

***Oracle Fusion Middleware 12c on  
SUSE Linux Enterprise Server 15 SP1  
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 SP1. Details are provided for Intel x86-64 versions of both Oracle FMW 12c and SUSE Linux Enterprise Server 15 SP1. 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 SP1- (x86-64)  
(<http://download.suse.de/install>)

### Oracle

- Database 12cR2 (12.2.0.1.0) - (x86\_64)  
(<https://www.oracle.com/downloads/#category-database>)
- Java SE Development Kit 8 (jdk-8u221-linux-x64.tar.gz)  
(<https://www.oracle.com/downloads/#category-java>)
- WebLogic Server 12cR2 (12.2.1.4) (fmw\_12.2.1.3.0\_wls\_Disk1\_1of1.zip)  
(<https://www.oracle.com/downloads/#category-middleware>)
- WebLogic Server 12cR2 (12.2.1.4.0) - (Fusion Middleware Infrastructure Installer)  
(<https://www.oracle.com/downloads/#category-middleware>)
- Forms and Reports 12c (12.2.1.4.0) - (x86\_64)  
(<https://www.oracle.com/downloads/#category-middleware>)
- WebTier 12cR2 Oracle HTTP Server (12.2.1.4.0) - (x86\_64)  
(<https://www.oracle.com/downloads/#category-middleware>)
- WebCenter Portal 12c (12.2.1.4.0) - (V983398-01.zip)  
(<https://www.oracle.com/downloads/#category-middleware>)
- SOA Suite 12c (12.2.1.4.0) - (V983385-01\_1of2.zip)  
(<https://www.oracle.com/downloads/#category-middleware>)
- Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) – (Generic Quick Installer)  
(<https://www.oracle.com/downloads/#category-middleware>)

## **Testing machine information**

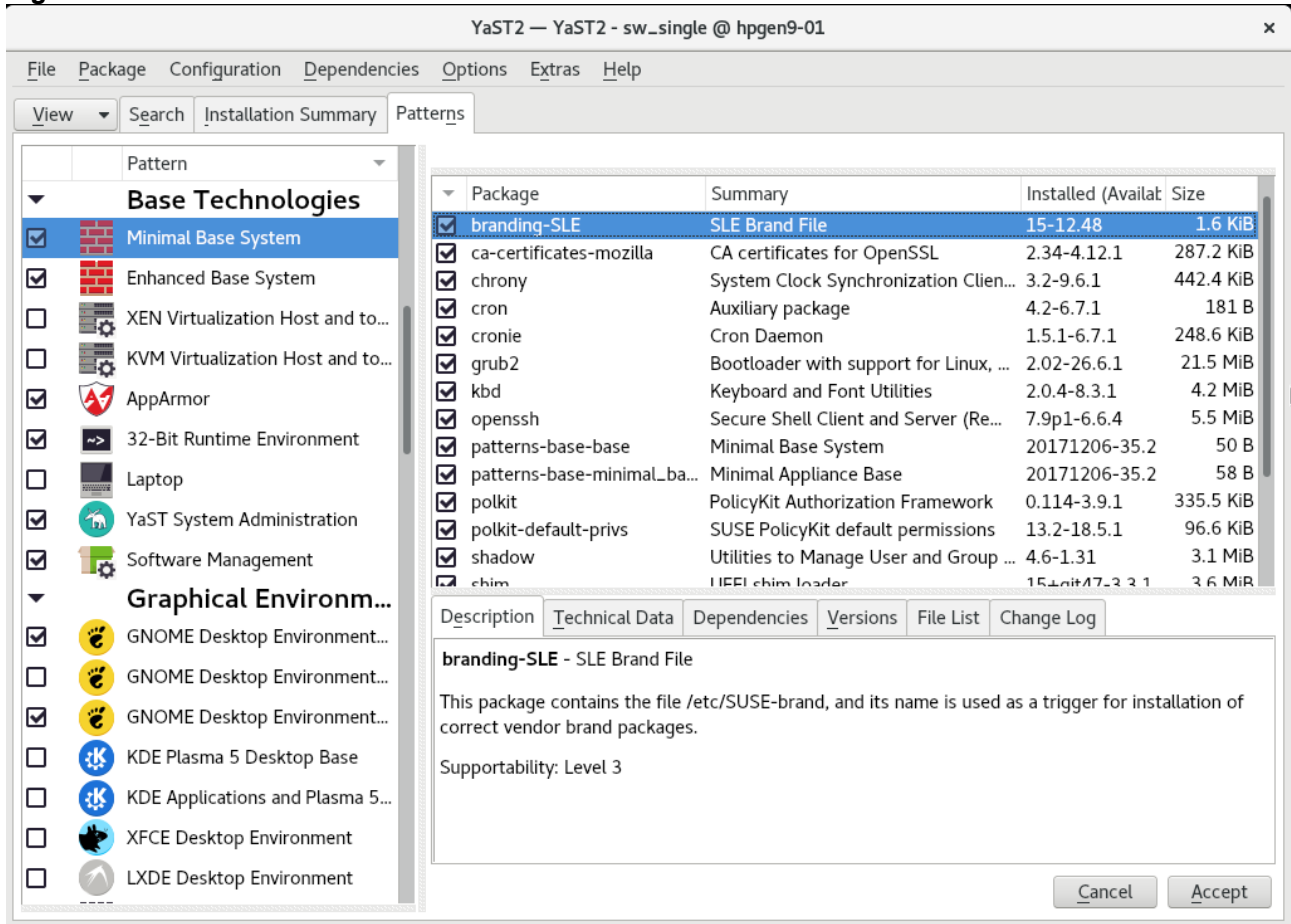
- HP DL388 Gen9 Server
- CPU: 2 \* Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz
- RAM: 64 GB
- NIC: 8
- Local HDD: 2 TB
- Operating System: SUSE Linux Enterprise Server 15 SP1 (x86\_64)
- Kernel version: 4.12.14-197.15-default

# Prerequisites

## 1. Installing SUSE Linux Enterprise Server 15 SP1

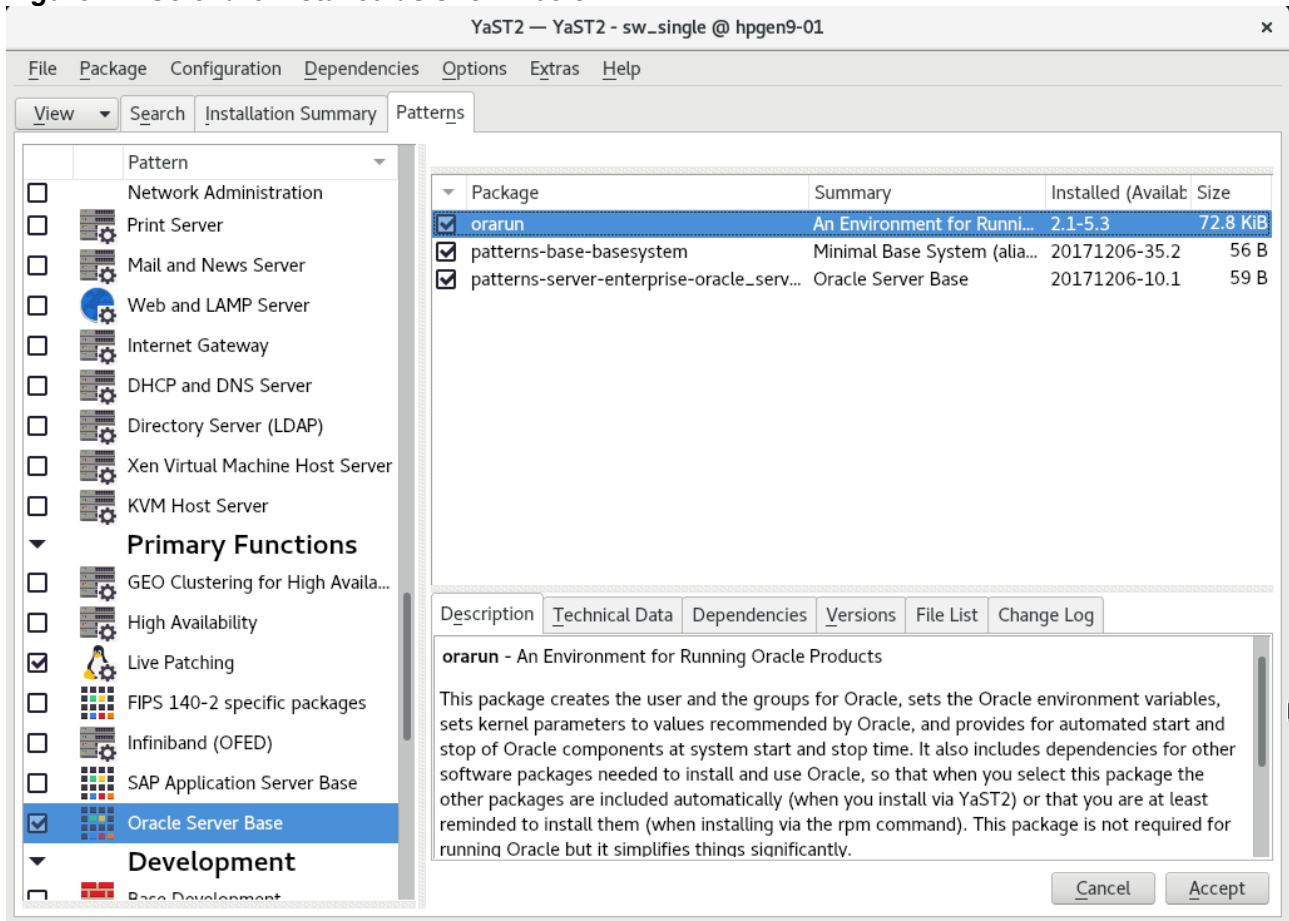
1-1. Install SUSE Linux Enterprise Server 15 SP1 on your testing machine. To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at <https://www.suse.com/documentation/>.

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



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

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



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

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

```
oracle@hpgen9-01:~> more /etc/os-release
NAME="SLES"
VERSION="15-SP1"
VERSION_ID="15.1"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp1"
oracle@hpgen9-01:~> uname -a
Linux hpgen9-01 4.12.14-197.15-default #1 SMP Thu Aug 1 12:18:13 UTC 2019 (8a1385f) x86_64 x86_64 x86_64 GNU/Linux
oracle@hpgen9-01:~> █
```

1-2. Special Startup Requirements.

1). To set the SHMMAX kernel parameter.

Change the value of SHMMAX to 4294967295 by including the following line in /etc/sysctl.conf:

```
kernel.shmmax = 4294967295
```

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

```
kernel.shmall = 9272480
```

Activate the new SHMMAX setting by running the command:

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

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

```
ulimit -a
```

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

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

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

```
oracle soft stack 10240
```

then reboot the machine.



## 2. Installing Oracle Database 12cR2

2-1. Log in to the target system (SUSE Linux Enterprise Server 15 SP1 64-bit OS) as a non-admin user. Download Oracle Database 12cR2 (12.2.0.1.0) x86\_64 from <https://www.oracle.com/downloads/#category-database>.

2-2. Oracle Database 12cR2 (12.2.0.1.0) is officially certified for SUSE Linux Enterprise Server 15 (4.12.14-25-default or later) x86\_64. For detailed instructions please use Official Oracle Install guides: <http://docs.oracle.com/en/database/database.html>.

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

```
oracle@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 Tue Oct 22 14:09:34 2019

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

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

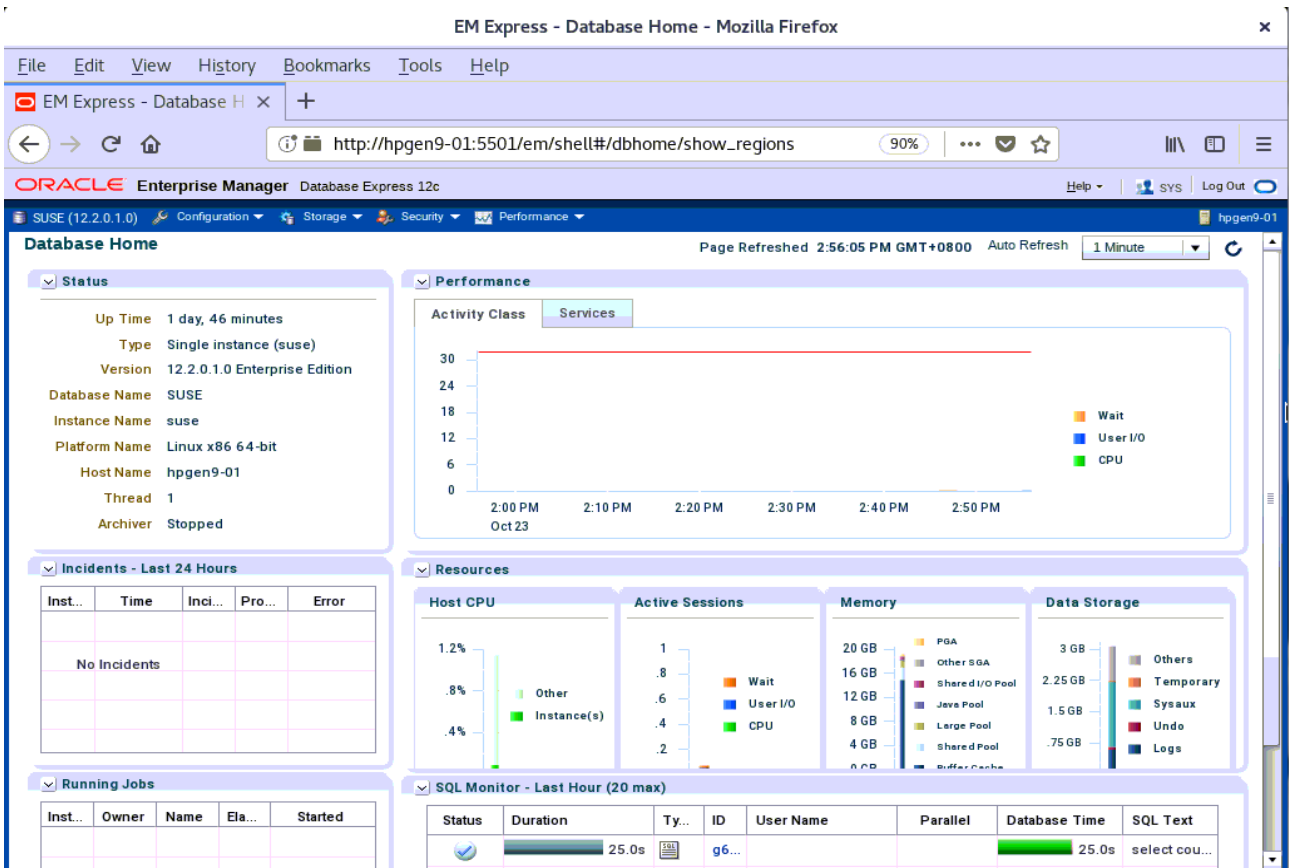
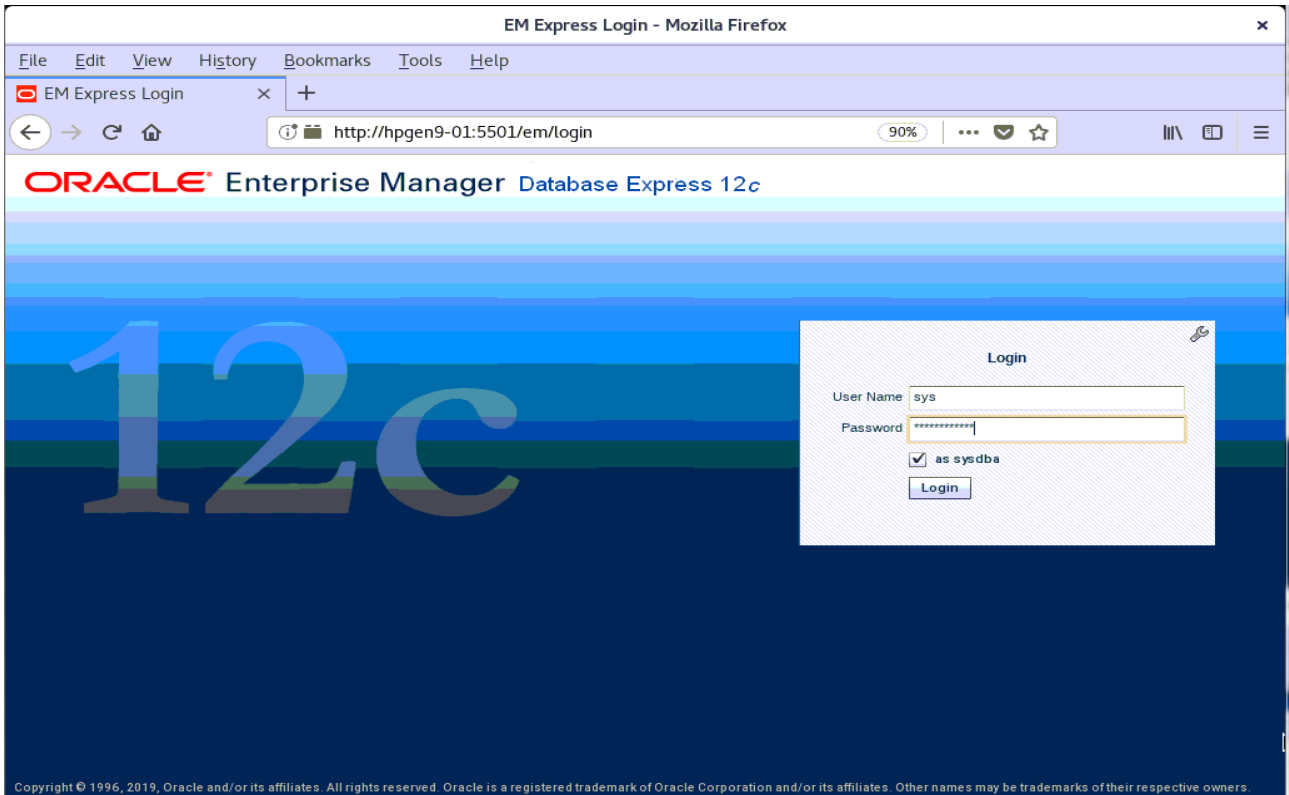
Total System Global Area 2.0200E+10 bytes
Fixed Size 19247928 bytes
Variable Size 4362079432 bytes
Database Buffers 1.5771E+10 bytes
Redo Buffers 47857664 bytes
Database mounted.
Database opened.
SQL> show sga

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

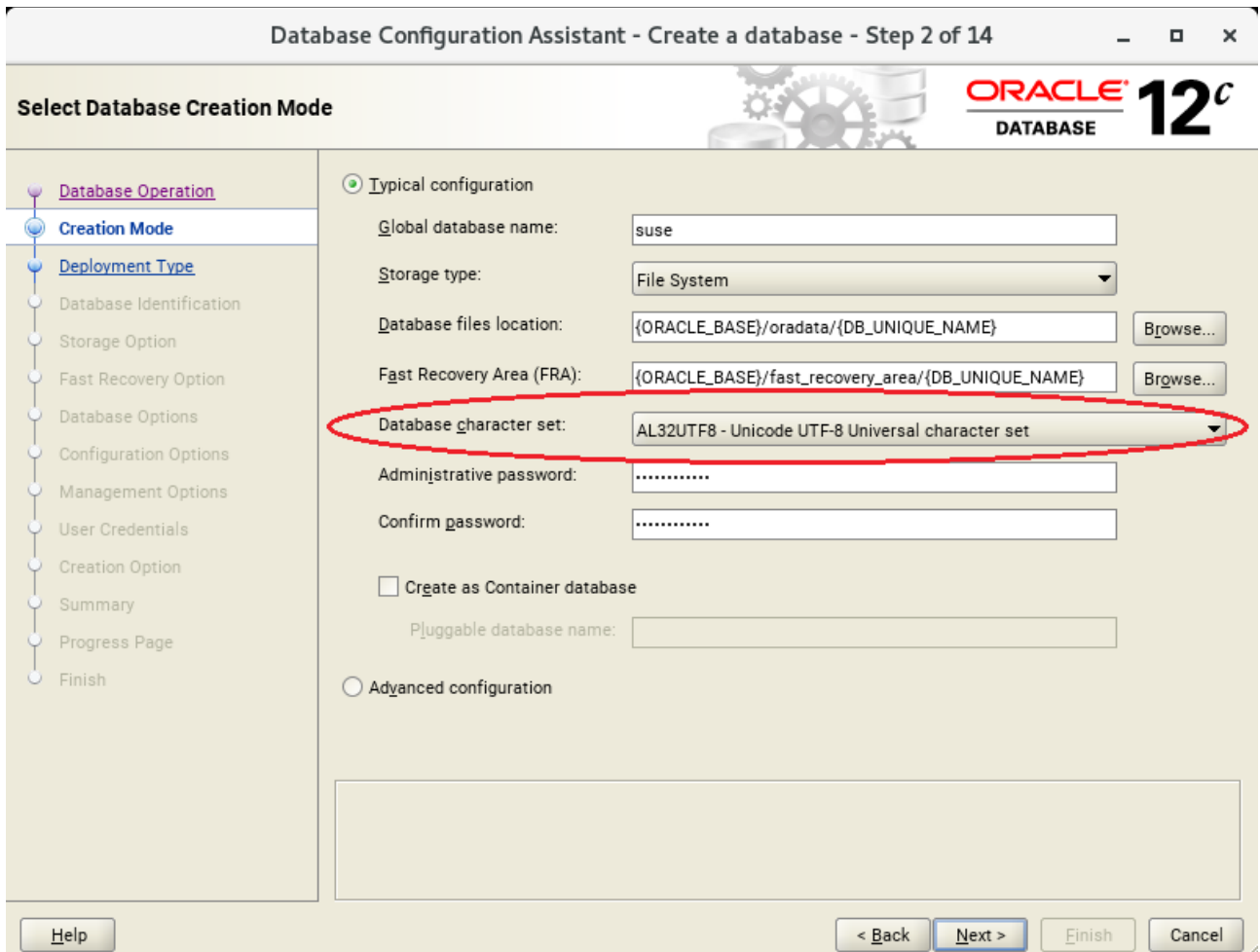
NAME          OPEN_MODE
-----
SUSE          READ WRITE

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.



)

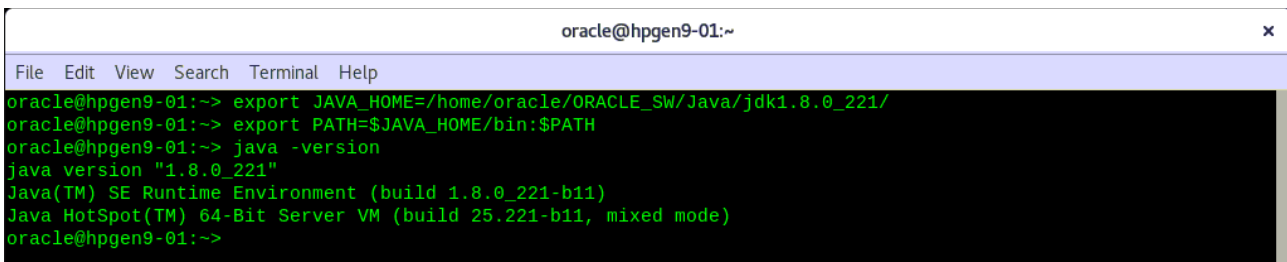
### 3. Installing Java

3-1. Log in to the target system (SUSE Linux Enterprise Server 15 SP1 64-bit OS) as a non-admin user. Download Java SE Development Kit 8 (jdk-8u221-linux-x64.tar.gz) from <https://www.oracle.com/downloads/#category-java>.

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

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

**Figure 3-1 Java information**

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

```
oracle@hpgen9-01:~> export JAVA_HOME=/home/oracle/ORACLE_Sw/Java/jdk1.8.0_221/
oracle@hpgen9-01:~> export PATH=$JAVA_HOME/bin:$PATH
oracle@hpgen9-01:~> java -version
java version "1.8.0_221"
Java(TM) SE Runtime Environment (build 1.8.0_221-b11)
Java HotSpot(TM) 64-Bit Server VM (build 25.221-b11, mixed mode)
oracle@hpgen9-01:~>
```

# Oracle Fusion MiddleWare 12c Installation and Configuration

\*\*\*\*\*

## Oracle WebLogic Server software

\*\*\*\*\*

### 1. Installing Oracle WebLogic Server software

1-1. Prerequisites:

Installation of Oracle WebLogic Server requires:

- 1). Oracle JDK 1.8.0\_191 and later is installed.

1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP1 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

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

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

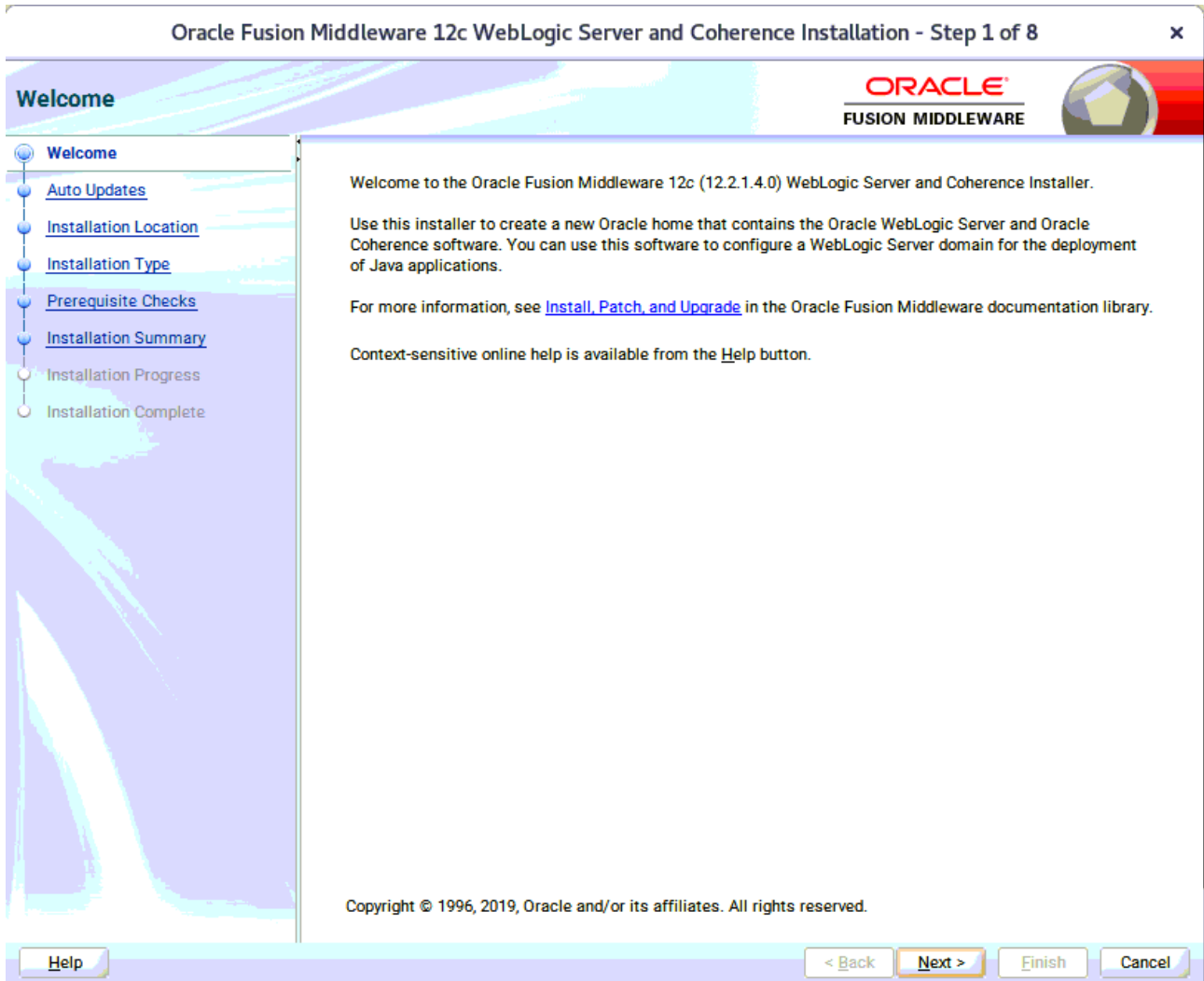
**For the actual installation, follow the steps below:**

- 1). Installation Inventory Setup.



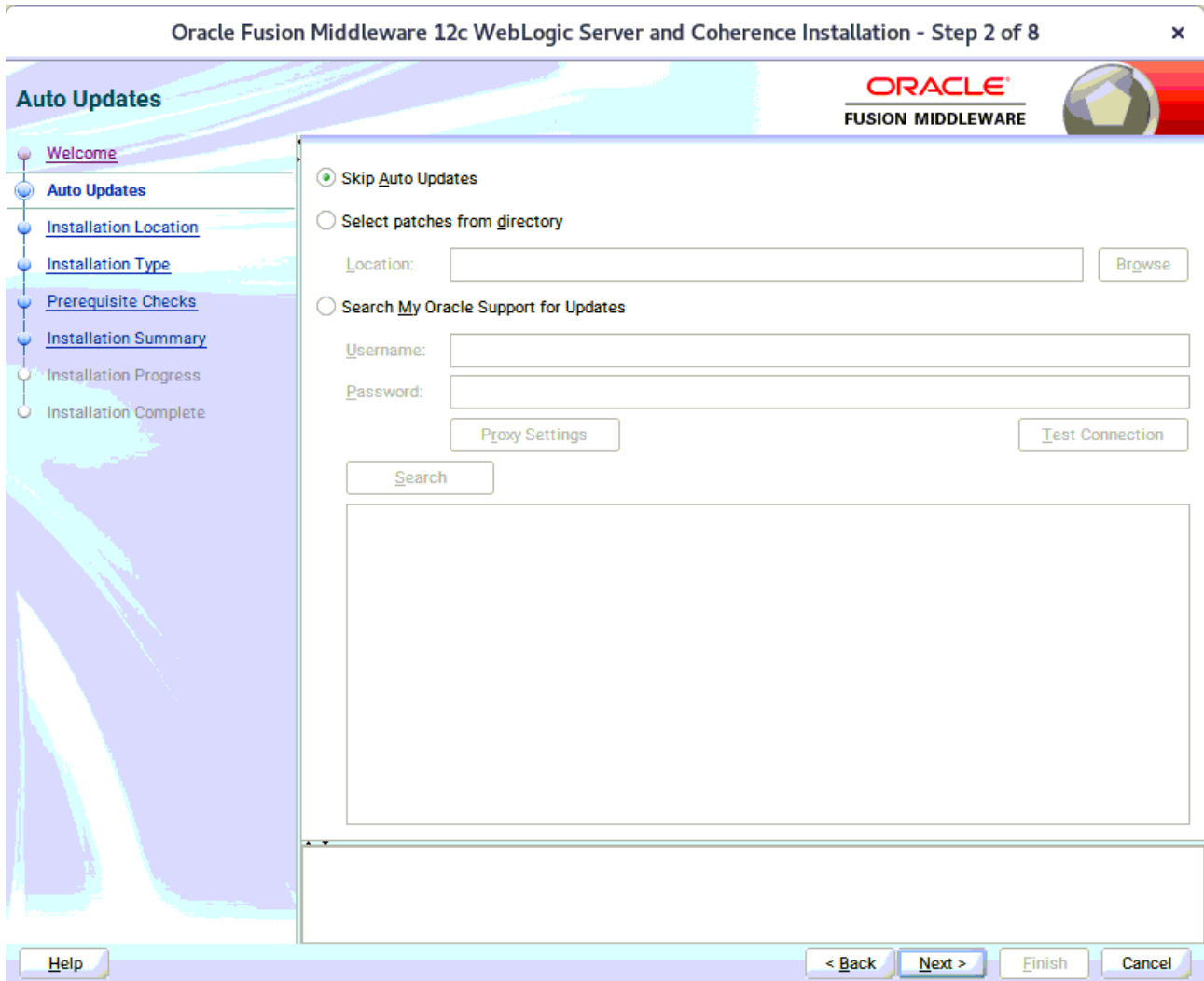
If this is your first Oracle installation on a host that is running SLES, please use this screen to specify the location of the Oracle central inventory directory and Operating System Group Name, then click **OK** to continue.

2). Welcome.



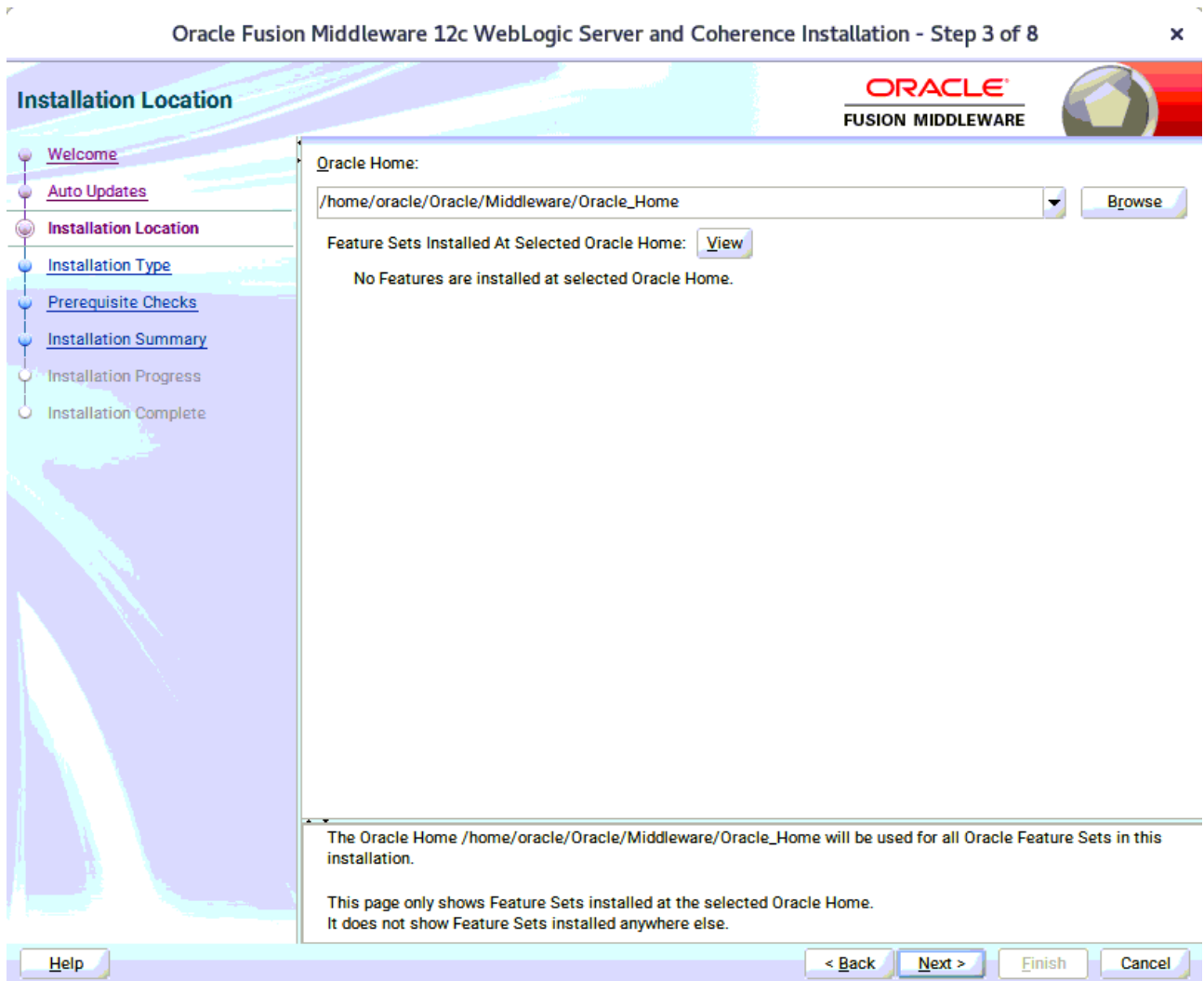
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3). Auto Updates.



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

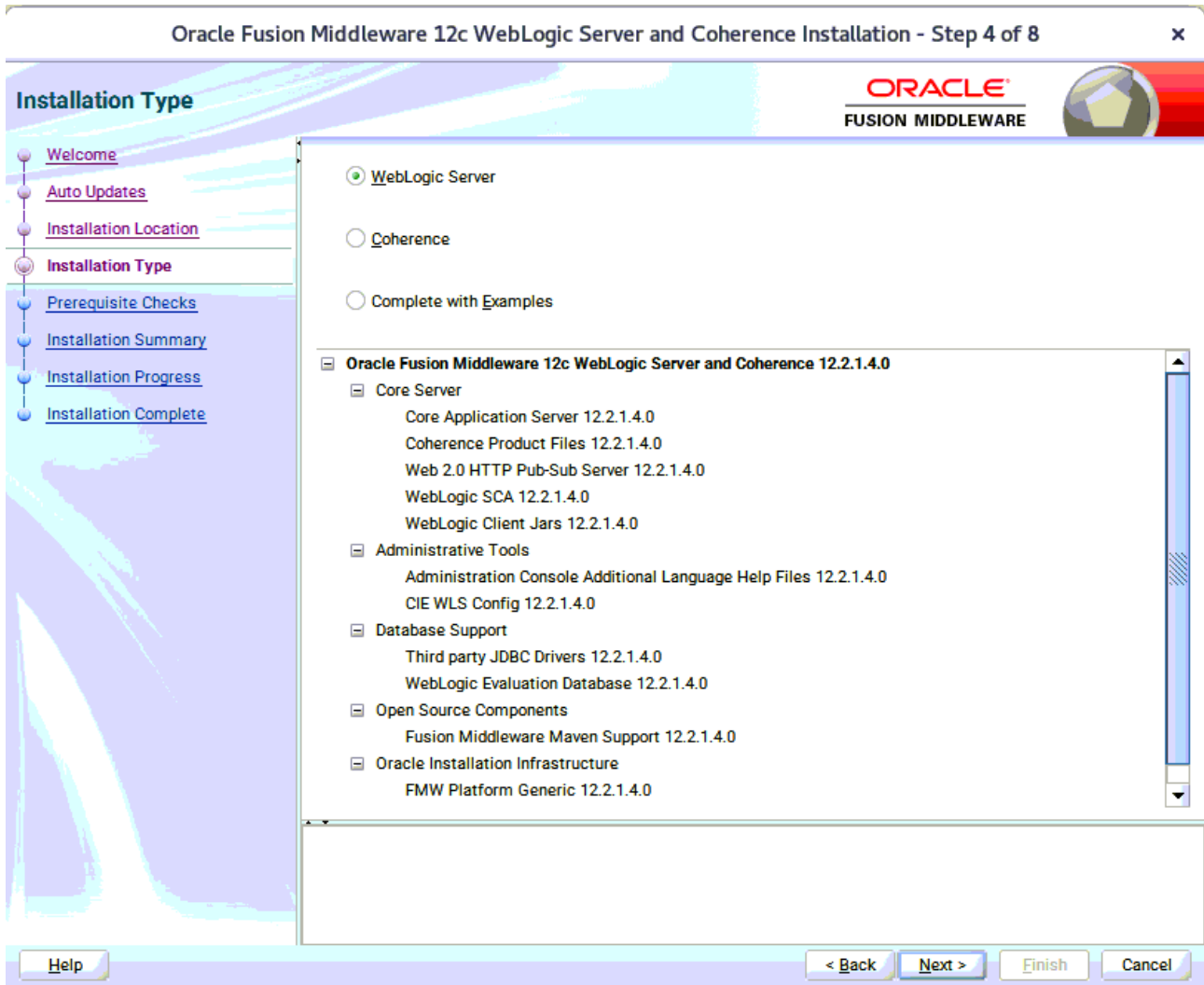
4). Installation Location.



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

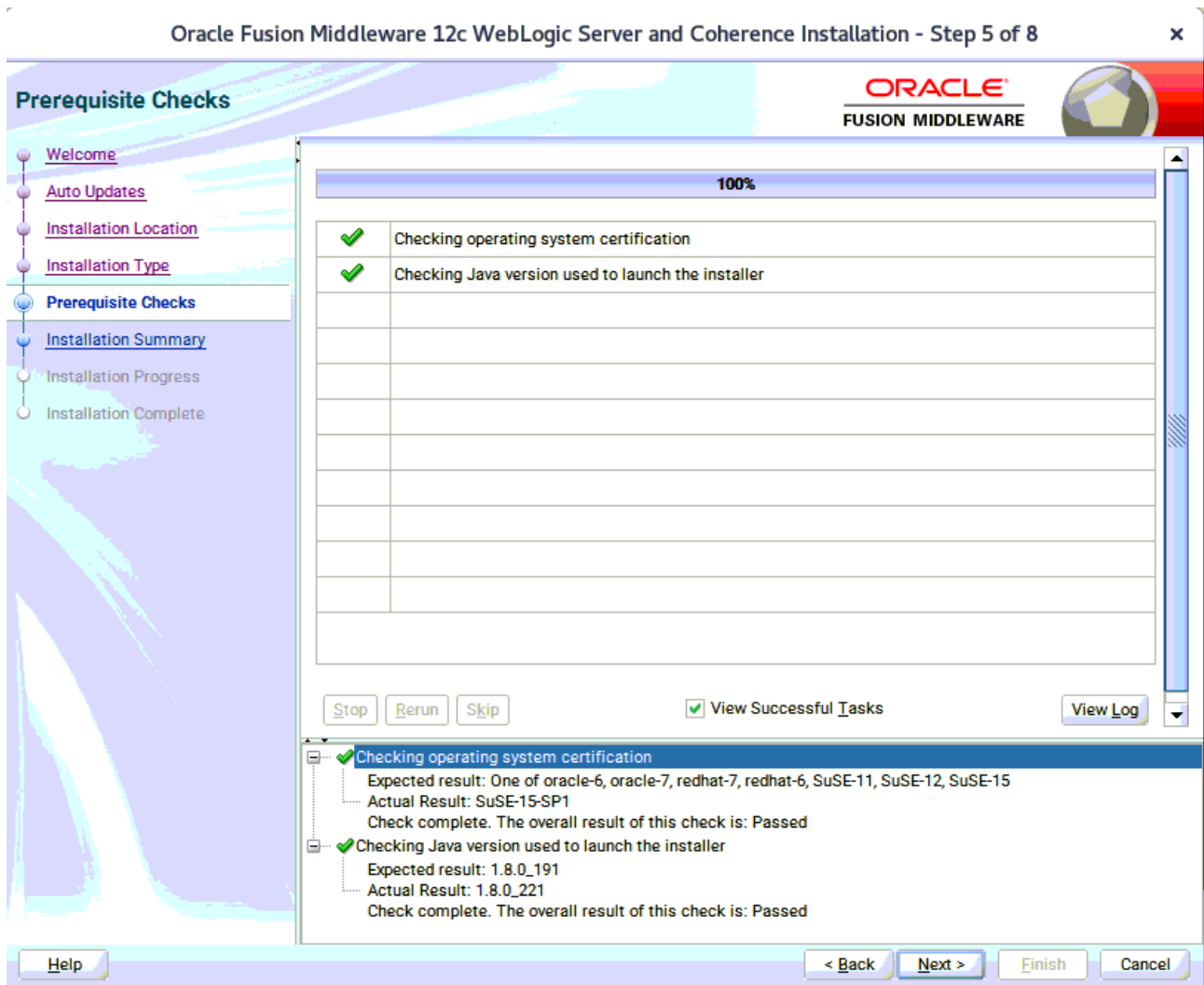


5). Installation Type.



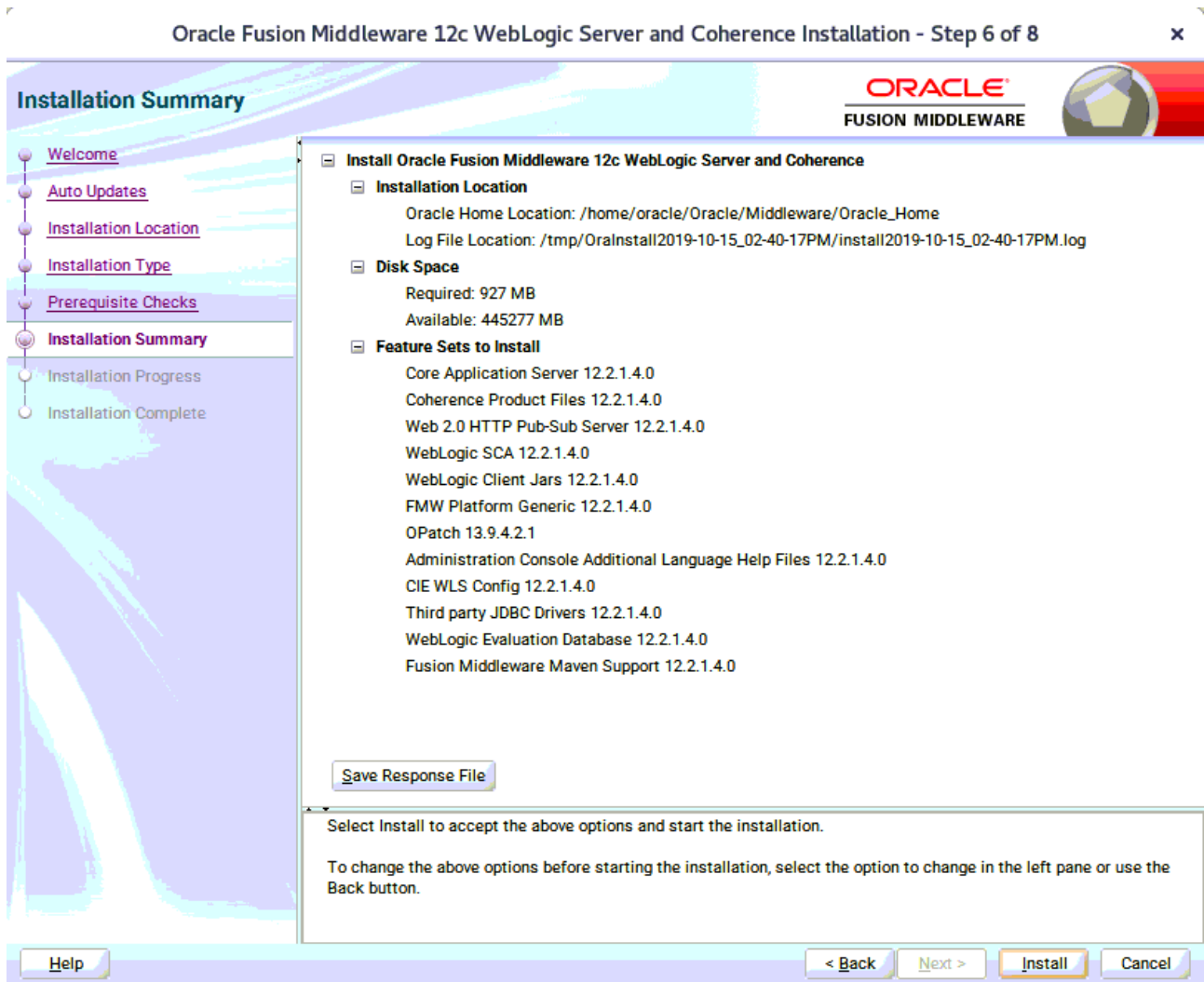
Use this screen to determine the type of installation you want to perform, then click **Next** to continue.

6). Prerequisite Checks.



Prerequisite Checks results will be shown as above, Oracle Fusion Middleware 12c is certified on SLES 15(+), 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.

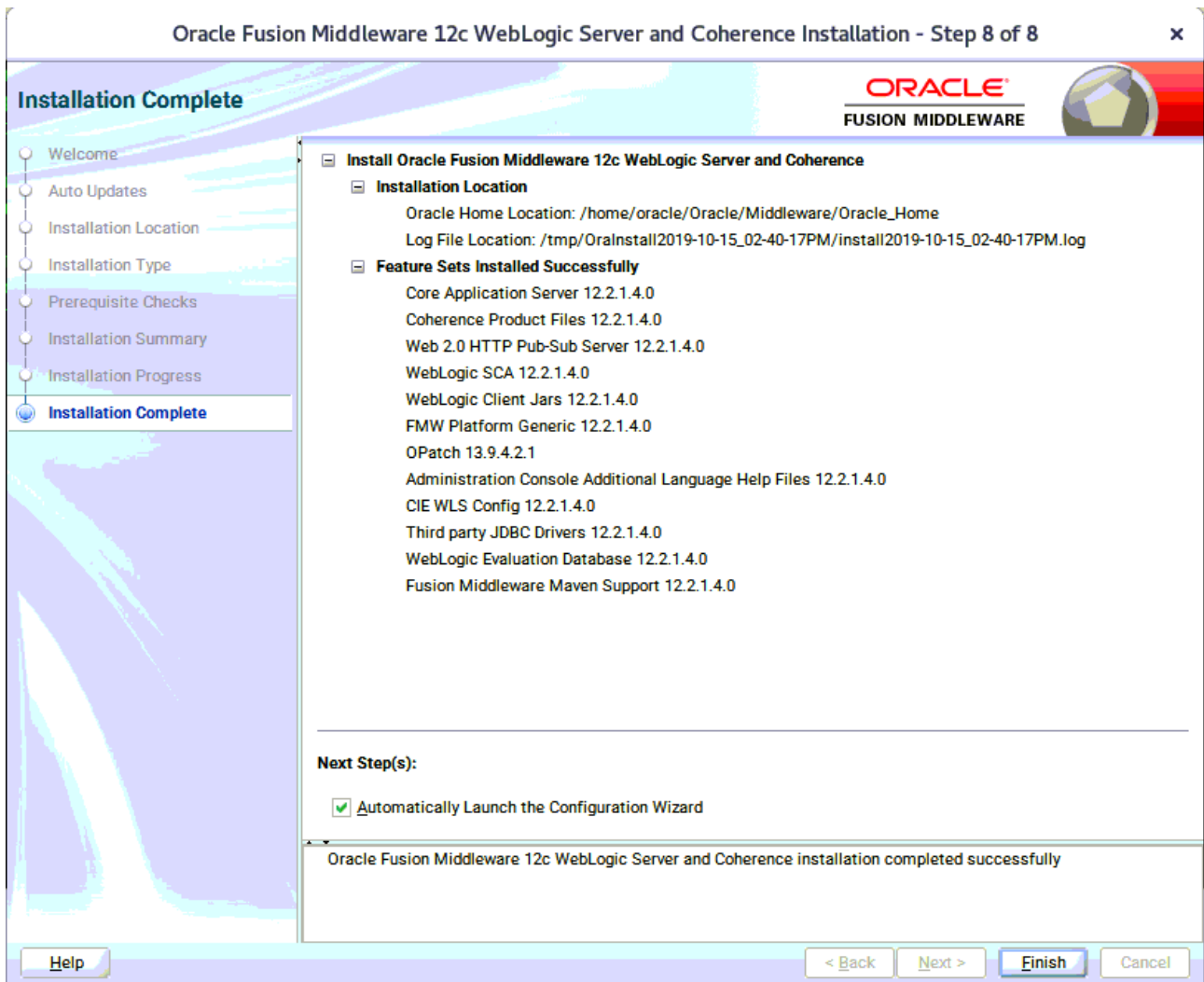
The screenshot displays the 'Installation Progress' window for Oracle Fusion Middleware 12c WebLogic Server and Coherence. The window title is 'Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 7 of 8'. The progress bar is at 100%. The tasks listed are:

✓	Prepare
✓	Copy
✓	Generating Libraries
✓	Performing String Substitutions
✓	Linking
✓	Setup
✓	Saving the inventory
✓	Post install scripts

Buttons at the bottom include: Help, < Back, Next >, Finish, and Cancel. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right. The slogan 'Hardware and Software Engineered to Work Together' is at the bottom right.

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.

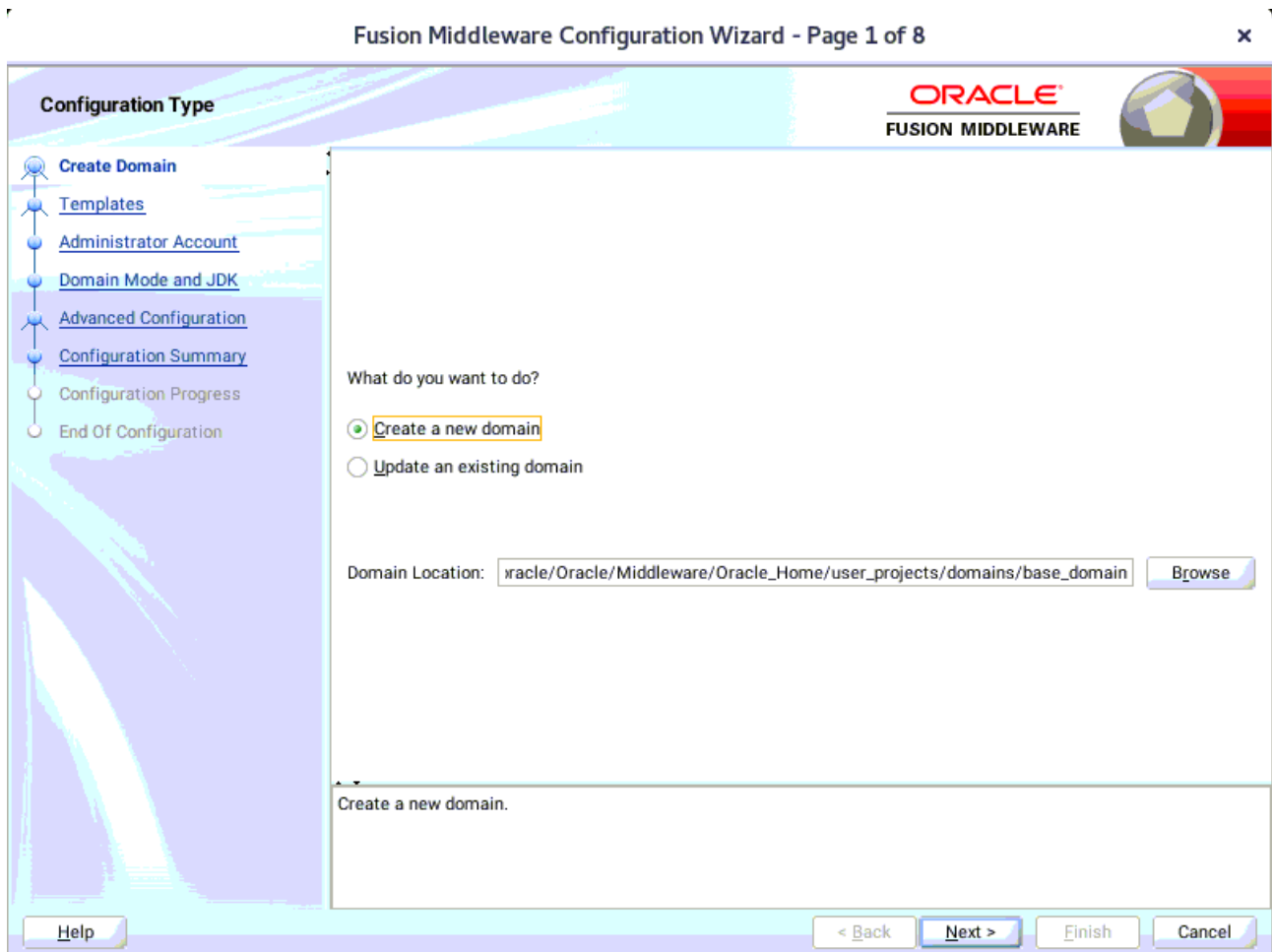
## 2. Creating and Configuring the WebLogic Domain

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**.

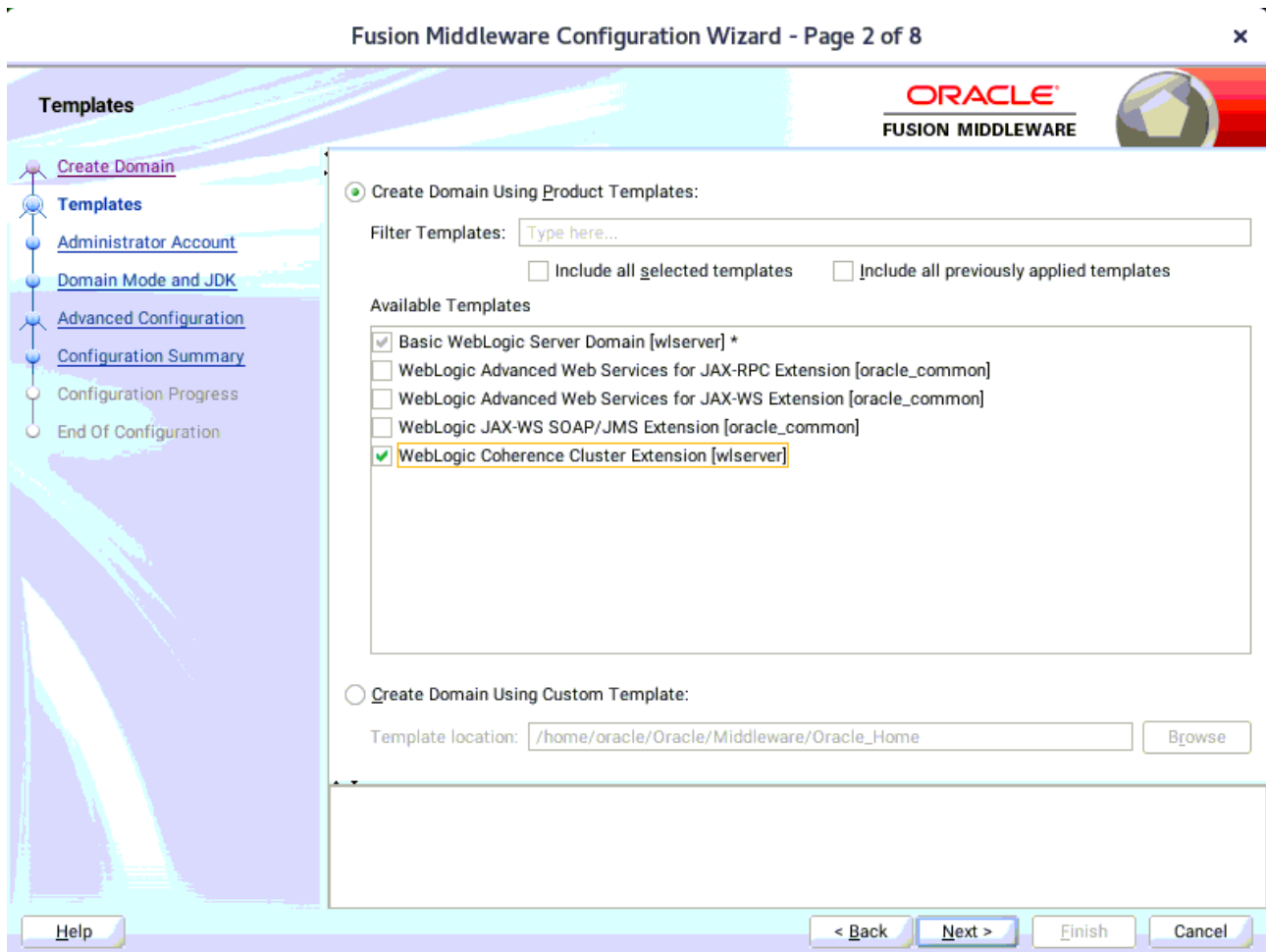
To set up your configuration, follow the steps below:

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.

Fusion Middleware Configuration Wizard - Page 3 of 8

**Administrator Account**

ORACLE  
FUSION MIDDLEWARE

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

Name

Password

Confirm Password

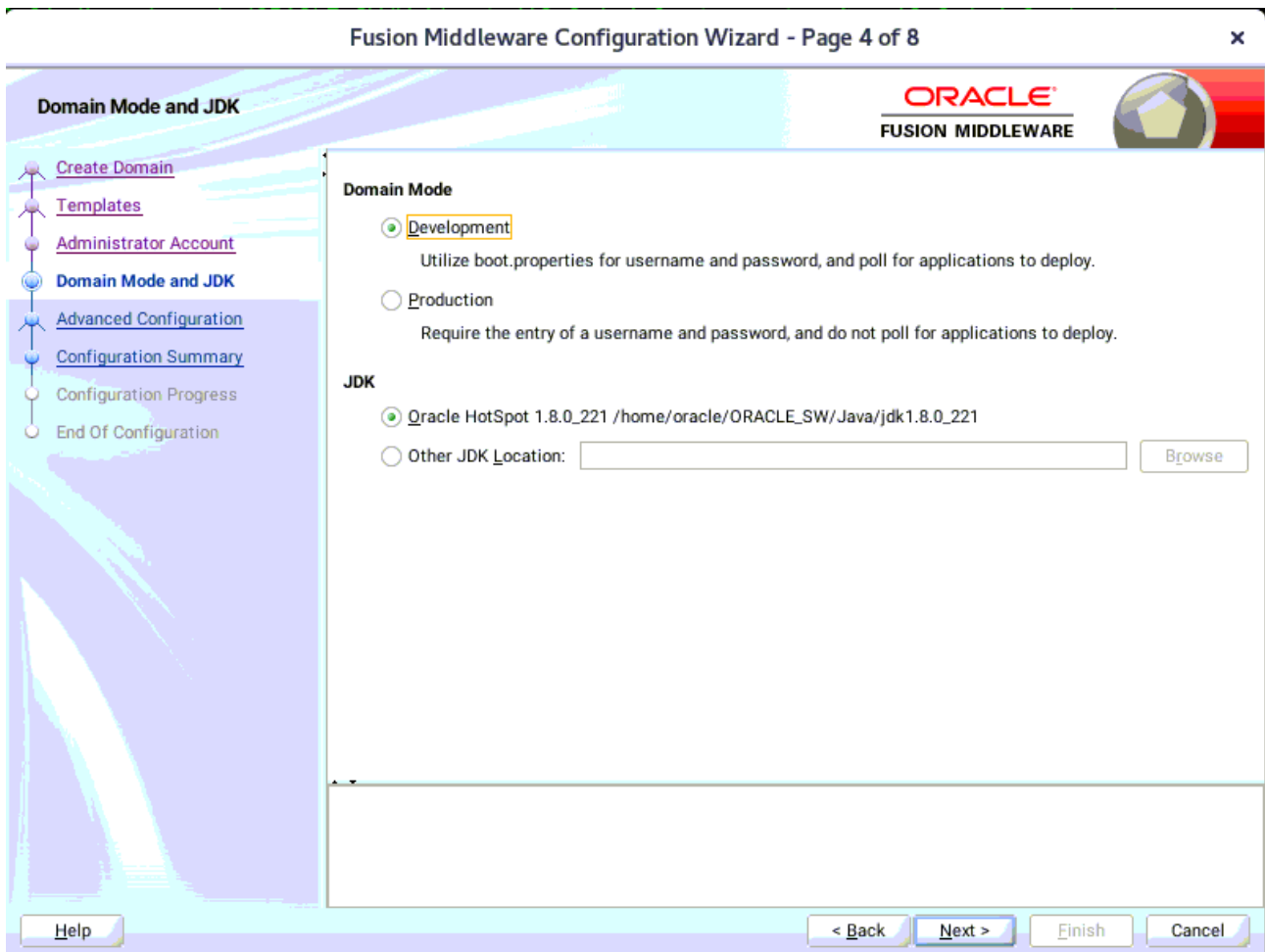
Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

Help < Back Next > Finish Cancel

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

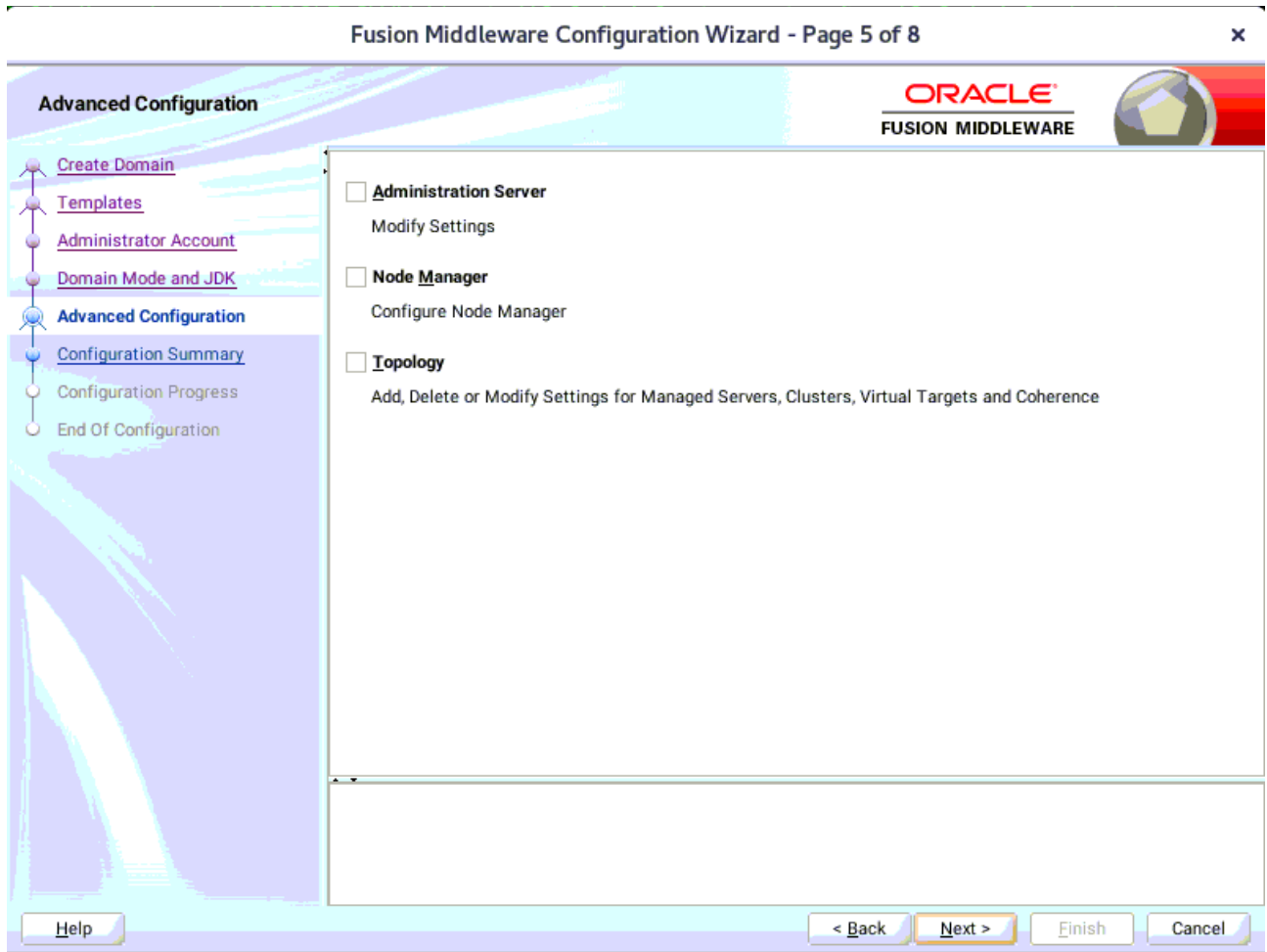


4). Domain Mode and JDK.



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.

Fusion Middleware Configuration Wizard - Page 6 of 8

**Configuration Summary**

- [Create Domain](#)
- [Templates](#)
- [Administrator Account](#)
- [Domain Mode and JDK](#)
- [Advanced Configuration](#)
- **Configuration Summary**
- [Configuration Progress](#)
- [End Of Configuration](#)

View: Deployment

- base\_domain (/home/oracle/Oracle/Middleware/Oracle
- AdminServer
  - AdminServer

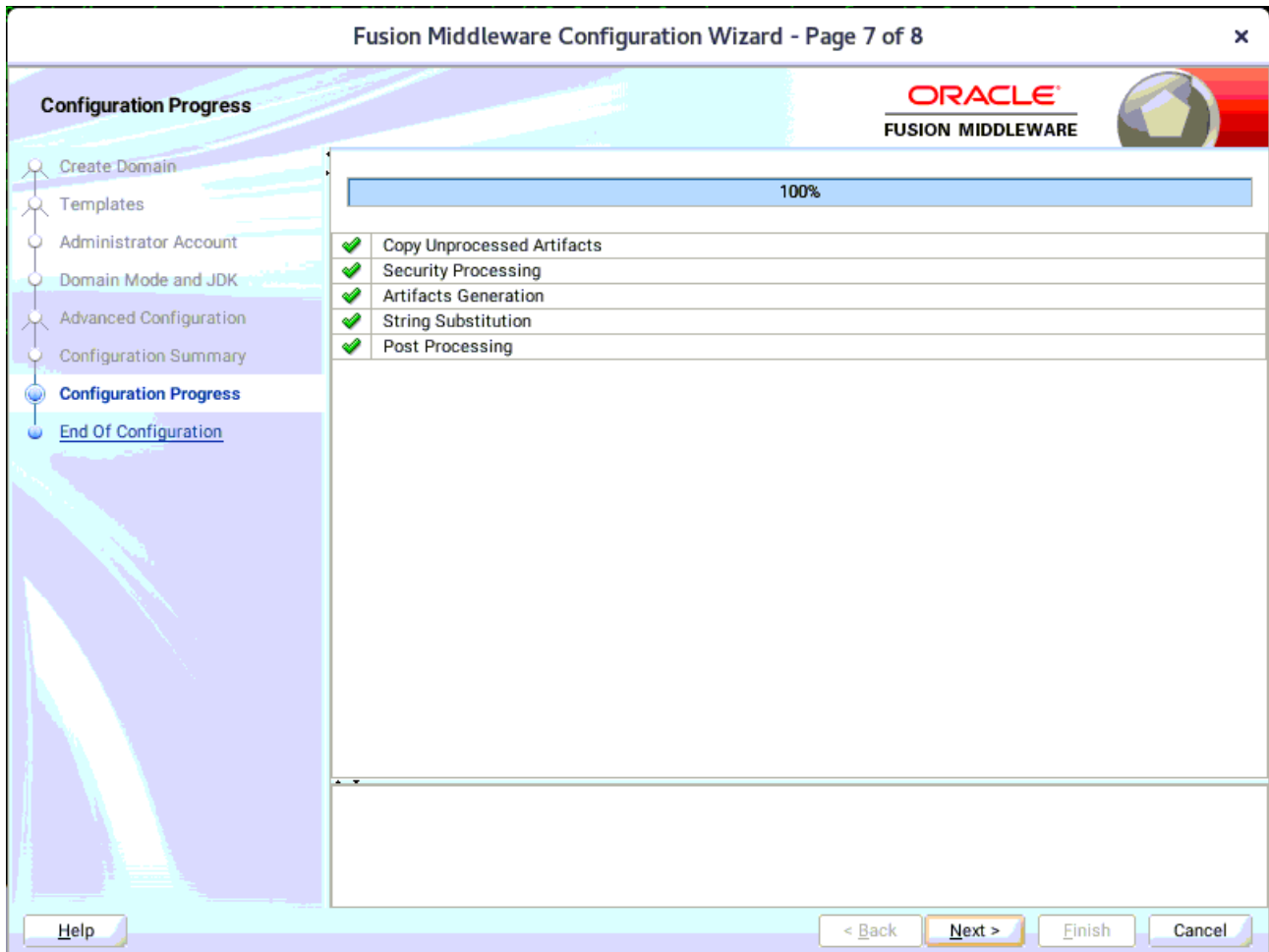
Name	Basic WebLogic Server Domain
Description	Create a basic WebLogic Server domain
Author	Oracle Corporation
Location	/home/oracle/Oracle/Middleware/Oracle
Name	WebLogic Coherence Cluster Extension
Description	Extend an existing WebLogic Server dom
Author	Oracle Corporation
Location	/home/oracle/Oracle/Middleware/Oracle

Select **Create** to accept the above options and start creating and configuring a new domain. To change the above configuration before starting Domain Creation, go back to the relevant page by selecting its name in the left pane, or by using the **Back** button.

Help
< Back
Next >
Create
Cancel

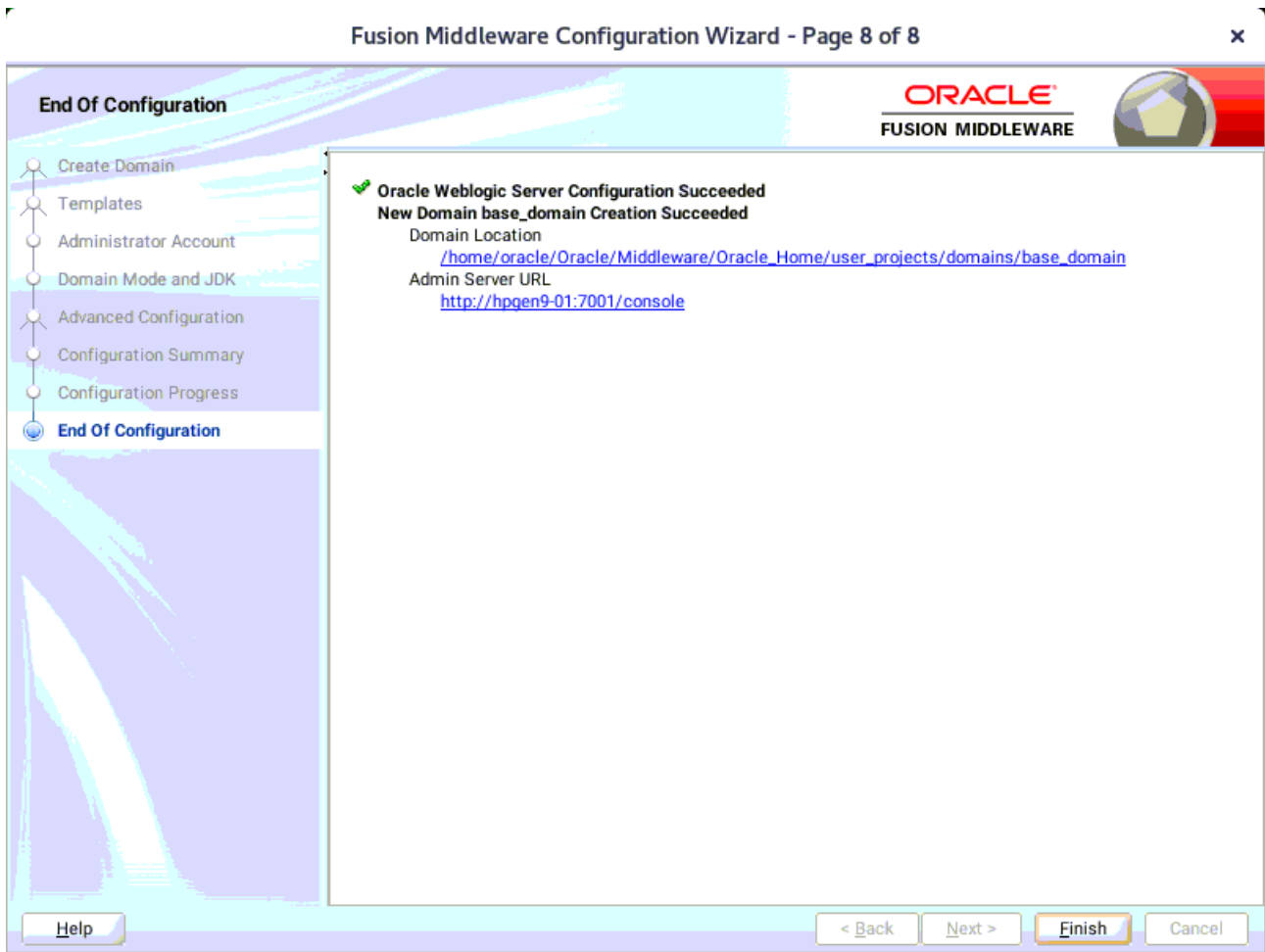
Review this screen to verify the information is correct, then click **Create** to continue.

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
>
<Oct 15, 2019 2:52:47,409 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to STARTING
.>
<Oct 15, 2019 2:52:47,454 PM GMT+08:00> <Notice> <Log Management> <BEA-170036> <The Logging monitoring service t
imer has started to check for logged message counts every 30 seconds.>
<Oct 15, 2019 2:52:48,132 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully esta
blished a connection with the Domain level Diagnostic Service.>
<Oct 15, 2019 2:52:48,307 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Oct 15, 2019 2:52:48,367 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Oct 15, 2019 2:52:48,417 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.>
<Oct 15, 2019 2:52:48,419 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.>
<Oct 15, 2019 2:52:48,420 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.>
<Oct 15, 2019 2:52:48,420 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Admi
nistration Server "AdminServer" for domain "base_domain" running in development mode.>
<Oct 15, 2019 2:52:48,420 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.>
<Oct 15, 2019 2:52:48,421 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.>
<Oct 15, 2019 2:52:48,422 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.>
<Oct 15, 2019 2:52:48,422 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.>
<Oct 15, 2019 2:52:48,431 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mo
de.>
<Oct 15, 2019 2:52:48,460 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.
>

```

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

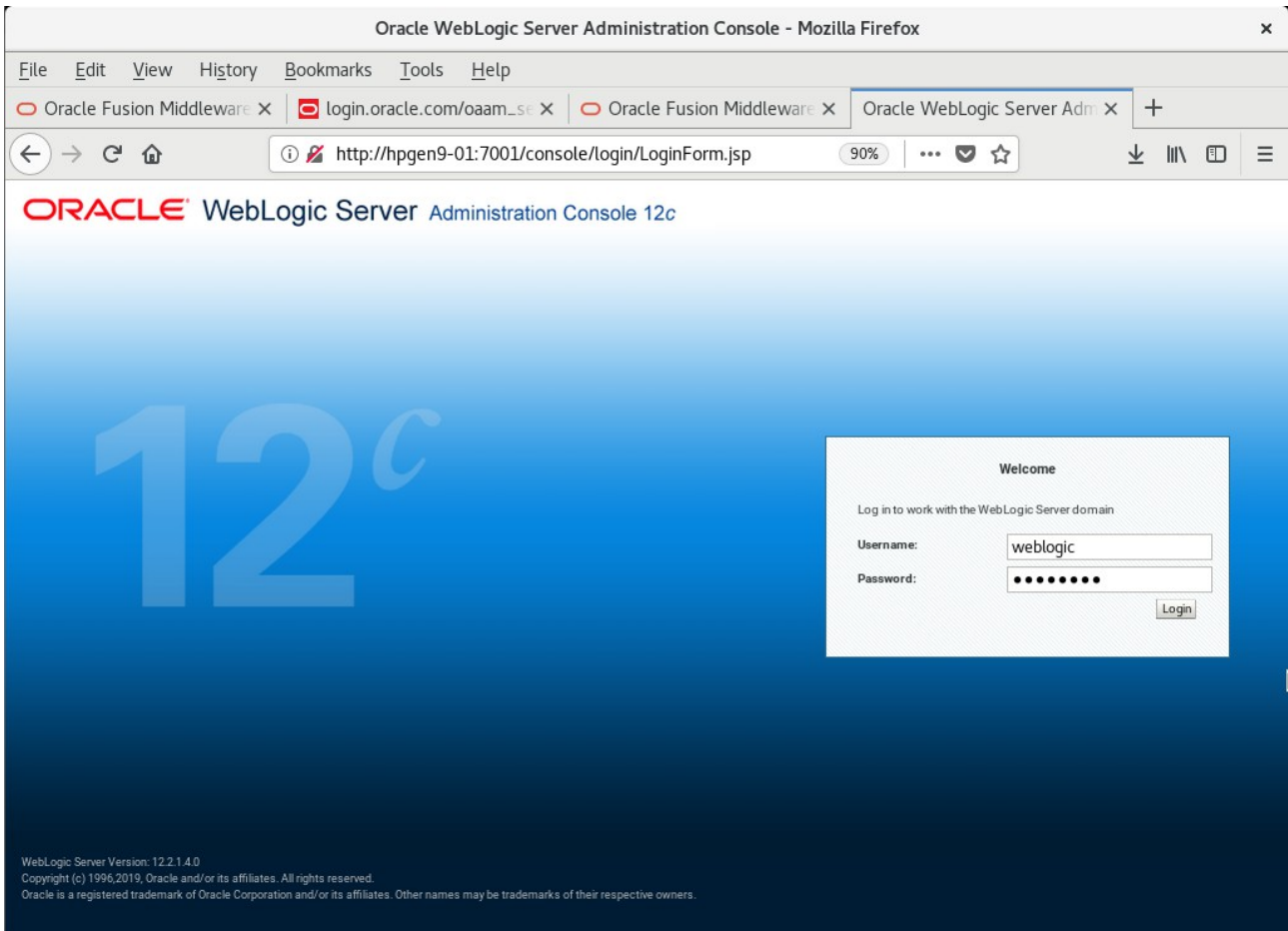
```

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

```

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

**Access to WebLogic Server Admin Console - Login page**



**Viewing WebLogic Server Admin Console - Home page**

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

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

**End of Oracle WebLogic Server Software.**



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

## 1. Installing Oracle Forms and Reports

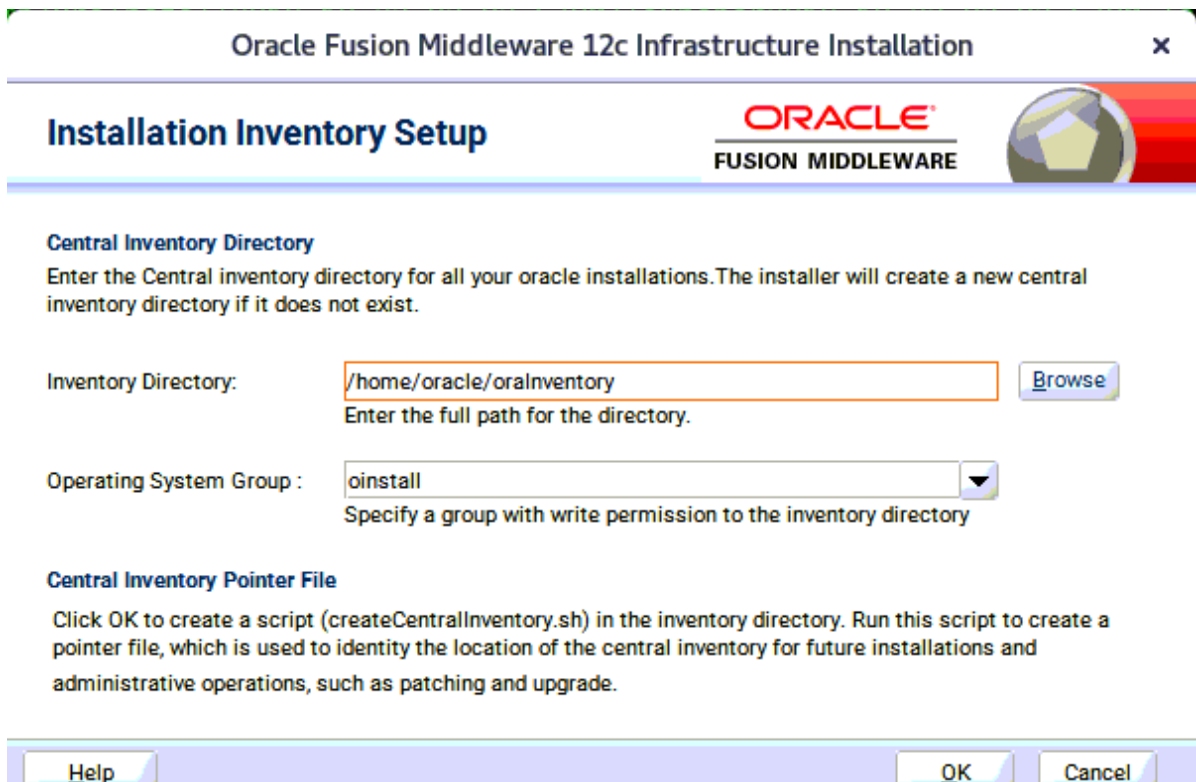
### 1-1. Prerequisites:

Installation of Oracle Forms and Reports requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0\_191 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

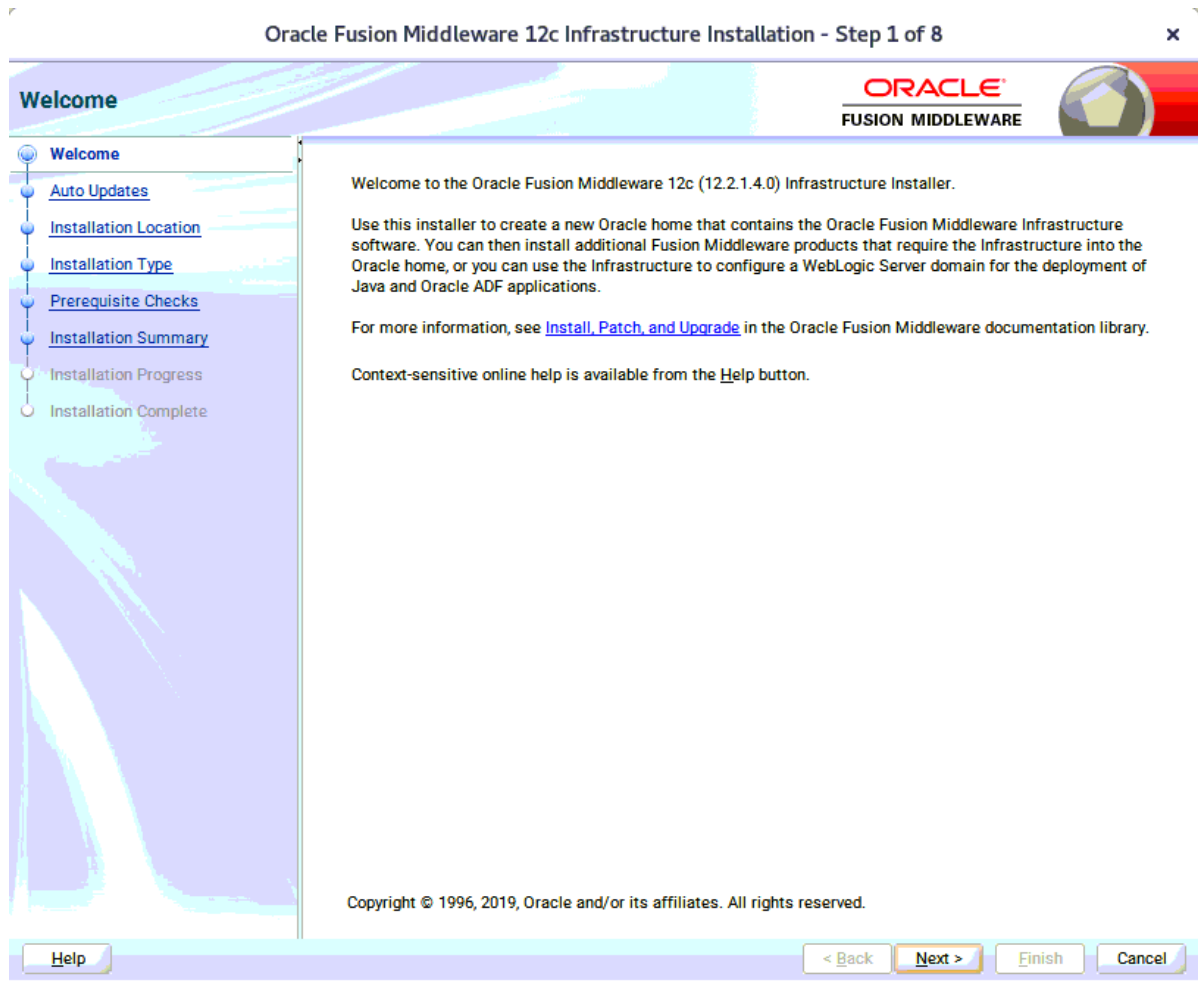
**Screenshots: A brief installation setup for Fusion Middleware Infrastructure Installer is as follows:**

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



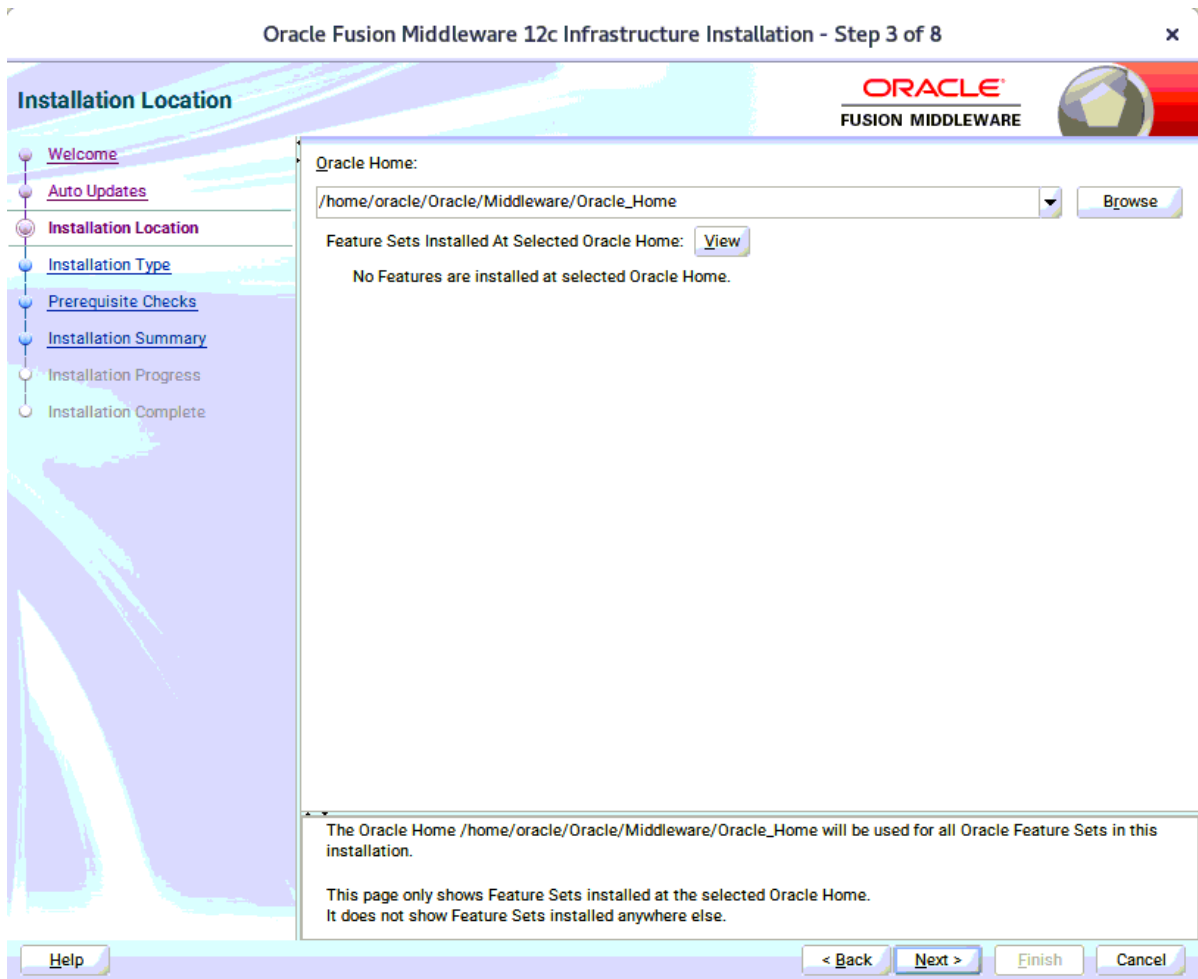
Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

3-2). Welcome.



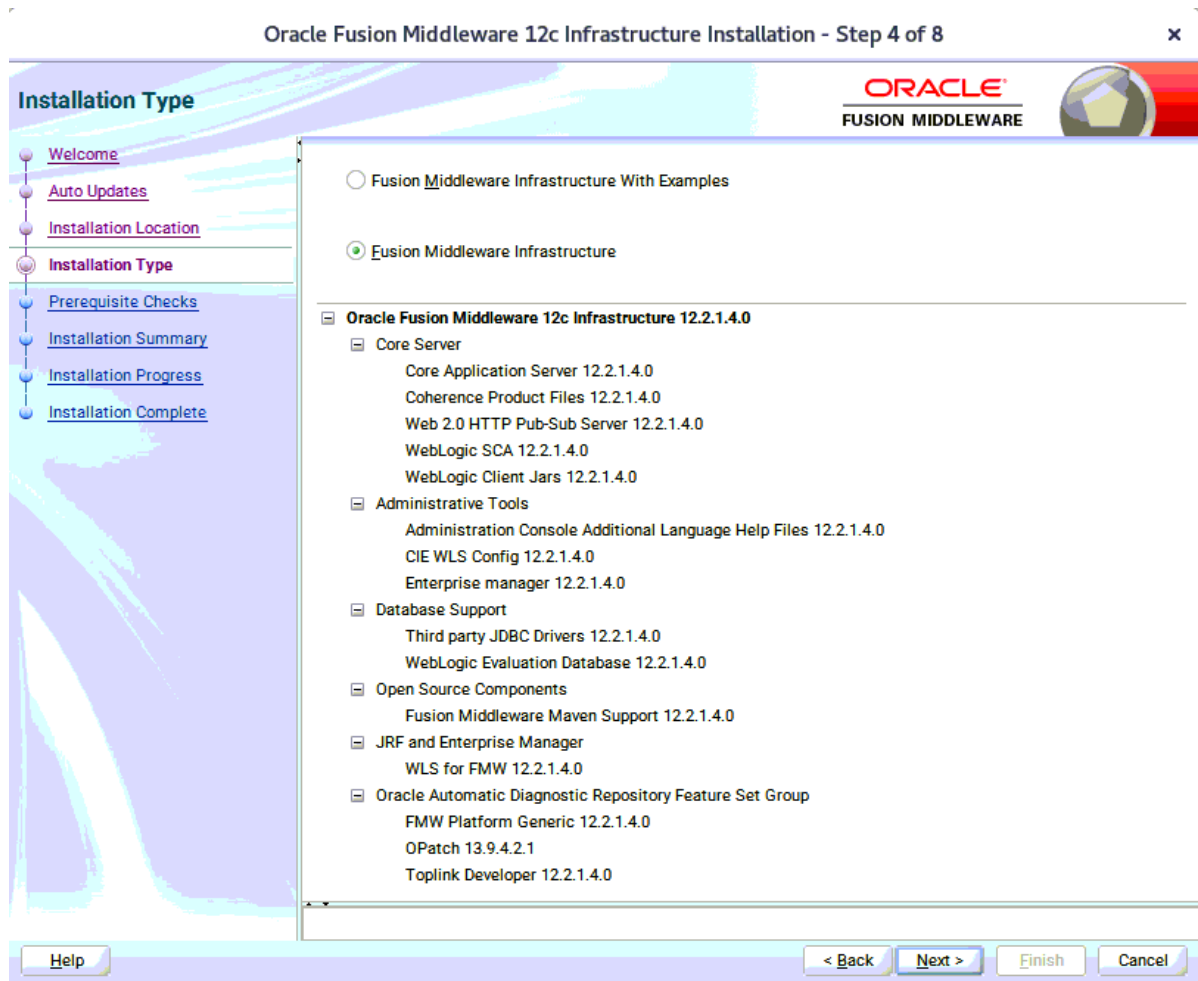
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3-3). Installation Location.



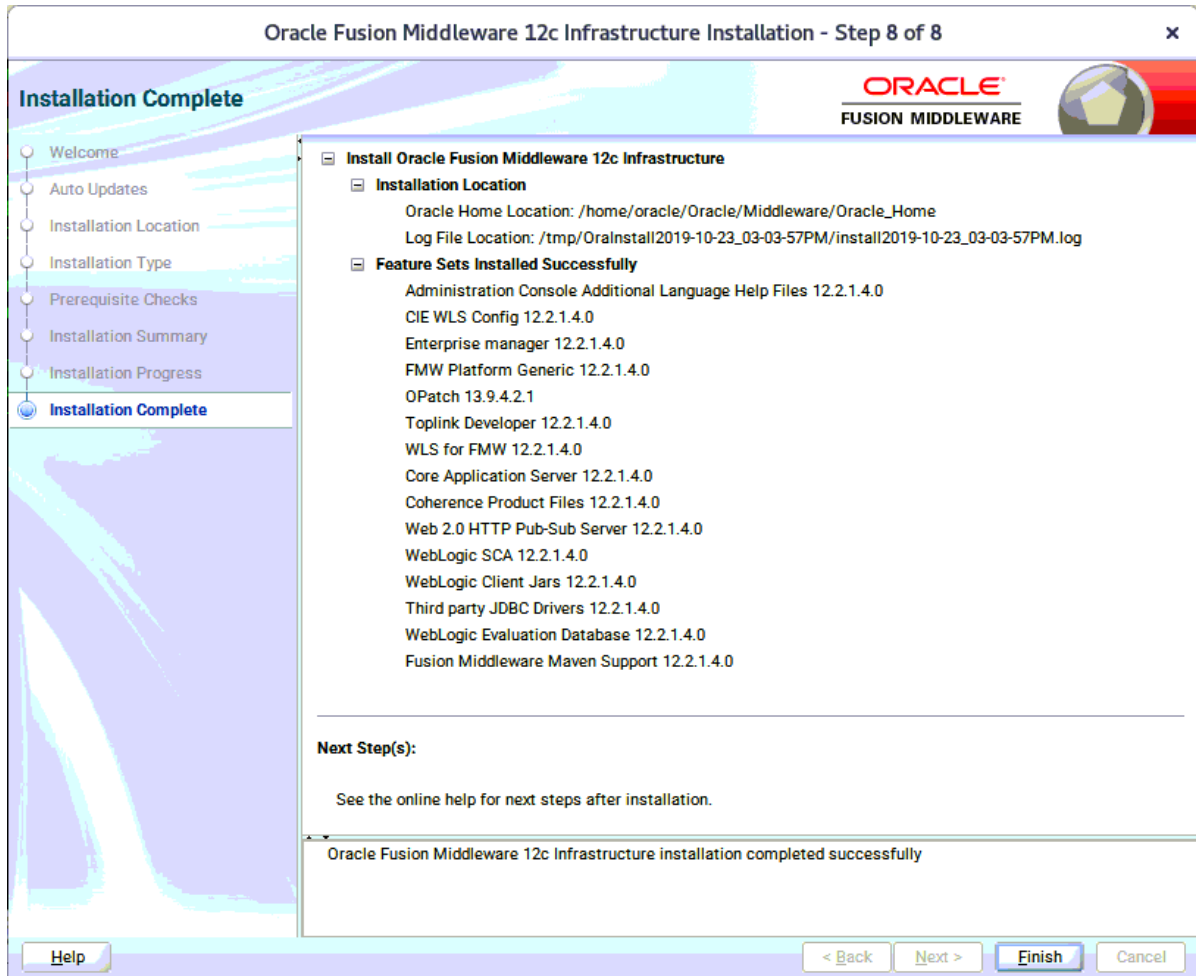
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

3-4). Installation Type.



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

3-5). Installation Complete.

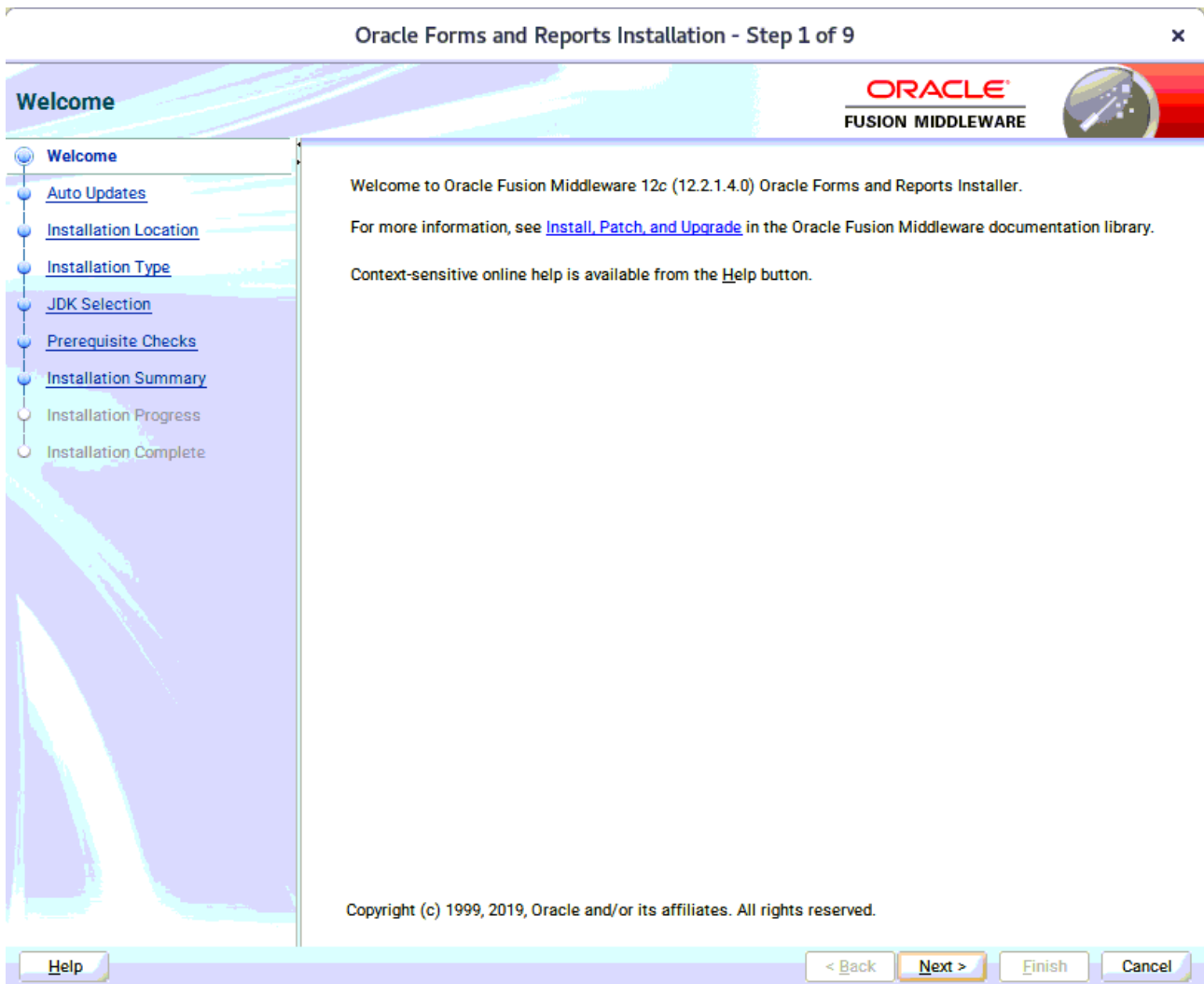


1-2. Log in to the target system (SUSE Linux Enterprise Server 15 SP1 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.  
(**Note:** Please ensure the user has the proper permissions to install and configure the software.)

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ('V983392-01\_1of2.zip' and 'V983392-01\_2of2.zip') files and launch the installation program by running 'fmw\_12.2.1.4.0\_fr\_linux64.bin'.

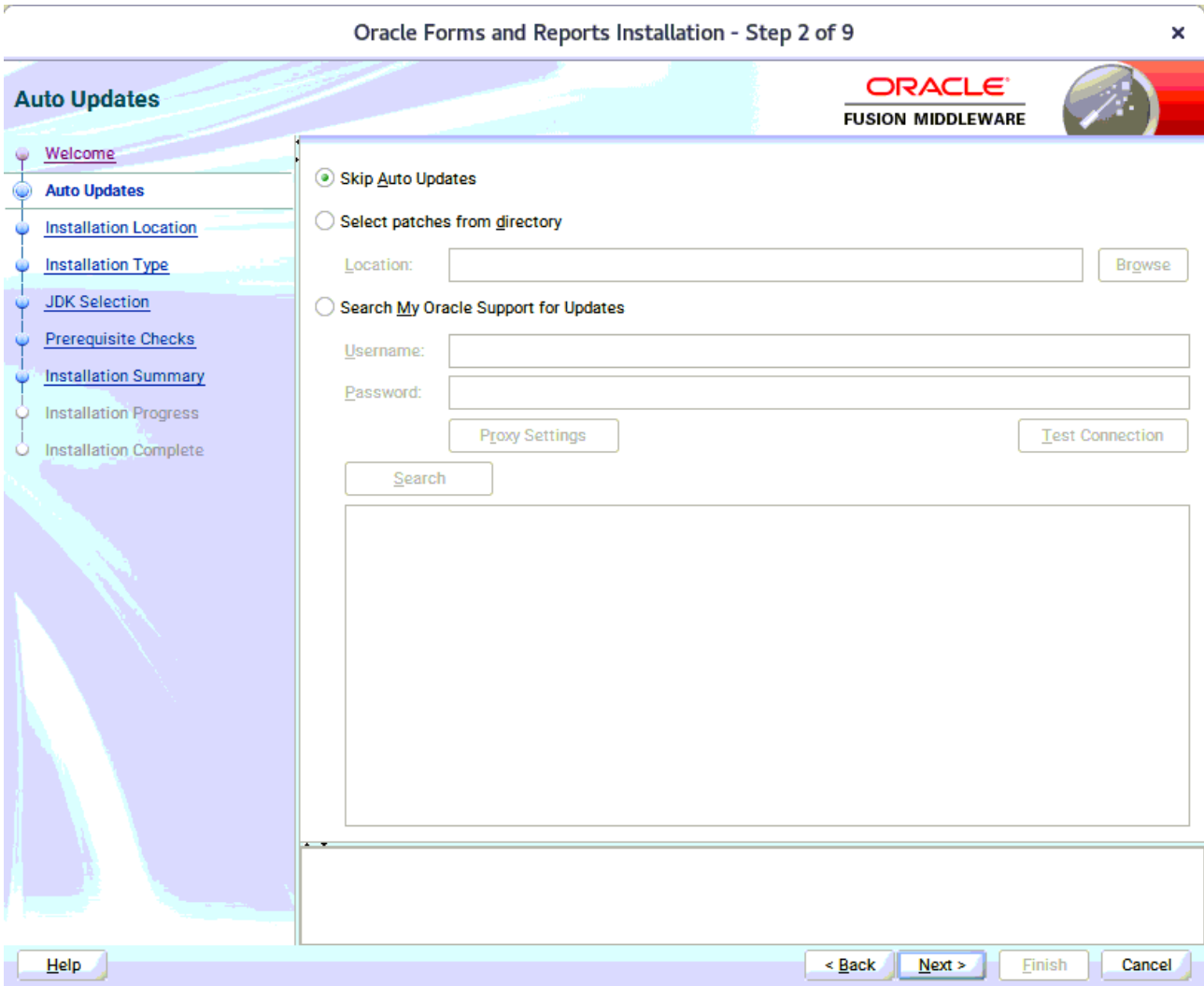
**For the actual installation, follow the steps below:**

1). Welcome page.



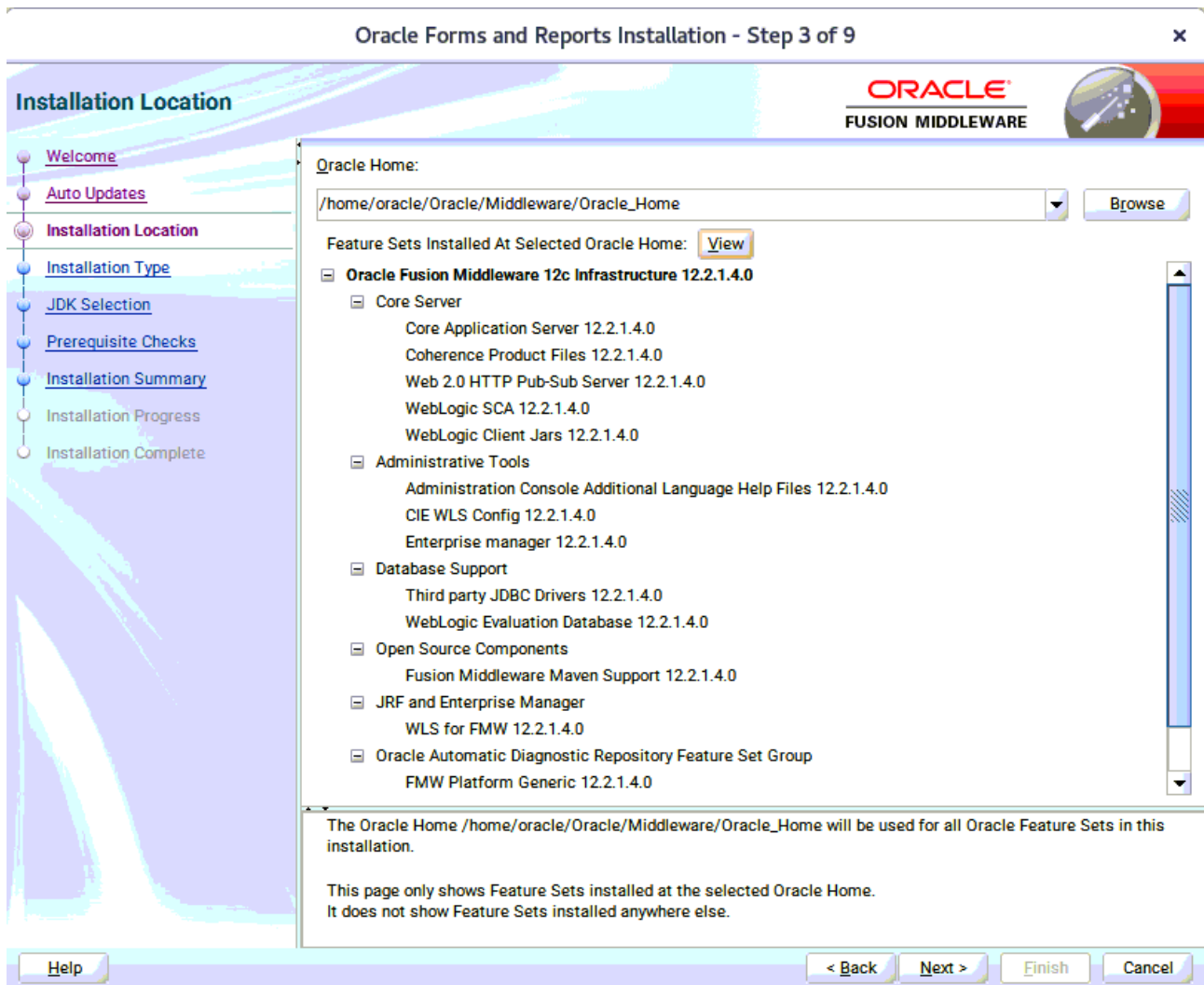
This page welcomes you to the installation. Click **Next** to continue.

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



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.

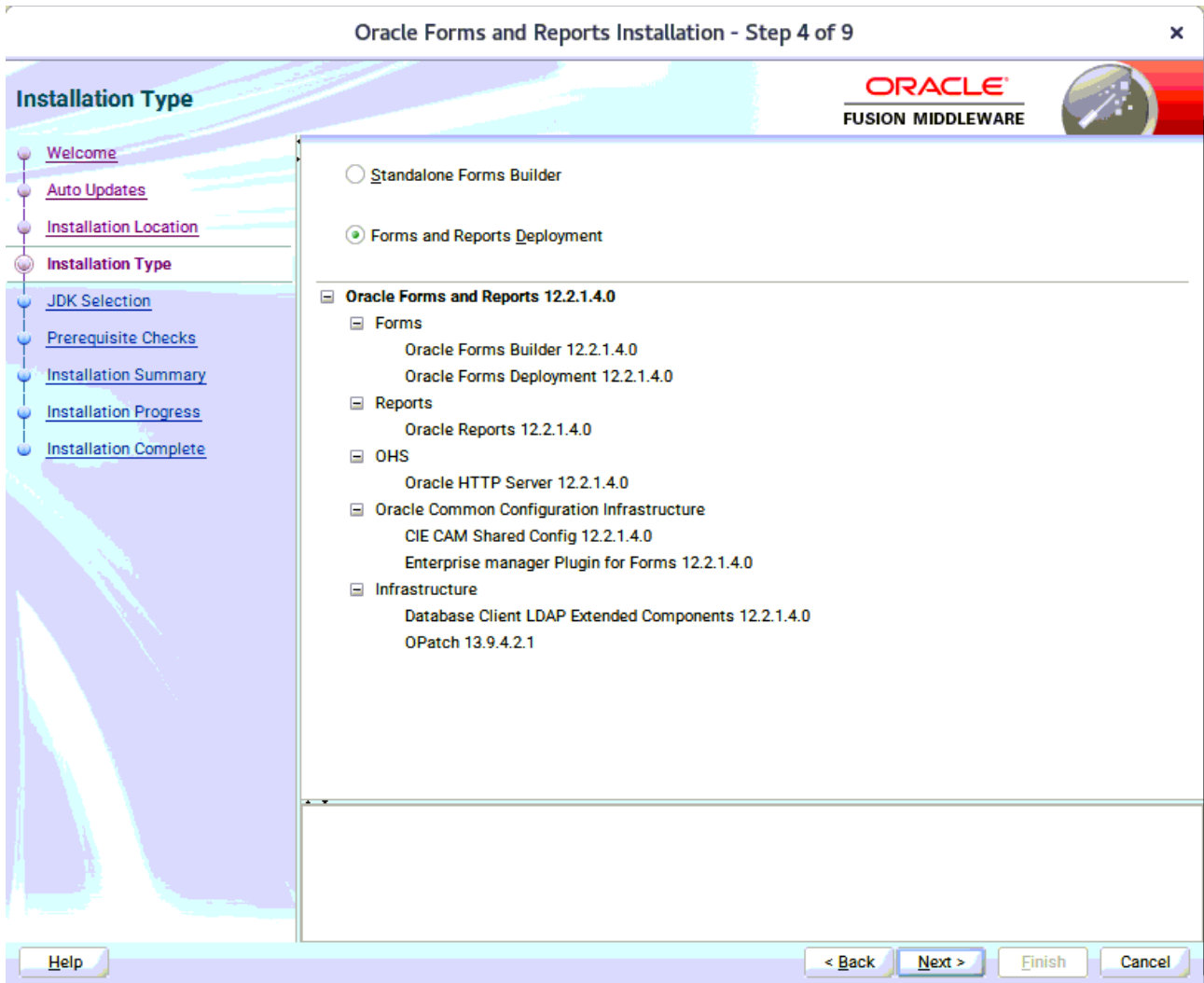
3). The **Installation Location** page appears.



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

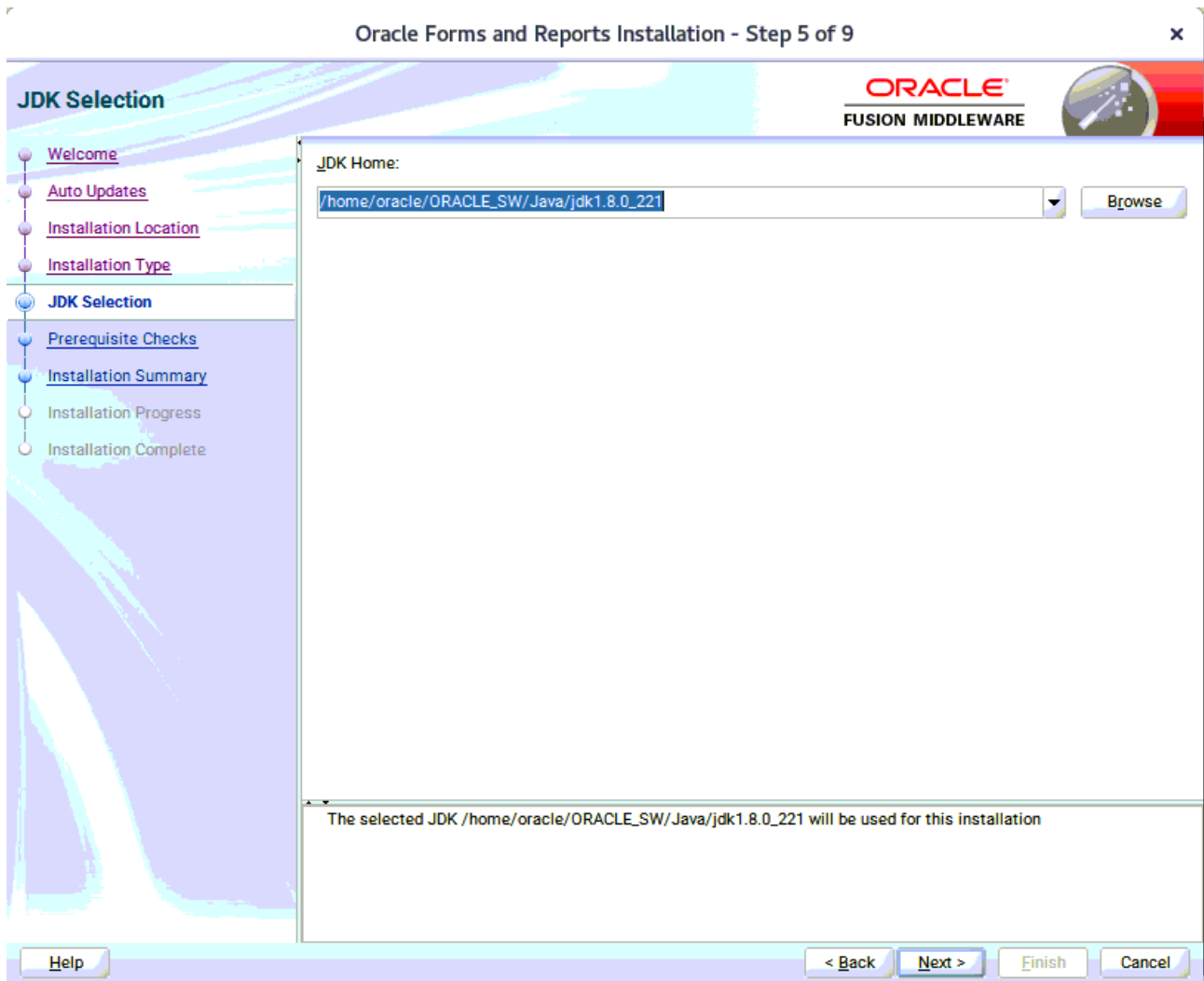


4). The **Installation Type** page appears.



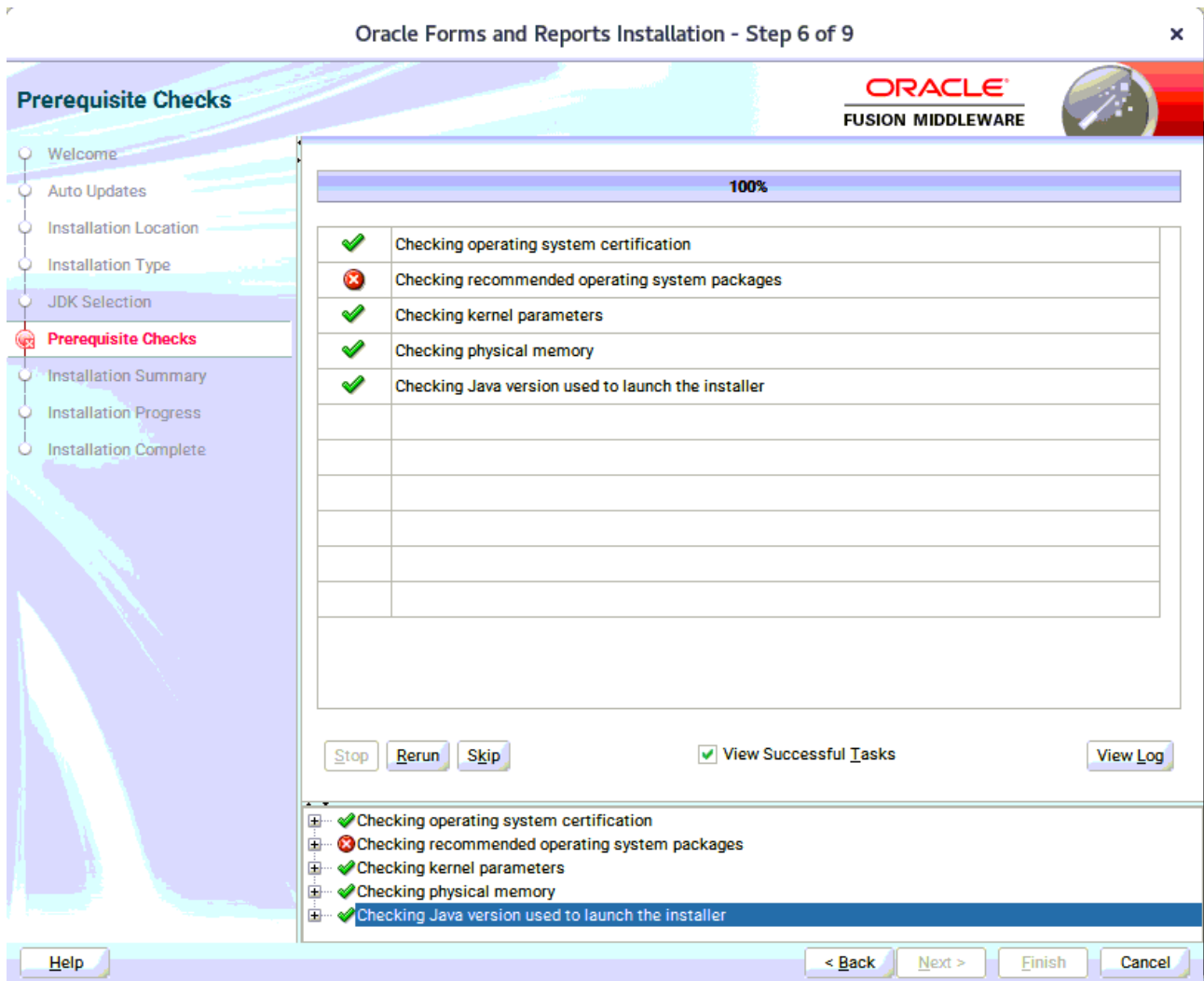
You can select **Standalone Forms Builder** if you want only that functionality, or choose **Forms and Reports Deployment** to install all of the products. Click **Next** to continue.

