ellucian™

Banner Translation Service
Installation and Administration Guide

Release 8.1.3
January 2012

Prepared by: Ellucian
4375 Fair Lakes Court
Fairfax, Virginia 22033
United States of America

Revision History

Publication Date	Summary
January 2012	New version that supports Translation Service 8.1.3 software.

Banner Translation Service 8.1.3
Installation and Administration Guide

Contents

1 Introduction

Data in Banner® is often constrained by lists of valid values. This encoded data is configured by the institution and is stored in support tables. As a result, the data is not always appropriate or usable by external systems. Institution-specific data values in Banner must be converted to standard values that external systems can recognize and use. The Banner Translation Service provides this translation capability for Banner Web services.

Value translations can impact performance. To reduce value translation, Ellucian recommends that you use shared Banner codes and industry standard codes (for example, ISO codes) when possible.

Interfaces

The Banner Translation Service is deployed as a separate J2EE application within the application server. The Banner Translation Service provides deployment flexibility with several interfaces at varying levels of granularity:

- Used directly from an XSL transform to perform in-line translations
- Deployed to accept an entire XML document that has particular elements and attributes identified (tokenized) for translation
- Accessed through its EJB interface
- Accessed through its Web services SOAP interface, described through WSDL
- Optionally deployed into the Oracle BPEL Process Manager and accessed through a Web Services Invocation Framework (WSIF) binding
- Optionally deployed within a Java application and accessed through local Java method invocation

The Banner Translation Service provides a Web-based administration interface to manipulate fields and corresponding application values. This interface also includes an XML import and export capability.

Database

The Banner Translation Service uses a relational database to store field value translations. You can use the same Oracle database that is used for Banner, or you can use any other Oracle database. In either case, the schema is created when the Banner Translation Service is installed. SQL scripts are delivered with those Banner Web services that require

translations. These scripts extract values from Banner validation tables and create XML files that can be imported into the Banner Translation Service.

2 Installation

The Banner® Translation Service is delivered with Banner Web Services. This chapter gives instructions for installing the Banner Translation Service on Oracle Application Server 10.1.3.4/5 and Oracle WebLogic Server 11g.

Requirements

The Banner Translation Service is certified on Oracle Application Server (OAS) 10.1.3.4/5 and Oracle WebLogic Server 11g with Java 1.6.

OAS 10.1.3.4/5 is delivered with Java 1.5. The following Oracle document provides instructions for changing to Java 1.6. If you contract with Ellucian for Oracle support, you can access the FAQ on the Customer Support Center. Otherwise, you can use your Oracle support account to access the document.

Document Title:	How to change the Java version used to run a specific OC4J instance
Ellucian FAQ:	1-AXZ803
Oracle Doc ID:	351476.1

Oracle database

The required Oracle database depends on the application server that you are using:

Application Server	Required Database
Oracle Application Server 10.1.3.4/5	Oracle Database 10gR2 or 11g
Oracle WebLogic Server 11g	Oracle Database 11g

Installation on Oracle Application Server 10.1.3.4/5

The Banner Translation Service is packaged as a J2EE compatible enterprise archive file named `TranslationService_v8.1.3.ear`. Use the following steps to install the Banner Translation Service on OAS 10.1.3.4/5:

- Step 1, “Extract the zip file”.

- Step 2, “Configure the database user”.
- Step 3, “Configure the database tables”.
- Step 4, “Create an OC4J instance”.
- Step 5, “Install the Banner Translation Service”
- Step 6, “Define the data source”.
- Step 7, “Configure the security role and user”.
- Step 8, “Configure logging (optional)”.
- Step 9, “Populate the Banner Translation Service”.

The Banner Translation Service can be installed on an existing Oracle Application Server. The Banner Translation Service and the Banner Web Services Adapters must be installed together on a new OC4J instance so they can be independently managed.

Step 1 Extract the zip file

The Banner Translation Service components are delivered in the `translation_service` folder in `banner_web_services_8.1.3.zip`. Create a new directory (for example, `bws_install`) and extract the zip file to this directory.

The `translation_service` folder has two directories:

- The `ear` directory contains the `TranslationService_v8.1.3.ear` and the `TranslationService_v8.1.3_plan.dat` files.
- The `database` directory contains the scripts used to create the database schema that are required by the Banner Translation Service.

Step 2 Configure the database user

Use the following steps to create or modify the database user (for example, `transsvc`) that is used for the Banner Translation Service. This user must have Resource and Connect privileges.

1. Connect to the database as a DBA account from SQL*Plus.
2. Execute the `translation_service/database/create_user_oracle.sql` script.

   The location of this script depends on how you downloaded the Banner Translation Service.
3. When prompted, enter the name of the datafile for the schema with the complete path.

Step 3 Configure the database tables

Use the following steps to load the Oracle sql file that creates the Banner Translation Service tables and schema.

1. Navigate to the `translation_service/database` subdirectory.

   The location of this subdirectory depends on how you downloaded the Banner Translation Service.

2. Open the `db.properties` file.

3. Enter the username and password for the user (created in step 2), hostname, port, and sid at the required places in the `db.properties` file. The default values are as follows:

username	`transsvc`
password	`transsvc`

4. Save the file.

5. Load the database schema by running the following command in the database directory:

   ```
   java –jar lib/ant-launcher.jar –f db.xml
   ```

Tip

You must manually enter the preceding command. Copying and pasting the command does not work.

Existing tables and views are first deleted during the load process. Warning messages are displayed because the deleted tables and views do not exist. These messages can be ignored because the tables and views are then created.

Step 4 Create an OC4J instance

Create a new OC4J instance for the Banner Translation Service and the Banner Web Service Adapters so that they can be independently managed. Refer to Oracle Application Server installation and configuration documentation for details.

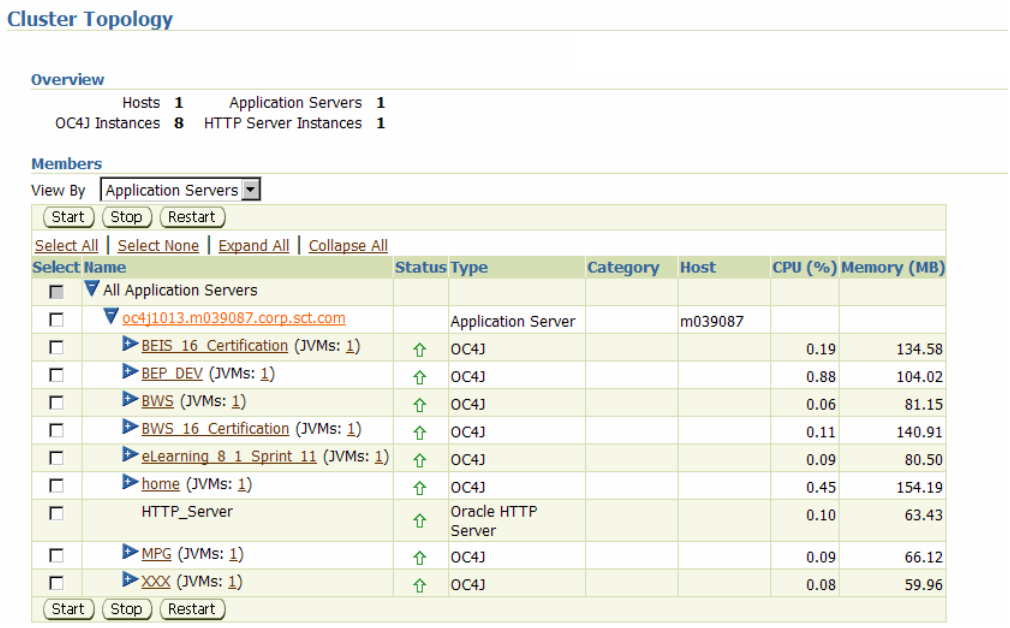
Step 5 Install the Banner Translation Service

Use the following steps to install the Banner Translation Service to the Oracle Application Server.

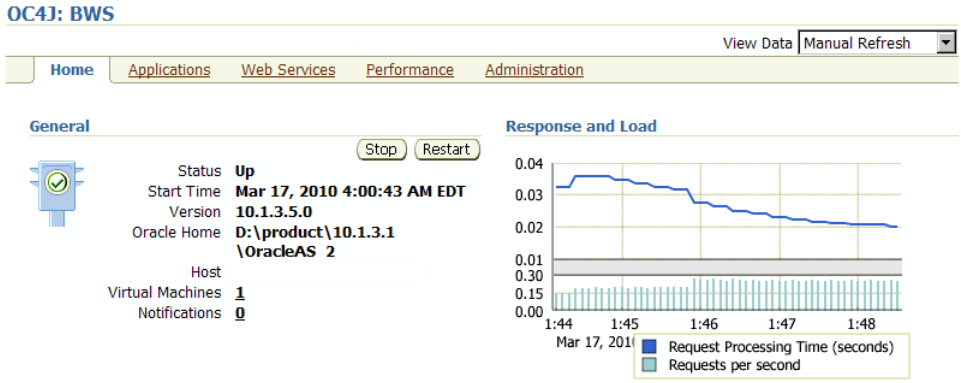
1. Connect to the Oracle Enterprise Manager:

   `http://<host>:<port>/em`

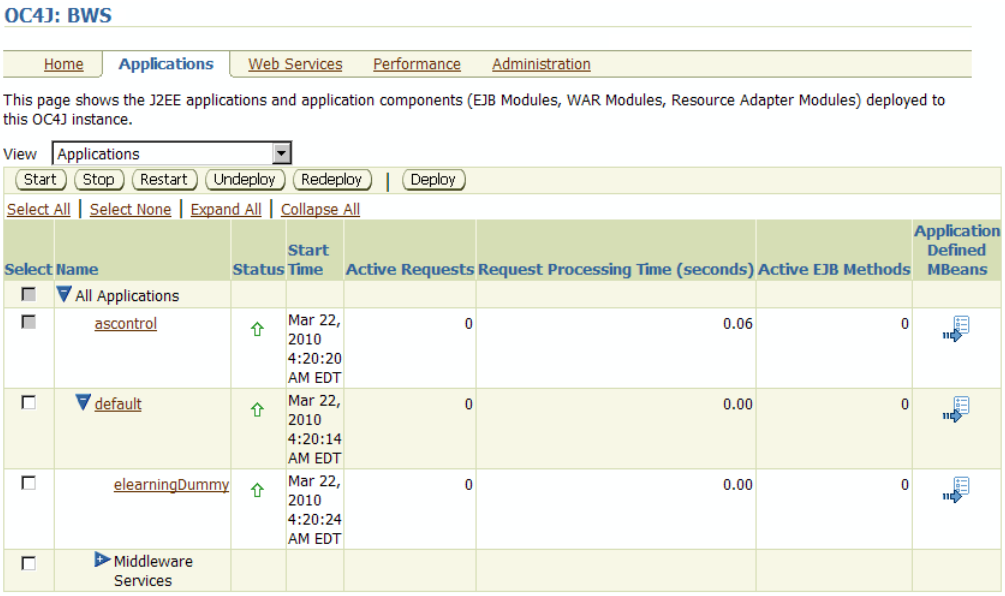
The console is displayed.



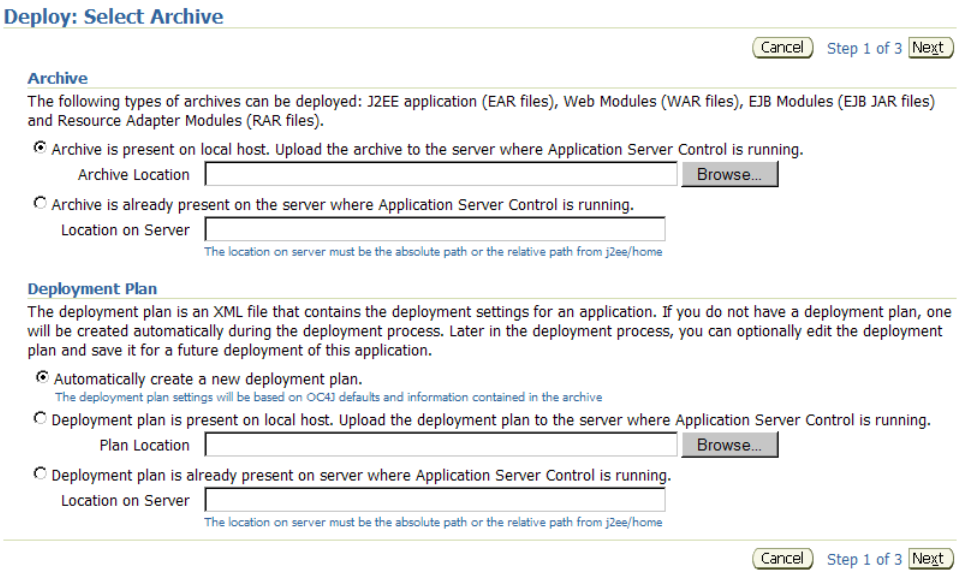
2. Click the name of the OC4J instance that will host the Banner Translation Service. The Home page for the selected instance is displayed.



3. Select the **Applications** tab. A list of deployed applications is displayed.



4. Click **Deploy**. The Deploy: Select Archive page is displayed.



5. Select the file to be uploaded:

   5.1. In the Archive section, select **Archive is present on local host. Upload the archive to the server where Application Server Control is running.**

   5.1. In the **Archive Location** field, click **Browse** and navigate to the `TranslationService_v8.1.3.ear` file.

   5.2. Select the file and click **Open**.

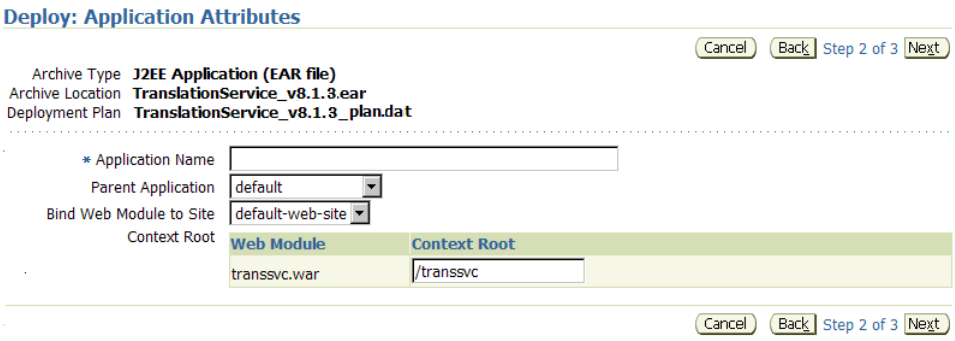
6. Select the deployment plan for the application:

   6.1. In the Deployment Plan section, select **Deployment plan is present on local host. Upload the deployment plan to the server where Application Server Control is running.**

   6.2. In the **Plan Location** field, click **Browse** and navigate to the `TranslationService_v8.1.3_plan.dat` file.

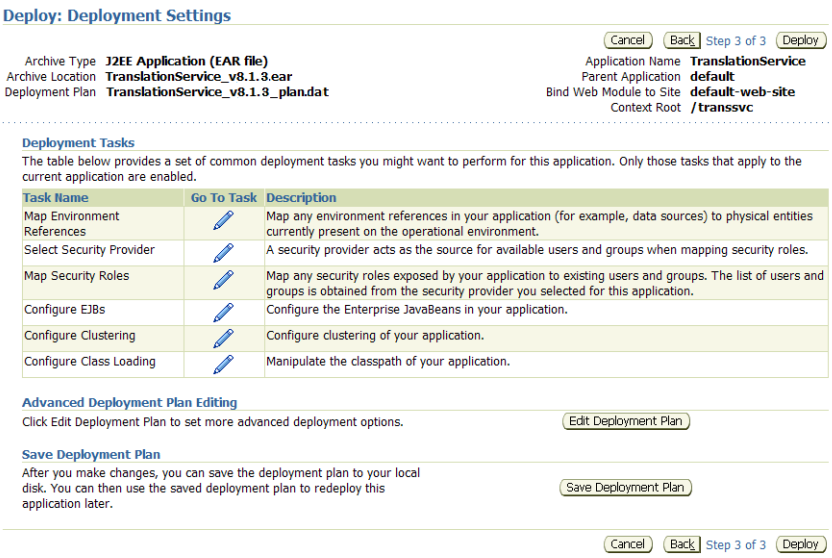
   6.3. Select the file and click **Open**.

7. Click **Next** on the Deploy: Select Archive page. The files are uploaded and the Deploy: Application Attributes page is displayed.



8. Enter a name for the application (for example, *TranslationService*) in the **Application Name** field.

9. Click **Next**. The Deploy: Deployment Settings page is displayed.



10. Click **Deploy** to accept the values and install the Banner Translation Service. A deployment confirmation page is displayed.

11. Click **Return** to continue.

    The **Applications** tab is displayed with the deployed application.

