Oracle Fusion Middleware 12c - Forms and Reports (12.2.1.0) on SUSE Linux Enterprise Server 12 (SP1) for x86-64

http://www.suse.com

Table of Contents

Introduction

This document provides details on installing and configuring Oracle Fusion Middleware 12c Forms and Reports (12.2.1.0) on SUSE Linux Enterprise Server 12 (SP1). Details are provided for Intel x86-64 versions of both Oracle Forms and Reports 12cR2 and SUSE Linux Enterprise Server 12. 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.

Official Oracle product documentation is available at: http://docs.oracle.com/en/

System Requirements and Specifications

Hardware Requirements

Requirement	Minimum
CPU	1-GHz CPU
Physical Memory	4 GB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	4 GB
Disk space for software files	4 GB

Software Requirements

SUSE

• SUSE Linux Enterprise Server 12 SP1 - (x86-64)
(http://download.suse.de/install)

Oracle

• Database 12cR1 (12.1.0.2.0) - (x86_64)
(http://www.oracle.com/technetwork/indexes/downloads/index.html#database)

• Java SE Development Kit 8 (jdk-8u91-linux-x64.tar.gz)
(http://www.oracle.com/technetwork/indexes/downloads/index.html#java)

• WebLogic Server 12cR2 (12.2.1) - (Fusion Middleware Infrastructure Installer)
(http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware)

• Forms and Reports 12c (12.2.1.0) - (x86_64)
(http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware)

Testing machine information

HP DL388 Gen9 Server
CPU: 2 * Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz
RAM: 64 GB
NIC: 8
Local HDD: 2TB
OS: SUSE Linux Enterprise Server 12 SP1 (x86-64) - Kernel version: 3.12.49-11-default

Prerequisites

1. Installing SUSE Linux Enterprise Server 12

1-1. Follow the installation document (URL:https://www.suse.com/documentation/sles-12/) to Install SLES 12 SP1 (x86-64) on the target machine.

Figure 1-1 Software Installed as shown below

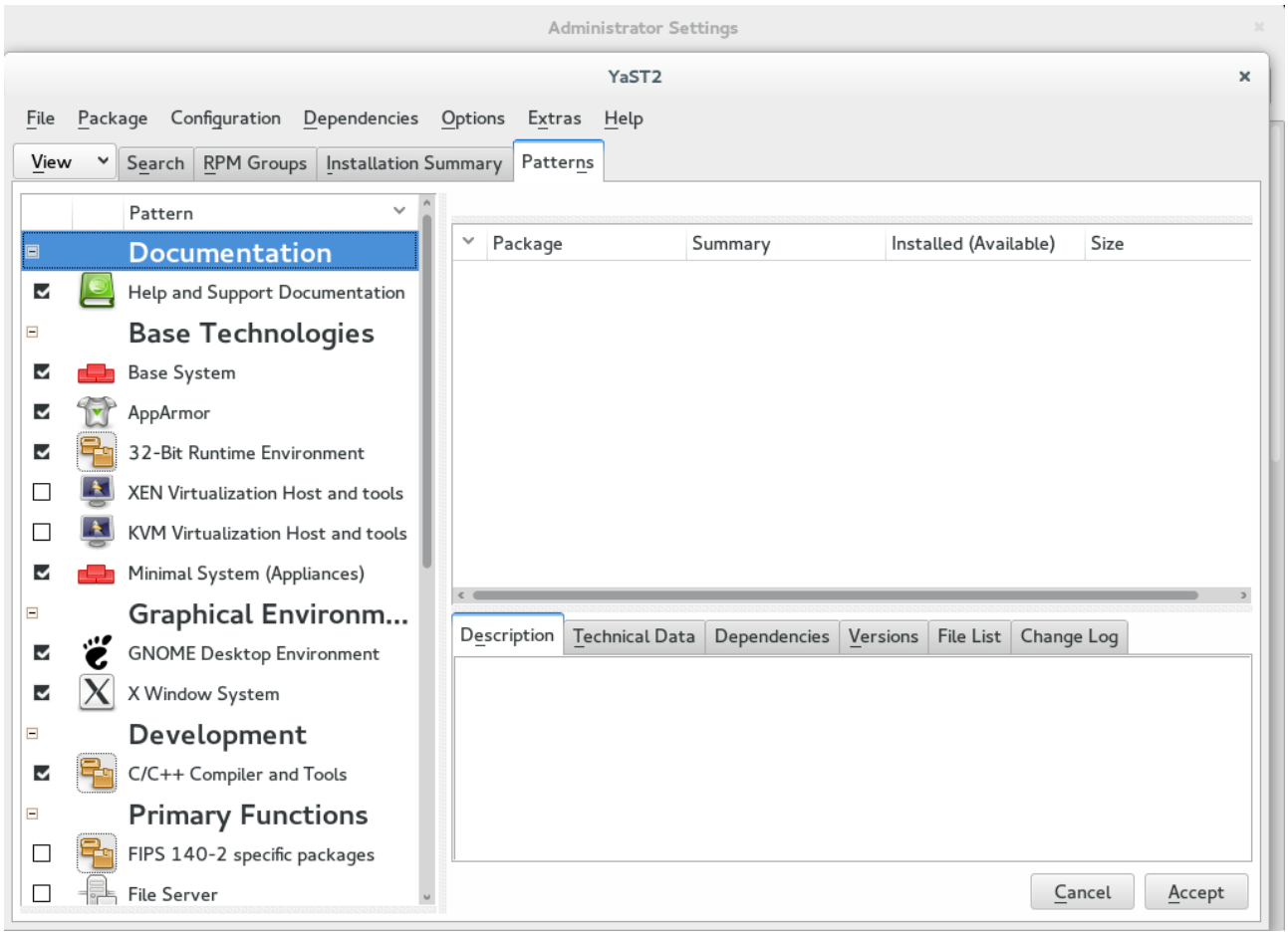


Figure 1-2 Software Installed as shown below

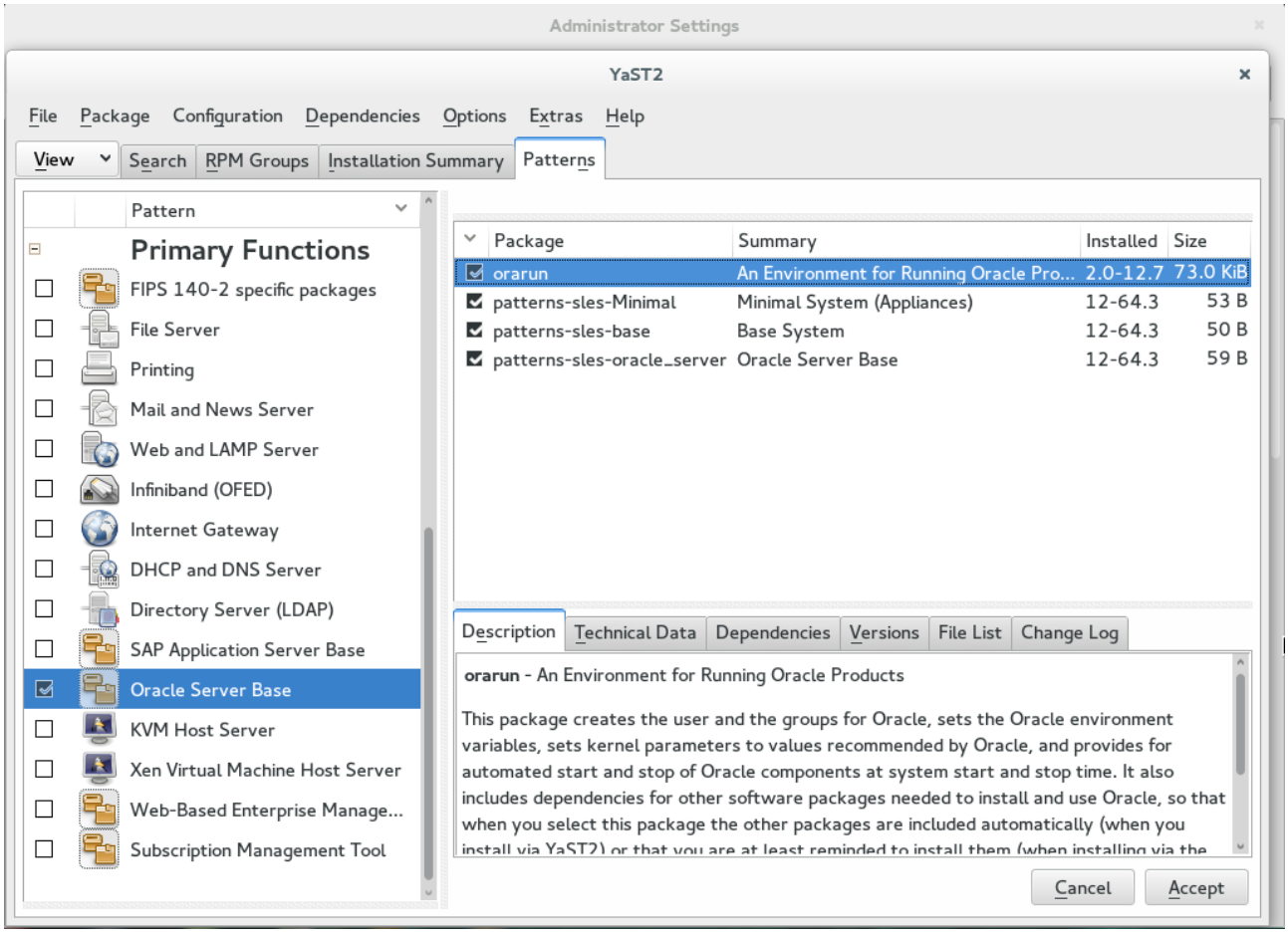


Figure 1-3 OS release information and kernel version

```
oracle@hpgen9-01:~> more /etc/os-release
NAME="SLES"
VERSION="12-SP1"
VERSION_ID="12.1"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp1"
oracle@hpgen9-01:~> uname -a
Linux hpgen9-01 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015 (8d714a0) x86_64 x86_64 x86_64 GNU/Linux
oracle@hpgen9-01:~>
```

1-2. Special Startup Requirements.

1). Increase the value for 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.

```
ulimit -n
```

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

```
* soft nofile 1024
```

Change the values from 1024 to 4096, then reboot the machine.

2. Installing Oracle Database 12cR1

2-1. Log in to the target system (SLES 12 SP1 64-bit OS) as a non-admin user. Download Oracle Database 12cR1 (12.1.0.2) x86_64 from http://www.oracle.com/technetwork/indexes/downloads/index.html#database.

2-2. Oracle Database 12cR1 (12.1.0.2) is officially certified for SLES12 (SP1). 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

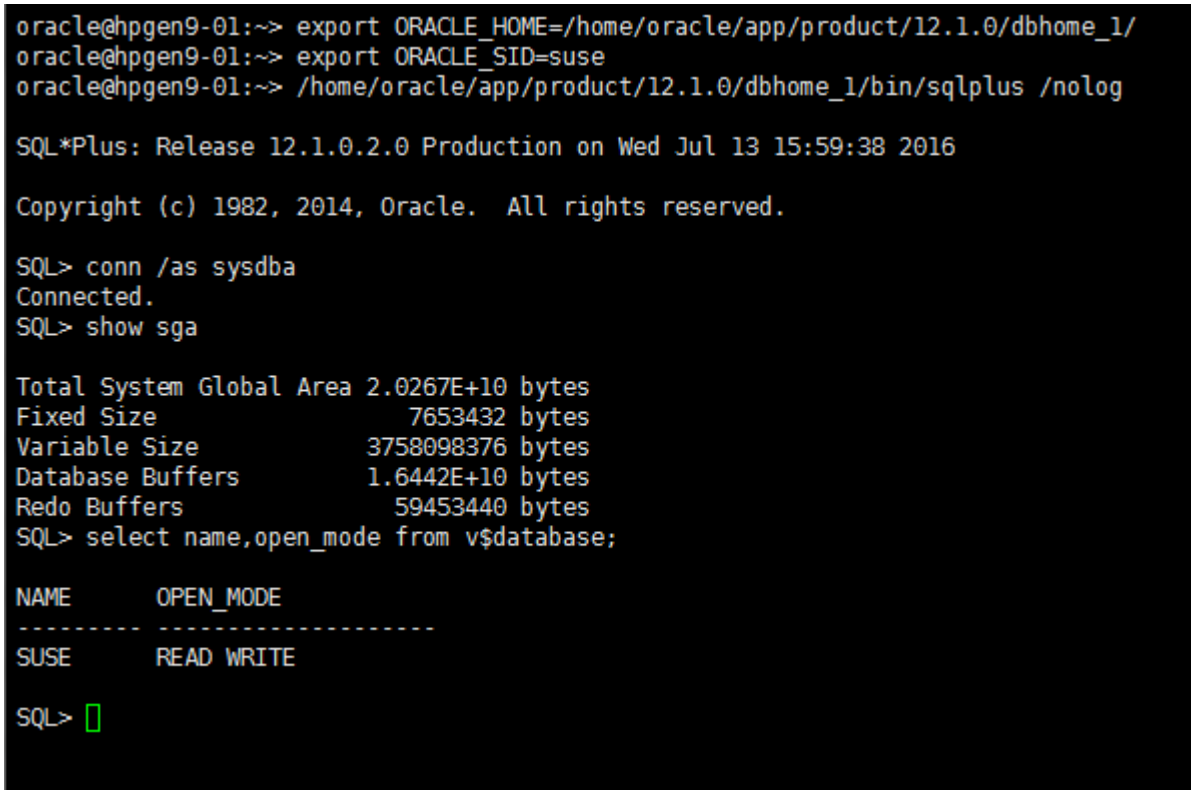
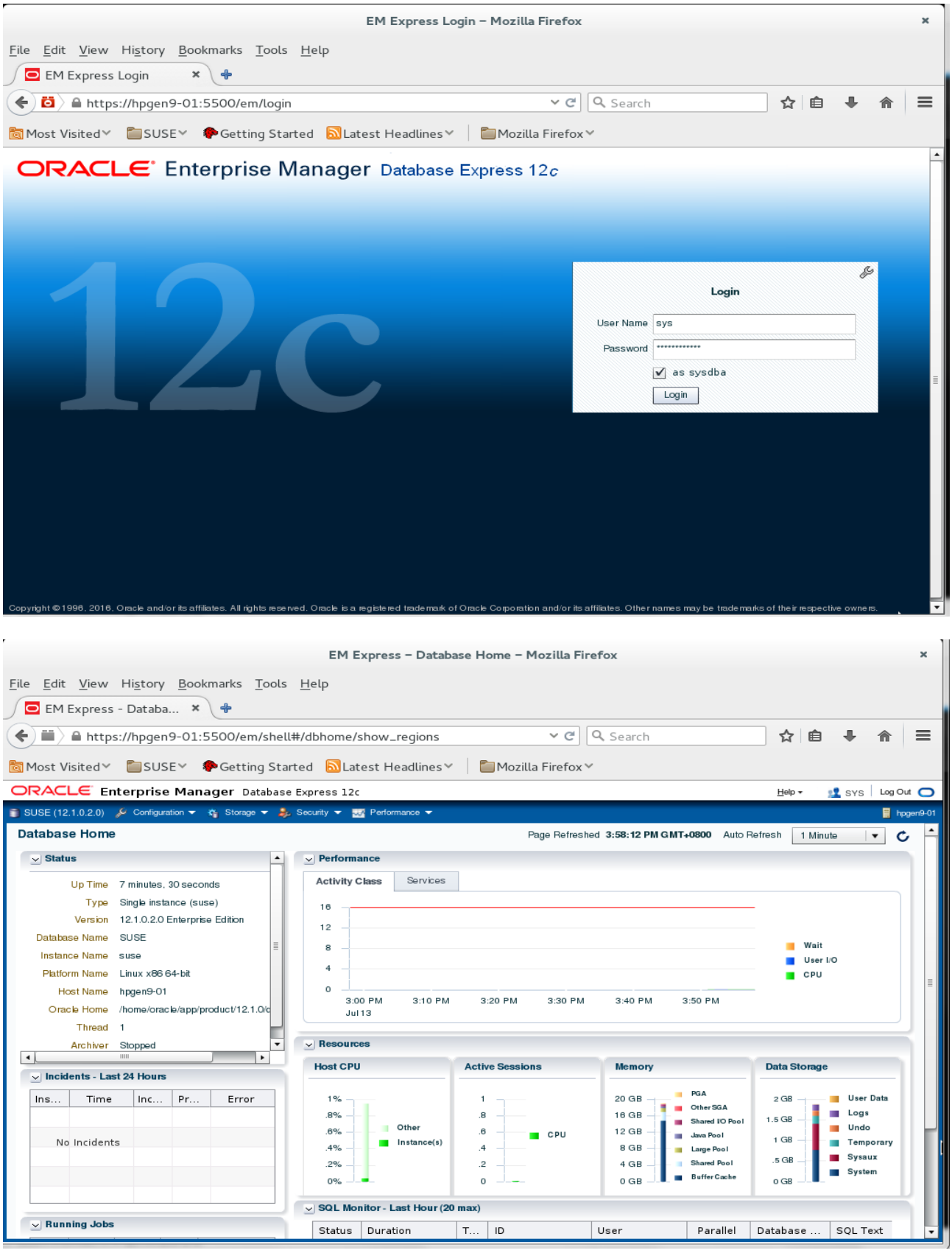
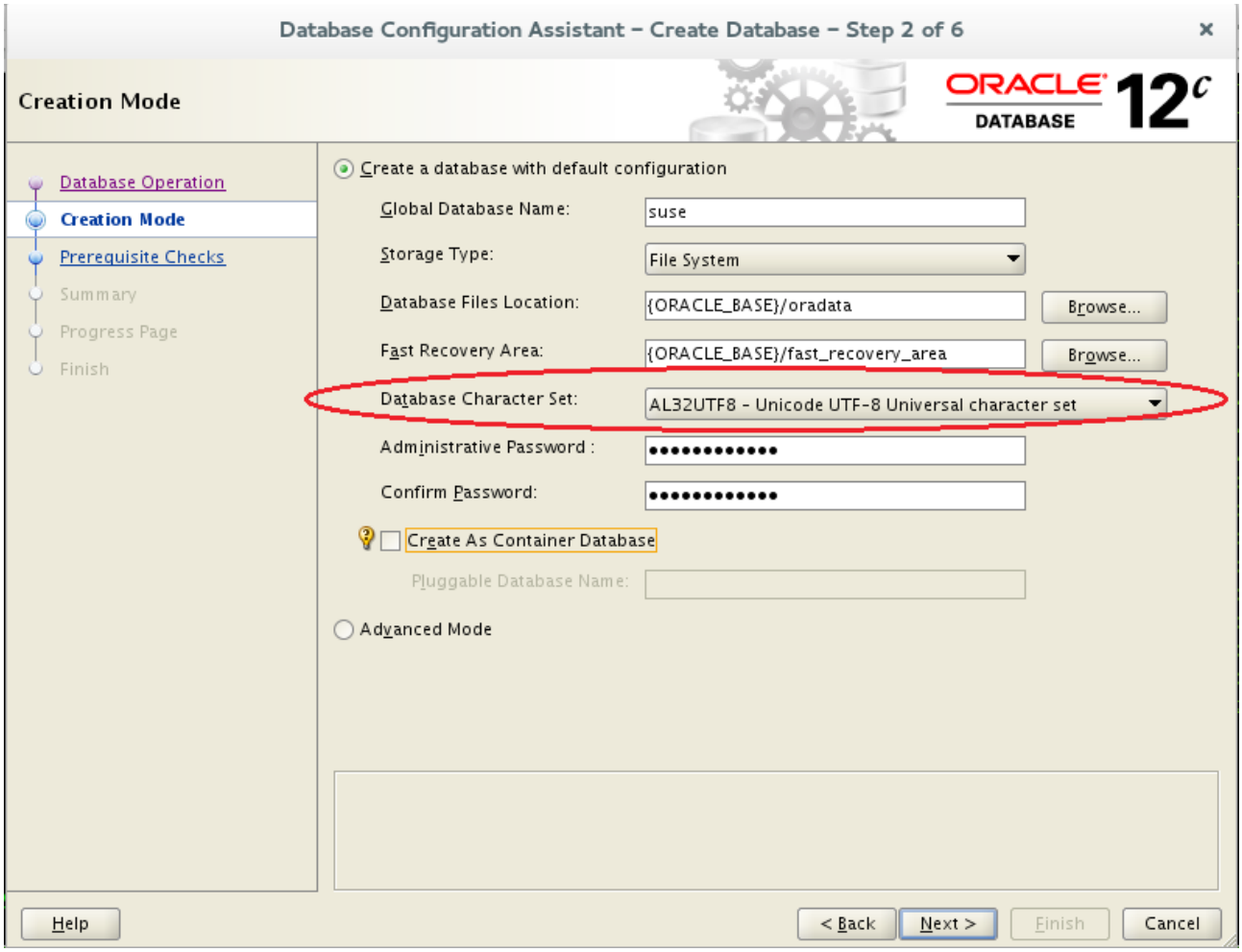


Figure 2-1 Access to Oracle Database 12cR1 Enterprise Manager



(**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.



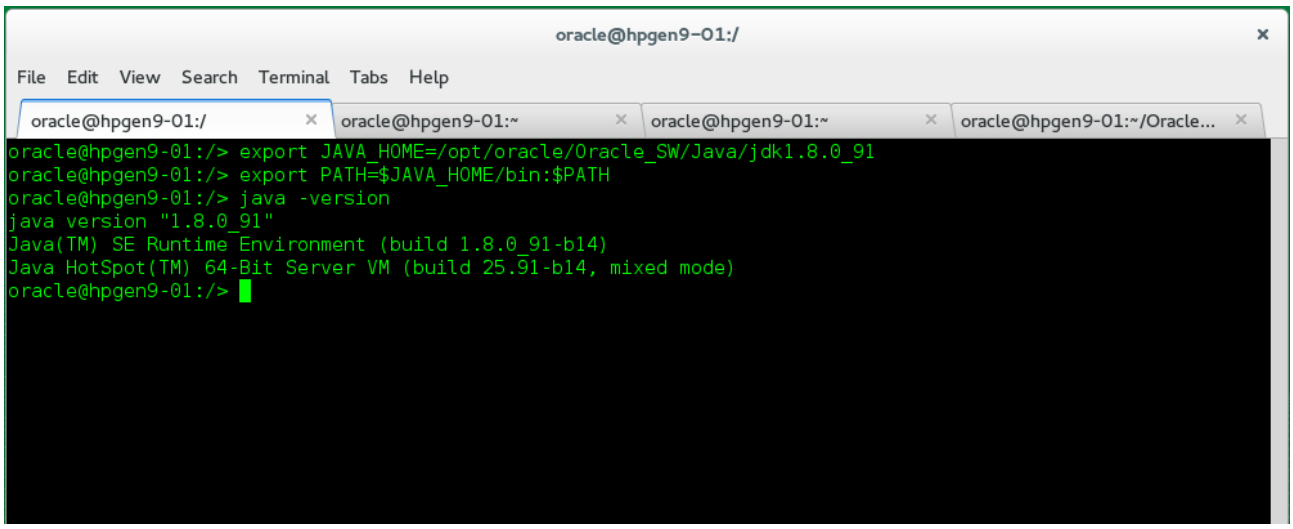
)

3. Installing Java

3-1. Log in to the target system (SLES 12 64-bit OS) as a non-admin user. Download Java SE Development Kit 8 (jdk-8u91-linux-x64.tar.gz) from
http://www.oracle.com/technetwork/indexes/downloads/index.html#java

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

Figure 2-1 Java information



(**Note**: Oracle WebLogic Server 12cR2 (12.2.1) requires JDK 1.8 version.)

4. Installing Oracle WebLogic Server 12cR2

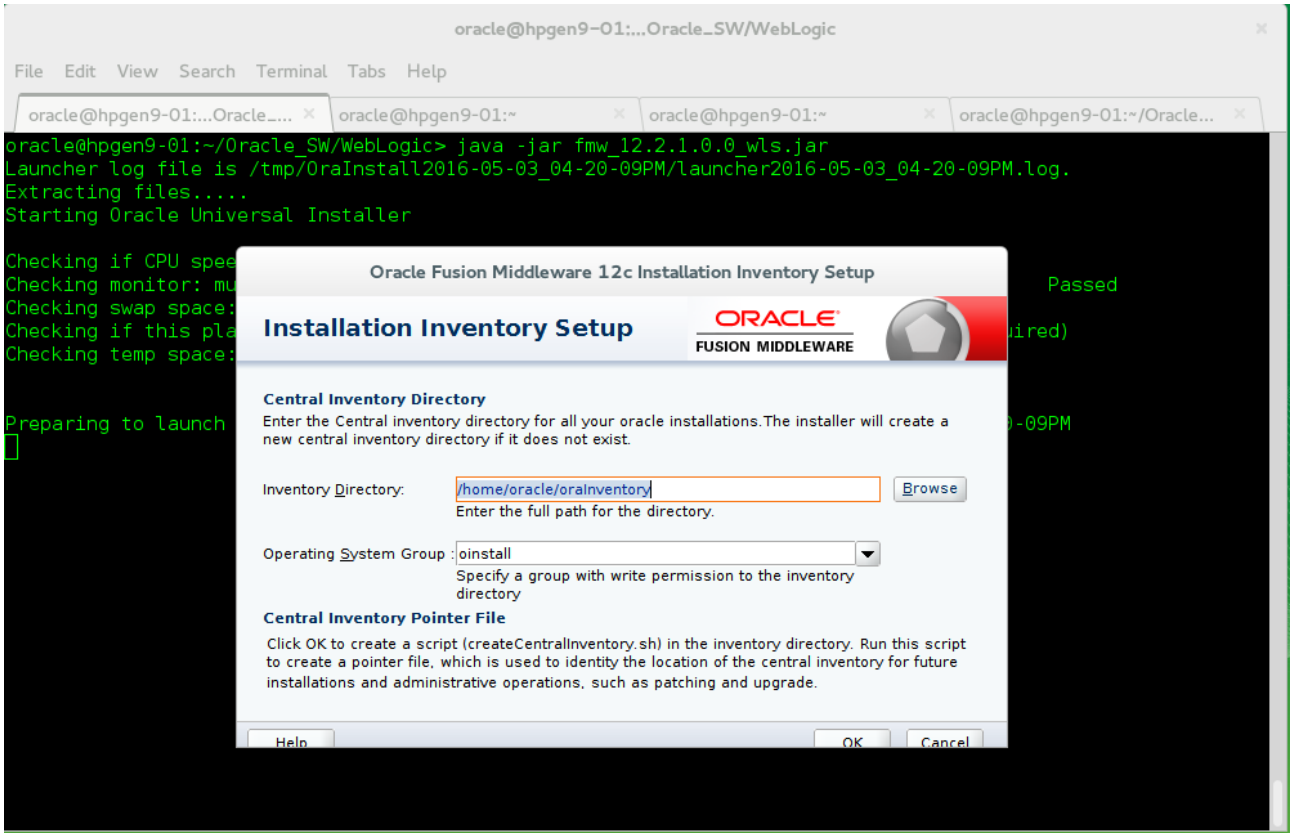
4-1. Log in to the target system (SLES 12 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1) (Fusion Middleware Infrastructure Installer) from http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html.

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

4-2. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw_12.2.1.0.0_infrastructure_Disk1_1of1.zip) file and launch the installation program by running '**java -jar fmw.xxxx.jar**'

Install Flow:

1). Installation Inventory Setup.

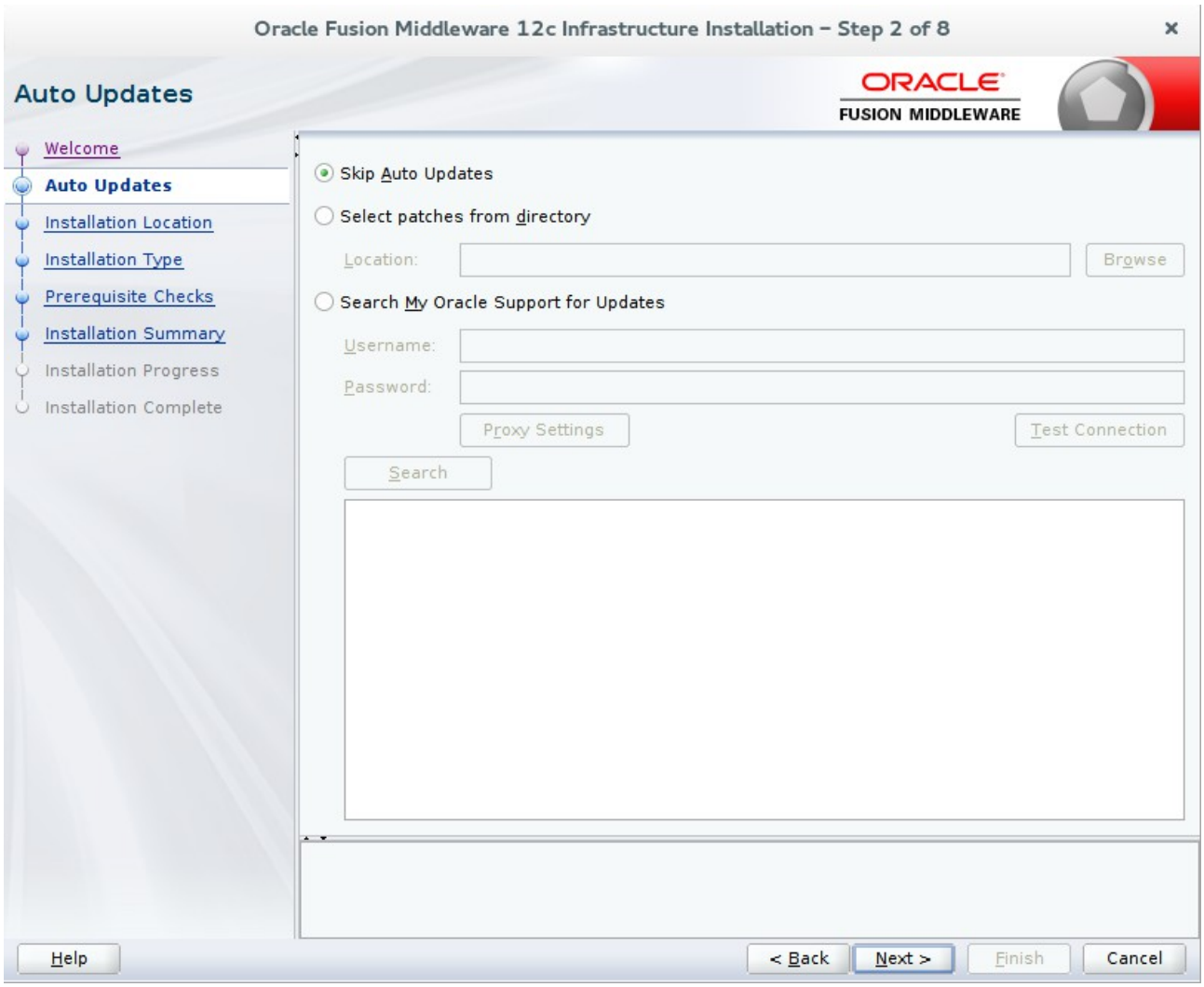


If this is your first Oracle installation on a host that is running SLES, please use this screen to specify the location of the Oracle central inventory directory and Operating System Group Name, then click **OK** to continue.

2). Welcome.

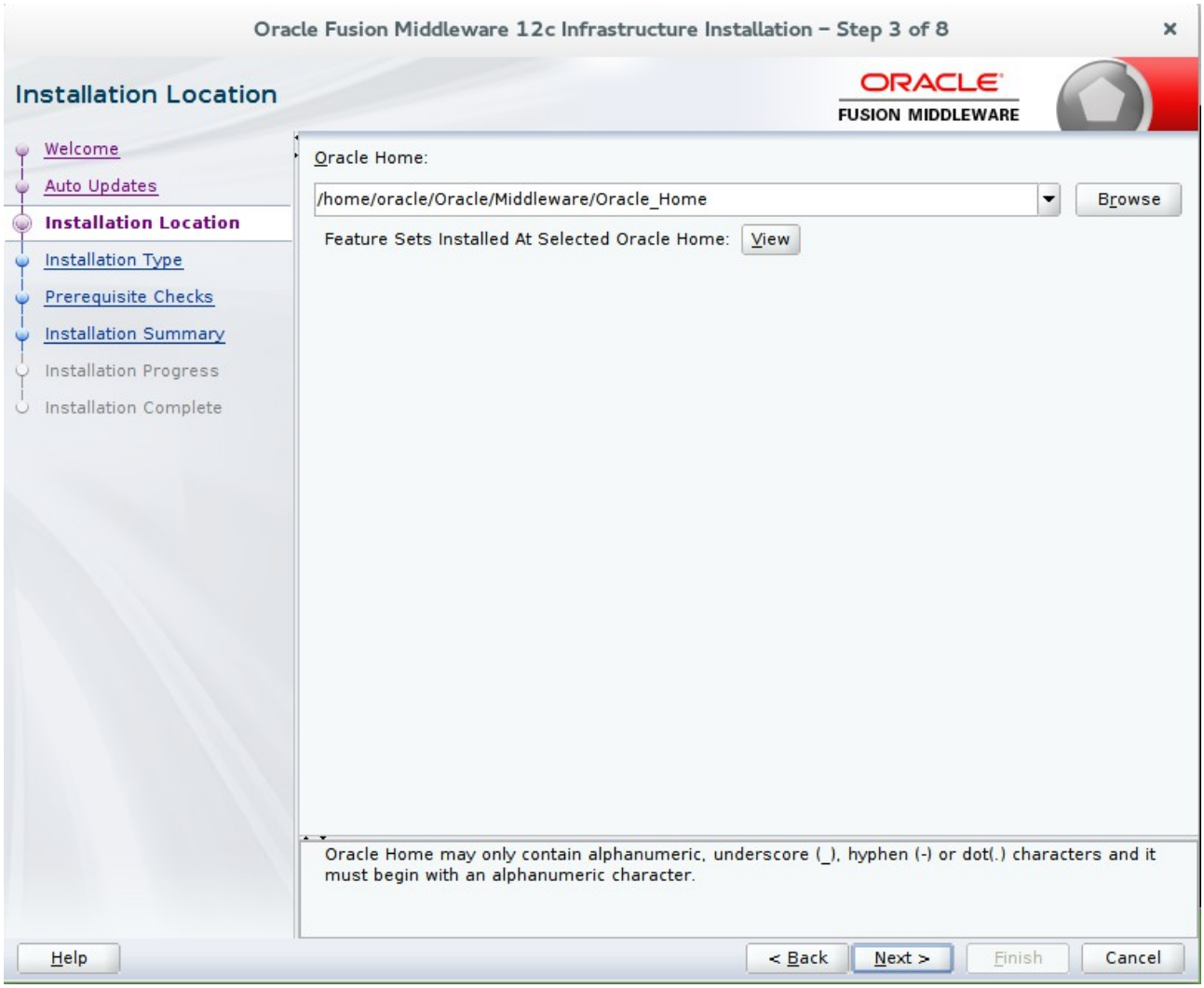
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3). Auto Updates.



