Oracle® Rapid Planning

Installation Guide

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Oracle Rapid Planning Installation Guide, Release 12.2

Part No. E48788-03

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Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle Rapid Planning Installation Guide.*

See Related Information Sources on page viii for more Oracle E-Business Suite product information.

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Structure

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Related Information Sources

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Oracle Advanced Supply Chain Planning Implementation and User's Guide

This guide describes Oracle Advanced Supply Chain Planning and provides information about supply chain planning. Oracle Rapid Planning and Oracle Advanced Supply Chain Planning share many features.

Oracle Rapid Planning Implementation and User's Guide

This guide describes Oracle Rapid Planning and provides information about supply chain simulation planning.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

You can navigate to the Oracle Integration Repository through Oracle E-Business Suite Integrated SOA Gateway.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an

Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

1

System Requirements

This chapter covers the following topics:

- About this Document
- Client Requirements
- Server Software Requirements
- Hardware Architecture
- Server Hardware Requirements
- Network Requirements

About this Document

This document explains what you need to do to install Oracle Rapid Planning.

Make sure that you have the latest version of this document before proceeding.

Client Requirements

Minimum Client Hardware Requirements:

- 1 GB of memory
- 1.5 GHz (or higher) processor

Minimum Browser Requirements:

- Microsoft Internet Explorer versions 7.x or 8.x. Microsoft Internet Explorer version 9 is supported *only* with ADF 11gR1 Patch Set 5 (PS5), which is required for Rapid Planning 12.1.3.9 and 12.2.2 and later. Microsoft Internet Explorer version 10 is not supported.
- Mozilla Firefox version 3.0 or later.

You do not need to install client software.

Server Software Requirements

The following list is the technology stack on which Oracle Rapid Planning receives rigorous testing. Other variations are possible.

- Java: JDK 1.6 update 11 or later. JDK 1.7 is supported *only* with ADF 11gR1 Patch Set 5 (PS5), which is required for Rapid Planning 12.1.3.9 and 12.2.2.
- ADF Libraries (Oracle Fusion MiddleWare 11g) and WebLogic application server requirements by Rapid Planning release:
  - Release 12.1.3.4 to 12.1.3.8, Release 12.2, and Release 12.2.1 requires - ADF 11gR1 Patch Set 3 (11.1.1.4.0) used with WebLogic Server 10.3.4
  - Release 12.1.3.9 and Release 12.2.2 or later - ADF 11gR1 Patch Set 5 (11.1.1.6.0) used with WebLogic Server 10.3.6

  For customers upgrading to 12.2.2 or 12.2.3:

  Install or upgrade to WebLogic 11gR1 (10.3.6) and Oracle ADF to Patch Set 5 (11.1.1.6.0) for Rapid Planning User Interface (UI) and Engine domains before you upgrade Oracle Rapid Planning.
- Database Server: Oracle Database Server 11g
- Oracle Value Chain Planning Suite: The entire Oracle VCP suite, which includes Rapid Planning, must be on the same release (12.2).
- Oracle E-Business Suite: Release 12.1.3 or later.
- Oracle JD Edwards: Release 9.1 (requires Oracle Value Chain Planning to Oracle JD Edwards Process Integration Pack). Rapid Planning 12.2 or later is only supported under Oracle JD Edwards 9.1.

Oracle Rapid Planning has an administrator application that allows you to perform the following:

- Monitor loaded plans.
- Close plans.
- Start and stop Managed Servers.

Close plans before stopping or restarting the Managed Servers associated with those plans.

Hardware Architecture

For solution architecture, the most important consideration is the size of the implementation:

- Small: 0 - 5 concurrent users and with a relatively low volume of data
- Medium: 5 - 20 concurrent users
- Large: 20 or more concurrent users across multiple time zones, with complex data structures, and with a relatively high volume of data

See also Hardware Requirements for the Servers, page 1-3.

Another consideration is the number of simulation plans that you want to run concurrently. Since each simulation plan needs a Managed Server, you need to provide a suitable number of Managed Servers to meet your processing needs.

Multi-Tier Architecture

An Oracle Rapid Planning implementation consists of the following architectural tiers:

- E-Business Suite tier with concurrent manager
- Oracle WebLogic domain and the Oracle WebLogic Server for the Oracle Rapid Planning User Interface
- Oracle WebLogic domain and the Oracle WebLogic Server for the Oracle Rapid Planning Administrator Utility
- Oracle WebLogic domain for the Engine and a suitable number of Managed Servers for the Engine
- Common file system or network storage device between the e-Business Suite tier and the Engine Managed Servers

Server Hardware Requirements

This section provides sample hardware requirements for the servers used in an Oracle Rapid Planning installation, as well as for the Analytical Engine.

These are basic guidelines. Contact your account representative or Oracle Support Services for help to more precisely configure and tune your memory.

The term Managed Server represents a single plan loaded in memory. Multiple users can concurrently view each plan.

Small Implementation:

- Engine domain: 10 Managed Servers configured with memory of 500 - 750 MB each

- User interface: 2 - 3 GB for its server
- Free hard disk space: Minimum 10 GB plus a variable component of 1 GB for each active plan

Medium Implementation:

- Engine domain: 20 Managed Servers configured with memory of 1 - 1.5 GB each
- User interface: 4 - 6 GB for its server
- Free hard disk space: Minimum 10 GB plus a variable component of 2 - 3 GB for each active plan

Large Implementation:

- Engine domain: 20 Managed Servers configured with memory of 2 GB or higher each
- User interface: 6+ GB for its server
- Free hard disk space: Minimum 10 GB, plus a variable component of 2 - 3 GB for each active plan

Multi-Tier Solution:

In a multi-tier solution, the servers and the Analytical Engine may be on different machines.

- Size of the supply chain: Supply chain size is determined by the number of organizations, items, resources, demands, supplies, bill of material components, and routings.
- Number of simulation plans that you plan to run concurrently: Each simulation plan will use up a Managed Server, and the requirement for the Managed Server depends on the size of the supply chain.
- Number of concurrent users: Impacts the user interface memory requirements.

Oracle Rapid Planning runs on 64-bit platforms using 64-bit version of the Java virtual machine (JVM) and the -d64 flag.

Database Server

Use the same sizing that you need for your other Oracle Value Chain Planning products.

Application Server

The table below shows the Application Server requirements.

Entity	Windows Stacks	UNIX Stack
Processor	8 core 1.6 GHz processor Higher for increased performance	8 core 1.6 GHz processor Higher for increased performance
Memory (depends on number of concurrent users)	See the hardware requirements for small, medium, and large implementations.	See the hardware requirements for small, medium, and large implementations.
Disk	See the hardware requirements for small, medium, and large implementations.	See the hardware requirements for small, medium, and large implementations.

Network Requirements

For a web-based solution, the wide-area network requirements vary by implementation.

In general, place these components on a high-speed LAN 1 or 10 Gigabits per second:

- E-Business Suite tier
- User Interface Server
- Database Server
- Engine Managed Servers

2

Pre-Configuration

This chapter covers the following topics:

- Performing Pre-Configuration Setup

Performing Pre-Configuration Setup

This section describes pre-configuration requirements for Oracle Rapid Planning. The tasks mentioned below need to be completed after applying Rapid Planning patch and before starting the installation.

1. Verify that WebLogic 11gR1 is installed.

   Install or upgrade to WebLogic 11gR1 (10.3.6) and Oracle ADF to Patch Set 5 (11.1.1.6.0) for Rapid Planning User Interface (UI) and Engine domains before you upgrade Oracle Rapid Planning. Refer to Server Software Requirements, page 1-2 for information on WebLogic and Oracle ADF library requirements for other Oracle Rapid Planning releases.

   For release 12.2 and later, do not install a separate WebLogic Server to create the Oracle Rapid Planning domains.

2. Cross mount the location for logs and files written by the concurrent programs with the WebLogic Server used for Rapid Planning.

3. The following profiles should be set up in EBS at the site level (the EBS instance that the data source points to):

   - User Profile Name: MSC: Oracle Rapid Planning URL

     Internal Profile Name: MSC_RP_HOST_URL

     The port number provided in the profile value should be same as the port number for the User Interface Domain that is defined in Creating the User Interface Domain.

     Syntax:

`http://domain_name:port_number`

Example:

`http://rws60144rems.us.oracle.com:6087`

- User Profile Name: MSC: Rapid Planning UI Refresh Timeout

  Internal Profile Name: MSC_RP_UI_TIMEOUT

  The profile timeout value is in milliseconds. For example, provide profile value of 5000 to represent a 5 second timeout.

- User Profile Name: MSC: Rapid Planning WebLogic Server Home

  Internal Profile Name: MSC_RP_WLS_HOME

  Provide the installation path to the *<WLS_Home>* directory.

  Example:

  /slot/user3536/wls/wlserver_10.3

  Make sure the Rapid Planning WebLogic Server and Oracle E-Business Suite Server URLs are in the same domain/subdomain for proper Single Sign-On (SSO) authentication.

- User Profile Name: MSC: Rapid Planning Scripts Home

  Internal Profile Name: MSC_RP_SCRIPTS_HOME

  This profile should point to the directory where all the WLST_scripts will be kept.

  Example:

  /slot/ems5910/appmgr/WLS/user_projects/domains/WLST_Scripts

4. After applying the respective patches for Rapid Planning User Interface, Rapid Planning Administration, and Rapid Planning Engine, verify that the following ZIP files appear in the directory path $MSC_TOP/dist/orp.

   Example:

   /slot/ems4928/appmgr/apps/apps_st/appl/msc/12.0.0/dist/orp

   - RPAdmin.zip
   - ui.zip
   - engine.zip

   For 12.2.3, if using Online Patching, there will be two APPL_TOPs, RUN tier and PATCH tier. Compare the ZIP files for both RUN and PATCH tier, and use the higher version for deployment.

For example, fs1 is assigned to one tier, either RUN or PATCH. Use the command `ident /u01/R122_EBS/fs1/EBSapps/appl/msc/12.0.0/dist/orp/engine.zip` to obtain the file version.

5. Create a folder named ORPTEMP in a user-defined directory (example: /tmp/ORPTEMP) on the host machine where WebLogic is installed. This folder is referenced as ORPTEMP in this document.

6. Copy the ZIP files to the folder ORPTEMP.

7. Extract all the ZIP files to the same folder.

   Each extracted file contains a respective EAR file. The EAR files will be selected from this location during deployment.

   Refer to the following topics in this guide for procedures to deploy the applications:

   - Configuring the JDBC Data Source for the User Interface Domain, page 3-35

     Configure JDBC data source for RP domains. When upgrading to an Exadata release or setting up new configuration for Rapid Planning for Exadata, the JDBC data source needs to be updated. Delete the old data source and create a new one for Exadata.

     The host name or URL should include the TNS entry for database RAC instead of single node.

     Example of a TNS string:

     ```
     (DESCRIPTION=(ADDRESS_LIST=(LOAD_BALANCE=YES)(FAILOVER=YES)
     (ADDRESS=(PROTOCOL=tcp)(HOST=DB_NODE_A_URL)(PORT=1234))
     (ADDRESS=(PROTOCOL=tcp)(HOST=DB_NODE_B_URL)(PORT=1234)))
     (CONNECT_DATA= (SERVICE_NAME=VIS)))
     ```

     Replace `DB_NODE_A_URL` and `DB_NODE_B_URL` with the URLs for the database nodes. This needs to be done for the RP Engine and the UI domain.

   - Deploying and Starting the Engine Application, page 3-58

   - Deploying and Starting the User Interface Application, page 3-63

8. To copy the class files, run the script InitialEngineSetup.sh in the folder WLST_scripts.

   - Log in to the machine where EBS is installed with username as APPL manager user or APPL TOP owner.

   - Set the environment variable $MSC_TOP to the path where you copied the patch.

     Example:

/slot/ems4928/appmgr/apps/apps_st/appl/msc/12.0.0

- Set the environment variable $JAVA_TOP to the path having Java classes.

  Example:

  /slot/ems2947/appmgr/apps/apps_st/comn/java/classes

9. After unzipping the file RPAdmin.zip, all the scripts are located in the folder RPAdmin/WLST_scripts. Copy the folder WLST_scripts to the path where Engine domain has been created:

   Example:

   <WLS_HOME>/user_projects/domains

   <WLS_HOME> refers to the name of the directory where WebLogic has been installed.

   If the directory domains is not present, create it manually.

   All scripts should be run from this path only.

   Ensure that the copied WLST_Scripts folder and the contents have `rwx` permissions for the UNIX session user launching the WebLogic Server.

   Example:

   ```
   chmod 777 *
   ```

   The WebLogic admin user should have write permissions on the *<WLS_HOME>* folder and subfolders.

10. Use the following steps to provide the Rapid Planning application access through EBS:

    ```
    cd $FND_TOP/patch/115/bin
    perl ojspCompile.pl --compile -s 'MscRPRedirect.jsp' --flush
    ```

11. After compiling, verify that the timestamp of file _MscRPRedirect.class under $COMMON_TOP/_pages is current.

12. After compiling, restart the EBS Middle Tier.

13. Once the Rapid Planning patch is applied, assign Oracle Supply Chain Simulation Planner responsibility to the user account.

14. Assign Planning Organizations to Oracle Supply Chain Simulation Planner Responsibility.

    - Navigate to **Advanced Planning Administrator > Admin > Organization Security**.

- Select **Oracle Supply Chain Simulation Planner** responsibility.
- Assign Organizations by moving the required organizations to the **Selected** list.
- Save the assignments.

3

Configuring Rapid Planning Domains and Servers

This chapter covers the following topics:

- Creating the Engine Domain
- Creating the User Interface Domain
- Starting the Engine Admin Server
- Starting the User Interface Admin Server
- Configuring the JDBC Data Source for the Engine Domain
- Configuring the JDBC Data Source for the User Interface Domain
- Deploying the RP Administration Application in the User Interface Domain
- Setting the Initial Configuration for the Rapid Planning User Interface and Engine
- Creating the Managed Servers
- Deploying and Starting the Engine Application
- Deploying and Starting the User Interface Application

Creating the Engine Domain

Use this procedure to create the Engine Domain.

1. Go to *<WLS_HOME>*/common/bin folder.

   Syntax:

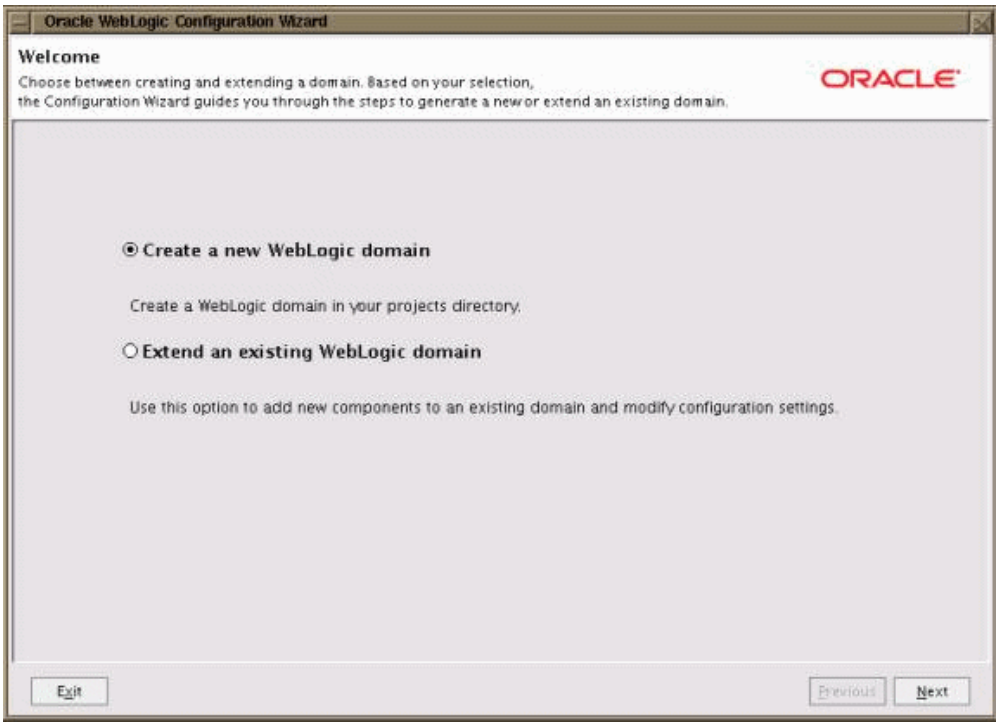
   ```
   cd <installation_path..>/wlserver_10.3/common/bin
   ```

2. Run config.sh.

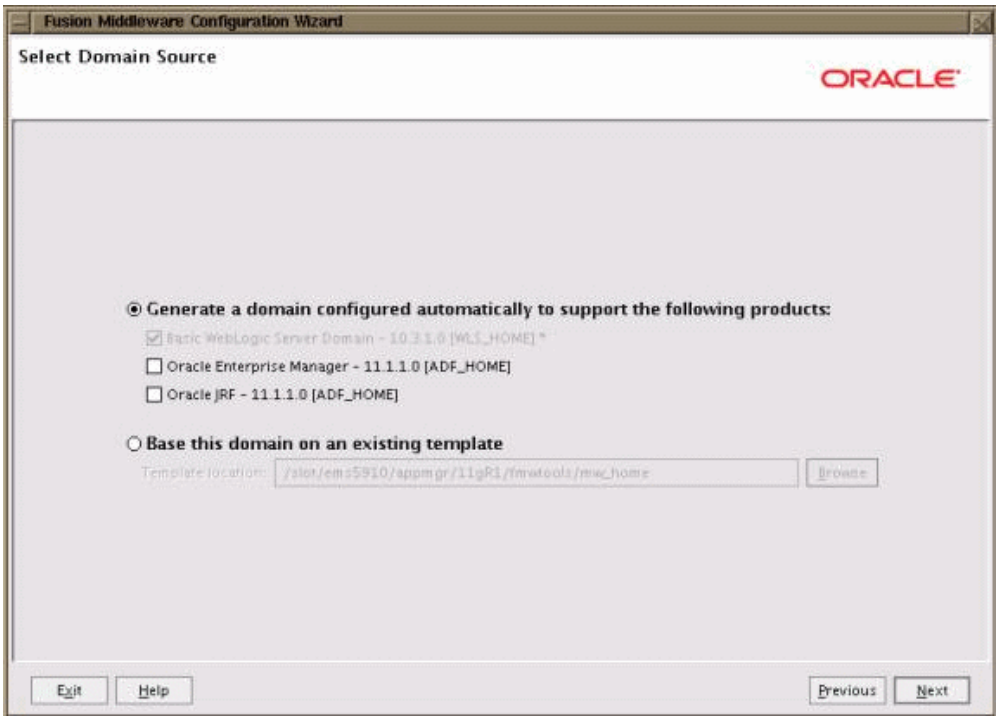
   Example:

```
-bash-3.00$ cd wlserver_10.3/common/bin
-bash-3.00$ . ./config.sh
```

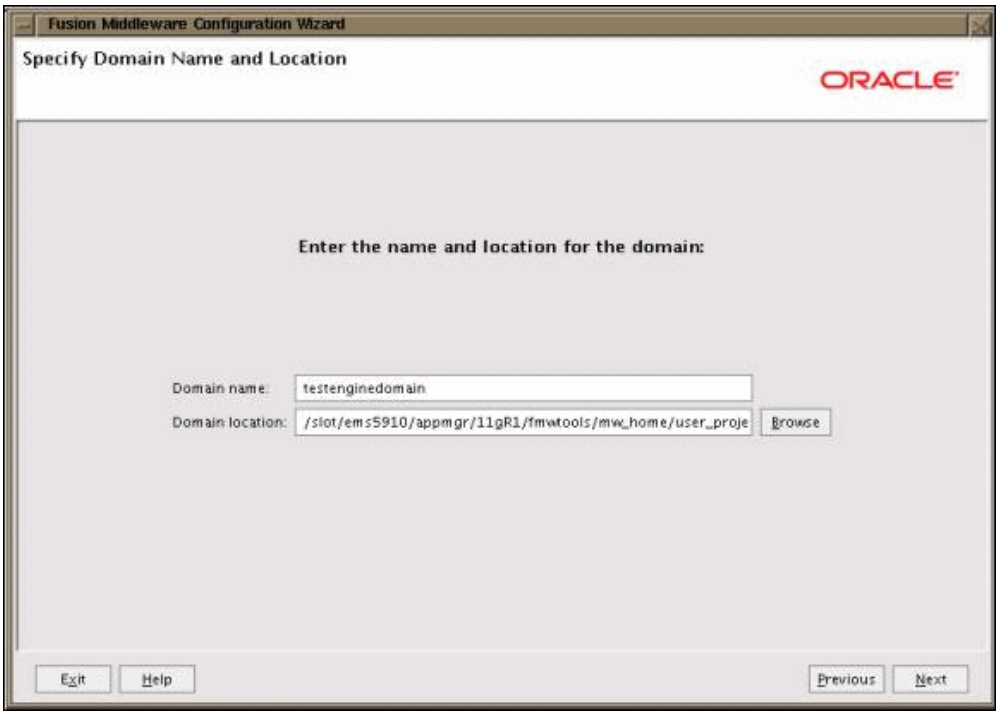
The Oracle WebLogic Configuration Wizard appears.



3. Select **Create a new WebLogic domain**, and click **Next**. The Select Domain Source screen appears.

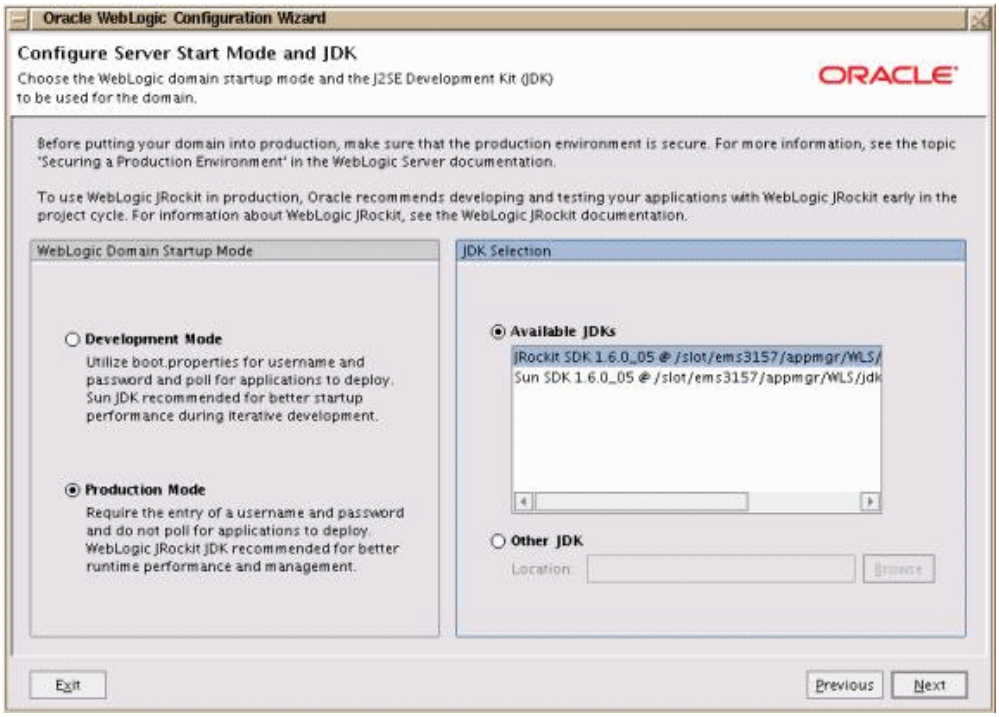


4. Select **Generate a domain configured automatically to support the following products**. Keep the default settings. Click **Next**. The Specify Domain Name and Location screen appears.



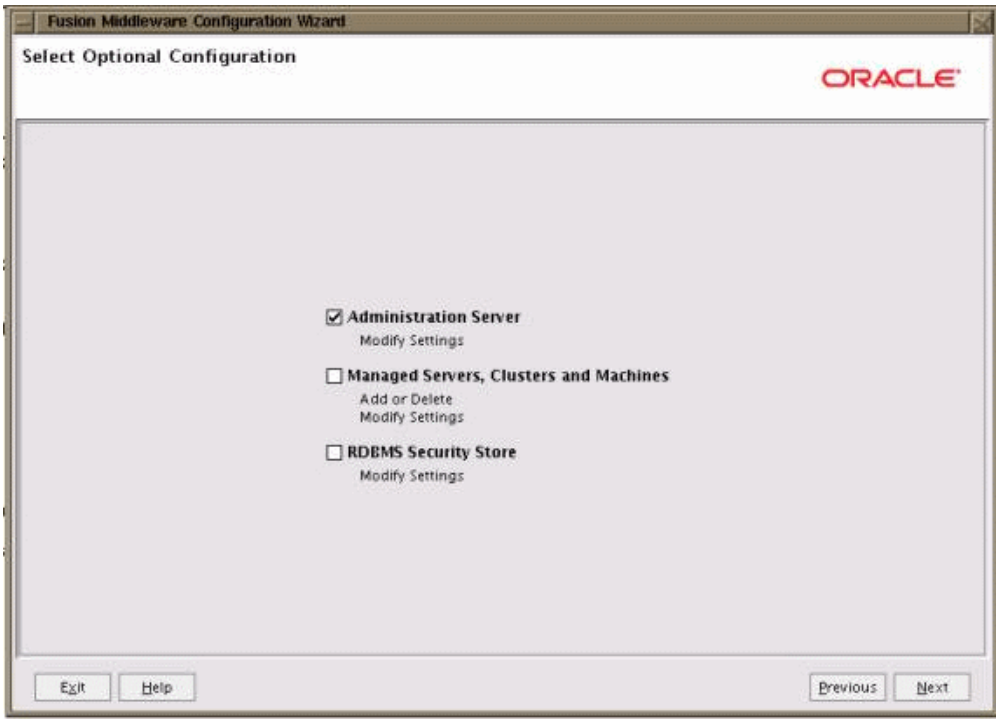
5. Enter the **Domain name** and **Domain location**. The domain location should be *<WLS_HOME>*/user_projects/domains. Click **Next**. The Configure Administrator User Name and Password screen appears.

6. Enter the **User name**, **User password** and **Confirm user password** of your choice, and click **Next**. The password must be alphanumeric. The Configure Server Start Mode and JDK screen appears.

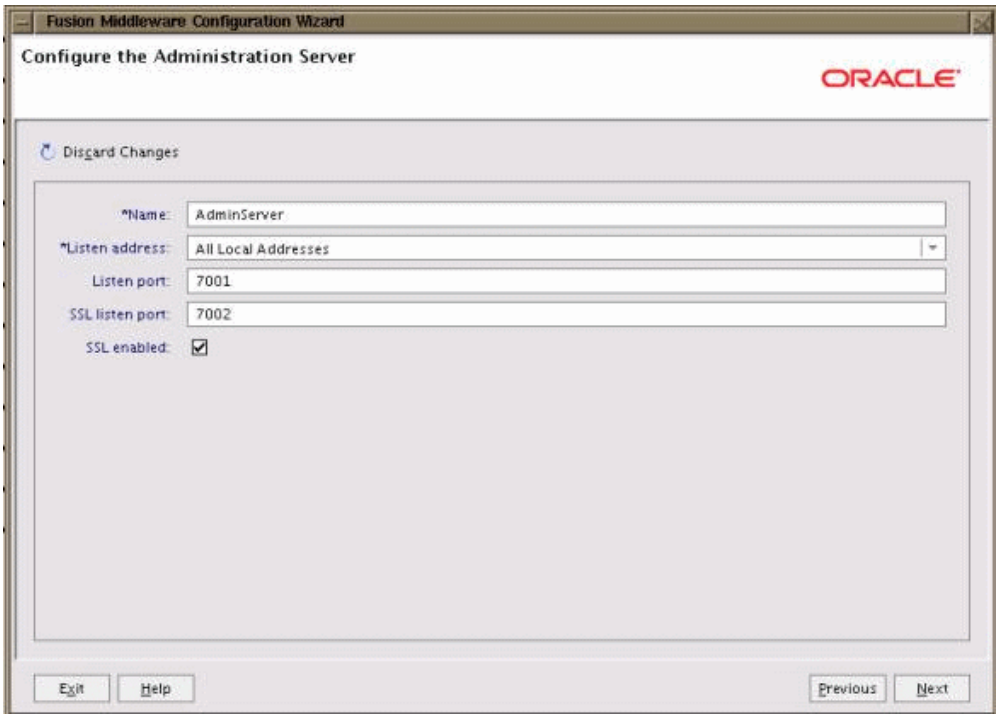


7. Perform the following:

   - Select **Production Mode**.
   - In JDK Selection region, select **Available JDKs** and select **JRockit SDK 1.6.0_05**.
   - Click **Next**. The Select Optional Configuration screen appears.



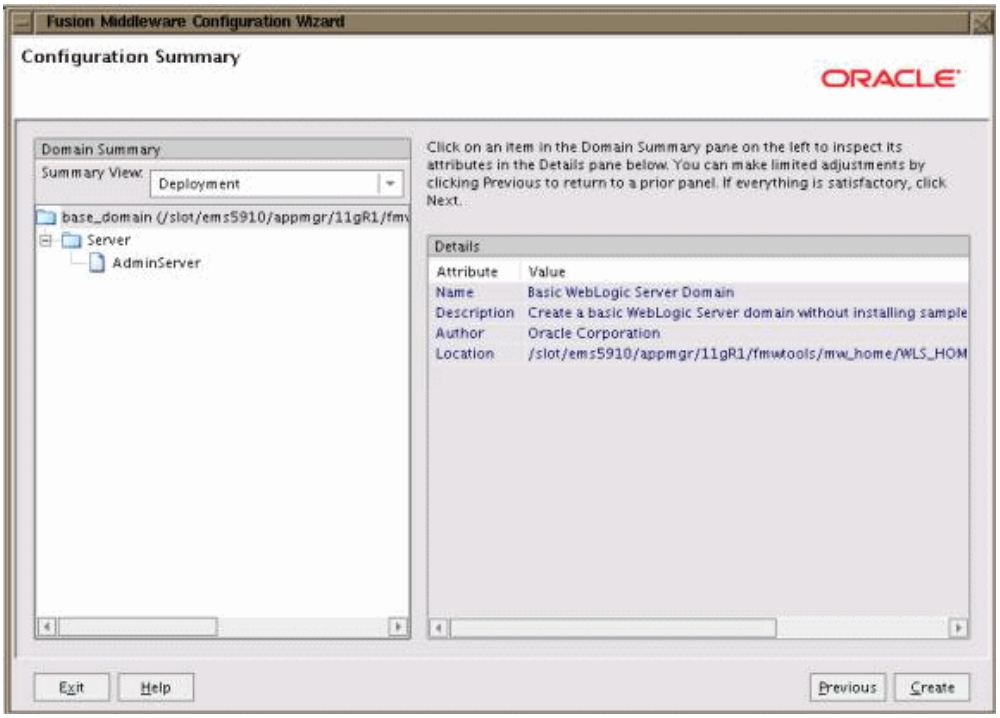
8. Select the **Administration Server** option only and click **Next**. The Configure the Administration Server screen appears.



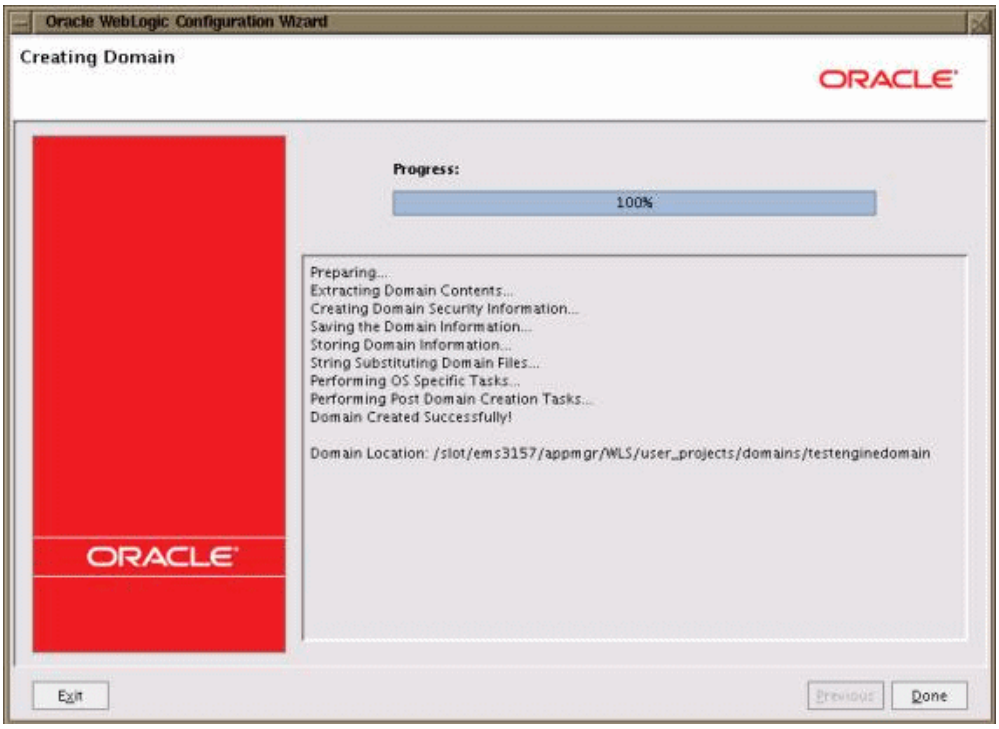
9. Enter the following details and click **Next**:

   - Name - Enter the name of the Admin Server.
   - Listen Address - The Admin Server listen port address.
   - Listen Port - Enter the server listen port. Check the availability of the port number before entering a value.
   - SSL listen port - Enter the SSL Listen Port. Check the availability of the port number before entering a value.
   - Check the **SSL enabled** option.

   The Configuration Summary screen appears.



10. Review the details. If you want to modify any settings, use the **Previous** button to return to the appropriate screen. If no changes are required, click **Create**. The Creating Domain screen appears to display the system progress.



11. When the domain is complete, click **Done**.

12. Go the Engine Domain directory:

    Syntax:

    ```
    $ cd
    /slot/ems3424/appmgr/WLS/user_projects/domains/wls_app3424/
    ```

    In the example above, `wls_app3424` is the engine domain directory.

13. Create output/ and log/ directories as follows:

    - `$ mkdir -m 777 output/`
    - `$ mkdir -m 777 log/`

Creating the User Interface Domain

Perform the following procedure to create a new User Interface (UI) Domain.

1. Go to *<WLS_HOME>*/common/bin.

   Syntax:

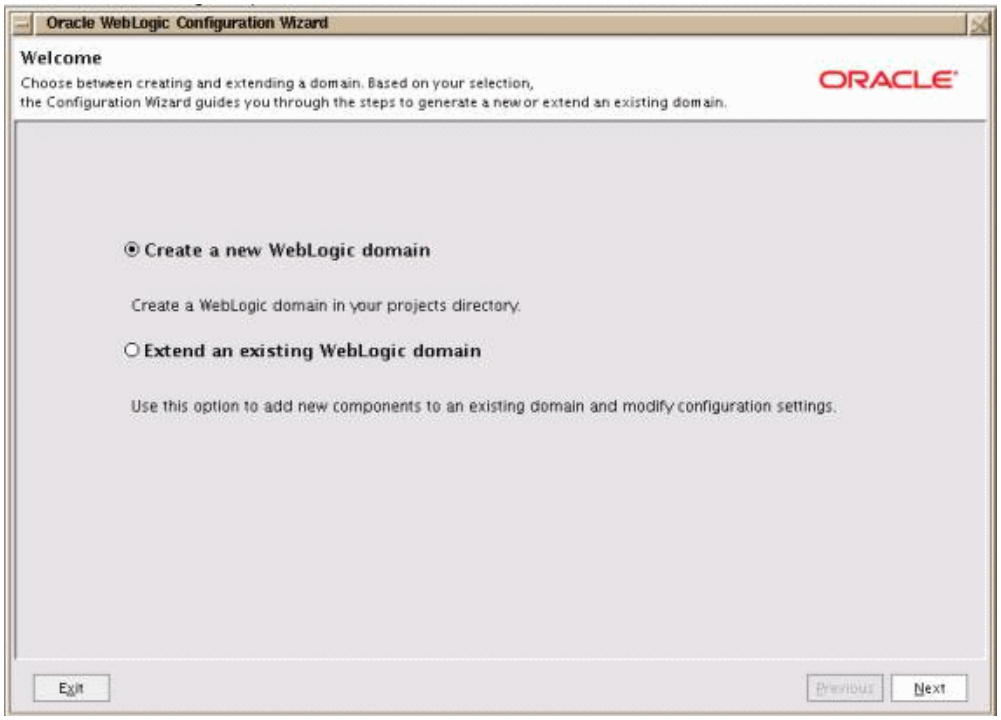
   `cd /slot/ems3157/appmgr/<WLS_HOME>/common/bin`

2. Run config.sh.

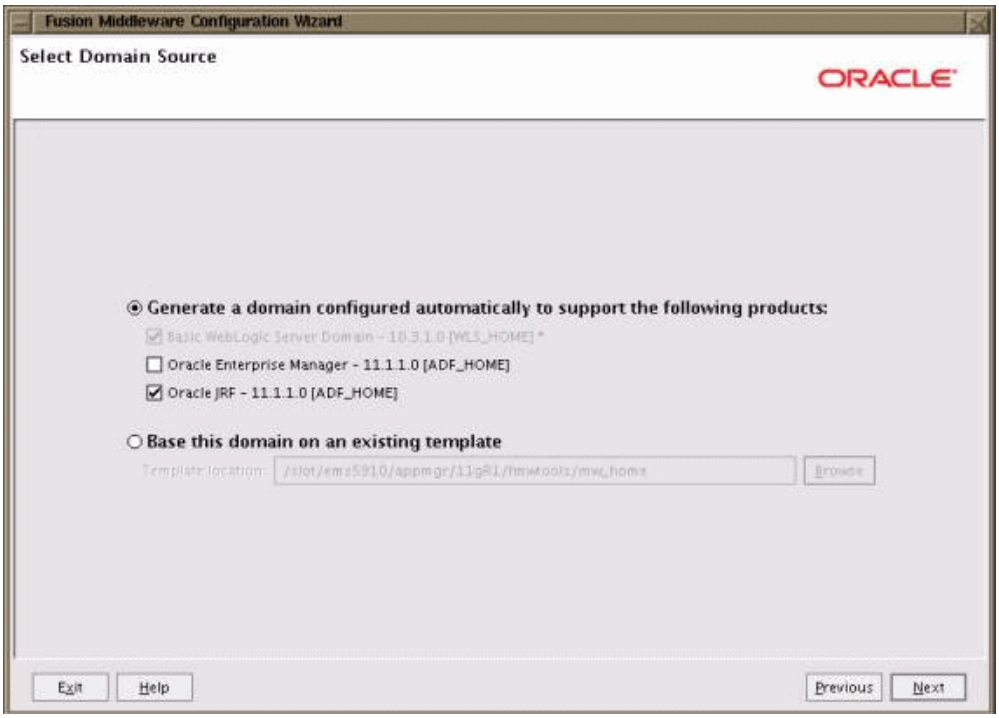
Example:

```
/config.sh
```

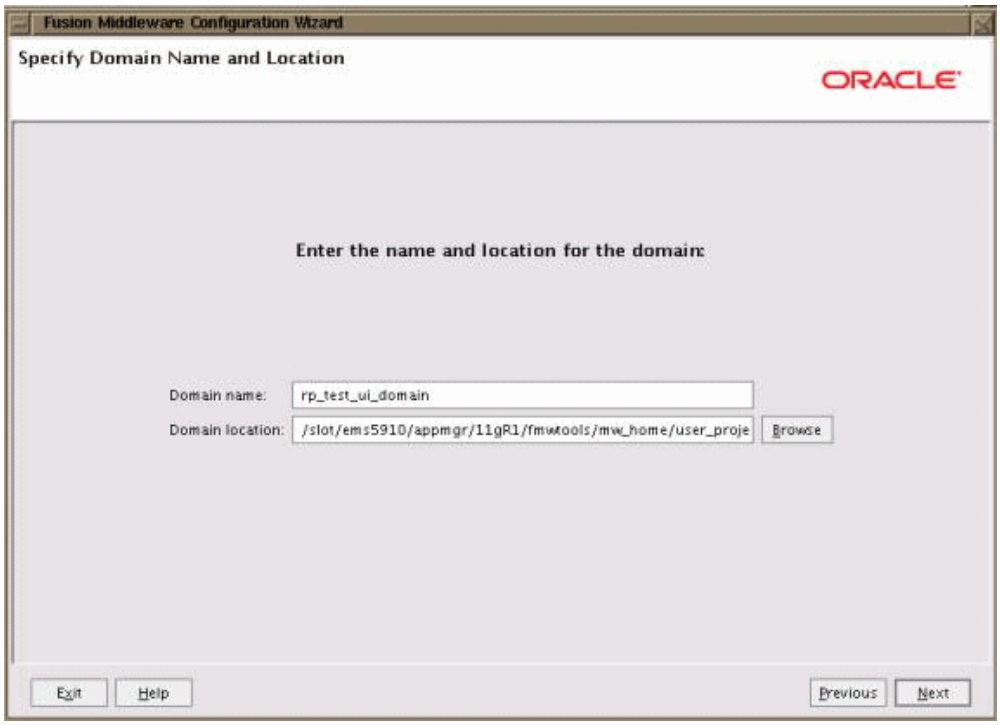
The Oracle WebLogic Configuration Wizard appears.



3. Select **Create a new WebLogic Domain**, and click **Next**. The Select Domain Source screen appears.

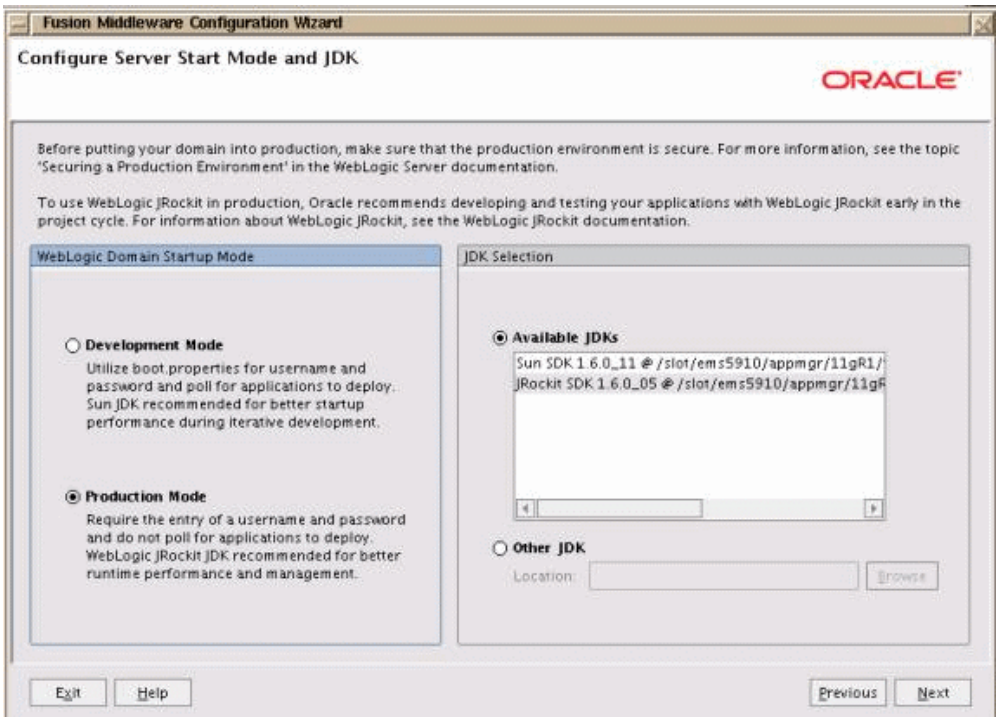


4. Select **Generate a domain configured to support the following products**, select the **Oracle JRF** option, and click **Next**. The Specify Domain and Location screen appears.



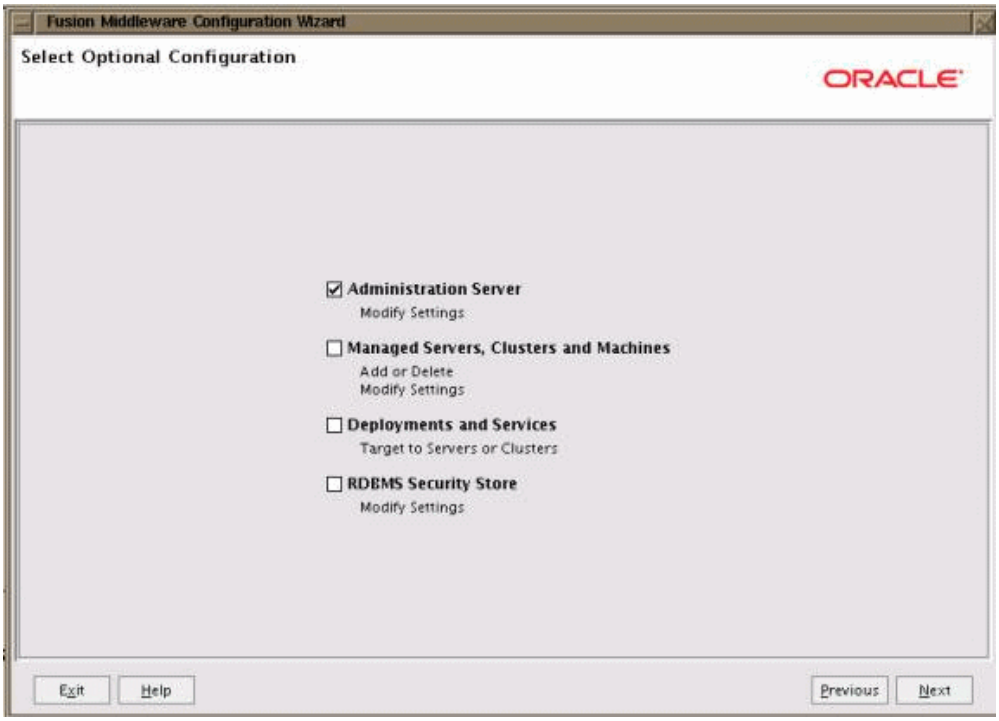
5. Provide the **Domain name** and **Domain location**, and click **Next**. The Domain location should be *<WLS_HOME>*/user_projects/domains. The Configure Administrator User Name and Password screen appears.

6. Enter the **User name**, **User password** and **Conform user password** of your choice, and then click **Next**. The Configure Server Start Mode and JDK screen appears.

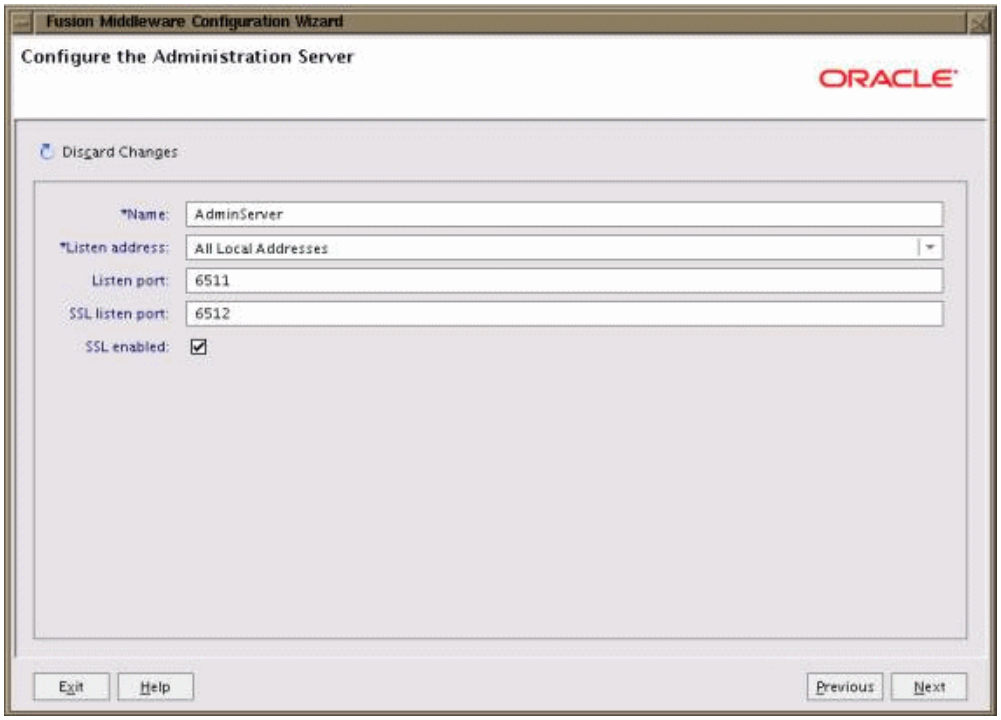


7. Perform the following:

   - Select **Production Mode**.
   - In JDK Selection region, select **Available JDKs** and select **JRockit SDK 1.6.0_05**.
   - Click **Next**. The Select Optional Configuration screen appears.



8. Select the **Administration Server** option only and click **Next**. The Configure the Administration Server screen appears.

