BEAProducts

Creating WebLogic Domains Using the Configuration Wizard

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Introduction

This section provides an overview of domain configuration using the Configuration Wizard.

Topics include:

- Introduction to Domains

- Overview of the Configuration Wizard

- About Domain and Extension Templates

- Creating a New Domain Using the Configuration Wizard

- Extending a Domain Using the Configuration Wizard

- Additional Tools for Creating, Extending, and Managing Domains

Introduction to Domains

Note: This section provides a brief introduction to domains. You can skip this section if you are familiar with the primary features of a domain.

A *domain* is the basic administration unit of WebLogic Server. It consists of one or more WebLogic Server instances, and logically related resources and services that are managed, collectively, as one unit.

Figure 1-1 WebLogic Domain Structure
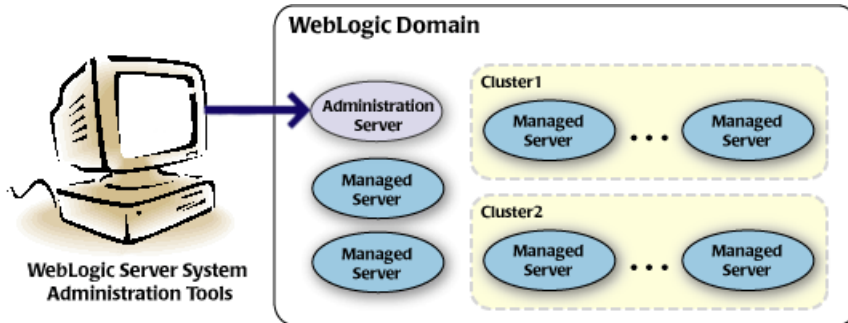
As shown in Figure 1-1, the basic domain infrastructure consists of one Administration Server and optional Managed Servers and clusters. These components are described in the following table.

Table 1-1 Domain Infrastructure Components

Feature	Description
Administration Server	A domain includes one WebLogic Server instance that is configured as an *Administration Server*. The Administration Server provides a central point for managing the domain and providing access to the WebLogic Server administration tools. These tools include, but are not limited to, the following: • WebLogic Server Administration Console—Graphical user interface to the Administration Server • WebLogic Server Node Manager—Java program that enables you to start and stop server instances—both Administration Servers and Managed Servers—remotely, and to monitor and automatically restart them after an unexpected failure. For more information about the WebLogic Server administration tools, see Summary of System Administration Tools and APIs in *Introduction to WebLogic Server and WebLogic Express.*

Table 1-1 Domain Infrastructure Components (Continued)

Feature	Description
Managed Servers	All other WebLogic Server instances in a domain are called *Managed Servers*. Managed Servers host application components and resources, which are also deployed and managed as part of the domain. In a domain with only a single WebLogic Server instance, that one server functions as both the Administration Server and Managed Server.
Clusters	A domain may also include WebLogic Server *clusters*, which are groups of server instances that work together to provide scalability and high availability for applications. Clusters can improve performance and provide failover should a server instance become unavailable. The servers within a cluster can run on the same machine, or they can reside on different machines. To the client, a cluster appears as a single WebLogic Server instance.

Note: All Managed Servers in a domain must run the same version of the WebLogic Server software. The Administration Server may run either the same version as the Managed Servers in the domain, or a later service pack.

In addition to infrastructure components, a domain defines the basic network configuration for the server instances it contains. Specifically, a domain defines application deployments, supported application services (such as database and messaging services), security options, and physical host machines.

Domain configuration information is stored in the configuration directories under the domain directory.

Common Domain Configurations

You may find it useful to configure multiple domains based on specific criteria, such as system administrator responsibilities, the logical classification of applications, the geographical locations of servers, or size. The following table outlines the most common domain configurations.

Table 1-2 Common Domain Configurations

Configuration	Description
Domain with Managed Servers	In typical production environments, several Managed Servers can host applications, and an Administration Server performs management operations.
Domain with Managed Servers and Clusters	In production environments that require increased performance, throughput, or availability for an application, several Managed Servers might be grouped in a cluster. In such a case, the domain consists of one or more clusters with the applications they host, additional Managed Servers, if necessary, and an Administration Server to perform management operations.
Stand-alone Server Domain	In development or test environments, a single application and server might be deployed independently without Managed Servers. In such a case, you can have a domain consisting of a single Administration Server that also hosts the applications you want to test or develop.

Note: In production environments, BEA recommends that you deploy applications only on Managed Servers; the Administration Server should be reserved for management tasks.

For more information about WebLogic Server domains, see "Understanding WebLogic Server Domains" in *Understanding Domain Configuration* at the following URL:

`http://e-docs.bea.com/wls/docs100/domain_config/understand_domains.html`

Overview of the Configuration Wizard

Before you can develop and run a WebLogic-based application, you must first create a domain, the basic administration unit for WebLogic Server. The Configuration Wizard, illustrated in Figure 1-2, simplifies the process of creating or extending a domain. To create or extend a domain using the Configuration Wizard, you simply select the product components you want to include in your domain (or choose a template that best meets your requirements), and provide some basic configuration information. The Configuration Wizard then creates or extends the domain using the settings from the templates that contain the component functionality that you specified.

Figure 1-2 Configuration Wizard
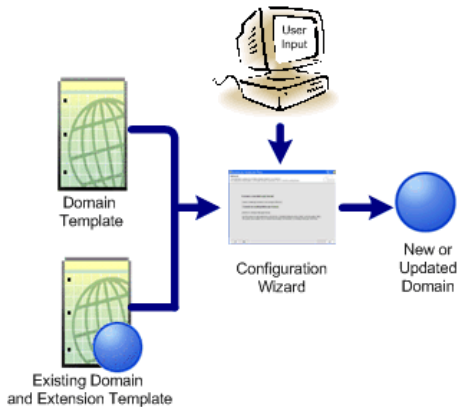
After creating a domain using the Configuration Wizard, you can start a WebLogic Server instance to run in the domain for application development, testing, or production use.

To simplify the process of creating templates, BEA provides the Domain Template Builder, which guides you through the process of creating custom domain and extension templates. These templates can be used later for creating and extending domains using the Configuration Wizard and WLST off-line. For information about the Domain Template Builder, see *Creating Templates Using the Domain Template Builder* at the following URL:

http://e-docs.bea.com/common/docs102/tempbuild/index.html

Note: For more information about WLST off-line, see the section Creating and Configuring WebLogic Domains Using WLST Off-line in *WebLogic Scripting Tool*. at the following URL:

http://e-docs.bea.com/wls/docs100/config_scripting/domains.html

Modes of Operation

The Configuration Wizard can be used off-line only, that is, when there is no server running. It supports the following modes of operation:

- Graphical mode—an interactive, GUI-based method

- Console mode—an interactive, text-based method

Note: For a scripted, silent-mode method, BEA recommends that you use the BEA WebLogic Scripting Tool. For more information, see *WebLogic Scripting Tool* at the following URL:

http://e-docs.bea.com/wls/docs100/config_scripting/index.html

Configuration Wizard Output

A domain created using the Configuration Wizard has the following directories:

- autodeploy—provides a location from which you can quickly deploy applications on a development server. When the WebLogic Server instance is running in development mode, it automatically deploys any applications or modules that you place in this directory.

- bin—contains scripts used to start and stop the Administration Server, and optionally Managed Servers.

- config—contains the following:

  – A domain-specific configuration file, config.xml, that specifies the name of the domain and the configuration parameter settings for each server instance, cluster, resource, and service in the domain.

  – Subdirectories that contain the configuration for various system modules, such as deployments, diagnostics, jdbc, jms, lib, nodemanager, and security. These subdirectories contain configuration files that are incorporated, by reference, into the central config.xml file.

    Note: Depending on your configuration, all subdirectories may not be present.

- console-ext—contains console extensions used by the Administration Server.

- init-info—contains files used by the Configuration Wizard in support of creating and extending the domain.

- lib—contains the domain library. Any jar files that you place in this directory are added, dynamically, to the end of the server classpath at server start-up.

- security—contains common security files for all servers in the domain.

- servers—contains a subdirectory for each server in the domain. These server subdirectories, in turn, contain subdirectories that hold directories and files that must be different for each server in a domain, such as bin, cache, data, logs, security, and tmp.

- `user_staged_config`—provides an alternative to the `config` directory if the domain is configured so that the configuration information is user-staged. That is, the administrator is responsible for staging (copying) the configuration information to the Managed Servers.

If the template used to create a domain included applications, the application files are located in the following directory by default:

`user_projects/applications/`*`domain_name`*

For a detailed description of the WebLogic domain directory structure, see the section Domain Configuration Files in *Understanding Domain Configuration* at the URL:

http://e-docs.bea.com/wls/docs100/domain_config/config_files.html

About Domain and Extension Templates

When using the Configuration Wizard, the term *template* refers to a Java Archive (JAR) file that contains the files and scripts required to create or extend a domain. The types of templates that can be used by the Configuration Wizard to create or extend domains include:

- *Domain template*—defines the full set of resources within a domain, including infrastructure components, applications, services, security options, and general environment and operating system options. This type of template can be created from an existing domain using the Domain Template Builder or the `pack` command, and can be used subsequently by the Configuration Wizard to create a new domain.

    As part of your product distribution, BEA provides a Base WebLogic Server domain template. This template defines the core set of resources within a domain, including an Administration Server and basic configuration information, infrastructure components, and general environment and operating system options. It does not include sample applications. You use this template to create a basic WebLogic Server domain that you can then extend with applications and services, or additional product component functionality.

- *Extension template*—defines applications and services that can provide additional product component functionality, such as Apache Beehive, product sample applications, or JDBC or JMS components. This type of template can be used to update an existing domain.

- *Managed Server template* – defines the subset of resources within a domain that are required to create a Managed Server domain on a remote machine. This type of template can be created using the `pack` command.

BEA delivers a set of predefined domain and extension templates with your product installation. This set of templates includes the base WebLogic Server domain template, and various extension templates that allow you to add product component functionality and samples to the base domain.

For a detailed description of these templates and how they relate to each other, see *Domain Template Reference* at the following URL:

http://e-docs.bea.com/common/docs102/tempref/index.html

Creating a New Domain Using the Configuration Wizard

The Configuration Wizard guides you through the process of creating a domain for your target environment by selecting the product components you want to include in your domain, or by using domain templates. If desired, you can also customize the domain to more closely match your particular environment by adding and configuring Managed Servers, clusters, and machine definitions, or customizing predefined JDBC data sources, and JMS file store directories. You may want to customize your domain in the following circumstances:

- To create a multi-server or clustered domain when using the default settings. (All the predefined templates delivered with the product create single-server domains.)

- To use a database that is different from the default database in the domain or extension template. In this case, you need to customize the JDBC settings to point to the appropriate database.

- To customize the listen port, and the SSL port

- To create a test environment using a domain template that you received, and to modify the domain configuration to work in the test environment based on your requirement.

Figure 1-3 illustrates the steps necessary to create a new domain using the Configuration Wizard.

Figure 1-3 Roadmap for Creating a New Domain
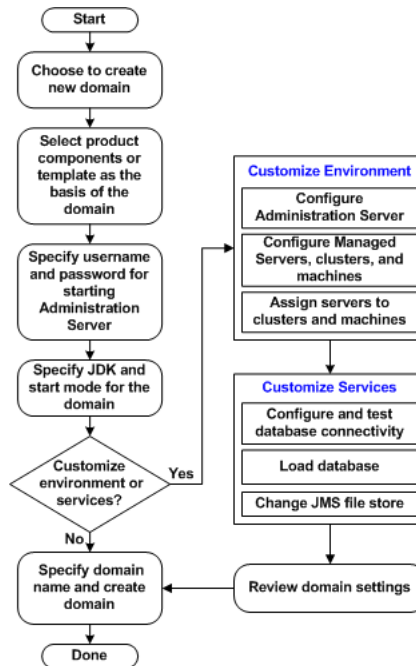
Extending a Domain Using the Configuration Wizard

You can extend an existing domain by adding predefined applications and services, or additional product component functionality. For example, if you created a base WebLogic Server domain and want to add WebLogic Portal, you can extend the domain using the WebLogic Portal extension.

To extend a domain using the Configuration Wizard, select the directory of the domain that you want to extend and then select the additional product component functionality. Alternatively, you can extend an existing domain by specifying an extension template to include additional applications and services. You can also customize the JDBC connections to your database and change the JMS file store. The Configuration Wizard uses your input to update the configuration related files, such as `config.xml`, and all other generated components in the domain directory, as required.

Figure 1-4 summarizes the steps required to extend an existing domain using the Configuration Wizard.

Figure 1-4 Roadmap for Extending an Existing Domain
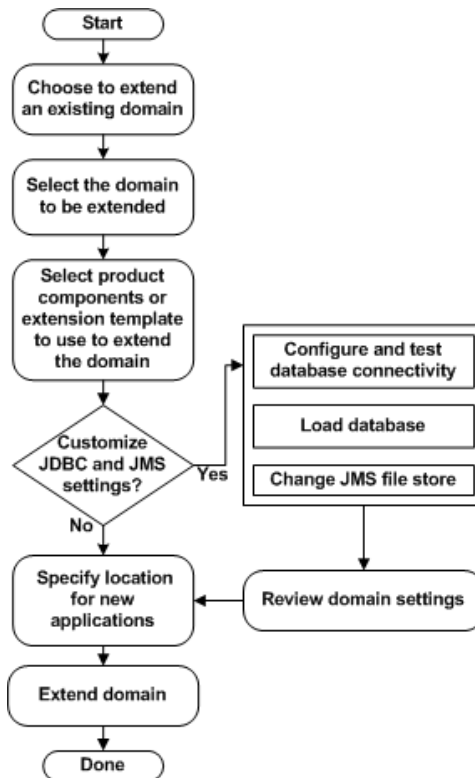
Additional Tools for Creating, Extending, and Managing Domains

WebLogic Server provides a rich set of system administration tools that enables you to install, configure, monitor, and manage one or more domains. As described previously, you can use the Configuration Wizard to create and extend domains. It is designed to simplify and automate the process of initial domain configuration, and the addition of product component functionality and well-defined applications and services to existing domains. The Configuration Wizard operates off-line, that is, when WebLogic Server is not running. It is not designed for use online when a WebLogic Server instance is running, or for use as a monitoring tool.

You can also use the tools defined in the following table to create, extend, and manage the domain. Run-time configuration can also be accomplished using the consoles of the BEA product components.

Table 1-3 Additional Tools for Creating, Extending, and Managing Domains

To perform the following tasks...	Use the following tools...
Create a new domain or extend an existing domain	• WebLogic Scripting Tool (WLST). WLST is a command-line scripting interface that you use to interact with and configure WebLogic Server instances and domains. When WLST is offline, it enables you to create a new domain or update an existing domain without connecting to a running WebLogic Server—supporting the same functionality as the Configuration Wizard. For more information, see *WebLogic Scripting Tool* at the following URL: http://e-docs.bea.com/wls/docs100/config_scripting/index.html • unpack. The unpack command enables you to create a new domain from the command line, by using a template compatible with your current installation. You cannot use unpack to extend an existing domain. For more information, see *Creating Templates and Domains Using the Pack and Unpack Commands* at the following URL: http://e-docs.bea.com/common/docs102/pack/index.html

Table 1-3 Additional Tools for Creating, Extending, and Managing Domains

To perform the following tasks...	Use the following tools...
Add applications and services, or modify existing settings	• WebLogic Server Administration Console. For more information, see the WebLogic Server Administration Console Online Help, accessible by selecting the help icon from the Administration Console interface or at the following URL: http://e-docs.bea.com/wls/docs100/ConsoleHelp/index.html • Other system administration tools, such as WLST, weblogic.Admin, JMX, and Ant. For more information, see the following documents: "Summary of System Administration Tools and APIs" in *Introduction to WebLogic Server and WebLogic Express* at: http://e-docs.bea.com/wls/docs100/intro/overview.html#sysadmintools *WebLogic Scripting Tool* at: http://e-docs.bea.com/wls/docs100/config_scripting/domains.html
Manage and monitor the health and status of the domain	• WebLogic Diagnostic Framework. For more information, see *Configuring and Using the WebLogic Diagnostics Framework* at the following URL: http://e-docs.bea.com/wls/docs100/wldf_configuring/index.html • WebLogic Server Administration Console. For more information, see the *WebLogic Server Administration Console Online Help*, accessible by selecting the help icon from the Administration Console interface or at the following URL: http://e-docs.bea.com/wls/docs100/ConsoleHelp/index.html • WebLogic Server Node Manager. For more information, see "Using Node Manager to Control Servers" in *Managing Server Startup and Shutdown* at the following URL: http://e-docs.bea.com/wls/docs100/server_start/nodemgr.html

Starting the Configuration Wizard

This section describes how to invoke the Configuration Wizard in graphical and console modes. Topics include:

- Starting in Graphical Mode
- Starting in Console Mode

Starting in Graphical Mode

When run in graphical mode, the Configuration Wizard is executed in a graphical environment. The console for the machine on which the product installation resides must support a Java-based GUI. All Windows-based consoles support Java-based GUIs; only a subset of UNIX-based consoles support Java-based GUIs.

Note: If you attempt to start the Configuration Wizard in graphical mode on a system that cannot support a graphical display, the Configuration Wizard automatically starts in console mode.

You can start the Configuration Wizard in graphical mode from either the Windows Start menu or from the command line.

- To start the Configuration Wizard in graphical mode on a Windows platform, choose the **Configuration Wizard** option from the BEA program group in the Windows Start Menu:

  Start > Programs > BEA > Tools > Configuration Wizard

- To start the Configuration Wizard in graphical mode from a Windows command prompt or on a UNIX platform:

  a. Log in to the target system on which the product installation resides.

  b. Open an MS-DOS command prompt window (on Windows) or a command shell (on UNIX).

  c. Go to the `\common\bin` subdirectory of the product installation directory. For example:

   `cd c:\bea\wlserver_10.0\common\bin`

  d. Invoke one of the following scripts to start the Configuration Wizard in graphical mode:

   Windows: `config.cmd`

   UNIX: `sh config.sh`

Starting in Console Mode

When run in console mode, the Configuration Wizard is executed in a text-based environment.

