



BEA WebLogic Adapter for SAP®

Installation and Configuration Guide

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BEA WebLogic Adapter for SAP Installation and Configuration Guide

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About This Document

This document explains how to install the BEA WebLogic Adapter for SAP. The BEA WebLogic Adapter for SAP is an application that is installed into the WebLogic Server J2EE application server infrastructure and WebLogic Integration. This adapter quickly and easily integrates your SAP IDocs, RFCs, and BAPIs with WebLogic Integration using Application Integration. Together, the adapter and WebLogic Integration provide all the functionality you need to integrate your mission critical SAP system with other enterprise applications.

This document is organized as follows:

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

Audience

This document is written for system integrators who develop client interfaces between SAP and other applications. It describes how to install the BEA WebLogic Adapter for SAP in order to integrate SAP IDocs, RFCs, and BAPIs with WebLogic Integration. It is assumed that readers know Web technologies and have a general understanding of Microsoft Windows and UNIX systems as well as the WebLogic Integration and WebLogic Server infrastructure.

Related Information

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

- *BEA WebLogic Adapter for SAP User Guide*
- *BEA WebLogic Adapter for SAP Release Notes*
- *BEA Application Explorer Installation Guide*
- BEA WebLogic Server installation and user documentation, which is available at the following URL:

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

Contact Us!

Your feedback on the BEA WebLogic Adapter for SAP documentation is important to us. Send us e-mail at docsupport@bea.com if you have questions or comments. Your comments will be reviewed directly by the BEA professionals who create and update the BEA WebLogic Adapter for SAP documentation.

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

If you have any questions about this version of BEA WebLogic Adapter for SAP, or if you have problems installing and running the BEA WebLogic Adapter for SAP, contact BEA Customer Support through BEA WebSupport at www.bea.com. You can also contact Customer Support by using the contact information provided on the Customer Support Card that 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

Documentation Conventions

The following documentation conventions are used throughout this document.

| Convention | Item |
|----------------------|---|
| boldface text | 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 | <p>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.</p> <p><i>Examples:</i></p> <pre>#include <iostream.h> void main () the pointer psz chmod u+w * \tux\data\ap .doc tux.doc BITMAP float</pre> |

| Convention | Item |
|--|---|
| monospace boldface text | Identifies significant words in code. <i>Example:</i> void commit () |
| <i>monospace</i> <i>italic</i> <i>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 |
| { } | 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"> ■ That an argument can be repeated several times in a command line ■ That the statement omits additional optional arguments ■ That you can enter additional parameters, values, or other information 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 SAP

This section provides instructions for installing the BEA WebLogic Adapter for SAP with WebLogic Integration. It includes the following topics:

- [Before Installing the Adapter](#)
- [Understanding the Representation of Paths](#)
- [Installing the Adapter With WebLogic Integration 7.0](#)
- [Installing the Adapter With WebLogic Integration 2.1](#)
- [Next Steps](#)

Before Installing the Adapter

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

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

In order to interact with SAP, you must gather the following SAP-specific connection information and ensure that it is available during the BEA WebLogic Adapter for SAP installation and configuration process:

- SAP Application Server Host Name/Address
- SAP System Number
- SAP Client
- SAP User ID
- SAP Password
- SAP Language

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 2.1 in the default location on a Windows system, *WLI_HOME* represents `c:\bea\wlintegration2.1`.
- 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 2.1, preconfigured domains (*bpmdomain*, *eaidomain*, *wlidomain*, and *samples*) are created as subdirectories of the *WLI_HOME*\config directory. Therefore, *domain* may be used to represent the root of a preconfigured WebLogic Integration 2.1 domain as follows:

WLI_HOME\config*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 install WebLogic Integration 2.1 in the default location on a Windows system, *DOMAIN_HOME* represents
c:\bea\wlintegration2.1\config\domain.
- 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 environment.

Installing the Adapter With WebLogic Integration 7.0

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

- [Step 1. Obtaining the BEA WebLogic Adapter for SAP](#)
- [Step 2. Configuring the Domain](#)
- [Step 3. Extracting JARs and Adjusting Classpath](#)
- [Step 4. Extracting SAP System-Specific Files](#)
- [Step 5. Updating the BEA License](#)
- [Step 6. Deploying the BEA WebLogic Adapter for SAP Using the WebLogic Server Console](#)
- [Step 7. Creating or Updating the Adapter Group](#)

Step 1. Obtaining the BEA WebLogic Adapter for SAP

The BEA WebLogic Adapter for SAP software is packaged as an EAR file (*BEA_SAP_1_0_70.ear*). You can obtain the software on CD or download it from 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 based on the WLI or EAI domain template, 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. Extracting JARs and Adjusting Classpath

Set the classpath using the procedure appropriate for your system:

- [Extracting JARs and Adjusting Classpath for Windows](#)
- [Extracting JARs and Adjusting Classpath for UNIX](#)

Extracting JARs and Adjusting Classpath for Windows

To unzip the adapter JAR files and adjust the classpath on Windows, complete the following steps:

1. Use WinZip (or another similar extracting product) to extract the `BEA_SAP_1_0_70.ear` file to a directory of your choice (for example, `BEA_HOME\adapters\sap`).

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 JAR files:

```
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\xercesImpl.jar
REM ===== SAP Java Libraries and DLL's (for JNI Calls) =====
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\win32\sapjCO.jar
```

Here, *BEA_HOME\adapters\sap* is the directory specified in step 1.

