



# BEA WebLogic Adapter for FIX

## Installation and Configuration Guide for WebLogic Integration 7.0

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## BEA Adapter for FIX Installation and Configuration Guide for WebLogic Integration 7.0

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# About This Document

This document explains how to install, configure, and deploy the BEA WebLogic Adapter for FIX to develop online connections to FIX applications.

This document is organized as follows:

- [Chapter 1, “Installing the BEA WebLogic Adapter for FIX,”](#) describes how to install the BEA WebLogic Adapter for FIX.

## Audience

This document is written for system integrators who develop client interfaces between FIX and other applications. It describes how to install the BEA WebLogic Adapter for FIX and how to develop application environments with specific focus on message integration. It is assumed that readers know Web technologies and have a general understanding of Microsoft Windows and UNIX systems.

## Related Information

The following documents provide additional information for the associated software components:

- *BEA WebLogic Adapter for FIX User Guide*
- *BEA WebLogic Adapter for FIX Release Notes*

- 
- BEA WebLogic Server installation and user documentation, which is available at the following URL:

[http://edocs.bea.com/more\\_wls.html](http://edocs.bea.com/more_wls.html)

- BEA WebLogic Integration installation and user documentation, which is available at the following URL:

[http://edocs.bea.com/more\\_wli.html](http://edocs.bea.com/more_wli.html)

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In your e-mail message, please indicate which version of the BEA WebLogic Adapter for FIX documentation you are using.

If you have any questions about this version of the BEA WebLogic Adapter for FIX, or if you have problems installing and running the BEA WebLogic Adapter for FIX, contact BEA Customer Support through BEA WebSupport at [www.bea.com](http://www.bea.com). You can also contact Customer Support by using the contact information provided on the Customer Support Card, which is included in the product package.

When contacting Customer Support, be prepared to provide the following information:

- Your name, e-mail address, phone number, and fax number
- Your company name and company address
- Your machine type and authorization codes
- The name and version of the product you are using
- A description of the problem and the content of pertinent error messages

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# Documentation Conventions

The following documentation conventions are used throughout this document.

Convention	Item
<b>boldface text</b>	Indicates terms defined in the glossary.
Ctrl+Tab	Indicates that you must press two or more keys simultaneously.
<i>italics</i>	Indicates emphasis or book titles.
monospace text	Indicates code samples, commands and their options, data structures and their members, data types, directories, and file names and their extensions. Monospace text also indicates text that you must enter from the keyboard. <i>Examples:</i> #include <iostream.h> void main ( ) the pointer psz chmod u+w * \tux\data\ap .doc tux.doc BITMAP float
<b>monospace boldface text</b>	Identifies significant words in code. <i>Example:</i> void <b>commit</b> ( )
<i>monospace italic text</i>	Identifies variables in code. <i>Example:</i> String <i>expr</i>
UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. <i>Examples:</i> LPT1 SIGNON OR

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Convention	Item
{ }	Indicates a set of choices in a syntax line. The braces themselves should never be typed.
[ ]	Indicates optional items in a syntax line. The brackets themselves should never be typed. <i>Example:</i> buildobjclient [-v] [-o name ] [-f file-list]... [-l file-list]...
	Separates mutually exclusive choices in a syntax line. The symbol itself should never be typed.
...	Indicates one of the following in a command line: <ul style="list-style-type: none"><li>■ That an argument can be repeated several times in a command line</li><li>■ That the statement omits additional optional arguments</li><li>■ That you can enter additional parameters, values, or other information</li></ul> The ellipsis itself should never be typed. <i>Example:</i> buildobjclient [-v] [-o name ] [-f file-list]... [-l file-list]...
.	Indicates the omission of items from a code example or from a syntax line. The vertical ellipsis itself should never be typed.



# 1 Installing the BEA WebLogic Adapter for FIX

This section describes how to install the BEA WebLogic Adapter for FIX. It includes the following topics:

- [Before Installing the Adapter](#)
- [Understanding the Representation of Paths](#)
- [Installing the Adapter With WebLogic Integration 7.0](#)
- [Next Steps](#)

## Before Installing the Adapter

Before you install the BEA WebLogic Adapter for FIX, you must review the *BEA WebLogic Adapter for FIX Release Notes* to ensure that you have the required prerequisite software installed. The *BEA WebLogic Adapter for FIX Release Notes* is available at the following URL:

<http://edocs.bea.com/wladders/doc70/index.html>

# Understanding the Representation of Paths

Because the location of files in the WebLogic Integration environment depends on options selected during installation and configuration, the conventions that follow are used throughout to represent paths.