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



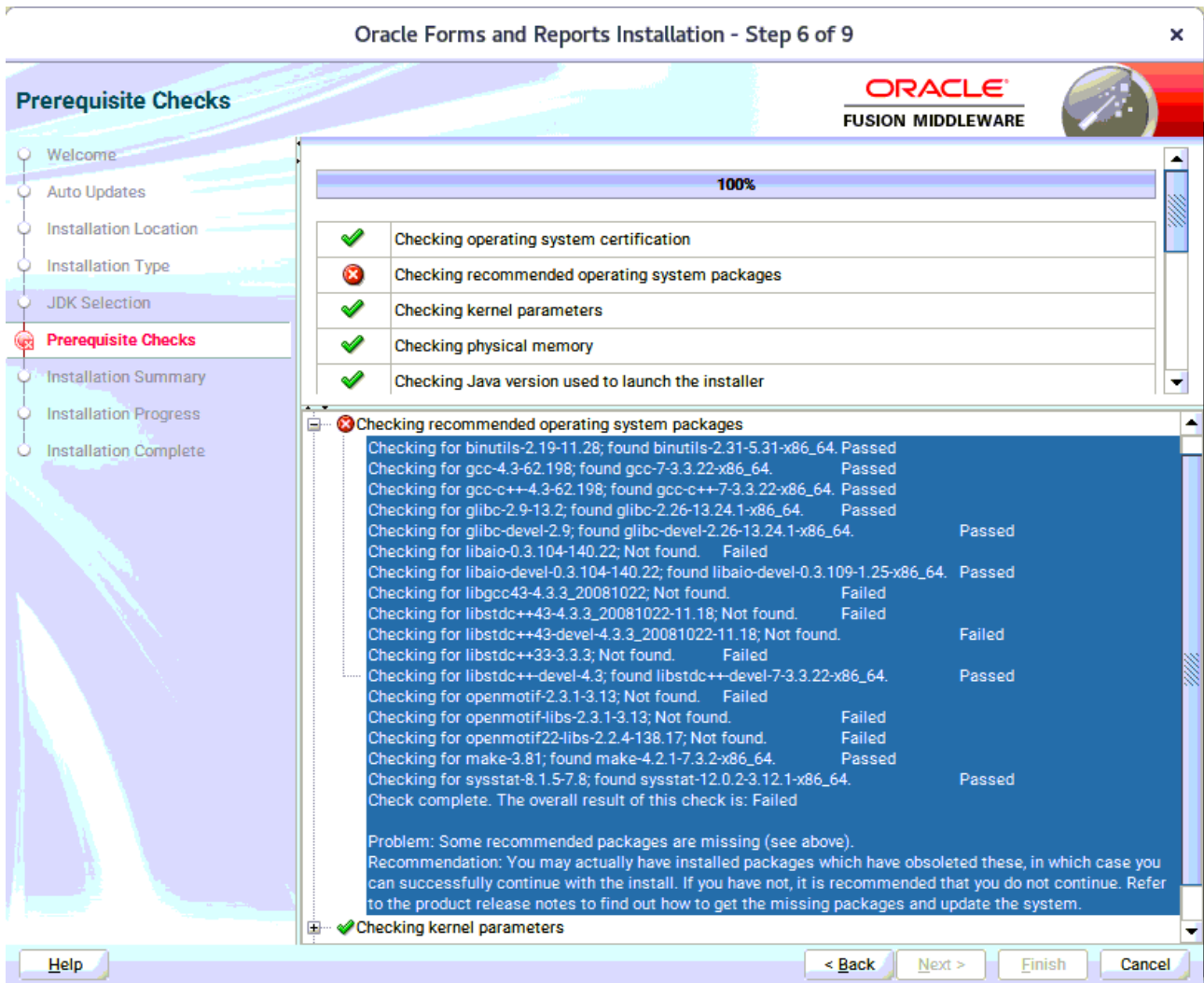
The selected JDK will be used for this installation. Click **Next** to continue.

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



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

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



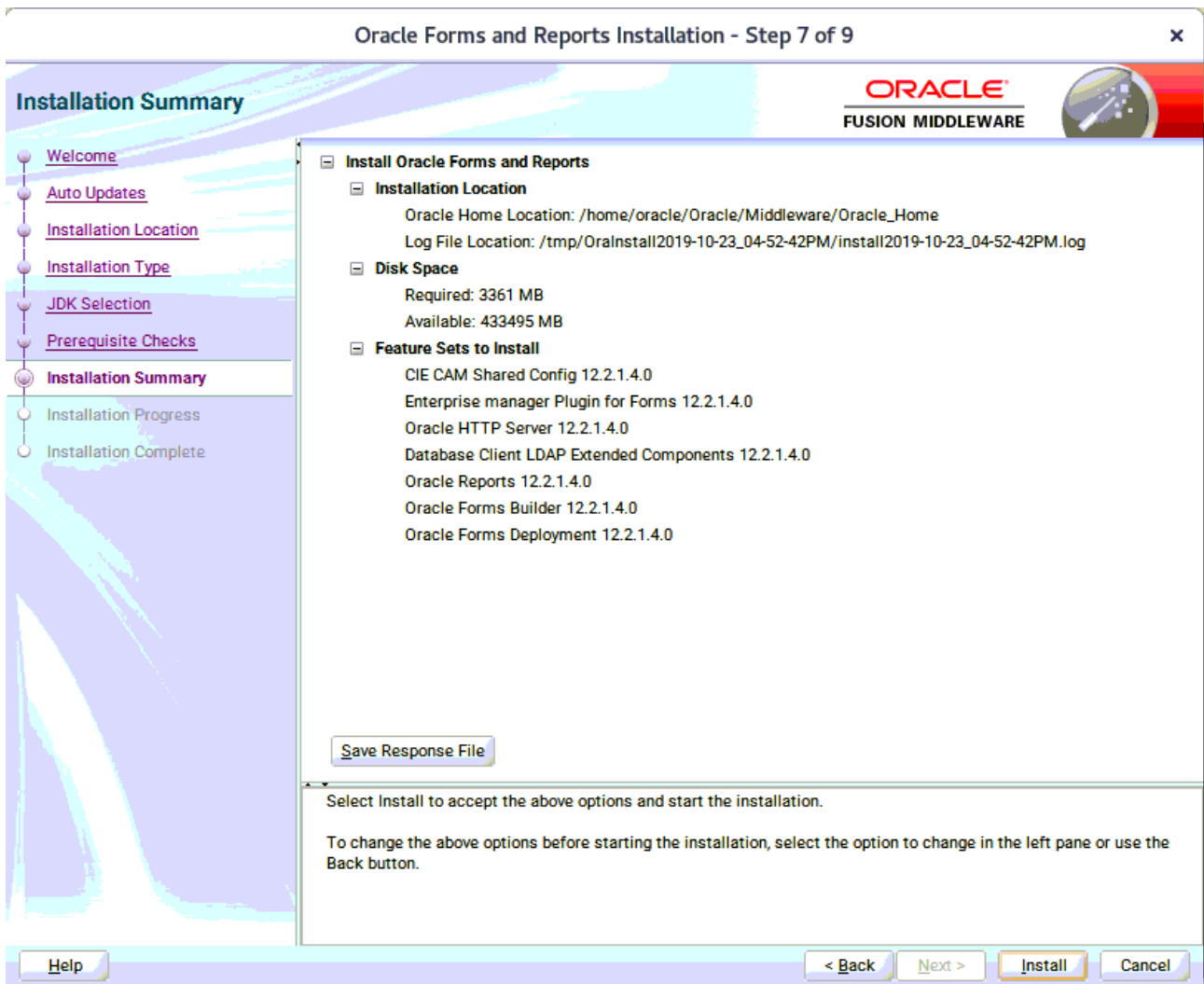
This issue caused by the different naming of these packages on SLES 15 (SP1). Oracle FUSION Middleware 12c (12.2.1.4) is certified on SLES15 (SP1), please make sure that the following packages are installed:

- binutils-2.29.1-4.46.x86\_64
- gcc7-ada-7.3.1+r258812-2.15.x86\_64
- gcc-c++-7-1.563.x86\_64
- gcc-c++-32bit-7-1.563.x86\_64
- gcc-ada-7-1.563.x86\_64
- gcc-locale-7-1.563.x86\_64
- gcc-info-7-1.563.x86\_64
- gcc-7-1.563.x86\_64
- gcc7-c++-7.3.1+r258812-2.15.x86\_64
- gcc7-info-7.3.1+r258812-2.15.noarch
- gcc7-7.3.1+r258812-2.15.x86\_64
- gcc7-locale-7.3.1+r258812-2.15.x86\_64
- gcc7-c++-32bit-7.3.1+r258812-2.15.x86\_64
- gcc7-32bit-7.3.1+r258812-2.15.x86\_64
- gcc-32bit-7-1.563.x86\_64

glibc-2.26-11.8.x86\_64  
linux-glibc-devel-4.15-1.47.noarch  
glibc-devel-2.26-11.8.x86\_64  
glibc-locale-2.26-11.8.x86\_64  
glibc-extra-2.26-11.8.x86\_64  
glibc-32bit-2.26-11.8.x86\_64  
glibc-devel-32bit-2.26-11.8.x86\_64  
mksh-56c-1.10.x86\_64  
libaio1-0.3.109-1.25.x86\_64  
libaio1-32bit-0.3.109-1.25.x86\_64  
libaio-devel-32bit-0.3.109-1.25.x86\_64  
libaio-devel-0.3.109-1.25.x86\_64  
libcap2-2.25-2.41.x86\_64  
libcap-ng0-0.7.9-1.42.x86\_64  
libcap2-32bit-2.25-2.41.x86\_64  
libstdc++6-7.3.1+r258812-2.15.x86\_64  
libstdc++6-devel-gcc7-7.3.1+r258812-2.15.x86\_64  
libstdc++6-32bit-7.3.1+r258812-2.15.x86\_64  
libstdc++6-devel-gcc7-32bit-7.3.1+r258812-2.15.x86\_64  
libstdc++6-locale-7.3.1+r258812-2.15.x86\_64  
libstdc++-devel-7-1.563.x86\_64  
libgcc\_s1-7.3.1+r258812-2.15.x86\_64  
libgcc\_s1-32bit-7.3.1+r258812-2.15.x86\_64  
make-4.2.1-5.48.x86\_64  
make-lang-4.2.1-5.48.noarch  
makedumpfile-1.6.3-5.6.x86\_64  
xorg-x11-7.6\_1-1.22.noarch  
xorg-x11-server-1.19.6-6.19.x86\_64  
xorg-x11-fonts-7.6-3.9.noarch  
xorg-x11-driver-video-7.6\_1-2.30.x86\_64  
xorg-x11-Xvnc-1.8.0-11.23.x86\_64  
xorg-x11-fonts-core-7.6-3.9.noarch  
xorg-x11-server-extra-1.19.6-6.19.x86\_64  
xorg-x11-essentials-7.6\_1-1.22.noarch

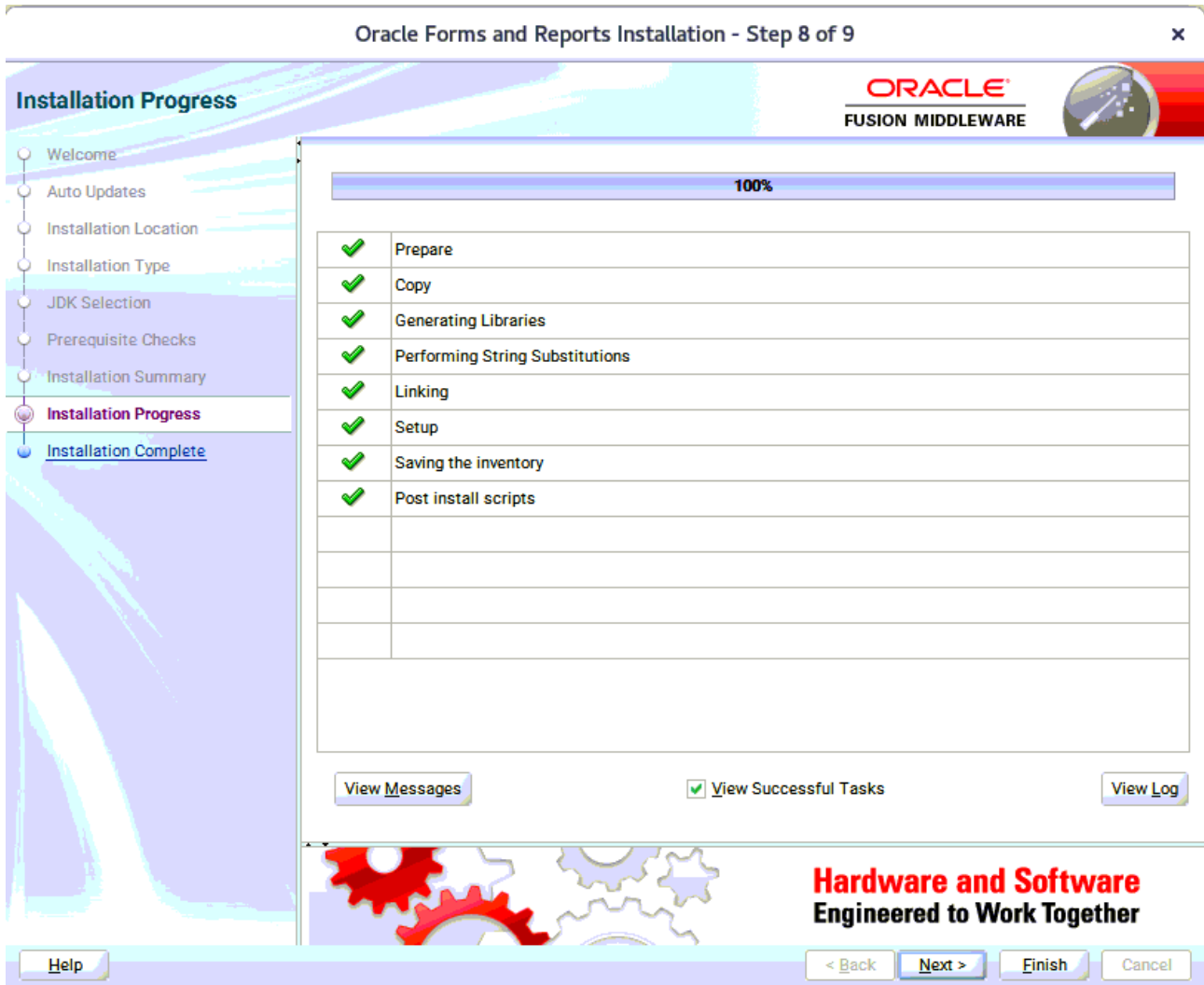
)

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



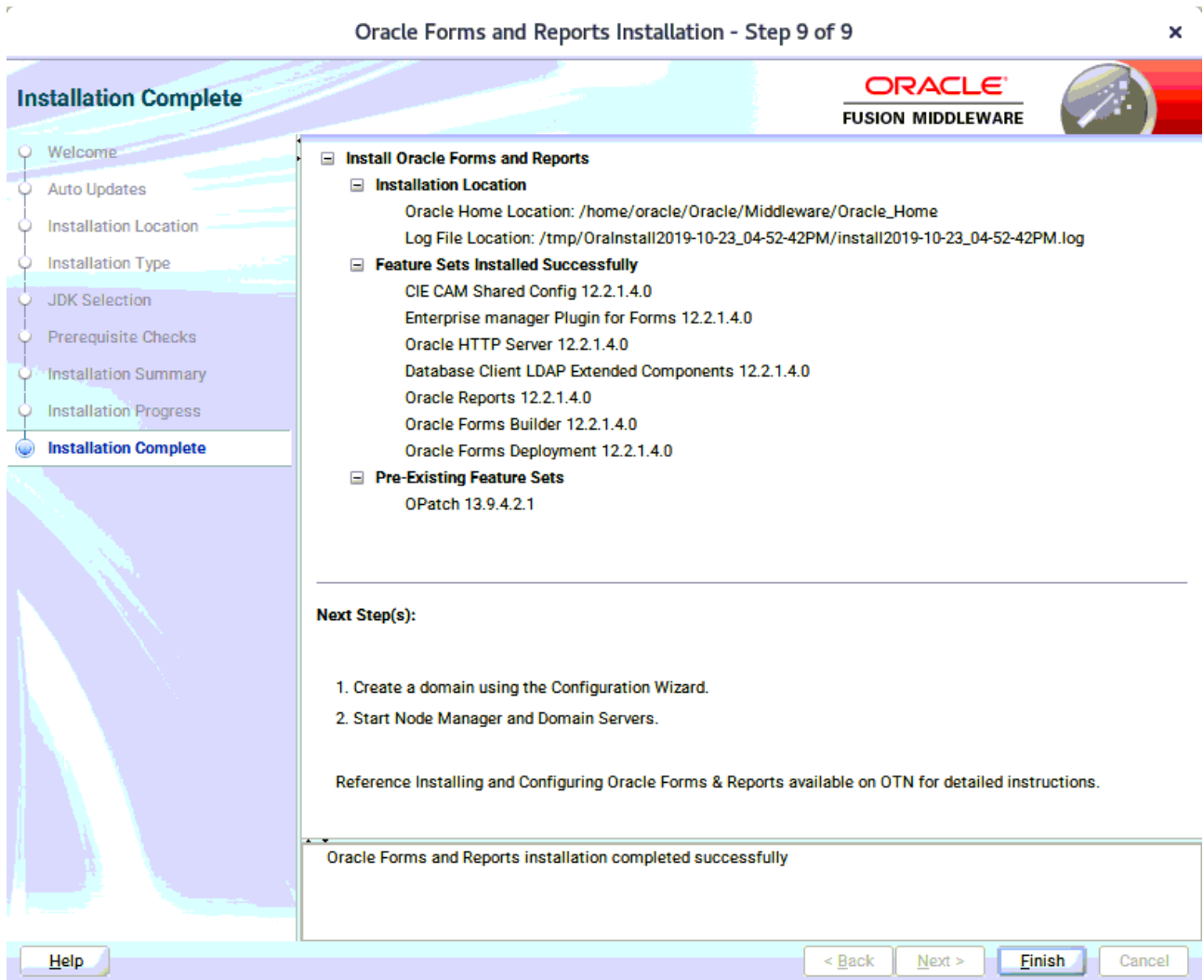
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



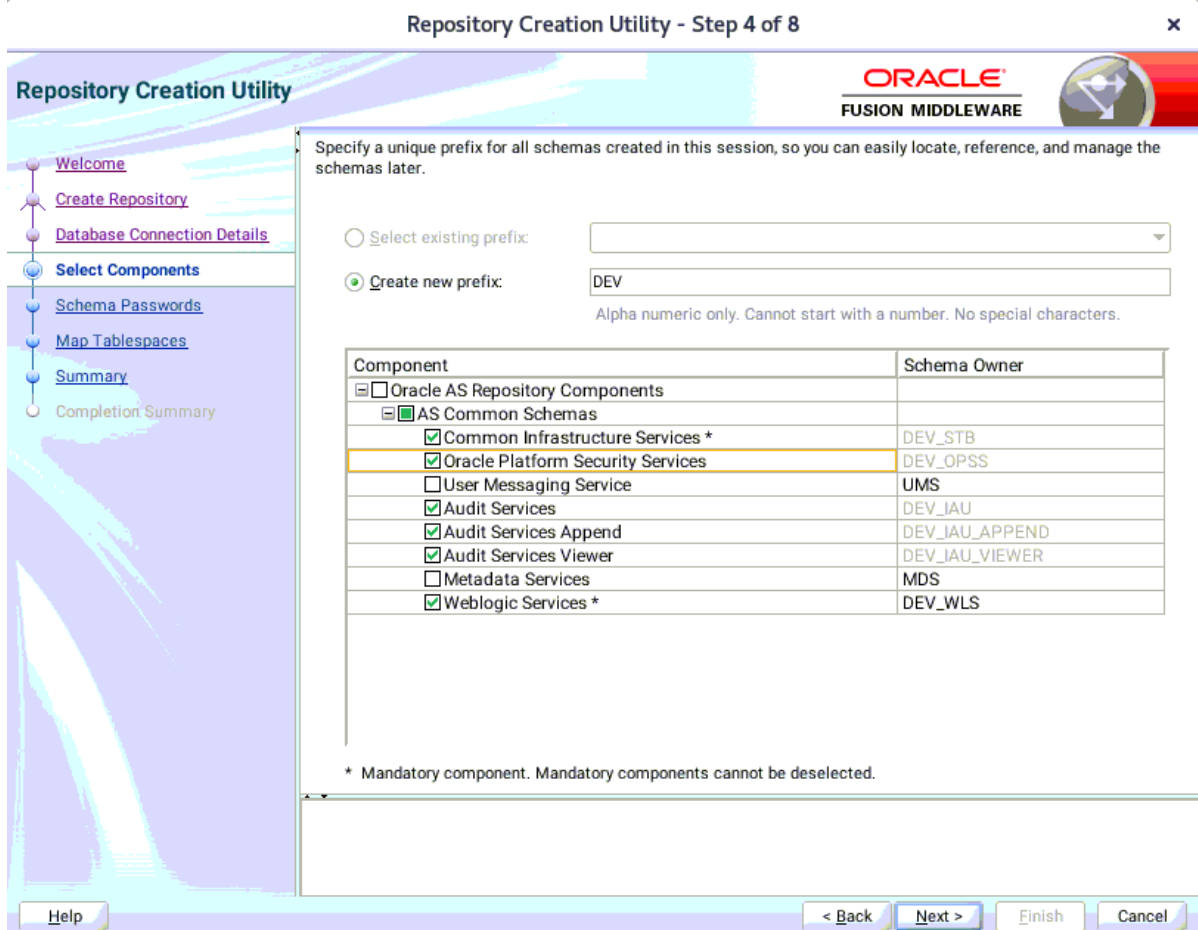
Click **Finish** to dismiss the installer.



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

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

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



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

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

Ensure the schema creation is successful.

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

---

**Repository Creation Utility**
ORACLE  
FUSION MIDDLEWARE

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

**Database details:**

Host Name: hpgen9-01  
 Port: 1521  
 Service Name: SUSE  
 Connected As: sys  
 Operation: System and Data Load concurrently  
 Execution Time: 2 minutes 21 seconds

RCU Logfile: /tmp/RCU2019-10-23\_17-10\_81299661/logs/rcu.log  
 Component Log Directory: /tmp/RCU2019-10-23\_17-10\_81299661/logs  
 View Log: [rcu.log](#)

Prefix for (prefixable) Schema DEV Owners

Component	Status	Time	Logfile(Click to view)
Common Infrastructure Services	Success	00:09.998(sec)	<a href="#">stb.log</a>
Oracle Platform Security Services	Success	00:42.688(sec)	<a href="#">opss.log</a>
Audit Services	Success	00:24.700(sec)	<a href="#">iau.log</a>
Audit Services Append	Success	00:09.482(sec)	<a href="#">iau_append.log</a>
Audit Services Viewer	Success	00:09.449(sec)	<a href="#">iau_viewer.log</a>
Weblogic Services	Success	00:29.816(sec)	<a href="#">wls.log</a>

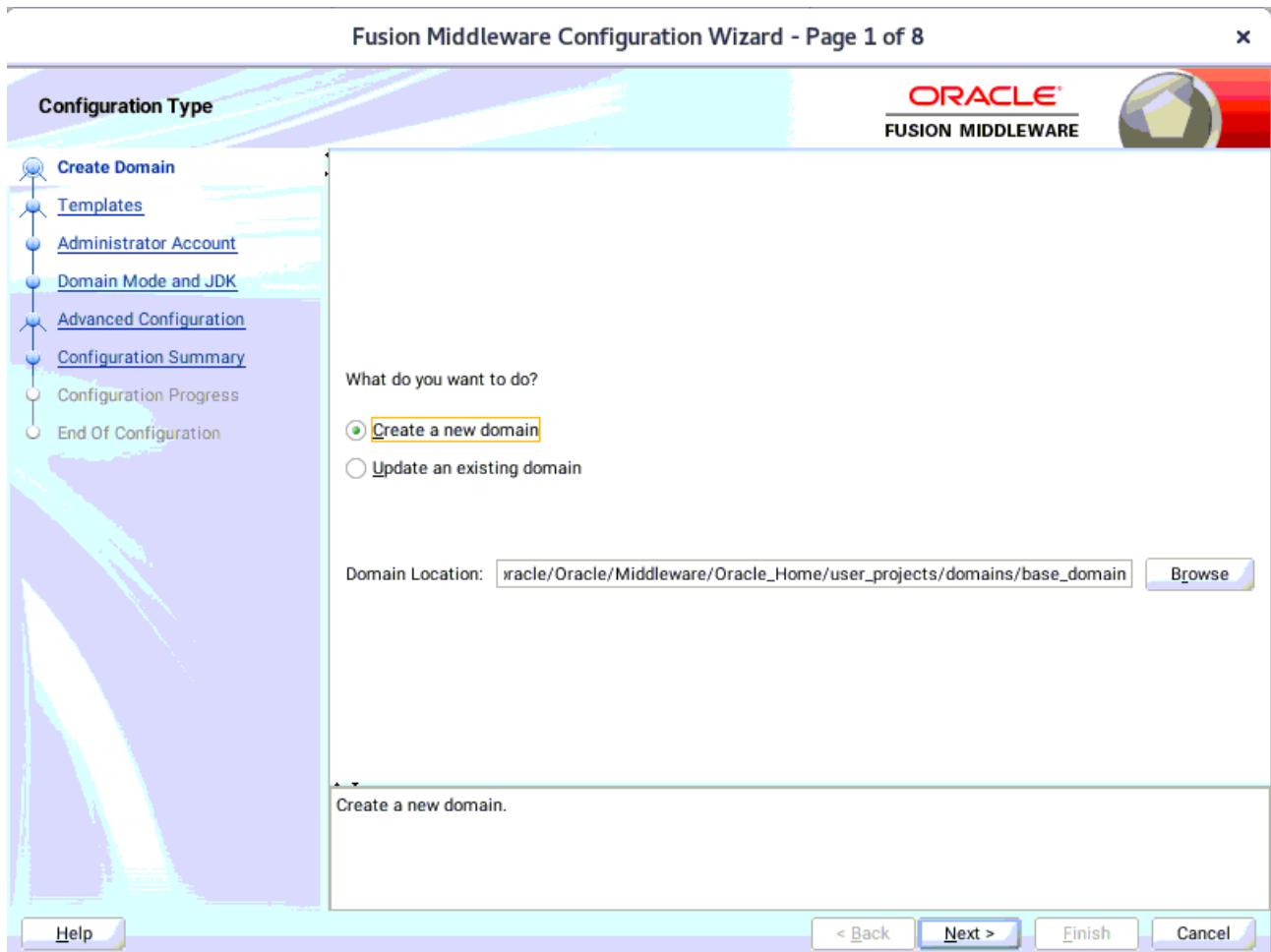
Help
< Back
Next >
Create
Close

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

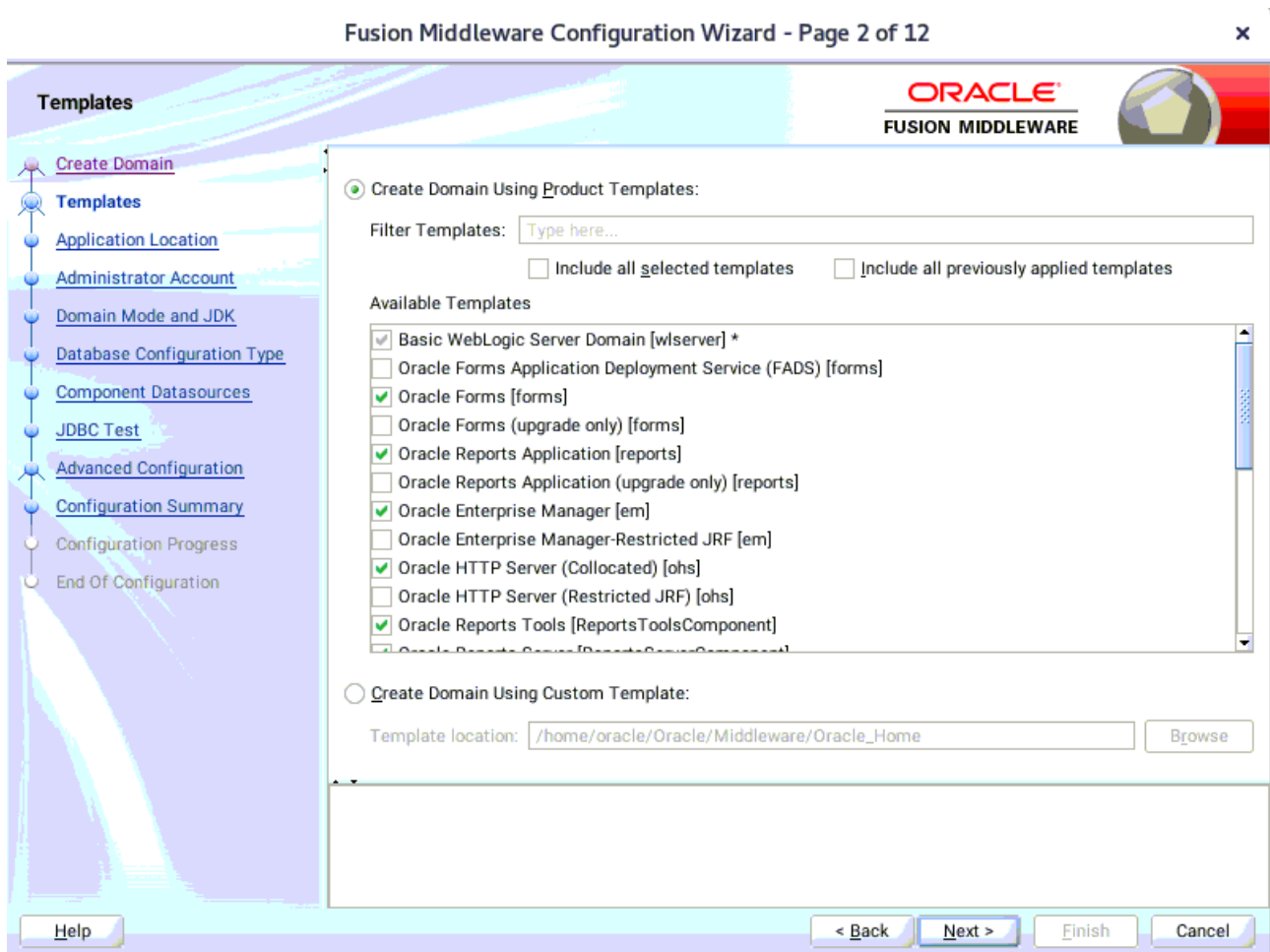
3-1. In order to complete the configuration. Run the config wizard using `config.sh` located in the `ORACLE_HOME/oracle_common/common/bin` directory.

Follow these steps:

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



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

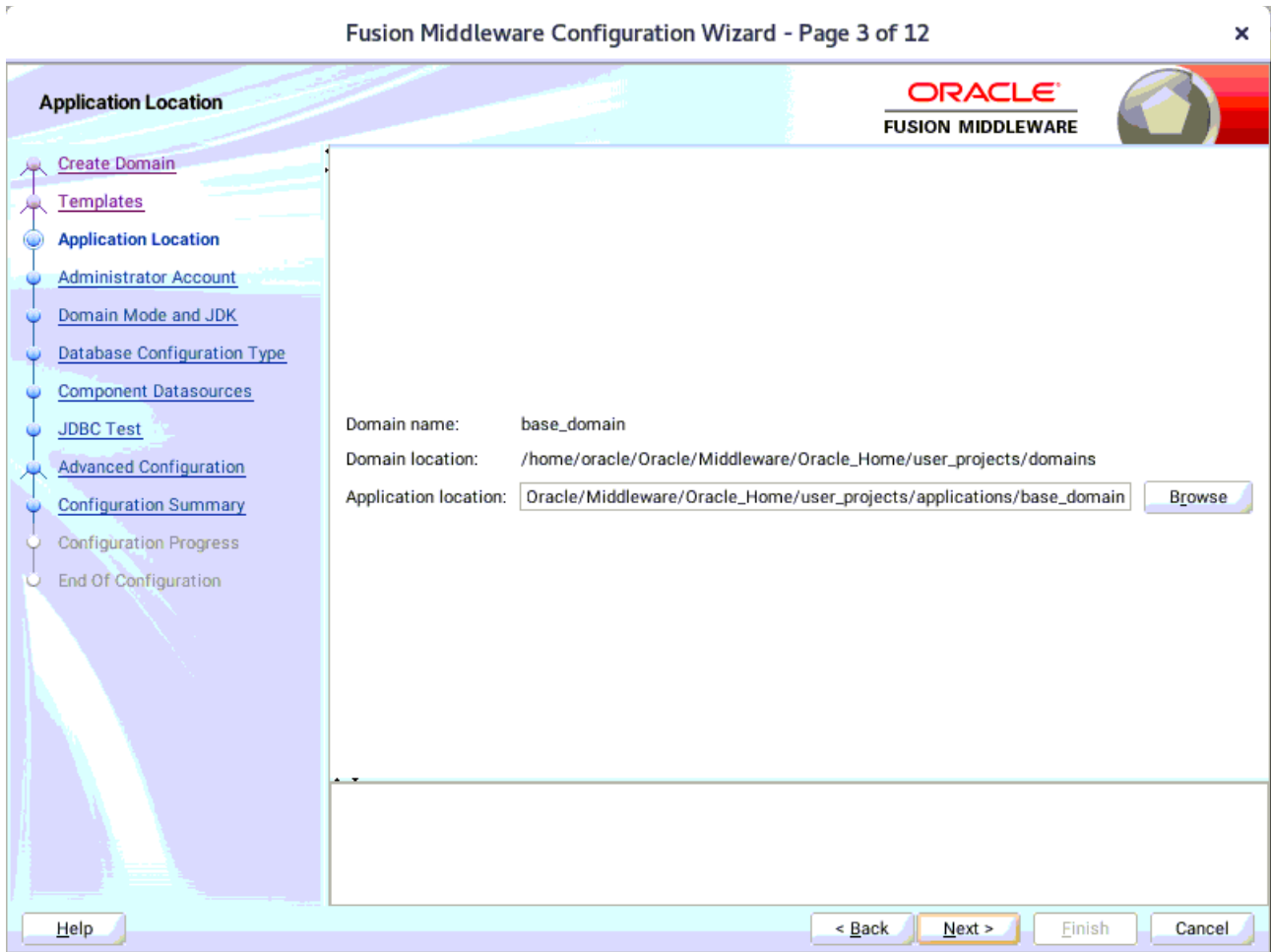


Keep the default selection (**Create Domain using Product Templates**). Selecting

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

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

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



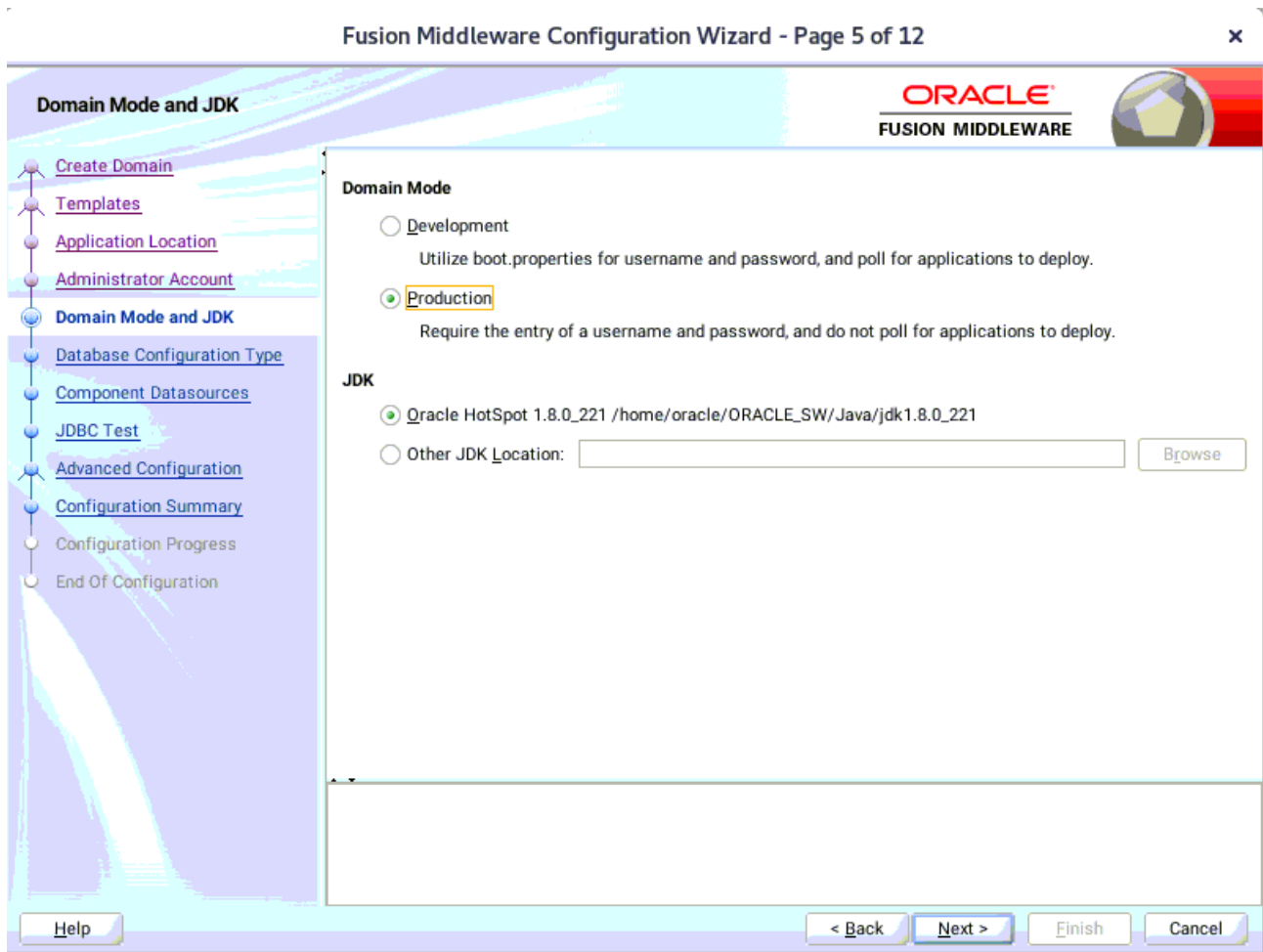
Keep the default value for Application location. Click **Next** to continue.

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

The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 4 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A navigation pane on the left lists the following steps: Create Domain, Templates, Application Location, Administrator Account (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 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 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**

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: .....

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.

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

**JDBC Component Schema**

ORACLE  
FUSION MIDDLEWARE

Vendor:  Driver:

Connection Parameters  Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

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

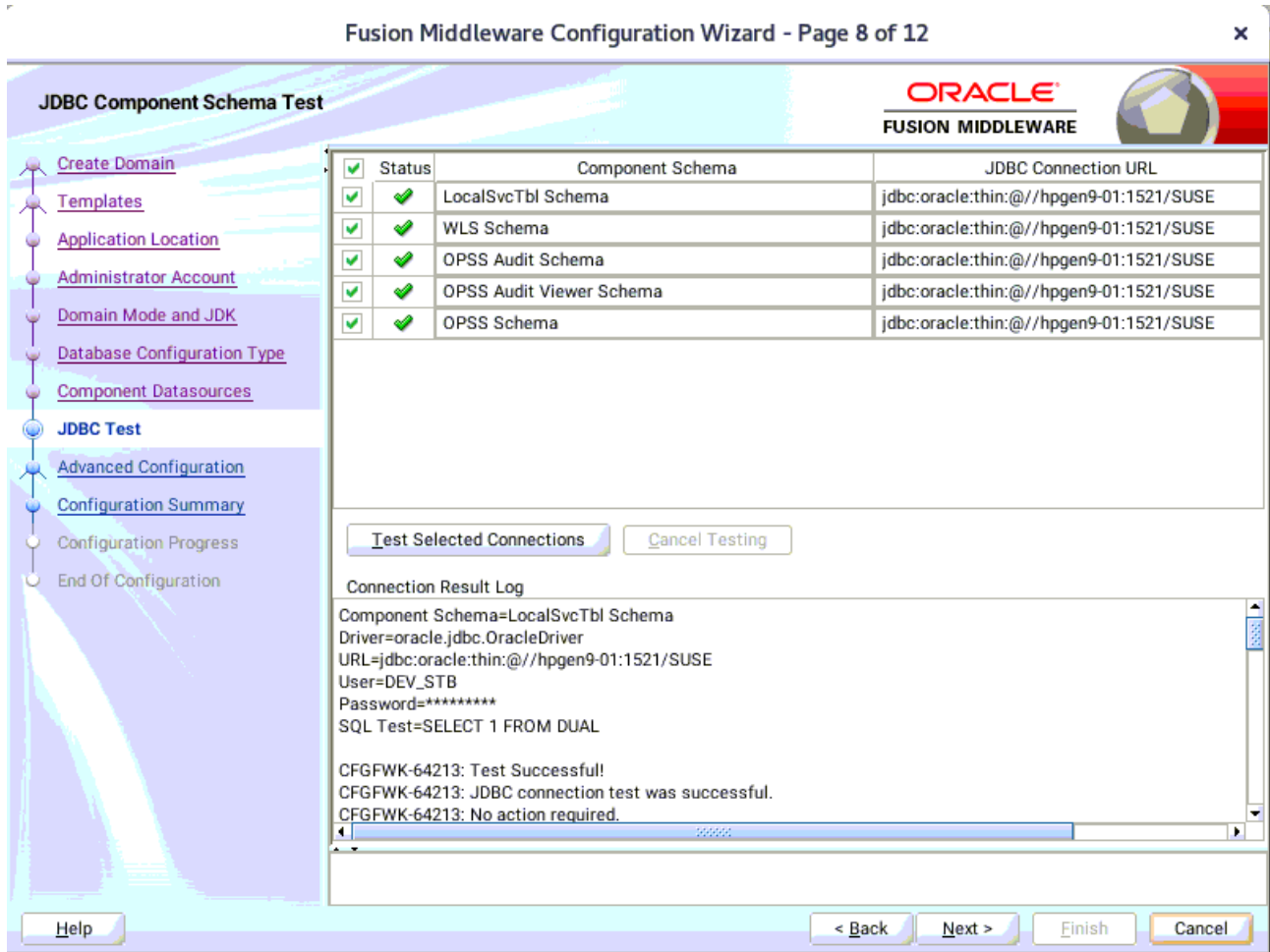
Edits to the data above will affect all checked rows in the table below.

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

Help < Back Next > Finish Cancel

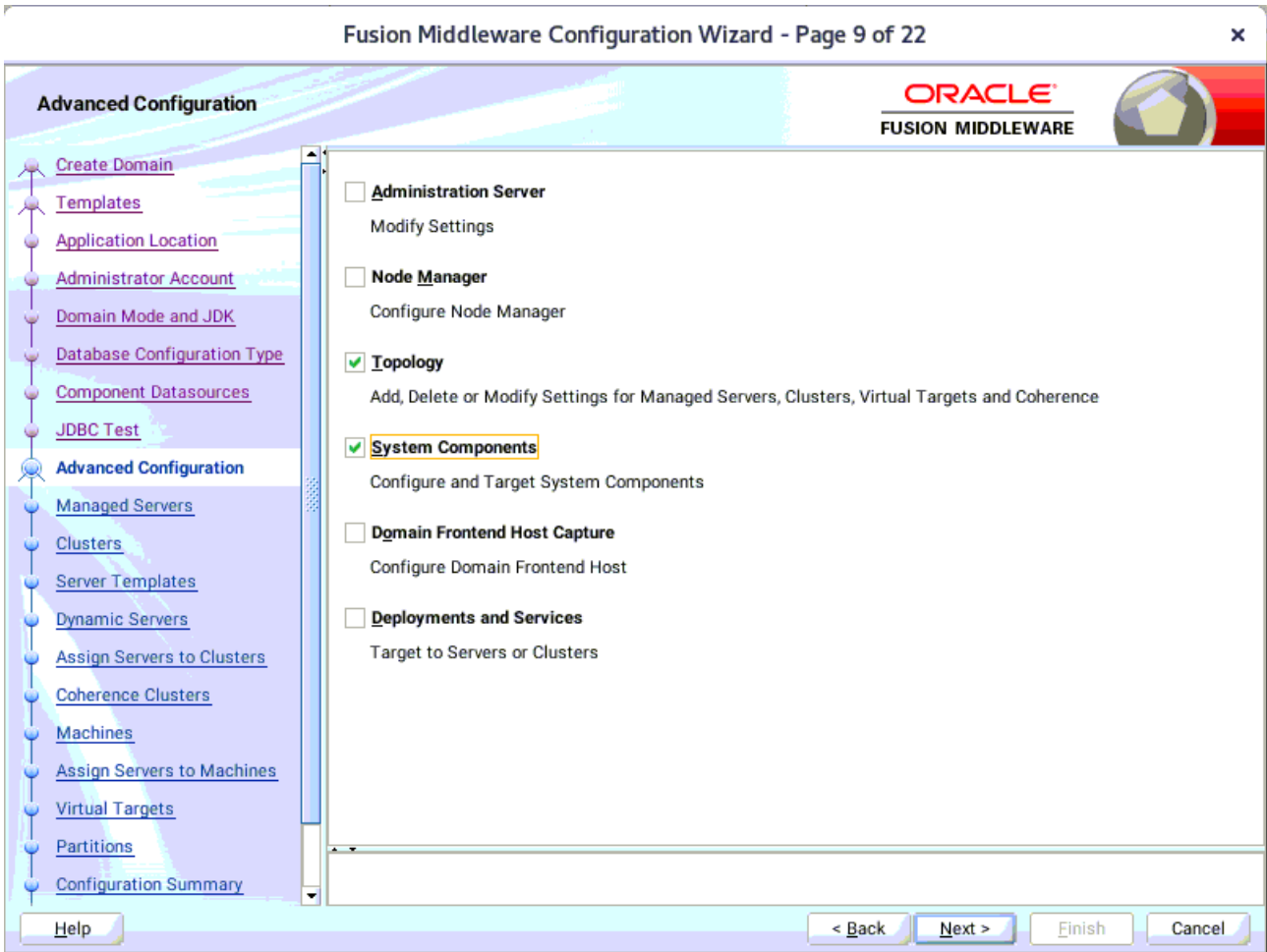
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



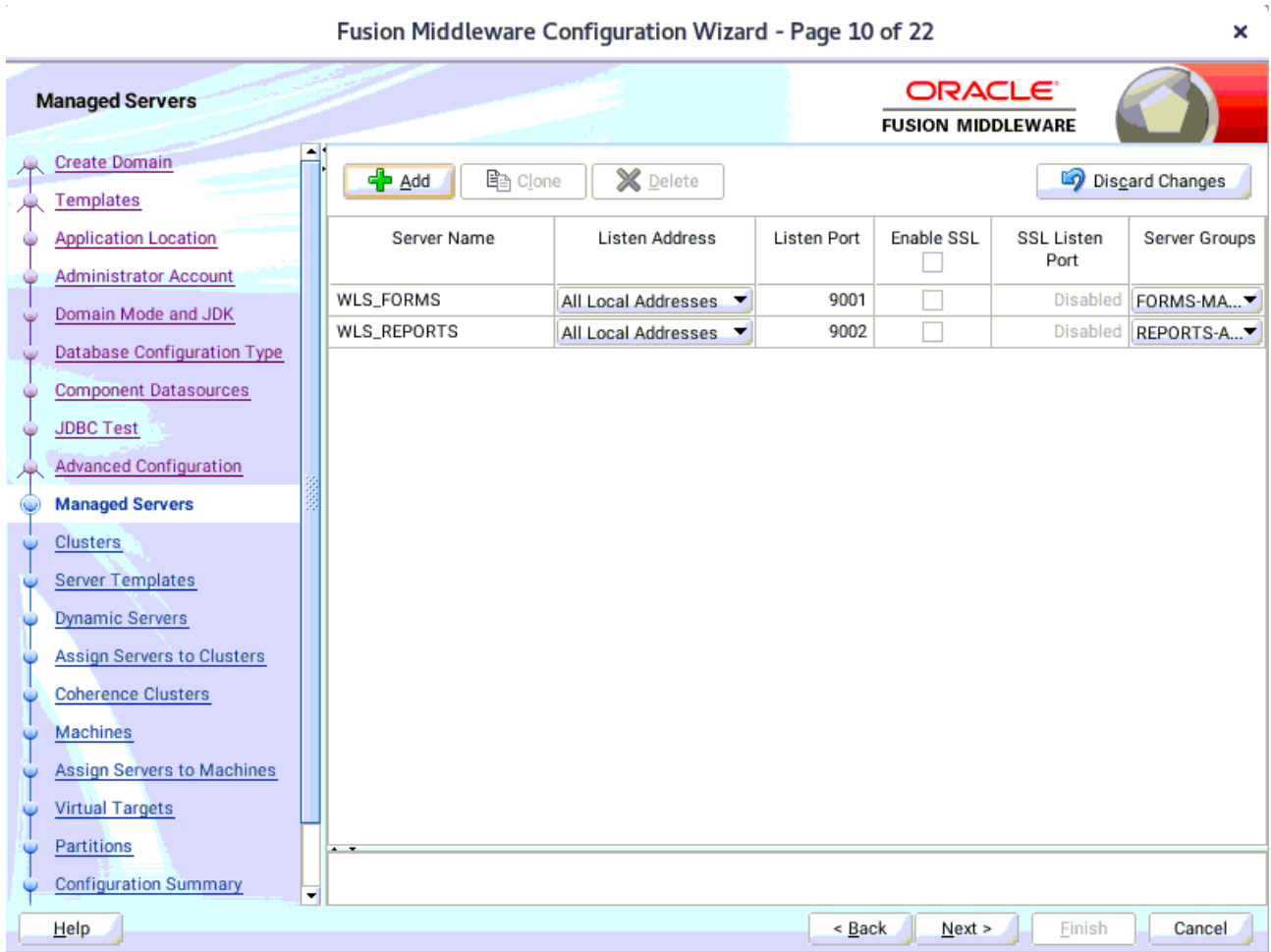
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



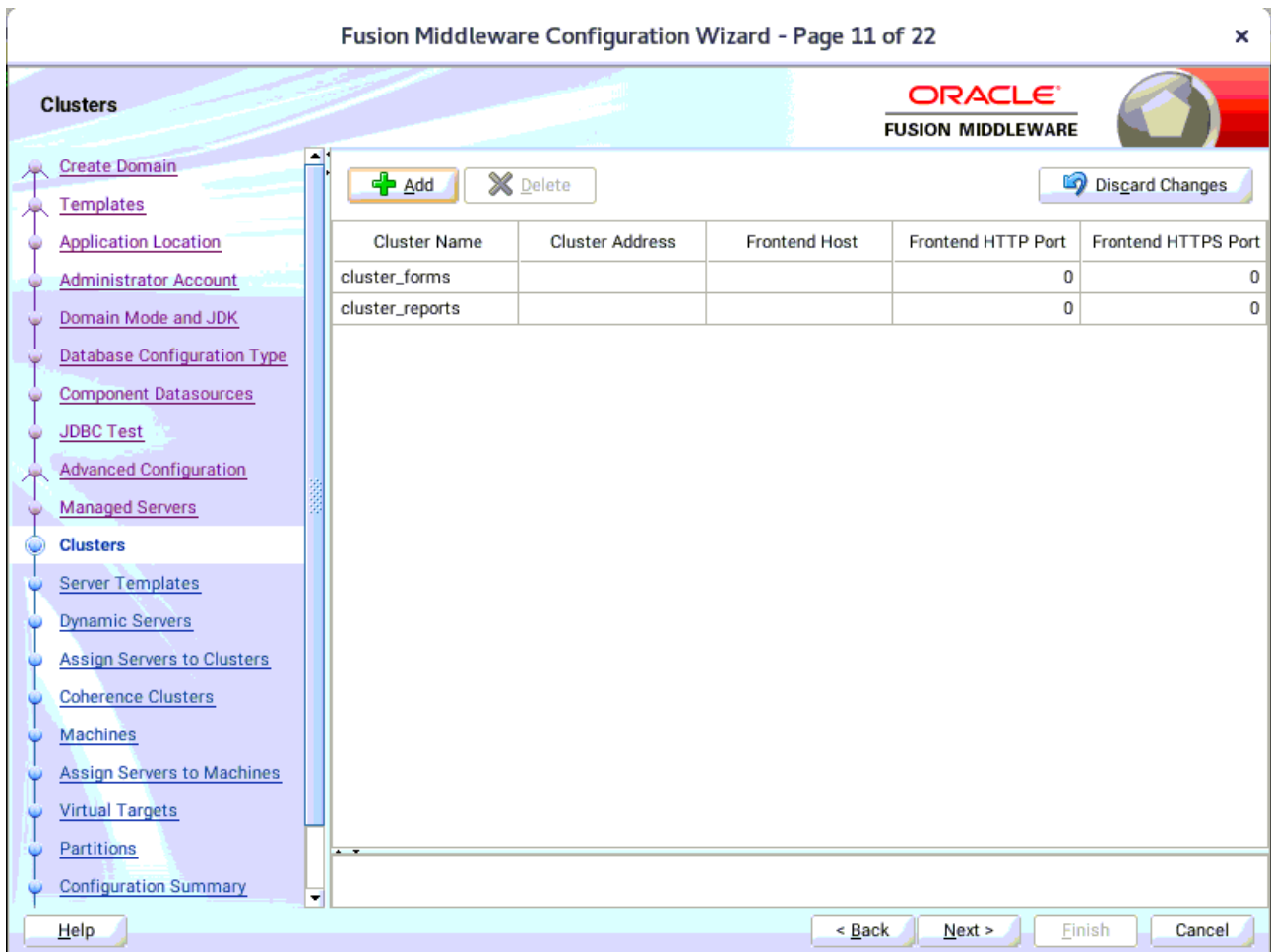
Select **Topology** and **System Components**. Click **Next** to continue.

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



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.

Fusion Middleware Configuration Wizard - Page 12 of 22

Server Templates



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

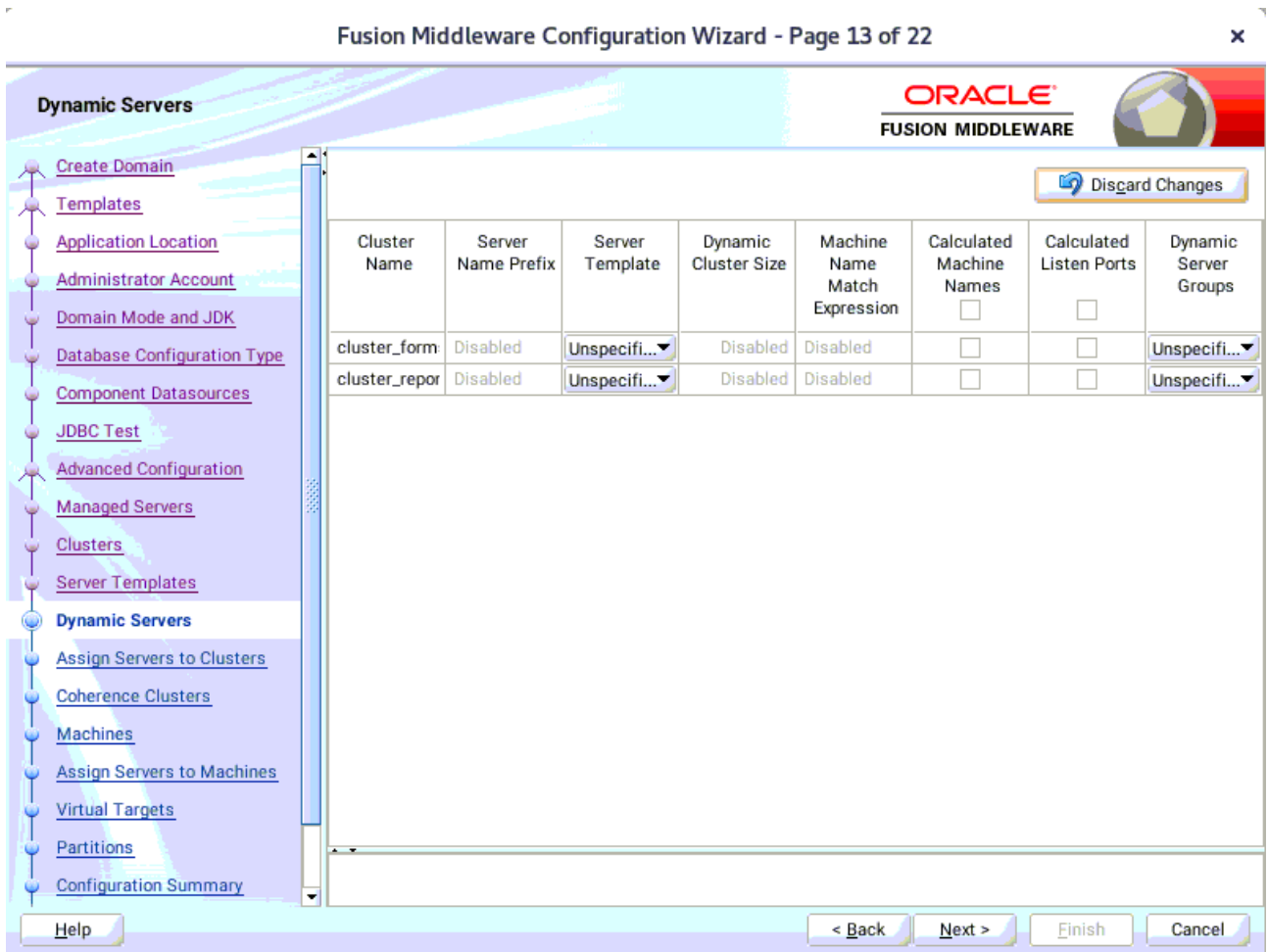
Add
 Delete
 Discard Changes

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

Help
< Back
Next >
Finish
Cancel

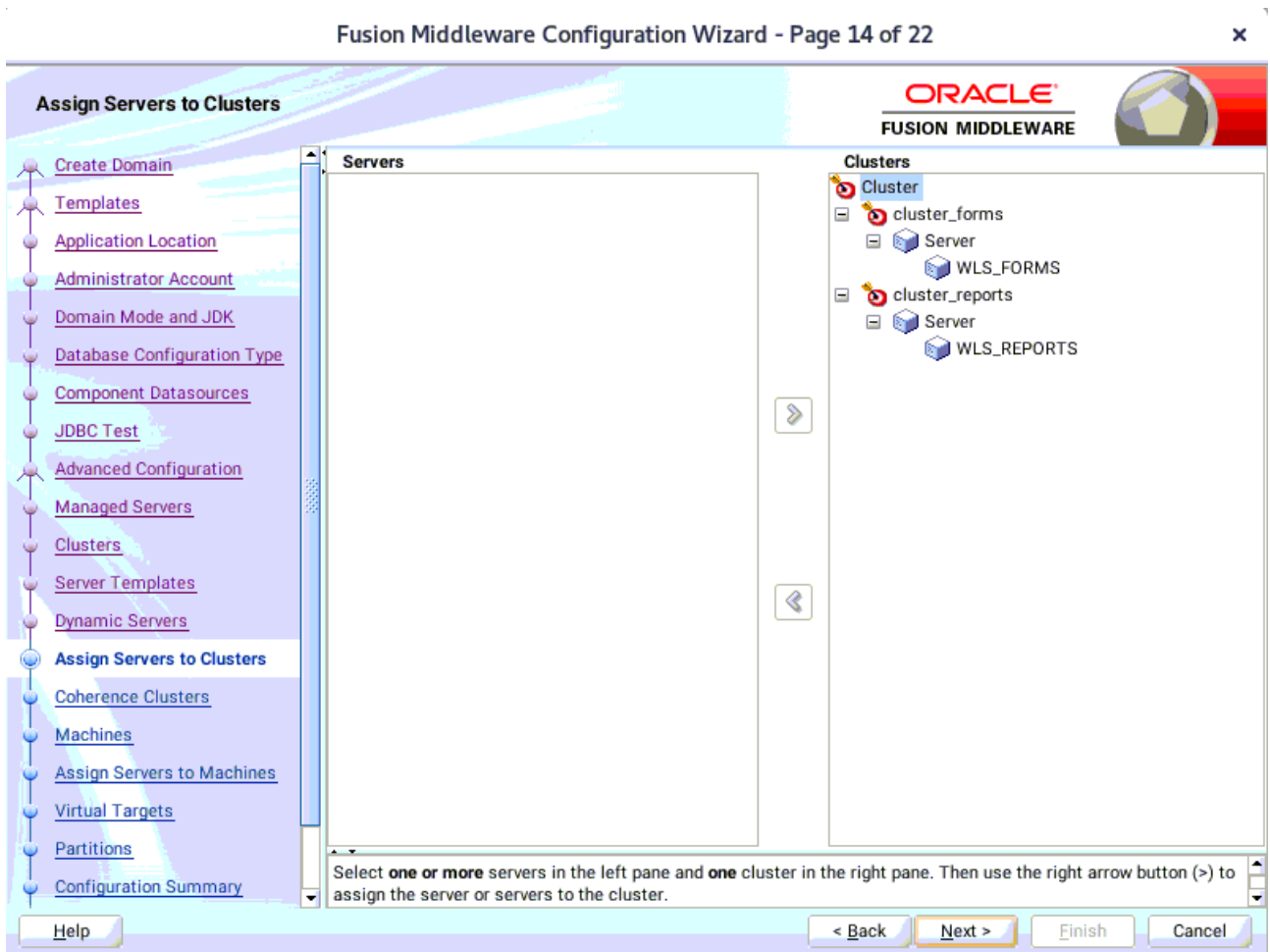
The default values will be appropriate for most cases. Click **Next** to continue.

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



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

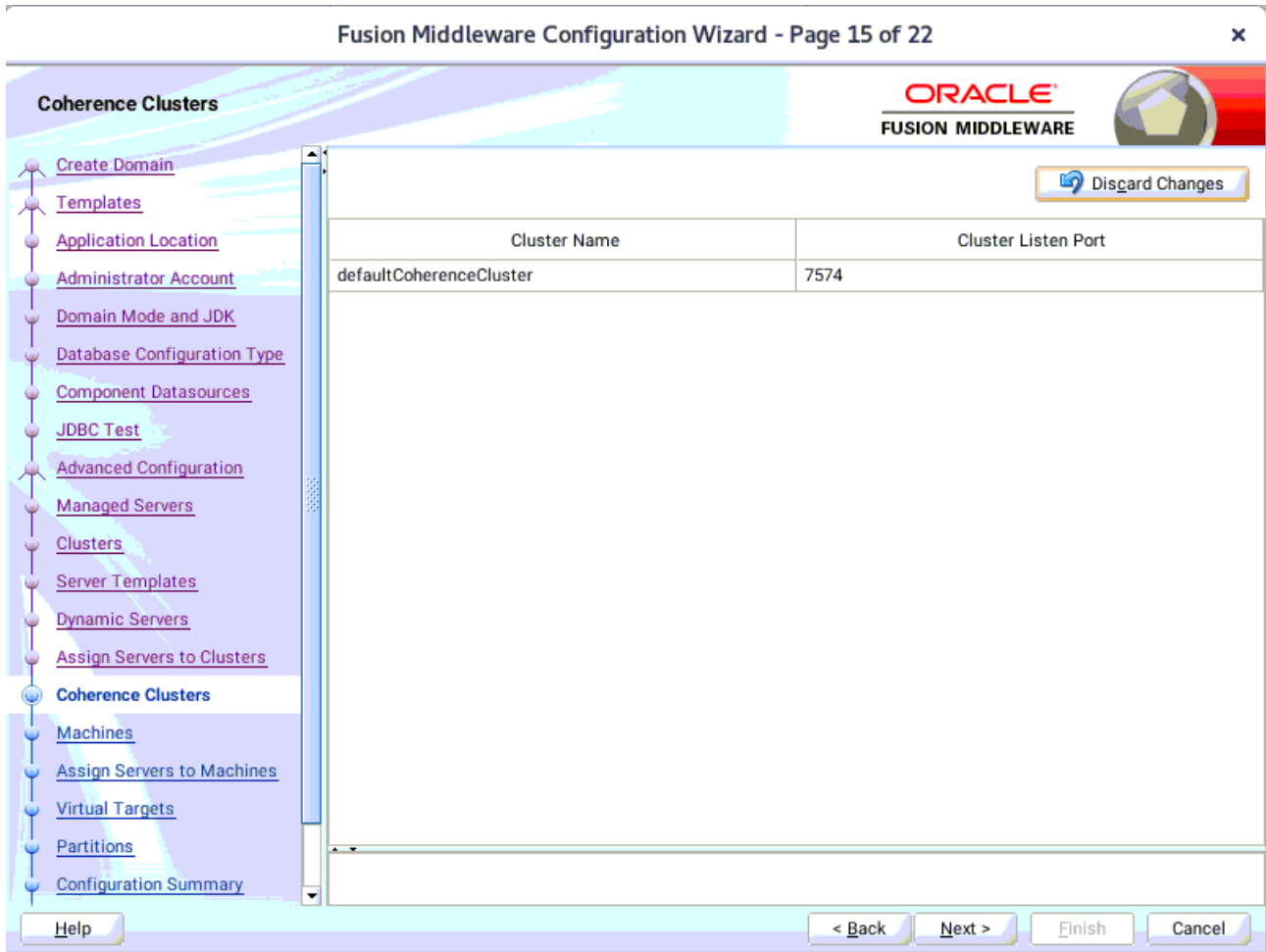
14). The **Assign Servers to Clusters** screen appears.



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

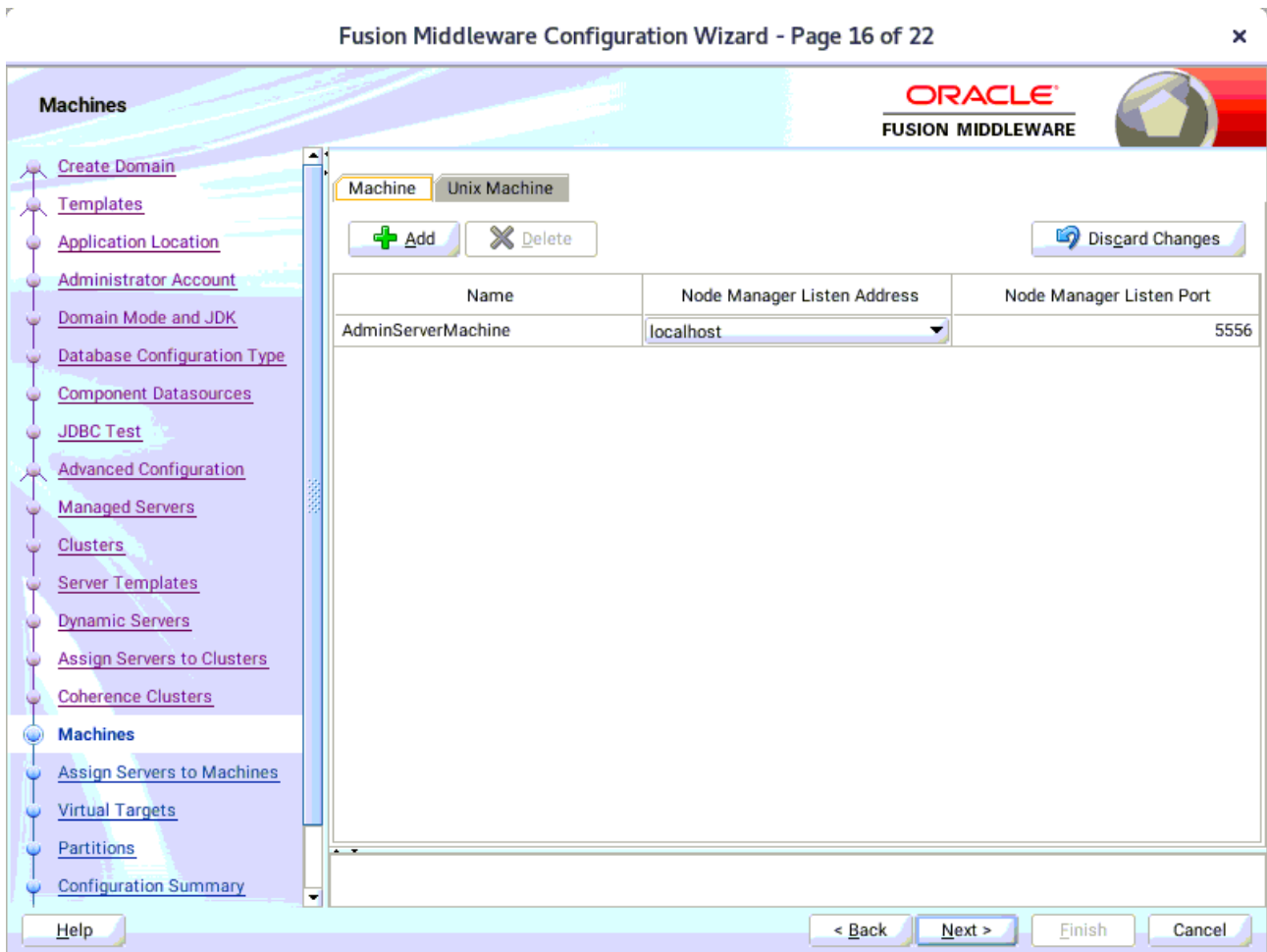


15). The **Coherence Clusters** screen appears.



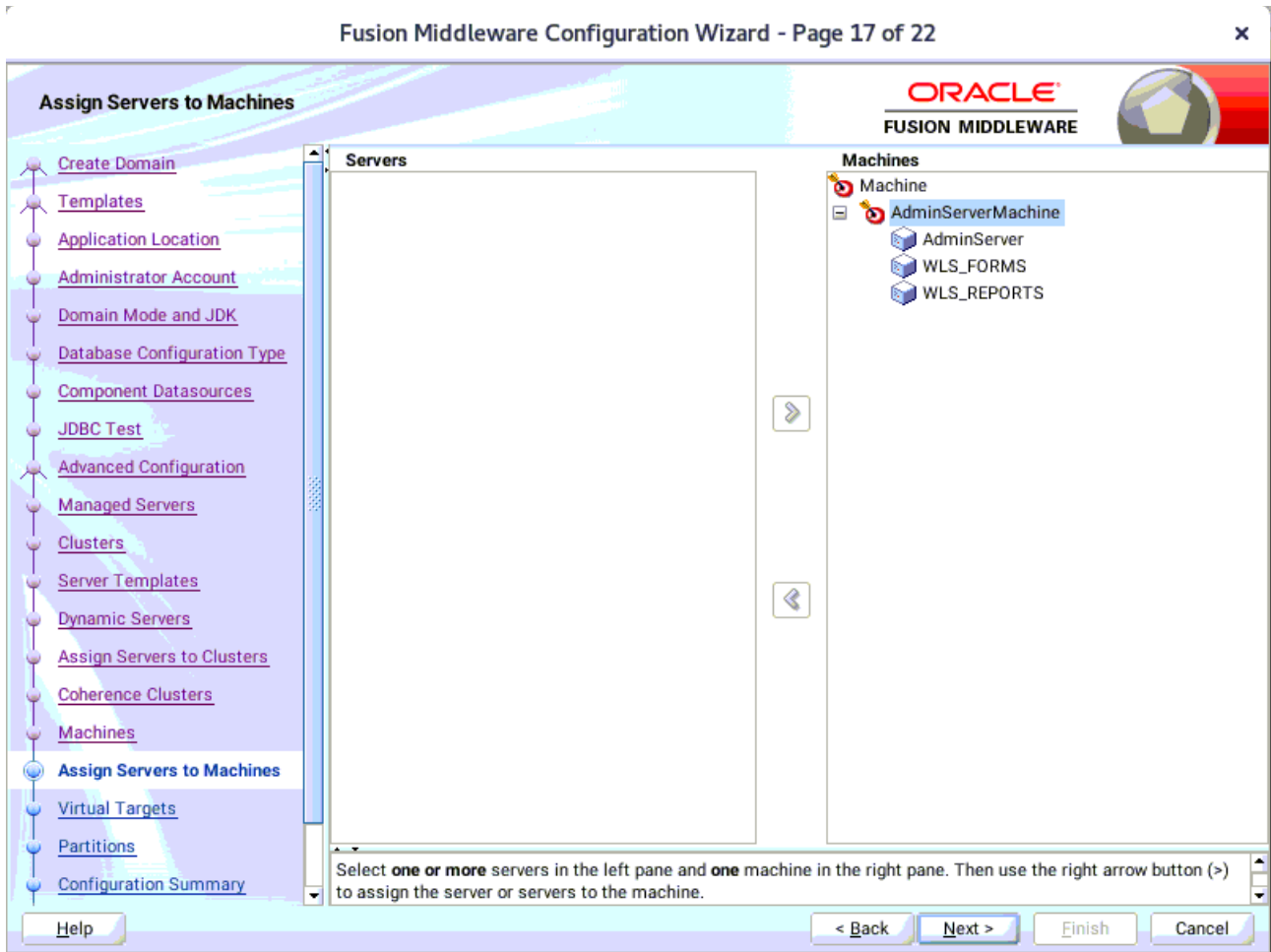
The default values will be appropriate for most cases. Click **Next** to continue.

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



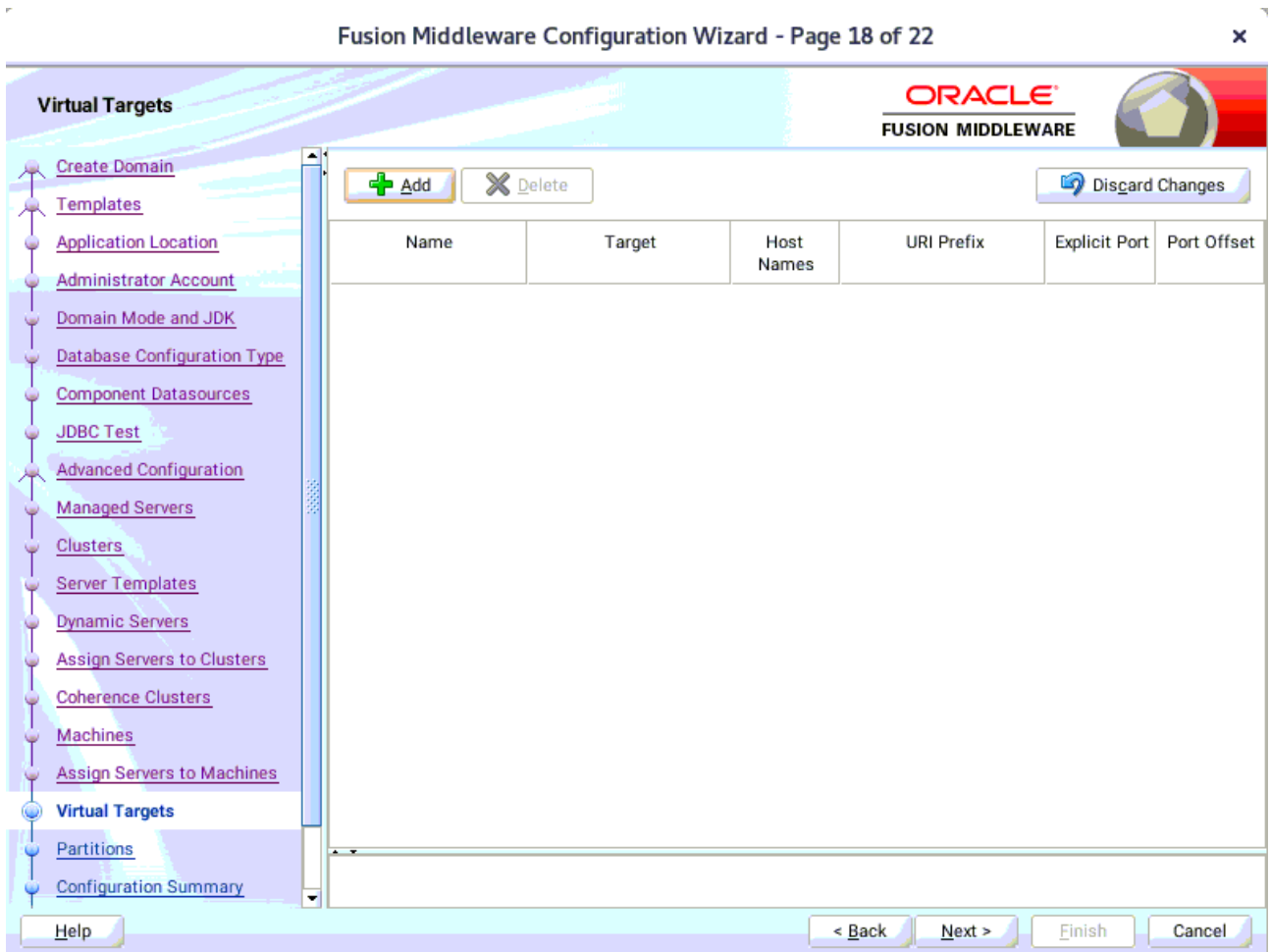
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

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



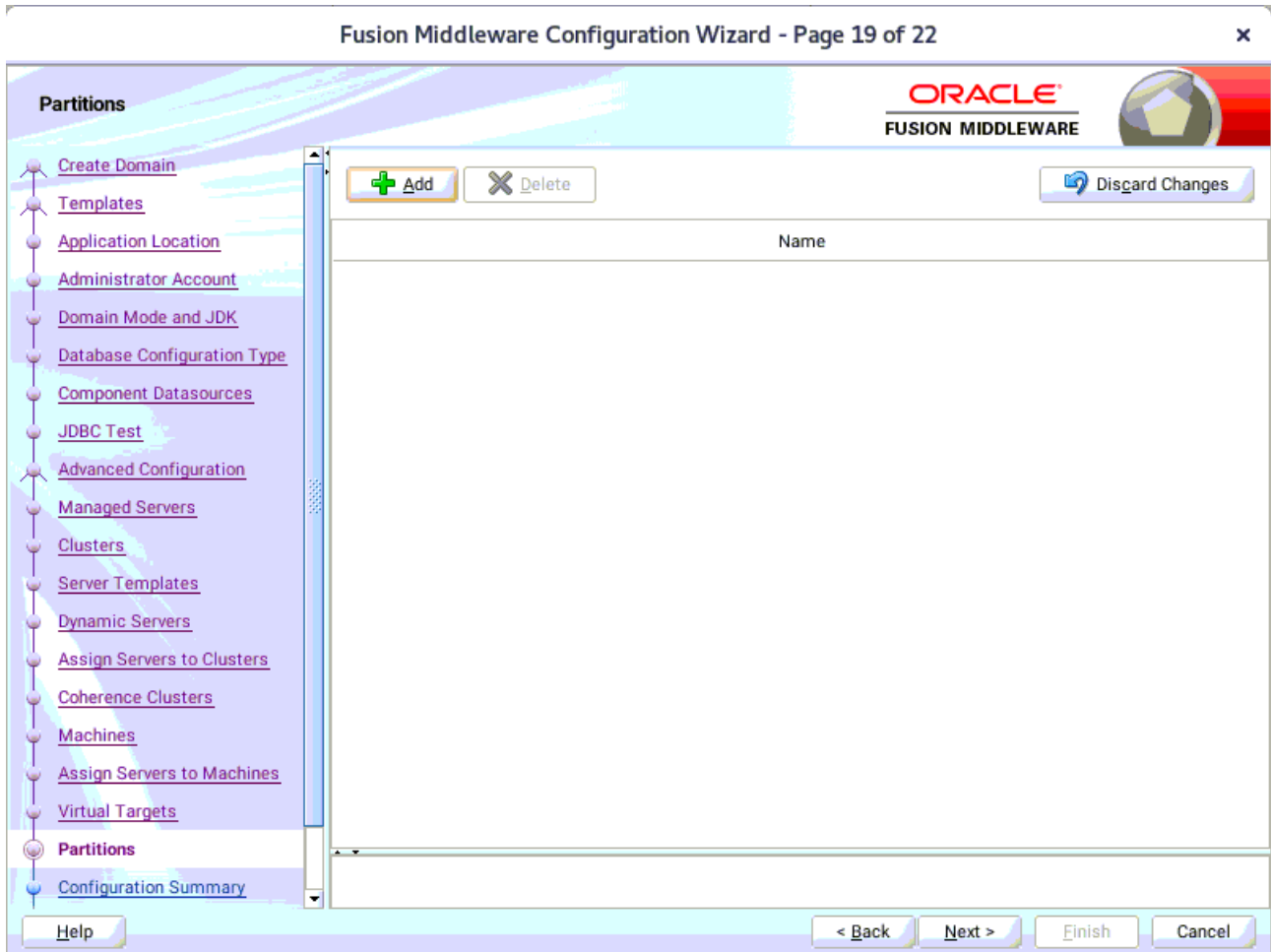
Move the AdminServer to the AdminServerMachine by clicking the '>' button. Click **Next** to continue.

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



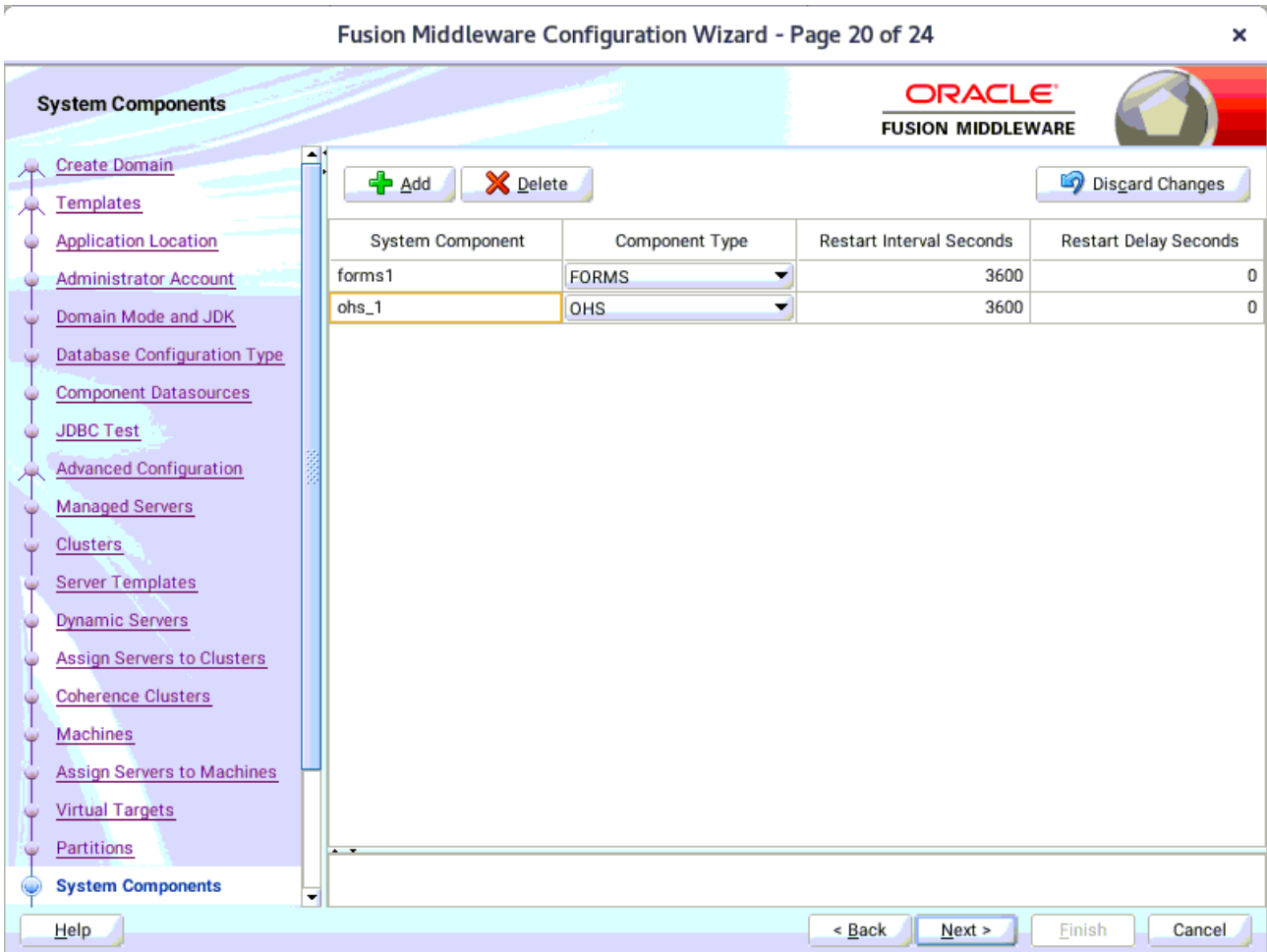
Used with WebLogic Server Partitions. Refer to the WebLogic Server documentation for details. Click **Next** to continue.

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



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

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



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

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

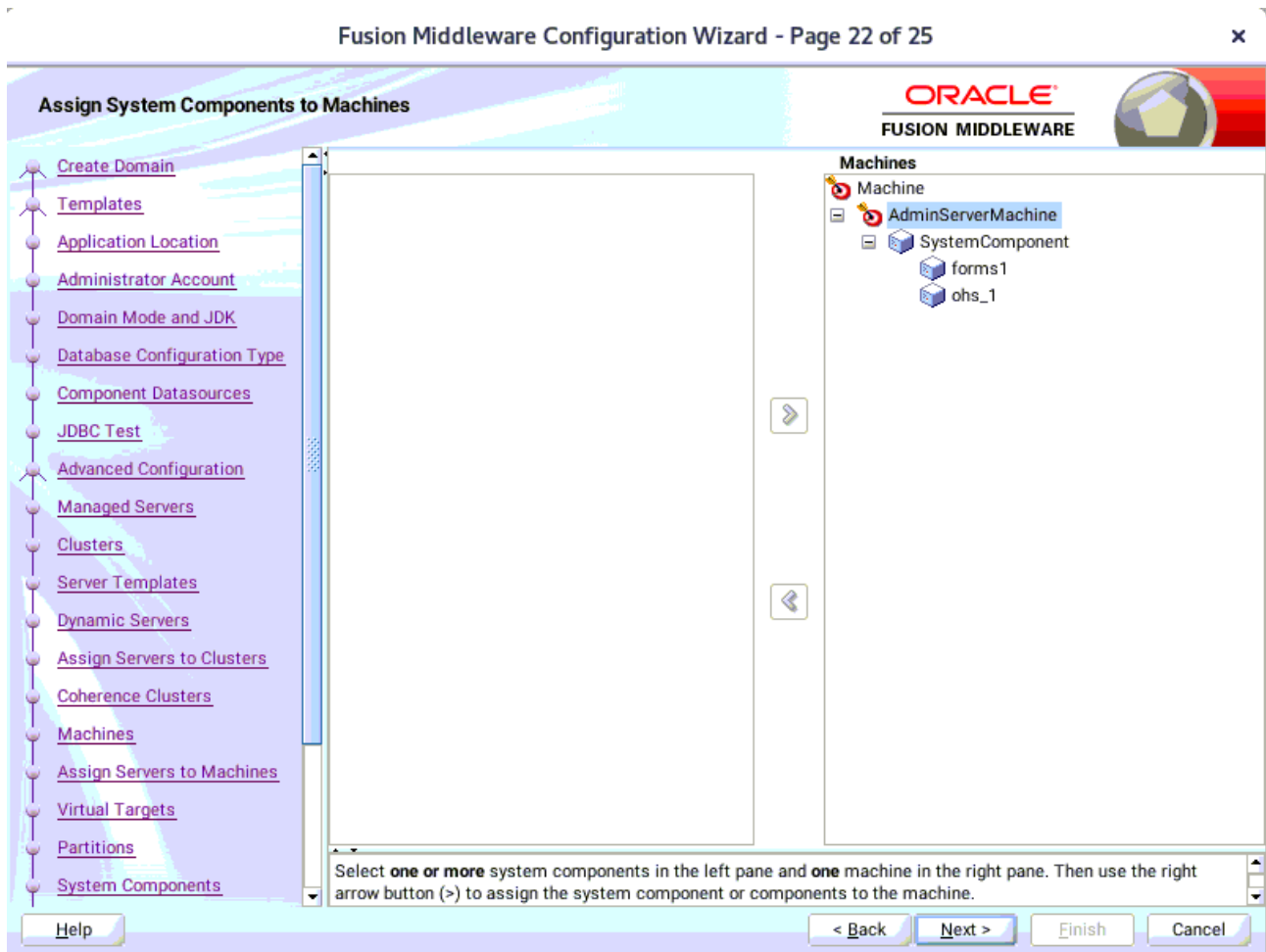
The screenshot shows the 'OHS Server' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 21 of 25'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation tree lists various configuration steps, with 'System Components' selected. 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, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted, indicating the next step in the wizard.

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

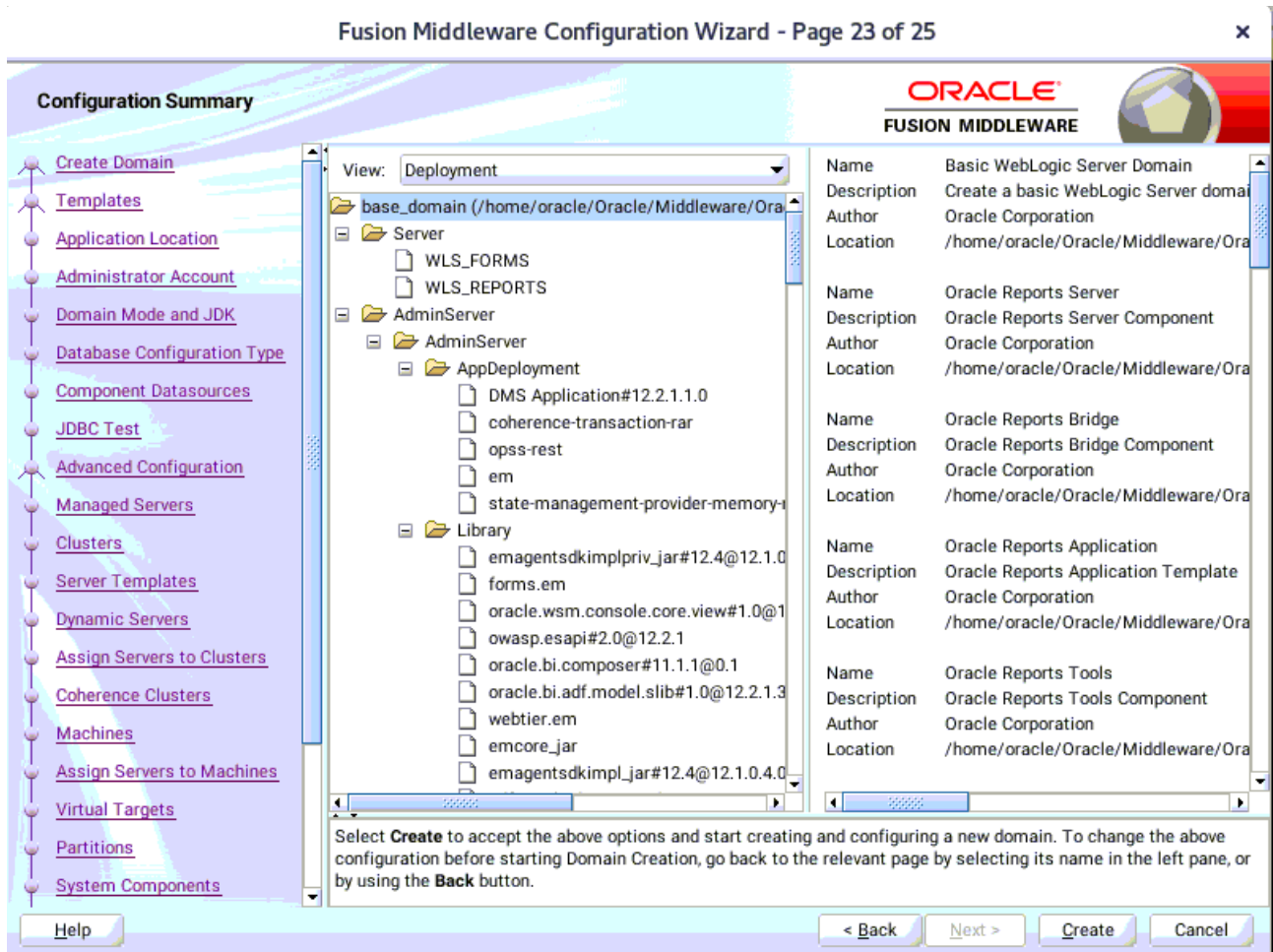
22). The **Assign System Components** screen appears.



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

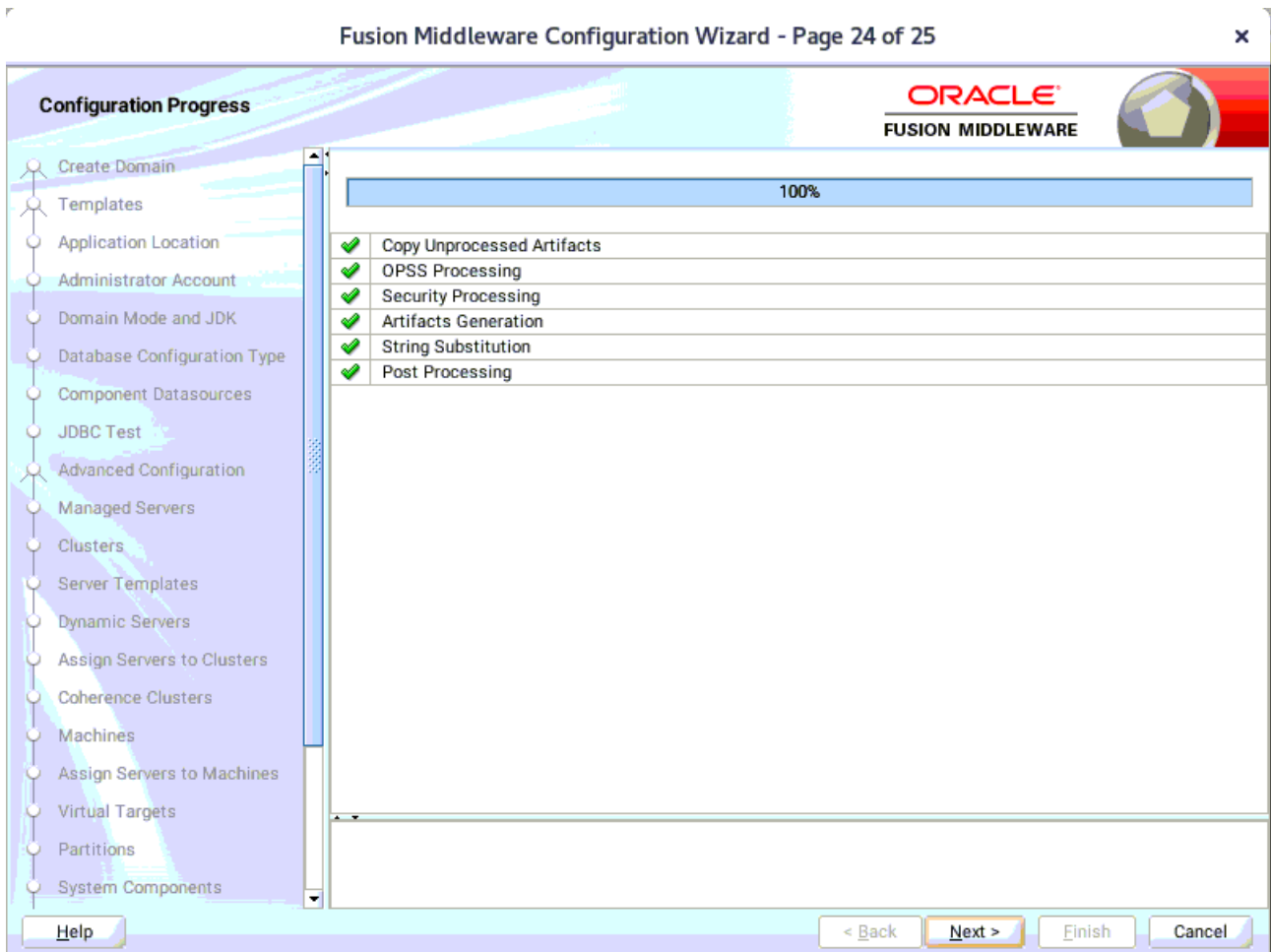


23). The **Configuration Summary** screen appears.



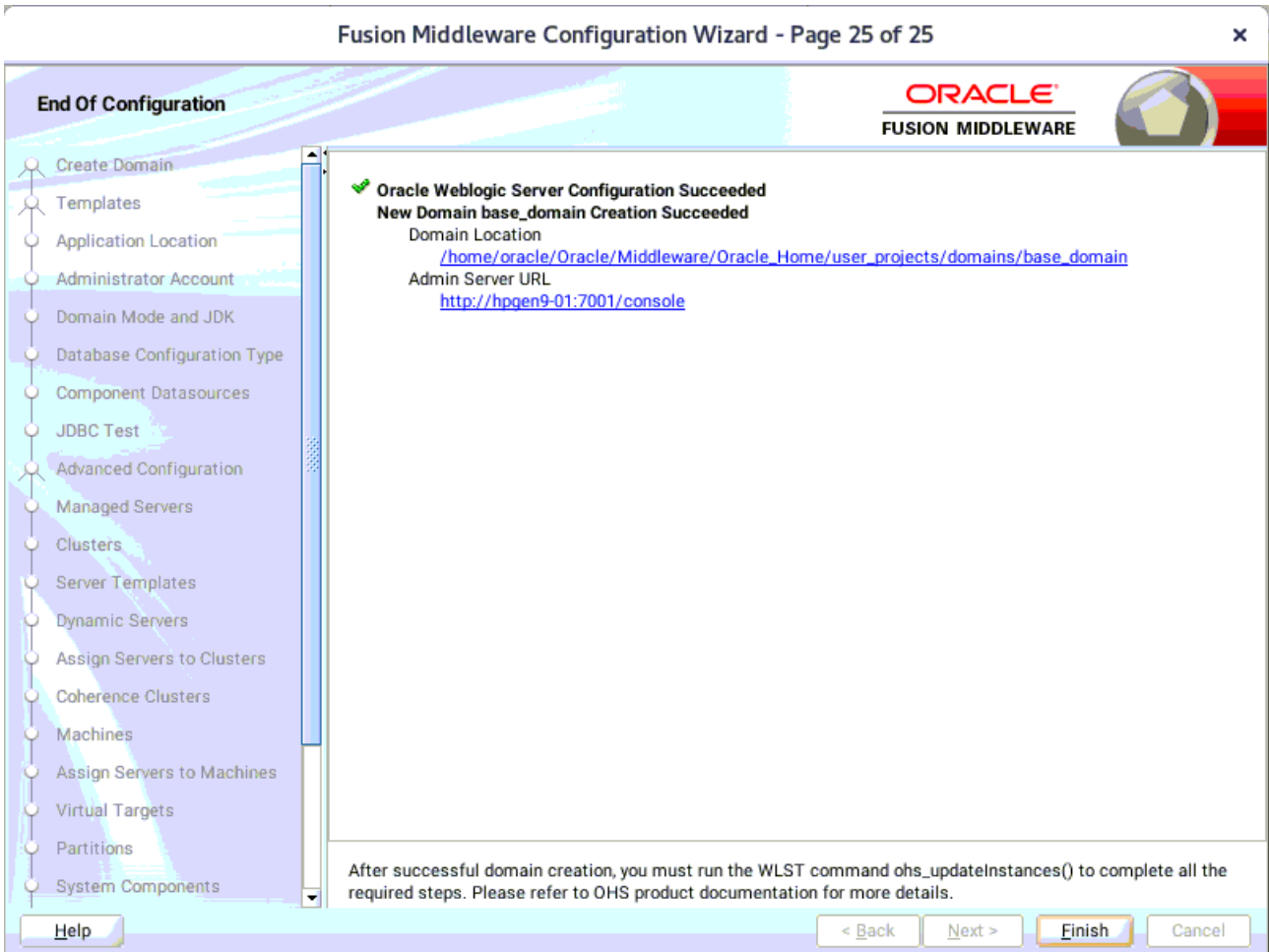
Select **Create** to accept the above options and start creating and configuring a new domain.

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:/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/user_projects/domains/base_domain/bin> ./startNodeMa
nager.sh > nm.out&
[1] 11258
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> + /home/oracl
e/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.ho
me=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/..coherence -Dbea.home=/home/oracle/Oracle/Middleware/Ora
cle_Home/wlserver/.. -Dreports.tools.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsToolsCompon
ent -Dreports.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/reports -Dreports.bridge.product.home=/hom
e/oracle/Oracle/Middleware/Oracle_Home/ReportsBridgeComponent -Dreports.server.product.home=/home/oracle/Oracle/
Middleware/Oracle_Home/ReportsServerComponent -Dforms.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/fo
rms -Dohs.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ohs -Doracle.security.jps.config=/home/oracle/
Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.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_221
weblogic.NodeManager -v
<Oct 24, 2019 12:02:06 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/us
er_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Oct 24, 2019 12:02:06 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Oct 24, 2019 12:02:06 PM GMT+08:00> <INFO> <Upgrade> <Saving upgraded NodeManager properties to '/home/oracle/O
racle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
<Oct 24, 2019 12:02:06 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/us
er_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Oct 24, 2019 12:02:06 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Typ
e=kss, PassPhraseUsed=true>
Oct 24, 2019 12:02:06 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/
jps-config-jse.xml
Oct 24, 2019 12:02:08 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.

```

**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
Queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleCon
figurableCacheFactory
<Oct 24, 2019 12:07:07,416 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Oct 24, 2019 12:07:07,488 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMIN
G.>
<Oct 24, 2019 12:07:07,488 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Oct 24, 2019 12:07:08,056 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to mult
iple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<Oct 24, 2019 12:07:08,058 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening o
n 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Oct 24, 2019 12:07:08,058 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Adm
inistration Server "AdminServer" for domain "base_domain" running in production mode.>
<Oct 24, 2019 12:07:08,059 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening o
n 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Oct 24, 2019 12:07:08,059 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 1
47.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Oct 24, 2019 12:07:08,059 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening o
n 127.0.0.1:7001 for protocols iiop, t3, ldap, snmp, http.>
<Oct 24, 2019 12:07:08,059 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening o
n 0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Oct 24, 2019 12:07:08,060 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 1
47.2.207.96:7001 for protocols iiop, t3, ldap, snmp, http.>
<Oct 24, 2019 12:07:08,063 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING m
ode.>
<Oct 24, 2019 12:07:08,082 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING
.>
2019-10-24 12:07:08.806/130.894 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '9' for q
ueue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over
ReST

```

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

```

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

```

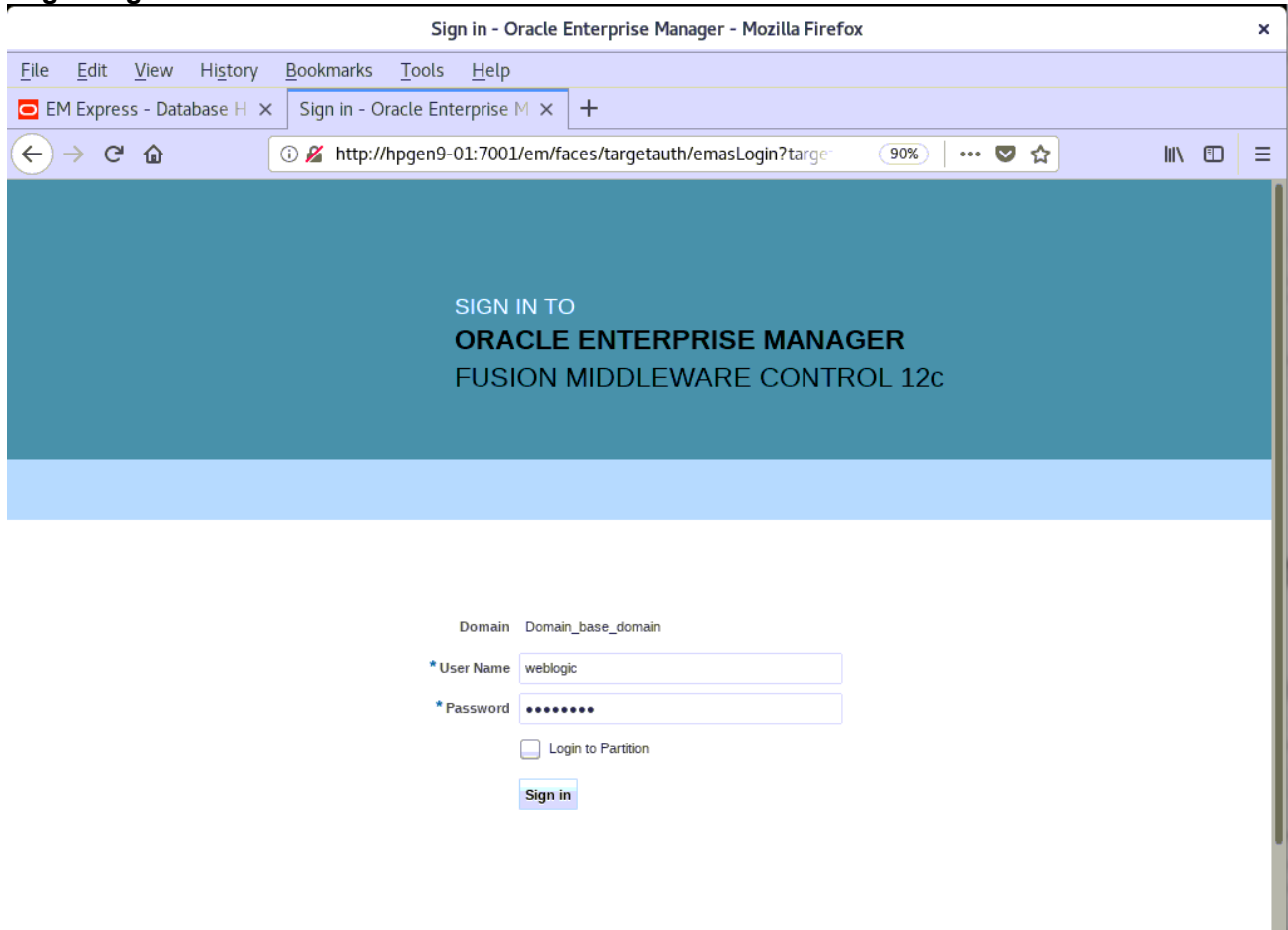
4-3. Verifying the Installed Products and Product Versions. Check the products and product version numbers by running the **opatch lsinventory -detail** command from the **ORACLE\_HOME/OPatch** directory.

Confirmed that OPatch succeeded.

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

1). Access to Enterprise Manager Console.

**Login Page:**



Home Page:

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain named 'base\_domain'. The browser title is 'base\_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox'. The address bar shows the URL 'http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainH'. The page displays a navigation menu with 'base\_domain' selected. A summary section shows 'Servers' with 2 Down and 1 Up, 'Clusters' with 2 Down, and 'Deployments' with 2 Down and 1 Up. The 'Administration Server' section shows details for 'AdminServer' (Name: AdminServer, Host: hpgen9-01, Listen Port: 7001). Below this is a 'Servers' table:

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

The bottom of the table indicates 'Columns Hidden 34' and 'Servers 3 of 3'. The page also includes an 'Information' section with a note about edit session locks and a timestamp of 'Oct 24, 2019 12:18:06 PM GMT+08:00'.

Starting WLS\_FORMS

The screenshot shows the Oracle Enterprise Manager interface for starting the 'WLS\_FORMS' WebLogic Server. The browser title is 'WLS\_FORMS (Oracle WebLogic Server) - Oracle Enterprise Manager - Mozilla Firefox'. The address bar shows the URL 'http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServer'. The page displays a navigation menu with 'WLS\_FORMS' selected. A summary section shows 'Monitoring' with 0 Request Processing Time (ms) and 0.00 Requests (per minute), and 'Deployments' with 1 Up. The 'General' section shows details for 'WLS\_FORMS' (Up Since: Oct 24, 2019 12:21:46 PM, Version: 12.2.1.4.0, State: Running, Health: OK, Server Type: Configured, Cluster: cluster\_forms, CPU Usage (%): 1.38, Heap Usage (MB): 381.06, Java Vendor: Oracle Corporation, Java Version: 1.8.0\_221). The 'Response and Load' section shows a line graph for 'Request Processing Time (ms)' and 'Requests (per minute)' from 12:08 PM to 12:20 PM. The 'EJBs' section shows 'Beans in Use 0'. The page also includes an 'Information' section with a note about edit session locks and a timestamp of 'Oct 24, 2019 12:22:17 PM GMT+08:00'. The bottom of the page shows the URL '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

File Edit View History Bookmarks Tools Help

EM Express - Database H x WLS\_REPORTS (Oracle Web x +

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

ORACLE Enterprise Manager Fusion Middleware Control 12c WebLogic Domain weblogic

WLS\_REPORTS

WebLogic Server Start Up Shut Down Oct 24, 2019 12:27:34 PM GMT+08:00

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

**Monitoring**

Request Processing Time (ms) 0

Requests (per minute) 0.00

**Deployments**

1 Up

**Most Requested**

Requests Processed 0

**General**

Up Since Oct 24, 2019 12:26:28 PM

Version 12.2.1.4.0

State Shutdown

Health OK ✓

Server Type Configured

Cluster cluster\_reports

CPU Usage (%) 0.31

Heap Usage (MB) 325.24

Java Vendor Oracle Corporation

Java Version 1.8.0\_221

**Servlets and JSPs**

Active Sessions 0

Request Processing Time (ms) 0

**Response and Load**

Table View

**EJBs**

Beans in Use 0

Base Accesses (per minute) 0.00

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

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

File Edit View History Bookmarks Tools Help

EM Express - Database H x base\_domain (Oracle WebLo x +

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

ORACLE Enterprise Manager Fusion Middleware Control 12c WebLogic Domain weblogic

base\_domain

WebLogic Domain Oct 24, 2019 12:27:53 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**

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 Oracle HTTP Server. The browser address bar shows the URL: `http://hpgen9-01:7001/em/faces/as_ohs_ohsHome?type=oracle`. The console displays the following information:

- Monitoring:** CPU Usage (%) is 0.00, Memory Usage (%) is 0.00.
- Virtual Hosts:** 2 Virtual Hosts.
- Modules:** 52 Modules.
- General Information:**
  - Component Name: ohs\_1
  - Version: 12.2.1.4.0
  - State: Running
  - Host: hpgen9-01
  - Ports: 7777 4443 127.0.0.1:7779
  - Machine Name: AdminServerMachine
  - Auto Restart:
  - Oracle Home: /home/oracle/Oracle/Middleware/Oracle\_Home
- Response and Load:** A line graph showing Request Processing Time (mili seconds) and /Domain\_base\_domain/base\_domain/ohs\_1: Request Throu... over time (12:17 PM to 12:29 PM, October 24 2019).
- Key Statistics:**
  - Idle Processes: Unavailable
  - Busy Processes: Unavailable
  - Error Rate (%): -1.00
  - Connection Duration (seconds): Unavailable
  - Request Processing Time (seconds): Unavailable
  - Request Throughput (per second): -1.00
- CPU and Memory Usage:** A line graph showing CPU and memory usage over time (12:17 PM to 12:29 PM, October 24 2019).

The URL in the address bar is updated to: `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 website. The browser address bar shows the URL: `http://hpgen9-01:7777/`. The page content includes:

- 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.
- Architecture Diagram:** A 3D diagram illustrating the Oracle HTTP Server 12c architecture. It shows the OHS (Oracle HTTP Server) at the center, supported by various components:
  - Local Content:** JS, HTML, and Audit Control.
  - Identity Management:** Auditing, Authentication, and Authorization.
  - Load Balancing:** Fusion Middleware Applications.
  - Enterprise Manager:** Manage, monitor, diagnose.
  - FMW Lifecycle Tools:** Process Management and HA, Certificate management, Automation, and Test to Production.

Oracle HTTP Server 12c - Mozilla Firefox

File Edit View History Bookmarks Tools Help

EM Express - Database x ohs\_1 (Oracle HTTP Server x Oracle HTTP Server 12c x Preferences x Oracle HTTP Server 12c x +

https://hpgen9-01:4443/ 90%

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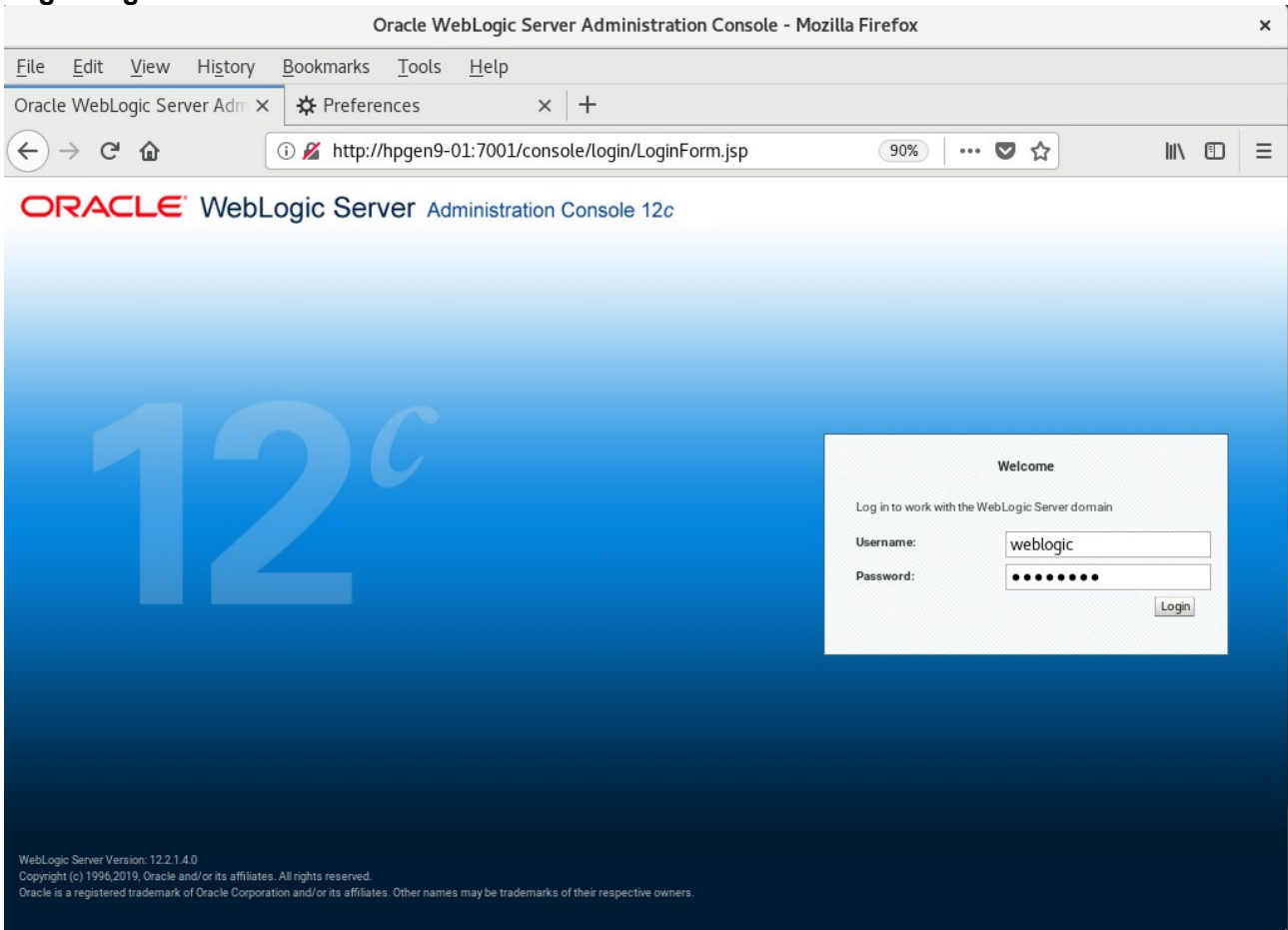
**ORACLE** Oracle HTTP Server 12c

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. At the center is a blue oval representing the server, containing several components: **Local Content** (with JS and HTML icons), **OHS** (Oracle HTTP Server), **Auditing**, **Authentication Authorization** (with a lock icon), **Audit Control**, and **Identity Management**. Below the oval are **Load Balancing** and **Fusion Middleware Applications**. To the left, **Process Management and HA**, **Certificate management**, **Automation**, and **Test to Production** are shown with gear icons and arrows pointing towards the server. Below these are **FMW Lifecycle Tools**. At the bottom, **Enterprise Manager** is shown with the text **Manage, monitor, diagnose** and an arrow pointing up towards the server.

2). Access to Administration Server Console

Login Page as shown below:

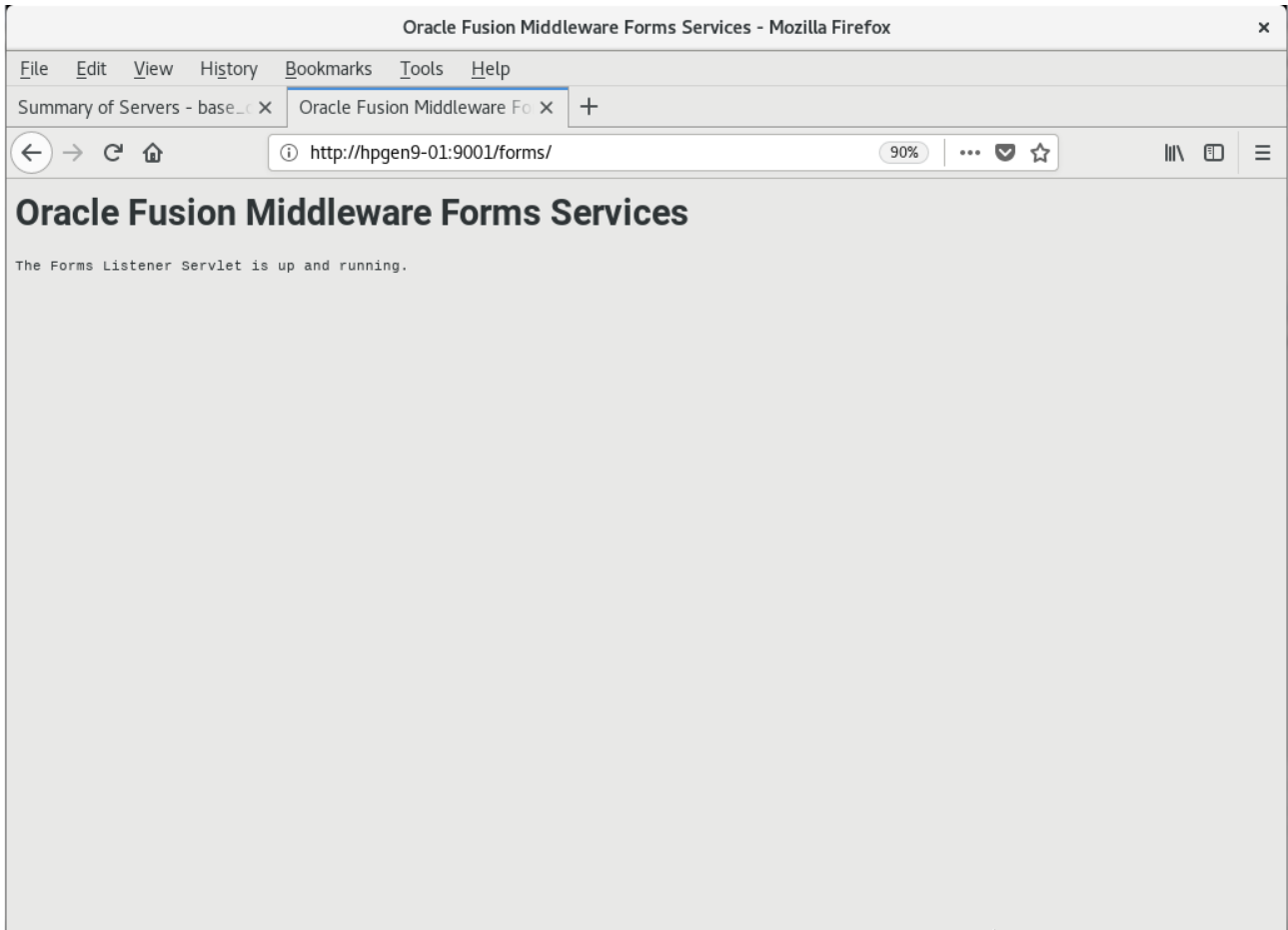


Home Page:

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.



