BEA WebLogic Adapter for ClarifyCRM®

Installation and Configuration Guide for WebLogic Integration 7.0

Release 7.0.3
Document Date: April 2003

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N/A	April 2003	7.0.3

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About This Document

This document explains how to install, configure, and deploy the BEA WebLogic Adapter for ClarifyCRM to develop online connections to ClarifyCRM applications using BEA WebLogic Integration 7.0.

This document is organized as follows:

- Chapter 1, "Introducing the BEA WebLogic Adapter for ClarifyCRM," describes how to install the adapter.
- Chapter 2, "Installing the BEA WebLogic Adapter for ClarifyCRM With the CBO Interface," describes how to install the adapter.
- Chapter 3, "Installing the BEA WebLogic Adapter for ClarifyCRM With the ClearBasic Interface," describes how to install the adapter.

Audience

This document is written for system integrators with programming backgrounds and an understanding of ClarifyCRM. Extensive knowledge of these subjects is not required, but may be helpful in learning about the adapter.

Related Information

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

- *BEA WebLogic Adapter for ClarifyCRM User Guide*
- *BEA WebLogic Adapter for ClarifyCRM Release Notes*
- BEA WebLogic Platform installation and user documentation, which is available at the following URL:

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

Contact Us!

Your feedback on the BEA WebLogic Adapter for ClarifyCRM 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 adapter documentation.

In your e-mail message, please indicate which version of the adapter documentation you are using.

If you have any questions about this version of the adapter, or if you have problems installing and running it, 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 adapter you are using
- The version of WebLogic Integration you are using
- A description of the problem and the content of pertinent error messages

Documentation Conventions

The following 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.
italics	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.
	Examples:
	`#include <iostream.h> void main ( ) the pointer psz`
	`chmod u+w *`
	`\tux\data\ap`
	`.doc`
	`tux.doc`
	`BITMAP`
	`float`

`monospace boldface text`	Identifies significant words in code. *Example*: `void` **`commit`** `( )`
`monospace italic text`	Identifies variables in code. *Example*: `String` *`expr`*

Convention	Item
UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. *Example*s: 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. *Example*: `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: ■ 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. *Example*: `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 Introducing the BEA WebLogic Adapter for ClarifyCRM

This section provides information about the distribution of the BEA WebLogic Adapter for ClarifyCRM. It includes the following topic:

- About the Adapter Distribution

About the Adapter Distribution

The BEA WebLogic adapter for ClarifyCRM is distributed in a single zip file. This zip file contains two ear files. Which one you use depends on which ClarifyCRM interface you will be using. You can use the adapter with either interface, or both.

The distribution zip file contains:

- `BEA_CLARIFY_1_0_70.ear` is the ear file for the CBO interface of ClarifyCRM.
- `BEA_CLARIFYCB_1_0_70.ear` is the ear file for the ClearBasic interface for ClarifyCRM.

For information on installing and configuring the adapter to use the CBO interface, see Chapter 2, "Installing the BEA WebLogic Adapter for ClarifyCRM With the CBO Interface."

For information on installing and configuring the adapter to use the ClearBasic interface, see Chapter 3, "Installing the BEA WebLogic Adapter for ClarifyCRM With the ClearBasic Interface."

2 Installing the BEA WebLogic Adapter for ClarifyCRM With the CBO Interface

This chapter provides instructions for installing the BEA WebLogic adapter for ClarifyCRM with the CBO interface. For information on installing the BEA WebLogic adapter for ClarifyCRM with the ClearBasic interface, see Chapter 3, "Installing the BEA WebLogic Adapter for ClarifyCRM With the ClearBasic Interface."

This chapter includes the following topics:

- Before Installing the Adapter
- Understanding the Representation of Paths
- Step 1. Obtaining the BEA WebLogic Adapter for ClarifyCRM
- Step 2. Configuring the Domain
- Step 3. Updating the Environment
- Step 4. Updating the BEA License
- Step 5. Deploying the Adapter Using the WebLogic Server Console
- Step 6. Creating or Updating the Adapter Group
- Next Steps

Before Installing the Adapter

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

`http://edocs.bea.com/wladapters/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/confgwiz/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 environment.

Step 1. Obtaining the BEA WebLogic Adapter for ClarifyCRM

The BEA WebLogic Adapter for ClarifyCRM software is packaged as an EAR file (BEA_CLARIFY_1_0_70.ear). You can obtain the software on CD or download it from www.bea.com.

You must also obtain the bea_clarify_samples.zip file, which contains the tool necessary for generating triggers for ClarifyCRM events. Upon extracting the contents of bea_clarify_samples.zip, the tool is placed in \DBTriggers directory. Modify the batch file specific to your database and execute. Within the \CreateTables directory, there are SQL scripts specific to your database. Execute these scripts to generate the required tables within your database

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/confgwiz/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. Updating the Environment

The BEA WebLogic Adapter for ClarifyCRM relies on JDBC access to the ClarifyCRM database for event processing. Therefore, the appropriate JDBC driver must be installed and set in the classpath. Before you update the server environment, you must obtain the JDBC driver required for your ClarifyCRM database.

If the ClarifyCRM database is stored in MS SQL Server, you can obtain the necessary JDBC driver from the following site:

`http://msdn.microsoft.com/downloads/default.asp`

If the ClarifyCRM database is stored in Oracle, you can obtain the necessary JDBC driver from the following site:

`http://otn.oracle.com/software/tech/java/sqlj_jdbc/content.html`

After you have obtained the required driver, update your environment as described in the following procedure.

Note: As of the release date, the BEA WebLogic Adapter for ClarifyCRM is only certified for use with Windows operating systems. We are working to certify the adapter on additional platforms. Check the BEA WebLogic Adapters web site at the following URL for updates:

`http://edocs.bea.com/wladapters/docs70/index.html`

To update the server environment on Windows, complete the following steps:

1. Go to the root directory for your domain:

   `cd` *`DOMAIN_HOME`*

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

2. Locate the `Set`*`DomainType`*`Data.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.

3. Update the `SVRCP` environment variable settings in the `Set`*`DomainType`*`Data.cmd` file.

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

   After the following line:

   ```
   set SVRCP=%SVRCP%;%PBCOMMONCP%
   ```

   add the following JAR files, according to your database environment:

   - For SQL server:

     ```
     set SVRCP=%SVRCP%;"install_path\msbase.jar"
     set SVRCP=%SVRCP%;"install_path\mssqlserver.jar"
     set SVRCP=%SVRCP%;"install_path\msutil.jar"
     set SVRCP=%SVRCP%;"clarify_install_path\javaclasses\ClfyCbo.jar"
     ```

   - For Oracle:

     ```
     set SVRCP=%SVRCP%;"install_path\classes12.zip"
     set SVRCP=%SVRCP%;"clarify_install_path\javaclasses\ClfyCbo.jar"
     ```

   Here, *`install_path`* is the full path to the directory in which you placed the above-listed JDBC driver files for SQL server or the full path to the `classes12.zip` file, and *`clarify_install_path`* is the path to the root of your ClarifyCRM installation.