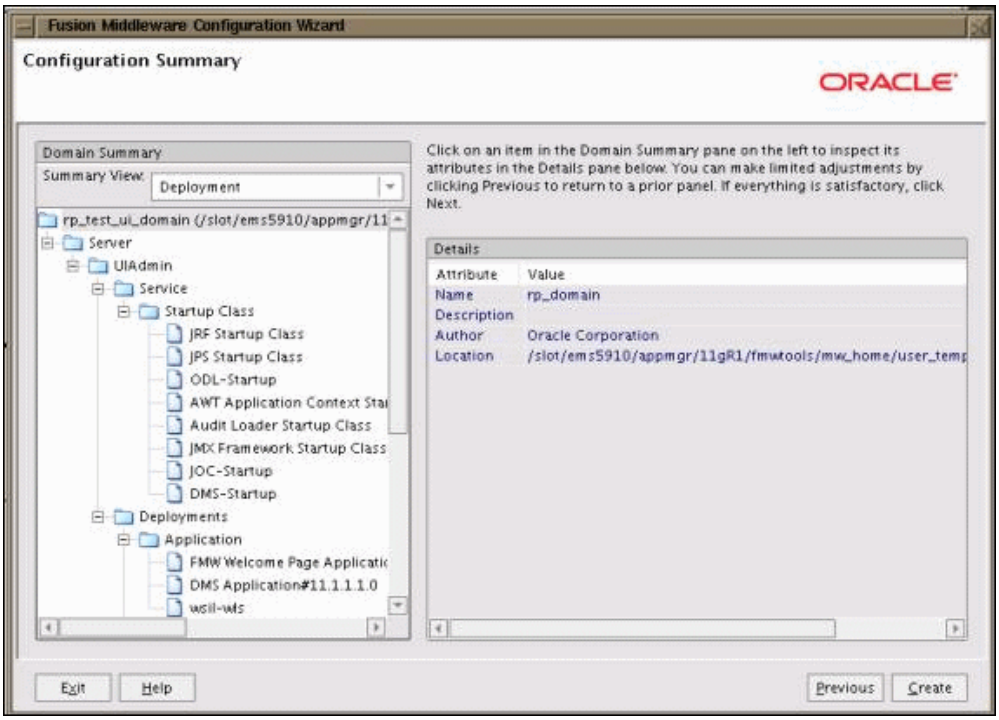


9. Enter the following details and click **Next**:

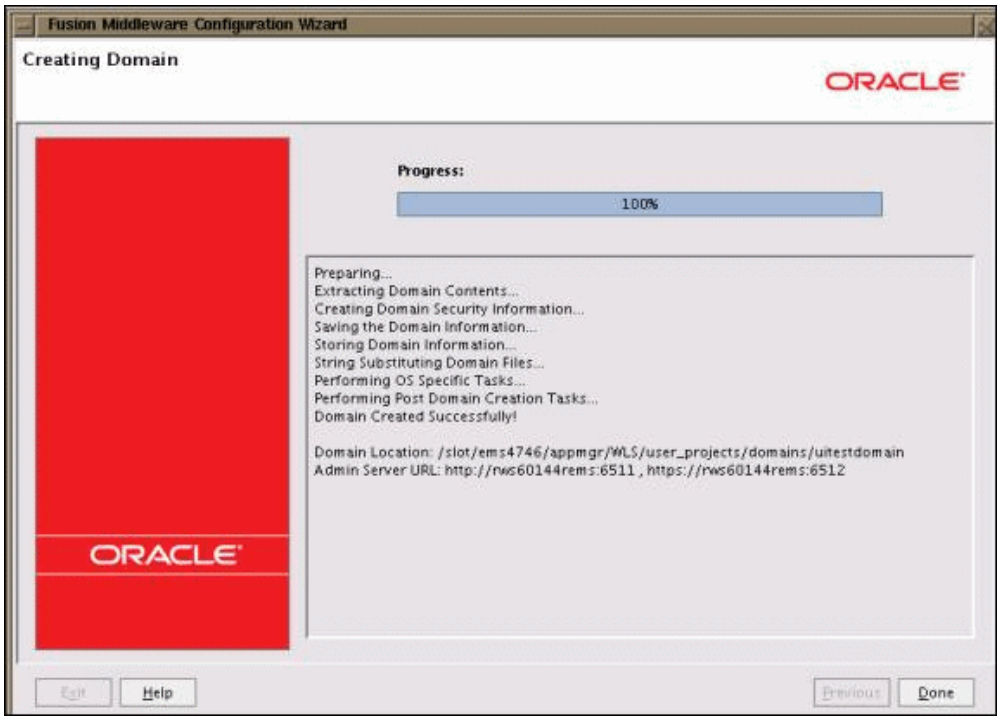
   - Name - Enter the name of the Admin Server
   - Listen Address - Enter the listen address.
   - Listen Port - Enter the server listen port. Check the availability of the port number before entering a value.

     This Listen Port is used to set up the profile MSC_RP_HOST_URL as mentioned in the Performing Pre-Configuration Setup, page 2-1 section.
   - SSL listen port - Enter the SSL Listen Port. Check the availability of the port number before entering a value.
   - SSL enabled - Select the **SSL enabled** option.

   The Configuration Summary screen appears.



10. Review the details. If you want to modify any settings, use the **Previous** button to return to the appropriate screen. If no changes are required, click **Create**. The Creating Domain screen appears to display the system progress.



11. When the domain is complete, click **Done**.

12. The Rapid Planning application uses graphical features. In order to enable theses features, the following steps need to be executed:

    - Edit the file setDomainEnv.sh available inside domain home bin directory.

    - Add the following to the property:

      `-Djava.awt.headless=true` to `EXTRA_JAVA_PROPERTIES`

Starting the Engine Admin Server

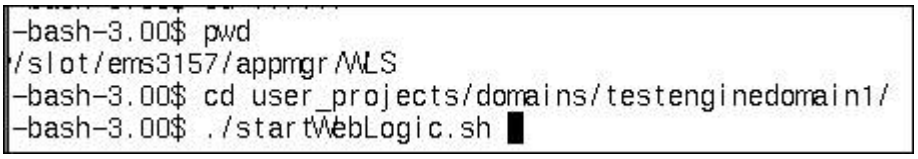
Perform the following procedure to start the Engine Admin Server.

1. Under *<WLS_HOME>*, go to the directory user_projects/domains/*<ENGINEDOMAINNAME>/*

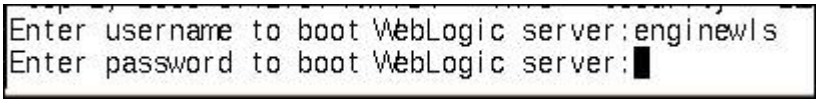
   Example:

   /slot/ems3157/appmgr/user_projects/domains/testenginedomain

2. Run the script startWebLogic.sh to start the Admin Server.



3. The console requests the username and password. Enter the Engine Domain credentials.



The console displays "Server started in RUNNING mode".

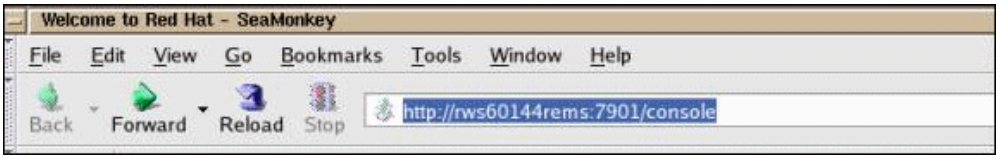
4. Open a web browser and type in the URL/address in the format below:

`http://<Machine_Name>:<Port_No>/console`

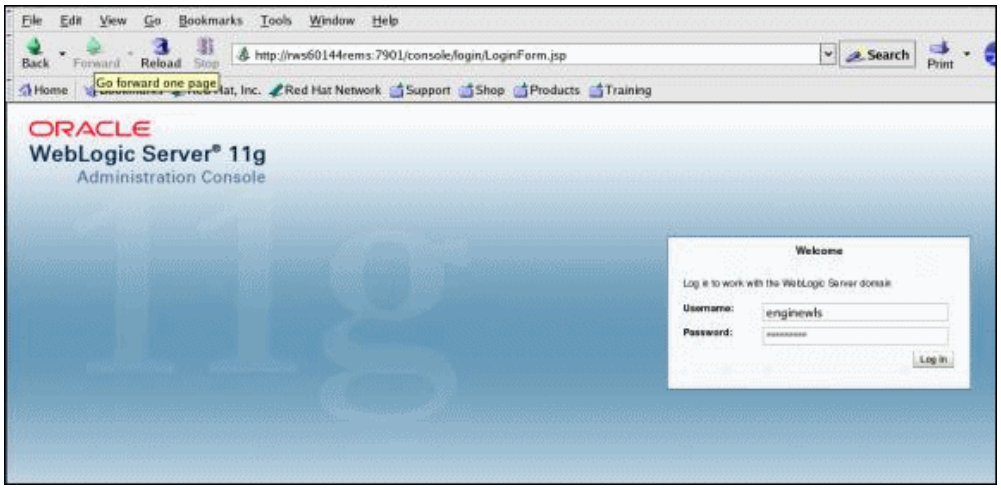
where `<Machine_Name>` is the host name of the machine on which the WebLogic Server is running (for example, `rws60144rems.us.oracle.com`) and `<Port_No>` is the Admin Server Listen port number specified when the Engine domain was created.

Example:

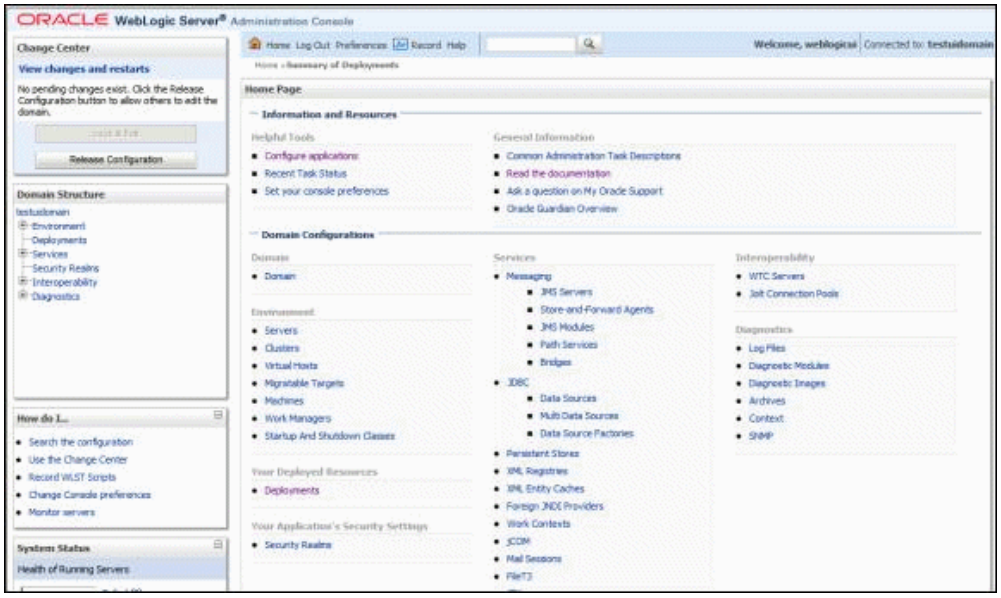
`http://rws60144rems:7901/console`



The WebLogic Server Administration Console appears.



5. Enter the Admin Server **Username** and **Password**, and click **Log In**. The WebLogic Administration Console home page appears.



Starting the User Interface Admin Server

Perform the following procedure to start the User Interface (UI) Admin Server.

1. Under *<WLS_HOME>*, go to the directory user_projects/domains/*<UIDOMAINNAME>*/.

   Example:

   /slot/ems4746/appmgr/user_projects/domains/testuidomain

2. Run the script startWebLogic.sh to start the Admin Server.

```
-bash-3.00$ pwd
/slot/ems4746/appmgr/WLS/user_projects/domains/testuidomain
-bash-3.00$ ./startWebLogic.sh
```

3. The console requests the username and password. Enter the User Interface Domain credentials.

```
Enter username to boot WebLogic server:weblogic
Enter password to boot WebLogic server:
```

The console displays "Server started in RUNNING mode".

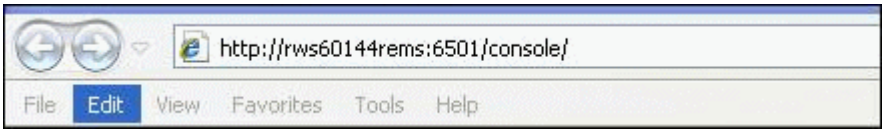
```
<Oct 1, 2009 1:59:31 AM PDT> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING>
<Oct 1, 2009 1:59:31 AM PDT> <Notice> <WebLogicServer> <BEA-000360> <Server started in RUNNING mode>
```

4. Open a web browser and type in the URL/address in the in the following format:

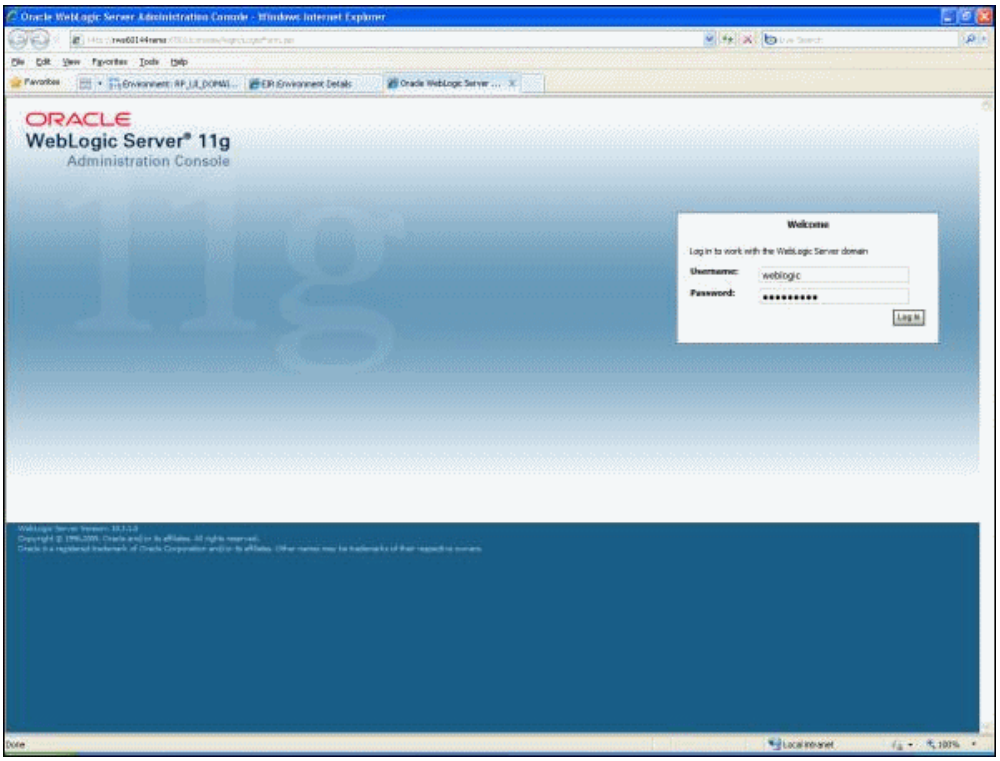
`http://<Machine_Name>:<Port_No>/console`

where `<Machine_Name>` is the host name of the machine on which the WebLogic Server is running (for example, `rws60144rems.us.oracle.com`) and `<Port_No>` is the Admin Server Listen port number specified when the User Interface Domain was created.

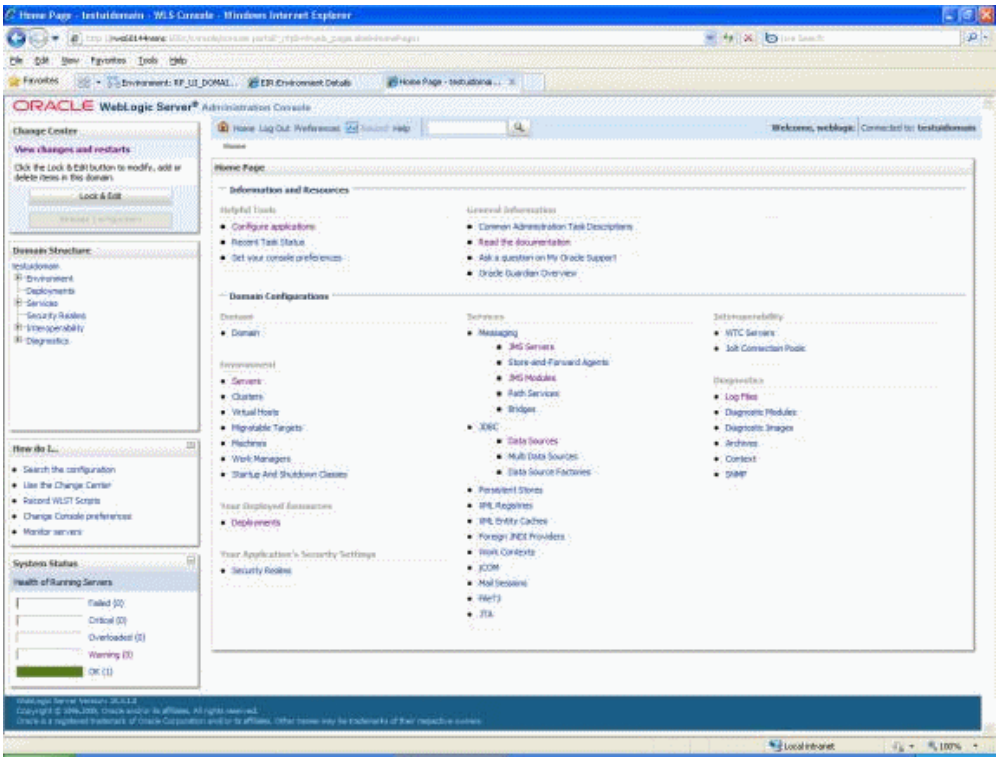
Example:



The WebLogic Server Administration Console appears.



5. Enter the User Interface Admin Server Username and Password, and click **Log In**.



6. Return to the UNIX console, and go to the User Interface Domain home (the path where UI domain is installed).

7. Create a new directory 'mds' in the following location:

   <UI_Domain_Home>/servers/*<Admin_Server>*/mds

   Example:

   <installation_path>
   /user_projects/domains/uitestdomain/servers/AdminServer/mds

8. To create a file persistence store on the WebLogic Server, perform the following:

   - Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.
   - Click the **Persistent Stores** link (or you can navigate to **Services > Persistent Stores** from the Domain Structure region).
   - Click **New**.
   - Select **Create File Store**.
   - Enter Name as 'mds-repos'.

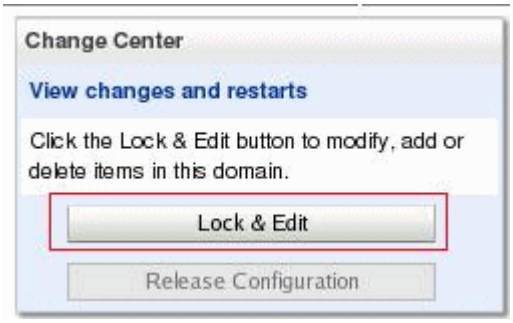
- Select AdminServer from the **Target** list.
- Set the path to *<UI_Domain_Home>*/servers/*<Admin_Server>*/mds.
- Click **OK**.
- From Change Center, click **Activate Changes**.

Configuring the JDBC Data Source for the Engine Domain

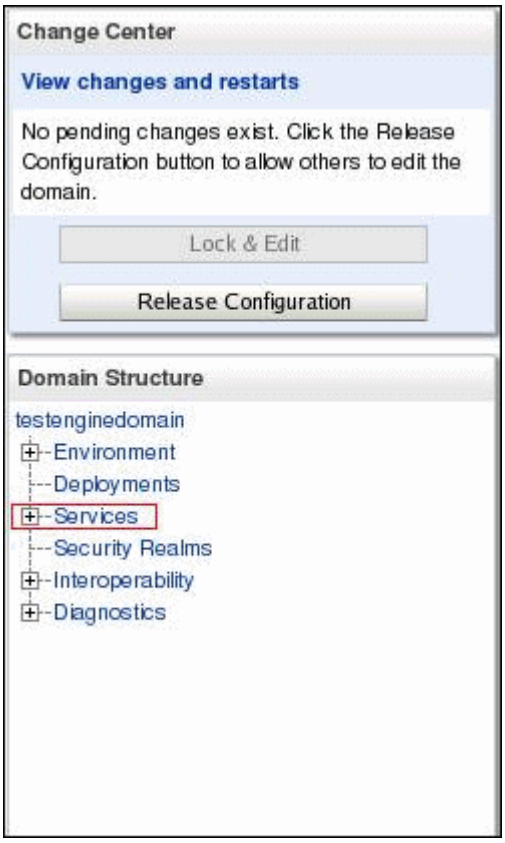
Use this procedure to configure the JDBC data source for the Domain Engine. Verify the Engine Domain Admin Server is up and running before performing this procedure.

> **Note:** When upgrading to an Exadata release or setting up new configuration for Rapid Planning for Exadata, the JDBC data source for the Rapid Planning Engine and User Interface domains need to be updated. Delete the old data source and create a new one for Exadata.
>
> The host name or URL should include the TNS entry for database RAC instead of single node.
>
> Example of a TNS string:
>
> ```
> (DESCRIPTION=(ADDRESS_LIST=(LOAD_BALANCE=YES)(FAILOVER=YES
> )
> (ADDRESS=(PROTOCOL=tcp)(HOST=DB_NODE_A_URL)(PORT=1234))
> (ADDRESS=(PROTOCOL=tcp)(HOST=DB_NODE_B_URL)(PORT=1234)))
> (CONNECT_DATA= (SERVICE_NAME=VIS)))
> ```
>
> Replace `DB_NODE_A_URL` and `DB_NODE_B_URL` with the URLs for the database nodes.

1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



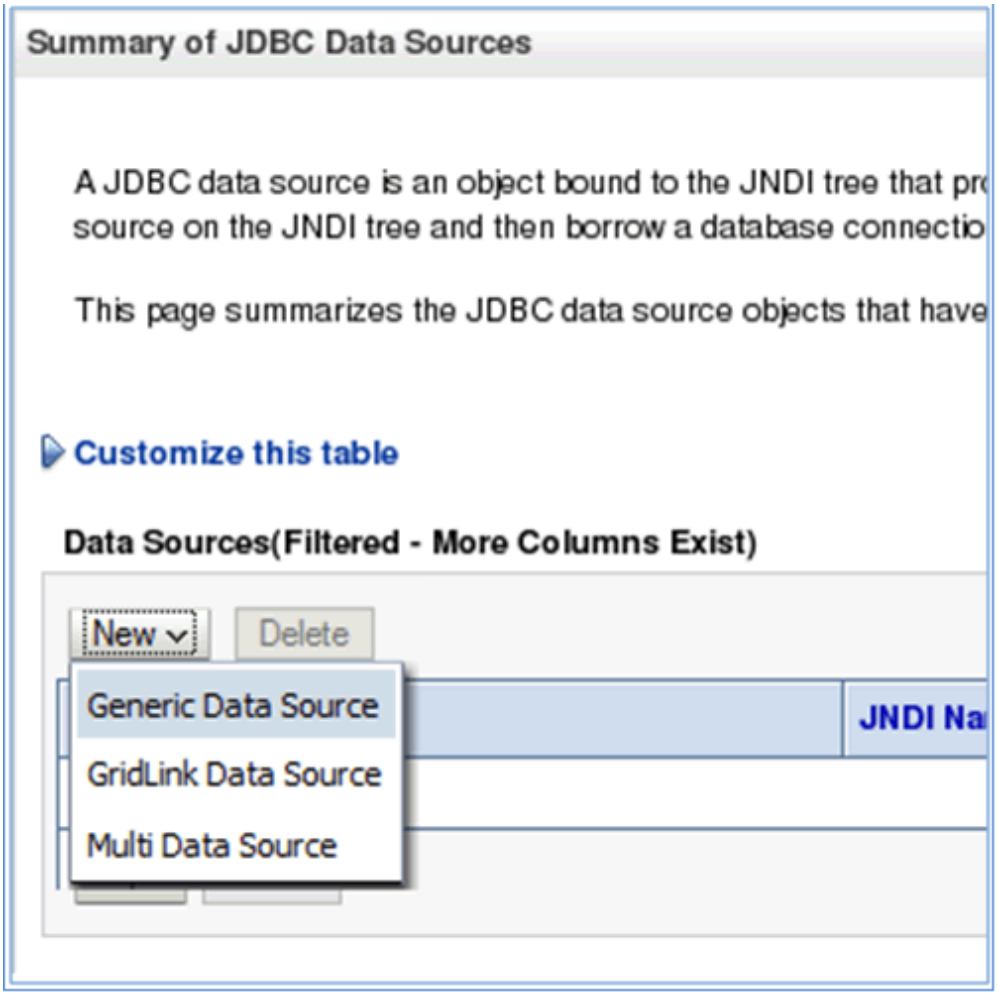
2. From the Domain Structure region, expand the **Services** tree node.



3. From Services tree, expand the **JDBC** tree node.

4. Select **Data Sources**.

5. Click **New** and select **Generic Data Source**.

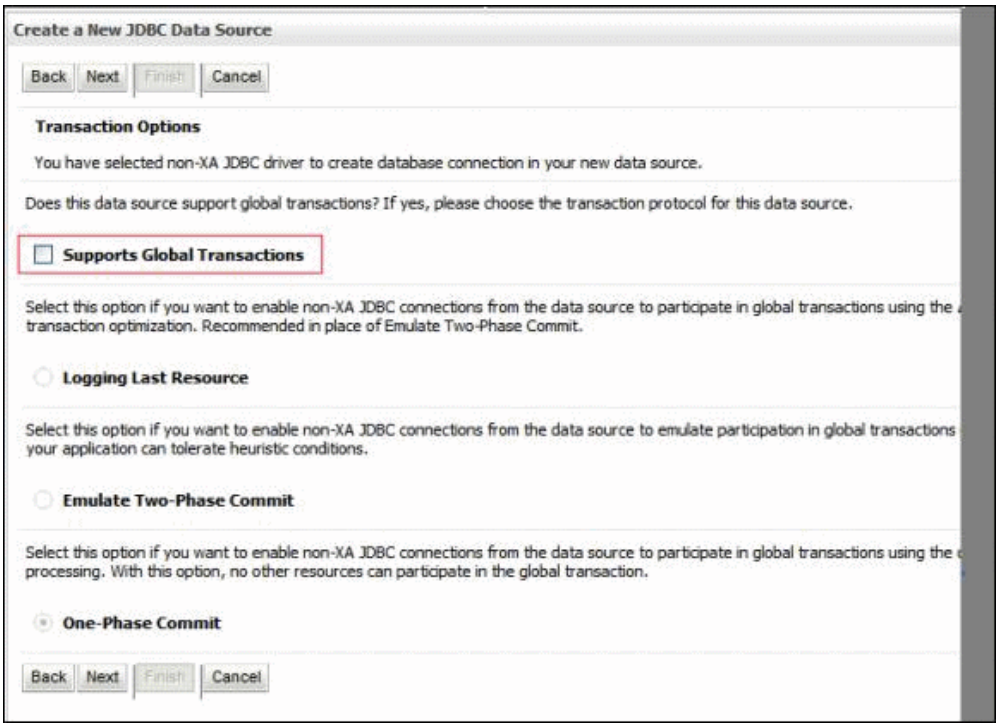


6. Enter the information as shown below, and click **Next**.

   - Name - Enter 'RapidPlanningDS2'.
   - JNDI Name - Enter 'RapidPlanningDS2'.
   - Database Type - Select **Oracle**.
   - Database Driver - Select **Oracle's Driver (Thin) for instance connections: 9.0.1, 9.2.0, 10, 11**.

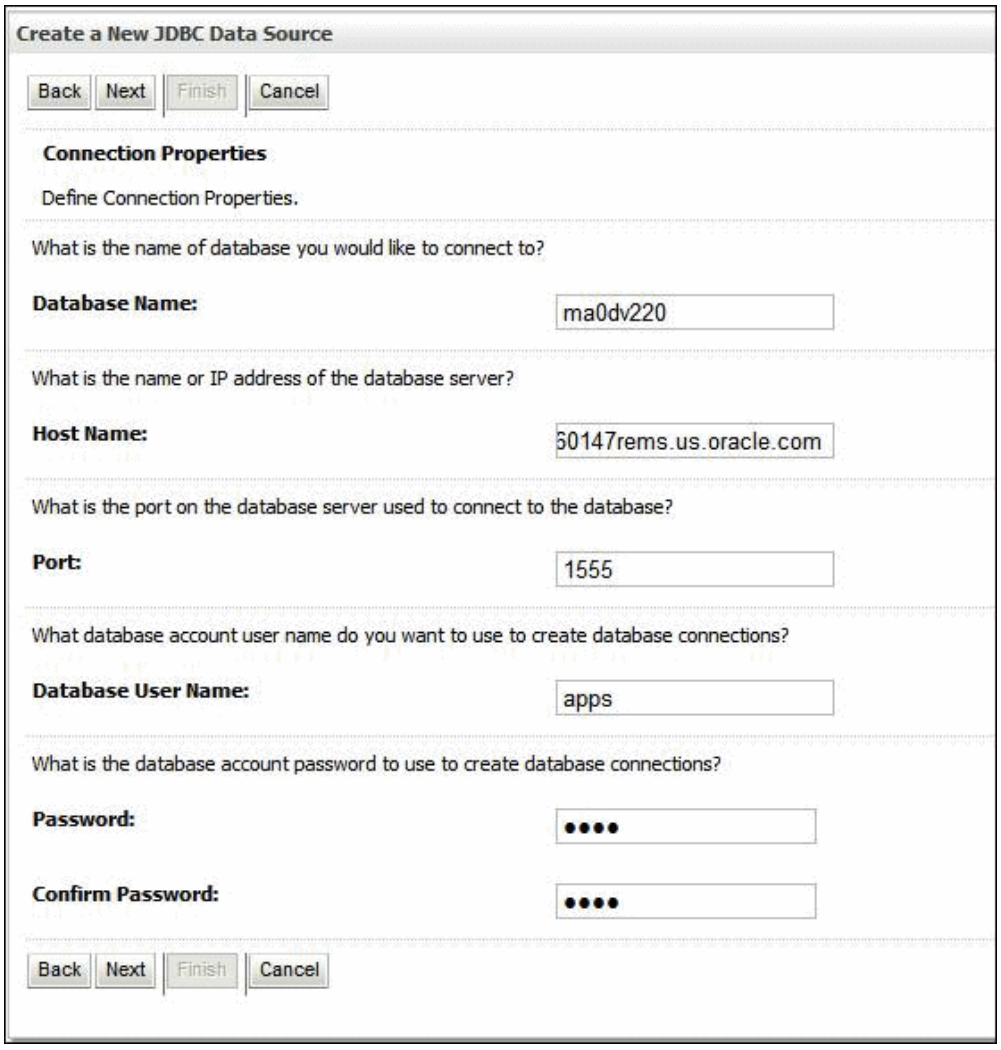
   Enter **Name** and **JNDI Name** as 'RapidPlanningDS2'. Check Troubleshooting, page 6-17 for JDBC Driver specific issues.

7. Deselect **Supports Global Transaction**, and click **Next**.



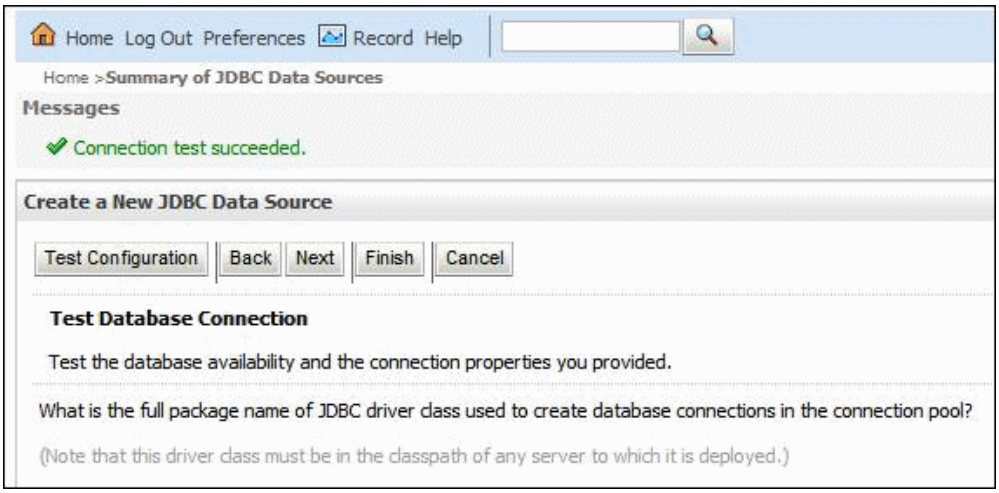
8. Enter the information as shown below and click **Next**.

   - Database Name - Enter database name (example, ma0dv220).
   - Host Name - Enter host name (example, rws60147rems.us.oracle.com).
   - Port - Enter port number (example, 1555).
   - Database User Name - Enter database user name.
   - Password - Enter database user name password.
   - Confirm Password - Re-enter password.



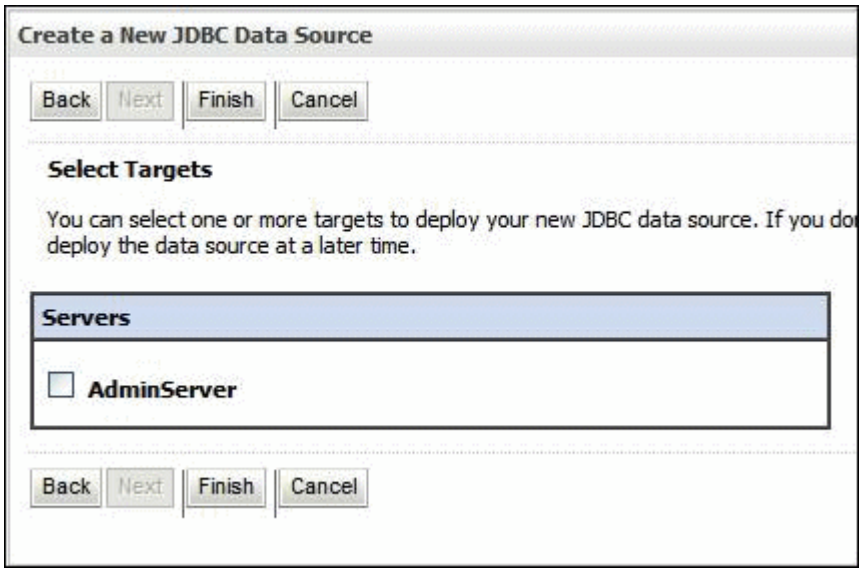
9. Click **Test Configuration**.

If JDBC is set up correctly, then a message "Connection test succeeded" appears.

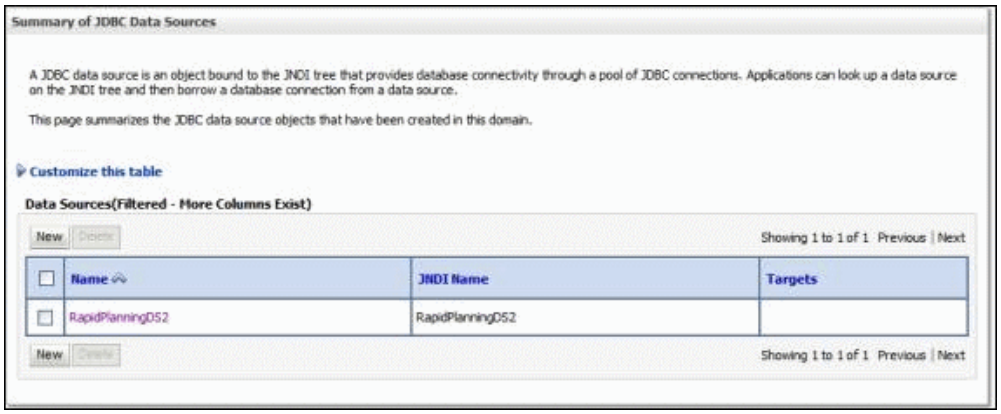


10. Click **Next**.

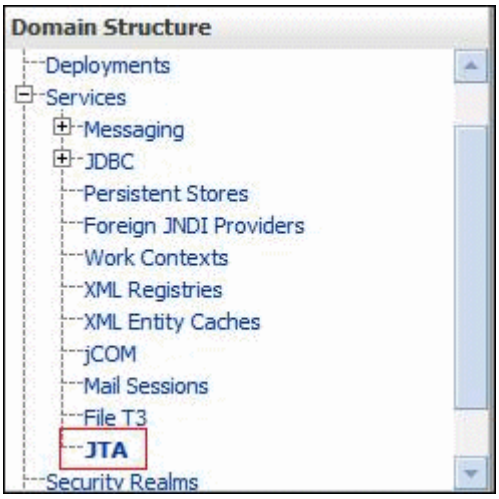
11. Do not select any target server. Click **Finish**.



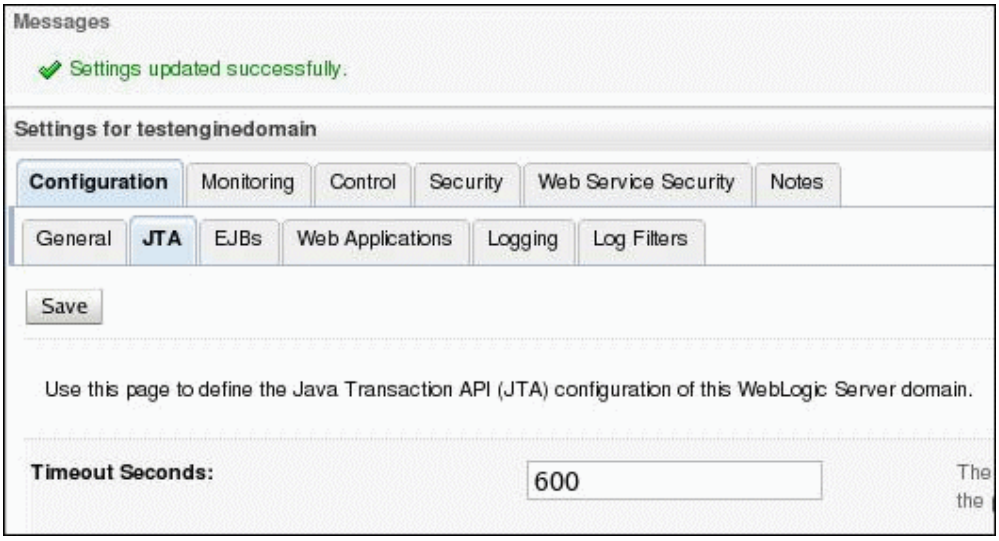
The Summary of JDBC Data Source page appears. The data source appears on the page.



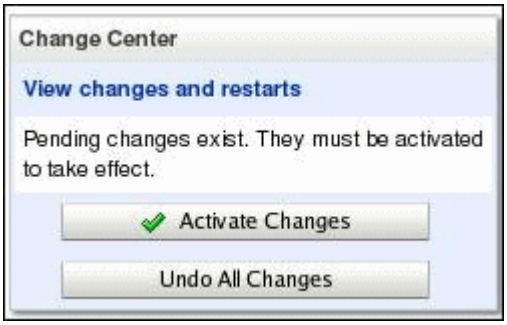
12. In the Domain Structure region, navigate to **Services > JTA**. Select the **Configuration** tab and then the **JTA** tab.



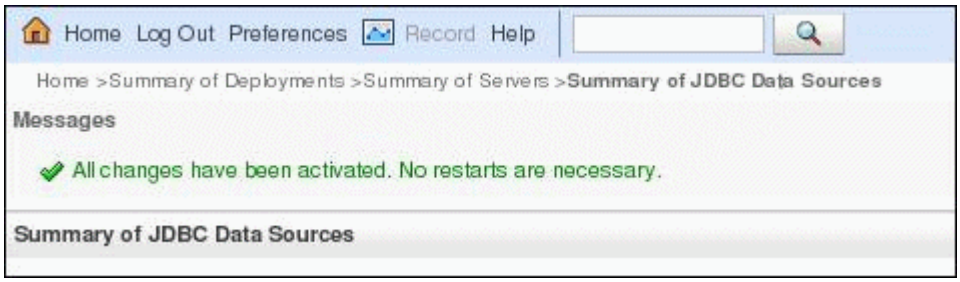
13. Set **Timeout Seconds** to '600' seconds as shown below, and click **Save**.



14. From Change Center, click **Activate Changes**.



Once Activation is complete, the message "All changes have been activated. No restarts are necessary." appears.



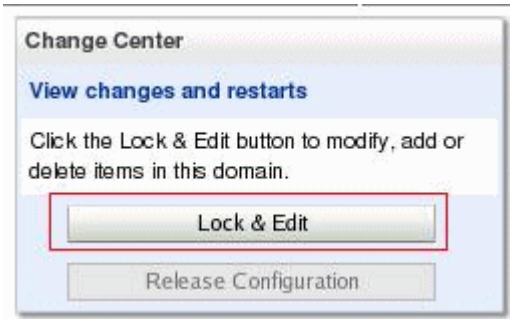
The JDBC Resource has been successfully set up.

Configuring the JDBC Data Source for the User Interface Domain

Use this procedure to configure the JDBC data source for the User Interface Domain. Verify the User Interface (UI) Domain Admin Server is up and running before performing this procedure.

> **Note:** When upgrading to an Exadata release or setting up new configuration for Rapid Planning for Exadata, the JDBC data source for the Rapid Planning Engine and User Interface domains need to be updated. Delete the old data source and create a new one for Exadata.
>
> The host name or URL should include the TNS entry for database RAC instead of single node.
>
> Example of a TNS string:
>
> ```
> (DESCRIPTION=(ADDRESS_LIST=(LOAD_BALANCE=YES)(FAILOVER=YES
> )
> (ADDRESS=(PROTOCOL=tcp)(HOST=DB_NODE_A_URL)(PORT=1234))
> (ADDRESS=(PROTOCOL=tcp)(HOST=DB_NODE_B_URL)(PORT=1234)))
> (CONNECT_DATA= (SERVICE_NAME=VIS)))
> ```
>
> Replace `DB_NODE_A_URL` and `DB_NODE_B_URL` with the URLs for the database nodes.

1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.

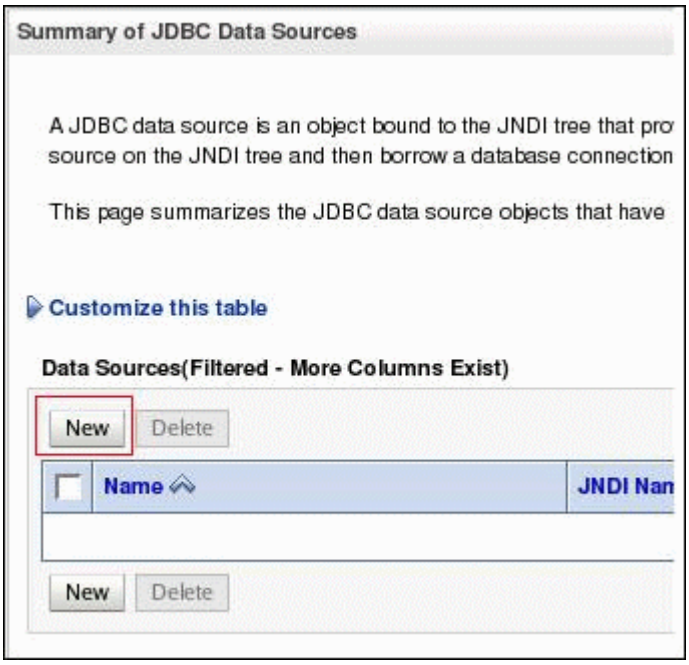


2. From the Domain Structure region, expand the **Services** tree node

3. From the Services tree, expand the **JDBC** node.

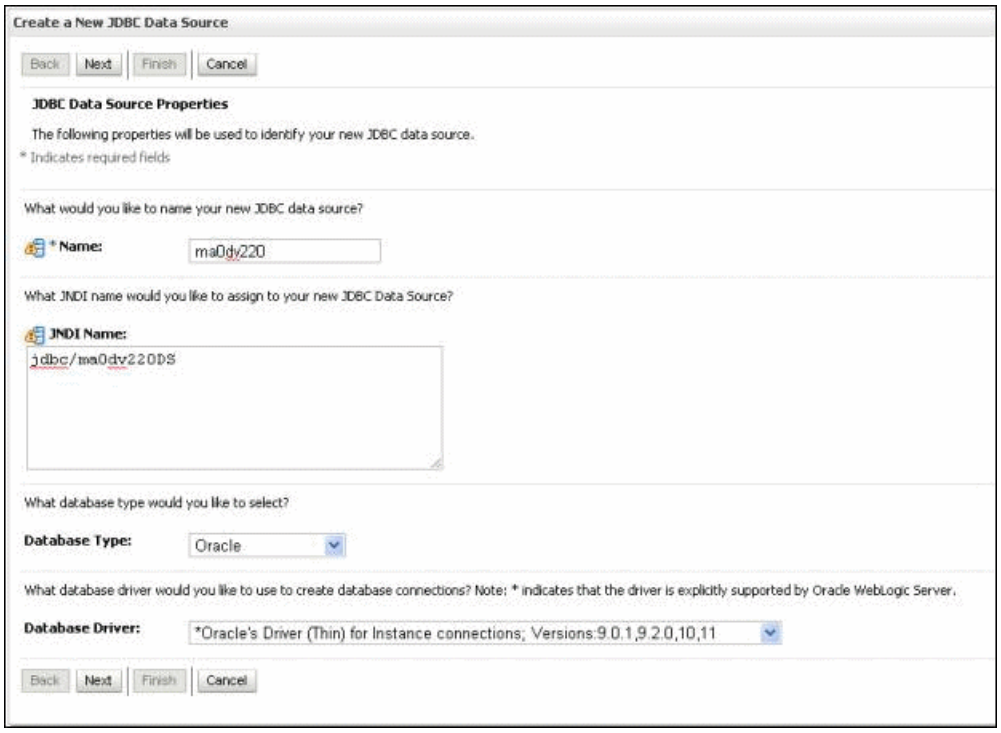
4. From JDBC tree, select **Data Sources**.

5. Click **New**.

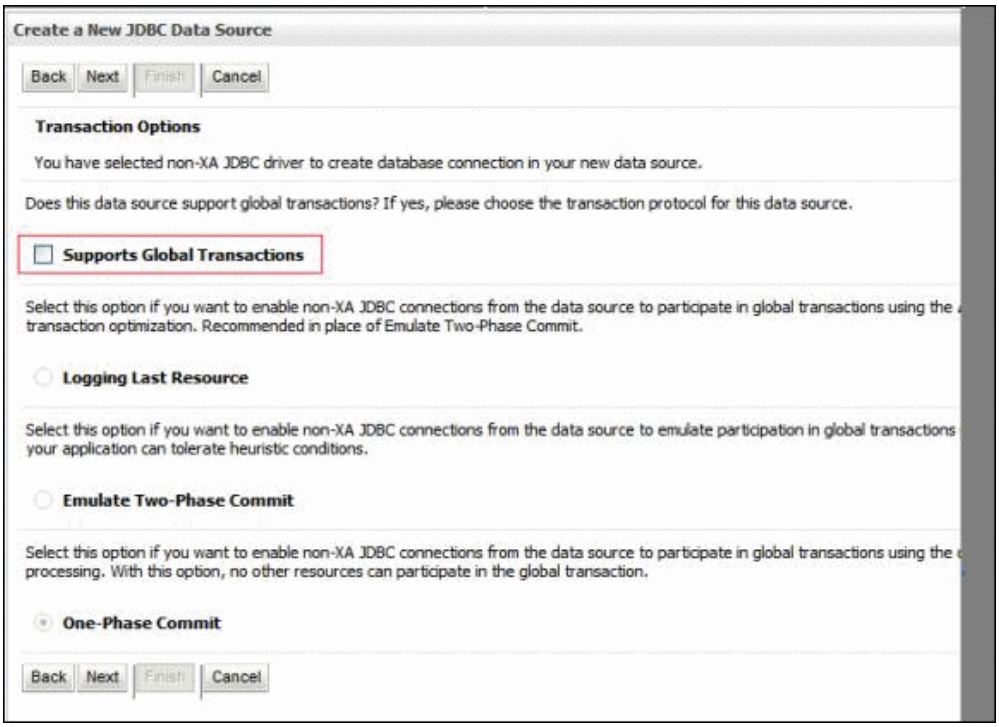


6. From the Create a New JDBC Data Source page, enter the following information as shown below, and click **Next**.

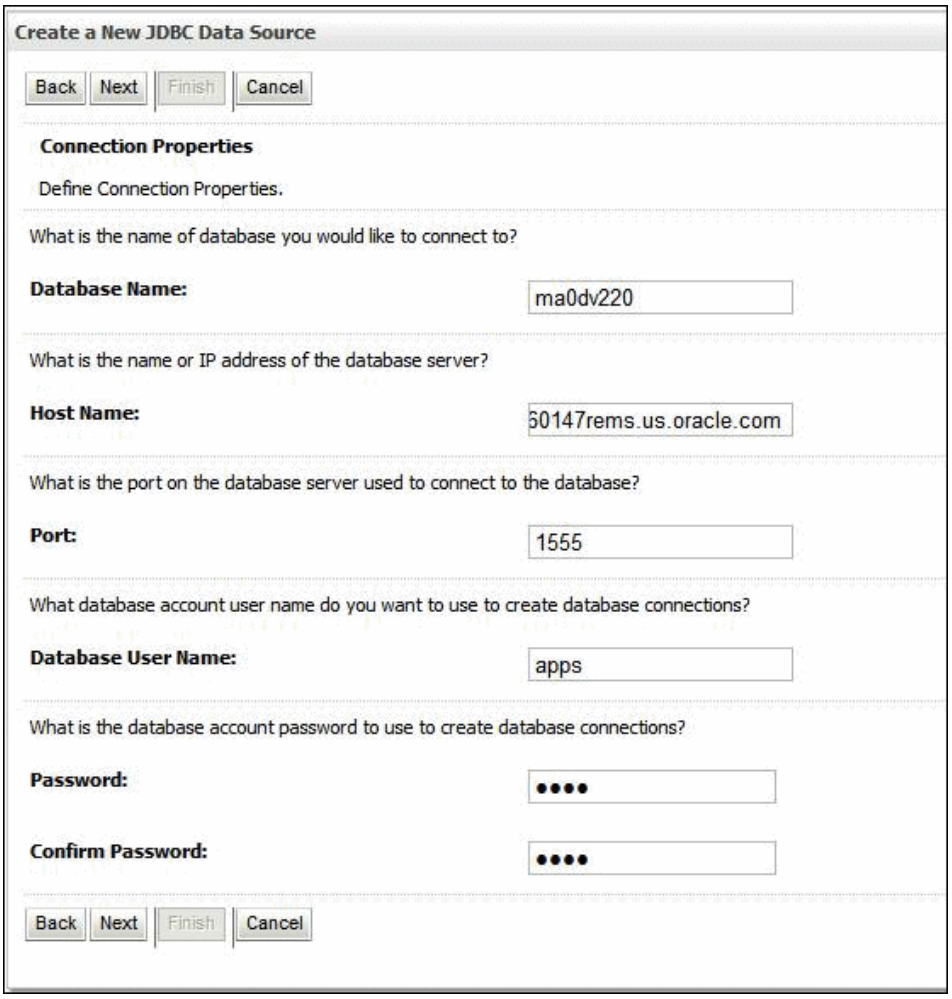
   - Name - Enter 'ma0dv220'.
   - JNDI Name - Enter 'jdbc/ma0dv220DS'.
   - Database Type - Select **Oracle**.
   - Database Driver - Select **Oracle's Driver (Thin) versions: 9.0.1, 9.2.0, 10, 11**.