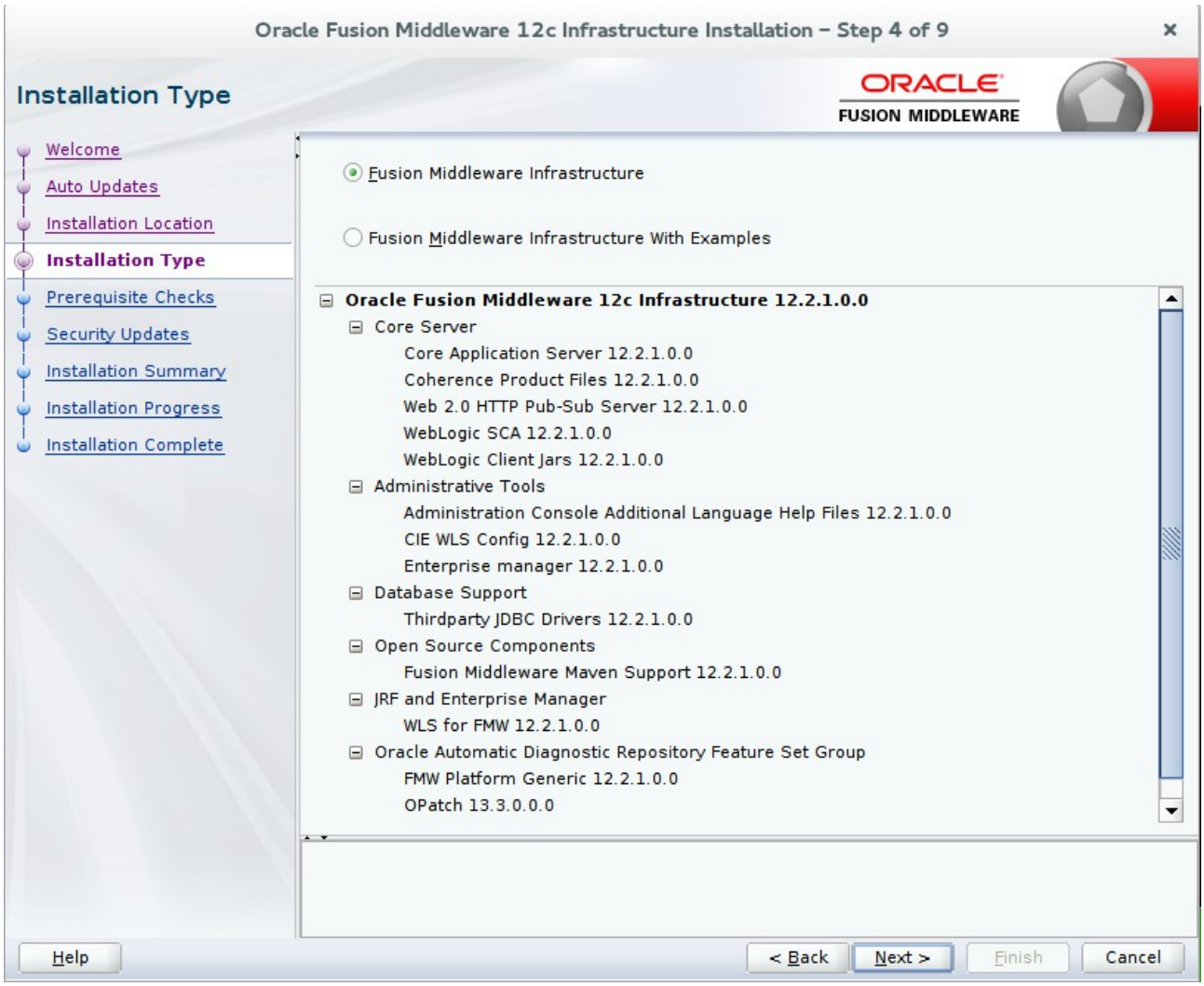
Select option "**Skip Auto Updates**" to skip this screen, then click **Next** to continue.

4). Installation Location.



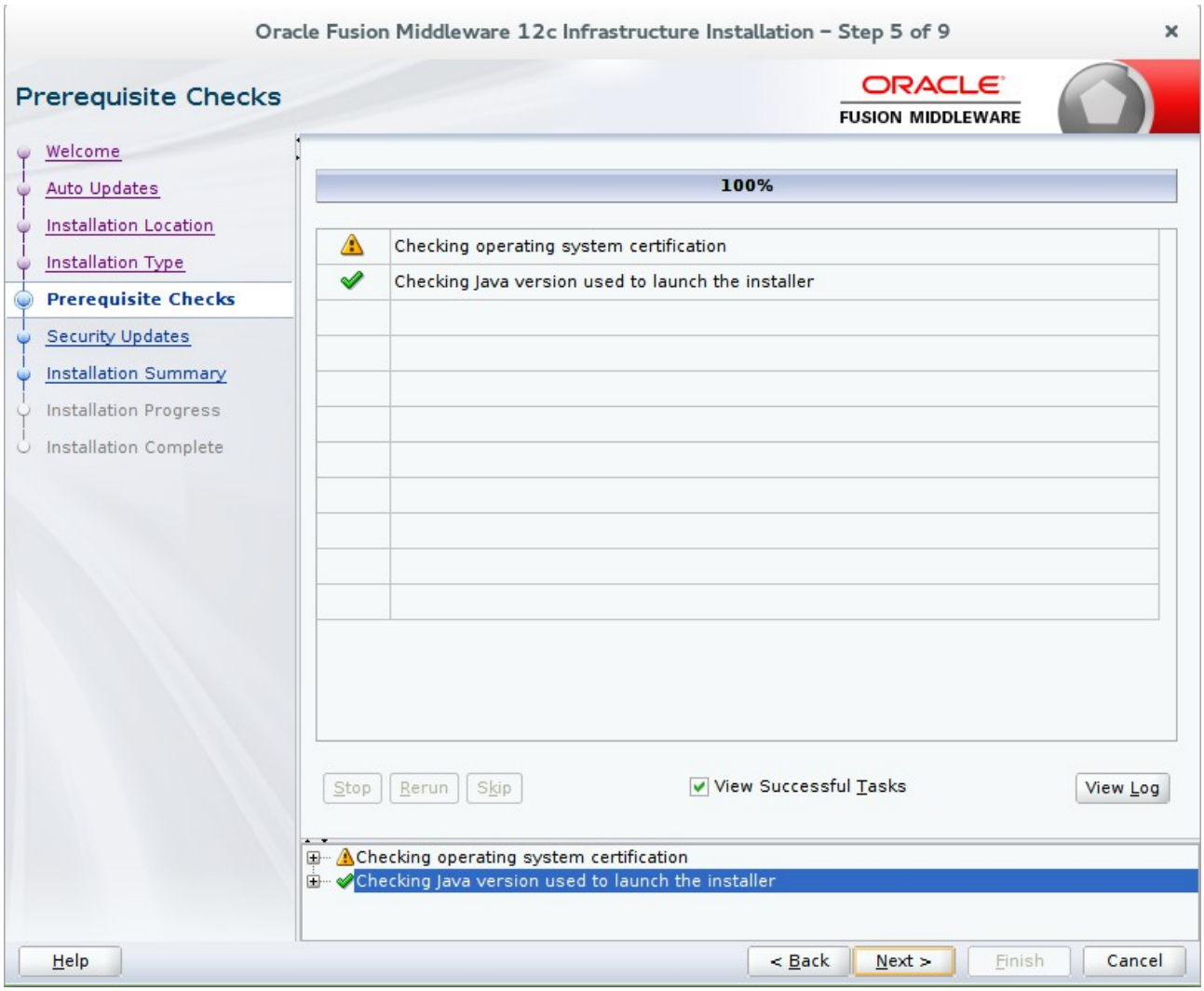
Type the full path of the directory in the Oracle Home field, then click **Next** to continue.

5). Installation Type.



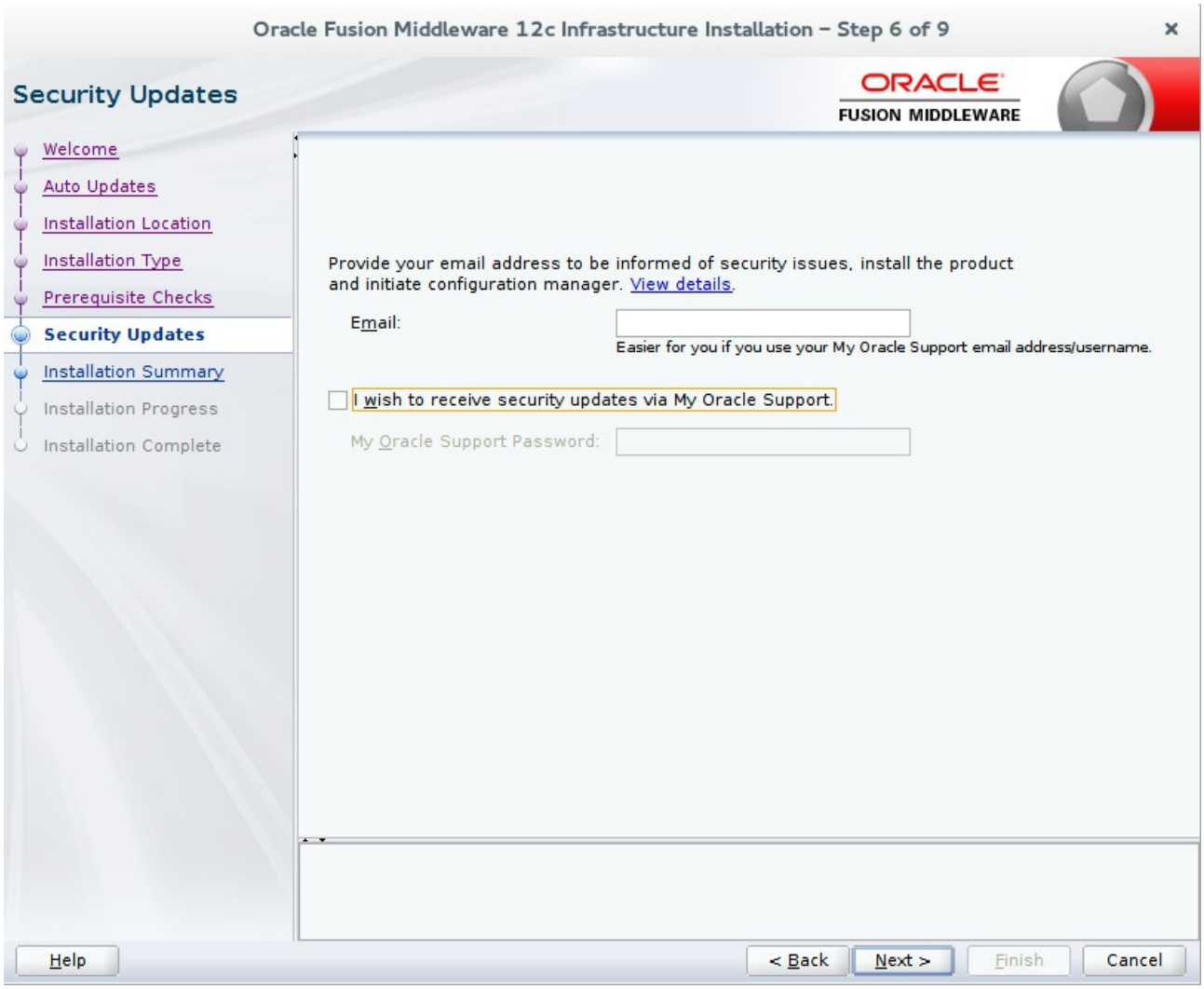
Use this screen to determine the type of installation you want to perform, then click **Next** to continue.

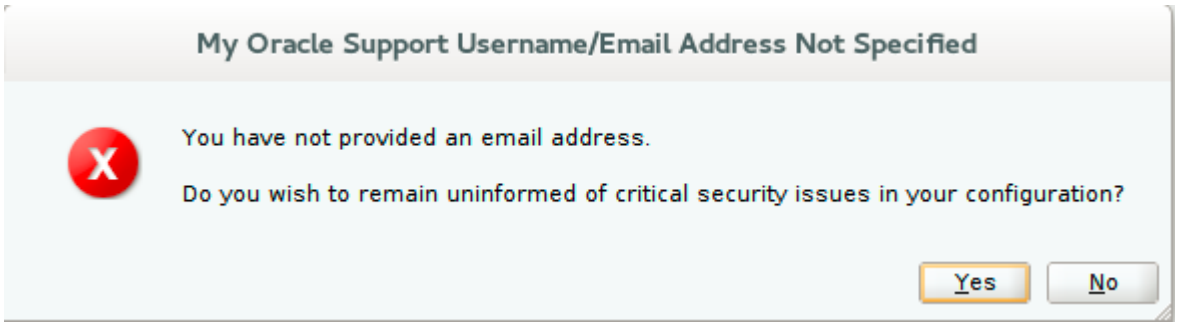
6). Prerequisite Checks.



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

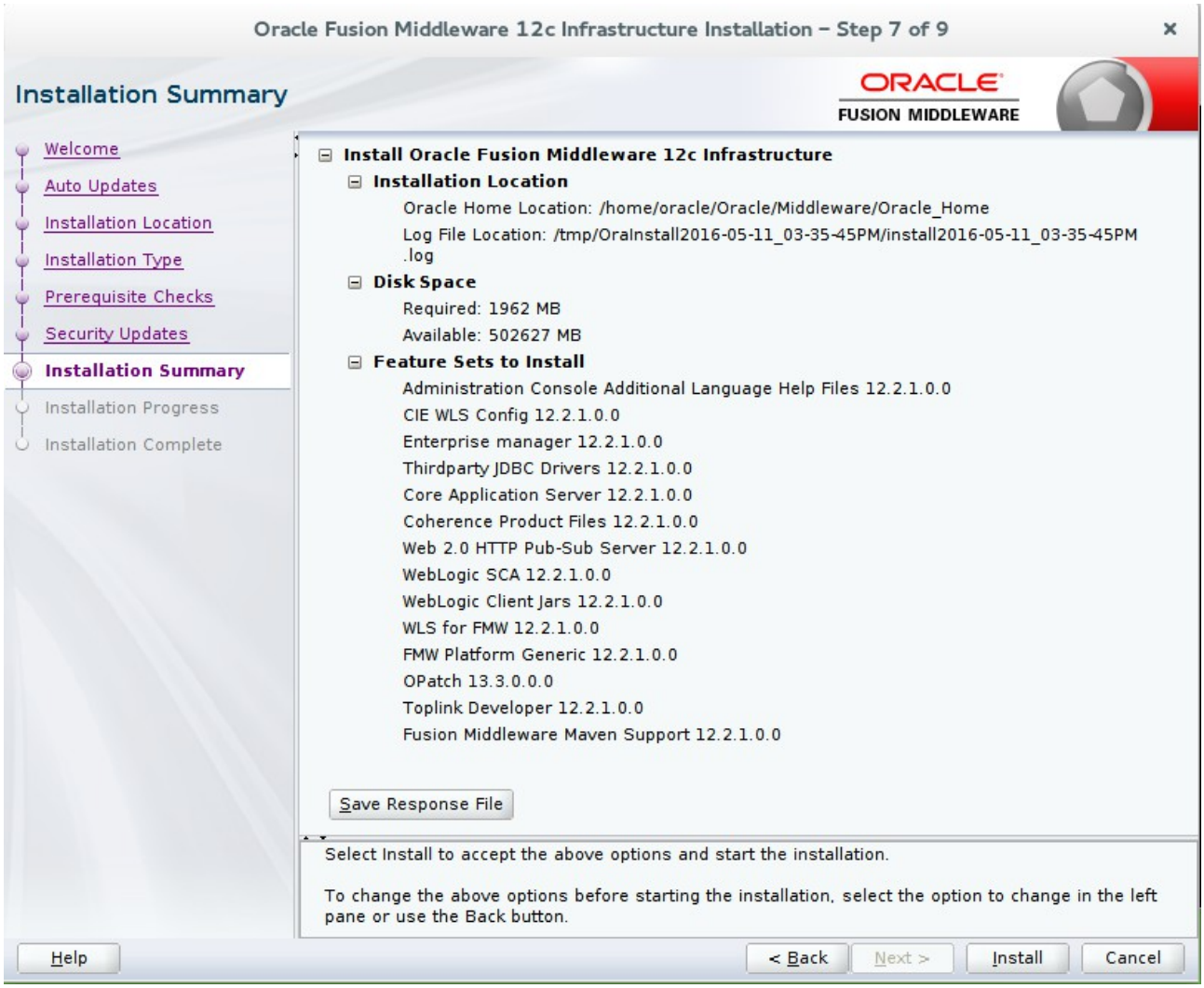
7). Security Updates.





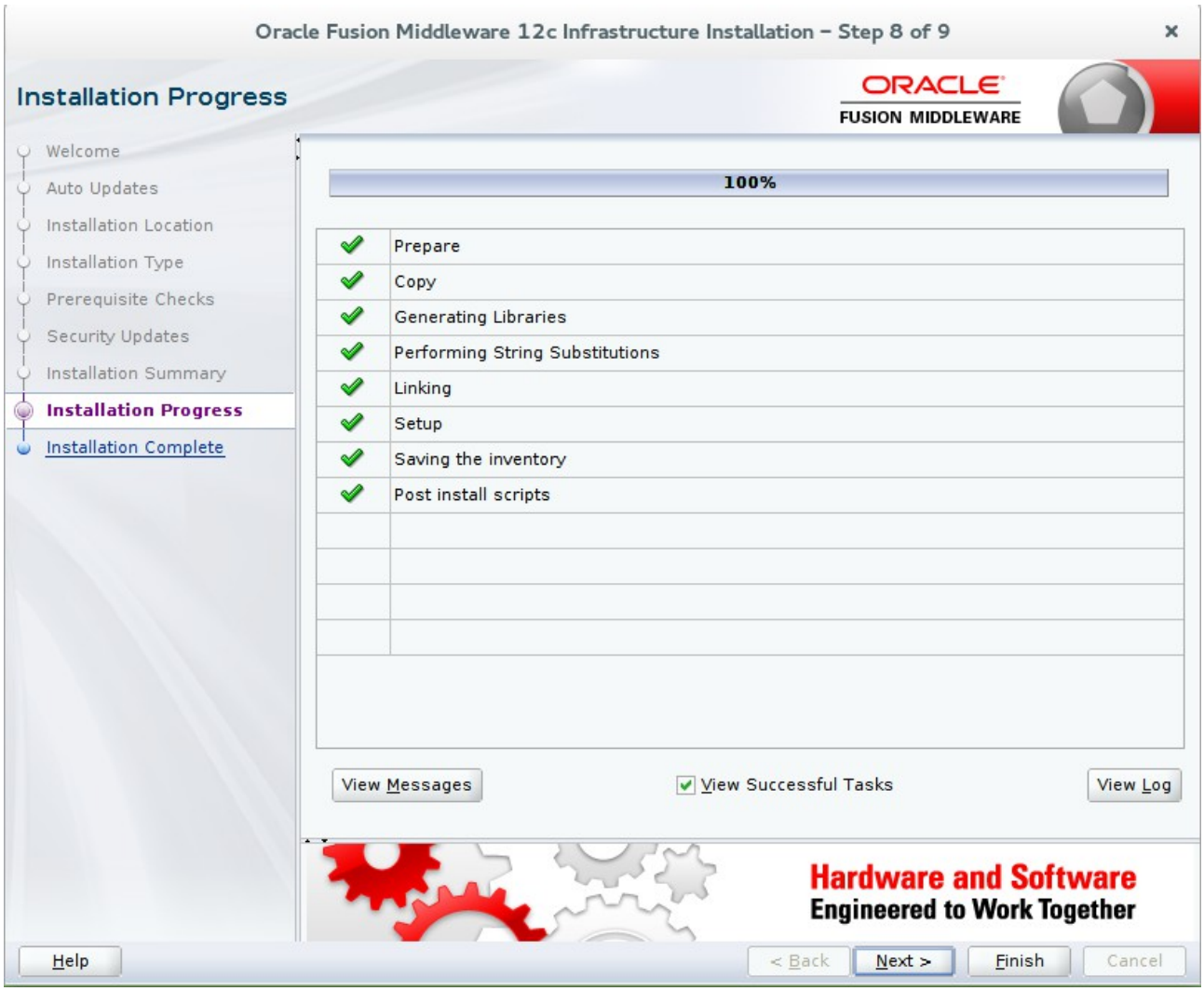
If you wish to register your installation, enter your Email address and your My Oracle Support password. If you wish to decline registration, deselect "**I wish to receive security updates via My Oracle Support**" and confirm your choice.

8). Installation Summary.



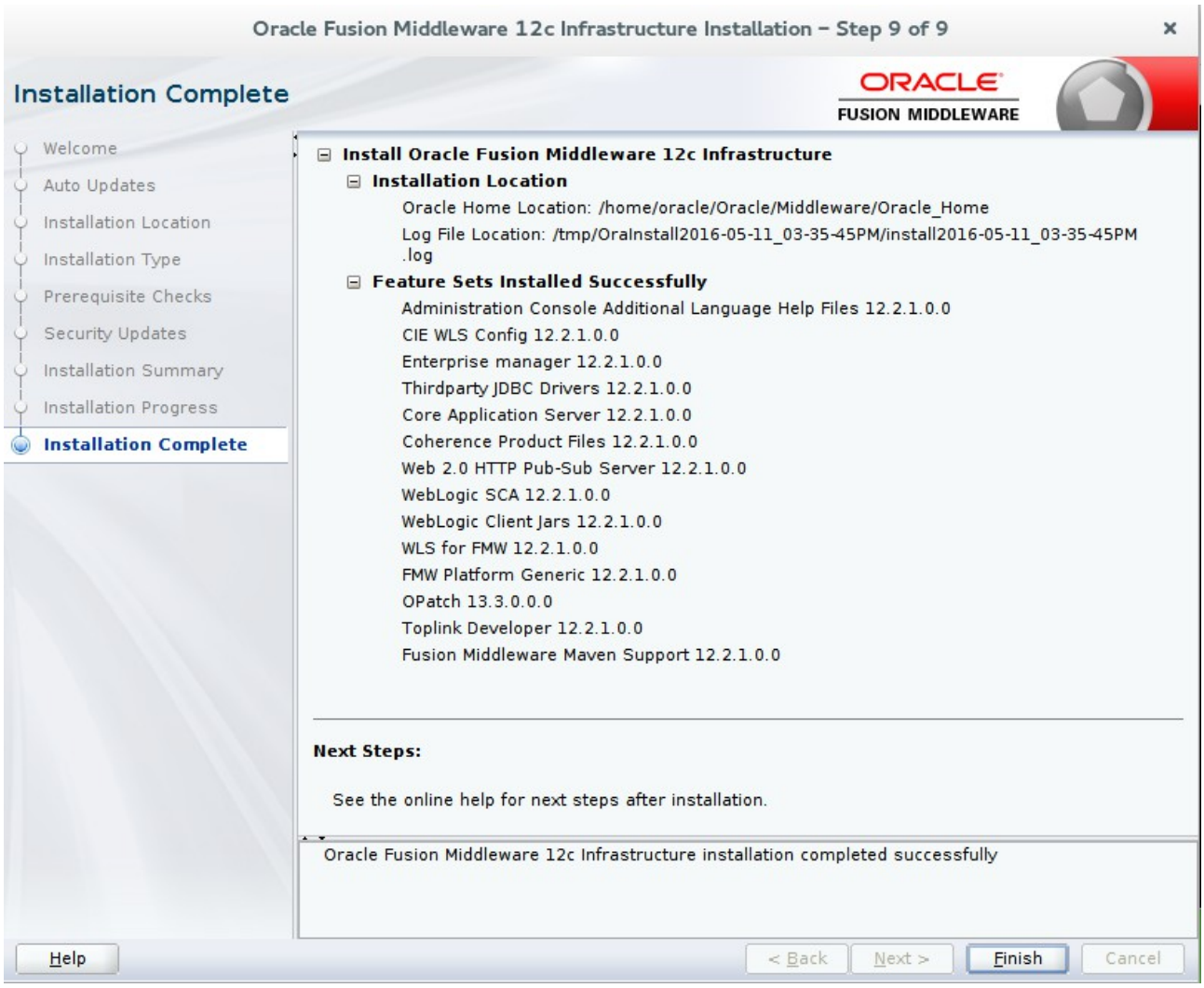
This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk space to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

9). Installation Progress.



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

10). Installation Complete.



This screen appears at the conclusion of the installation. Click **Finish** to dismiss the installer.

Oracle Forms and Reports 12c Installation

1. Installing Oracle Forms and Reports

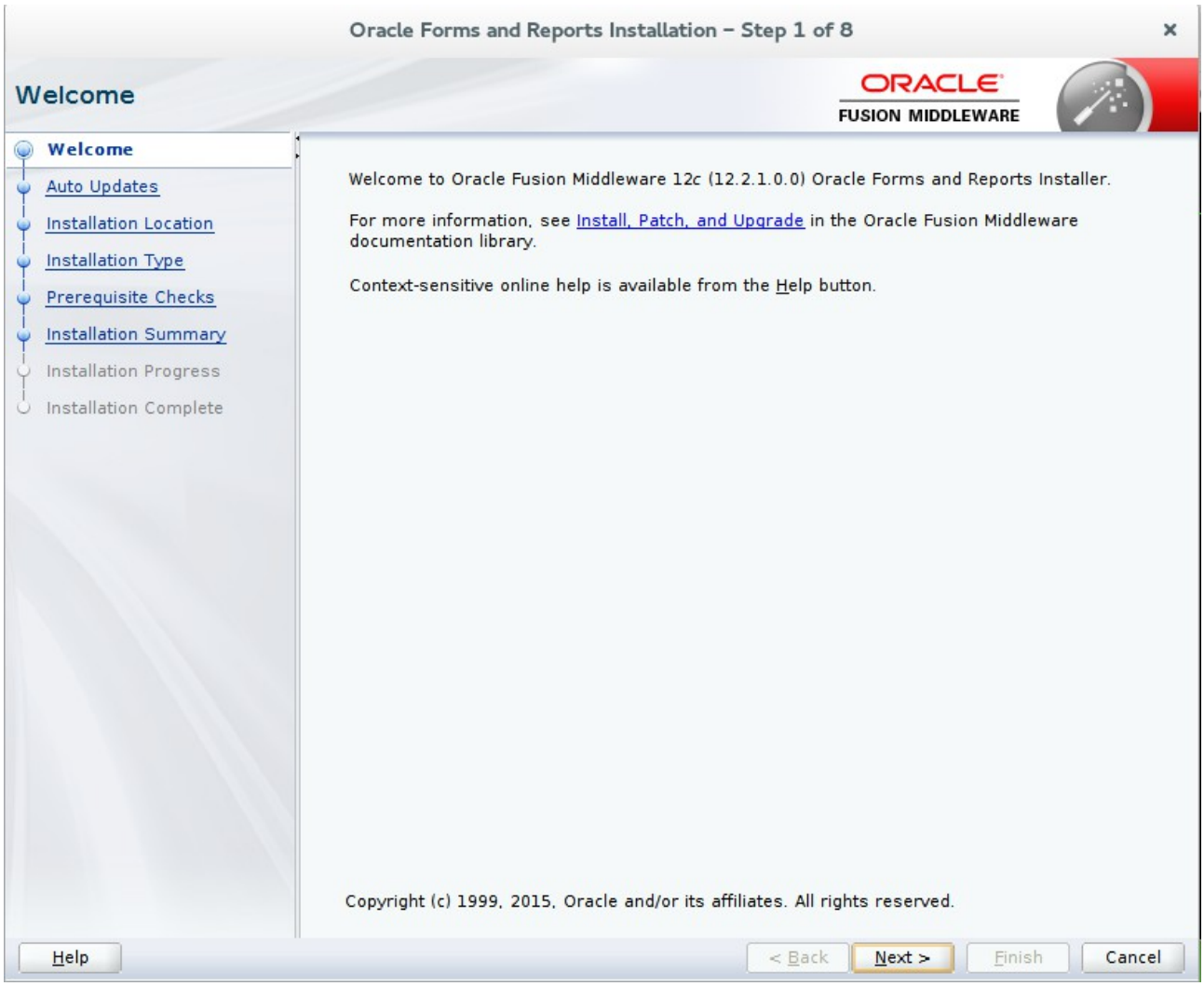
1-1. Log in to the target system (SLES 12 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.0) from http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware.

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

1-2. Go to the directory where you downloaded the installation program. Extract the contents of this .zip (fmw_12.2.1.0.0_fr_linux64_Disk1_1of1.zip) file and launch the installation program by running '**fmw_12.2.1.0.0_fr_linux64.bin**'

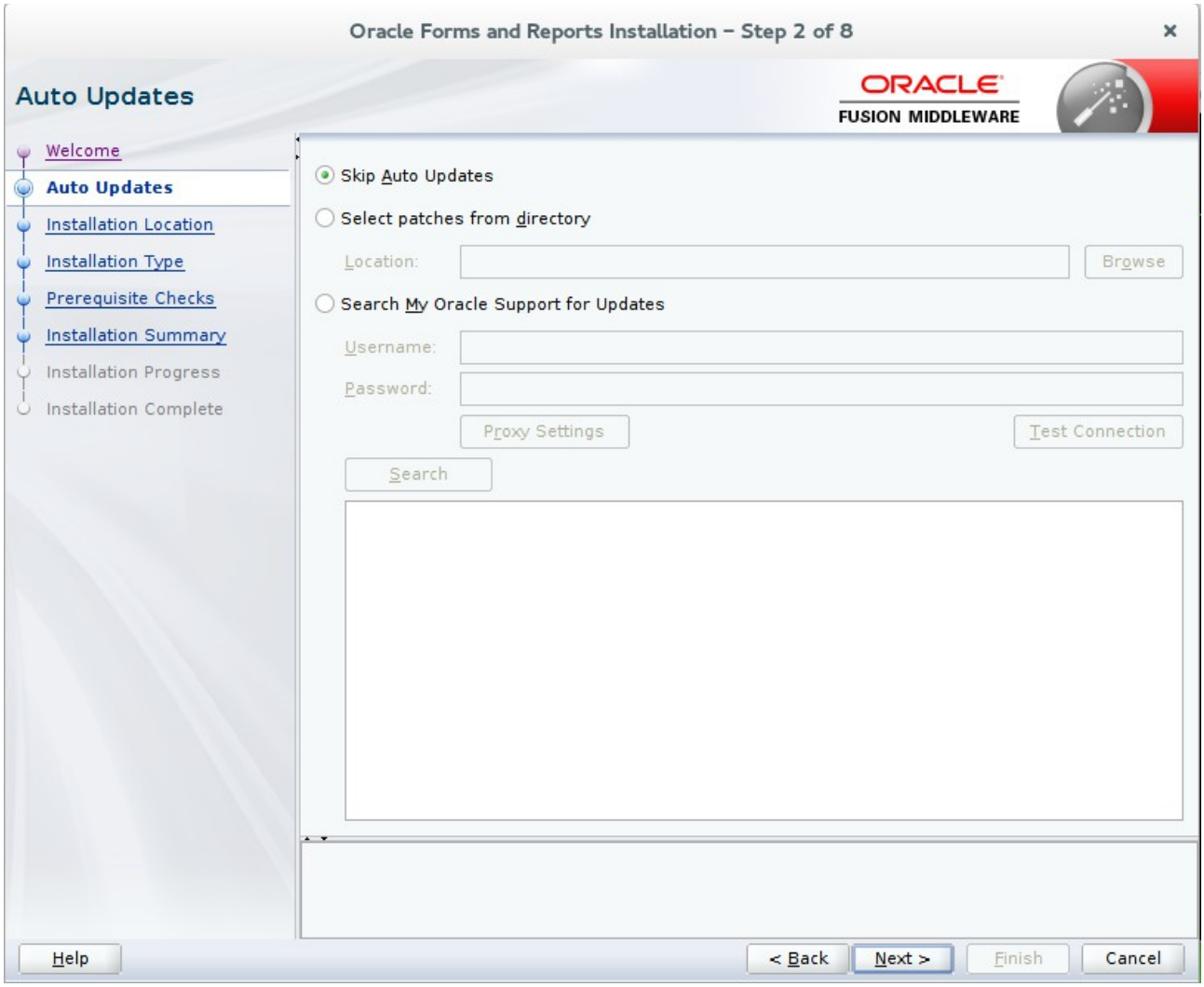
Install Flow:

1). Welcome page.



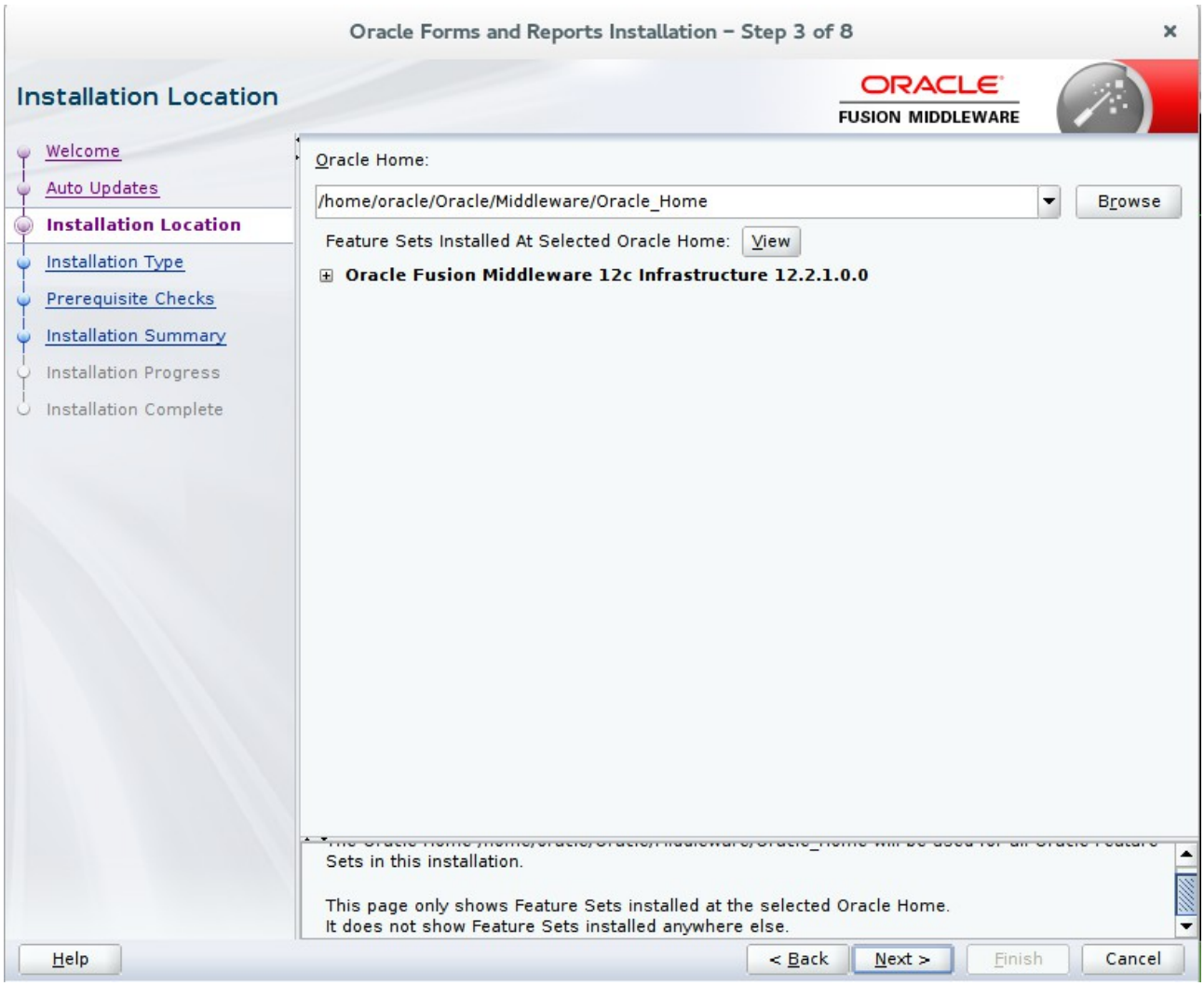
This page welcomes you to the installation. Click **Next** to continue.