4. Add the Clarify `bin` directory to the `PATH` environment variable. For example, add the following statement to the `Set`*`DomainType`*`Data.cmd` file:

   ```
   set PATH=%PATH%;"clarify_install_path\bin"
   ```

Step 4. Updating the BEA License

The BEA WebLogic Adapter for ClarifyCRM 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 `clarify_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. Change to the *`BEA_HOME`* directory. For example, on a Windows system, open an MS-DOS session and 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. For example, on a Windows system:

   ```
   set PATH=BEA_HOME\jdk131_03\bin;%PATH%
   ```

4. Merge the license update file into your existing license by executing the command appropriate to your system. For example, on a Windows system:

   ```
   UpdateLicense 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 Using the WebLogic Server Console

After the BEA WebLogic Adapter for ClarifyCRM 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:

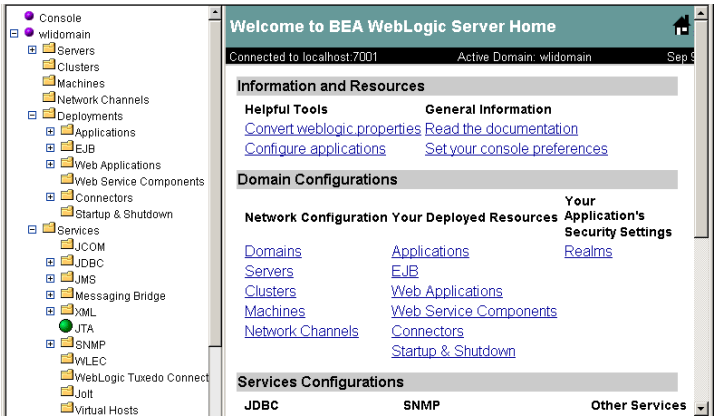
   `http://`*`host`*`:`*`port`*`/console/`

   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.

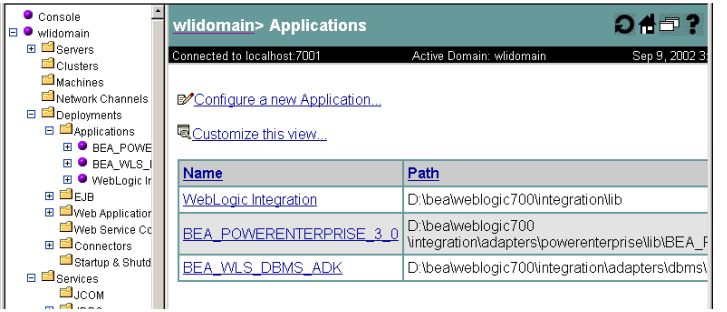
Figure 2-1 WebLogic Server Console



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

   The console displays the Applications window.

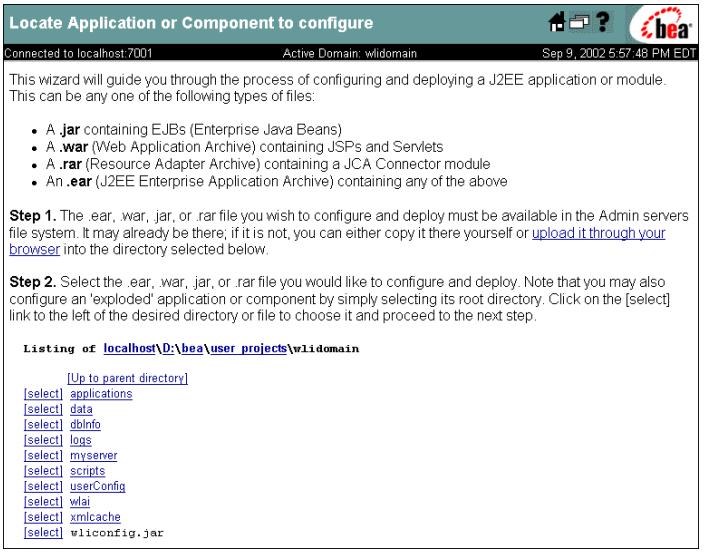
Figure 2-2 Applications Window



5. Click the Configure a new Application link.

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

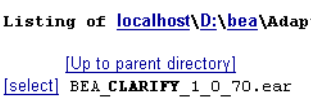
Figure 2-3 Locate Application or Component to Configure Window



6. Do one of the following:

If you copied the `BEA_CLARIFY_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 2-4 Locating the Adapter EAR File



If you have not copied the `BEA_CLARIFY_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 2-5 Selecting the Target Directory

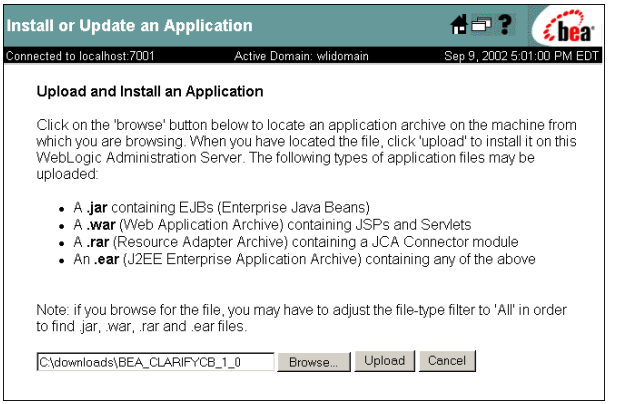
b. Click the upload it through your browser link to display the Install or Update an Application window.

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.

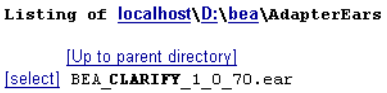
Figure 2-6 Install or Update an Application Window



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.

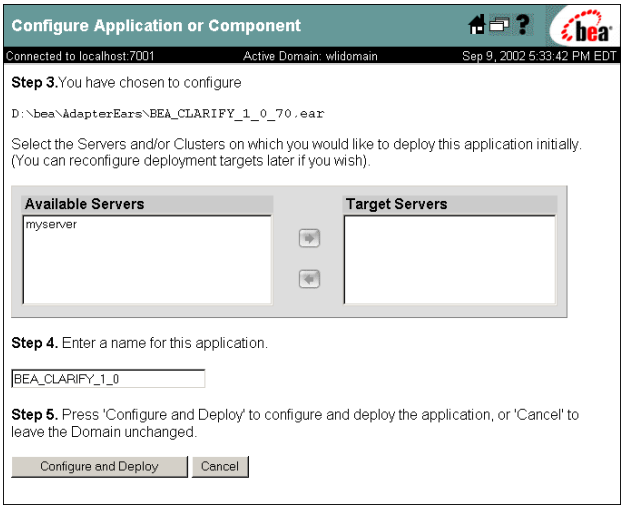
Figure 2-7 Adapter EAR File Uploaded to Administrative Server



7. Click the [select] link to the left of the adapter EAR file.

The console displays the Configure Application or Component window.

Figure 2-8 Configure Application or Component Window

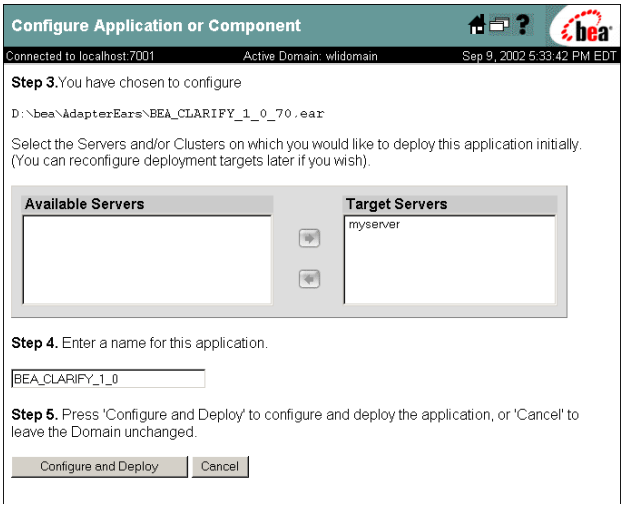


8. Select the servers or clusters on which to deploy the adapter by using the arrow buttons to move entries from the available list to the target list.
9. You must change the application name from `BEA_CLARIFY_1_0_70` to `BEA_CLARIFY_1_0`.

   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 2-9 Configured Application



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 2-1 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 2-14.
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 "Adding the User Name to the Adapter Group" on page 2-15.

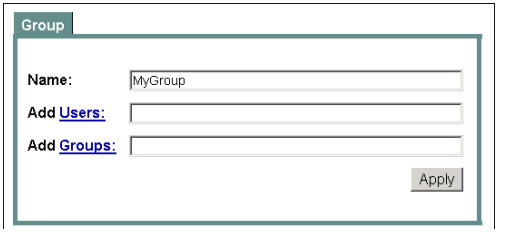
Creating the Adapter Group

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.

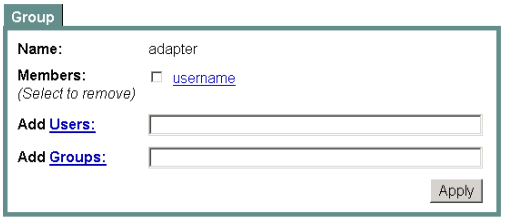
Figure 2-10 Group Window



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 2-11 Group Window



Adding the User Name to the Adapter Group

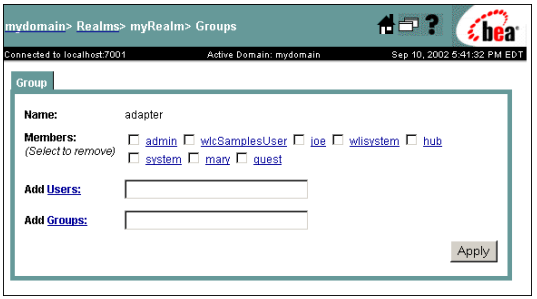
To add the administrative server user name to the `adapter` group, complete the following steps:

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.

Figure 2-12 Group Definition



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