4). Access to Oracle Reports Services.

Oracle Reports Services - Servlet - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Summary of Servers - base... x Oracle Reports Services - Se... x +

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

**ORACLE**  
Reports

Oracle Reports Services - Servlet Command Help

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

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

**Valid Reports Servlet Commands**

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

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

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

**End of Oracle Forms and Reports.**

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

## 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\_191 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

1-2. Login to the target system (SLES 15 SP1 64-bit OS) as a non-admin user. Download the Oracle WebTier 12cR2 OHS (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

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

1-3. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw\_12.2.1.4.0\_ohs\_linux64\_Disk1\_1of1.zip) file and launch the installation program by running 'fmw\_12.2.1.4.0\_ohs\_linux64.bin'

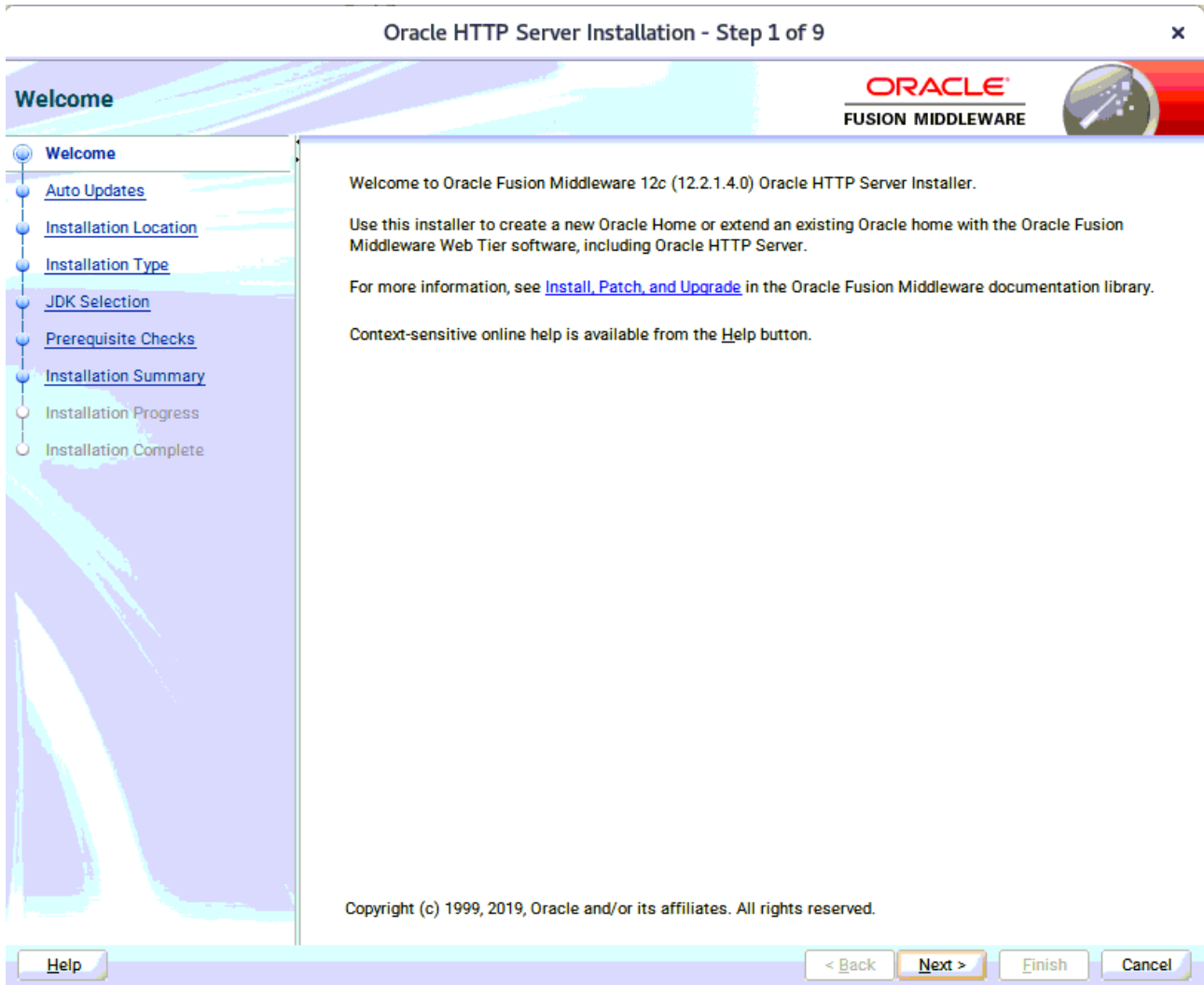
**For the actual installation, follow the steps below:**

- 1). Installation Inventory Setup.



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

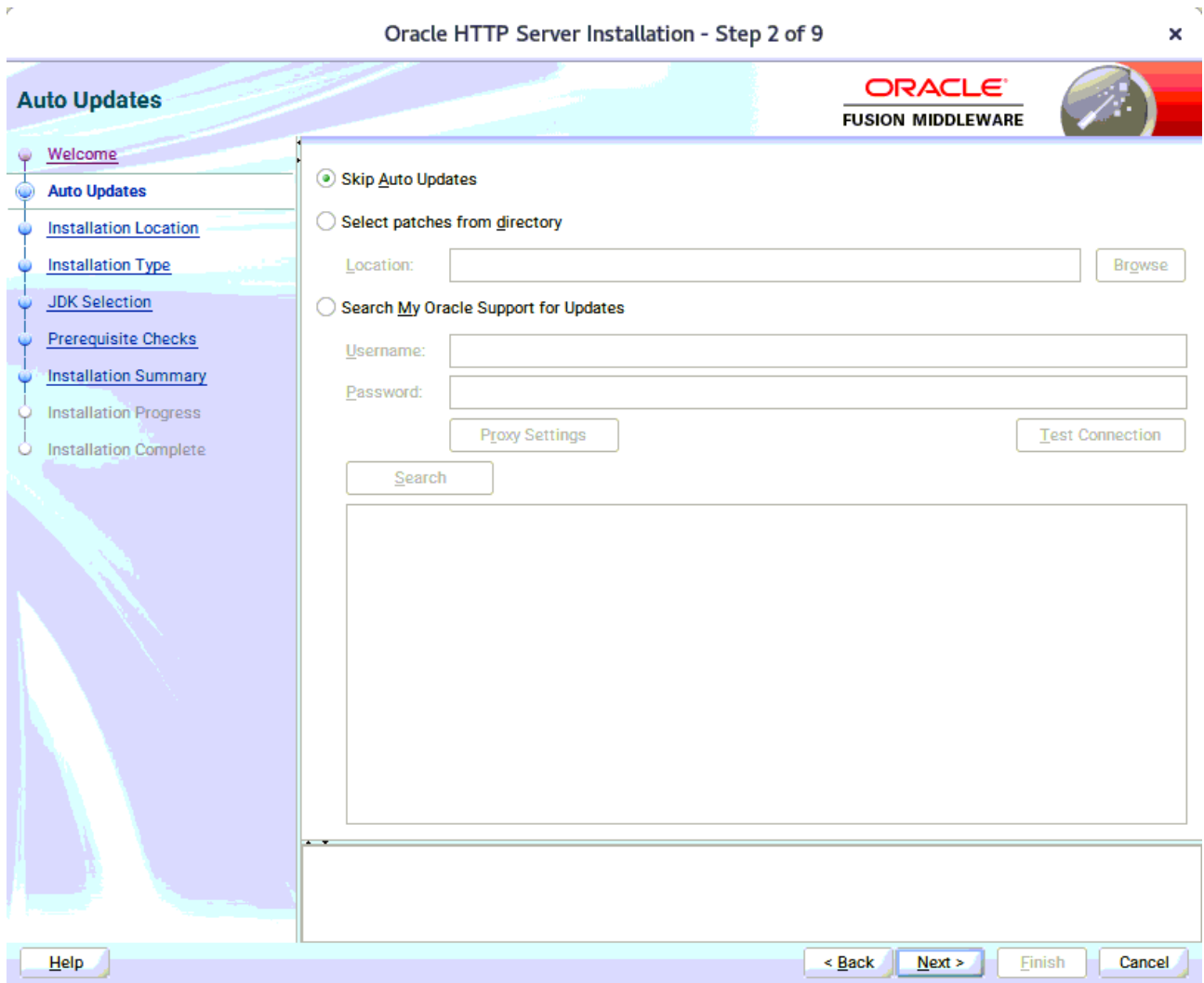
2). Welcome page.



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

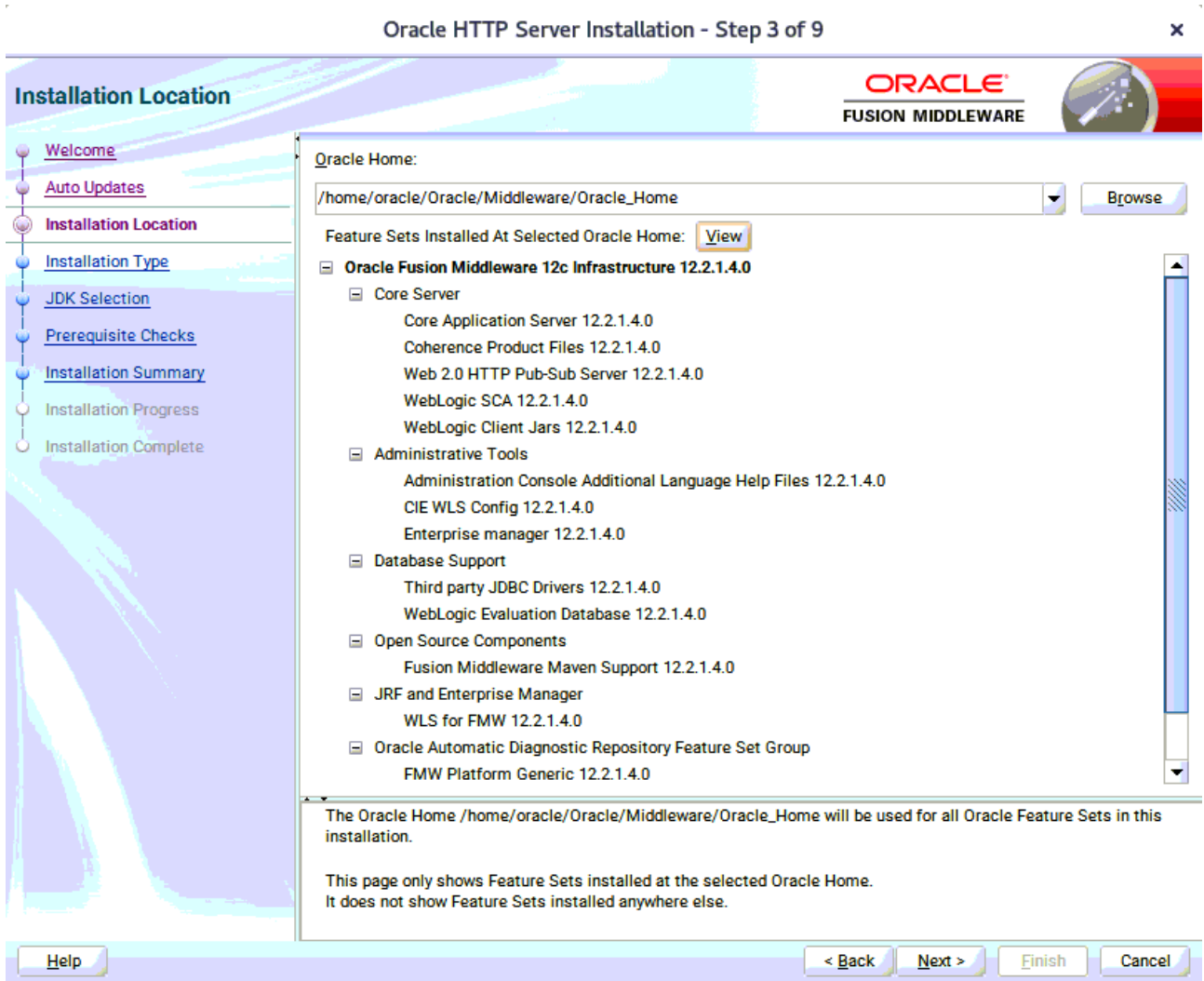


2). The **Auto Updates** page appears.



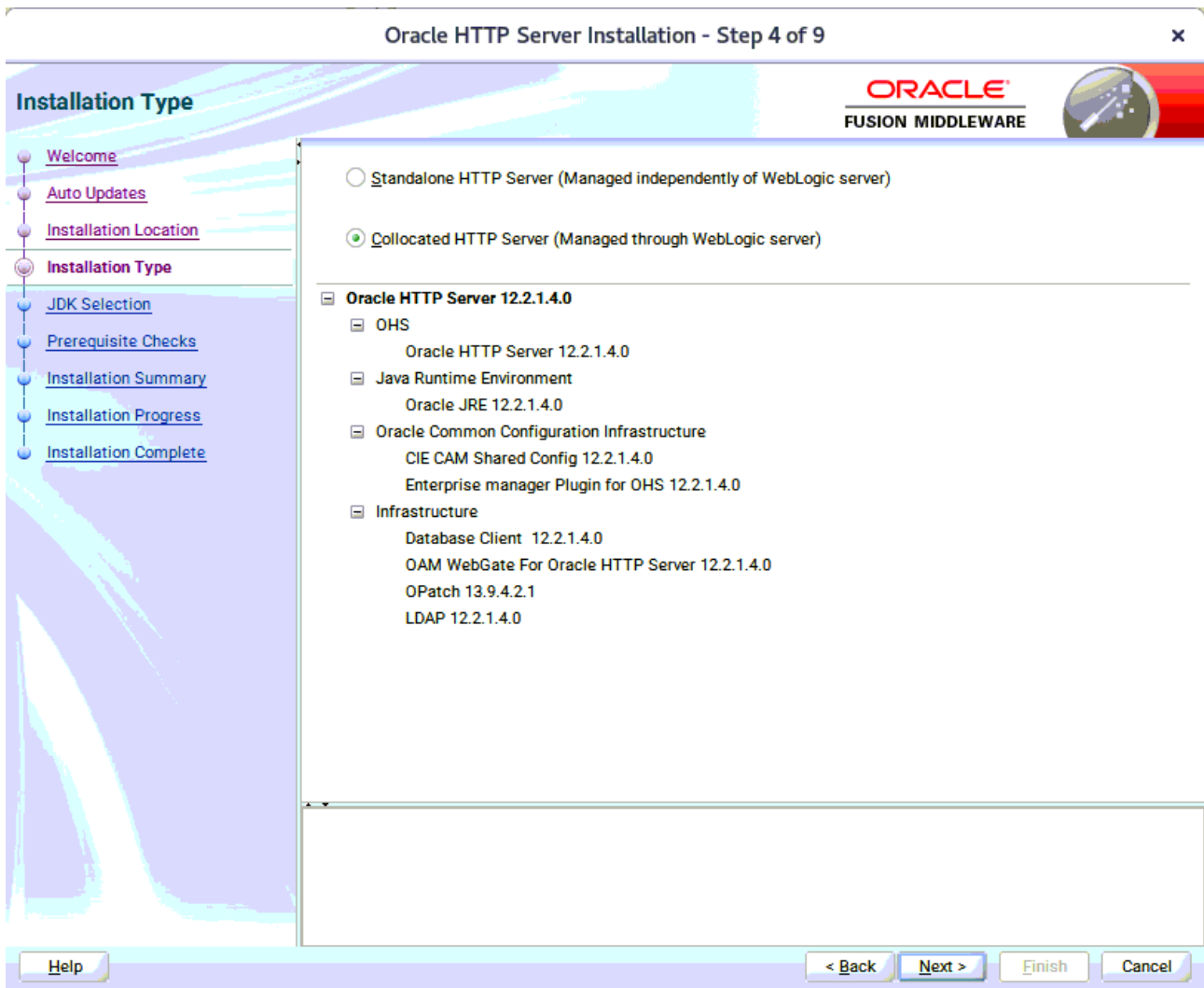
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



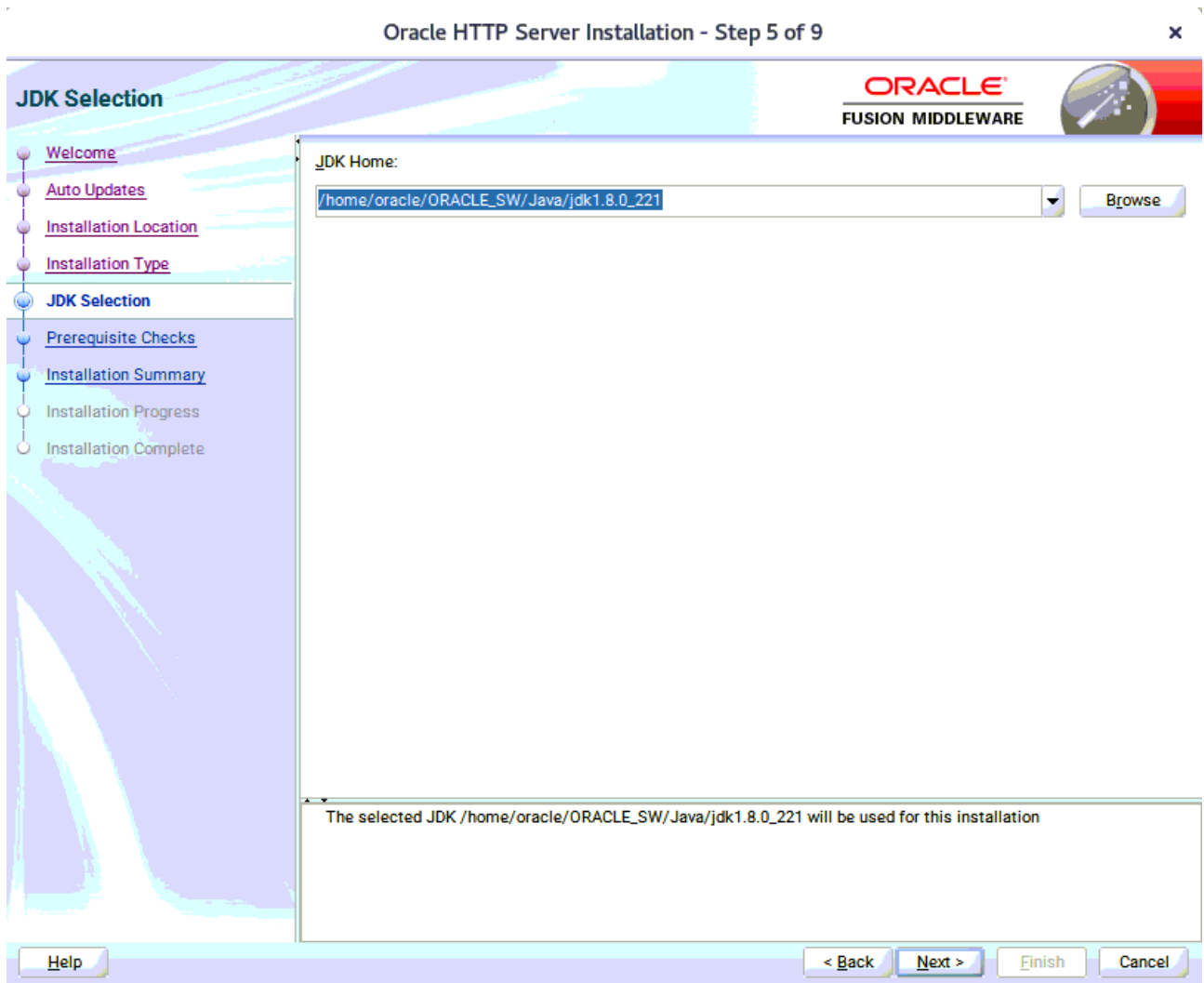
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



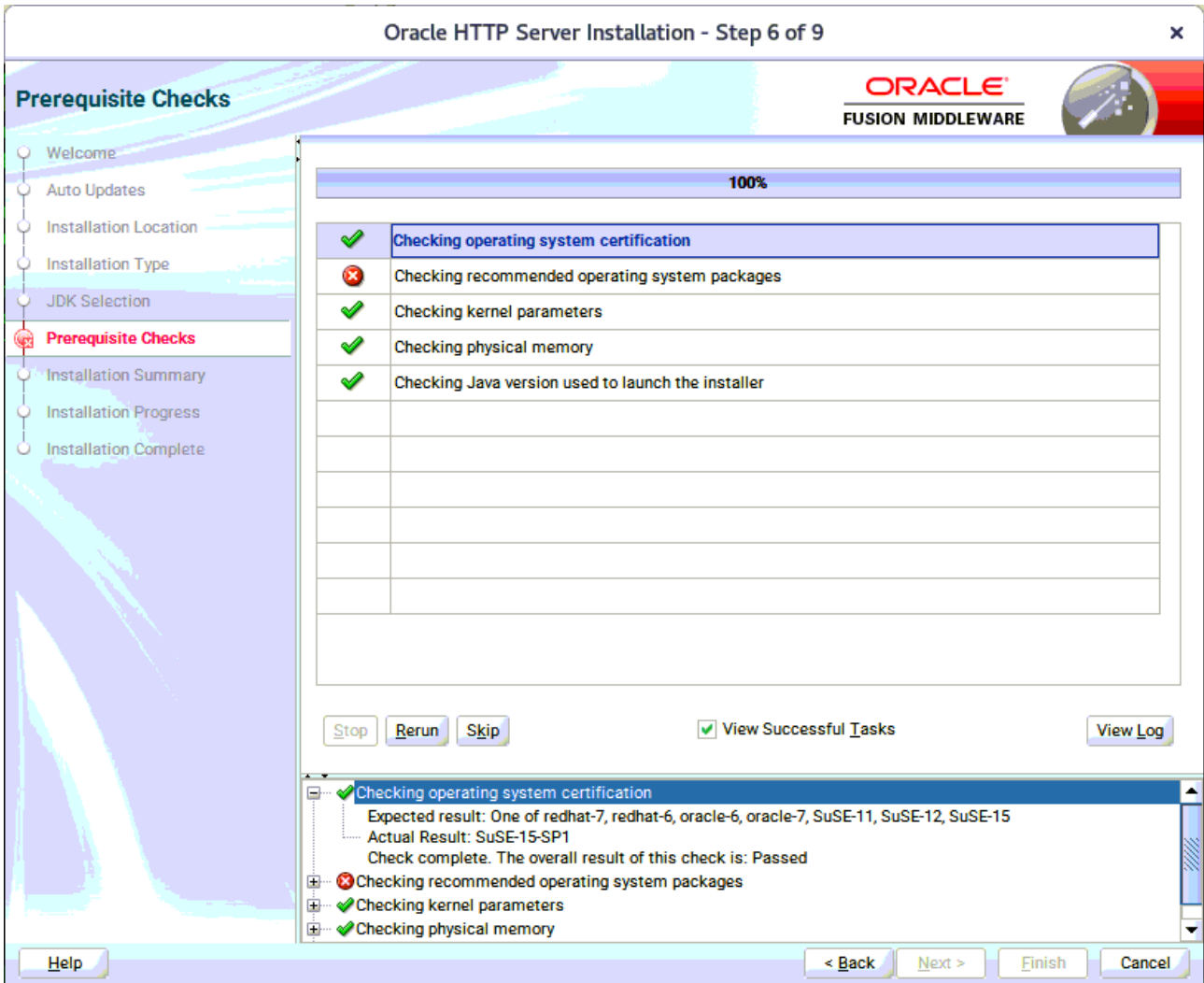
Selected **Collocated HTTP Server (Managed through WebLogic server)** to configure Oracle HTTP Server in a WebLogic Server Domain. (Alternative, select **Standalone HTTP Server (Managed independently of WebLogic server)** in the Installation Type screen to configure Oracle HTTP Server in a Standalone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

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



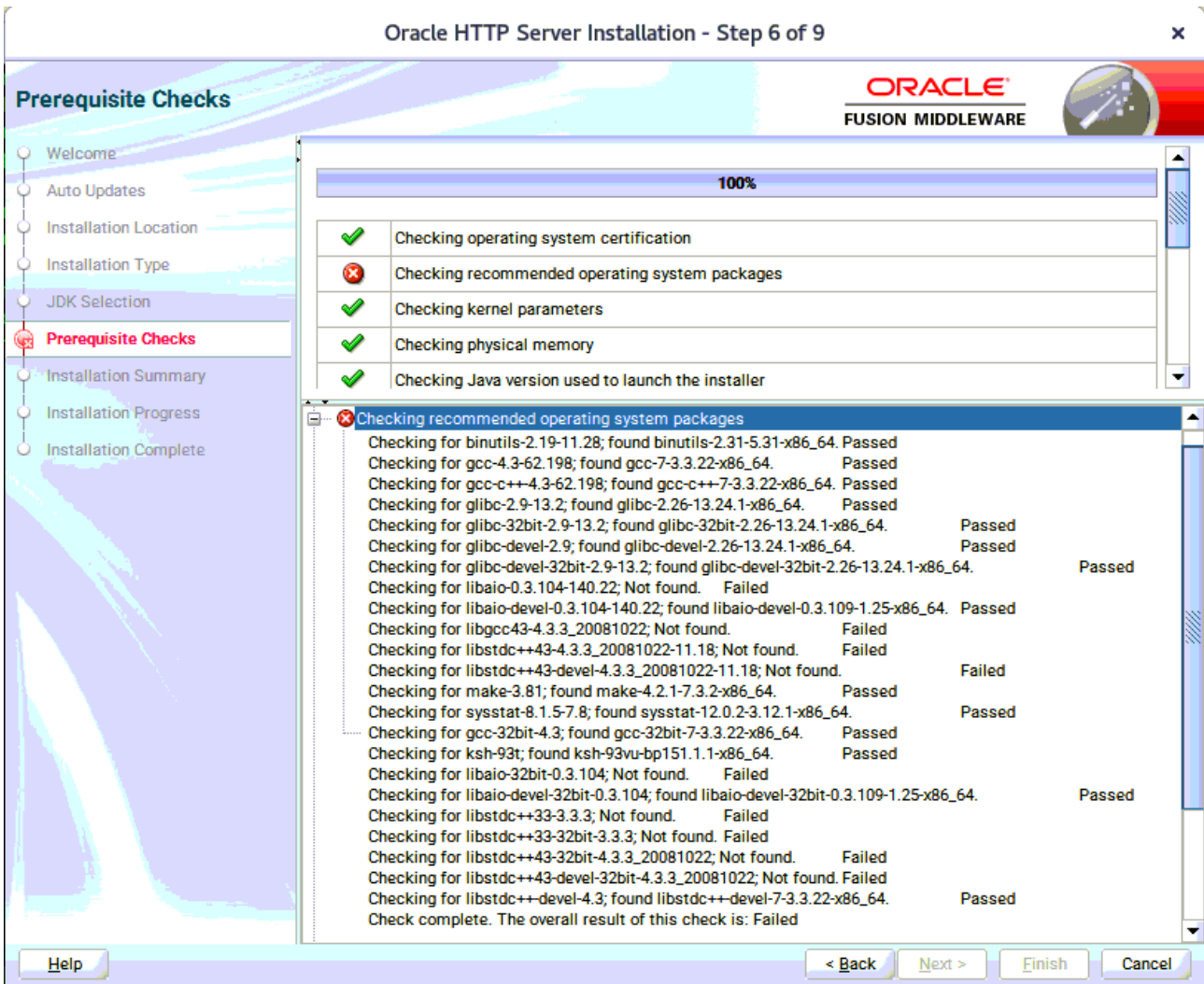
The selected JDK will be used for this installation. Click **Next** to continue.

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



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

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



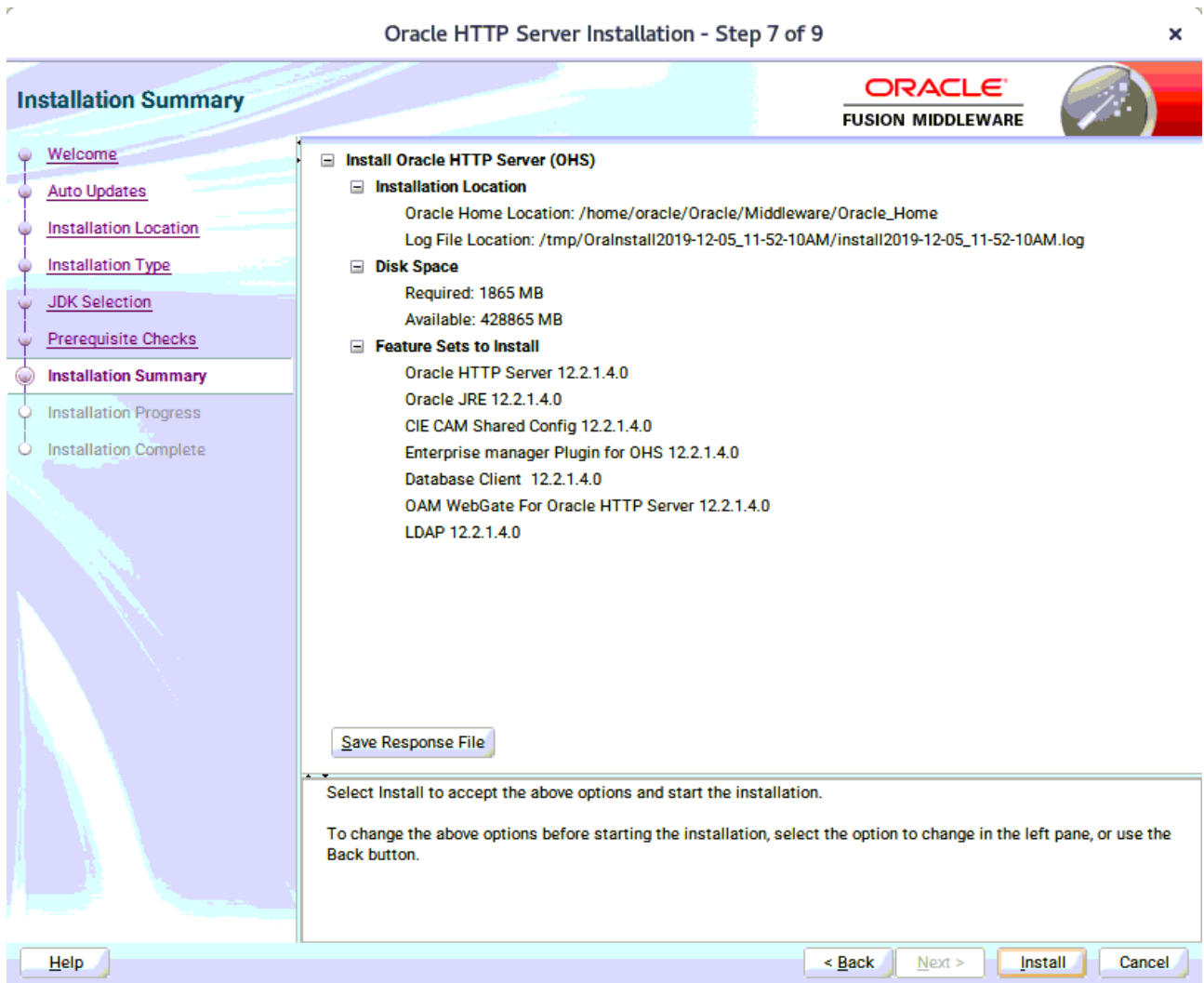
This is due to rpm name change in SLES15 (SP1). Oracle FUSION Middleware 12c (12.2.1.4) is certified on SLES15 (SP1). Manually ensure the following updated packages are installed.

- binutils-2.29.1-4.46.x86\_64
- gcc7-ada-7.3.1+r258812-2.15.x86\_64
- gcc-c++-7-1.563.x86\_64
- gcc-c++-32bit-7-1.563.x86\_64
- gcc-ada-7-1.563.x86\_64
- gcc-locale-7-1.563.x86\_64
- gcc-info-7-1.563.x86\_64
- gcc-7-1.563.x86\_64
- gcc7-c++-7.3.1+r258812-2.15.x86\_64
- gcc7-info-7.3.1+r258812-2.15.noarch
- gcc7-7.3.1+r258812-2.15.x86\_64
- gcc7-locale-7.3.1+r258812-2.15.x86\_64
- gcc7-c++-32bit-7.3.1+r258812-2.15.x86\_64
- gcc7-32bit-7.3.1+r258812-2.15.x86\_64
- gcc-32bit-7-1.563.x86\_64
- glibc-2.26-11.8.x86\_64
- linux-glibc-devel-4.15-1.47.noarch

glibc-devel-2.26-11.8.x86\_64  
glibc-locale-2.26-11.8.x86\_64  
glibc-extra-2.26-11.8.x86\_64  
glibc-32bit-2.26-11.8.x86\_64  
glibc-devel-32bit-2.26-11.8.x86\_64  
mksh-56c-1.10.x86\_64  
libaio1-0.3.109-1.25.x86\_64  
libaio1-32bit-0.3.109-1.25.x86\_64  
libaio-devel-32bit-0.3.109-1.25.x86\_64  
libaio-devel-0.3.109-1.25.x86\_64  
libcap2-2.25-2.41.x86\_64  
libcap-ng0-0.7.9-1.42.x86\_64  
libcap2-32bit-2.25-2.41.x86\_64  
libstdc++-7.3.1+r258812-2.15.x86\_64  
libstdc++-devel-gcc7-7.3.1+r258812-2.15.x86\_64  
libstdc++-32bit-7.3.1+r258812-2.15.x86\_64  
libstdc++-devel-gcc7-32bit-7.3.1+r258812-2.15.x86\_64  
libstdc++-locale-7.3.1+r258812-2.15.x86\_64  
libstdc++-devel-7-1.563.x86\_64  
libgcc\_s1-7.3.1+r258812-2.15.x86\_64  
libgcc\_s1-32bit-7.3.1+r258812-2.15.x86\_64  
make-4.2.1-5.48.x86\_64  
make-lang-4.2.1-5.48.noarch  
makedumpfile-1.6.3-5.6.x86\_64  
xorg-x11-7.6\_1-1.22.noarch  
xorg-x11-server-1.19.6-6.19.x86\_64  
xorg-x11-fonts-7.6-3.9.noarch  
xorg-x11-driver-video-7.6\_1-2.30.x86\_64  
xorg-x11-Xvnc-1.8.0-11.23.x86\_64  
xorg-x11-fonts-core-7.6-3.9.noarch  
xorg-x11-server-extra-1.19.6-6.19.x86\_64  
xorg-x11-essentials-7.6\_1-1.22.noarch

)

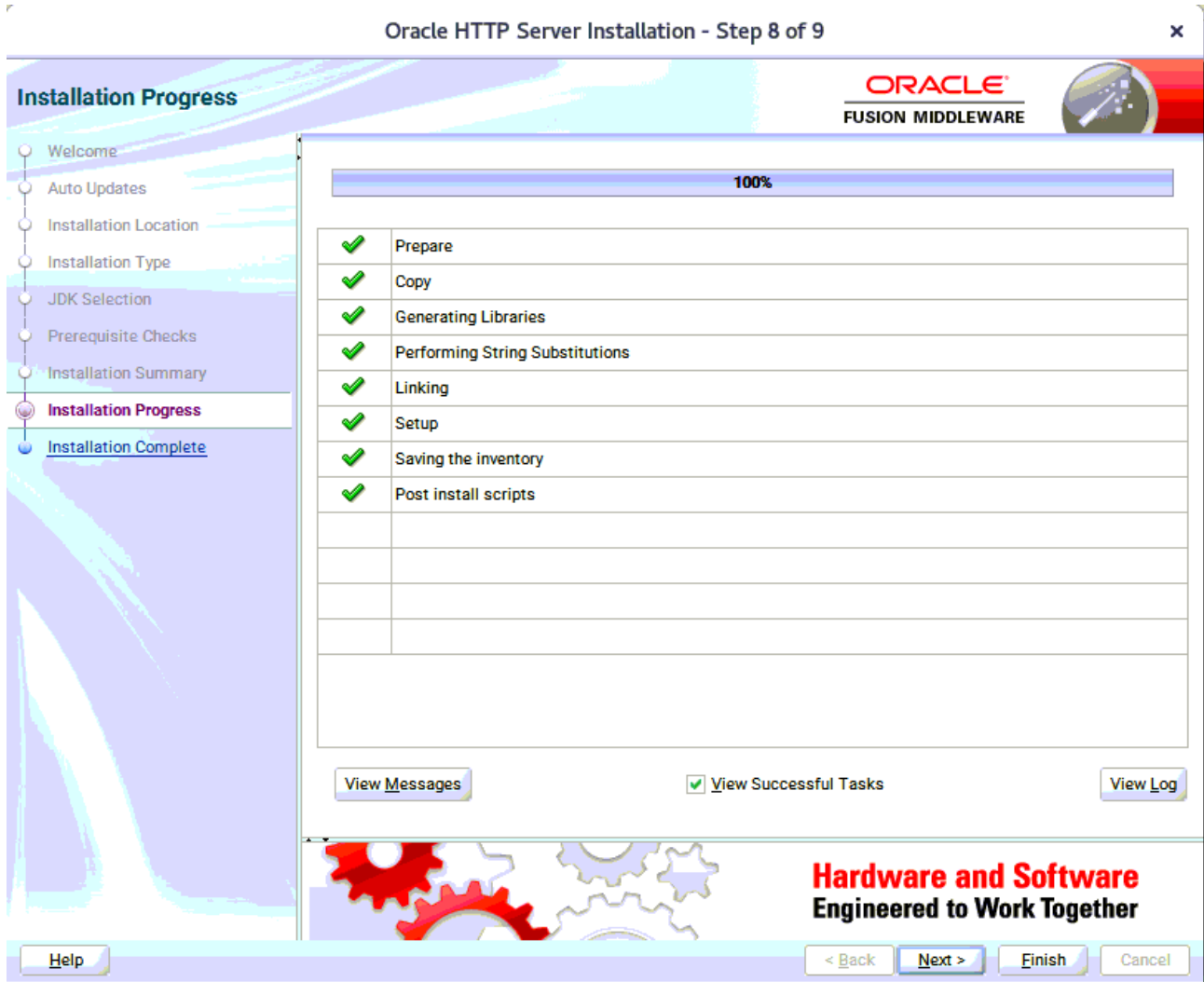
7). The **Installation Summary** page appears.



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

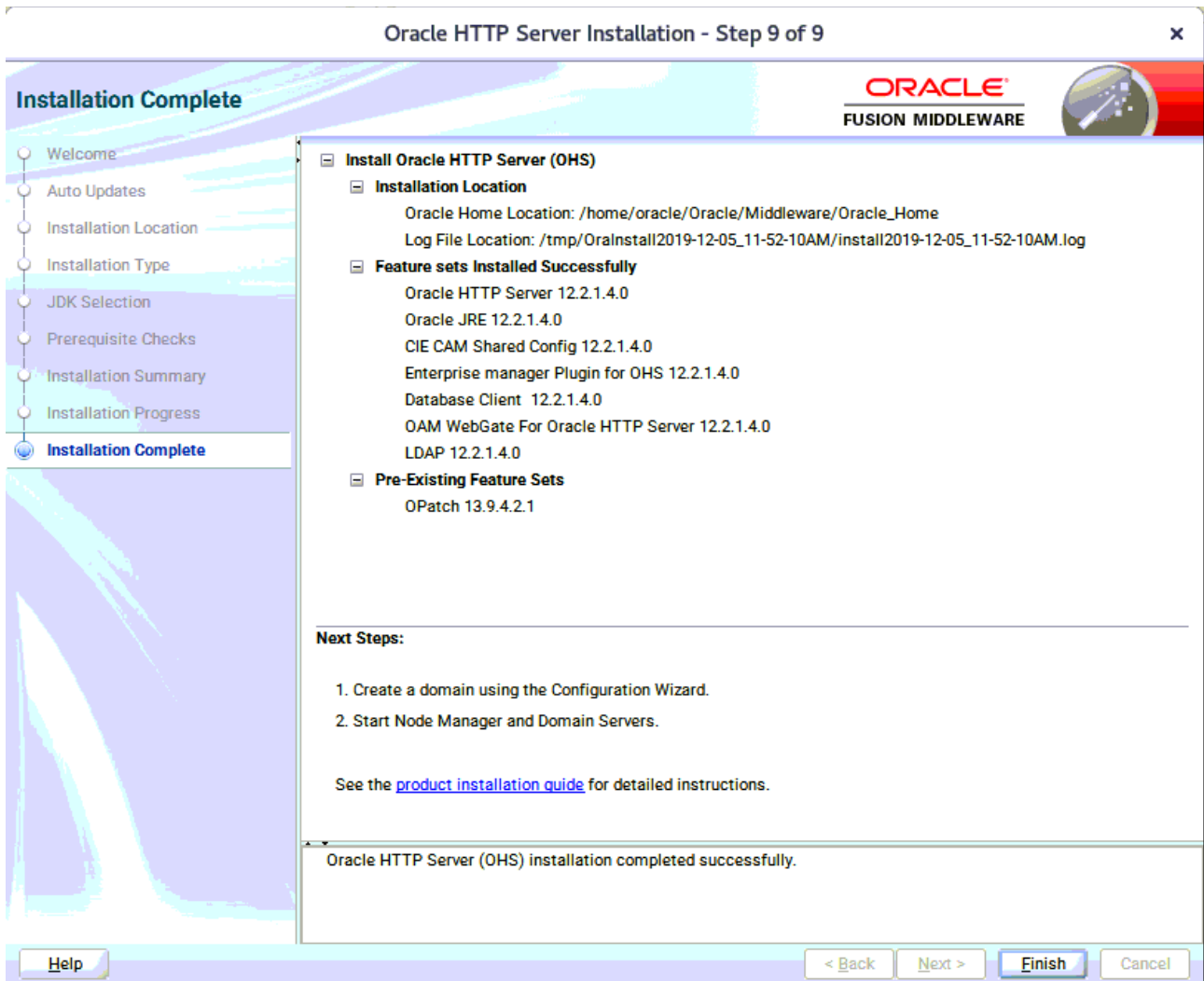


8). The **Installation Progress** page appears.



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

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



Click **Finish** to dismiss the installer.

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

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

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

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.

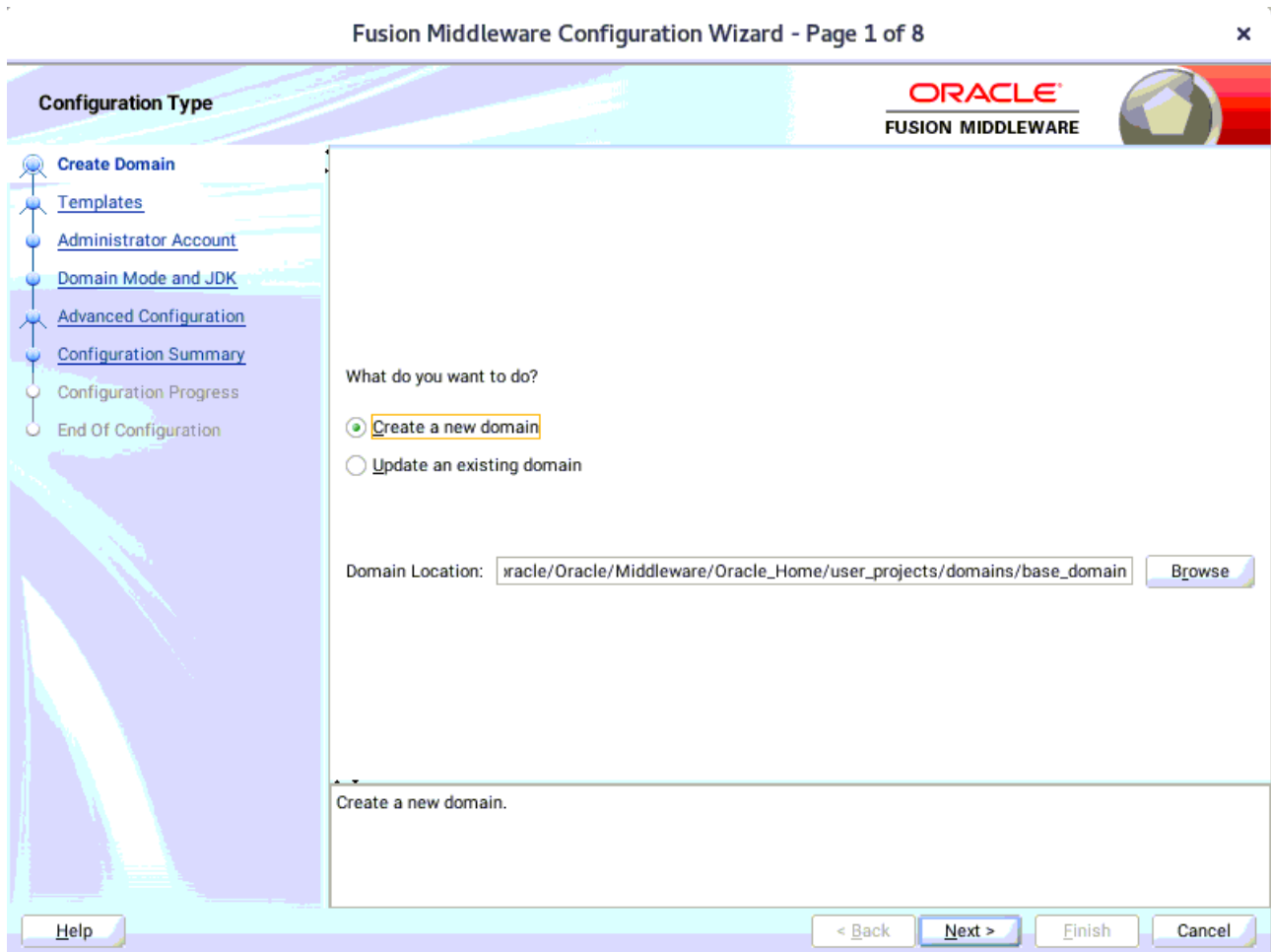
Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the components as shown above, and ensure the schema creation is successful.

### 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.

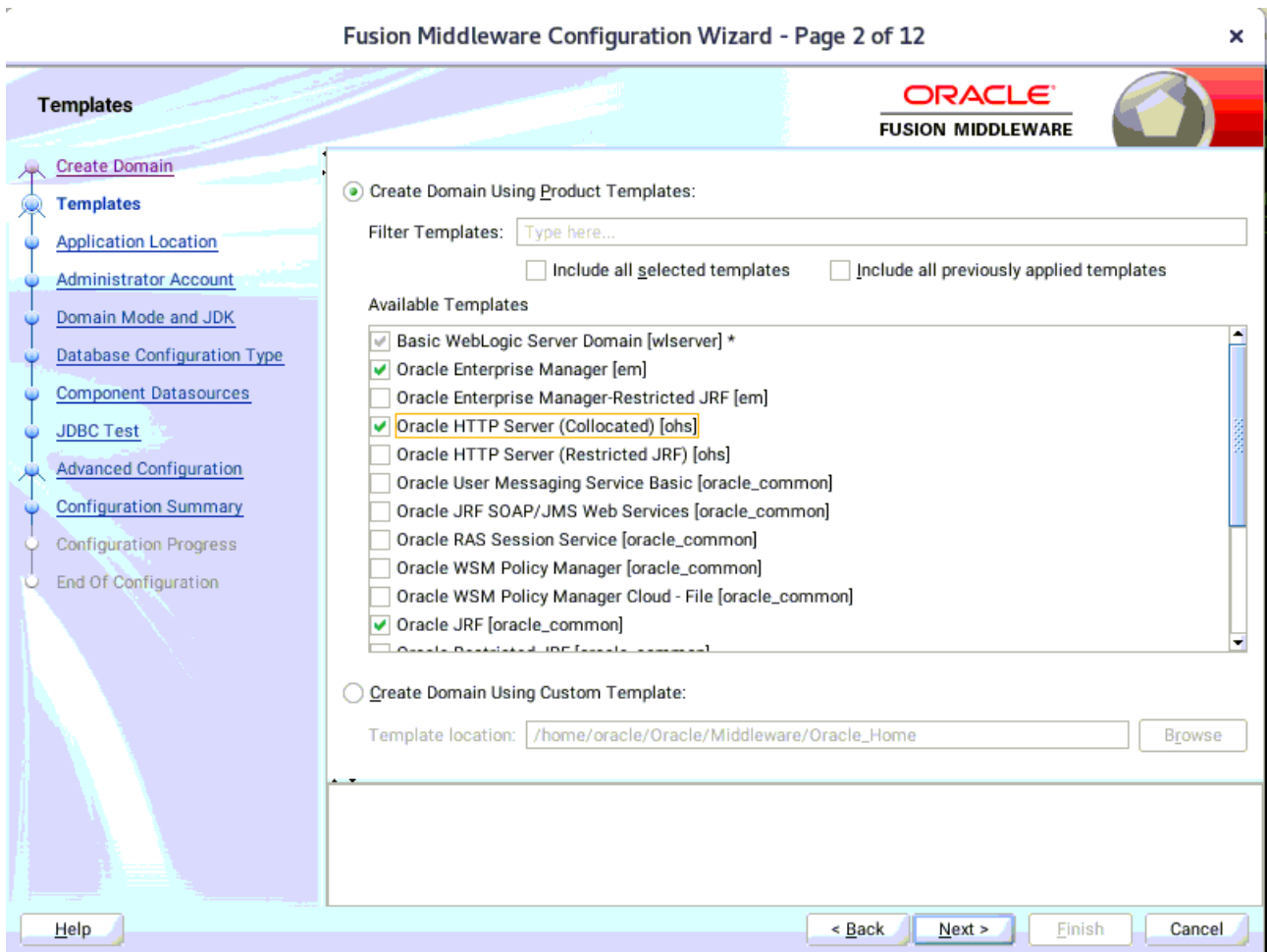
Follow these steps:

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



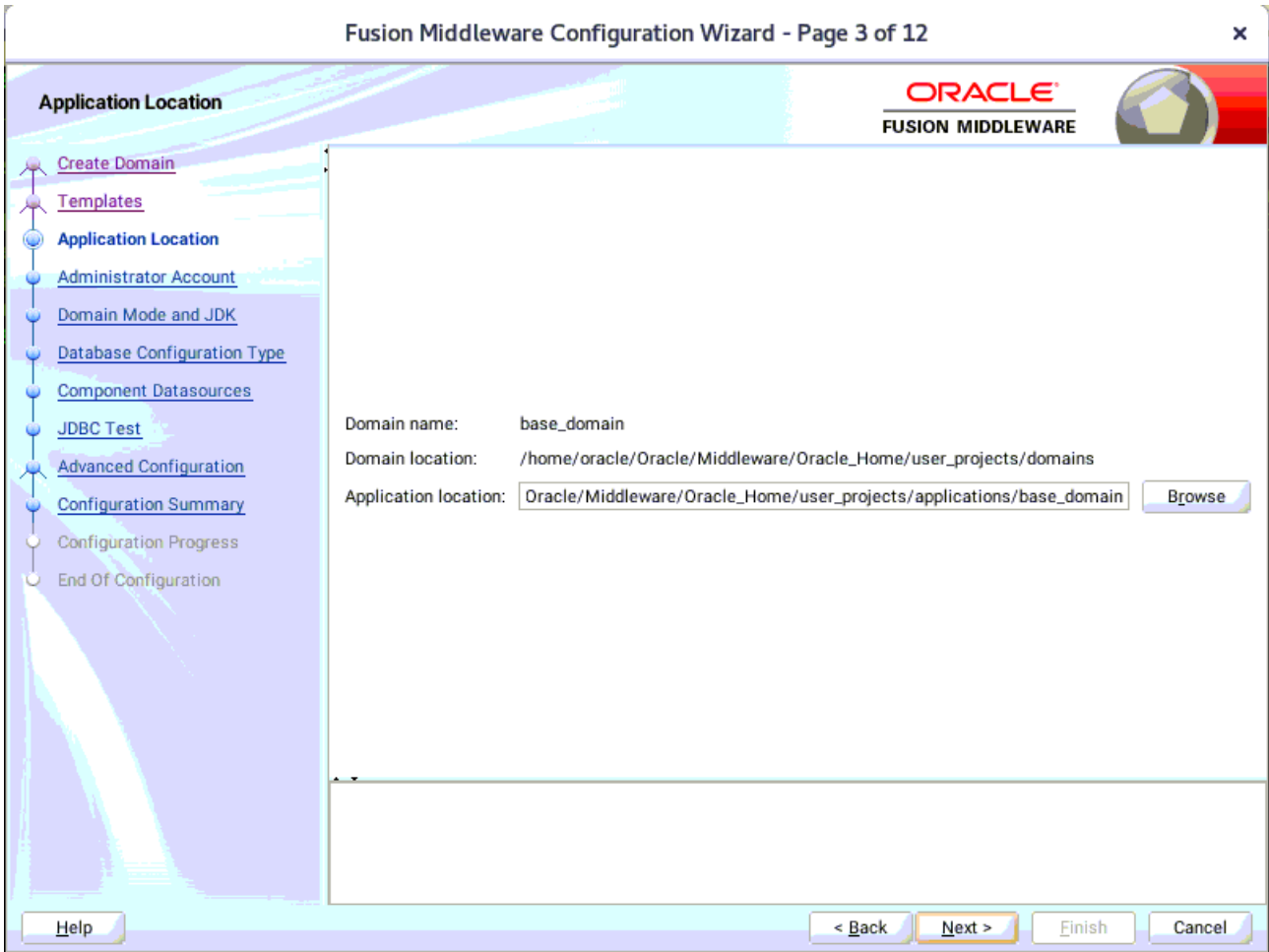
Click **Next** to continue.

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



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

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



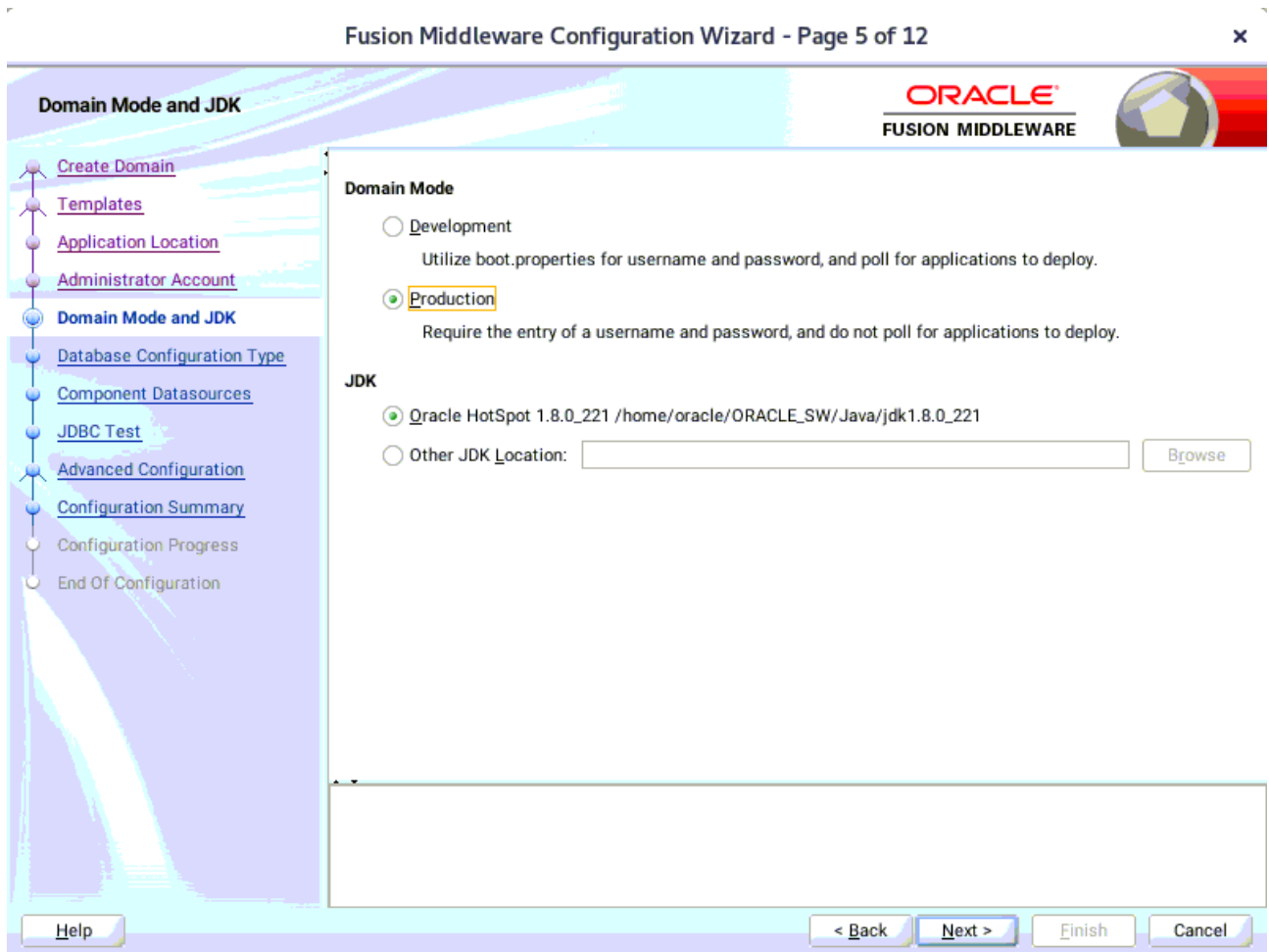
Keep the default value for Application location. Click **Next** to continue.

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

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

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

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



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

(**Note:** 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**

- [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](#)

Vendor:  Driver:

Connection Parameters     Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

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

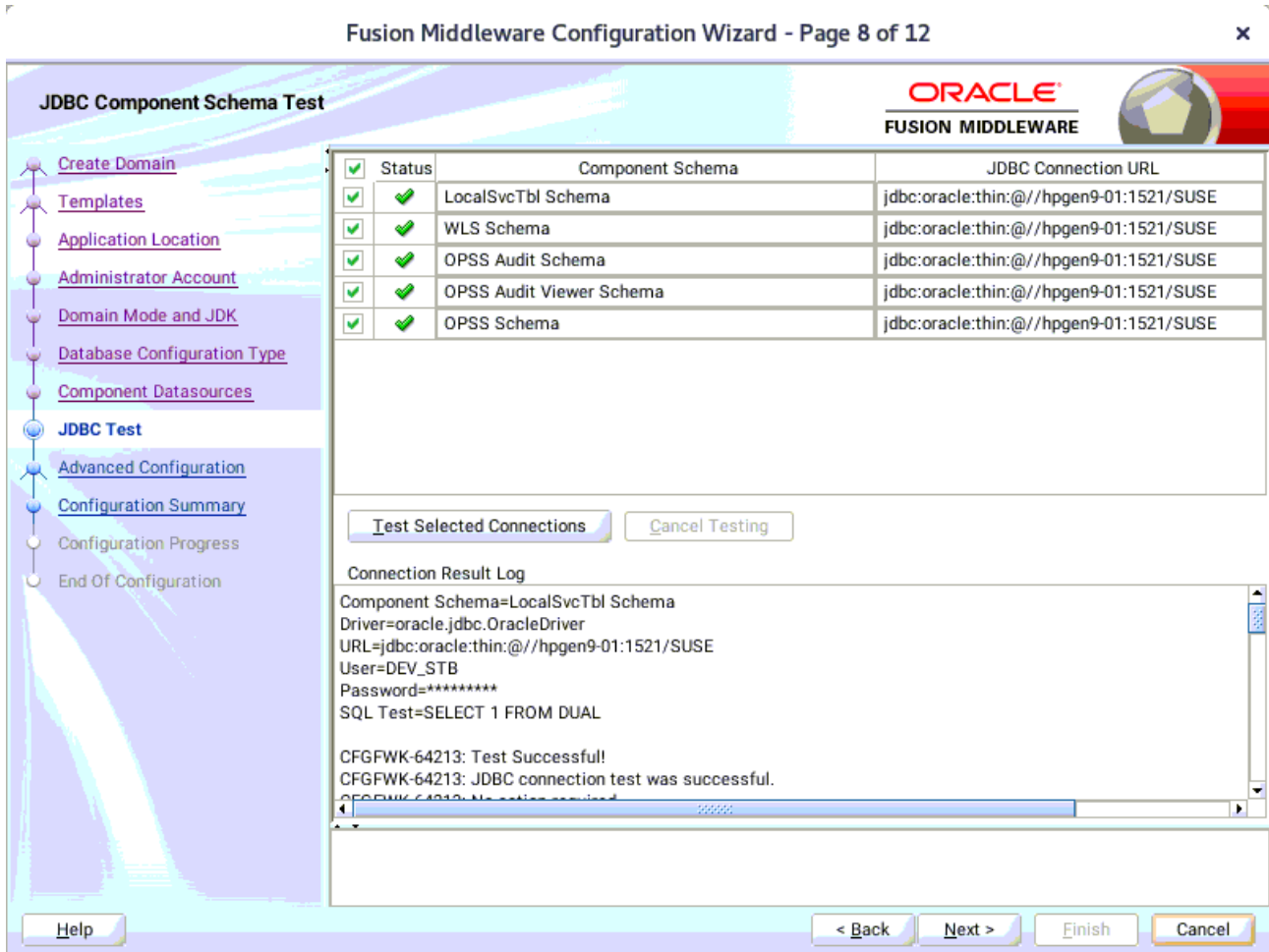
Edits to the data above will affect all checked rows in the table below.

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

[Help](#)
[< Back](#)
[Next >](#)
[Finish](#)
[Cancel](#)

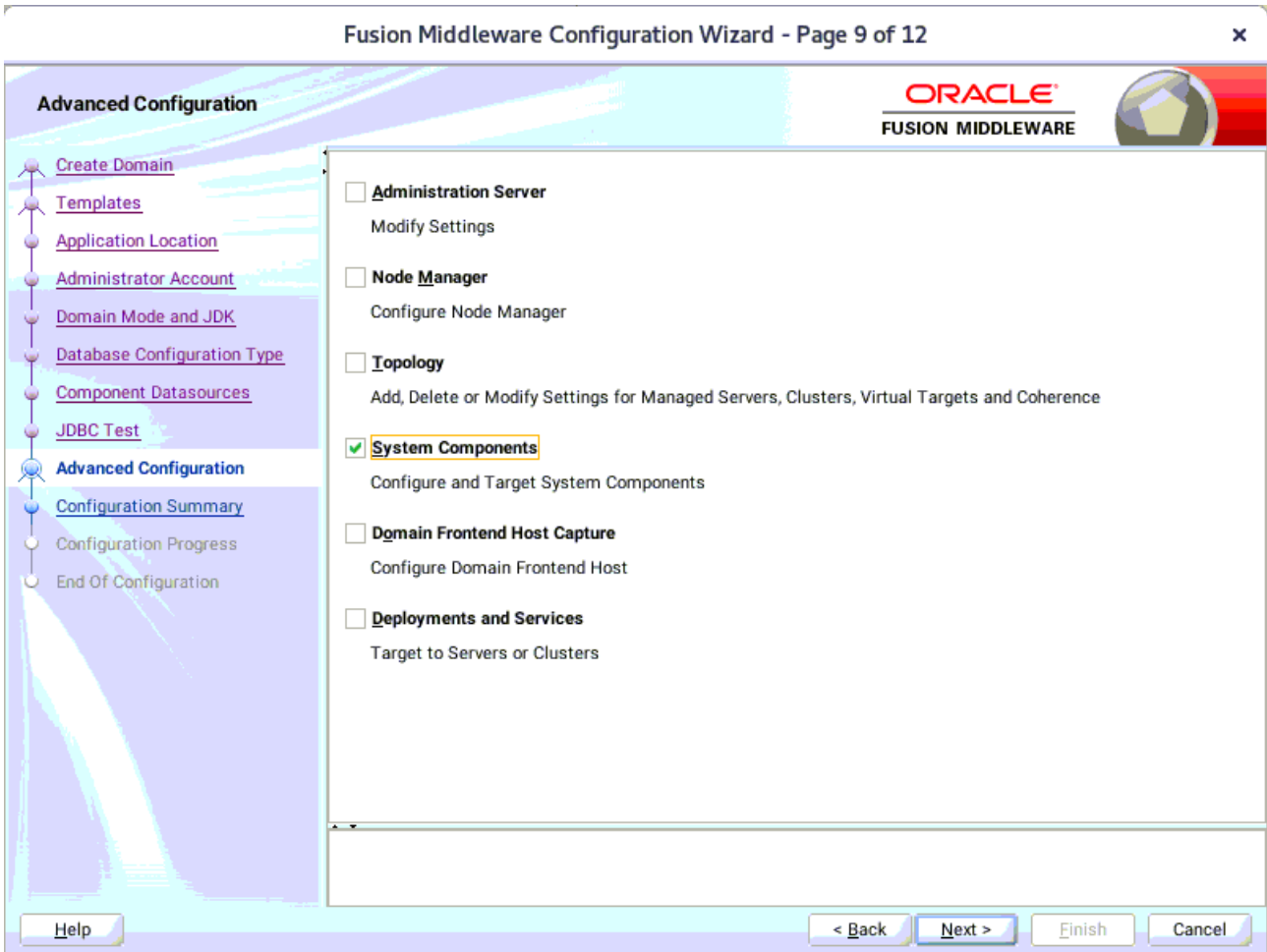
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



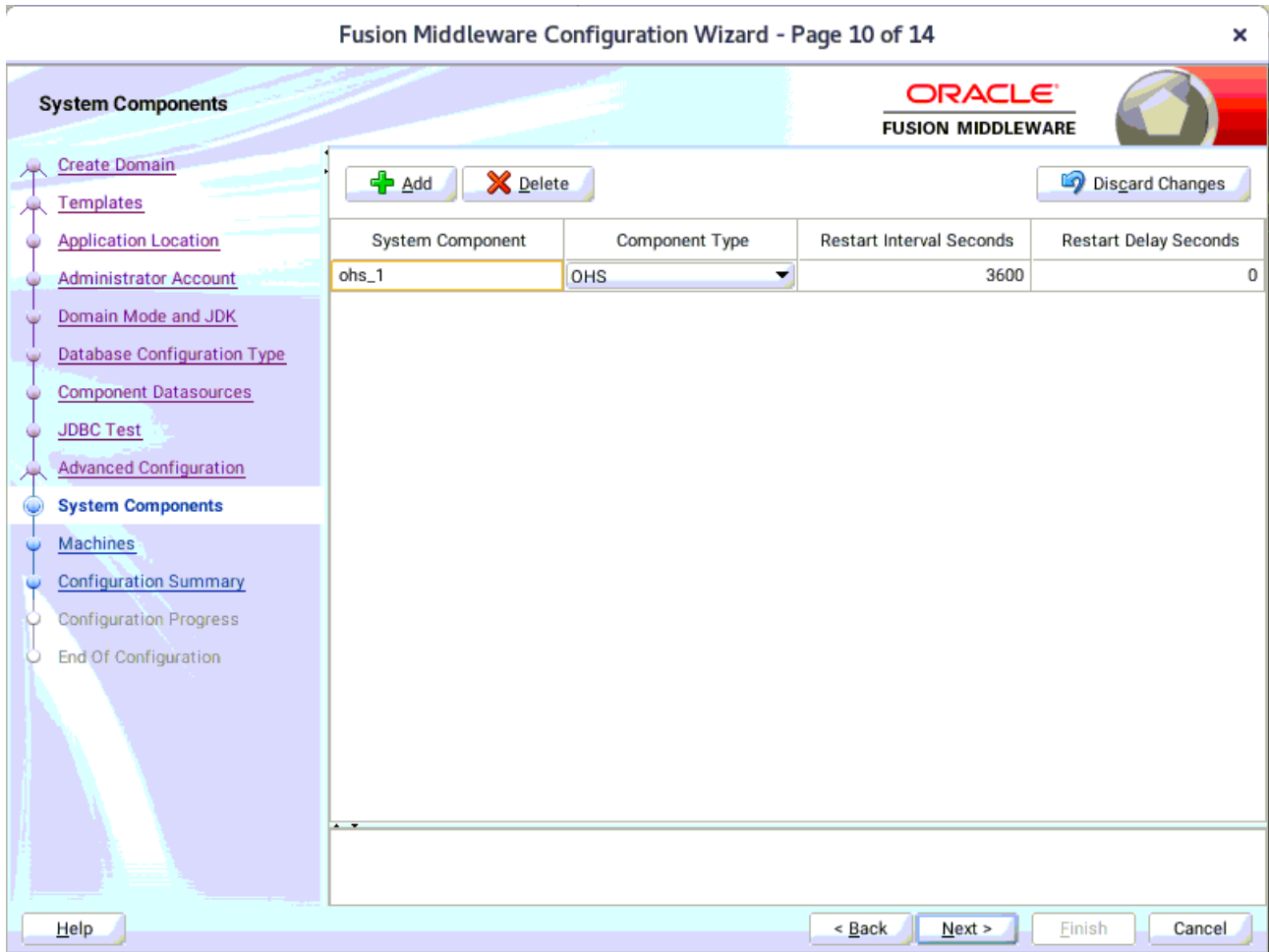
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



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.

Fusion Middleware Configuration Wizard - Page 11 of 15

**OHS Server**

ORACLE  
FUSION MIDDLEWARE

System Component: ohs\_1

Admin Host: 127.0.0.1

Admin Port: 7779

Listen Address: hpgen9-01

Listen Port: 7777

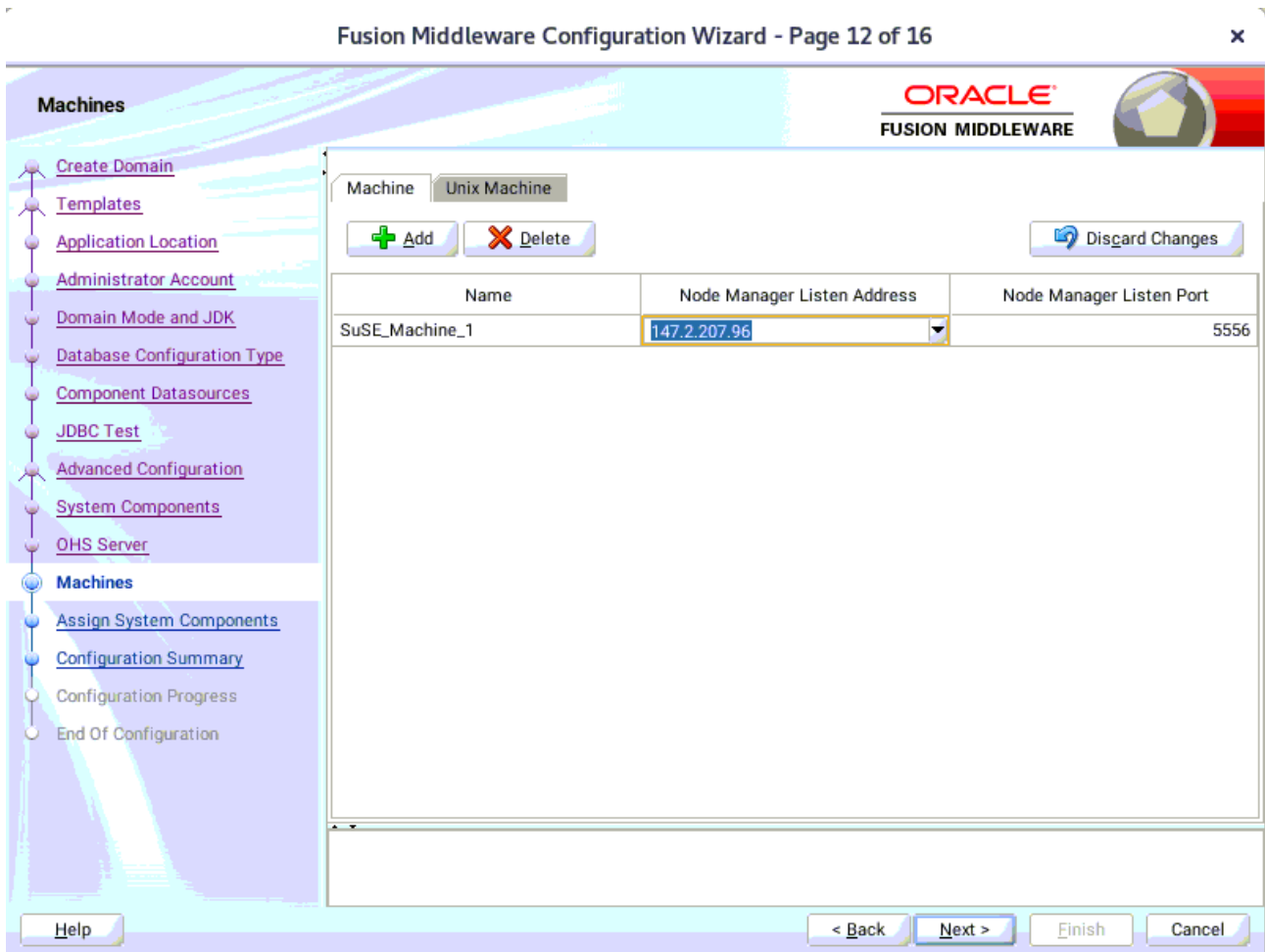
SSL Listen Port: 4443

Server Name: http://hpgen9-01:7777

Help < Back Next > Finish Cancel

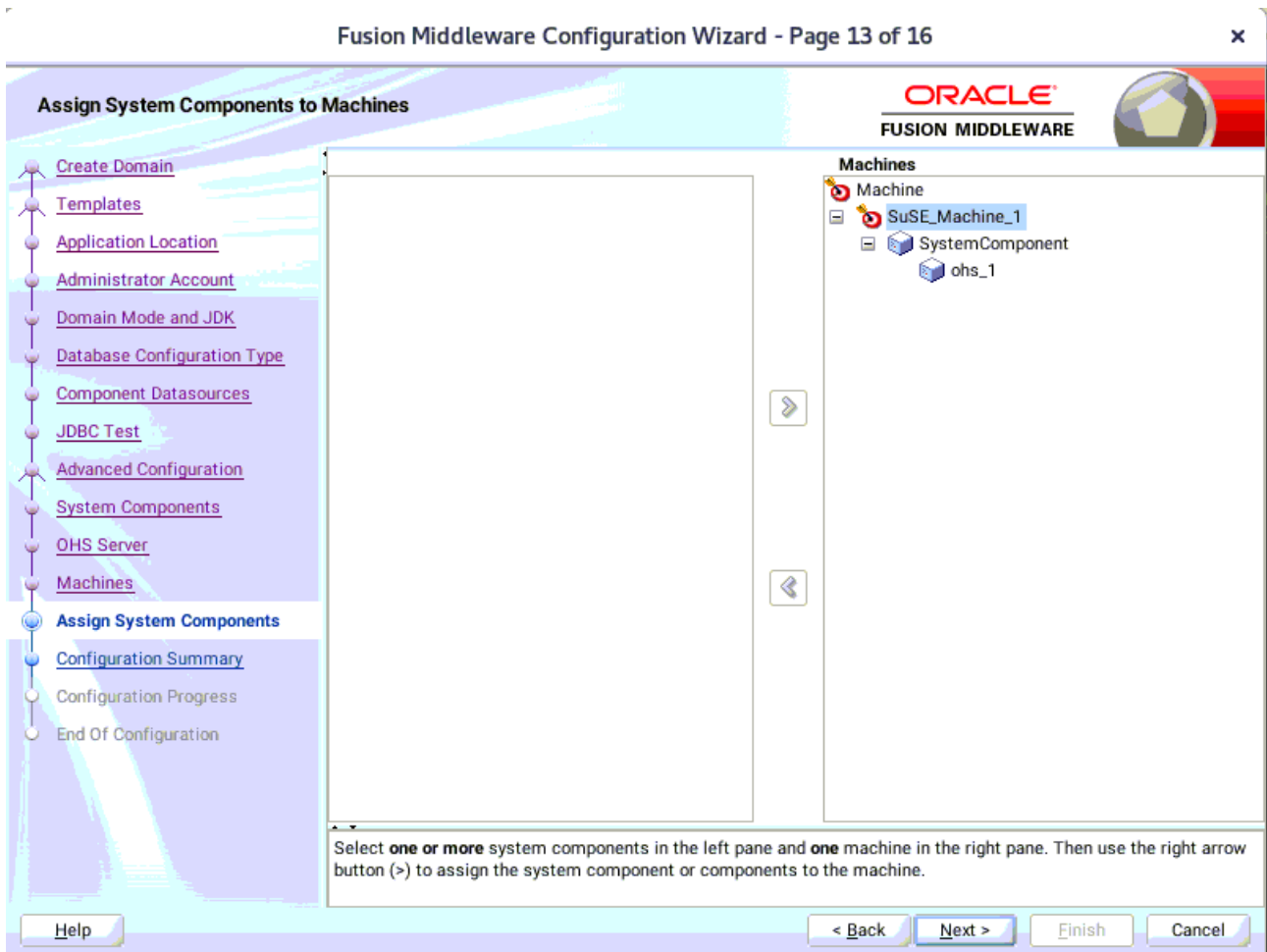
Use the **OHS Server** screen to configure the Oracle HTTP Server servers in your domain. In the System Component field specify the IP address of the host on which the Oracle HTTP Server instance will reside. Do not use "localhost". Click **Next** to continue.

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.

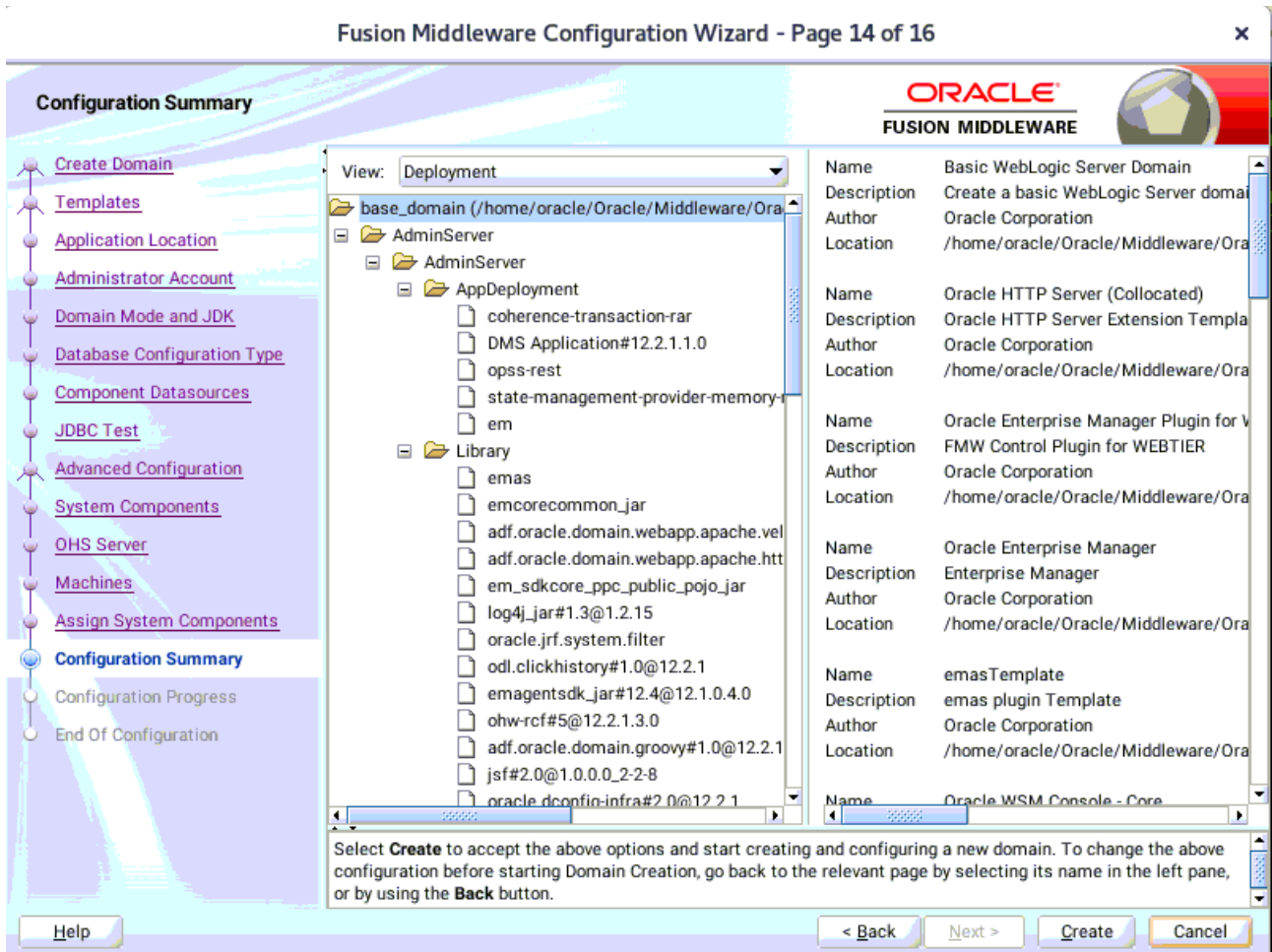
13). The **Assign System Components** screen appears.



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

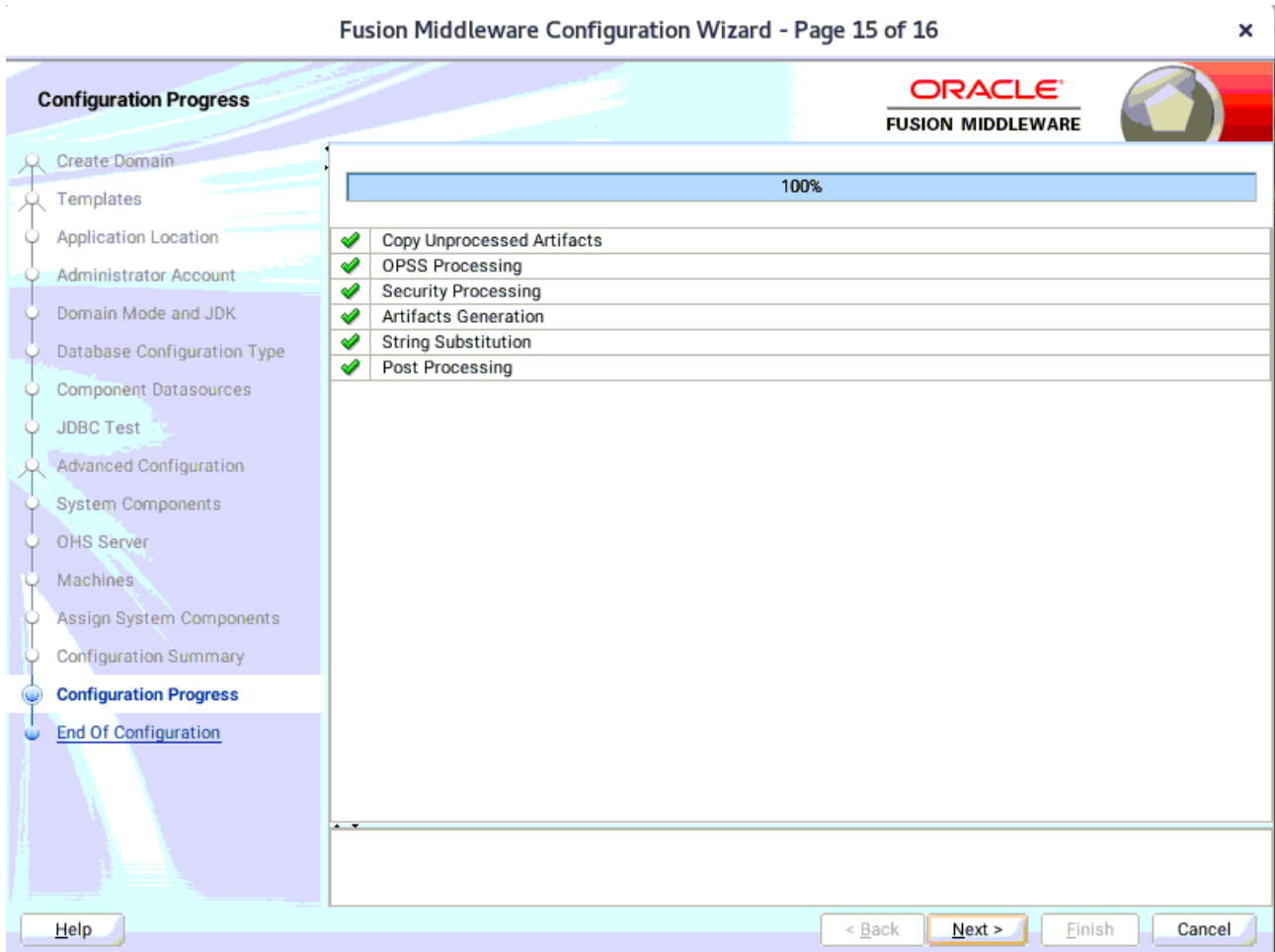


14). The **Configuration Summary** screen appears.



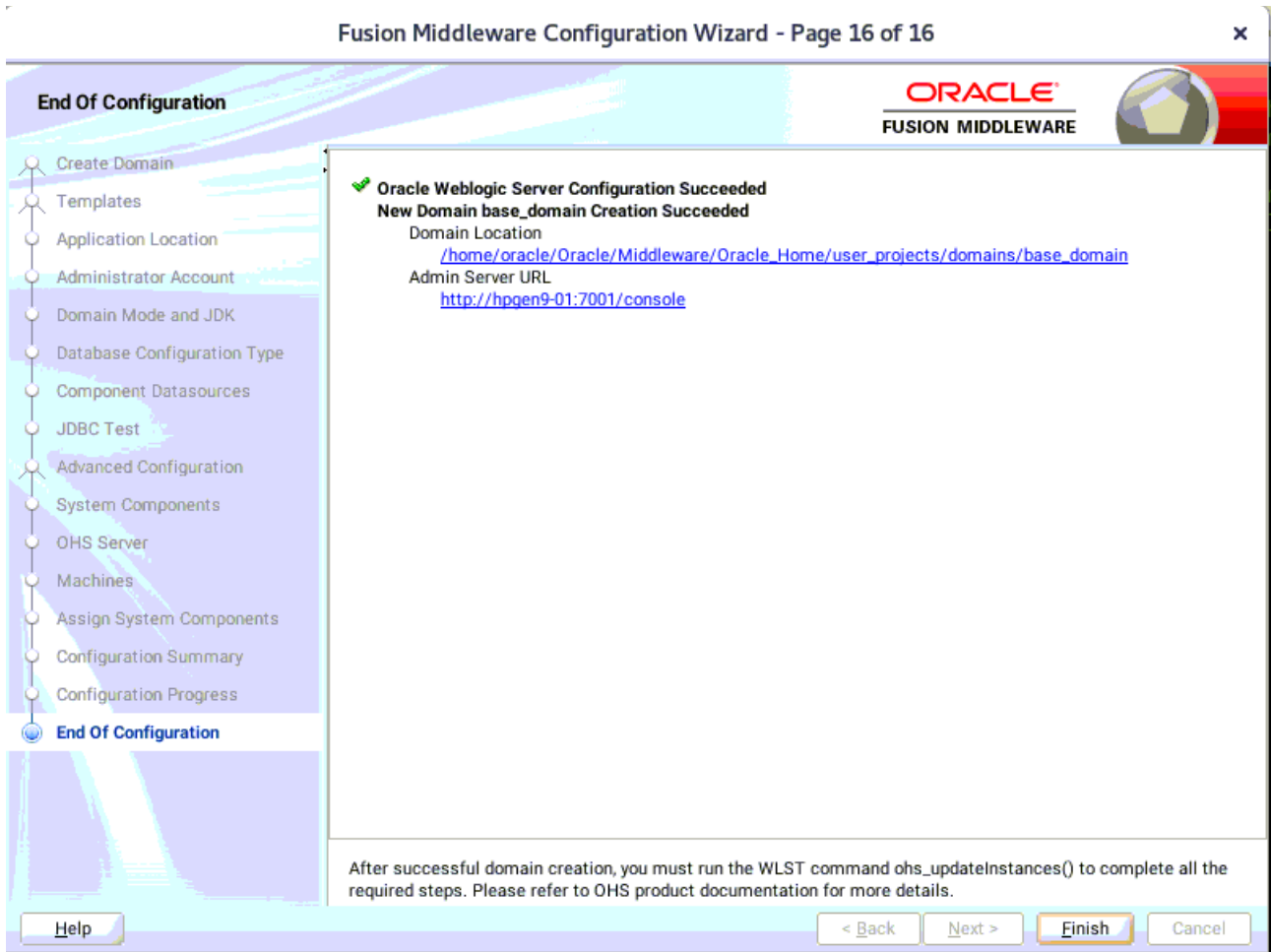
Select **Create** to accept the above options and start creating and configuring a new domain.

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/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] 18423
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_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/oracle/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./ -Dohs.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ohs -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221/weblogic.nodemanager -v
<Dec 5, 2019 12:42:57 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Dec 5, 2019 12:42:57 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Dec 5, 2019 12:42:57 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'>
<Dec 5, 2019 12:42:57 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Dec 5, 2019 12:42:57 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Dec 05, 2019 12:42:57 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation

```

**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@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x oracle@hpgen9-01:/ho... x
/em/public_lib_download/.*, /em/redirect.*, /em/relocatetarget.*, /em/sdkImpl/core/uifwkmobile/skins/.*, /em/servlet/GaugeServlet.*, /em/servlet/GraphServlet.*, /em/swlib/getfile, /em/VncViewer.jar, /em/websvcs.*, /em/jobrecv
.<Dec 5, 2019 12:48:20,544 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Dec 5, 2019 12:48:21,659 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
<Dec 5, 2019 12:48:22,239 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Dec 5, 2019 12:48:22,633 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Dec 5, 2019 12:48:22,633 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Dec 5, 2019 12:48:23,396 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.>
<Dec 5, 2019 12:48:23,397 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Dec 5, 2019 12:48:23,397 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.>
<Dec 5, 2019 12:48:23,398 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.>
<Dec 5, 2019 12:48:23,398 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.>
<Dec 5, 2019 12:48:23,398 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.>
<Dec 5, 2019 12:48:23,399 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.>
<Dec 5, 2019 12:48:23,399 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.>
<Dec 5, 2019 12:48:23,402 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Dec 5, 2019 12:48:23,443 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.

```

Initializing WebLogic Scripting Tool (WLST) ...

[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[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')

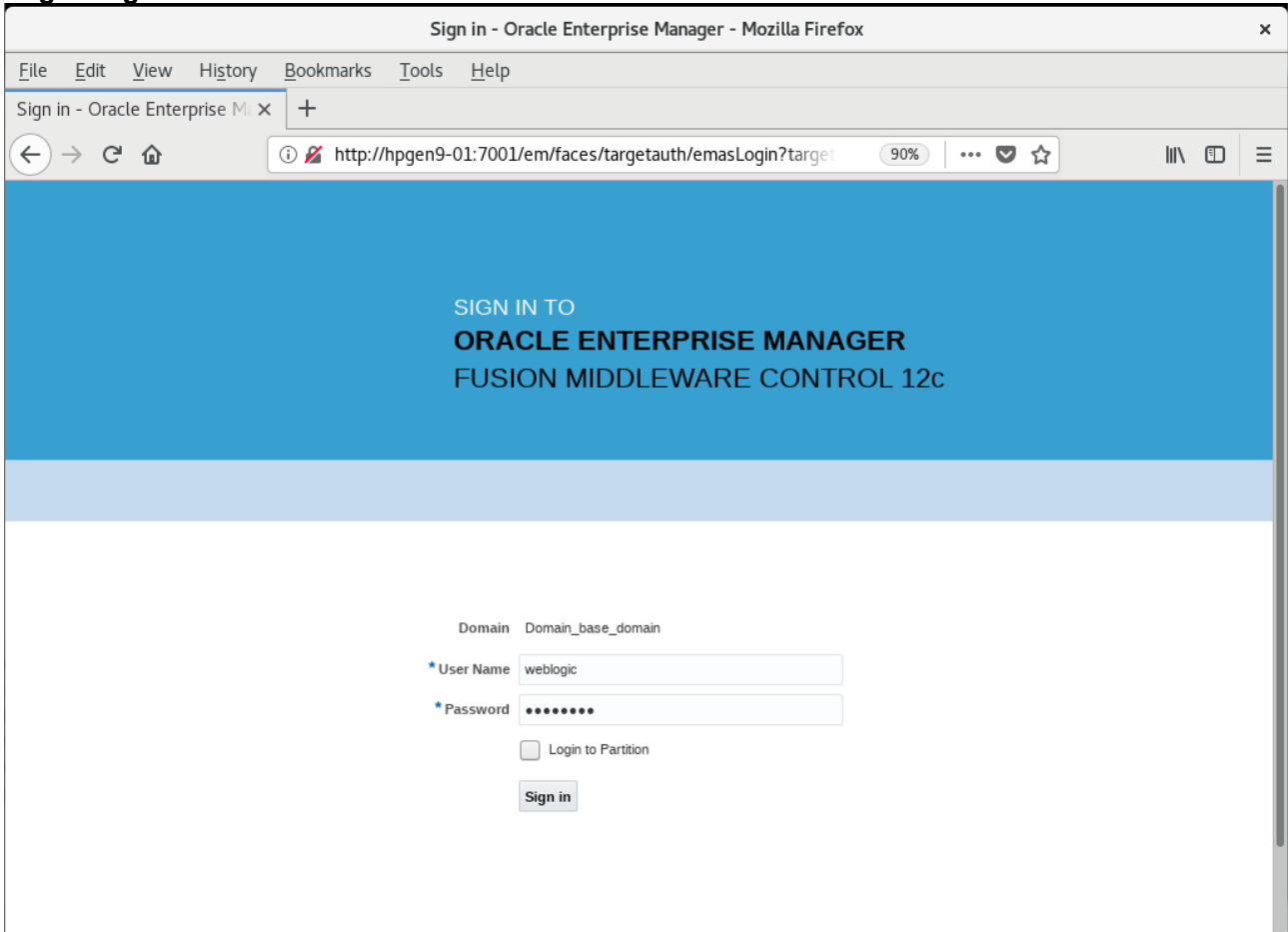
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Saving all your changes ...
Saved all your changes successfully.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the 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 a WebLogic Domain named 'base\_domain'. The page title is 'base\_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox'. The browser address bar shows the URL 'http://hpgen9-01:7001/em/faces/as-weblogic-webLogicDomainH'. The interface includes a navigation menu on the left with 'Servers', 'Clusters', and 'Deployments', each showing a green circle and '1 Up'. The main content area is titled 'Administration Server' and shows details for 'AdminServer' with Name 'AdminServer', Host 'hpgen9-01', and Listen Port '7001'. Below this is a table of servers:

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

The bottom of the page indicates 'Columns Hidden 34' and 'Servers 1 of 1'. The timestamp is 'Dec 5, 2019 12:58:29 PM GMT+08:00'.

Starting Oracle HTTP Server (ohs\_1)

The screenshot shows the Oracle Enterprise Manager interface for starting an Oracle HTTP Server named 'ohs\_1'. The page title is 'ohs\_1 (Oracle HTTP Server) - Oracle Enterprise Manager - Mozilla Firefox'. The browser address bar shows the URL 'http://hpgen9-01:7001/em/faces/as\_ohs\_ohsHome?type=oracle'. The interface includes a navigation menu on the left with 'Monitoring', 'Virtual Hosts', and 'Modules'. The main content area is titled 'ohs\_1' and shows a 'Start Up' button. The 'General' section displays the following details:

- Component Name: ohs\_1
- Version: 12.2.1.4.0
- 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

The 'Key Statistics' section shows the following values:

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

The 'Response and Load' section contains a graph showing 'Request Processing Time (milli seconds)' and 'Domain\_base\_domain/base\_domain/ohs\_1: Request Throu...'. The 'CPU and Memory Usage' section contains a graph showing 'CPU and Memory Usage'. The timestamp is 'Dec 5, 2019 1:01:13 PM GMT+08:00'.



ohs\_1 is up.

The screenshot shows the Oracle Enterprise Manager console for the ohs\_1 component. The status is 'Running'. Key statistics include 3 idle processes, 0 busy processes, and 0.00% error rate. The console also features monitoring graphs for response and load, and CPU and memory usage.

Component Name	Value
Component Name	ohs_1
Version	12.2.1.4.0
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

Key Statistics	Value
Idle Processes	3
Busy Processes	0
Error Rate (%)	0.00
Connection Duration (seconds)	0
Request Processing Time (seconds)	0

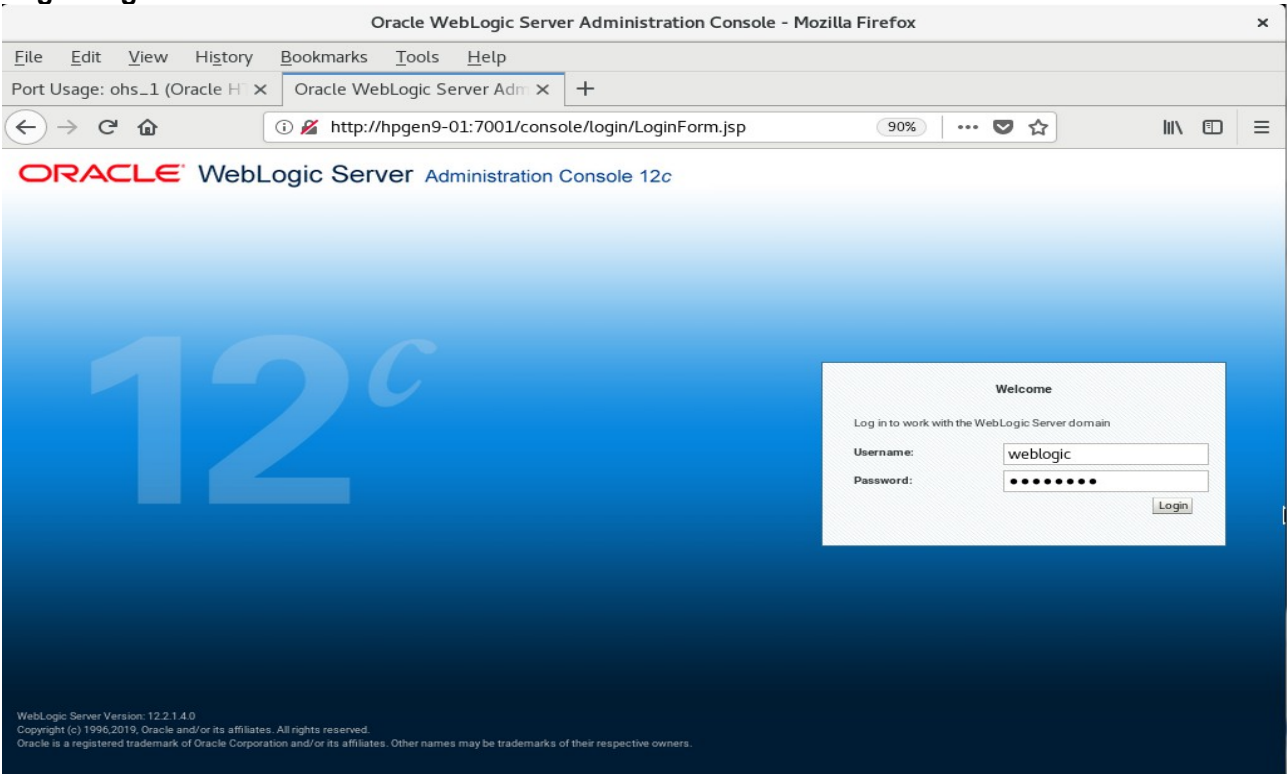
OHS Ports Configuration as shown below.

The screenshot shows the 'Port Usage' configuration page for ohs\_1. The table below lists the configured ports and their associated IP addresses and protocols.

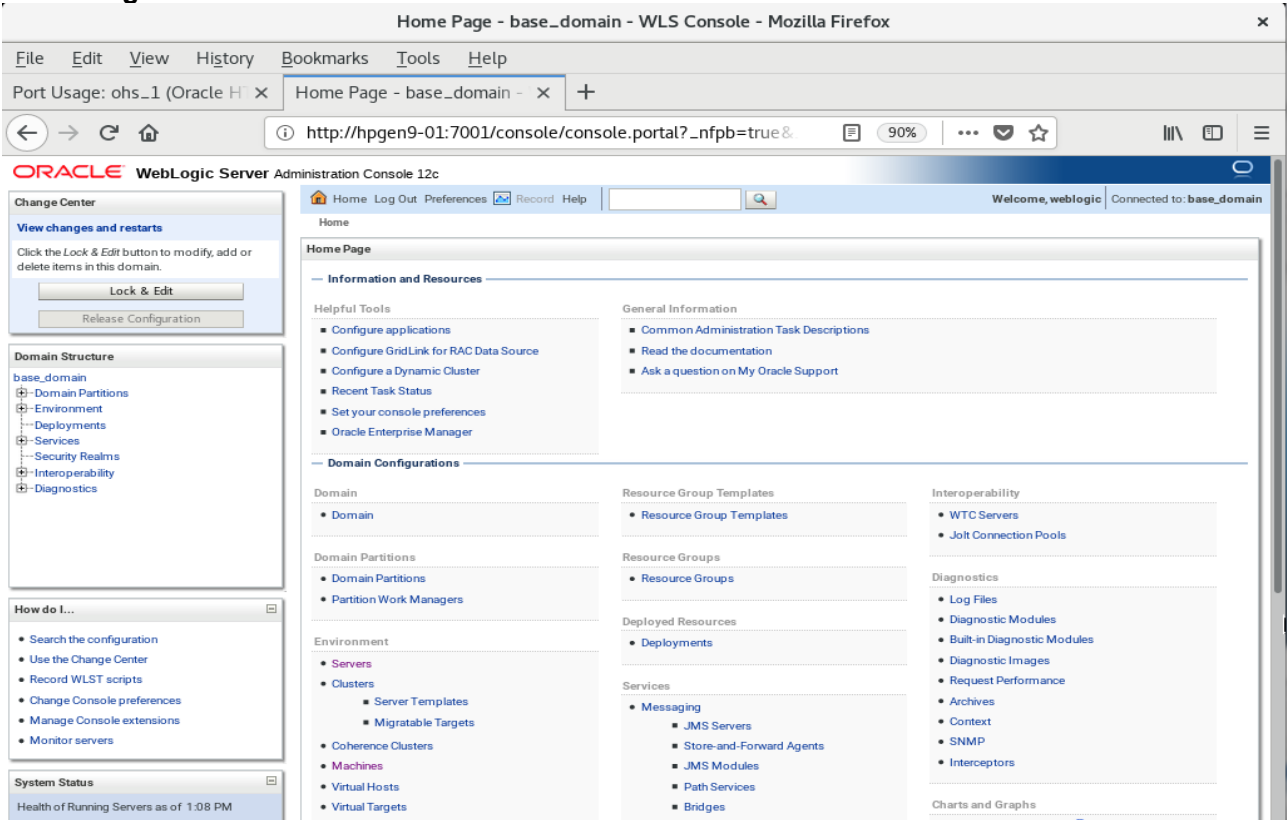
Port in Use	IP Address	Component	Protocol
7779	127.0.0.1	ohs_1	HTTPS
4443	hpgen9-01	ohs_1	HTTPS
7777	hpgen9-01	ohs_1	HTTP

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 browser title is "Summary of Servers - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://hpgen9-01:7001/console/console.portal?\_nfpb=true&". The page content includes:

- Change Center:** View changes and restarts, Lock & Edit, Release Configuration.
- Domain Structure:** base\_domain, Domain Partitions, Environment, Deployments, Services, Security Realms, Interoperability, Diagnostics.
- How do I...:** Create Managed Servers, Clone servers, Delete Managed Servers, Delete the Administration Server, Start and stop servers, View objects in the JNDI tree.
- System Status:** Health of Running Servers as of 1:10 PM.
- Summary of Servers:** Configuration, Control tabs. Text: "A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain."
  - Buttons: New, Clone, Delete. Showing 1 to 1 of 1 Previous | Next.
  - Table:
 

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured			RUNNING	OK	7001
  - Buttons: New, Clone, Delete. Showing 1 to 1 of 1 Previous | Next.

**Viewing the summary of Machines:**

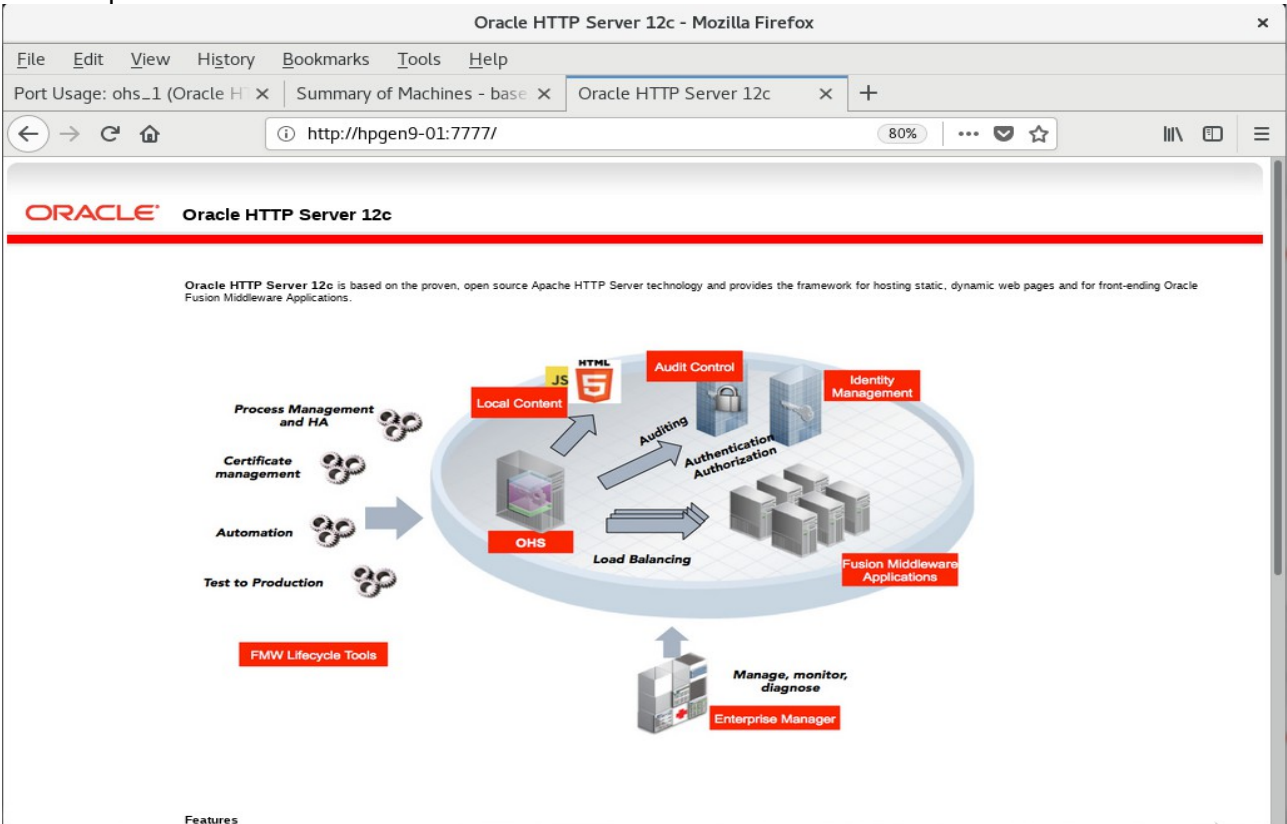
The screenshot shows the Oracle WebLogic Server Administration Console interface. The browser title is "Summary of Machines - base\_domain - WLS Console - Mozilla Firefox". The URL is "http://hpgen9-01:7001/console/console.portal?\_nfpb=true&". The page content includes:

- Change Center:** View changes and restarts, Lock & Edit, Release Configuration.
- Domain Structure:** base\_domain, Domain Partitions, Environment, Deployments, Services, Security Realms, Interoperability, Diagnostics.
- How do I...:** Create and configure machines, Assign server instances to machines, Clone machines, Delete machines.
- System Status:** Health of Running Servers as of 1:11 PM. Failed (0), Critical (0).
- Summary of Machines:** Summary of Machines. Text: "A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). WebLogic Server uses configured machine names to determine the optimum server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers. This page displays key information about each machine that has been configured in the current WebLogic Server domain."
  - Buttons: New, Clone, Delete. Showing 1 to 1 of 1 Previous | Next.
  - Table:
 

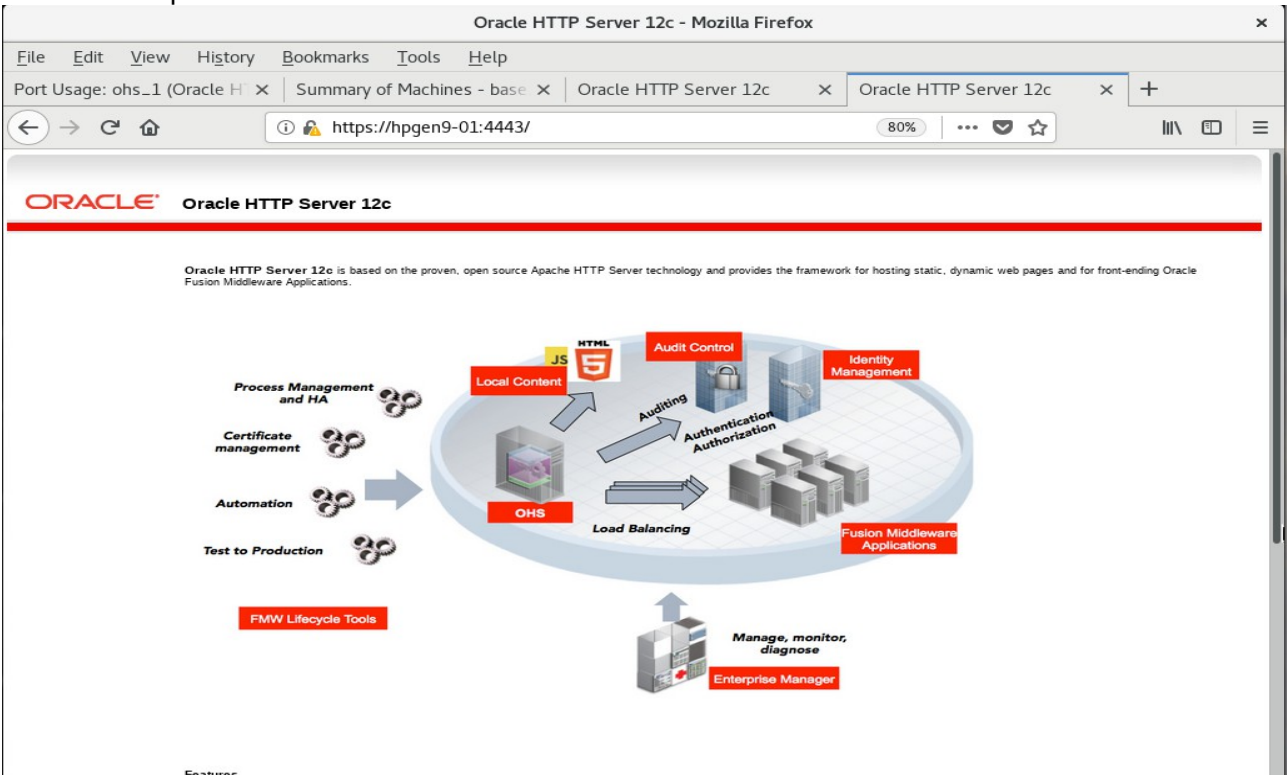
Name	Type
SUSE_Machine_1	Machine
  - Buttons: New, Clone, Delete. Showing 1 to 1 of 1 Previous | Next.

3). Access to Oracle HTTP Server listening address

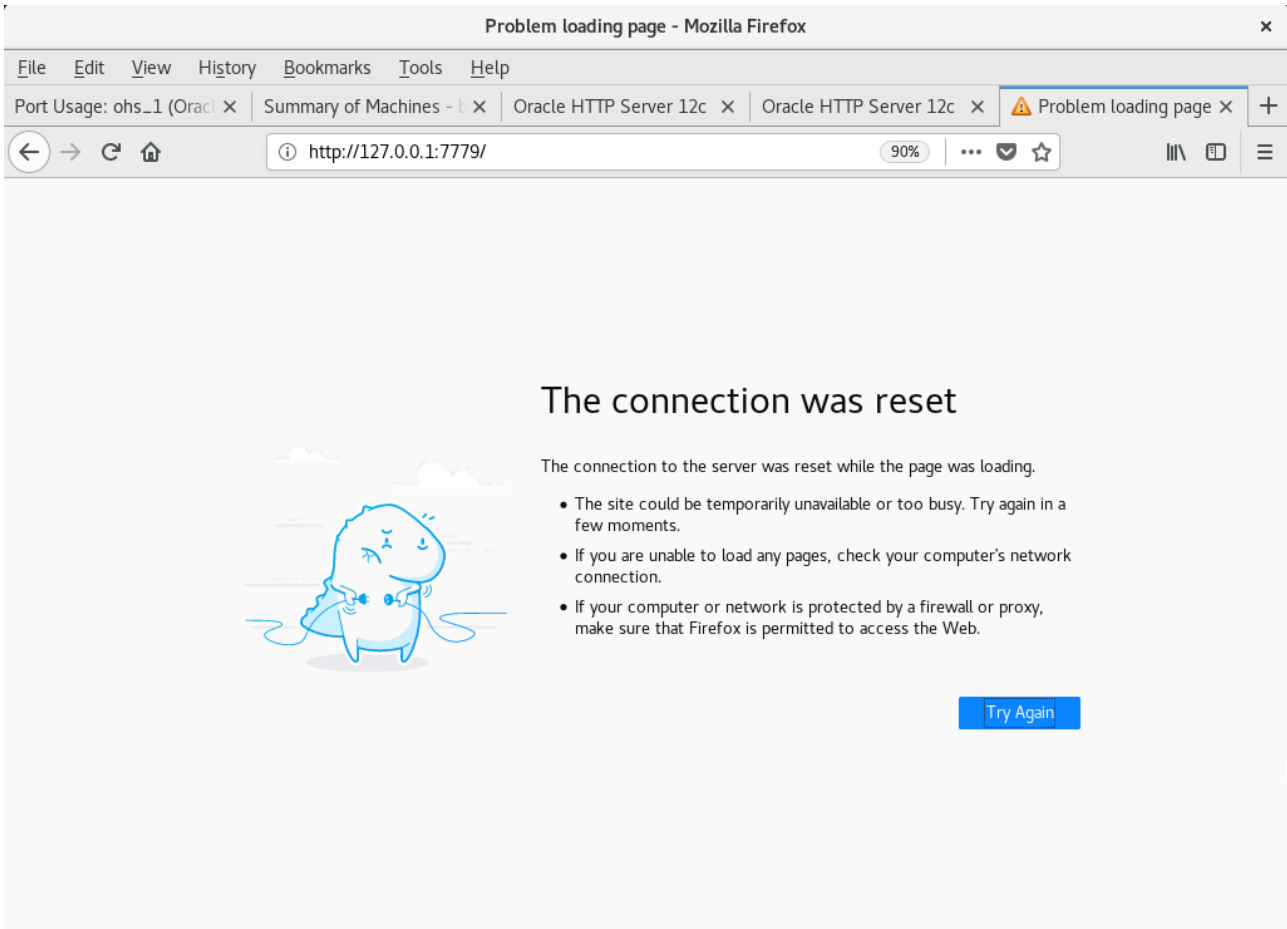
URL: <http://host:7777/>



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



**Admin Host URL:** http://host:7779/



(**Issue:** The page can not be displayed.)

Checking the listening port and firewall.

```

hpgen9-01:/opt/oracle # netstat -tupln | grep 7777
tcp        0      0 147.2.207.96:7777    0.0.0.0:*        LISTEN    24027/httpd
hpgen9-01:/opt/oracle # netstat -tupln | grep 4443
tcp        0      0 147.2.207.96:4443    0.0.0.0:*        LISTEN    24027/httpd
hpgen9-01:/opt/oracle # netstat -tupln | grep 7779
tcp        0      0 127.0.0.1:7779      0.0.0.0:*        LISTEN    24027/httpd
hpgen9-01:/opt/oracle # firewall-cmd --state
not running
hpgen9-01:/opt/oracle #

```

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

```

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) ...

[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[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/> state('ohs_1')
Current state of "ohs_1" : RUNNING
wls:/base_domain/serverConfig/>

```

**End of Oracle WebTier Http Server.**

\*\*\*\*\*  
**Oracle WebCenter Portal**  
\*\*\*\*\*

## 1. Installing Oracle WebCenter Portal 12c

### 1-1. Prerequisites:

Installation of Oracle WebCenter Portal requires:

- 1). Oracle Database 12cR2 (12.2.0.1.0) installed.
- 2). Oracle JDK 1.8.0\_191 and later installed.
- 3). Oracle WebLogic Server 12cR2 (12.2.1.4.0) (Fusion Middleware Infrastructure Installer)

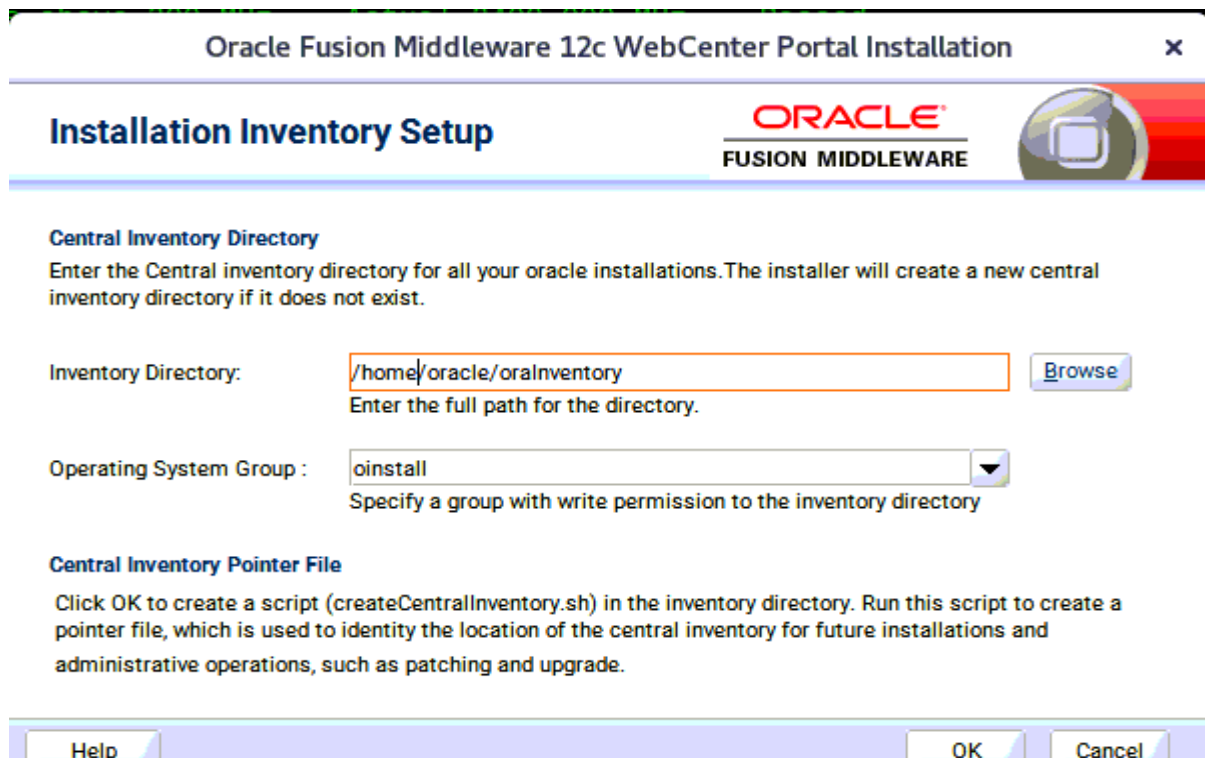
1-2. Log in to the target system (SLES 15 SP1 64-bit OS) as a non-admin user. Download the Oracle WebCenter Portal 12c (12.2.1.4.0) from <https://www.oracle.com/downloads/#category-middleware>.