7. Deselect **Supports Global Transaction**, and click **Next**.

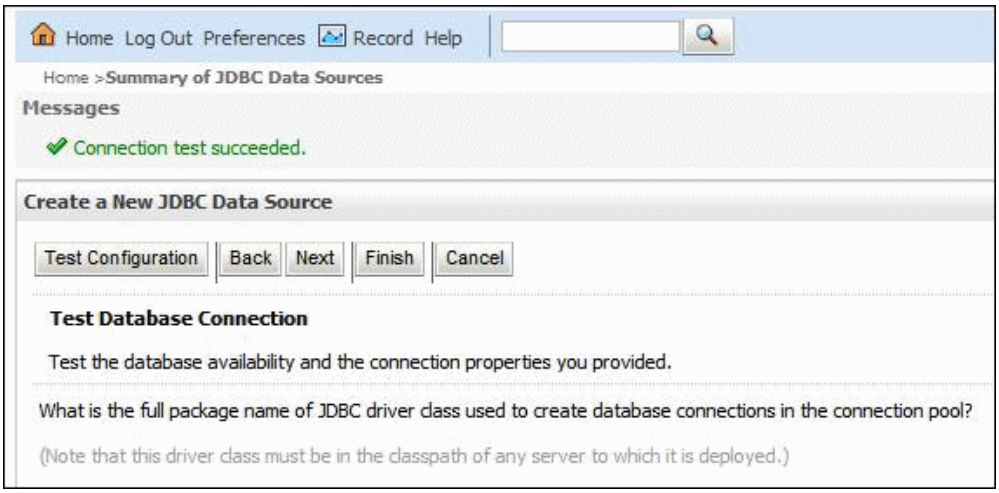


8. Enter the following information, and click **Next**.
   - Database Name - Enter database name (example, ma0dv220).
   - Host Name - Enter host name (example, rws60147rems.us.oracle.com).
   - Port - Enter port number (example, 1555).
   - Database User Name - Enter database user name.
   - Password - Enter database user name password.
   - Confirm Password - Reenter database user name password.



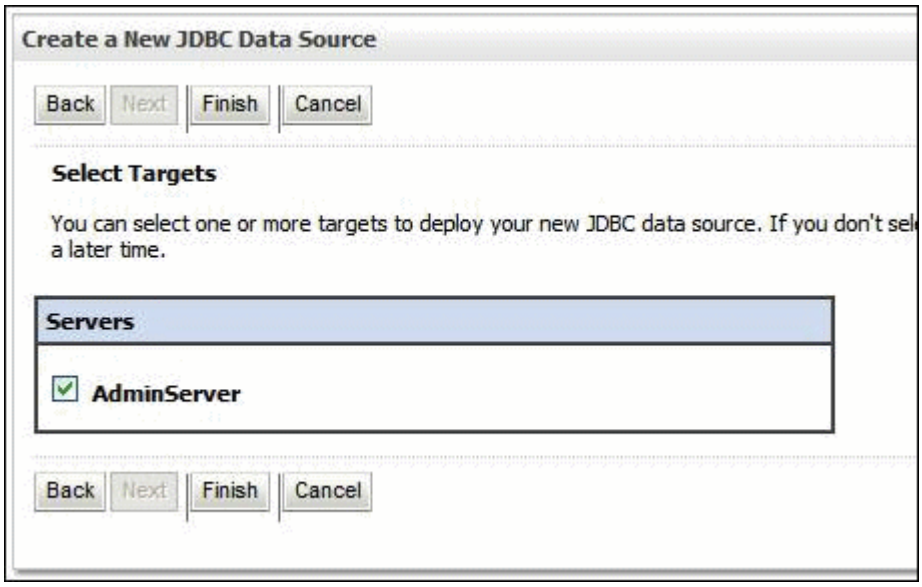
9. Click **Test Configuration**.

If JDBC is set up correctly, then a message "Connection test succeeded" appears.

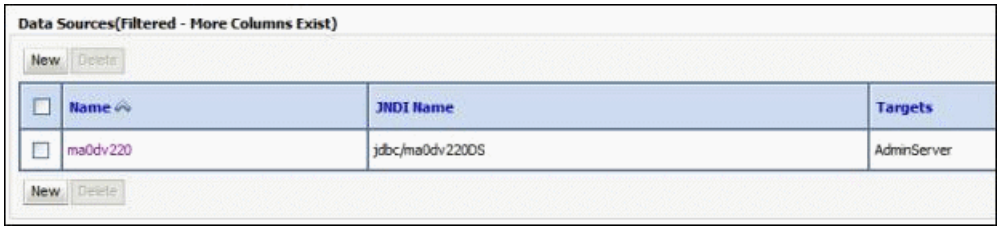


10. Click **Next**.

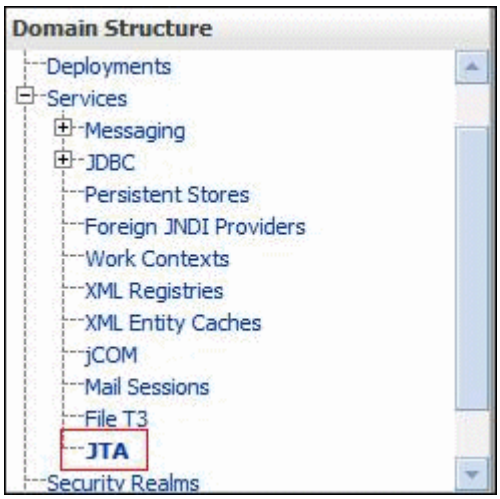
11. Select the default Admin Server as the target (as shown in the example below), and click **Finish**.



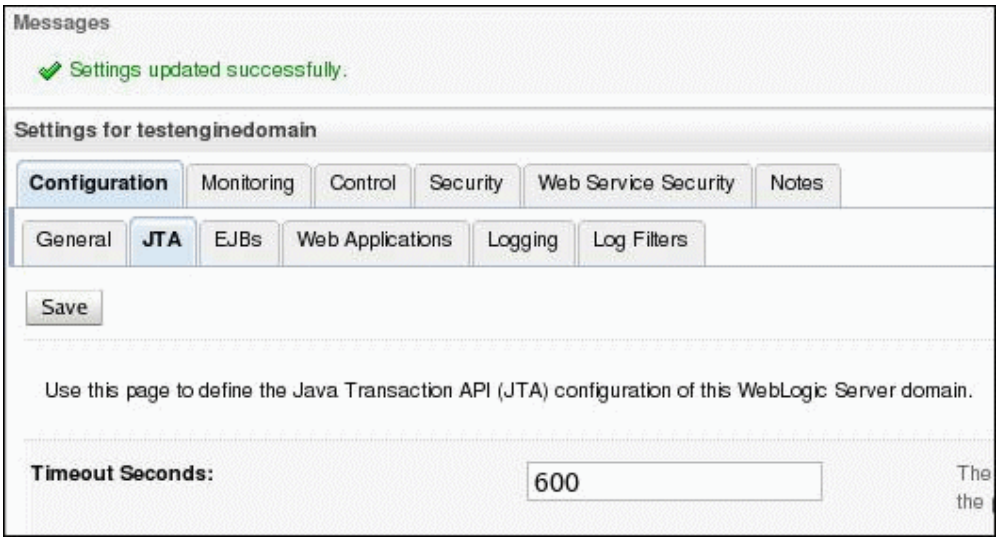
The Summary of JDBC Data Source page appears. The data source appears on the page.



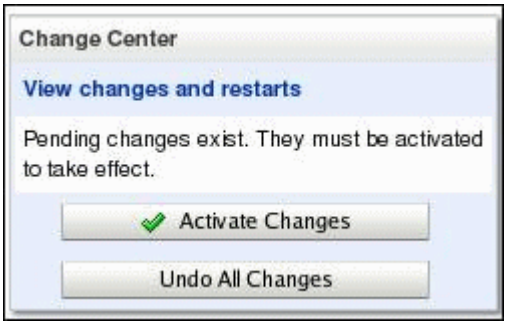
12. From the Domain Structure region, navigate to **Services > JTA**. Select the **Configuration** tab and then the **JTA** tab.



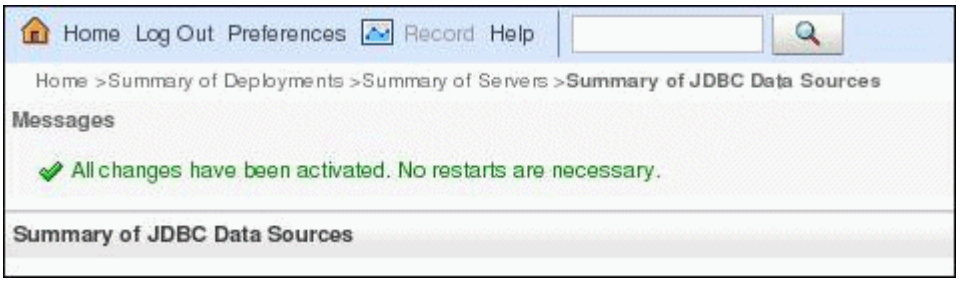
13. Set **Timeout Seconds** to '600' seconds as shown below, and click **Save**.



14. From the Change Center, click **Activate Changes**.



Once activation is complete, the message "All changes have been activated. No restarts are necessary." appears.



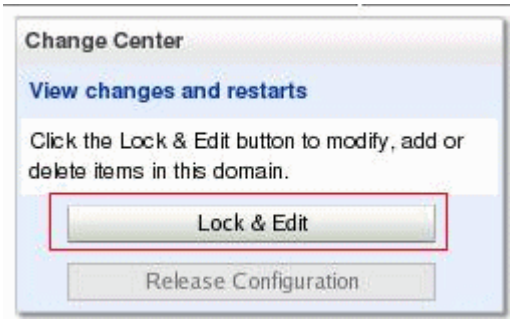
The JDBC Resource has been successfully set up.

Deploying the RP Administration Application in the User Interface Domain

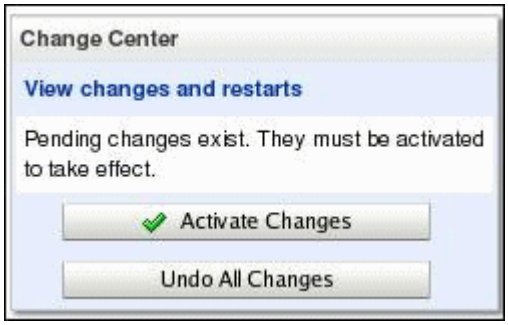
Perform the following procedure to deploy the Rapid Planning Administration application in the User Interface (UI) Domain.

Verify the UI Domain Admin Server is up and running before performing this procedure.

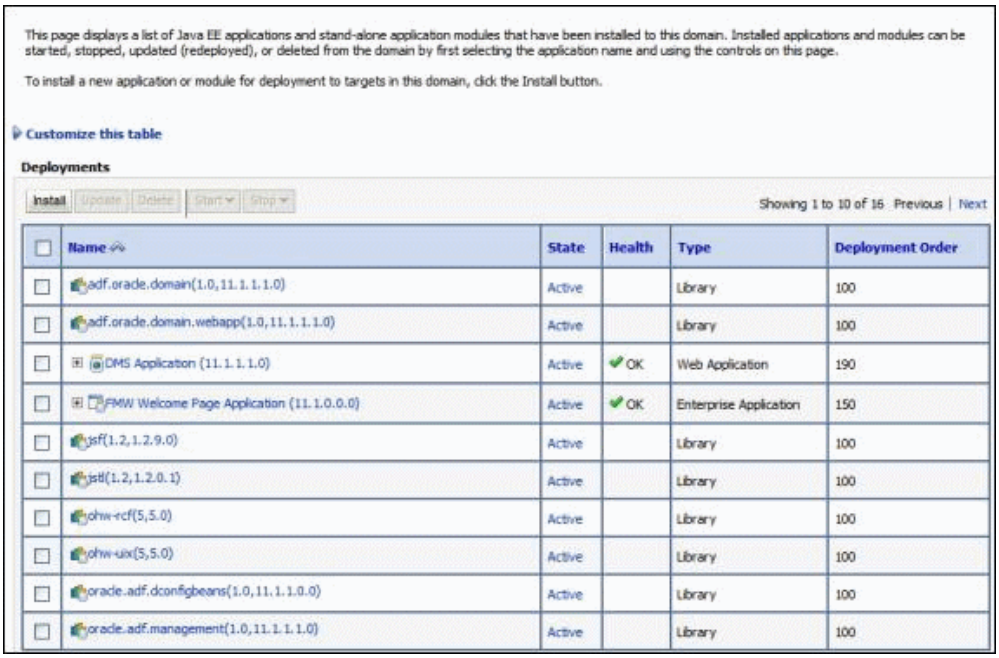
1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



2. From Domain Structure region, select **Deployments**.

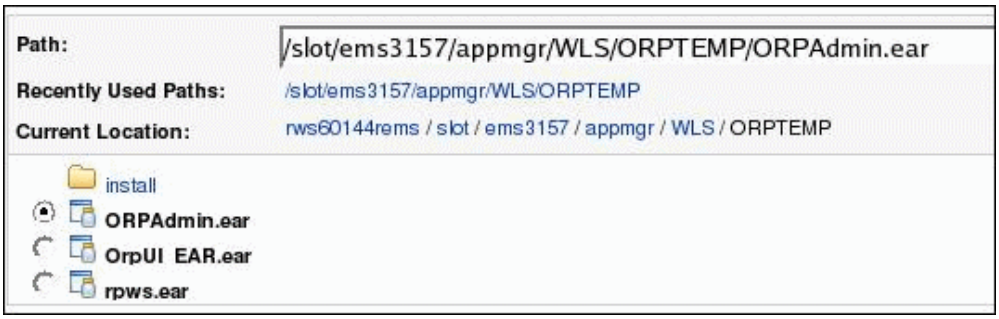


The Java EE applications appear on the page.

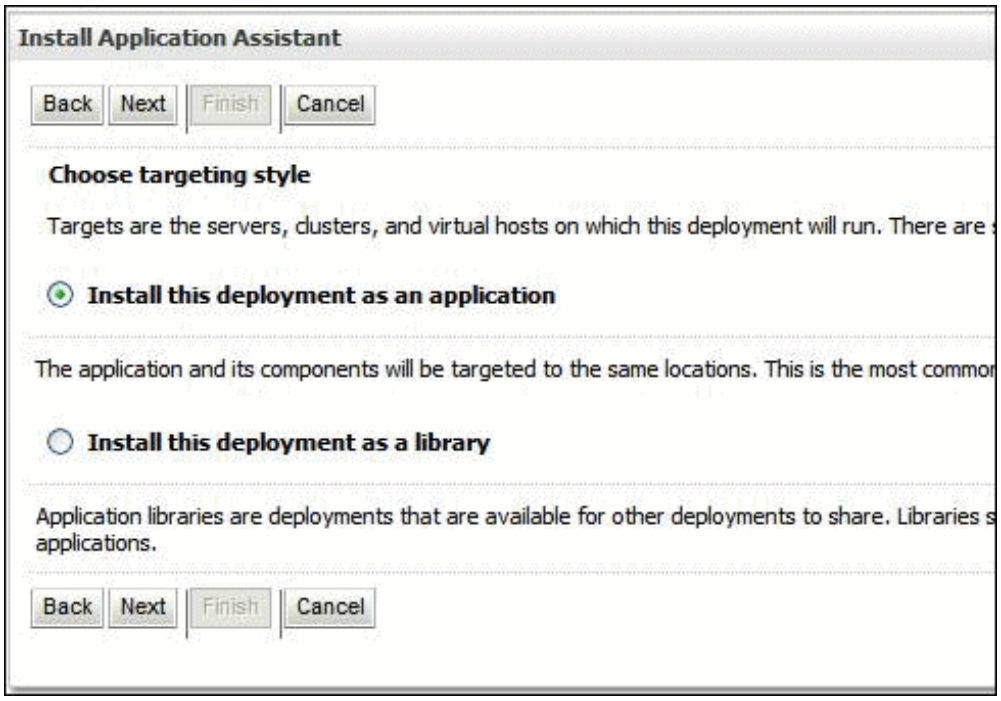


3. Click **Install**.

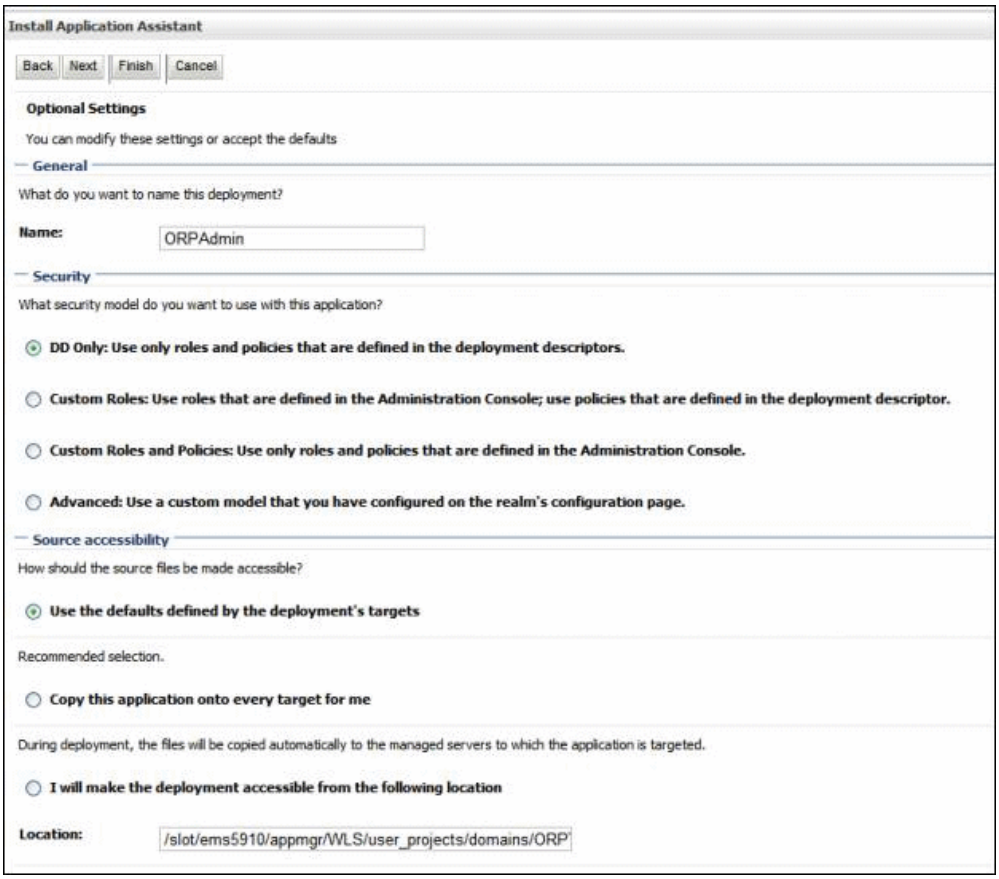
4. Navigate to the path where the EAR file is located, and select the ORPAdmin.ear file. The EAR file is in the ORPTEMP location, as mentioned in Performing Pre-Configuration Setup, page 2-1 section of this document.



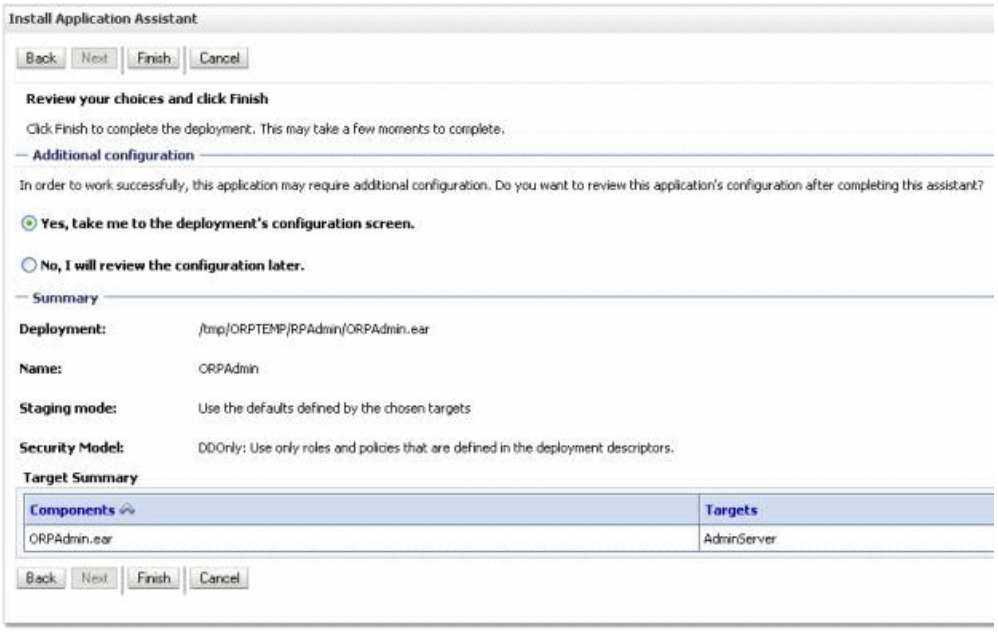
5. Select **Install this deployment as an application**, and click **Next**.



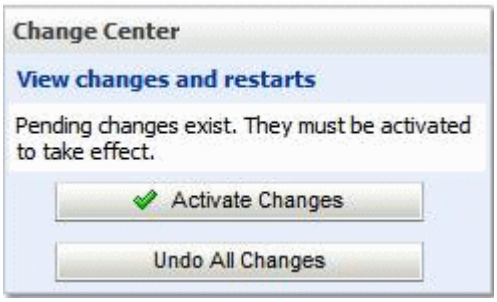
6. Select the options you require, and click **Next**.



7. Click **Finish**, and then click **Save** (if applicable).



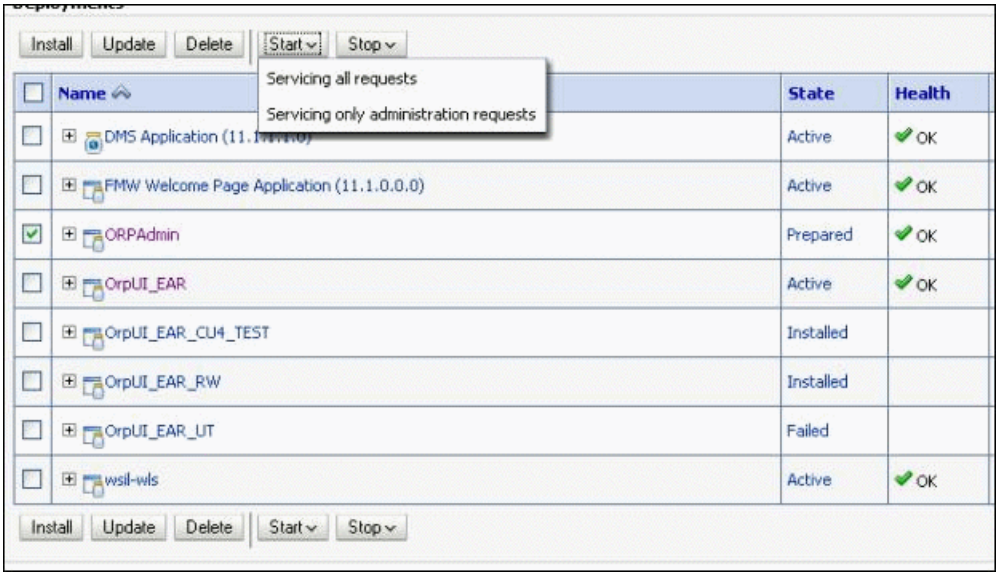
8. Select **Activate Changes**.



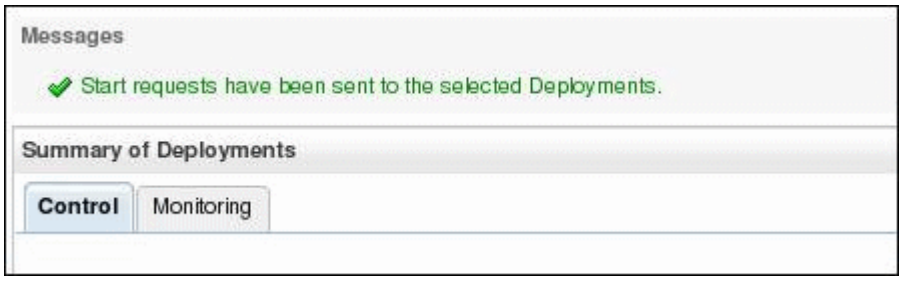
The deployment appears in the table.

Optionally, you can restart the AdminServer after deployment.

9. Select **ORPAdmin**. Click **Start > Servicing all requests**. Click **Next**. The Start Application Assistant page appears. Click **Yes**.



A message appears to inform you that the start requests have been sent to the selected deployments.



10. Log in to the application using following link format in your web browser:

    Example:

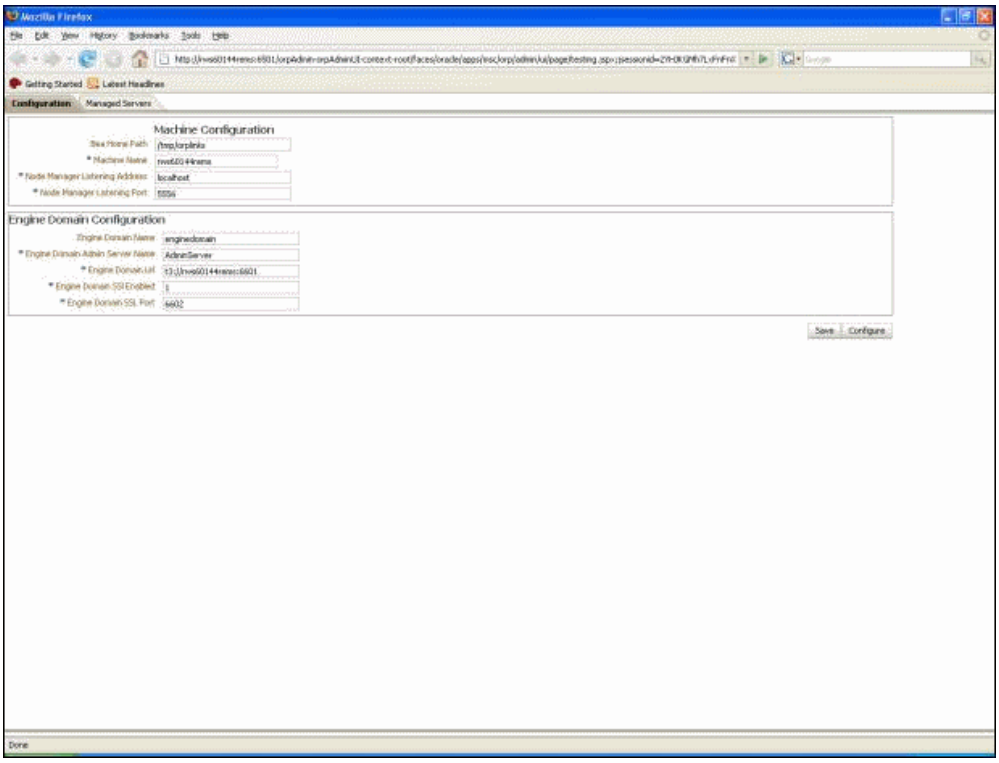
    ```
    http://<Machine_Name>:<Port_No>/rpadmin/faces/oracle/apps/msc
    /orp/admin/ui/page/AdminMainUI.jspx
    ```

    Example:

    ```
    http://rws60144rems:6501/rpadmin/faces/oracle/apps/msc/orp/ad
    min/ui/page/AdminMainUI.jspx
    ```

    The EBS home page appears.

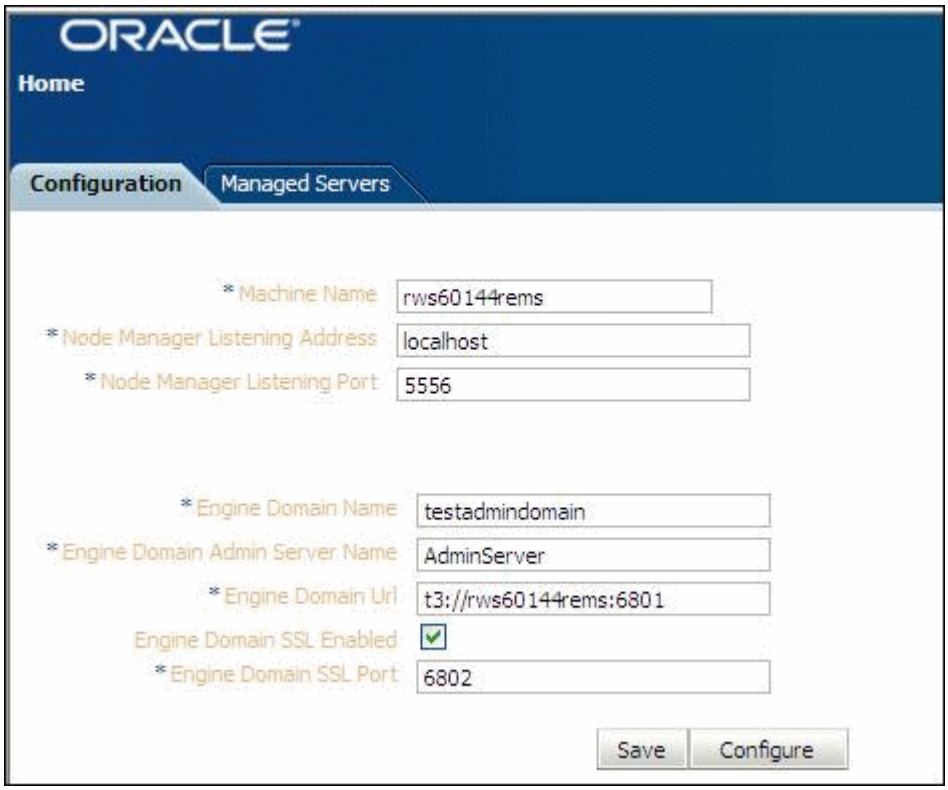
11. Select **Advanced Planning Administrator** responsibility, and then select **Rapid Planning (Setup and Configuration)**.



Setting the Initial Configuration for the Rapid Planning User Interface and Engine

Verify the Engine Domain Admin Server is up and running before performing this procedure.

1. On Rapid Planning Admin User Interface (UI) home page, click the **Configuration** tab.



2. Enter the following information.

Machine Details

1. Machine Name - Host name of the machine on which the WebLogic Server is running (example, rws60144rems.us.oracle.com).

2. Node Manager Listen Address - Set to localhost.

3. Node Manager Listen Port - Set to 5556.

Engine Domain Details

1. Engine Domain Name - Enter the name of Engine Domain provided during installation in Creating the Engine Domain, page 3-1.

2. Engine Domain Admin Server Name - Enter the name of Engine Domain Admin Server provided during installation in Creating the Engine Domain, page 3-1.

3. Engine Domain Url - Enter `t3://<Machine_Name>:<Port_No>`. Use protocol `t3` and not `http`.

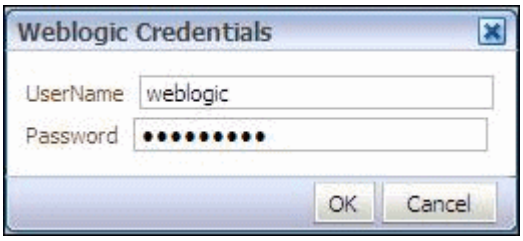
4. Engine Domain SSL Enabled - Select this option.

5. Engine Domain SSL Port - Enter the SSL Port Number provided during installation in Creating the Engine Domain, page 3-1.

3. Once you have entered all the values, click **Save**.

4. Verify the information entered, and click **Configure**. The WebLogic Credentials dialog appears.

5. Enter the user credentials for Engine Domain Admin Server, and click **OK**.

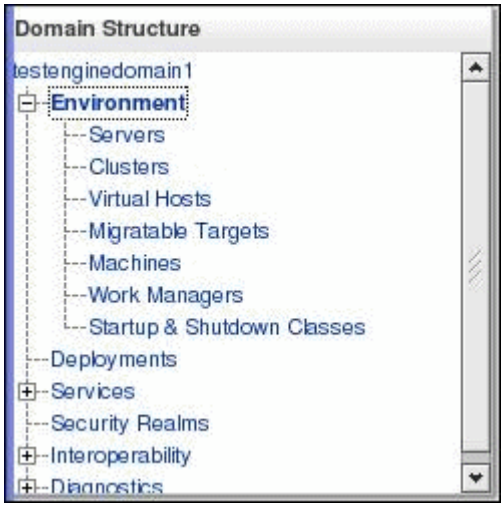


After configuration, the machine and Node Manager are set up.

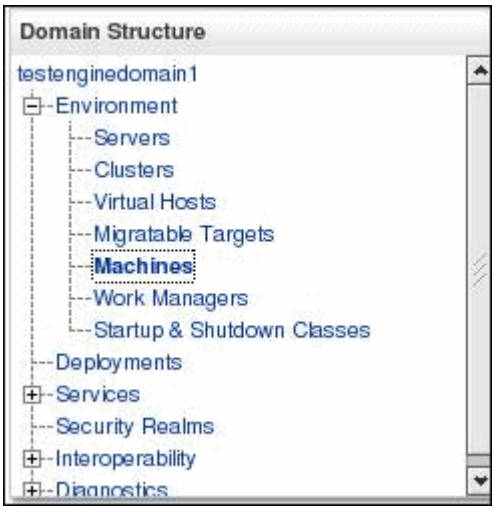
6. Verify the machine and Node Manager setup.

   1. Log in to WebLogic Administration Console from your browser.

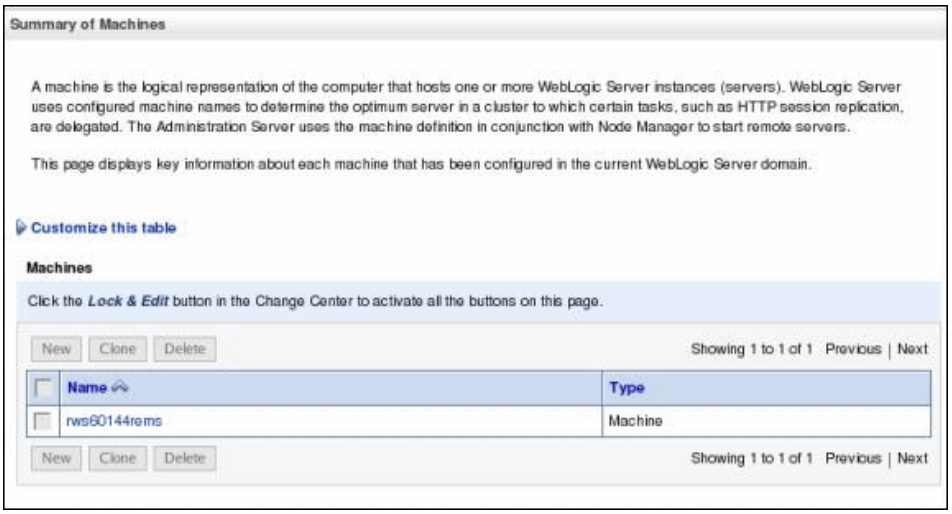
   2. From the Domain Structure region, expand the **Environment** node.



   3. Select **Machines**. The newly created machine appears on the Summary of Machines page.

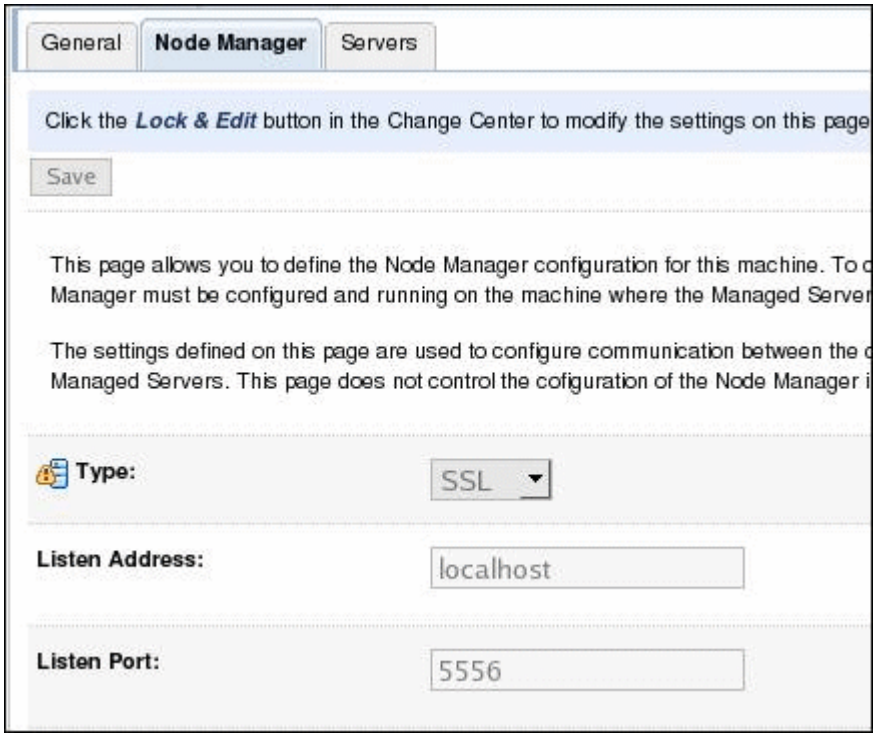


4. Select a machine name to view the machine details.



5. The settings for the server appear, as shown below.

6. Select the **Node Manager** tab to view Node Manager details.

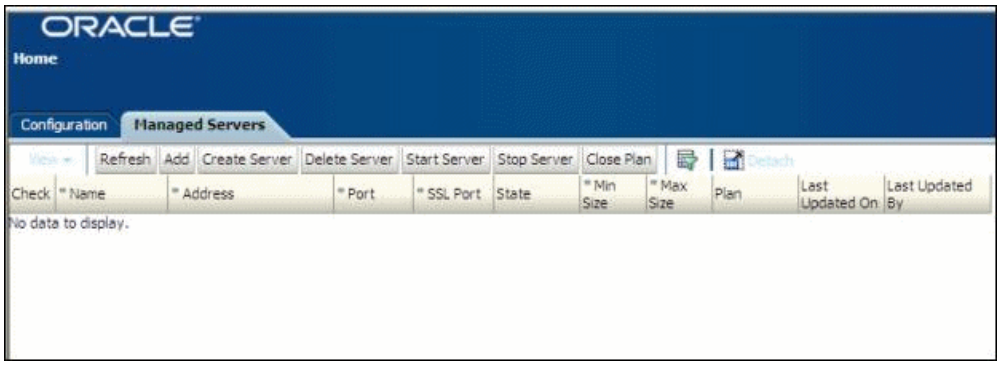


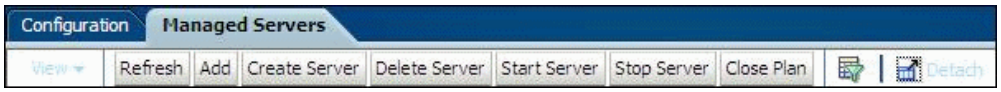
Creating the Managed Servers

Perform the following procedure to create the necessary Managed Servers.

Verify the Engine Domain Admin Server is up and running before performing this procedure.

1. In Rapid Planning Admin User Interface (UI), select the **Managed Servers** tab.

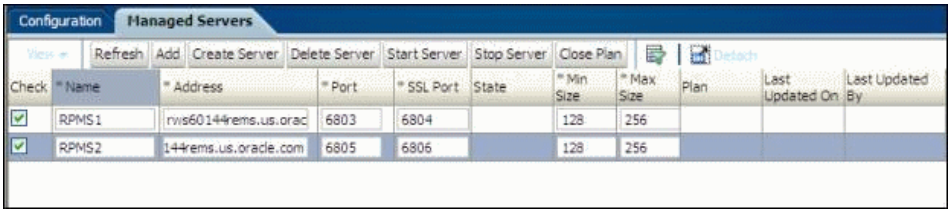




2. Cick the **Add**. An empty row appears.

3. Enter the following information in the new row:

   - Name - Enter the name of the Managed Server.
   - Address - Enter the Listen Address for Manager Server
   - Port - Enter the Listen Port for Manager Server.
   - SSL Enabled - Select the **Check** box to enter SSL Port Number.
   - SSL Port - Enter the Secured Socket Listen Port for Managed Server.
   - Min Size - Enter the minimum heap size memory argument for Manager Server.
   - Max Size - Enter the maximum heap size memory argument for Manager Server.



4. Repeat the steps above to add and define all the necessary Managed Servers. Make sure the Managed Server names are unique.

5. After the information is entered for all the servers, select the **Check** box for the servers that you want to create.

6. Click **Create Server**. You are prompted for username and password.

7. Enter the user credentials for Engine Domain Admin Server, and click **OK**.

   Wait for return of control. Once control is back; click **Refresh**. Verify that all the created servers are in the "Running" state.

8. If the server has not started, select the server and click **Start Server**.

Deploying and Starting the Engine Application

Verify the Engine Domain Admin Server is up and running before performing this procedure.

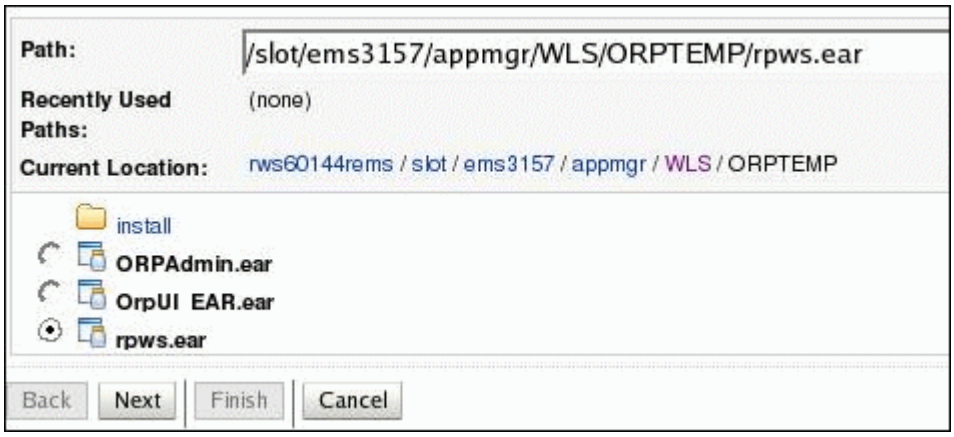
To start Engine Domain Server, refer to the Starting the Engine Admin Server, page 3-19 .

1. Click **Lock & Edit** from the Change Center region in top left corner to modify the domain configuration.

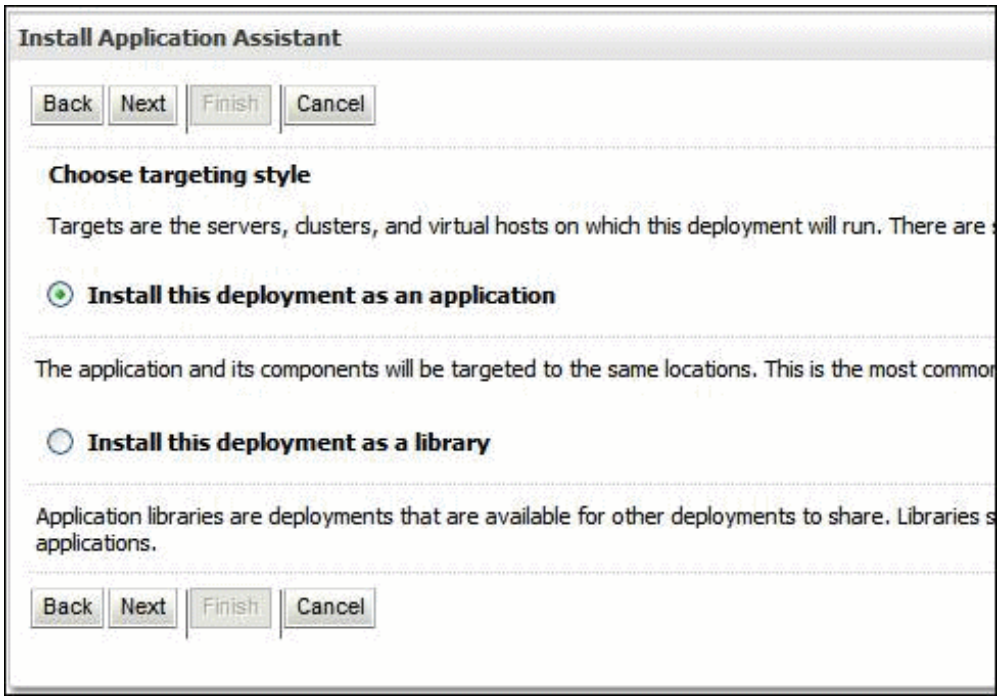
2. From Domain Structure region, click **Deployments**. The Deployments screen appears.

3. Click **Install**.

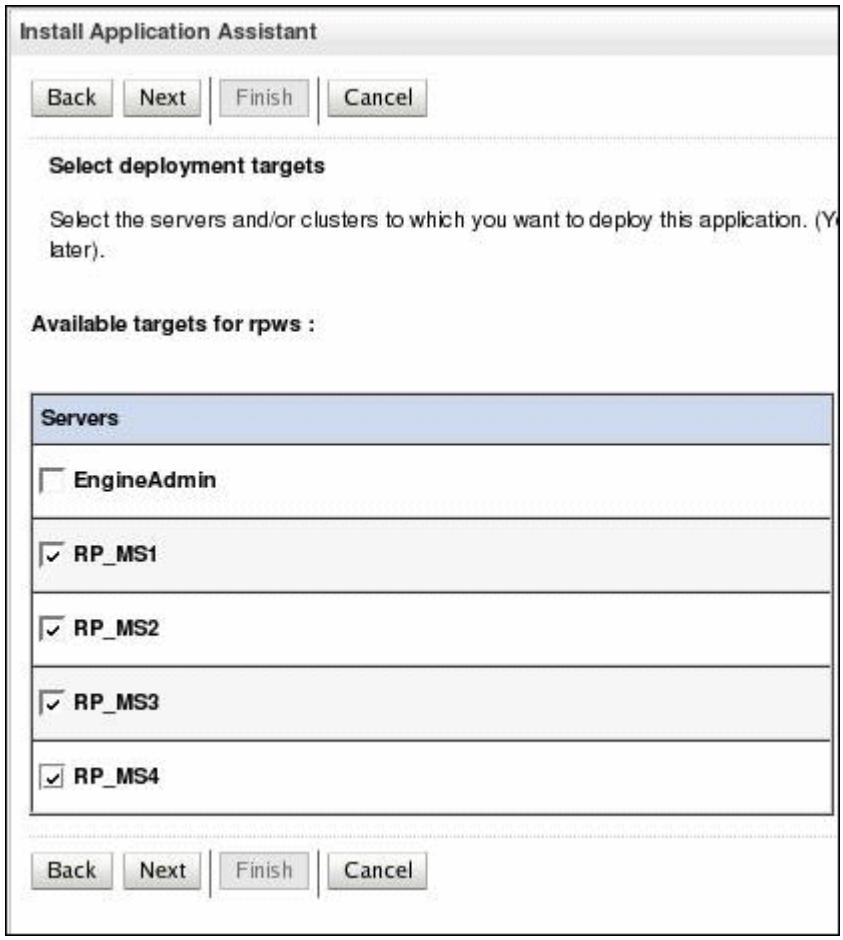
4. Navigate to the path where the EAR file is located, and select the rpws.ear file. The EAR file is located in the ORPTEMP location as mentioned in Performing Pre-Configuration Setup, page 2-1 section of this document.



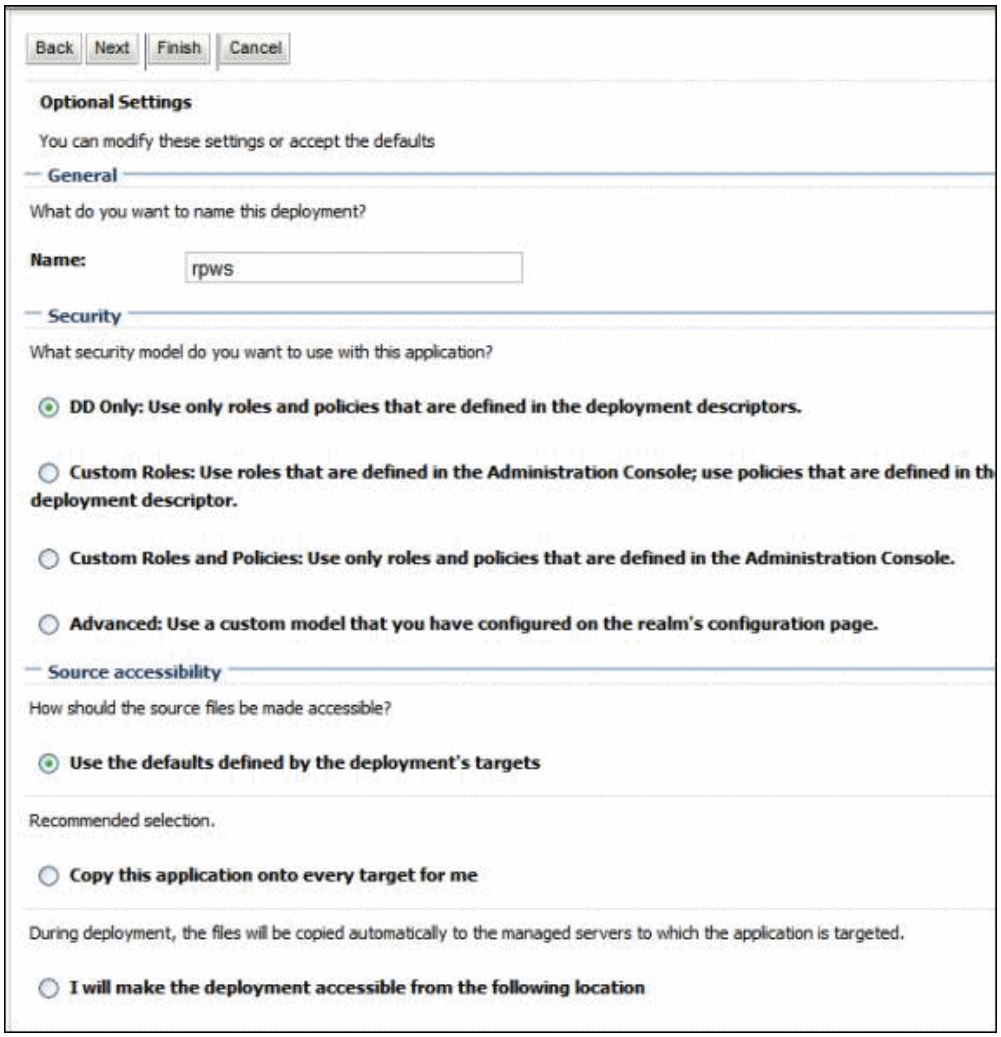
5. Select **Install this deployment as an application**, and click **Next**.