3 Installing the BEA WebLogic Adapter for ClarifyCRM With the ClearBasic Interface

This chapter applies to the BEA WebLogic adapter for ClarifyCRM with the ClearBasic interface. For information on installing the adapter for ClarifyCRM with the CBO interface, see Chapter 2, "Installing the BEA WebLogic Adapter for ClarifyCRM With the CBO Interface."

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

`http://edocs.bea.com/wladapters/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/confgwiz/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 environment.

Installing the Adapter With WebLogic Integration 7.0

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

- Step 1. Obtaining the BEA WebLogic Adapter for Clarify CRM
- Step 2. Configuring the WebLogic Domain
- Step 3. Configuring WebLogic Tuxedo Connector

- Step 4. Updating the BEA License
- Step 5. Deploying the Adapter Using the WebLogic Server Console
- Step 6. Creating or Updating the Adapter Group

Step 1. Obtaining the BEA WebLogic Adapter for Clarify CRM

The BEA WebLogic Adapter for ClarifyCRM software is packaged as an EAR file (`BEA_CLARIFYCB_1_0_70.ear`). You can obtain the software on CD or download it from `www.bea.com`.

Step 2. Configuring the WebLogic Domain

The adapter can be deployed only 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/confgwiz/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. Configuring WebLogic Tuxedo Connector

The ClearBasic interface of the BEA WebLogic Adapter for ClarifyCRM uses Tuxedo and the WebLogic Tuxedo Connector (WTC) to communicate to the Clarify application server. ClearBasic routines are then executed at the Tuxedo-based Clarify application server through a Tuxedo-to-ClearBasic router service.

WTC provides a Tuxedo Domain-to-Domain connectivity between the services available in Tuxedo and the services hosted by EJBs in WebLogic. WTC also provides the Java ATMI (JATMI) interface, which enables Java components to call Tuxedo services and Tuxedo services to invoke the service methods of WebLogic-hosted EJBs.

WLI service calls to the ClearBasic interface of the BEA Adapter for ClarifyCRM translate the XML request document into a JATMI Tuxedo service call through the facilities provided by the adapter and WTC to a remote Tuxedo application. This application receives the service call and its arguments (in an FML32-based buffer) and routes the request to a ClearBasic Clarify routine. The results are returned and presented as the response to the original WLI service request.

Conversely, Clarify ClearBasic routines may call a Tuxedo service that is routed through the Tuxedo Domain configuration to a WLS-based WTC domain. The WLS WTC Exported Service and the EJB supporting this service will be invoked, with the ClearBasic arguments (in an FML32-based buffer) forming the contents of a WLI posted XML event.

This step includes the following topics:

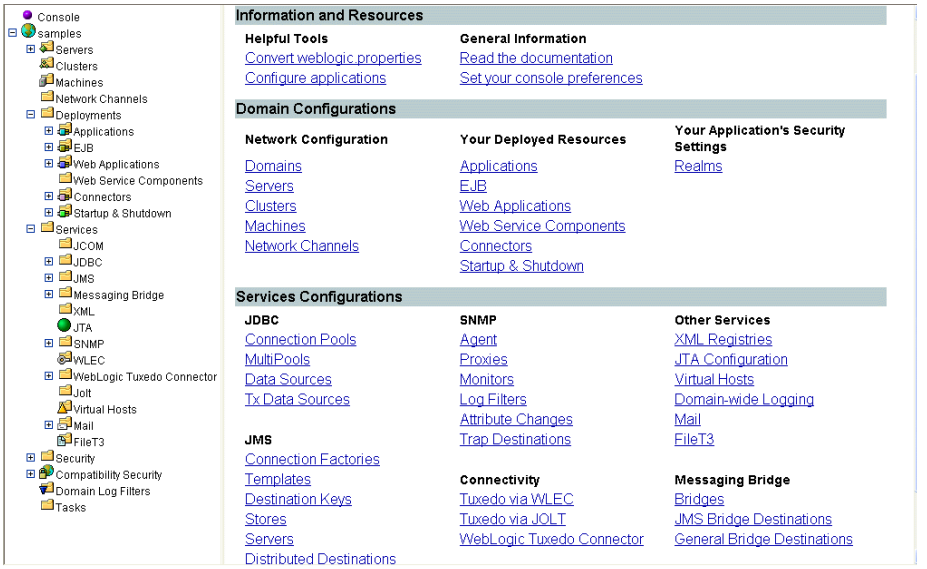
- Creating a New WTC Server
- Creating a Local WebLogic Domain
- Creating a Remote Tuxedo Domain
- Exporting a Local WTC Service
- Importing a Remote Tuxedo Service
- Configuring the WebLogic Tuxedo Connector EJBs
- Creating Domain Access Permissions for WTC Server

Creating a New WTC Server

To create a new WTC Server:

1. Log on to the BEA WebLogic Server Console.

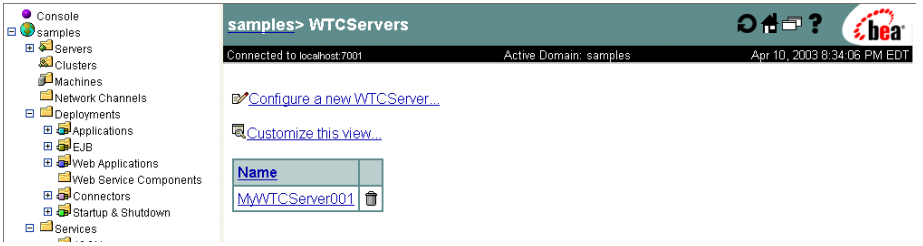
Figure 3-1 WebLogic Server Console Main Window



2. Click WebLogic Tuxedo Connector.

   The WTCServers window opens.

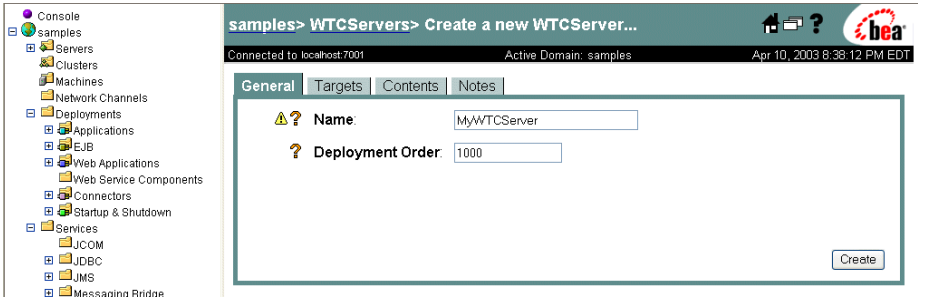
Figure 3-2 WTCServers Window



3. Click Configure a new WTCServer...

   The Create a new WTCServer... window opens.

Figure 3-3 Create a New WTCServer General Tab