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

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

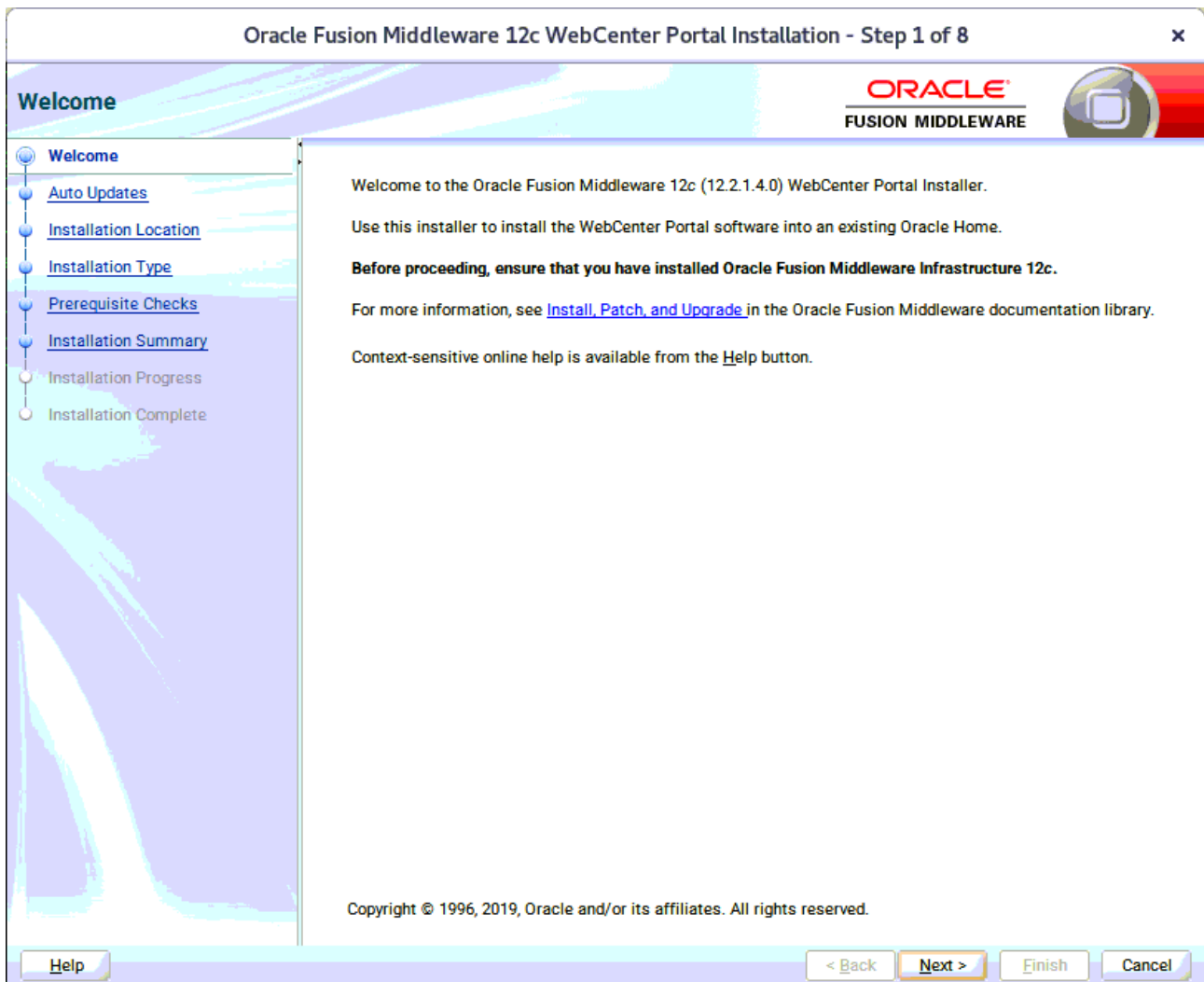
**For the actual installation, follow the steps below:**

### 1). Installation Inventory Setup.



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

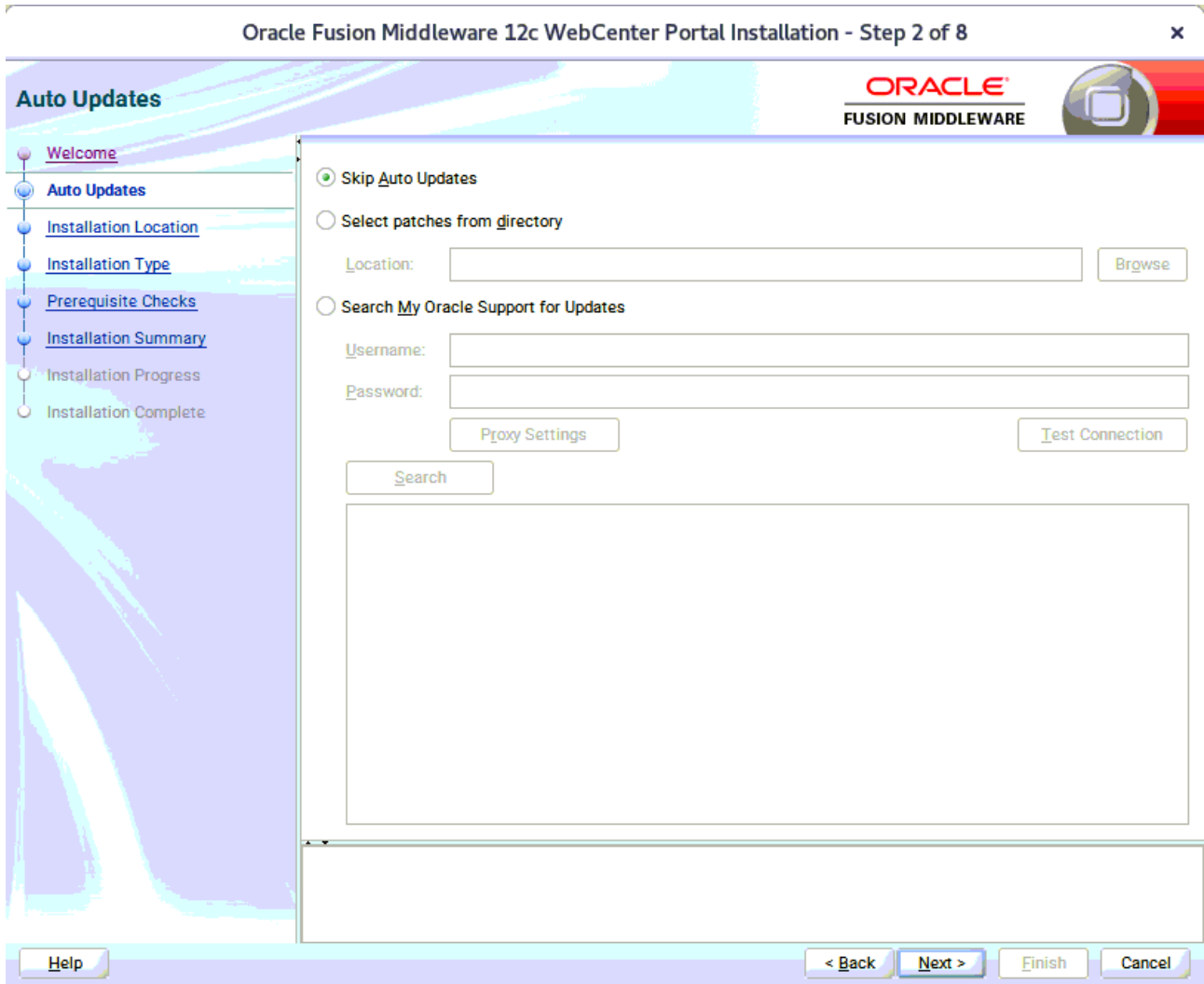
2). Welcome page.



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

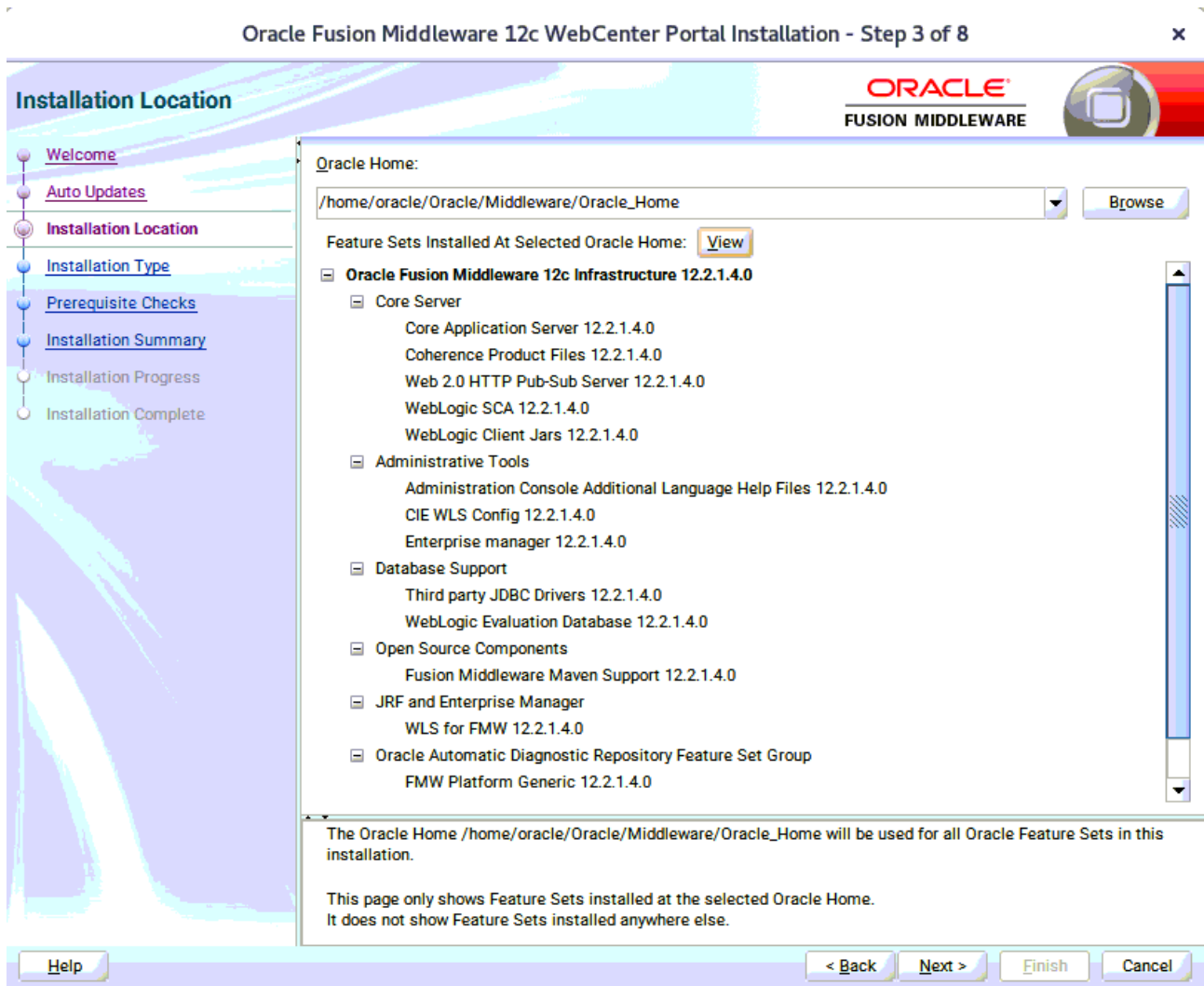


3). The **Auto Updates** page appears.



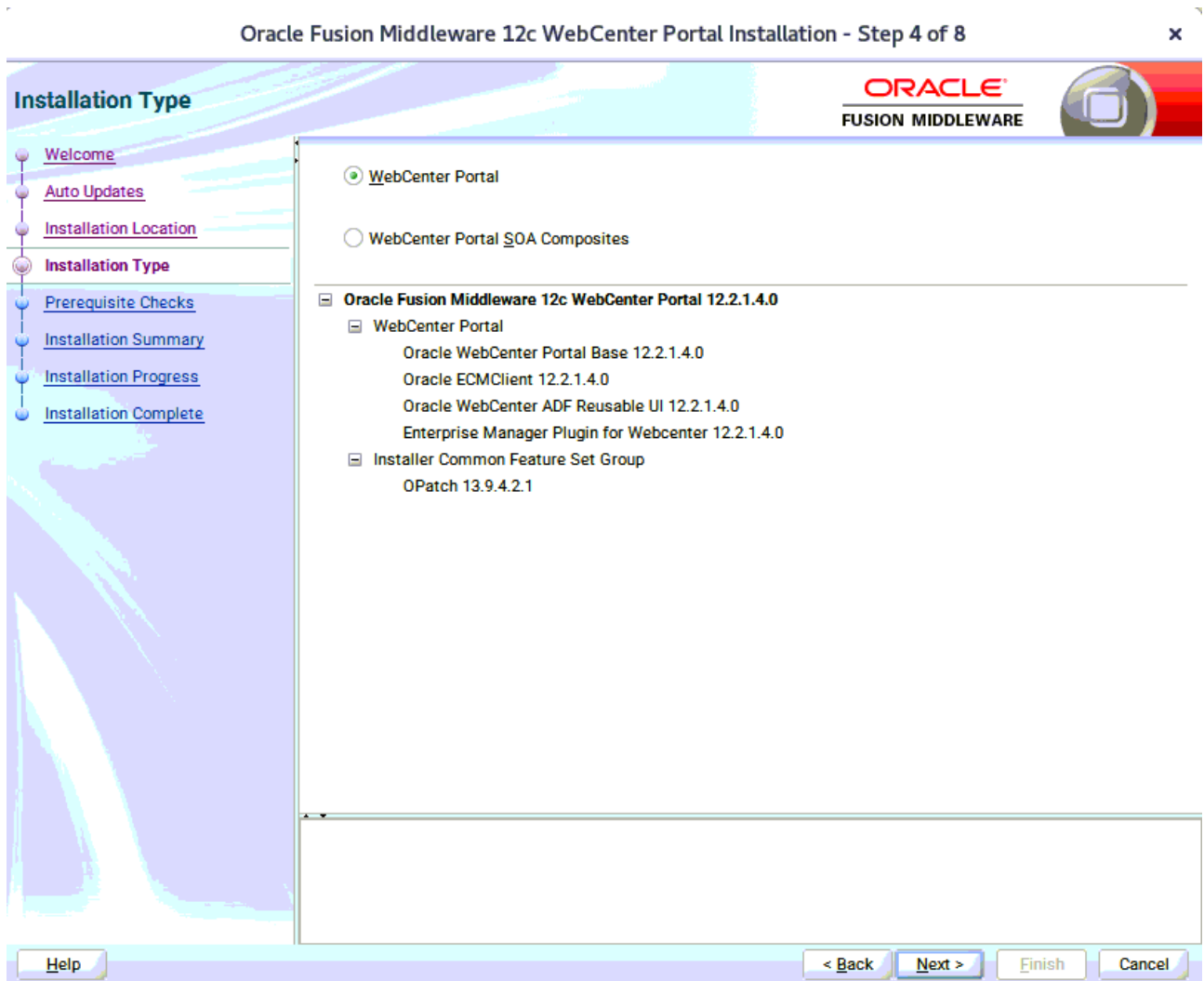
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



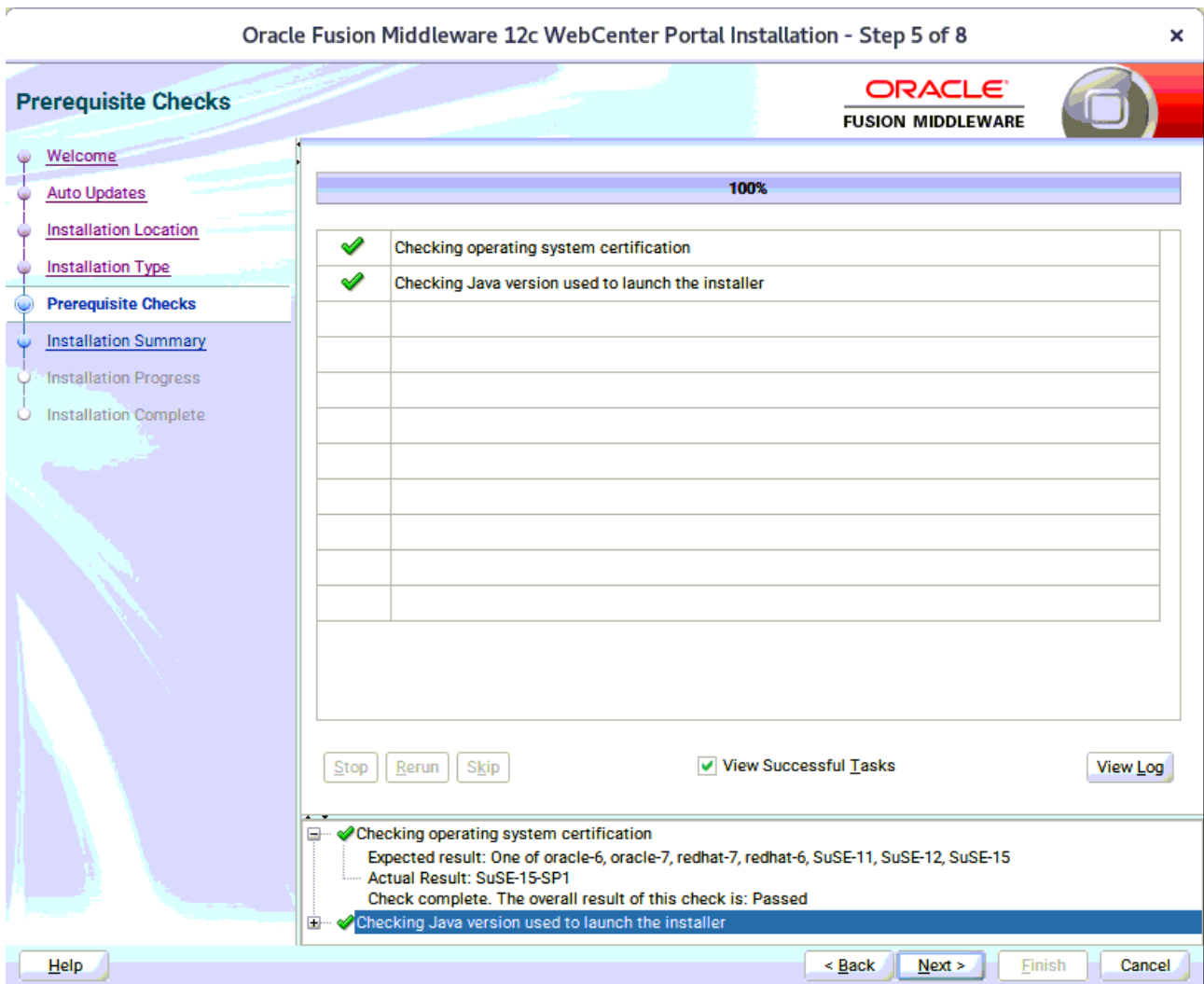
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



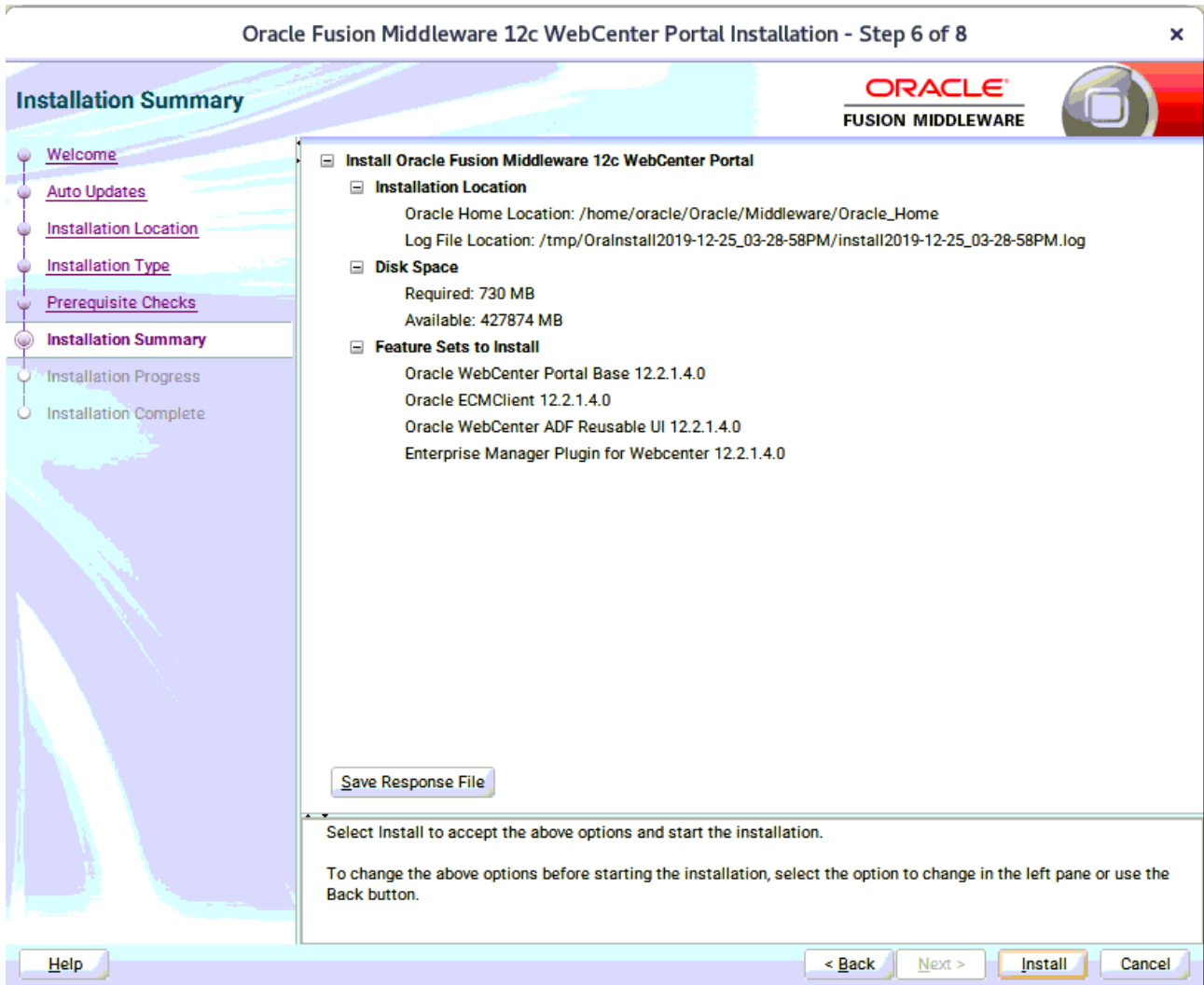
Use this screen to select the installation type and then products or feature sets you want to install. Selected the **WebCenter Portal** install type to install the WebCenter product. Click **Next** to continue.

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



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

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.

Oracle Fusion Middleware 12c WebCenter Portal Installation - Step 7 of 8

**Installation Progress**

ORACLE  
FUSION MIDDLEWARE

100%

✓	Prepare
✓	Copy
✓	Generating Libraries
✓	Performing String Substitutions
✓	Linking
✓	Setup
✓	Saving the inventory
✓	Post install scripts

View Messages View Successful Tasks View Log

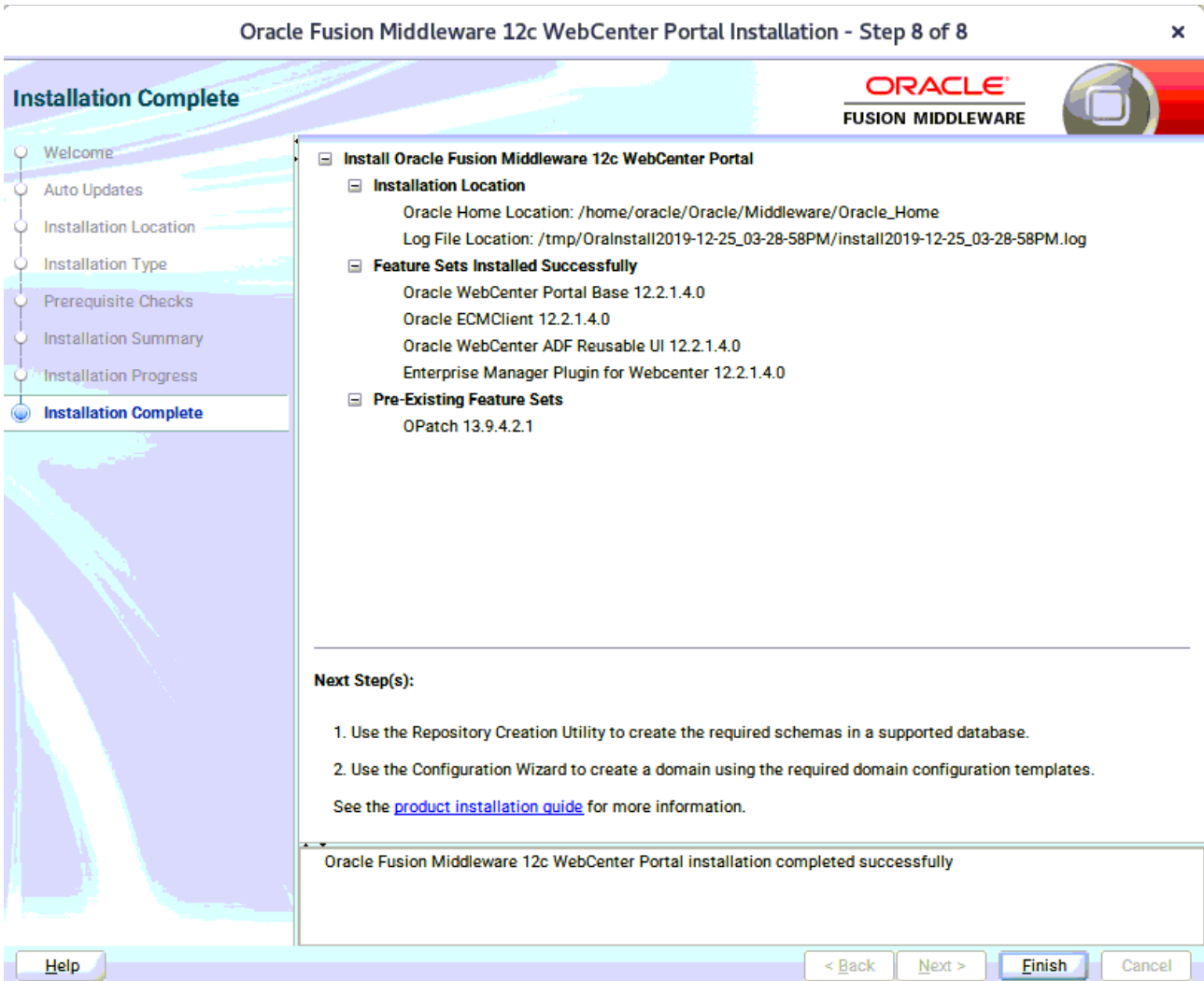
Oracle Fusion Middleware

Productivity. Flexibility. Experience.

Help < Back Next > Finish Cancel

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

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

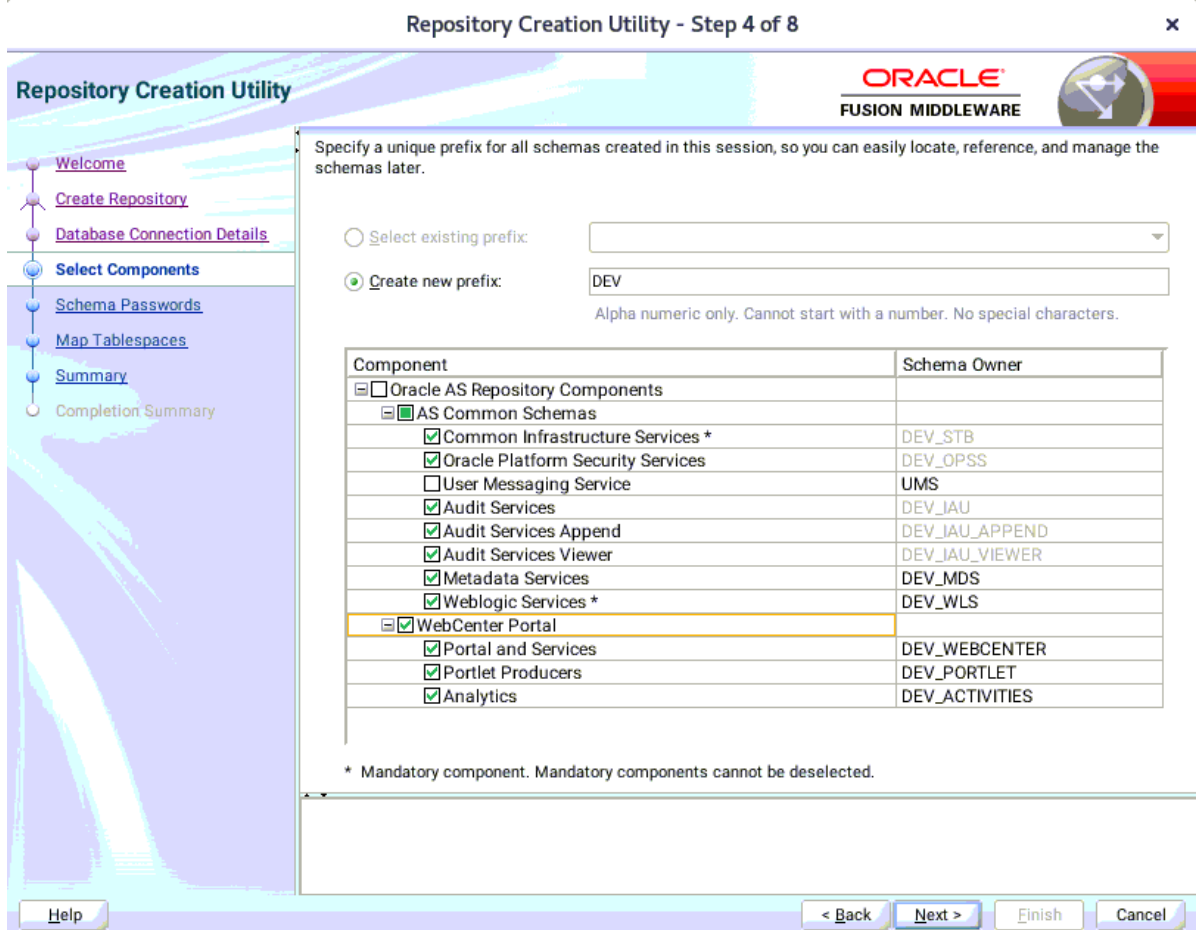


Click **Finish** to dismiss the installer.

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

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

**Screenshot: Database schemas creating for Oracle WebCenter Portal.**



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

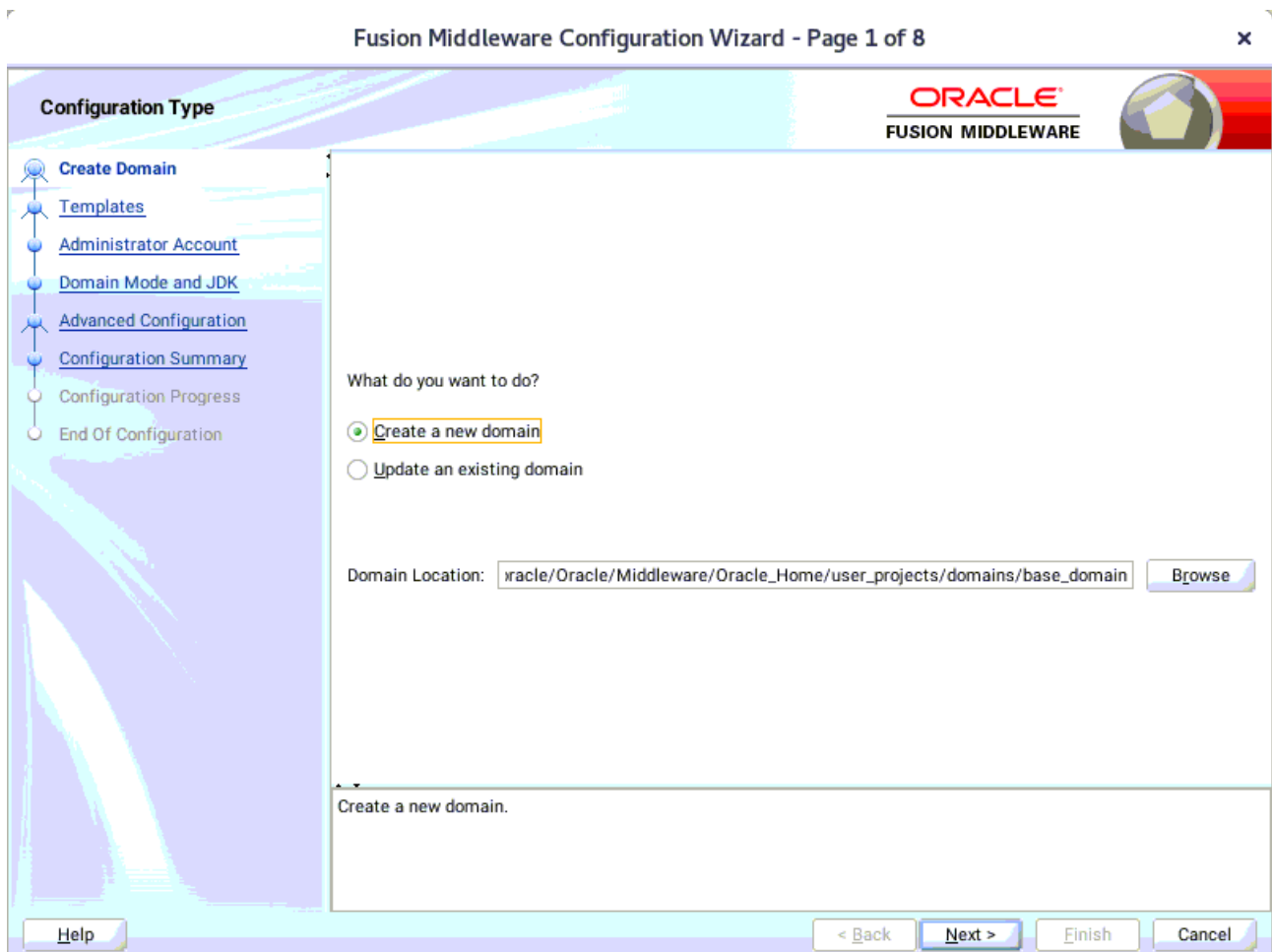


### 3. Configuring Oracle WebCenter Portal 12c using the Config Wizard

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

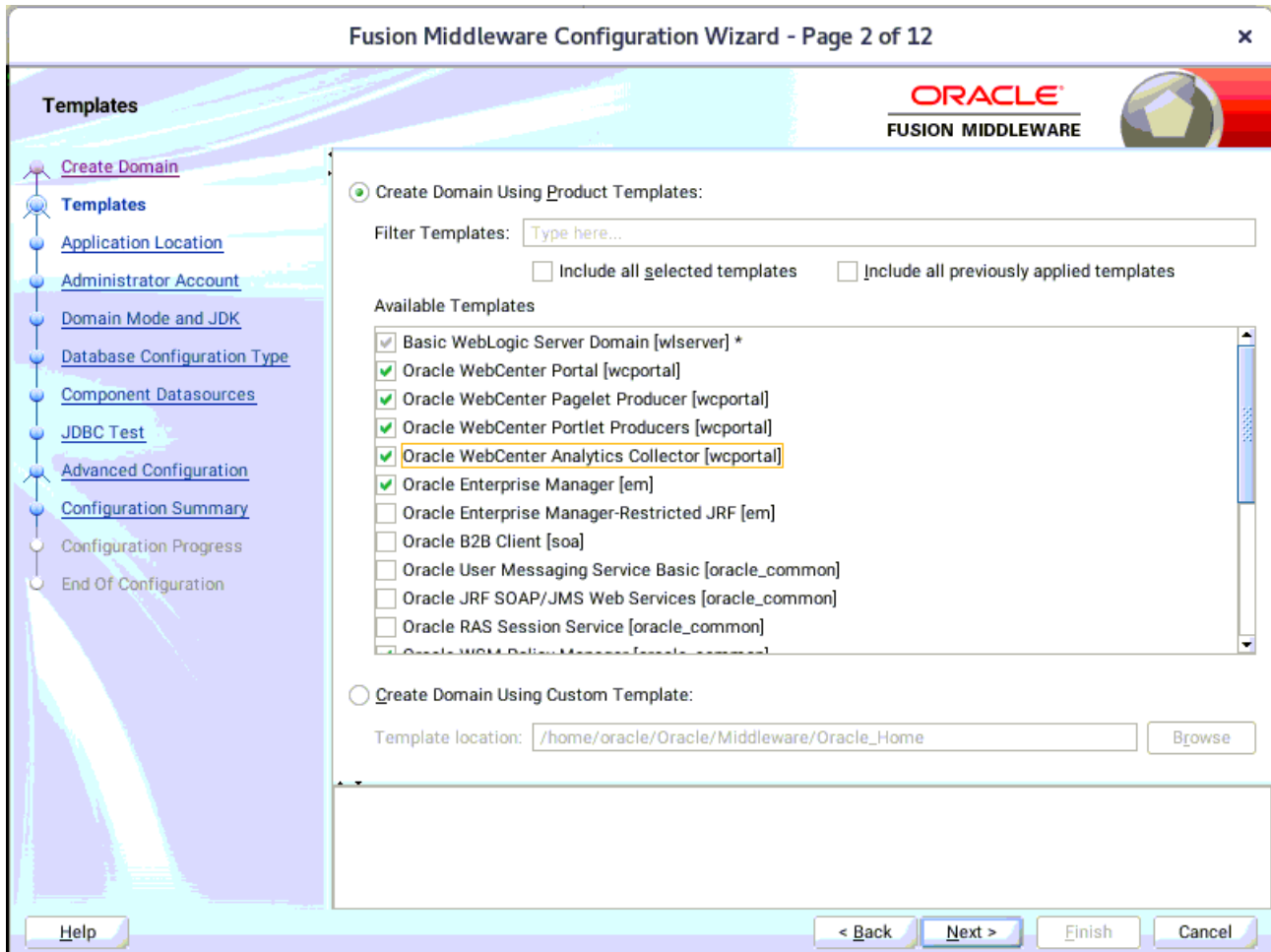
#### Follow these steps:

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



Click **Next** to continue.

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



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

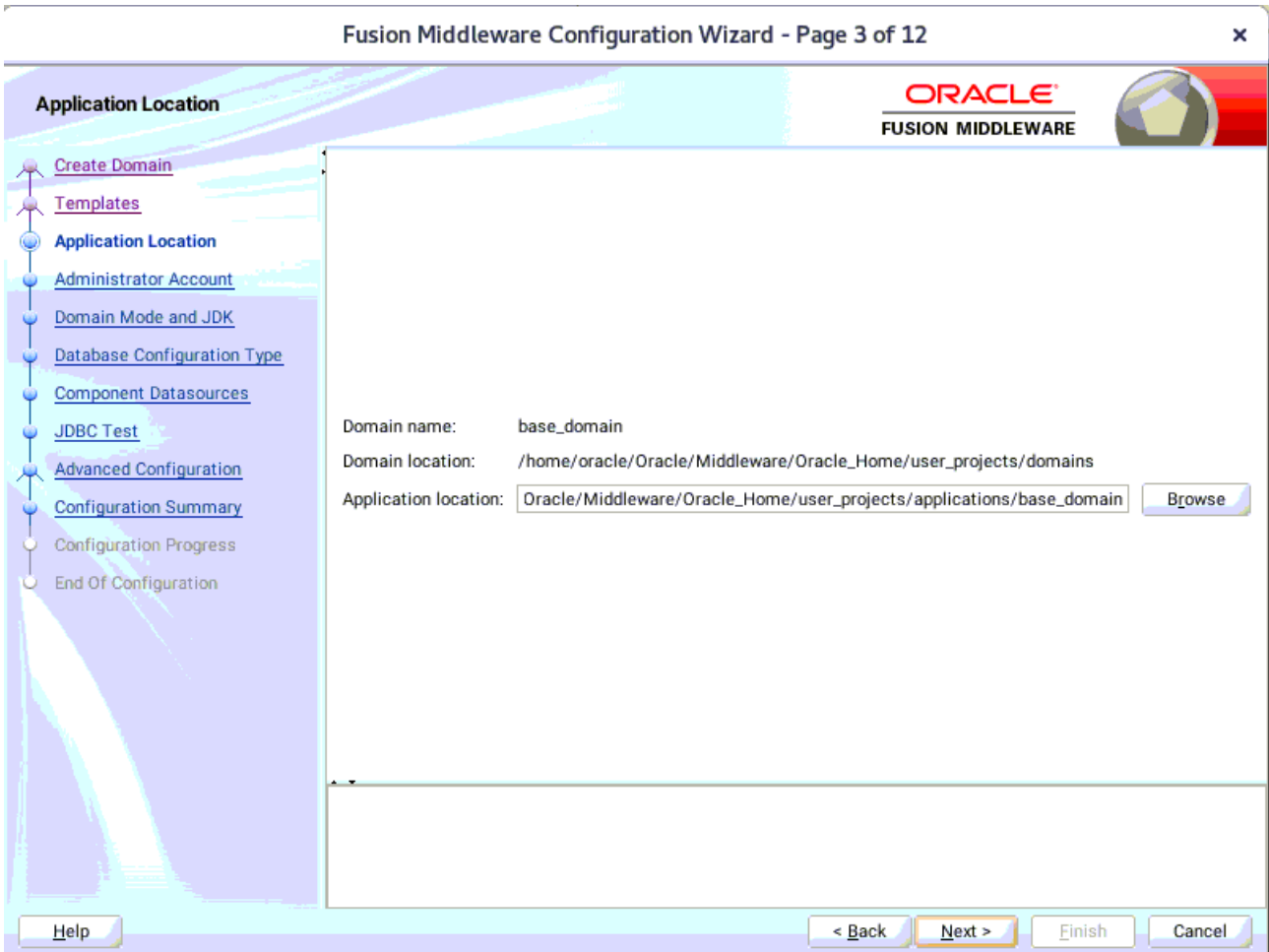
- Oracle WebCenter Portal [wcportal]

Selecting this template automatically selects the following as dependencies:

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

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

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



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

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

Fusion Middleware Configuration Wizard - Page 4 of 12

**Administrator Account**

ORACLE  
FUSION MIDDLEWARE

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

Name:

Password:

Confirm Password:

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

Help < Back Next > Finish Cancel

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

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

The screenshot shows the 'Domain Mode and JDK' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 5 of 12'. The Oracle Fusion Middleware logo is visible in the top right corner. On the left, a navigation pane lists the following steps: Create Domain, Templates, 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 content area is divided into two sections: 'Domain Mode' and 'JDK'. Under 'Domain Mode', there are two radio button options: 'Development' (with a description: 'Utilize boot.properties for username and password, and poll for applications to deploy.') and 'Production' (selected, with a description: 'Require the entry of a username and password, and do not poll for applications to deploy.'). Under 'JDK', there are two radio button options: 'Oracle HotSpot 1.8.0\_221 /home/oracle/ORACLE\_SW/Java/jdk1.8.0\_221' (selected) and 'Other JDK Location:' followed by a text input field and a 'Browse' button. At the bottom of the wizard, 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**

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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**

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.

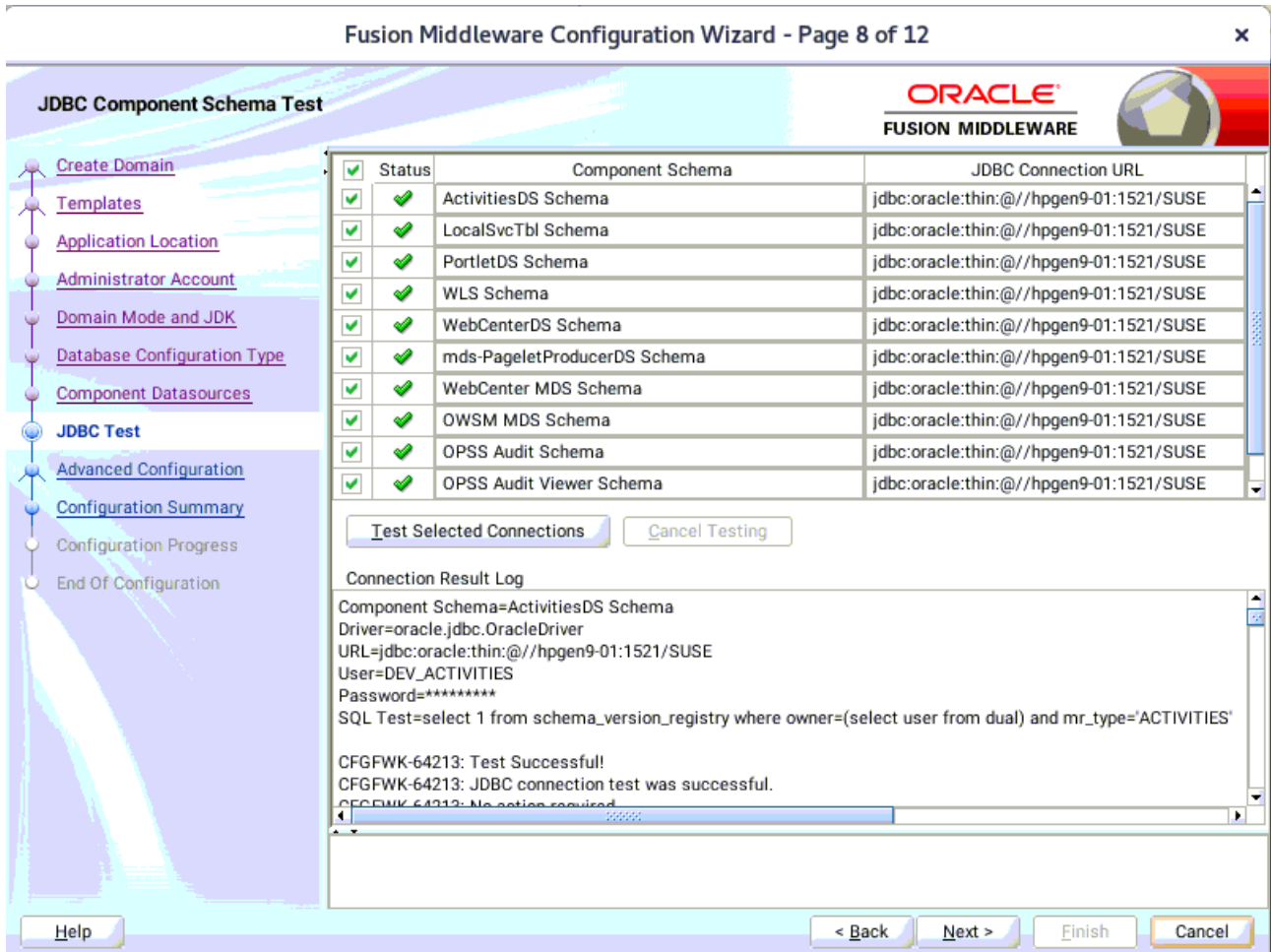
<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	ActivitiesDS Schema	SUSE	hpgen9-01	1521	DEV_ACTIVITIE	.....
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	DEV_STB	.....
<input type="checkbox"/>	PortletDS Schema	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	.....

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.

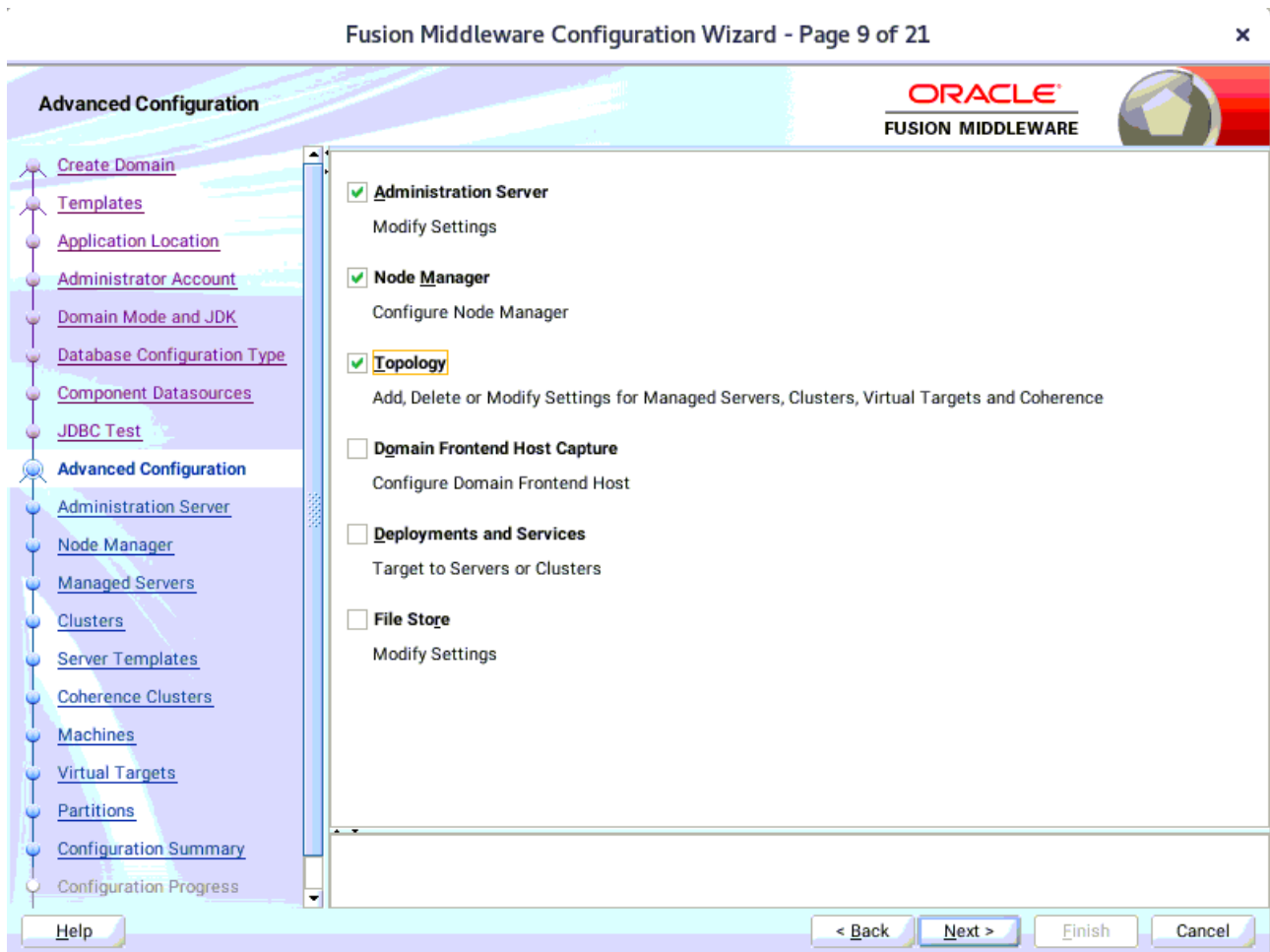
8). The **JDBC Component Schema Test** screen appears.



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](#)

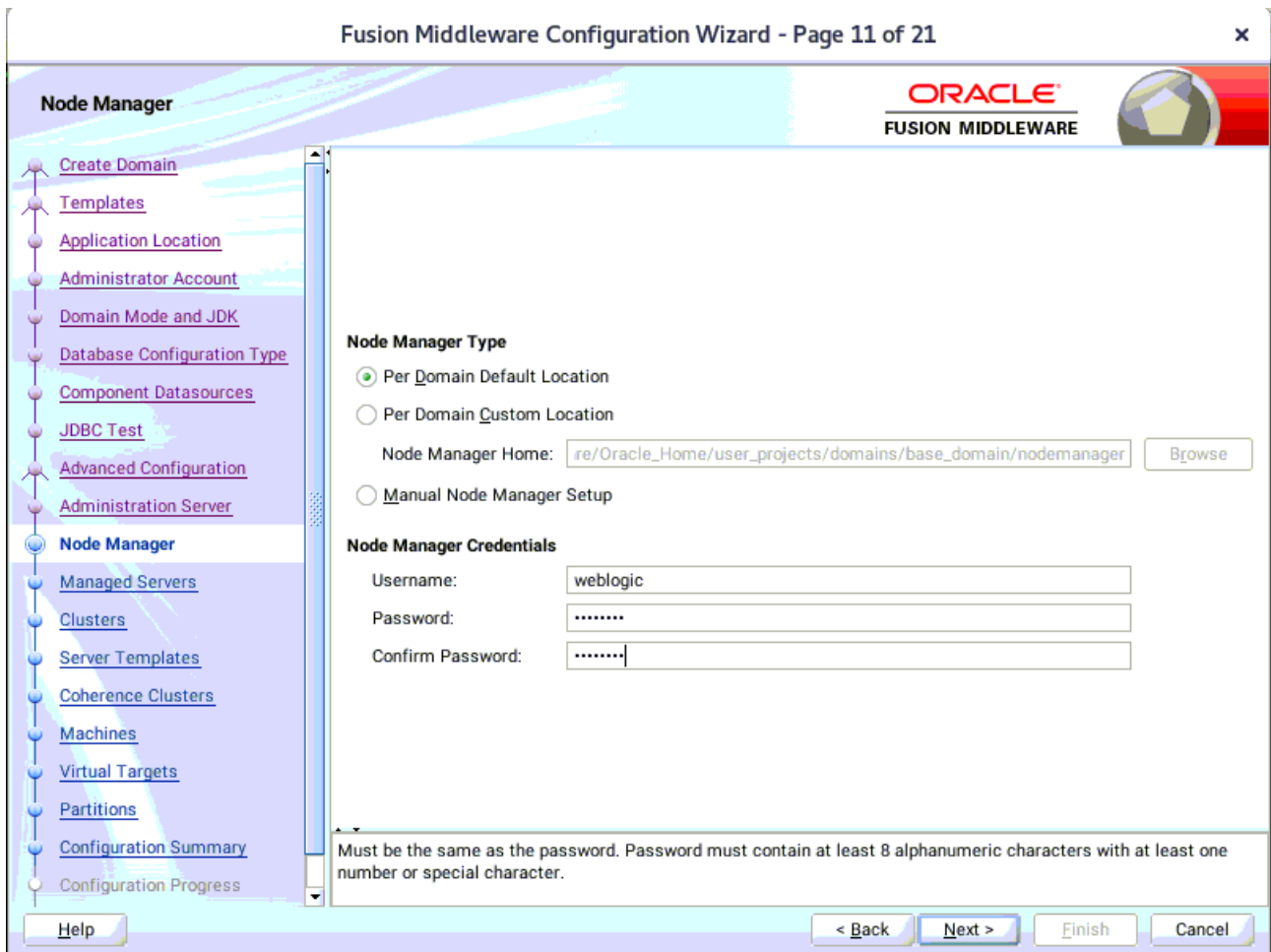
Server Name:   
 Listen Address:   
 Listen Port:   
 Enable SSL:   
 SSL Listen Port:   
 Server Groups:

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



- 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

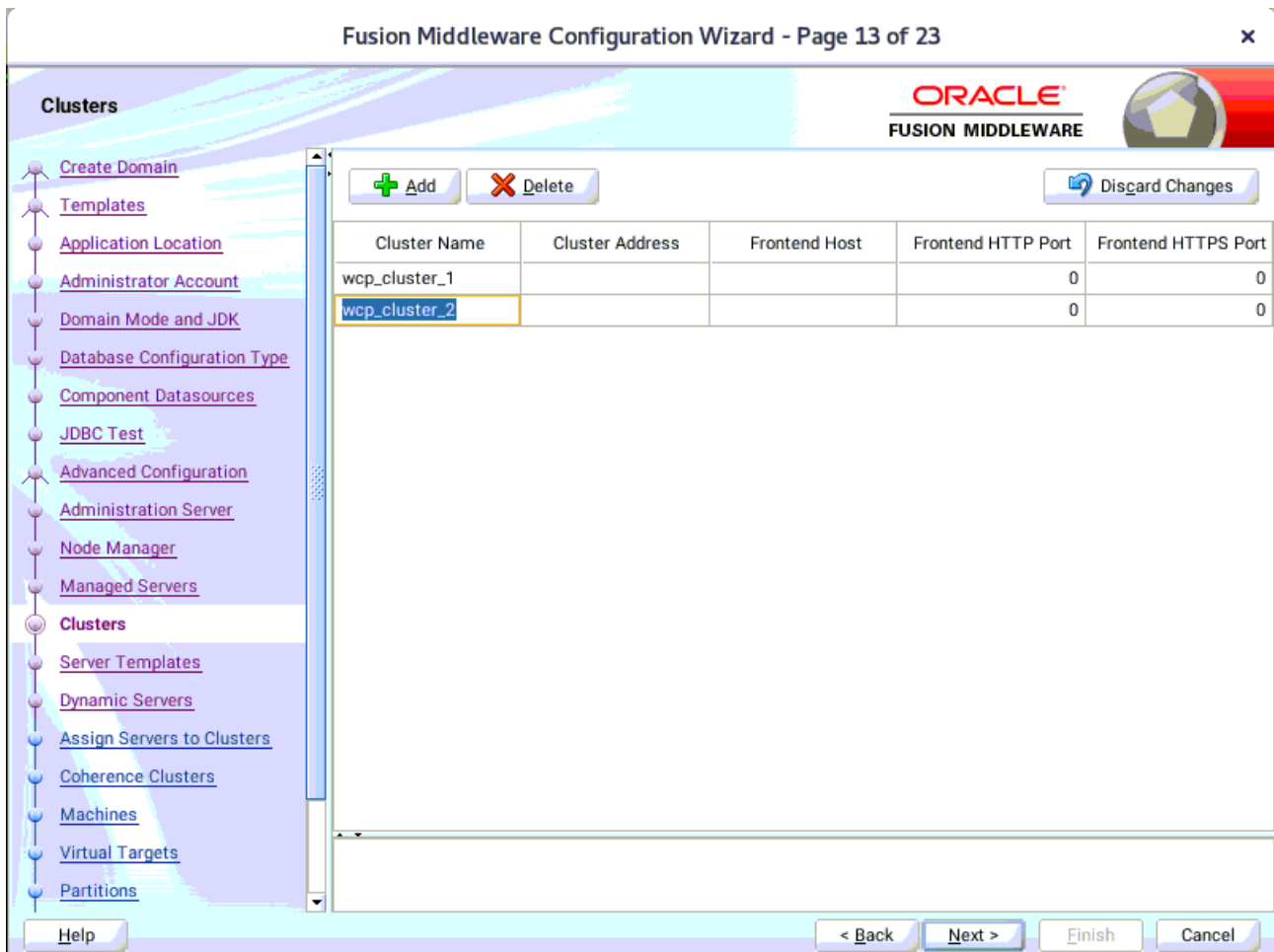
+ Add
Clone
✗ Delete
Discard Changes

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 ...

Help
< Back
Next >
Finish
Cancel

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

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

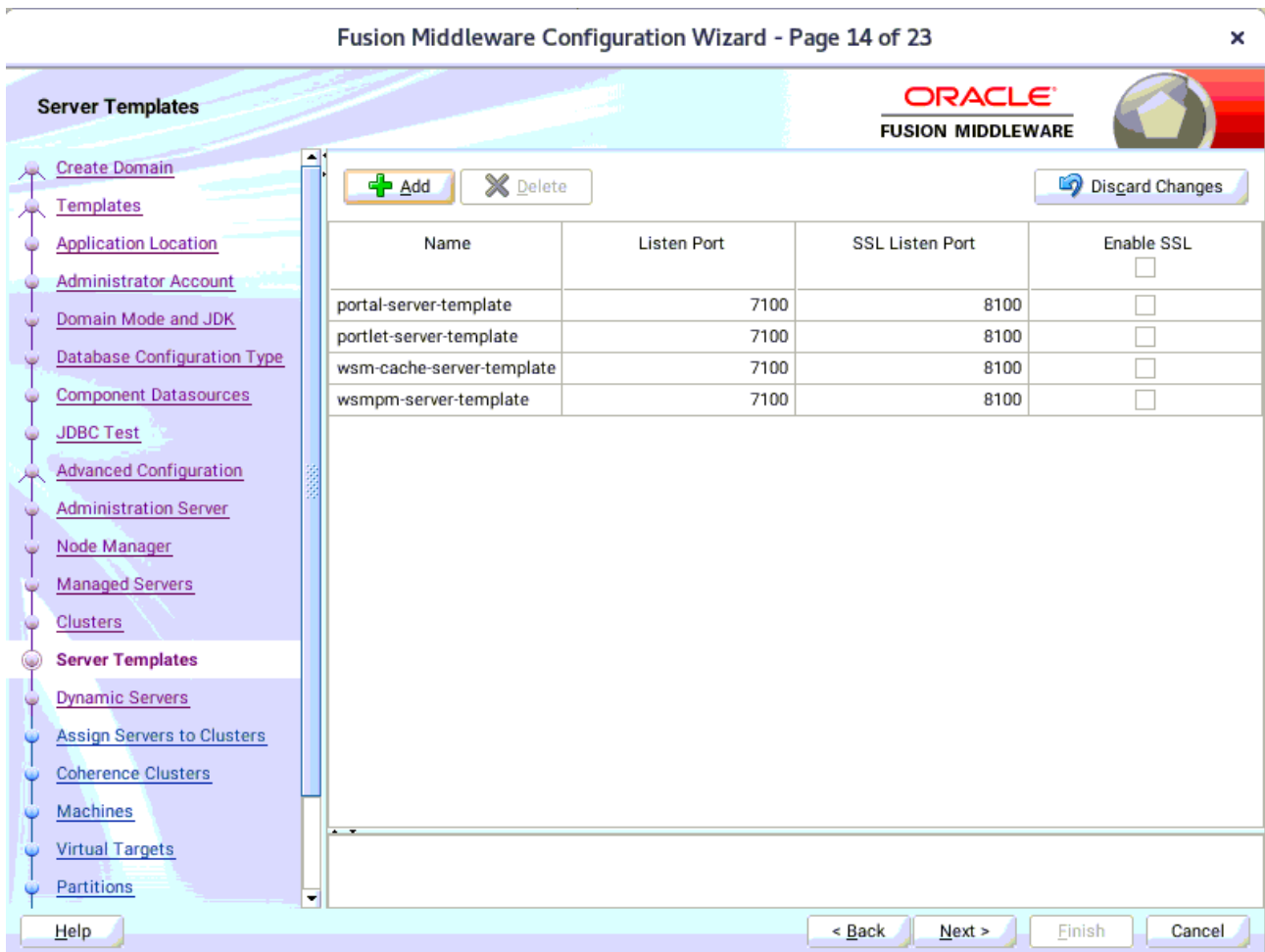


On the Clusters screen:

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

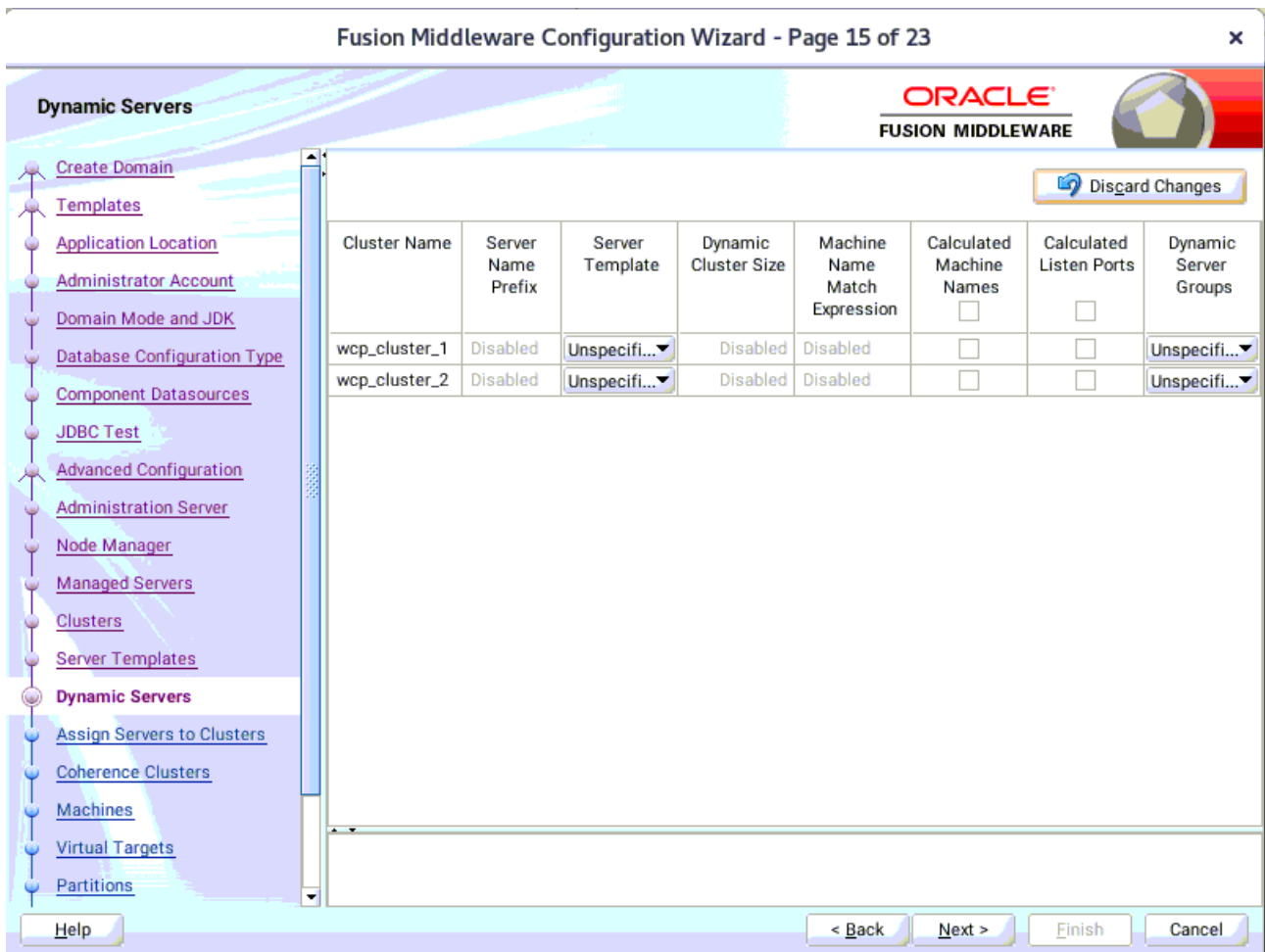
Click **Next** to continue.

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



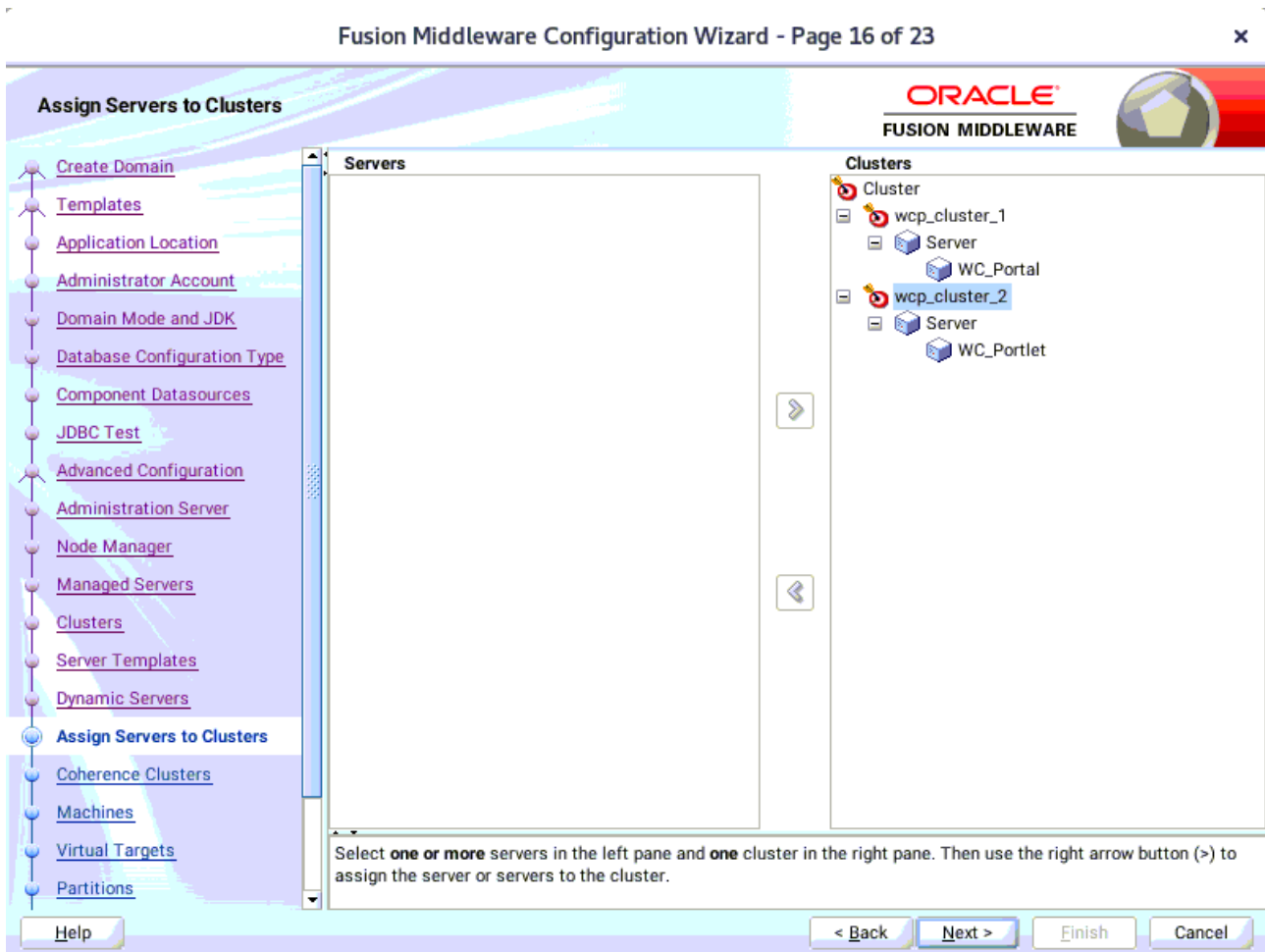
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



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

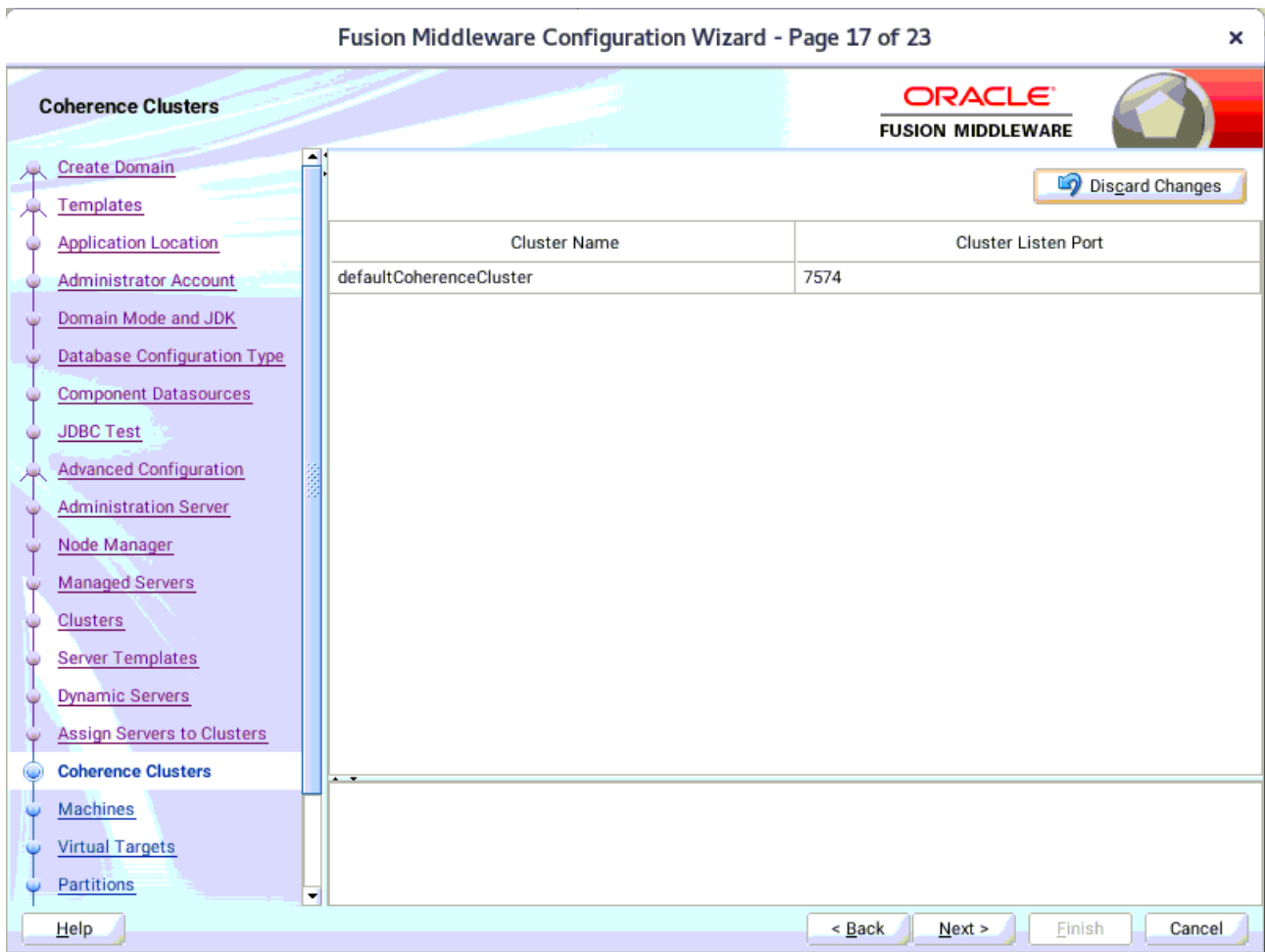
16). The **Assign Servers to Clusters** screen appears.



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

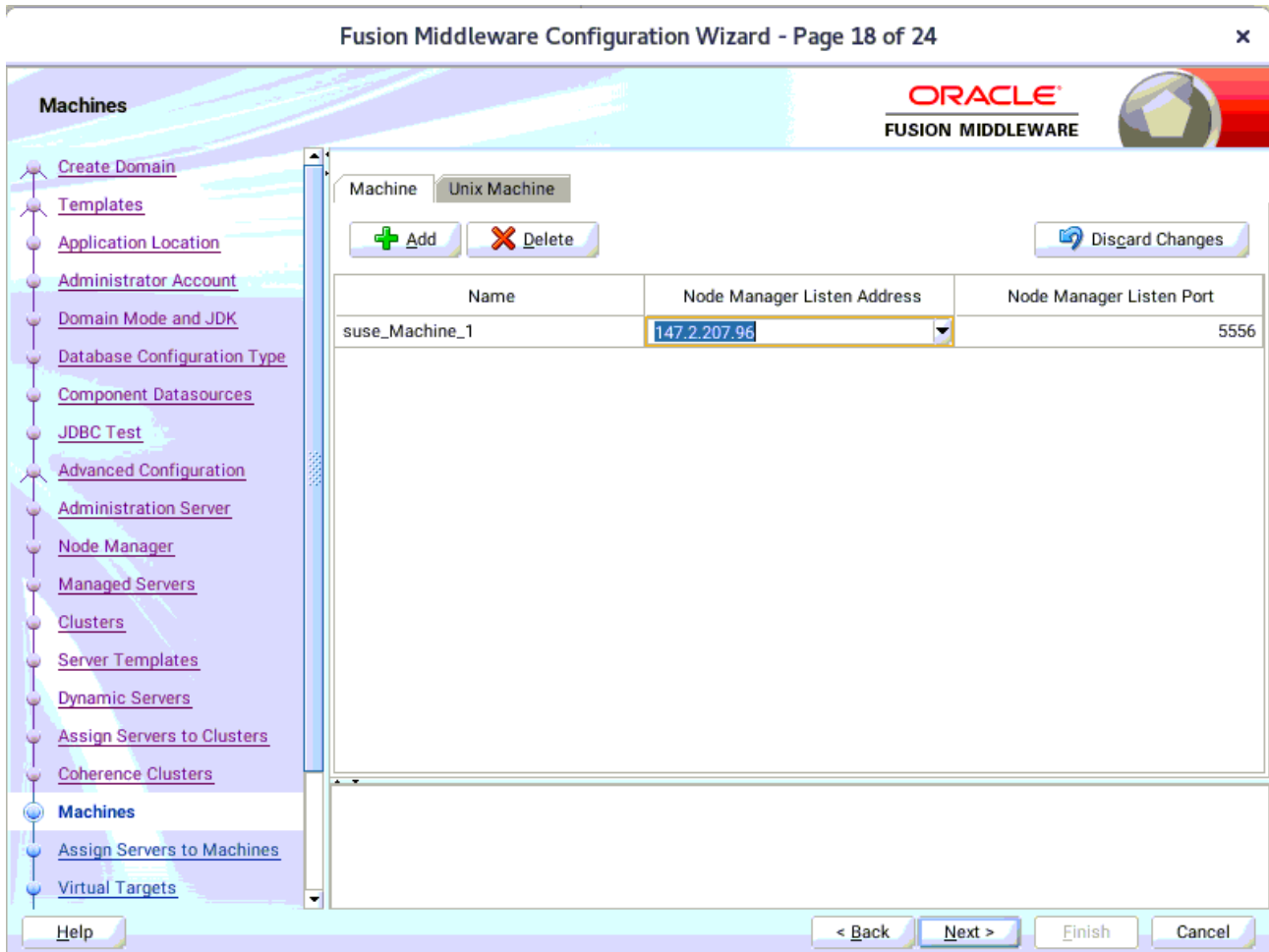


17). The **Coherence Clusters** screen appears.



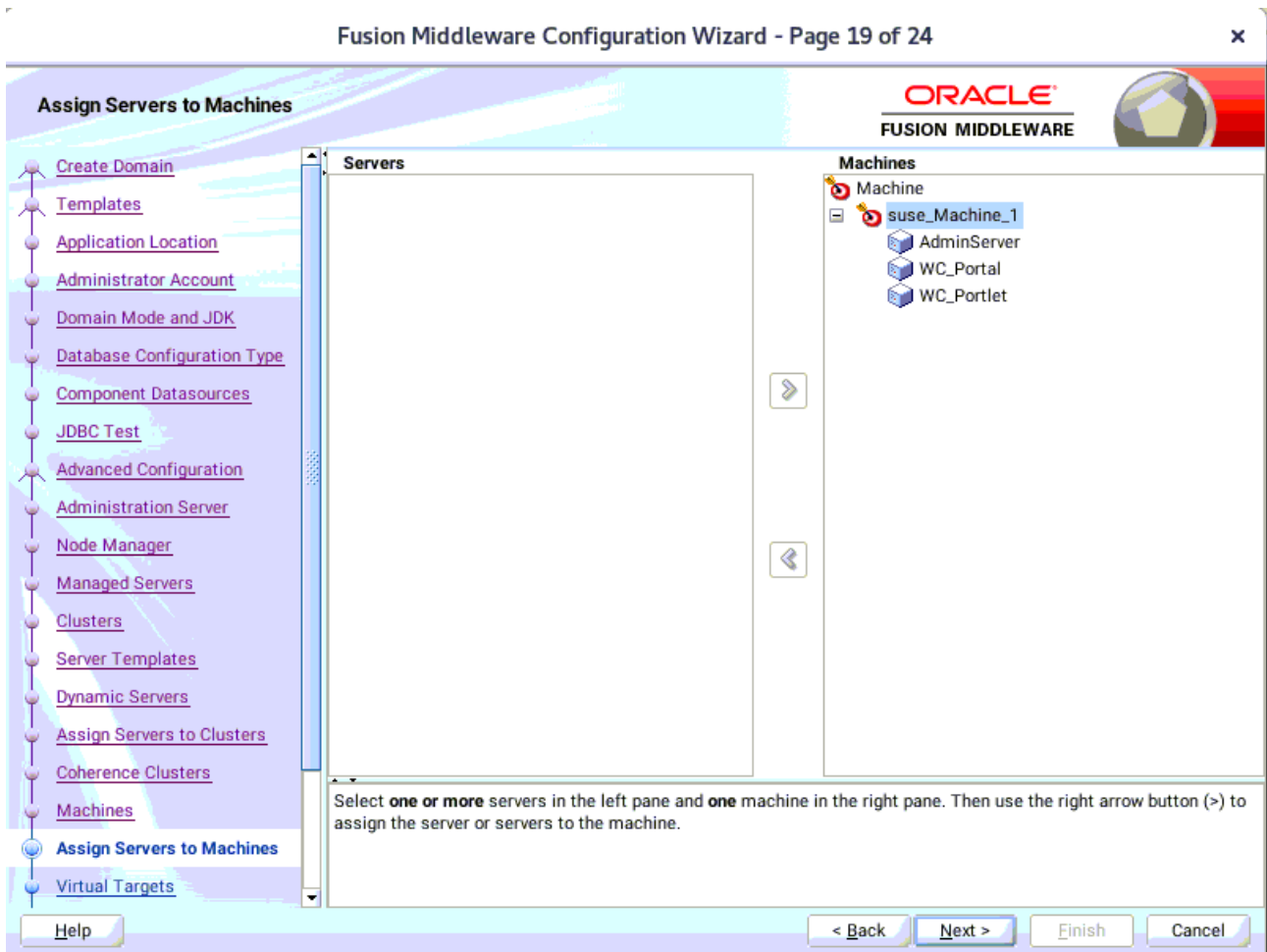
Leave the default port number as the Coherence cluster listen port. Click **Next** to continue.

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



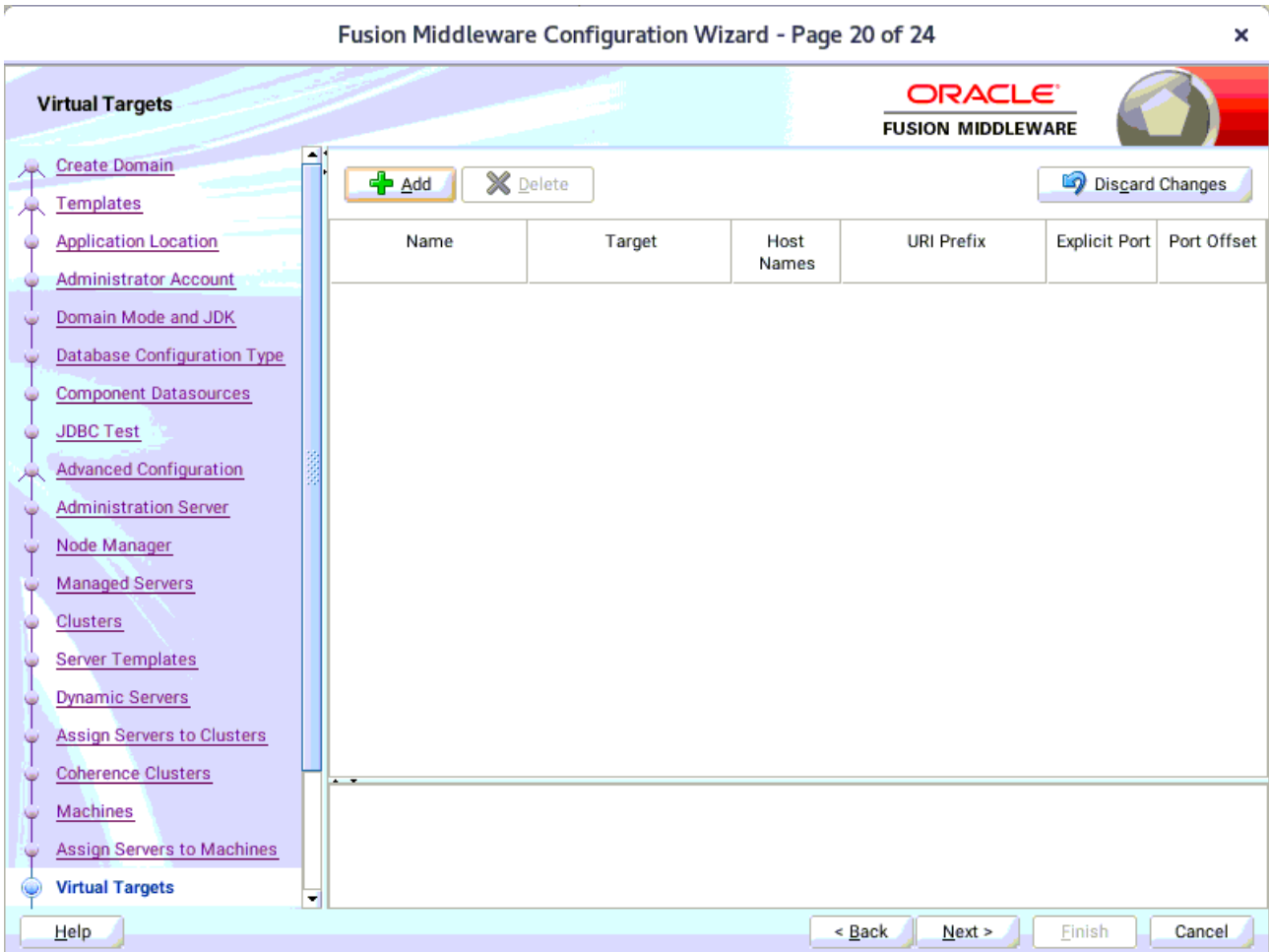
To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



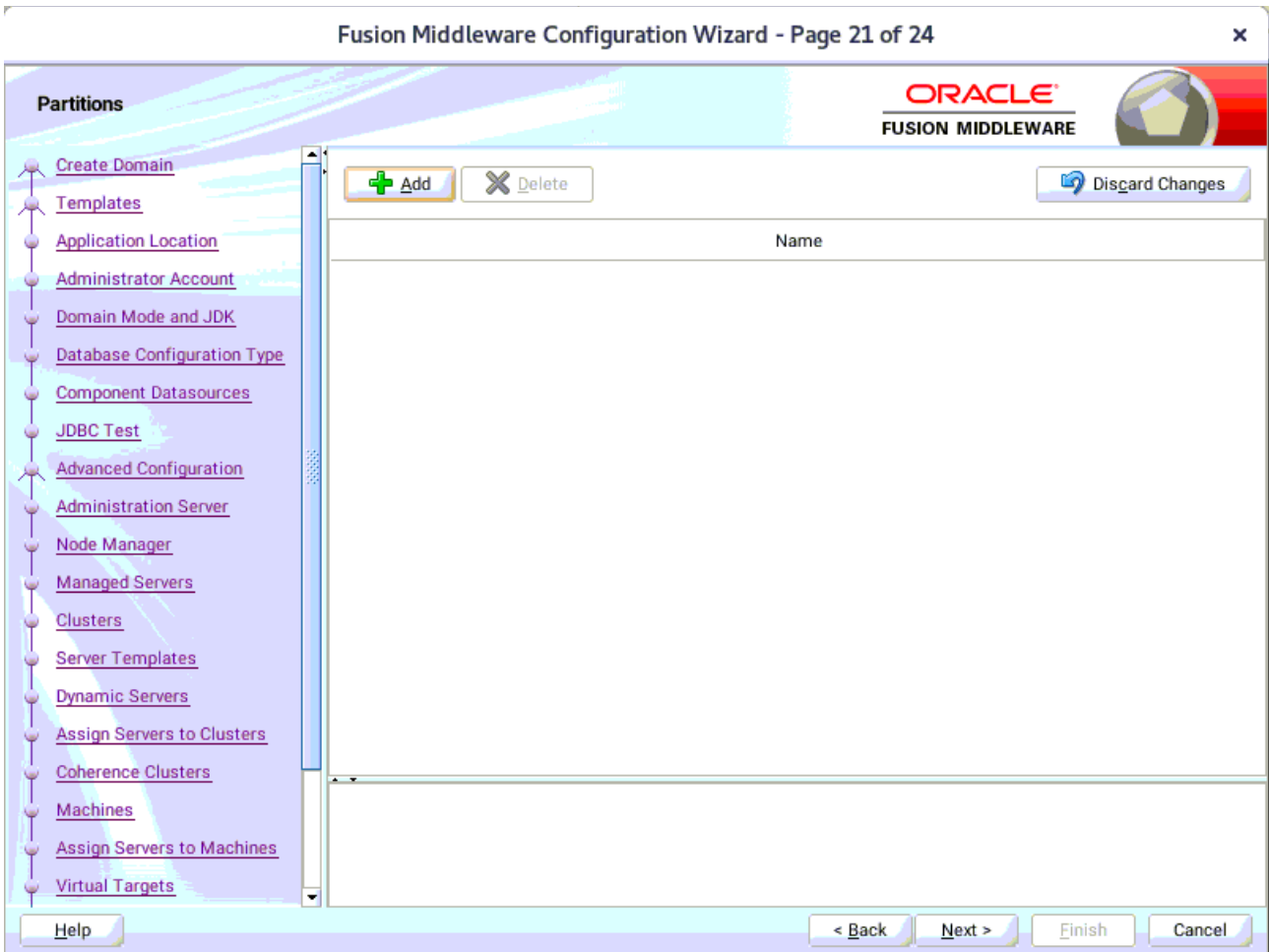
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



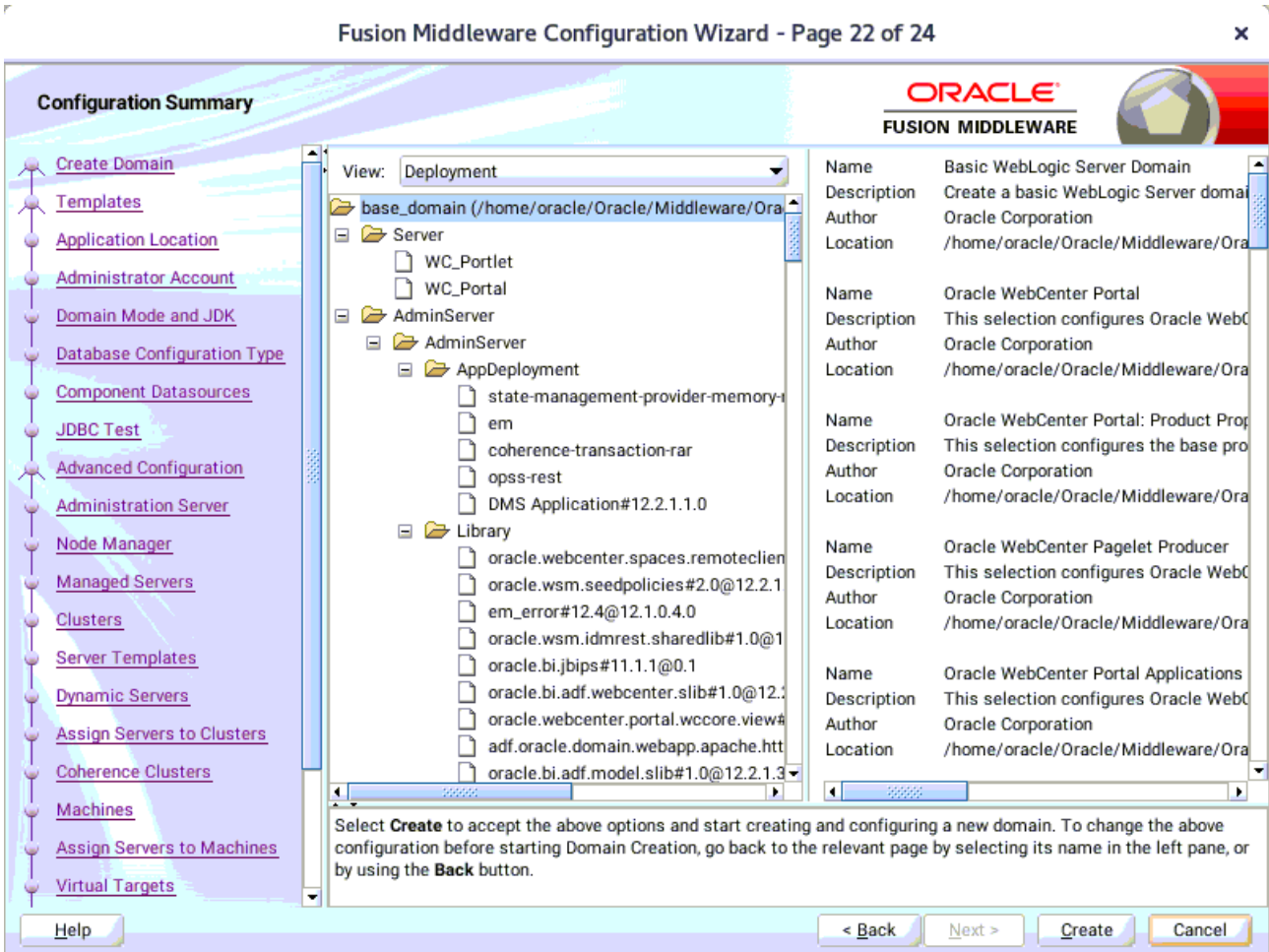
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



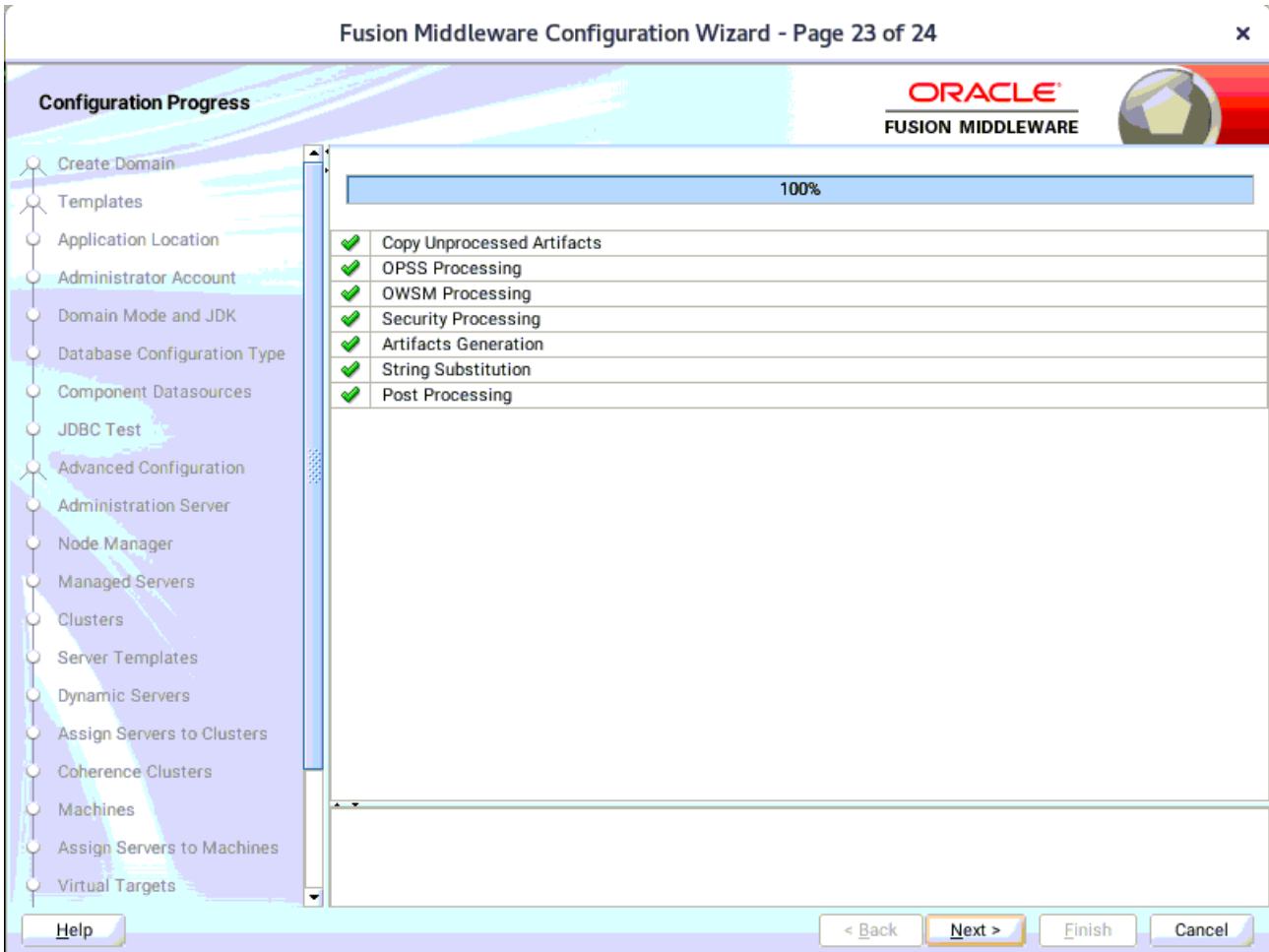
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



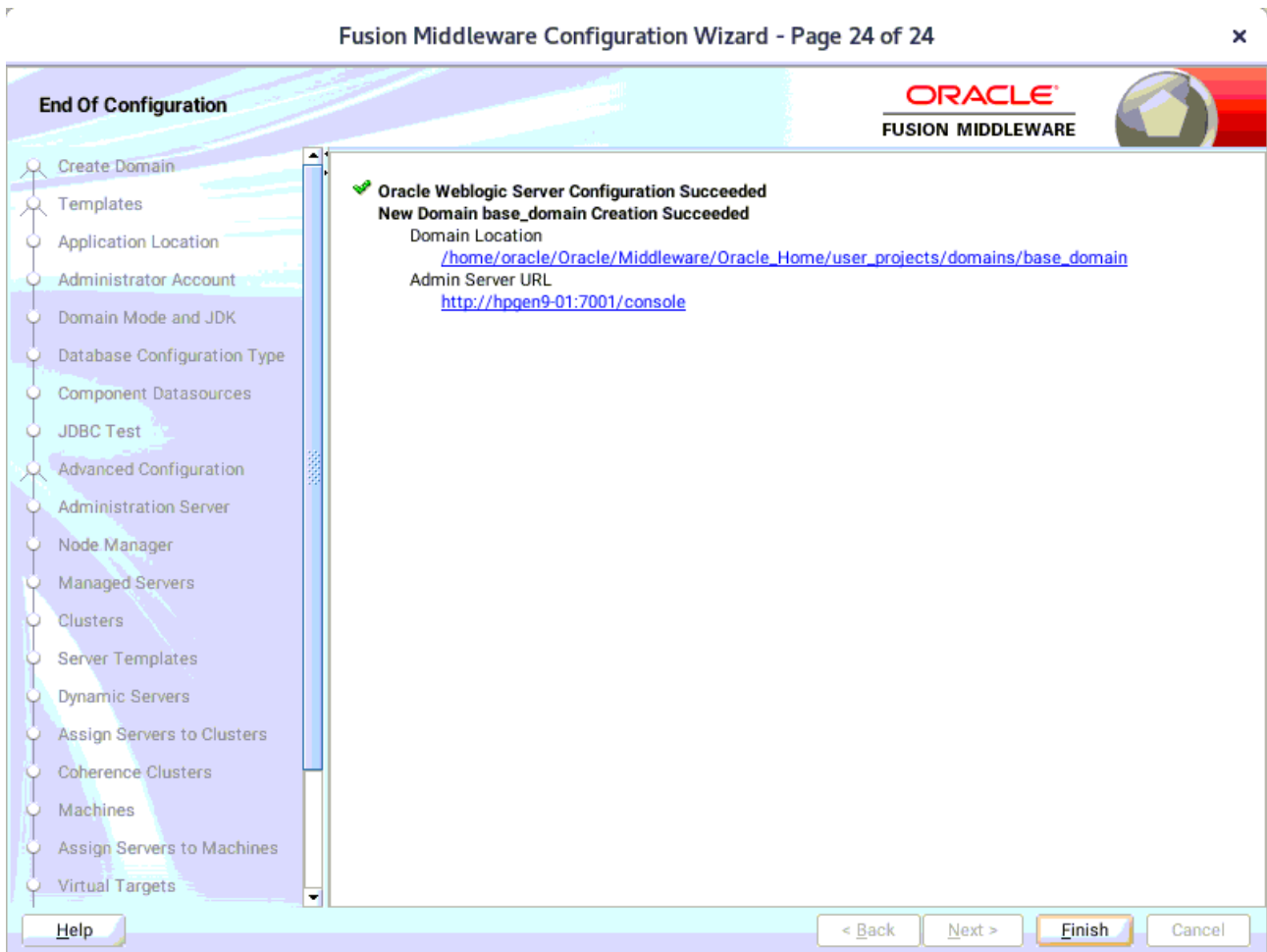
Select **Create** to accept the above options and start creating and configuring a new domain.

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



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

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



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



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

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

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

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

```

oracle@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] 9650
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_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar::/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/oracle/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./ -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Dec 25, 2019 4:40:07 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Dec 25, 2019 4:40:07 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Dec 25, 2019 4:40:07 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'>
<Dec 25, 2019 4:40:07 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Dec 25, 2019 4:40:07 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Dec 25, 2019 4:40:07 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml

```

Starting 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
2019-12-25 16:44:19.103/129.230 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for q
ueue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleCon
figurableCacheFactory
<Dec 25, 2019 4:44:19,198 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully esta
blished a connection with the Domain level Diagnostic Service.>
<Dec 25, 2019 4:44:19,820 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Dec 25, 2019 4:44:19,883 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Dec 25, 2019 4:44:19,883 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Dec 25, 2019 4:44:20,801 PM GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multi
ple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<Dec 25, 2019 4:44:20,802 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Admi
nistration Server "AdminServer" for domain "base_domain" running in production mode.>
<Dec 25, 2019 4:44:20,802 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.>
<Dec 25, 2019 4:44:20,803 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on
0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Dec 25, 2019 4:44:20,803 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.>
<Dec 25, 2019 4:44:20,804 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.>
<Dec 25, 2019 4:44:20,804 PM GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on
0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Dec 25, 2019 4:44:20,805 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.>
<Dec 25, 2019 4:44:20,808 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mo
de.>
<Dec 25, 2019 4:44:20,838 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.
>
2019-12-25 16:44:21.533/131.661 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '63' for q
ueue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over
REST

```

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

```

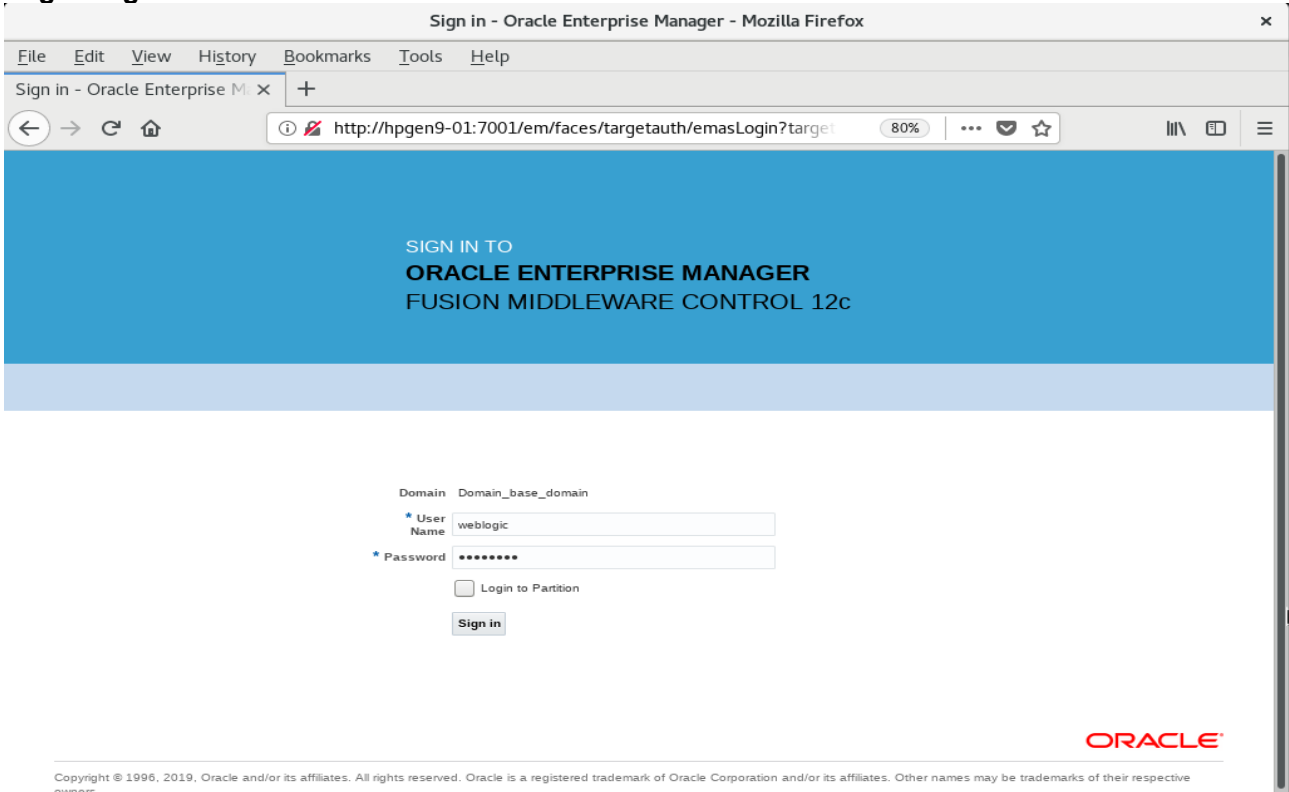
-----
Server state changed to RUNNING.
-----

```

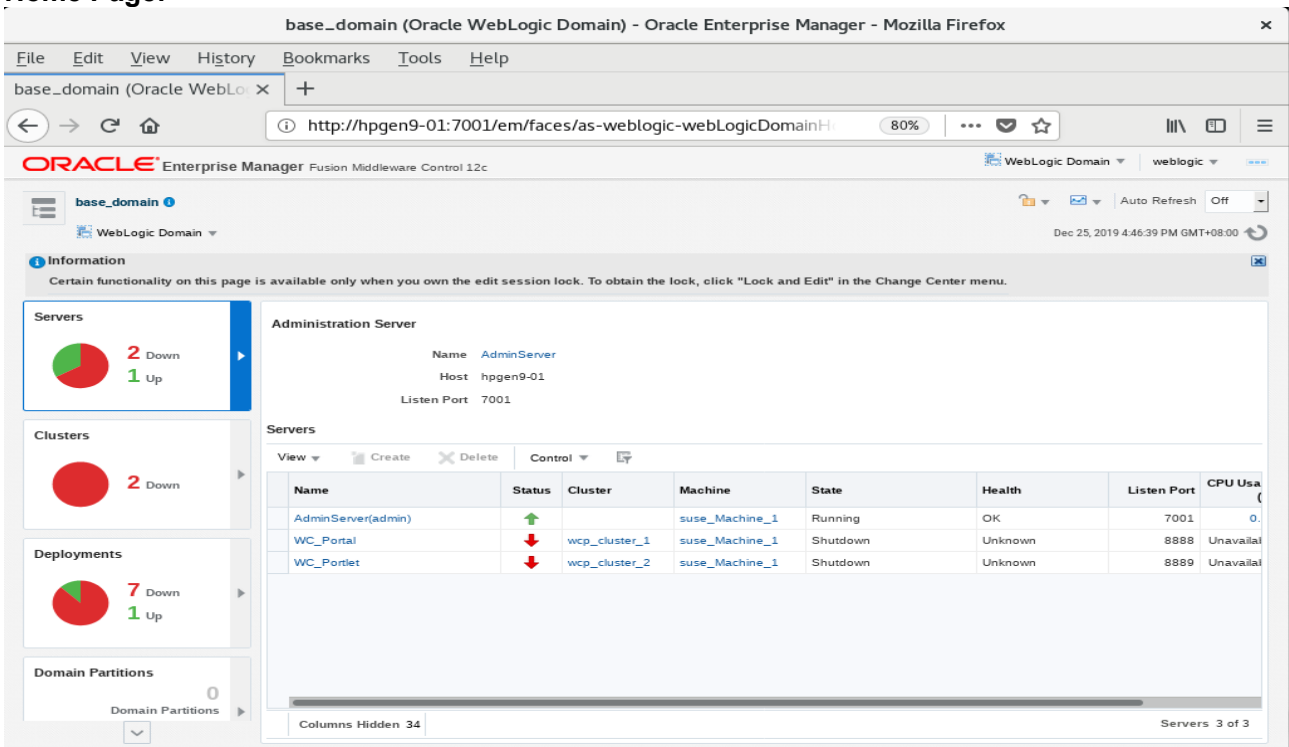
4-3. Checking Oracle WebCenter Product URLs.

1). Access to Enterprise Manager Console.

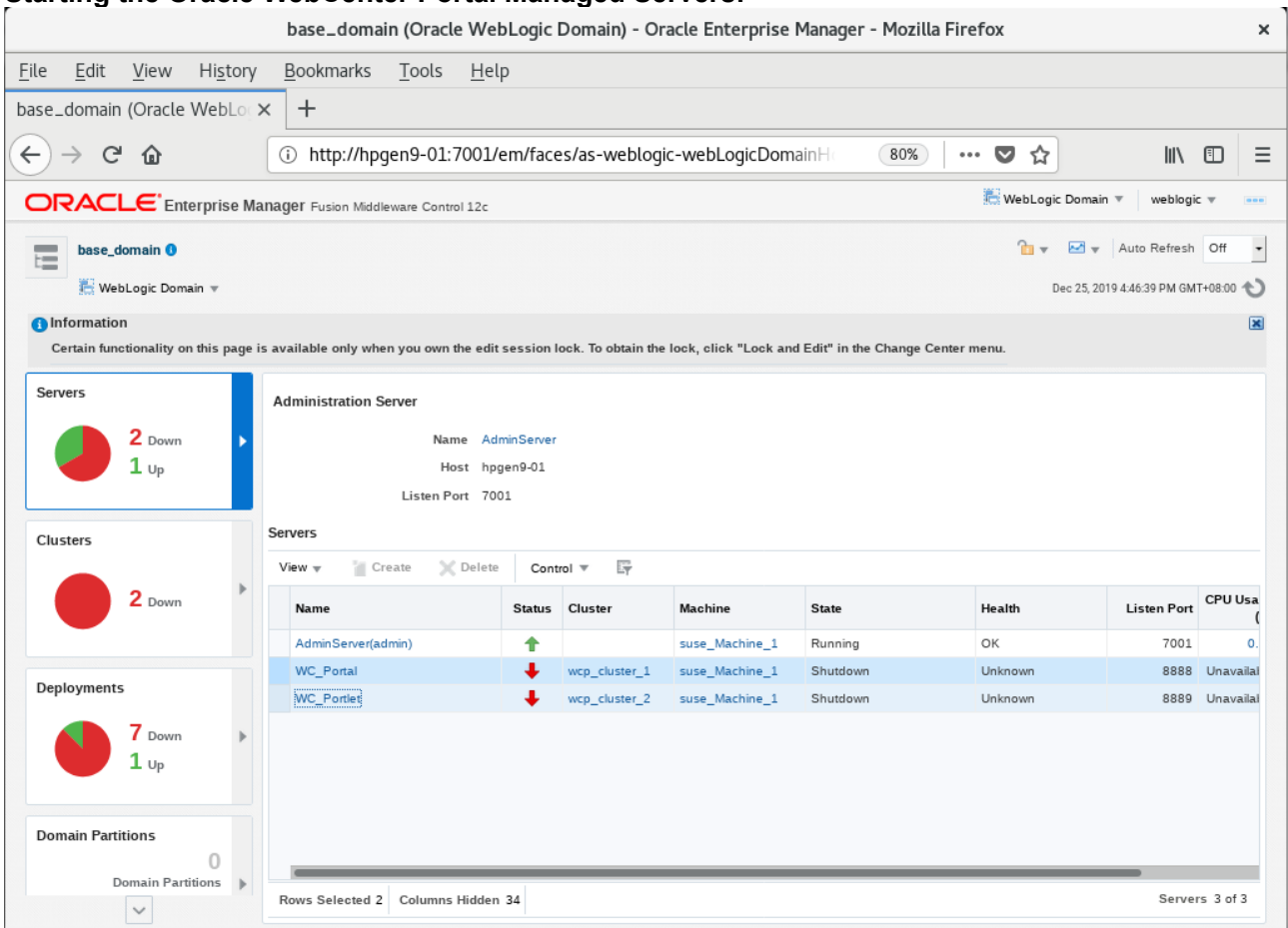
**Login Page:**



**Home Page:**



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



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

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

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

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain. On the left, there are summary cards for Servers (2 Down, 1 Up), Clusters (2 Down), Deployments (7 Down, 1 Up), and Domain Partitions (0). The main area displays the 'Administration Server' details (Name: AdminServer, Host: hpgen9-01, Listen Port: 7001) and a table of managed servers. A 'Control' menu is open over the table, with 'Start' selected. The table shows the following data:

Name	Machine	State	Health	Listen Port	CPU Usage (%)
AdminServer(admin)	suse_Machine_1	Running	OK	7001	0.0
WC_Portlet	suse_Machine_1	Shutdown	Unknown	8888	Unavailable
WC_Portlet	suse_Machine_1	Shutdown	Unknown	8889	Unavailable

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

The screenshot shows the Oracle Enterprise Manager interface after the servers have started. The 'Servers' summary card now shows 3 Up. The table of managed servers is updated to show all servers in a 'Running' state:

Name	Status	Cluster	Machine	State	Health	Listen Port	CPU Usage (%)
AdminServer(admin)	↑		suse_Machine_1	Running	OK	7001	6.5
WC_Portlet	↑	wcp_cluster_1	suse_Machine_1	Running	OK	8888	6.1
WC_Portlet	↑	wcp_cluster_2	suse_Machine_1	Running	OK	8889	0.2

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".

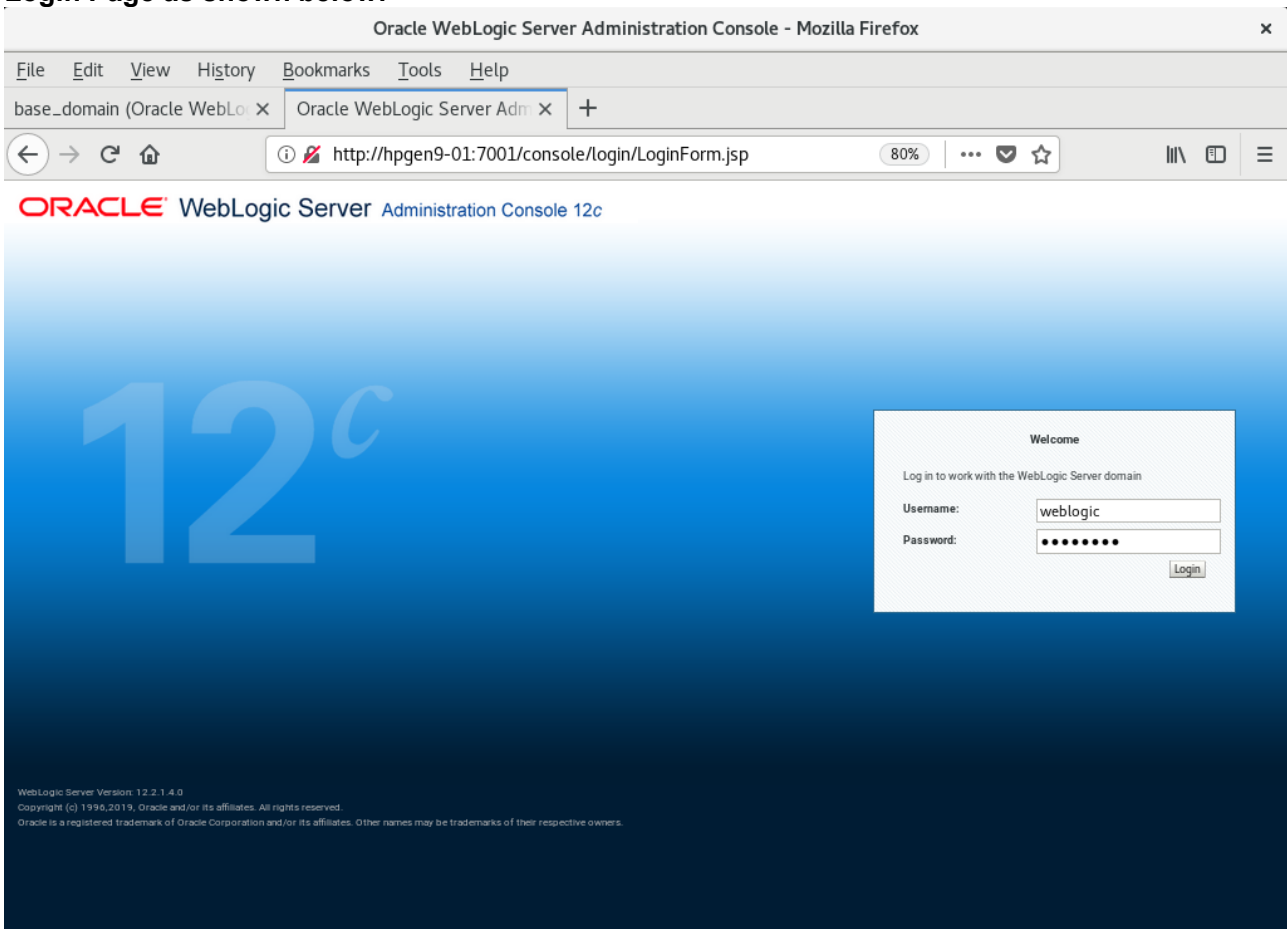
Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

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:

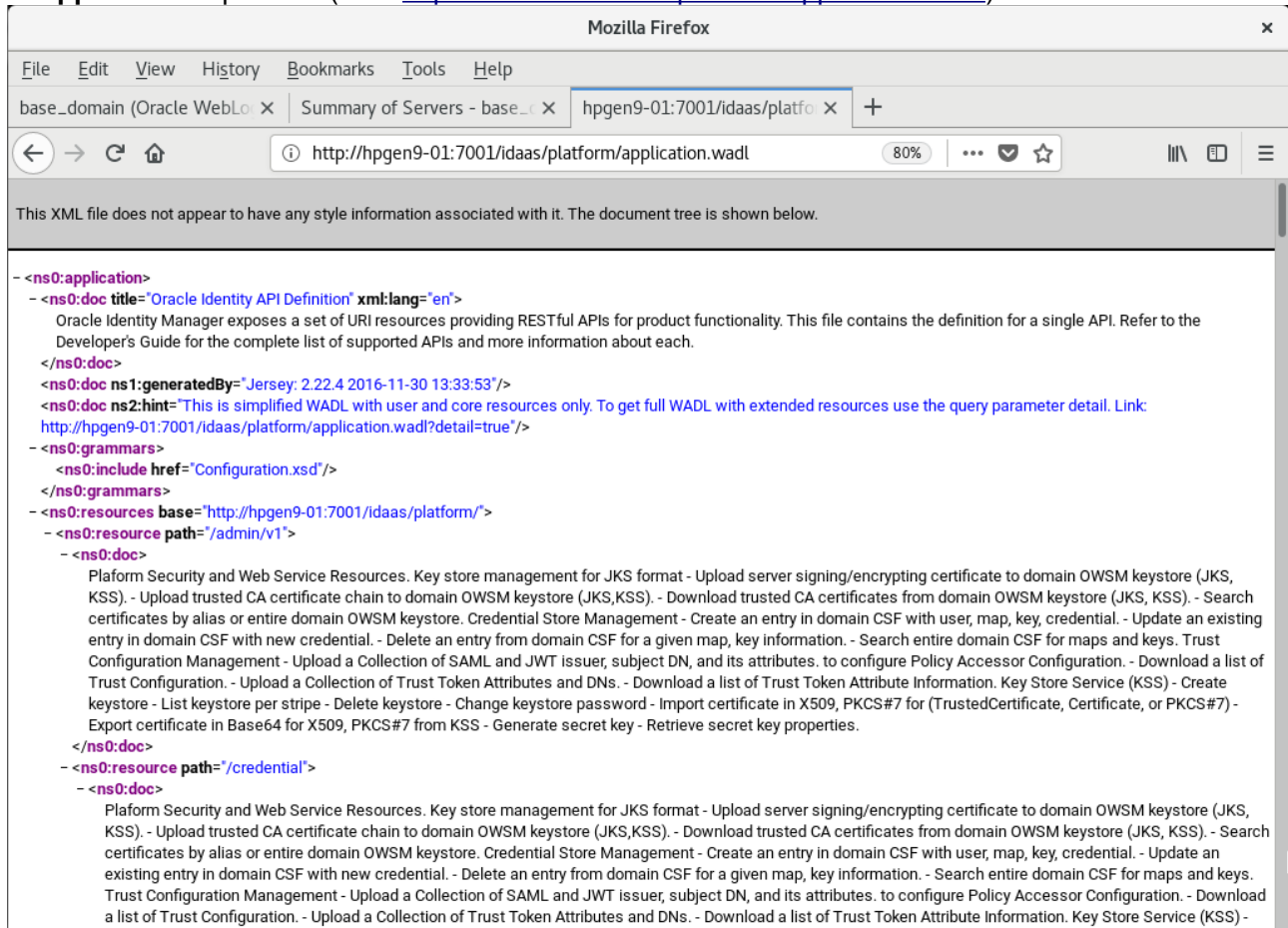


Home Page:

Viewing the summary of servers:

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>)


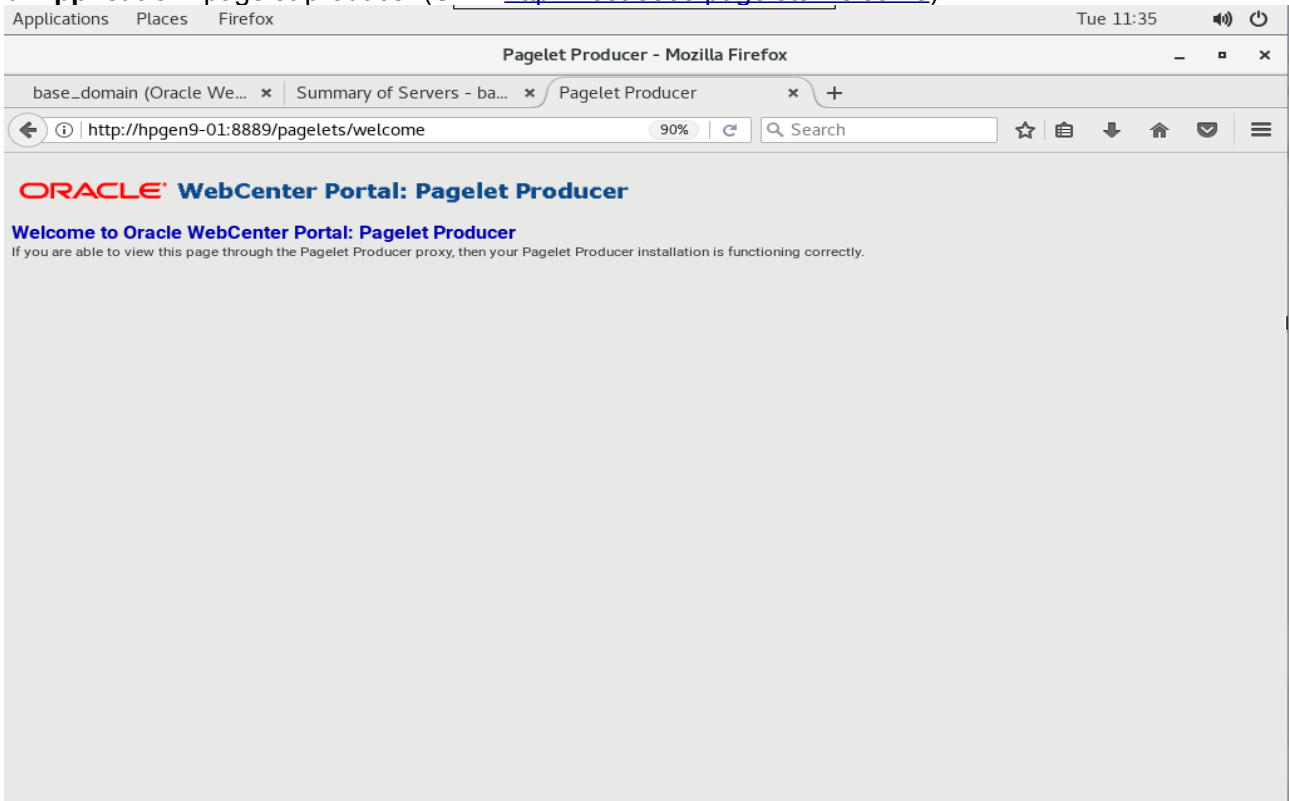
This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

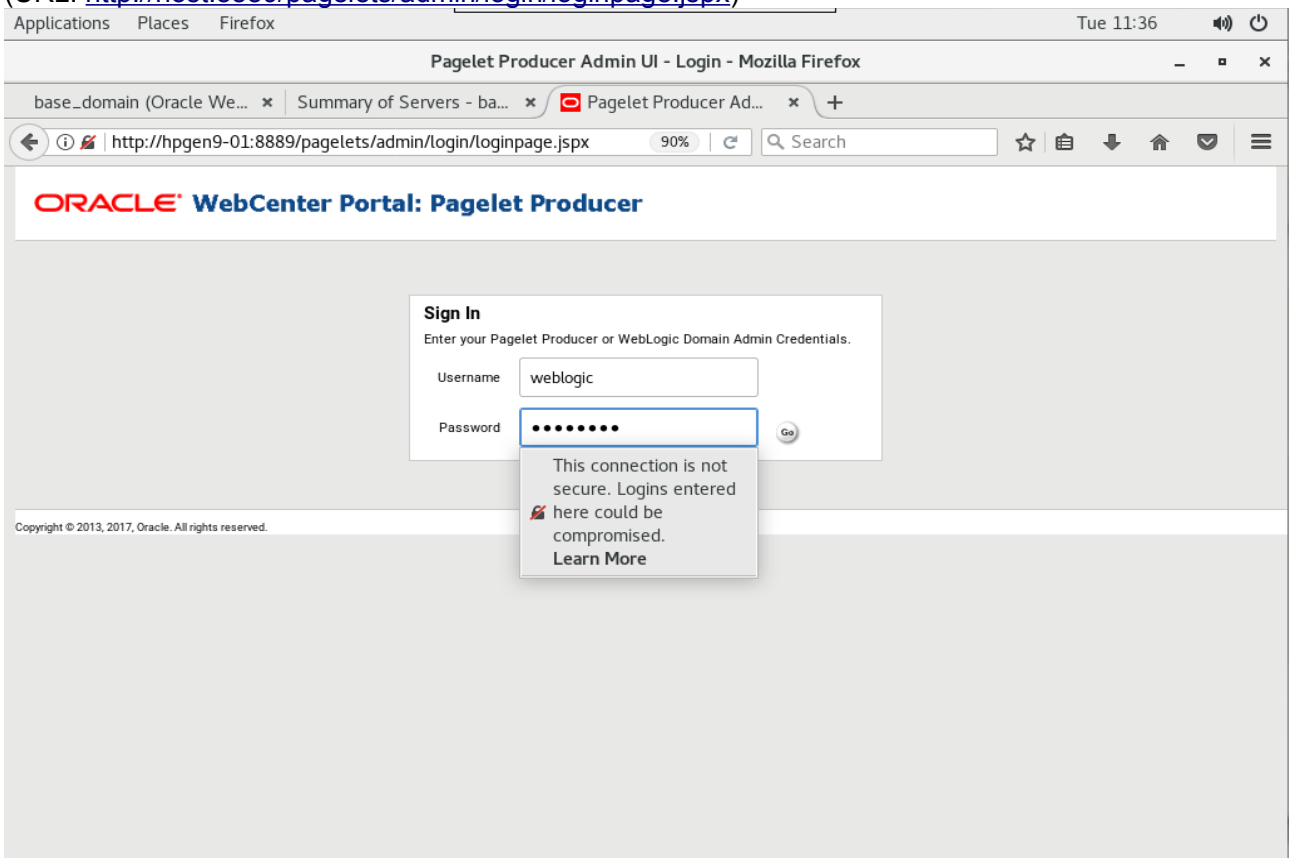
- <ns0:application>
- <ns0:doc title="Oracle Identity API Definition" xml:lang="en">
  Oracle Identity Manager exposes a set of URI resources providing RESTful APIs for product functionality. This file contains the definition for a single API. Refer to the Developer's Guide for the complete list of supported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



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



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



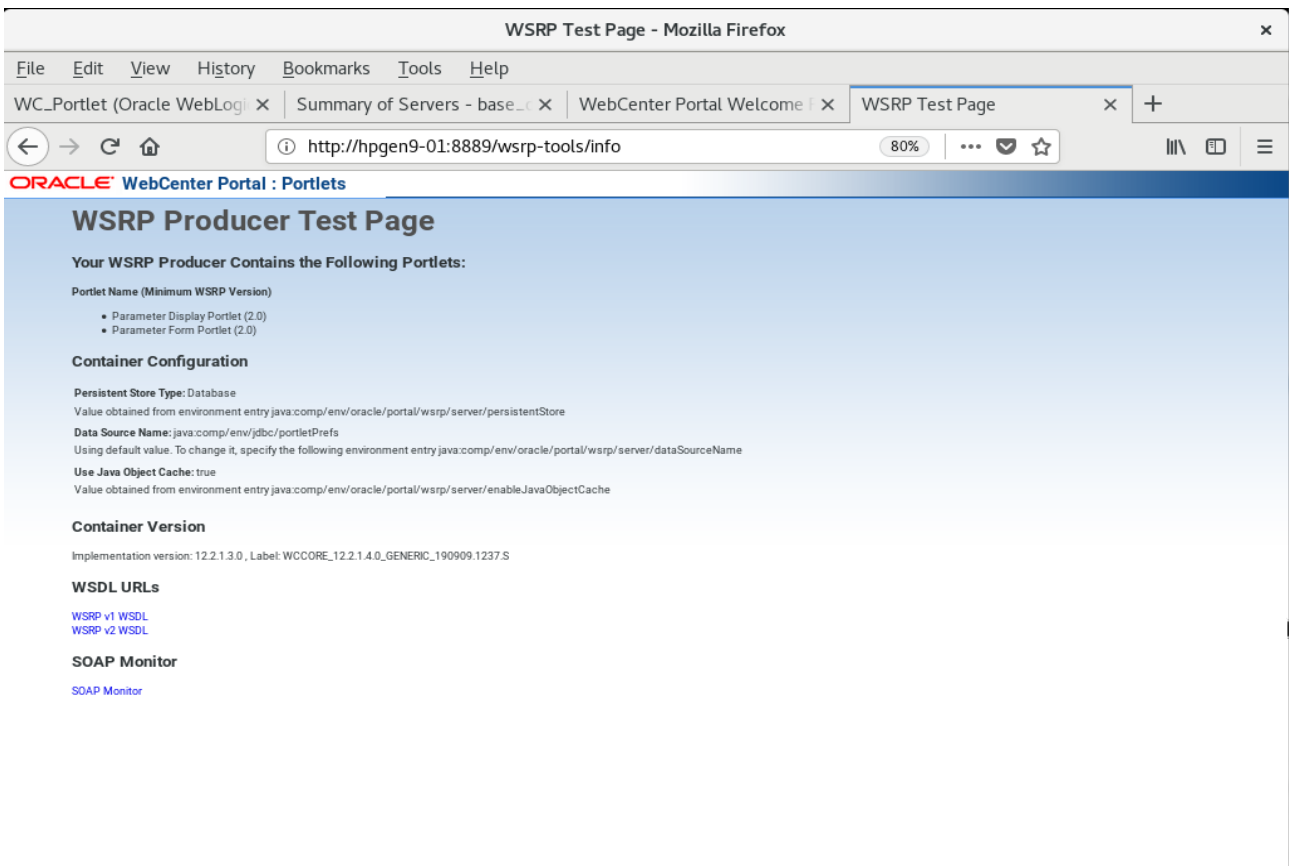
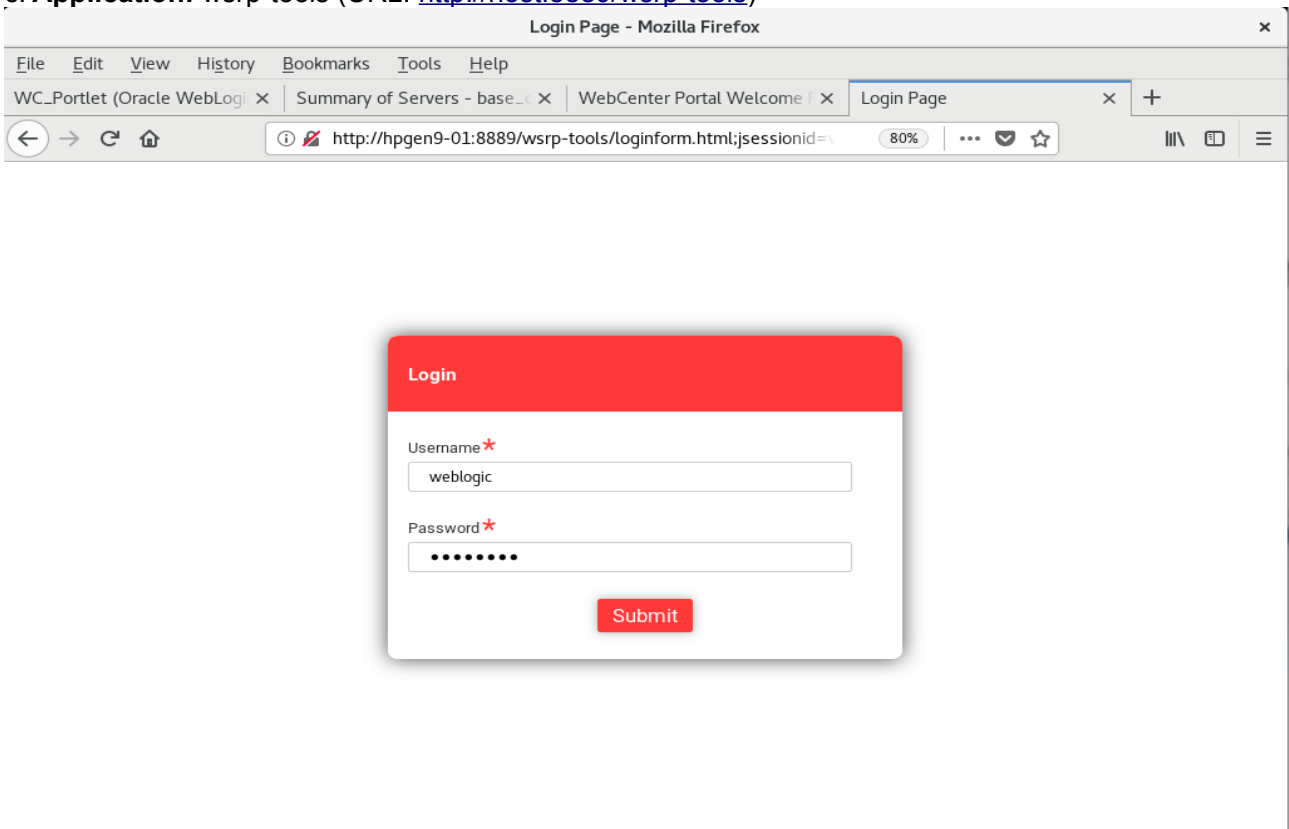
The screenshot shows a Mozilla Firefox browser window with the title "Oracle WebCenter Portal: Pagelet Producer - Mozilla Firefox". The address bar displays the URL "http://hpgen9-01:8889/pagelets/admin/" at 90% zoom. The page header includes the Oracle logo and the text "WebCenter Portal: Pagelet Producer" with a "Logout" link on the right. The main content area is divided into two sections: "Navigator" and "Summary".

**Navigator:** A tree view showing a "Jump to:" dropdown set to "Resources". Under "welcome\_resource", there is a list of categories: General, Policy, Autologin, Headers, Pagelets, Injectors, Parsers, and Files. Below this, there are expandable sections for "login\_resource" and "pagelet\_api".

**Summary:** A text box containing the instruction: "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."

At the bottom left of the page, the copyright notice reads: "Copyright © 2013, 2017, Oracle. All rights reserved."

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



Mozilla Firefox

File Edit View History Bookmarks Tools Help

WC\_Portlet (Or: x | Summary of Ser x | WebCenter Port x | WSRP Test Pag x | hpgen9-01:888 x | hpgen9-01:888 x | hpgen9-01:888 x | +

← → ↻ 🏠 ⓘ http://hpgen9-01:8889/wsrp-tools/portlets/wsrp1?WSDL 80% ... 📖 ☆ 🖨 📄 ☰

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>

