Content Server

Version: 7.0

Installing Content Server with WebLogic Server

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FatWire SOFTWARE

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Chapter 1

Introduction

This document provides guidelines for installing Content Server on WebLogic Server 9.2, connecting to the supported database of your choice.

Note

Anyone using this guide is expected to have experience installing and configuring databases, web servers, and application servers. Selected information regarding the configuration of third-party products is given in this guide. For detailed information about a particular third-party product, refer to that product's documentation.

This chapter provides information that will help you prepare for the Content Server installation. It contains the following sections:

About This Guide

This guide covers the installation, configuration, and maintenance of WebLogic Server 9.2, as required to support Content Server. This includes configuration of a domain with admin and managed servers, vertical clusters, and backend databases. The last chapter in this guide shows you how to install Content Server.

How This Guide is Organized

The content of this guide is organized by function rather than the order in which installation steps are completed. For example, a function such as application deployment is associated with the application server. It is presented in Part II (which covers the application server), even though it is performed later, when Content Server is installed (Part IV). Each major component of the Content Server installation is covered in its own part. A summary of the installation steps in the required order is given at the end of this chapter (see "Installation Quick Reference," on page 7).

Graphics in This Guide

Many steps in this guide display screen captures of dialog boxes and similar windows that you interact with in order to complete the steps. The screen captures are shown to help you follow the installation process. They are not intended to be sources of specific information, such as parameter values, options to select, or product version number.

Paths and Directories

This guide uses the following paths and directories:

Name used by guide	Description
`<domain_home>`	Path to the WebLogic domain; the path includes the domain name.
`<cs_install_dir>`	Path to the directory where Content Server is installed; the path does not include the name of the Content Server application.
`<bea_home>`	Path to the directory where WebLogic is installed; the path includes the name of the directory.
`<shared_dir>`	Path to the shared folder on the given system; the path includes the name of the shared folder.
`<deploy_dir>`	Path to the directory to which Content Server is deployed; the path includes the name of the deployment directory.
`<content_dir>`	(Portal installations only) The `content` directory inside the directory containing your WebLogic Portal Web project.

Installation Quick Reference

After you install and configure the J2EE components that support Content Server, you will run the Content Server installer, which will guide you through the installation process. You will run the installer on each development, delivery, and management system on which you plan to use Content Server. During the Content Server installation, you will have the option to install sample sites and sample content.

Note

The names of the systems in your Content Server environment might differ from the names used in this document. Typically, the management system is also called "staging," and the delivery system is also called "production."

The steps below summarize the installation and configuration of Content Server and its supporting software. Keep the steps handy as a quick reference to installation procedures and to chapters that provide detailed instructions.

To install Content Server and its supporting software

Complete the steps below for each development, content management, and production environment.

I. Set Up the Database

Set up your choice of supported databases by installing the database management system, creating a database for Content Server, and configuring the database. For instructions, refer to our configuration guide, *Configuring Third-Party Software*.

II. Set Up the Application Server

1. Install WebLogic Server. For instructions, see Chapter 3, "Installing WebLogic Server."

   Note

   This chapter also contains commands for starting and stopping the servers that are used in this guide.

2. Depending on the type of installation you are creating (web or portal), do one of the following:
   - For web installations, create and configure a WebLogic server domain, as shown in "Creating and Configuring a WebLogic Server Domain," on page 24. This step requires you to:
     1) Create an admin server for the domain.
     2) Create a managed server for a production environment and, if you choose to set up vertical clustering, a managed server for each cluster member.
     3) Name the domain.
   - For portal installations, create and configure a WebLogic portal domain, as shown in "Creating and Configuring a WebLogic Portal Domain," on page 48. The corresponding admin server is created for you automatically when you create the portal domain.

3. Set up the environment for deployment and database communications. Depending on the type of installation you are creating (web or portal), this step requires you to:
   a. (Web installations only) Set environment variables to ensure that all servers are using the correct JDK. For instructions, see "Setting Environment Variables," on page 37.
   b. (Web installations only) Turn off host name verification for non-production systems. For instructions, see "Disabling Host Name Verification," on page 37.
   c. (Web installations only) Enable HTTP tunneling on all servers on which Content Server will be deployed. Enabling tunneling enables you to run commands using the `weblogic.Deployer` utility (which deploys Content Server.) For instructions, see "Enabling HTTP Tunneling," on page 39.
   d. Set up the data source. For instructions, see "Creating and Configuring a Data Source," on page 39.
4. For portal installations, create and configure a WebLogic portal application. For instructions, see "Creating and Configuring a WebLogic Portal Application," on page 56.

III. (Optional) Set Up the Web Server

If you plan to integrate WebLogic Server with either the Apache or IIS web server, follow instructions in Chapter 6, "Installing and Configuring the Web Server."

IV. Install Content Server

1. Before you launch the installer, make sure that:
   - You have created the directory into which you are installing Content Server. The directory name and path cannot contain spaces and the application server must be able to read from and write to that directory.
   - For clustered installations, you have created the following:
     - A managed server. You will install Content Server on this server.
     - A shared file system directory that all cluster members can read from and write to; the directory name and path cannot contain spaces. Note the following:
       - For delivery systems, the default location of the shared file system directory is the directory containing the directory in which Content Server is installed.
       - For content management and development systems, the default location of the shared file system directory is inside the directory in which Content Server is installed.
   - You have added the JDK `/bin` directory to the path variable.
   - Your system is capable of displaying the CS installer GUI. The installer will not work in text mode.
2. Install Content Server by running the supplied installer. The installer provides online help at each screen, should you need guidance. For more information, see Chapter 7, "Installing and Configuring Content Server."

If you choose to deploy the CS application manually, you will have to deploy the application halfway through the installation when the installer displays the "Installation Actions" window. For instructions, see one of the following sections:

- For web installations, see "Deploying Web Applications," on page 44.
- For portal installations, see "Deploying Portal Applications," on page 65.

If you are using an Oracle database and will require text attributes greater than 2000 characters, you will have to set the `cc.bigtext` property to `CLOB` after the CS application is deployed. For instructions, see step 5 in "Running the Installer," on page 78.

3. Complete the Content Server installation by performing the following steps:
   a. If you installed Content Server on Unix, set the permissions for Content Server binaries by following the steps in "Setting File Permissions (Unix Only)," on page 79.
   b. Verify the Content Server installation by logging in as the administrator. For instructions, see "Verifying the Installation," on page 79.
   c. If the CS system you installed is a delivery system, switch WebLogic to production mode. For instructions, see "Switching WebLogic to Production Mode (Delivery Systems Only)," on page 85.
   d. If you are creating a portal installation, use WebLogic Workshop to create a WebLogic portal, add pages to the portal, and populate the pages with the appropriate Content Server portlets. For instructions, see "Setting Up the Portal (Portal Installations Only)," on page 86.
   e. If you need to perform LDAP integration, follow the steps in "Integrating with LDAP (Required for Portal Installations)," on page 91. LDAP integration is mandatory for portal installations, and optional for web installations.
   f. If you are creating a vertically clustered system, follow instructions in "Setting Up a Content Server Cluster (Optional)," on page 91.
   g. Once the entire installation is completed and verified, set up Content Server for its business purpose. For instructions, see the *Content Server Administrator's Guide* and the *Content Server Developer's Guide*.

Part 1

Database

This part contains a short chapter summarizing the databases that Content Server uses. Instructions on creating and configuring the databases are given in our guide *Configuring Third-Party Software.*

This part contains the following chapter:

- Chapter 2, "Setting Up a Database"

Chapter 2

Setting Up a Database

Content Server requires access to a database that is specifically configured for Content Server. The list of supported databases (as well as other third-party components) is given in the *Supported Platform Document*, accessible from:

`http://e-docs.fatwire.com/CS`

(Click the Content Server version number, and on the Content Server page, click the **Supported Platform Document** link.)

Before installing any other of Content Server's supporting software, you must complete the following steps:

1. Install the database management system.
   For instructions, refer to the product vendor's documentation.
2. Create and configure a database for Content Server.
   For instructions, consult our guide *Configuring Third-Party Software*. Note that database configuration is identical across different application servers. Refer to the correct chapter to create and configure the database of your choice.

Part 2

Application Server

This part contains information about installing and configuring WebLogic Server as well as integrating WebLogic Server with either the Apache or IIS web server.

This part contains the following chapter:

Chapter 3

Installing WebLogic Server

This chapter contains information about installing WebLogic Server to support and deploy your Content Server web application.

This chapter contains the following sections:

Start/Stop Commands

This section lists commands that are used in this guide for managing WebLogic Server.

- Start the admin server:

  <domain_home>/startWebLogic.sh

- Stop the admin server:

  <domain_home>/bin/stopWebLogic.sh

- Start the node manager:

  <bea_home>/weblogic92/server/bin/startNodeManager.sh

- Start a managed server:

  <domain_home>/bin/startManagedWebLogic.sh <managed_server_name> http://<listening_address>:<admin_port>

- Stop a managed server:

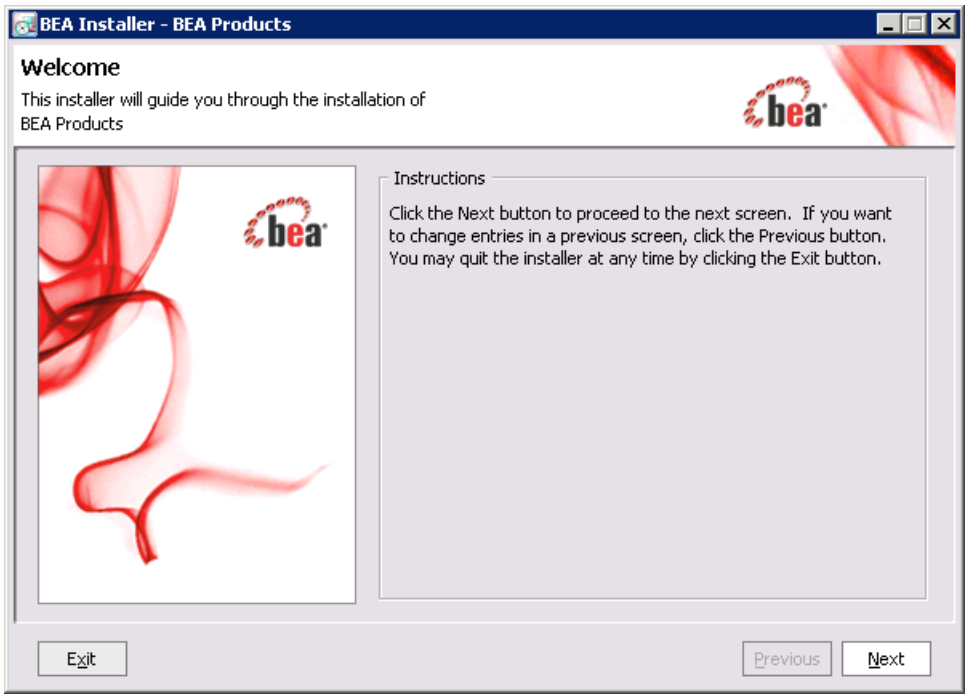
  <domain_home>/bin/stopManagedWebLogic.sh <managed_server_name> http://<listening_address>:<admin_port>

- Start WebLogic Workshop:

  <bea_home>/weblogic92/workshop4WP/workshop4WP.sh

Installing WebLogic Server

1. Run the WebLogic Server 9.2 installer (on Unix, make sure your `DISPLAY` variable is set).
2. At the "Welcome" screen, click **Next**.



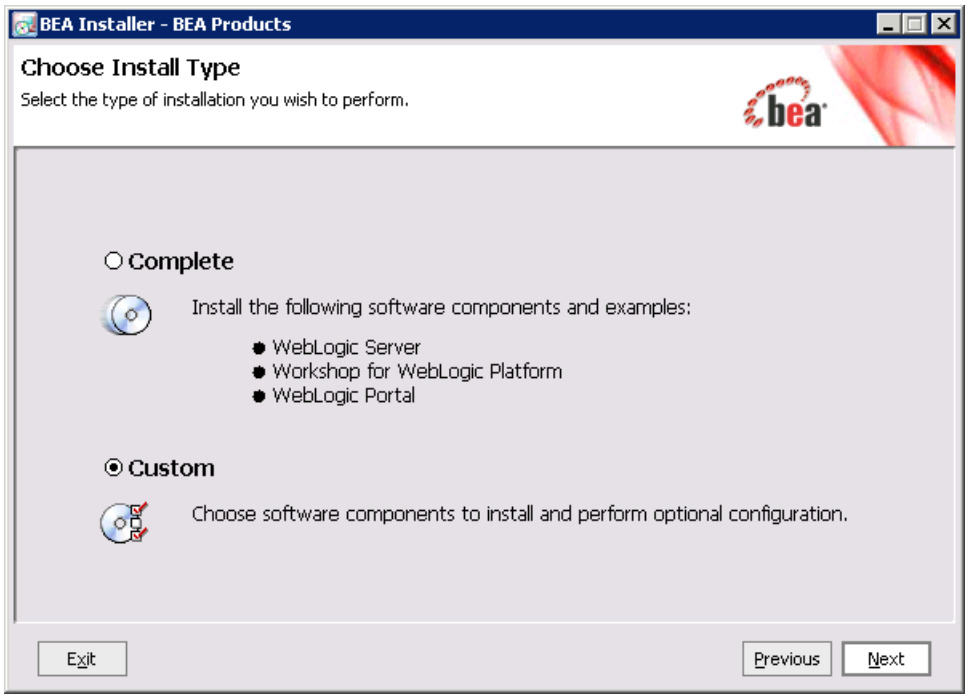
3. Click **Yes** to accept the BEA License Agreement.

4. Either use an existing BEA home directory or select **Create a new BEA Home** and browse for a directory. Click **Next**.

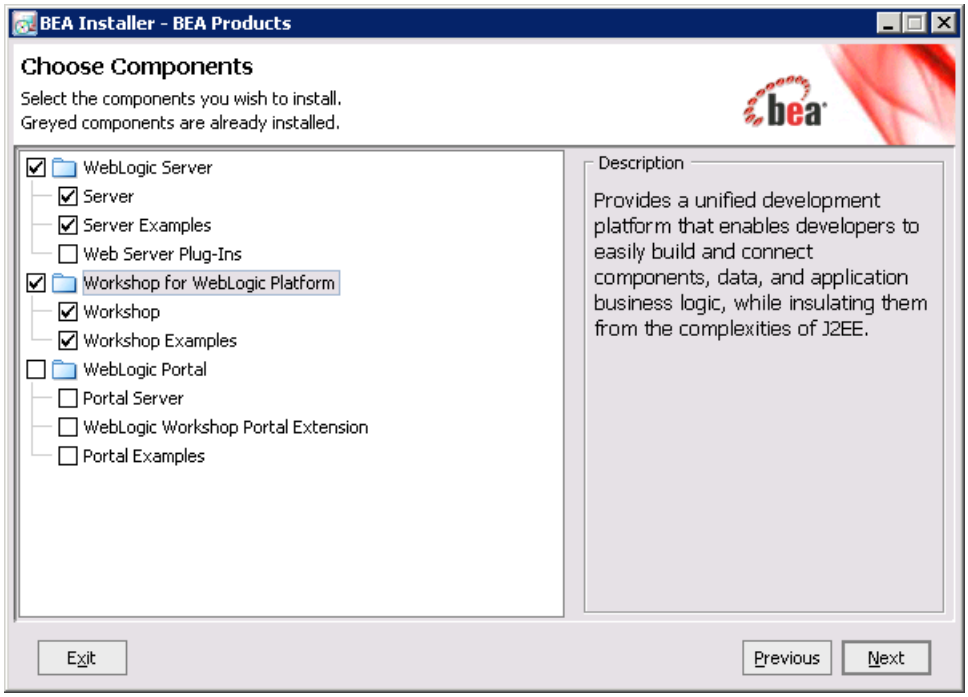
Note

The BEA home directory will be referred to throughout this guide as `<bea_home>`.

5. Select **Custom Install Type** and click **Next**.



6. Deselect **WebLogic Portal**. If you will be using a web server, select **Web Server Plug-Ins**. Click **Next**.



7. Deselect **Mercury profiling tools** and click **Next**.
8. On the next three screens, click **Next**.

9. The installation starts. Close the window after completion.

10. Continue with Chapter 4, "Configuring WebLogic Server for Web Installations" to configure a WebLogic domain.

Chapter 4

Configuring WebLogic Server for Web Installations

This chapter contains information about configuring WebLogic Server to support and deploy your Content Server web application.

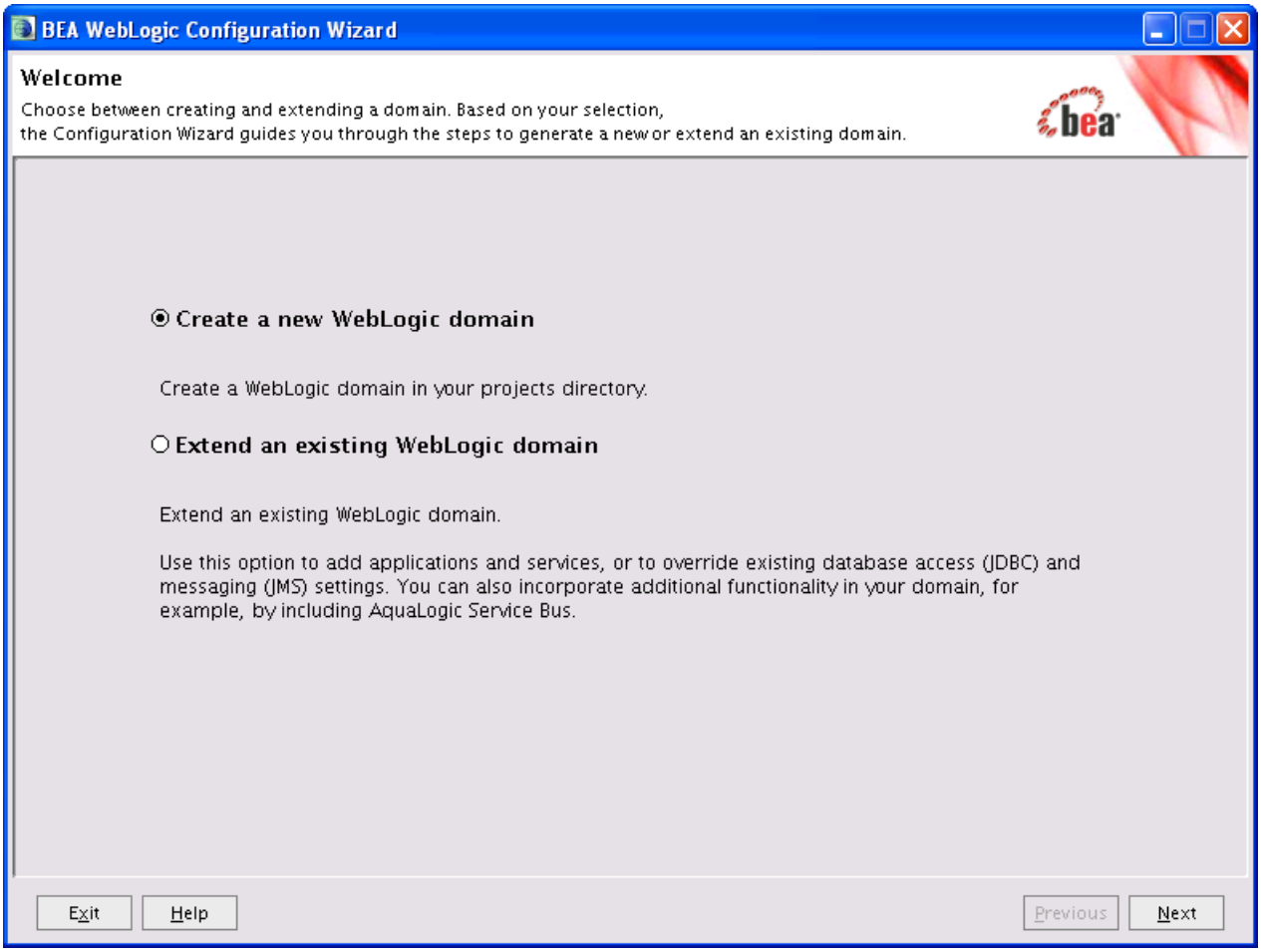
This chapter contains the following sections:

Creating and Configuring a WebLogic Server Domain

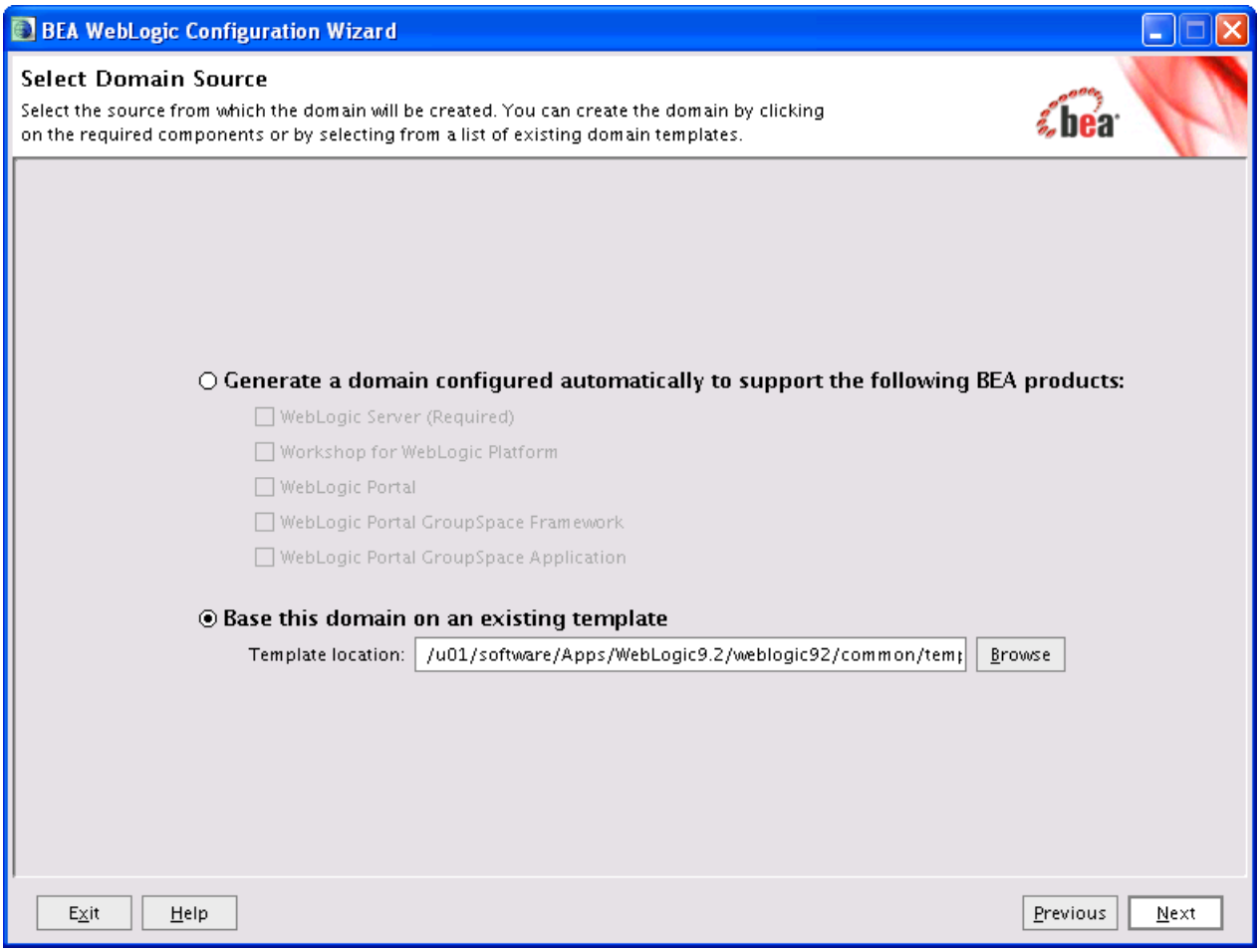
In the steps below, you will be creating a WebLogic domain and configuring the domain by adding an admin server. If you are creating a production system, you will also add a managed server to the domain, and if you are creating a cluster, you will add a managed server for each cluster member.

To create and configure a WebLogic Server domain

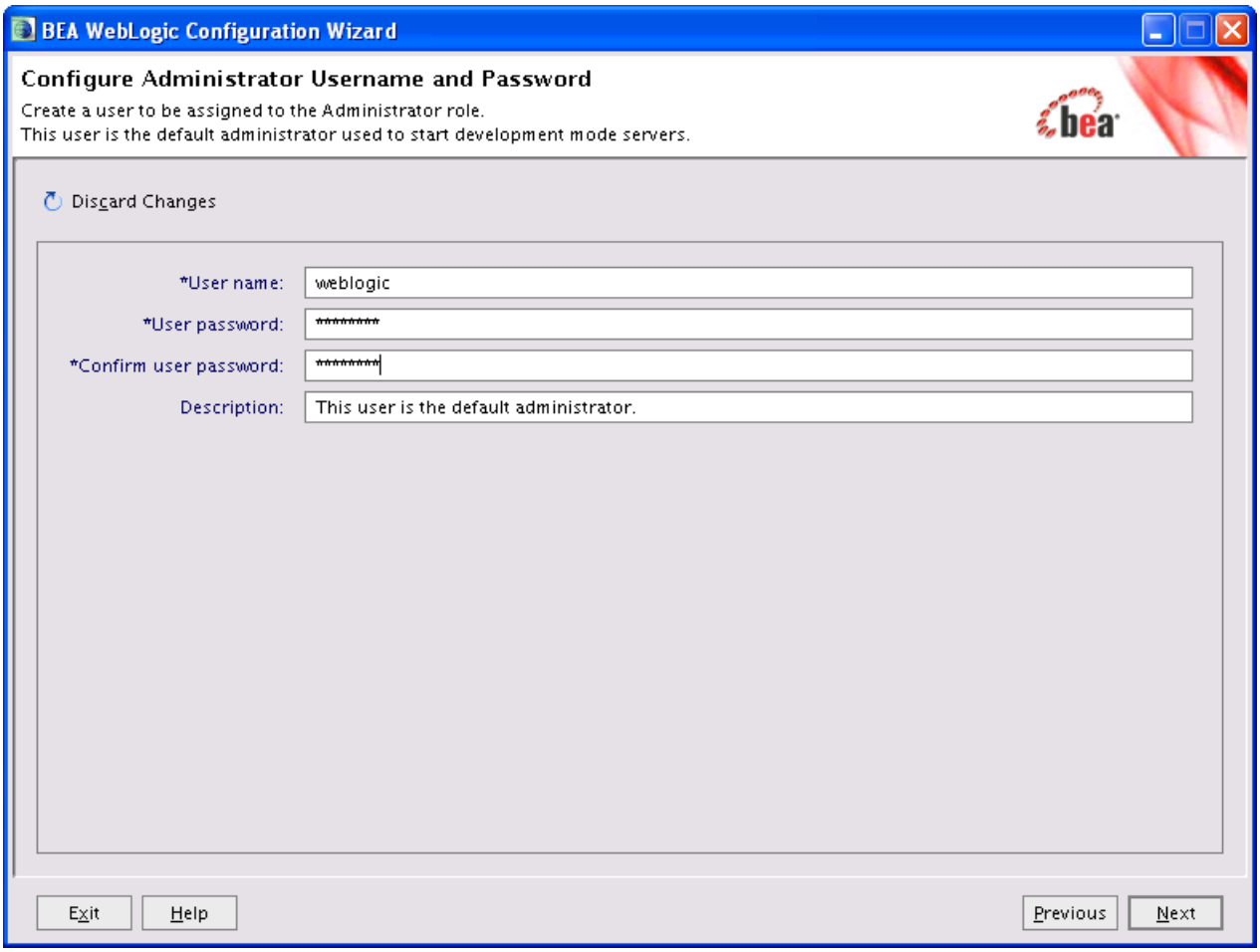
1. Change directories to `<bea_home>/weblogic92/common/bin` and run **`config.sh`** (**`.bat`** for Windows).
2. Create a domain:
   a. On the "Welcome" screen, select **Create a new WebLogic domain** and click **Next**.



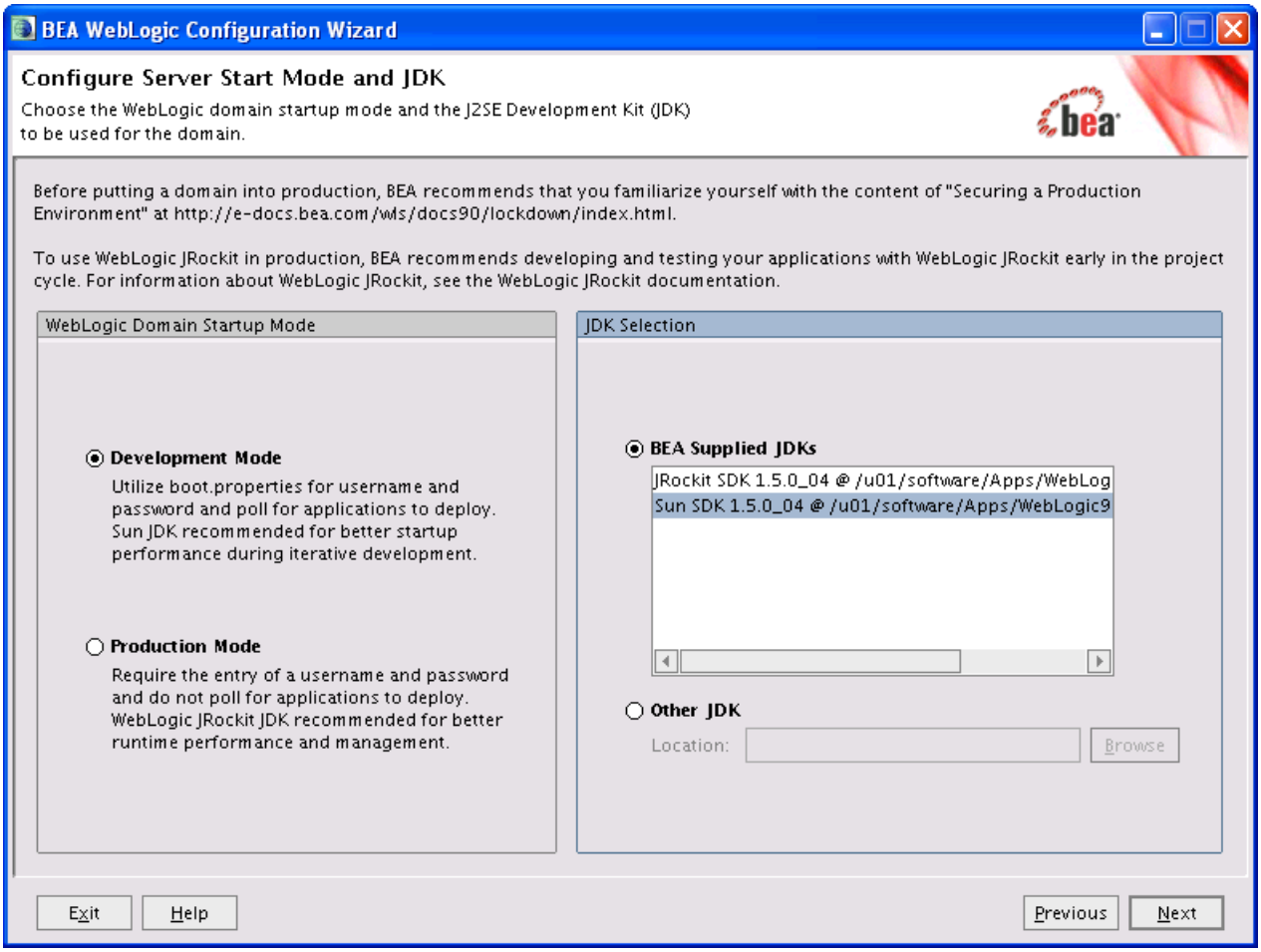
b. Select **Base this domain on an existing template** and click **Next**.



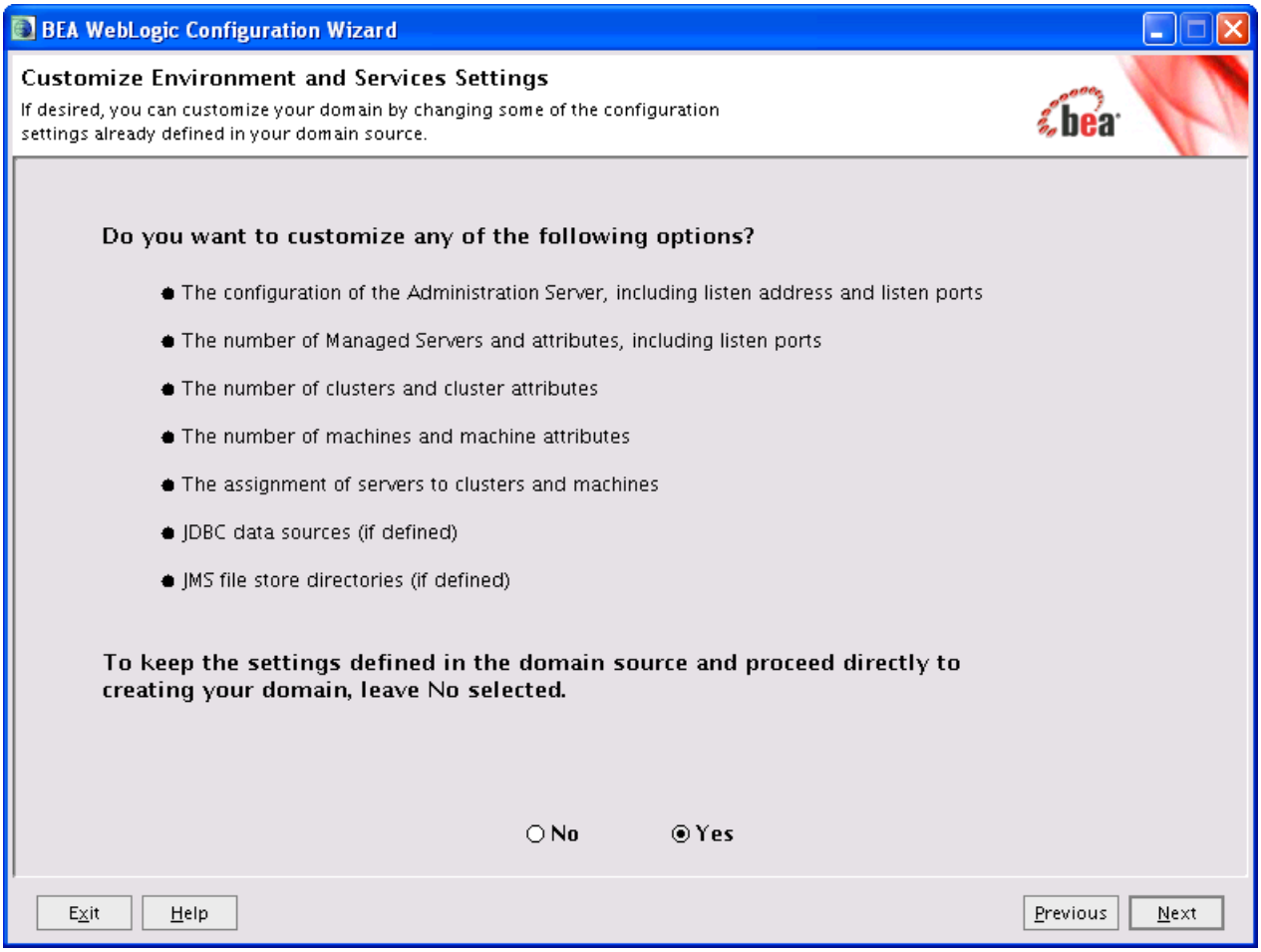
c. Enter a domain user name and password and click **Next**.



d. Select **Development Mode** and the Sun SDK (in the "BEA Supplied JDKs" list box). For production environments, the domain will be changed to **Production Mode** later in this guide (step C on page 85). Click **Next**.

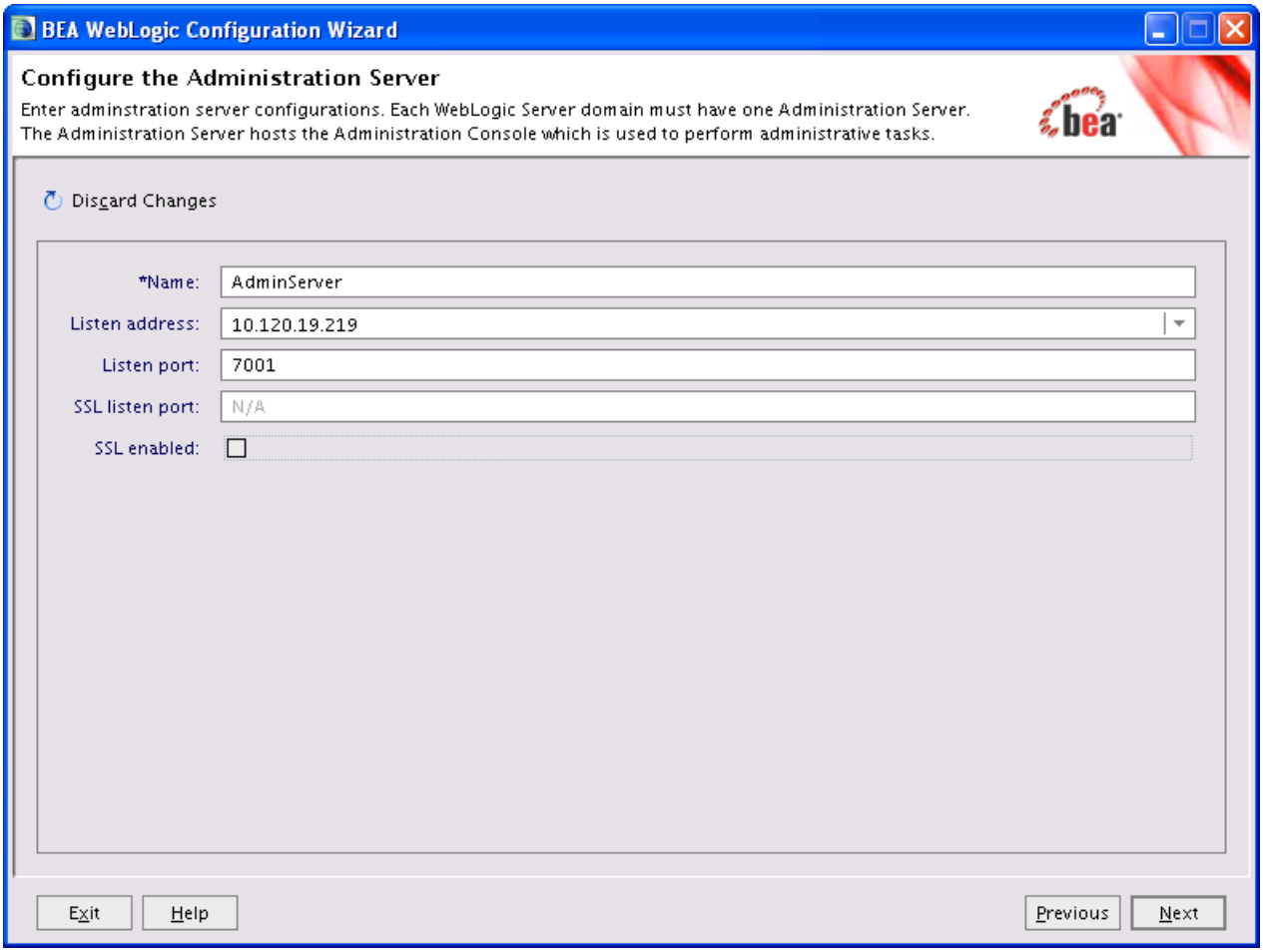


e. In the "Customize Environment and Services Settings" screen, select **Yes** and click **Next**.



In the screens that follow, you will configure the domain by adding an admin server and managed servers as necessary.

3. Configure the admin server:
   a. Enter a name, listening address, and port for the admin server.
   b. Click **Next**.



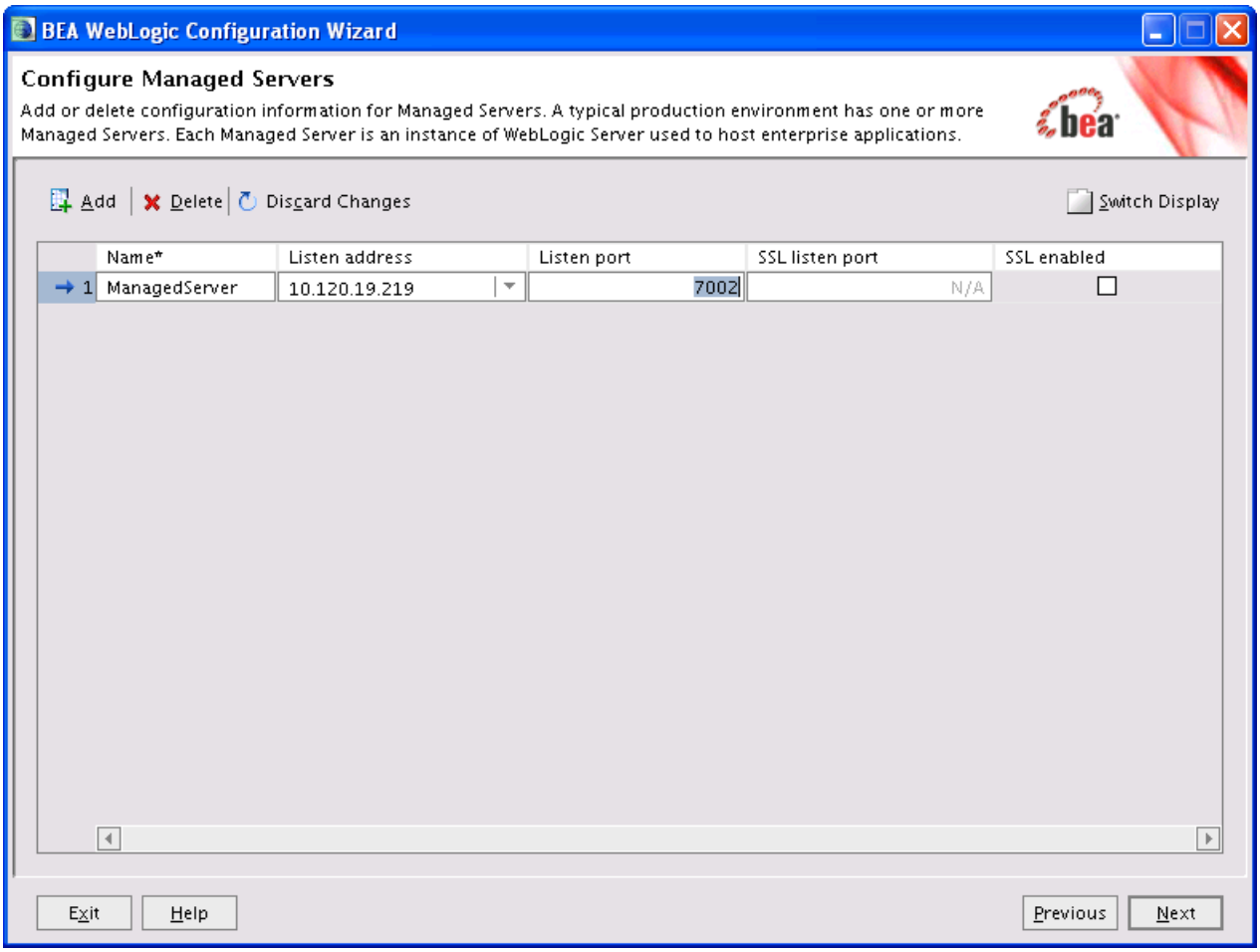
Note

Throughout this guide, the values that you entered will be referred to as `<listening_address>` and `<admin_port>`.

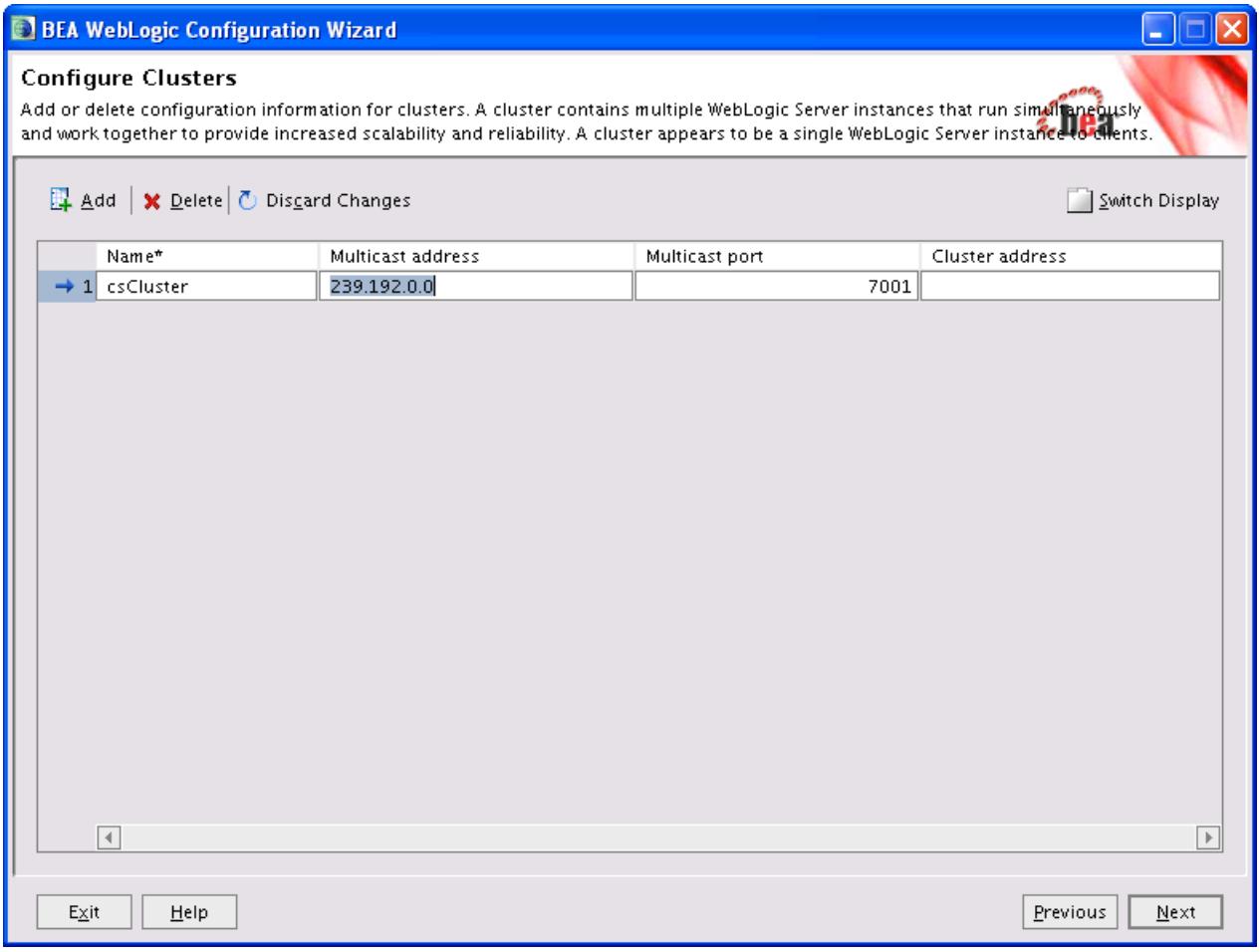
4. Add a managed server:
   a. Click **Add** and enter a name, listening address, and port.

> **Note**
>
> - For a production environment, a managed server is recommended.
> - If you are creating a cluster, a managed server is required for each cluster member. Your options are to:
>   - Create all the managed servers in this step
>   - Create a managed server for the primary cluster member in this step, but postpone creating the remaining managed servers until CS is installed on the primary member. If you choose the latter option, you will need to follow instructions in "Setting Up a Content Server Cluster (Optional)," on page 91.

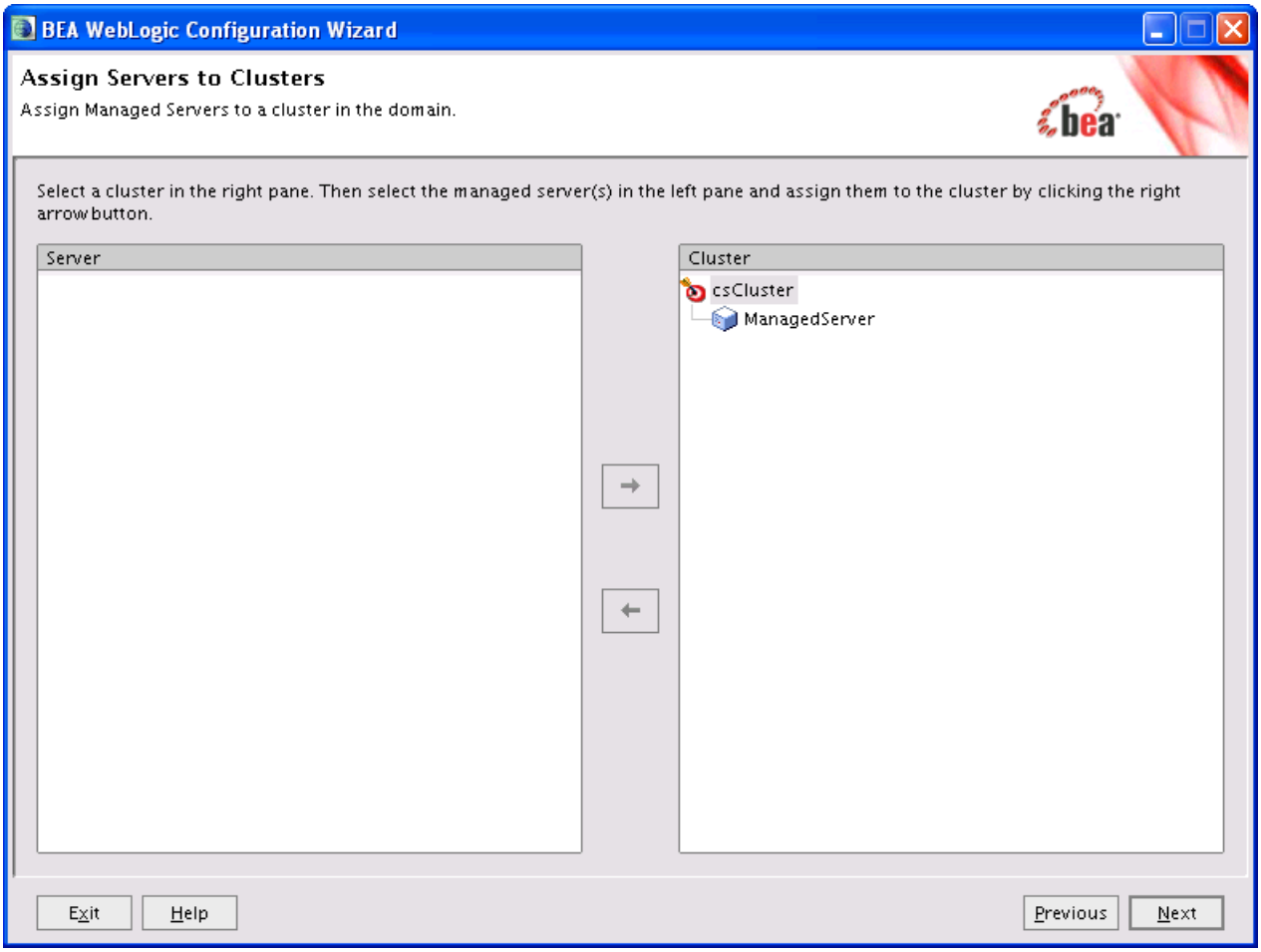
   b. Click **Next**.



