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Banner Translation Service
Installation and Administration Guide

Release 8.1.4
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Revision History

Publication Date	Summary
January 2014	New version that supports Banner Translation Service 8.1.4 software.

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Contents

1 Introduction

Banner® data is often constrained by lists of valid values. This encoded data is configured by your institution and 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.

To improve performance, you should 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.

Requirements

The Banner Translation Service has the following requirements.

- The Banner Translation Service is certified on Oracle WebLogic Server 11g with Java 1.6 and 1.7.
- The Oracle Database 11g is required.

Recommended configuration

The Banner Translation Service must be installed in an Oracle WebLogic Basic Domain. It must not be installed using any other Oracle WebLogic template, especially the Oracle WebLogic Classic Domain that supports Oracle Forms and Reports.

The recommended configuration is to establish a separate physical or virtual domain for the Banner Translation Service and other middle-tier components. This domain would run a separate installation of Oracle WebLogic Server, configured using the Basic Domain template (not the Classic Domain template) that is provided by Oracle.

The Oracle WebLogic Server domain should consist of the default Admin Server and at least one Managed Server for the deployment of the Banner Translation Service and the Banner Web Services Adapters. The adapters must be installed on the same Managed Server as the Banner Translation Service.

If a domain based on the Basic Domain template already exists for middle-tier applications, the Banner Translation Service can be installed with the adapters in a separate Managed Server in that domain.

Installation steps

The Banner Translation Service is packaged as a J2EE compatible enterprise archive file (`TranslationService_v8.1.4.ear`). Use the following steps to install the Banner Translation Service on Oracle WebLogic Server 11g:

Step 1 Extract the zip file

The Banner Translation Service components are delivered in the `translation_service` folder in `banner_web_services_8.1.4.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 `TranslationService_v8.1.4.ear`.
- The `database` directory contains the scripts used to create the database schema that is 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. Run SQL*Plus and connect to the database as a DBA account.

2. Execute `translation_service/database/create_user_oracle.sql`.

   The location of this script depends on where 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` directory.

   The location of this directory depends on where you downloaded the Banner Translation Service.

2. Open `db.properties`.

3. Enter the username and password for the database user (created in step 2), hostname, port, and sid at the required places in `db.properties`. 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 Service 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*, resulting in limited information (INFO, WARNING, ERROR, and FATAL level statements) being stored in log files. To provide detailed logging for initial operations, you should change the logging level to *DEBUG*. You should change the logging level for initial operations only.

Use the following steps to modify the logging level if you want more detailed logging.

1. Copy `TranslationService_v8.1.4.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_v8.1.4.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 .ear file.

   ```
   jar cvf TranslationService_v8.1.4.ear *.war META-INF/*
   legal/* *.jar classes/* lib/*
   ```

   The rebuilt `TranslationService_v8.1.4.ear` is used for installation.

Step 5 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 6 Create a JAAS configuration file

An authentication provider must be configured in the Oracle WebLogic Server to allow for basic authentication against the Banner Translation Service administration console. The authentication provider is set using a JAAS configuration file. Use the following steps to create the configuration file.

1. Use a text editor to create `jaas.config` with the following content:

```
myrealm {
   weblogic.security.auth.login.UsernamePasswordLoginModule
   REQUIRED;
};
```

2. Save `jaas.config` in the following location:

```
<WebLogic Home>/user_projects/domains/<your domain directory>/
config/security
```

   where `<WebLogic Home>` is the base directory for the Oracle WebLogic software packages and configuration files, and `<your domain directory>` is the domain where the components will be deployed.

Step 7 Configure the Managed Server to use the authentication provider

The Oracle WebLogic Managed Server where the Banner Translation Service will be deployed must be configured to load `jaas.config` on startup. There are two ways to configure the Managed Server, depending on how you want to start the Managed Server. Use option 1 (page 11) if the Managed Server will be started by using the Oracle WebLogic Server administration console. Use option 2 (page 14) if the Managed Server will be started by running a script.

Option 1 - If you are using the administration console to start the Managed Server

Use this option if the Managed Server will be started from the Oracle WebLogic Server administration console. The location of the JAAS configuration file is set as an argument on the **Server Start** tab of the specific Managed Server. The location of the JAAS configuration file applies only to that specific Managed Server.

Use the following steps to configure the Managed Server.

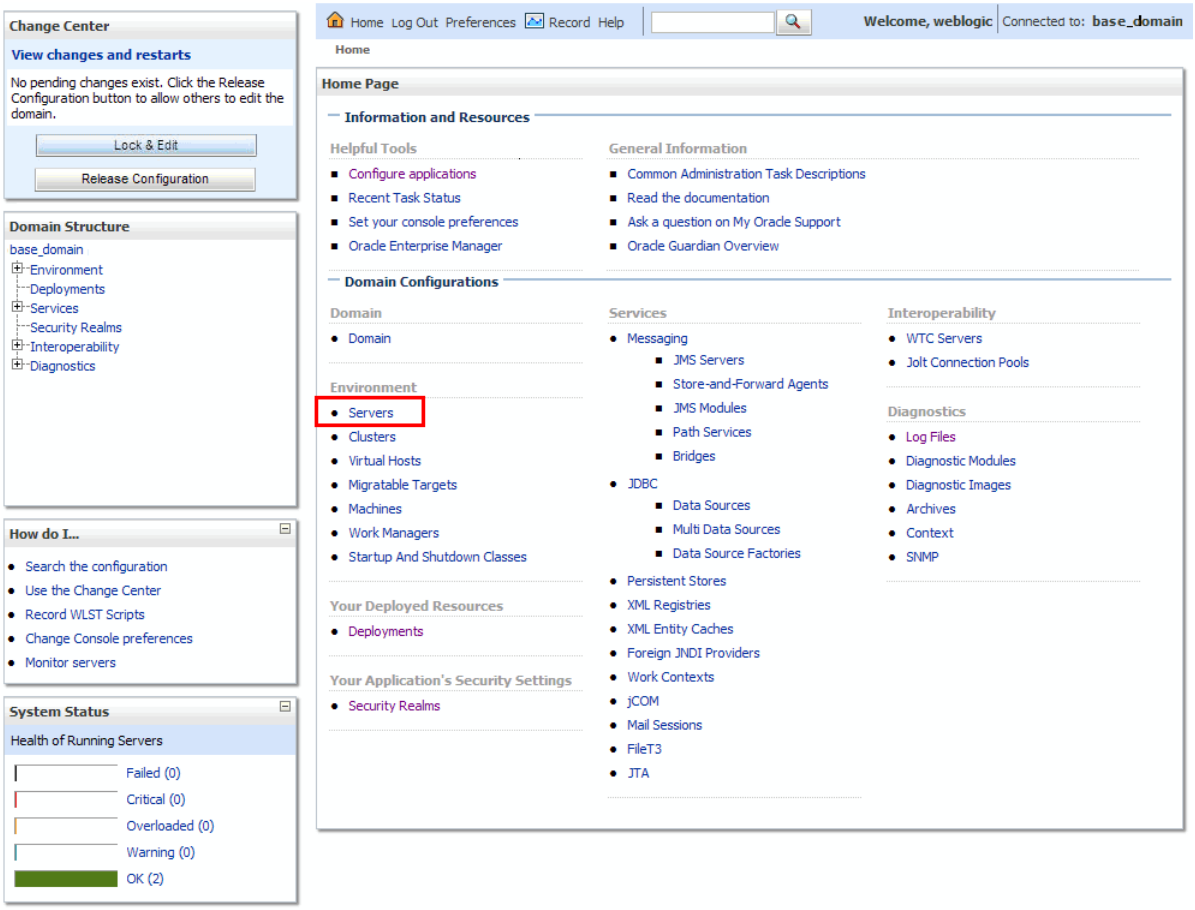
1. Connect to the Oracle WebLogic Server administration console for the domain where the Banner Translation Service will be deployed:

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

   The Home Page is displayed.

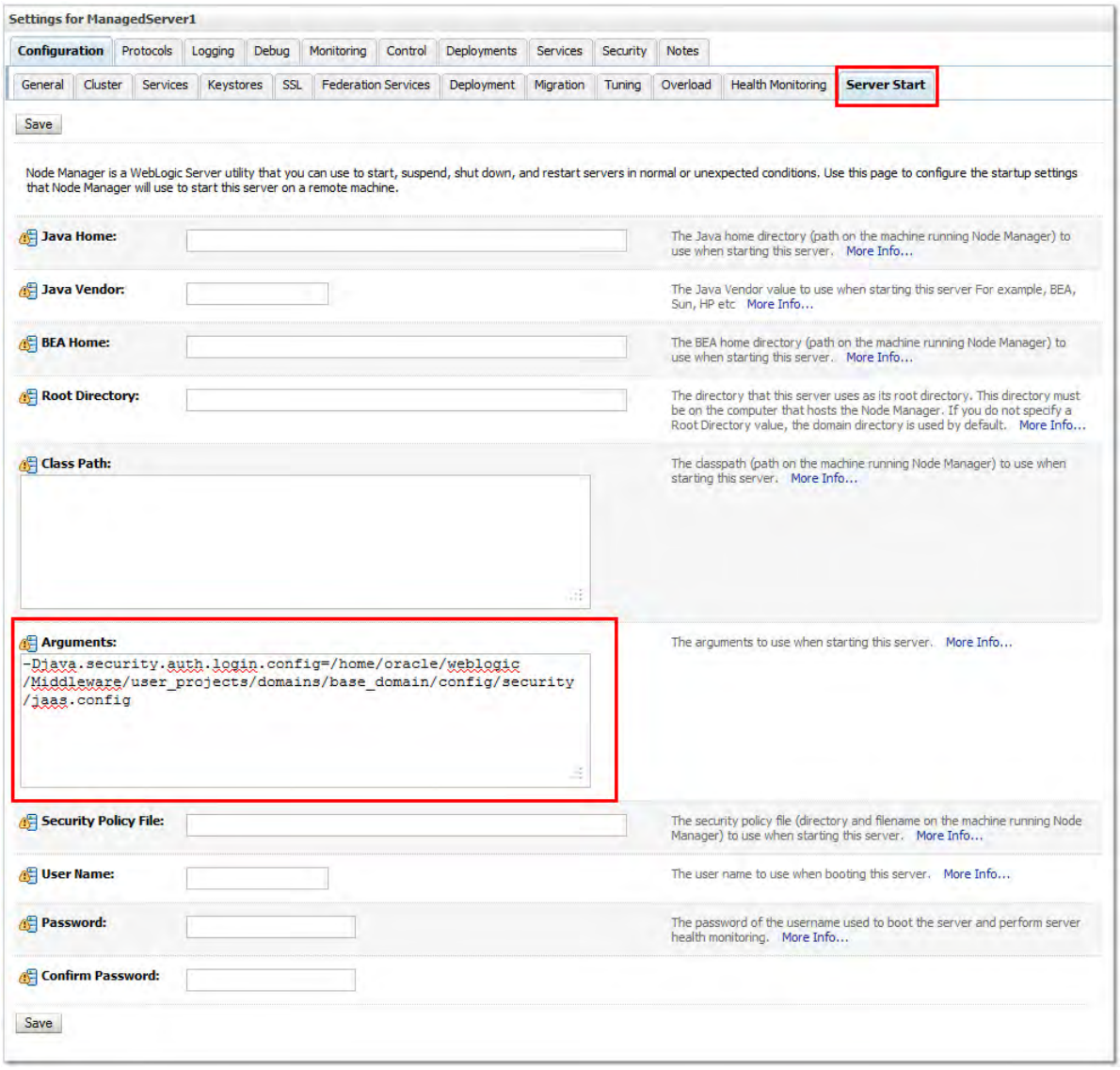
2. In the Change Center pane, click **Lock & Edit**.

3. In the Domain Configurations section, click **Servers**.



The Summary of Servers page is displayed.

4. Click the name of the server where the Banner Translation Service will be deployed. The Settings page is displayed.



5. Select the **Server Start** tab.

6. In the **Arguments** field, enter the full path to `jaas.config`, including the file name:

   ```
   -Djava.security.auth.login.config=<WebLogic Home>/
   user_projects/domains/<your domain directory>/config/security/
   jaas.config
   ```

   where `<WebLogic Home>` is the base directory for all Oracle WebLogic software packages and configuration files, and `<your domain directory>` is the domain where the Banner Translation Service will be deployed.