Extracting JARs and Adjusting Classpath for UNIX

To extract the adapter JAR files and adjust the classpath on UNIX, complete the following steps:

1. Use jar (or another similar extracting product) to extract *BEA_SAP_1_0_70.ear* to a directory of your choice (for example, *BEA_HOME\adapters\sap*).
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.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 JAR files:

```
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/xercesImpl.jar
REM ===== SAP Java Libraries and DLL's (for JNI Calls) =====
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/your_unix_system/sapjCO.jar
```

Here, *BEA_HOME/adapters/sap* is the directory specified in step 1, and *your_unix_system* is *hpux* or *solaris*, depending on your UNIX system.

Step 4. Extracting SAP System-Specific Files

The *BEA_SAP_1_0_70.ear* file includes the operating-system-specific files necessary to access SAP. These files are archived in operating-system-specific directories (for example, */hpux*, */solaris*, or */win32*).

Complete the following steps to extract these non-Java files and add the location of the files to the appropriate environment variable.

1. Use Winzip or jar to extract the platform-specific files to a directory of your choice (for example, *BEA_HOME\adapters\sap\win32* or *BEA_HOME\adapters\sap\solaris*).

For example, use the following jar command to extract the files required for Sun Solaris:

```
jar -xvf BEA_SAP_1_0_70.ear -c solaris
```

2. Update the *SetDomainTypeData.cmd* file to add the location of the files to the appropriate environment variable.
 - For example, on Windows, add the following to the *SetDomainTypeData.cmd* file to add the directory to the *PATH*:

```
REM ===== Add SAP Binaries =====
SET PATH=%PATH%; "%BEA_HOME%\adapters\sap\win32"
```
 - For example, on Solaris, add the following to the *SetDomainTypeData.cmd* file to add the directory to the *LD_LIBRARY_PATH*:

```
# ===== Add SAP Binaries =====
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$BEA_HOME/adapters/sap/solaris
```


Step 5. Updating the BEA License

The BEA WebLogic Adapter for SAP 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.

When you have obtained a valid license for the adapter, update your `license.bea` file by completing the following steps:

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 `sap_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 6. Deploying the BEA WebLogic Adapter for SAP Using the WebLogic Server Console

After the BEA WebLogic Adapter for SAP is installed, it must be deployed to your domain. To configure and deploy an adapter using the WebLogic Server Administration Console, complete the following steps:

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

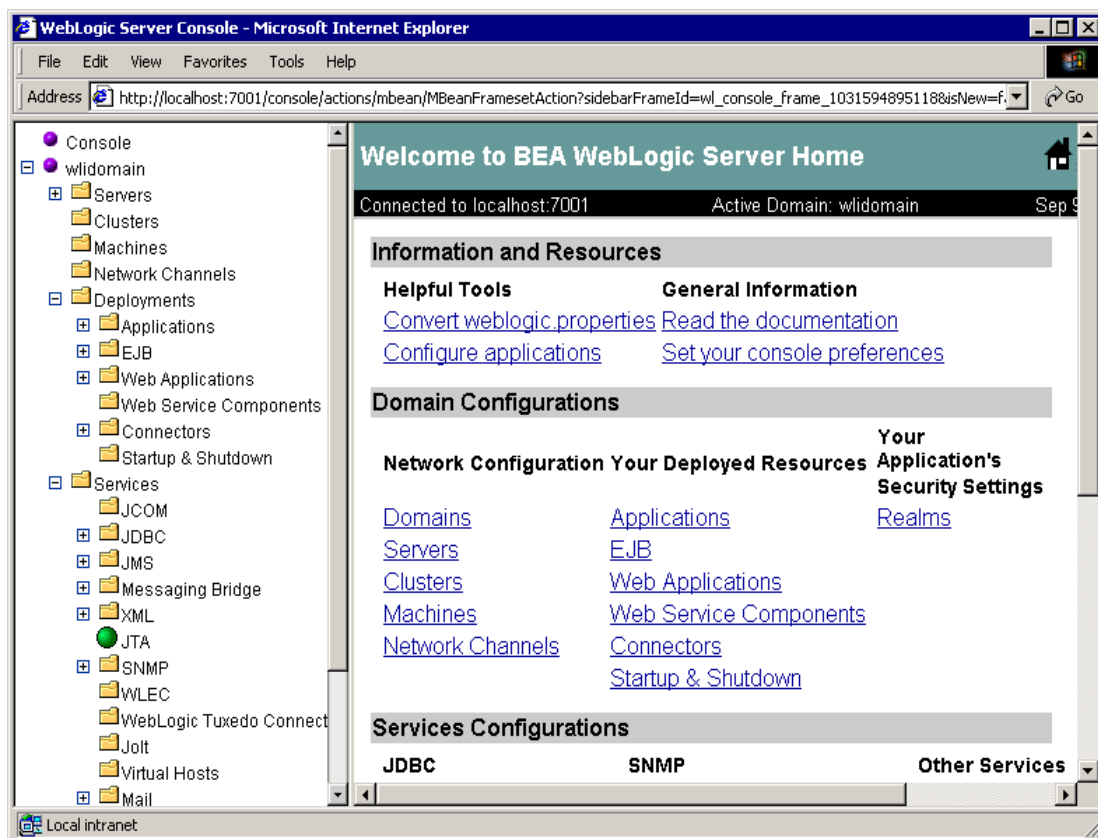
`http://host:port/console/`

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

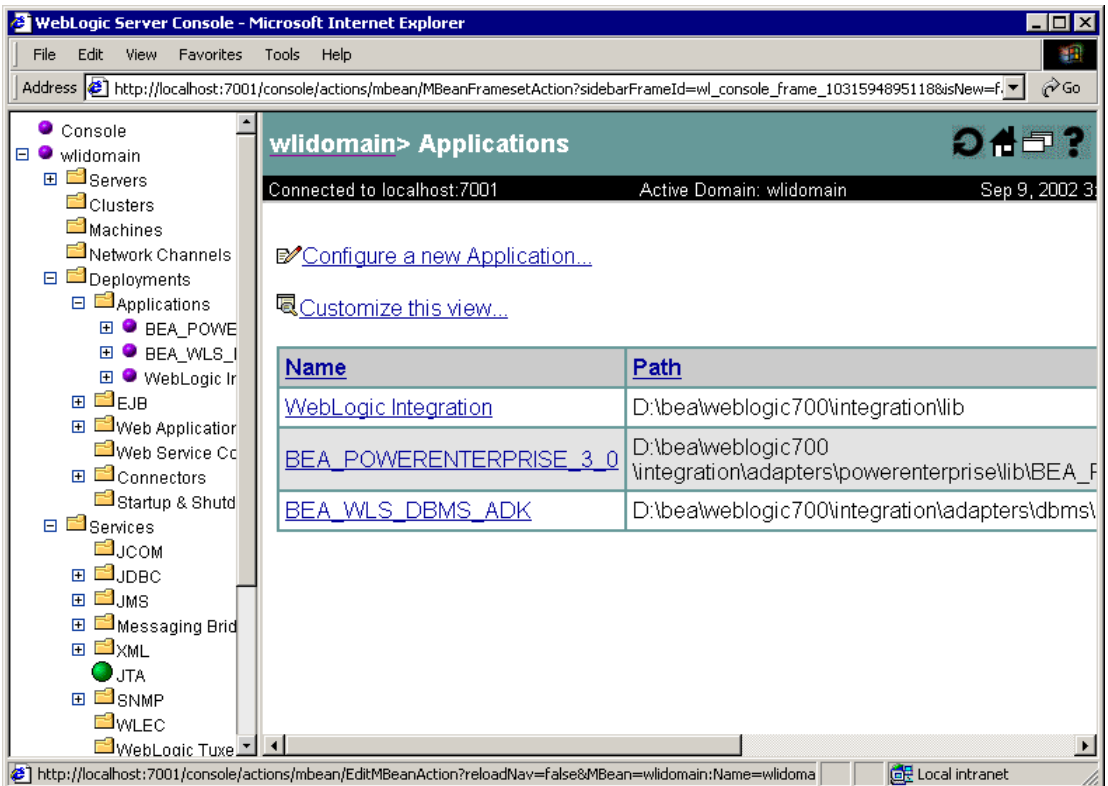


1 *Installing the BEA WebLogic Adapter for SAP*

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

The console displays the Applications window.