```

Mozilla Firefox

File Edit View History Bookmarks Tools Help

WC\_Portlet (Or: x | Summary of Ser x | WebCenter Port x | WSRP Test Pag x | hpgen9-01:888 x | hpgen9-01:888 x | hpgen9-01:888 x | +

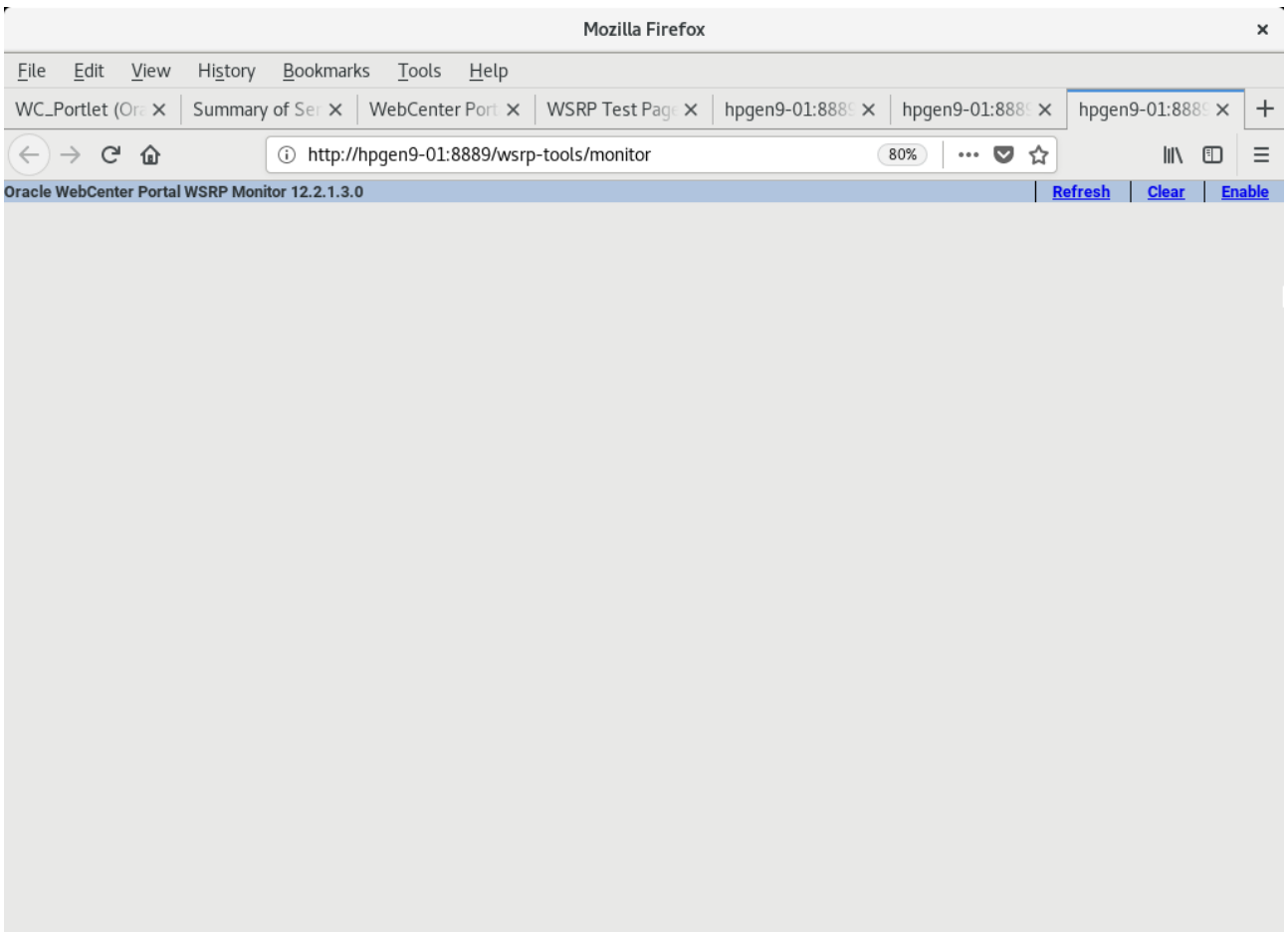
← → ↻ 🏠 ⓘ http://hpgen9-01:8889/wsrp-tools/portlets/wsrp2?WSDL 80% ... 📖 ☆ 🖨 📄 ☰

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

```

- <definitions targetNamespace="urn:oasis:names:tc:wsrp:v2:wSDL">
  <import namespace="urn:oasis:names:tc:wsrp:v2:bind" location="http://hpgen9-01:8889/wsrp-tools/portlets/wsrp2?WSDL=wsrp_v2_bindings.wSDL"/>
  <service name="WSRP_v2_Service">
    <port name="WSRP_v2_ServiceDescription_Service" binding="bind:WSRP_v2_ServiceDescription_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRP_v2_ServiceDescription_Service"/>
    </port>
    <port name="WSRP_v2_Markup_Service" binding="bind:WSRP_v2_Markup_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRP_v2_Markup_Service"/>
    </port>
    <port name="WSRP_v2_Registration_Service" binding="bind:WSRP_v2_Registration_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRP_v2_Registration_Service"/>
    </port>
    <port name="WSRP_v2_PortletManagement_Service" binding="bind:WSRP_v2_PortletManagement_Binding_SOAP">
      <soap:address location="http://hpgen9-01:8889/wsrp-tools/portlets/WSRP_v2_PortletManagement_Service"/>
    </port>
  </service>
</definitions>

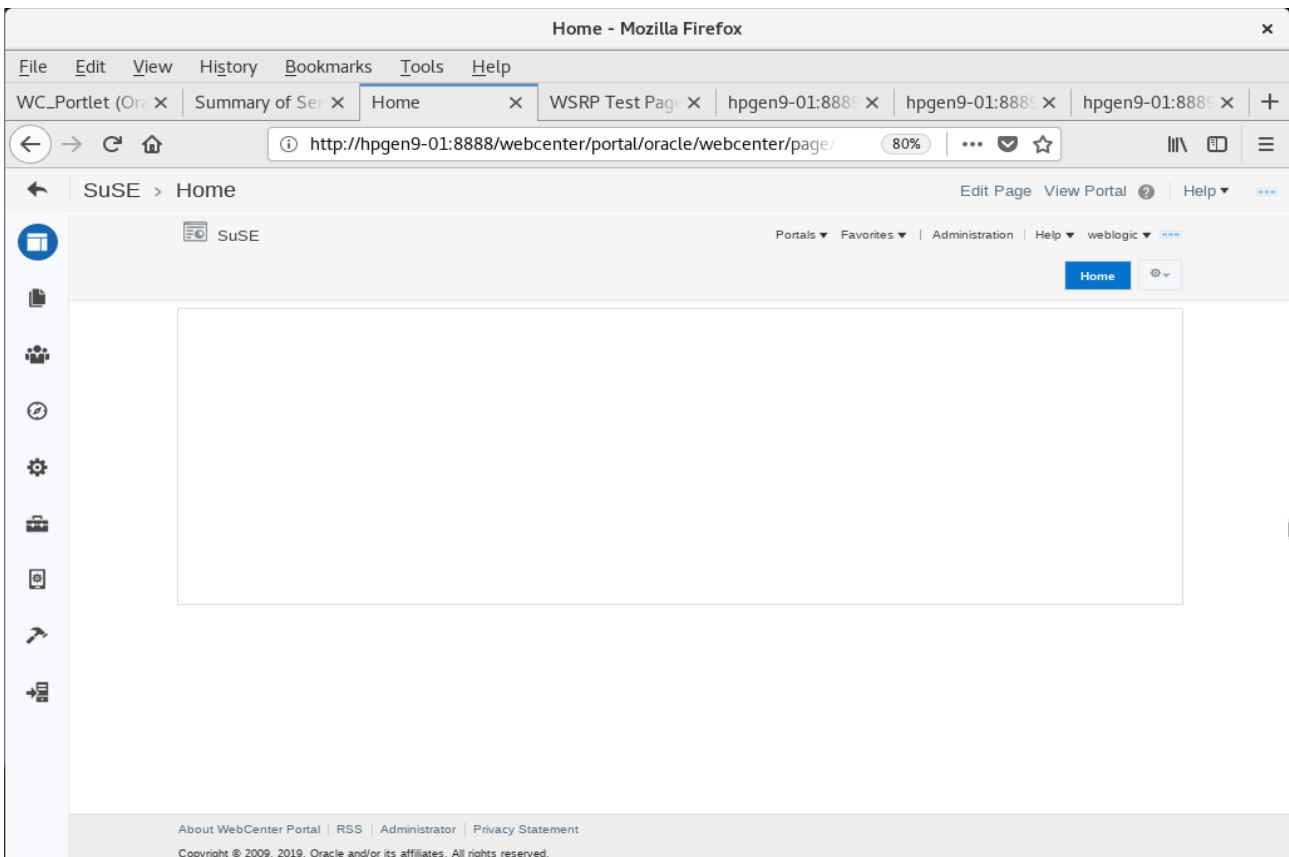
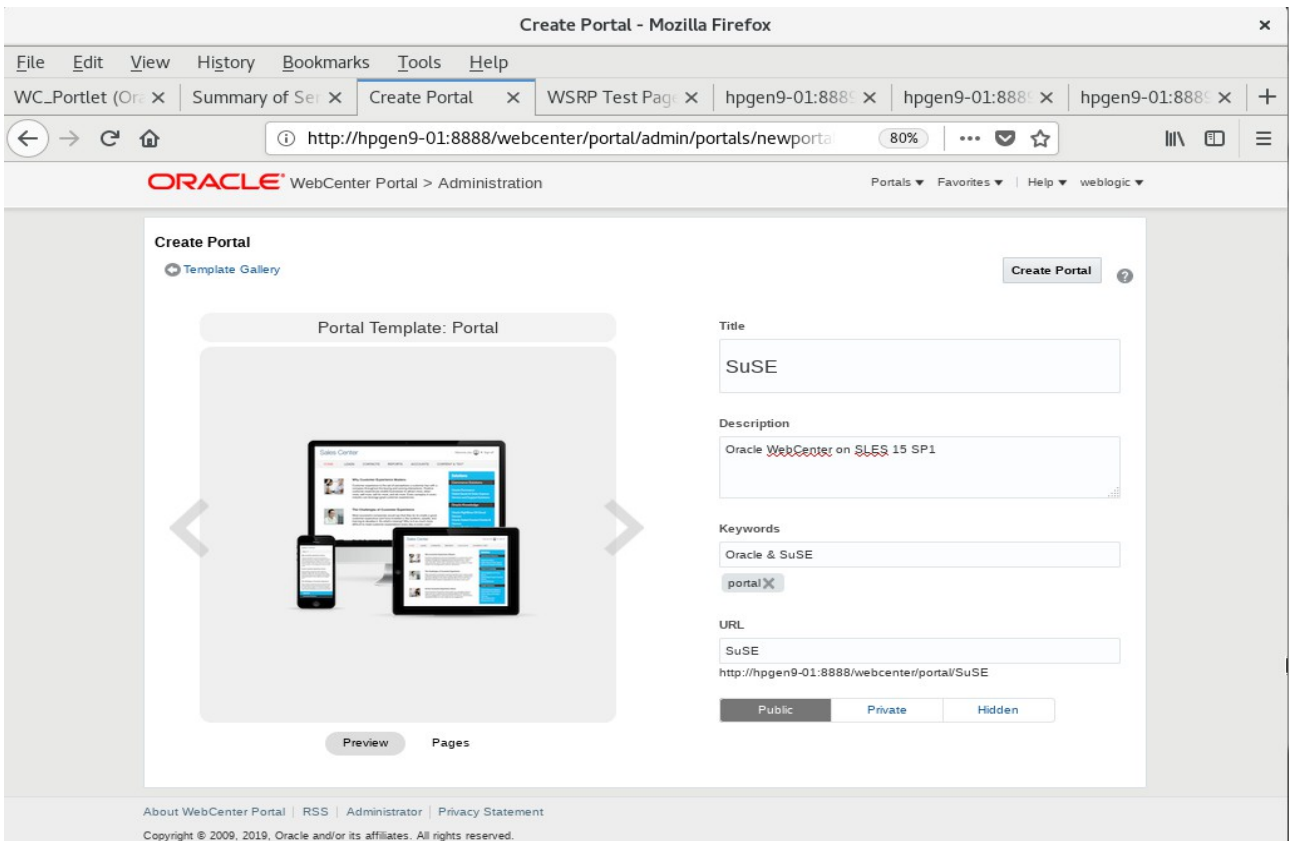
```



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

The screenshot shows the 'WebCenter Portal Welcome Page' in a Mozilla Firefox browser window. The browser's address bar displays the URL <http://hpgen9-01:8888/webcenter/system/welcome.jsp?wc.cc>. The page features a blue header with a large white circle containing a blue icon of a computer monitor with a pie chart. To the right of the icon, the text reads 'SIGN IN TO WEBCENTER PORTAL'. Below this, there are two input fields: 'User Name' with the value 'weblogic' and 'Password' with masked characters. A blue 'Sign In' button is positioned below the password field, with a link 'or View Public Portals' to its right. At the bottom of the page, the Oracle logo is on the left, and a footer contains links for 'Contact Admin', 'About WebCenter Portal', 'Privacy Statement', and 'Help', along with a 'Language' dropdown menu.

The screenshot shows the 'Portal Browser' page in a Mozilla Firefox browser window. The browser's address bar displays the URL <http://hpgen9-01:8888/webcenter/portal/admin/portals/list?wc.cc>. The page title is 'Portal Browser'. At the top, there is a search bar labeled 'Search Portals' and a 'Show' dropdown menu set to 'All Portals'. To the right, there is a 'Sort By' dropdown menu set to 'Name' and a 'Create Portal' button with a question mark icon. Below these elements, there are two large colored boxes: a red one labeled 'Administration' with a gear icon, and a green one labeled 'Home Portal' with a house icon. To the right of these boxes, the text 'No portals were found.' is displayed. At the bottom of the page, there is a footer with links for 'About WebCenter Portal', 'RSS', 'Administrator', and 'Privacy Statement', and a copyright notice: 'Copyright © 2009, 2019, Oracle and/or its affiliates. All rights reserved.'



The screenshot shows the Oracle WebCenter Administration console in a Mozilla Firefox browser window. The browser's address bar displays the URL `http://hpgen9-01:8888/webcenter/portal/admin/portals/admin/Su`. The page title is "SuSE - General".

The main content area is titled "SuSE > General" and contains the following sections:

- Portal Information:**
  - Title:** SuSE
  - Acronym:** SU
  - Description:** Oracle WebCenter on SLES 15 SP1
  - Portal Color:** A green color swatch is selected, with a "Choose Color" button next to it.
  - Keywords:** A text input field contains "Enter Keywords". Below it, a list of keywords is shown: "portal", "Oracle", "&", and "SuSE".
  - A "Save" button is located at the bottom of this section.
- Portal Details:**
  - Name:** SuSE [Rename](#)
  - Portal URL:** <http://hpgen9-01:8888/webcenter/portal/SuSE>
  - Internal ID:** sf4ee071c\_446a\_4919\_9758\_61dc21e170f8
  - Members:** 1
  - Last Activity:** 47 seconds ago
  - Created:** 51 seconds ago by webllogic
- Status:**
  - Active:**  The portal is active



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

Collector Information

Refresh

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

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**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\_191 and later installed.

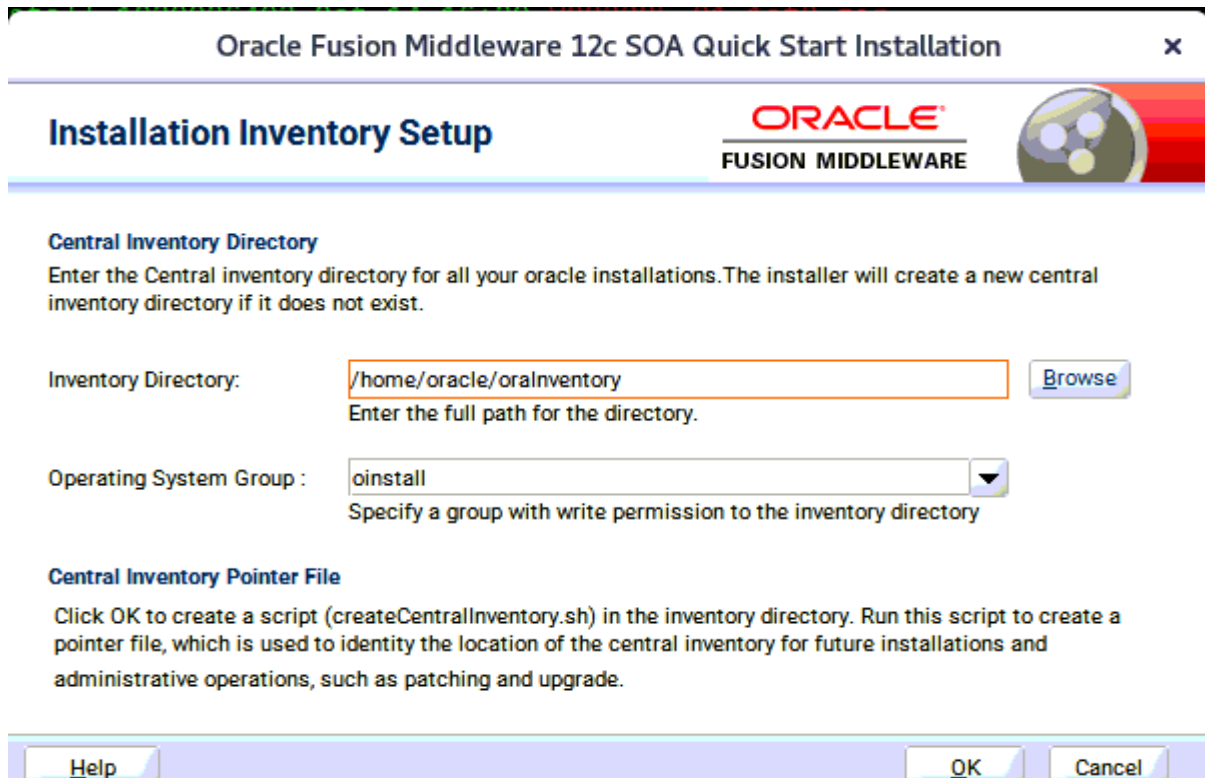
1-2. Log in to the target system (SLES 15 SP1 64-bit OS) as a non-admin user. Download the Oracle SOA Suite 12c (12.2.1.4.0) Quick Start installer zip file from <https://www.oracle.com/downloads/#category-middleware>.

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

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ('V983385-01\_1of2.zip') files and launch the installation program by running '**java -jar fmw\_12.2.1.4.0\_soa\_quickstart.jar** '

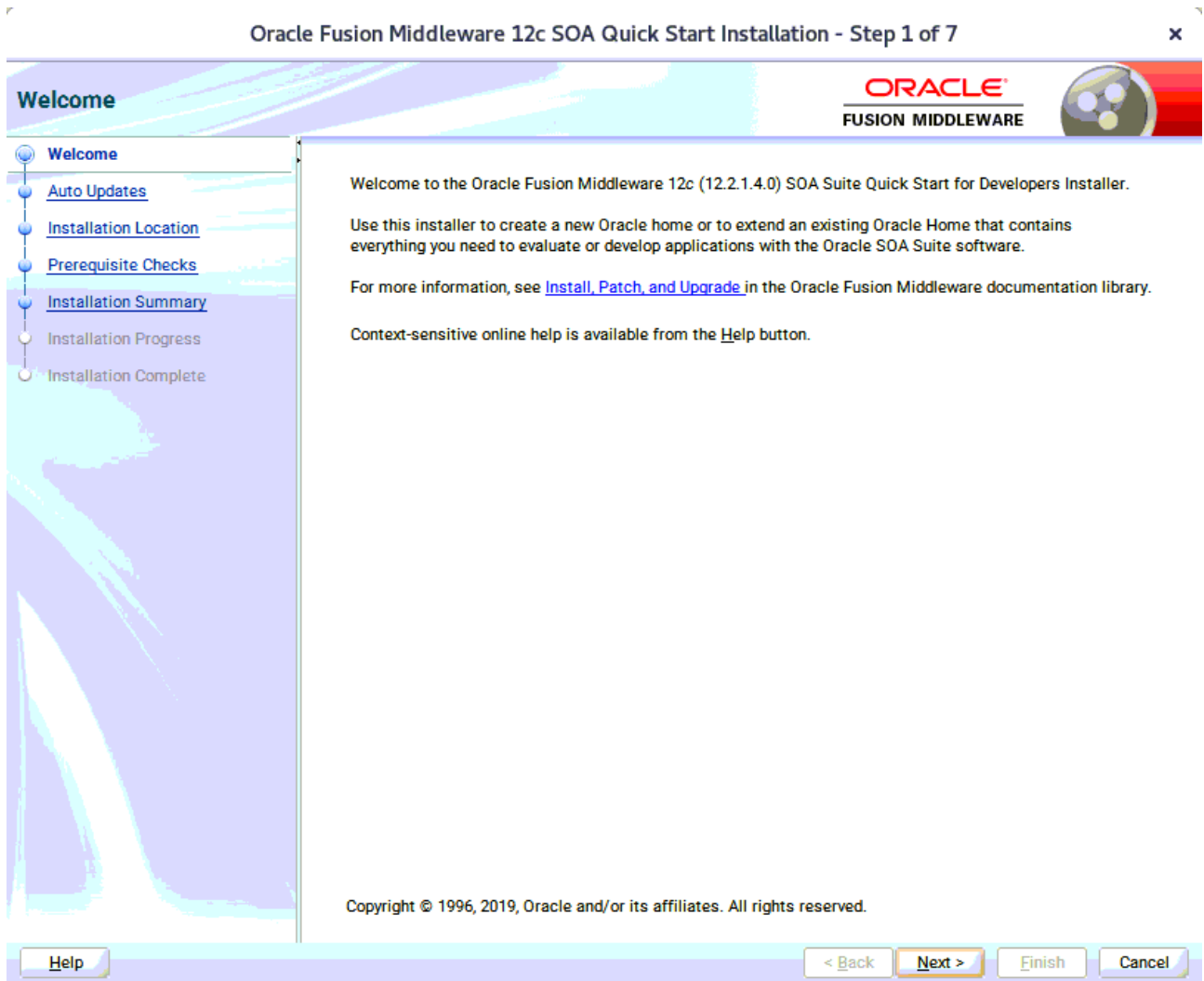
**For the actual installation, follow the steps below:**

- 1). Installation Inventory Setup.



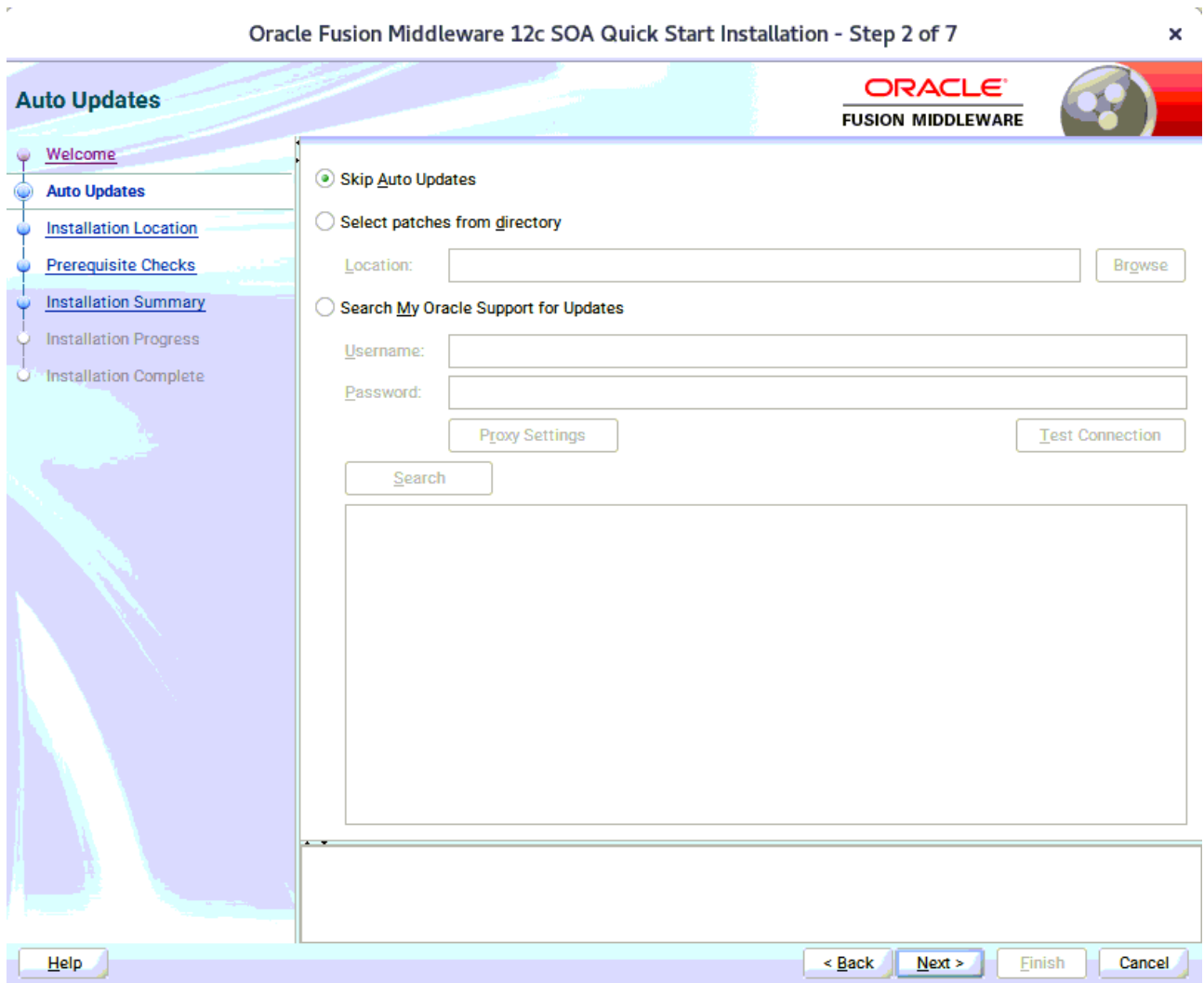
Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

2). Welcome page.



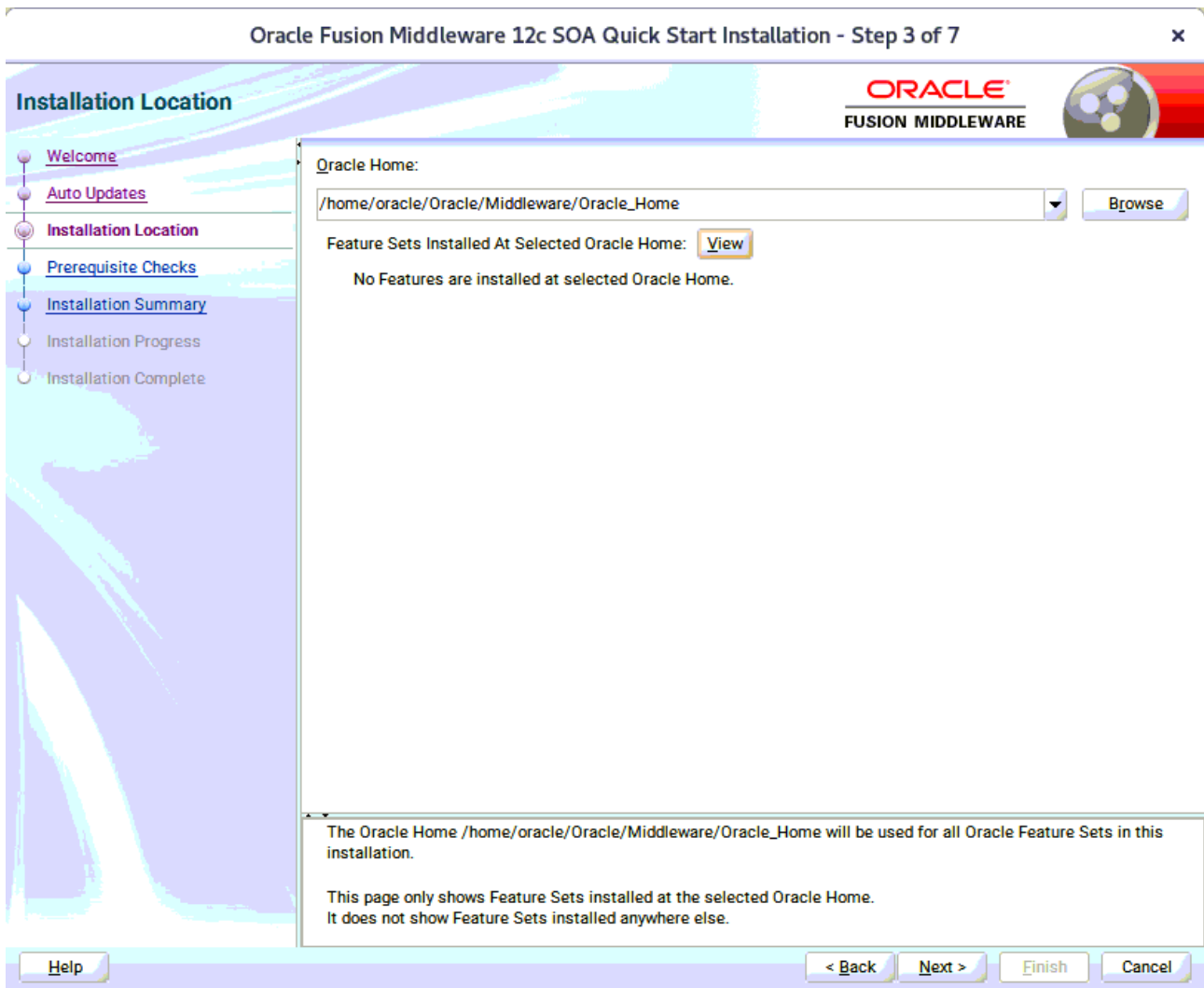
This page welcomes you to the installation. Click **Next** to continue.

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



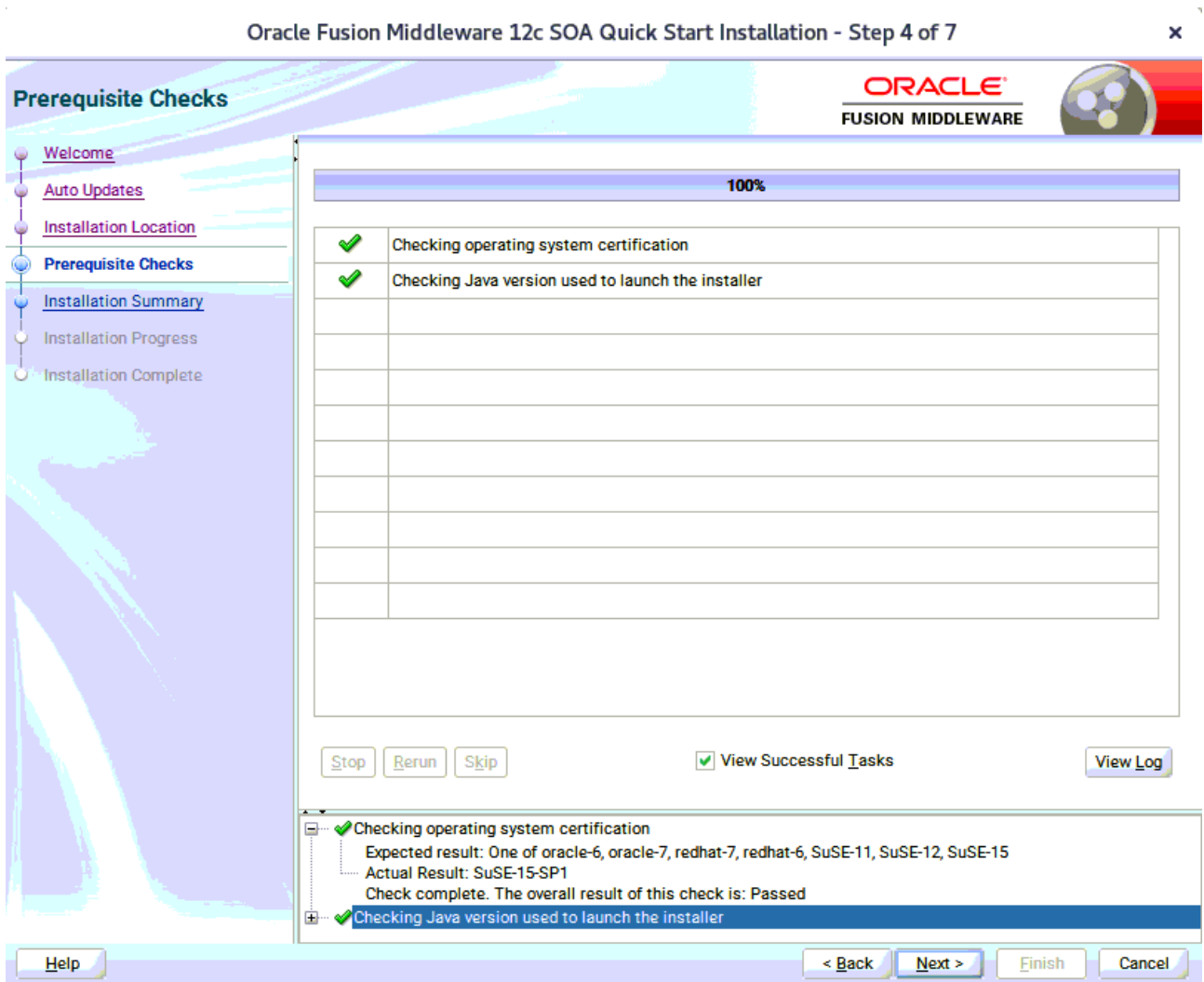
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



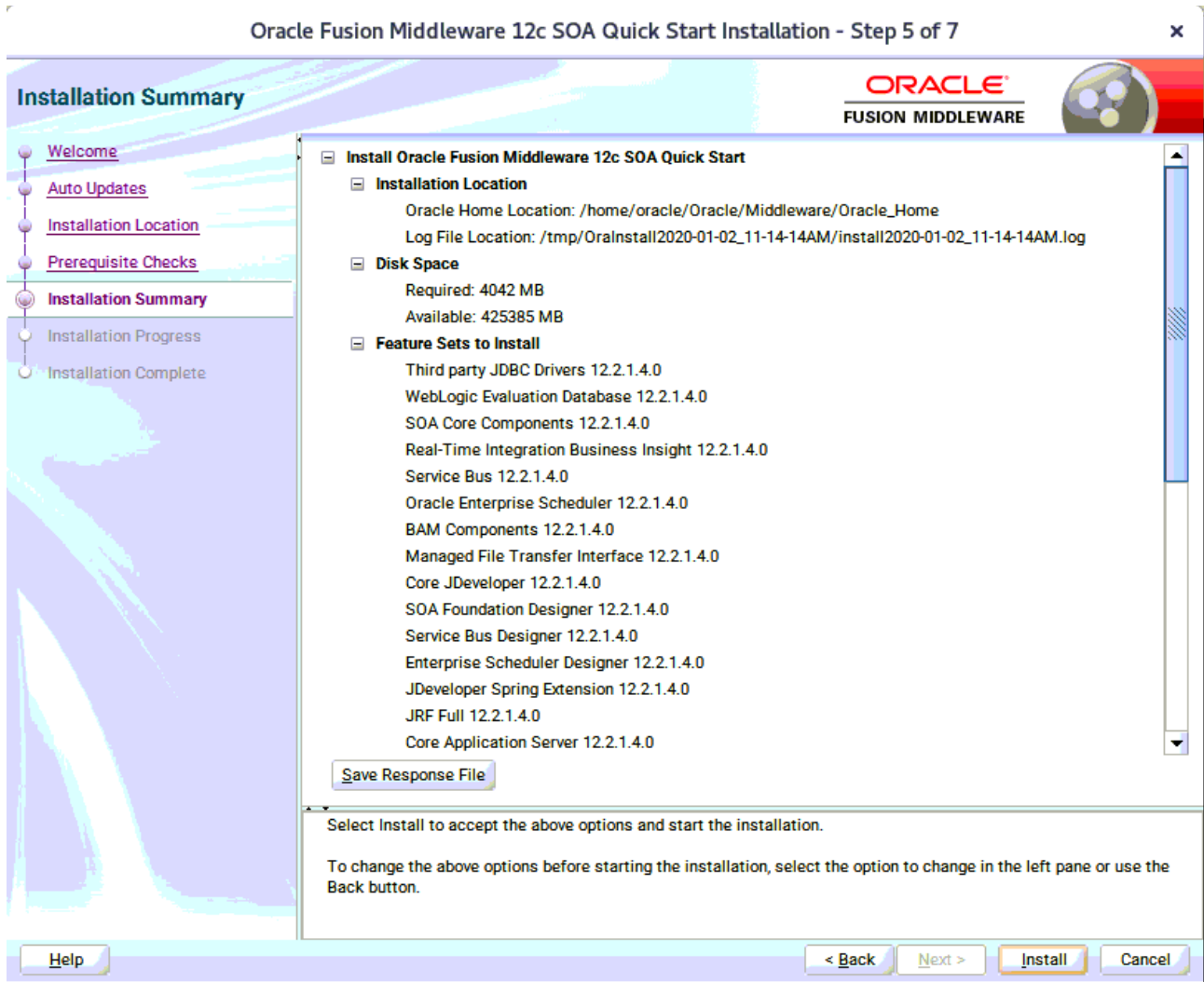
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



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

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



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

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

Oracle Fusion Middleware 12c SOA Quick Start Installation - Step 6 of 7

**Installation Progress**

ORACLE  
FUSION MIDDLEWARE

100%

✓	Prepare
✓	Copy
✓	Generating Libraries
✓	Performing String Substitutions
✓	Linking
✓	Setup
✓	Saving the inventory
✓	Post install scripts

[View Messages](#)  [View Successful Tasks](#) [View Log](#)

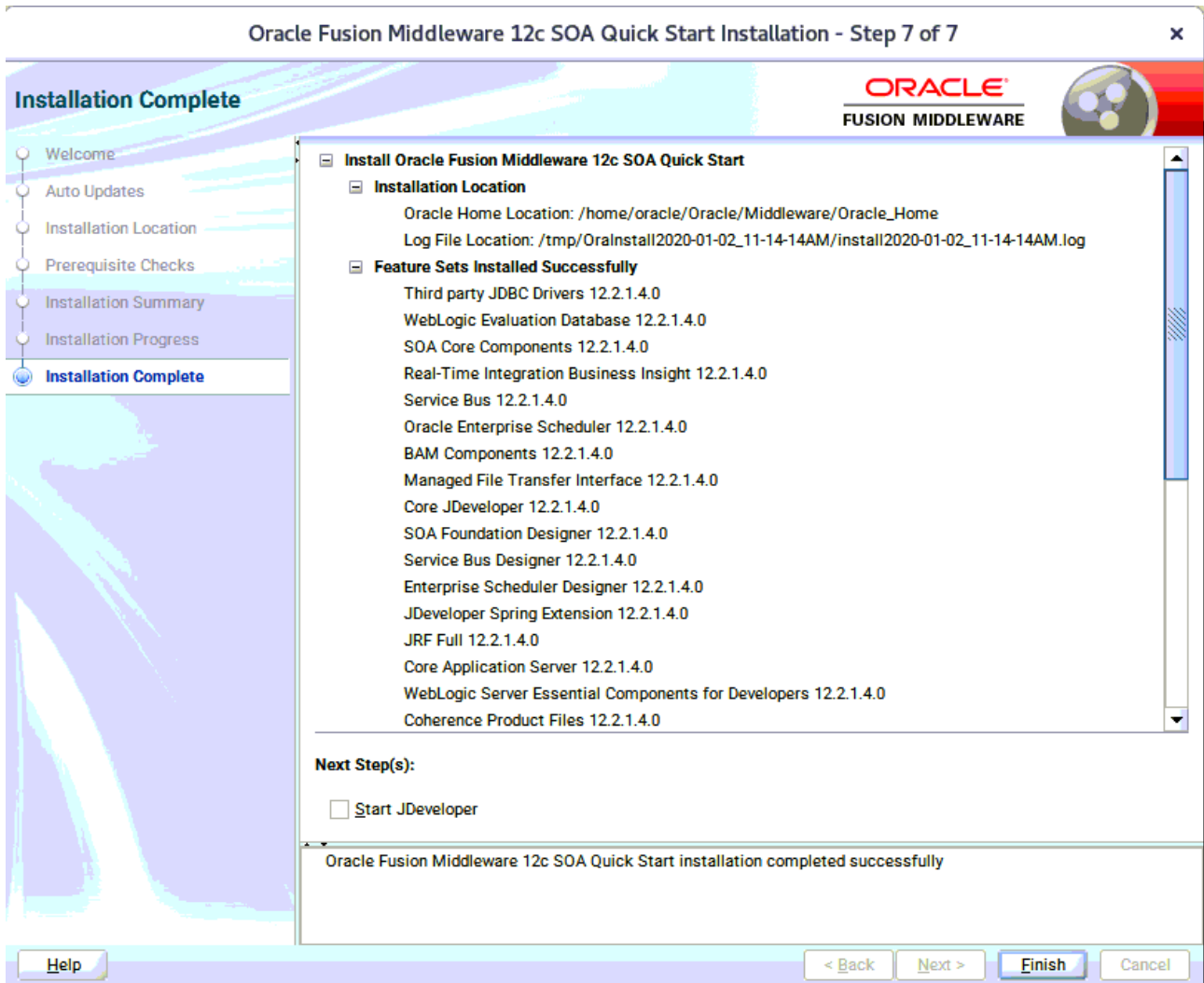
**Hardware and Software  
Engineered to Work Together**

[Help](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

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



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

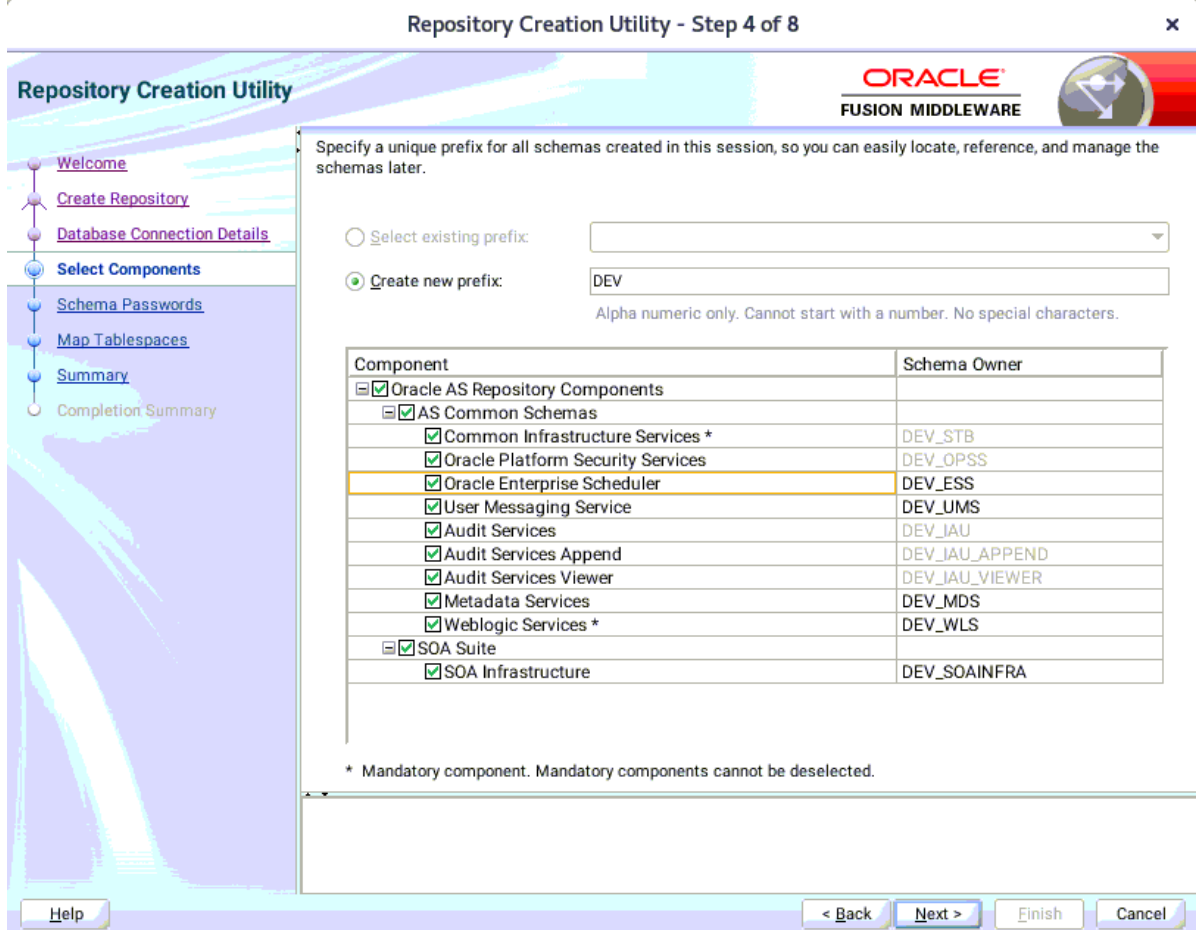


At the bottom of this screen, there is a checkbox to launch Oracle JDeveloper upon closing the installation wizard. This guide recommends that you uncheck this box. Click **Finish** to dismiss the installer.

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

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

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



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

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

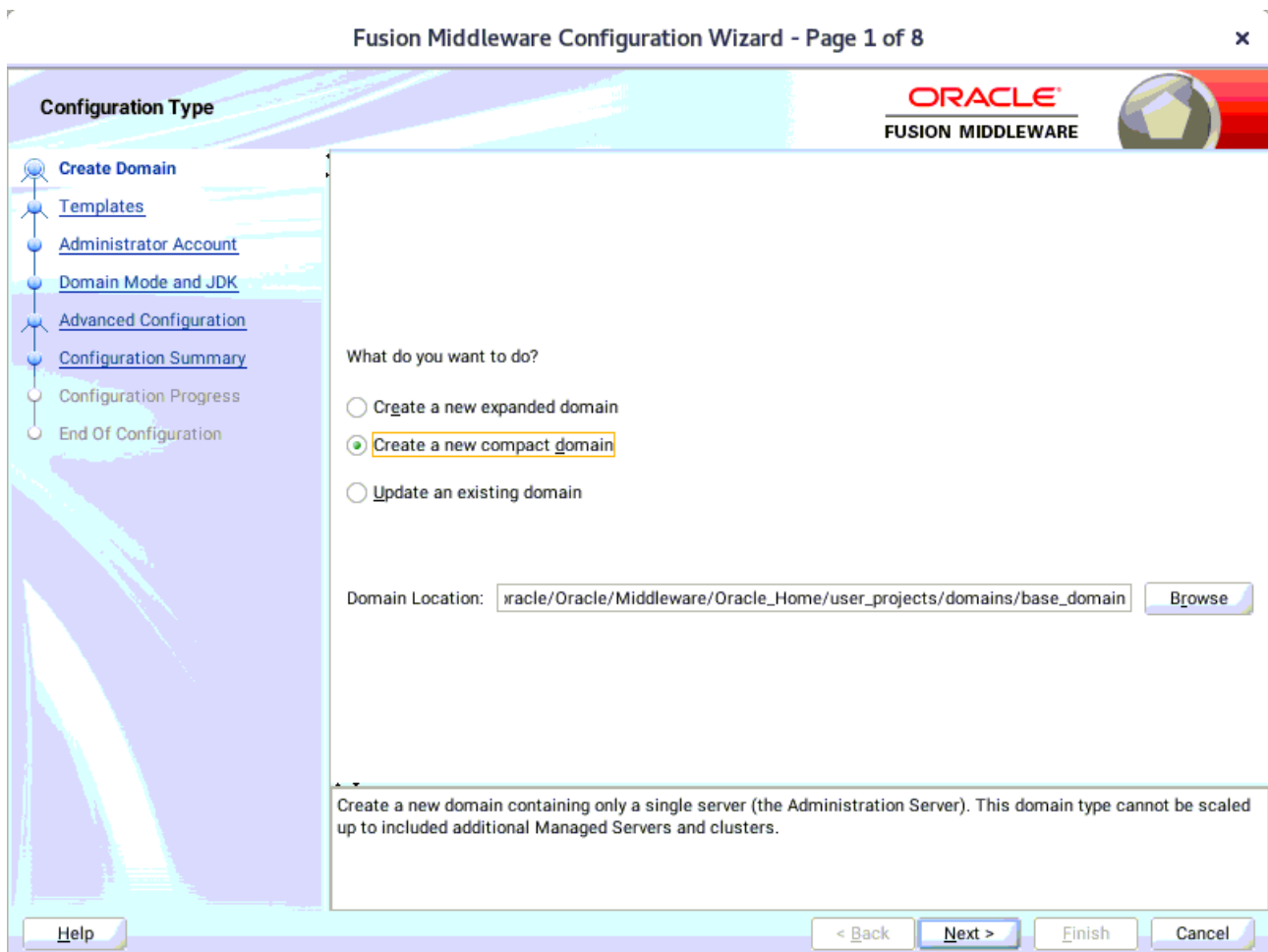
3-1. Go to **ORACLE\_HOME/oracle\_common/common/bin**. Set the environment variable **CONFIG\_JVM\_ARGS** to **-Dcom.oracle.cie.config.showProfile=true**. This will activate the compact domain option in the configuration wizard. Then launch the configuration wizard.

Example commands for this task are as follows:

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

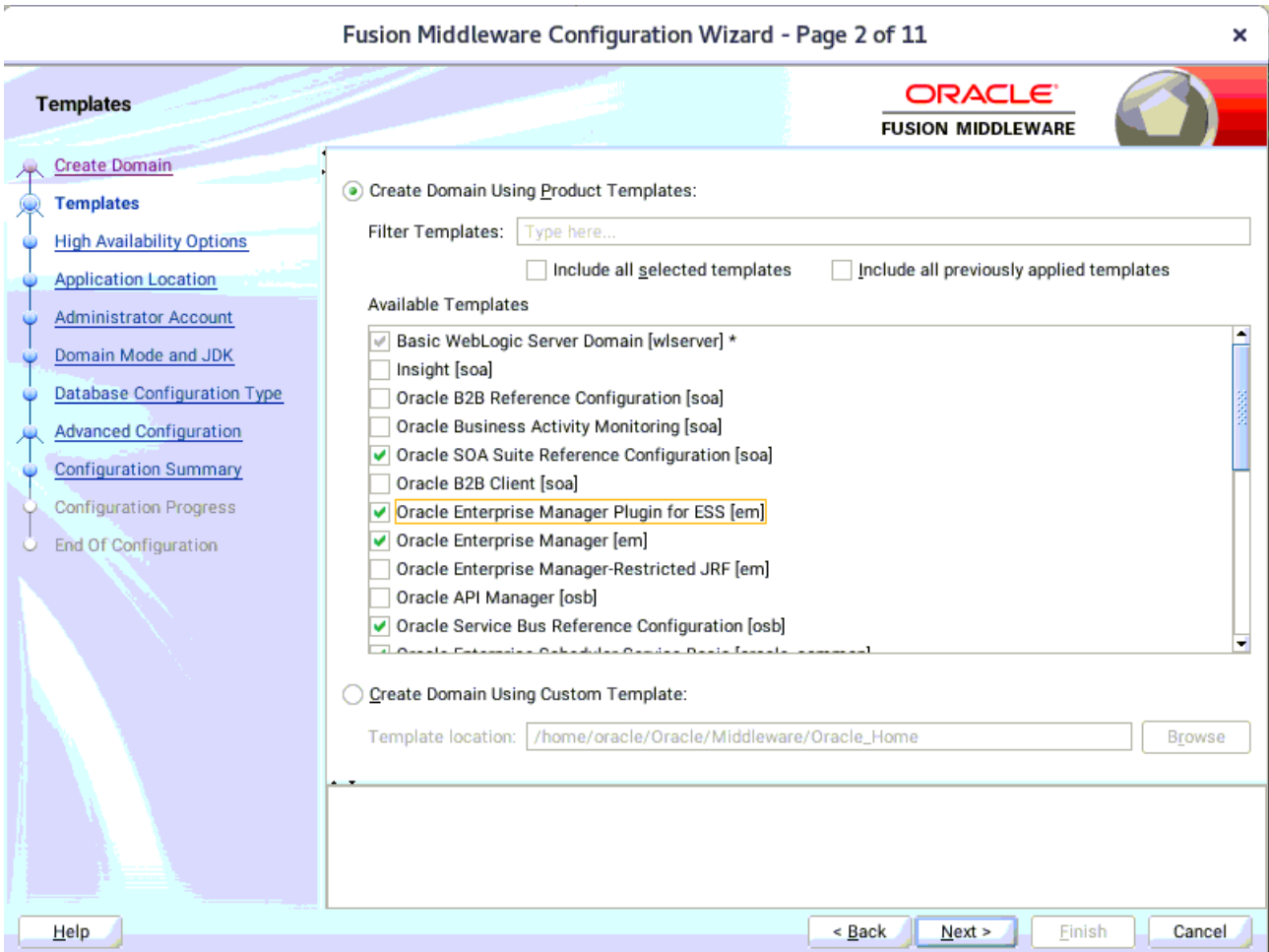
#### Follow these steps:

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



Click **Next** to continue.

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

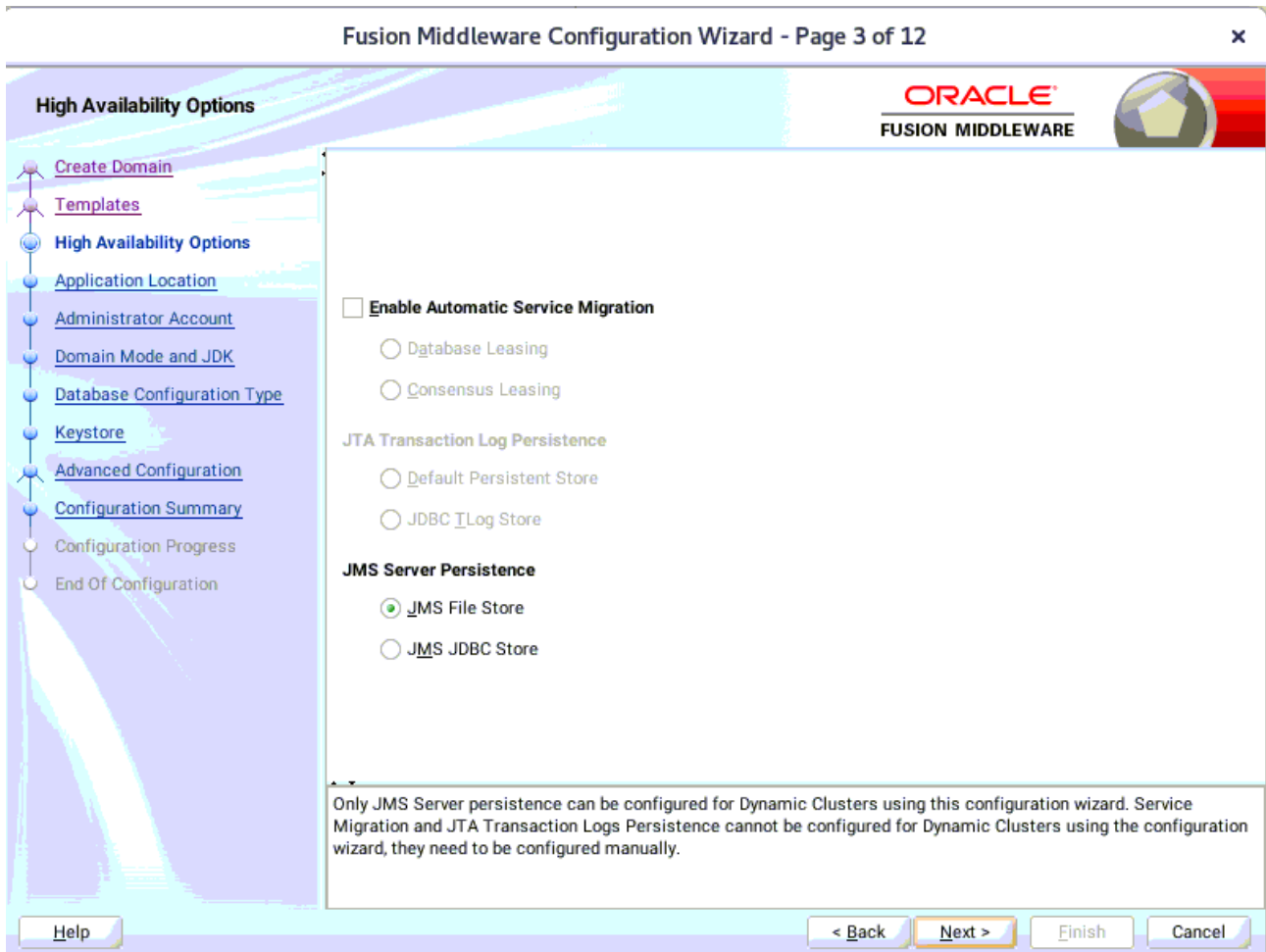


Use the **Templates** screen to select the templates you require. On the **Templates** screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

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

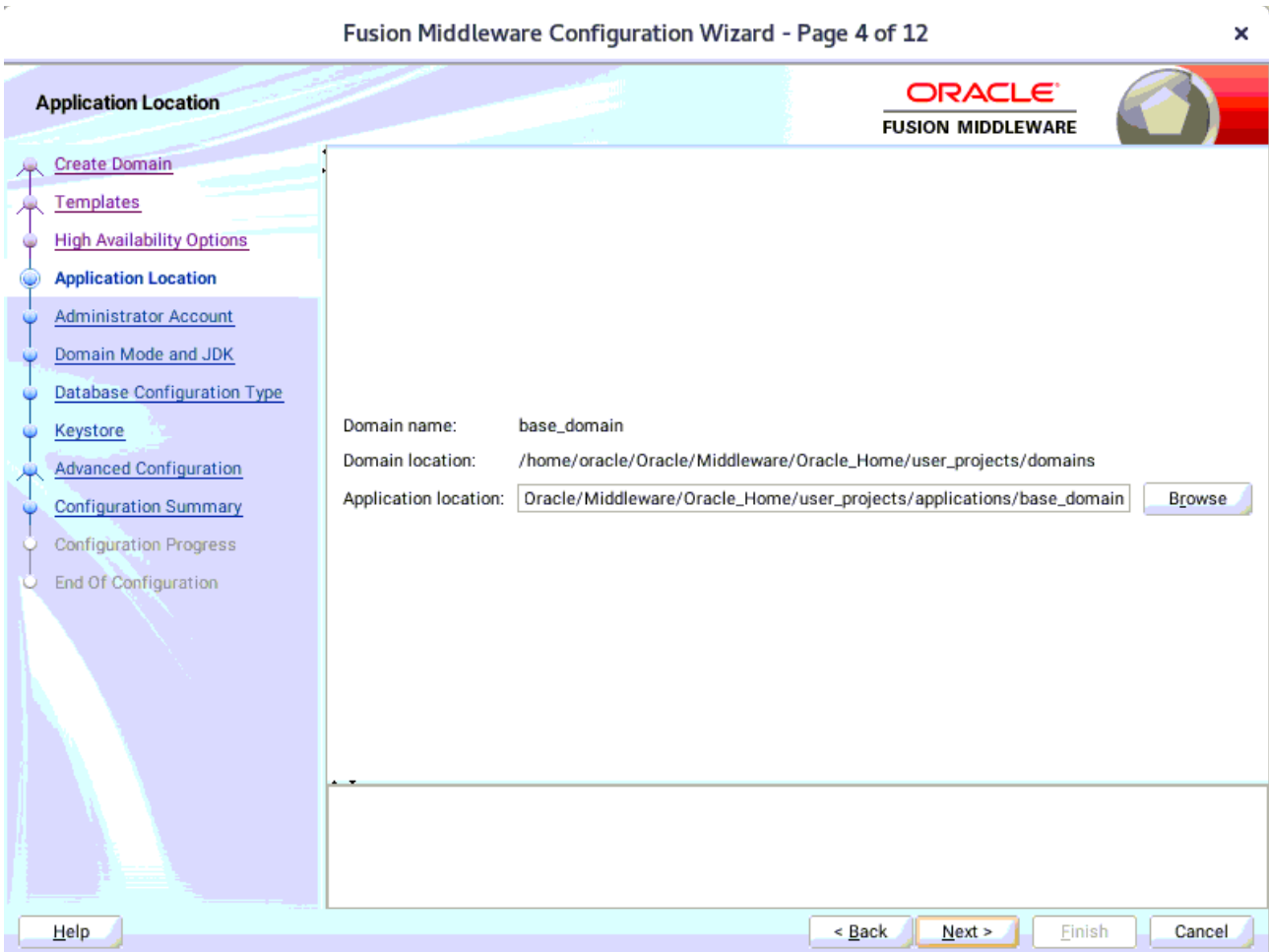
Click **Next** to continue.

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



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

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



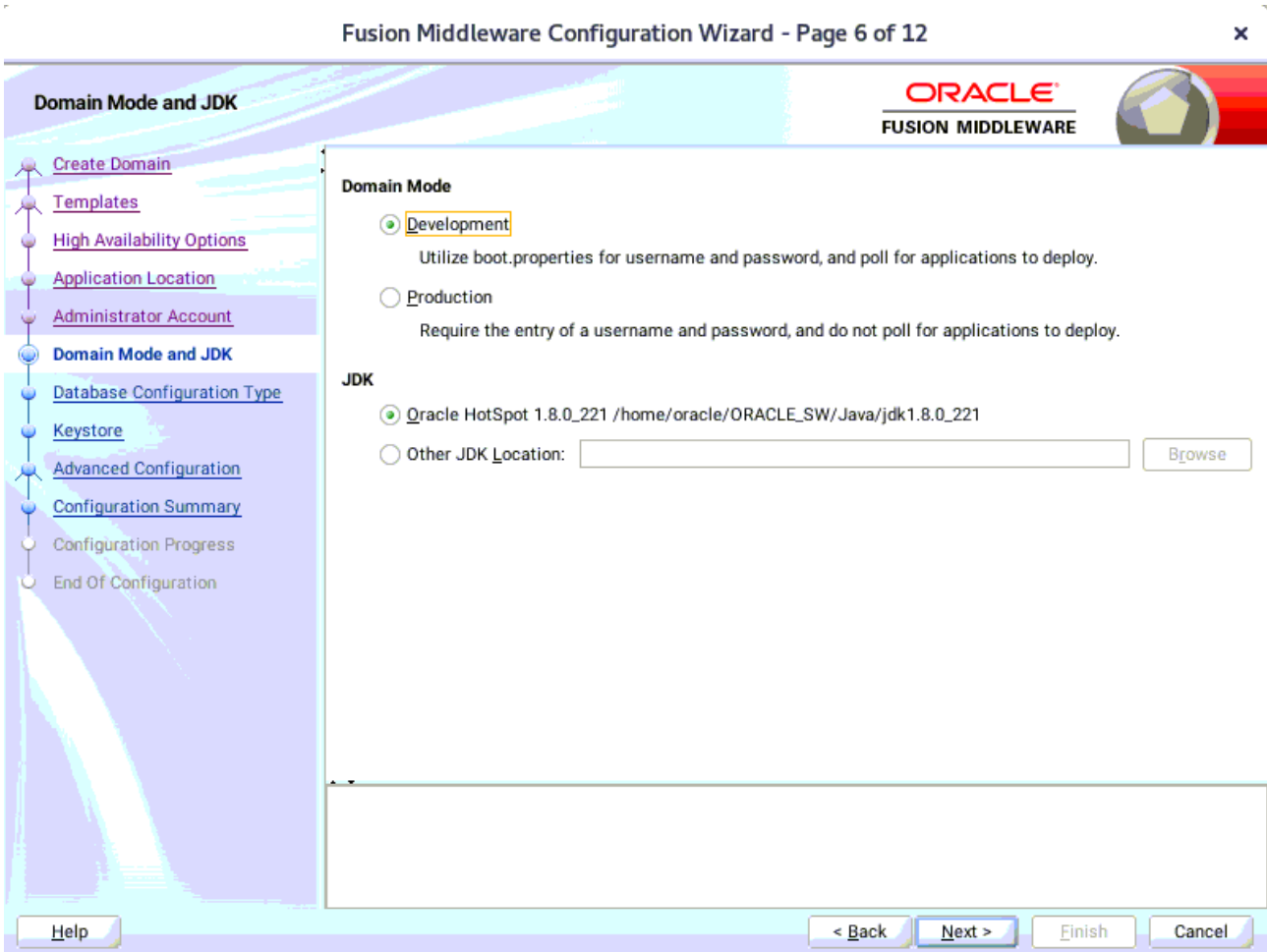
Keep the default value for Application location. Click **Next** to continue.

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

The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 5 of 12'. The Oracle 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, Keystore, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters '\*\*\*\*\*', and 'Confirm Password' with masked characters '\*\*\*\*\*'. Below the fields is a validation message: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

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

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



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



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

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:     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.

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.

Fusion Middleware Configuration Wizard - Page 8 of 14

**JDBC Component Schema**

- [Create Domain](#)
- [Templates](#)
- [High Availability Options](#)
- [Application Location](#)
- [Administrator Account](#)
- [Domain Mode and JDK](#)
- [Database Configuration Type](#)
- [Component Datasources](#)
- [JDBC Test](#)
- [Keystore](#)
- [Advanced Configuration](#)
- [Configuration Summary](#)
- [Configuration Progress](#)
- [End Of Configuration](#)

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

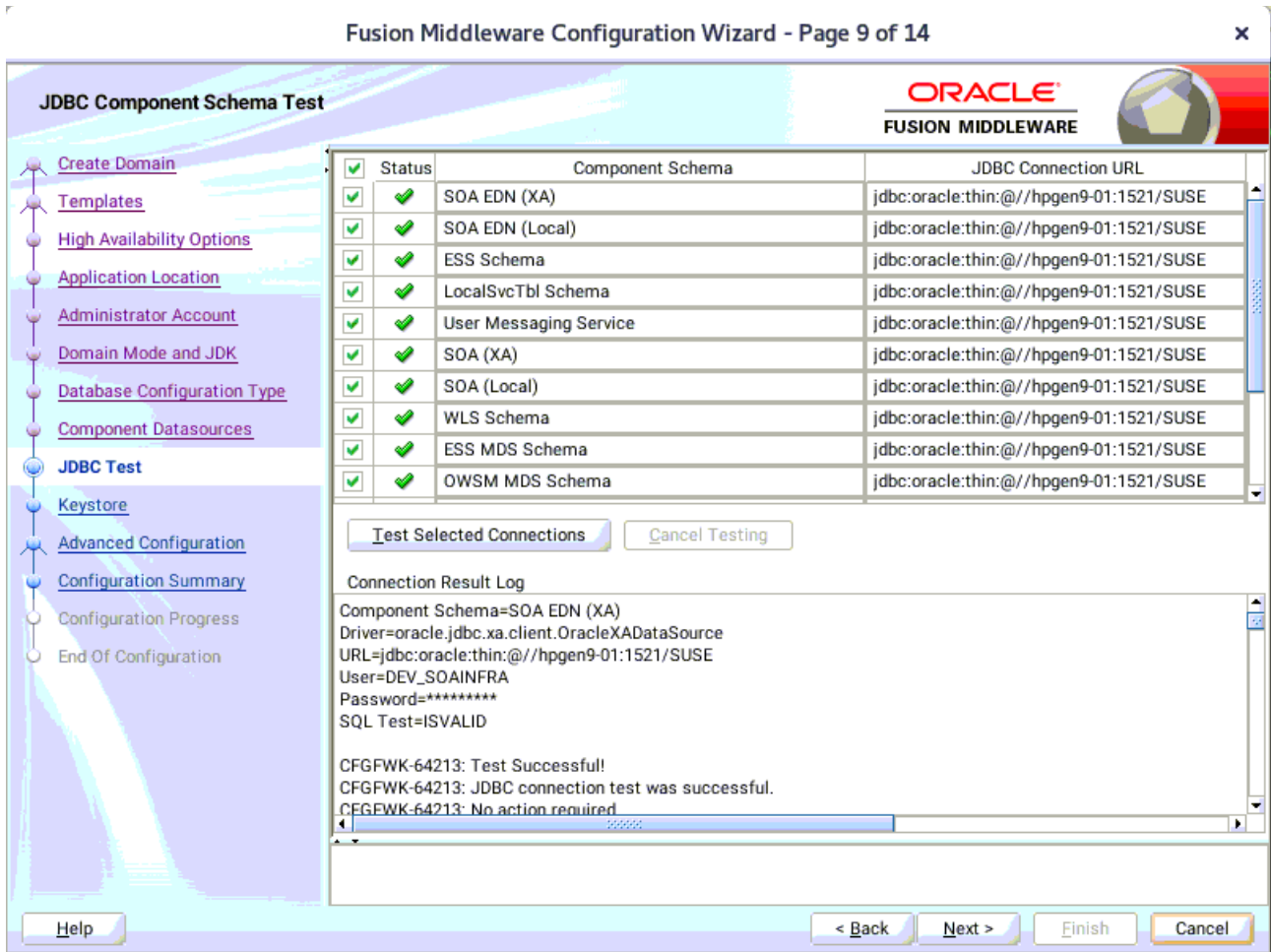
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	SOA EDN (XA)	SUSE	hpgen9-01	1521	DEV_SOAINFR/	.....
<input type="checkbox"/>	SOA EDN (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFR/	.....
<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_SOAINFR/	.....
<input type="checkbox"/>	SOA (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFR/	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUN	.....
<input type="checkbox"/>	ESS MDS Schema	SUSE	hpgen9-01	1521	DEV_MDS	.....

[Help](#)
[< Back](#)
[Next >](#)
[Finish](#)
[Cancel](#)

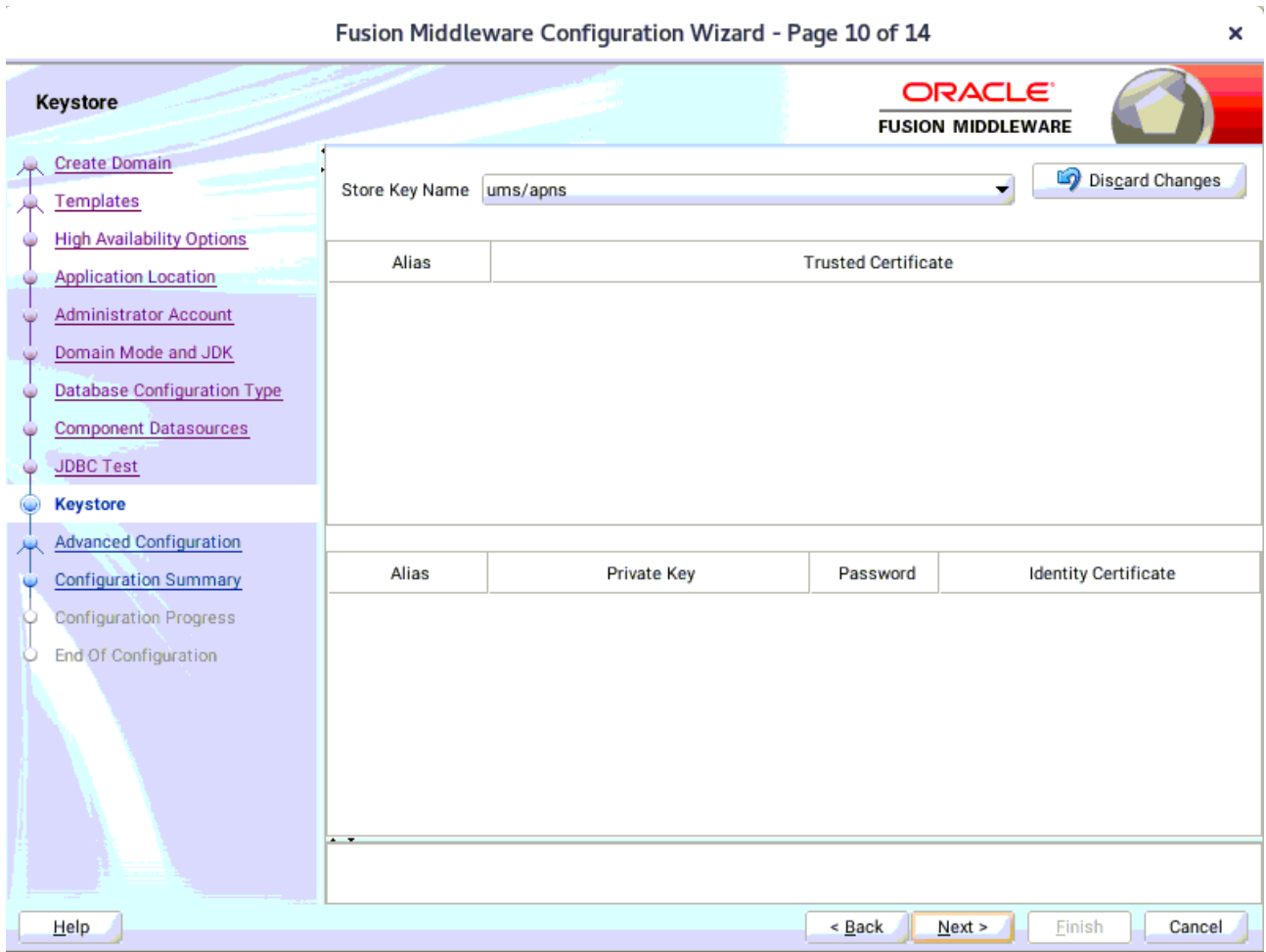
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



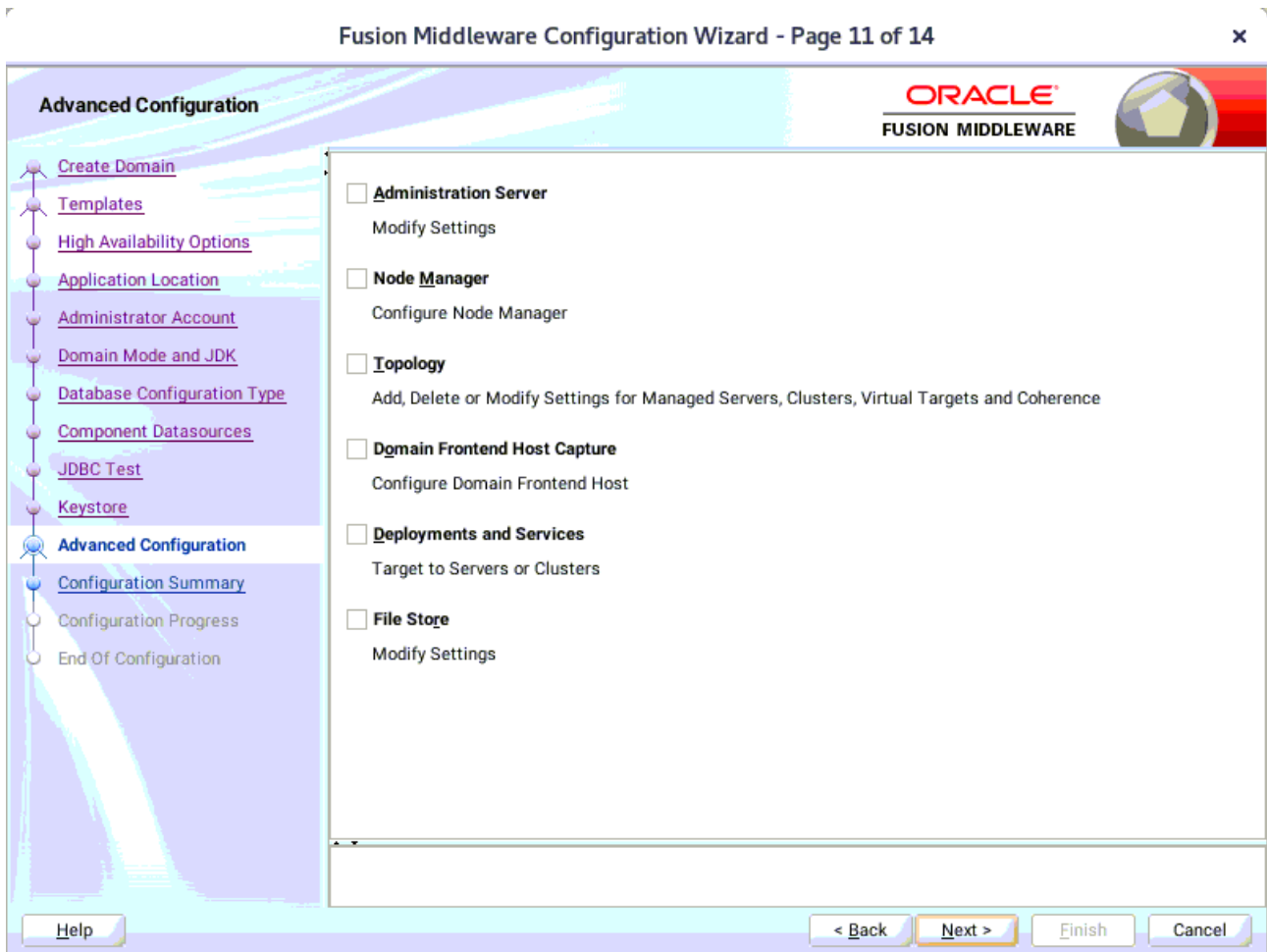
The tests are run and the results given. Ensure all test results are successful. Click **Next** to continue.

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



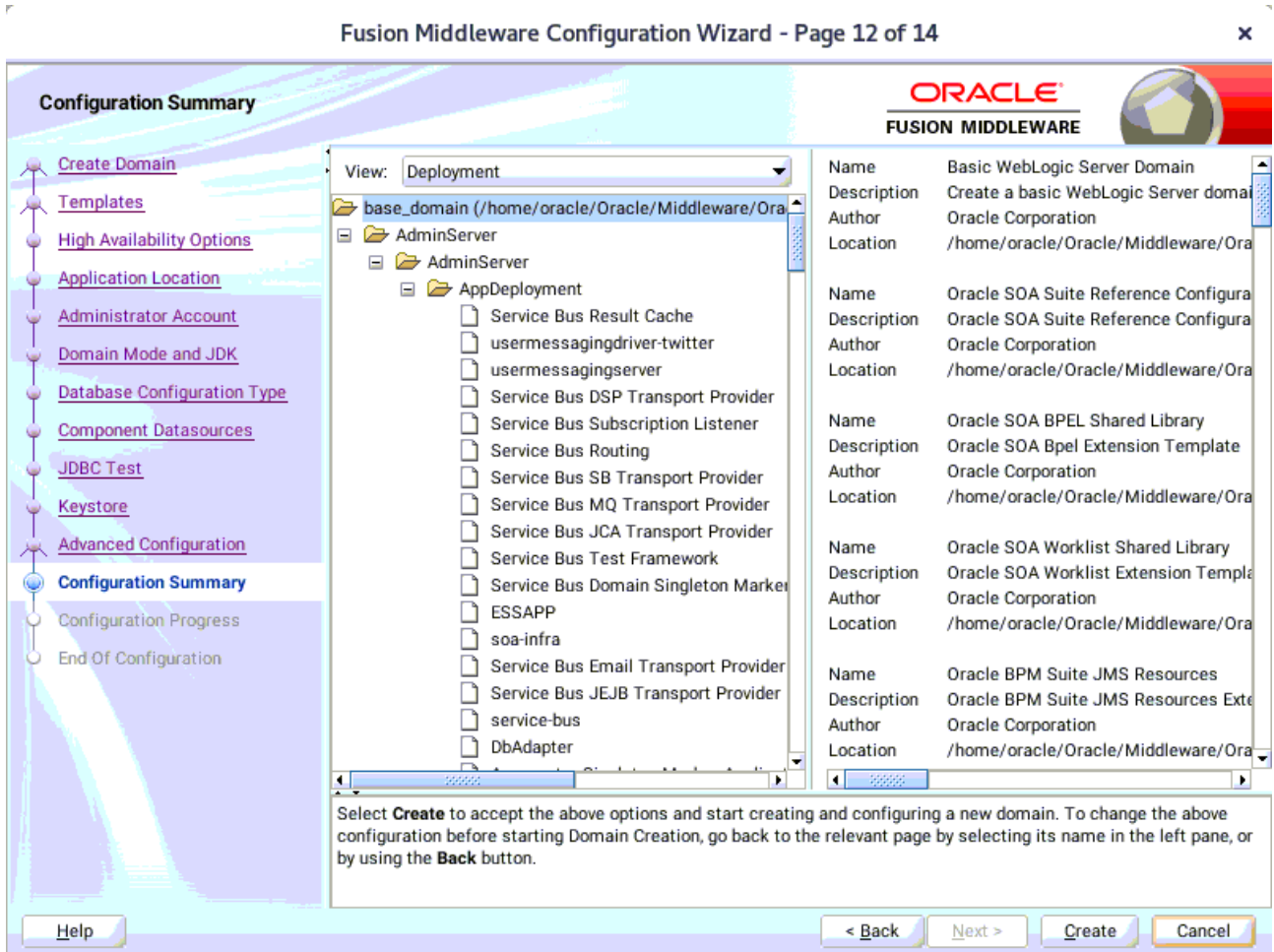
Accept the defaults and click **Next** to continue.

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



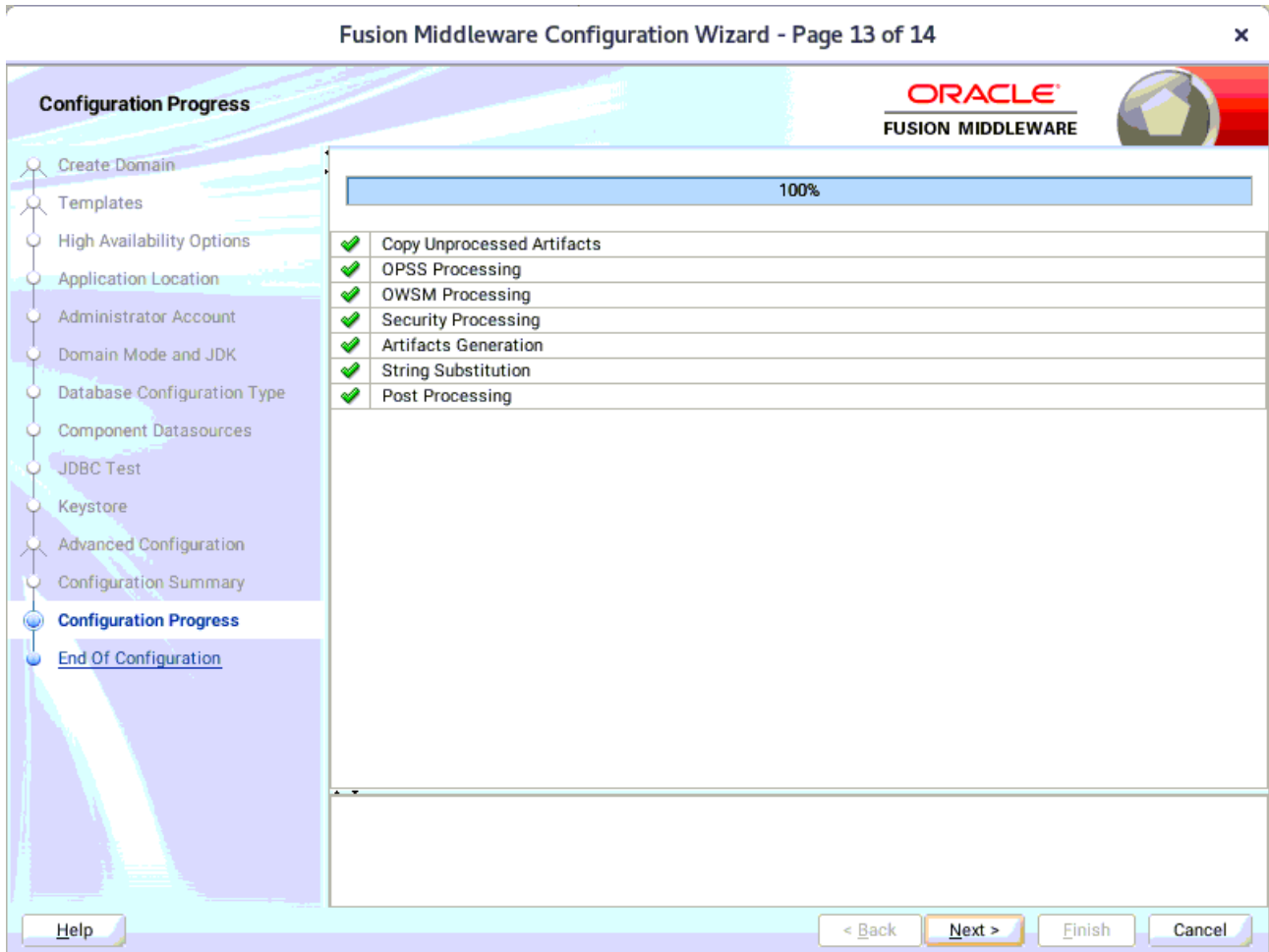
On the Advanced Configuration screen, you do not need any advanced configuration for a compact domain. You can skip through the Advanced Configuration screen without selecting anything. Click **Next** to continue.

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



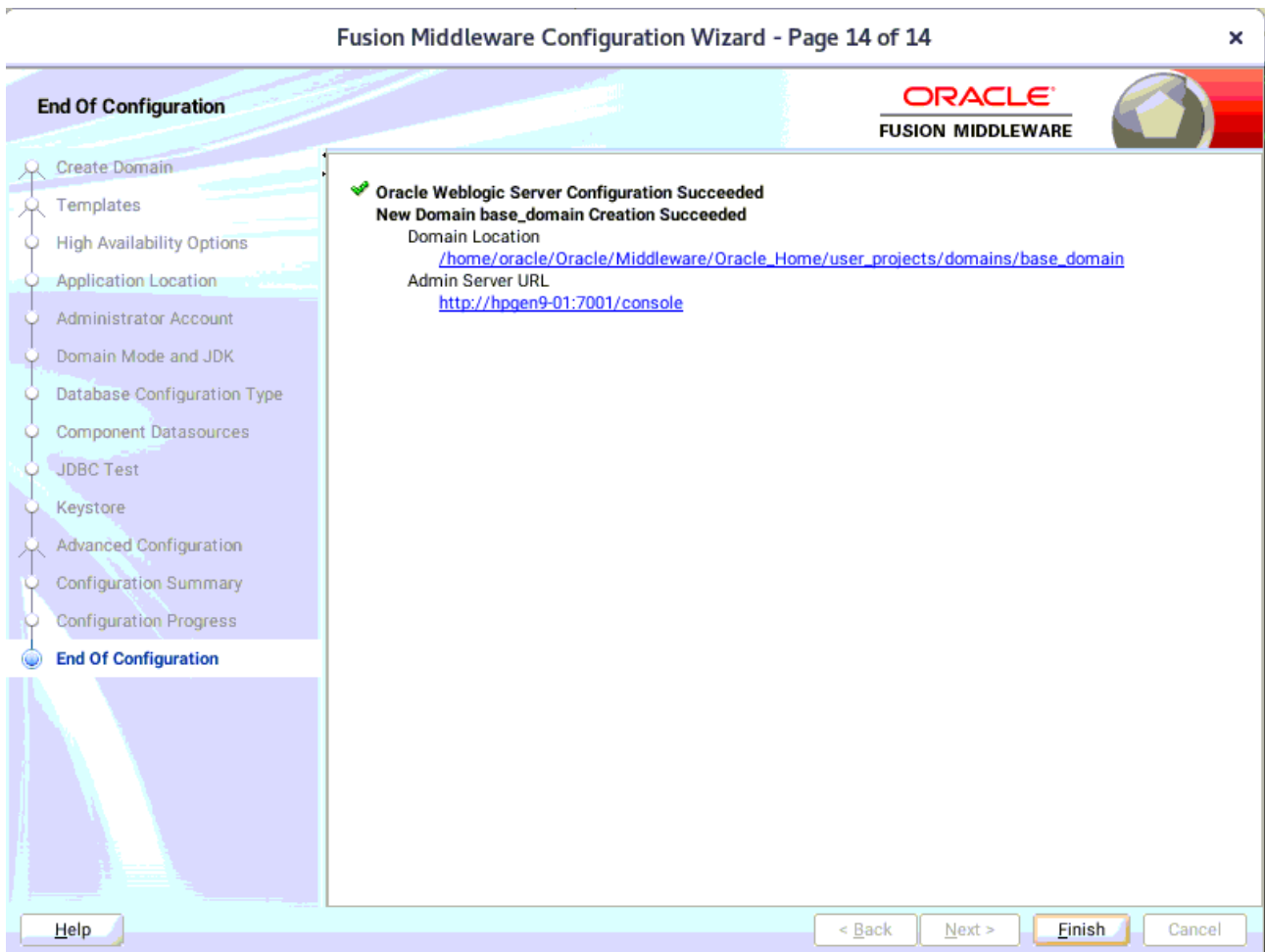
Select **Create** to accept the above options and start creating and configuring a new domain.

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



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

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



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



## 4. Verifying Oracle SOA Suite 12c Installation and Configuration

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

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

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

```

oracle@hpgen9-01:/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
0:0:0:0:0:0:1%lo:7001 for protocols iiop, t3, ldap, snmp, http.>
<Jan 2, 2020 1:06:15,138 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.>
<Jan 2, 2020 1:06:15,363 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Appl
ication: ESSAPP, EJBComponent: ess-ejb.jar) has connected to Resource Adapter ess/ra. Property weblogic.mdb.sus
pendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Bean.>
<Jan 2, 2020 1:06:15,408 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageReceiverBean
(Application: usermessagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJm
sMessageReceiver. Property weblogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-
Based Message-Driven Bean.>
<Jan 2, 2020 1:06:15,555 PM GMT+08:00> <Warning> <oracle.mds> <BEA-000000> <MDS-01364: Namespace mapping for "/o
racle/apps/ess/custom" is overlapping with namespace mapping for "/oracle/apps/ess"; the first mapping is redund
ant.>
<Jan 2, 2020 1:06:15,610 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean ESSAppEndpoint(Appl
ication: EssNativeHostingApp, EJBComponent: native-ess-ejb.jar) has connected to Resource Adapter ess/ra. Proper
ty weblogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-Based Message-Driven Be
an.>
<Jan 2, 2020 1:06:15,620 PM GMT+08:00> <Warning> <EJB> <BEA-010241> <The Message-Driven Bean MessageForwarderBea
n(Application: usermessagingserver, EJBComponent: engine-ejb.jar) has connected to Resource Adapter jca/EngineJm
sMessageReceiver. Property weblogic.mdb.suspendConnectionOnStart is ignored, because it is not supported by JCA-
Based Message-Driven Bean.>
<Jan 2, 2020 1:06:15,622 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mod
e.>
====> ResourceBundleListFromConfig topDirs : []
==> found 0 SOA composites to deploy in group 0 . Using 5 threads for composite load. composite count from dcMa
nager : 0 CompositeLazyLoading enabled. CompositeLazyDeployment disabled.
deploying 0 composites took 0 ms
----->deploying 0 composites took 8 ms
<Jan 2, 2020 1:06:15,667 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
Not fusion apps env
SOA Platform is running and accepting requests. Start up took 45879 ms, partition=DOMAIN

```

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

```

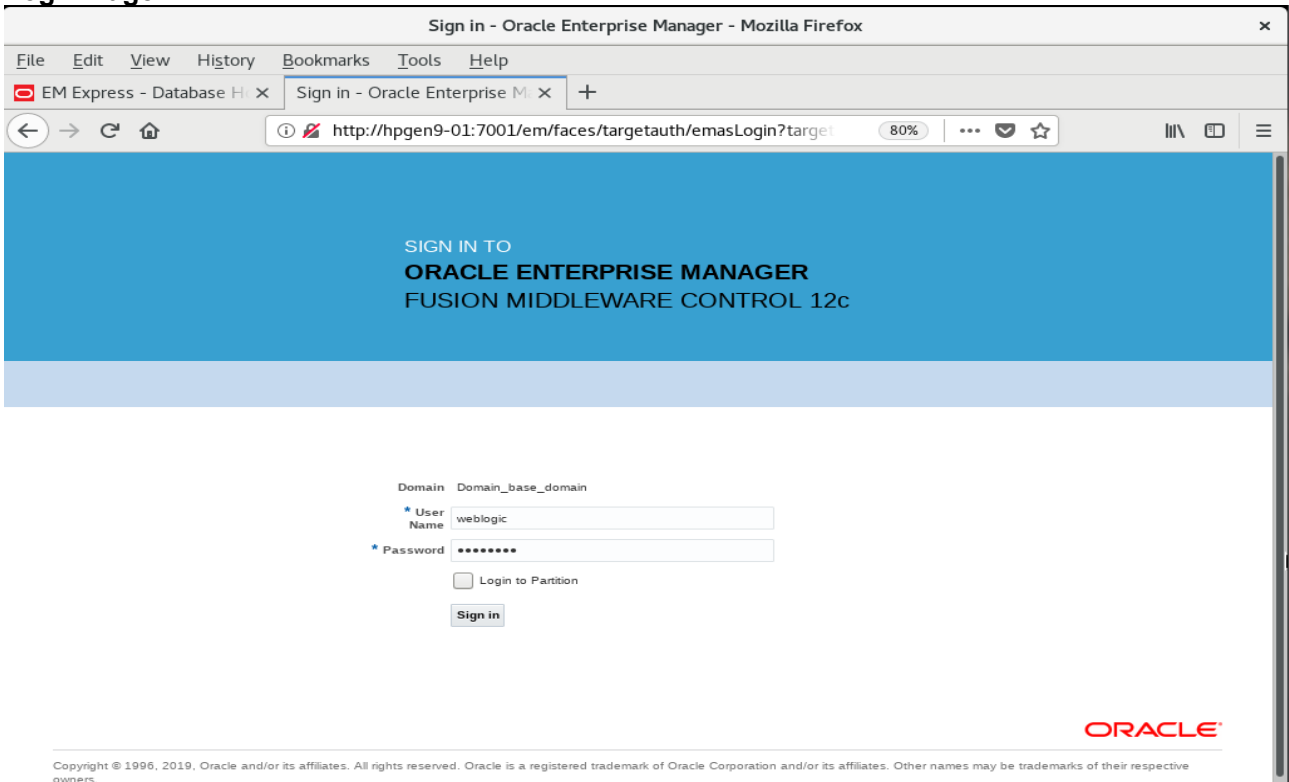
-----
Server state changed to RUNNING.
-----

```

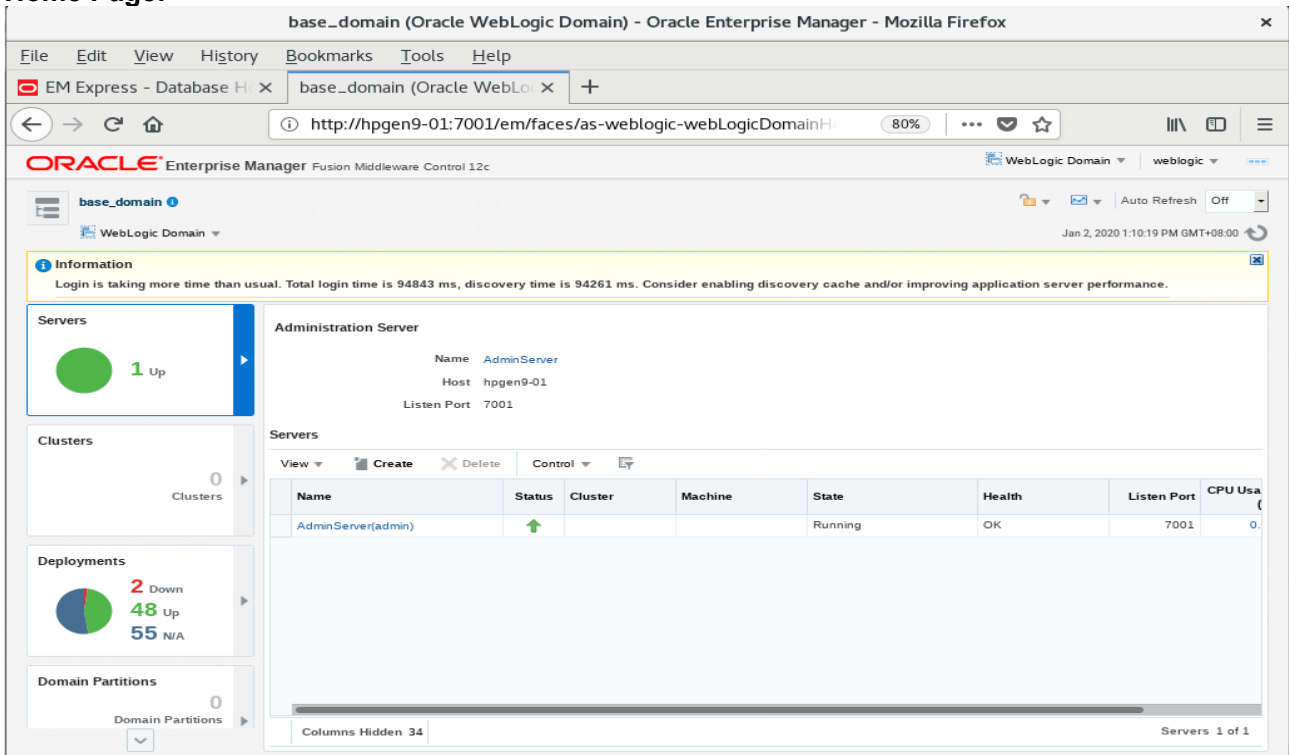
4-3. Checking Oracle SOA Suite 12c Product URLs.

1). Access to Enterprise Manager Console.