7. Click **Save.**

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

Option 2 - If you are using a script to start the Managed Server

Use this option if the Managed Server will be started by running `startManagedWebLogic.sh` (or `.cmd`). A `JAVA_OPTIONS` statement must be added to `setDomainEnv.sh` (or `.cmd`). The location of the JAAS configuration file applies to the entire domain, including the Admin Server and all Managed Servers.

Use the following steps to update the script for Windows.

1. Open `setDomainEnv.cmd` located under `<WebLogic Home>/user_projects/domains/<your domain directory>/bin`.

2. Search for the last occurrence of the following text:

```
set JAVA_OPTIONS=%JAVA_OPTIONS%
```

3. Add the following in the line preceding the line identified in step 2.

```
set JAVA_OPTIONS=%JAVA_OPTIONS%
-Djava.security.auth.login.config=
<domain home>\config\security\jaas.config
```

Use the following steps to update the script for Linux/Unix.

1. Open `setDomainEnv.sh` located under `<WebLogic Home>/user_projects/domains/<your domain directory>/bin`.

2. Search for the last occurrence of the following text:

```
JAVA_OPTIONS="${JAVA_OPTIONS}"
```

3. Add the following in the line preceding the line identified in step 2.

```
JAVA_OPTIONS="${JAVA_OPTIONS}
-Djava.security.auth.login.config=
<domain home>/config/security/jaas.config"
```

Note

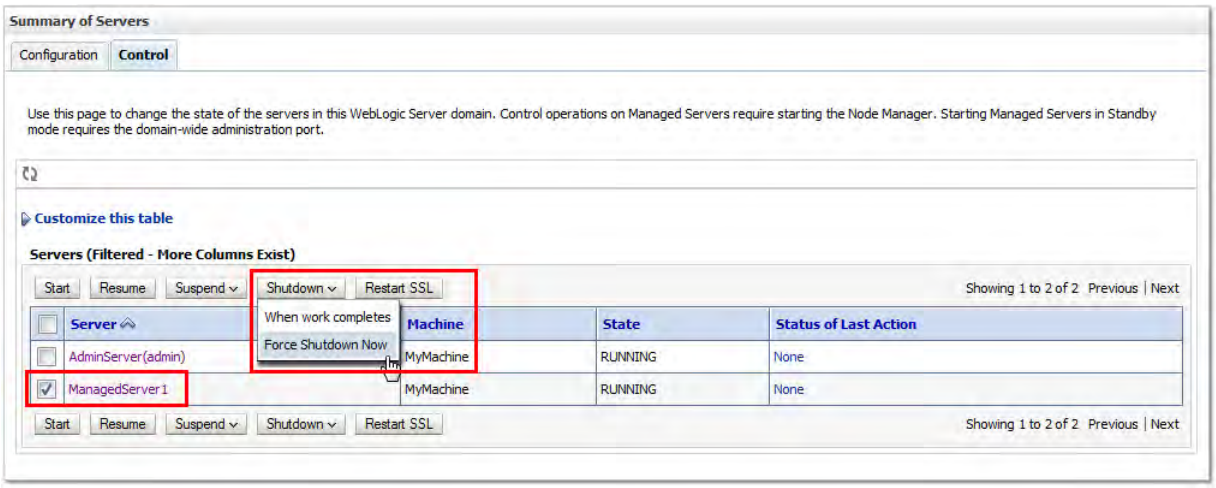
There is a space between the closing brace and the dash (that is, {JAVA_OPTIONS}**[space]**-Djava). ■

Step 8 Restart the Managed Server

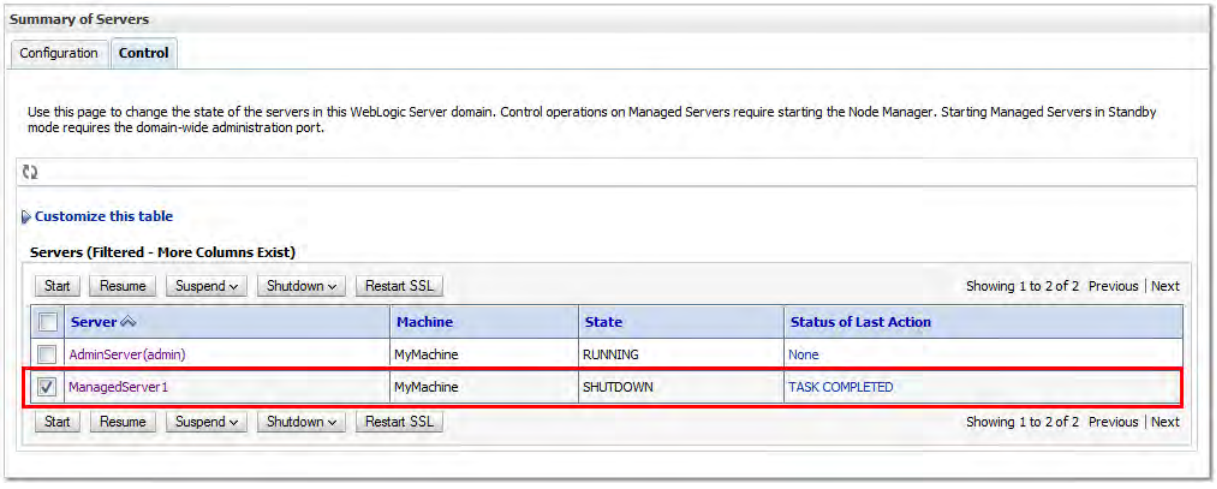
There are two ways to restart the Managed Server. Use option 1 (page 15) if you are using the administration console to start the Managed Server. Use option 2 (page 16) if you are using a script to start the Managed Server.

Option 1 - If you are using the administration console to start the Managed Server

1. Make sure the Summary of Servers page is displayed.
2. Select the **Control** tab.



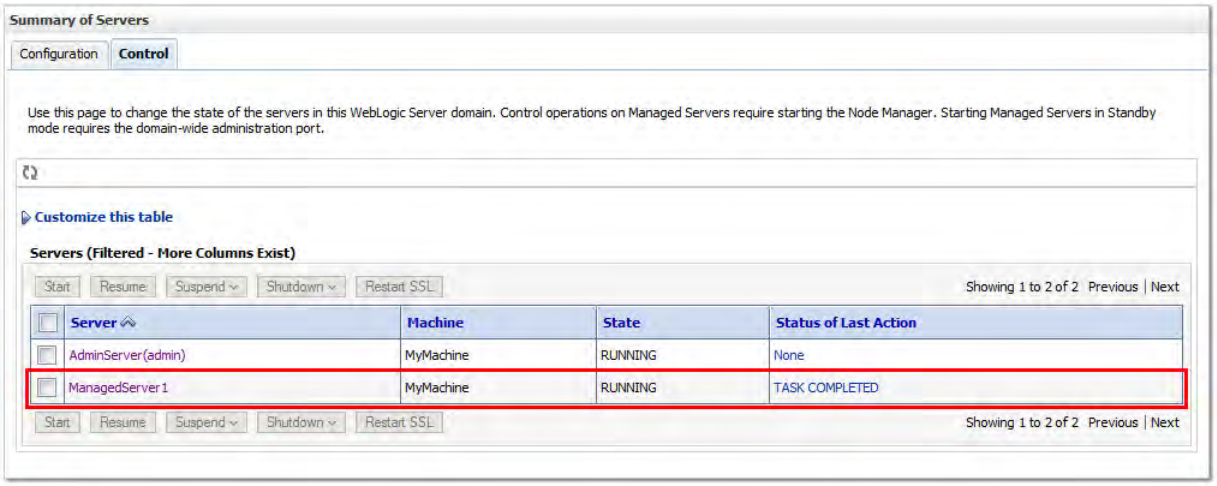
3. Select the Managed Server where the configuration changes were made.
4. Click **Shutdown** > **Force Shutdown Now**.
5. Confirm the selection.
6. Wait for the server to enter a *SHUTDOWN* state.



7. Select the same Managed Server.
8. Click **Start**.

9. Confirm the selection.

10. Wait for the server to enter a *RUNNING* state.



Option 2 - If you are using a script to start the Managed Server

Use the following steps to restart the server for Windows.

1. Navigate to the `<WebLogic Home>/user_projects/domains/<your domain directory>/bin` directory.

2. Stop the server by running the following script:

   ```
   stopManagedWebLogic.cmd <server name>
   ```

Note

There is a space between the command and <server name>; that is, stopManagedWeblogic.cmd**[space]**<server name>. ■

Example:

```
stopManagedWebLogic.cmd ManagedServer1
```

3. Start the server by running the following script:

   ```
   startManagedWebLogic.cmd <server name>
   ```

Use the following steps to restart the server for Linux/Unix.

1. Navigate to the `<WebLogic Home>/user_projects/domains/<your domain directory>/bin` directory.

2. Stop the server by running the following script:

```
./stopManagedWebLogic.sh <server name>
```

Note

There is a space between the command and <server name>; that is, ./stopManagedWeblogic.sh**[space]**<server name>.

Example:

```
./stopManagedWebLogic.sh ManagedServer1
```

3. Start the server by running the following script:

```
./startManagedWebLogic.sh <server name>
```

Step 9 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 with lookup name `jdbc/transsvc`. Use the following steps to define the data source.

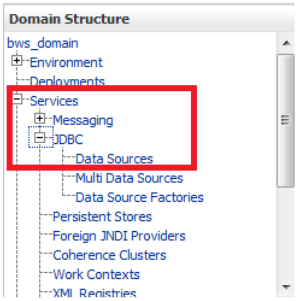
1. Connect to the Oracle WebLogic Server administration console for the domain where the Banner Translation Service will be deployed:

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

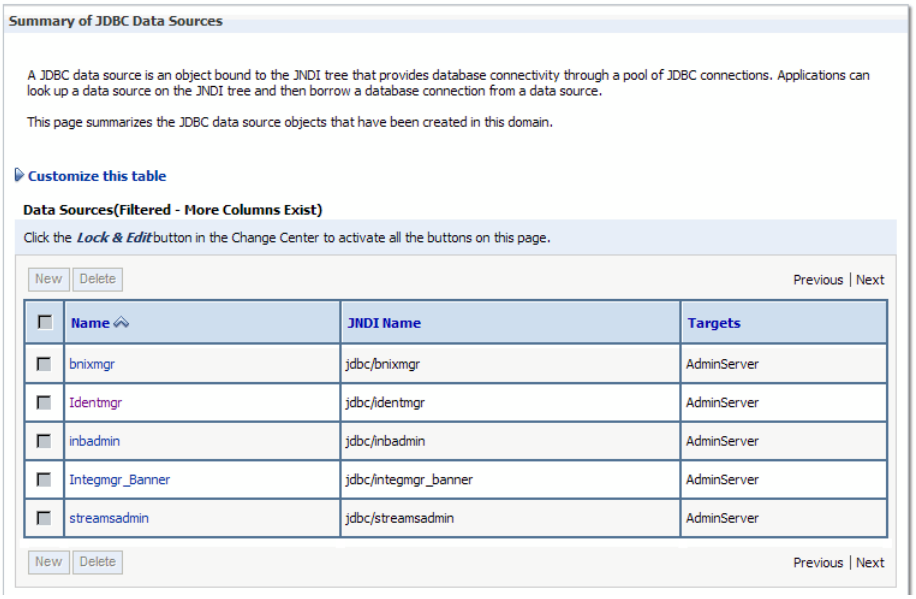
   The Home page is displayed.