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



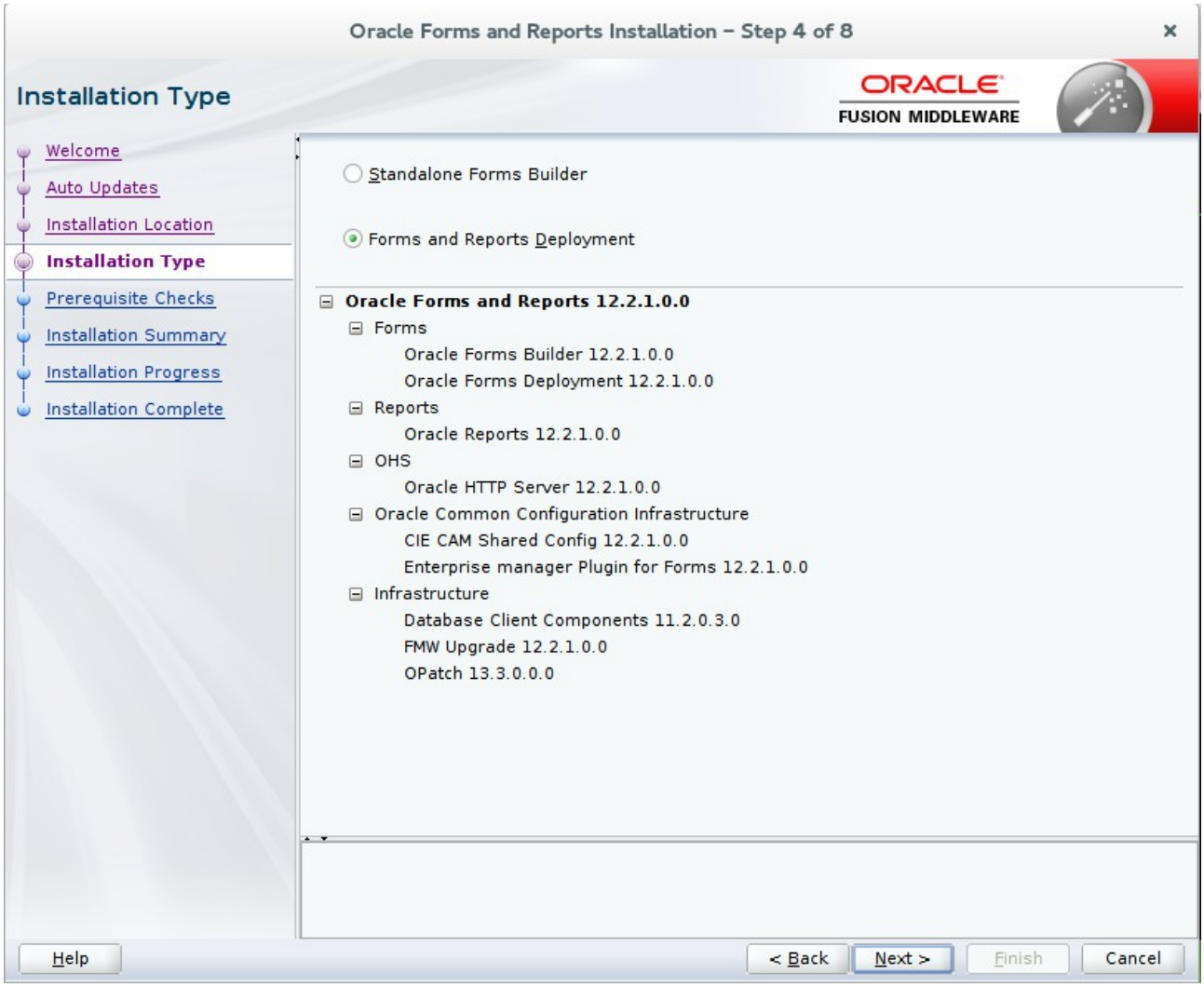
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



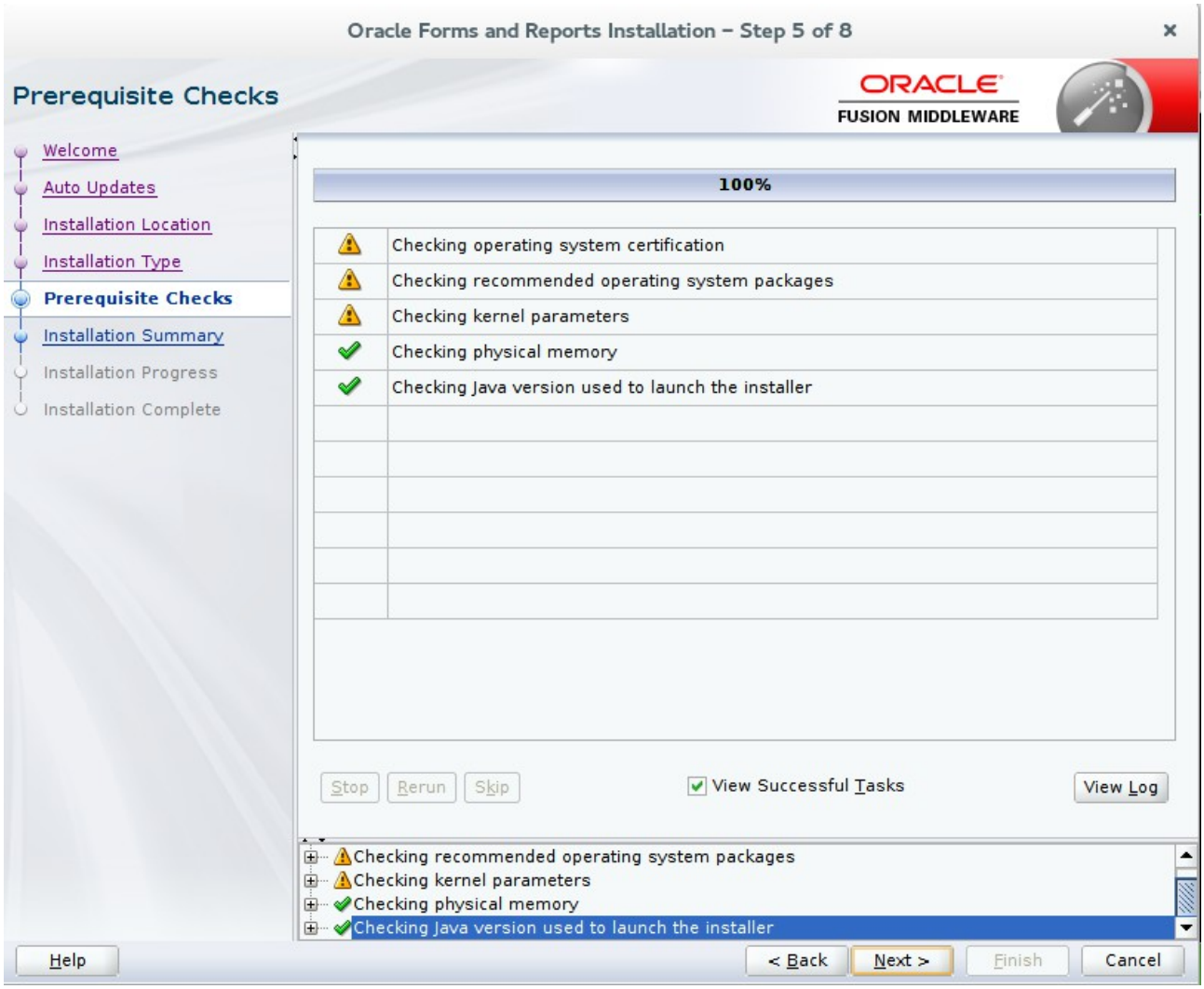
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



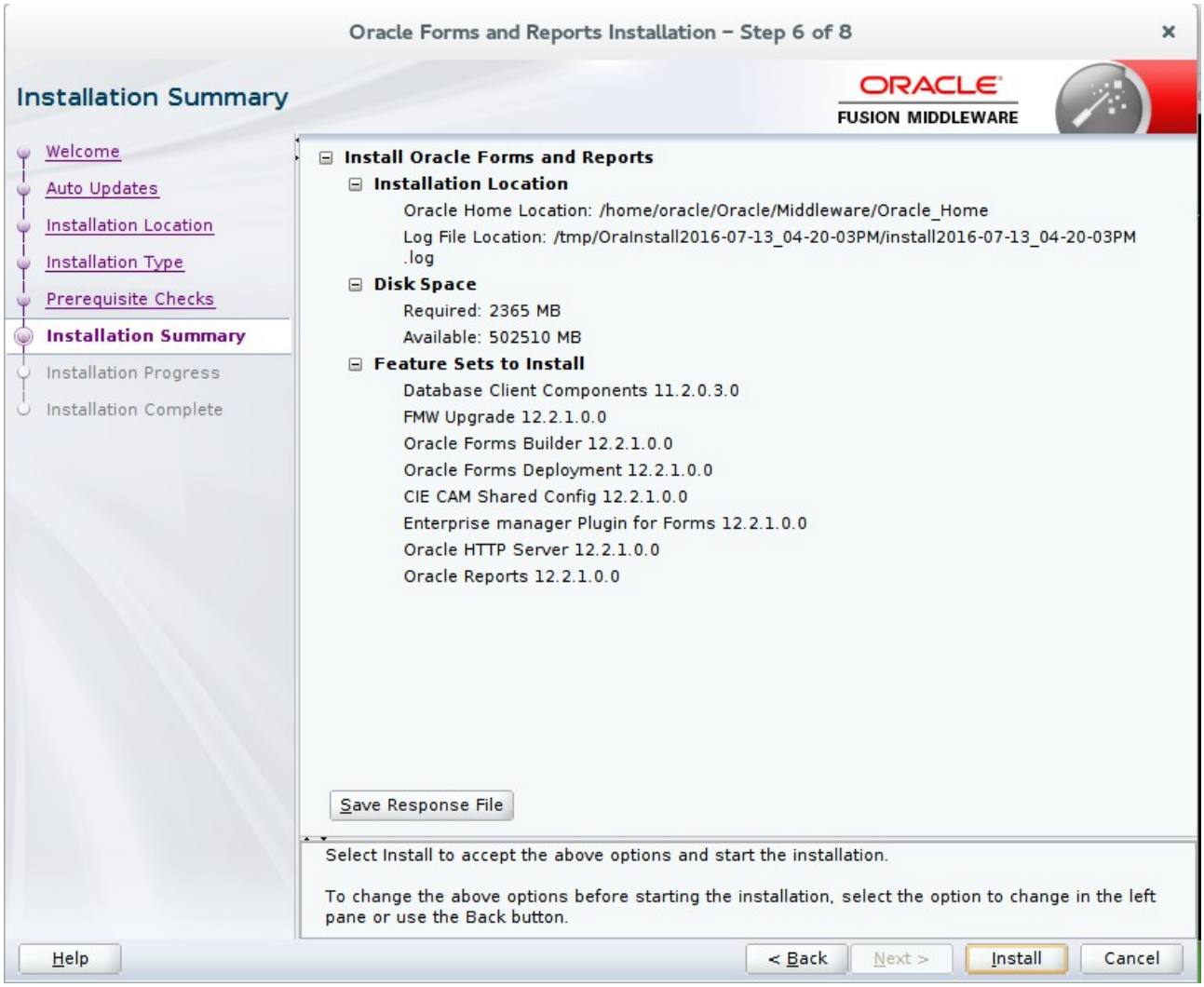
You can select **Standalone Forms Builder** if you want only that functionality, or choose **Forms and Reports Deployment** to install all of the products. Click **Next** to continue.

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



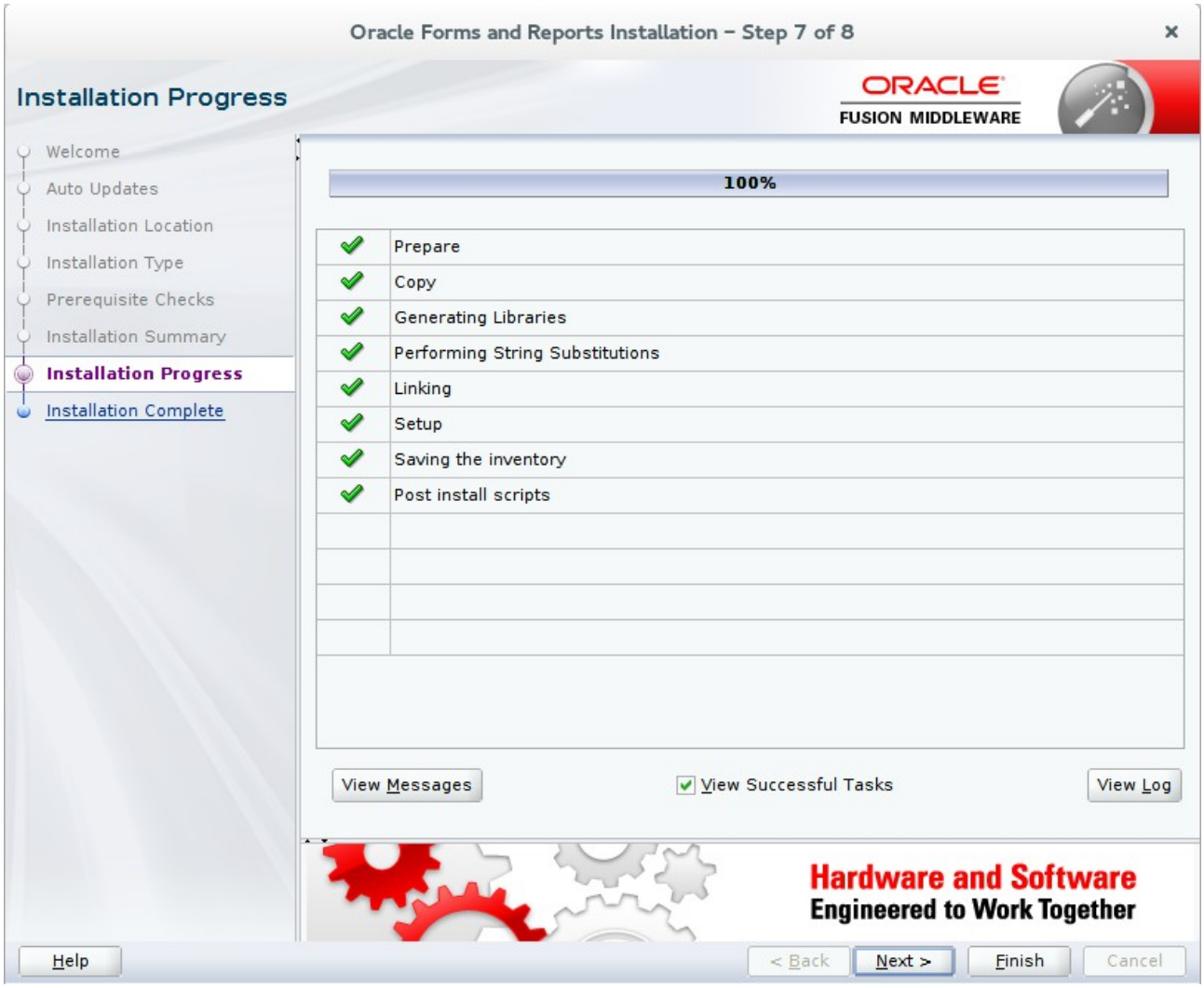
This pages shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



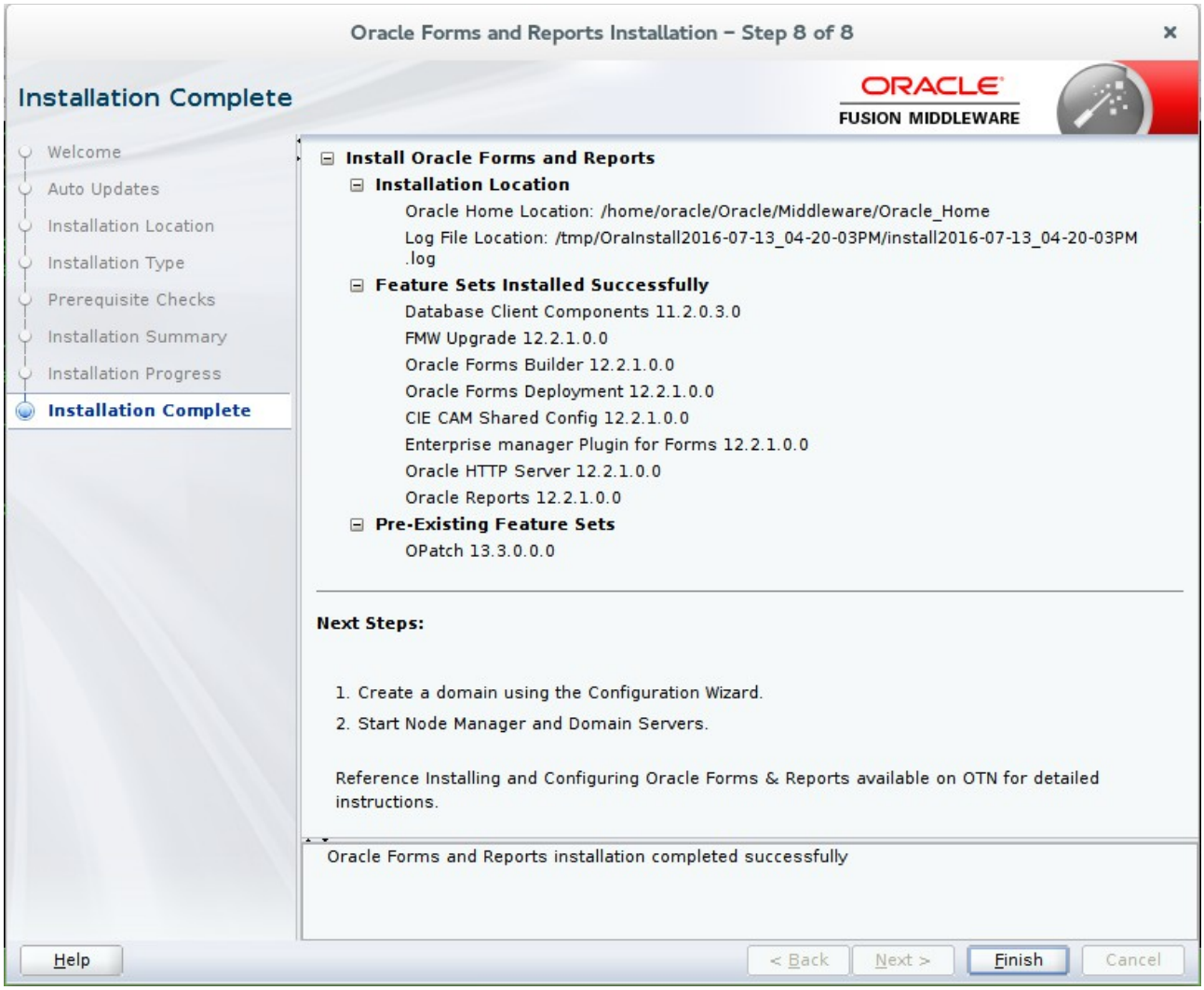
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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.



Click **Finish** to dismiss the installer.

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

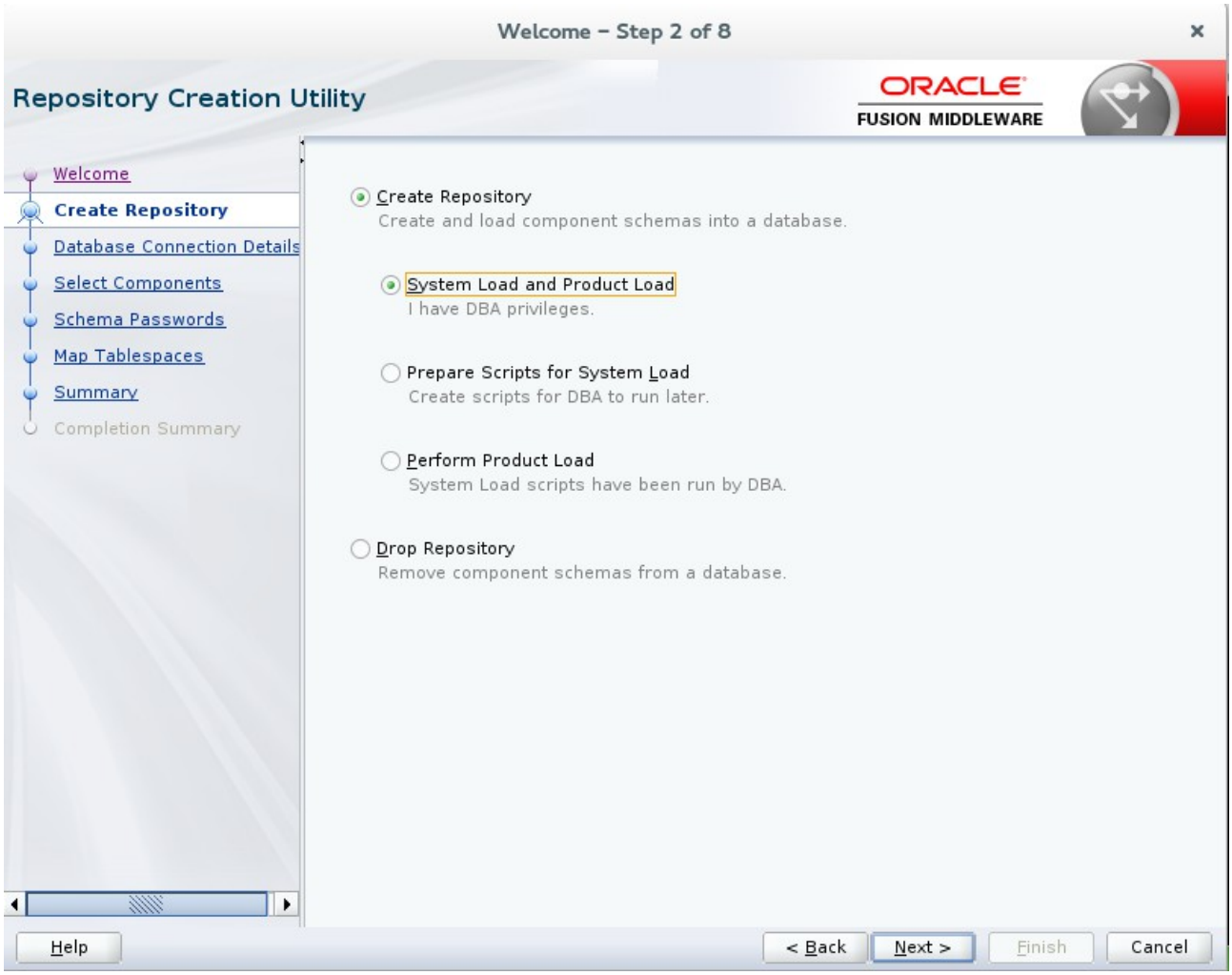
2-1. Repository Creation Utility (RCU) is available with the Oracle WebLogic Server 12cR2 Fusion Middleware Infrastructure distribution. Run $FMW_HOME/oracle_common/bin/rcu.sh

Follow these steps:

1). The **Welcome** page appears.

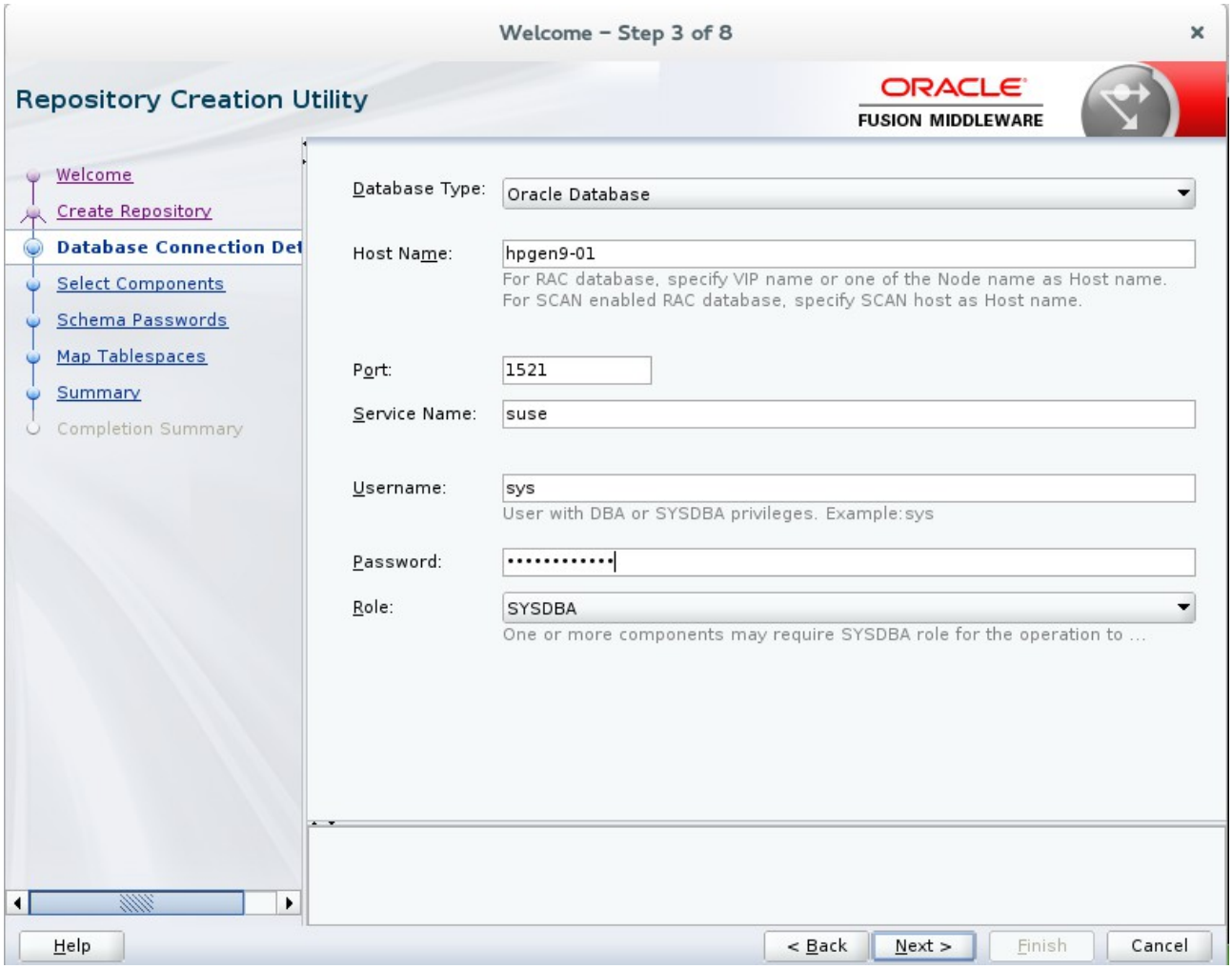
Click **Next** to continue.

2). The **Create Repository** page appears.



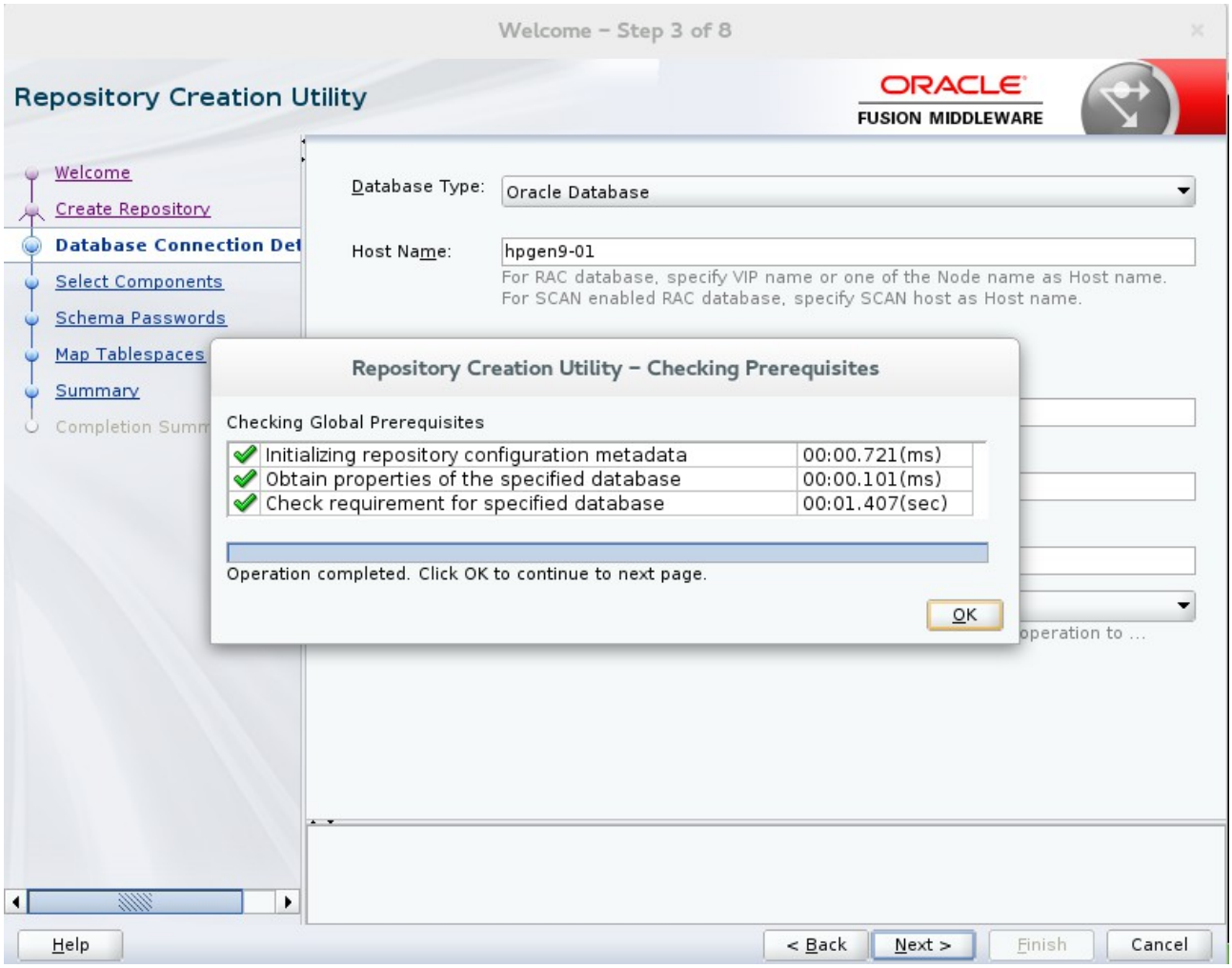
Select **Create Repository**, and **System Load and Product Load** (default). Click **Next** to continue.

3). The **Database Connection Details** page appears.



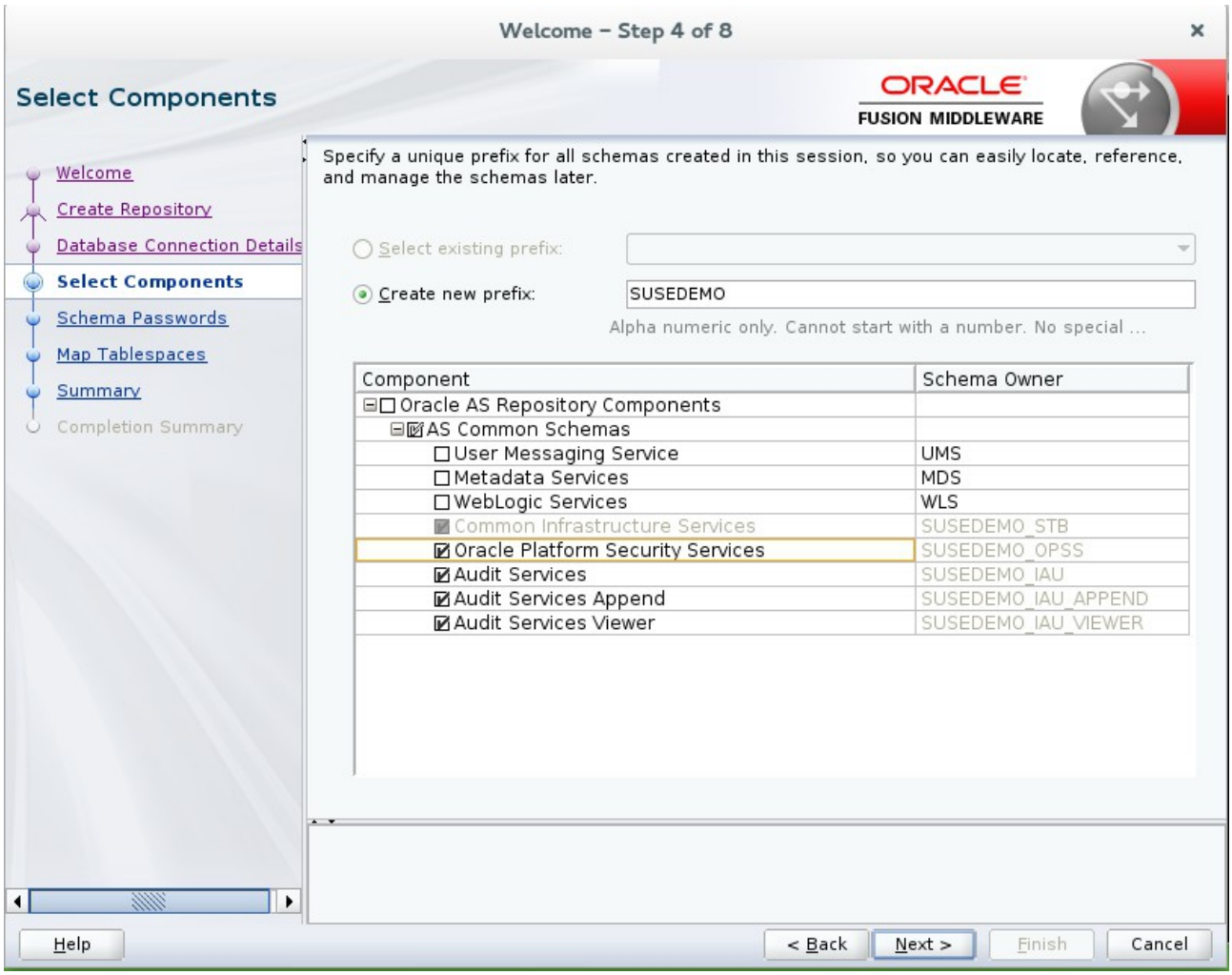
Enter the RCU DB connection information as shown in the screen below. Click **Next** to continue.

The **Checking Prerequisites** box pops up.



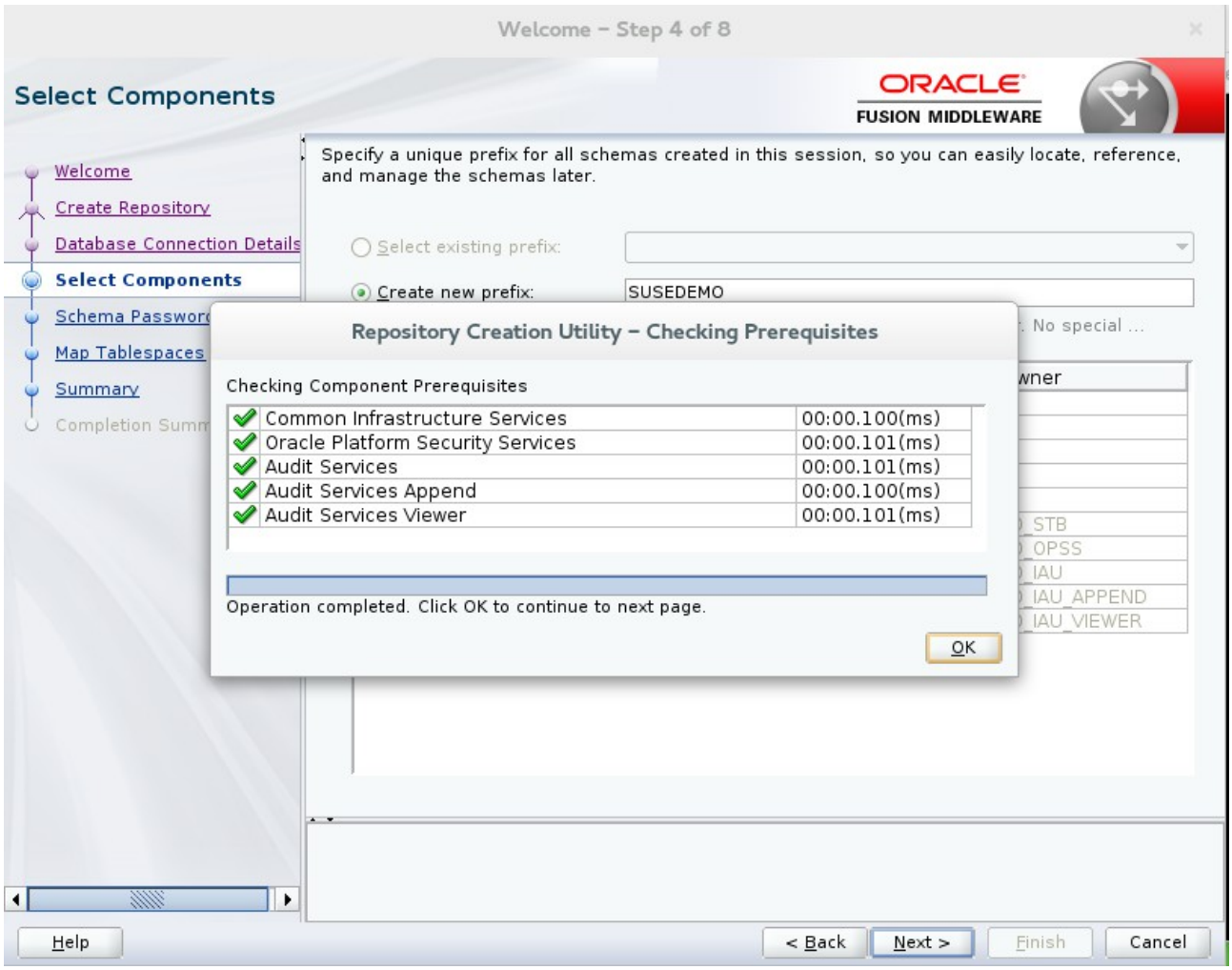
It shows the progress of prerequisites checking. When it is complete, click **OK**.

4). The **Select Components** page appears.



