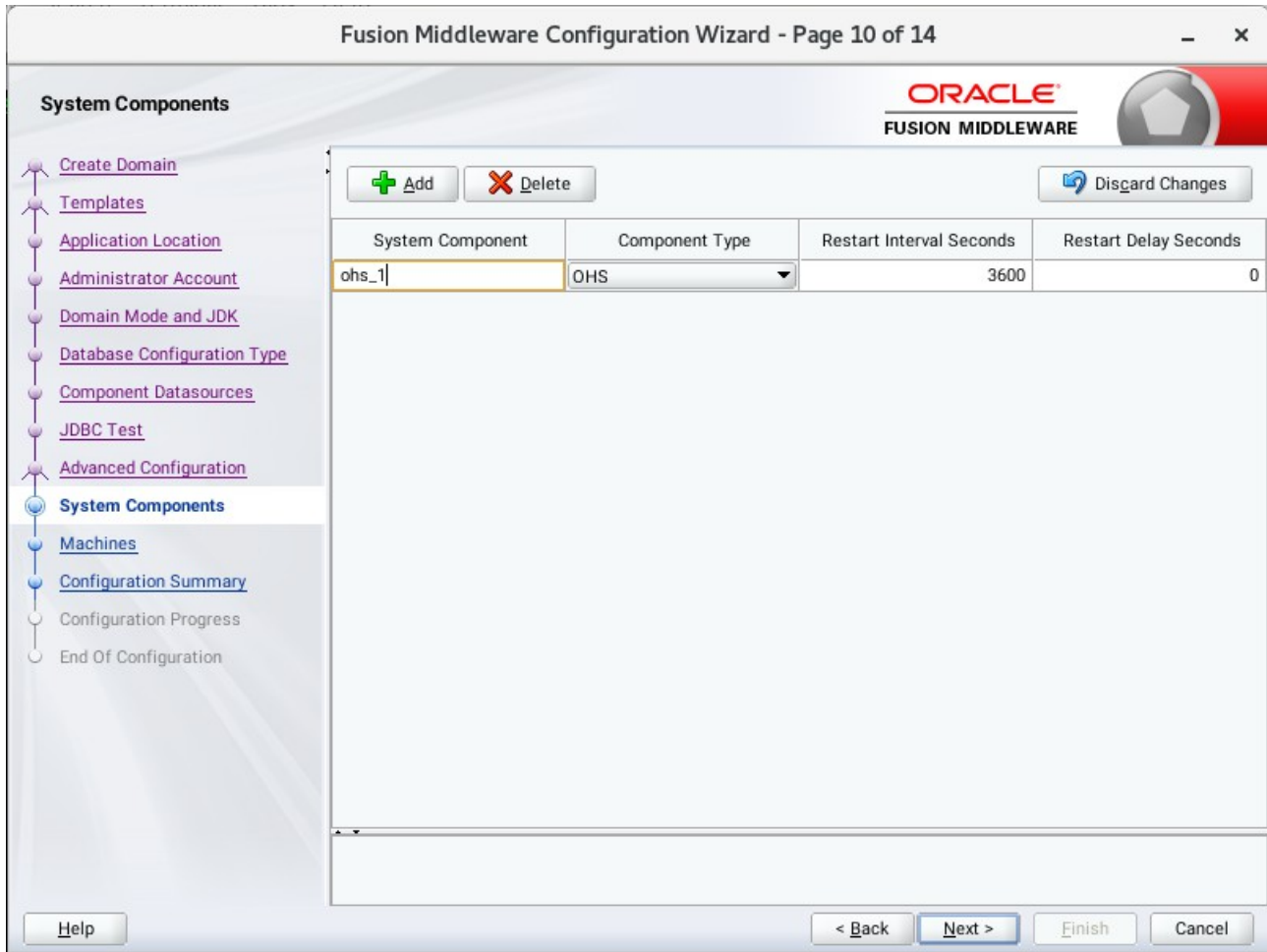
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



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

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



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 Oracle Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 11 of 15'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists 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, **OHS Server** (highlighted), Machines, Configuration Summary, Configuration Progress, and End Of Configuration. The main configuration area contains the following fields:

System Component	ohs_1
Admin Host	127.0.0.1
Admin Port	7779
Listen Address	hpgen9-01
Listen Port	7777
SSL Listen Port	4443
Server Name	http://hpgen9-01:7777

At the bottom of the screen, there are four buttons: 'Help', '< Back', 'Next >' (highlighted), 'Finish', and 'Cancel'.

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

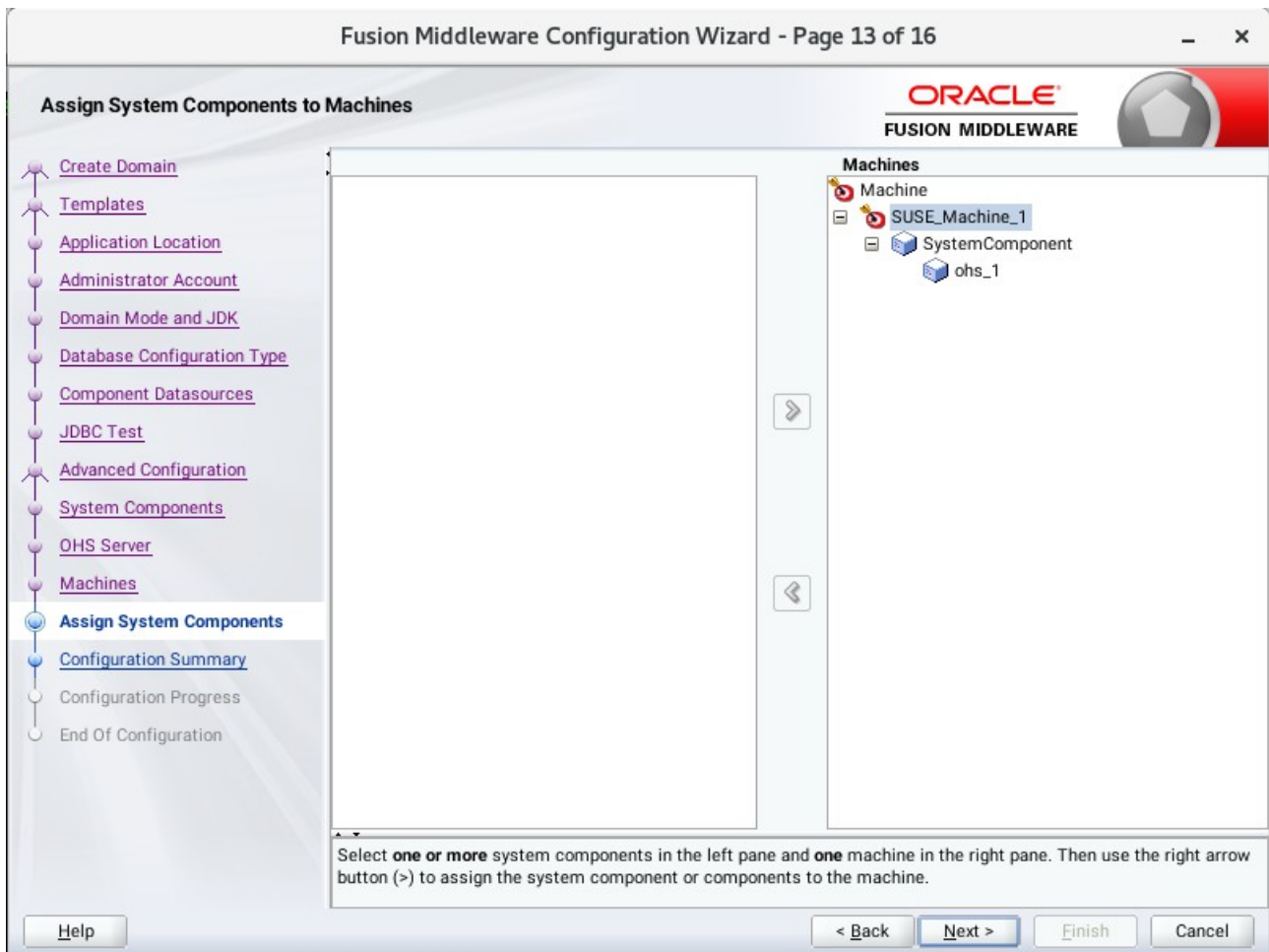
12). The **Machines** screen appears.



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

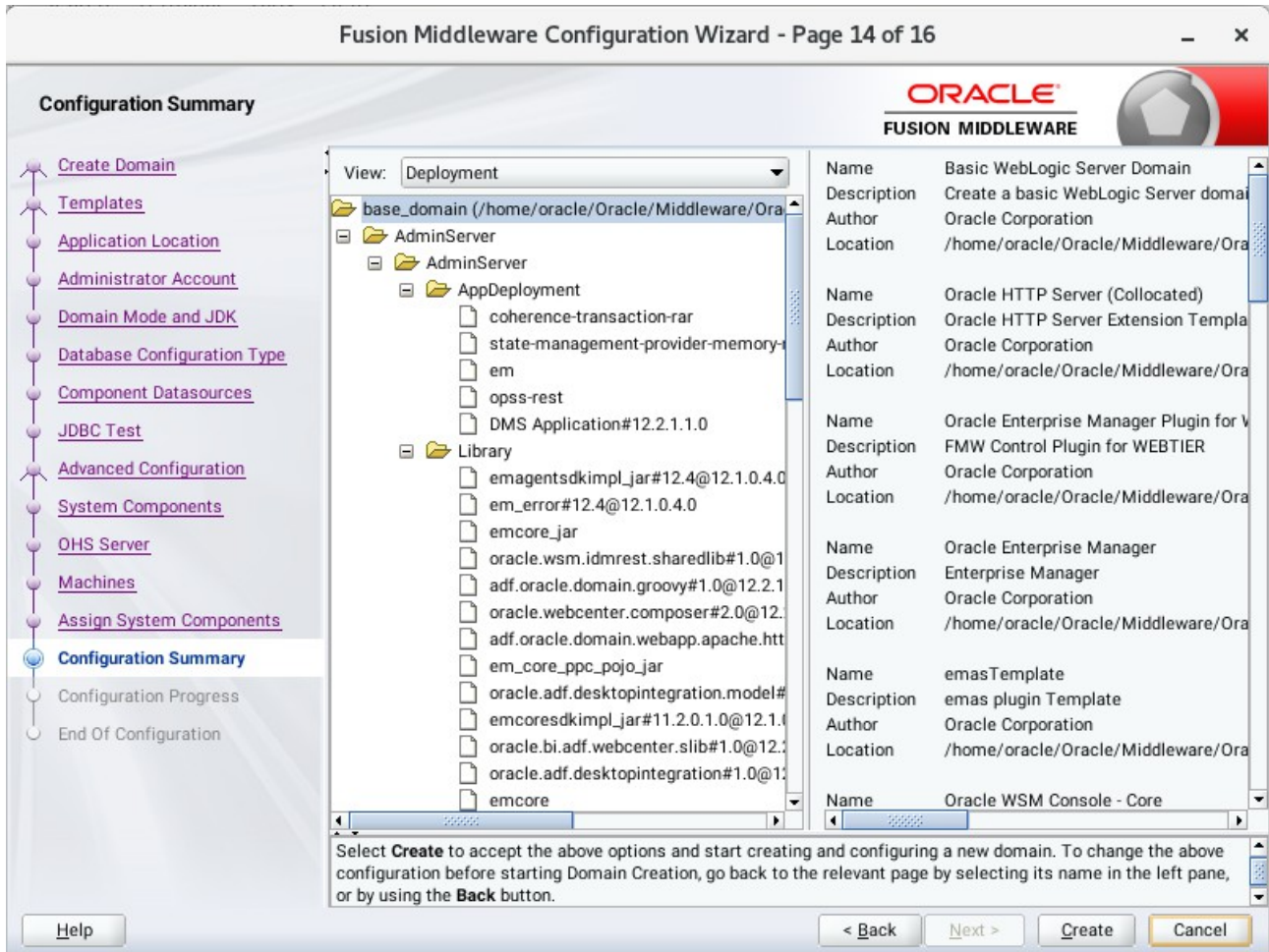


13). The **Assign System Components** screen appears.



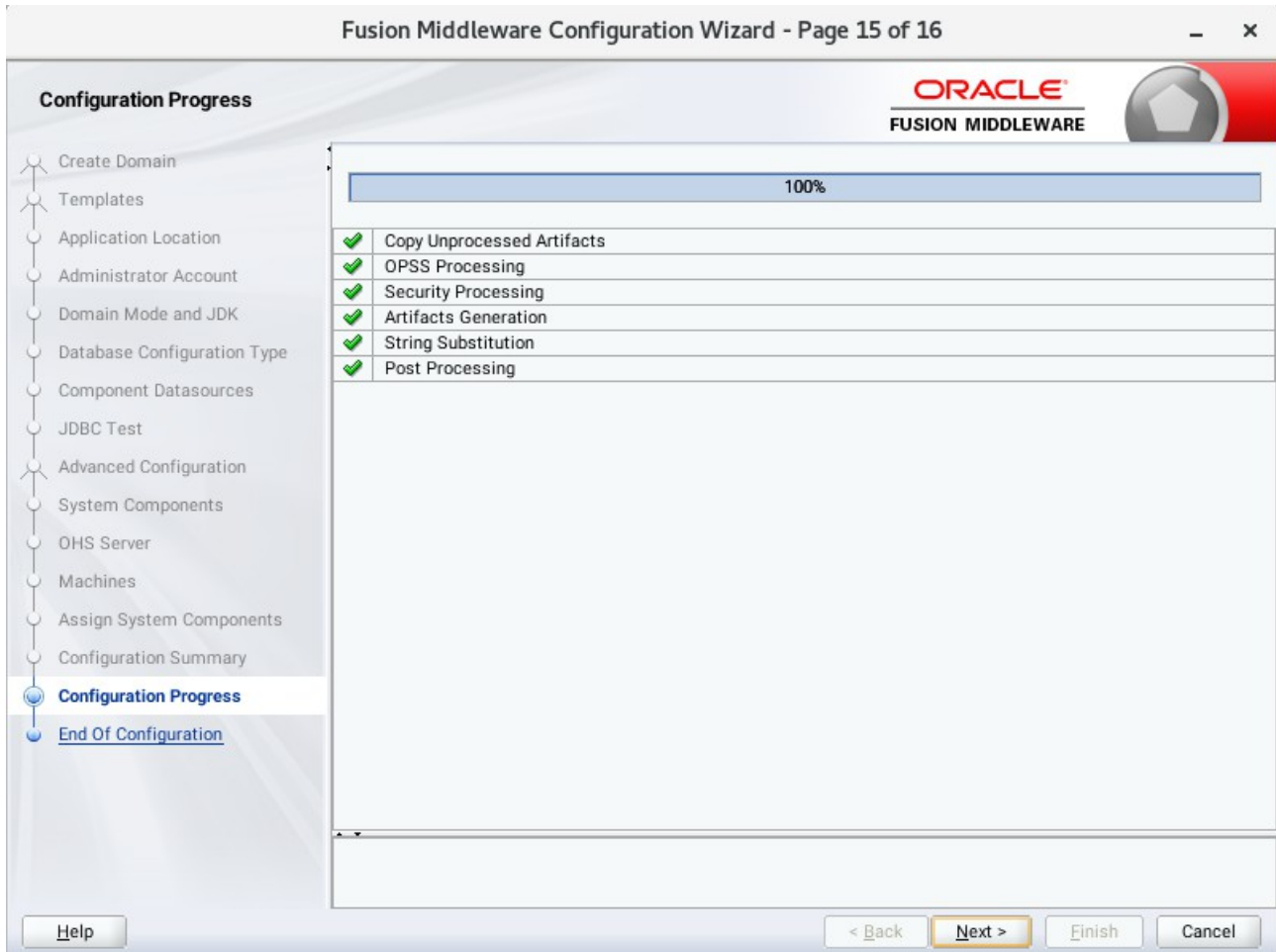
Select the '**ohs\_1**' in the System Component list box and click the right arrow. Click **Next** to continue.

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



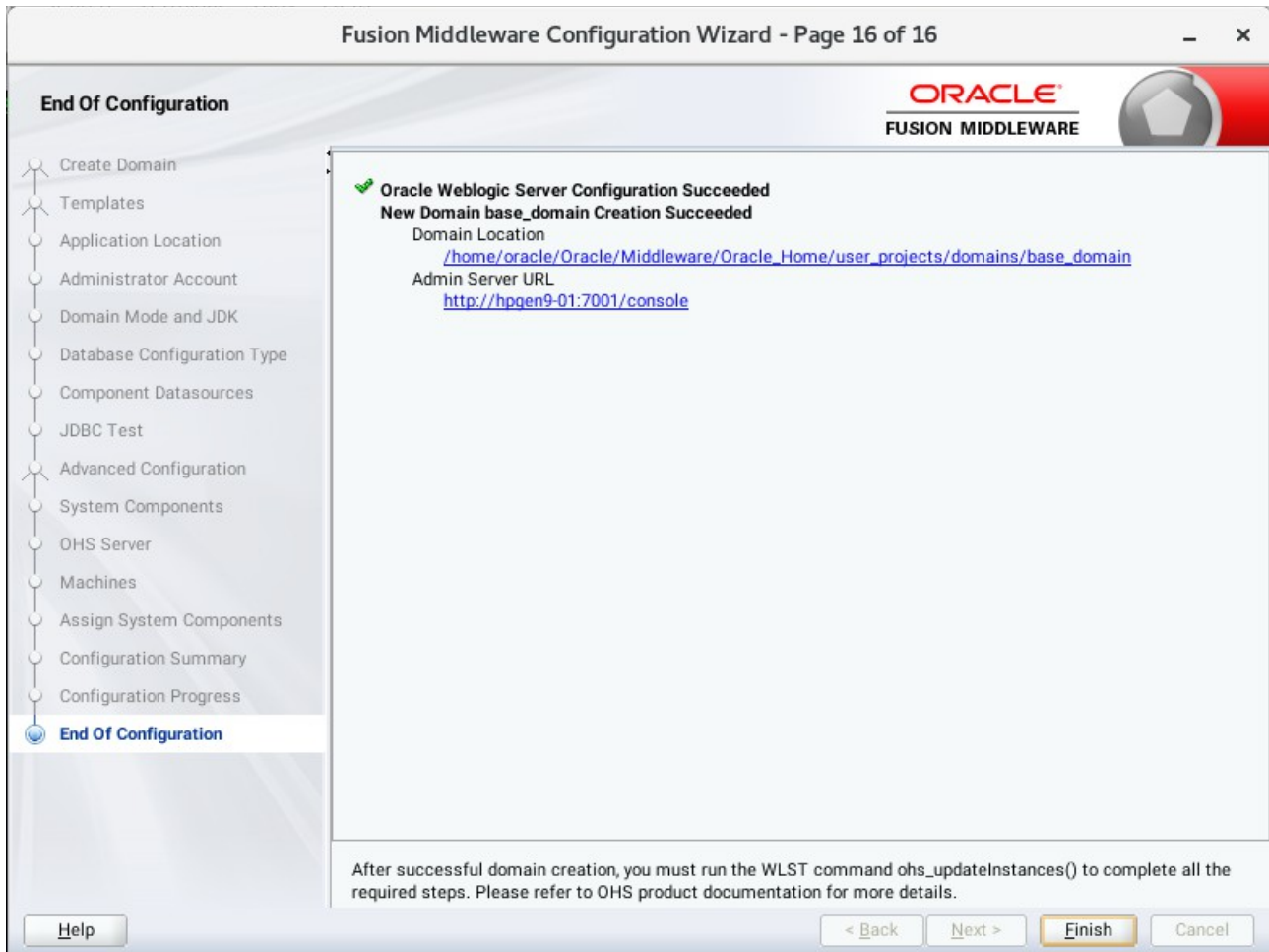
Select **Create** to accept the above options and start creating and configuring a new domain.

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



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

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



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

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

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

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

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

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 5830
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup: ignoring input and redirecting stderr to stdout

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/node
manager
CLASSPATH=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlse
rver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdp
arty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common
n.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_161/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.se
curity.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.vers
ion=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_doma
in -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/ora
cle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/orac
le/ORACLE_SW/Java/jdk1.8.0_161 weblogic.NodeManager -v
<Apr 19, 2018 1:33:58 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Apr 19, 2018 1:33:59 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.3.0>
<Apr 19, 2018 1:33:59 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Ora
cle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Apr 19, 2018 1:33:59 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Apr 19, 2018 1:33:59 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type
=kss, PassPhraseUsed=true>
Apr 19, 2018 1:34:00 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext

```

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

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-0... x oracle@hpgen9-0... x
es/.*, /em/install/getAgentImage, /em/helppages/help.*, /em/jsLibs/.*, /em/jsLibs0bf/.*, /em/login.jsp, /em/mapp
roxy.*, /em/mobile/core/uifwk/skins/.*, /em/ocamm/lib.*, /em/onetime.*, /em/ovs/discovertargets, /em/public/.*,
/em/public_lib_download/.*, /em/redirect.*, /em/relocatetarget.*, /em/sdkImpl/core/uifwkmobile/skins/.*, /em/serv
let/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs.*, /em/jobrecv
.*]
<Apr 19, 2018 1:37:25,643 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully esta
blished a connection with the Domain level Diagnostic Service.>
<Apr 19, 2018 1:37:26,301 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Apr 19, 2018 1:37:26,378 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Apr 19, 2018 1:37:26,379 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Apr 19, 2018 1:37:26,483 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multi
ple IP addresses: 127.0.0.1, 0:0:0:0:0:0:0:1.>
<Apr 19, 2018 1:37:26,486 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Admi
nistration Server "AdminServer" for domain "base domain" running in production mode.>
<Apr 19, 2018 1:37:26,486 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.>
<Apr 19, 2018 1:37:26,486 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on
0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Apr 19, 2018 1:37:26,486 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 14
7.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Apr 19, 2018 1:37:26,487 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.>
<Apr 19, 2018 1:37:26,487 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on
0:0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Apr 19, 2018 1:37:26,487 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 14
7.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Apr 19, 2018 1:37:26,537 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mo
de.>
<Apr 19, 2018 1:37:26,547 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/ohs/common/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/ohs/common/bin> ./wlst.sh
WARNING: This is a deprecated script. Please invoke the wlst.sh script under oracle_common/common/bin.
Initializing WebLogic Scripting Tool (WLST) ...

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

[ERROR] Failed to construct terminal; falling back to unsupported
java.lang.NumberFormatException: For input string: "0x100"
    at java.lang.NumberFormatException.forInputString(NumberFormatException.java:65)
    at java.lang.Integer.parseInt(Integer.java:580)
    at java.lang.Integer.valueOf(Integer.java:766)
    at jline.internal.InfoCmp.parseInfoCmp(InfoCmp.java:59)
    at jline.UnixTerminal.parseInfoCmp(UnixTerminal.java:242)
    at jline.UnixTerminal.<init>(UnixTerminal.java:65)
    at jline.UnixTerminal.<init>(UnixTerminal.java:50)
    at sun.reflect.NativeConstructorAccessorImpl.newInstance0(Native Method)
    at sun.reflect.NativeConstructorAccessorImpl.newInstance(NativeConstructorAccessorImpl.java:62)
    at sun.reflect.DelegatingConstructorAccessorImpl.newInstance(DelegatingConstructorAccessorImpl.java:45)
    at java.lang.reflect.Constructor.newInstance(Constructor.java:423)
    at java.lang.Class.newInstance(Class.java:442)
    at jline.TerminalFactory.getFlavor(TerminalFactory.java:211)
    at jline.TerminalFactory.create(TerminalFactory.java:102)
    at jline.TerminalFactory.get(TerminalFactory.java:186)
    at jline.TerminalFactory.get(TerminalFactory.java:192)
    at jline.console.ConsoleReader.<init>(ConsoleReader.java:243)
    at jline.console.ConsoleReader.<init>(ConsoleReader.java:235)
    at jline.console.ConsoleReader.<init>(ConsoleReader.java:223)
    at sun.reflect.NativeConstructorAccessorImpl.newInstance0(Native Method)
    at sun.reflect.NativeConstructorAccessorImpl.newInstance(NativeConstructorAccessorImpl.java:62)
    at sun.reflect.DelegatingConstructorAccessorImpl.newInstance(DelegatingConstructorAccessorImpl.java:45)
    at java.lang.reflect.Constructor.newInstance(Constructor.java:423)

```

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/ohs/common/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/ohs/common/bin> ./wlst.sh
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

wls:/offline> connect ('weblogic','welcome1','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')

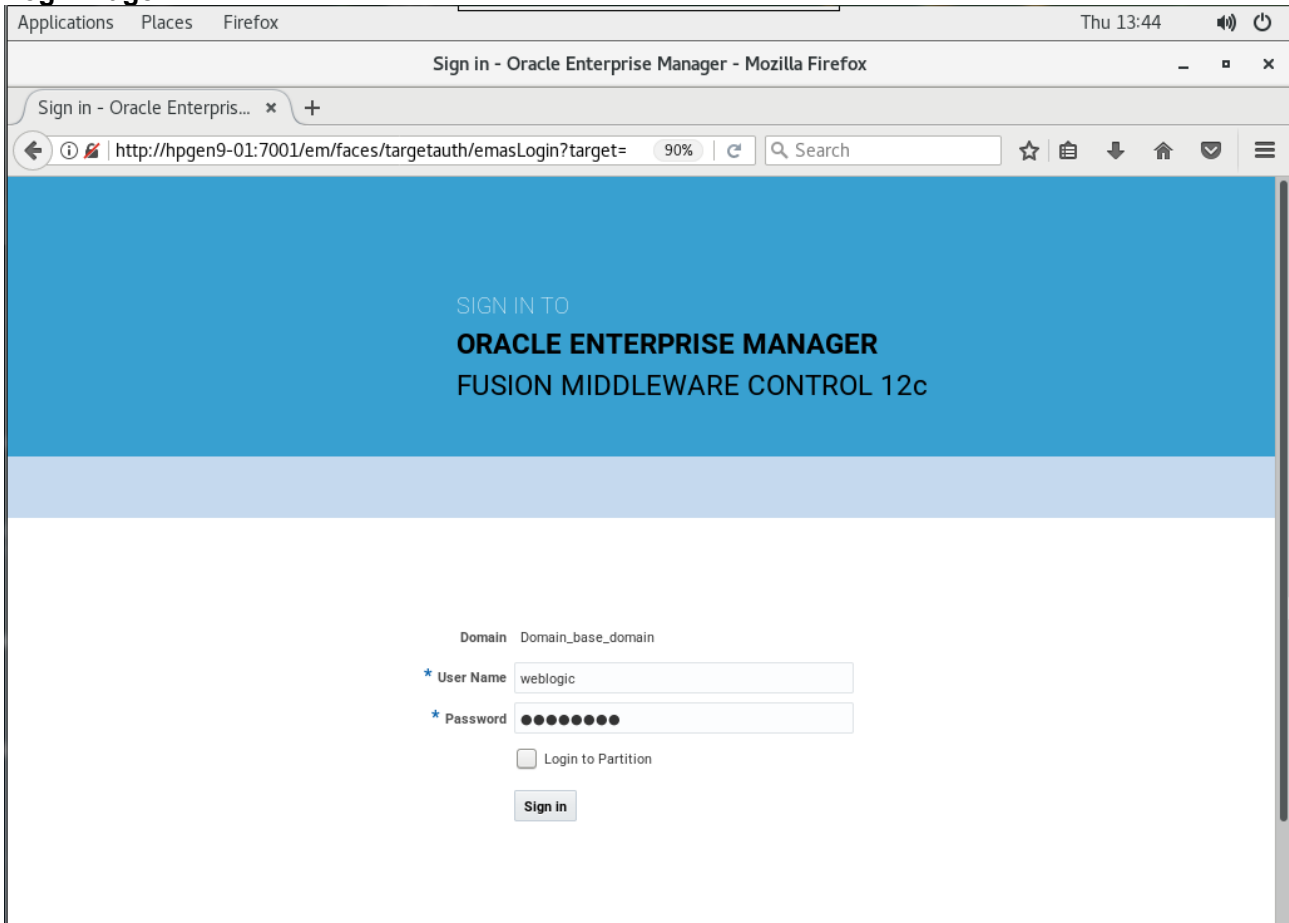
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Saving all your changes ...
Saved all your changes successfully.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the 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:





Home Page:

The screenshot shows the Oracle Enterprise Manager interface for the 'base\_domain (Oracle WebLogic Domain)'. The browser address bar shows the URL: http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomain. The page title is 'base\_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox'. The interface includes a navigation menu on the left with 'Servers', 'Clusters', and 'Deployments'. The main content area shows 'Administration Server' details: Name: AdminServer, Host: hpgen9-01, Listen Port: 7001. Below this is a table of servers:

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

The status bar at the bottom indicates 'Columns Hidden: 34' and 'Servers: 1 of 1'. The page timestamp is 'Apr 19, 2018 1:44:36 PM GMT+08:00'.

Starting Oracle HTTP Server (ohs\_1)

The screenshot shows the Oracle Enterprise Manager interface for the 'ohs\_1 (Oracle HTTP Server)'. The browser address bar shows the URL: http://hpgen9-01:7001/em/faces/as\_ohs\_ohsHome?type=orac. The page title is 'ohs\_1 (Oracle HTTP Server) - Oracle Enterprise Manager - Mozilla Firefox'. The interface includes a navigation menu on the left with 'Monitoring', 'Virtual Hosts', and 'Modules'. The main content area shows 'General' information for the component 'ohs\_1':

- Component Name: ohs\_1
- Version: 12.2.1.3.0
- State: Shutdown
- Host: 147.2.207.96
- Ports: hpgen9-01:7777 hpgen9-01:4443, 127.0.0.1:7779
- Machine Name: SUSE\_Machine\_1
- Auto Restart:
- Oracle Home: /home/oracle/Oracle/Middleware/Oracle\_Home

Below the general information is a 'Key Statistics' section:

- Idle Processes: Unavailable
- Busy Processes: Unavailable
- Error Rate (%): -1.00
- Connection Duration (seconds): Unavailable

There are also two empty charts: 'Response and Load' and 'CPU and Memory Usage'. The page timestamp is 'Apr 19, 2018 1:45:35 PM GMT+08:00'.

ohs\_1 is up.

The screenshot shows the Oracle Enterprise Manager interface for the ohs\_1 component. The top navigation bar includes 'Applications', 'Places', and 'Firefox'. The browser title is 'ohs\_1 (Oracle HTTP Server) - Oracle Enterprise Manager - Mozilla Firefox'. The address bar shows the URL: [http://hpgen9-01:7001/em/faces/as\\_ohs\\_ohsHome?type=or](http://hpgen9-01:7001/em/faces/as_ohs_ohsHome?type=or). The page content includes:

- Monitoring:** CPU Usage (%) is 0.00, Memory Usage (%) is 3.51.
- Virtual Hosts:** 2 Virtual Hosts.
- Modules:** 52 Modules.
- General Information:**
  - Component Name: ohs\_1
  - Version: 12.2.1.3.0
  - State: Running
  - Host: 147.2.207.96
  - Ports: hpgen9-01:7777 hpgen9-01:4443 127.0.0.1:7779
  - Machine Name: SUSE\_Machine\_1
  - 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 Throu... from 01:36 PM to 01:48 PM on April 19, 2018.
- CPU and Memory Usage:** A line graph showing CPU and memory usage from 01:36 PM to 01:48 PM on April 19, 2018.
- Key Statistics:**
  - Idle Processes: 3
  - Busy Processes: 0
  - Error Rate (%): 0.00

OHS Ports Configuration as shown below.

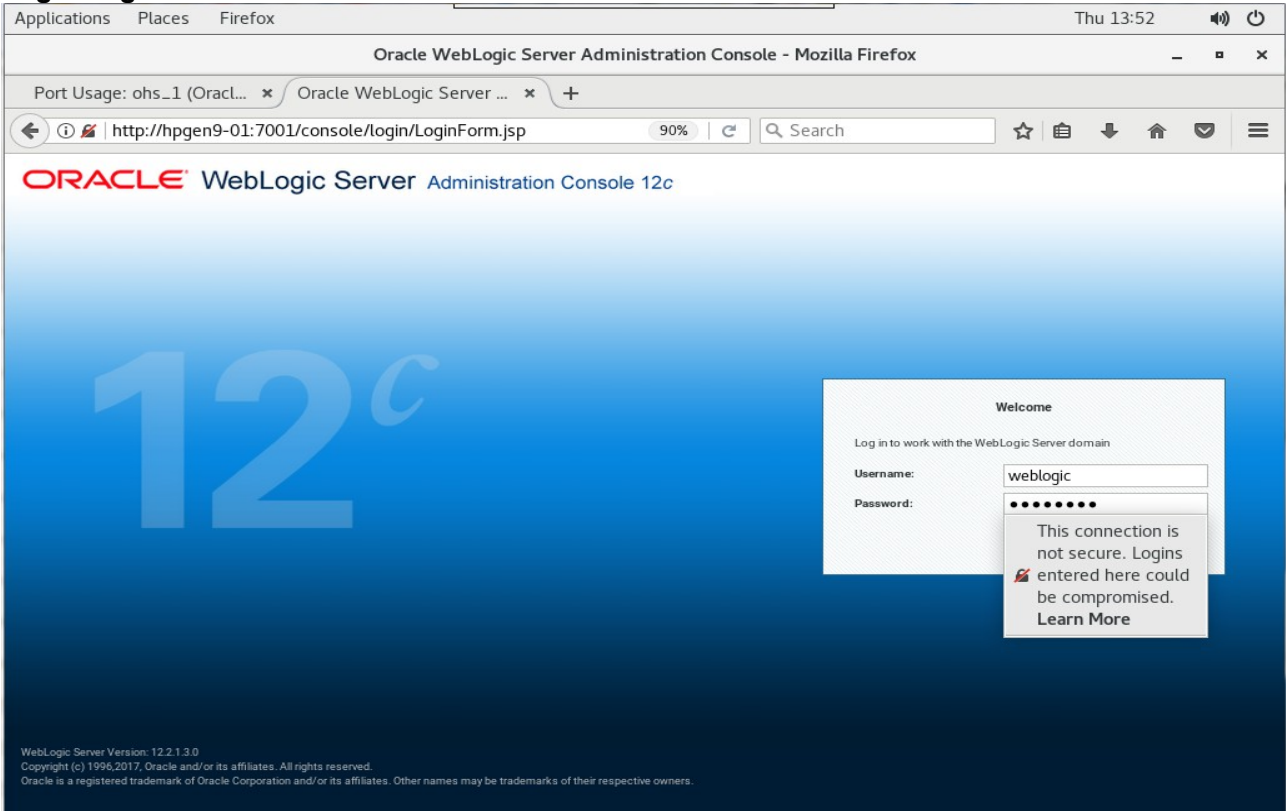
The screenshot shows the 'Port Usage' configuration page for ohs\_1 in Oracle Enterprise Manager. The browser title is 'Port Usage: ohs\_1 (Oracle HTTP Server) - Oracle Enterprise Manager - Mozilla Firefox'. The address bar shows the URL: <http://hpgen9-01:7001/em/faces/as/as/portsUsage?type=or>. The page content includes:

- Port Usage Table:**

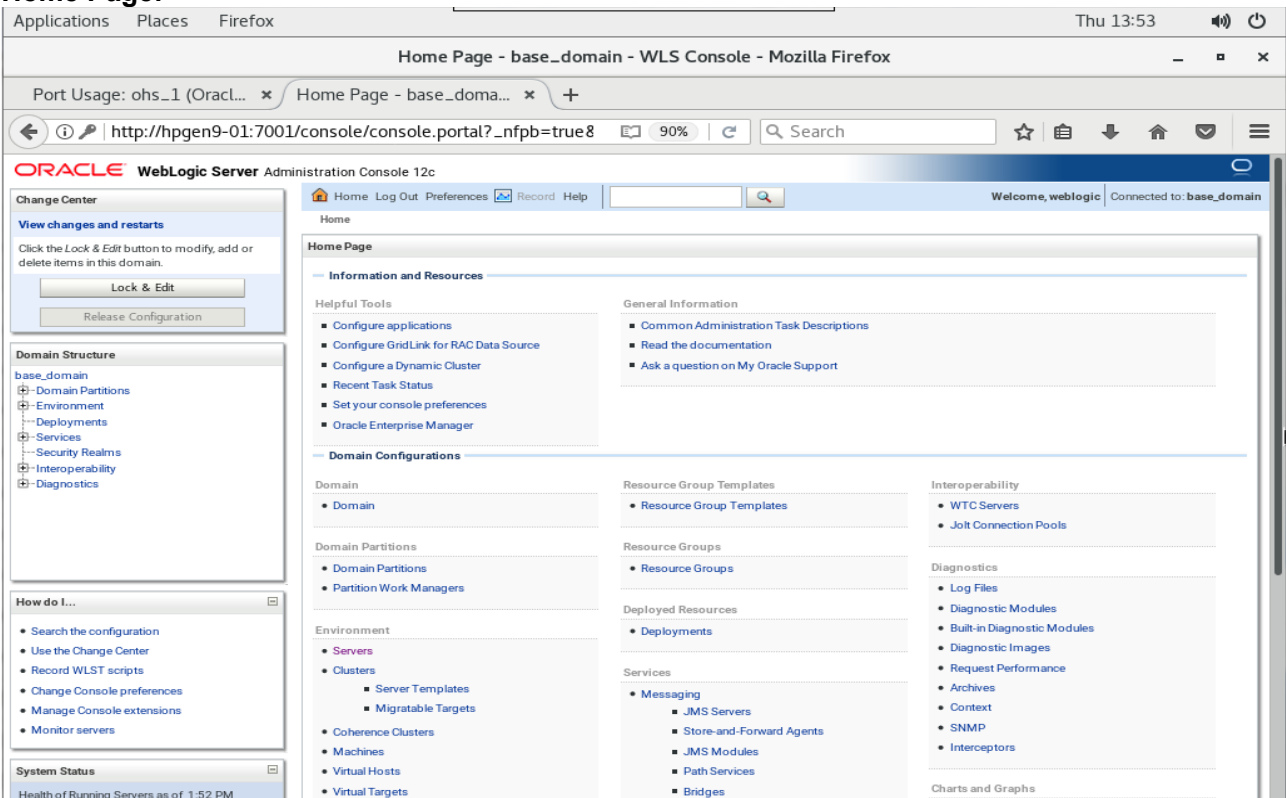
Port in Use	IP Address	Component	Protocol
7779	127.0.0.1	ohs_1	HTTP
4443	hpgen9-01	ohs_1	HTTPS
7777	hpgen9-01	ohs_1	HTTP

2). Access to Administration Server Console

Login Page as shown below:



Home Page:



**Viewing the summary of servers:**

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area is titled "Summary of Servers" and includes a description of servers and a table of configured servers. The table has the following data:

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 main content area is titled "Summary of Machines" and includes a description of machines and a table of configured machines. The table has the following data:

Name	Type
SUSE_Machine_1	Machine

3). Access to Oracle HTTP Server listening address

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

The screenshot shows a Mozilla Firefox browser window with the URL <http://hpgen9-01:7777/>. The page title is "Oracle HTTP Server 12c - Mozilla Firefox". The main content area features the Oracle logo and the text "Oracle HTTP Server 12c". Below this, 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." A central diagram illustrates the architecture, showing "Local Content" (HTML, JS) being served by "OHS" (Oracle HTTP Server) through "Load Balancing" to "Fusion Middleware Applications". Supporting components include "Audit Control", "Auditing", "Authentication Authorization", and "Identity Management". On the left, "Process Management and HA", "Certificate management", "Automation", and "Test to Production" are listed, with "FMW Lifecycle Tools" below them. At the bottom, "Enterprise Manager" is shown for "Manage, monitor, diagnose" tasks.

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

The screenshot shows a Mozilla Firefox browser window with the URL <https://hpgen9-01:4443/>. The page title is "Oracle HTTP Server 12c - Mozilla Firefox". The main content area features the Oracle logo and the text "Oracle HTTP Server 12c". Below this, 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." A central diagram illustrates the architecture, showing "Local Content" (HTML, JS) being served by "OHS" (Oracle HTTP Server) through "Load Balancing" to "Fusion Middleware Applications". Supporting components include "Audit Control", "Auditing", "Authentication Authorization", and "Identity Management". On the left, "Process Management and HA", "Certificate management", "Automation", and "Test to Production" are listed, with "FMW Lifecycle Tools" below them. At the bottom, "Enterprise Manager" is shown for "Manage, monitor, diagnose" tasks.

Admin Host URL: <http://host:7779/>

**ORACLE** Oracle HTTP Server 12c

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

The diagram illustrates the Oracle HTTP Server 12c architecture. On the left, management tools include Process Management and HA, Certificate management, Automation, and Test to Production. These tools interact with the OHS (Oracle HTTP Server) component, which handles Local Content (JS and HTML). The OHS component is connected to Fusion Middleware Applications via Load Balancing, Authentication Authorization, and Auditing. The OHS component also includes Audit Control and Identity Management. The entire system is managed and monitored by FMW Lifecycle Tools and Manage, monitor.

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

```
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/> state('AdminServer')
Current state of "AdminServer" : 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:

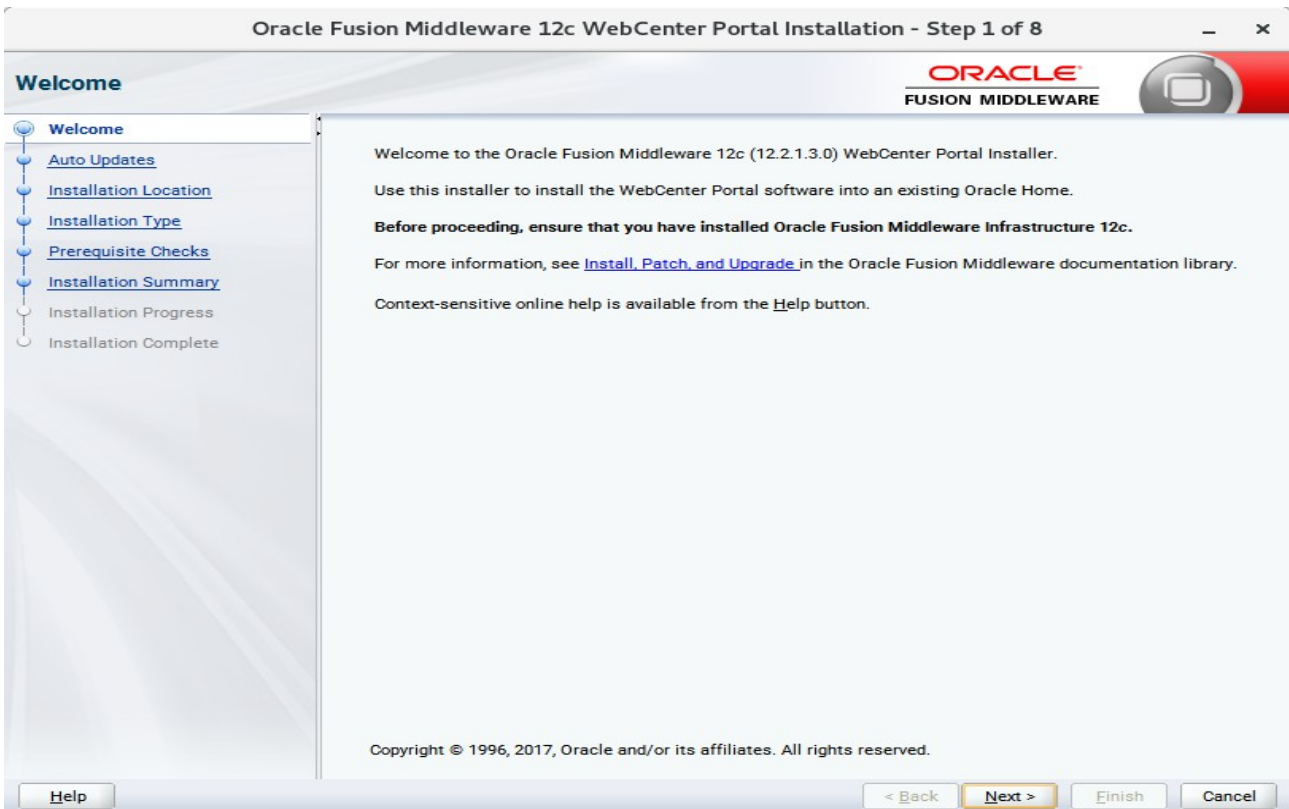
- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0\_131 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.3.0) (Fusion Middleware Infrastructure Installer)

1-1. Log in to the target system (SLES 15 64-bit OS) as a non-admin user. Download the Oracle WebCenter Portal 12c (12.2.1.3.0) 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.)

1-2. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw\_12.2.1.3.0\_wcportal\_Disk1\_1of1.zip) file and launch the installation program by running '`java -jar fmw_12.2.1.3.0_wcportal_*.jar`'

**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.

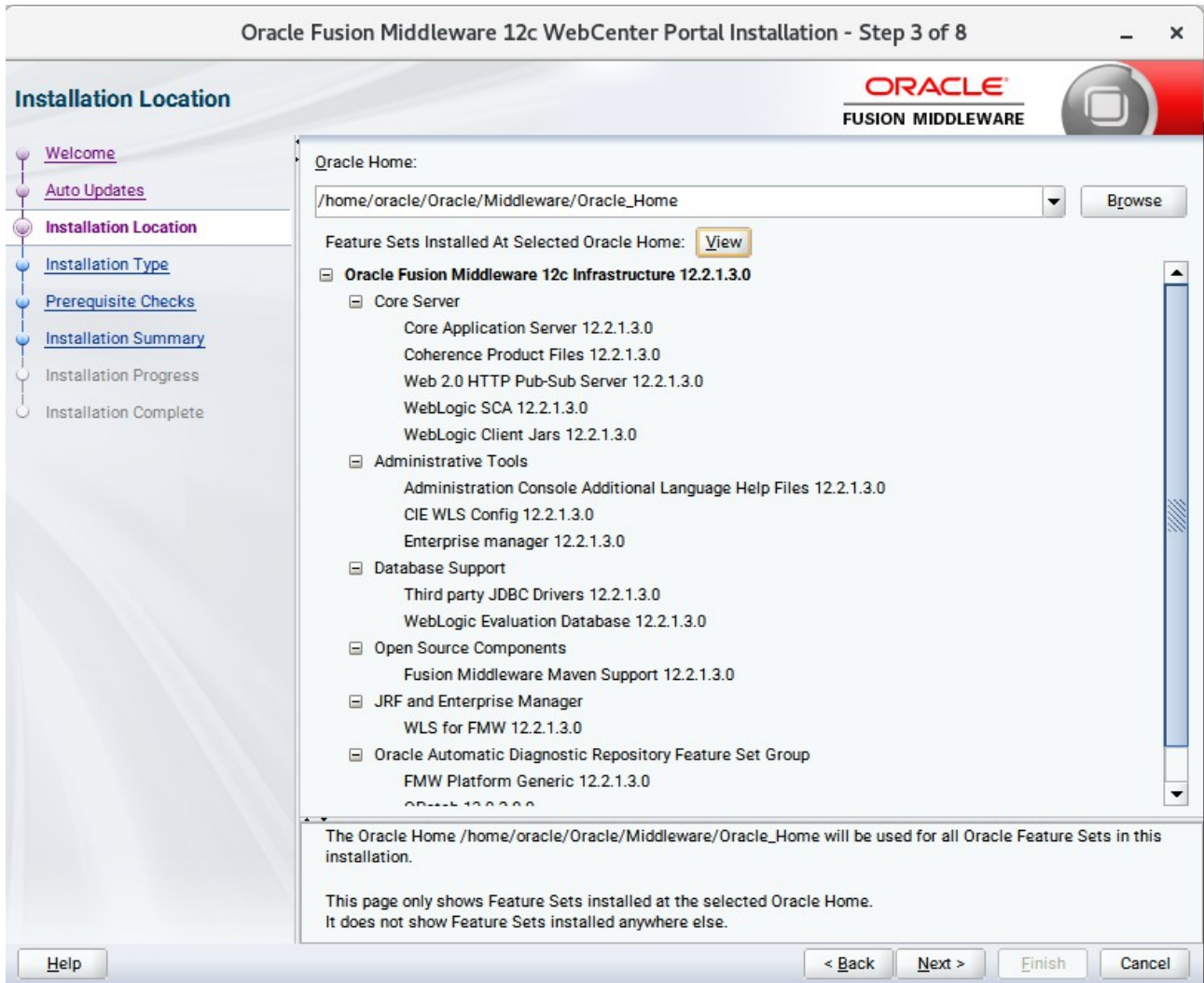
The screenshot shows the 'Auto Updates' configuration page during the installation of Oracle Fusion Middleware 12c on SLES 15. The window title is 'Oracle Fusion Middleware 12c WebCenter Portal Installation - Step 2 of 8'. The page features a navigation pane on the left with the following items: Welcome, 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 in the top right. The configuration options are as follows:

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

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

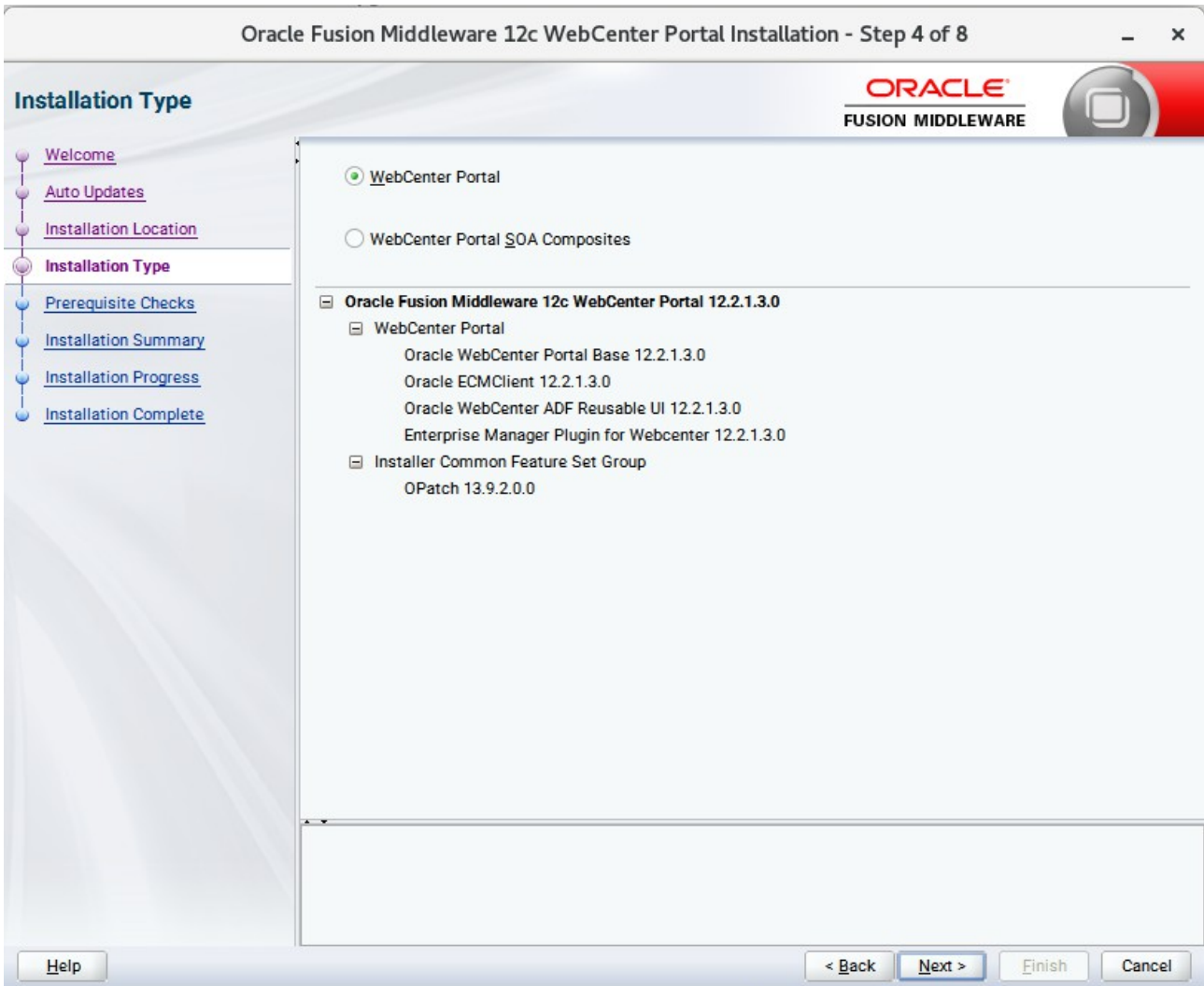
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



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

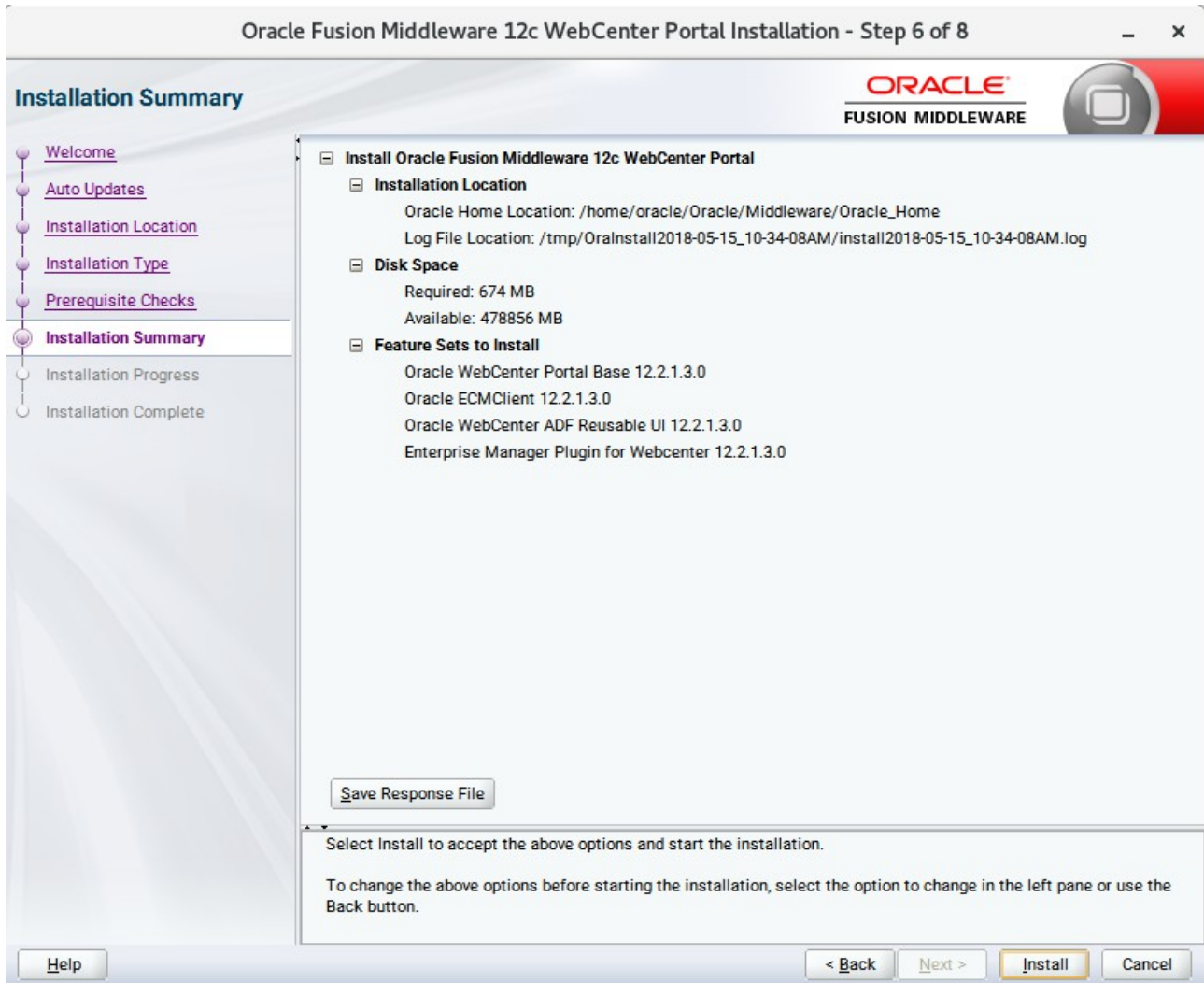
4). The **Installation Type** page appears.



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.



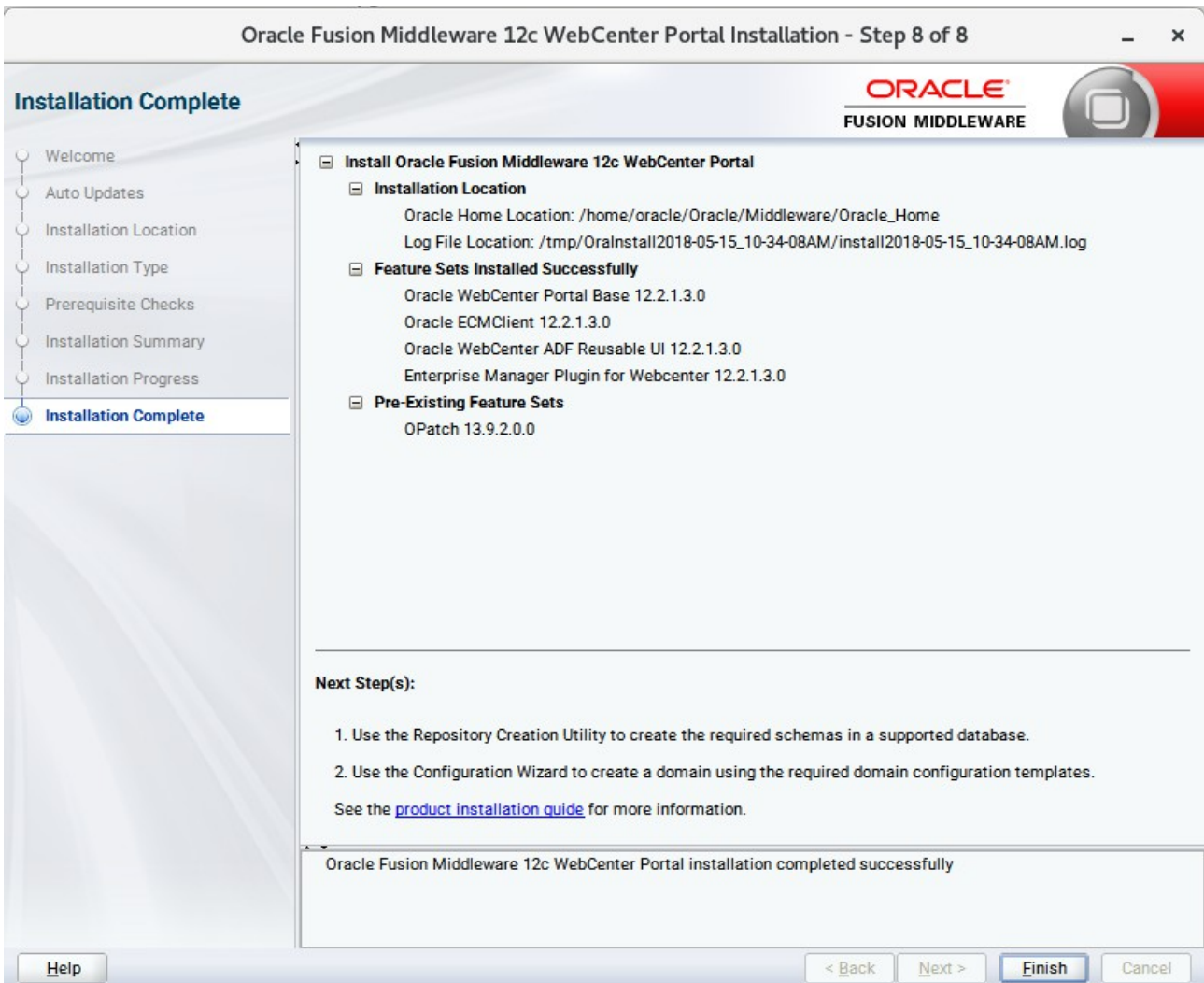
6). The **Installation Summary** page appears.



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

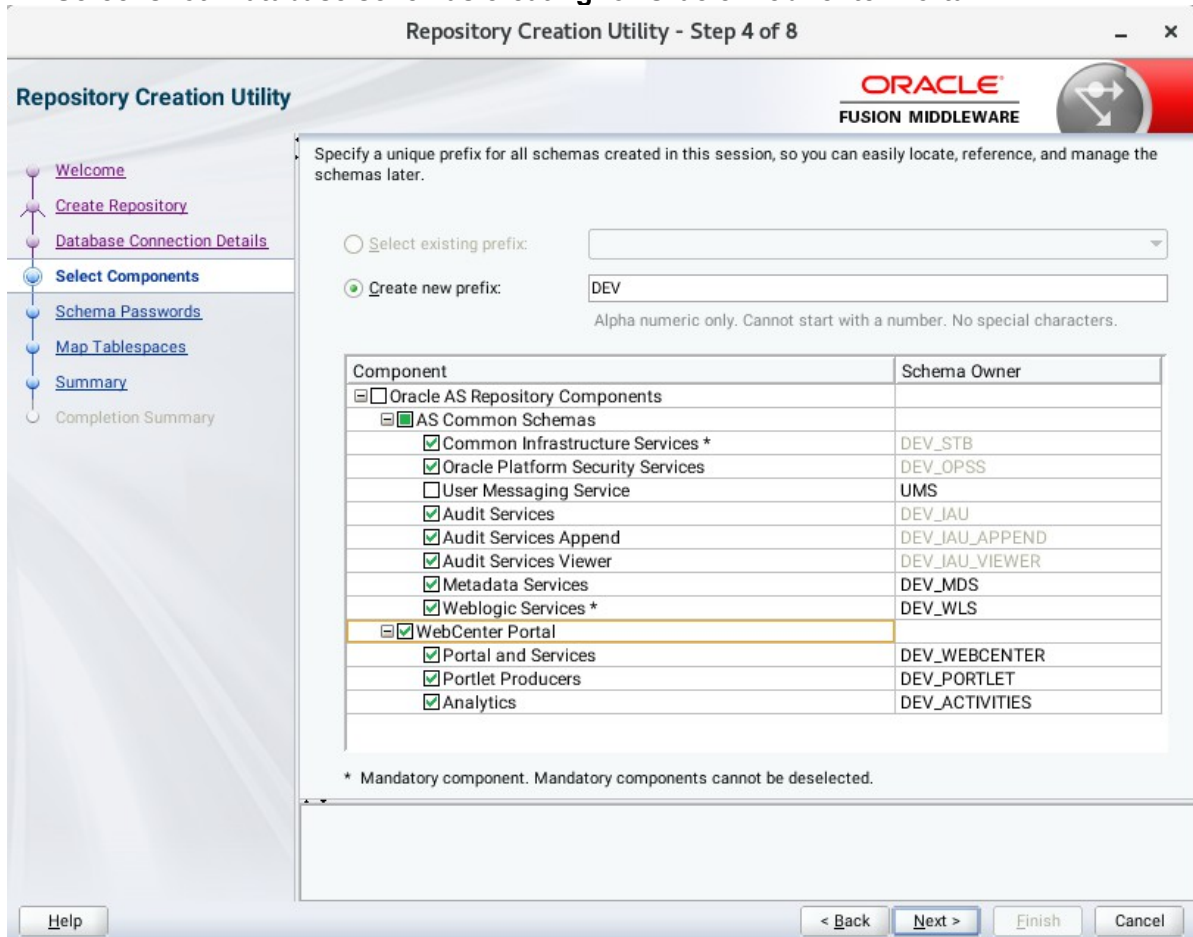


Click **Finish** to dismiss the installer.

## 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, and ensure schema creation is successful.

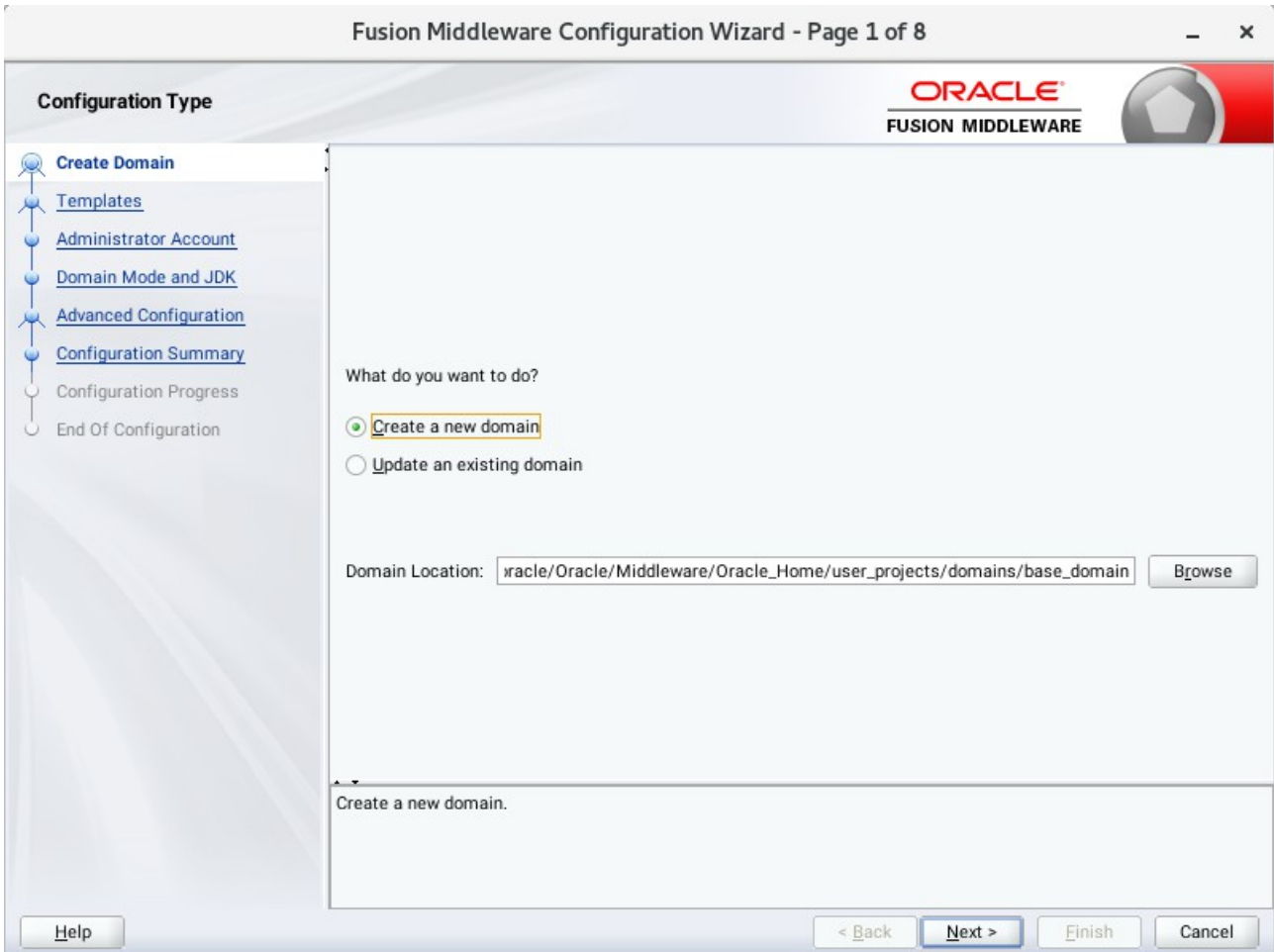


### 3. Configuring Oracle WebCenter Portal 12c using the Config Wizard

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

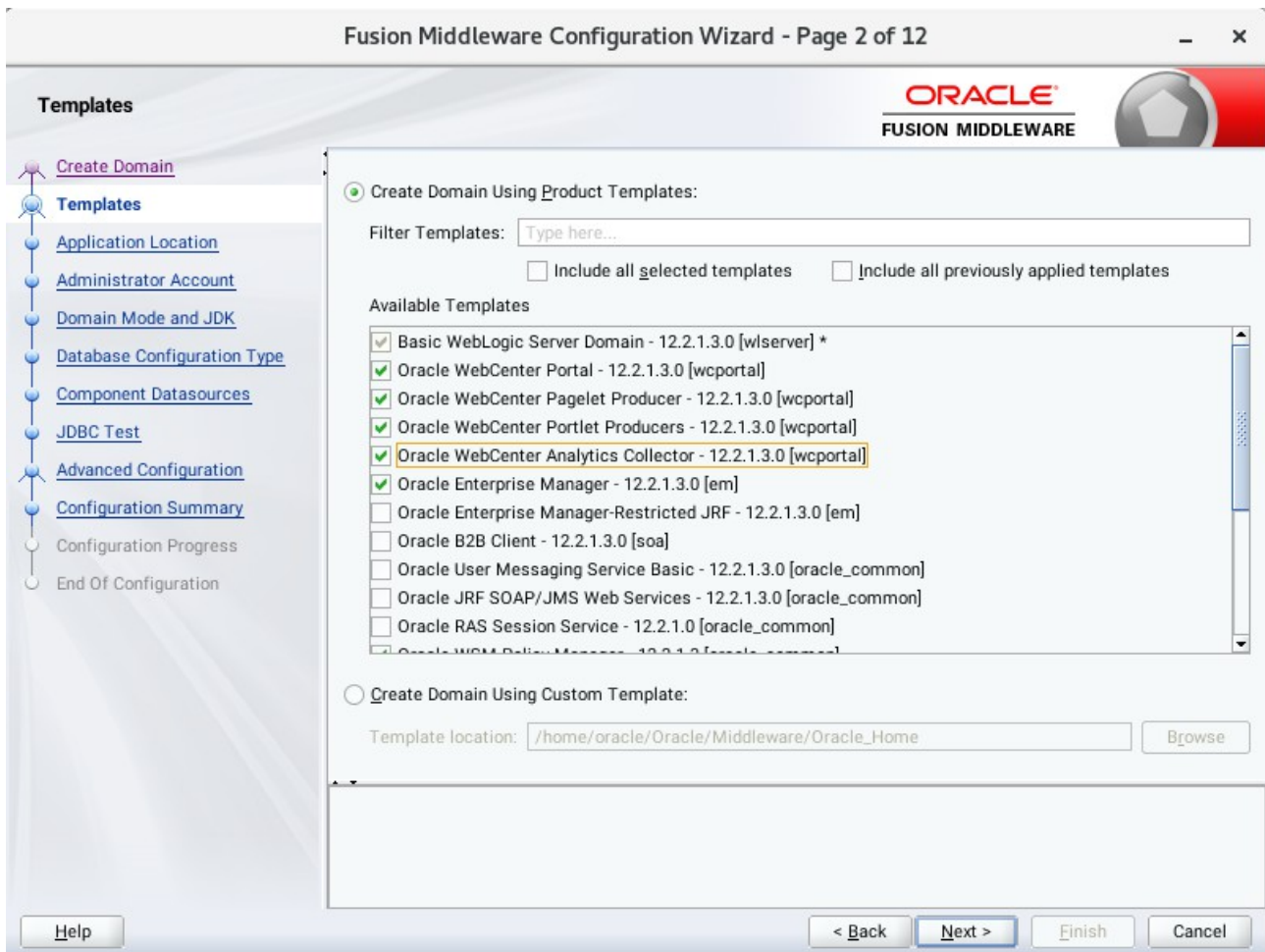
#### Follow these steps:

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



Click **Next** to continue.

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



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

- Oracle WebCenter Portal - 12.2.1.3.0 [wcportal]

Selecting this template automatically selects the following as dependencies:

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

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

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



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

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

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: weblogic  
Password: .....  
Confirm Password: .....

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

Help < Back Next > Finish Cancel

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

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

The screenshot shows the 'Fusion Middleware Configuration Wizard - Page 5 of 12' window. The title bar includes the Oracle logo and 'FUSION MIDDLEWARE'. The main content area is titled 'Domain Mode and JDK'. On the left, a navigation pane lists steps: Create Domain, Templates, Application Location, Administrator Account, **Domain Mode and JDK** (highlighted), Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains two sections: 'Domain Mode' and 'JDK'. Under 'Domain Mode', there are two radio buttons: 'Development' (unselected) and 'Production' (selected). Below 'Production' is a text description: 'Require the entry of a username and password, and do not poll for applications to deploy.' Under 'JDK', there are two radio buttons: 'Oracle HotSpot 1.8.0\_161 /home/oracle/ORACLE\_SW/Java/jdk1.8.0\_161' (selected) and 'Other JDK Location:' (unselected). The 'Other JDK Location:' option has an empty text input field and a 'Browse' button. 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 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: .....

Get RCU Configuration Cancel

Connection Result Log

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

Successfully Done.

Click "Next" button to continue.

Help < Back Next > Finish Cancel

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

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

**JDBC Component Schema**

Vendor:  Driver:

Connection Parameters  Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

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

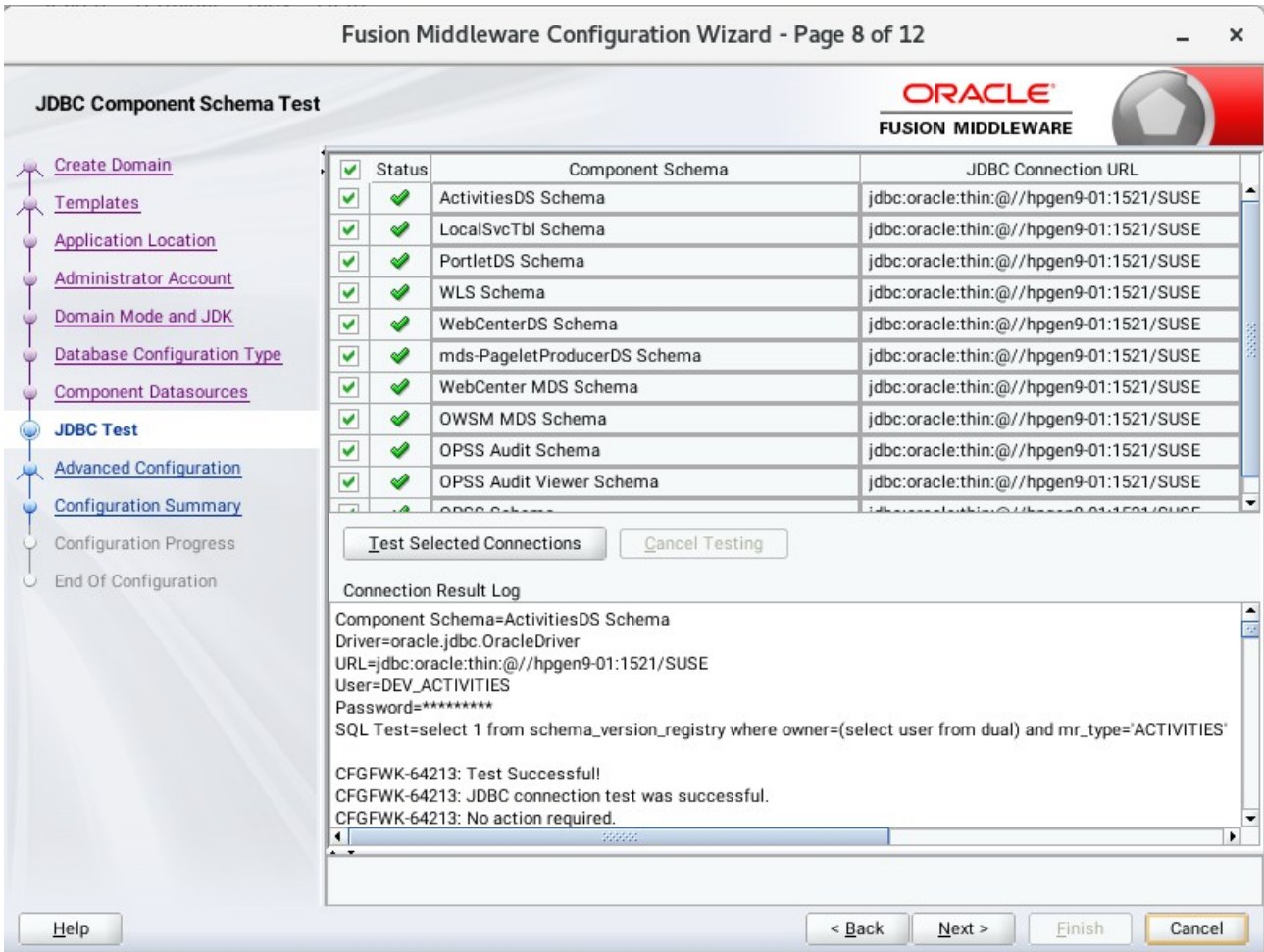
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	ActivitiesDS Schema	SUSE	hpgen9-01	1521	DEV_ACTIVITIE	.....
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	DEV_STB	.....
<input type="checkbox"/>	PortletDS Schema	SUSE	hpgen9-01	1521	DEV_PORTLET	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUN	.....
<input type="checkbox"/>	WebCenterDS Schema	SUSE	hpgen9-01	1521	DEV_WEBCENT	.....
<input type="checkbox"/>	mds-PageletProducerDS	SUSE	hpgen9-01	1521	DEV_MDS	.....
<input type="checkbox"/>	WebCenter MDS Schem	SUSE	hpgen9-01	1521	DEV_MDS	.....
<input type="checkbox"/>	OWSM MDS Schema	SUSE	hpgen9-01	1521	DEV_MDS	.....
<input type="checkbox"/>	OPSS Audit Schema	SUSE	hpgen9-01	1521	DEV_IAU_APPE	.....

Help

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

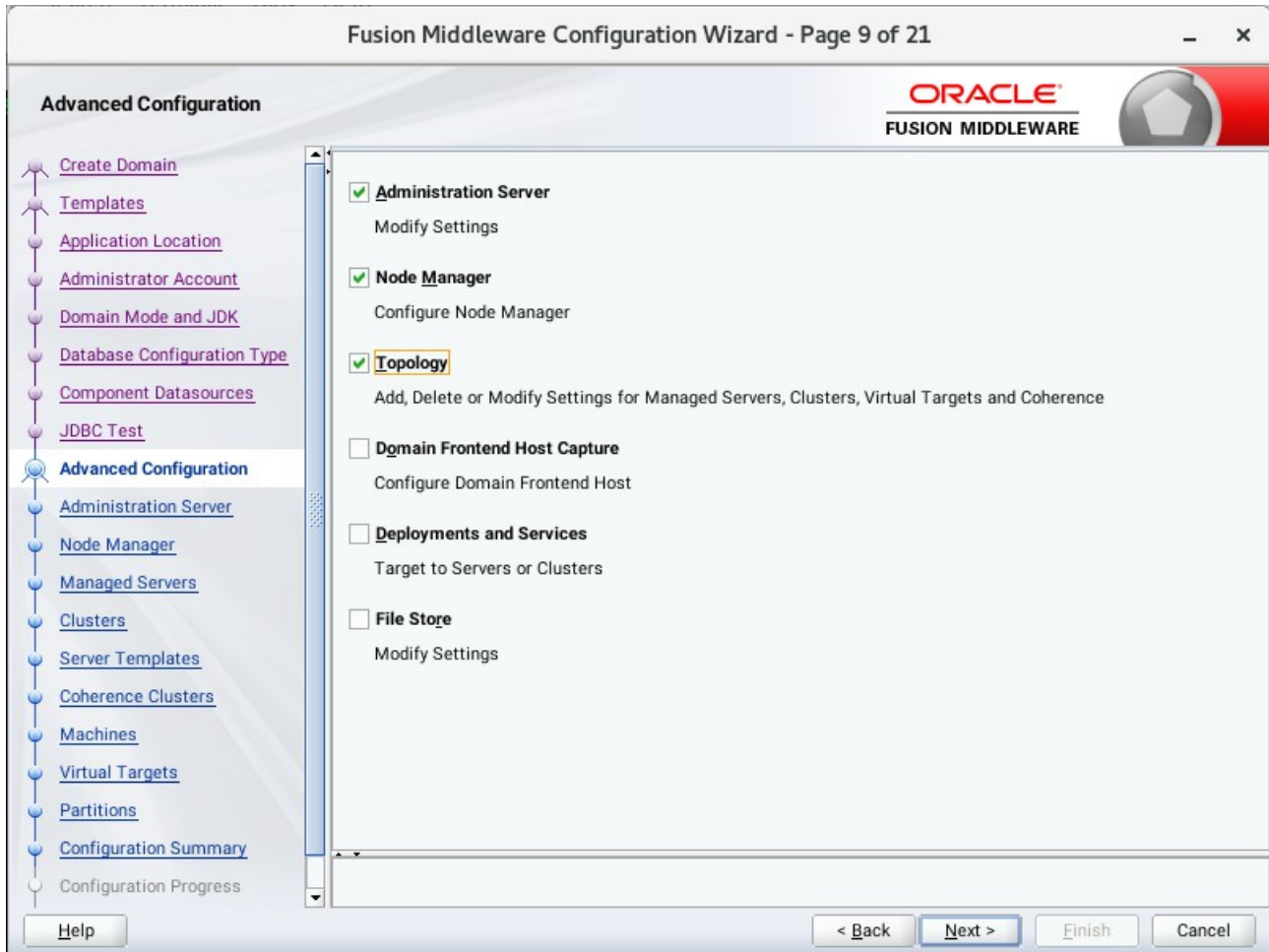
8). The **JDBC Component Schema Test** screen appears.



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



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



On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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

Fusion Middleware Configuration Wizard - Page 10 of 21

**Administration Server**

ORACLE  
FUSION MIDDLEWARE

Navigation Tree:

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

Form Fields:

Server Name:

Listen Address:

Listen Port:

Enable SSL:

SSL Listen Port:

Server Groups:

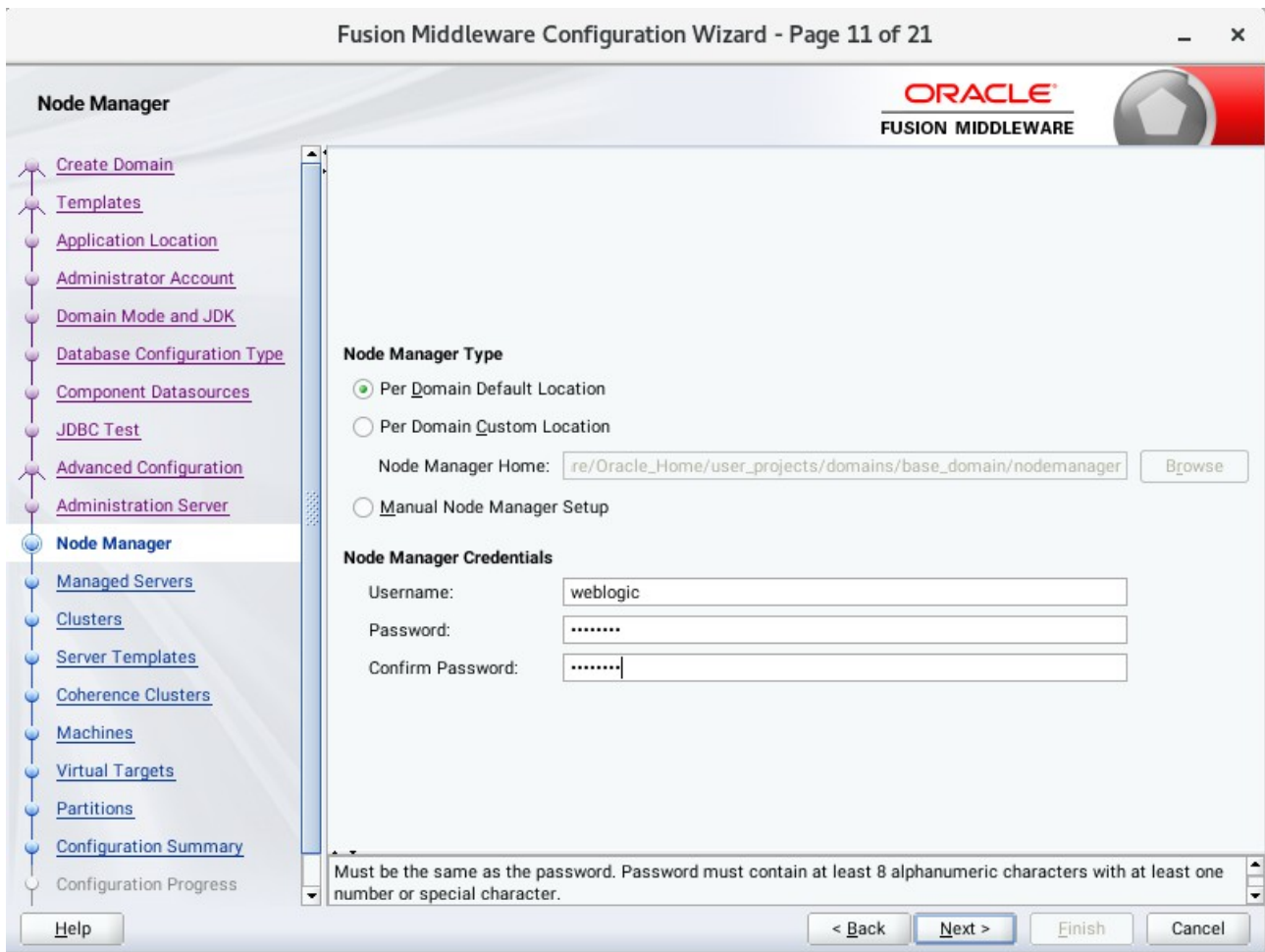
Warning: The name must not be null or empty and may not contain any : , = \* ? % / \_cloned.

Buttons:

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.



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

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

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

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
WC_Portlet	147.2.207.96	8889	<input type="checkbox"/>	Disabled	WebCenter ...
WC_Portal	147.2.207.96	8888	<input type="checkbox"/>	Disabled	WebCenter ...

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

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

Fusion Middleware Configuration Wizard - Page 13 of 23

**Clusters**

ORACLE  
FUSION MIDDLEWARE

+ Add    X Delete    Discard Changes

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port	Dynamic Server Groups
wcp_cluster_1			0	0	Unspecified ▼
wcp_cluster_2			0	0	Unspecified ▼

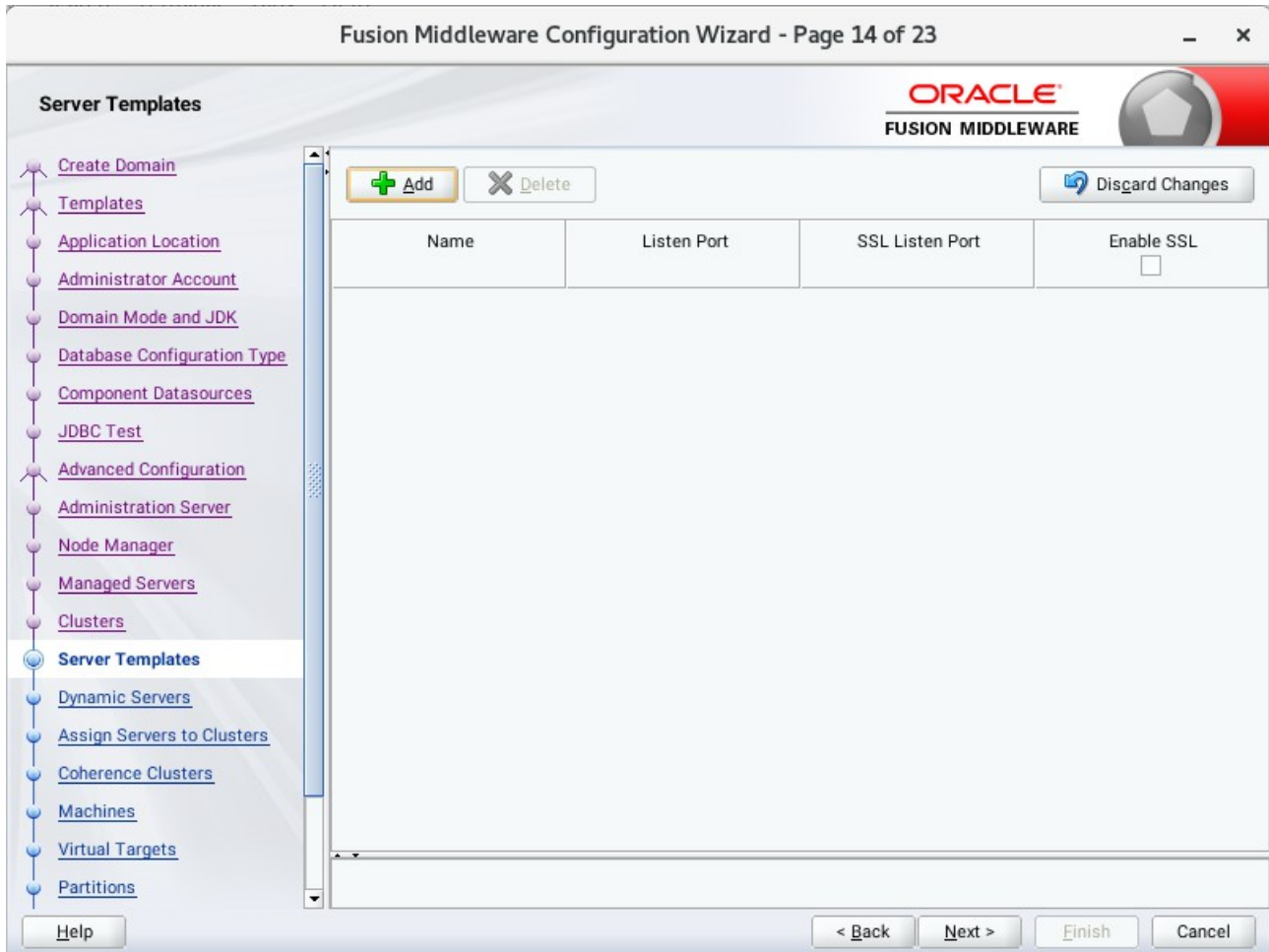
Help    < Back    Next >    Finish    Cancel

On the Clusters screen:

1. Click **Add**.
2. Specify **wcp\_cluster\_1** in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create one more clusters: **wcp\_cluster\_2**.

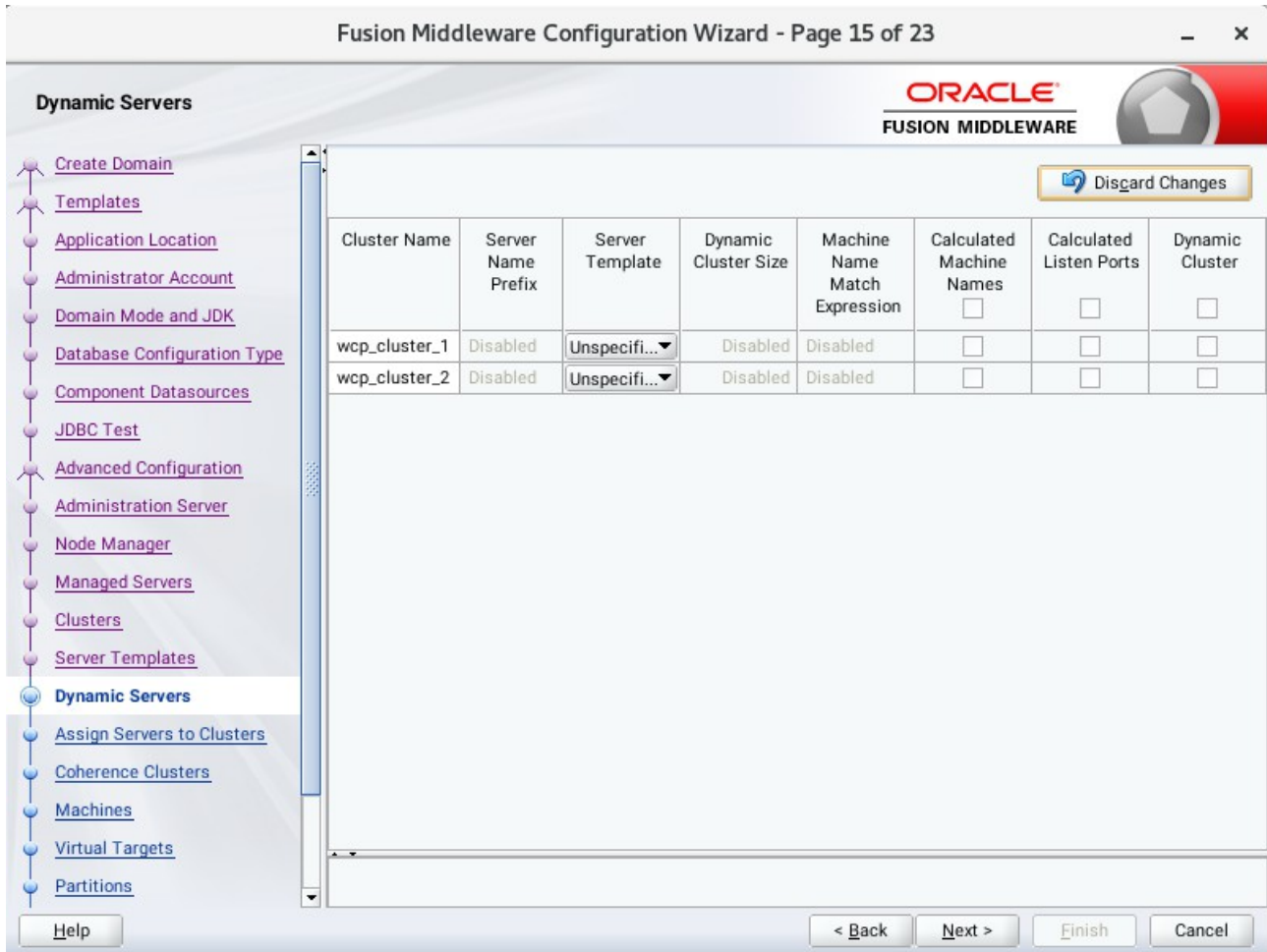
Click **Next** to continue.

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



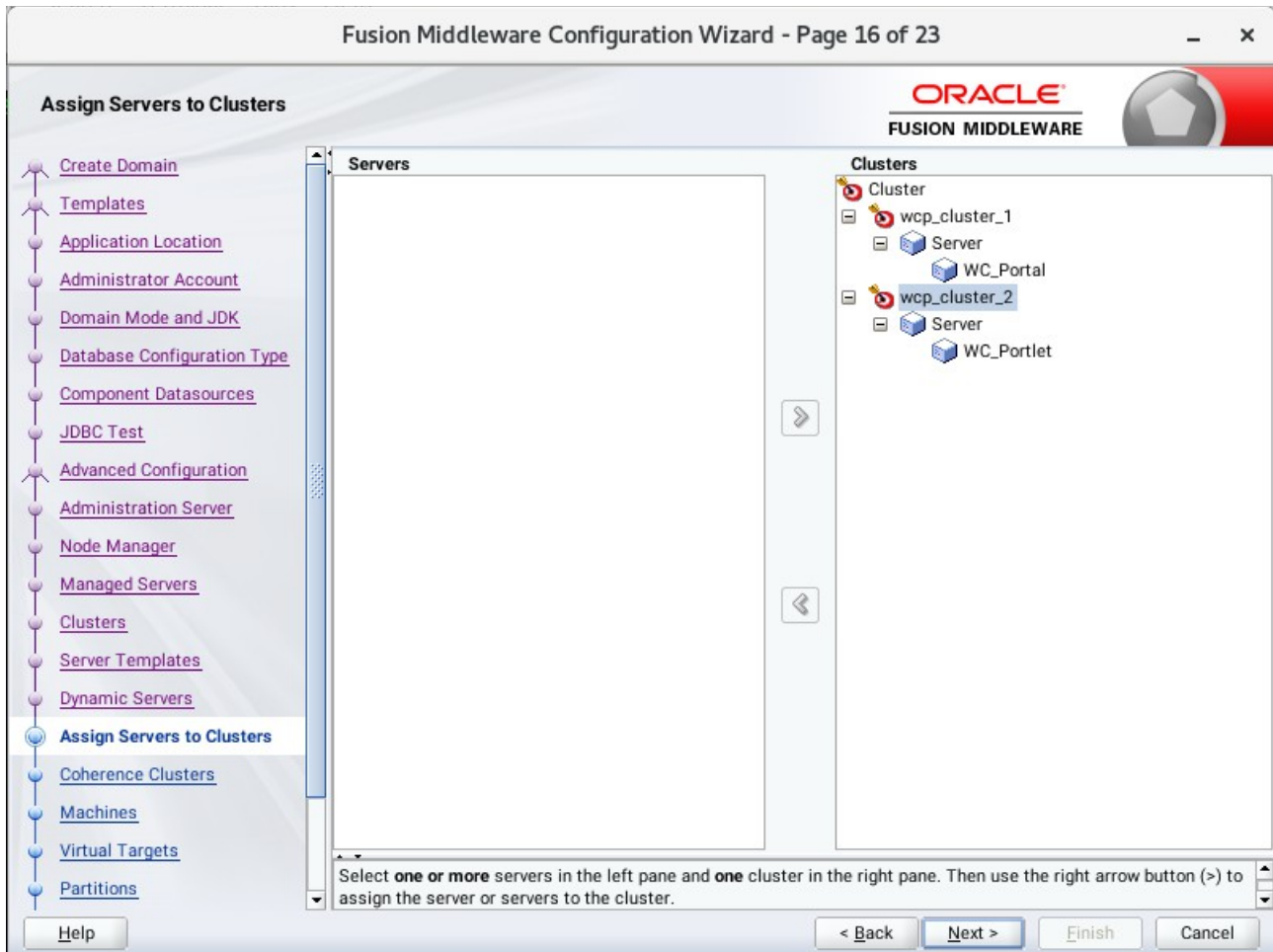
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



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

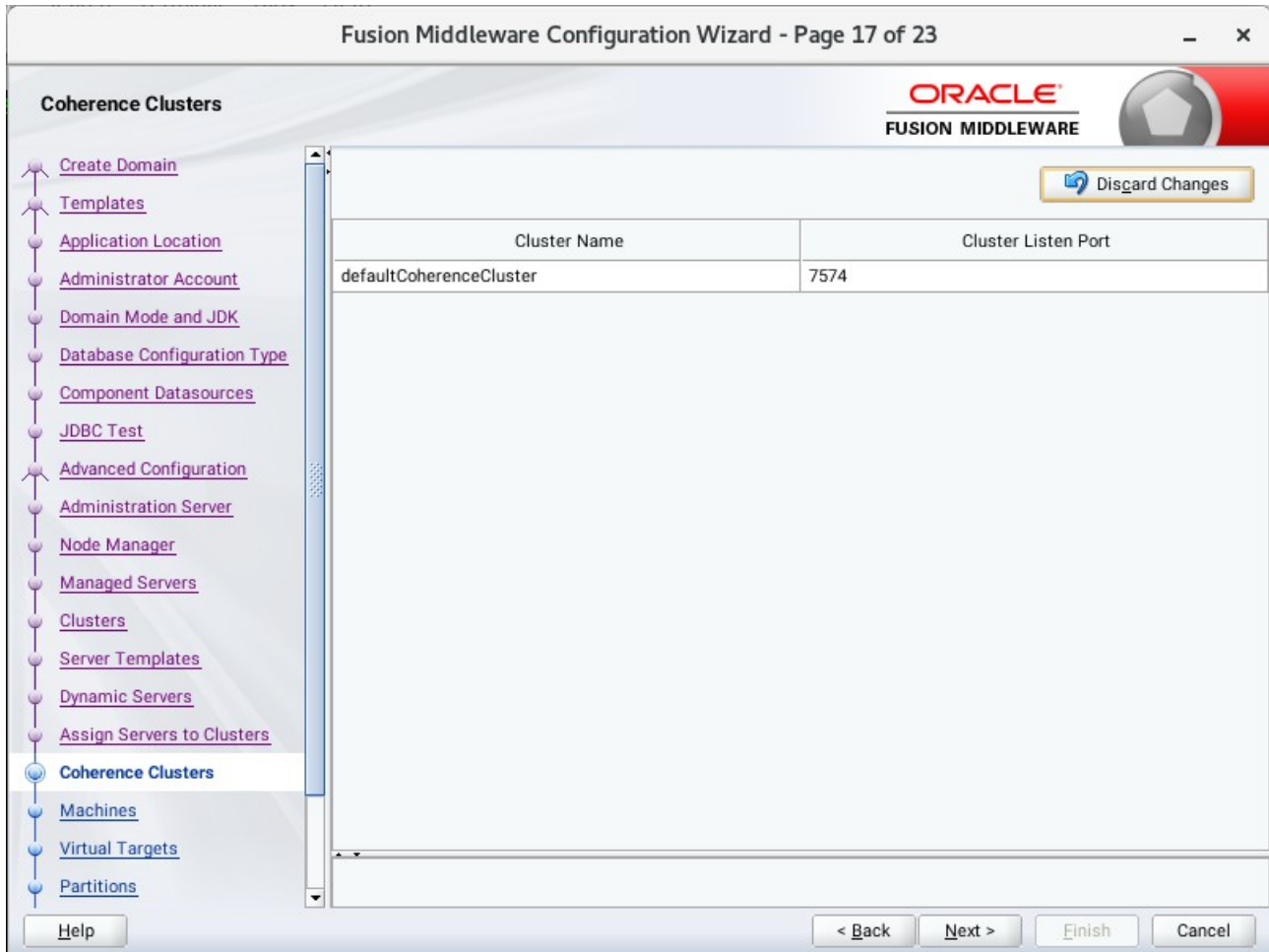
16). The **Assign Servers to Clusters** screen appears.



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

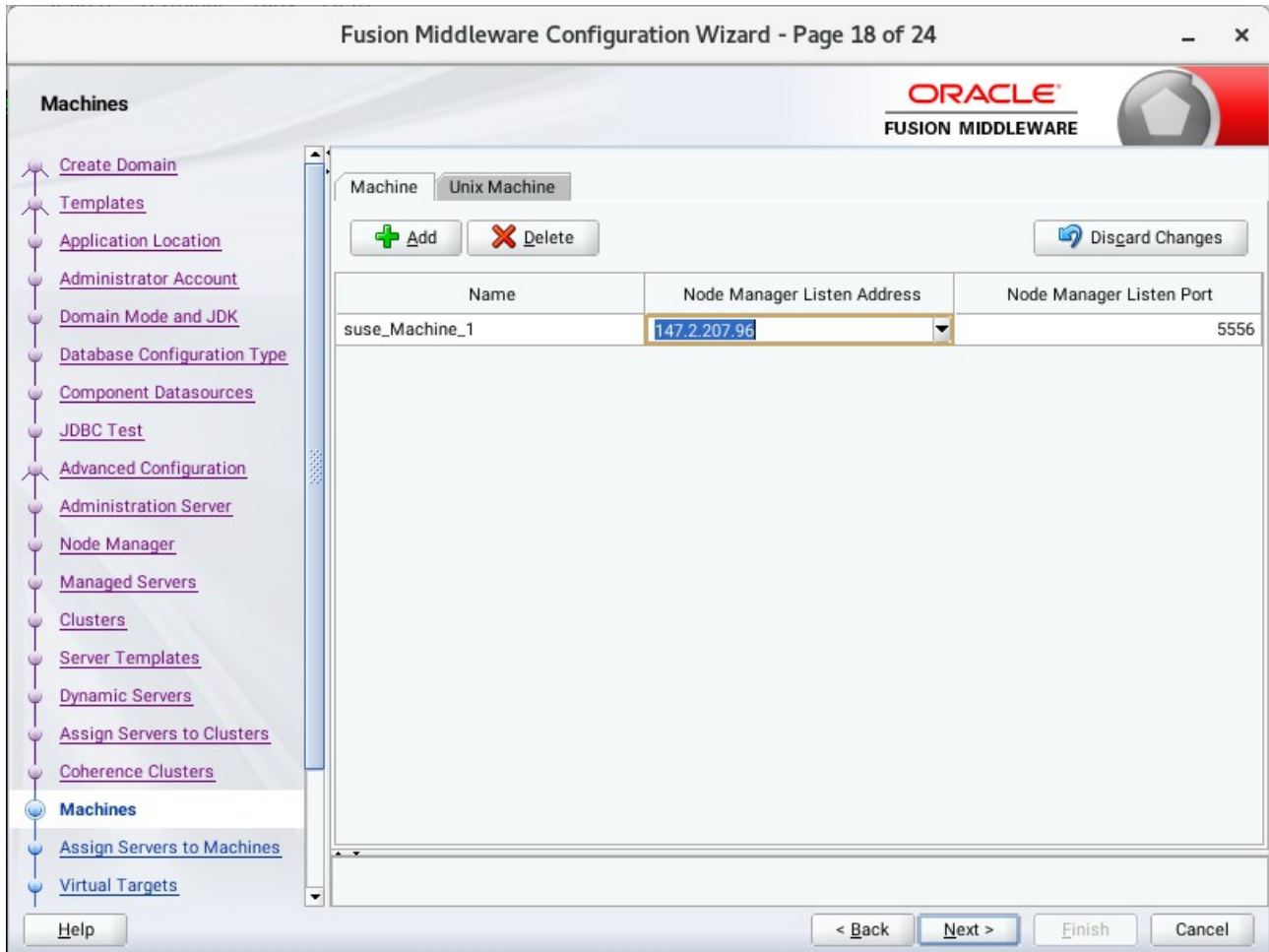


17). The **Coherence Clusters** screen appears.



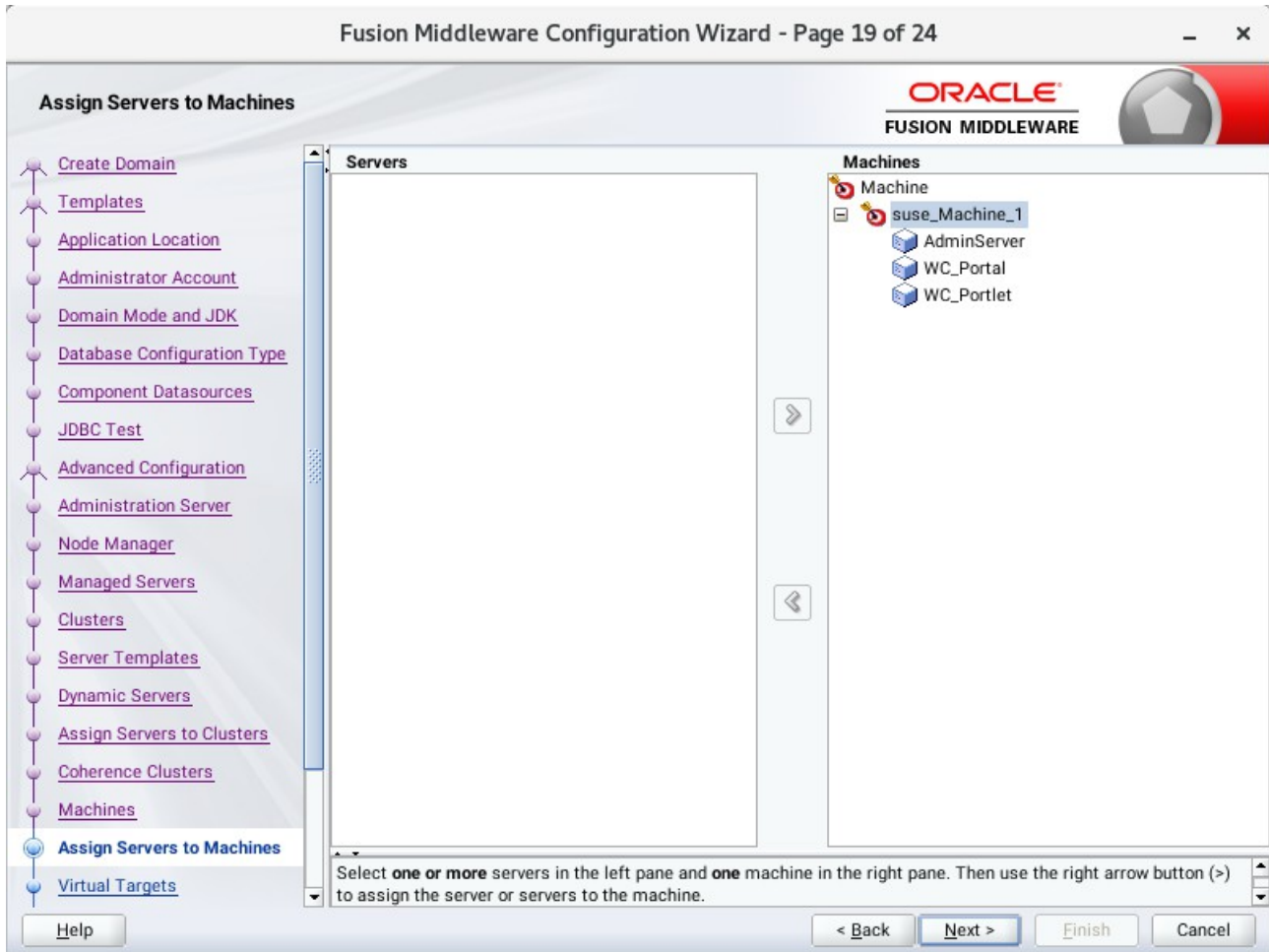
Leave the default port number as the Coherence cluster listen port. Click **Next** to continue.

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



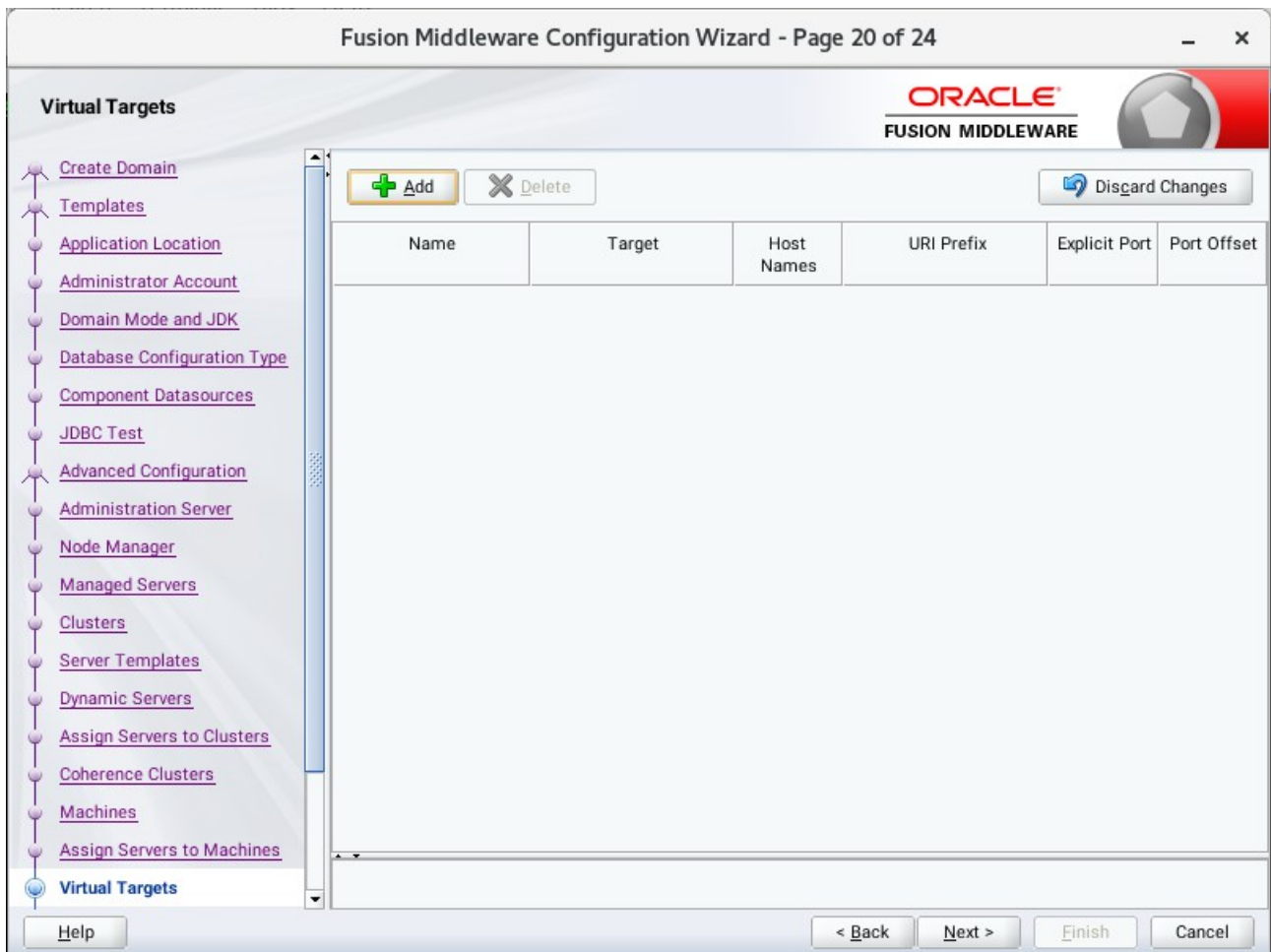
To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



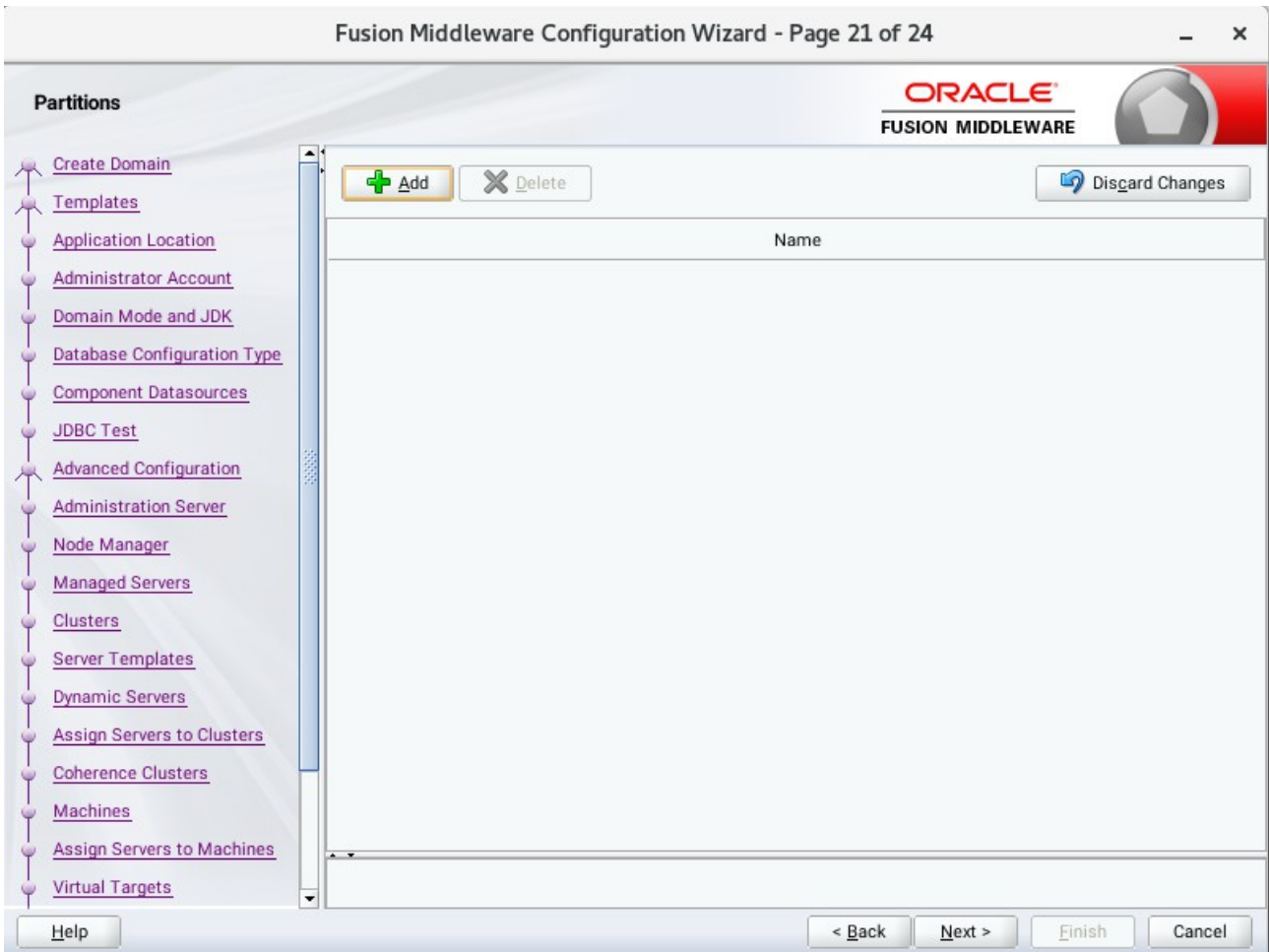
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



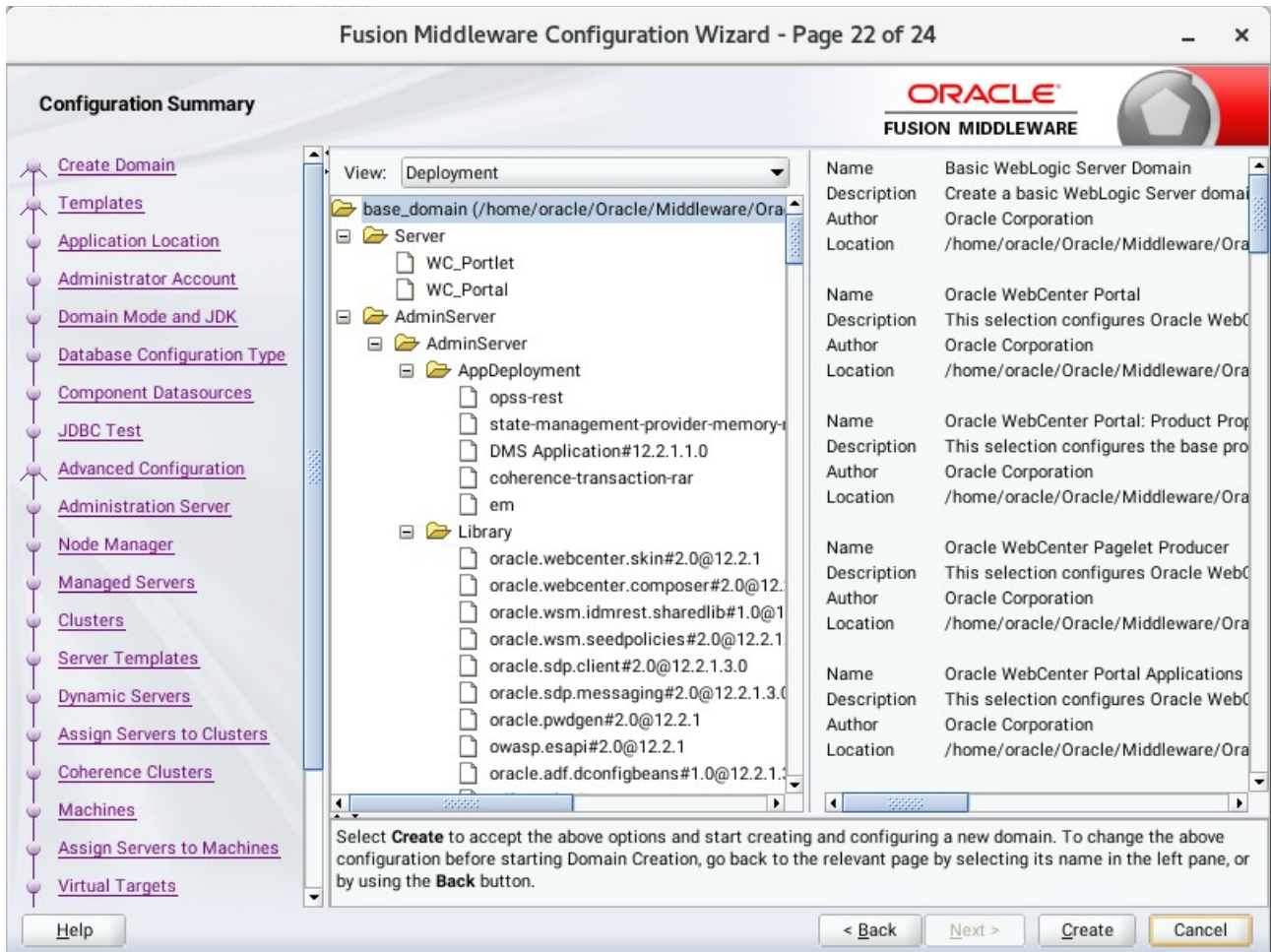
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



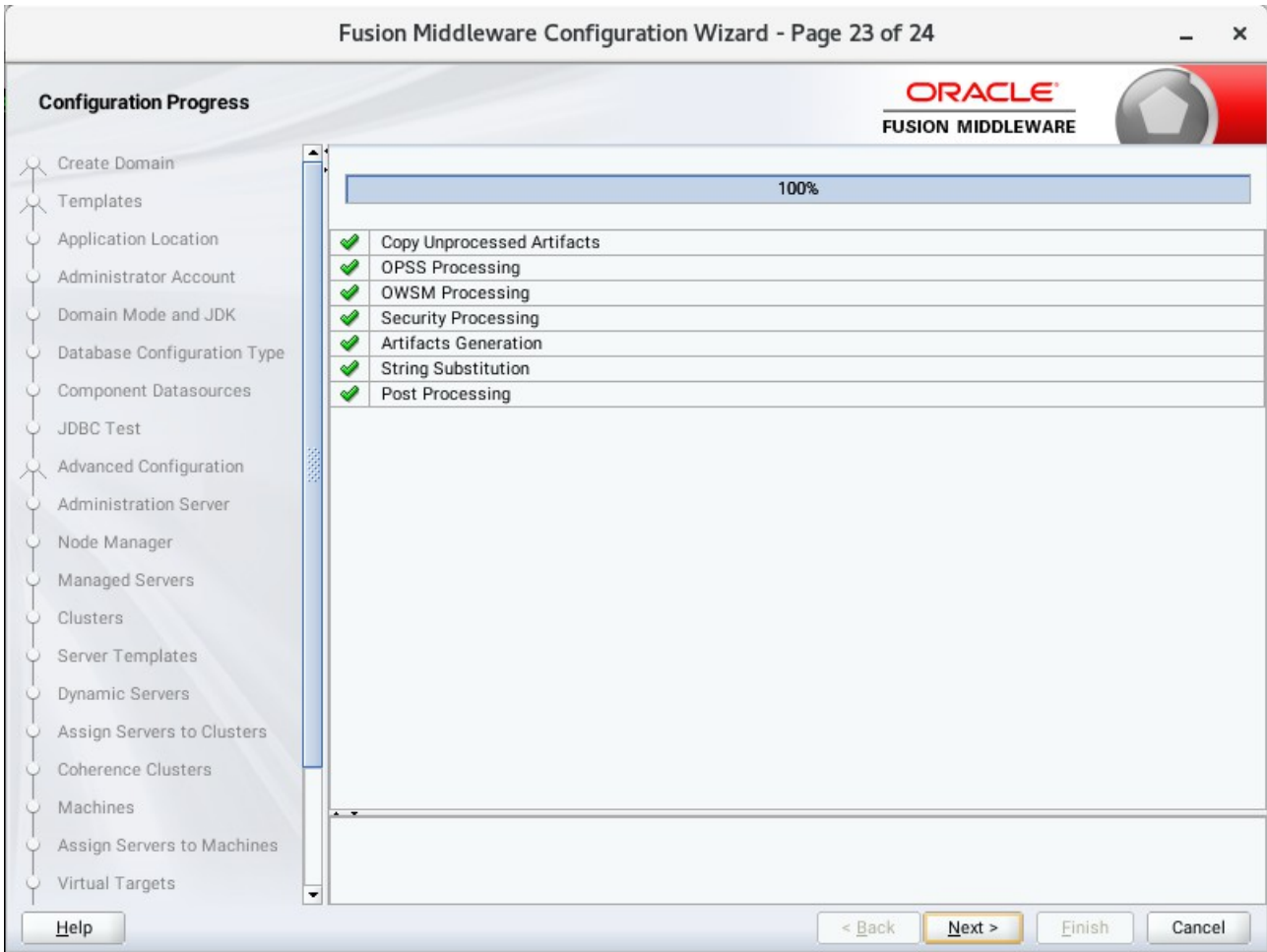
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



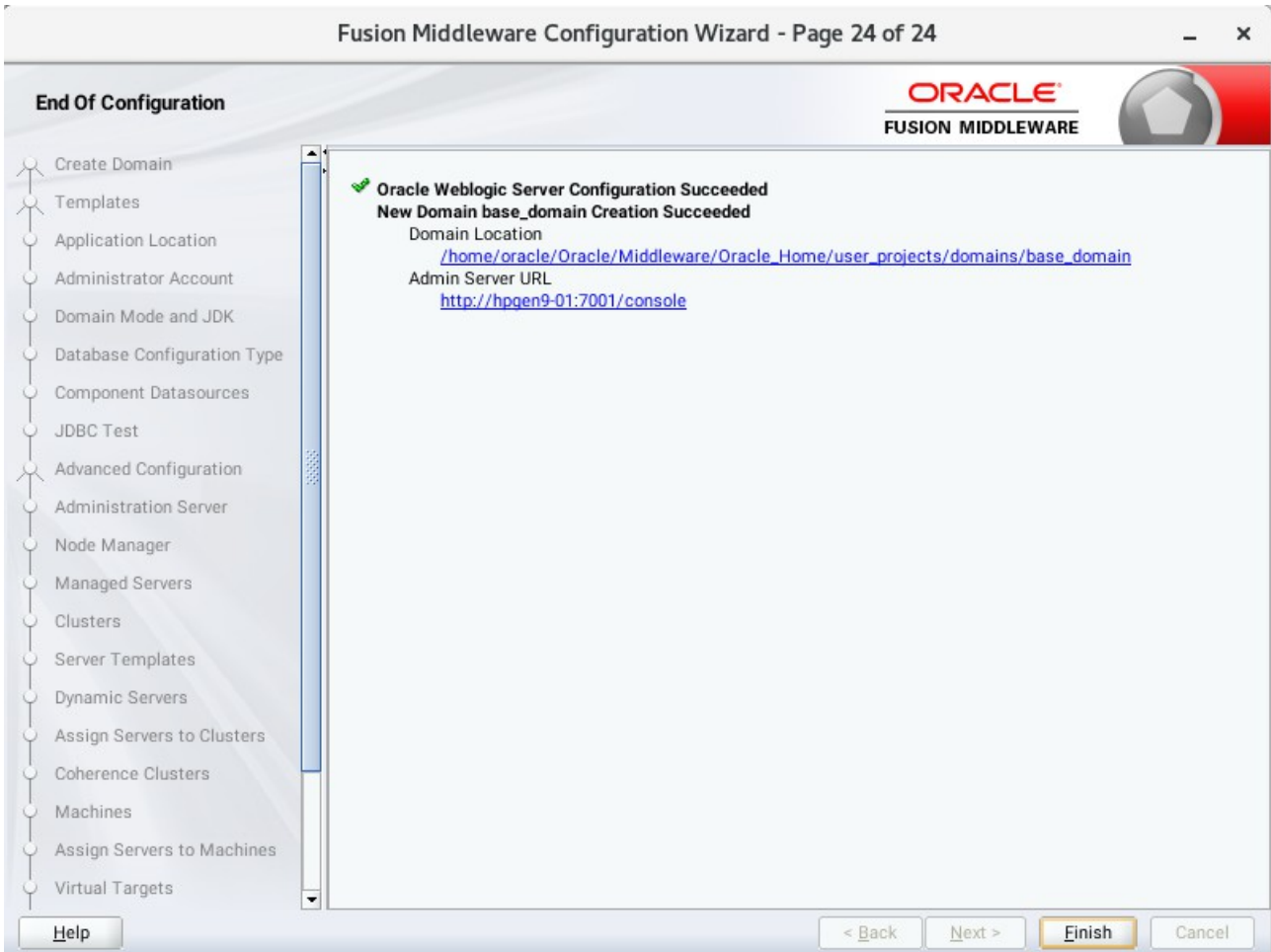
Select **Create** to accept the above options and start creating and configuring a new domain.

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



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

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



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



## 4. Verifying Oracle WebCenter Portal 12c Installation and Configuration

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

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

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

```

Applications  Places  Terminal  Tue 11:12
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/O... x oracle@hpgen9-01:/home/oracle/Or... x oracle@hpgen9-01:/home/oracle/Or... x
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 1799
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup: ignoring input and redirecting stderr to stdout

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/node
anager
CLASSPATH=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlser
ver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdpa
r
ty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.
n
odemanager.jar::/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./:/home/oracle/Oracle/Middleware/Oracle_Hom
e
/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/oracle/ORACLE_SW/Java/jdk1.8.0_161/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -
D
coherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/M
i
ddleware/Oracle_Home/wlserver/.. -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_pr
o
jects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Midl
e
ware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/O
r
acle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchCla
s
sLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -D

```

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

```

2018-05-15 11:15:02.796/98.128 Oracle Coherence GE 12.2.1.3.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<May 15, 2018 11:15:02,890 AM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
<May 15, 2018 11:15:03,575 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<May 15, 2018 11:15:03,651 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<May 15, 2018 11:15:03,652 AM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers : Resolving connection list DomainRuntimeServiceMBean>
<May 15, 2018 11:15:03,768 AM 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.>
<May 15, 2018 11:15:03,769 AM 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.>
<May 15, 2018 11:15:03,770 AM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<May 15, 2018 11:15:03,770 AM 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.>
<May 15, 2018 11:15:03,770 AM 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.>
<May 15, 2018 11:15:03,770 AM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<May 15, 2018 11:15:03,770 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base domain" running in production mode.>
<May 15, 2018 11:15:03,771 AM 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.>
<May 15, 2018 11:15:03,913 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<May 15, 2018 11:15:03,924 AM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>

```

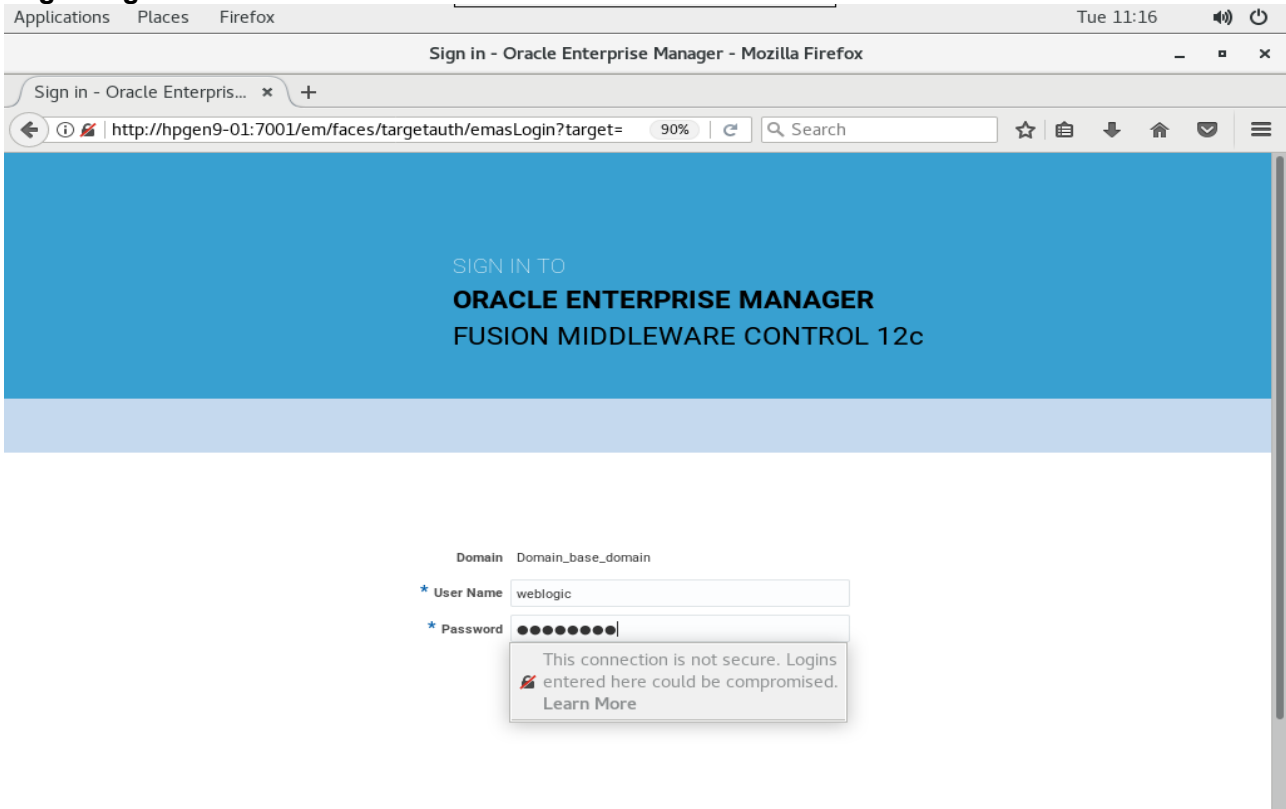
You know that the administrator server is running when you see the following output:

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

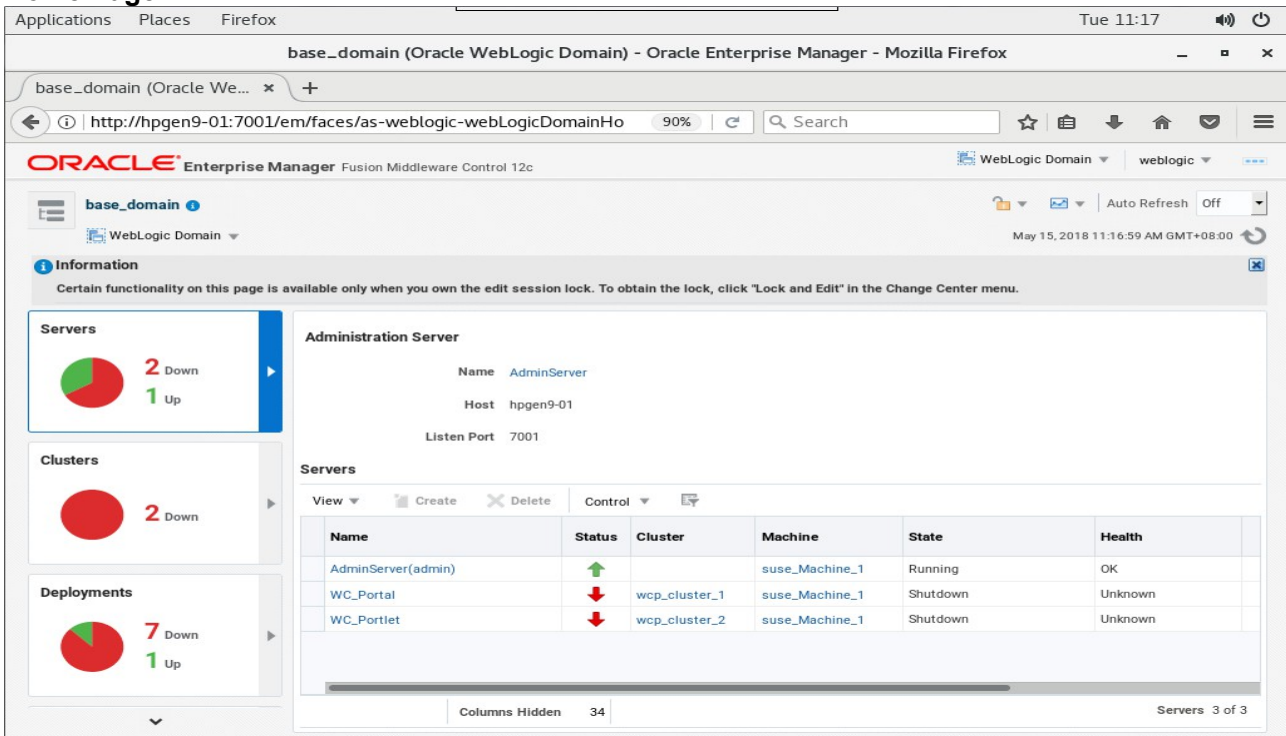
4-3. Checking Oracle WebCenter Product URLs.

1). Access to Enterprise Manager Console.

**Login Page:**



**Home Page:**



**Starting the Oracle WebCenter Portal Managed Servers:**

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain. On the left, there are summary cards for Servers (2 Down, 1 Up), Clusters (2 Down), and Deployments (7 Down, 1 Up). The main area displays the 'Administration Server' details (Name: AdminServer, Host: hpgen9-01, Listen Port: 7001) and a table of managed servers. The table shows that 'WC\_Portal' and 'WC\_Portlet' are in a 'Shutdown' state with 'Unknown' health, while 'AdminServer(admin)' is 'Running' with 'OK' health.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_Machine_1	Running	OK
WC_Portal	↓	wcp_cluster_1	suse_Machine_1	Shutdown	Unknown
WC_Portlet	↓	wcp_cluster_2	suse_Machine_1	Shutdown	Unknown

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

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

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

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain. On the left, there are summary cards for Servers (2 Down, 1 Up), Clusters (2 Down), and Deployments (7 Down, 1 Up). The main area displays the 'Administration Server' details and a table of managed servers. A 'Control' menu is open over the table, with 'Start' selected.

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

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

The screenshot shows the Oracle Enterprise Manager interface after the servers have been started. The summary cards now show 3 Up Servers, 2 Up Clusters, and 7 Up Deployments. The table of managed servers now includes a 'Status' column with green up arrows, and all servers are in a 'Running' state.

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_Machine_1	Running	OK
WC_Portal	↑	wcp_cluster_1	suse_Machine_1	Running	OK
WC_Portlet	↑	wcp_cluster_2	suse_Machine_1	Running	OK

Checking WebCenter Servers state through Oracle WLST tool.

```

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".

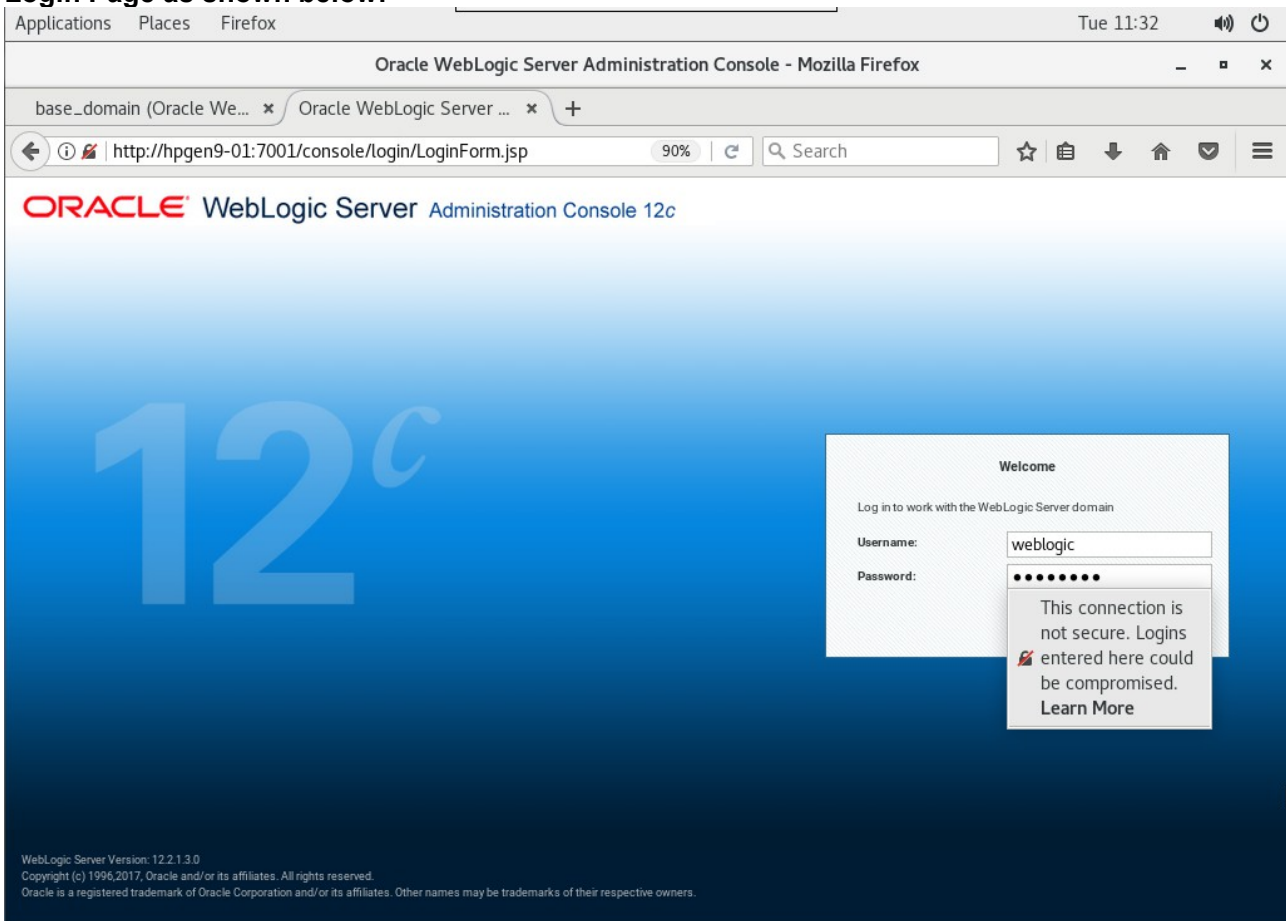
Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

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:



base\_domain (Oracle We... x Oracle WebLogic Server ... x +

Oracle WebLogic Server Administration Console - Mozilla Firefox

base\_domain (Oracle We... x Oracle WebLogic Server ... x +

http://hpgen9-01:7001/console/login/LoginForm.jsp 90% Search

**ORACLE** WebLogic Server Administration Console 12c

**12<sup>c</sup>**

**Welcome**

Log in to work with the WebLogic Server domain

Username:

Password:

This connection is not secure. Logins entered here could be compromised. [Learn More](#)

WebLogic Server Version: 12.2.1.3.0  
Copyright (c) 1996,2017, 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 WebLogic Server Administration Console 12c Home Page. The browser window title is "Home Page - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://hpgen9-01:7001/console/console.portal?\_nfpb=true&". The page features a navigation bar with "Home", "Log Out", "Preferences", "Record", and "Help" options. The main content area is divided into several sections:

- Change Center:** Includes "View changes and restarts" and buttons for "Lock & Edit" and "Release Configuration".
- Domain Structure:** A tree view showing the hierarchy: base\_domain > Domain Partitions > Environment > Deployments > Services > Security Realms > Interoperability > Diagnostics.
- How do I...:** A list of tasks such as "Search the configuration", "Use the Change Center", "Record WLST scripts", "Change Console preferences", "Manage Console extensions", and "Monitor servers".
- System Status:** Shows "Health of Running Servers as of 11:31 AM".
- Information and Resources:** Includes "Helpful Tools" (Configure applications, GridLink for RAC Data Source, Dynamic Cluster, Task Status, preferences, Oracle Enterprise Manager) and "General Information" (Common Administration Task Descriptions, documentation, My Oracle Support).
- Domain Configurations:** Lists "Domain", "Domain Partitions", and "Environment".
- Resource Group Templates:** Lists "Resource Group Templates".
- Resource Groups:** Lists "Resource Groups".
- Deployed Resources:** Lists "Deployments".
- Services:** Lists "Messaging" (JMS Servers, Store-and-Forward Agents, JMS Modules, Path Services, Bridges).
- Interoperability:** Lists "WTC Servers" and "Jolt Connection Pools".
- Diagnostics:** Lists "Log Files", "Diagnostic Modules", "Built-in Diagnostic Modules", "Diagnostic Images", "Request Performance", "Archives", "Context", "SNMP", and "Interceptors".
- Charts and Graphs:** A section for visual data representation.

Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console 12c Summary of Servers page. The browser window title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p". The page features a navigation bar with "Home", "Log Out", "Preferences", "Record", and "Help" options. The main content area is divided into several sections:

- Change Center:** Includes "View changes and restarts" and buttons for "Lock & Edit" and "Release Configuration".
- Domain Structure:** A tree view showing the hierarchy: base\_domain > Domain Partitions > Environment > Deployments > Services > Security Realms > Interoperability > Diagnostics.
- How do I...:** A list of tasks such as "Create Managed Servers", "Clone servers", "Delete Managed Servers", "Delete the Administration Server", "Start and stop servers", and "View objects in the JNDI tree".
- System Status:** Shows "Health of Running Servers as of 11:32 AM".
- Summary of Servers:** Includes "Configuration" and "Control" tabs. A description states: "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 this is a "Customize this table" link and a "Servers (Filtered - More Columns Exist)" section with a "Lock & Edit" button.

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		suse_Machine_1	RUNNING	OK	7001
WC_Portlet	Configured	wcp_cluster_1	suse_Machine_1	RUNNING	OK	8888
WC_Portlet	Configured	wcp_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>)

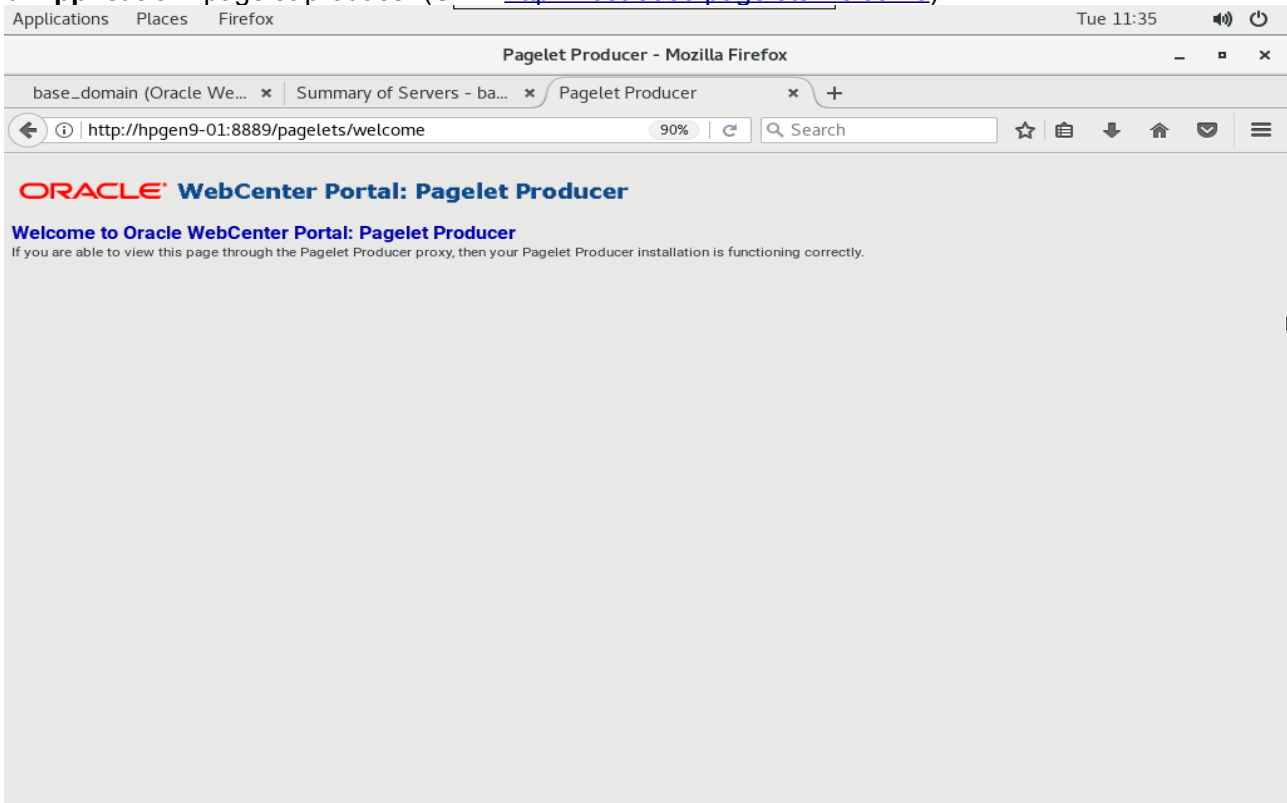
This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

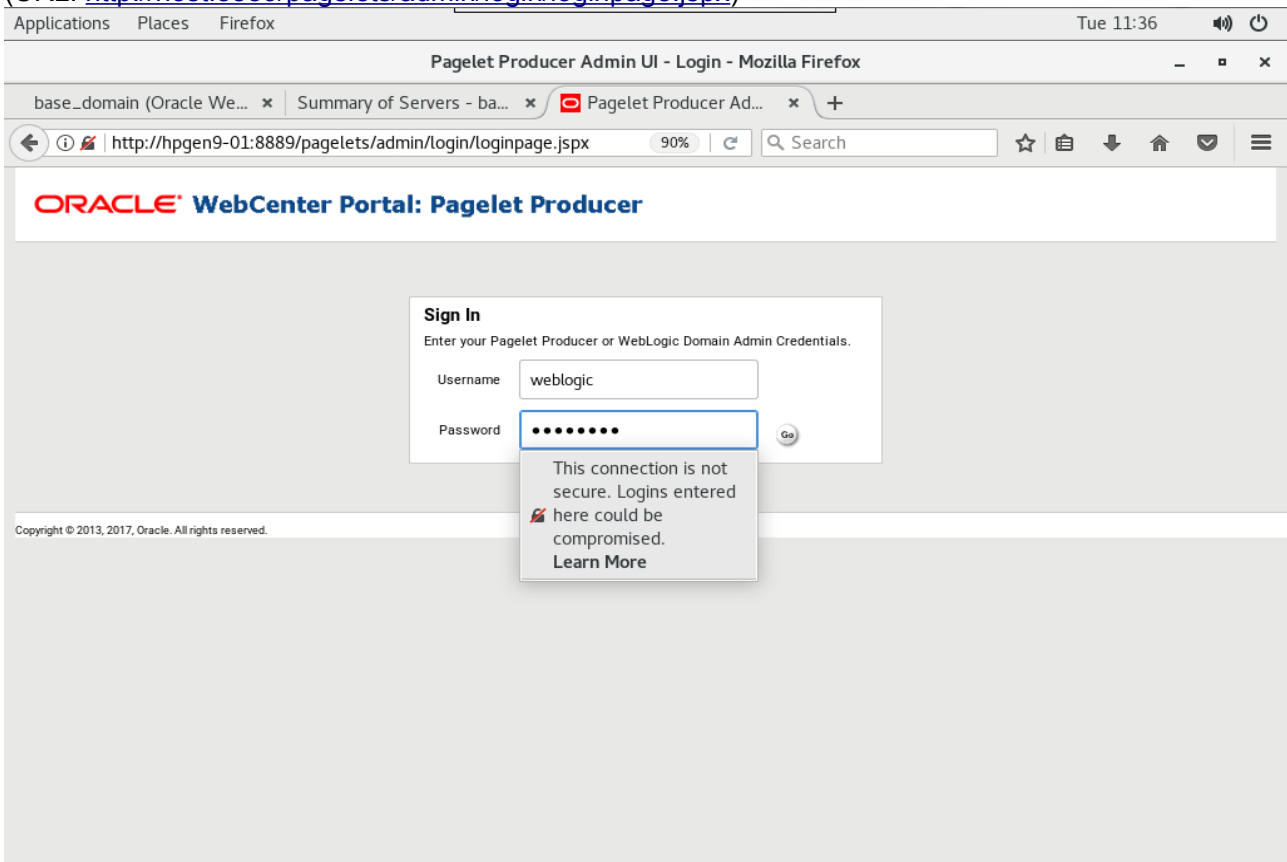
- <ns0:application>
- <ns0:doc title="Oracle Identity API Definition" xml:lang="en">
  Oracle Identity Manager exposes a set of URI resources providing RESTful APIs for product functionality. This file contains the definition for a single API. Refer to the Developer's Guide for the complete list of supported 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 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>
  
```



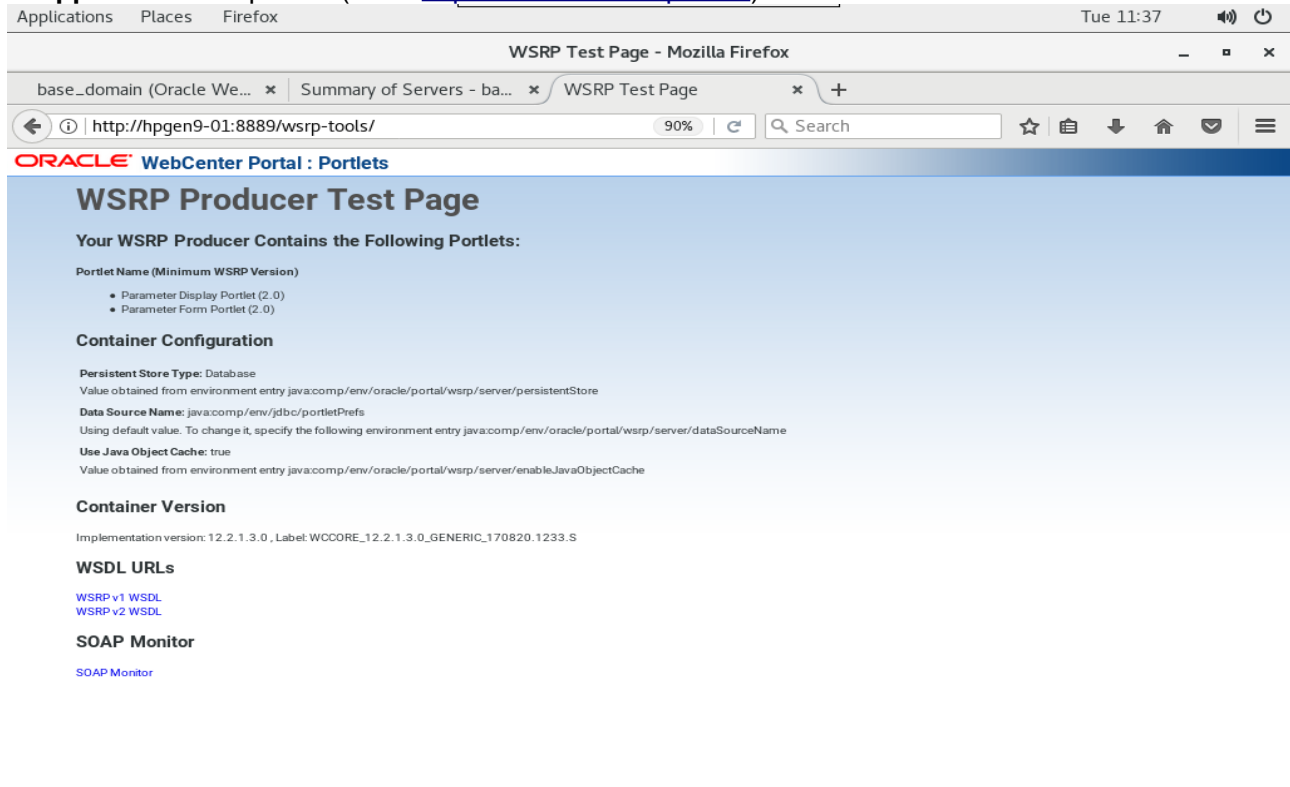
b. **Application:** pagelet-producer (URL: <http://host:8889/pagelets/welcome>)



(URL: <http://host:8889/pagelets/admin/login/loginpage.jsp>)



The screenshot shows the Oracle WebCenter Portal: Pagelet Producer interface. The browser window title is "Oracle WebCenter Portal: Pagelet Producer - Mozilla Firefox". The address bar shows the URL "http://hpgen9-01:8889/pagelets/admin/". The page header includes the Oracle logo and the text "WebCenter Portal: Pagelet Producer". A "Logout" link is visible in the top right corner. The main content area is divided into two sections: "Navigator" and "Summary". The "Navigator" section shows a tree view of resources, with "welcome\_resource" selected. The "Summary" section contains a message: "This resource is based on a generic website. Select the General node and give this resource a name and and edit resource details. To save this resource, click the Save button in the Navigator toolbar." The footer of the page reads "Copyright © 2013, 2017, Oracle. All rights reserved."

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


Applications Places Firefox Tue 11:37

WSRP Test Page - Mozilla Firefox

base\_domain (Oracle We... x Summary of Servers - ba... x WSRP Test Page x +

http://hpgen9-01:8889/wsrp-tools/ 90% Search

**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**

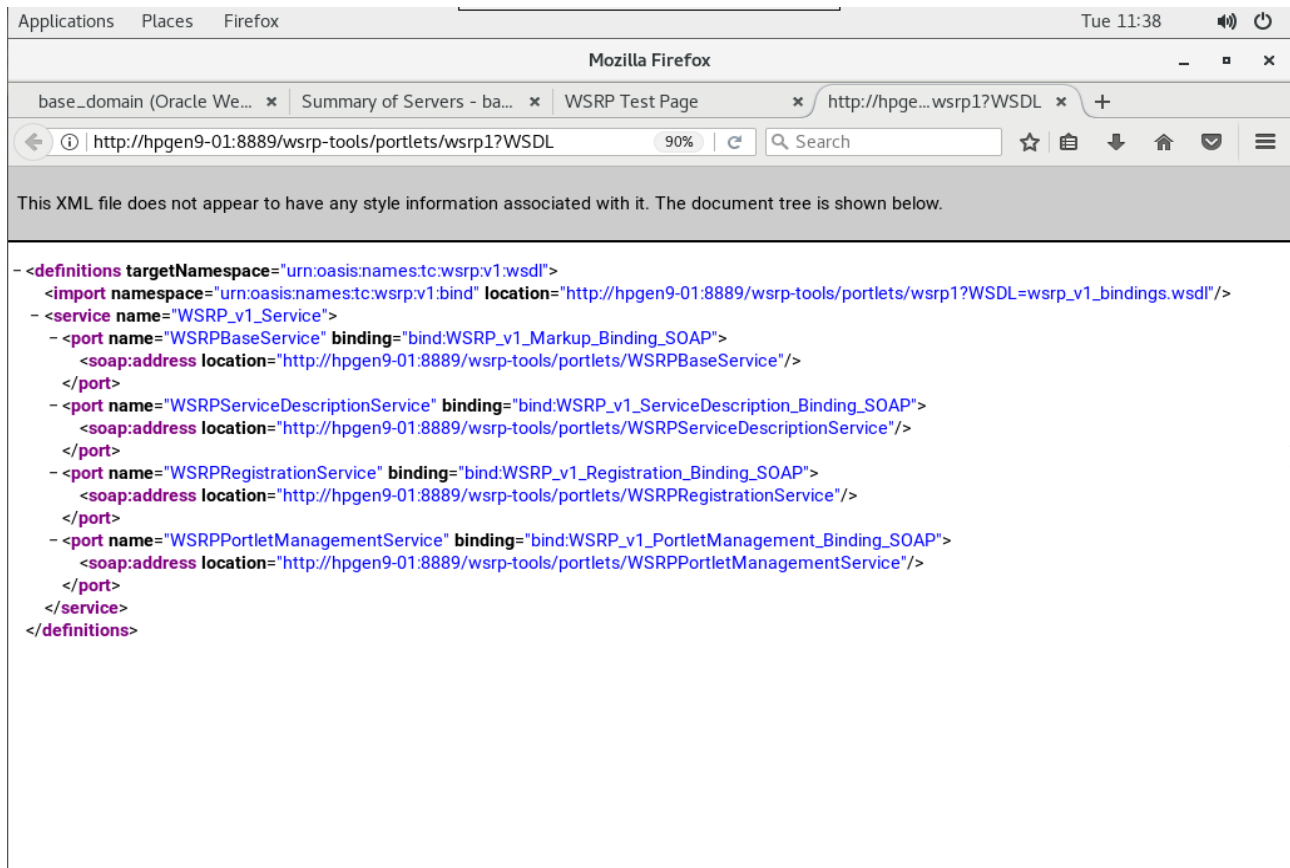
Implementation version: 12.2.1.3.0, Label: WCCORE\_12.2.1.3.0\_GENERIC\_170820.1233.S

**WSDL URLs**

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

**SOAP Monitor**

[SOAP Monitor](#)



Applications Places Firefox Tue 11:38

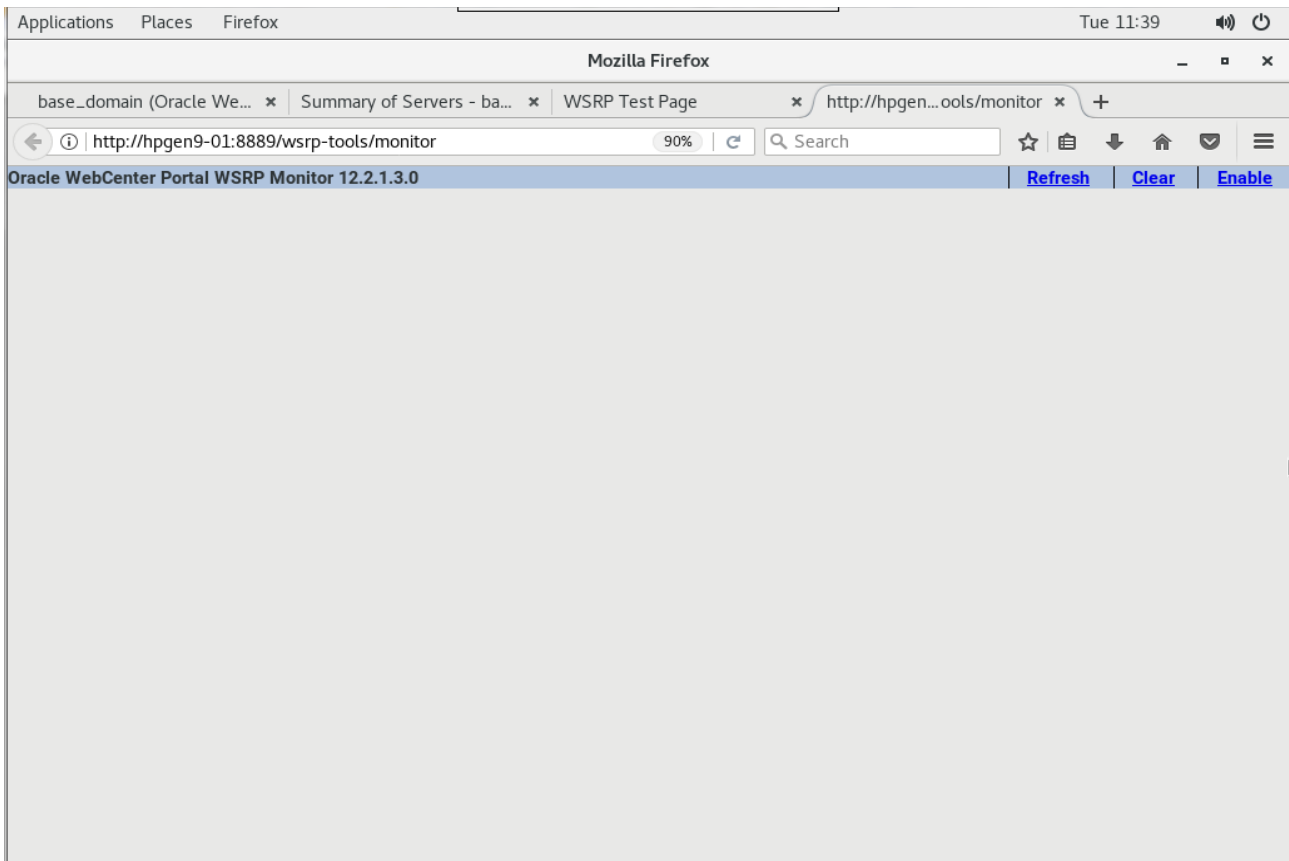
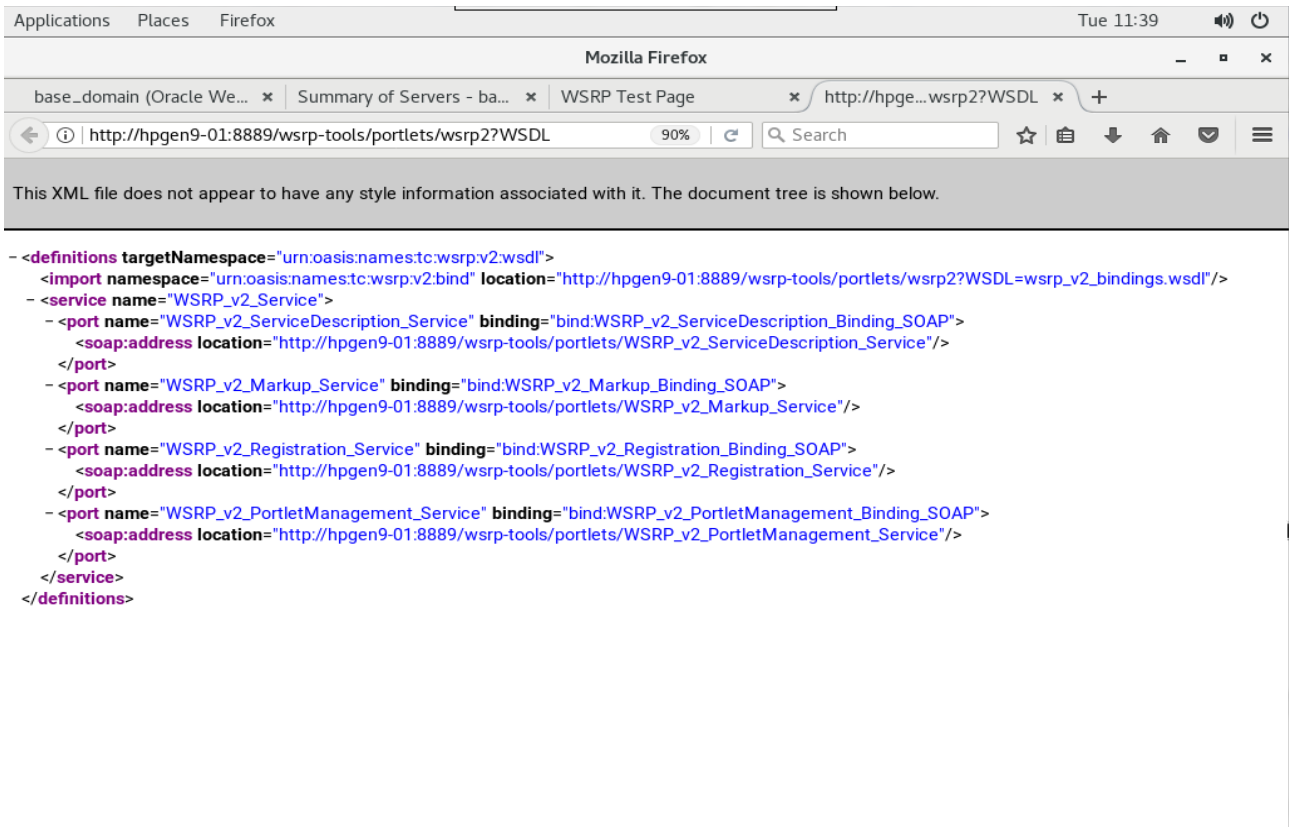
Mozilla Firefox

base\_domain (Oracle We... x Summary of Servers - ba... x WSRP Test Page x http://hpge...wsrp1?WSDL x +

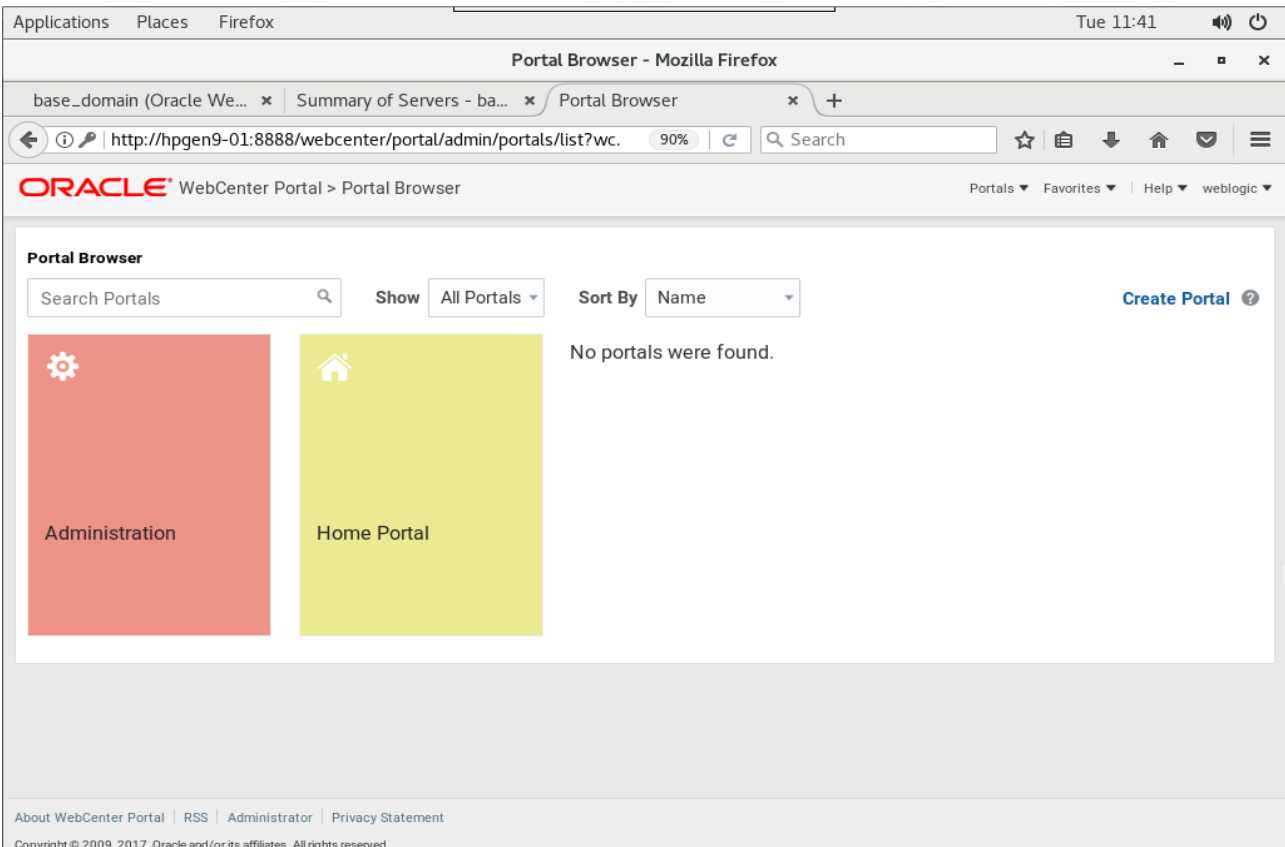
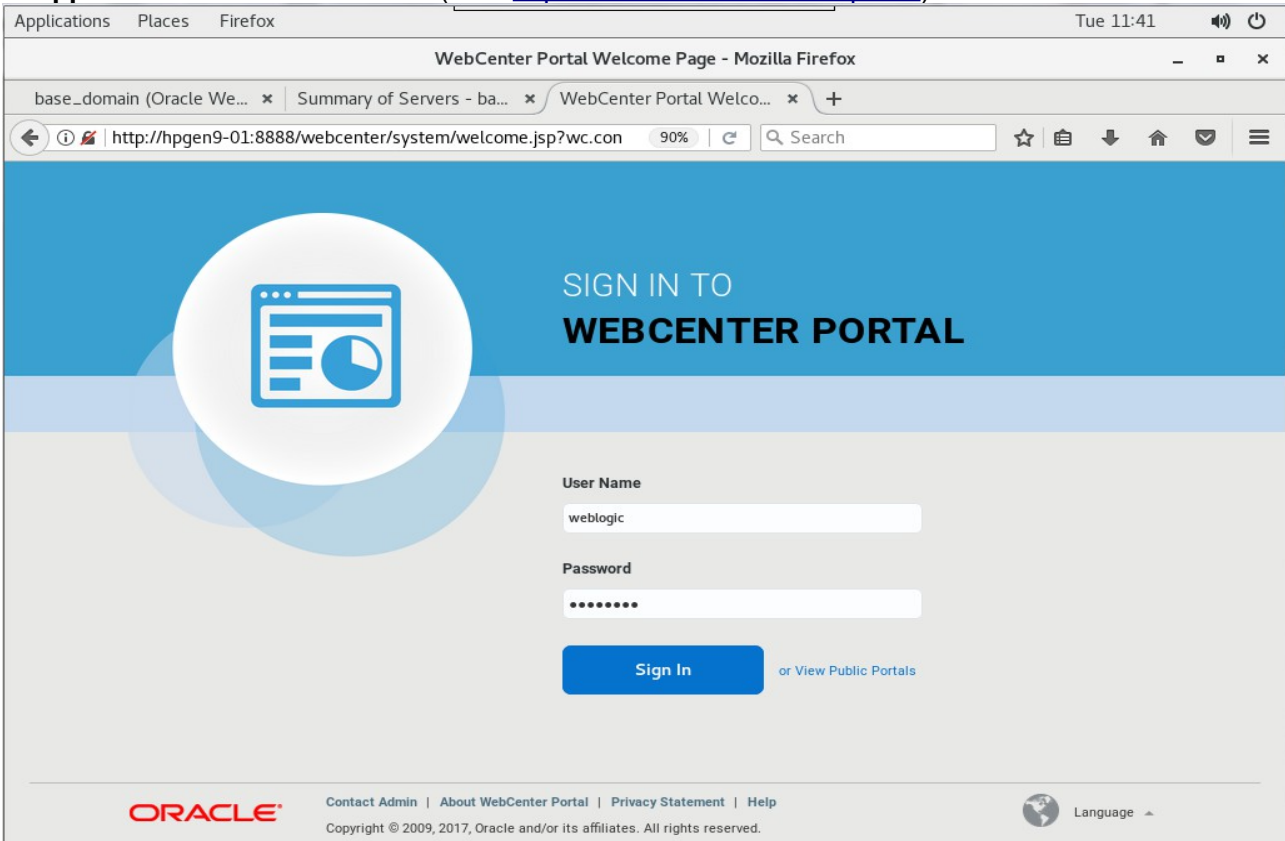
http://hpgen9-01:8889/wsrp-tools/portlets/wsrp1?WSDL 90% Search

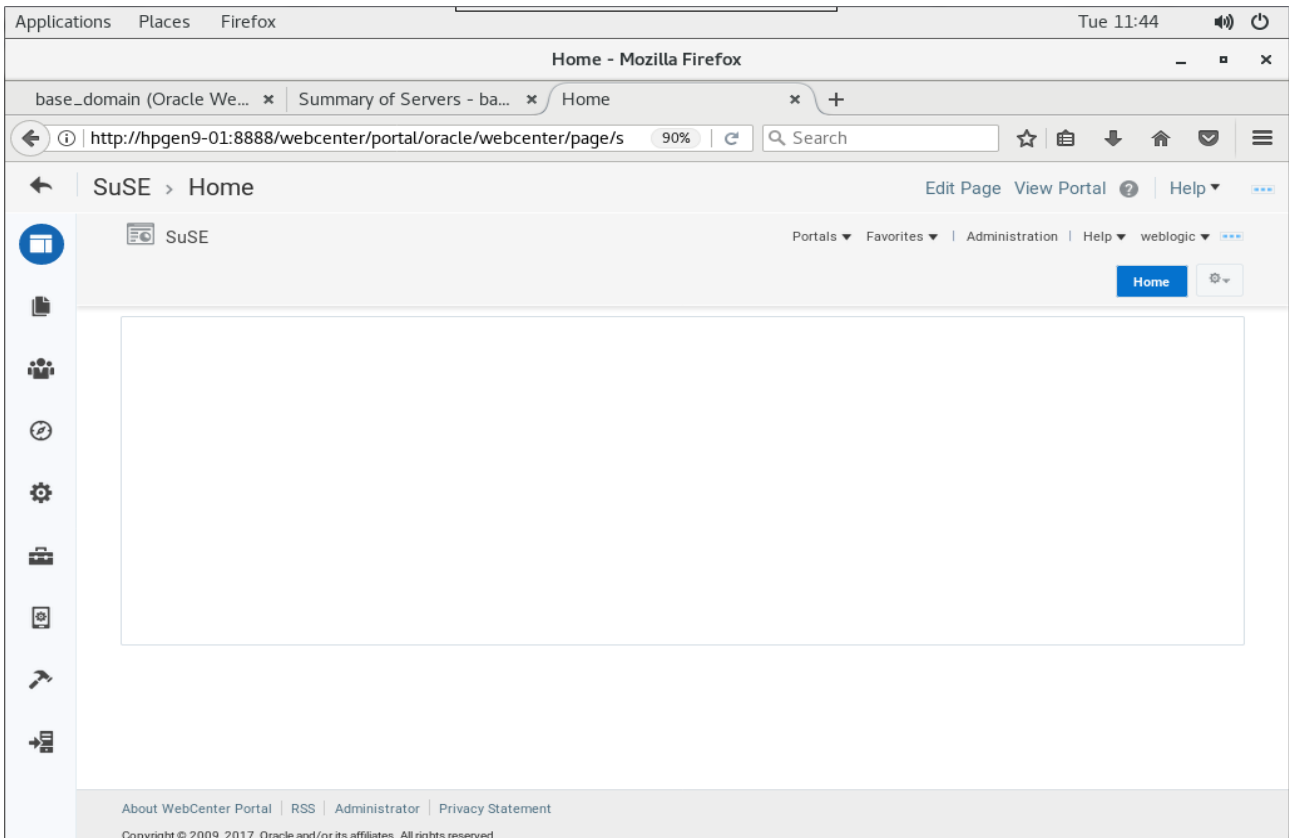
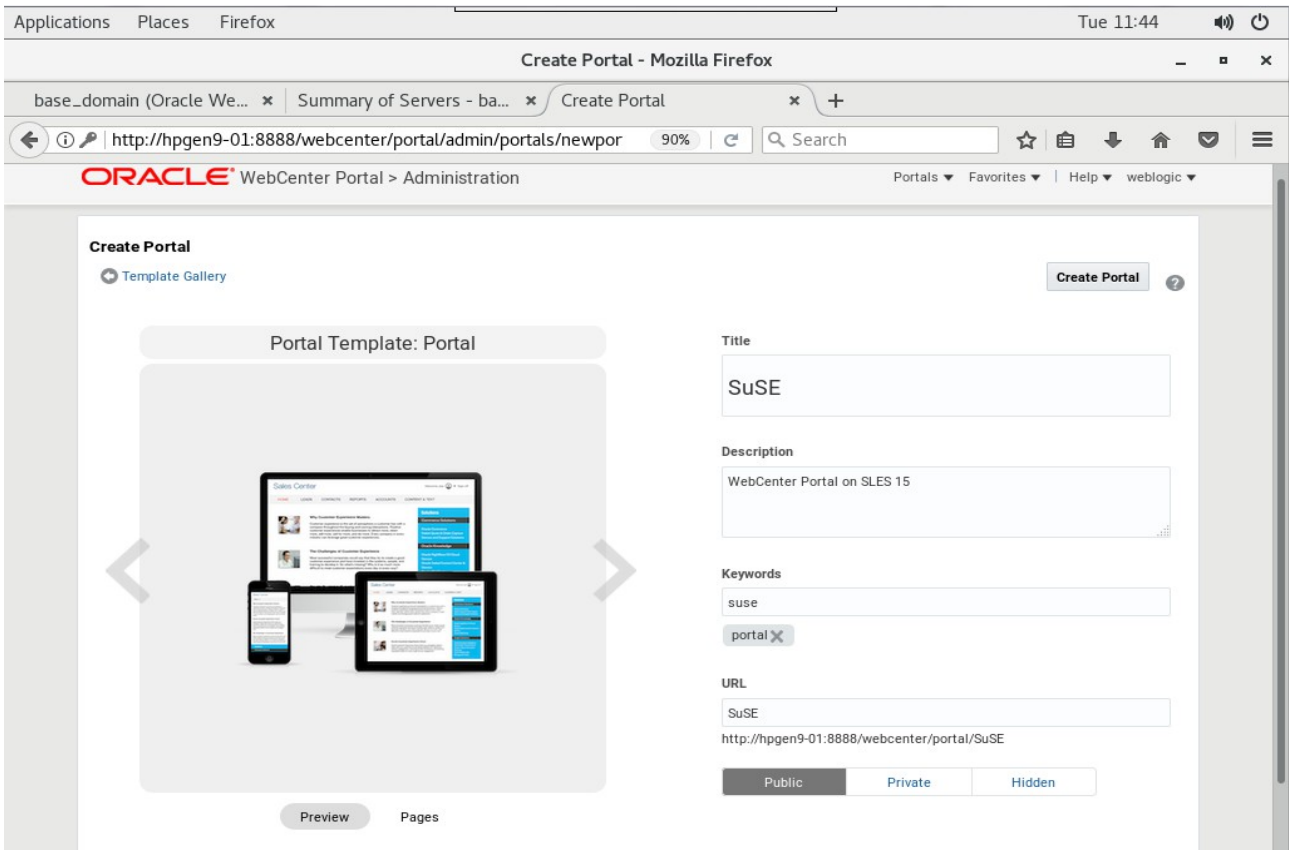
This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
- <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>
```



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





The screenshot shows a web browser window with the title "SuSE - General - Mozilla Firefox". The address bar displays the URL "http://hpgen9-01:8888/webcenter/portal/admin/portals/admin/SuS". The page content is organized into two main sections: "Portal Information" and "Portal Details".

**Portal Information**

- Title:** SuSE
- Acronym:** SU
- Description:** WebCenter Portal on SLES 15
- Portal Color:** A color selection tool with a "Choose Color" button.
- Keywords:** A text input field containing "portal" and "suse".
- Save:** A button to save the configuration.

**Portal Details**

- Name:** SuSE [Rename](#)
- Portal URL:** <http://hpgen9-01:8888/webcenter/portal/SuSE>
- Internal ID:** s149d32d4\_146a\_4040\_86a6\_12cf84d5c67c
- Members:** 1
- Last Activity:** 2 minutes ago

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

The screenshot shows a Mozilla Firefox browser window with the following details:

- Address bar: <http://hpge9-01:8888/collector/analytics-collector-diagnostics.jspx>
- Page Title: Analytics Collector
- Section: Collector Information
- Refresh button: Refresh
- Configuration Table:

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:

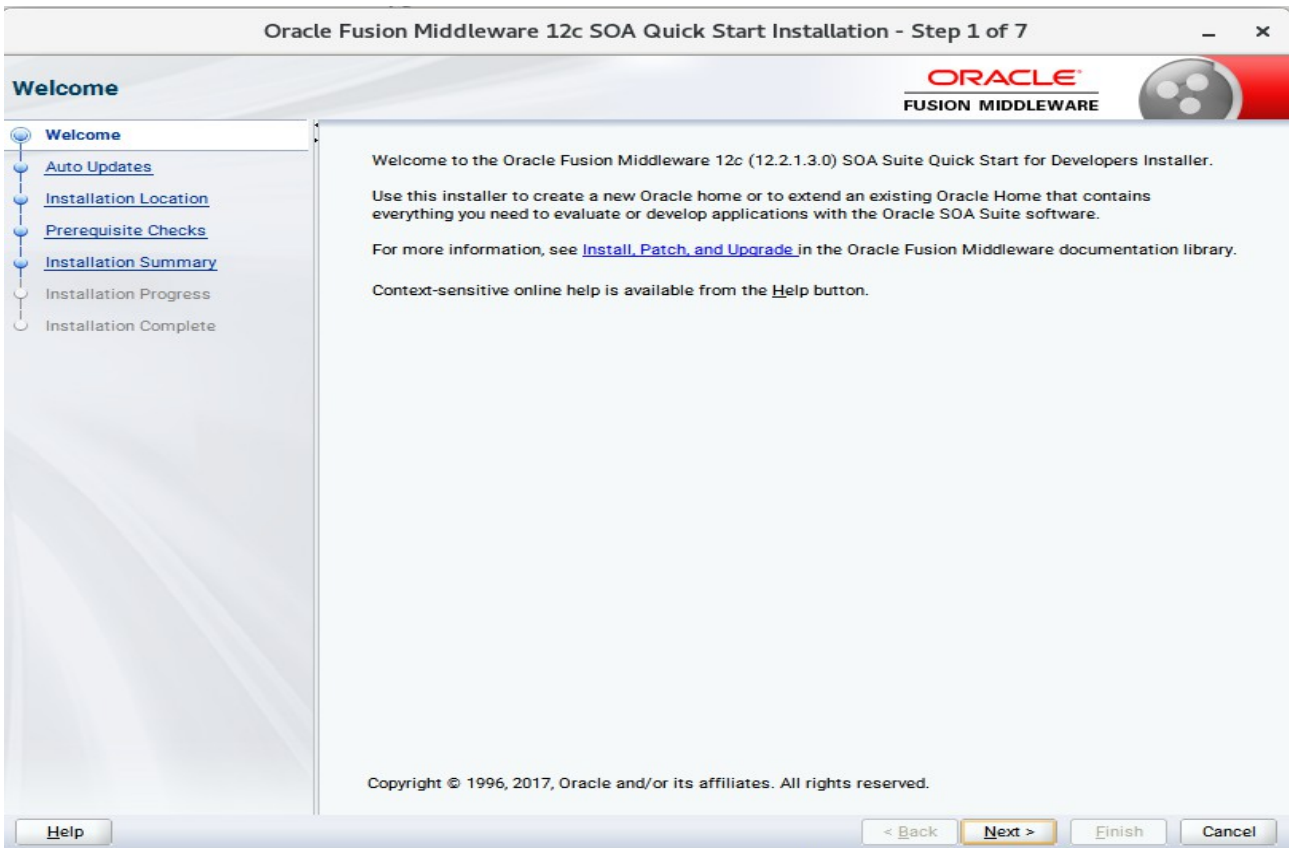
- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0\_131 and later installed.

1-2. Log in to the target system (SLES 15 64-bit OS) as a non-admin user. Download the Oracle SOA Suite 12c (12.2.1.3.0) Quick Start 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\_12.2.1.3.0\_soaqs\_Disk1\_1of2.zip") files and launch the installation program by running 'java -jar fmw\_12.2.1.3.0\_soa\_quickstart.jar'

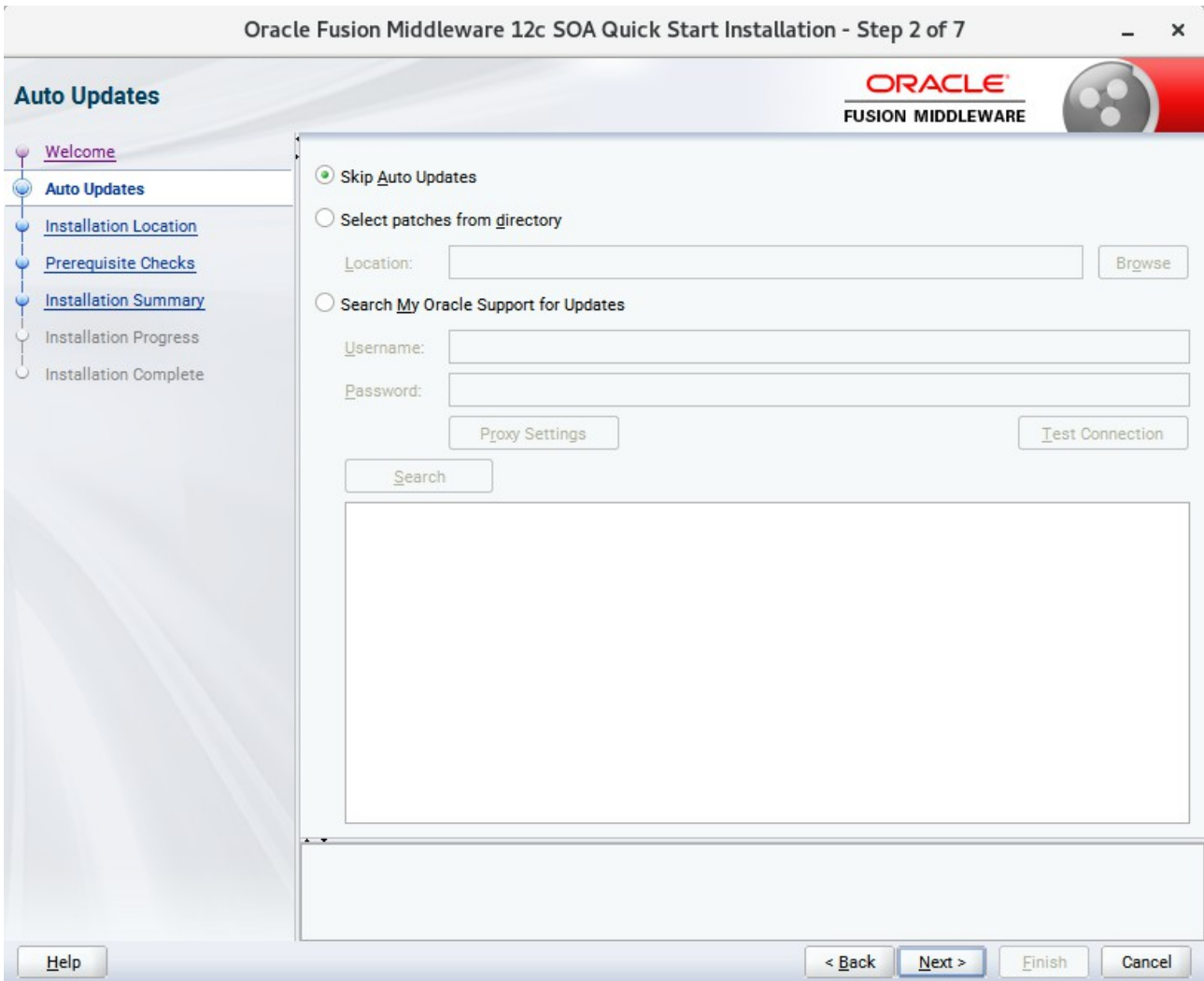
**For the actual installation, follow the steps below:**

- 1). Welcome page.



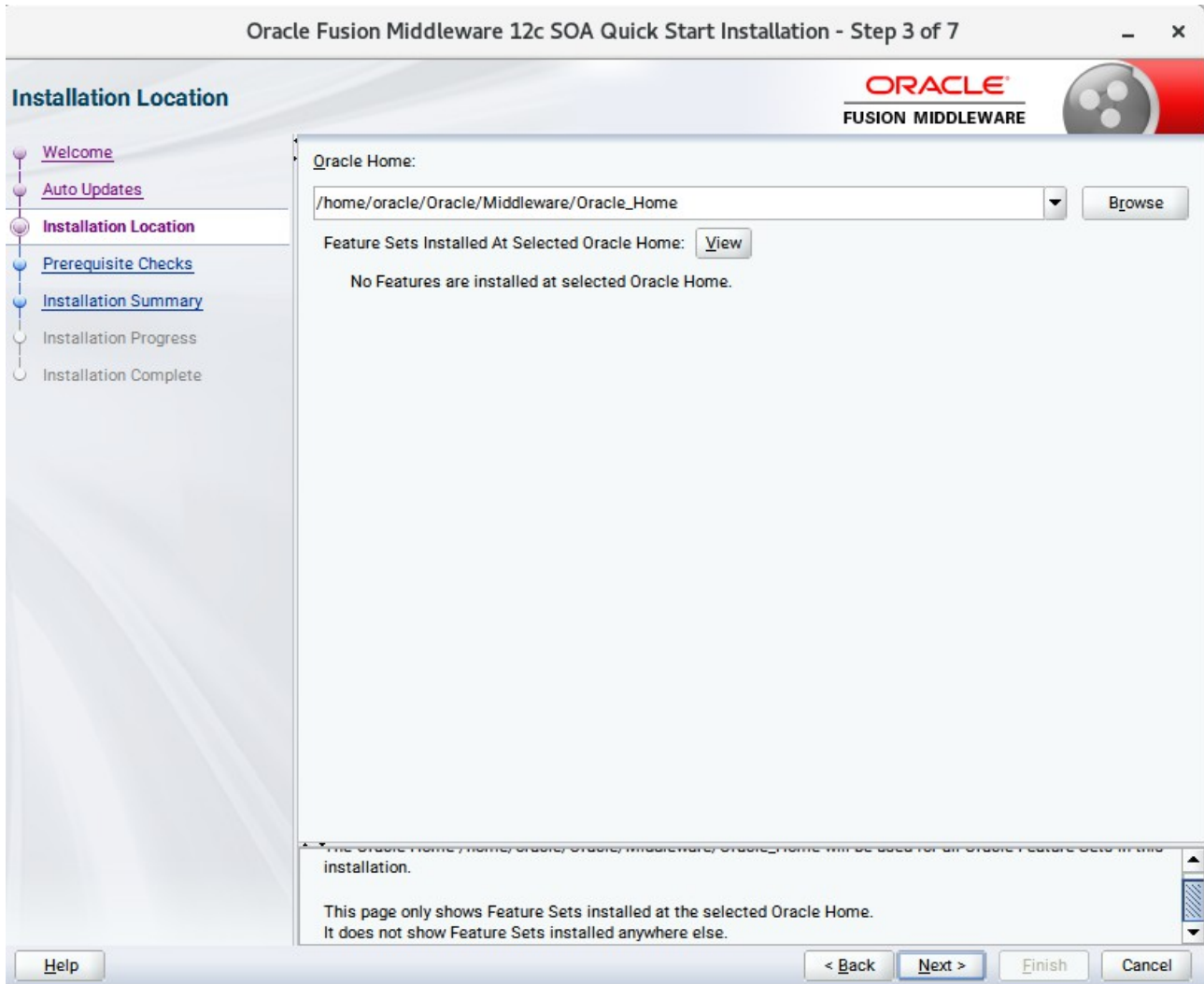
This page welcomes you to the installation. Click **Next** to continue.

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



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.

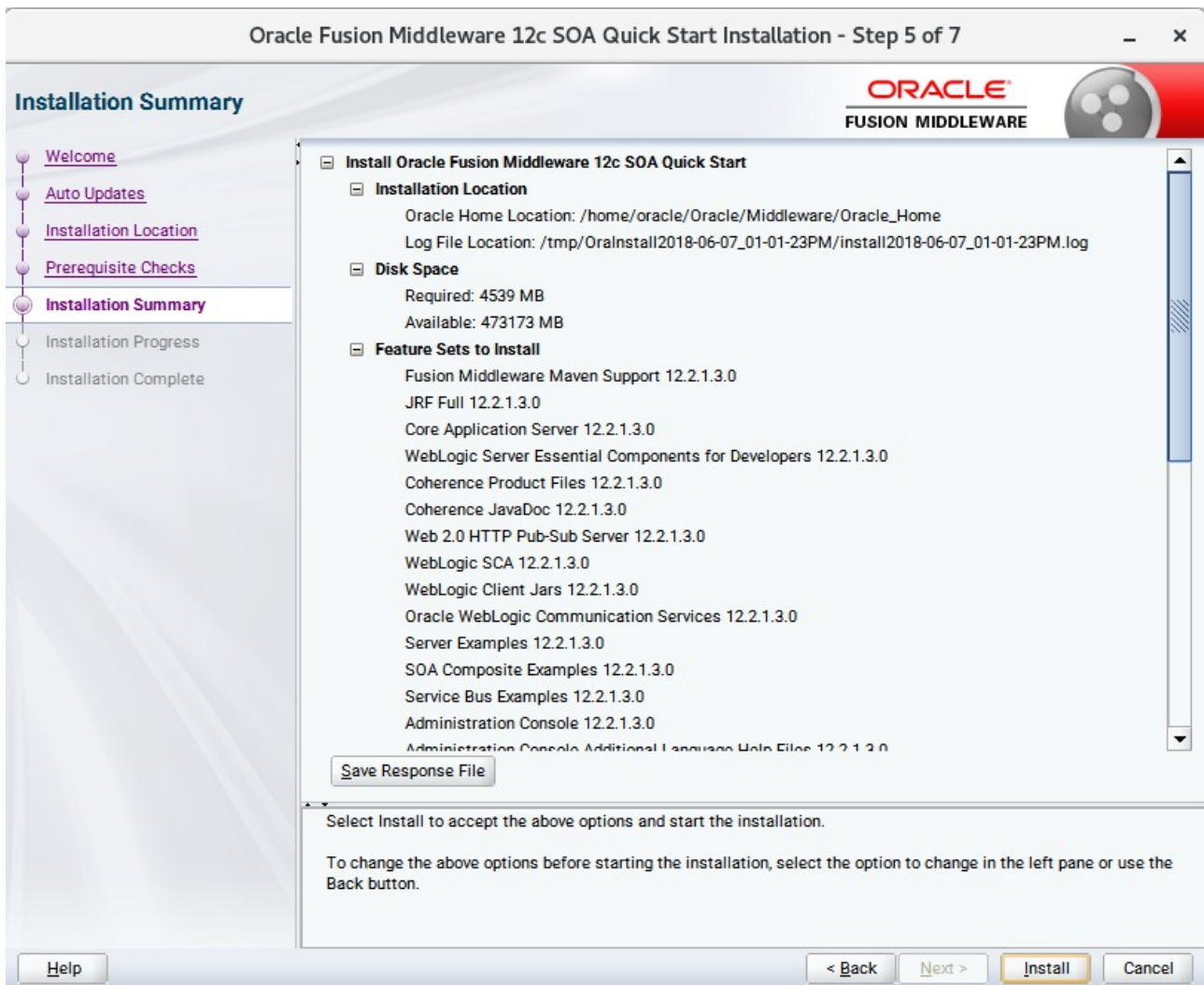
3). The **Installation Location** page appears.



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

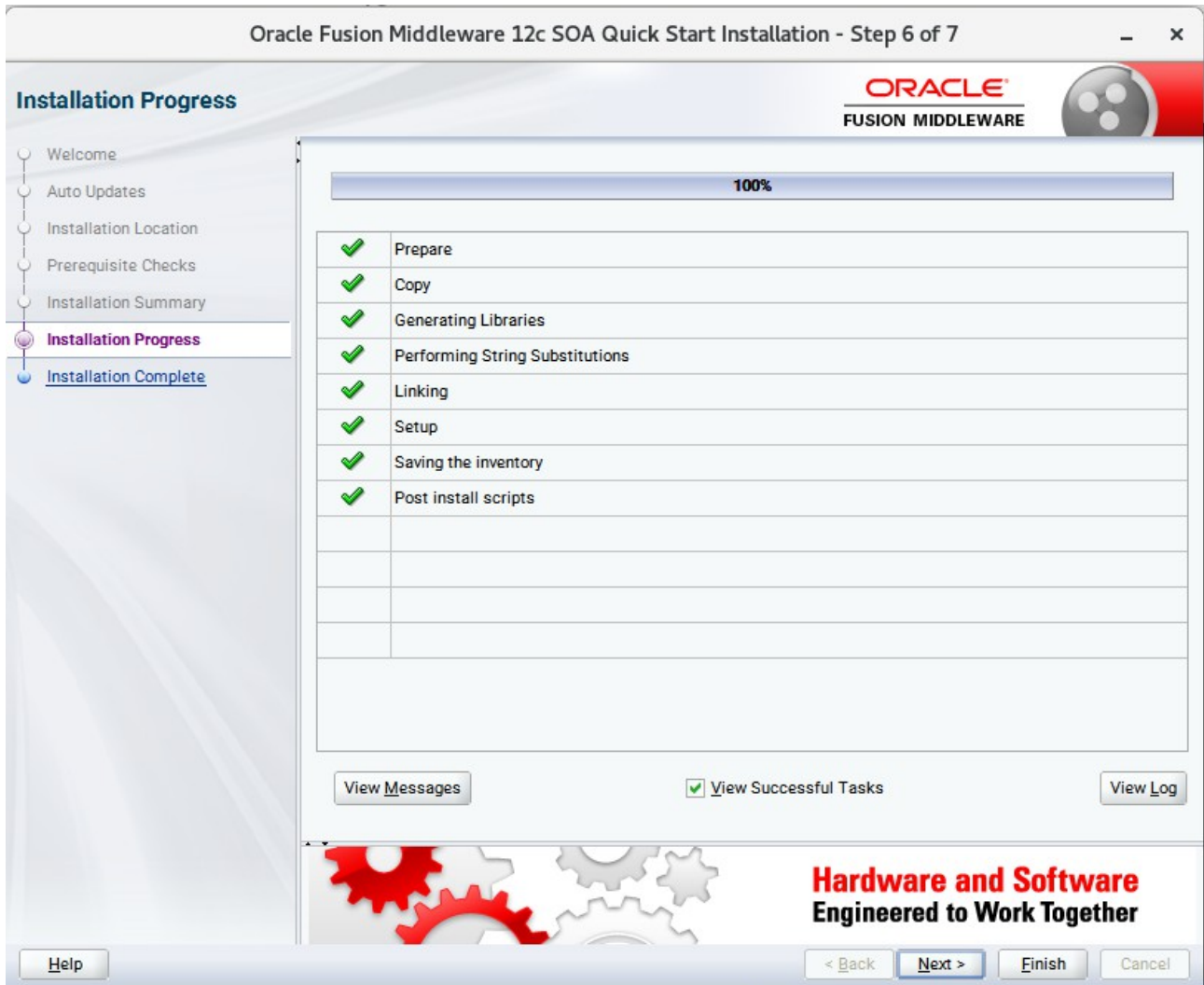


5). The **Installation Summary** page appears.



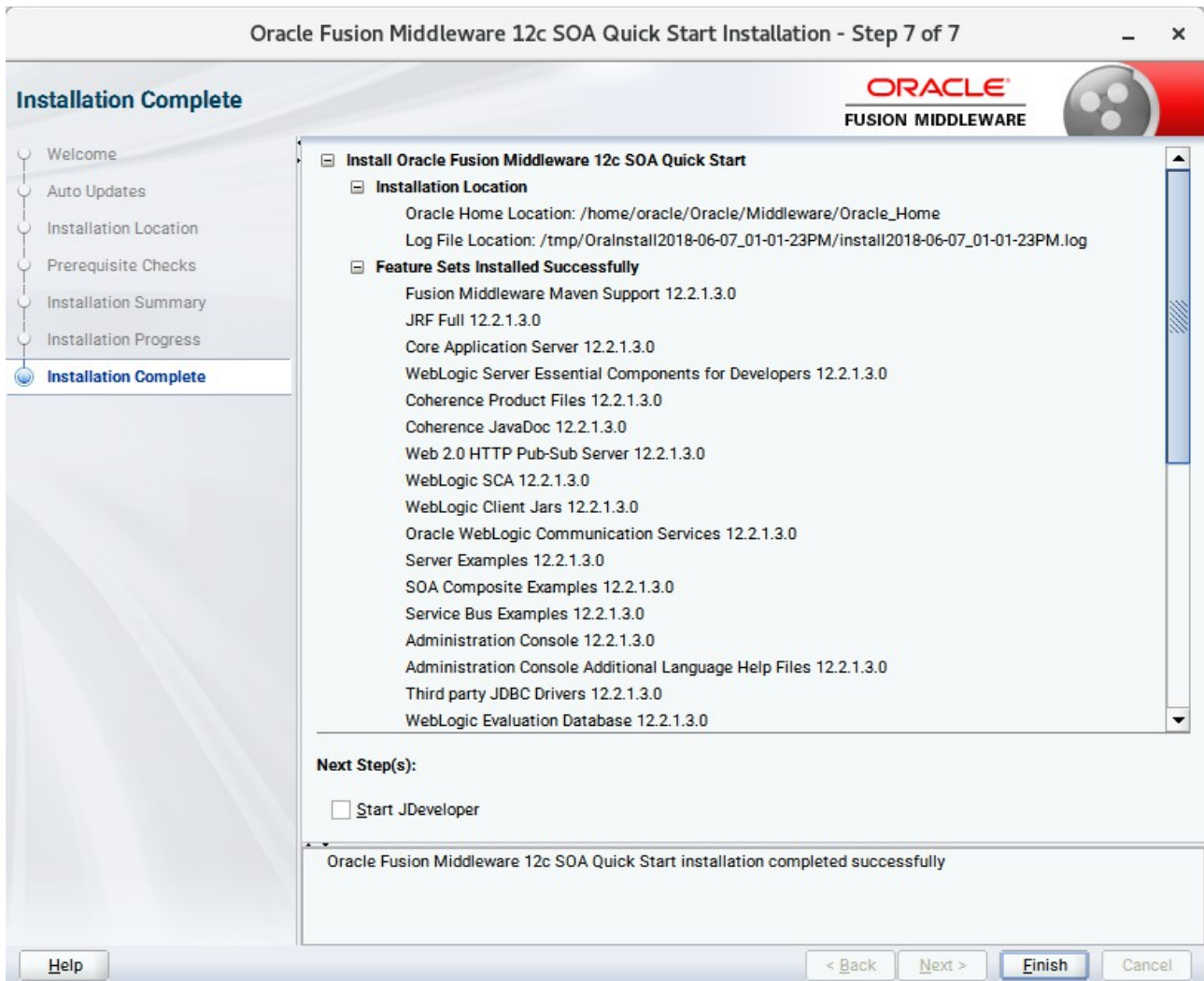
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

6). 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**.

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

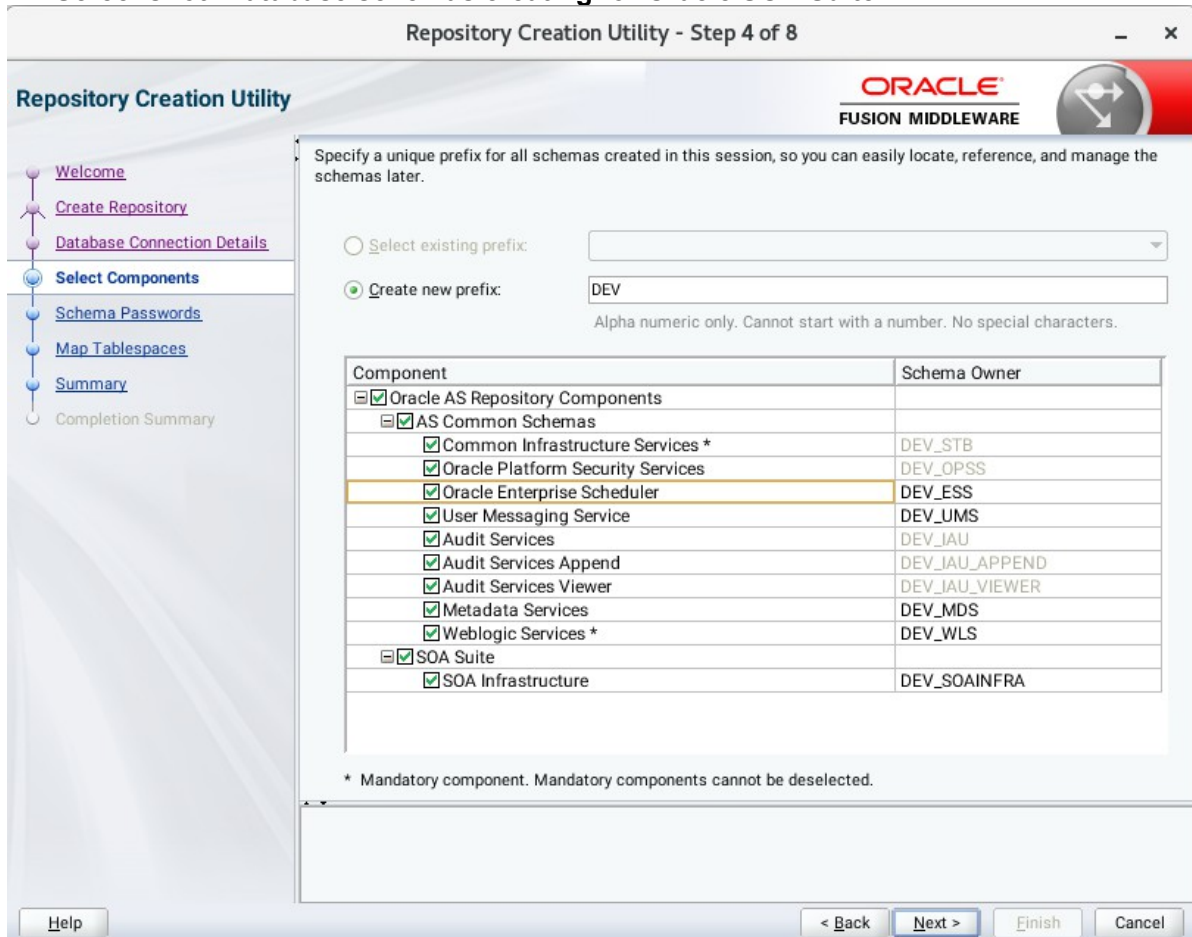


At the bottom of this screen, there is a checkbox to launch Oracle JDeveloper upon closing the installation wizard. This guide recommends that you uncheck this box. Click **Finish** to dismiss the installer.

## 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, and ensure schema creation is successful.



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

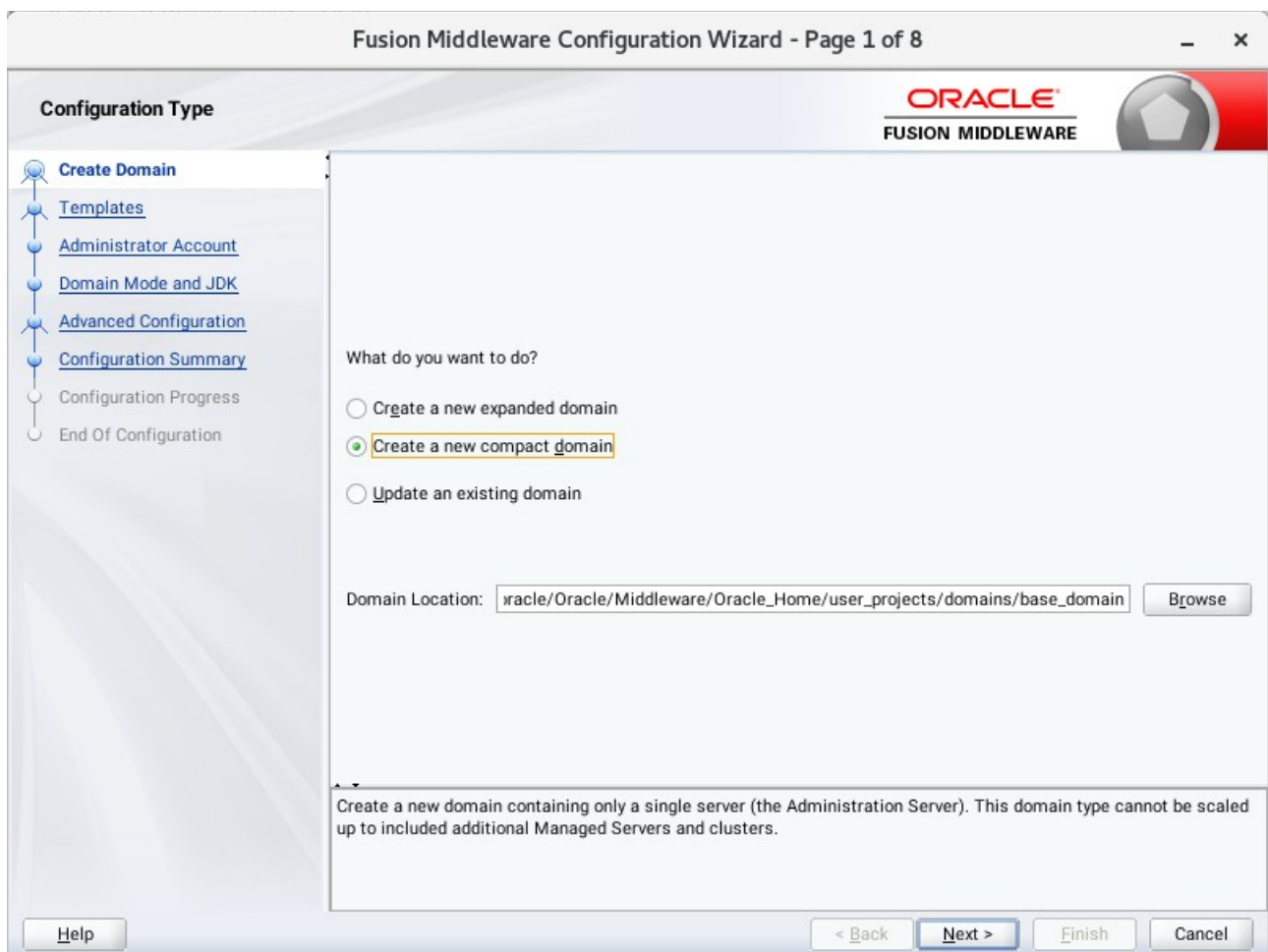
3-1. Go to **ORACLE\_HOME/oracle\_common/common/bin**. Set the environment variable **CONFIG\_JVM\_ARGS** to **-Dcom.oracle.cie.config.showProfile=true**. This will activate the compact domain option in the configuration wizard. Then launch the configuration wizard.

Example commands for this task are as follows:

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

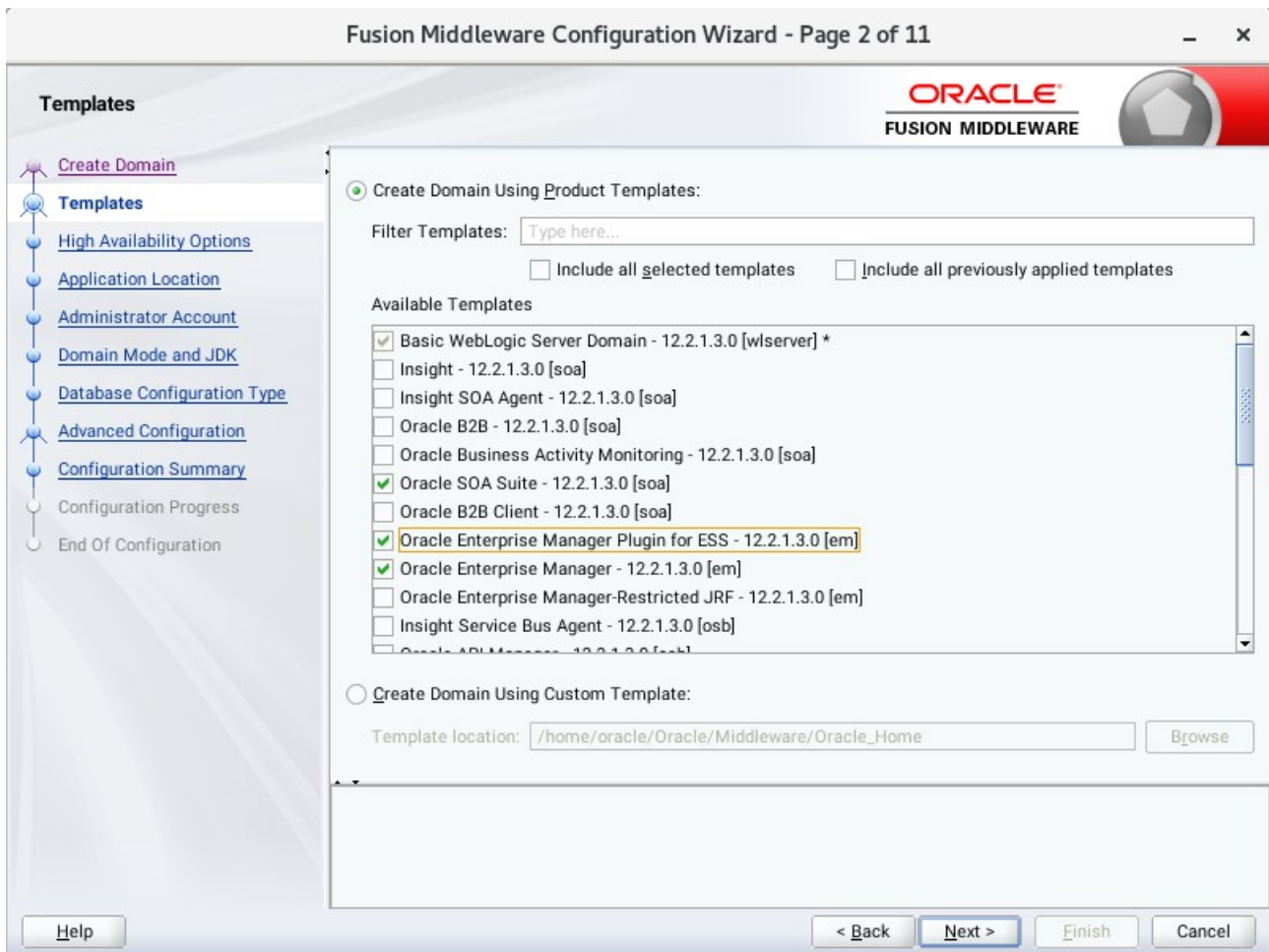
#### Follow these steps:

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



Click **Next** to continue.

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

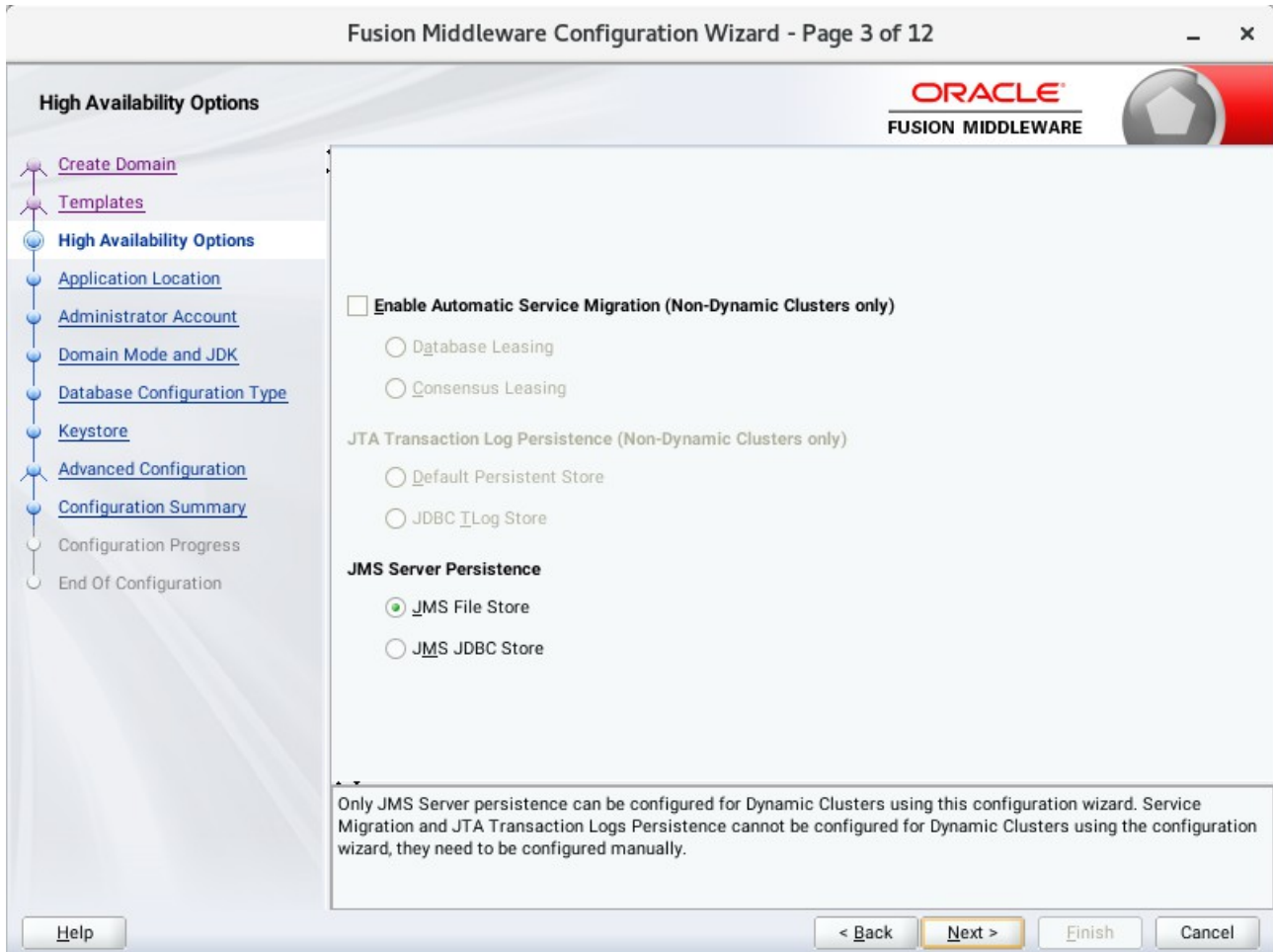


Use the **Templates** screen to select the templates you require. On the **Templates** screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

- Oracle SOA Suite – 12.2.1.3.0[soa]  
Selecting this template automatically selects the following as dependencies:
  - Oracle Enterprise Manager – 12.2.1.3.0 [em]
  - Oracle WSM Policy Manager – 12.2.1.3 [oracle\_common]
  - Oracle JRF – 12.2.1.3.0 [oracle\_common]
  - WebLogic Coherence Cluster Extension – 12.2.1.3.0 [wlserver]
- Oracle Service Bus – 12.2.1.3.0 [osb]  
Selecting this template automatically selects the following as a dependency:
  - ODSI XQuery 2004 Components – 12.1.3.0 [oracle\_common]
- WebLogic Advanced Web Services for JAX-RPC Extension -- 12.2.1.3.0 [oracle\_common]
- Oracle Enterprise Scheduler Service Basic – 12.2.1.3.0 [oracle\_common]
- Oracle Enterprise Manager Plugin for ESS – 12.2.1.3.0 [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.



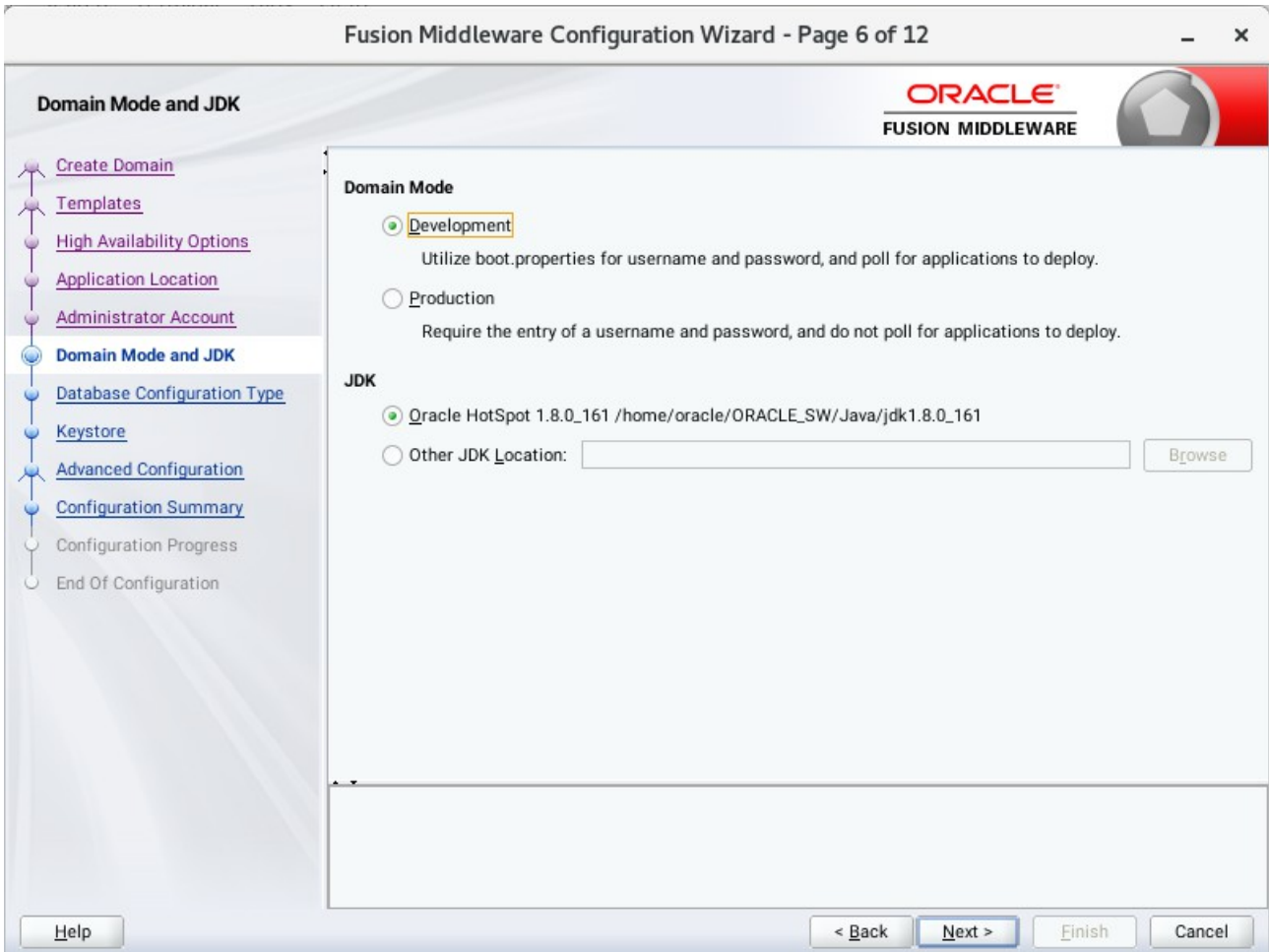
Keep the default value for Application location. Click **Next** to continue.

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 these fields is a note: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

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

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



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

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

Fusion Middleware Configuration Wizard - Page 7 of 14

**Database Configuration Type**

ORACLE  
FUSION MIDDLEWARE

Specify AutoConfiguration Options Using:

RCU Data    Embedded Database (JavaDB)    Manual Configuration

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

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

Connection Parameters    Connection URL String

Host Name: 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.

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.

**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.

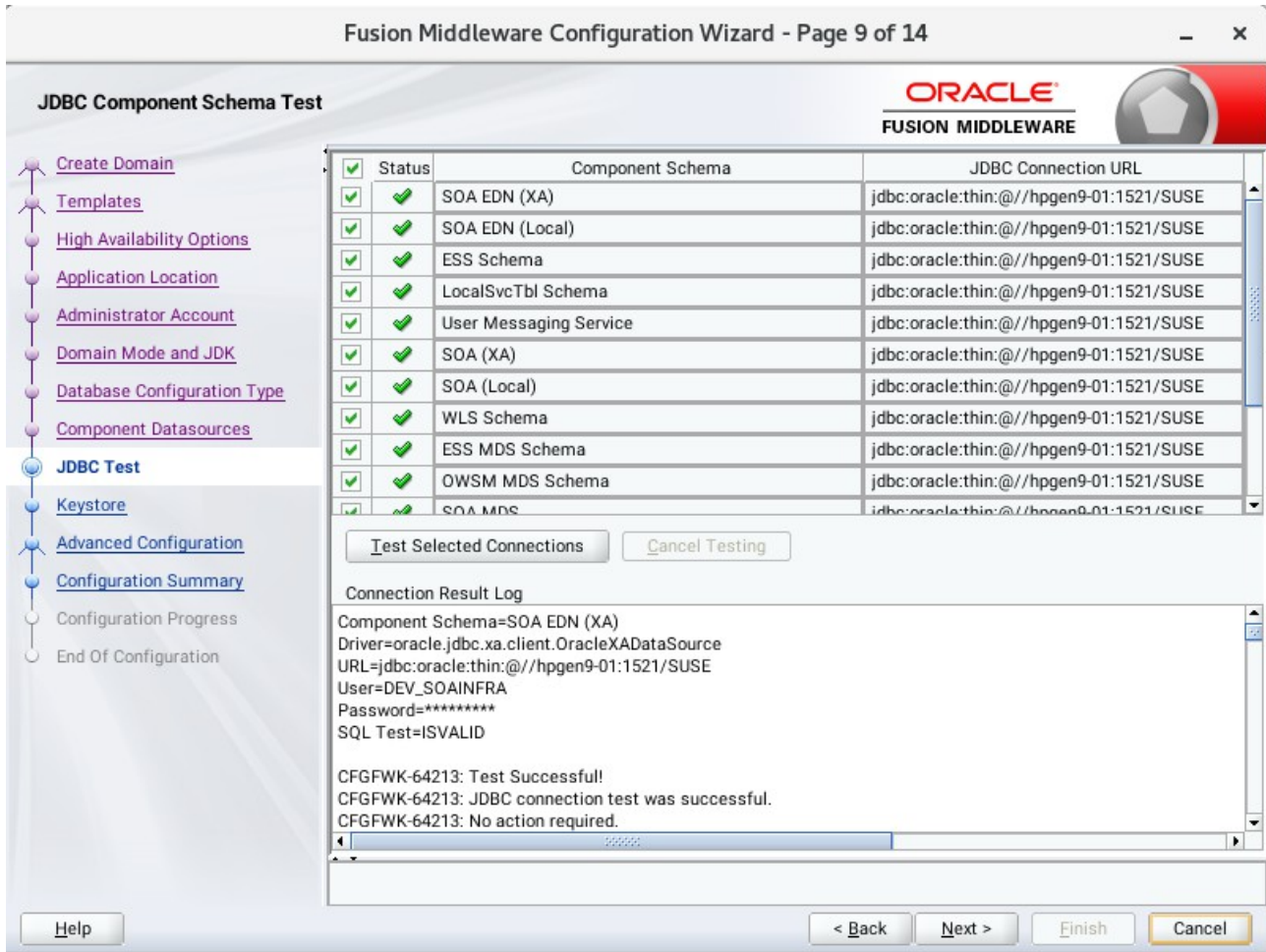
<input type="checkbox"/>	Component Schema	DBMS/Ser...	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	SOA EDN (XA)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	SOA EDN (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	ESS Schema	SUSE	hpgen9-01	1521	DEV_ESS	.....
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	DEV_STB	.....
<input type="checkbox"/>	User Messaging Service	SUSE	hpgen9-01	1521	DEV_UMS	.....
<input type="checkbox"/>	SOA (XA)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	SOA (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUNTIME	.....
<input type="checkbox"/>	ESS MDS Schema	SUSE	hpgen9-01	1521	DEV_MDS	.....

Help

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

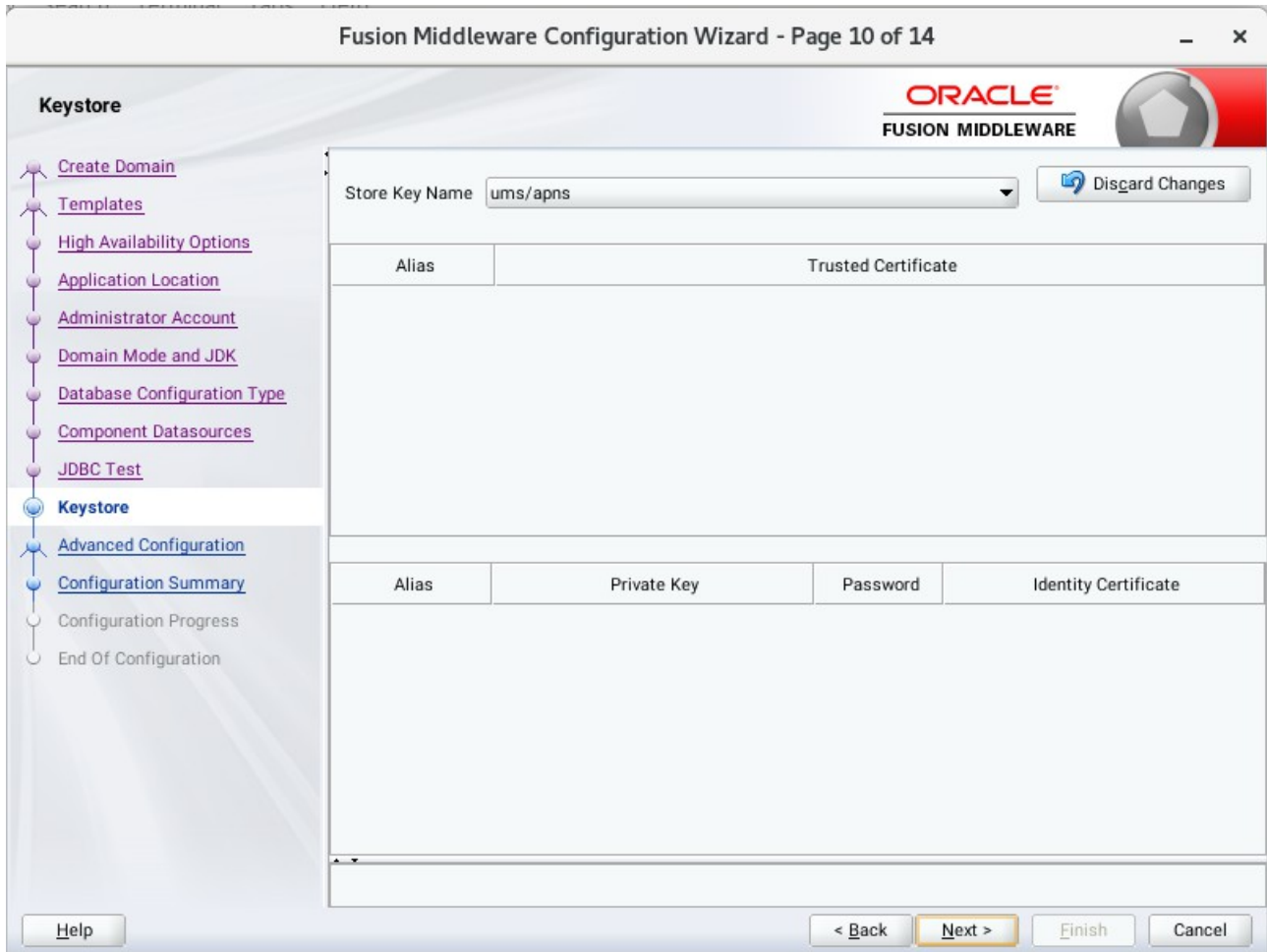


9). The **JDBC Component Schema Test** screen appears.