Step 6 Define the data source

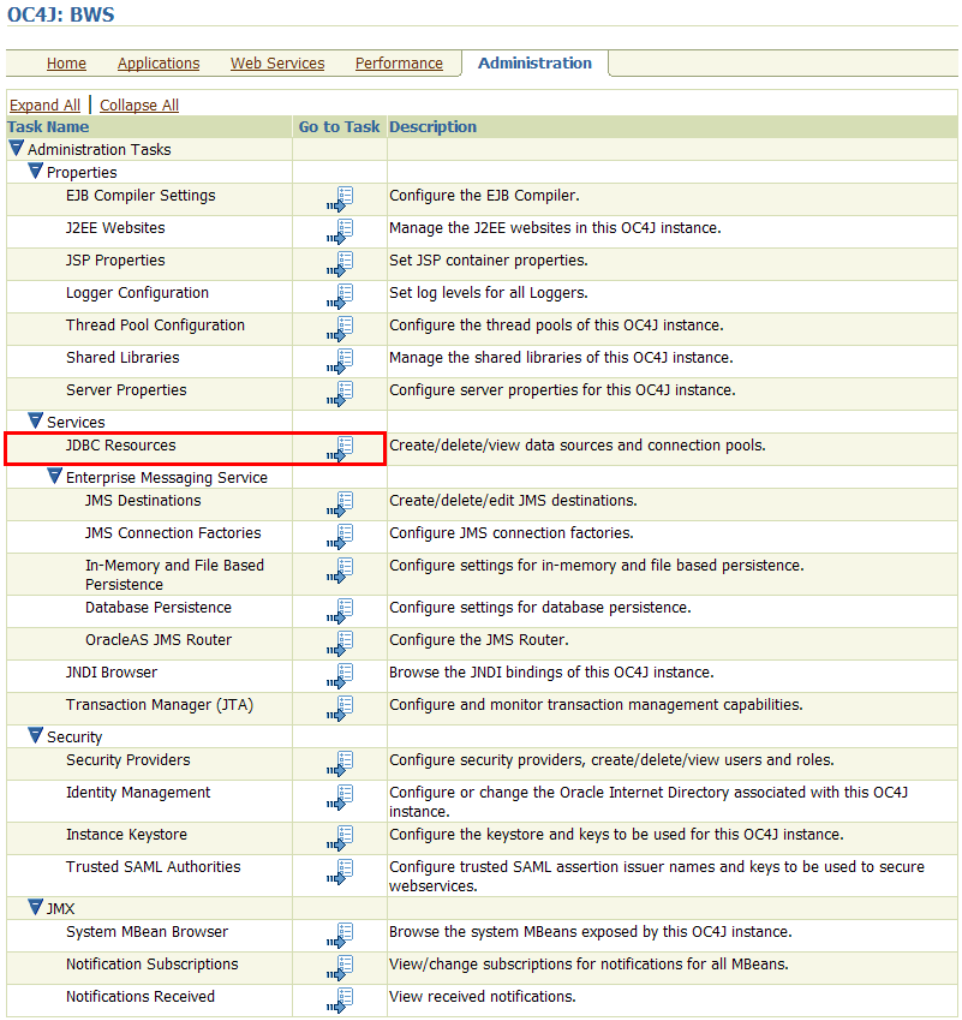
A data source provides the connection properties to the Banner database. By default, the Banner Translation Service needs a data source named `jdbc/transsvc`.

There are two ways to define a data source:

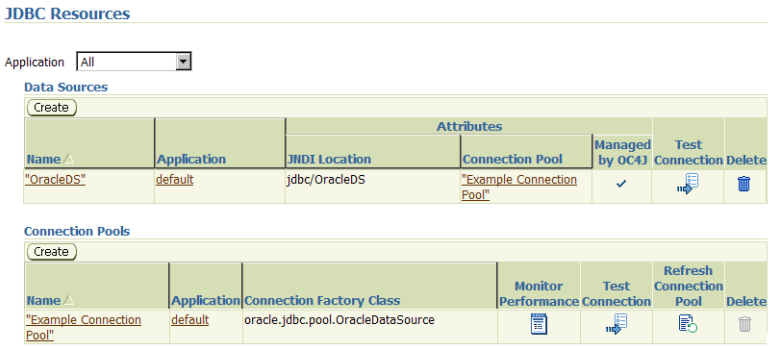
- **At the OC4J instance level** - This method promotes resource sharing, allowing multiple applications in the instance to use the same connection pool to connect to the database.
- **At the application level** - This method permits each application in the instance to access the database via an application-specific connection pool.

Use the following steps to define the data source.

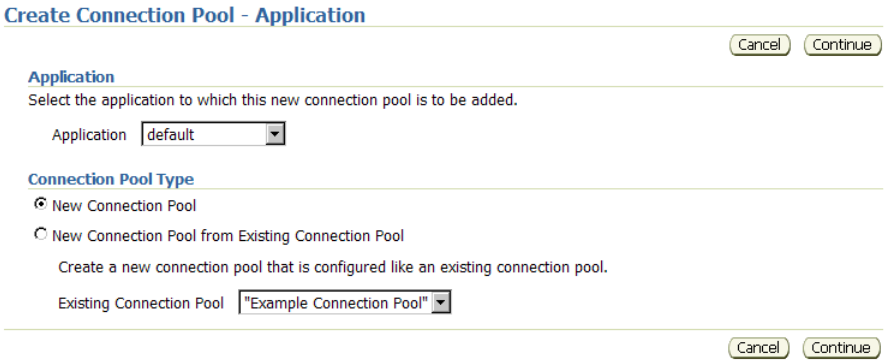
1. Select the **Administration** tab. A list of tasks is displayed.



2. Select **JDBC Resources** in the Services section. The JDBC Resources page is displayed.



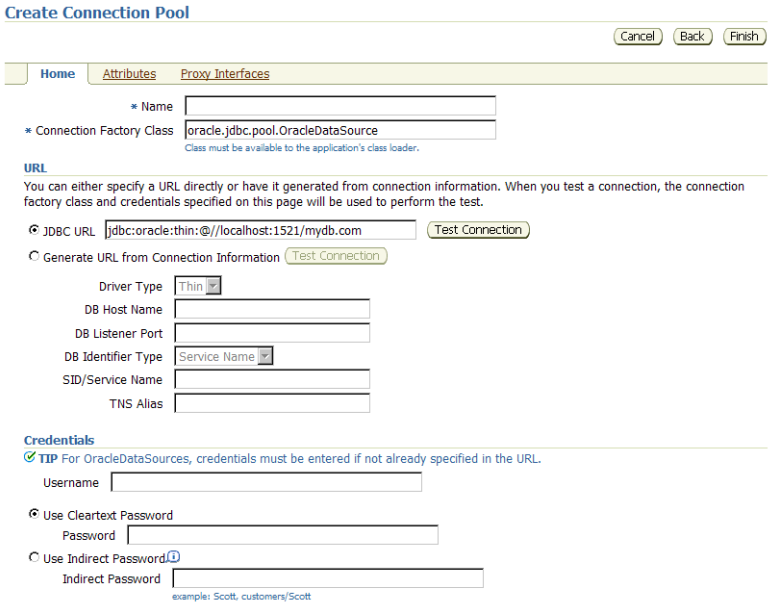
3. Click **Create** in the Connection Pools section. The Create Connection Pool - Application page is displayed.



4. Select the application and connection pool type for the new pool:

Application	If you want to define the connection pool at the OC4J level, select *default*. All applications in the instance will use this connection pool. If you want to define the connection pool at the application level, select the Banner Translation Service application.
New Connection Pool	Select the button.

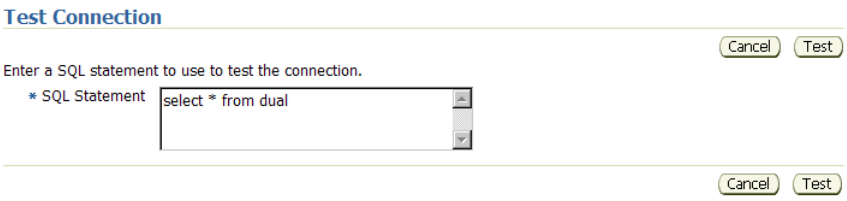
5. Click **Continue**. The Create Connection Pool page is displayed.



6. Enter the following information to set up the connection pool for the Oracle schema name that hosts the Banner Translation Service objects (default is `transsvc`):

Name	*transsvc_pool* (This is an example. Enter the name of your choice.)
Connection Factory Class	*oracle.jdbc.pool.OracleDataSource*
JDBC URL	*jdbc:oracle:thin:@host:port:SID* where *host* = database host *port* = database listener port (usually *1521*) *SID* = database instance
Username	Oracle schema name that hosts the Banner Translation Service objects (default is *transsvc*)
Use Cleartext Password	Select **Use Cleartext Password** and enter the password that was specified in the `db.properties` file (Step 3, "Configure the database tables").

7. Click **Test Connection**. The Test Connection page is displayed.



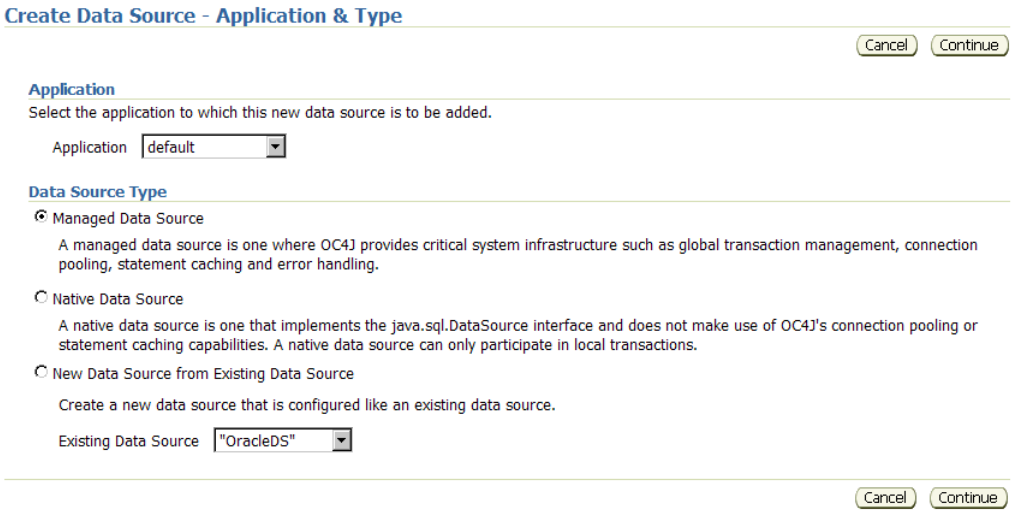
8. Click **Test** to test the connection pool for the *transsvc* schema. The Create Connection Pool page is redisplayed with a success or failure message.

   8.1. If the test succeeds, continue with the next step.

   8.2. If the test fails, ensure that the connection URL and credentials are correct. Continue testing until the connection is successful.

9. Click **Finish**.

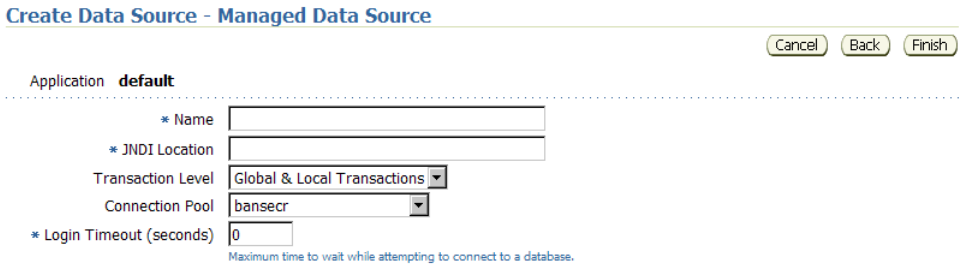
10. Click **Create** in the Data Sources section on the JDBC Resources page. The Create Data Source - Application & Type page is displayed.



11. Select the application and data source type for the data source:

Application	If you want to define the data source at the OC4J level, select *default*. All applications in the instance will use this data source. If you want to define the data source at the application level, select the Banner Translation Service application.
Managed Data Source	Select the button.

12. Click **Continue**. The Create Data Source - Managed Data Source page is displayed.



13. Enter the following information to set up the `transsvc` data source:

Name	*transsvc*
JNDI Location	*jdbc/transsvc*
Connection Pool	*transsvc_pool*

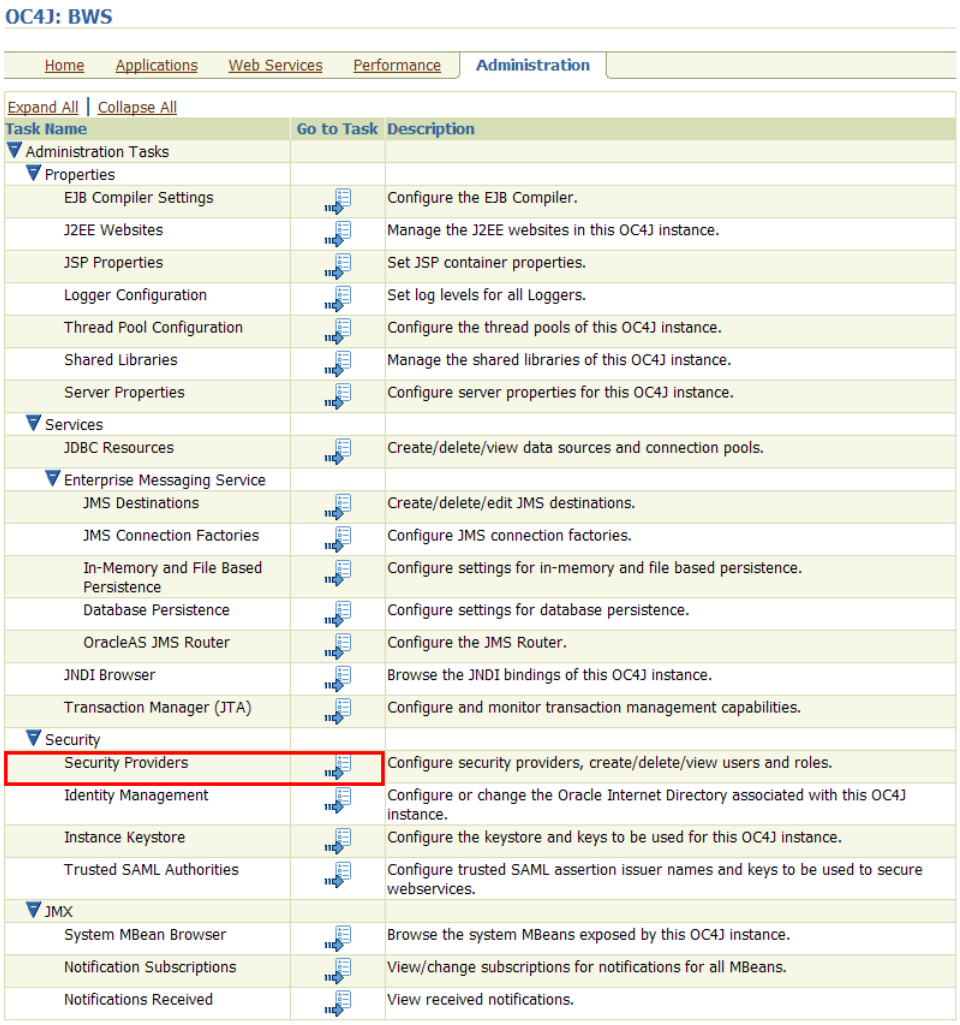
14. Click **Finish**.

    Return to the Home page.

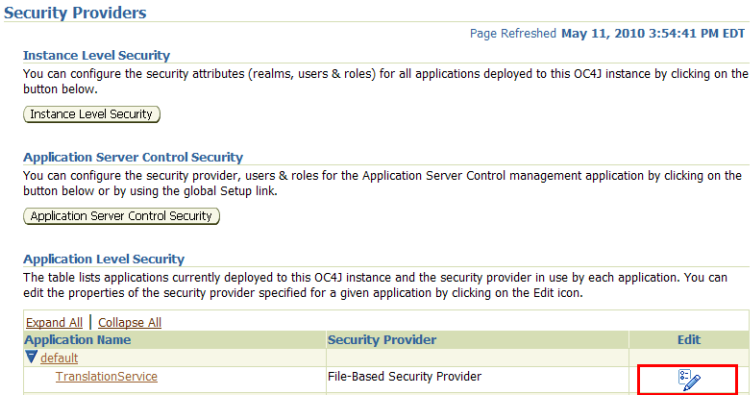
Step 7 Configure the security role and user

Use the following steps to configure the `transsvcAdmin` role and an administrative user for the Banner Translation Service. This role and user are required for accessing the Banner Translation Service administrative interface.

