Oracle® Fusion Middleware

Creating Domain Templates Using the Domain Template Builder

12*c* Release 1 (12.1.1)

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This document describes how to use the Domain Template Builder to create WebLogic domain and extension templates.

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Preface

This preface describes the document accessibility features and conventions used in this guide–*Creating Domain Templates Using the Domain Template Builder*.

Documentation Accessibility

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introduction

This chapter provides an overview of how to create templates in WebLogic Server by using the Domain Template Builder.

This chapter includes the following sections:

- Section 1.1, "Overview of the Domain Template Builder"
- Section 1.2, "About Domain and Extension Templates"
- Section 1.3, "Overview of Creating Domain Templates by Using the Domain Template Builder"
- Section 1.4, "Overview of Creating Extension Templates by Using the Domain Template Builder"
- Section 1.5, "Additional Tools for Creating Templates"

1.1 Overview of the Domain Template Builder

You can create WebLogic domains by using domain and extension templates that contain the key attributes and files required for building or extending a WebLogic domain. To create domain or extension templates, you use the Domain Template Builder, which is a standalone Java application that guides you through the process. This process is illustrated in Figure 1–1.

Figure 1–1   Domain Template Builder
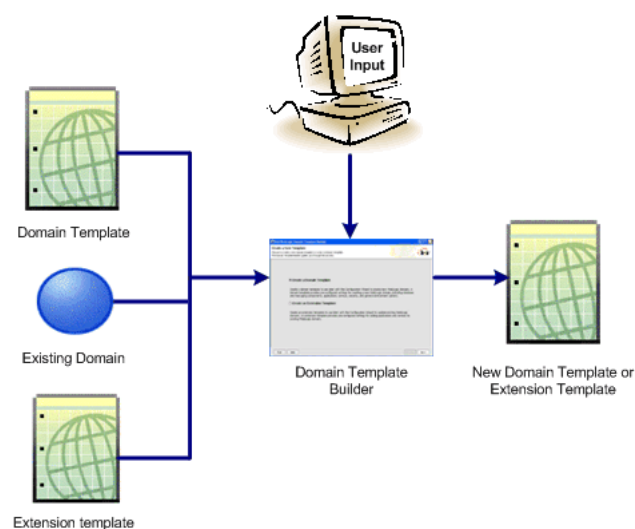
The Domain Template Builder is designed to be used off-line in graphical mode. It is not supported in console mode. Therefore, the console attached to the machine on which you are using the Domain Template Builder must support Java-based GUIs. All consoles for Windows systems support Java-based GUIs; some UNIX-based consoles support Java-based GUIs.

Your product installation includes a set of predefined domain and extension templates. This set of templates includes the WebLogic Server Base Domain template, and various extension templates that allow you to add product features and samples to the base domain. For more information on the templates that are available for various products, see the *Domain Template Reference*.

After you create your domain and add new resources and applications to it, you can use the Domain Template Builder to create a custom domain template. You can also use the Domain Template Builder to customize an existing template. For example, you may want to remove applications or add SQL scripts for additional databases. To do so, select the existing domain or template as the source for your new custom template. When your custom domain templates are complete, you can use them to create domains by using the Configuration Wizard, WLST Offline, or the `unpack` command. For more information about these tools, see Section 1.5, "Additional Tools for Creating Templates."

1.2 About Domain and Extension Templates

In the context of the Domain Template Builder, the term template refers to a Java Archive (JAR) file. A template JAR contains the files and scripts that are needed to create or extend a WebLogic 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 WebLogic domain, including infrastructure components, applications, services, security options, and general environment and operating system options. You can create this type of template from an existing domain by using the Domain Template Builder or the `pack` command. You can then create a domain based on the template.

  The product distribution includes the WebLogic Server Base 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 can use this template to create a basic WebLogic Server domain, which you can then extend with applications and services, or additional product component functionality.

- **Extension template**—defines applications and services that can provide additional features, such as applications, or JDBC resources, JMS components, or deployed libraries. This type of template can be used to update an existing WebLogic domain.

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

Your product installation includes a set of predefined domain and extension templates. This set includes the WebLogic Server Base Domain template and various extension templates that allow you to add component features and samples to the base domain. For more information about these templates and how they relate to each other, see the *Domain Template Reference*.

1.3 Overview of Creating Domain Templates by Using the Domain Template Builder

To create a custom domain template by using the Domain Template Builder, select the domain or domain template from which you want to create your new domain template. You then have the option to modify the following:

- Basic template information

- Application and domain directory contents

- SQL scripts for database configuration

- Administration Server and user configuration

- Basic security configuration, such as creating users, groups, and global roles and their assignments

- Start menu entries (Windows only)

- Customized scripts and variables

Table 1–1 summarizes the steps for creating a domain template by using the Domain Template Builder. These steps are described in detail in Chapter 3, "Using the Domain Template Builder to Create Domain Templates."

Table 1–1 Steps for Creating a Domain Template by Using the Domain Template Builder

In This Step	You Perform This Action
Create a New Template	Choose **Create a Domain Template** to create a domain template.
Select a Template Domain Source	Select the domain template or the WebLogic domain directory from which you want to create a domain template.
Describe the Template	Specify a description for the template.
Add or Omit Applications	Review and, if necessary, modify the list of applications to be included in the template.
Add Files	Review and, if necessary, modify the files to be included in the template.
Add SQL Scripts	Add SQL scripts for each database that you expect to be used with the domains created from this template, and specify the order in which the scripts are executed.
Configure the Administration Server	Define the Administration Server settings, such as listen port and whether or not SSL is enabled.
Configure Administrator Username and Password	Specify the username and password for the Administration Server. Optionally, you can also configure additional security features by defining users and groups and assigning them to global security roles.
Specify Start Menu Entries	Optionally, define entries for the Windows **Start** menu.
"Prepare Scripts and Files with Replacement Variables"	Replace specific paths, filenames, and other domain environment settings with replacement variables in text files contained in the template. The Configuration Wizard later replaces the variables with exact strings to set up a specific WebLogic domain.
Review WebLogic Domain Template	Review the settings defined in your template.
Creating Template	Specify the name and directory for the domain template, and launch the process that creates it.

1.4 Overview of Creating Extension Templates by Using the Domain Template Builder

The process of creating an extension template is similar to the process of creating a domain template, except that you are not prompted to configure the Administration Server, assign an administrator username and password, or specify **Start** menu entries. These domain settings are already defined in the domain you are extending.

To create an extension template, you select a domain or extension template to use as the basis for the extension template. You then have the option to modify:

- Basic template information, such as name and description
- Application directory contents and location
- Files to be included in the template
- SQL scripts for database configuration
- Additional security, such as creating users, groups, and global roles
- Customized scripts and variables

The Domain Template Builder creates an extension template (JAR file) that can be used to extend an existing WebLogic domain.

Table 1–2 summarizes the steps for creating an extension template. These steps are described in detail in Chapter 4, "Creating Extension Templates by Using the Domain Template Builder."