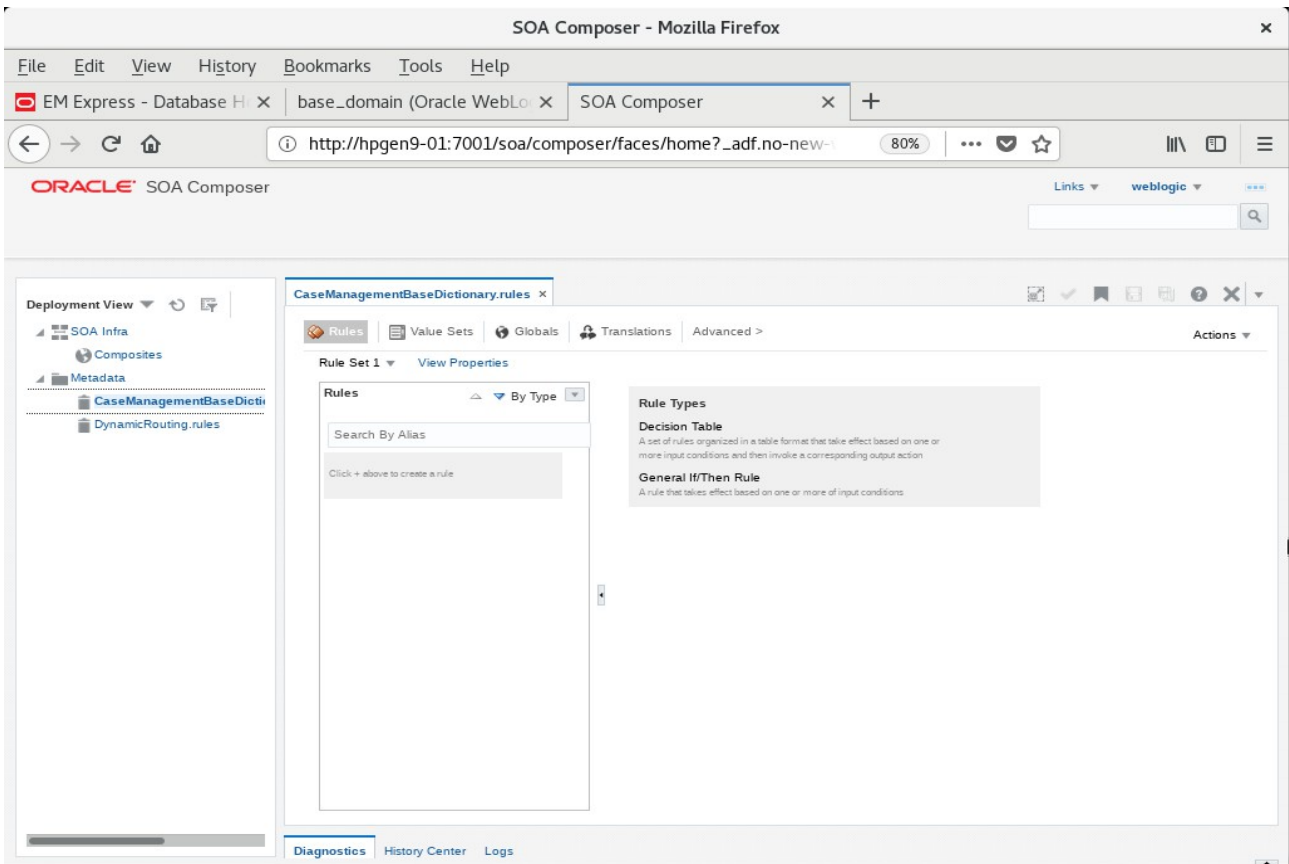
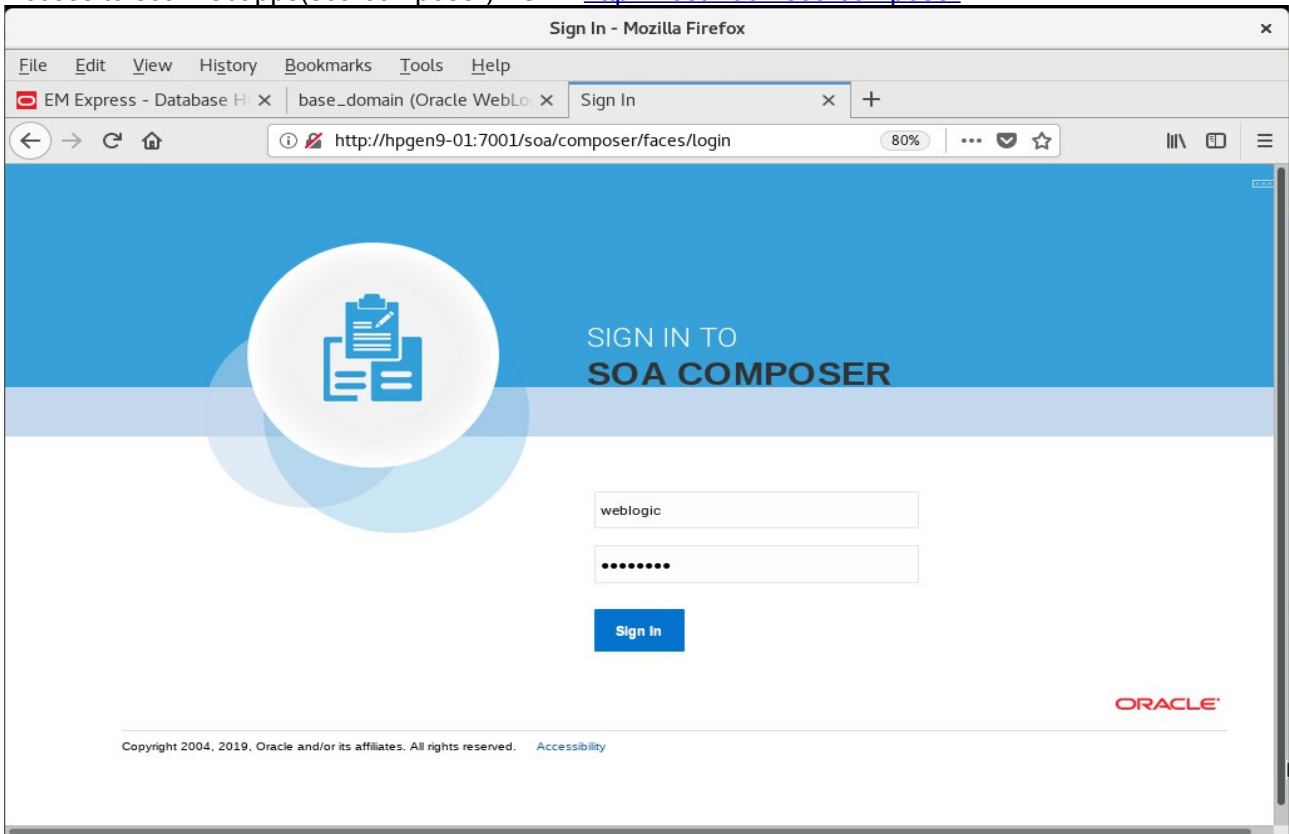
**Login Page:**



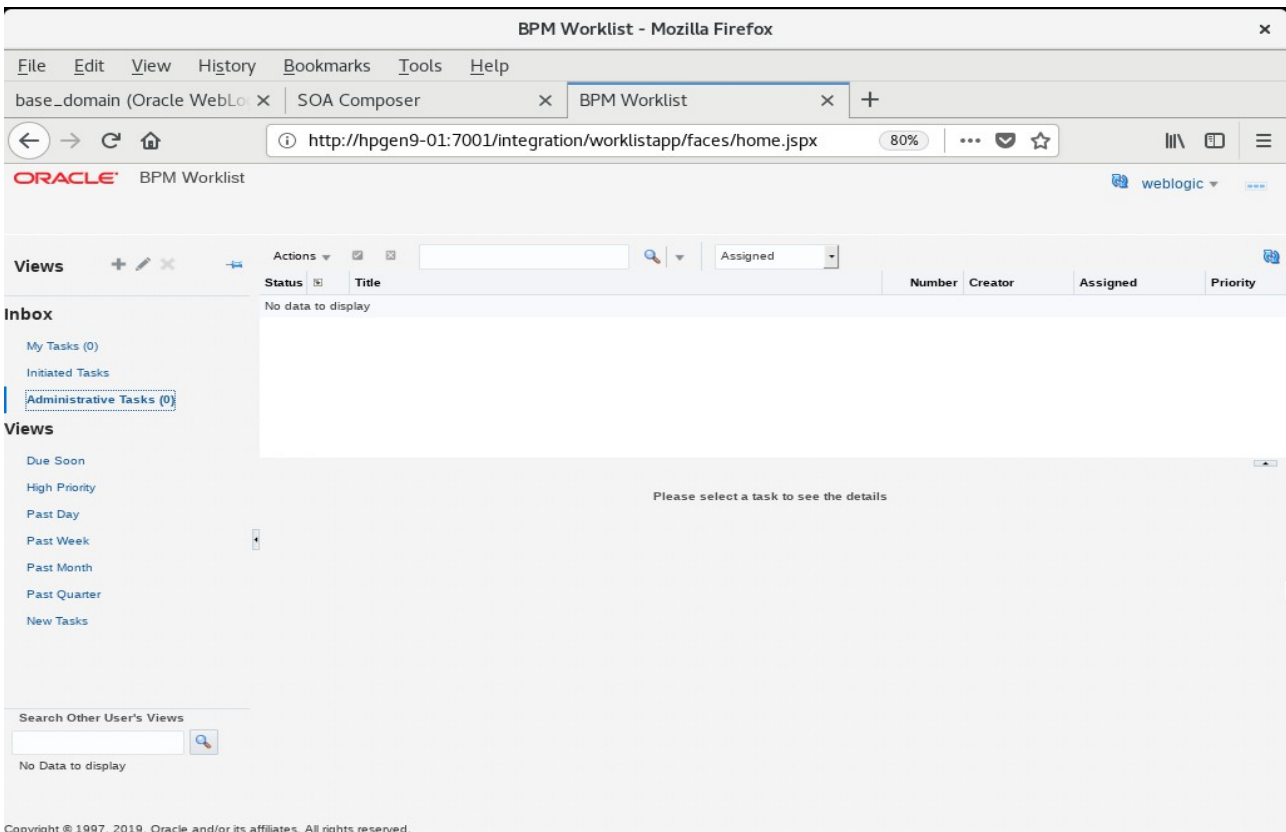
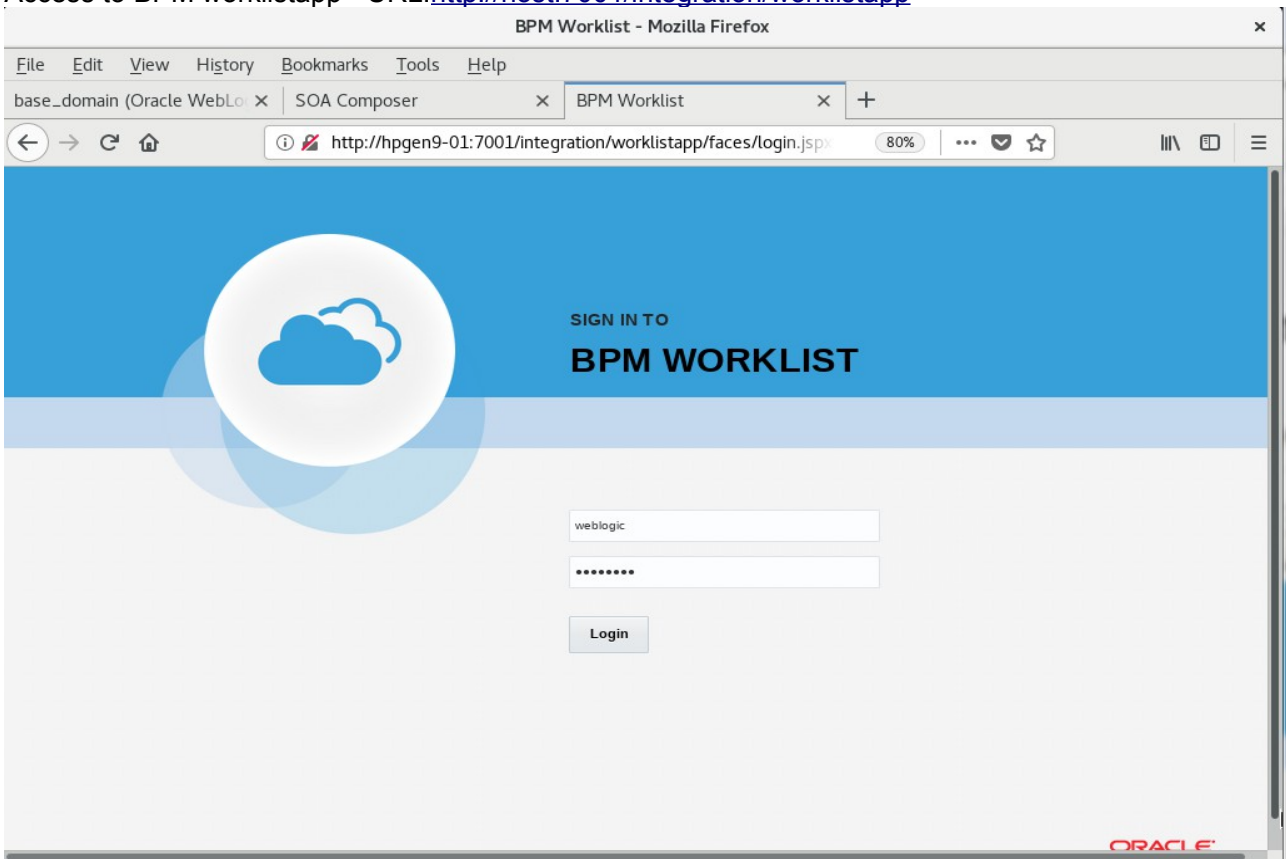
**Home Page:**



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

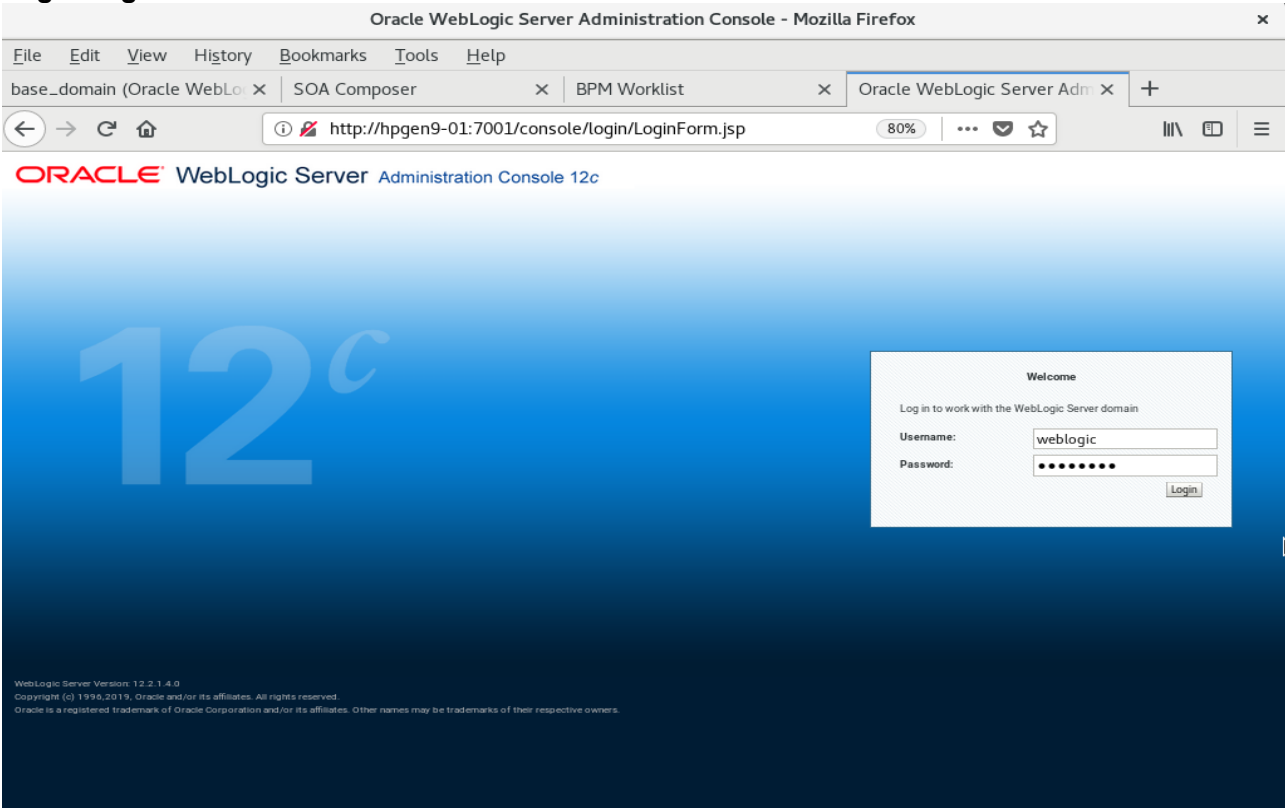


Access to BPM worklistapp - URL:<http://host:7001/integration/worklistapp>

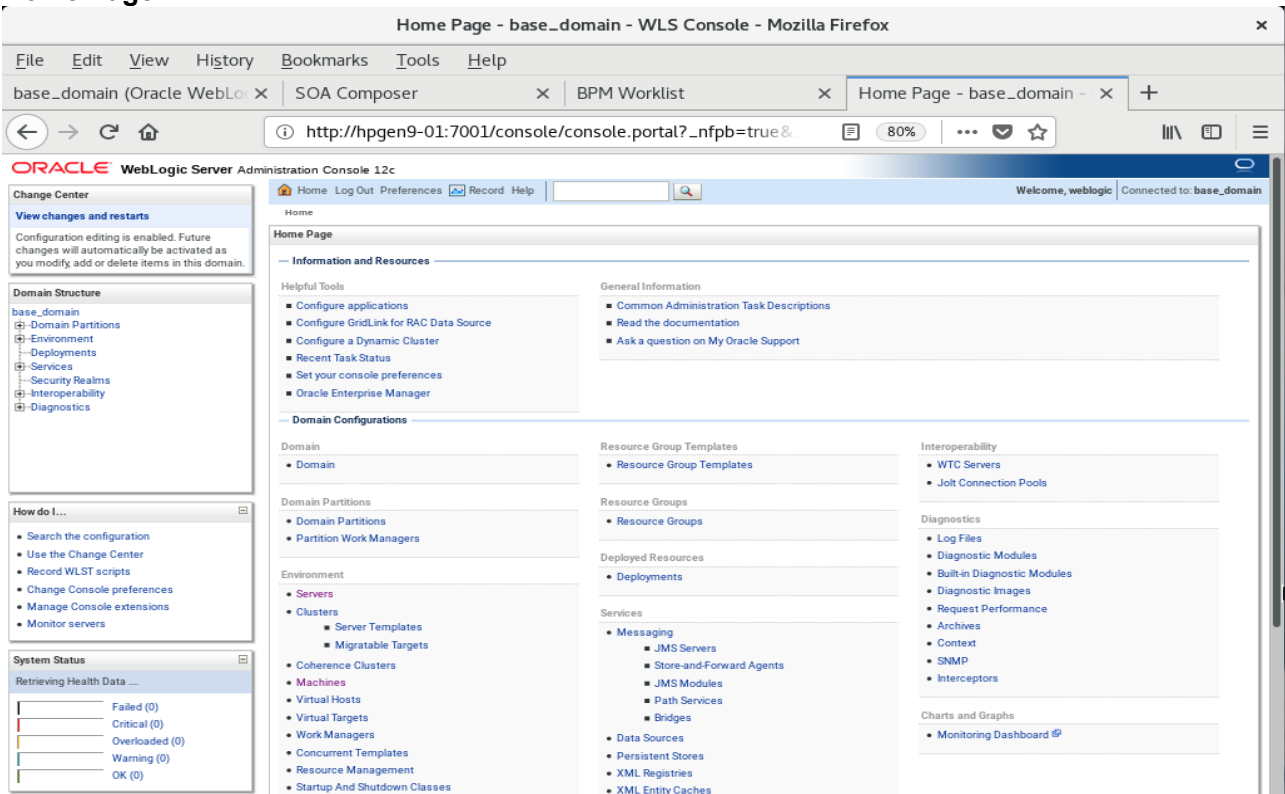


2). Access to Administration Server Console

Login Page as shown below:



Home Page:



Viewing the summary of servers:

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area is titled "Summary of Servers" and contains the following information:

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

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

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

The left sidebar includes the following sections:

- Change Center:** View changes and restarts. Configuration editing is enabled.
- Domain Structure:** A tree view showing the hierarchy of the domain, including Domain Partitions, Environment, Deployments, Services, Security Realms, Interoperability, and Diagnostics.
- How do I...:** A list of actions such as "Create Managed Servers", "Clone servers", "Delete Managed Servers", "Delete the Administration Server", "Start and stop servers", and "View objects in the JNDI tree".
- System Status:** A bar chart showing the health of running servers as of 1:16 PM. The status is OK (1).

3). Connecting JDeveloper to the Compact Domain.

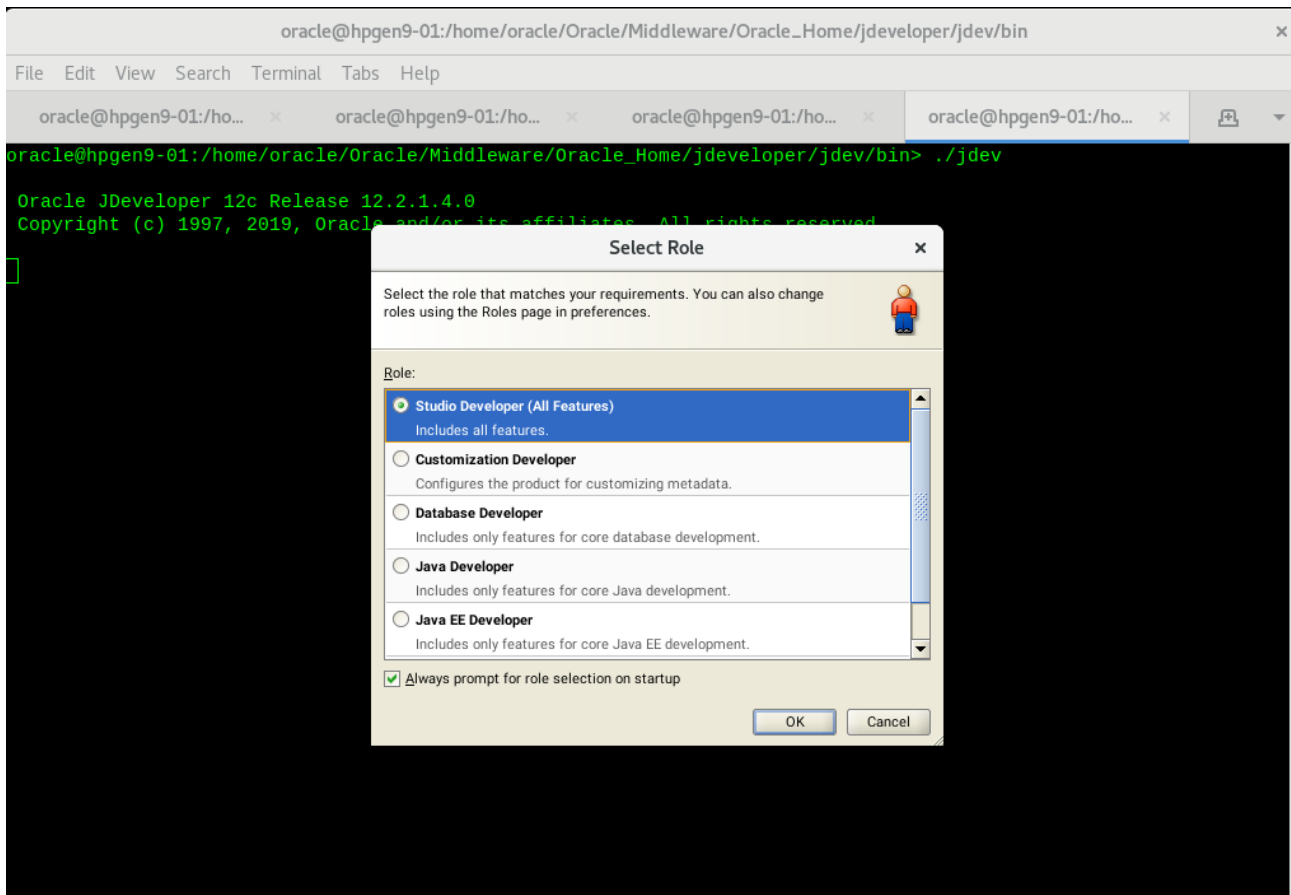
Launch Oracle JDeveloper with the appropriate command.

Ex:

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

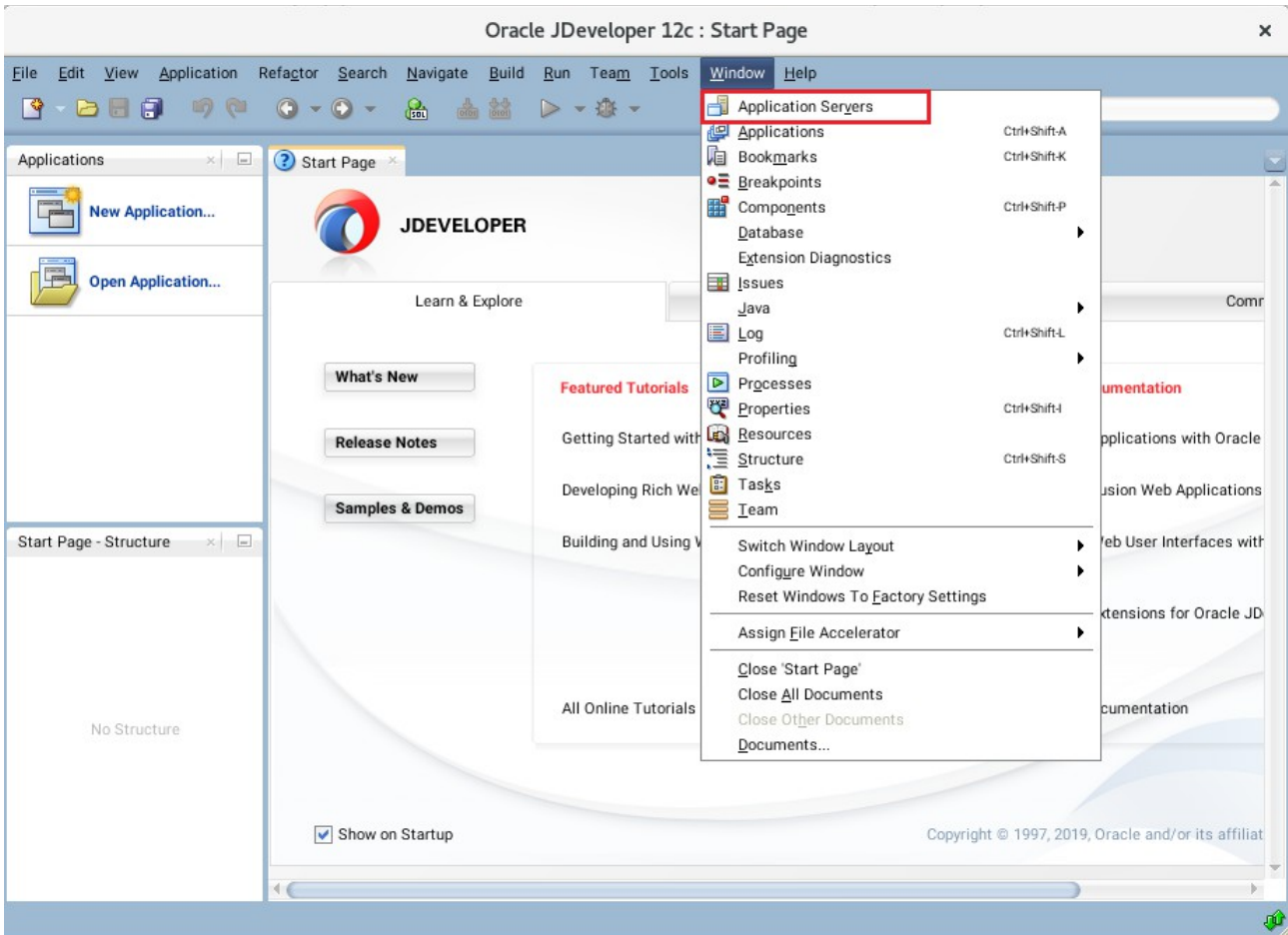
**Follow these steps:**

a1). Select Role.



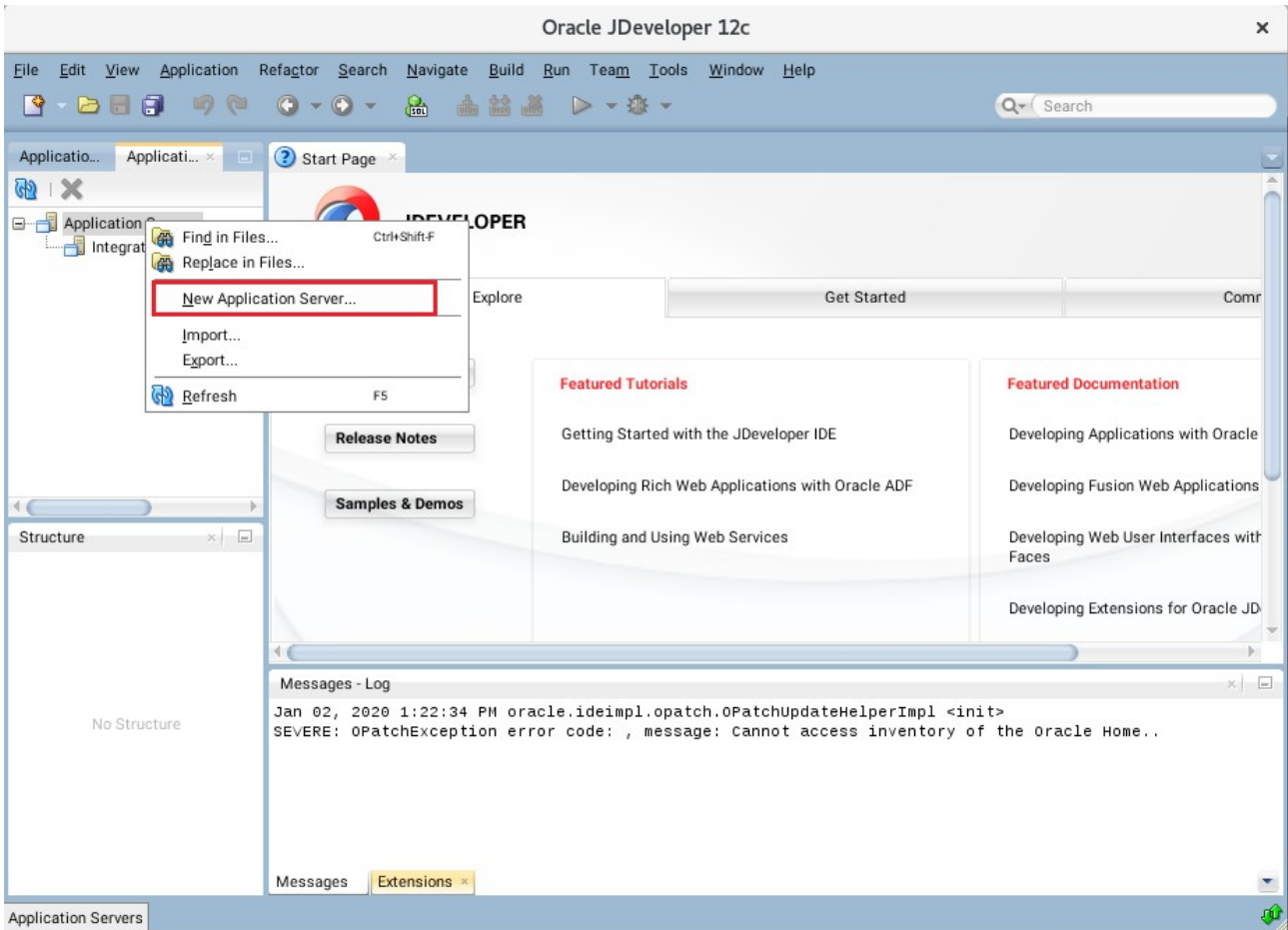
Select the role that matches your requirements. Click **OK** to continue.

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.



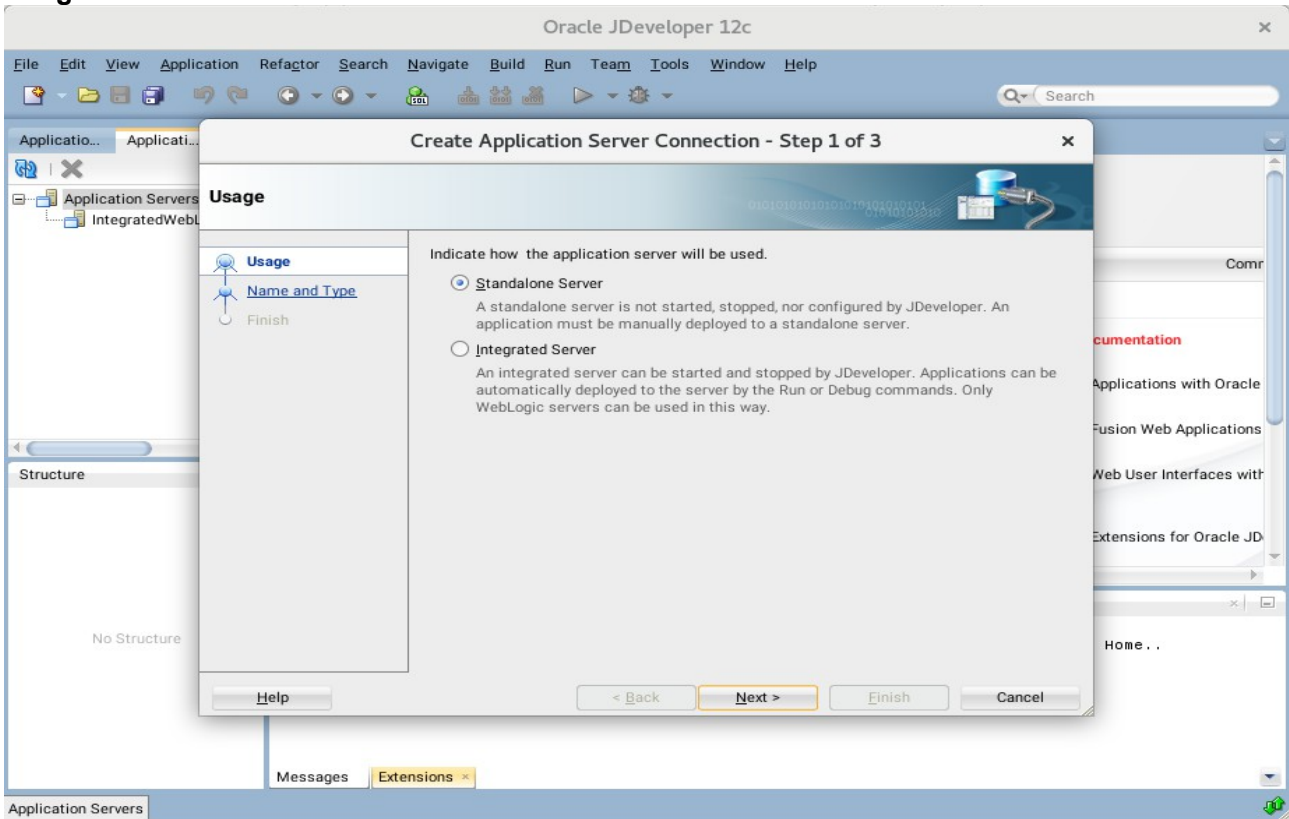


a3). Right-click on **Application Servers** in the Application Server Navigator. Select **New Application Server** from the drop-down menu to launch the **Create Application Server Connection** wizard.

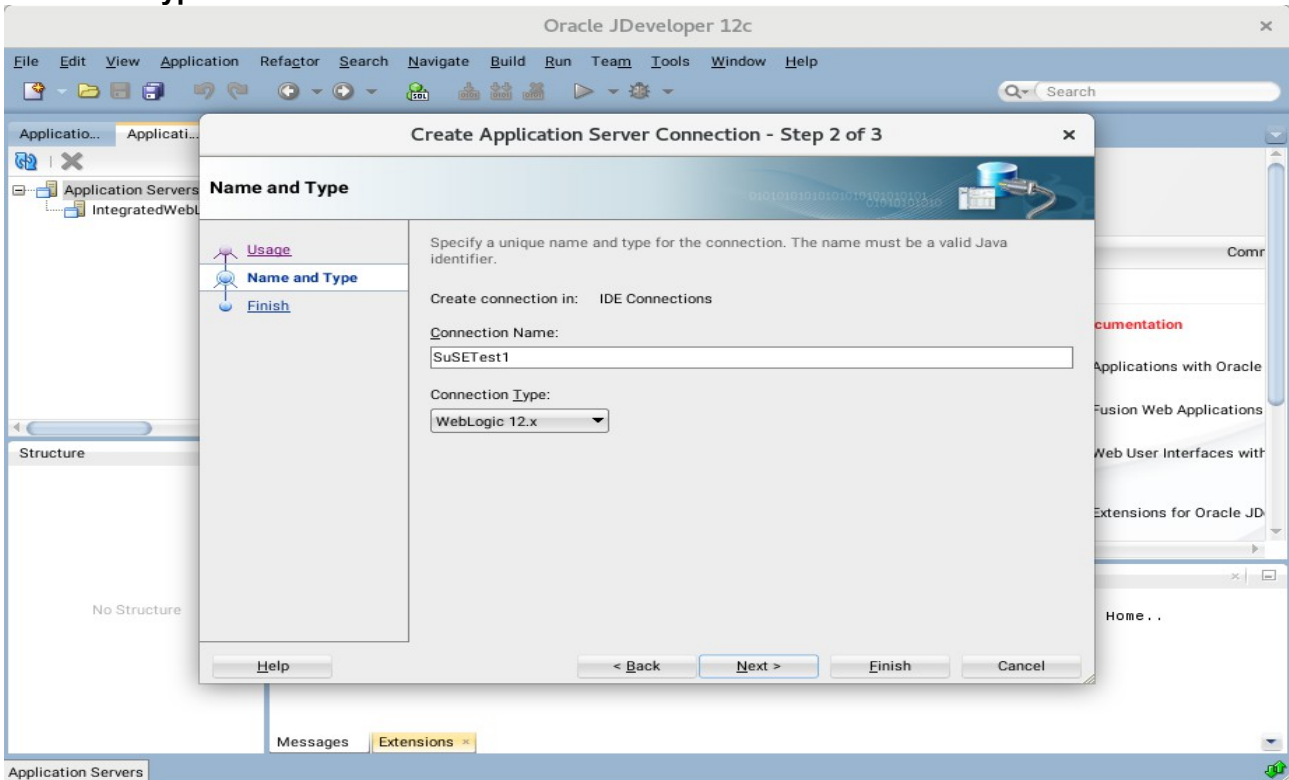


a4). Creating Application Server Connection steps as shown below.

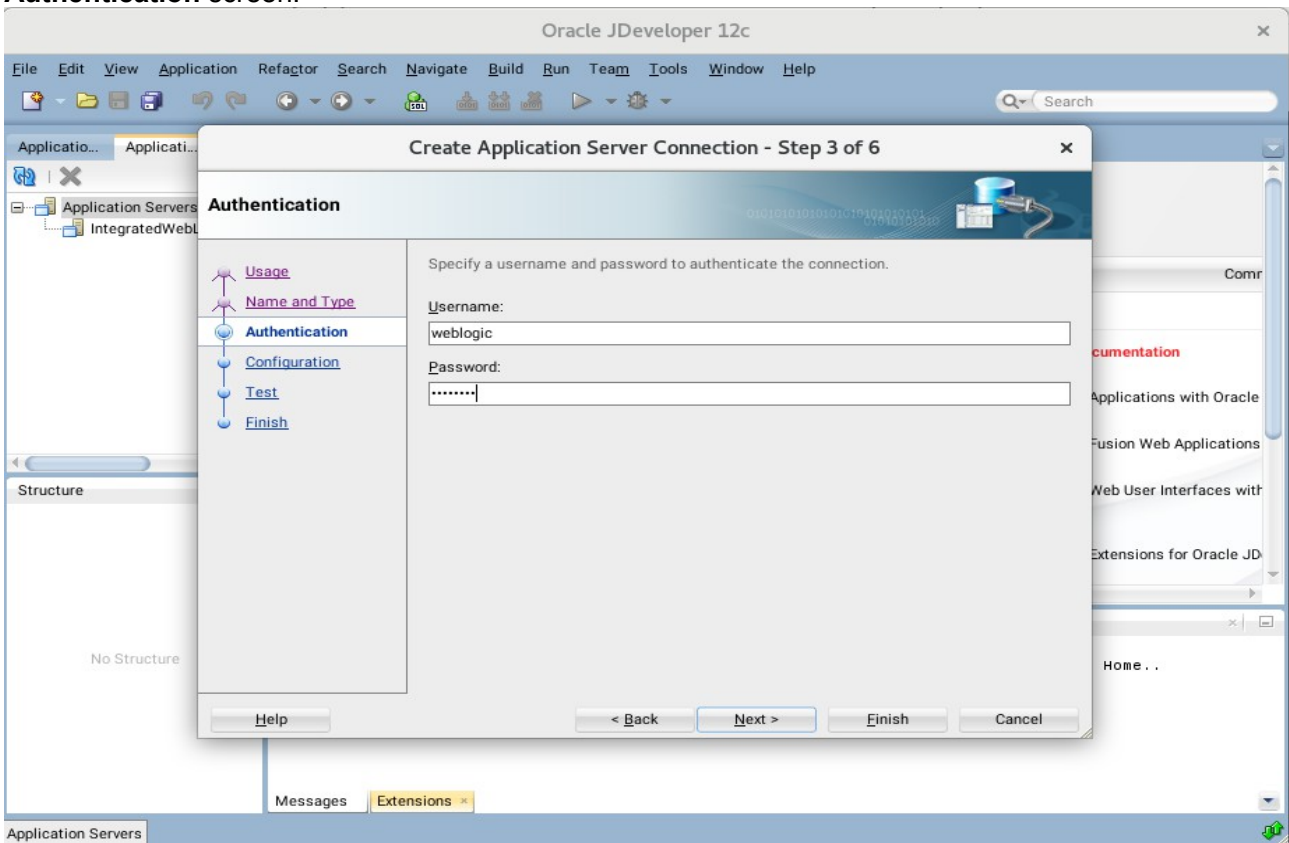
**Usage screen.**



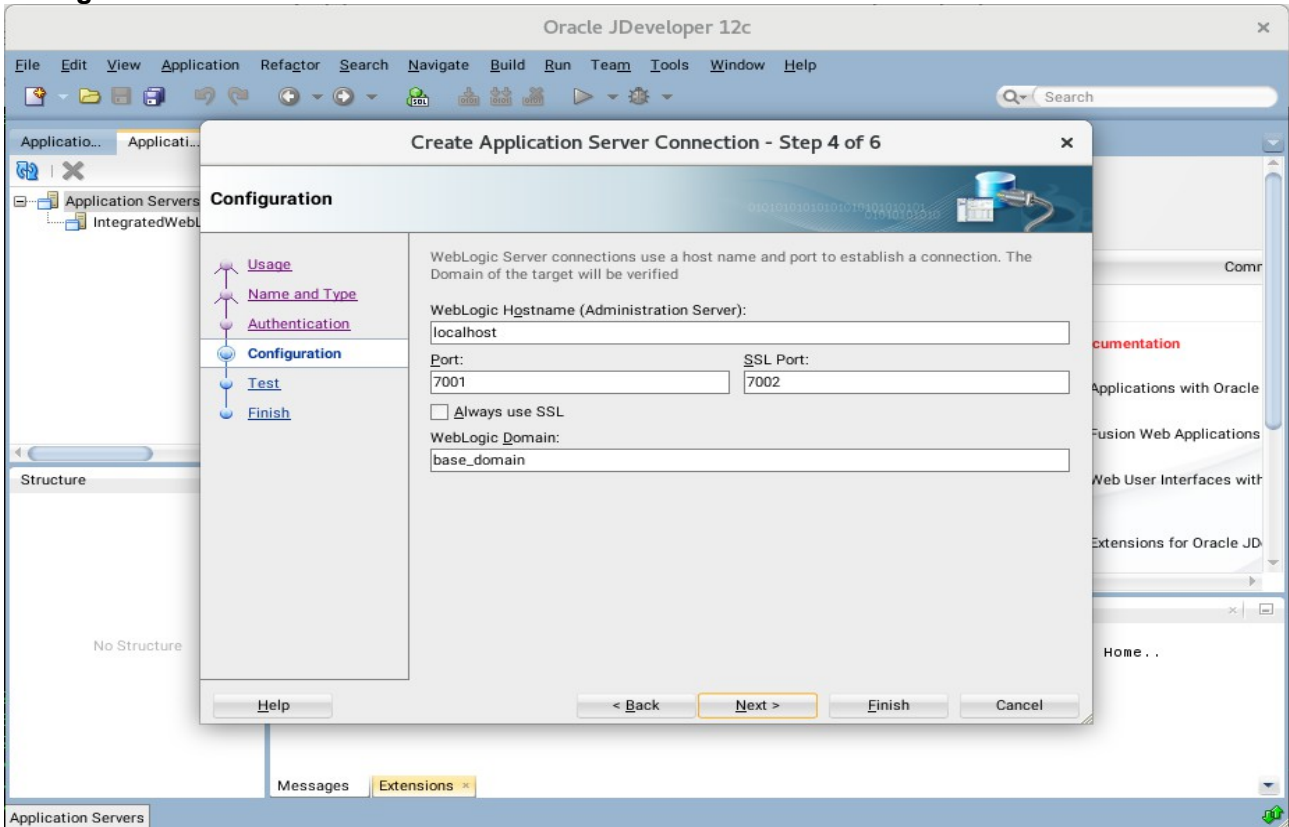
**Name and Type screen.**



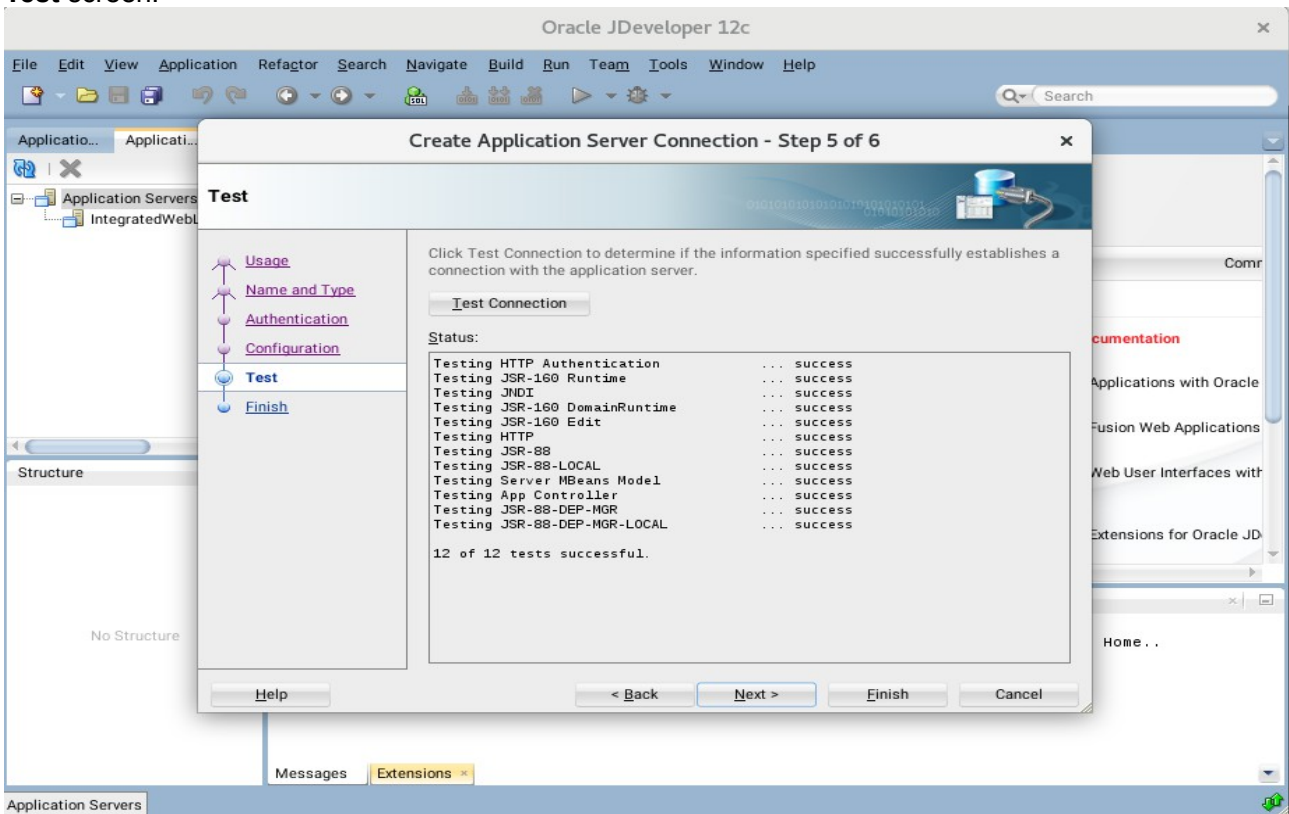
Authentication screen.



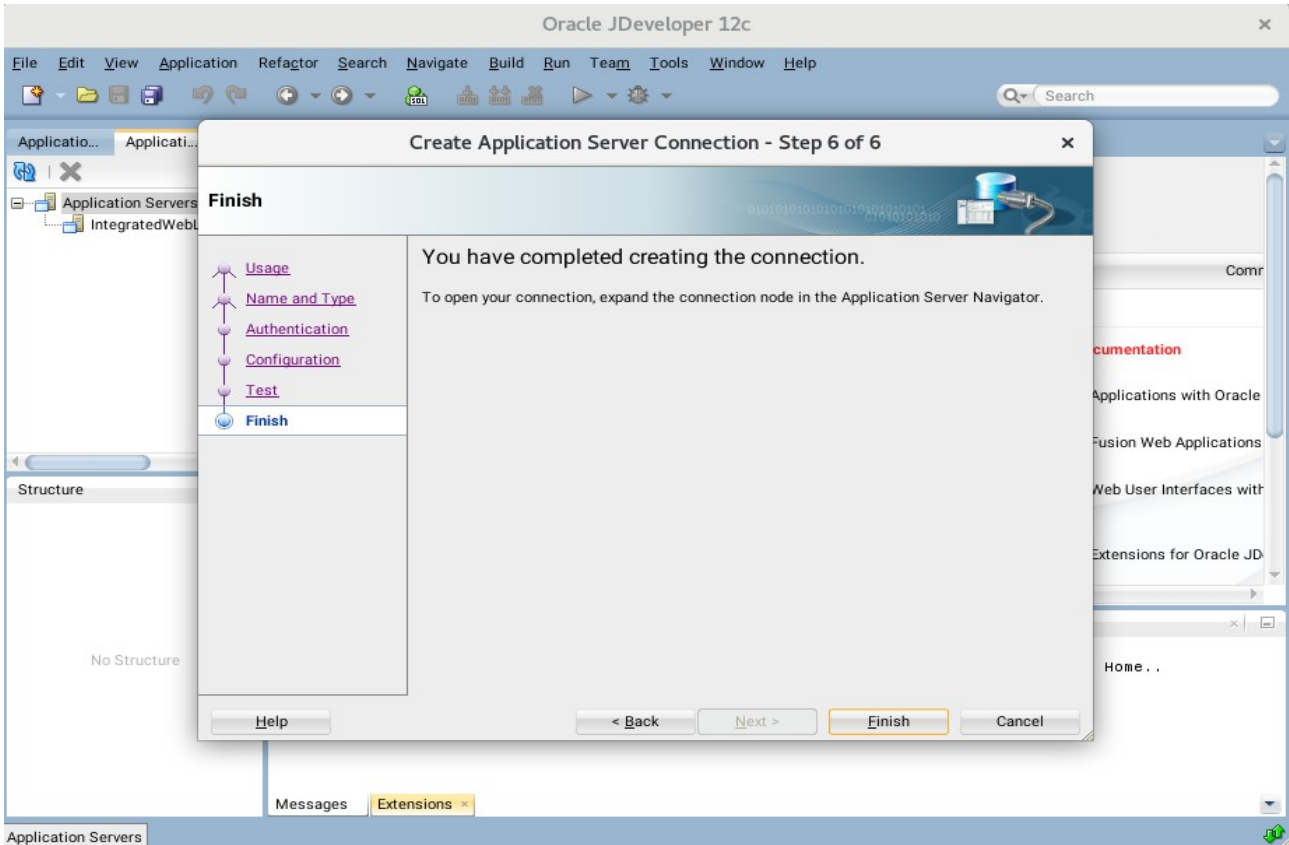
Configuration screen.



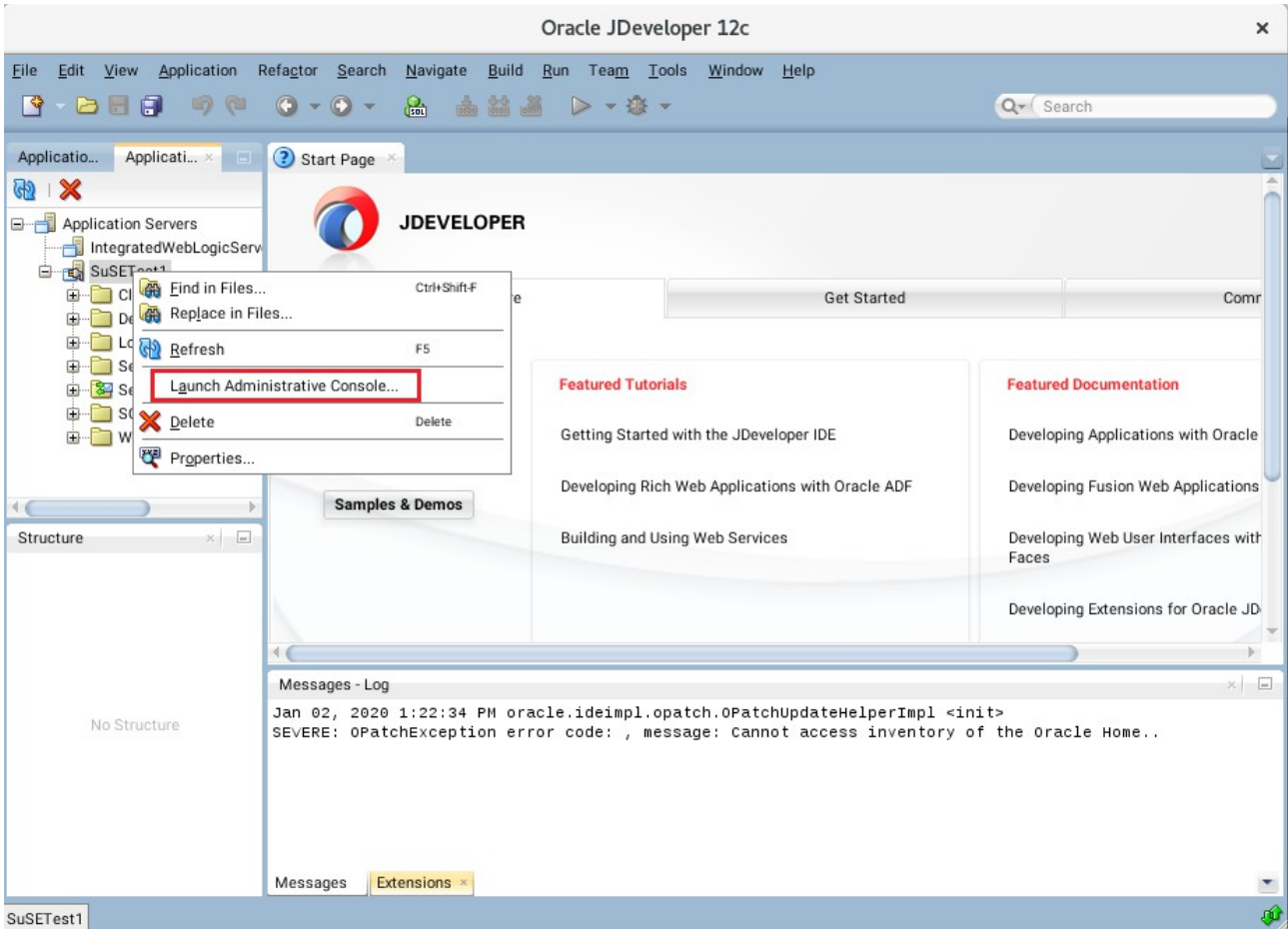
Test screen.



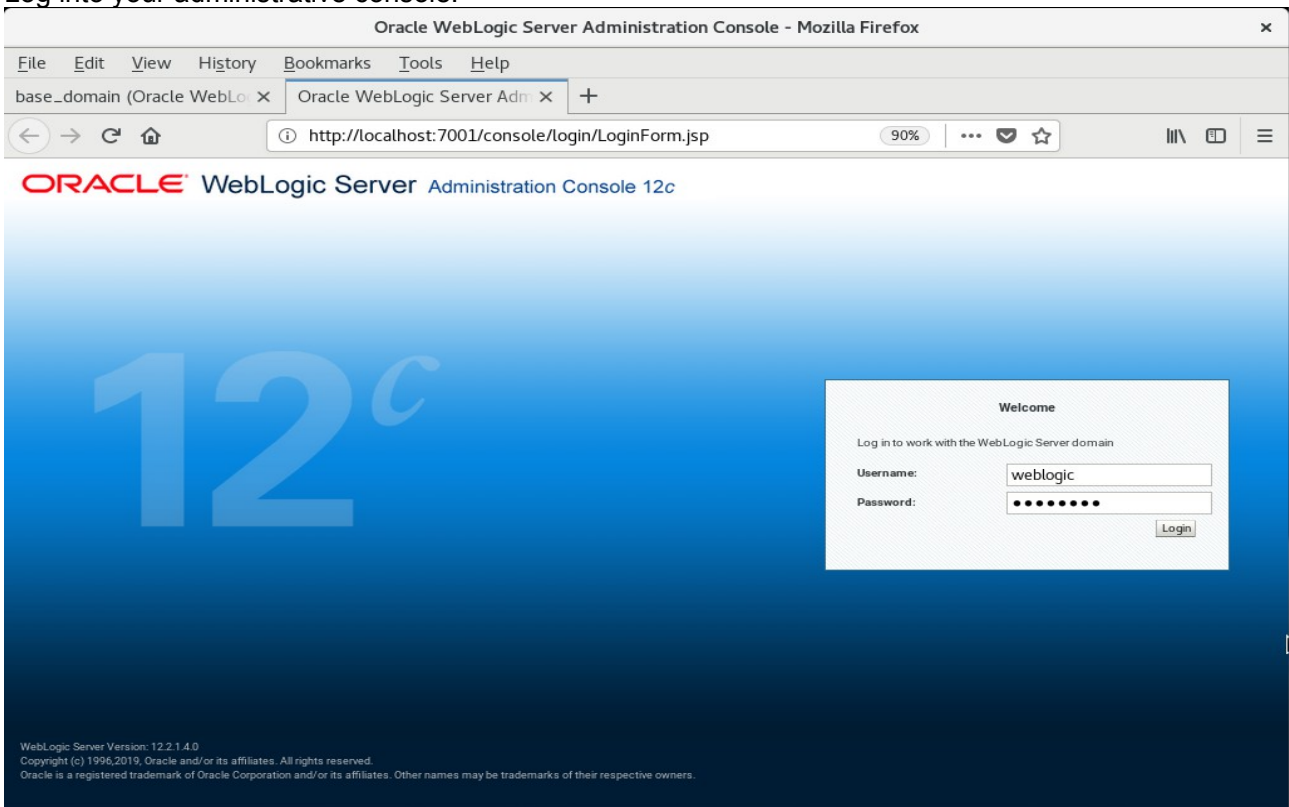
Finish screen.



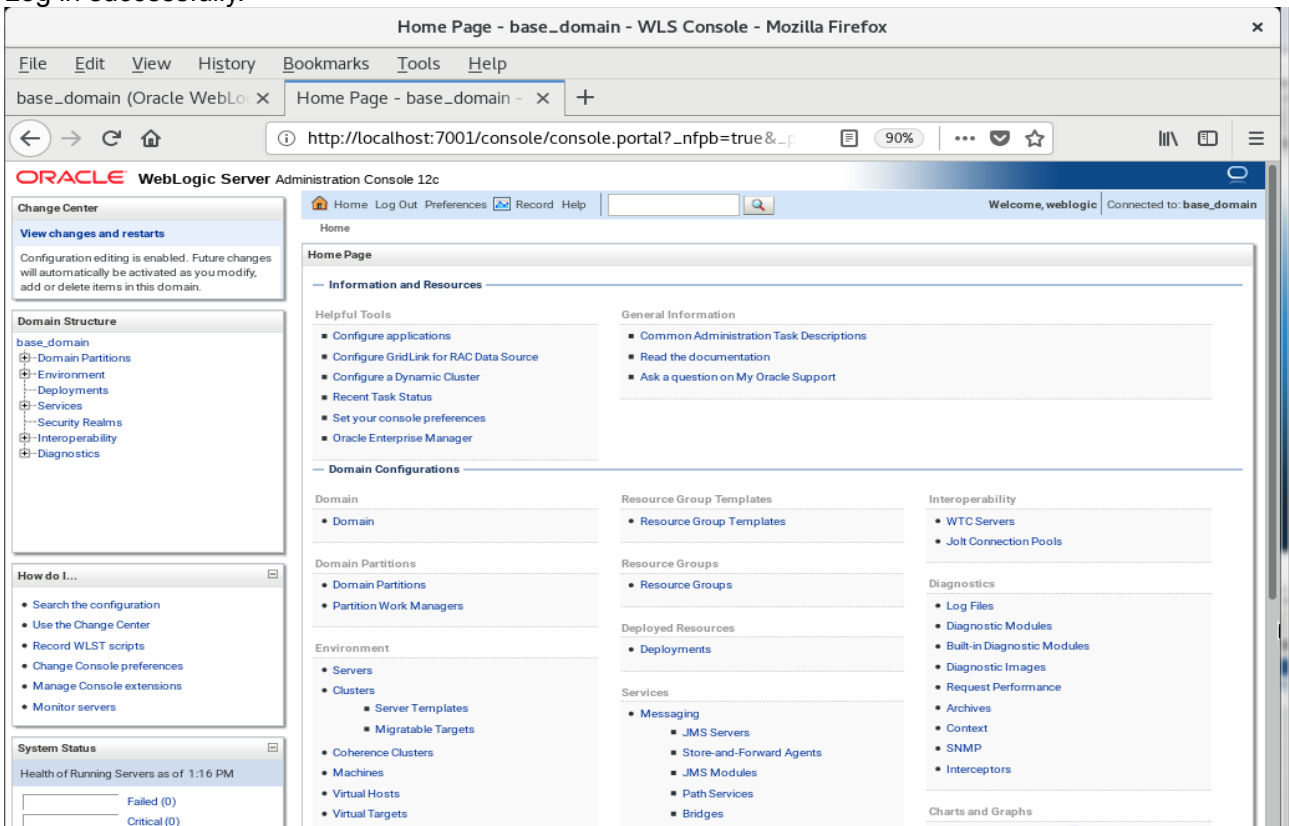
a5). Verifying Your Connection. Expand the connection node beside **Application Servers** in the Application Server Navigator. You should see your domain listed by the **Connection Name** you specified on the **Name and Type** screen. Right-click on your domain's name and choose **Launch Administrative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



Log into your administrative console.



Log in successfully.



**End of Oracle SOA Suite.**

\*\*\*\*\*

## Oracle Access Manager

\*\*\*\*\*

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

#### 1-1. Prerequisites:

Installation of Oracle Identity and Access management requires:

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

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

```
SQL> show parameter open_cursors;

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

System altered.

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

Total System Global Area 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 jdk1.8.0\_191 and later installed.

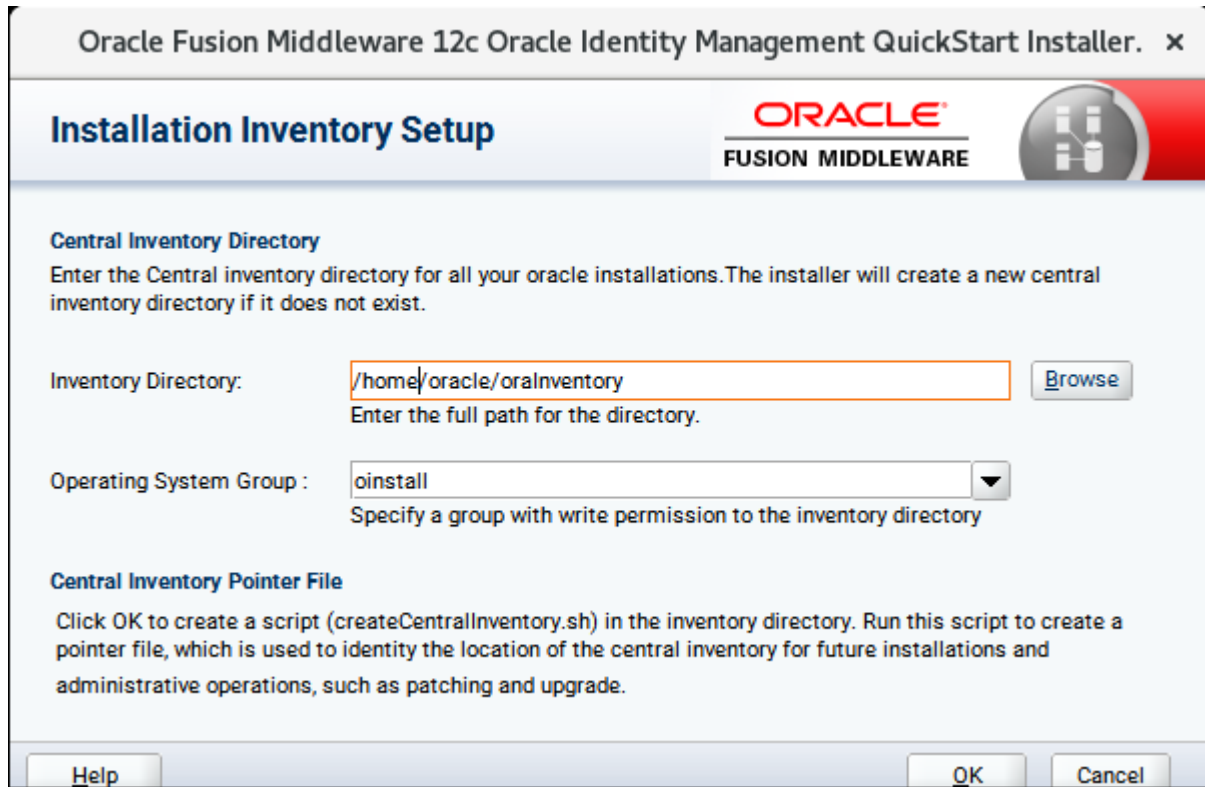
1-2. Log in to the target system (SLES 15 SP1 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <https://www.oracle.com/downloads/#category-middleware>.

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

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

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

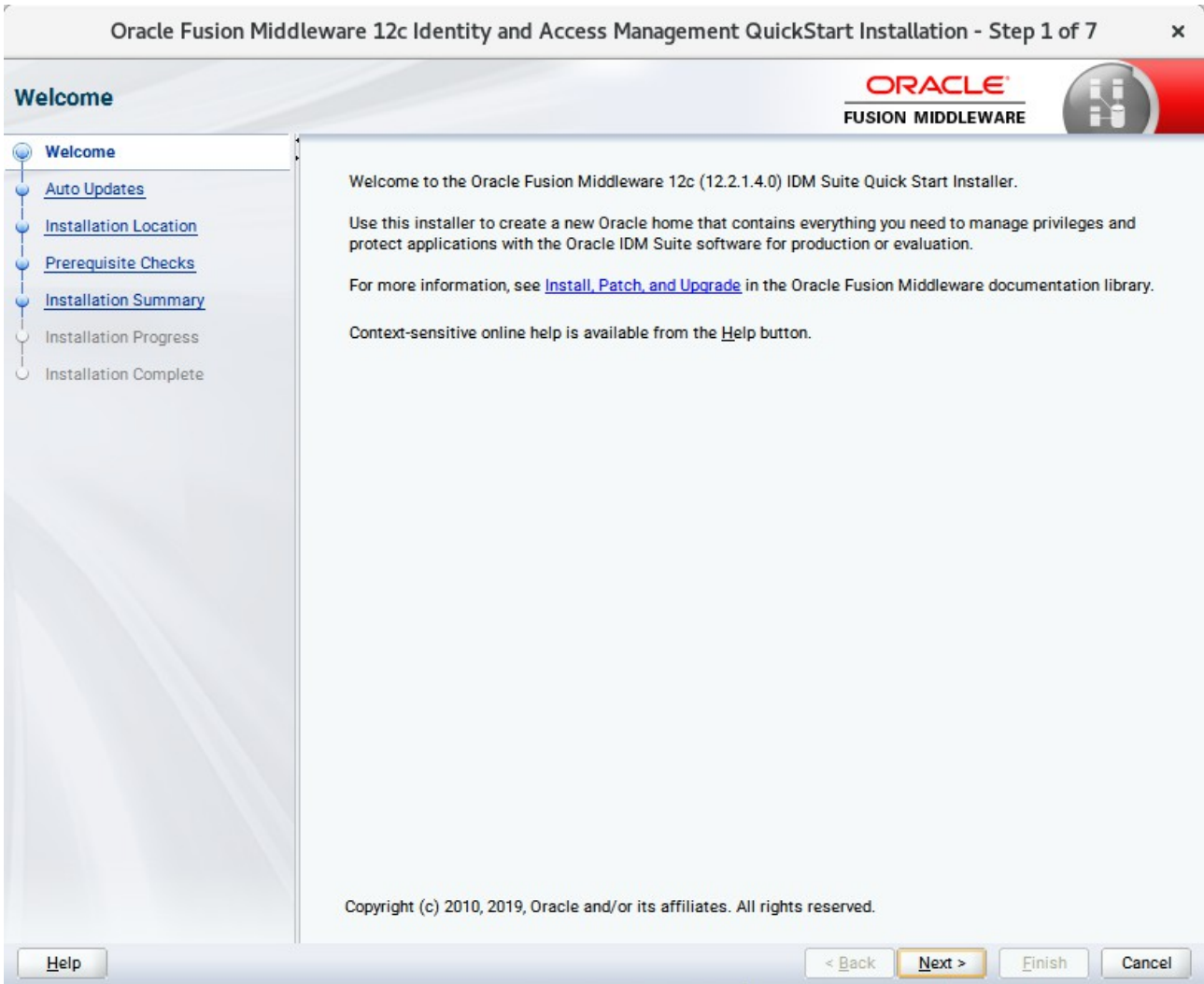
1). Installation Inventory Setup.



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

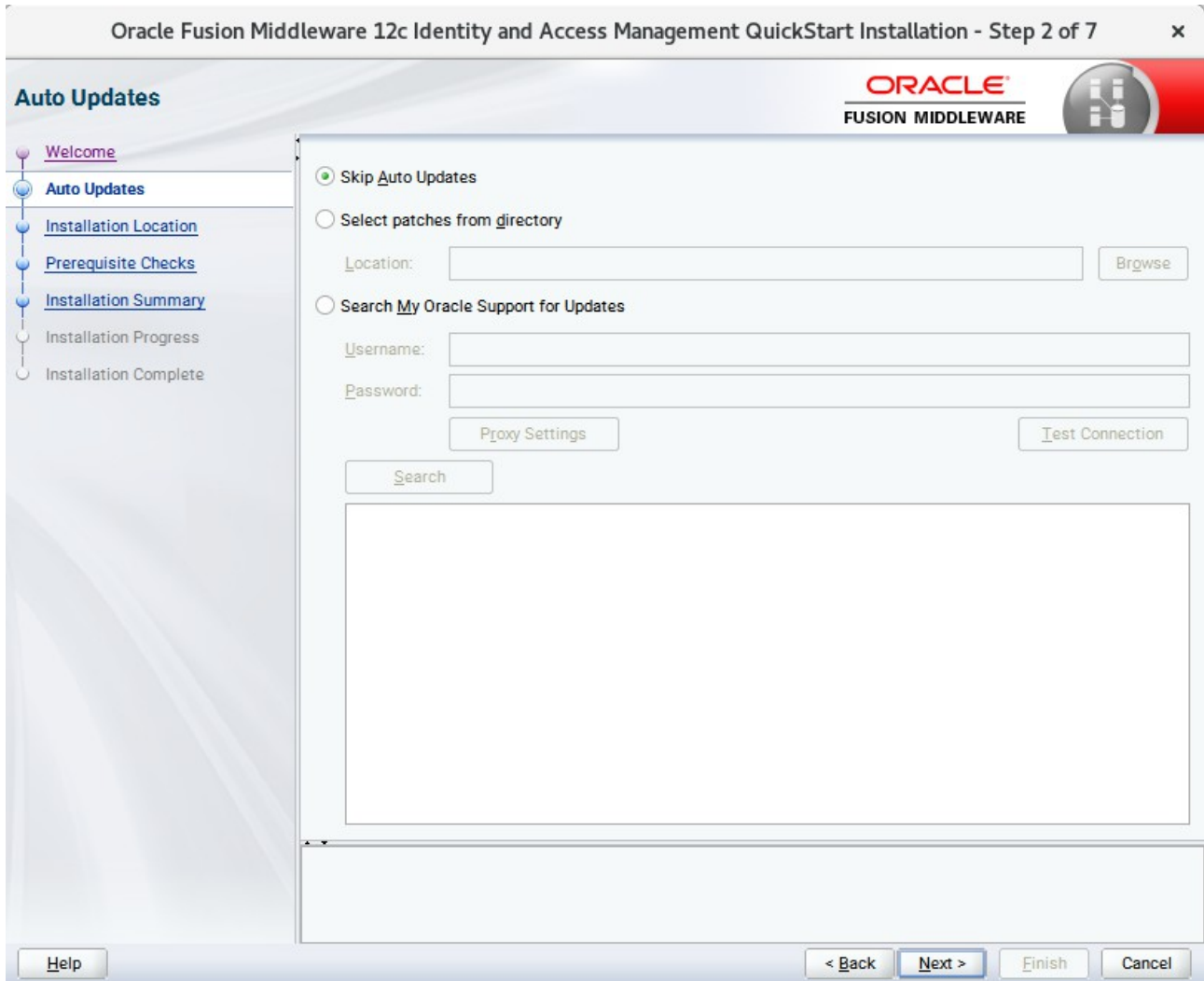


2). **Welcome** page appears.



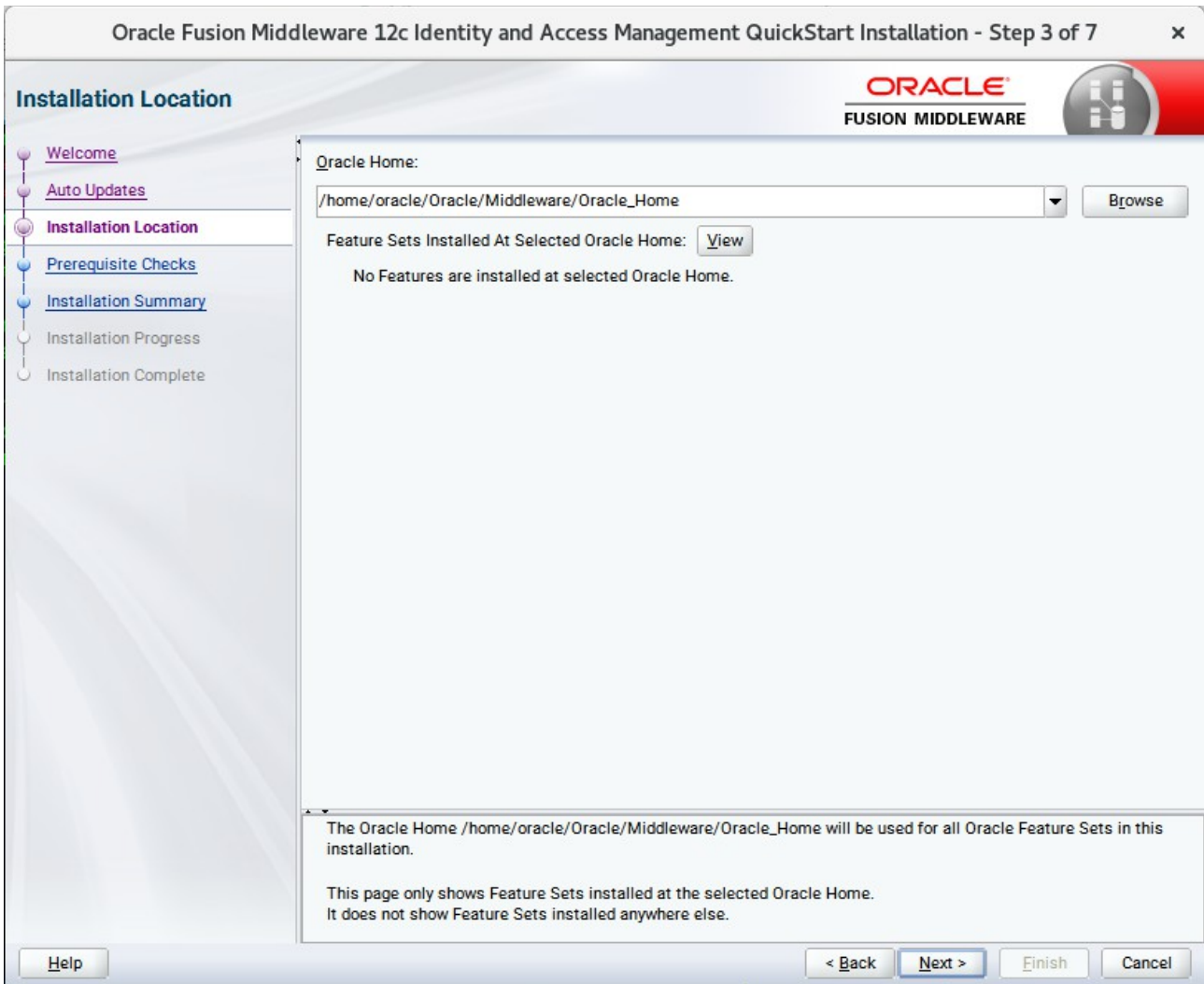
This page welcomes you to the installation. Click **Next** to continue.

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



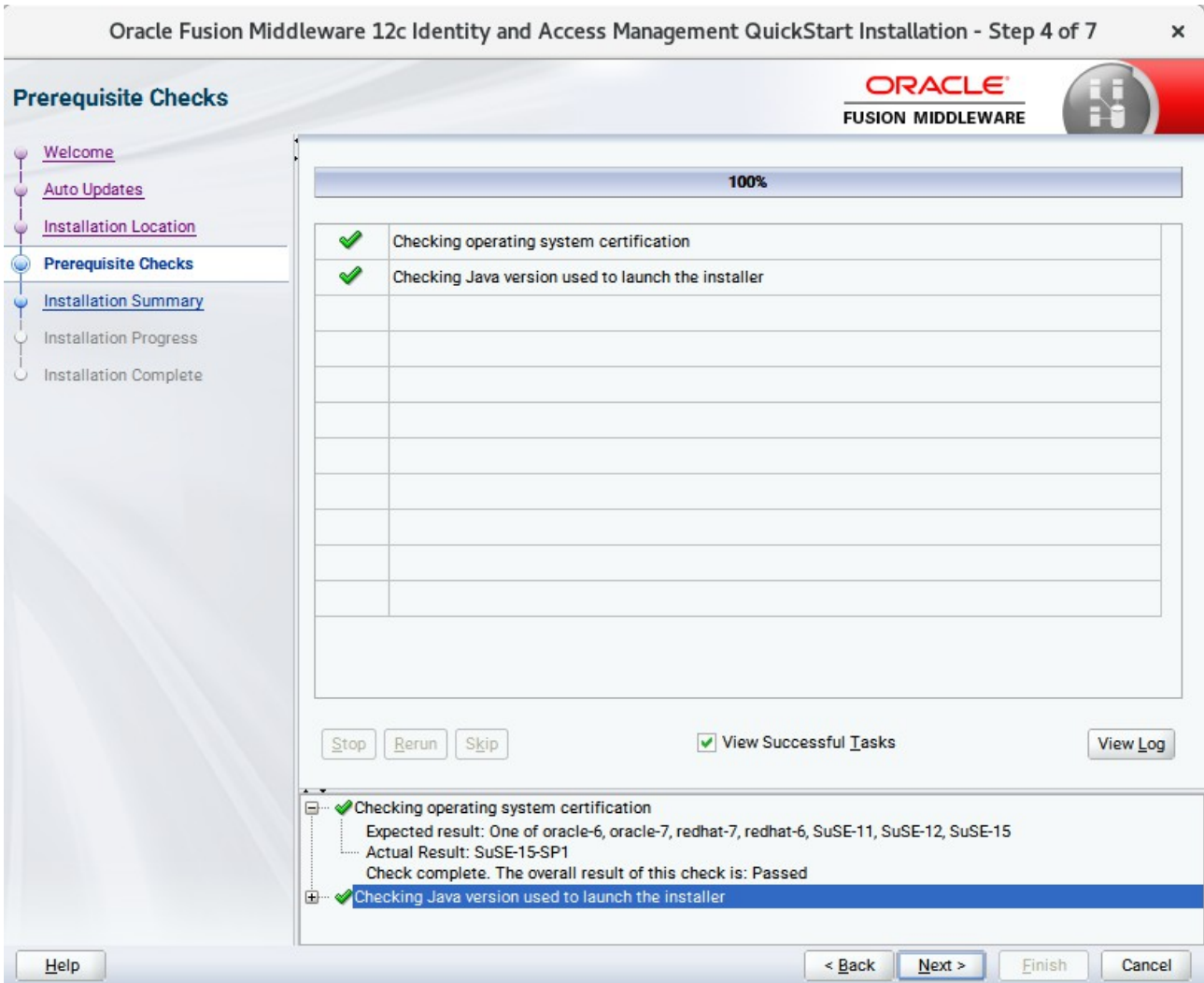
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



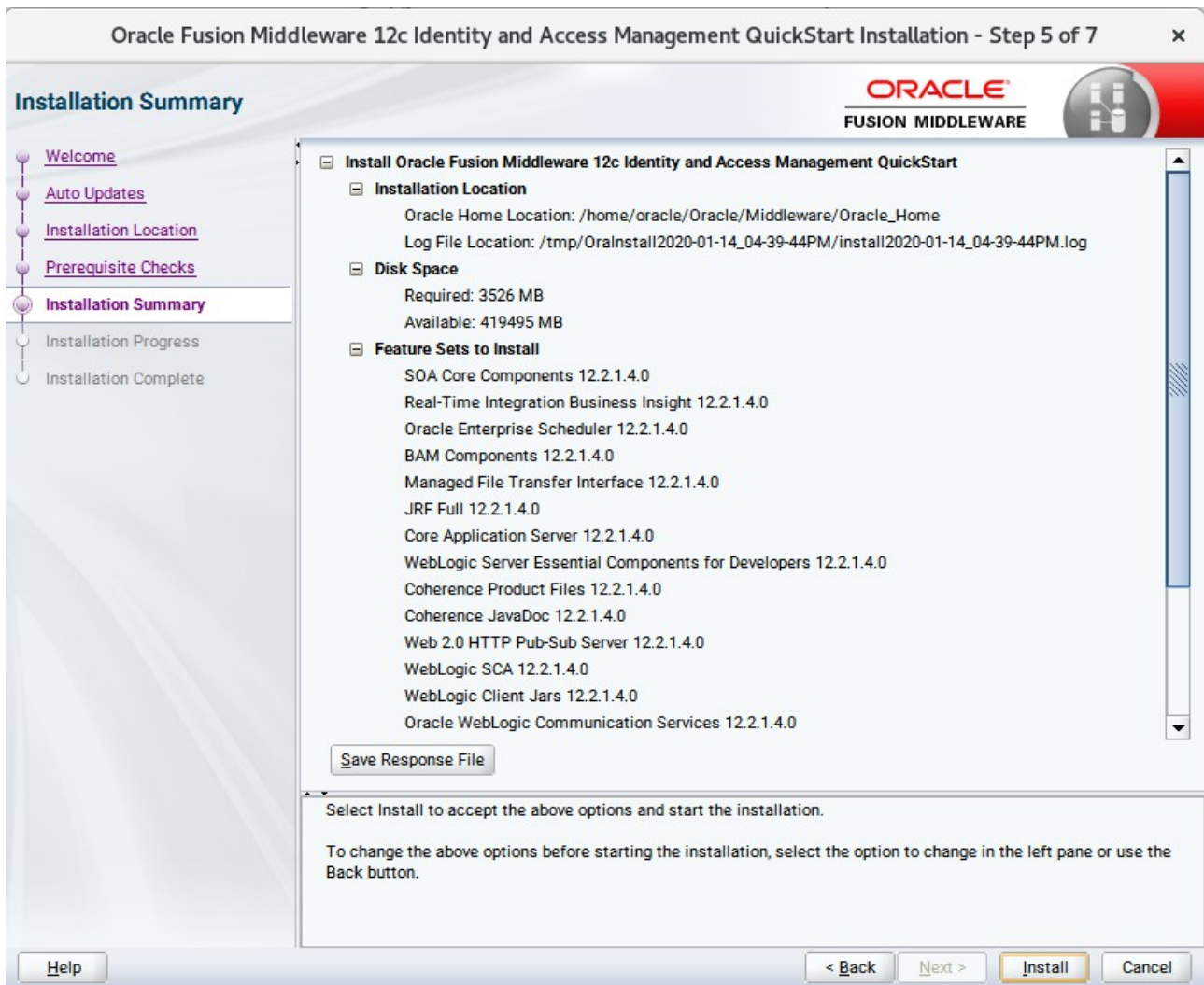
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



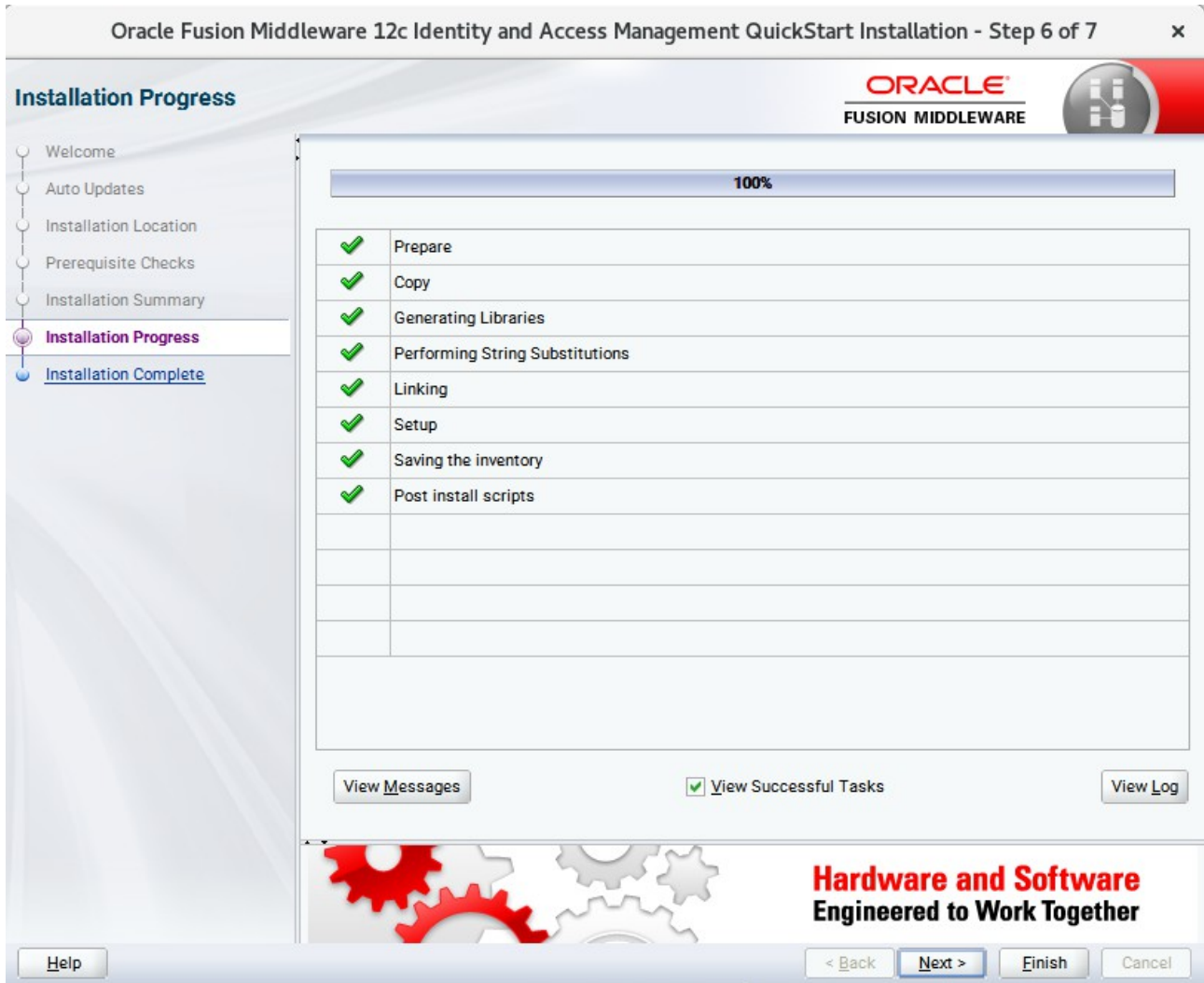
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



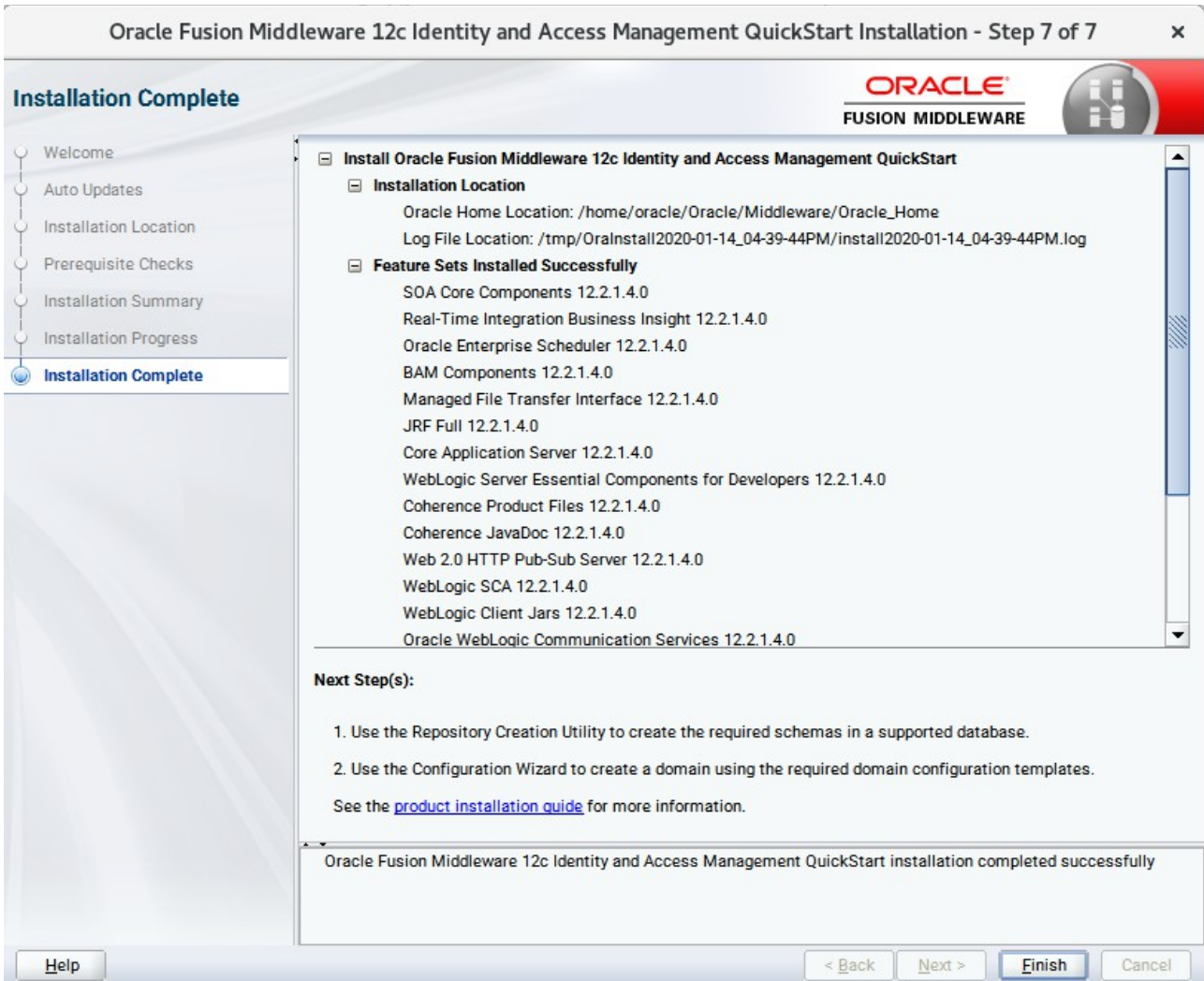
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



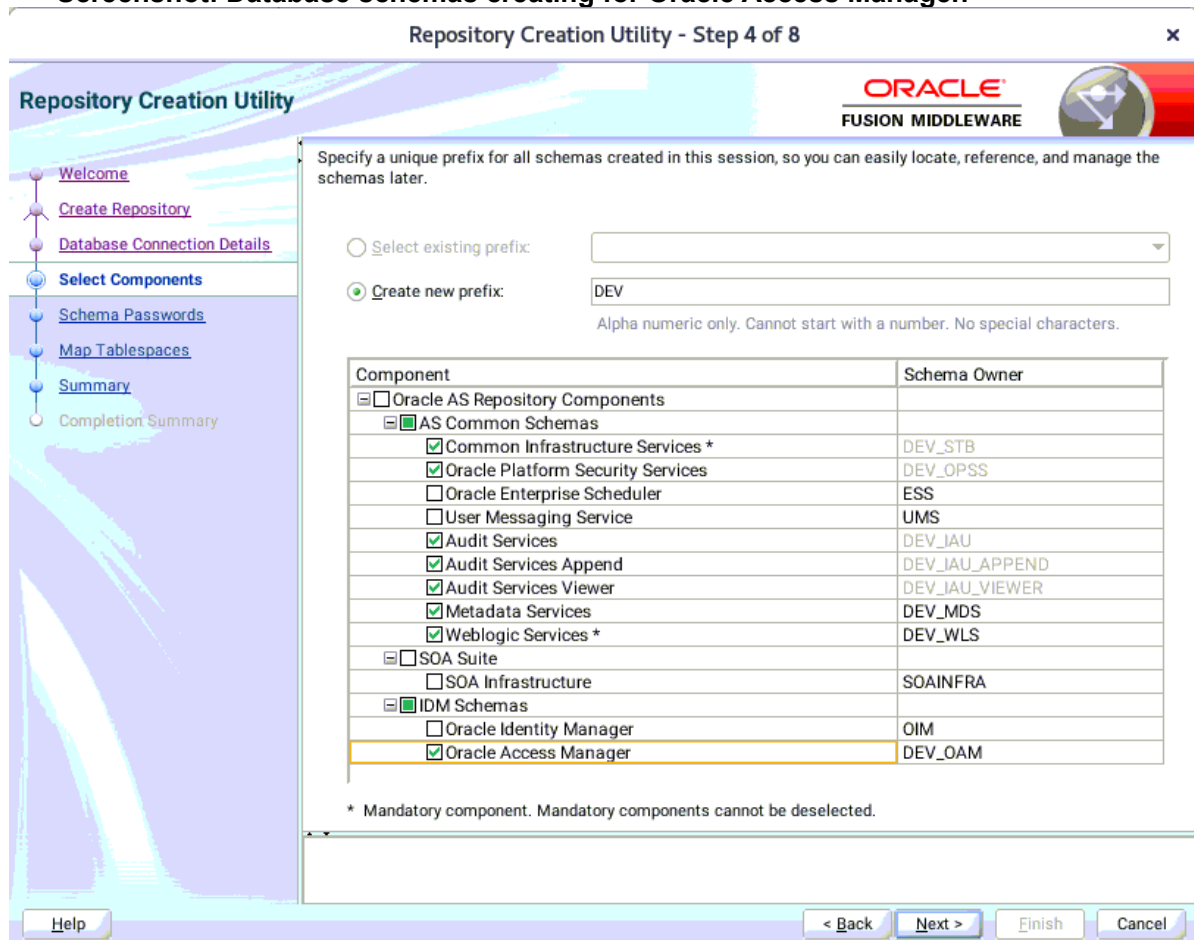
This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

## 2. Configuring the Oracle Access Manager Domain

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

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

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



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

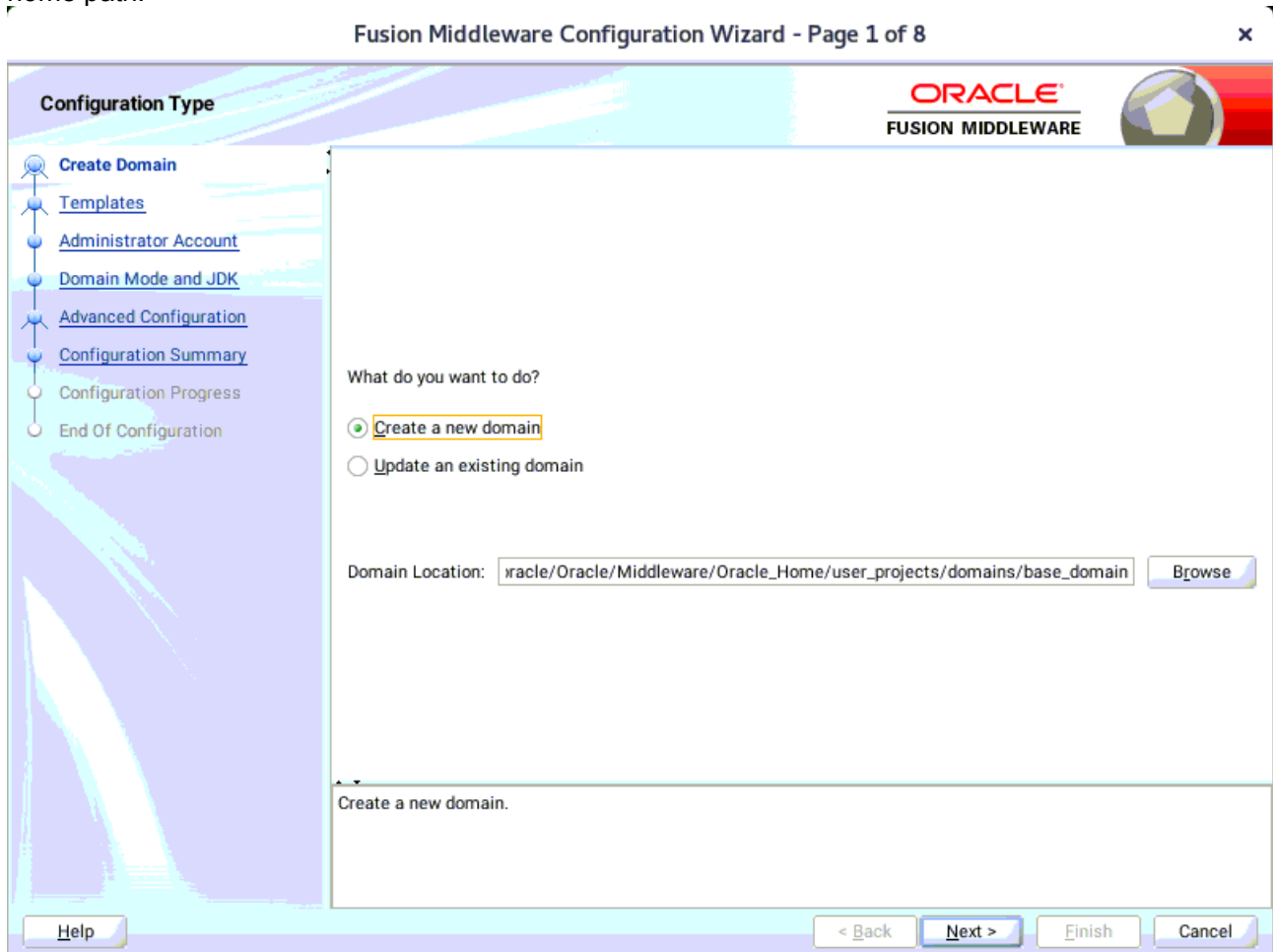


## 2-2. Configuring a Domain for Oracle Access Manager(OAM) using the Config Wizard

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

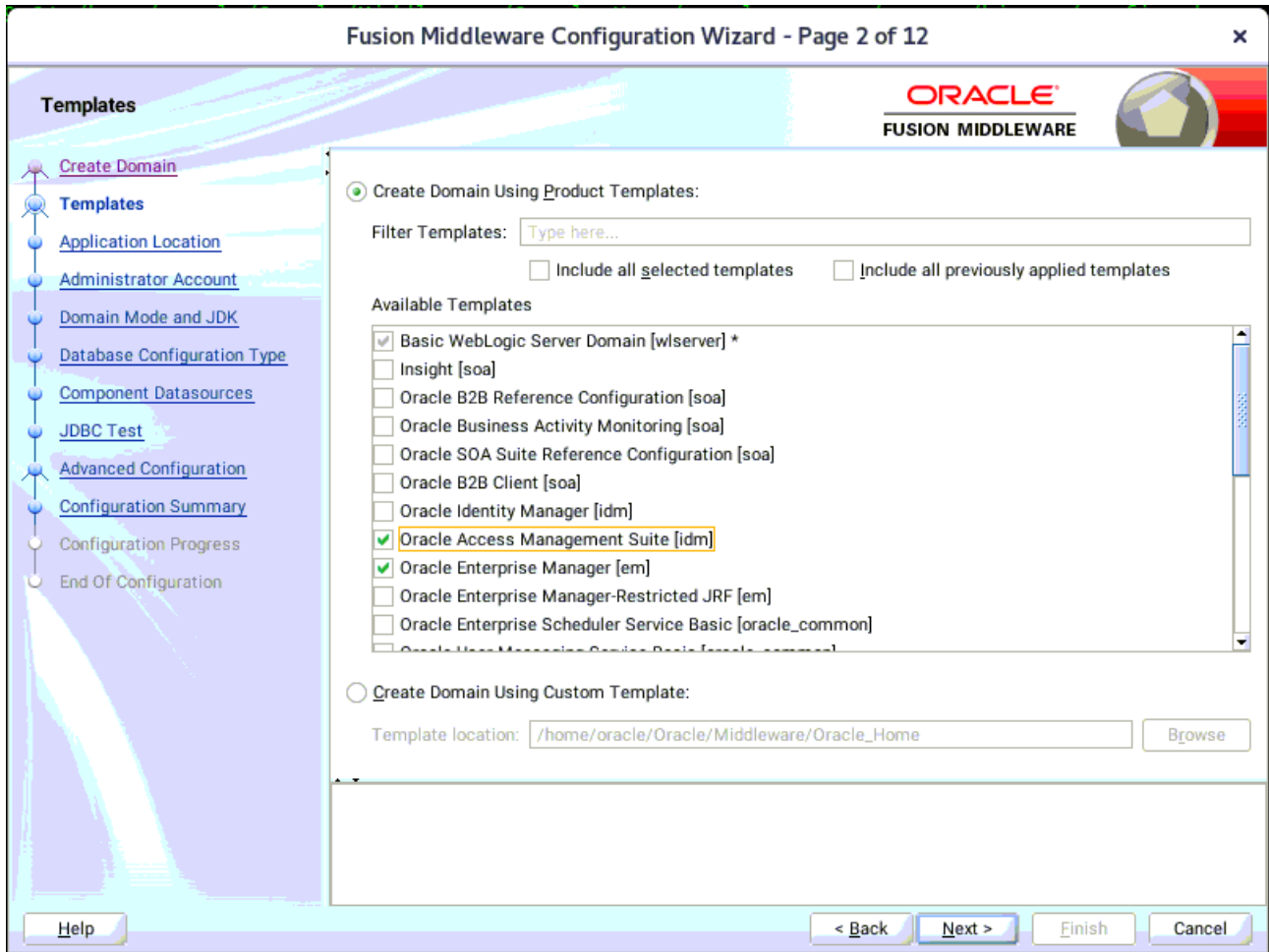
### Follow these steps:

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



Click **Next** to continue.

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



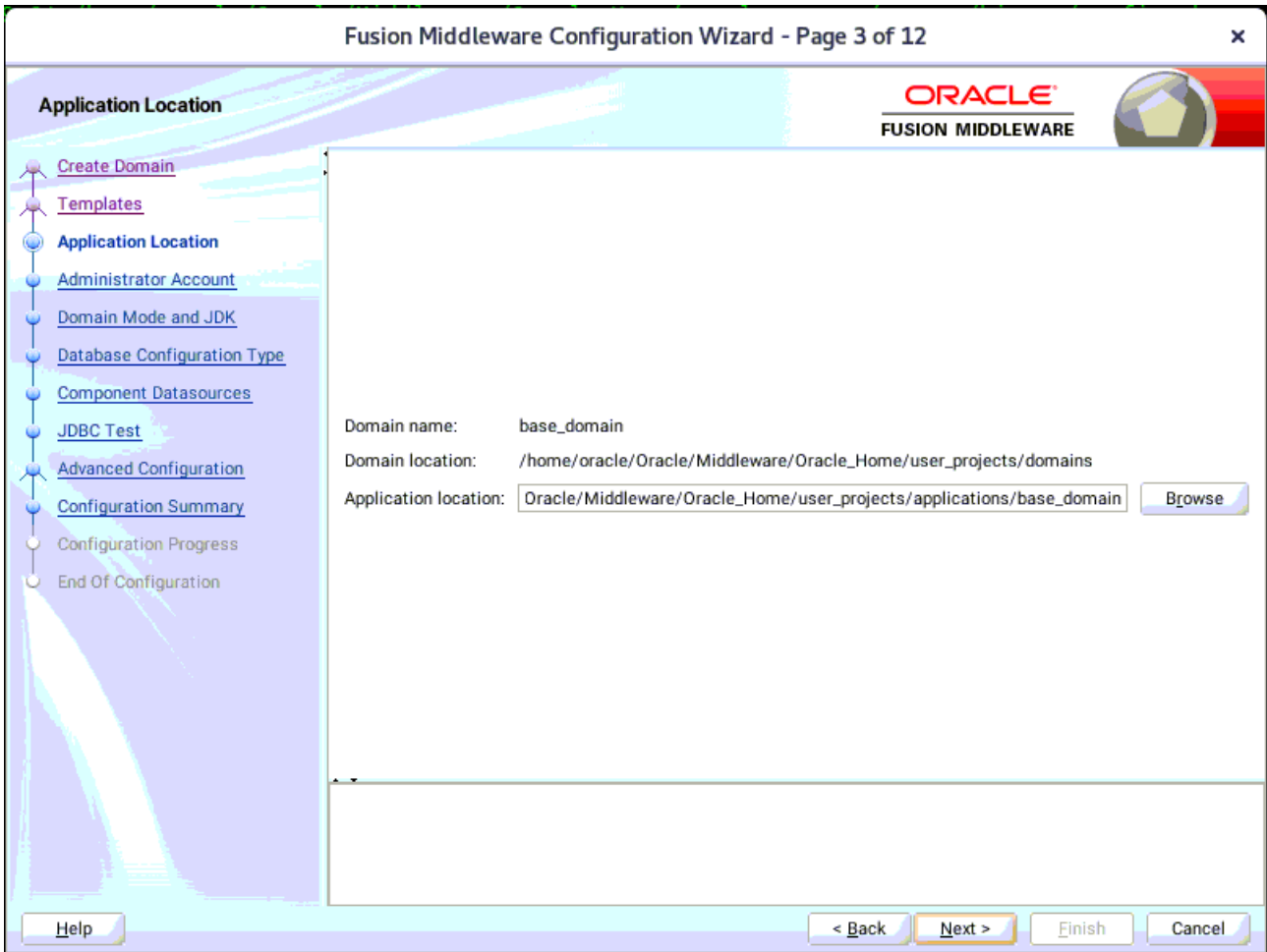
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Access Management Suite [idm]**.

Selecting these templates automatically selects the following as dependencies:

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

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

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



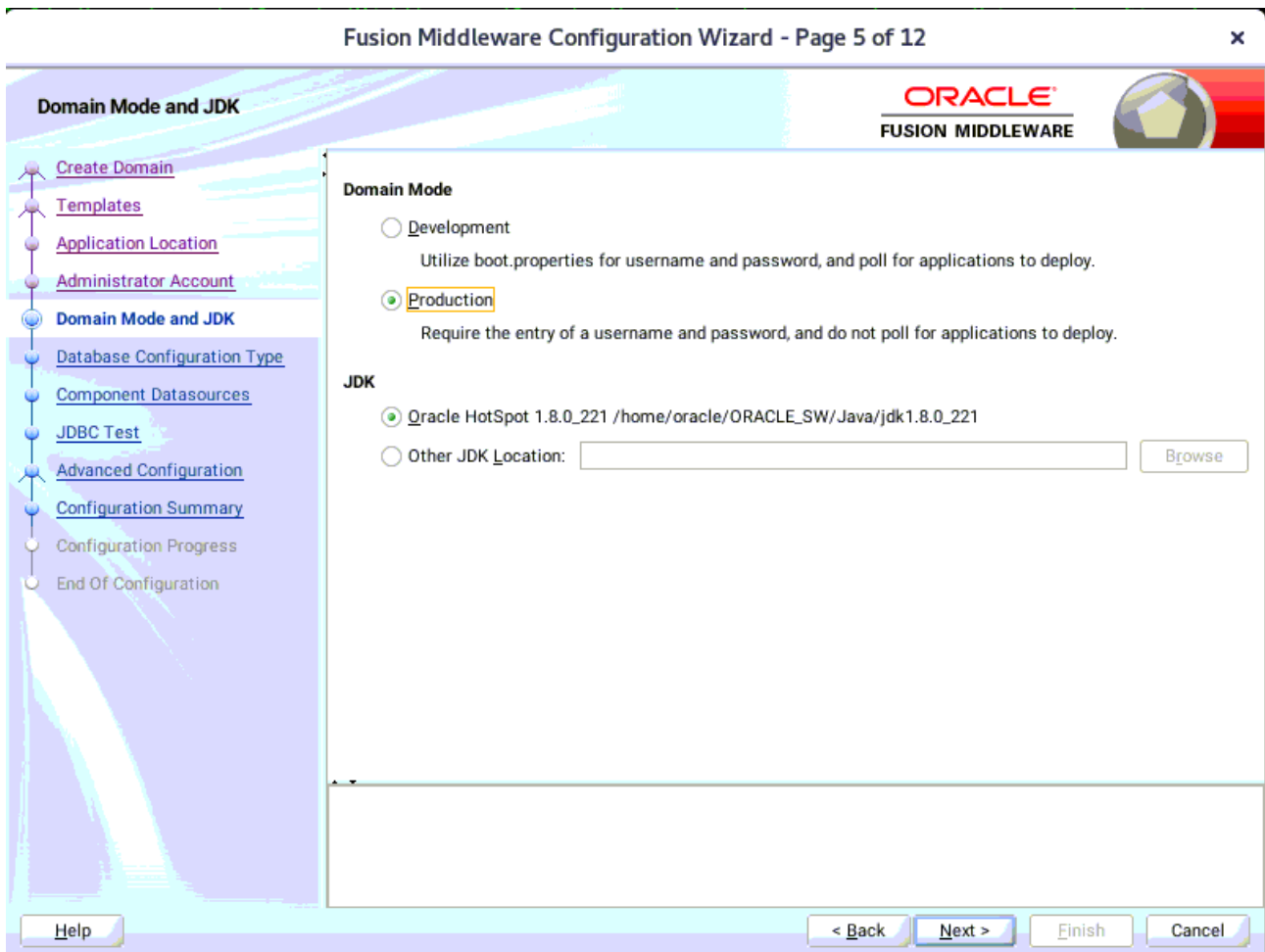
Keep the default value for Application location. Click **Next** to continue.

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

The screenshot shows the 'Administrator Account' configuration screen in the Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 4 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. On the left, a navigation pane lists the following steps: Create Domain, Templates, Application Location, Administrator Account (selected), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters '.....', and 'Confirm Password' with masked characters '.....'. Below these fields is a 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.



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: .....

Get RCU Configuration    Cancel

Connection Result Log

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

Successfully Done.

Click "Next" button to continue.

Help    < Back    Next >    Finish    Cancel

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

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

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

**JDBC Component Schema**

ORACLE  
FUSION MIDDLEWARE

Vendor:  Driver:

Connection Parameters  Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

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

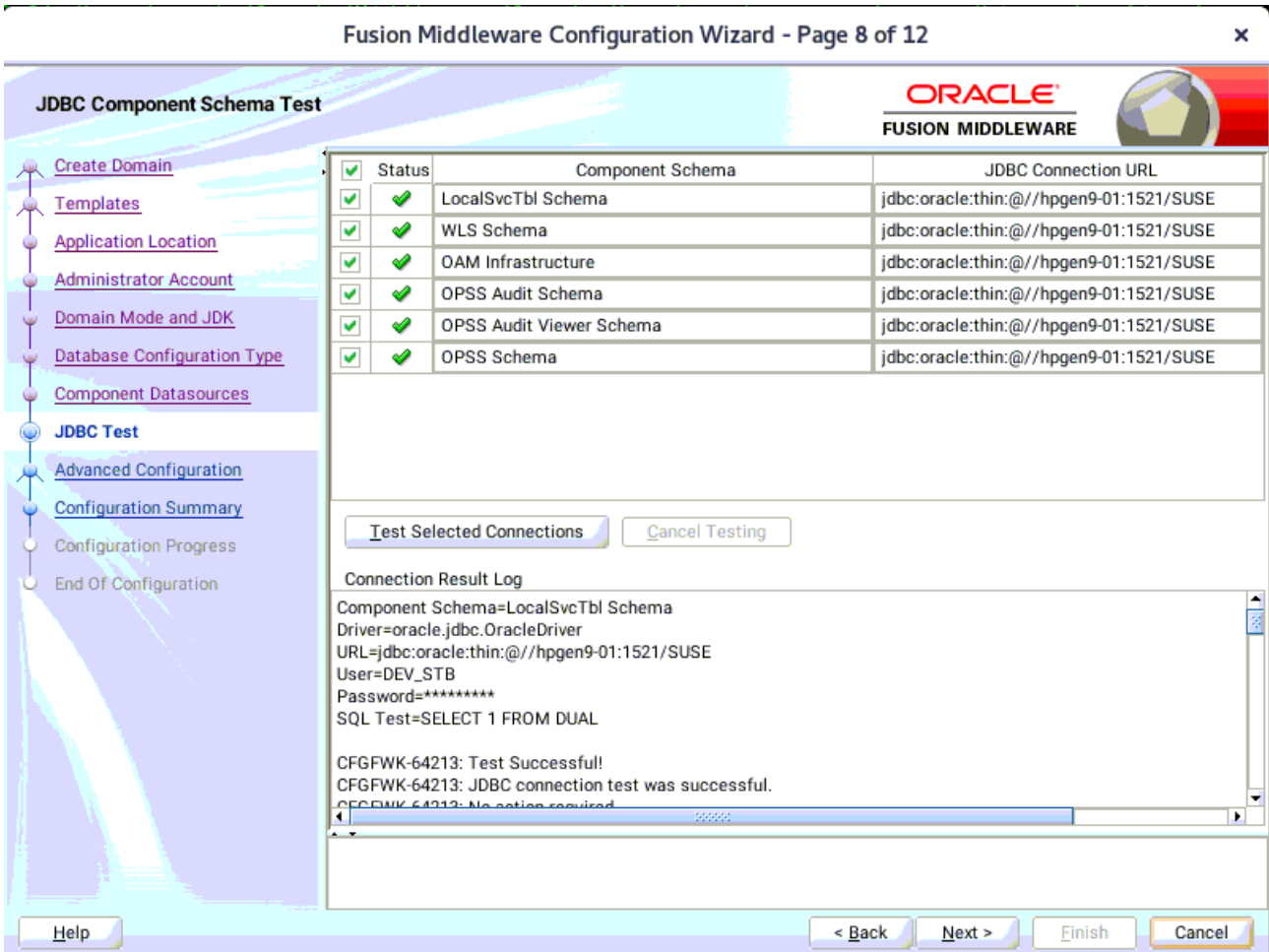
Edits to the data above will affect all checked rows in the table below.

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

Help

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

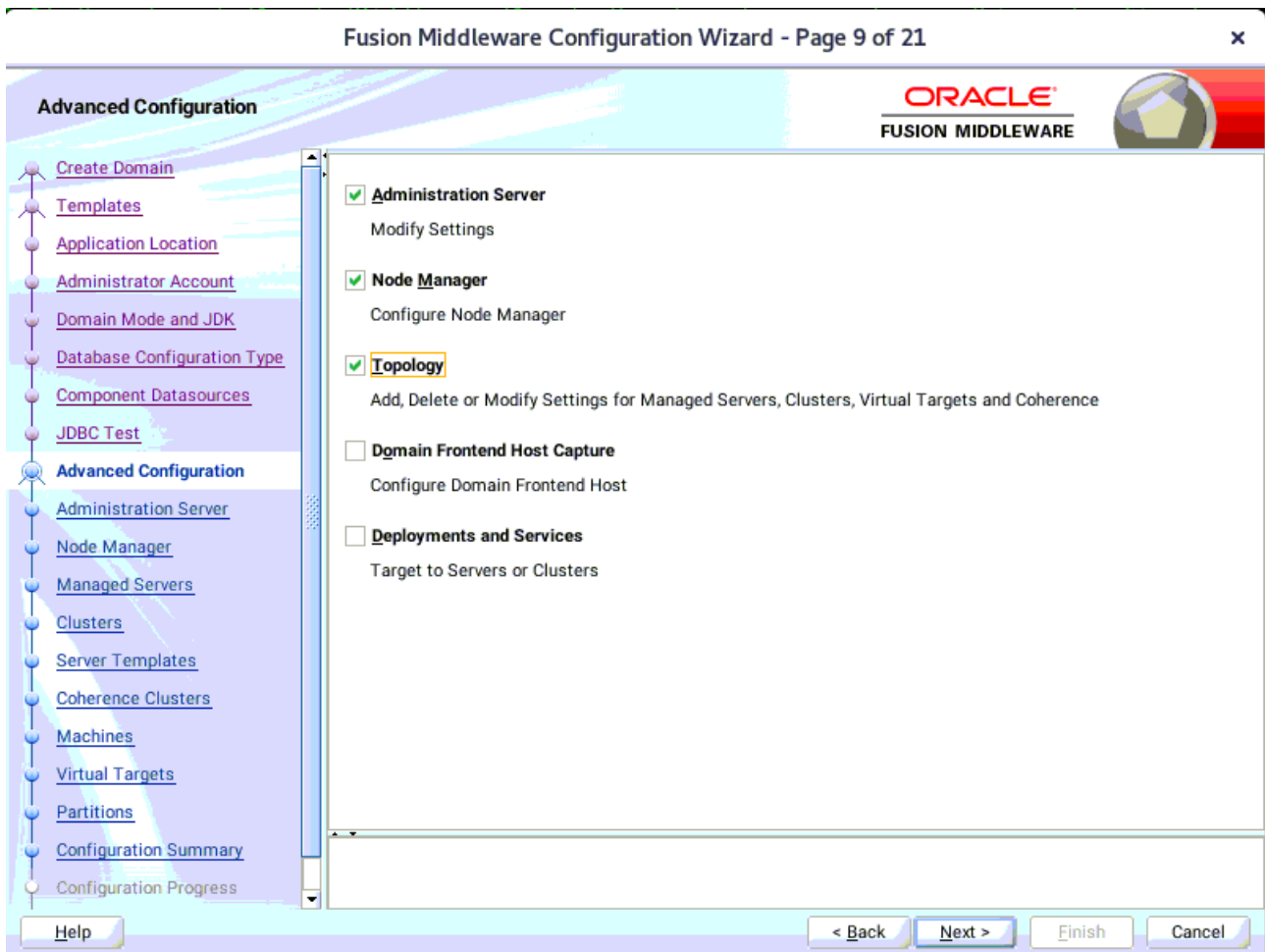
8). The **JDBC Component Schema Test** screen appears.



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



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



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](#)

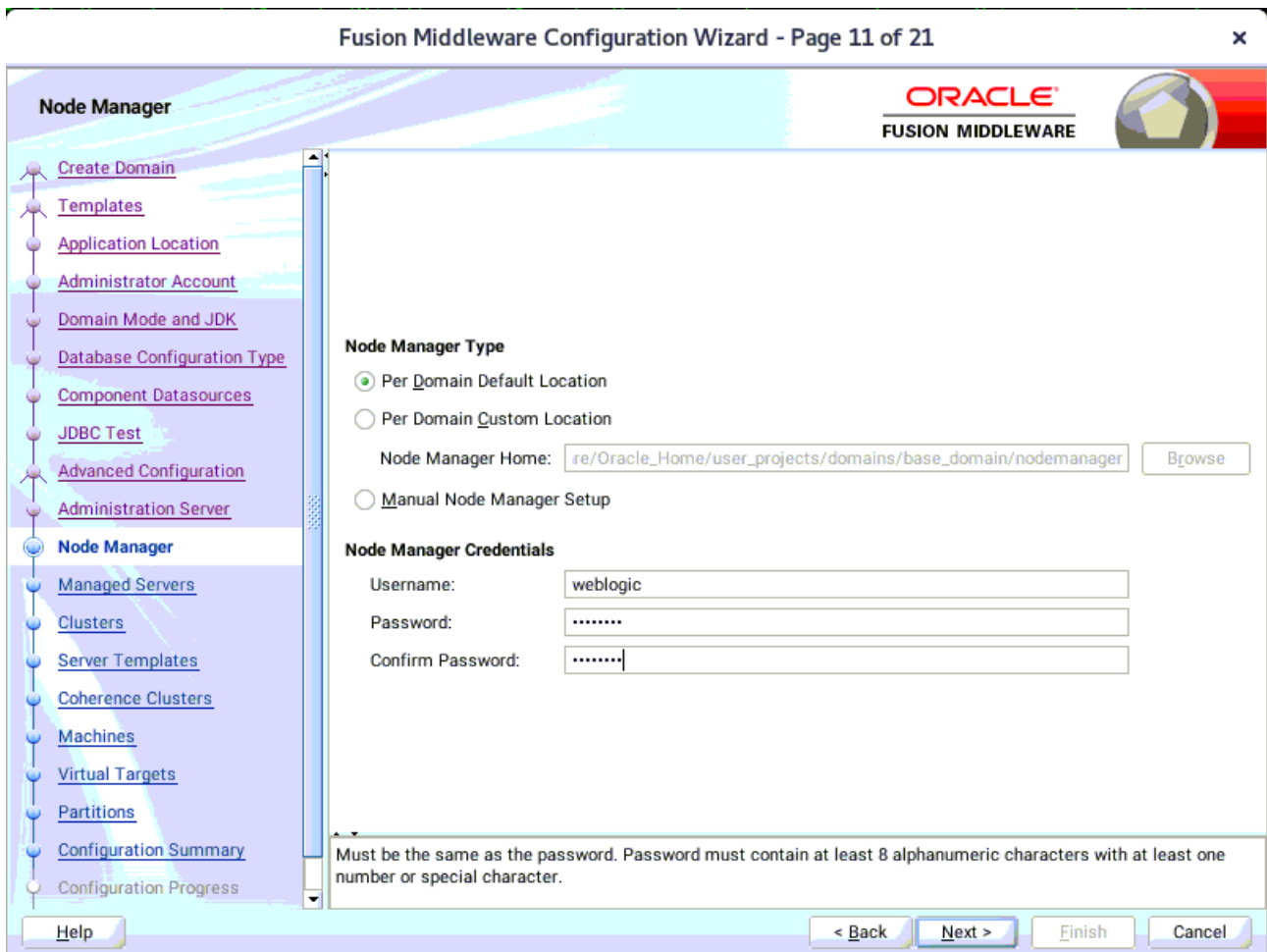
Server Name: AdminServer  
 Listen Address: 147.2.207.96  
 Listen Port: 7001  
 Enable SSL:   
 SSL Listen Port:   
 Server Groups: Unspecified

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

[Help](#)
[< Back](#)
[Next >](#)
[Finish](#)
[Cancel](#)

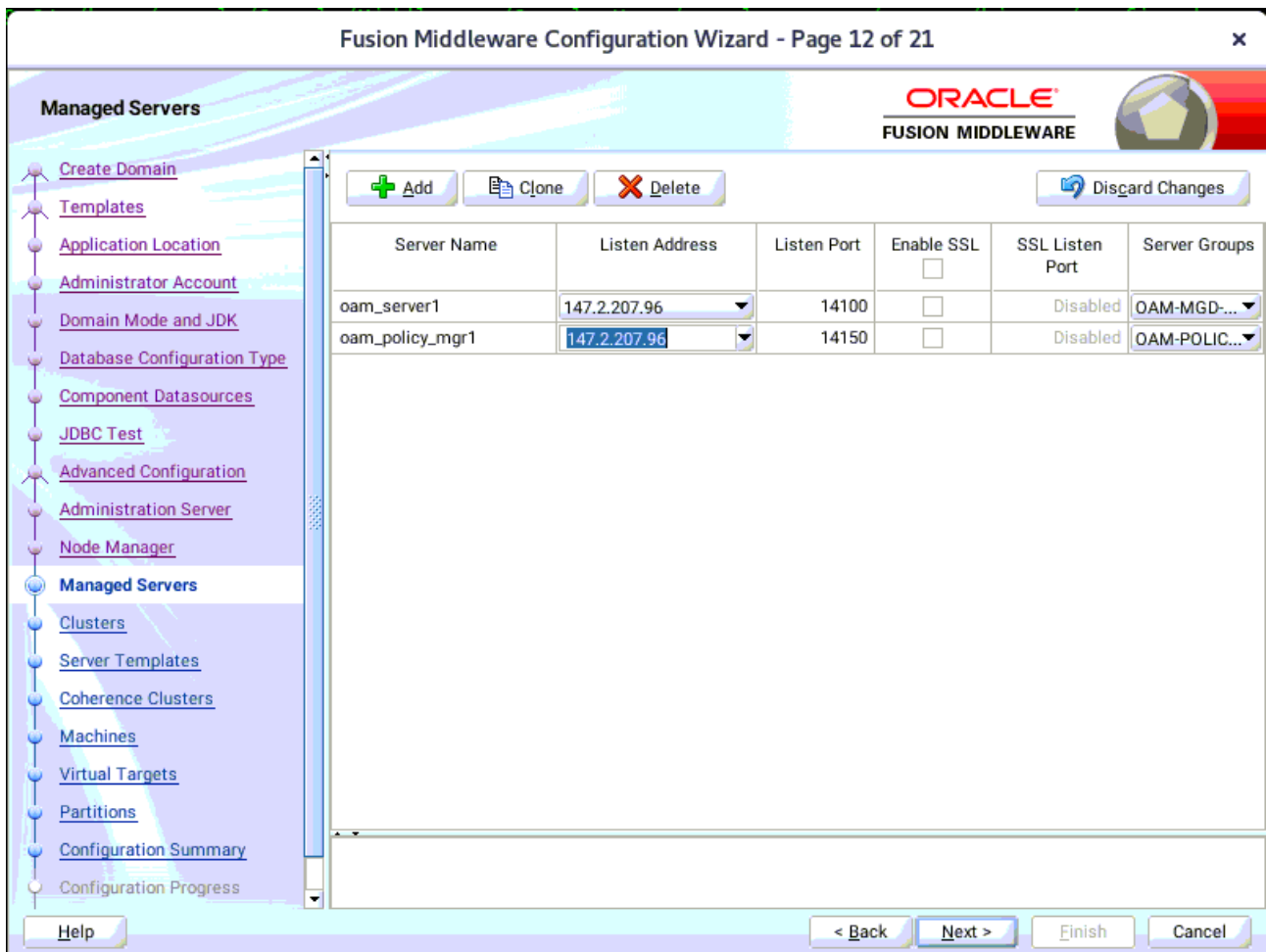
Use the **Administration Server** screen to select the IP address of the host. Select the drop-down list next to **Listen Address** and select the IP address of the host where the Administration Server will reside, or use the system name or DNS name that maps to a single IP address. Click **Next** to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

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



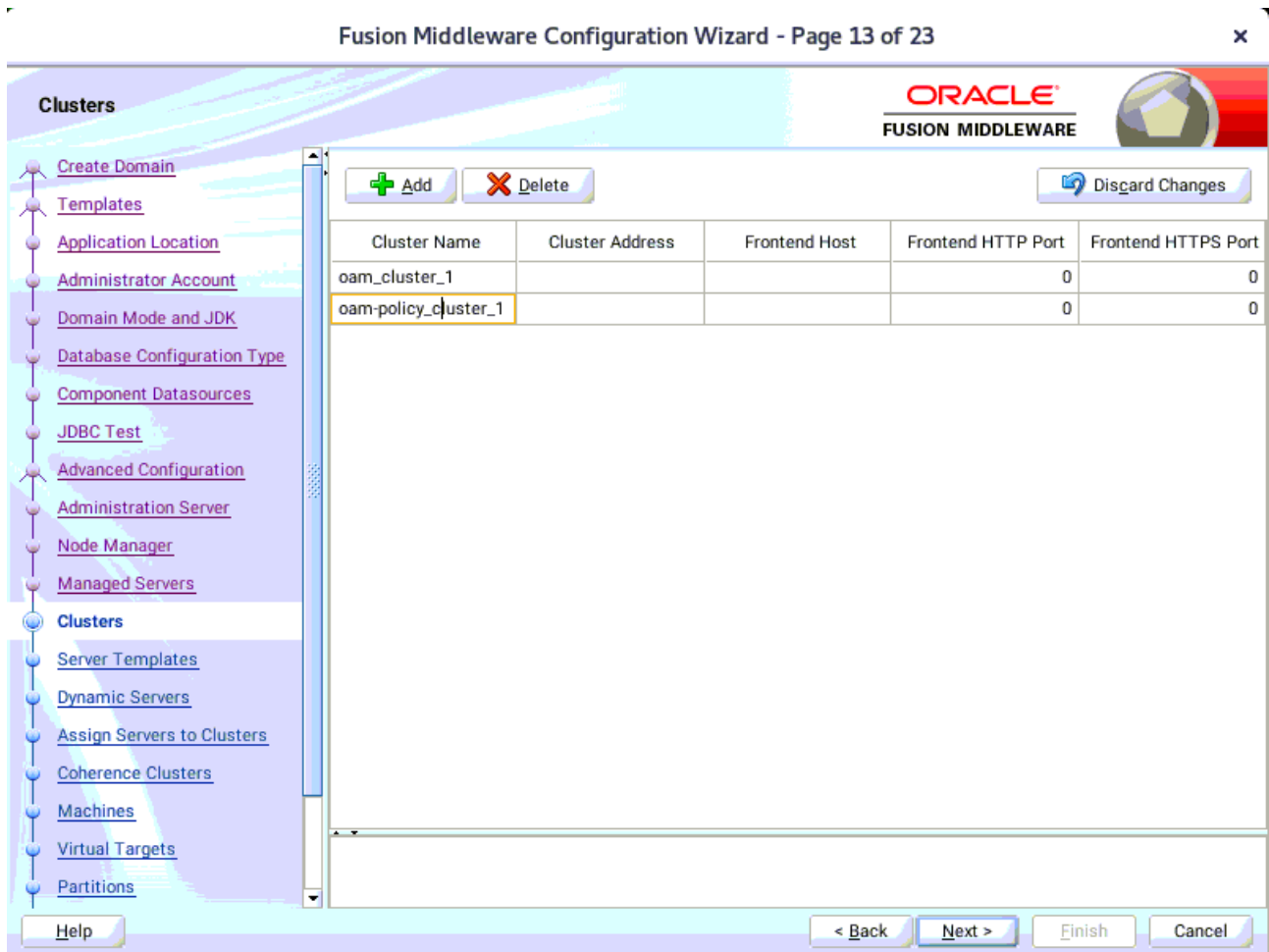
Select **Per Domain Default Location** as the Node Manager type, then specify Node Manager credentials. Click **Next** to continue.

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



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

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



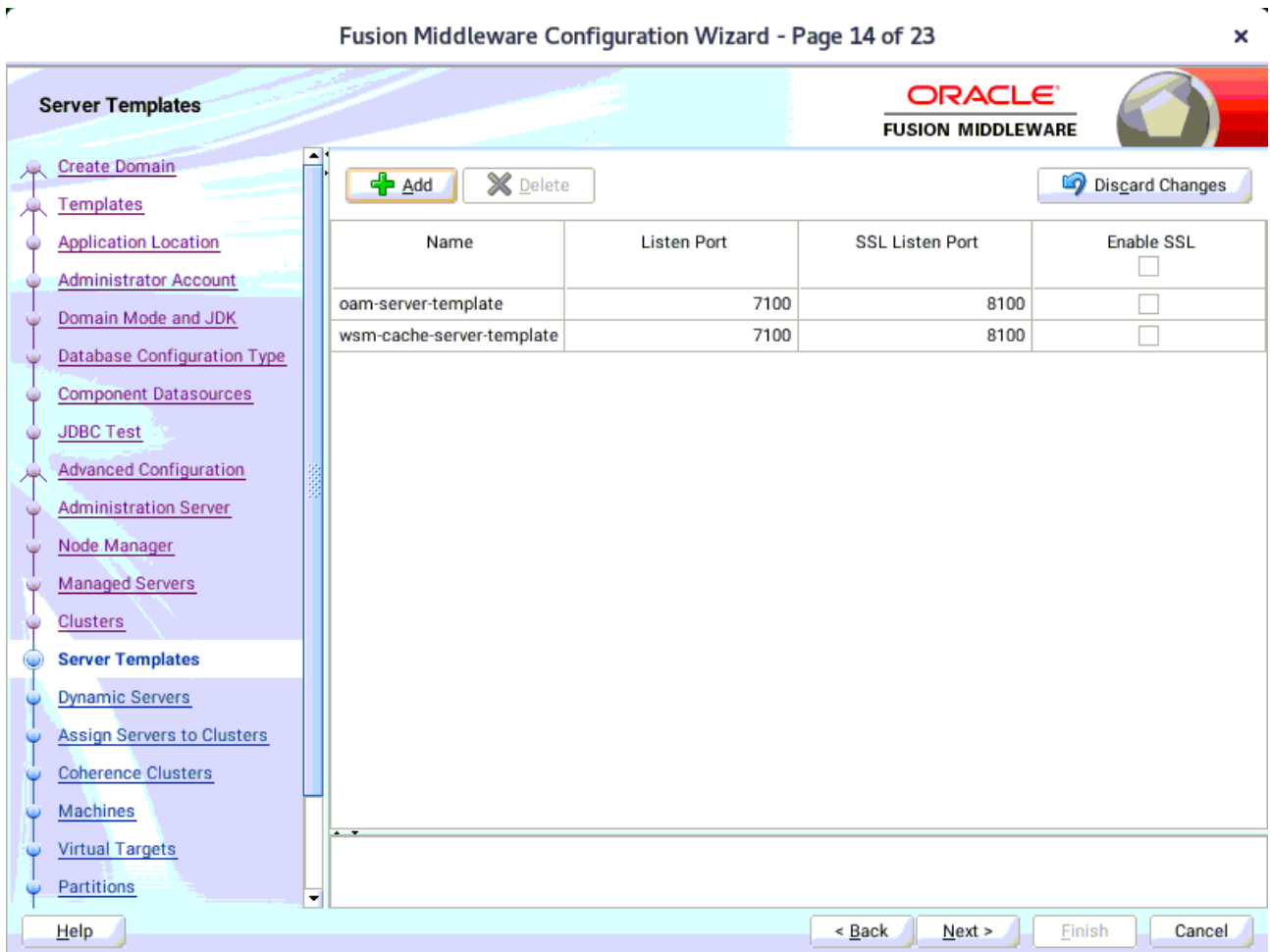
On the Clusters screen:

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

Click **Next** to continue.

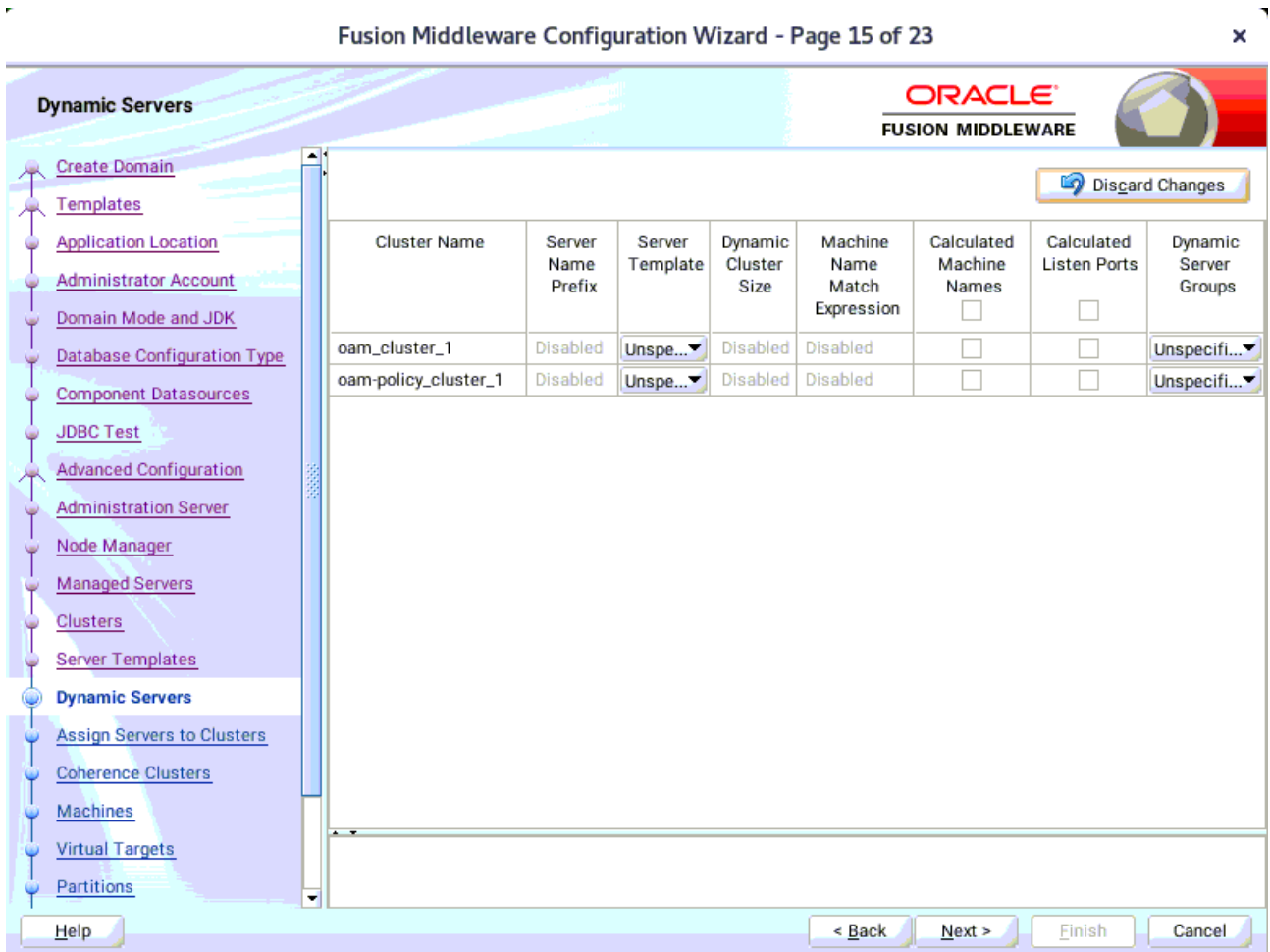
(**Note:** Configuring a non-clustered setup on a single node, skip this screen.)

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



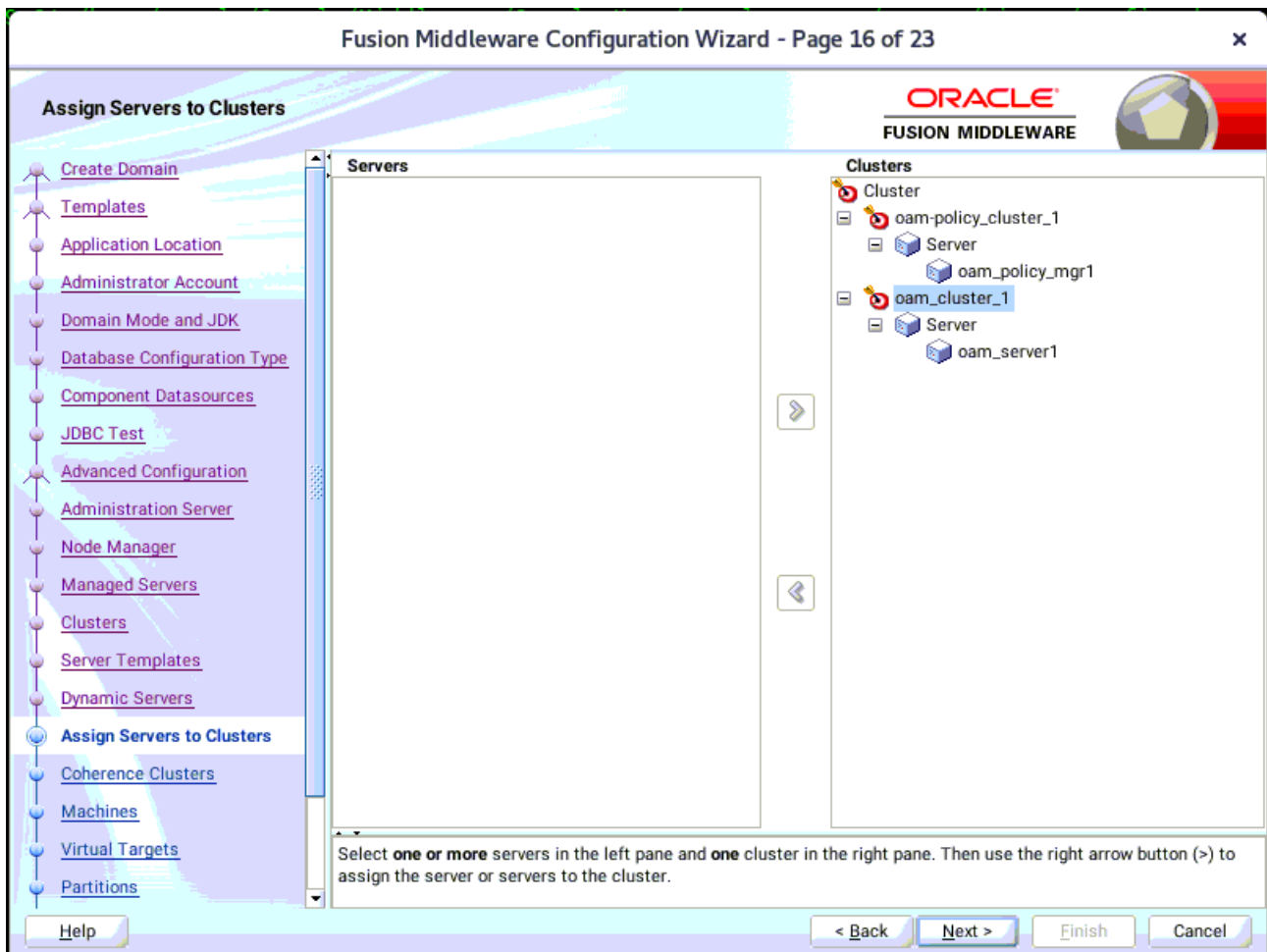
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



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

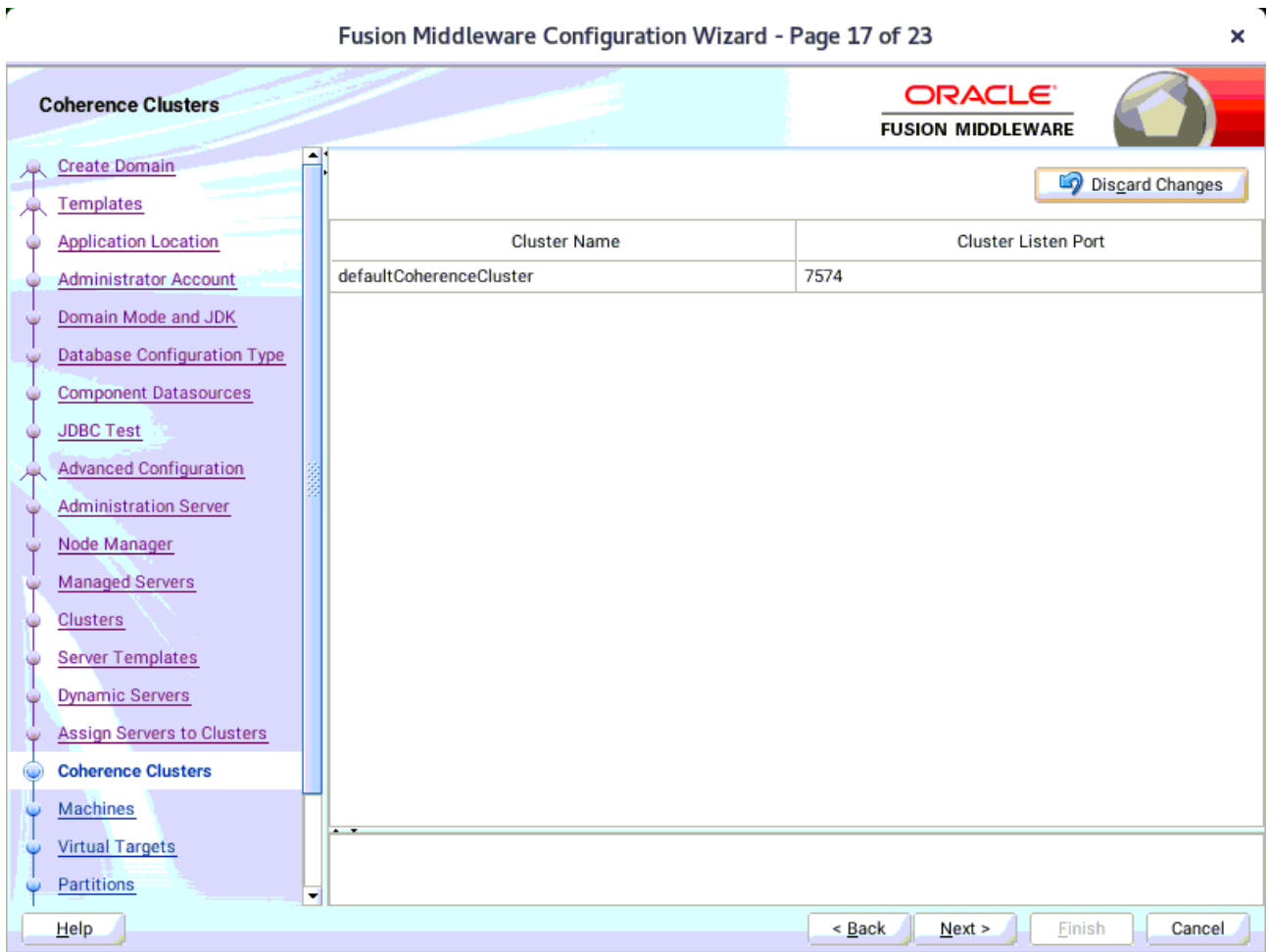
16). The **Assign Servers to Clusters** screen appears.



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



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



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

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

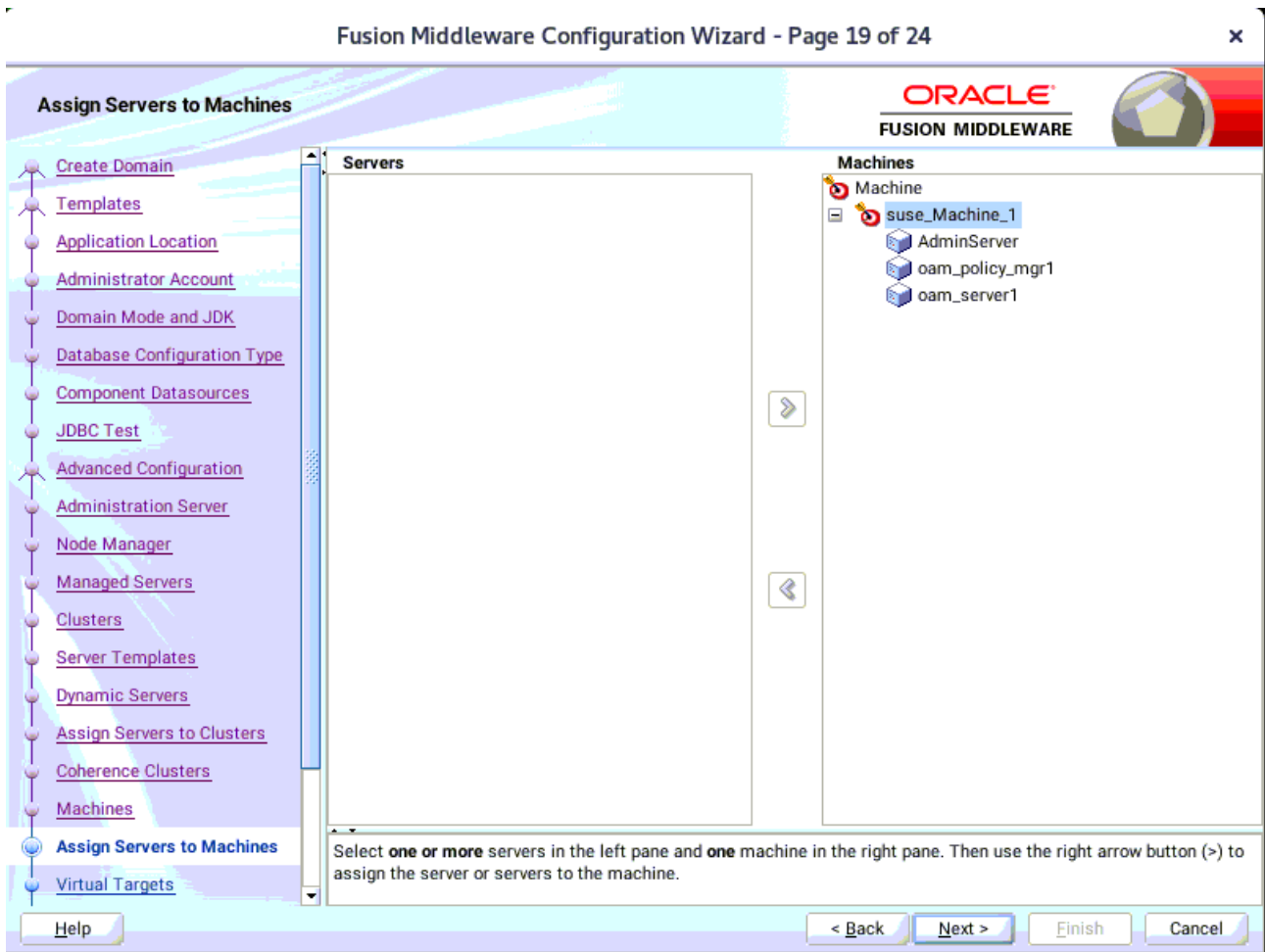
The screenshot shows the 'Machines' screen in the Fusion Middleware Configuration Wizard. The title bar indicates 'Fusion Middleware Configuration Wizard - Page 18 of 24'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right corner. A sidebar on the left contains a list of configuration steps, with 'Machines' selected. The main area shows a 'Machine' tab with a 'Unix Machine' sub-tab. There are '+ Add' and 'X Delete' buttons, and a 'Discard Changes' button. A table lists the machines:

Name	Node Manager Listen Address	Node Manager Listen Port
suse_Machine_1	localhost	5556

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

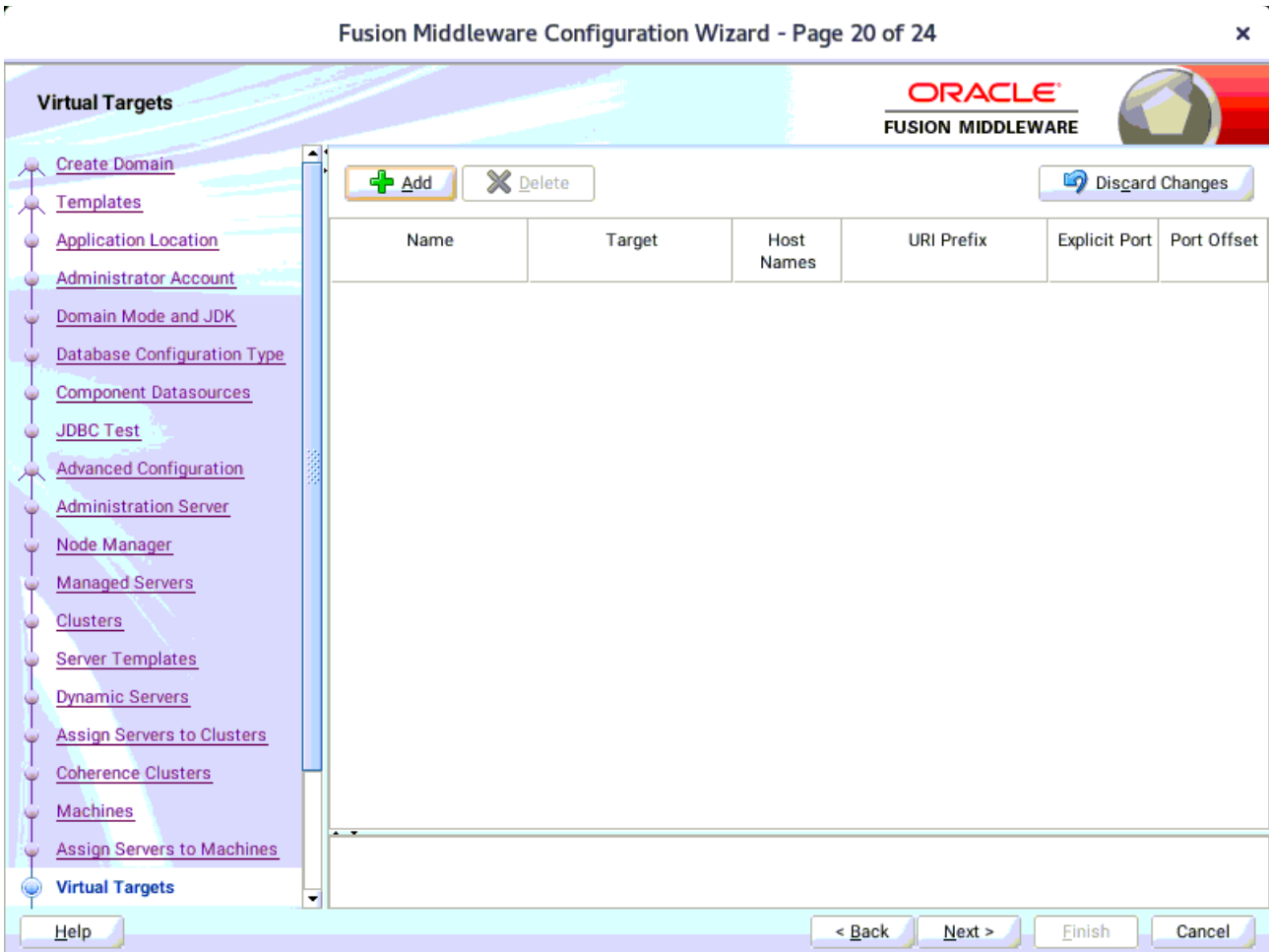
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



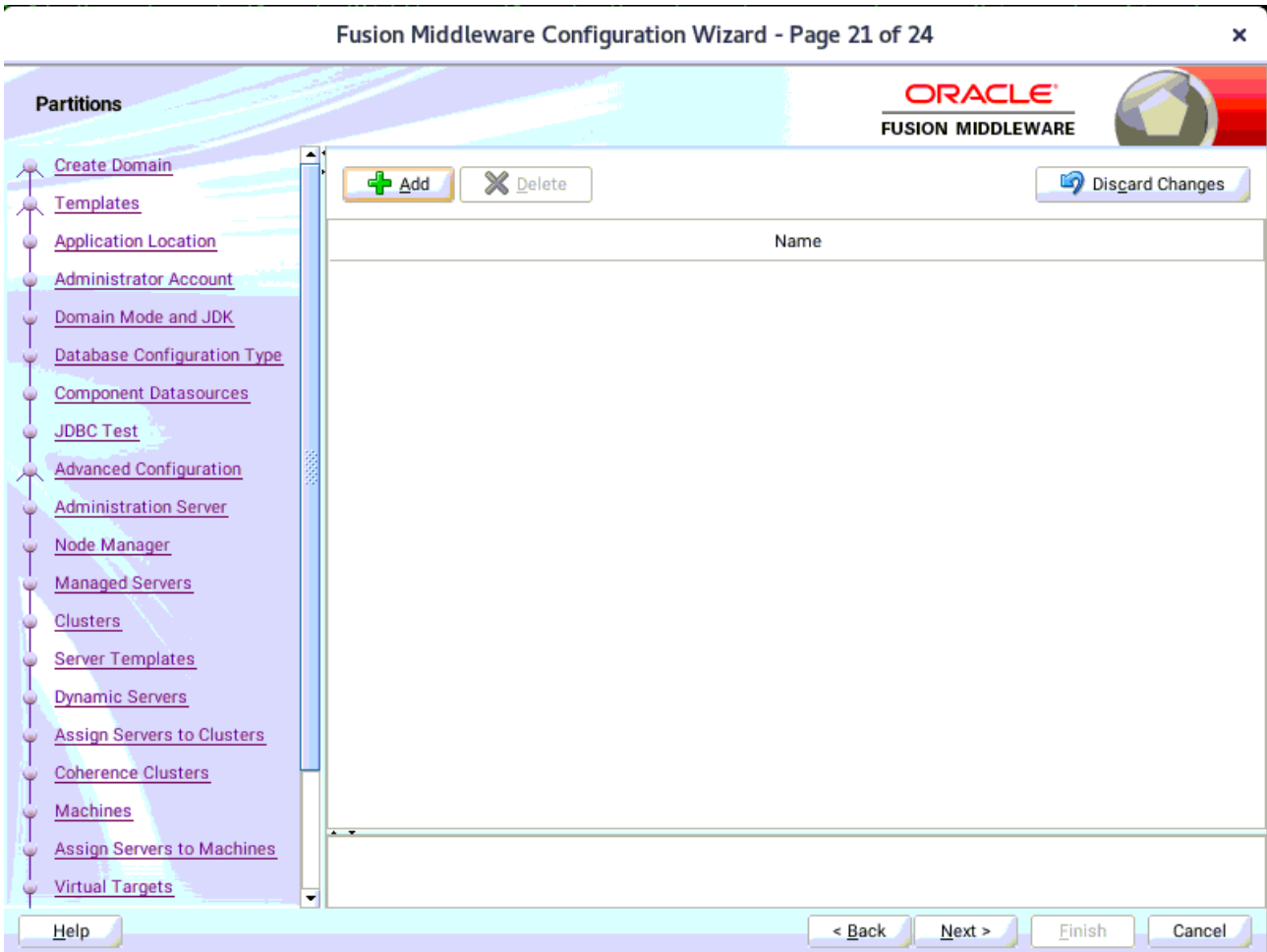
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



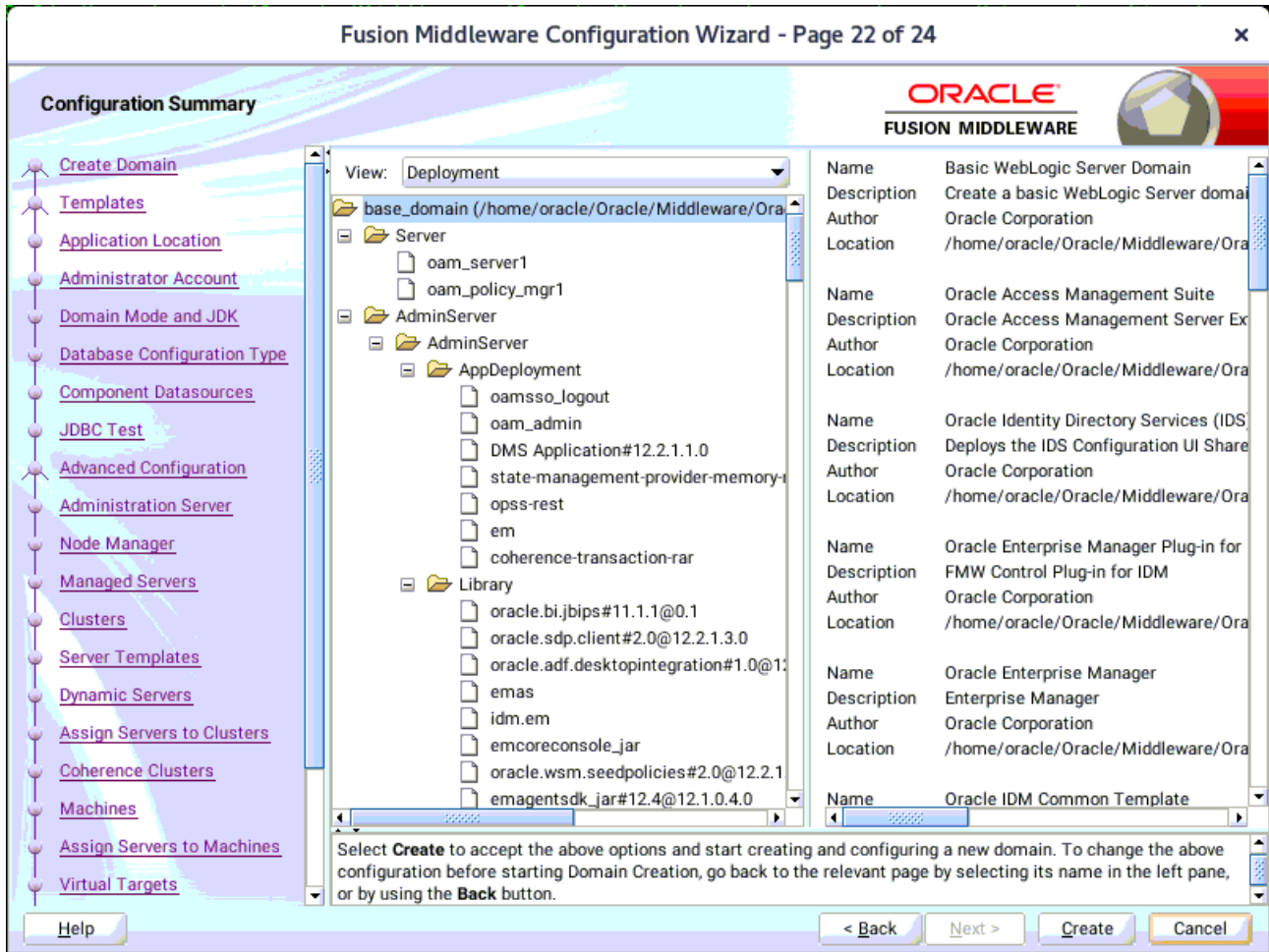
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



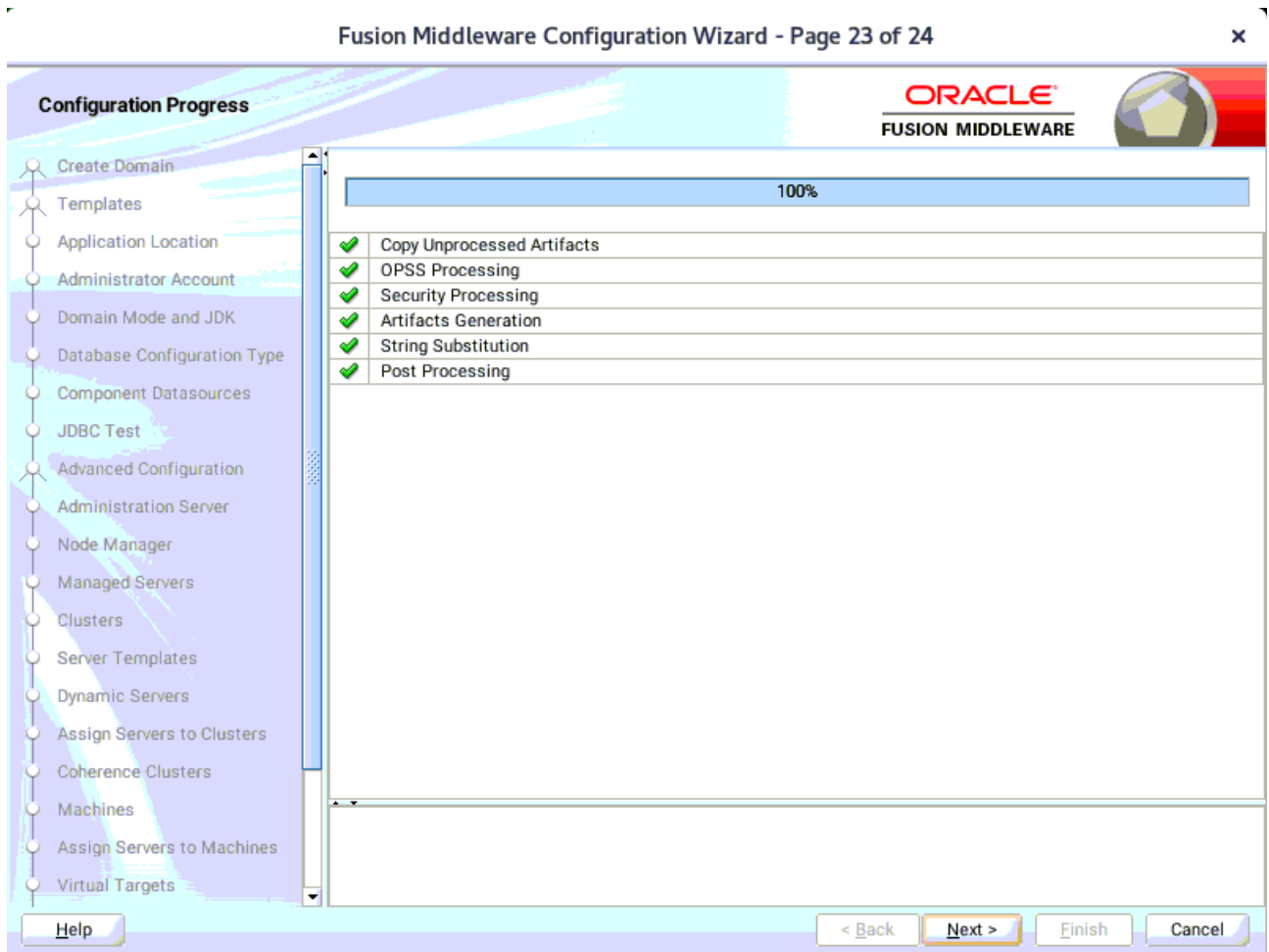
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



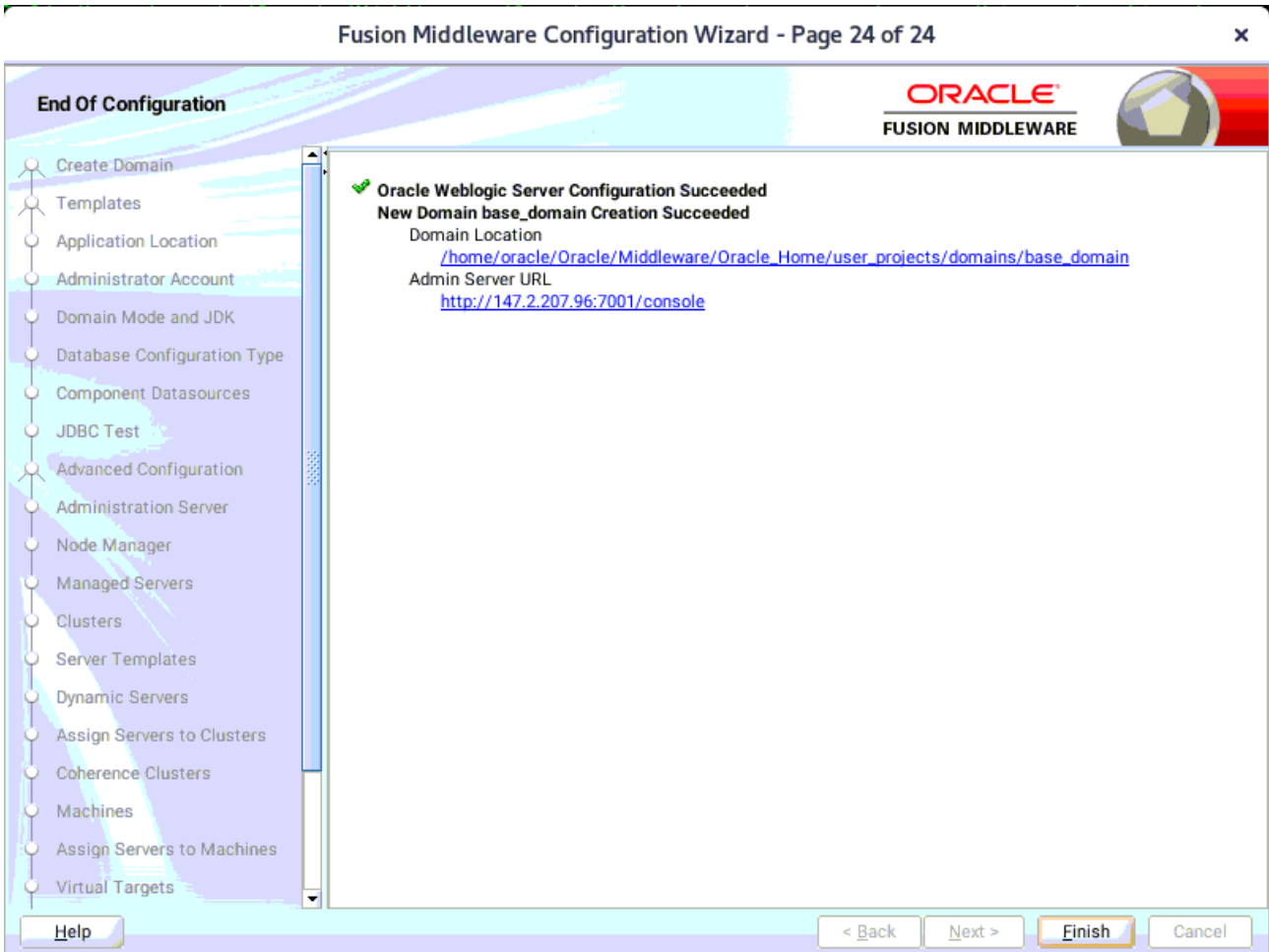
Select **Create** to accept the above options and start creating and configuring a new domain.

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/Oracle/Middleware/Oracle... x oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle... x
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 15019
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_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/
server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/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_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -
Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/
Middleware/Oracle_Home/wlserver/./ -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_
projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/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_221 weblogic.NodeManager -v
<Jan 19, 2020 6:34:28 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jan 19, 2020 6:34:29 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jan 19, 2020 6:34:29 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'>
<Jan 19, 2020 6:34:29 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/use
r_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jan 19, 2020 6:34:29 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type
=kss, PassPhraseUsed=true>
Jan 19, 2020 6:34:29 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/
jps-config-jse.xml
Jan 19, 2020 6:34:30 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext

```

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:/home/oracle/Or... x oracle@hpgen9-01:/home/oracle/Or... x oracle@hpgen9-01:/home/oracle/Or... x
<Jan 19, 2020 6:41:28,676 PM GMT+08:00> <Warning> <org.glassfish.jersey.internal.Errors> <BEA-000000> <The following warnings have been detected: WARNING: A HTTP GET method, public java.lang.Object oracle.security.am.common.rest.agent.registration.AgentRegistrationService.getService(java.lang.String,java.lang.String), should not consume any entity.>
>
<Jan 19, 2020 6:41:31,563 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FACES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
2020-01-19 18:41:31.914/243.029 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coherence-cache-config.xml"
2020-01-19 18:41:31.942/243.057 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[STANDBY] ExecuteThread: '3' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleConfigurableCacheFactory
<Jan 19, 2020 6:41:31,965 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully established a connection with the Domain level Diagnostic Service.>
<Jan 19, 2020 6:41:33,759 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jan 19, 2020 6:41:33,902 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Jan 19, 2020 6:41:33,902 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers: Resolving connection list DomainRuntimeServiceMBean>
<Jan 19, 2020 6:41:34,604 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Administration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jan 19, 2020 6:41:34,605 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.>
<Jan 19, 2020 6:41:34,605 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.>
<Jan 19, 2020 6:41:34,607 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Jan 19, 2020 6:41:34,649 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
2020-01-19 18:41:35.683/246.798 Oracle Coherence GE 12.2.1.4.0 <Info> (thread=[ACTIVE] ExecuteThread: '50' for queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Configured versioned, multi-cluster Management over ReST

```

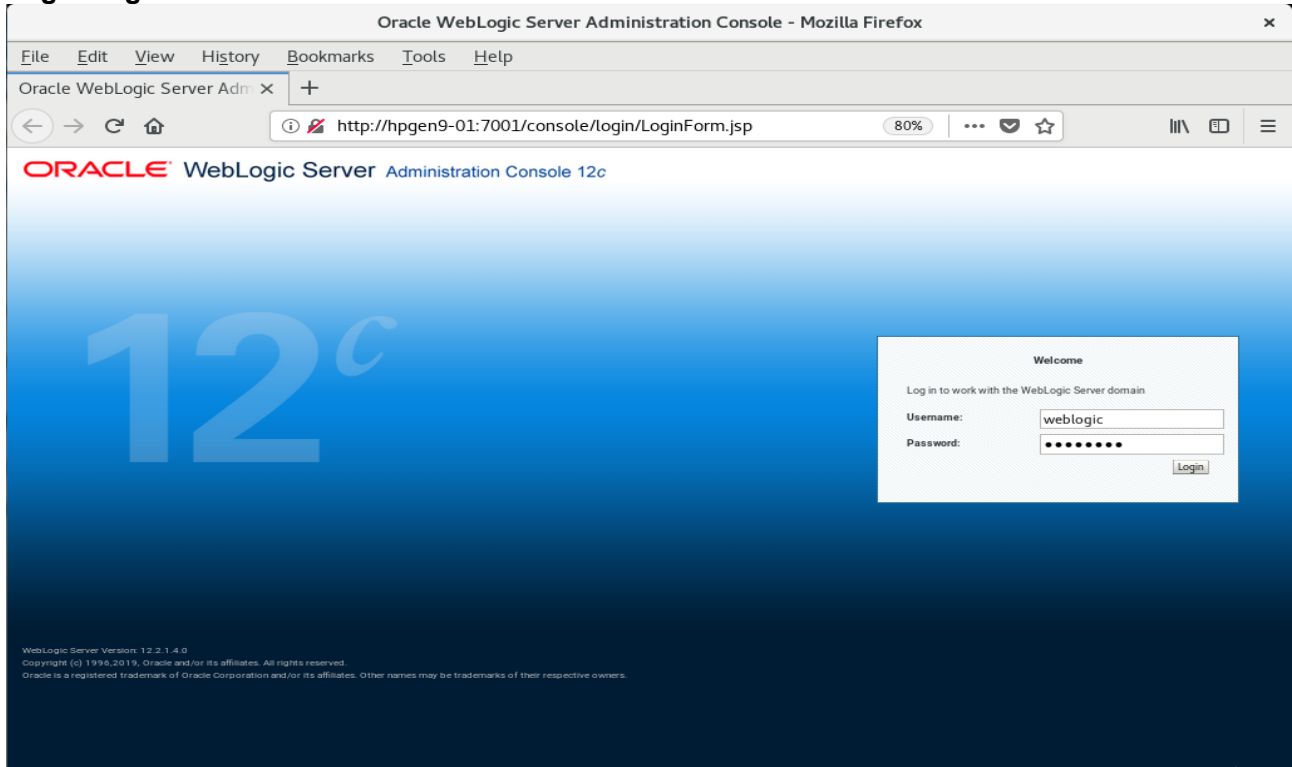
You know that the administrator server is running when you see the following output:

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

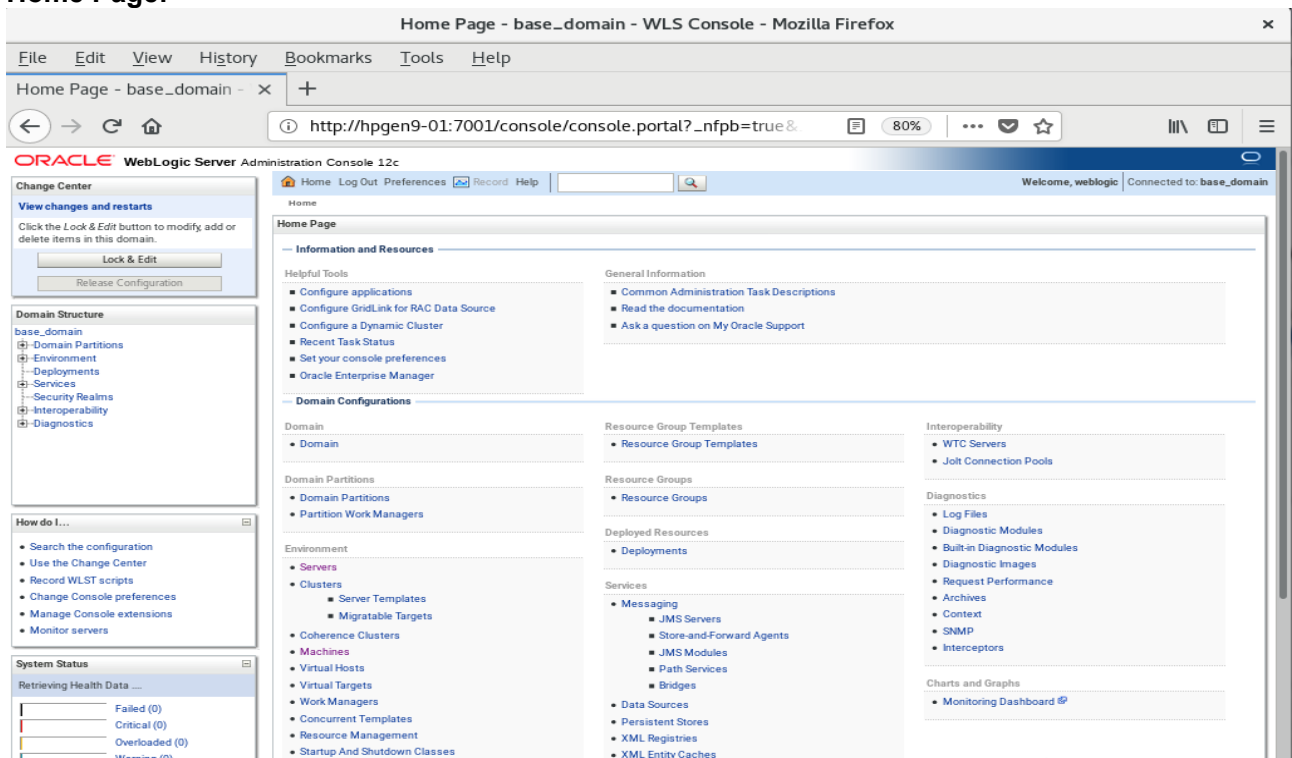
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

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

##### Login Page:



##### Home Page:



Viewing the summary of servers:

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

Summary of Servers

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

Customize this table

Servers (Filtered - More Columns Exist)

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

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		suse_Machine_1	RUNNING	OK	7001
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

System Status: Health of Running Servers as of 6:45 PM. Failed (0), Critical (0), Overloaded (0), Warning (0), OK (1).

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\_Machine\_1

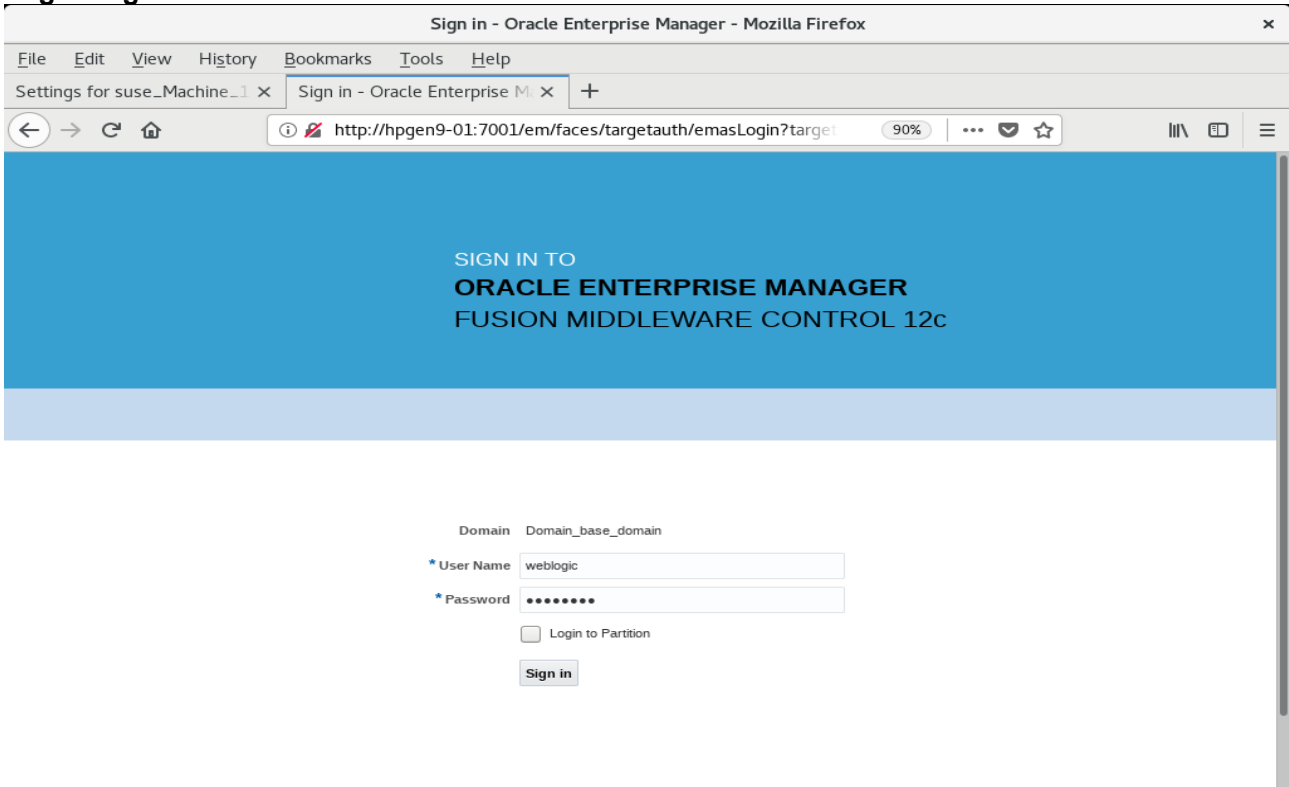
Node Manager Status: Reachable. Current status of this Node Manager. More Info...

Version: 12.2.1.4.0. Version string returned from the Node Manager. More Info...

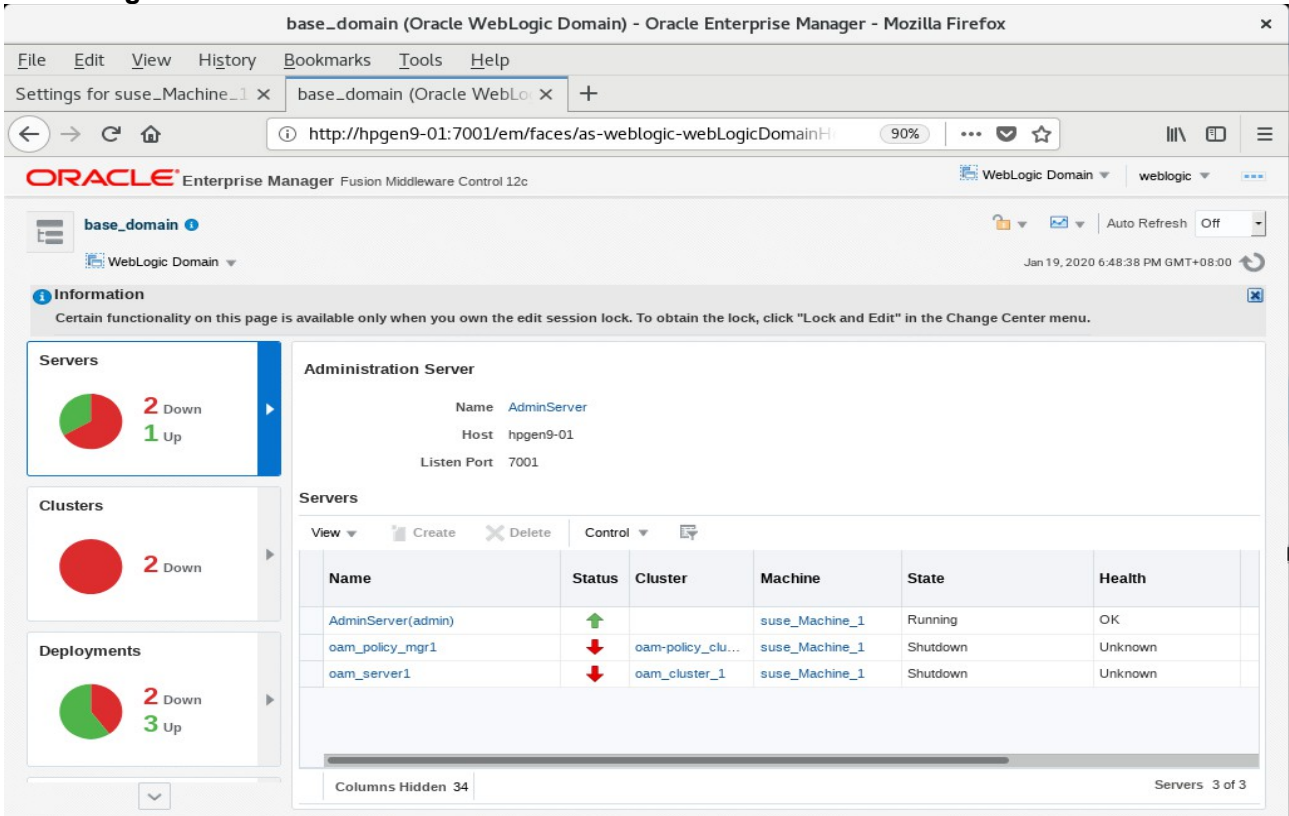
System Status: Health of Running Servers as of 6:46 PM. Failed (0), Critical (0), Overloaded (0), Warning (0), OK (1).

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\_Machine\_1 x base\_domain (Oracle WebLo x +

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

ORACLE Enterprise Manager Fusion Middleware Control 12c WebLogic Domain weblogic

base\_domain WebLogic Domain Jan 19, 2020 6:58:08 PM GMT+08:00

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

Servers  
1 Down  
2 Up

Administration Server  
Name AdminServer  
Host hpgen9-01  
Listen Port 7001

Servers  
View Create Delete Control

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_Machine_1	Running	OK
oam_policy_mgr1	↓	oam-policy_clu...	suse_Machine_1	Shutdown	Unknown
oam_server1	↑	oam_cluster_1	suse_Machine_1	Running	OK

Columns Hidden 34 Servers 3 of 3

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

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

Settings for suse\_Machine\_1 x base\_domain (Oracle WebLo x +

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

ORACLE Enterprise Manager Fusion Middleware Control 12c WebLogic Domain weblogic

base\_domain WebLogic Domain Jan 19, 2020 7:06:22 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  
View Create Delete Control

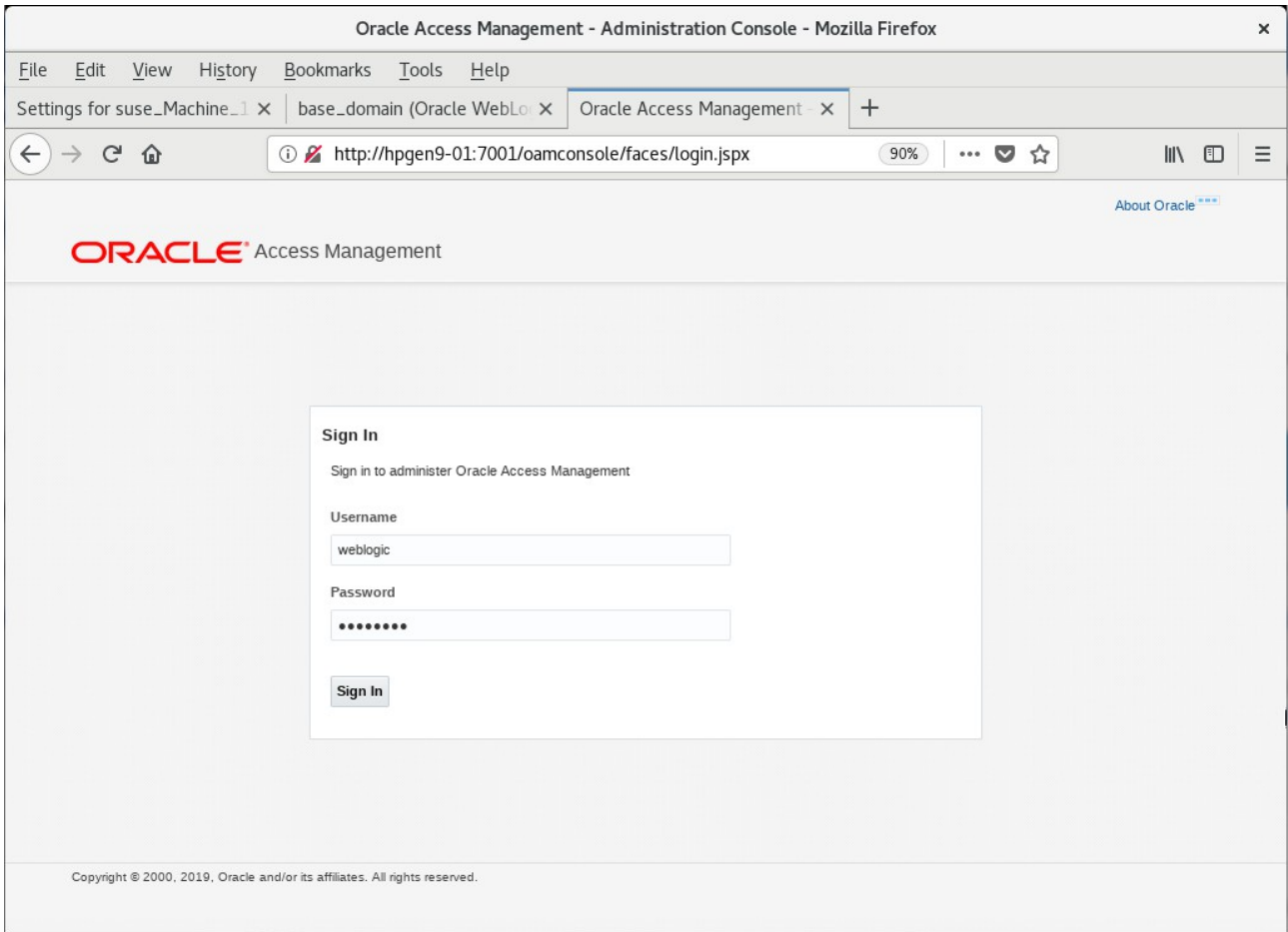
Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑		suse_Machine_1	Running	OK
oam_policy_mgr1	↑	oam-policy_clu...	suse_Machine_1	Running	OK
oam_server1	↑	oam_cluster_1	suse_Machine_1	Running	OK

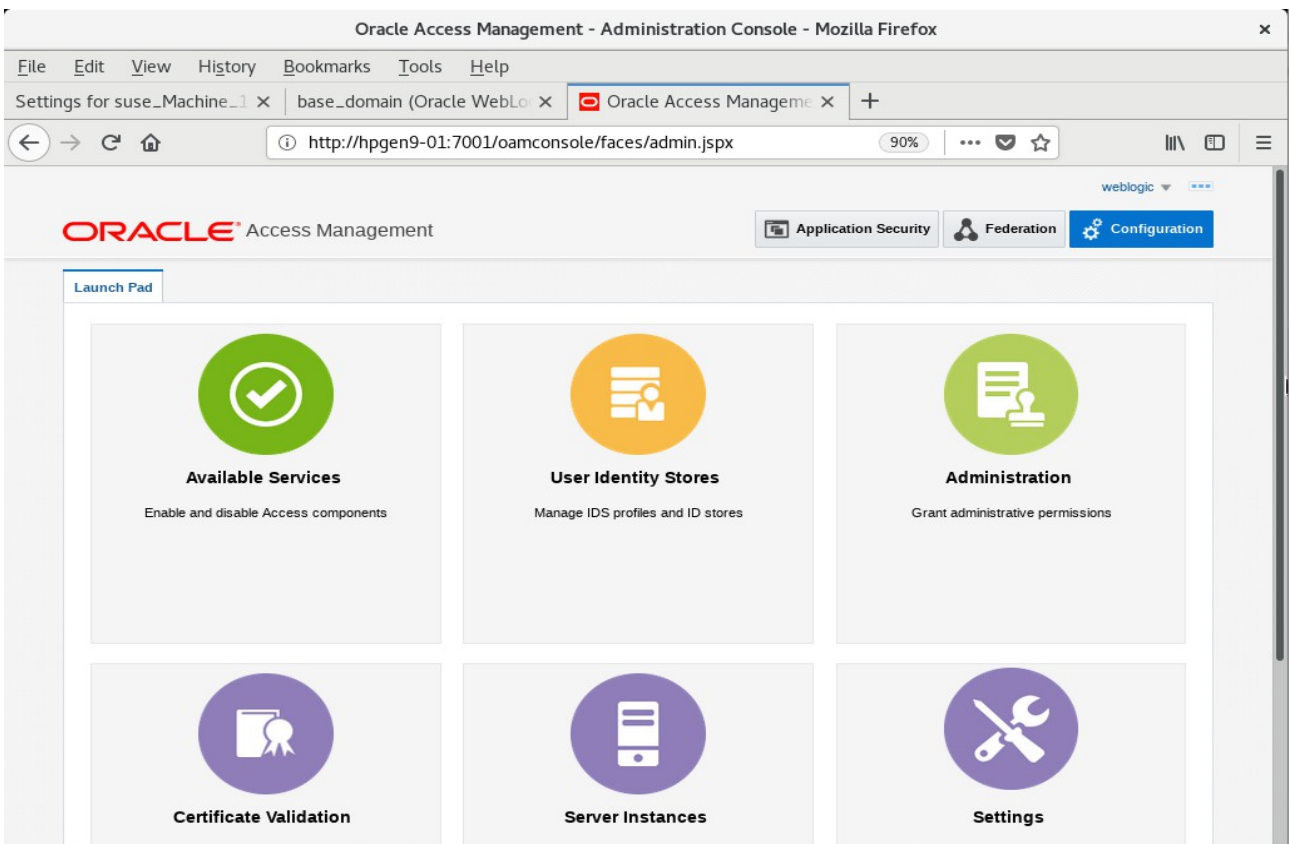
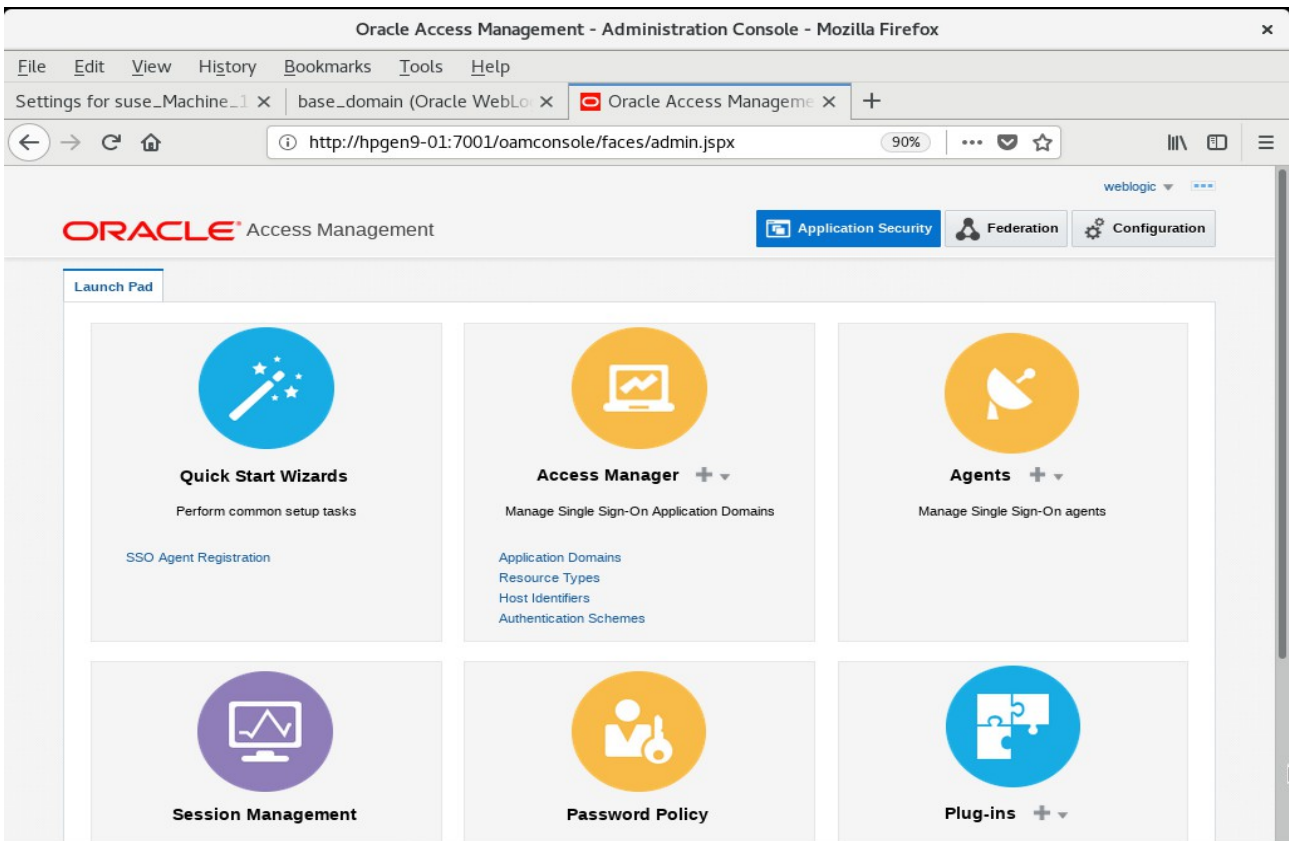
Columns Hidden 34 Servers 3 of 3

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.

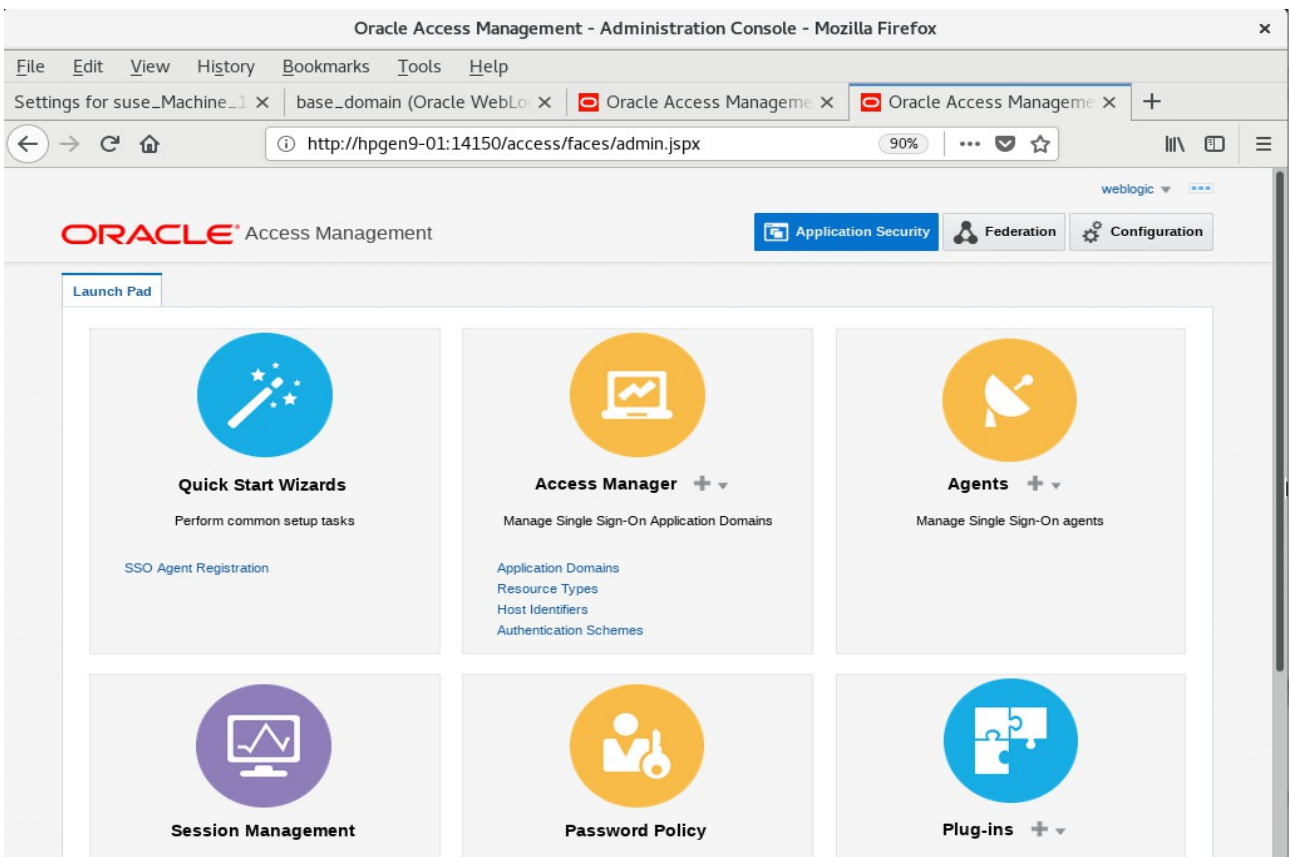
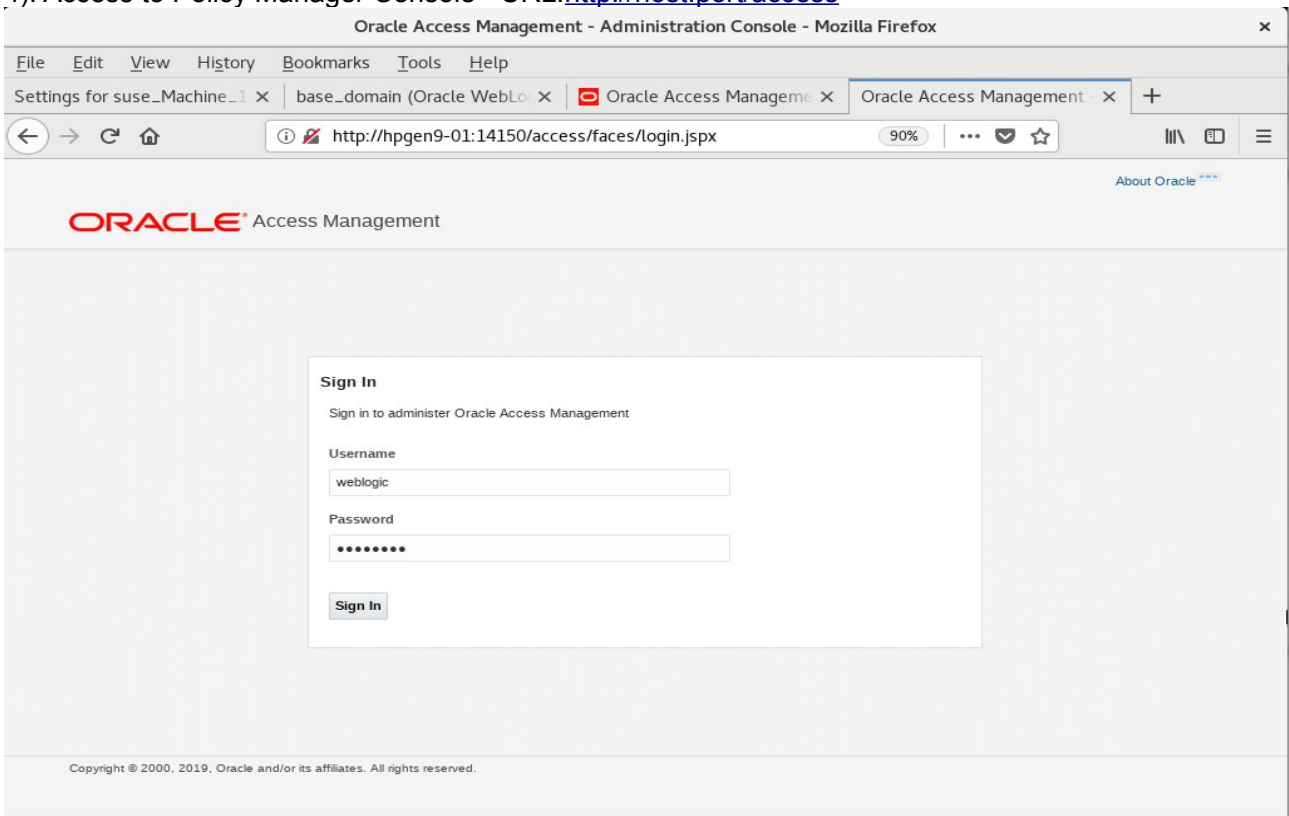
3). Access to Oracle Access Management Console - URL:<http://host:port/oamconsole>







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 12cPS4 software

### 1-1. Prerequisites:

Installation of Oracle Identity and Access Management requires:

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

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

```
SQL> conn /as sysdba
Connected.
SQL> @/home/oracle/app/product/12.2.0/dbhome_1/javavm/install/initxa.sql

PL/SQL procedure successfully completed.

JVMRMACTION
-----
FULL_REMOVAL

PL/SQL procedure successfully completed.

Package created.

Package body created.

Synonym created.

Grant succeeded.

SQL> █
```

```

SQL> @/home/oracle/app/product/12.2.0/dbhome_1/rdbms/admin/xaview.sql
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\_191 and later installed.

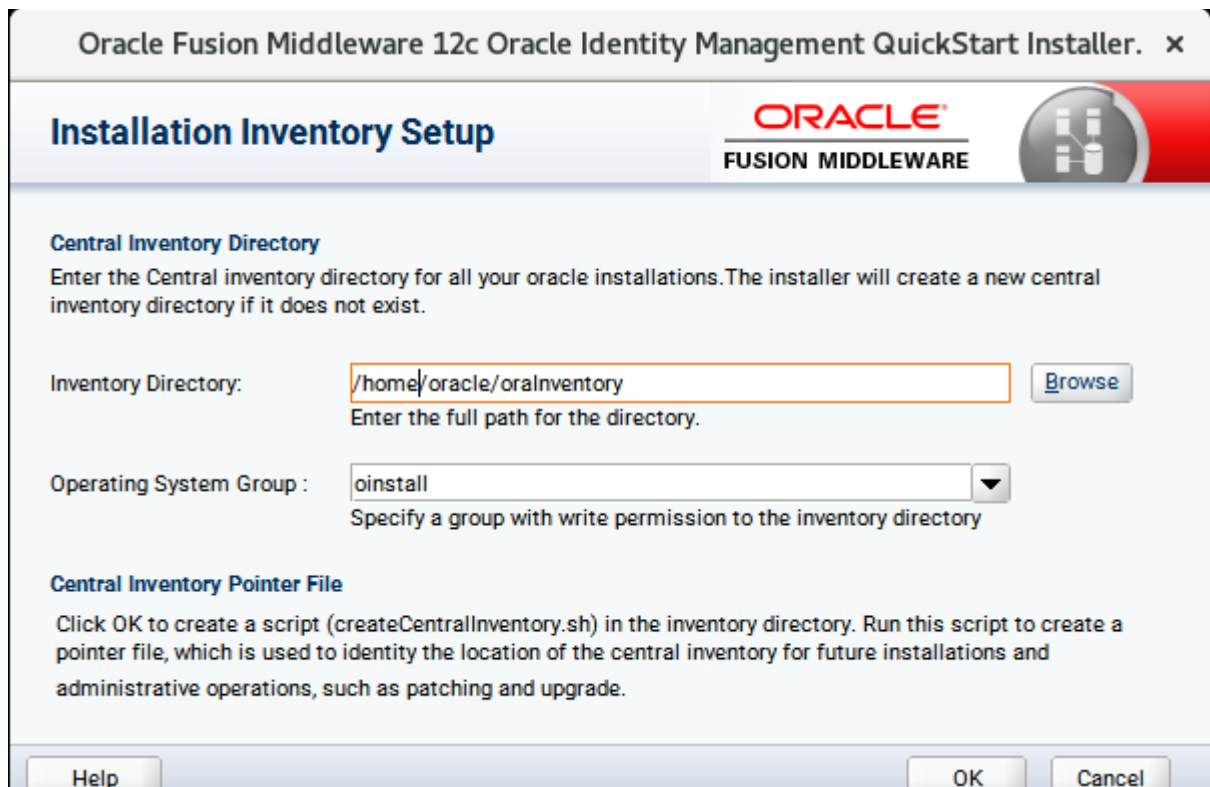
1-2. Log in to the target system (SLES 15 SP1 64-bit OS) as a non-admin user. Download the Oracle Identity and Access Management 12cPS4 (12.2.1.4.0) generic installer .zip file from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

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

1-3. Go to the directory where you downloaded the installation program. Extract the contents of these .zip ("fmw\_12.2.1.4.0\_idmqs\_Disk1\_1of2.zip" and "fmw\_12.2.1.4.0\_idmqs\_Disk1\_2of2.zip") files and launch the installation program by running '`java -jar fmw_12.2.1.4.0_idmquickstart.jar`'

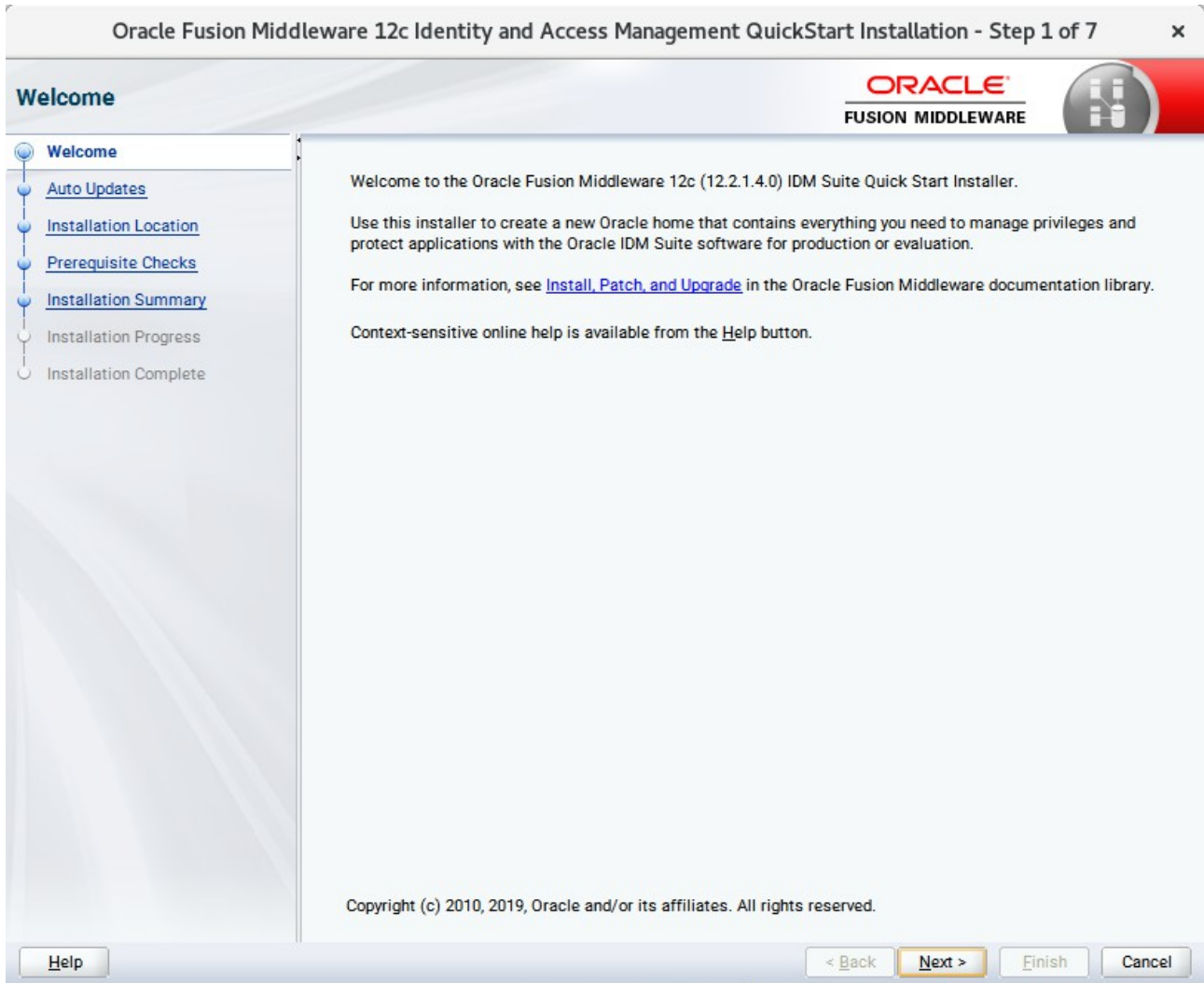
**For the actual installation, follow the steps below:**

1). Installation Inventory Setup.



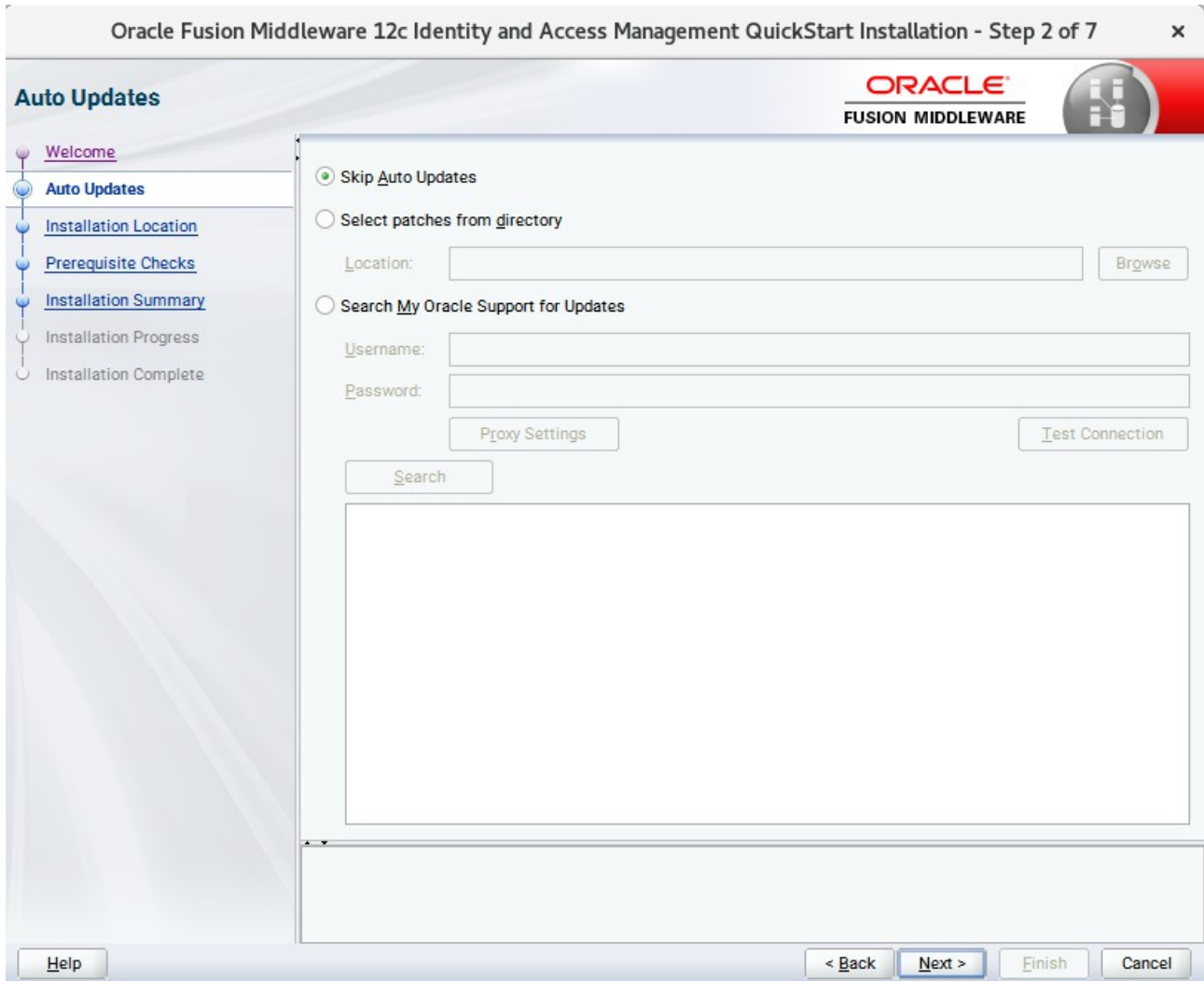
Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory, then click **OK** to continue.

2). **Welcome** page appears.



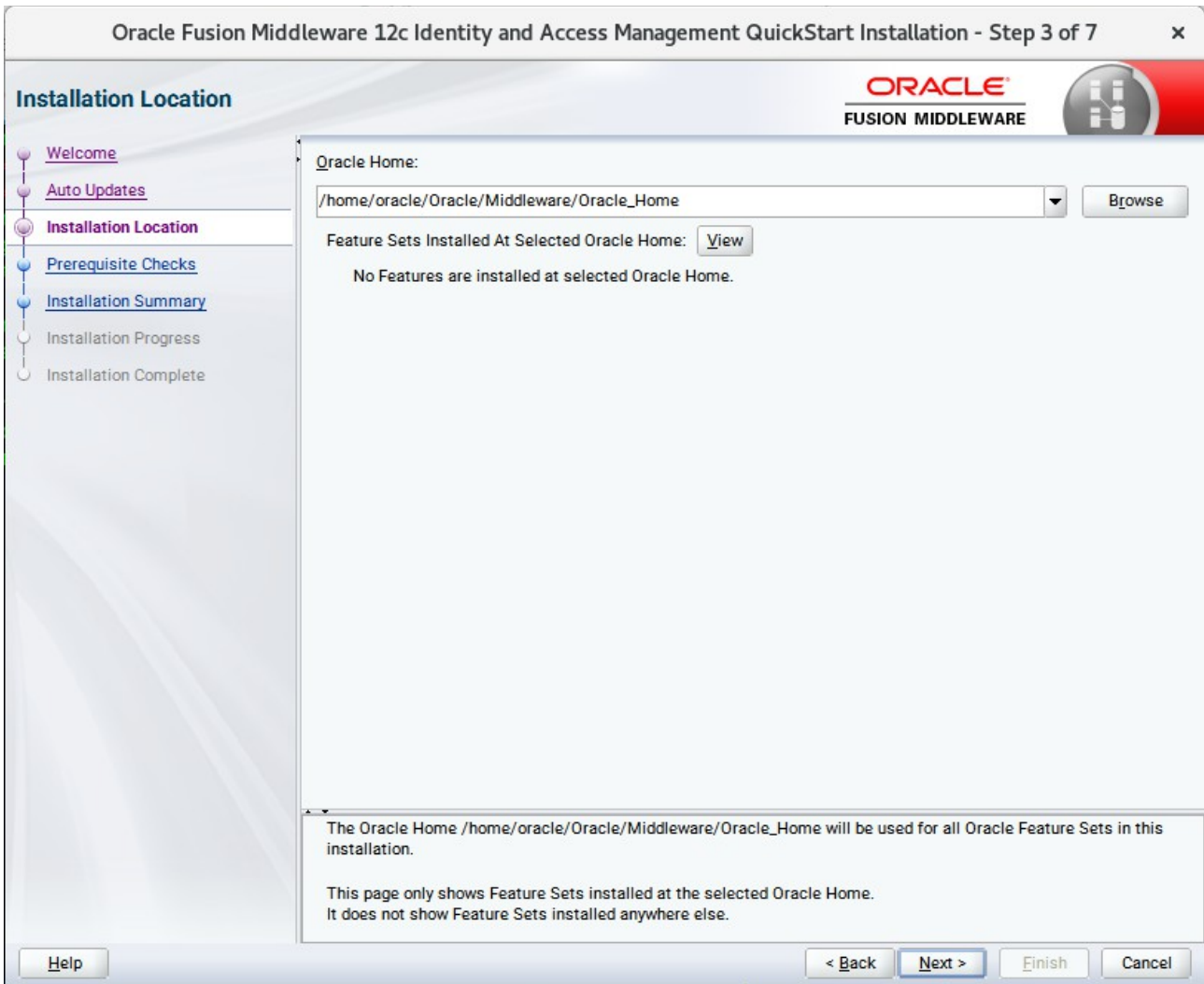
This page welcomes you to the installation. Click **Next** to continue.

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



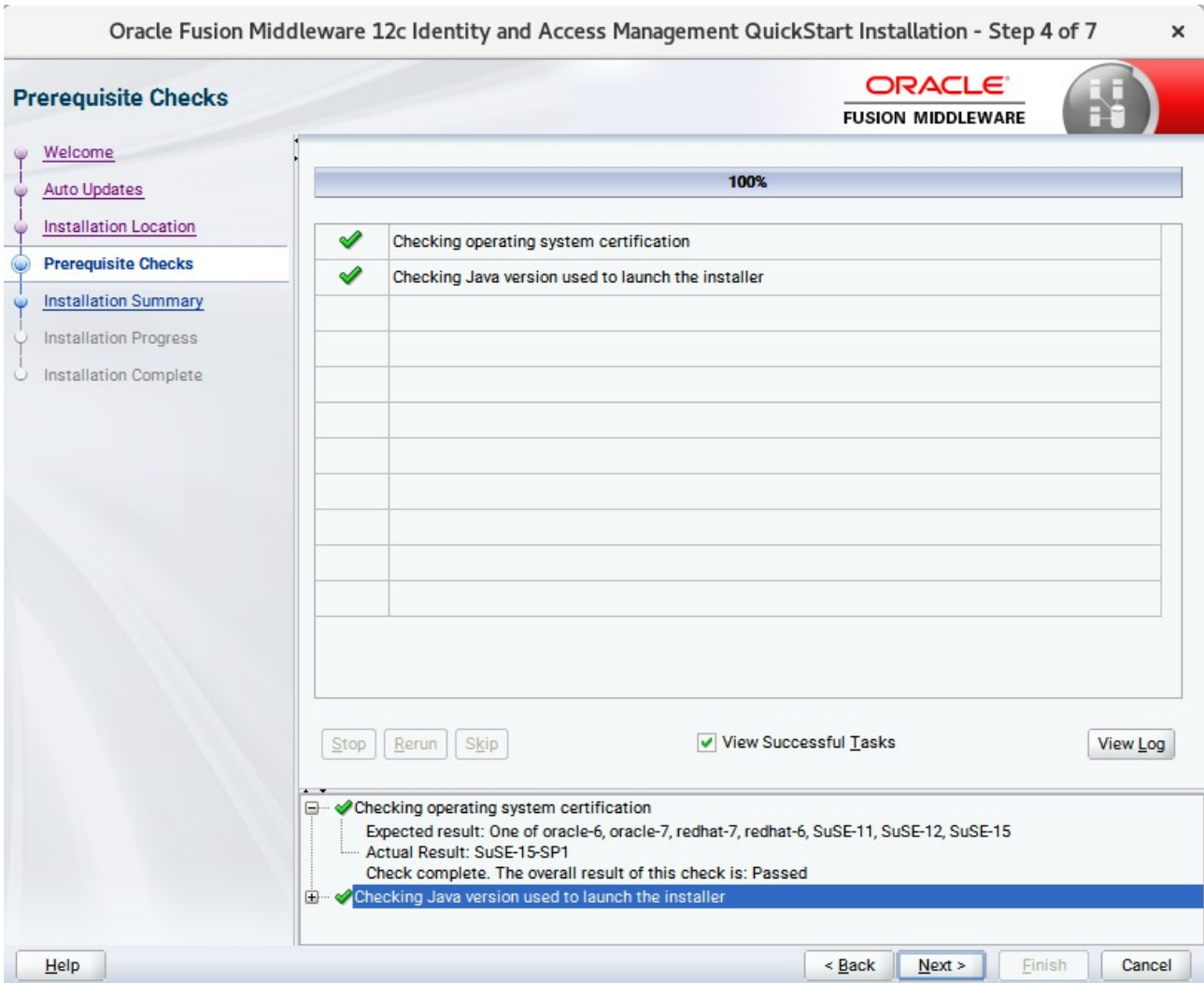
This screen helps to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account. Make your choices, then click **Next** to continue.

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



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

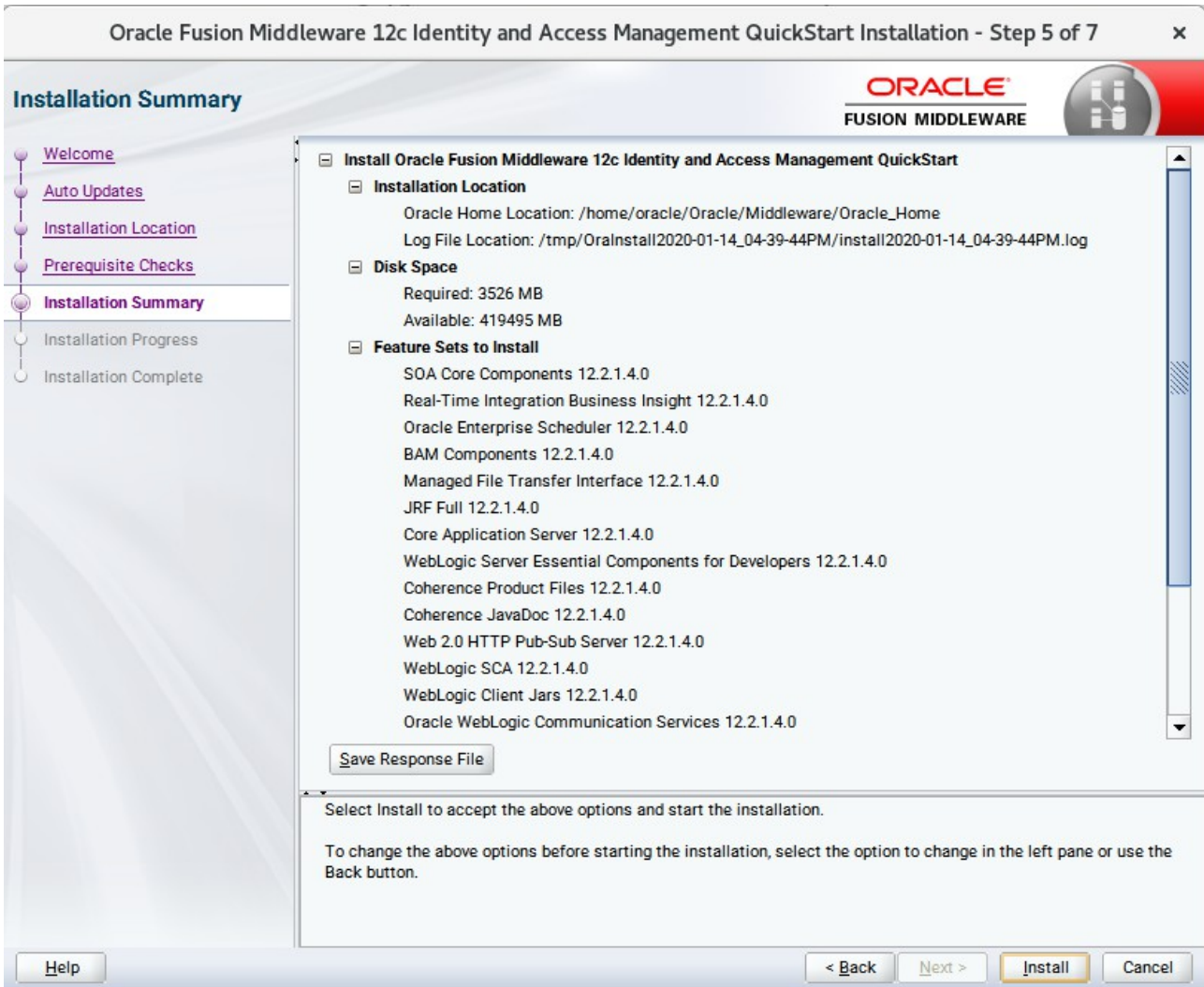
5). The **Prerequisites Checks** page appears.



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

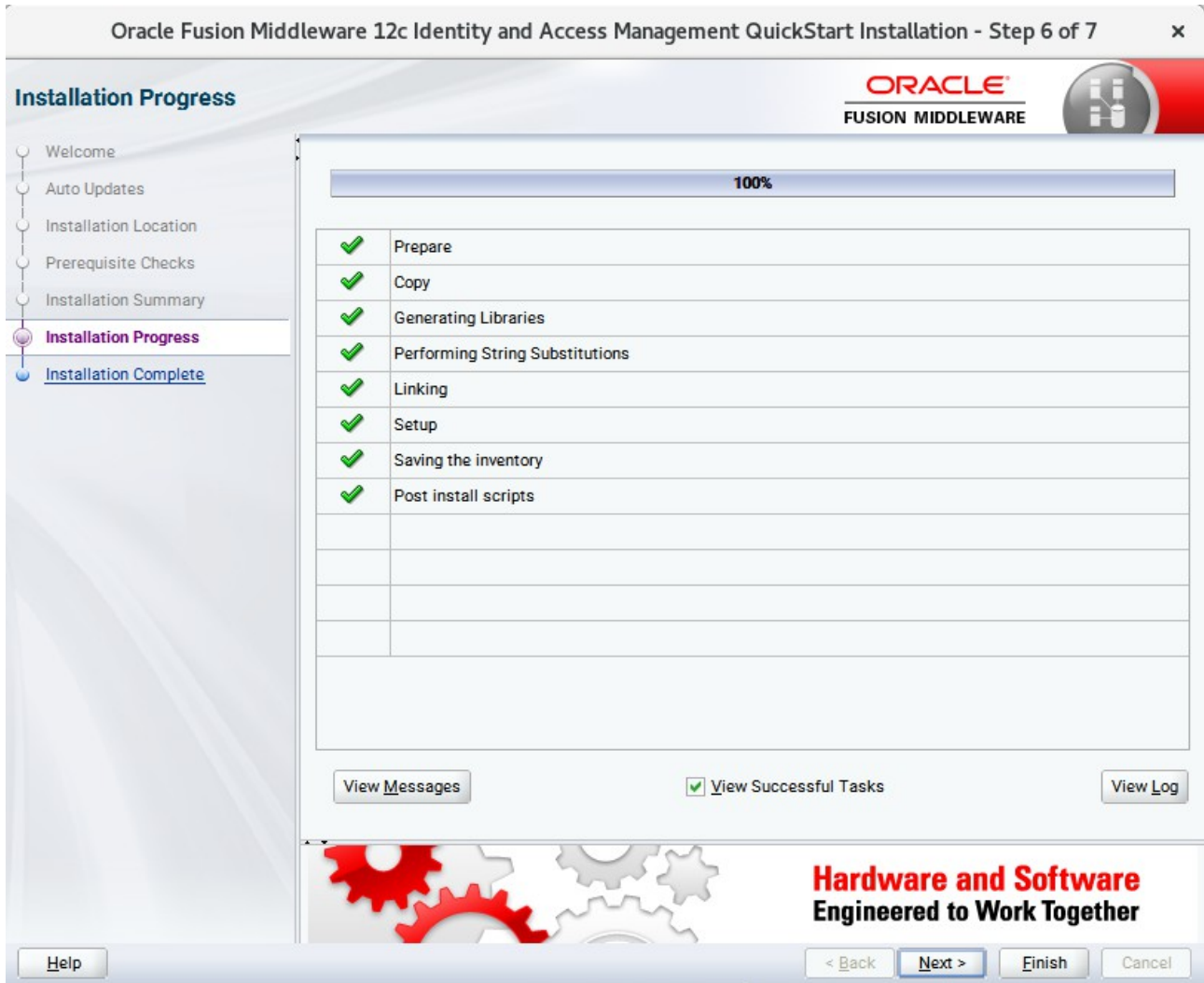


6). The **Installation Summary** page appears.



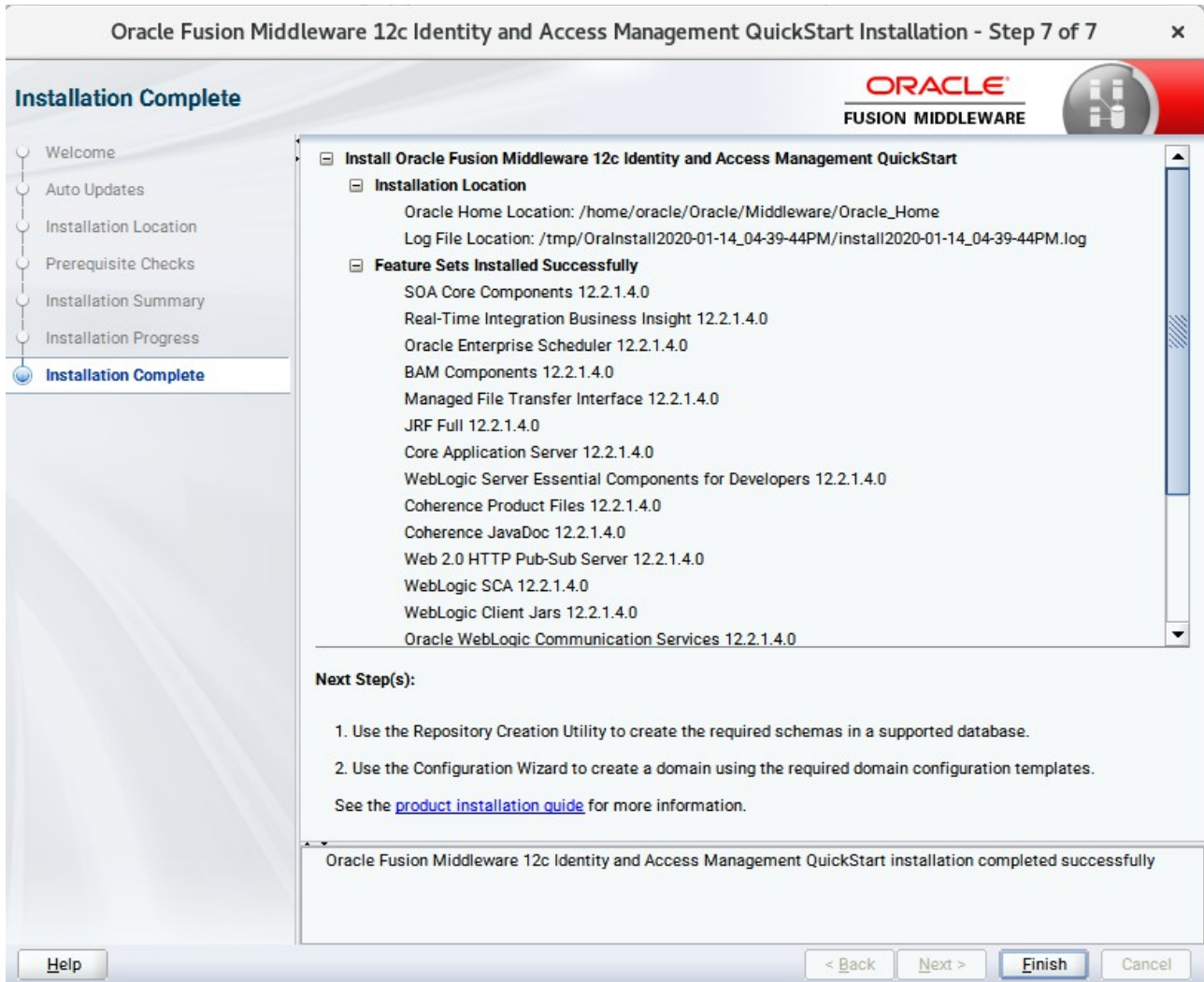
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



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

## 2. Configuring the Oracle Identity Manager Domain

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

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

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

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

Select existing prefix:

Create new prefix:

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

Component	Schema Owner
<input type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Common Infrastructure Services *	DEV_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	DEV_OPSS
<input type="checkbox"/> Oracle Enterprise Scheduler	ESS
<input 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
<input checked="" type="checkbox"/> SOA Suite	
<input checked="" type="checkbox"/> SOA Infrastructure	DEV_SOAINFRA
<input checked="" type="checkbox"/> IDM Schemas	
<input checked="" type="checkbox"/> Oracle Identity Manager	DEV_OIM
<input type="checkbox"/> Oracle Access Manager	OAM

\* Mandatory component. Mandatory components cannot be deselected.

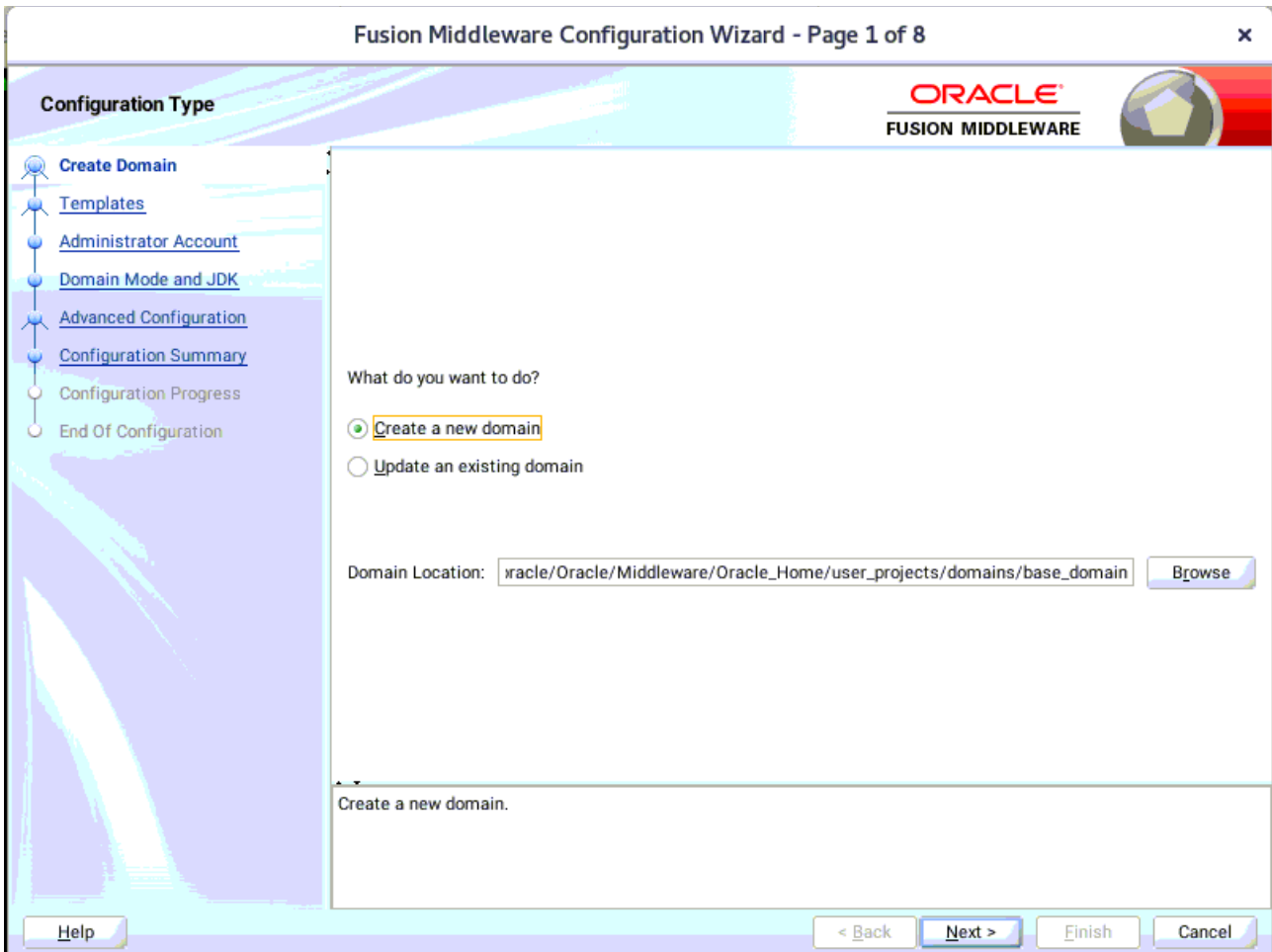
Select the **Create new prefix** radio button and provide a schema prefix (such as DEV). Select the **Oracle Identity Manager** schema, this action automatically selects the schemas as dependencies, and ensure the schema creation is successful.

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

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

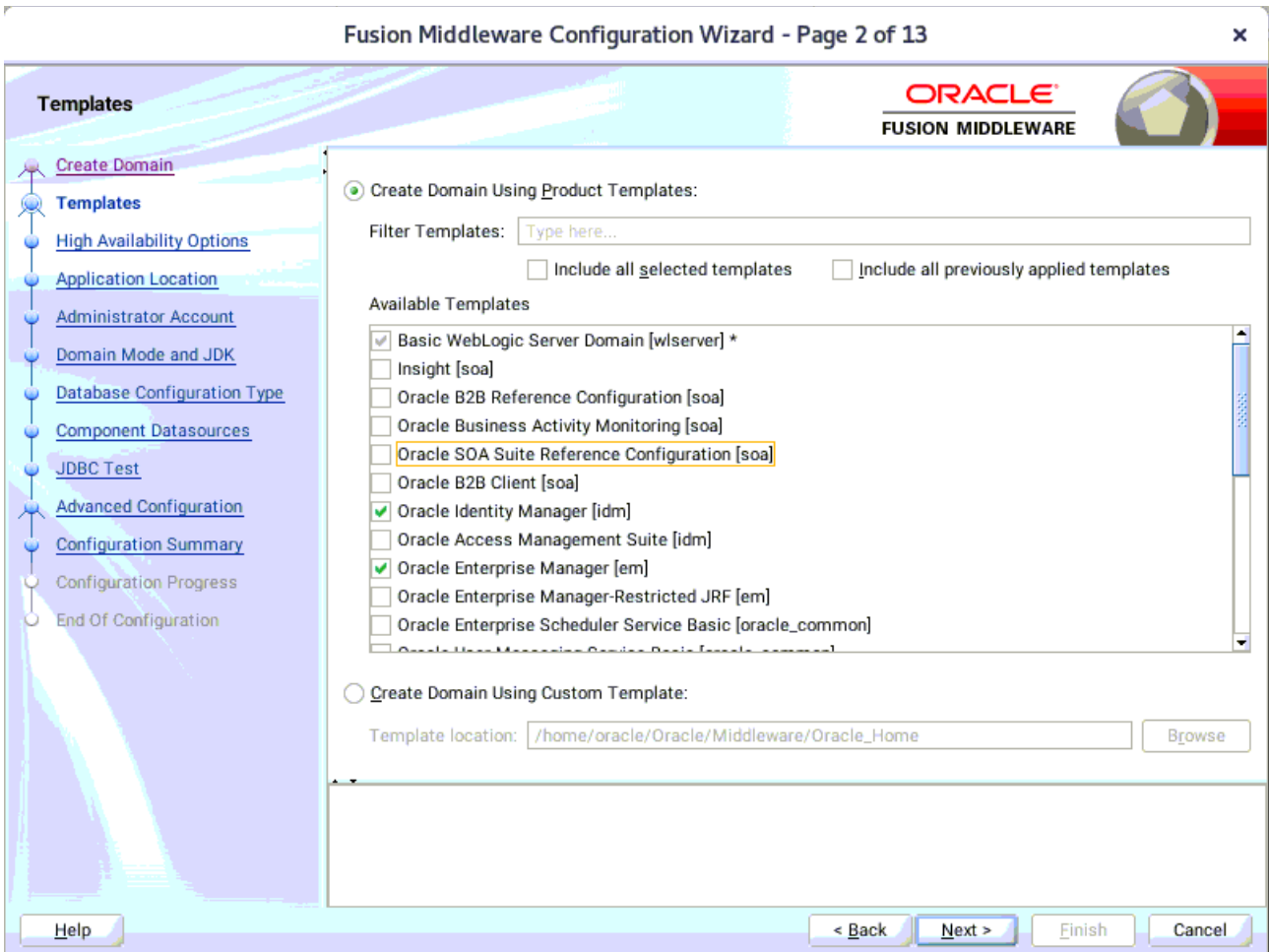
### Follow these steps:

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



Click **Next** to continue.