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

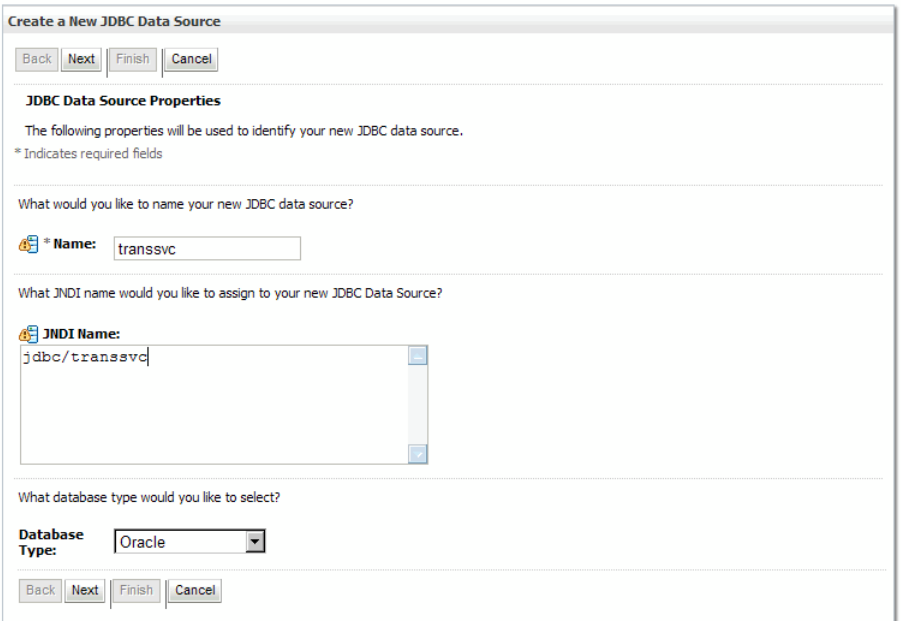
3. In the Domain Structure pane, expand and click **Services** > **JDBC** > **Data Sources**.



The Summary of JDBC Data Sources page is displayed.



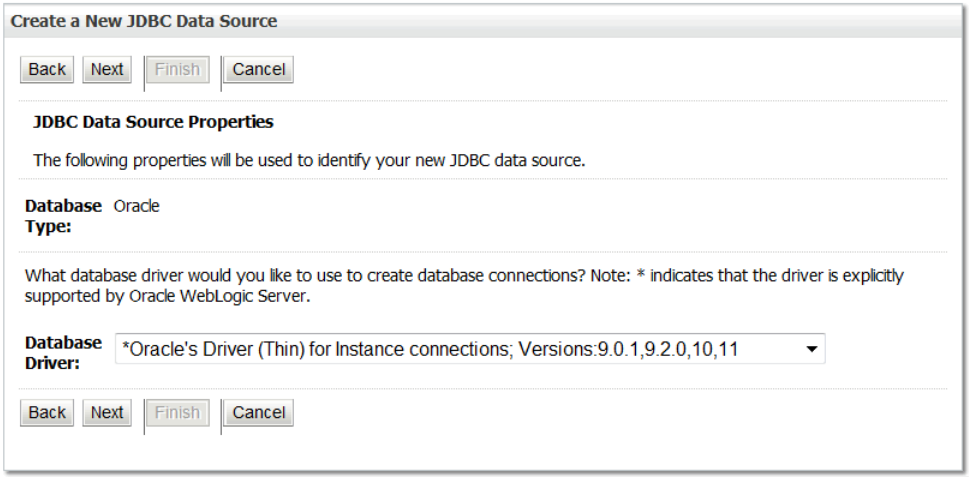
4. Click **New**. The Create a New JDBC Data Source page is displayed.



5. Enter the following data source properties:

Name	*transsvc*
JNDI Name	*jdbc/transsvc*
Database Type	*Oracle*

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



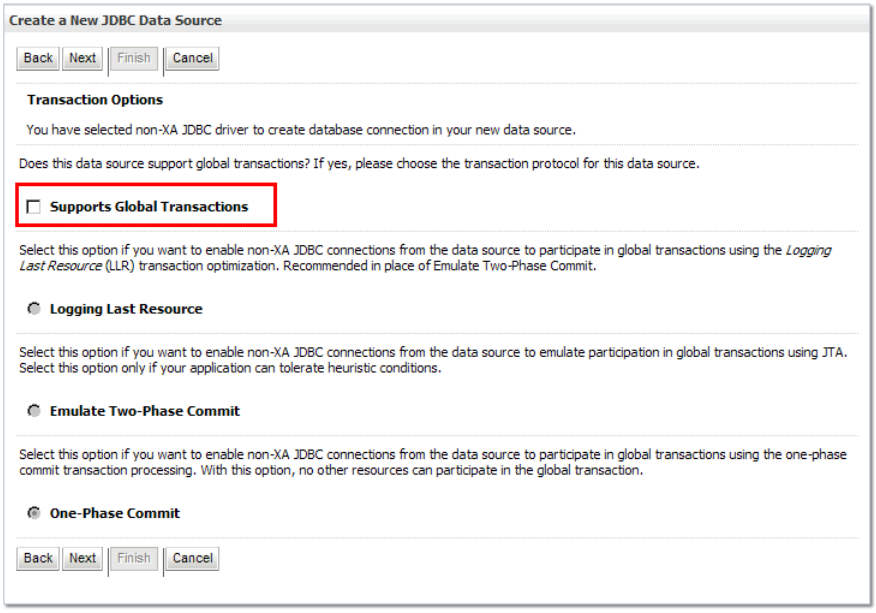
7. Select the appropriate database driver that is used to create database connections:

   - If your database is RAC-based, select **Oracle's Driver (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*.

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

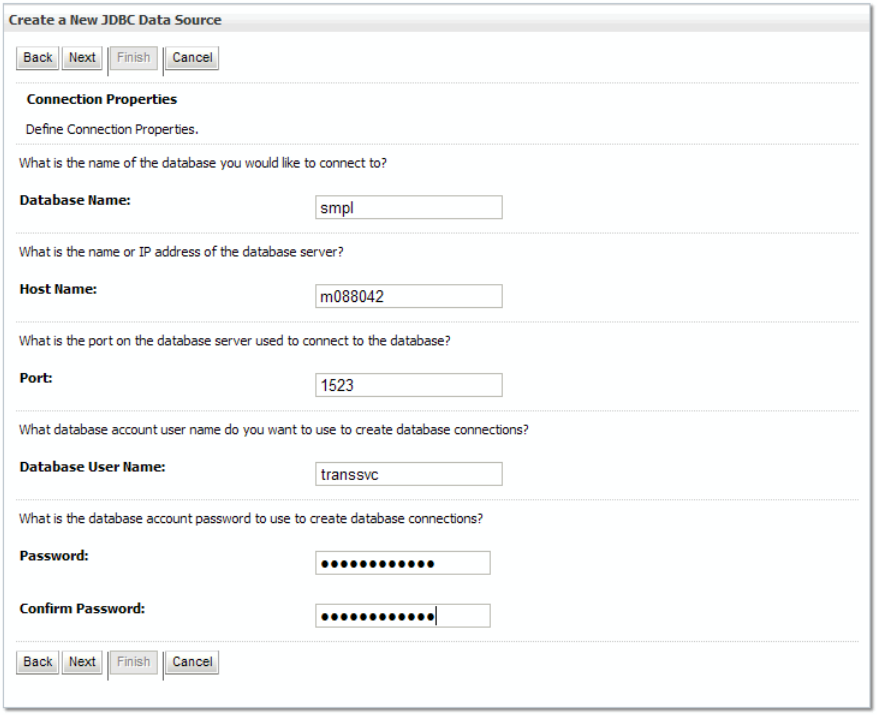
   If the Connection Properties page is displayed, go directly to step 9.

   If the Transaction Options page is displayed, clear the **Supports Global Transactions** check box and click **Next**. Then go to step 9.

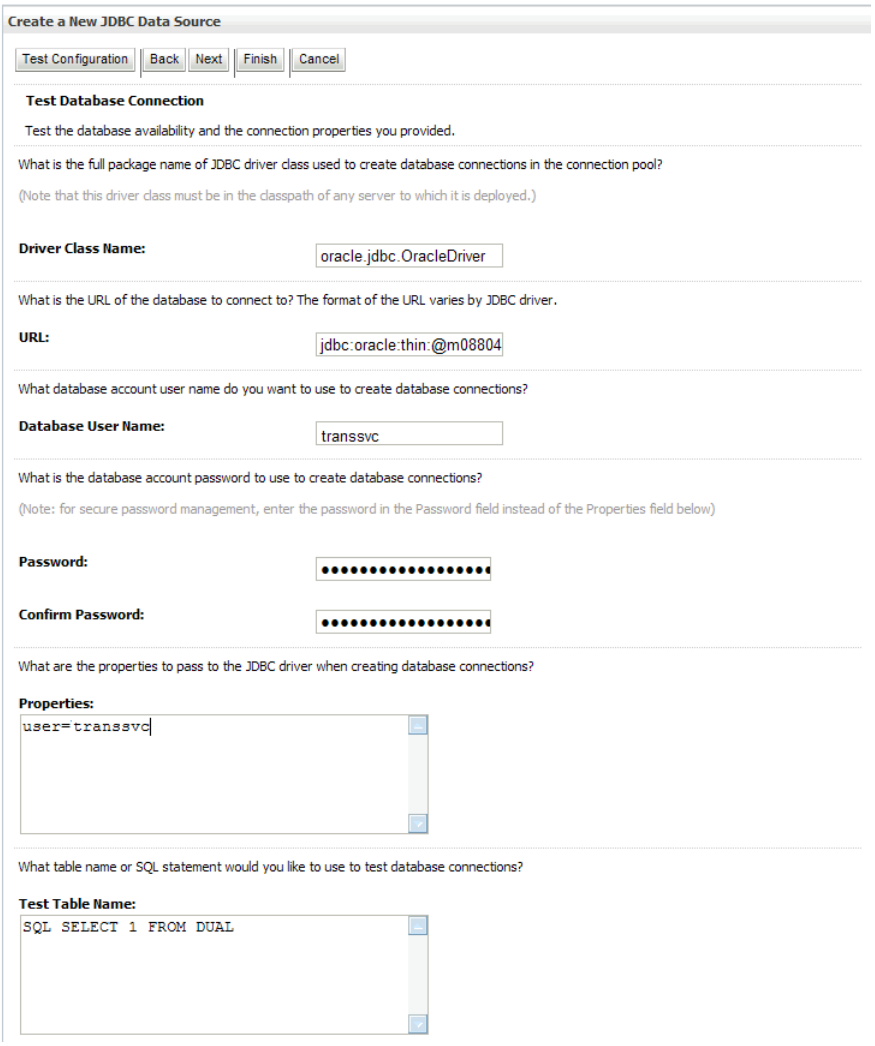


9. Enter the following properties on the Connection Properties page:

Service Name	Service name of the database to which you are connecting. **Note:** This field is displayed and is required if you selected **Oracle's Driver (Thin) for RAC Service-Instance connections; Versions:10,11* as the database driver.
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



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



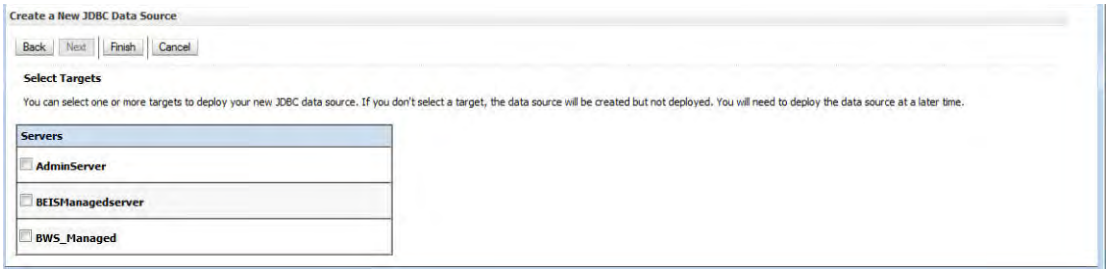
11. Verify the property values.