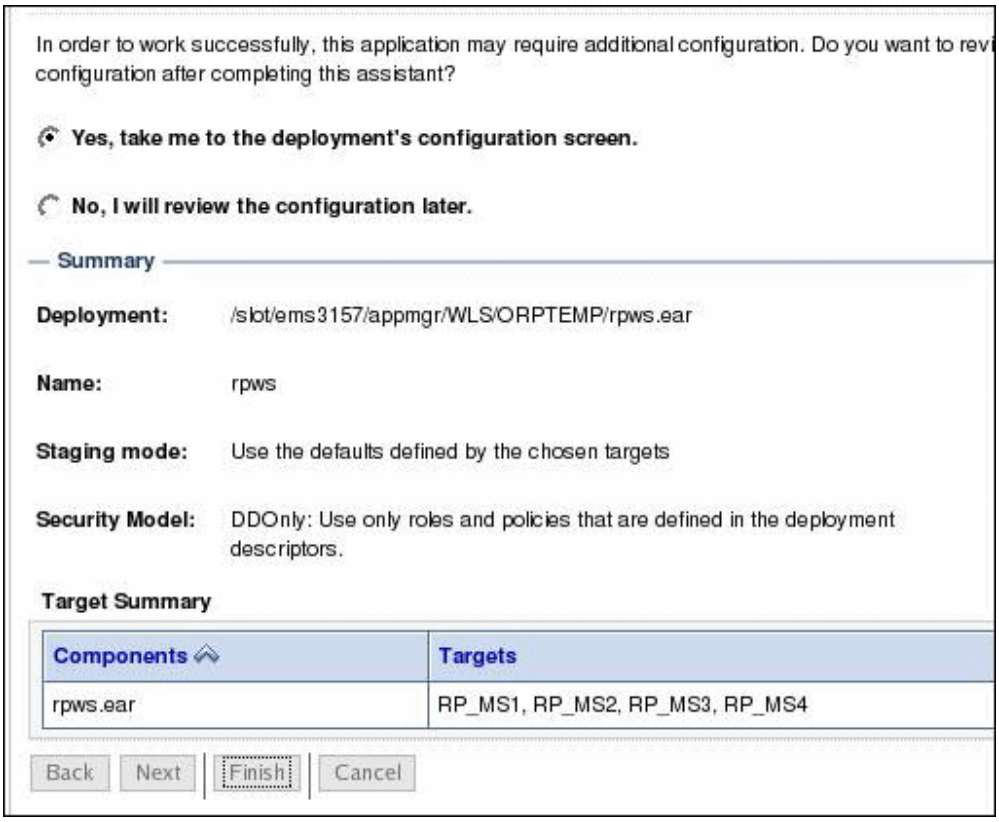
6. Select all the Managed Servers as the targets for the application, and click **Next**. Do not select the Admin Server. The Optional Settings page appears.



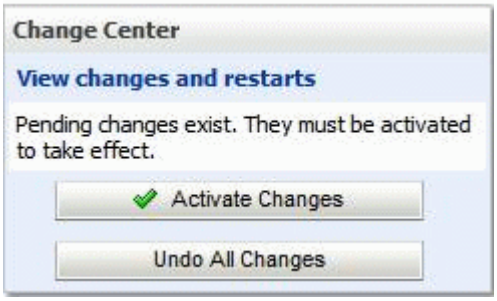
7. On the Optional Settings page, keep the default settings, and click **Next**.



8. Click **Finish**, then click **Save**.

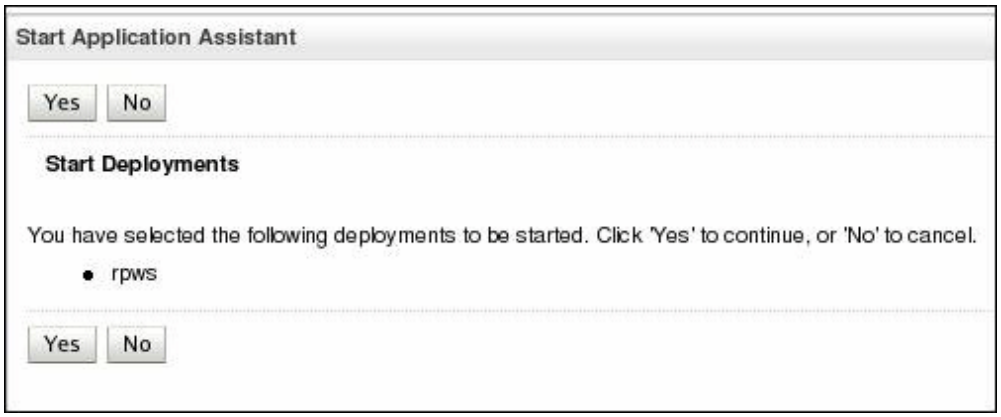


9. Click **Activate Changes**.



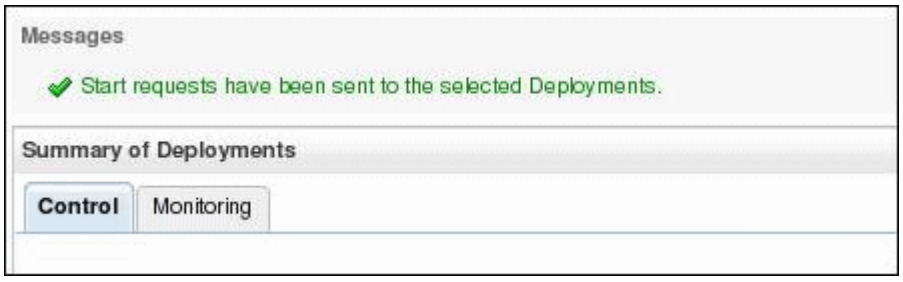
Use the Deployments page to control or modify deployments.

10. Select the check box for **rpws**. Click **Start > Servicing all requests**. Click **Next**. The Start Application Assistant page appears.



11. Click **Yes**.

    A message appears to inform you that the start requests have been sent to the selected deployments.



Deploying and Starting the User Interface Application

Perform the following procedure to deploy and start the User Interface (UI) application.

Verify the UI Domain Admin Server is running before performing this procedure.

To start UI Domain Server, refer to Starting the Engine Admin Server, page 3-19.

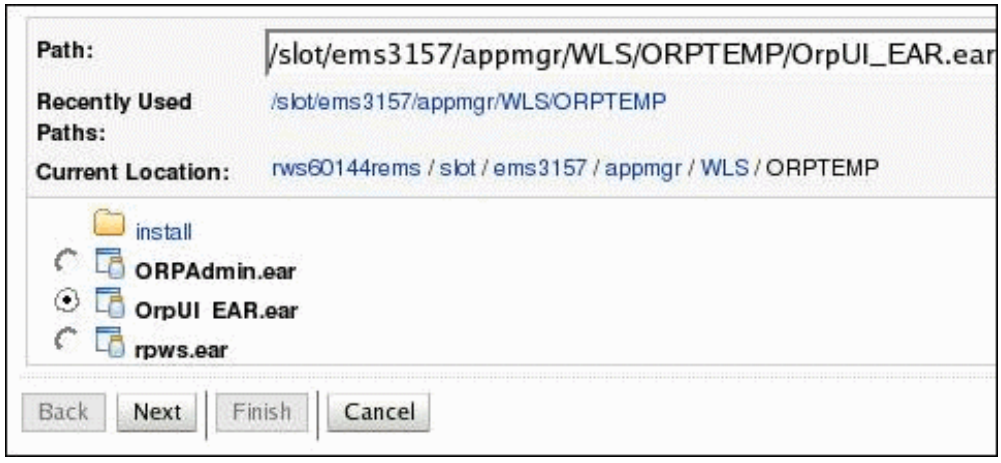
Provide the UI Domain credentials (Machine_Name, Port_No, username and password) to start the server.

1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.

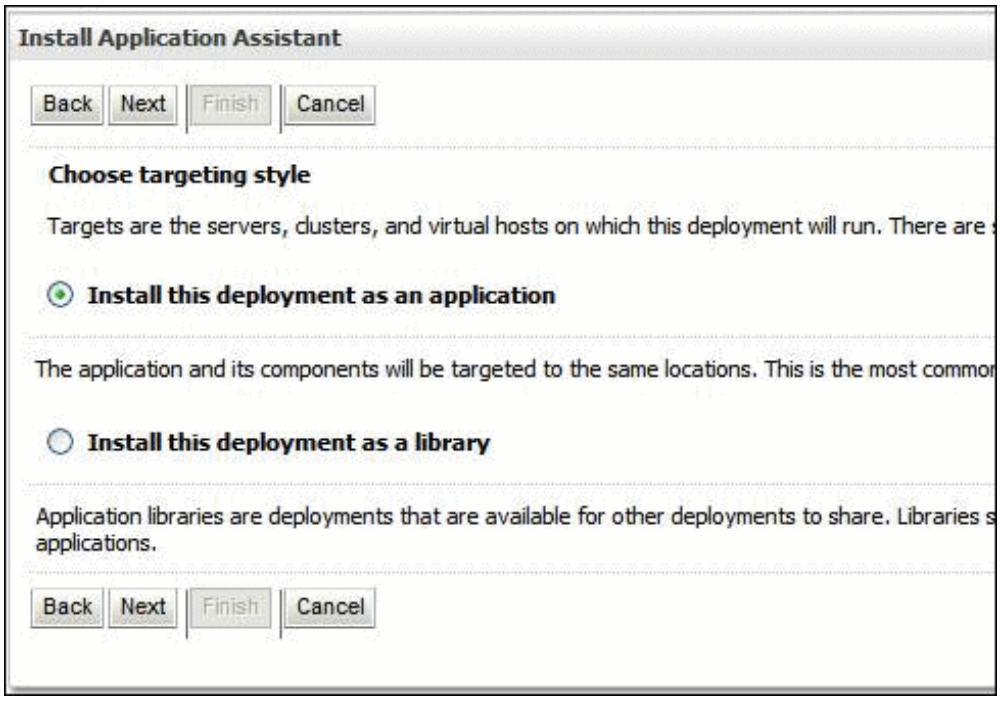
2. From Domain Structure region, click **Deployments**. The Deployments page appears.

3. Click **Install**.

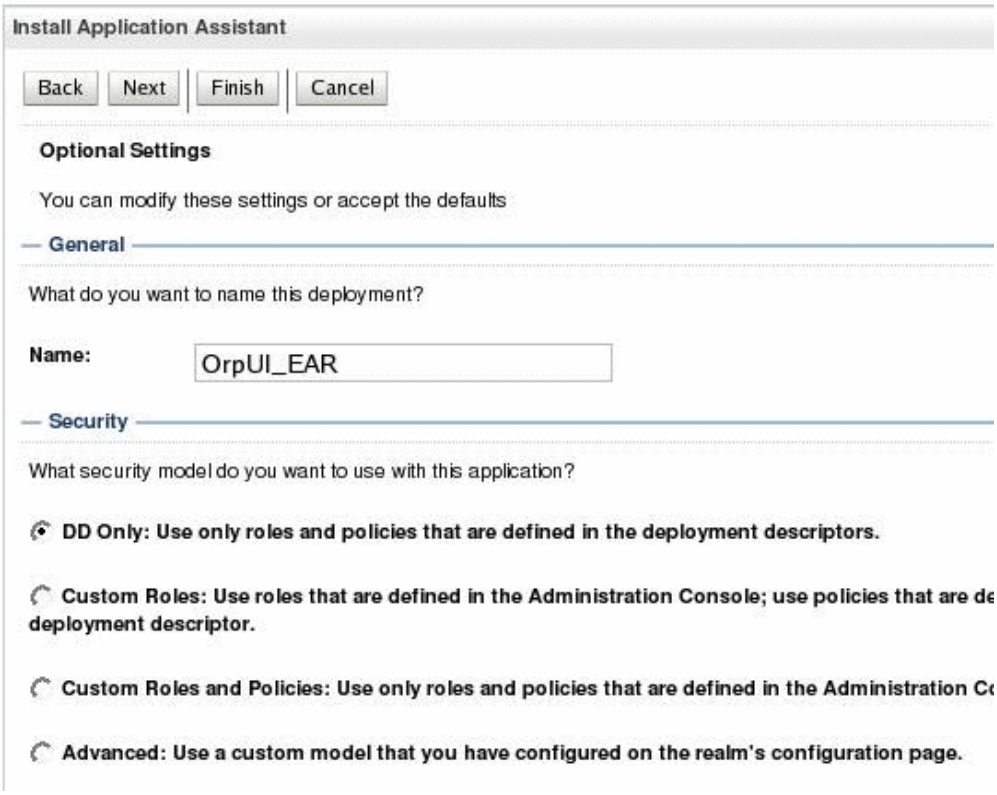
4. Navigate to the path where the EAR file is located. The EAR file is in the ORPTEMP location as mentioned in Performing Pre-Configuration Setup, page 2-1 section of this document. Select the **OrpUI_EAR.ear** file. Click **Next**.



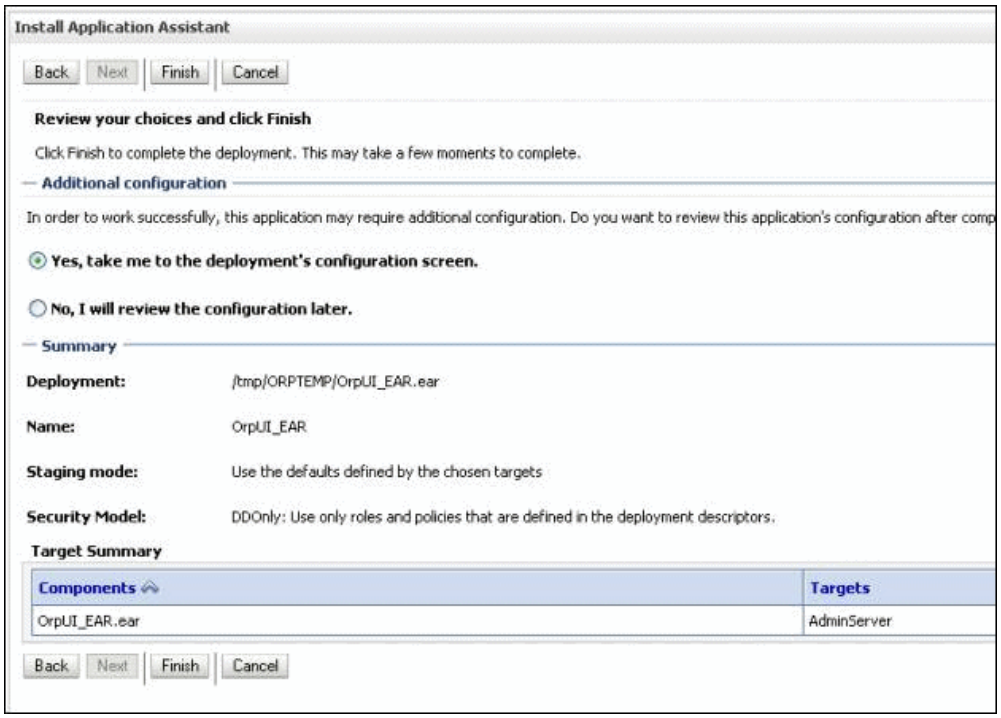
5. Select **Install this deployment as an application**, and click **Next**. The Install Application Assistant page appears.



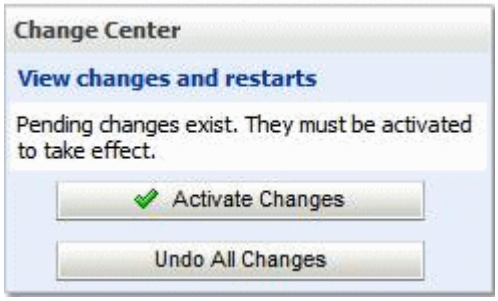
6. Keep the default settings and click **Next**. The Review Your Choices page appears.



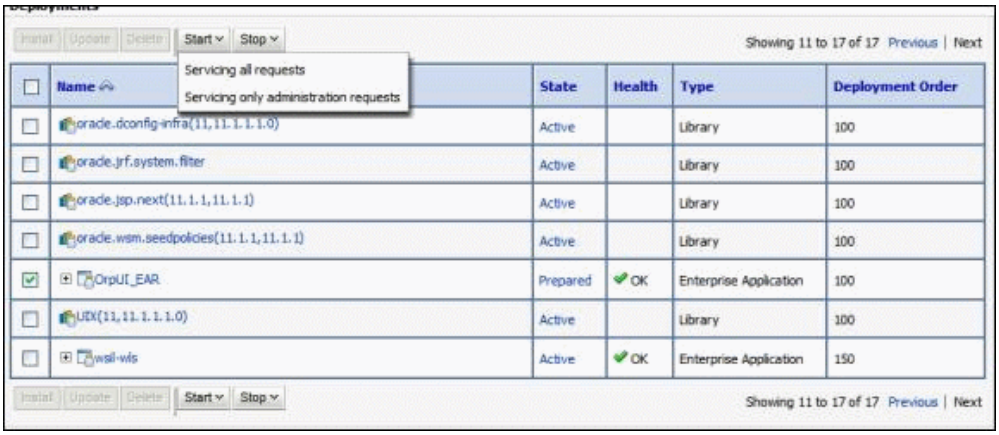
7. Click **Finish**, and then click **Save**.



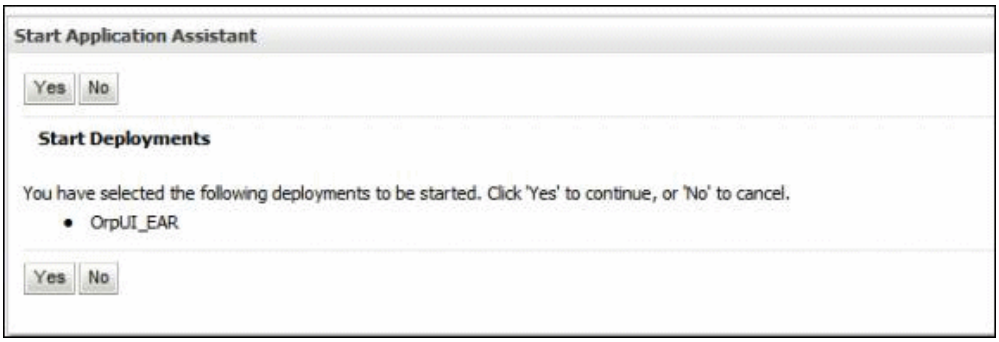
8. Click **Activate Changes**.



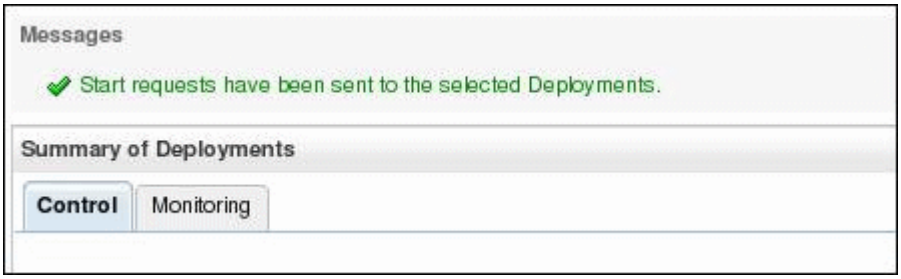
9. Select the check box for OrpUI_EAR. Select **Start > Servicing all requests**. Click **Next**. The Start Application Assistant page appears.



10. Click **Yes**.



A message appears to inform you that start requests have been sent to the selected deployments.



11. Log in to the application using following link format in your web browser:

Example Format:

```
http://<Machine_Name>.us.oracle.com:<Port_No>/rapidplanning/faces/RPMainUI
```

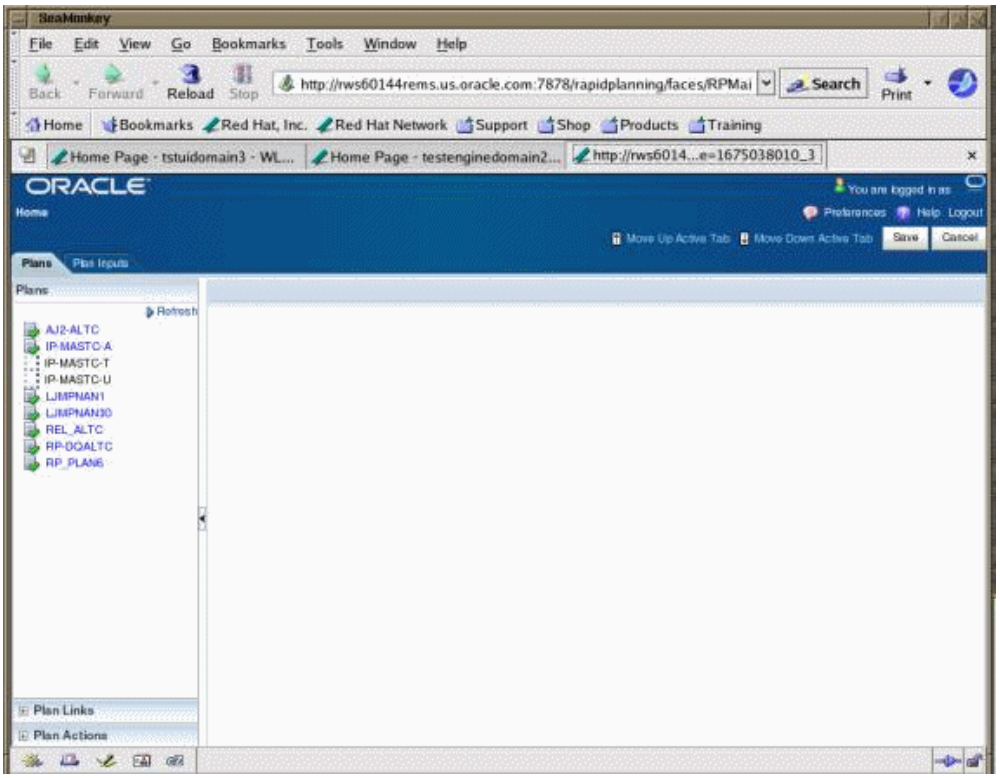
Example:

```
http://rws60144rems.us.oracle.com:7001/rapidplanning/faces/RPMainUI
```

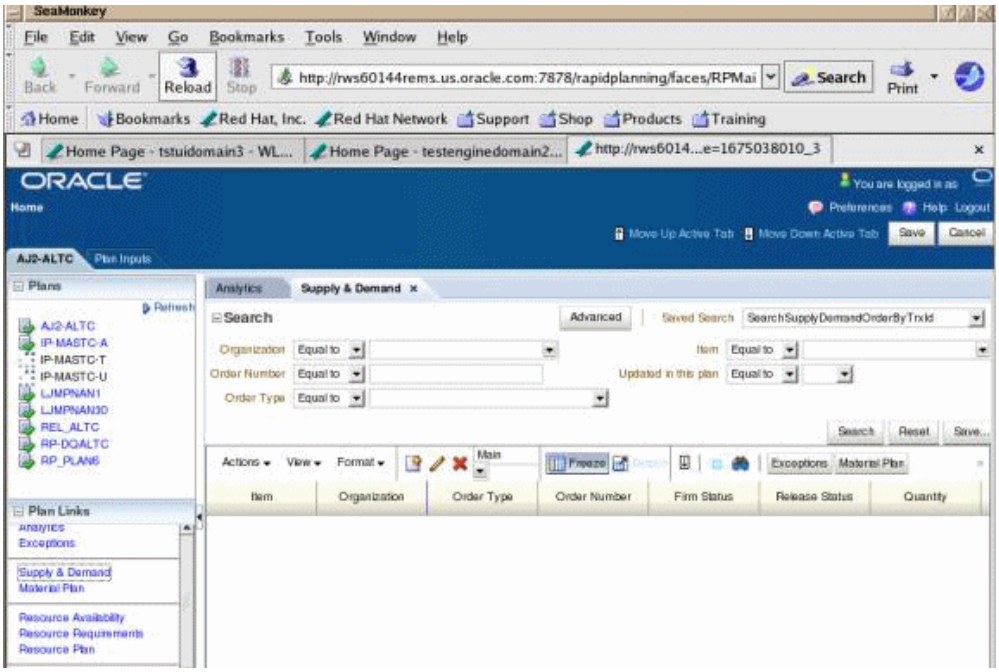
The Oracle Applications Login page appears.

12. Enter the **Username** and **Password**, and click **OK**.

13. Once home page appears, select **Oracle Supply Chain Simulation Planner > Plans, Inputs and Simulations**. The Plans page appears.



14. From the Plans region, select a plan to start working on it. The plan details page appears.


SeaMonkey
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://rws60144rems.us.oracle.com:7878/rapidplanning/faces/RPMai
Search
Print
Home Bookmarks Red Hat, Inc. Red Hat Network Support Shop Products Training
Home Page - tstuidomain3 - WL...
Home Page - testenginedomain2...
http://rws6014...e=1675038010_3
ORACLE
Home
You are logged in as
Preferences Help Logout
Move Up Active Tab
Move Down Active Tab
Save
Cancel
AJ2-ALTC
Plan Inputs
Plans
Refresh
AJ2-ALTC
IP-MASTC-A
IP-MASTC-T
IP-MASTC-U
LJMPNAN1
LJMPNAN30
REL_ALTC
RP-DQALTC
RP_PLAN6
Plan Links
Analytics
Exceptions
Supply & Demand
Material Plan
Resource Availability
Resource Requirements
Resource Plan
Analytics
Supply & Demand
Search
Advanced
Saved Search
SearchSupplyDemandOrderByTrxId
Organization
Equal to
Item
Order Number
Updated in this plan
Order Type
Search
Reset
Save...
Actions
View
Format
Main
Freeze
Exceptions
Material Plan
Item
Organization
Order Type
Order Number
Firm Status
Release Status
Quantity

4

Managed Servers

This chapter covers the following topics:

- Adding Managed Servers
- Starting Managed Servers
- Closing a Plan on Managed Servers
- Stopping Managed Servers
- Deleting Managed Servers

Adding Managed Servers

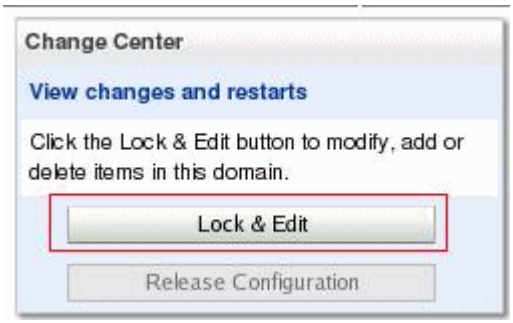
Verify the Engine Domain Admin Server is up and running before performing this procedure.

1. Once you log in to the Rapid Planning Admin User Interface, select **Refresh**, and enter the Engine domain credentials when prompted.
2. Select the **Managed Servers** tab. The list of current Managed Servers appears.
3. Click **Add**. An empty row appears. Enter the following information for the new Managed Server:
    - Name - Enter the name of the Managed Server. Make sure the Managed Server name is unique.
    - Address - Enter the Listen Address for Manager Server.
    - Port - Enter the Listen Port for Manager Server.
    - SSL Enabled - Select this option to enter SSL port number.
    - SSL Port - Enter the Secured Socket Listen Port for Managed Server.

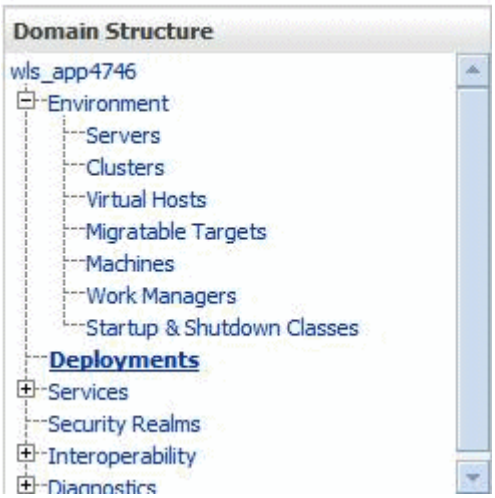
- Min Size - Enter the minimum heap size memory argument for Manager Server.
- Max Size - Enter the maximum heap size memory argument for Manager Server.

4. Repeat the steps to add and define all the necessary Managed Servers. Verify that the Manager Server names are unique.
5. After all Manager Servers are defined, select the check box for the servers that you want to create.
6. Click **Create Server**. You are prompted for the username and password.
7. Enter the user credentials for Engine Domain Admin Server, and click **OK**.

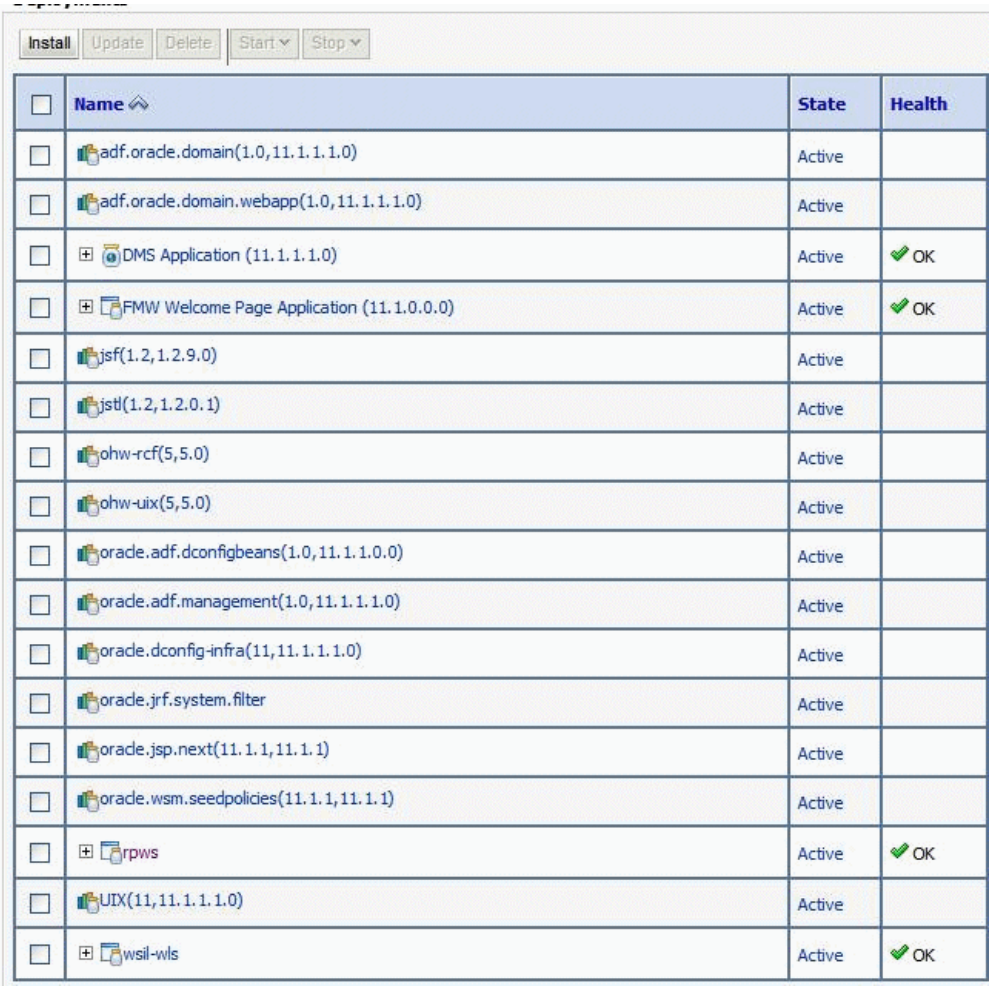
   Wait for return of control. Once control is back, all the newly created Managed Servers display a State of "Running".
8. Once the Managed Servers are added, target all the newly created Managed Servers to the Deployed Application. Open the WebLogic interface for Engine Domain as described in Starting the Engine Admin Server, page 3-19.
9. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



10. Select **Deployments** from the Domain Structure region.



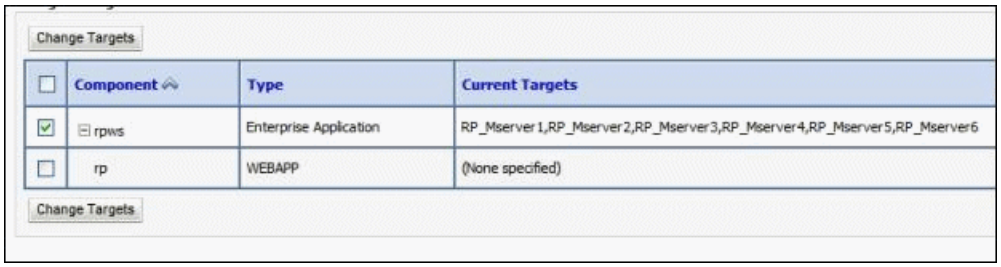
The page displays the list of available deployments.



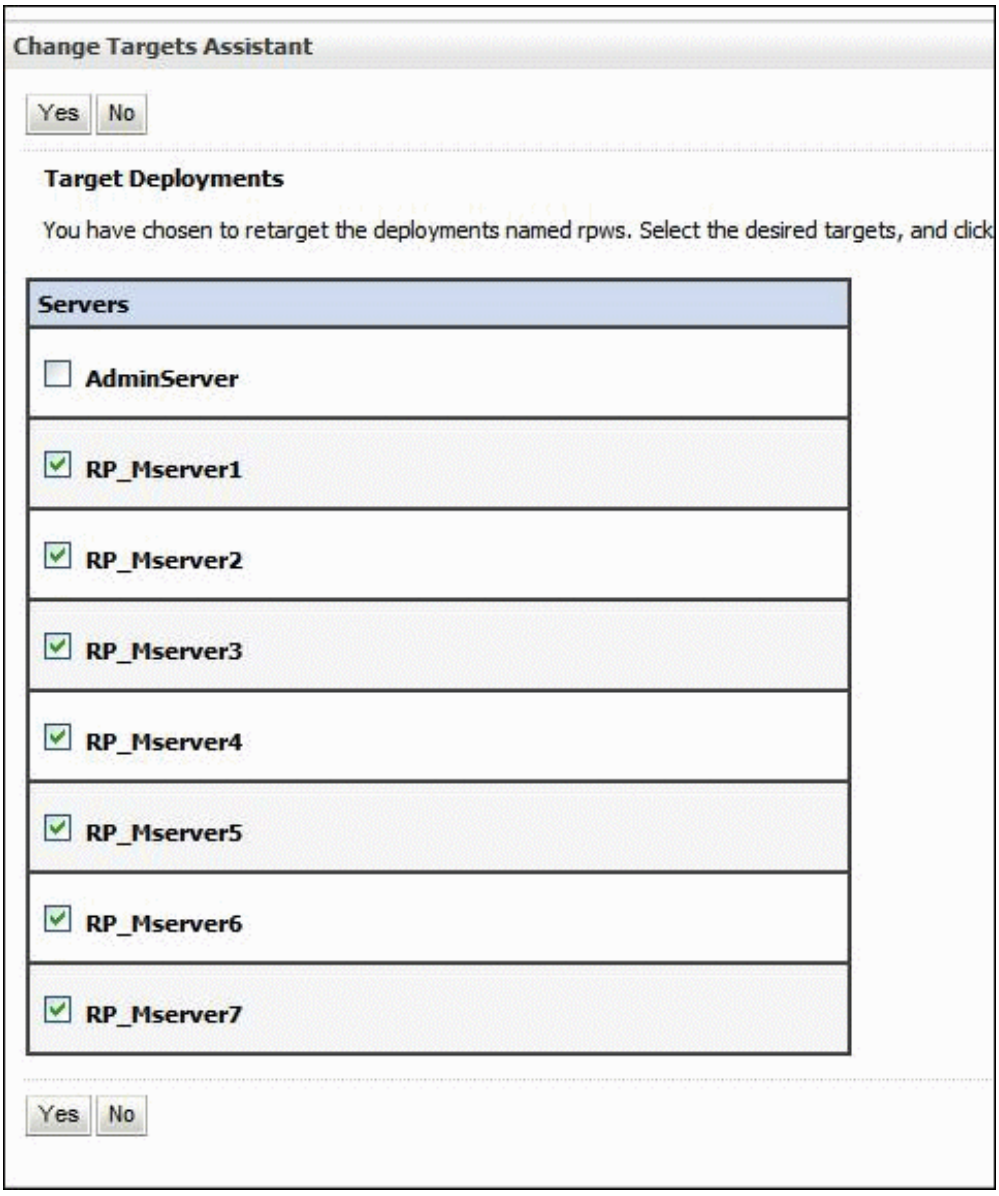
11. Select the Engine application (rpws in the example above).

12. Select the **Targets** tab.

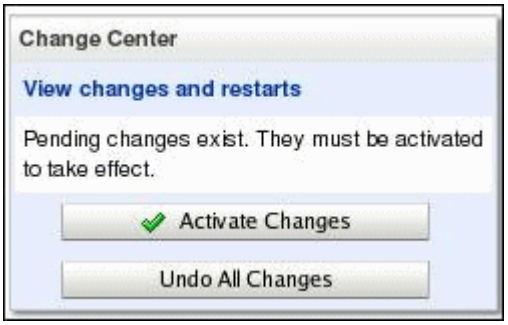
13. Select the check box with the Type "Enterprise Application", and click **Change Targets**.



14. Select all the Managed Servers you want to deploy the application, except the AdminServer, and click **Yes**. Follow the instructions.



15. From Change Center region, click **Activate Changes**.



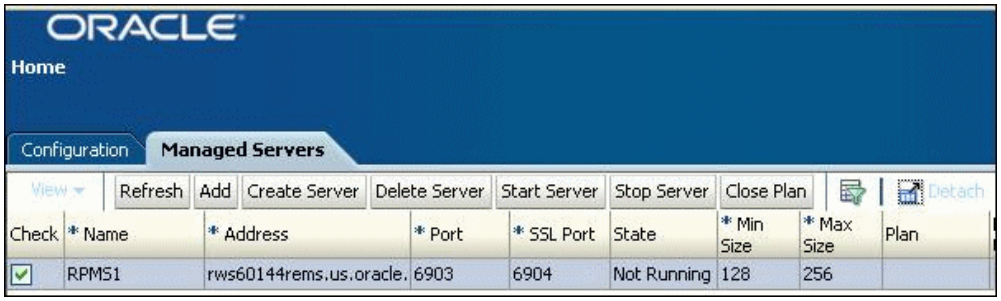
Starting Managed Servers

Perform the following procedure to start Managed Servers.

Verify the Engine Domain Admin Server is up and running before performing this procedure.

1. From the Rapid Planning Admin User Interface, select the **Managed Servers** tab. The list of current Managed Servers appears on the page.

2. Select the **Check** box for the servers you want to start, and click **Start Server**.



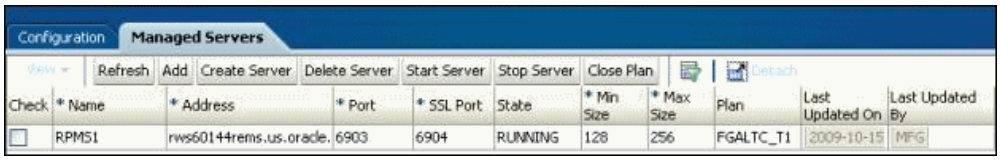
The selected servers display the State as "Running". If a selected server State does not appear as "Running", refer to the log files. Use the **Refresh** button to update the status displayed on screen.

Closing a Plan on Managed Servers

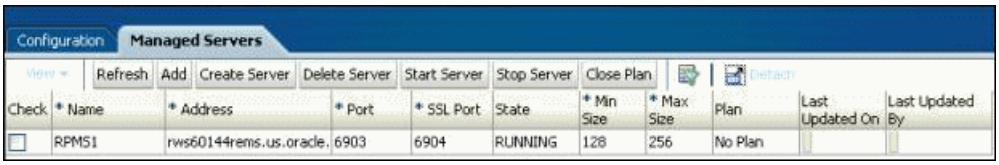
To close a plan running on a Managed Server, perform the following procedure:

1. Select the **Check** box for the Managed Server where the plan is loaded. The **Plan** field displays the name of the plan currently being run on the Managed Server.

2. Click **Close Plan**.



3. Click **Refresh**. The **Plan** field displays "No Plan".



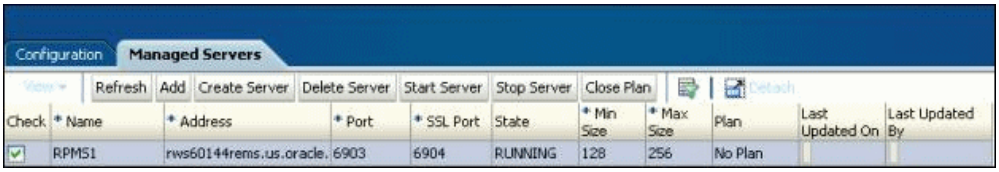
Stopping Managed Servers

Perform the following procedure to stop Managed Servers.

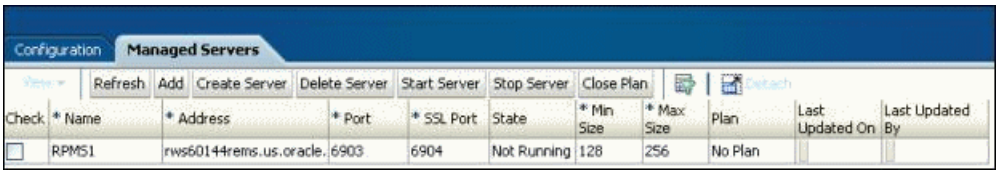
Verify the Engine Domain Admin Server is up and running before performing this procedure.

Close any plans currently loaded on the Managed Server before attempting to stop server.

1. From Rapid Planning Admin User Interface, select the **Managed Servers** tab.
2. Select the **Check** box for the servers you want to stop, and click **Stop Server**.



The selected servers display a State of "Not Running". If the selected servers do not display "Not Running", refer to the log files.



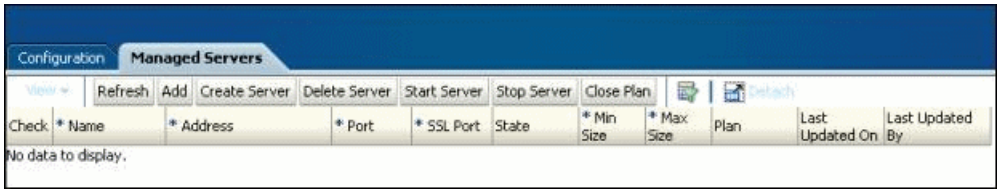
Deleting Managed Servers

Perform the following procedure to delete Managed Servers.

Verify the Engine Domain Admin Server is up and running before performing this procedure.

1. From Rapid Planning Admin User Interface, select the **Managed Servers** tab.
2. Select the **Check** box for the servers you want to delete, and click **Delete Server**.

The selected servers no longer appear on the page. If the selected servers still appear, refer to the log files.



5

Performing an Upgrade

This chapter covers the following topics:

- Copying and Extracting the ZIP Files
- Redeploying the Engine Application
- Redeploying the User Interface Application
- Deleting Oracle Rapid Planning Engine Output (Binary) Files

Copying and Extracting the ZIP Files

Each time a new patch is delivered, it has to be copied into the correct directory, and the new applications will have to be deployed to all the Managed Servers. Perform the following procedure to copy and extract the ZIP files.

1. To copy the class files, run the script InitialEngineSetup.sh in the folder WLST_scripts.

   - Log in to the machine where EBS is installed with username as APPL manager user or APPL TOP owner.

   - Set the environment variable $MSC_TOP to the path where you copied the patch.

     Example:

     /slot/ems4928/appmgr/apps/apps_st/appl/msc/12.0

     For 12.2.3, if using Online Patching, there will be two APPL_TOPs, RUN tier and PATCH tier. Compare the ZIP files for both RUN and PATCH tier, and use the higher version for deployment.

     For example, fs1 is assigned to one tier, either RUN or PATCH. Use the command `ident /u01/R122_EBS/fs1/EBSapps/appl/msc/12.0.0/dist/orp/engine.zip` to obtain the file version.

- Set the environment variable $JAVA_TOP to the path having Java classes.

  Example:

  /slot/ems2947/appmgr/apps/apps_st/comn/java/classes

2. Create a folder named ORPTEMP in a user-defined directory (for example: /tmp/ORPTEMP) on the host machine where WebLogic is installed. This folder is referred to as ORPTEMP.

3. Copy the following ZIP files to the folder ORPTEMP.

   - RPAdmin.zip
   - ui.zip
   - engine.zip

4. Extract all the ZIP files in the same folder. Each unzipped file contains a respective EAR file.

   The EAR files will be selected from this location for deployment.

5. For release 12.2 and later, there are two $MSC_TOP directories that require the following updates:

   - Copy the class files to $JAVA_TOP (oracle/apps/msc) locations on both the APPL_TOP directories.

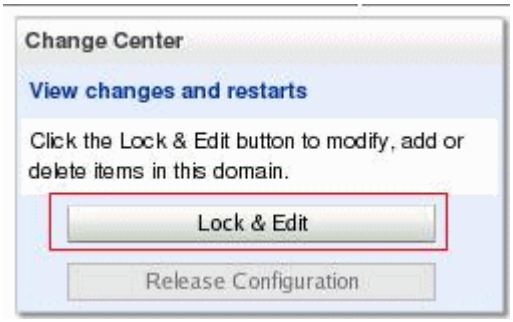
     The patching process does not update this directory. Refer to the patch readme for each release for specific manual updates that may be required to these directories.

Redeploying the Engine Application

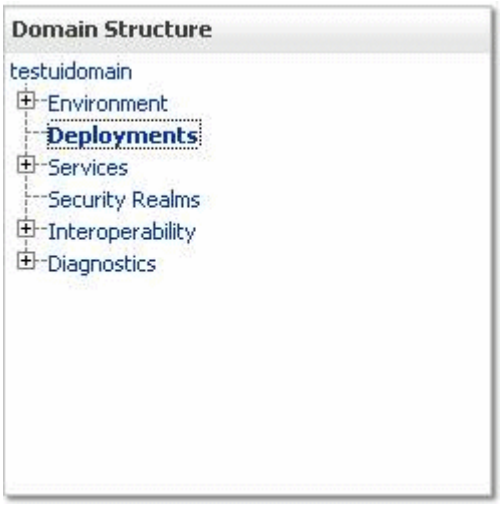
Perform the following procedure to redeploy the Engine Application.

1. In order to redeploy the Engine Application, open the WebLogic interface for Engine Domain according to the procedure in Starting the Engine Admin Server, page 3-19.

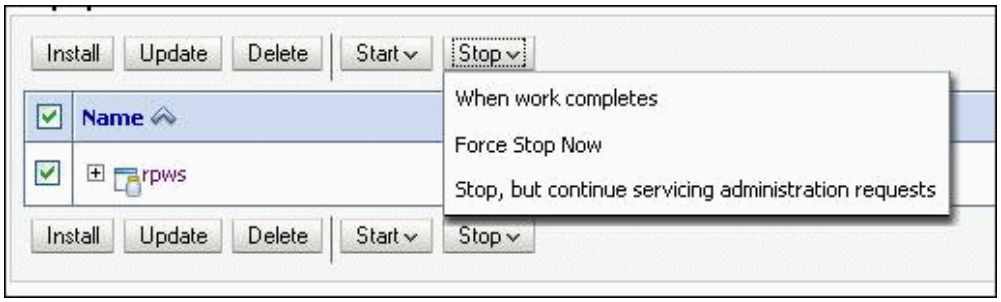
2. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



3. Select **Deployments** from the Domain Structure region.



4. Select the application you want to redeploy, and click **Stop**. Select **Force Stop Now**.



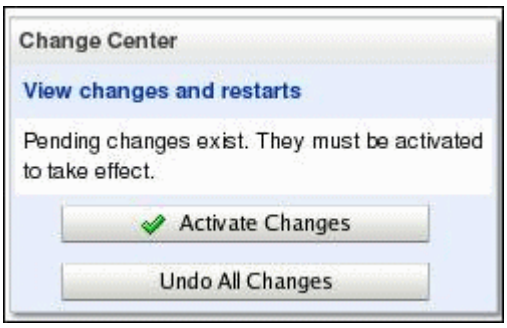
5. Click **Yes** to stop the application.

6. Select the application you want to redeploy, and click **Delete**.

7. Click **Yes** to delete the application.

8. Follow the procedure in the section Deploying and Starting Engine Application, page 3-58 to deploy the Engine Application.