1. Select the **Administration** tab. A list of tasks is displayed.

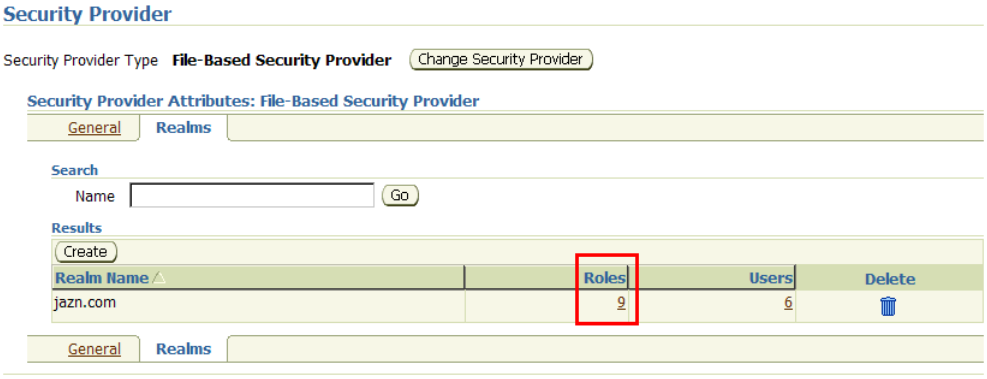


2. Select **Security Providers** in the Security section. The Security Providers page is displayed.

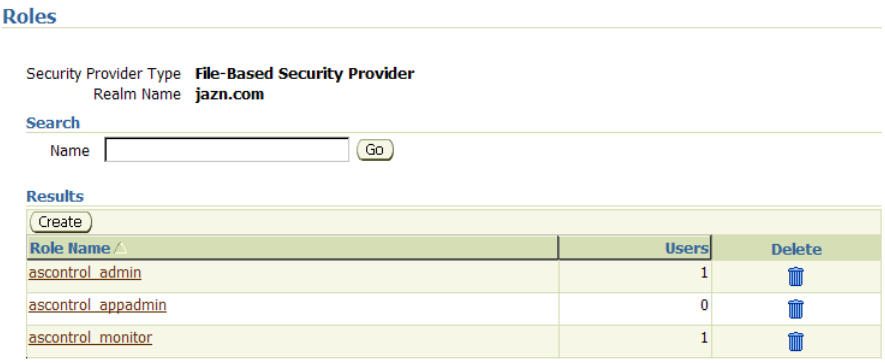


3. In the Application Level Security section, click the **Edit** button for the Banner Translation Service application. The Security Provider page is displayed.

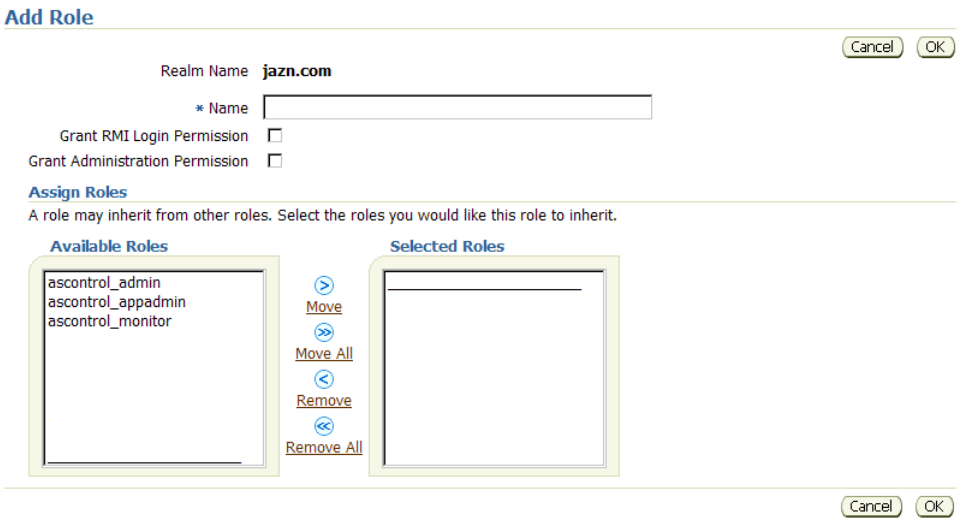
4. Select the **Realms** tab.



5. Click the link under the **Roles** column. The Roles page is displayed.



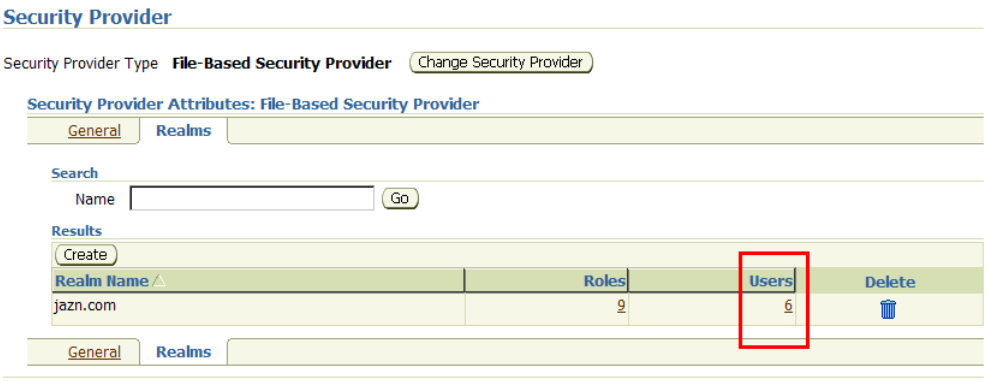
6. Click **Create**. The Add Role page is displayed.



7. Enter *transsvcAdmin* in the **Name** field.

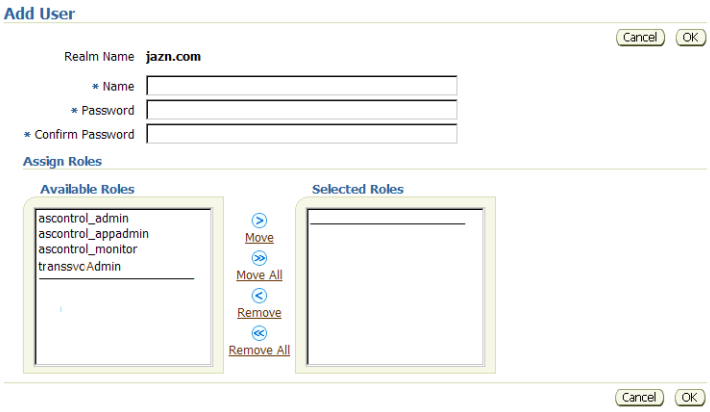
8. Click **OK**. The Roles page is redisplayed with the new role.

9. Return to the Security Providers page.



10. Click the link under the **Users** column. The Users page is displayed.

11. Click **Create**. The Add User page is displayed.



12. Enter the following information to create a user:

Name	*Admin* (This is an example. Enter the name of your choice.)
Password	Password for the user being created
Confirm Password	Confirmation of the password

13. In the Assign Roles section, select the *transsvcAdmin* role in the **Available Roles** list and move it to the **Selected Roles** list.

14. Click **OK**. The Users page is redisplayed with the new user.

Step 8 Configure logging (optional)

The Banner Translation Services uses Apache's log4j to log the activities performed by the application at runtime. Log4j uses a properties file to establish specific runtime options. The following options should be reviewed and modified as appropriate:

- **Location of the log files**. The default location is `<IAS_HOME>/j2ee/home/log/translation_service.log`. This location should be changed to the OC4J instance where the Banner Translation Service is installed.
- **Logging level**. The default level is *INFO*, resulting in limited information (INFO, WARNING, ERROR, and FATAL level statements) being stored in log files. To provide detailed logging, you should modify the log4j configurations.

Use the following steps to modify the logging options as appropriate.

1. Navigate to `<IAS_HOME>/j2ee/<OC4J instance>/applications/TranslationService_v8.1.3/classes.`

2. Edit `log4j.properties` as follows:

Property	Original Value	New Value
`log4j.appender.logfile.File`	`log/translation_service.log`	`../<OC4J instance>/log/translation_service.log`
`log4j.logger.com.sct`	`INFO, logfile`	`DEBUG, logfile`

3. Restart the OC4J instance for the changes to take effect.

Step 9 Populate the Banner Translation Service

Populate the Banner Translation Service with the enterprise fields and corresponding field value translations that support integration within your institution. Refer to Chapter 3, “Administration”.

Installation on Oracle WebLogic Server 11g

The Banner Translation Service is packaged as a J2EE compatible enterprise archive file named `TranslationService_v8.1.3.ear`. Use the following steps to install the Banner Translation Service on Oracle WebLogic Server 11g:

The Banner Translation Service can be installed on an existing Oracle WebLogic Domain. However, not on a Classic Domain that comes with `WLS_FORMS` and `WLS_REPORTS` servers. The Banner Translation Service and the Banner Web Services Adapters must be installed together, preferably on a new Managed Server so they can be managed independently from other applications.

Step 1 Extract the zip file

The Banner Translation Service components are delivered in the `translation_service` folder in `banner_web_services_8.1.3.zip`. Create a new directory (for example, `bws_install`) and extract the zip file to this directory.

The `translation_service` folder has two directories:

- The `ear` directory contains the `TranslationService_v8.1.3.ear` and the `TranslationService_v8.1.3_plan.dat` files.

- The `database` directory contains the scripts used to create the database schema that are required by the Banner Translation Service.

Step 2 Configure the database user

Use the following steps to create or modify the database user (for example, `transsvc`) that is used for the Banner Translation Service. This user must have Resource and Connect privileges.

1. Connect to the database as a DBA account from SQL*Plus.
2. Execute the `translation_service/database/create_user_oracle.sql` script.

   The location of this script depends on how you downloaded the Banner Translation Service.
3. When prompted, enter the name of the datafile for the schema with the complete path.

Step 3 Configure the database tables

Use the following steps to load the Oracle sql file that creates the Banner Translation Service tables and schema.

1. Go to the `translation_service/database` subdirectory.

   The location of this subdirectory depends on how you downloaded the Banner Translation Service.
2. Open the `db.properties` file.
3. Enter the username and password for the user (created in step 2), hostname, port, and sid at the required places in the `db.properties` file. The default values are as follows:

username	`transsvc`
password	`transsvc`

4. Save the file.
5. Load the database schema by running the following command in the database directory:

   ```
   java –jar lib/ant-launcher.jar –f db.xml
   ```

Tip

You must manually enter the preceding command. Copying and pasting the command does not work.

Existing tables and views are first deleted during the load process. Warning messages are displayed because the deleted tables and views do not exist. These messages can be ignored because the tables and views are then created.

Step 4 Configure logging (optional)

The Banner Translation Services uses Apache's log4j to log the activities performed by the application at runtime. The log file is located at the following location:

```
Oracle\Middleware\user_projects\domains\<domain_name>\log
```

where `<domain_name>` is the name of the domain where the Banner Translation Service will be installed. This location cannot be changed.

A property in the `log4j.properties` file determines the logging level. The default logging level is *INFO*, which results in limited information (INFO, WARNING, ERROR, and FATAL level statements) being stored in log files. Use the following steps to modify the logging level if you want more detailed logging.

1. Copy `TranslationService_v8.1.3.ear` to a temporary location. This location is referred to as `<EAR_HOME>`.
2. Navigate to `<EAR_HOME>` and execute the following command.

   ```
   jar xvf TranslationService_v8.1.3.ear
   ```

3. Open `classes\log4j.properties`.
4. Edit the `log4j.logger.com.sct` property as follows:

   Original value: *INFO*
   New value: *DEBUG*

5. Save the change.
6. From `<EAR_HOME>` execute the following command to rebuild the enterprise archive file.

   ```
   jar cvf TranslationService_v8.1.3.ear *.war META-INF/*
   legal/* *.jar classes/* lib/*
   ```

   The rebuilt `TranslationService_v8.1.3.ear` is used for installation.

Step 5 Configure the Oracle WebLogic Server

The Oracle WebLogic Server must be configured to use the *Advanced* security model instead of the default *DD only* option. This setup pertains to the realm configuration.It applies to the entire domain.(Although you can create a totally new realm for the domain,

only one realm can be active at a time for the entire domain.) This security configuration protects all server resources for the domain.

Note

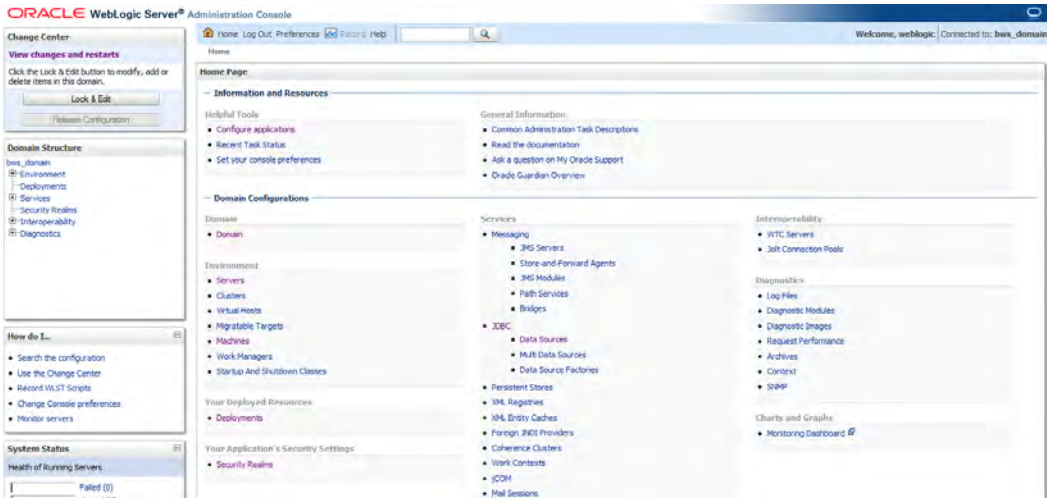
The Oracle WebLogic Server needs to be configured only once. If the server was previously configured, you can skip this step. ■

Use the following steps to configure the server.

1. Connect to the Oracle WebLogic Server Administration Console:

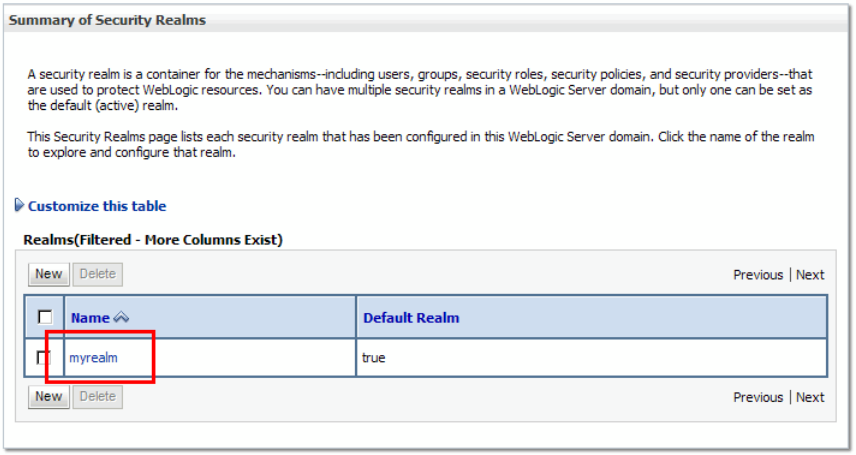
   `http://<host>:<port>/console`

   The Home Page is displayed.

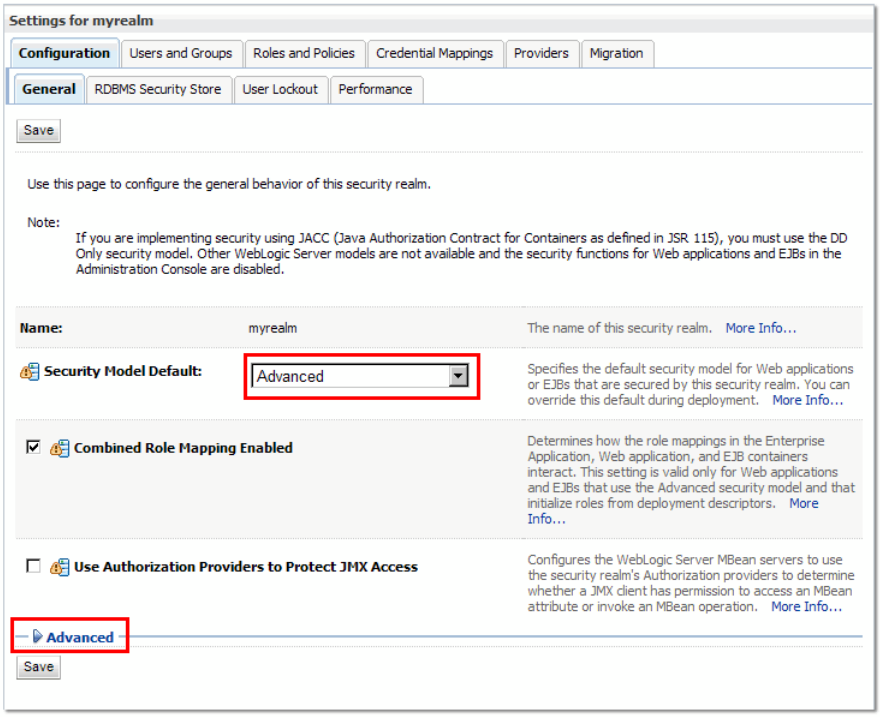


2. Click **Lock & Edit** in the Change center pane.

3. In the Domain Structure pane, click **Security Realms**. The Summary of Security Realms page is displayed.

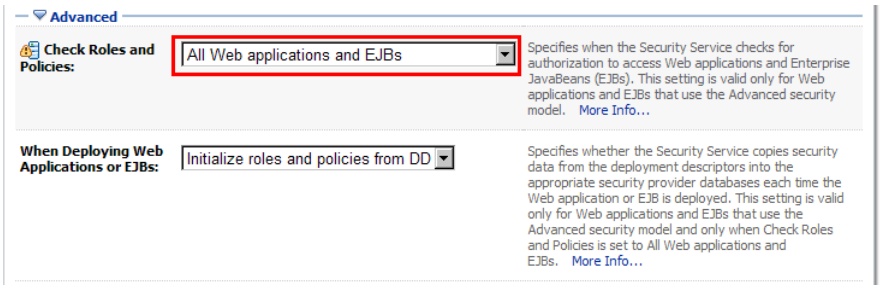


4. Click **myrealm**. The Settings for myrealm page is displayed.



5. Select *Advanced* in the **Security Model Default** drop-down list.

6. Click the **Advanced** link to display the advanced options.



7. Select *All Web Applications and EJBs* in the **Check Roles and Policies** drop-down list.

8. Click **Save**.

9. Restart the server for the changes to take effect.

Step 6 Create a Managed server

Create a new Managed Server for the Banner Translation Service and the Banner Web Service Adapters so that they can be independently managed. Refer to Oracle WebLogic Server Documentation Library for details.

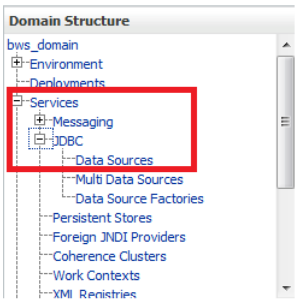
Step 7 Define the data source

A data source provides the connection properties to the Banner database. By default, the Banner Translation Service needs a data source named `jdbc/transsvc`.

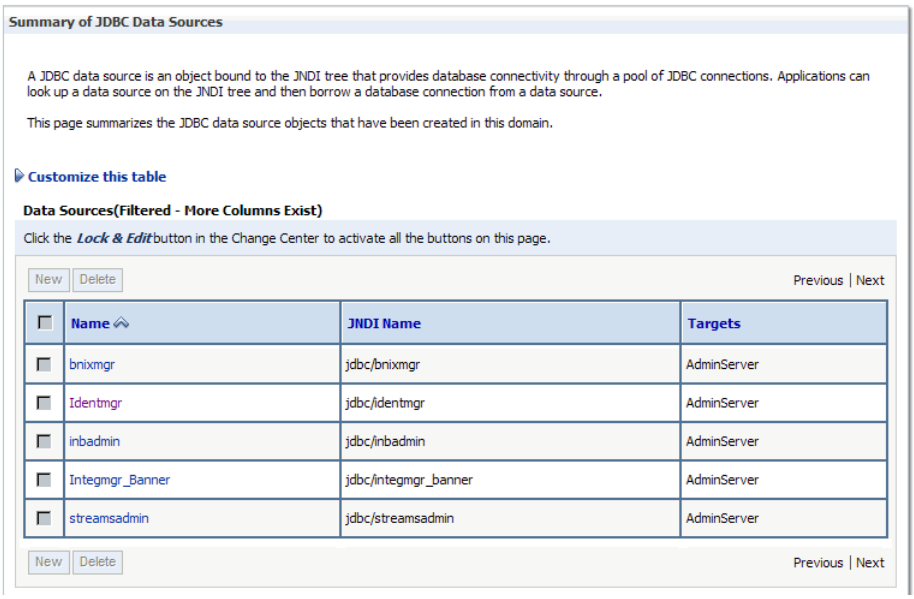
Use the following steps to define the data source.

1. In the Change Center pane, click **Lock & Edit**.

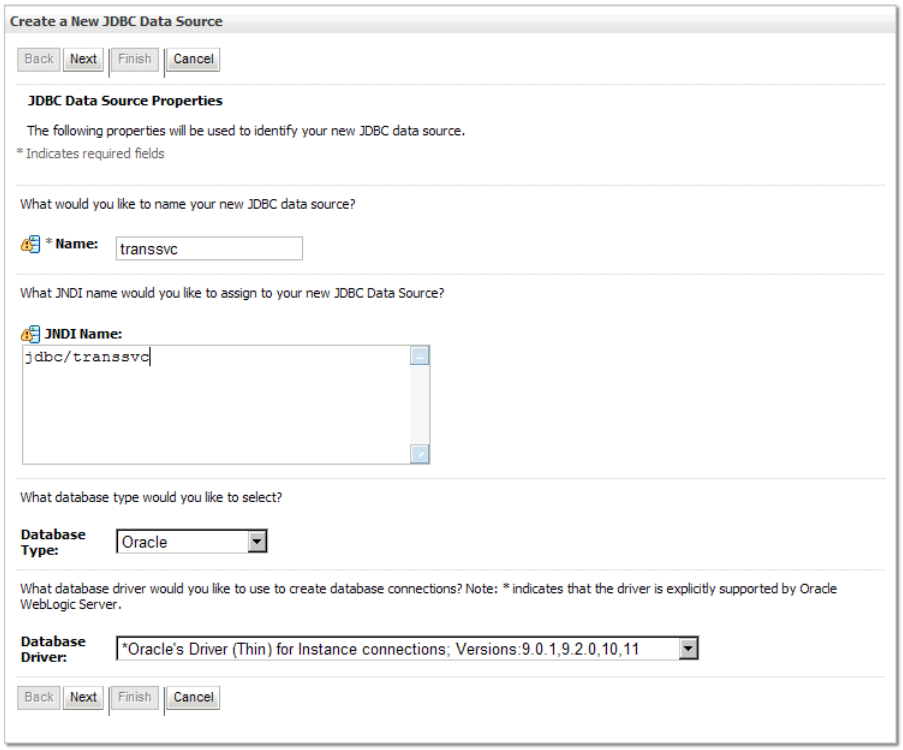
2. In the Domain Structure pane, expand and click **Services -> JDBC -> Data Sources**.



The Summary of JDBC Data Sources page is displayed.



3. Click **New**. The Create a New JDBC Data Source page is displayed.

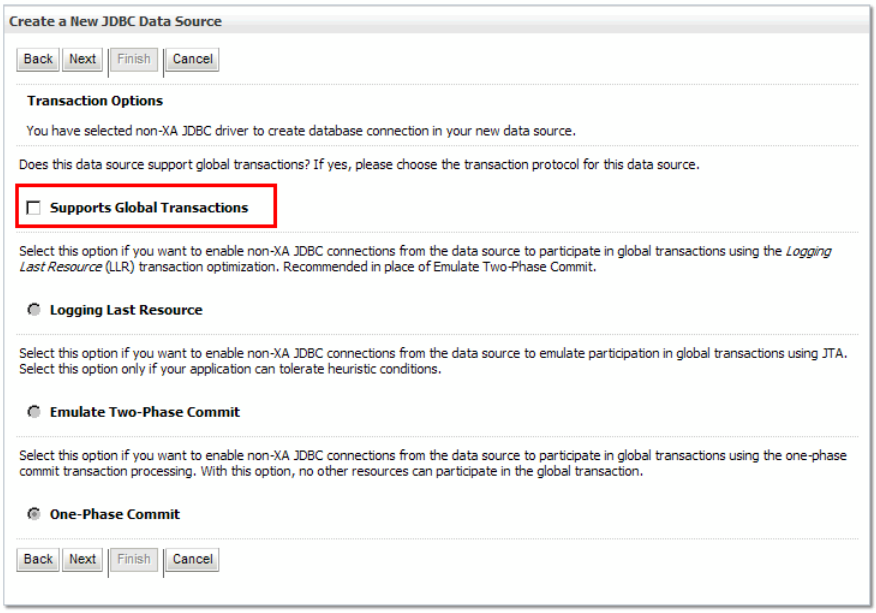


4. Enter the following data source properties:

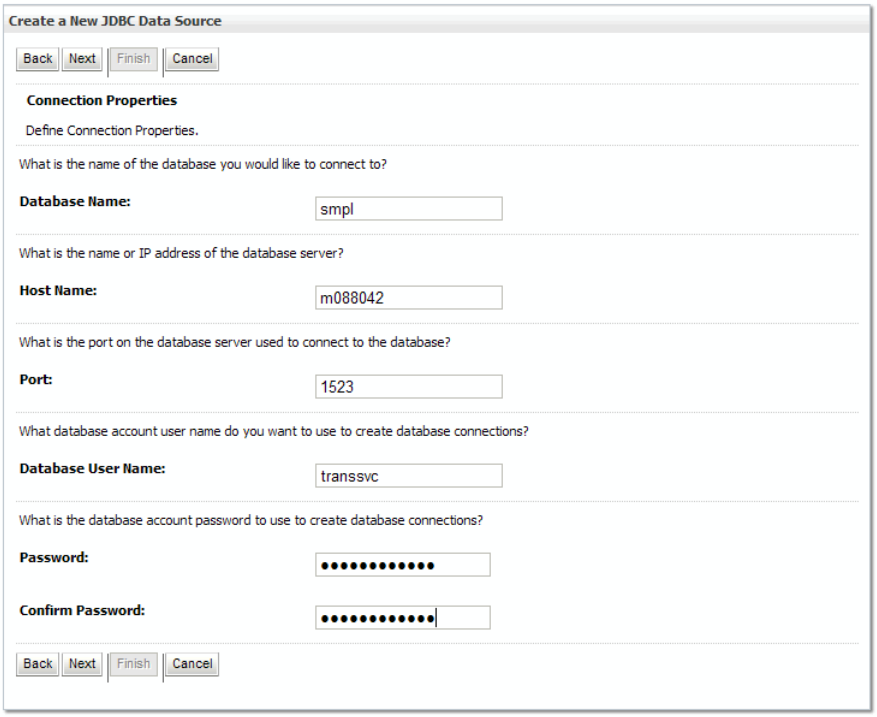
Name	*transsvc*
JNDI Name	*jdbc/transsvc*
Database Type	*Oracle*
Database Driver	Appropriate database driver that is used to create database connection. If your database is RAC-based select **Oracle's (Thin) for RAC Service-Instance connections; Versions:10,11* Otherwise, Select **Oracle's Driver (Thin) for Instance connections; Versions:9.0.1, 9.2.0,10,11*

5. Click **Next**. The next page is displayed.

   The following page may or may not be displayed. If it is displayed, clear the **Supports Global Transactions** check box and go to step 6. If the following page is not displayed, skip to step 7.



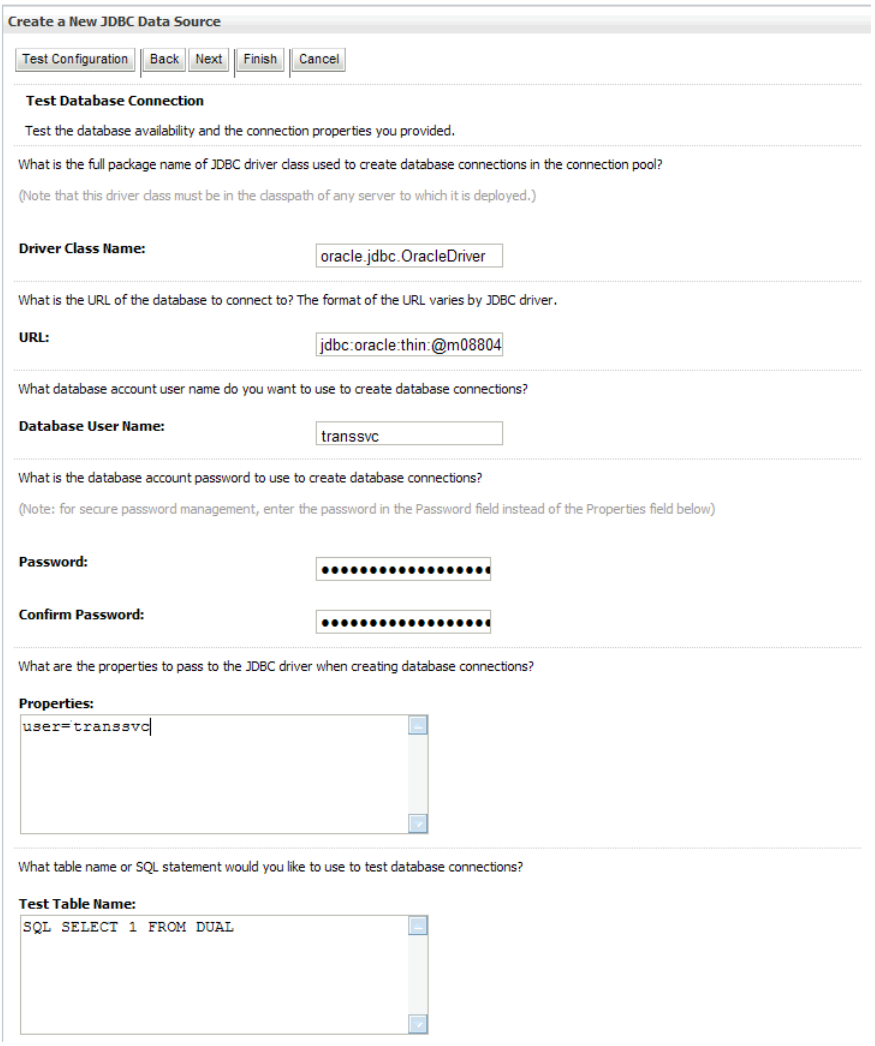
6. Click **Next**. The next page is displayed.



7. Enter the following connection properties:

Database Name	Name of the database to which you are connecting
Host Name	IP address or name of the database server
Port	Port on the database server that is used to connect to the database
Database User Name	*transsvc*
Password	Password for the `transsvc` user
Confirm Password	Confirmation of the password

8. Click **Next**. The next page is displayed with the properties that you entered.



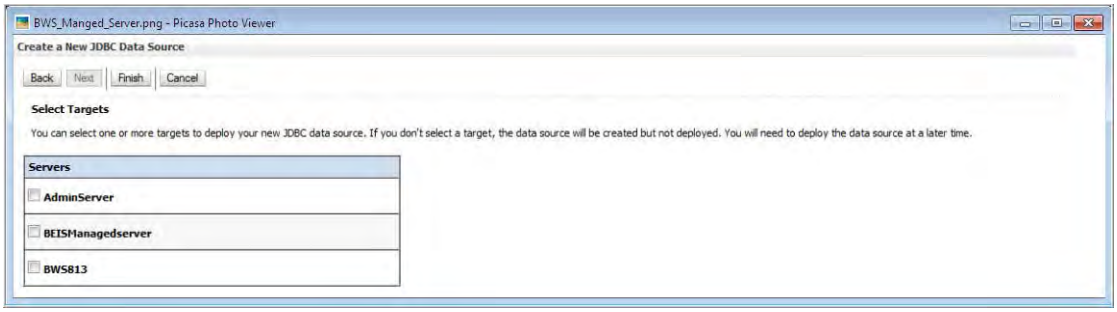
9. Verify the property values.

10. Click **Test Configuration**. The page is redisplayed with a success or failure message.

    10.1. If the test succeeds, continue with the next step.

    10.2. If the test fails, ensure that the connection URL and credentials are correct. Continue testing until the connection is successful.

11. Click **Next**. The next page is displayed.



12. Select the server(s) where you want to deploy the new data source. At a minimum, this should be the Managed Server where the Banner Translation Service will be deployed.

13. Click **Finish**.

    The Summary of JDBC Data Sources page is displayed with the new data source.

14. Verify that the new data source is associated with the server.

15. In the Change Center pane, click **Activate Changes**.

Step 8 Install the Banner Translation Service

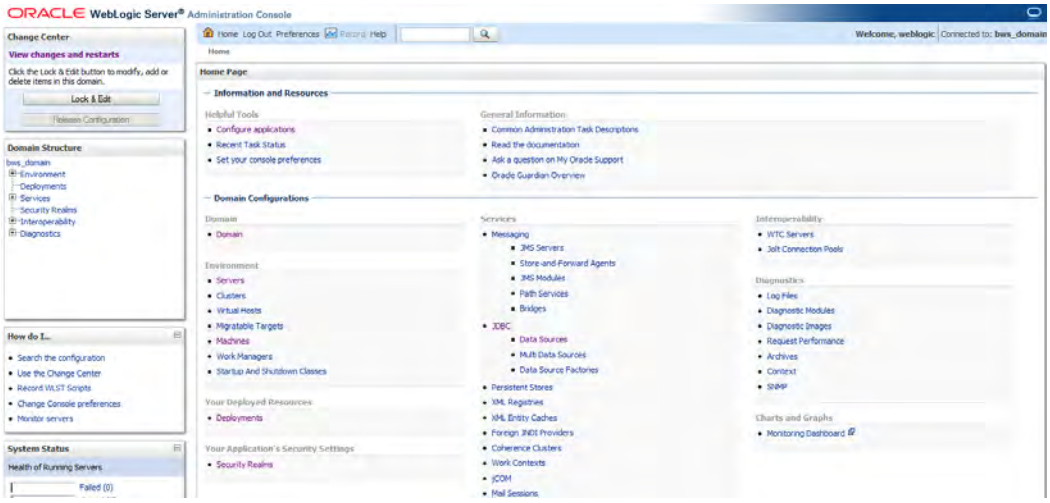
Before beginning this step, you must also understand the concepts published by Oracle regarding the deployment of ear files.

Use the following steps to install the Banner Translation Service to the Oracle WebLogic Server.

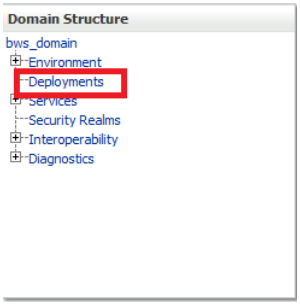
1. Connect to the Oracle WebLogic Server Administration Console:

   ```
   http://<host>:<port>/console
   ```

   The Home Page is displayed.

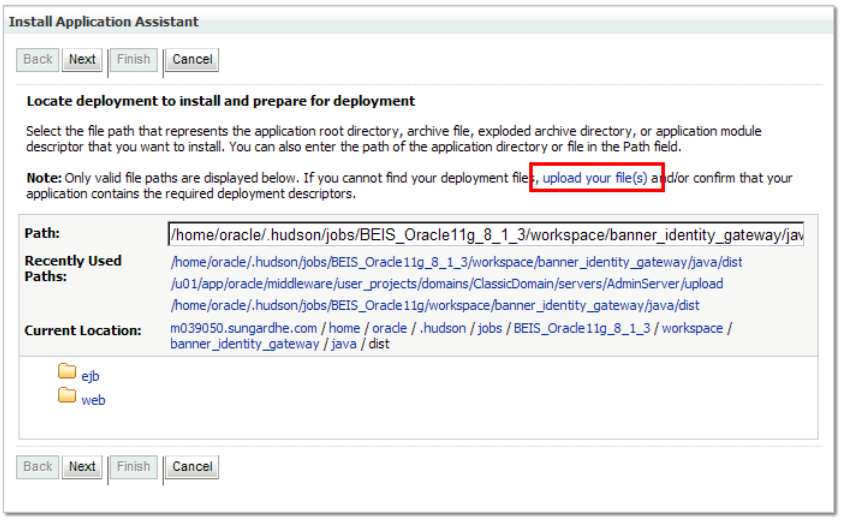


2. In the Domain Structure pane, click **Deployments**.

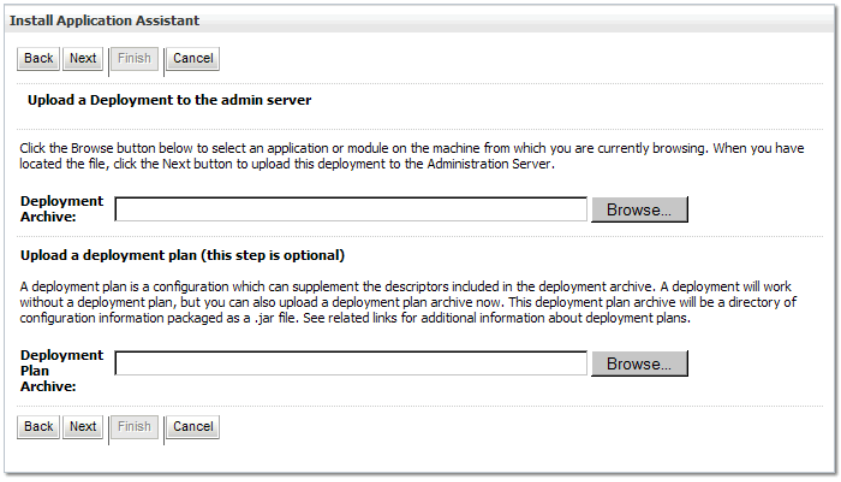


The Summary of Deployments page is displayed.

3. In the Summary of Deployments page, click **Install**. The Install Application Assistant page is displayed.



4. Click **upload your file(s)**. The next installation page is displayed.

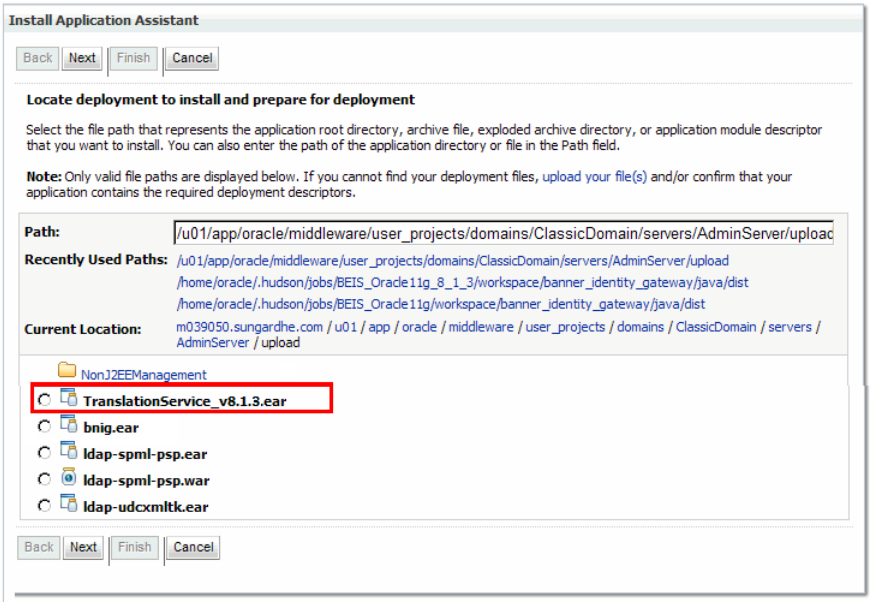


5. Select the file to be uploaded:

   5.1. In the **Deployment Archive** field, click **Browse** and navigate to the `TranslationService_v8.1.3.ear` file.

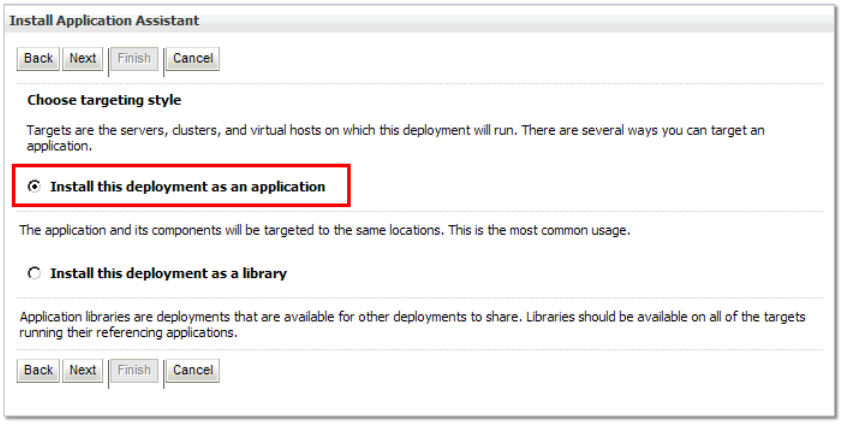
   5.1. Select the file and click **Open**.

6. Click **Next**. The next installation page is displayed.



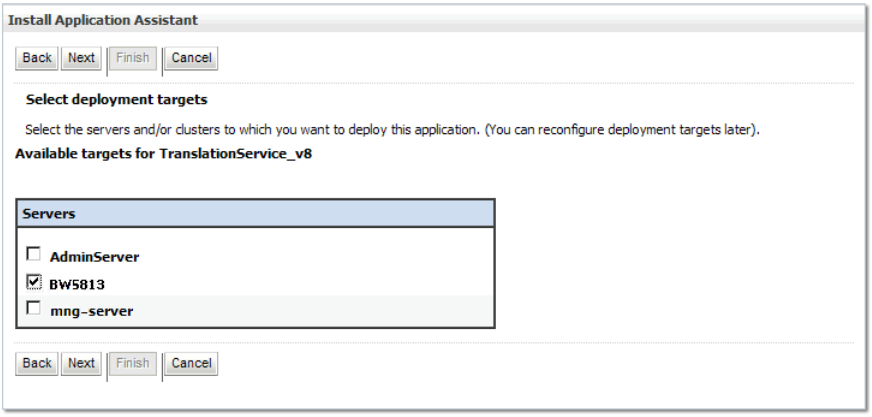
7. Select the `TranslationService_v8.1.3.ear` file from the list.

8. Click **Next**. The next installation page is displayed.



9. Select **Install this deployment as an application**.

10. Click **Next**. The next installation page is displayed.

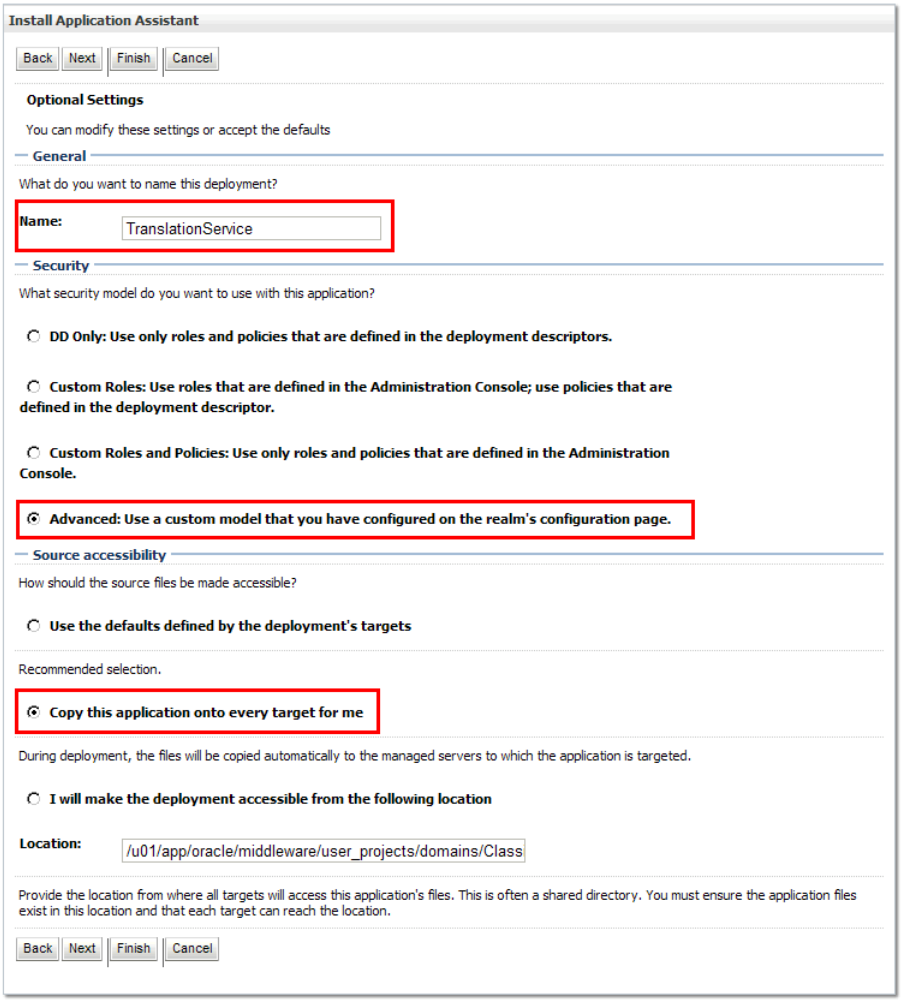


11. Select the server where the application should be deployed. (The application can be installed on an existing server.).

Note

Ellucian recommends deploying applications to a WebLogic Managed Server and not to the Administration Server in the domain. If you do not see the preceding page, you should check your WebLogic server configuration to ensure that a Managed Server is available for deployment of applications. If a Manager Server is not available, the application will be deployed to the Administration Server, which is not a recommended configuration. For more information, consult the Oracle WebLogic Server Documentation Library. ■

12. Click **Next**. The next installation page is displayed.

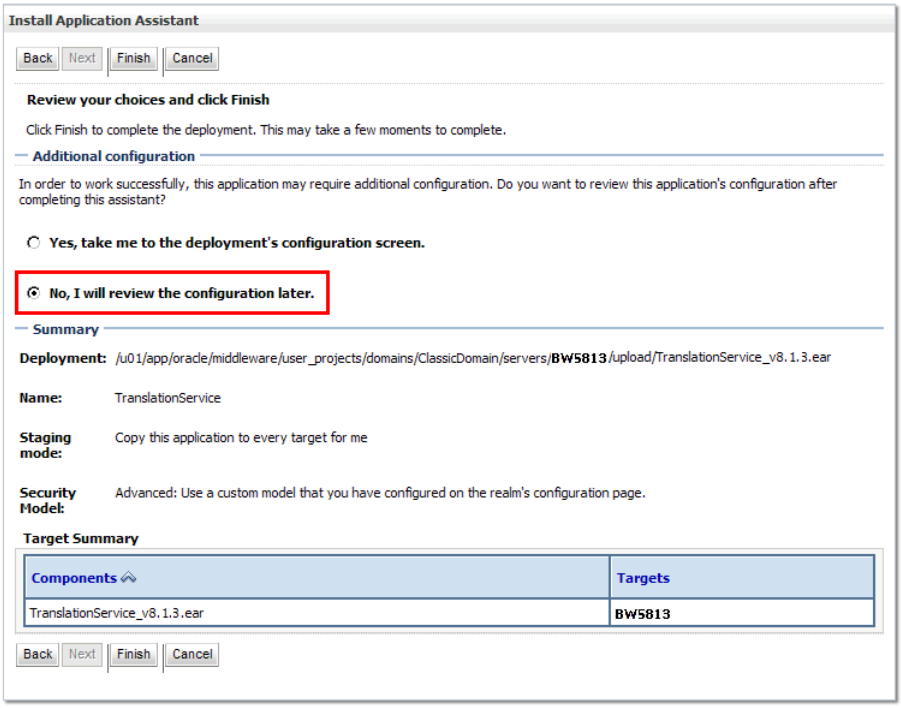


13. Enter a name for the application (for example, *TranslationService*) in the **Name** field.

14. Select **Advanced: Use a custom model that you have configured on the realm's configuration page**.

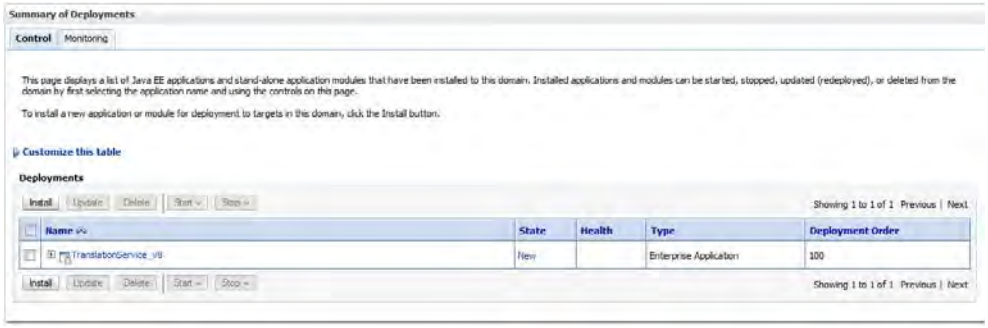
15. Select **Copy this application onto every target for me**.

16. Click **Next**. The next installation page is displayed.



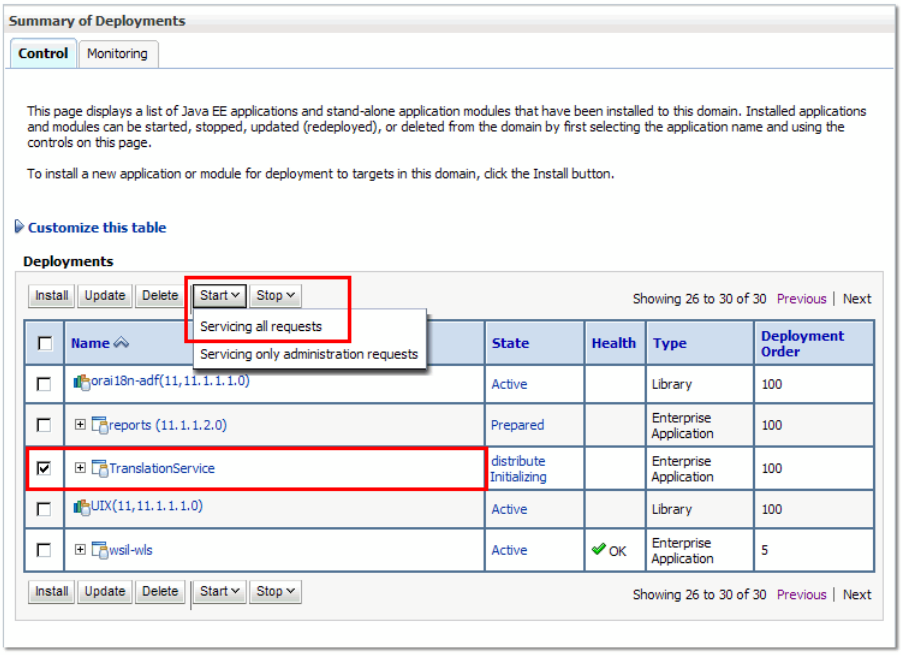
17. Select **No, I will review the configuration later**.

18. Click **Finish** to start the deployment. When deployment is completed, the Summary of Deployments page is redisplayed with the newly deployed application.



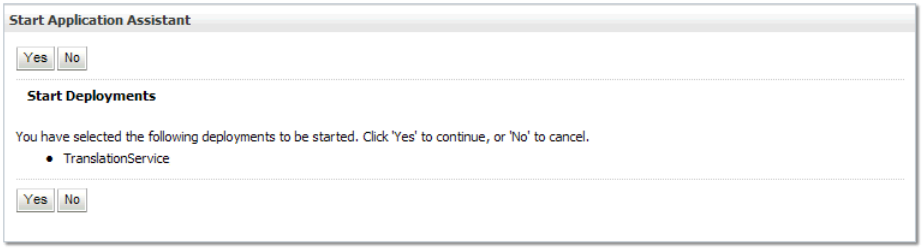
19. In the Change Center pane, click **Activate Changes**.