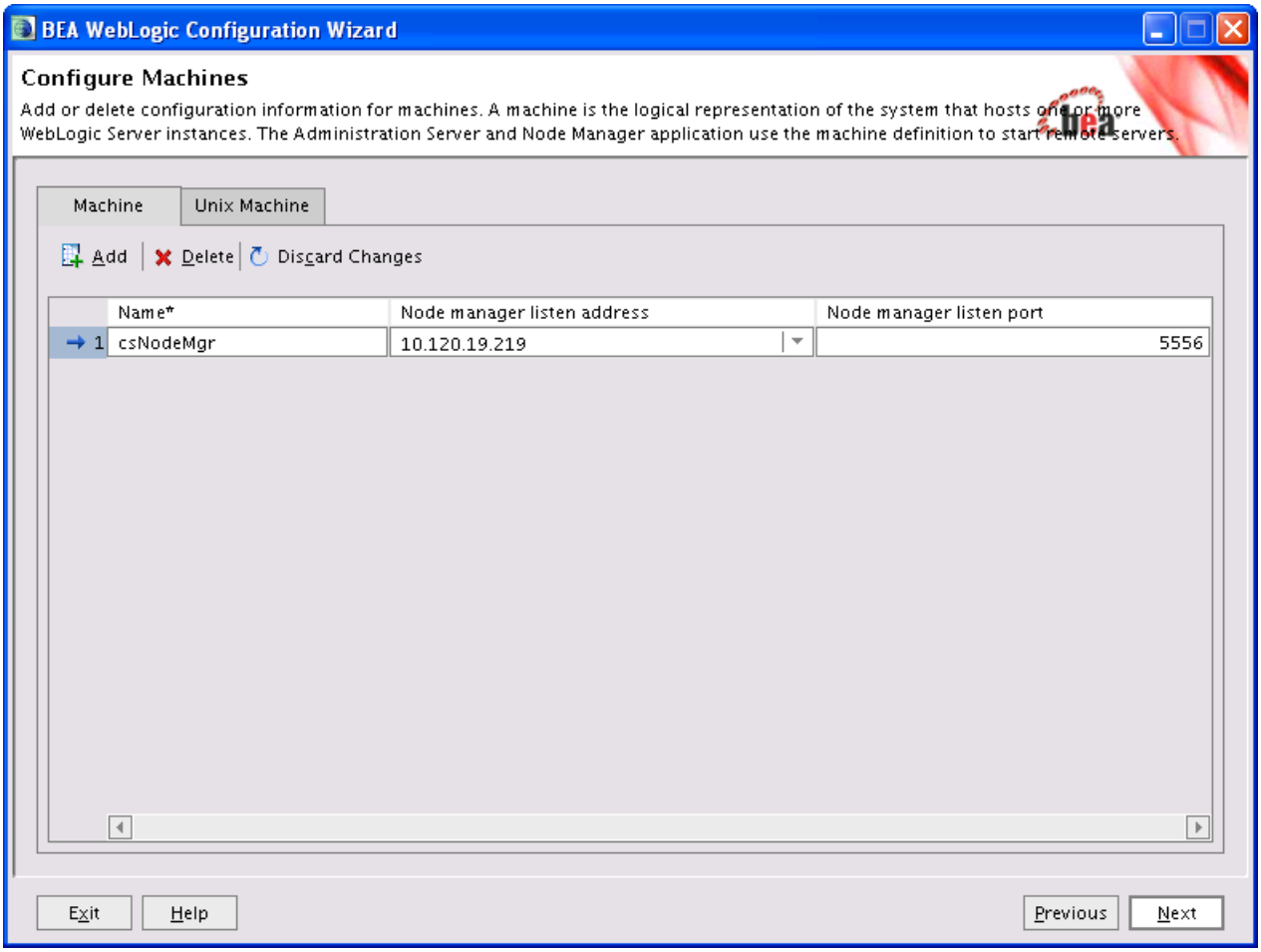
5. If you are ***not*** creating a cluster, click **Next** and skip to step 6 on page 33. Otherwise, create and configure a cluster:
   a. Create a cluster:
      1) Click **Add**.
      2) Enter a name for the cluster.
      3) In the **Multicast port** field, enter the admin server listening port.
      4) Click **Next**.



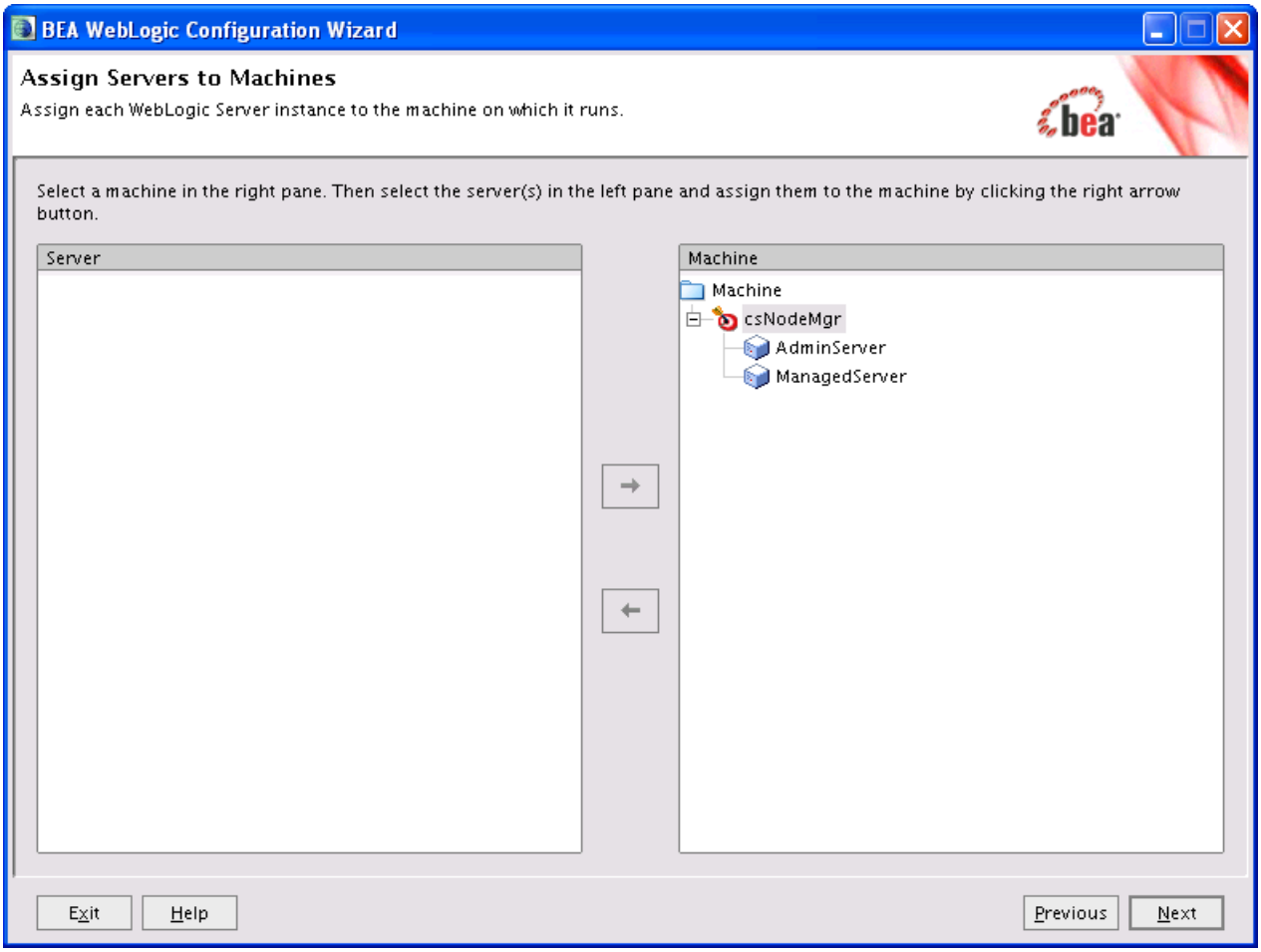
b. Add the managed server(s) to the cluster (by clicking the managed server(s) and clicking the right arrow). Click **Next**.



6. Configure the node manager:
   a. Click **Add** and enter a name and listening address. Click **Next**.

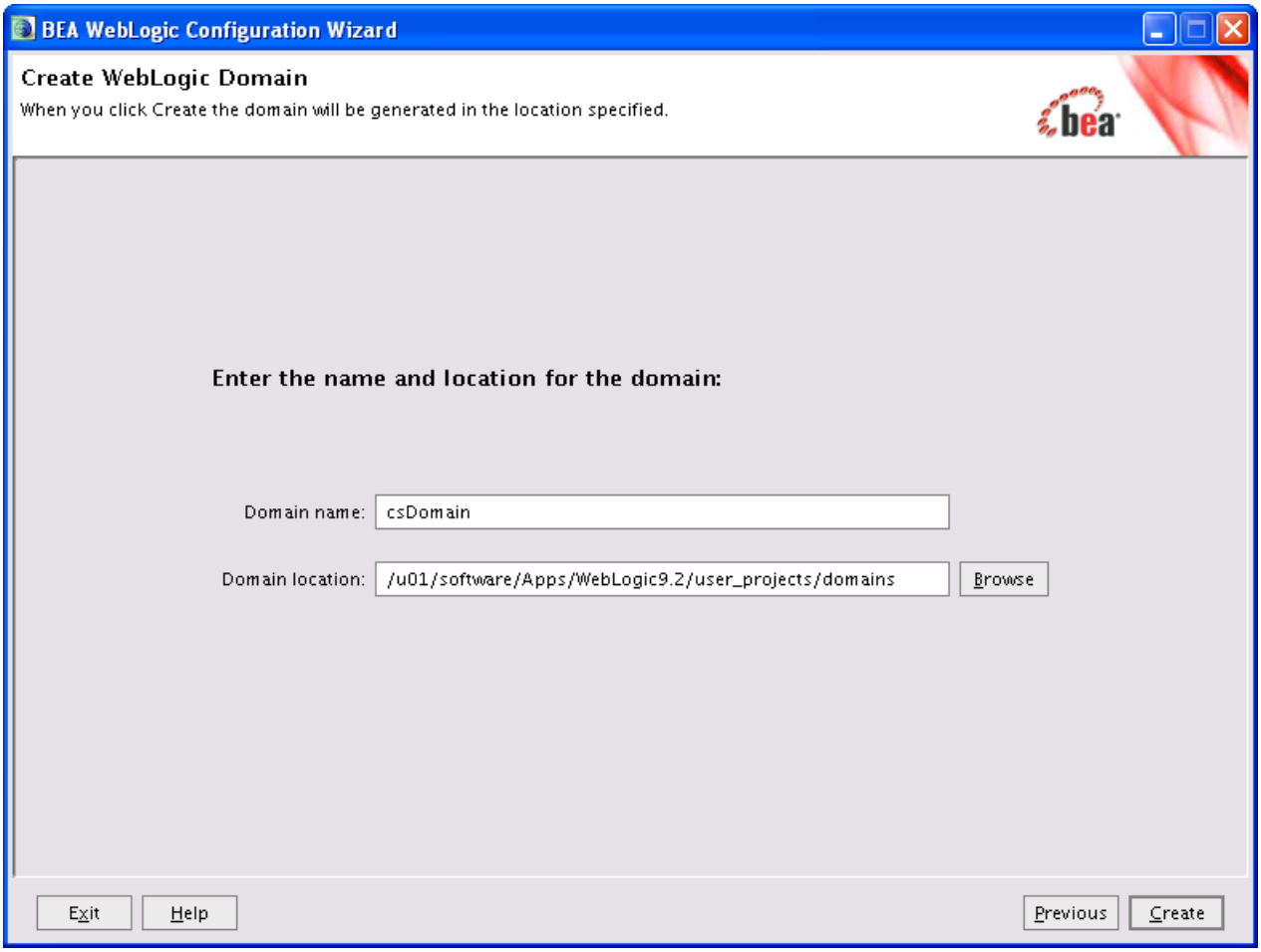


b. Add both the admin and managed servers to the node manager using the right arrow. Click **Next**.



7. After reviewing the domain configuration, click **Next**.

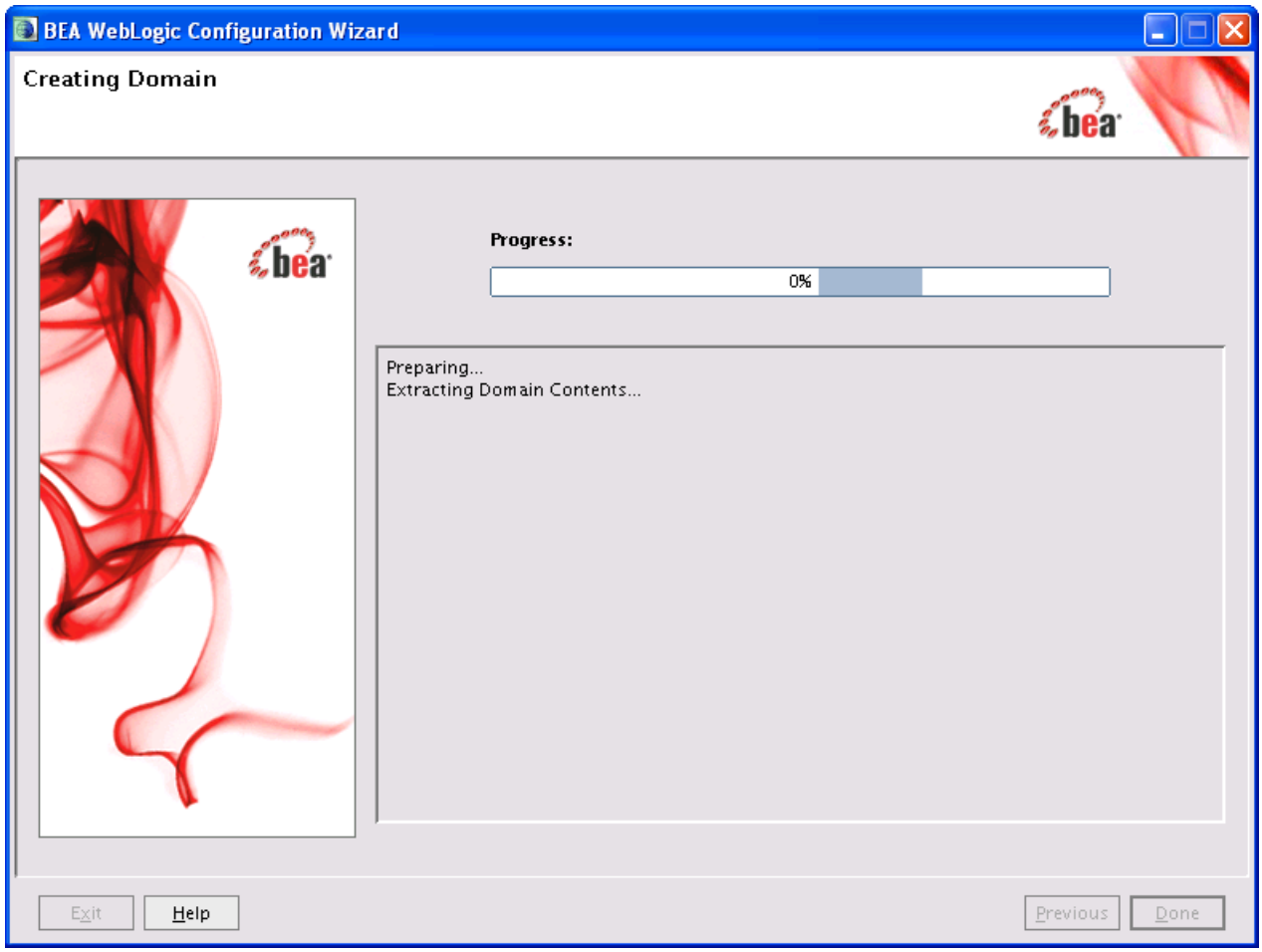
8. Enter a name for the domain and the path where the domain will be created. Click **Create**.



Note

The path to the domain will be referred to throughout this guide as `<domain_home>`.

9. The domain installation begins. When the installation is complete, click **Done**.



10. Your next steps are the following:
    a. For all systems (production and otherwise), set the environment variables to ensure that all servers are using the correct JDK. For instructions, go to "Setting Environment Variables," on page 37.
    b. For non-production environments, disable host name verification. For instructions, go to "Disabling Host Name Verification," on page 37.
    c. For all servers on which CS will be deployed, enable HTTP tunneling in order to support command-line deployment, using the `weblogic.Deployer` or `weblogic.Admin` utilities. For instructions, go to "Enabling HTTP Tunneling," on page 39.

Setting Environment Variables

Setting environment variables ensures that each server is using the right JDK.

To set environment variables

1. Log into the Administration Console.
2. Expand **Environment** in the tree.
3. Click **Servers**.
4. Click ***ServerName***.
5. Click the **Configuration** tab.
6. Click **Server Start**.
7. Click **Lock & Edit**.
8. For "Java Home," enter the path to the WebLogic JDK (`<bea_home>/jdk150_04`).
9. For "Java Vendor," enter **Sun**.
10. Click **Save**.
11. Click **Accept Changes**.
12. Repeat this procedure for each server in the system.
13. The next step is to disable host name verification for non-production environments. Follow instructions in the next section.

Disabling Host Name Verification

For non-production environments, you may decide to disable host name verification.This section explains how to do so from both the command line and the administration console.

Note

After host name verification is disabled:

1. Enable HTTP tunneling in order to prepare the web application for command-line controlled deployment. For instructions, see "Enabling HTTP Tunneling," on page 39.
2. Create the data source. For instructions, see "Creating and Configuring a Data Source," on page 39.

Command Line

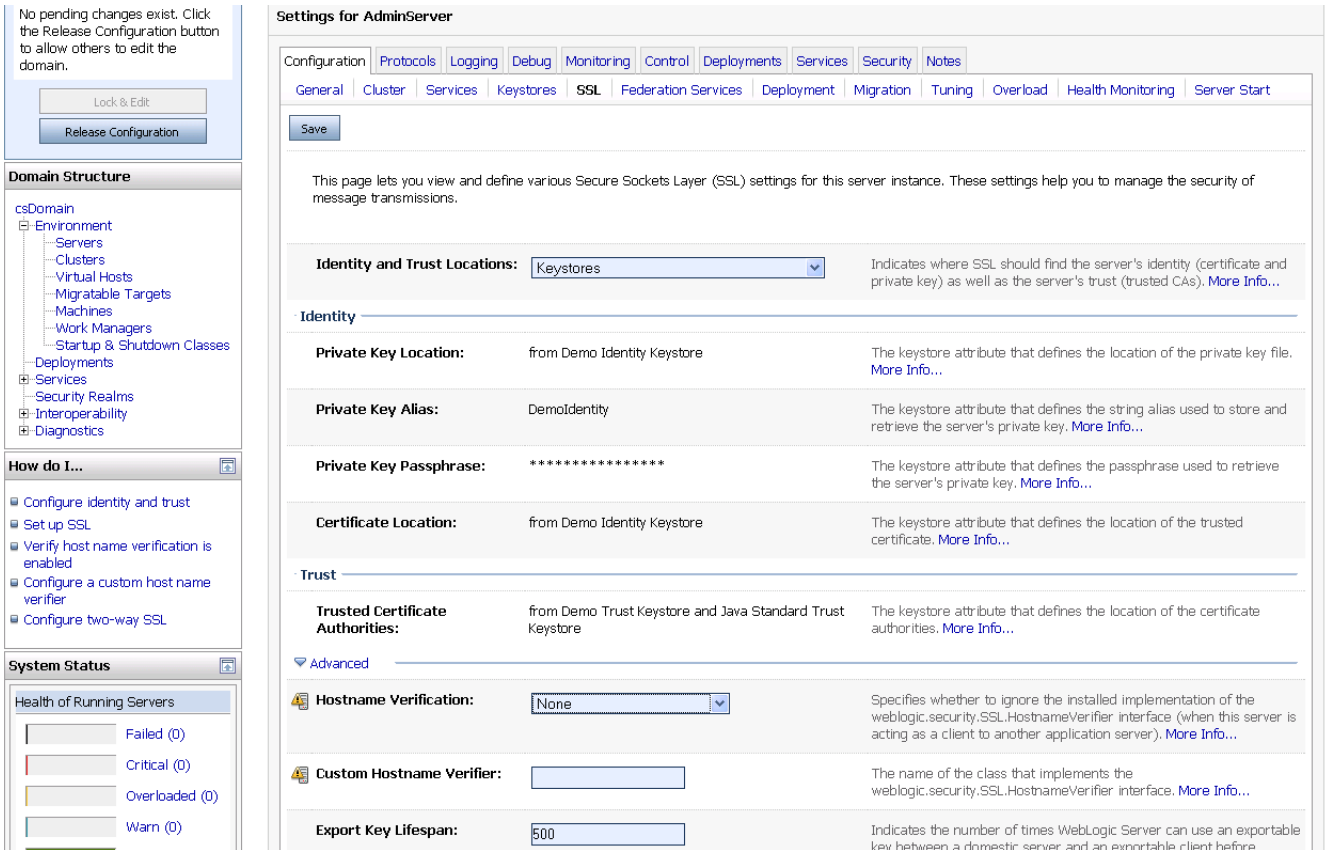
For both the **`startWebLogic.sh`** and **`startManagedWebLogic.sh`** scripts (**`.bat`** in Windows) located in `domain_home/bin`, edit the script by inserting the following line after the first large comment block:

```
JAVA_OPTIONS="${JAVA_OPTIONS} -
   Dweblogic.security.SSL.ignoreHostnameVerification=true"
```

Administration Console

1. Start the admin server.
2. Change to the `<domain_home>` directory and run `startWebLogic.sh` (`.bat` for Windows).
3. After the admin server has started, open a web browser and log in to the "WebLogic Server Administration Console" at:

   `http://<listening_address>:<admin_port>/console`
4. In the tree at the left of the screen, expand **Environment**.
5. Click **Servers**.
6. For each of the servers listed:
   a. Click the server name.
   b. Click the **Configuration** tab.
   c. Click **SSL**.
   d. Click **Advanced.**
   e. Click **Lock & Edit** in the upper left corner.
   f. From the drop-down menu labeled **Hostname Verification,** select **None**.
   g. Click **Save**.
7. Click **Activate Changes**.



Enabling HTTP Tunneling

Note

The steps in this section must be completed before Content Server is deployed.

In order to run commands using the `weblogic.Deployer` or `weblogic.Admin` utilities, HTTP tunneling must be enabled on each server. This section explains how to enable tunneling for any server that will be controlled from the command line.

To enable HTTP tunneling

1. Log in to the administration console.
2. Expand **Environment** on the left hand side.
3. Click **Servers**.
4. For the admin server and each managed server:
   a. Click the server name.
   b. Click the **Protocols** tab.
   c. Click **General**.
   d. Click **Lock & Edit**.
   e. Click the **Enable Tunneling** check box.
   f. Click **Save.**
5. Click **Activate Changes**.
6. The next step is to create a data source. Follow instructions in the next section.

Creating and Configuring a Data Source

This section explains how to create a data source for any of the supported databases using the WebLogic Server Administration Console. This section assumes the admin server has already been started. Two basic steps then need to be completed:

A. Create the Data Source

B. Configure the Connection Pool Size

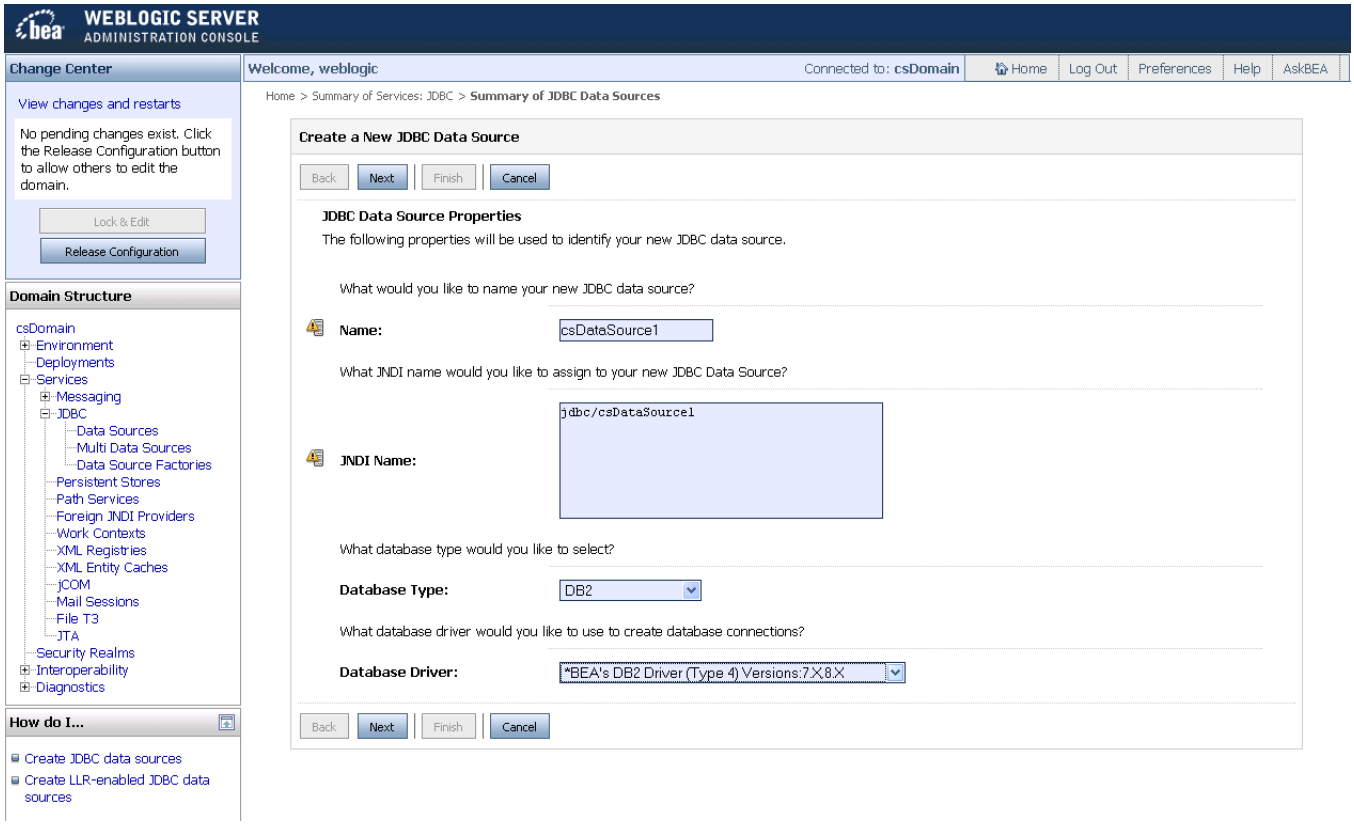
Note

If you are using an Oracle database and require text attributes greater than 2000 characters, you will have to set `cc.bigtext` to `CLOB`. To support `CLOB`, use Oracle database 9.2.0.6 (or a higher supported version). Also use Oracle 10g drivers. (`CLOB` is not supported for lower database versions and for Oracle drivers 9x [thin, type 4].)

You will set `cc.bigtext` to `CLOB` when you run the Content Server installer (as explained in “Running the Installer,” on page 78.)

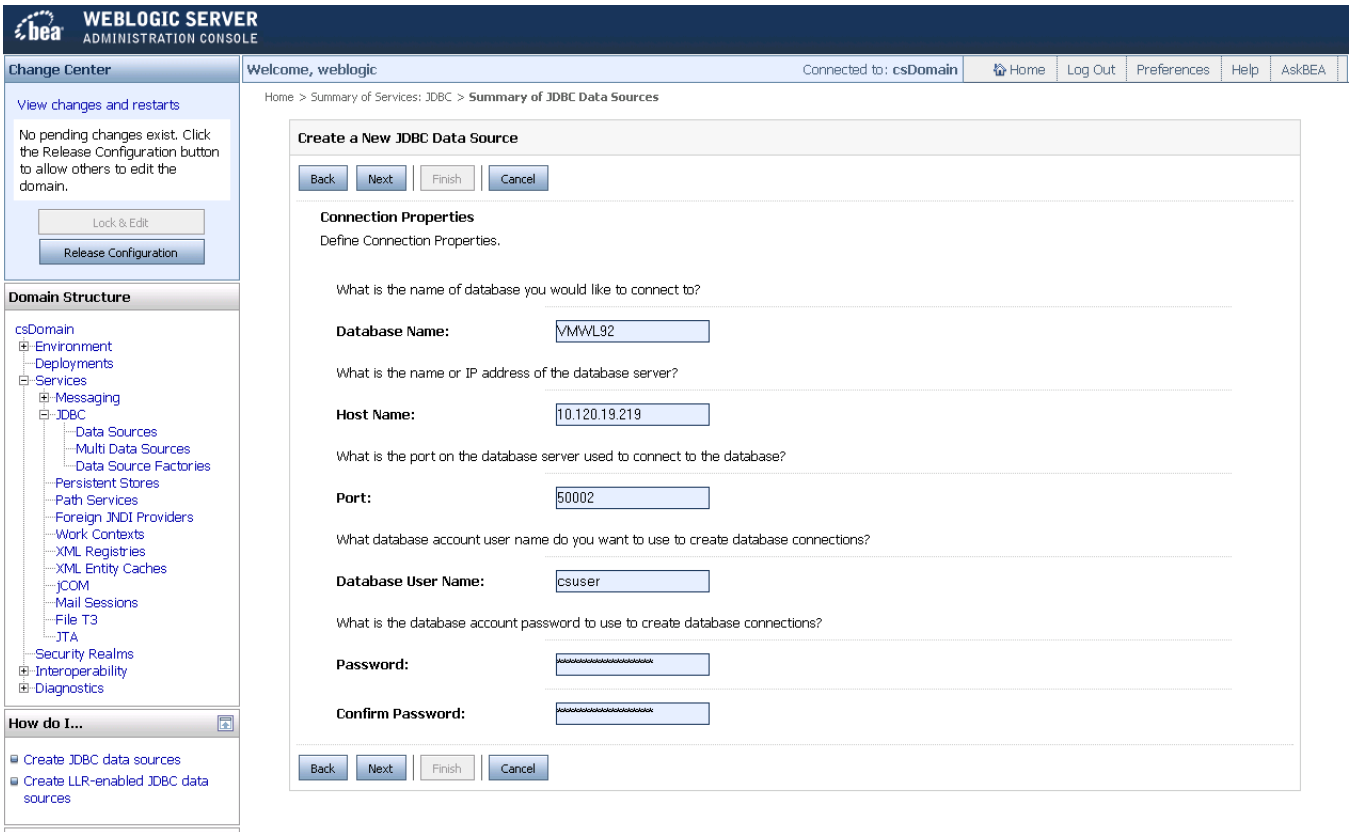
A. Create the Data Source

1. Log in to the WebLogic Server Administration Console.
2. In the tree at the left:
   a. Expand **Services**.
   b. Expand **JDBC**.
   c. Click **Data Sources**.
3. Click **New**.
4. In the "Create a New JDBC Data Source" screen, enter the following values:
   a. A name for the data source.
   b. `jdbc/<datasource_name>` for the JNDI name.
   c. A database type/driver pair. Your choices are:
      - MS SQL Server / BEA's MS SQL Server Driver (Type 4)
      - Oracle / BEA's Oracle Driver (Type 4)
      - DB2 / BEA's DB2 Driver (Type 4)

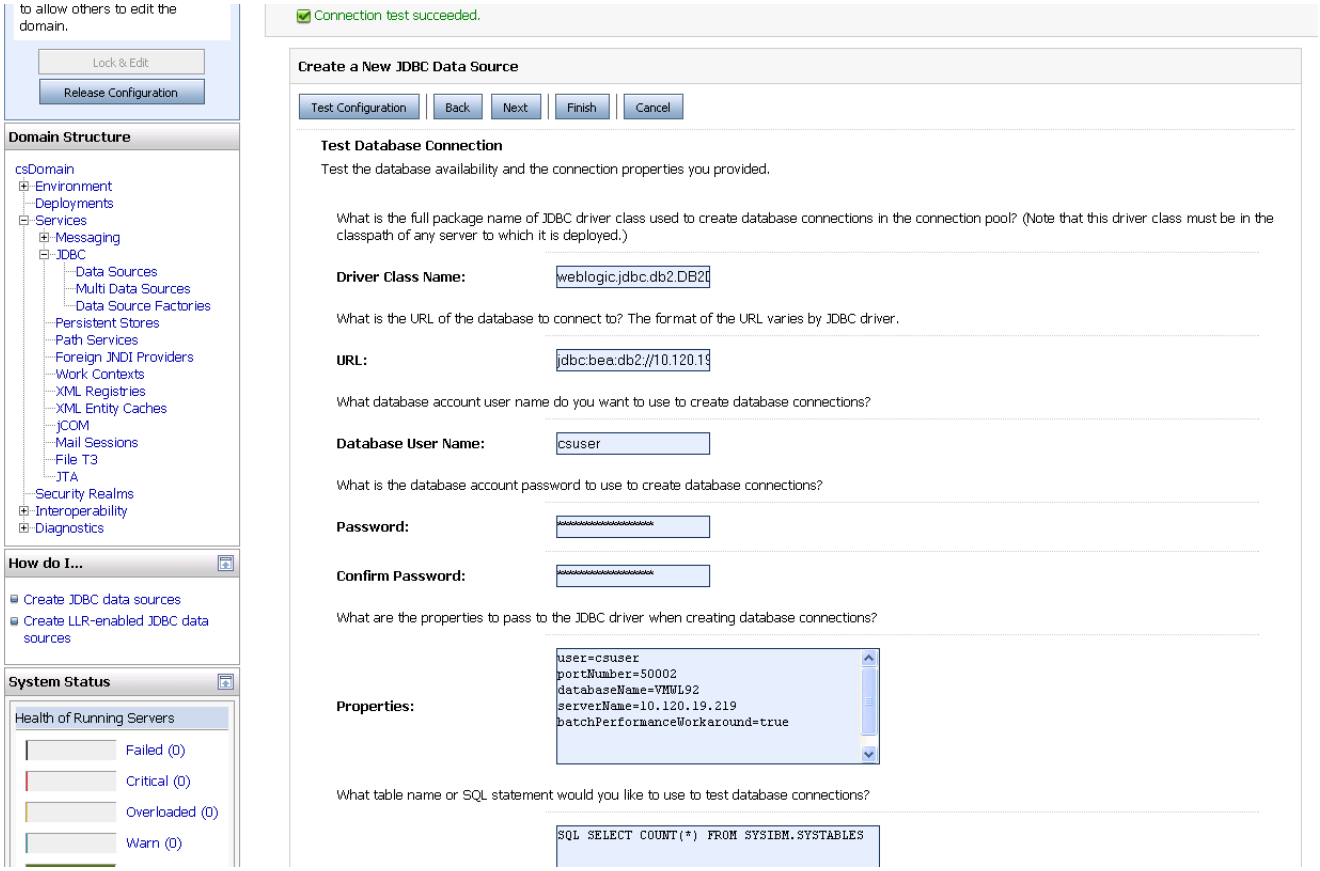


5. Click **Next**.
6. Click **Next** in the screen that follows.

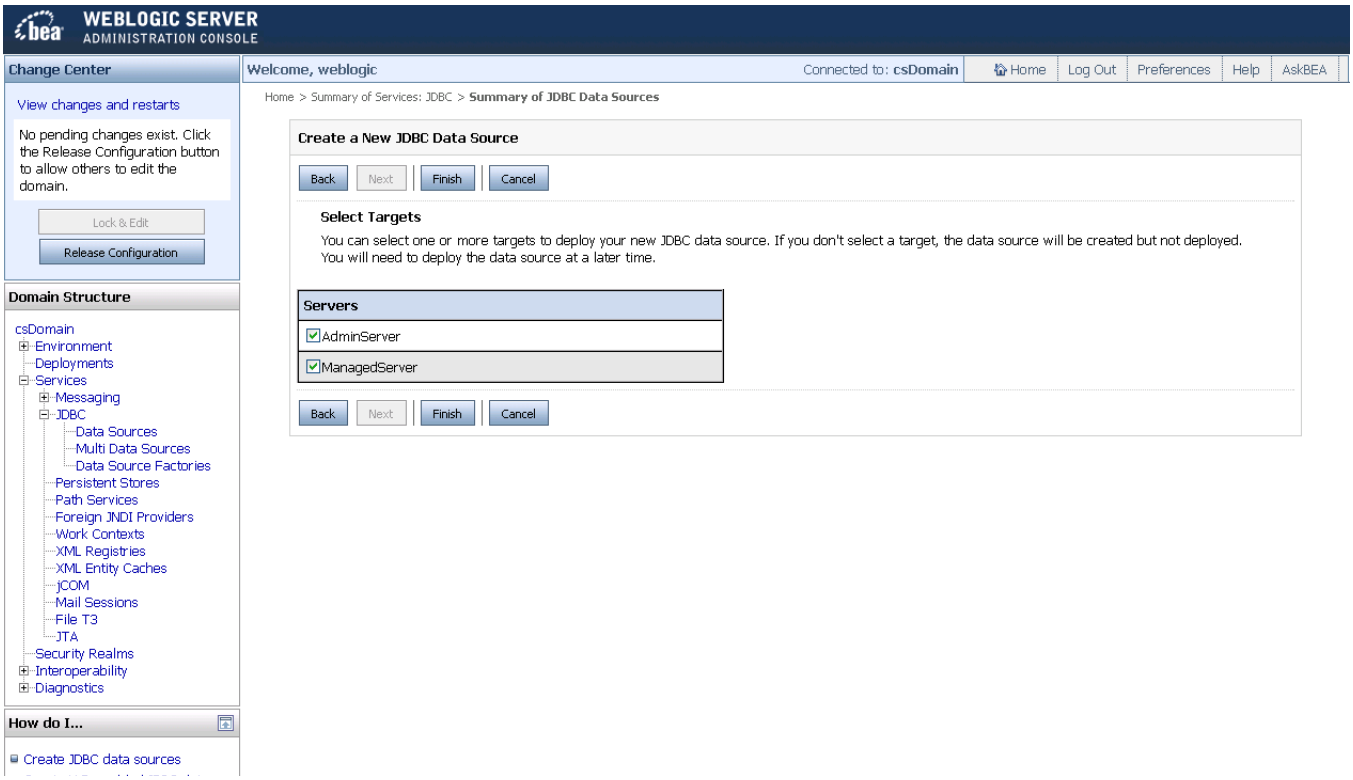
7. For “Connection Properties,” enter the database name, host name for the database server, port, user name, and password. Click **Next**.



8. Verify that the data source information is correct, and click **Test Configuration**. This will test your data source. If the test fails, review your data source information, and try again. When the test succeeds, click **Next**.



9. Check both the admin and managed servers and click **Finish.**



10. Click **Activate Changes**.

B. Configure the Connection Pool Size

The default values allow a connection pool to contain only up to 15 physical connections. This value needs to be increased.

1. In the left-hand tree:
   a. Expand **Services**.
   b. Expand **JDBC**.
   c. Click **Data Sources**.
2. Click on the newly created data source.
3. In the **Configuration** tab click **Connection Pool**.
4. Click **Lock & Edit**.
5. For “Initial Capacity,” enter **10** and for “Maximum Capacity,” enter **100**.
6. Click **Save**.
7. Click **Accept Changes**.
8. Your next step is one of the following:
   - If you wish to integrate with the Apache or IIS web server, follow instructions in Chapter 6, “Installing and Configuring the Web Server.”
   - To install Content Server, follow instructions in Chapter 7, “Installing and Configuring Content Server.”

Deploying Web Applications

This section shows you how to deploy a web application on WebLogic Server using the `weblogic.Deployer` utility. You will refer to the steps below halfway through the Content Server installation (Chapter 7).

A. Set Up the Environment for weblogic.Deployer

Note

The `weblogic.Deployer` command set requires its environment to be configured. This environment must not be used for installing Content Server.

1. Set the `JAVA_HOME` environment variable to the WebLogic JDK located in `<bea_home>`.
2. Finish setting up the environment by sourcing the `setWLSEnv.sh/cmd` script found in `<bea_home>/weblogic92/server/bin`. This is done on Unix with **`. setWLSEnv.sh`** or **`source setWLSEnv.sh`**.

B. Deploy the Web Application

1. Start the admin server.
2. If you are deploying in a production environment, start the node manager and the managed server.
3. Deploy the web application.

Note

The deployment name takes the name of the directory that the application was deployed to, or the name that the application was given during the Content Server installation:

```
java weblogic.Deployer -adminurl http://
   <listening_address>:<admin_port> -user <domain_login>
   -password <domain_password> -name <deployment_name> -
   targets AdminServer -nostage -deploy
   <deployment_dir>/<deployment_name>
```

Example of `deployment_dir`:

```
/u01/software/Apps/Weblogic/user_projects/domains/
  csDomain/applications
```

Example of `deployment_name`:

```
ContentServer
```

4. When the application has been deployed, it will start automatically. You can stop, start, or undeploy the application with the following commands:
   - Stop the application:

     ```
     java weblogic.Deployer -adminurl http://
        <listening_address>:<admin_port> -user <domain_login> -
        password <domain_password> -name <deployment_name> -stop
     ```

   - Start the application:

     ```
     java weblogic.Deployer -adminurl http://
        <listening_address>:<admin_port> -user <domain_login> -
        password <domain_password> -start -name <deployment_name>
     ```

   - Undeploy the application:

     ```
     java weblogic.Deployer -adminurl http://
        <listening_address>:<admin_port> -user <domain_login> -
        password <domain_password> -name <deployment_name> -
        undeploy
     ```

Chapter 5

Configuring WebLogic Server for Portal Installations

This chapter contains information about configuring WebLogic Server to support and deploy your Content Server portal application.

This chapter contains the following sections:

Creating and Configuring a WebLogic Portal Domain

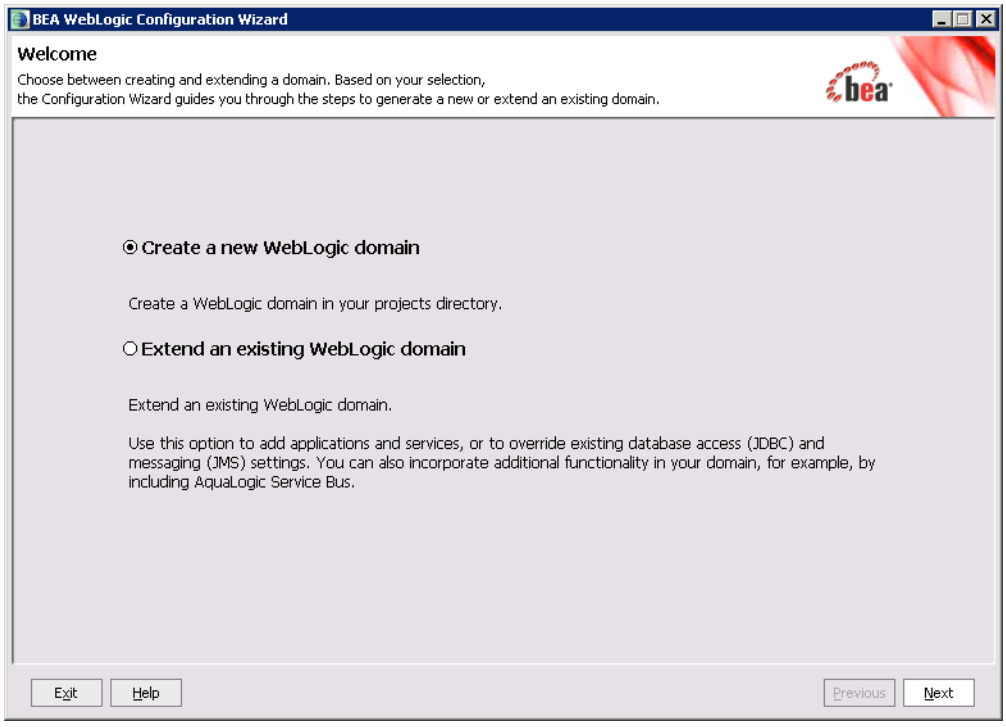
In the steps below, you will be creating and configuring a WebLogic Portal domain and the admin server that is created in the process.

To create and configure a WebLogic portal domain

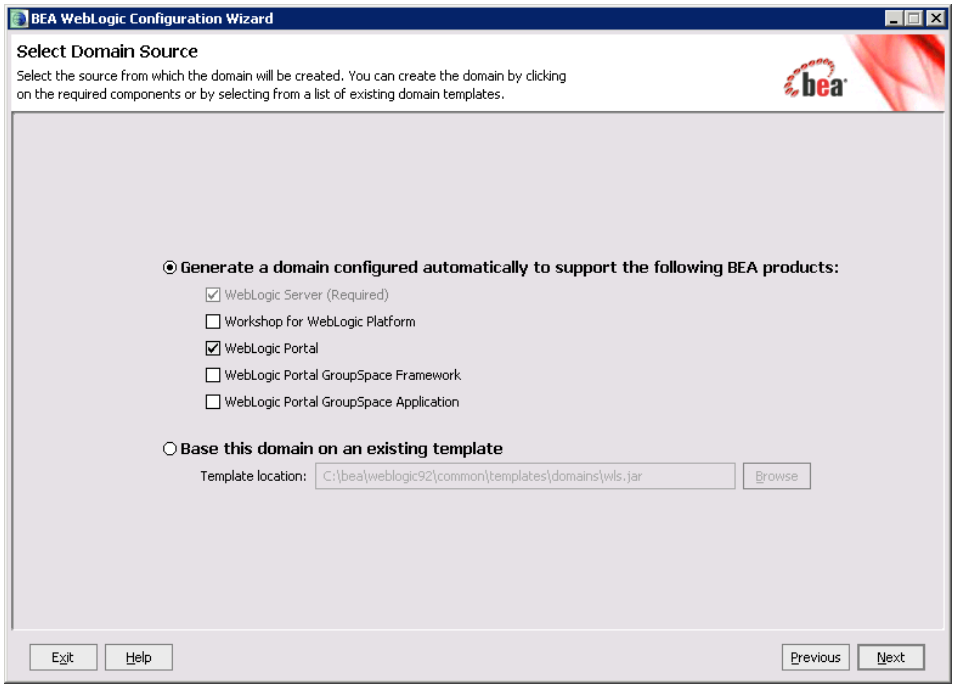
1. Run the WebLogic Configuration Wizard by executing the following command:

   `<bea_home>/weblogic92/common/bin/config.sh`

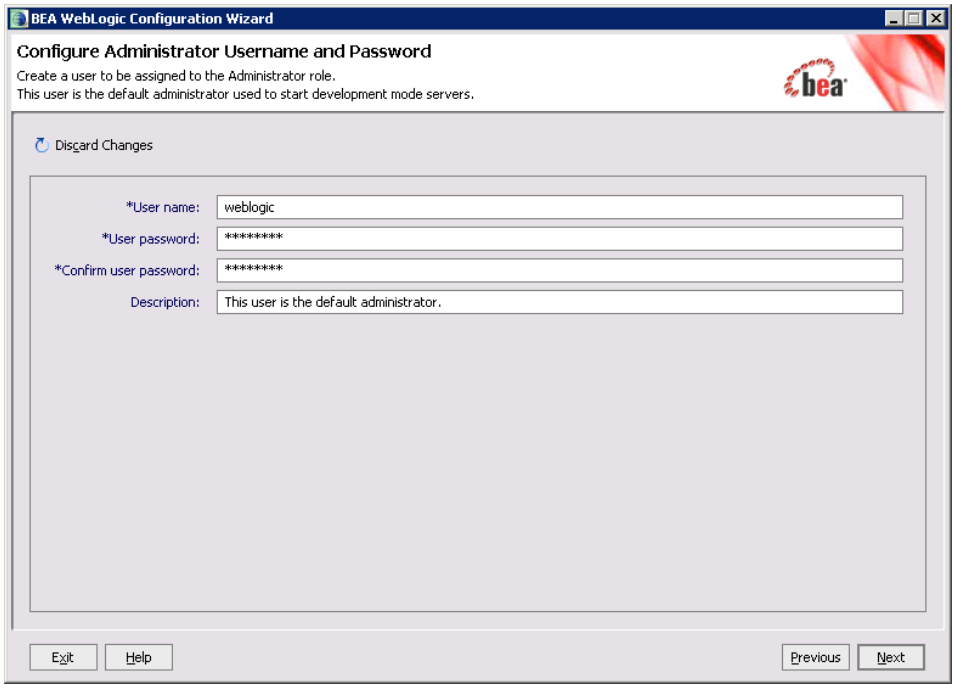
2. In the "Welcome" screen, select **Create a New WebLogic Domain**. Click **Next**.



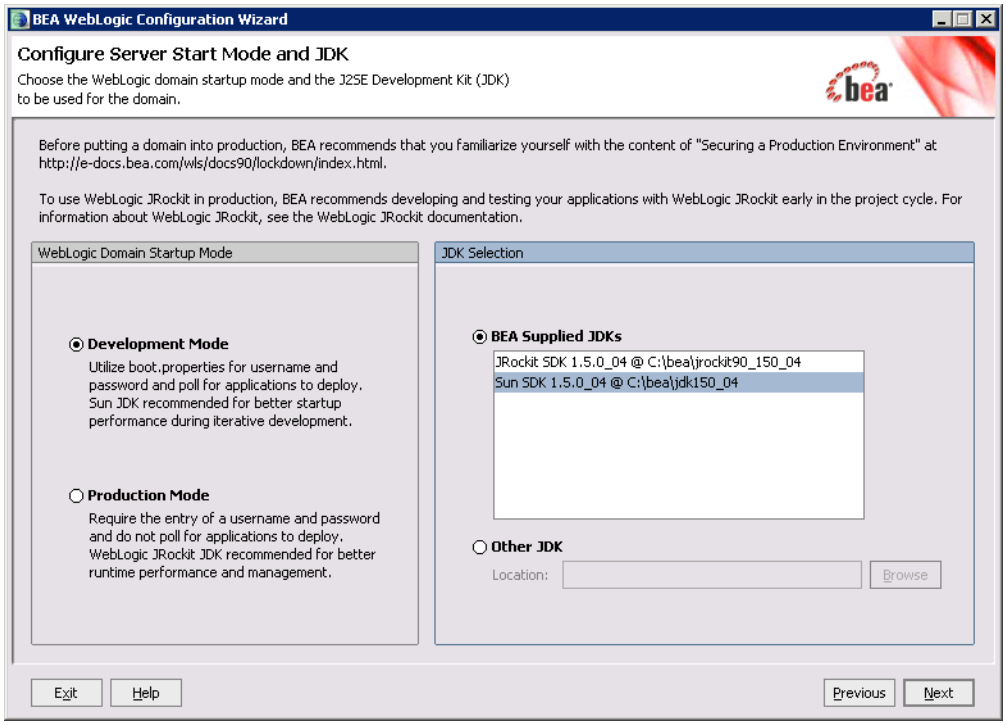
3. In the "Select Domain Source" screen, do the following:
   a. Select **Generate a domain configured automatically to support the following BEA products**.
   b. Select the **WebLogic Portal** check box.
   c. Click **Next**.



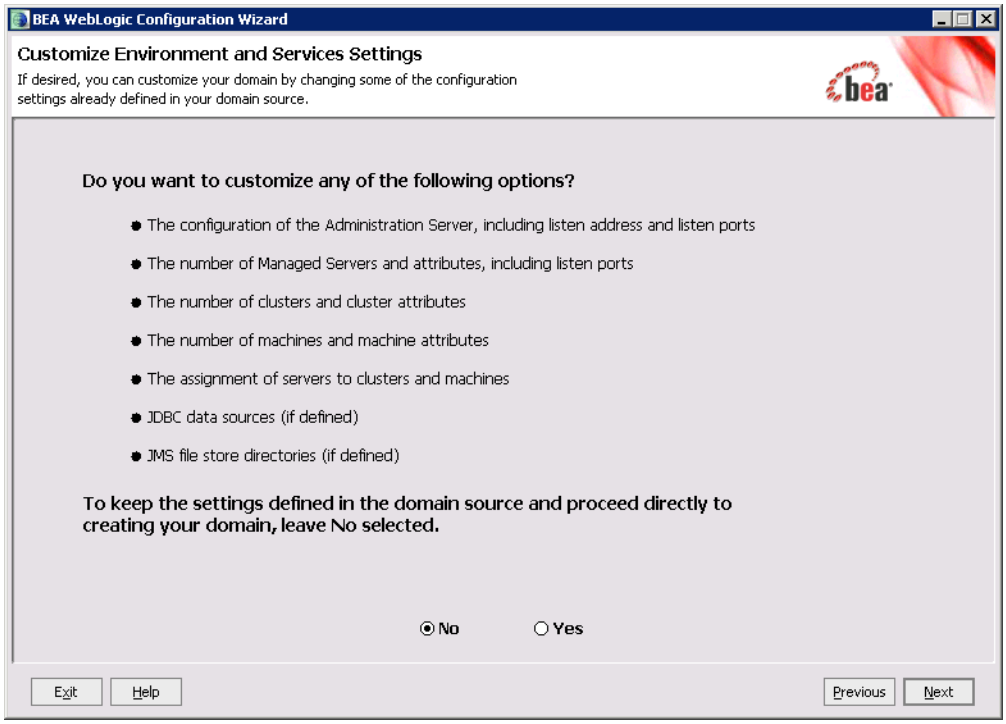
4. Enter a user name and password for the administrator of the portal domain. Click **Next**.



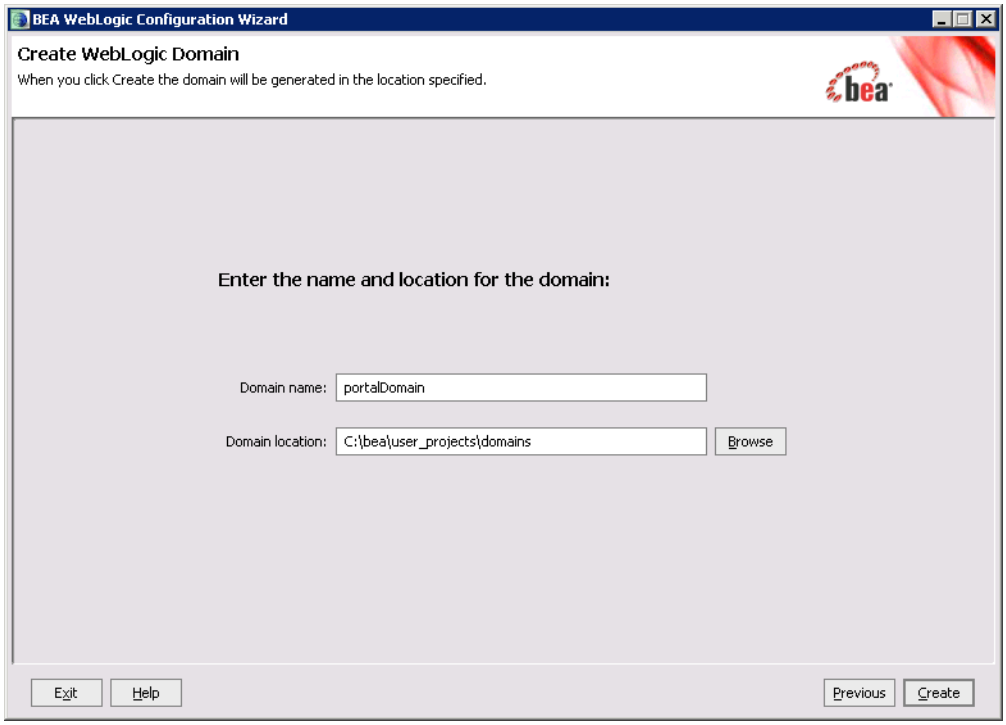
5. In the “Configure Server Start Mode and JDK” screen, do the following:
   a. In the “Startup Mode” area, select **Development Mode**. For production environments, the domain will be changed to **Production Mode** later in this guide (step C on page 85).
   b. In the “JDK Selection” area, select **BEA Supplied JDKs** and select the Sun SDK from the list.



6. In the "Customize Environment and Services Settings" screen, select **No**. Click **Next**.



7. Enter a name for the domain, and the path where the domain will be created. (This path will be referred to throughout this guide as `<domain_home>`.) Click **Create**.



8. When the creation process is complete, click **Done**.
9. Start the admin server.

Creating and Configuring a Data Source

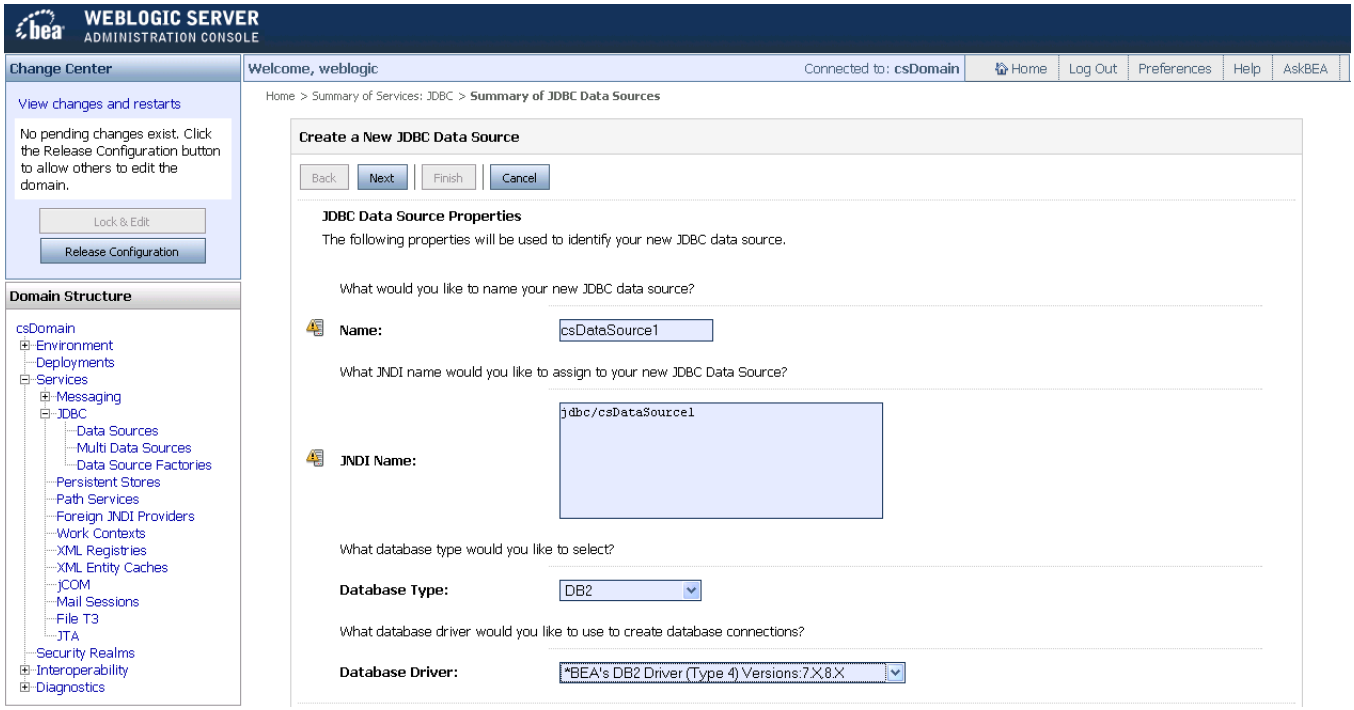
This section explains how to create a data source for any of the supported databases using the WebLogic Server Administration Console. This section assumes the admin server has already been started. Two basic steps then need to be completed:

A. Create the Data Source

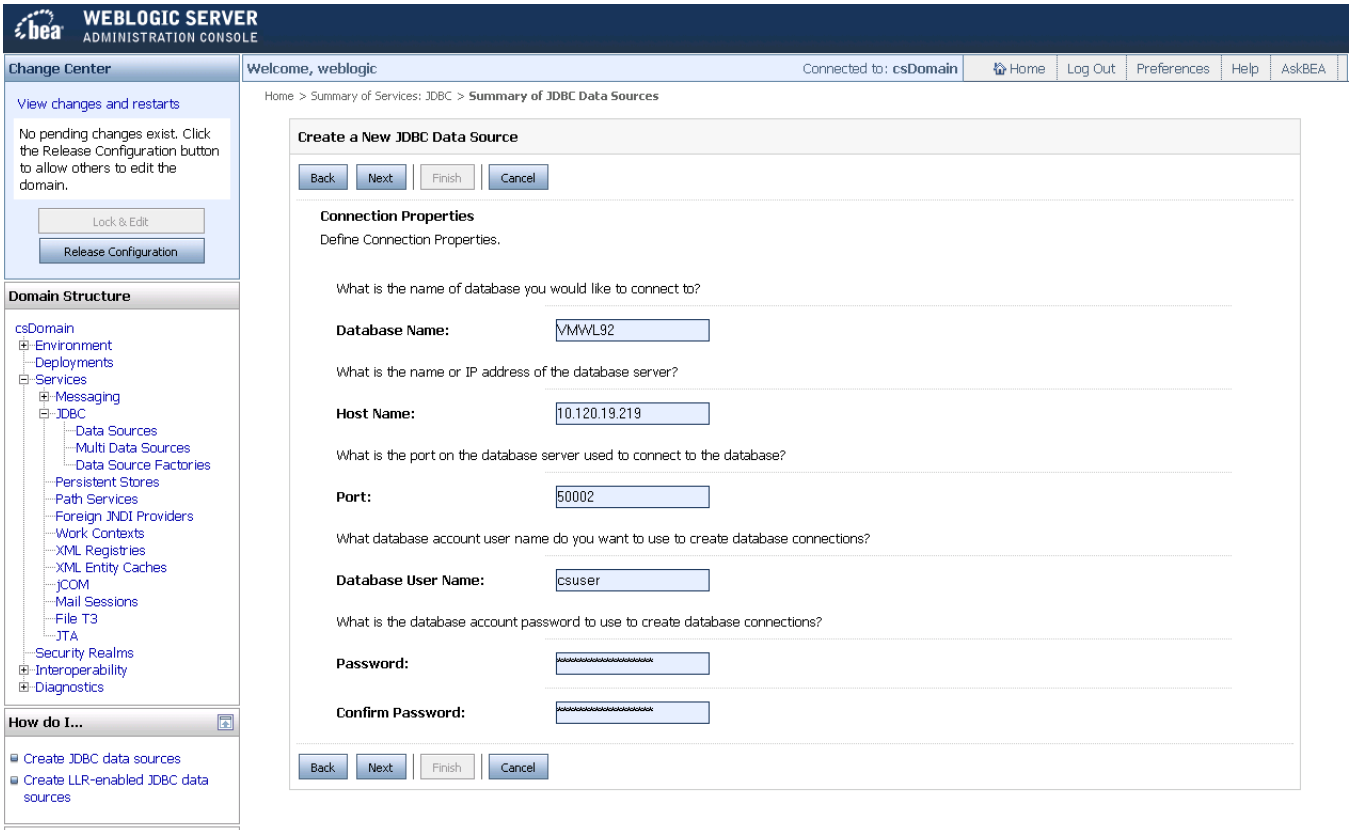
B. Configure the Connection Pool Size

A. Create the Data Source

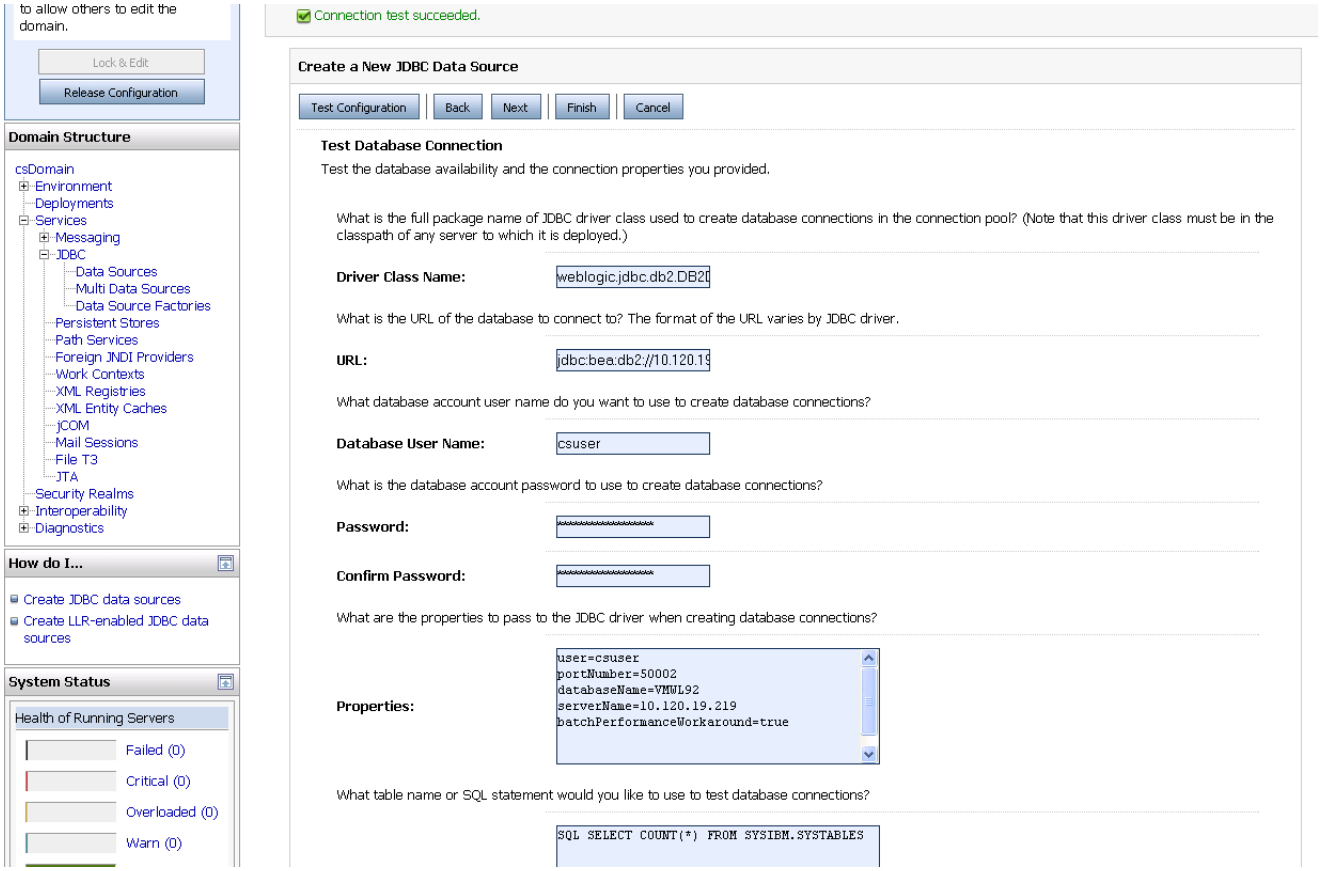
1. Log in to the WebLogic Server Administration Console.
2. In the tree at the left:
   a. Expand **Services**.
   b. Expand **JDBC**.
   c. Click **Data Sources**.
3. Click **New**.
4. In the "Create a New JDBC Data Source" screen, enter the following values:
   a. A name for the data source.
   b. `jdbc/<datasource_name>` for the JNDI name.
   c. A database type/driver pair. Your choices are:
      - MS SQL Server / BEA's MS SQL Server Driver (Type 4)
      - Oracle / BEA's Oracle Driver (Type 4)
      - DB2 / BEA's DB2 Driver (Type 4)



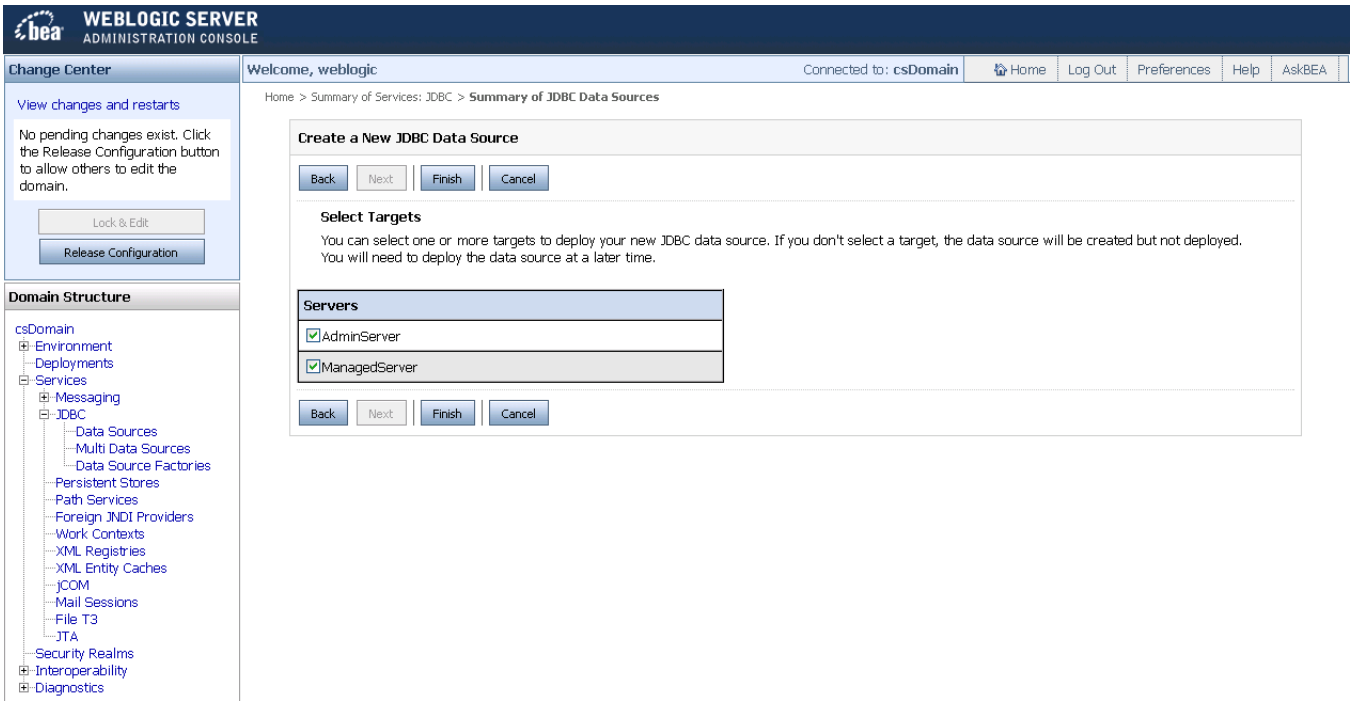
5. Click **Next**.
6. Click **Next** in the screen that follows.
7. For "Connection Properties," enter the database name, host name for the database server, port, user name, and password. Click **Next**.



8. Verify that the data source information is correct, and click **Test Configuration**. This will test your data source. If the test fails, review your data source information, again. When the test succeeds, click **Next**.



9. Check both the admin and managed servers and click **Finish.**



10. Click **Activate Changes**.

B. Configure the Connection Pool Size

The default values allow a connection pool to contain only up to 15 physical connections. This value needs to be increased.

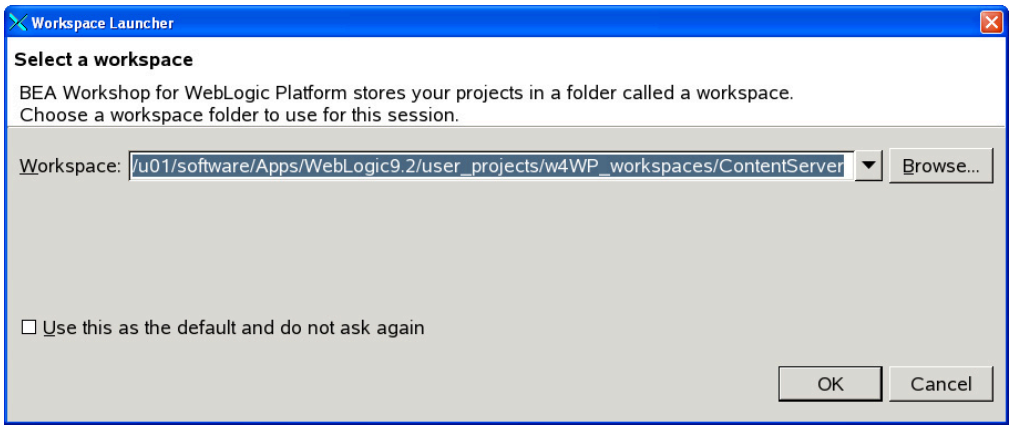
1. In the left-hand tree:
   a. Expand **Services**.
   b. Expand **JDBC**.
   c. Click **Data Sources**.
2. Click on the newly created data source.
3. In the **Configuration** tab click **Connection Pool**.
4. Click **Lock & Edit**.
5. For “Initial Capacity,” enter **10** and for “Maximum Capacity,” enter **100**.
6. Click **Save**.
7. Click **Accept Changes**.
8. Continue on to the next section, “Creating and Configuring a WebLogic Portal Application,” on page 56.

Creating and Configuring a WebLogic Portal Application

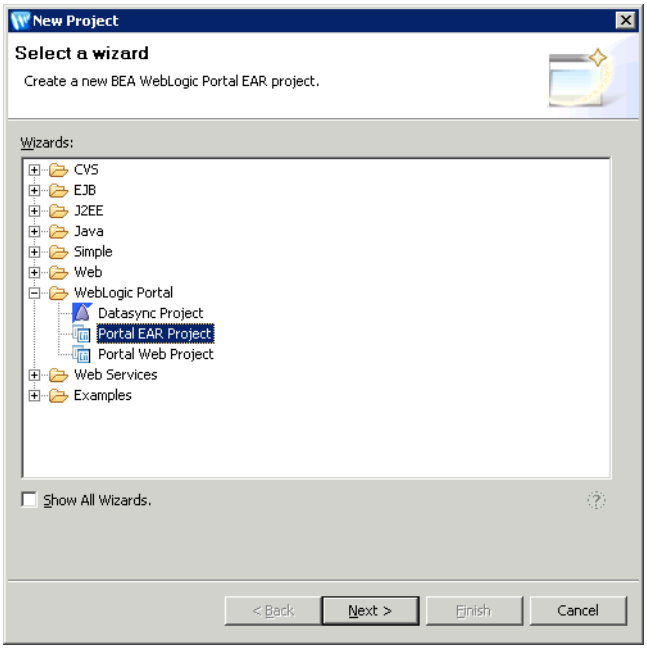
This section shows you how to create a portal application using WebLogic Workshop.

1. Stop the admin server.
2. Start WebLogic Workshop by executing the following command:

   `<bea_home>/workshop92/workshop4WP/workshop4WP.sh`
3. (Optional) If you have not yet specified a workspace directory, you will be prompted to do so. Set the directory, then click **OK**.

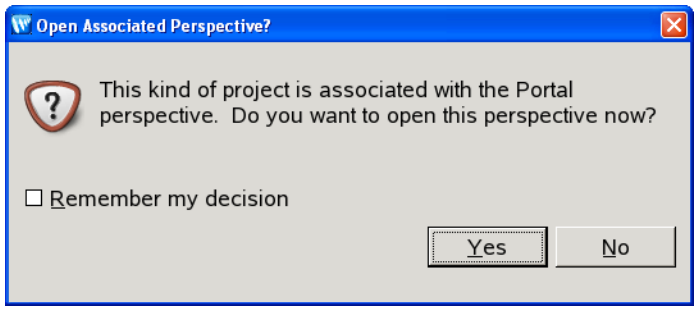


4. Create a Portal EAR project. Do the following:
   a. In the **File** menu, select **New**, then **Project**.
   b. In the "Select a Wizard" screen, expand **WebLogic Portal** and select **Portal EAR Project**. Click **Next**.



   c. Enter a name for the new project. Click **Finish**.

d. In the pop-up window that appears, click **Yes**.

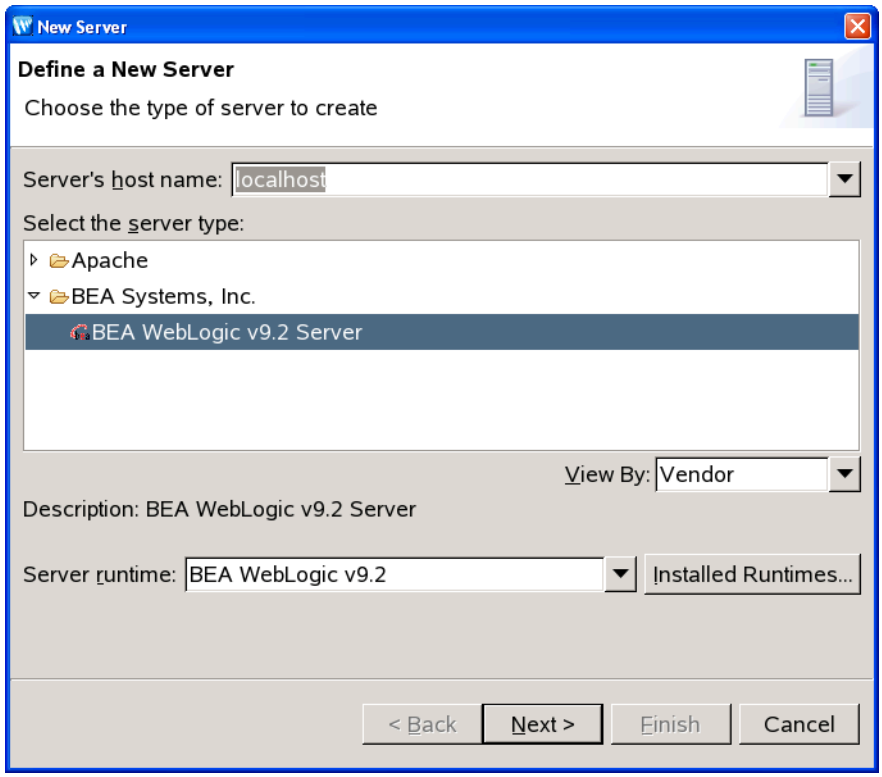


5. Define a new WebLogic server:

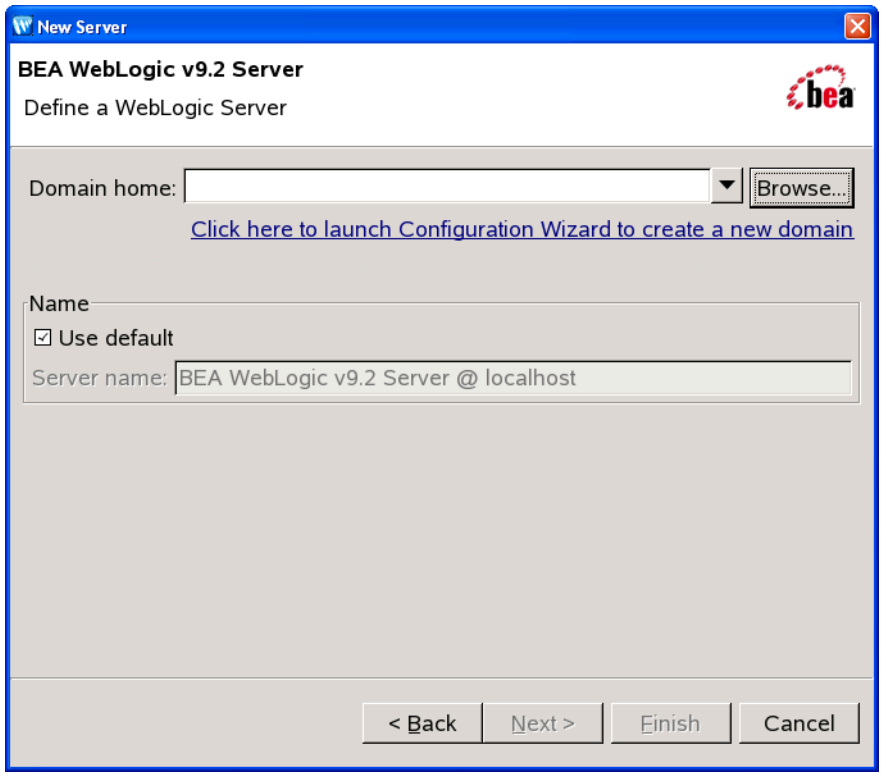
a. Switch to the "Workshop" view. From the **Window** menu, select **Open Perspective**, then **Workshop**.

b. In the **File** menu, select **New**, then **Server**.

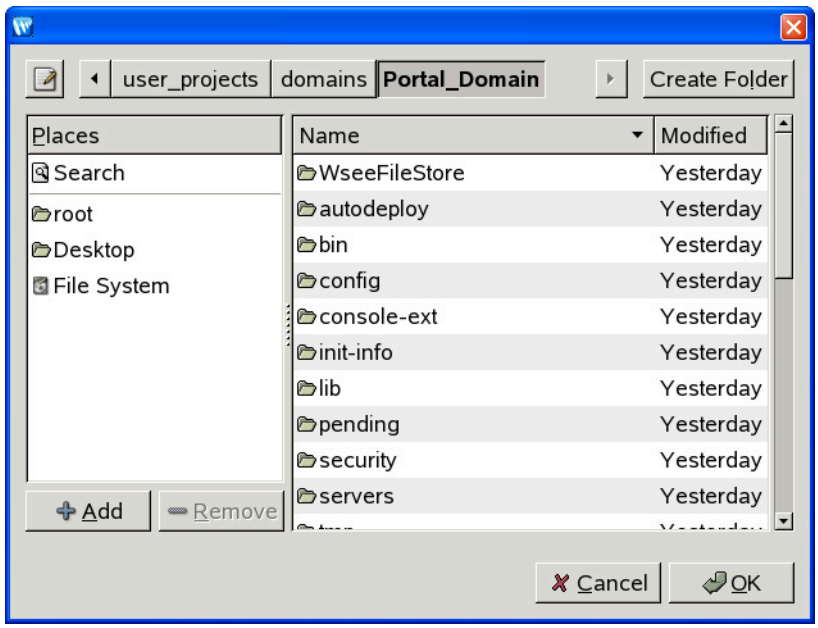
c. In the "Define a New Server" screen, expand **BEA Systems, Inc**. and select **BEA WebLogic v9.2 Server**. Click **Next**.



d. In the "Define a WebLogic Server" screen, click **Browse**.

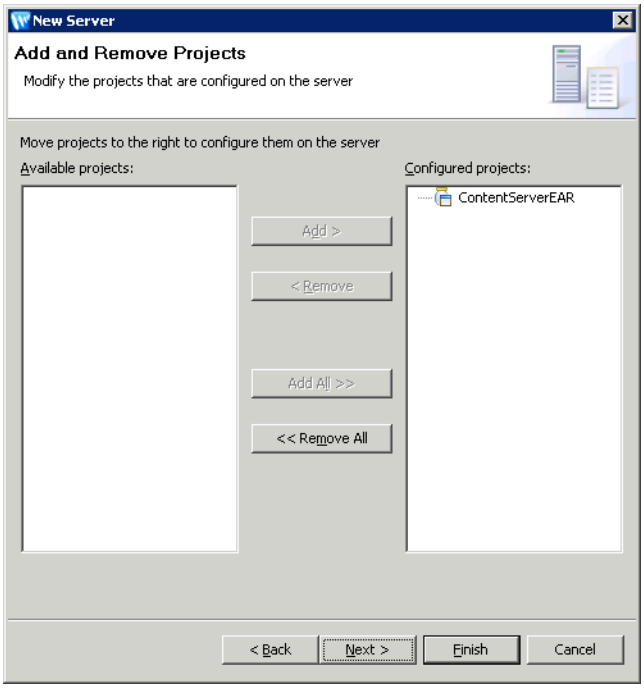


e. Browse to the `<domain_home>` directory you specified in step 7 on page 51. Click **OK**.



f. In the "Define a WebLogic Server" screen, click **Next**.

g. In the left-hand list, select the Portal EAR project you created in step 4 on page 56 and click **Add**. Then click **Finish**.

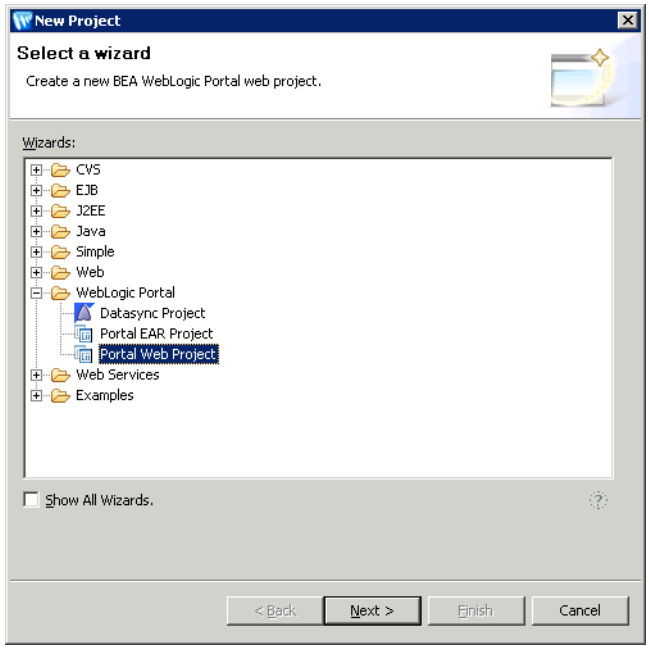


6. Create a Portal Web project. Do the following:

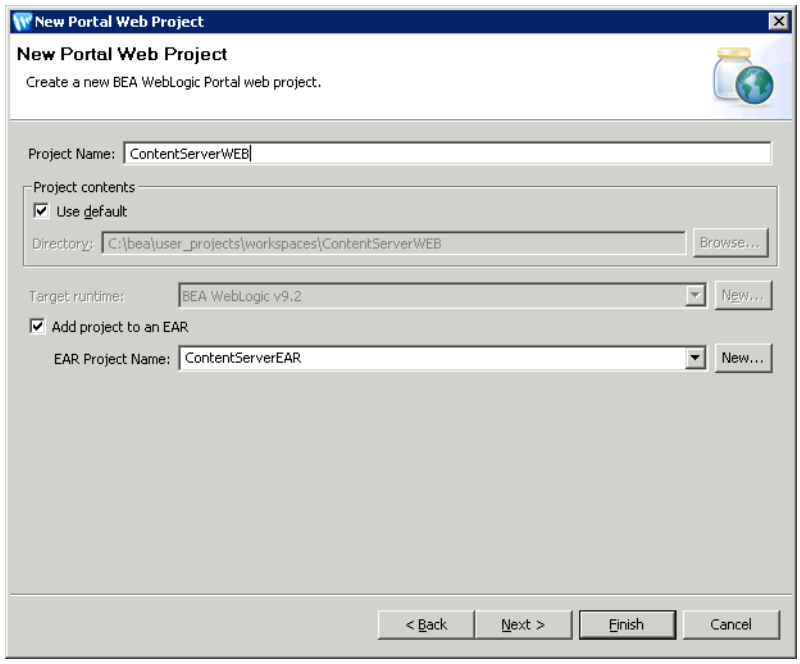
a. Switch to the "Portal" view. In the **Window** menu, select **Open Perspective**, then **Portal**.

b. In the **File** menu, select **New**, then **Portal Web Project**.

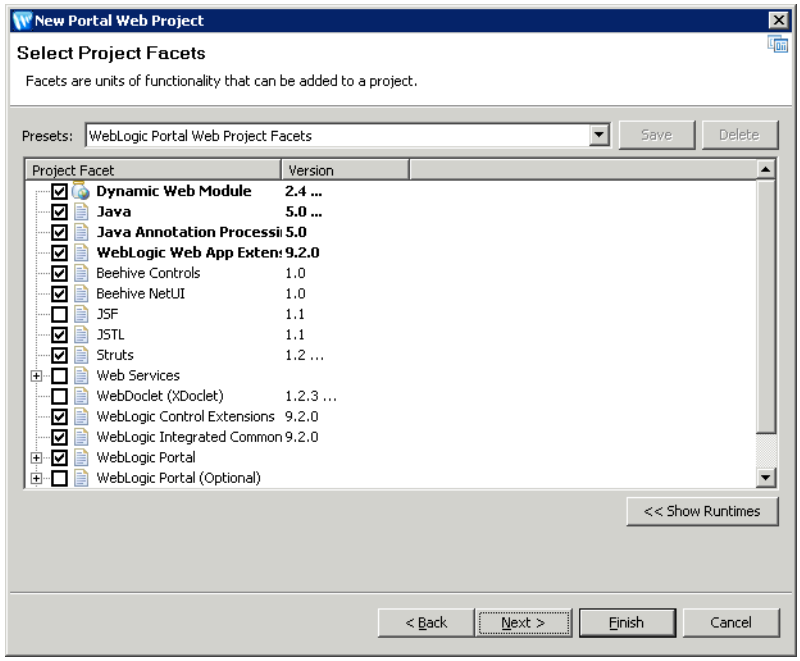
c. In the "Select a Wizard" screen, expand **WebLogic Portal** and select **Portal Web Project**. Click **Next**.



d. Enter a name for the new project, and select the **Add project to an EAR** check box. Click **Next**.



e. In the "Select Project Facets" screen, click **Next**.



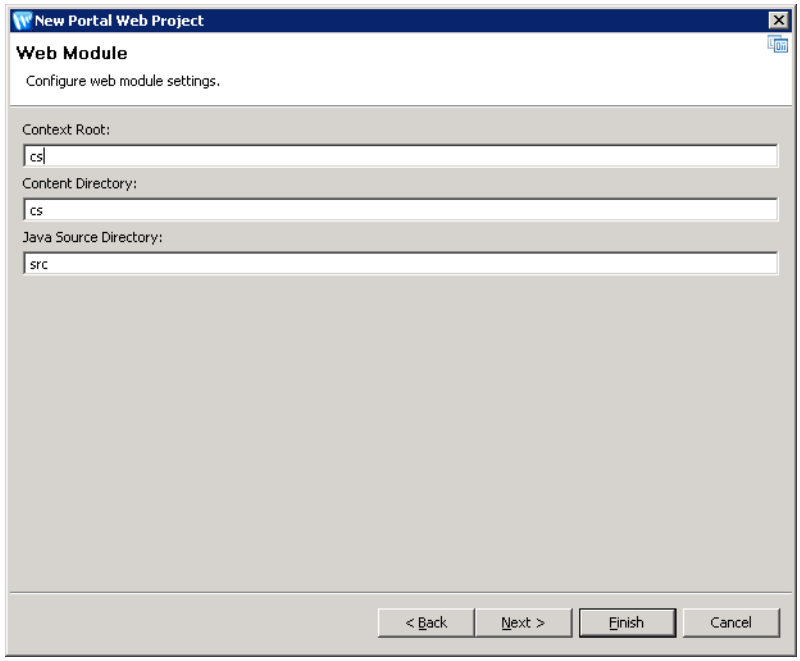
f. In the "Web Module" screen, do the following:

1) Enter a supported context root (`cs` or `servlet`).

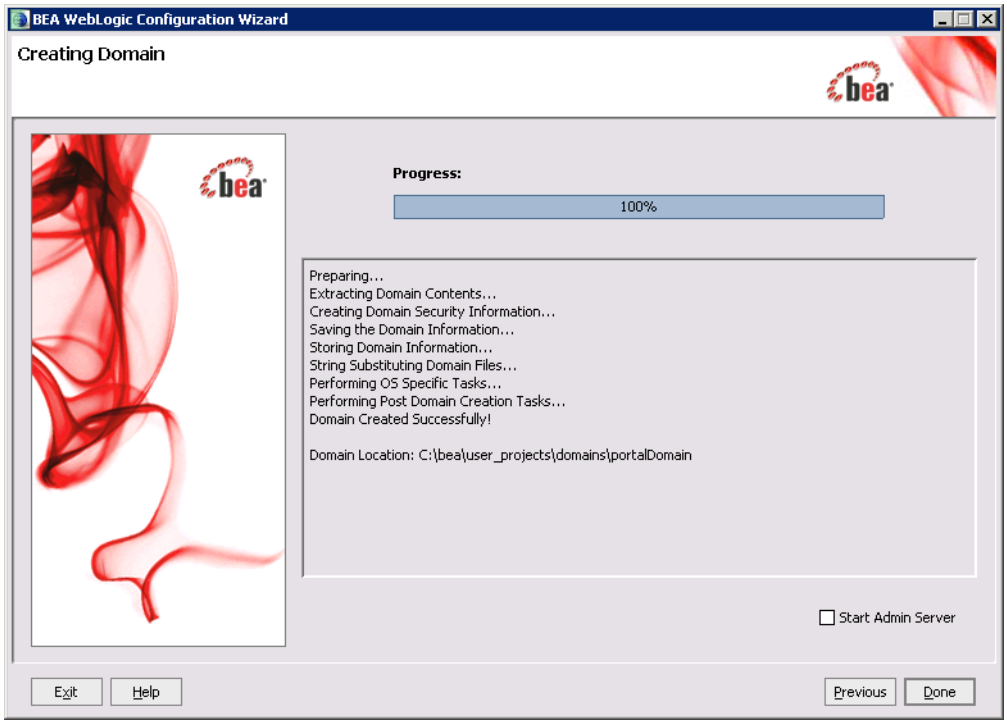
2) Enter a content directory name. (This directory will be referred to later in this guide as `<content_dir>`.)

3) In the **Java Source Directory** field, enter **src**.

4) Click **Finish**.

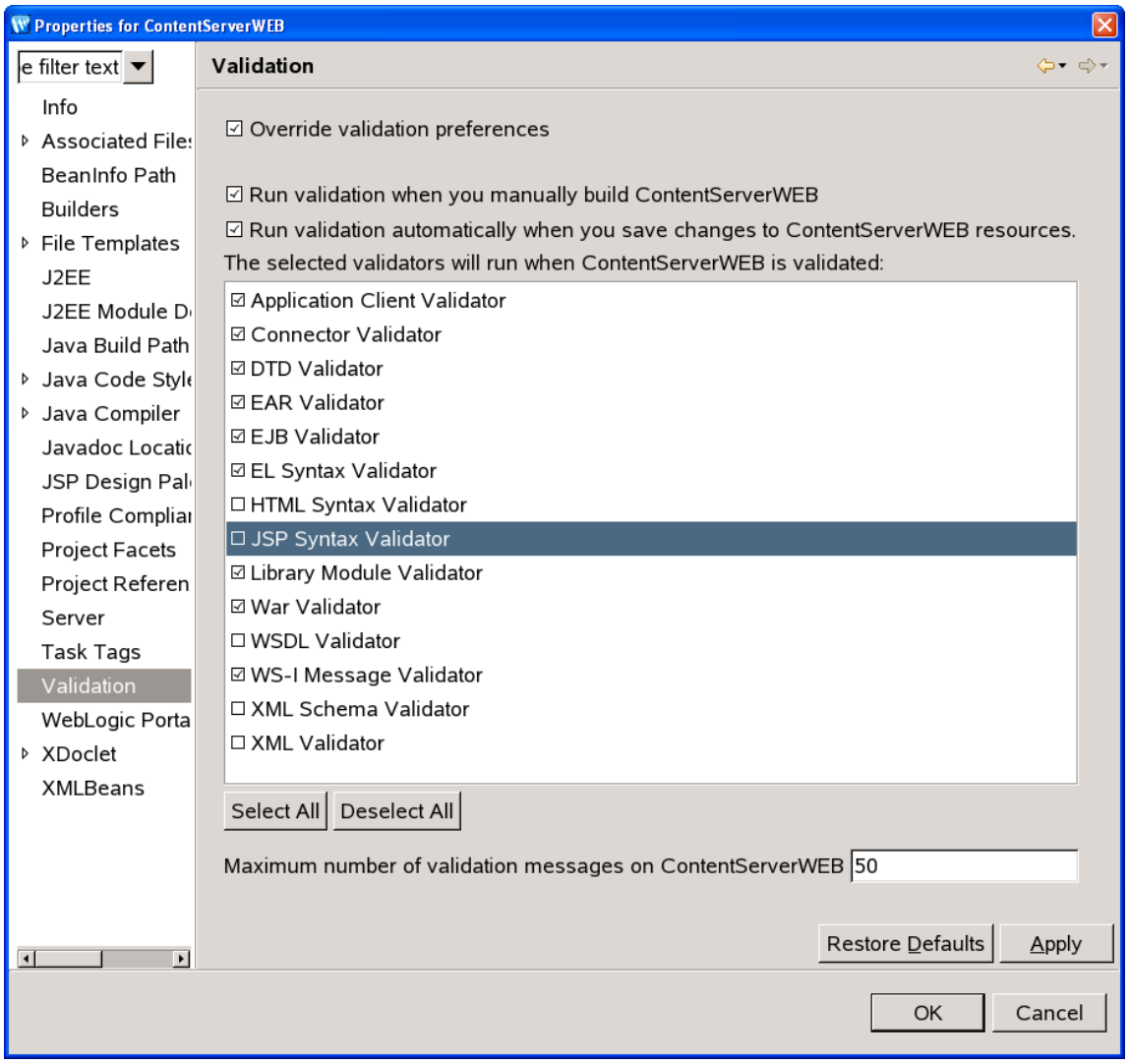


g. Wait until the Portal Web project is created and configured, then click **Done**.



7. Return to WebLogic Workshop and check the status of the Portal EAR project. If errors are displayed, right-click the Portal EAR project in the **Package Explorer** pane and select **Refresh**.

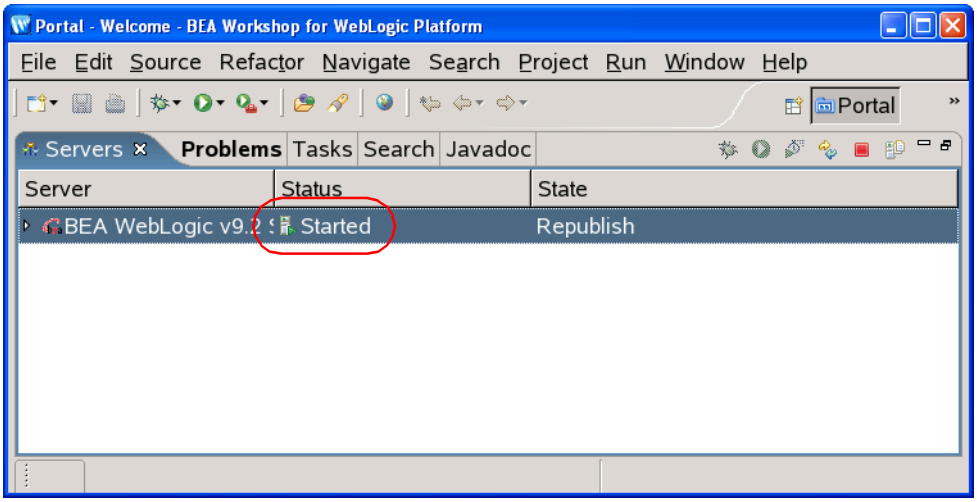
8. Disable validation of JSP syntax, XML, and XML schema. Do the following:
   a. In the **Package Explorer** pane on the left, right-click the Portal Web project and select **Properties**.
   b. In the left pane, click **Validation**.
   c. Deselect the **JSP Syntax Validator**, **XML Validator**, and **XML Schema Validator** check boxes.
   d. Click **OK**.



9. Synchronize the newly defined WebLogic server:
   a. Start the admin server using the following command (do not use Workshop to start the server):

```
<domain_home>/startWebLogic.sh
```

b. Once the admin server starts, the status of the WebLogic server you created changes to “Started”:



c. Right-click the WebLogic server and select **Publish**.

When publishing completes successfully, the state of the WebLogic server changes to “Synchronized.”

10. Your next step is one of the following:

- If you wish to integrate with the Apache or IIS web server, follow instructions in Chapter 6, “Installing and Configuring the Web Server.”
- To install Content Server, follow instructions in Chapter 7, “Installing and Configuring Content Server.”

Deploying Portal Applications

This section shows you how to deploy portal applications using WebLogic Workshop. You will perform the steps below half-way through the Content Server installation.

1. Start WebLogic Workshop by executing the following command:

   `<bea_home>/workshop92/workshop4WP/workshop4WP.sh`

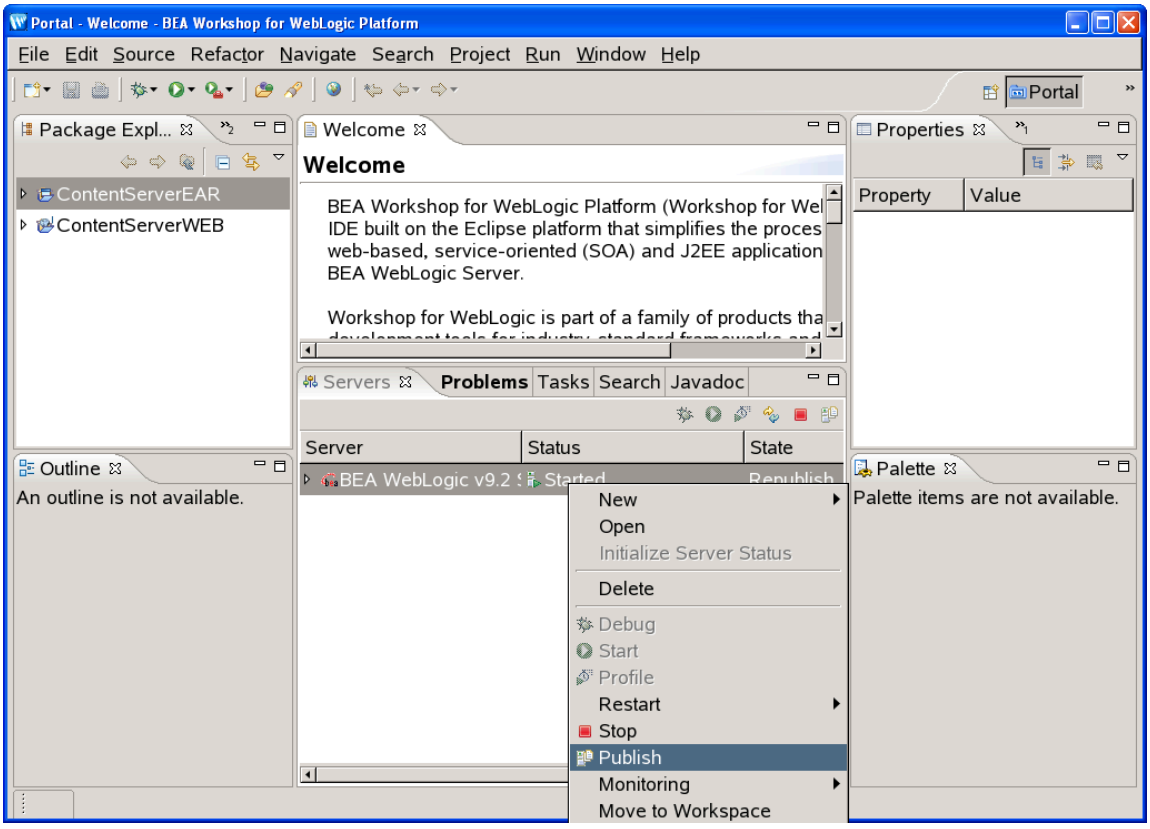
2. Start the admin server using the following command (do not start it using Workshop):

   `<domain_home>/startWebLogic.sh`

   When the admin server starts successfully, the status of the WebLogic server changes to “Started.”

3. Build (or rebuild) the portal application. In the **Package Explorer** pane on the left, right-click the portal application and select **Refresh**. When the application completes building, the status of the WebLogic server changes to “Republish.” This means that the most recent version of the portal application has not yet been deployed to the server.

4. Right-click the WebLogic server and select **Publish**.



When the state of the WebLogic server changes to “Synchronized,” the portal application has been successfully deployed.

Part 3

Web Server

This part shows you how to install and configure the Apache and IIS web servers. Both are optional components in a Content Server installation.

This part contains the following chapter:

- Chapter 6, “Installing and Configuring the Web Server”

Chapter 6

Installing and Configuring the Web Server

This chapter provides guidelines for integrating WebLogic Server with your choice of either the Apache web server or the IIS web server. Note that integrating with a web server is optional.

This chapter contains the following sections:

Installing and Configuring Apache 2.0.*x* Plug-in

This section explains how to integrate Apache 2.0.*x* with WebLogic Server using the `mod_wl_20.so` plug-in.

To install Apache

1. Install Apache 2.0.*x* HTTP server.
2. Make sure that `mod_so.c` is enabled. Run `<apache_home>/bin/apachectl -l`. If `mod_so.c` is not in the list that is printed, you must rebuild your Apache with the `-enable-module=so` option.
3. Copy the `mod_wl_20.so` file from `<bea_home>/weblogic92/server/plugin/<os_type>/<os_version>` to `<apache_home>/modules`. On Linux, it is located in the `<bea_home>/weblogic92/server/plugin/linux/i686` directory.
4. Edit the `http.conf` file which is located in the `<apache_home>/conf` directory.
   a. Add the following to the `LoadModules` section:

      ```
      LoadModule weblogic_module modules/mod_wl_20.so
      ```

   b. Before "Section 3" of the `httpd.conf` file, add the following lines:
      - For a non-clustered environment:

        ```
        <IfModule mod_weblogic.c>
          WebLogicHost <listening_address>
          WebLogicPort <listen_port>
        </IfModule>
        ```

      - For a clustered environment:

        ```
        <IfModule mod_weblogic.c>
          WebLogicCluster <listening_address1>:<listen_port1>,
           <listening_address2>:<listen_port2>
        </IfModule>
        ```

   c. After the last `Location` tag, add the following:

      ```
      <Location /servlet>
      SetHandler weblogic-handler
      </Location>
      ```

5. Verify the syntax of the `<Apache_home>/conf/httpd.conf` file with the following command:

   `<Apache_home>/bin/apachectl -t`

6. You are now ready to install Content Server. For instructions, go to Chapter 7, "Installing and Configuring Content Server."

Installing and Configuring IIS Plug-in for IIS 6.0 and Higher

You configure IIS for WebLogic by mapping two file extensions to the WebLogic application. Mapping the file extensions takes two steps:

A. Use the IIS console to map the `.jsp` and `.wlforward` extensions to the appropriate `.dll` provided by WebLogic.

B. Create a configuration file called `iisproxy.ini`, which specifies how to contact WebLogic. Creating the configuration file is a manual step that you complete outside the IIS console.

A. Create the Application Mappings and the ISAPI Filter

Complete the following steps:

1. Right-click the **My Computer** icon on your desktop and select **Manage** from the pop-up menu.
2. In the "Computer Management" window, select **Services and Applications** > **Internet Information Services**.
3. Right-click **Default Web Site** and select **Properties**.
4. In the **Default Web Site Properties** dialog box, select the **Home Directory** tab.
5. Click in the **Execute Permissions** field and select **Scripts and Executables** from the drop-down list.
6. Click **Configuration**.
7. In the **Application Configuration** dialog box, select the **App Mappings** tab.
8. In the **App Mappings** dialog box, verify that the **Cache ISAPI applications** option is selected.
9. Click **Add**.
10. In the **Add/Edit Application Extension Mapping** form, create a mapping for the `.jsp` file extension. Enter the following values:

Field	Set to This Value

Executable	Click **Browse.** Navigate to and select:
	`<bea_home>\weblogic92\server\native\win\`
	`  <os_version>iisproxy.dll`

Extension	`jsp` (not `.jsp` — do not include the period)
Verbs	**All verbs** (the default)
Script engine	Clear this option.
Check that file exists	Clear this option.

11. Click **OK**.
12. Back in the **App Mappings** dialog box, click **Add** again.

13. This time in the **Add/Edit Application Extension Mapping** dialog box, create a mapping for the `.wlforward` file extension. Enter the following values:

Item	Set It to This Value
Executable	Click **Browse.** Navigate to and select: `<bea_home>\weblogic92\server\native\win\<os_version>iisproxy.dll` **Note**: Be sure to select `iisproxy.dll`; do **not** select `iisforward.dll`
Extension	`wlforward` (not `.wlforward` — do not include the period)
Verbs	**All verbs** (the default)
Script engine	Clear this option.
Check that file exists	Clear this option.

14. Click **OK**.
15. Back in the **App Mappings** dialog box, click **Apply**; then click **OK**.

    In the **Application Configuration** window you see two new **Application Mapping** entries named `.jsp` and `.wlforward`.
16. Click **OK**.
17. In the **Default Web Site Properties** dialog box, select the **ISAPI Filters** tab.
18. Click **Add…**
19. In the **Filter Properties** form, create a filter that uses the WebLogic `iisforward.dll` file. Enter the following values:

Item	Set It to This Value
Filter Name	You can specify an arbitrary name, but we recommend: `iisforwardfilter`
Executable	Click **Browse.** Navigate to and select: `<bea_home>\weblogic92\server\native\win\<os_version>iisproxy.dll`

20. Click **OK**.
21. In the **Default Web Site Properties** dialog box, click **Apply;** then click **OK**.
22. The installed version of IIS with its initial settings does not allow the `iisproxy.dll`. Use the IIS Manager console to enable the Plug-In:
    a. Open the IIS Manager console.
    b. Select Web Service Extensions.
    c. Set “All Unknown ISAPI Extensions” to **Allowed**.

B. Create the iisproxy.ini Configuration File

1. Open a text editor and create a new file.
2. In this file, enter the following statements. Be aware that the case of each property must exactly match the case specified here:

```
WebLogicHost=<listening_address>
WebLogicPort=<managed_listen_port>
ConnectTimeoutSecs=20
ConnectRetrySecs=5
WlForwardPath=/servlet
```

> **Note**
>
> In the `WlForwardPath` property, `/servlet` corresponds to `<WebRoot>` in the installer screens for WebLogic (`/servlet` is normally the application server context).

3. Save and name the file: `iisproxy.ini`
4. Place the file in the following directory:

   `<bea_home>\weblogic92\server\bin`
5. Restart all the IIS services. If you need instructions, follow the steps below.

> **Note**
>
> You can start the various IIS services in various ways. To be sure that all the necessary services are running, start IIS from the **Services** node.

   a. Right-click the **My Computer** icon.
   b. Select **Manage** from the pop-up menu.
   c. In the **Computer Management** dialog box, expand the **Services and Applications** node in the tree.
   d. Select **Services**.
   e. In the list of services on the right, right click **IIS Admin Service**.
   f. Select **Start** from the pop-up menu.

   To start (or stop) the default web site only

   a. Right-click the **MyComputer** icon.
   b. Select **Manage** from the pop-up menu.
   c. In the **Computer Management** window, expand the **Services and Applications**. node in the tree.
   d. Expand the **Internet Information Services** node.
   e. Right-click **Default Web Site**.
   f. Select **Start** (or **Stop**, as appropriate), from the pop-up menu.
6. You are now ready to install Content Server. For instructions, got to Chapter 7, "Installing and Configuring Content Server."

Part 4

Content Server

This part shows you how to install Content Server. It contains the following chapter:

- Chapter 7, “Installing and Configuring Content Server”

Chapter 7

Installing and Configuring Content Server

This chapter provides guidelines for installing Content Server on WebLogic Server, connecting to the supported database of your choice.

This chapter contains the following sections:

Installing Content Server

After completing Steps I – IV.1 in the "Installation Quick Reference," on page 7, you install Content Server using the provided installer. The installation process consists of two stages.

In the first stage, the installer gathers necessary configuration information, installs the file structure, and deploys the CS application (unless you choose to deploy the application manually). At the end of the first stage, the installer displays an "Installation Actions" window describing the steps you must perform before proceeding to the second stage of the installation. If you chose to deploy the CS application manually, the first of these steps will be to deploy the CS application by following the instructions in "Deploying Web Applications," on page 44.

If you are using an Oracle database and require text attributes greater than 2000 characters, you must set the `cc.bigtext` property to `CLOB` after the CS application is deployed. (For instructions, see step 5 in the next section.)

If the first stage fails, the installer allows you to go back and modify your configuration options (except the database type), and retry the installation.

Note

If you need to change the type of database you have specified during the installation, you must delete the installed CS file structure and restart the installation.

In the second stage, the installer populates the database with the tables and data required for Content Server to function. If the second stage fails, the file structure and database tables must be deleted and the installation restarted from the beginning.

Running the Installer

To install Content Server

1. Make sure you have completed Steps I – IV.1 in the "Installation Quick Reference," on page 7.
2. Extract the Content Server installer archive into a temporary directory.
3. Change to the temporary directory containing the installer files.
4. Execute the installer script:
   - On Windows: **`csInstall.bat`**
   - On Unix: **`csInstall.sh`**

   The installer provides online help at each screen. Read the online help for detailed explanations of the options that are presented in each screen. If you encounter problems during the installation process, consult the online help for possible causes and solutions.
5. If you are using an Oracle database and require text attributes greater than 2000 characters, you must set the `cc.bigtext` property to `CLOB`. When the installer displays the "Installation Actions" pop-up window, complete step 1 displayed in the window, then do the following:
   a. Open the Property Editor by clicking the **Property Editor** button.

b. In the Property Editor, open the `futuretense.ini` file.

c. Click the **Database** tab.

d. Locate the `cc.bigtext` property and set its value to `CLOB`.

e. Save your changes and close the Property Editor.

f. Continue on to step 3 displayed in the "Installation Actions" window.

6. When the installation completes successfully, perform the post-installation steps in this chapter as required for your installation. Post-installation steps begin on page 79.

Post-Installation Steps

When the installation process completes successfully, perform the following steps:

A. Setting File Permissions (Unix Only)

If you installed Content Server on Unix, you must grant the "executable" permission to all files in the `<cs_install_dir>/bin` directory. To do so, perform the following steps:

1. Change to the `<cs_install_dir>/bin` directory.
2. Run the following command: **`chmod +x *`**
3. Restart the corresponding WebLogic server.

B. Verifying the Installation

In this section, you will log in to your installation in order to verify that it functions.

Logging in to the Advanced Interface

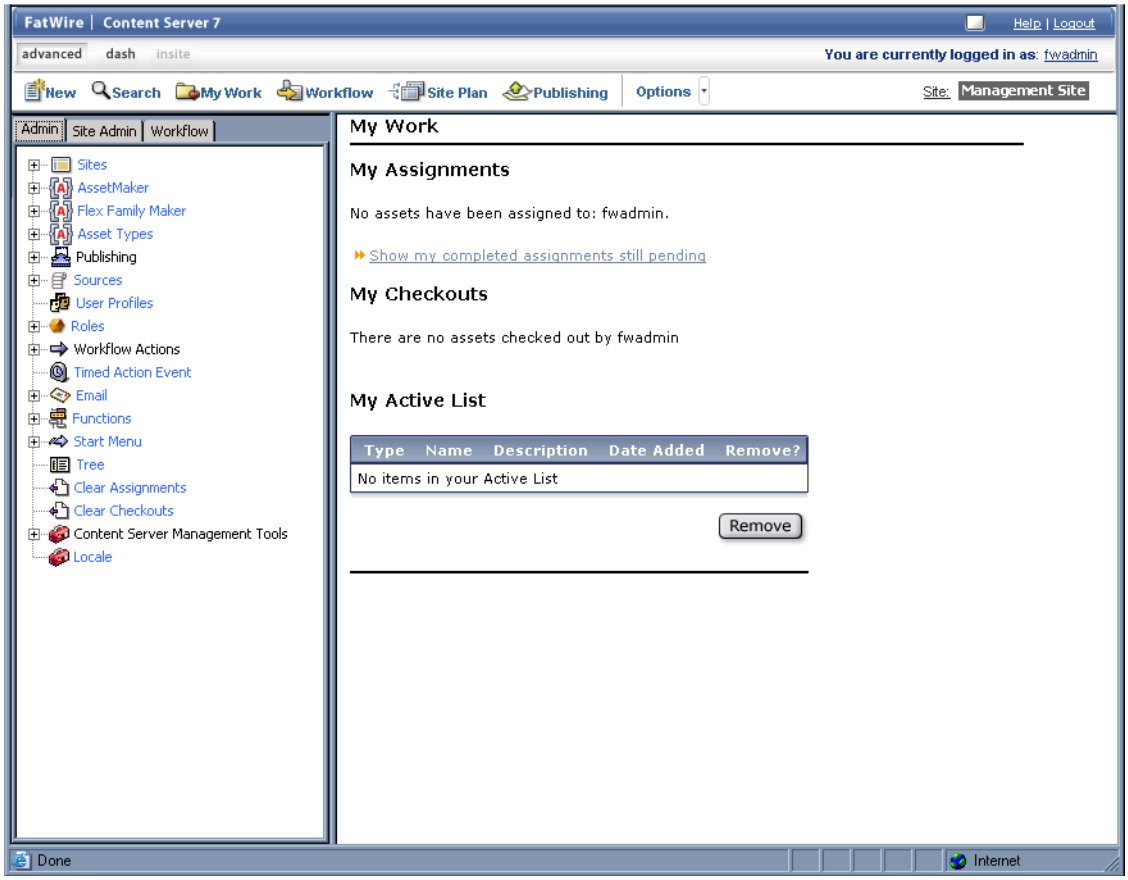
1. Point your browser to the following URL:

   `http://<hostname>:<port>/<context>/Xcelerate/LoginPage.html`

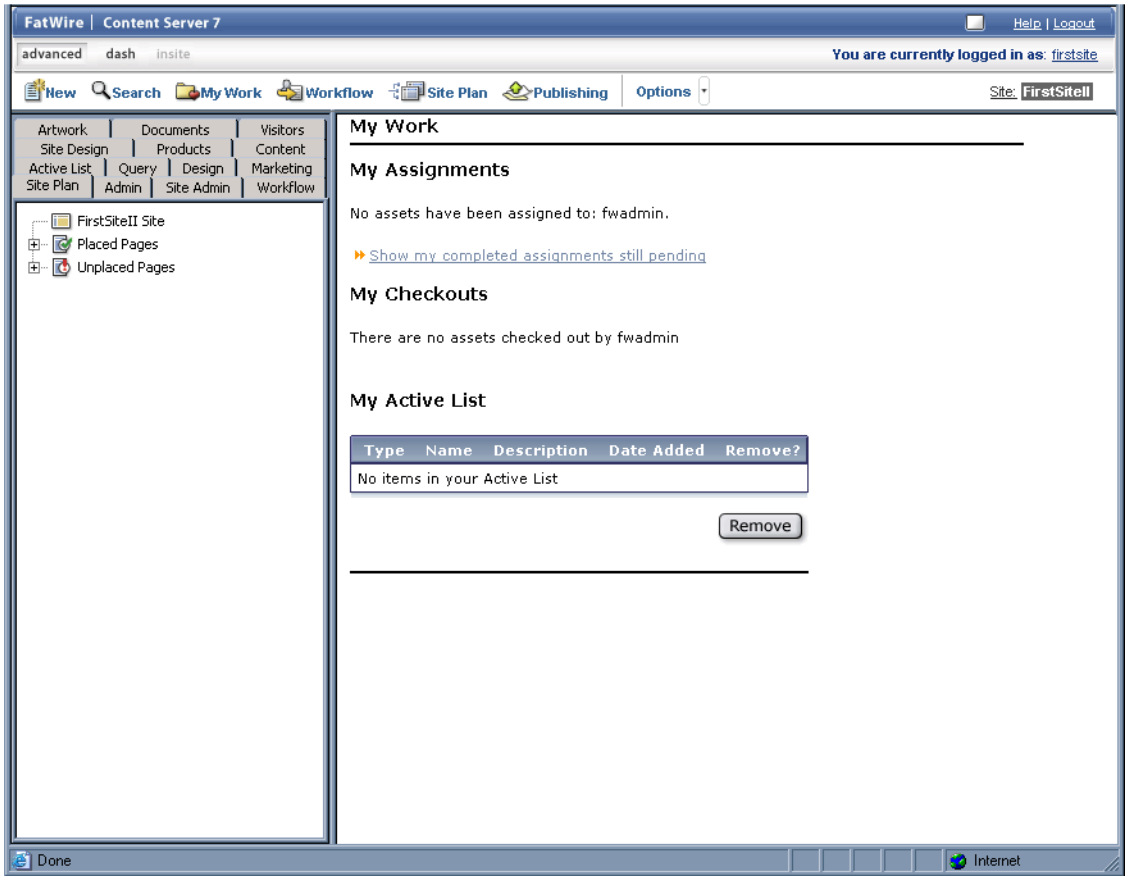
Content Server displays the Advanced interface login form.

2. Enter the following credentials:
   - User name: **fwadmin**
   - Password: **xceladmin**
3. Click **Login**.

   Depending on whether you installed sample sites, one of the following happens:
   - If you did not install any sample sites, you are logged in to the built in Content Server management site. Only system administration functionality is available.



- If you installed one sample site, you are logged in to that site.



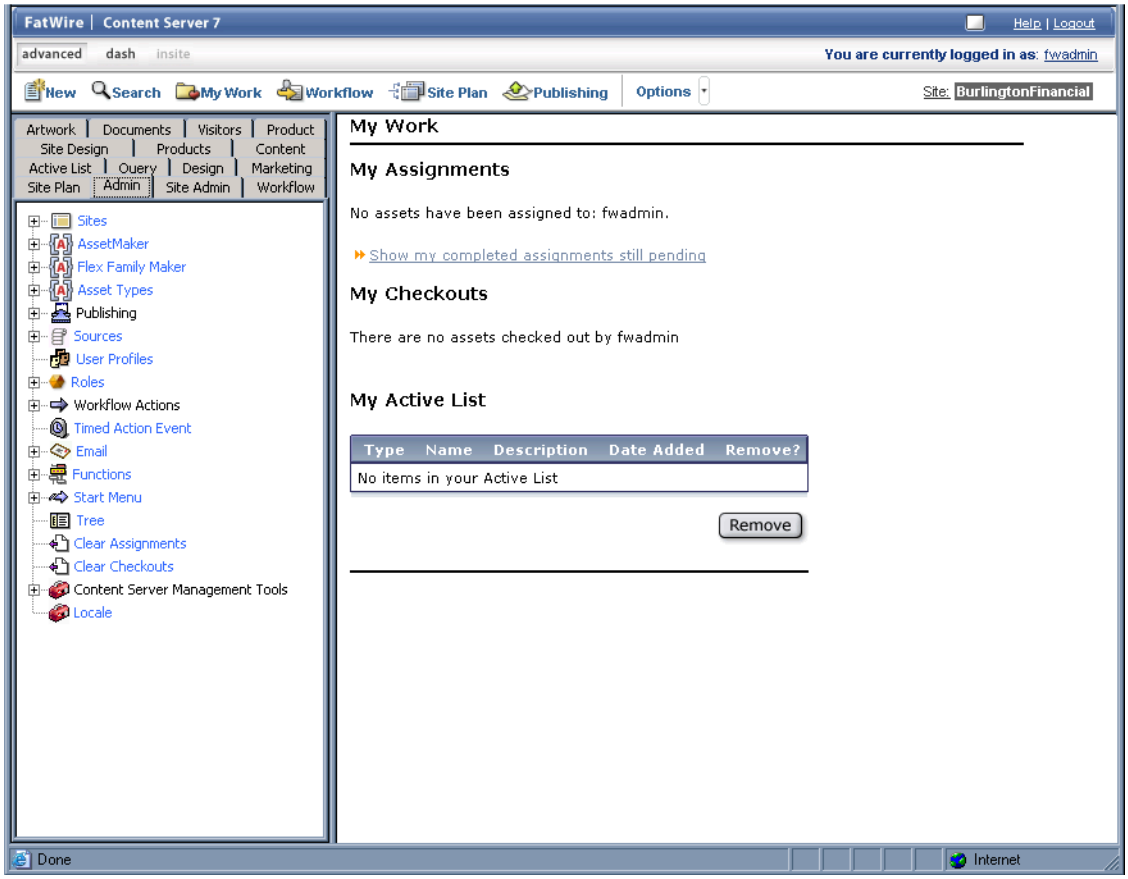
- If you installed more than one sample site, Content Server displays the "Select Site" screen. In such case, select the sample site you wish to log in to.

You have logged in as fwadmin
Select a site that you want to work on:

Site	Description	Assigned Role
BurlingtonFinancial	Burlington Financial	GeneralAdmin, ArtworkEditor, Approver, ContentEditor, WorkflowAdmin, Analyst, Pricer, Marketer, SiteAdmin, Checker, MarketingAuthor, MarketingEditor, Author, Editor, ContentAuthor, Expert, ProductAuthor, ProductEditor, DocumentAuthor, DocumentEditor, Designer, ArtworkAuthor
FirstSiteII	FirstSite Mark II	ArtworkEditor, GeneralAdmin, Approver, ContentEditor, WorkflowAdmin, Analyst, Pricer, Marketer, SiteAdmin, Checker, MarketingAuthor, MarketingEditor, Author, Editor, ContentAuthor, Expert, ProductAuthor, ProductEditor, DocumentAuthor, ArtworkAuthor, Designer, DocumentEditor
GE Lighting	GE Lighting	Designer, SiteAdmin, WorkflowAdmin, GeneralAdmin

[Log in again]

When you select a site, you are logged in to that site.



Logging in to the Dashboard Interface

1. Point your browser to the following URL:

   `http://<hostname>:<port>/<context>`

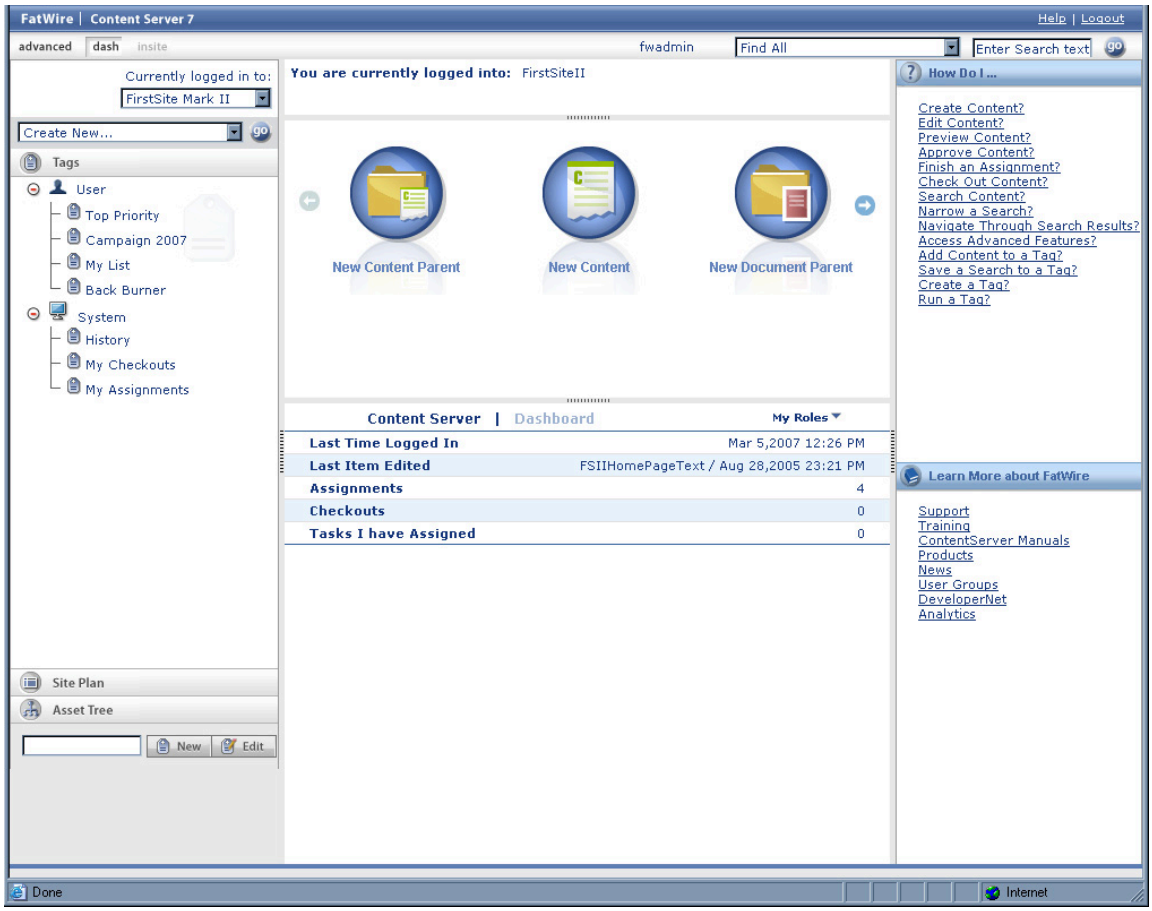
   Content Server displays the Dashboard interface login page.

2. Enter the following credentials:
   - User name: **fwadmin**
   - Password: **xceladmin**

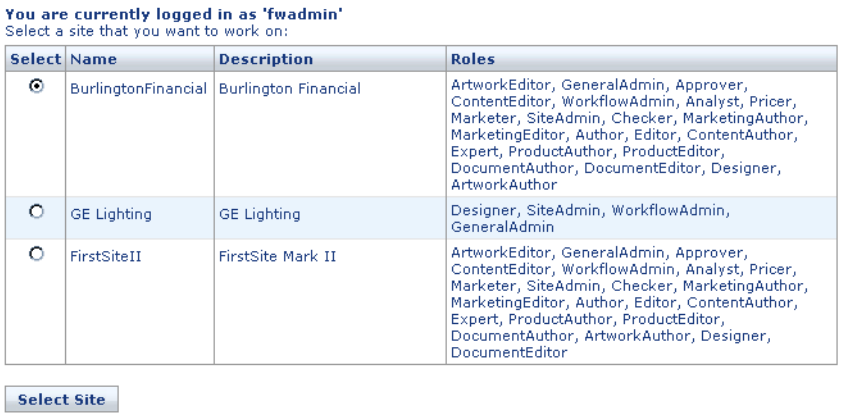
3. Click **Login**.

   Depending on whether you installed sample sites, one of the following happens:

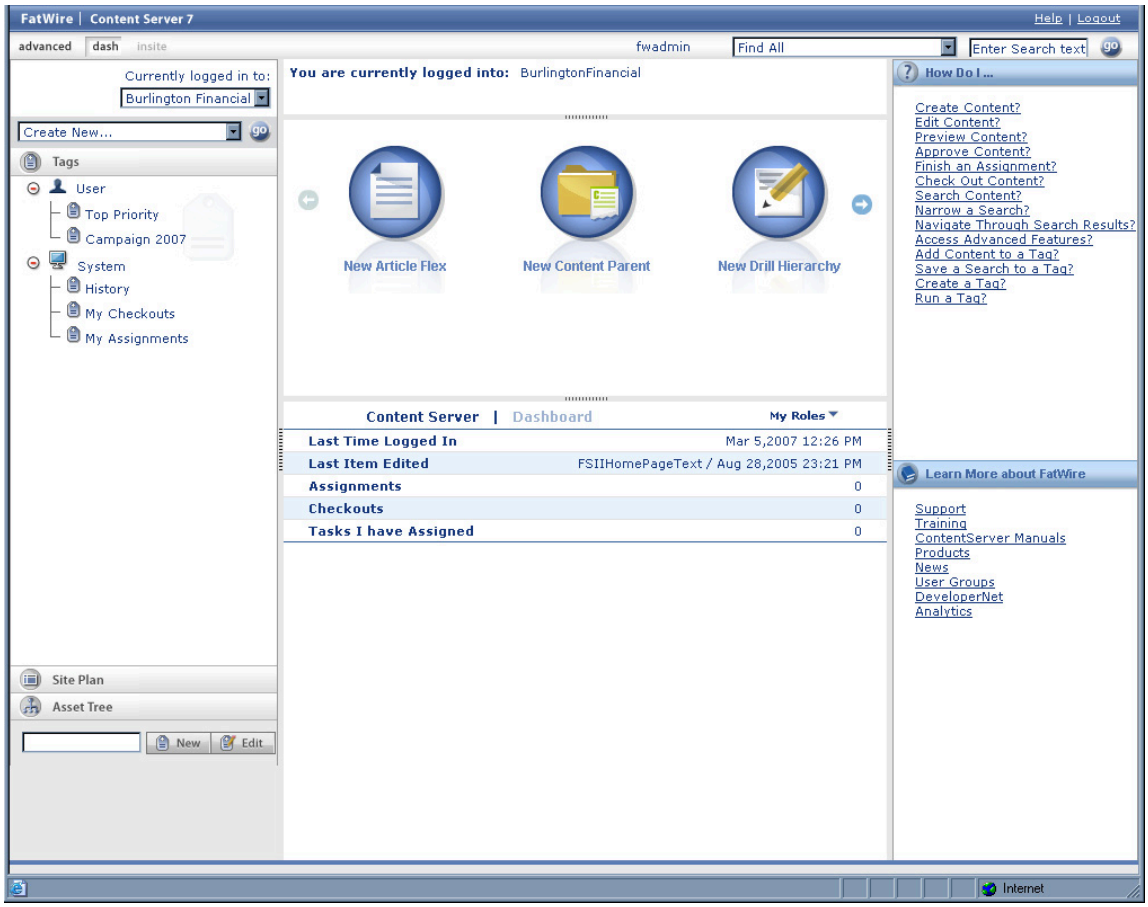
   - If you did not install any sample sites, Content Server displays a message notifying you of that fact. You will not be able to log in to the Dashboard interface until at least one site exists on your system.
   - If you installed one sample site, you are logged in to that site.



   - If you installed more than one sample site, Content Server displays the "Select Site" screen. In such case, select the sample site you wish to log in to.



When you select a site, you are logged in to that site.



Content Server is now ready for configuration. Follow the steps in the rest of this chapter.

C. Switching WebLogic to Production Mode (Delivery Systems Only)

If you created a delivery system, switch WebLogic to production mode:

1. Log in to the WebLogic Administration Console.
2. Click the domain name in the tree.
3. Click the **General** tab.
4. Click **Lock & Edit**.
5. Select the check box next to **Production Mode**.
6. Click **Save**.
7. Click **Accept Changes**.
8. Restart all servers.

Note

If you need to turn off production mode, set the environment for `weblogic.deployer` as shown in the previous section "Set Up the Environment for weblogic.Deployer," on page 44 (assuming you open a new window), then run the following command:

```
java weblogic.Admin -url :<admin_listen_port>/" href="http:/
   /:<admin_listen_port>"http://
   <listening_address>:<admin_listen_port>
   -username weblogic -password demo4132 SET -type Domain
   -property ProductionModeEnabled false
```

9. After restarting all servers you may see the following error:

```
<BEA-090782><Server is Running in Production Mode and Native
Library(terminalio) to read the password securely from
commandline is not found.>
```

If you receive this error, do the following:

a. Modify your WebLogic start scripts. The scripts are:

- `<domain_home>/bin/startWebLogic.sh`
- `<domain_name>/bin/startManagedWebLogic.sh`

(If using Windows, the files will have `.bat` extensions instead of `.sh`.)

Add the following (as a single line) to each script:

```
JAVA_OPTIONS="${JAVA_OPTIONS}
    -Dweblogic.manangement.allowPasswordEcho=true"
```

b. Restart all servers.

D. Setting Up the Portal (Portal Installations Only)

For portal installations, you must create and populate a WebLogic portal using WebLogic Workshop.

Creating the Portal

1. Start WebLogic Workshop by executing the following command:

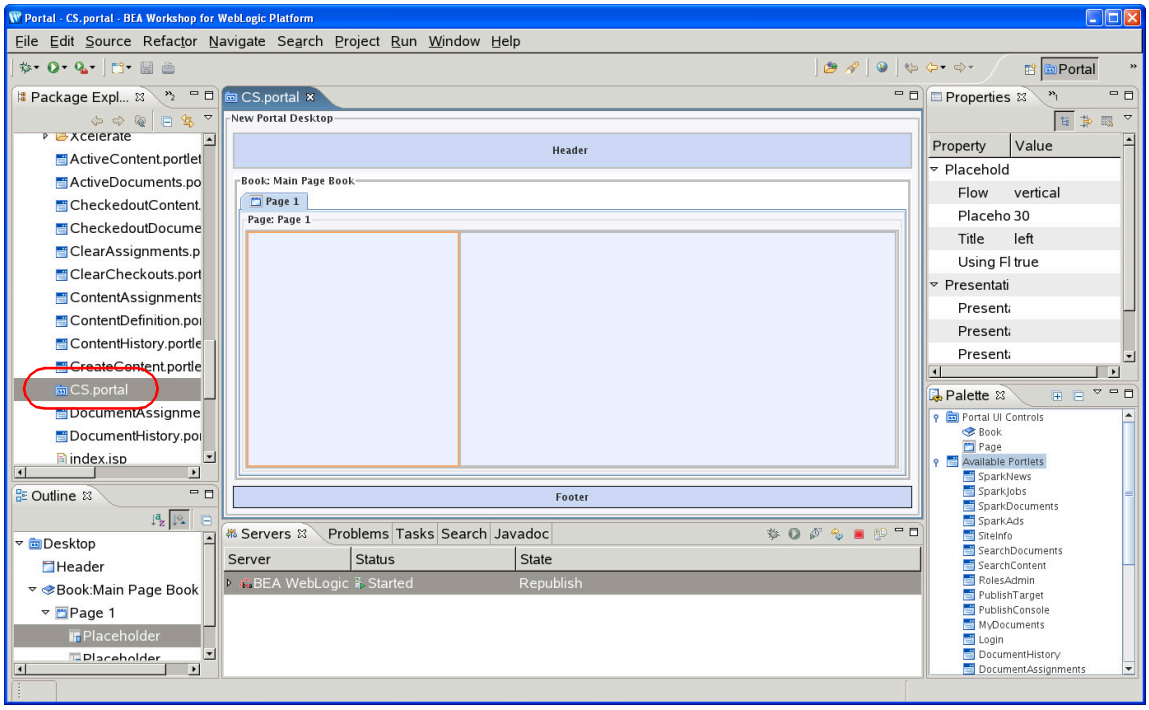
   `<bea_home>/weblogic92/workshop4WP/workshop4WP.sh`

2. In the **File** menu, select **New**, then **Portal**.
3. In the "New Portal" screen, expand the Portal Web project you created for your portal and select the content directory, `<content_dir>`, which you specified in step f on page 61 when you created the project.
4. In the **File name:** field, enter a file name for the project. The file name must either have a `.portal` extension, or no extension at all.
5. Click **Finish** and proceed to the next section to populate the portal with pages and Content Server portlets.

Populating the Portal

1. Copy the login portlet files to the web application. Do the following:
   - **On Unix,** decompress the file `<cs_install_dir>/bin/loginportlet.zip` to the `<content_dir>` directory of the WebLogic Workshop Portal project you created in the previous section.
   - **On Windows**, do the following:
     1) Decompress the file `<cs_install_dir>\bin\loginportlet.zip` into a temporary directory and change to that directory.
     2) Copy the `Login.portlet` file to the `<content_dir>` directory of the WebLogic Workshop Portal project you created in the previous section.
     3) (Optional) If you did not install Spark sample portlets, do the following:
        a. Create the directory, `<content_dir>\SparkSample`
        b. Copy the file, `SparkSample\login.jsp` from the temporary directory to `<content_dir>\SparkSample`
        c. Copy the file, `WEB-INF\lib\bealoginportlet.jar` from the temporary directory to `<content_dir>\WEB-INF\lib`
2. Publish the changes to the affected WebLogic server.

3. In the **Package Explorer** pane at the left, expand the Portal Web project you created in "Creating and Configuring a WebLogic Portal Application," on page 56, then expand the content directory, `<content_dir>`, which you specified in step f on page 61.



4. Add pages to the portal. (You will name them in the next step.) Do the following:
   a. In the **Outline** pane in the lower left, expand **Desktop**.
   b. Right-click **Book:Main Page Book**. select **Insert**, and click **New Page**. Repeat this step for each page listed in the following table:

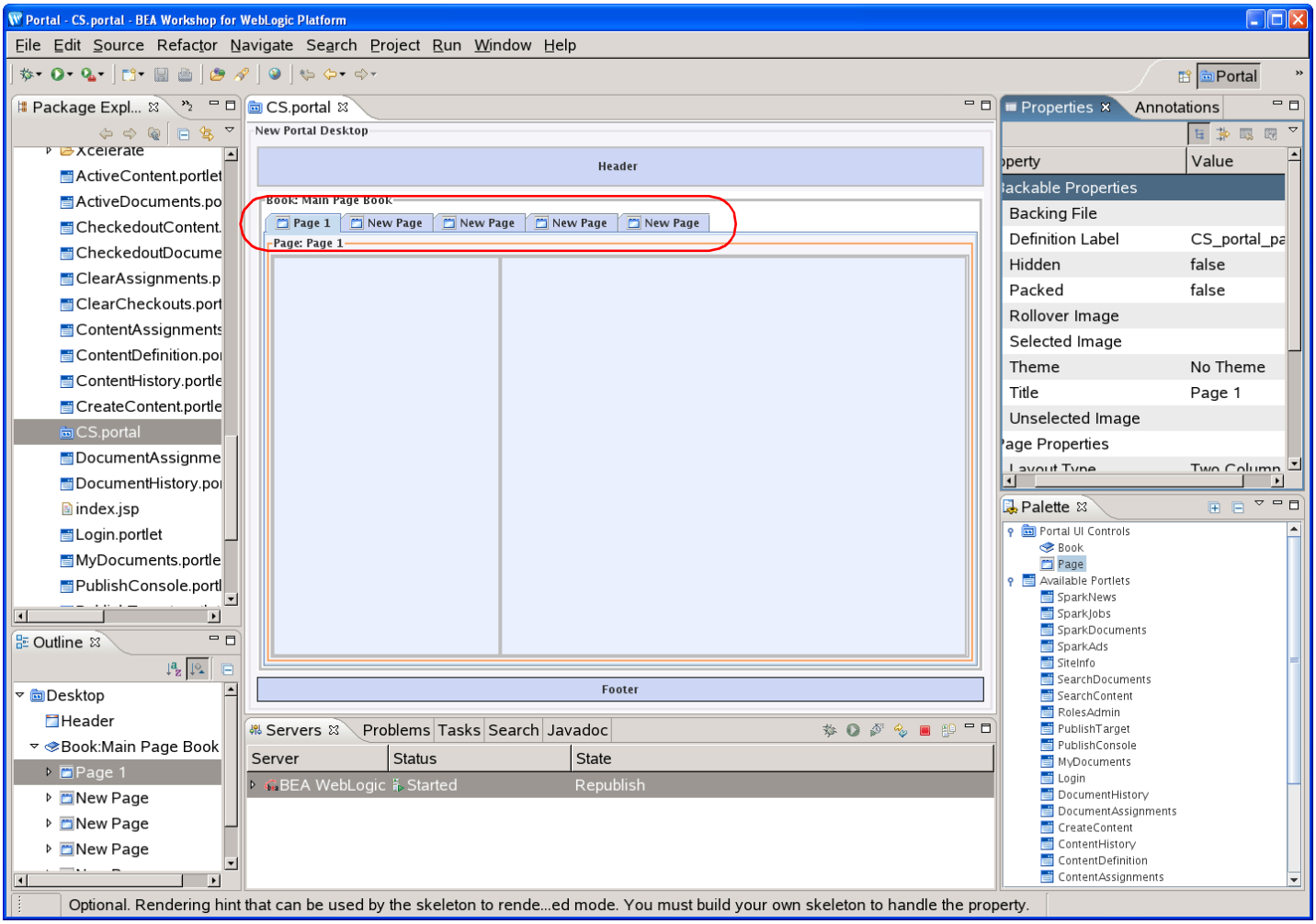
Table 1: Portlets and their functions

Name	Purpose
Portal Login	Allows users to log in to the portal. Used by all systems (development, content management, and delivery).
CS Content	Displays portlets used to manage structured content. Create this page on development and content management systems, but not on delivery systems.
CS Documents	Displays portlets used to manage document-based content. Create this page on development and content management systems, but not on delivery systems.
Spark Display (optional)	Create this page if you installed the Spark sample site and want to display its content in the portal.

Table 1: Portlets and their functions *(continued)*

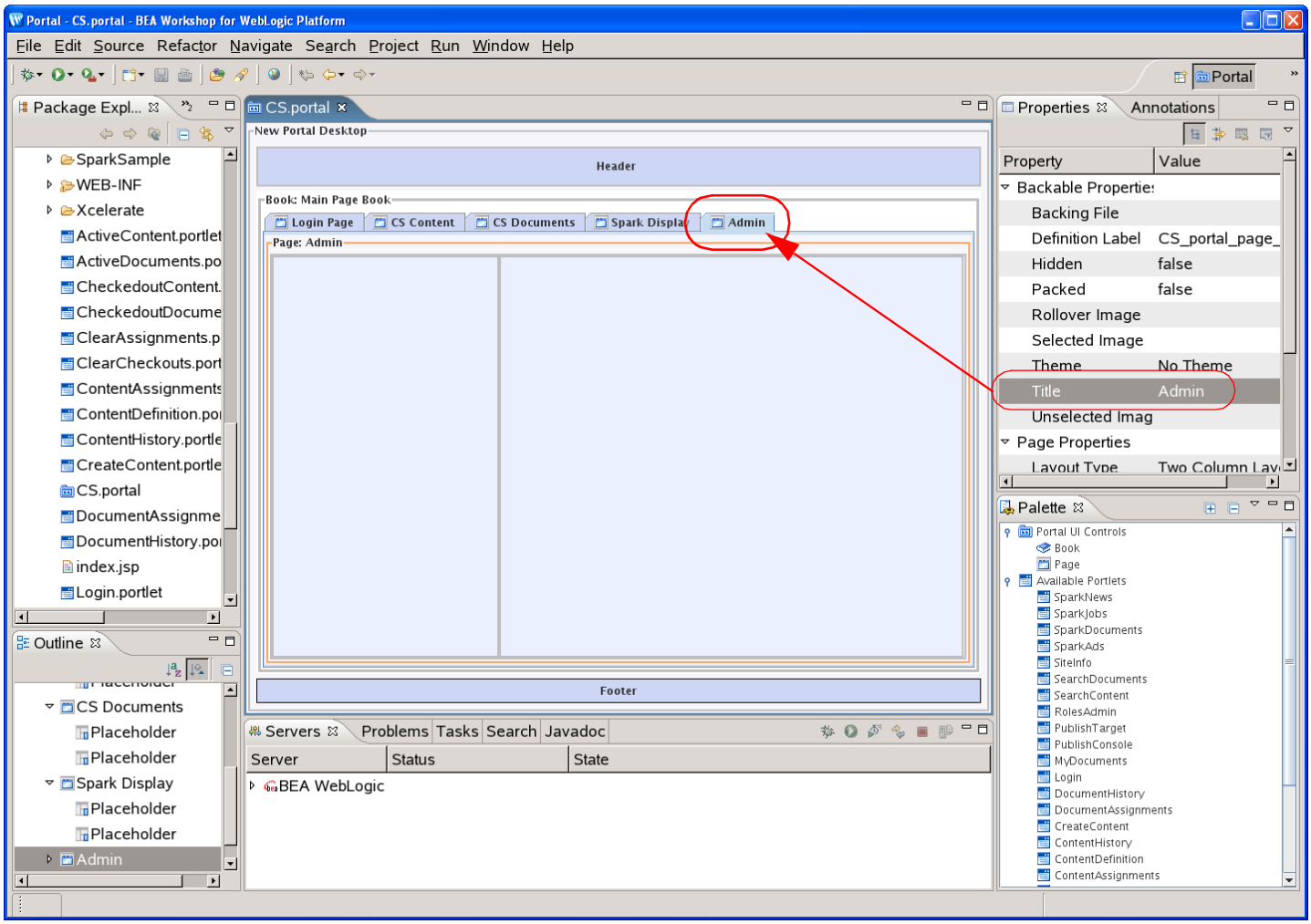
Name	Purpose
Admin (optional)	Create this page if you installed the Spark sample site and wish to use its administrative portlets to manage the users working in the Spark sample site on your development and content management systems. You can not use the Spark administrative portlets to manage users working in sites other than the Spark sample site; in such cases, do not create this page.

When you are finished, the pages will appear in the center pane, as follows:



5. Name the pages you created in step 4. Do the following for each page:
   a. Select the tab belonging to the page you want to name.
   b. Enter a name for the page in the **Title** field in the **Properties** pane at the right.
   c. If the **Properties** pane does not display the properties of the page you selected, double-click the page in the **Outline** pane in the lower left.

When you are finished, the names you assigned to the pages will be displayed in the corresponding tabs in the center pane, as follows:

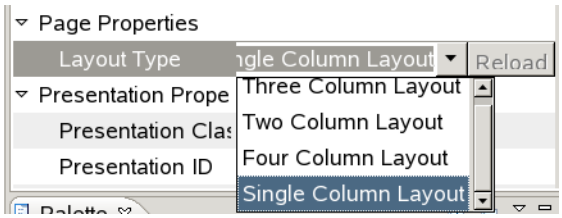


6. (Optional) If you want to change the layout of a page (the default is a two-column layout), do the following:

   a. In the **Outline** pane in the lower left, double-click the page whose layout you want to change.

   b. In the **Properties** pane at the top right, expand **Page Properties**.

   c. In the **Layout Type** field, select the desired layout.



   d. Select another property within the **Properties** pane to apply the new layout to the page.

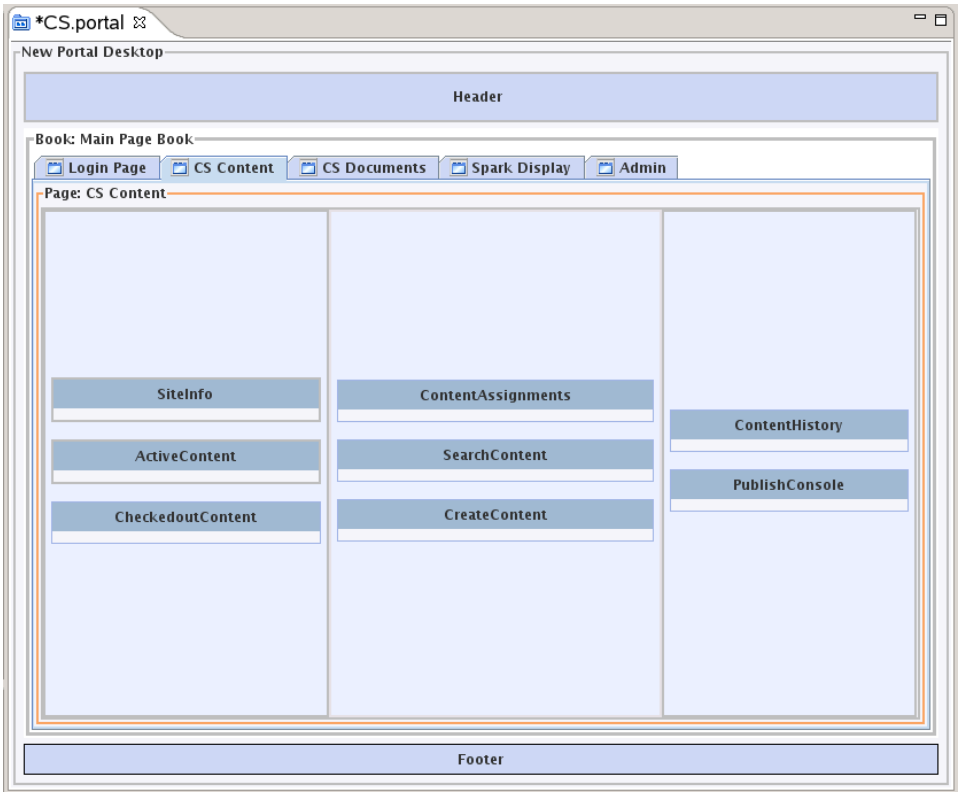
7. Populate each page with the appropriate CS portlets, according to the table below. Do the following:

   a. Select the tab corresponding to the page you want to populate.

   b. Drag the portlets from the **Palette** pane in the lower right to the corresponding page, as described in the following table (the portlets are displayed under **Available Portlets**):

Page	Portlets to Add to Page
Portal Login	Login
CS Content	SiteInfo, ActiveContent, CheckedoutContent, ContentAssignments, SearchContent, CreateContent, ContentHistory
CS Documents	SiteInfo, ActiveDocuments, CheckedoutDocuments, DocumentAssignments, SearchDocuments, DocumentHistory, MyDocuments
Spark Display (if created)	SiteInfo, SparkAds, SparkDocuments, SparkJobs, SparkNews
Admin (if created)	RolesAdmin, ClearCheckouts, ContentDefinition, ClearAssignments, PublishTarget

For example, when you are finished populating the “CS Content” page, it will look similar to the following:



8. Save your changes. In the **File** menu, click **Save**.
9. Publish the changes to the WebLogic server. Do the following:
   a. Rebuild the portal application to include your changes. In the **Package Explorer** pane in the upper left, navigate to the Portal Web project you created for your portal, right-click on the project, and select **Refresh**.

      When the application is successfully rebuilt, the status of the WebLogic server changes to "Republish." This means that the most recent version of the portal application has not yet been deployed to the server.
   b. Redeploy the portal application. Right-click the WebLogic server and select **Publish**.

      When the state of the WebLogic server changes to "Synchronized," the portal application has been successfully redeployed to include your changes.

E. Integrating with LDAP (Required for Portal Installations)

LDAP integration is mandatory for portal installations, and optional for web installations. If you need to perform LDAP integration, you must do the following:

1. Set up a supported LDAP server of your choice. For instructions, see *Configuring Third-Party Software*.
2. Run the LDAP integration program included on the Content Server CD.

For more information, see the *LDAP Integration Guide*.

F. Setting Up a Content Server Cluster (Optional)

If you plan to install Content Server in a vertical cluster, complete the following steps:

Before starting the steps in this section, make sure of the following:

- You have a full Content Server installation on a managed server.
- You are installing a vertical cluster (WebLogic managed servers are installed on the same machine).

1. Adding a Managed Server

If you do not have a managed server in addition to the managed server that was used in the previous section, you must create one for each of the remaining cluster members. Otherwise, skip to the next step, "2. Creating Additional Cluster Members."

To add a managed server

1. Log into the "WebLogic Administration Console."
2. Expand **Environment.**
3. Click **Servers.**
4. Click **Lock & Edit.**
5. Click **New.**

6. Enter a name for the new managed server. Enter the listening address, which is the same as the admin server. Enter the listening port, a port different from the admin server and other managed servers. Select **No, this is a stand-alone server**, and click **Next.**
7. Click **Finish.**
8. Click **Accept Changes.**
9. Click **Servers**.
10. Click on the managed server you just created.
11. On the **Configuration** tab, click General.
12. Click **Lock & Edit**.
13. From the **Machine** drop-down menu, select the node manager that was created during the domain configuration.
14. Click **Save**.
15. Click **Activate Changes**.
16. Start the new managed server.
17. Repeat this procedure for each additional managed server.

2. Creating Additional Cluster Members

1. After adding the managed server(s), create the cluster members. Repeat the steps in "Installing Content Server," on page 78. When this has been done, you should have at least a primary cluster member and a secondary cluster member.
2. The managed servers now need to be placed in a cluster. For instructions, continue with the next section.

3. Creating and Configuring a Cluster

If you did not create and configure a cluster when creating the domain, you will need to do so now. In this section, you will place the managed servers (hosting Content Server) into the cluster.

To create and configure a cluster

1. Create a cluster:
   a. Log in to the administration console.
   b. Expand **Environment**.
   c. Click **Clusters**.
   d. Click **Lock & Edit**.
   e. Click **New**.
   f. Enter a name for the cluster. Leave the default multicast address. Enter the Admin Port for **Multicast port**. Click **OK**.
   g. Click **Activate Changes**.
2. Add servers to the cluster:
   a. While logged in to the administration console, click **Servers**.
   b. For each managed server that will be a cluster member:

1) Click on the server name.
2) Click **Lock & Edit**.
3) On the **Configuration** tab, select the cluster created previously in this section for the **Cluster** drop-down menu.
4) Click **Save**.
5) Click **Activate Changes**.

3. Configure file locking and cluster parameters:
   a. Stop the applications running on the cluster members.
   b. Create a `sync` directory under `<shared_dir>`.
   c. For each application on a cluster member:

      Edit the `<cs_install_dir>/futuretense.ini` file. Set `ft.sync` to a value that is the same for all cluster members. Set `ft.usedisksync` to the path of the created `sync` directory.
4. Copy all the files from `<cs_install_dir>/bin` to `<bea_home>/weblogic92/server/native/<os_type>/<os_version>` (the files include the Keyview files).
5. For example, on Linux, copy the files to: `<bea_home>/weblogic92/server/native/linux/i686/`

Note

On Linux: Add the destination path to the PATH statement. To do so, edit the two scripts `<domain_home>/bin/startWebLogic.sh` and `<bea_home>/weblogic92/server/bin/startNodeManager.sh` by adding the following lines after the first comment block:

```
LD_LIBRARY_PATH="$LD_LIBRARY_PATH:/u01/software/Apps/
   WebLogic9.2/weblogic92/server/native/linux/i686"
PATH="$LD_LIBRARY_PATH:$PATH"
export LD_LIBRARY_PATH
export PATH
```

6. Start the applications on the cluster members. For login information, see step on page 79.

G. Setting Up Content Server for Its Business Purpose

Once you have completed your Content Server installation, you are ready to configure it for business use. For instructions, see the *Content Server Administrator's Guide* and the *Content Server Developer's Guide*. The guides explain how to create and enable a content management environment including the data model, content management sites, site users, publishing functions, and client interfaces.