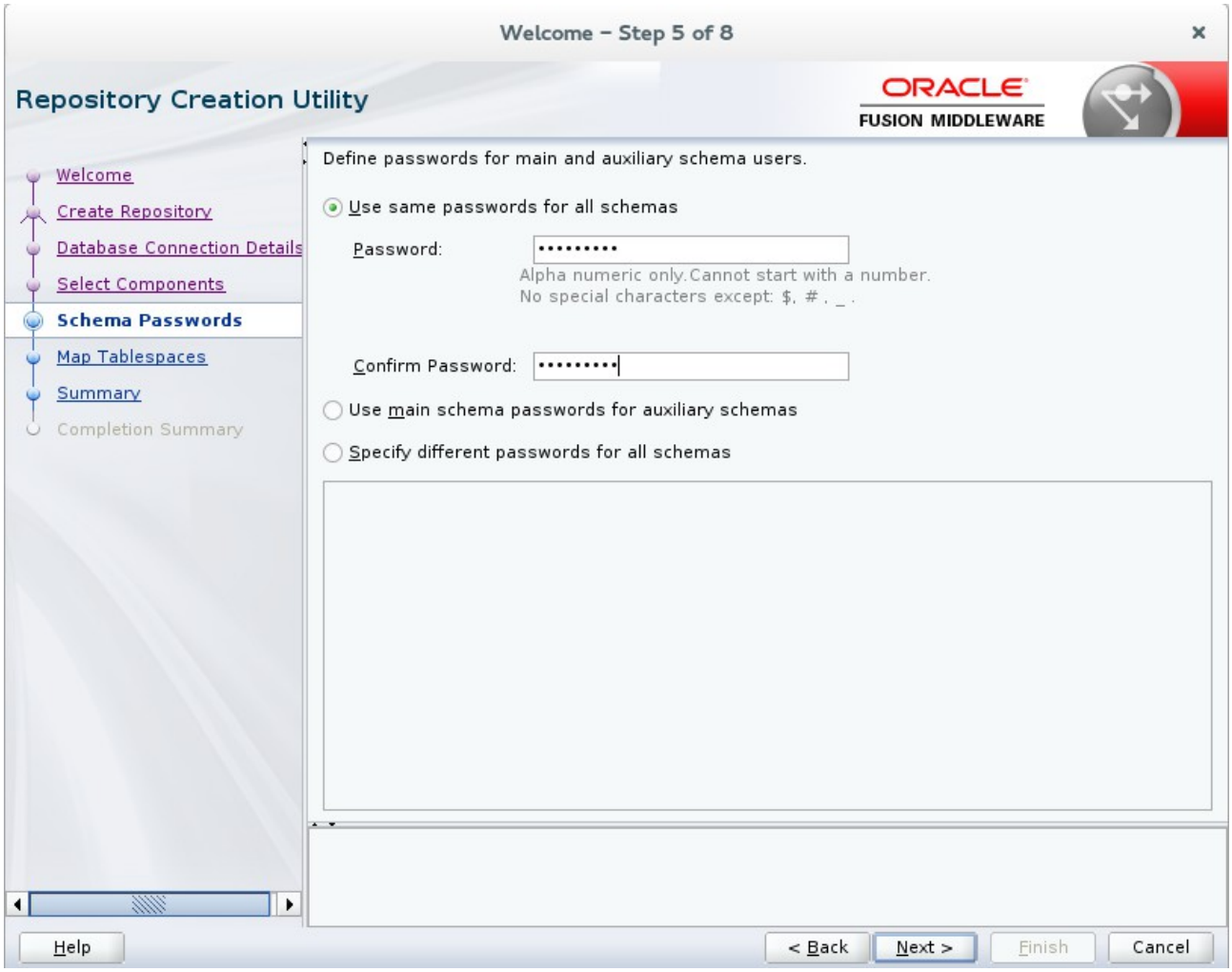
Select the **Create new prefix** radio button and provide a schema prefix (such as DEMO). Select the following components: **Oracle Platform Security Services**, **Audit Services**, **Audit Services Append** and **Audit Services Viewer**. Click **Next** to continue.

The **Checking Prerequisites** box pops up.



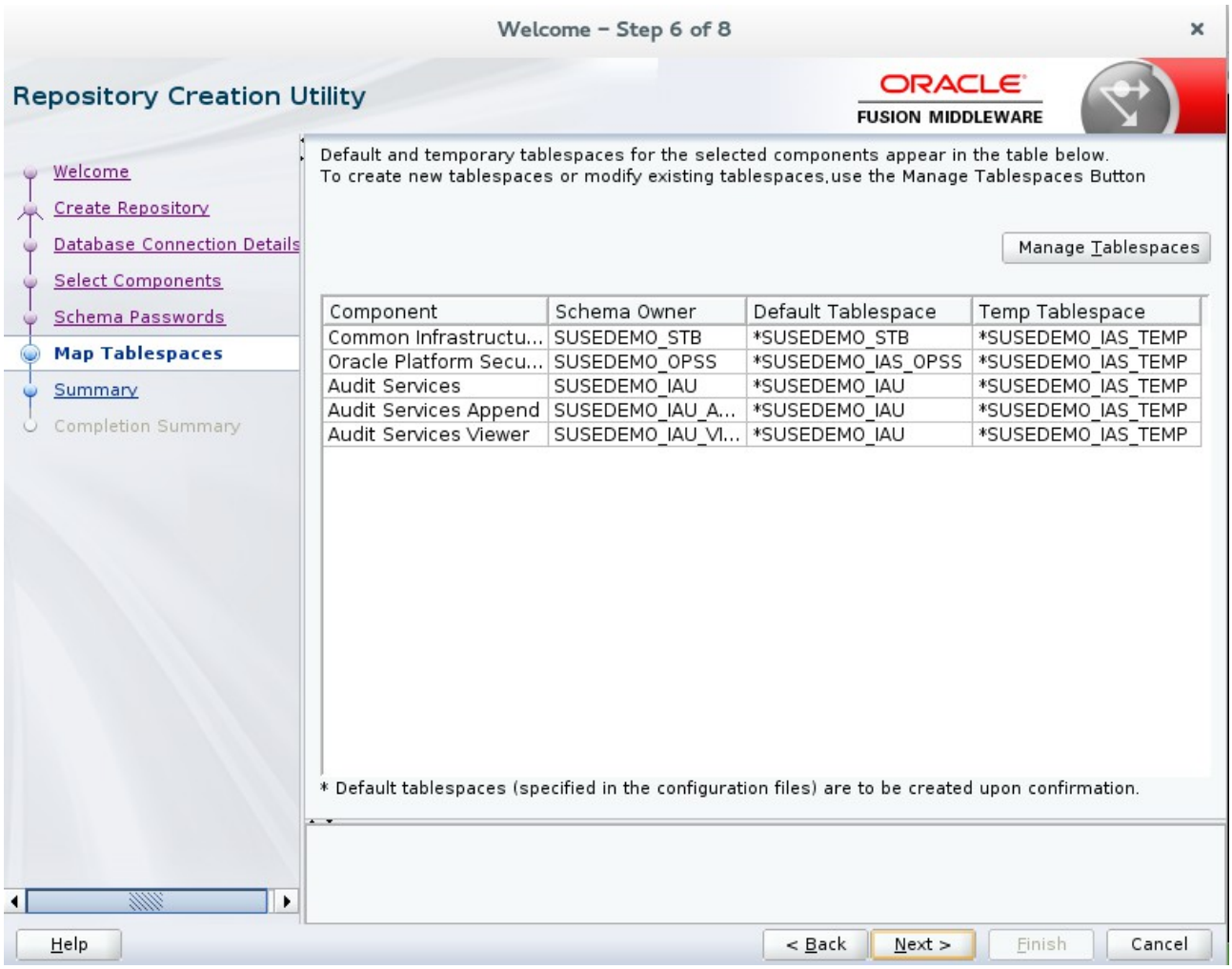
It shows the progress of prerequisites checking. When it is complete, click **OK**.

5). The **Schema Passwords** page appears.



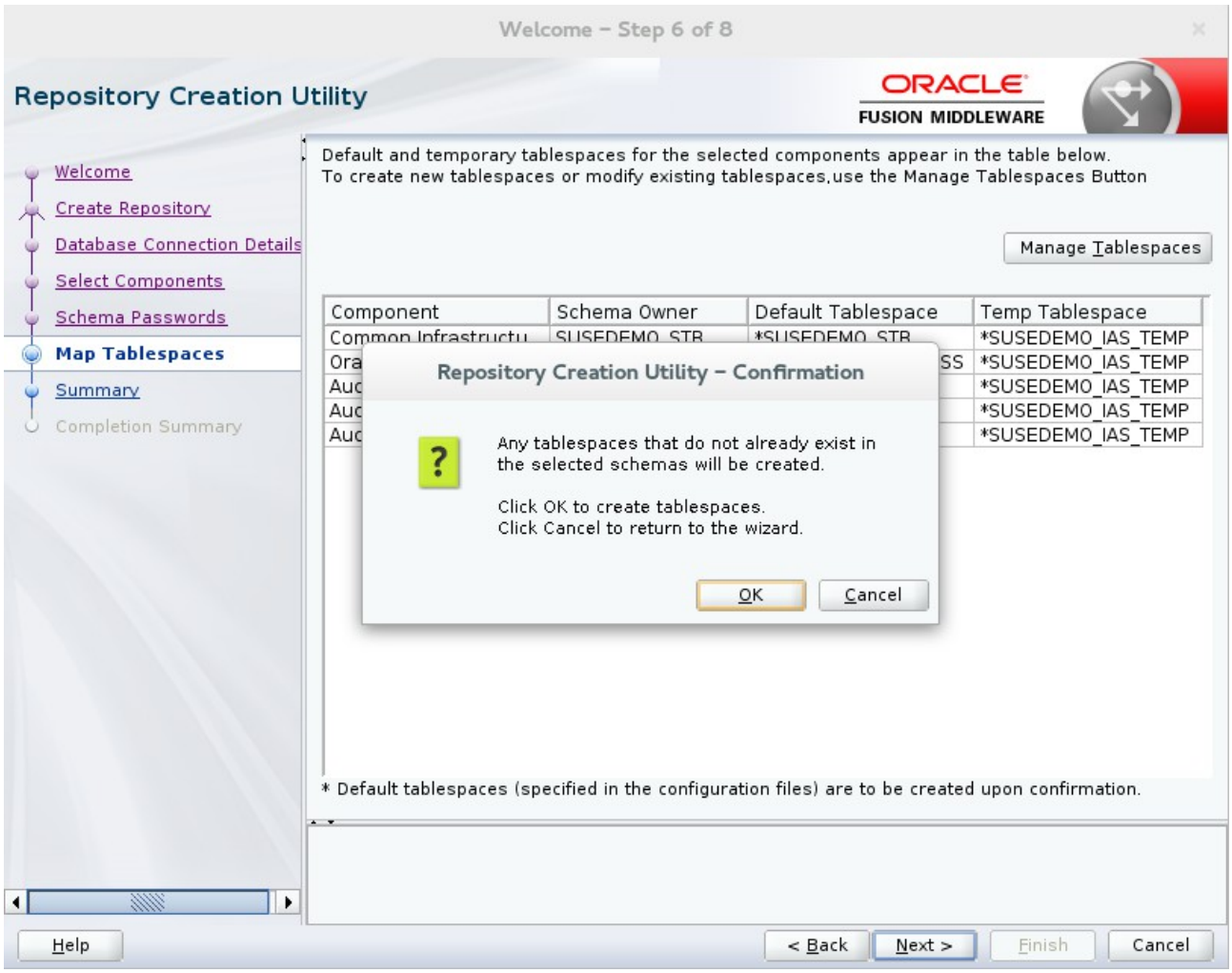
Leave the default **Use same passwords for all schemas** radio button selected, and enter the password in the **Password** field. Click **Next** to continue.

6). The **Map Tablespaces** page appears.



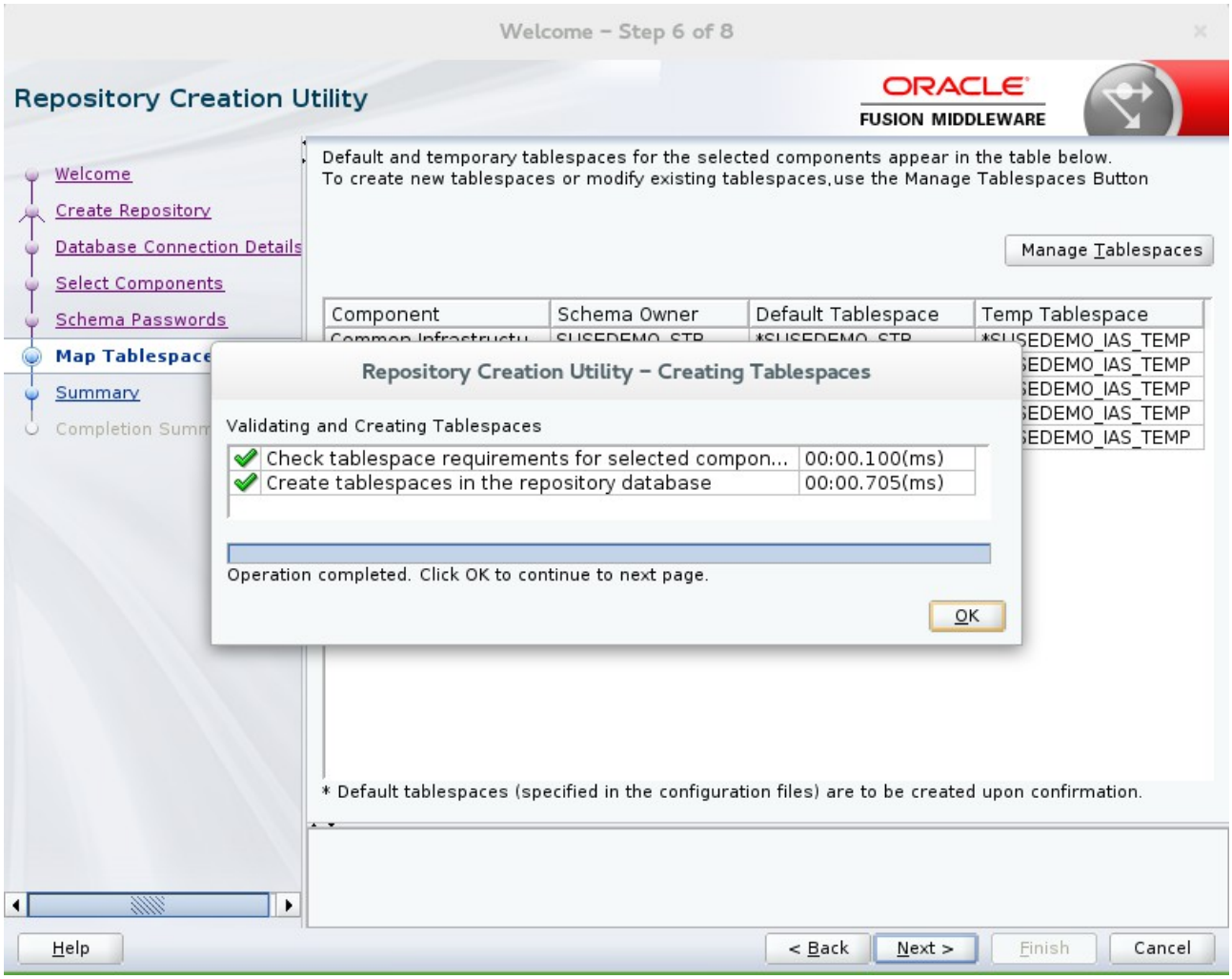
Map action is required. Click **Next** to continue.

A Repository Creation Utility box pops up, requiring your confirmation.



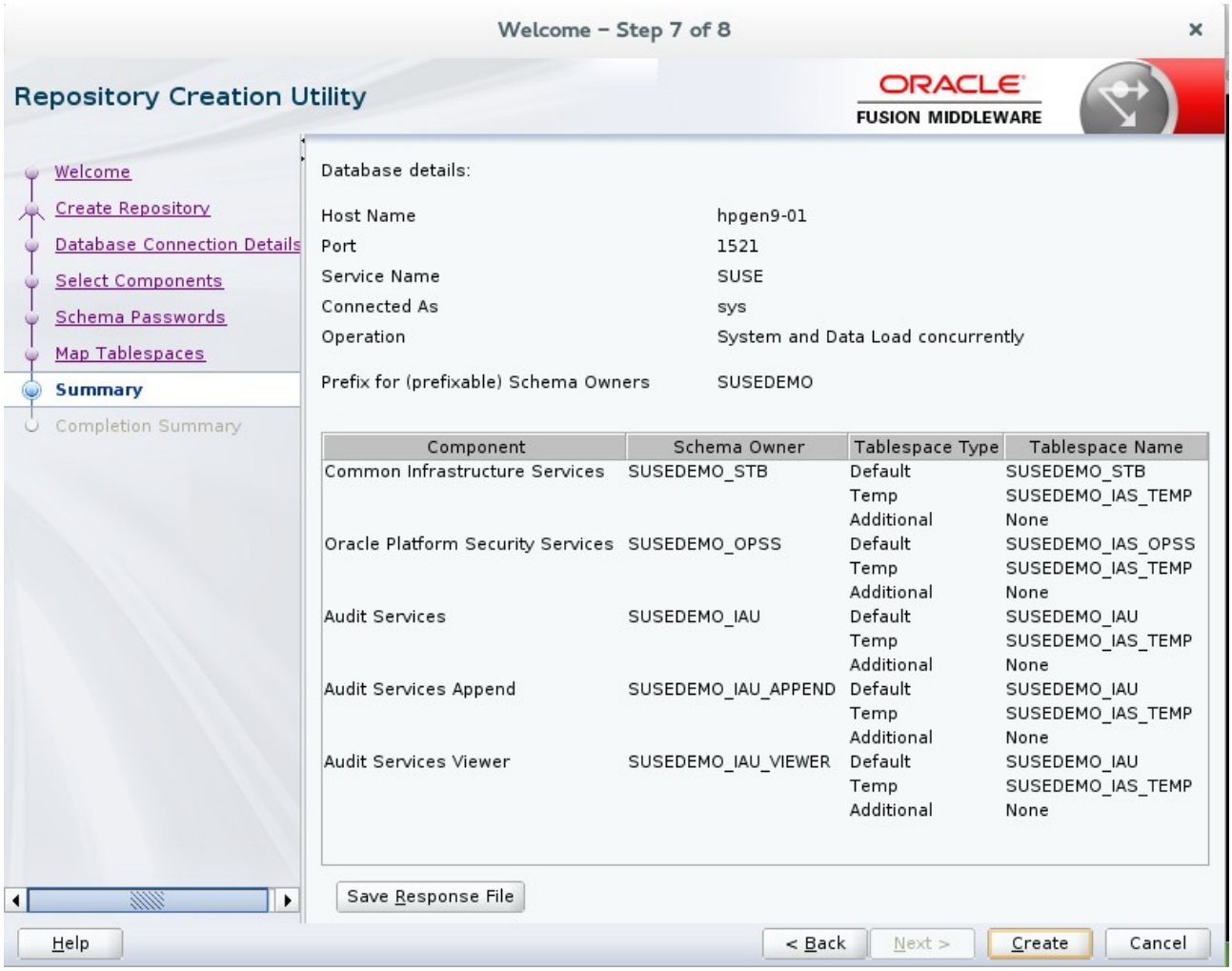
Click **OK**.

A **Creating Tablespaces** pop up appears, showing the progress of tablespace creation.



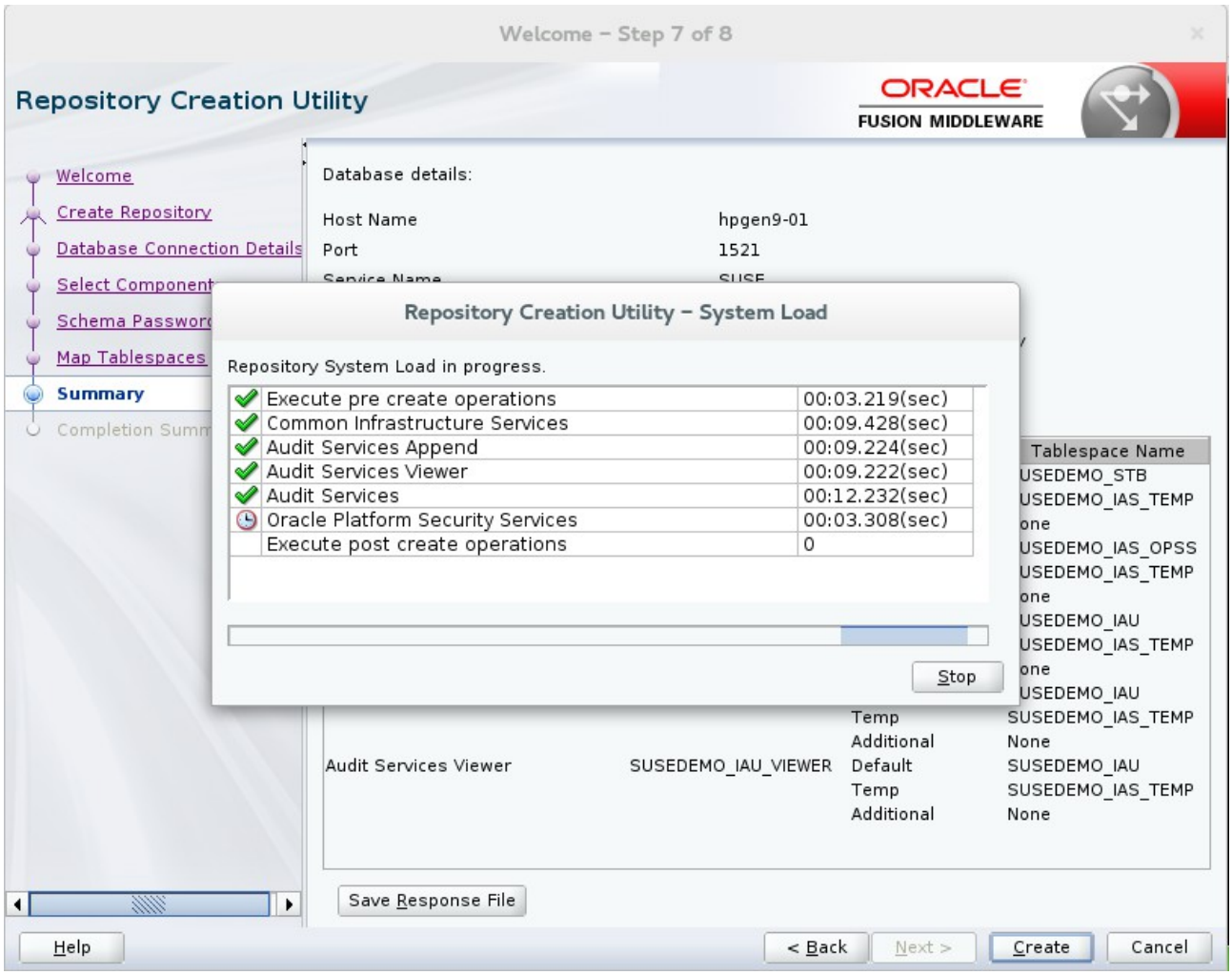
Click **OK**, then **Next**.

7). The **Summary** page appears, showing your actions and choices.

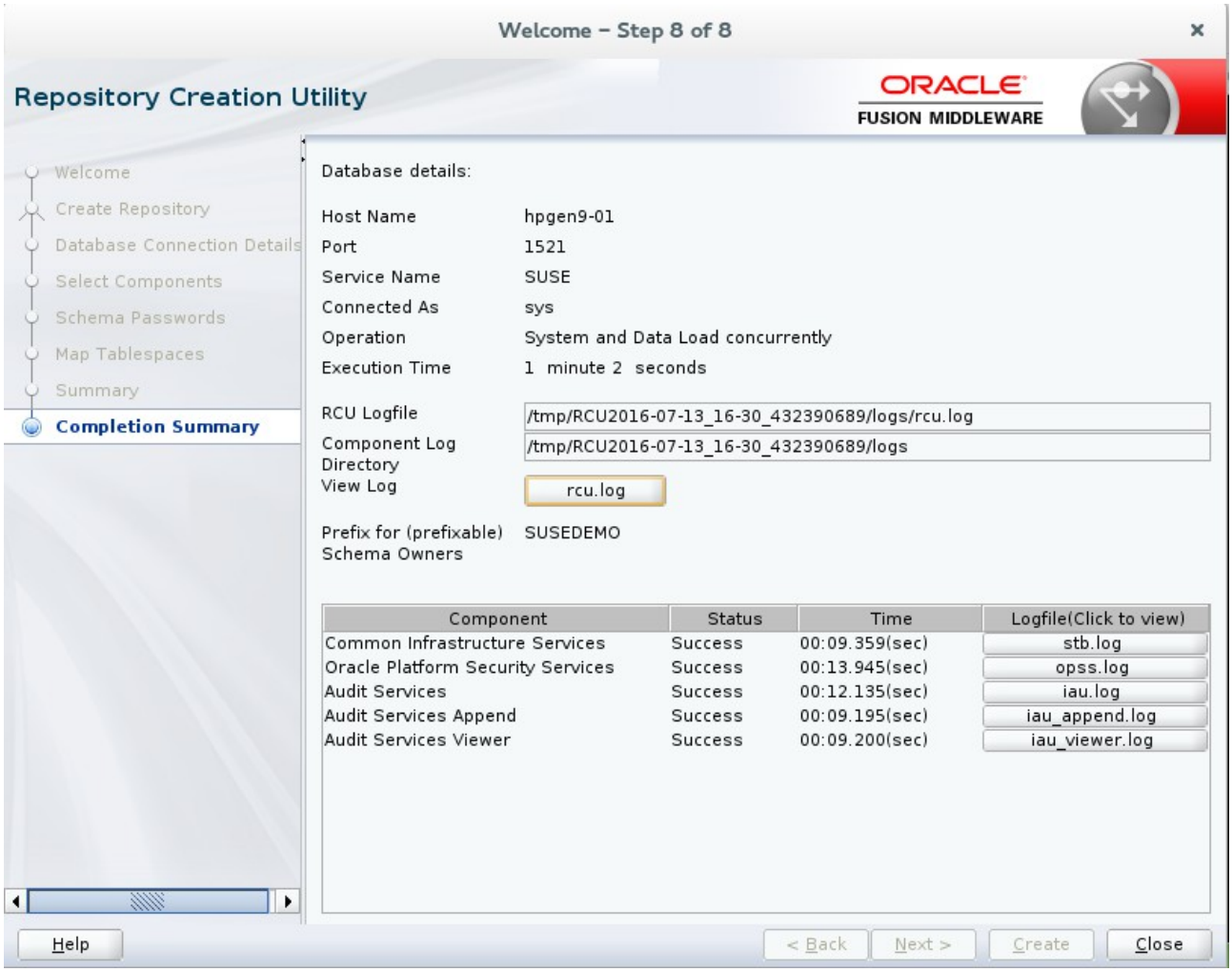


Click **Create** to continue.

A **System Load** progress box appears, showing progress.The box will disappear when complete.



8). The **Completion Summary** page appears.



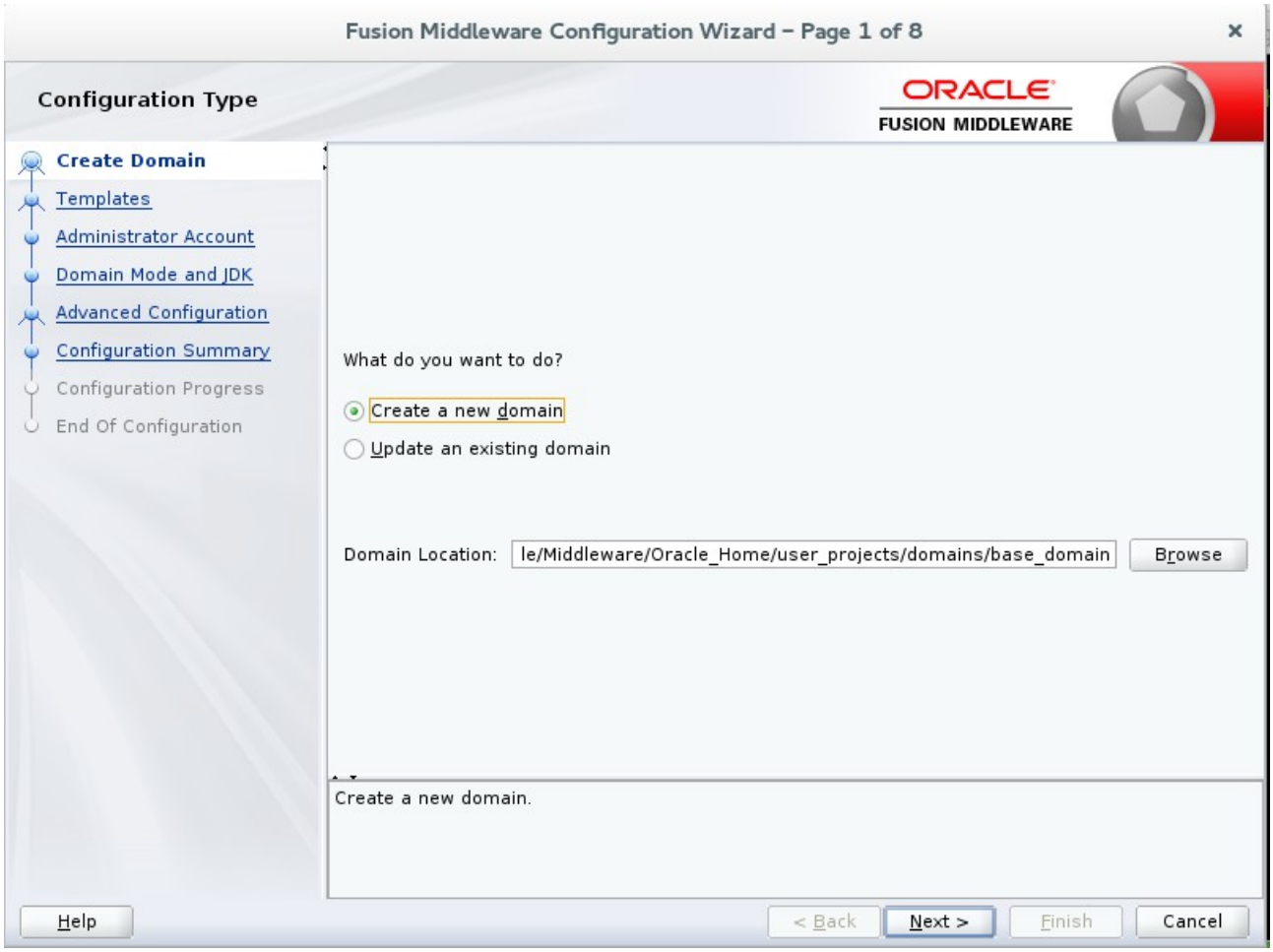
Ensure schema creation is successful. Click **Close** to dismiss the screen.

3. Configuring Oracle Forms and Reports using the Config Wizard

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

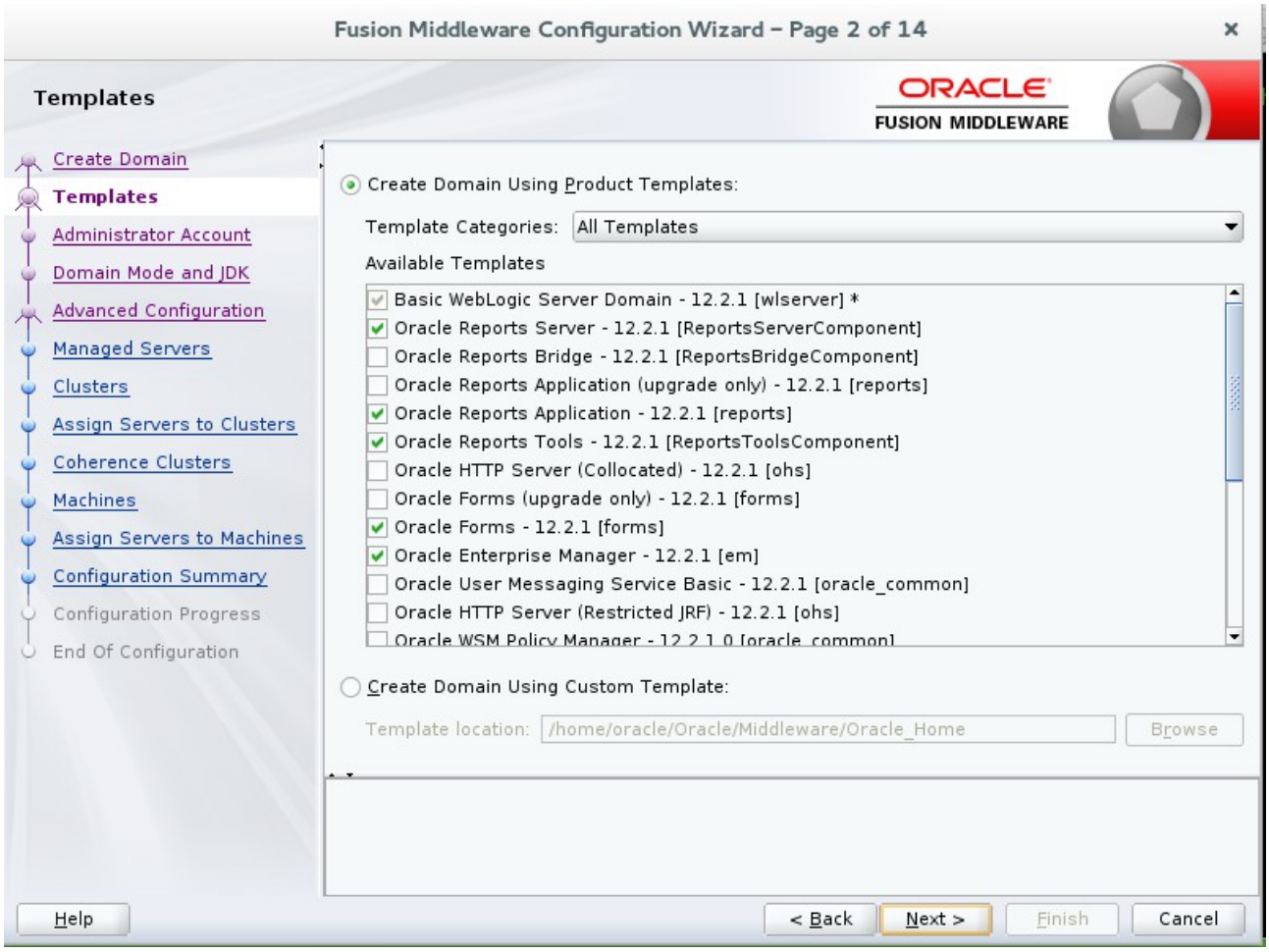
Follow these steps:

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



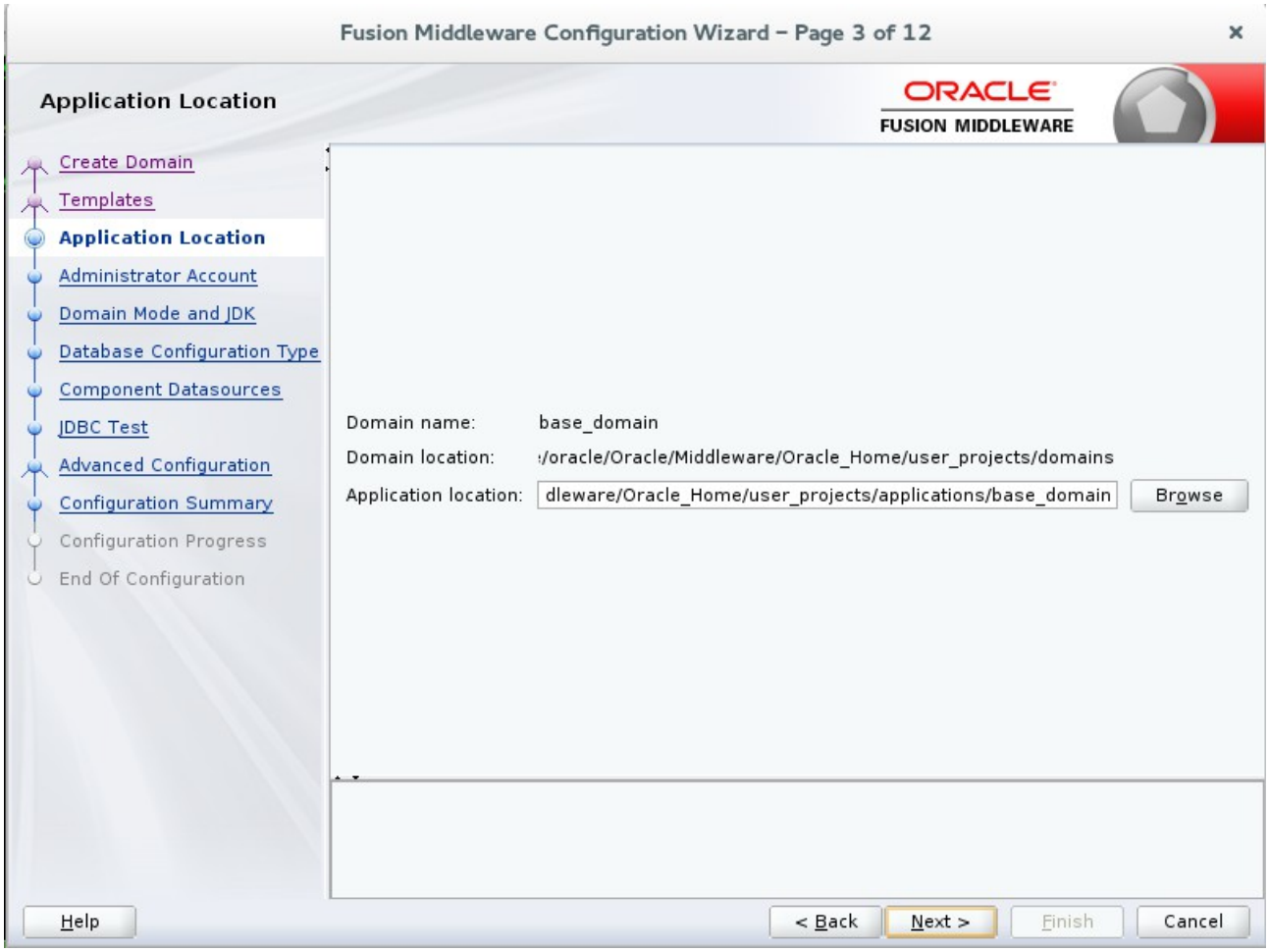
Click **Next** to continue.