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

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

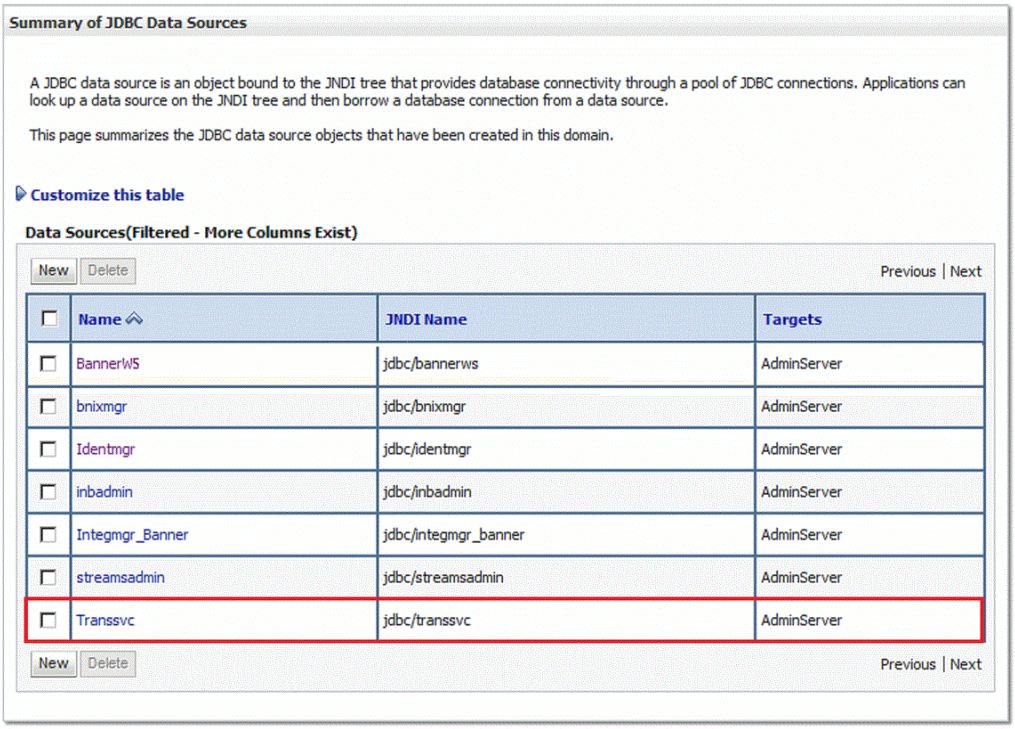
    12.2. If the test fails, ensure that the connection URL and credentials are correct. Continue testing until the connection is successful.

13. Click **Next**. The Select Targets page is displayed.



14. 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.

15. Click **Finish**. The Summary of JDBC Data Sources page is displayed with the new data source.



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

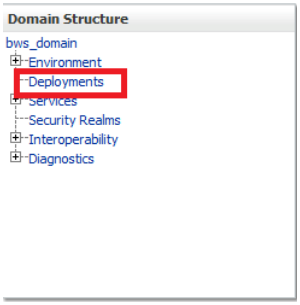
17. In the Change Center pane, click **Activate Change**.

Step 10 Install the Banner Translation Service

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

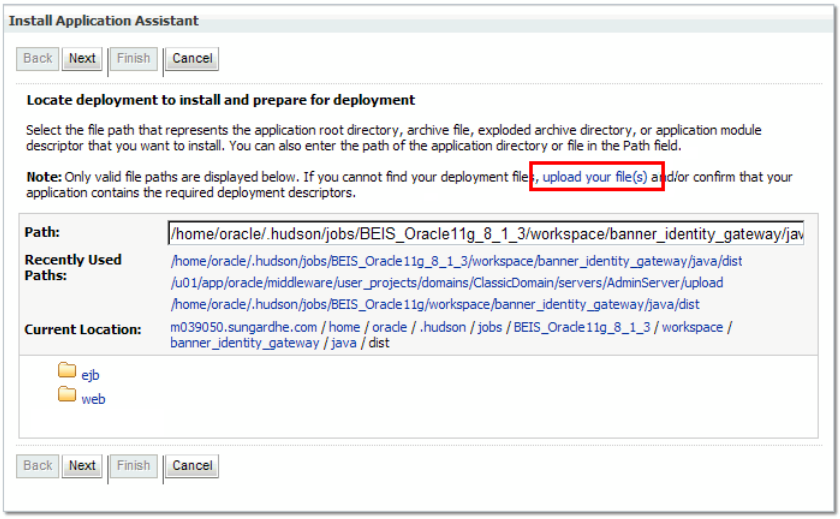
1. In the Change Center pane, click **Lock & Edit**.

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

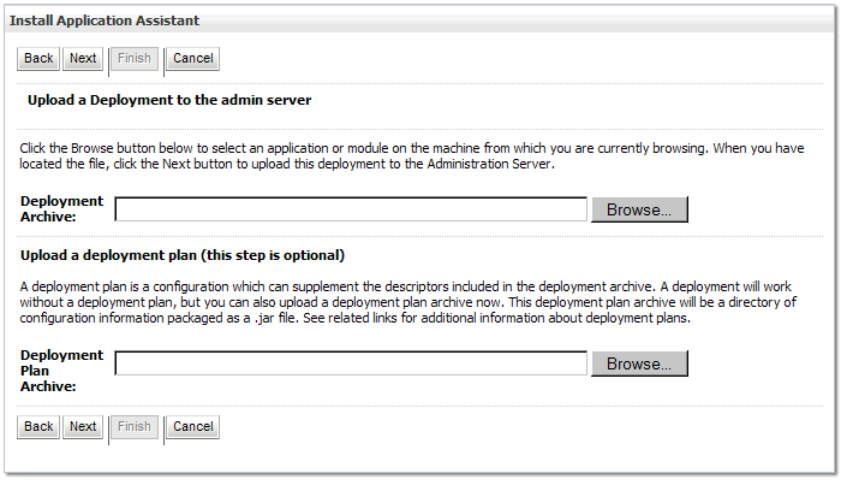


   The Summary of Deployments page is displayed.

3. Click **Install**. The Install Application Assistant page is displayed.



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



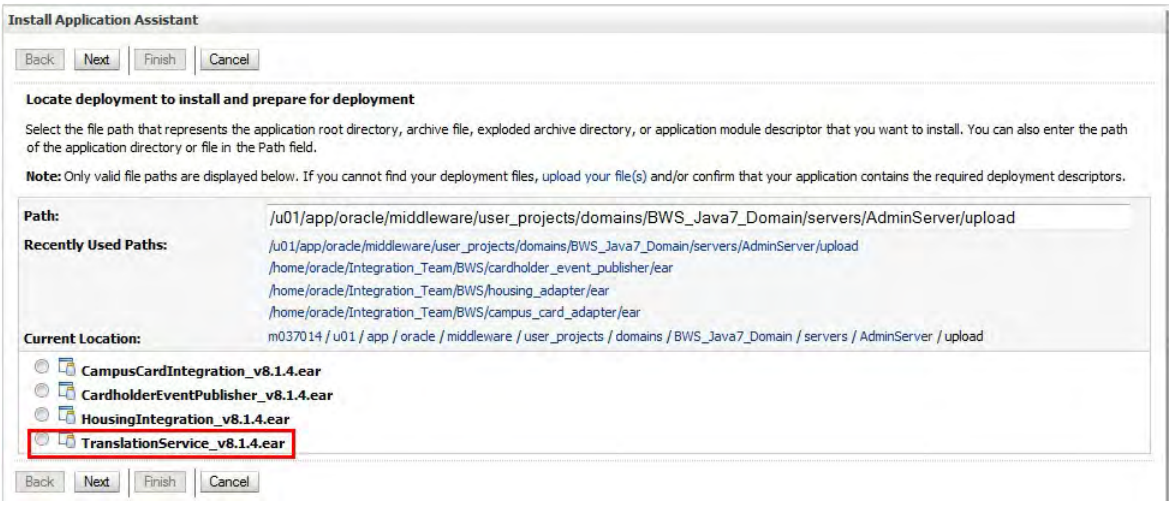
5. Select the file to be uploaded:

   5.1. In the **Deployment Archive** field, click **Browse** and navigate to `TranslationService_v8.1.4.ear`.

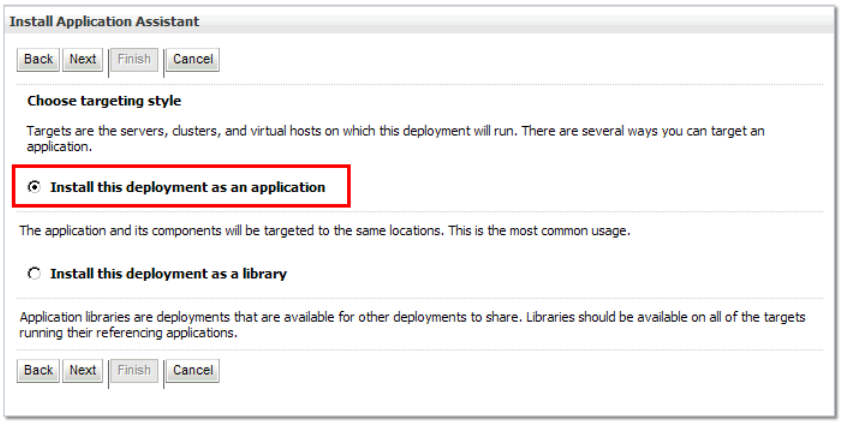
   5.1. Select the file and click **Open**.

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

7. Select `TranslationService_v8.1.4.ear` from the list.



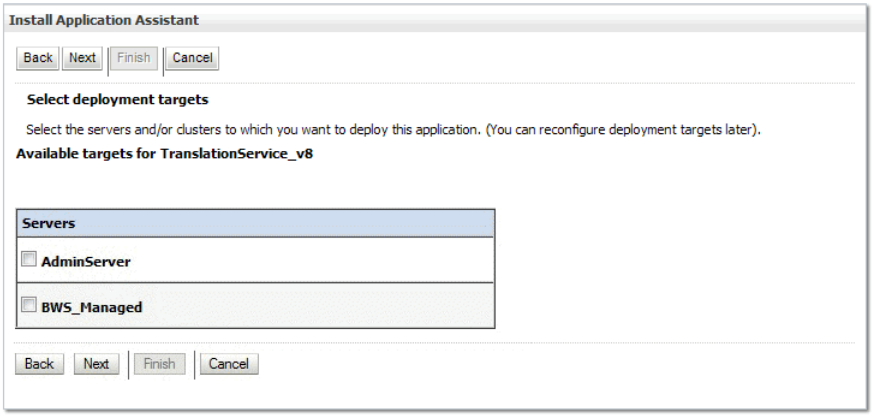
8. Click **Next**. The next installation page is displayed.



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

10. Click **Next**. The Select Deployment Targets page may or may not be displayed, depending on the domain.

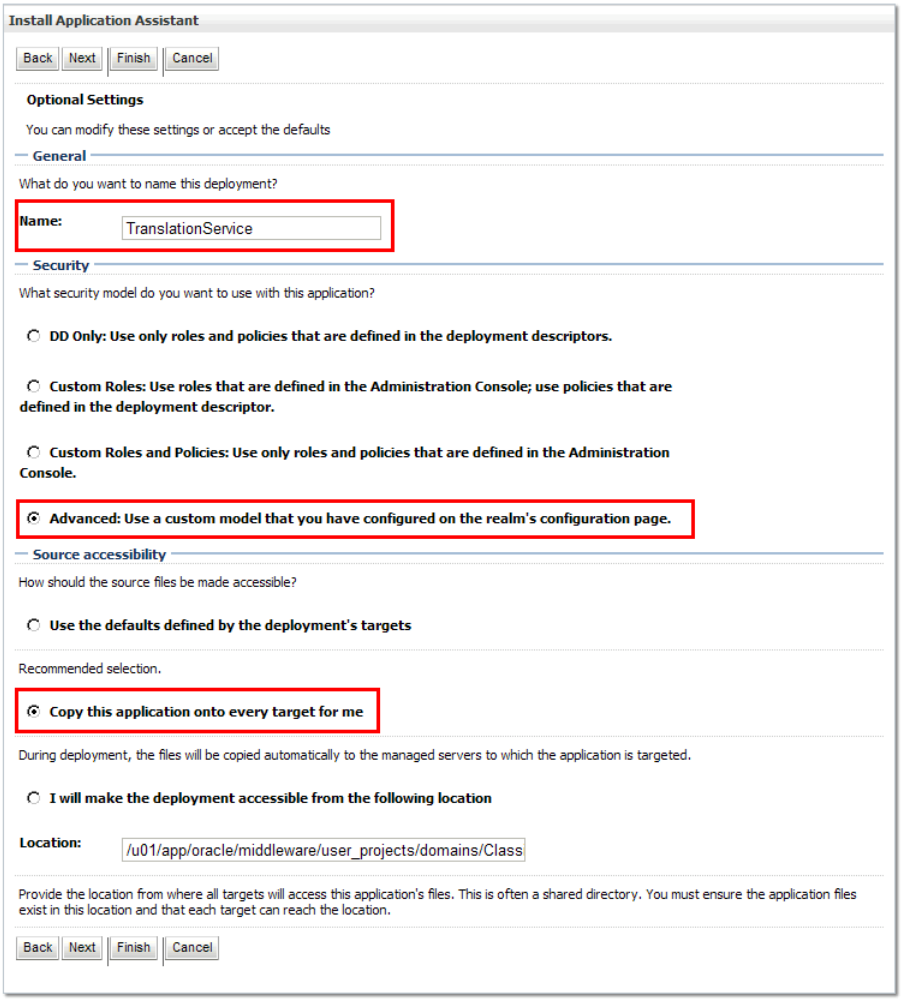
    10.1. If the Select Deployment Targets page *is* displayed, select the server where the application should be deployed. The application can be installed to an existing server. The application should be installed to a WebLogic Managed Server, not to the Admin Server. Then click **Next** to display the Optional Settings page.