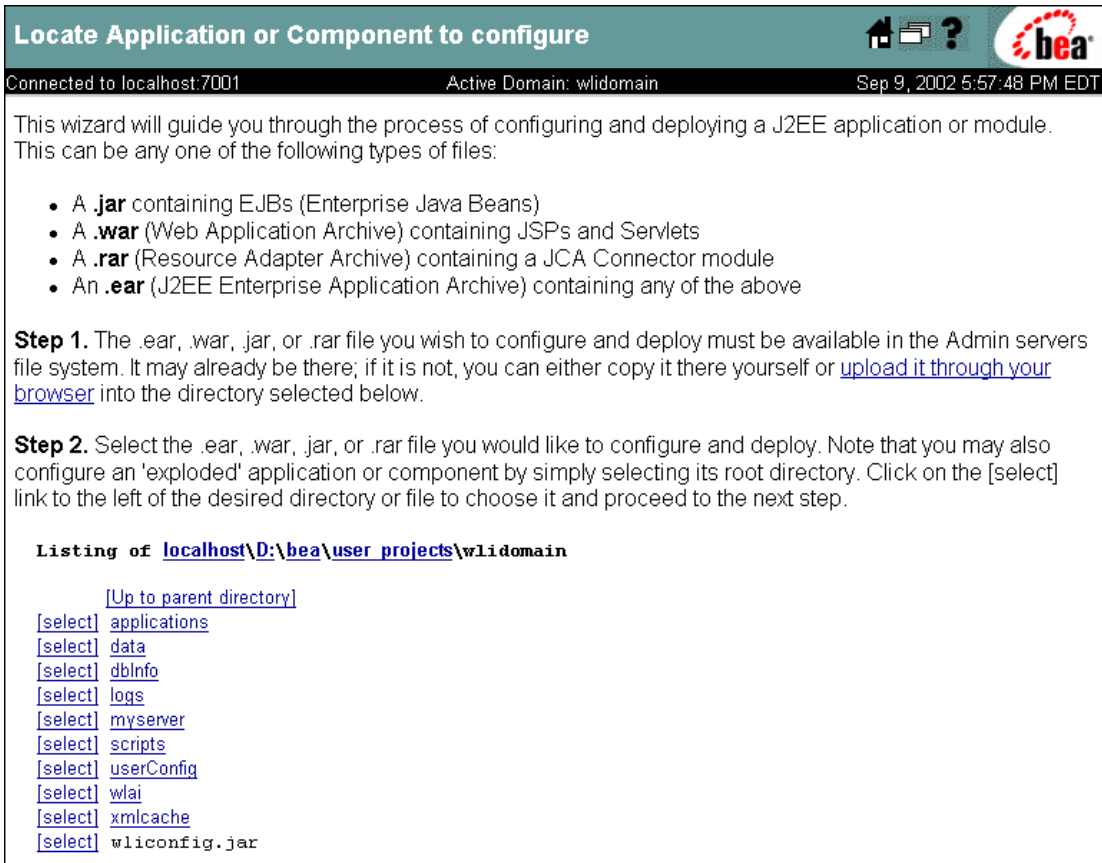
Figure 1-2 Applications Window



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_SAP_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\D:\bea\AdapterEars](#)

[\[Up to parent directory\]](#)
[\[select\]](#) `BEA_SAP_1_0_70.ear`

If you have not copied the `BEA_SAP_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](#)

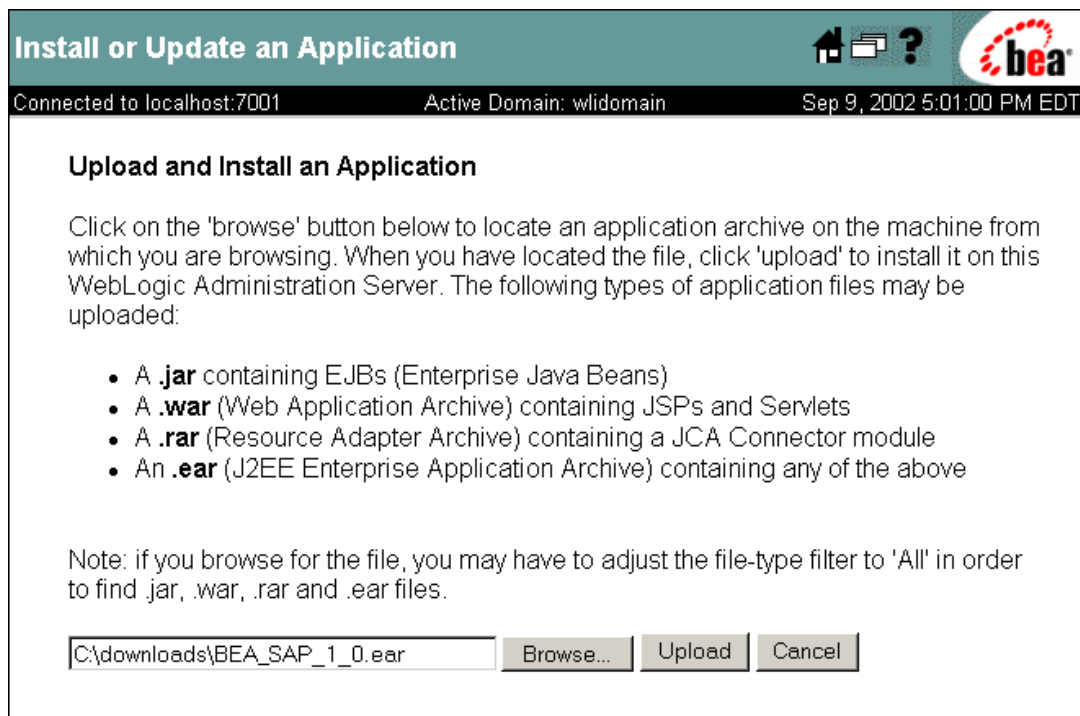
[\[Up to parent directory\]](#)

- 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_SAP_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

Configure Application or Component





Connected to localhost:7001Active Domain: wlidomainSep 9, 2002 5:33:42 PM EDT

Step 3. You have chosen to configure

D:\bea\AdapterEars\BEA_SAP_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_SAP_1_0_70

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

Configure and Deploy

Cancel




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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_SAP_1_0_70 to BEA_SAP_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: wlidomain Sep 9, 2002 5:33:42 PM EDT

Step 3. You have chosen to configure
D:\bea\AdapterEars\BEA_SAP_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_SAP_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 7. 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

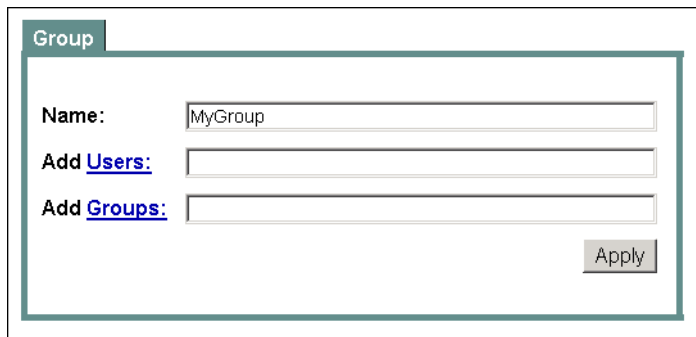
| If you created a domain based on the . . . | And the administrative server user name is . . . | Then . . . |
|--|--|---|
| Platform domain template | Any value | Create the adapter group and add the administrative user name to it as described in “Creating the Adapter Group” on page 1-20 . |
| WLI or EAI domain template | <code>system</code> | The adapter group is already defined. This group includes the <code>system</code> user name by default. No further configuration is required. |
| WLI or EAI domain template | A value other than <code>system</code> | The adapter group is already defined. Add the user name to the group as described in “Adding the User Name to the Adapter Group” on page 1-21 . |

Creating the Adapter Group

To create the adapter group and add the administrative server user name to it, complete the following steps:

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](#):

Apply

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

The screenshot shows a 'Group' window with the following elements:

- Name:** adapter
- Members:** ☐ [username](#)
(Select to remove)
- Add [Users](#):** [Text input field]
- Add [Groups](#):** [Text input field]
- Apply** button

Adding the User Name to the Adapter Group

To add the administrative server user name to the `adapter` group, complete the following steps:

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.