Table 1–2   Steps for Creating Extension Templates by Using the Domain Template Builder

In this step	You
Create a New Template	Choose **Create an Extension Template** to create an extension template.
Select a Template Domain Source	Choose an extension template or a WebLogic domain directory from which you want to create the extension template.
Describe the Template	Enter a description for the template. If you select an existing template as your source, the description for that template is displayed. Review the description, and modify it if necessary.
Add or Omit Applications	Review and, if necessary, modify the list of applications to be included in your extension template.
Add Files	Review and, if necessary, modify the list of files to be included in your extension template.
Add SQL Scripts	Add SQL scripts for each database that you expect to be used with the domains created from this template and specify the order in which the scripts are executed.
Security Configuration Options	Optionally, create users, groups, and roles; then, assign them to groups and global roles.
Prepare Scripts and Files with Replacement Variables	Replace specific paths, filenames, and other environment-specific strings with replacement variables in text files contained in the template. Later, when a specific WebLogic domain is being created, the Configuration Wizard replaces these variables with exact strings.
Review WebLogic Extension Template Settings	Review the settings defined in your template.

Table 1–2   (Cont.) Steps for Creating Extension Templates by Using the Domain Template Builder

In this step	You
Creating Template	Enter a name and directory for the extension template, and launch the process that creates it.

1.5 Additional Tools for Creating Templates

As described earlier, you can create custom domain and extension templates by using the Domain Template Builder. You can also use the following tools to create templates:

- `pack`

  This command enables you to create a template archive (JAR file) that contains a snapshot of either an entire WebLogic domain or a subset of a WebLogic domain. You can use a template that contains a subset of a domain to create a Managed Server domain directory hierarchy on a remote machine.

  For more information, see *Creating Templates and Domains Using the Pack and Unpack Commands*.

- WebLogic Scripting Tool (WLST):

  WLST is a command-line scripting interface, which you can use to interact with and configure WebLogic Server instances and domains. When WLST is offline, you can create a WebLogic domain or update an existing WebLogic domain without connecting to a running WebLogic Server—supporting the same functionality as the Configuration Wizard.

  For more information, see *Oracle WebLogic Scripting Tool* and *WebLogic Scripting Tool Command Reference*.

2

Starting the Domain Template Builder

This chapter describes how to start the Domain Template Builder.

> **Note:** The Domain Template Builder can be used only in graphical mode. To create templates from the command line, use the `pack` command. For more information, see *Creating Templates and Domains Using the Pack and Unpack Commands*.

Starting the Domain Template Builder on a Windows machine

To start the Domain Template Builder on a Windows machine, do one of the following:

- From the **Start** menu, choose **Start** > **Programs** > **Oracle WebLogic** > **WebLogic Server** > **Tools** > **Domain Template Builder**.

  The Create a New Template window is displayed.

- From a command prompt window:

  1. Go to the `common\bin` subdirectory of the WebLogic Server installation directory.

  2. Run the `config_builder.cmd` command.

Starting the Domain Template Builder on a UNIX machine

To start the Domain Template Builder on a UNIX machine, the console attached to the machine on which you are running the Domain Template Builder must support Java-based GUIs.

1. Log on to the target system.

2. Open a command shell.

3. Go to the `common/bin` subdirectory of the WebLogic Server installation directory.

4. Run the following script:

   `sh config_builder.sh`

3

Using the Domain Template Builder to Create Domain Templates

This chapter describes how to create a domain template using the Domain Template Builder.

This chapter includes the following sections:

- Section 3.1, "Create a New Template"
- Section 3.2, "Select a Template Domain Source"
- Section 3.3, "Describe the Template"
- Section 3.4, "Specify Template JAR Name and Location"
- Section 3.5, "Add or Omit Applications"
- Section 3.6, "Add Files"
- Section 3.7, "Add SQL Scripts"
- Section 3.8, "Configure the Administration Server"
- Section 3.9, "Configure Administrator Username and Password"
- Section 3.10, "Configure Users, Groups, and Global Roles"
- Section 3.14, "Specify Start Menu Entries"
- Section 3.15, "Prepare Scripts and Files with Replacement Variables"
- Section 3.16, "Review WebLogic Domain Template"
- Section 3.17, "Creating Template"

3.1 Create a New Template

The Create a New Template screen is displayed when you start the Domain Template Builder as described in Chapter 2, "Starting the Domain Template Builder."

Table 3–1 describes the options on this screen.

Table 3–1   Options for Creating Templates

Choose this option	When you want to
Create a Domain Template	Create a template that defines the full set of resources within a WebLogic domain, including infrastructure components, applications, services, security options, and general environment and operating system parameters.
	You can use the template that you create as the basis for creating a WebLogic domain, by specifying the template in the Configuration Wizard, WLST, or the unpack command.
Create an Extension Template	Create a template that defines applications and services that can be used to extend existing WebLogic domains.
	You can import applications and services stored in extension templates into an existing WebLogic domain by using the Configuration Wizard. For more information, see Chapter 4, "Creating Extension Templates by Using the Domain Template Builder."

Select **Create a Domain Template** and click **Next**.

The Select a Template Domain Source screen is displayed.

3.2 Select a Template Domain Source

The **Select a Template Domain Source** screen lets you choose the domain or domain template from which you want to create a new domain template.

To select an existing WebLogic domain as the source for the new template

1. Select the Select a Domain tab.

2. Navigate to the directory of the WebLogic domain from which you want to create a domain template. Valid domain directories are indicated by the Domain directory folder icon, shown here.

3. Click **Next**.

   The Domain Template Builder verifies that the directory you selected contains a valid domain.

   > **Note:**   If the directory does not contain a valid domain, an error message is displayed.

   The Describe the Template screen is displayed.

To select a domain template as the source for the new template

1. Select the **Select a Template** tab.

2. From the list of templates displayed in the **Templates** pane, select a template.

   The templates in the list are located in the directory specified in the **Locate Additional Templates** pane. If you want to change the directory, click **Browse**, and then either navigate to the appropriate directory or enter the path manually.

3. Click **Next**.

The Describe the Template screen is displayed.

3.3 Describe the Template

Use the Describe the Template screen to provide a description for the template.

> **Note:** This description is displayed in the **Select a Template** pane of the Select a Template Domain Source screen.

- If you selected a WebLogic domain as the source for the new template, enter the information required for the domain, and click **Next**.

- If you selected a template as the source for the new template, information about the selected template is displayed. Review the information, and, if necessary, change it to suit the requirements of your domain. When done, click **Next**.

Table 3–2 describes the fields on the Describe the Template screen. Fields marked with an asterisk are required.

Table 3–2   Describe the Template

Field	Description
*Name	Enter a valid name for the domain template. The name must be a string of characters, and can include spaces.
*Version	Enter a version number for the template, for example, 1.0.0 or 10.3.3.0
Author	Enter the name of the author of the template. The author must be a string of characters, and can include spaces.
Category	Enter the name of the category in which you want this template to be displayed. The category must be a string of characters, and can include spaces.
Description	Enter a description of the domain template. The description must be a string of characters, and can include spaces.

3.4 Specify Template JAR Name and Location

From the Specify Template JAR Name and Location screen, you can accept the provided default template JAR file name and directory location, or you change them. Table 3–3 describes the fields on this screen.

When done, click **Next**.

Table 3–3   Specify Template JAR File Name and Location

Field	Description
Template jar name	This field defaults to a name based on the values you entered in the Name and Version fields on the previous screen. If the template name includes spaces, they are replaced by a period (.). The Name and Version are separated by an underscore (_). For example, if you entered "My new domain" for Name and 1.0.0 for Version on the previous screen, the JAR file name defaults to my.new.domain_1.0.0.
	You can enter another name for the JAR file if you want. The name must not include spaces.
Template location	This field defaults to *MW_HOME*\user_templates, where *MW_HOME* is the Middleware home directory. If you want to store the file elsewhere, either enter the full path to the desired directory or click the **Browse** button to select the directory.

3.5 Add or Omit Applications

The Add or Omit Applications screen is displayed only if applications are included in the template or domain that you selected.

From the Add or Omit Applications screen, you can

- Review the list of applications that are currently defined in your template source

- Review the paths of the current and imported applications

- If necessary, change the relative path for the directory into which applications are imported

- If necessary, omit applications from the list of files to be imported.

By default, the Domain Template Builder includes applications from the domain or template you specified as the source for the template that you are creating. For example:

- If you selected a *template* as the source for the new template, and if the source template has a separately defined applications directory, all the application files defined in the applications directory are included by default.

- If you selected a *domain* as the source for the new template, applications that fulfill the following conditions are included by default:

    - Applications that are defined in the `config.xml` file by the `app-deployment` element

    - Applications that are not considered internal applications in your product installation are included by default

    ---

    Note: When you create or extend a clustered domain (by using the Configuration Wizard or WLST) based on a template that contains applications with application-scoped JDBC or JMS resources, you may need to perform certain additional steps after creating or extending the domain. These steps are needed to ensure that the application and its application-scoped resources are targeted and deployed properly. For more information about targeting and deploying application-scoped modules, see "Deploying Applications and Modules with weblogic.deployer" in *Deploying Applications to Oracle WebLogic Server*.

To add applications in (or omit them from) the template:

1. In the Applications pane, review the list of applications to be included in your template. By default, all the applications are selected.

    The listed applications reside in the directory specified in the **Current Application Path** field. The applications are copied into your template from this location.

2. To change the relative path of the directory into which an application is imported, do the following:

    a. Select the application in the **Applications** pane.

    b. In the **Imported Application Path** field, enter the relative path you want to use after the application is imported into your template.

> **Note:** Some of the applications listed in the **Applications** pane may be included with the WebLogic products. You cannot change the relative paths for these applications. When you select these applications in the **Applications** pane, the **Imported Application Path** field is replaced by an **Internal Application Path** field. Because these files are installed on your system during your product installation, they are not copied into the template at template creation time. When you use this template to create a domain, this path points to the application files located in your product installation directory.

3. Deselect the check box for any application that you do not want to include in the template.

4. Click **Next**.

   The Add Files screen is displayed.

3.6 Add Files

By default, the Domain Template Builder includes files from the WebLogic domain or template you specified as the source for the new template.

- If you selected an existing template as the source for the new template, all files from the source template are automatically included. If the existing template defines a separate applications directory, the applications in the template are listed under the Applications Root Directory in the **Current Template View** pane.

- If you selected a domain as the source for your new template, the following files and directories are included by default:

  - All files in the root directory with the following extensions: `.cmd`, `.sh`, `.xml`, `.properties`, and `.ini`

  - All files with the `.pem` extension defined in the SSL configuration for your domain

  - `bin` directory

  - `lib` directory

  - All files in the `security` directory that are not created automatically during domain creation

    For example, in WebLogic, `XACMLRoleMapperInit.ldift` is not created automatically, and therefore is included in the template by default when creating a template.

  - All files and subdirectories in the `config` directory that are *not* included by the Domain Template Builder automatically during template creation. For example, `config.xml` and any JDBC and JMS resources defined in `config.xml` are not displayed in the **Current Template View** pane by default because the Domain Template Builder automatically includes them in the template when creating the template.

> **Note:** By default, the `servers` directory is not included in the template. If you have configured additional security data such as users, groups, or roles, through the WebLogic Server Administration Console or other online tools, it is stored in the LDAP server and is not included in the template. You must export the data first and then import it into the target domain.

You may also need to include other files from your domain or file system that are required by the applications.

The Add Files screen lets you to review, add, or remove files in the template.

- To view the current list of files in your template, expand the Domain Root Directory and Applications Root Directory in the **Current Template View** pane.

- To add a file, navigate to the file within the **File System View** pane and select **Add File**. You can use the filters in the **Show File Types** drop-down list to limit the files displayed in this pane. For example, to display only files with the `.cmd` extension, select `*.cmd` from the drop-down list.

- To remove a file, select the file from the **Current Template View** pane, and select **Remove File**.

> **Note:** You cannot remove files shown in red or their parent directories as they consist of the applications defined in the `config.xml` file in the template source. These files are included by default in the template being created. If you do not want these files included in your template, you must remove the application with which they are associated. To do so, click **Previous** to return to the Add or Omit Applications screen and deselect the appropriate check box for the application.
>
> If you attempt to add a file that is created automatically by the Configuration Wizard at domain creation time, an error message is displayed.

After adding and removing files as necessary, click **Next**.

The Add SQL Scripts screen is displayed.

3.7 Add SQL Scripts

You can add your own SQL scripts to the new template, so that the scripts are available when you create a WebLogic domain based on the template.

> **Note:** SQL scripts that are included with the product do not need to be added to the template.

The Add SQL Scripts window lets you add SQL scripts for each database that you expect to be used with the WebLogic domains created from this template. You can also specify the order in which the scripts are executed. When you create a WebLogic domain based on this template, the databases and associated SQL scripts that you include are displayed on the Run Database Scripts screen of the Configuration Wizard.

> **Note:** If you use a template as the basis for the new template, SQL files that are included in the source template are displayed in the **Selected Database Scripts** pane, organized by database type.

To add SQL scripts to the template:

1. In the Database Type and Version pane, select a database from the **Type** drop-down list.

2. Select the database version from the **Version** drop-down list or enter a version number directly in the field.

3. Click **Add SQL File**.

   The Open dialog box is displayed.

4. Navigate to the directory that contains the SQL scripts for the selected database.

5. Select the SQL files to be added, and click **Add SQL File(s)**.

   The SQL files that you added are displayed in the Selected SQL Files pane. The **Selected Database Scripts** pane displays a tree-view of all the databases and associated SQL scripts included in the template.

   You can change the order in which the SQL files are executed by using the **Up** and **Down** arrow icons. The specified sequence is reflected in the **Selected Database Scripts** pane.

6. Repeat steps 1 through 5 for each database for which you want to include SQL files.

7. Click **Next**.

To remove SQL scripts from the template:

1. From the **Type** drop-down list in the **Database Type and Version** pane, select the database for which you want to remove SQL scripts.

2. Select the database version from the **Version** drop-down list or enter a version number directly in the field.

   The SQL scripts for the selected database displayed in the **Selected Database Scripts** pane are listed in the **Selected SQL Files** pane.

3. In the **Selected SQL Files** pane, select the SQL file to be removed and click **Remove SQL File**.

4. Repeat steps 1 through 3 for each SQL script that you want to remove.

5. Click **Next**.

   The Configure the Administration Server screen is displayed.

   > **Note:** If you are creating an extension template, the Security Configuration Options screen is displayed next. For more information, see Section 4.8, "Security Configuration Options."

3.8 Configure the Administration Server

In every WebLogic domain, one server must be designated as the Administration Server. The Administration Server is the central point from which the entire domain is managed.

You can access the Administrator Server by using the following URL:

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

The protocol can be any of the following: t3, t3s, http, https.

You can define the *listen-address* and *listen-port* for the Administration Server on the Configure the Administration Server screen of the Domain Template Builder.

For information about the fields on the **Configure the Administration Server** screen, see "Configure the Administration Server" in *Creating Domains Using the Configuration Wizard*.

After configuring the Administration Server, click **Next**.

The Configure Administrator Username and Password screen is displayed.

3.9 Configure Administrator Username and Password

When you create a domain template, the administrator username and password from the original WebLogic domain or template are included in your new template. If necessary, you can modify this username and password.

You can also provide extra security for application resources using the following security features:

- Users and groups: Classification of individuals and groups of individuals who may be granted a security role. Typically, a group is a collection of users who share a role or function within a company, such as working in the same department.

- Global security roles: Dynamically computed privileges that are used to restrict access to WebLogic resources. These privileges are granted to or withheld from users according to the roles that they are assigned.

To modify the administrator username and password:

1. Specify a valid username in the **Username** field. This name is used to start the Administration Server and connect to it. User names are case sensitive.

   Do not use commas or any characters in the following comma-delimited list:

   ```
   \t, < >, #, |, &, ?, ( ), { }
   ```

2. Specify a valid password in the **User password** field. A valid password must contain *at least* eight case-sensitive characters and *at least* one numeric character. The password value is encrypted.

3. Re-enter the password in the **Confirm user password** field.

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

5. If you want to configure additional users, groups, and global roles, select **Yes** at the bottom of the screen, and click **Next**. The Configure Users, Groups, and Global Roles screen is displayed.

   If you do not want to configure additional users, groups, and global roles, select **No**, and click **Next**. The Specify Start Menu Entries screen is displayed (see Section 3.14, "Specify Start Menu Entries."

3.10 Configure Users, Groups, and Global Roles

The Configure Users, Groups and Global Roles screen is displayed in the Domain Template Builder in the following situations:

- You are creating a domain template and you selected the option to configure users, groups, and global roles on the Configure Administrator Username and Password screen.

- You are creating an extension template and you selected **Yes** on the Security Configurations Option screen.

Users, groups, and global roles are defined as follows:

- A user is an entity that can be authenticated. The user can be a person or a software entity, such as a Java client. Each user is given a unique identity within a security realm.

- A group is a collection of users who usually have something in common, such as that they are working in the same department in a company.

- A security role is a privilege granted to users or groups based on specific conditions. Like groups, security roles allow you to restrict access to WebLogic resources for multiple users simultaneously. A security role that applies to all WebLogic resources deployed within a security realm (and, thus, within the entire WebLogic domain) is called a global role.

The Configure Users, Groups and Global Roles screen lets you define users, groups, and roles for authentication purposes. You must define at least one user.

> **Note:** Depending on the template or domain you selected, one or more users, groups, or roles may be defined already. In addition, WebLogic Server defines a default set of groups and roles. For a list of the default groups and roles defined in WebLogic Server, see "Users, Groups, and Security Roles" in *Securing Resources Using Roles and Policies for Oracle WebLogic Server*.

To configure users, groups, and global roles:

1. Select the **User** tab and review the current user configuration. Add or change entries as required for your domain. To delete a user, click in any of the fields of the relevant row, and click **Delete**.

2. Select the **Group** tab and review the current group configuration. Add or change the entries required for your domain. To delete a group, click in any of the fields of the relevant row, and click **Delete**.

3. Select the **Role** tab and review the current role configuration. The predefined list of WebLogic Server global security roles is displayed. Add or change the entries required for your domain by using the guidelines provided in Table 3–4. To delete a role, click in any of its fields of the relevant row, and click **Delete**.

> **Note:** Do not make the default global security roles for administrative and server resources more restrictive. If you eliminate any existing security roles, you risk degrading WebLogic Server operation. You can, however, make the default security roles more inclusive (for example, by adding new security roles).

Table 3–4   Configure Users, Groups and Global Roles

Field	Description
Name*	Enter a valid name for the role. Security role names are case sensitive. Do not use blank spaces, commas, hyphens, or any characters in the following comma-delimited list:
	`\t, < >, #, |, &, ~, ?, ( ), { }`
	The default value in this field is `new_Role_n`, where `n` specifies a numeric value that is used to differentiate among all default role names; the value of `n` for the first role is 1. The value is incremented by 1 for each role that is added.
Description	Enter a description of the role to be used for informational purposes only

When you finish your updates, click **Next**.

The Assign Users to Groups screen is displayed.

3.11 Assign Users to Groups

The Assign Users to Groups screen lets you assign users to groups. It is recommended that you add users to groups. By managing groups, you can manage multiple users more efficiently.

1. In the **Group** pane, select the group to which you want to assign users.

    The current assignments for the selected group are displayed in the left pane.

2. In the right pane, do one of the following:

    ■   To assign a user to the selected group, select the check box for the user.

    ■   To remove a user from the selected group, clear the check box for the user.

    To select all users in the list, click **Select All**. To deselect all users in the list, click **Unselect All**.

    The list of groups associated with each user is updated to reflect the changes.

3. Repeat steps 1 and 2 for each user that you want to assign to a group. You can assign a user to more than one group.

4. Click **Next.**

    The Assign Groups to Groups screen is displayed.

3.12 Assign Groups to Groups

The Assign Groups to Groups screen lets you designate one group as a subgroup of another, to refine management of security for your domain.

> **Note:**   You should not assign groups recursively. For example, do not assign groupA as a subgroup of groupB and groupB as a subgroup of groupA.

1. In the **Group** pane, select the group to which you want to assign a subgroup.

    The current assignments for the selected group are displayed in the left pane.

2. In the right pane, do one of the following:

- ■ To assign a group as a subgroup of the selected group, select the check box for the group.

  To select all groups in the list, click **Select All**.

- ■ To remove a subgroup from the selected group, deselect the check box for the group.

  To unselect all groups in the list, click **Unselect All**.

The list of subgroups associated with each group is updated to reflect your changes.

3. Repeat steps 1 and 2 for each group that you want to designate as a subgroup. You can make a group a subgroup of more than one group.

4. Click **Next**.

The Assign Users and Group to Global Roles screen is displayed.

3.13 Assign Users and Groups to Global Roles

The Assign Users and Groups to Global Roles screen prompts you to assign users and groups to the global security roles defined by WebLogic Server. For a list of the default roles and the privileges that users or groups in these security roles are granted, see "Default Global Roles" in *Securing Resources Using Roles and Policies for Oracle WebLogic Server*.

> **Note:**   You must assign one or more users or groups (containing one or more users) to the administrator role to ensure that there is at least one user who can start WebLogic Server.

1. In the **Role** pane, select the global role to which you want to assign users and groups.

   The current assignments for the selected role are displayed in the left pane.

2. In the right pane, do one of the following:

   - ■ To assign a user or group to the selected role, select the associated check box.

     To select all users and groups in the list, click **Select All**.

   - ■ To remove a user or group from the selected role, clear the associated check box.

     To unselect all users and groups in the list, click **Unselect All**.

   The **Role** list corresponding to each user and group is updated to reflect the global roles to which the user and group are assigned.

3. Repeat steps 1 and 2 for each user or group that you want to assign to a global role. You can assign a user or group to more than one global role.

4. Click **Next**.

The Specify Start Menu Entries screen is displayed.

> **Note:** If you are creating an extension template, the Prepare Scripts and Files with Replacement Variables screen that is displayed next. For more information, see Section 3.15, "Prepare Scripts and Files with Replacement Variables."

3.14 Specify Start Menu Entries

The **Specify Start Menu Entries** screen prompts you to create items to be added to the Windows **Start** menu.

The next step depends on the source for the new template that you are creating.

- If you selected a WebLogic domain as the source for the new template, Start menu entries are not defined. To create Start menu entries for the domain, enter the required information and click **Next**. The required information is defined in Table 3–5.

- If you selected a *template* as the source for your custom template, the Start menu entries from the selected template are displayed here. Review the information and, if necessary, modify it to meet the requirements of your domain, as described in Table 3–5.

Add, modify, or delete entries as required by your domain, using the guidelines provided in Table 3–5.

Table 3–5   Specify Start Menu Entries

Field	Description
Shortcut link name	Enter a valid name for the shortcut to be displayed in the Start menu. The name must be a string of characters and it may include the space character.
Program	Specify the program to be run when the shortcut is selected. A list of the programs defined by the template source is shown in the drop-down list. To use a predefined program, select it from the drop-down list.
	To specify an alternate program, enter the relative path to it in this field. To ensure that the template is portable, you can use variables such as $USER_ INSTALL_DIR$ and $DOMAIN_DIRECTORY$ to specify your program path. For example:
	$USER_INSTALL_DIR$\server\bin\installNodeMgrSvc.cmd.
	Note: Do not specify any executable or script that does not reside in the MW_ HOME directory.
Argument	Enter any parameter that you want to pass to the shortcut program.
Working directory	Enter the path of the directory from which the shortcut will be executed. If you have selected a program from the drop-down list in the **Program** field, this field is not available.
	Note: By default, the working directory is the directory that contains the executable or script. In most cases, you do not need this field.
Description	Enter a description for the shortcut.

To delete an entry, click the tab for the Start menu entry, and click **Delete**.

When you finish updating your settings, click **Next**.

The Prepare Scripts and Files with Replacement Variables screen is displayed.

3.15 Prepare Scripts and Files with Replacement Variables

When you are creating a template, you want the scripts and files that you are packaging with your template to be free of local domain environment settings and ready for use by the Configuration Wizard. The Domain Template Builder automatically updates any standard scripts included in a template (such as start scripts) by replacing hard-coded values for various domain environment settings with replacement variables. The Configuration Wizard can replace these variables with new hard-coded values during the configuration of a new WebLogic domain.

The Prepare Scripts and Files with Replacement Variables screen enables you to replace hard-coded strings with replacement variables in files that have not been updated by the Domain Template Builder.

> **Note:** The check boxes of files that were automatically updated by the Domain Template Builder are selected.

To insert replacement variables into your files:

1. Open the file in one of the following ways:

   - Double-click the appropriate filename in the **Select File** list.

   - Select the appropriate filename in the list and click **Edit**.

   The **Instructions** pane is replaced by an **Edit File** pane, in which the file is displayed. An editing toolbar is provided at the top of the **Edit File** pane.

2. To insert a replacement variable:

   a. Select the string to be replaced.

   b. Click the right mouse button. A list of replacement variables is displayed.

   c. Select the required variable.

   The replacement variable replaces the selected string. The Configuration Wizard later substitutes literal strings for the replacement variables to set up a specific WebLogic domain. For definitions of the available replacement variables, see Section 3.15.1, "Replacement Variable Definitions."

3. Repeat steps 1 and 2 for each string for which you want to substitute a variable.

4. Review the changes and click **Save** to preserve your changes, or **Revert** to replace the current version of the file with the last saved version. If you edited the file since the last time you saved it, you are prompted to confirm the revert operation.

   > **Note:** You can also click **Reset** in the **Select File** pane to revert to the saved version of the file.

5. If you saved the edited file, select the check box next to the filename in the **Select File** pane.

6. Repeat steps 1 through 5 for each file in which you want to insert replacement variables.

7. Click **Next**.

   The Review the Domain Template screen is displayed (see Section 3.16, "Review WebLogic Domain Template").

3.15.1 Replacement Variable Definitions

The following table defines the replacement variables most commonly used in files.

Table 3–6   List of Replacement Variables

Variable	Definition
ADMIN_SERVER_URL	URL specifying the listen address (host name or IP address) and port number of the Administration Server for the WebLogic domain.
APPLICATIONS_ DIRECTORY	Directory containing the applications required by the domain. By default, the pathname for this directory is *MW_HOME*\user_ projects\applications\domain.
BEA_HOME	The Middleware Home directory (*MW_HOME*) in which the products associated with the domain are installed. On a Windows system, the default path for this directory is C:\Oracle\Middleware.
DOCSWEBROOT	The URL specifying the location of the product documentation on the Internet.
DOMAIN_HOME	Directory in which the domain resides.
DOMAIN_NAME	Name of the domain.
DOMAIN_USER	Administration username required to start the server.
JAVA_HOME	Location of the JDK used to start WebLogic Server.
JAVA_VENDOR	Vendor of the JVM, for example, Oracle, HP, IBM, and Sun.
JAVA_VM	Mode in which you want the JVM to run, such as -jrockit, -server, -hotspot.
LISTEN_PORT	Port to be used to listen for regular, non-secure requests (through protocols such as HTTP and T3). The default value is 7001.
PRODUCTION_MODE	Mode in which the server is started. If this variable is set to true, the server starts in production mode; if set to false, the server starts in development mode.
SAMPLES_HOME	Directory containing the samples provided with your product installation. By default, the path name for this directory is *MW_ HOME*\wlserver_*version*\samples.
SERVER_HOST	Name or address of the machine hosting the server.
SERVER_NAME	Name of the server to be started.
SERVER_PORT	Port to be used to listen for regular, non-secure requests (through protocols such as HTTP and T3). The default value is 7001.
SSL_PORT	Port to be used to listen for secure requests (through protocols such as HTTPS and T3S). The default value is 7002.
STARTMODE	Mode in which the server is started: development or production.
USERDOMAIN_HOME	Directory containing the user domains created with the Configuration Wizard. By default, the path for this directory is *MW_ HOME*\user_projects\domains.
WL_HOME	Root directory of your WebLogic Server installation. By default, this directory is defined as *MW_HOME*\wlserver_*version*.
WLW_INSTALL_DIR	Root directory of your WebLogic Workshop installation. By default, the path for this directory is *MW_HOME*\workshop_*version*.

3.16 Review WebLogic Domain Template

The Review WebLogic Domain Template screen lets you review the settings for the new template before it is created.

1. Select an item in the **Template Summary** pane on the left and review the associated details in the **Details** pane on the right. If you need to change any settings that you defined in previous windows, select **Previous** to return to the required configuration window.

   > **Note:** You can limit the type of information displayed in the Template Summary screen by using the **View** drop-down list.

2. Click **Create**.

   The Creating Template screen is displayed.

3.17 Creating Template

The **Creating Template** screen displays status messages during the template creation process. The Domain Template Builder generates a JAR file that contains all the components required to generate a new WebLogic domain, including the template settings that you provided.

When the process completes, click **Done** to exit the Domain Template Builder.

The files included in a template vary, depending on the WebLogic domain or template on which the template is based. For example, if you specify any Start menu entries in the Specify Start Menu Entries screen, a `startmenu.xml` file that contains the specified entries is included in the template. When you use this template to create a domain, Start menu entries are created by using the values specified in this file. For more information, see "Files Typically Included in a Template" in the *Domain Template Reference*.

4

Creating Extension Templates by Using the Domain Template Builder

This chapter describes how to create an extension template using the Domain Template Builder. The process for creating an extension template is similar to the process for creating a domain template, except that you do not configure the Administration Server, assign an administrator username and password, or specify Start menu entries. These domain settings are already defined in the domain you are extending.

This chapter includes the following sections:

- Section 4.1, "Create a New Template"
- Section 4.2, "Select a Template Domain Source"
- Section 4.3, "Describe the Template"
- Section 4.4, "Specify Template JAR Name and Location"
- Section 4.5, "Add or Omit Applications"
- Section 4.6, "Add Files"
- Section 4.7, "Add SQL Scripts"
- Section 4.8, "Security Configuration Options"
- Section 4.9, "Prepare Scripts and Files with Replacement Variables"
- Section 4.10, "Review WebLogic Extension Template Settings"
- Section 4.11, "Creating Template"

4.1 Create a New Template

The Create a New Template screen is displayed when you start the Domain Template Builder as described in Chapter 2, "Starting the Domain Template Builder."

Select **Create an Extension Template** and click **Next**.

The Select a Template Domain Source screen is displayed.

4.2 Select a Template Domain Source

The Select a Template Domain Source screen lets you choose the application template or domain directory from which you want to create an extension template.

To select an extension template as the source for the new extension template

1. Select the **Select a Template** tab.

2. Select a template from the **Templates** list.

   The templates are grouped by category.

   The extension templates displayed in the list are located in the directory specified in the **Locate Additional Templates** pane. If you want to change the directory, either enter the path, or click **Browse** and then navigate to the appropriate directory.

3. Click **Next**. A Progress dialog box is displayed while the template is being prepared.

   When this process completes, the Describe the Template screen is displayed. Proceed to the next section.

To select a WebLogic domain as the source for the new extension template

1. Select the **Select a Domain** tab.

2. Navigate to the domain directory from which you want to create an extension template and select the desired WebLogic domain.

   Valid domain directories are indicated by a Domain directory folder icon.

3. Click **Next**. A Progress dialog box is displayed while the template is being prepared.

   When this process completes, the Describe the Template screen is displayed.

4.3 Describe the Template

The Describe the Template screen prompts you to provide a description for the template.

> **Note:** The description that you provide here is displayed in the **Select a Template** pane of the Select a Template Domain Source screen.

- If you selected a template as the source for the new template, information about the selected template is displayed. Review the information, and, if necessary, change it to suit the requirements of your WebLogic domain. Then, click **Next**.

- If you selected a WebLogic domain as the source for the new template, enter the information required for the domain, and click **Next**.

For information about the fields in the Describe the Template screen, see Table 3–2.

The Add or Omit Applications screen is displayed.

4.4 Specify Template JAR Name and Location

From the Specify Template JAR Name and Location screen, you can accept the provided default template JAR file name and directory location, or you change them.

For more information on these fields, see Table 3–3.

When done, click **Next**.

4.5 Add or Omit Applications

On the Add or Omit Applications screen, you can

- Review the list of applications that are currently defined in your template source

- Review the path names of the current and imported applications

- If necessary, change the relative directory into which applications are imported

- If necessary, omit applications from the list of files to be imported.

For more information, see Section 3.5, "Add or Omit Applications."

After performing the required steps, click **Next**. The Add Files screen is displayed.

4.6 Add Files

By default, the Domain Template Builder includes files from the domain or extension template that you specified as the source for the new extension template. On the Add Files screen, you can review, add, and remove files in the template.

For more information, see Section 3.6, "Add Files."

After performing the required steps, click **Next**. The Add SQL Scripts screen is displayed.

4.7 Add SQL Scripts

On the Add SQL Scripts screen, you can add SQL scripts for each database that you expect to be used with the WebLogic domains that you extend using this template. You can also specify the order in which the scripts should be executed. For more information, see Section 3.7, "Add SQL Scripts."

After performing the required steps, click **Next**. The Security Configuration Options screen is displayed.

4.8 Security Configuration Options

Optionally, you can configure security parameters for the application resources within the WebLogic domain. You can use the following security features to provide security for an application resource:

- Users and groups: Classification of individuals and groups of individuals who may be granted a security role. Typically, a group is a collection of users who share a role or function within a company, such as working in the same department.

- Global security roles: Dynamically computed privileges that are used to restrict access to WebLogic resources. These privileges are granted to or withheld from users according to the roles to which they are assigned.

  For example, to leverage individual skills, many Web development teams divide system administration responsibilities into distinct roles. A team may then assign a different level of permission to each role. Each project might give only one or two team members permission to deploy components, but allow all team members to view the WebLogic Server configuration.

  WebLogic Server supports such role-based development by providing four default global roles: Admin, Deployer, Operator, and Monitor. These roles determine access privileges for system administration operations.

> **Note:** Do not make the default global security roles for administrative and server resources more restrictive. If you eliminate any existing security roles, you risk degrading WebLogic Server operation. You can, however, make the default security roles more inclusive (for example, by adding new security roles).

On the Security Configuration Options screen, you can set security options for your application.

- If you choose **No**, the security settings for the new extension template are the same as the settings defined in the source template or WebLogic domain.

- If you choose **Yes**, additional screens are displayed to let you configure the security options, as described in Table 4–1.

Table 4–1   Security Configuration Options Window - Parameters

Task	Description
Configure users, groups, and global roles	Define users, groups, and global roles for authentication purposes. For instructions, see Section 3.10, "Configure Users, Groups, and Global Roles."
Assign users to groups	Assign users to groups. Groups allow you to manage multiple users at the same time. This is generally more efficient than managing each user individually. For instructions, see Section 3.11, "Assign Users to Groups."
Assign groups to groups	Designate a group as a subgroup of another group, to add further granularity to security management. For instructions, see Section 3.12, "Assign Groups to Groups."
Assign users and groups to global roles	Assign users and groups to predefined WebLogic Server global security roles. For instructions, see Section 3.13, "Assign Users and Groups to Global Roles."

4.9 Prepare Scripts and Files with Replacement Variables

The Domain Template Builder automatically updates any standard scripts included in a template, such as start scripts, by replacing hard-coded values for various domain environment settings with variables. The Configuration Wizard can later replace these variables with new hard-coded values during the configuration of a new WebLogic domain.

If you want, you can prepare additional files to be included with your template by manually inserting replacement variables. For more information, see Section 3.15, "Prepare Scripts and Files with Replacement Variables."

After performing the required steps, click **Next**. The Review WebLogic Extension Template screen is displayed.

4.10 Review WebLogic Extension Template Settings

In the Review WebLogic Extension Template screen, you can review the settings for the new extension template before it is created.

1. Select an item in the Template Summary pane on the left and review the associated details in the Details pane on the right. If you need to change any settings that you defined in previous windows, select **Previous** to return to the required configuration window.

> **Note:** You can use the **View** drop-down list to limit the type of information displayed on the Template Summary screen.

2. Click **Create**.

3. The Create an Extension Template screen is displayed.

4.11 Creating Template

The Creating Template screen displays status messages during the template creation process. The Domain Template Builder generates a JAR file that contains only the applications and services specified in the extension template.

When the process completes, click **Done** to exit the Domain Template Builder.

5

How Do I?

This chapter provides information and examples for some common template creation tasks.

This chapter includes the following sections:

- Section 5.1, "How Do I Create a Custom Domain Template?"
- Section 5.2, "How Do I Create a Custom Extension Template?"

5.1 How Do I Create a Custom Domain Template?

The following example explains how to use the Avitek Medical Records Sample Domain to create a custom domain template. A domain template defines the full set of resources within a domain, including infrastructure components, applications, services, security options, and general environment and operating system parameters. Once you have created this sample domain, you can then use this template as input to the Configuration Wizard to create a Medical Records sample domain.

> **Note:** This example is based on the assumption that you have installed the WebLogic Server samples while installing the product.

1. Start the Domain Template Builder.

   - On Windows, from the Start menu, choose **Start** > **Programs** > **Oracle WebLogic** > **WebLogic Server** > **Tools** > **Domain Template Builder**.

   - On UNIX:

     – Go to the WebLogic Server `/common/bin` subdirectory:

       `cd MW_HOME/wlserver_12.1/common/bin`

     – Enter the following command:

       `sh config_builder.sh`

2. On the Create a New Template screen, select **Create a Domain Template**, and click **Next**.

3. On the Select a Template Domain Source screen:

   a. Select the Select a Domain tab.

   b. Navigate to the following directory:

      `MW_HOME\wlserver_12.1\samples\domains`

where *MW_HOME* is the Middleware home directory (the default is `C:\Oracle\Middleware\`).

    c. Select the **medrec** domain.

    d. Click **Next**.

4. On the Describe the Template screen, fill in each field and click **Next**.

For this example, enter the following information.

- **Name**—Avitek Medical Records Sample Domain
- **Version**—10.3.3 (or accept the displayed default)
- **Author**—Oracle Corporation
- **Category**—Oracle
- **Description**—Create the Avitek Medical Records domain in a directory outside of the installed kit. The Avitek Medical Records is a WebLogic Server sample application suite that concisely demonstrates all aspects of the Java EE platform.

Note: If the template you are creating is to be used as the source for a new template, the information you provide in this window is displayed in the **Select a Template** section of the Select a Template Domain Source screen.

---

5. On the Enter the name and location of the domain template screen, enter the following information or accept the defaults:

- **Template jar name**—Enter the name you want to use for the template's JAR file, or accept the displayed default, which is based on the name you entered on the previous screen.
- **Template location**—Accept the default (*MW_HOME*\user_templates) or enter another directory location.

6. On the Add or Omit Applications screen, you can omit applications from the template and, if applicable, change the relative path of the directory into which applications are imported. By default, all applications in the domain are selected, indicating that they will be added to the template.

The applications in this domain are included with the WebLogic Server software. Therefore, you cannot change the relative path of the directory into which they are imported. Because these applications reside on your system, they are not copied into the template.

For this example, leave all applications selected, and click **Next**.

7. On the Add Files screen, you can add or remove files from the template. By default, the following files and directories are included in the template:

- All files in the root directory with the following extensions: `.cmd`, `.sh`, `.xml`, `.properties`, and `.ini`.
- `bin` directory
- `lib` directory

- All files in the `security` directory that are not created automatically during domain creation. For example, `DefaultRoleMapperInit.ldift` and `XACMLRoleMapperInit.ldift` are not included by default.

- All files and subdirectories in the `config` directory that are not included automatically by the Domain Template Builder during template creation. For example, `config.xml` and any JDBC and JMS resources defined in `config.xml` are not displayed in the Current Template View pane by default because the Domain Template Builder automatically includes them in the template during template creation.

Note: Because the applications to be included in this template are provided with the product installation, they are not copied into the template. Therefore, they are not included in the **Applications Root Directory** list in the **Current Template View** pane.

If there are other files on your system that are required for deployed applications, you can add them in this window.

The medrec template does not contain any additional files to add. Click **Next** to continue.

8. On the Add SQL Scripts screen, you can add SQL scripts for each database that you expect to use with the domains created from this template.

   The Medical Records sample uses the default Derby demo database included with your product installation; so you do not need to add SQL scripts in this example.

   Click **Next** to continue.

9. On the Configure the Administration Server screen, define the configuration information for the Administration Server. For more information, see Section 3.8, "Configure the Administration Server."

   In this example, leave the default values selected and click **Next**.

10. On the Configure Administrator Username and Password screen, you can specify the username and password that is used to start and connect to the Administration Server.

    By default, the username/password combination for the Medical Records domain is `weblogic/welcome1`. You can configure additional users, groups, and global roles.

    For this example, accept the default settings, and click **Next**.

11. On the Specify Start Menu Entries screen, you can create entries for the Windows Start menu. In this example, you create entries to start and stop the Medical Records server.

    To create a Start menu entry for starting the Medical Records server:

    a. Click **Add**.

    b. In the **Shortcut link name** field, enter `Start Medical Records Server`.

    c. From the **Program** drop-down list, select **bin/startWebLogic.cmd** (Windows) or select **bin\startWebLogic.sh** (UNIX).

       It is not necessary to complete the remaining fields for this example.

    To create a Start menu entry for stopping the Medical Records server:

    a. Click **Add**.

    b. In the **Shortcut link name** field, enter `Stop Medical Records Server`.

    c. From the **Program** drop-down list, select **bin/stopWebLogic.cmd** (Windows) or select **bin\stopWebLogic.sh** (UNIX).

       It is not necessary to complete the remaining fields for this example.

    Click **Next**.

12. In the Prepare Scripts and Files with Replacement Variables screen, you can replace hard-coded strings with replacement variables in files that have not been updated by the Domain Template Builder. The Domain Template Builder automatically updates any standard scripts included in a template, such as start scripts, by replacing hard-coded values for various domain environment settings with replacement variables. The Configuration Wizard can later replace these variables with new hard-coded values during the configuration of a new domain.

    In this example, it is not necessary to edit any additional scripts or files.

    Click **Next**.

13. On the Review WebLogic Domain Template screen, review the settings for the new domain template before it is created. If you need to make changes to any configuration information that you specified previously, click **Previous** to return to the required configuration window.

    Click **Create**.

14. On the **Creating Template** screen, status messages are displayed during the template creation process.

    Click **Done** to close the Domain Template Builder.

5.2 How Do I Create a Custom Extension Template?

The following example shows how to create a custom extension template by modifying the Avitek Medical Records Sample Domain extension template provided with WebLogic Server. An extension template defines applications and services that extend an existing domain. The process for creating an extension template is similar to the process for creating a domain template, except that you do not configure the Administration Server, assign an administrator username and password, or specify Start menu entries, because these domain settings are already defined in the domain to be extended.

In this example, you create a customized MedRec extension template in which you add support for an additional Medical Records user. Once you have created the sample extension template, you can extend an existing WebLogic domain with the Medical Records sample domain by selecting your new extension template in the Configuration Wizard.

To create a customized MedRec extension template:

1. Start the Domain Template Builder.

   ■ On Windows, from the Start menu, choose **Start** > **Programs** > **Oracle WebLogic** > **WebLogic Server** > **Tools** > **Domain Template Builder.**

   ■ On UNIX:

     – Go to the WebLogic Server `/common/bin` subdirectory:

        `cd MW_HOME/wlserver_12.1/common/bin`

– Enter the following command:

```
sh config_builder.sh
```

2. On the Create a New Template screen, select **Create a Domain Template**, and click **Next**.

3. On the Select a Template Domain Source screen, select an existing extension template or a domain from which to create an extension template. In this example, you create an extension template using the Avitek Medical Records extension template included in the product installation.

   a. Click the **Select a Template** tab.

   A list of the predefined extension templates provided with your product installation is displayed in the **Templates** pane.

   b. Select the **Avitek Medical Records Sample Domain** extension template from the list.

   c. Click **Next**.

4. You are using an existing template as the source for the new template; so information from the Avitek Medical Records Sample Domain extension template is displayed automatically in the **Describe the Template** screen.

   For this example, you do not need to change anything.

   Click **Next**.

5. On the Enter the name and location of the domain template screen, enter the following information or accept the defaults:

   ■ **Template jar name**—Enter the name you want to use for the template's JAR file, or accept the displayed default, which is based on the name you entered on the previous screen.

   ■ **Template location**—Accept the default (*MW_HOME*\user_templates) or enter another directory location.

6. On the Add or Omit Applications screen, you can omit applications from the extension template and change the relative path of the directory into which applications are imported. By default, all the applications included in the source are selected, indicating that they will be added to your custom template.

   For this example, you do not need to add or omit any applications.

   Click **Next**.

7. On the Add Files screen, you can add or remove files from the extension template. You selected an existing template as the source for your custom template; so all files from the source template are also included automatically.

   In this example, the Avitek Medical Records Sample Domain extension template includes a separately defined applications directory. Therefore, the applications in the template are listed under **Applications Root Directory** in the **Current Template View** pane.

   Click **Next**.

8. On the Add SQL Scripts screen, you can add SQL scripts for each database that you expect to use with the domains created from this template.

   For this example, you do not need to add any database scripts.

   Click **Next**.

9. On the **Security Configurations Options** screen, you can customize any security settings that are defined in either your domain or the extension template that serves as the source for the new extension template.

   Because you are going to define an additional user in this example, select **Yes**, and click **Next**.

10. On the **Configure Users, Groups, and Global Roles** screen, you can define users, groups, and roles for authentication purposes. The users, groups, and roles defined in the template are listed. You can select the **Users**, **Groups**, or **Roles** tab to view the current definitions.

    In this example, you will define a new physician and assign the physician to an existing group.

    a. Select the **Users** tab.

    b. Click **Add**.

    c. Enter the following values:

       User Name: joe@md.com

       User Password: welcome1

       Description: MedRec Physician

       By default, the new user is assigned to the Administrators group. In the next window, clear this assignment, and assign joe@md.com to the MedRec Physicians group.

    d. Click **Next**.

11. On the Assign Users to Groups screen, you can assign users to groups. Oracle recommends that you add users to groups, because by managing groups you can manage multiple users simultaneously.

    In this example, you need to remove joe@md.com from the Administrators group and assign to the MedRecPhysicians group.

    a. In the **Group** pane, ensure that the **Administrators** group is selected.

       A list of current assignments for the **Administrators** group is displayed in the left pane.

    b. In the left pane, deselect the check box for joe@md.com.

    c. In the **Group** pane, select **MedRecPhysicians**.

       A list of current assignments for the MedRecPhysicians group is displayed in the left pane.

    d. In the left pane, select the check box for joe@md.com. The list of groups associated with joe@md.com is updated to reflect the change.

    e. Click **Next**.

12. On the Assign Groups to Groups screen, you can designate one group as a member of another group. In this example, you do not need to change the default assignments.

    Click **Next**.

13. On the Assign Users and Groups to Global Roles screen, you can assign users and groups to the global security roles defined by WebLogic Server. In this example, you do not need to change the default assignments.

Click **Next**.

14. On the Prepare Scripts and Files with Replacement Variables screen, you can replace hard-coded strings with replacement variables in files that have not been updated by the Domain Template Builder. The Domain Template Builder automatically updates any standard scripts included in a template, such as start scripts, by replacing hard-coded values for various domain environment settings with replacement variables. The Configuration Wizard can later replace these variables with new hard-coded values during the configuration of a new domain.

    In this example, it is not necessary to edit any additional scripts or files. Click **Next**.

15. On the Review WebLogic Domain Template screen, review the settings for the new extension template before it is created. If you need to modify any of the information that you previously defined, click **Previous** to return to the required configuration window.

    Click **Create**.

16. On the Creating Template screen, status messages are displayed during the template creation process.

    Click **Done**.