

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



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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

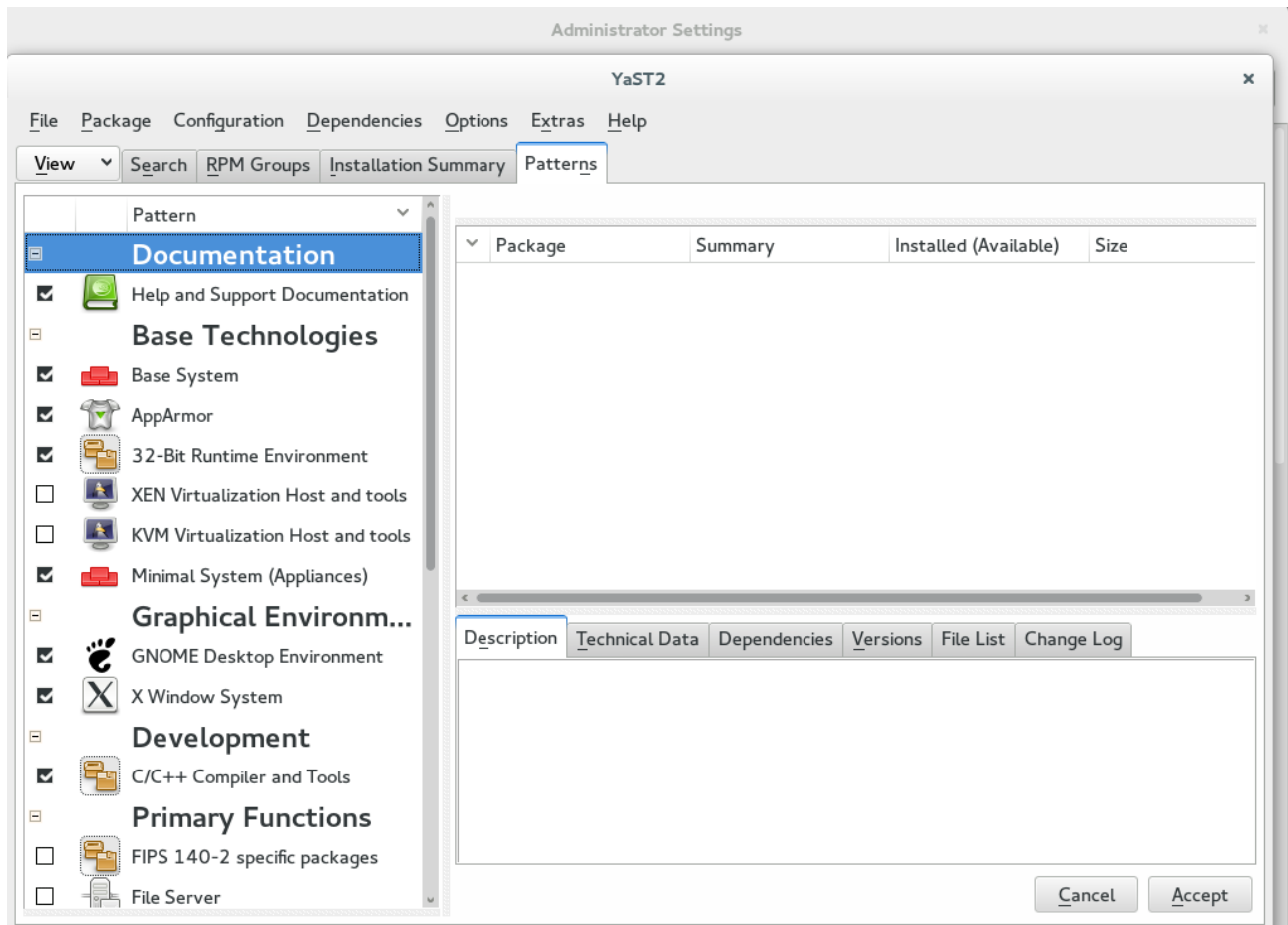


Figure 1-2 Software Installed as shown below

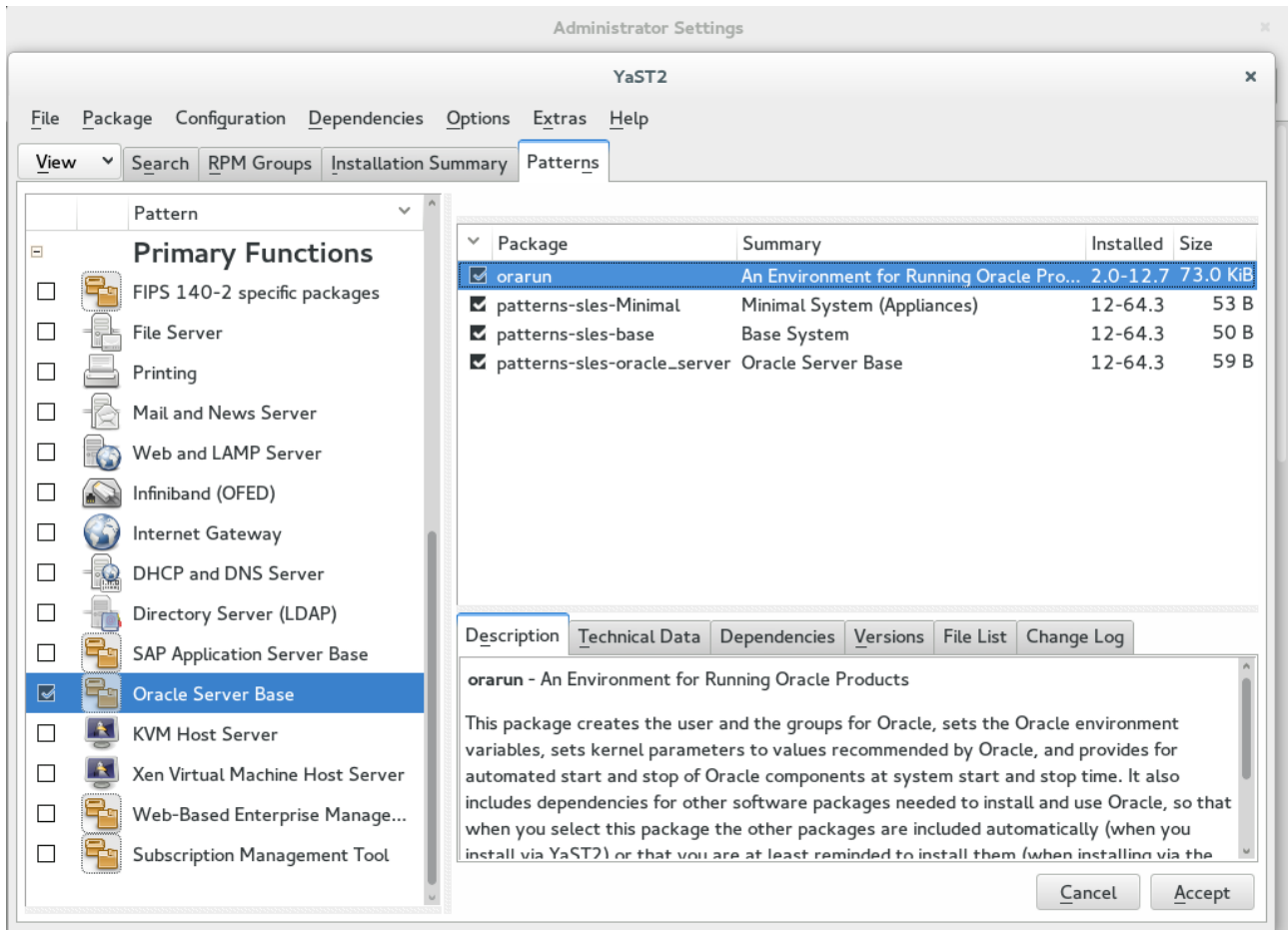


Figure 1-3 OS release information and kernel version

```
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

```
oracle@hpgen9-01:~> export ORACLE_HOME=/home/oracle/app/product/12.1.0/dbhome_1/
oracle@hpgen9-01:~> export ORACLE_SID=suse
oracle@hpgen9-01:~> /home/oracle/app/product/12.1.0/dbhome_1/bin/sqlplus /nolog

SQL*Plus: Release 12.1.0.2.0 Production on Wed Jul 13 15:59:38 2016

Copyright (c) 1982, 2014, Oracle. All rights reserved.

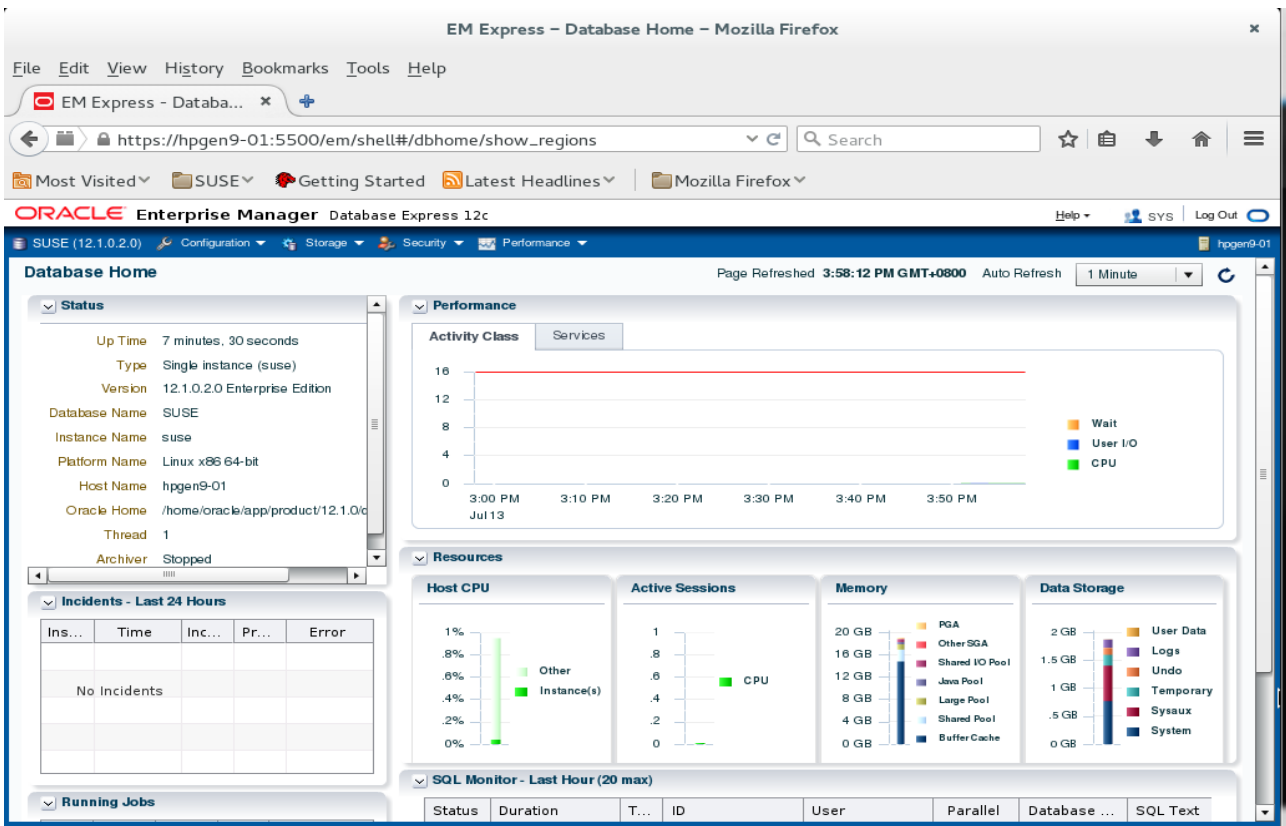
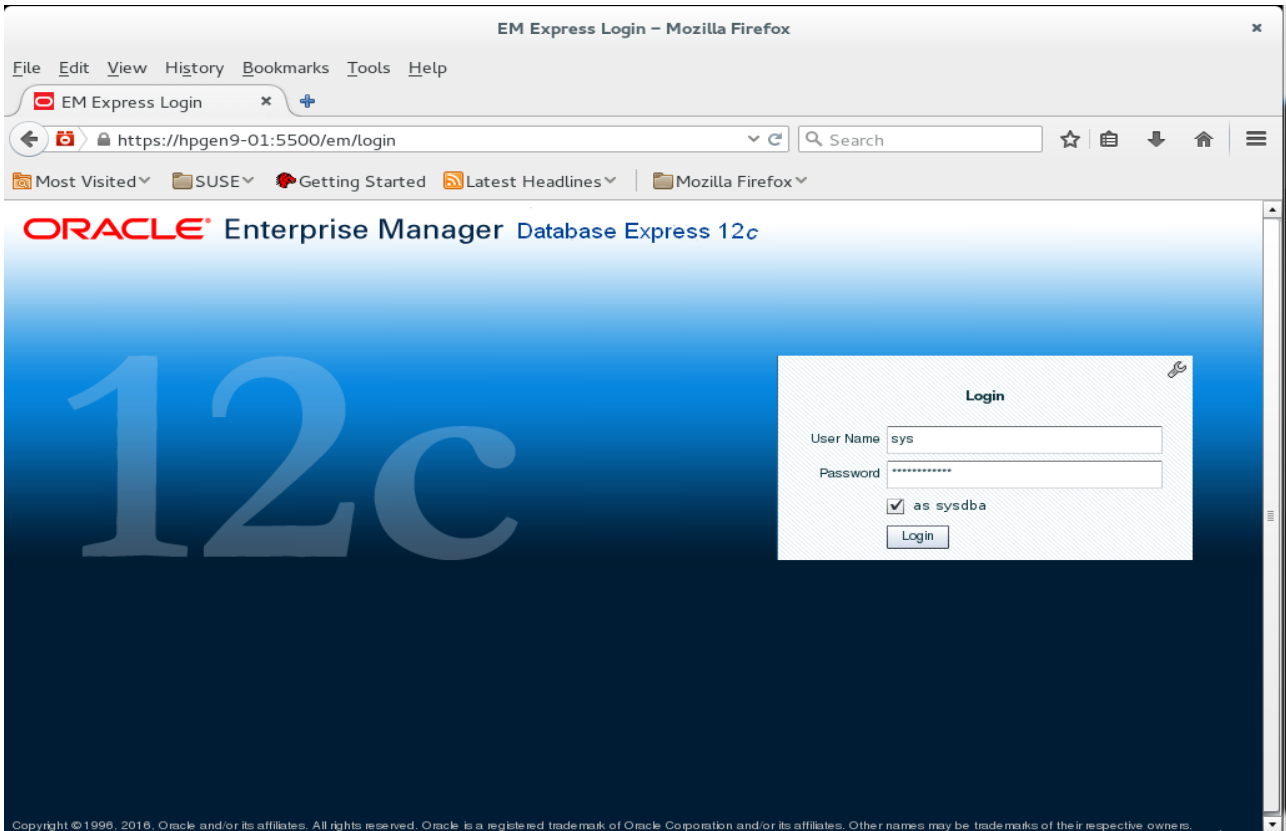
SQL> conn /as sysdba
Connected.
SQL> show sga

Total System Global Area 2.0267E+10 bytes
Fixed Size 7653432 bytes
Variable Size 3758098376 bytes
Database Buffers 1.6442E+10 bytes
Redo Buffers 59453440 bytes
SQL> select name,open_mode from v$database;

NAME          OPEN_MODE
-----
SUSE          READ WRITE

SQL> █
```


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.

The screenshot shows the 'Database Configuration Assistant - Create Database - Step 2 of 6' window. The 'Creation Mode' tab is active, and the 'Create a database with default configuration' radio button is selected. The 'Database Character Set' dropdown menu is highlighted with a red circle and set to 'AL32UTF8 - Unicode UTF-8 Universal character set'. Other fields include 'Global Database Name' (suse), 'Storage Type' (File System), 'Database Files Location' ({ORACLE_BASE}/oradata), and 'Fast Recovery Area' ({ORACLE_BASE}/fast_recovery_area). The 'Administrative Password' and 'Confirm Password' fields are masked with dots. The 'Create As Container Database' checkbox is unchecked. The 'Advanced Mode' radio button is also unselected. The 'Next >' button is highlighted in blue.

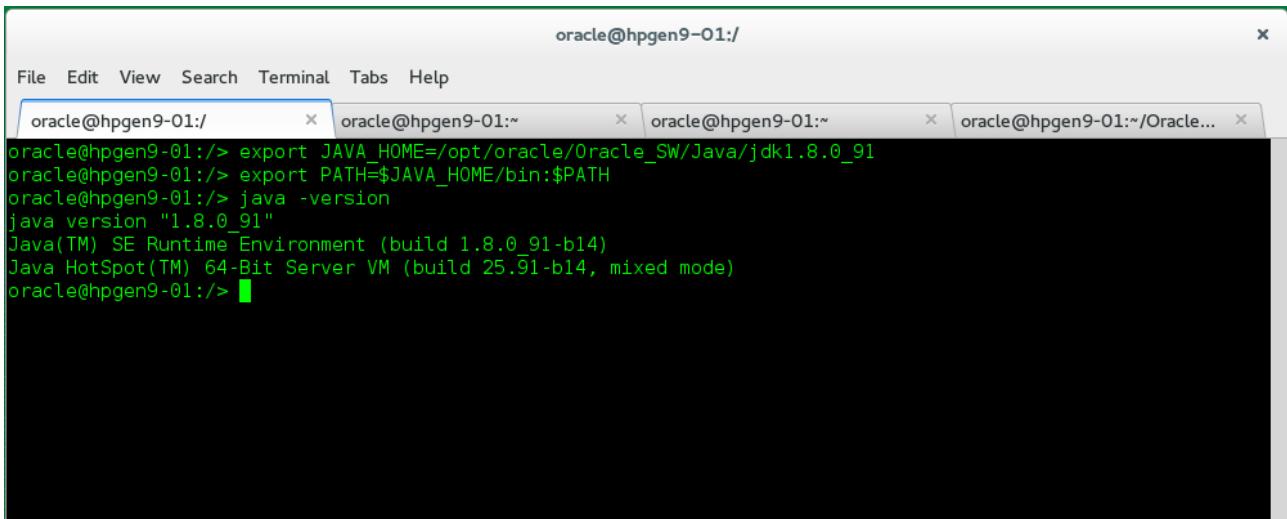
)

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

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

```
oracle@hpgen9-01:~> export JAVA_HOME=/opt/oracle/Oracle_SW/Java/jdk1.8.0_91
oracle@hpgen9-01:~> export PATH=$JAVA_HOME/bin:$PATH
oracle@hpgen9-01:~> java -version
java version "1.8.0_91"
Java(TM) SE Runtime Environment (build 1.8.0_91-b14)
Java HotSpot(TM) 64-Bit Server VM (build 25.91-b14, mixed mode)
oracle@hpgen9-01:~>
```

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

4. Installing Oracle WebLogic Server 12cR2

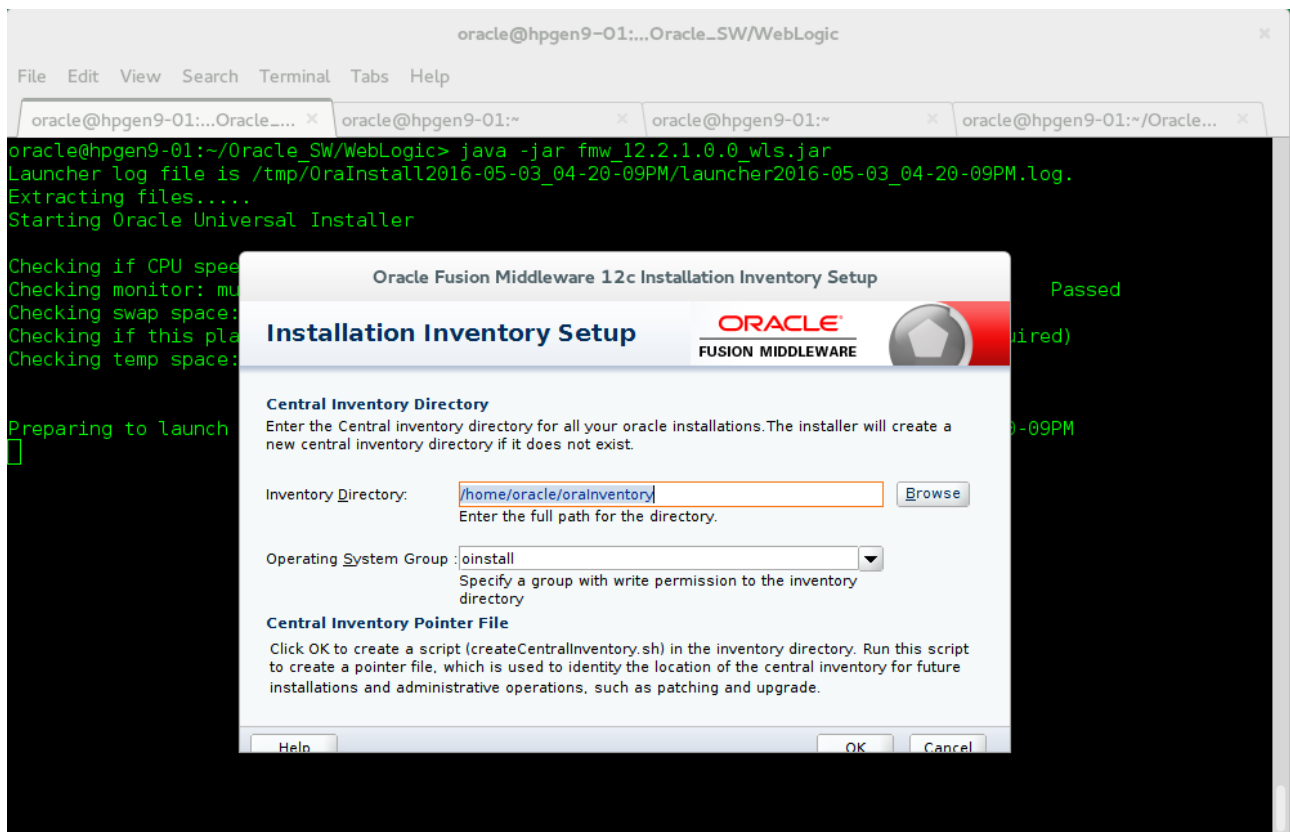
4-1. Log in to the target system (SLES 12 64-bit OS) as a non-admin user. Download the Oracle WebLogic Server 12cR2 (12.2.1) (Fusion Middleware Infrastructure Installer) from <http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>.

(**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.



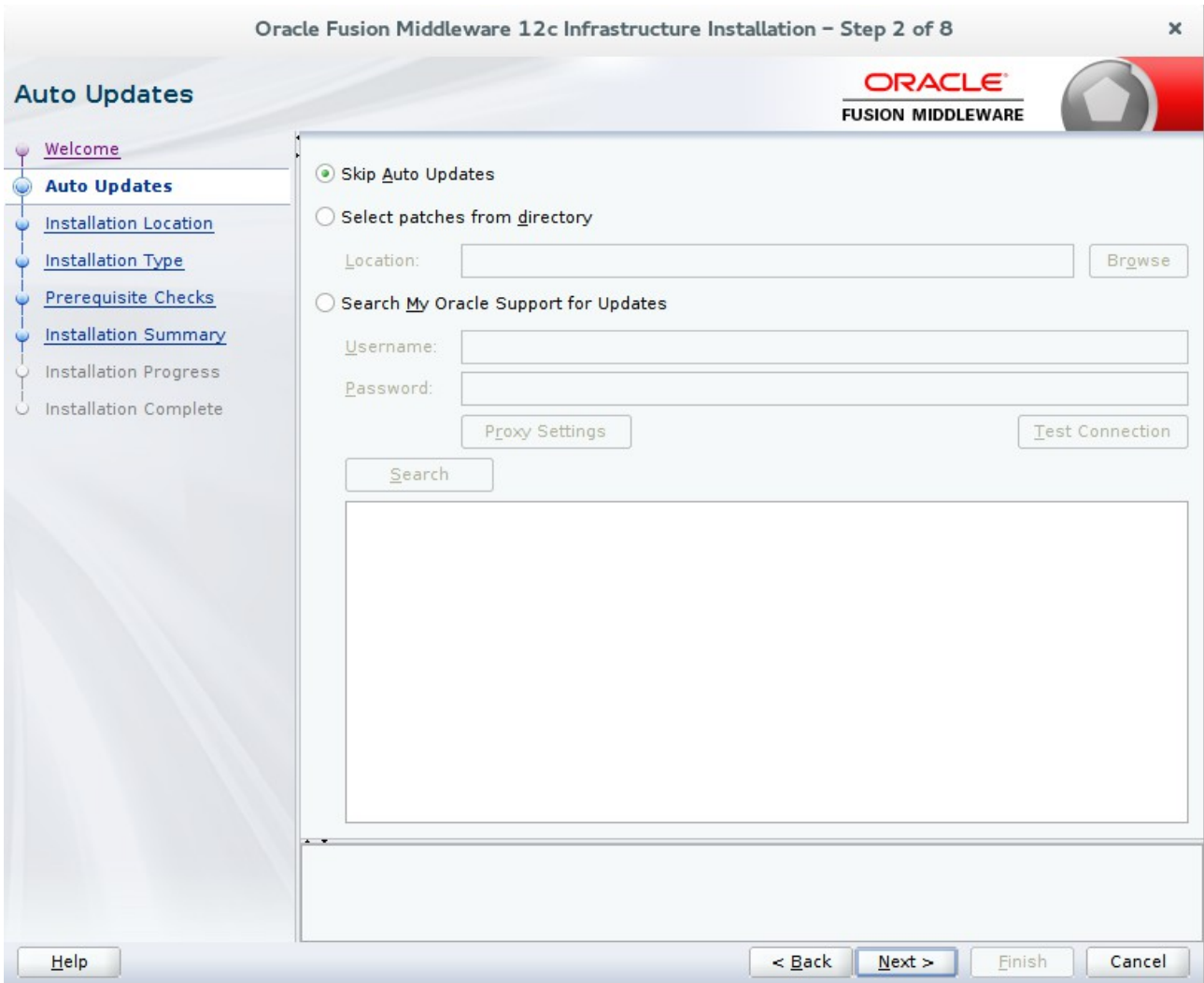
If this is your first Oracle installation on a host that is running SLES, please use this screen to specify the location of the Oracle central inventory directory and Operating System Group Name, then click **OK** to continue.

2). Welcome.



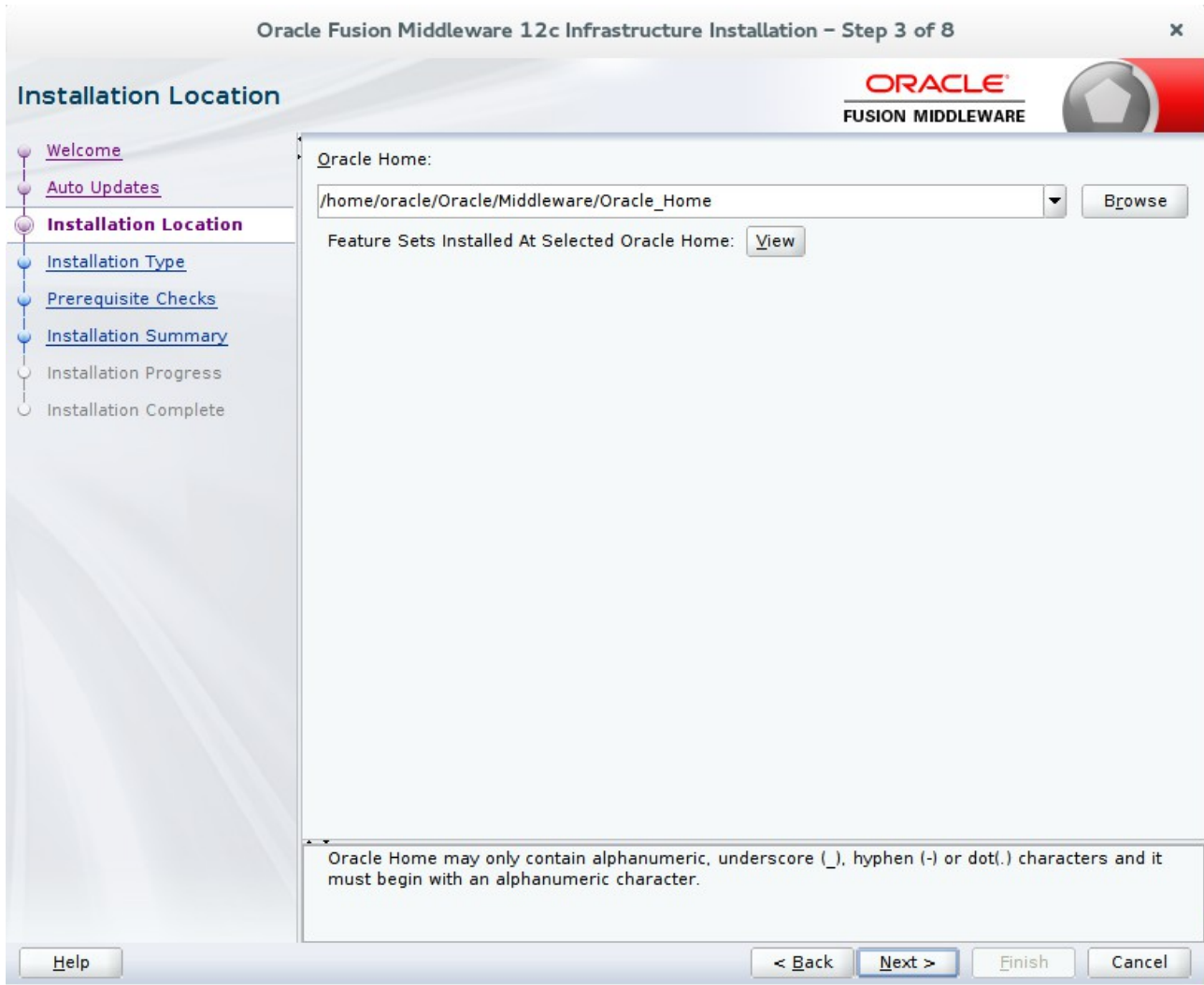
Review the information on this screen carefully to be sure you have performed all the necessary prerequisites, then click **Next** to continue.

3). Auto Updates.



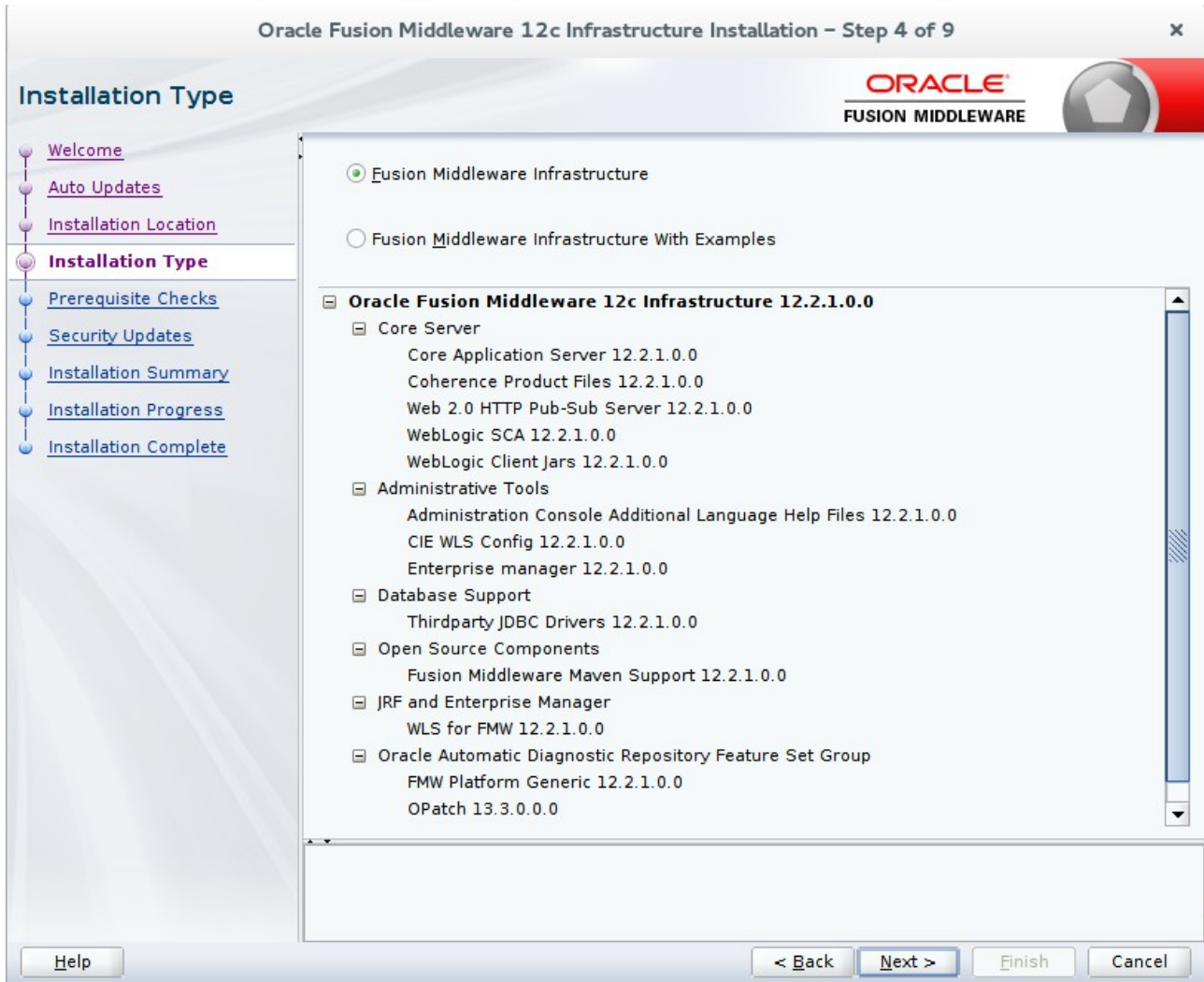
Select option "Skip Auto Updates" to skip this screen, then click **Next** to continue.

4). Installation Location.



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

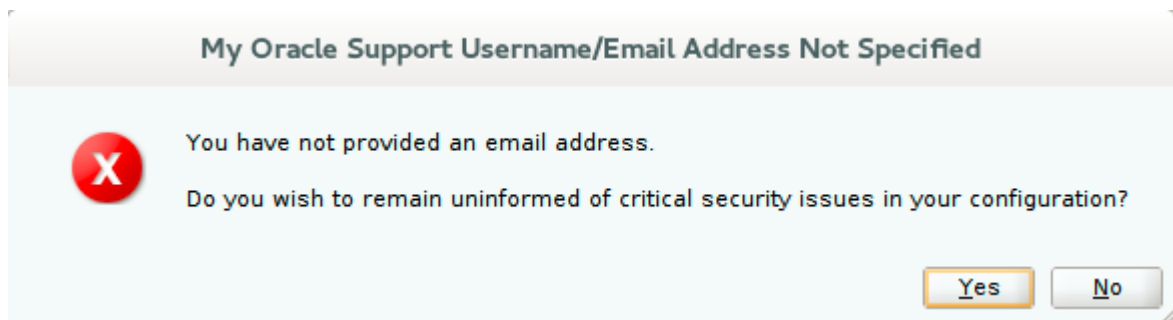
5). Installation Type.



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

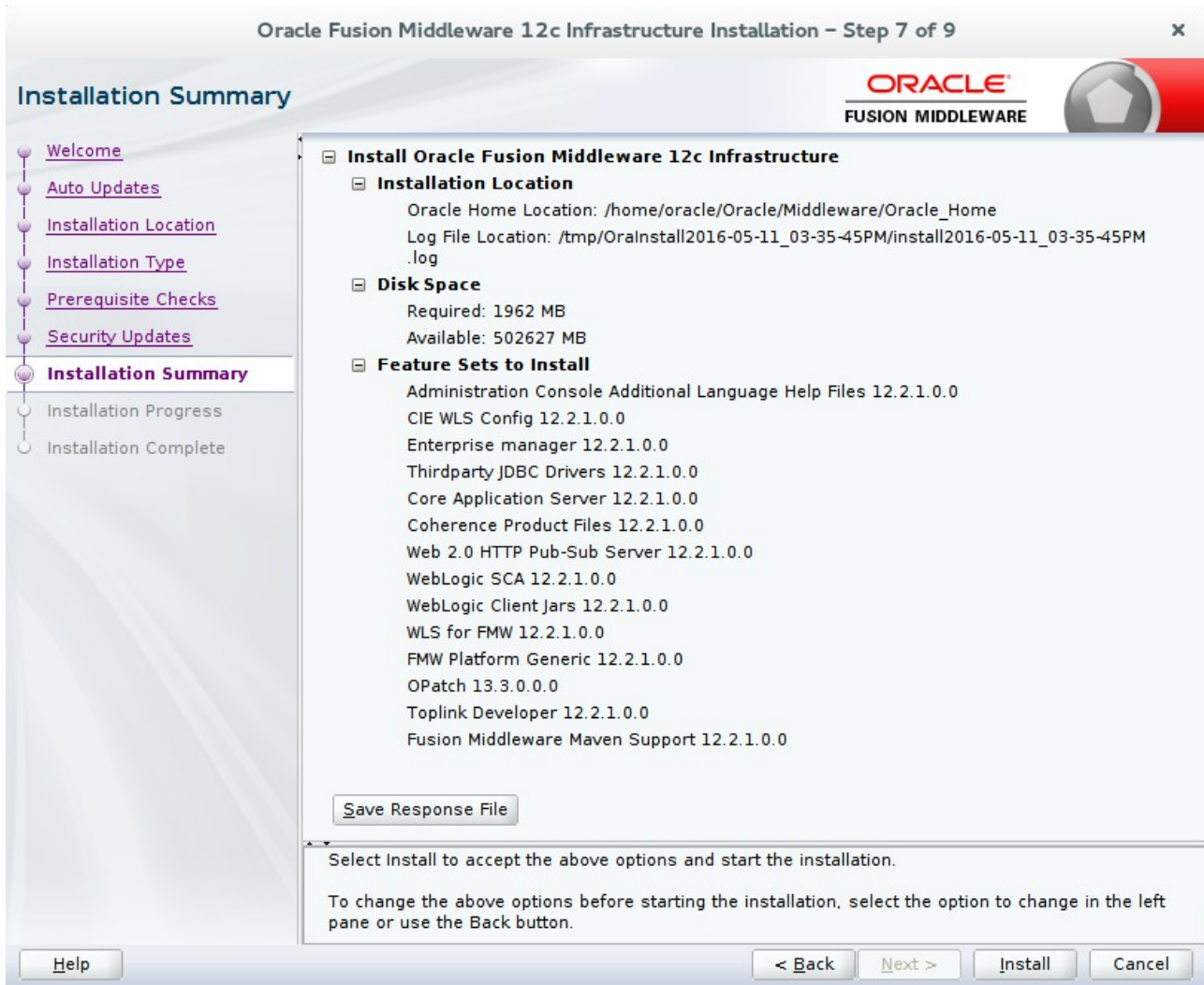
7). Security Updates.

The screenshot shows the 'Security Updates' step of the Oracle Fusion Middleware 12c Infrastructure Installation. The window title is 'Oracle Fusion Middleware 12c Infrastructure Installation - Step 6 of 9'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right. A navigation pane on the left lists steps: Welcome, Auto Updates, Installation Location, Installation Type, Prerequisite Checks, Security Updates (selected), Installation Summary, Installation Progress, and Installation Complete. The main content area contains the following text: 'Provide your email address to be informed of security issues, install the product and initiate configuration manager. [View details.](#)' Below this is an 'Email:' label followed by an empty text input field. A note below the field says 'Easier for you if you use your My Oracle Support email address/username.' There is a checkbox labeled 'I wish to receive security updates via My Oracle Support.' which is currently unchecked. Below the checkbox is a 'My Oracle Support Password:' label followed by an empty text input field. At the bottom of the window are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.



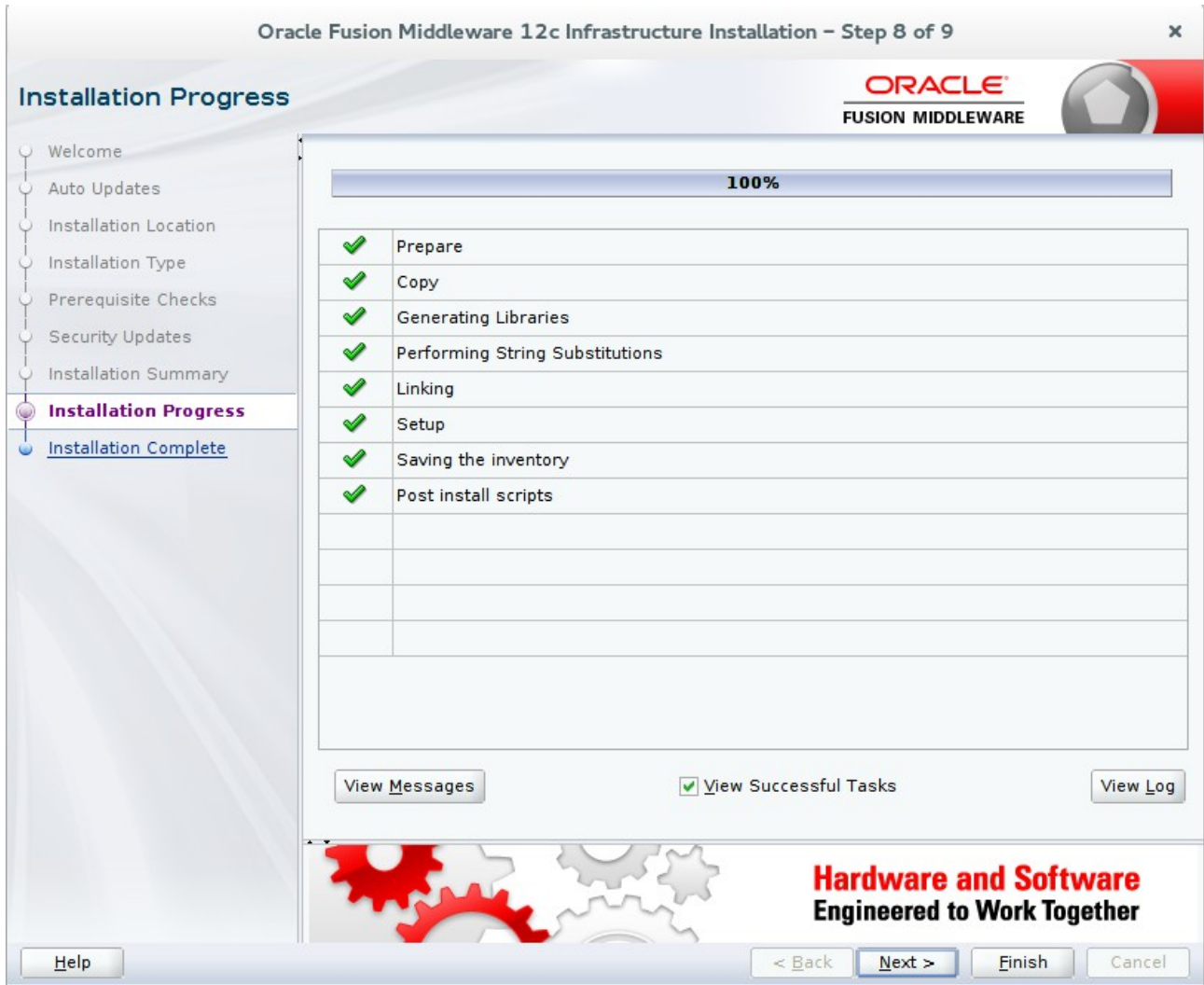
If you wish to register your installation, enter your Email address and your My Oracle Support password. If you wish to decline registration, deselect "I wish to receive security updates via My Oracle Support" and confirm your choice.

8). Installation Summary.



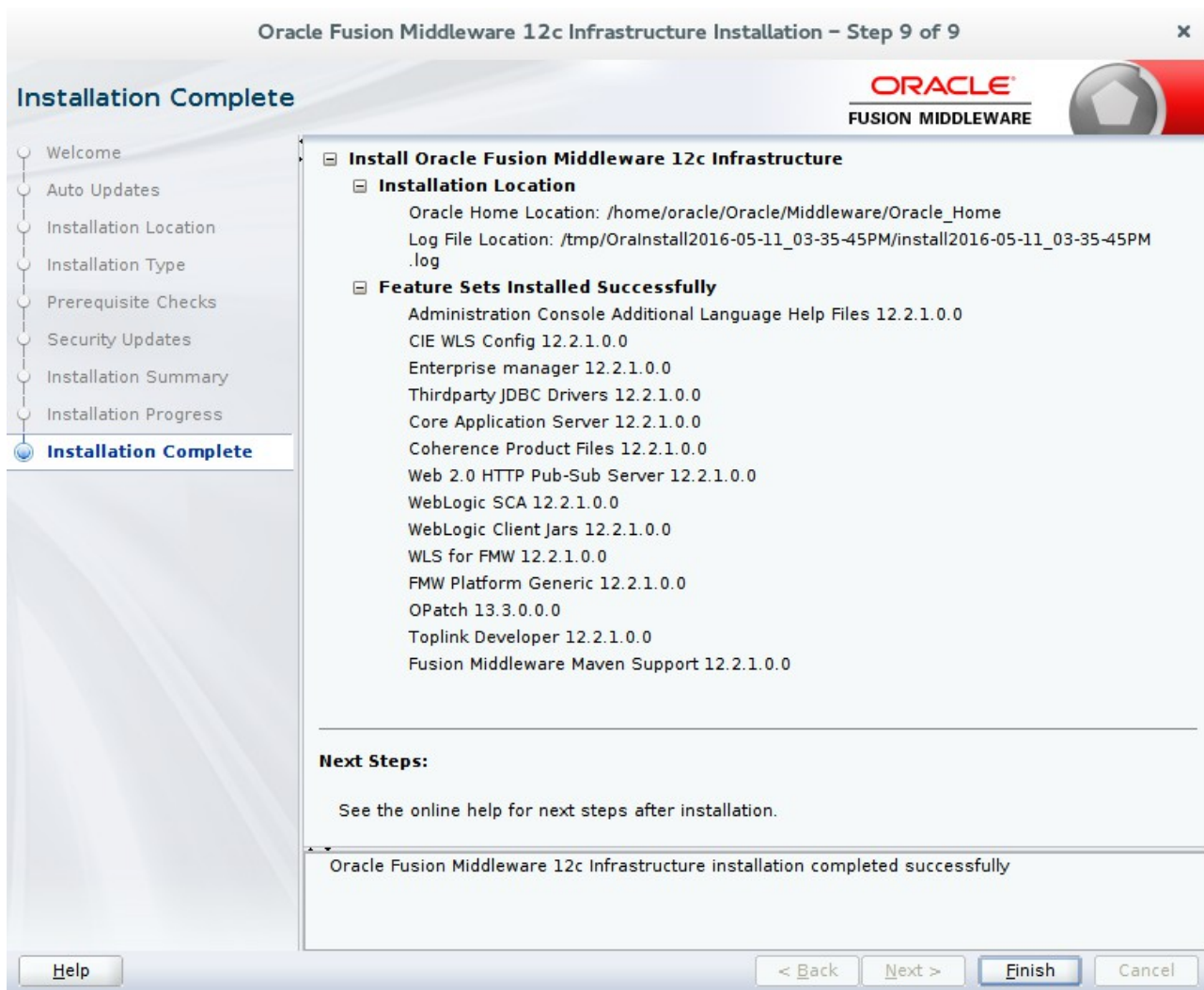
This screen contains a list of the feature sets you selected for installation, along with the approximate amount of disk space to be used by the feature sets once installation is complete. Check the information, then click **Install** to continue.

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

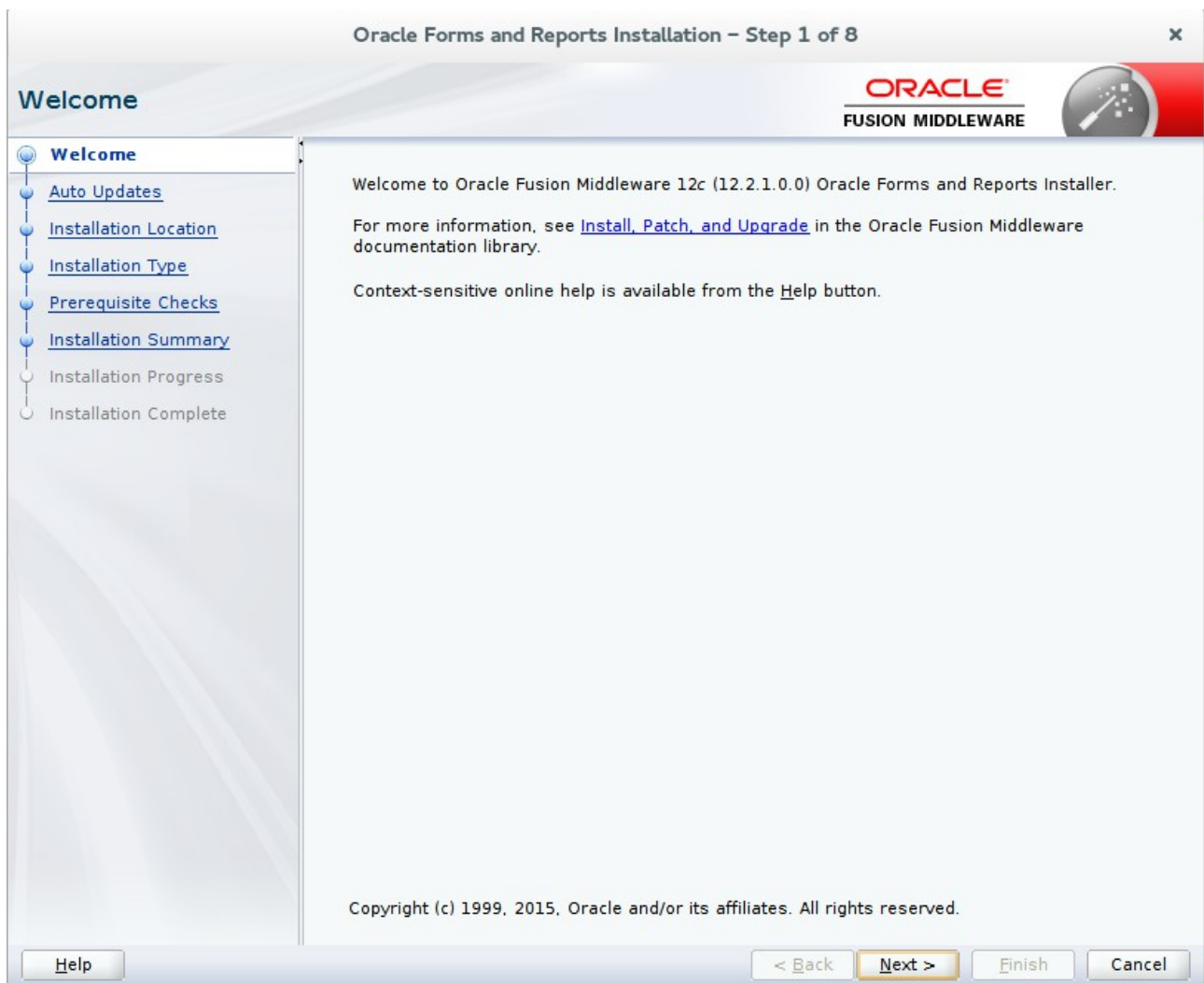
1-1. Log in to the target system (SLES 12 64-bit OS) as a non-admin user. Download the Oracle Forms and Reports 12c (12.2.1.0) from <http://www.oracle.com/technetwork/indexes/downloads/index.html#middleware>.

(**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'

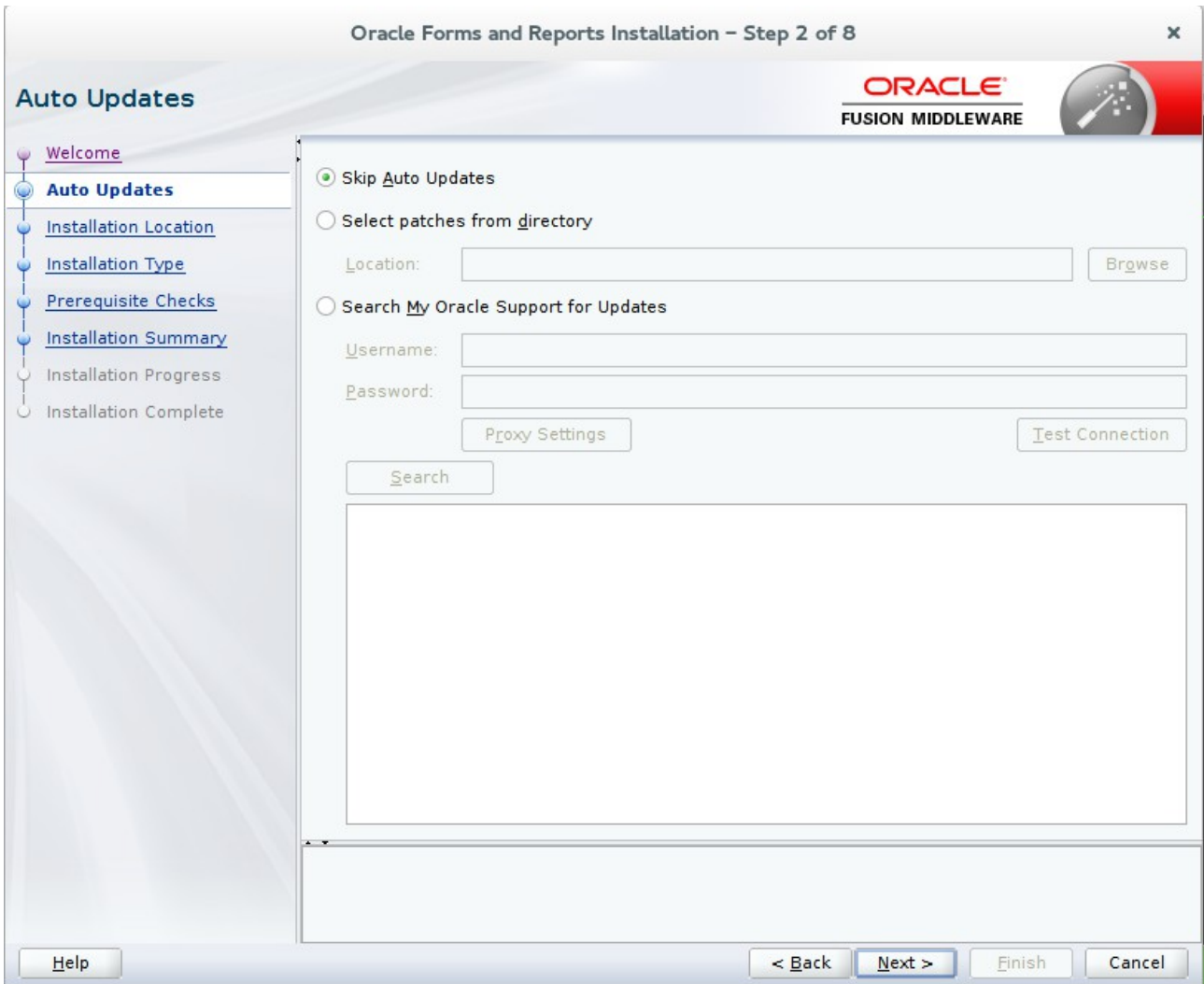
Install Flow:

1). Welcome page.



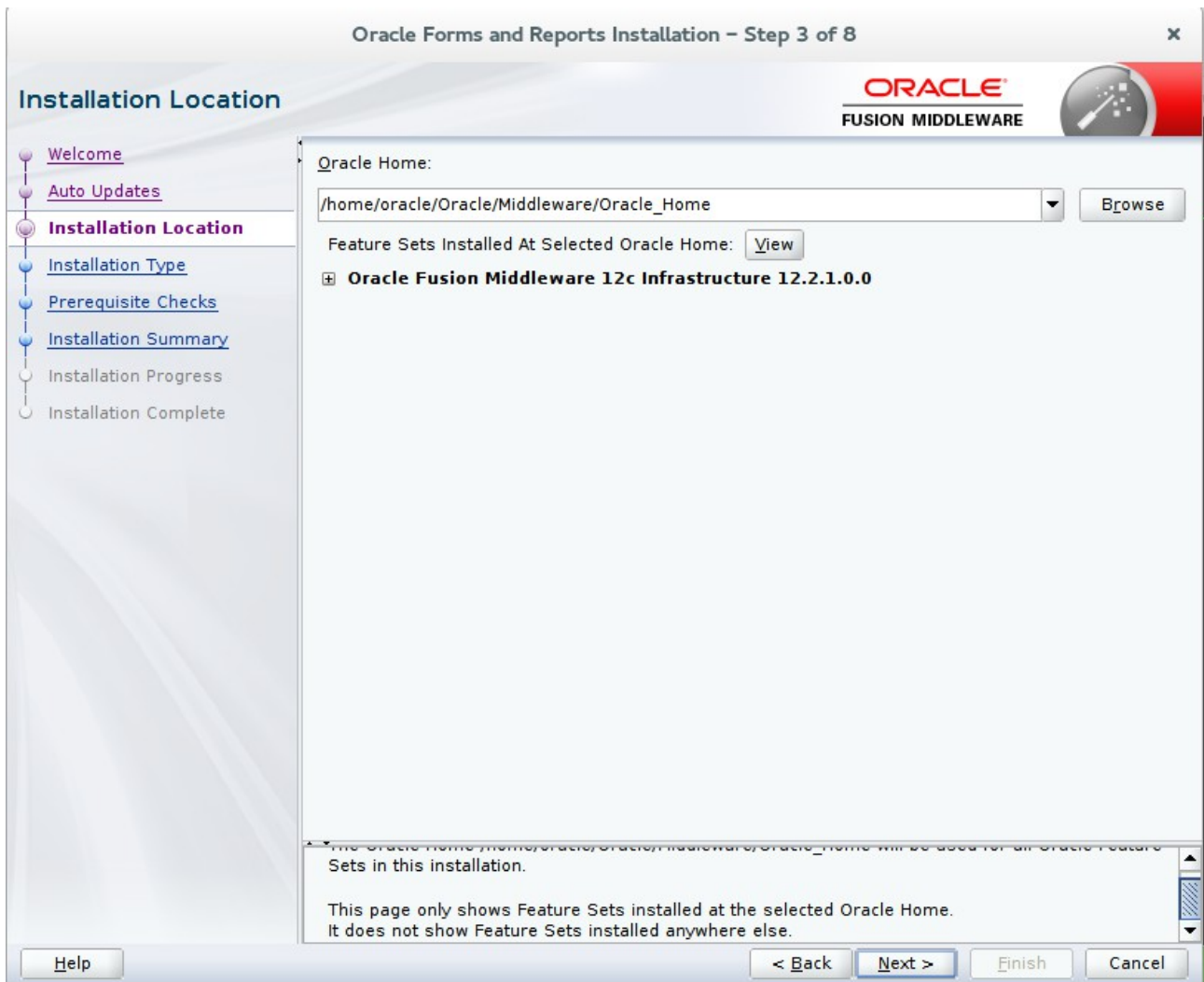
This page welcomes you to the installation. Click **Next** to continue.

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



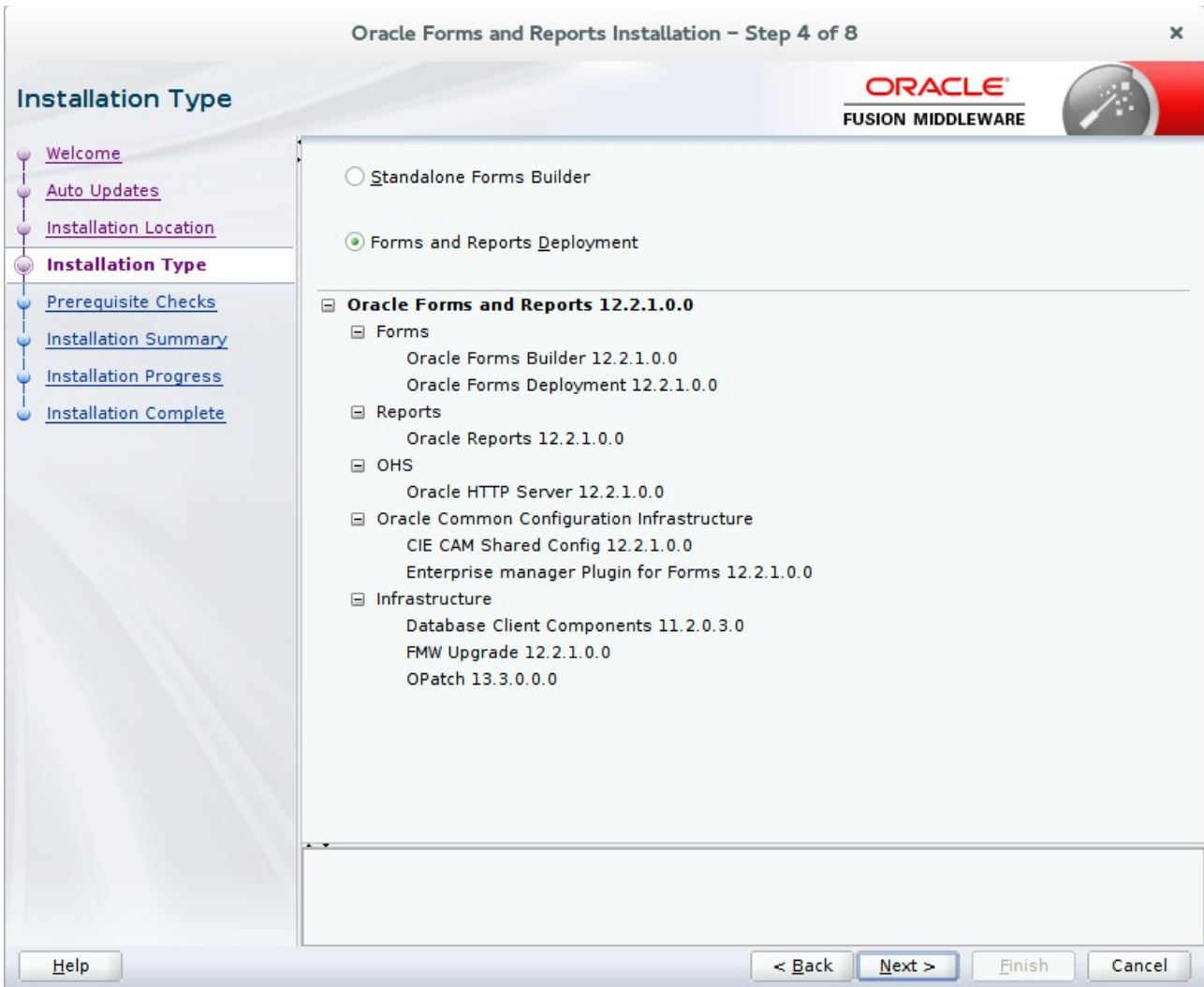
This page enables you to choose to automatically receive software updates for your components from Oracle Corporation. make your choices, then click **Next** to continue.

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



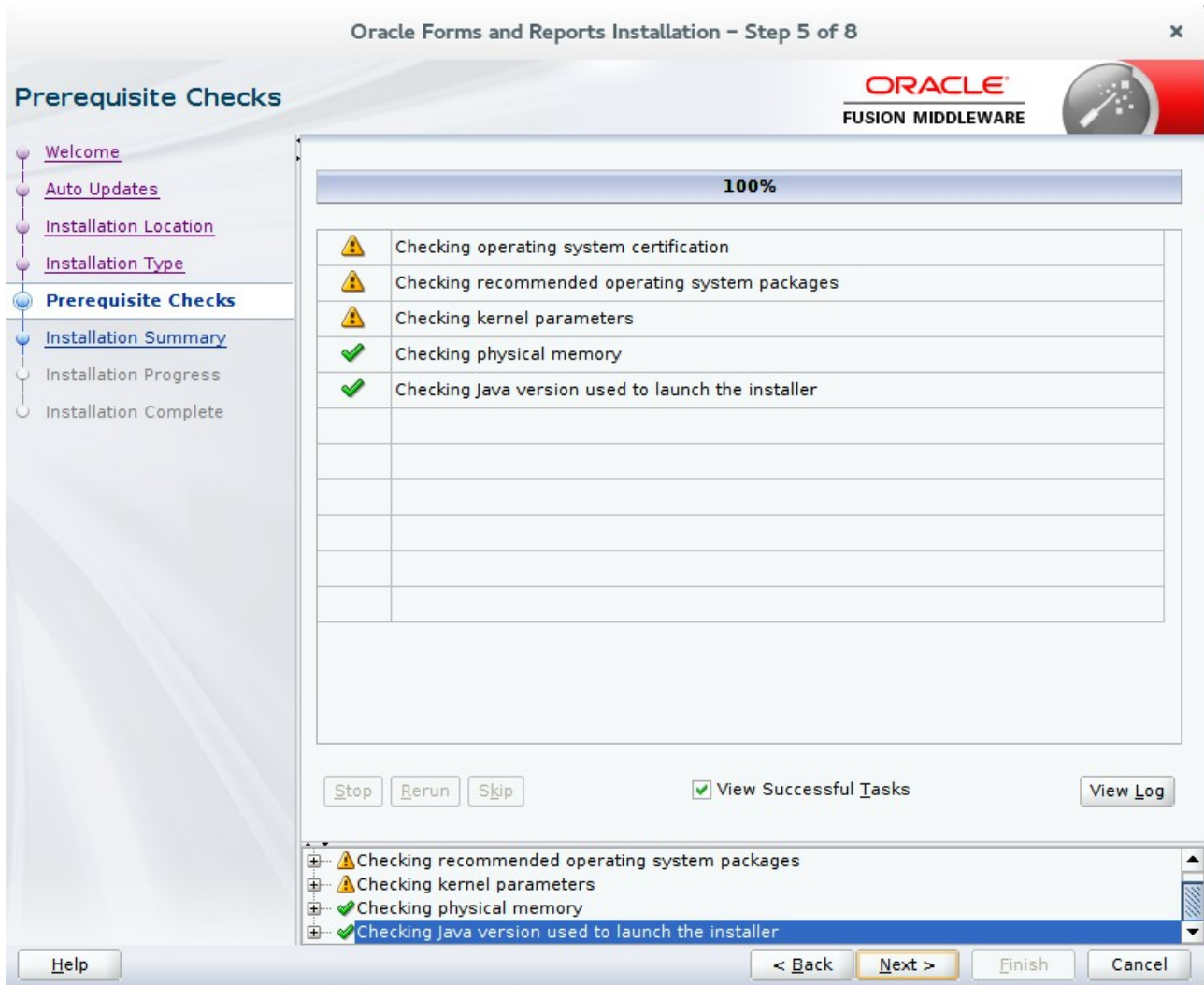
Specify the Oracle home location into which you want to install the product(s). Click **Next** to continue.

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



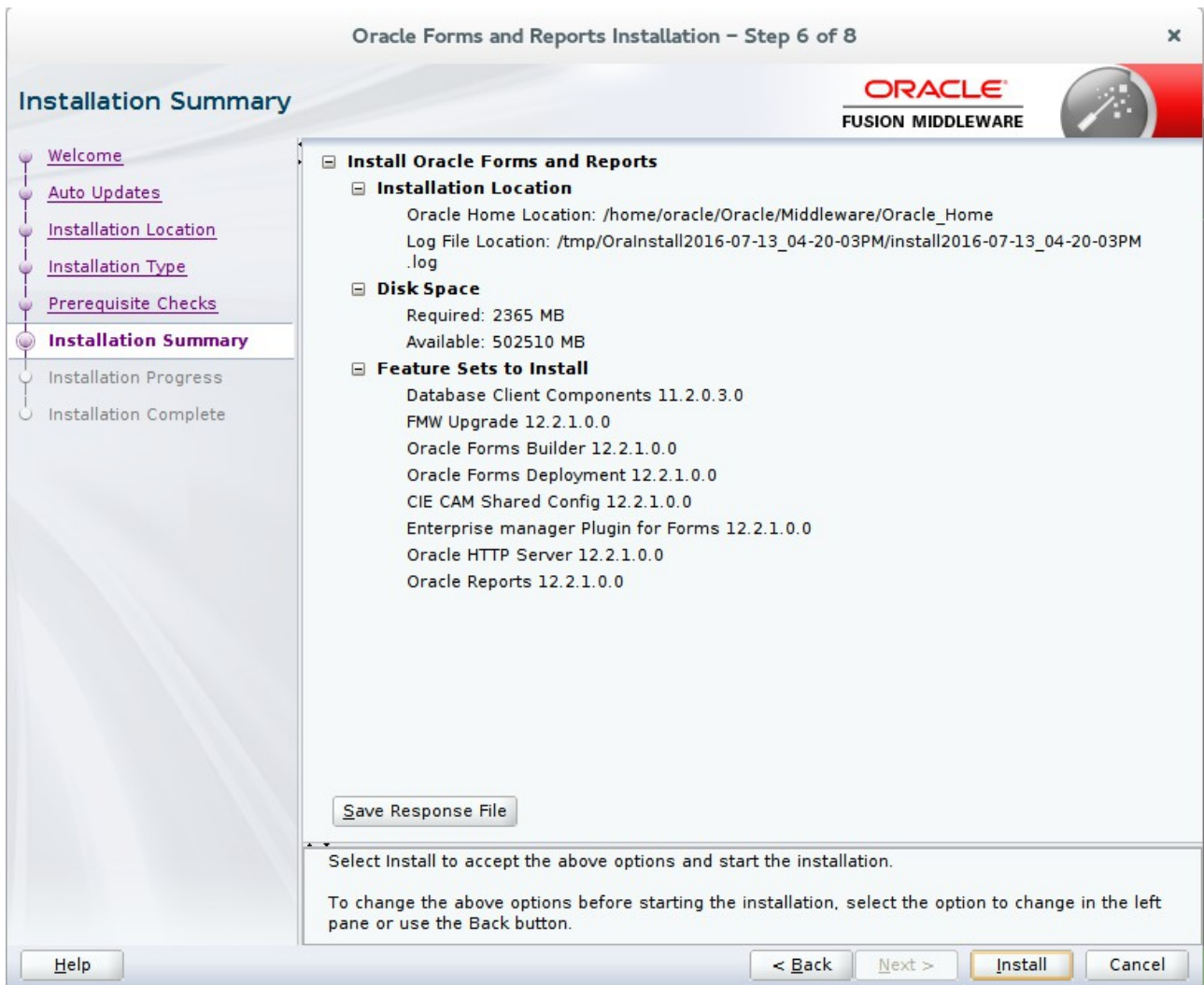
You can select **Standalone Forms Builder** if you want only that functionality, or choose **Forms and Reports Deployment** to install all of the products. Click **Next** to continue.

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



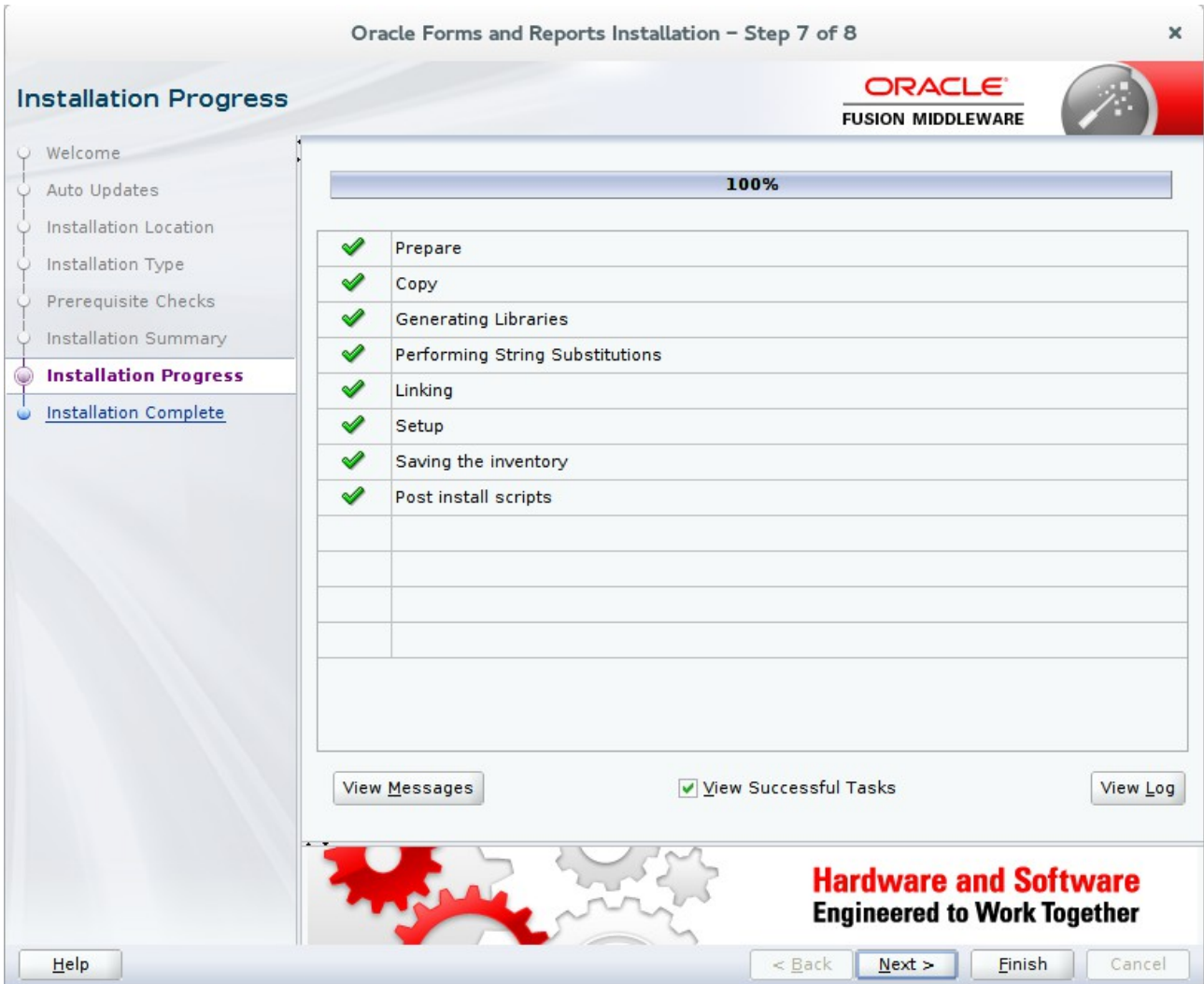
This page shows you the progress of the system checking the prerequisites on your system prior to installation. If you are lacking any prerequisites, a message will appear telling you so. You do not need to take any actions on this page, though you can view the log from here. Click **Next** to continue.

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



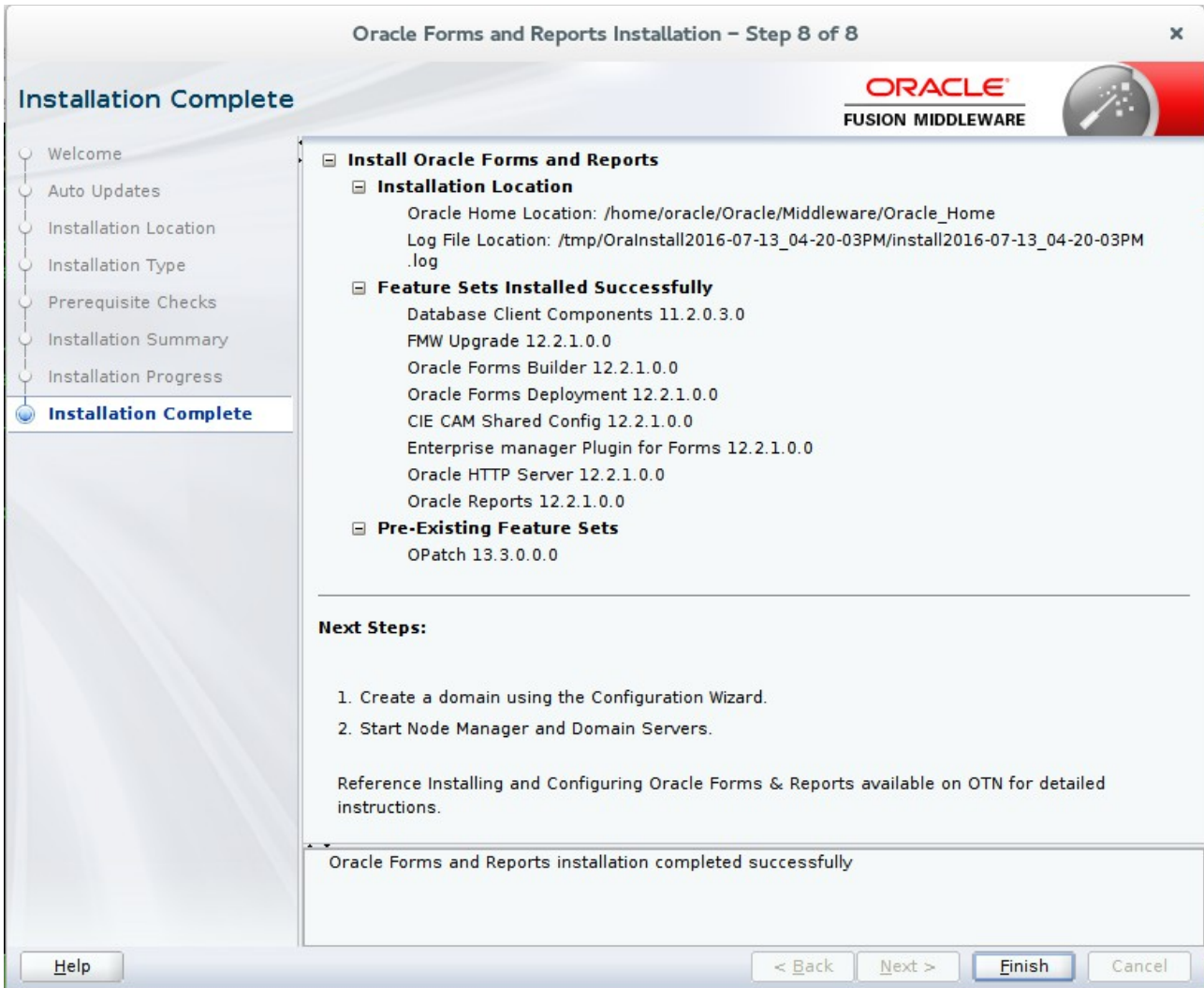
This page shows you what components and features are about to be installed. If you need to make changes, click **Back**, otherwise, click **Install** to start the installation.

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



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

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



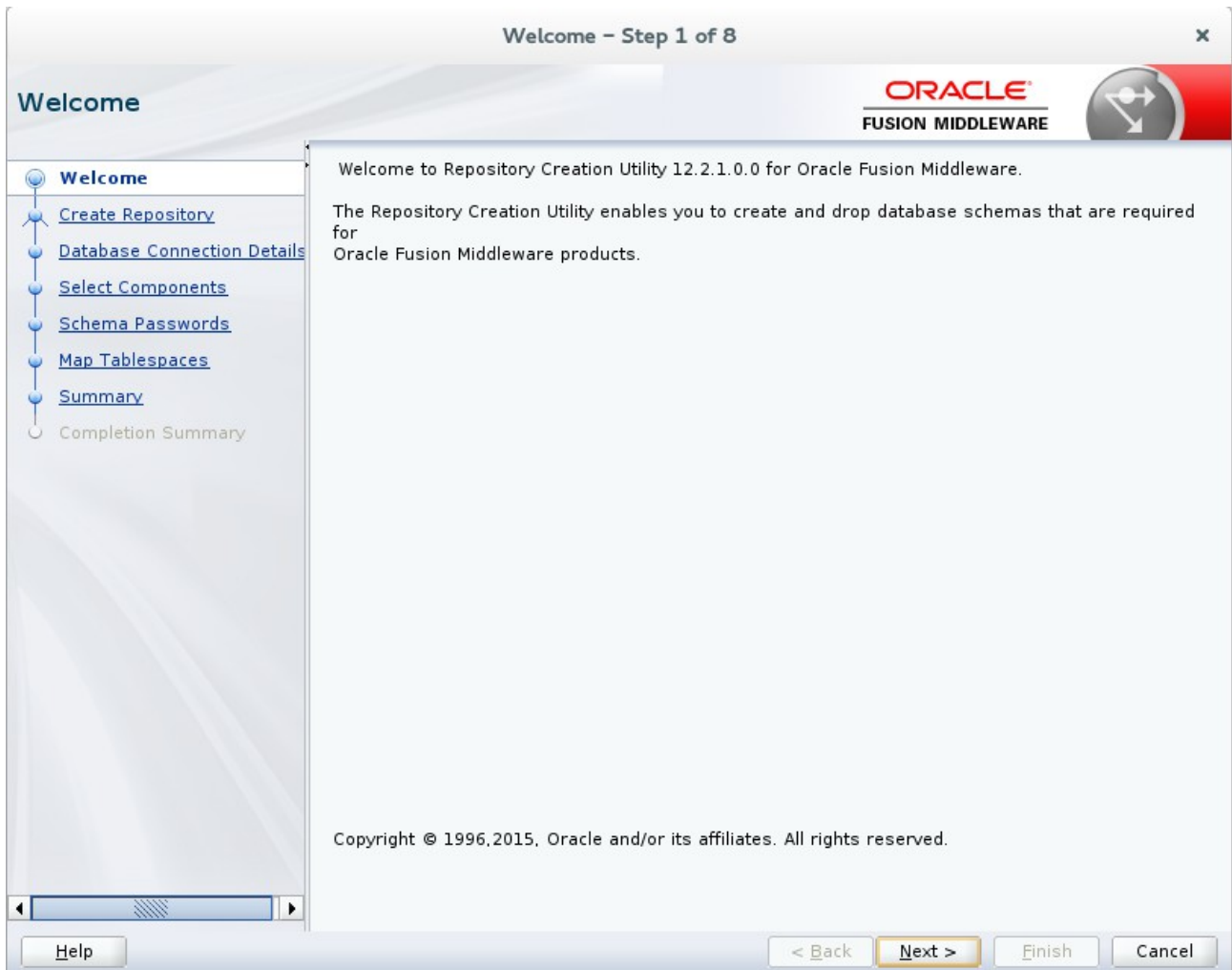
Click **Finish** to dismiss the installer.

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`

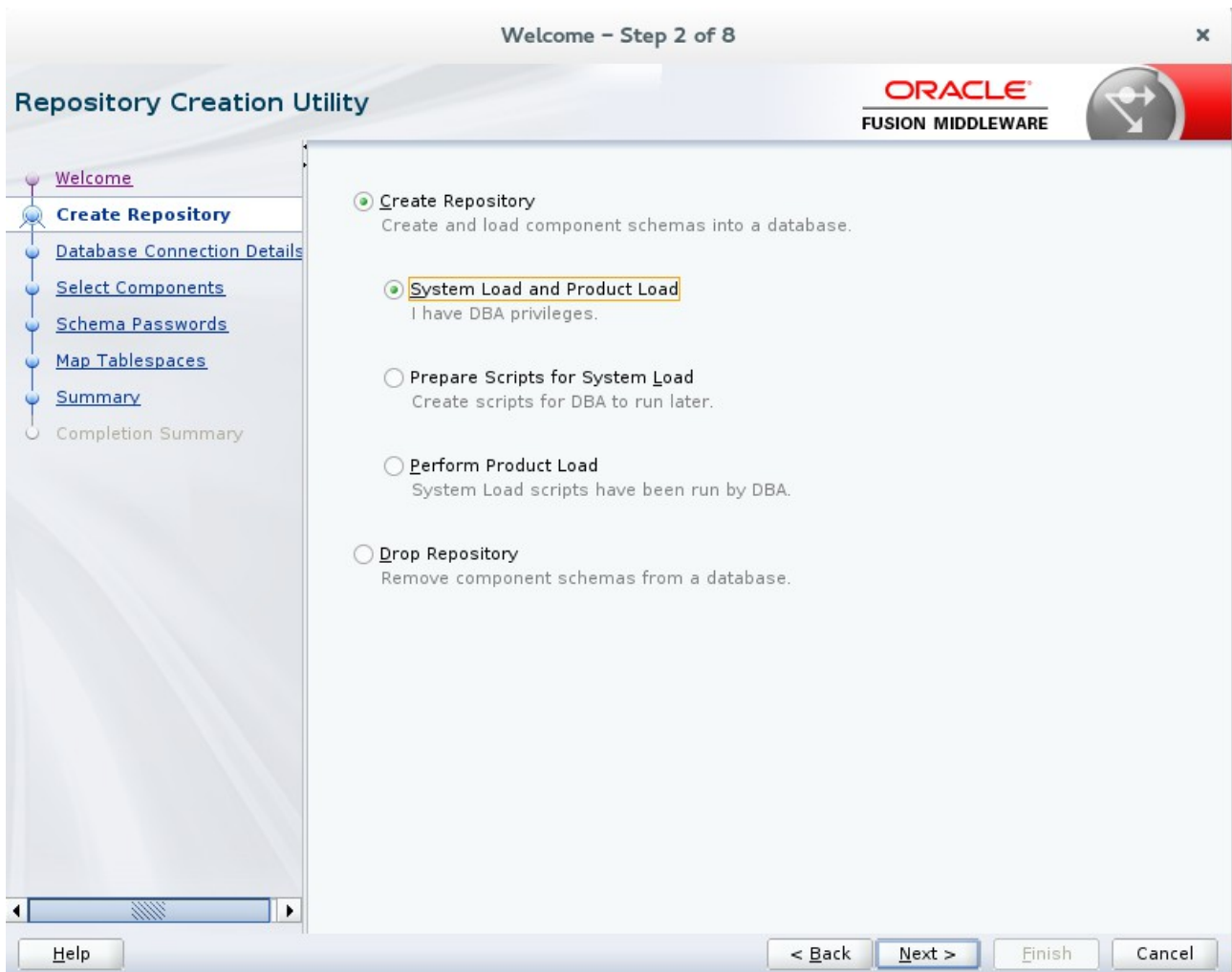
Follow these steps:

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.

Welcome - Step 3 of 8

Repository Creation Utility

ORACLE
FUSION MIDDLEWARE

Database Type: Oracle Database

Host Name: hpgen9-01
For RAC database, specify VIP name or one of the Node name as Host name.
For SCAN enabled RAC database, specify SCAN host as Host name.

Port: 1521

Service Name: suse

Username: sys
User with DBA or SYSDBA privileges. Example:sys

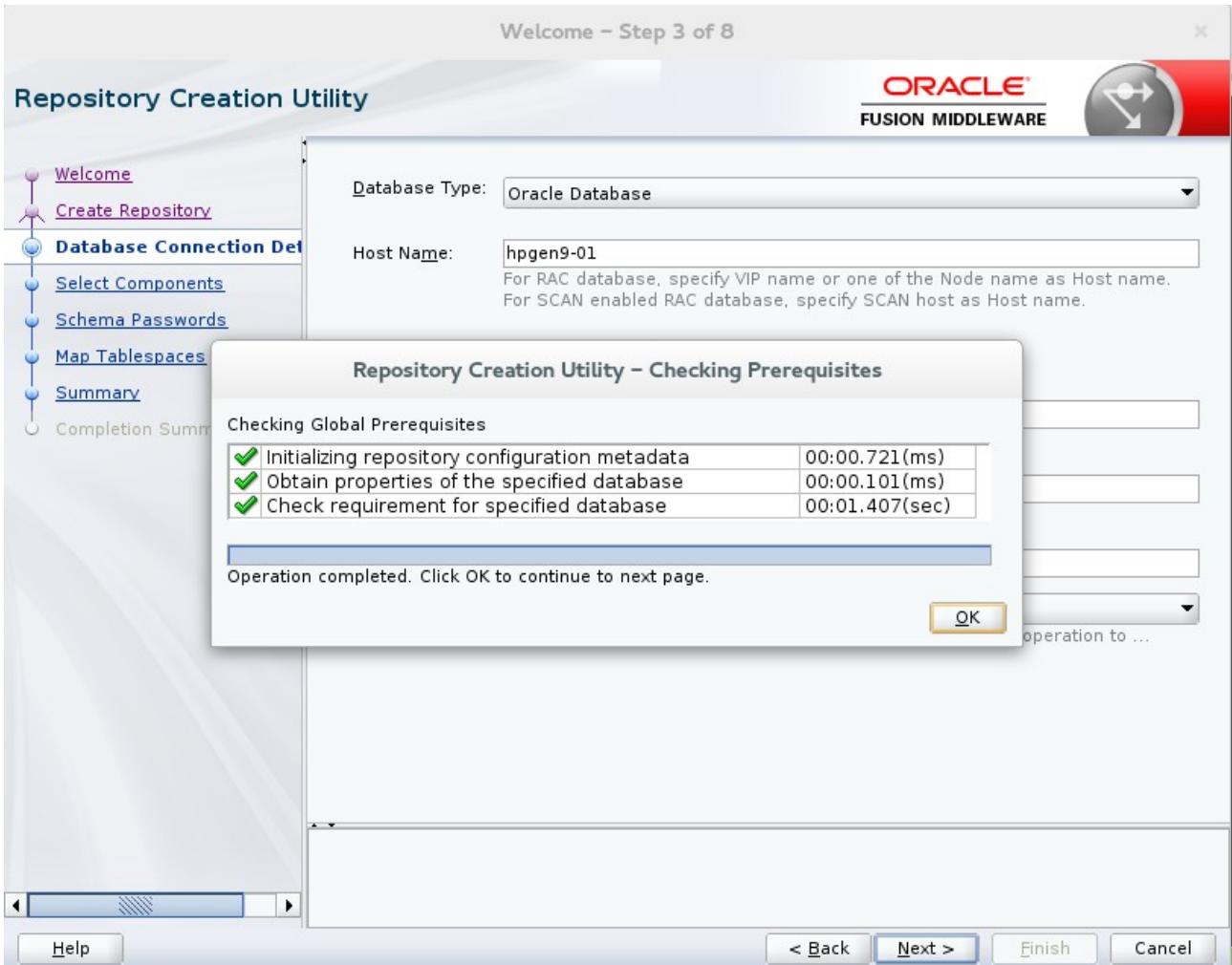
Password:

Role: SYSDBA
One or more components may require SYSDBA role for the operation to ...

Help < Back Next > Finish Cancel

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.

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:

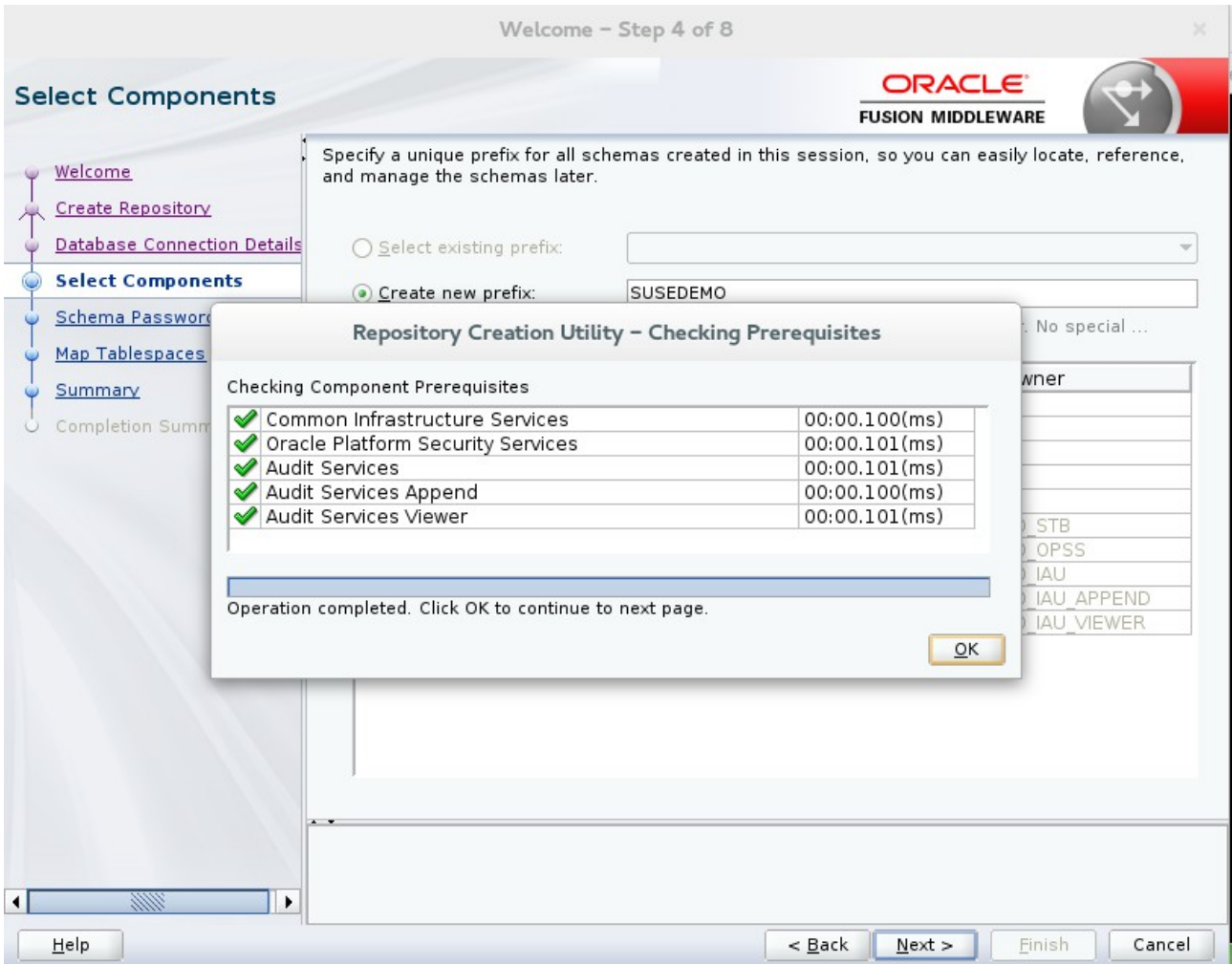
Create new prefix:

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

Component	Schema Owner
<input type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input type="checkbox"/> User Messaging Service	UMS
<input type="checkbox"/> Metadata Services	MDS
<input type="checkbox"/> WebLogic Services	WLS
<input checked="" type="checkbox"/> Common Infrastructure Services	SUSEDEMO_STB
<input checked="" type="checkbox"/> Oracle Platform Security Services	SUSEDEMO_OPSS
<input checked="" type="checkbox"/> Audit Services	SUSEDEMO_I AU
<input checked="" type="checkbox"/> Audit Services Append	SUSEDEMO_I AU_APPEND
<input checked="" type="checkbox"/> Audit Services Viewer	SUSEDEMO_I AU_VIEWER

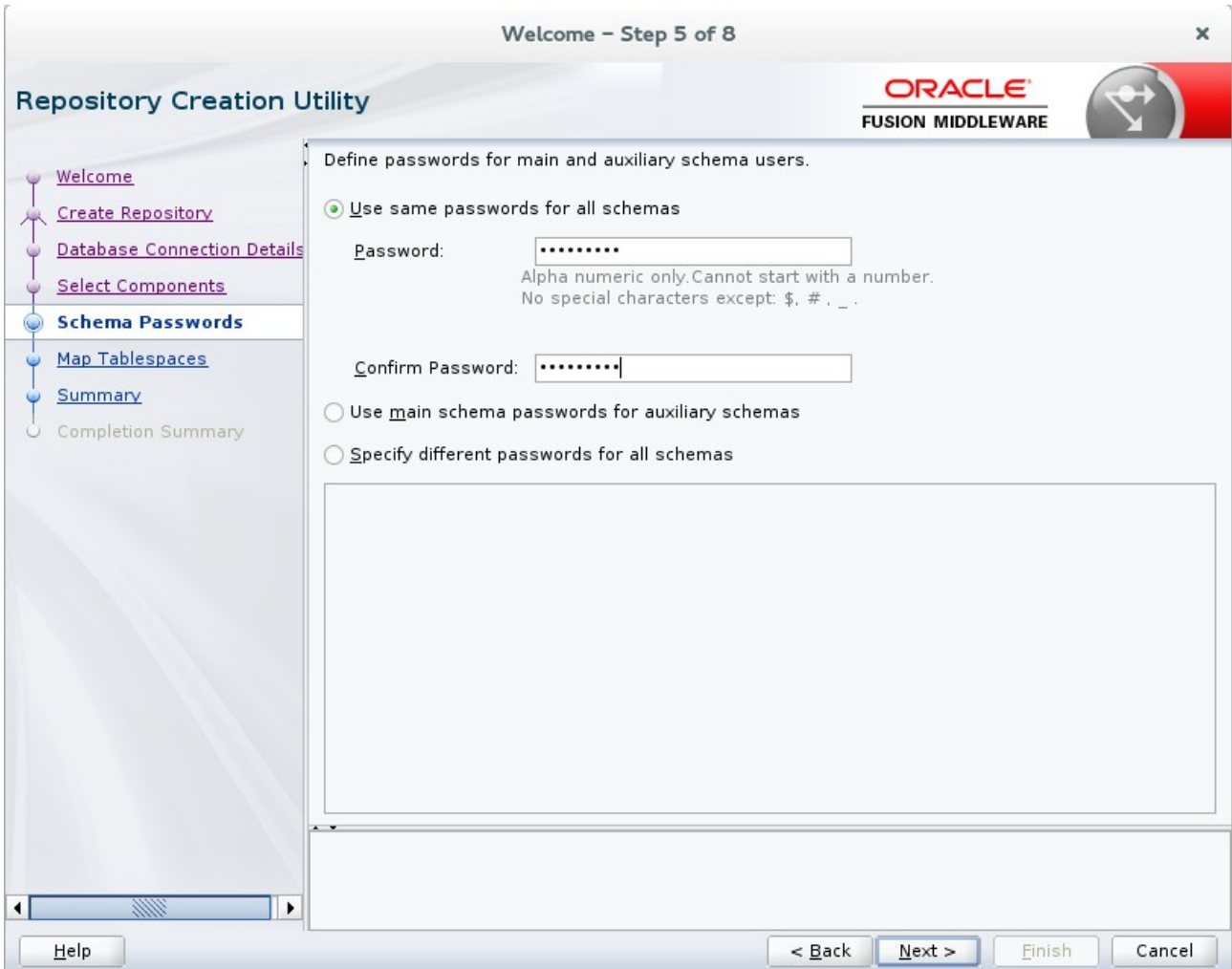
Select the **Create new prefix** radio button and provide a schema prefix (such as DEMO). Select the following components: **Oracle Platform Security Services**, **Audit Services**, **Audit Services Append** and **Audit Services Viewer**. Click **Next** to continue.

The **Checking Prerequisites** box pops up.



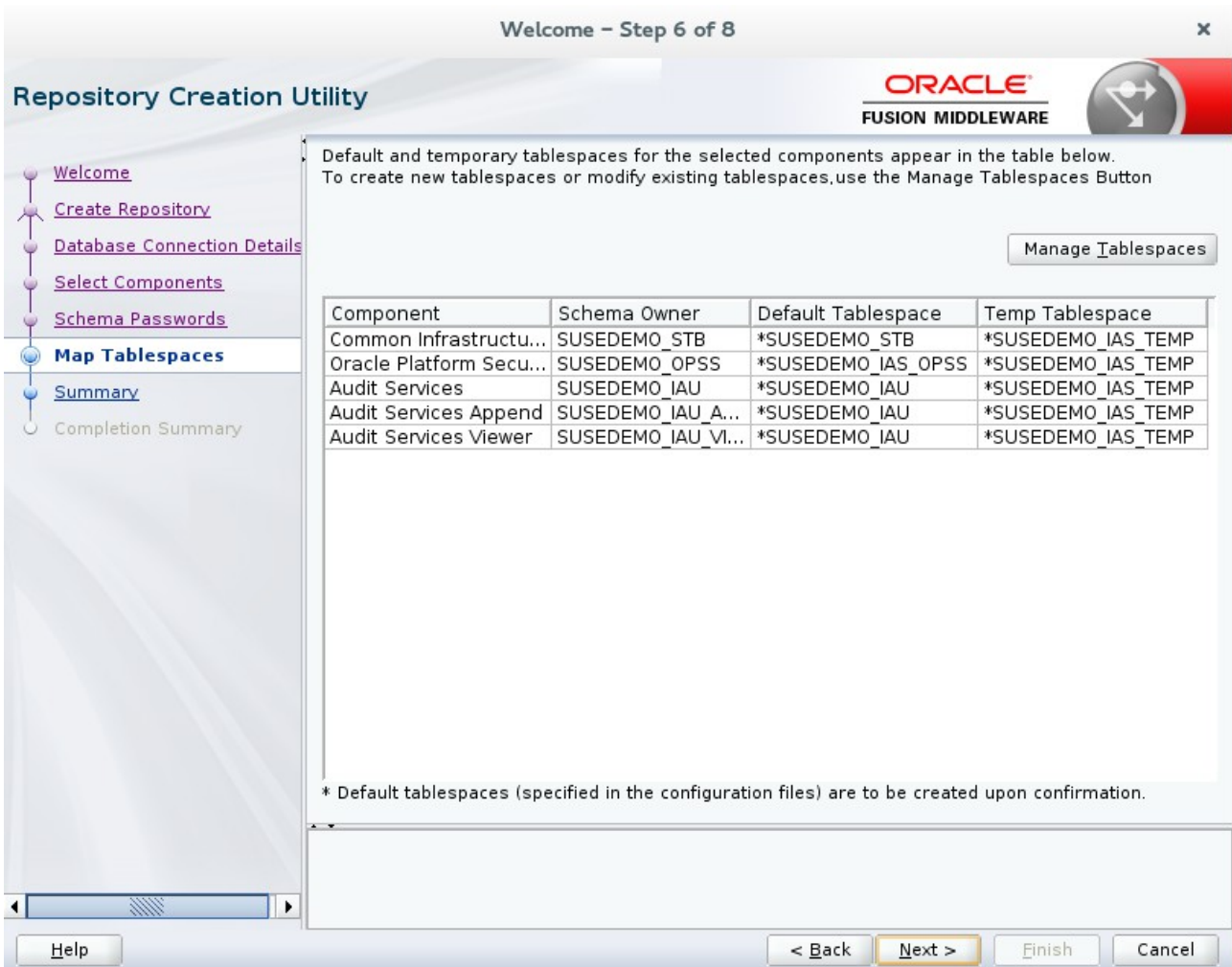
It shows the progress of prerequisites checking. When it is complete, click **OK**.

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



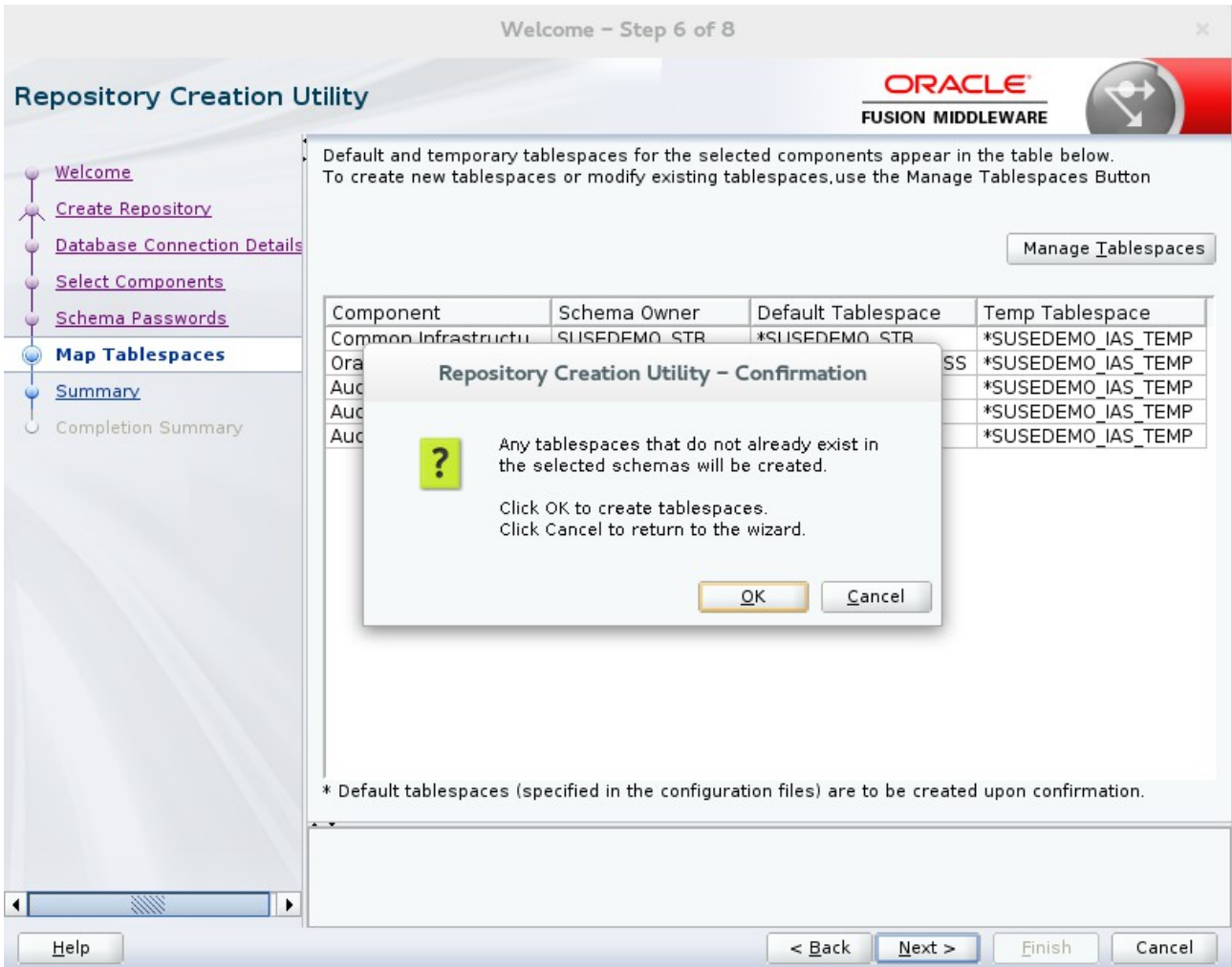
Leave the default **Use same passwords for all schemas** radio button selected, and enter the password in the **Password** field. Click **Next** to continue.

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



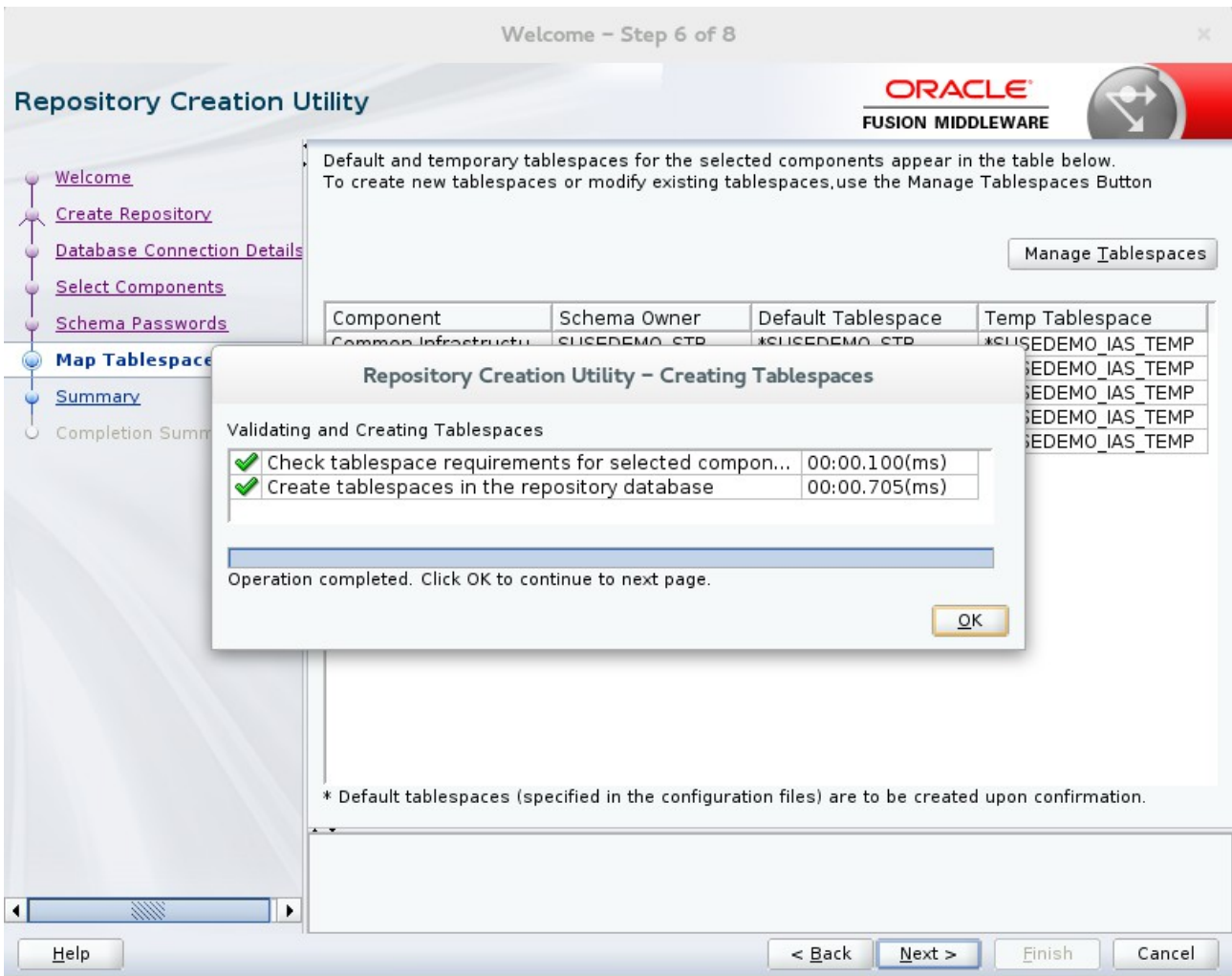
Map action is required. Click **Next** to continue.

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



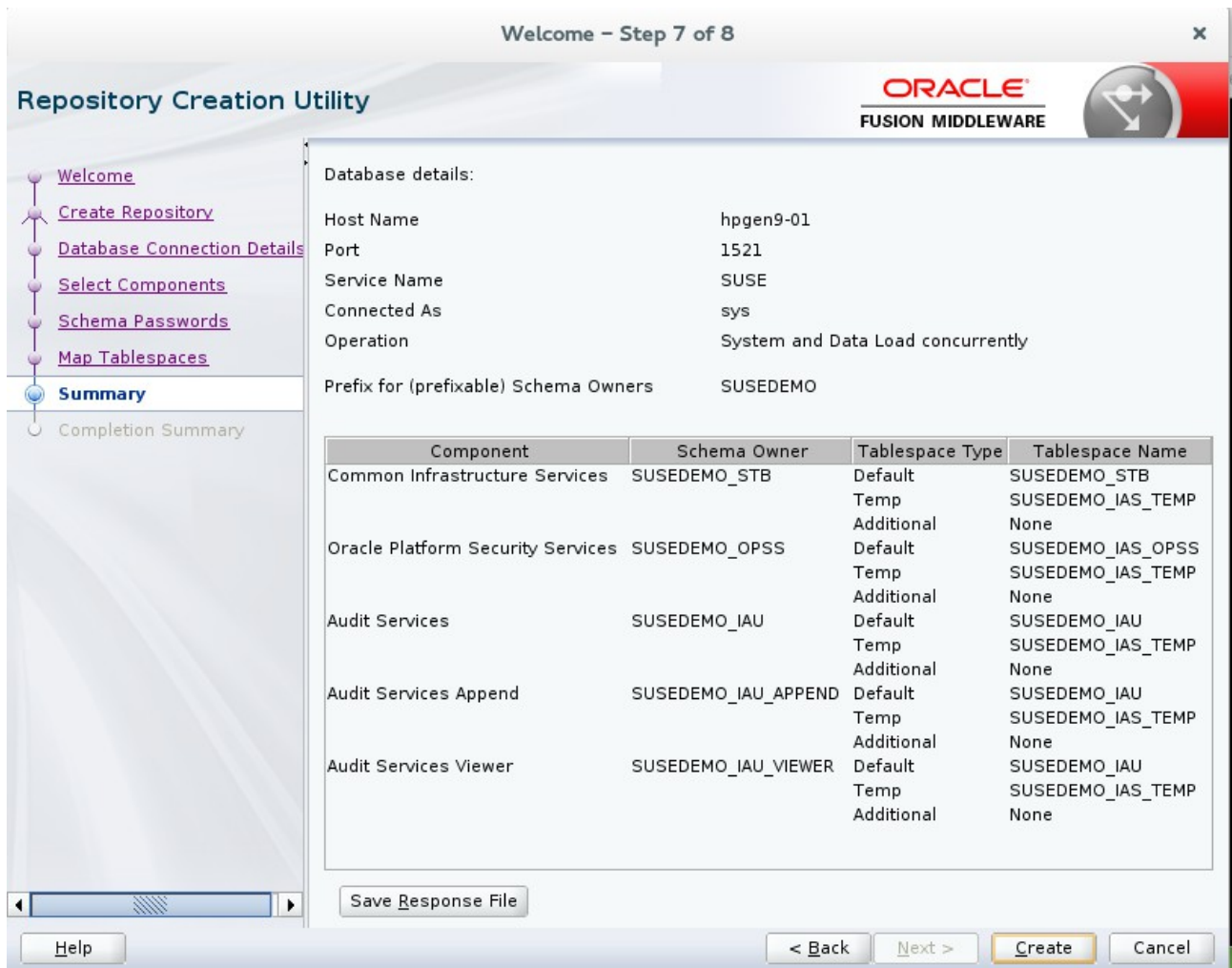
Click **OK**.

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



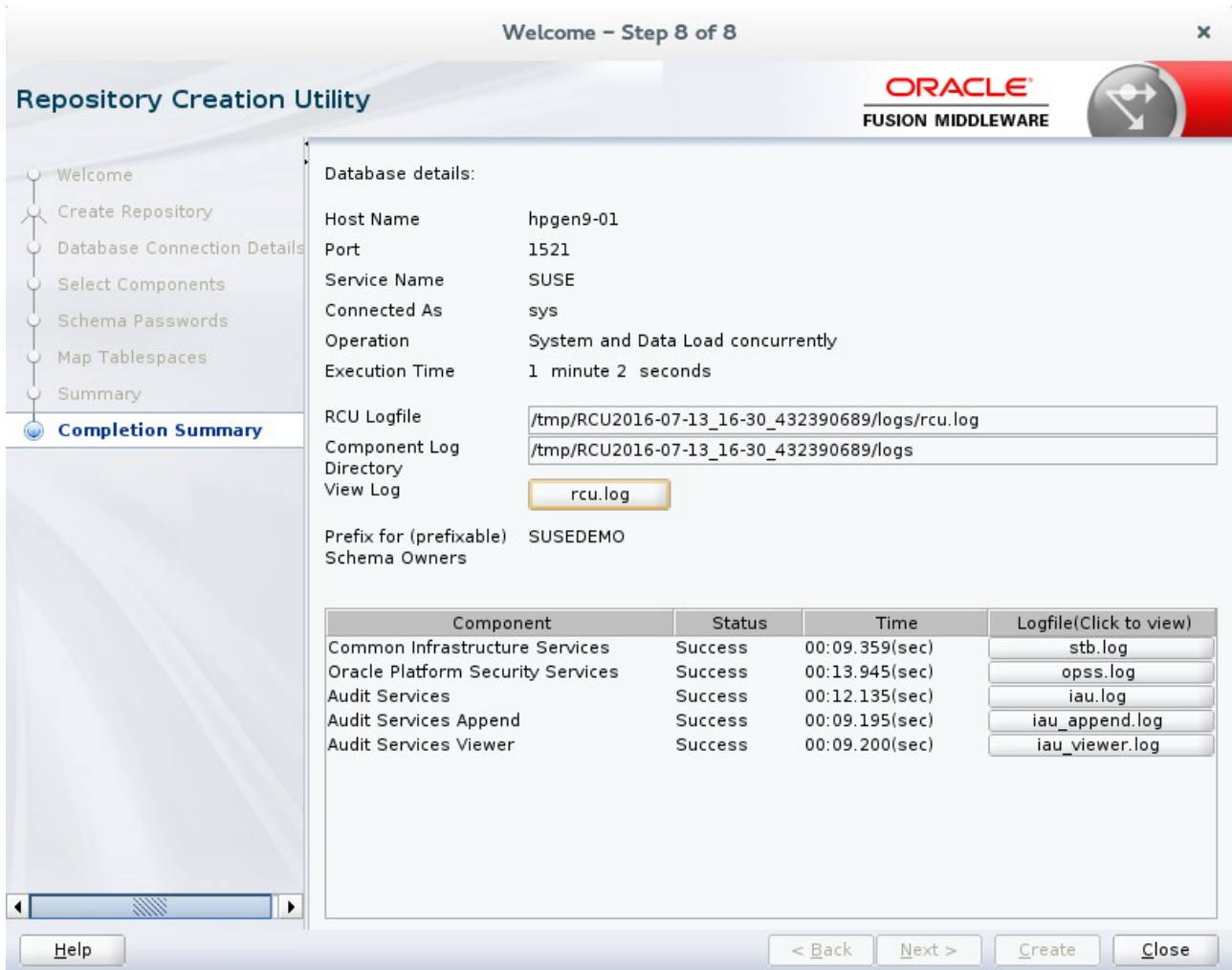
Click **OK**, then **Next**.

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



Click **Create** to continue.

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



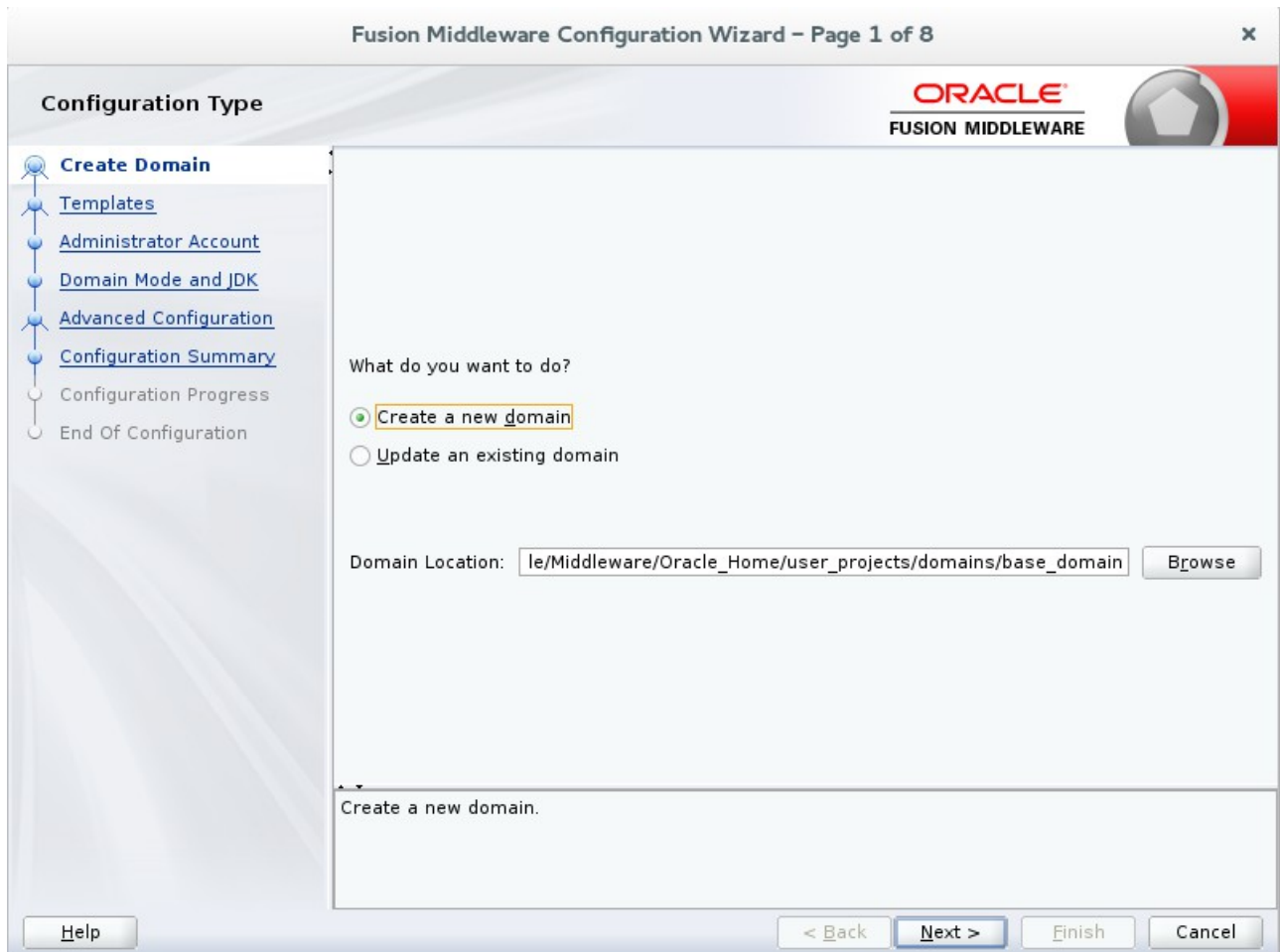
Ensure schema creation is successful. Click **Close** to dismiss the screen.

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.

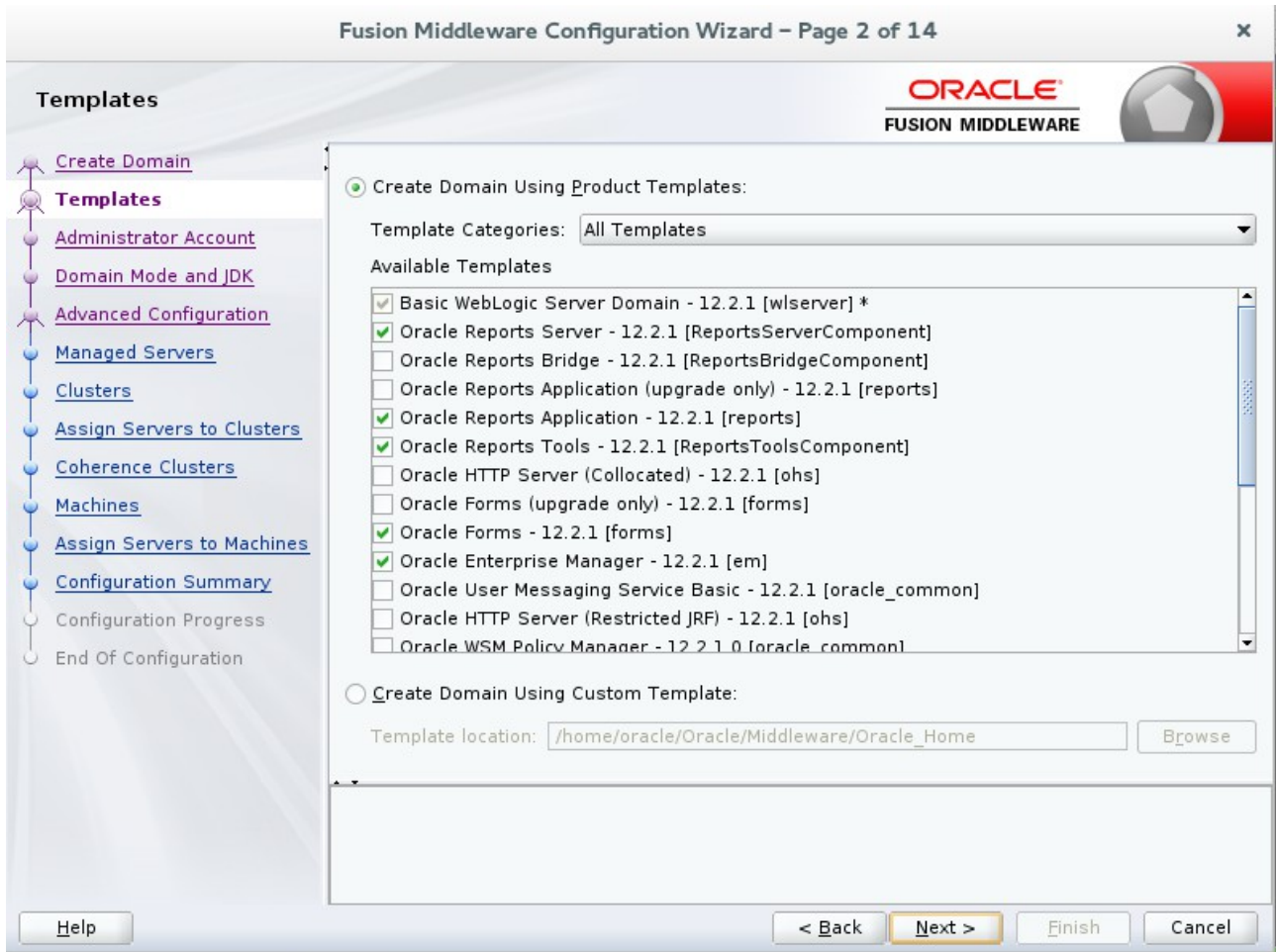
Follow these steps:

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



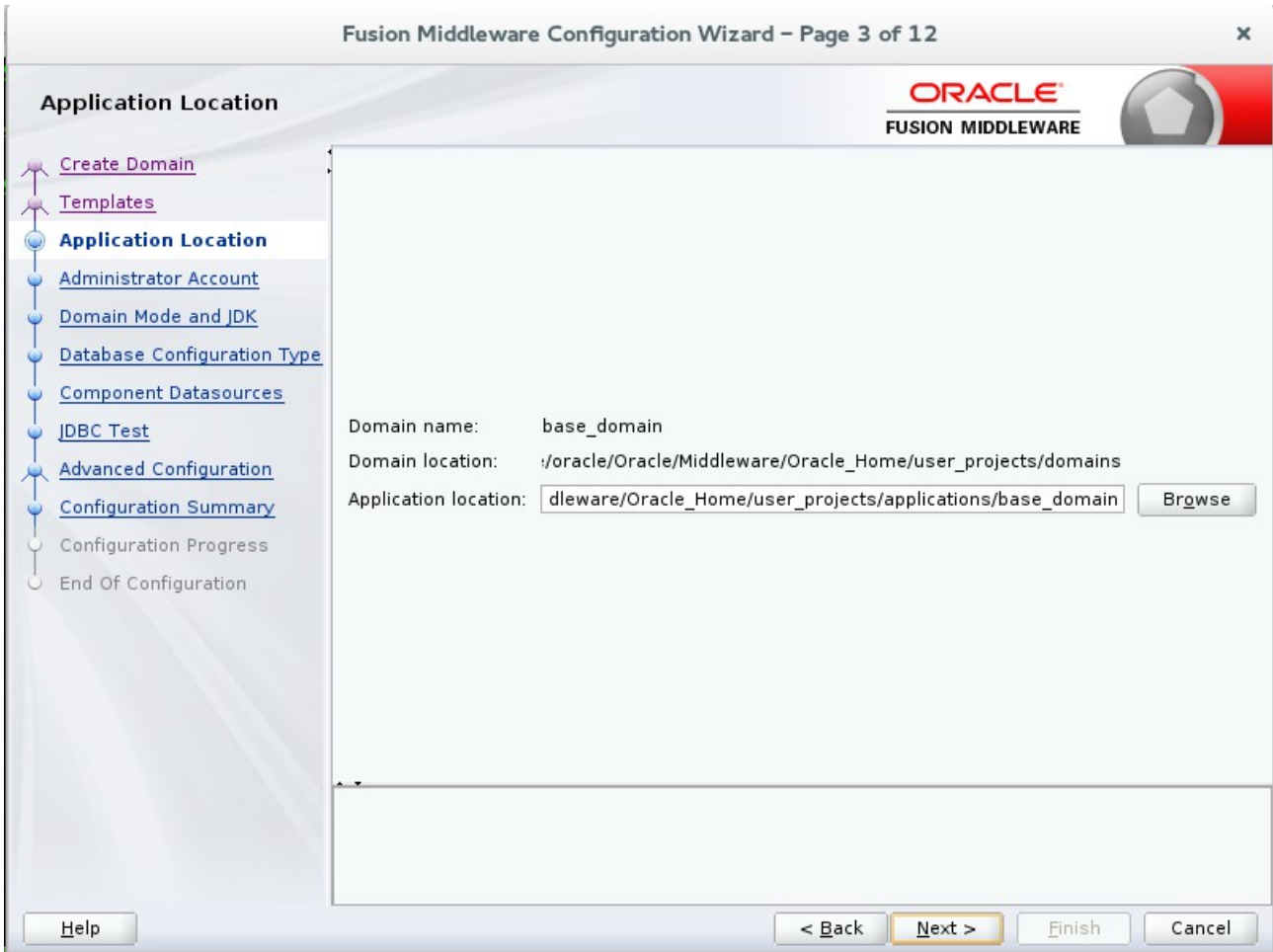
Click **Next** to continue.

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.

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

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

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

Fusion Middleware Configuration Wizard – Page 5 of 12

Domain Mode and JDK

ORACLE
FUSION MIDDLEWARE

Development
 Utilize boot.properties for username and password, and poll for applications to deploy.

Production
 Require the entry of a username and password, and do not poll for applications to deploy.

JDK

Oracle HotSpot 1.8.0_91 /opt/oracle/Oracle_SW/java/jdk1.8.0_91

Other JDK Location:

Help

< Back Next > Finish Cancel

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

(**Note:** Your 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.

The screenshot shows the 'Database Configuration Type' screen in the Fusion Middleware Configuration Wizard. The title bar indicates 'Page 6 of 12'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right. The left navigation pane lists several steps, with 'Database Configuration Type' currently selected. The main area contains the following elements:

- Specify AutoConfiguration Options Using:**
 - RCU Data
 - Manual Configuration
- Enter the database connection details using the Repository Creation Utility service table (STB) schema credentials. The Wizard uses this connection to automatically configure the datasources required for components in this domain.**
- Vendor:** Oracle (dropdown)
- Driver:** *Oracle's Driver (Thin) for Service connections; ... (dropdown)
- DBMS/Service:** suse
- Host Name:** hpgen9-01
- Port:** 1521
- Schema Owner:** SUSEDEMO_STB
- Schema Password:** [masked]
- Buttons:** 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.

```
- Instruction:** Click "Next" button to continue.
- Bottom Buttons:** Help, < Back, Next >, Finish, Cancel

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

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

Fusion Middleware Configuration Wizard – Page 7 of 12

JDBC Component Schema

ORACLE
FUSION MIDDLEWARE

Vendor: Driver:

DBMS/Service: Host Name: Port:

Schema Owner: Schema Password:

Oracle RAC configuration for component schemas:
 Convert to GridLink Convert to RAC multi data source Don't convert

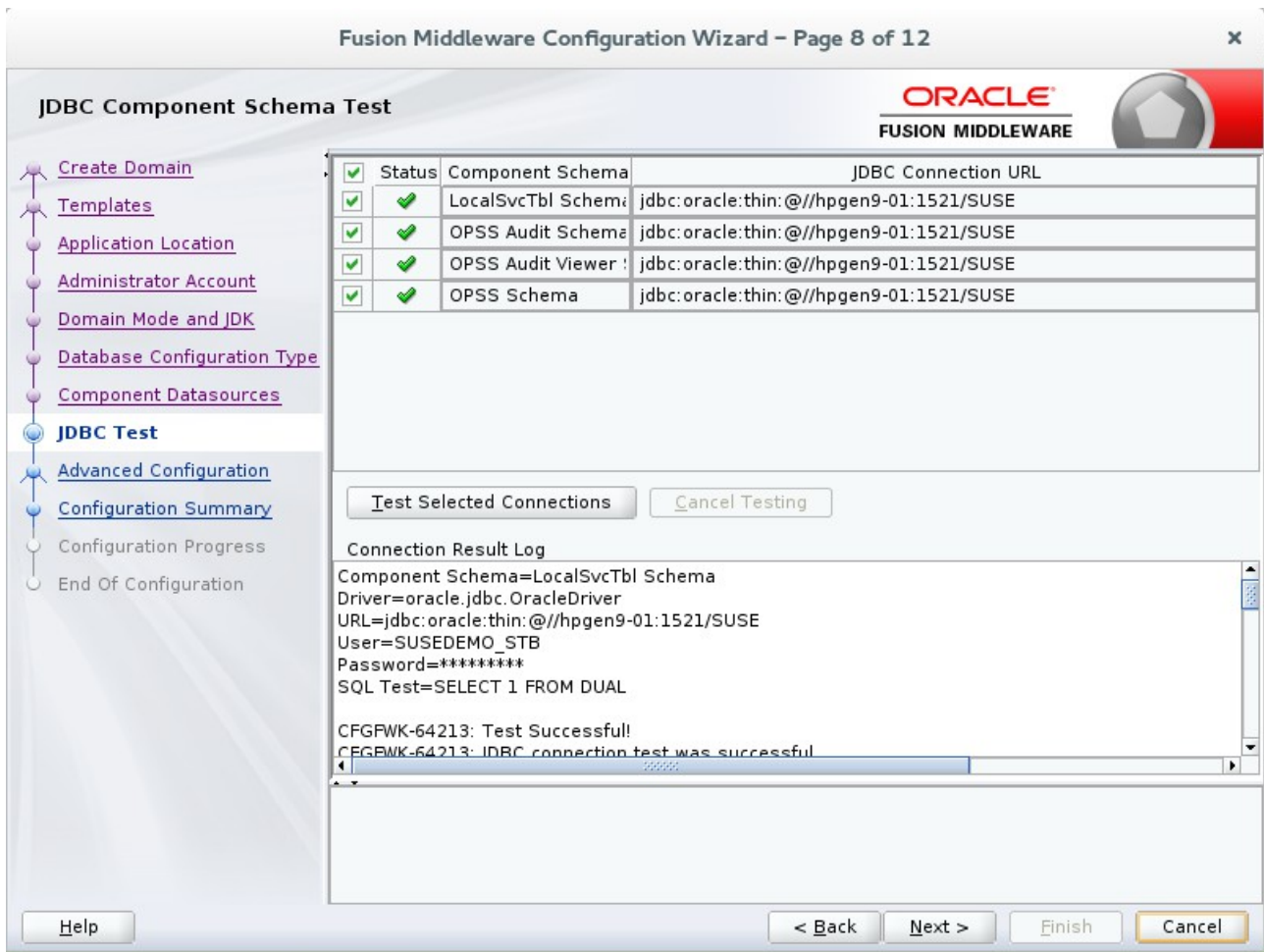
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/S...	Host Name	Port	Schema Owner	Schema Pass...
<input type="checkbox"/>	LocalSvcTbl Schema	SUSE	hpgen9-01	1521	SUSEDEMO_STB	*****
<input type="checkbox"/>	OPSS Audit Schema	SUSE	hpgen9-01	1521	SUSEDEMO_IAU_APPEND	*****
<input type="checkbox"/>	OPSS Audit Viewer S...	SUSE	hpgen9-01	1521	SUSEDEMO_IAU_VIEWER	*****
<input type="checkbox"/>	OPSS Schema	SUSE	hpgen9-01	1521	SUSEDEMO_OPSS	*****

Help

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

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



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

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



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

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

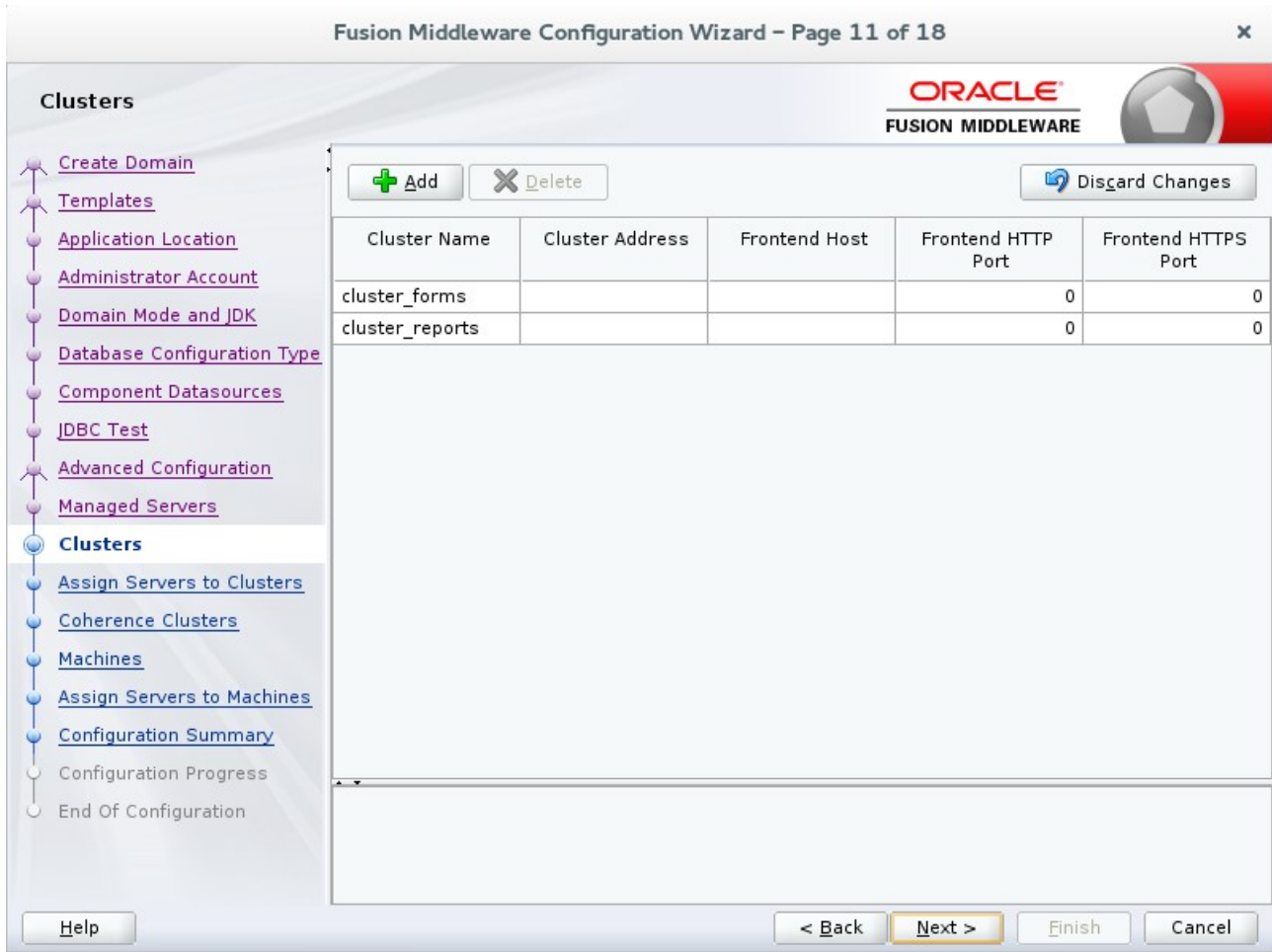
The screenshot shows the 'Managed Servers' configuration screen in the Oracle Fusion Middleware Configuration Wizard. The window title is 'Fusion Middleware Configuration Wizard - Page 10 of 18'. The Oracle logo and 'FUSION MIDDLEWARE' text are visible in the top right. A navigation pane on the left lists various configuration steps, with 'Managed Servers' currently selected. The main area contains a table with the following data:

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
WLS_FORMS	192.168.1.190	9001	<input type="checkbox"/>	Disabled	FORMS-MA...
WLS_REPORTS	192.168.1.190	9002	<input type="checkbox"/>	Disabled	REPORTS-...

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

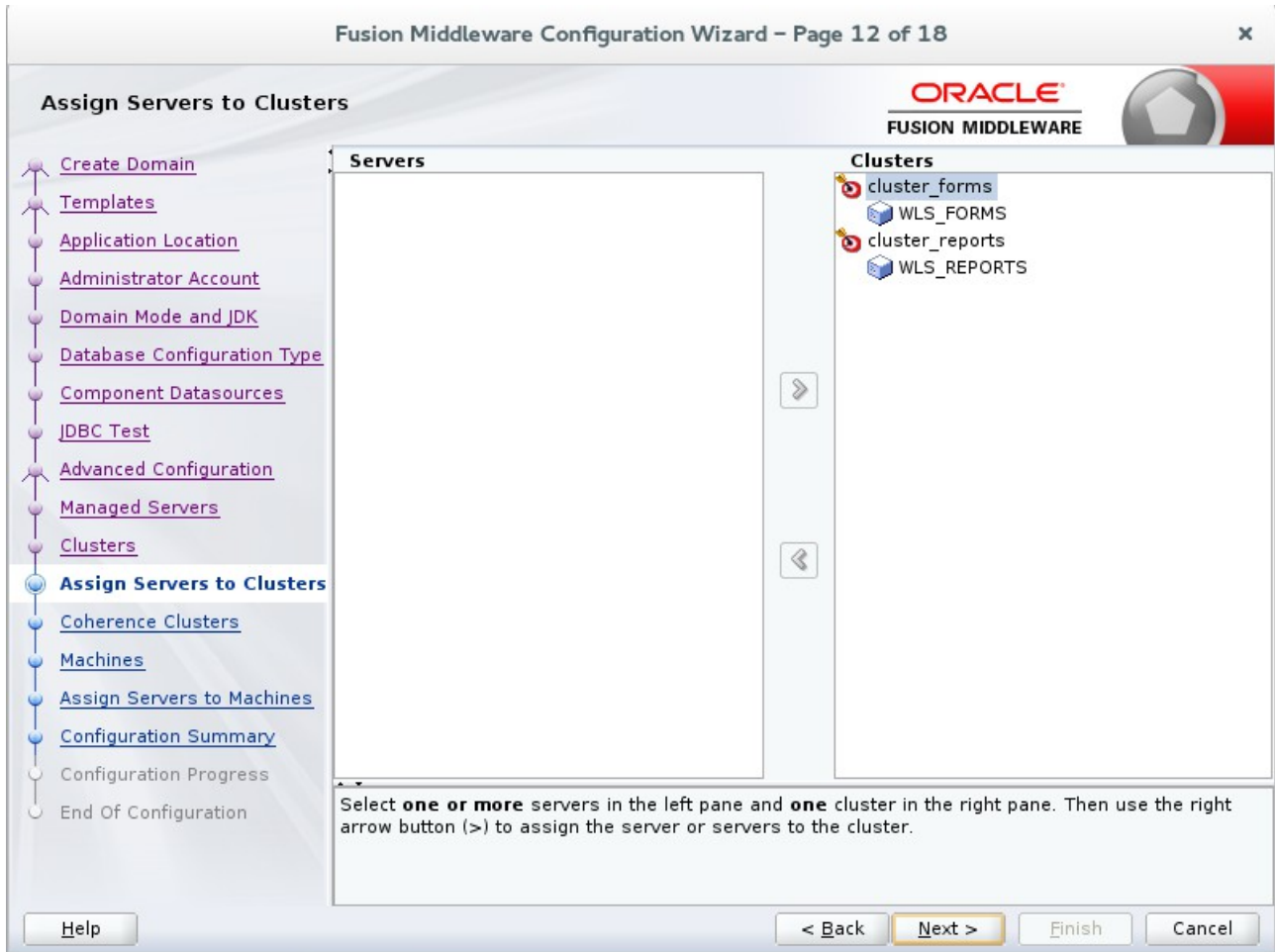
Verify that the Server Groups is set to FORMS-MAN-SVR (for Forms) and REPORTS-APP-SERVERS (for Reports). Click **Next** to continue.

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



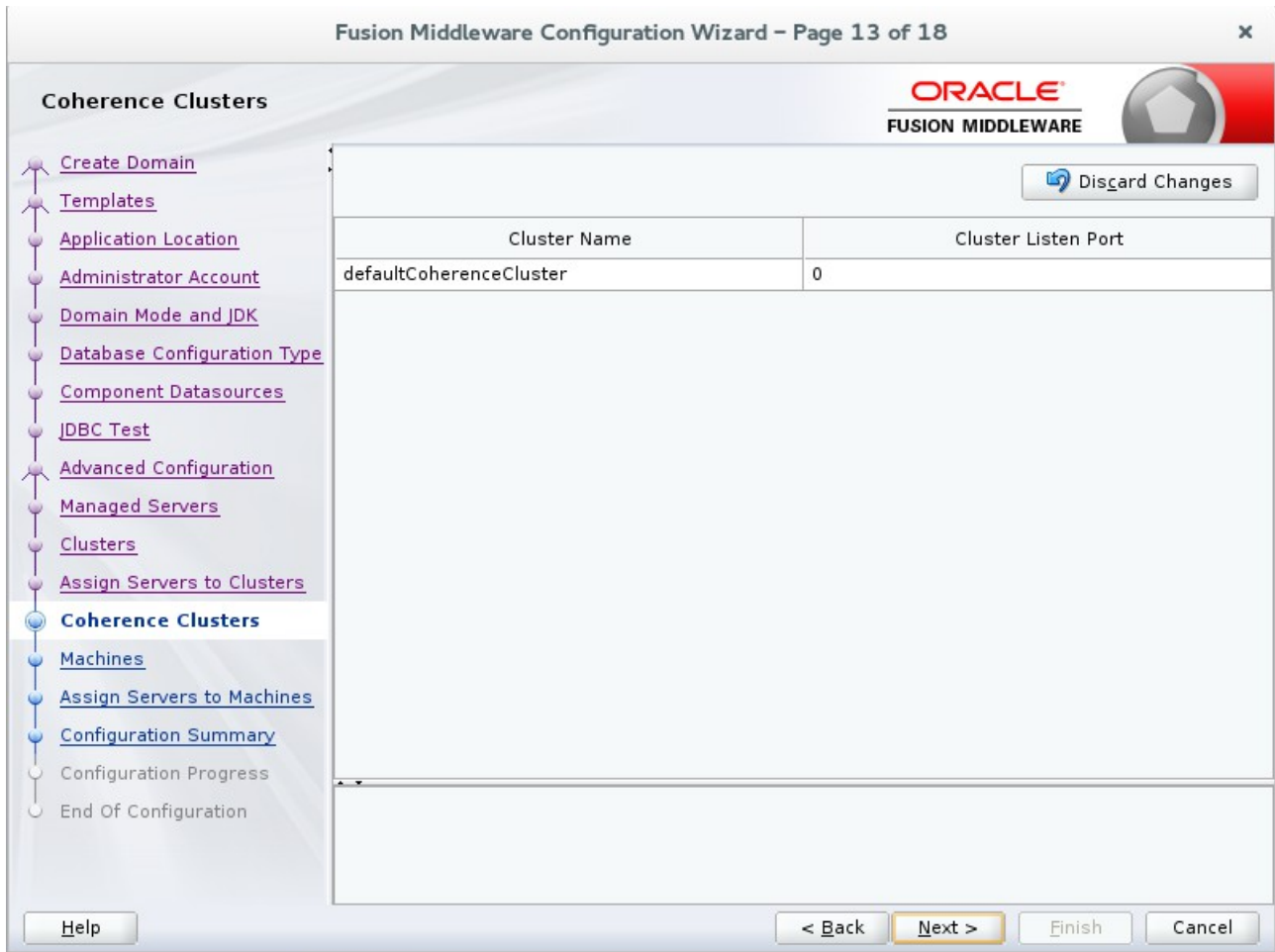
Default entries will be acceptable in most cases, unless adding new clusters is desirable. Click **Next** to continue.

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



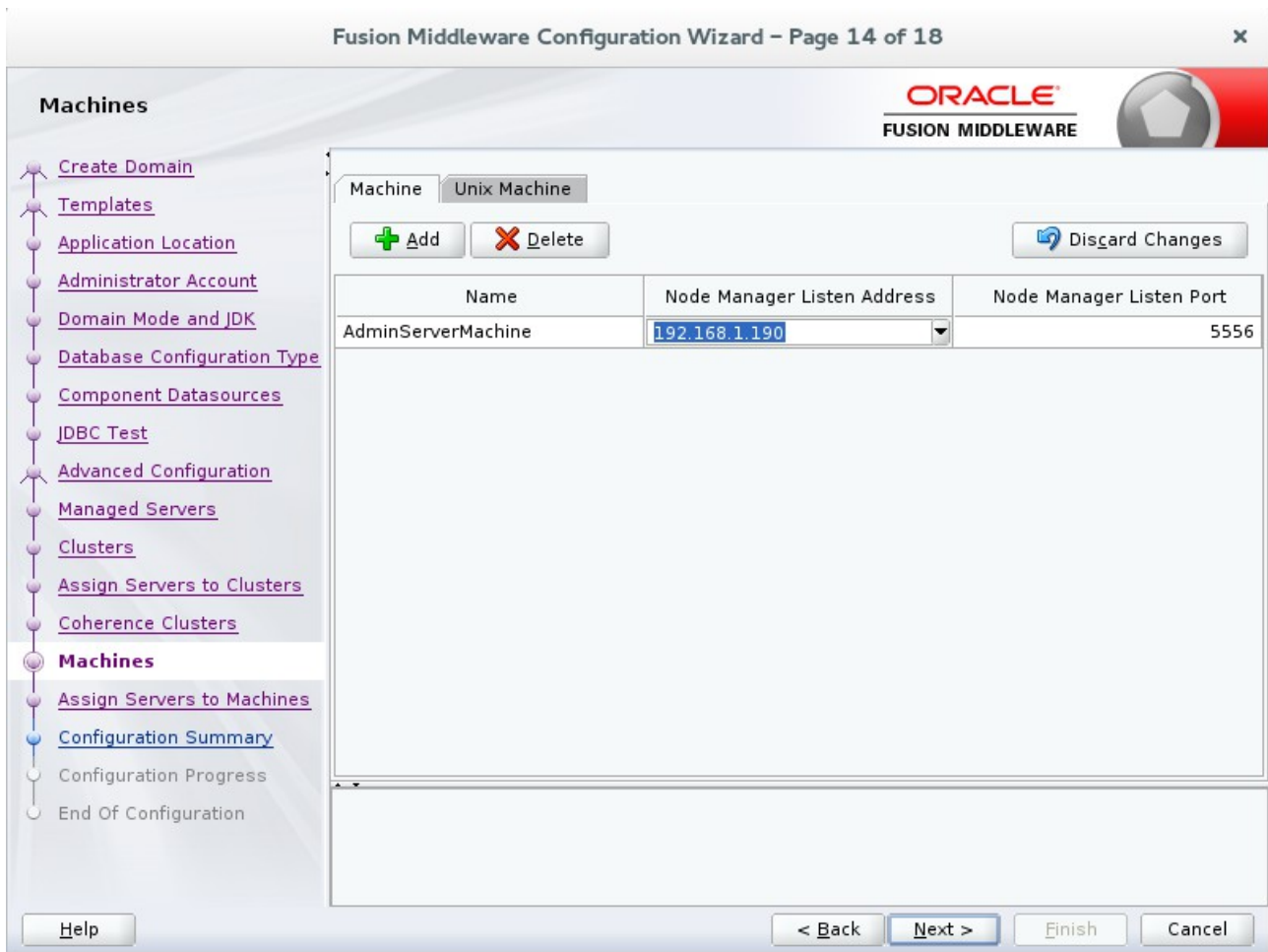
The default values will be appropriate for most cases. However, if new managed servers were added in the previous step, they should be added to the cluster here. Click **Next** to continue.

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



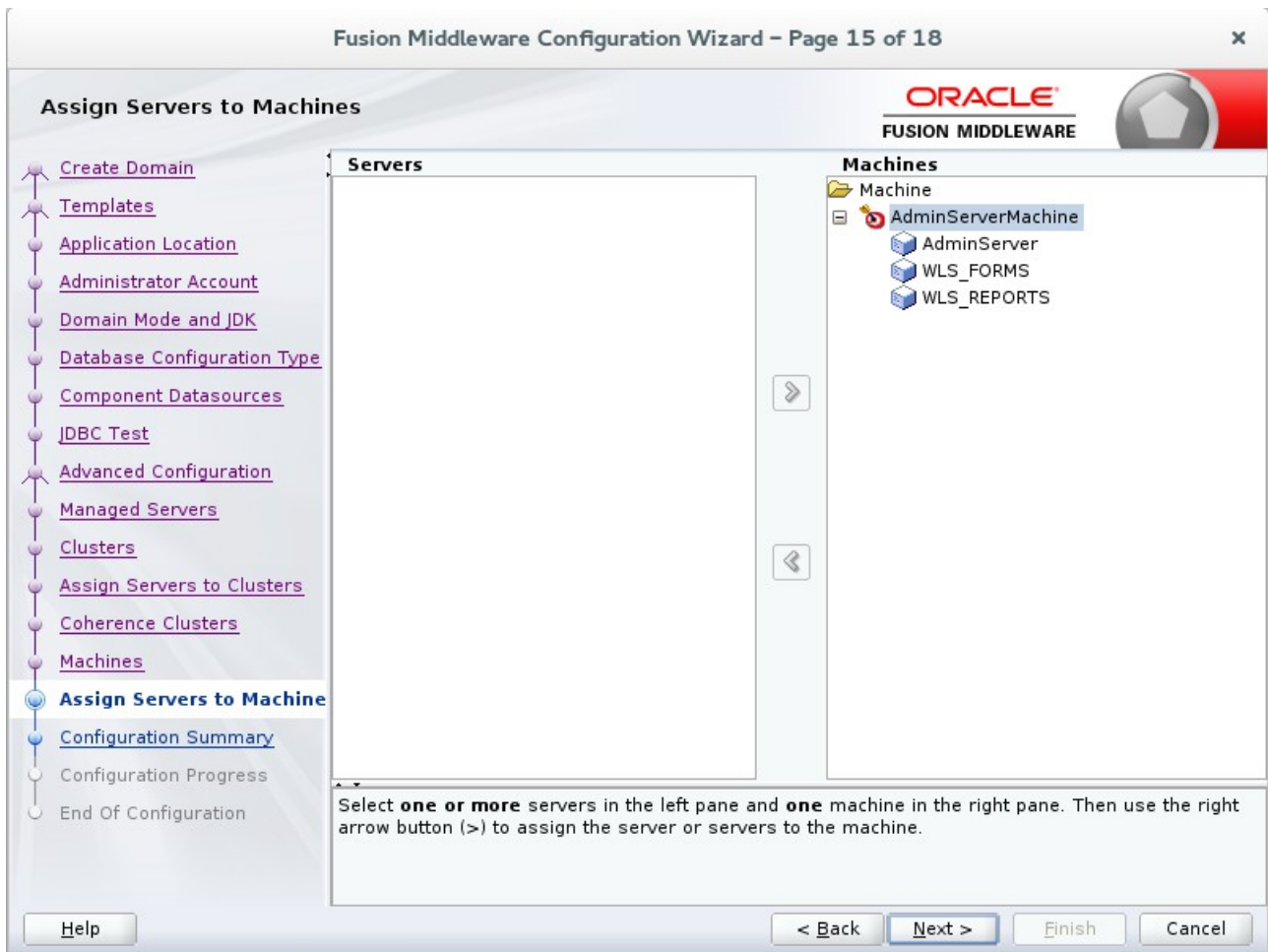
The default values will be appropriate for most cases. Click **Next** to continue.

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



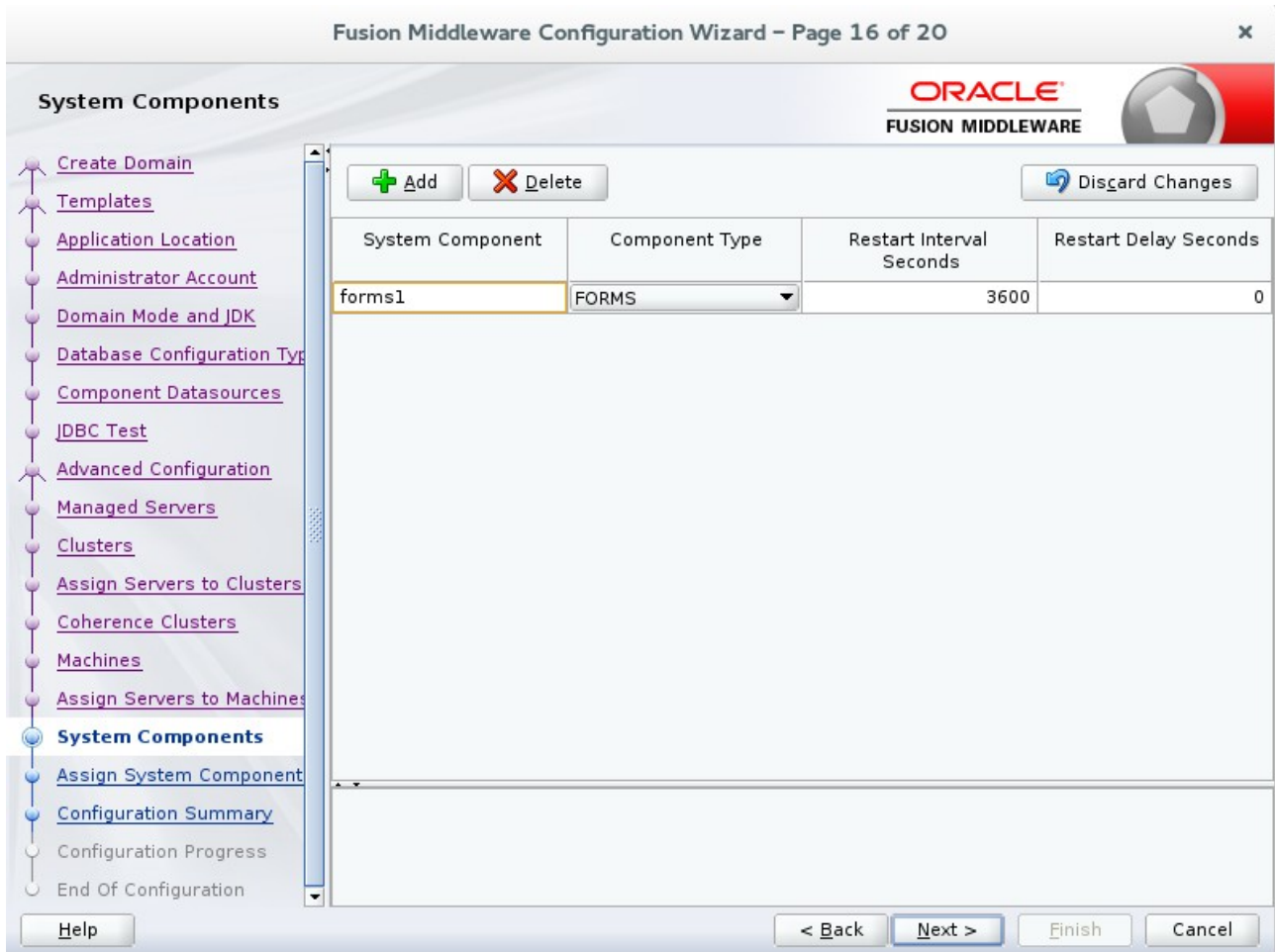
You can use this screen to override the machine name or add additional Machine names for extended domain. Click **Next** to continue.

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



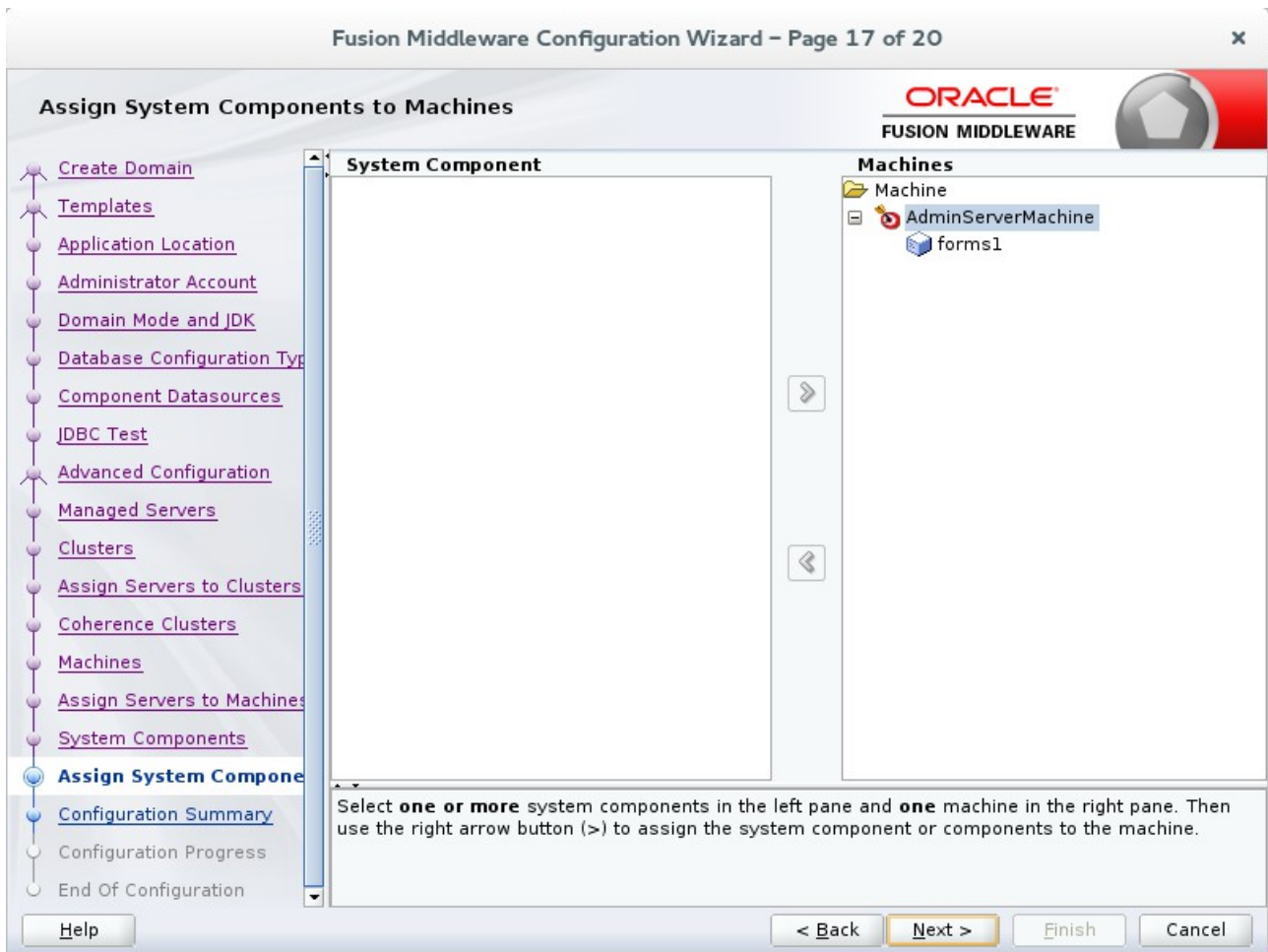
Move the AdminServer to the AdminServerMachine by clicking the '>' button. Click **Next** to continue.

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



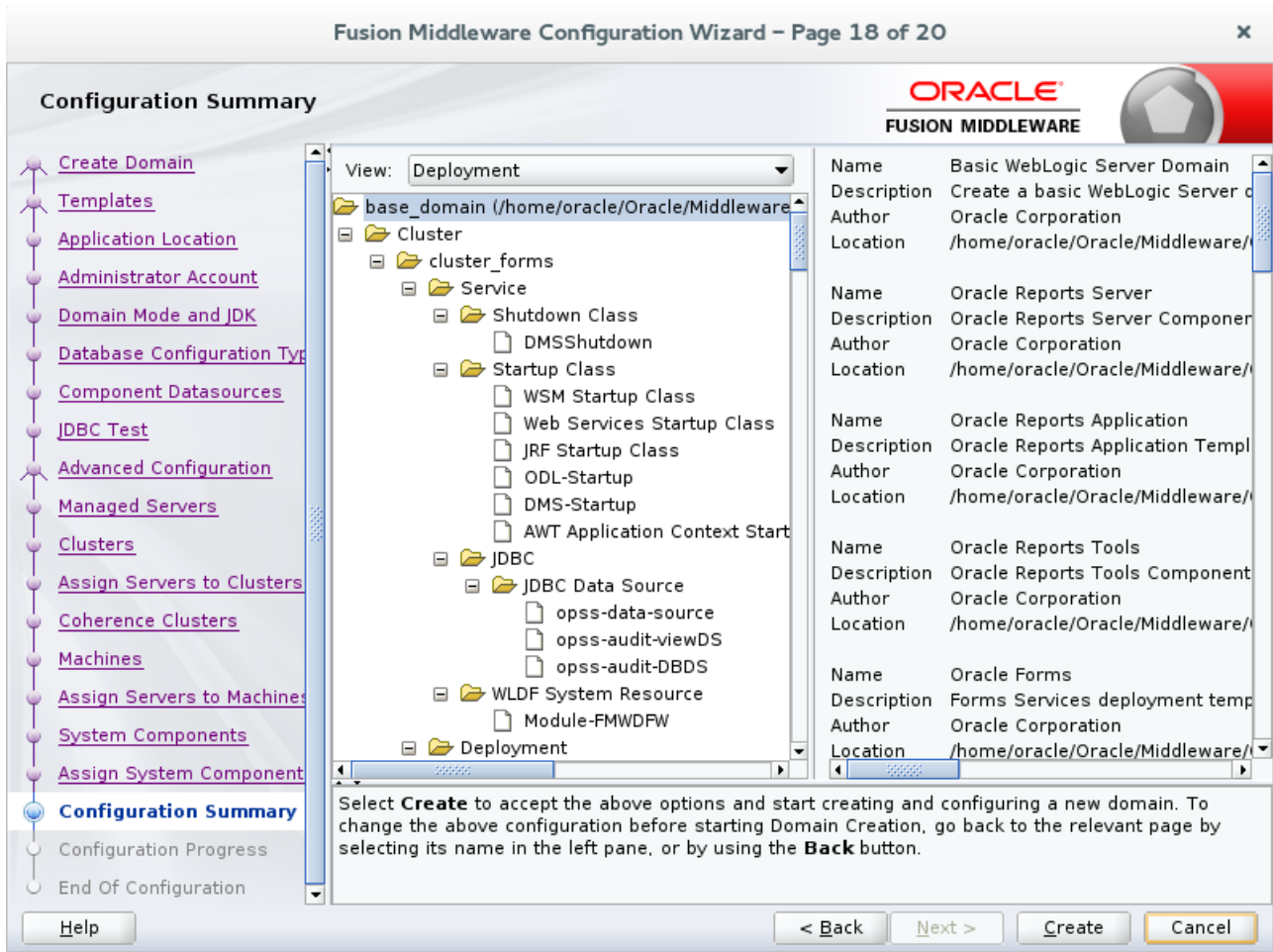
The default values will be appropriate for most cases. You can add additional Forms or other System Component instances on this screen (for extend domain scenario). Click **Next** to continue.

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



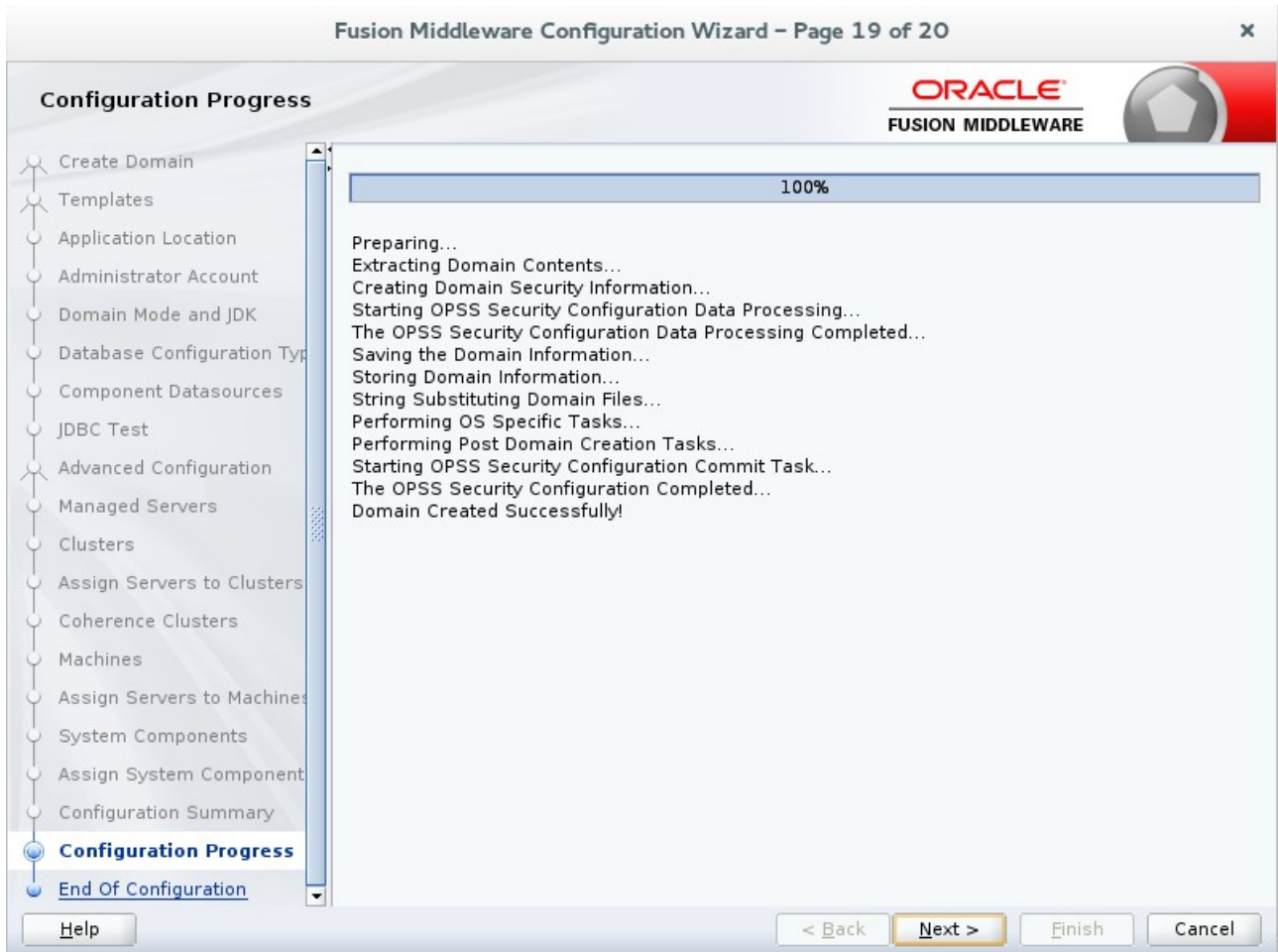
The default values will be appropriate for most cases. Click **Next** to continue.

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



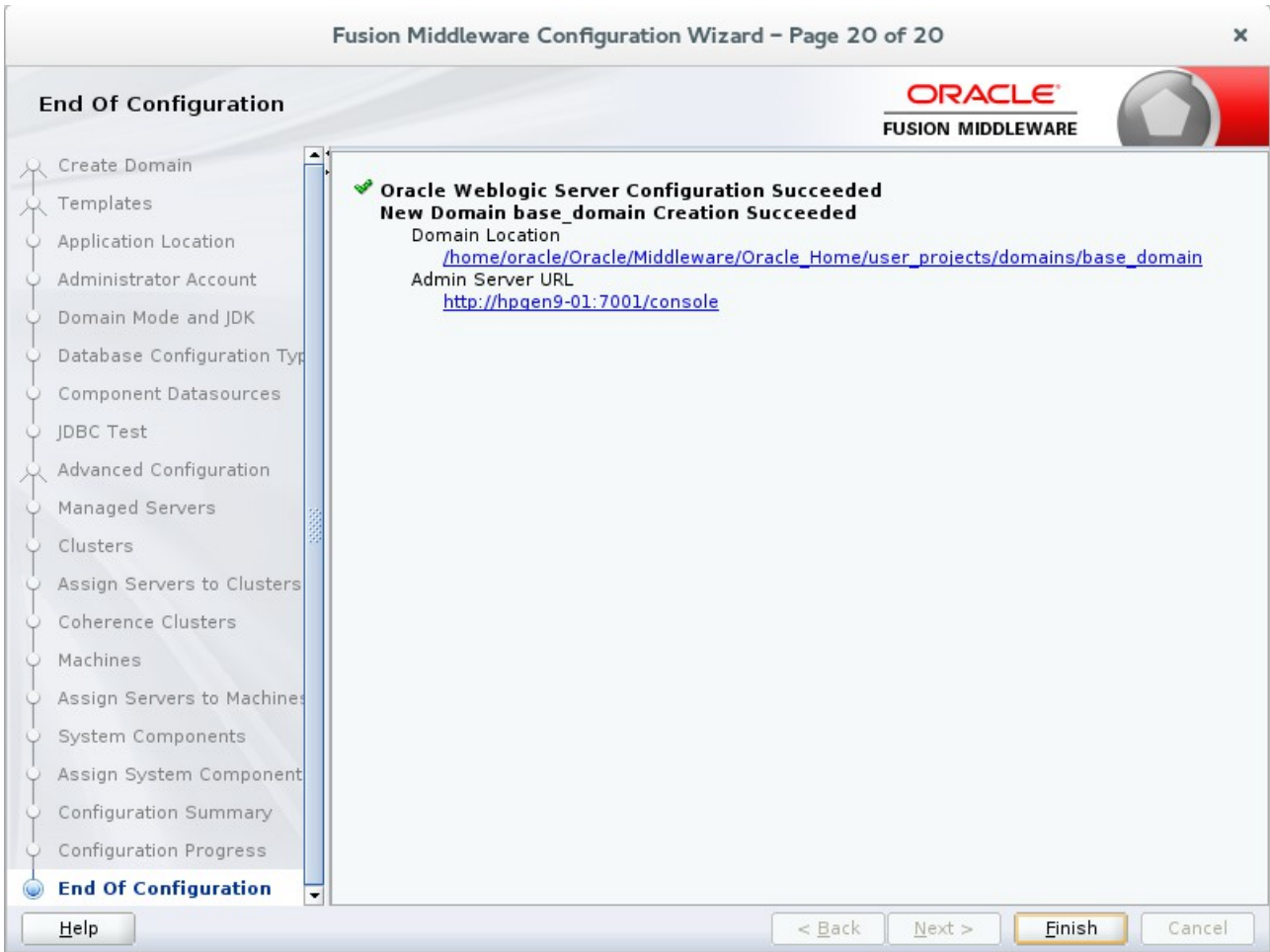
Select **Create** to accept the above options and start creating and configuring a new domain.

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&`

```

oracle@hpgen9-01:...ns/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> ./startNodeManager.sh > nm.out&
[1] 7112
oracle@hpgen9-01:/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin> + /opt/oracle/Oracle_SW/Java/jdk1.8.0_91/bin/java -server -Xms32m -Xmx200m -Dcoherence.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./coherence -Dbea.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/./ -Dreports.tools.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsToolsComponent -Dreports.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/reports -Dreports.server.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsServerComponent -Dforms.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/forms -Doracle.security.jps.config=/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/jps-config-jse.xml -Dcommon.components.home=/home/oracle/Oracle/Middleware/Oracle_Home/oracle_common -Dopss.version=12.2.1 -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=/opt/oracle/Oracle_SW/Java/jdk1.8.0_91/weblogic.NodeManager -v
<13-Jul-2016 17:13:41 o'clock GMT+08:00> <INFO> <Loading domains file: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.domains>
<13-Jul-2016 17:13:41 o'clock GMT+08:00> <INFO> <Loading identity key store: FileName=kss://system/demoidentity, Type=kss, PassPhraseUsed=true>
Jul 13, 2016 5:13:43 PM oracle.security.opss.internal.runtime.ServiceContextManagerImpl getContext
WARNING: Bootstrap services are used by OPSS internally and clients should never need to directly read/write bootstrap credentials. If required, use Wlst or configuration management interfaces.
<13-Jul-2016 17:13:43 o'clock GMT+08:00> <INFO> <Loaded NodeManager configuration properties from '/home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/nodemanager/nodemanager.properties'>
Node manager v12.2.1

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

```

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

```

oracle@hpgen9-01:~/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x
acle_Home/user_projects/domains/base_domain -Doracle.server.config.dir=/home/oracle/Oracle/Middleware/Oracle_Ho
me/user_projects/domains/base_domain/config/fmwconfig/servers/AdminServer -Doracle.domain.config.dir=/home/orac
le/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig -Dforms.product.home=/home/
oracle/Oracle/Middleware/Oracle_Home/forms -Dreports.tools.product.home=/home/oracle/Oracle/Middleware/Oracle_H
ome/ReportsToolsComponent -Dreports.server.product.home=/home/oracle/Oracle/Middleware/Oracle_Home/ReportsServe
rComponent -Djavaagent:/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server/lib/debugpatch-agent.jar -da
-Dwls.home=/home/oracle/Oracle/Middleware/Oracle_Home/wlserver/server -Dweblogic.home=/home/oracle/Oracle/Middl
eware/Oracle_Home/wlserver/server -Djavax.management.builder.initial=weblogic.management.jmx.mbeanserver.WLSMB
eanServerBuilder -Dem.oracle.home=/home/oracle/Oracle/Middleware/Oracle_Home/em -DINSTANCE_HOME=/home/oracle/O
racle/Middleware/Oracle_Home/user_projects/domains/base_domain -Djava.awt.headless=true -Doracle.sysman.util.lo
gging.mode=dual_mode -Doracle.forms.weblogic=1 -Djava.util.logging.manager=oracle.core.ojdl.logging.ODLLogMan
ager weblogic.Server
<13-Jul-2016 17:16:24 o'clock GMT+08:00> <Info> <Security> <BEA-090905> <Disabling the CryptoJ JCE Provider sel
f-integrity check for better startup performance. To enable this check, specify -Dweblogic.security.allowCrypto
JDefaultJCEVerification=true.>
<13-Jul-2016 17:16:24 o'clock GMT+08:00> <Info> <Security> <BEA-090906> <Changing the default Random Number Gen
erator in RSA CryptoJ from ECDRBG128 to HMACDRBG. To disable this change, specify -Dweblogic.security.allowCryp
toJDefaultPRNG=true.>
<13-Jul-2016 17:16:25 o'clock GMT+08:00> <Info> <WebLogicServer> <BEA-000377> <Starting WebLogic Server with Ja
va HotSpot(TM) 64-Bit Server VM Version 25.91-b14 from Oracle Corporation.>
Jul 13, 2016 5:16:25 PM oracle.security.jps.wls.JpsBootStrapService start
INFO: JPS bootstrap service started.
<13-Jul-2016 17:16:25 o'clock GMT+08:00> <Info> <RCM> <BEA-2165021> <"ResourceManagement" is not enabled in thi
s JVM. Enable "ResourceManagement" to use the WebLogic Server "Resource Consumption Management" feature. To ena
ble "ResourceManagement", you must specify the following JVM options in the WebLogic Server instance in which t
he JVM runs: -XX:+UnlockCommercialFeatures -XX:+ResourceManagement.>
<13-Jul-2016 17:16:25 o'clock GMT+08:00> <Info> <Management> <BEA-141107> <Version: WebLogic Server 12.2.1.0.0
Tue Oct 6 10:05:47 PDT 2015 1721936>
<13-Jul-2016 17:16:26 o'clock GMT+08:00> <Info> <Security> <BEA-090065> <Getting boot identity from user.>
Enter username to boot WebLogic server:weblogic
Enter password to boot WebLogic server:

```

Enter username and password.

```

oracle@hpgen9-01:~/base_domain/bin
File Edit View Search Terminal Tabs Help
oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x oracle@hpgen9-... x
queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Loaded cache configuration from "jar:file:/home/or
acle/Oracle/Middleware/Oracle_Home/oracle_common/modules/oracle.wsm.common/wsm-agent-core.jar!/oracle-wsm-coher
ence-cache-config.xml"
2016-07-13 17:18:12.223/108.737 Oracle Coherence GE 12.2.1.0.0 <Info> (thread=[STANDBY] ExecuteThread: '1' for
queue: 'weblogic.kernel.Default (self-tuning)', member=n/a): Created cache factory com.tangosol.net.ExtensibleC
onfigurablesCacheFactory
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.
>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMI
NG.>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to mul
tiple IP addresses: 127.0.0.1, 0:0:0:0:0:0:1.>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <WebLogicServer> <BEA-000329> <Started the WebLogic Server Ad
ministration Server "AdminServer" for domain "base_domain" running in production mode.>
<13-Jul-2016 17:18:12 o'clock 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.>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on
192.168.1.190:7001 for protocols iiop, t3, ldap, snmp, http.>
<13-Jul-2016 17:18:12 o'clock 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.>
<13-Jul-2016 17:18:12 o'clock 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.>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on
192.168.1.190:7001 for protocols iiop, t3, ldap, snmp, http.>
<13-Jul-2016 17:18:12 o'clock 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.>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING
mode.>
<13-Jul-2016 17:18:12 o'clock GMT+08:00> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNIN
G.>

```


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.odb6.jar
```

```
    /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
```

```
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6_g.jar
```

```
    /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
```

```
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6dms.jar
```

```
    /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
```

```
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb7.jar
```

```
    /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
```

```
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb7_g.jar
```

```
    /oracle/jdbc/driver/OracleDatabaseMetaData.class -->
```

```
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb7dms.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.odb6.jar
/oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6_g.jar
/oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6dms.jar
/oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb7.jar
/oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb7_g.jar
/oracle/jdbc/OracleDatabaseMetaData.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb7dms.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.odb6.jar
/oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6.jar
/oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6.jar
/oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6.jar
/oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6_g.jar
/oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6_g.jar
/oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6_g.jar
/oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6_g.jar
/oracle/net/ns/NSProtocolNIO.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6dms.jar
/oracle/net/ns/NSProtocolStream.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6dms.jar
/oracle/net/nt/ConnStrategy.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6dms.jar
/oracle/net/resolver/AddrResolution.class -->
ORACLE_HOME/oracle_common/modules/oracle.jdbc.odb6dms.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 -->

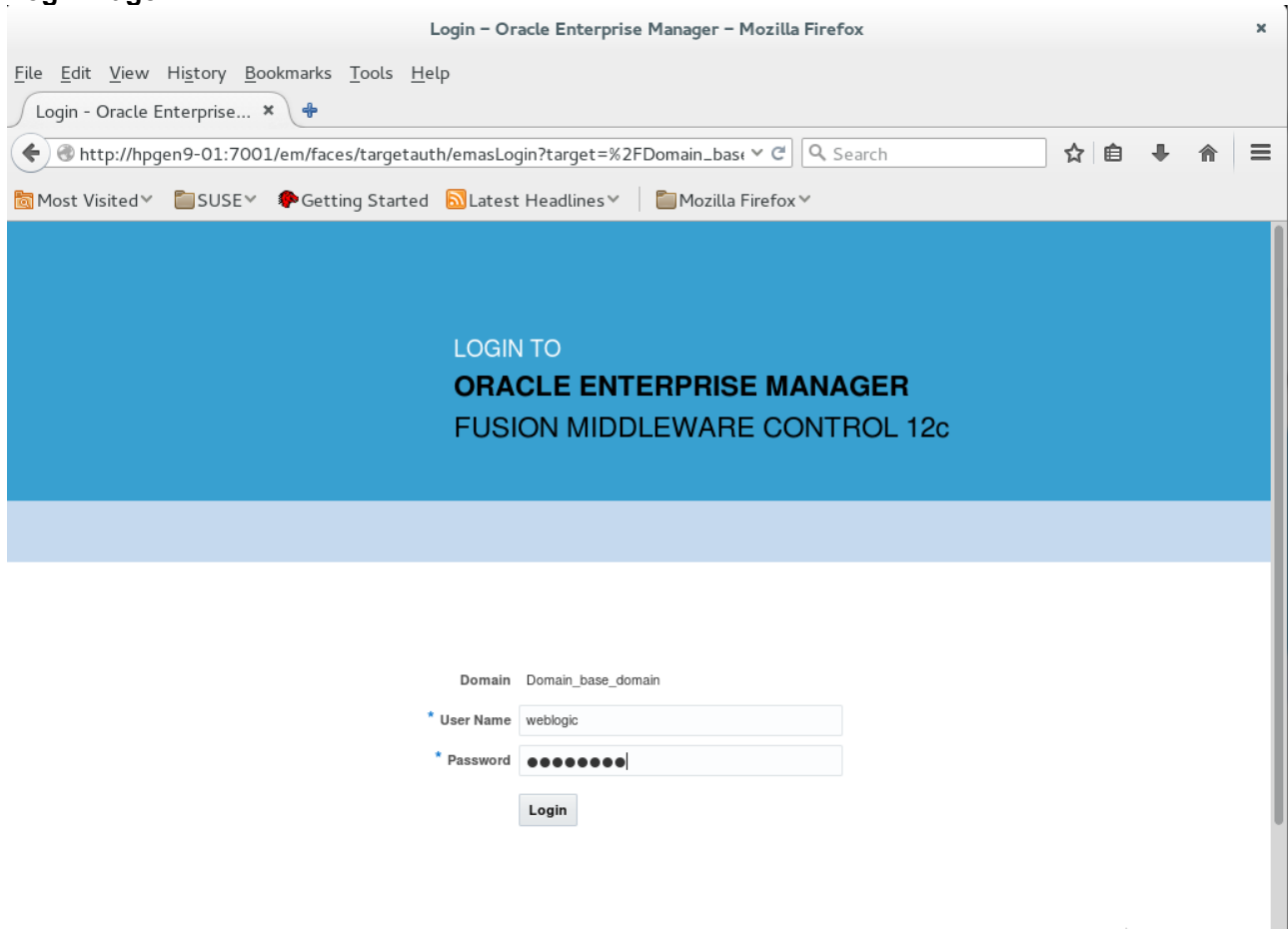
```
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/wls/WebLogicCluster$5.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/wls/WebLogicCluster$FailoverEventWrapper.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/wls/WebLogicCluster$3.class -->
ORACLE_HOME/oracle_common/modules/oracle.ucp.jar
/oracle/ucp/common/wls/WebLogicCluster$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:

base_domain (Oracle WebLogic Domain) – Oracle Enterprise Manager – Mozilla Firefox

base_domain (Oracle We... x

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

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

base_domain

WebLogic Domain

13-Jul-2016 17:26:22 GMT+08:00

Information

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

Servers

2 Down
1 Up

Administration Server

Name AdminServer
Host hpgen9-01
Listen Port 7001

Servers

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

Columns Hidden 33 Servers 3 of 3

Starting WLS_FORMS - Click Start Up.

WLS_FORMS (Oracle WebLogic Server) – Oracle Enterprise Manager – Mozilla Firefox

WLS_FORMS (Oracle W... x

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

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

WLS_FORMS

WebLogic Server | Start Up | Shut Down

13-Jul-2016 17:26:58 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

Metrics Unavailable

Deployments

1 Down

Most Requested

0 Requests Processed

General

Version 12.2.1.0.0
State Shutdown
Server Type Configured
Cluster cluster_forms
CPU Usage (%) Unavailable
Heap Usage (MB) Unavailable
Java Vendor Unavailable
Java Version Unavailable

Servlets and JSPs

Active Sessions Unavailable

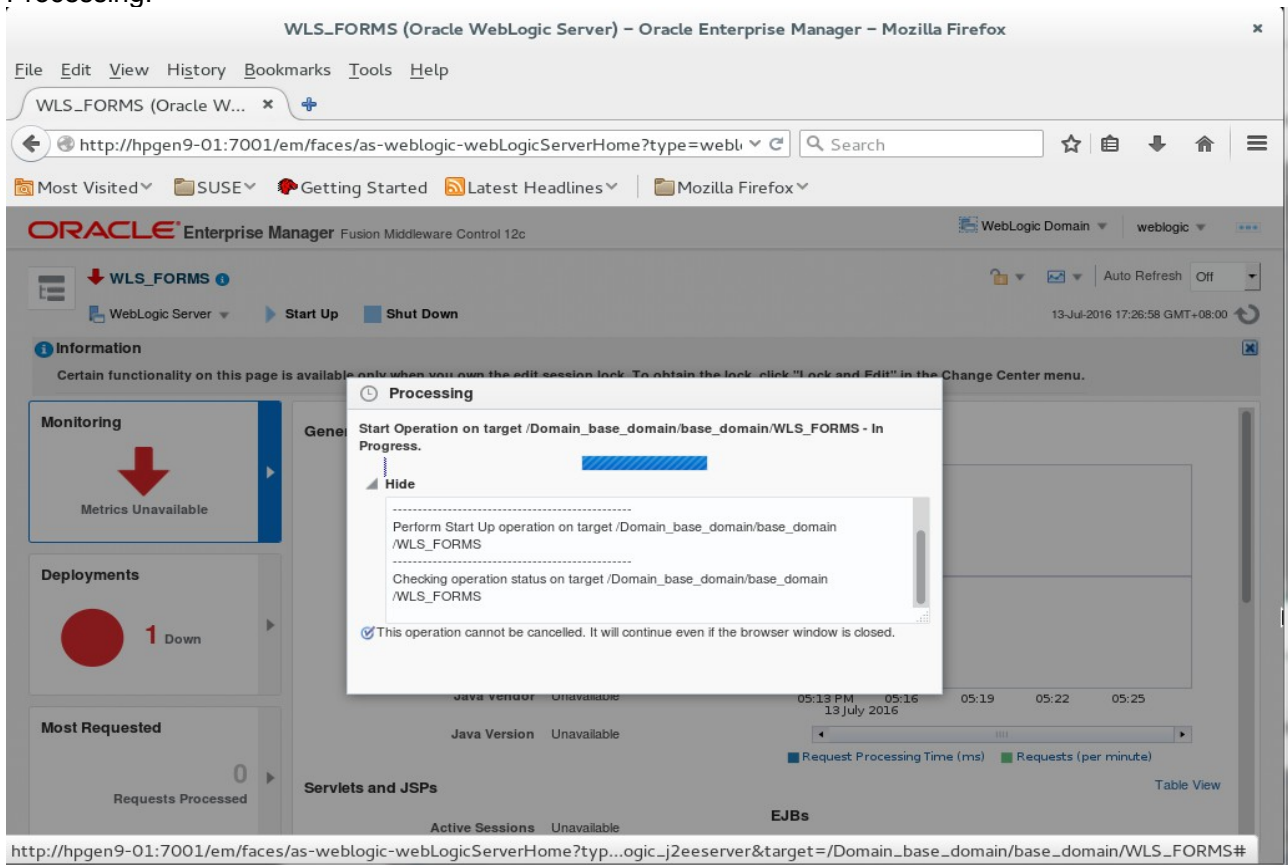
Response and Load

05:13 PM 13 July 2016

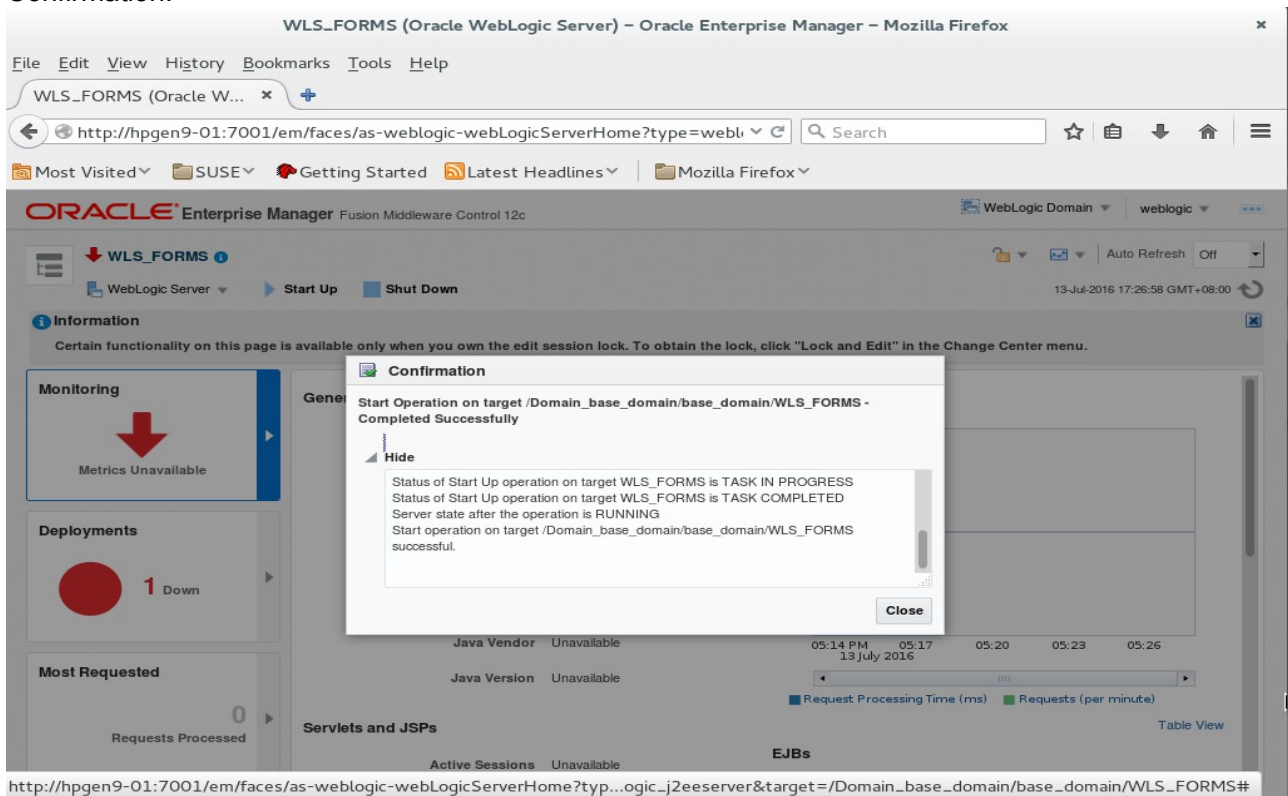
Request Processing Time (ms) Requests (per minute)

EJBs

Processing.



Confirmation.



WLS_FORMS is up.

The screenshot shows the Oracle Enterprise Manager console for WLS_FORMS. The status is 'Up' with a green circle icon. The 'Monitoring' widget shows 0 request processing time and 0.00 requests per minute. The 'General' section lists: Up Since 13-Jul-2016 17:27:59, Version 12.2.1.0.0, State Running, Health OK, Server Type Configured, Cluster cluster_forms, CPU Usage (%) 0.29, Heap Usage (MB) 225.40, Java Vendor Oracle Corporation, and Java Version 1.8.0_91. The 'Response and Load' chart shows a flat line at 0.0. The 'Deployments' widget shows 1 Up. The 'Most Requested' widget shows 0 Requests Processed.

Starting WLS_REPORTS - Click Start Up.

The screenshot shows the Oracle Enterprise Manager console for WLS_REPORTS. The status is 'Down' with a red circle icon. The 'Monitoring' widget shows 'Metrics Unavailable' with a red arrow. The 'General' section lists: Version 12.2.1.0.0, State Shutdown, Server Type Configured, Cluster cluster_reports, CPU Usage (%) Unavailable, Heap Usage (MB) Unavailable, Java Vendor Unavailable, and Java Version Unavailable. The 'Response and Load' chart is empty. The 'Deployments' widget shows 1 Down. The 'Most Requested' widget shows 0 Requests Processed. The 'Servlets and JSPs' section shows Active Sessions Unavailable.

Processing.

The screenshot shows the Oracle Enterprise Manager interface for a WebLogic Server named 'WLS_REPORTS'. A modal dialog box titled 'Processing' is displayed in the center. The dialog contains the following text:

- Start Operation on target /Domain_base_domain/base_domain/WLS_REPORTS - In Progress.
- Hide
- Perform Start Up operation on target /Domain_base_domain/base_domain /WLS_REPORTS
- Checking operation status on target /Domain_base_domain/base_domain /WLS_REPORTS
- This operation cannot be cancelled. It will continue even if the browser window is closed.

In the background, the 'Start Up' button is highlighted, and the 'Monitoring' section shows 'Metrics Unavailable'. The URL at the bottom of the browser window is: http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?type=weblogic...ic_j2eeserver&target=/Domain_base_domain/base_domain/WLS_REPORTS#

Confirmation.

The screenshot shows the Oracle Enterprise Manager interface for the 'WLS_REPORTS' WebLogic Server. A modal dialog box titled 'Confirmation' is displayed in the center. The dialog contains the following text:

- Start Operation on target /Domain_base_domain/base_domain/WLS_REPORTS - Completed Successfully
- Hide
- Status of Start Up operation on target WLS_REPORTS is TASK IN PROGRESS
- Status of Start Up operation on target WLS_REPORTS is TASK COMPLETED
- Server state after the operation is RUNNING
- Start operation on target /Domain_base_domain/base_domain/WLS_REPORTS successful.
- Close

In the background, the 'Start Up' button is now greyed out, and the 'Monitoring' section shows 'Request Processing Time (ms)' as 0 and 'Requests (per minute)' as 0.00. The 'Deployments' section shows '1 Up'. The URL at the bottom of the browser window is: http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?type=weblogic...ic_j2eeserver&target=/Domain_base_domain/base_domain/WLS_REPORTS#

WLS_REPORTS is up.

WLS_REPORTS (Oracle WebLogic Server) - Oracle Enterprise Manager - Mozilla Firefox

URL: <http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?type=weblogic>

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

Deployments
 1 Up

Most Requested
 0 Requests Processed

General

- Up Since: 13-Jul-2016 17:31:04
- Version: 12.2.1.0.0
- State: Running
- Health: OK ✓
- Server Type: Configured
- Cluster: cluster_reports
- CPU Usage (%): 1.30
- Heap Usage (MB): 281.67
- Java Vendor: Oracle Corporation
- Java Version: 1.8.0_91

Response and Load

Graph showing Request Processing Time (ms) and Requests (per minute) from 05:17 PM to 05:29 PM on 13 July 2016.

EJBs

URL: http://hpgen9-01:7001/em/faces/as-weblogic-webLogicServerHome?type=weblogic...ic_j2eeserver&target=/Domain_base_domain/base_domain/WLS_REPORTS#

Home page - All three servers are up and running.

base_domain (Oracle WebLogic Domain) - Oracle Enterprise Manager - Mozilla Firefox

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

Servers
 3 Up

Clusters
 2 Up

Deployments
 3 Up

Administration Server

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

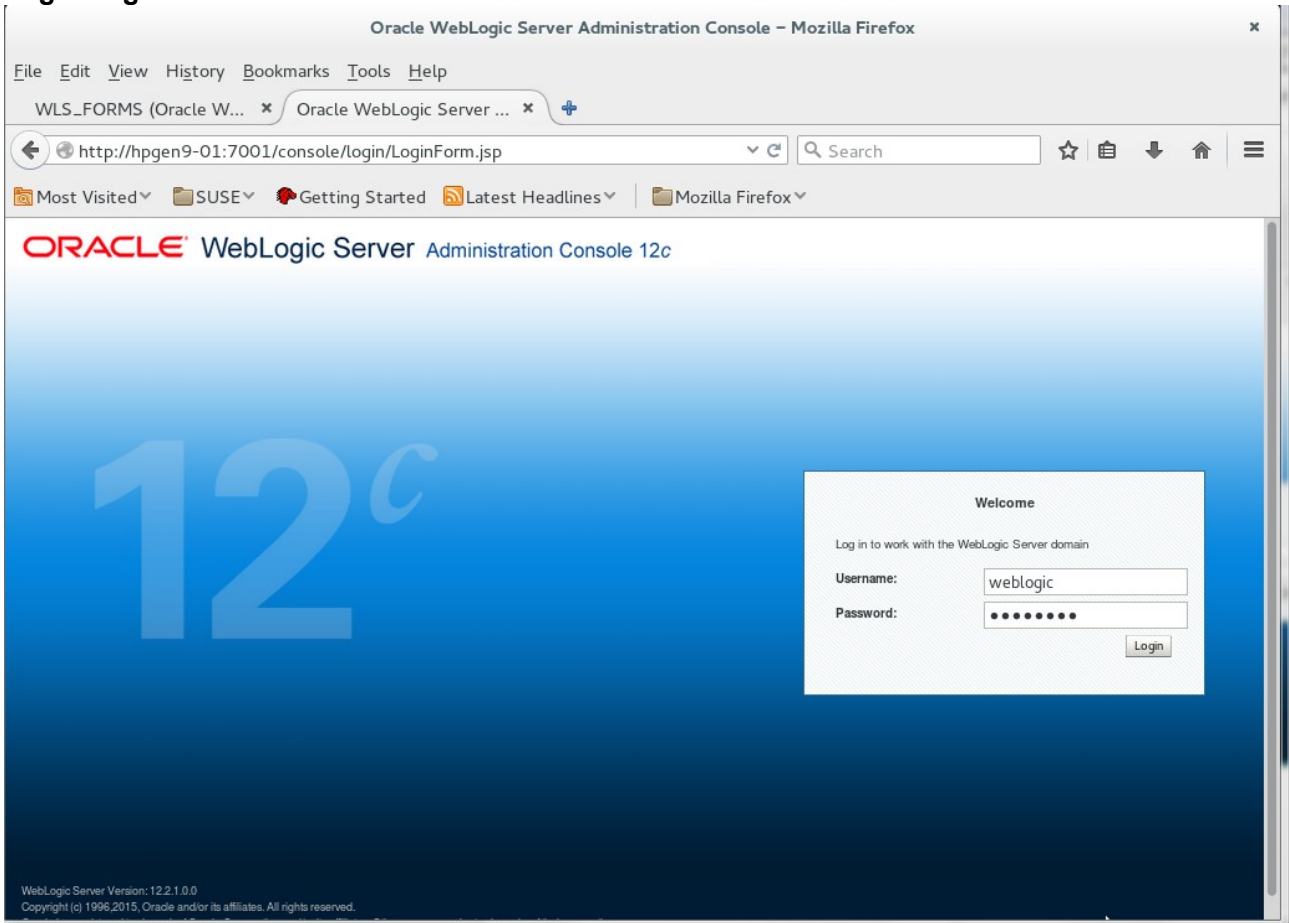
Servers

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

Columns Hidden: 33 | Servers: 3 of 3

2). Access to Administration Server Console

Login Page as shown below:



Home Page:

Home Page – base_domain – WLS Console – Mozilla Firefox

File Edit View History Bookmarks Tools Help

WLS_FORMS (Oracle W... x Home Page - base_doma... x

http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=Hc

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: base_domain

Home Page

Information and Resources

Helpful Tools

- Configure applications
- Configure GridLink for RAC Data Source
- Configure a Dynamic Cluster
- Recent Task Status
- Set your console preferences
- Oracle Enterprise Manager

General Information

- Common Administration Task Descriptions
- Read the documentation
- Ask a question on My Oracle Support

Domain Configurations

Domain

- Domain

Domain Partitions

- Domain Partitions
- Partition Work Managers

Environment

- Servers
- Clusters
 - Server Templates
 - Migratable Targets
- Coherence Clusters
- Machines

Resource Group Templates

- Resource Group Templates

Resource Groups

- Resource Groups

Deployed Resources

- Deployments

Services

- Messaging
 - JMS Servers
 - Store-and-Forward Agents
 - JMS Modules

Interoperability

- WTC Servers
- Jolt Connection Pools

Diagnostics

- Log Files
- Diagnostic Modules
- Built-in Diagnostic Modules
- Diagnostic Images
- Request Performance
- Archives
- Context
- SNMP
- Interceptors

Viewing the summary of servers:

Summary of Servers – base_domain – WLS Console – Mozilla Firefox

File Edit View History Bookmarks Tools Help

WLS_FORMS (Oracle W... x Summary of Servers - ba... x

http://hpgen9-01:7001/console/console.portal?_nfpb=true&_pageLabel=CoreSe

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: base_domain

Home > Summary of Servers

Summary of Servers

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.

This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

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

New Clone Delete

Showing 1 to 3 of 3 Previous | Next

<input type="checkbox"/>	Name ↕	Type	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)	Configured		AdminServerMachine	RUNNING	OK	7001
<input type="checkbox"/>	WLS_FORMS	Configured	cluster_forms	AdminServerMachine	RUNNING	OK	9001
<input type="checkbox"/>	WLS_REPORTS	Configured	cluster_reports	AdminServerMachine	RUNNING	OK	9002

New Clone Delete

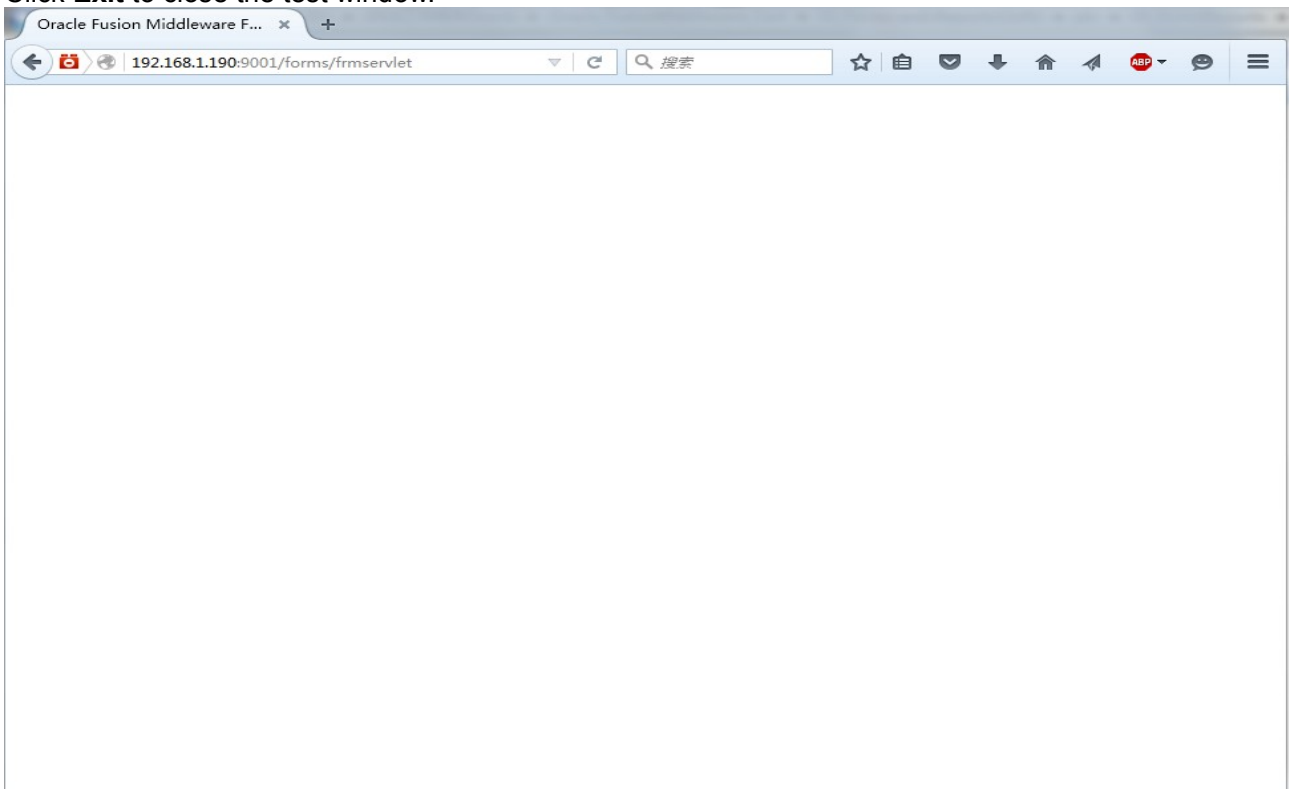
Showing 1 to 3 of 3 Previous | Next

3). Access to Oracle Forms.

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

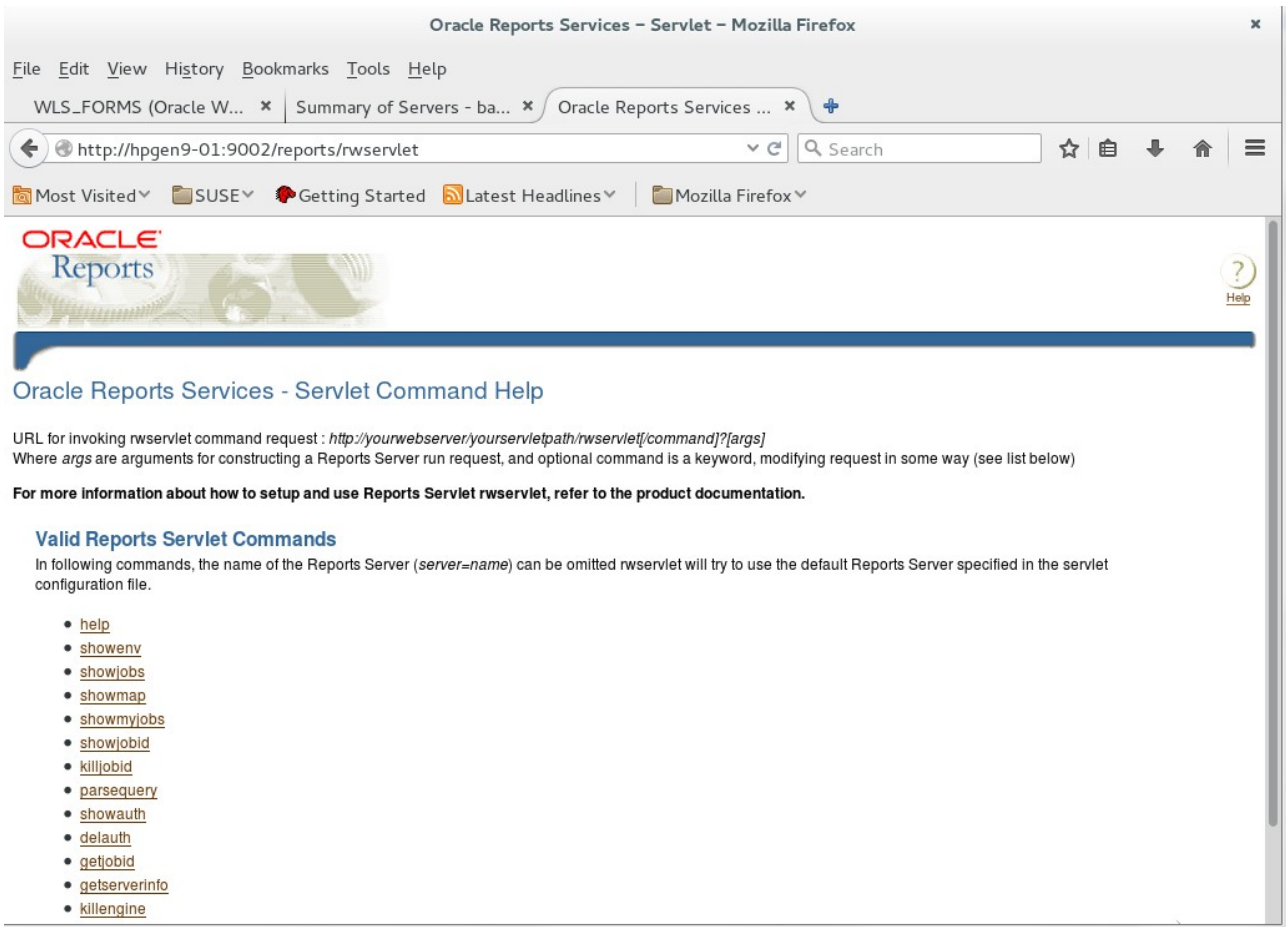


Click **Exit** to close the test window.



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>