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Figure 1-12 Group Definition

The screenshot shows the BEA WebLogic Group Definition web interface. The breadcrumb navigation at the top reads "mydomain> Realms> myRealm> Groups". The status bar indicates "Connected to localhost:7001", "Active Domain: mydomain", and the date/time "Sep 10, 2002 5:41:32 PM EDT". The BEA logo is in the top right corner. A "Group" tab is selected. The main form area contains the following fields:

- Name:** adapter
- Members:** (Select to remove) ☐ [admin](#) ☐ [wlcSamplesUser](#) ☐ [joe](#) ☐ [wlisystem](#) ☐ [hub](#)
☐ [system](#) ☐ [mary](#) ☐ [guest](#)
- Add [Users](#):**
- Add [Groups](#):**
- Apply** button

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.

Installing the Adapter With WebLogic Integration 2.1

This topic provides instructions for installing the BEA WebLogic Adapter for SAP with WebLogic Integration 2.1. It includes the following steps:

- [Step 1. Obtaining the BEA WebLogic Adapter for SAP](#)
- [Step 2. Extracting JARs and Adjusting Classpath](#)
- [Step 3. Extracting SAP System-Specific Files](#)
- [Step 4. Configuring the WebLogic Integration Database for the Domain](#)
- [Step 5. Replacing the xmltoolkit.jar File](#)
- [Step 6. Updating the BEA License](#)
- [Step 7. Deploying the BEA WebLogic Adapter for SAP Using the WebLogic Server Console](#)
- [Step 8. Adding the Administrative Server User Name to the Adapter Group](#)

Step 1. Obtaining the BEA WebLogic Adapter for SAP

The BEA WebLogic Adapter for SAP is packaged as an EAR file (`BEA_SAP_1_0.ear`). You can obtain the software on CD or download it from www.bea.com.

Note: At the time of publication of this document, WebLogic Server 6.1 is unable to explode RAR files (BEA Support CASE number 333672). Use an extraction tool (such as WinZip) to extract the contents of the adapter EAR file, `BEA_SAP_1_0.ear`, and add the location of the unpackaged objects to the server's classpath (see [Step 2. Extracting JARs and Adjusting Classpath](#)).

Step 2. Extracting JARs and Adjusting Classpath

Set the classpath using the procedure appropriate for your system:

- [Extracting JARs and Adjusting Classpath for Windows](#)
- [Extracting JARs and Adjusting Classpath for UNIX](#)

Extracting JARs and Adjusting Classpath for Windows

To unzip the adapter JAR files and adjust the classpath on Windows, complete the following steps:

1. Use WinZip (or another similar extracting product) to extract the `BEA_SAP_1_0.ear` file to a directory of your choice (for example, `BEA_HOME\adapters\sap`).

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.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 following SVRCP environment variable settings to the `SetDomainTypeData.cmd` file for the domain to include all the JAR files included in the EAR 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%\wlai
```

add the following JAR files, which are listed in the order required for the classpath:

```
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\BEA_SAP_1_0.jar
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\ibi-edaqm.jar
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\xercesImpl.jar
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\xmlParserAPIs.jar
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\xmltoolkit.jar
REM ===== SAP Java Libraries and DLL's (for JNI Calls) =====
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\ibi-sapjco.jar
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\win32\sapjCO.jar
set SVRCP=%SVRCP%;BEA_HOME\adapters\sap\xmltoolkit.jar
```

Here, `BEA_HOME\adapters\sap` is the directory specified in step 1.

Extracting JARs and Adjusting Classpath for UNIX

To extract the adapter JAR files and adjust the classpath on UNIX, complete the following steps:

1. Use `jar` (or another similar extracting product) to extract `BEA_SAP_1_0.ear` to a directory of your choice (for example, `BEA_HOME\adapters\sap`).
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.

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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 following SVRCP environment variable settings to the `SetDomainTypeData.cmd` file for the domain to include all the JAR files included in the EAR 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%\wlai
```

add the following JAR files, which are listed in the order required for the classpath:

```
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/BEA_SAP_1_0.jar
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/ibi-edaqm.jar
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/xercesImpl.jar
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/xmlParserAPIs.jar
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/xmltoolkit.jar
# ===== SAP Java Libraries and DLL's (for JNI Calls) =====
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/ibi-sapjco.jar
set SVRCP=$SVRCP:BEA_HOME/adapters/sap/your_unix_system/sapjco.jar
```

Here, *BEA_HOME/adapters/sap* is the directory specified in step 1, and *your_unix_system* is *hpux* or *solaris*, depending on your UNIX system.

Step 3. Extracting SAP System-Specific Files

The `BEA_SAP_1_0.ear` file includes the operating-system-specific files necessary to access SAP. These files are archived in operating-system-specific directories (for example, `/hpux`, `/solaris`, or `/win32`).

Complete the following steps to extract these non-Java files and add the location of the files to the appropriate environment variable.

1. Use Winzip or jar to extract the platform-specific files to a directory of your choice (for example, `BEA_HOME\adapters\sap\win32` or `BEA_HOME\adapters\sap\solaris`).

For example, use the following jar command to extract the files required for Solaris:

```
jar -xvf BEA_SAP_1_0.ear -c solaris
```

2. Update the `SetDomainTypeData.cmd` file to add the location of the files to the appropriate environment variable.
 - For example, on Windows, add the following to the `SetDomainTypeData.cmd` file to add the directory to the `PATH`:

```
REM ===== Add SAP Binaries =====  
SET PATH=%PATH%; "%BEA_HOME%\adapters\sap\win32"
```
 - For example, on Solaris, add the following to the `SetDomainTypeData.cmd` file to add the directory to the `LD_LIBRARY_PATH`:

```
# ===== Add SAP Binaries =====  
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$BEA_HOME/adapters/sap/solaris
```

Step 4. Configuring the WebLogic Integration Database for the Domain

If you have not already done so, you must create the WebLogic Integration database tables for your domain. For detailed instructions, see “Configuring the Database for a Domain” in *Starting, Stopping and Customizing BEA WebLogic Integration*, which is available at the following URL:

http://edocs.bea.com/wlintegration/v2_1sp/config/index.htm

Step 5. Replacing the `xmltoolkit.jar` File

The BEA WebLogic Adapters include a new `xmltoolkit.jar` file. You must replace your existing WebLogic Integration `xmltoolkit.jar` file with the new JAR file.

To configure the new `xmltoolkit.jar` file, follow these steps:

1. Rename your original `xmltoolkit.jar` file to `xmltoolkit.jar.old` by entering the commands appropriate for your operating system:
 - On a Windows system:

```
cd WLI_HOME\lib
rename xmltoolkit.jar xmltoolkit.jar.old
```
 - On a UNIX system:

```
cd WLI_HOME/lib
mv xmltoolkit.jar xmltoolkit.jar.old
```
2. Extract the `xmltoolkit.jar` file from the adapter EAR file into a temporary directory.
3. Copy the new `xmltoolkit.jar` file (extracted in step 2) to the `WLI_HOME\lib` directory for Windows or the `WLI_HOME/lib` directory for UNIX.

Caution: Simply replacing the `xmltoolkit.jar` file is not sufficient; you must also make changes to the `setenv` and `SetDomainTypeData` scripts as described in the following steps.

4. Edit the top-level `setenv` script and make the appropriate changes for your operating system:

- On a Windows system, edit the `WLI_HOME\setenv.cmd` script.

Replace the line:

```
set WLICOMMONCP=
```

with

```
set WLICOMMONCP=%WLI_HOME%\lib\xmltoolkit.jar
```

- On a UNIX system, edit the `WLI_HOME/setenv.sh` script.

Replace the line:

```
WLICOMMONCP=$WLI_LIB/wlicommon.jar
```

with

```
WLICOMMONCP=$WLI_LIB/wlicommon.jar:$WLI_HOME/lib/xmltoolkit.jar
```

5. Edit the `SetDomainTypeData` script.

Here, *DomainType* is the type of domain. For example, depending on the configuration of your domain, locate and edit the `SetwliDomainData.cmd` or `SeteaiDomainData.cmd` file.

- On a Windows system:

For example, edit the `DOMAIN_HOME\SetwliDomainData.cmd` script.

Replace the line:

```
set SVRCP=%WLISERVERCP%;%CMNCP%
```

with

```
set  
SVRCP=%WLI_HOME%\lib\xmltoolkit.jar;%WLISERVERCP%;%CMNCP%
```

- On a UNIX system:

For example, edit the `DOMAIN_HOME/SetwliDomainData` script.

Replace the line:

```
SVRCP=$WLISERVERCP:$CMNCP
```

with

```
SVRCP=$WLI_HOME/lib/xmltoolkit.jar:$WLISERVERCP:$CMNCP
```

Step 6. Updating the BEA License

The BEA WebLogic Adapter for SAP 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.

When you have obtained a valid license for the adapter, update your `license.bea` file by completing the following steps:

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 `sap_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 7. Deploying the BEA WebLogic Adapter for SAP Using the WebLogic Server Console

After the BEA WebLogic Adapter for SAP is installed, it must be deployed to WebLogic Server for your domain (for example, `wlidomain`). To configure and deploy an adapter using the WebLogic Server Administration Console, complete the following steps:

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

```
http://localhost:port/console/
```

Here, *localhost* 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.

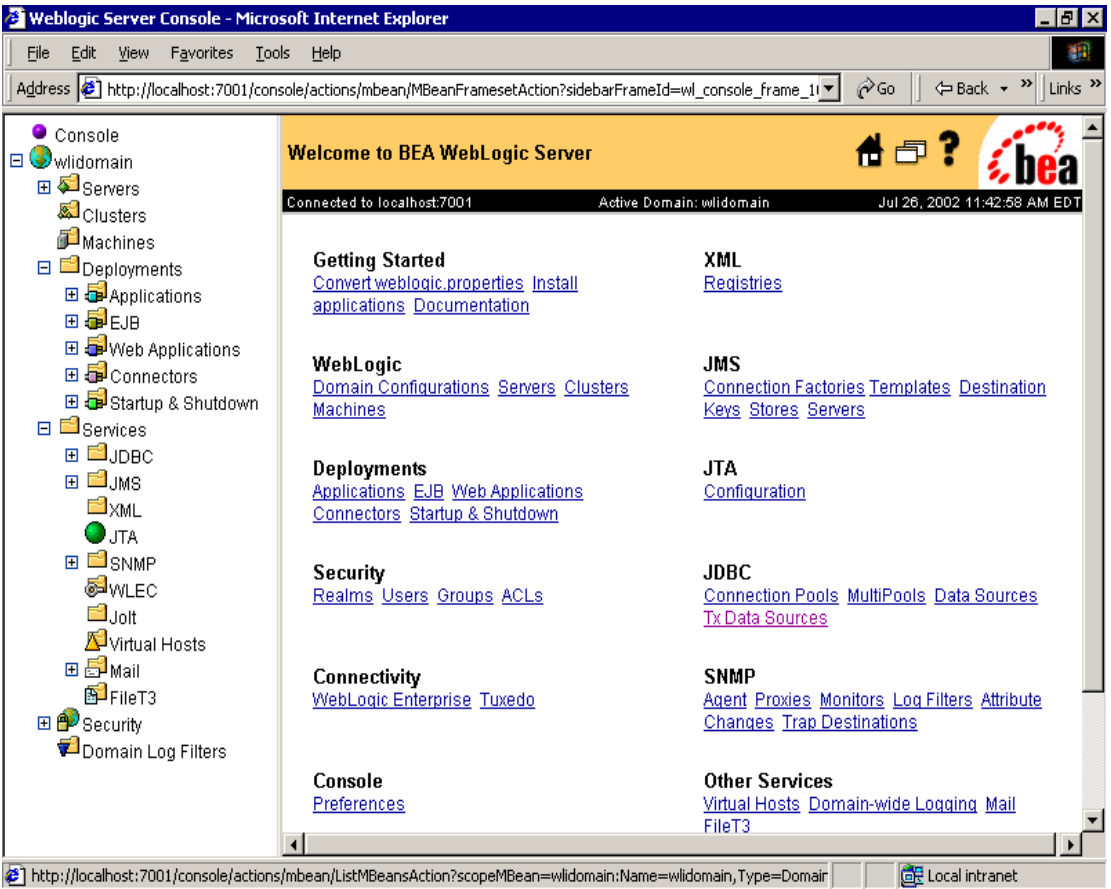
Note: If you have not updated the default login, see “WebLogic Integration Users and Passwords” in *Starting, Stopping, and Customizing WebLogic Integration* at the following URL:

```
http://edocs.bea.com/wlintegration/v2_1sp/config/getstart.htm
```

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The WebLogic Server Administration Console opens.

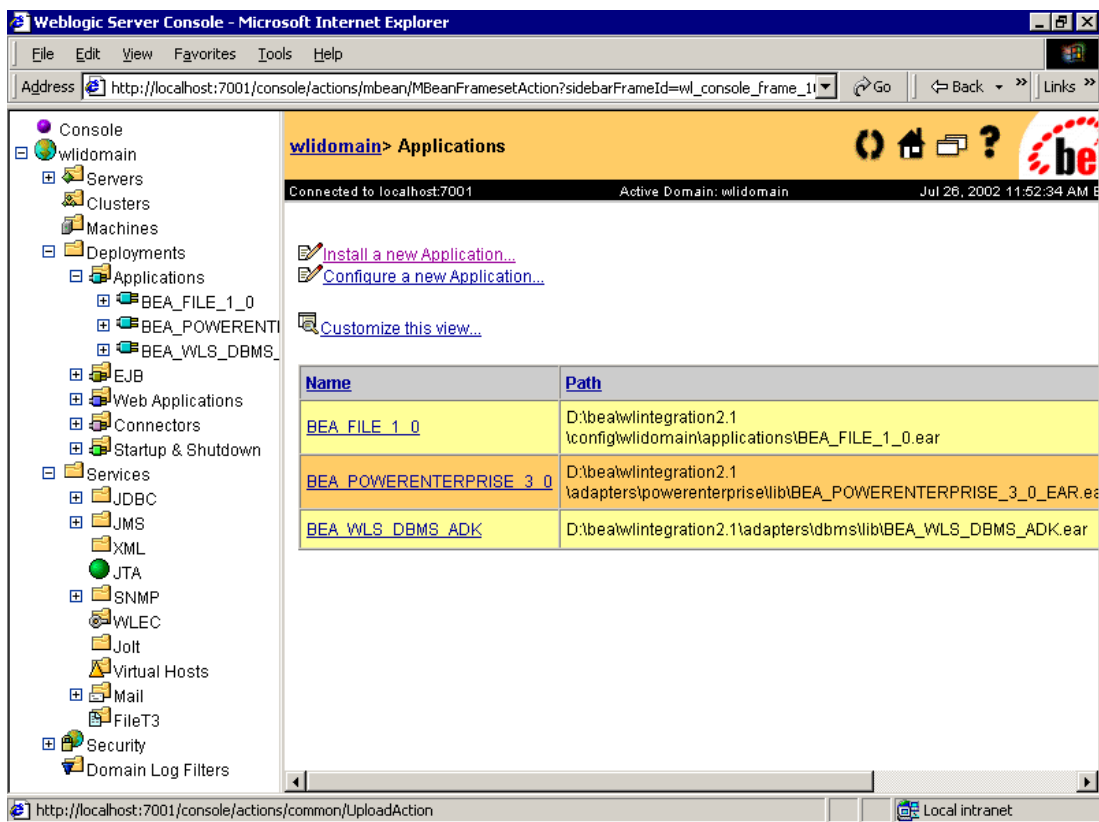
Figure 1-13 WebLogic Server Console



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

The console displays the Applications window.

