



BEA WebLogic Platform™

Domain Upgrade Guide

Contents

- Upgrading a WebLogic Platform Domain5
- Overview of the Domain Upgrade Process7
- Prerequisites for Upgrading a WebLogic Platform Domain .13
- Procedure for Upgrading a WebLogic Platform Domain15

Upgrading a WebLogic Platform Domain

This guide describes how to upgrade a WebLogic Platform domain — a domain that contains WebLogic Integration (WLI), WebLogic Portal (WLP), and Workshop for WebLogic resources.

The guide contains the following topics:

- [Overview of the Domain Upgrade Process](#)
- [Important Notes About the Domain Upgrade Process](#)
- [Prerequisites for Upgrading a WebLogic Platform Domain](#)
- [Procedure for Upgrading a WebLogic Platform Domain](#)

Note: For information about upgrading applications created in WebLogic Integration (WLI), WebLogic Portal (WLP), and Workshop, see the [WLI Upgrade Guide](#), [WLP Upgrade Guide](#), and [Workshop Upgrade Guide](#), respectively.

Upgrading a WebLogic Platform Domain

Overview of the Domain Upgrade Process

BEA provides a tool called Domain Upgrade Wizard to help you upgrade WebLogic domains. You can use the Domain Upgrade Wizard to upgrade domains that are created in the following product releases:

Product	Upgrade from Release/s	Upgrade to Release/s
WebLogic Server	6.1, 7.0, 8.1, or 9.x	10.0
WebLogic Workshop	8.1 SP4 or higher, or 9.x	10.2
WebLogic Integration	8.1 SP4 or higher, or 9.x	10.2
WebLogic Portal	8.1 SP4 or higher, or 9.x	10.2
WebLogic Platform	8.1 or 9.x	10.2

This section provides an overview of the tasks that the Domain Upgrade Wizard performs when you use it to upgrade a WebLogic Platform domain.

1. The original domain directory is backed up (if you opt for it).

The wizard backs up the domain directory only; it does not preserve file permissions. BEA recommends that you back up the domain, any external applications, and application database resources. For more information, see Step 3: Back Up the Application Environment in [Roadmap for Upgrading Your Application Environment](#).

Note: The backup files created by the wizard might contain confidential information. So ensure that they are protected.

2. Scripts, such as the startup and shutdown scripts, are re-created. Any original scripts are renamed as *orig-scriptname.bak*, where *orig-scriptname* represents the name and extension of the original script.

Note: The wizard does not copy any customizations in the original startup scripts to the new scripts. For example, if you specified a nondefault value for the `JAVA_OPTIONS` environment variable in the original script, the specified value is not preserved in the new script.

3. The original domain is restructured: a new directory structure is created and the domain components are moved to new locations.

Note: This step is performed only when upgrading from a pre-9.x domain.

During the restructuring, if a required directory already exists, that directory, and the files and subdirectories in it are retained.

Existing server log files are copied to the `servers/server_name/logs/pre-10.0-logs` directory in the domain, where *server_name* specifies the name of the server.

For information about the domain directory structure, see [WebLogic Domain Directory Structure Enhancements](#).

4. The persisted configuration information stored in the configuration file (`config.xml`) is upgraded to the `config` directory.

Note: This step is performed only when upgrading from a pre-9.x domain.

If the wizard encounters duplicate resources while upgrading the configuration file (`config.xml`), a message is logged in the progress window. In this case, the last resource definition encountered is used during the conversion.

5. Persisted data – such as JMS file stores, JMS JDBC stores, and transaction stores – is upgraded.

Note: If JMS JDBC stores are used in the domain, you must first configure the environment, as described in Step 6: Set Up the Environment in [Roadmap for Upgrading Your Application Environment](#).

After the JMS JDBC stores are upgraded, the original JMS JDBC stores are not deleted. You must consider this while planning for capacity. You can delete the original JMS JDBC store tables after the upgrade process. The original JMS JDBC store tables are named

*PrefixName*JMSSTORE and *PrefixName*JMSSTATE, where *PrefixName* is the value of the `Prefix Name` attribute for the JMS JDBC store.

If you do not want to upgrade persisted JMS messages, you can delete the JMS file store or JMS JDBC store tables before running the upgrade. When you do so, only JMS messages are lost; the configuration is not changed. For information about managing JDBC store tables, see [Managing JDBC Store Tables](#).

The wizard does not upgrade a JMS JDBC or file store if it detects that an upgrade has already been performed. To perform multiple upgrades of a domain in which the same persistent stores are used (for example, in a test scenario), you must revert the data in the JMS store each time you repeat the upgrade process, as follows:

- For a JMS JDBC store, the upgrade process creates a new table named *PrefixName*WLSTORE, where *PrefixName* is the value of the `Prefix Name` attribute for the JMS JDBC store. Before repeating the upgrade process on a domain that uses the JMS JDBC store, remember to drop this table.
 - To repeat the upgrade process, ensure that you first restore the backed up version of the JMS file store.
6. Resources are added to support advanced web services, including the `WseeFileStore` file store, the `WseeJmsServer` JMS server, and its associated JMS module.

Note: This step is performed only when upgrading from a pre-9.x domain.
 7. Beehive shared library modules are added to support Workshop applications.

Note: This step is performed only when upgrading from a pre-9.x domain.
 8. The `JWSQueueTransport` EJB, if it is present in the domain, is removed.
 9. The following tasks are performed if any data source is configured to use PointBase (v5 or lower):
 - The database is automatically loaded in embedded mode and upgraded to PointBase v5.1.
 - The `pointbase.ini` file is updated to set `database.home`, `documentation.home` and `pbembedded.lic` for PointBase v5.1.
 - The database files are renamed from `workshop` to `weblogic_eval` and the associated data source JDBC driver URLs accordingly fixed.
 - The PointBase-related environment settings are carried over to the upgraded domain scripts, `setDomainEnv.cmd` and `setDomainEnv.sh`.

10. If the domain contains WLI resources, see the [Upgrading Your WebLogic Integration Domain](#) section in the [WLI Upgrade Guide](#).
11. If the domain contains WLP resources, the wizard performs the following additional tasks:
 - Adds shared library modules to support personalization (P13n) applications.
 - Adds shared library modules to support WebLogic Platform applications.
 - Updates and adds JMS and JDBC resources to support WebLogic Platform applications.
 - Removes user-defined applications that have been deployed to the domain.
 - Note:** This step is performed only when upgrading from a 8.1x domain. For 9.2 and 10.0 domains, application deployments are retained.
 - Updates WebLogic personalization (P13n) JDBC data sources and connection pools.
 - Configures SSPI providers required by WebLogic Portal; also adds WebLogic SAML providers, Identity Asserter, and Credential Mapper to the security realm to enable the WSRP 9.x features.
 - Adds the SQLAuthenticator security provider to the domain.
 - Note:** The `portaladmin` and `weblogic` users are added to the SQLAuthenticator security provider. You can remove these users from the `DefaultAuthenticator` security provider after the domain is upgraded.
 - If the RDBMSAuthenticator security provider is used, users and groups are copied from the RDBMSAuthenticator provider to the SQLAuthenticator provider.
 - Note:** You can remove the RDBMSAuthenticator, including its data and tables, after the domain is upgraded.
12. The domain database schema objects are optionally upgraded.
13. The configuration is saved.
 - Note:** When upgrading remote managed servers, the wizard does not persist the configuration information.
14. Issues that require further consideration are reported.

Important Notes About the Domain Upgrade Process

- You must upgrade the domains on every machine in the application environment. For information about preparing domain directories on remote managed servers, see Step 5:

Prepare the Remote Managed Server Domain Directories in [Roadmap for Upgrading Your Application Environment](#).

- As of WebLogic Server 9.0, the `.wlnotdelete` directory is no longer used in the WebLogic Server environment.
- During the upgrade process, file permissions are not preserved. You must verify and reset all nondefault file permissions.
- On a UNIX system, ownership and permissions for any new files created during the upgrade process are assigned to the user performing the upgrade. For example, if the upgrade is performed by root, then root is assigned ownership of any new files. As a result, any user who subsequently wants to update these files in the domain must have root privileges. So, if required, modify the permissions on files created during the upgrade process.
- After upgrading, the server might prompt you for the user name and password while booting. This is because the `weblogic.management.username` and `weblogic.management.password` arguments, which were used in earlier scripts have been dropped.
- When you upgrade a domain on a remote managed server, a message similar to the following might be displayed to indicate that the referenced application path does not reside in the system:

```
<Aug 1, 2005 6:42:06 PM EDT> <INFO> <Upgrade> <BEA-800000> <An invalid path, 'C:\bea\wlserver_10.0\user_projects\mydomain\medrecEar.ear', was specified for application, 'medrecEar'.>
```

Ignore this message.

- The Domain Upgrade Wizard does not upgrade applications. For information about upgrading WLI, WLP, and Workshop applications, see the [WLI Upgrade Guide](#), the [WLP Upgrade Guide](#), and the [Workshop Upgrade Guide](#), respectively.

It is not necessary to upgrade WLS applications. In most cases, they will continue to run in the upgraded WLS 10.0 application environment. For information about changes that affect WLS applications in your environment, see [WebLogic Server 10.0 Compatibility with Previous Releases](#).

Overview of the Domain Upgrade Process

Prerequisites for Upgrading a WebLogic Platform Domain

This section lists the prerequisites for upgrading a WebLogic Platform domain.

- Plan and prepare for the upgrade, as described in [Roadmap for Upgrading Your Application Environment](#)
- Undeploy WebLogic Platform applications (applications which contain components from Workshop, WLP, or WLI).
 - Note:** You must upgrade these applications before deploying them to the upgraded domain. For information about upgrading WLI, WLP, and Workshop applications, see the [WLI Upgrade Guide](#), the [WLP Upgrade Guide](#), and the [Workshop Upgrade Guide](#), respectively.
 - Note:** You do not need to undeploy WLP-only applications; the Domain Upgrade Wizard undeploys them automatically. You must, however, upgrade the applications before deploying them to the upgraded domain.
 - Note:** You do not need to undeploy WebLogic Server (WLS) applications. In most cases, WLS applications will continue to run in the upgraded WLS 10.0 application environment. For information about changes that affect WLS applications in your environment, see [WebLogic Server 10.0 Compatibility with Previous Releases](#).
- Ensure that the domain directory contains, at a minimum, the following files:
 - Note:** This is required only if you are upgrading from a pre-9.x domain.
 - `config.xml`

Prerequisites for Upgrading a WebLogic Platform Domain

- Security-related files, including `SerializedSystemIni.dat`, `DefaultAuthenticatorInit.ldift`, `DefaultAuthorizerInit.ldift`, and `DefaultRoleMapperInit.ldift`

If the security-related files are not available, the server fails to start; an authentication error message is logged.

- Transaction log (`.tlog`) files that reside in the domain

For more information, see [Transaction Log Files](#).

- Ensure that the console from which you are running the Domain Upgrade Wizard supports Java-based GUIs.
- Review [Important Notes About the Domain Upgrade Process](#).
- Ensure that the JMS store is backed up.
- If JMS JDBC stores are used, ensure that the corresponding database is running.

Note: PointBase databases are automatically started and shut down by the Domain Upgrade Wizard.

Procedure for Upgrading a WebLogic Platform Domain

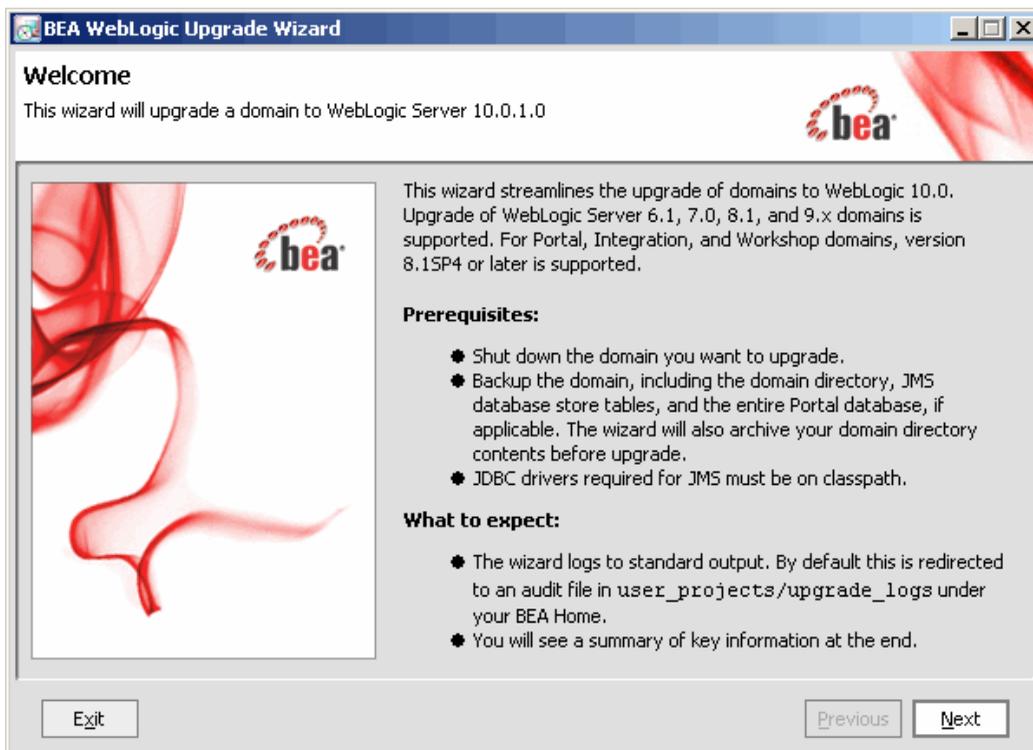
This section describes how to use the Domain Upgrade Wizard to upgrade a WebLogic Platform domain.

1. Ensure that the prerequisites listed in [Prerequisites for Upgrading a WebLogic Platform Domain](#) have been met.
2. Start the Domain Upgrade Wizard.
 - **On Windows systems:**
 - If you do not have to customize the environment to specify JDBC driver classes, then, from the Windows start menu, choose **Start > Programs > BEA Products > Tools > Domain Upgrade Wizard**.
 - If you need to customize the environment to specify JDBC driver classes, set up the environment, as described in [Roadmap for Upgrading Your Application Environment](#). Then, from the command prompt, run
`WL_HOME\common\bin\upgrade.cmd`.
 - **On UNIX systems,** run the following command: `WL_HOME/common/bin/upgrade.sh`.

The wizard creates a log file in the `BEA_HOME/user_projects/upgrade_logs` directory.

The Domain Upgrade Wizard starts, as shown in the following figure.

Figure 1-1 WebLogic Upgrade Wizard



3. Click **Next** to continue.

The following table describes the actions you need to take in each window of the Domain Upgrade Wizard.

Table 1-1 Procedure for Upgrading a WebLogic Domain

Window	Action/s
Select WebLogic Version	Select the version of the domain that you are upgrading. Click Next to proceed.
Select a Domain to Upgrade	Select the directory that contains the WebLogic domain to be upgraded. Click Next to proceed.

Table 1-1 Procedure for Upgrading a WebLogic Domain (Continued)

Window	Action/s
Inspect Domain	<p>Review progress of the wizard as it inspects the domain.</p> <p>If you attempt to upgrade a domain in which custom security providers are used, without first upgrading those security providers, an error message is displayed and the wizard exits. If you receive this error message, upgrade the custom security providers, as described in Upgrading a Security Provider, and then restart the Domain Upgrade Wizard.</p> <p>The wizard proceeds automatically to the next window.</p>
Select Administration Server	<p>This window is displayed only if the domain contains multiple servers.</p> <p>Select the server that you want to use as the administration server in the new domain.</p> <p>Click Next to proceed.</p>
Enter Node Manager Credentials	<p>Enter the user name and password (and confirm the password) for Node Manager authorization.</p> <p>For WebLogic Server 10.0, the Node Manager requires user name and password credentials to be specified for each domain. By default, the user name and password are set to weblogic. If you do not use the Node Manager, leave the default values unchanged.</p> <p>Click Next to proceed.</p>
Select Upgrade Options	<p>Back up current domain (recommended): If selected, the wizard backs up the original domain directory and stores it in a zip file. By default, this option is selected.</p> <p>Note: The wizard backs up the domain directory only; it does not preserve file permissions. BEA recommends that you back up the domain and any external application and application database resources in a separate process, as described in Step 3: Back Up the Application Environment in Roadmap for Upgrading Your Application Environment.</p> <p>Add log files to backup zip: If selected, log files are included in the backup zip file. By default, log files are included in the backup file.</p> <p>Note: The number and size of log files might be large; so use this option judiciously.</p> <p>Do not set backwards compatibility flags: As of WebLogic Server 9.0, certain previously supported behavior has changed to comply with J2EE 1.4. By default, the wizard sets flags to enable the previous behavior in the new domain. If you select this option, these flags are not set for backward compatibility. For more information about the backward compatibility flags, see the Backward Compatibility Flags section in WebLogic Server 10.0 Compatibility with Previous Releases.</p>

Table 1-1 Procedure for Upgrading a WebLogic Domain (Continued)

Window	Action/s
Directory Selection Analysis and Optional Tasks	<p>Review progress as the wizard processes the domain information and options provided. Progress messages are displayed in the window.</p> <p>The wizard proceeds automatically to the next window.</p>
Domain Backup	<p>Review progress of the wizard as it prepares to back up the domain. Progress messages are displayed in the window.</p> <p>The wizard proceeds automatically to the next window.</p>
Select Directory for Domain Backup	<p>This window is displayed only if you selected the Back up current domain option in the Select Upgrade Options window. If you did not select that option, proceed to Restructure Domain Directory.</p> <ul style="list-style-type: none"> • Backup directory: Select the directory in which you want to save the backup zip file. By default, the original domain directory is used. • Backup file name: Enter the name of the backup file. The default file name is <code>weblogic-domain-backup-<i>domain</i>.zip</code>, where <i>domain</i> specifies the name of the domain. <p>Click Next to proceed.</p>
Backup Domain	<p>Review progress as the wizard backs up the domain. A progress bar displays the percentage of the backup process that is complete, and progress messages are displayed in the window.</p> <p>Note: Backup files created by the wizard need to be protected by the user as they might contain confidential information.</p> <p>The wizard proceeds automatically to the next window.</p>
Restructure Domain Directory	<p>Review progress as the wizard restructures the domain directory.</p> <p>The wizard proceeds automatically to the next window.</p>
Upgrade Configuration Settings	<p>Review progress as the wizard upgrades the configuration settings.</p> <p>The wizard proceeds automatically to the next window.</p>
Upgrade Persisted Messages and Transaction Log Formats	<p>Review progress as the wizard upgrades the persisted messages (JMS file and JDBC stores) and transaction (JTA) logs that exist in the domain.</p> <p>The wizard proceeds automatically to the next window.</p>

Table 1-1 Procedure for Upgrading a WebLogic Domain (Continued)

Window	Action/s
Upgrade RDBMS Authenticator Security Provider	<p>This window is displayed only when an RDBMSAuthenticator Security Provider exists in the domain that you are upgrading.</p> <p>Specify whether the deprecated RDBMSAuthenticator must be replaced by the SQLAuthenticator.</p> <p>Click Next to proceed.</p>
Execute P13n Components Domain Upgrade	<p>This window is displayed only if the domain contains WLI or WLP resources.</p> <p>Review progress as the wizard updates the personalization components.</p> <p>Click Next to proceed.</p>
Execute Upgrade of Personalization Databases	<p>This window is displayed only if the domain contains WLI or WLP resources.</p> <p>Review progress as the wizard prepares to upgrade the database schema objects used by personalization. You have the option to upgrade the database in a subsequent step.</p> <p>Click Next to proceed.</p>
Execute WLP Domain Upgrade Plugins	<p>This window is displayed only if the domain contains WLP resources.</p> <p>The wizard upgrades the WLP-specific resources in the domain.</p> <p>Click Next to proceed.</p>
Prepare WLI Domain Upgrade Plugins	<p>This window is displayed only if the domain contains WLI resources.</p> <p>The wizard upgrades WLI-specific resources in the domain.</p> <p>Click Next to proceed.</p>
Execute WLI Domain Upgrade Plugins	<p>This window is displayed only if the domain contains WLI resources.</p> <p>The wizard upgrades WLI resources in the domain.</p> <p>Click Next to proceed.</p>
Finalize Domain Upgrade	<p>Review progress of the wizard as it saves the upgraded configuration and deletes any temporary files that were created during the upgrade process. Progress messages are displayed in the window.</p> <p>Note: While upgrading remote managed servers, the wizard does not persist the configuration information.</p> <p>Click Next to proceed.</p>

Table 1-1 Procedure for Upgrading a WebLogic Domain (Continued)

Window	Action/s
<p>Database Upgrade Choice</p>	<p>This window is displayed only if the domain contains WLP or WLI resources.</p> <p>Specify whether you want to upgrade the domain database. BEA recommends that you use the Domain Upgrade Wizard to upgrade the domain database.</p> <p>Note: The wizard does not back up the domain database. You must back up your domain database before starting the domain upgrade.</p> <p>Click Next to proceed.</p>
<p>Initialize Category/Datasource Table</p>	<p>This window is displayed only if the domain contains WLI or WLP resources, and if you have opted to upgrade the domain database.</p> <p>Review progress of the wizard as it prepares to upgrade the domain database schema objects.</p> <p>The wizard proceeds automatically to the next window.</p>
<p>Associate DB Categories with Datasources</p>	<p>This window is displayed only if the domain contains WLI or WLP resources, and if you have opted to upgrade the domain database.</p> <p>The table displays the database “categories” and their associated data sources. The categories are used with their associated data source to initialize the domain database. If the data source for a database category is undefined, you can update the category with the correct data source. If the data source remains undefined, it is skipped during the upgrade process. In most cases, the default association is correct and no further changes are required.</p> <p>Note: Ensure that a data source is associated with each database category that you want to upgrade. Database categories for which the data source is not defined are not upgraded.</p>
<p>Execute Database Plugins</p>	<p>This window is displayed only if the domain contains WLI or WLP resources, and if you have opted to upgrade the domain database.</p> <p>Review progress of the wizard as it prepares to upgrade the database schema objects.</p> <p>The wizard proceeds automatically to the next window.</p>
<p>Upgrade Complete</p>	<p>Review the results of the upgrade, including any important messages that require further analysis.</p> <p>Click Done to close the Domain Upgrade Wizard.</p>