4. Enter a name and deployment order for this WebLogic Tuxedo Connector Server (that is, for this instance of the WebLogic Tuxedo Connector).

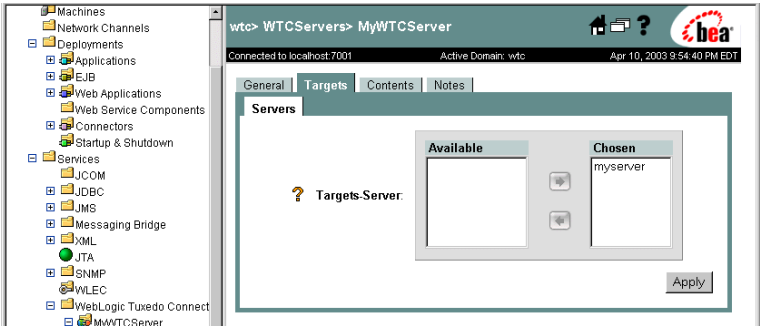
   You can provide any descriptive name for the server: it serves only to contain the configuration of domains and services.

5. Click Create to create your new WTC Server.

6. Select the Targets tab.

7. Move the WebLogic Server on which you want the WTC server to be deployed to the Chosen list, if it is not already there.

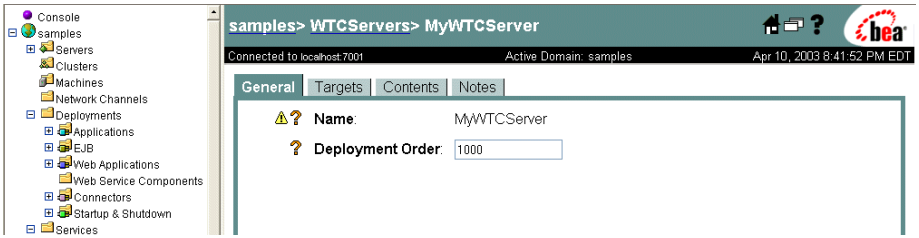
Figure 3-4 New WTC Server Targets Tab



8. In the left pane, expand the node corresponding to your new WTC Server.

   The WTC Server's components are displayed in the left pane.

Figure 3-5 Expanded WTC Server Node



You have successfully created the WTC Server.

To create:

- A local WebLogic domain, see "Creating a Local WebLogic Domain."
- A remote Tuxedo domain, see "Creating a Remote Tuxedo Domain."

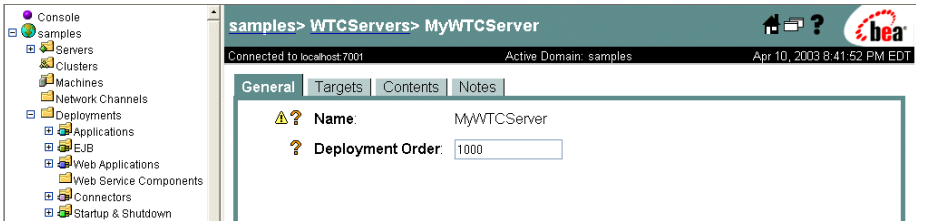
You can create the domains in any order.

Creating a Local WebLogic Domain

To create a local WebLogic domain:

1. Log on to the WebLogic Server Console and expand your WebLogic Tuxedo Connector (WTC) Server's node in the left pane, if you have not yet done so.

Figure 3-6 Expanded WTC Server Node



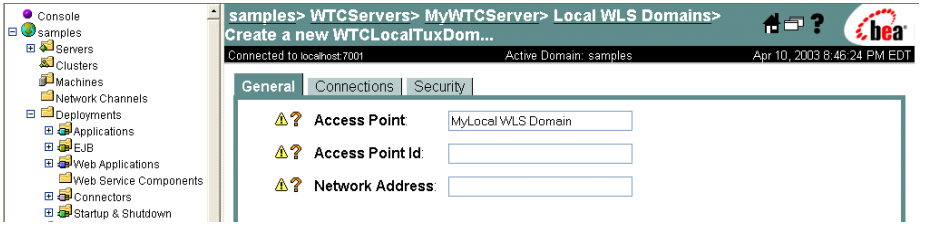
2. Select the WTC Server's Local WLS Domains node in the left pane.

   The Local WLS Domains window opens.

3. Click Configure a new Local WLS Domain in the right pane.

   The Create a new WTCLocalTuxDom... window opens.

Figure 3-7 Create a New WTC Local Tuxedo Domain Window



4. Specify the access point, the access point ID, and the network address.

   You have successfully created the local WebLogic domain. To create a remote Tuxedo domain, see "Creating a Remote Tuxedo Domain."

   If you have already created a remote Tuxedo domain, you can now create services.

   - To export a local WTC service, see "Exporting a Local WTC Service."
   - To import a remote Tuxedo service, see "Importing a Remote Tuxedo Service."

   You can export and import services in any order.

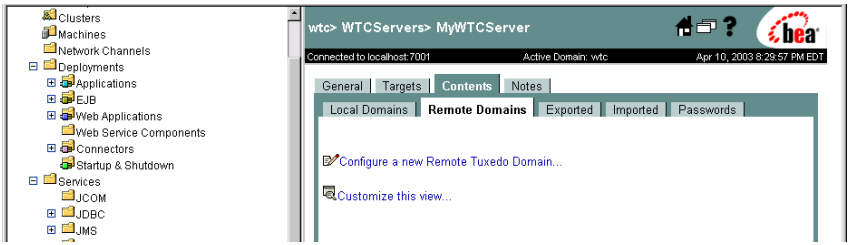
Creating a Remote Tuxedo Domain

This configuration corresponds to the remote Tuxedo domain that will be running ClarifyCRM and to which the local WebLogic Server WTC domain will be communicating.

To create a remote WebLogic domain:

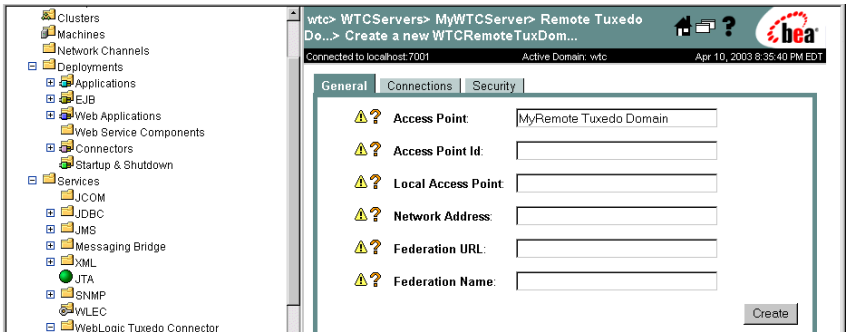
1. Log on to the WebLogic Server Console and expand your WebLogic Tuxedo Connector (WTC) Server's node in the left pane, if you have not yet done so.
2. Select the WTC Server's Remote Tuxedo Domains node in the left pane.

Figure 3-8 WTC Server Remote Domains Tab



3. Click Configure a new Remote WLS Domain.

Figure 3-9 Create a New Remote Tuxedo Domain Window



4. Enter the domain's properties:
   - Access Point: the name of the remote Tuxedo domain.
   - Access Point Id: the ID of the Tuxedo domain as listed in the DMCONFIG configuration on Tuxedo.

- Local Access Point: the name of the local WLS domain that will be connected to this remote Tuxedo domain.
- Network Address: the TCP/IP //host:port of the remote Tuxedo domain.
- Federation URL: the URL for a foreign name service that is federated into JNDI. You are not required to provide this value.
- Federation Name: the context at which to federate to a foreign name service. You are not required to provide this value.

5. Click Create to activate the configuration you have defined.

   You may also want to modify default values in the Connections and Security tabs. Please see your WebLogic Tuxedo Connector Administration manual for help with modifying these values.

   You have successfully created a remote Tuxedo domain. To create a local WebLogic domain, see "Creating a Local WebLogic Domain."

   If you have already created a local WebLogic domain, you can now create services.

   - To export a local WTC service, see "Exporting a Local WTC Service."
   - To import a remote Tuxedo service, see "Importing a Remote Tuxedo Service."

   You can export and import services in any order.

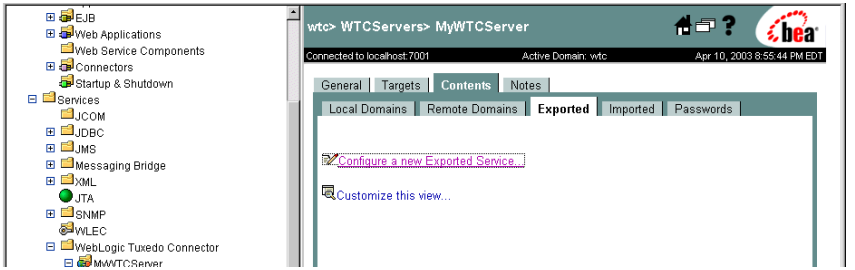
Exporting a Local WTC Service

Exported local WebLogic Tuxedo Connector (WTC) services are services hosted on the WebLogic Server, implemented through Enterprise JavaBeans (EJBs) which implement the weblogic.wtc.jatmi.TuxedoService interface. The ClearBasic interface of the BEA WebLogic Adapter for ClarifyCRM supplies an EJB to support the inbound invocation of service requests and to post the constructed XML event document into WebLogic Integration. These local WTC services support the event adapter.

To export a local WTC service:

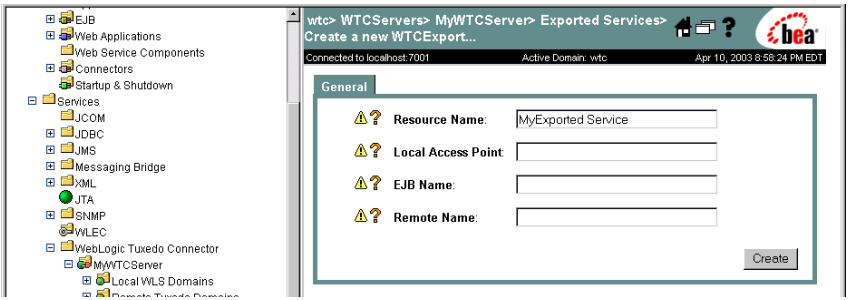
1. Log on to the WebLogic Server Console and expand your WTC Server's node in the left pane, if you have not yet done so.
2. Select the WTC Server's Exported Services node in the left pane.

Figure 3-10 WTC Server Exported Tab



3. Click Configure a new Exported Service.

Figure 3-11 Exported Service General Tab



4. Enter the service's properties:
   - Resource Name: the locally known name of the service.
   - Local Access Point: the name of the local WebLogic WTC domain access point containing the service.
   - EJB Name: the JNDI name of the EJB implementing the Tuxedo service locally on the WebLogic Server.
   - Remote Name: the name the local service will be known as when accessed in the remote Tuxedo domains.
5. Click Create to activate the configuration entries.

   You have successfully exported the local WTC service. To import a remote Tuxedo service, see "Importing a Remote Tuxedo Service."

Importing a Remote Tuxedo Service

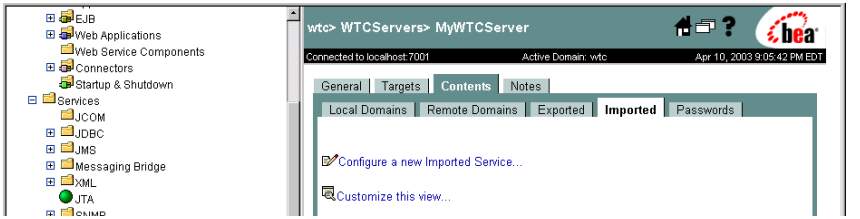
Imported remote Tuxedo services are services hosted on the remote Tuxedo server. ClarifyCRM supplies a routing service, CB_EXESUB, that takes Tuxedo requests and calls into ClarifyCRM ClearBasic routines.

To export a remote WTC service:

1. Log on to the WebLogic Server Console and expand your WTC Server's node in the left pane, if you have not yet done so.

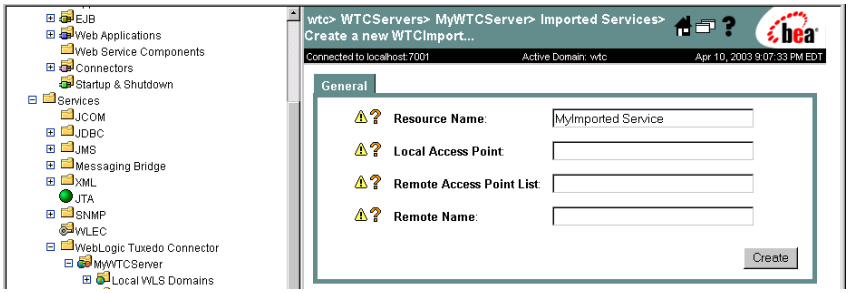
2. Select the WTC Server's Imported Services node in the left pane.

Figure 3-12 WTC Server Imported Tab



3. Click Configure a new Imported Service.

Figure 3-13 Exported Service General Tab



4. Enter the service's properties:

   - Resource Name: the locally-known name of the service.
   - Local Access Point: the name of the local WebLogic WTC domain access point in which the service will be made available.
   - Remote Access Point List: the list of all defined remote Tuxedo domains that can be called on to execute the imported service.

- Remote Name: the name the remote service as it exists in the Tuxedo domains.

5. Click Create to activate the configuration entries.

   You have successfully imported the remote Tuxedo service. To export a local Tuxedo service, see "Exporting a Local WTC Service."

Configuring the WebLogic Tuxedo Connector EJBs

The ClearBasic interface for the BEA WebLogic Adapter for ClarifyCRM requires Enterprise JavaBeans (EJBs) to access the Java-based Application to Monitor Interface (JATMI) of the WebLogic Tuxedo Connector (WTC). Two EJBs are supplied:

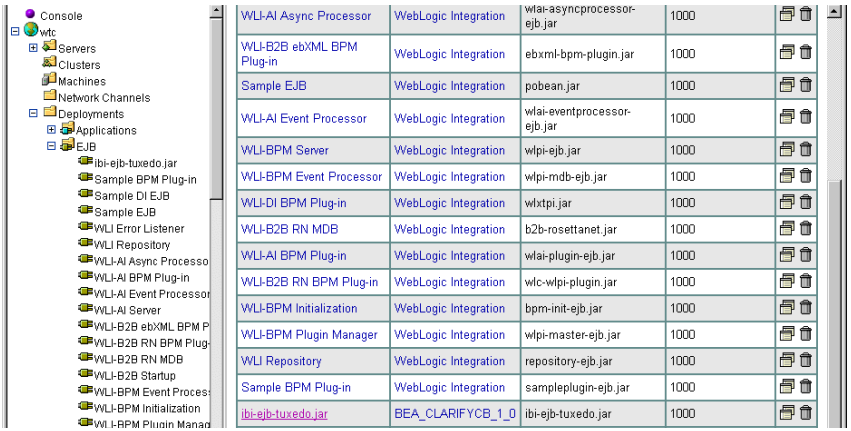
- TuxConnectorEJB for WLAI service invocation.
- TuxEventConnectorEJB for Tuxedo service invocation and WLAI event posting.

The EJBs are automatically installed and deployed when the adapter's Web Application .ear file is installed. This section describes the configuration options available to the Tuxedo Connector EJBs.