Figure 1-14 Applications Window

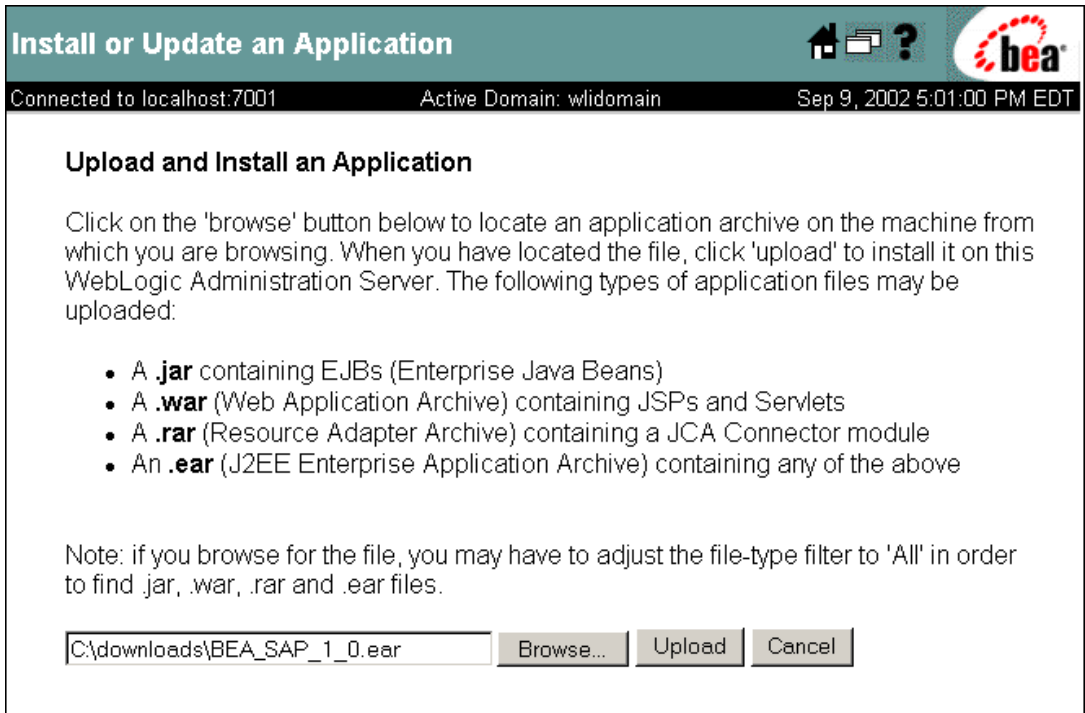


5. Click the Install a new Application link.

The console displays the Install or Update an Application window.

6. Click Browse to locate the application archive you selected during installation (BEA_SAP_1_0.ear).

Figure 1-15 Locating the Application Archive Window



7. Click Upload to upload the `BEA_SAP_1_0.ear` file.

The console displays the application files currently installed to indicate that the upload is complete and the adapter file is deployed to WebLogic Server.

8. You can verify deployment by viewing the adapter configuration, as follows:
 - a. Choose Deployments and then Applications from the navigation tree.
 - b. Click the `BEA_SAP_1_0.ear` file link.

Step 8. Adding the Administrative Server User Name to the Adapter Group

A user group, `adapter`, is defined in each domain that supports application integration functionality. Before you create an application view that employs the events or services supported by an adapter, you must add the user name defined for the administrative server to the `adapter` group.

Note: By default, the `adapter` group includes the user `system`. If the user name defined for the administrative server is `system`, skip this step. For example, if you are starting the server in a preconfigured domain, and you have not modified the default administrative server login, you can skip this step.

To add the administrative server user name to the `adapter` group, complete the following steps:

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

The console displays groups currently defined for the domain.

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

Figure 1-16 Group Definition

The screenshot shows the BEA WebLogic Administration Console interface. The breadcrumb navigation at the top reads: [eaidomain](#) > [Realms](#) > [myRealm](#) > [Groups](#). The status bar indicates: Connected to localhost:7001, Active Domain: eaidomain, and the date/time is Sep 10, 2002 7:18:19 PM EDT. The main content area is titled 'Group' and displays the definition for the 'adapter' group. It includes a 'Name' field with the value 'adapter'. The 'Members' section, with the instruction '(select to remove)', lists several users: [joe](#), [system](#), [guest](#), [hub](#), [wlpisystem](#), [mary](#), [wlicsystem](#), [admin](#), and [wlcSamplesUser](#). Below this are two input fields: 'Add [Users](#):' and 'Add [Groups](#):', each followed by a text box. An 'Apply' button is located in the bottom right corner of the group definition area.

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 SAP. For more information, see the *BEA WebLogic Adapter for SAP User Guide*.