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



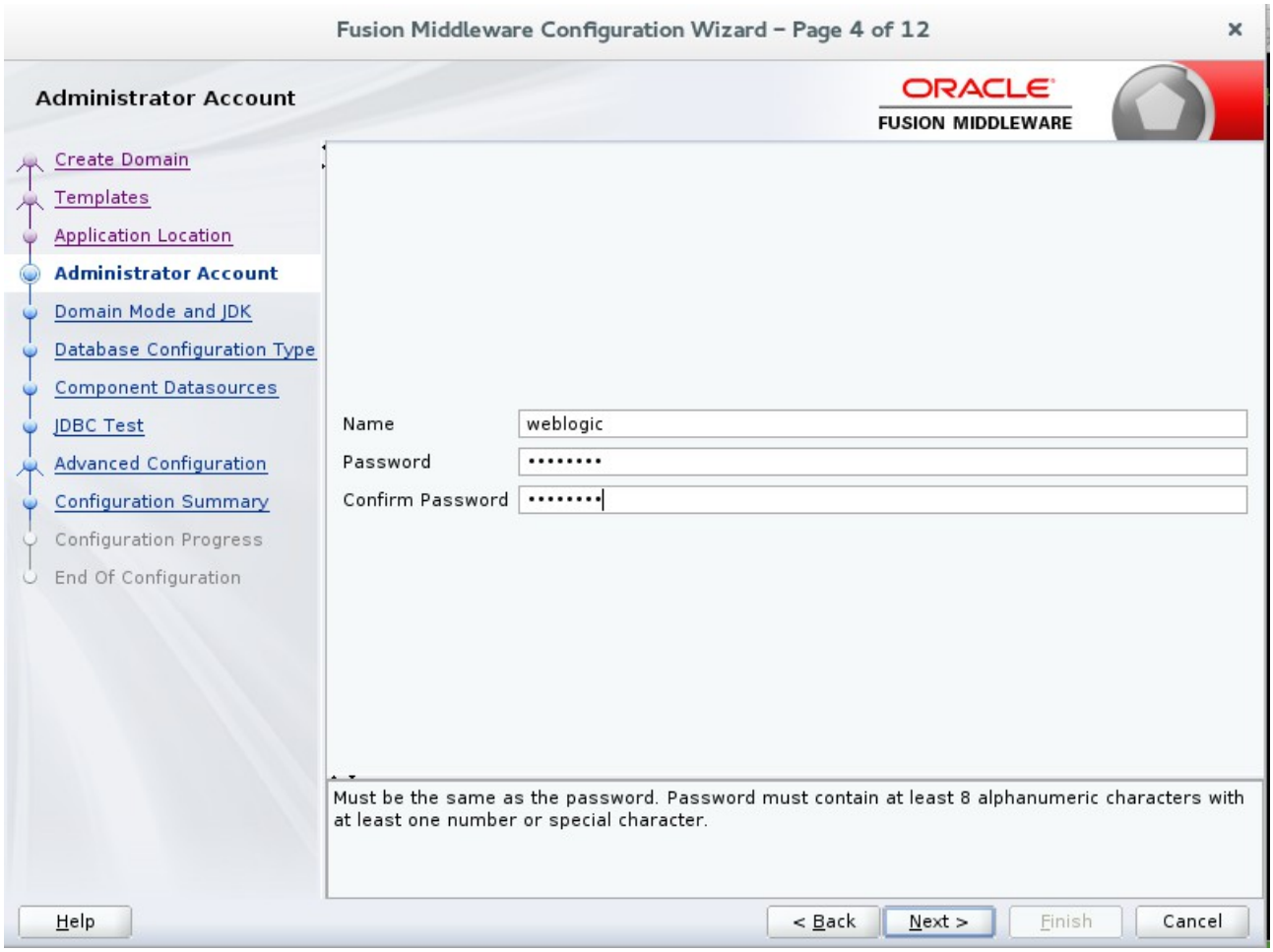
Keep the default selection (**Create Domain using Product Templates**), and select **Oracle Forms – 12.2.1** components and **Oracle Reports – 12.2.1** components. Click **Next** to continue.

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



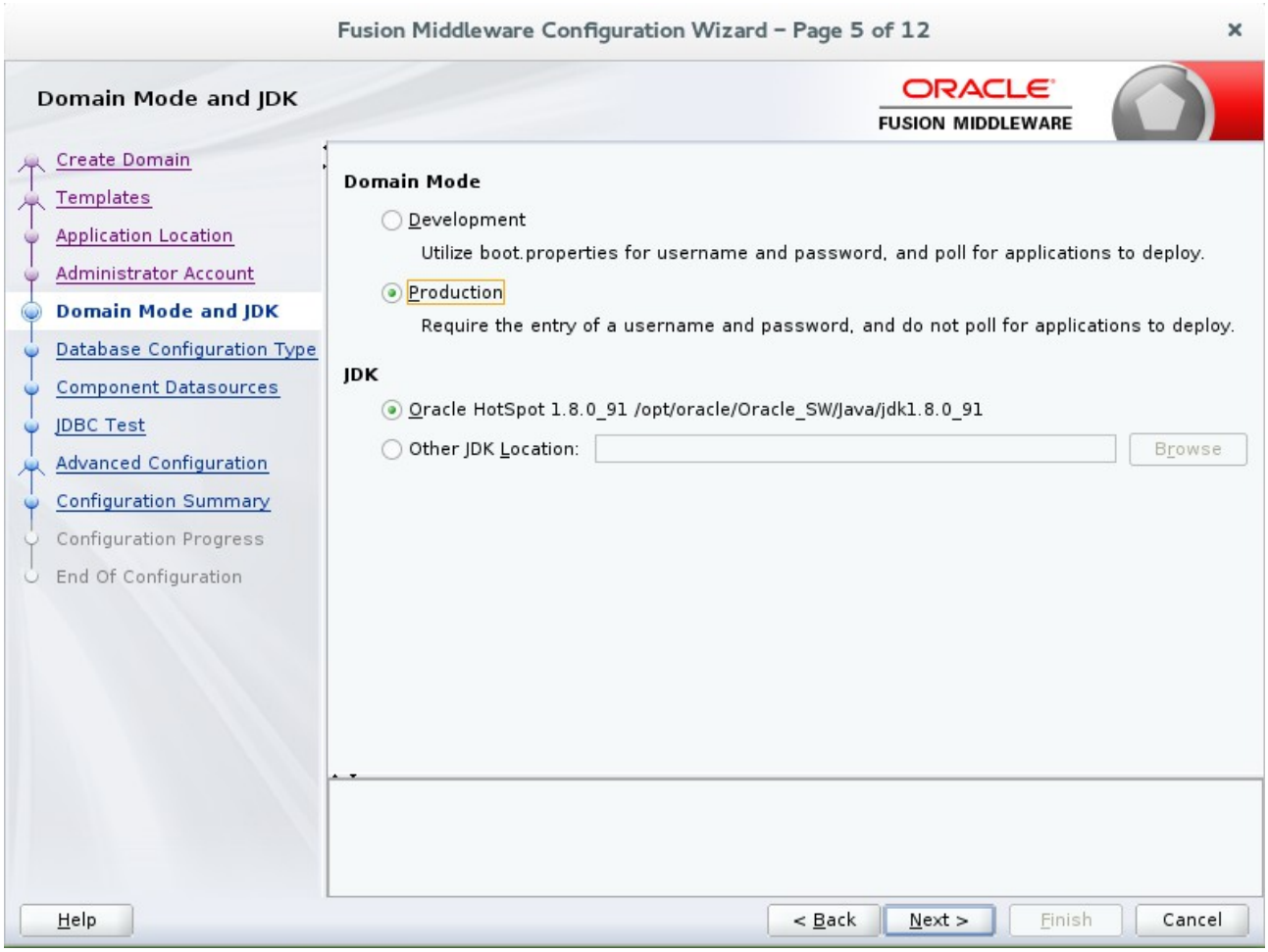
Keep the default value for Application location.Click **Next** to continue.

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



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.

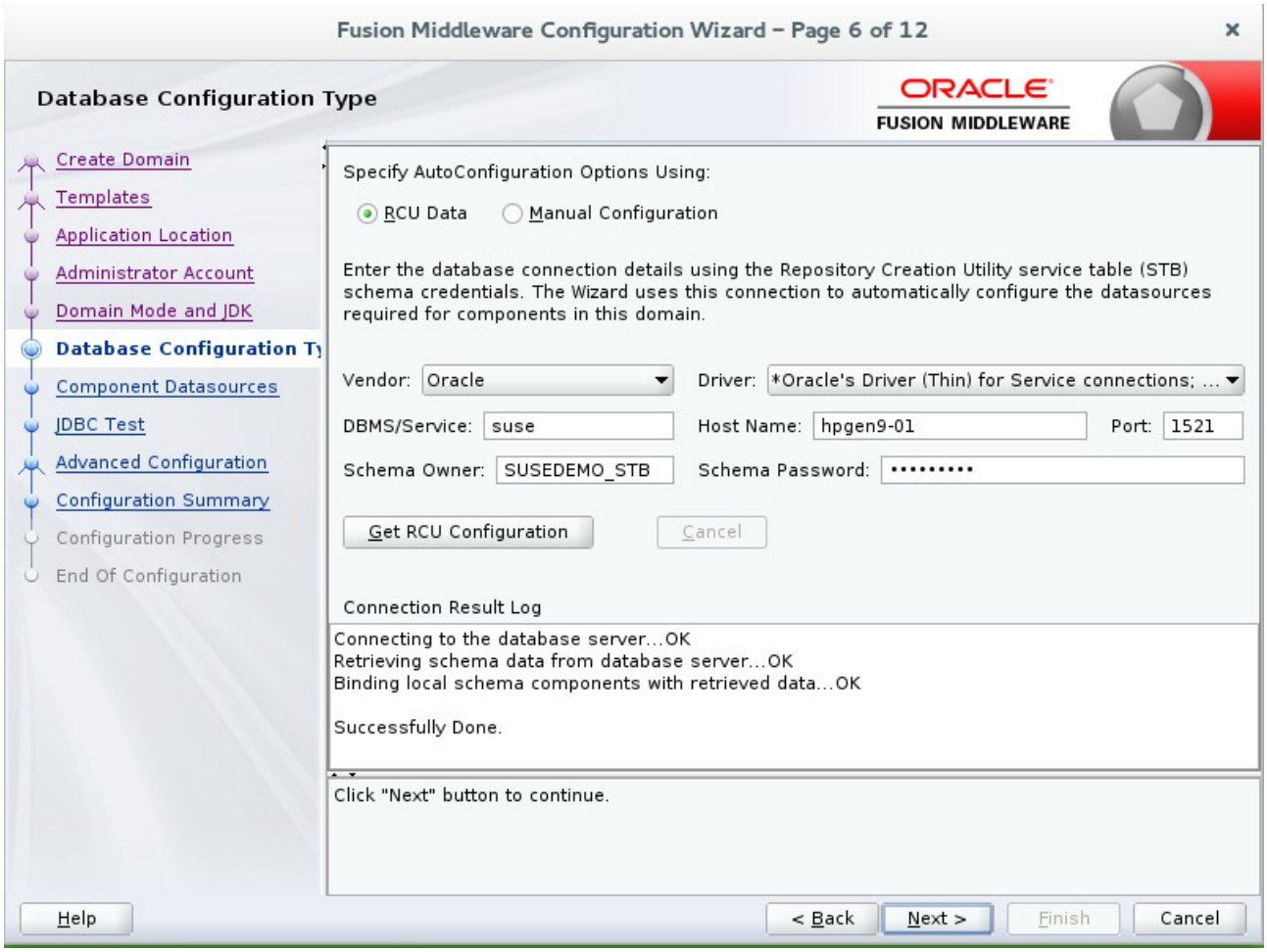
5). The **Domain Mode and JDK** screen appears.



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.

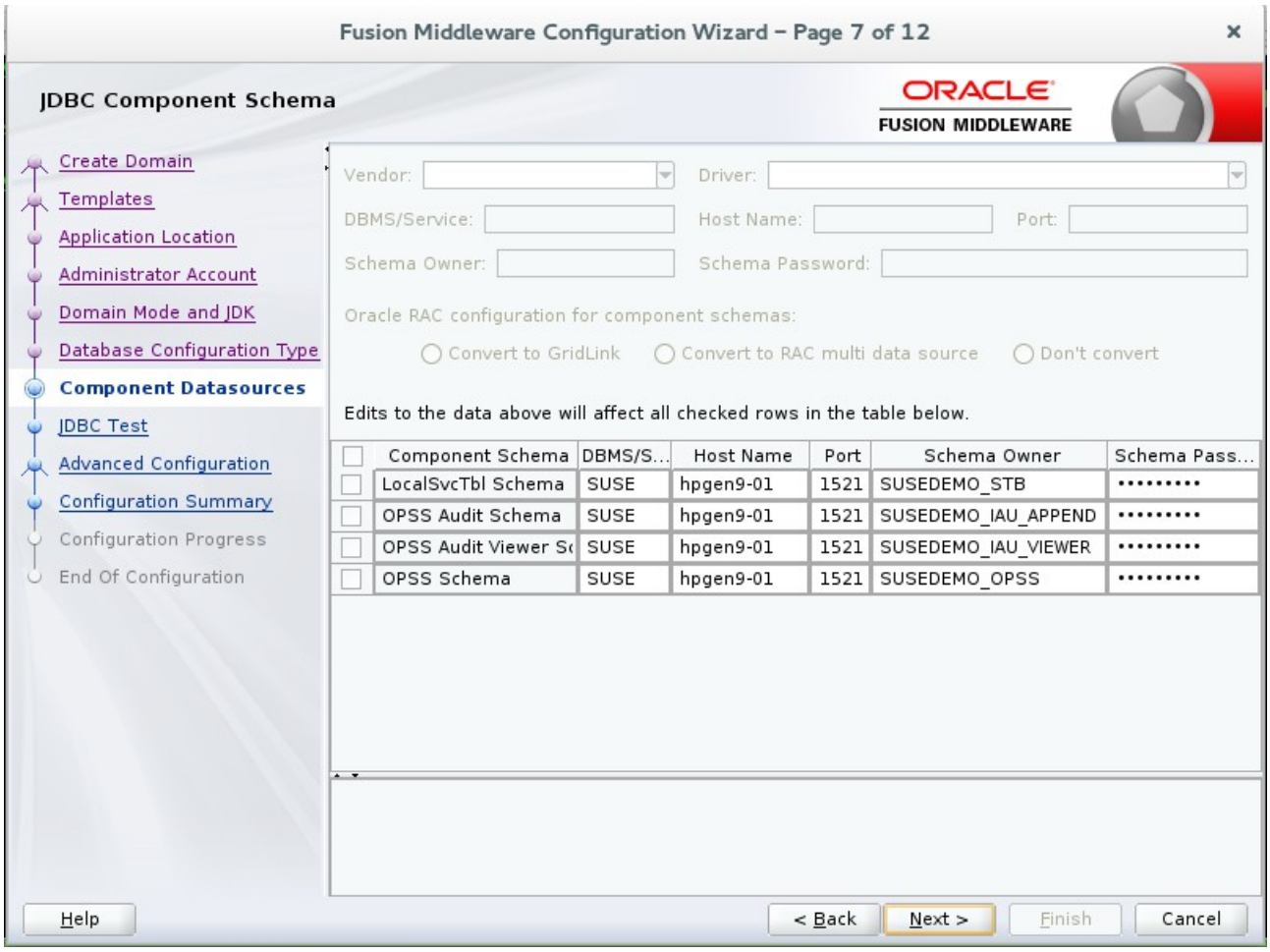
(**Note**: Your Oracle Forms and Reports installation can only be secured with Identity Management if you are configuring your components in deployment mode.)

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



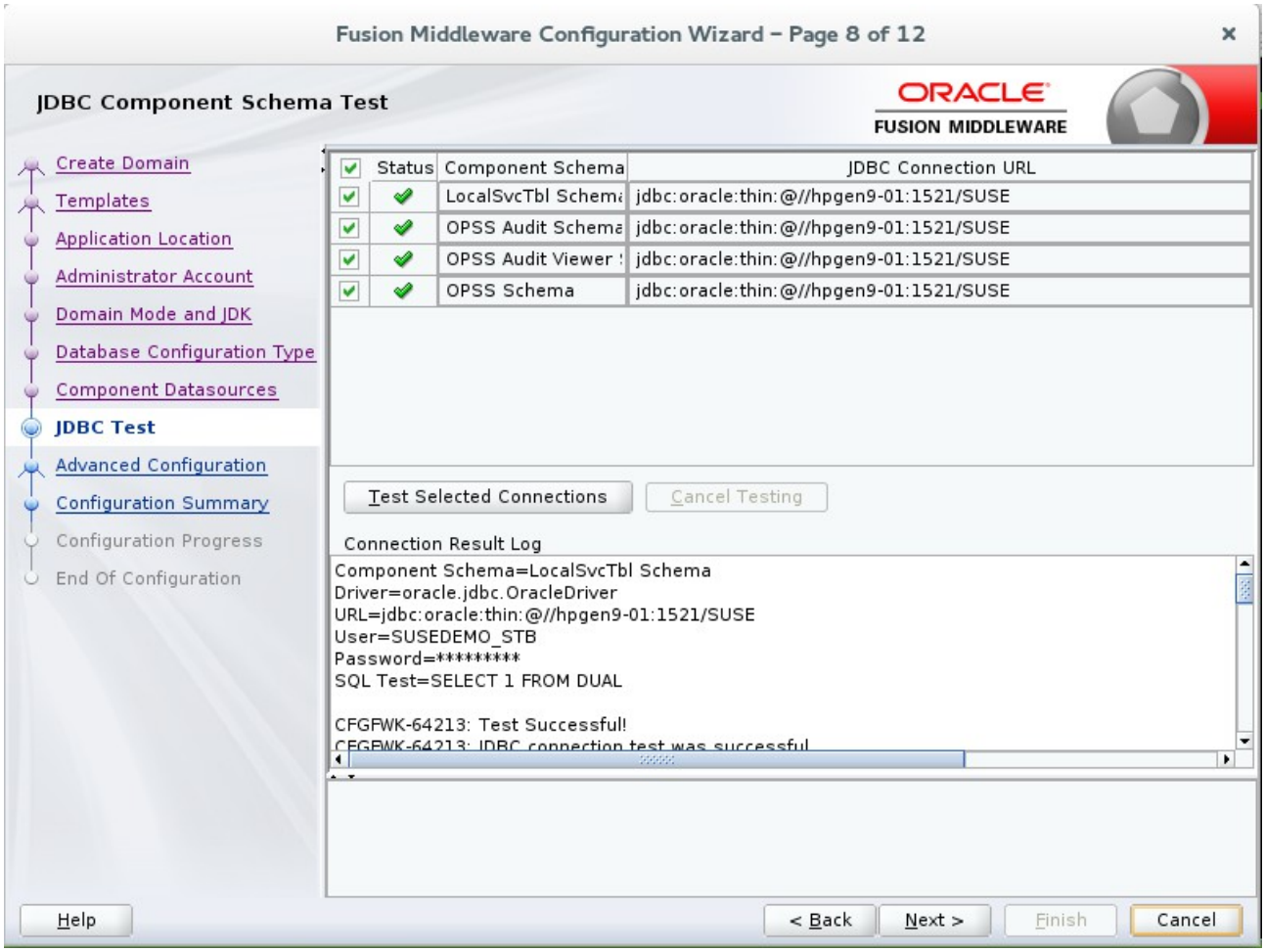
Enter the RCU DB connection information, then click **Get RCU Configuration**. You should receive a success message. Click **Next** to continue.

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



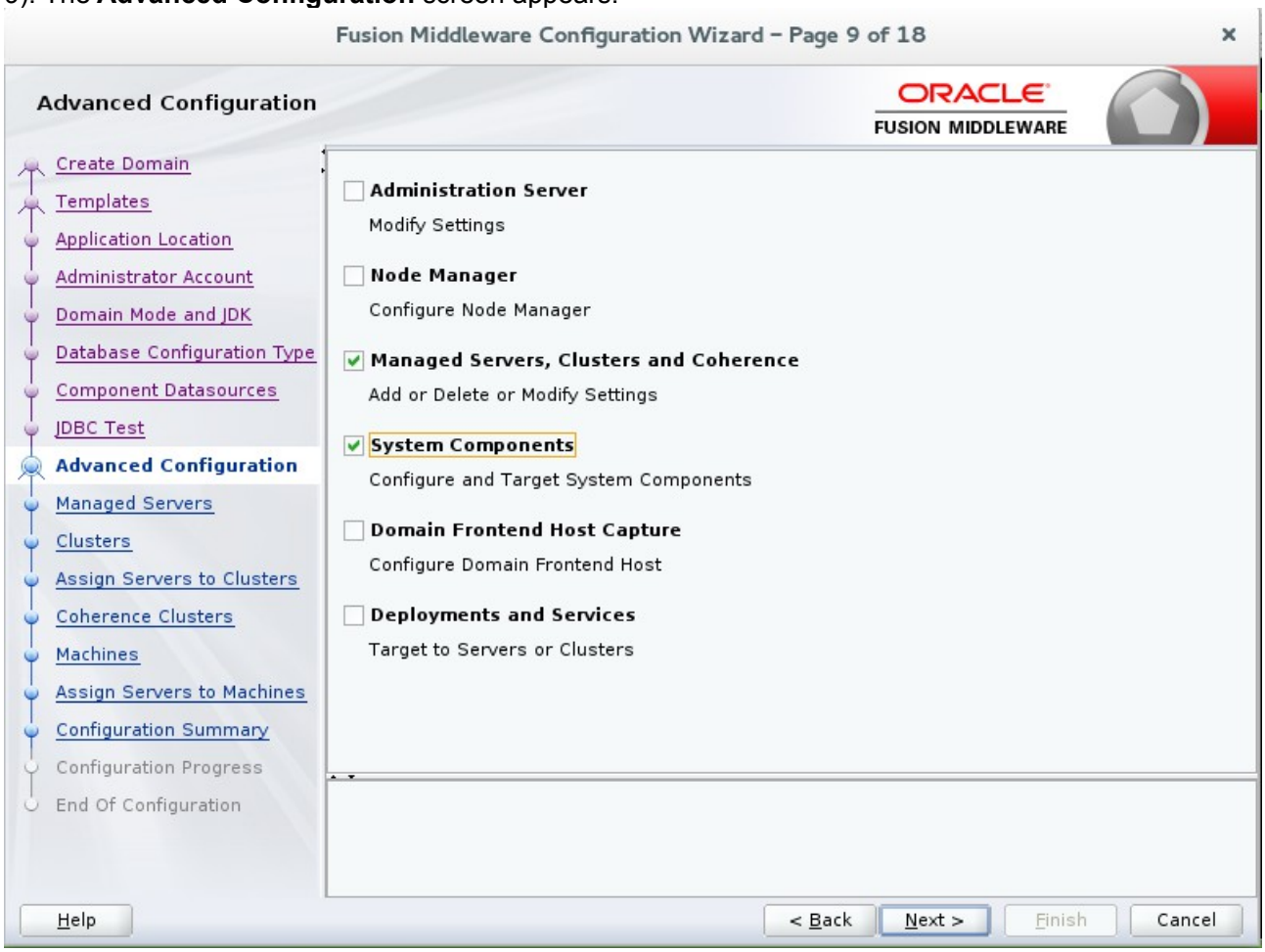
Our instructions assume each Repository schema uses the same password. If not, enter the correct schema passwords. Click **Next** to continue.

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



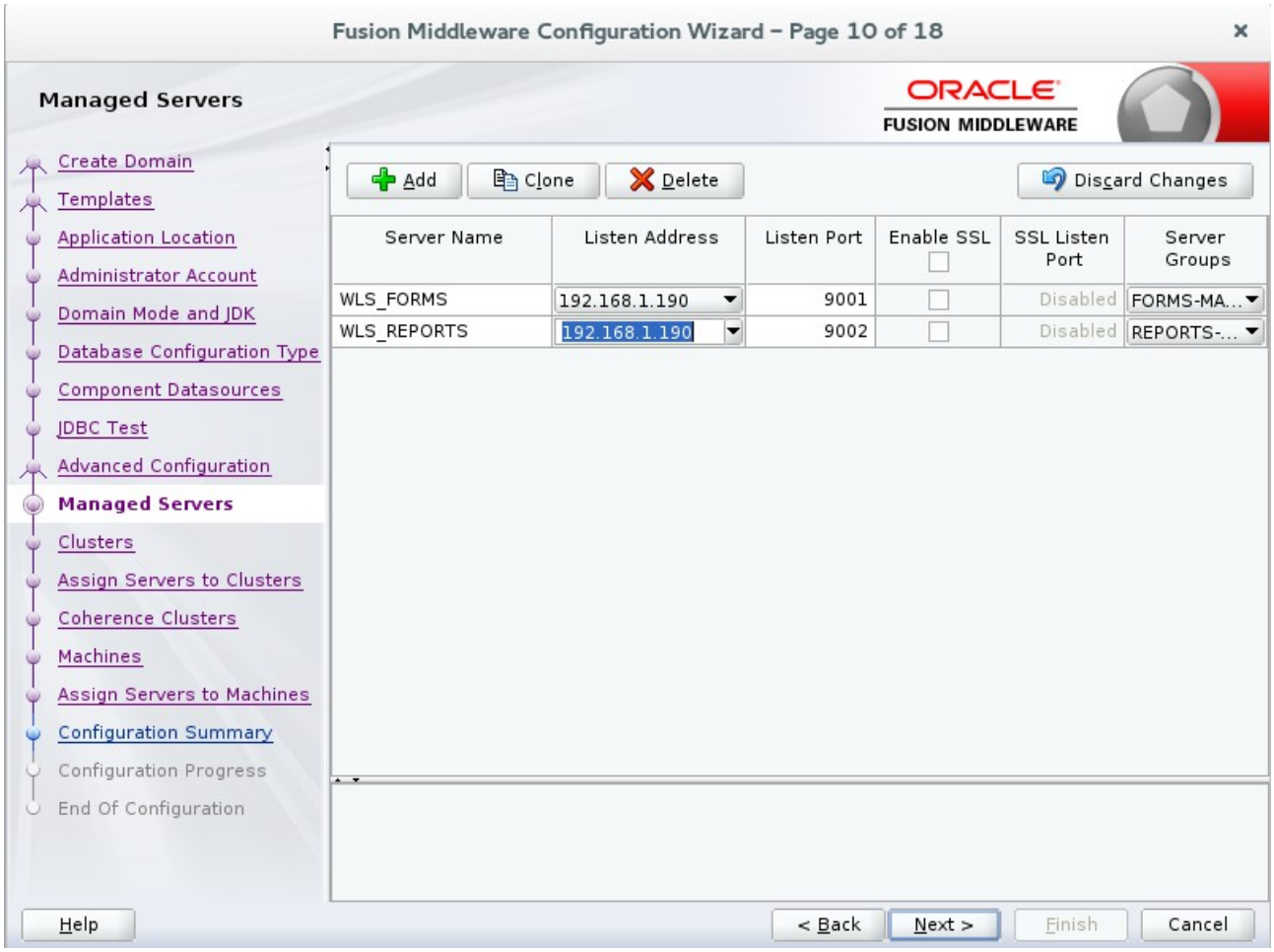
The tests are run and the results given. Ensure all test results are successful.Click **Next** to continue.

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



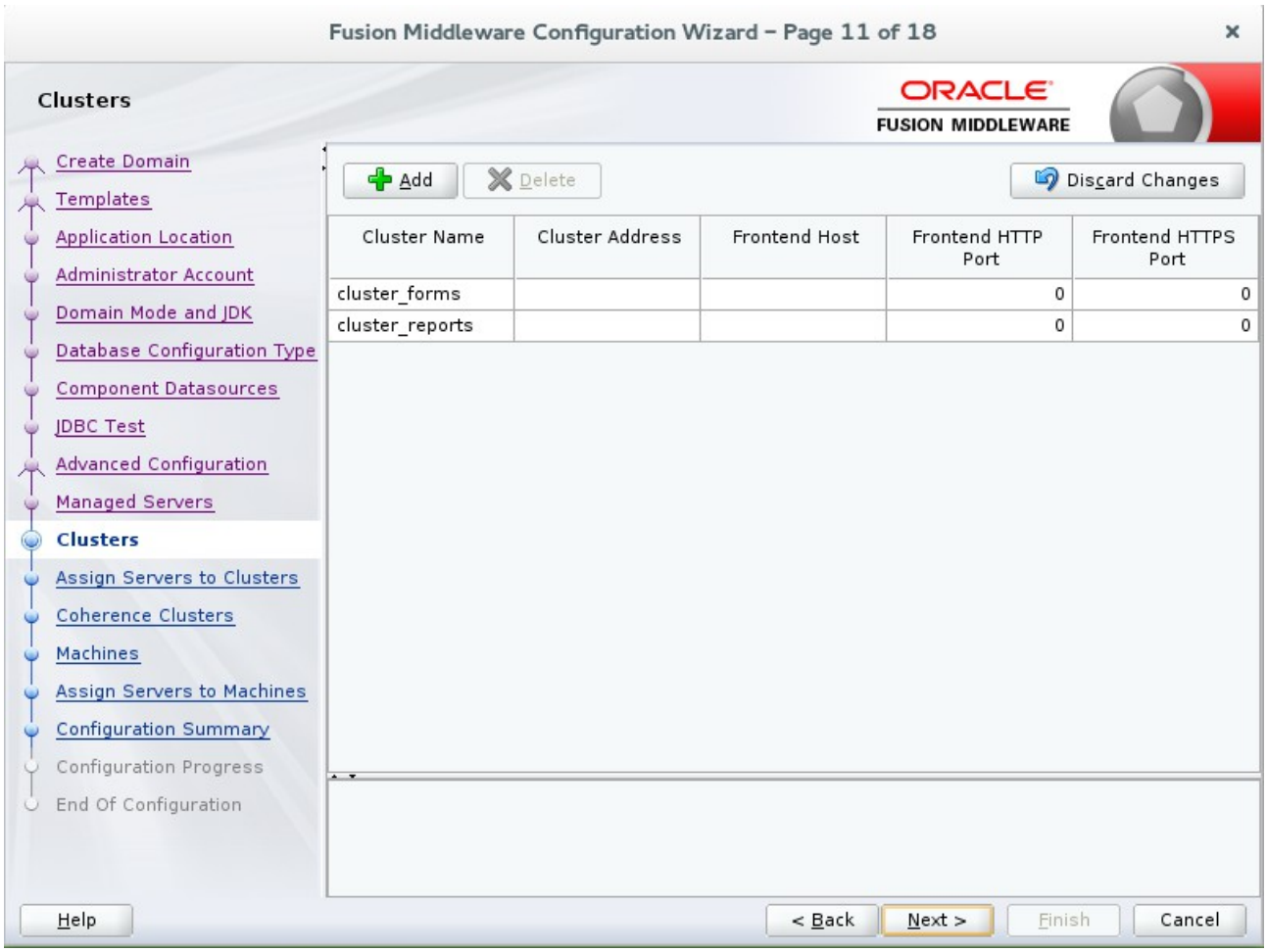
Choose the services on your requirements, then click **Next** to continue.

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



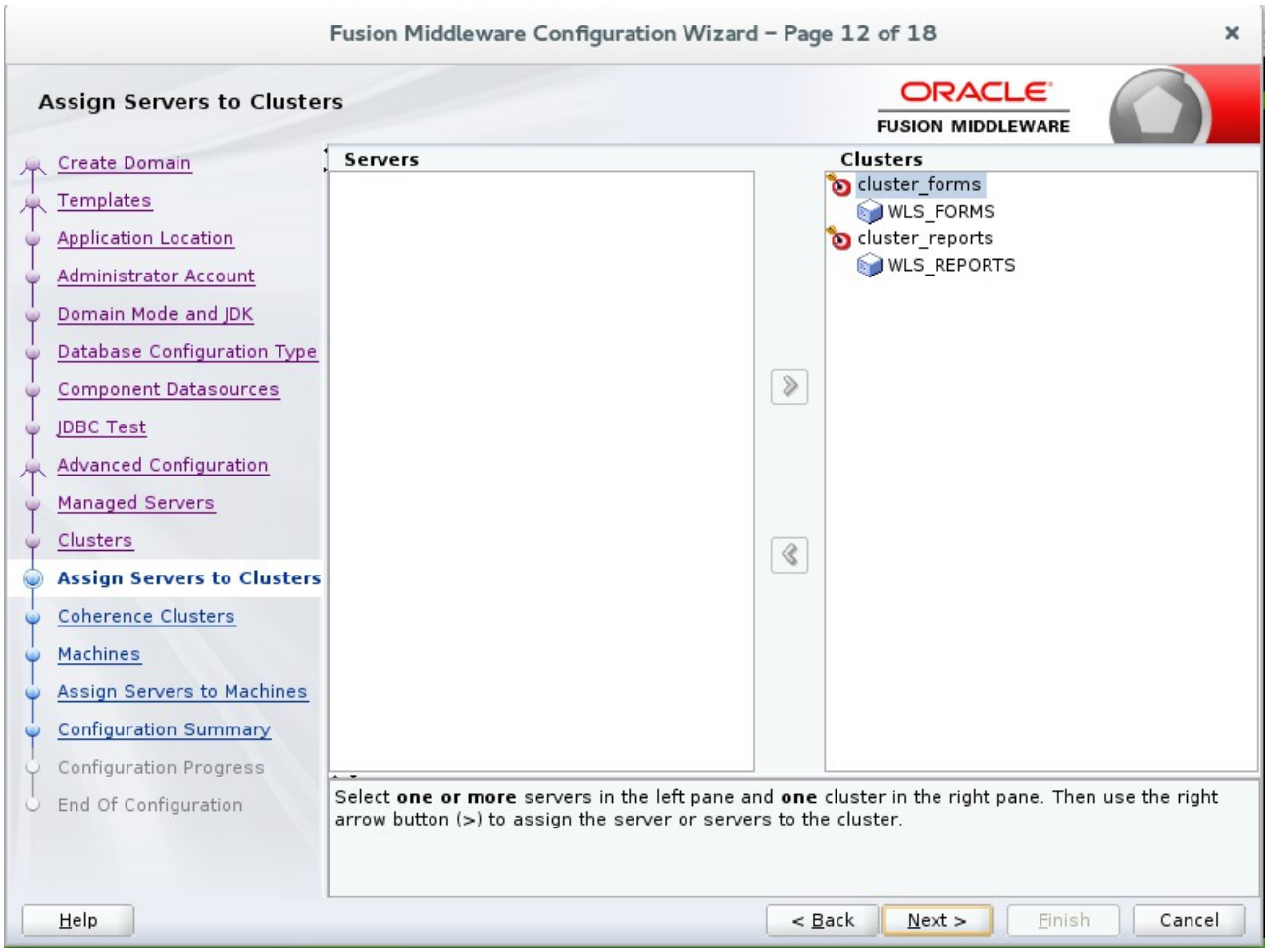
Verify that the Server Groups is set to FORMS-MAN-SVR (for Forms) and REPORTS-APP-SERVERS (for Reports). Click **Next** to continue.