1. Log on to the WebLogic Server Console if you have not already done so.
2. Select Deployments→EJB in the left pane.

   The list of all EJBs deployed on your WebLogic Server is displayed.

Figure 3-14 Deployed EJB Window



3. Click ibi-ejb-tuxedo.jar, the EJB .jar file that is supplied with the adapter. Both EJBs are contained in this file.

   The ibi-ejb-tuxedo.jar summary window opens.

Figure 3-15 ibi-ejb-tuxedo.jar Summary Window

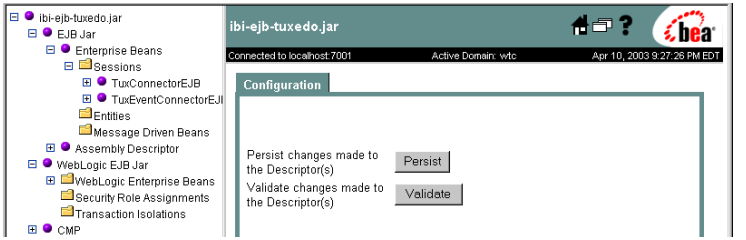
4. Click Edit EJB Descriptor....

   A separate WebLogic Server Console window opens, with ibi-ejb-tuxedo.jar the root node in the left pane.

5. Expand ibi-ejb-tuxedo.jar→EJB Jar→Enterprise Beans→Sessions in the left pane.

   The nodes for the two EJBs are displayed in the left pane.

Figure 3-16 EJB Nodes Displayed in Left Pane



6. Expand the two EJB nodes in the left pane.

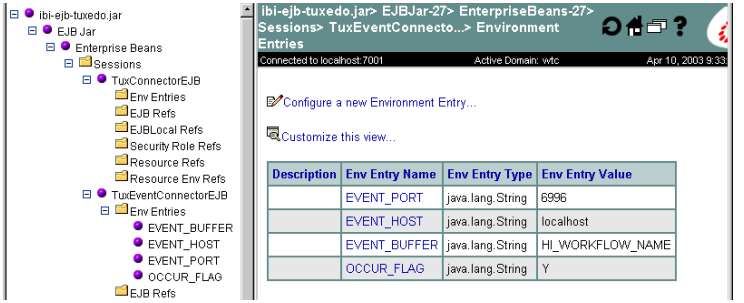
   TuxEventConnectorEJB is responsible for receiving Tuxedo service requests, translating the Tuxedo data into XML, and posting into the WebLogic Integration event adapter. TuxEventConnectorEJB has environment entries (run-time properties that control the behavior of the EJB). You will configure its properties.

TuxConnectorEJB receives XML request documents and invokes Tuxedo service calls via the JATMI layer of WTC, and receives the corresponding response data and creates response documents from it. It has no properties to be configured.

7. Unfold TuxEventConnectorEJB's Env Entries folder.

   The EJB's environment entries are displayed.

Figure 3-17 EJB Environment Entries Window



This EJB has the following environment entries:

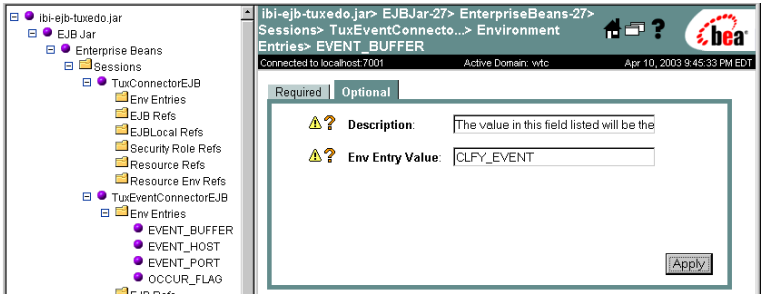
- EVENT_PORT, which specifies the port to which the event XML file will be posted by the EJB.
- EVENT_HOST, which specifies the host to which the event XML file will be posted by the EJB.
- EVENT_BUFFER, which specifies the Tuxedo FML field from which the root XML element will be obtained.
- OCCUR_FLAG, which indicates whether OCCURRENCE attributes will be added to the created XML document elements to ensure addressability of repeating XML elements. (Y indicates that OCCURRENCE attributes will be created for every field; N indicates that no OCCURRENCE attributes will be created.)

8. To change the EJB's environment entry:

   a. Select the entry.

   b. Select the Optional tab.

Figure 3-18 Event Buffer Environment Entry Optional Tab



c. Enter a new value.

d. Click Apply.

You have finished configuring the WTC EJBs.

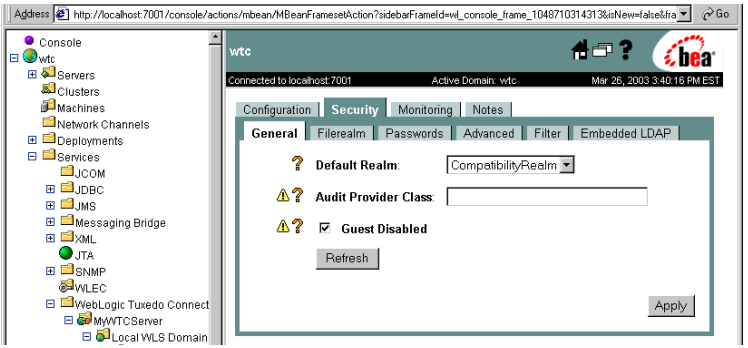
Creating Domain Access Permissions for WTC Server

The Local WLS-based WTC domain and the remote Tuxedo domain have several security settings. By default, there is no domain-to-domain security configured for a WebLogic Server WebLogic Tuxedo Connector (WTC) to Tuxedo domain setup. For information about other security options that restrict access at the domain level, consult your WTC manual.

Regardless of the security levels chosen (“none”, “application password,” or “domain password”) on the local and remote domains, a connection principle will be required for the remote Tuxedo domain. It will be under this account that the remote domain will invoke local WTC-based service requests. By default, the connection principle or user ID under which a remote domain connects is its Access Point ID. An account must be created in the active security realm under which the remote domain request can be executed.

WebLogic Interface adapters must run in a domain that supports application integration, and these domains run under CompatibilityRealm security.

Figure 3-19 Domain Security Settings



For this reason, you must create a user account for the remote Tuxedo domain:

1. Create a new account for the remote Tuxedo domain.

   From the WebLogic Console, expand the Compatibility Security branch, and select Users.

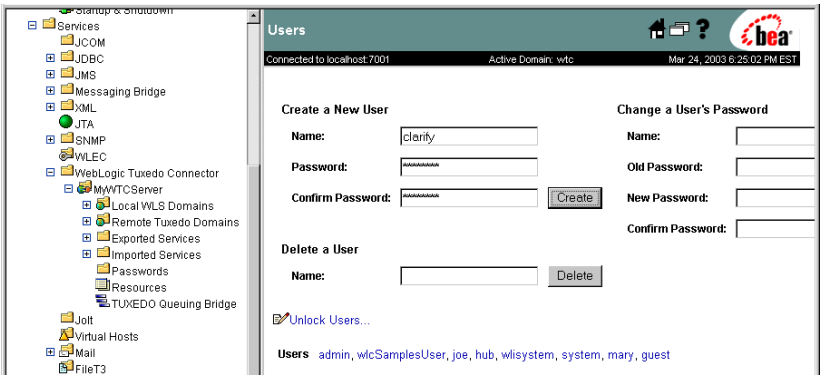
   Fill in the requisite fields to create a new user:

   a. name, which must match the remote Tuxedo Access Point ID.

   b. password, which can be anything as it is not checked when domain security is set to “none.”

   Click Create and then click Click here to save these changes to the realm implementation.

Figure 3-20 New Account Configuration



Step 4. Updating the BEA License

The BEA WebLogic Adapter for ClarifyCRM 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 `clarify_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 Using the WebLogic Server Console

After the BEA WebLogic Adapter for ClarifyCRM is installed, you must deploy it to your WebLogic domain.

To 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:

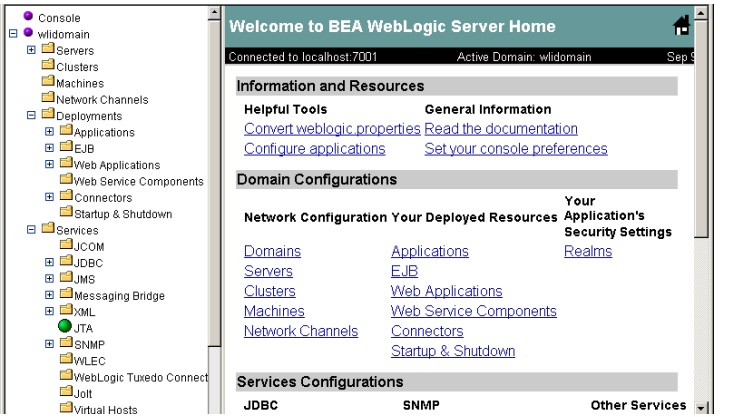
   `http://`*`host:port`*`/console/`

   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.

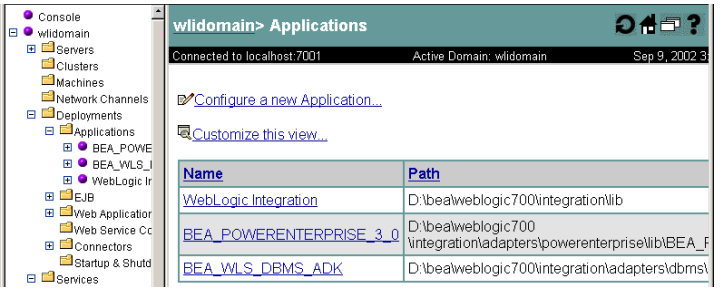
Figure 3-21 WebLogic Server Console



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

   The console displays the Applications window.

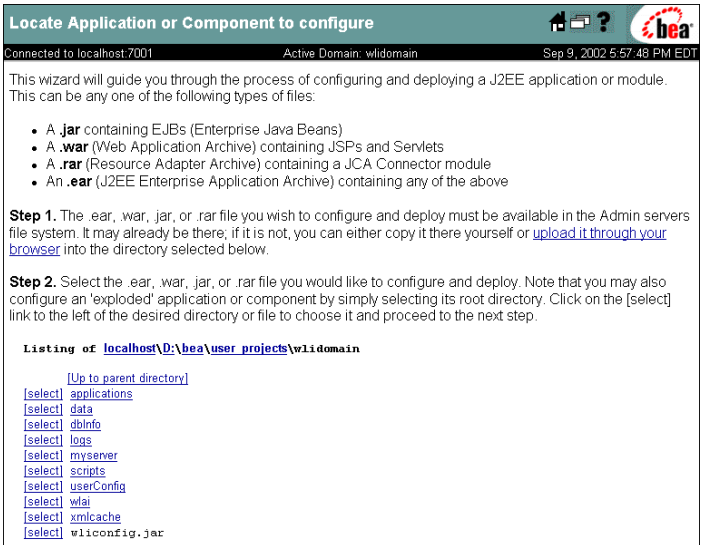
Figure 3-22 Applications Window



5. Click the Configure a new Application link.

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

Figure 3-23 Locate Application or Component to Configure Window



6. Do one of the following:

   If you copied the `BEA_CLARIFYCB_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 3-24 Locating the Adapter EAR File

   If you have not copied the `BEA_CLARIFYCB_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 3-25 Selecting the Target Directory

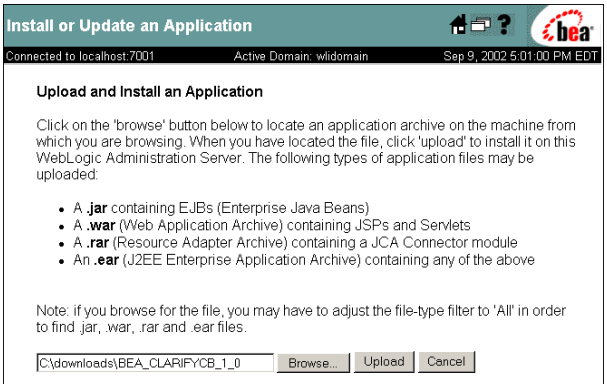
b. Click the upload it through your browser link to display the Install or Update an Application window.

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 3-26 Install or Update an Application Window



e. Click Upload.

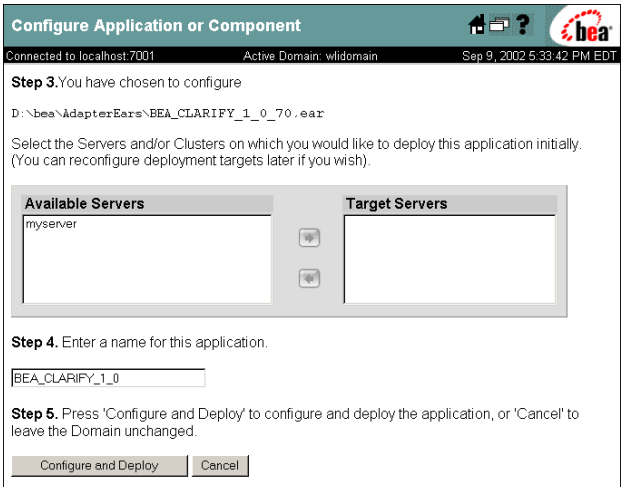
The browser status bar indicates upload progress. When the upload is complete, you are returned to the Locate Application or Component to configure window. The uploaded file now resides in the directory selected in step a.

Figure 3-27 Adapter EAR File Uploaded to Administrative Server

7. Click the [select] link to the left of the adapter EAR file.

The console displays the Configure Application or Component window.

Figure 3-28 Configure Application or Component Window



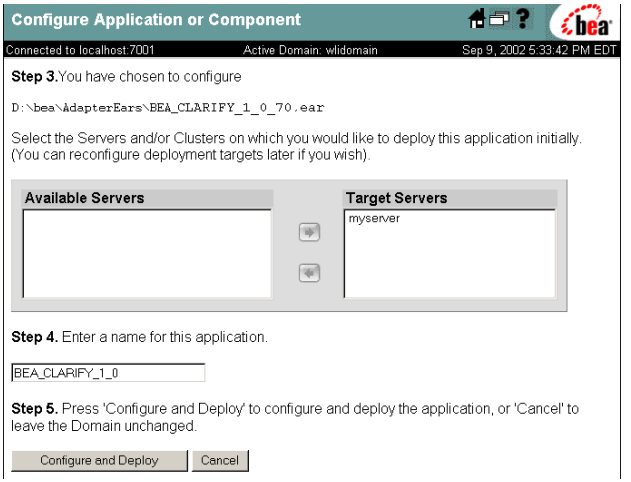
8. Select the servers or clusters on which to deploy the adapter by using the arrow buttons to move entries from the available list to the target list. For more information, see "Using the Adapter in a Clustered Environment" on page 3-26.

9. You must change the application name from `BEA_CLARIFYCB_1_0_70` to `BEA_CLARIFYCB_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.

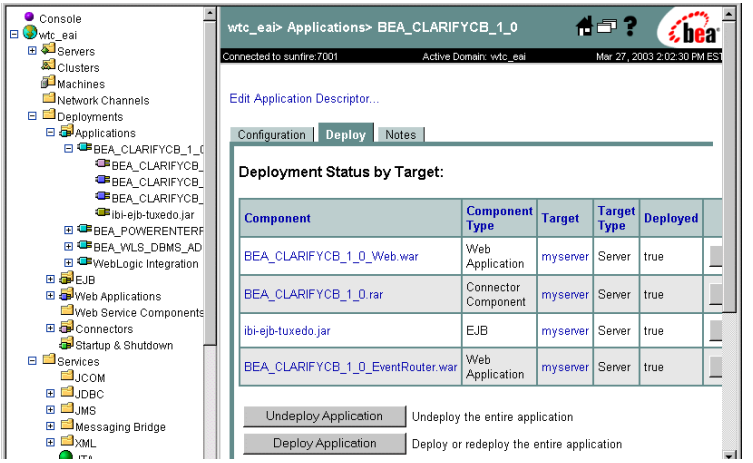
Figure 3-29 Configured Application



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.

Figure 3-30 Deployment Status



Of special note, this adapter also installs an EJB module represented in the above diagram by the ibi-ejb-tuxedo.jar module in the BEA_CLARIFYCB_1_0 tree.

Using the Adapter in a Clustered Environment

The adapter for ClarifyCRM adapter is supported for a clustered environment. In order to successfully deploy the adapter on a clustered environment, you must deploy the WTC and EJB services on each node in the cluster. For more information on clustering, see "Using WebLogic Server Clusters" in "Deploying Solutions" in *WebLogic Integration 7.0*:

```
http://edocs.bea.com/wls/docs70/cluster/index.html
```

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 3-1 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 3-27.
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.

Table 3-1 Configuration Requirements (Continued)

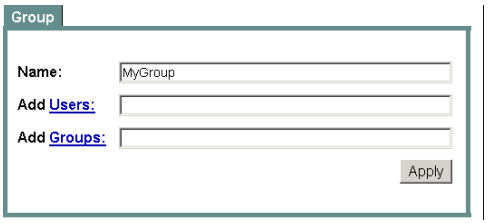
If you created a domain based on the . . .	And the administrative server user name is . . .	Then . . .
WLI or EAI domain template	A value other than `system`	The `adapter` group is already defined. Add the user name to the group as described in "Adding the User Name to the Adapter Group" on page 3-28.

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.

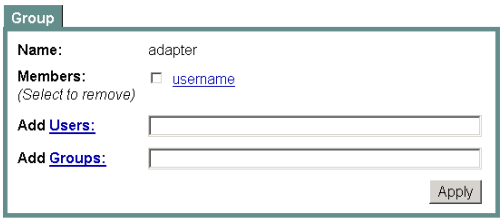
Figure 3-31 Group Window



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 3-32 Group Window



Adding the User Name to the Adapter Group

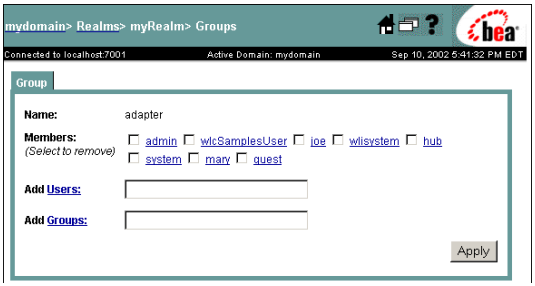
To add the administrative server user name to the `adapter` group, complete the following steps:

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.

Figure 3-33 Group Definition



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