9. From Change Center region, click **Activate Changes**.

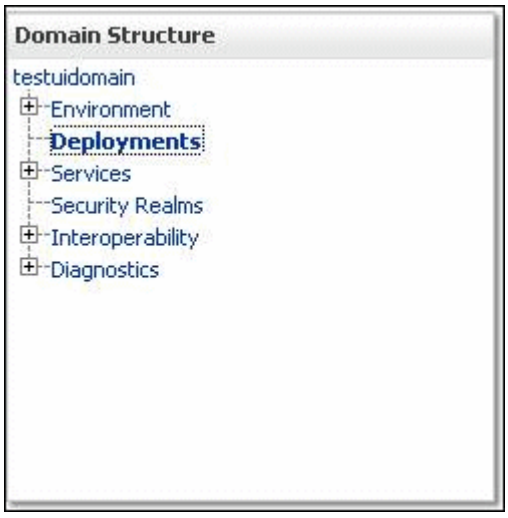


Redeploying the User Interface Application

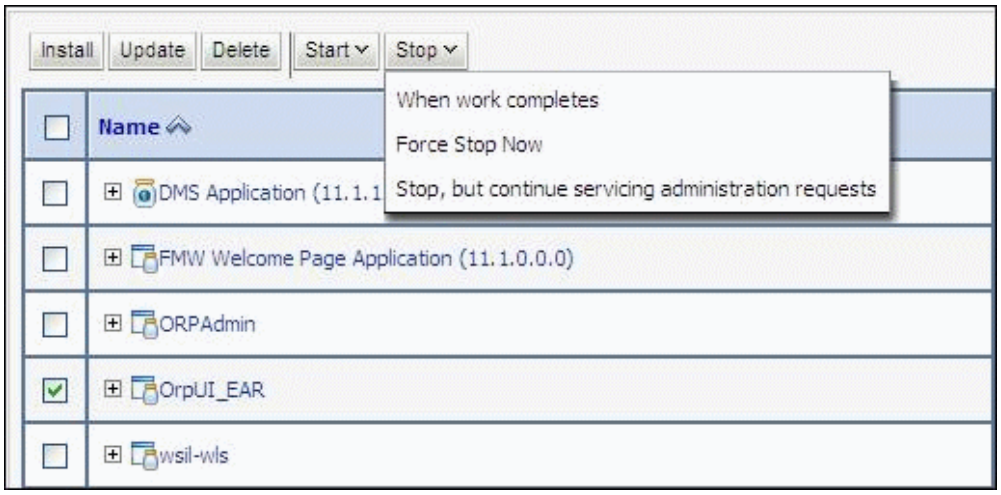
Perform the following procedure to redeploy the User Interface (UI) Application.

1. In order to redeploy the Engine Application, open the WebLogic UI for Engine Domain according to the procedure mentioned in Starting the User Interface Admin Server, page 3-21.

2. Select **Deployments** from the Domain Structure region.

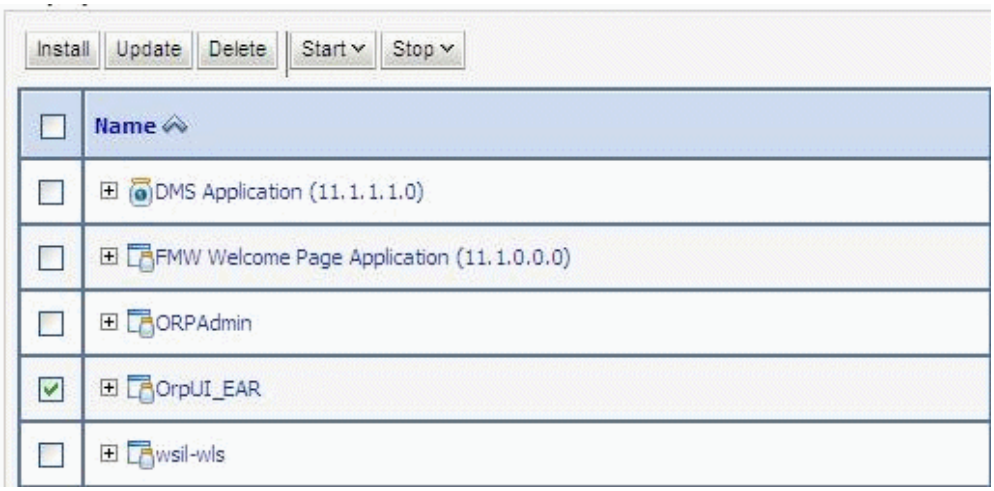


3. Select the application you want to redeploy, and click **Stop**. Select **Force Stop Now**.



4. Click **Yes** to stop the application.

5. Select the application you want to redeploy, and click **Delete**.



6. Click **Yes** to delete the application.

7. Perform the procedure in Deploying and Starting the User Interface Application, page 3-63 to deploy the User Interface Application.

Deleting Oracle Rapid Planning Engine Output (Binary) Files

After you deploy a new engine EAR file, delete the old binary files described in the following procedure. You cannot use them to load the plans.

1. In *<WLS_HOME>*, navigate to directory user_projects/domains/*<ENGINEDOMAINNAME>*/output.

   Example:

   /slot/ems3157/appmgr/user_projects/domains/testenginedomain/output

2. Delete the contents of the output folder.

6

Properties, Scripts, Backups, and Troubleshooting

This chapter covers the following topics:

- Updating Configuration Data in the WLST_Config.properties File
- Configuring the Engine Domain Using Scripts
- Creating Managed Servers Using Scripts
- Managing the Managed Servers Using Scripts
- Backing Up Files
- Troubleshooting

Updating Configuration Data in the WLST_Config.properties File

For the initial configuration, the WLST_Config.properties file needs to be up to date with the relevant details. The file is located in the folder WLST_scripts. A sample property file has been attached for reference. Refer to the example below to populate the file with the proper details.

```
# Weblogic DetailsExample:
#===================
BEA_HOME -
Provide the WebLogic home directory - the path in which WebLogic is
installed
<line break>
# Engine Domain Details
#======================
Engine_Domain_Name -
Name of Engine Domain provided during installation in 2.1.
Engine_Domain_AdminServer_Name -
Name of Engine Domain Admin Server provided during installation in 2.1.
Engine_Domain_Url -
t3://<Machine_Name>:<Port_No>
Protocol used should be t3 and not http
Machine_Name (For ex. rws60144rems)
Port_No :- Listen Port No. for Engine Domain
Engine_Domain_sslEnabled=1
Engine_Domain_sslPort -
SSL Port Number provided during installation in 2.1.
# <line break>
# Machine Details
#================
Machine_Name -
Host name of the machine on which the WebLogic server is running (e.g.
rws60144rems.us.oracle.com)
Node_Manager_Listen_Address = localhost
Node_Manager_Listen_Port = 5556
# <line break>
# Server_Start_Arguments
#======================
Engine_Admin_Min_Memory -
Minimum size of the server memory (like 128M)
Engine_Admin_Max_Memory -
Maximum size of the server memory (like 256M)
```

A sample configuration file appears below.

```
#*****************************************#
# Enter the values for the following keys
#*****************************************#

# Weblogic Details
#==================
BEA_HOME=/tmp/orplinks

# Engine Domain Details
#======================
Engine_Domain_Name=enginedomain
Engine_Domain_AdminServer_Name=AdminServer
Engine_Domain_Url=t3://rws60144rems:6601
Engine_Domain_sslEnabled=1
Engine_Domain_sslPort=6602

# Machine Details
#================
Machine_Name=rws60144rems
Node_Manager_Listen_Address=localhost
Node_Manager_Listen_Port=5556

# Server_Start_Arguments
#=======================
Engine_Admin_Min_Memory=128M
Engine_Admin_Max_Memory=256M
```

The values below are pre-populated. Do not edit these values.

```
# JMS Resource details
#====================
JMS_System_Resource_Name=RPModule
JMS_Que_Name=RPQueue
JMS_Que_JNDI_Name=weblogic.wsee.DefaultQueue
JMS_SubDep_Name=RPSubModule
# <line break>
# JMS Server details
#===================
JMS_Server_Name=RPWSJMSServer
# <line break>
# Engine Domain JDBC Resource Details
#============================
JDBC_System_Resource_Name - RPPlanningDS2
```

```
#*****************************************#
# Please do not edit the values given below
#*****************************************#

# JMS Resource details
#=====================
JMS_System_Resource_Name=RPModule
JMS_Que_Name=RPQueue
JMS_Que_JNDI_Name=weblogic.wsee.DefaultQueue
JMS_SubDep_Name=RPSubModule

# JMS Server details
#===================
JMS_Server_Name=RPWSJMSServer

# Engine Domain JDBC Resource Details
#====================================
JDBC_System_Resource_Name=RapidPlanningDS2
```

Configuring the Engine Domain Using Scripts

Perform the following procedure to configure the Engine Domain using scripts:

1. Verify that the Admin Server is running. If the Admin Server is not running, then start it as per the instructions in Starting the Engine Admin Server, page 3-19.

2. Run the InitialSetup.sh script.

   Check the present working directory through command `pwd`.

   Go to the directory *<WLS_HOME>*/user_projects/domains directory, and run the script by issuing the following command:

   ```
   $ ./WLST_scripts/InitialSetup.sh <Username> <Password>
   ```

   The Username and Password are required for Engine Domain Server.

   ```
   -bash-3.00$ pwd
   /slot/ems3157/appmgr/WLS/user_projects/domains
   -bash-3.00$ ./WLST_scripts/InitialSetup.sh enginewls enginewls1
   ```

3. View the log file InitialSetup.log to verify the servers were successfully created. To view the log file, go to the next directory WLST_log and open the file InitialSetup.log.

4. This script sets up the machine and Node Manager. To verify the setup, refer to Setting the Initial Configuration for the Rapid Planning User Interface and Engine, page 3-52.

Creating Managed Servers Using Scripts

Perform the following procedure to create the Managed Servers using a script.

1. Edit the CreateServer.Properties file to create additional Managed Servers and provide the necessary server details for your environment.

   Input the server details in the format below. (Refer to the sample CreateServer.properties file provided in the folder WLST_scripts.)

   - Enter the `No_Of_Managed_Servers` to be created.

   - For each Managed Server to be created, enter the following values:

     ```
     ms_Name_[i]=
     ms_Listen_Port_[i]=
     ms_Listen_Address_[i]=
     ms_sslEnabled_[i]=
     ms_sslPort_[i]=
     ms_Min_Memory_[i]=
     ms_Max_Memory_[i]=
     ```

     where `i` represents the number of the server.

     For example, if `No_Of_Managed_Servers` is 5, then there should be 5 sets of the values above in the format as mentioned where `i` has values 1, 2, 3, 4, and 5. Each Managed Server is defined by the following values you define in the CreateServer.Properties file:

     - ms_Name_[i] - Enter the name of the Managed Server.

     - ms_Listen_Port_[i] - Enter the Listen Port for Manager Server.

     - ms_Listen_Address_[i] - Enter the Listen Address for Manager Server.

     - ms_sslEnabled_[i] - Enter '1' to make SSL Port enabled.

     - ms_sslPort_[i] - Enter the SSL Port Number.

     - ms_Min_Memory_[i] - Enter the minimum memory argument for Manager Server.

- ms_Max_Memory_[i] - Enter the maximum memory argument for Manager Server.

A sample CreateServer.properties file appears below.

```
# Number of Managed Servers in Engine_Domain
#============================================
No_Of_Managed_Servers=2

# Managed_Server_1 Details
#=========================
ms_Name_1=RP_MS1
ms_Listen_Port_1=7881
ms_Listen_Address_1=rws60144rems.us.oracle.com
ms_sslEnabled_1=1
ms_sslPort_1=7882
MS_MIN_MEMORY_1=128M
MS_MAX_MEMORY_1=512M

# Managed_Server_2 Details
#=========================
ms_Name_2=RP_MS2
ms_Listen_Port_2=7883
ms_Listen_Address_2=rws60144rems.us.oracle.com
ms_sslEnabled_2=1
ms_sslPort_2=7884
MS_MIN_MEMORY_2 =128M
MS_MAX_MEMORY_2=512M
```

2. Run the CreateServer.sh script.

   Check the current working directory using the command `pwd`.

   Go to the directory *<WLS_HOME>*/user_projects/domains, and run the CreateServer.sh script.

   Syntax:

   ```
   $ ./WLST_scripts/CreateServer.sh <Username> <Password>
   <ServerName1> <ServerName2>
   ```

   The Username and Password for the Engine Domain Server are required when running the CreateServer.sh script. Server Names should be same referenced in the CreateServer.properties file.

```
-bash-3.00$ pwd
/slot/ems3157/appmgr/WLS/user_projects/domains
```

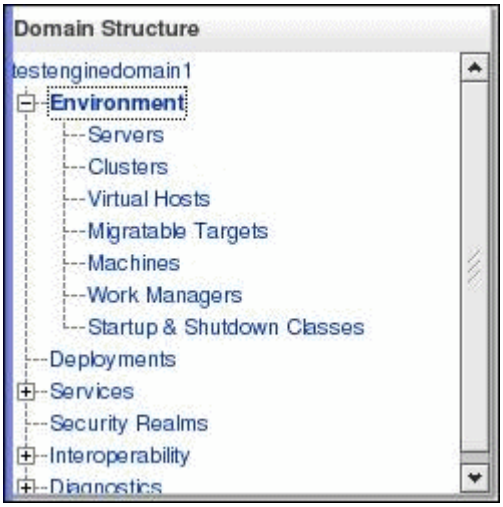
```
-bash-3.00$ ./WLST_scripts/CreateServer.sh enginewls enginewls RP_MS3 RP_MS4
```

3. View the log file CreateServer.log to verify the servers were successfully created. To view the log file, go to the next directory WLST_log and open the CreateServer.log file.

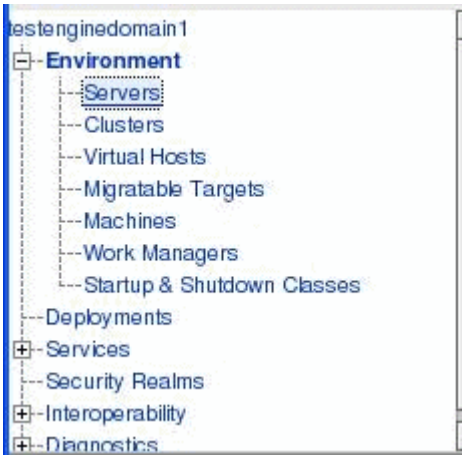
4. Verify the newly created Managed Server.

   If the log file shows that the Admin Server was shutdown, start the server as per the instructions in Starting the Engine Admin Server, page 3-19.

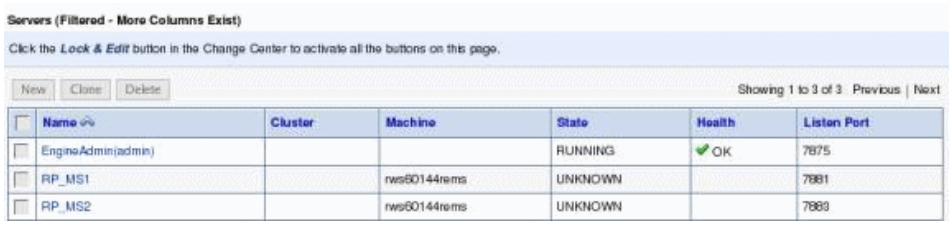
   - From the WebLogic home page, select **Environment** from the Domain Structure region.



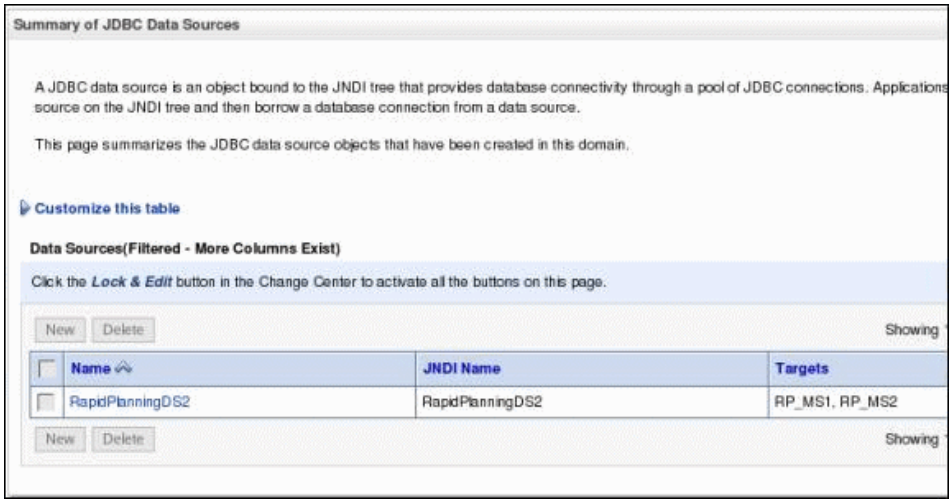
   - Select **Servers**.



   - Select a server name (for example, RP_MS1). The machine details appear.



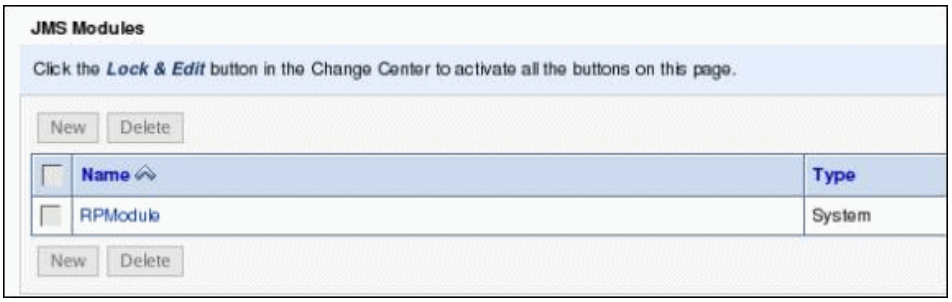
- From the Domain Structure region, expand the **Services** tree node and select **Data Sources**. The Summary of the JDBC Data Sources screen appears.



The Target Servers for the JDBC Resource appear in the Targets column.

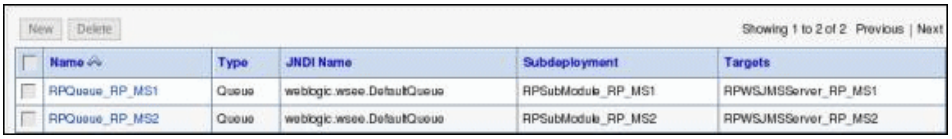
- From Domain Structure region, navigate to **Services > Messaging> JMS Servers**. One JMS Server is created for each Managed Server.

- In left pane, select **JMS Modules**. One JMS Module is created. All the Managed Servers will be mapped to a single JMS Module.



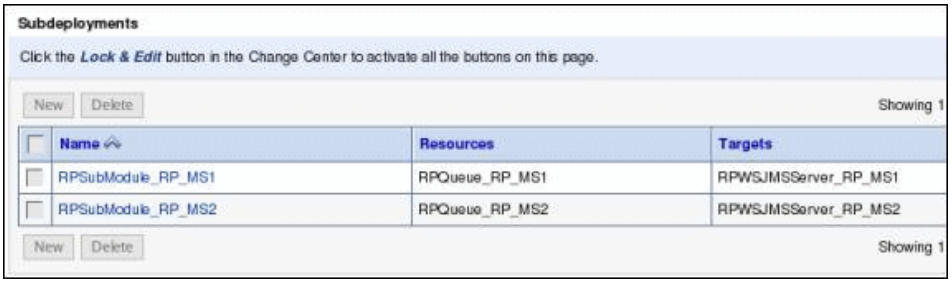
A JMS Module contains JMS Queues and Subdeployments.

- Select the module name (RPModule in this example). One Queue is created for each server.



- From the Settings region, select the **Subdeployments** tab.

One Subdeployment is created for each server.



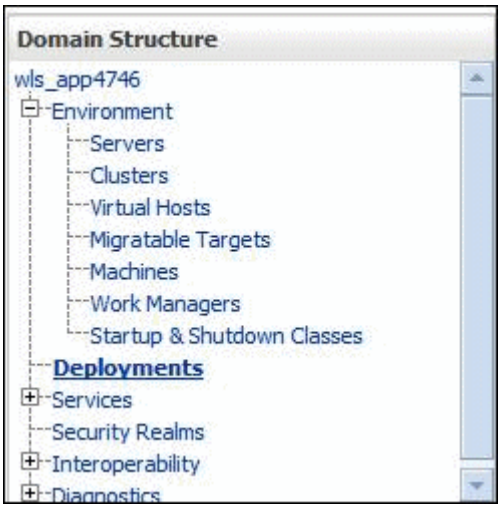
Managing the Managed Servers Using Scripts

Adding Managed Servers:

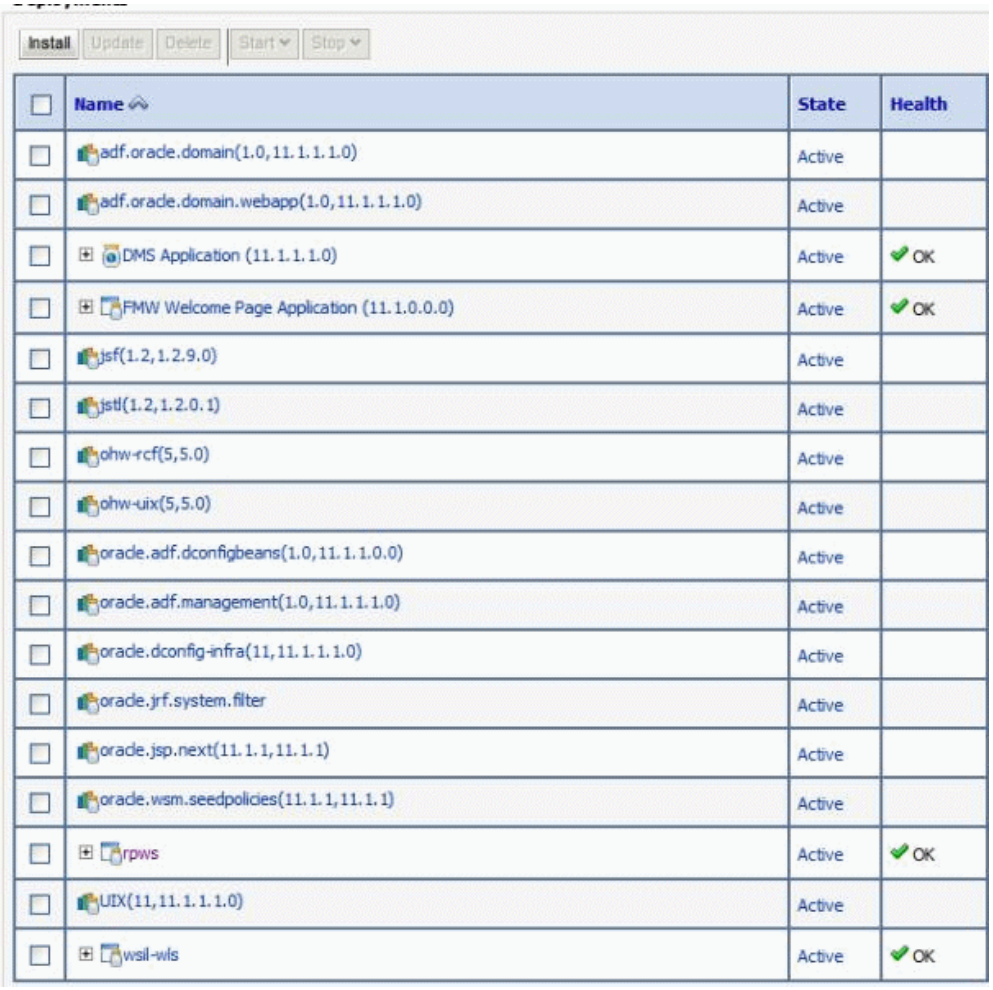
Refer to the Creating Managed Servers Using Script, page 6-5 in order to add Managed Servers to the existing setup.

1. After the necessary Managed Served are added, target all the newly created Managed Servers to the Deployed Application. In order to achieve this, open the WebLogic User Interface for Engine Domain using the procedures in Starting the Engine Admin Server, page 3-19.

2. Select **Deployments** from the Domain Structure region.

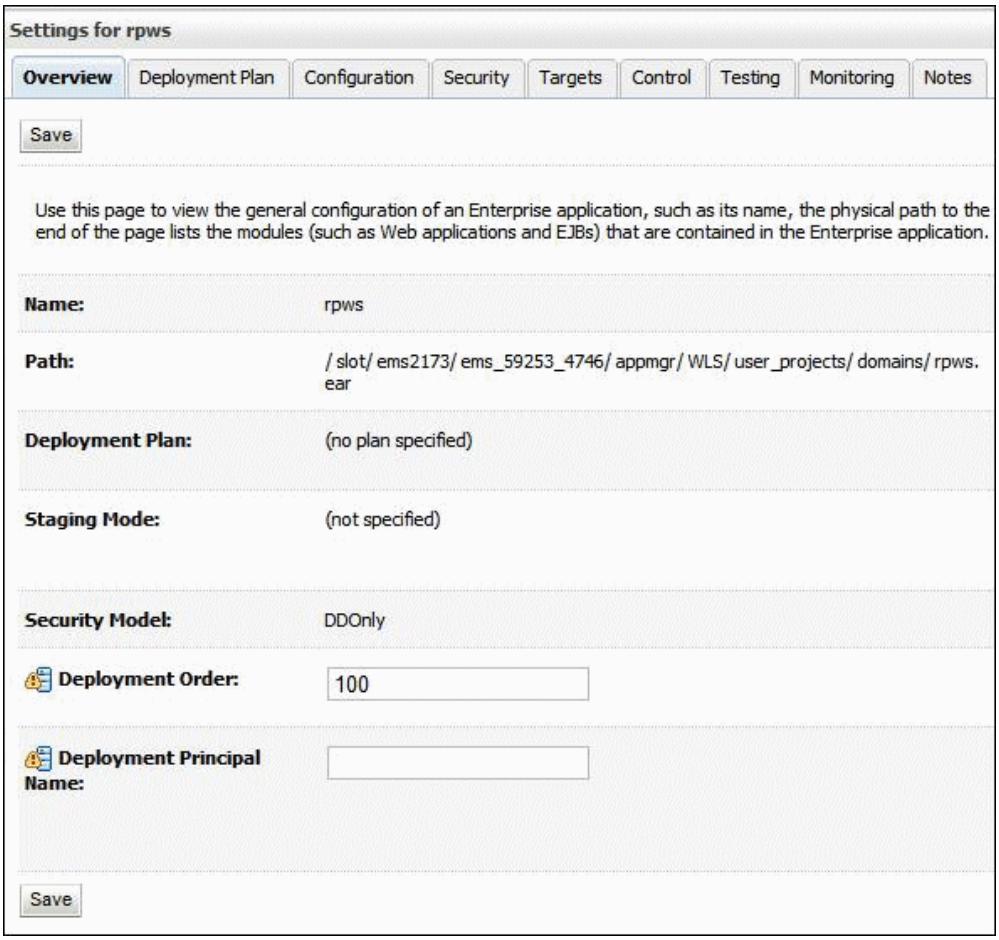


The following page appears.

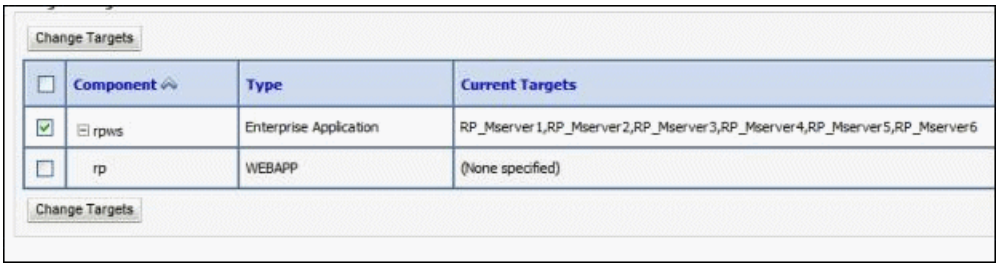


3. Select the Engine Application (rpws in the example).

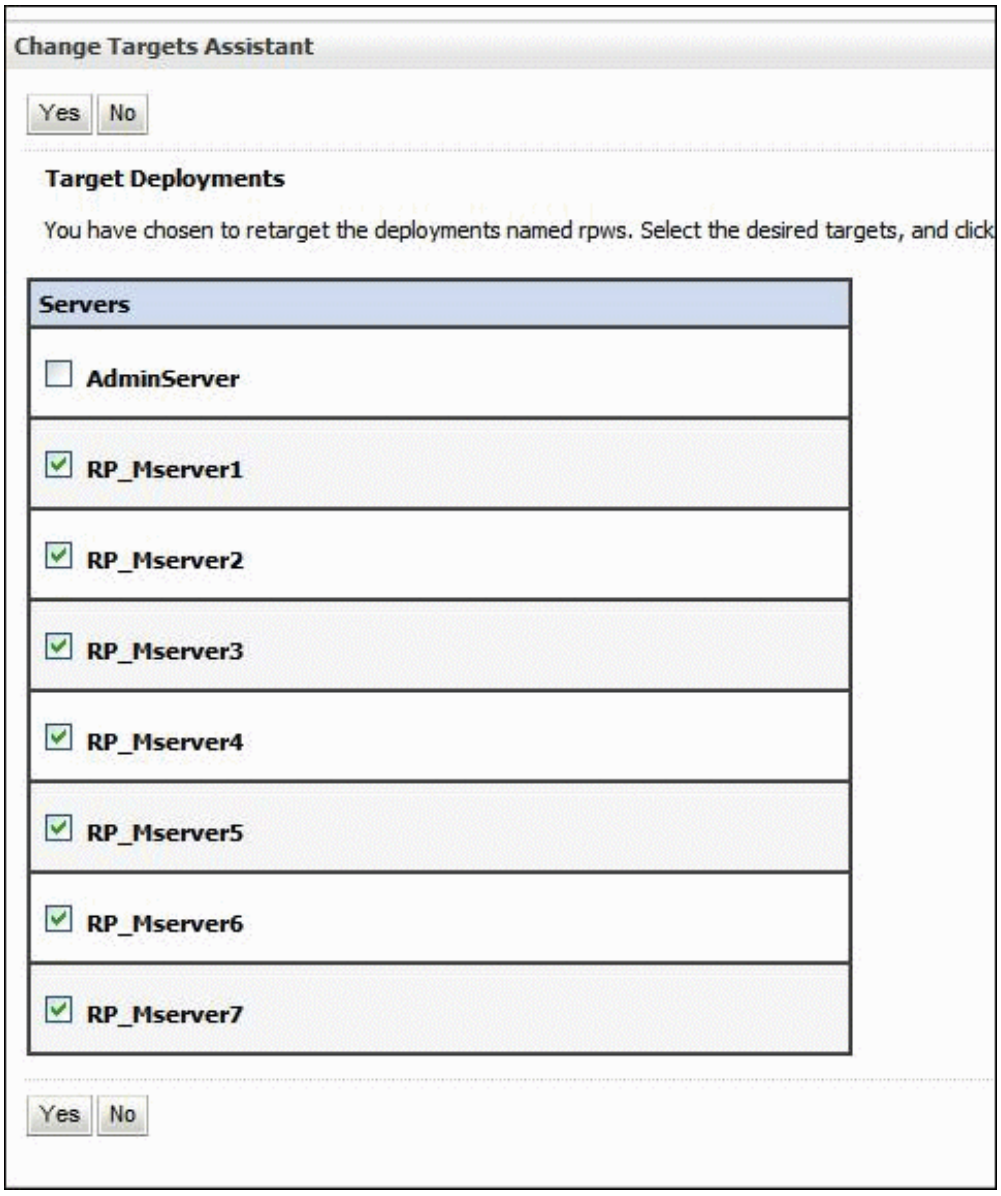
4. Select the **Targets** tab.



5. Select the check box with the **Type** "Enterprise Application", and click **Change Targets**.



6. Check all the Managed Servers you want to deploy the application, except the AdminServer, and click **Yes**. Follow the instructions.



Starting Managed Servers:

Perform the following procedure to start the Managed Servers using script commands.

1. Check the present working directory through command `pwd`.

2. Go to the directory *<WLS_HOME>*/user_projects/domains and run the StartManServer.sh script as shown in the example below.

   Syntax:

   ```
   $ ./WLST_scripts/StartManServer.sh <Username> <Password>
   <ServerName1> <ServerName2> ….
   ```

Username and Password for the Engine Domain Server are required when running the StartManServer.sh script.

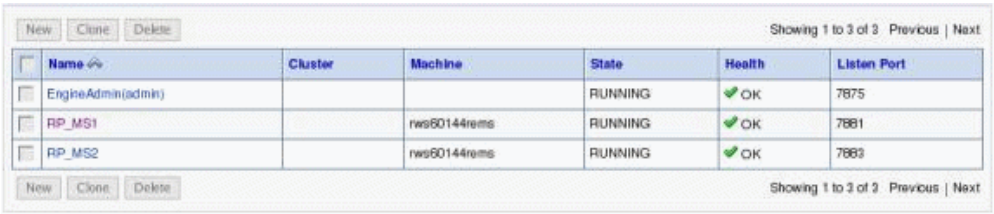
```
-bash-3.00$ pwd
/slot/ems3157/appmgr/WLS/user_projects/domains
-bash-3.00$ ./WLST_scripts/StartManServer.sh enginewls enginewls1 RP_MS1 RP_MS2
```

3. View the log file StartManServer.log to verify the Managed Servers were successfully started. To view the log file, go to the next directory WLST_log and open the file StartManServer.log file.

```
-bash-3.00$ cd WLST_log/
-bash-3.00$ cat StartManServer.log
```

4. To verify the status of the Managed Servers, select **Servers** from the Domain Structure region.

5. The table displays the status of all the servers.



Stopping Managed Servers:

Perform the following procedure to stop a Managed Server using script commands.

1. Check the present working directory through command `pwd`.

2. Go to the directory *<WLS_HOME>*/user_projects/domains and run the StopManServer.sh script as shown in the example below.

   Syntax:

   ```
   $ ./WLST_scripts/StopManServer.sh <Username> <Password>
   <ServerName>
   ```

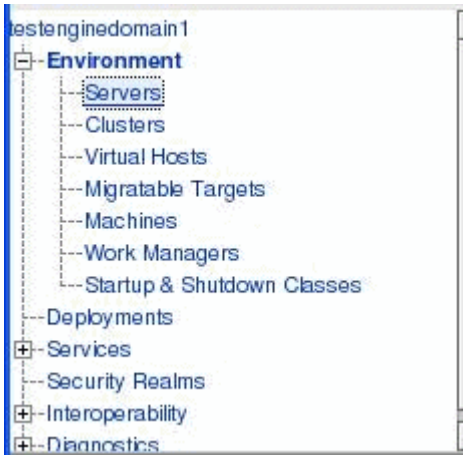
   Username and Password for the Engine Domain Server are required when running the StopManServer.sh script.

   ```
   -bash-3.00$ pwd
   /slot/ems3157/appmgr/WLS/user_projects/domains
   -bash-3.00$ ./WLST_scripts/StopManServer.sh enginewls enginewls1 RP_MG1
   ```

3. View the log file StopManServer.log to verify the Managed Servers were successfully stopped. To view the log file, go to the next directory WLST_log, and open the StopManServer.log file.

   ```
   -bash-3.00$ cd WLST_log/
   -bash-3.00$ cat StopManServer.log
   ```

4. To verify the status of the Managed Servers, select **Servers** from the Doamin Structure region.

   The table displays the status of all the servers.

Deleting Managed Servers:

Perform the following procedure to delete a Managed Server using script commands.

1. Check the present working directory through command `pwd`.

2. Go to the directory *<WLS_HOME>*/user_projects/domains and run the DeleteServer.sh script as shown in the example below.

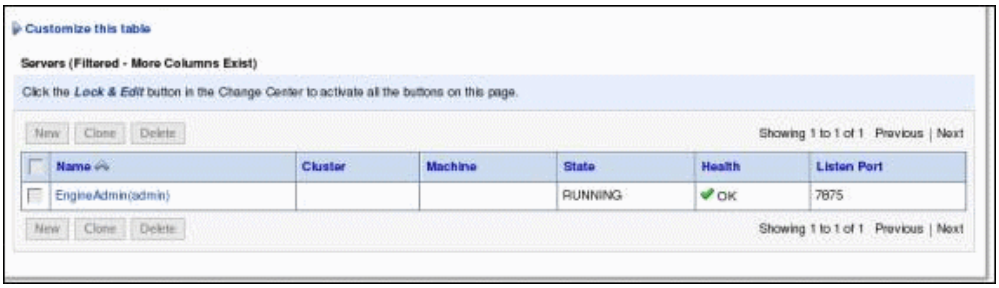
   Syntax:

   ```
   $ ./WLST_scripts/DeleteServer.sh <Username> <Password>
   <ServerName 1> <ServerName 2> …. <ServerName N>
   ```

   ```
   -bash-3.00$ pwd
   /slot/ems3157/appmgr/WLS/user_projects/domains
   -bash-3.00$ ./WLST_scripts/DeleteServer.sh enginewls enginewls1 RP_MS1 RP_MS2
   ```

3. To verify the status of the Managed Servers, select **Servers** in the left pane.

   The table displays the status of all the servers. In the Servers section, the Managed Servers you specified should no longer appear in the table.



Backing Up Files

The following directories are candidates for your ad-hoc backup, scheduled backup, or backup processes and scripts:

- user_projects/domains/WLST_scripts
- user_projects/domains/WLST_scripts/WLST_Config.properties

It is recommended that this file be backed up periodically for maintaining Managed Server information.

- user_projects/domains/WLST_log

Troubleshooting

What to do if Admin Server runs out of memory?

If the Admin Server runs out of memory, you need to modify the stack size. Follow the steps mentioned below. The following example modifies the JROCKIT memory size from 256K to 1024K:

Inside engine domain `<engine_domain_name>/bin/setDomainEnv.sh`

In the file setDomainEnv.sh, locate the memory configuration, as shown in the example below. Overwrite this with the New Memory Configuration (which appears below the Original Memory Configuration).

Original Memory Configuration

```
XMS_SUN_64BIT="256"
export XMS_SUN_64BIT
XMS_SUN_32BIT="256"
export XMS_SUN_32BIT
XMX_SUN_64BIT="768"
export XMX_SUN_64BIT
XMX_SUN_32BIT="768"
export XMX_SUN_32BIT
XMS_JROCKIT_64BIT="256"
export XMS_JROCKIT_64BIT
XMS_JROCKIT_32BIT="256"
export XMS_JROCKIT_32BIT
XMX_JROCKIT_64BIT="768"
export XMX_JROCKIT_64BIT
XMX_JROCKIT_32BIT="768"
export XMX_JROCKIT_32BIT
<line break>
if [ "${JAVA_VENDOR}" = "Sun" ] ; then
WLS_MEM_ARGS_64BIT="-Xms256m -Xmx768m"
export WLS_MEM_ARGS_64BIT
WLS_MEM_ARGS_32BIT="-Xms256m -Xmx768m"
export WLS_MEM_ARGS_32BIT
else
WLS_MEM_ARGS_64BIT="-Xms512m -Xmx768m"
export WLS_MEM_ARGS_64BIT
WLS_MEM_ARGS_32BIT="-Xms512m -Xmx768m"
export WLS_MEM_ARGS_32BIT fi
<line break>
if [ "${JAVA_VENDOR}" = "Oracle" ] ; then
CUSTOM_MEM_ARGS_64BIT="-Xms${XMS_JROCKIT_64BIT}m -
Xmx${XMX_JROCKIT_64BIT}m"
export CUSTOM_MEM_ARGS_64BIT
CUSTOM_MEM_ARGS_32BIT="-Xms${XMS_JROCKIT_32BIT}m -
Xmx${XMX_JROCKIT_32BIT}m"
export CUSTOM_MEM_ARGS_32BIT else
CUSTOM_MEM_ARGS_64BIT="-Xms${XMS_SUN_64BIT}m -Xmx${XMX_SUN_64BIT}m"
export CUSTOM_MEM_ARGS_64BIT
CUSTOM_MEM_ARGS_32BIT="-Xms${XMS_SUN_32BIT}m -
Xmx${XMX_SUN_32BIT}m"
export CUSTOM_MEM_ARGS_32BIT
fi
```

New Memory Configuration (Overwrite the old configuration with the following.)

```
XMS_SUN_64BIT="256"
export XMS_SUN_64BIT
XMS_SUN_32BIT="256"
export XMS_SUN_32BIT
XMX_SUN_64BIT="768"
export XMX_SUN_64BIT
XMX_SUN_32BIT="768"
export XMX_SUN_32BIT
XSS_SUN_64BIT="1024"
export XSS_SUN_64BIT
XSS_SUN_32BIT="1024"
export XSS_SUN_32BIT
XSS_JROCKIT_64BIT="1024"export XSS_JROCKIT_64BIT
XSS_JROCKIT_32BIT="1024"
export XSS_JROCKIT_32BIT
XMS_JROCKIT_64BIT="256"
export XMS_JROCKIT_64BIT
XMS_JROCKIT_32BIT="256"
export XMS_JROCKIT_32BIT
XMX_JROCKIT_64BIT="768"
export XMX_JROCKIT_64BIT
XMX_JROCKIT_32BIT="768"
export XMX_JROCKIT_32BIT
<line break>
if [ "${JAVA_VENDOR}" = "Oracle" ] ; then
CUSTOM_MEM_ARGS_64BIT="-Xms${XMS_JROCKIT_64BIT}m -
Xmx${XMX_JROCKIT_64BIT}m -Xss${XSS_JROCKIT_64BIT}k"
export CUSTOM_MEM_ARGS_64BIT
CUSTOM_MEM_ARGS_32BIT="-Xms${XMS_JROCKIT_32BIT}m -
Xmx${XMX_JROCKIT_32BIT}m -Xss${XSS_JROCKIT_32BIT}k"
export CUSTOM_MEM_ARGS_32BIT
else
CUSTOM_MEM_ARGS_64BIT="-Xms${XMS_SUN_64BIT}m -
Xmx${XMX_SUN_64BIT}m -Xss${XSS_SUN_64BIT}k"
export CUSTOM_MEM_ARGS_64BIT
CUSTOM_MEM_ARGS_32BIT="-Xms${XMS_SUN_32BIT}m -
Xmx${XMX_SUN_32BIT}m -Xss${XSS_SUN_32BIT}k"
export CUSTOM_MEM_ARGS_32BIT
fi
```

When configuring the machine from the Rapid Planning Admin User Interface, the machine is not created in the Engine AdminServer. How can I resolve this issue?

This might occur due to multiple reasons. Please write down the remedial steps.

Reason 1

Engine Server is not running.

Action required: Start the Engine server.

Reason 2

MSC: Rapid Planning Scripts Home profile value is not set correctly.

Action required:

- Ensure that you have provided the correct path precisely as mentioned in the pre-configuration section.

- Ensure the path is accessible and has full permissions for the UNIX user who started the UI Domain Admin Server.

Reason 3

Machine could not be configured due to port conflict.

Action required: Ensure the port numbers specified are available.

I am unable to open the Rapid Planning Administration User Interface or the Rapid Planning Simulation Planner User Interface.

Log in to EBS home page.

- For Rapid Planning Administration User Interface, select **Advanced Planning Administrator** responsibility Rapid Planning (Setup and Configuration)
- For Rapid Planning Simulation Planner User Interface, select **Supply Chain Simulation Planner** responsibility Supply Chain Simulation Planner (Plans, Inputs and Simulations)
- If the responsibility is not available in your home page, contact your System Administrator to add this responsibility to your EBS user.
- In case of any error message regarding User credentials/security, ensure that this step is executed properly.

While performing the configuration steps, "Lock & Edit" mode is not available. Why?

The domain has been created in the Development mode. Production mode is recommended.

When starting the WebLogic Server, the server does not prompt for credentials. Why?

Check if your server is in Development mode or Production mode. Production mode is recommended.

Refer to the instructions in Creating the User Interface Domain, page 3-10 and Creating the Engine Domain, page 3-1.

Unable to view Analytics/KPI graphs in the Simulation Planner User Interface. What could be the reason?

The application requires browser plug-ins to enable the KPI views/graphs. If this situation is encountered even after verifying the browser plug-ins are available, you might have missed this setup step in Creating the Engine Domain, page 3-1.

Create output/ and log/ directories as follows:

```
$ mkdir -m 777 output/
$ mkdir -m 777 log/
```

Unable to run a plan in the Simulation Planner User Interface. Plan run fails.

Verify in Creating the Engine Domain, page 3-1 that this setup step was executed.

Create output/ and log/ directories as follows:

```
$ mkdir -m 777 output/
```

```
$ mkdir -m 777 log/
```

After deploying the Rapid Planning Admin User Interface (UI) application, the UI does not appear in the browser. Instead an error message "Error 500 - Internal Server Error" appears.

Verify the classpath settings. Make sure that the `CLASSPATH`, `JAVA_HOME` have been unset before you start WebLogic Server.

You can try the following to clear its settings: `export CLASSPATH= "`

Unset the above mentioned variables and try restarting the server.

SQL failure/error occurs when you set up a database link from a 11g to 10g database.

This is due to a bug in the DMS JDBC driver (ojdbc6dms.jar) regarding connecting from a 11g database to a 10g database.

Find the following in file setDomainEnv.cmd on Windows or in file filesetDomainEnv.sh on UNIX:

```
if NOT "%PRE_CLASSPATH%"=="" (
set PRE_CLASSPATH=%
COMMON_COMPONENTS_HOME %\modules
#oracle.jdbc_11.1.1
\ojdbc6dms.jar;%PRE_CLASSPATH%
) else (
set PRE_CLASSPATH=%
COMMON_COMPONENTS_HOME %\modules
\oracle.jdbc_11.1.1\ojdbc6dms.jar  )
```

Replace it with the following:

```
if NOT "%PRE_CLASSPATH%"=="" (
set PRE_CLASSPATH=%WL_HOME%\lib
\ojdbc6.jar;%PRE_CLASSPATH%
) else (
set PRE_CLASSPATH=%WL_HOME%\lib\ojdbc6.jar
```

Saved queries do not retain the query condition.

In Rapid Planning User Interface Domain, folder bin, find file startWebLogic.sh.

Below line `SAVE_JAVA_OPTIONS=""` line, add the following line:

```
JAVA_OPTIONS="${JAVA_OPTIONS}
-Doracle.mds.validatelocaluniqueattr=false
```

Example:

```
SAVE_JAVA_OPTIONS="${JAVA_OPTIONS}"
SAVE_CLASSPATH="${CLASSPATH}"
# Start Derby
DERBY_DEBUG_LEVEL="0"
if [ "${DERBY_FLAG}" = "true" ] ; then
${WL_HOME}/common/derby/bin/startNetworkServer.sh
>"${DOMAIN_HOME}/derby.log" 2>&1
fi
JAVA_OPTIONS="${SAVE_JAVA_OPTIONS}"
SAVE_JAVA_OPTIONS=""
JAVA_OPTIONS="${JAVA_OPTIONS}
-Doracle.mds.validatelocaluniqueattr=false"
```

Rapid Planning authentication leads to redirect loop

Use the same protocol to access URLs for the Oracle E-Business Suite and the Oracle Rapid Planning User Interface application. If Oracle E-Business Suite is:

1. SSL enabled: Use `https://` for both access URLs
2. Not SSL enabled: Use `http://` for both access URLs

Use the appropriate port number.

7

Horizontal Scaling

This chapter covers the following topics:

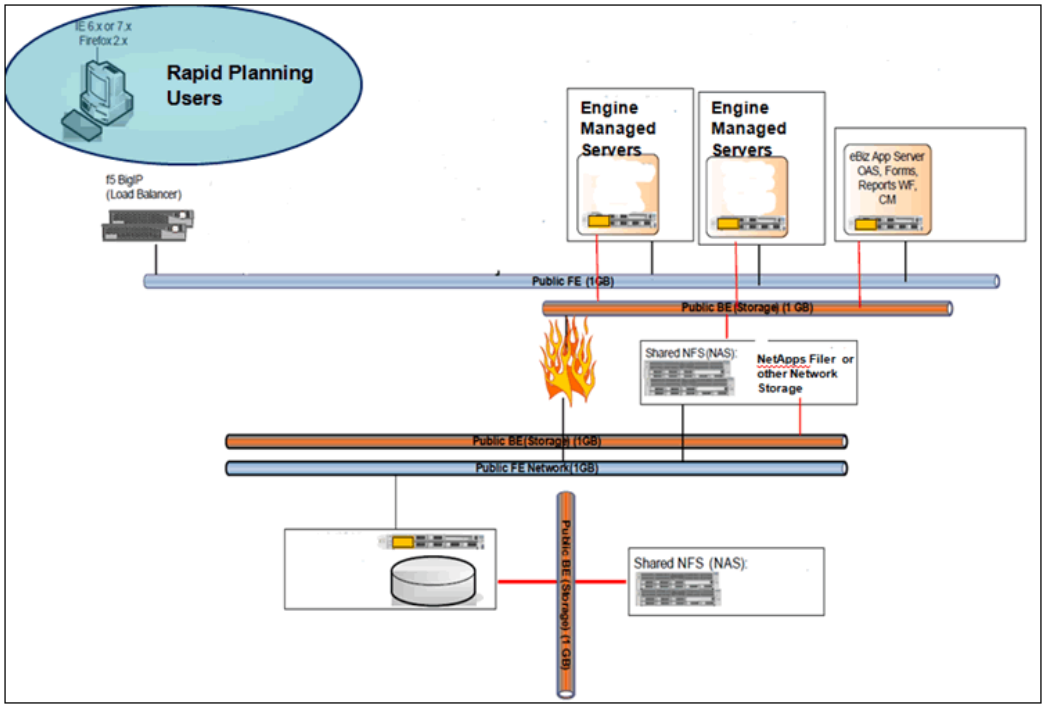
- Using Horizontal Scaling in Your Environment
- Performing Pre-Configuration Setup
- Creating the Engine Domain
- Starting the Engine Admin Server
- Configuring the JDBC Data Source for the Engine Domain
- Setting Up the Secondary Host Machine
- Setting Up Managed Servers
- Creating the JMS Servers, Subdeployments, and Queues
- Deploying and Starting the Engine Application
- Creating the Rapid Planning Input, Output, and Log Folders
- Performing a Fresh Installation
- Adding a New Managed Server

Using Horizontal Scaling in Your Environment

This chapter provides installation instructions for Oracle Rapid Planning that uses horizontal scaling.

Horizontal scaling is when your environment contains Managed Servers that span multiple machines. This architecture provides higher availability and easier expansion as Managed Servers are distributed across multiple machines and geographic locations.

As a part of horizontal scaling, one Rapid Planning Engine domain is created on one primary host, while Managed Servers are created on different machines (secondary hosts).



To achieve this, WebLogic Server needs to be installed on all machines, and the Node Manager Utility is required to be up and running on all hosts.

The Node Manager enables the following common operations tasks for a Managed Server regardless of its location with respect to its Administration Server:

- Start and stop remote Managed Servers.
- Monitor the self-reported health of Managed Servers and automatically terminate server instances whose health state is failed.
- Automatically restart Managed Servers that have the failed health state or have shut down unexpectedly due to a system crash or reboot.

In order to achieve more concurrent plan runs, new Managed Servers can be added to existing or new machines and associate them to the Rapid Planning domain.

> **Note:** For a horizontal scaled environment, perform all Managed Server setup and administration using the WebLogic Administration Console, not the Rapid Planning User Interface (UI).

Example Architecture

The preceding diagram displays Engine Domain architecture that uses horizontal scaling. Managed Servers RP_MS1, RP_MS2, RP_MS3 reside on one host, while RP_MS4 reside on a separate machine and the Engine WebLogic domain is hosted on a different machine.

There is no difference in terms of user experience. From a user perspective, they appear as if being hosted on same machine and user can run, load, and launch plans in the same manner.

Performing Pre-Configuration Setup

This section describes pre-configuration requirements for Oracle Rapid Planning. The tasks mentioned below need to be completed after applying Rapid Planning patch and before starting the installation.

1. Verify that WebLogic 11gR1 is installed.

   WebLogic 11gR1 Patch set 5 (WebLogic 10.3.6.0) is required. Upgrade your

WebLogic installation before you upgrade Oracle Rapid Planning.

For release 12.2 and later, do not install a separate WebLogic Server to create the Oracle Rapid Planning domains.

2. Cross mount the location for logs and files written by the concurrent programs with the WebLogic Server used for Rapid Planning. For more details on cross mount, refer to Enabling Access to APPLCSF, page 7-62.

3. The following profiles should be set up in EBS at site level (the EBS instance that the data source points to):

   - User Profile Name: MSC: Oracle Rapid Planning URL

     Internal Profile Name: MSC_RP_HOST_URL

     The port number provided in the profile value should be same as the port number for the User Interface Domain that is defined in Creating the User Interface Domain, page 3-10.

     Syntax:

     `http://domain_name:port_number`

     Example:

     `http://rws60144rems.us.oracle.com:6087`

   - User Profile Name: MSC: Rapid Planning UI Refresh Timeout

     Internal Profile Name: MSC_RP_UI_TIMEOUT

     The profile timeout value is in milliseconds. For example, provide profile value of 5000 to represent a 5 second timeout.

   - User Profile Name: MSC: Rapid Planning WebLogic Server Home

     Internal Profile Name: MSC_RP_WLS_HOME

     Provide the installation path to the *<WLS_Home>* directory.

     Example:

     /slot/user3536/wls/wlserver_10.3

     Make the Rapid Planning WebLogic Server and Oracle e-Business Suite Server URLs in the same domain/subdomain for proper Single Sign-On (SSO) authentication.

   - User Profile Name: MSC: Rapid Planning Scripts Home

     Internal Profile Name: MSC_RP_SCRIPTS_HOME

     This profile should point to the directory where all the WLST_scripts will be kept.

Example:

/slot/ems5910/appmgr/WLS/user_projects/domains/WLST_Scripts

4. After applying the respective patches for Rapid Planning User Interface, Rapid Planning Administration, and Rapid Planning Engine, verify that the following ZIP files appear in the directory path $MSC_TOP/dist/orp.

   Example:

   /slot/ems4928/appmgr/apps/apps_st/appl/msc/12.0.0/dist/orp

   - RPAdmin.zip
   - ui.zip
   - engine.zip

   For 12.2.3, if using Online Patching, there will be two APPL_TOPs, RUN tier and PATCH tier. Compare the ZIP files for both RUN and PATCH tier, and use the later version for deployment.

   For example, fs1 is assigned to one tier, either RUN or PATCH. Use the command `ident /u01/R122_EBS/fs1/EBSapps/appl/msc/12.0.0/dist/orp/engine.zip` to obtain the file version.

5. Create a folder named ORPTEMP in a user-defined directory (for example, /tmp/ORPTEMP) on the host machine where WebLogic is installed. This folder is referenced as ORPTEMP in this document.

6. Copy the ZIP files to the folder ORPTEMP.

7. Extract all the ZIP files in the same folder.

   Each unzipped file contains a respective EAR file. The EAR files will be selected from this location during deployment.

   Refer to the following topics for procedures to deploy the applications:

   - Configuring the JDBC Data Source for the User Interface Domain, page 3-35
   - Deploying and Starting the Engine Application, page 3-58
   - Deploying and Starting the User Interface Application, page 3-63

8. To copy the class files, run the script InitialEngineSetup.sh in the folder WLST_scripts.

   - Log in to the machine where EBS is installed with username as APPL manager user or APPL TOP owner.

- Set the environment variable $MSC_TOP to the path where you copied the patch.

  Example:

  /slot/ems4928/appmgr/apps/apps_st/appl/msc/12.0.0

- Set the environment variable $JAVA_TOP to the path having Java classes.

  Example:

  /slot/ems2947/appmgr/apps/apps_st/comn/java/classes

9. After unzipping the file RPAdmin.zip, all the scripts are located in the folder RPAdmin/WLST_scripts. Copy the folder WLST_scripts to the path where Engine domain has been created:

   Example:

   <WLS_HOME>/user_projects/domains

   <WLS_HOME> refers to the name of the directory where WebLogic has been installed.

   If the directory domains is not present, create it manually.

   All scripts should be run from this path only.

   Ensure that the copied WLST_Scripts folder and the contents have `rwx` permissions for the UNIX session user launching the WebLogic Server.

   Example:

   ```
   chmod 777 *
   ```

   The WebLogic admin user should have write permissions on the *<WLS_HOME>* folder and subfolders.

10. Use the following steps for enabling the Rapid Planning application access through EBS:

    ```
    cd $FND_TOP/patch/115/bin
    perl ojspCompile.pl --compile -s 'MscRPRedirect.jsp' --flush
    ```

11. After compiling, verify that the timestamp of file _MscRPRedirect.class under $COMMON_TOP/_pages is current.

12. After compilation, restart the EBS Middle Tier.

13. Once Rapid Planning patch is applied, assign Oracle Supply Chain Simulation Planner responsibility to the user account.

14. Assign Planning Organizations to Oracle Supply Chain Simulation Planner Responsibility.

- Navigate to **Advanced Planning Administrator > Admin > Organization Security**.
- Select **Oracle Supply Chain Simulation Planner Responsibility**.
- Assign Organizations by moving the required organizations to the **Selected** list.
- Save the assignments.

Creating the Engine Domain

Perform this procedure to create the Engine Domain.

1. Go to *<WLS_HOME>*/common/bin folder.

   Syntax:

   ```
   cd <installation_path..>/wlserver_10.3/common/bin
   ```

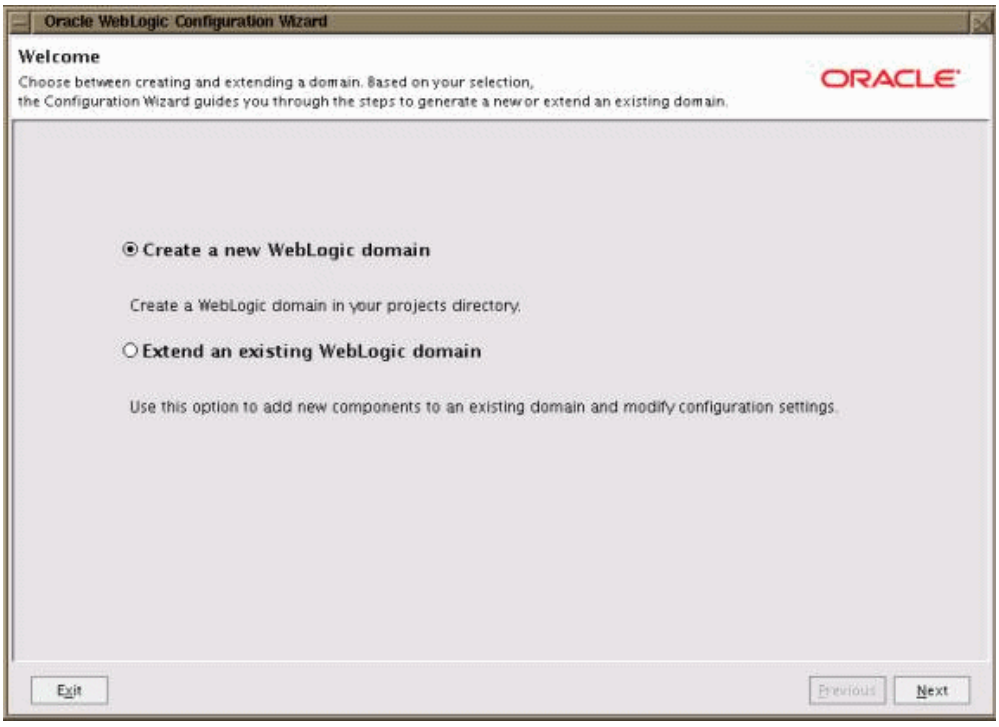
2. Run config.sh.

   Example:

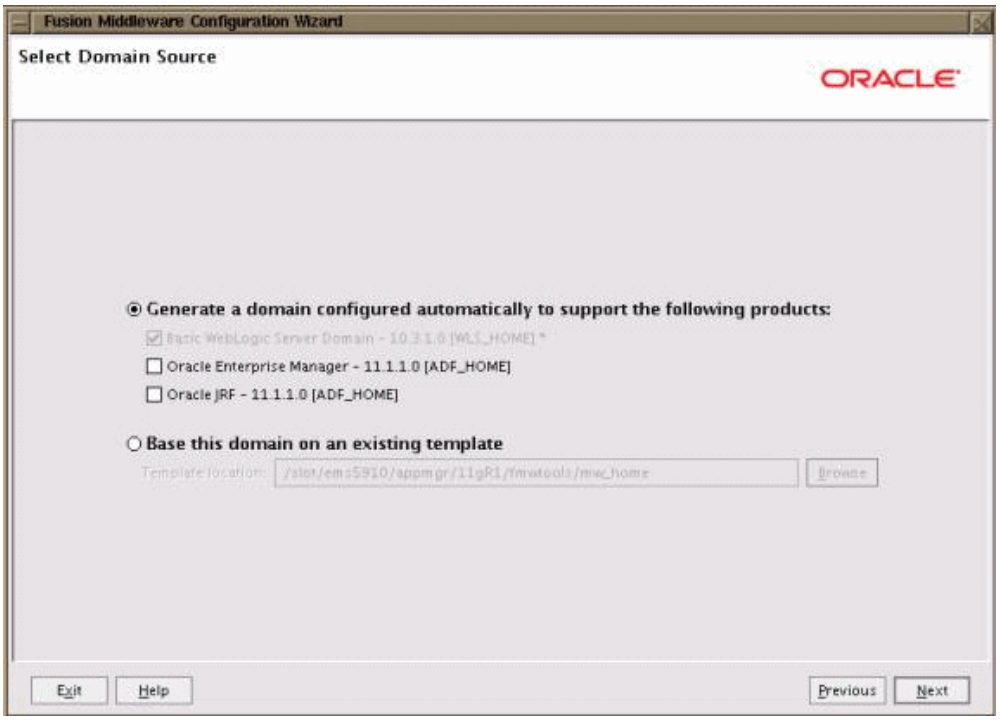
   ```
   /config.sh
   ```

   ```
   -bash-3.00$ cd wlserver_10.3/common/bin
   -bash-3.00$ . ./config.sh
   ```

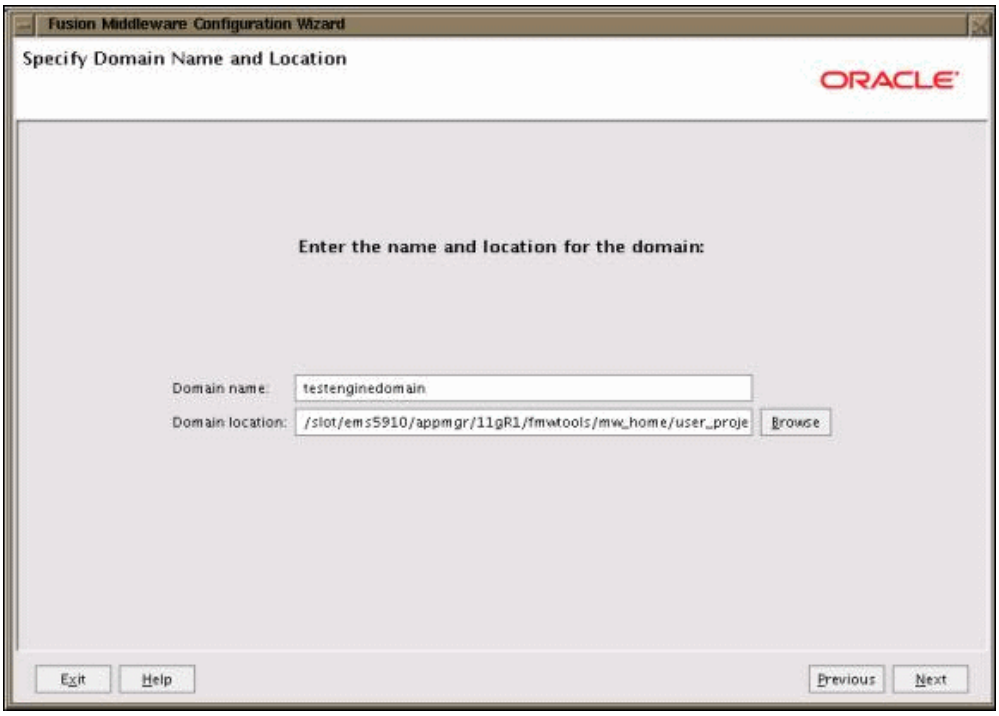
   The Oracle WebLogic Configuration Wizard appears.



3. Select **Create a new WebLogic domain**, and click **Next**. The Select Domain Source screen appears.

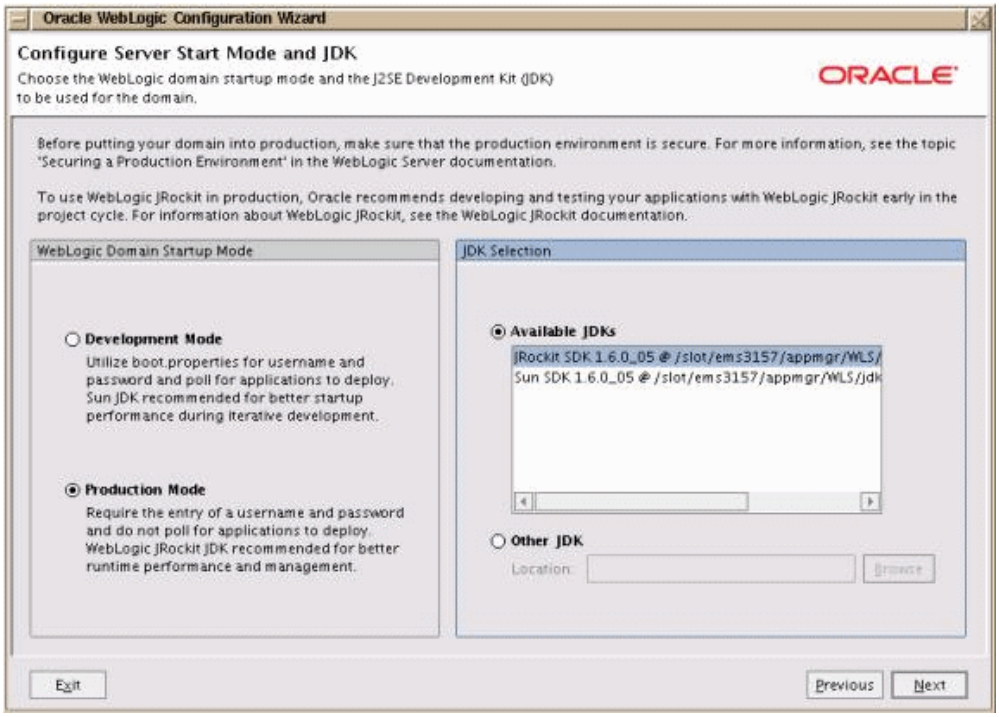


4. Select **Generate a domain configured automatically to support the following products**. Do not select any check box options. Keep the default settings. Click **Next** . The Specify Domain Name and Location screen appears.



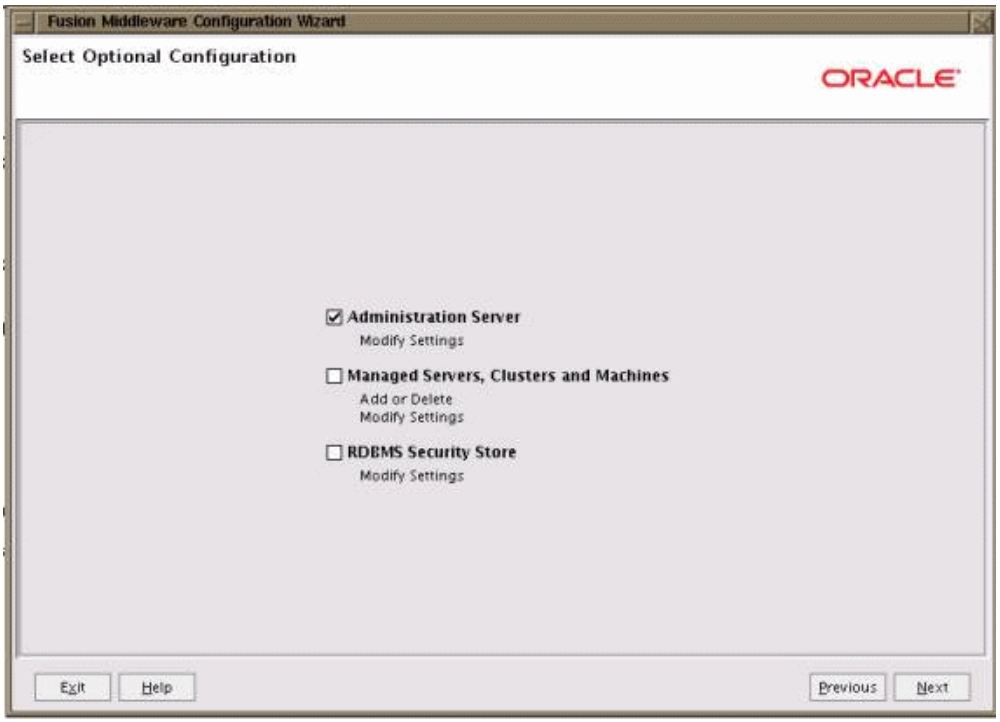
5. Enter the **Domain name** and **Domain location**. The domain location should be *<WLS_HOME>*/user_projects/domains. The Configure Administrator User Name and Password screen appears. Click **Next**.

6. Enter the **User name**, **User password** and **Confirm user password** of your choice, and click **Next**. The password must be alphanumeric. The Configure Server Start Mode and JDK screen appears.

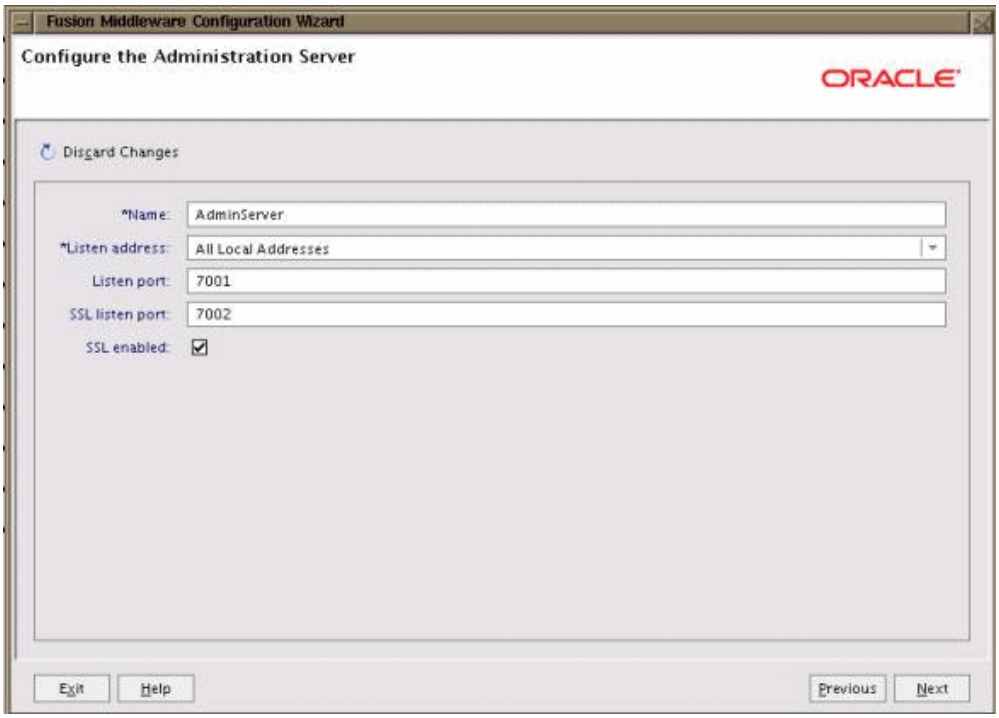


7. Perform the following:

   - Select **Production Mode**.
   - In JDK Selection region, select **Available JDKs** and select **JRockit SDK 1.6.0_05**.
   - Click **Next**. The Select Optional Configuration screen appears.



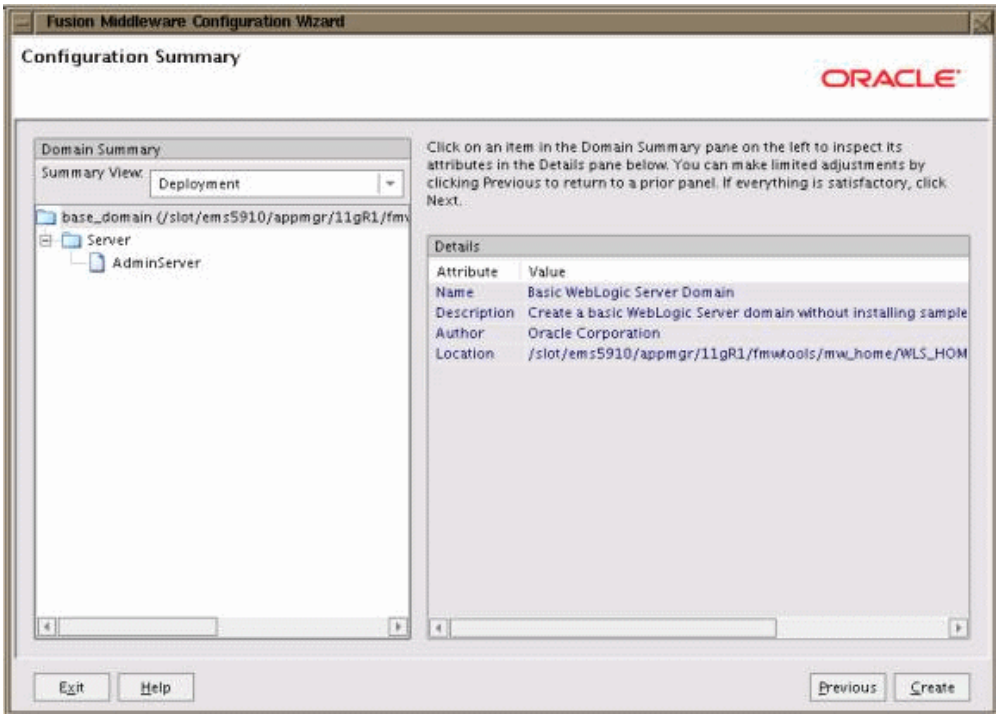
8. Select the **Administration Server** option only and click **Next**. The Configure the Administration Server screen appears.



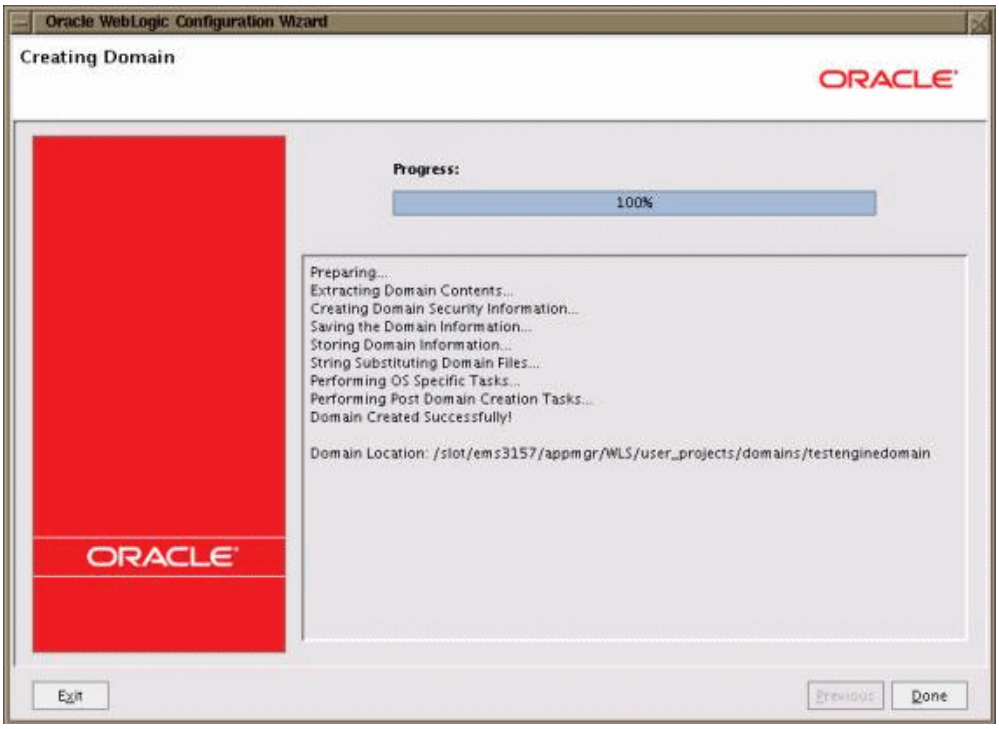
9. Enter the following details and click **Next**:

   - Name - Enter the name of the Admin Server.
   - Listen Address - The Admin Server listen port address.
   - Listen Port - Enter the server listen port. Check the availability of the port number before entering a value.
   - SSL listen port - Enter the SSL Listen Port. Check the availability of the port number before entering a value.
   - Check the **SSL enabled** option.

   The Configuration Summary screen appears.



10. Review the details. If you want to modify any settings, use the **Previous** button to return to the appropriate screen. If no changes are required, click **Create**. The Creating Domain screen appears to display the system progress.



11. When the domain is complete, click **Done**.

Starting the Engine Admin Server

Perform the following procedure to start the Engine Admin Server.

1. Under *<WLS_HOME>*, go to the directory user_projects/domains/ *<ENGINEDOMAINNAME>/*

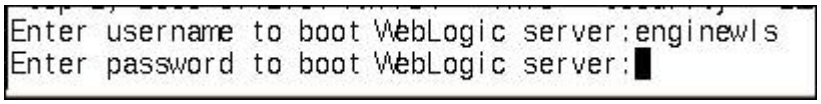
   Example:

   /slot/ems3157/appmgr/user_projects/domains/testenginedomain

2. Run the script startWeblogic.sh to start the Admin Server.

```
-bash-3.00$ pwd
/slot/ems3157/appmgr/WLS
-bash-3.00$ cd user_projects/domains/testenginedomain1/
-bash-3.00$ ./startWebLogic.sh
```

3. The console requests the username and password. Enter the Engine Domain credentials.



The console displays "Server started in RUNNING mode".

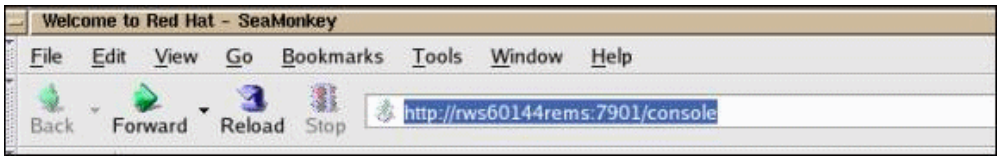
4. Open a web browser and type in the URL/address in the format below:

   `http://<Machine_Name>:<Port_No>/console`

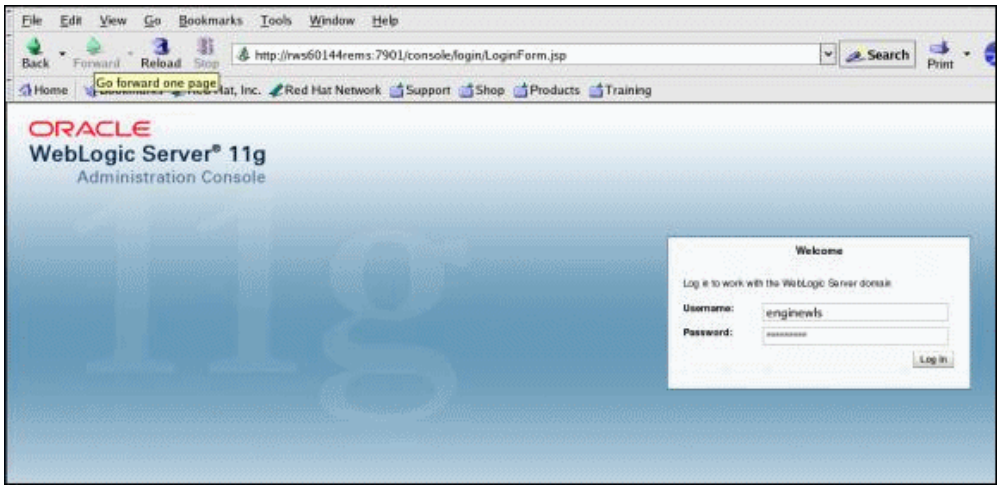
   where `<MACHINE_NAME>` is the host name of the machine on which the WebLogic Server is running (for example, `rws60144rems.us.oracle.com`) and `<Port_No>` is the Admin Server Listen port number specified when the Engine domain was created.

   Example:

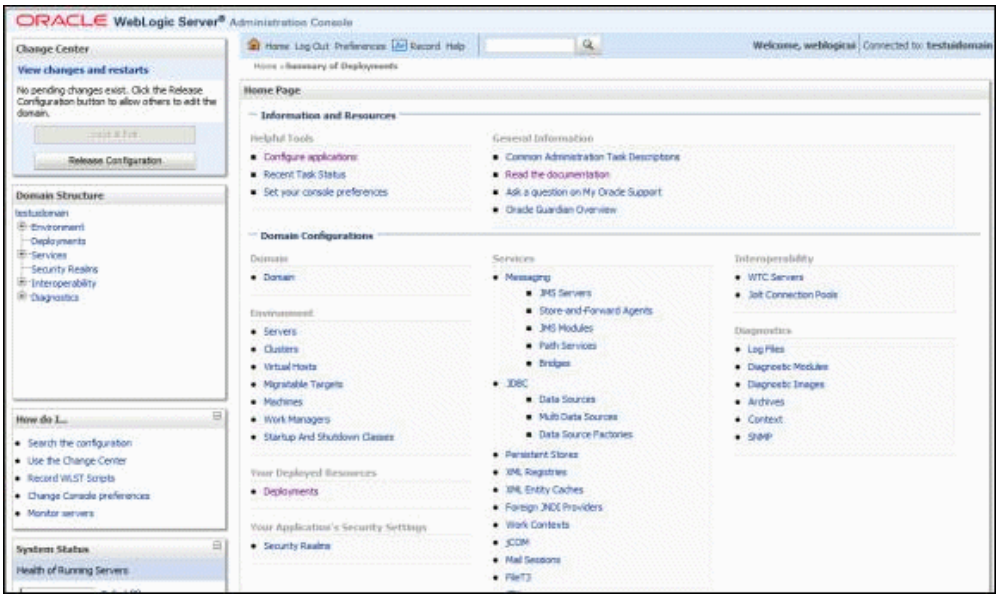
   `http://rws60144rems:7901/console`



The WebLogic Server Administration Console appears.



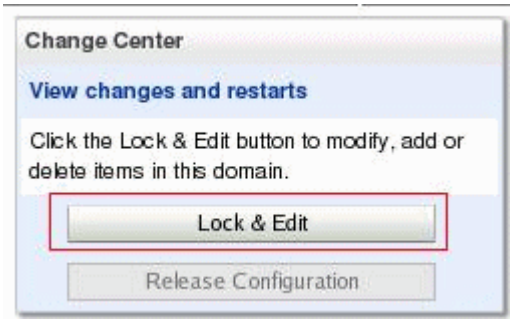
5. Enter the Admin Server **Username** and **Password**, and click **Log In**. The WebLogic Administration Console home page appears.



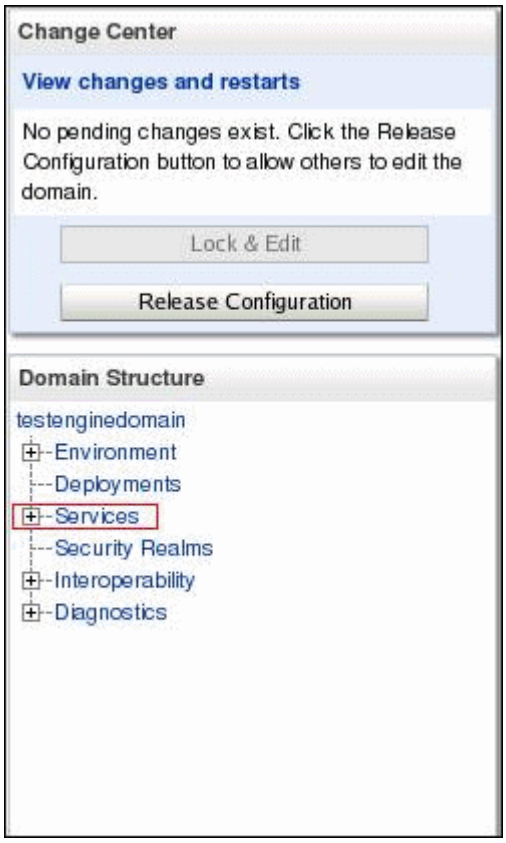
Configuring the JDBC Data Source for the Engine Domain

Perform this procedure to configure the JDBC data source for the Engine Domain. Verify that the Engine Domain Admin Server is up and running before performing this procedure.

1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



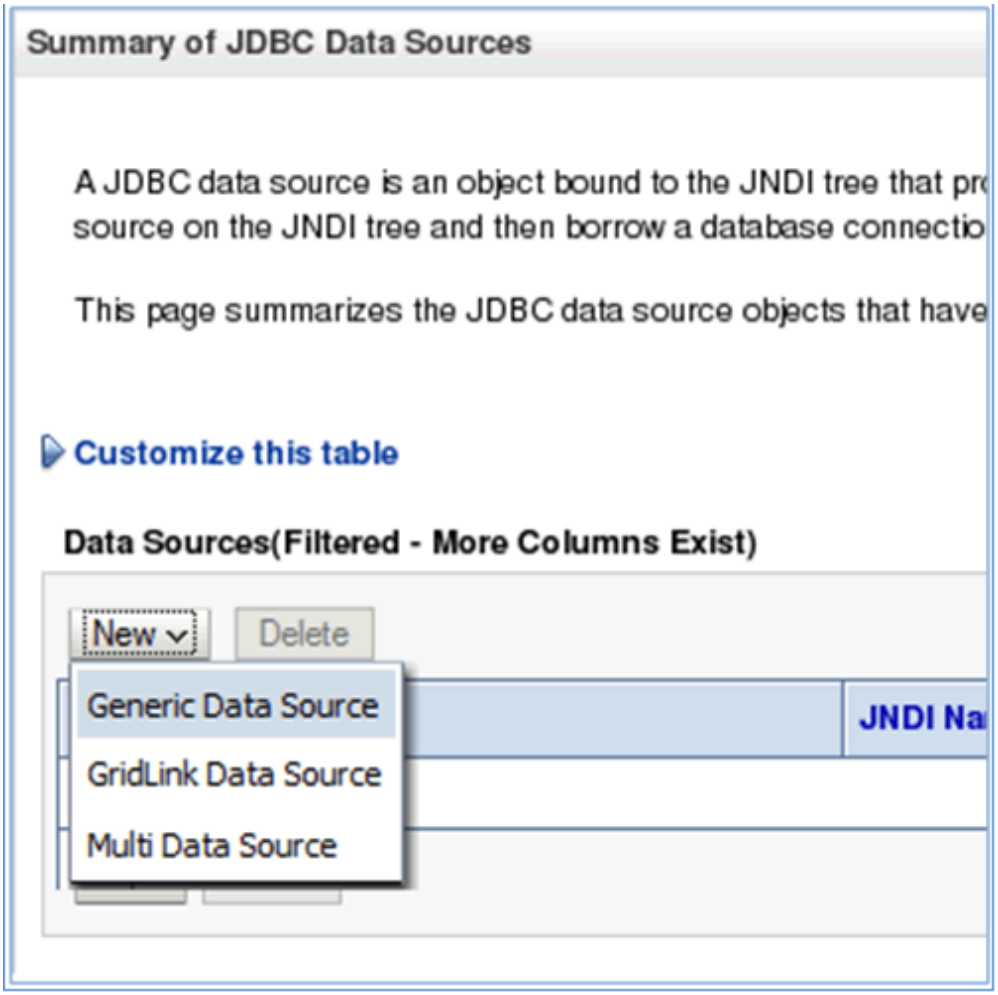
2. From the Domain Structure region, expand the **Services** tree node.



3. From Services tree, expand the **JDBC** tree node.

4. Select **Data Sources**.

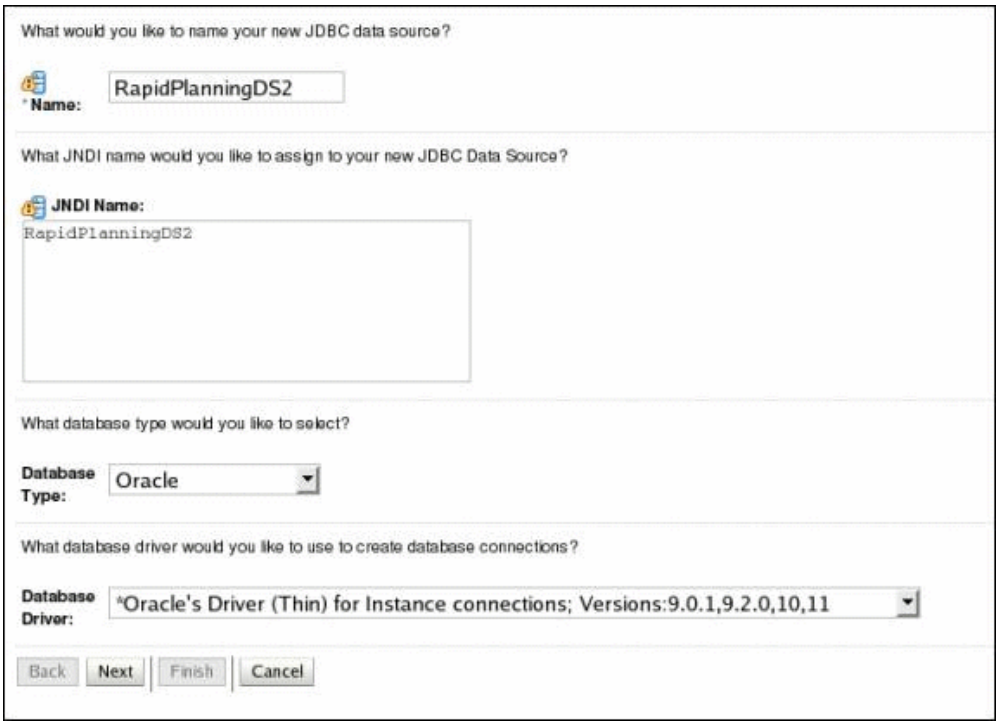
5. Click **New** and select **Generic Data Source**.



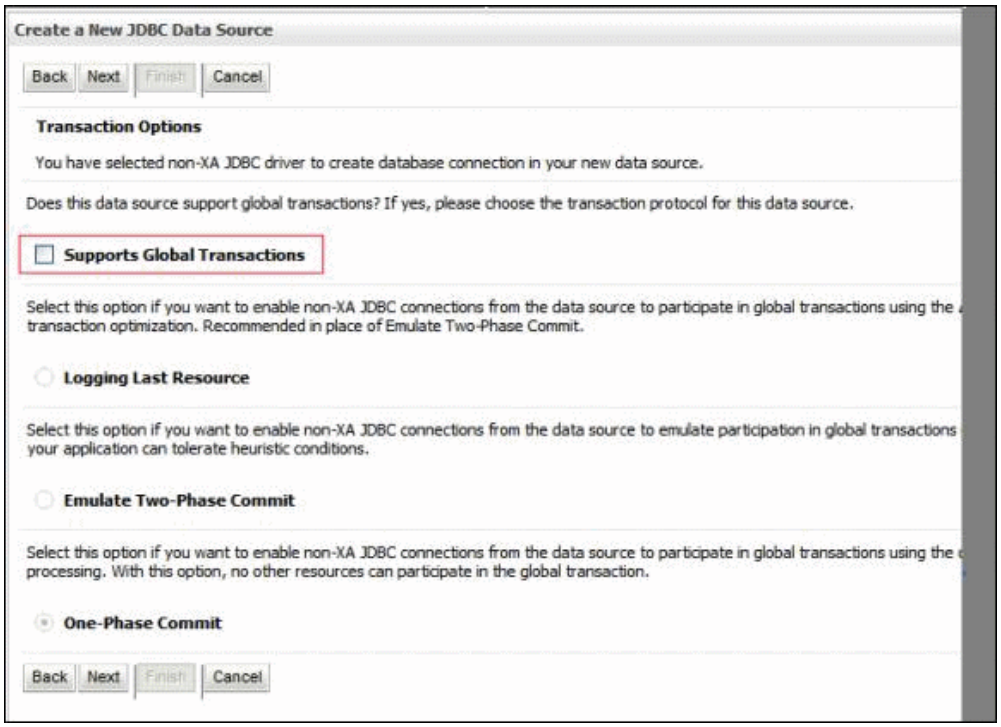
6. Enter the information as shown below, and click **Next**.

   - Name - Enter 'RapidPlanningDS2'.
   - JNDI Name - Enter 'RapidPlanningDS2'.
   - Database Type - Select **Oracle**.
   - Database Driver - Select **Oracle's Driver (Thin) for instance connections: 9.0.1, 9.2.0, 10, 11**.

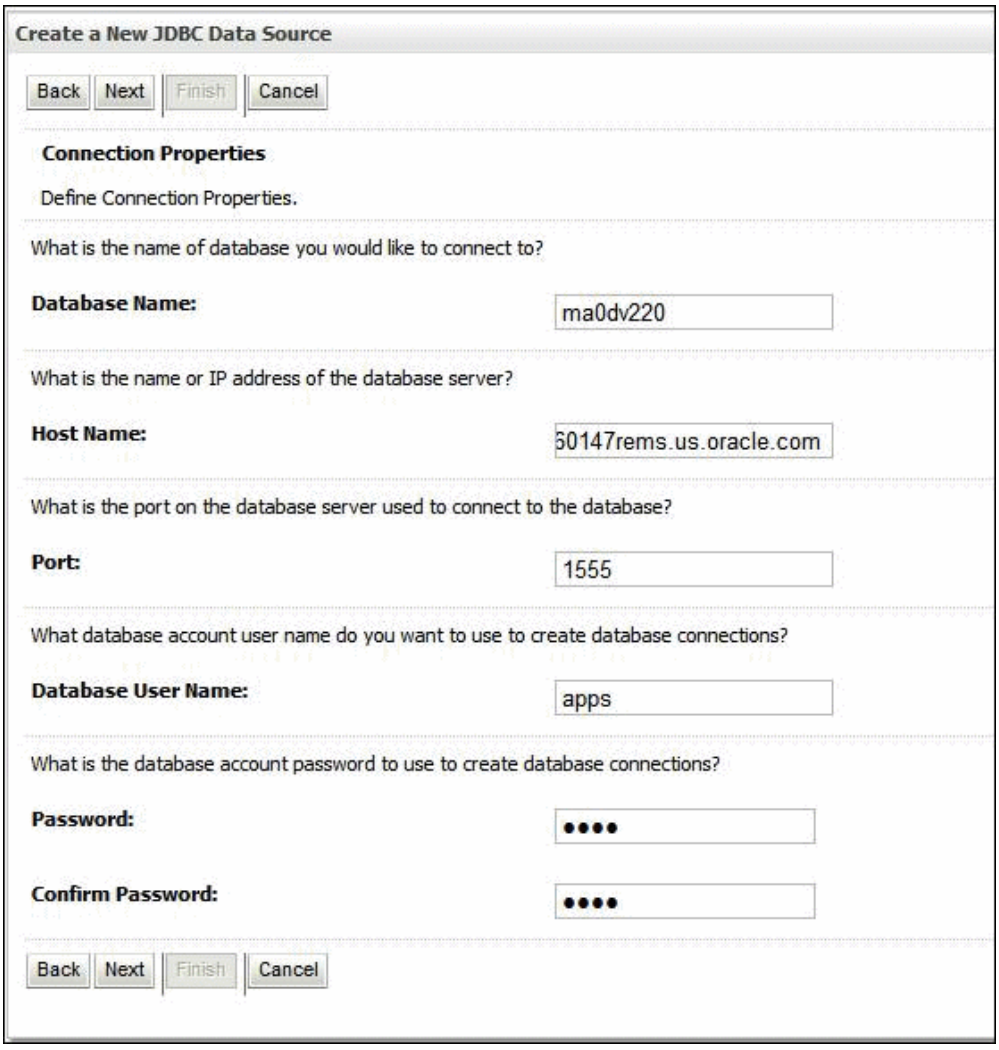
   Enter **Name** and **JNDI Name** as 'RapidPlanningDS2'. Check "Troubleshooting, page 6-17" for JDBC Driver specific issues.



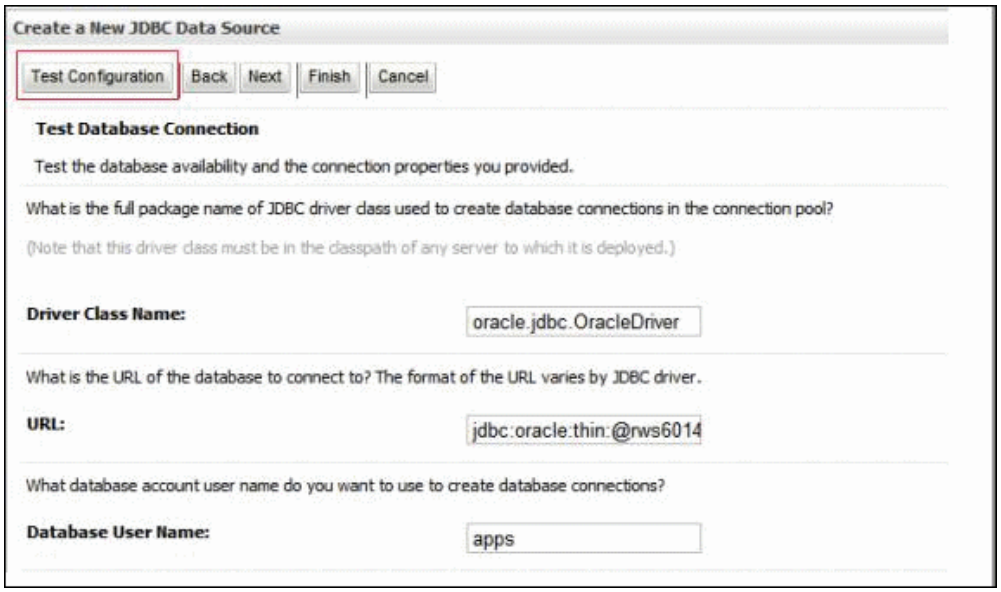
7. Deselect **Supports Global Transaction** and click **Next**.



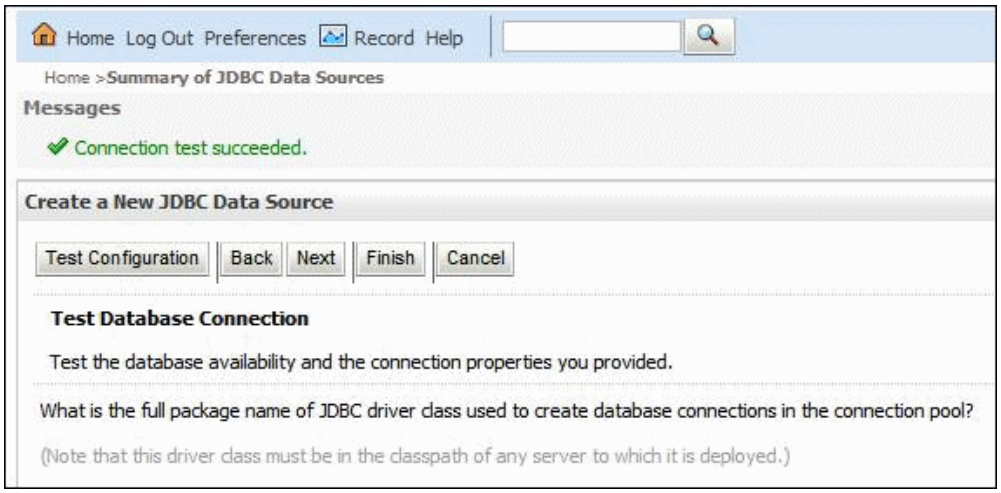
8. Enter the information as shown below and click **Next**.
   - Database Name - Enter the database name (example, ma0dv220).
   - Host Name - Enter the host name (example, rws60147rems.us.oracle.com).
   - Port - Enter the port number (example, 1555).
   - Database User Name - Enter the database user name.
   - Password - Enter the database user name password.
   - Confirm Password - Re-enter the password.



