



BEA WebLogic Adapter for RDBMS

Installation and Configuration Guide for WebLogic Integration 2.1

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Part Number	Date	Release
N/A	November 2002	7.0 with Service Pack 1

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About This Document

This document explains how to install the BEA WebLogic Adapter for Relational Database Management Systems (RDBMS) for WebLogic Integration 2.1, which is used to develop client-server interfaces between an RDBMS and other applications.

This document is organized as follows:

- [Chapter 1, “Installing the Adapter for WebLogic Integration 2.1,”](#) describes how to install the BEA WebLogic Adapter for RDBMS.

Audience

This document is written for system integrators who need to develop client-server interfaces between RDBMS and third-party enterprise information system (EIS) applications.

It provides information about using adapter tools to develop connections between a WebLogic Integration client and an RDBMS.

It is assumed that readers have a general understanding of Microsoft Windows and UNIX systems as well as:

- Some experience installing EIS and integration products and an understanding of RDBMS and SQL products with which this software will be integrating.
- Specific business application knowledge.
- Knowledge of the specific business application and data models for the required application.
- General knowledge of BEA WebLogic Integration architecture.
- General knowledge of XML concepts.

Extensive internal knowledge of the specific SQL environment is not required, but may be helpful in learning about the BEA WebLogic Adapter for RDBMS.

Related Information

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

- *BEA WebLogic Adapter for RDBMS User Guide*
- *BEA WebLogic Adapter for RDBMS Release Notes*
- BEA WebLogic Server 6.1 installation and user documentation, which is available at the following URL:
`http://edocs.bea.com/wls/docs61/index.html`
- BEA WebLogic Integration 2.1 installation and user documentation, which is available at the following URL:
`http://edocs.bea.com/wlintegration/v2_1sp/index.html`
- Specific RDBMS installation and user documentation.

Contact Us!

Your feedback on the BEA WebLogic Adapter for RDBMS 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 RDBMS documentation.

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

If you have any questions about this version of the BEA WebLogic Adapter for RDBMS, or if you have problems installing and running the BEA WebLogic Adapter for RDBMS, 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, 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

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	<div>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.</div> <div><i>Examples:</i></div> <div>#include <iostream.h> void main () the pointer psz chmod u+w * \tux\data\ap .doc tux.doc BITMAP float</div>
monospace boldface text	<div>Identifies significant words in code.</div> <div><i>Example:</i></div> <div>void commit ()</div>
<i>monospace italic text</i>	<div>Identifies variables in code.</div> <div><i>Example:</i></div> <div>String <i>expr</i></div>
UPPERCASE TEXT	<div>Indicates device names, environment variables, and logical operators.</div> <div><i>Examples:</i></div> <div>LPT1 SIGNON OR</div>

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">■ 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 Adapter for WebLogic Integration 2.1

This section provides instructions for installing the BEA WebLogic Adapter for RDBMS with WebLogic Integration 2.1. It includes the following topics:

- [Before Installing the Adapter](#)
- [Understanding the Representation of Paths](#)
- [Step 1. Obtaining the BEA WebLogic Adapter for RDBMS](#)
- [Step 2. Extracting JARs and Adjusting the Classpath](#)
- [Step 3. Configuring the WebLogic Integration Database for the Domain](#)
- [Step 4. Replacing the xmltoolkit.jar File](#)
- [Step 5. Updating the BEA License](#)
- [Step 6. Deploying the Adapter Using the WebLogic Server Console](#)
- [Step 7. Adding the Administrative Server User Name to the Adapter Group](#)
- [Next Steps](#)

Before Installing the Adapter

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

<http://edocs.bea.com/wlapters/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 2.1 in the default location on a Windows system, *WLI_HOME* represents `c:\bea\wlintegration2.1`.

- *domain* is used to indicate the name of a domain.
 - In WebLogic Integration 2.1, preconfigured domains (`bpmdomain`, `eidomain`, `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`

- *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.`

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.