20. Start the newly deployed application as follows:



20.1. Select the newly deployed application.

20.1. Click **Start -> Servicing all requests**. The Start Application Assistant page is displayed.



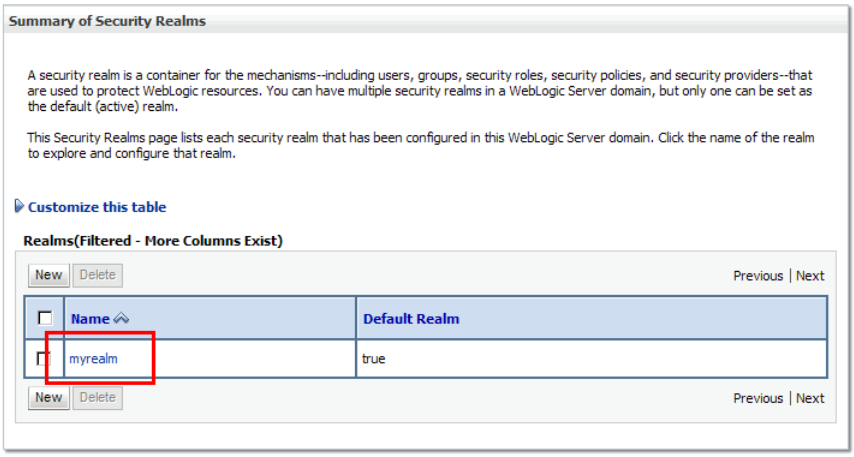
20.2. Click **Yes**.

Step 9 Configure the security group and user

Use the following steps to configure the `transsvcAdminGroup` group and an administrative user for the Banner Translation Service. This group and user are required for accessing the Banner Translation Service administrative interface.

1. In the Domain Structure pane, click **Security Realms**.

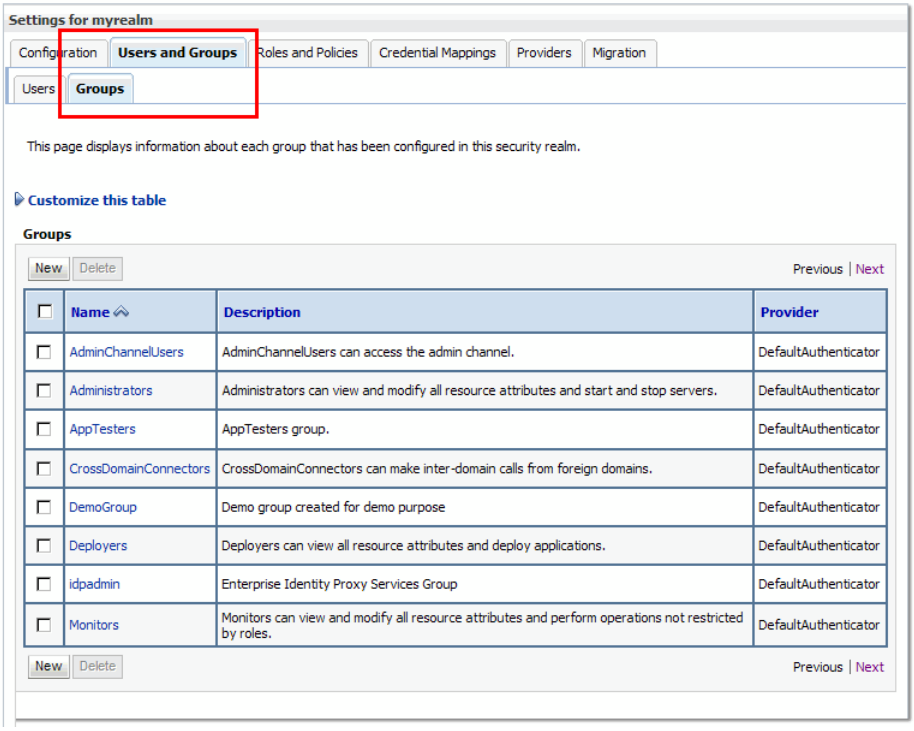
The Summary of Security Realms page is displayed.



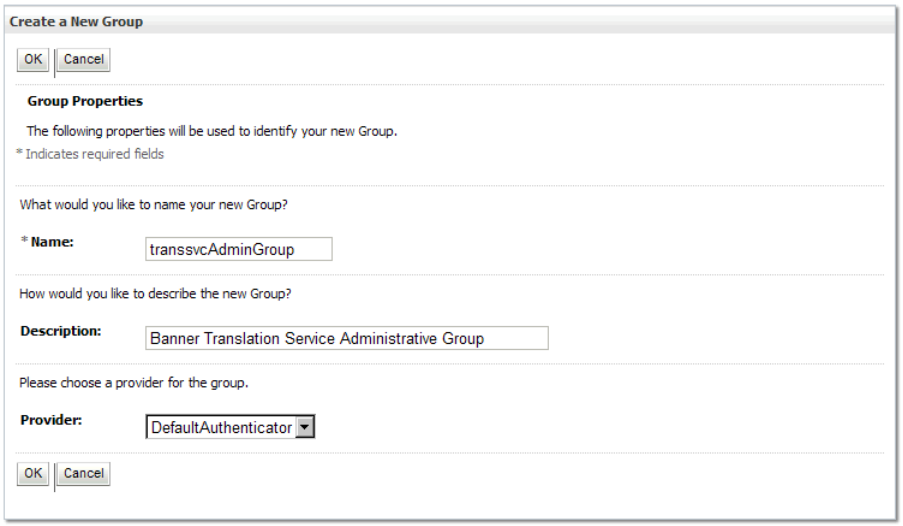
2. Click **myrealm**. The Settings page is displayed.

3. Select the **Users and Groups** tab.

4. Select the **Groups** sub-tab. A table of existing groups is displayed.



5. Click **New**. The Create a New Group page is displayed.



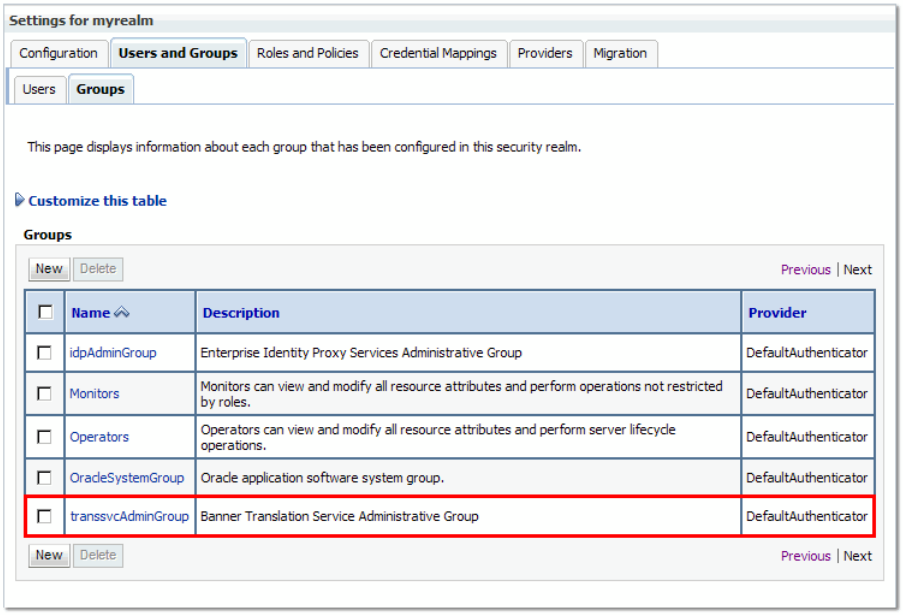
6. Enter the following information to create a group:

Name *transsvcAdminGroup*

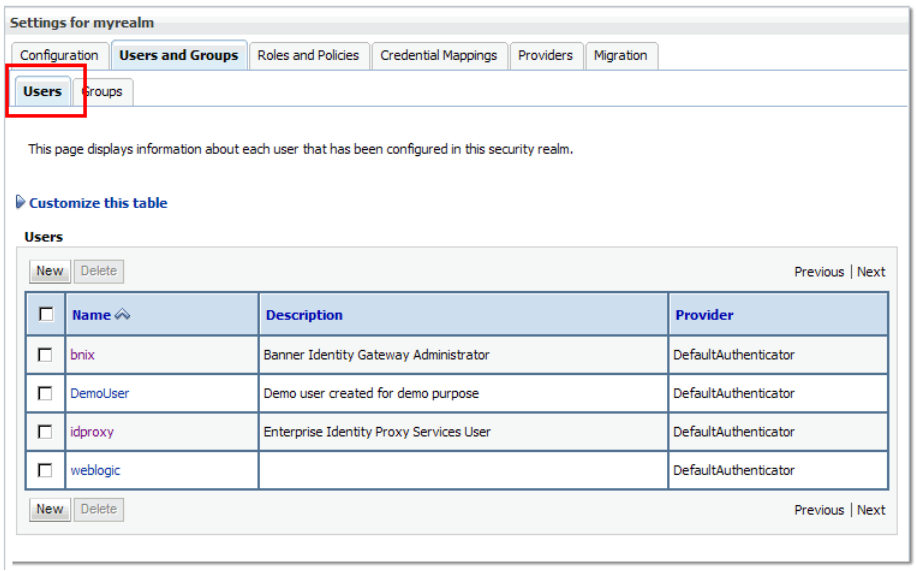
Description *Banner Translation Service Administrative Group*

Provider *DefaultAuthenticator*

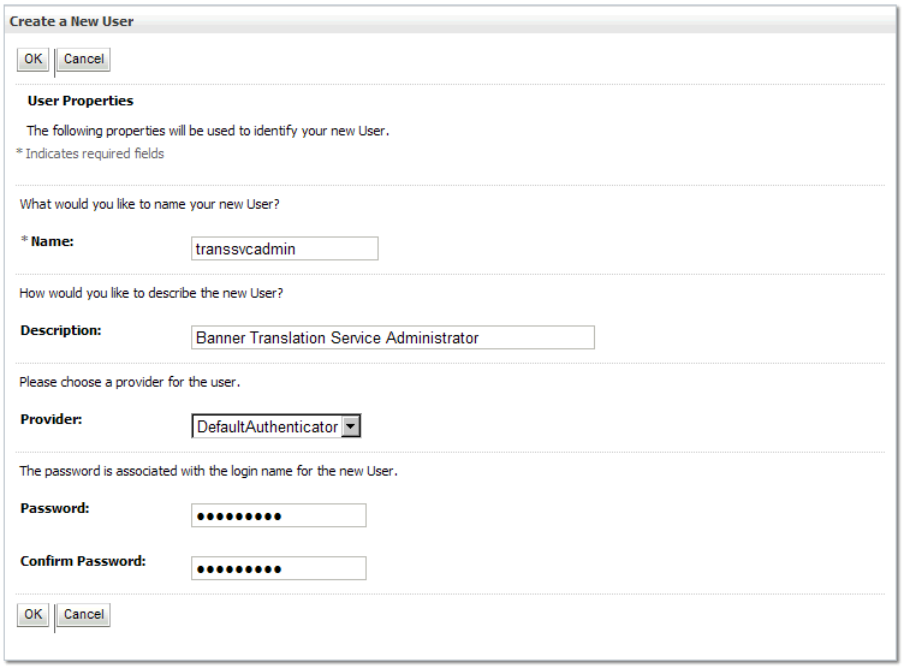
7. Click **OK**. The table of groups is redisplayed with the new group.



8. Select the **Users** sub-tab. A table of existing users is displayed.



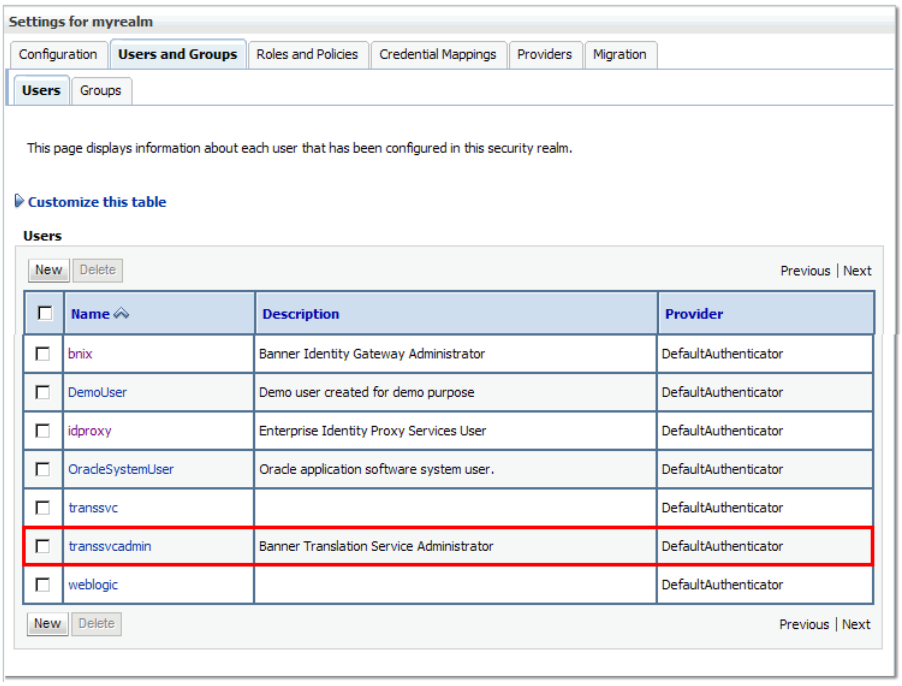
9. Click **New**. The Create a New User page is displayed.



10. Enter the following information to create a user:

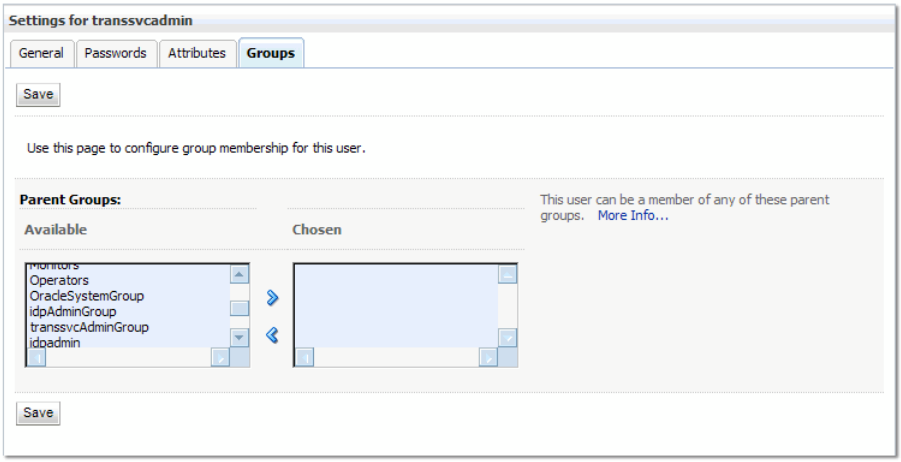
Name	*transsvcadmin* (This is an example. Enter the name of your choice.)
Description	*Banner Translation Service Administrator*
Provider	*DefaultAuthenticator*
Password	Password for the user being created
Confirm Password	Confirmation of the password

11. Click **OK**. The table of users is redisplayed with the new user.

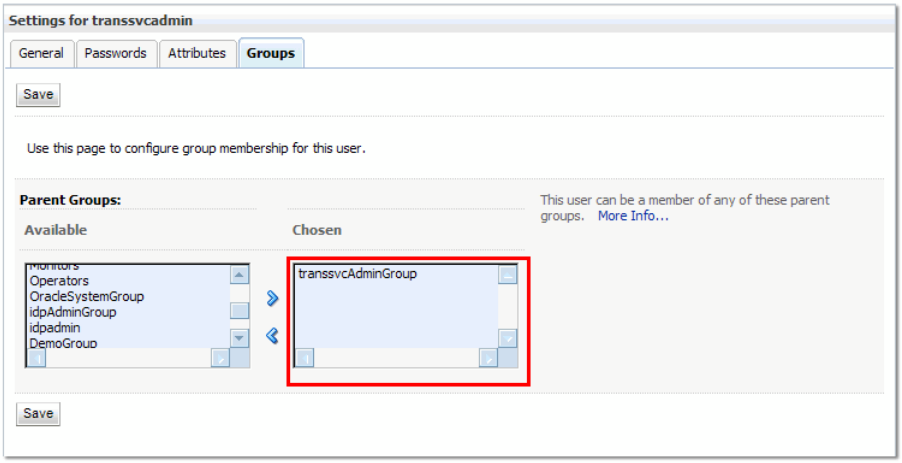


12. Click the name of the user you just created. The Settings page for the user is displayed.

13. Select the **Groups** tab.



14. In the Parent Groups section, select *transsvcAdminGroup* in the **Available** list and move it to the **Chosen** list.



15. Click **Save**.

Step 10 Populate the Banner Translation Service

Populate the Banner Translation Service with the enterprise fields and corresponding field value translations that support integration within your institution. Refer to Chapter 3, "Administration".