9. Click **Test Configuration**.

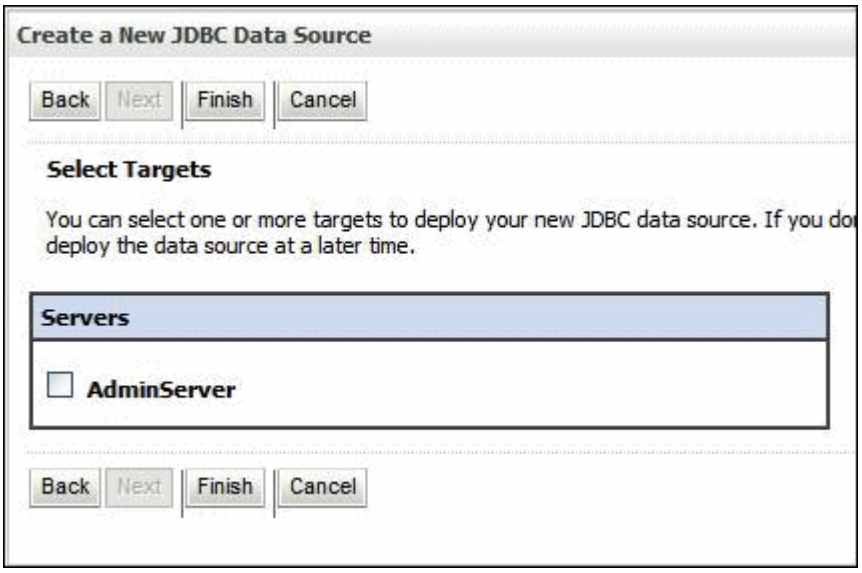


If JDBC is set up correctly, then a message "Connection test succeeded" appears.

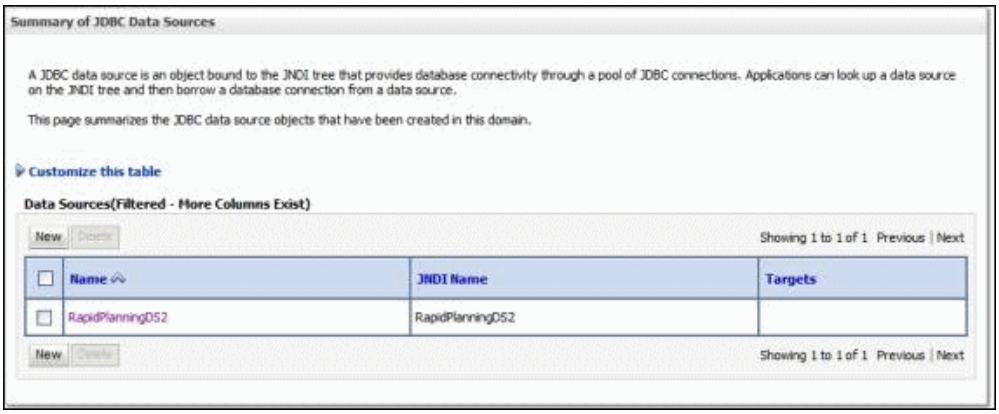


10. Click **Next**.

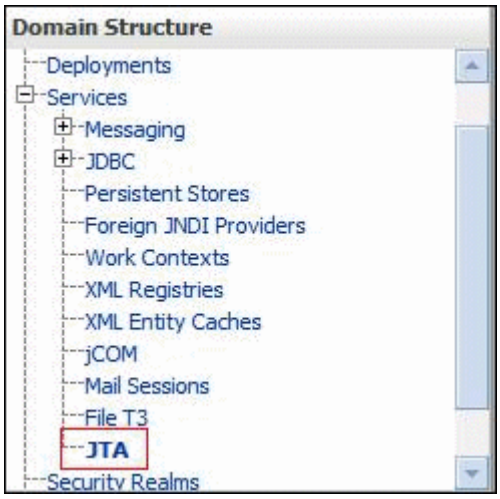
11. Do not select any target servers. Click **Finish**.



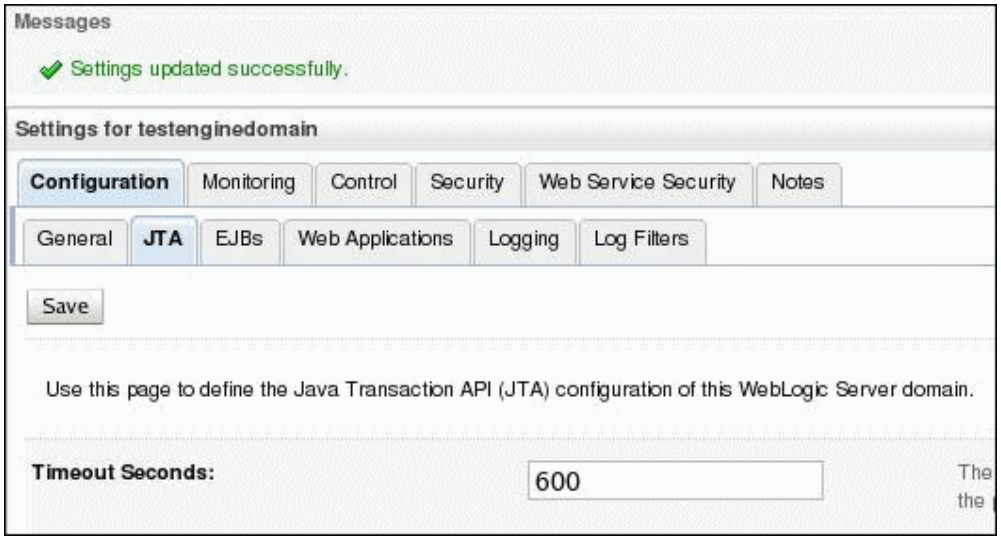
The Summary of JDBC Data Source page appears. The data source appears on the page.



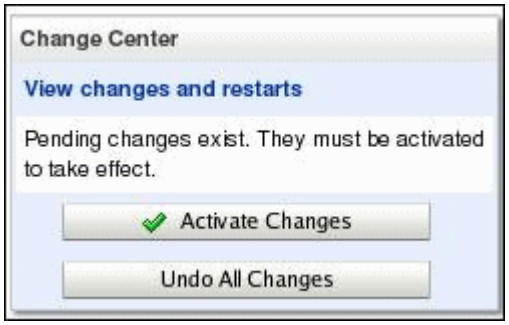
12. In the Domain Structure region, navigate to **Services > JTA**. Select the **Configuration** tab, and then select the **JTA** tab.



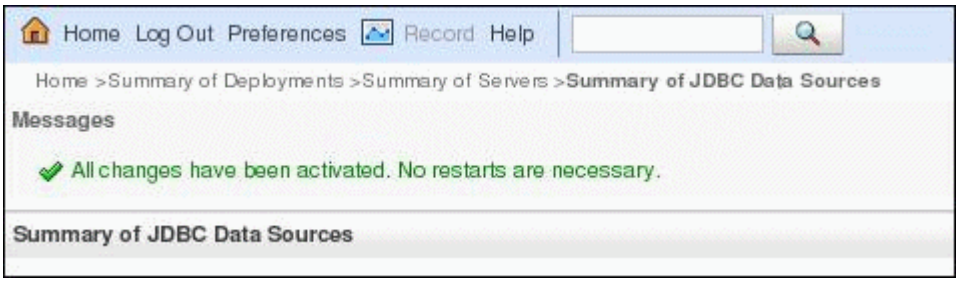
13. Set **Timeout Seconds** to 600 seconds, as shown below, and click **Save**.



14. From the Change Center, click **Activate Changes**.



Once Activation is complete, the message "All changes have been activated. No restarts are necessary." appears.



The JDBC Resource has been successfully set up.

Setting Up the Secondary Host Machine

Setting up the secondary host consists of the following procedures:

- Transferring files to the secondary host
- Registering the Node Manager and setting up the Node Manager properties file
- Adding machines and Node Manager to the WebLogic Console

Transferring Files to the Secondary Host:

Use this procedure to copy the template JAR file and the setDomainEnv.sh file from the primary host to the secondary host.

1. On the primary host, navigate to the following location:

   <WLS_HOME>/common/bin

2. Run the following command:

   ```
   ./pack.sh -managed=true -domain=<DOMAIN_HOME> -<Template_Name.jar>
   -template_name="Template_Description"
   ```

   Example:

   ```
   ./pack.sh -managed=true
   -domain=/slot/ems3102/oracle/mwhome/user_projects/domain/testengined
   omain/
   -template=/slot/ems3102/oracle/mwhome/user_projects/domain/testengin
   edomain/testRPTemplate.jar
   -template_name="testRPDomain template"
   ```

3. Transfer the template file to the secondary host location where you want to copy the domain files.

4. On the secondary host, navigate to the location where template file has been copied

and run the following command:

```
<WLS_HOME>/common/bin/unpack.sh –domain=<full path where the domain needs to be created/Domian_Name> -template=<Template_Name>
```

Example:

```
/slot/ems6386/oracle/mwhome/wlserver_10.3/common/bin/unpack.sh
-domain=
/slot/ems3102/oracle/mwhome/user_projects/domain/testenginedomain/
-template=./ testRPDomain template
```

5. Copy setDomainEnv.sh file from the primary host to the secondary host. This file is not copied over with an `unpack` command. Transfer the file to the secondary host by FTP. Back up the original setDomainEnv.sh file, and overwrite it with the file from primary host. The setDomainEnv.sh file on the primary host is in the following location:

   <DOMAIN_HOME>/bin

Registering the Node Manager and Setting Up the Node Manager Properties File:

1. On the primary host, navigate to the following location:

   <WLS_HOME>/common/bin

2. Run the Node Manager as follows:

   ```
   nohup ./startNodeManager.sh &
   ```

3. Navigate to the following location:

   <WLS_HOME>/common/nodemanager/

4. Open the nodemanager.properties file and edit the value of the `StartScriptEnabled` to `true`, as shown in the example below.

```
StartScriptName=startWebLogic.sh
ListenAddress=
NativeVersionEnabled=true
ListenPort=5556
LogToStderr=true
SecureListener=true
LogCount=1
DomainRegistrationEnabled=false
StopScriptEnabled=false
QuitEnabled=false
LogAppend=true
StateCheckInterval=500
CrashRecoveryEnabled=false
StartScriptEnabled=true
LogFile=/slot/ems6386/oracle/mwhome/wlserver_10.3/common/nodemanager/nodemanager.log
LogFormatter=weblogic.nodemanager.server.LogFormatter
ListenBacklog=50
```

5. Stop and start the Node Manager for the changes to take effect, as shown in the example below.

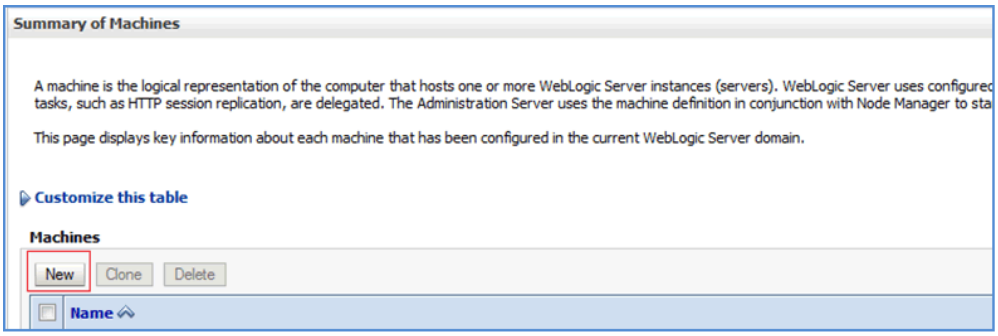
```
-bash-3.00$ ps -aefl | grep ./startNodeManager
0 S ora3102  13452 11567  0  77   0 -  1003 pipe_w 04:44 pts/16   00:00:00 grep ./startNodeManager
0 S ora3102  32276 11567  0  78   0 -  1075 wait   02:46 pts/16   00:00:00 /bin/sh ./startNodeManager.sh
-bash-3.00$ kill -9 32276
```

   Initial starting and stopping of the Node Manager is necessary for generating properties files.

6. Repeat this procedure for all host machines.

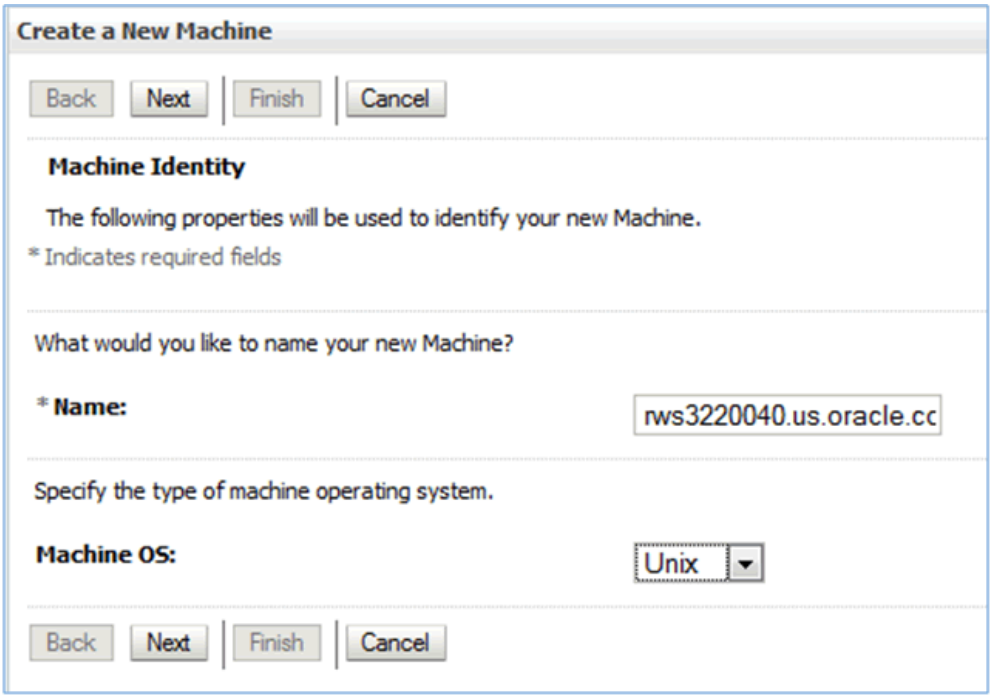
Adding Machines and Node Manager to the WebLogic Console:

1. Log in to the WebLogic Administration Console from your browser.
2. From the Domain Structure region, expand the **Environment** node and select **Machines**.
3. Click **New**.



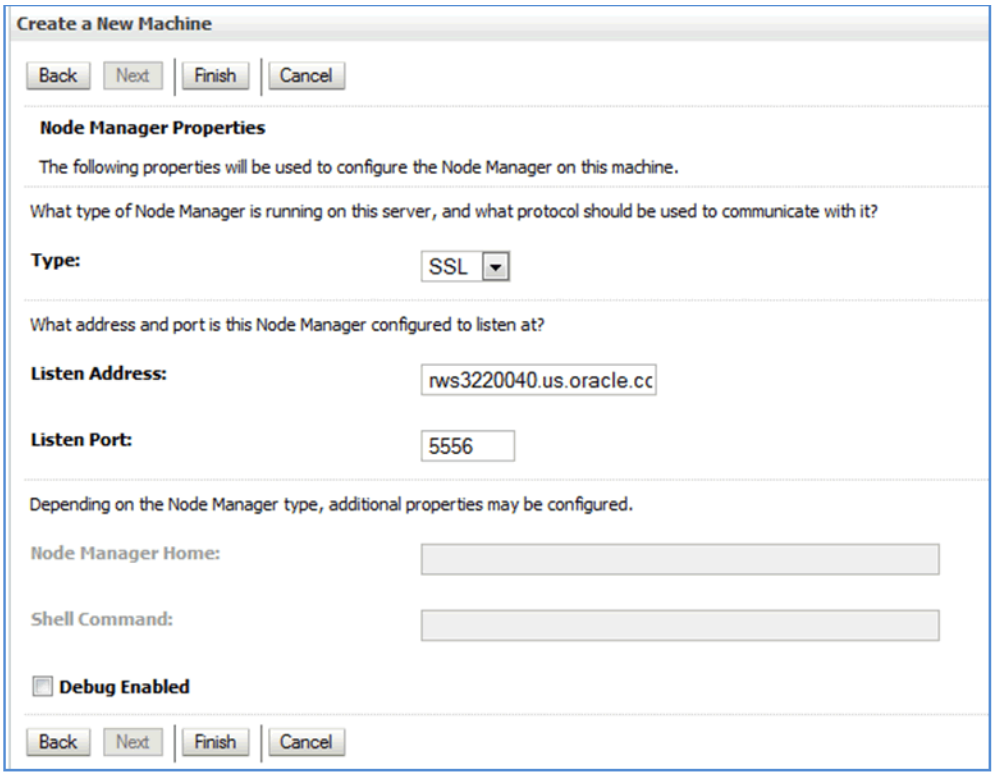
4. Enter the following information, and click **Next**.

   - Name - Enter the machine name.
   - Machine OS - Select **Unix**.

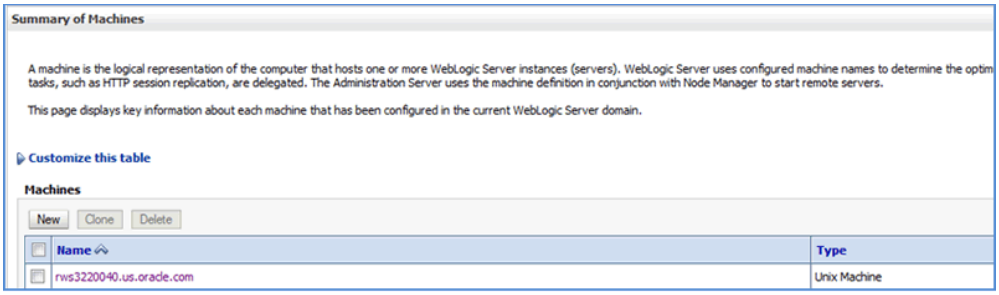


5. Enter the following information, and click **Finish**.

   - Type - Select **SSL**.
   - Listen Address - Enter the Node Manager's listen address.
   - Listen Port - Enter '5556' as the Node Manager's listen port.

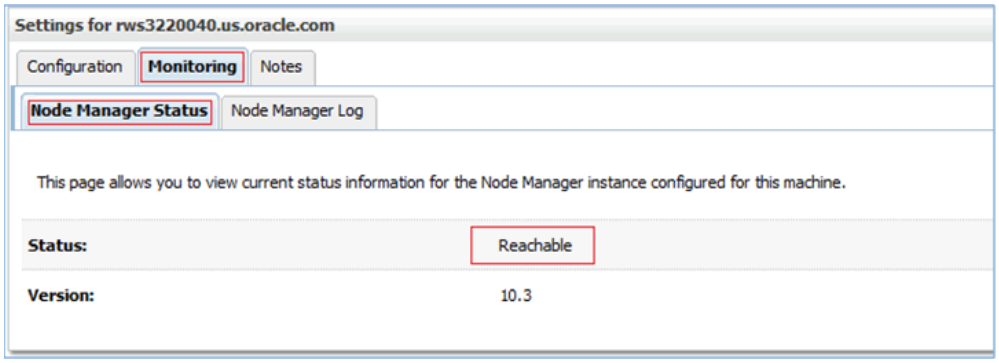


The Summary of Machine page appears and displays the new machine.



6. Check the status of Node Manager for the machine by selecting the new machine displayed on the page.

7. Select the **Monitoring** tab, and click the **Node Manager Status** tab. The **Status** field displays "Reachable".



8. Repeat the procedure to add machines for all the hosts.

9. From Change Center region, click **Activate Changes**.

   Once activation is complete the following message appears:

   "All changes have been activated. No restarts are necessary."

Setting Up Managed Servers

Setting up the Managed Servers consists of the following procedures:

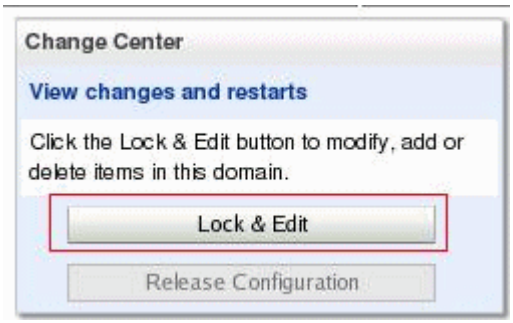
- Creating a Managed Server
- Updating the machine information for the Managed Server

> **Note:** For a horizontal scaled environment, perform all Managed Server setup and administration using the WebLogic Administration Console, not the Rapid Planning User Interface (UI).

Creating a Managed Server:

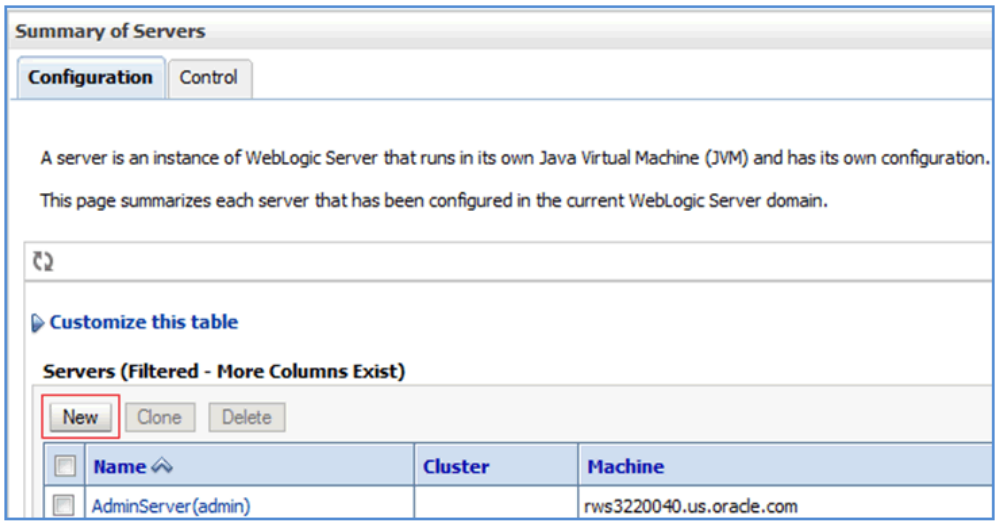
Verify that the Engine Domain Admin Server is up and running before performing this procedure.

1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



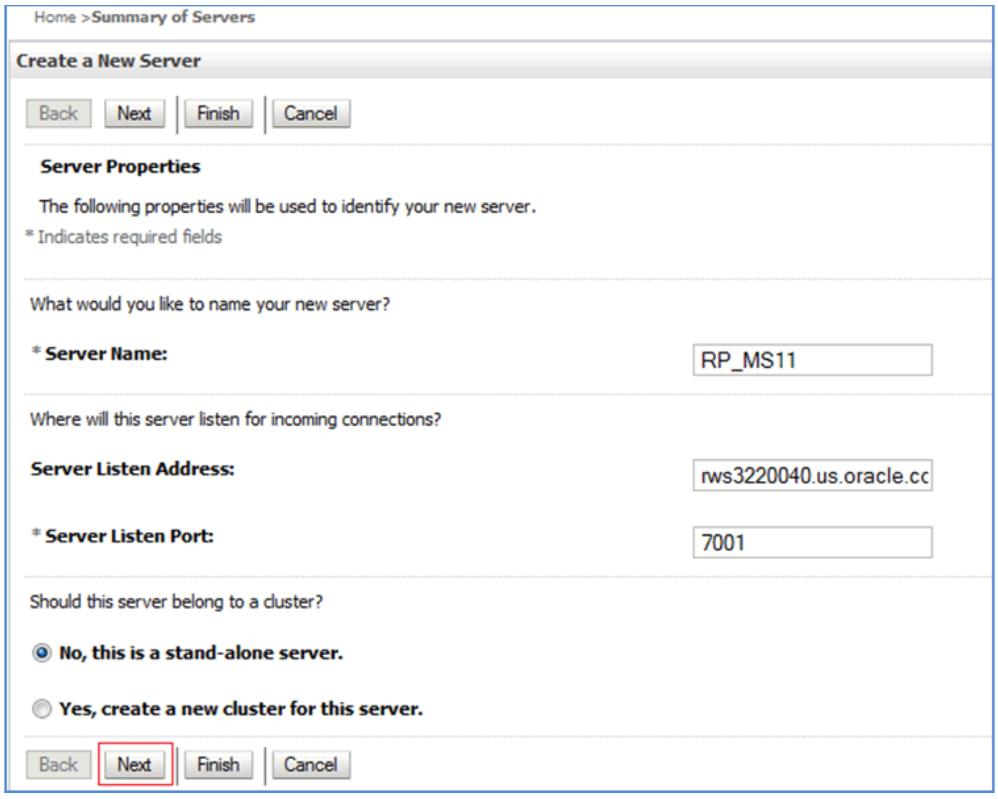
2. From the Domain Structure region, expand the **Environment** tree node and select **Servers**.

3. Click **New**.

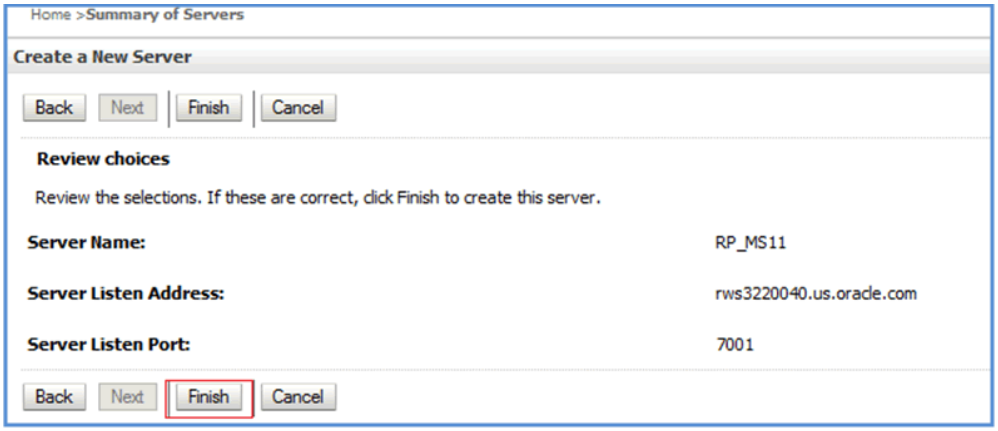


4. Enter the following information, and click **Next**.

   - Server Name - Enter the name of the Managed Server.
   - Server Listen Address - Enter the Listen Address for Managed Server.
   - Server Listen Port - Enter the Server Listen Port for Managed Server. Verify the port number assigned to each Managed Server is unique across *all* your Managed Servers across *all* machines.
   - Should this server belong to a cluster? - Select **No**. The Rapid Planning User Interface and Engine do not support cluster configuration.



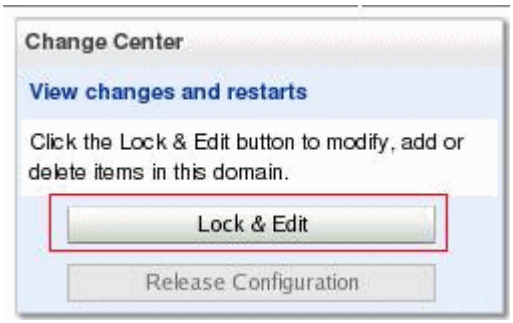
5. Verify the information and click **Finish**.



6. From the Change Center region, click **Activate Changes**.

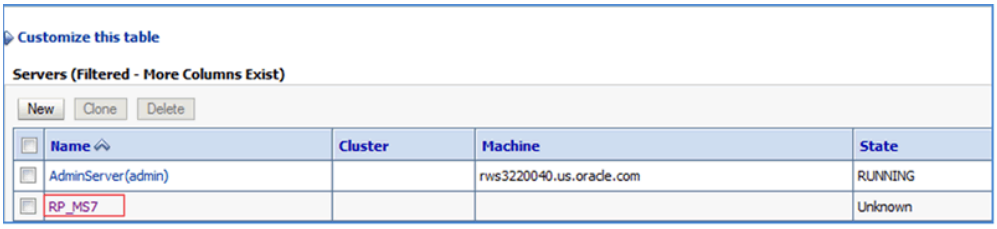
Updating the Machine Information for Managed Server:

1. Click **Lock & Edit** from the Change Center region in top left corner to change the domain configuration.



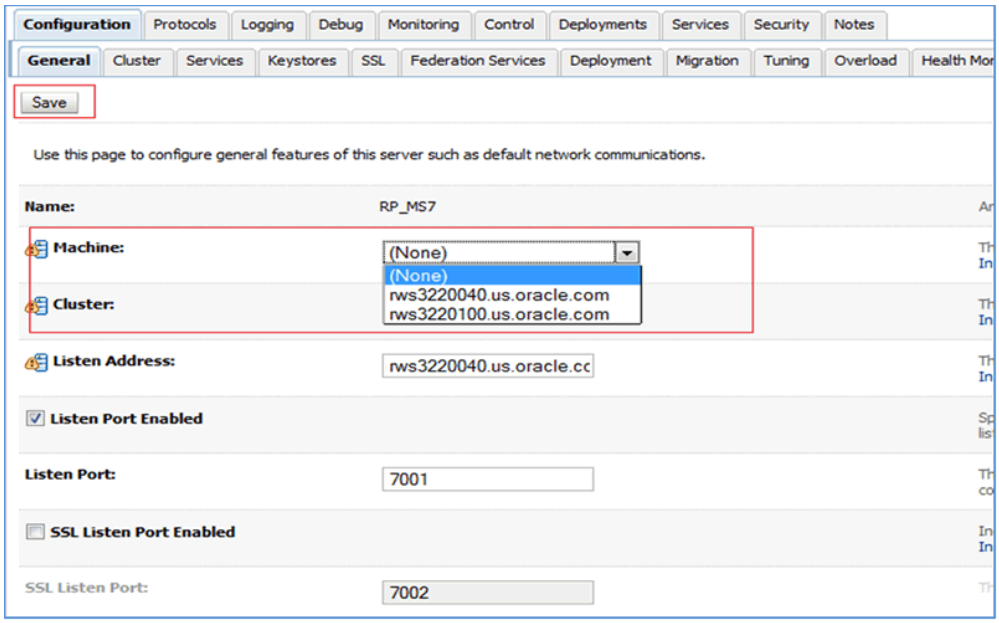
2. From the Domain Structure region, expand the **Environment** tree node, and select **Servers**.

3. Select the Managed Server name.



   The General subtab under the Configuration tab appears.

4. Select the machine name from the **Machine** list and click **Save**.



The machine is assigned to the Managed Server.

5. Repeat this procedure to assign all machines to the Managed Servers.

6. From the Change Center region, click **Activate Changes**.

Creating the JMS Servers, Subdeployments, and Queues

Creating the JMS Servers, Subdeployments, and Queues consists of the following procedures:

1. Starting the Manager Servers

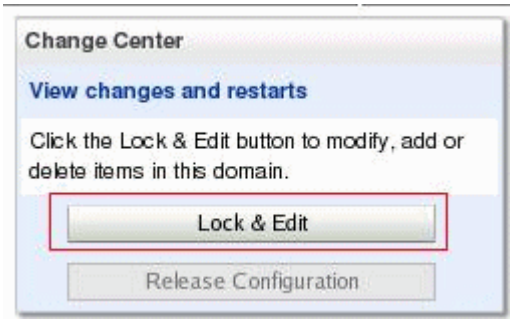
2. Creating the JMS Server

3. Creating the subdeployments for the JMS module

4. Creating the queues

Starting the Managed Servers:

1. Click **Lock & Edit** in the Change Center region in the top left corner to change the domain configuration.



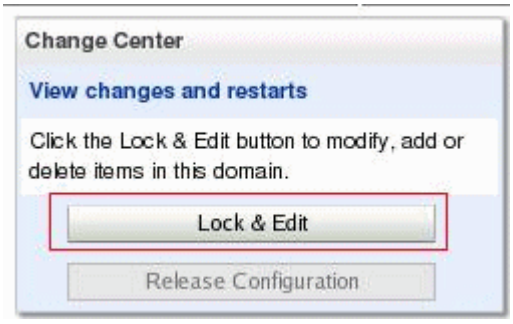
2. From the Domain Structure region, expand the **Environment** tree node and select **Servers**.

3. Navigate to the **Control** tab, select the Managed Servers that you want to start, and click **Start**.

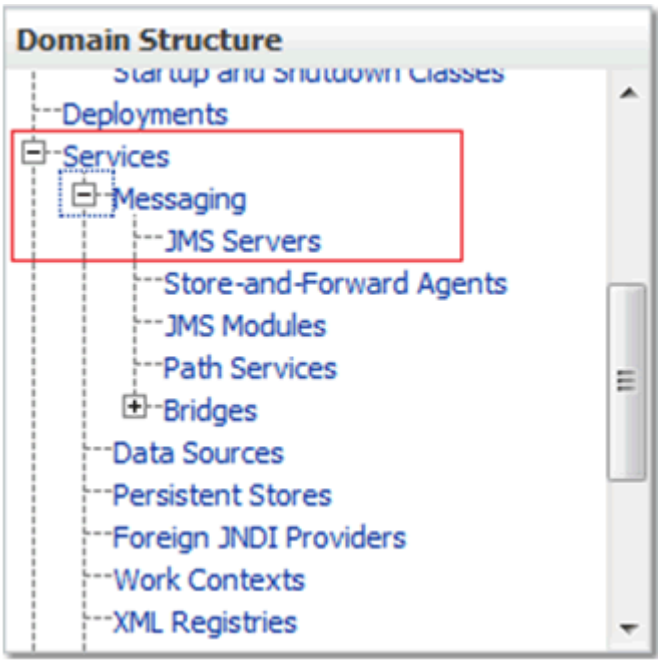
Creating the JMS Server:

Create a JMS Server for each Rapid Planning Managed Server. The JMS servers act as management containers for the queues and topics in the JMS modules that are targeted to them. The JMS servers defined are created in the current WebLogic Server domain.

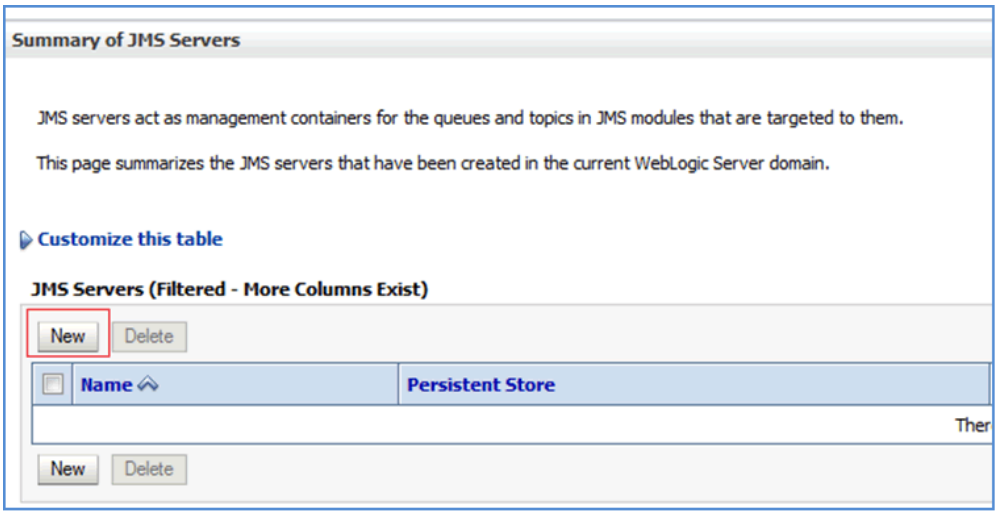
1. Click **Lock & Edit** in the Change Center region in the top left corner to change the domain configuration.



2. From the Domain Structure region, expand the **Services** tree node, expand the Messaging node, and select **JMS Servers**.



3. Click **New**.

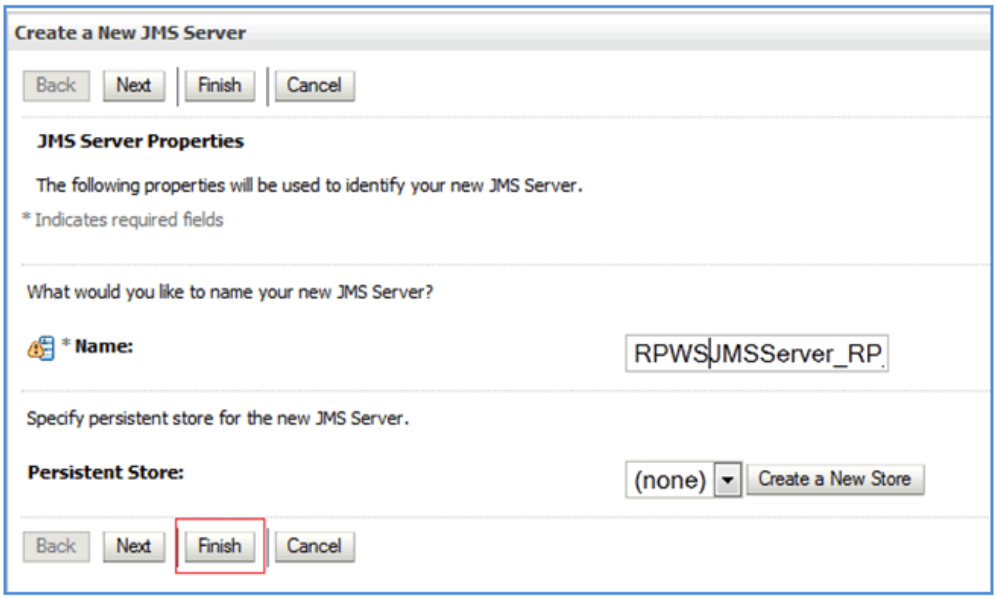


4. Enter the JMS Server name, as shown below. Click **Next** and select the same Managed Server as the target. Click **Finish**.

   Enter the JMS Server name using the following format: RPWSJMSServer_ *<Managed_Server_Name>*.

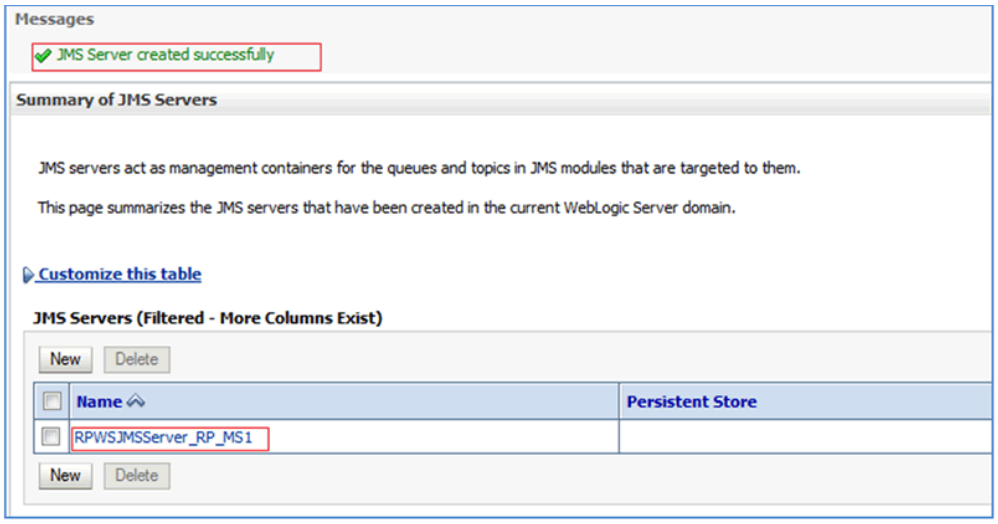
   Example:

   For Managed Server RP_MS1, enter 'RPWSJMSServer_RP_MS1'.



   The following message appears:

   "JMS Server created successfully."



5. Repeat the process to define a Rapid Planning JMS Server for each of the Rapid Planning Managed Servers in your environment.

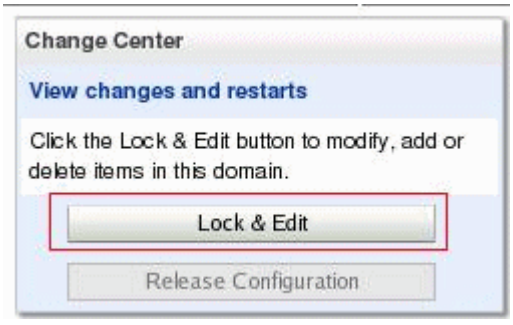
6. In the Change Center region, click **Activate Changes**.

Creating the JMS Module:

Use this procedure to create the JMS module for Rapid Planning named 'RPModule'. JMS modules are application-related definitions that are independent of the domain environment. You create and manage JMS resources either as system modules or as application modules. Use the Administration Console as described below to create your JMS module.

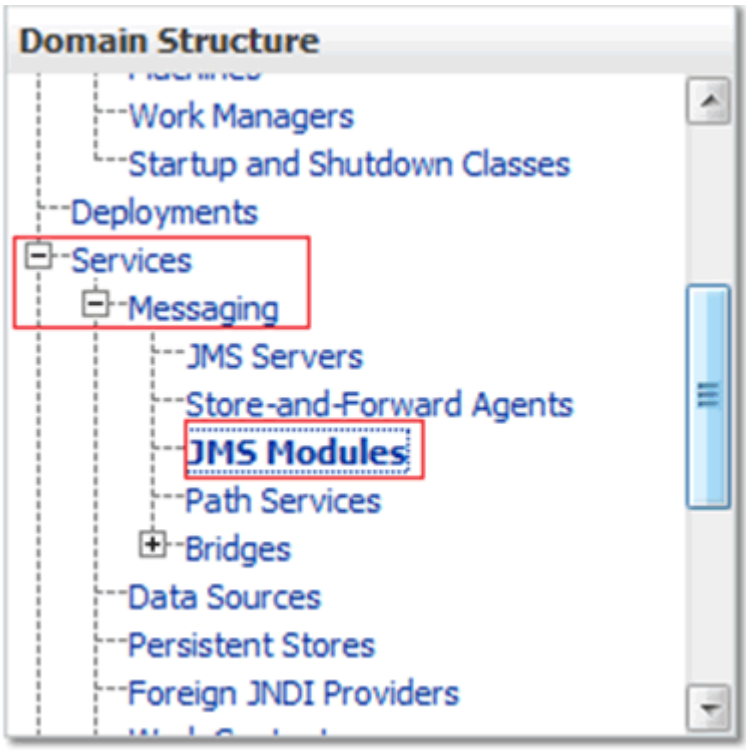
If JMS Module is already present, do not re-create a new module. Update the existing RPModule by adding the new Rapid Planning Managed Servers as targets for RPModule.

1. Click **Lock & Edit** in the Change Center region in the top left corner to change the domain configuration.



2. From the Domain Structure region, expand the **Services** tree node, expand the

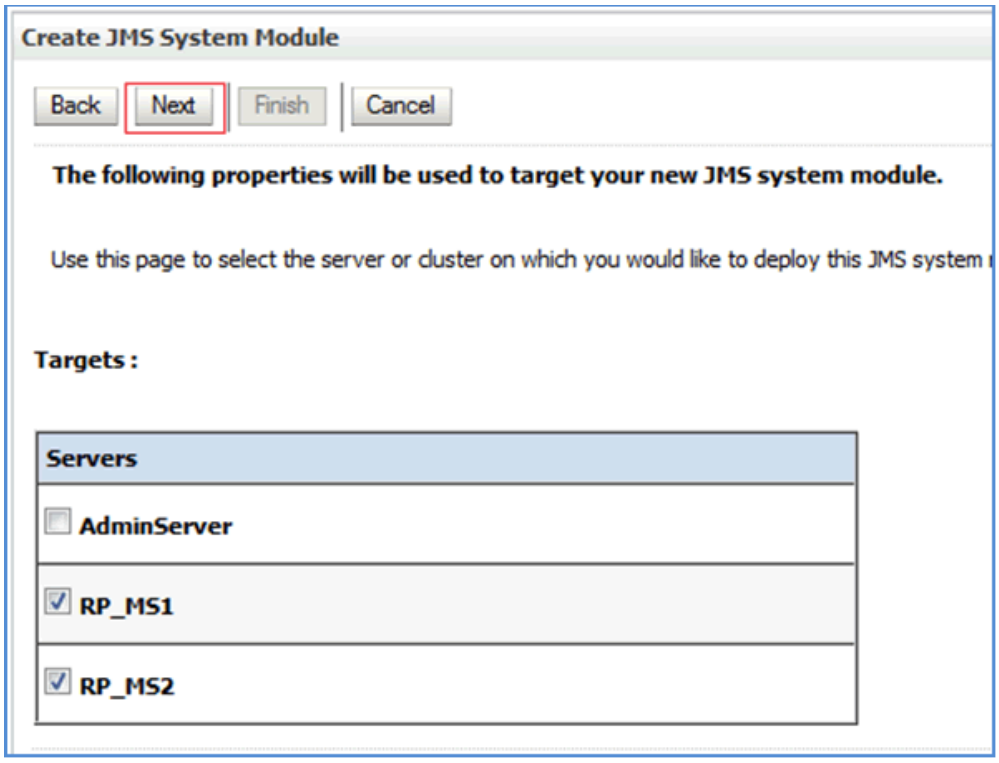
Messaging node, and select **JMS Modules**.



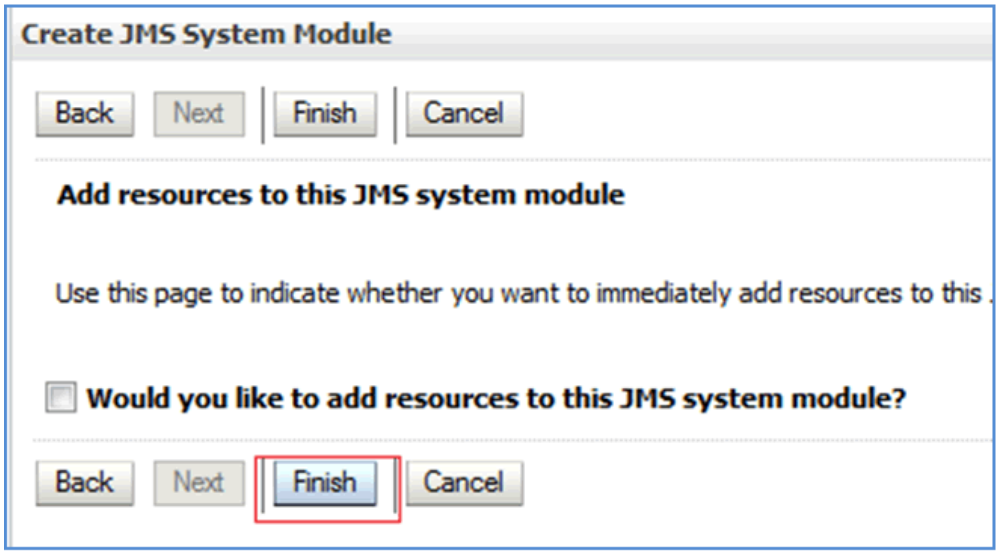
3. Click **New**.

4. Enter 'RPModule' in the **Name** field, and click **Next**.

5. Select the target Rapid Planning Managed Servers, and click **Next**. The selected target Rapid Planning Managed Servers are mapped to the JMS Module 'RPModule'.

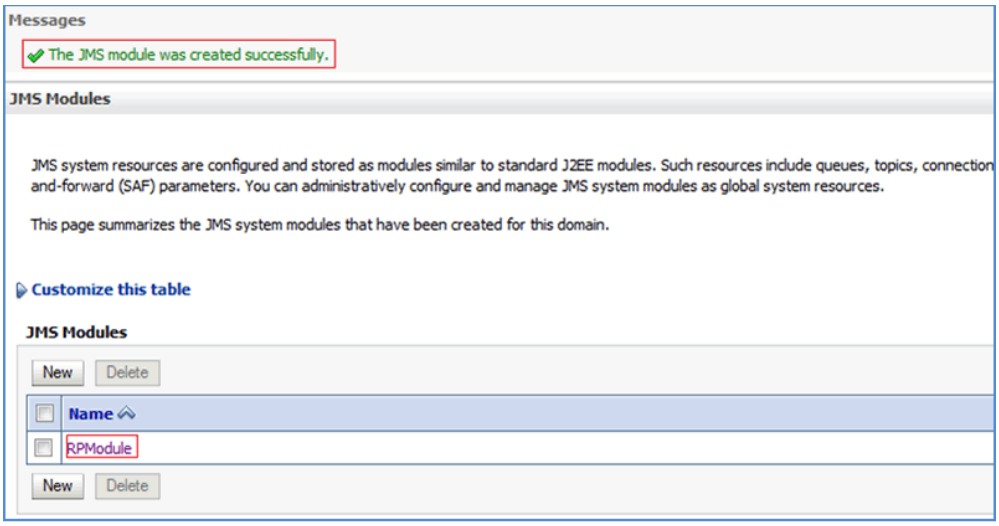


6. Click **Finish**.



The following message appears:

"The JMS module was successfully created."

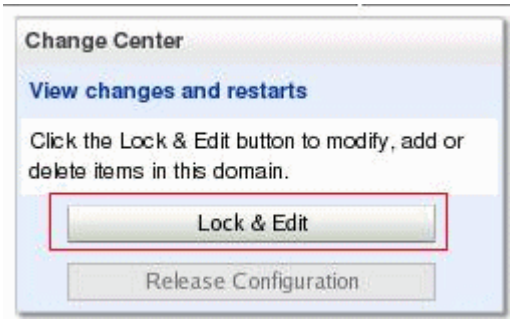


7. In the Change Center region, click **Activate Changes**.

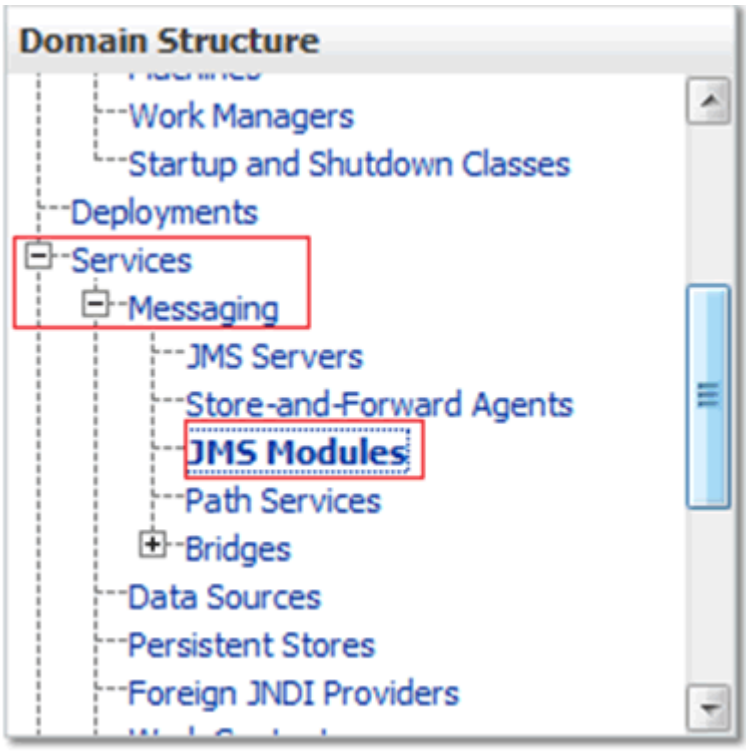
Creating the Subdeployments for the JMS Module:

Use the following procedure to create one subdeployment for each Rapid Planning Managed Server. A subdeployment is assigned to a JMS Module, which in this case is the RPModule you previously created.

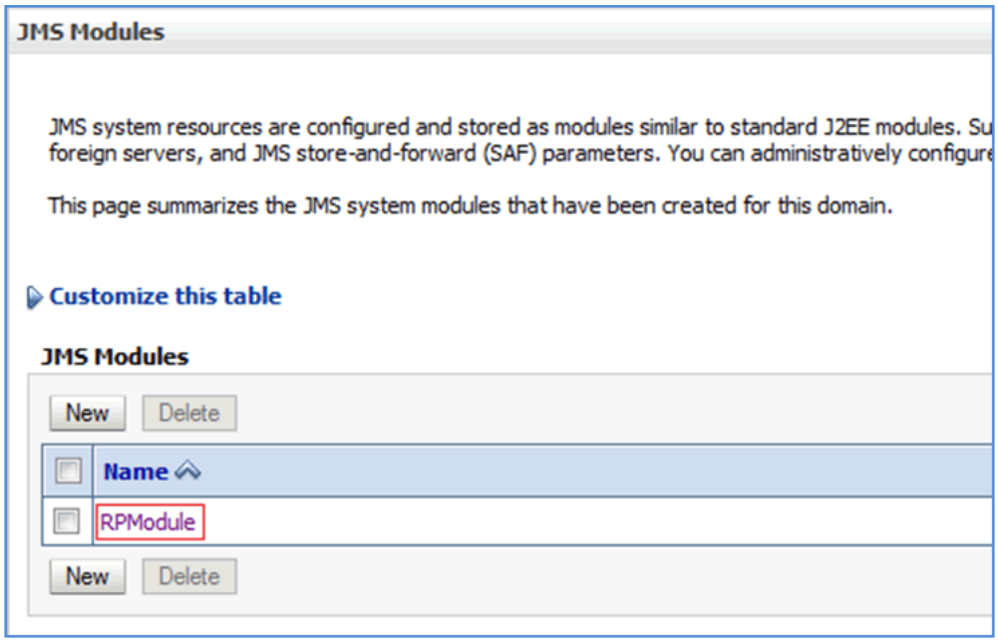
1. Click **Lock & Edit** in the Change Center region in the top left corner to change the domain configuration.



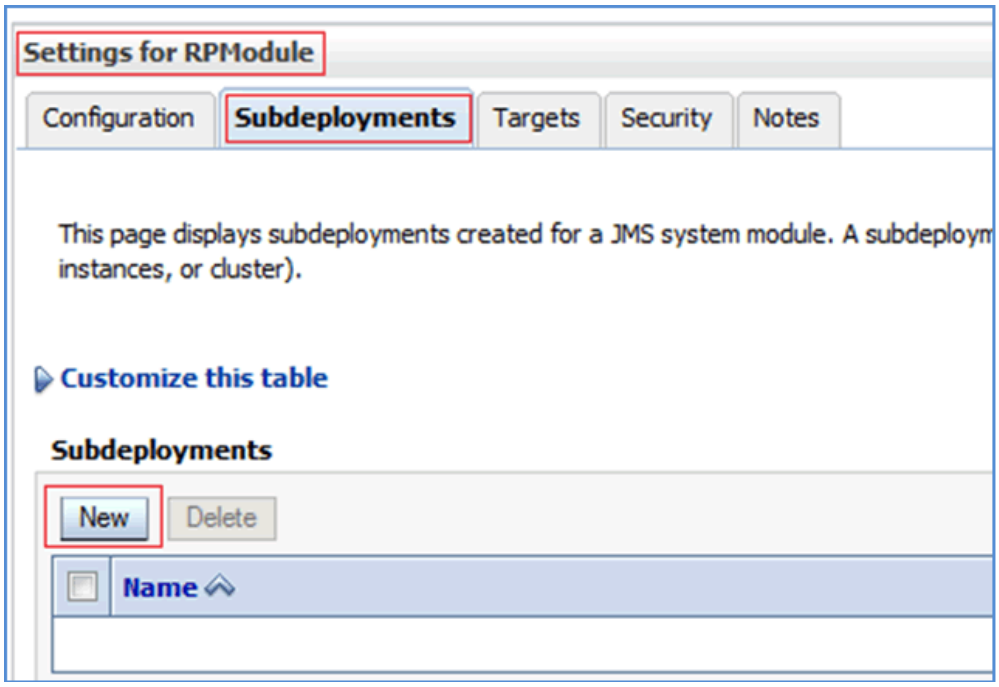
2. From the Domain Structure region, expand the **Services** tree node, expand the **Messaging** node, and select **JMS Modules**.



3. Select the existing JMS Module (for example, RPModule).



4. Navigate to the **Subdeployments** tab, and click **New**.

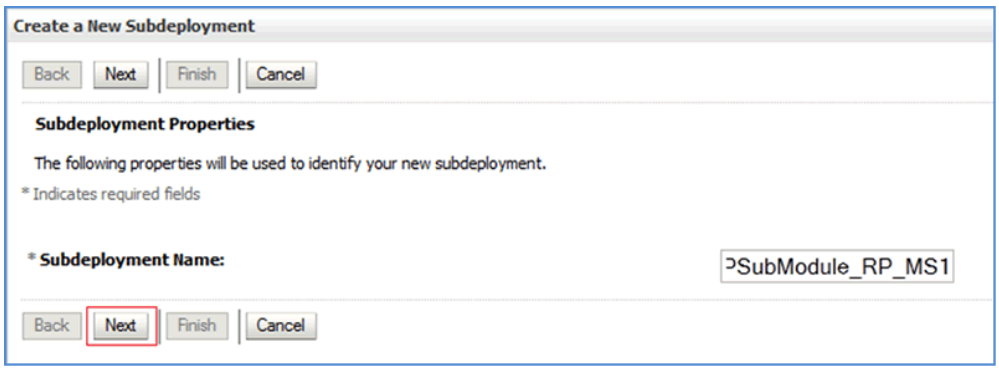


5. Enter the Subdeployment Name, as shown below, and click **Finish**.

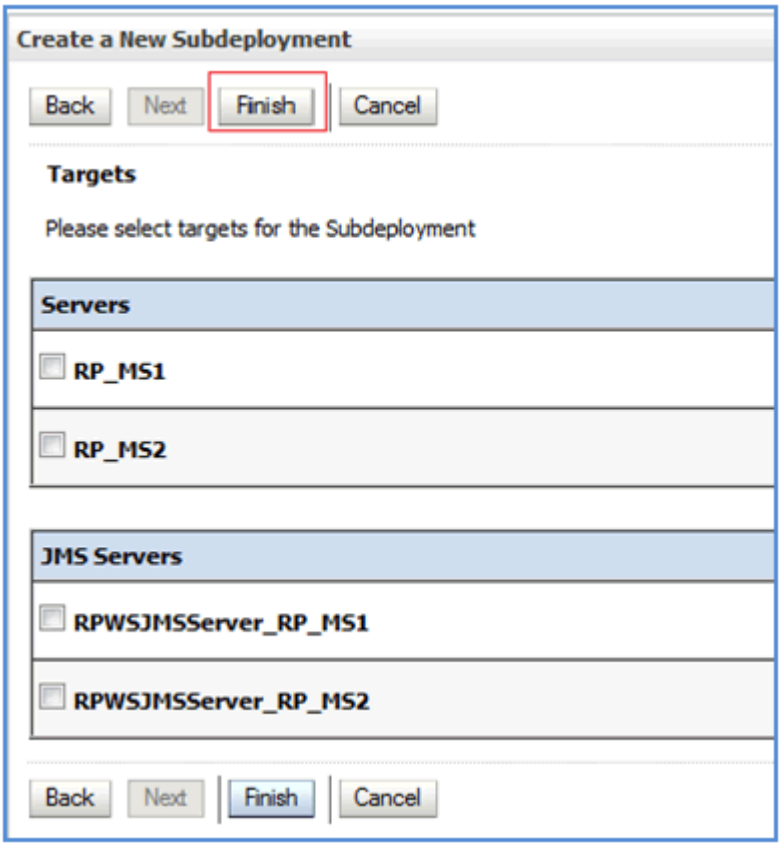
   Enter the Subdeployment Name using the following format: RPSubModule_ *<Managed_Server_Name>*.

   Example:

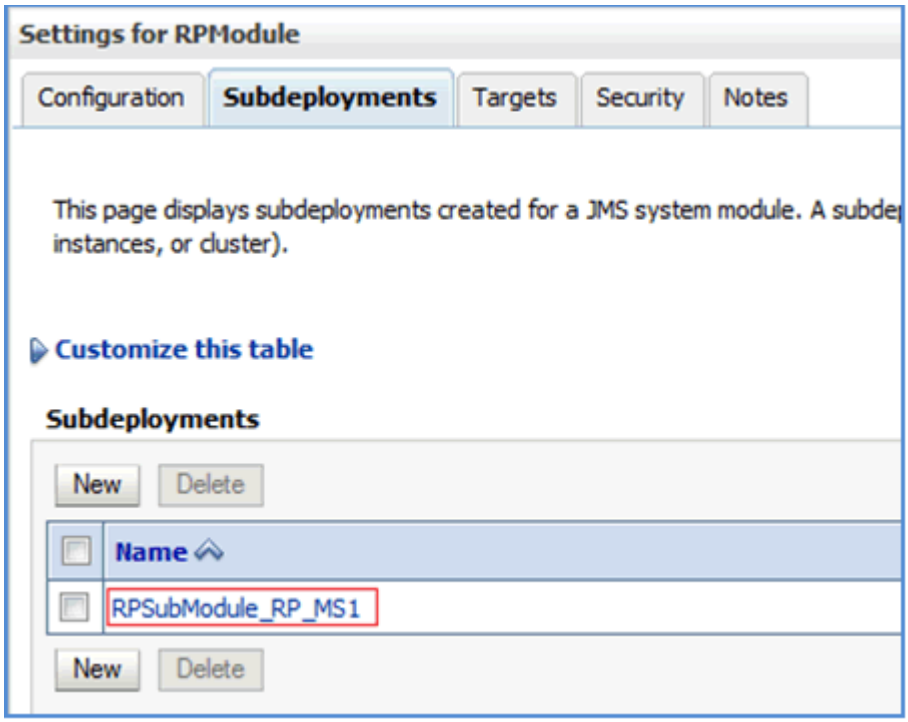
   For Rapid Planning Managed Server RP_MS1, enter 'RPSubModule_RP_MS1'.



6. Click **Finish**. Do not select any Targets Servers or JMS Servers options.



The subdeployment is created.



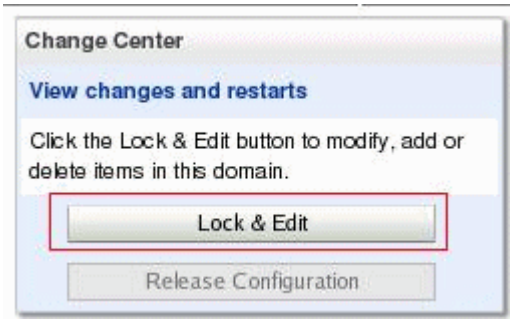
7. Repeat the procedure until one subdeployment has been defined for each of the Rapid Planning Managed Servers.

8. From Change Center region, click **Activate Changes**.

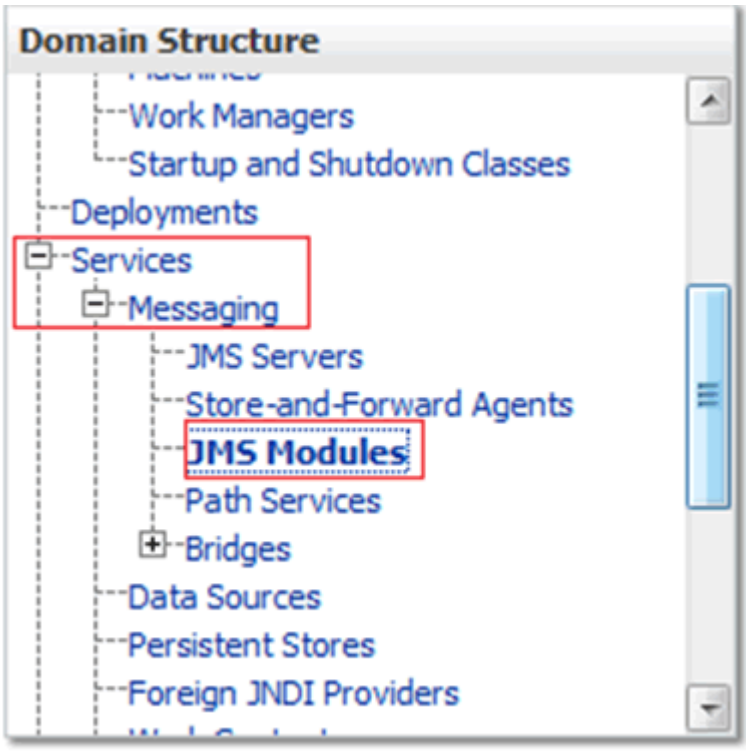
Creating the Queues:

Use the following procedure to create one queue for each of the Rapid Planning Managed Servers in your environment. These queues are all assigned as resources to the single Rapid Planning JMS module, RPModule in this example.

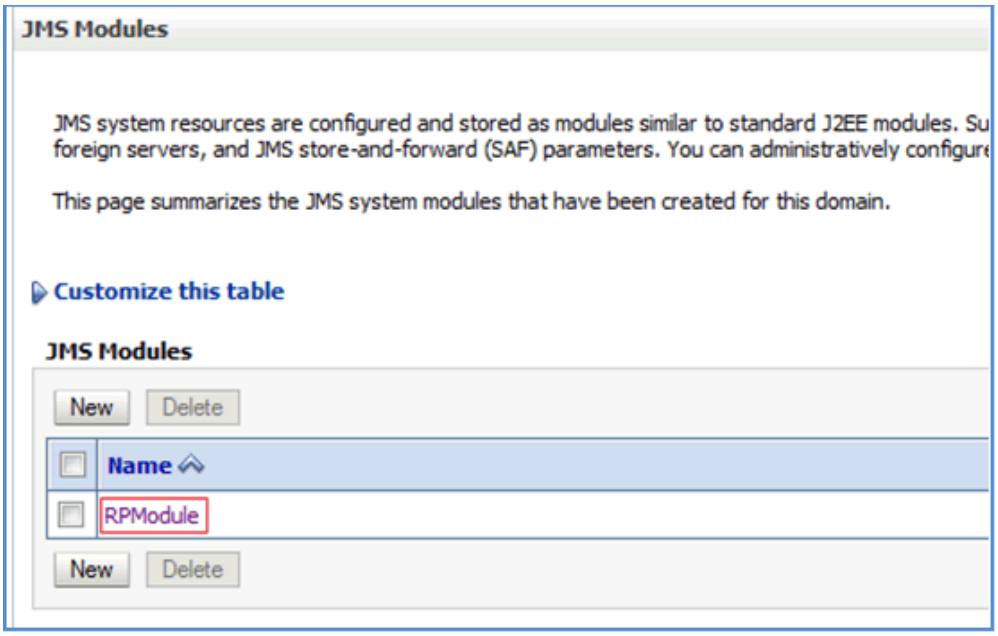
1. Click **Lock & Edit** in the Change Center region in the top left corner to change the domain configuration.



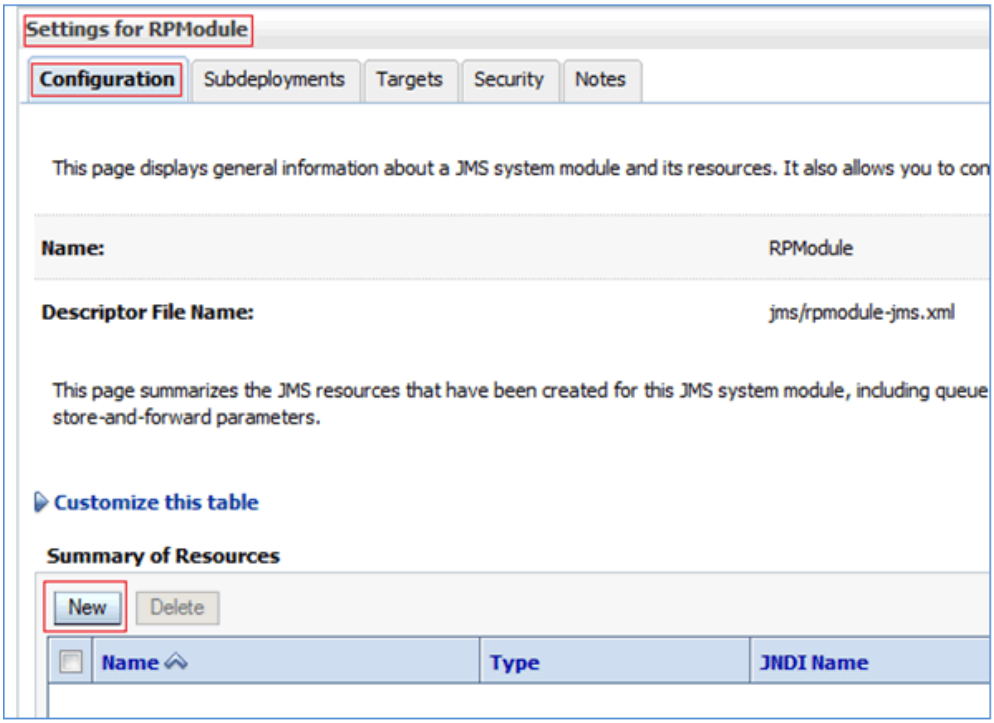
2. From the Domain Structure region, expand the **Services** tree node, expand the **Messaging** node, and select **JMS Modules**.



3. Select the existing JMS Module (for example, RPModule).



4. Navigate to the **Configuration** tab and click **New**.



5. Perform the following, and click **Next**.

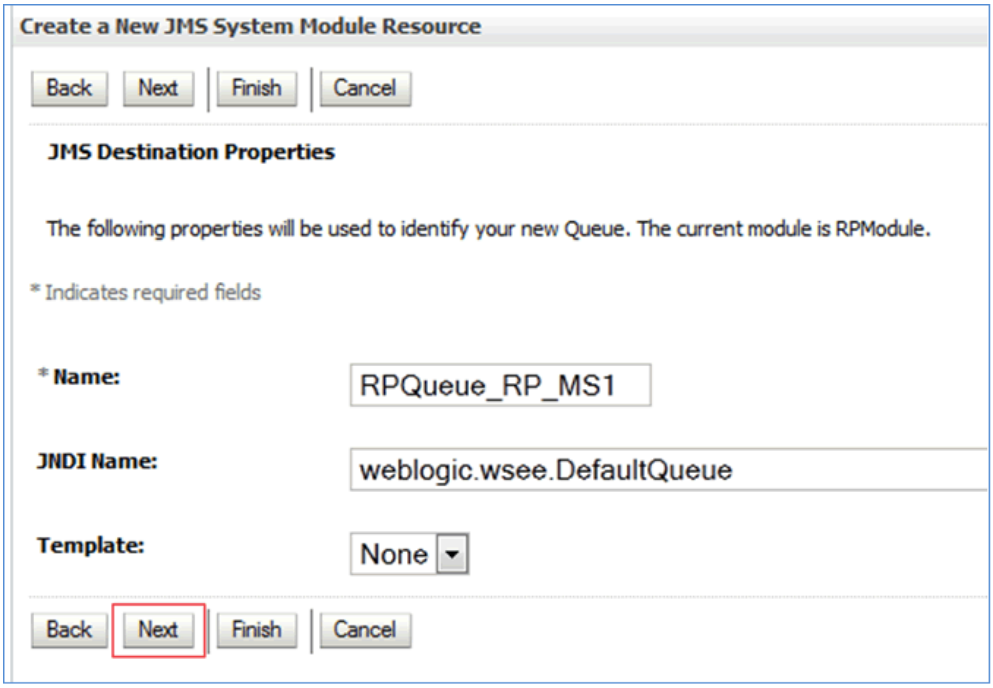
   - Name - Enter the queue Name using the following format: RPQueue_ *<Managed_Server_Name>*.

     Example:

     For Managed Server RP_MS1, enter 'RPQueue _RP_MS1'.

   - JNDI Name - Enter 'weblogic.wsee.DefaultQueue'.

   - Template - Select **None**.

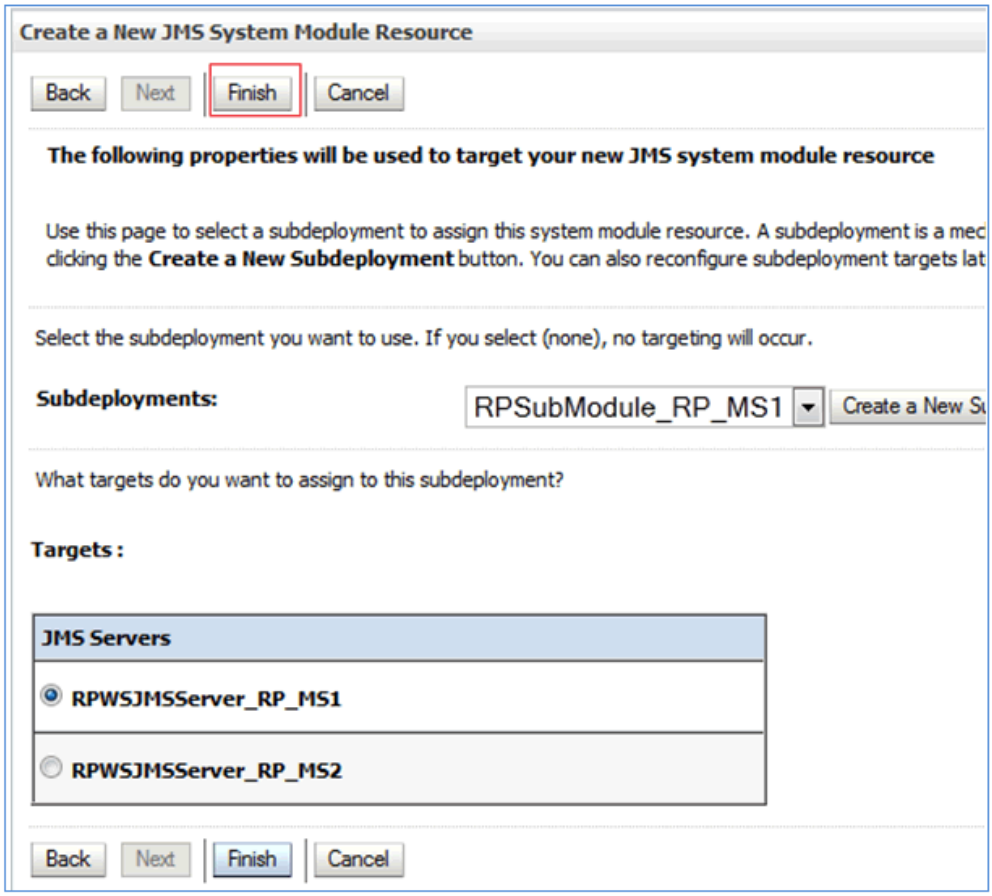


6. Enter the following information, and click **Finish**.

   - Subdeployments - Select the matching RPSubModule_ *<Managed_Server_Name>* from the **Subdeployments** list.
   - For Targets - JMS Servers - Select the matching RPWSJMSServer_ *<Managed_Server_Name>* from the JMS Servers table.

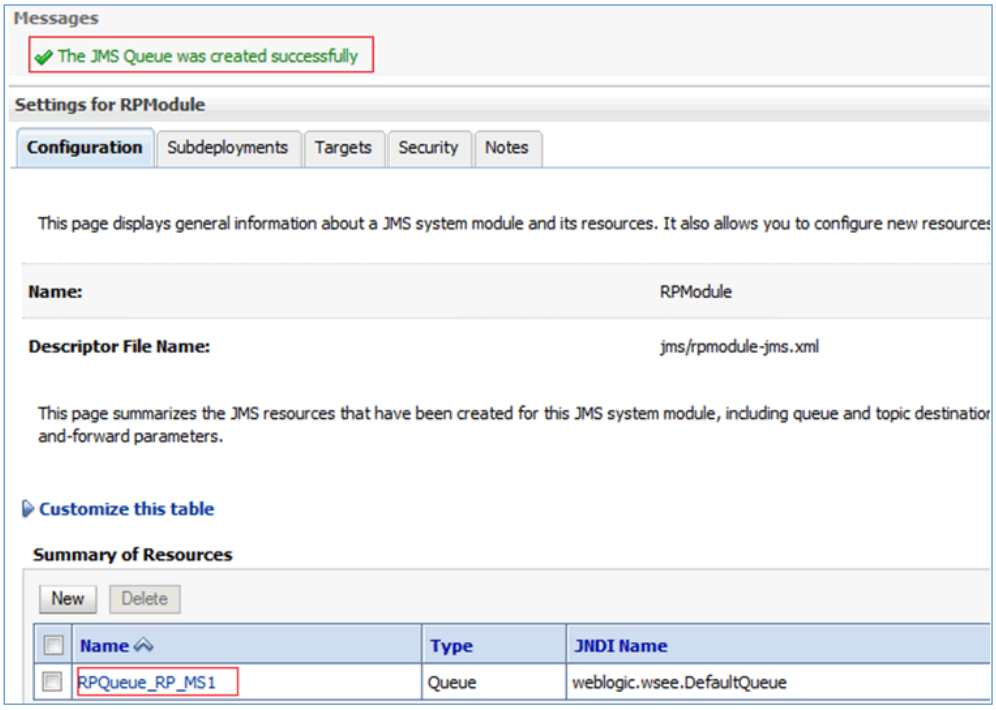
   Example:

   If you created a the queue RPQueue_RP_MS1, which is the queue for Managed Server RP_MS1, then select RPSubModule_RP_MS1 from the **Subdeployments** list, and select RPWSJMSServer_RP_MS1 from the JMS Servers table.



The following message appears:

The JMS Queue was created successfully.



7. Repeat the procedure until one queue has been defined for each of the Rapid Planning Managed Servers. When complete, the Settings for RPModule page displays all your Rapid Planning queues.

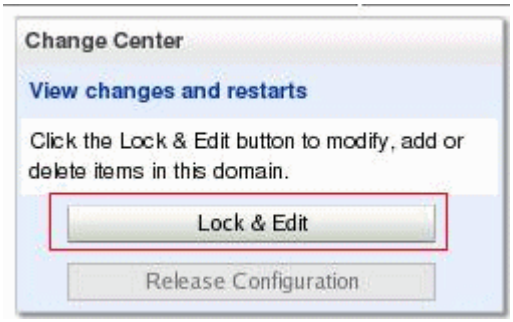
8. In the Change Center region, click **Activate Changes**.

Deploying and Starting the Engine Application

Verify the Engine Domain Admin Server is up and running before performing this procedure.

To start the Engine Admin Server, refer to Starting the Engine Admin Server, page 3-19.

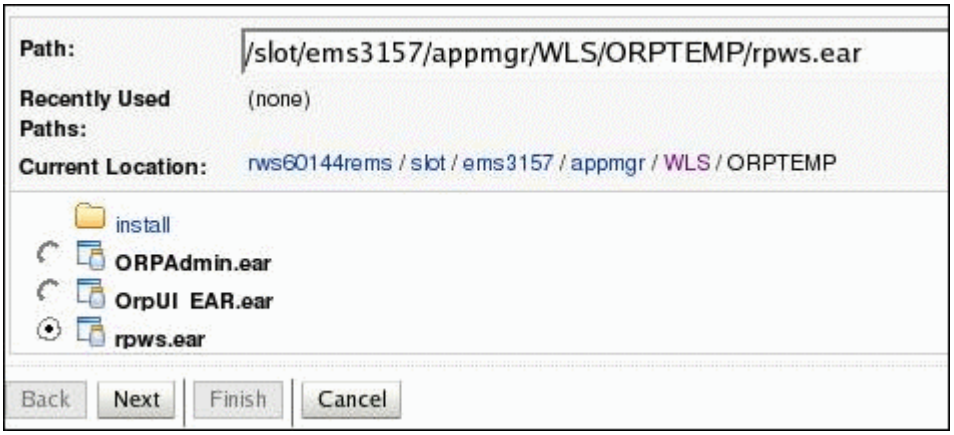
1. Click **Lock & Edit** in the Change Center region in the top left corner to change the domain configuration.



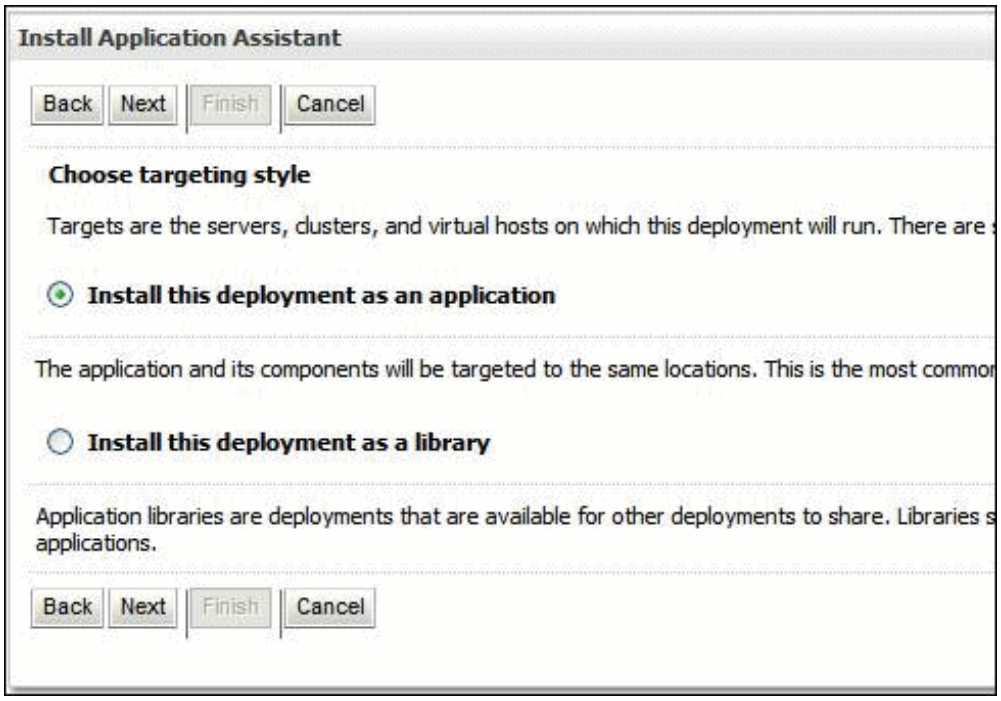
2. From the Domain Structure region, click **Deployments** . The Deployments page appears.

3. Click **Install**.

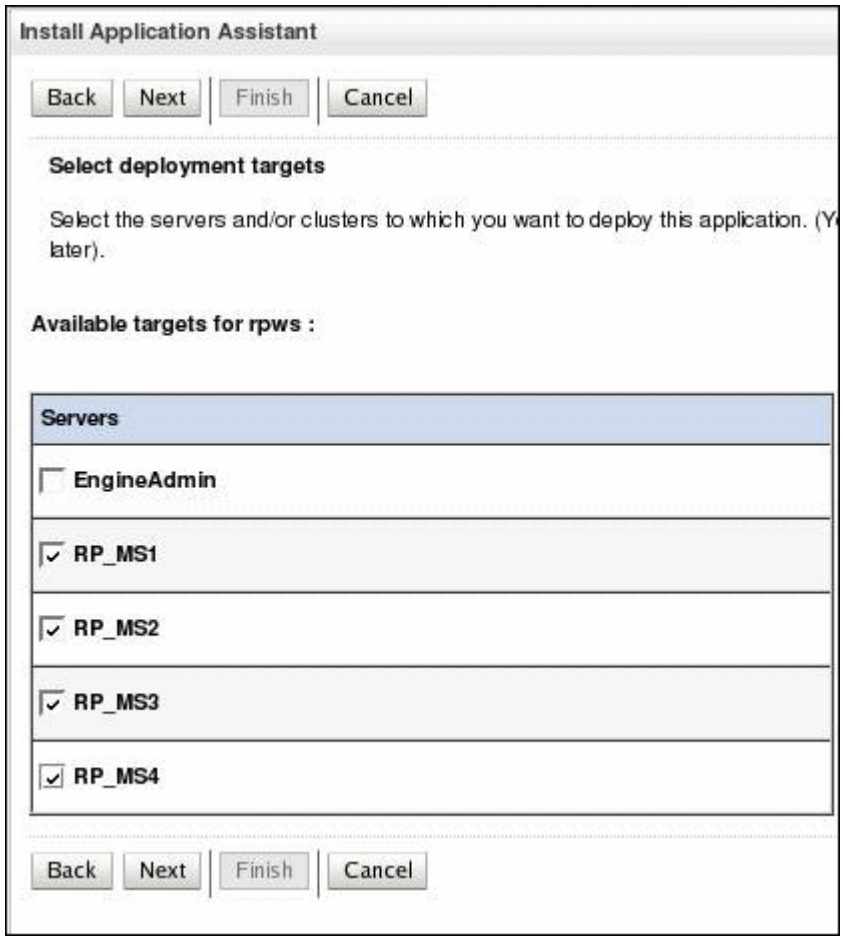
4. Navigate to the path where the EAR file is located, select the rpws.ear file, and click **Next**. The EAR file is located in the ORPTEMP location as mentioned in Performing Pre-Configuration Setup, page 7-3.



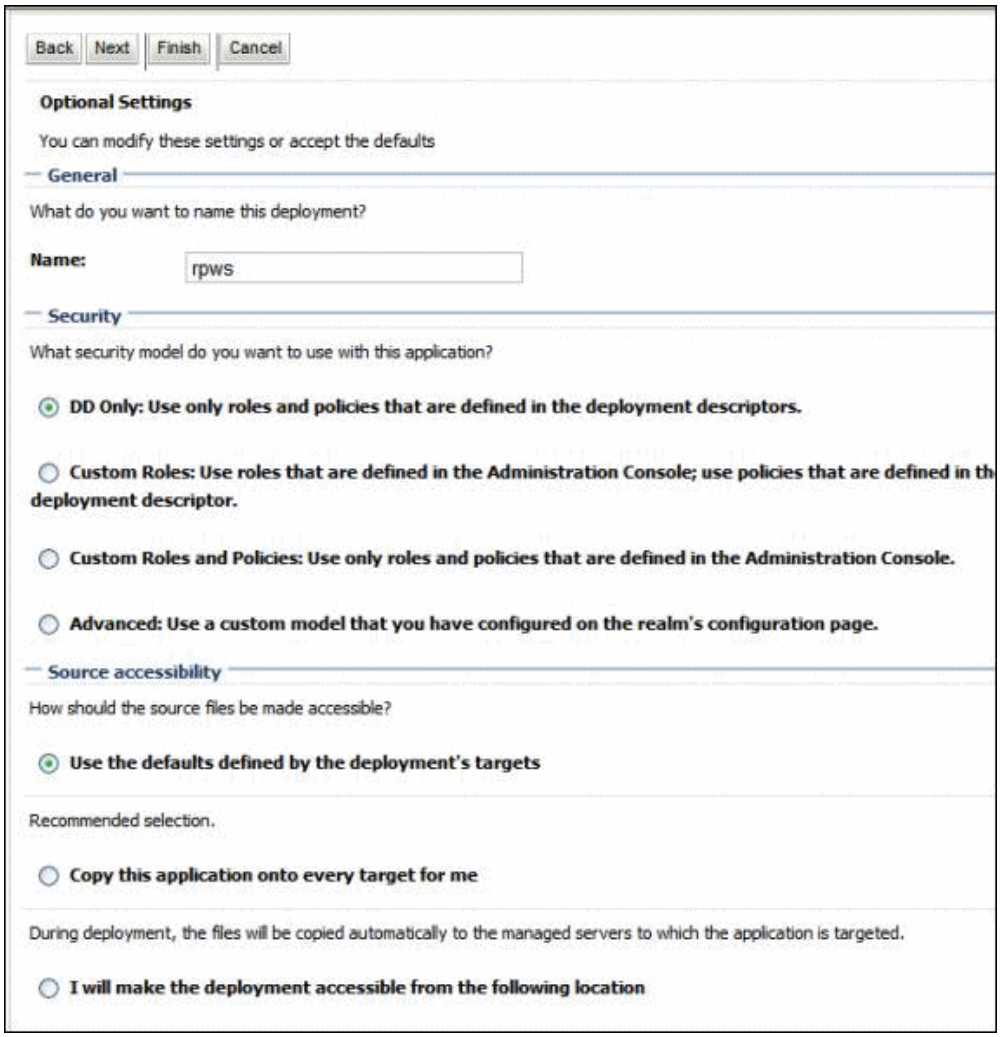
5. Select **Install this deployment as an application**, and click **Next**.



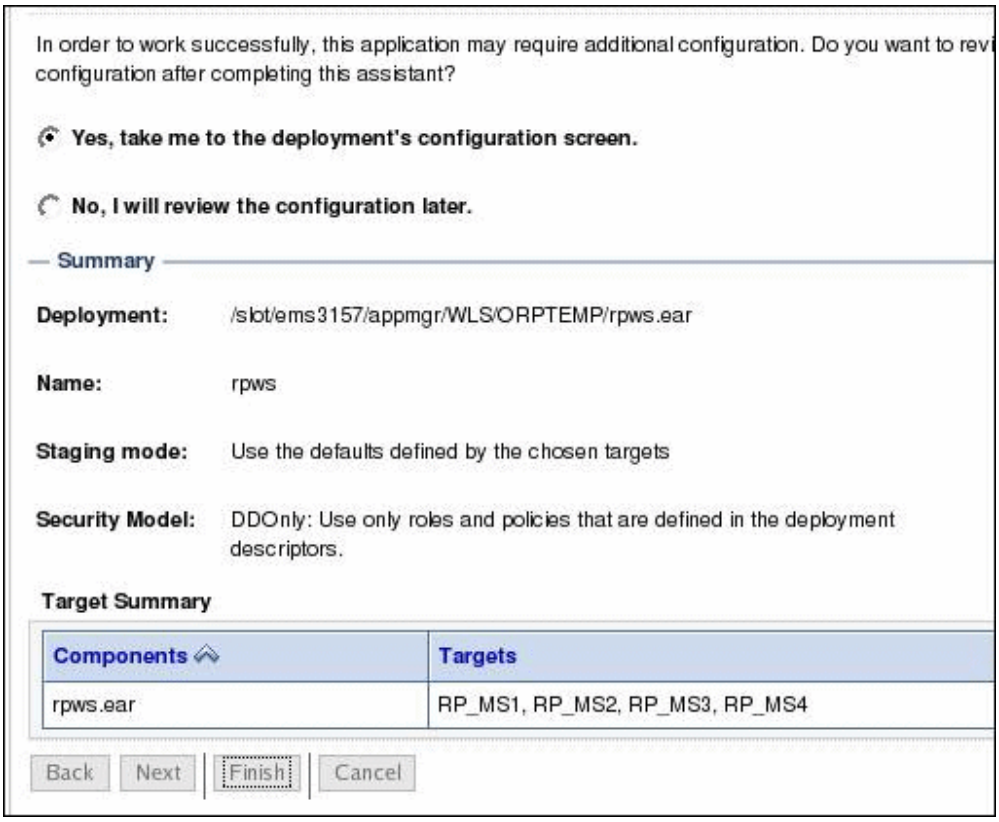
6. Select all the Rapid Planning Managed Servers as the targets for the application, and click **Next**. Do not select the Admin Server. The Optional Settings page appears.



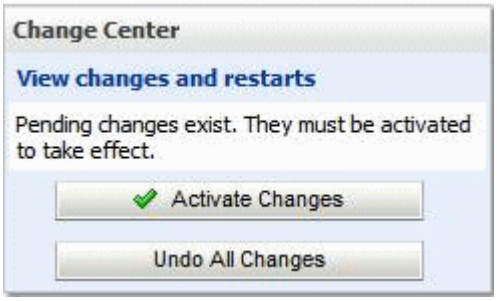
7. On the Optional Settings page, keep the default settings, and click **Next**.



8. Click **Finish** and then click **Save**.

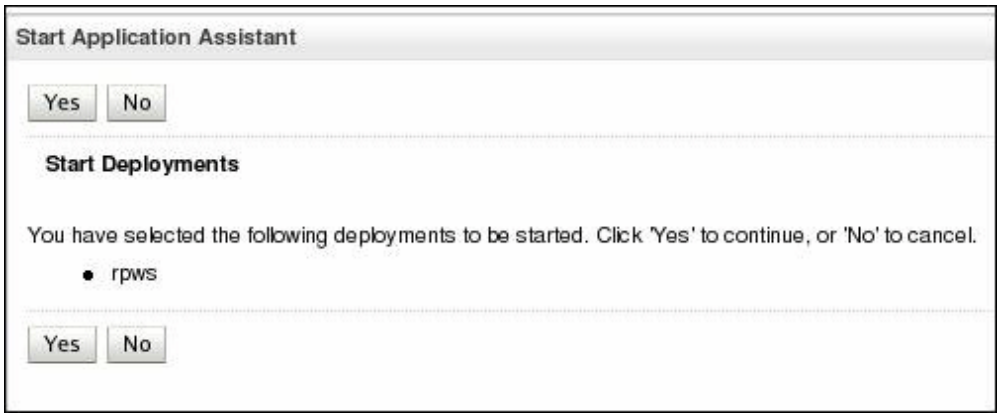


9. Click **Activate Changes**.



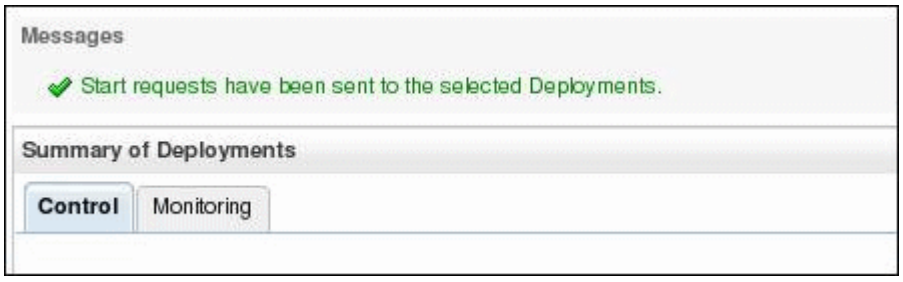
Use the Deployments page to control and modify deployments.

10. Select the check box for **rpws**. Click **Start > Servicing all requests**. Click **Next**. The Start Application Assistant page appears.



11. Click **Yes**.

    A message appears to inform you that the start requests have been sent to the selected deployments.



12. Log in to the application using following format in your web browser:

    ```
    http://<Machine_Name>
    .us.oracle.com:<Port_No>/rapidplanning/faces/RPMainUI
    ```

    Example:

    ```
    http://rws60144rems.us.oracle.com:7001/rapidplanning/faces/RP
    MainUI
    ```

The Oracle Application Login page appears.

13. Enter 'mfg' in the **Username** field, and enter 'welcome' in the **Password** field.

14. From the home page, select **Oracle Supply Chain Simulation Planner**. The Plans page appears.

15. From the Plans pane, select a plan to start working on it. The plan details appear on screen.

Creating the Rapid Planning Input, Output, and Log Folders

Creating Log and Output Folders:

1. Create log and output folder in a central location. Make sure the location is accessible from all hosts, through proper mounting.

   Example:

   On the primary host, navigate to the location /slot/ems3102/oracle.

   Create output and log folders as follows:

   ```
   mkdir -m 777 RP_Output/
   mkdir -m 777 RP_Log/
   ```

2. Make sure all secondary hosts have mounting with write access these folders.

3. Navigate to the domain directory of the host and create soft links for the RP_Output and RP_Log folder, as shown in the example below.

   Example:

   ```
   cd <DOMAIN_HOME>/<Domain_Name>
   ln  -s <Path_to_Output_folder>output
   ln  -s <Path_to_Log_folder>log
   ```

   Example:

   ```
   ln -s /slot/ems3102/oracle/RP_OUTPUT/ output
   ln -s /slot/ems3102/oracle/RP_Log/  log
   ```

4. Repeat the previous step to create the necessary soft links for all hosts.

Enabling Access to APPLCSF:

This procedure is necessary only if EBS is installed on a different machine than the WebLogic Server and the APPLCSF directory is not set up as a shared folder across EBS and WebLogic Server machines.

APPLCSF is the path where the Rapid Planning input files are located.

Mounting of this location must be done on all host machines so the Rapid Planning

Engine can read input files.

In the event the mount point is different then the actual path, the following procedure must be performed to add `-DAPPSCSF` property to setDomainEnv.sh file.

1. Navigate to *<DOMAIN_HOME>*/bin location.

2. Open setDomainEnv.sh file.

3. Add the following lines:

   `RP_INPUT_FILES_PATH="-DAPPLCSF=<Location_of_Data_Files>"`

   Example:

   The data files reside on machine EBS_MACHINE at location /slot/ems9526/appmgr/inst/apps/ma0yd213_rws60145rems/logs/appl/conc/out.

   On WebLogic Server host, the folder /slot/ems9220 of EBS_MACHINE is mounted with mount point ma0yd213.

   Path to access Rapid Planning input files on this WebLogic Server host is as follows:

   /ma0yd213/appmgr/inst/apps/ma0yd213_rws60145rems/logs/appl/conc/out

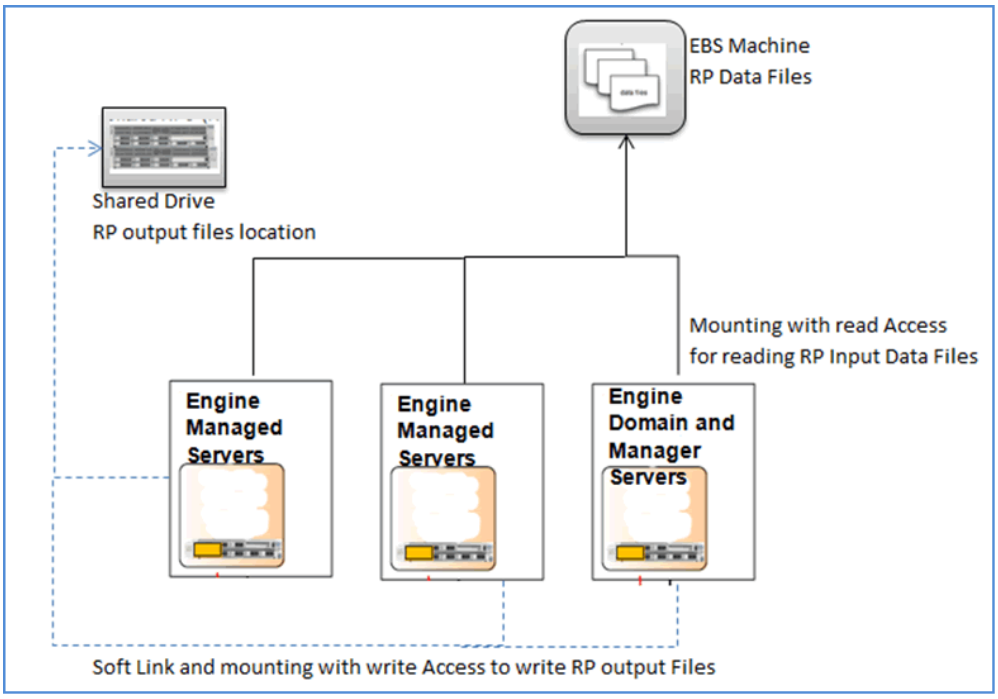
   Therefore, set the value as:

   ```
   RP_INPUT_FILES_PATH="-DAPPLCSF=/ma0yd213/appmgr/inst/apps/ma0yd213_r
   ws60145rems/logs/appl/conc/out"
   ```

4. Add `RP_INPUT_FILES_PATH` to `JAVA_PROPERTIES`.
   `JAVA_PROPERTIES="${JAVA_PROPERTIES} ${WLP_JAVA_PROPERTIES} ${RP_INPUT_FILES_PATH}"`

   In the previous example for secondary host, the path to access RP_OUTPUT and RP_LOG folder will depend on mount point.

   The figure illustrates the various mounting and soft links required in a horizontally scaled architecture.



Performing a Fresh Installation

In the event of a new install, follow all the steps in sequence as mentioned in this guide

Adding a New Managed Server

If you want to perform scaling by adding a Managed Server on new or existing machine, the production servers do not need to be taken offline.

If a Managed Server is being added to existing machine, then you need to perform the following:

- Setting Up the Managed Servers, page 7-33
- Creating the JMS Servers, Subdeployments, and Queues, page 7-37
- Deploying and Starting the Engine Application, page 7-55

If Managed Server is being added to new machine, then you need to perform the following:

- Setting Up the Secondary Host Machine, page 7-28
- Setting Up the Managed Servers, page 7-33

- Creating the JMS Servers, Subdeployments, and Queues, page 7-37
- Deploying and Starting the Engine Application, page 7-55
- Creating the Rapid Planning Input, Output, and Log Folders, page 7-62

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