Step 1. Obtaining the BEA WebLogic Adapter for RDBMS

The BEA WebLogic Adapter for RDBMS software is packaged as an EAR file (`BEA_RDBMS_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_RDBMS_1_0.ear`, and add the location of the unpackaged objects to the server's classpath (see [Step 2. Extracting JARs and Adjusting the Classpath](#)).

Step 2. Extracting JARs and Adjusting the Classpath

Set the classpath using the procedure appropriate for your system:

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

Extracting JARs and Adjusting the Classpath for Windows

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

1. Use WinZip (or another similar extracting product) to extract the `BEA_RDBMS_1_0.ear` file to a directory of your choice (for example, `BEA_HOME\AdapterEars`).

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%\wla
```

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

```
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\ibi-edaqm.jar
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\BEA_RDBMS_1_0.jar
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\xercesImpl.jar
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\xmlParserAPIs.jar
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\xmltoolkit.jar
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\classes12.zip
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\jconn2.jar
SET SVRCP=%SVRCP%;BEA_HOME\AdapterEars\ibi-rdbms.jar
```

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

Extracting JARs and Adjusting the Classpath for UNIX

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

1. Use `jar` (or another similar extracting product) to extract `BEA_RDBMS_1_0.ear` to a directory of your choice (for example, `BEA_HOME/ear/lib/RDBMS`).

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/ear/lib/RDBMS/ibi-edaqm.jar
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/BEA_RDBMS_1_0.jar
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/xercesImpl.jar
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/xmlParserAPIs.jar
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/xmltoolkit.jar
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/classes12.zip
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/jconn2.jar
SET SVRCP=%SVRCP%;BEA_HOME/ear/lib/RDBMS/ibi-rdbms.jar
```

Here, *BEA_HOME/ear/lib/RDBMS* is the directory specified in step 1.

Step 3. 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*, at the following URL:

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

Step 4. Replacing the xmltoolkit.jar File

The BEA WebLogic Adapters include a new `xmltoolkit.jar` file. You need to 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.

Note: 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
```

1 Installing the Adapter for WebLogic Integration 2.1

- 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 the 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 5. Updating the BEA License

The BEA WebLogic Adapter for RDBMS 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.

Note: A single license is provided for the BEA WebLogic Utility Adapter Pack, which includes the file, RDBMS, email, and HTTP adapters. If you have already updated the license for another utility adapter, you can skip this step.

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 `utility_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\bin;%PATH%
```
 - On a UNIX system:

```
PATH=BEA_HOME/jdk131/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 Adapter Using the WebLogic Server Console

After the BEA WebLogic Adapter for RDBMS 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://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.

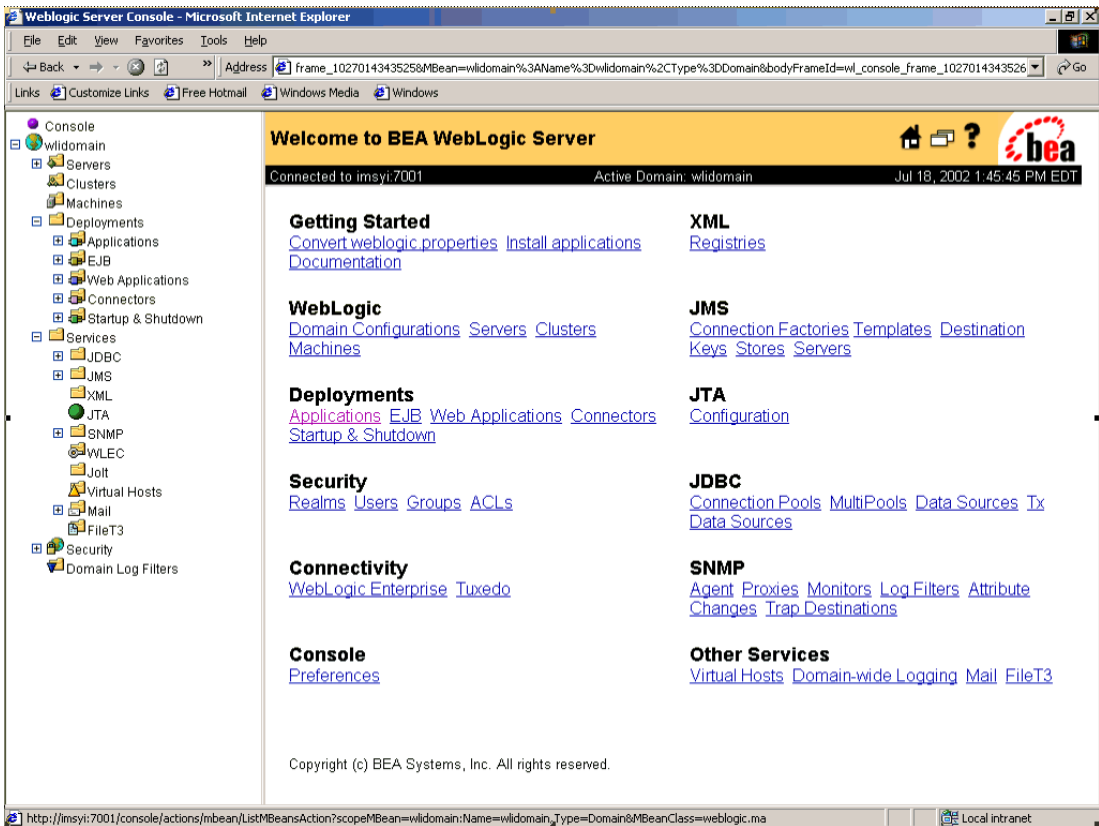
Step 6. Deploying the Adapter Using the WebLogic Server Console

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

The WebLogic Server Administration Console opens.

Figure 1-1 WebLogic Server Console

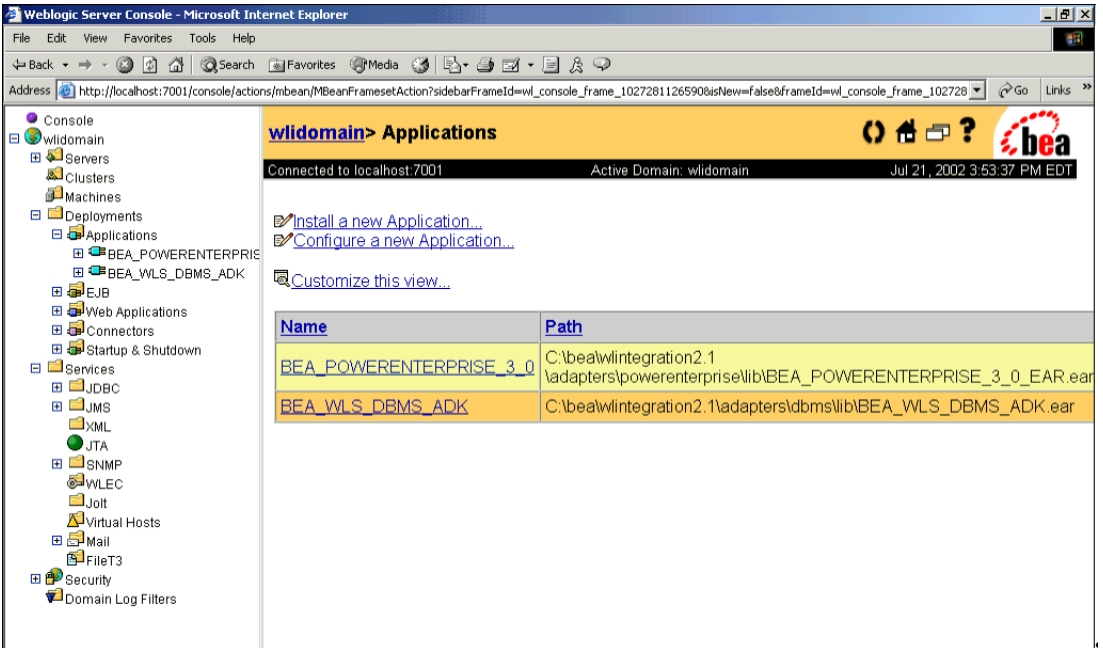


4. In the left pane, choose Deployments and then Applications from the navigation tree.

The console displays the Applications window.

1 *Installing the Adapter for WebLogic Integration 2.1*

Figure 1-2 Applications Window

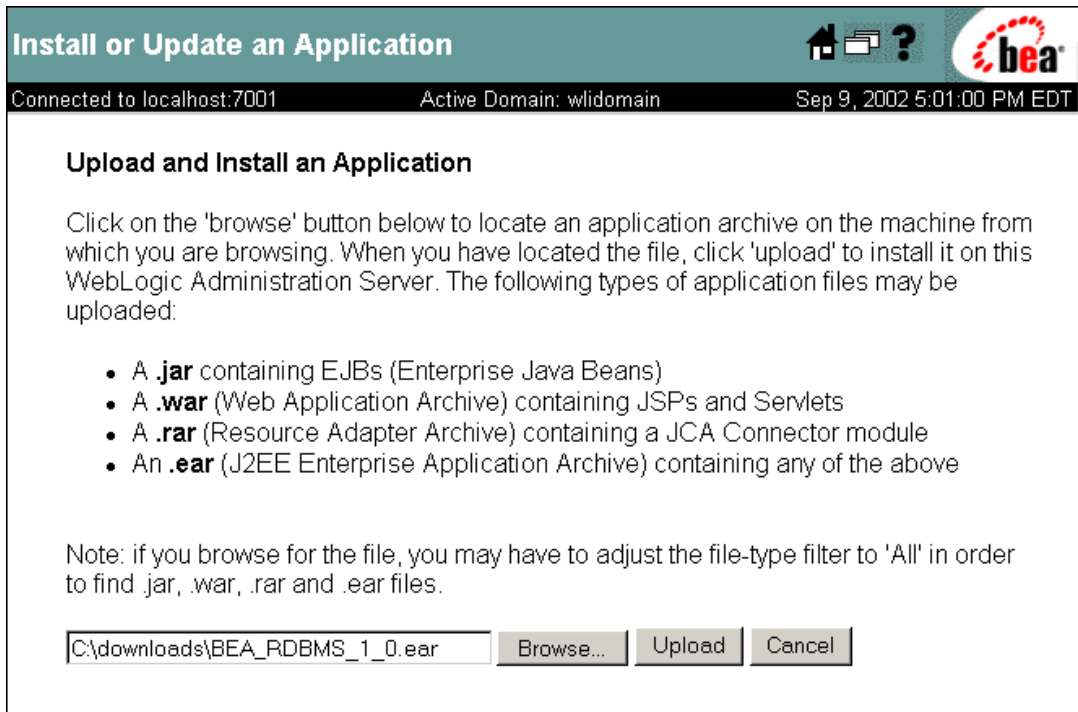


5. Click the Install a new Application link.

The console displays the Install or Update an Application window.

6. Click Browse to locate the application archive you selected during installation (BEA_RDBMS_1_0.ear).

Figure 1-3 Locating the Application Archive Window



7. Click Upload to upload the BEA_RDBMS_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_RDBMS_1_0.ear file link.

Step 7. 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 the groups currently defined for the domain.

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

Figure 1-4 Group Definition

The screenshot shows the WebLogic Server Administration Console interface. The breadcrumb navigation at the top reads: `eaideomain> Realms> myRealm> Groups`. Below this, a status bar indicates "Connected to localhost:7001", "Active Domain: eaideomain", and the date/time "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". Below this is a "Members:" section with the text "(select to remove)" and a list of users with checkboxes: `joe`, `system`, `guest`, `hub`, `wlplsystem`, `mary`, `wlcsystem`, `admin`, and `wlcSamplesUser`. There are two input fields labeled "Add Users:" and "Add Groups:". An "Apply" button is located in the bottom right corner of the form.

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

If you have not already installed the BEA Application Explorer, install it now. See the *BEA Application Explorer Installation and Configuration Guide*.

When you have successfully deployed the adapter and installed the BEA Application Explorer, 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 RDBMS. For more information, see the *BEA WebLogic Adapter for RDBMS User Guide*.