- *BEA\_HOME* represents the BEA Home directory specified for your WebLogic installation.

For example, if you install the product in the default location on a Windows system, *BEA\_HOME* represents `c:\bea`.

- *WLI\_HOME* represents the root of your WebLogic Integration installation.

For example:

- If you install WebLogic Integration 7.0 in the default location on a Windows system, *WLI\_HOME* represents `c:\bea\weblogic700\integration`.
- *domain* is used to indicate the name of a domain.
  - In WebLogic Integration 7.0, a new tool, the Configuration Wizard, is used to create custom user domains. When you use the Configuration Wizard to set up the domain configuration stored on the administration server, you are prompted to assign a domain name, *domain*, and to specify the location to which the *domain* directory will be installed. The files required by the administration server are installed in the *domain* directory under the specified location.

For additional information, see *Using the Configuration Wizard* which is available at the following URL:

<http://edocs.bea.com/platform/docs70/configwiz/index.html>

For example, if you accept the Configuration Wizard default location, *BEA\_HOME\user\_projects*, the files required by the administration server are installed in the following directory:

*BEA\_HOME\user\_projects\domain*

- *DOMAIN\_HOME* represents the complete path to the root of a domain.

For example:

- If you use the WebLogic Integration 7.0 Configuration Wizard to create a domain in the default location on a Windows system, *DOMAIN\_HOME* represents `c:\bea\weblogic700\user_projects\domain`.

**Note:** *WLI\_HOME* and *BEA\_HOME* (italicized) also represent the corresponding Windows and UNIX environment variables. For example, the literal interpretation of *WLI\_HOME* is `%WLI_HOME%` for Windows and `$WLI_HOME` for UNIX.

Unlike *WLI\_HOME* and *BEA\_HOME*, *DOMAIN\_HOME* is not an environment variable that is set by default in the WebLogic Integration environmen

## Installing the Adapter With WebLogic Integration 7.0

This topic provides instructions for installing the BEA WebLogic Adapter for FIX with WebLogic Integration 7.0. It includes the following steps:

- [Step 1. Obtaining the BEA WebLogic Adapter for FIX](#)
- [Step 2. Configuring the Domain](#)
- [Step 3. Adjusting the Classpath](#)
- [Step 4. Updating the BEA License](#)
- [Step 5. Deploying the Adapter for FIX Using the WebLogic Server Console](#)
- [Step 6. Creating or Updating the Adapter Group](#)

### Step 1. Obtaining the BEA WebLogic Adapter for FIX

The BEA WebLogic Adapter for FIX software is packaged as an EAR file (`BEA_FIX_1_0_70.ear`). You can obtain the software on CD or download it from [www.bea.com](http://www.bea.com).

# Step 2. Configuring the Domain

The adapter can only be deployed in a domain that includes support for application integration functionality. If you have not already done so, use the Configuration Wizard to create the domain and select one of the following domain templates:

- Enterprise application integration (EAI) domain template
- WebLogic Integration (WLI) domain template
- Platform domain template

For the information you need to configure a fully functional domain based on the template, see the appropriate section of the *Configuration Wizard Template Reference*:

- For the EAI domain template, see the following URL:

`http://edocs.bea.com/platform/docs70/template/eaidomain.html`

- For the WLI domain template, see the following URL:

`http://edocs.bea.com/platform/docs70/template/wlidomain.html`

- For the platform domain template, see the following URL:

`http://edocs.bea.com/platform/docs70/template/platjar.html`

For general information about using the Configuration Wizard, see *Using the Configuration Wizard* at the following URL:

`http://edocs.bea.com/platform/docs70/configwiz/index.html`

When you use the Configuration Wizard to create a domain that includes support for application integration, a domain-specific version of the Database Wizard is installed in the `DOMAIN_HOME` directory. You must run the Database Wizard for the domain to initialize the database repository with the required tables and system data. For additional information, see “Configuring the Database for a Domain” in *Starting, Stopping and Customizing BEA WebLogic Integration*, at the following URL:

`http://edocs.bea.com/wli/docs70/config/index.htm`

## Step 3. Adjusting the Classpath

Set the classpath using the procedure appropriate for your system:

- [Adjusting the Classpath for Windows](#)
- [Adjusting the Classpath for UNIX](#)

### Adjusting the Classpath for Windows

To adjust the classpath on Windows:

1. Extract the following files from the adapter for FIX EAR file (BEA\_FIX\_1\_0\_70.ear):
  - xercesExt.jar
  - xercesImpl.jar
  - fixengine-1.3.0.jar

Place these files in a directory, for example D:\fixextract

2. Go to the root directory for your domain:

```
cd DOMAIN_HOME
```

**Note:** You must choose a domain that supports application integration functionality.

3. Find the `SetDomainTypeData.cmd` file.

Here, *DomainType* is the type of the domain. For example, if your domain is configured to support the development of solutions that employ the full range of WebLogic Integration functionality, it contains the `SetwliDomainData.cmd` file.

4. Update the SVRCP environment variable settings in the `SetDomainTypeData.cmd` file.

**Note:** The SVRCP environment variable is used in the `SetDomainTypeData` script to set the classpath for the java executable.

After the following line:

```
set SVRCP=%SVRCP%;%WLI_DOMAIN_HOME%\applications\DefaultWebApp_  
myserver\WEB-INF\classes
```

add the following lines:

```
rem ===== Xerces and FIX Java Libraries =====  
set SVRCP=%SVRCP%;D:\fixExtract\fixengine-1.3.0.jar  
  
set SVRCP=%SVRCP%;D:\fixExtract\xercesExt.jar  
  
set SVRCP=%SVRCP%;D:\fixExtract\xercesImpl.jar
```

Here, *D:\fixExtract* is the directory to which you extracted the JAR files.

### Adjusting the Classpath for UNIX

To adjust the classpath on UNIX:

1. Extract the following files from the adapter for FIX EAR file (BEA\_FIX\_1\_0\_70.ear):

- xercesExt.jar
- xercesImpl.jar
- fixengine-1.3.0.jar

Place these files in a directory, for example */fixextract*

2. Go to the root directory for your domain:

```
cd DOMAIN_HOME
```

**Note:** You must choose a WebLogic Integration domain that supports application integration functionality.

3. Find the *SetDomainTypeData* file.

Here, *DomainType* is the type of the domain. For example, if your domain is configured to support the development of solutions that employ the full range of WebLogic Integration functionality, it contains the *SetWliDomainData* file.

4. Update the SVRCP environment variable settings in the *SetDomainTypeData* file.

**Note:** The SVRCP environment variable is used in the *SetDomainTypeData* script to set the classpath for the java executable.

After the following line:

```
SVRCP=$SVRCP:$WLI_DOMAIN_HOME/applications/DefaultWebApp_myserver/  
WEB-INF/classes
```

add the following JAR files:

```
rem ===== Xerces and FIX Java Libraries =====
set SVRCP=$SVRCP:/fixExtract/fixengine-1.3.0.jar

set SVRCP=$SVRCP:/fixExtract/xercesExt.jar

set SVRCP=$SVRCP:/fixExtract/xercesImpl.jar
```

Here, */fixExtract* is the directory to which you extracted the JAR files.

## Step 4. Updating the BEA License

The BEA WebLogic Adapter for FIX cannot be used without a valid software license. If you have downloaded the adapter for evaluation, you must obtain an evaluation license as described on the adapter download page. If you have purchased a license for the adapter, the license file is typically sent to you as an e-mail attachment.

To update your `license.bea` file:

1. Save the license file that you obtained with a name other than `license.bea`, in the `BEA_HOME` directory. For example, save the file as `fix_adapter_license.bea`. Use this file as the *license\_update\_file* in step 4 of this procedure.

**Warning:** Do not overwrite or change the name of the existing `license.bea` file.

2. Perform the step appropriate for your platform:
  - On a Windows system, open an MS-DOS session and go to the `BEA_HOME` directory.
  - On a UNIX system, go to the `BEA_HOME` directory.
3. If it is not already included, add the JDK to your `PATH` variable by executing the command appropriate to your system:
  - On a Windows system:

```
set PATH=BEA_HOME\jdk131_03\bin;%PATH%
```
  - On a UNIX system:

```
PATH=BEA_HOME/jdk131_03/bin:$PATH
export PATH
```
4. Merge the license update file into your existing license by executing the command appropriate to your system:

- On a Windows system:

```
UpdateLicense license_update_file
```

- On a UNIX system:

```
sh UpdateLicense.sh license_update_file
```

Here, *license\_update\_file* is the name to which you saved the license update file in step 1.

5. Save a copy of your updated `license.bea` file in a safe place outside the WebLogic Integration and application installation directories.

## Step 5. Deploying the Adapter for FIX Using the WebLogic Server Console

After the BEA WebLogic Adapter for FIX is installed, it must be deployed to your domain.

To configure and deploy an adapter using the WebLogic Server Administration Console:

1. Start WebLogic Server.
2. Start the WebLogic Server Administration Console in a browser using the following URL:

```
http://host:port/console/
```

Here, *host* represents the machine on which WebLogic Server is running and *port* represents the listening port.

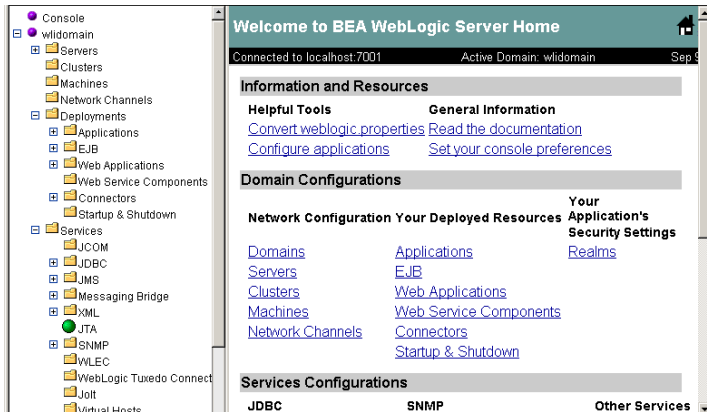
For example, `http://localhost:7001/console/`

3. When prompted, enter the user name and password for the server.

The WebLogic Server Administration Console opens.



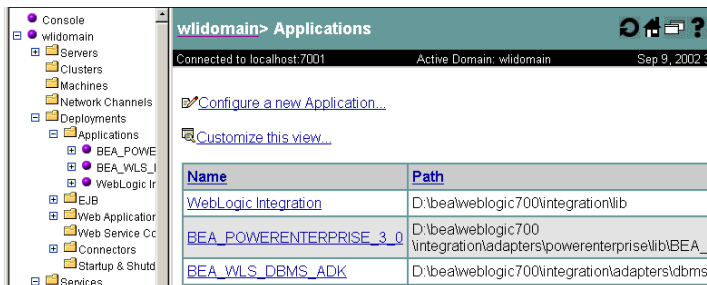
**Figure 1-1 WebLogic Server Console**



4. In the left pane, choose Deployments and then Applications from the navigation tree.

The console displays the Applications window.

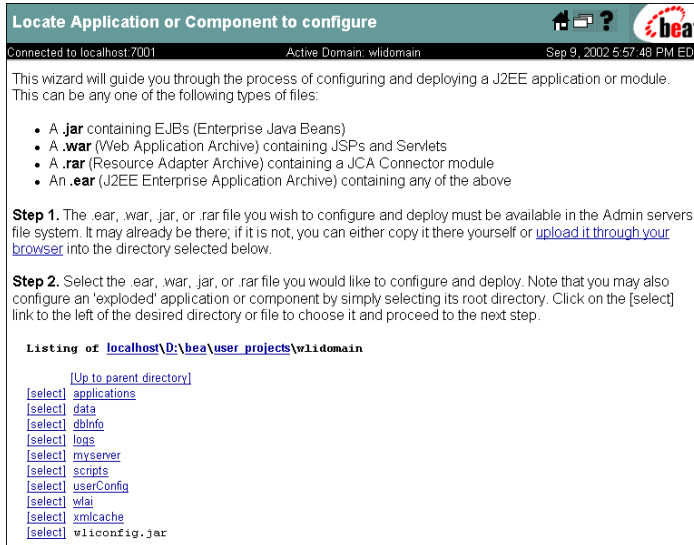
**Figure 1-2 Applications Window**



5. Click the Configure a new Application link.

The console displays the Locate Application or Component to configure window.

**Figure 1-3 Locate Application or Component to Configure Window**



6. Do one of the following:

If you copied the `BEA_FIX_1_0_70.ear` file to a directory on the administrative server, navigate to that directory. For example, if you copied the file to the `D:\bea\AdapterEars` directory, select the directory as shown in the following figure.

**Figure 1-4 Locating the Adapter EAR File**

Listing of [localhost\0:\bea\AdapterEars](#)

[\[Up to parent directory\]](#)

[\[select\]](#) `BEA_FIX_1_0_70.ear`

If you have not copied the `BEA_FIX_1_0_70.ear` file to a directory on the administrative server, do the following:

a. Navigate to the directory to which the file will be uploaded.

For example, to upload the adapter from your local machine to the `D:\bea\AdapterEars` directory on the administrative server, select the directory as shown in the following figure.

### Figure 1-5 Selecting the Target Directory

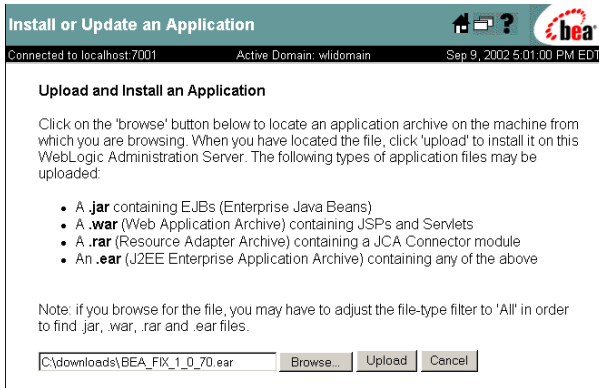
Listing of [localhost\D:\bea\AdapterEars](#)

[\[Up to parent directory\]](#)

- b. Click the upload it through your browser link to display the Install or Update an Application window.
- c. Click Browse to display the Choose File dialog box.
- d. In the Choose File dialog box, locate the file, and then click Open.

The console displays the selected location.

### Figure 1-6 Install or Update an Application Window



- e. Click Upload.

The browser status bar indicates upload progress. When the upload is complete, you are returned to the Locate Application or Component to configure window. The uploaded file now resides in the directory selected in step a.

### Figure 1-7 Adapter EAR File Uploaded to Administrative Server

Listing of [localhost\D:\bea\AdapterEars](#)

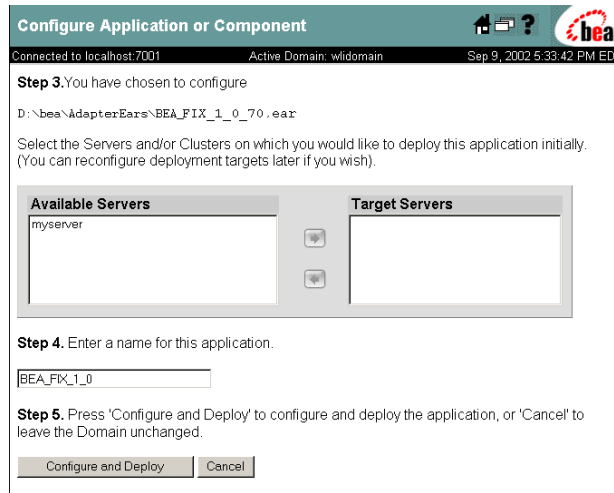
[\[Up to parent directory\]](#)

[\[select\]](#) BEA\_FIX\_1\_0\_70.ear

7. Click the [\[select\]](#) link to the left of the adapter EAR file.

The console displays the Configure Application or Component window.

**Figure 1-8 Configure Application or Component Window**



8. Select the servers or clusters on which to deploy the adapter by using the arrow buttons to move entries from the available list to the target list.
9. You must change the application name from BEA\_FIX\_1\_0\_70 to BEA\_FIX\_1\_0.

**Note:** If you do not change the application name, the adapter will not be available to application views.

The following figure shows a configured application.

**Figure 1-9 Configured Application**

**Configure Application or Component**

Connected to localhost:7001 Active Domain: wldomain Sep 9, 2002 5:39:42 PM EDT

**Step 3.** You have chosen to configure  
D:\bea\AdapterEars\BEA\_FIX\_1\_0\_70.ear

Select the Servers and/or Clusters on which you would like to deploy this application initially.  
(You can reconfigure deployment targets later if you wish).

Available Servers	Target Servers
	myserver

**Step 4.** Enter a name for this application.  
BEA\_FIX\_1\_0

**Step 5.** Press 'Configure and Deploy' to configure and deploy the application, or 'Cancel' to leave the Domain unchanged.

10. Click **Configure and Deploy**.

The console displays the deployment status, which includes a description, status, begin time, and end time for the deployed adapter.

## Step 6. Creating or Updating the Adapter Group

Before you create an application view that uses the events or services supported by an adapter, the following requirements must be met:

- The user group, `adapter`, must be defined.
- The administrative server user name must be a member of the `adapter` group.

The action required to complete the configuration depends on which domain template you selected when you created the domain. See the following table for guidelines.

**Table 1-1 Configuration Requirements**

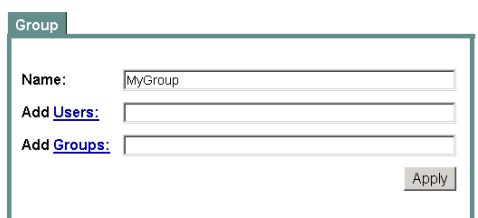
<b>If you created a domain based on the . . .</b>	<b>And the administrative server user name is . . .</b>	<b>Then . . .</b>
Platform domain template	Any value	Create the adapter group and add the administrative user name to it as described in <a href="#">“Creating the Adapter Group” on page 1-14.</a>
WLI or EAI domain template	system	The adapter group is already defined. This group includes the system user name by default. No further configuration is required.
WLI or EAI domain template	A value other than system	The adapter group is already defined. Add the user name to the group as described in <a href="#">“Adding the User Name to the Adapter Group” on page 1-15.</a>

## Creating the Adapter Group

To create the adapter group:

1. In the left pane of the WebLogic Server Administration Console, choose Compatibility Security and then Groups from the navigation tree.
2. Click the Create a New Group link to display the Group window.

**Figure 1-10 Group Window**



Group

Name:

Add [Users:](#)

Add [Groups:](#)

3. Enter adapter in the Name field.

4. Enter the administrative server user name in the Add Users field.
5. Click Apply.

The Group window is updated as shown in the following figure.

**Figure 1-11 Group Window**

Group

Name: adapter

Members: [\(Select to remove\)](#) ☐ [username](#)

Add Users:

Add Groups:

Apply

### Adding the User Name to the Adapter Group

To add the administrative server user name to the adapter group:

1. In the left pane of the WebLogic Server Administration Console, choose Compatibility Security and then Groups from the navigation tree.

The console displays the groups currently defined for the domain.

2. Locate and click the link for the adapter group to display the group definition.

**Figure 1-12 Group Definition**

mydomain> Realms> myRealm> Groups

Connected to localhost:7001 Active Domain: mydomain Sep 10, 2002 5:41:32 PM EDT

Group

Name: adapter

Members: [\(Select to remove\)](#) ☐ [admin](#) ☐ [wlcsamplesUser](#) ☐ [joe](#) ☐ [wlsystem](#) ☐ [hub](#) ☐ [system](#) ☐ [mary](#) ☐ [quest](#)

Add Users:

Add Groups:

Apply

3. If the administrative server user name is not included in the Members list, enter the user name in the Add Users field.
4. Click Apply to add the user name to the group.

The name is added to the Members list.

# Next Steps

When you have successfully installed and deployed the adapter, you can log on to the WebLogic Integration Application View Console to create application views that employ events and services supported by the BEA WebLogic Adapter for FIX. For more information, see the *BEA WebLogic Adapter for FIX User Guide*.