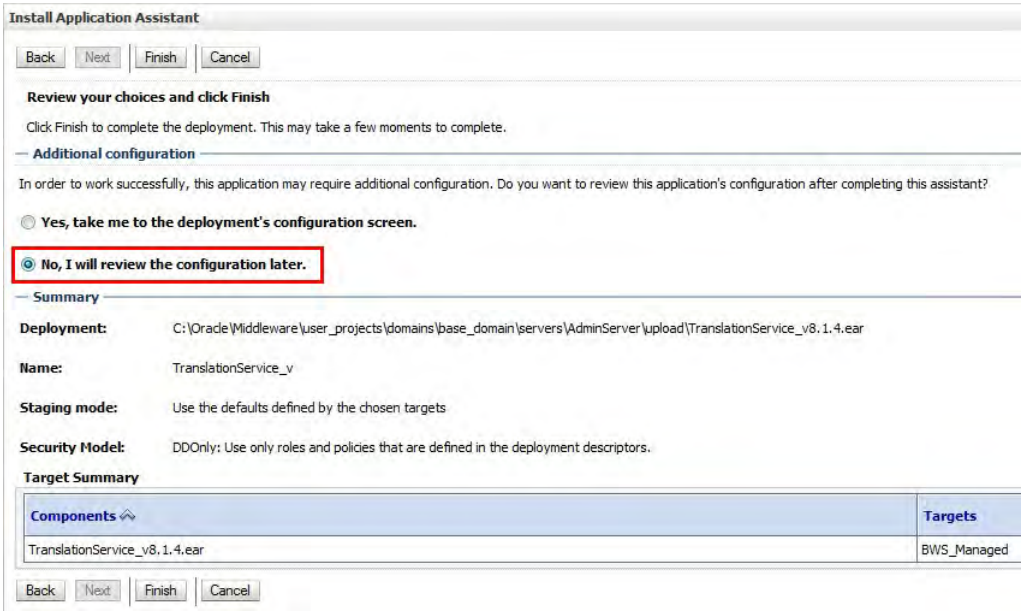
    10.2. If the Select Deployment Targets page *is not* displayed (rather, the Optional Settings page is displayed), check your Oracle WebLogic Server configuration to ensure that a Managed Server is available for deployment of applications. If a Managed Server is not available, the application will be deployed to the Admin Server, which is not a recommended configuration. For more information, consult the Oracle WebLogic Server Documentation Library.

11. Enter the following information on the Optional Settings page:

Name	Name for the application (for example, *TranslationService*)
Advanced: Use a custom model that you have configured on the realm's configuration page	Select the radio button.
Copy this application onto every target for me	Select the radio button.

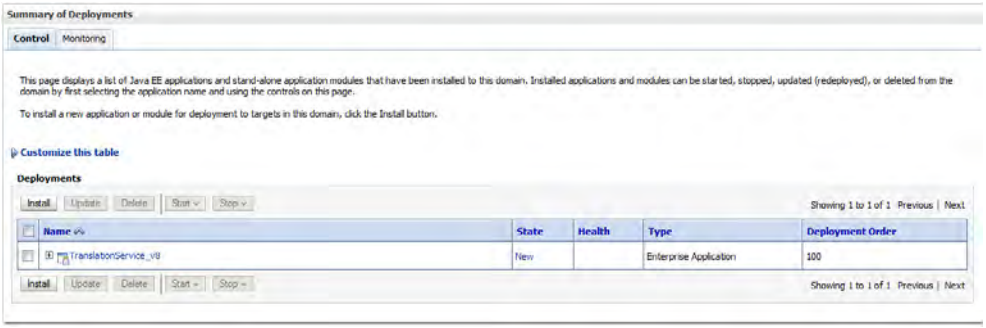


12. Click **Next**. The next installation page is displayed.



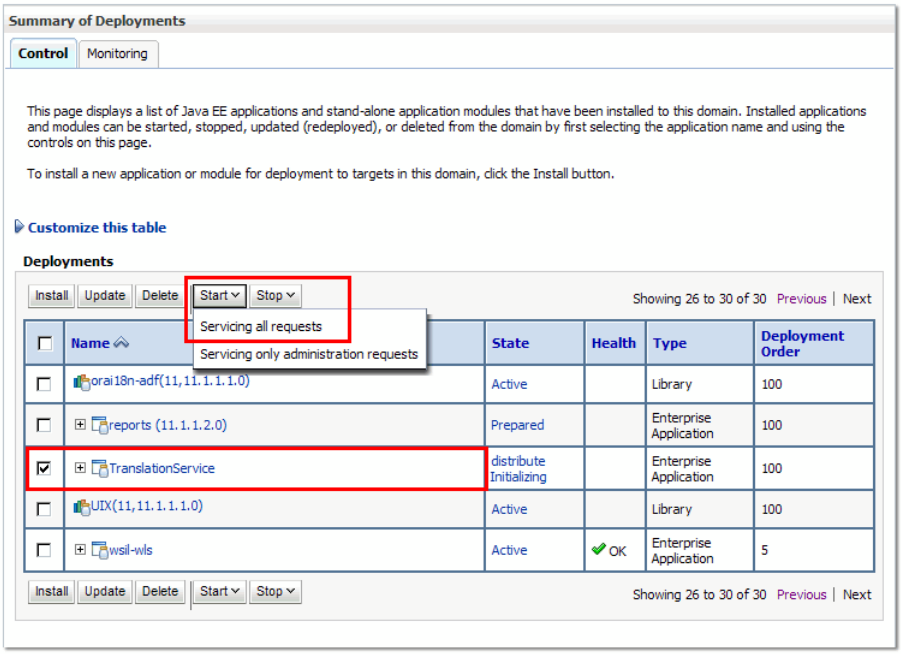
13. Select **No, I will review the configuration later**.

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



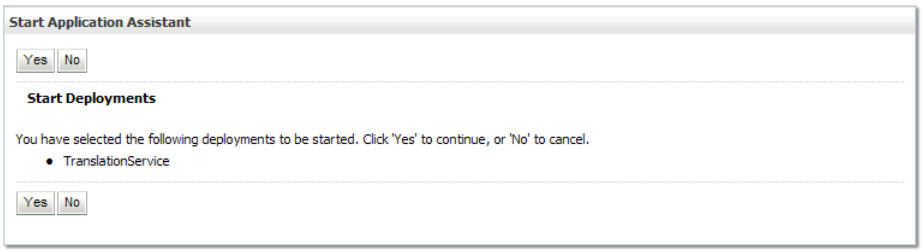
15. In the Change Center pane, click **Activate Changes**.

16. Start the newly deployed application as follows:



16.1. Select the newly deployed application.

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



16.2. Click **Yes**.

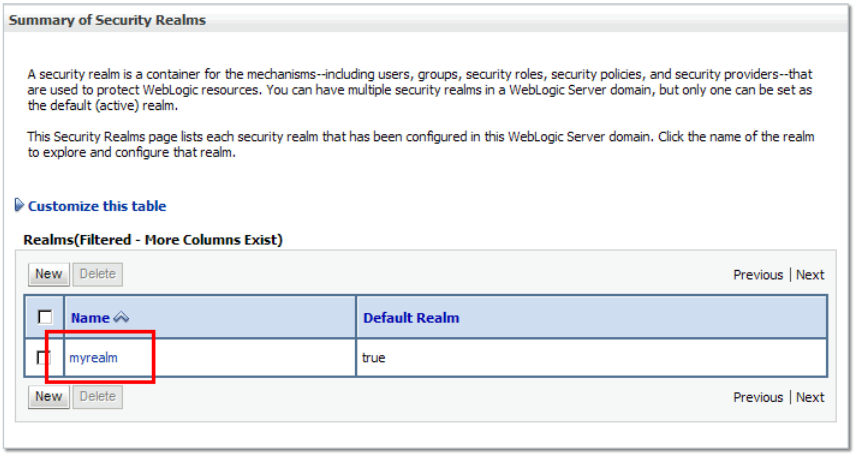
Step 11 Configure the security group and user

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 Change Center pane, click **Lock & Edit**.

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

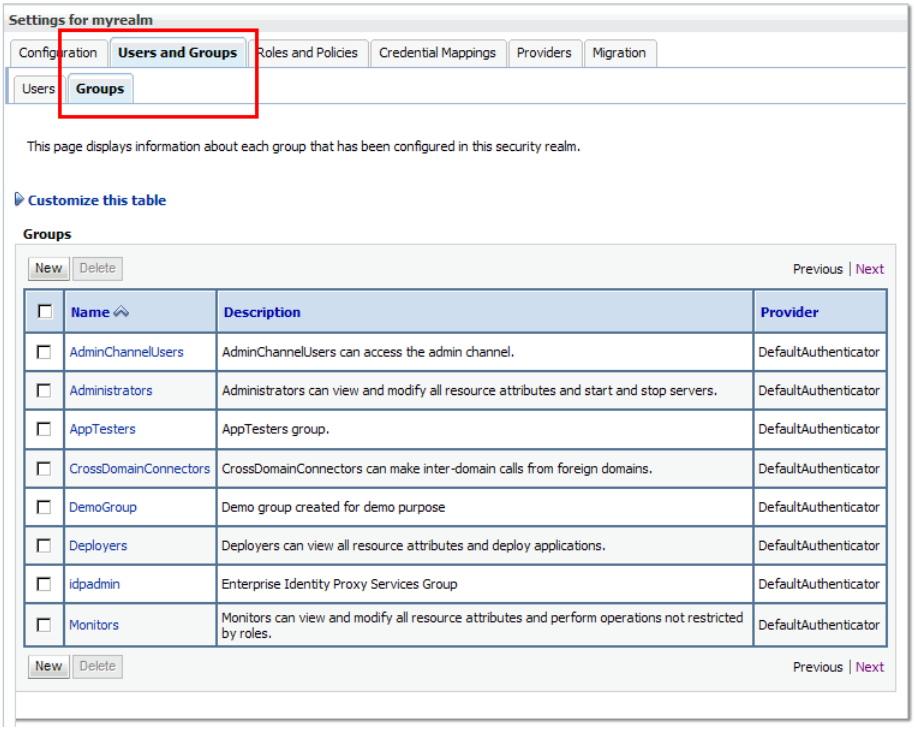
The Summary of Security Realms page is displayed.