3 Administration

The Banner® Translation Service provides a Web-based administration interface that is used to perform the following functions:

- Manage data translations (import and export bulk translations, add translations, and manage translations).
- Use Web services to process translation requests.
- Test data translations.

Terminology

The concept of “enterprise” data definitions is fundamental to the Banner Translation Service. This term characterizes data that is used by multiple applications in the enterprise— data that is not application-specific. Enterprise data structures are universal and can be mapped to any number of applications.

Application-specific data can be mapped to enterprise definitions for exchange with other applications. In this way, enterprise data definitions are used to bridge applications.

The concept of enterprise data definitions is the basis for the following terms used in the Banner Translation Service administration interface:

Term	Description
Enterprise Field	Data element that is part of an enterprise data definition and contains values that require translation. These elements are enterprise definitions (not system-specific). Normally, they equate to an XML tag name and are qualified by a namespace prefix (for example, *rco:Gender*).
Enterprise Field Value	Data value assigned to an enterprise field. Enterprise field values are the common values that are used in the enterprise. Applications that cannot accept these enterprise field values must incorporate or use a service that provides translation to application-specific values.
Field Translation	System-specific value for the enterprise field value. Because Banner uses the Banner Translation Service, Banner codes are represented as field translations.

Example

Enterprise Field	Enterprise Field Value	Field Translation
Gender	Male	M
Gender	Female	F

Access the Web console

Use the following steps to access the Banner Translation Service on the Web console.

1. Access the following URL:

   ```
   http://<host>:<port>/transsvc
   ```

2. Click **LOGIN**.
3. Enter the appropriate username and password.
4. Click **OK**.

Manage data translations

The following sections provide instructions for managing data translations.

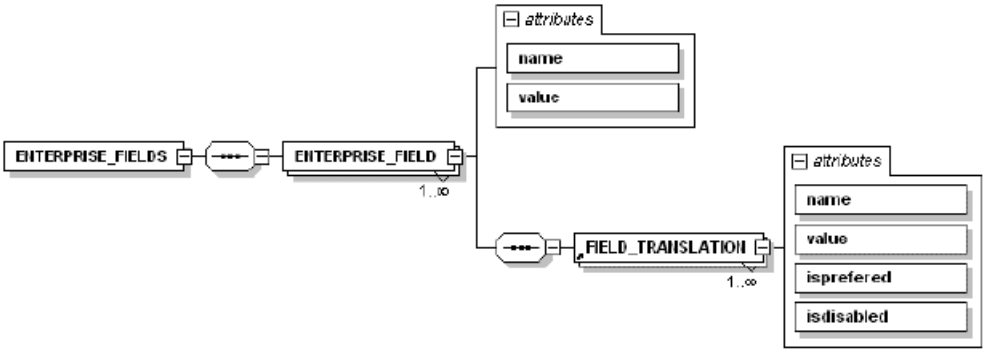
Import enterprise fields

You can import multiple enterprise fields to the Banner Translation Service in one operation. This feature is particularly useful when a pre-production or test instance contains required data that must be loaded to the production instance.

Note

For Banner Web services to work properly, you must import translations that are delivered with Banner Web services. Refer to the *Banner Web Services Installation Guide* for details on importing these translations to the Banner Translation Service.

The data to be loaded must be in the following XML format, which mirrors the Banner Translation Service data structure:



A sample XML file follows:

```
<ENTERPRISE_FIELDS>
   <ENTERPRISE_FIELD name=”sghe:EnterpriseFieldName”
value="AnEnterpriseFieldValue">
      <FIELD_TRANSLATION name="Application B" value="AppBValue"
      isprefered="false" isdisabled="false"/>
      <FIELD_TRANSLATION name="Application A" value="AppAValue"
      isprefered="false" isdisabled="false"/>
   </ENTERPRISE_FIELD>
</ENTERPRISE_FIELDS>
```

Use the following steps to import enterprise fields.

1. Click **List** under the Enterprise Field menu.
2. Click **Import** in the Enterprise Fields section. The Load Enterprise Field/s page is displayed:

3. Click **Browse**.
4. Navigate to the file to be imported and select it.
5. Click **Open**. The Load Enterprise Field/s page is redisplayed.
6. Click **Load**. The Import Completed page is displayed.
7. Click **Continue**. An updated list of enterprise field names is displayed.

Export enterprise fields

You can export a single enterprise field or all enterprise fields from the Banner Translation Service.

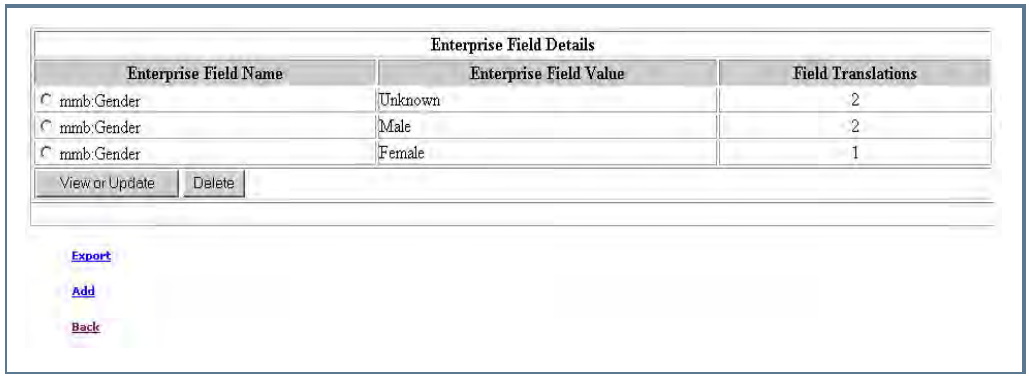
Export one enterprise field

Use the following steps to export a single enterprise field.

1. Click **List** under the Enterprise Field menu.

   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

2. Click the enterprise field you want to export. The Enterprise Field Details page is displayed:



3. Click **Export** (at the bottom of the page).

4. Click **Save**.

5. Navigate to the location where you want to save the file.

6. Enter a file name.

Note

The default file name is `xmlexport`. We recommend using a more descriptive file name. ■

7. Click **Save**.

Export all enterprise fields

Use the following steps to export all enterprise fields. This feature is particularly useful when a pre-production or test instance contains all the required data that needs to be moved to the production instance.

1. Click **List** under the Enterprise Field menu.
2. Click **Export** in the Enterprise Fields section.
3. Click **Save**.
4. Navigate to the location where you want to save the file.
5. Enter a file name.

Note

The default file name is `xmlexport`. We recommend using a more descriptive file name. ■

6. Click **Save**.

List enterprise fields

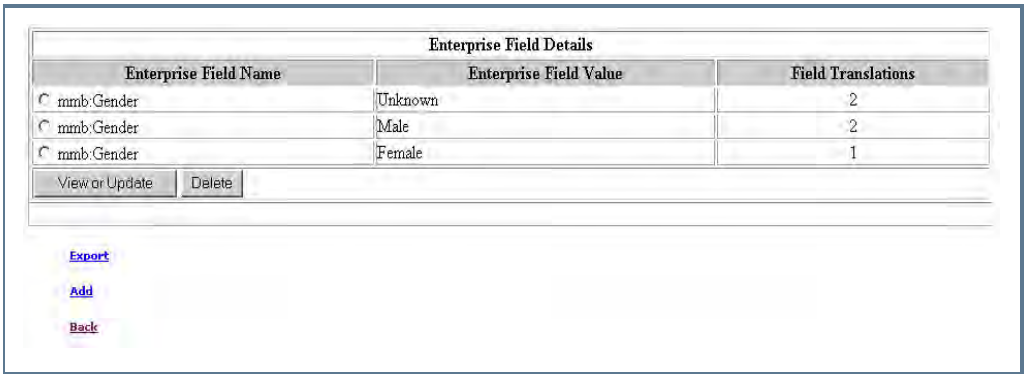
Use the following steps to list all enterprise fields defined in the system. You can select an enterprise field from the list and display the enterprise field values associated with the selected field. Only enterprise fields such as rco:Gender and rco:CountryCode are displayed.

1. Click **List** under the Enterprise Field menu.

   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

2. Click an enterprise field name. The Enterprise Field Details page displays the following information:

Enterprise Field Name	Name of the selected enterprise field
Enterprise Field Value	Each enterprise field value for the selected enterprise field
Field Translations	Number of field translations defined for each enterprise field value



Add an enterprise field

When the Banner Translation Service is installed, the translation tables do not have any data in them. Enterprise fields are normally imported as a group. However, you can add an

enterprise field manually, if necessary. Use the following steps to manually add an enterprise field.

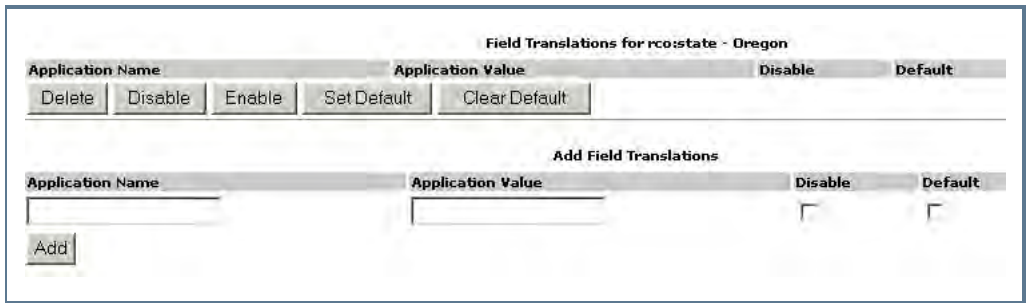
1. Click **List** under the Enterprise Field menu.

2. Click **Add** in the Enterprise Fields section. The Create Enterprise Field page is displayed.

3. Enter the following information:

Enterprise Field	Name of the new enterprise field (for example, *rco:state*)
Value	First enterprise field value (for example, *Oregon*)

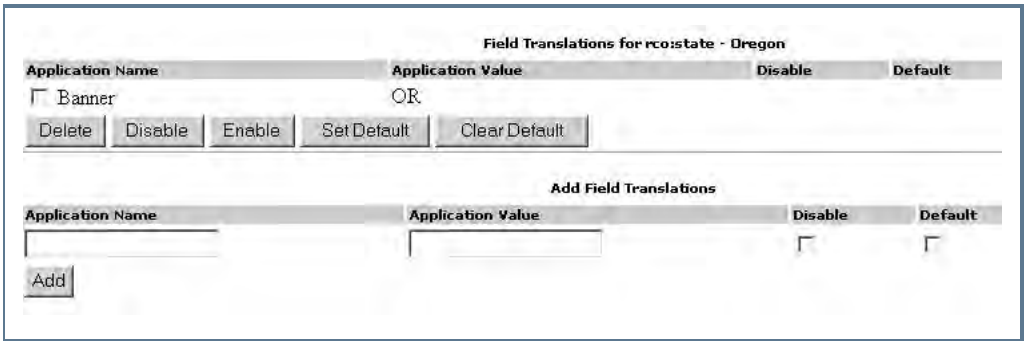
4. Click **Create**. The Field Translations page displays the new enterprise field name and enterprise field value.



5. Enter the following information to define a field translation:

Application Name	System for which the field translation is valid
Application Value	System-specific value for the enterprise field value

6. Click **Add**. The Field Translations page displays the new field translation.



7. Repeat steps 5 and 6 to add each field translation.

8. When all field translations are entered for the enterprise field value, click **Back**. The Enterprise Field Details page displays the new enterprise field.

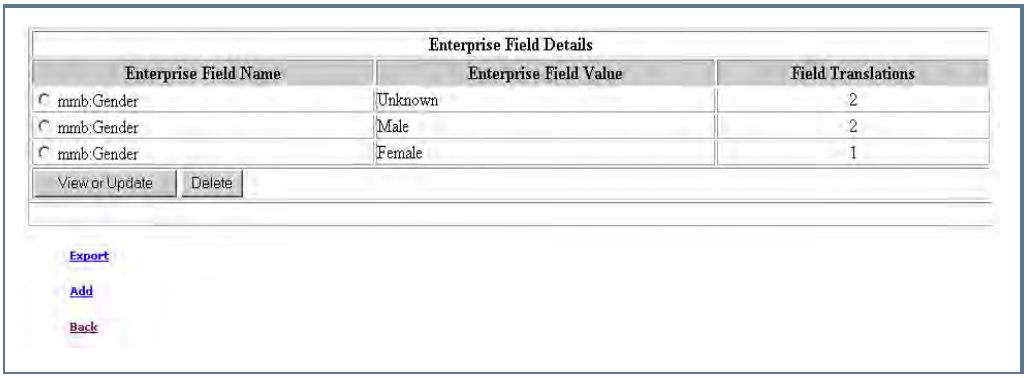
Add an enterprise field value

Use the following steps to add an enterprise field value to an existing enterprise field.

1. Click **List** under the Enterprise Field menu.

   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

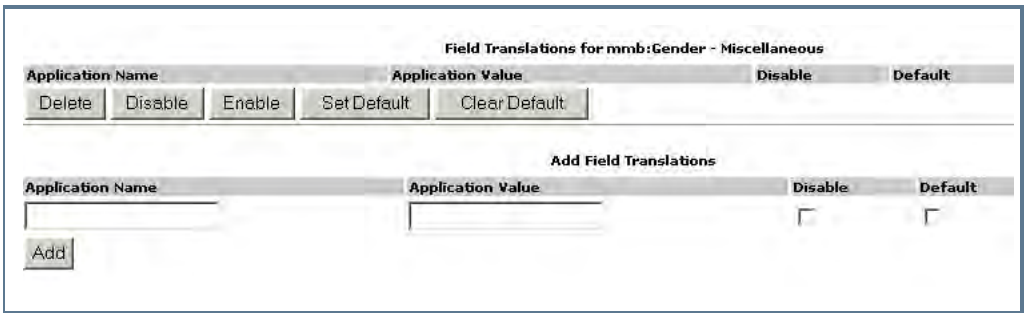
2. Click the name of the enterprise field to which you want to add an enterprise field value. The Enterprise Field Details page displays existing enterprise field values for the selected enterprise field.



3. Click **Add**. The Create Enterprise Field page is displayed with the name of the selected enterprise field.

4. Enter the new enterprise field value in the **Value** field.

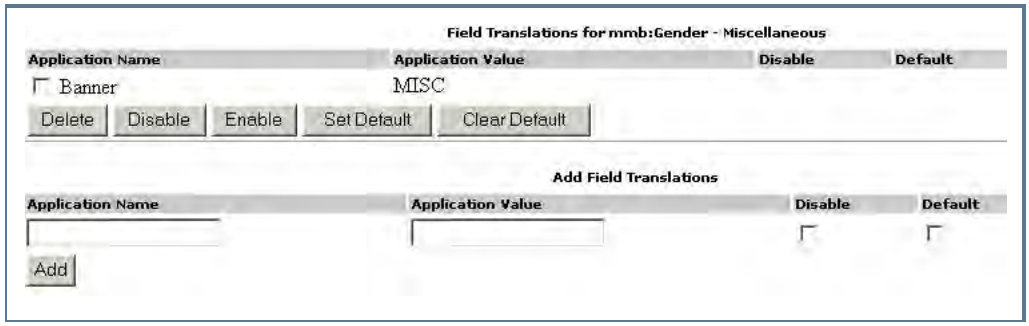
5. Click **Create**. The Field Translations page is displayed with the enterprise field name and the new enterprise field value.



6. Enter the following information to define a field translation:

Application Name	System for which the field translation is valid
Application Value	System-specific value for the enterprise field value

7. Click **Add**. The Field Translations page displays the new field translation.



8. Repeat steps 6 and 7 to add each field translation for the enterprise field value.

9. When all field translations are entered for the enterprise field value, click **Back**. The Enterprise Field Details page displays the new enterprise field value.

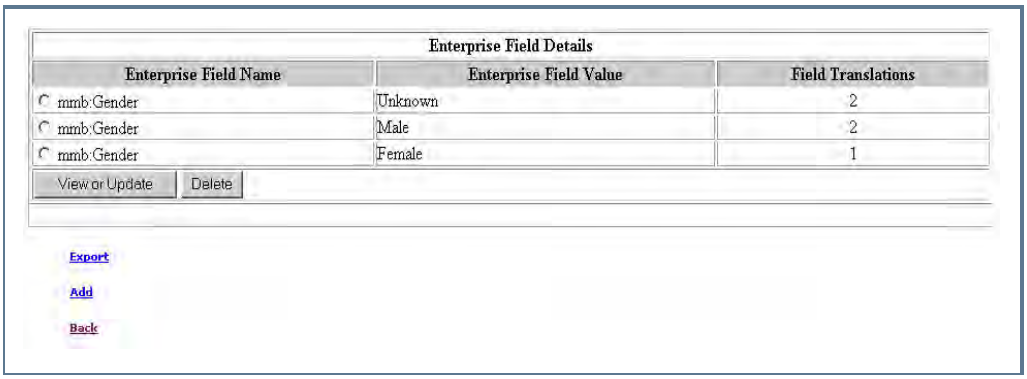
Add a field translation

An enterprise field value can have multiple field translations. These field translations allow the Banner Translation Service to assign the appropriate value to a data stream that requests translation from system A to system B. System A might represent Banner, and system B might represent any external system that exchanges data with Banner. Use the following steps to add a field translation.

1. Click **List** under the Enterprise Field menu.

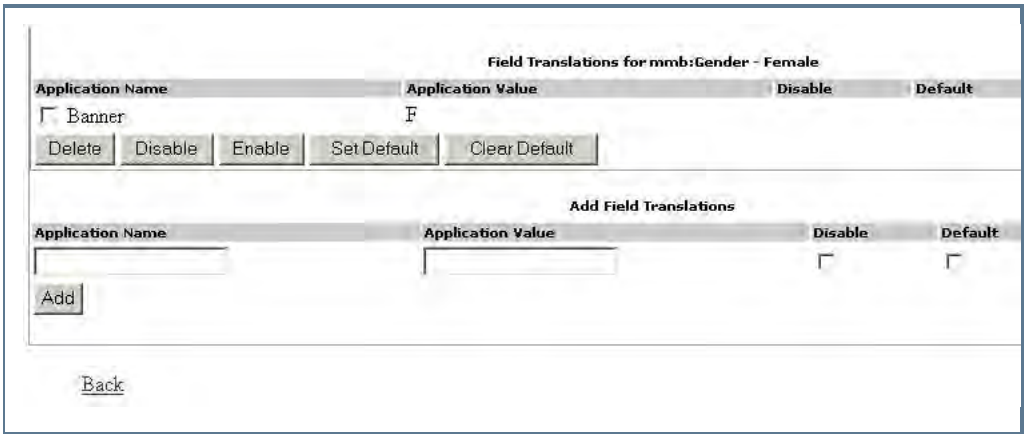
   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

2. Click the name of the enterprise field to which you want to add field translations. The Enterprise Field Details page displays existing enterprise field values for the selected enterprise field.



3. Select the enterprise field name/value pair to which you want to add field translations.

4. Click **View or Update**. The Field Translations page displays existing field translations.

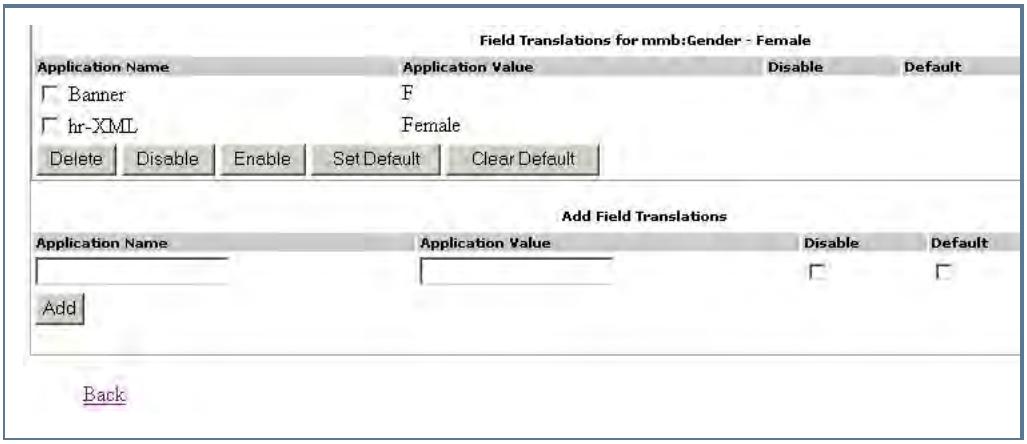


5. Enter the following information for the new field translation:

Application Name	System for which the field translation is valid
Application Value	System-specific value for the enterprise field value

6. (optional) Select the **Disable** check box if the field translation is disabled initially.

7. Click **Add**. The Field Translations page displays the new translation value.



8. (optional) To identify the default field translation, select the field translation and click **Set Default**.

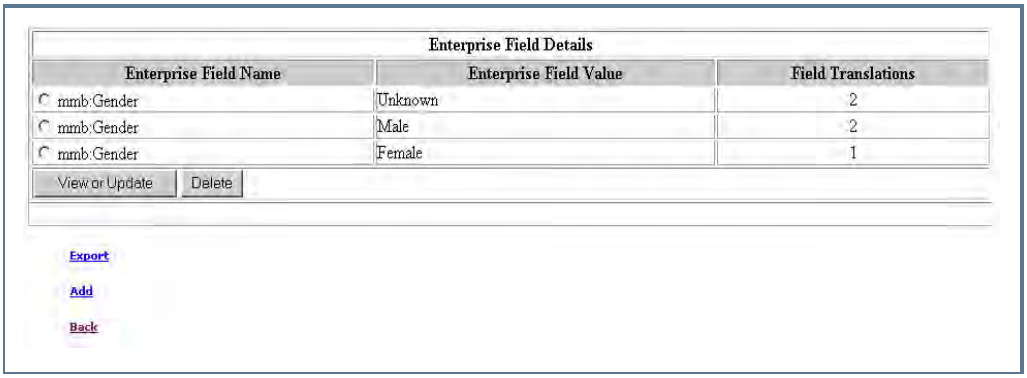
Delete an enterprise field value

Use the following steps to delete an enterprise field value associated with an enterprise field.

1. Click **List** under the Enterprise Field menu.

   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

2. Click the name of the enterprise field for which you want to delete an enterprise field value. The Enterprise Field Details page displays existing enterprise field values for the selected enterprise field.



3. Select the enterprise field name/value pair you want to delete.

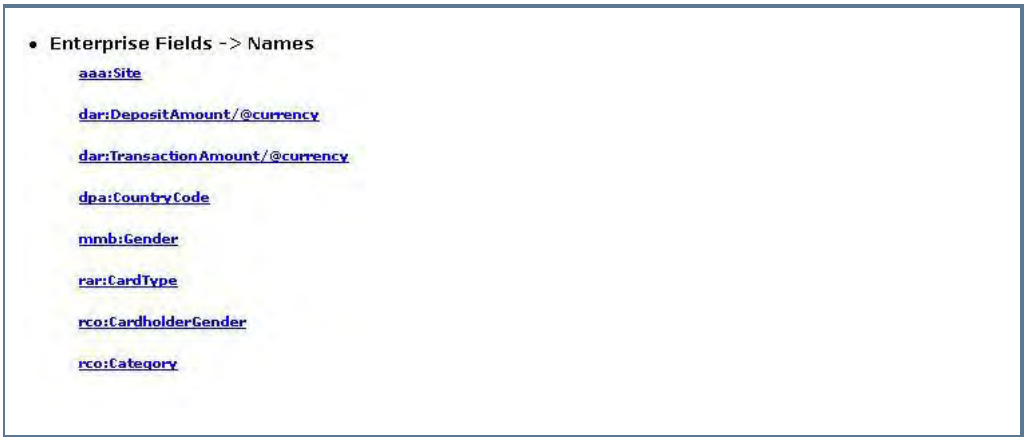
4. Click **Delete**. The Enterprise Field Details page is redisplayed with the enterprise field value deleted.

Delete a field translation

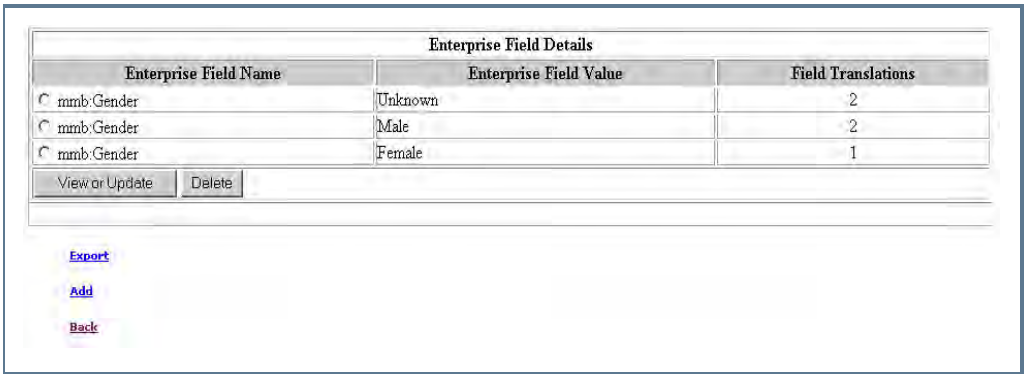
Use the following steps to delete field translations associated with an enterprise field value.

1. Click **List** under the Enterprise Field menu.

   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

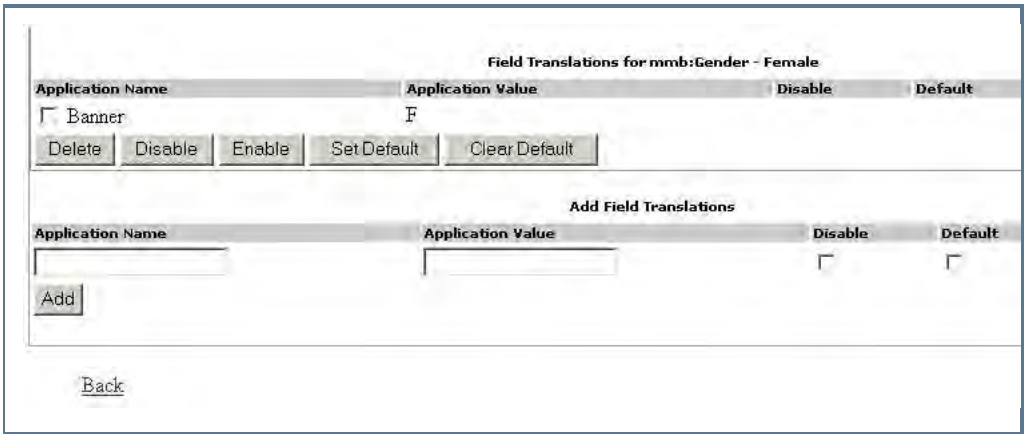


2. Click the name of the enterprise field for which you want to delete field translations. The Enterprise Field Details page displays existing enterprise field values for the selected enterprise field.



3. Select the enterprise field name/value pair for which you want to delete field translations.

4. Click **View or Update**. The Field Translations page displays existing field translations.



4.1. Select the field translations you want to delete.

4.2. Click **Delete**. The Field Translations page is redisplayed with the enterprise field value deleted.

Disable and enable a field translation

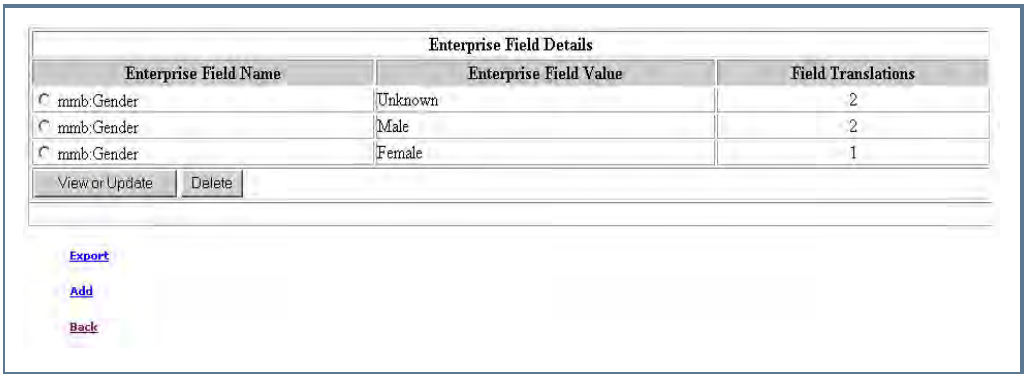
A disabled field translation is ignored when the Banner Translation Service processes a translation request. An enabled field translation is associated with the enterprise field

value when the Banner Translation Service processes a translation request. Use the following steps to disable or enable field translations.

1. Click **List** under the Enterprise Field menu.

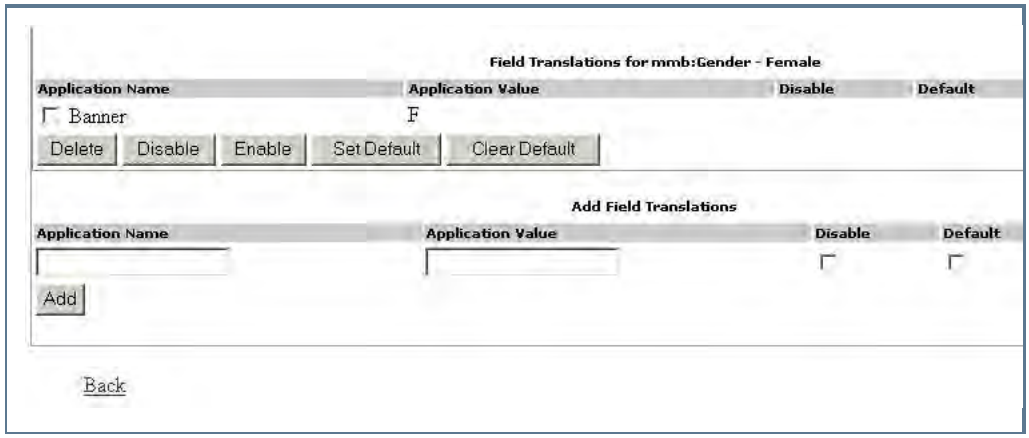
   The Enterprise Fields -> Names section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

2. Click the name of the enterprise field for which you want to disable or enable field translations. The Enterprise Field Value page displays existing enterprise field values for the selected enterprise field.



3. Select the enterprise field name/value pair for which you want to disable or enable field translations.

4. Click **View or Update**. The Field Translations page displays existing field translations.



5. Select the field translations you want to disable or enable.

6. Click **Disable** or **Enable**. The Field Translations page is redisplayed with the enterprise field value disabled or enabled.

Process translation requests via a Web service

The Banner Translation Service provides a Web service that processes translation requests.This Web service can be accessed via the Web Service menu, but is intended for Ellucian internal use only. It is used by the Banner Web Services Adapters and the Banner Cardholder Event Publisher. When this Web service is ready for general availability, additional information about its use will be provided.

Test data translations

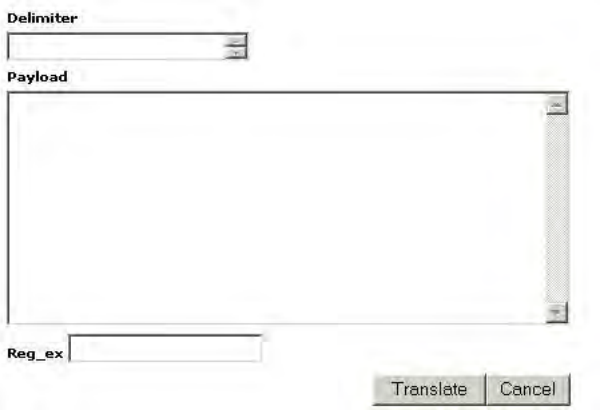
The Banner Translation Service provides a translation Web tool that can be used to test your Banner Translation Service data setup and diagnose any issues. This tool tests the following scenarios:

Translation Scenario	Example
Enterprise to application value	Enterprise to Banner Nation translation
Application to enterprise value	Banner to enterprise Nation translation
Application to application value	Banner to AnyOtherApplication Nation translation

Steps to test data translations

Use the following steps to test your data translations.

1. Click **Translator** under the Tools menu. The following page is displayed.



2. Enter the following information:

Delimiter	String of characters used to separate parameters inside the tokens that are provided by the regular expression (Reg_ex)
Payload	Data that needs to be translated
Reg_ex	Regular expression that defines the dataset (the tokens that need translation). Each dataset/token has a well-defined set of parameters that determine the operation being requested. Each token is defined using the following parameters: • `entFieldName` - enterprise field name • `entFieldValue` - enterprise field value • `srcApplicationName` - name of source application • `srcApplicationValue` - value of UDC field in source application • `destApplicationName` - name of destination application • `destApplicationValue` - value of UDC field in destination application

3. Click **Translate**.

Required parameters

The following parameters are required for the corresponding translation requests:

Enterprise to application value translation	`entFieldName`
	`entFieldValue`
	`srcApplicationName`

Application to enterprise value translation	`entFieldName`
	`srcApplicationName`
	`srcApplicationValue`

Application to application value translation	`entFieldName`
	`srcApplicationName`
	`srcApplicationValue`
	`destApplicationName`

The Banner Translation Service also supports a `defaultValue` parameter. This parameter provides a way to return a default value when no translation data is found. You can specify this parameter in any of the preceding three operations.

Example

Enterprise field name: *rco:CardholderGender*
Enterprise field value: *Male*
Source application: *Banner*

Use the following payload to convert the enterprise field value to a Banner value:

The `entFieldName`, `entFieldValue,` and `srcApplicationName` parameters are specified in the request.

Reg_ex represents the regular expression that the Banner Translation Service uses to identify the token in its entirety. Its value here is `'@#(.*?)@#'`. The token obtained by the Banner Translation Service from the payload would be the following:

```
@#;entFieldName=rco:CardholderGender;srcApplicationName=Banner;
entFieldValue=Male;@#
```

Once the regular expression successfully extracts the token, the Banner Translation Service extracts the `entFieldName`, `entFieldValue`, and `srcApplicationName` parameters that are needed to process this request. It does this by breaking up the token based on the delimiter. In this example the delimiter is `';'`.

The Banner Translation Service processes the translation with the following result:

4 Country View Road
Malvern, Pennsylvania 19355
United States of America
www.sungardhe.com