To start the Configuration Wizard in console mode:

1. Log in to the target system on which the product installation resides.

2. Open a command-line shell.

3. Go to the `\common\bin` subdirectory of the product installation directory. For example:

  `cd c:\bea\wlserver_10.0\common\bin`

4. Invoke one of the following scripts:

  – Windows: `config.cmd -mode=console`

  – UNIX: `sh config.sh -mode=console`

  Note: The command and arguments must be entered in lower-case.

To finish creating your domain, respond to the prompts in each section by entering the number associated with your choice, pressing Enter, or typing `next` (or `n`) to accept the current selection. The arrow ($\rightarrow$) indicates the value currently selected. To quit the Configuration Wizard, enter `Exit` in response to any prompt. To review or change your selection, enter `Previous` at the prompt.

Note: Instead of typing complete words when you want to enter `[Exit]`, `[Previous]`, and `[Next]`, you can use the following one-letter shortcuts: `x`, `p`, and `n`, respectively.

Creating a WebLogic Domain

Before you can develop and run WebLogic-based applications, you must first create a domain. The Configuration Wizard guides you through the process of creating a new domain quickly and easily, by selecting the product components you want to include in your domain, or by using domain templates.

The following topics describe the steps required to create a new domain using the Configuration Wizard:

- Create or Extend a Domain

- Select a Domain Source

- Configure an Administrator Username and Password

- Specify the Server Start Mode and JDK

- Customize Environment and Services Settings

- Create the WebLogic Domain

- Creating Domain

Related Topics

"Creating a New Domain Using the Configuration Wizard" on page 1-8

"Introduction to Domains" on page 1-1

"Creating a Domain" on page 11-1

Create or Extend a Domain

The **Welcome** window prompts you to choose whether you want to create a new domain or extend an existing one.

Table 3-1 Welcome Window options

Choose this option. . .	When you want to . . .
Create a new WebLogic domain	Create a new domain that is configured to meet your requirements. Begin by selecting the product components you want to include in your domain, or a domain template to be used as the basis for your domain. Then modify settings as required.
Extend an existing WebLogic domain	Add product component functionality or support for additional applications and services to an existing domain. Begin by selecting the directory of the domain that you want to update. Then specify the product components you want to add, or identify the extension template you want to use for adding applications and services. You then have the option of customizing the JDBC connections to your database and the JMS file store, if defined. To learn more, see Chapter 9, "Extending WebLogic Domains."

Related Topics

"Creating a New Domain Using the Configuration Wizard" on page 1-8

"Introduction to Domains" on page 1-1

"Creating a Domain" on page 11-1

Select a Domain Source

The **Select a Domain Source** window prompts you to select the source from which to create the domain. You can select the product components to include in your domain, or select a custom template on which to base your domain.

Choose one of the following options for selecting the source for your domain:

- **Generate a domain configured automatically to support the following BEA products:**

  To use this option, select the check boxes associated with the components you want to include, and click **Next**.

You can select the following product components in the **Select a Domain Source** window as displayed in Figure 3-1. For more information about selecting different products from the list of products and relation between them, see

http://e-docs.bea.com/common/docs102/tempref/tempref.html.

Figure 3-1 Select Domain Source window
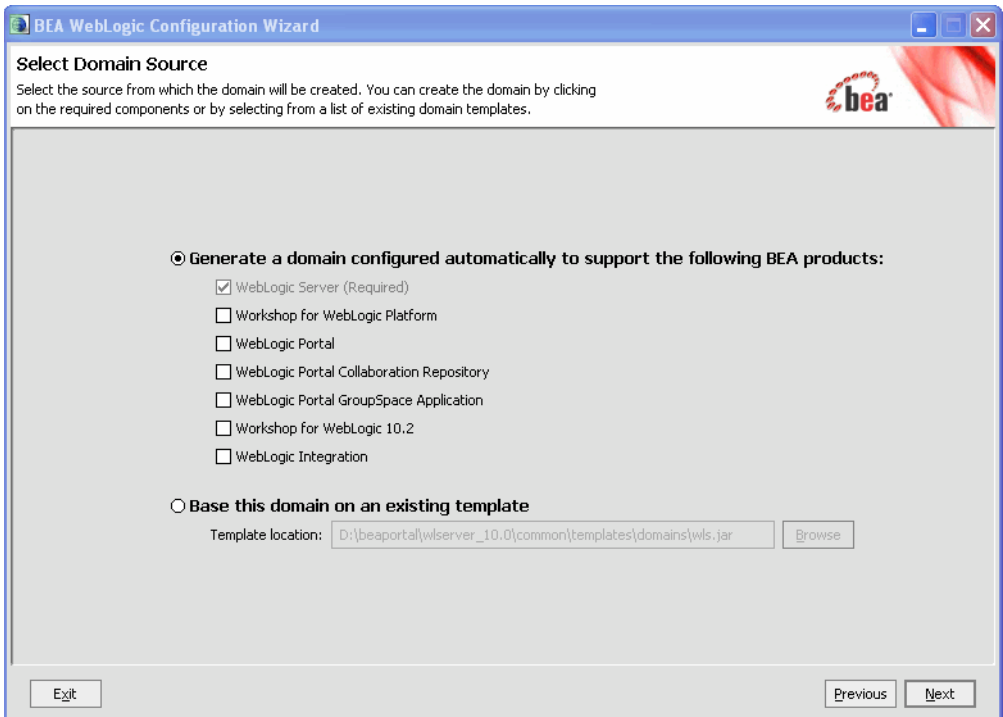
The Weblogic Server is selected, by default.

Note: To create a WebLogic Integration domain, you must select the **WebLogic Integration** check-box, as well as the **Workshop for WebLogic 10.2** check-box.

● **Base this domain on an existing template**

To use this option, manually enter the full pathname to the template in the **Template location** field, and click **Next**, or click **Browse** to navigate to the directory containing the desired template. Select the domain template that contains the settings you want to use as the basis for your domain.

Note: While using the Configuration Wizard or WLST off-line to create or extend a clustered domain with a template that has applications containing application-scoped JDBC and/or JMS resources, you may need to perform additional steps (after the domain is created or extended) to make sure that the application and its application-scoped resources are targeted and deployed properly in a clustered environment. For more information on the targeting and deployment of application-scoped modules, see "Deploying Applications and Modules" in *Deploying Applications to WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/deployment/deploy.html.

Configure an Administrator Username and Password

The **Configure Administrator Username and Password** window prompts you to specify a username and password to be used for starting the Administration Server.

To configure an administrator username and password:

1. Enter a valid value in the **Username** field. This name is used to boot the Administration Server and connect to it.

   Do not use commas or any characters in the following comma-separated list: \t, < >, #, |, &, ?, ( ), { }. User names are case sensitive.

2. Enter a valid value in the **User password** field: a string of at least 8 case-sensitive characters. The password value is encrypted.

   Note: Do not use the password = weblogic in a production environment.

3. Reenter the password in the **Confirm user password** field.

4. Optionally, enter a login description for this username.

5. Click **Next** to proceed to the next configuration window.

Specify the Server Start Mode and JDK

The **Configure Server Start Mode and JDK** window prompts you to specify the:

- Startup mode for your domain

- JDK to be used for the domain

Choose the Startup Mode

Specify the startup mode for your domain as shown in the following table.

Table 3-2 Development and Production Modes

Choose this mode...	When...
Development	You are creating your applications. In this mode, the configuration of security is relatively relaxed, allowing you to auto-deploy applications.
Production	You are creating your applications. In this mode, the configuration of security is stringent, requiring a user name and password to deploy applications.
	Note: Before putting a domain into production, BEA recommends that you familiarize yourself with the content of Securing a Production Environment at: http://e-docs.bea.com/wls/docs100/lockdown/index.html.

Differences Between Domain Startup Modes

The following table describes the differences between development and production modes in terms of key functions.

Table 3-3 Differences Between Development and Production Modes

Function	In development mode...	In production mode...
SSL	You can use the demonstration digital certificates and the demonstration keystores provided by the WebLogic Server security services. With these certificates, you can design your application to work within environments secured by SSL. For more information about managing security, see "Configuring SSL" in *Securing WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/secmanage/ssl.html	You should not use the demonstration digital certificates and the demonstration keystores. If you do so, a warning message is displayed.
Deploying Applications	WebLogic Server instances can automatically deploy and update applications that reside in the domain_name/autodeploy directory (where domain_name is the name of a domain). It is recommended that this method be used only in a single-server development environment. For more information, see *Deploying Applications to WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/deployment/deploy.html	The auto-deployment feature is disabled, so you must use the WebLogic Server Administration Console, the weblogic.Deployer tool, or the WebLogic Scripting Tool (WLST). For more information, see *Deploying Applications to WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/deployment/index.html
Log File Rotation	When you start a server, the server automatically renames (rotates) its local server log file as server-name.log.n. For the remainder of the server session, the server rotates its local log file whenever the size of the file reaches 500 kilobytes.	A server rotates its local log file after the size of the file reaches 500 kilobytes.
JDBC System Resource	The default capacity is 15 connections.	The default capacity is 25 connections.

Select the JDK for the Domain

The **JDK Selection** pane prompts you to select the J2SE Development Kit (JDK) for the startup mode you selected in the **WebLogic Domain Startup Mode** pane. The Configuration Wizard presents a list of the JDKs supplied by BEA and installed with the product, including:

- Sun JDK

  From Sun Microsystems.

- BEA JRockit JDK

  From BEA Systems, Inc.

You can choose one of the JDKs supplied by BEA or another JDK that you have installed on your system. If you select a JDK supplied by BEA, the Configuration Wizard will create server startup scripts that invoke the JDK you select.

For more information about startup scripts, see *WLS Performance and Tuning* available at:

http://e-docs.bea.com/wls/docs100/perform/WLSTuning.html

Select only those JDKs that are supported on the platform you are using. For a list of the JDKs that are supported for a specific platform, see *Supported Configurations*. The default selection reflects the JDK that best meets the requirements of your environment, based on the platform on which you are installing the domain.

Note: If you plan to use the JRockit JDK in production mode, BEA recommends that you develop and test your applications using BEA JRockit early in your project cycle. For information about BEA JRockit, see the *BEA JRockit JDK* documentation at the following URL:

http://e-docs.bea.com/jrockit/webdocs/index.html

To select the JDK:

1. Perform one of the following steps:

   – To use a JDK supplied by BEA, select **BEA Supplied JDKs** and then select a JDK from the list.

   – To use a JDK that is not installed with the product, select **Other JDK**, click **Browse**, and navigate to the appropriate directory.

     Note: The Configuration Wizard does not configure the start scripts to use this type of JDK. You must change the start scripts manually.

2. Click **Next** to proceed to the next configuration window.

Related Topics

For information on changing the run-time mode after you have created a domain, see "Change to production mode" in the *WebLogic Server Administration Console Online Help* at: http://e-docs.bea.com/wls/docs100/ConsoleHelp/taskhelp/domainconfig/Change RuntimeModes.html.

Customize Environment and Services Settings

The **Customize Environment and Services Settings** window gives you the option to change the distribution of your domain across servers, clusters, and machines, and to modify existing JDBC and JMS file store settings.

If you choose not to customize any environment or services settings by accepting the default (**No**), you proceed directly to creating the domain.

The following topics summarize the settings you can change.

Customize the Environment

You can customize the environment of your domain as follows:

- Change the configuration of the Administration Server, including listen address and listen ports

- Add or delete Managed Servers, or change the configuration of existing Managed Servers defined in the selected template

- Group the Managed Servers into clusters, which allows multiple Managed Servers to operate as a single unit to host applications and resources. To group the Managed Servers into clusters, you have the option of performing the following steps:

  – Add or delete clusters, or change the configuration of existing clusters

  – Assign the Managed Servers to a cluster in the domain

  – Create an HTTP proxy for each cluster within the domain

- Assign WebLogic Server instances to host machines. In a domain, machine definitions identify a particular, physical piece of hardware and are used to associate a computer with the Managed Servers it hosts. To map WebLogic Server instances to host machines, you have the option of performing the following steps:

  – Add or delete machines, or change the configuration of existing machines

– Assign each instance of WebLogic Server to the machine on which it runs.

For more information, see Chapter 5, "Customizing the Environment."

Customize Existing JDBC and JMS Settings

If the domain source on which you are basing your domain contains a database configuration, you have the option to do the following:

- Modify JDBC Data Source settings, including database type and drivers

- Test the connections to the database

- Load the database

Note: If you select **Yes** in the **Customize Environment and Services Settings** screen, the Configuration Wizard does not run any database automatically, even though domain JDBC is configured for pointbase database. In the **Run Database Scripts** dialog box, click **Run Scripts** screen, to load the respective database.

If you select **No** in the **Customize Environment and Services Settings** screen, the Configuration Wizard automatically populates the required Pointbase database.

If a JMS file store has been defined in the domain source, you can also change the file store definition.

For more information, see Chapter 7, "Customizing JDBC and JMS Settings in WebLogic Domains."

Create the WebLogic Domain

The **Create WebLogic Domain** window prompts you to specify the name and pathname for the domain, and initiate its creation.

To create the WebLogic domain:

1. Make sure that the **Domain Name** field contains the name of the required domain. If you need to change the value in this field, click within the field and modify the string displayed there.

   Note: Domain names cannot start with a number. (This requirement avoids potential conflicts with internally-generated JDBC store table names, which must begin with a letter.)

2. Make sure that the **Domain Location** field contains the name of the required domain directory. If you need to change the value in this field:

    a. Click **Browse** to invoke the **Select a WebLogic Domain Directory** dialog box.

    b. In the dialog box, navigate to the appropriate directory or manually enter its pathname in the **Location** field. Click **OK**.

The domain directory can be located anywhere on your system. By default, it resides in `BEA_HOME\user_projects\domains\domain`, where `BEA_HOME` is the directory that contains the product installation, and `domain` is the name of the domain directory defined by the selected domain template.

3. Click **Create.**

    Note: You cannot overwrite an existing domain. If a domain with the name you specify already exists in the selected location, you must either delete the existing domain, or specify a different name or location for this domain.

The **Creating Domain** window is opened to display status messages during the domain creation process.

The Configuration Wizard stores the `config.xml` file and all other generated components in the domain directory that you specify.

Creating Domain

The **Creating Domain** window displays status messages during the domain creation process. When the process is complete, the new domain is ready for use.

Table 3-4 Creating Domain

On this platform...	Perform the following task...
UNIX and Linux	Click **Done**.
Windows	Do one of the following: • If you want to start the server immediately, select the **Start Admin Server** check box and click **Done**. • If you do not want to start the server at this time, click **Done**.

Creating an AquaLogic Service Bus Domain

Before you can develop and run AquaLogic-based applications, you must first create a domain. The Configuration Wizard guides you through the process of creating a new domain quickly and easily, by selecting the product components you want to include in your domain, or by using domain templates.

The following topics describe the steps required to create a new domain using the Configuration Wizard:

- Create or Extend a Domain
- Select a Domain Source
- Configure an Administrator Username and Password
- Specify the Server Start Mode and JDK
- Customize Environment and Services Settings
- Create the WebLogic Domain
- Creating Domain

Related Topics

"Creating a New Domain Using the Configuration Wizard" on page 1-8

"Introduction to Domains" on page 1-1

"Creating a Domain" on page 11-1

Create or Extend a Domain

The **Welcome** window prompts you to choose whether you want to create a new domain or extend an existing one.

Table 4-1 Welcome window

Choose this option...	When you want to...
Create a new WebLogic domain	Create a new domain that is configured to meet your requirements. Begin by selecting the product components you want to include in your domain, or a domain template to be used as the basis for your domain. Then modify settings as required.
Extend an existing WebLogic domain	Add product component functionality or support for additional applications and services to an existing domain. Begin by selecting the directory of the domain that you want to update. Then specify the product components you want to add, or identify the extension template you want to use for adding applications and services. You then have the option of customizing the JDBC connections to your database and the JMS file store, if defined. To learn more, see Chapter 9, "Extending WebLogic Domains."

Related Topics

"Creating a New Domain Using the Configuration Wizard" on page 1-8

"Introduction to Domains" on page 1-1

"Creating a Domain" on page 11-1

Select a Domain Source

The **Select a Domain Source** window prompts you to select the source from which to create the domain. You can select the product components to include in your domain, or select a custom template on which to base your domain.

Choose one of the following options for selecting the source for your domain:

- **Generate a domain configured automatically to support the following BEA products:**

  To use this option, select the check boxes associated with the components you want to include, and click **Next**.

You can select the following product components in the **Select a Domain Source** window as displayed in Figure 4-1. For more information about selecting different products from the list of products and relation between them, see http://e-docs.bea.com/common/docs102/tempref/tempref.html.

Figure 4-1 Select Domain Source window
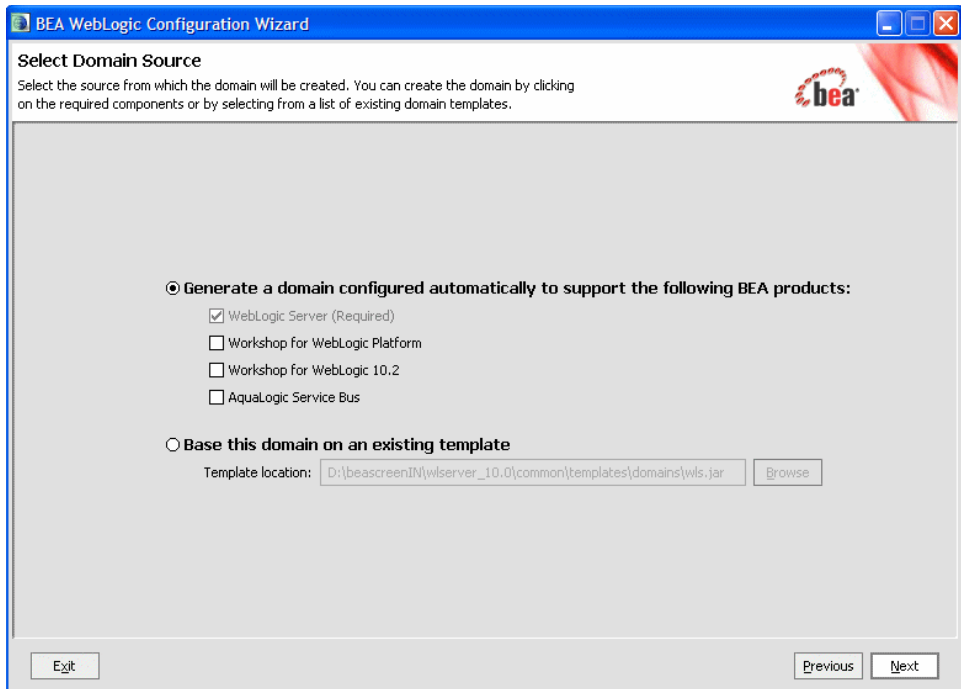
The WebLogic Server is selected by default.

Note: You must not select Workshop for WebLogic Platform, when you are configuring a domain for ALSB.

- **Base this domain on an existing template**

To use this option, manually enter the full pathname to the template in the **Template location** field and click **Next**, or click **Browse** to navigate to the directory containing the desired template. Select the domain template that contains the settings you want to use as the basis for your domain.

> **Note:** While using the Configuration Wizard or WLST Off-line to create or extend a clustered domain with a template that has applications containing application-scoped JDBC and/or JMS resources, you may need to perform additional steps (after the domain is created or extended) to make sure that the application and its application-scoped resources are targeted and deployed properly in a clustered environment. For more information on the targeting and deployment of application-scoped modules, see "Deploying Applications and Modules" in Deploying Applications to WebLogic Server at the following URL: http://e-docs.bea.com/wls/docs100/deployment/deploy.html.

Configure an Administrator Username and Password

The **Configure Administrator Username and Password** window prompts you to specify a username and password to be used for starting the Administration Server.

To configure an administrator username and password:

1. Enter a valid value in the **Username** field. This name is used to boot the Administration Server and connect to it.

   Do not use commas or any characters in the following comma-separated list: \t, < >, #, |, &, ?, ( ), { }. User names are case sensitive.

2. Enter a valid value in the **User password** field: a string of at least 8 case-sensitive characters. The password value is encrypted.

   Note: Do not use password = weblogic in a production environment.

3. Reenter the password in the **Confirm user password** field.

4. Optionally, enter a login description for this username.

5. Click **Next** to proceed to the next configuration window.

Specify the Server Start Mode and JDK

The **Configure Server Start Mode and JDK** window prompts you to specify the:

- Startup mode for your domain
- JDK to be used for the domain

Choose the Startup Mode

Specify the startup mode for your domain as shown in the following table.

Table 4-2 Choose the Startup mode

Choose this mode...	When...
Development	You are creating your applications. In this mode, the configuration of security is relatively relaxed, allowing you to auto-deploy applications.
Production	Your application is running in its final form. In this mode, security is fully configured.
	Note: Before putting a domain into production, BEA recommends that you familiarize yourself with the content of *Securing a Production Environment* at http://e-docs.bea.com/wls/docs100/lockdown/index.html.

Differences Between Domain Startup Modes

The following table describes the differences between development and production modes in terms of key functions.

Table 4-3 Differences Between Development and Production Modes

Function	In development mode...	In production mode...
SSL	You can use the demonstration digital certificates and the demonstration keystores provided by the WebLogic Server security services. With these certificates, you can design your application to work within environments secured by SSL. For more information about managing security, see "Configuring SSL" in *Securing WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/secmanage/ssl.html	You should not use the demonstration digital certificates and the demonstration keystores. If you do so, a warning message is displayed.
Deploying Applications	WebLogic Server instances can automatically deploy and update applications that reside in the **domain_name**/autodeploy directory (where **domain_name** is the name of a domain). It is recommended that this method be used only in a single-server development environment. For more information, see *Deploying Applications to WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/deployment/deploy.html	The auto-deployment feature is disabled, so you must use the WebLogic Server Administration Console, the weblogic.Deployer tool, or the WebLogic Scripting Tool (WLST). For more information, see *Deploying Applications to WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/deployment/index.html

Table 4-3 Differences Between Development and Production Modes

Function	In development mode...	In production mode...
Log File Rotation	When you start a server, the server automatically renames (rotates) its local server log file as **server-name**.log.n. For the remainder of the server session, the server rotates its local log file whenever the size of the file reaches 500 kilobytes.	A server rotates its local log file after the size of the file reaches 500 kilobytes.
JDBC System Resource	The default capacity is 15 connections.	The default capacity is 25 connections.

Select the JDK for the Domain

The **JDK Selection** pane prompts you to select the J2SE Development Kit (JDK) for the startup mode you selected in the **WebLogic Domain Startup Mode** pane. The Configuration Wizard presents a list of the JDKs supplied by BEA and installed with the product, including:

- Sun JDK

  From Sun Microsystems.

- BEA JRockit JDK

  From BEA Systems, Inc.

You can choose one of the JDKs supplied by BEA or another JDK that you have installed on your system. If you select a JDK supplied by BEA, the Configuration Wizard will create server startup scripts that invoke the JDK you select.

For more information about startup scripts, see *WLS Performance and Tuning* available at:

http://e-docs.bea.com/wls/docs100/perform/WLSTuning.html

Select only those JDKs that are supported on the platform you are using. For a list of the JDKs that are supported for a specific platform, see *Supported Configurations* available at the location:

http://e-docs.bea.com/platform/suppconfigs/index.html

The default selection reflects the JDK that best meets the requirements of your environment, based on the platform on which you are installing the domain.

Note: If you plan to use the JRockit JDK in production mode, BEA recommends that you develop and test your applications using BEA JRockit early in your project cycle. For

information about BEA JRockit, see the *BEA JRockit JDK* documentation at the following URL:

http://e-docs.bea.com/jrockit/webdocs/index.html

To select the JDK:

1. Perform one of the following steps:

   – To use a JDK supplied by BEA, select **BEA Supplied JDKs** and then select a JDK from the list.

   – To use a JDK that is not installed with the product, select **Other JDK**, click **Browse**, and navigate to the appropriate directory.

   Note: The Configuration Wizard does not configure the start scripts to use this type of JDK. You must change the start scripts manually.

2. Click **Next** to proceed to the next configuration window.

Related Topics

For information on changing the run-time mode after you have created a domain, see "Change to production mode" in the *WebLogic Server Administration Console Online Help* at http://e-docs.bea.com/wls/docs100/ConsoleHelp/taskhelp/domainconfig/Change RuntimeModes.html.

Customize Environment and Services Settings

The **Customize Environment and Services Settings** window gives you the option to change the distribution of your domain across servers, clusters, and machines, and to modify existing JDBC and JMS file store settings.

If you choose not to customize any environment or services settings by accepting the default (**No**), you proceed directly to creating the domain.

The following topics summarize the settings you can change.

Customize the Environment

You can customize the environment of your domain as follows:

- Change the configuration of the Administration Server, including listen address and listen ports

- Add or delete Managed Servers, or change the configuration of existing Managed Servers defined in the selected template

- Group the Managed Servers into clusters, which allows multiple Managed Servers to operate as a single unit to host applications and resources. To group the Managed Servers into clusters, you have the option of performing the following steps:

  – Add or delete clusters, or change the configuration of existing clusters

  – Assign the Managed Servers to a cluster in the domain

  – Create an HTTP proxy for each cluster within the domain

- Assign WebLogic Server instances to host machines. In a domain, machine definitions identify a particular, physical piece of hardware and are used to associate a computer with the Managed Servers it hosts. To map WebLogic Server instances to host machines, you have the option of performing the following steps:

  – Add or delete machines, or change the configuration of existing machines

  – Assign each instance of WebLogic Server to the machine on which it runs.

For more information, see Chapter 5, "Customizing the Environment."

Customize Existing JDBC and JMS Settings

If the domain source on which you are basing your domain contains a database configuration, you have the option to do the following:

- Modify JDBC Data Source settings, including database type and drivers

- Test the connections to the database

- Load the database

If a JMS file store has been defined in the domain source, you can also change the file store definition.

For more information, see Customizing JDBC and JMS Settings in WebLogic Domains.

Create the WebLogic Domain

The **Create WebLogic Domain** window prompts you to specify the name and pathname for the domain, and initiate its creation.

To create the WebLogic domain:

1. Make sure that the **Domain Name** field contains the name of the required domain. If you need to change the value in this field, click within the field and modify the string displayed there.

2. Make sure that the **Domain Location** field contains the name of the required domain directory. If you need to change the value in this field:

   a. Click **Browse** to invoke the **Select a WebLogic Domain Directory** dialog box.

   b. In the dialog box, navigate to the appropriate directory or manually enter its pathname in the **Location** field. Click **OK**.

   The domain directory can be located anywhere on your system. By default, it resides in `BEA_HOME\user_projects\domains\domain`, where `BEA_HOME` is the directory that contains the product installation, and `domain` is the name of the domain directory defined by the selected domain template.

3. Click **Create.**

   Note: You cannot overwrite an existing domain. If a domain with the name you specify already exists in the selected location, you must either delete the existing domain, or specify a different name or location for this domain.

   The **Creating Domain** window is opened to display status messages during the domain creation process.

   The Configuration Wizard stores the `config.xml` file and all other generated components in the domain directory that you specify.

Creating Domain

The **Creating Domain** window displays status messages during the domain creation process. When the process is complete, the new domain is ready for use.

Table 4-4 Creating Domain

On this platform . . .	Perform the following task . . .
UNIX and Linux	Click Done.
Windows	Do one of the following: • If you want to start the server immediately, select the **Start Admin Server** check box and click **Done**. • If you do not want to start the server at this time, click **Done**.

Customizing the Environment

When you are creating a new domain using the Configuration Wizard, you have the option to change the distribution of your domain across servers, clusters, and machines.

The following topics describe the steps required to change the environment for your domain:

- Configure the Administration Server
- Configure Managed Servers
- Configure Clusters
- Assign Managed Servers to Clusters
- Create HTTP Proxy Applications
- Configure Machines
- Assign Servers to Machines
- Review the Domain Settings

Related Topics

"Creating a Domain with Managed Servers and Clusters" on page 11-4

Configure the Administration Server

In every domain, one server must be designated the Administration server: the central point from which the whole domain is managed. The **Configure the Administration Server** window

prompts you to define configuration information for the Administration Server. This information is used to access the Administration Server in the domain.

Servers can be reached using the following URL:

protocol://listen-address:listen-port

In this URL, *protocol* can be any of the following:

- t3
- t3s
- http
- https

listen-address and *listen-port* are defined in the **Configure the Administration Server** window.

To configure the Administration Server:

Review the values displayed in the window and modify them as necessary, using the guidelines provided in the following table. When you finish updating your settings, click **Next**.

Note: The fields marked in asterisk are required.

Table 5-1 List of Fields

In this field . . .	Do the following . . .
Name*	Enter a valid server name: a string of characters that can include spaces. Each server instance in your product environment must have a unique name, regardless of the domain or cluster in which it resides, or whether it is an Administration Server or a Managed Server. In addition, the name of the Administration Server must be unique among all component names within the domain. **Note:** This value is specified for identification purposes only; it is not used as part of the URL for applications that are deployed on the server. The server name is displayed in the WebLogic Server Administration Console. In addition, if you use WebLogic Server command-line utilities or APIs, you must specify this name to identify the server.
Listen address	From the drop-down list, select a value for the listen address. Valid values for the listen address are as follows: • All Local Addresses (default) • IP address of the computer that hosts the server • DNS name that resolves to the host • localhost (valid only for requests that are issued from the computer on which the server is running) If you identify the listen address for a server instance as localhost, non-local processes cannot connect to the server instance. Only processes on the machine that hosts the server instance can connect to the server instance. If the server instance must be accessible as localhost (for example, if you create administrative scripts that connect to localhost), and it must also be accessible by remote processes, select All Local Addresses. The server instance determines the address of the machine and listens on it. To learn more about Listen Addresses, see "Specifying Listen Addresses" on page 5-5.
Listen port	Enter a valid value for the listen port to be used for regular, non-secure requests (via protocols such as HTTP and T3). The default value is 7001. If you leave this field blank, the default value is used. The valid listen port range is from 1 to 65,534. For more information, see "Specifying Listen Ports" on page 5-6.

Table 5-1 List of Fields

In this field . . .	Do the following . . .
SSL listen port	Enter a valid value to be used for secure requests (via protocols such as HTTPS and T3S). The default value is 7002. If you leave this field blank, the default value is used.
	The valid listen port range is from 1 to 65,535.
	Note: By default, a server instance uses demonstration certificates to authenticate requests from a secure port. In a production environment, you must configure SSL to use certificates from a certificate authority. For more information, see "Configuring SSL" in *Securing WebLogic Server* at `http://e-docs.bea.com/wls/docs100/secmanage/ssl.html`.
	For more information, see "Specifying Listen Ports" on page 5-6.
SSL enabled	Select the check box in this field to enable the SSL listen port. By default, the SSL is disabled for all new servers.

Specifying Listen Addresses

If you want to limit the valid listen address for a server, use the guidelines for specifying listen addresses provided in the following table.

Table 5-2 Specifying Listen Address details

If the listen address is set to . . .	Then the following is true...
`All Local Addresses` or DNS name	On multi-homed Windows machines, a server instance binds to all available IP addresses.
IP Address or DNS name	• To connect to the server instance, processes can specify either the IP address or the corresponding DNS name. • Processes that specify localhost fail to connect. • You must update existing processes that use localhost to connect to the server instance. • For connections that specify the IP address for the listen address and a secured port for the listen port, host name verification must be disabled. **Note:** To resolve a DNS name to an IP address, WebLogic Server must be able to contact an appropriate DNS server or obtain the IP address mapping locally. Therefore, if you specify a DNS name for the listen address, you must either leave a port open long enough for the WebLogic Server instance to connect to a DNS server and cache its mapping or you must specify the IP address mapping in a local file. If you specify an IP address for the listen address and then a client request specifies a DNS name, WebLogic Server will attempt to resolve the DNS name, but if it cannot access DNS name mapping, the request will fail.
`localhost`	• Processes must specify localhost to connect to the server instance. • Only processes that reside on the machine that hosts the server instance (local processes) will be able to connect to the server instance.

Specifying Listen Ports

Refer to the following guidelines when specifying listen ports and secure listen ports:

- Although you can specify any valid port number, if you specify port 80, you can omit the port number from the HTTP request used to access resources over HTTP. For example, if you define port 80 as the listen port, you can use the URL:
  `http://hostname/myfile.html` instead of
  `http://hostname:portnumber/myfile.html`.

- On some operating systems, port 80 can be accessed only by processes run under a privileged user or group ID. In this case, you can assign the server instance to a UNIX machine on which a Post-Bind UID or GID is defined.

- In a development environment, you might want to run multiple instances of WebLogic Server on a single computer. If you do so, each instance must use a unique listen port/listen address combination. On a multi-homed computer, you can use the same listen port but you must configure each server to use a unique IP address as its listen address. If your computer does not support multiple IP addresses, you must use a different listen port for each active instance.

Configure Managed Servers

The **Configure Managed Servers** window prompts you to provide the configuration information for one or more Managed Servers. Production environments typically deploy one or more Managed Servers, in addition to the Administration Server, to host enterprise applications. (For details, see "Introduction to Domains" on page 1-1.) This step is optional.

Note: You can create Managed Servers on remote machines using the `pack` and `unpack` commands. For more information, see "Creating and Starting a Managed Server on a Remote Machine: Main Steps" in *Creating Templates and Domains Using the Pack and Unpack Commands* at
`http://e-docs.bea.com/common/docs102/pack/tasks.html#remote`.

To Configure Managed Servers:

1. Review the current list of Managed Server configurations. Default values may vary, based on the domain source you selected earlier.

   Note: The wizard provides two views: a concise tabular view of all the Managed Servers and an individual view of each Managed Server, where each server is represented by a tab—you switch between servers by selecting the corresponding tab. To toggle the display mode between table and tab formats, click **Switch Display**.

2. Add or modify entries as required by your domain, using the guidelines provided in the following table. To delete a Managed Server, select the Managed Server in the list and click **Delete**. When you finish updating your settings, click **Next**.

Note: Fields marked with an asterisk are required.

Configure Clusters

A cluster is a group of WebLogic Server instances that work together to provide scalability and high-availability for applications. This window is displayed only if your domain contains at least one Managed Server.

The **Configure Clusters** window prompts you to configure the clusters in your domain. This step is optional.

To configure clusters:

1. Review the current list of cluster configurations. Default values may vary, based on the domain source you selected earlier.

   Note: The wizard provides two views: a concise tabular view of all the clusters and an individual view of each cluster, where each cluster is represented by a tab—you switch between clusters by selecting the corresponding tab. To toggle the display mode between table and tab formats, click **Switch Display**.

2. Add or modify entries, as required by your domain, using the guidelines provided in the following table. To delete a cluster, select the cluster in the list and click **Delete**. When you finish updating your settings, click **Next**.

Note: Fields marked with an asterisk are required.

Table 5-3 Configure Clusters Window Fields

In this field...	Enter a...
Name*	Valid cluster name: a string of characters that can include spaces.
	The name of the cluster must be unique among all component names within the domain.
	The default value in this field is new_Cluster_**n**, where **n** specifies a numeric value that is used to differentiate among all default cluster names; the value of n for the first cluster is 1. The value is incremented by 1 for each cluster that is added.
Multicast address	Multicast address for the cluster. This address is used by cluster members to communicate with each other. The default value is 239.192.0.0.
	Valid multicast addresses are any valid IP addresses from 224.0.0.1 to 239.255.255.255.
Multicast port	Multicast port for the cluster. The multicast port is used by cluster members to communicate with each other. The default value is 7001.
	Valid values for multicast ports are from 1 to 65,534.
Cluster address	Cluster address that identifies the Managed Servers in the cluster.
	A cluster address can be one of the following:
	• Comma-separated list of IP addresses or DNS names and ports, for example: dns_name:port, dns_name:port
	• DNS name that maps to multiple IP addresses
	• localhost, DNS name, or IP address if the listen address of all Managed Servers is listening to the same address with unique port numbers
	The cluster address is used in entity and stateless EJBs to construct the host name portion of URLs. If the cluster address is not set, EJB handles may not work properly.

Related Topics

"Configure Managed Servers" on page 5-6

"Setting Up WebLogic Clusters" in *Using WebLogic Server Clusters* at
http://e-docs.bea.com/wls/docs100/cluster/setup.html

Assign Managed Servers to Clusters

The **Assign Servers to Clusters** window prompts you to assign the available Managed Server(s) to a cluster within the domain. This window is displayed only if you have defined at least one cluster.

To assign managed servers to clusters:

1. In the **Cluster** pane, select the cluster to which you want to assign a Managed Server.

2. Assign the Managed Server to the designated cluster in one of the following ways:

   – Double-click the name of the Managed Server in the **Server** pane.

   – Select the Managed Server and click the right arrow.

   – Shift-click to select multiple Managed Servers, then click the right arrow.

   The name of the Managed Server is removed from the **Server** pane and added, below the name of the target cluster, to the **Cluster** pane.

   Note: Only Managed Servers are listed in the **Server** pane. The Administration Server is not listed because it cannot be assigned to a cluster.

3. Repeat steps 1 and 2 for each Managed Server that you want to assign to a cluster.

4. Review the cluster assignments.

   If necessary, you can remove a Managed Server from a cluster in one of the following ways:

   – Double-click the name of the Managed Server in the **Cluster** pane.

   – Select the Managed Server and click the left arrow.

   The name of the Managed Server is removed from the **Cluster** pane and restored to the **Server** pane.

5. Click **Next** to proceed to the next configuration window.

Create HTTP Proxy Applications

The **Create HTTP Proxy Applications** window prompts you to create an HTTP proxy application on a Managed Server to proxy client requests to the cluster. An HTTP proxy application operates as an intermediary for HTTP requests.

This window is displayed only if both of the following statements are true:

- At least one Managed Server has been assigned to a cluster.

- At least one Managed Server has not been assigned to a cluster.

To create HTTP proxy applications:

1. If you have multiple clusters, select the tab corresponding to the cluster for which you want to create HTTP proxy applications.

2. Click **Create HTTP proxy for cluster *clustername***.

   A list of the available servers is displayed in the **Proxy Server** drop-down list.

   Note: Only Managed Servers that have not been assigned to a cluster are displayed in the drop-down list.

3. From the **Proxy Server** list, select a Managed Server onto which the proxy applications can be deployed.

   A proxy application named `BEAProxy4_clustername_servername` is created and targeted to the Managed Server.

4. Repeat steps 1 through 3 for each cluster for which you want to create HTTP proxy applications.

5. Click **Next** to proceed to the next configuration window.

Configure Machines

The **Configure Machines** window prompts you to define the configuration information for the Windows and UNIX machines in the domain. This step is optional.

You may want to perform this step in circumstances such as (but not limited to) the following:

- The Administration Server uses the machine definition, in conjunction with the Node Manager application, to start remote servers.

- WebLogic Server uses configured machine names when determining which server in a cluster is best able to handle certain tasks, such as HTTP session replication. WebLogic Server then delegates those tasks to the identified server.

Note: You must create a machine configuration for each product installation that runs a Node Manager process. The machine configuration must include values for the listen address and port number parameters.

To configure Windows machines:

Select the **Machine** tab and review the current list of configurations for Windows machines. Add or modify entries as required by your domain using the guidelines provided in the following table. Default values may vary, based on the domain source you selected earlier. To delete a machine, select the machine in the list and click **Delete**. When you finish updating your settings, click **Next**.

Note: Fields marked with an asterisk are required.

Table 5-4 Configure Machines Window fields

In this field...	Do the following...
Name*	Enter a valid machine name: a string of characters that can include spaces. The machine name: • Is used to identify the machine within the WebLogic Server domain; it is not required to match the network name for the machine. • Must be unique among all component names within the domain. The default value in this field is new_Machine_n, where n specifies a numeric value that is used to differentiate among all default machine names; the value of n for the first machine is 1. The value is incremented by 1 for each machine that is added.

Table 5-4 Configure Machines Window fields

In this field...	Do the following...
Node manager listen address	Select a value from the drop-down list for the listen address used by Node Manager to listen for connection requests. By default, the IP addresses defined for the local system and localhost are shown in the drop-down list. The default is localhost.
	Valid values for the listen address are as follows:
	• IP address of the computer that hosts the server
	• DNS name that resolves to the host
	• localhost
	• All Local Addresses
	If you specify an IP address for a machine that will host the Administration Server and you need to access the WebLogic Server Node Manager, you must disable host name verification. For details and instructions, see "Using Host Name Verification" in *Securing WebLogic Server* at the following URL: http://e-docs.bea.com/wls/docs100/secmanage/ssl.html#host_name_verifier
Node manager listen port	Enter a valid value for the listen port used by Node Manager to listen for connection requests.
	The valid Node Manager listen port range is from 1 to 65534.
	The default value is 5556.

To configure UNIX machines:

Select the **UNIX Machine** tab and review the current list of UNIX machine configurations. Add or modify entries as required by your domain, using the guidelines provided in the following table. Default values may vary, based on the domain source you selected earlier. To delete a machine, select the machine in the list and click **Delete**. When you finish updating your settings, click **Next**.

Note: Fields marked with an asterisk are required.

Table 5-5 Configure Machines Window fields - UNIX

In this field . . .	Do the following . . .
Name*	Enter a valid machine name: a string of characters that can include spaces.
	The machine name:
	• Is used to identify the machine within the WebLogic Server domain; it is not required to match the network name for the machine.
	• Must be unique among all component names within the domain.
	The default value in this field is new_UnixMachine_**n**, where **n** specifies a numeric value that is used to differentiate among all default machine names; the value of n for the first machine name is 1. The value is incremented by 1 for each machine that is added.
Post bind GID enabled	Select the check box to enable a server running on this machine to bind to a UNIX group ID (GID) after it finishes all privileged startup actions (see Post bind GID). The default is Disabled (unchecked).
Post bind GID	Enter a valid UNIX group ID (GID) that a server running on this machine will run under after it finishes all privileged startup actions. Otherwise, the server continues to run under the group from which it was started. (Requires that you enable Post-Bind GID.)
Post bind UID enabled	Select the check box to enable a server running on this machine to bind to a UNIX user ID (UID) after it finishes all privileged startup actions (see Post bind UID). The default is Disabled (unchecked).
Post bind UID	Enter a valid UNIX user ID (UID) that a server running on this machine will run under after it finishes all privileged startup actions. Otherwise, the server continues to run under the account from which it was started. (Requires that you enable Post-Bind UID.)

Table 5-5 Configure Machines Window fields - UNIX

In this field . . .	Do the following . . .
Node manager listen address	Select a value from the drop-down list for the listen address used by Node Manager to listen for connection requests. By default, the IP addresses defined for the local system and localhost are shown in the drop-down list. The default is localhost.
	Valid values for the listen address are as follows:
	• IP address of the computer that hosts the server
	• DNS name that resolves to the host
	• localhost
	• All Local Addresses
	If you specify an IP address for a machine that will host the Administration Server and need to access the WebLogic Server Node Manager, you must disable host name verification. For details and instructions, see "Using Host Name Verification" in *Securing WebLogic Server* at the following URL:
	`http://e-docs.bea.com/wls/docs100/secmanage/ssl.html#host_name_verifier`
Node manager listen port	Enter a valid value for the listen port used by Node Manager to listen for connection requests.
	The valid Node Manager listen port range is from 1 to 65534.
	The default value is 5556.

Related Topics

"Using Node Manager to Control Servers" in *Managing Server Startup and Shutdown* at `http://e-docs.bea.com/wls/docs100/server_start/nodemgr.html`

Assign Servers to Machines

The **Assign Servers to Machines** window prompts you to assign WebLogic Server instances to the machines on which they run. This window is displayed only if you have defined at least one machine.

To assign WebLogic Server instances to machines:

1. In the **Machine** pane, select the Windows or UNIX machine to which you want to assign a WebLogic Server instance.

2. Assign the appropriate WebLogic Server instance to the designated machine in one of the following ways:

   – Double-click the WebLogic Server instance in the **Server** pane.

   – Select the appropriate WebLogic Server instance in the **Server** pane and click the right arrow.

   – Shift-click to select multiple Servers in the Server pane, then click the right arrow.

   The name of the WebLogic Server instance is removed from the **Server** pane and added, below the name of the target machine, to the **Machine** pane.

3. Repeat steps 1 and 2 for each WebLogic Server instance that you want to assign to a machine.

4. Review the machine assignments.

   If necessary, you can remove a WebLogic Server instance from a machine in one of the following ways:

   – Double-click the name of the appropriate WebLogic Server instance in the **Machine** pane

   – Select the appropriate WebLogic Server instance in the **Machine** pane and click the left arrow

   The name of the WebLogic Server instance is removed from the **Machine** pane and restored to the **Server** pane.

5. Click **Next** to proceed to the next configuration window.

   If the domain source on which you are basing your domain contains JDBC data source and JMS file store definitions, you are presented with the option to modify them as described in Chapter 7, "Customizing JDBC and JMS Settings in WebLogic Domains." Otherwise, you are presented with the option to review the domain settings and create the domain.

Review the Domain Settings

The **Review WebLogic Domain** window allows you to review the detailed configuration settings of your domain before the Configuration Wizard creates it.

To review the domain settings:

1. Select an item in the **Domain Summary** pane on the left and review the associated details in the **Details** pane on the right. You can make limited adjustments by clicking **Previous** to return to a prior window.

> **Note:** You can limit the type of information displayed in the **Domain Summary** pane by selecting a filter from the **View** drop-down list.

2. Click **Next** to proceed to the next configuration window, "Create the WebLogic Domain" on page 3-9.

Customizing the AquaLogic Service Bus Environment

When you are creating a new domain using the Configuration Wizard, you have the option to change the distribution of your domain across servers, clusters, and machines.

The following topics describe the steps required to change the environment for your domain:

- Configure the Administration Server
- Configure Managed Servers
- Configure Clusters
- Assign Managed Servers to Clusters
- Create HTTP Proxy Applications
- Configure Machines
- Assign Servers to Machines
- Review the Domain Settings

Related Topics

"Creating a Domain with Managed Servers and Clusters" on page 11-4

Configure the Administration Server

In every domain, one server must be designated the Administration server: the central point from which the whole domain is managed. The **Configure the Administration Server** window prompts you to define configuration information for the Administration Server. This information is used to access the Administration Server in the domain.

Servers can be reached using the following URL:

`protocol://listen-address:listen-port`

In this URL, `protocol` can be any of the following:

- `t3`
- `t3s`
- `http`
- `https`

`listen-address` and `listen-port` are defined in the **Configure the Administration Server** window.

To configure the Administration Server:

Review the values displayed in the window and modify them as necessary, using the guidelines provided in the following table. When you finish updating your settings, click **Next**.

Notes:

- You must first select **Yes** in the **Customize Environment and Service Settings** to go to the **Configure Administration Server**.
- Fields marked with an asterisk are mandatory.

Table 6-1 Configure the Administration Server Window Fields

In this field . . .	Do the following . . .
Name*	Enter a valid server name: a string of characters that can include spaces. Each server instance in your product environment must have a unique name, regardless of the domain or cluster in which it resides, or whether it is an Administration Server or a Managed Server. In addition, the name of the Administration Server must be unique among all component names within the domain. **Note:** This value is specified for identification purposes only; it is not used as part of the URL for applications that are deployed on the server. The server name is displayed in the WebLogic Server Administration Console. In addition, if you use WebLogic Server command-line utilities or APIs, you must specify this name to identify the server.
Listen address	From the drop-down list, select a value for the listen address. Valid values for the listen address are as follows: • All Local Addresses (default) • IP address of the computer that hosts the server • DNS name that resolves to the host • localhost (valid only for requests that are issued from the computer on which the server is running) If you identify the listen address for a server instance as localhost, non-local processes cannot connect to the server instance. Only processes on the machine that hosts the server instance can connect to the server instance. If the server instance must be accessible as localhost (for example, if you create administrative scripts that connect to localhost), and it must also be accessible by remote processes, select All Local Addresses. The server instance determines the address of the machine and listens on it. To learn more about Listen Addresses, see "Specifying Listen Addresses" on page 6-4.
Listen port	Enter a valid value for the listen port to be used for regular, non-secure requests (via protocols such as HTTP and T3). The default value is 7001. If you leave this field blank, the default value is used. The valid listen port range is from 1 to 65,534. For more information, see "Specifying Listen Ports" on page 6-6.

Table 6-1 Configure the Administration Server Window Fields

In this field . . .	Do the following . . .
SSL listen port	Enter a valid value to be used for secure requests (via protocols such as HTTPS and T3S). The default value is 7002. If you leave this field blank, the default value is used.
	The valid listen port range is from 1 to 65,535.
	Note: By default, a server instance uses demonstration certificates to authenticate requests from a secure port. In a production environment, you must configure SSL to use certificates from a certificate authority. For more information, see "Configuring SSL" in *Securing WebLogic Server* at http://e-docs.bea.com/wls/docs100/secmanage/ssl.html.
	For more information, see "Specifying Listen Ports" on page 6-6.
SSL enabled	Select the check box in this field to enable the SSL listen port. By default, the SSL is disabled for all new servers.

Specifying Listen Addresses

If you want to limit the valid listen address for a server, use the guidelines for specifying listen addresses provided in the following table.

Table 6-2 Listen Address Details

If the listen address is set to . . .	Then the following is true . . .
`All Local Addresses` or DNS name	On multi-homed Windows machines, a server instance binds to all available IP addresses.
IP Address or DNS name	• To connect to the server instance, processes can specify either the IP address or the corresponding DNS name. • Processes that specify localhost fail to connect. • You must update existing processes that use localhost to connect to the server instance. • For connections that specify the IP address for the listen address and a secured port for the listen port, host name verification must be disabled. **Note:** Note: To resolve a DNS name to an IP address, WebLogic Server must be able to contact an appropriate DNS server or obtain the IP address mapping locally. Therefore, if you specify a DNS name for the listen address, you must either leave a port open long enough for the WebLogic Server instance to connect to a DNS server and cache its mapping or you must specify the IP address mapping in a local file. If you specify an IP address for the listen address and then a client request specifies a DNS name, WebLogic Server will attempt to resolve the DNS name, but if it cannot access DNS name mapping, the request will fail.
`localhost`	• Processes must specify localhost to connect to the server instance. • Only processes that reside on the machine that hosts the server instance (local processes) will be able to connect to the server instance.

Specifying Listen Ports

Read the following guidelines when specifying listen ports and secure listen ports:

- The default value for port number is 7001.

- Although you can specify any valid port number, if you specify port 80, you can omit the port number from the HTTP request used to access resources over HTTP. For example, if you define port 80 as the listen port, you can use the URL: `http://hostname/myfile.html` instead of `http://hostname:portnumber/myfile.html`.

- On some operating systems, port 80 can be accessed only by processes run under a privileged user or group ID. In this case, you can assign the server instance to a UNIX machine on which a Post-Bind UID or GID is defined.

- In a development environment, you might want to run multiple instances of WebLogic Server on a single computer. If you do so, each instance must use a unique listen port/listen address combination. On a multi-homed computer, you can use the same listen port but you must configure each server to use a unique IP address as its listen address. If your computer does not support multiple IP addresses, you must use a different listen port for each active instance.

Configure Managed Servers

The **Configure Managed Servers** window prompts you to provide the configuration information for one or more Managed Servers. Production environments typically deploy one or more Managed Servers, in addition to the Administration Server, to host enterprise applications. (For details, see "Introduction to Domains" on page 1-1.) This step is optional.

Note: You can create Managed Servers on remote machines by using the `pack` and `unpack` commands. For more information, see "Creating and Starting a Managed Server on a Remote Machine: Main Steps" in *Creating Templates and Domains Using the Pack and Unpack Commands* at `http://e-docs.bea.com/common/docs102/pack/tasks.html#remote`.

To Configure Managed Servers:

1. Review the current list of Managed Server configurations. Default values may vary, based on the domain source you selected earlier.

2. The wizard provides two views: a concise tabular view of all the Managed Servers and an individual view of each Managed Server, where each server is represented by a tab—you switch between servers by selecting the corresponding tab. To toggle the display mode between table and tab formats, click **Switch Display**.

3. Add or modify entries as required by your domain, using the guidelines provided in the following table. To delete a Managed Server, select the Managed Server in the list and click **Delete**. When you finish updating your settings, click **Next**.

Table 6-3 describes the fields required for configuring managed servers.

Note: Fields marked with an asterisk are required.

Table 6-3 Configure Managed Servers Window Fields

In this field...	Do the following...
Name*	Enter a valid server name: a string of characters that can include spaces.
	Each server instance in your WebLogic environment must have a unique name, regardless of its function (Managed Server or Administration Server) and the domain or cluster in which it resides. In addition, the name of each Managed Server must be unique among all component names within the domain.
	The default value in this field is new_Server_n, where n specifies a numeric value used to differentiate among default Managed Server names; the value of n for the first Managed Server is 1. The value is incremented by 1 for each Managed Server that is added.
	Note: Note: The server name is included for identification purposes only; it is not used as part of the URL for applications that are deployed on the server. The server name is displayed in the WebLogic Server Administration Console. In addition, if you use WebLogic Server command-line utilities or APIs, you must specify this name to identify the managed server.
Listen address	Select a value for the listen address from the drop-down list. Valid values for the listen-address are as follows: • All Local Addresses (default) • IP address of the computer that hosts the server • DNS name that resolves to the host • localhost (valid only for requests that are issued from the computer on which the server is running)
	If you identify a server instance's listen address as localhost, non-local processes cannot connect to the server instance. Only processes on the machine that hosts the server instance can connect to the server instance. If the server instance must be accessible as localhost (for example, if you create administrative scripts that connect to localhost), and it must also be accessible by remote processes, select All Local Addresses. The server instance determines the address of the machine and listens on it.
	If you intend to run the Managed Server on a remote machine, be sure to specify a valid IP address for the machine that will host the Managed Server.
	To learn more about listen addresses, see "Specifying Listen Ports" on page 6-6.

Table 6-3 Configure Managed Servers Window Fields

In this field...	Do the following...
Listen port	Enter a valid value for the listen port to be used for regular, non-secure requests (via protocols such as HTTP and T3). The default value is 7001. If you leave this field blank, the default value is used.
	The valid listen port range is from 1 to 65,534.
	If you intend to run the Managed Server on a remote machine, be sure to specify a valid listen port for the machine that will host the Managed Server.
	For more information, see "Specifying Listen Ports" on page 6-6.
SSL listen port	Enter a valid value to be used for secure requests (via protocols such as HTTPS and T3S). The default value is 7002. If you leave this field blank, the default value is used.
	The valid listen port range is from 1 to 65,535.
	Note: By default, a server instance uses demonstration certificates to authenticate requests from a secure port. In a production environment, you must configure SSL to use certificates from a certificate authority. For more information, see "Configuring SSL" in *Securing WebLogic Server* at `http://e-docs.bea.com/wls/docs100/secmanage/ssl.html`.
	For more information, see "Specifying Listen Ports" on page 6-6.
SSL enabled	Select the check box to enable the SSL Listen Port. The default is disabled.

Note: Field marked with an asterisk are required.

Configure Clusters

A cluster is a group of WebLogic Server instances that work together to provide scalability and high-availability for applications. This window is displayed only if your domain contains at least one Managed Server.

The **Configure Clusters** window prompts you to configure the clusters in your domain. This step is optional.

To configure clusters:

1. Review the current list of cluster configurations. Default values may vary, based on the domain source you selected earlier.

> **Note:** The wizard provides two views: a concise tabular view of all the clusters and an individual view of each cluster, where each cluster is represented by a tab—you switch between clusters by selecting the corresponding tab. To toggle the display mode between table and tab formats, click **Switch Display**.

2. Add or modify entries, as required by your domain, using the guidelines provided in the following table. To delete a cluster, select the cluster in the list, and click **Delete**. After you finish updating your settings, click **Next**.

> **Note:** If you are creating a domain that includes AquaLogic Service Bus functionality, you can configure only one cluster per domain.

Table 6-4 describes the fields required to configure a cluster.

> **Note:** Fields marked with an asterisk are required.

Table 6-4 Configure Clusters Window Fields

In this field...	Enter a...
Name*	Valid cluster name: a string of characters that can include spaces.
	The name of the cluster must be unique among all component names within the domain.
	The default value in this field is new_Cluster_n, where n specifies a numeric value that is used to differentiate among all default cluster names; the value of n for the first cluster is 1. The value is incremented by 1 for each cluster that is added.
Multicast address	Multicast address for the cluster. This address is used by cluster members to communicate with each other. The default value is 239.192.0.0.
	Valid multicast addresses are any valid IP addresses from 224.0.0.1 to 239.255.255.255.

Table 6-4 Configure Clusters Window Fields

In this field...	Enter a...
Multicast port	Multicast port for the cluster. The multicast port is used by cluster members to communicate with each other. The default value is 7001. Valid values for multicast ports are from 1 to 65534.
Cluster address	Cluster address that identifies the Managed Servers in the cluster. A cluster address can be one of the following: • Comma-separated list, without white space, of IP addresses or DNS names and ports, for example: dns_name:port,dns_name:port • DNS name that maps to multiple IP addresses • localhost, DNS name, or IP address if the listen address of all Managed Servers is listening to the same address with unique port numbers The cluster address is used in entity and stateless EJBs to construct the host name portion of URLs. If the cluster address is not set, EJB handles may not work properly.

Related Topics

"Configure Managed Servers" on page 6-6

"Setting Up WebLogic Clusters" in *Using WebLogic Server Clusters* at
http://e-docs.bea.com/wls/docs100/cluster/setup.html

Assign Managed Servers to Clusters

The **Assign Servers to Clusters** window prompts you to assign the available Managed Server(s) to a cluster within the domain. This window is displayed only if you have defined at least one cluster.

To assign Managed Servers to clusters:

1. In the **Cluster** pane, select the cluster to which you want to assign a Managed Server.

2. Assign the Managed Server to the designated cluster in one of the following ways:

   – Double-click the name of the Managed Server in the **Server** pane.

   – Select the Managed Server and click the right arrow.

   – Shift-click to select multiple Managed Servers, then click the right arrow.

   The name of the Managed Server is removed from the **Server** pane and added, below the name of the target cluster, to the **Cluster** pane.

   Note: Only Managed Servers are listed in the **Server** pane. The Administration Server is not listed because it cannot be assigned to a cluster.

3. Repeat steps 1 and 2 for each Managed Server that you want to assign to a cluster.

4. Review the cluster assignments.

   If necessary, you can remove a Managed Server from a cluster in one of the following ways:

   – Double-click the name of the Managed Server in the **Cluster** pane.

   – Select the Managed Server and click the left arrow.

   The name of the Managed Server is removed from the **Cluster** pane and restored to the **Server** pane.

5. Click **Next** to proceed to the next configuration window.

Create HTTP Proxy Applications

The **Create HTTP Proxy Applications** window prompts you to create an HTTP proxy application on a Managed Server to proxy client requests to the cluster. An HTTP proxy application operates as an intermediary for HTTP requests.

Note: This window is displayed only if at least one Managed Server has been assigned to a cluster and at least one Managed Server has not been assigned to a cluster.

To create HTTP proxy applications:

1. If you have multiple clusters, select the tab corresponding to the cluster for which you want to create HTTP proxy applications.

2. Click **Create HTTP proxy for cluster *clustername***.

   A list of the available servers is displayed in the **Proxy Server** drop-down list.

   Note: Only Managed Servers that have not been assigned to a cluster are displayed in the drop-down list.

3. From the **Proxy Server** list, select a Managed Server onto which the proxy applications can be deployed.

   A proxy application named `BEAProxy4_clustername_servername` is created and targeted to the Managed Server.

4. Repeat steps 1 through 3 for each cluster for which you want to create HTTP proxy applications.

5. Click **Next** to proceed to the next configuration window.

Configure Machines

The **Configure Machines** window prompts you to define the configuration information for the Windows and UNIX machines in the domain. This step is optional.

You may want to perform this step in circumstances such as (but not limited to) the following:

- The Administration Server uses the machine definition, in conjunction with the Node Manager application, to start remote servers.

- WebLogic Server uses configured machine names when determining which server in a cluster is best able to handle certain tasks, such as HTTP session replication. WebLogic Server then delegates those tasks to the identified server.

Note: You must create a machine configuration for each product installation that runs a Node Manager process. The machine configuration must include values for the listen address and port number parameters.

To configure Windows machines:

Select the **Machine** tab and review the current list of configurations for Windows machines. Add or modify entries as required by your domain using the guidelines provided in the following table. Default values may vary, based on the domain source you selected earlier. To delete a machine, select the machine in the list and click **Delete**. When you finish updating your settings, click **Next**.

Table 6-5 describes the fields required to configure machine for Windows.

Note: Fields marked with an asterisk are required.

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Table 6-5 Configure Machines Window Fields - Windows

In this field...	Do the following...
Name*	Enter a valid machine name: a string of characters that can include spaces.
	The machine name:
	• Is used to identify the machine within the WebLogic Server domain; it is not required to match the network name for the machine.
	• Must be unique among all component names within the domain.
	The default value in this field is new_Machine_n, where n specifies a numeric value that is used to differentiate among all default machine names; the value of n for the first machine is 1. The value is incremented by 1 for each machine that is added.
Node manager listen address	Select a value from the drop-down list for the listen address used by Node Manager to listen for connection requests. By default, the IP addresses defined for the local system and localhost are shown in the drop-down list. The default is localhost.
	• Valid values for the listen address are as follows:
	• IP address of the computer that hosts the server
	• DNS name that resolves to the host
	• localhost
	• All Local Addresses
	If you specify an IP address for a machine that will host the Administration Server and you need to access the WebLogic Server Node Manager, you must disable host name verification. For details and instructions, see "Using Host Name Verification" in *Securing WebLogic Server* at the following URL:
	`http://e-docs.bea.com/wls/docs100/secmanage/ssl.html#host_name_verifier`
Node manager listen port	Enter a valid value for the listen port used by Node Manager to listen for connection requests.
	The valid Node Manager listen port range is from 1 to 65534.
	The default value is 5556.

To configure UNIX machines:

Select the **UNIX Machine** tab and review the current list of UNIX machine configurations. Add or modify entries as required by your domain, using the guidelines provided in the following

table. Default values may vary, based on the domain source you selected earlier. To delete a machine, select the machine in the list and click **Delete**. When you finish updating your settings, click **Next**.

Table 6-6 describes the fields required to configure machine for UNIX.

Note: Fields marked with an asterisk are required.

Table 6-6 Configure Machines Window Fields - Unix

In this field...	Do the following...
Name*	Enter a valid machine name: a string of characters that can include spaces.
	The machine name:
	• Is used to identify the machine within the WebLogic Server domain; it is not required to match the network name for the machine.
	• Must be unique among all component names within the domain.
	The default value in this field is new_UnixMachine_**n**, where **n** specifies a numeric value that is used to differentiate among all default machine names; the value of n for the first machine name is 1. The value is incremented by 1 for each machine that is added.
Post bind GID enabled	Select the check box to enable a server running on this machine to bind to a UNIX group ID (GID) after it finishes all privileged startup actions (see Post bind GID). The default is Disabled (unchecked).
Post bind GID	Enter a valid UNIX group ID (GID) that a server running on this machine will run under after it finishes all privileged startup actions. Otherwise, the server continues to run under the group from which it was started. (Requires that you enable Post-Bind GID.)
Post bind UID enabled	Select the check box to enable a server running on this machine to bind to a UNIX user ID (UID) after it finishes all privileged startup actions (see Post bind UID). The default is Disabled (unchecked).
Post bind UID	Enter a valid UNIX user ID (UID) that a server running on this machine will run under after it finishes all privileged startup actions. Otherwise, the server continues to run under the account from which it was started. (Requires that you enable Post-Bind UID.)

Table 6-6 Configure Machines Window Fields - Unix

In this field...	Do the following...
Node manager listen address	Select a value from the drop-down list for the listen address used by Node Manager to listen for connection requests. By default, the IP addresses defined for the local system and localhost are shown in the drop-down list. The default is localhost. • Valid values for the listen address are as follows: • IP address of the computer that hosts the server • DNS name that resolves to the host • localhost • All Local Addresses If you specify an IP address for a machine that will host the Administration Server and need to access the WebLogic Server Node Manager, you must disable host name verification. For details and instructions, see "Using Host Name Verification" in Securing WebLogic Server at the following URL: `http://e-docs.bea.com/wls/docs100/secmanage/ssl.html#host_name_verifier`
Node manager listen port	Enter a valid value for the listen port used by Node Manager to listen for connection requests. The valid Node Manager listen port range is from 1 to 65534. The default value is 5556.

Related Topics

"Using Node Manager to Control Servers" in *Managing Server Startup and Shutdown* at `http://e-docs.bea.com/wls/docs100/server_start/nodemgr.html`

Assign Servers to Machines

The **Assign Servers to Machines** window prompts you to assign WebLogic Server instances to the machines on which they run.

Note: This window is displayed only if you have defined at least one machine.

To assign WebLogic Server instances to machines:

1. In the **Machine** pane, select the Windows or UNIX machine to which you want to assign a WebLogic Server instance.

2. Assign the appropriate WebLogic Server instance to the designated machine in one of the following ways:

    – Double-click the WebLogic Server instance in the **Server** pane.

    – Select the appropriate WebLogic Server instance in the **Server** pane and click the right arrow.

    – Shift-click to select multiple Servers in the Server pane, then click the right arrow.

    The name of the WebLogic Server instance is removed from the **Server** pane and added, below the name of the target machine, to the **Machine** pane.

3. Repeat steps 1 and 2 for each WebLogic Server instance that you want to assign to a machine.

4. Review the machine assignments.

    If necessary, you can remove a WebLogic Server instance from a machine in one of the following ways:

    – Double-click the name of the appropriate WebLogic Server instance in the **Machine** pane

    – Select the appropriate WebLogic Server instance in the **Machine** pane and click the left arrow

    The name of the WebLogic Server instance is removed from the **Machine** pane and restored to the **Server** pane.

5. Click **Next** to proceed to the next configuration window.

    If the domain source on which you are basing your domain contains JDBC data source and JMS file store definitions, you are presented with the option to modify them as described in Chapter 8, "Customizing JDBC and JMS Settings in AquaLogic Service Bus Domains."

Otherwise, you are presented with the option to review the domain settings and create the domain.

Review the Domain Settings

The **Review WebLogic Domain** window allows you to review the detailed configuration settings of your domain before the Configuration Wizard creates it.

To review the domain settings:

1. Select an item in the **Domain Summary** pane on the left and review the associated details in the **Details** pane on the right. You can make limited adjustments by clicking **Previous** to return to a prior window.

   Note: You can limit the type of information displayed in the **Domain Summary** pane by selecting a filter from the **View** drop-down list.

2. Click **Next** to proceed to the next configuration window, .

Customizing JDBC and JMS Settings in WebLogic Domains

When you are creating or extending a domain using the Configuration Wizard, you have the option to modify JDBC data source and JMS file store settings if they were previously defined in your domain or template.

The following topics describe the steps required to change the JDBC and JMS file store settings in your domain:

- Configure JDBC Data Sources

- Test Data Source Connections

- Run Database Scripts

- Configure JMS File Stores

- Review the Domain Settings

Configure JDBC Data Sources

A JDBC data source contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection. When finished with the connection, the application returns the connection to the connection pool in the data source.

The **Configure JDBC Data Sources** window prompts you to configure the JDBC data sources defined in your domain source. This step is optional. If desired, you can also test the connections to the database using the **Test Connections** button.

Note: The values that you specify for your database in this window must match the actual configuration of the database. For example, if you change the name of the PointBase database for a preconfigured domain in the **DBMS name** field, there must be an actual PointBase database configured with that name.

To configure JDBC data sources:

1. Review the current list of JDBC data sources. Each data source is represented by a tab. You can view the information for a particular data source by selecting the corresponding tab. Default values may vary, based on the domain source you selected earlier.

2. Add or modify entries as required by your domain, using the guidelines provided in the following table. When you finish updating your settings, do one of the following:

   – If you want to test the data source connections to the specified databases, click **Test Connections**. The **Test Data Source Connections** window is displayed. For more information, see "Test Data Source Connections" on page 7-4.

   – If you do not want to test the connections to the database, click **Next**.

Note: Fields marked with an asterisk are required.

Table 7-1 Configure JDBC Data Sources Window Fields

In this field . . .	In this field . . .
Name*	Enter a valid name for a JDBC data source: a string of characters that can include spaces.
	The name of the JDBC data source must be unique among all component names within the domain.
JNDI name*	From the drop-down list, select a JNDI name to which this data source is bound.
	To add a new JNDI name, select Add New and enter a valid JNDI pathname.
	To modify an existing JNDI name, select the name and edit as required.
	You can associate multiple JNDI names with a single data source.
	When an application looks up a JNDI path, a javax.sql.DataSource instance corresponding to the data source is returned.
Database type*	From the drop-down list, select the type of database to which you want to connect. If your DBMS is not listed, select Other.
Driver*	From the drop-down list, select the JDBC driver you want to use to connect to the database. The list includes common JDBC drivers for the selected DBMS.
	If you selected Other in the Database type field, this field is not available.

Table 7-1 Configure JDBC Data Sources Window Fields

In this field . . .	In this field . . .
Class name*	If you selected a DBMS in the **Database type** field, no action is required.
	If you selected Other in the **Database type** field, enter the full package name of the class that implements the java.sql.Driver interface for your DBMS.
DBMS name*	Enter the name of the database.
	If you selected Other in the **Database type** field, this field is not available.
DBMS host*	Enter the name of the server machine hosting the database.
	If you selected Other in the **Database type** field, this field is not available.
DBMS port*	Enter the port to be used to connect to the server. The default setting associated with the database selected is displayed.
	If you selected Other in the Database type field, this field is not available.
JDBC URL*	If you selected a DBMS in the **Database type** field, no action is required. If the Driver Name has been set and a default URL exists, that URL is used as the value of this field.
	If you selected Other in the **Database type** field, enter the URL for the database that is used to create the connections in the connection pool in the data source.
User name*	Enter the account login name required for connecting to the database.
	If you selected Other in the **Database type** field, this field is not available. This value can be specified in the **Additional Properties** field.
User password*	Enter a password that is valid for accessing the database. Valid values consist of a string of alphanumeric characters. The hyphen (-) and underscore (_) characters are supported.
	This password overrides the password entered as part of the JDBC Properties.
	The value is encrypted.
Confirm user password*	Re-enter the user password.
Known properties	If you selected a DBMS in the **Database type** field, no action is required. This field displays the properties list passed to the JDBC driver for use in the creation of physical database connections.
	If you selected Other in the **Database type** field, this field is blank.

Table 7-1 Configure JDBC Data Sources Window Fields

In this field . . .	In this field . . .
Additional properties	Enter any additional properties to be passed to the JDBC driver.
	If you specified Other in the Database type field, enter any properties to be passed to the JDBC driver, such as the property needed to specify the user.
Supports global transactions	If you selected an XA driver in the Driver field:
	Supports global transactions and Two-phase commit protocol are selected by default and cannot be changed.
	If you selected a non-XA driver in the Driver field:
	• Supports global transactions may be selected, if desired.
	• If Supports global transactions is selected, select one of the following protocols:
	Logging Last Resource—With this option, the transaction branch in which the connection is used is processed as the last resource in the transaction and is processed as a one-phase commit operation. The result of the operation is written in a log file on the resource itself, and the result determines the success or failure of the prepare phase of the transaction. This option offers some performance benefits with greater data safety than Emulate Two-Phase Commit, but it has some limitations. For more information, see "Understanding the Logging Last Resource Transaction Option" in *Configuring and Managing WebLogic JDBC* at http://e-docs.bea.com/wls/docs100/jdbc_admin/jdbc_datasour ces.html#llr.
	Emulate two-phase commit—With this option, the transaction branch in which the connection is used always returns success for the prepare phase of the transaction. It offers performance benefits, but also has risks to data in some failure conditions. Select this option only if your application can tolerate heuristic conditions. For more information, see "Understanding the Emulate Two-Phase Commit Transaction Option" in *Configuring and Managing WebLogic JDBC* at http://e-docs.bea.com/wls/docs100/jdbc_admin/jdbc_datasour ces.html#emulate2pc.
	One-phase commit (default)—With this option, a connection from the data source can be the only participant in the global transaction and the transaction is completed using a one-phase commit optimization. If more than one resource participates in the transaction, an exception is thrown.

Test Data Source Connections

The **Test Data Source Connections** window allows you to test the connection to the database for each of the data sources defined in your domain, using the JDBC URL defined for the

database. This window is only displayed if you clicked **Test Connections** on the **Configure JDBC Data Sources** window.

A list of the data sources and the associated JDBC URLs is displayed.

To test the connections to the database:

1. Make sure that the database to which you want to test the connections is running.

2. Click **Test** for the data source connection that you want to test.

   Note: When you press **Test** for a data source, the button changes to **Cancel**. You can press **Cancel** at any time to cancel the test. Once a test is in progress, all other **Test** buttons are disabled.

   If the status field is empty, the test has not been initiated.

3. Review the results of the test in the **Connection Result Log** pane.

4. Repeat for each data source, as desired.

5. Click **OK** to return to the **Configure JDBC Data Sources** window.

Run Database Scripts

The **Run Database Scripts** window prompts you to set up the database content for each of the data sources defined in your domain using pre-existing SQL or database loading files. A domain template may contain a set of SQL files organized by database type. This window is displayed only if the domain template contains one or more SQL files.

Note: There are no databases defined in `wls.jar`: therefore, the Configure JDBC Data Sources dialog box is not displayed when you select WLS template to create a domain. If you select the WebLogic Platform template, the **Configure JDBC Data Sources** dialog box is displayed, but the **Load Database** dialog box is not displayed.

Note: While using PointBase in Development Mode it is optional to click Run Scripts to load the scripts, and it is mandatory to click Run Scripts in the Production Mode to load scripts.

   If you are using the default PointBase database, you do not need to start the database server before running the scripts. For all other databases, your database server must be running to execute the SQL scripts.

To set up the database content:

1. In the **Available JDBC Data Sources** pane, select the data source for which you want to run the scripts. The scripts that will be executed are displayed in the **Available SQL Files and Database Loading Options.**

   – If you are using the Portal template:

     ● Choose `p13n` DataSource, and then click **Run Scripts**.

     ● If you are maintaining Application GroupSpace data in a different database, choose apps GroupSpace DataSource, and then click **Run Scripts**.

   – If you are using scripts that you have created and loaded along with your application already, choose any of the available datasources.

2. Select the database version from the **DB Version** drop-down menu.

3. Click **Run Scripts**.

   All the scripts displayed in the **Available SQL Files and Database Loading Options** pane for the selected data source are executed, and the results are displayed in the **Results** pane. If you prefer to capture test output in a log file, select the **Log File** check box and manually enter the location of the log file or click **Browse** to navigate to the name of the desired log file.

4. Repeat steps 1 through 3 for each data source for which you want to execute SQL scripts.

5. Click **Next** to proceed to the next configuration window.

Configure JMS File Stores

A JMS file store is a disk-based file in which persistent messages can be saved.

The **Configure JMS File Stores** window allows you to modify JMS file stores that are configured in your domain. This step is optional.

To configure JMS file stores:

1. Review the current list of JMS file stores. Default values may vary based on the domain source you selected earlier.

   Note: The wizard provides two display modes: a concise tabular view of all the defined components, and an individual view, in which each component is represented by a tab, and you view a particular component by selecting the corresponding tab. To toggle the display mode between table and tab formats, click **Switch Display**.

2. Modify entries, as required by your domain, using the guidelines provided in the following table. When you finish updating your settings, click **Next**.

Table 7-2 Configure JMS FIle Stores Window Fields

In this field...	Do the following...
Name*	Enter a name for the JMS file store: a string of characters that can include spaces. The name of the JMS file store must be unique among all component names within the domain.
Directory	Enter the pathname of the directory on the file system where the JMS file store is kept. This directory must reside on your system.
Synchronous write policy	From the drop-down list, select one of the following synchronous write policies to determine how the file store writes data to disk: • Cache-Flush—specifies that transactions cannot be completed until all their write operations have been flushed down to disk. • Disabled—specifies that transactions are complete as soon as their writes are cached in memory. When this policy is active, the completion of transactions does not depend on waiting for writes to reach the disk. • Direct-Write—specifies that write operations are performed directly to disk. This policy is supported on Solaris and Windows. If this policy is active on an unsupported platform, the file store automatically switches to the Cache-Flush policy. • Unspecified (default) This parameter setting affects performance, scalability, and reliability. **Note:** Although the use of the Direct-Write policy is transactionally reliable on Solaris systems, Windows systems may leave transaction data in the on-disk cache without writing it to disk immediately. This is not considered to be transactionally reliable, since a power failure can cause loss of on-disk cache data— possibly resulting in lost and/or duplicate messages. For reliable writes using Direct-Write on Windows, either disable all write caching for the disk (enabled by default), or use a disk with a battery-backed cache. Some file systems, however, do not allow this value to be changed (for example, a RAID system that has a reliable cache). **Note:** If the JMS file store is used exclusively for paging non-persistent messages to disk, the synchronous write policy is ignored.

Related Topics

"Creating a Custom (User-Defined) File Store" in *Configuring WebLogic Server Environments* at
http://e-docs.bea.com/wls/docs100/config_wls/store.html#CreatingaCustomFil eStore

Review the Domain Settings

The **Review WebLogic Domain** window allows you to review the detailed configuration settings of your domain before the Configuration Wizard creates it.

To review the domain settings:

1. Select an item in the **Domain Summary** pane on the left and review the associated details in the **Details** pane on the right. You can make limited adjustments by clicking **Previous** to return to a prior window.

   Note: You can limit the type of information displayed in the **Domain Summary** pane by selecting a filter from the **View** drop-down list

2. Click **Next** to proceed to the next configuration window, "Create the WebLogic Domain."

Customizing JDBC and JMS Settings in AquaLogic Service Bus Domains

When you are creating or extending a domain using the Configuration Wizard, you have the option to modify JDBC data source and JMS file store settings if they were previously defined in your domain or template.

The following topics describe the steps required to change the JDBC and JMS file store settings in your domain:

- Configure JDBC Data Sources
- Test Data Source Connections
- Run Database Scripts
- Configure JMS File Stores
- Review the Domain Settings

Configure JDBC Data Sources

A JDBC data source contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection. When finished with the connection, the application returns the connection to the connection pool in the data source.

The **Configure JDBC Data Sources** window prompts you to configure the JDBC data sources defined in your domain source. This step is optional. If desired, you can also test the connections to the database using the **Test Connections** button.

Note: The values that you specify for your database in this window must match the actual configuration of the database. For example, if you change the name of the PointBase database for a preconfigured domain in the **DBMS name** field, there must be an actual PointBase database configured with that name.

To configure JDBC data sources:

1. Review the current list of JDBC data sources. Each data source is represented by a tab. You can view the information for a particular data source by selecting the corresponding tab. Default values may vary, based on the domain source you selected in the **Select A Domain Source** window.

2. Add or modify entries as required by your domain, using the guidelines provided in the following table. When you finish updating your settings, do one of the following:

    –   If you want to test the data source connections to the specified databases, click **Test Connections**. The **Test Data Source Connections** window is displayed. For more information, see "Test Data Source Connections" on page 8-7.

    –   If you do not want to test the connections to the database, click **Next**.

Figure 8-1 illustrates the JDBC Data Sources window for AquaLogic Service Bus domains.

Figure 8-1 Configure JDBC Data Sources window

Note: Fields marked with an asterisk are required.

Table 8-1 Configure JDBC Data Sources Window - Fields

In this field . . .	Do the following...
Name*	Enter a valid name for a JDBC data source: a string of characters that can include spaces.
	The name of the JDBC data source must be unique among all component names within the domain.
JNDI name*	From the drop-down list, select a JNDI name to which this data source is bound.
	To add a new JNDI name, select Add New and enter a valid JNDI pathname.
	To modify an existing JNDI name, select the name and edit as required.
	Note: You can associate multiple JNDI names with a single data source.
	When an application looks up a JNDI path, a javax.sql.DataSource instance corresponding to the data source is returned.
Database type*	From the drop-down list, select the type of database to which you want to connect. If your DBMS is not listed, select `Other`.
Driver*	From the drop-down list, select the JDBC driver you want to use to connect to the database. The list includes common JDBC drivers for the selected DBMS.
	If you selected Other in the **Database type** field, this field is not available.
Class name*	If you selected a DBMS in the **Database type** field, no action is required.
	If you selected Other in the **Database type** field, enter the full package name of the class that implements the java.sql.Driver interface for your DBMS.
DBMS name*	Enter the name of the database.
	If you selected Other in the **Database type** field, this field is not available.
DBMS host*	Enter the name of the server machine hosting the database.
	If you selected Other in the **Database type** field, this field is not available.
DBMS port*	Enter the port to be used to connect to the server. The default setting associated with the database selected is displayed.
	If you selected Other in the **Database type** field, this field is not available.

Table 8-1 Configure JDBC Data Sources Window - Fields

In this field . . .	Do the following...
JDBC URL*	If you selected a DBMS in the **Database type** field, no action is required. If the Driver Name has been set and a default URL exists, that URL is used as the value of this field.
	If you selected Other in the **Database type** field, enter the URL for the database that is used to create the connections in the connection pool in the data source.
User name*	Enter the account login name required for connecting to the database.
	If you selected Other in the **Database type** field, this field is not available. This value can be specified in the **Additional Properties** field.
User password*	Enter a password that is valid for accessing the database. Valid values consist of a string of alphanumeric characters. The hyphen (-) and underscore (_) characters are supported.
	This password overrides the password entered as part of the JDBC Properties.
	The value is encrypted.
Confirm user password*	Re-enter the user password.
Known properties	If you selected a DBMS in the **Database type** field, no action is required. This field displays the properties list passed to the JDBC driver for use in the creation of physical database connections.
	If you selected Other in the **Database type** field, this field is blank.

Table 8-1 Configure JDBC Data Sources Window - Fields

In this field . . .	Do the following...
Additional properties	Enter any additional properties to be passed to the JDBC driver.
	If you specified Other in the **Database type** field, enter any properties to be passed to the JDBC driver, such as the property needed to specify the user.
Supports global transactions	If you selected an XA driver in the Driver field:
	• **Supports global transactions** and **Two-phase commit** protocol are selected by default and cannot be changed.
	If you selected a non-XA driver in the **Driver** field:
	• **Supports global transactions** may be selected, if desired.
	• If **Supports global transactions** is selected, select one of the following protocols:
	Logging Last Resource—With this option, the transaction branch in which the connection is used is processed as the last resource in the transaction and is processed as a one-phase commit operation. The result of the operation is written in a log file on the resource itself, and the result determines the success or failure of the prepare phase of the transaction. This option offers some performance benefits with greater data safety than Emulate Two-Phase Commit, but it has some limitations. For more information, see "Understanding the Logging Last Resource Transaction Option" in *Configuring and Managing WebLogic JDBC* at: http://e-docs.bea.com/wls/docs100/jdbc_admin/jdbc_datasource s.html#llr.
	Emulate two-phase commit—With this option, the transaction branch in which the connection is used always returns success for the prepare phase of the transaction. It offers performance benefits, but also has risks to data in some failure conditions. Select this option only if your application can tolerate heuristic conditions. For more information, see "Understanding the Emulate Two-Phase Commit Transaction Option" in *Configuring and Managing WebLogic JDBC* at: http://e-docs.bea.com/wls/docs100/jdbc_admin/jdbc_datasource s.html#emulate2pc.
	One-phase commit (default)—With this option, a connection from the data source can be the only participant in the global transaction and the transaction is completed using a one-phase commit optimization. If more than one resource participates in the transaction, an exception is thrown.

Related Topics

"Configuring JDBC Data Sources" in *Configuring and Managing WebLogic JDBC* at:
http://e-docs.bea.com/wls/docs100/jdbc_admin/jdbc_datasources.html

Test Data Source Connections

The **Test Data Source Connections** window allows you to test the connection to the database for each of the data sources defined in your domain, using the JDBC URL defined for the database. This window is only displayed if you clicked **Test Connections** on the **Configure JDBC Data Sources** window.

A list of the data sources and the associated JDBC URLs is displayed.

To test the connections to the database:

1. Make sure that the database to which you want to test the connections is running.

2. Click **Test** for the data source connection that you want to test.

   Note: When you press **Test** for a data source, the button changes to **Cancel**. You can press **Cancel** at any time to cancel the test. Once a test is in progress, all other **Test** buttons are disabled.

   If the status field is empty, the test has not been initiated.

3. Review the results of the test in the **Connection Result Log** pane.

4. Repeat for each data source, as desired.

5. Click **OK** to return to the **Configure JDBC Data Sources** window.

Run Database Scripts

The **Run Database Scripts** window prompts you to set up the database content for each of the data sources defined in your domain using pre-existing SQL or database loading files. A domain template may contain a set of SQL files organized by database type. This window is displayed only if the domain template contains one or more SQL files.

Note: There are no databases defined in `wls.jar`: therefore, the Configure JDBC Data Sources dialog box is not displayed when you select WLS template to create a domain. If you select the WebLogic Platform template, the **Configure JDBC Data Sources** dialog box is displayed, but the **Load Database** dialog box is not displayed.

Note: While using PointBase in Development Mode it is optional to click Run Scripts to load the scripts, and it is mandatory to click Run Scripts in the Production Mode to load scripts.

If you are using the default PointBase database, you do not need to start the database server before running the scripts. For all other databases, your database server must be running to execute the SQL scripts.

To set up the database content:

1. In the **Available JDBC Data Sources** pane, select the data source for which you want to run the scripts. The scripts that will be executed are displayed in the **Available SQL Files and Database Loading Options.**

   – If you are using the Portal template:

     • Choose `p13n` DataSource, and then click **Run Scripts**.

     • If you are maintaining Application GroupSpace data in a different database, choose apps GroupSpace DataSource, and then click **Run Scripts**.

   – If you are using the WebLogic Service Bus Extension (ALSB template), choose `wlsjmsrpDataSource`.

   – If you are using scripts that you have created and loaded along with your application already, choose any of the available datasources.

2. Select the database version from the **DB Version** drop-down menu.

3. Click **Run Scripts**.

   All the scripts displayed in the **Available SQL Files and Database Loading Options** pane for the selected data source are executed, and the results are displayed in the **Results** pane. If you prefer to capture test output in a log file, select the **Log File** check box and manually enter the location of the log file or click **Browse** to navigate to the name of the desired log file.

4. Repeat steps 1 through 3 for each data source for which you want to execute SQL scripts.

5. Click **Next** to proceed to the next configuration window.

Configure JMS File Stores

A JMS file store is a disk-based file in which persistent messages can be saved.

The **Configure JMS File Stores** window allows you to modify JMS file stores that are configured in your domain. This step is optional.

To configure JMS file stores:

1. Review the current list of JMS file stores. Default values may vary based on the domain source you selected earlier.

    Note: The wizard provides two display modes: a concise tabular view of all the defined components, and an individual view, in which each component is represented by a tab, and you view a particular component by selecting the corresponding tab. To toggle the display mode between table and tab formats, click **Switch Display**.

2. Modify entries, as required by your domain, using the guidelines provided in the following table. When you finish updating your settings, click **Next**.

Note: Fields marked with an asterisk are required.

Table 8-2 Configure JMS File Stores Window

In this field...	Do the following...
Name*	Enter a name for the JMS file store: a string of characters that can include spaces.
	The name of the JMS file store must be unique among all component names within the domain.

Table 8-2 Configure JMS File Stores Window

In this field...	Do the following...
Directory	Enter the pathname of the directory on the file system where the JMS file store is kept. This directory must reside on your system.
Synchronous	From the drop-down list, select one of the following synchronous write policies to determine how the file store writes data to disk:
	• Cache-Flush—specifies that transactions cannot be completed until all their write operations have been flushed down to disk.
	• Disabled—specifies that transactions are complete as soon as their writes are cached in memory. When this policy is active, the completion of transactions does not depend on waiting for writes to reach the disk.
	• Direct-Write—specifies that write operations are performed directly to disk. This policy is supported on Solaris and Windows. If this policy is active on an unsupported platform, the file store automatically switches to the Cache-Flush policy.
	• Unspecified (default)
	This parameter setting affects performance, scalability, and reliability.
	Note: Although the use of the Direct-Write policy is transactionally reliable on Solaris systems, Windows systems may leave transaction data in the on-disk cache without writing it to disk immediately. This is not considered to be transactionally reliable, since a power failure can cause loss of on-disk cache data—possibly resulting in lost and/or duplicate messages. For reliable writes using Direct-Write on Windows, either disable all write caching for the disk (enabled by default), or use a disk with a battery-backed cache. Some file systems, however, do not allow this value to be changed (for example, a RAID system that has a reliable cache).
	Note: If the JMS file store is used exclusively for paging non-persistent messages to disk, the synchronous write policy is ignored.

Related Topics

"Creating a Custom (User-Defined) File Store" in *Configuring WebLogic Server Environments* at:

http://e-docs.bea.com/wls/docs100/config_wls/store.html#CreatingaCustomFile
eStore

Review the Domain Settings

The **Review WebLogic Domain** window allows you to review the detailed configuration settings of your domain before the Configuration Wizard creates it.

To review the domain settings:

1. Select an item in the **Domain Summary** pane on the left and review the associated details in the **Details** pane on the right. You can make limited adjustments by clicking **Previous** to return to a prior window.

   Note: You can limit the type of information displayed in the **Domain Summary** pane by selecting a filter from the **View** drop-down list

2. Click **Next** to proceed to the next configuration window, "Create the WebLogic Domain."

Extending WebLogic Domains

You can add product component functionality, or additional applications and services to an existing domain by extending it using the Configuration Wizard. For example, if you created a base WebLogic Server domain and you want to add the Avitek Medical Records Examples functionality, you must extend the domain by adding the `medrec.jar` template to it.

The Configuration Wizard simplifies the task of extending an existing domain by using extension templates. BEA delivers a set of predefined extension templates, which are described in *Domain Template Reference* at the following URL:

http://e-docs.bea.com/common/docs102/tempref/index.html

The following topics describe the steps required to extend an existing domain using the Configuration Wizard:

- Choose to Extend a Domain

- Select a WebLogic Domain Directory

- Select the Extension Source

- Customize JDBC and JMS Settings

- Extend Your WebLogic Domain

Note: Make sure that the servers in the domain are not running; you cannot extend an active domain using the Configuration Wizard.

Related Topics

Choose to Extend a Domain

The **Welcome** window prompts you to choose whether you want to create a new domain or extend an existing domain by adding product component functionality, applications and services.

Choose **Extend an existing WebLogic domain** and click **Next**.

Select a WebLogic Domain Directory

The **Select a WebLogic Domain Directory** window prompts you to select an existing domain that you want to update with additional applications or services.

To select a WebLogic domain directory:

1. Use the navigation tree to select a valid domain directory: a directory that contains a `config.xml` file in the `config` directory of the domain. A valid domain directory is indicated by the ![icon] icon.

2. Click **Next** to proceed to the next configuration window.

Select the Extension Source

The **Select Extension Source** window prompts you to select the source from which to extend your domain. You can select product components to add to your domain, or extend your domain using an existing extension template.

To select the source from which to extend your domain:

1. Choose one of the following options:

   – Select **Extend my domain automatically to support the following added BEA products:**

     To use this option, simply check the boxes for the components you want to add to your domain. The components already included in your domain are indicated by a grayed-out check box.

   – Select **Extend my domain using an existing extension template**:

     To use this option, you can manually enter the pathname to the extension template in the **Template location** field and click **Next**.

Alternatively, you can click **Browse** to invoke the **Select a Template** dialog box. The default directory lists the predefined extension templates provided with your product installation. Use the drop-down arrow in the **Look In:** field to navigate to an alternate directory if desired. Select the desired extension template and click **OK** to return to the **Select Extension Source** window.

2. Click **Next** to proceed to the next configuration window.

Customize JDBC and JMS Settings

The **Customize JDBC and JMS Settings** window gives you the option to modify existing JDBC and JMS file store settings. If you choose not to customize any JDBC or JMS settings by accepting the default (**No**), you proceed directly to extending the domain.

The following topics summarize the settings you can change:

- **Configure JDBC Data Sources**

  You can edit the settings for the JDBC Data Sources configured in your domain. For more information about the settings in this window, see "Configure JDBC Data Sources" on page 7-1.

- **Test JDBC Data Source Connections**

  You can test the JDBC Data Source connections to the running database on your local machine. For more information, see "Test Data Source Connections" on page 7-4.

- **Set Up JDBC Database Content**

  You can set up the database content used by the applications in the domain using pre-existing SQL or database loading files. For more information, see "Run Database Scripts" on page 7-5.

- **Configure JMS File Stores**

  If your domain contains a JMS file store, this window prompts you to configure JMS file stores as required for your domain. For more information about the settings in this window, see "Configure JMS File Stores" on page 7-6.

- **Review WebLogic Domain**

  In this window, you can review the settings you have defined for your domain. For more information, see "Review the Domain Settings" on page 7-8.

Extend Your WebLogic Domain

The **Extend WebLogic Domain** window displays the read-only name and location for your domain. If your domain contains an applications directory and the domain extension does not contain application files, the location for that directory is also displayed. However, if your domain extension contains application files, you are prompted to provide the pathname to the applications directory in the **Applications Location** field.

1. Once you have defined the applications directory, if required, click **Extend** to extend the domain with the applications, services, and settings provided from the specified extension template.

   The **Creating Domain** window is opened to display status messages during the update process. The Configuration Wizard updates the config.xml file and other application-specific components in the domain directory, as defined by the domain template.

   When the process is complete, the updated domain is ready.

2. Click **Done** in the **Creating Domain** window.

Extending Domains in AquaLogic Service Bus

You can add product component functionality, or additional applications and services to an existing domain by extending it using the Configuration Wizard. For example, if you created a base WebLogic Server domain and you want to add the Avitek Medical Records Examples functionality, you must extend the domain by adding the `medrec.jar` template to it.

The Configuration Wizard simplifies the task of extending an existing domain by using extension templates. BEA delivers a set of predefined extension templates, which are described in *Domain Template Reference* at the following URL:

http://e-docs.bea.com/common/docs102/tempref/index.html

The following topics describe the steps required to extend an existing domain using the Configuration Wizard:

- Choose to Extend a Domain

- Select a WebLogic Domain Directory

- Select the Extension Source

- Customize JDBC and JMS Settings

- Extend Your WebLogic Domain

Note: Make sure that the servers in the domain are not running; you cannot extend an active domain using the Configuration Wizard.

Related Topics

Choose to Extend a Domain

The **Welcome** window prompts you to choose whether you want to create a new domain or extend an existing domain by adding product component functionality, applications and services.

Choose **Extend an existing WebLogic domain** and click **Next**.

Select a WebLogic Domain Directory

The **Select a WebLogic Domain Directory** window prompts you to select an existing domain that you want to update with additional applications or services.

To select a WebLogic domain directory:

1. Use the navigation tree to select a valid domain directory: a directory that contains a `config.xml` file in the `config` directory of the domain. A valid domain directory is indicated by the ⬛ icon.

2. Click **Next** to proceed to the next configuration window.

Select the Extension Source

The **Select Extension Source** window prompts you to select the source from which to extend your domain. You can select product components to add to your domain, or extend your domain using an existing extension template.

Figure 10-1 Select Extension Source Window

To select the source from which to extend your domain:

1. Choose one of the following options:

   – Select **Extend my domain automatically to support the following added BEA products:**

   To use this option, simply check the boxes for the components you want to add to your domain. The components already included in your domain are indicated by a grayed-out check box.

   – Select **Extend my domain using an existing extension template**:

   To use this option, you can manually enter the pathname to the extension template in the **Template location** field and click **Next**.

   Alternatively, you can click **Browse** to invoke the **Select a Template** dialog box. The default directory lists the predefined extension templates provided with your product

installation. Use the drop-down arrow in the **Look In:** field to navigate to an alternate directory if desired. Select the desired extension template and click **OK** to return to the **Select Extension Source** window.

2. Click **Next** to proceed to the next configuration window.

Customize JDBC and JMS Settings

The **Customize JDBC and JMS Settings** window gives you the option to modify existing JDBC and JMS file store settings. If you choose not to customize any JDBC or JMS settings by accepting the default (**No**), you proceed directly to extending the domain.

The following topics summarize the settings you can change:

- **Configure JDBC Data Sources**

   You can edit the settings for the JDBC Data Sources configured in your domain. For more information about the settings in this window, see "Configure JDBC Data Sources" on page 8-1.

- **Configure JMS File Stores**

   If your domain contains a JMS file store, this window prompts you to configure JMS file stores as required for your domain. For more information about the settings in this window, see "Configure JMS File Stores" on page 8-8.

Extend Your WebLogic Domain

The **Extend WebLogic Domain** window displays the read-only name and location for your domain. If your domain contains an applications directory and the domain extension does not contain application files, the location for that directory is also displayed. However, if your domain extension contains application files, you are prompted to provide the pathname to the applications directory in the **Applications Location** field.

1. Once you have defined the applications directory, if required, click **Extend** to extend the domain with the applications, services, and settings provided from the specified extension template.

   The **Creating Domain** window is opened to display status messages during the update process. The Configuration Wizard updates the config.xml file and other application-specific components in the domain directory, as defined by the domain template.

   When the process is complete, the updated domain is ready.

2. Click **Done** in the **Creating Domain** window.

Examples: Using the Configuration Wizard

This section provides information and examples for some common domain configuration tasks using the Configuration Wizard:

- Creating a Domain
- Extending an Existing Domain
- Creating a Domain with Managed Servers and Clusters

Creating a Domain

The following example explains how to create a WebLogic Server domain.

1. Start the Configuration Wizard in graphical mode.

   – On Windows:

      Start > Programs > BEA > Tools > Configuration Wizard

   – On UNIX:

      Go to the `/common/bin` subdirectory of the product installation directory. For example:
      `cd $BEAHOME/wlserver_10.0/common/bin`

      Enter `sh config.sh`

2. In the **Welcome** window, select **Create a new WebLogic domain** and click **Next**.

3. In the **Select a Domain Source** window:

   a. Select **Generate a domain configured automatically to support the following BEA products**.

   Note that the **WebLogic Server** check box is selected by default since it is a prerequisite for all WebLogic domains.

   b. Click **Next**.

4. In the **Configure Administrator Username and Password** window, enter a valid username and password, and click **Next**. This username is used to boot the Administration Server and connect to it.

5. In the **Configure Server Start Mode and JDK** window, specify whether to start the server in development mode or production mode, and select which JDK to use. For more information, see "Specify the Server Start Mode and JDK" on page 3-4. Click **Next**.

6. In the **Customize Environment and Services Settings** window, indicate whether you want to change the distribution of your domain across servers, clusters, and machines, and to modify existing JDBC and JMS file store services. To add Managed Servers and clusters to your domain, or change JDBC and JMS settings, select **Yes** and click **Next**. The Configuration Wizard steps you through the process. To accept the default settings, leave **No** selected and click **Next**.

   In this example, we are not customizing the domain. Leave **No** selected and click **Next**.

7. In the **Create WebLogic Domain** window, enter a name for the domain and specify a location for the domain directory.

   For example, since we are going to extend this domain in the next example using the WebLogic Portal extension template, name the domain my_default_domain.

   By default, the domain is created in *BEA_HOME*\user_projects\domains*domain*, where *BEA_HOME* is the directory that contains the product installation, and *domain* is the domain name that you specify (my_default_domain in this example). Click **Create**.

8. In the **Creating Domain** window, once the domain has been created, do one of the following:

   – If you are creating the domain on a Windows system and you want to start the server immediately, select the **Start Admin Server** check box and click **Done.**

   – Click **Done**.

Extending an Existing Domain

The following example explains the procedure to extend the WebLogic Server domain you created in "Creating a Domain" on page 11-1 using the WebLogic Portal extension template.

Note: Make sure that the servers in the domain are not running; you cannot update an active domain.

1. Start the Configuration Wizard in graphical mode.

   – On Windows:

      Start > Programs > BEA > Tools > Configuration Wizard

   – On UNIX:

      Go to the `/common/bin` subdirectory of the product installation directory. For example: `cd $BEAHOME/wlserver_10.0/common/bin`

      Enter `sh config.sh`

2. In the **Welcome** window, choose **Extend an existing WebLogic domain** and click **Next**.

3. In the **Select a WebLogic Domain Directory** window, navigate to the domain directory that you want to extend. You must select a valid domain directory, which is indicated by the

   icon. Select the domain to be extended and click **Next**.

   For this example, navigate to `BEA_HOME\user_projects\domains` and select `portal_domain`. `BEA_HOME` is the directory that contains your product installation.

4. In the **Select Extension Source** window, you can choose to extend your domain by selecting product components or an extension template.

   To extend your domain using the WebLogic Portal extension template:

   a. Select **Extend my domain using an existing extension template** and click **Browse**.

   b. In the **Select a Template** window, select `wlp.jar` and click **OK**.

   c. Click **Next** in the **Select Extension Source** window.

5. In the **Customize JDBC and JMS Settings** window, you have the option to customize JDBC and JMS file store settings if they were previously defined in your domain or in the extension template you are using to extend your domain. To customize the JDBC and JMS

file store settings, select **Yes** and click **Next**. The Configuration Wizard steps you through the process. To accept the default settings in your templates, leave **No** selected and click **Next**.

For this example, leave **No** selected and click **Next**.

6. In the **Extend WebLogic Domain** window, you can specify an applications directory to contain the application files that are being added to the domain.

By default, this applications directory is
`BEA_HOME\user_projects\applications\`*domain*, where `BEA_HOME` is the directory that contains the product installation, and *`domain`* is the domain name that you specify (`portal_domain` in this example).

Click **Extend**.

7. In the **Creating Domain** window, click **Done** to close the Configuration Wizard.

Creating a Domain with Managed Servers and Clusters

The following example explains the procedure to create a new WebLogic Portal domain that is based on the Basic WebLogic Server Portal domain template, as you did in "Creating a Domain" on page 11-1. In this case, however, you customize your domain to include:

- Two Managed Servers

  A *Managed Server* hosts application components and resources, which are deployed and managed as part of the domain. The two Managed Servers are in addition to the Administration Server.

- A single cluster

  A *cluster* is a group of WebLogic Server instances that work together to provide scalability and high availability for applications. Clusters can improve performance and provide failover if a server instance becomes unavailable. The servers within a cluster can run on the same machine, or they can run on different machines. To the client, a cluster appears as a single WebLogic Server instance. In this example, all the servers and the cluster created by the Configuration Wizard are to run on your local machine.

1. Start the Configuration Wizard in graphical mode.

   – On Windows:

   Start > Programs > BEA > Tools > Configuration Wizard

– On UNIX:

Go to the `/common/bin` subdirectory of the product installation directory. For example:
`cd $BEAHOME/wlserver_10.0/common/bin`

Enter `sh config.sh`

2. In the **Welcome** window, select **Create a new WebLogic domain** and click **Next**.

3. In the **Select a Domain Source** window:

   a. Select **Generate a domain configured automatically to support the following BEA products**.

   Note that the **WebLogic Server** check box is selected by default since it is a prerequisite for all WebLogic domains.

   b. Select the WebLogic Portal checkbox, and click **Next**.

4. In the **Configure Administrator Username and Password** window, enter a valid username and password, and click **Next**. This username is used to boot the Administration Server and connect to it.

5. In the **Configure Server Start Mode and JDK** window, specify whether to start the server in development mode or production mode, and select which JDK to use. For more information, see "Specify the Server Start Mode and JDK" on page 3-4. Click **Next**.

6. In the **Customize Environment and Services Settings** window, indicate whether you want to change the distribution of your domain across servers, clusters, and machines, and to modify existing JDBC and JMS file store services. To add Managed Servers and clusters to your domain, or change JDBC and JMS settings, select **Yes** and click **Next**.

7. In the **Configure the Administration Server** window, define the configuration information for the Administration Server, including:

   – Administration Server name

   – Listen address

   – Nonsecure and secure (optional) listen ports

   Servers can be reached through the following URL:
   protocol`://`*listen-address*`:`*listen-port*

   For more information, see "Configure the Administration Server" on page 5-1.

To configure the Administration Server in this example, enter the following values:

– Name: **MyAdminServer**

– Listen Address: **127.0.0.1**

– Listen Port: **7001**

– SSL Enabled: **Select this check box**

– SSL Listen Port: **7002**

Click **Next** to go to the **Configure Managed Servers** window.

8. In the **Configure Managed Servers** window, define the configuration information for one or more Managed Servers, including:

– Managed Server name

– Listen address

– Nonsecure and secure (optional) listen ports

Servers can be reached through the following URL:
protocol://*listen-address*:*listen-port*.

For example, to add two Managed Servers named MS1 and MS2 to the domain, do the following:

a. Click **Add** to add a Managed Server.

b. Enter the following values, shown in bold, for the first Managed Server:

Name: **MS1**

Listen Address: **127.0.0.1**

Listen Port: **8001**

SSL Enabled: **Select this check box**

SSL Listen Port: **8011**

c. Click **Add** to add a second Managed Server and enter the following values shown in bold:

Name: **MS2**

Listen Address: **127.0.0.1**

Listen Port: **8101**

SSL Enabled: **Select this check box**

SSL Listen Port: **8111**

d. Click **Next** to go to the **Configure Clusters** window.

9. In the **Configure Clusters** window, define the configuration information for one or more clusters, including:

   – Cluster name

   – Multicast address and port

   – Cluster address that identifies the Managed Servers in the cluster

   For example, to add a single cluster, MY_CLUSTER, to the domain, do the following:

   a. Click **Add** to add a cluster.

   b. Enter the following values shown in bold:

   Name: **MY_CLUSTER**

   Multicast Address: **239.192.0.0**

   Multicast Port: **8050**

   Cluster Address: **127.0.0.1**

   Note: Because all the Managed Servers listen at the same IP address (relying on unique port numbers to keep them separate), you should set the Cluster Address to the same IP address as the Managed Servers.

   c. Click **Next** to go to the **Assign Servers to Clusters** window.

10. In the **Assign Servers to Clusters** window, assign the available Managed Servers to a cluster within the domain. By default, MY_CLUSTER, the only cluster that is defined, is already selected in the Cluster pane.

    In this example, all Managed Servers will be assigned to the cluster MY_CLUSTER. To do so:

    a. **Shift-click** the name of each Managed Server on the Server pane so that all Managed Servers are selected.

    b. Click the **right arrow** to assign the Managed Servers to the cluster, MY_CLUSTER.

The names of the Managed Servers are removed from the Server pane and added, below the name of the target cluster, to the Cluster pane.

c. Click **Next** to go to the **Configure Machines** window.

11. In the **Configure Machines** window, you define the configuration information for the Windows and UNIX machines in the domain. This step is optional.

   Note: In this example, all the servers in the domain are to reside on your local machine, so it is unnecessary to set up additional machines and target servers to them. Therefore, you can skip the machine configuration steps.

   Click **Next** to go to the **Review WebLogic Domain** window.

12. In the **Review WebLogic Domain** window, review the detailed configuration settings of your domain before the Configuration Wizard creates it.

   The **Domain Summary** pane shows the Deployment view by default. By selecting different options from the Summary View drop-down list, you can see different views of the domain summary, for example, the Cluster view.

   Select an item in the **Domain Summary** pane on the left and review the associated details in the **Details** pane on the right. You can make limited adjustments by clicking **Previous** to return to a prior window.

   After reviewing the contents of your domain, click **Next** to go to the **Create WebLogic Domain** window.

13. In the **Create WebLogic Domain** window, enter a name for the domain and specify a location for the domain directory.

   In this example, name the domain `myclusterdomain`.

   By default, the domain is created in `BEA_HOME\user_projects\domains\`*`domain`*, where `BEA_HOME` is the directory that contains the product installation, and *`domain`* is the domain name that you specify (`myclusterdomain` in this example). Click **Create**.

14. In the **Creating Domain** window, once the domain has been created, do one of the following:

   – If you are creating the domain on a Windows system and you want to start the server immediately, select the **Start Admin Server** check box and click **Done.**

   – Click **Done**.

How Do I...?

This section provides examples for specific tasks using the Configuration Wizard. The topics include:

- How Do I: Create a WLI Domain Using an Enterprise-Quality Database?

- How Do I: Create a Portal Domain Using an Enterprise-Quality Database?

- How Do I: Create an ALSB Domain Using an Enterprise-Quality Database?

How Do I: Create a WLI Domain Using an Enterprise-Quality Database?

The following example explains the procedure to create a new WebLogic Integration domain that uses a database other than the default PointBase database.

1. Start the Configuration Wizard in graphical mode.

   – On Windows:

   Start > Programs > BEA > Tools > Configuration Wizard

   – On UNIX:

   Go to the /common/bin subdirectory of the product installation directory. For example:
   cd $BEAHOME/weblogic102/common/bin

   Enter sh config.sh

2. In the **Welcome** window, select **Create a new WebLogic domain**, and click **Next**.

3. In the Select a Domain Source window:

   a. Select **Generate a domain configured automatically to support the following BEA products**.

   b. Select the **WebLogic Integration** check box.

      Note: The WebLogic Server check box is selected by default since it is a prerequisite for all WebLogic domains.

   c. Click Next.

4. In the **Configure Administrator Username and Password** window, enter a valid username and password, and click **Next**. This username is used to boot the Administration Server and connect to it.

5. In the **Configure Server Start Mode and JDK** window, specify the Domain startup mode, JDBC and JDK, click **Next**, and for more information, see "Specify the Server Start Mode and JDK" on page 3-4.

6. In the **Customize Environment and Services Settings** window, select **Yes** to modify JDBC Data Source Configurations to specify a non-PointBase database, and click **Next**.

7. In the **Configure the Administration Server** window, define the configuration information for the Administration server, and click **Next**. For more information, see "Configure the Administration Server" on page 5-1.

8. In the **Configure Managed Server**s window, define the configuration information for one or more managed servers, and click **Next**. For more information, see "Configure Managed Servers" on page 5-6.

9. In the **Configure Machines** window, define the configuration information for machine or hosts in the domain, and click **Next**. For more information, see "Configure Machines" on page 5-10.

10. In the Configure JDBC Data Sources window, modify the configuration information for each data source to point to the desired Database type and driver.

    Note: Always define p13nDataSource and cgDataSource-nonXA with a non-XA driver. For example, when configuring a domain for Oracle, use BEA's Oracle Driver (Type 4) with these data sources.

    Note: For every other data source, a tab is displayed in the Configure JDBC Data Sources panel for Database Type and Driver configuration. The remaining data sources can be defined with either an XA or non-XA Driver, as required. When each data source is configured, click **Test Connections** to display the **Test Data**

Source Connections window. Test each database source to verify database connectivity. Go back to the Configure JDBC Data Sources window to check and correct any database connectivity issue before proceeding.

> **Note:** Ensure that the database to which you want to test the connection is running.

Click **Next** to proceed to the **Run Database Scripts** window.

11. In the **Run Database Scripts** window, select the **Log File** check box, and click **Run Scripts** to create WLI Business Process, P13N, and Worklist Data Objects.

> **Note:** In the Results pane, verify that Database Load Successful is returned for each Run Script execution. Otherwise, correct the problem before proceeding.

12. In the **Configure JMS File Store** window, enter any JMS File Store information for the domain, and click **Next**. For more information, see "Configure JMS File Stores" on page 7-6.

13. In the **Review WebLogic Domain** window, verify the contents of the domain, and click **Next**. For more information, see "Review the Domain Settings" on page 7-8.

In the **Create WebLogic Domain** window, type a name and location for your new WebLogic Integration domain, click **Create**. Once the domain is created, the server for WebLogic Integration is ready to be started.

How Do I: Create a Portal Domain Using an Enterprise-Quality Database?

The following example explains the procedure to create a new WebLogic Portal domain that uses a database other than the default PointBase database. For additional information about configuring an Enterprise-Quality Database, see the *WebLogic Portal Database Administration Guide* at the following URL:

http://edocs.bea.com/wlp/docs102/db/index.html

1. Start the Configuration Wizard in graphical mode.

   – On Windows:

   Start > Programs > BEA > Tools > Configuration Wizard

   – On UNIX:

   Go to the /common/bin subdirectory of the product installation directory. For example:
   cd $BEAHOME/wlserver_10.0/common/bin

Enter `sh config.sh`

2. In the **Welcome** window, select **Create a new WebLogic domain**, and click **Next**.

3. In the **Select a Domain Source** window:

   a. Select **Generate a domain configured automatically to support the following BEA products**.

   b. Select the **WebLogic Portal** check box.

      Note: The **WebLogic Server** check box is selected by default since it is a prerequisite for all WebLogic domains.

   c. Optionally, select the **WebLogic Portal GroupSpace Framework** and **WebLogic Portal GroupSpace Application** check boxes to include database resources required for a GroupSpace Community and a pre-configured GroupSpace application, respectively. For more information, see the *WebLogic Portal GroupSpace Guide* at the following URL: http://edocs.bea.com/wlp/docs102/groupspace/index.html

      Note: The **WebLogic Portal** checkbox is selected by default since it is a prerequisite for WebLogic Portal GroupSpace.

   d. Click **Next**.

4. In the **Configure Administrator Username and Password** window, enter a valid username and password, and click **Next**. This username is used to boot the Administration Server and connect to it.

5. In the **Configure Server Start Mode and JDK** window, specify the Domain startup mode, JDBC and JDK, click **Next**, and for more information, see "Specify the Server Start Mode and JDK" on page 3-4.

6. In the **Customize Environment and Services Settings** window, select **Yes** to modify JDBC Data Source Configurations to specify a non-PointBase database, and click **Next**.

7. In the **Configure the Administration Server** window, define the configuration information for the Administration server, and click **Next**. For more information, see "Configure the Administration Server" on page 5-1.

8. In the **Configure Managed Server**s window, define the configuration information for one or more managed servers, and click **Next**. For more information, see "Configure Managed Servers" on page 5-6.

9. In the **Configure Machines** window, define the configuration information for machine or hosts in the domain, and click **Next**. For more information, see "Configure Machines" on page 5-10.

10. In the Configure JDBC Data Sources window, modify the configuration information for each data source to point to the desired Database type and driver. For a list of supported databases and drivers for WebLogic Portal, see *Supported Database Configurations* at the following URL:

   http://edocs.bea.com/platform/suppconfigs/configs102/102_over/overview.html

   Please keep the following considerations in mind:

   – Each data source for WebLogic Portal is described in WL_HOME/portal/db/jdbc/README.txt. This Readme file includes additional important information about database specific data source settings and XA JDBC Driver usage. It also describes a process for switching a default PointBase domain to a domain using an Enterprise Quality Database, without using the Configuration Wizard guide to modify each data source.

   – **For the MySQL Database:**

     The MySQL JDBC driver is not fully XA compatible, therefore WebLogic Portal does not support using com.mysql.jdbc.jdbc2.optional.MysqlXADataSource. Data sources that require XA, and those that are XA capable, should use the com.myself.jdbc.Driver with the global-transactions-protocol LoggingLastResource instead.

   – **For Database Types other than MySQL:**

     Always define portalDataSourceAlwaysXA with an XA driver. For example, when configuring a domain for Oracle, use BEA's Oracle Driver (Type 4 XA).

     Always define p13nDataSource and cgDataSource-nonXA with a non-XA driver. For example, when configuring a domain for Oracle, use BEA's Oracle Driver (Type 4) with these data sources.

     For every other data source, a tab is displayed in the Configure JDBC Data Sources panel for Database Type and Driver configuration. The remaining data sources can be defined with either an XA or non-XA Driver, as required. When each data source is configured, click **Test Connections** to display the **Test Data Source Connections** window. Test each database source to verify database connectivity. Go back to the **Configure JDBC Data Sources** window to check and correct any database connectivity issue before proceeding.

> **Note:** If you selected the **WebLogic Portal GroupSpace Framework** check box in step 3, and you want to use a database other than PointBase for the GroupSpace Database, `appsGroupSpaceDataSource` will require data source configuration. For example, to use an Oracle database with the WebLogic Portal GroupSpace Framework configure `appsGroupSpaceDataSource`, to use BEA's Oracle Driver (Type 4) and specify a user name and password that is unique for WebLogic Groupspace. For more information, see the *WebLogic Portal Database Administration Guide* at the following URL:
> `http://edocs.bea.com/wlp/docs102/db/oracle.html#wp1070839`
> Ensure that the database to which you want to test the connection is running.

Click **Next** to proceed to the **Run Database Scripts** window.

11. In the **Run Database Scripts** window, select the **Log File** check box, and then click **Run Scripts** to create both the P13N and Portal Database Objects.

    Also, if you selected **WebLogic Portal GroupSpace Framework** in Step 3, select the `appsGroupSpaceDataSource` in **Available JDBC Data Sources**, and then click **Run Scripts** to load the database objects for the **WebLogic Portal GroupSpace Framework**.

    > **Note:** In the **Results** pane, verify that **Database Load Successful** is returned for each Run Script execution. Otherwise, correct the problem before proceeding.

12. In the **Configure JMS File Store** window, enter any JMS File Store information for the domain, and click **Next**. For more information, see "Configure JMS File Stores" on page 7-6.

13. In the **Review WebLogic Domain** window, verify the contents of the domain, and click **Next**. For more information, see "Review the Domain Settings" on page 7-8.

14. In the **Create WebLogic Domain** window, enter a name and location for your new WebLogic Portal domain, click **Create**. Once the domain is created, the server for WebLogic Portal is ready to be started.

How Do I: Create an ALSB Domain Using an Enterprise-Quality Database?

The following example explains how to create a new AquaLogic Service Bus domain that uses a database other than PointBase for your JMS Reporting Provider.

1. Start the Configuration Wizard in graphical mode.

    – On Windows:

Start > Programs > BEA > Tools > Configuration Wizard

– On UNIX:

Go to the `/common/bin` subdirectory of the product installation directory. For example:
`cd $BEAHOME/weblogic91/common/bin`

Enter `sh config.sh`

2. In the **Welcome** window, select **Create a new WebLogic domain** and click **Next**.

3. In the **Select a Domain Source** window:

    a. Select **Generate a domain configured automatically to support the following BEA products**.

    b. Select the **Service Bus** check box.

       Note that the **WebLogic Server** check box is selected by default since it is a prerequisite for all WebLogic domains.

    c. Click **Next**.

4. In the **Configure Administrator Username and Password** window, enter a valid username and password, and click **Next**. This username is used to boot the Administration Server and connect to it.

5. In the **Configure Server Start Mode and JDK** window, specify whether to start the server in development mode or production mode, and select which JDK to use. For more information, see "Specify the Server Start Mode and JDK" on page 4-4. Click **Next**.

6. In the **Customize Environment and Services Settings** window, indicate whether you want to change the distribution of your domain across servers, clusters, and machines, or to modify existing JDBC and JMS file store services.

   The JMS Reporting Provider in the Service Bus template is preconfigured to use the PointBase database provided with your installation. In this example, we want to select a different database. Select **Yes** and click **Next**.

7. In the **Configure the Administration Server** window, define the configuration information for the Administration Server, including:

    – Administration Server name

    – Listen address

    – Nonsecure and secure (optional) listen ports

Servers can be reached through the following URL:
protocol://*listen-address*:*listen-port*

For more information, see "Configure the Administration Server" on page 6-2.

In this example, you can either accept the default values, or enter configuration information specific to your Administration Server.

Click **Next** to proceed to the **Configure Managed Servers** window.

8. In the **Configure Managed Server**s window, define the configuration information for one or more Managed Servers. For this example, you do not need to add Managed Servers.

    Click **Next** to proceed to the **Configure Machines** window.

9. In the **Configure Machines** window, define the configuration information for the Windows and UNIX machines in the domain. If you intend to use Node Manager, you must create a machine configuration for each product installation that runs a Node Manager process. For this example, you do not need to configure a machine.

    Click **Next** to proceed to the **Configure JDBC Data Sources** window.

10. In the **Configure JDBC Data Sources** window, you can modify the configuration information for data sources defined in the template. You can also test the connections to your database.

    The JMS Reporting Provider data source (`wlsbjmsrpDataSource`) is preconfigured to use the PointBase database. To use an alternate database, make the following edits in this window:

    – In the **Database type** field, select a supported database, such as Oracle, MS SQL, Sybase, or DB2.

    – In the **Driver** field, select a supported non-XA driver.

        Note: For a list of the supported drivers, see "Supported Database Configurations" in *Supported Configurations for AquaLogic Service Bus 3.0* at
        `http://edocs.bea.com/platform/suppconfigs/configs_al30/alsb30/supported_db.html`.

    – Select the **Supports global transactions** and **Logging last resource** options.

    – Complete the remaining required fields as appropriate for your database.

    When you have completed all the required fields in this window, click **Test Connections** to display the **Test Data Source Connections** window.

11. In the **Test Data Source Connections** window, you can test the connection to the database for each of the data sources defined in your domain, using the JDBC URL defined for the database.

> **Note:** Make sure that the database to which you want to test the connection is running.

To test the connection from the `wlsbjmsrpDataSource` data source to the database you specified, click **Test**. Verify that the test was successful, then click **OK** to return to the **Configure JDBC Data Sources** window.

Click **Next** to proceed to the **Run Database Scripts** window.

12. In the **Run Database Scripts** window, you set up the database content for each of the data sources defined in your domain using pre-existing SQL or database loading files.

If you selected **Development** for the server start mode in Step 5, the database tables are created automatically when the JMS Reporting Provider is deployed.

If you selected **Production** for the server start mode in Step 5, you must execute the database scripts to create the JMS Reporting Provider tables, as described below. To do so:

a. In the **Available JDBC Data Sources** pane, select `wlsbjmsrpDataSource`.

b. The **Available Sql Files And Database Loading Options** pane displays all the scripts available in the data source. Select the scripts to run, by checking or unchecking the check box associated with the scripts.

c. Select the database version from the **DB Version** drop-down menu.

d. To create a log file, select the check box associated with **Log File**. Specify the location of the log file. The default location of the log file is
`BEA_HOME\WLSERVER_10.0\common\lib\jdbc.log`
where: `BEA_HOME` is the directory containing the product installation.

e. Click **Run Scripts**.

To confirm that the tables were created successfully, review the results in the **Results** pane.

f. Click **Next**.

13. In the **Configure JMS File Store** window, you can modify JMS file stores that are configured in your domain.

In this example, you do not need to modify the JMS file store definition.

Click **Next**.

14. In the **Review WebLogic Domain** window, review the detailed configuration settings of your domain before the Configuration Wizard creates the domain.

    The **Domain Summary** pane shows the Deployment view by default. By selecting different options from the Summary View drop-down list, you can see different views of the domain summary, for example, the Cluster view.

    Select an item in the **Domain Summary** pane on the left and review the associated details in the **Details** pane on the right. You can make limited adjustments by clicking **Previous** to return to a prior window.

    After reviewing the contents of your domain, click **Next** to go to the **Create WebLogic Domain** window.

15. In the **Create WebLogic Domain** window, enter a name for the domain and specify a location for the domain directory.

    For example, you may want to name this `servicebus_domain`.

    By default, the domain is created in `BEA_HOME\user_projects\domains\domain`, where `BEA_HOME` is the directory that contains the product installation, and `domain` is the domain name that you specify (`servicebus_domain` in this example). Click **Create**.

16. In the **Creating Domain** window, once the domain has been created, do one of the following:

    – If you are creating the domain on a Windows system and you want to start the server immediately, select the **Start Admin Server** check box and click **Done.**

    – Click **Done**.