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



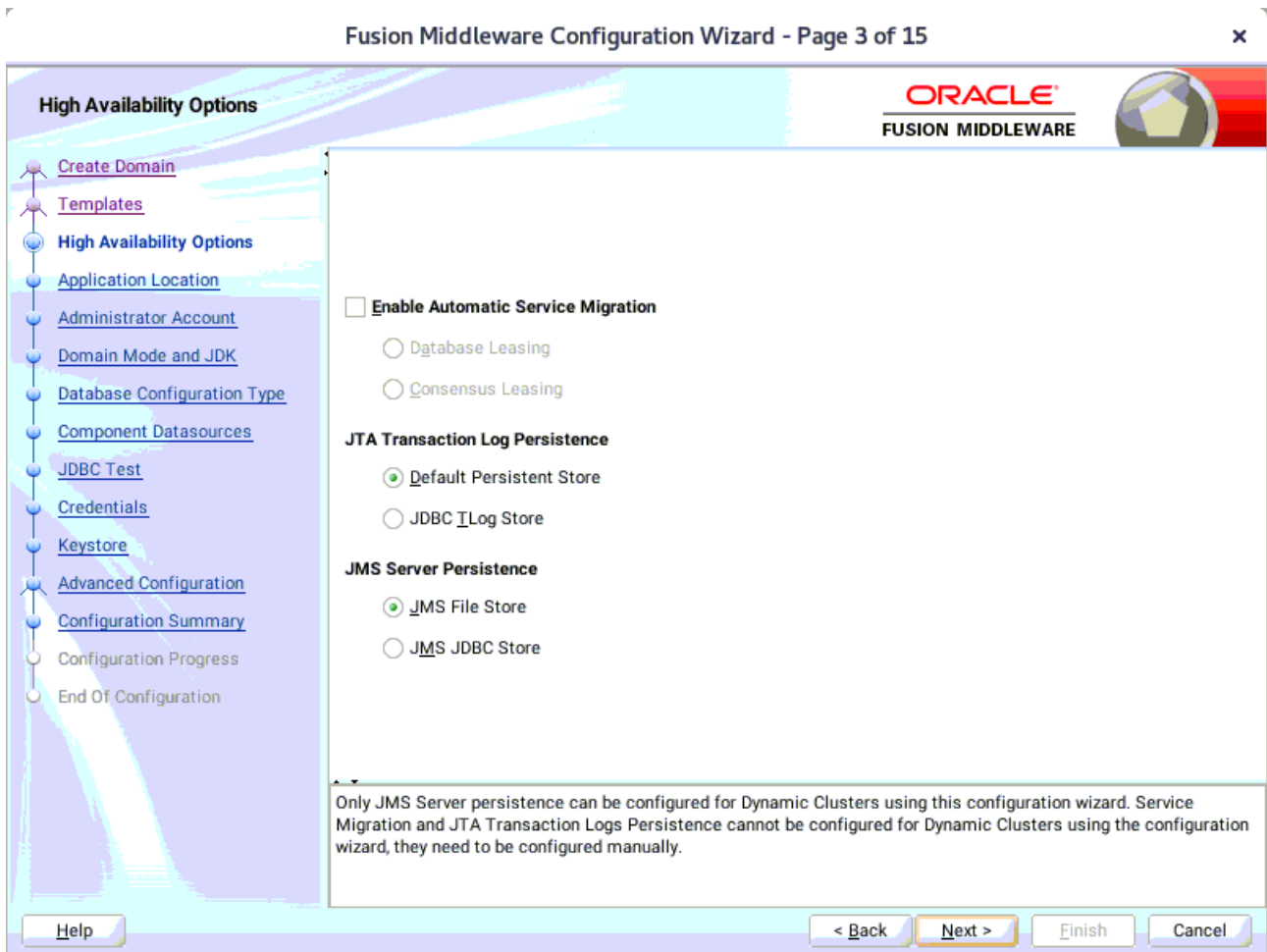
On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Identity Manager [idm]**.

Selecting this template automatically selects the following as dependencies:

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

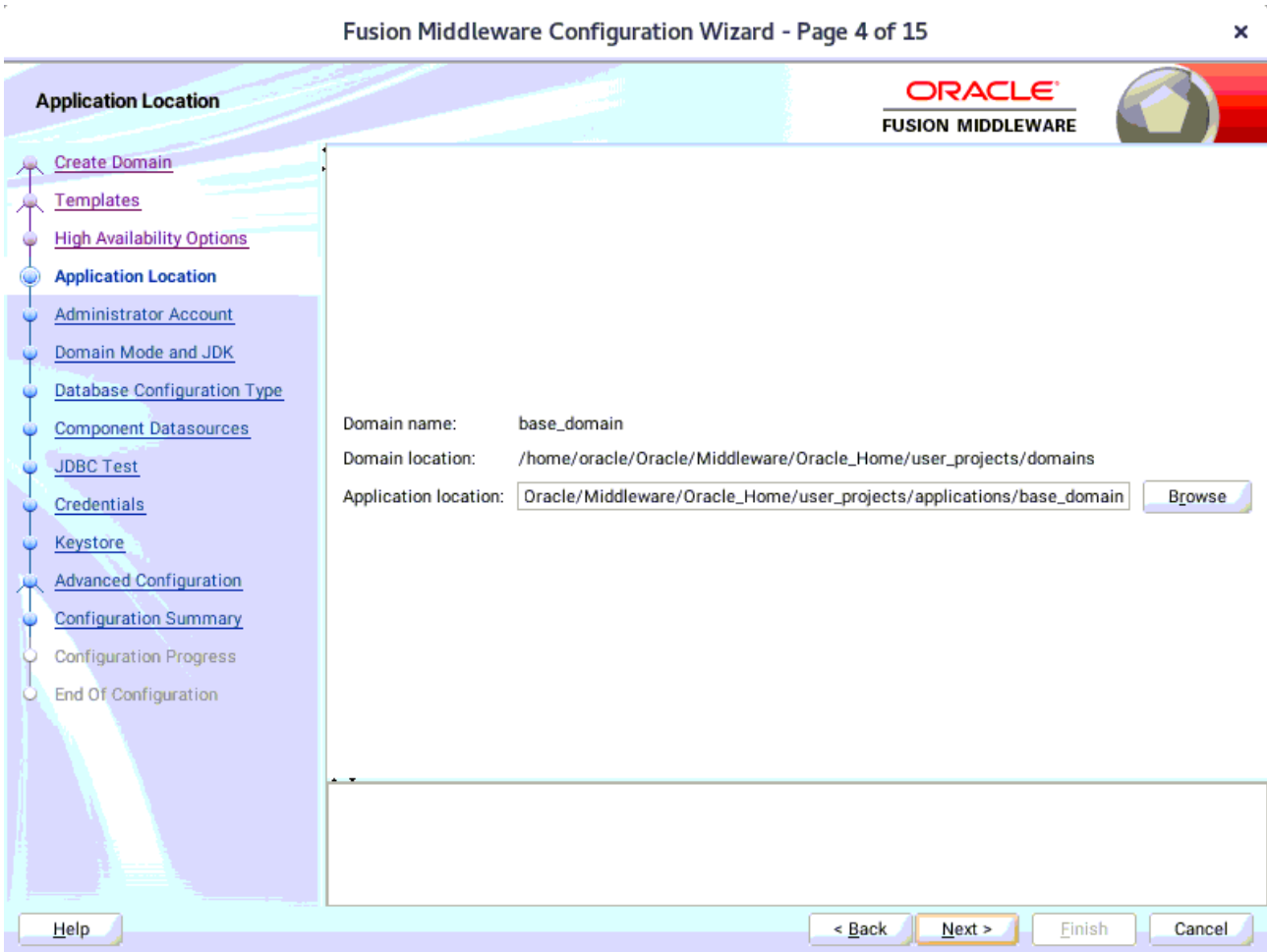
You can also select any of the Oracle products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later. Click **Next** to continue.

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



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

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



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

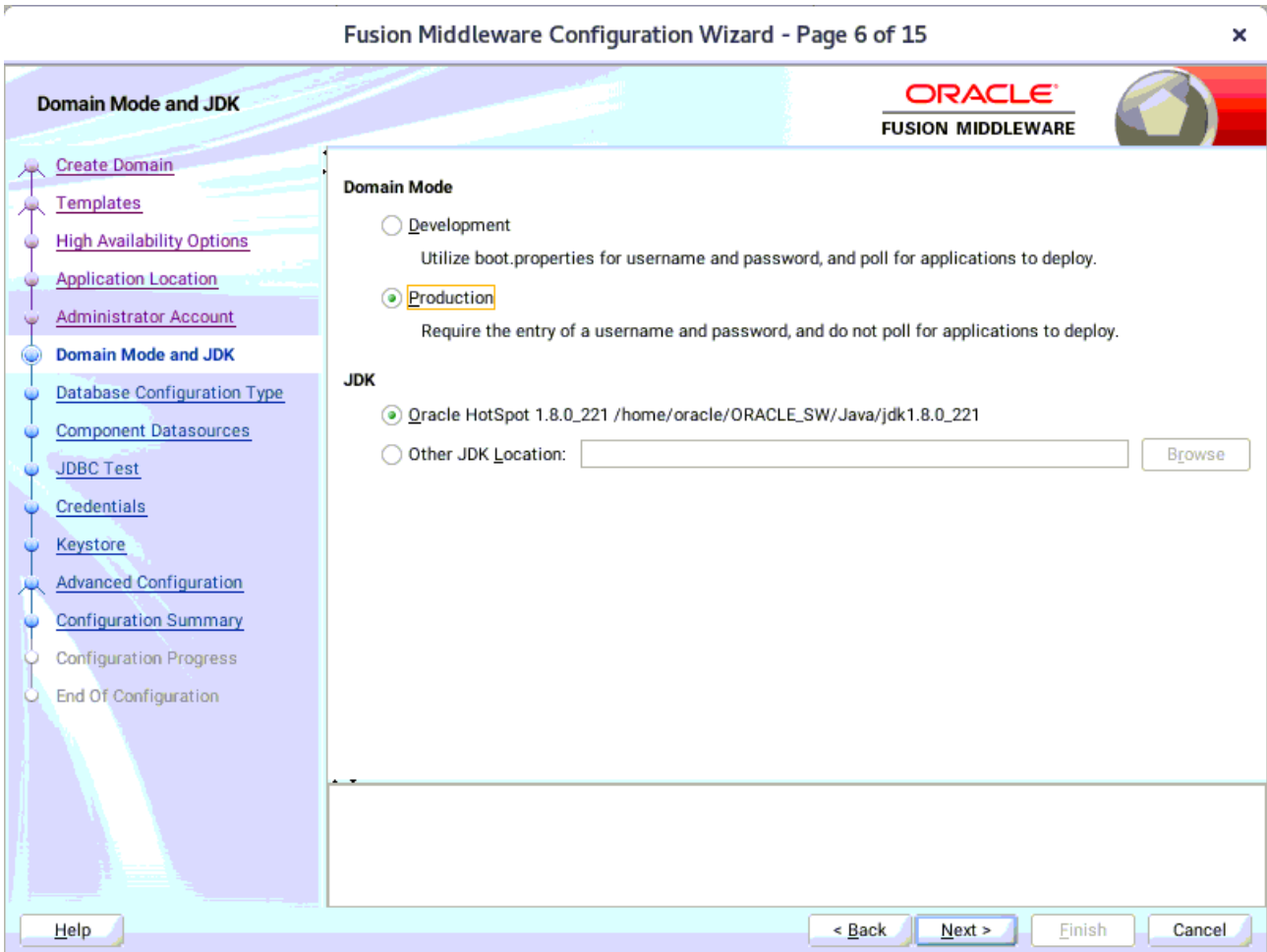


5). The **Administrator Account** screen appears.

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

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: .....

Get RCU Configuration    Cancel

Connection Result Log

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

Successfully Done.

Click "Next" button to continue.

Help    < Back    Next >    Finish    Cancel

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

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

Fusion Middleware Configuration Wizard - Page 8 of 15

**JDBC Component Schema**

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

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

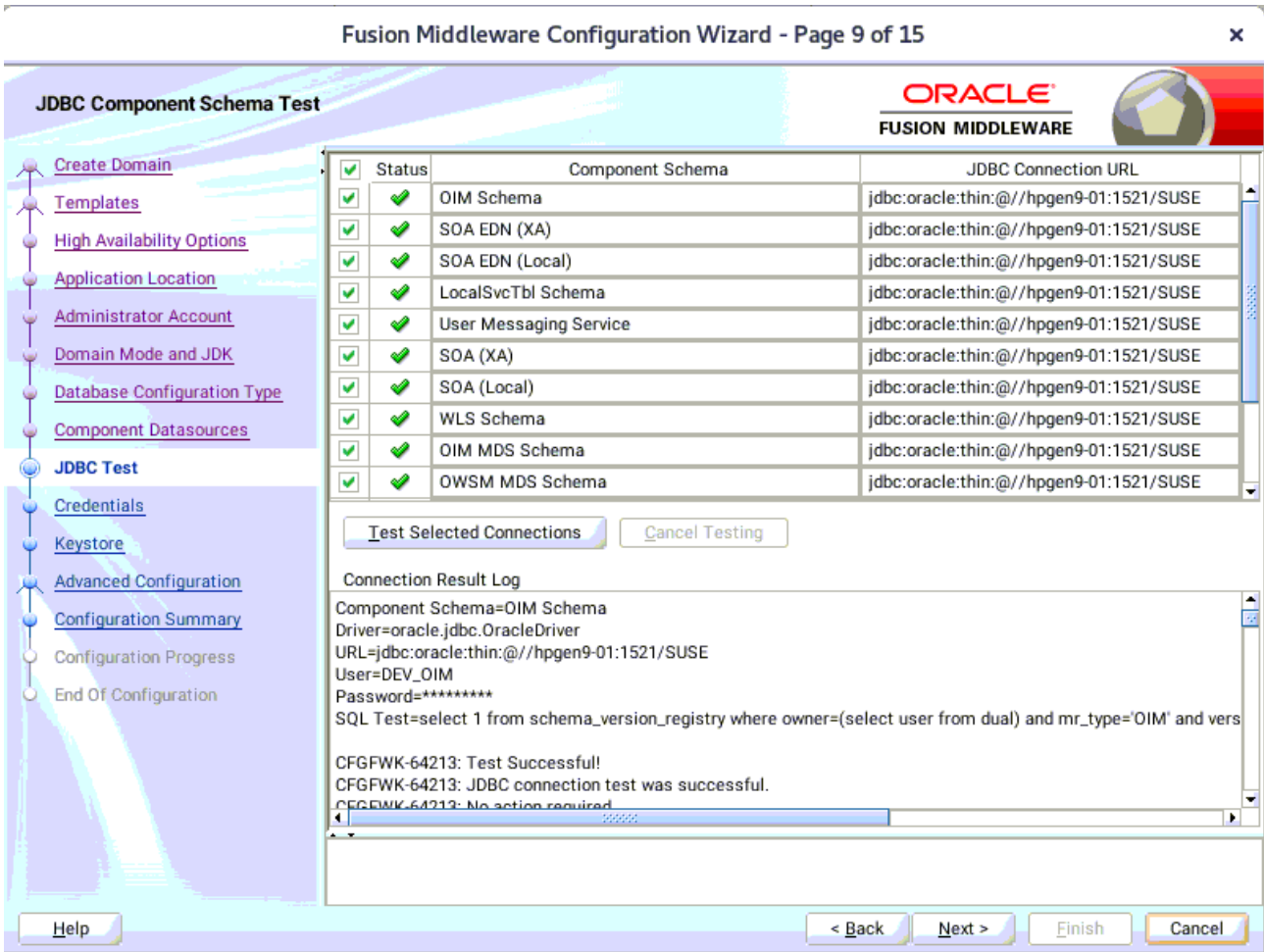
Edits to the data above will affect all checked rows in the table below.

<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_SOAINFR/	.....
<input type="checkbox"/>	SOA EDN (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFR/	.....
<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_SOAINFR/	.....
<input type="checkbox"/>	SOA (Local)	SUSE	hpgen9-01	1521	DEV_SOAINFR/	.....
<input type="checkbox"/>	WLS Schema	SUSE	hpgen9-01	1521	DEV_WLS_RUN	.....

Help
< Back
Next >
Finish
Cancel

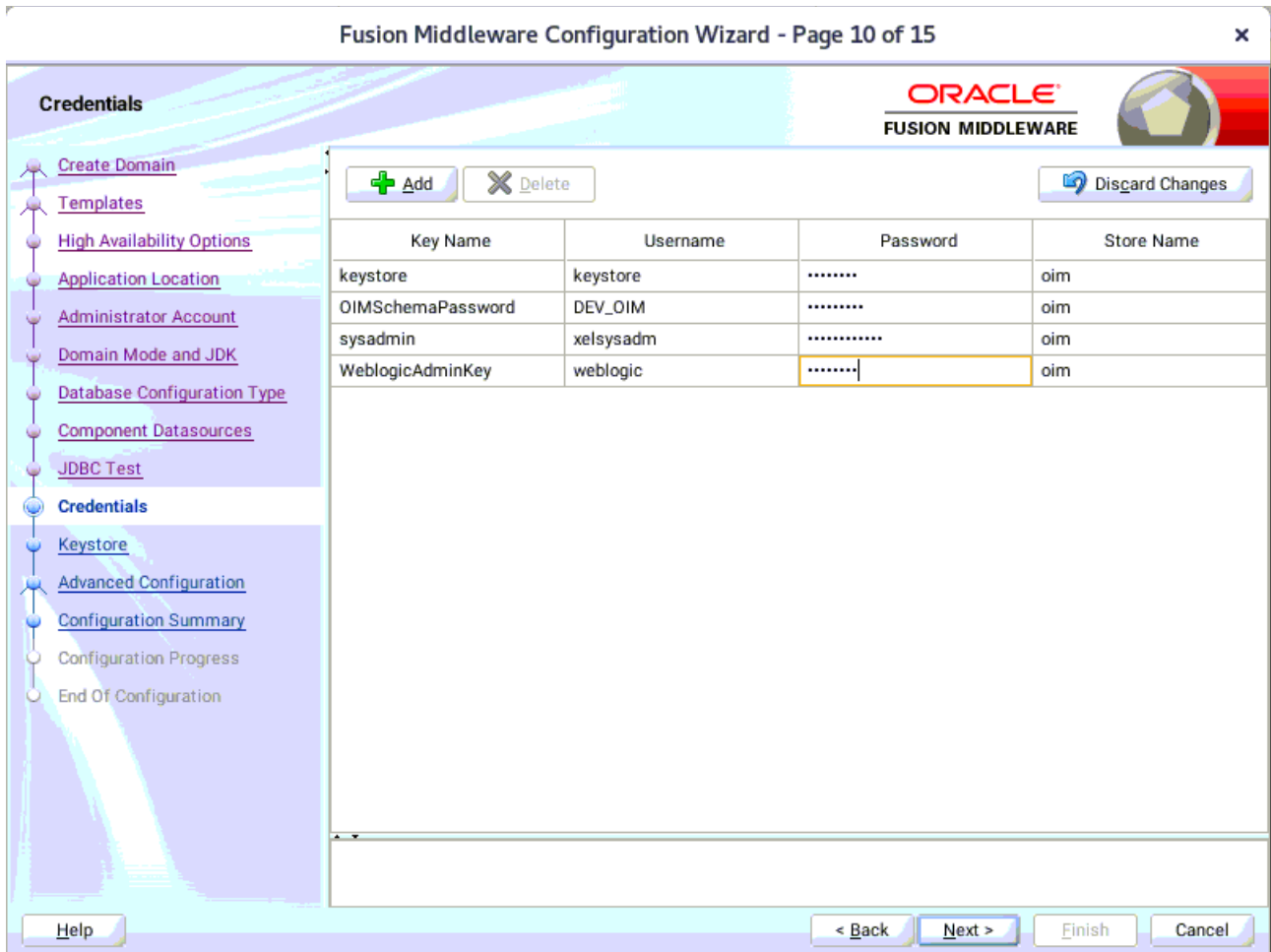
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



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.

Fusion Middleware Configuration Wizard - Page 11 of 15

**Keystore**

ORACLE  
FUSION MIDDLEWARE

Store Key Name: ums/apns [Disgard Changes]

Alias	Trusted Certificate

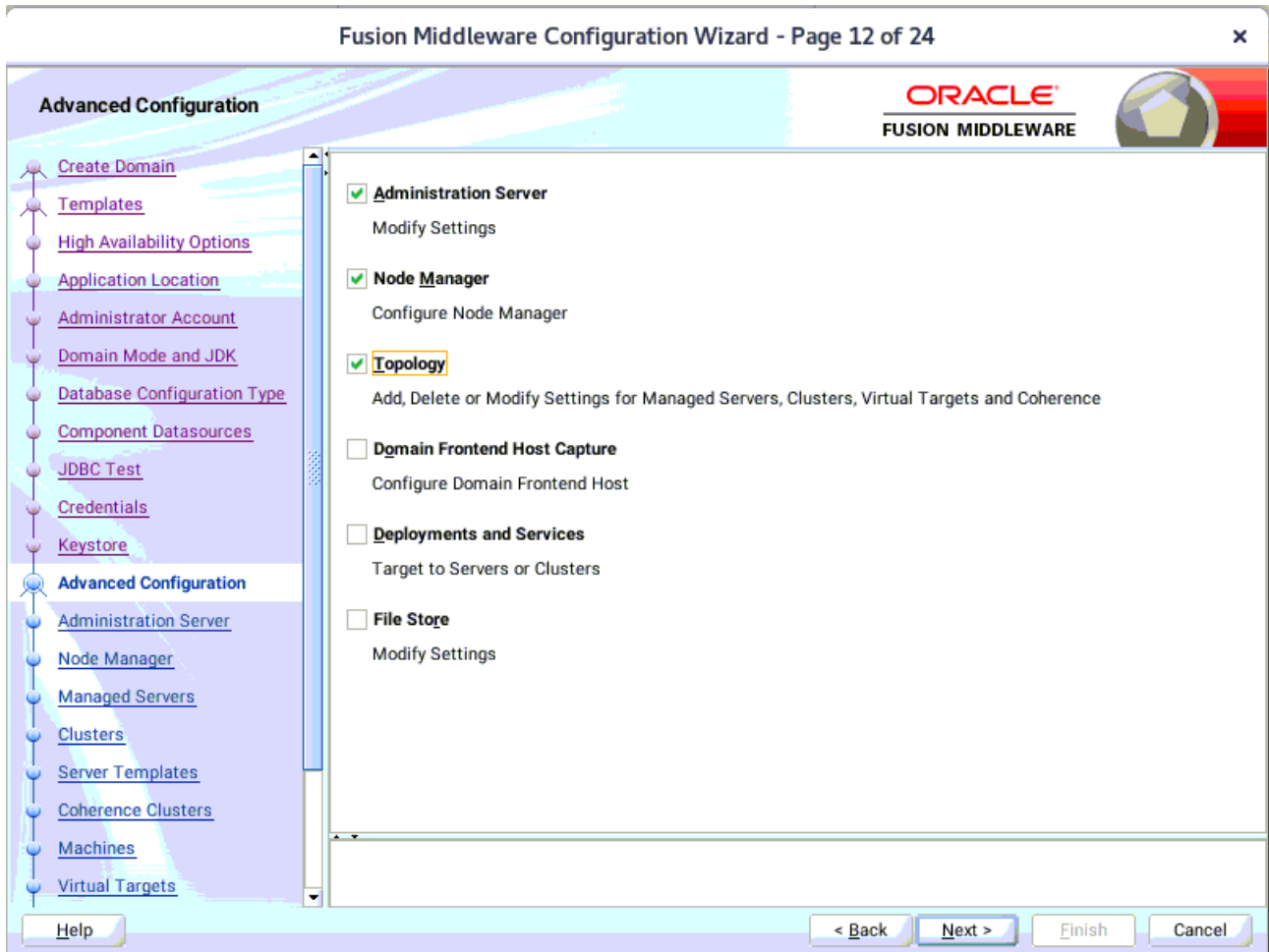
  

Alias	Private Key	Password	Identity Certificate

Help    < Back    Next >    Finish    Cancel

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

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



On the Advanced Configuration screen, select:

- Administration Server
- Node Manager
- Topology

Then, click **Next** to continue.



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

Fusion Middleware Configuration Wizard - Page 13 of 24

**Administration Server**

ORACLE  
FUSION MIDDLEWARE

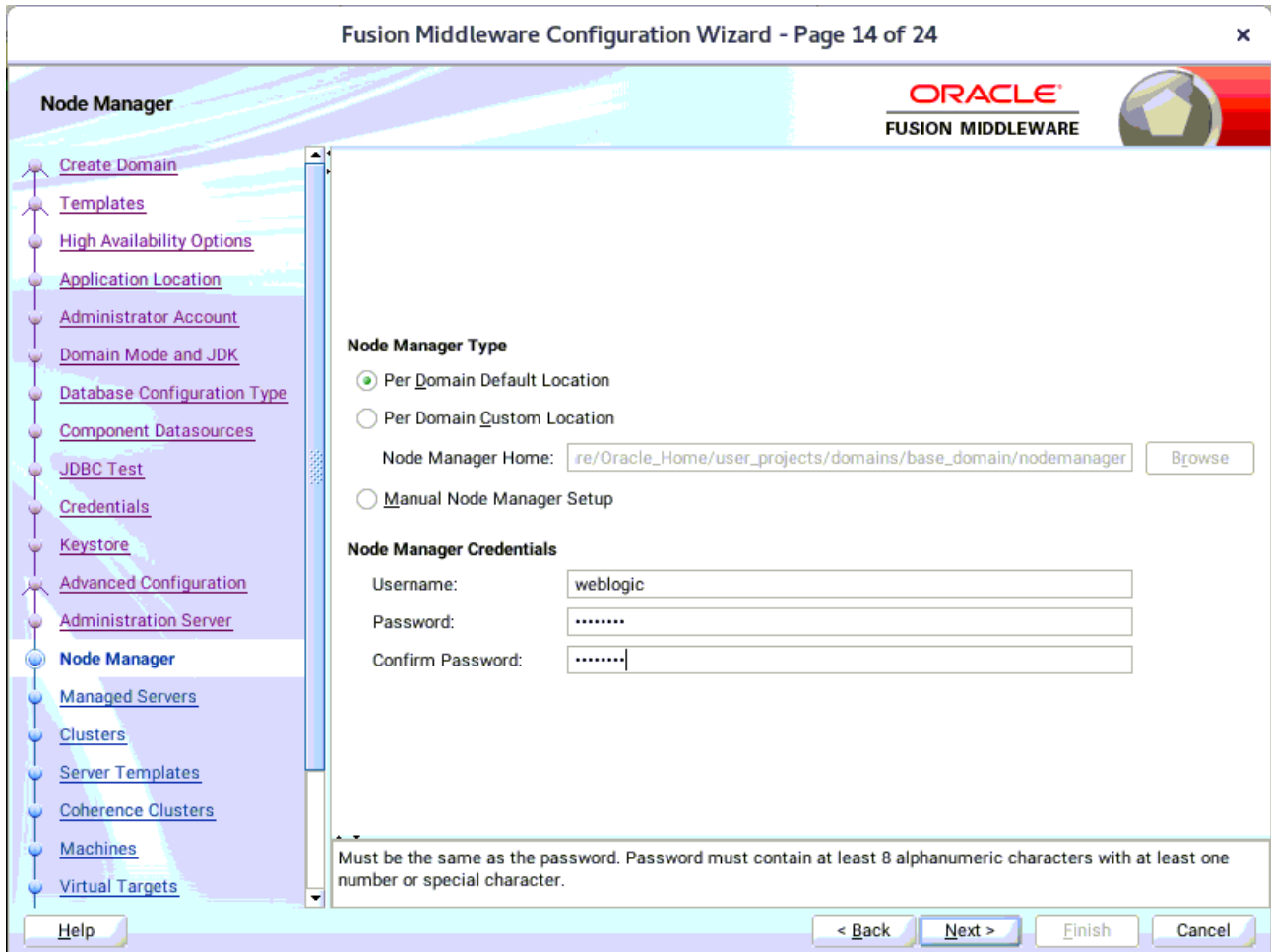
[Create Domain](#)  
[Templates](#)  
[High Availability Options](#)  
[Application Location](#)  
[Administrator Account](#)  
[Domain Mode and JDK](#)  
[Database Configuration Type](#)  
[Component Datasources](#)  
[JDBC Test](#)  
[Credentials](#)  
[Keystore](#)  
[Advanced Configuration](#)  
**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



[+ Add](#)
[C|one](#)
[X Delete](#)

[Disgard 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-...

[Help](#)

[< Back](#)
[Next >](#)
[Finish](#)
[Cancel](#)

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

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

Fusion Middleware Configuration Wizard - Page 16 of 26

**Clusters**

ORACLE  
FUSION MIDDLEWARE

+ Add    X Delete    Disgard Changes

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

Help    < Back    Next >    Finish    Cancel

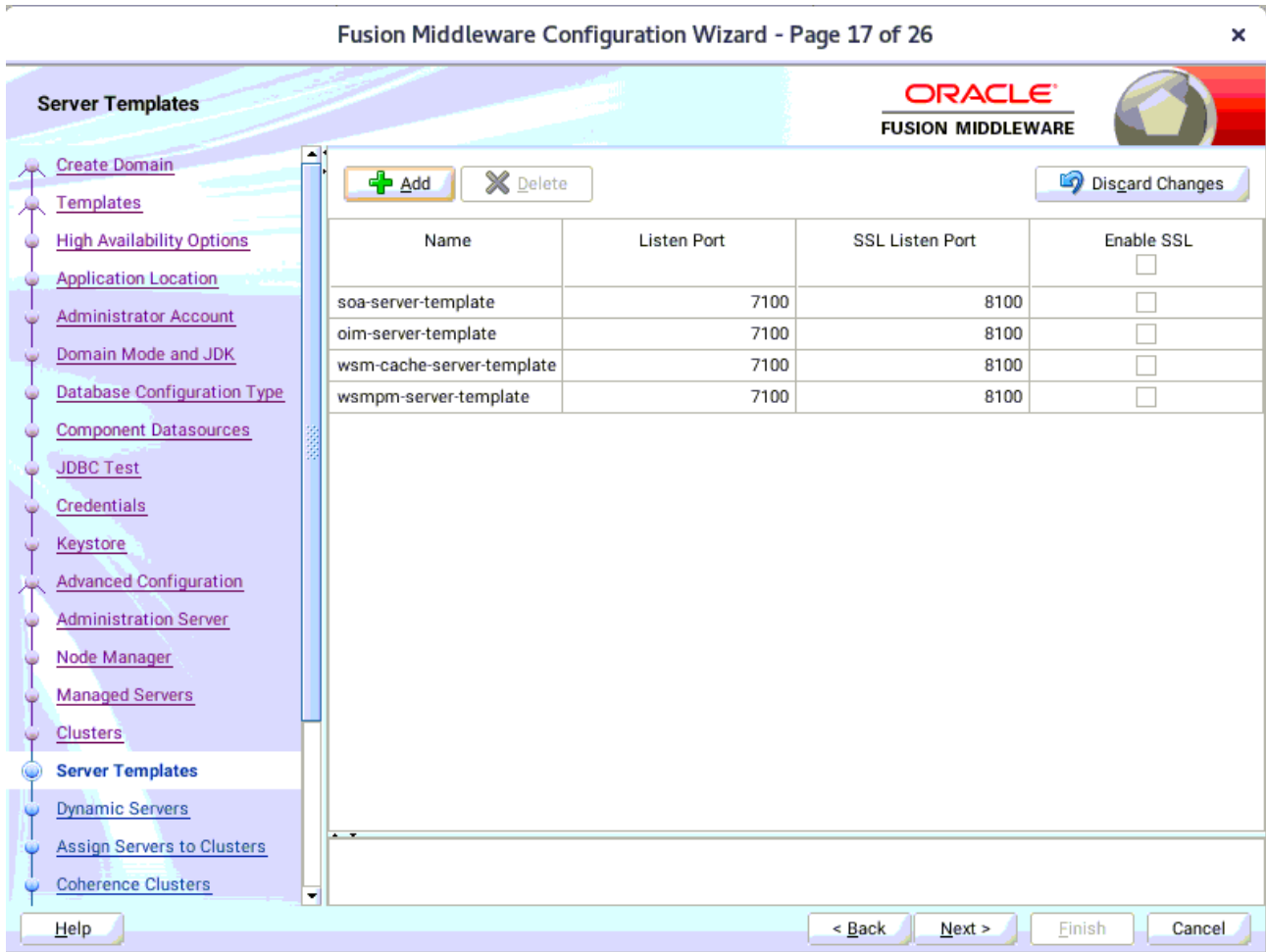
On the Clusters screen:

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

Click **Next** to continue.

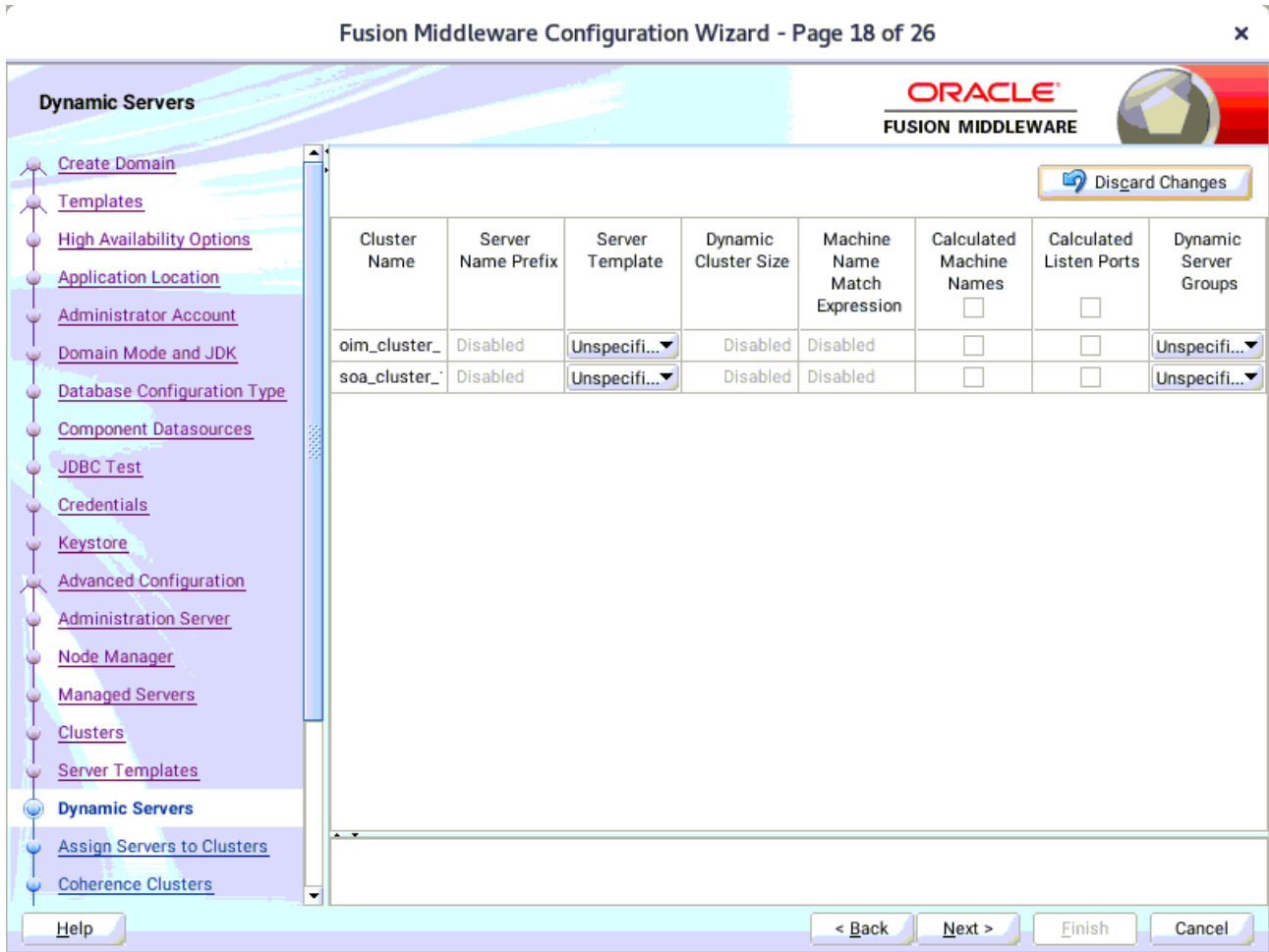
(**Note:** If you are configuring a non-clustered setup on a single node, skip this screen.)

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



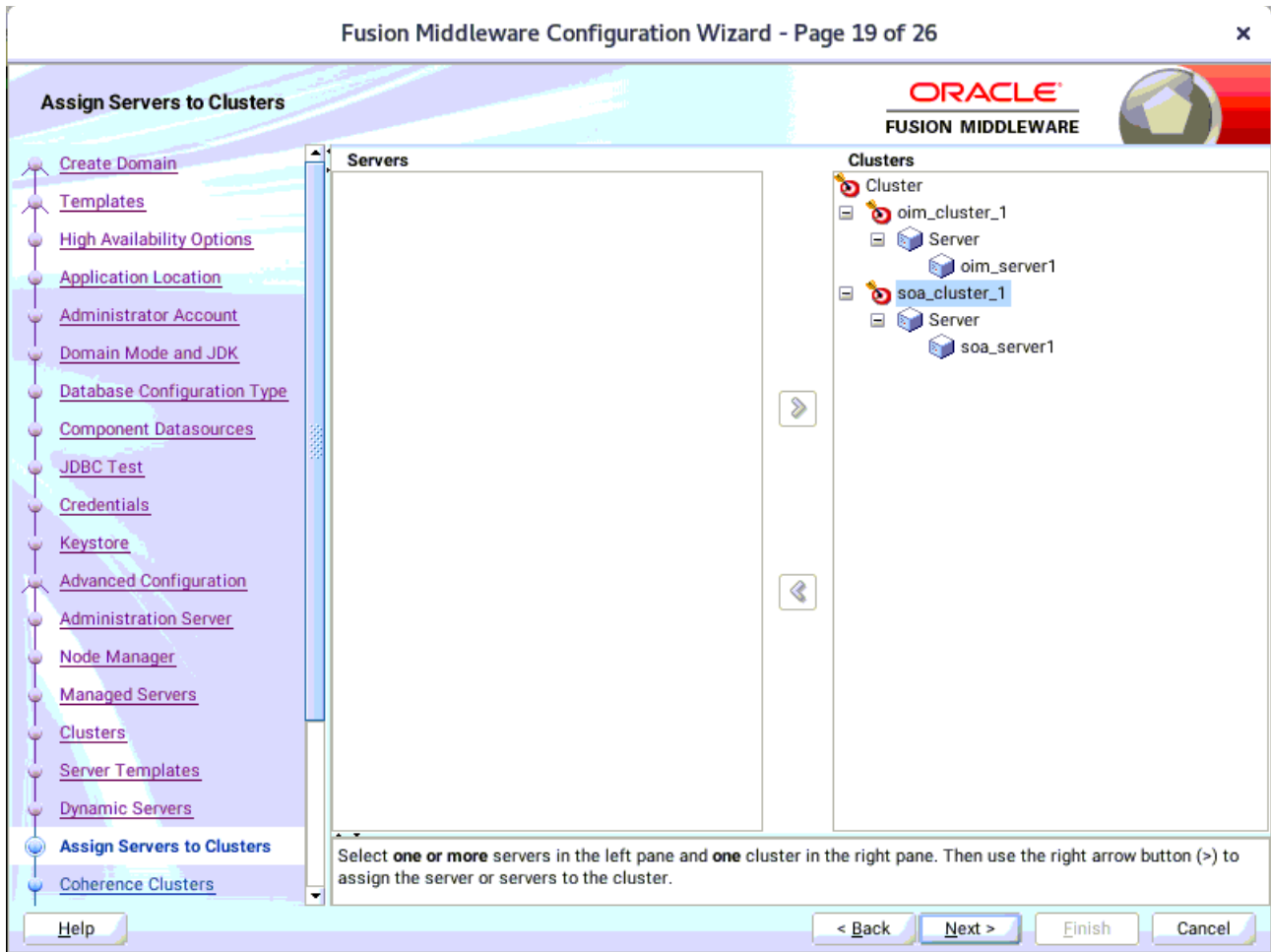
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain. To continue configuring the domain, click **Next**.

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



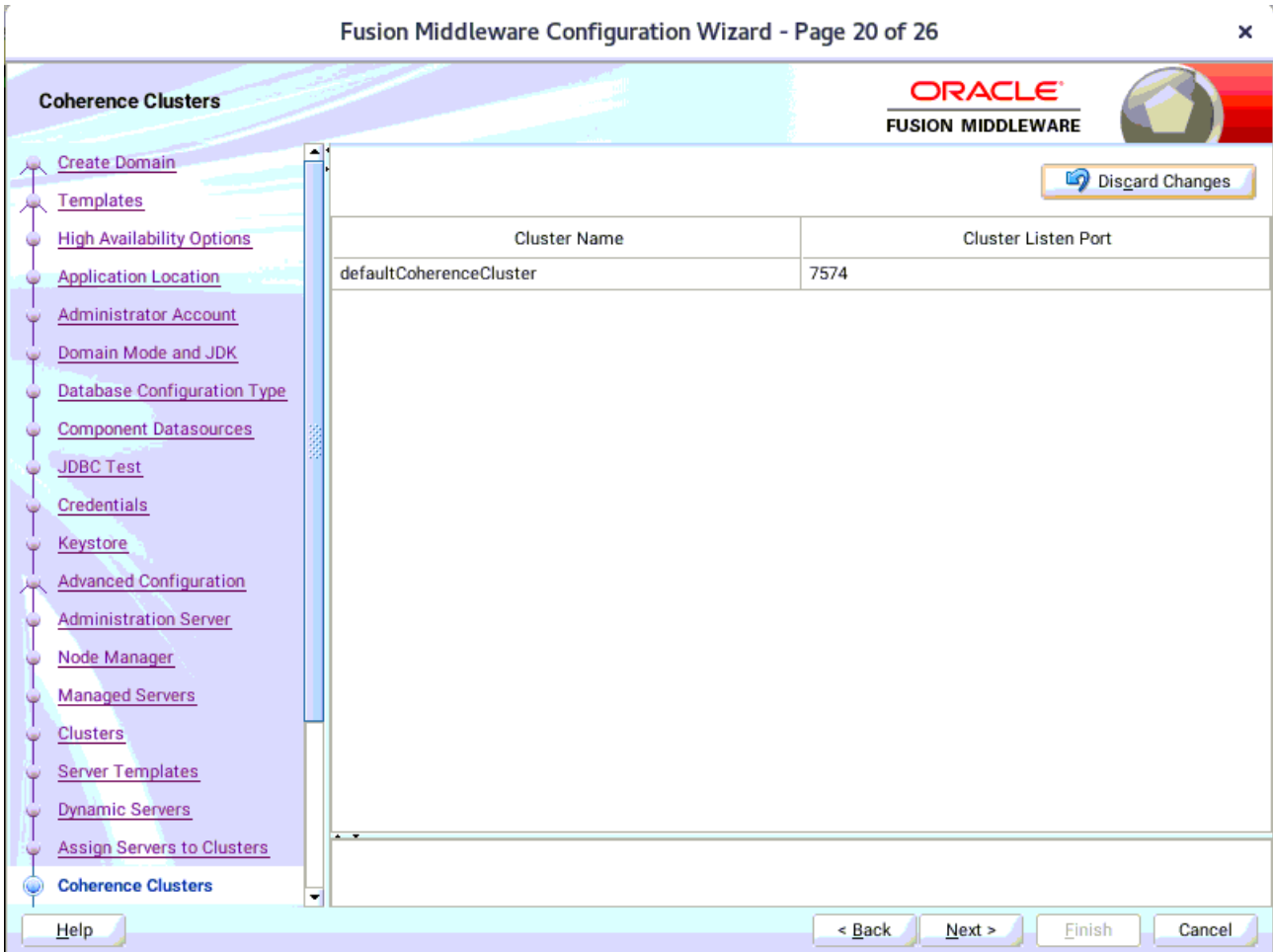
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers. If you are not configuring a dynamic cluster, click **Next** to continue configuring the domain.

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.

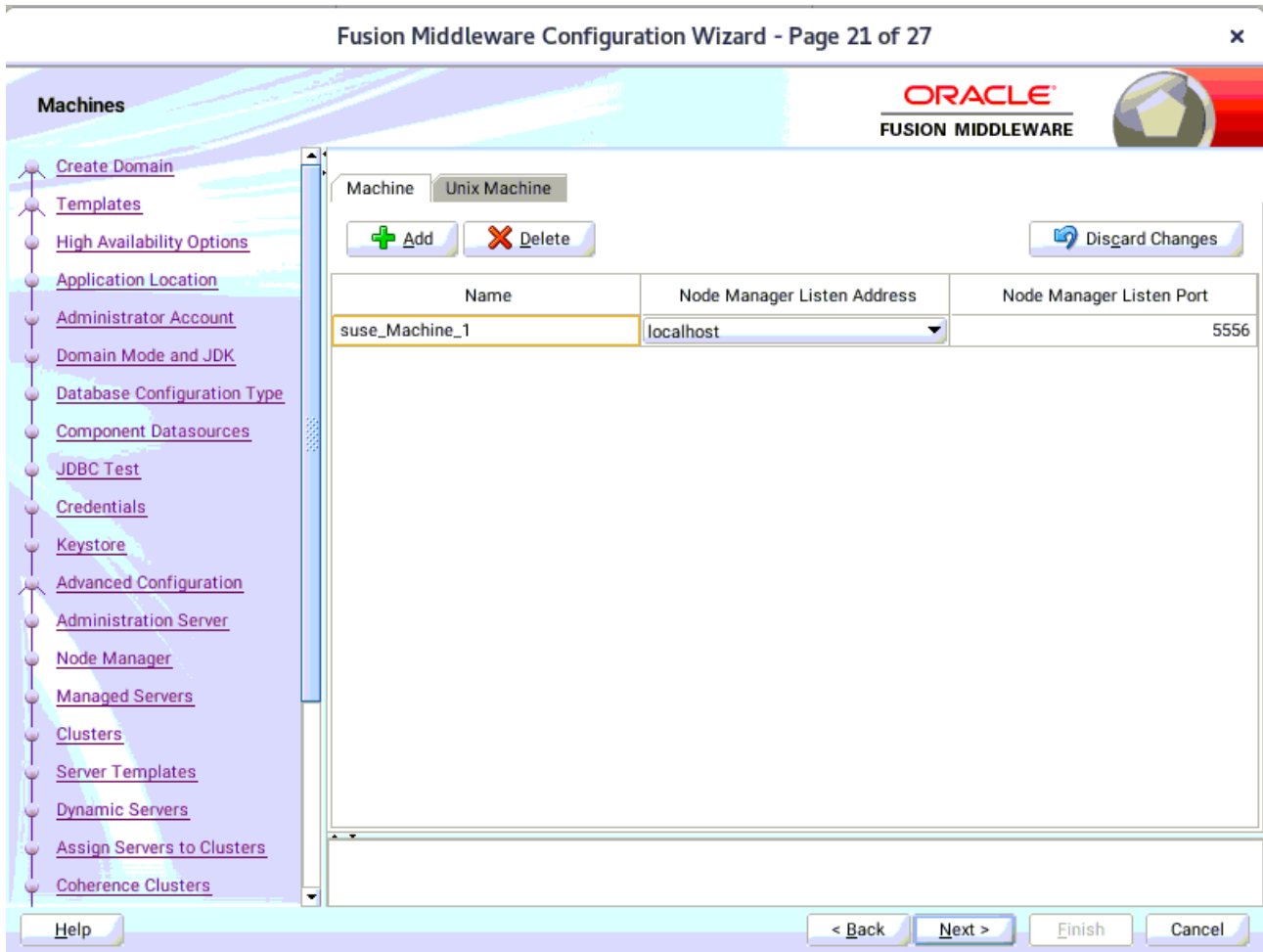
20). The **Coherence Clusters** screen appears.



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.

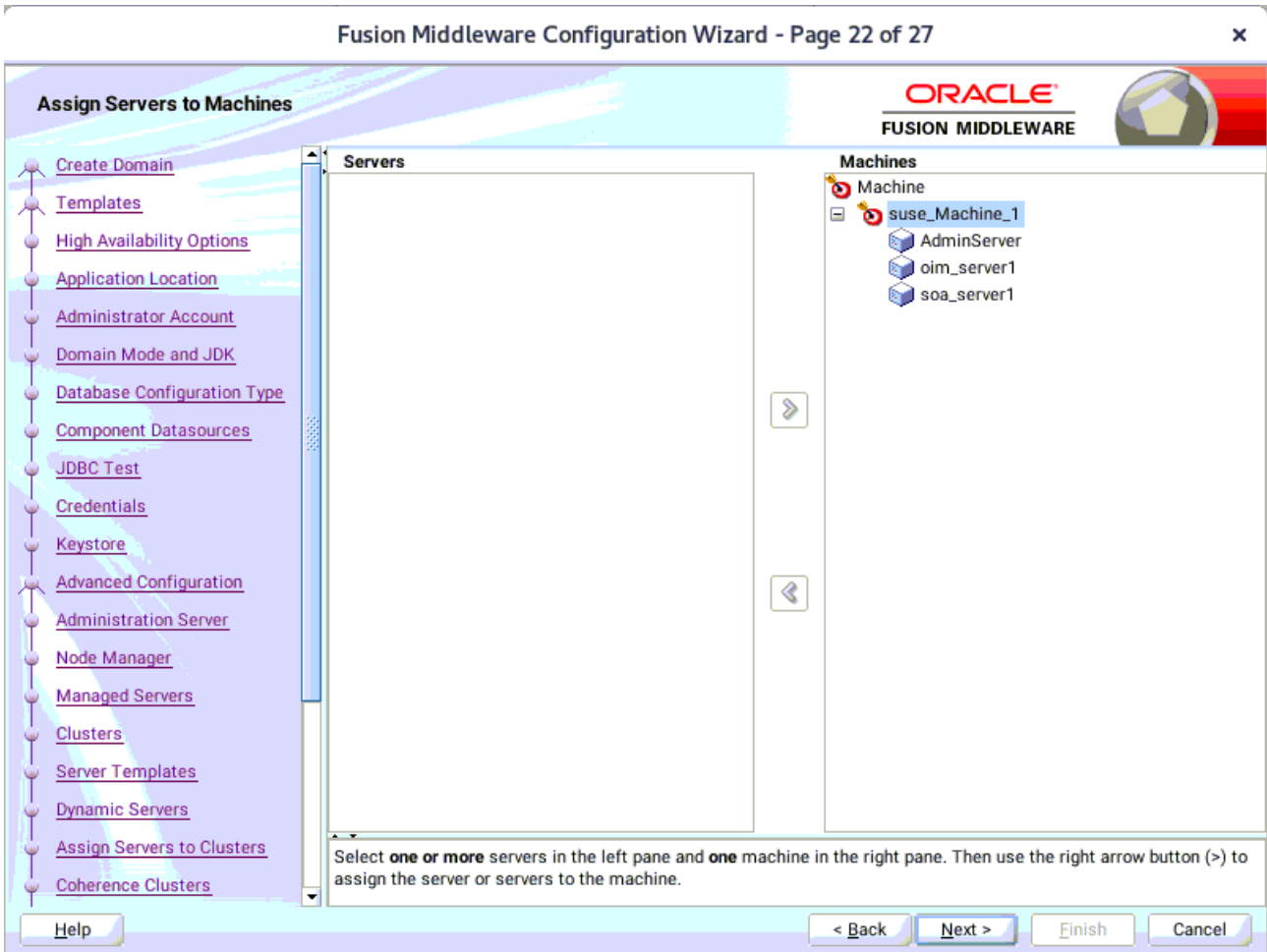


21). The **Machines** screen appears.



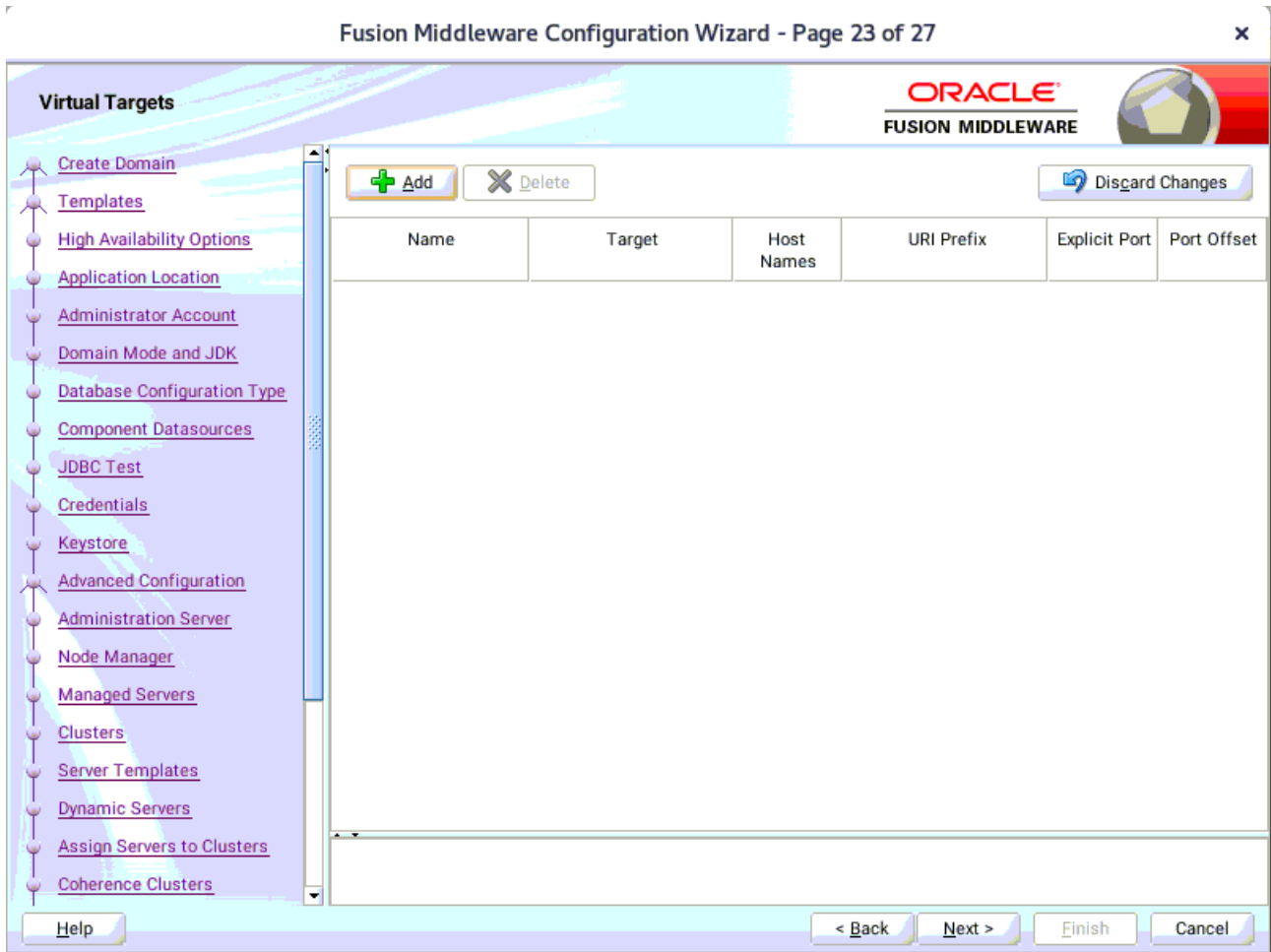
To create a new machine so that Node Manager can start and stop servers. Click **Next** to continue.

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



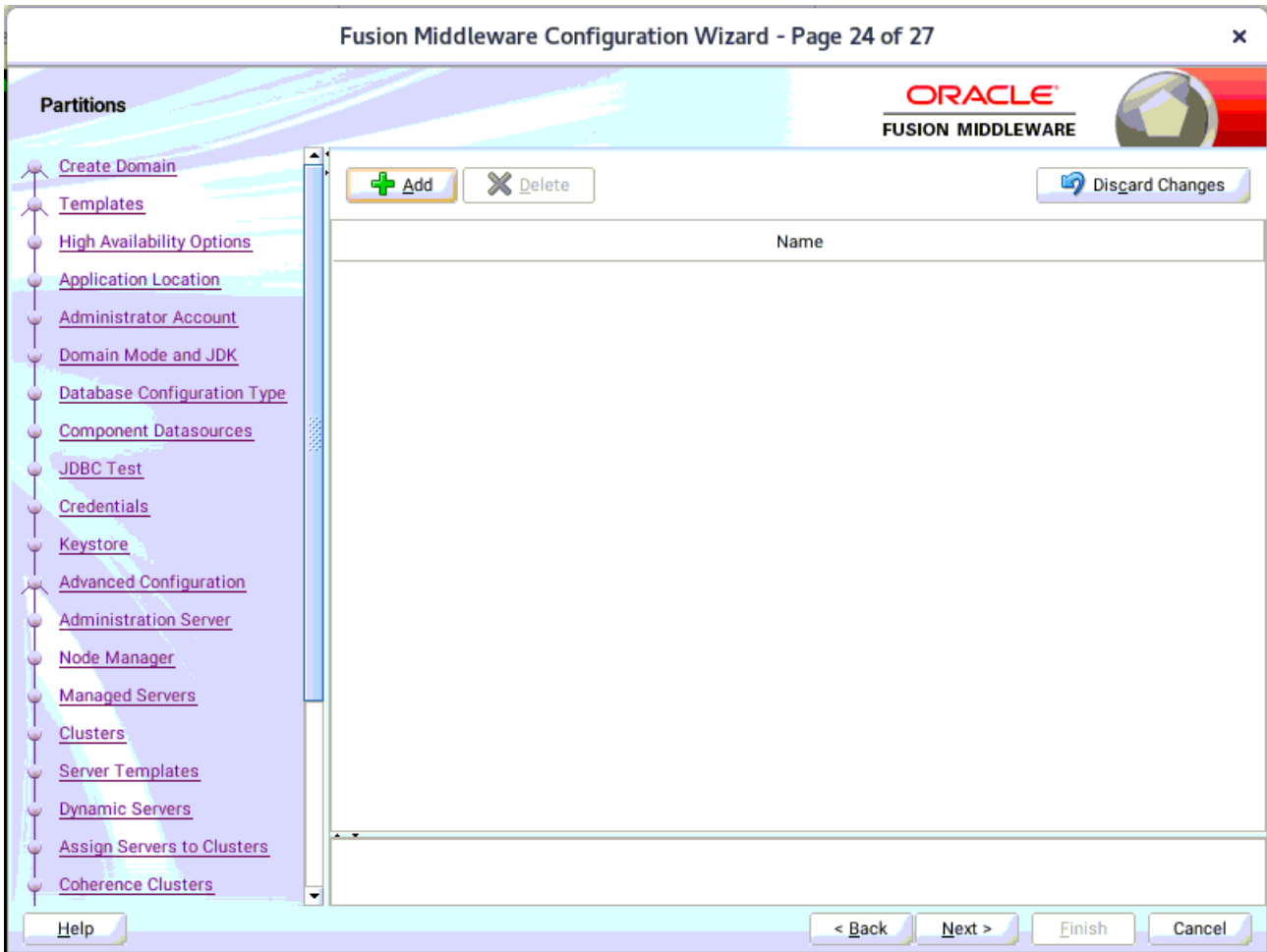
Use the **Assign Servers to Machines** screen to assign the Managed Servers to the new machine you just created. Click **Next** to continue.

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



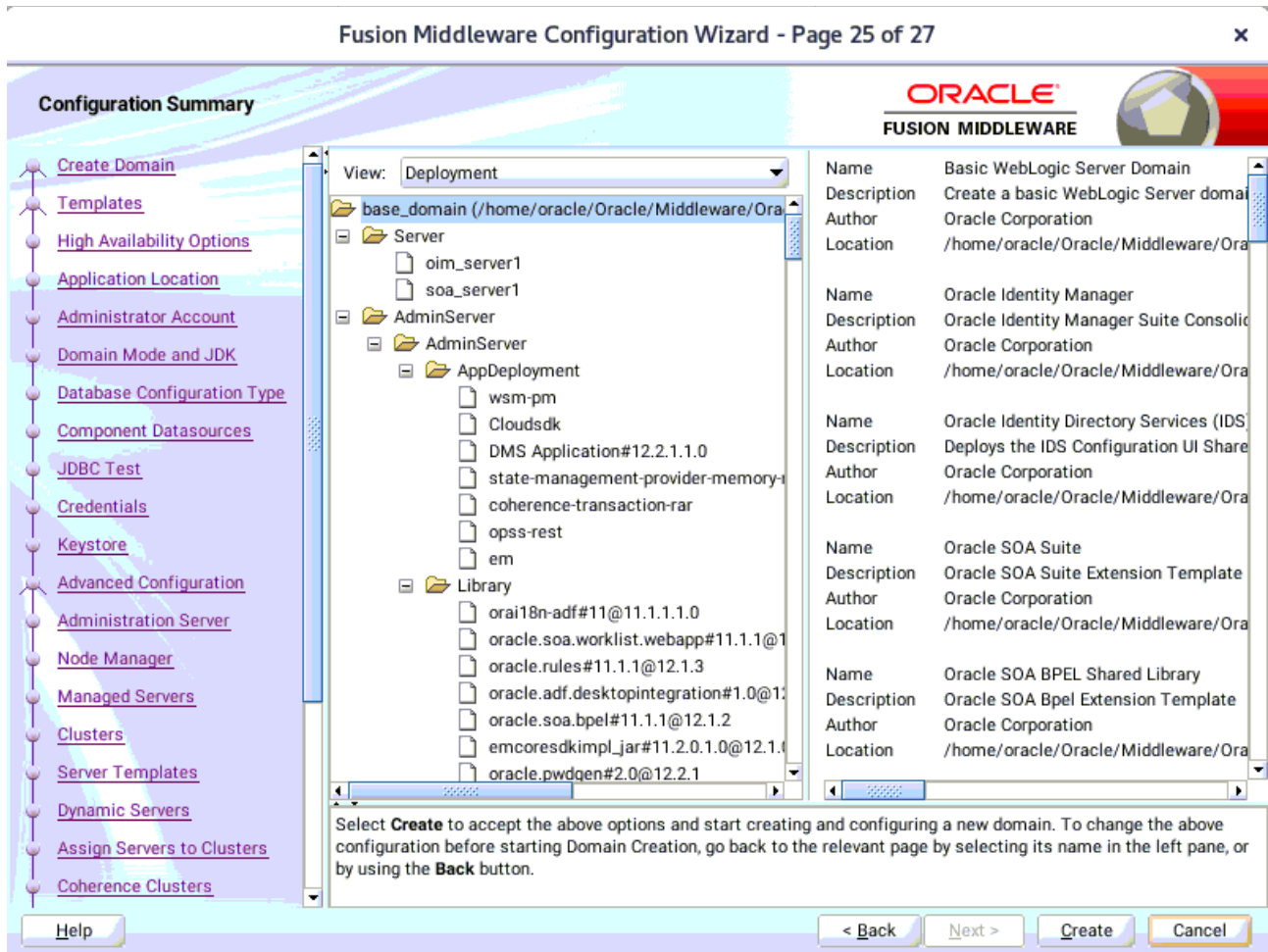
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

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



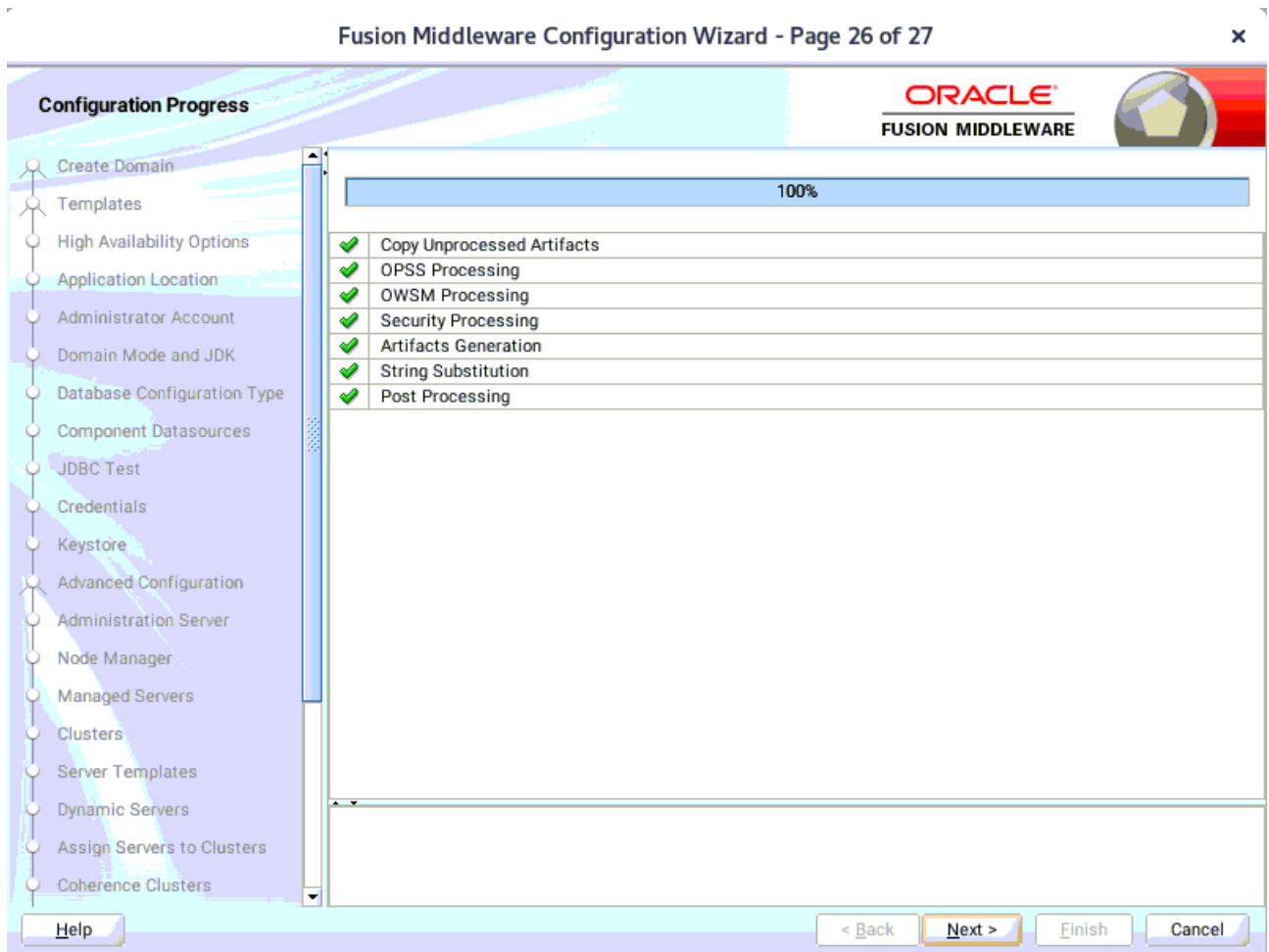
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

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



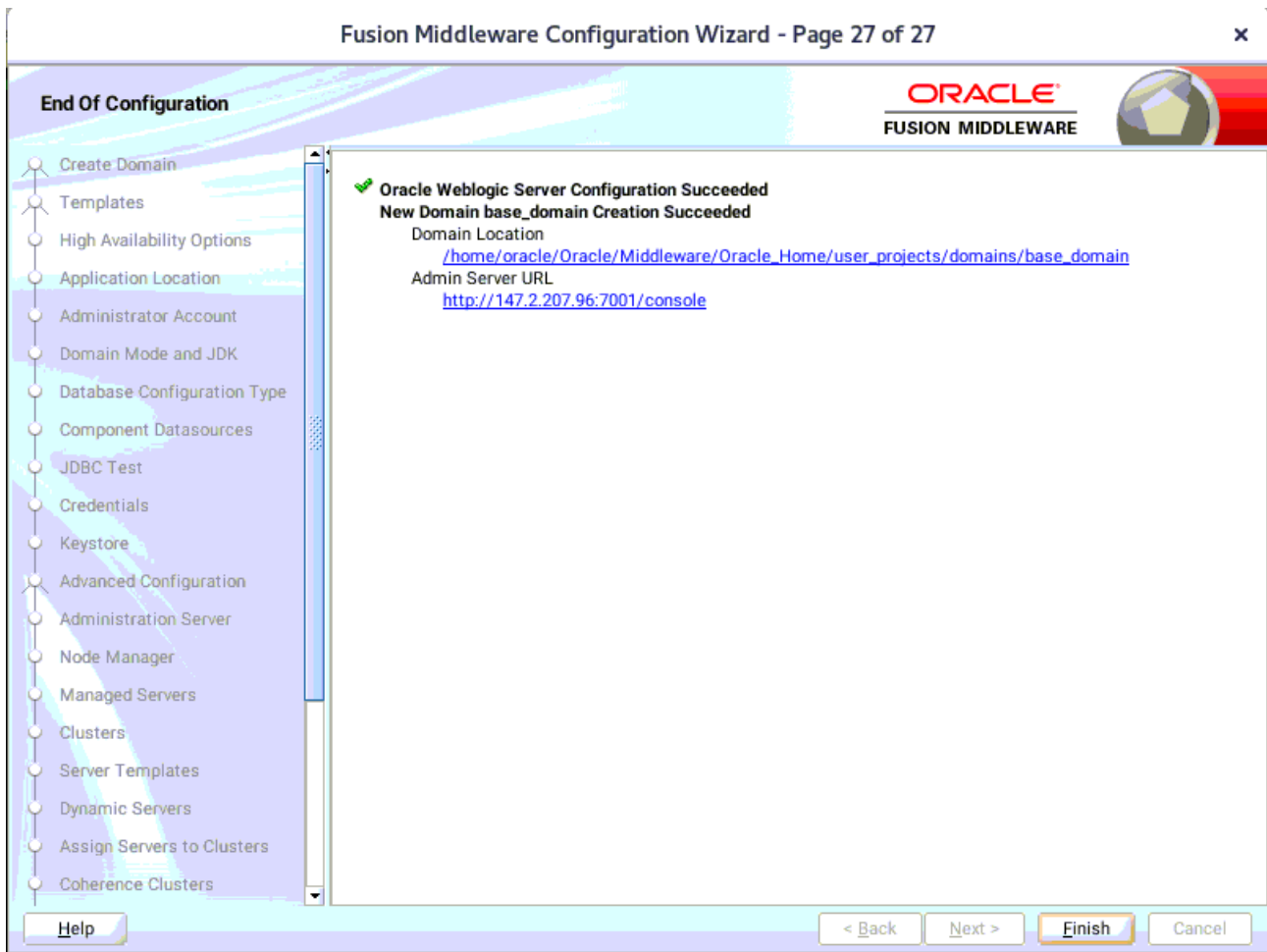
Select **Create** to accept the above options and start creating and configuring a new domain.

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.

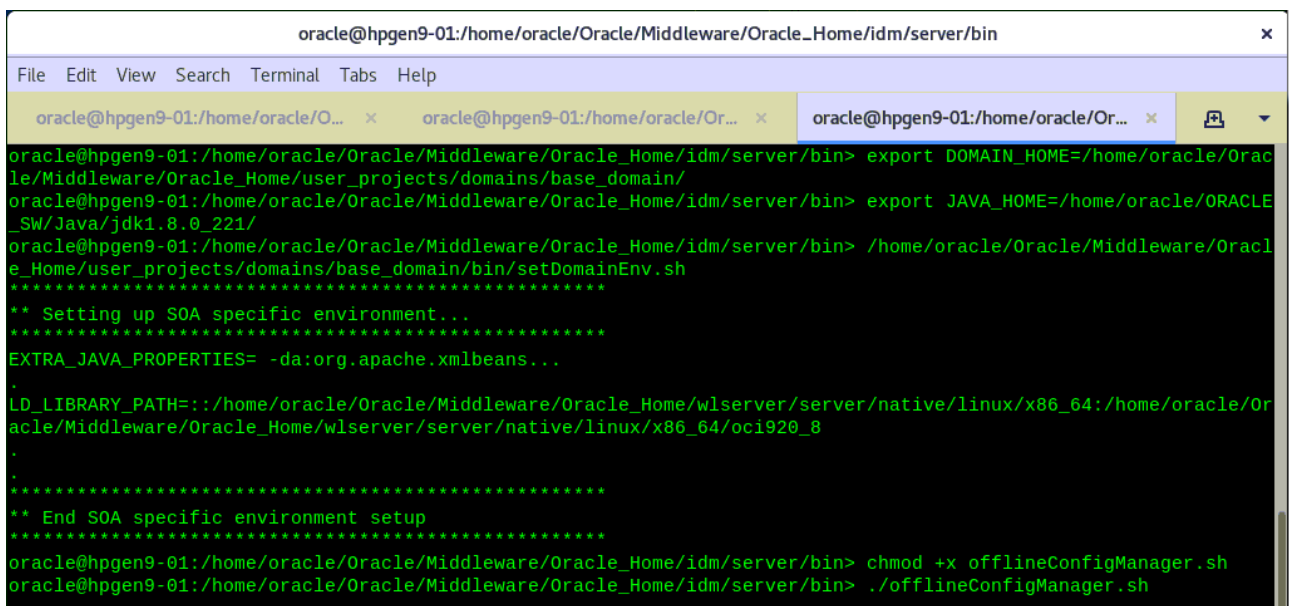
```
DOMAIN_HOME
JAVA_HOME
```

- 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
```



```
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/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/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_221/
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/bin> /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin/setDomainEnv.sh
*****
** Setting up SOA specific environment...
*****
EXTRA_JAVA_PROPERTIES= -da:org.apache.xmlbeans...
.
LD_LIBRARY_PATH=:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/native/linux/x86_64:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/native/linux/x86_64/oci920_8
.
*****
** End SOA specific environment setup
*****
oracle@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:/home/oracle/O... x oracle@hpgen9-01:/home/oracle/Or... x oracle@hpgen9-01:/home/oracle/Or... x
** Setting up SOA specific environment...
*****
EXTRA_JAVA_PROPERTIES= -da:org.apache.xmlbeans...
LD_LIBRARY_PATH=:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/native/linux/x86_64:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/native/linux/x86_64/oci920_8
.
*****
** End SOA specific environment setup
*****
oracle@hpgen9-01:/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/mbeantypes/ dir
copied /home/oracle/Oracle/Middleware/Oracle_Home/idm/server/loginmodule/wls/schema/* to /home/oracle/Oracle/Middleware/Oracle_Home/oracle_common/lib/schematypes/ dir

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

reading Domain --> base_domainat path --> /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/

```

```

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/idm/server/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
<Jan 17, 2020 4:32:37,203 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSConfigXMLForWLS() method of JPSConfigXMLUpdate class>
Jan 17, 2020 4:32:37 PM oracle.iam.OIMPostConfigManager.config.util.JPSConfigXMLUpdate updateJPSConfigXMLForWLS
INFO: Exiting updateJPSConfigXMLForWLS() method of JPSConfigXMLUpdate class
<Jan 17, 2020 4:32:37,205 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Updated jps-config-jse.xml Details.>
Jan 17, 2020 4:32:37 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSConfig
INFO:
Updated jps-config-jse.xml Details.
<Jan 17, 2020 4:32:37,207 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting updateJPSConfig() method of OIMConfigManager class>
Jan 17, 2020 4:32:37 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager updateJPSConfig
INFO: Exiting updateJPSConfig() method of OIMConfigManager class
<Jan 17, 2020 4:32:37,208 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <[OIM_CONFIG] Copying the mbean Files>
Jan 17, 2020 4:32:37 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
[OIM_CONFIG] Copying the mbean Files
<Jan 17, 2020 4:32:37,209 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Entering copyMbeanFiles() method of OIMConfigManager class>
Jan 17, 2020 4:32:37 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO: Entering copyMbeanFiles() method of OIMConfigManager class
<Jan 17, 2020 4:32:37,210 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Copying mbean files are successful>
Jan 17, 2020 4:32:37 PM oracle.iam.OIMPostConfigManager.config.OIMConfigManager copyMbeanFiles
INFO:
Copying mbean files are successful
<Jan 17, 2020 4:32:37,211 PM GMT+08:00> <Info> <oracle.iam.OIMPostConfigManager> <BEA-000000> <Exiting copyMbeanFiles() method of OIMConfigManager class>
Jan 17, 2020 4:32:37 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:/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/user_projects/domains/base_domain/bin> nohup ./startNodeManager.sh > nm.out&
[1] 23278
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_221/lib/tools.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./oracle_common/modules/thirdparty/ant-contrib-1.0b3.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.nodemanager.jar:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./home/oracle/Oracle/Middleware/Oracle_Home/wlserver/modules/features/oracle.wls.common.grizzly.jar
+ /home/oracle/ORACLE_SW/Java/jdk1.8.0_221/bin/java -server -Xms32m -Xmx200m -Djdk.tls.ephemeralDHKeySize=2048 -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./ -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1.3 -Dweblogic.RootDirectory=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -Djava.security.policy=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/weblogic.policy -Dweblogic.nodemanager.JavaHome=/home/oracle/ORACLE_SW/Java/jdk1.8.0_221 weblogic.NodeManager -v
<Jan 17, 2020 4:34:21 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jan 17, 2020 4:34:21 PM GMT+08:00> <INFO> <Upgrade> <Setting NodeManager properties version to 12.2.1.4.0>
<Jan 17, 2020 4:34:21 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'>
<Jan 17, 2020 4:34:21 PM GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<Jan 17, 2020 4:34:21 PM GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jan 17, 2020 4:34:21 PM oracle.security.jps.internal.config.xml.XmlConfigurationFactory validateFileLocation
INFO: JPS Config: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/

```

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
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.*]
<Jan 17, 2020 4:39:52,352 PM GMT+08:00> <Warning> <oracle.adfinternal.view.faces.partition.FeatureUtils> <ADF_FA
CES-30130> <Ignoring feature-dependency on feature "AdfUIChoose". No such feature exists.>
<Jan 17, 2020 4:39:53,426 PM GMT+08:00> <Notice> <Log Management> <BEA-170027> <The server has successfully esta
blished a connection with the Domain level Diagnostic Service.>
<Jan 17, 2020 4:39:54,107 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Jan 17, 2020 4:39:54,186 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING
.>
<Jan 17, 2020 4:39:54,186 PM GMT+08:00> <Notice> <JMX> <BEA-149535> <JMX Resiliency Activity Server=All Servers
: Resolving connection list DomainRuntimeServiceMBean>
<Jan 17, 2020 4:39:55,493 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Admi
nistration Server "AdminServer" for domain "base_domain" running in production mode.>
<Jan 17, 2020 4:39:55,494 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.>
<Jan 17, 2020 4:39:55,495 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.>
<Jan 17, 2020 4:39:55,496 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mo
de.>
<Jan 17, 2020 4:39:55,522 PM GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.
>

```

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

---

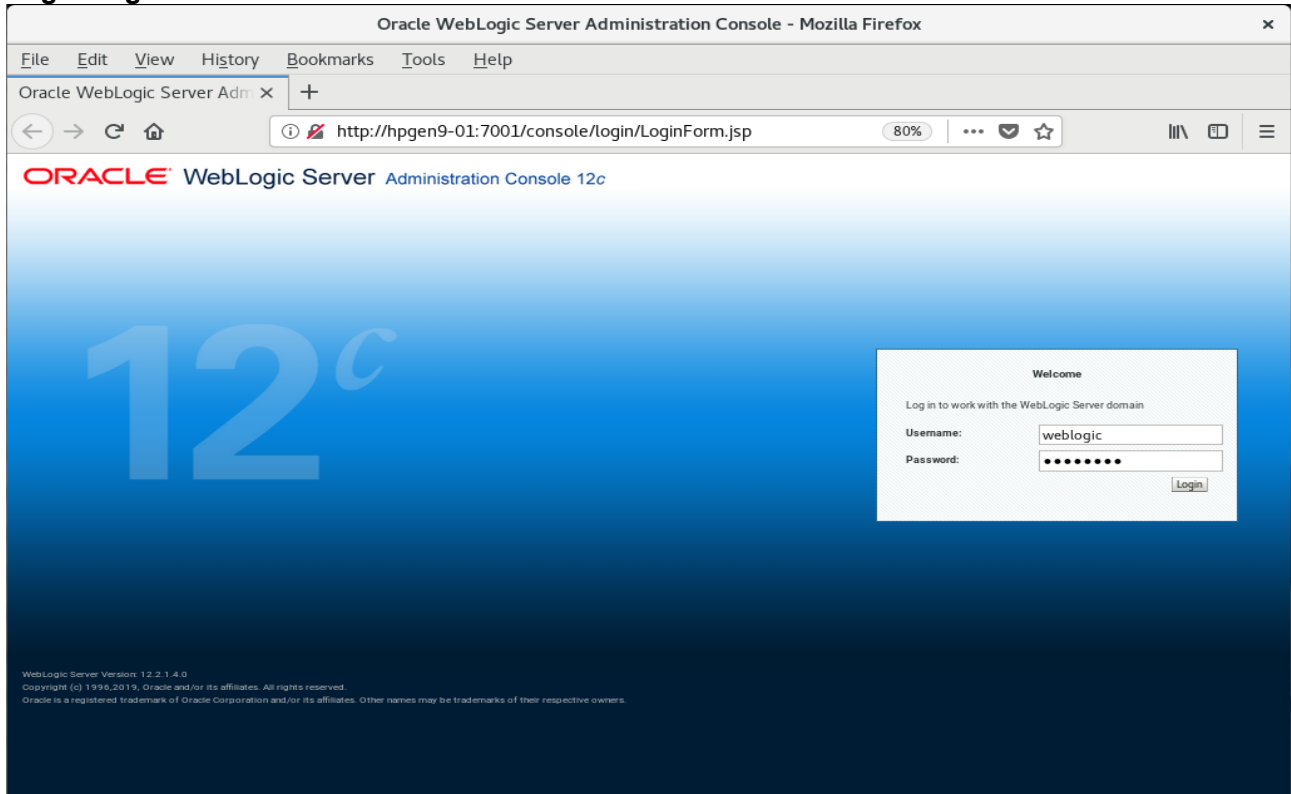
*Server state changed to RUNNING.*

---

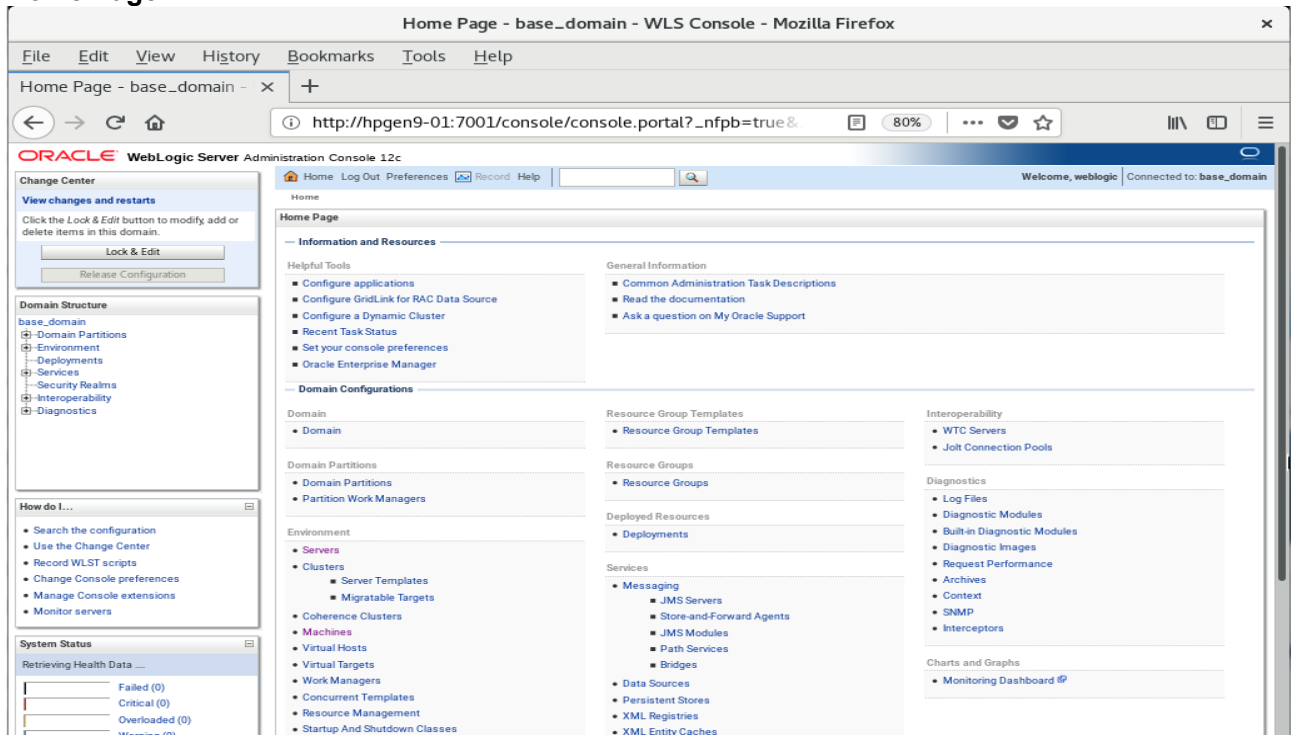
### 3-3. Checking Oracle Identity and Access Management 12c Product URLs.

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

#### Login Page:



#### Home Page:



**Viewing the summary of servers:**

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

Summary of Servers

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

Customize this table

Servers (Filtered - More Columns Exist)

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

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		suse_Machine_1	RUNNING	OK	7001
oim_server1	Configured	oim_cluster_1	suse_Machine_1	SHUTDOWN	Not reachable	14000
soa_server1	Configured	soa_cluster_1	suse_Machine_1	SHUTDOWN	Not reachable	7003

Verify that the Admin Server can connect to the node manager running on your machine.

**Environments -> Machines -> <your machine> -> Monitoring.** The status should show: **Reachable**

Settings for suse\_Machine\_1 - base\_domain - WLS Console - Mozilla Firefox

Settings for suse\_Machine\_1

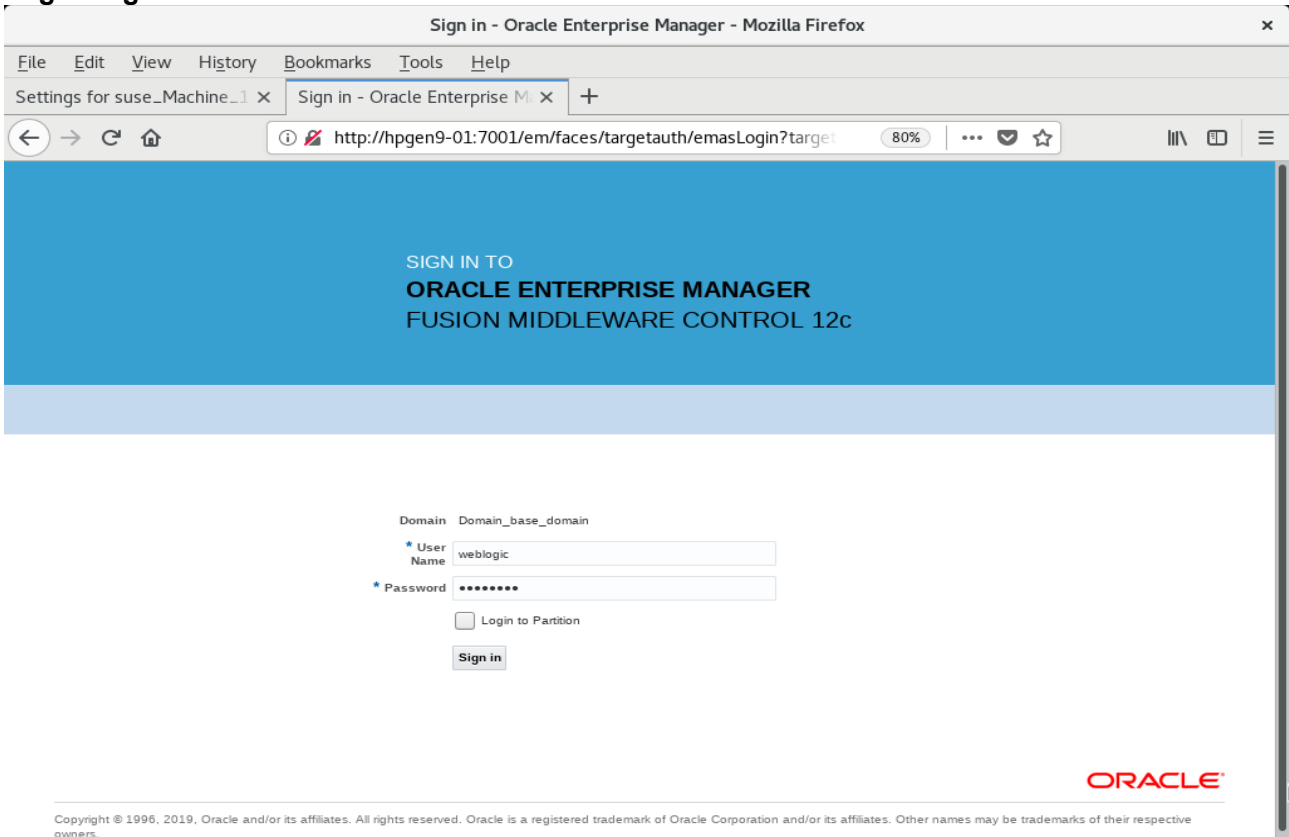
Node Manager Status

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

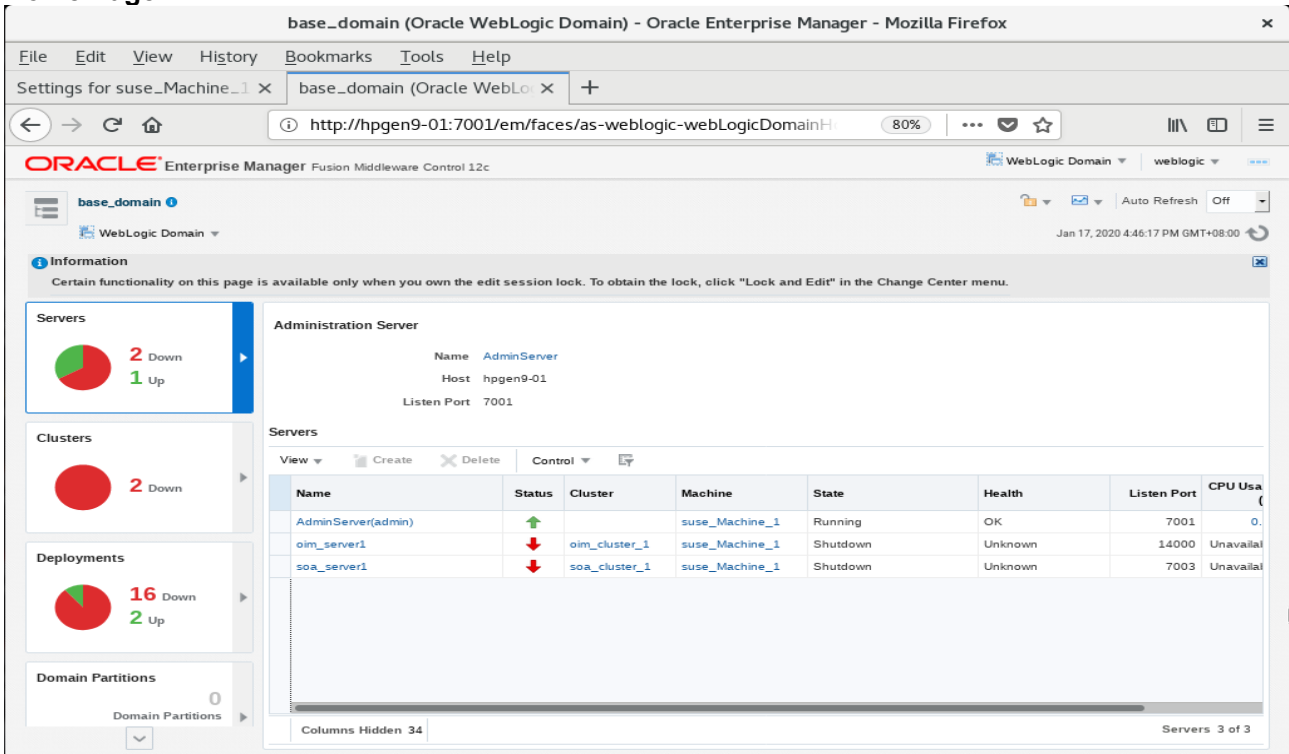
Status:	Reachable	Current status of this Node Manager. <a href="#">More Info...</a>
Version:	12.2.1.4.0	Version string returned from the Node Manager. <a href="#">More Info...</a>

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:

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Domain named 'base\_domain'. On the left, there are summary cards for Servers (1 Down, 2 Up), Clusters (1 Down, 1 Up), Deployments (10 Down, 8 Up), and Domain Partitions (0). The main area displays the 'Administration Server' details and a table of managed servers.

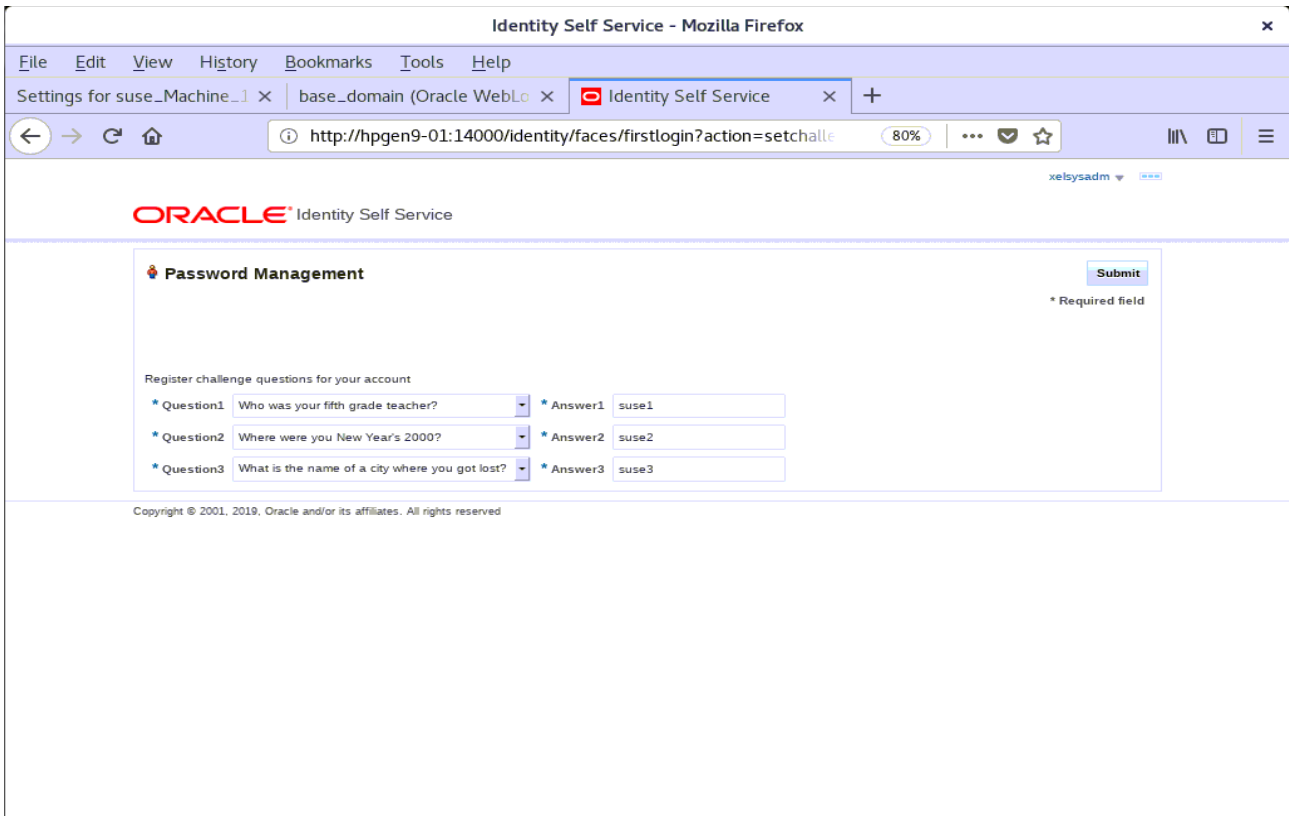
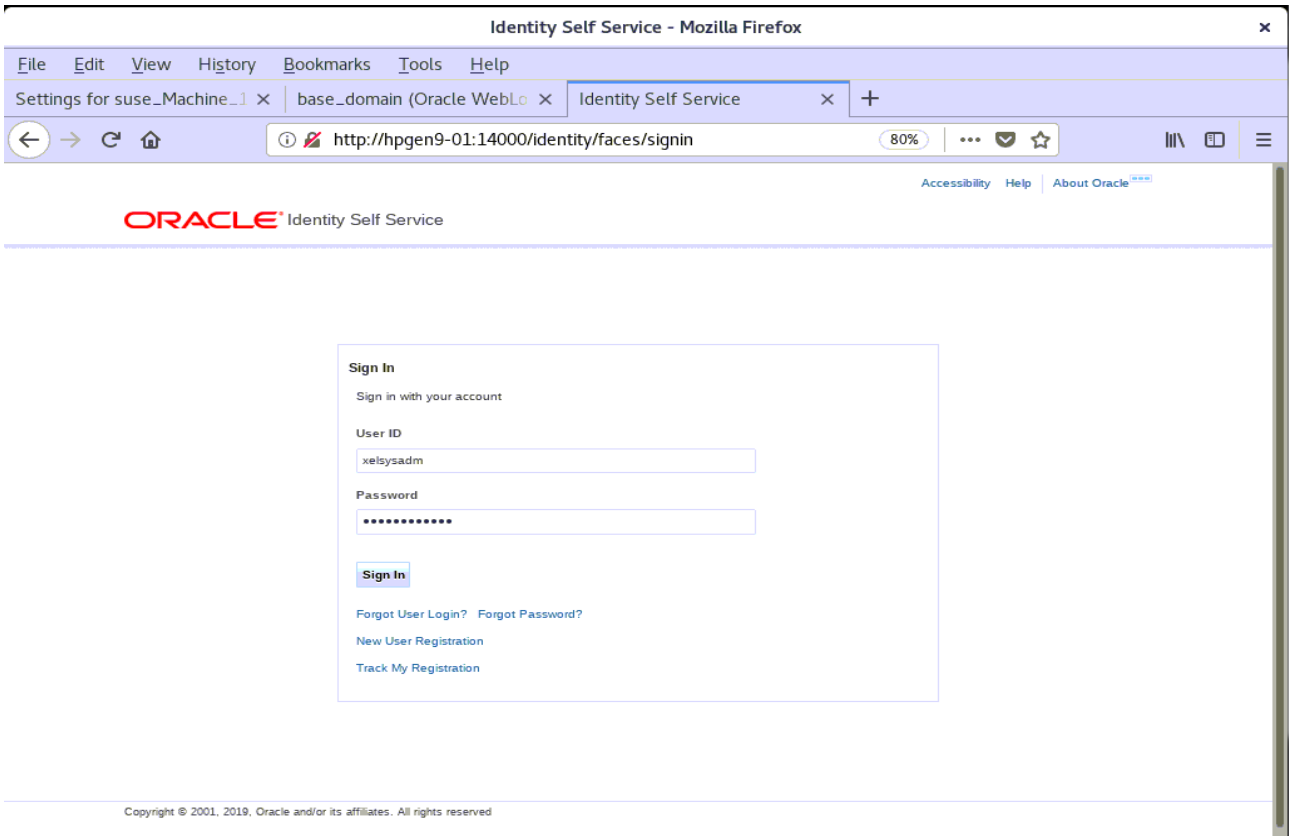
Name	Status	Cluster	Machine	State	Health	Listen Port	CPU Usage (%)
AdminServer(admin)	↑		suse_Machine_1	Running	OK	7001	2.46
oim_server1	↓	oim_cluster_1	suse_Machine_1	Shutdown	Unknown	14000	Unavailable
soa_server1	↑	soa_cluster_1	suse_Machine_1	Running	OK	7003	10.27

The screenshot shows the Oracle Enterprise Manager interface after the servers have been started. The summary cards now show Servers (3 Up), Clusters (2 Up), and Deployments (7 Down, 11 Up). The main area displays the 'Administration Server' details and a table of managed servers.

Name	Status	Cluster	Machine	State	Health	Listen Port	CPU Usage (%)
AdminServer(admin)	↑		suse_Machine_1	Running	OK	7001	0.91
oim_server1	↑	oim_cluster_1	suse_Machine_1	Running	OK	14000	Unavailable
soa_server1	↑	soa_cluster_1	suse_Machine_1	Running	OK	7003	0.21

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

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





The screenshot shows the Oracle Identity Self Service web application interface. The browser window title is "Identity Self Service - Mozilla Firefox". The address bar shows the URL "http://hpgen9-01:14000/identity/faces/home". The page header includes the Oracle logo and "Identity Self Service" text, along with "Sandboxes", "Customize", and a user profile "xelsysadm". There are two main navigation buttons: "Self Service" and "Manage".

The main content area is titled "Home" and contains six tiles arranged in a 2x3 grid:

- My Information**: Manage your profile, passwords and challenge questions.
- My Access**: See what you have access to.
- Request Access**: Request access for yourself or for others.
- Track Requests**: Track the status of your pending requests.
- Provisioning Tasks**: Take action on fulfillment tasks assigned to you.
- Pending Approvals**: Take action on requests assigned to you for approvals.

At the bottom of the page, there is a copyright notice: "Copyright © 2001, 2019, Oracle and/or its affiliates. All rights reserved."



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

Welcome to the Oracle SOA Platform on WebLogic - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Settings for suse\_Machir x base\_domain (Oracle We x Identity Self Service x Identity System Admi x Welcome to the Oracle S x +

← → ↻ 🏠 ⓘ http://hpgen9-01:7003/soa-infra/ 80% ⋮ 📄 ☆ 🖨 📖 ☰

## Welcome to the Oracle SOA Platform on WebLogic

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

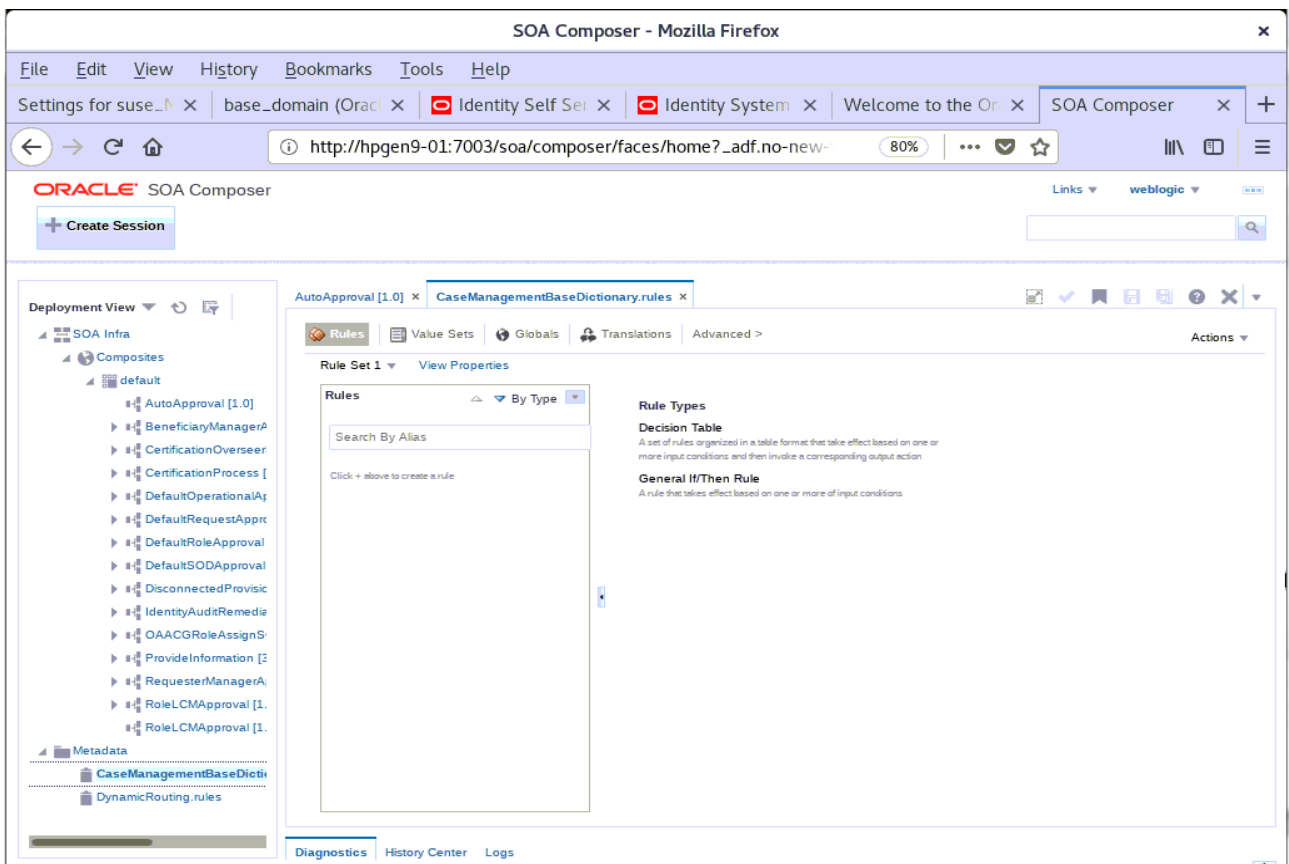
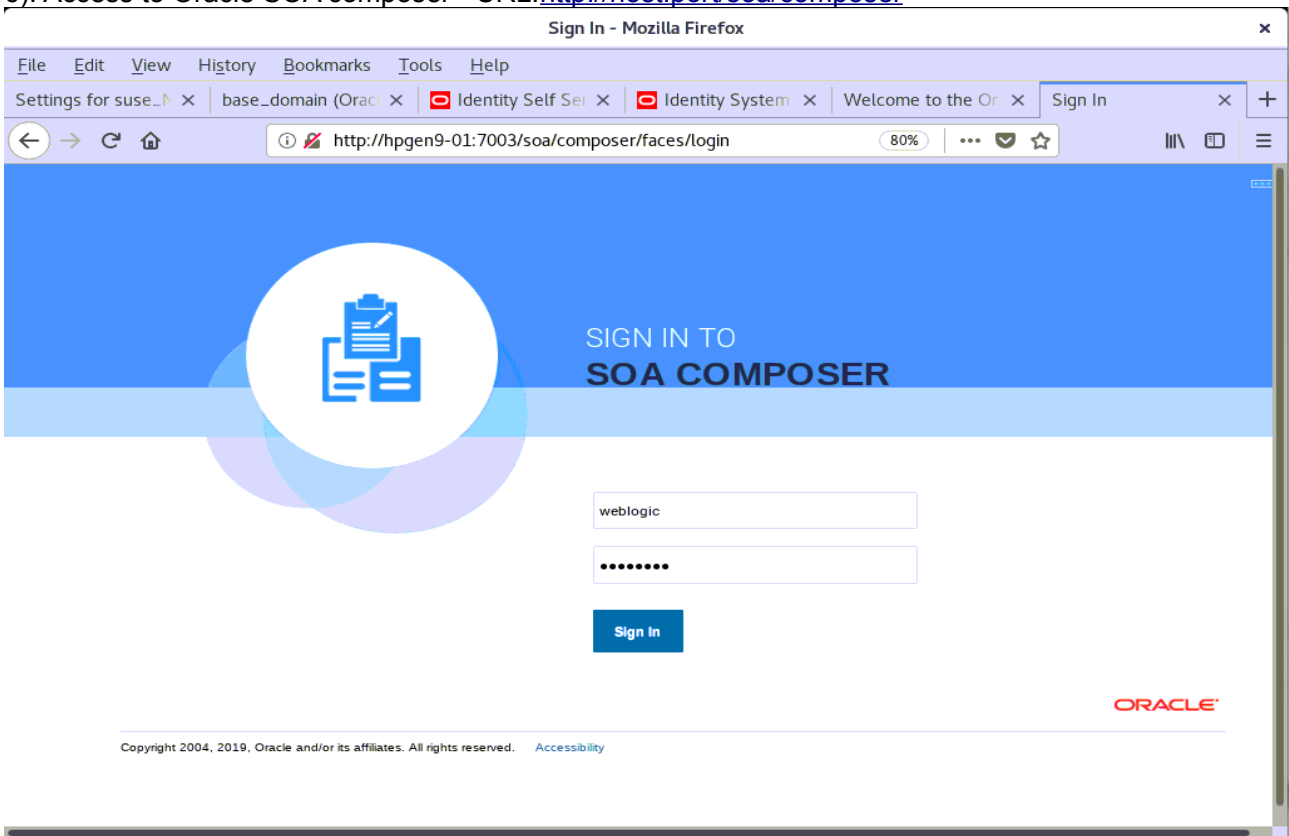
The following composites are currently deployed:

- default/AutoApproval!1.0\*soa\_837a917e-f33d-4dfd-a675-e1ef5fd93b88
  - [Test RequestApprovalService](#)
- default/BeneficiaryManagerApproval!4.0\*soa\_e1612ae0-b783-4a89-ac95-13c2bca3434d
  - [Test RequestApprovalService](#)
- default/CertificationOverseerProcess!2.0\*soa\_720e8a46-fb27-46fe-b67b-2bfabe2dd46e
  - [Test CertificationTaskService](#)
- default/CertificationProcess!2.0\*soa\_16666342-d04c-4e32-a6d5-173521dd036b
  - [Test CertificationTaskService](#)
- default/DefaultOperationalApproval!5.0\*soa\_33e867f7-0975-43b0-818a-8db2340e44b5
  - [Test RequestApprovalService](#)
- default/DefaultRequestApproval!6.0\*soa\_82d7205f-c929-4e92-9d2d-7d12ffad000f
  - [Test RequestApprovalService](#)
- default/DefaultRoleApproval!3.0\*soa\_488b54ba-5003-4f4f-9164-aa88bfd02708
  - [Test RequestApprovalService](#)
- default/DefaultSODApproval!2.0\*soa\_67e10934-0d83-40a1-b179-739bda7cd2eb
  - [Test RequestApprovalService](#)
- default/DisconnectedProvisioning!2.0\*soa\_e42de6a7-5944-4fd4-95ad-9bdc6ef9fab4
  - [Test manualprovisioningprocess\\_client](#)
- default/IdentityAuditRemediation!1.0\*soa\_3c5292f2-4fb2-4984-95fb-767305d3ce2f
  - [Test IdentityAuditRemediationService](#)
- default/OAACGRoleAssignSODCheck!1.0\*soa\_66417375-3036-4692-845c-19e5eedcd64a
  - [Test RequestApprovalService](#)
- default/ProvideInformation!3.0\*soa\_4daca0b0-d84c-4539-a045-bad39a0f7085
  - [Test RequestApprovalService](#)
- default/RequesterManagerApproval!3.0\*soa\_964adced-04ba-40ec-82b5-d4c077f97c0b
  - [Test RequestApprovalService](#)

Links

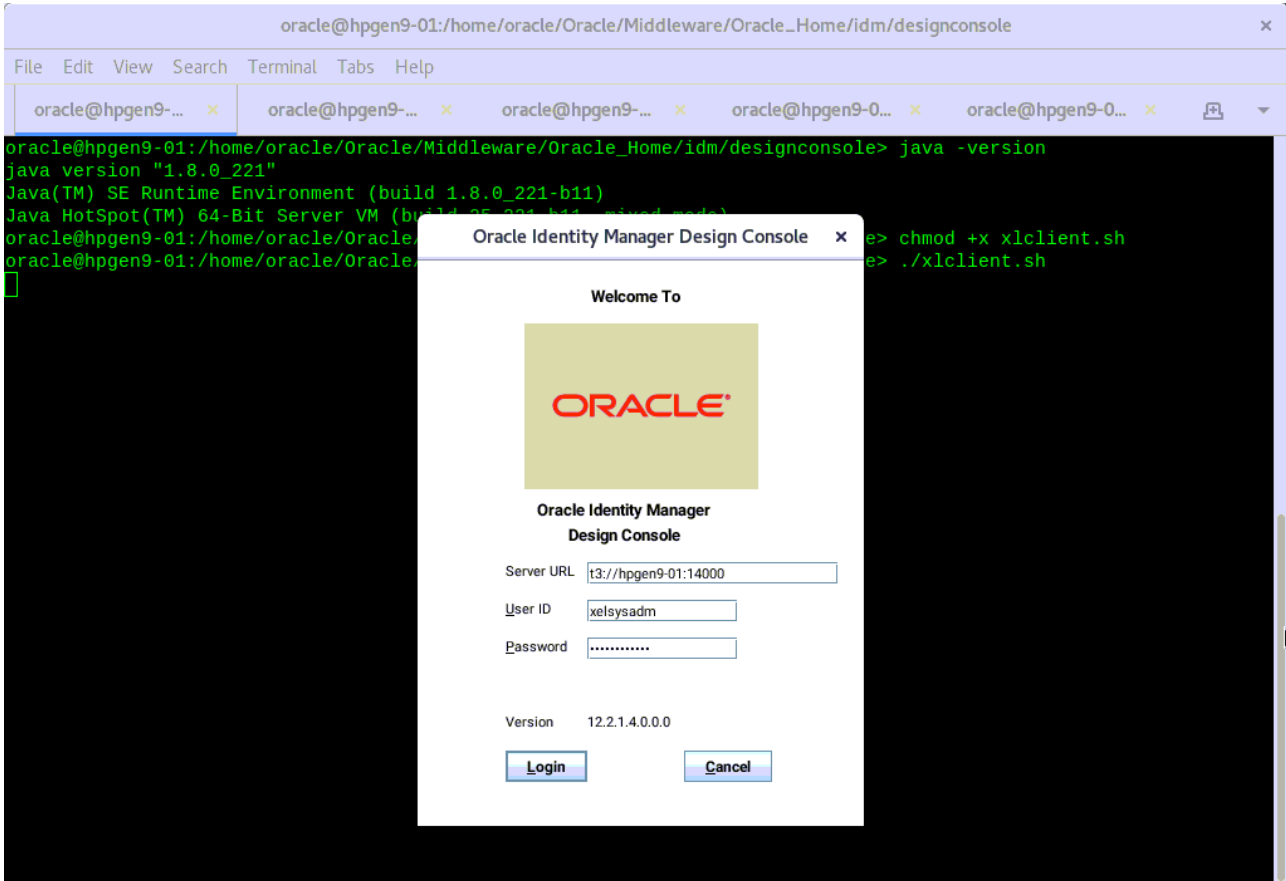
- [SOA Composer](#)
- [BPM Worklist](#)

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

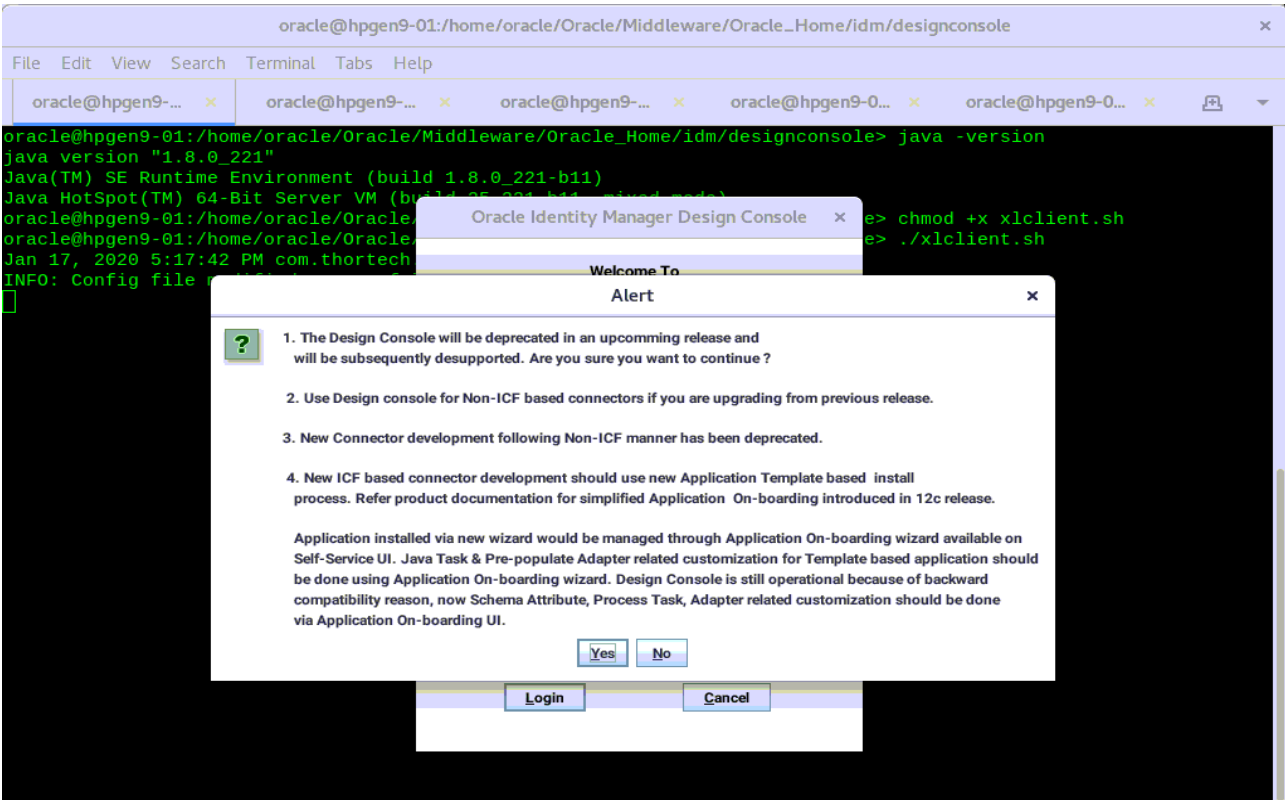


7). Verifying connection for OIM design console. Launch the Design Console (via the xlclient.sh script in \$MW\_HOME/idm/designconsole)

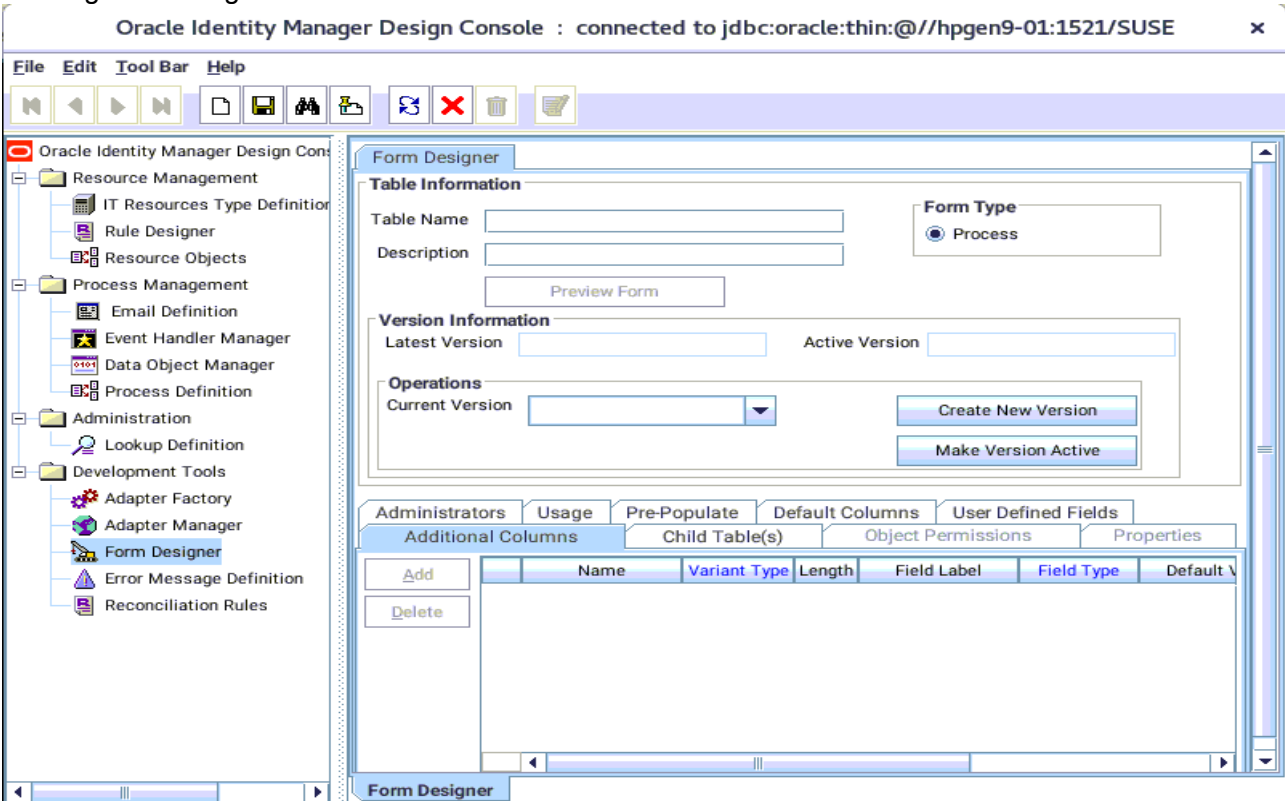
```
export JAVA_HOME=xxx  
chmod +x xlclient.sh  
./xlclient.sh
```



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



Viewing OIM Design Console.



**End of Oracle Identity Manager.**

## Additional Comments

This document shows how to install and configure a standard topology for Oracle Fusion Middleware components 12c on SLES 15 SP1. You can extend this topology to make it highly available and secure so it is suitable for a production system.

**SUSE ISV Engineering Team**  
**Jan 23rd, 2020**  
<https://www.suse.com>