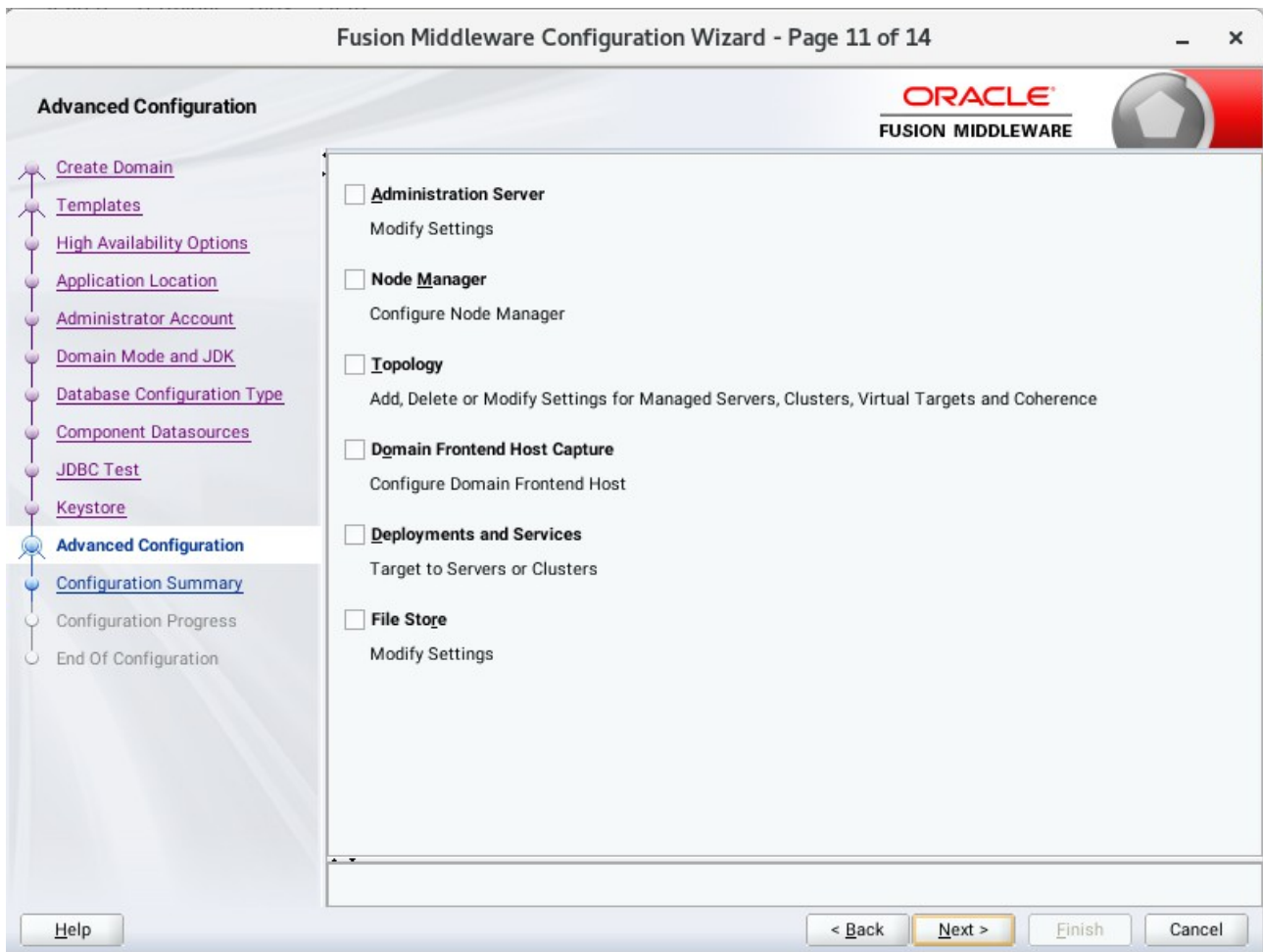
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



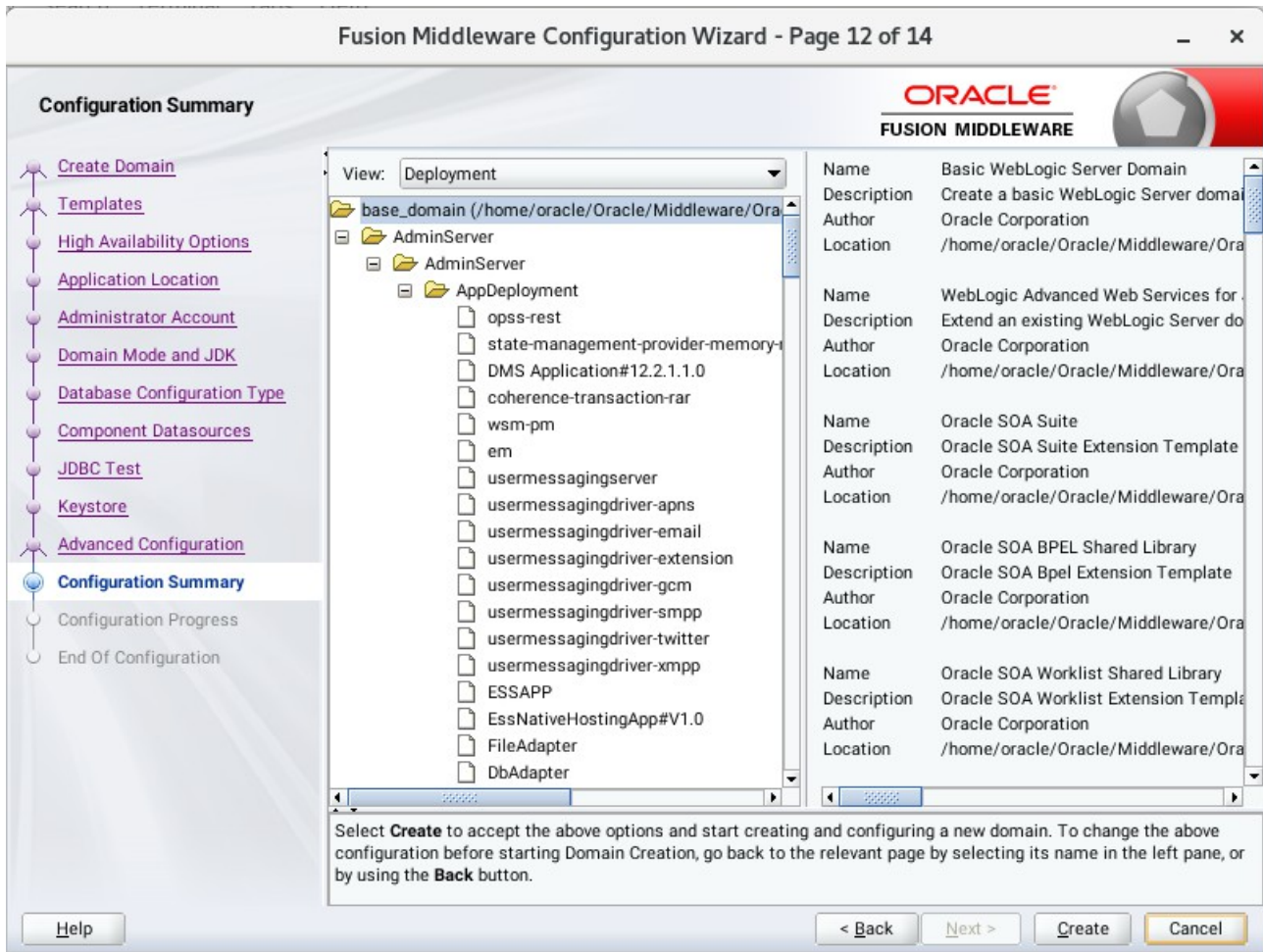
Accept the defaults and click **Next** to continue.

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



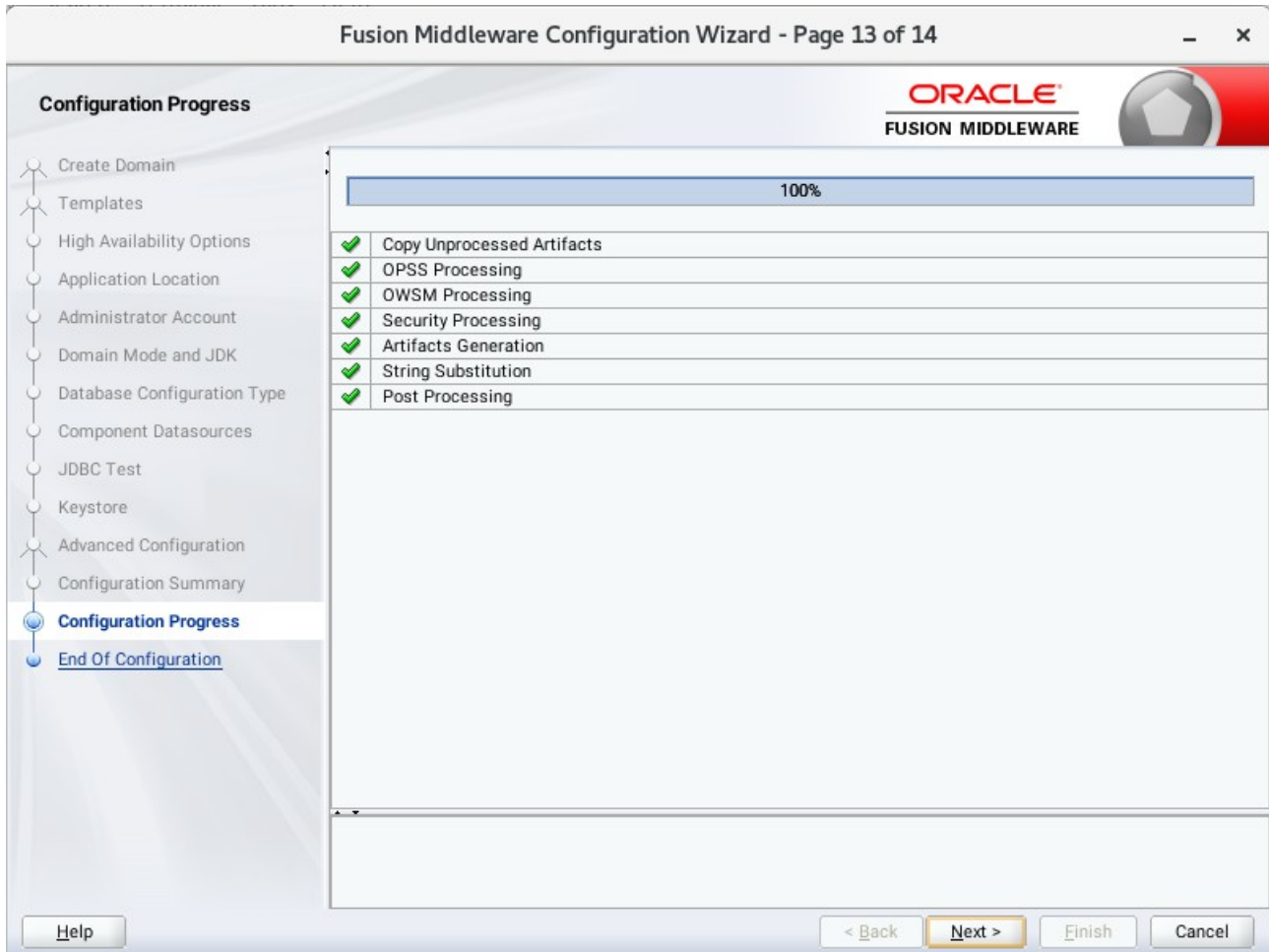
On the Advanced Configuration screen, you do not need any advanced configuration for a compact domain. You can skip through the Advanced Configuration screen without selecting anything. Click **Next** to continue.

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



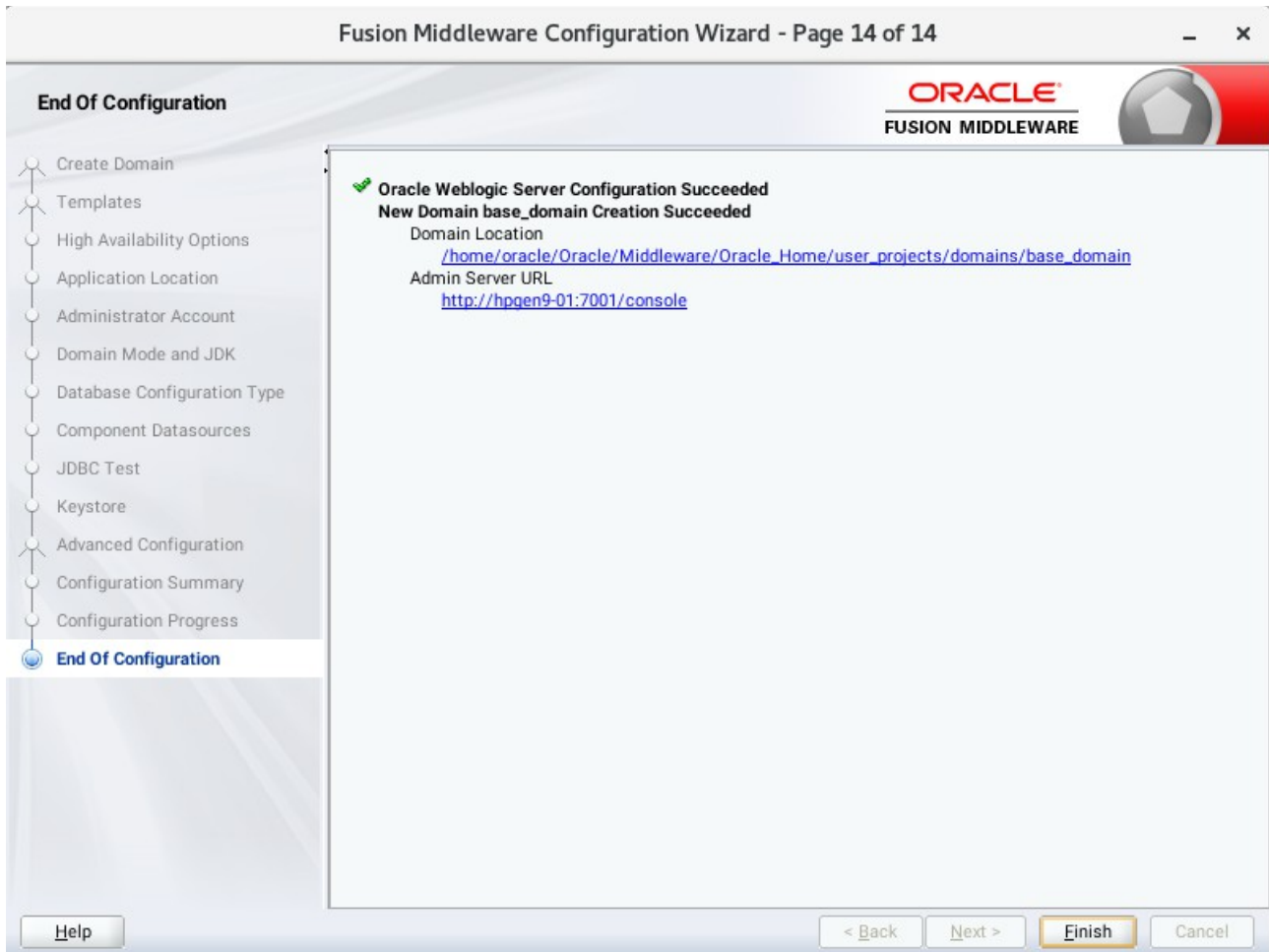
Select **Create** to accept the above options and start creating and configuring a new domain.

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`.**

```

Applications  Places  Terminal  Thu 13:57
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/O... x oracle@hpgen9-01:/home/oracle/Or... x oracle@hpgen9-01:/home/oracle/Or... x
oracle/apps/ess/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redundant.>
<Jun 7, 2018 1:57:14,499 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: ESSAPP, EJBComponent: ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdsbs.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jun 7, 2018 1:57:14,607 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.>
<Jun 7, 2018 1:57:14,648 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Application: EssNativeHostingApp, EJBComponent: native-ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdsbs.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jun 7, 2018 1:57:14,649 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageForwarderBean(Application: usermessagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJMSMessageReceiver. Property weblogic.mdsbs.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jun 7, 2018 1:57:14,655 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
Found 0 composites to be loaded
----->deploying 0 composites took 7 ms
<Jun 7, 2018 1:57:14,674 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
Not fusion apps env
<Jun 7, 2018 1:57:15,039 PM GMT+08:00> <Warning> <oracle.soa.scheduler> <BEA-000000> <No row exists in table soa_qtz_JOB_DETAILS for lock named: VerificationSessionPurgeJob-QLCKSEP-DEFAULT>
[EL Info]: 2018-06-07 13:57:15.203--ServerSession(77941)--EclipseLink, version: Eclipse Persistence Services - 2.6.5.v20170607-b3d05bd
[EL Info]: 2018-06-07 13:57:15.203--ServerSession(77941)--Server: 12.2.1.3.0
[EL Info]: 2018-06-07 13:57:15.211--ServerSession(77941)--/file:/home/oracle/Oracle/Middleware/Oracle_Home/soa/soa/modules/oracle.soa.fabric.11.1.1/tracking-fabric.jar_soa local_resiliency_persistence_unit login successful
SOA Platform is running and accepting requests. Start up took 22901 ms, partition=DOMAIN

```

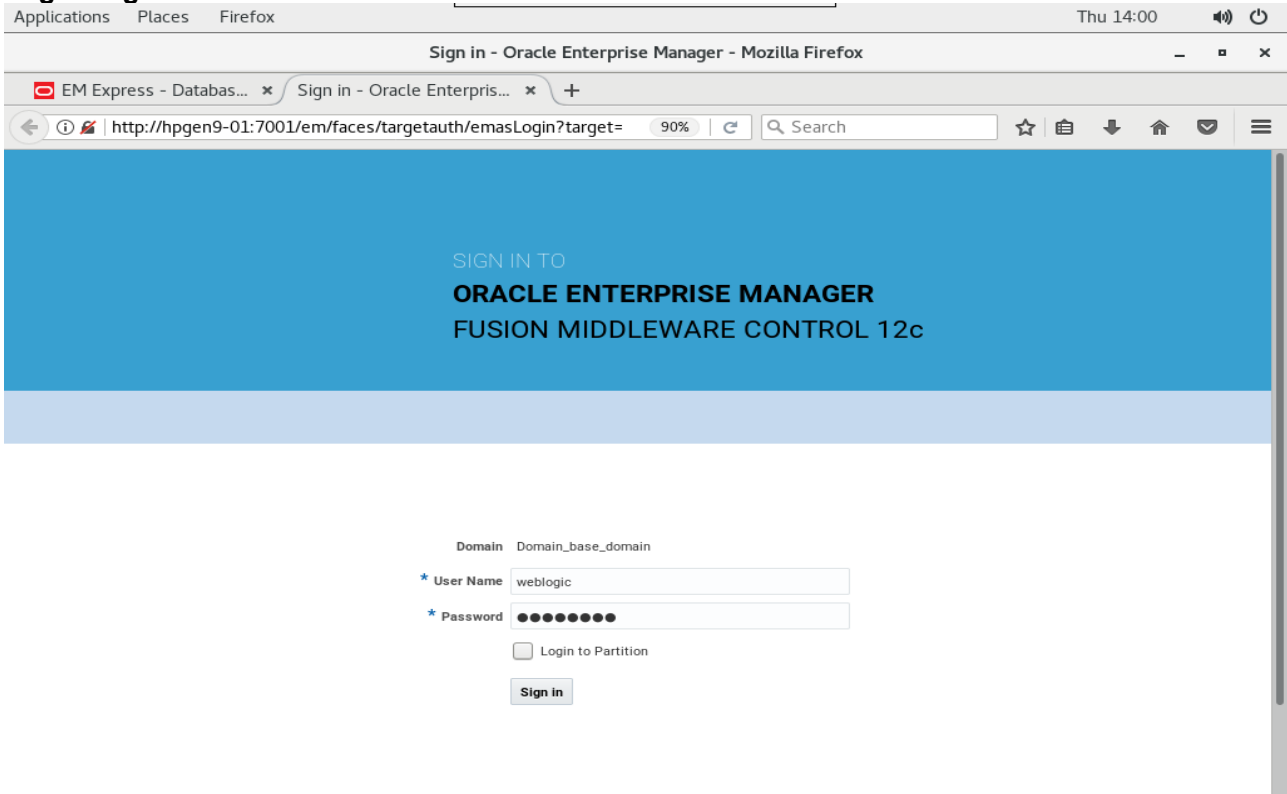
You know that the administrator server is running when you see the following output:

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

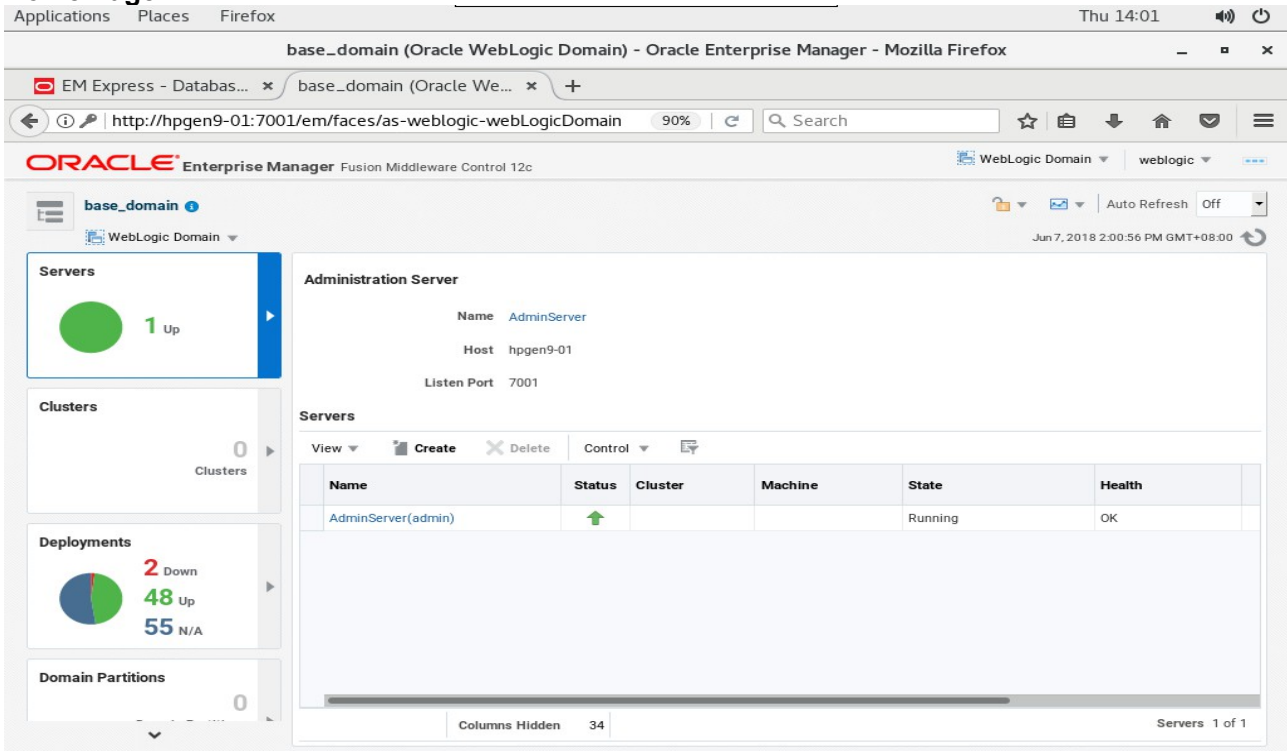
4-3. Checking Oracle SOA Suite 12c Product URLs.

1). Access to Enterprise Manager Console.

**Login Page:**

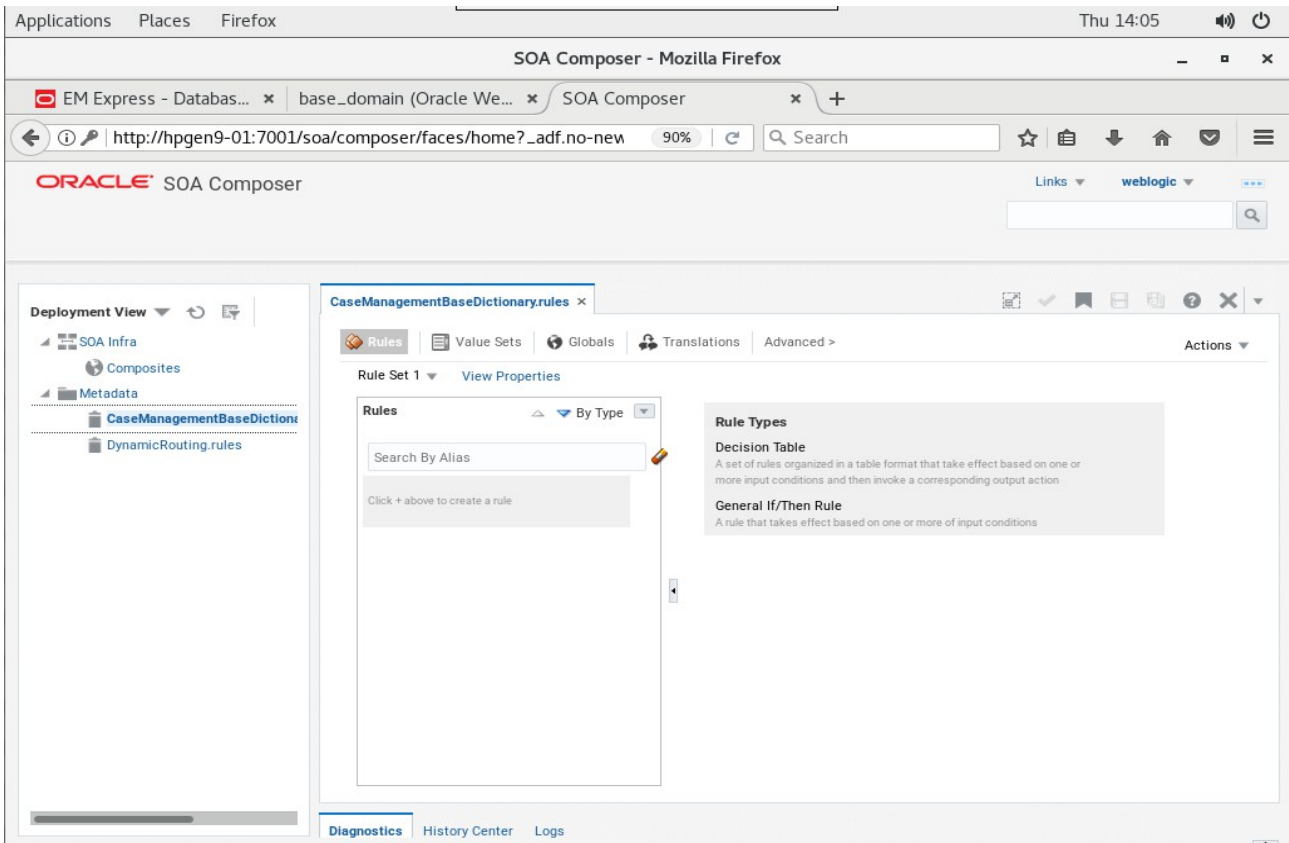
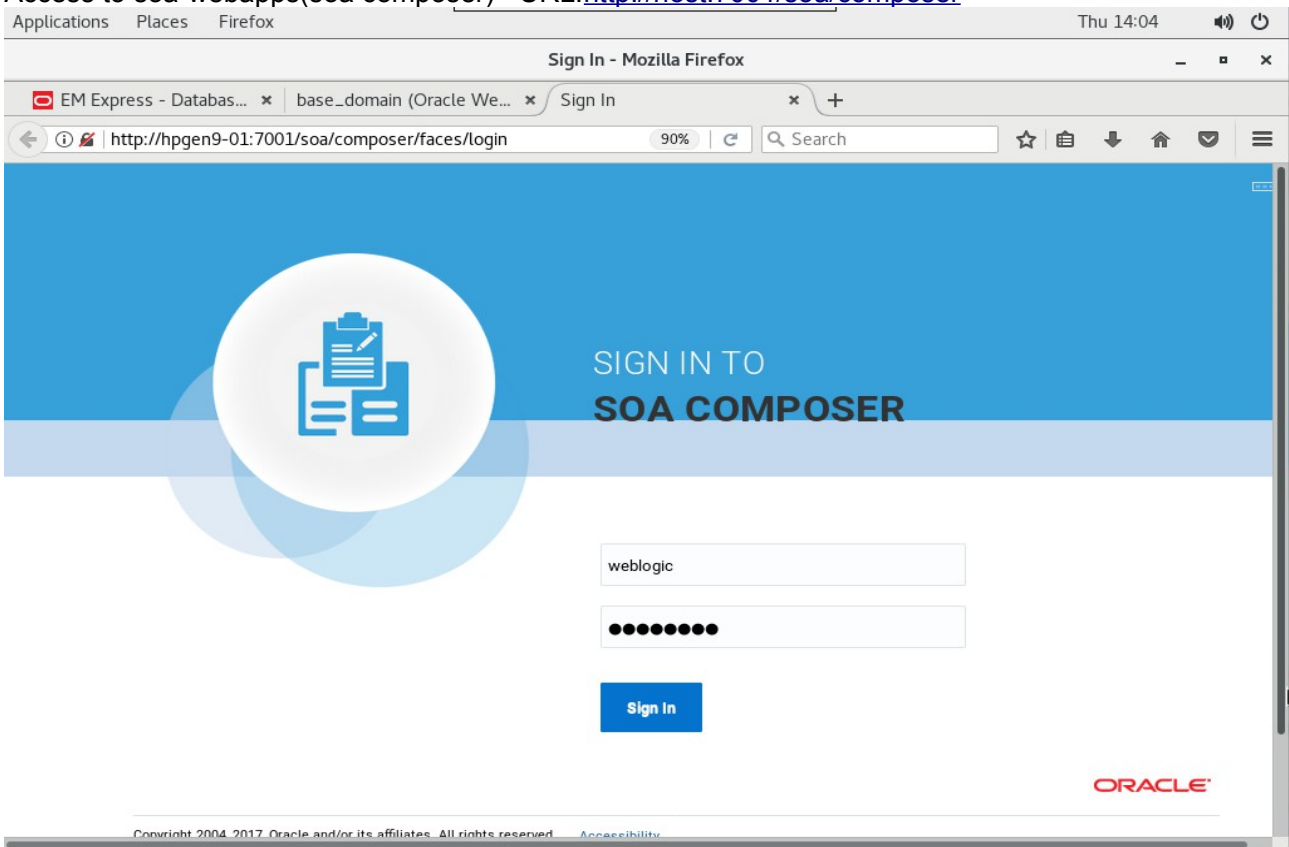


**Home Page:**

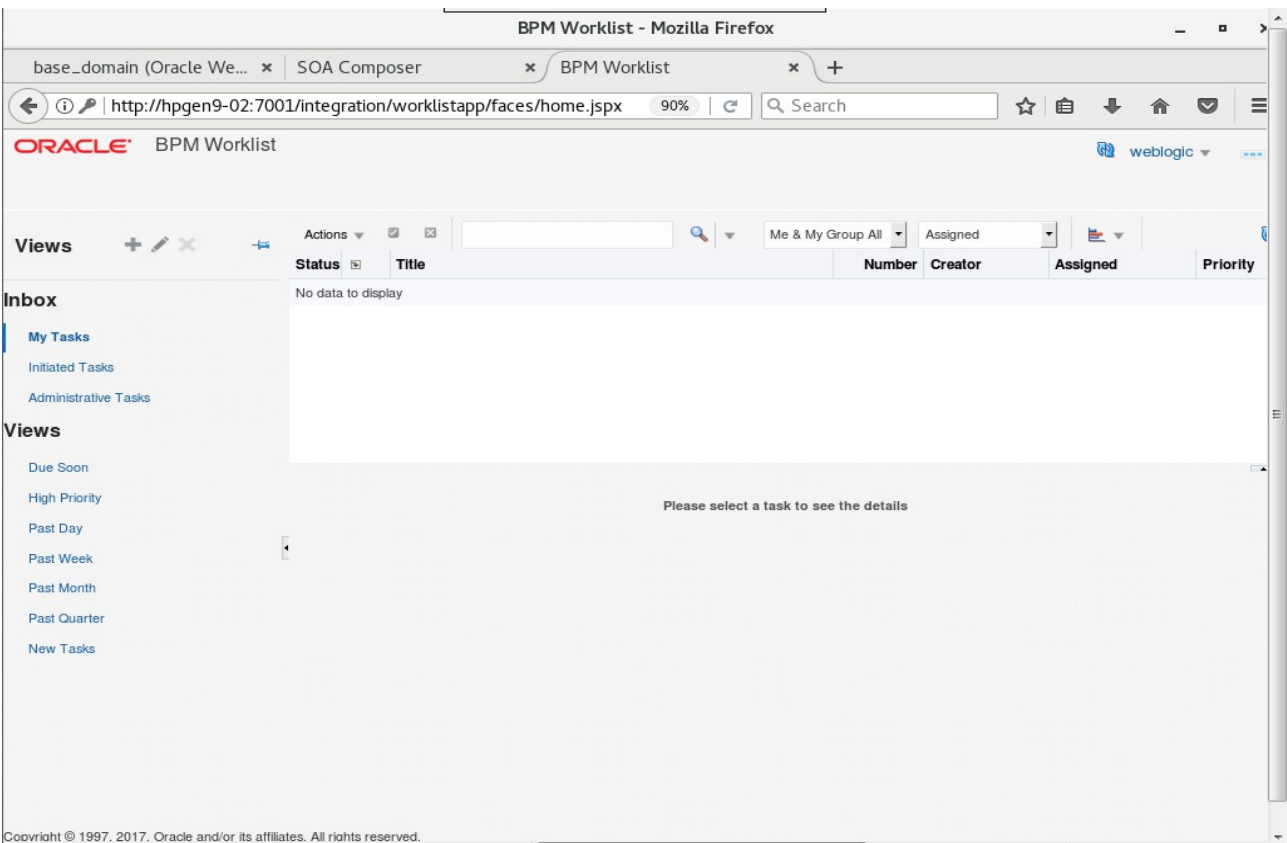
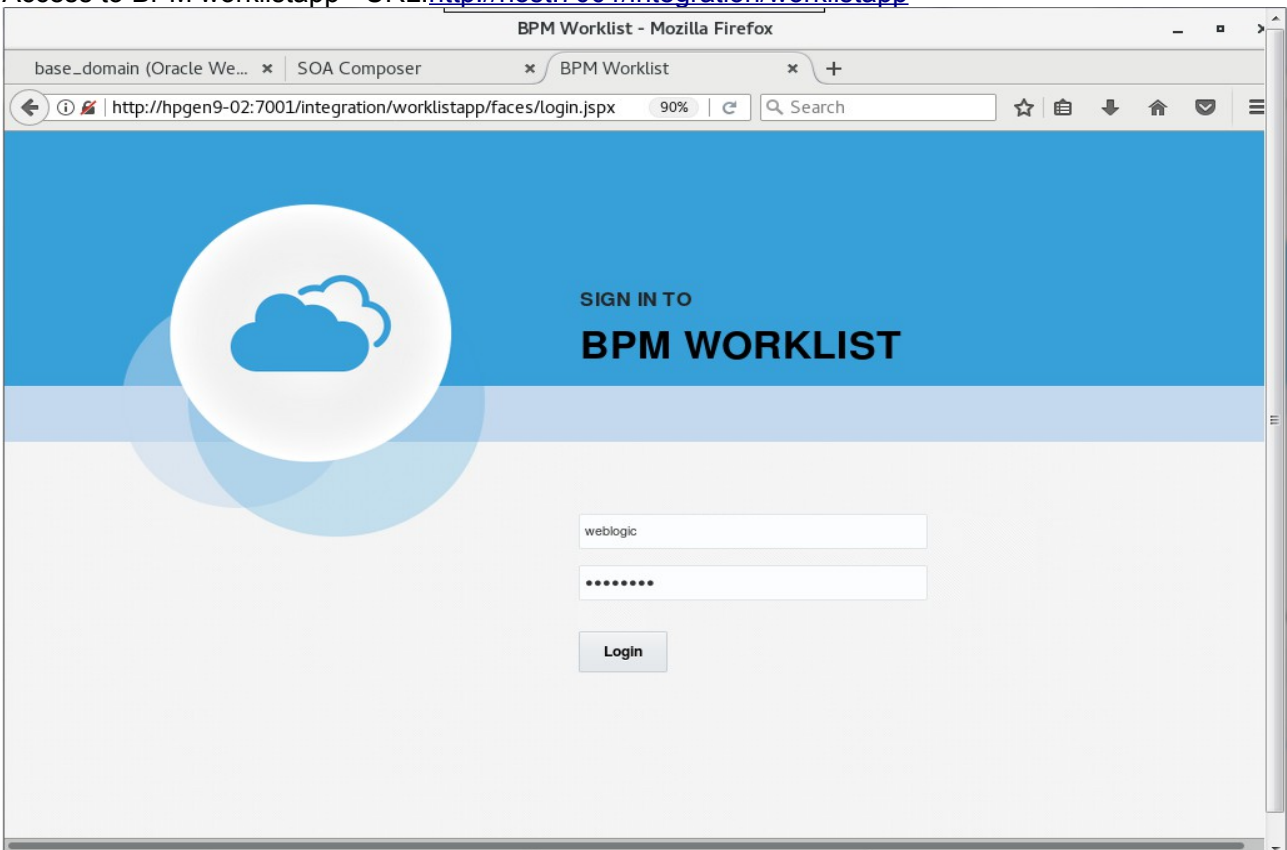




Access to soa-webapps(soa composer) - URL:<http://host:7001/soa/composer>

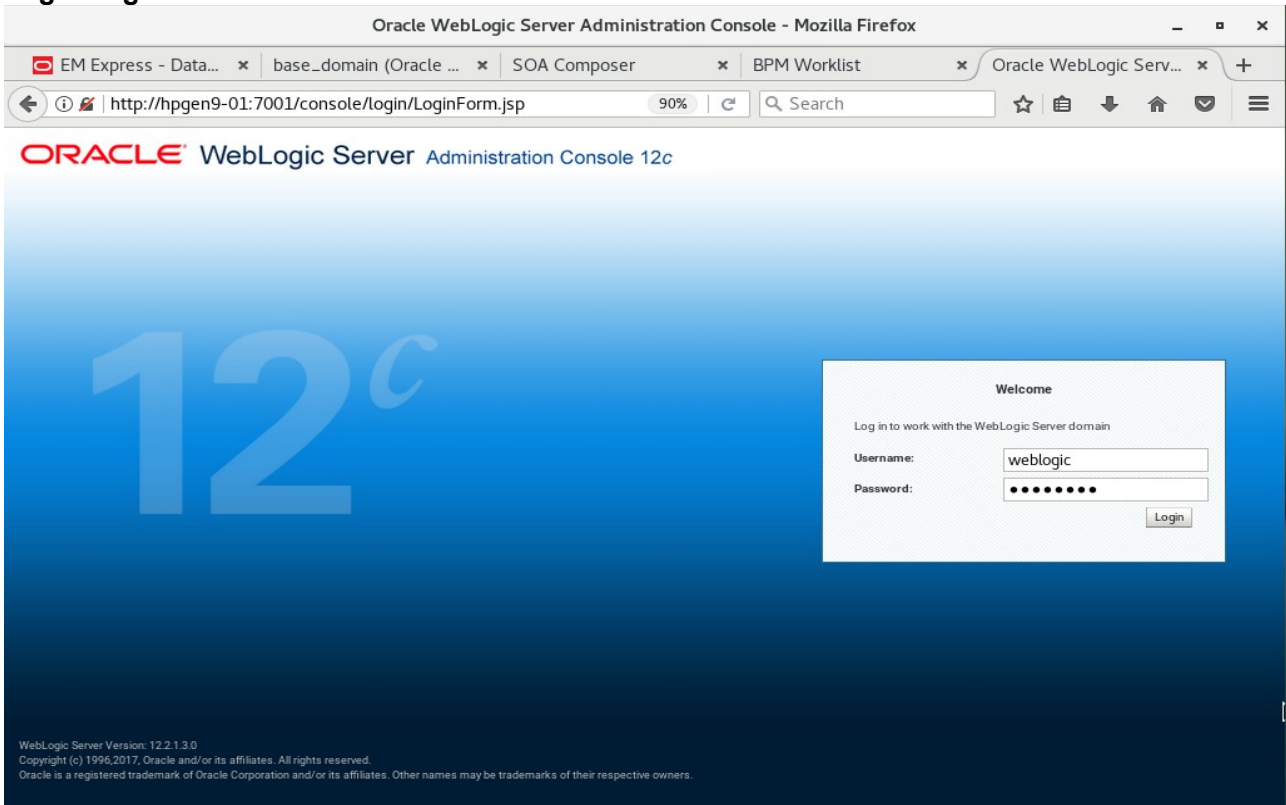


Access to BPM worklistapp - URL:<http://host:7001/integration/worklistapp>

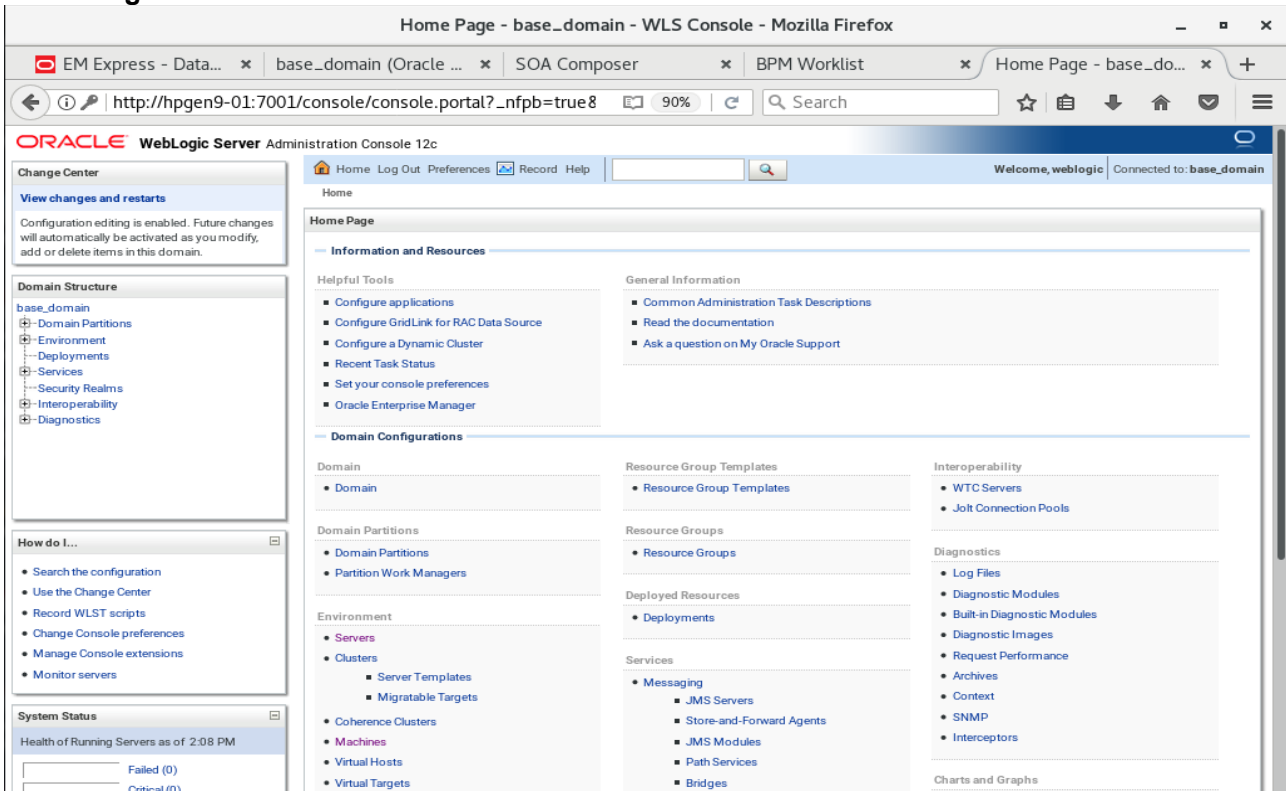


2). Access to Administration Server Console

Login Page as shown below:



Home Page:



Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p". The page title is "Summary of Servers".

The left sidebar contains several panels:

- Change Center:** View changes and restarts. Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.
- Domain Structure:** A tree view showing the hierarchy: base\_domain > Domain Partitions > Environment > Deployments > Services > Security Realms > Interoperability > Diagnostics.
- How do I...:** A list of actions: 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 2:09 PM. Failed (0), Critical (0).

The main content area shows the "Summary of Servers" page. It has tabs for "Configuration" and "Control". Below the tabs, there is a description: "A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain." There is a "Customize this table" link.

The table shows the following data:

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

Buttons for "New", "Clone", and "Delete" are visible above and below the table. The table indicates "Showing 1 to 1 of 1" items.

3). Connecting JDeveloper to the Compact Domain.

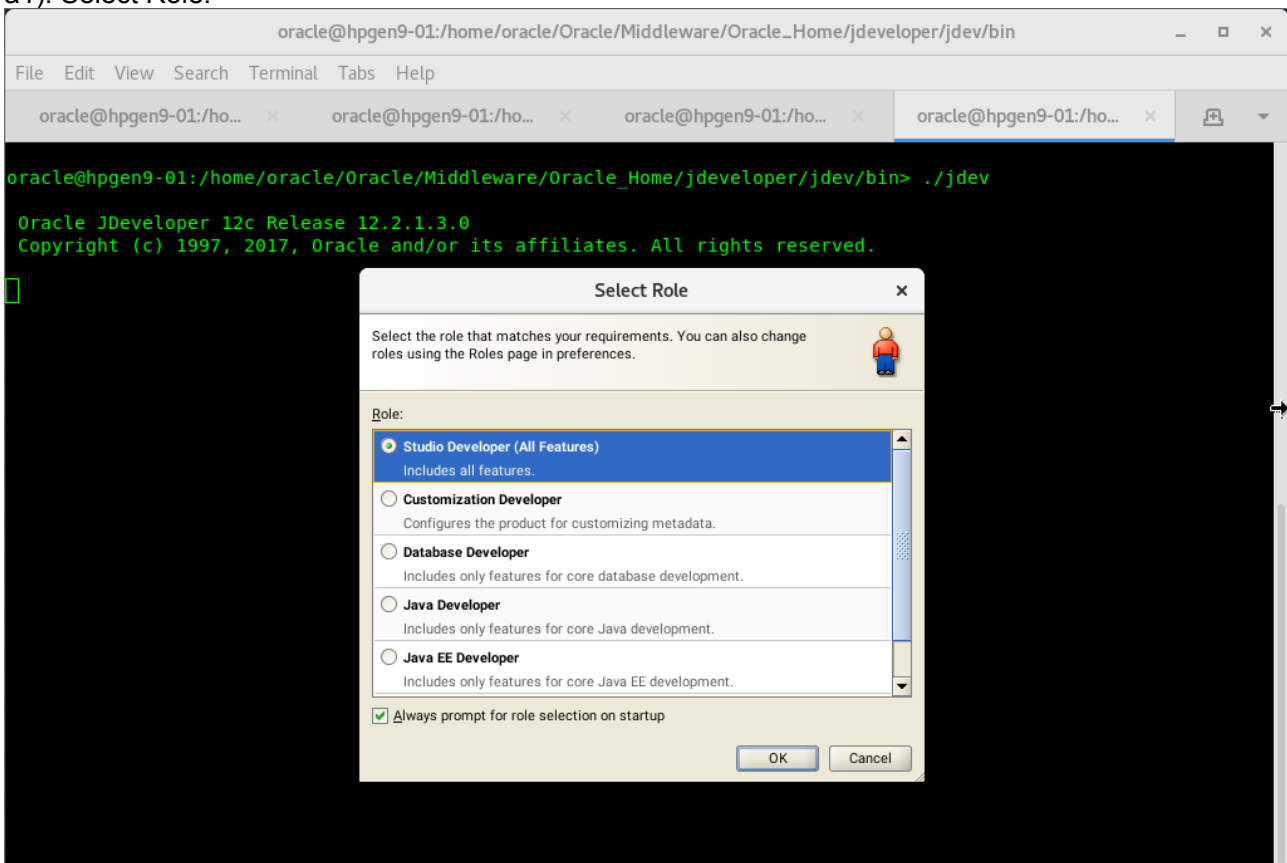
Launch Oracle JDeveloper with the appropriate command.

Ex:

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

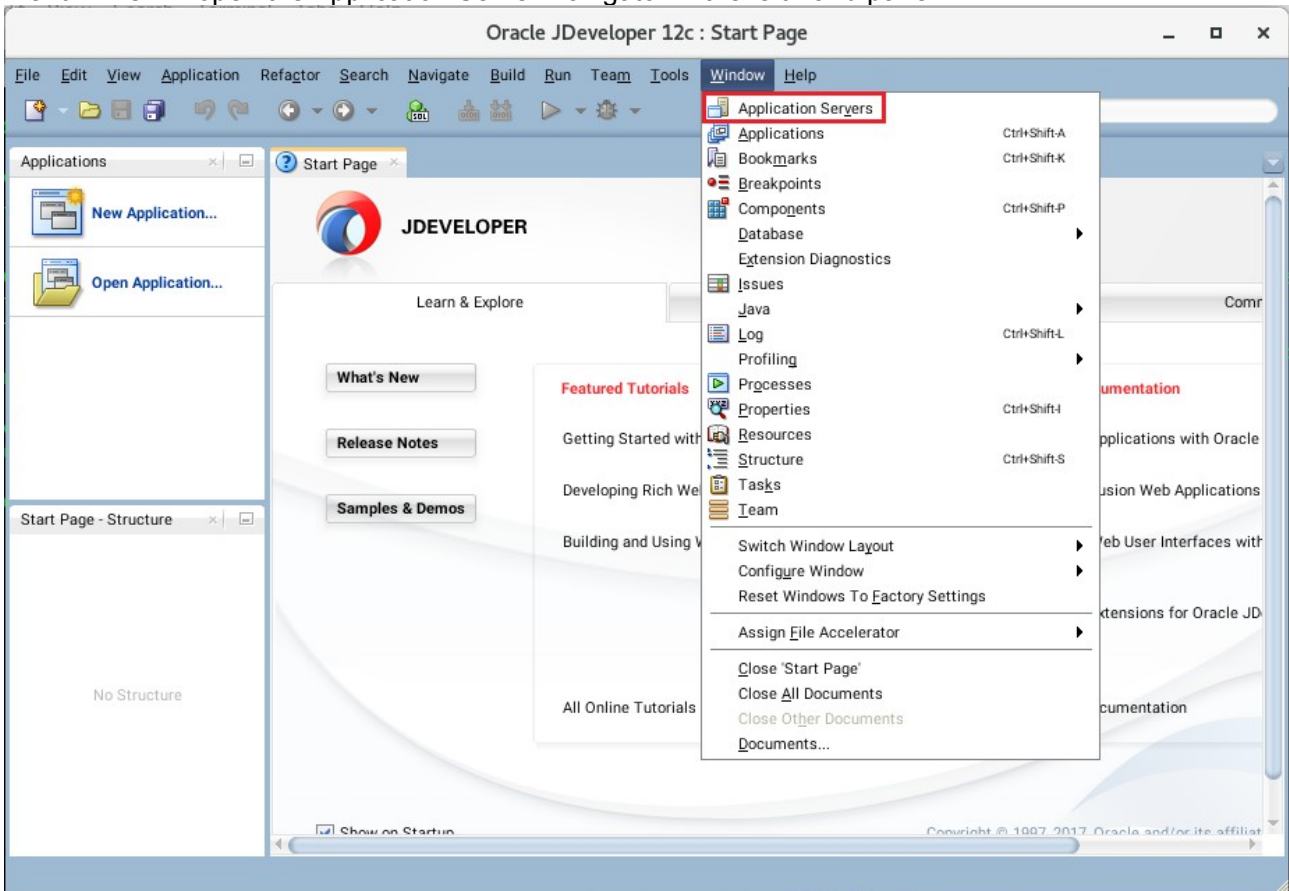
**Follow these steps:**

a1). Select Role.

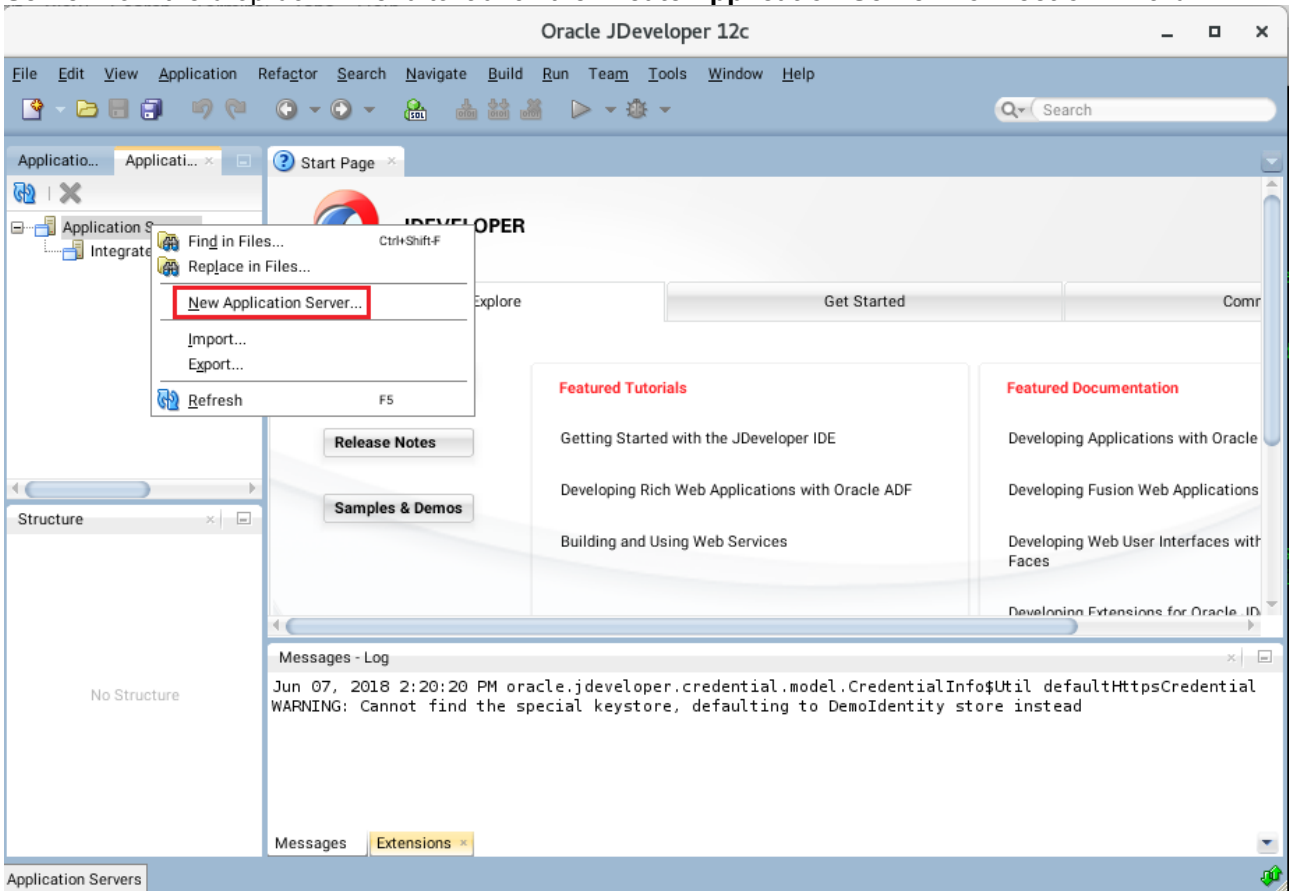


Select the role that matches your requirements. Click **OK** to continue.

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.

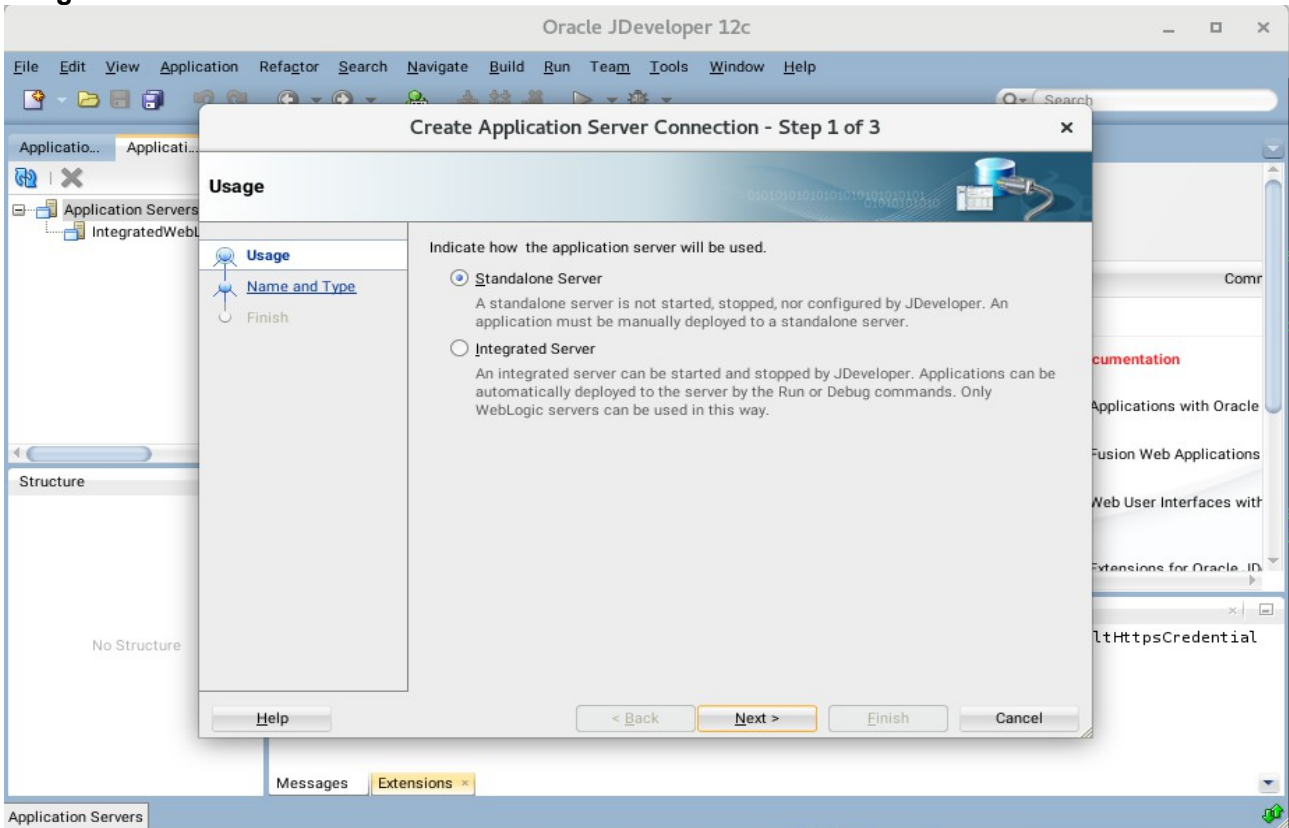


a3). Right-click on **Application Servers** in the Application Server Navigator. Select **New Application Server** from the drop-down menu to launch the **Create Application Server Connection** wizard.

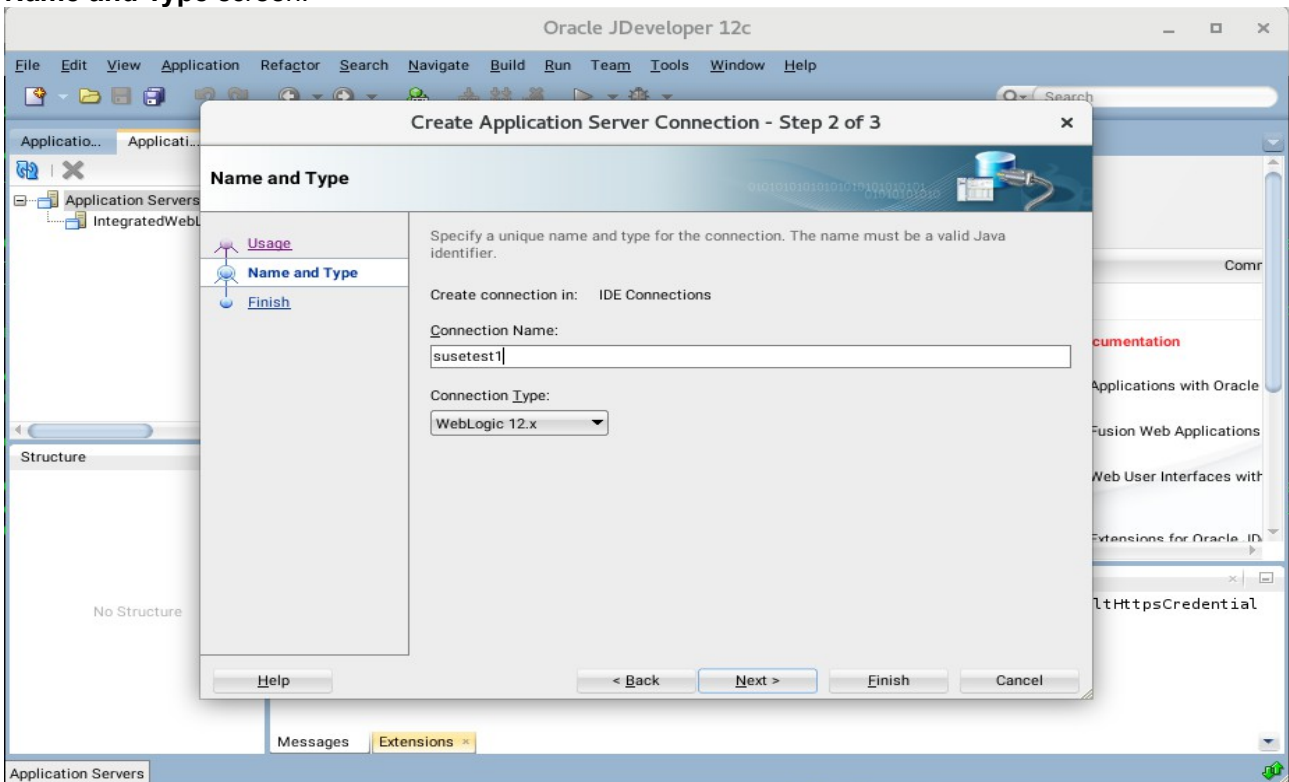


a4). Creating Application Server Connection steps as shown below.

**Usage** screen.

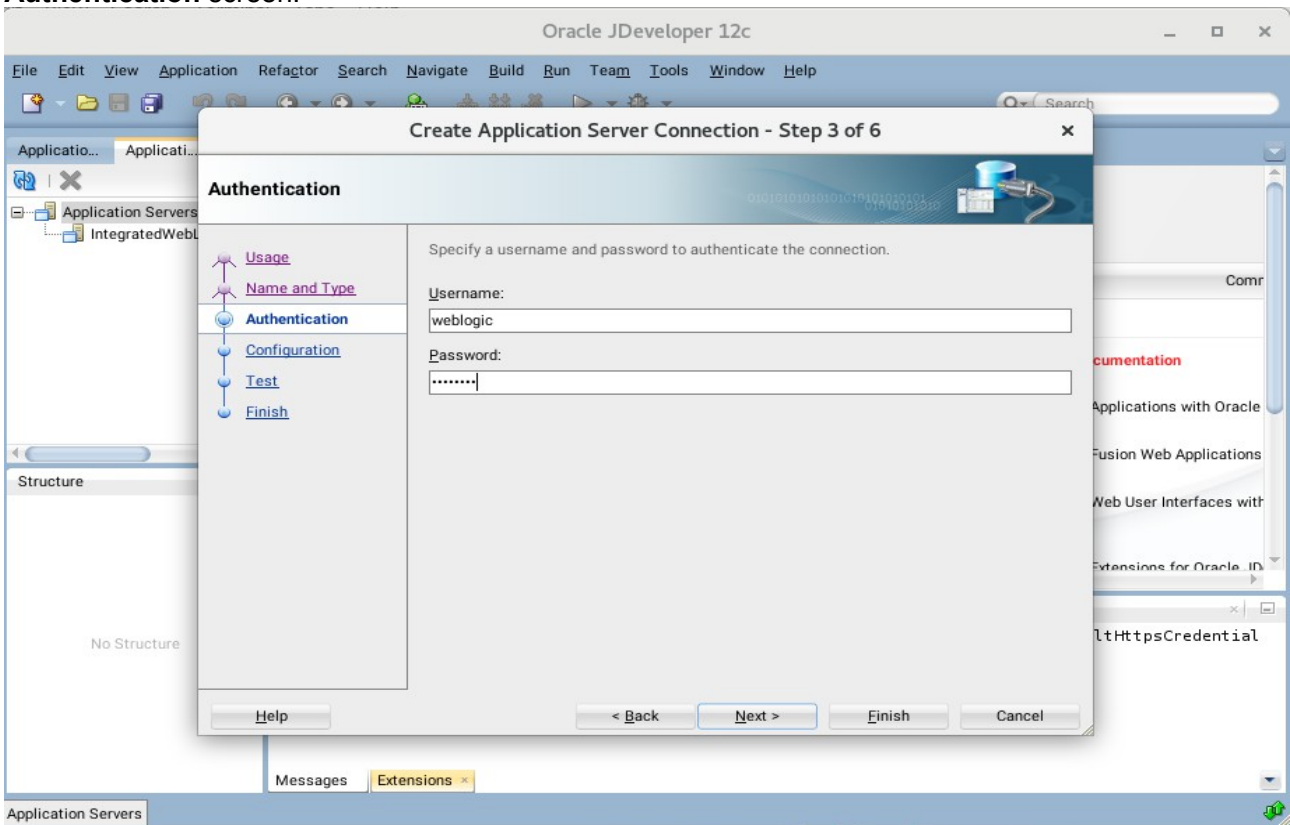


**Name and Type** screen.

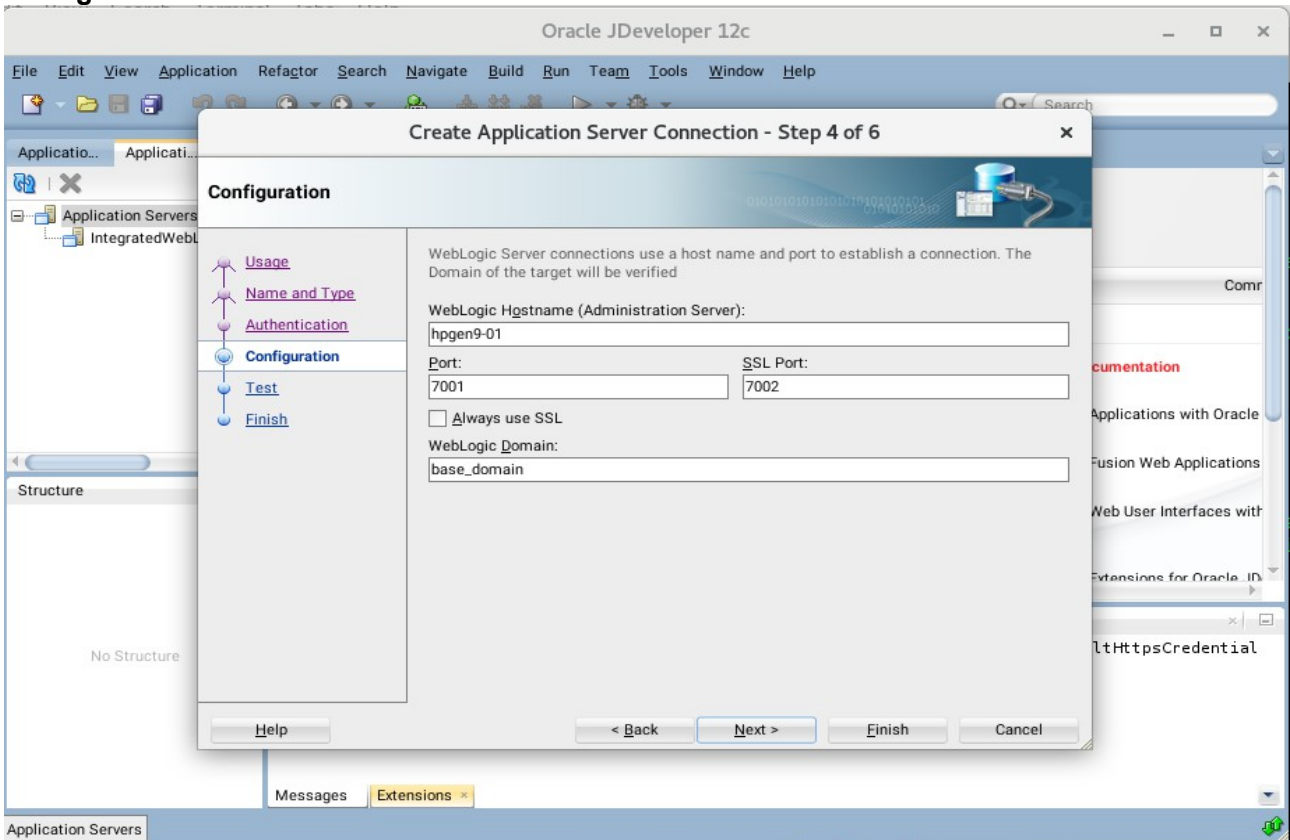




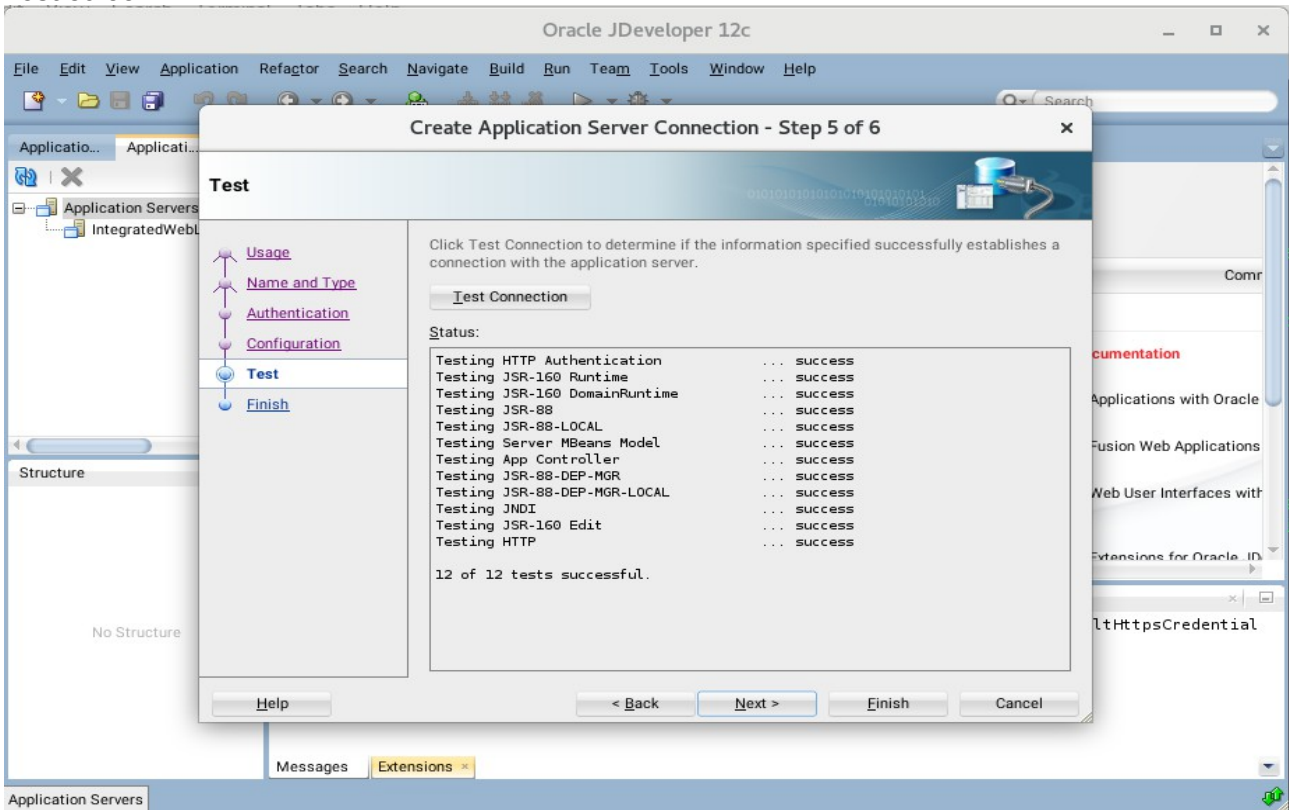
**Authentication screen.**



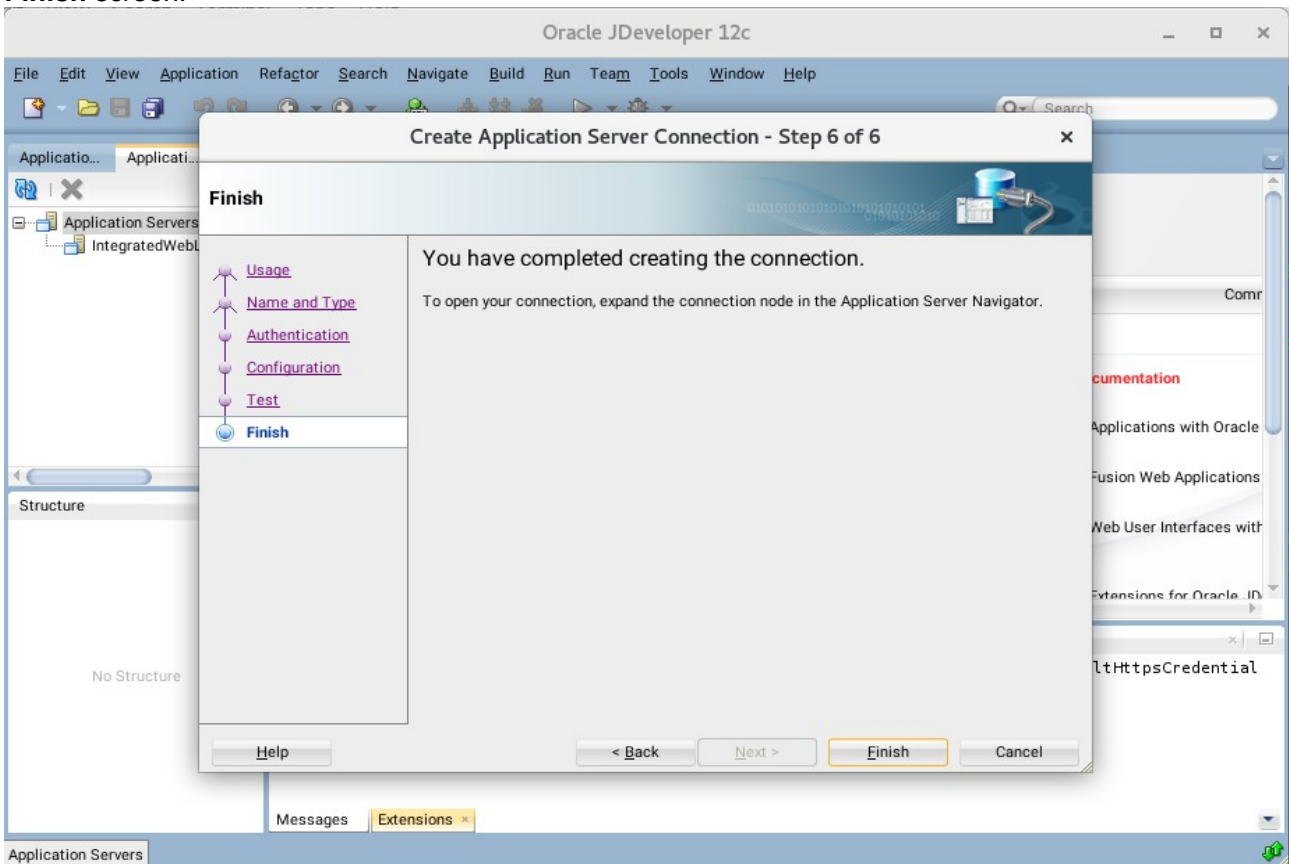
**Configuration screen.**



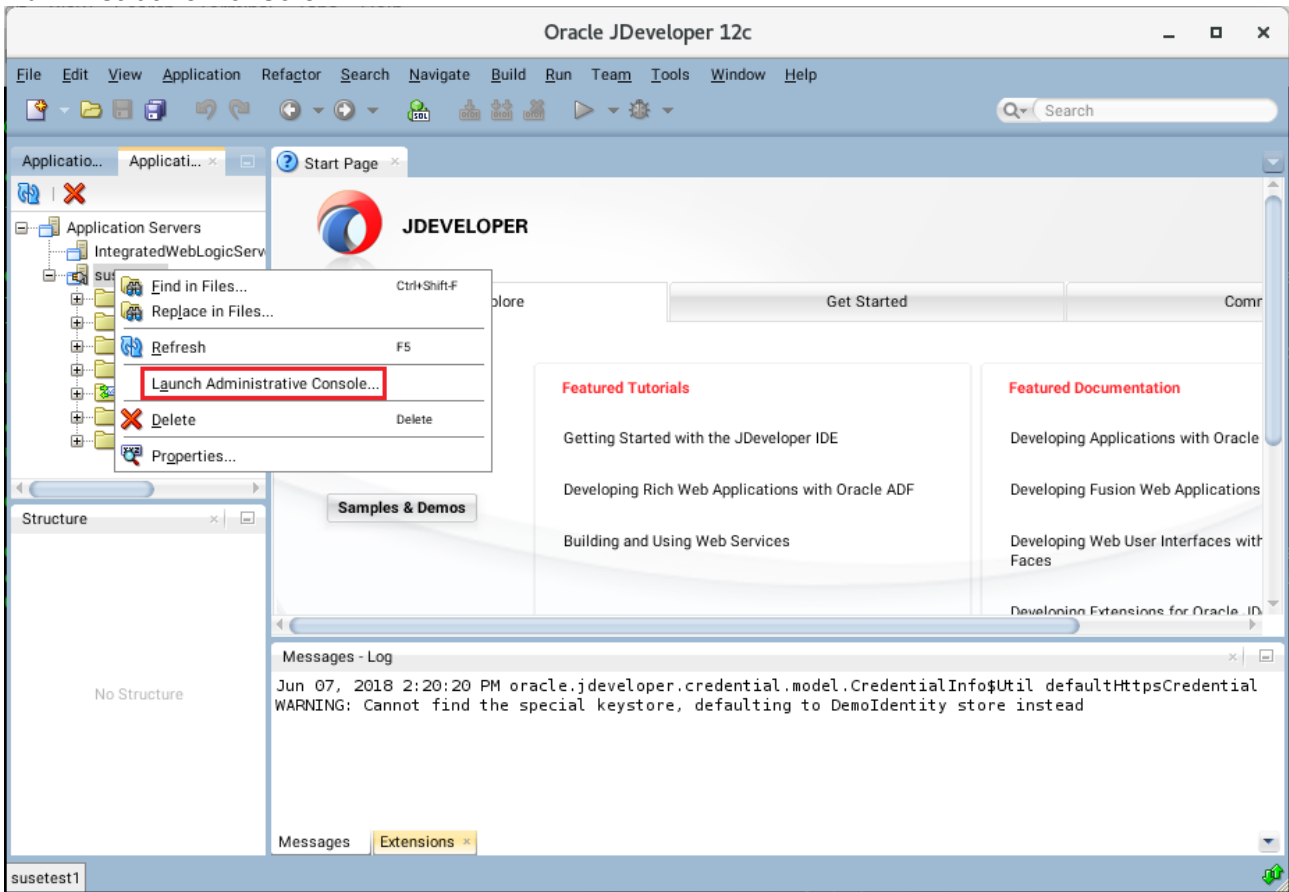
**Test screen.**



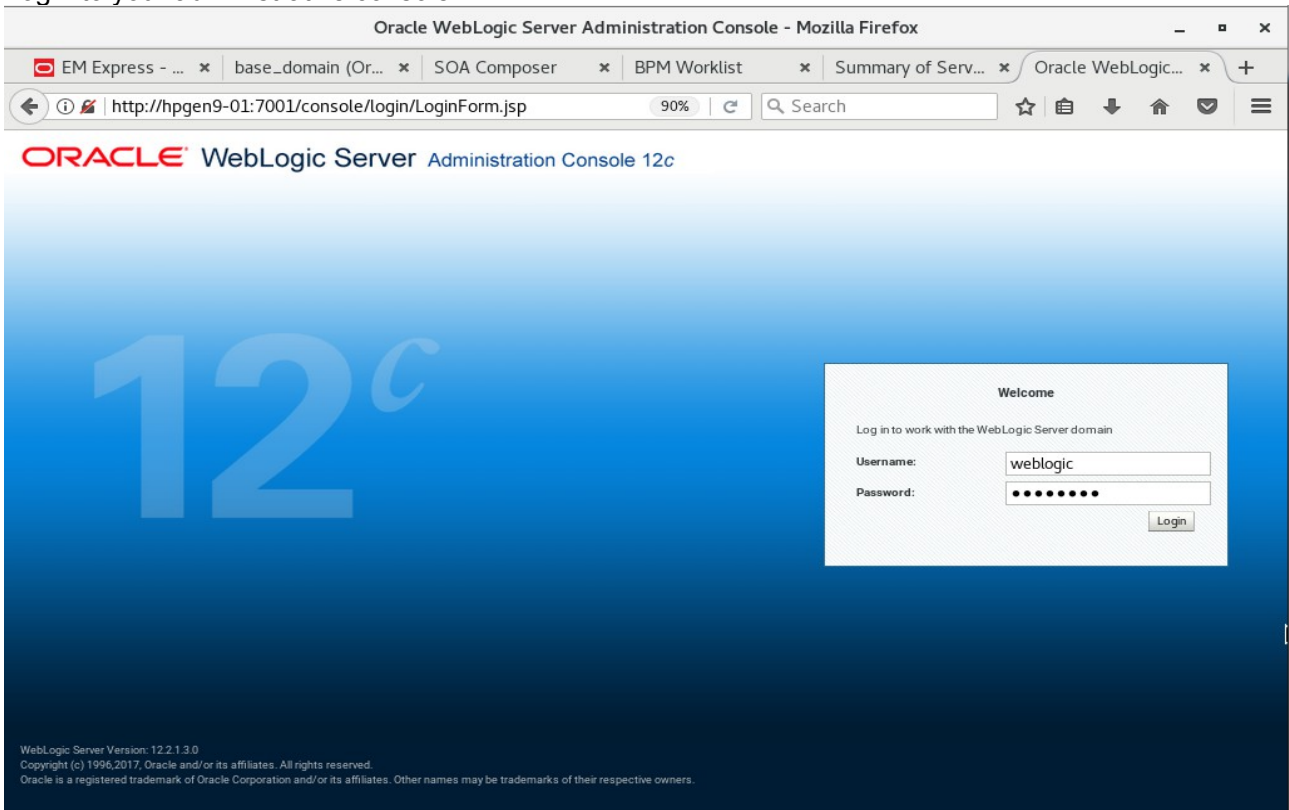
**Finish screen.**



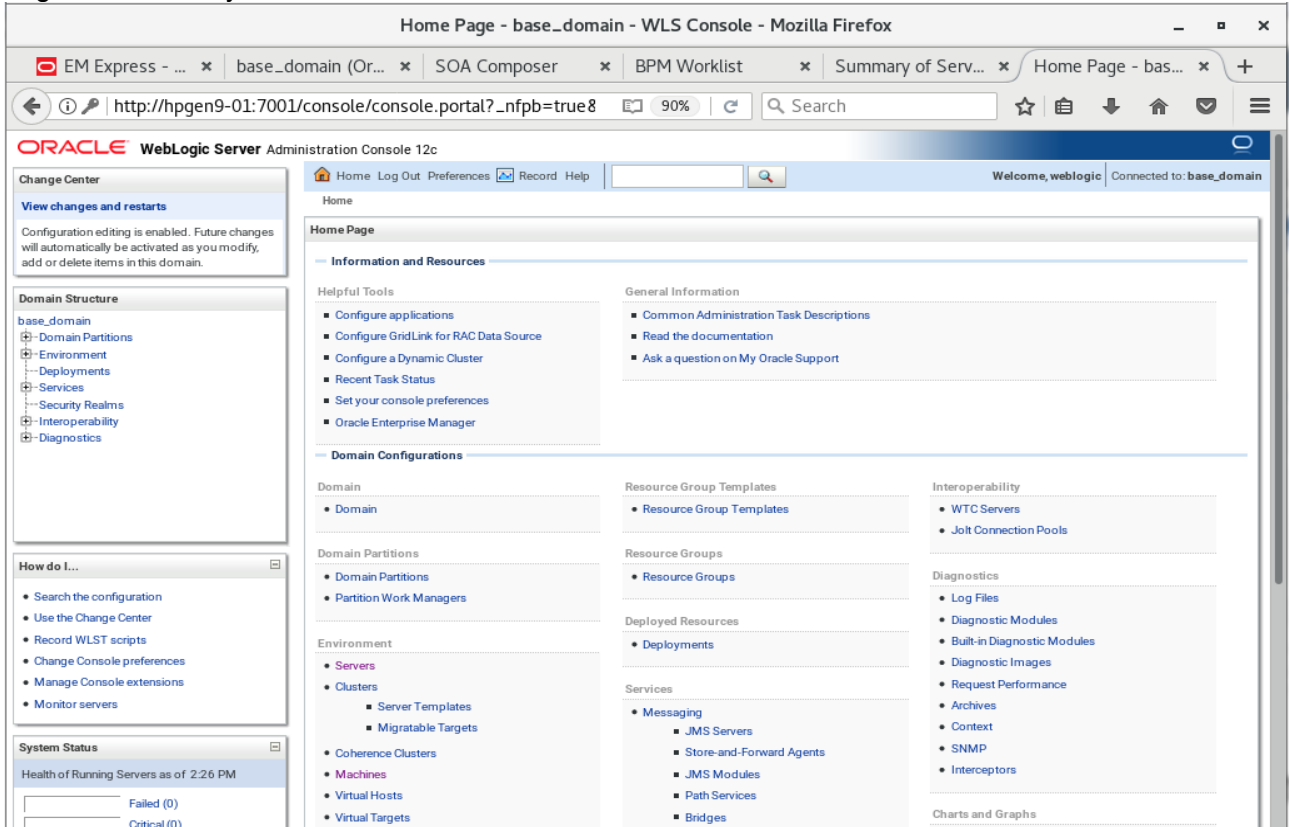
a5). Verifying Your Connection. Expand the connection node beside **Application Servers** in the Application Server Navigator. You should see your domain listed by the **Connection Name** you specified on the **Name and Type** screen. Right-click on your domain's name and choose **Launch Administrative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



Log into your administrative console.