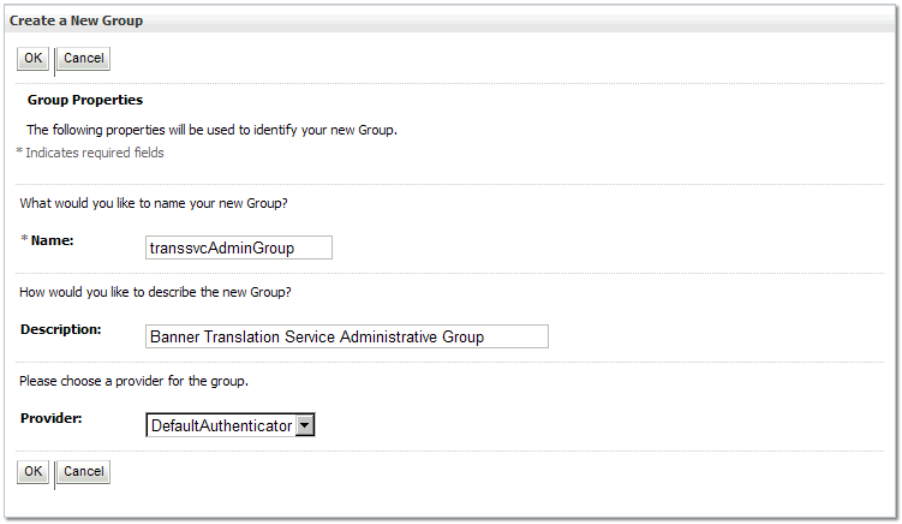
3. Click **myrealm**. The Settings for myrealm page is displayed.

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

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



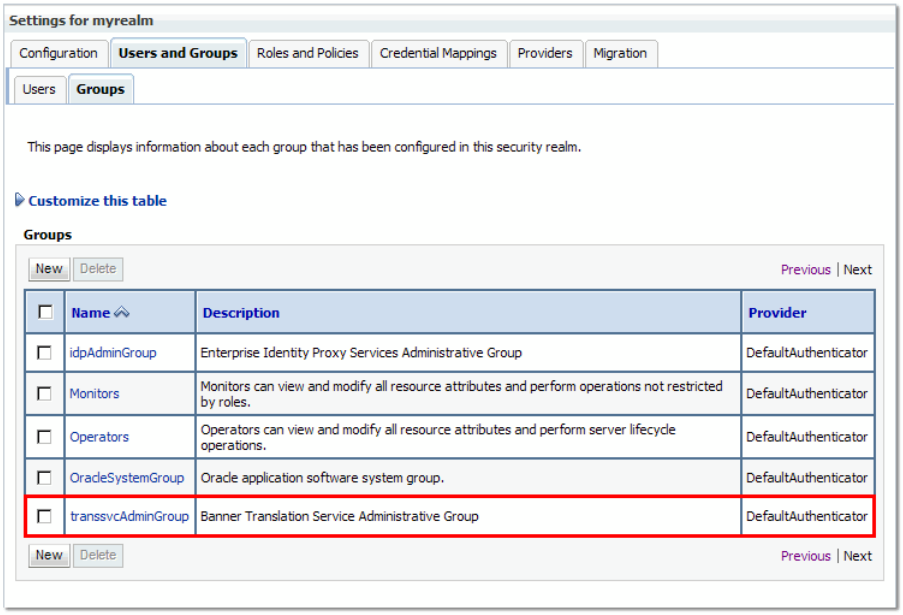
6. Click **New**. The Create a New Group page is displayed.



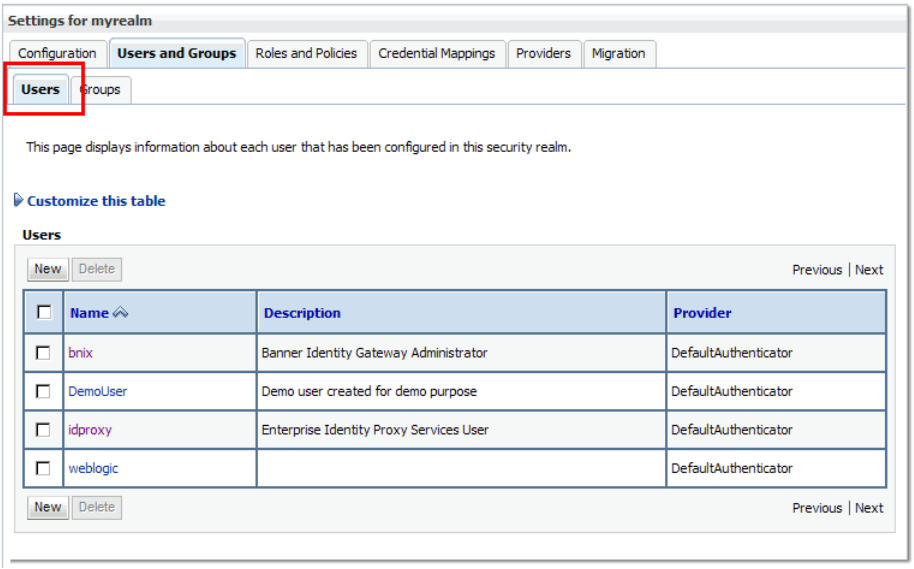
7. Enter the following information to create a group:

Name	*transsvcAdminGroup*
Description	*Banner Translation Service Administrative Group*
Provider	*DefaultAuthenticator*

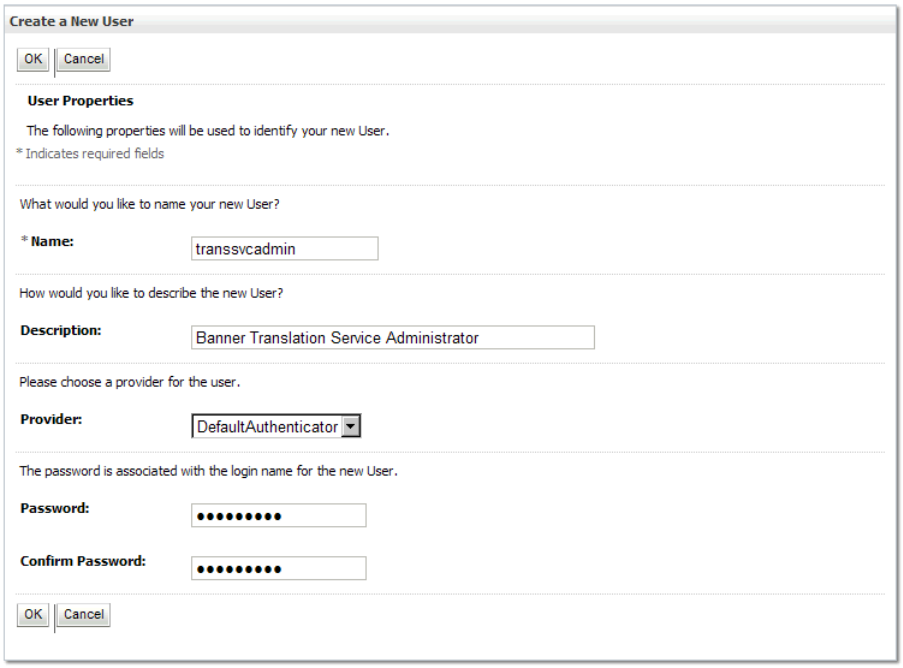
8. Click **OK**. The table of groups is redisplayed with the new group.



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



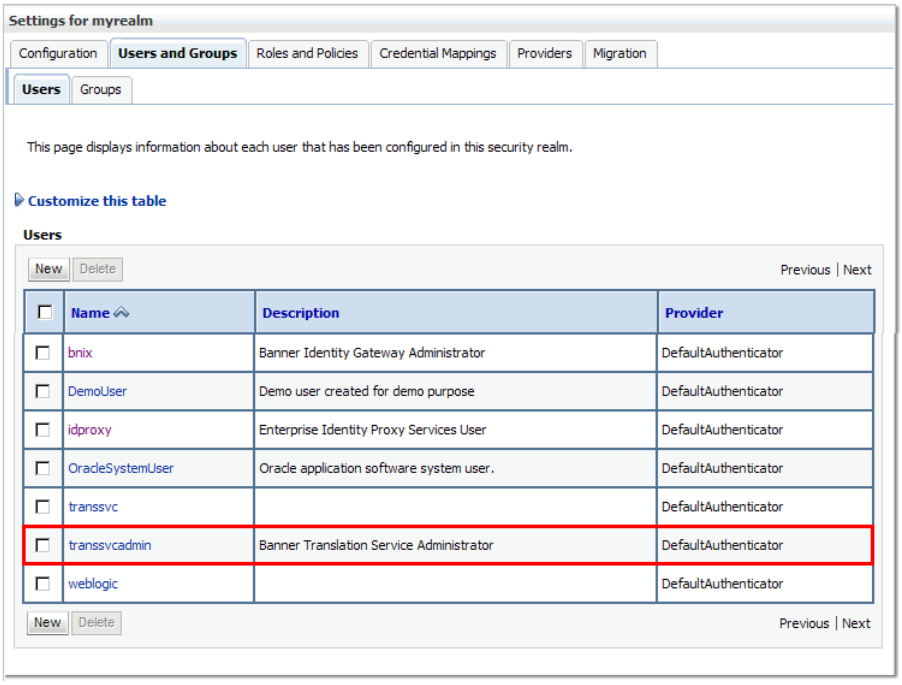
10. Click **New**. The Create a New User page is displayed.



11. Enter the following information to create a user:

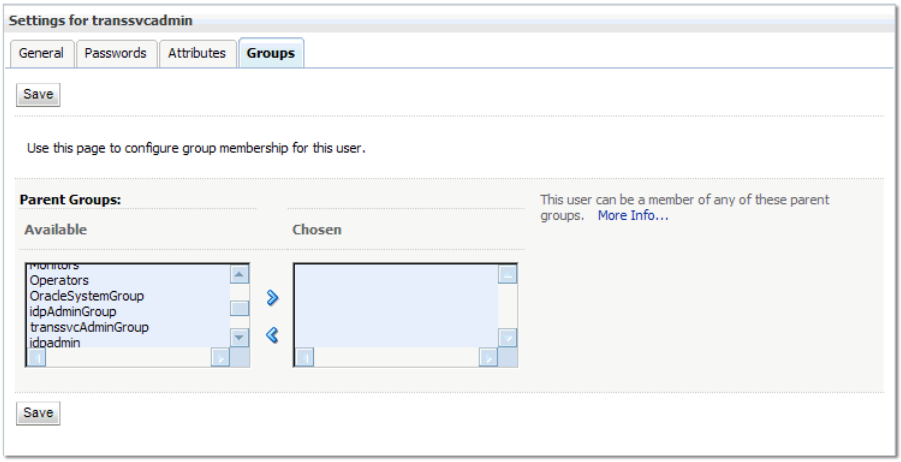
Name	*transsvcadmin* (This is an example. Enter the name of your choice.)
Description	*Banner Translation Service Administrator*
Provider	*DefaultAuthenticator*
Password	Password for the user being created
Confirm Password	Confirmation of the password

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

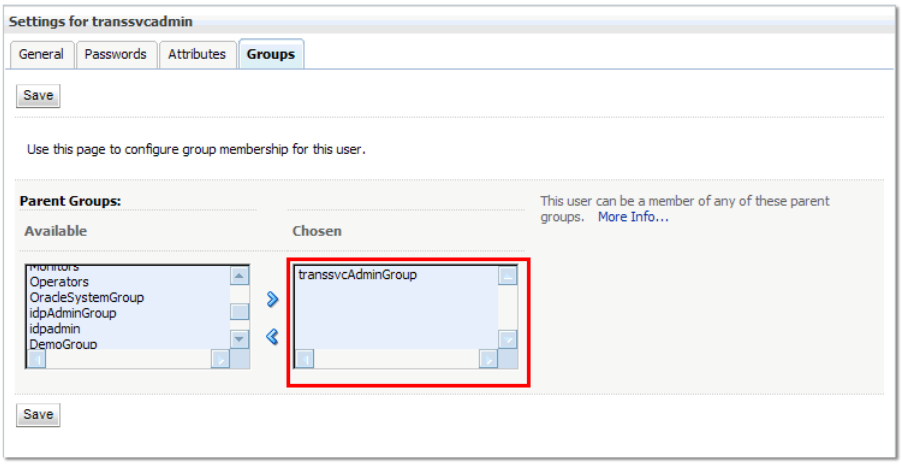


13. Click the name of the user you just created. The Settings page for the user is displayed.

14. Select the **Groups** tab.



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



16. Click **Save**.

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

Step 12 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 administration 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.