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



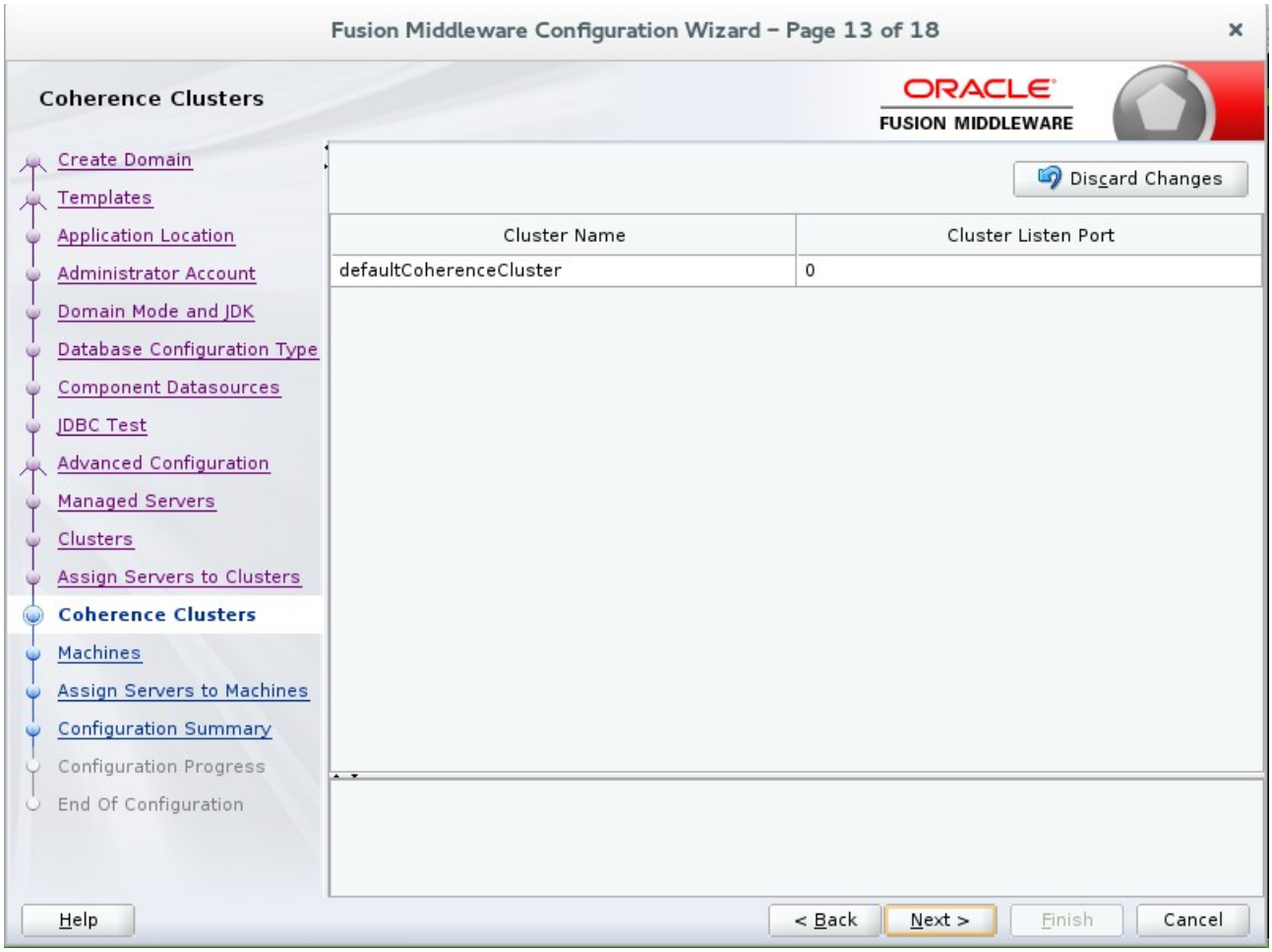
Default entries will be acceptable in most cases, unless adding new clusters is desirable. Click **Next** to continue.

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



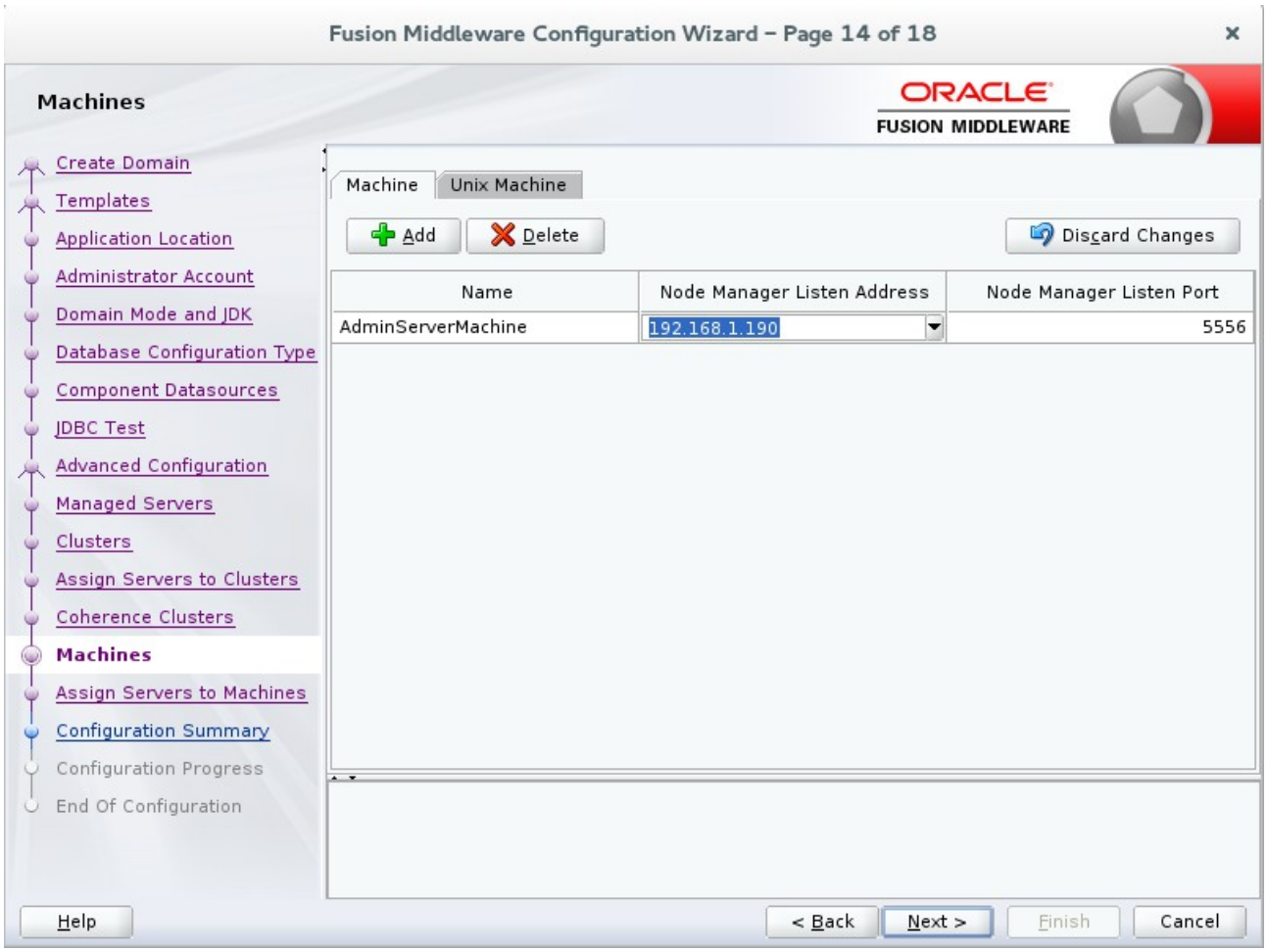
The default values will be appropriate for most cases. However, if new managed servers were added in the previous step, they should be added to the cluster here. Click **Next** to continue.

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



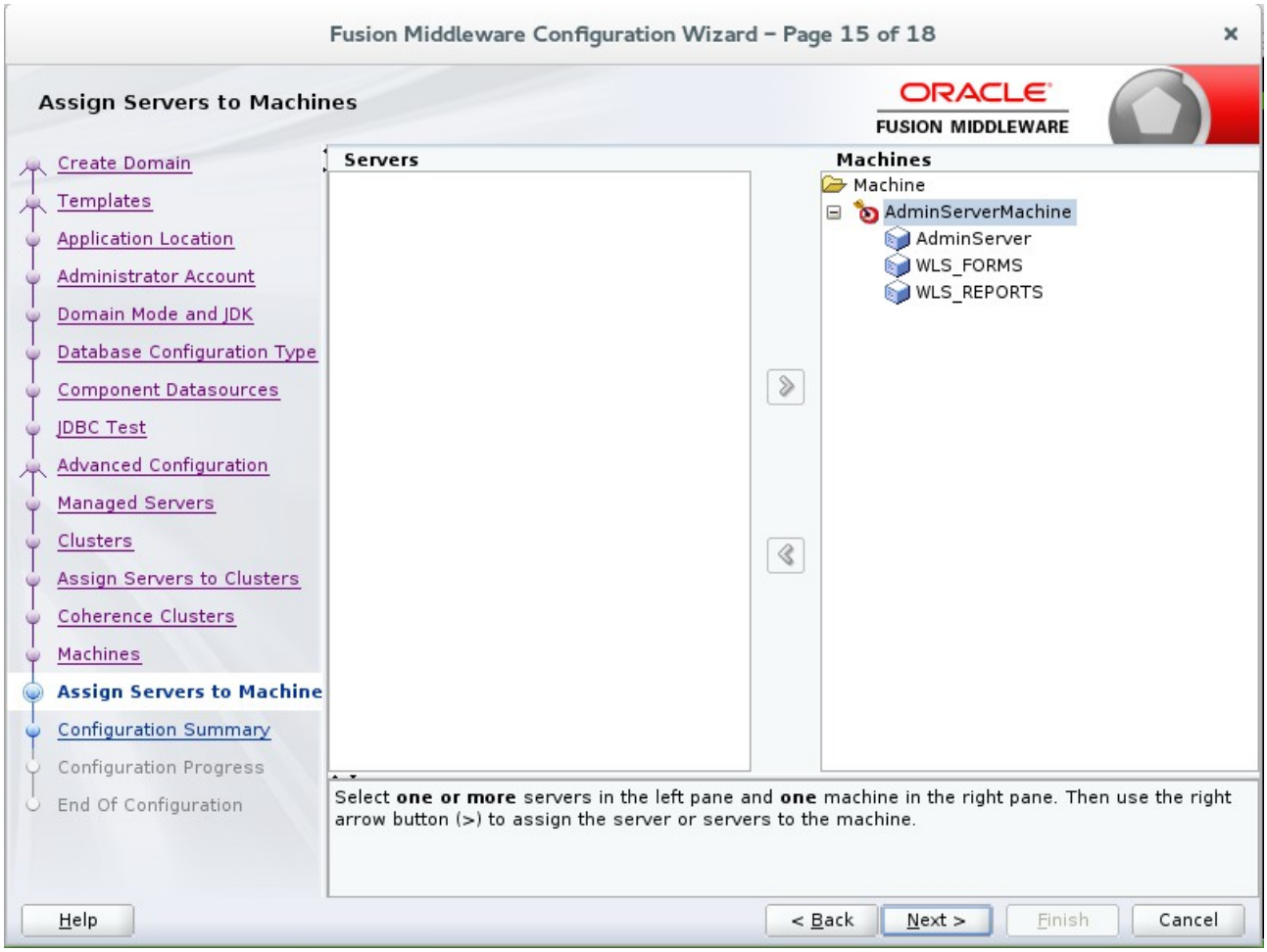
The default values will be appropriate for most cases. Click **Next** to continue.

14). The **Machines** screen appears.



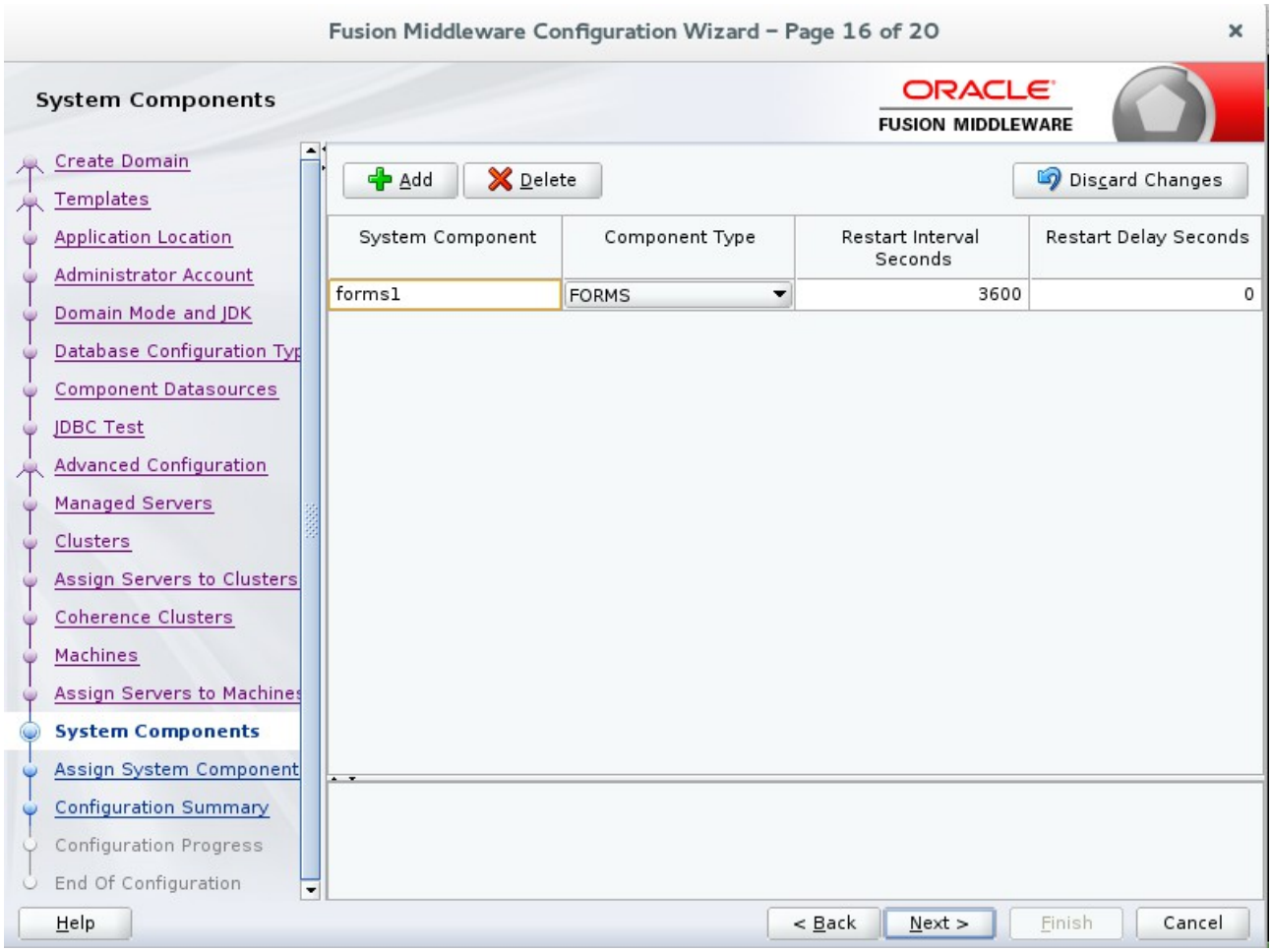
You can use this screen to override the machine name or add addition Machine names for extend domain. Click **Next** to continue.

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



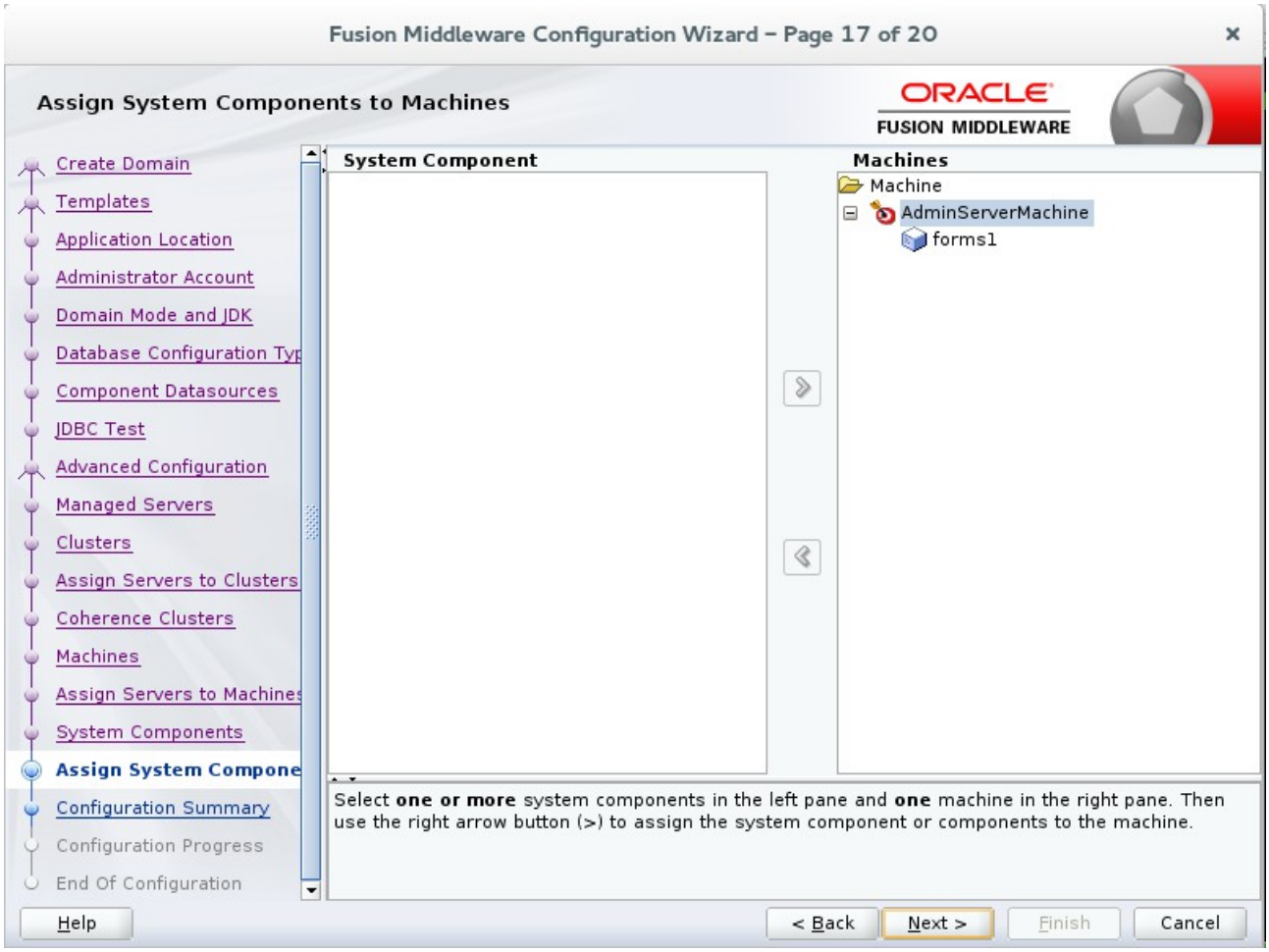
Move the AdminServer to the AdminServerMachine by clicking the '**>**' button. Click **Next** to continue.

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



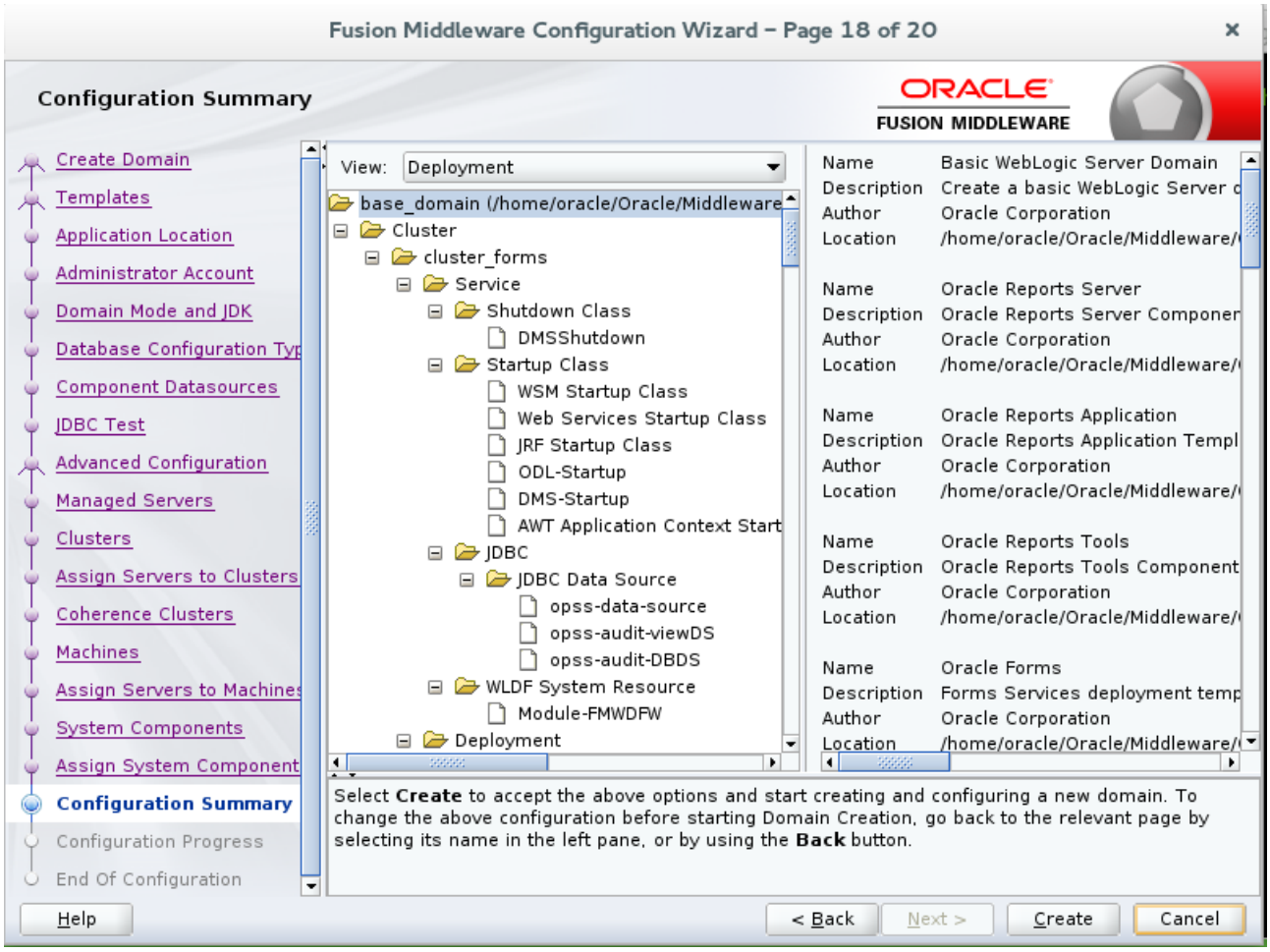
The default values will be appropriate for most cases. You can add additional Forms or other System Component instances on this screen (for extend domain scenario). Click **Next** to continue.

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



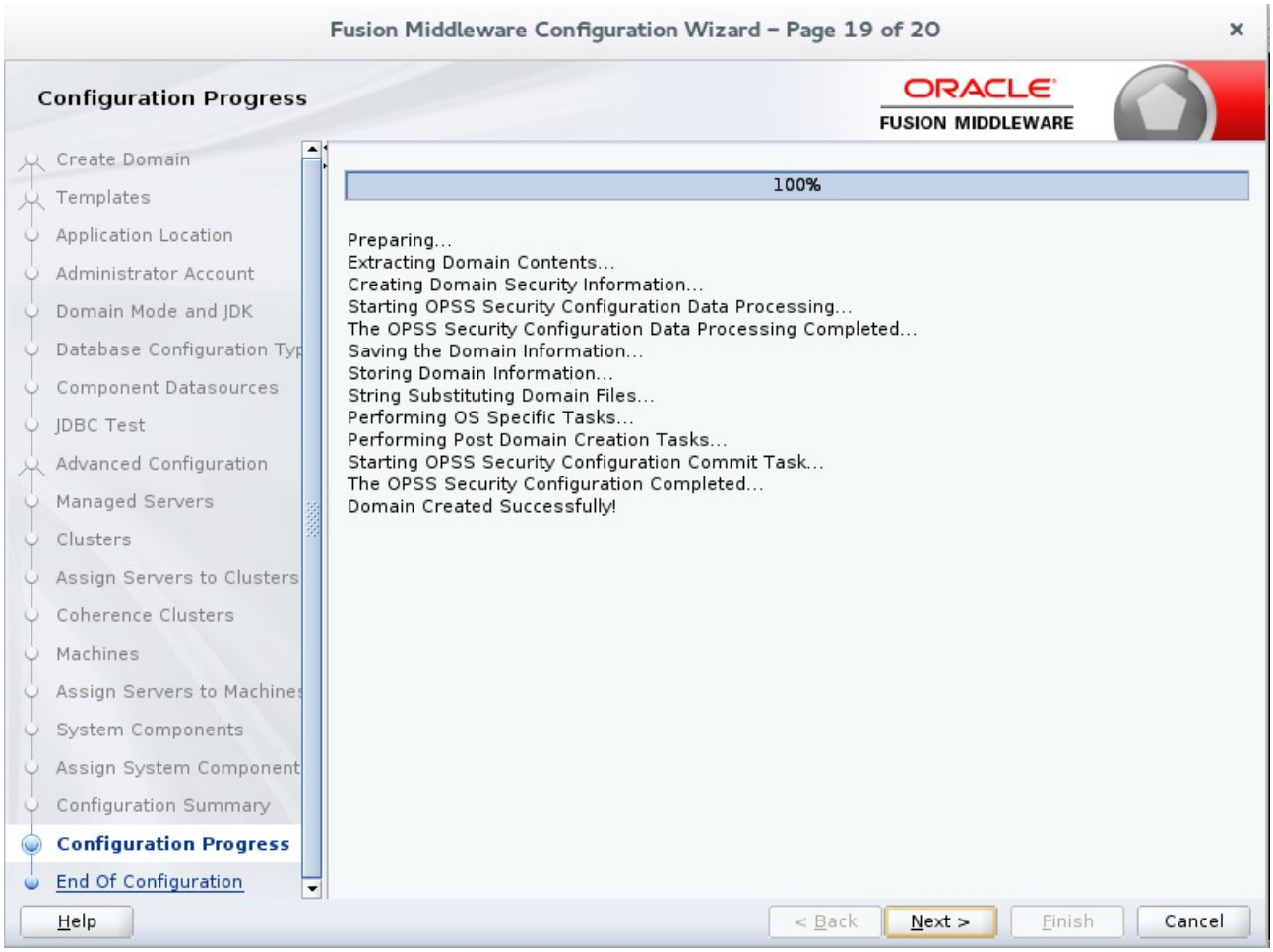
The default values will be appropriate for most cases. Click **Next** to continue.

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



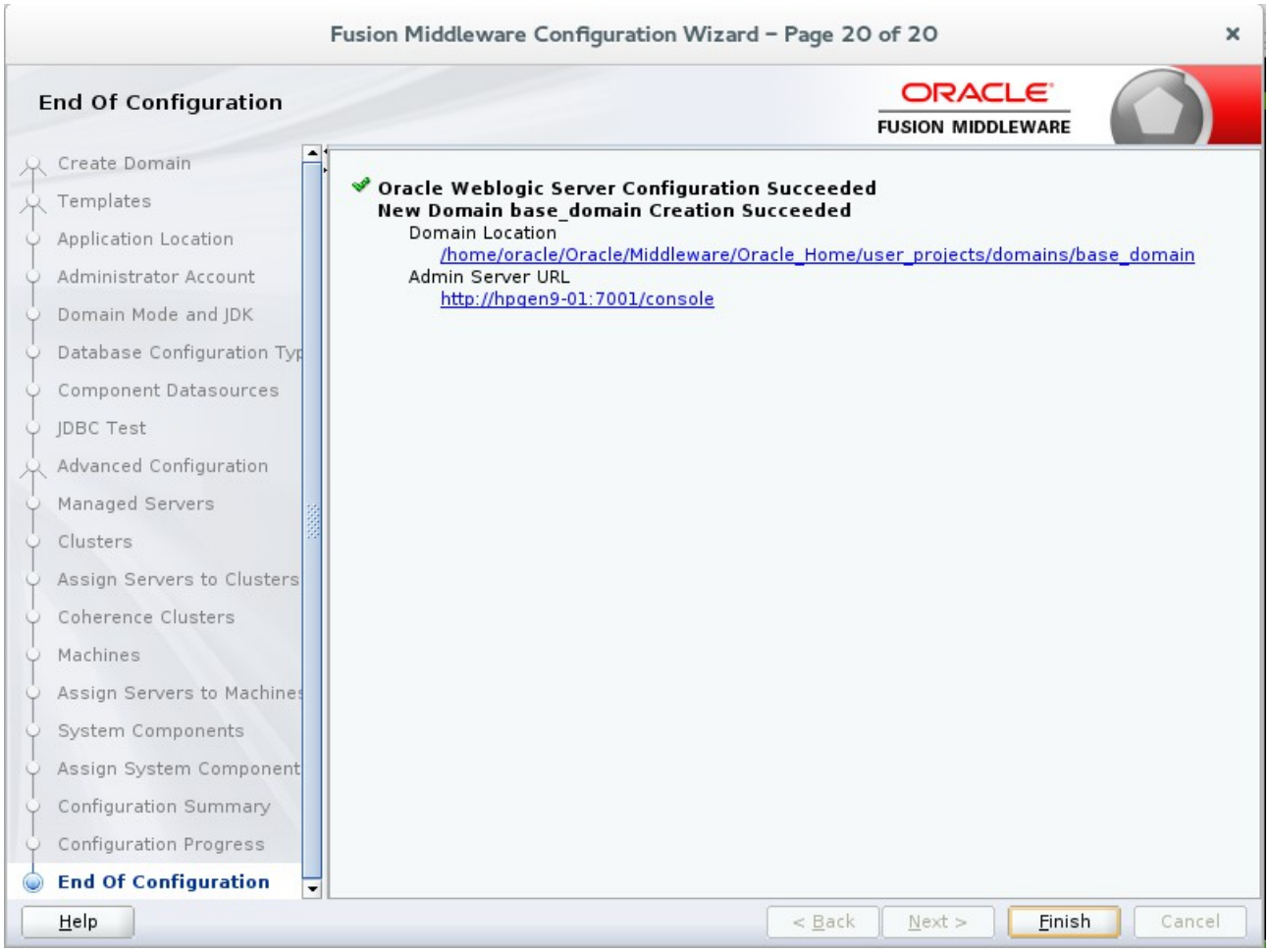
Select **Create** to accept the above options and start creating and configuring a new domain.

19). 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.

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



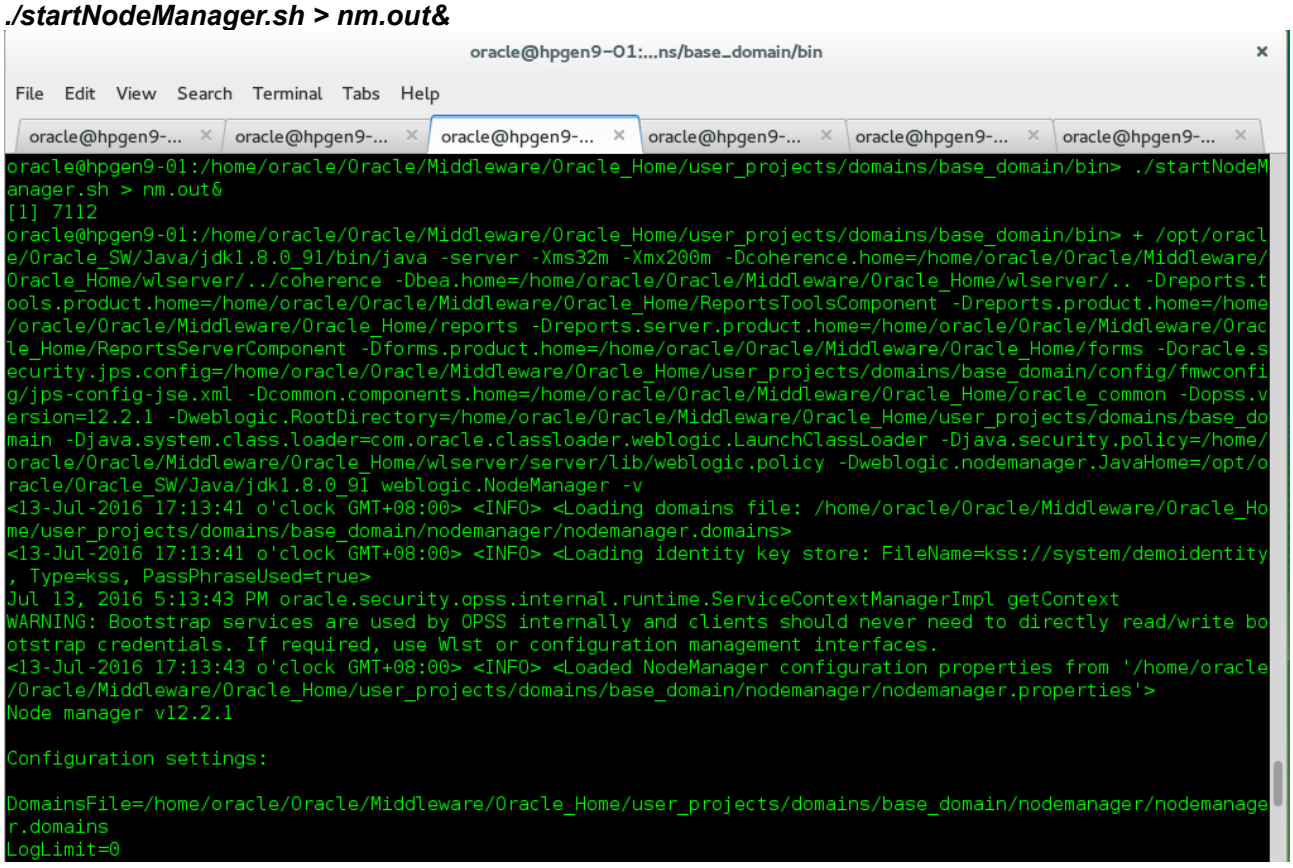
Once you see: "Oracle Weblogic Server Configuration Succeeded", record the '**Domain Location**' and '**Admin Server URL'**, then click **Finish** to dismiss the Configuration Wizard.

4. Verifying Oracle Forms and Reports Installation and Configuration

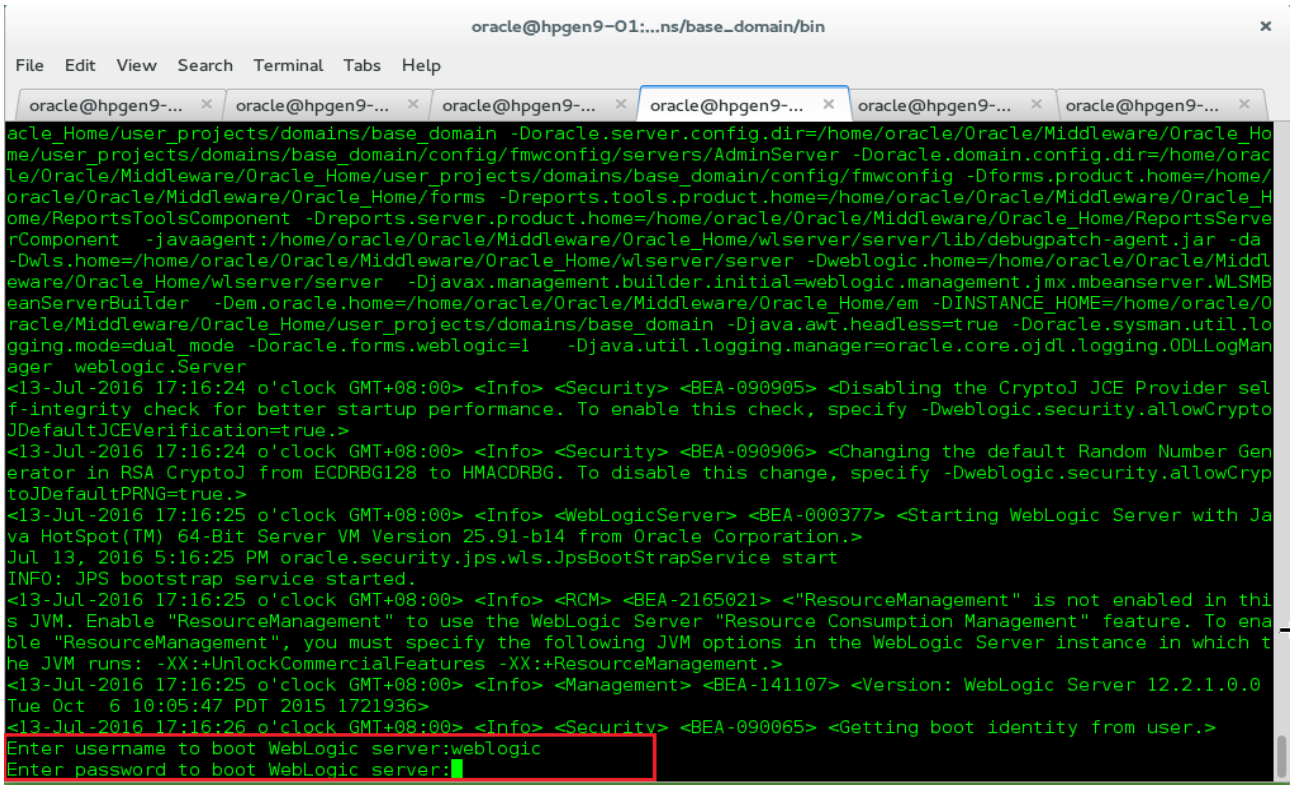
4-1. Check for the presence of installation log files in logs directory inside your Oracle Inventory directory. Also, check the domain server logs, which are located in the servers directory inside the domain home directory.

4-2. Starting the Node Manager and the AdminServer.

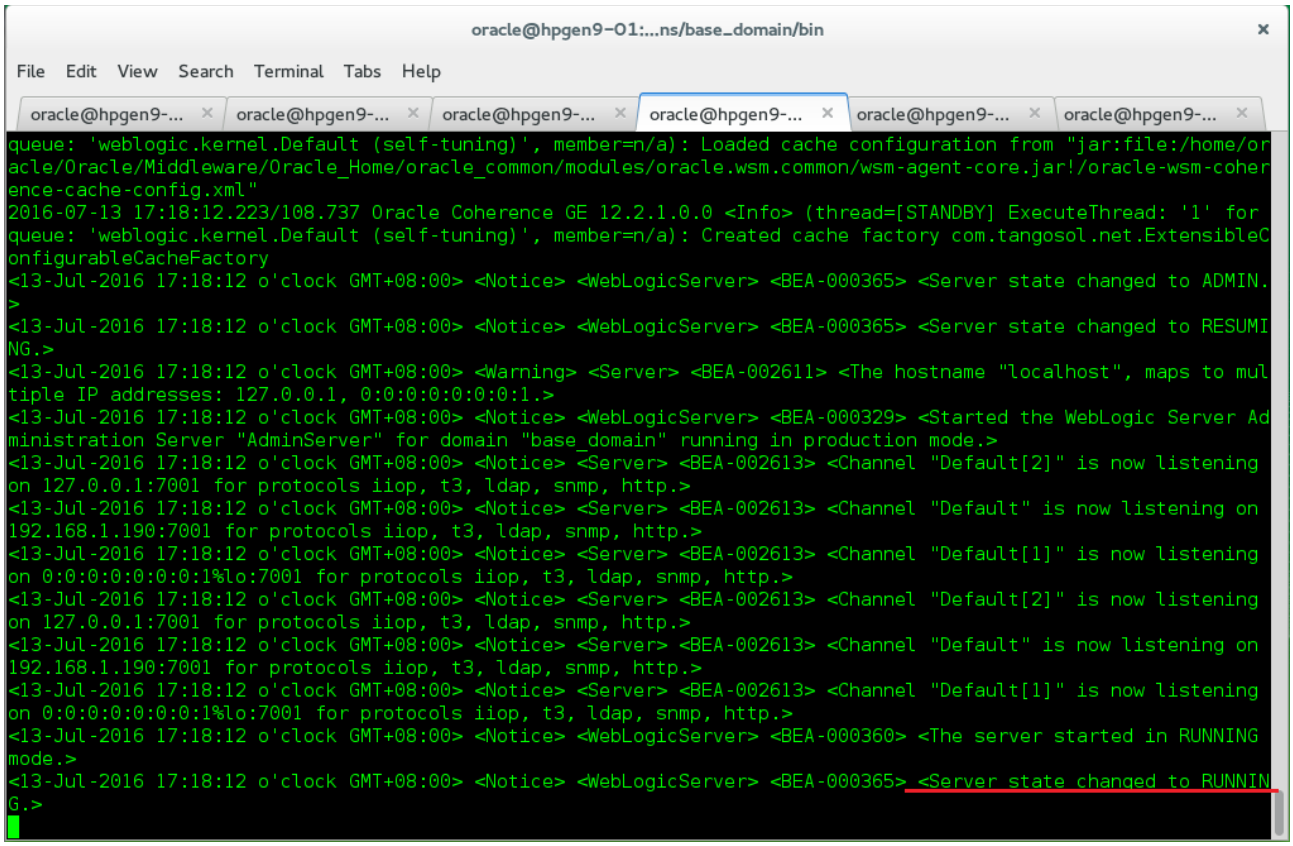
Starting the Node Manager, go to the DOMAIN_HOME/bin directory and run ./startNodeManager.sh > nm.out&



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



Enter username and password.



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.

---

oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/OPatch> ./opatch lsinventory -details

```
Oracle Interim Patch Installer version 13.3.0.0.0
Copyright (c) 2016, Oracle Corporation.  All rights reserved.

Oracle Home       : /home/oracle/Oracle/Middleware/Oracle_Home
Central Inventory : /home/oracle/app/oraInventory
   from           : /home/oracle/Oracle/Middleware/Oracle_Home/oraInst.loc
OPatch version    : 13.3.0.0.0
OUI version       : 13.3.0.0.0
Log file location : /home/oracle/Oracle/Middleware/Oracle_Home/cfgtoollogs/opatch/opatch2016-07-13_17-22-13PM_1.log

OPatch detects the Middleware Home as "/home/oracle/Oracle/Middleware/Oracle_Home"

Lsinventory Output file location : /home/oracle/Oracle/Middleware/Oracle_Home/cfgtoollogs/opatch/lsinv/lsinventory2016-07-13_17-22-13PM.txt
--------------------------------------------------------------------------------
Local Machine Information::
Hostname: hpgen9-01
ARU platform id: 226
ARU platform description:: Linux x86-64

Interim patches (6) :

Patch  19795066     : applied on Wed Jul 13 16:12:30 GMT+08:00 2016
Unique Patch ID:  19149348
Patch description:  "One-off"
   Created on 16 Jul 2015, 15:51:43 hrs UTC
   Bugs fixed:
     19795066
   Files Touched:
     /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
     /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
   Patch Location in Inventory:
     /home/oracle/Oracle/Middleware/Oracle_Home/inventory/oneoffs/19795066
   Patch Location in Storage area:
     /home/oracle/Oracle/Middleware/Oracle_Home/.patch_storage/19795066_Jul_16_2015_15_51_43
```

```
Patch  19632480     : applied on Wed Jul 13 16:12:13 GMT+08:00 2016
Unique Patch ID:  19278519
Patch description:  "One-off"
   Created on 25 Aug 2015, 07:19:43 hrs UTC
   Bugs fixed:
     19632480
   Files Touched:
     /oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
     /oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
   Patch Location in Inventory:
     /home/oracle/Oracle/Middleware/Oracle_Home/inventory/oneoffs/19632480
   Patch Location in Storage area:
     /home/oracle/Oracle/Middleware/Oracle_Home/.patch_storage/19632480_Aug_25_2015_07_19_43

Patch  19154304     : applied on Wed Jul 13 16:11:56 GMT+08:00 2016
Unique Patch ID:  19278518
Patch description:  "One-off"
   Created on 25 Aug 2015, 07:10:13 hrs UTC
   Bugs fixed:
     19154304
   Files Touched:
     /oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
```

```
    /oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
    /oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
    /oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
    /oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
    /oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
    /oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
    /oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
    /oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
    /oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
  Patch Location in Inventory:
    /home/oracle/Oracle/Middleware/Oracle_Home/inventory/oneoffs/19154304
  Patch Location in Storage area:
    /home/oracle/Oracle/Middleware/Oracle_Home/.patch_storage/19154304_Aug_25_2015_07_10_13

Patch  19030178     : applied on Wed Jul 13 16:11:39 GMT+08:00 2016
Unique Patch ID:  19234068
Patch description:  "One-off"
  Created on 4 Aug 2015, 05:40:22 hrs UTC
  Bugs fixed:
    19030178
  Files Touched:
    /oracle/net/nt/TcpsConfigure.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
    /oracle/net/nt/TcpsConfigure.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
    /oracle/net/nt/TcpsConfigure.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
    /oracle/net/nt/TcpsConfigure.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
    /oracle/net/nt/TcpsConfigure.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
    /oracle/net/nt/TcpsConfigure.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
  Patch Location in Inventory:
    /home/oracle/Oracle/Middleware/Oracle_Home/inventory/oneoffs/19030178
  Patch Location in Storage area:
    /home/oracle/Oracle/Middleware/Oracle_Home/.patch_storage/19030178_Aug_4_2015_05_40_22

Patch  19002423     : applied on Wed Jul 13 16:11:22 GMT+08:00 2016
Unique Patch ID:  18804275
```

```
Patch description:  "One-off"
   Created on 9 Apr 2015, 23:09:16 hrs UTC
   Bugs fixed:
     19002423
   Files Touched:
     /oracle/jdbc/driver/OraclePreparedStatement$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/driver/OraclePreparedStatement$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/driver/OraclePreparedStatement$BatchFIFONode.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/driver/OraclePreparedStatement$Pair.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/driver/OraclePreparedStatement.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6.jar
     /oracle/jdbc/driver/OraclePreparedStatement$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$BatchFIFONode.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$Pair.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/driver/OraclePreparedStatement$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/driver/OraclePreparedStatement$BatchFIFONode.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/driver/OraclePreparedStatement$Pair.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/driver/OraclePreparedStatement.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc6dms.jar
     /oracle/jdbc/driver/OraclePreparedStatement$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/driver/OraclePreparedStatement$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/driver/OraclePreparedStatement$BatchFIFONode.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/driver/OraclePreparedStatement$Pair.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/driver/OraclePreparedStatement.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7.jar
     /oracle/jdbc/driver/OraclePreparedStatement$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$BatchFIFONode.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement$Pair.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
     /oracle/jdbc/driver/OraclePreparedStatement.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7_g.jar
```

```
    /oracle/jdbc/driver/OraclePreparedStatement$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/jdbc/driver/OraclePreparedStatement$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/jdbc/driver/OraclePreparedStatement$BatchFIFONode.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/jdbc/driver/OraclePreparedStatement$Pair.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
    /oracle/jdbc/driver/OraclePreparedStatement.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc/ojdbc7dms.jar
  Patch Location in Inventory:
    /home/oracle/Oracle/Middleware/Oracle_Home/inventory/oneoffs/19002423
  Patch Location in Storage area:
    /home/oracle/Oracle/Middleware/Oracle_Home/.patch_storage/19002423_Apr_9_2015_23_09_16

Patch  18905788     : applied on Wed Jul 13 16:11:05 GMT+08:00 2016
Unique Patch ID:  18668039
Patch description:  "One-off"
  Created on 7 Mar 2015, 00:43:09 hrs UTC
  Bugs fixed:
    18905788
  Files Touched:
    /oracle/ucp/common/Cluster$1.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/Cluster.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/Cluster$5.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/Cluster$4.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/Cluster$2.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/Cluster$3.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$7.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$9.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$1XSelector.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$Event.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$2$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$Event$Status.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$Stats.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$Event$EventType.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$8.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$StatsOne.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/FailoverDriver$1$10.class -->
```

ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$1$5.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$1$2$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$1$6.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$1$3.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$3.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver$1$4.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/FailoverDriver.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Event$Flag.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$1AffinitySelector.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Stats$CloseResultsCounter.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Stats$BorrowResultsCounter.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Stats$Counter.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$1$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Event.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$MixTable.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Stats.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Stats$PeakBorrowed.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$3.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$4.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer$Stats$Times.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/LoadBalancer.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/ONSDriver$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/ONSDriver.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/wls/WebLogicCluster$CoreConnectionWrapper.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/wls/WebLogicCluster$2.class -->

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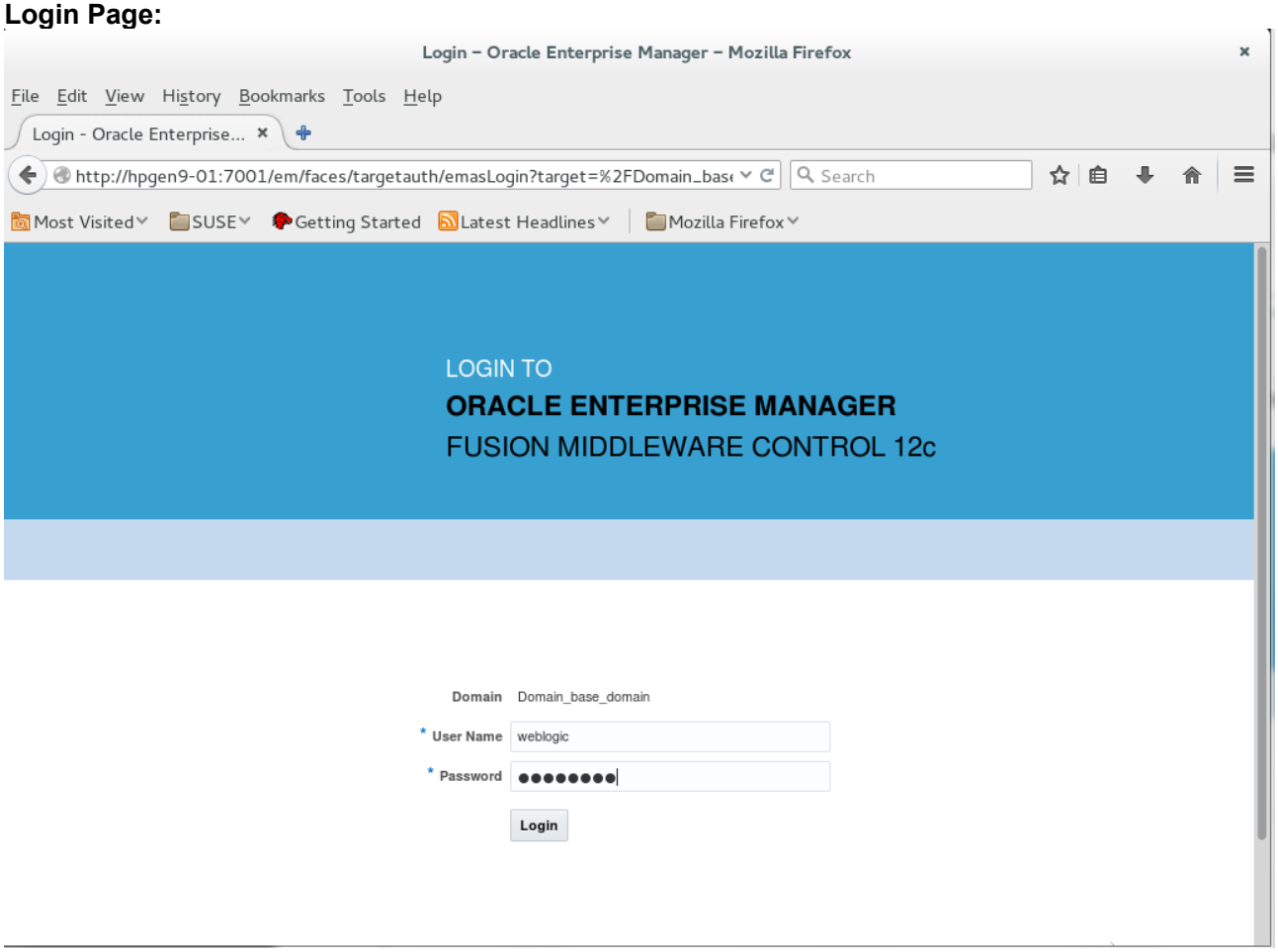
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$5.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$FailoverEventWrapper.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$3.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$LoadBalanceEventWrapper.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$InitialRACCallback.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$7.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$6.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$4.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/common/wls/WebLogicCluster$LoadBalanceEventWrapper$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSDatabaseEventHandlerTask.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSOracleFailoverEventSubscriber.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSOracleRuntimeLBEventSubscriber.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSRuntimeLBEventHandlerTask.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSSubscriberBase$Mocker.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSSubscriberBase$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/ONSSubscriberBase.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/RACManagerImpl$1.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/RACManagerImpl$RACCallbackExtended.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/RACManagerImpl.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/jdbc/oracle/RACManagerImpl$2.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/util/UCPErrorHandler.class --> ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
    /oracle/ucp/util/UCPMessages.properties -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
  Patch Location in Inventory:
    /home/oracle/Oracle/Middleware/Oracle_Home/inventory/oneoffs/18905788
  Patch Location in Storage area:
    /home/oracle/Oracle/Middleware/Oracle_Home/.patch_storage/18905788_Mar_7_2015_00_43_09
--------------------------------------------------------------------------------
OPatch succeeded.
--------------------------------------------------------------------------------
```

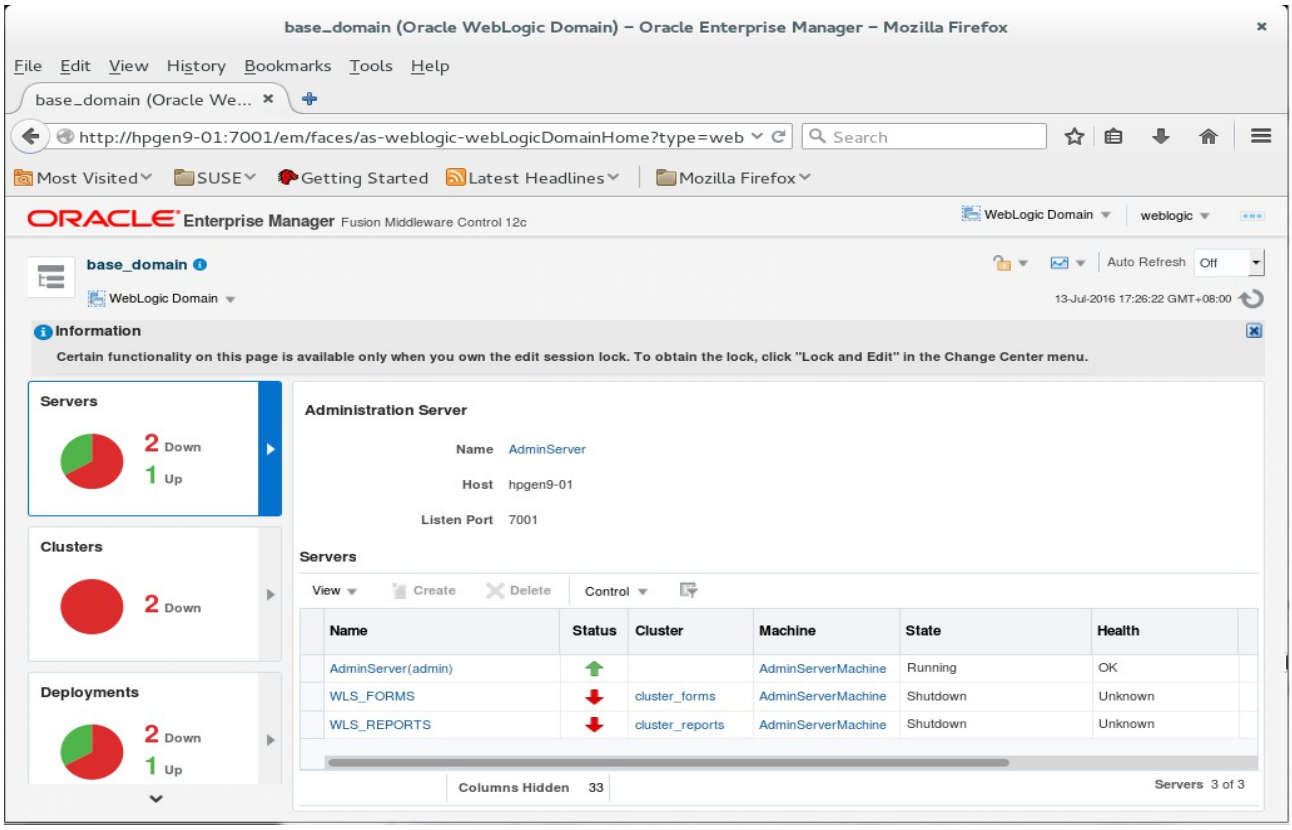
4-4. Checking Oracle Forms and Reports Product URLs.

1). Access to Enterprise Manager Console.

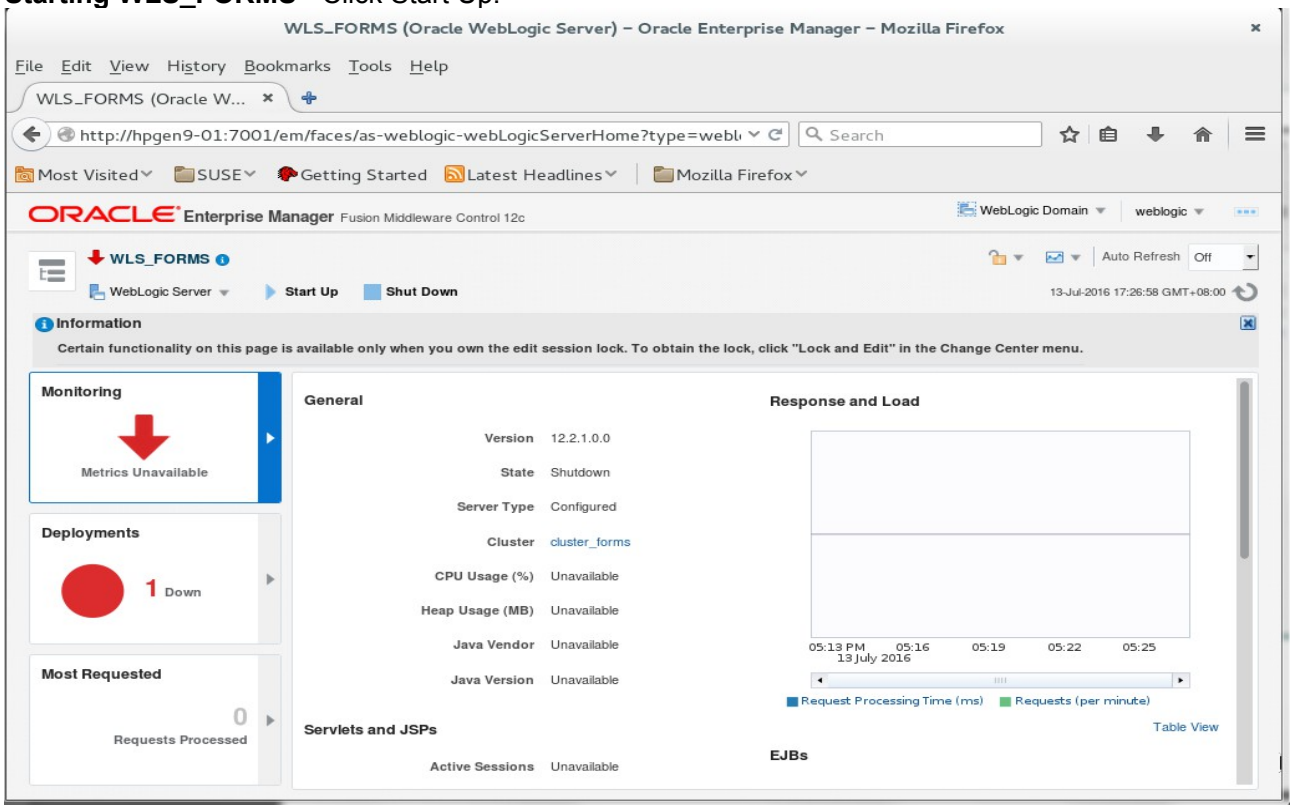
Login Page:



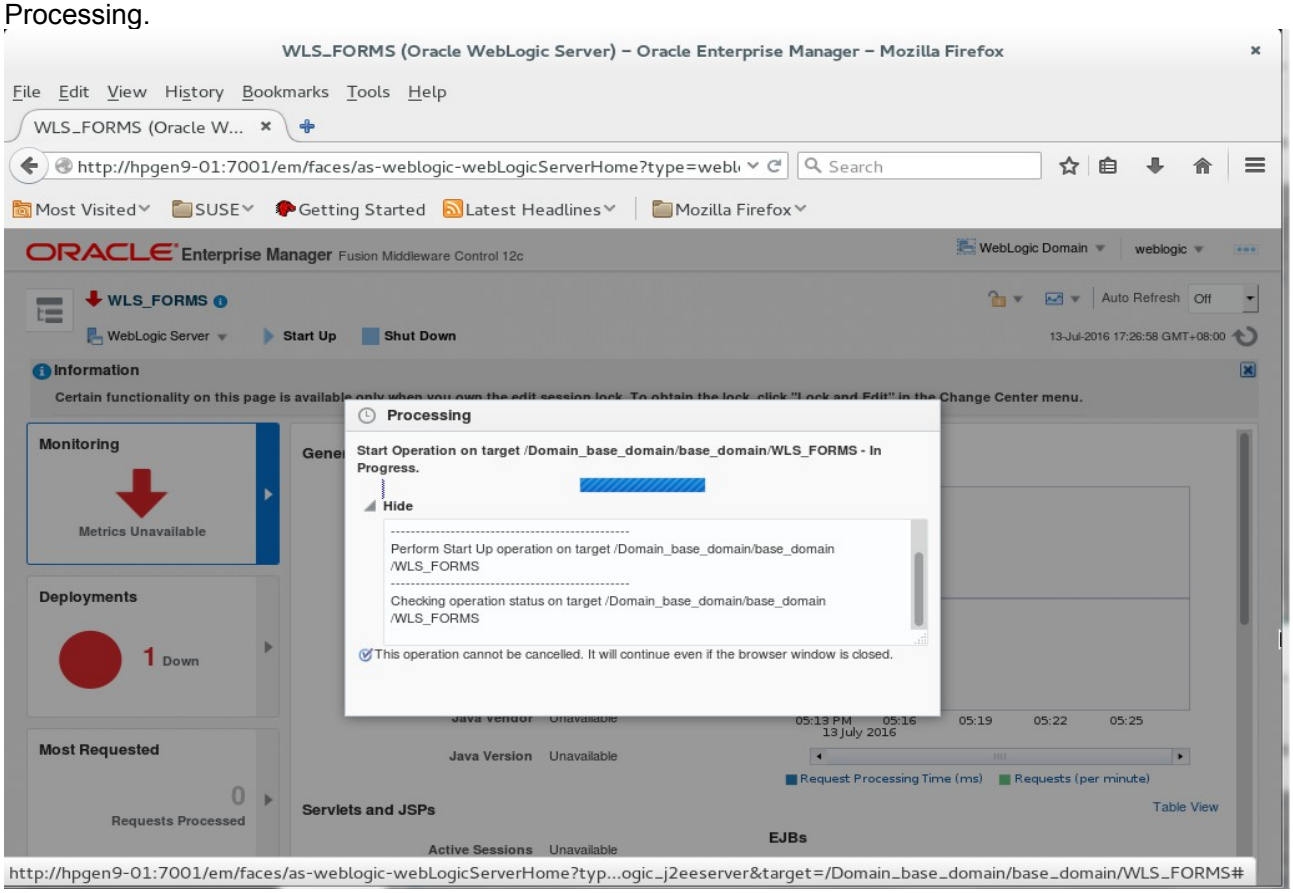
Home Page:



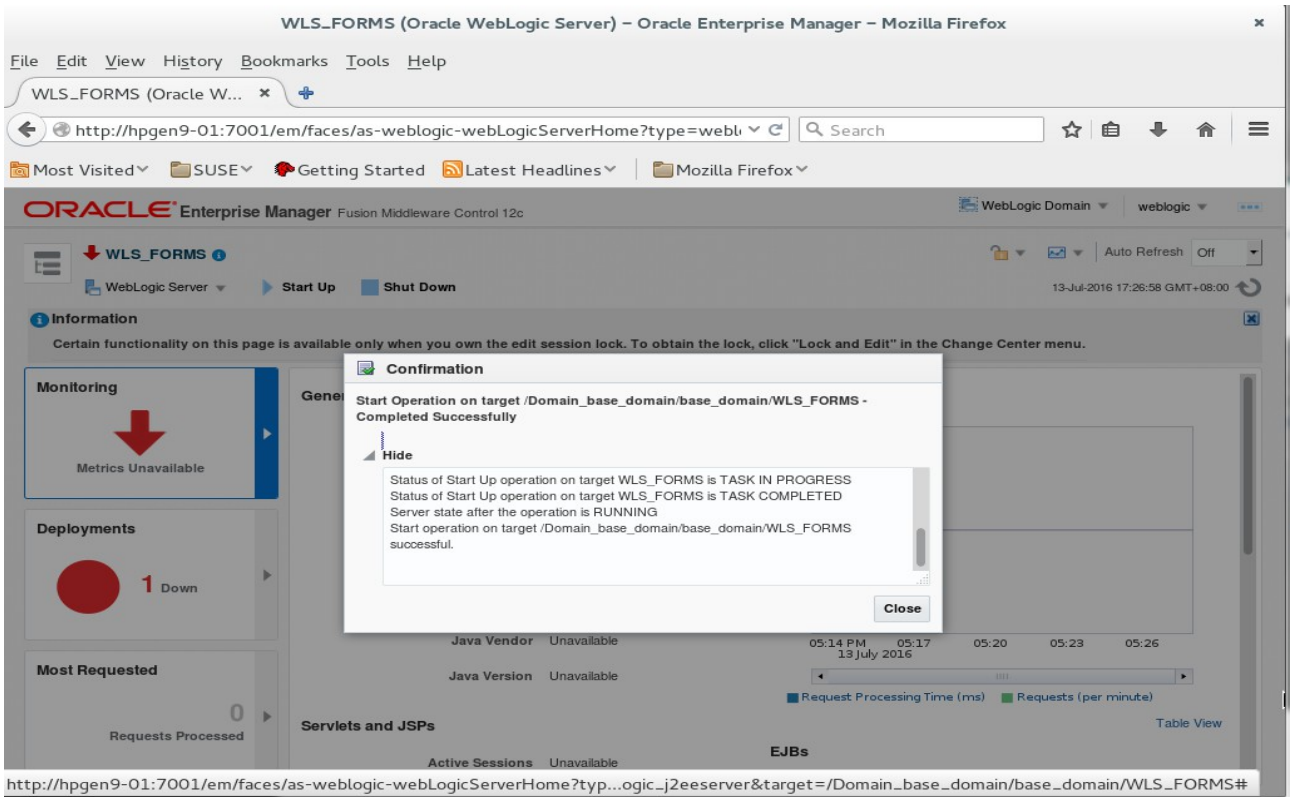
Starting WLS_FORMS - Click Start Up.



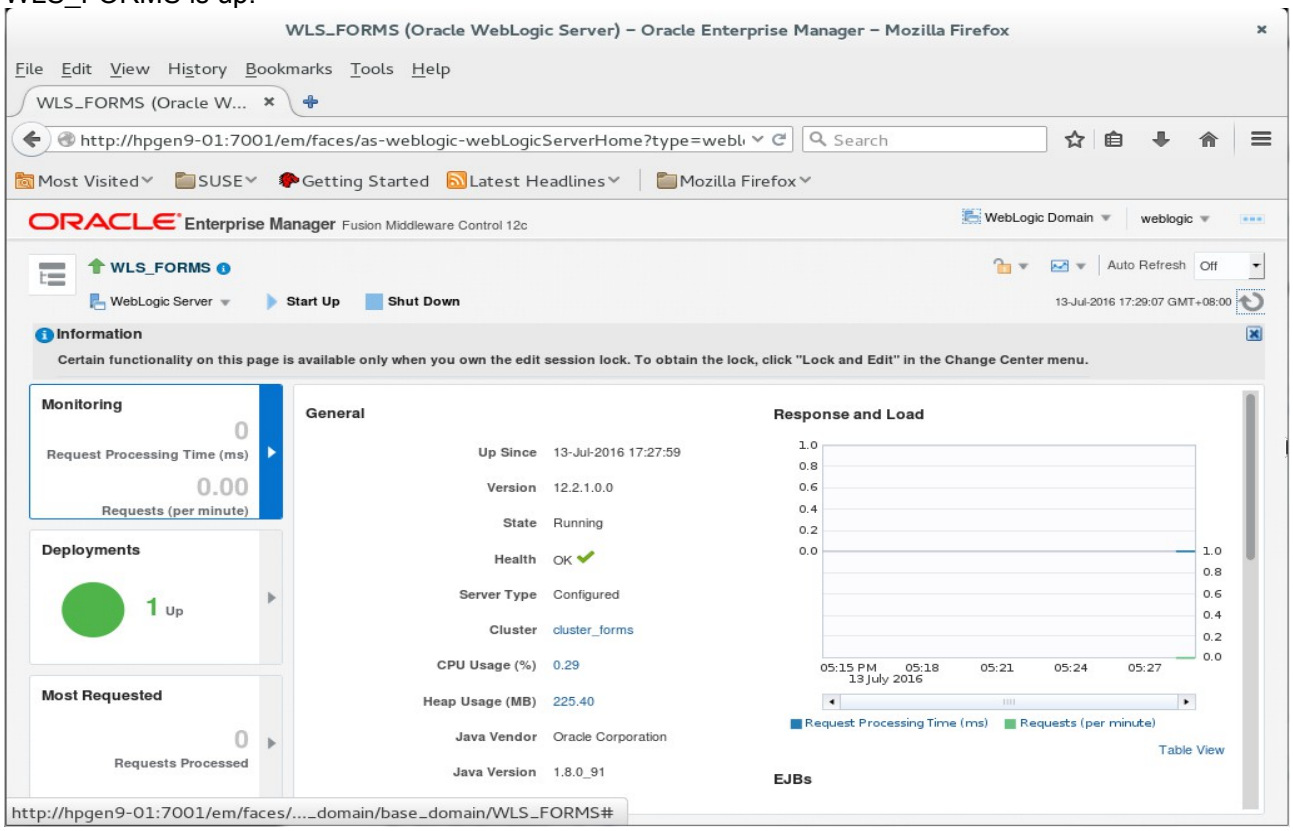
Processing.



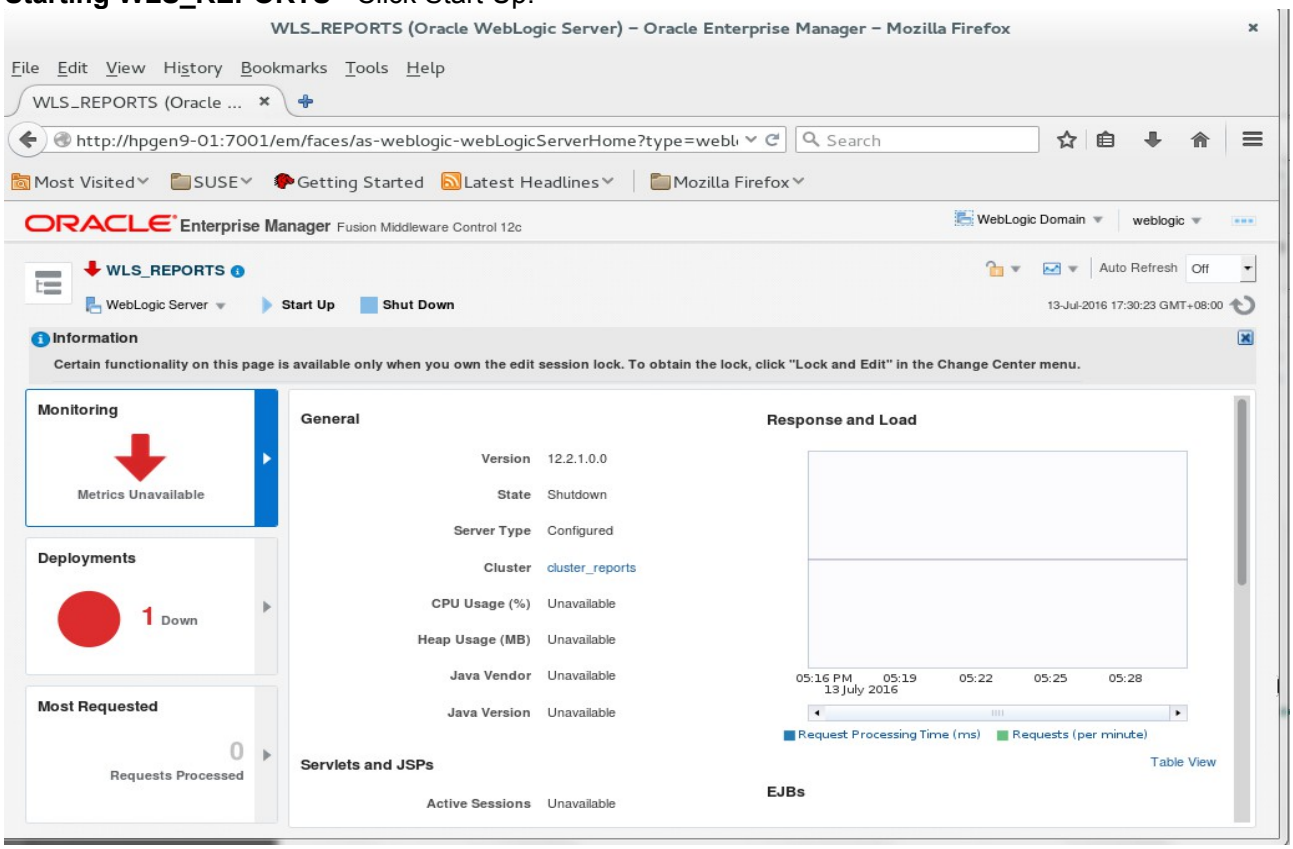
Confirmation.



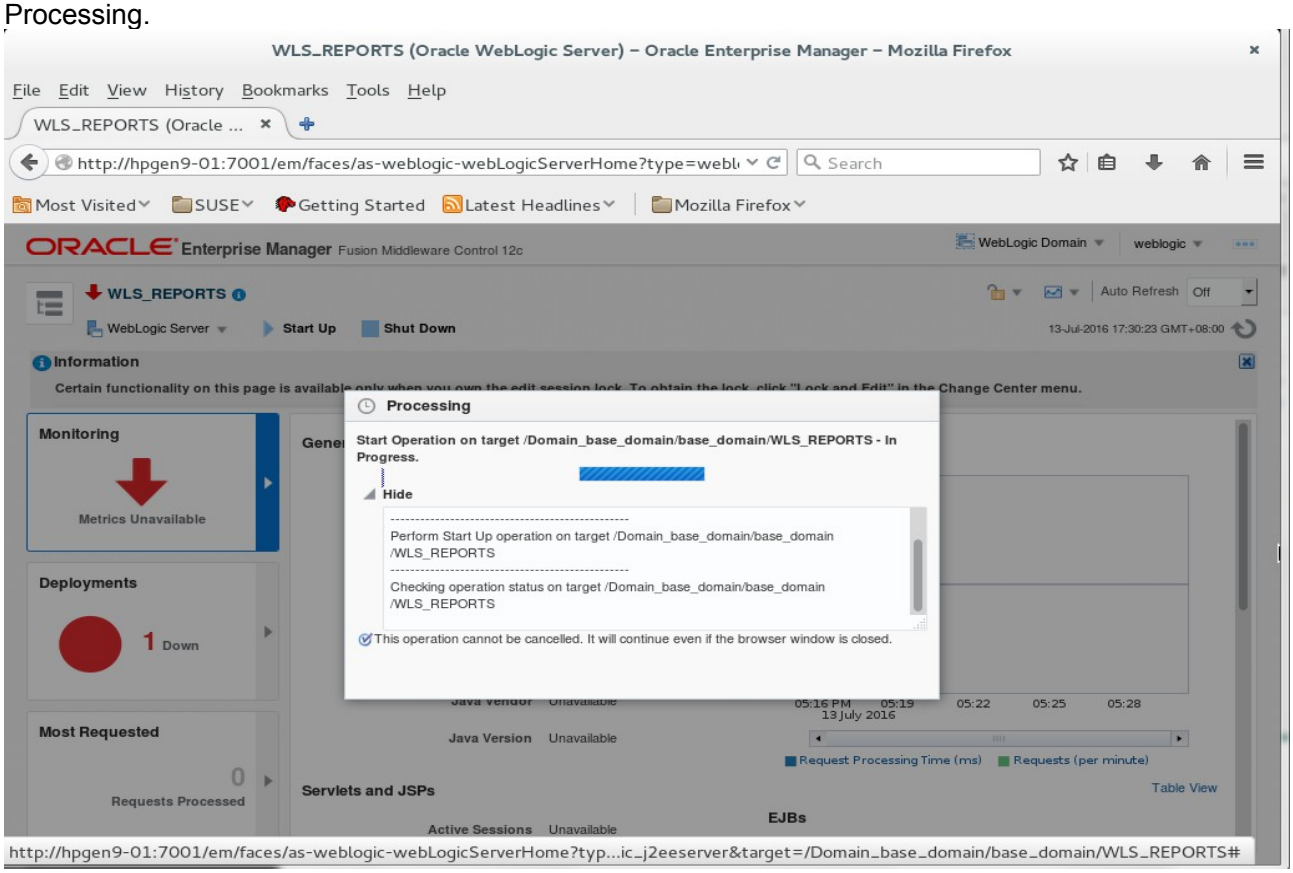
WLS_FORMS is up.



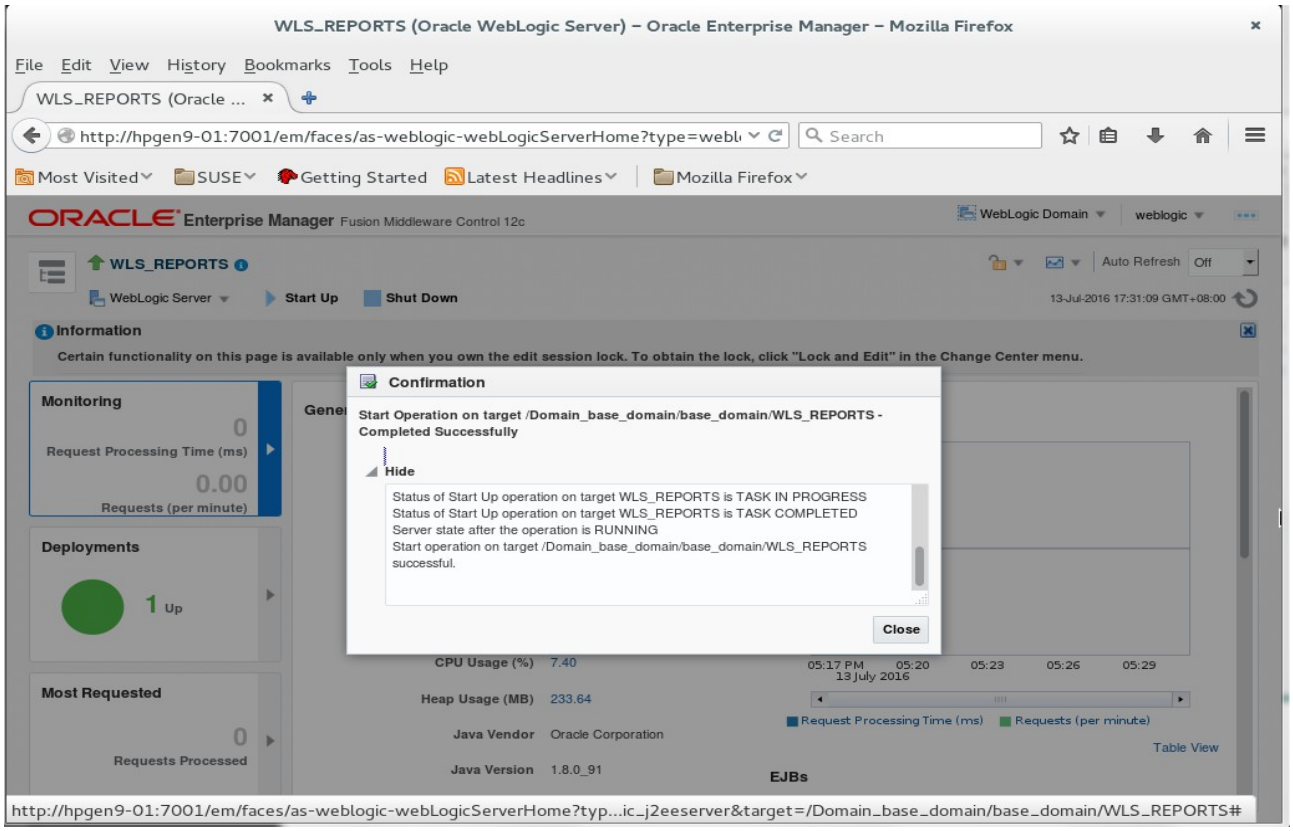
Starting WLS_REPORTS - Click Start Up.



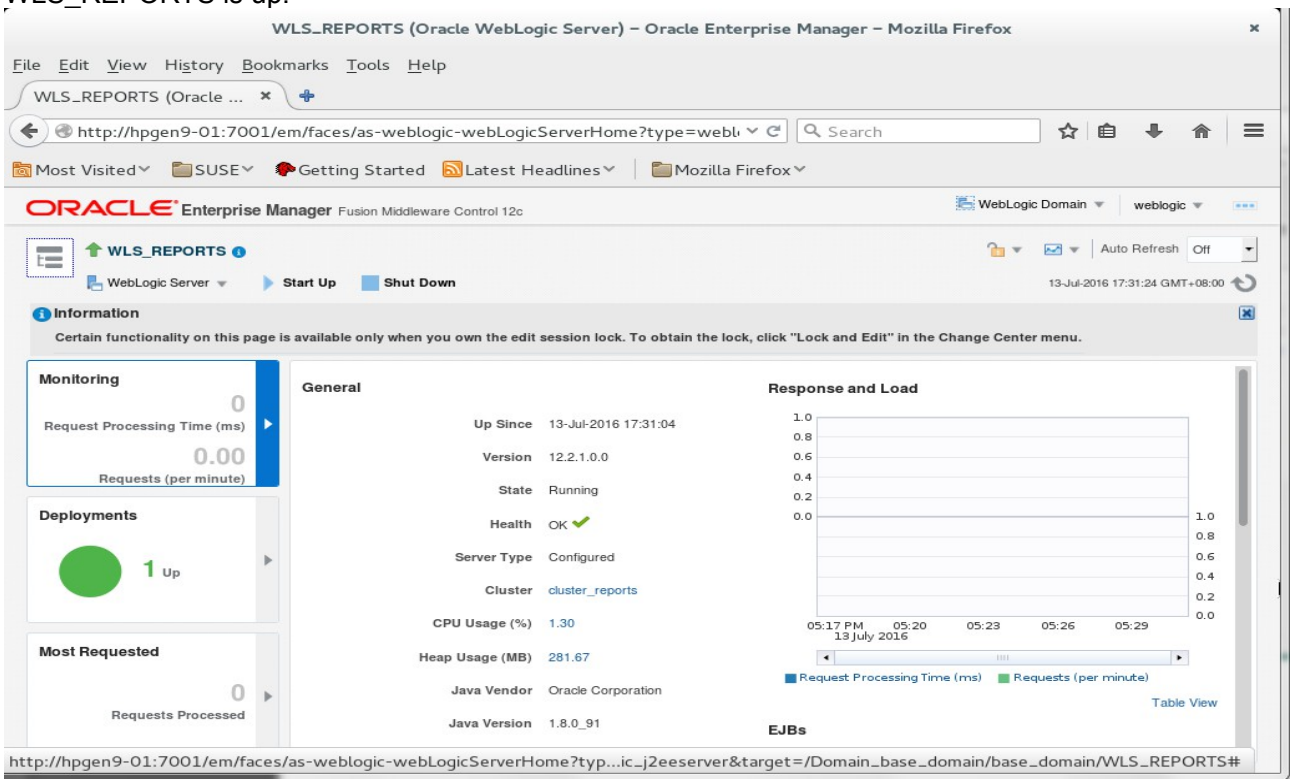
Processing.



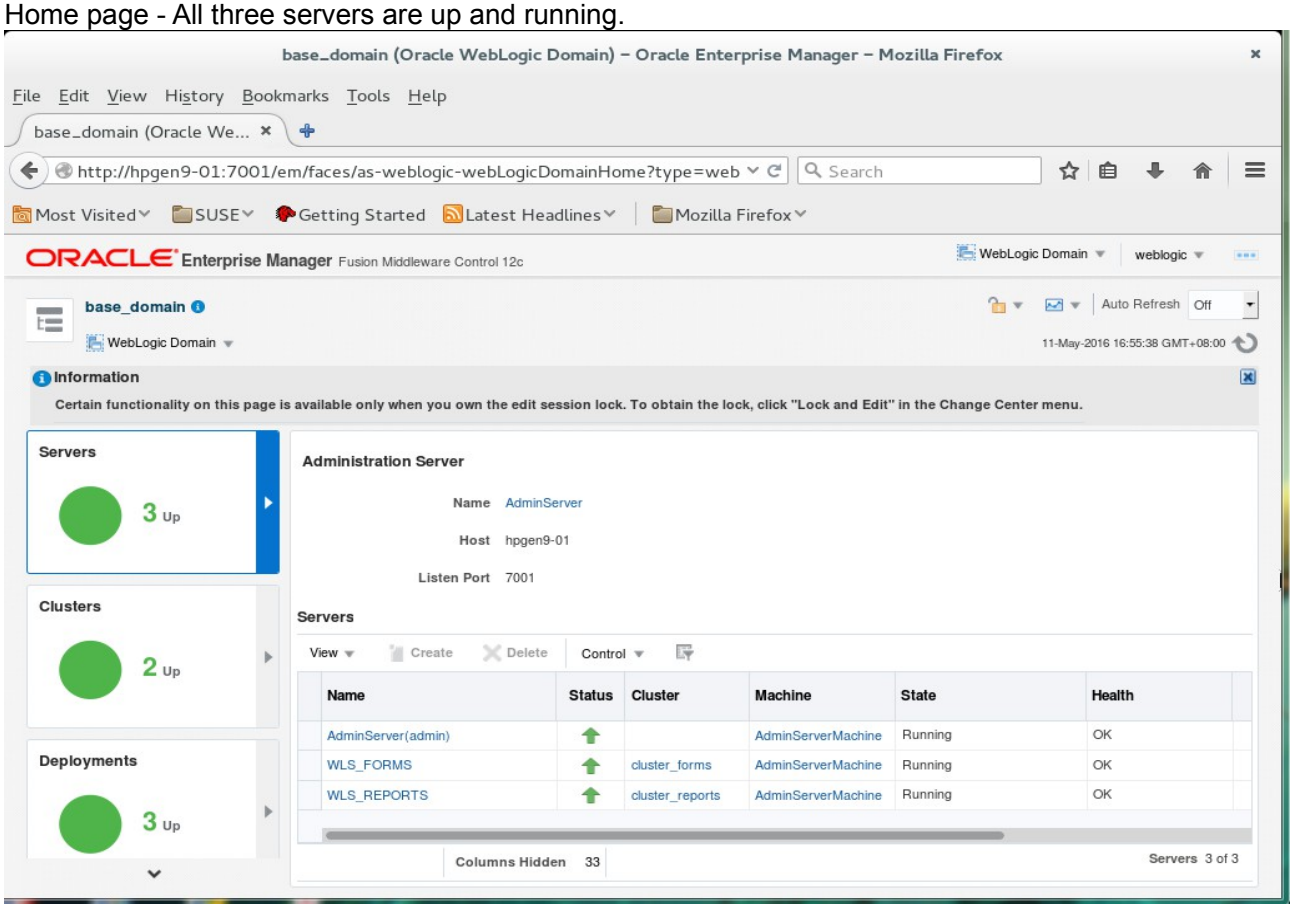
Confirmation.



WLS_REPORTS is up.

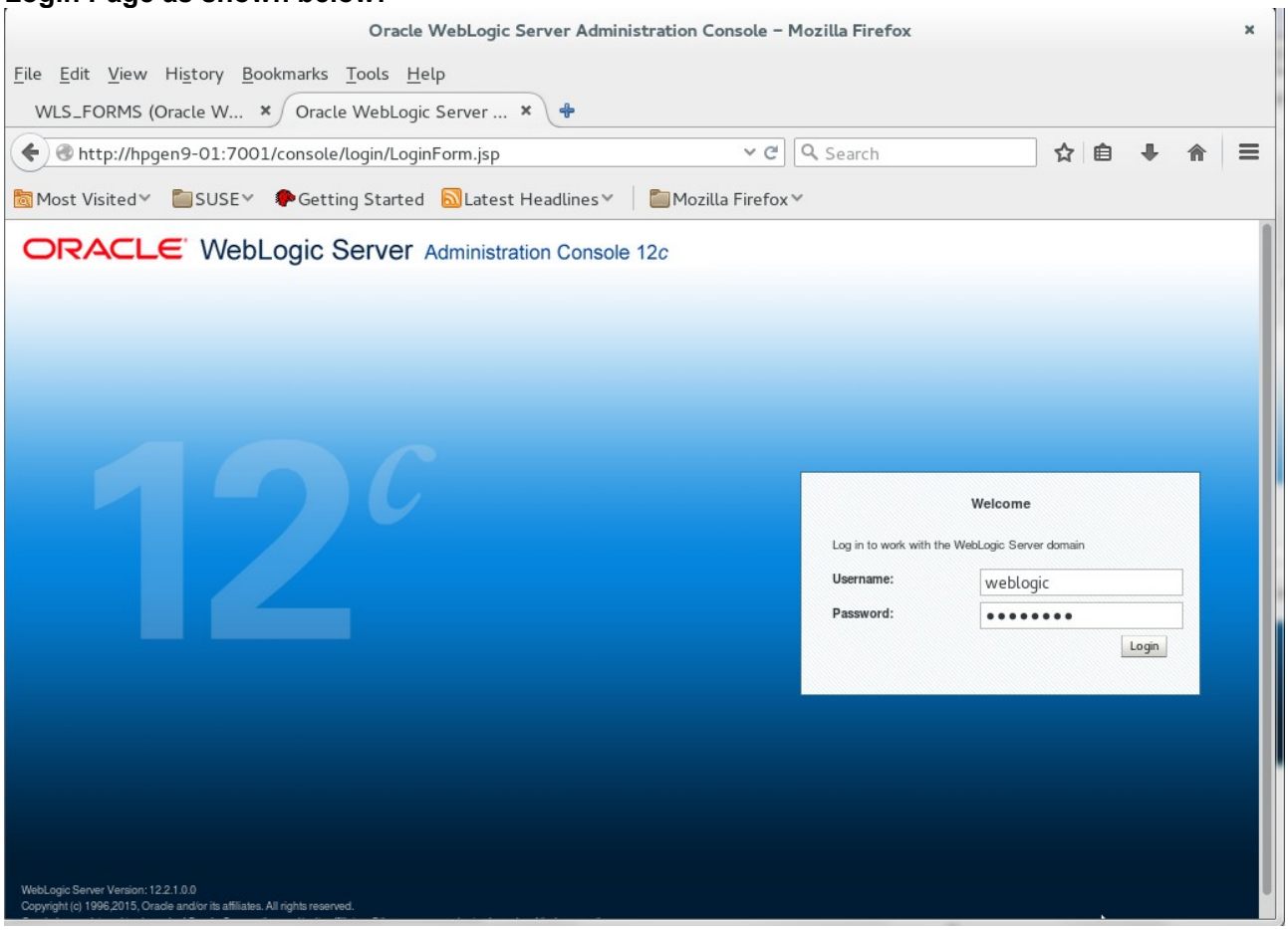


Home page - All three servers are up and running.

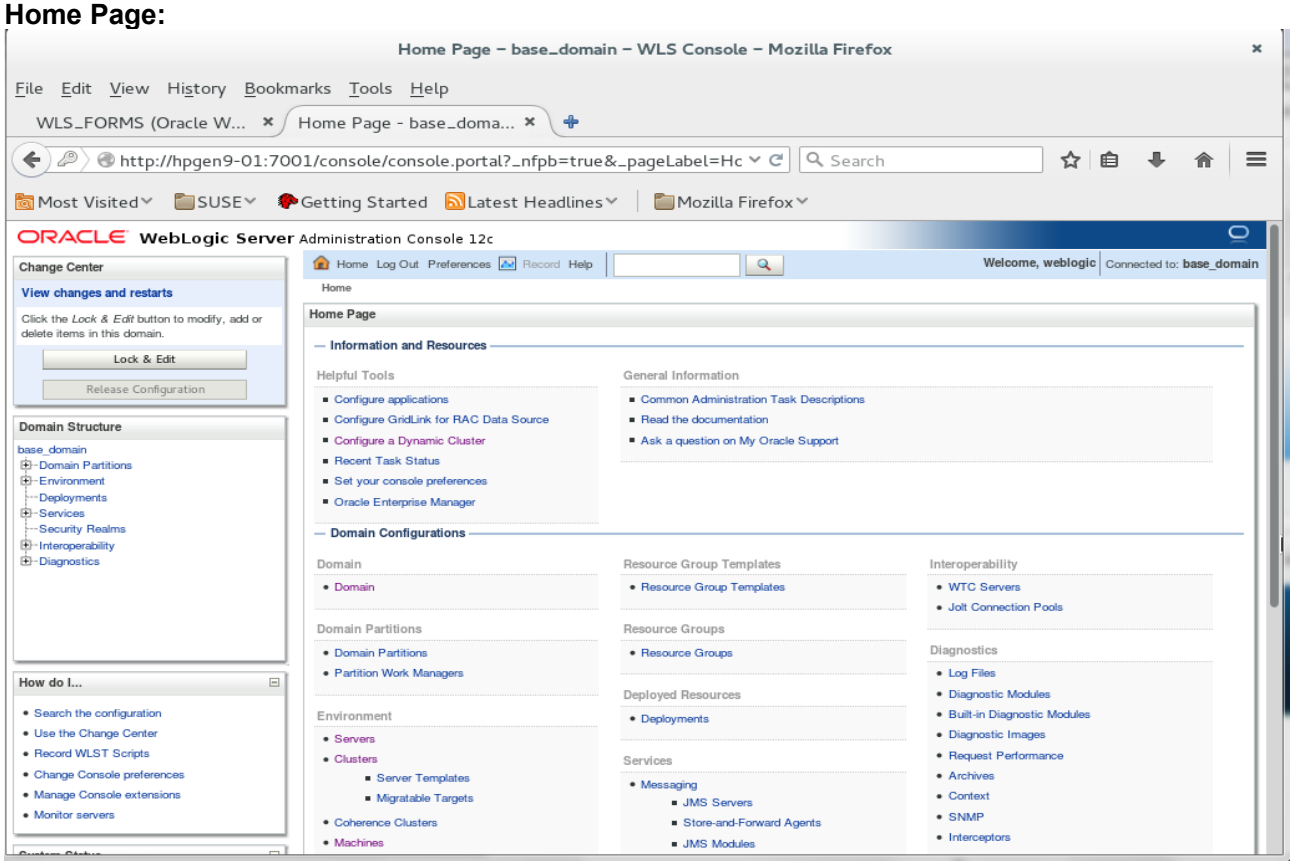


2). Access to Administration Server Console

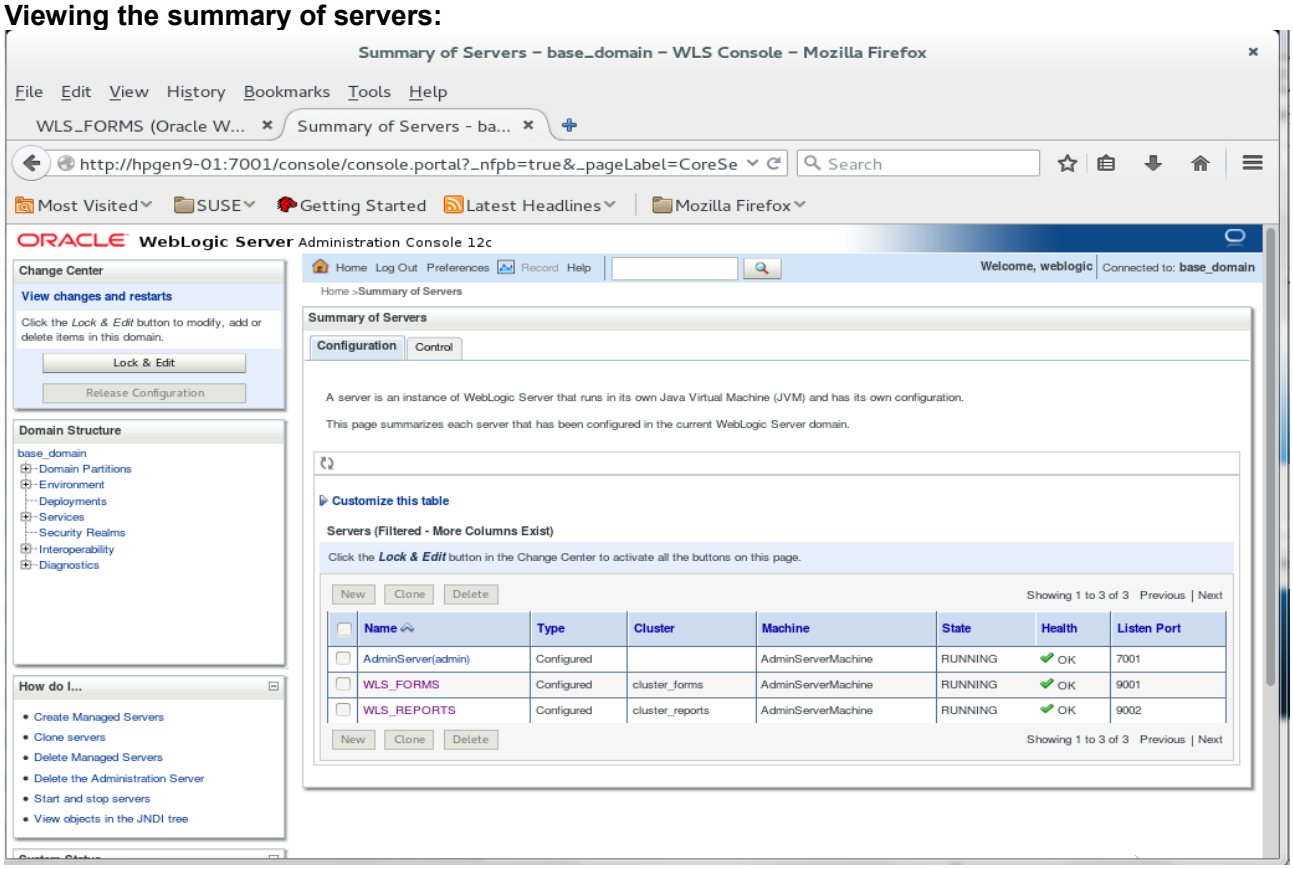
Login Page as shown below:



Home Page:

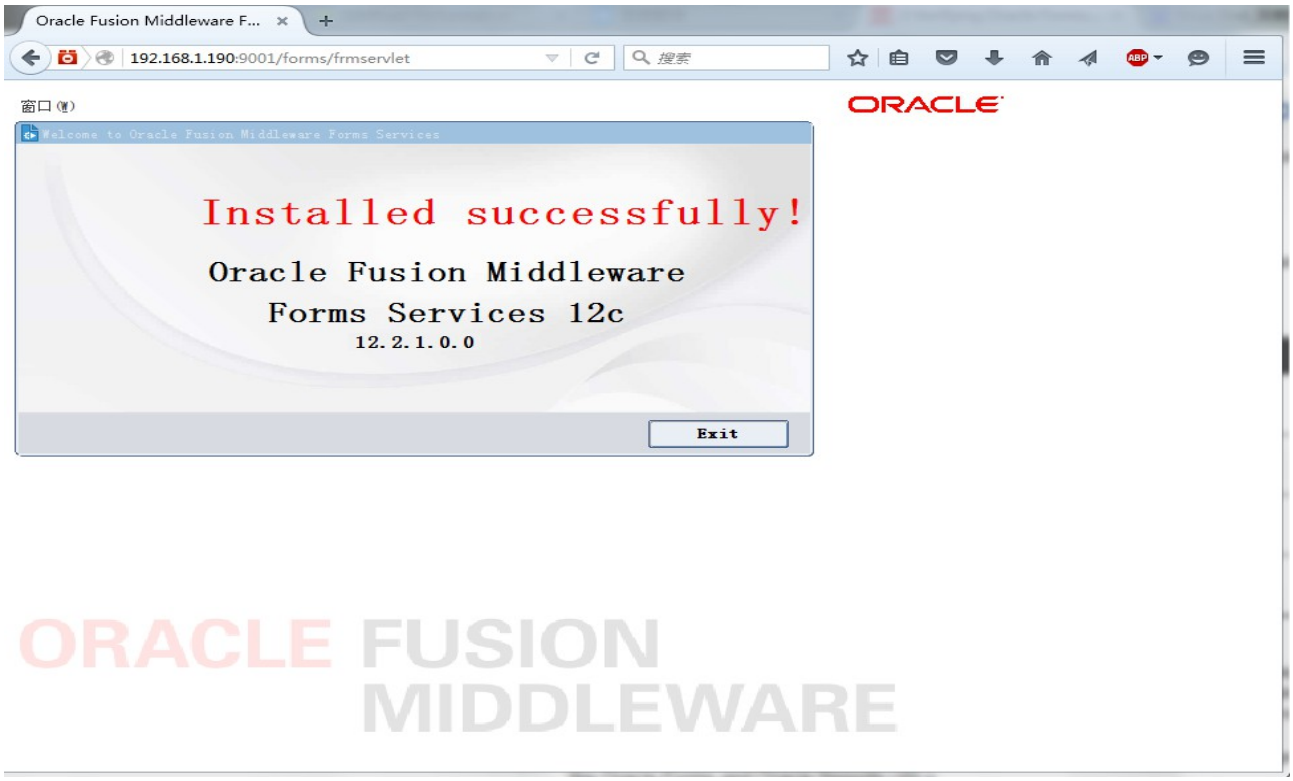


Viewing the summary of servers:

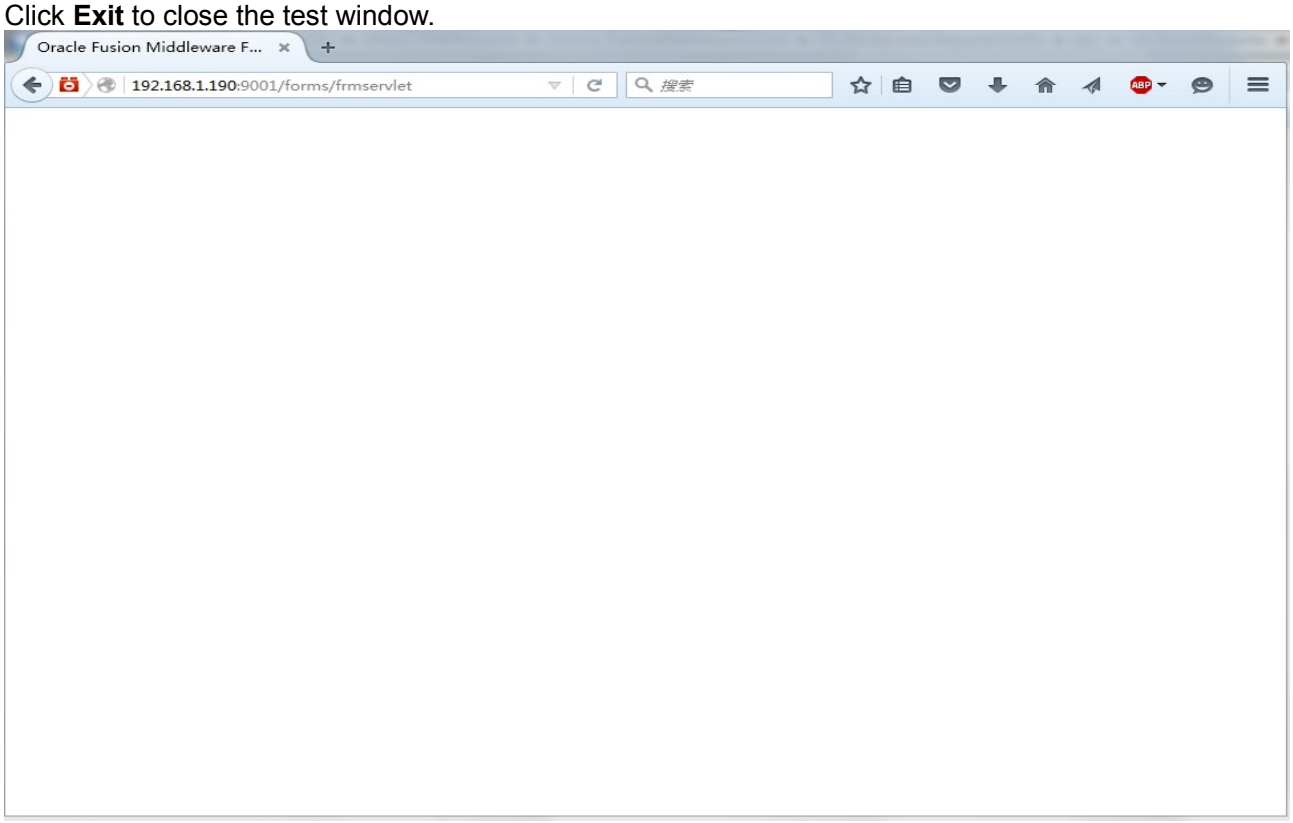


3). Access to Oracle Forms.

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

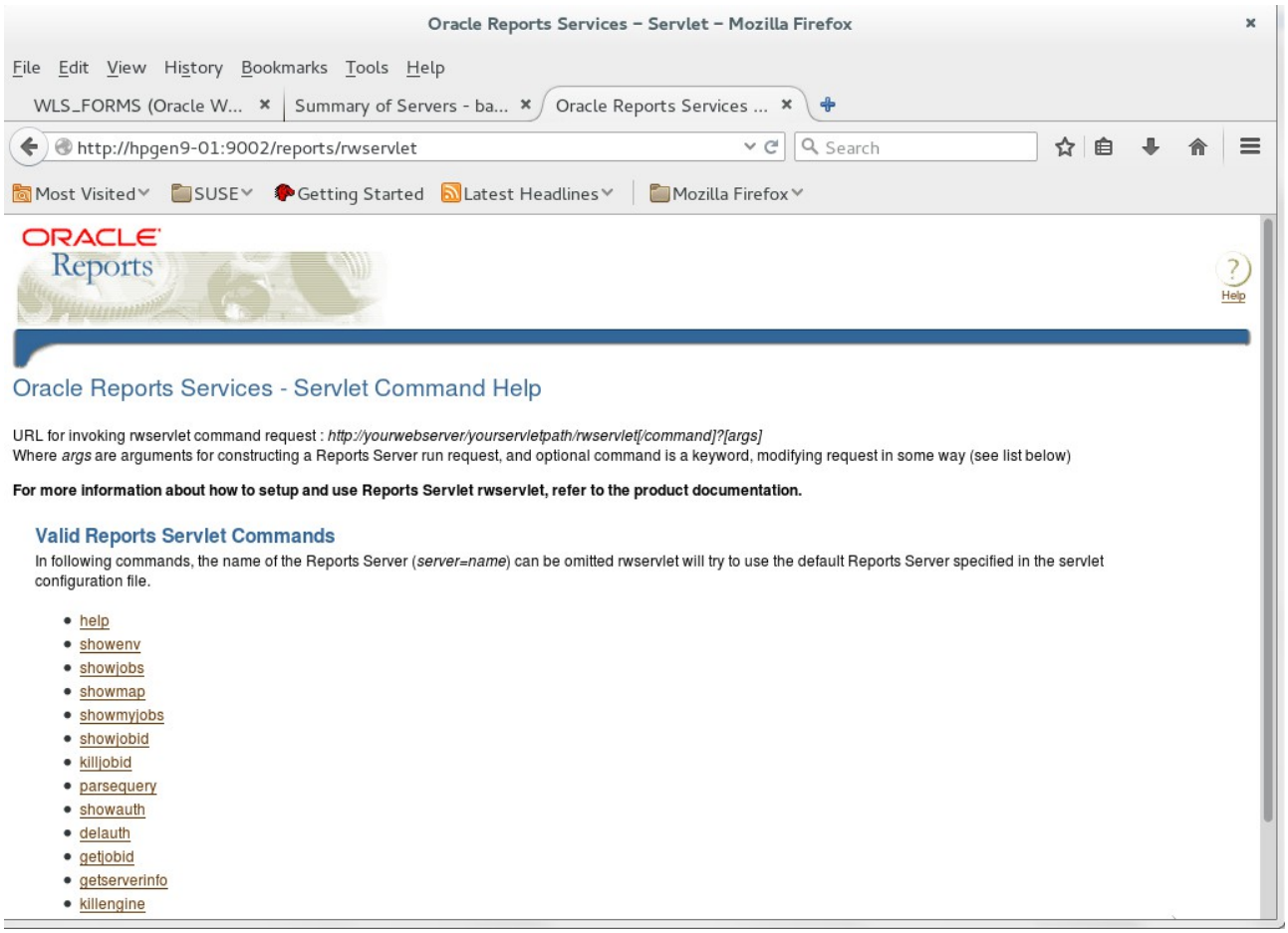


Click **Exit** to close the test window.



4). Access to Oracle Reports.

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



Additional Comments

This document shows how to install and configure a standard topology for Oracle Forms and Reports. You can extend this topology to make it highly available and secure so it is suitable for a production system.

Thank you !
SUSE ISV Engineering Team
July 22nd, 2016

https://www.suse.com