Log in successfully.



**End of Oracle SOA Suite.**

\*\*\*\*\*

## Oracle Access Manager

\*\*\*\*\*

### 1. Installing Oracle Identity and Access Management 12cPS3 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 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 parameter open_cursors;

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

- 2). Oracle JDK 1.8.0\_131 and later installed.

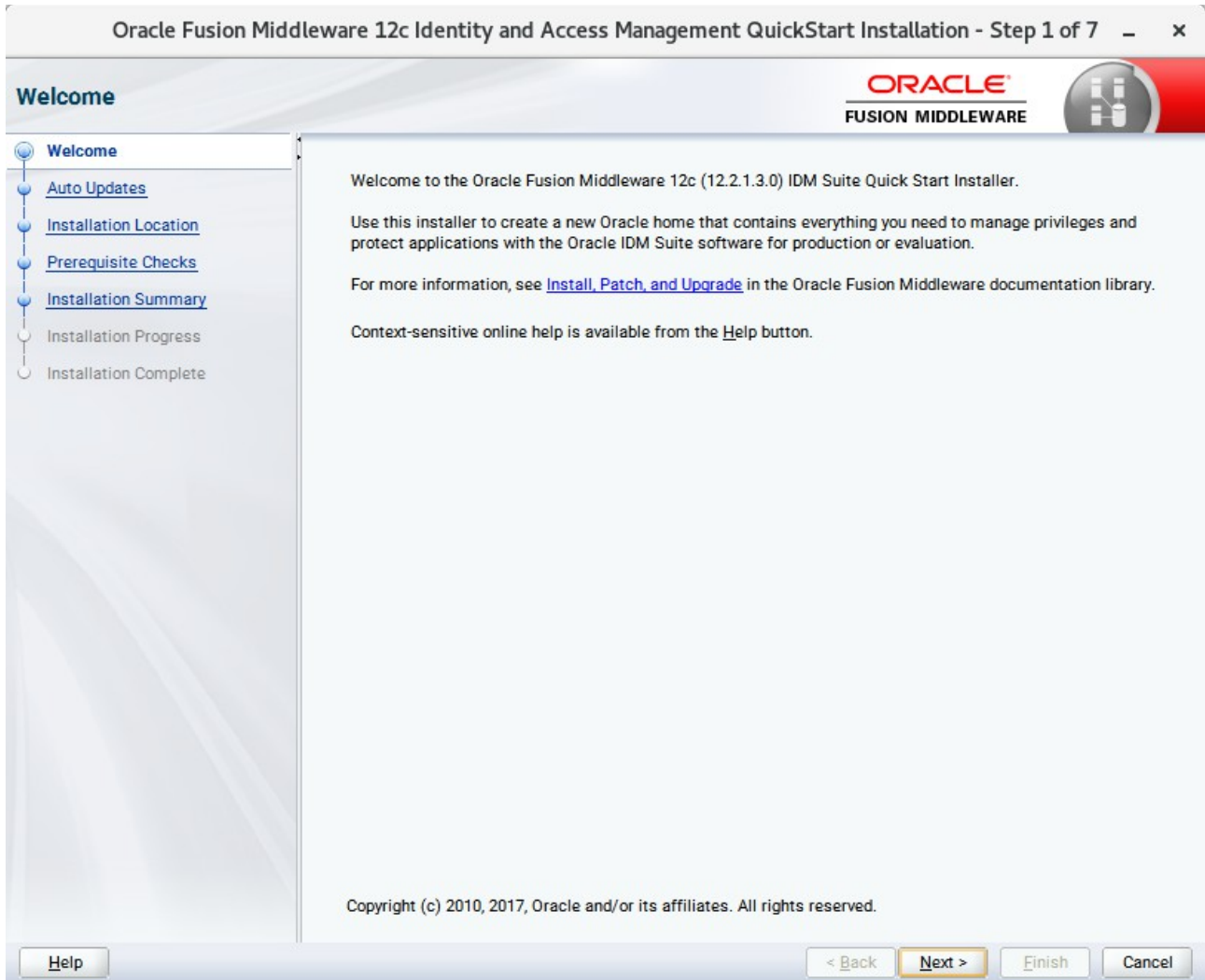
1-2. Log in to the target system (SLES 15 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS3 (12.2.1.3.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

(**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\_12.2.1.3.0\_idmqqs\_Disk1\_1of2.zip" and "fmw\_12.2.1.3.0\_idmqqs\_Disk1\_2of2.zip") files and launch the installation program by running '`java -jar fmw_12.2.1.3.0_idmquickstart.jar`'

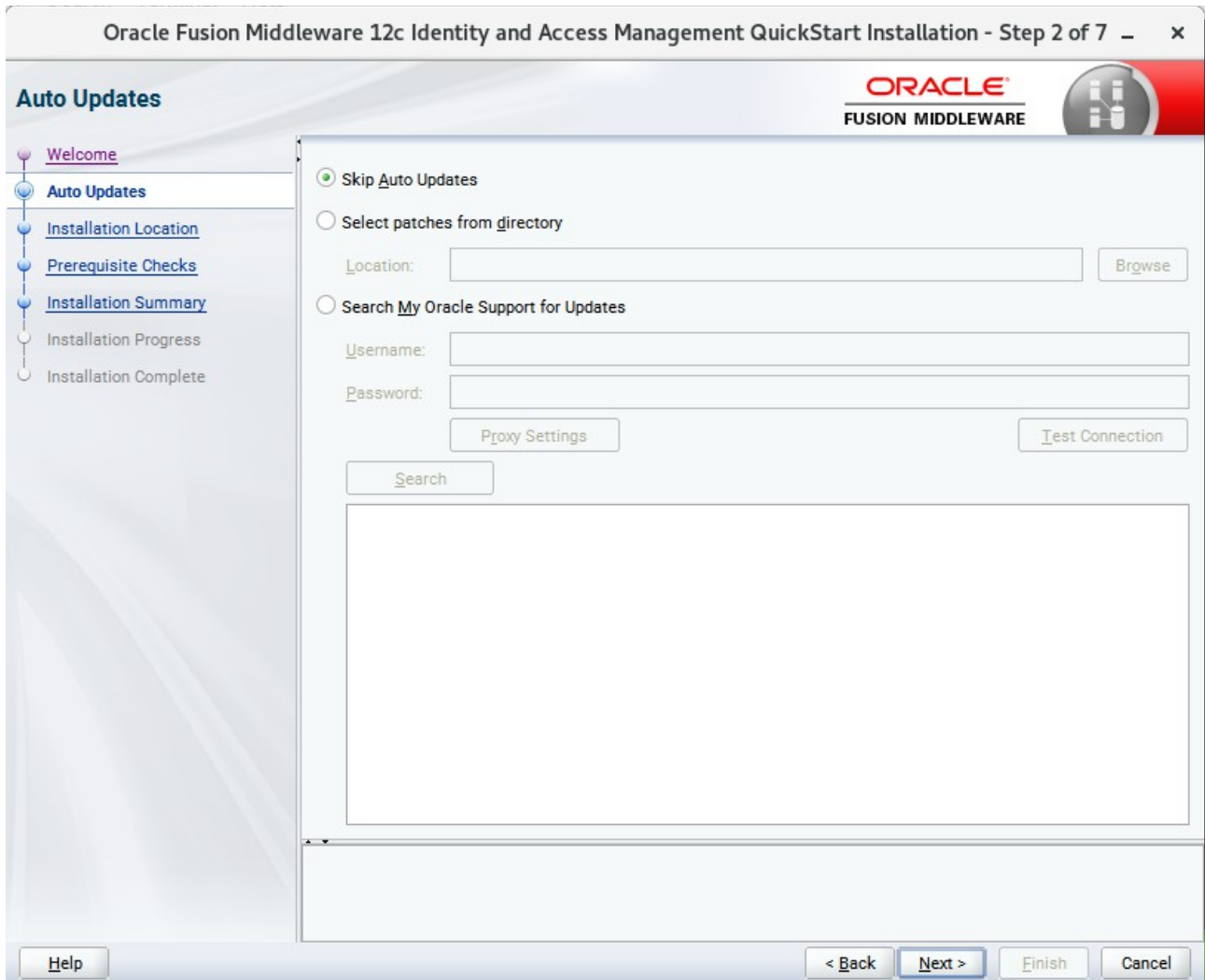
**For the actual installation, follow the steps below:**

1). **Welcome** page appears.



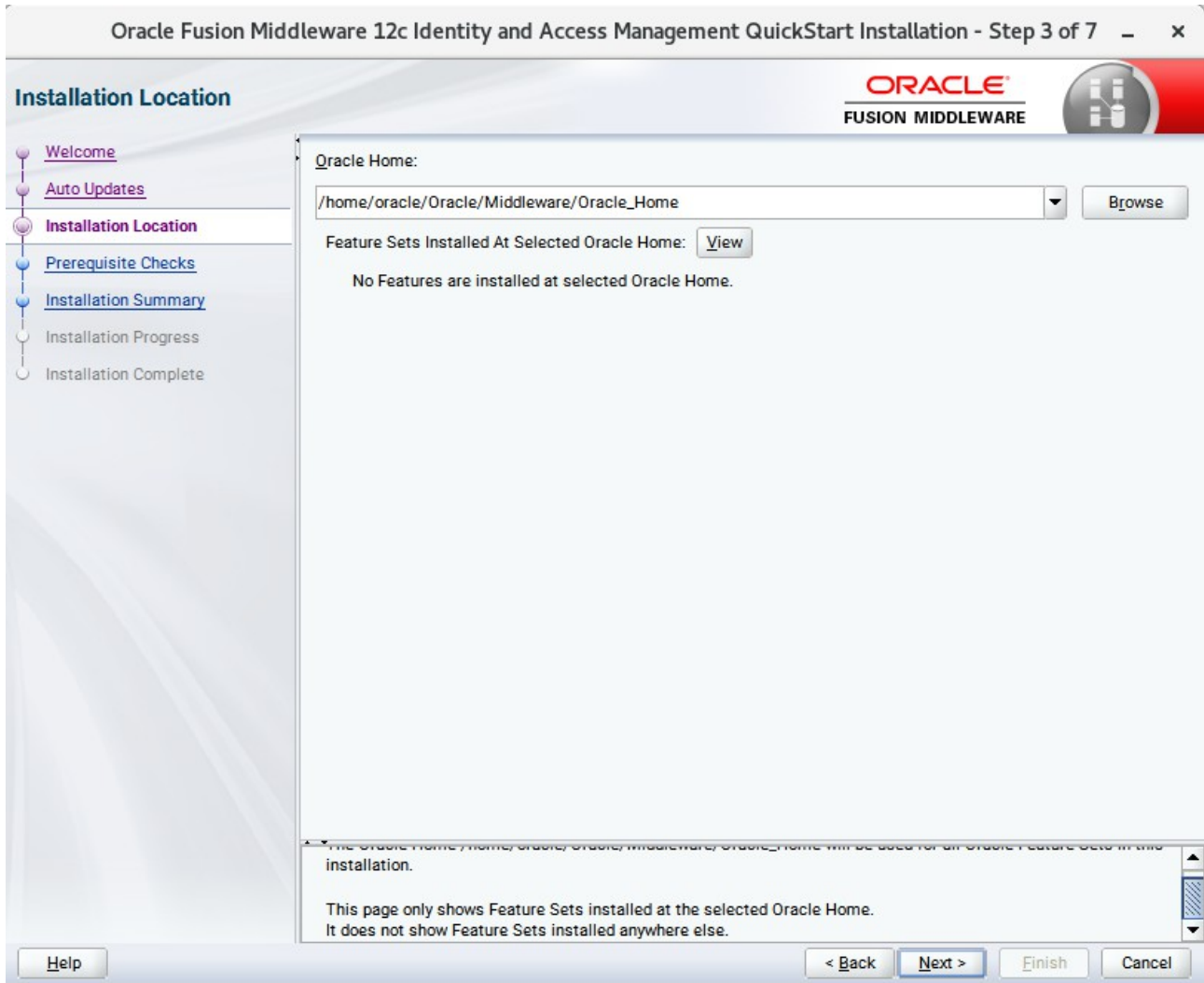
This page welcomes you to the installation. Click **Next** to continue.

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



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.

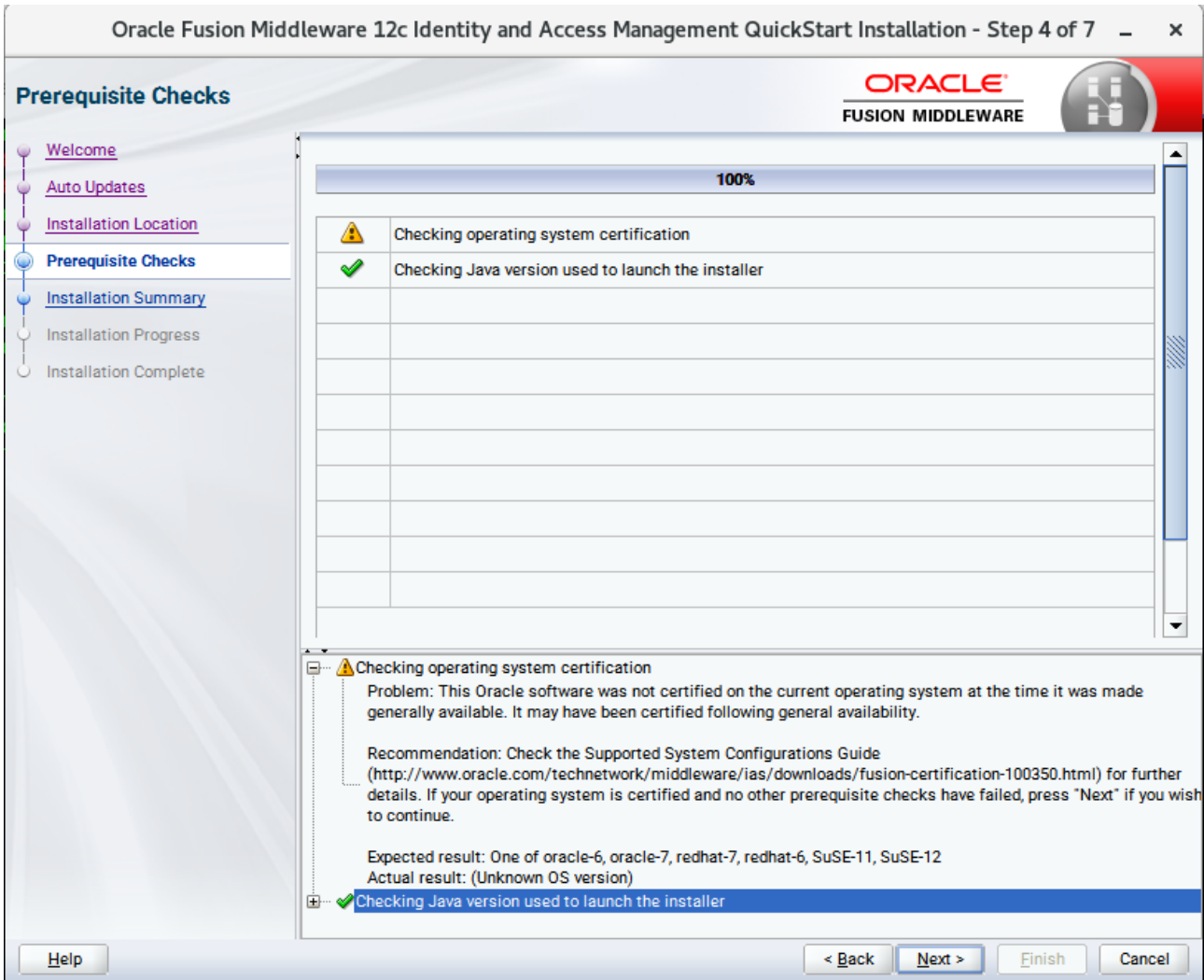
3). The **Installation Location** page appears.



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

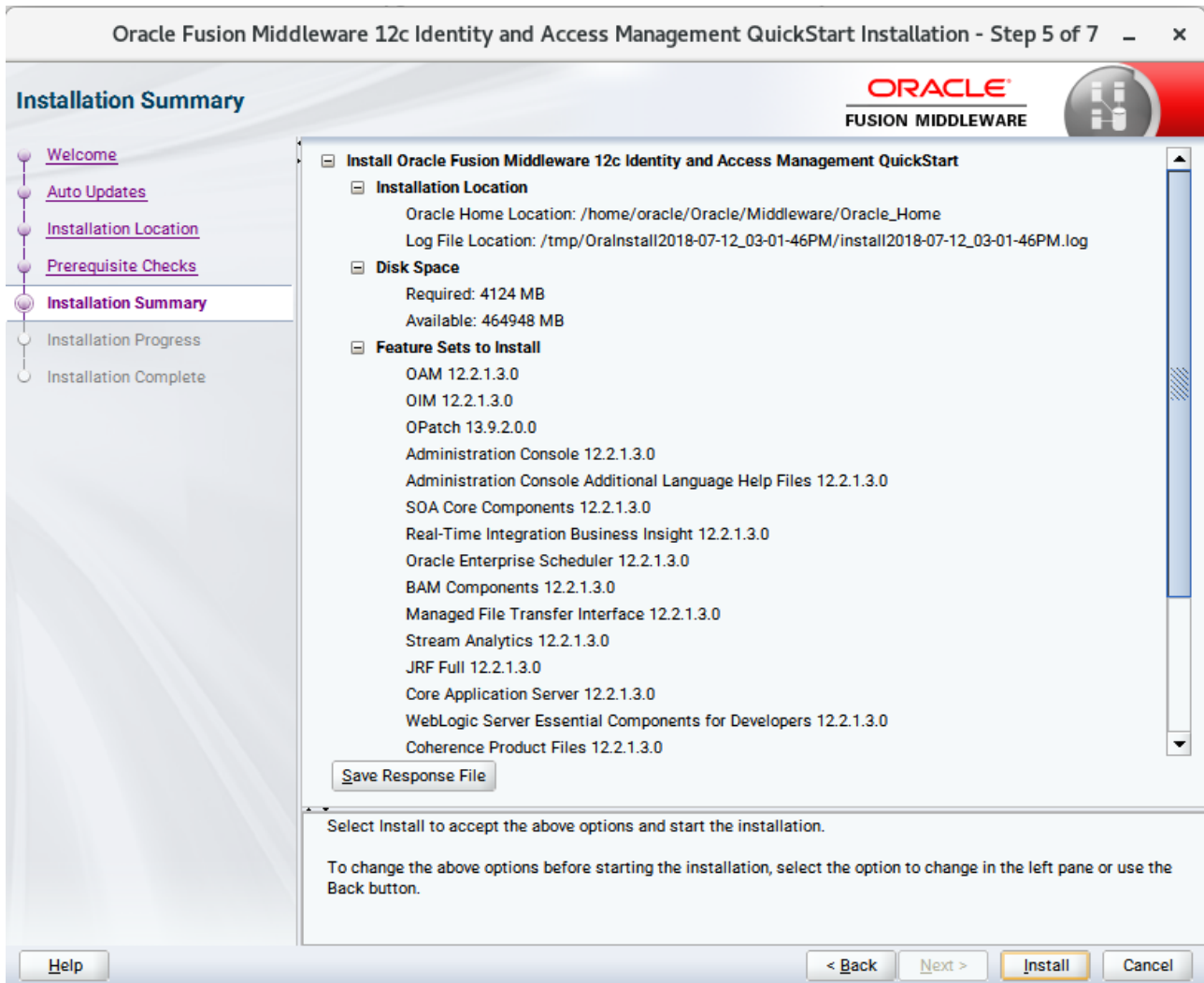


4). The **Prerequisites Checks** page appears.



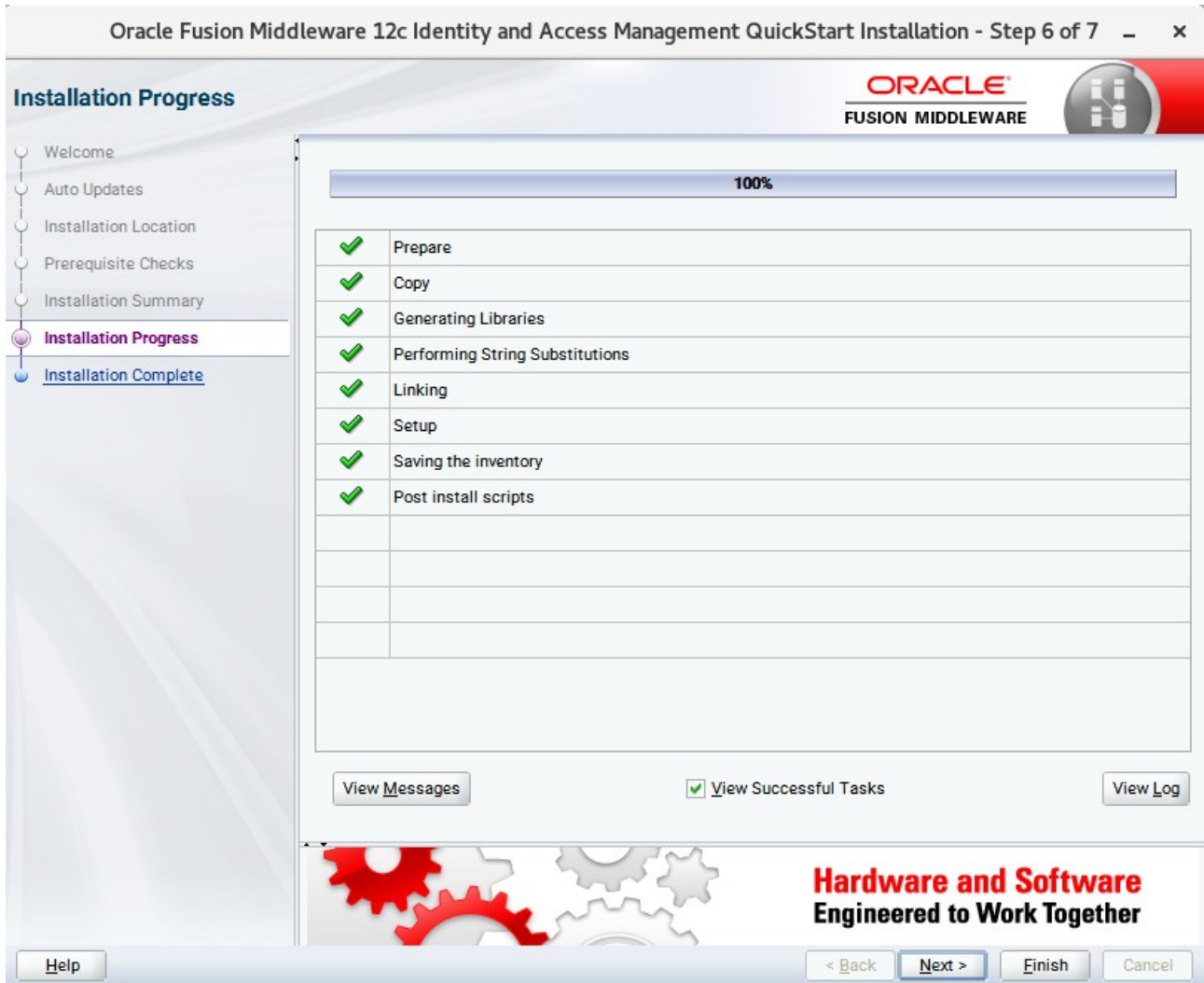
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



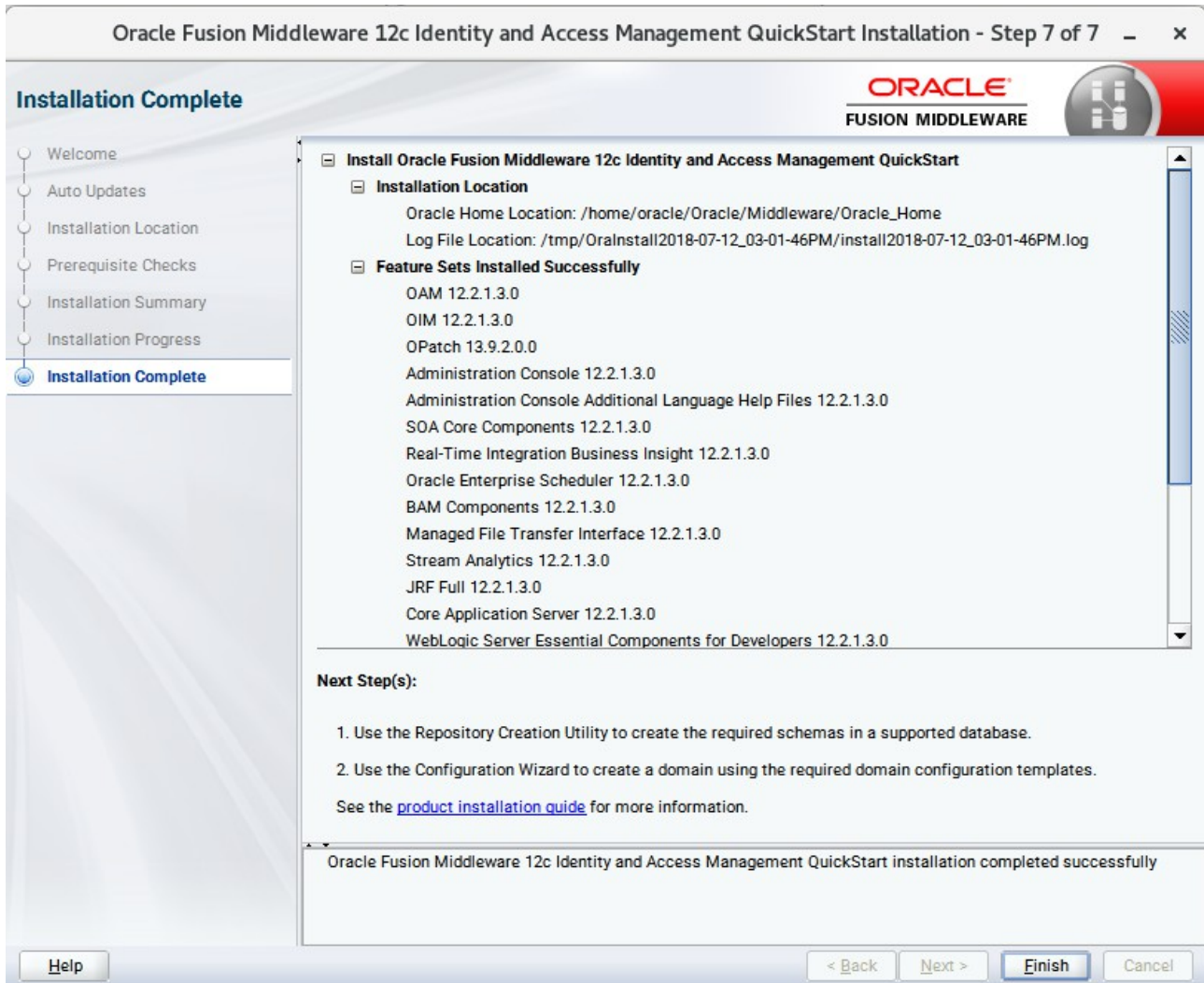
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

6). 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**.

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



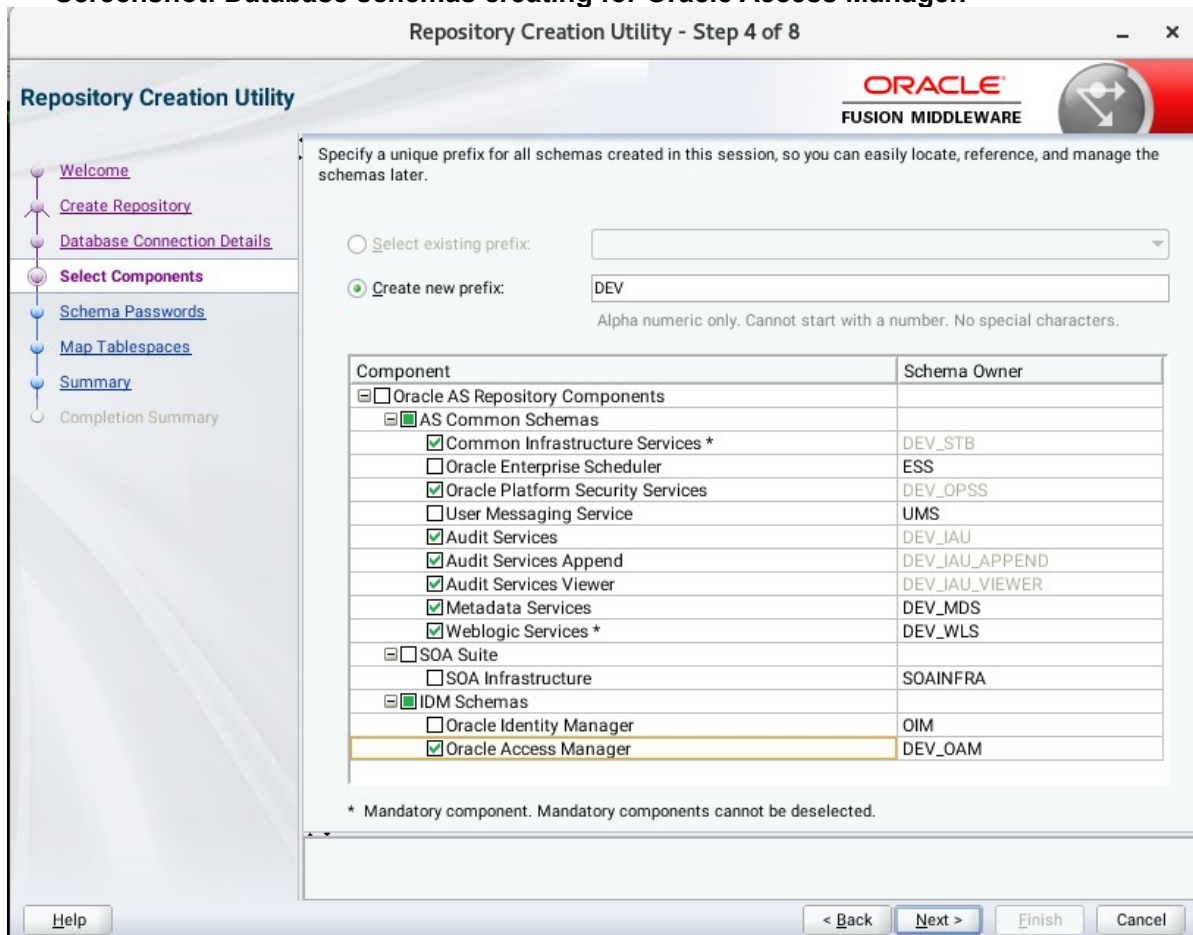
This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

## 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.**



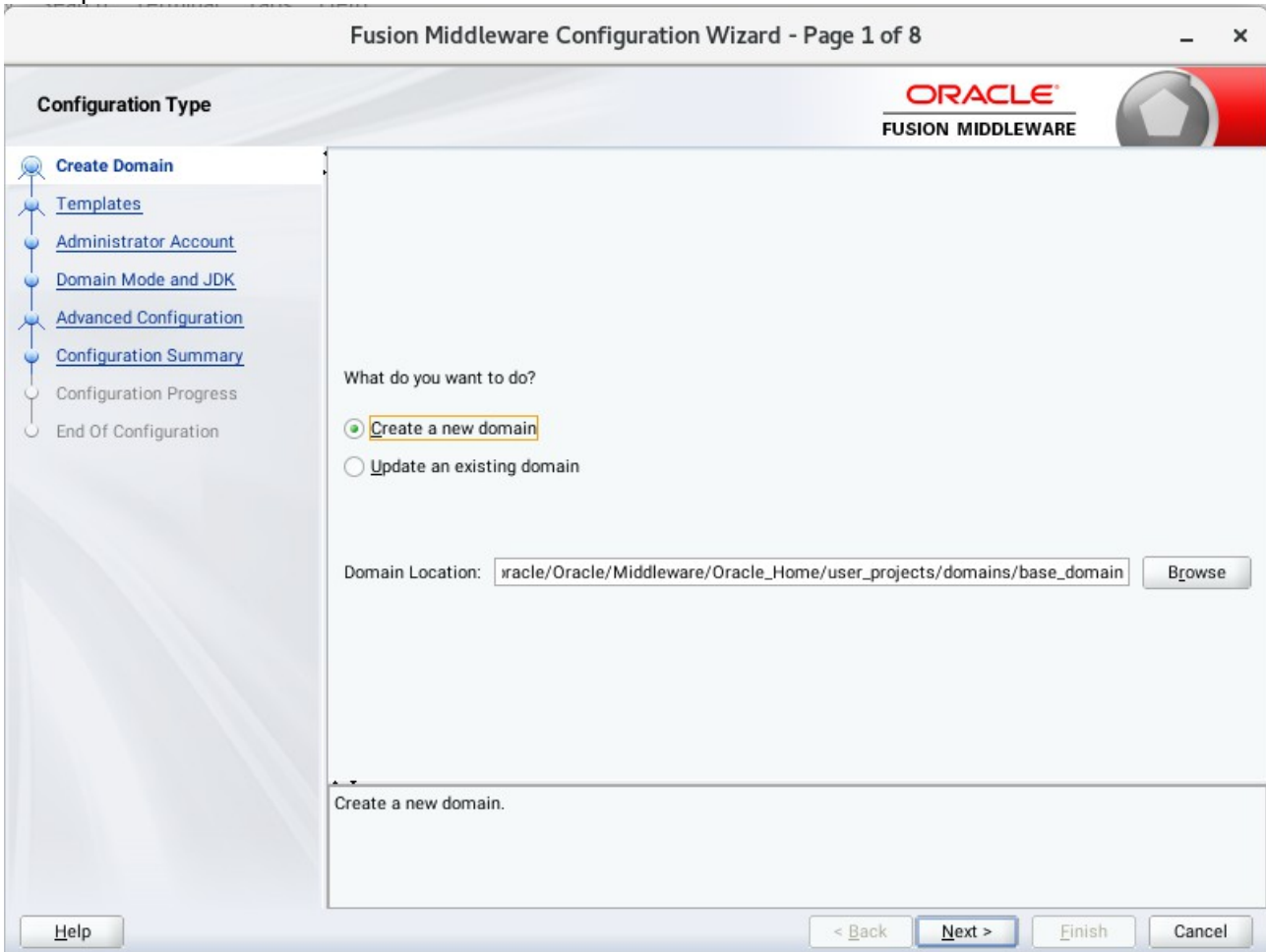
Select the **Create new prefix** radio button and specify a custom prefix(such as DEV). Select the **Oracle Access Manager** schema, this action automatically selects the schemas as dependencies, and ensure the schema creation is successful.

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

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

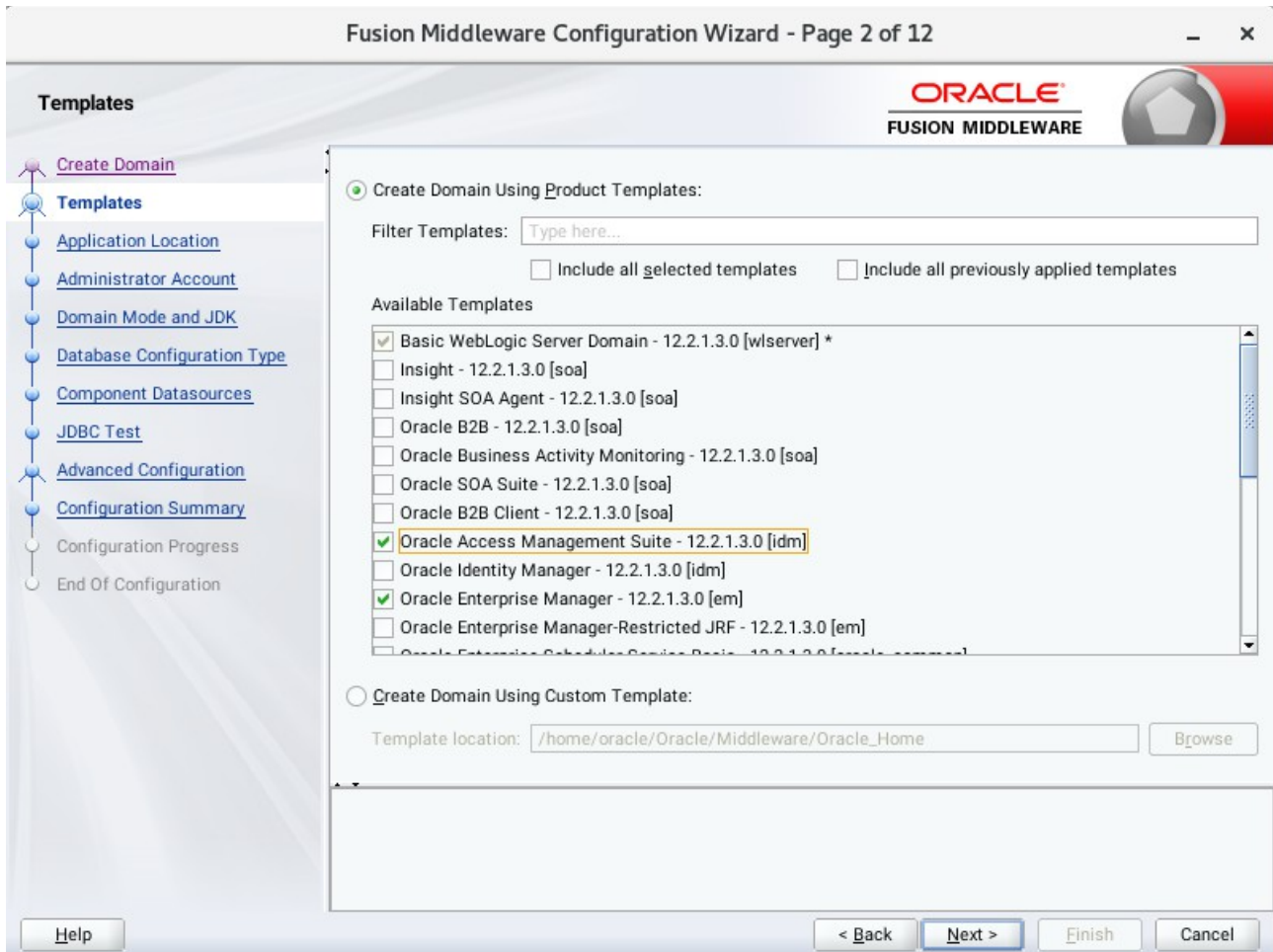
**Follow these steps:**

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



Click **Next** to continue.

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



On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Access Management Suite - 12.2.1.3.0 [idm]**.

Selecting these templates automatically selects the following as dependencies:

- Oracle Enterprise Manager - 12.2.1.3.0 [em]
- Oracle JRF - 12.2.1.3.0 [oracle\_common]
- WebLogic Coherence Cluster Extension - 12.2.1.3.0 [wlserver]

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

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



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

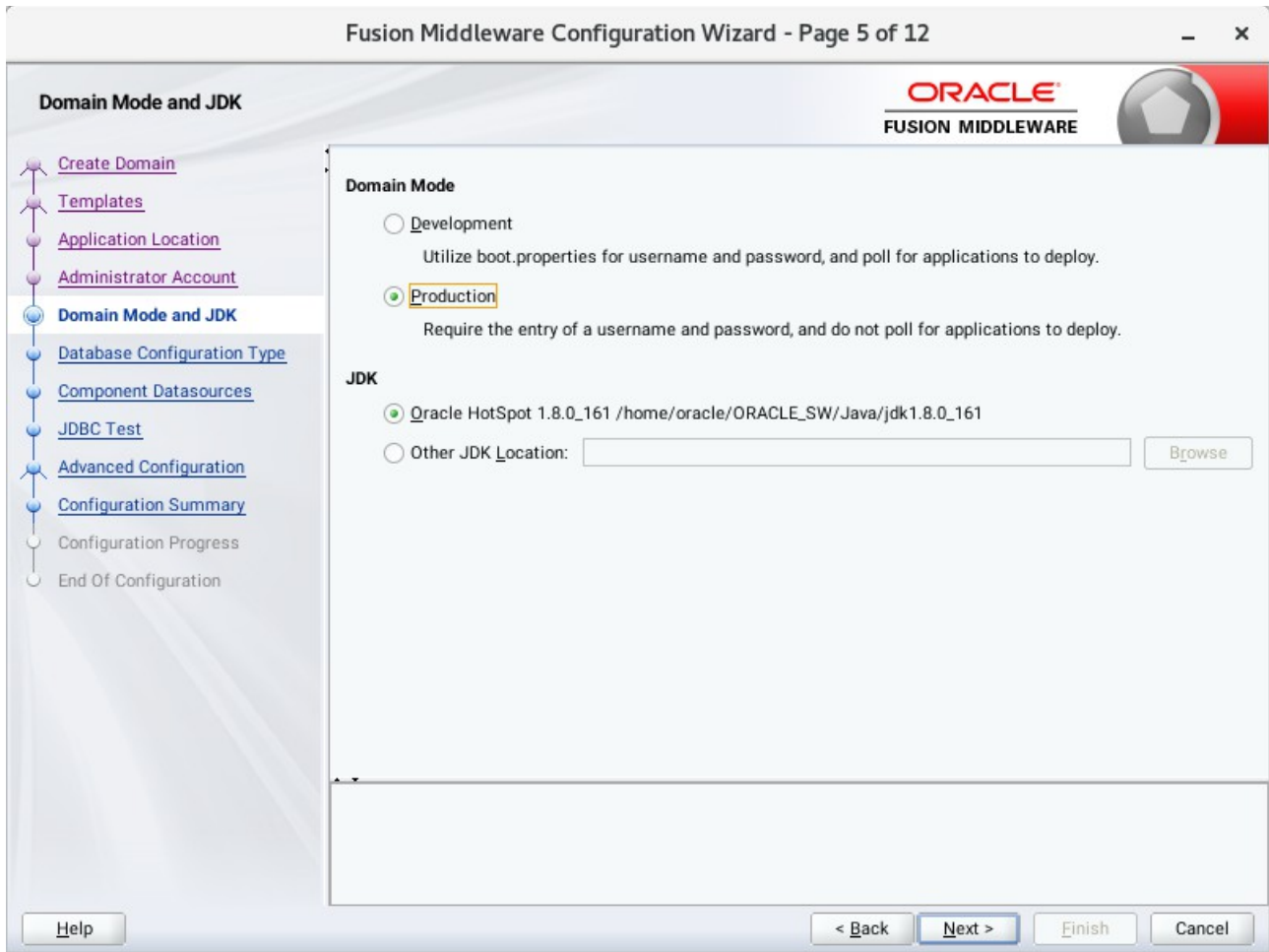


4). The **Administrator Account** screen appears.

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

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

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



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

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

Fusion Middleware Configuration Wizard - Page 6 of 12

**Database Configuration Type**

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.

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

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

**JDBC Component Schema**

ORACLE  
FUSION MIDDLEWARE

Vendor:  Driver:

Connection Parameters  Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

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

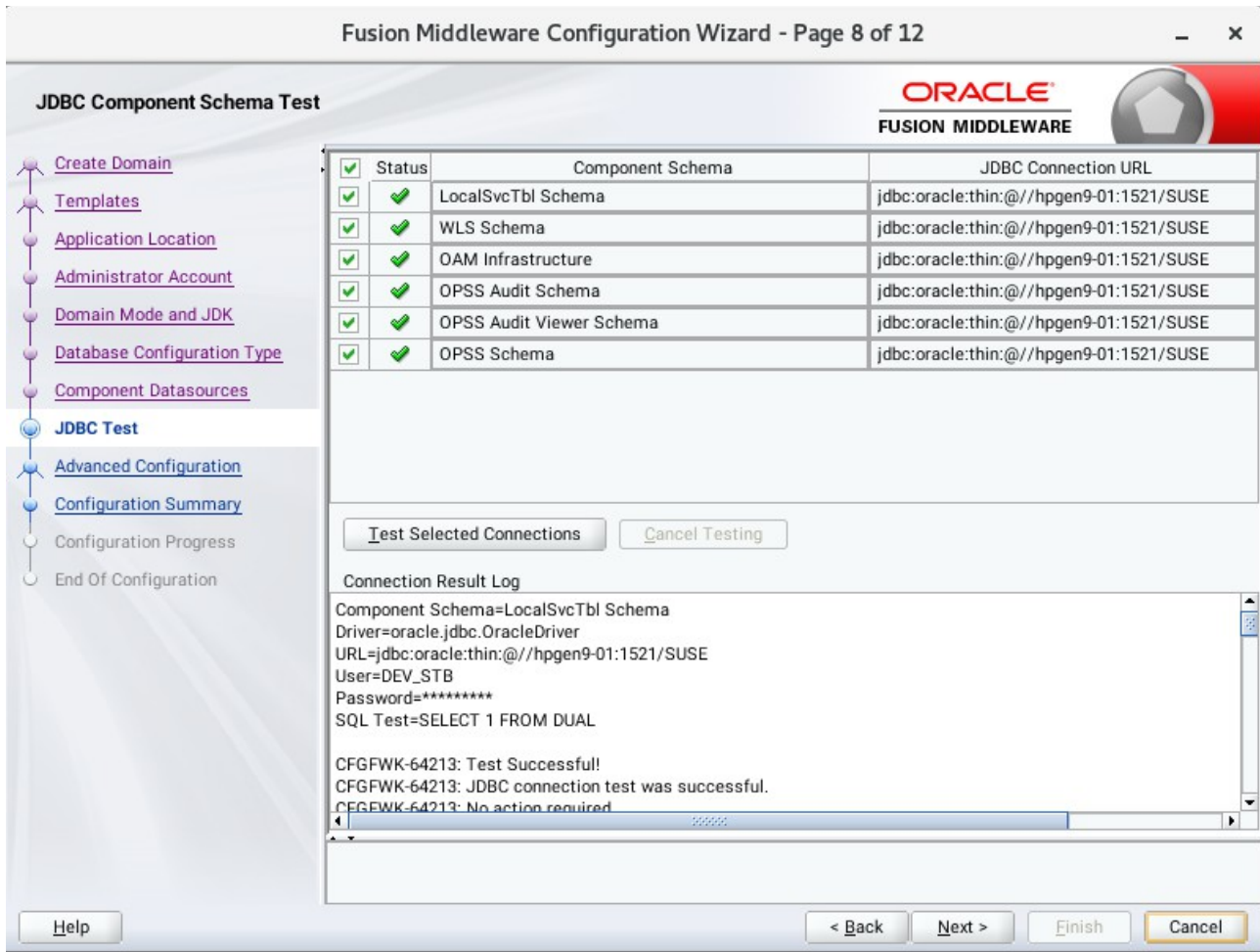
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	DEV_STB	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUNTIME	.....
<input type="checkbox"/>	OAM Infrastructure	SUSE	hpgen9-01	1521	DEV_OAM	.....
<input type="checkbox"/>	OPSS Audit Schema	SUSE	hpgen9-01	1521	DEV_IAU_APPEND	.....
<input type="checkbox"/>	OPSS Audit Viewer Sche	SUSE	hpgen9-01	1521	DEV_IAU_VIEWER	.....
<input type="checkbox"/>	OPSS Schema	SUSE	hpgen9-01	1521	DEV_OPSS	.....

Help < Back **Next >** Finish Cancel

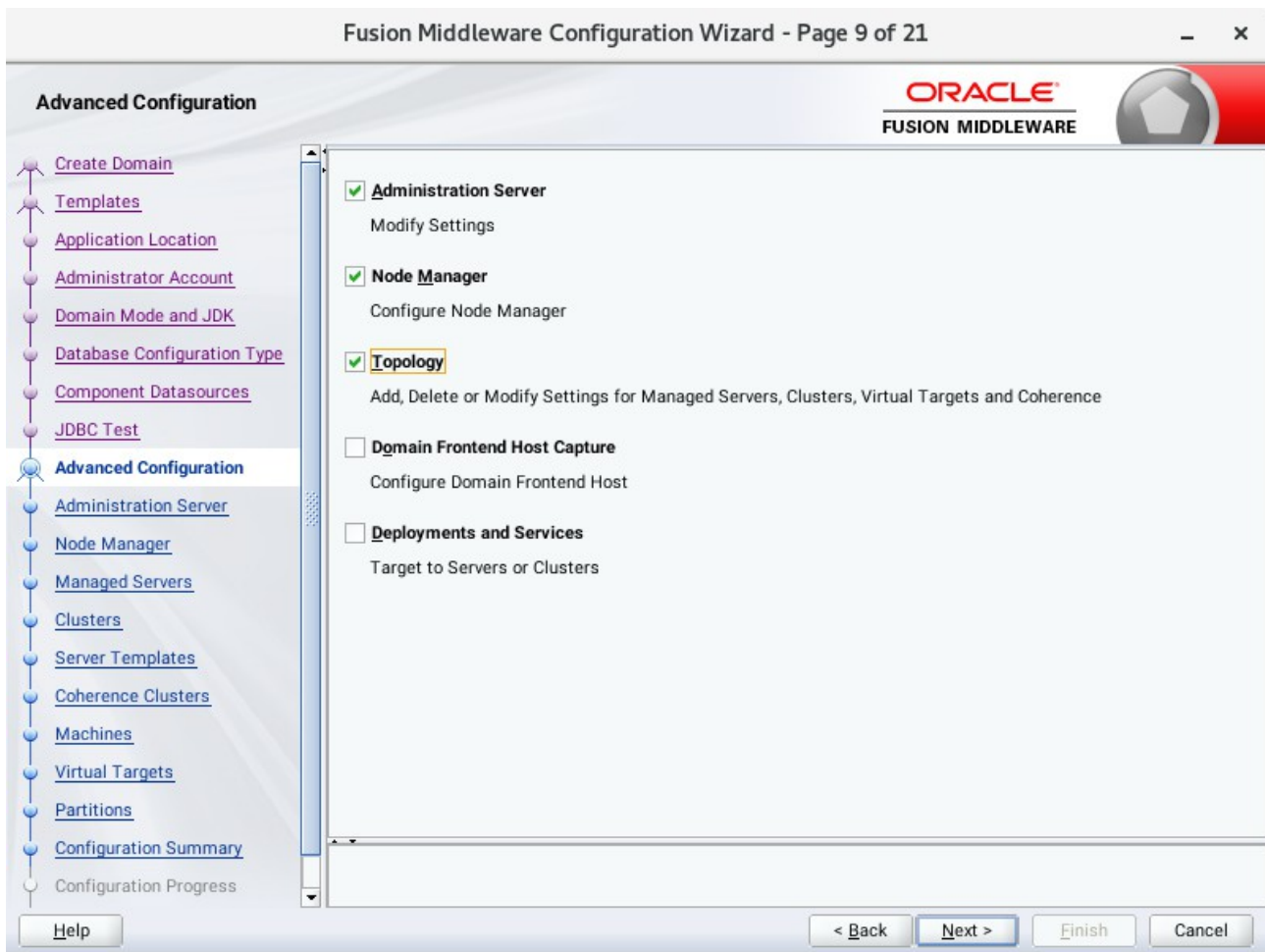
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



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

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



On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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

Fusion Middleware Configuration Wizard - Page 10 of 21

**Administration Server**

ORACLE  
FUSION MIDDLEWARE

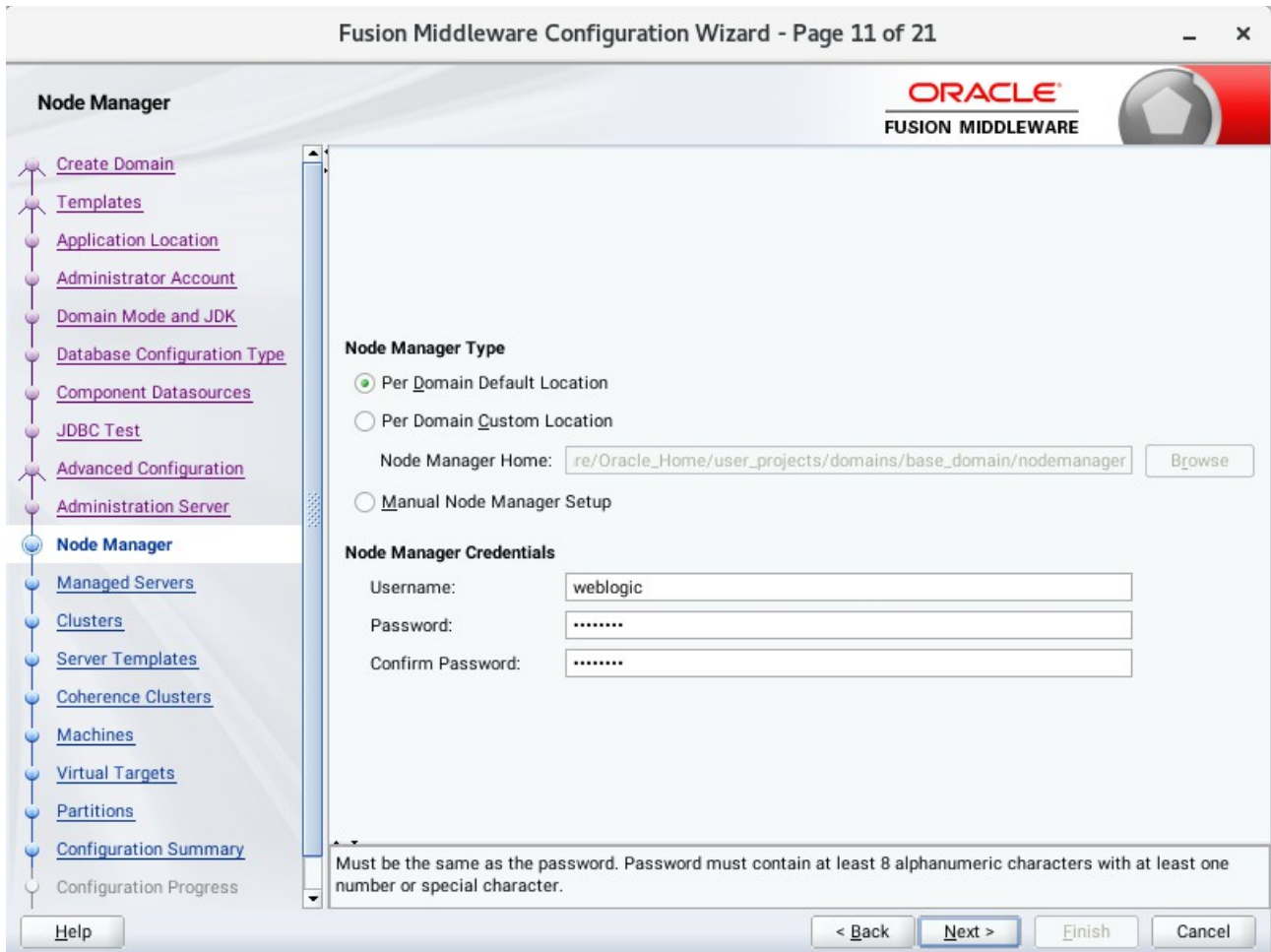
[Create Domain](#)  
[Templates](#)  
[Application Location](#)  
[Administrator Account](#)  
[Domain Mode and JDK](#)  
[Database Configuration Type](#)  
[Component Datasources](#)  
[JDBC Test](#)  
[Advanced Configuration](#)  
**Administration Server**  
[Node Manager](#)  
[Managed Servers](#)  
[Clusters](#)  
[Server Templates](#)  
[Coherence Clusters](#)  
[Machines](#)  
[Virtual Targets](#)  
[Partitions](#)  
[Configuration Summary](#)  
 Configuration Progress

Server Name: AdminServer  
 Listen Address: 147.2.207.96  
 Listen Port: 7001  
 Enable SSL:   
 SSL Listen Port:   
 Server Groups: Unspecified

The name must not be null or empty and may not contain any : , \* ? % / \_cloned.

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.



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

**Managed Servers**

ORACLE  
FUSION MIDDLEWARE

+ Add    Clone    X Delete    Discard 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.

Fusion Middleware Configuration Wizard - Page 13 of 23

**Clusters**

ORACLE  
FUSION MIDDLEWARE

+ Add    X Delete    Disgard Changes

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port	Dynamic Server Groups
oam_cluster_1			0	0	Unspecified
oam-policy_cluster_1			0	0	Unspecified

Help    < Back    Next >    Finish    Cancel

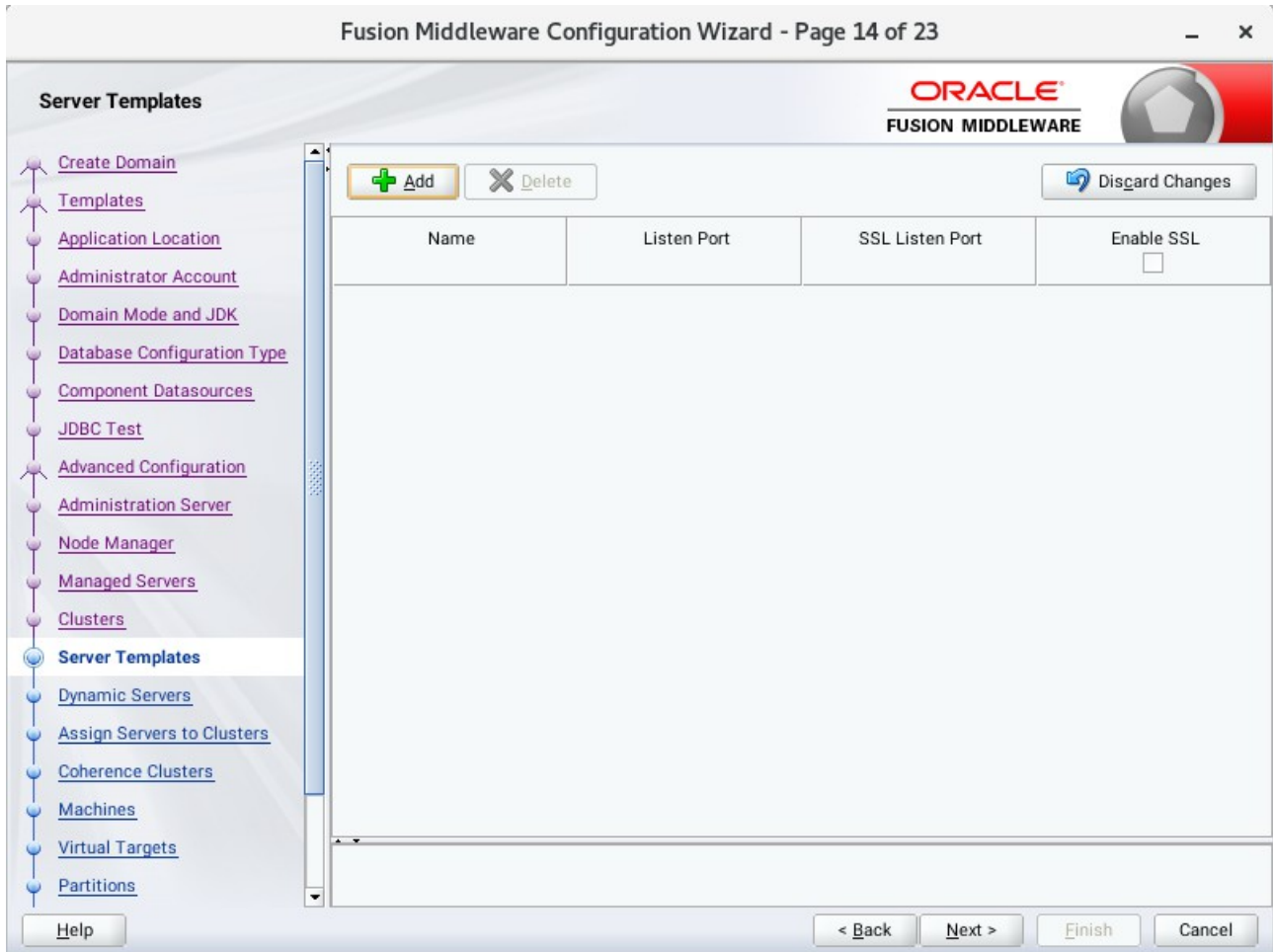
On the Clusters screen:

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

Click **Next** to continue.

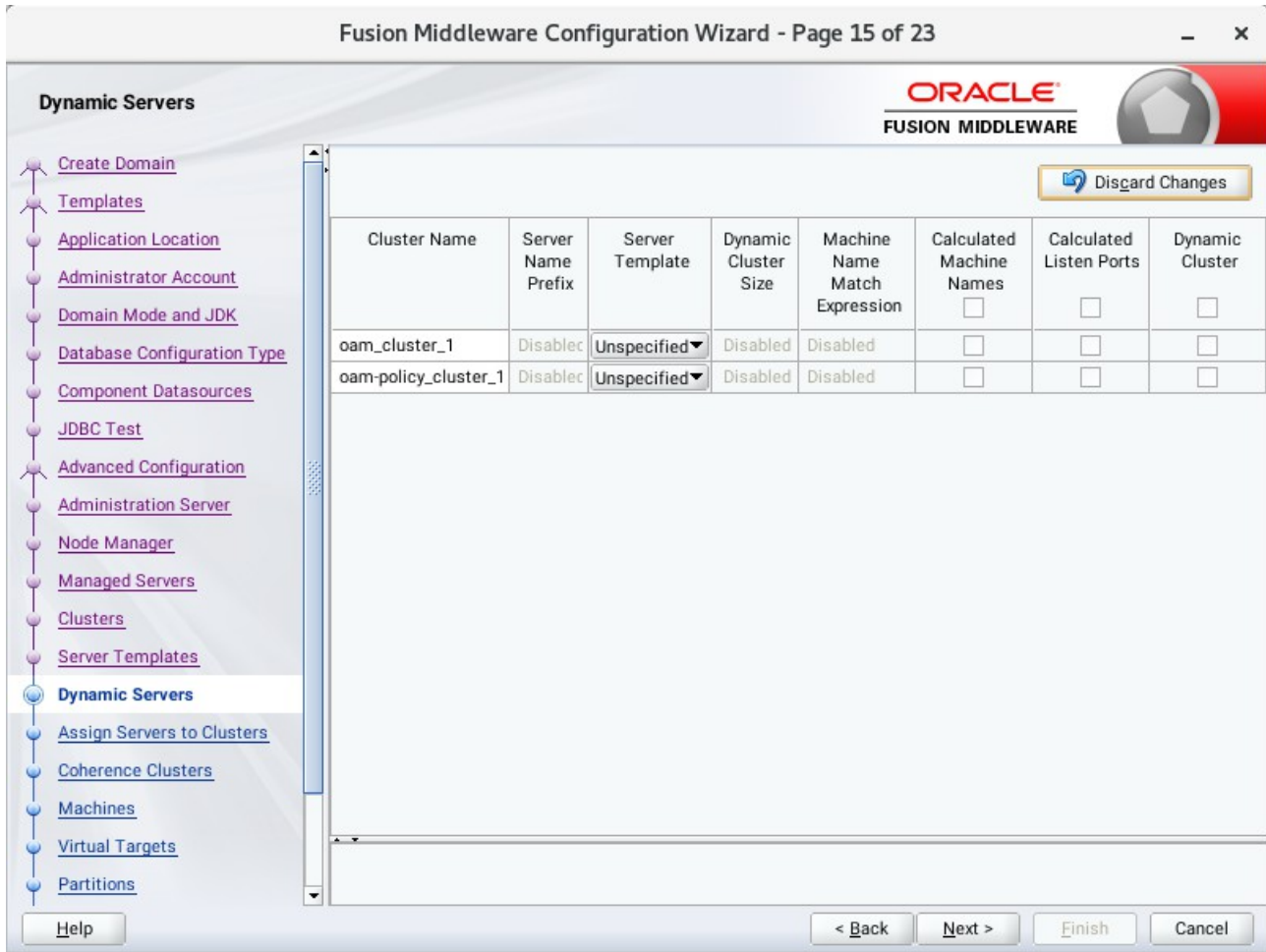
(**Note:** Configuring a non-clustered setup on a single node, skip this screen.)

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



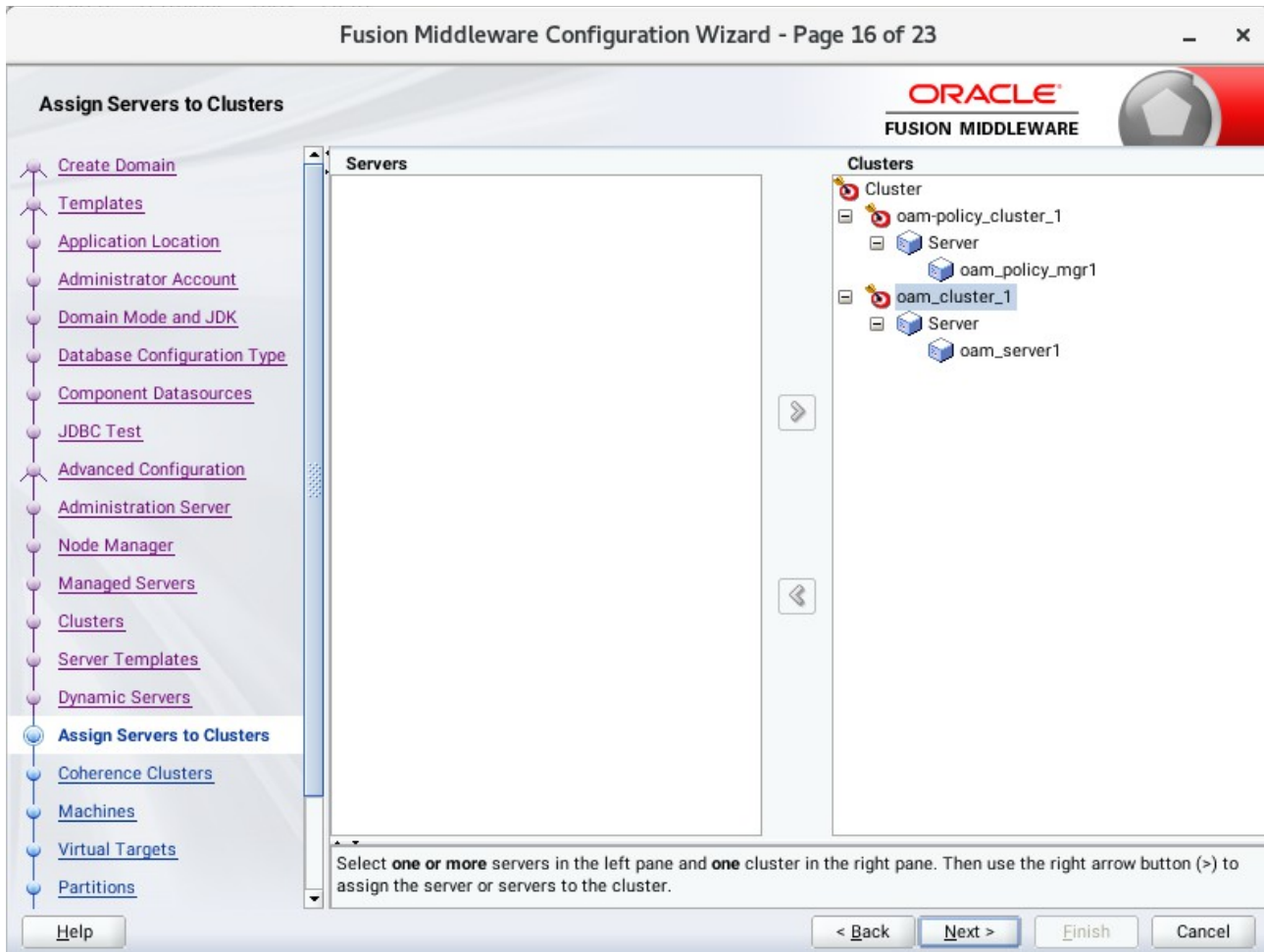
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



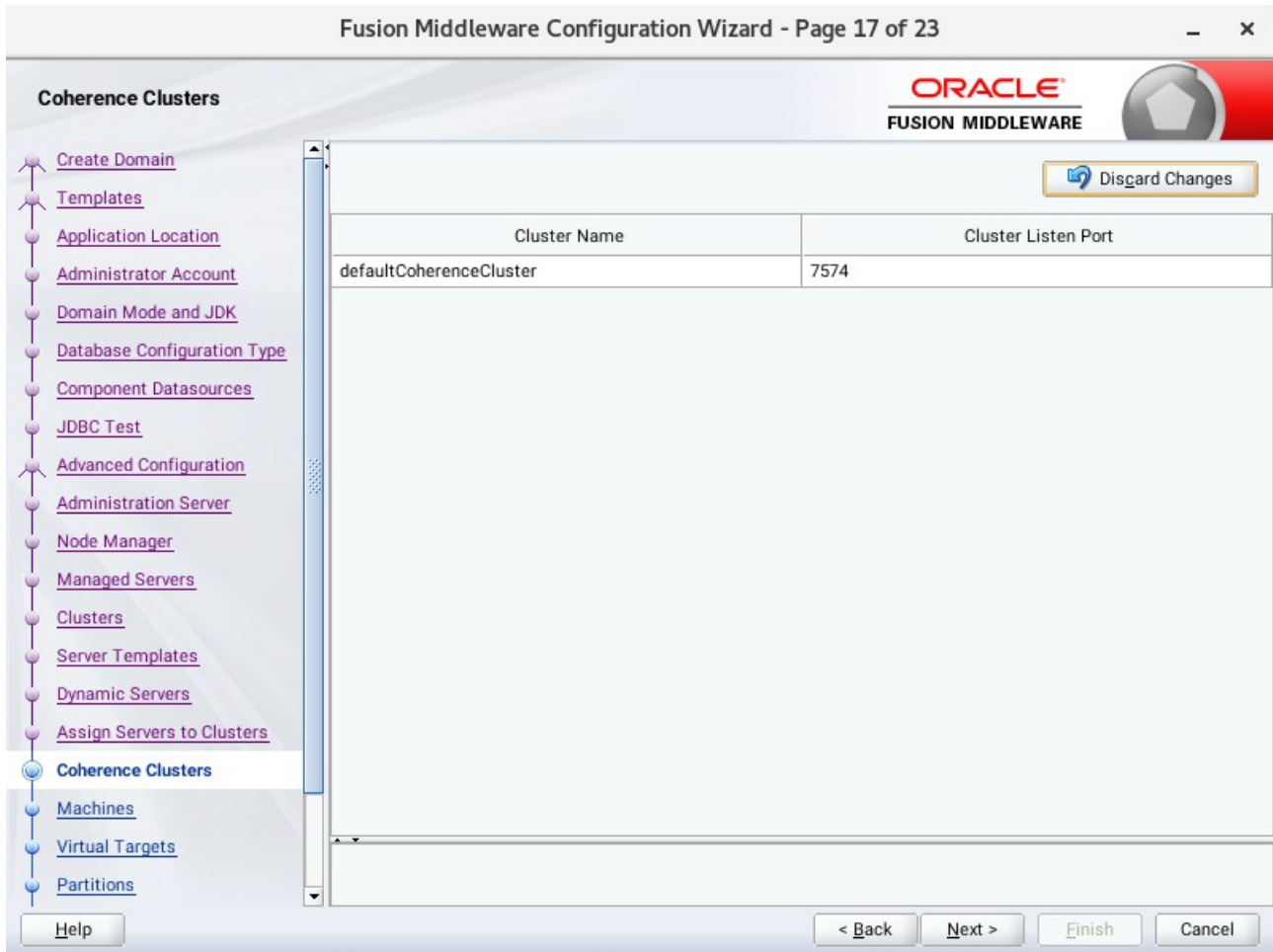
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



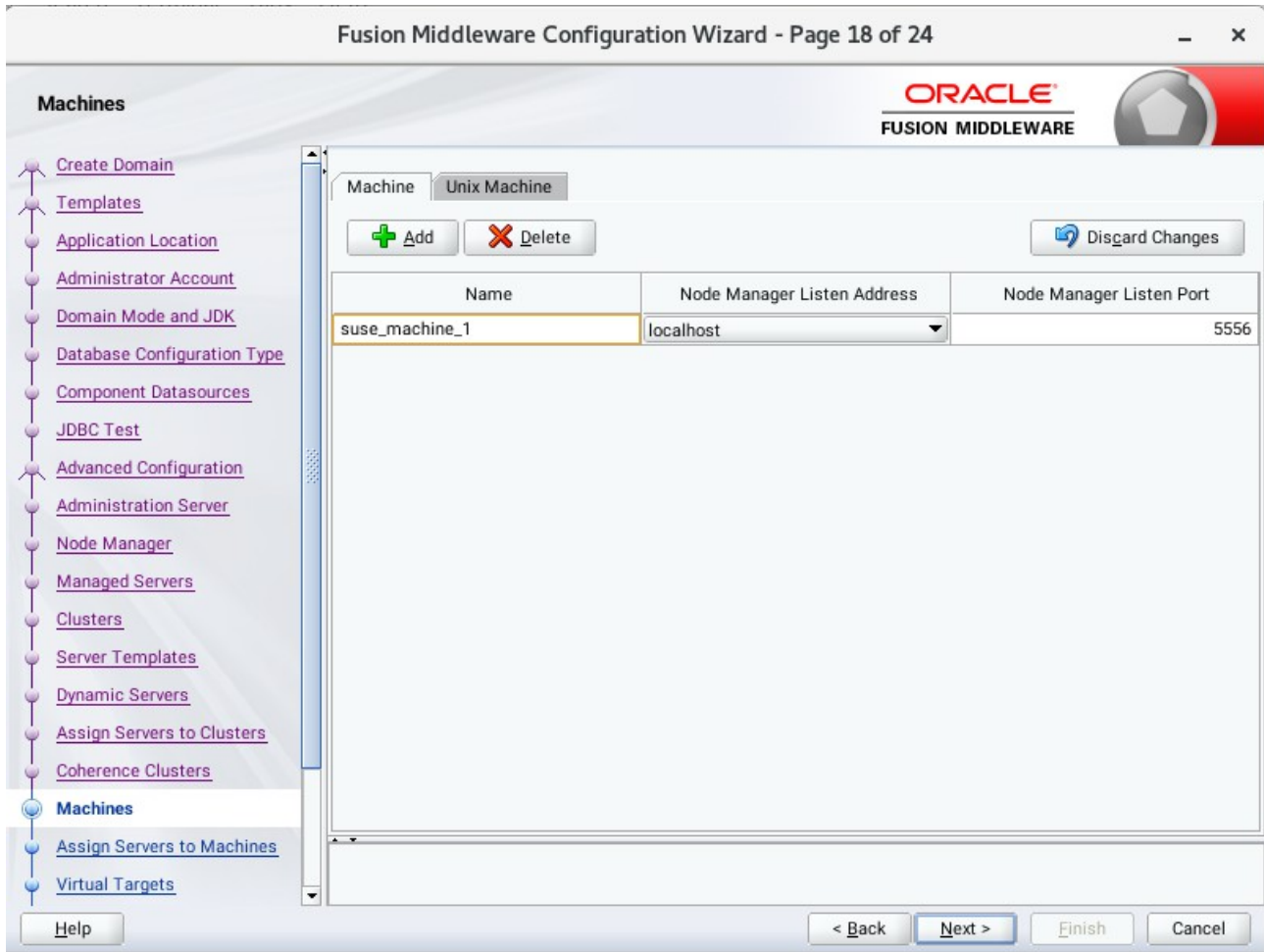
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



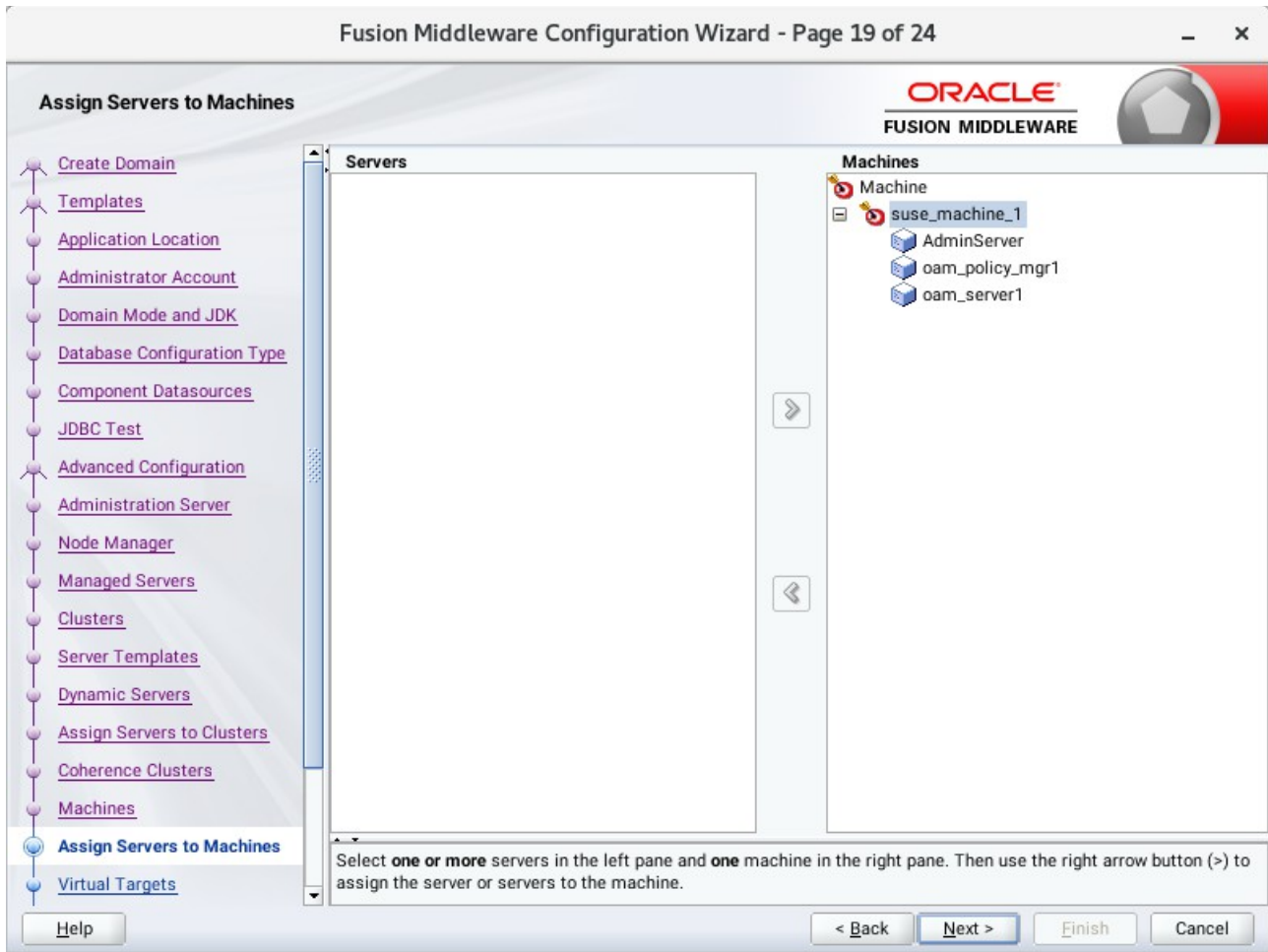
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



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

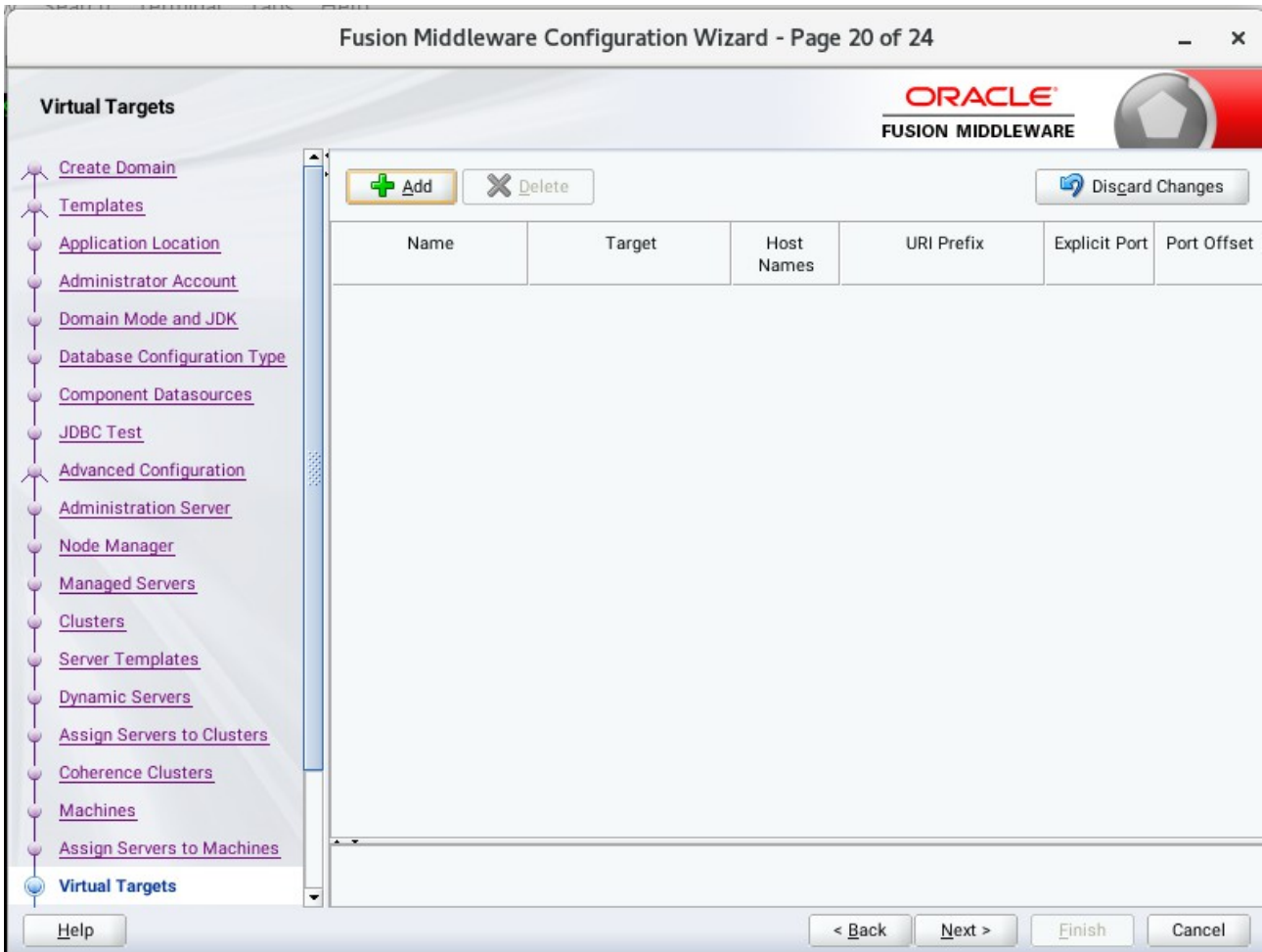
19). The **Assign Servers to Machines** screen appears.



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

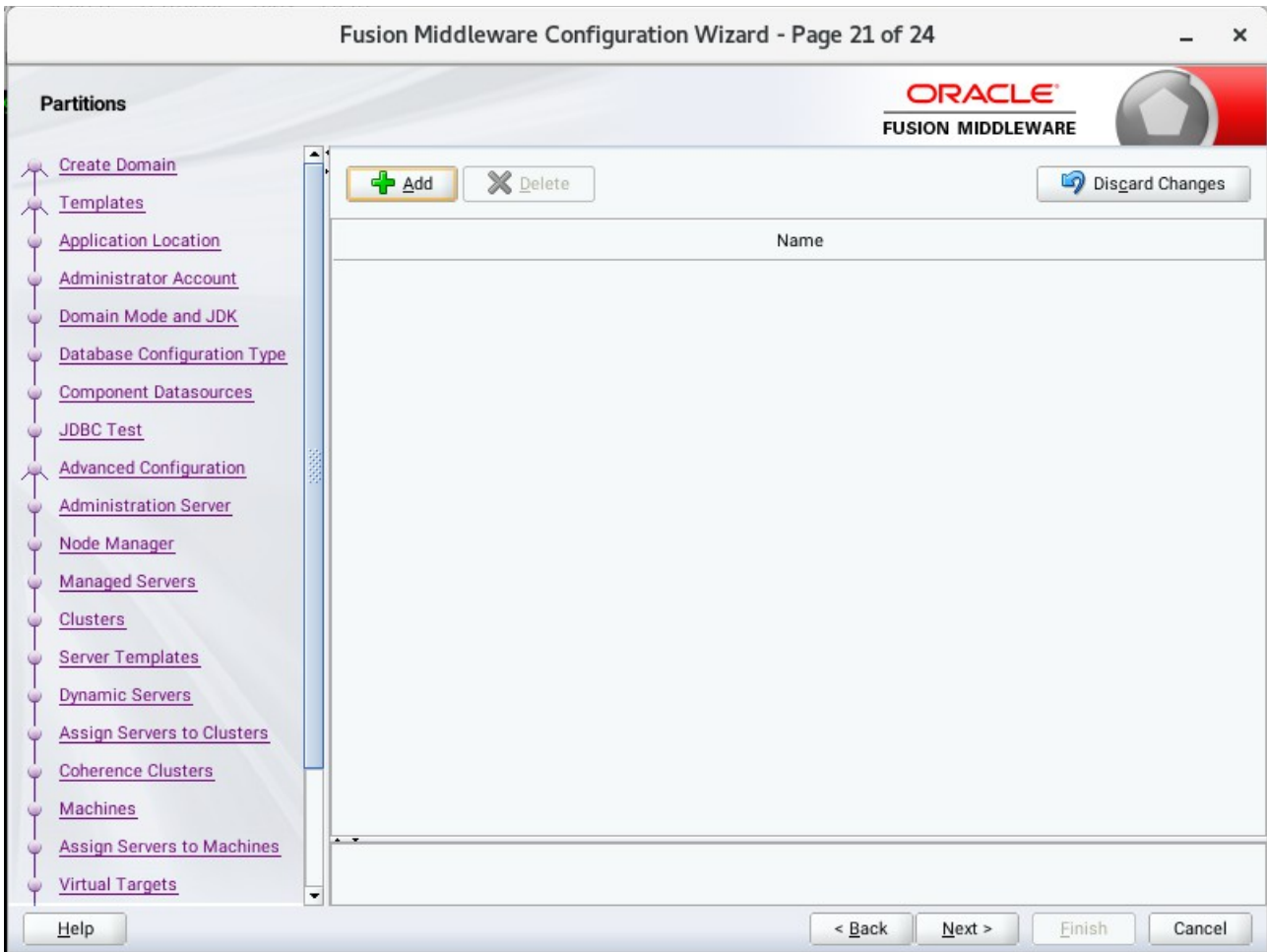


20). The **Virtual Targets** screen appears.



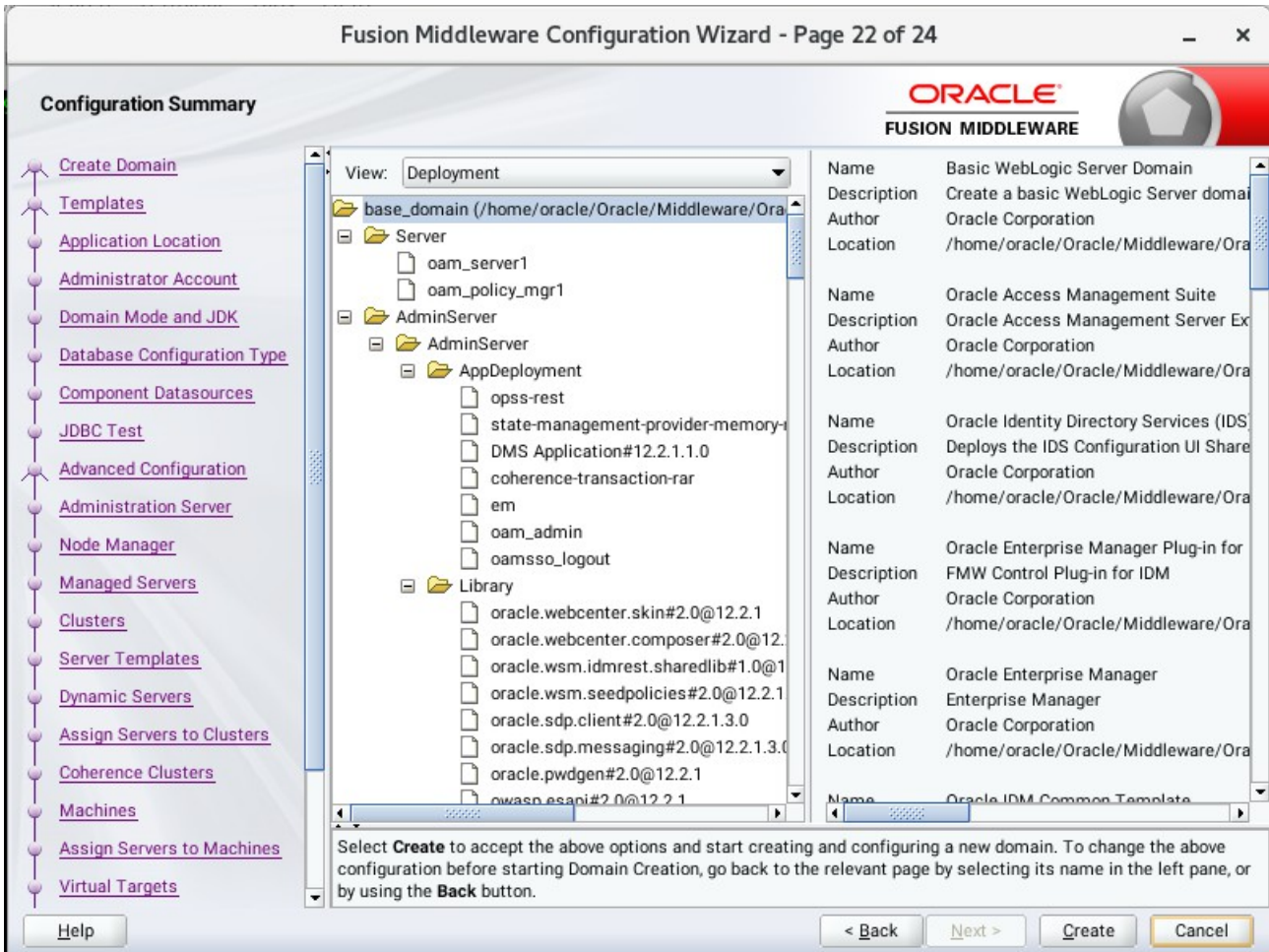
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



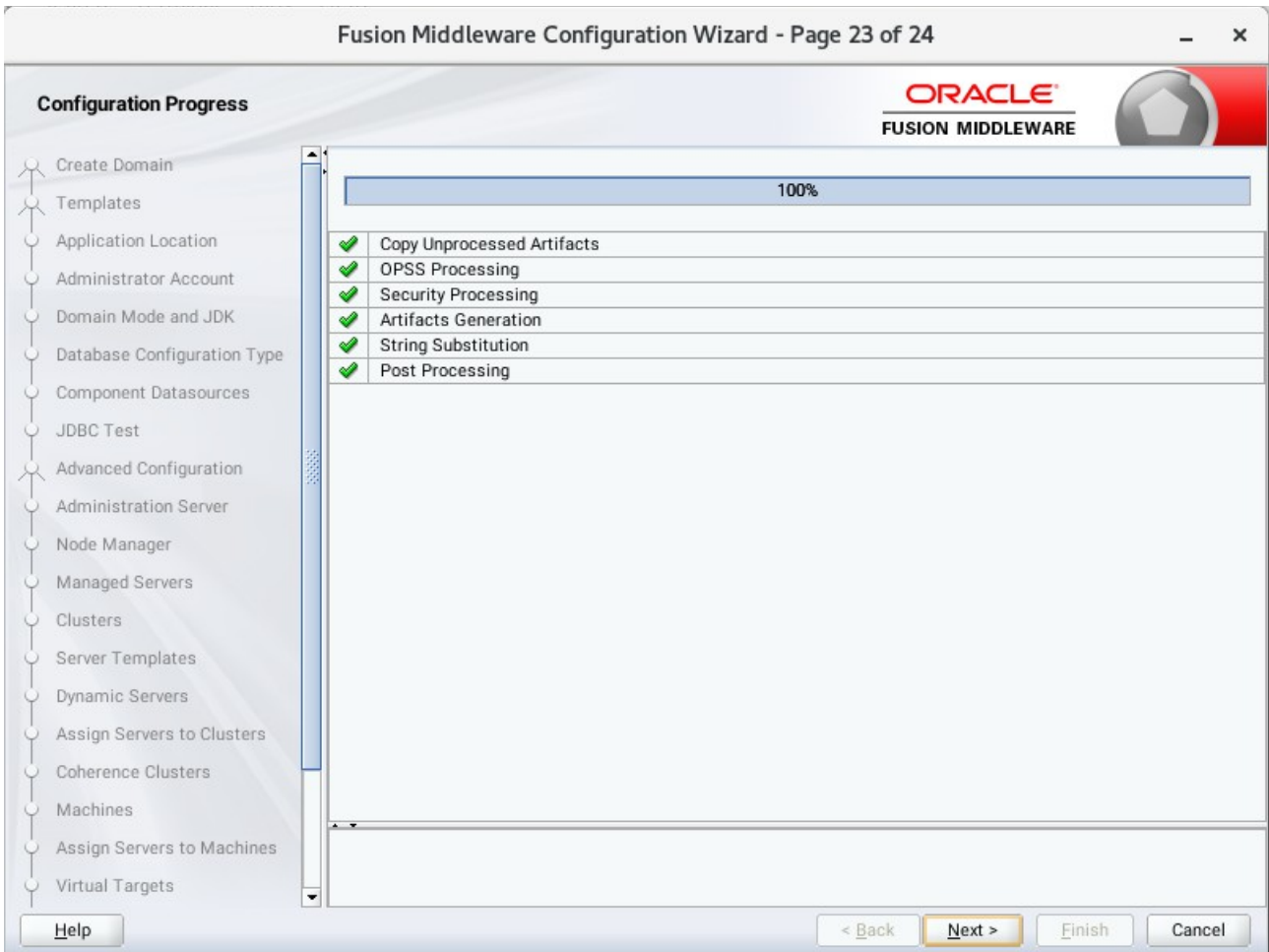
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



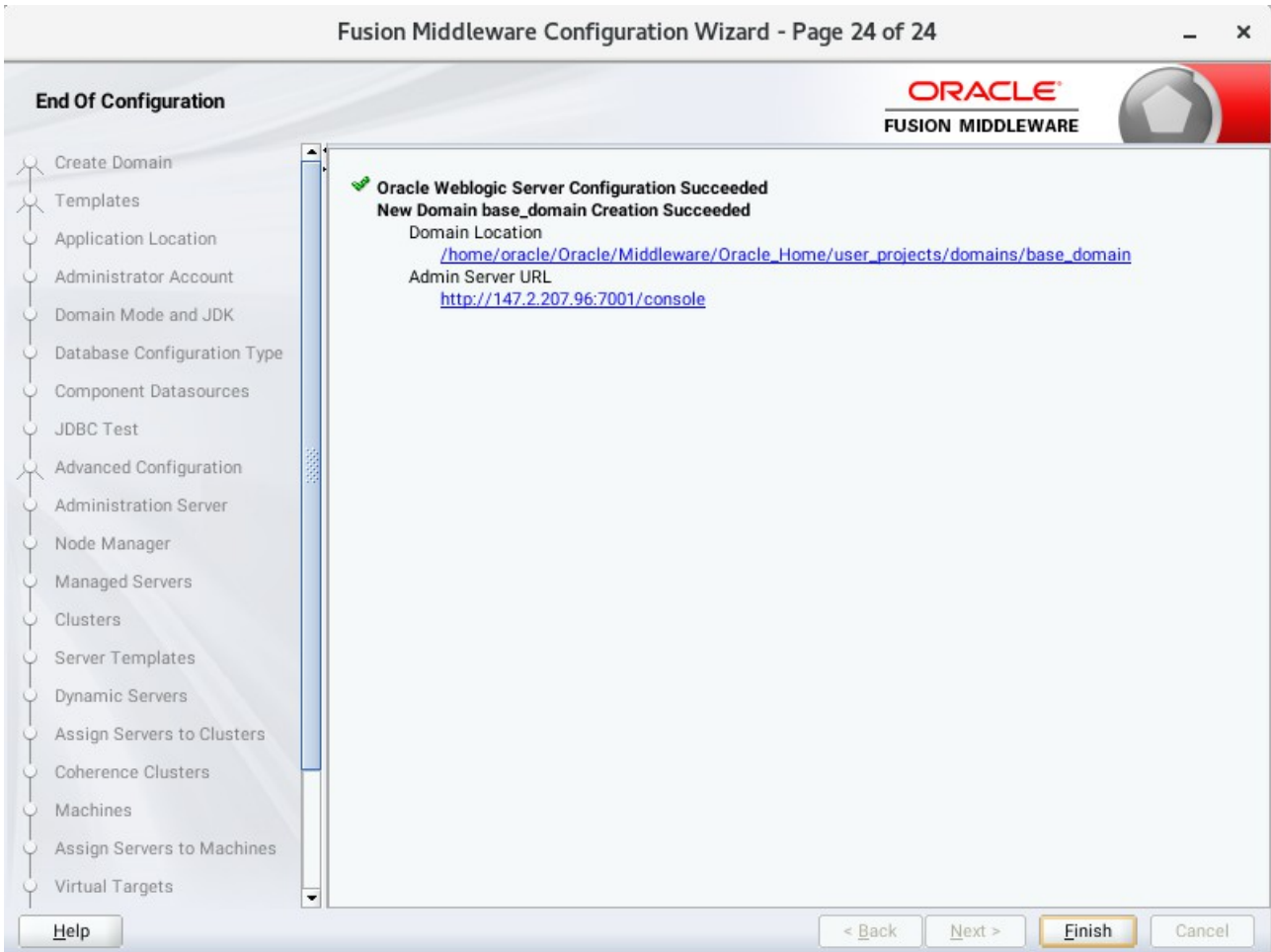
Select **Create** to accept the above options and start creating and configuring a new domain.

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:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/O... x oracle@hpgen9-01:/home/oracle/Or... x oracle@hpgen9-01:/home/oracle/Or... x
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 32392
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup: ignoring input and redirecting stderr to stdout

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/node
manager
CLASSPATH=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/
server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdp
arty/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_161/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/Mi
ddleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middlewa
re/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.Laun
chClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.pol
icy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161 weblogic.NodeManager -v
<Jul 12, 2018 6:30:14 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 12, 2018 6:30:15 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.3.0>
<Jul 12, 2018 6:30:15 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/Or
acle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Jul 12, 2018 6:30:15 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 12, 2018 6:30:15 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type
=kss, PassPhraseUsed=true>
Jul 12, 2018 6:30:17 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write boo

```

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

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x
m_addLdapPwd" cannot be found.>
<Jul 12, 2018 6:34:52,797 PM GMT+08:00> <Warning> <oracle.as.jmx.framework.MessageLocalizationHelper> <J2EE JMX-46041> <The resource for bundle "oracle.security.am.wlst.management.FoundationConfigMBeanResources" with key "oam_updateAgentPassword" cannot be found.>
<Jul 12, 2018 6:34:53,532 PM GMT+08:00> <Warning> <javax.enterprise.resource.webcontainer.jsf.managedbean> <jsf.managed.bean.duplicate> <JSF1074: Managed bean named 'TreeRefresh' has already been registered. Replacing existing managed bean class type oracle.am.security.TreeRefresh with oracle.security.fed.admin.sts.ui.model.TreeRefresh.>
<Jul 12, 2018 6:35:00,795 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
2018-07-12 18:35:00.818/149.995 Oracle Coherence GE 12.2.1.3.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2018-07-12 18:35:00.845/150.022 Oracle Coherence GE 12.2.1.3.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jul 12, 2018 6:35:02,302 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 12, 2018 6:35:02,370 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jul 12, 2018 6:35:02,370 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers: Resolving connection list DomainRuntimeServiceMBean>
<Jul 12, 2018 6:35:02,576 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jul 12, 2018 6:35:02,577 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.>
<Jul 12, 2018 6:35:02,578 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.>
<Jul 12, 2018 6:35:02,579 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jul 12, 2018 6:35:02,593 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
v

```

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

---

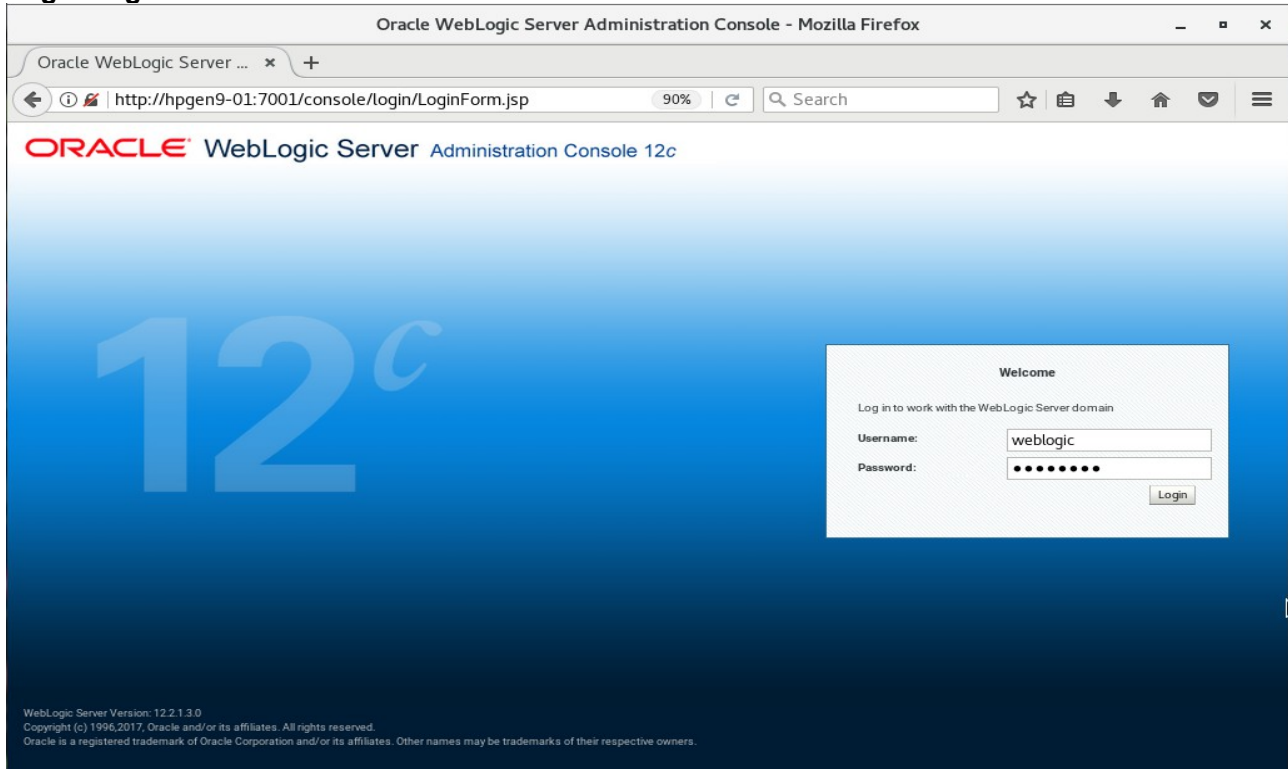
*Server state changed to RUNNING.*

---

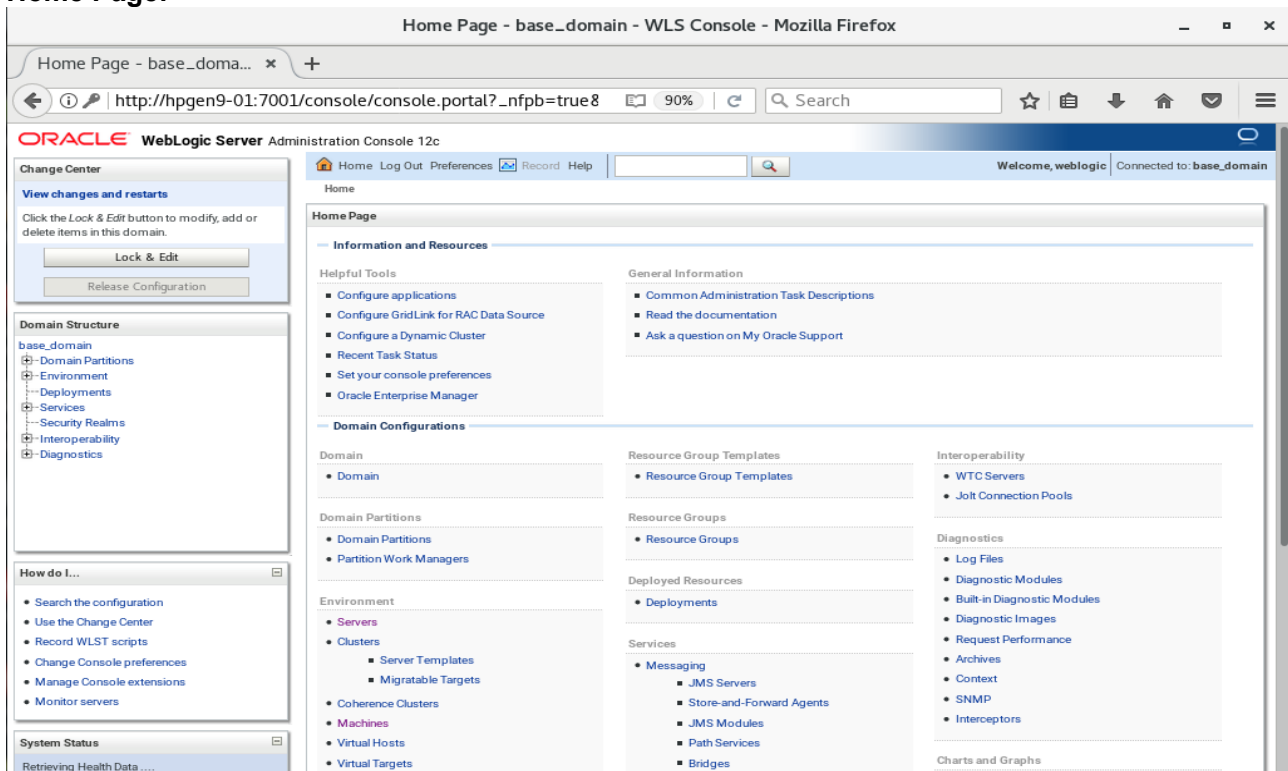
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

#### 1). Access to Administration Server Console

##### Login Page:



##### Home Page:





**Viewing the summary of servers:**

Summary of Servers - base\_domain - WLS Console - Mozilla Firefox

Summary of Servers - ba... x +

http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: base\_domain

Home > Summary of Servers

Summary of Servers

Configuration Control

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

Customize this table

Servers (Filtered - More Columns Exist)

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

New Clone Delete Showing 1 to 3 of 3 Previous | Next

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	SHUTDOWN	Not reachable	14150
oam_server1	Configured	oam_cluster_1	suse_machine_1	SHUTDOWN	Not reachable	14100

New Clone Delete Showing 1 to 3 of 3 Previous | Next

Change Center

View changes and restarts

Click the Lock & Edit button to modify, add or delete items in this domain.

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 6:38 PM

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 - base\_domain - WLS Console - Mozilla Firefox

Settings for suse\_machin... x +

http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: base\_domain

Home > Summary of Servers > Summary of Environment > Summary of Machines > suse\_machine\_1

Settings for suse\_machine\_1

Configuration Monitoring Notes

Node Manager Status Node Manager Log

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

Status: Reachable Current status of this Node Manager. More Info...

Version: 12.2.1.3.0 Version string returned from the Node Manager. More Info...

Change Center

View changes and restarts

Click the Lock & Edit button to modify, add or delete items in this domain.

Lock & Edit

Release Configuration

Domain Structure

- base\_domain
  - Domain Partitions
  - Environment
    - Deployments
    - Services
    - Security Realms
  - Interoperability
  - Diagnostics

How do I...

- Monitor Node Manager status
- Monitor Node Manager logs
- Create and configure machines

System Status

Health of Running Servers as of 6:38 PM

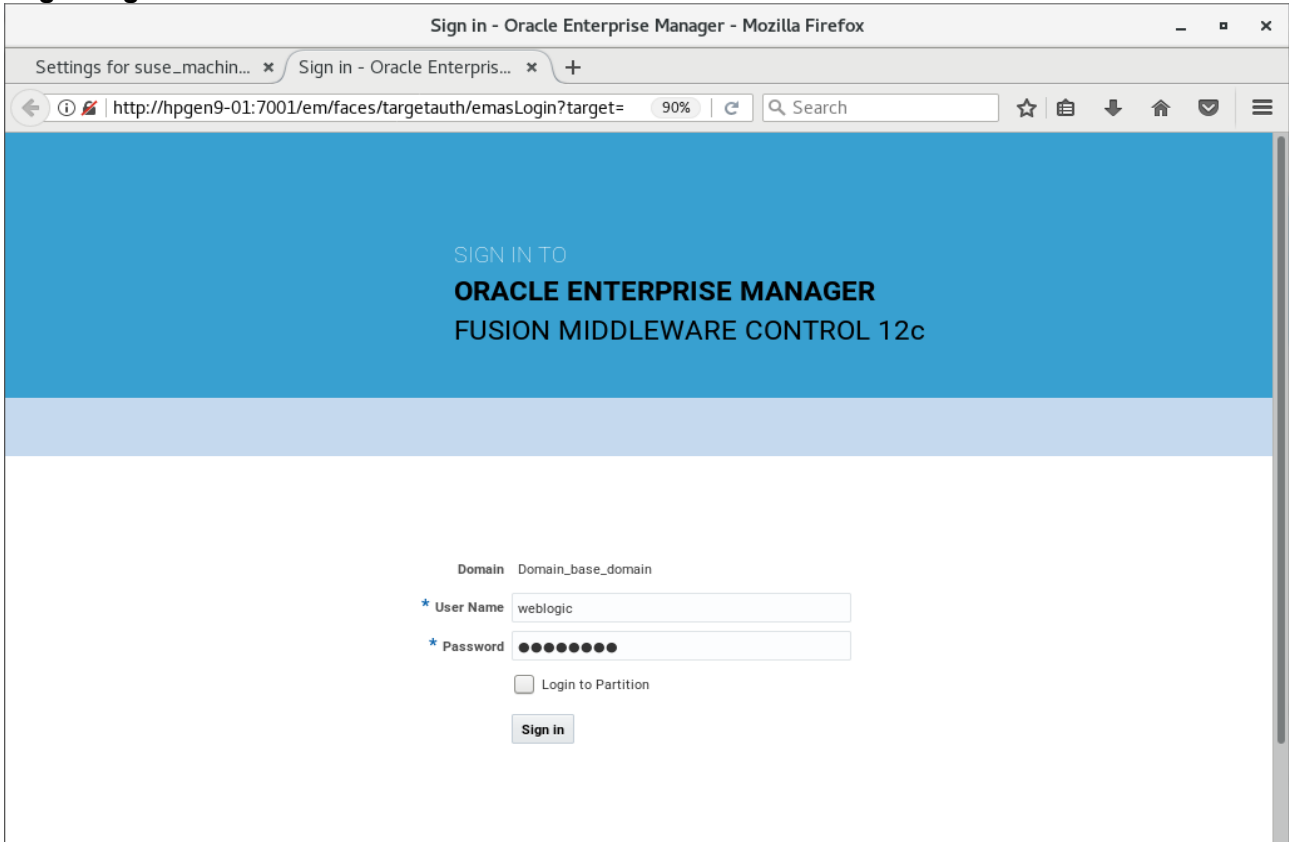
Failed (0)

Critical (0)

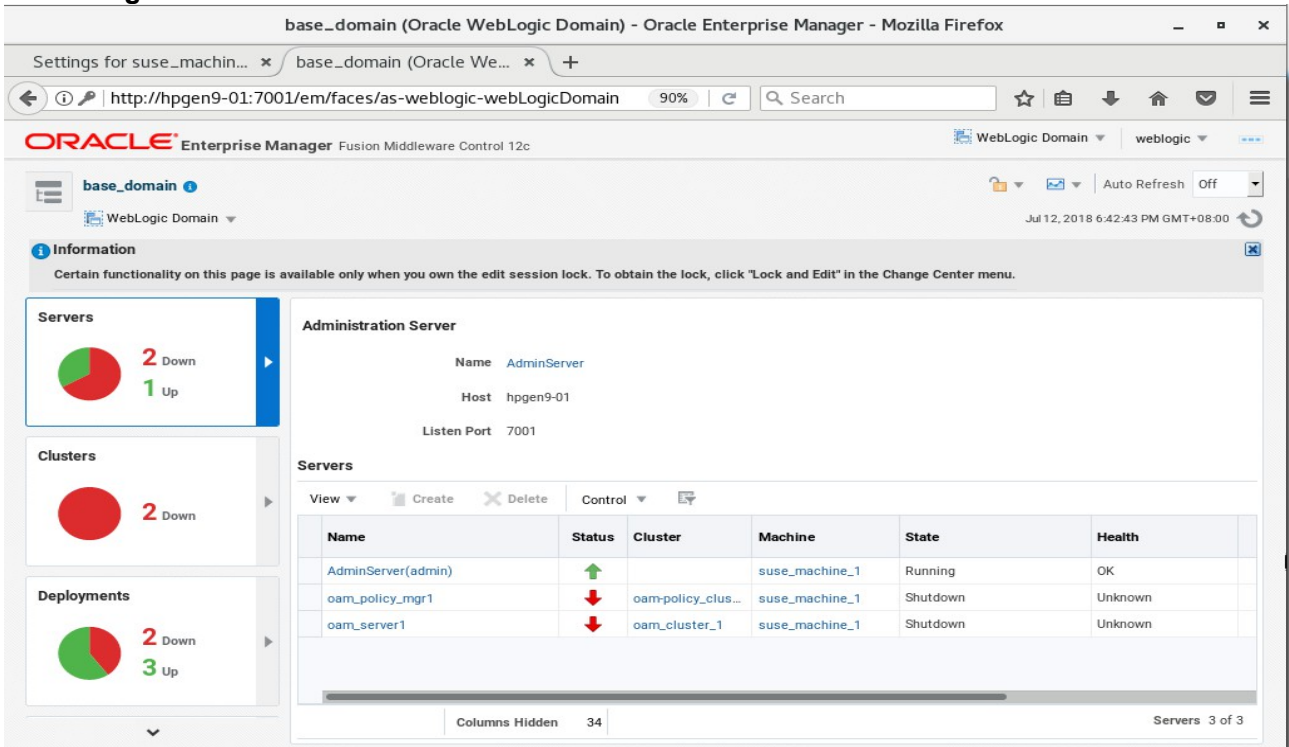
Overloaded (0)

2). 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:

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

Settings for suse\_machin... x base\_domain (Oracle We... x +

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomain 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

base\_domain

WebLogic Domain Jul 12, 2018 6:47:15 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
oam_policy_mgr1	↓	oam-policy_clus...	suse_machine_1	Shutdown	Unknown
oam_server1	↑	oam_cluster_1	suse_machine_1	Running	OK

Columns Hidden 34 Servers 3 of 3

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

Settings for suse\_machin... x base\_domain (Oracle We... x +

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomain 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

base\_domain

WebLogic Domain Jul 12, 2018 6:49:05 PM GMT+08:00

Information

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

**Servers**

3 Up

**Administration Server**

Name AdminServer  
Host hpgen9-01  
Listen Port 7001

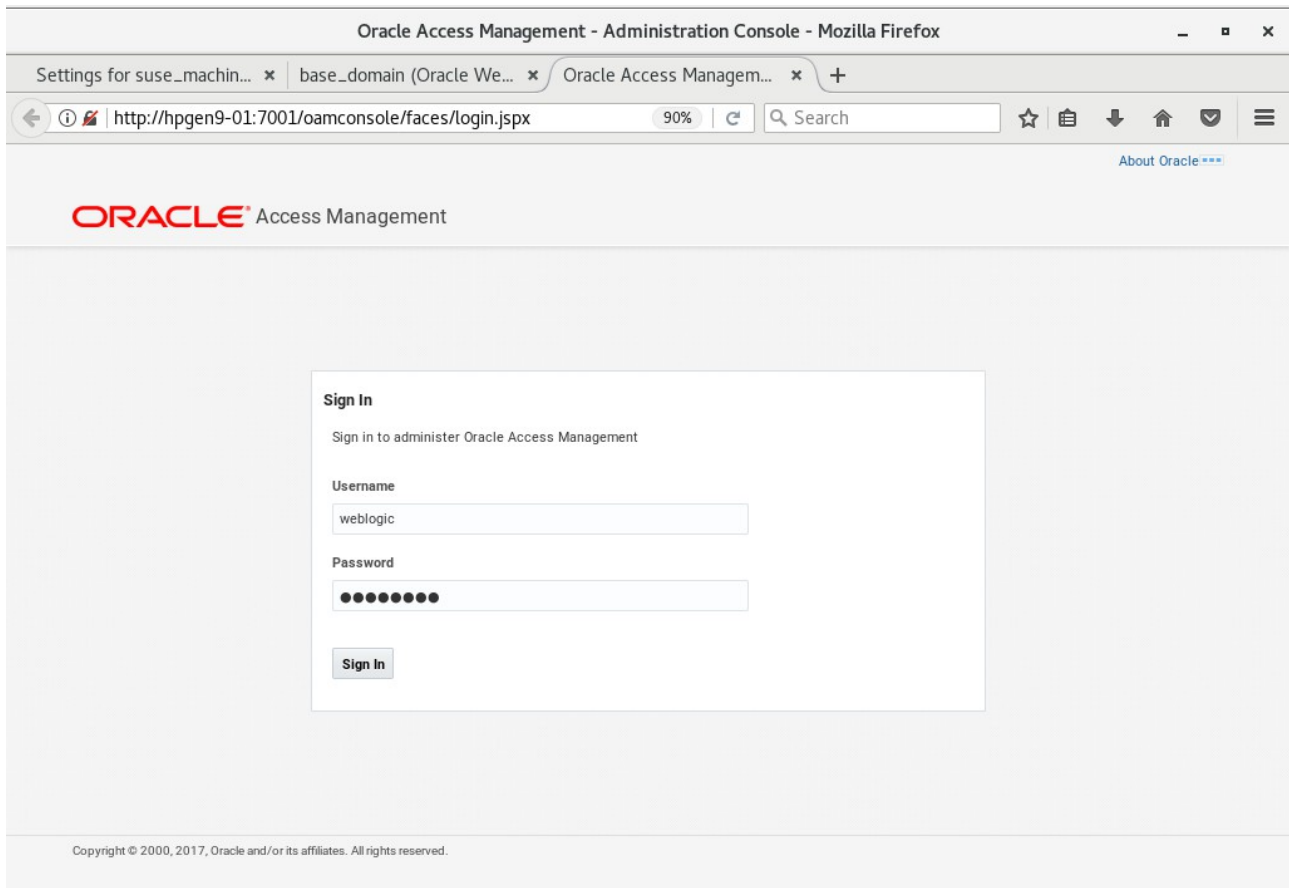
**Servers**

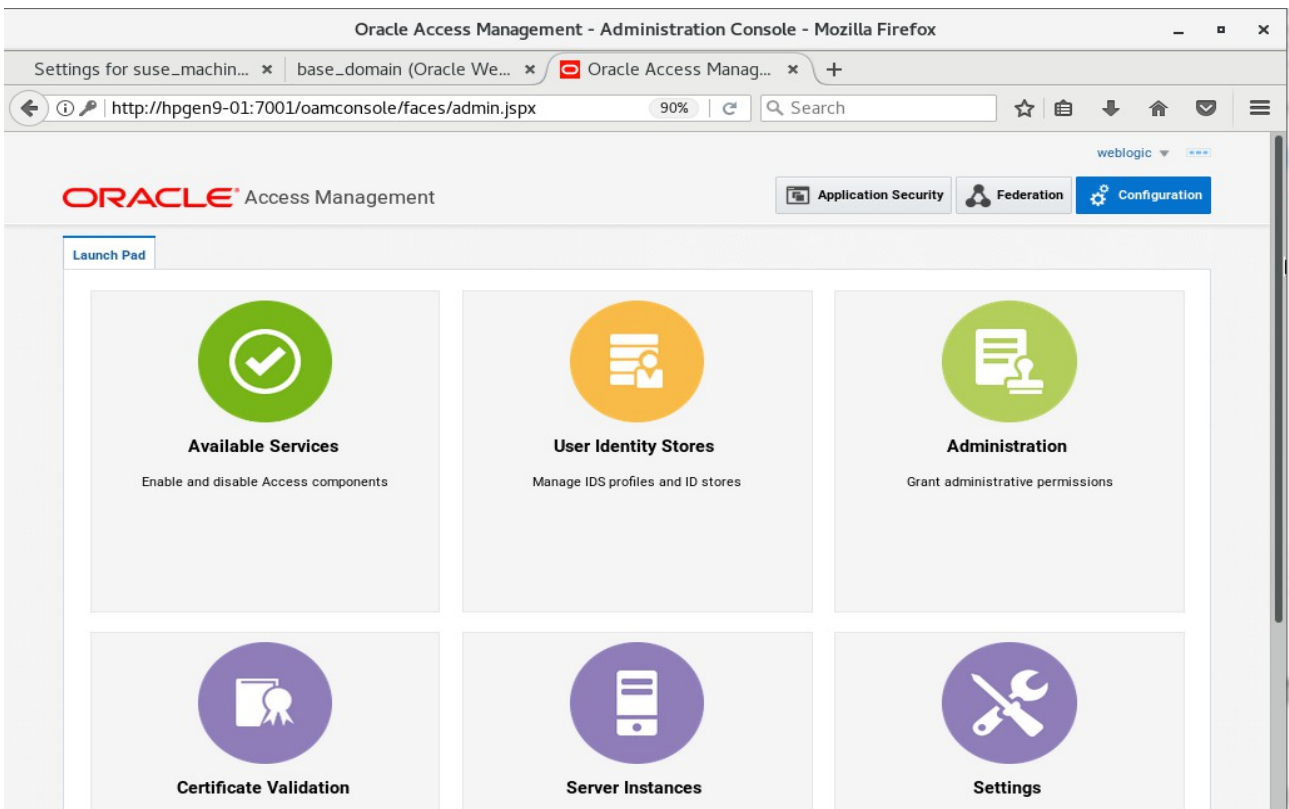
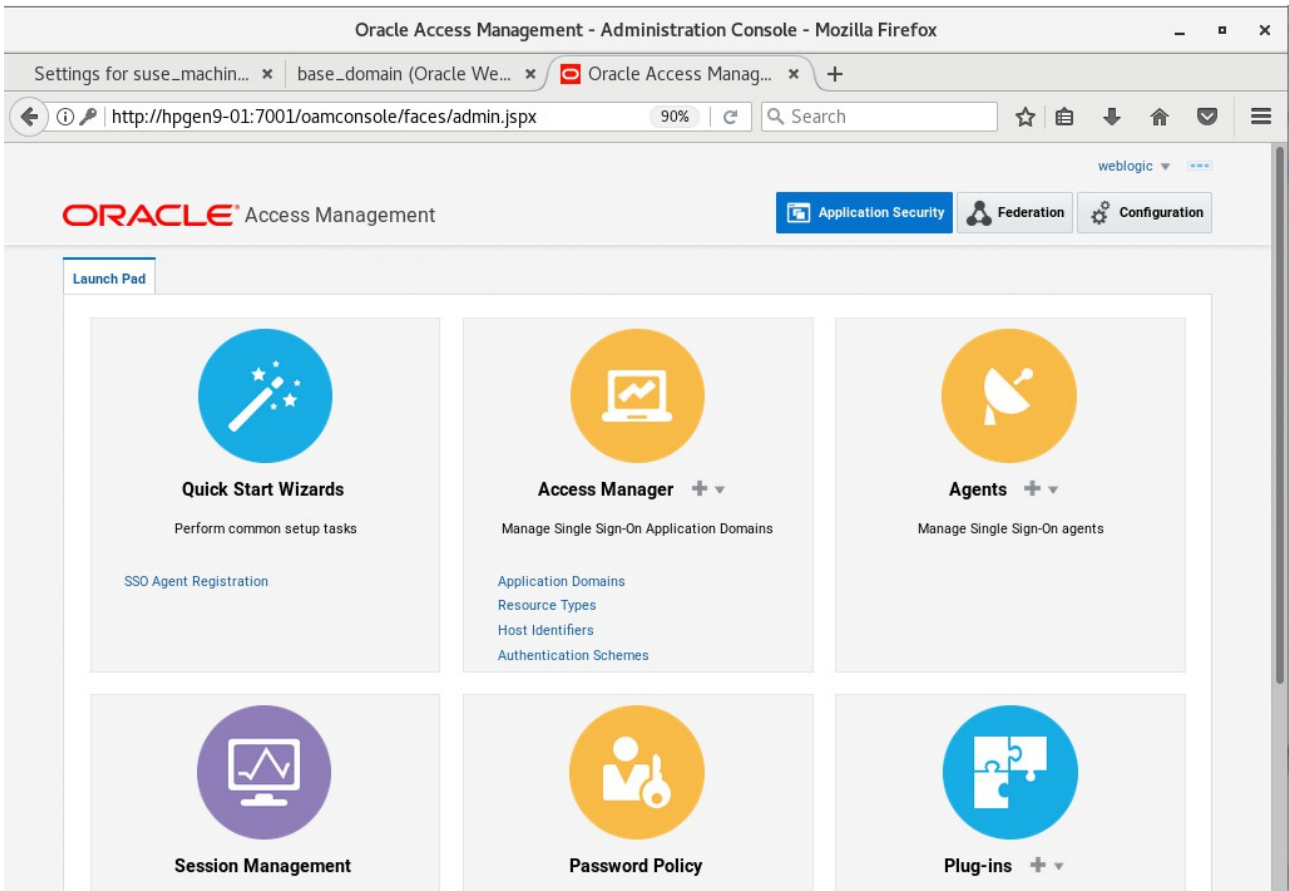
Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_machine_1	Running	OK
oam_policy_mgr1	↑	oam-policy_clus...	suse_machine_1	Running	OK
oam_server1	↑	oam_cluster_1	suse_machine_1	Running	OK

Columns Hidden 34 Servers 3 of 3

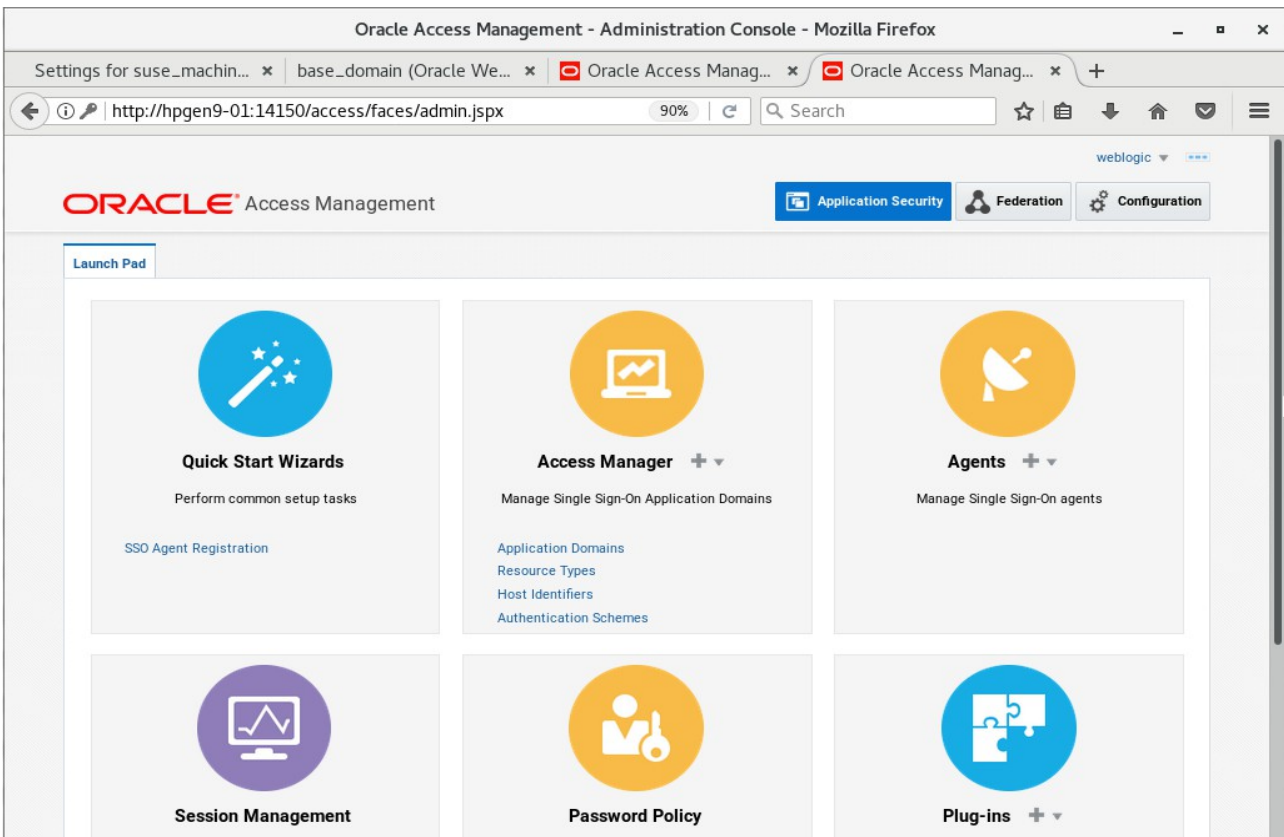
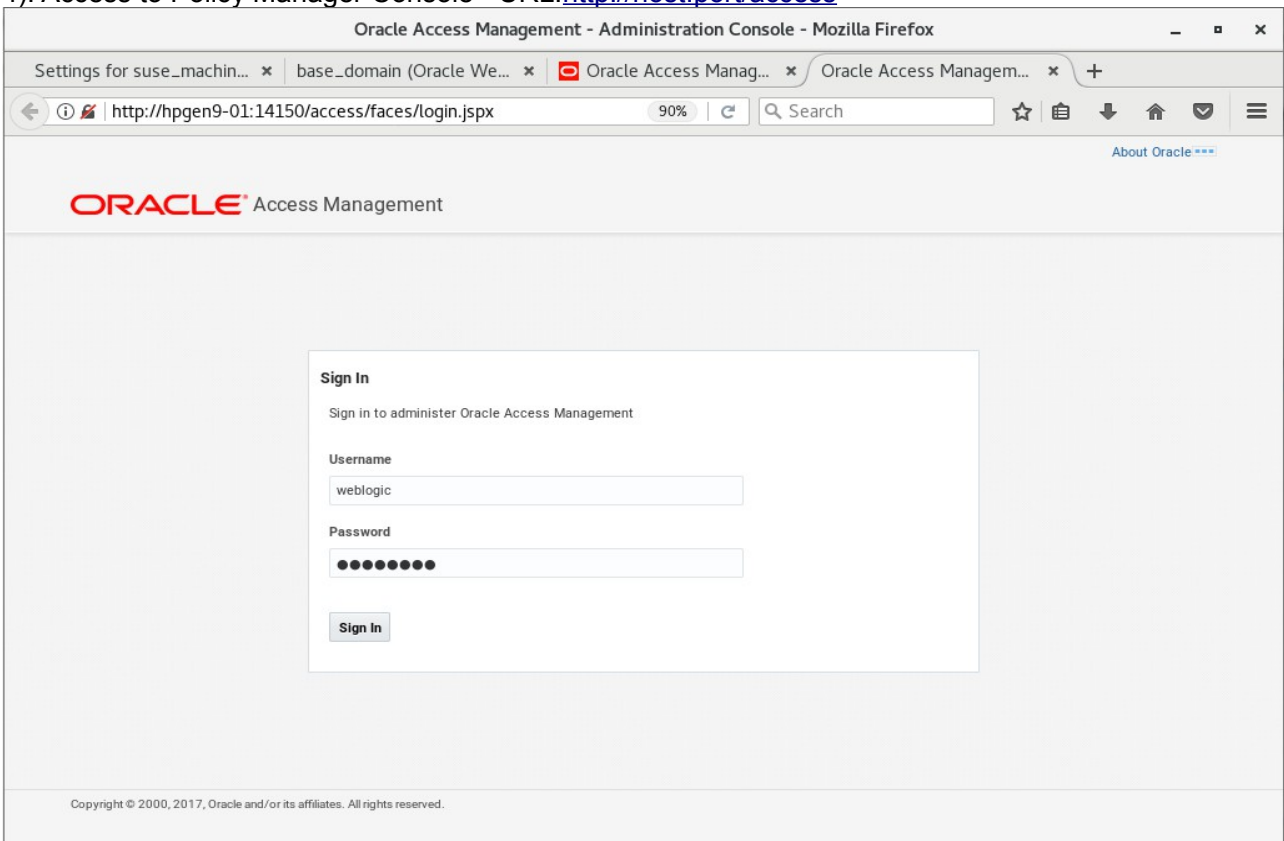
After they start up successfully, each managed server is listed as Running.

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





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



**End of Oracle Access Manager.**

\*\*\*\*\*

## Oracle Identity Manager

\*\*\*\*\*

### 1. Installing Oracle Identity and Access Management 12cPS3 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.

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

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

View created.

Synonym created.

View created.

Synonym created.

SQL> █
```

Also, 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 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 parameter open_cursors;

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

)  
2). Oracle JDK 1.8.0\_131 and later installed.

1-2. Log in to the target system (SLES 15 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS3 (12.2.1.3.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

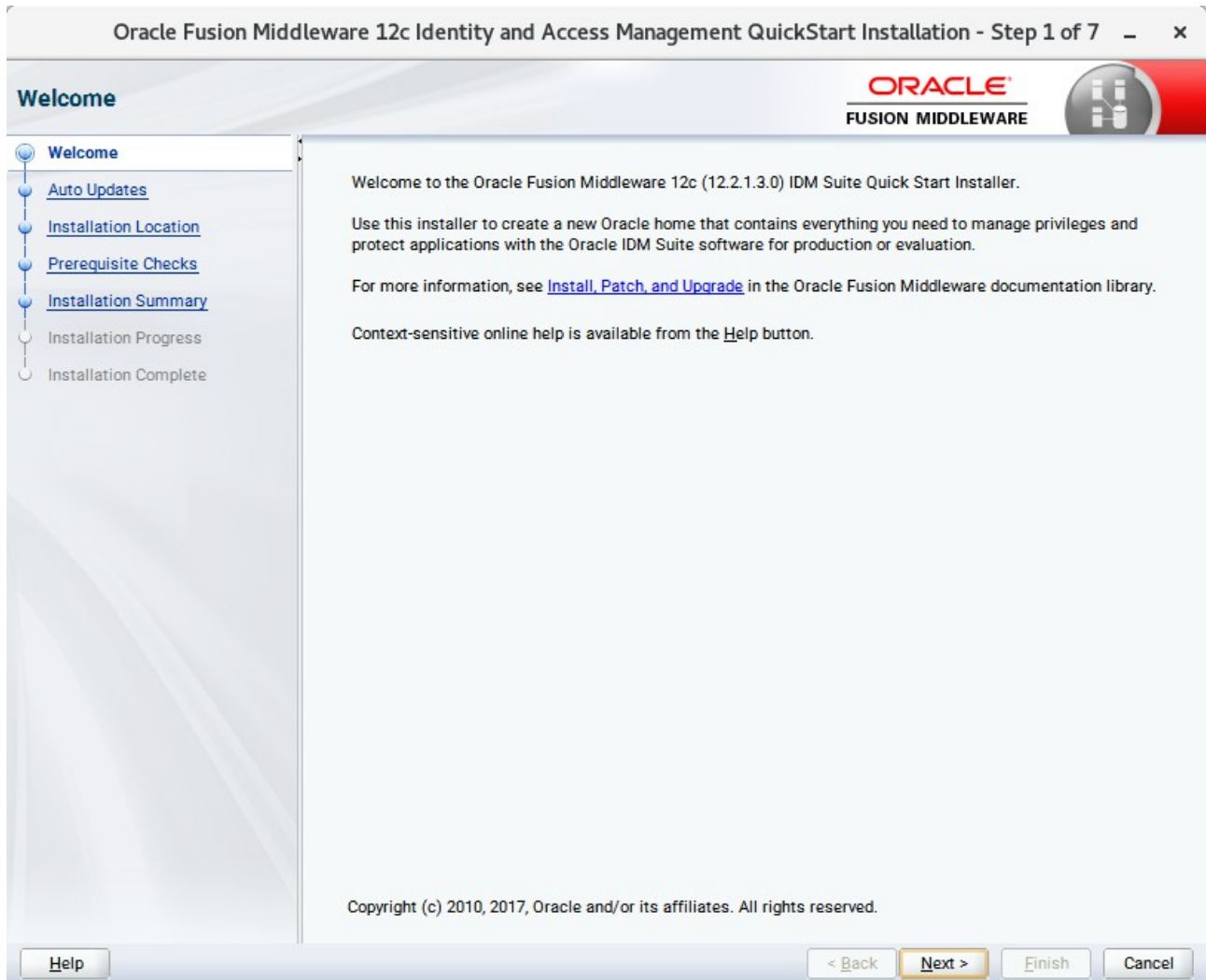
(**Note:** Please ensure the installation user has the proper permissions to install and configure the software.)



1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ("fmw\_12.2.1.3.0\_idmqsd\_Disk1\_1of2.zip" and "fmw\_12.2.1.3.0\_idmqsd\_Disk1\_2of2.zip") files and launch the installation program by running '`java -jar fmw_12.2.1.3.0_idmquickstart.jar`'

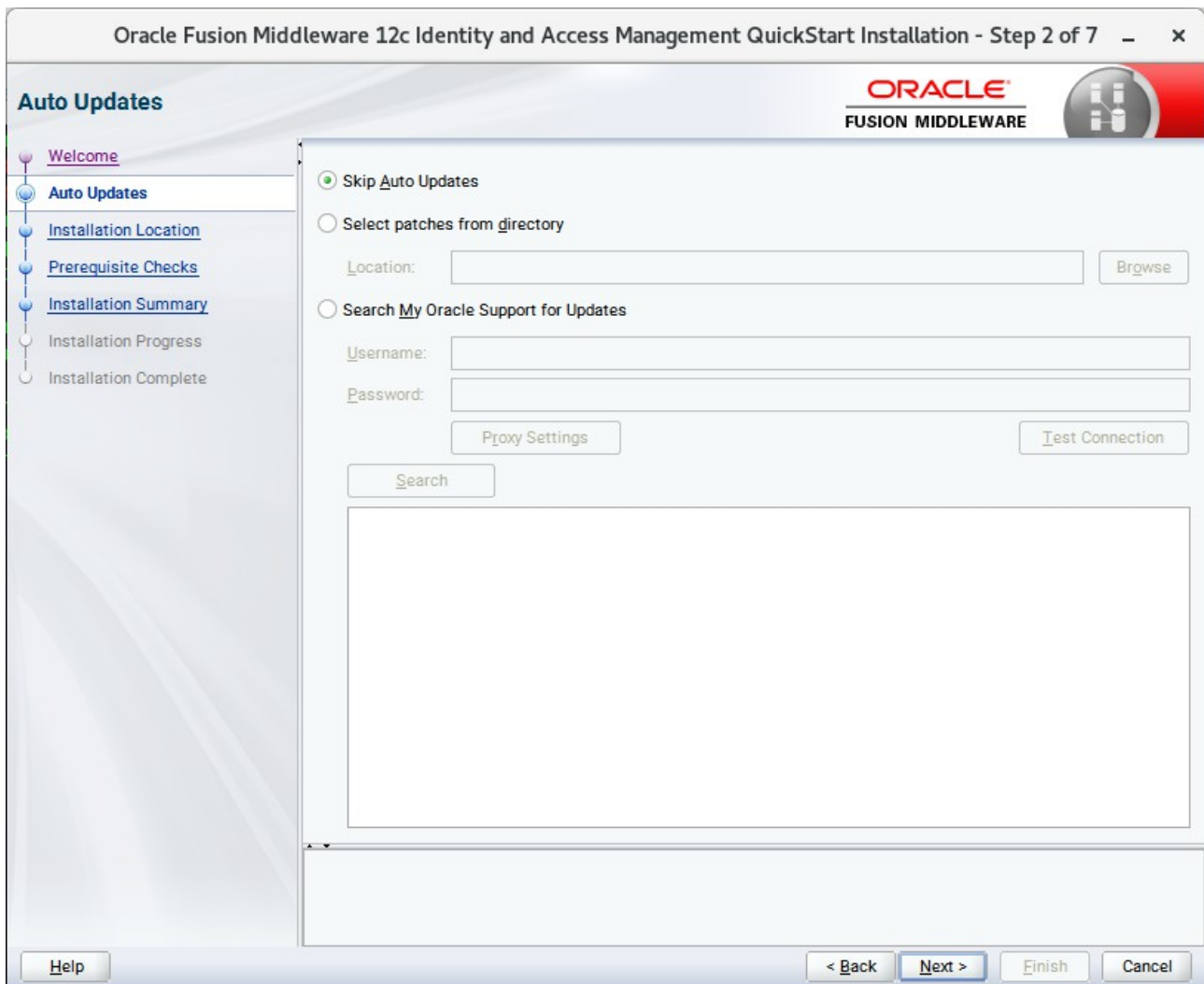
**For the actual installation, follow the steps below:**

1). **Welcome** page appears.



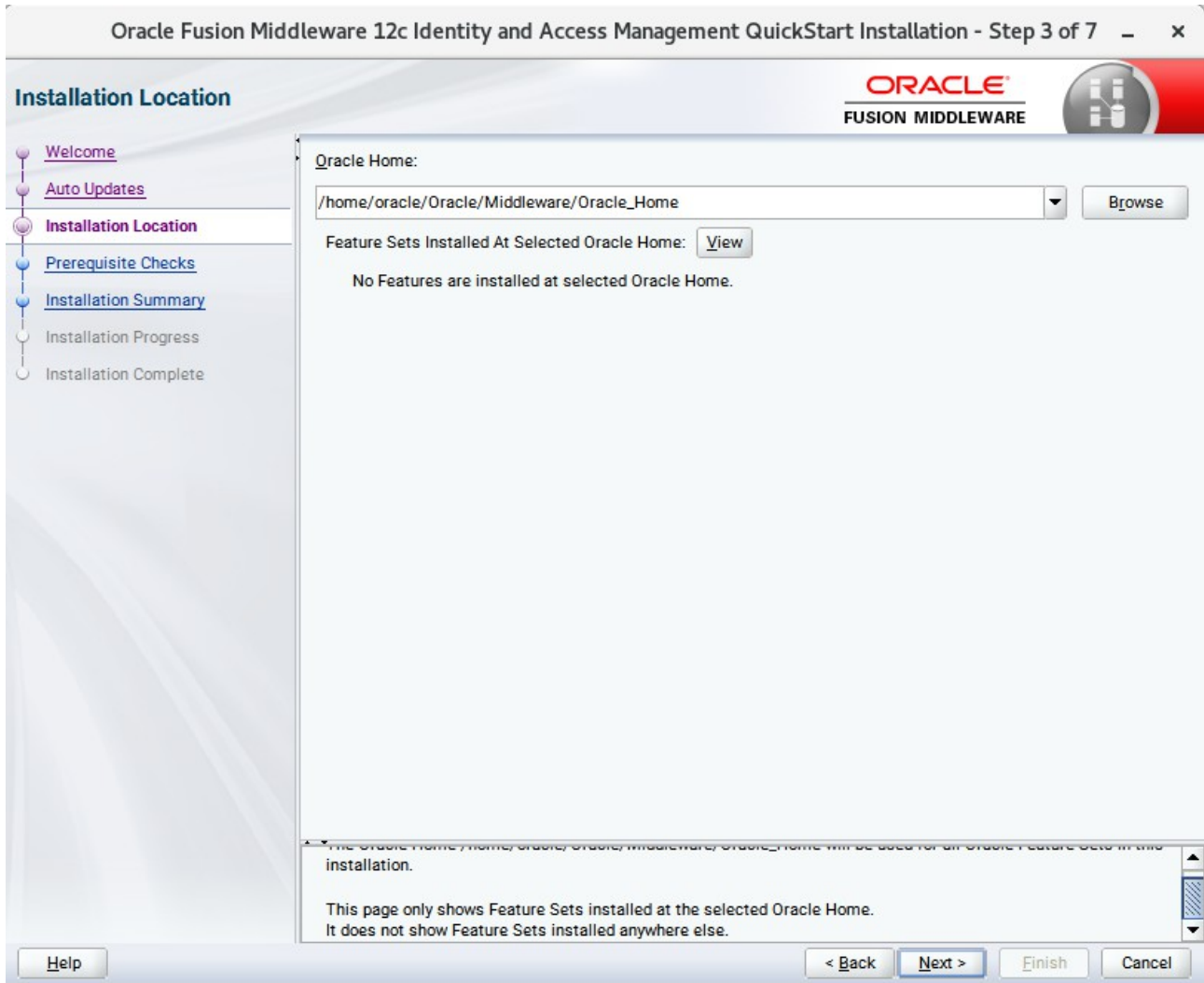
This page welcomes you to the installation. Click **Next** to continue.

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



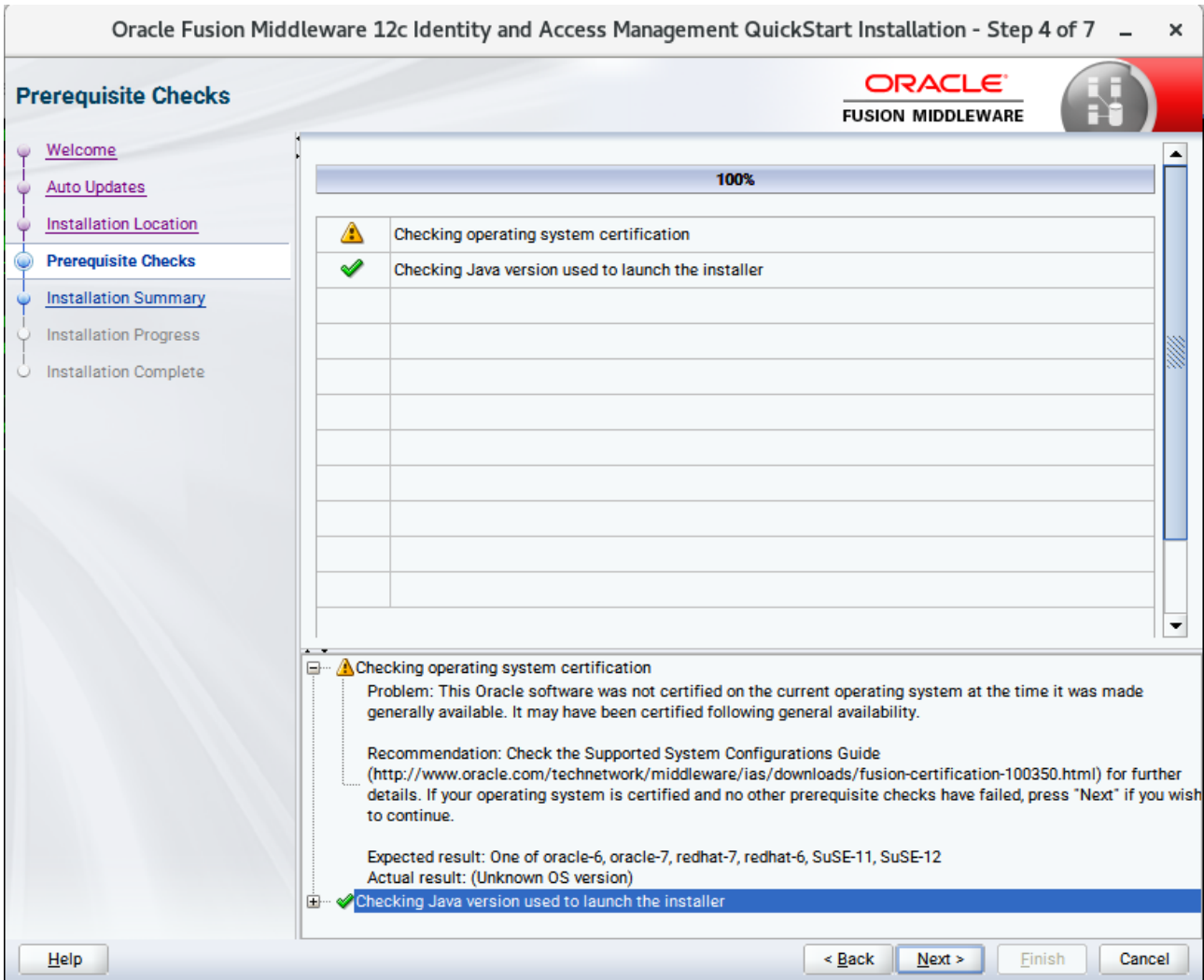
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



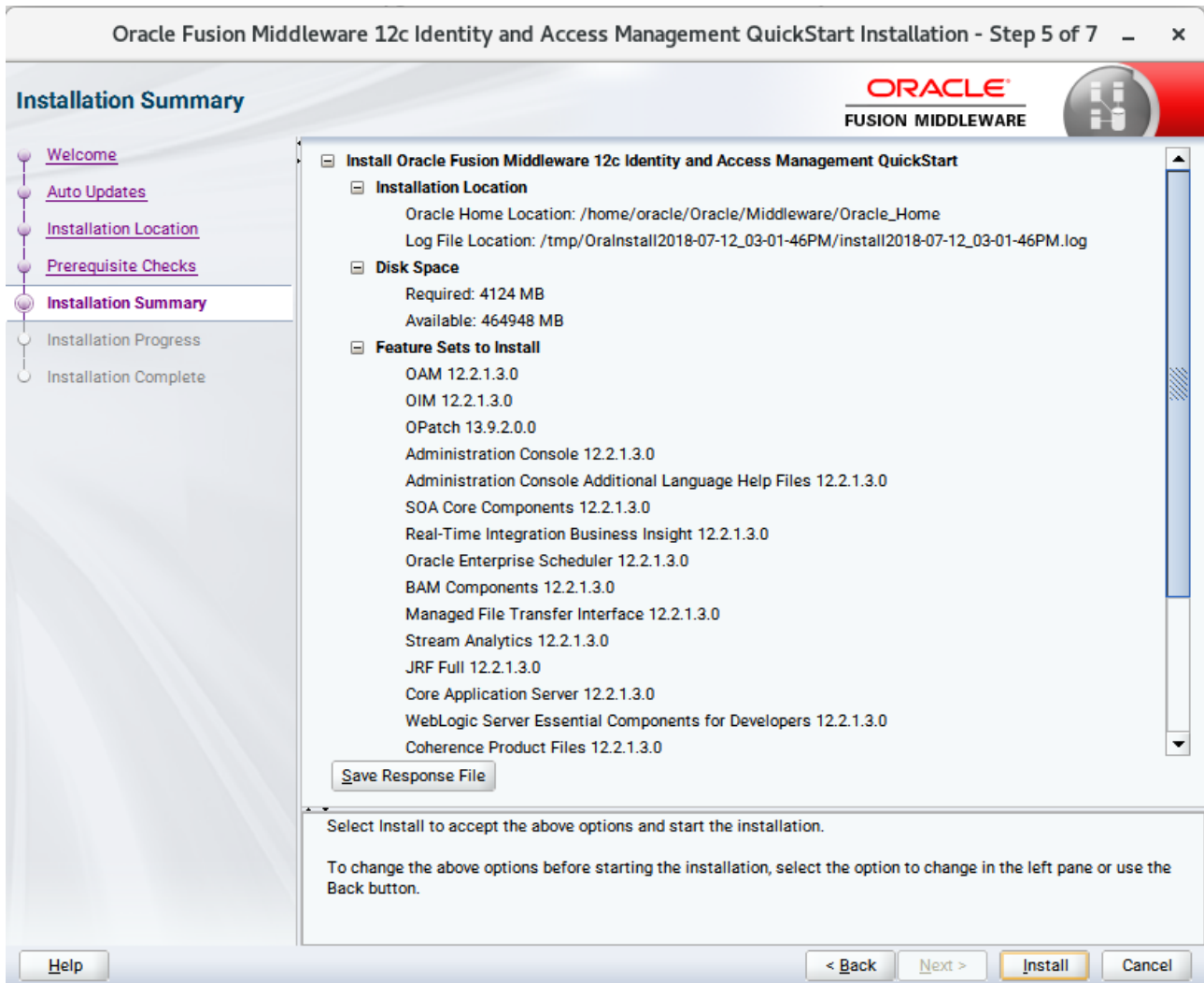
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

4). The **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.

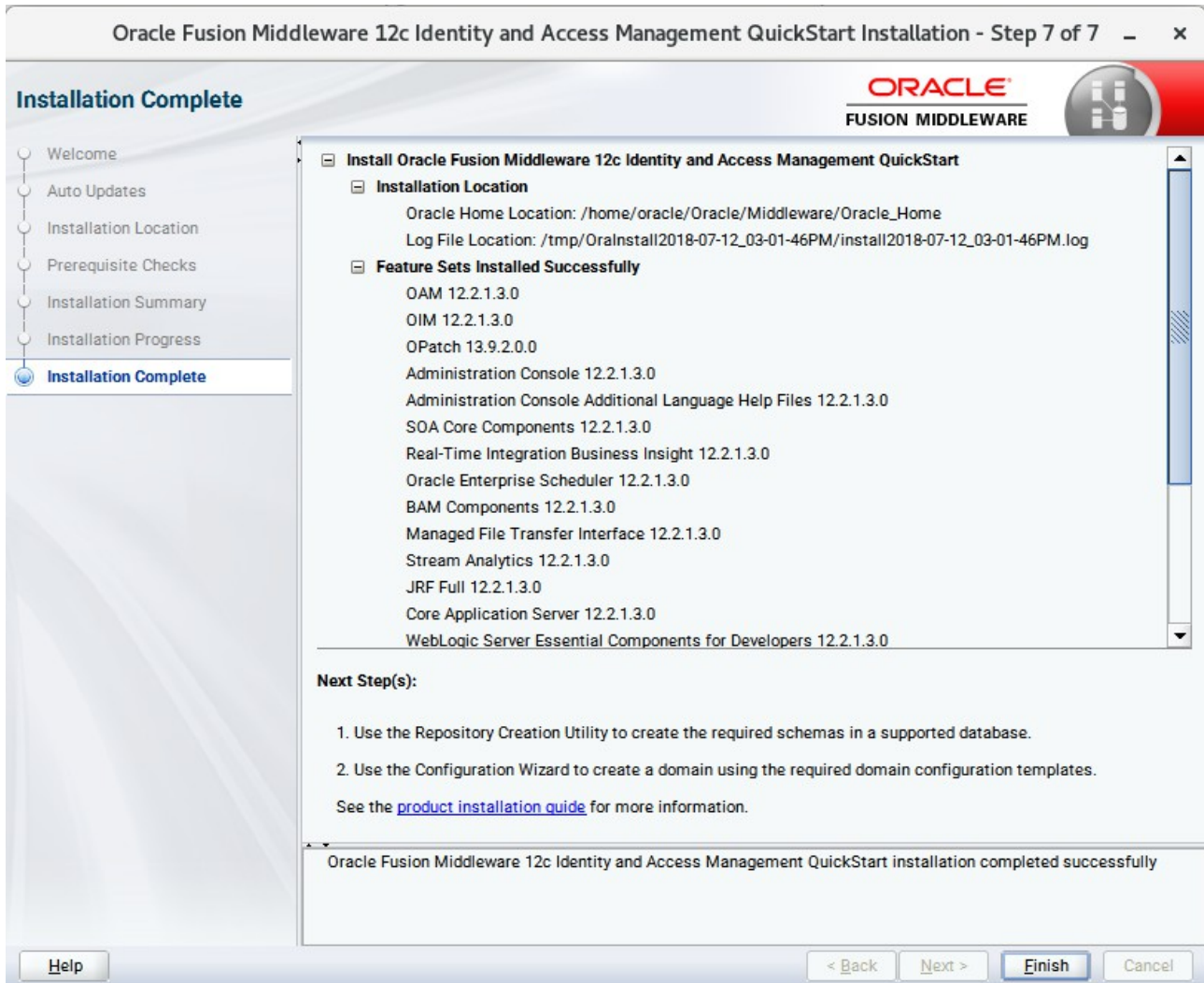
5). The **Installation Summary** page appears.



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



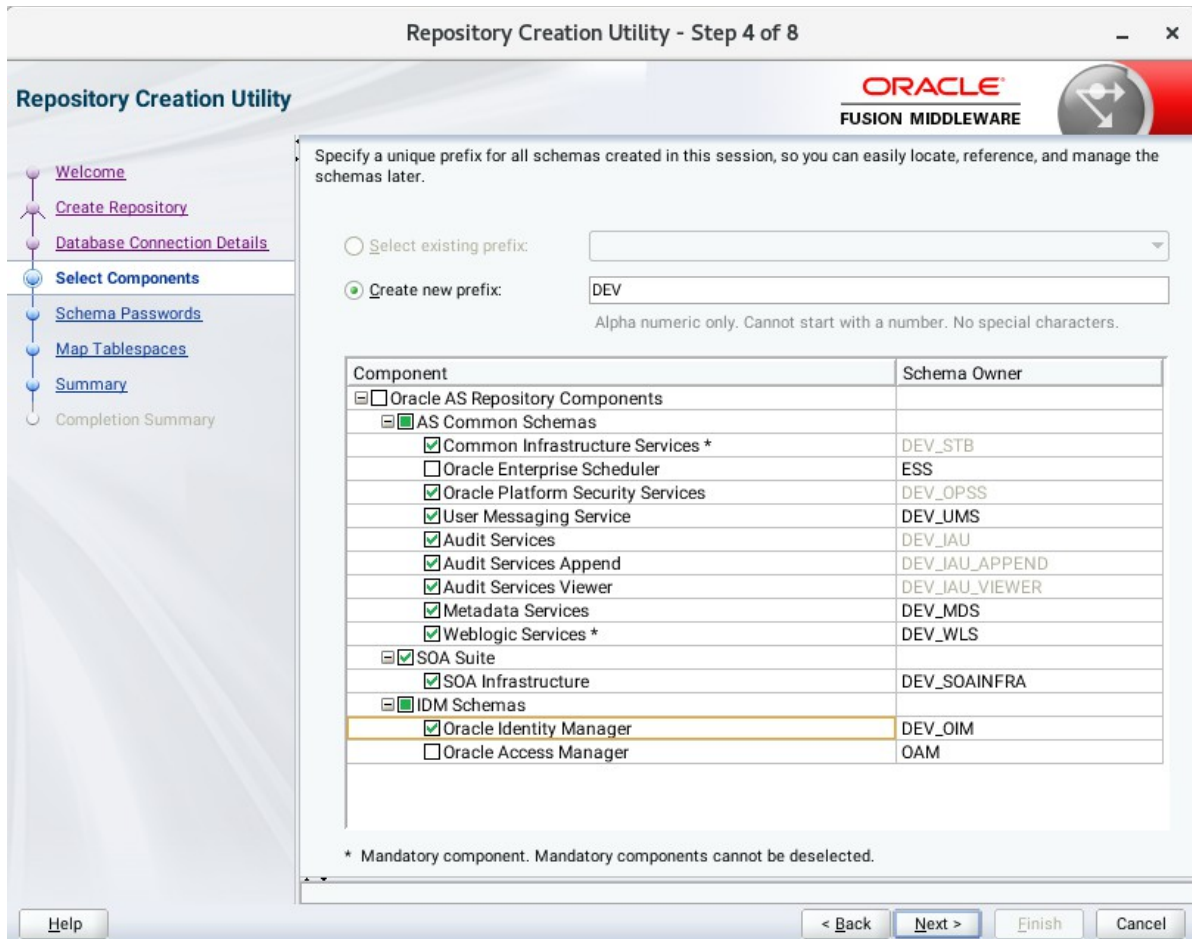
This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

## 2. Configuring the Oracle Identity Manager Domain

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

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

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



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

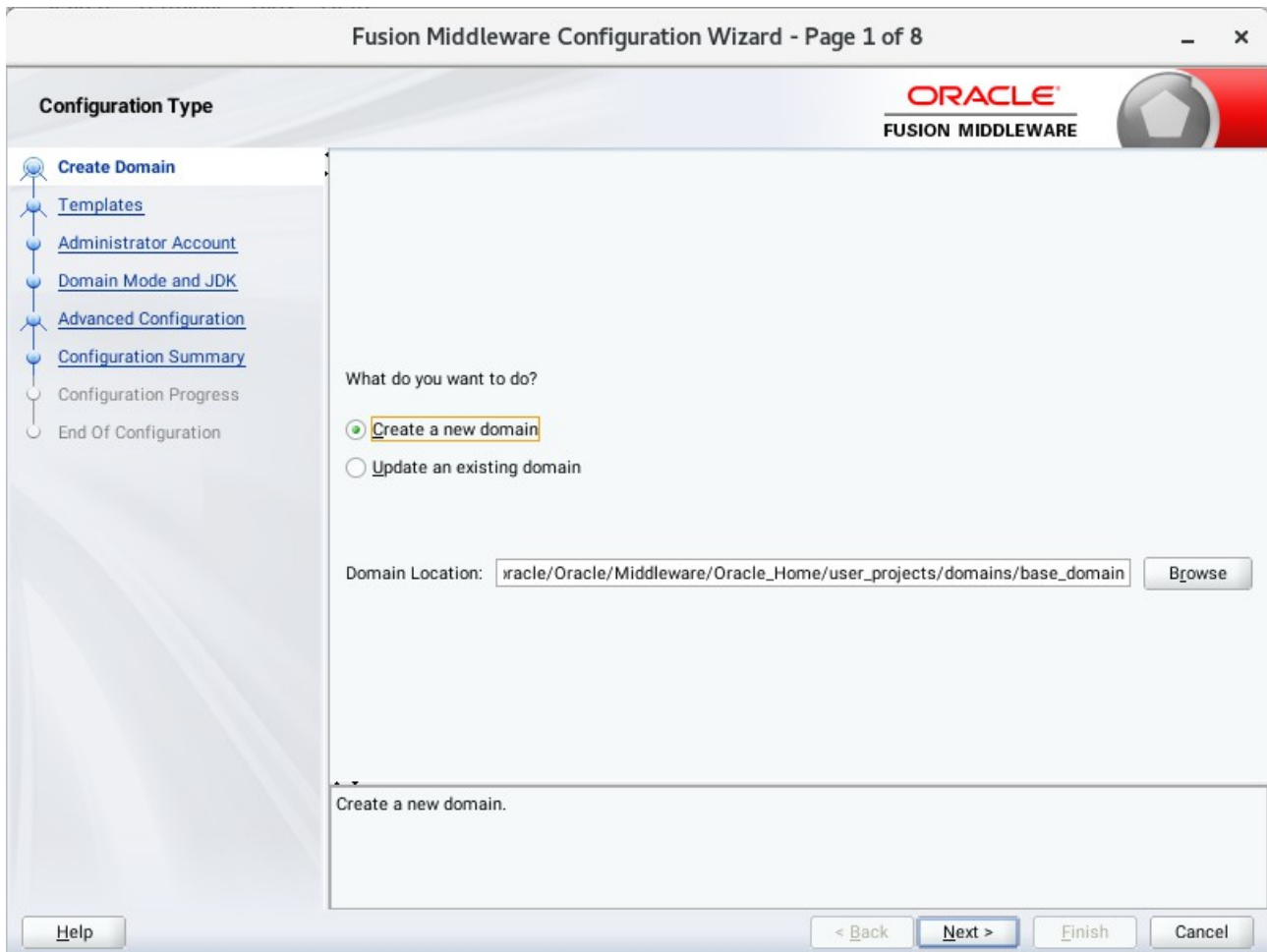


## 2-2. Configuring a Domain for Oracle Identity Manager(OIM) using the Config Wizard

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

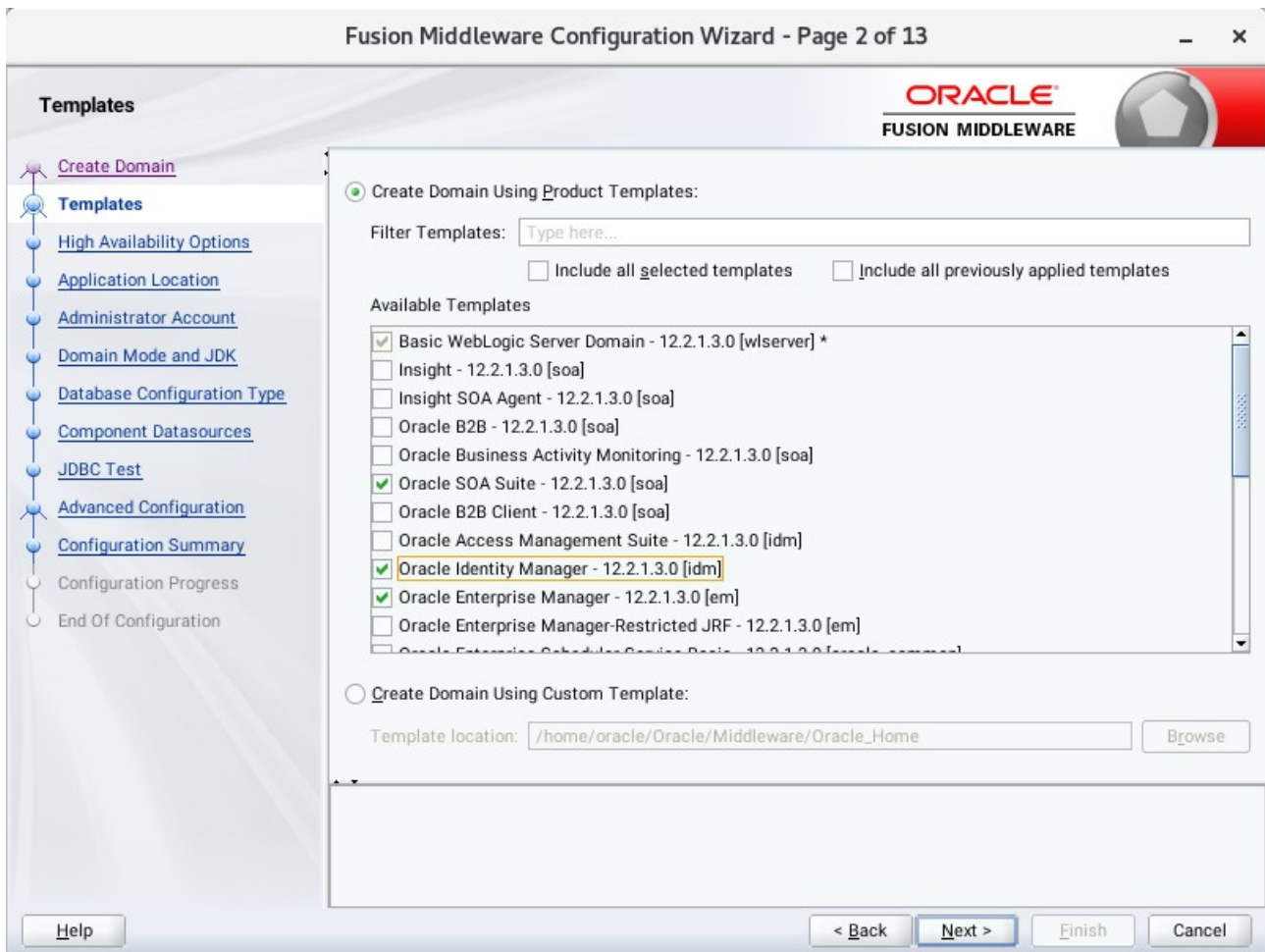
### Follow these steps:

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



Click **Next** to continue.

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



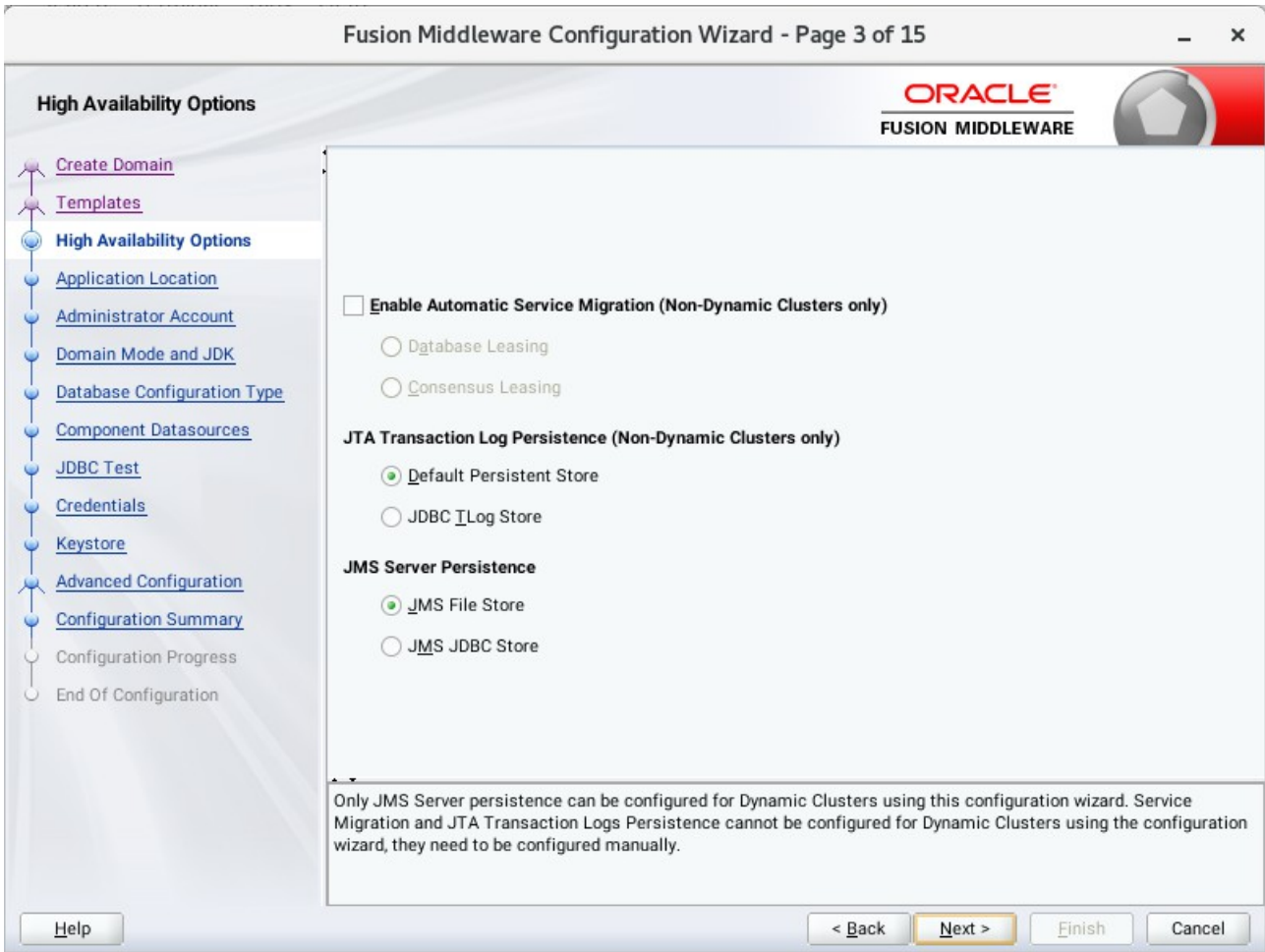
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Identity Manager - 12.2.1.3.0 [idm]**.

Selecting these templates automatically selects the following as dependencies:

- Oracle SOA Suite - 12.2.1.3.0 [soa]
- Oracle Enterprise Manager - 12.2.1.3.0 [em]
- Oracle JRF - 12.2.1.3.0 [oracle\_common]
- Oracle WSM Policy Manager - 12.2.1.3 [oracle\_common]
- WebLogic Coherence Cluster Extension - 12.2.1.3.0 [wlserver]

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

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



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

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



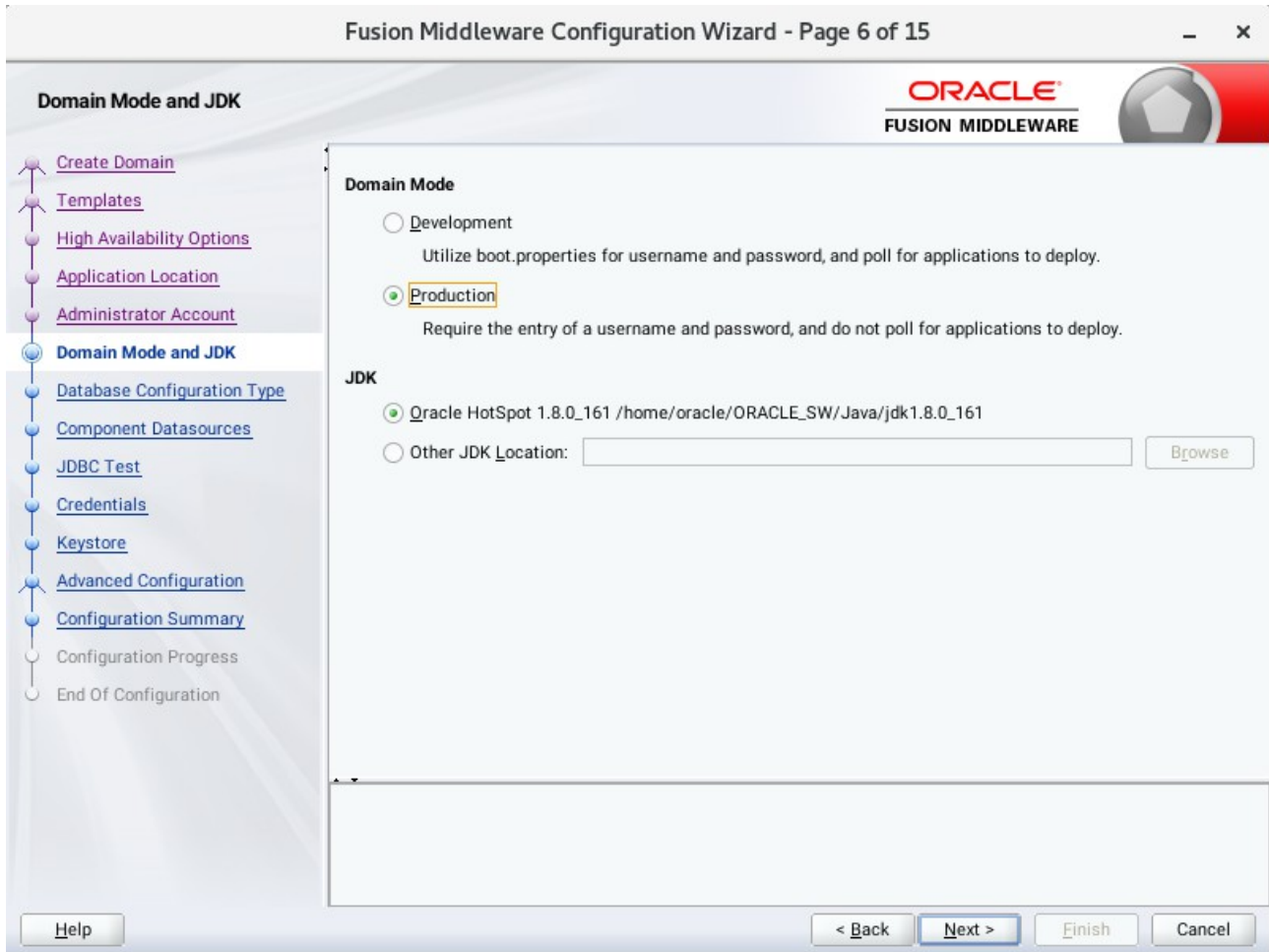
Keep the default value for Application location. Click **Next** to continue.

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

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

Fusion Middleware Configuration Wizard - Page 7 of 15

**Database Configuration Type**

ORACLE  
FUSION MIDDLEWARE

Specify AutoConfiguration Options Using:

RCU Data     Manual Configuration

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

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

Connection Parameters     Connection URL String

Host Name: 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.

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.

**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"/>	OIM Schema	SUSE	hpgen9-01	1521	DEV_OIM	.....
<input type="checkbox"/>	SOA EDN (XA)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	SOA EDN (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	DEV_STB	.....
<input type="checkbox"/>	User Messaging Service	SUSE	hpgen9-01	1521	DEV_UMS	.....
<input type="checkbox"/>	SOA (XA)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	SOA (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFRA	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUNTIME	.....

Help < Back **Next >** Finish Cancel

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



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

**Fusion Middleware Configuration Wizard - Page 9 of 15**

**JDBC Component Schema Test**

✓	Status	Component Schema	JDBC Connection URL
✓	✓	OIM Schema	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	SOA EDN (XA)	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	SOA EDN (Local)	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	LocalSvcTbl Schema	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	User Messaging Service	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	SOA (XA)	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	SOA (Local)	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	WLS Schema	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	OIM MDS Schema	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
✓	✓	OWSM MDS Schema	jdbc:oracle:thin:@//hpgen9-01:1521/SUSE

Test Selected Connections    Cancel Testing

**Connection Result Log**

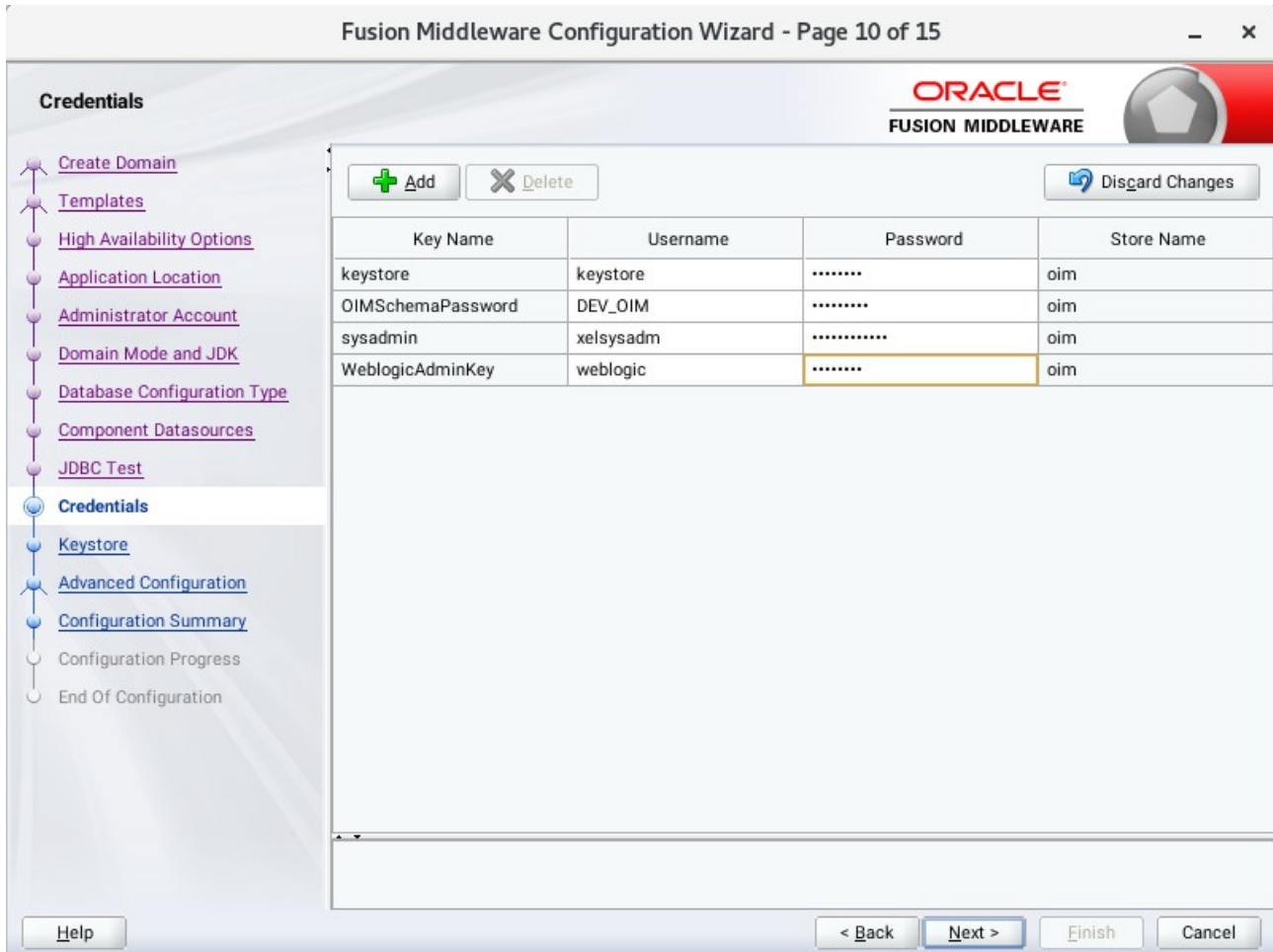
```

Component Schema=OIM Schema
Driver=oracle.jdbc.OracleDriver
URL=jdbc:oracle:thin:@//hpgen9-01:1521/SUSE
User=DEV_OIM
Password=*****
SQL Test=select 1 from schema_version_registry where owner=(select user from dual) and mr_type='OIM' and vers
CFGFWK-64213: Test Successful!
CFGFWK-64213: JDBC connection test was successful.
CFGFWK-64213: No action required
    
```

Help    < Back    Next >    Finish    Cancel

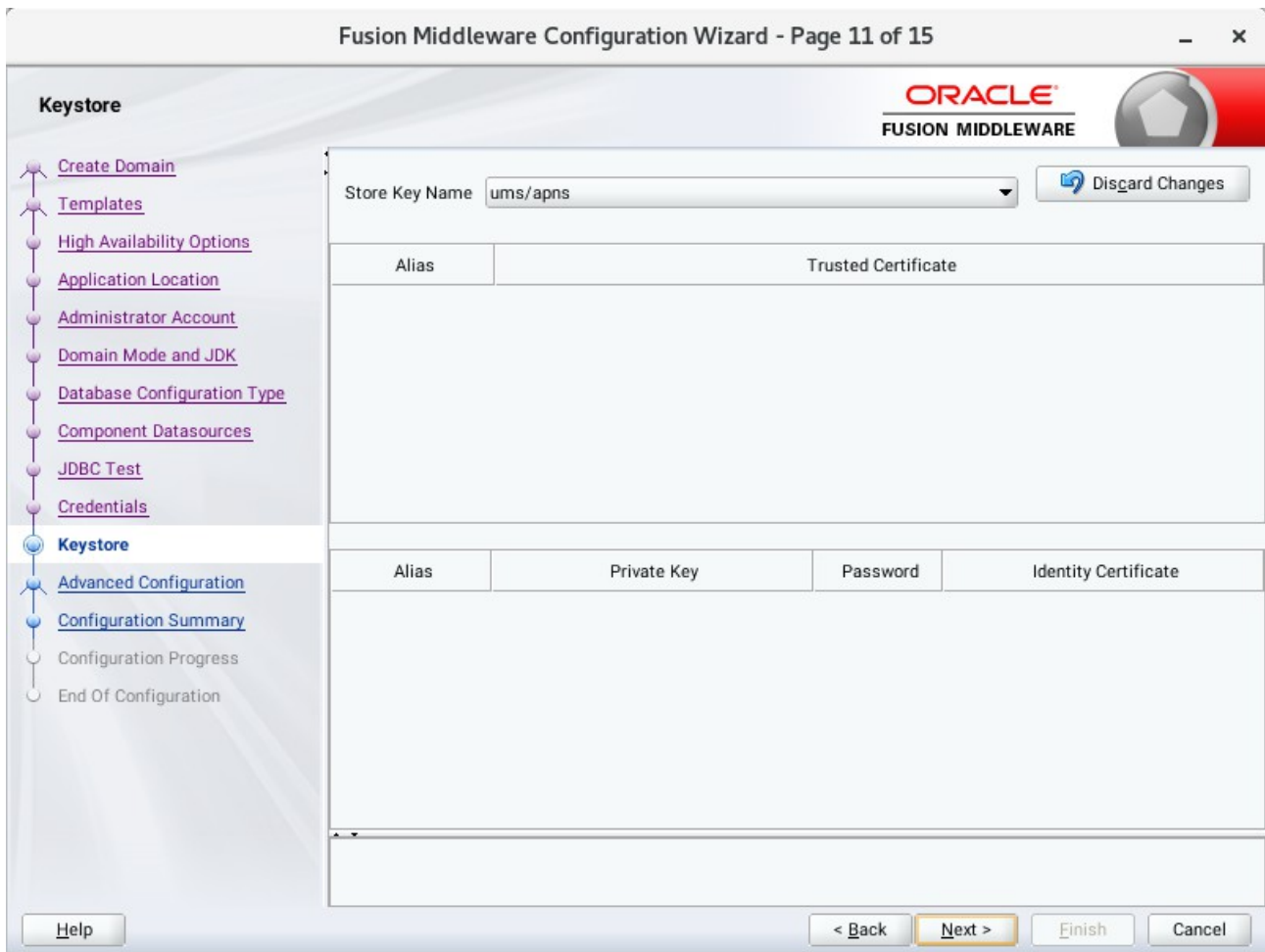
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



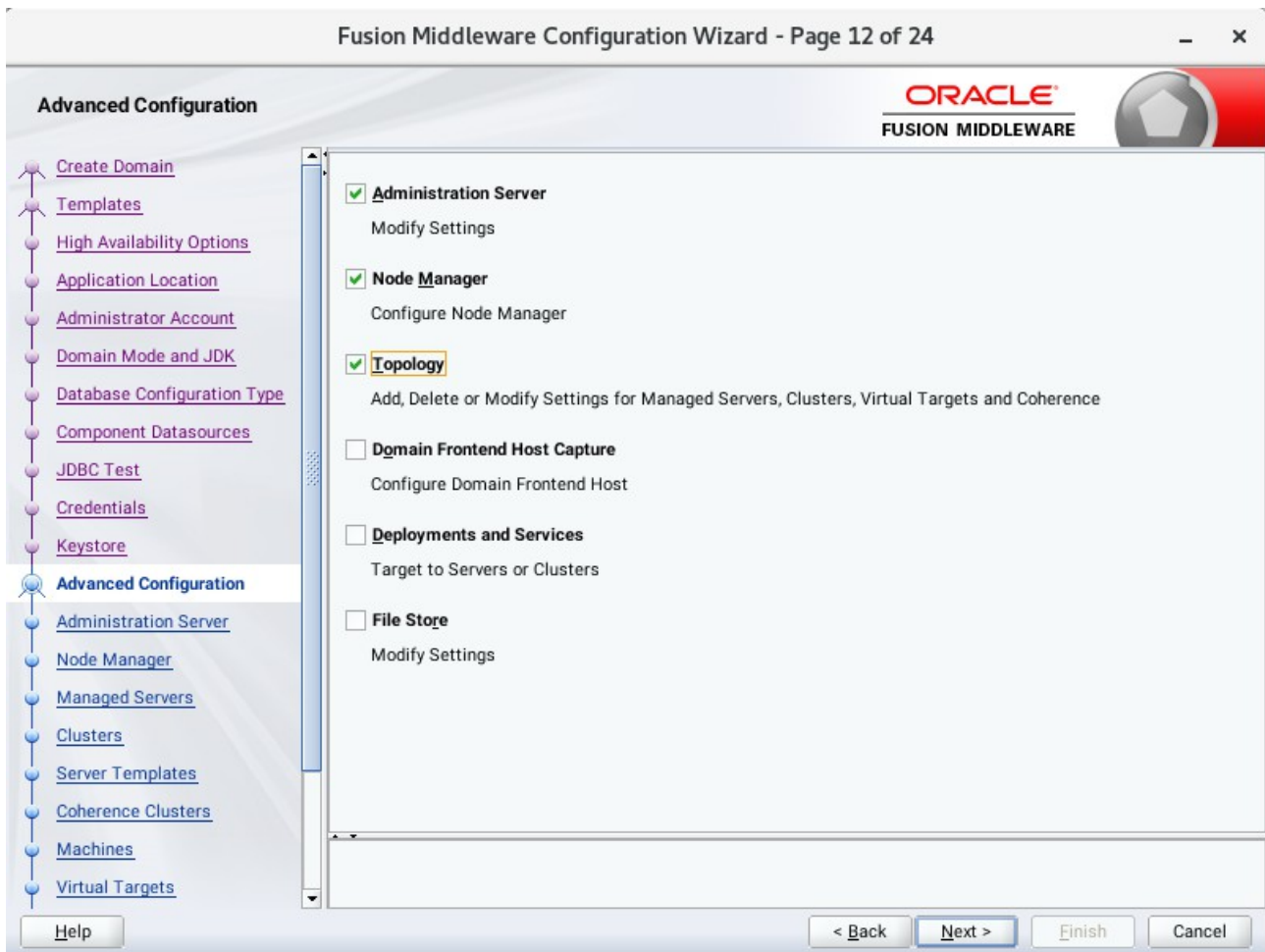
Use the Credentials screen to set credentials for each key in the domain. Ensure that you specify 'keystore' as the username for the key **Keystore**, and 'xelsysadm' as the username for the key **sysadmin**.

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



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

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



On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.

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

Fusion Middleware Configuration Wizard - Page 13 of 24

**Administration Server**

ORACLE  
FUSION MIDDLEWARE

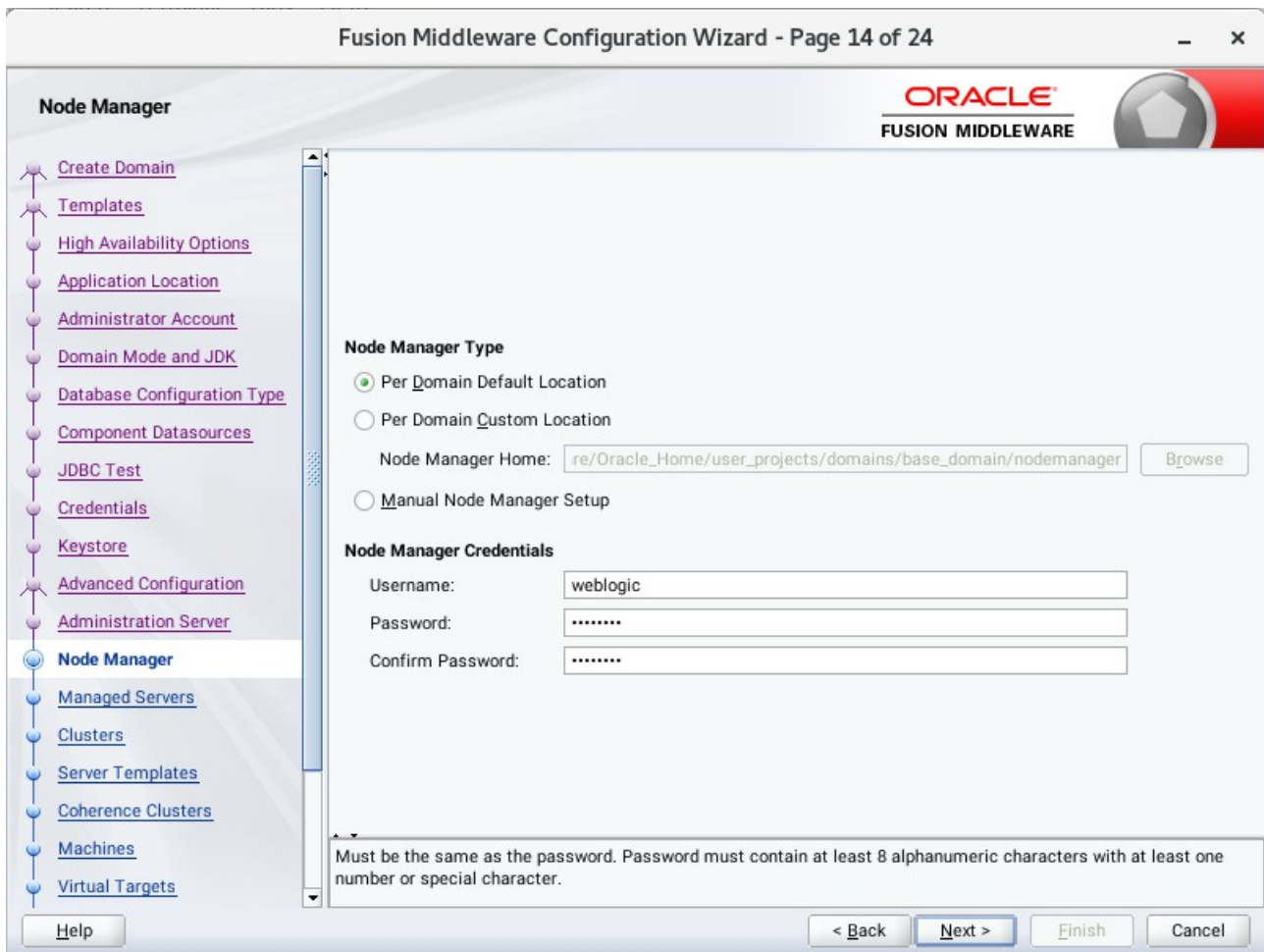
[Create Domain](#)  
[Templates](#)  
[High Availability Options](#)  
[Application Location](#)  
[Administrator Account](#)  
[Domain Mode and JDK](#)  
[Database Configuration Type](#)  
[Component Datasources](#)  
[JDBC Test](#)  
[Credentials](#)  
[Keystore](#)  
[Advanced Configuration](#)  
**Administration Server**  
[Node Manager](#)  
[Managed Servers](#)  
[Clusters](#)  
[Server Templates](#)  
[Coherence Clusters](#)  
[Machines](#)  
[Virtual Targets](#)

Server Name: AdminServer  
 Listen Address: 147.2.207.96  
 Listen Port: 7001  
 Enable SSL:   
 SSL Listen Port:   
 Server Groups: Unspecified

The name must not be null or empty and may not contain any : , = \* ? % / \_cloned.

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.



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

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

Fusion Middleware Configuration Wizard - Page 15 of 24

**Managed Servers**

ORACLE  
FUSION MIDDLEWARE

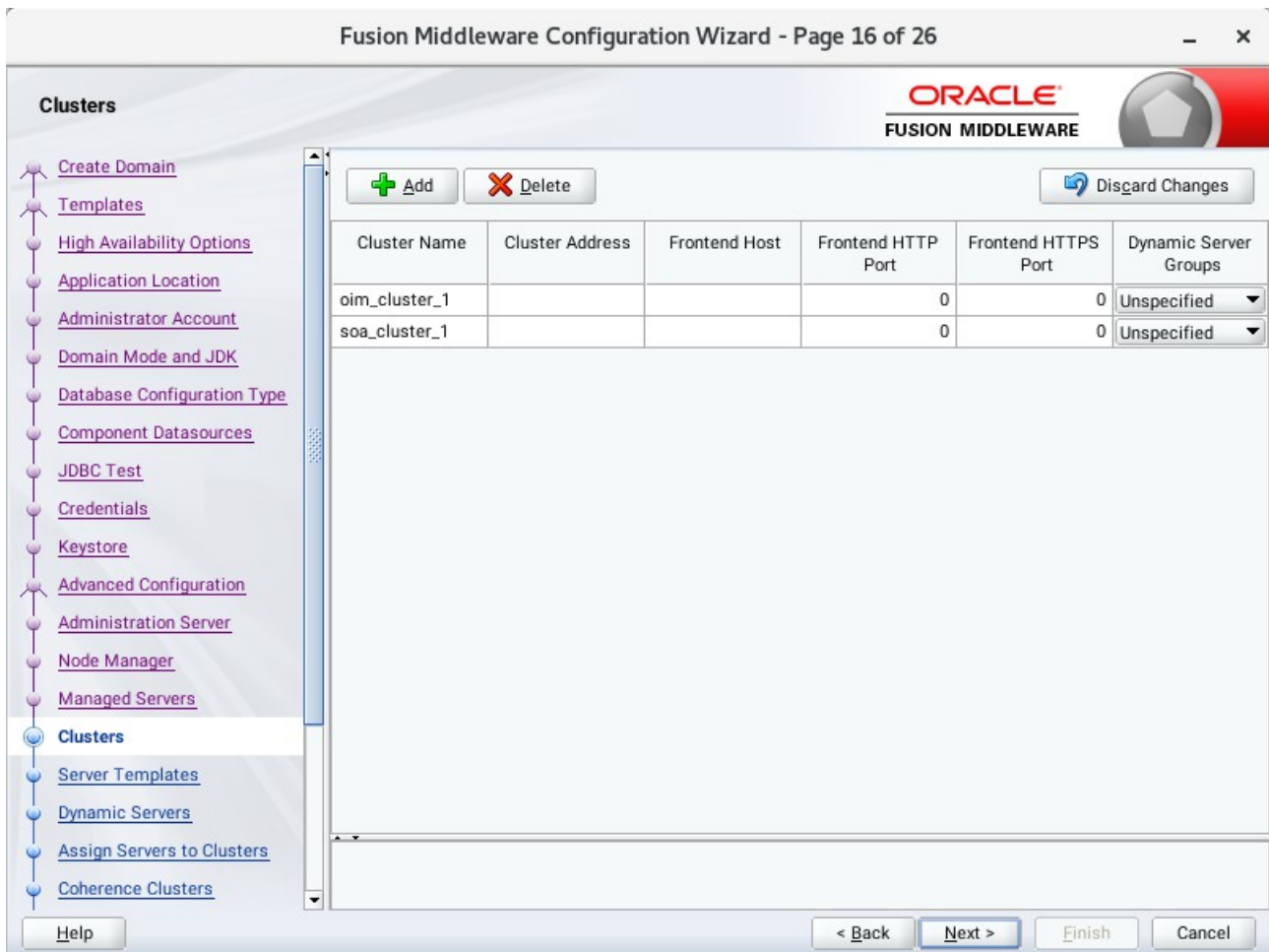
+ Add    C|one    X Delete    Discard Changes

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
oim_server1	147.2.207.96	14000	<input type="checkbox"/>	Disabled	OIM-MGD-S...
soa_server1	147.2.207.96	7003	<input type="checkbox"/>	Disabled	SOA-MGD-...

< Back    Next >    Finish    Cancel

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

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



On the Clusters screen:

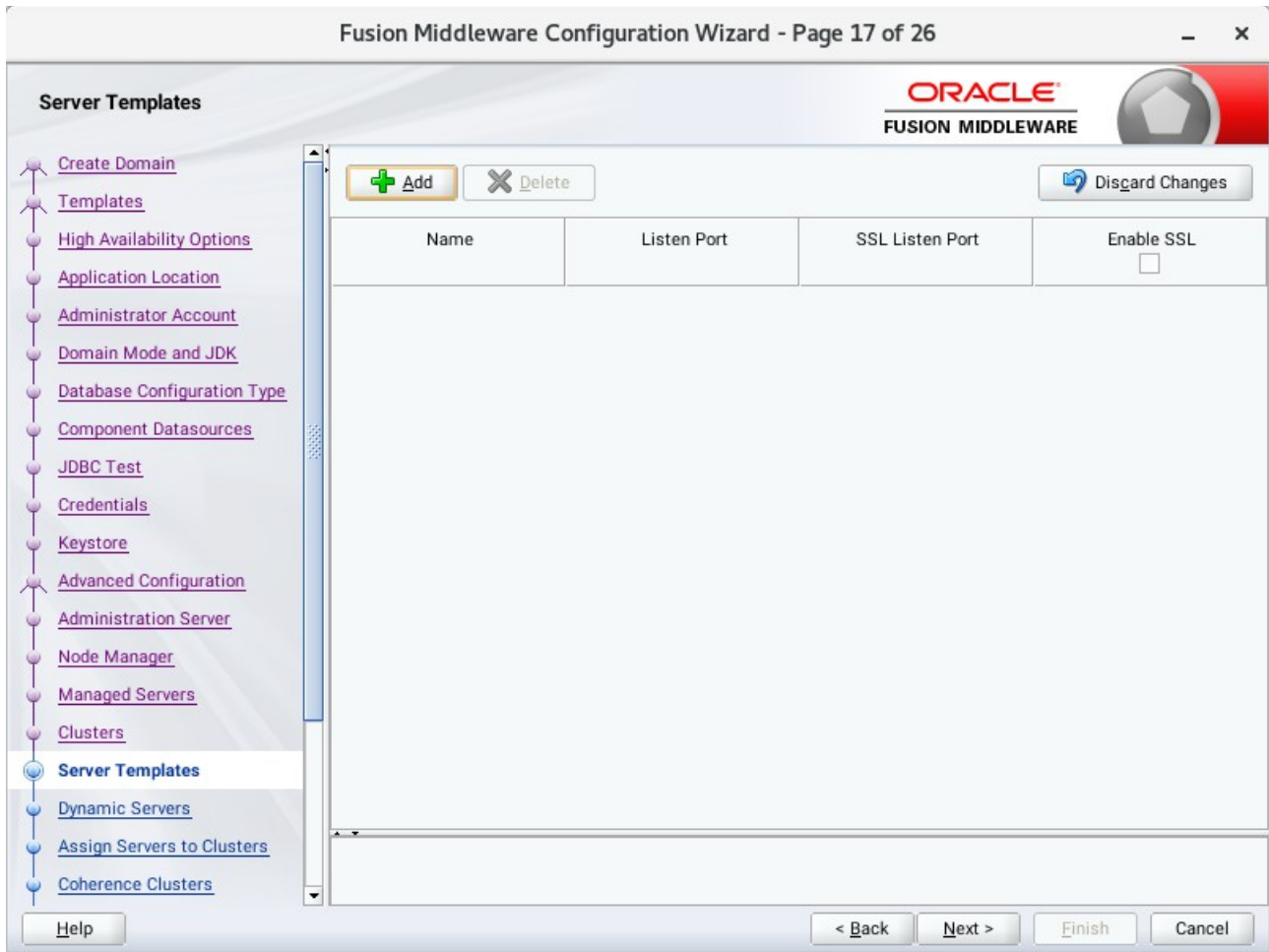
1. Click **Add**.
2. Specify *oim\_cluster\_1* in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create *soa\_cluster\_1* cluster.

Click **Next** to continue.

(**Note:** If you are configuring a non-clustered setup on a single node, skip this screen.)

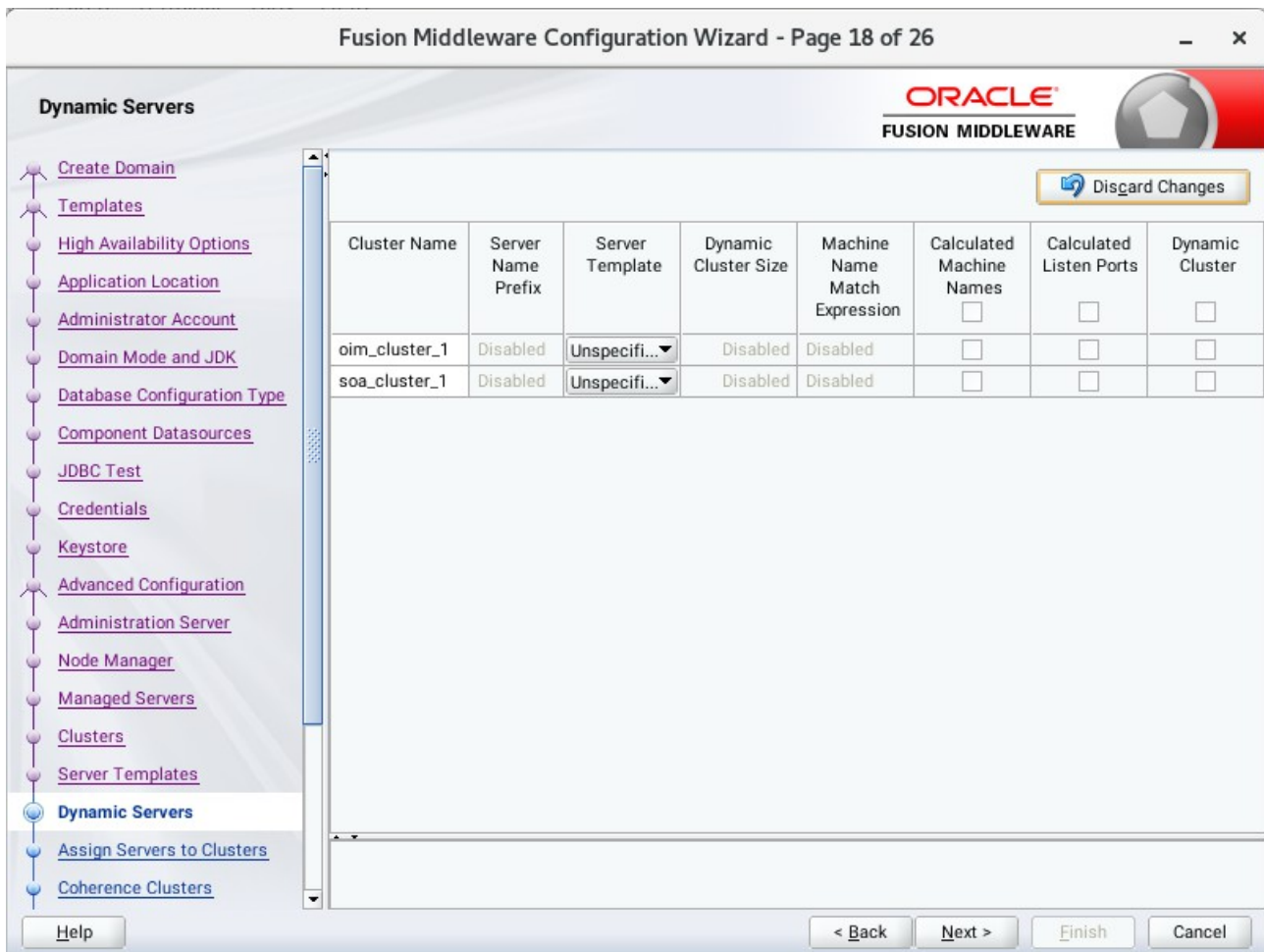


17). The **Server templates** screen appears.



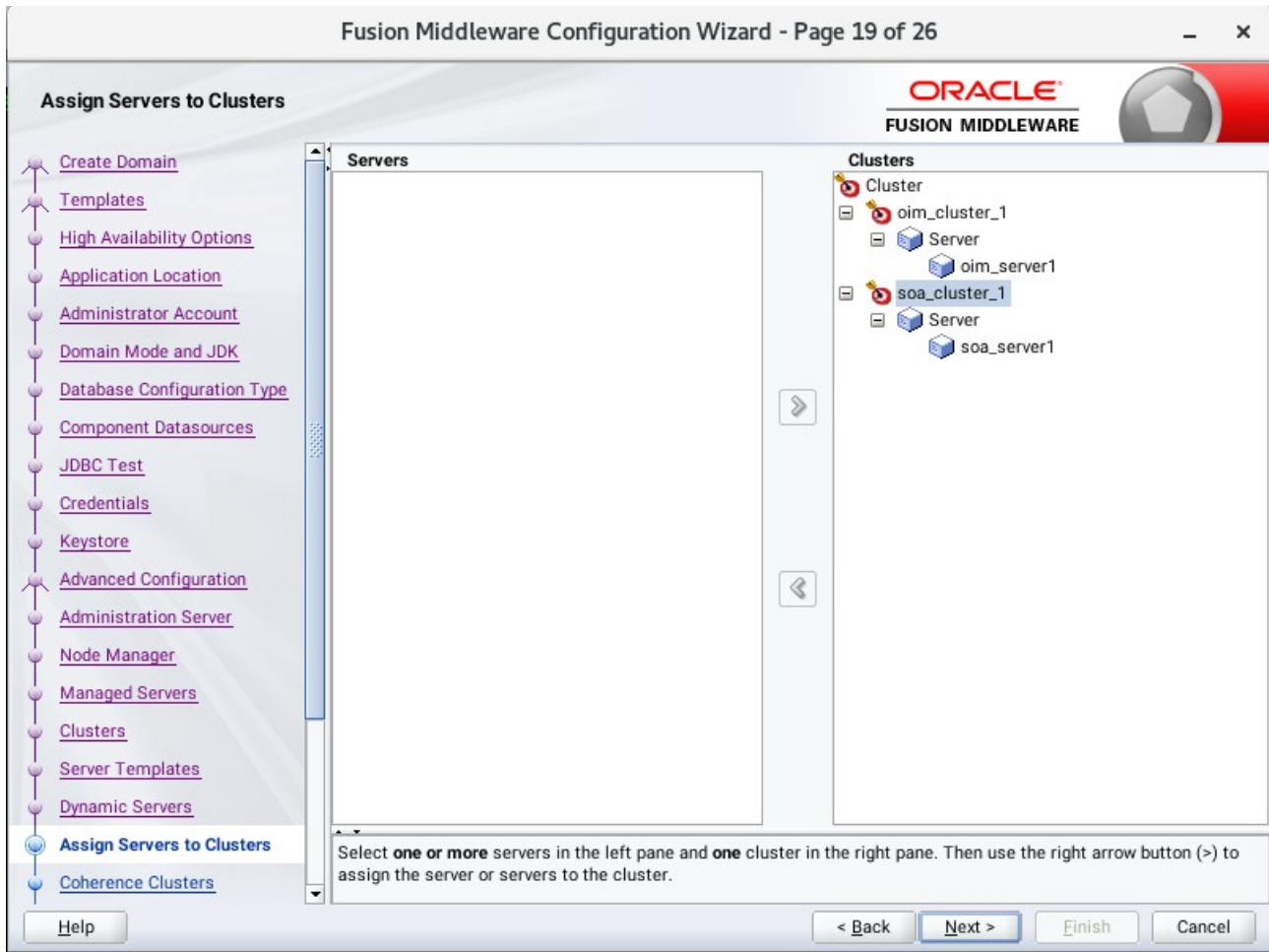
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



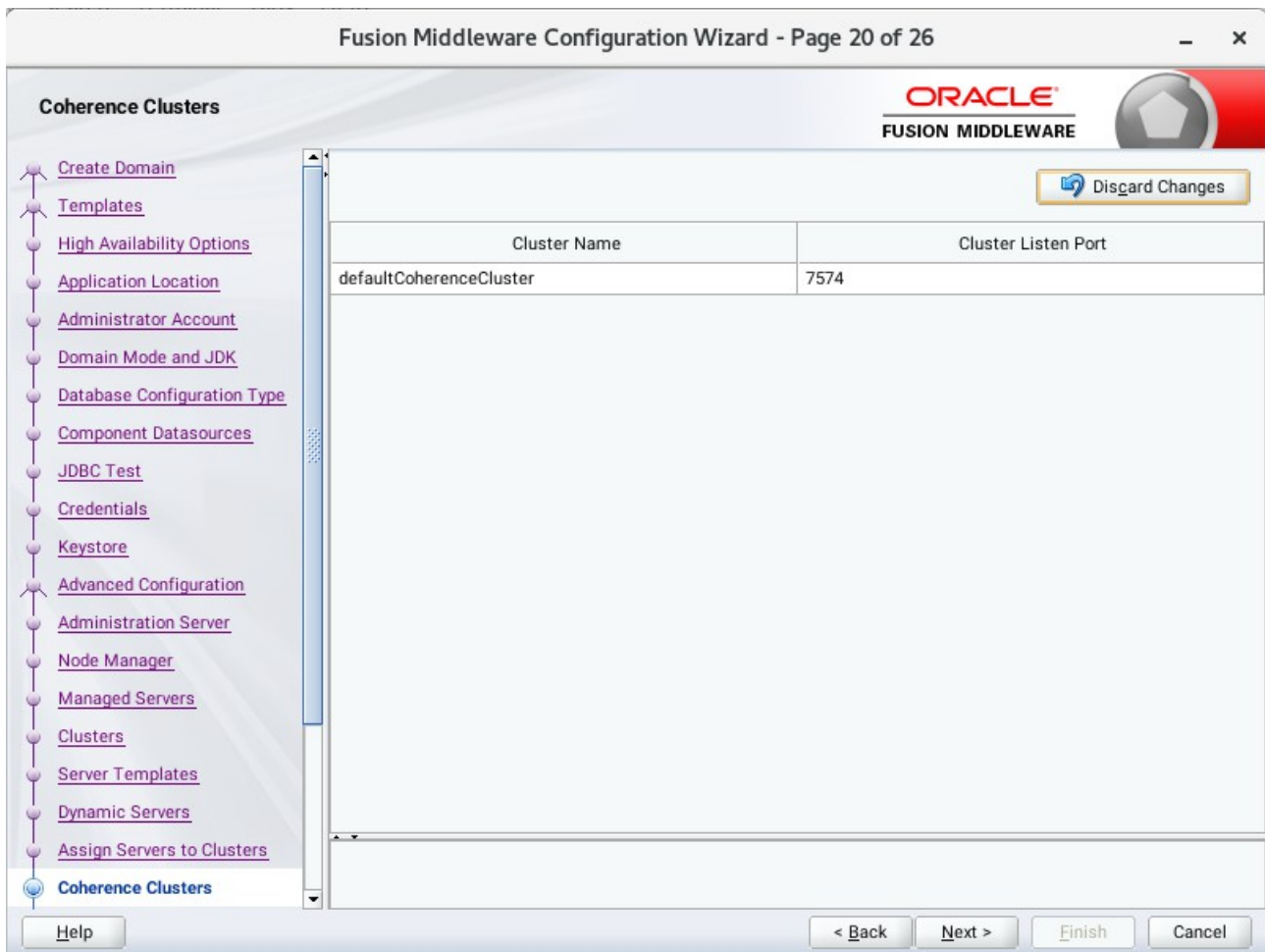
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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



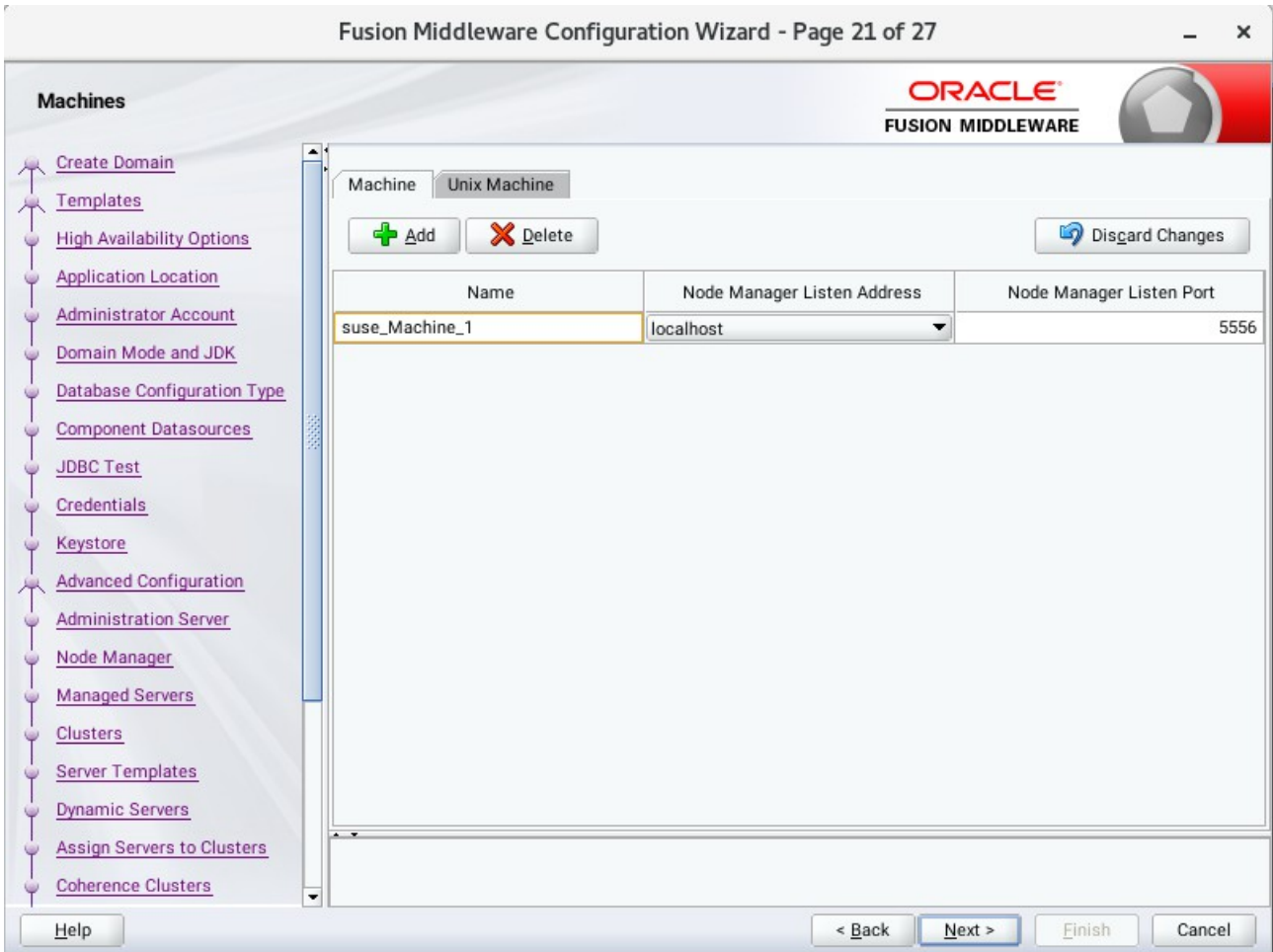
Use the **Assign Servers to Clusters** screen to assign Managed Servers to a new configured cluster. Click **Next** to continue.

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



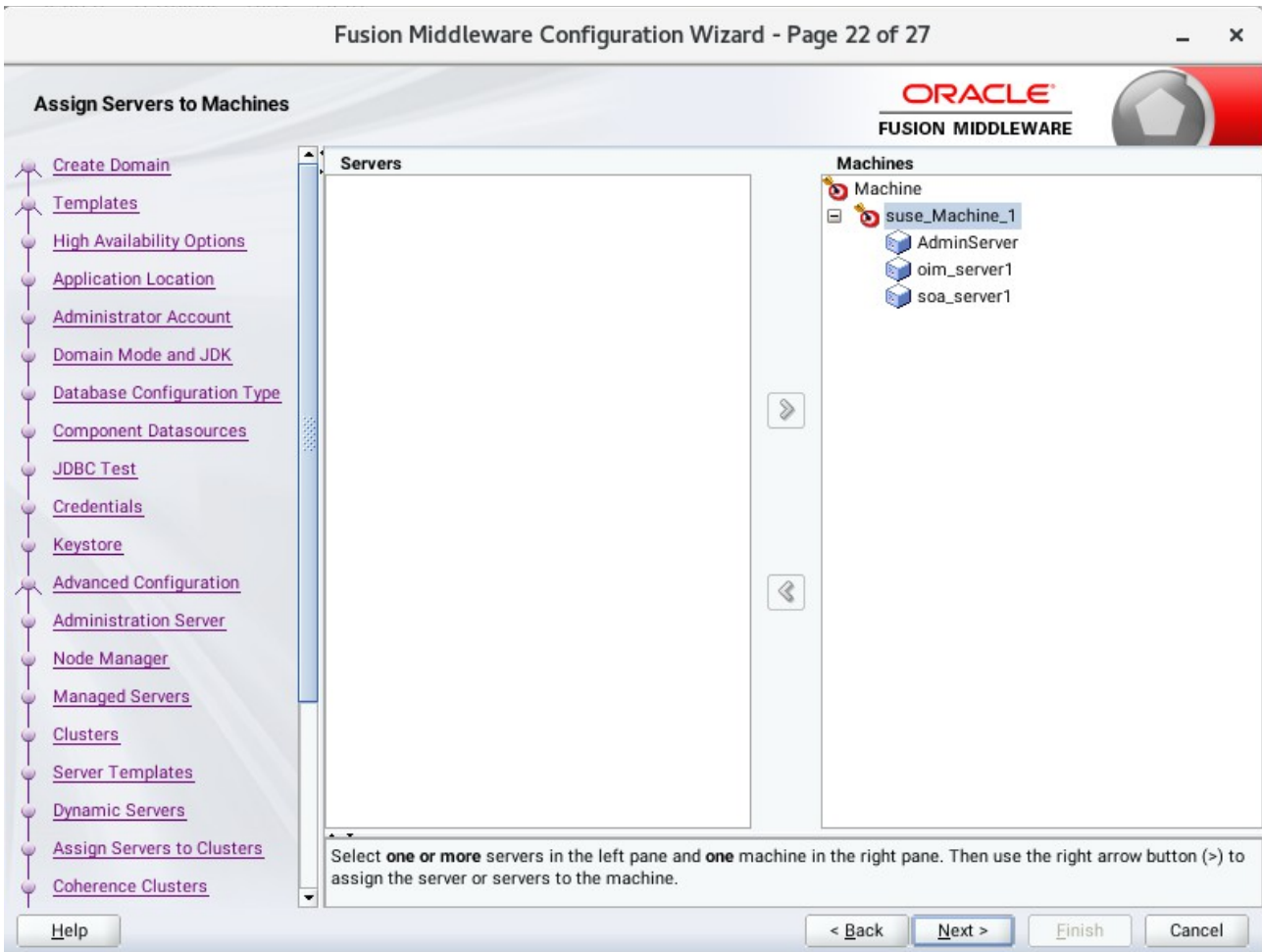
Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain. Click **Next** to continue.

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



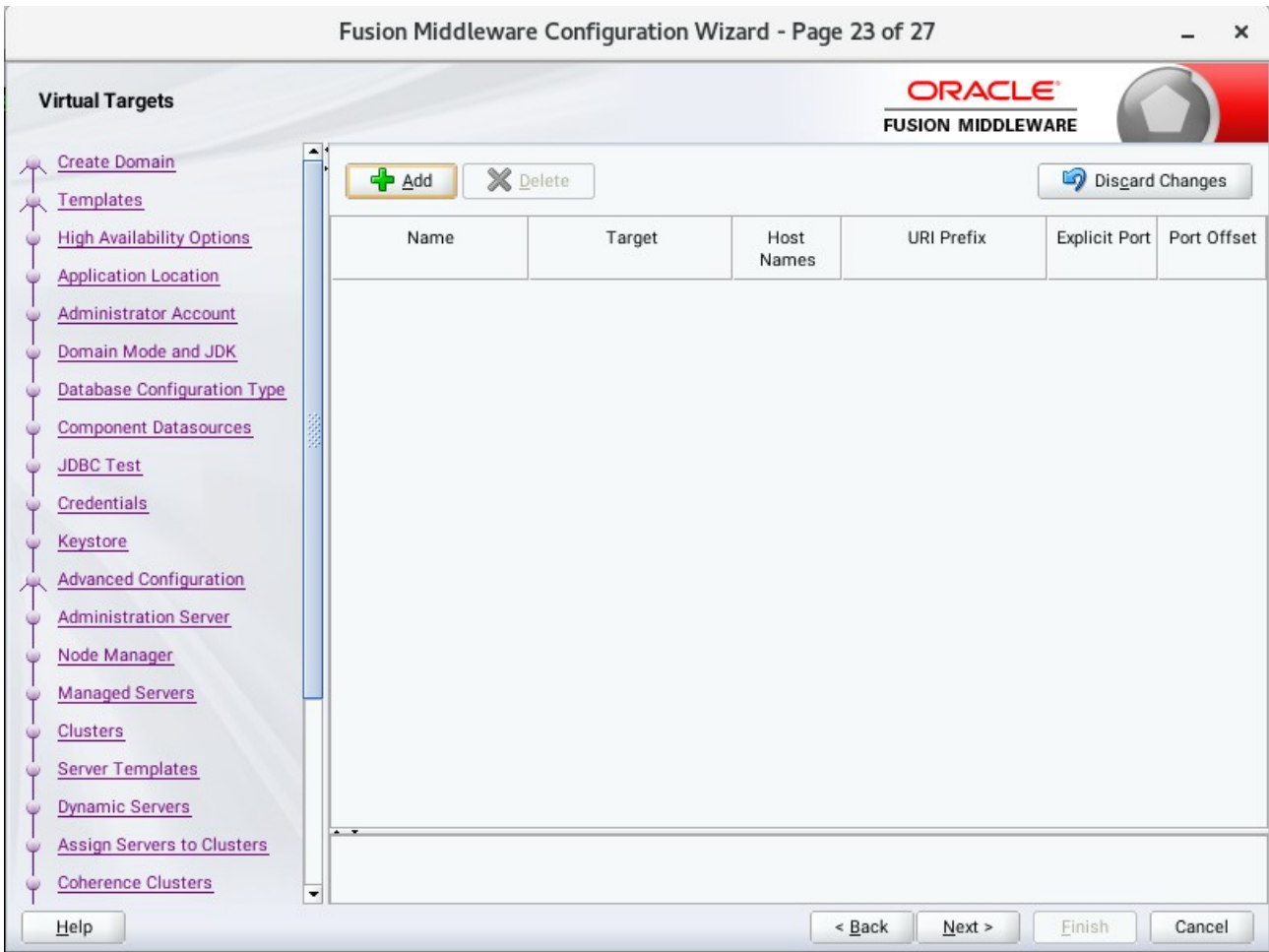
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



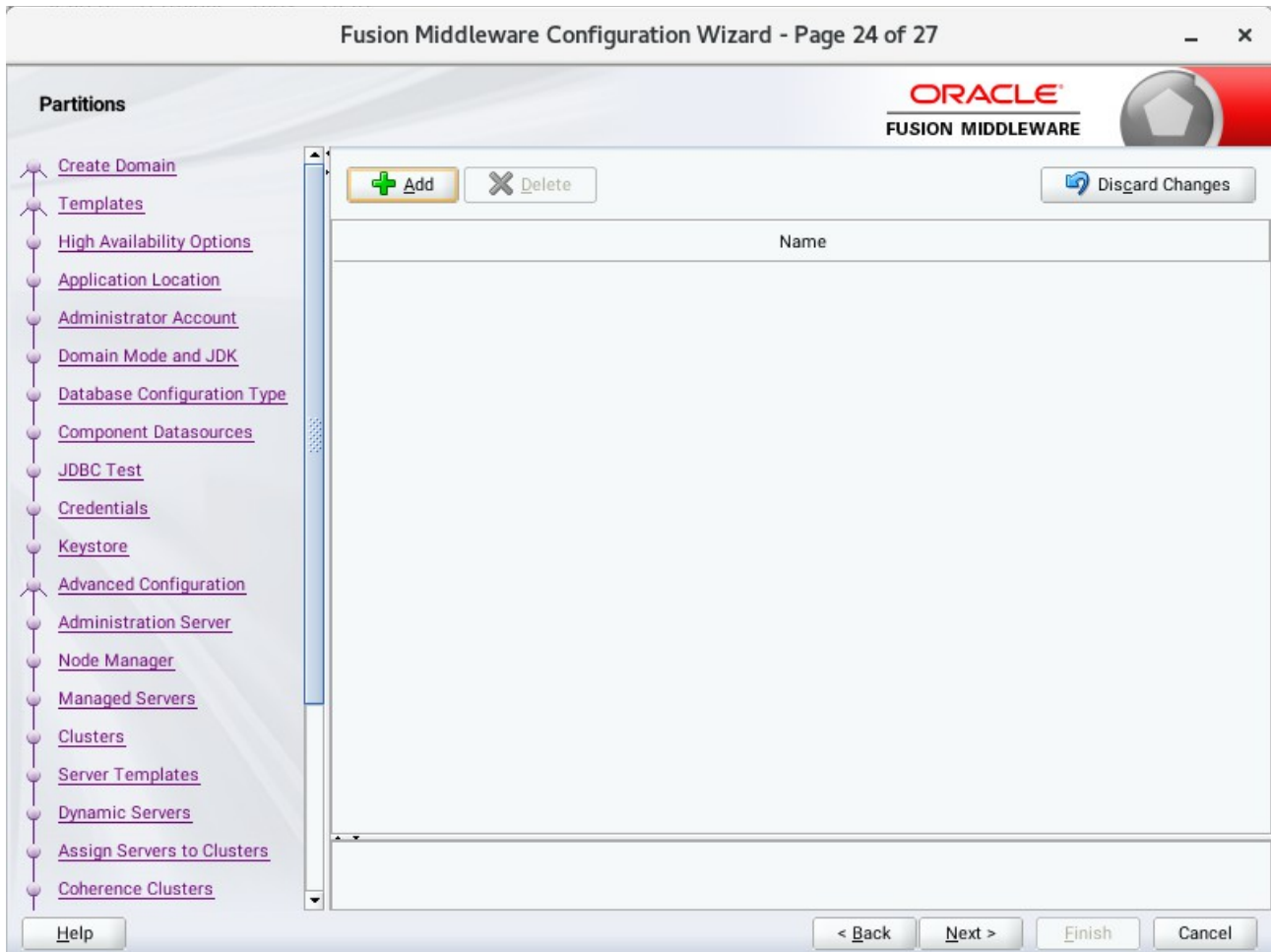
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



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

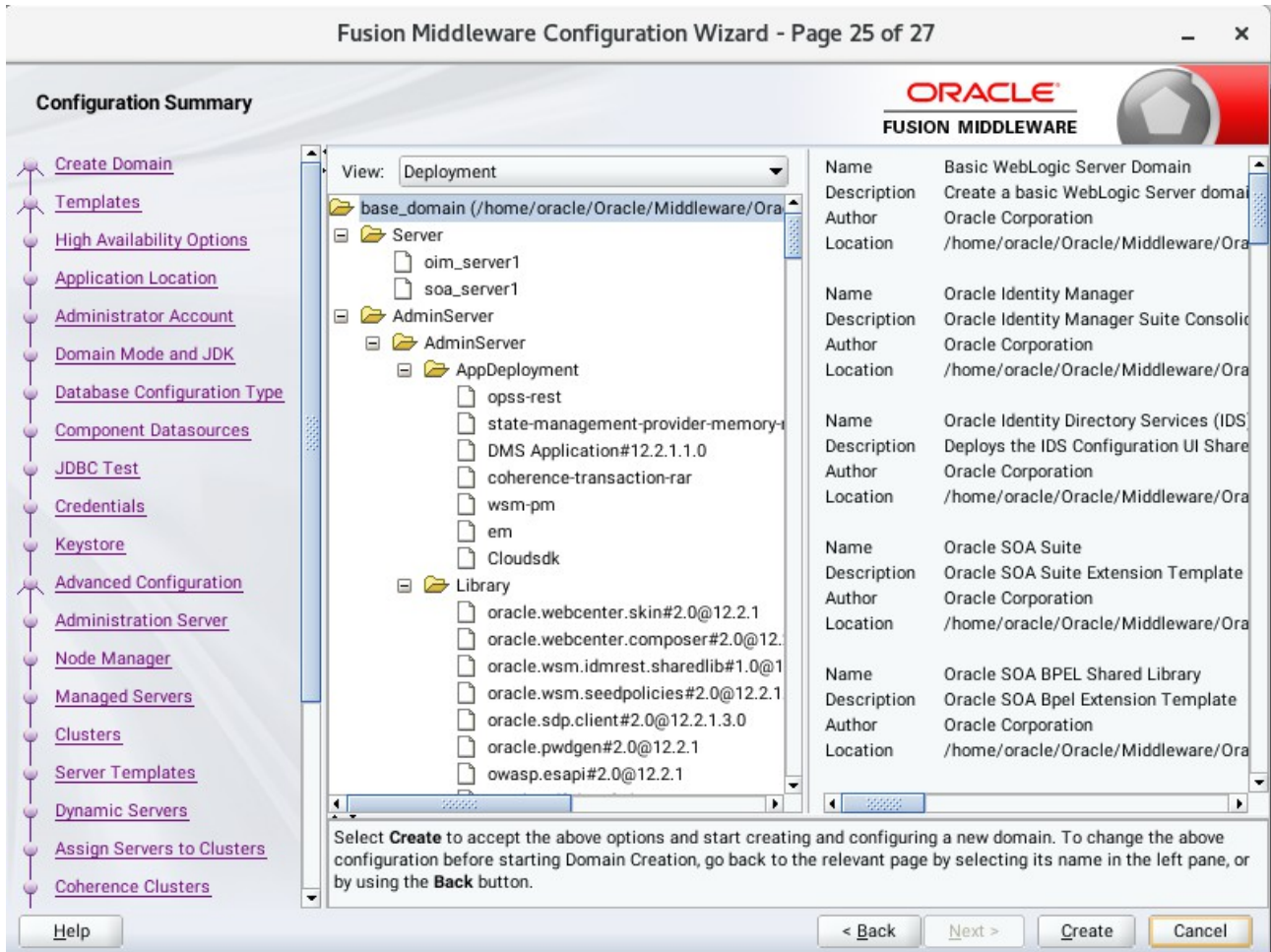
24). The **Partitions** screen appears.



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

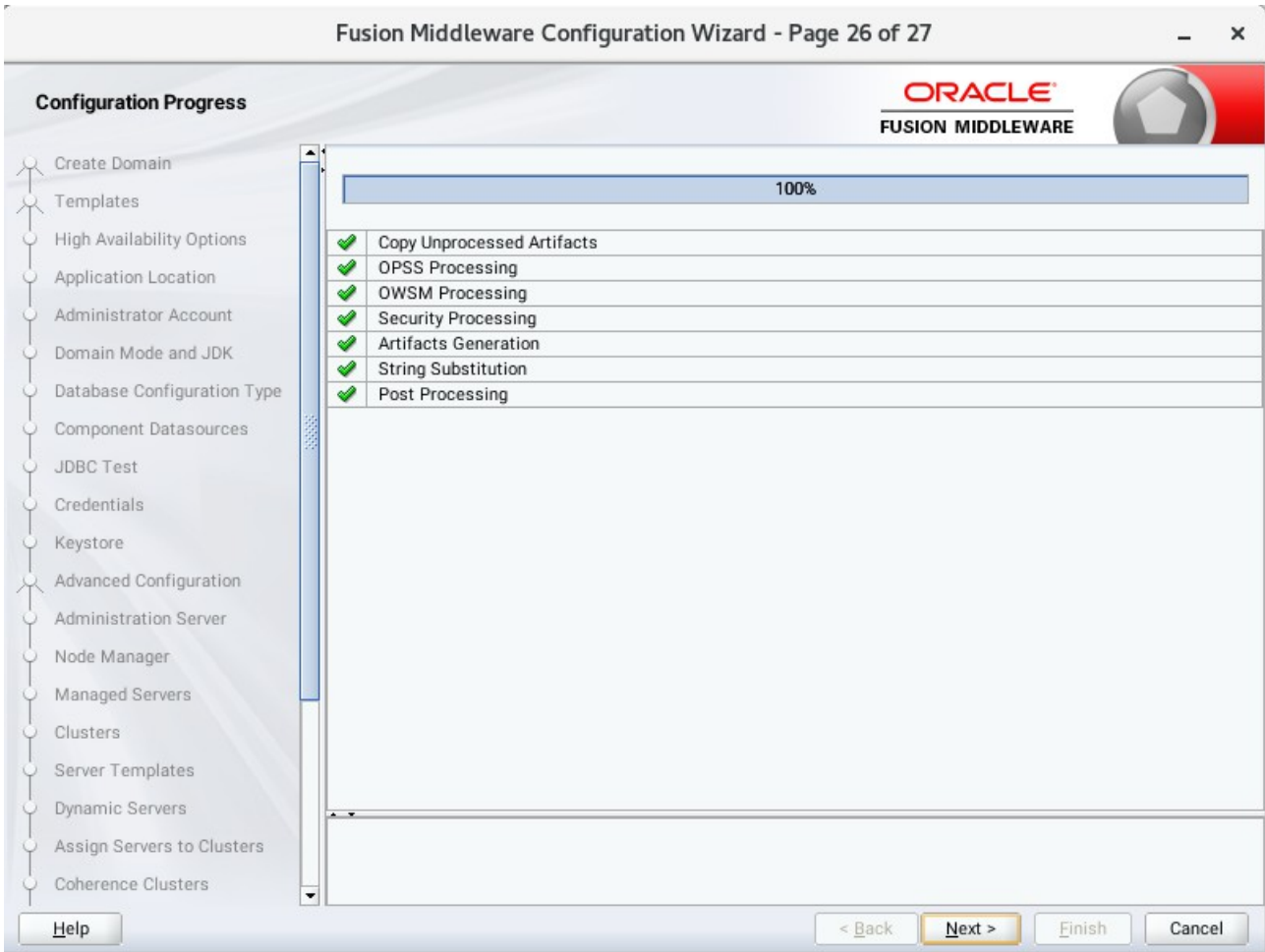


25). The **Configuration Summary** screen appears.



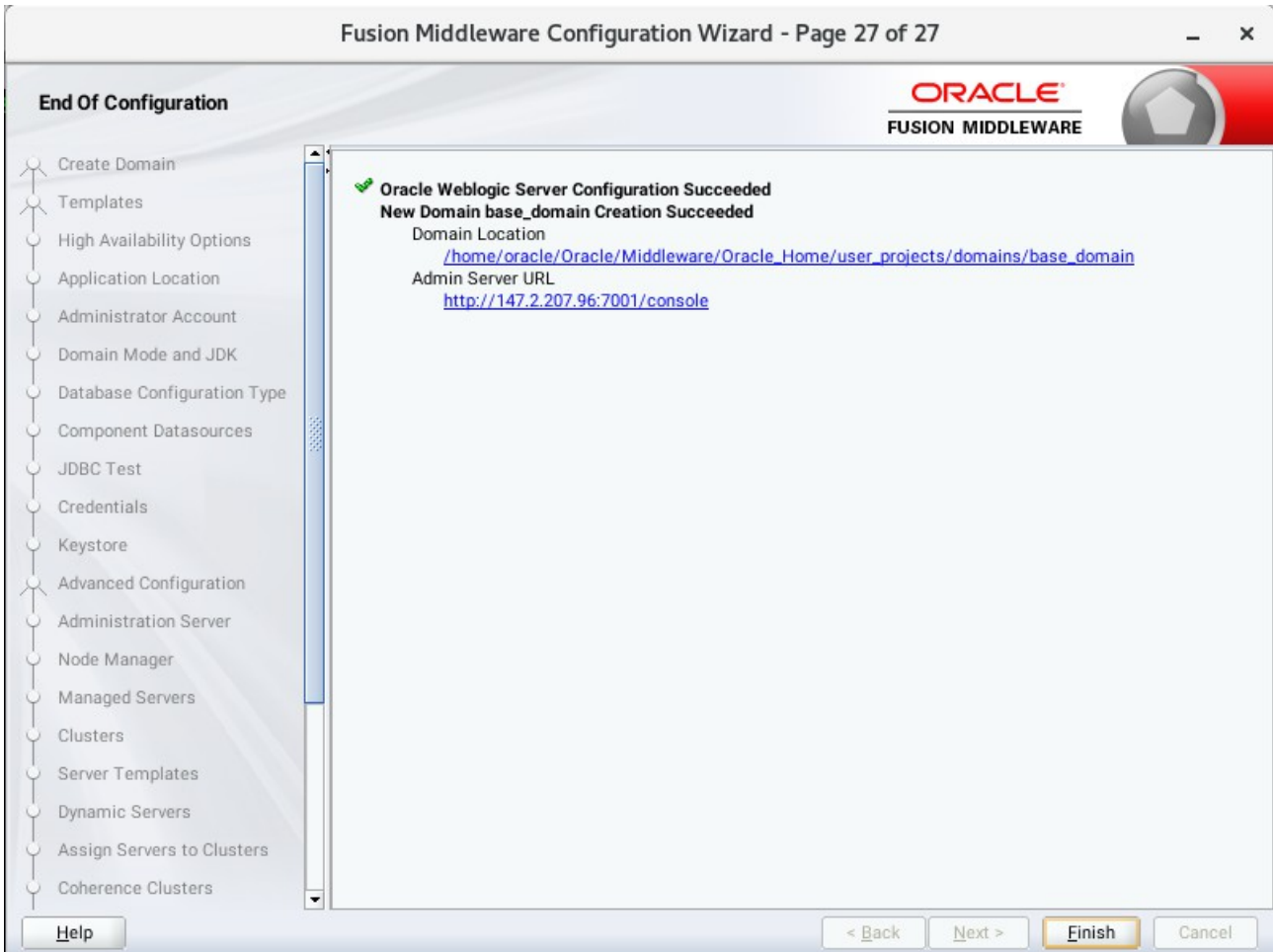
Select **Create** to accept the above options and start creating and configuring a new domain.

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



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

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



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

## 2-3. Performing Post-Configuration Tasks

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

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

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

- Set the following environment variables to the right values.

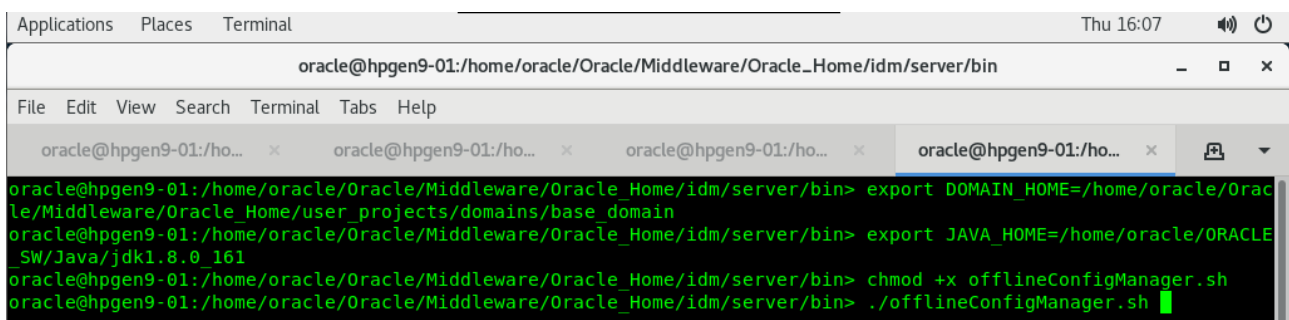
```
DOMAIN_HOME
JAVA_HOME
```

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

```
./setDomainEnv.sh
```

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

```
./offlineConfigManager.sh
```



The screenshot shows a terminal window with the following content:

```
Applications  Places  Terminal  Thu 16:07  [Speaker Icon] [Power Icon]
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x [Window Icon] [Dropdown Arrow]
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> export DOMAIN_HOME=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> export JAVA_HOME=/home/oracle/Oracle_Home/Java/jdk1.8.0_161
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:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> export DOMAIN_HOME=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> export JAVA_HOME=/home/oracle/Oracle_SW/Java/jdk1.8.0_161
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/idm
MW Home==> /home/oracle/Oracle/Middleware/Oracle_Home
cp: -r not specified; omitting directory '/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema'
copied jars from /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/ to /home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/mbeans/types/ dir
copied /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema/* to /home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/lib/schematypes/ dir
Initializing WebLogic Scripting Tool (WLST) ...
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands
reading Domain --> base_domain at path --> /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain
Session started for modification.
New Token Issuer Trust document named "tokenissuertrustWLSbase_domain" created.
To use the new document in the domain configuration, you must run the setWSMConfiguration command where category = "TokenIssuerTrust", property name = "name" and value = "tokenissuertrustWLSbase_domain".
A new property "name" within category "TokenIssuerTrust" has been added.
The values "[tokenissuertrustWLSbase_domain]" have been added to property "name" within category "TokenIssuerTrust".
Configuration properties associated with the context "/WLS/base_domain" has been created.
Token Issuer Trust document named "tokenissuertrustWLSbase_domain" selected in the session.

```

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x
ig/jps-config-jse.xml is updated.
<Jul 12, 2018 4:08:42,907 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSConfigXMLForWLS() method of JPSConfigXMLUpdate class>
Jul 12, 2018 4:08:42 PM oracle.iam.OIMPostConfigManager.config.util.JPSConfigXMLUpdate updateJPSConfigXMLForWLS
INFO: Exiting updateJPSConfigXMLForWLS() method of JPSConfigXMLUpdate class
<Jul 12, 2018 4:08:42,907 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Updated jps-config-jse.xml Details.>
Jul 12, 2018 4:08:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSConfig
INFO:
Updated jps-config-jse.xml Details.
<Jul 12, 2018 4:08:42,908 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSConfig() method of OIMConfigManager class>
Jul 12, 2018 4:08:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSConfig
INFO: Exiting updateJPSConfig() method of OIMConfigManager class
<Jul 12, 2018 4:08:42,909 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <[OIM CONFIG] Copying the mbean Files>
Jul 12, 2018 4:08:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
[OIM CONFIG] Copying the mbean Files
<Jul 12, 2018 4:08:42,910 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Entering copyMbeanFiles() method of OIMConfigManager class>
Jul 12, 2018 4:08:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Entering copyMbeanFiles() method of OIMConfigManager class
<Jul 12, 2018 4:08:42,910 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Copying mbean files are successful>
Jul 12, 2018 4:08:42 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
Copying mbean files are successful
<Jul 12, 2018 4:08:42,911 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting copyMbeanFiles() method of OIMConfigManager class>
Jul 12, 2018 4:08:42 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:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 5715
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup: ignoring input and redirecting stderr to stdout

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> more nm.out
NODEMGR_HOME is already set to /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager
CLASSPATH=/home/oracle/ORACLE_SW/Java/jdk1.8.0_161/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_161/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_161 weblogic.NodeManager -v
<Jul 12, 2018 4:11:01 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 12, 2018 4:11:01 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.3.0>
<Jul 12, 2018 4:11:01 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, 2018 4:11:01 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jul 12, 2018 4:11:01 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jul 12, 2018 4:11:03 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 boo

```

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

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpg... x oracle@hpg... x oracle@hpg... x oracle@hpg... x oracle@hpg... x oracle@hpg... x
FMWProv: Integration Class called and was reloaded for me
PostInstallConfigIntegration:oracle_ias_farm target auth registration is done.
CompositesProvIntegration init...
getAllPluginOracleHomes: ConnectionService is null
getAllPluginOracleHomes: ConnectionService is null
Anonymous url config processing:/WEB-INF/config/anonymous-access-emcore.config
Anonymous-urls:[/em/IEsvgdetect.js.*, /em/LoginStatusServlet.*, /em/adf/.*, /em/adflib/.*, /em/afr/.*, /em/bi/.*
, /em/bmp/discovertargets, /em/cabo/.*, /em/console/help.*, /em/console/logon/.*, /em/consoleStatus.jsp, /em/dyn
amicImage.*, /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/helppages/.*, /em/flashbridge.*, /em/formsapp/lib/formsRecorder.jar, /em/imag
es/.*, /em/install/getAgentImage, /em/helppages/help.*, /em/jsLibs/.*, /em/jsLibs0bf/.*, /em/login.jsp, /em/mapp
roxy.*, /em/mobile/core/uifwk/skins/.*, /em/ocamm/lib.*, /em/onetime.*, /em/ovs/discovertargets, /em/public/.*,
/em/public_lib_download/.*, /em/redirect.*, /em/relocatetarget.*, /em/sdkImpl/core/uifwkmobile/skins/.*, /em/serv
let/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs.*, /em/jobrec
v.*]
<Jul 12, 2018 4:15:51,468 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully esta
blished a connection with the Domain level Diagnostic Service.>
<Jul 12, 2018 4:15:52,127 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jul 12, 2018 4:15:52,221 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Jul 12, 2018 4:15:52,222 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Jul 12, 2018 4:15:52,366 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Admi
nistration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jul 12, 2018 4:15:52,367 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 14
7.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2018 4:15:52,368 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 14
7.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jul 12, 2018 4:15:52,706 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mo
de.>
<Jul 12, 2018 4:15:52,716 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.
v

```

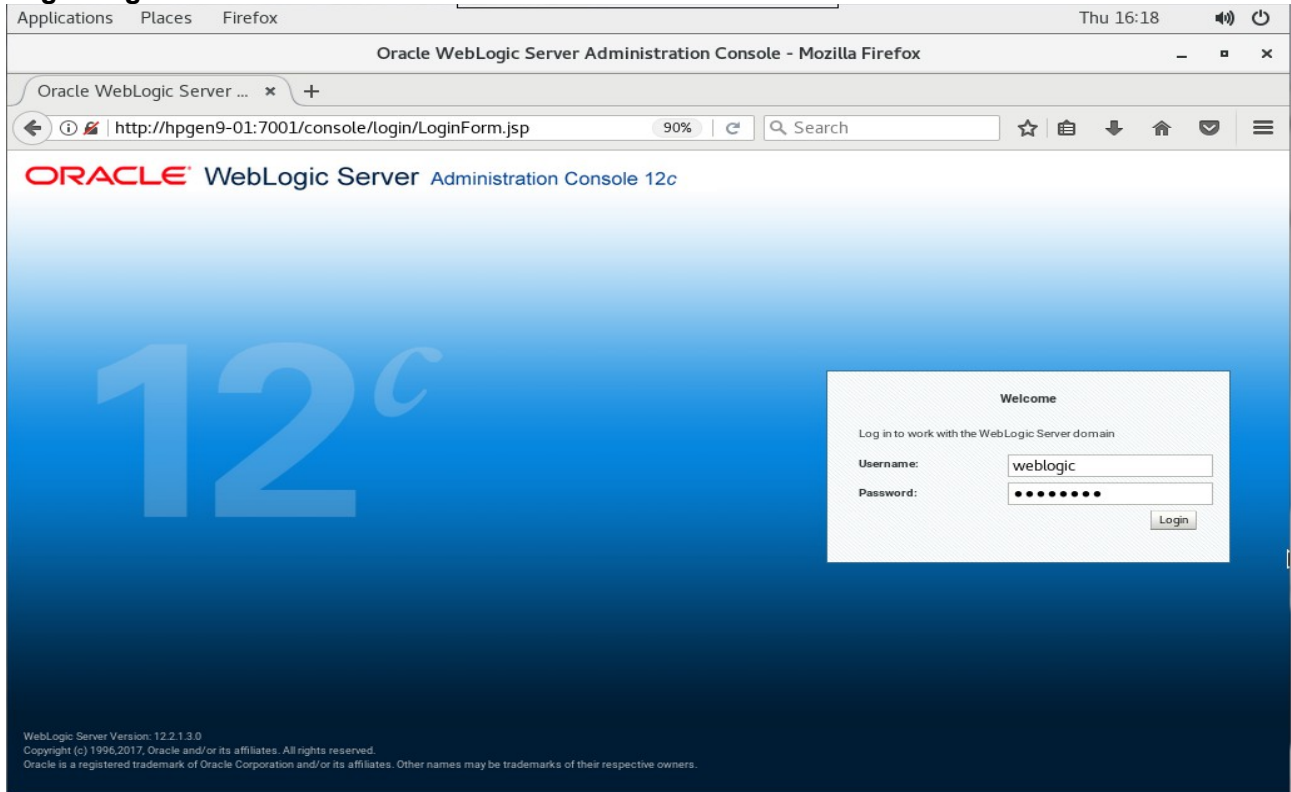
You know that the administrator server is running when you see the following output:

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

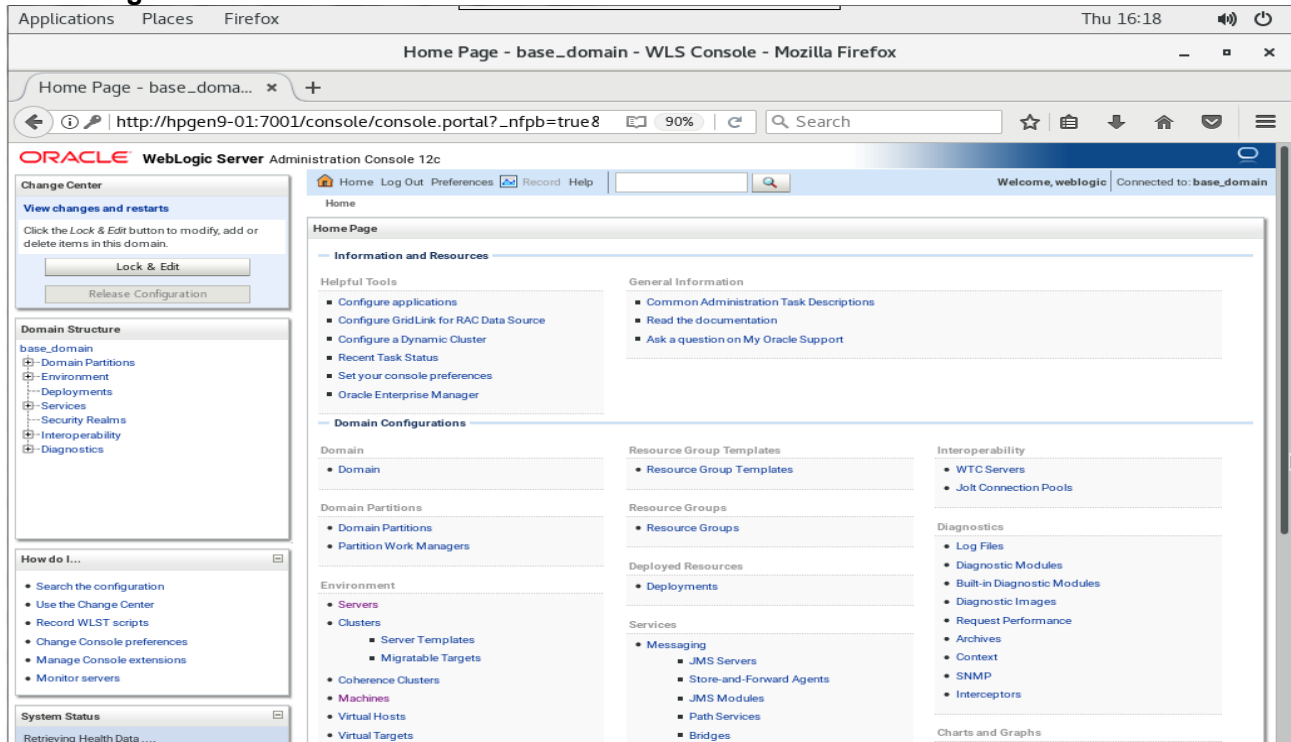
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

#### 1). Access to Administration Server Console

##### Login Page:



##### Home Page:





Viewing the summary of servers:

Summary of Servers - base\_domain - WLS Console - Mozilla Firefox

Summary of Servers - ba... x +

http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: base\_domain

Home > Summary of Servers

Summary of Servers

Configuration Control

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

Customize this table

Servers (Filtered - More Columns Exist)

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

New Clone Delete Showing 1 to 3 of 3 Previous | Next

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	SHUTDOWN	Not reachable	14000
soa_server1	Configured	soa_cluster_1	suse_Machine_1	SHUTDOWN	Not reachable	7003

New Clone Delete Showing 1 to 3 of 3 Previous | Next

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 - base\_domain - WLS Console - Mozilla Firefox

Settings for suse\_Machin... x +

http://hpgen9-01:7001/console/console.portal?\_nfpb=true&\_p

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: base\_domain

Home > Summary of Servers > Summary of Environment > Summary of Machines > suse\_Machine\_1

Settings for suse\_Machine\_1

Configuration Monitoring Notes

Node Manager Status Node Manager Log

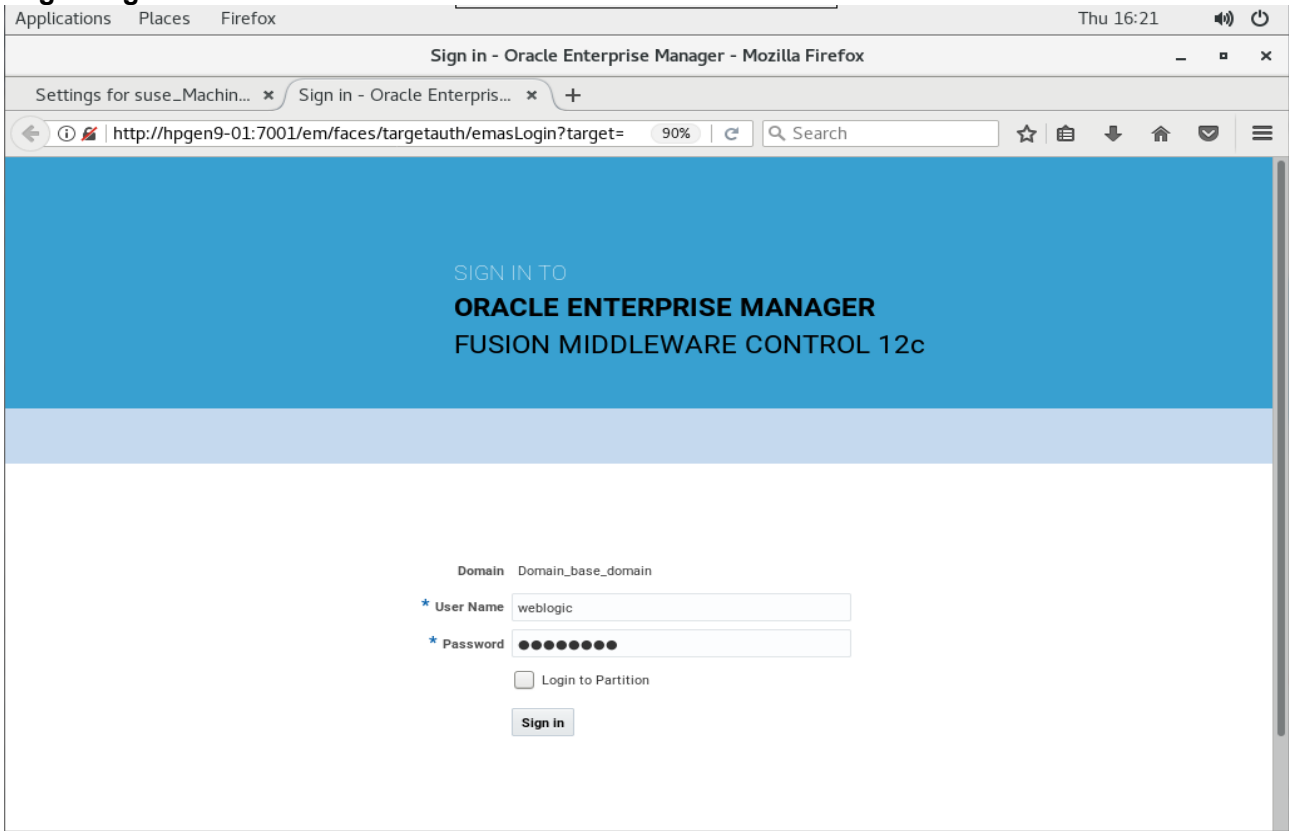
This page allows you to view current status information for the Node Manager instance configured for this machine.

Status: Reachable Current status of this Node Manager. More Info...

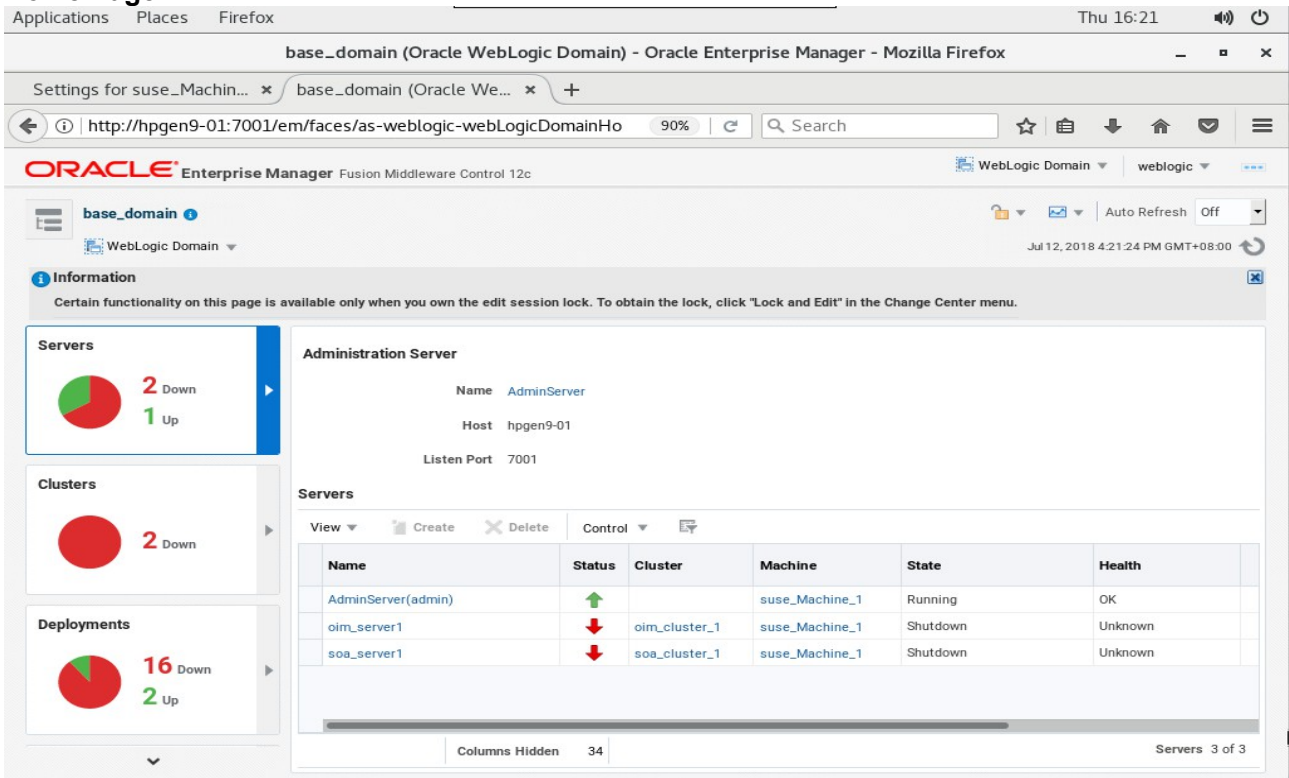
Version: 12.2.1.3.0 Version string returned from the Node Manager. More Info...

2). Access to Enterprise Manager Console.

**Login Page:**



**Home Page:**



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

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

Settings for suse\_Machin... x base\_domain (Oracle We... x +

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainHo 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

base\_domain

WebLogic Domain

Jul 12, 2018 4:23:53 PM GMT+08:00

**Information**

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

**Servers**

1 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

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

Settings for suse\_Machin... x base\_domain (Oracle We... x +

http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomain 90%

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

base\_domain

WebLogic Domain

Jul 12, 2018 4:29:32 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**

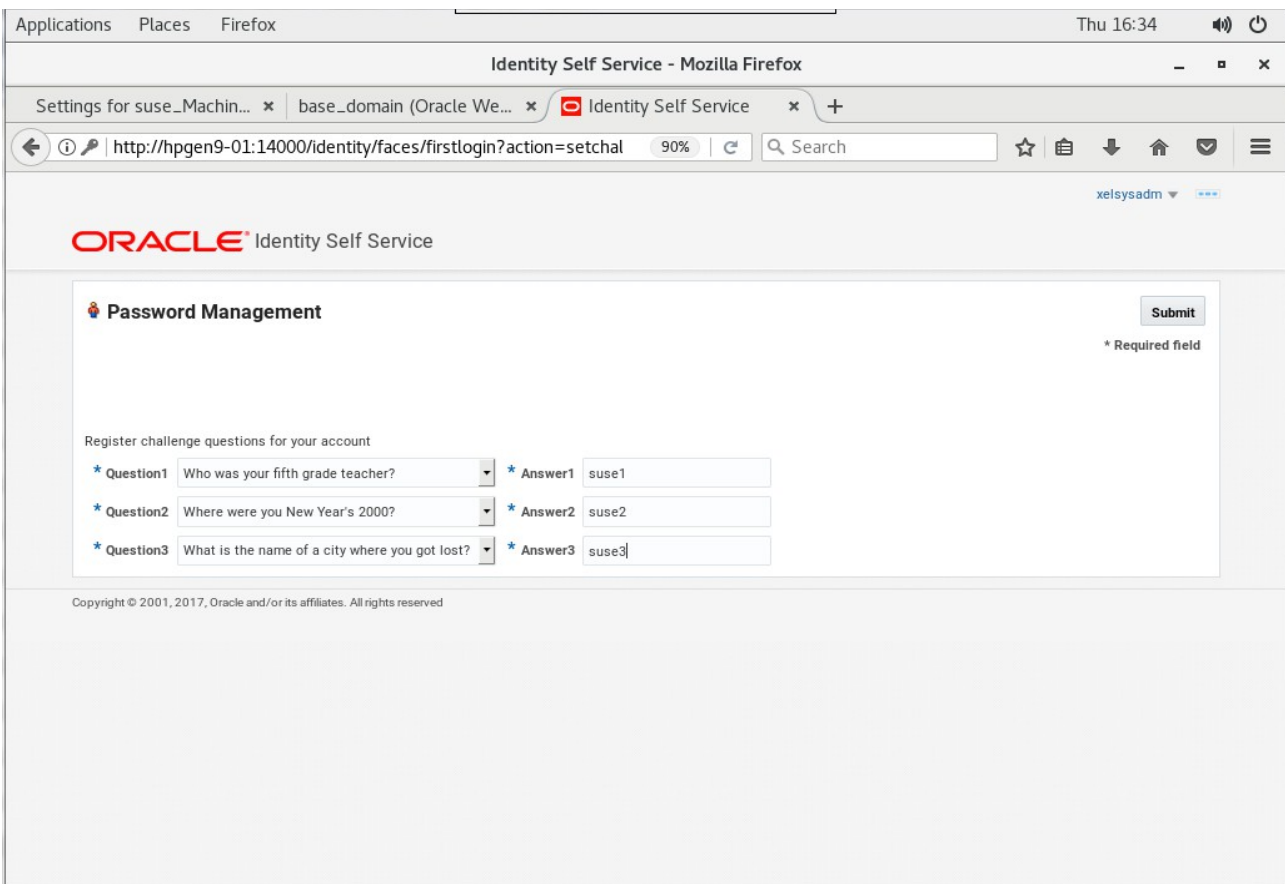
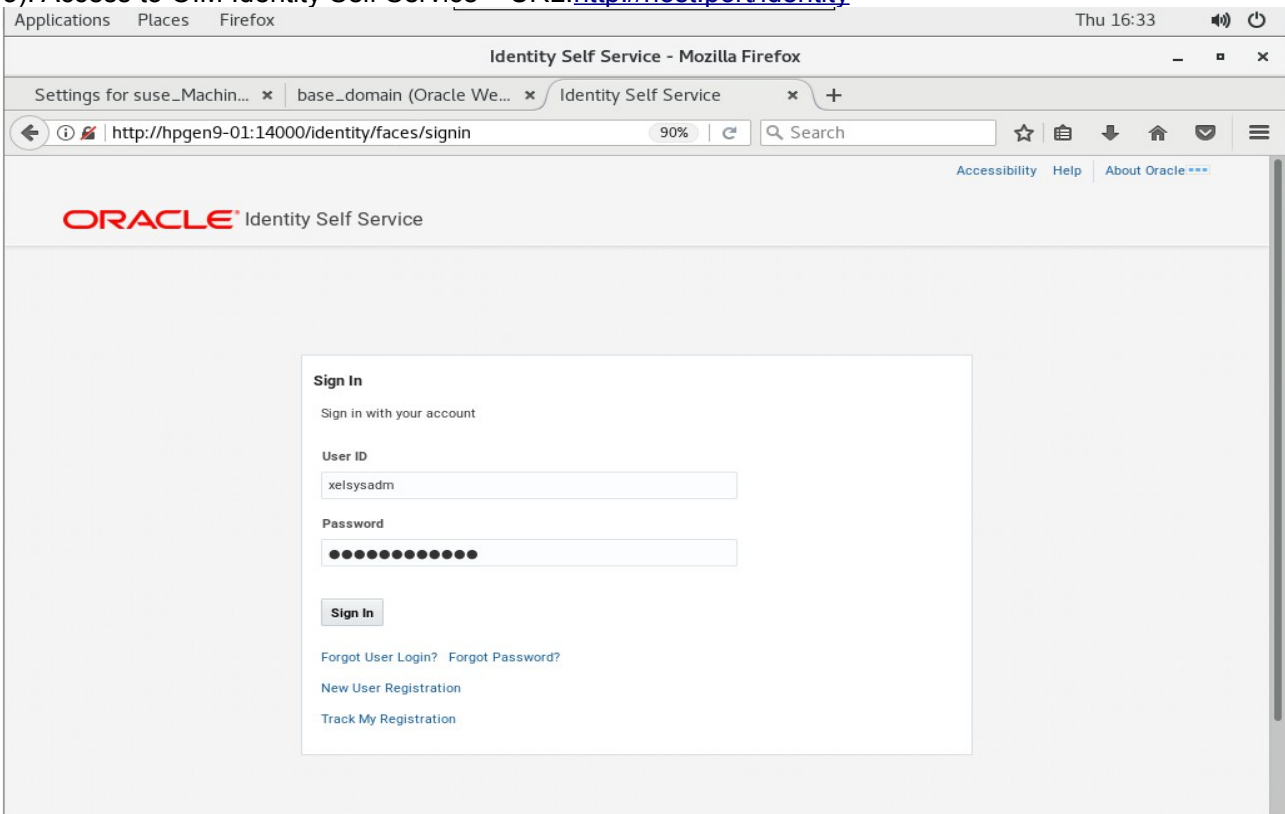
Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_Machine_1	Running	OK
oim_server1	↑	oim_cluster_1	suse_Machine_1	Running	OK
soa_server1	↑	soa_cluster_1	suse_Machine_1	Running	OK

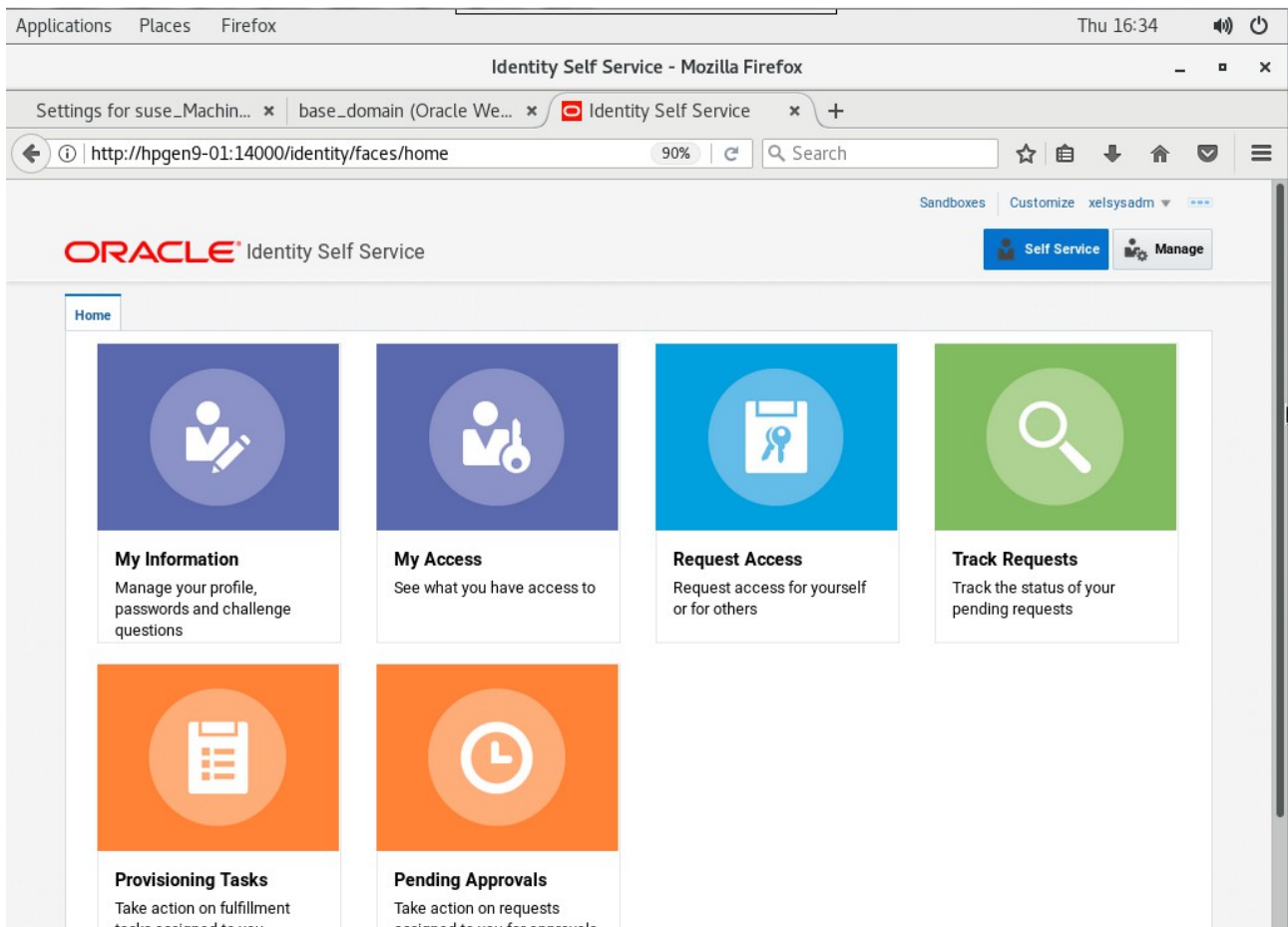
Columns Hidden 34 Servers 3 of 3

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

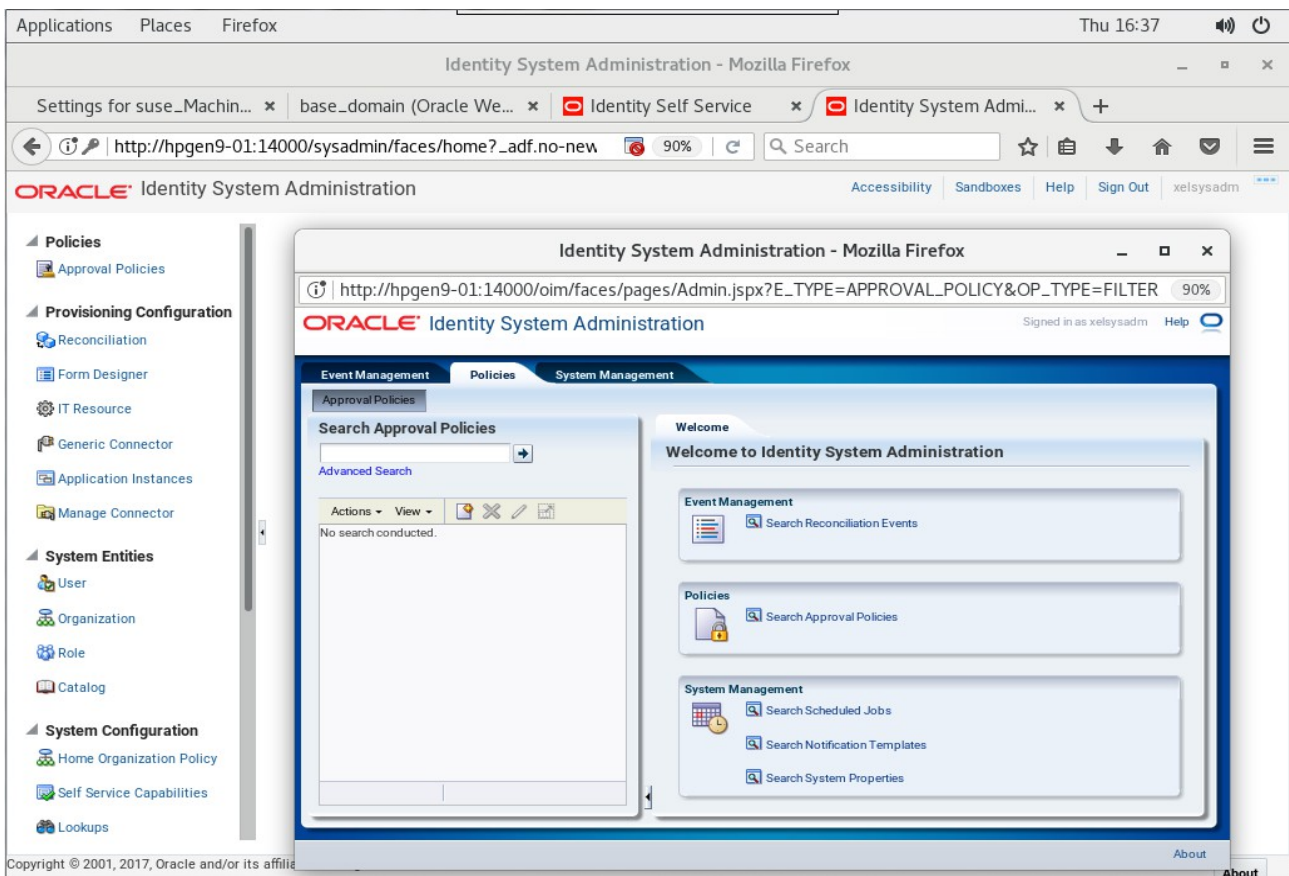
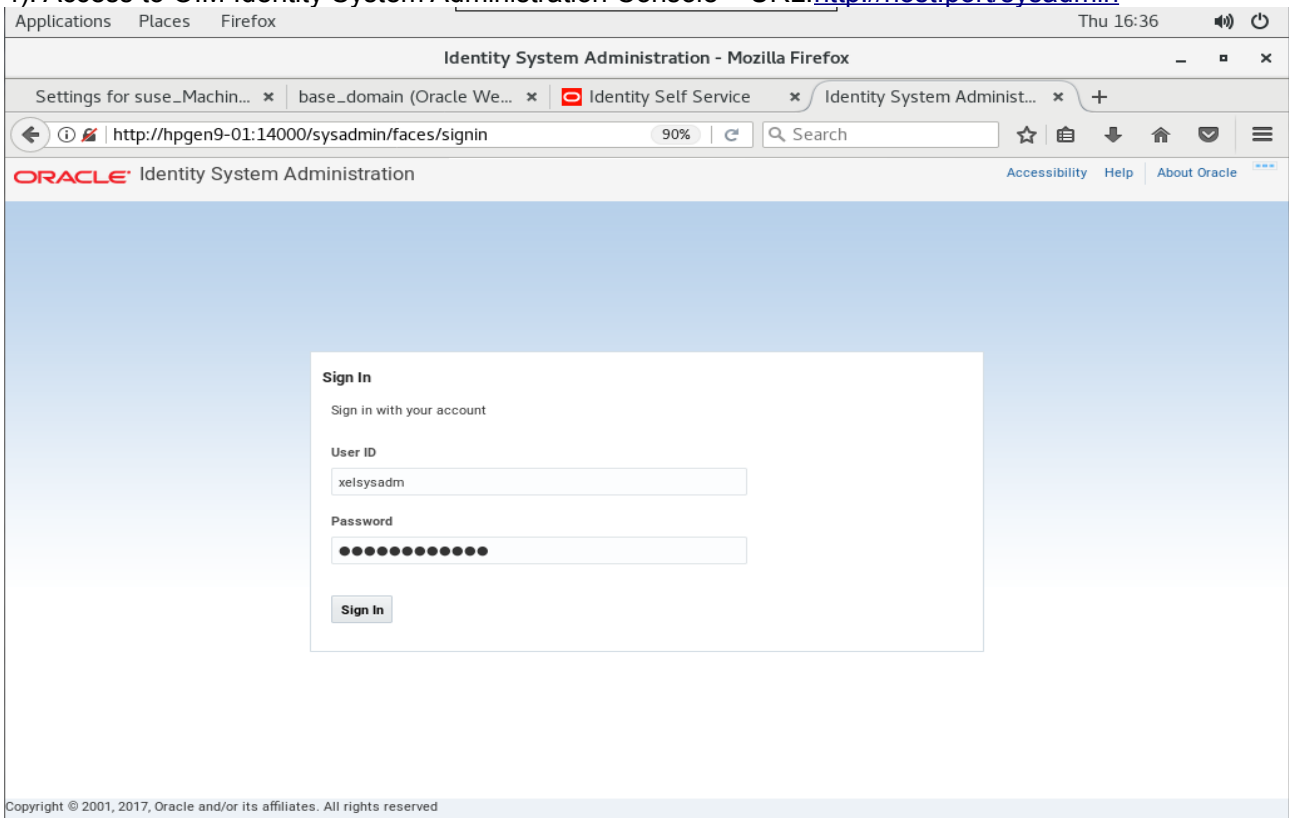
After they start up successfully, each managed server is listed as Running.

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>

The screenshot shows a Mozilla Firefox browser window. The title bar reads 'Welcome to the Oracle SOA Platform on WebLogic - Mozilla Firefox'. The address bar contains 'http://hpgen9-01:7003/soa-infra/'. The page content is as follows:

**Welcome to the Oracle SOA Platform on WebLogic**

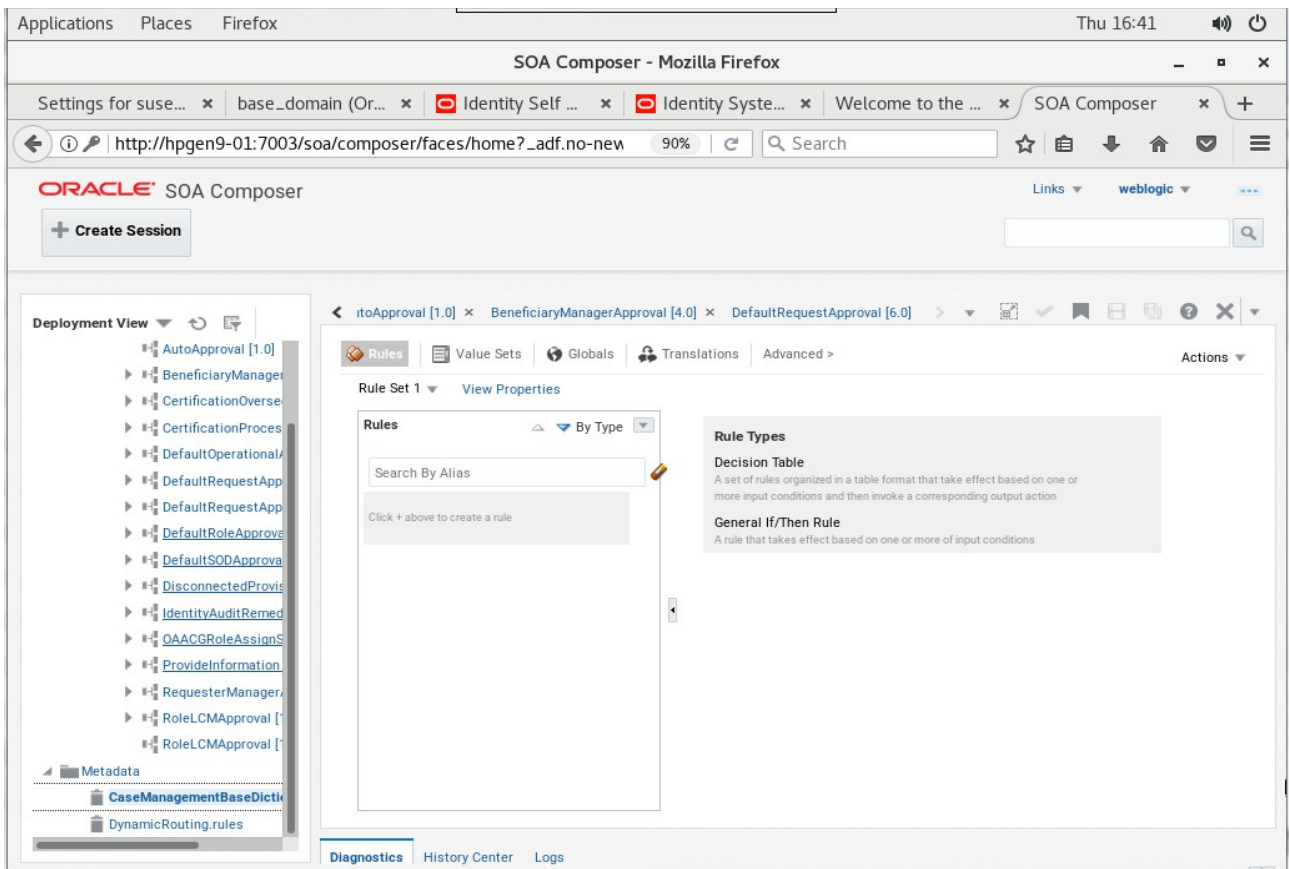
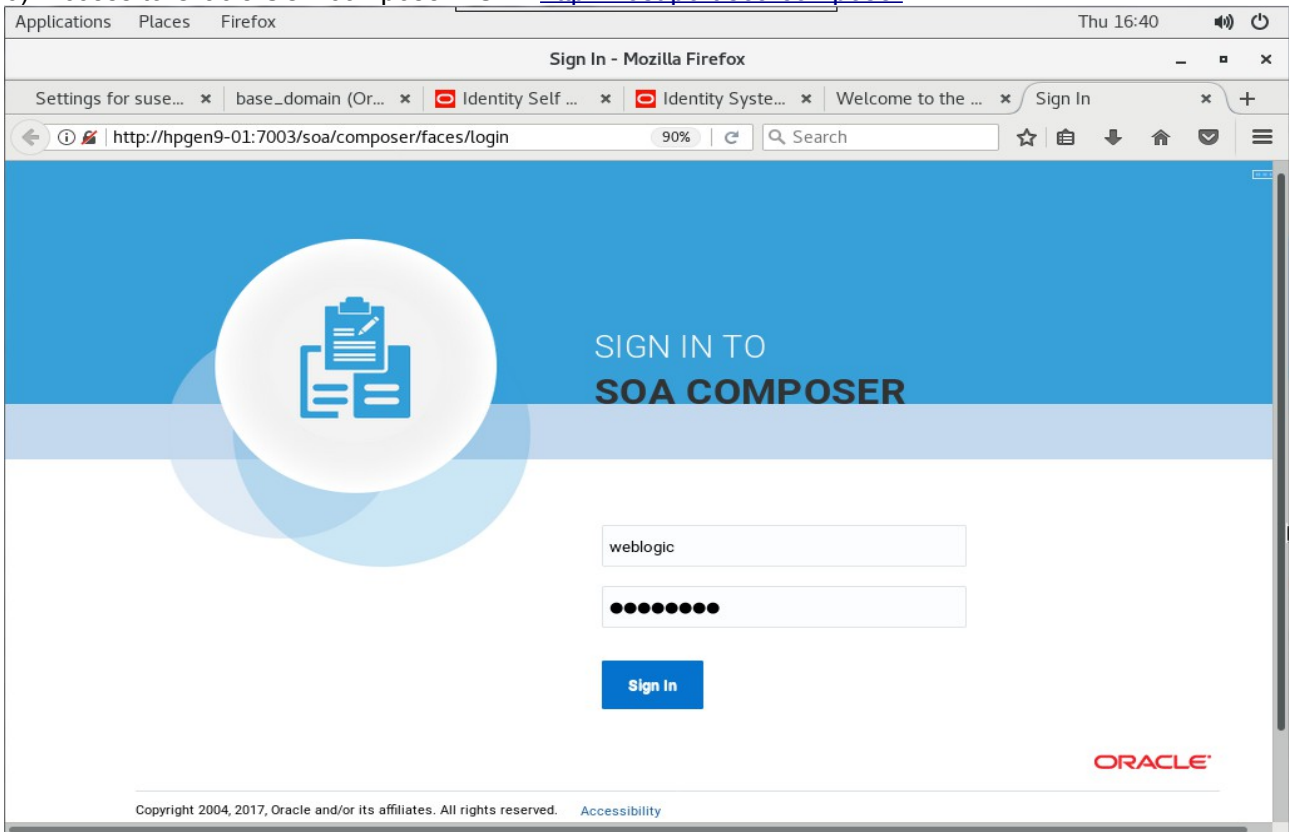
SOA Version: v12.2.1.3.0 - MAIN\_170820.1700.2557  
 WebLogic Server 12.2.1.3.0 (12.2.1.3.0)  
 Running on: soa\_server1

The following composites are currently deployed:

1. default/AutoApproval!1.0\*soa\_503e5417-e313-4cbf-a0b9-66747c7626ff
  - o Web Service: RequestApprovalService
2. default/BeneficiaryManagerApproval!4.0\*soa\_d9ba6a27-9bb8-4388-8c2d-6dc1808e92aa
  - o Web Service: RequestApprovalService
3. default/CertificationOverseerProcess!2.0\*soa\_13abf636-d8db-4ef9-aa31-0de5747bd4e2
  - o Web Service: CertificationTaskService
4. default/CertificationProcess!2.0\*soa\_af7b63ef-ab59-4fde-850d-834a7c008498
  - o Web Service: CertificationTaskService
5. default/DefaultOperationalApproval!5.0\*soa\_63827a0f-d04a-4ca9-a265-0ad633b8cf11
  - o Web Service: RequestApprovalService
6. default/DefaultRequestApproval!5.0\*soa\_30571b2e-995b-4836-9beb-f440ae9d6b4f
  - o Web Service: RequestApprovalService
7. default/DefaultRequestApproval!6.0\*soa\_1ac62944-f942-4ed3-a4a4-f4eb6e8b9343
  - o Web Service: RequestApprovalService
8. default/DefaultRoleApproval!3.0\*soa\_6c310e19-402c-496c-afaf-27c84e07c56a
  - o Web Service: RequestApprovalService
9. default/DefaultSODApproval!2.0\*soa\_97b1e512-7bed-471b-b101-63b3cd2442b2
  - o Web Service: RequestApprovalService
10. default/DisconnectedProvisioning!2.0\*soa\_5b9abb8a-c9c2-4d86-a530-6c6edecb05ac
  - o Web Service: manualprovisioningprocess\_client
11. default/IdentityAuditRemediation!1.0\*soa\_cd0a237f-0a7a-4e2a-a29f-d2236b8a8089
  - o Web Service: IdentityAuditRemediationService
12. default/OACGRoleAssignSODCheck!1.0\*soa\_d80c1eaf-7b45-4373-8ff7-7311d869da32

On the right side of the page, there is a 'Links' section with two links: [SOA Composer](#) and [BPM Worklist](#).

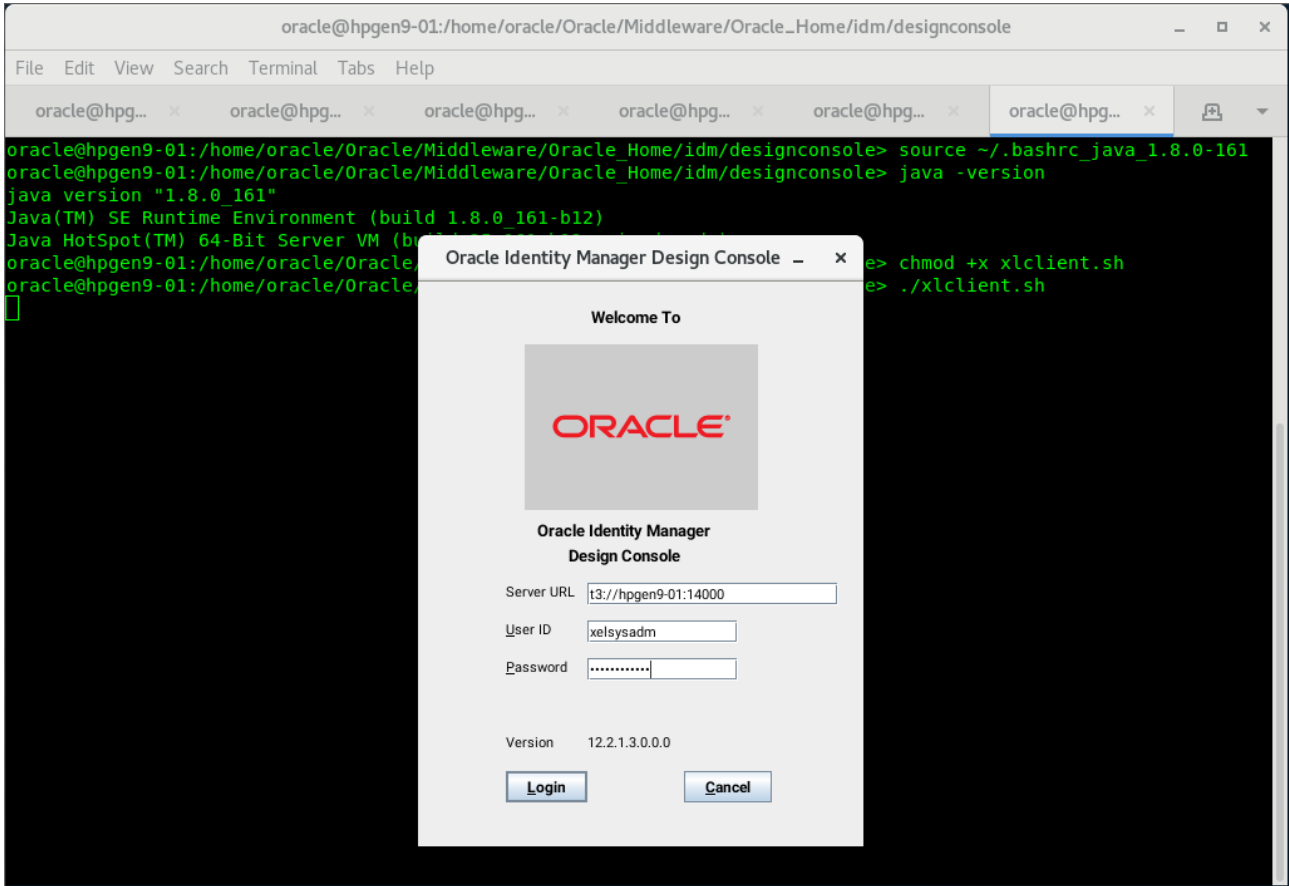
6). Access to Oracle SOA composer - URL:<http://host:port/soa/composer>



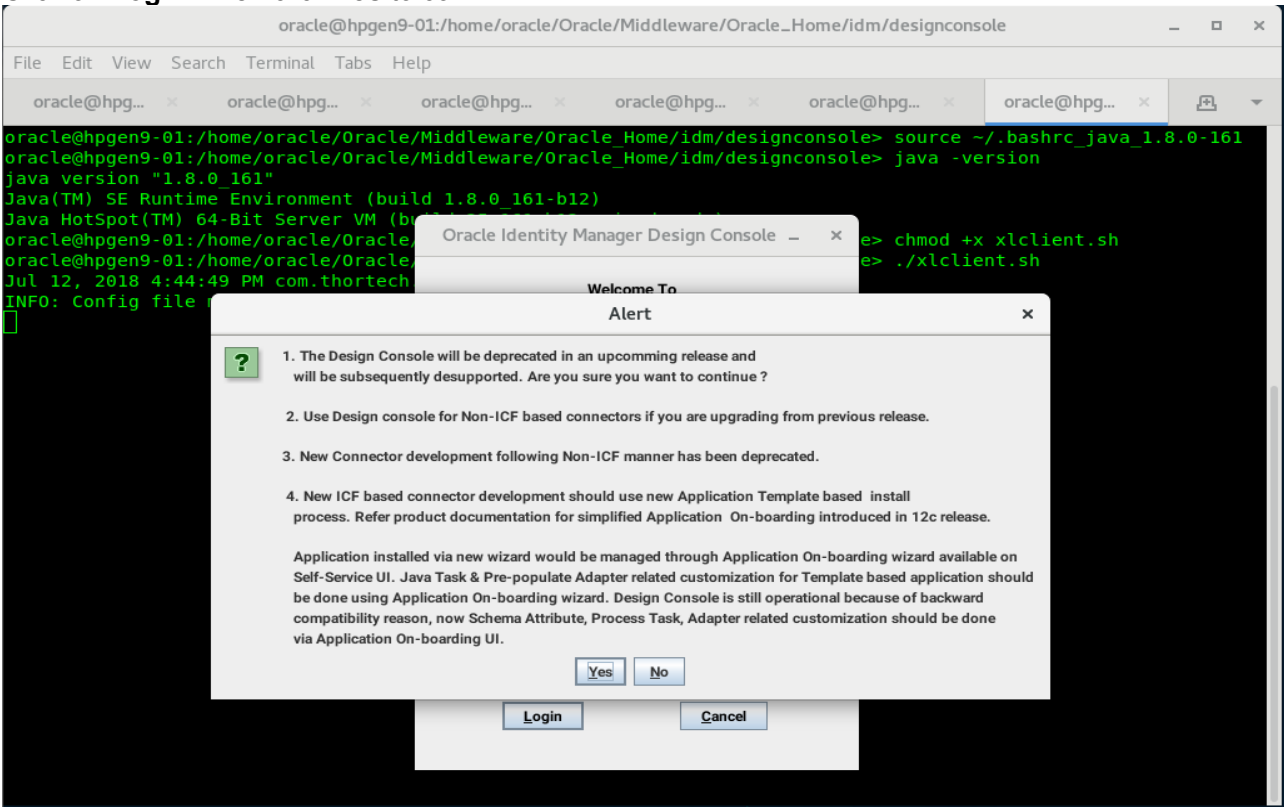


7). Verifying connection for OIM design console. Launch the Design Console (via the xlclient.sh script in \$MW\_HOME/idm/designconsole)

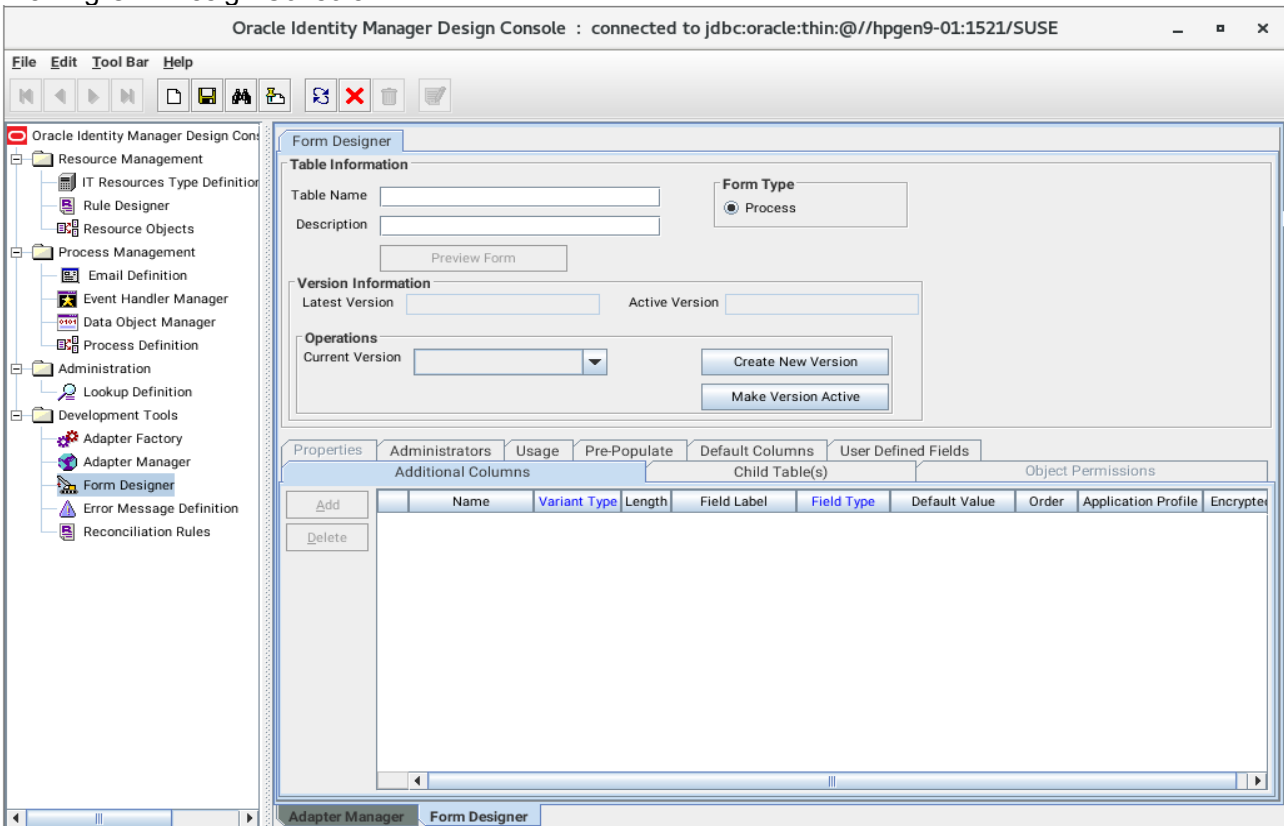
```
export JAVA_HOME=xxx  
chmod +x xlclient.sh  
./xlclient.sh
```



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



Viewing OIM Design Console.



**End of Oracle Identity Manager.**

## Additional Comments

This document shows how to install and configure a standard topology for Oracle Fusion Middleware components 12c on SLES 15. You can extend this topology to make it highly available and secure so it is suitable for a production system.

**SUSE ISV Engineering Team**  
**Oct 10, 2019**  
<https://www.suse.com>