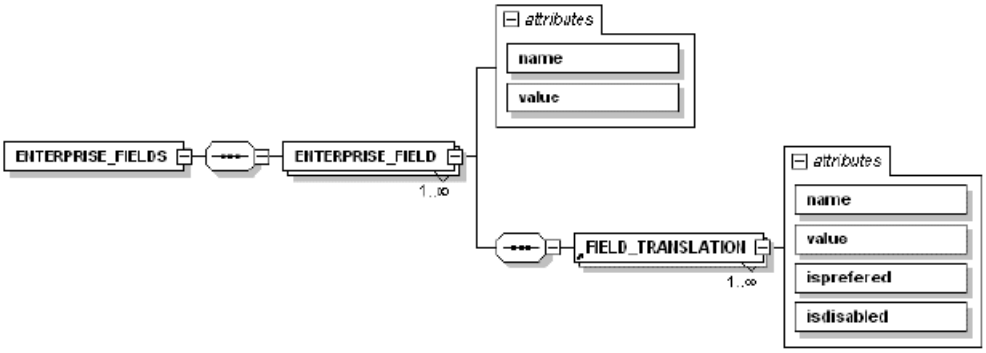
Import enterprise fields

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.

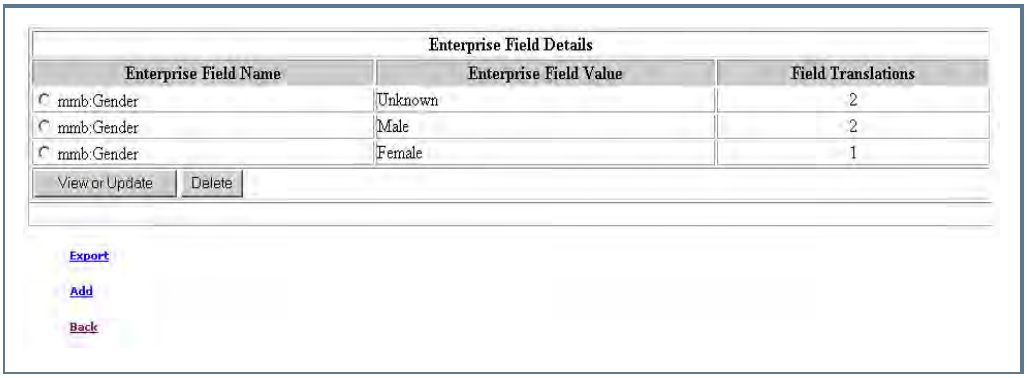
Export one enterprise field

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 that 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`. You should use 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 must 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`. You should use a more descriptive file name.

6. Click **Save**.

List enterprise fields

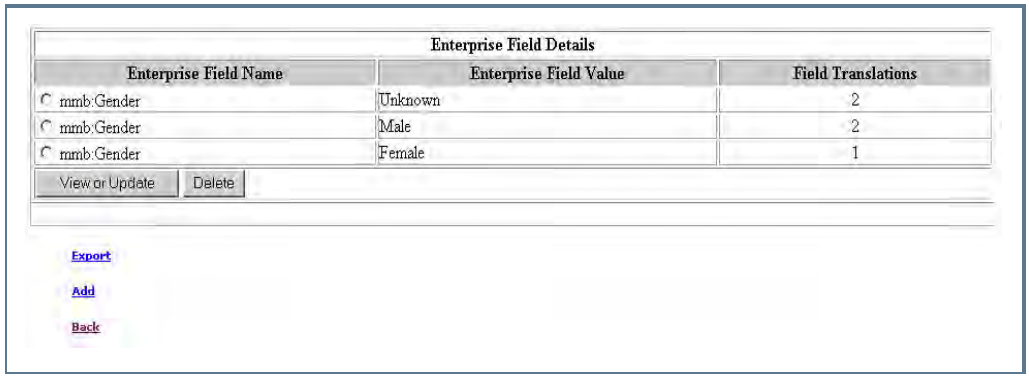
Use the following steps to list all enterprise fields defined in the system. You can select an enterprise field from the list and display the enterprise field values associated with the selected field. Only enterprise fields such as rco:Gender and rco:CountryCode are displayed.

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.

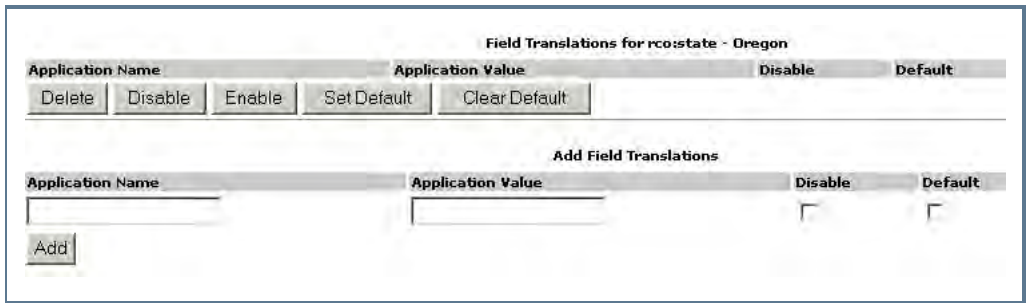
1. Click **List** under the **Enterprise Field** menu.

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*)

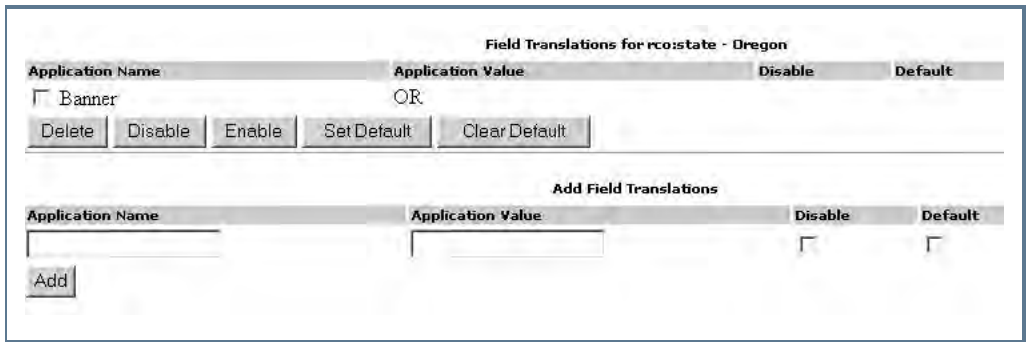
4. Click **Create**. The Field Translations page displays the new enterprise field name and enterprise field value.



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.

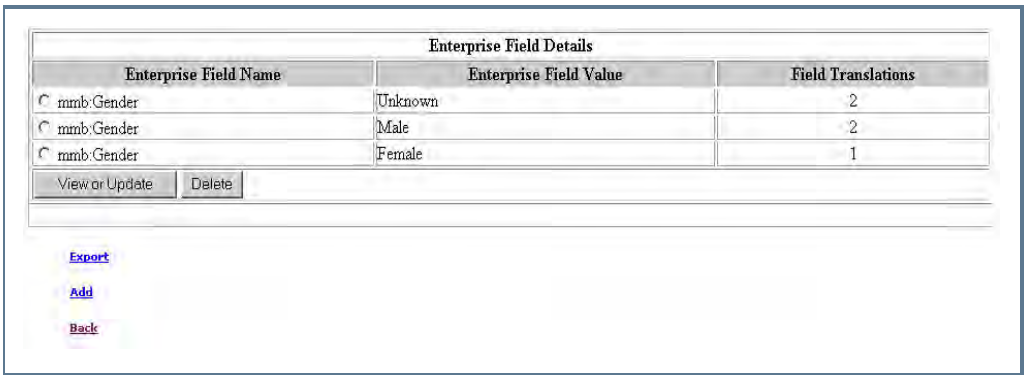
Add an enterprise field value

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*).

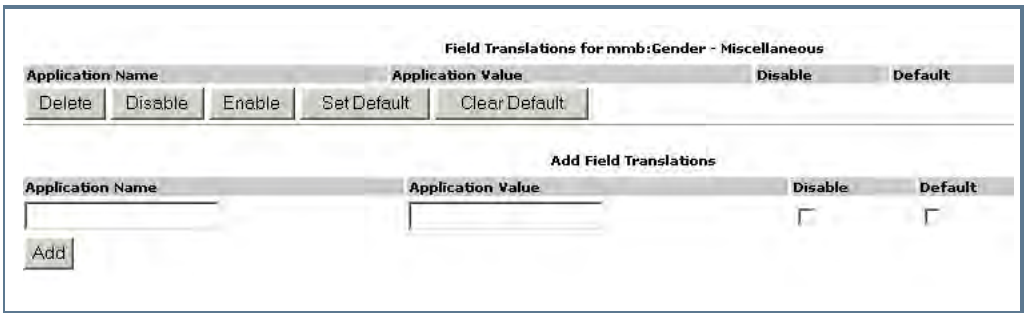
2. Click the name of the enterprise field to which you want to add an enterprise field value. The Enterprise Field Details page displays existing enterprise field values for the selected enterprise field.



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.

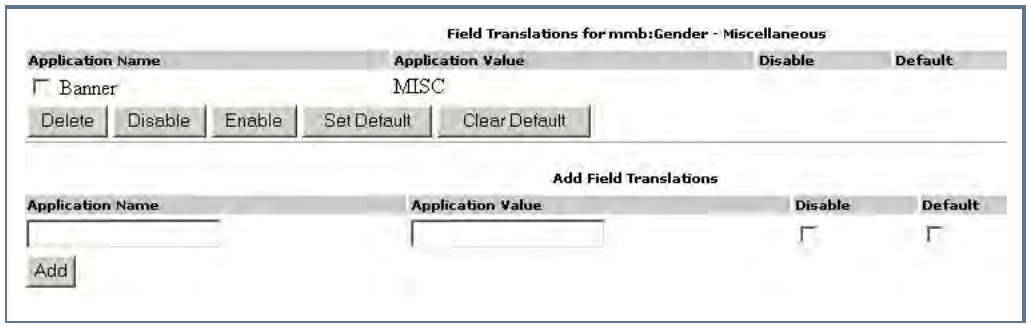
5. Click **Create**. The Field Translations page is displayed with the enterprise field name and the new enterprise field value.



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.

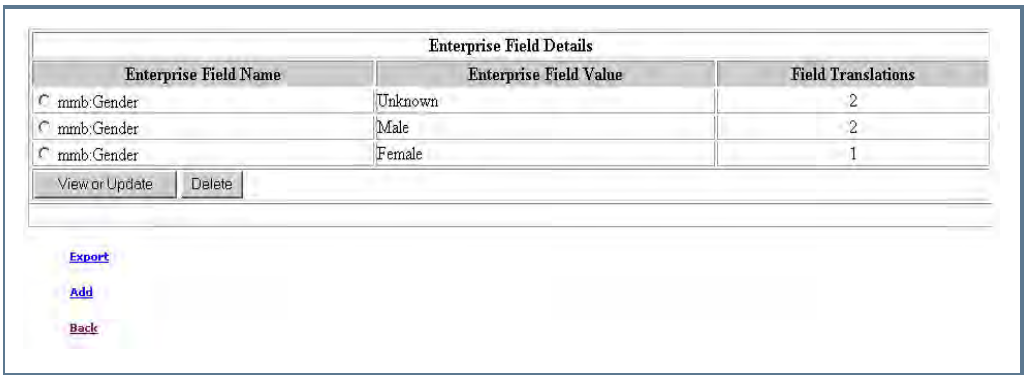
Add a field translation

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.

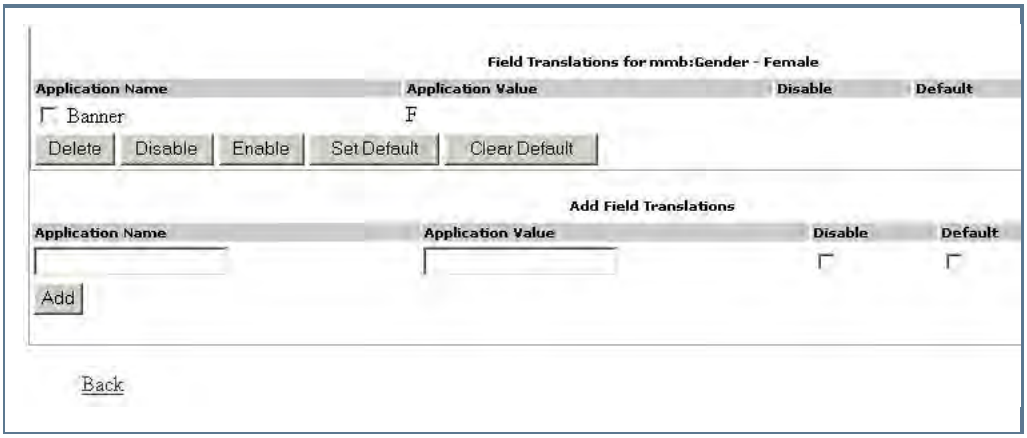
   The **Enterprise Fields > Names** section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

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.

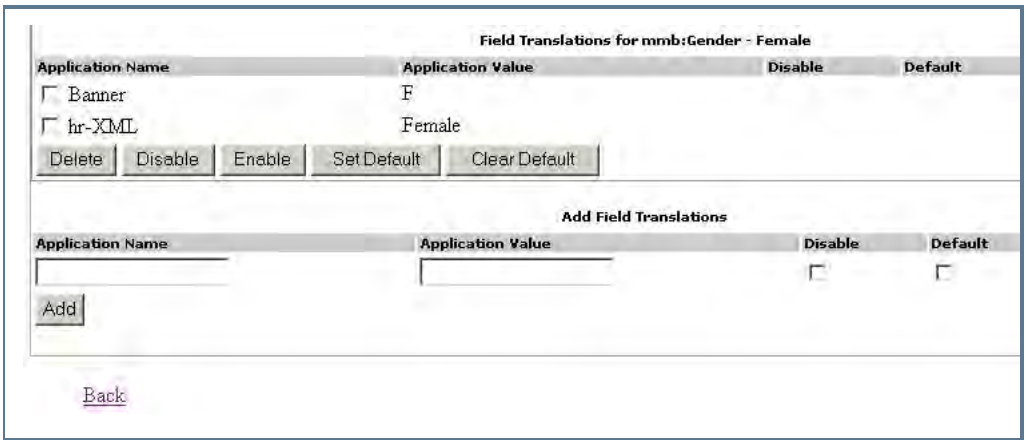


5. Enter the following information for the new field translation:

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**.

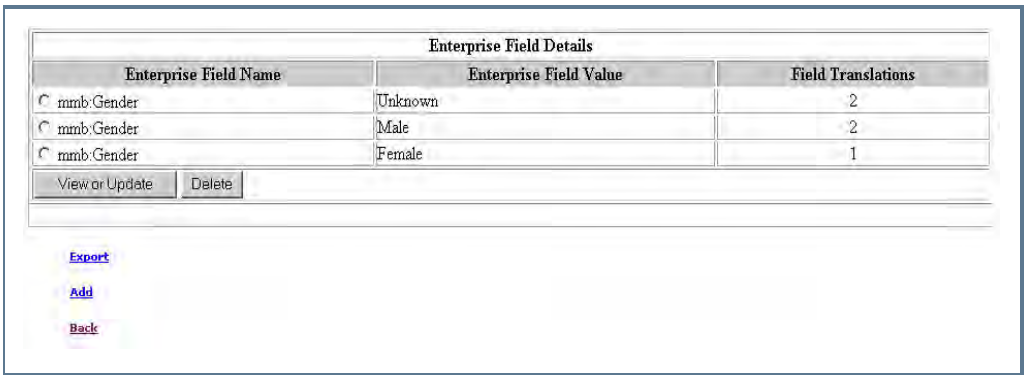
Delete an enterprise field value

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.

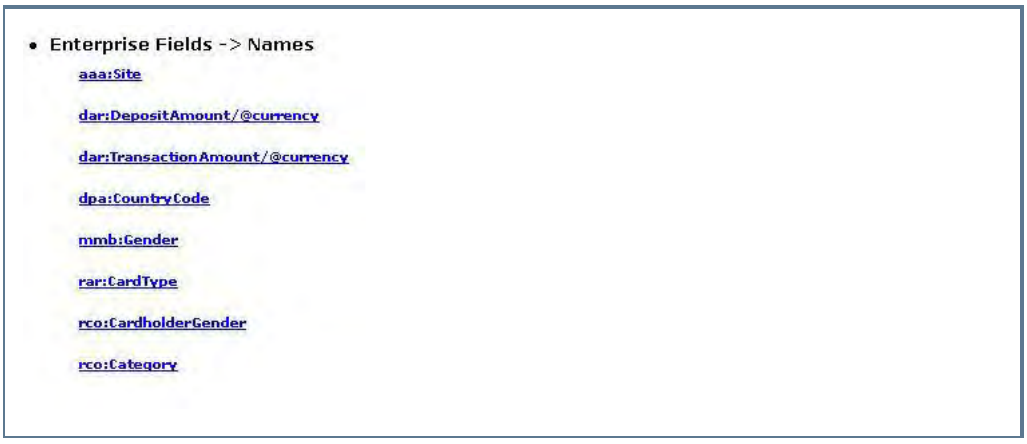
4. Click **Delete**. The Enterprise Field Details page is redisplayed with the enterprise field value deleted.

Delete a field translation

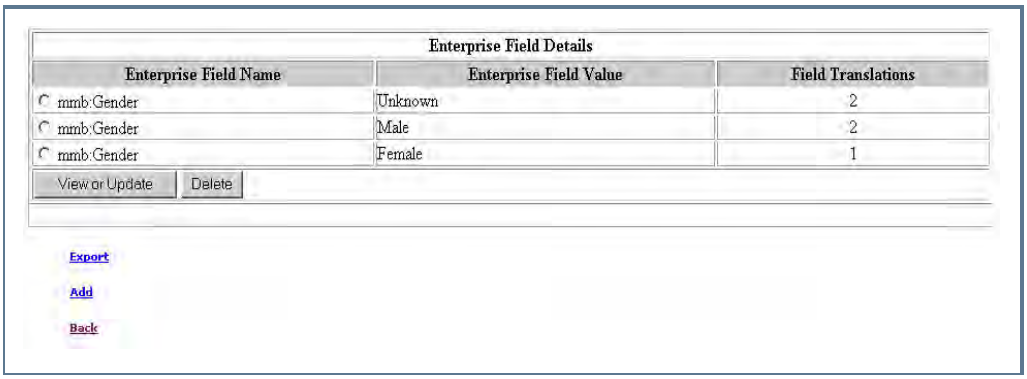
Use the following steps to delete field translations associated with an enterprise field value.

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*).

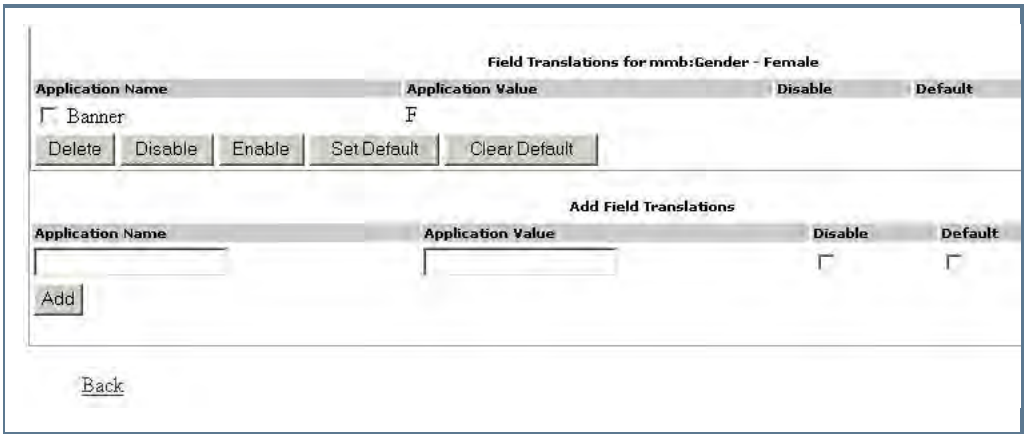


2. Click the name of the enterprise field for which you want to delete field translations. The Enterprise Field Details page displays existing enterprise field values for the selected enterprise field.



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

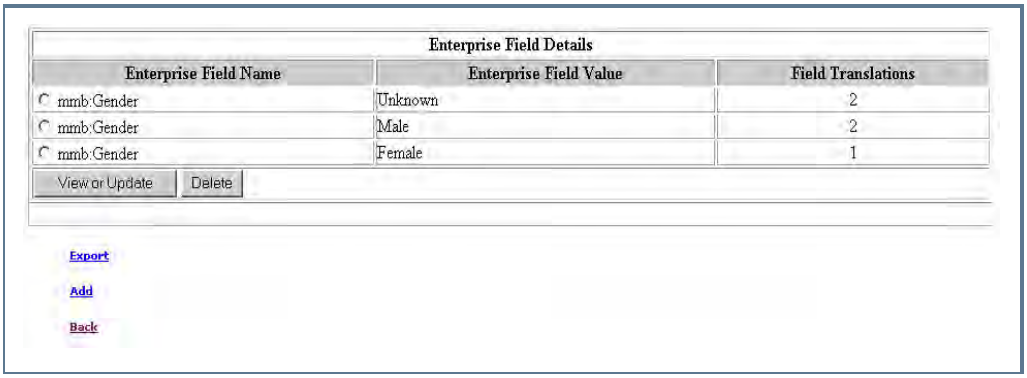
A disabled field translation is ignored when the Banner Translation Service processes a translation request. An enabled field translation is associated with the enterprise field

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.

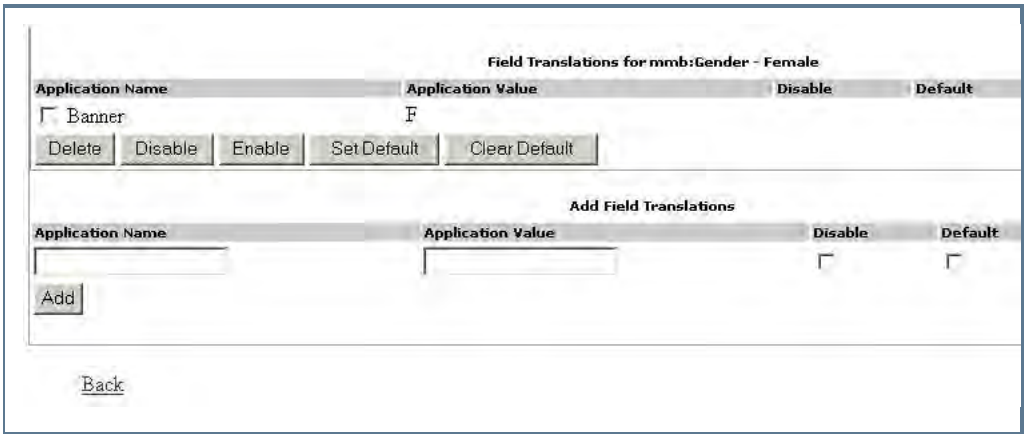
   The **Enterprise Fields > Names** section displays hyperlinks for existing enterprise fields. Each enterprise field name includes a namespace prefix (for example, *mmb*) and an XML tag name (for example, *Gender*).

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

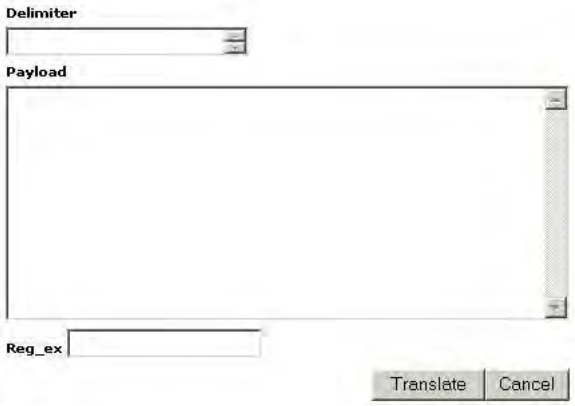
The Banner Translation Service provides a translation web tool that can be used to test your Banner Translation Service data setup and diagnose any issues. This tool tests the following scenarios:

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: