



Banner Translation Service

Installation and Administration Guide

Release 8.1.3
January 2012



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Banner Translation Service 8.1.3 Installation and Administration Guide

Contents

Chapter 1	Introduction	5
	Interfaces	5
	Database	5
Chapter 2	Installation	7
	Requirements	7
	Oracle database.	7
	Installation on Oracle Application Server 10.1.3.4/5	7
	Step 1 Extract the zip file.	8
	Step 2 Configure the database user	8
	Step 3 Configure the database tables	9
	Step 4 Create an OC4J instance	9
	Step 5 Install the Banner Translation Service	9
	Step 6 Define the data source.	13
	Step 7 Configure the security role and user	18
	Step 8 Configure logging (optional).	22
	Step 9 Populate the Banner Translation Service	23
	Installation on Oracle WebLogic Server 11g	23
	Step 1 Extract the zip file.	23
	Step 2 Configure the database user	24
	Step 3 Configure the database tables	24
	Step 4 Configure logging (optional).	25
	Step 5 Configure the Oracle WebLogic Server	25
	Step 6 Create a Managed server	28
	Step 7 Define the data source.	28
	Step 8 Install the Banner Translation Service	32
	Step 9 Configure the security group and user	39

Step 10 Populate the Banner Translation Service	44
Chapter 3 Administration	45
Terminology	45
Access the Web console	46
Manage data translations	46
Import enterprise fields	46
Export enterprise fields	48
List enterprise fields	49
Add an enterprise field	50
Add an enterprise field value	52
Add a field translation	54
Delete an enterprise field value	56
Delete a field translation	57
Disable and enable a field translation	58
Process translation requests via a Web service	60
Test data translations	60
Steps to test data translations	61
Required parameters	62
Example	62

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.

Cluster Topology

Overview

Hosts **1** Application Servers **1**
OC4J Instances **8** HTTP Server Instances **1**

Members

View By **Application Servers**

Start **Stop** **Restart**

Select All | **Select None** | **Expand All** | **Collapse All**

Select	Name	Status	Type	Category	Host	CPU (%)	Memory (MB)
<input type="checkbox"/>	▼ All Application Servers						
<input type="checkbox"/>	▼ oc4j1013.m039087.corp.sct.com			Application Server	m039087		
<input type="checkbox"/>	▶ BEIS_16_Certification (JVMs: 1)	↑	OC4J			0.19	134.58
<input type="checkbox"/>	▶ BEP_DEV (JVMs: 1)	↑	OC4J			0.88	104.02
<input type="checkbox"/>	▶ BWS (JVMs: 1)	↑	OC4J			0.06	81.15
<input type="checkbox"/>	▶ BWS_16_Certification (JVMs: 1)	↑	OC4J			0.11	140.91
<input type="checkbox"/>	▶ eLearning_8_1_Sprint_11 (JVMs: 1)	↑	OC4J			0.09	80.50
<input type="checkbox"/>	▶ home (JVMs: 1)	↑	OC4J			0.45	154.19
<input type="checkbox"/>	HTTP_Server	↑	Oracle HTTP Server			0.10	63.43
<input type="checkbox"/>	▶ MPG (JVMs: 1)	↑	OC4J			0.09	66.12
<input type="checkbox"/>	▶ XXX (JVMs: 1)	↑	OC4J			0.08	59.96

Start **Stop** **Restart**

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

OC4J: BWS

View Data **Manual Refresh**

Home Applications Web Services Performance Administration

General

Stop **Restart**

Status **Up**

Start Time **Mar 17, 2010 4:00:43 AM EDT**

Version **10.1.3.5.0**

Oracle Home **D:\product\10.1.3.1\oracleAS_2**

Host

Virtual Machines **1**

Notifications **0**

Response and Load

The graph displays two metrics over a period from 1:44 to 1:48 on Mar 17, 2010. The top line represents Request Processing Time (seconds), which starts at approximately 0.035 and gradually decreases to about 0.02. The bottom area represents Requests per second, shown as a bar chart with values fluctuating between 0.00 and 0.30.

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

OC4J: BWS

Home Applications Web Services Performance Administration

This page shows the J2EE applications and application components (EJB Modules, WAR Modules, Resource Adapter Modules) deployed to this OC4J instance.

View Applications

Start Stop Restart Undeploy Redeploy Deploy

Select All Select None Expand All Collapse All

Select	Name	Status	Start Time	Active Requests	Request Processing Time (seconds)	Active EJB Methods	Application Defined MBeans
<input type="checkbox"/>	▼ All Applications						
<input type="checkbox"/>	ascontrol	↑	Mar 22, 2010 4:20:20 AM EDT	0	0.06	0	
<input type="checkbox"/>	▼ default	↑	Mar 22, 2010 4:20:14 AM EDT	0	0.00	0	
<input type="checkbox"/>	elearningDummy	↑	Mar 22, 2010 4:20:24 AM EDT	0	0.00	0	
<input type="checkbox"/>	▶ Middleware Services						

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

Deploy: Select Archive

Cancel Step 1 of 3 Next

Archive

The following types of archives can be deployed: J2EE application (EAR files), Web Modules (WAR files), EJB Modules (EJB JAR files) and Resource Adapter Modules (RAR files).

Archive is present on local host. Upload the archive to the server where Application Server Control is running.
Archive Location Browse...

Archive is already present on the server where Application Server Control is running.
Location on Server
The location on server must be the absolute path or the relative path from j2ee/home

Deployment Plan

The deployment plan is an XML file that contains the deployment settings for an application. If you do not have a deployment plan, one will be created automatically during the deployment process. Later in the deployment process, you can optionally edit the deployment plan and save it for a future deployment of this application.

Automatically create a new deployment plan.
The deployment plan settings will be based on OC4J defaults and information contained in the archive

Deployment plan is present on local host. Upload the deployment plan to the server where Application Server Control is running.
Plan Location Browse...

Deployment plan is already present on server where Application Server Control is running.
Location on Server
The location on server must be the absolute path or the relative path from j2ee/home

Cancel Step 1 of 3 Next

- Select the file to be uploaded:
 - In the Archive section, select **Archive is present on local host. Upload the archive to the server where Application Server Control is running.**
 - In the **Archive Location** field, click **Browse** and navigate to the TranslationService_v8.1.3.ear file.
 - 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.

Deploy: Application Attributes

Cancel Back Step 2 of 3 Next

Archive Type **J2EE Application (EAR file)**
 Archive Location **TranslationService_v8.1.3.ear**
 Deployment Plan **TranslationService_v8.1.3_plan.dat**

* Application Name
 Parent Application default
 Bind Web Module to Site default-web-site
 Context Root

Web Module	Context Root
transsvc.war	/transsvc

Cancel Back Step 2 of 3 Next

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.

Deploy: Deployment Settings

Cancel Back Step 3 of 3 Deploy

Archive Type **J2EE Application (EAR file)**
 Archive Location **TranslationService_v8.1.3.ear**
 Deployment Plan **TranslationService_v8.1.3_plan.dat**

Application Name **TranslationService**
 Parent Application **default**
 Bind Web Module to Site **default-web-site**
 Context Root **/transsvc**

Deployment Tasks

The table below provides a set of common deployment tasks you might want to perform for this application. Only those tasks that apply to the current application are enabled.

Task Name	Go To Task	Description
Map Environment References		Map any environment references in your application (for example, data sources) to physical entities currently present on the operational environment.
Select Security Provider		A security provider acts as the source for available users and groups when mapping security roles.
Map Security Roles		Map any security roles exposed by your application to existing users and groups. The list of users and groups is obtained from the security provider you selected for this application.
Configure EJBs		Configure the Enterprise JavaBeans in your application.
Configure Clustering		Configure clustering of your application.
Configure Class Loading		Manipulate the classpath of your application.

Advanced Deployment Plan Editing

Click Edit Deployment Plan to set more advanced deployment options. Edit Deployment Plan

Save Deployment Plan

After you make changes, you can save the deployment plan to your local disk. You can then use the saved deployment plan to redeploy this application later. Save Deployment Plan

Cancel Back Step 3 of 3 Deploy

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.

OC4J: BWS

Home Applications Web Services Performance Administration		
Expand All Collapse All		
Task Name	Go to Task	Description
Administration Tasks		
Properties		
EJB Compiler Settings		Configure the EJB Compiler.
J2EE Websites		Manage the J2EE websites in this OC4J instance.
JSP Properties		Set JSP container properties.
Logger Configuration		Set log levels for all Loggers.
Thread Pool Configuration		Configure the thread pools of this OC4J instance.
Shared Libraries		Manage the shared libraries of this OC4J instance.
Server Properties		Configure server properties for this OC4J instance.
Services		
JDBC Resources		Create/delete/view data sources and connection pools.
Enterprise Messaging Service		
JMS Destinations		Create/delete/edit JMS destinations.
JMS Connection Factories		Configure JMS connection factories.
In-Memory and File Based Persistence		Configure settings for in-memory and file based persistence.
Database Persistence		Configure settings for database persistence.
OracleAS JMS Router		Configure the JMS Router.
JNDI Browser		Browse the JNDI bindings of this OC4J instance.
Transaction Manager (JTA)		Configure and monitor transaction management capabilities.
Security		
Security Providers		Configure security providers, create/delete/view users and roles.
Identity Management		Configure or change the Oracle Internet Directory associated with this OC4J instance.
Instance Keystore		Configure the keystore and keys to be used for this OC4J instance.
Trusted SAML Authorities		Configure trusted SAML assertion issuer names and keys to be used to secure webservices.
JMX		
System MBean Browser		Browse the system MBeans exposed by this OC4J instance.
Notification Subscriptions		View/change subscriptions for notifications for all MBeans.
Notifications Received		View received notifications.

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

JDBC Resources

Application

Data Sources

Create						
Name	Application	JNDI Location	Connection Pool	Managed by OC4J	Test Connection	Delete
"OracleDS"	default	jdbc/OracleDS	"Example_Connection Pool"	✓		

Connection Pools

Create						
Name	Application	Connection Factory Class	Monitor Performance	Test Connection	Refresh Connection Pool	Delete
"Example_Connection Pool"	default	oracle.jdbc.pool.OracleDataSource				

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

Create Connection Pool - Application Cancel Continue

Application
 Select the application to which this new connection pool is to be added.

Application

Connection Pool Type

New Connection Pool

New Connection Pool from Existing Connection Pool

Create a new connection pool that is configured like an existing connection pool.

Existing Connection Pool

Cancel Continue

- 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.

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

Create Connection Pool Cancel Back Finish

Home **Attributes** Proxy Interfaces

* Name

* Connection Factory Class
Class must be available to the application's class loader.

URL
 You can either specify a URL directly or have it generated from connection information. When you test a connection, the connection factory class and credentials specified on this page will be used to perform the test.

JDBC URL Test Connection

Generate URL from Connection Information Test Connection

Driver Type

DB Host Name

DB Listener Port

DB Identifier Type

SID/Service Name

TNS Alias

Credentials

TIP For OracleDataSources, credentials must be entered if not already specified in the URL.

Username

Use Cleartext Password

Password

Use Indirect Password ^(D)

Indirect Password
example: Scott, customers/Scott

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

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

Test Connection

Enter a SQL statement to use to test the connection. Cancel Test

* SQL Statement Cancel Test

- Click **Test** to test the connection pool for the *transsvc* schema. The Create Connection Pool page is redisplayed with a success or failure message.
 - If the test succeeds, continue with the next step.
 - If the test fails, ensure that the connection URL and credentials are correct. Continue testing until the connection is successful.
- Click **Finish**.

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

Create Data Source - Application & Type

Cancel Continue

Application
Select the application to which this new data source is to be added.

Application

Data Source Type

Managed Data Source
A managed data source is one where OC4J provides critical system infrastructure such as global transaction management, connection pooling, statement caching and error handling.

Native Data Source
A native data source is one that implements the java.sql.DataSource interface and does not make use of OC4J's connection pooling or statement caching capabilities. A native data source can only participate in local transactions.

New Data Source from Existing Data Source
Create a new data source that is configured like an existing data source.

Existing Data Source

Cancel Continue

- 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.

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

Create Data Source - Managed Data Source

Cancel Back Finish

Application **default**

* Name

* JNDI Location

Transaction Level

Connection Pool

* Login Timeout (seconds)
Maximum time to wait while attempting to connect to a database.

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

Name	<i>transsvc</i>
JNDI Location	<i>jdbc/transsvc</i>
Connection Pool	<i>transsvc_pool</i>

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.

OC4J: BWS

Home Applications Web Services Performance Administration		
Expand All Collapse All		
Task Name	Go to Task	Description
Administration Tasks		
Properties		
EJB Compiler Settings		Configure the EJB Compiler.
J2EE Websites		Manage the J2EE websites in this OC4J instance.
JSP Properties		Set JSP container properties.
Logger Configuration		Set log levels for all Loggers.
Thread Pool Configuration		Configure the thread pools of this OC4J instance.
Shared Libraries		Manage the shared libraries of this OC4J instance.
Server Properties		Configure server properties for this OC4J instance.
Services		
JDBC Resources		Create/delete/view data sources and connection pools.
Enterprise Messaging Service		
JMS Destinations		Create/delete/edit JMS destinations.
JMS Connection Factories		Configure JMS connection factories.
In-Memory and File Based Persistence		Configure settings for in-memory and file based persistence.
Database Persistence		Configure settings for database persistence.
OracleAS JMS Router		Configure the JMS Router.
JNDI Browser		Browse the JNDI bindings of this OC4J instance.
Transaction Manager (JTA)		Configure and monitor transaction management capabilities.
Security		
Security Providers		Configure security providers, create/delete/view users and roles.
Identity Management		Configure or change the Oracle Internet Directory associated with this OC4J instance.
Instance Keystore		Configure the keystore and keys to be used for this OC4J instance.
Trusted SAML Authorities		Configure trusted SAML assertion issuer names and keys to be used to secure webservices.
JMX		
System MBean Browser		Browse the system MBeans exposed by this OC4J instance.
Notification Subscriptions		View/change subscriptions for notifications for all MBeans.
Notifications Received		View received notifications.

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

Security Providers

Page Refreshed May 11, 2010 3:54:41 PM EDT

Instance Level Security

You can configure the security attributes (realms, users & roles) for all applications deployed to this OC4J instance by clicking on the button below.

[Instance Level Security](#)

Application Server Control Security

You can configure the security provider, users & roles for the Application Server Control management application by clicking on the button below or by using the global Setup link.

[Application Server Control Security](#)

Application Level Security

The table lists applications currently deployed to this OC4J instance and the security provider in use by each application. You can edit the properties of the security provider specified for a given application by clicking on the Edit icon.

Expand All Collapse All		
Application Name	Security Provider	Edit
default		
TranslationService	File-Based Security Provider	

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

Security Provider

Security Provider Type **File-Based Security Provider** [Change Security Provider](#)

Security Provider Attributes: File-Based Security Provider

[General](#) [Realms](#)

Search
Name [Go](#)

Results
[Create](#)

Realm Name ▲	Roles	Users	Delete
jazn.com	9	6	

[General](#) [Realms](#)

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

Roles

Security Provider Type **File-Based Security Provider**
Realm Name **jazn.com**

Search
Name [Go](#)

Results
[Create](#)

Role Name ▲	Users	Delete
ascontrol_admin	1	
ascontrol_appadmin	0	
ascontrol_monitor	1	

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

Add Role [Cancel](#) [OK](#)

Realm Name **jazn.com**

* Name

Grant RMI Login Permission

Grant Administration Permission

Assign Roles

A role may inherit from other roles. Select the roles you would like this role to inherit.

Available Roles

- ascontrol_admin
- ascontrol_appadmin
- ascontrol_monitor

➤
[Move](#)

➡➡
[Move All](#)

➤
[Remove](#)

⬅⬅
[Remove All](#)

Selected Roles

[Cancel](#) [OK](#)

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.

Security Provider

Security Provider Type **File-Based Security Provider** [Change Security Provider](#)

Security Provider Attributes: File-Based Security Provider

[General](#) [Realms](#)

Search
Name [Go](#)

Results

[Create](#)

Realm Name [△]	Roles	Users	Delete
jazn.com	9	6	

[General](#) [Realms](#)

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

Users

Security Provider Type **File-Based Security Provider**
Realm Name **jazn.com**

Search
Name [Go](#)

Results

[Create](#)

User Name [△]	Assigned Roles	Delete
anonymous		
JtaAdmin	oc4j-administrators*	
oc4jadmin	oc4j-administrators*, ascontrol_admin*	
rmiuser	ascontrol_monitor*	

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

Add User [Cancel](#) [OK](#)

Realm Name **jazn.com**

* Name

* Password

* Confirm Password

Assign Roles

Available Roles

- ascontrol_admin
- ascontrol_appadmin
- ascontrol_monitor
- transsvcAdmin

>

Move

>>

Move All

<

Remove

<<

Remove All

Selected Roles

[Cancel](#) [OK](#)

12. Enter the following information to create a user:

Name	<i>Admin</i> (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
<code>log4j.appender.logfile. File</code>	<code>log/translation_ service.log</code>	<code>../<OC4J instance>/ log/translation_ service.log</code>
<code>log4j.logger.com.sct</code>	<code>INFO, logfile</code>	<code>DEBUG, logfile</code>

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:

- [Step 1, “Extract the zip file”](#)
- [Step 2, “Configure the database user”](#)
- [Step 3, “Configure the database tables”](#)
- [Step 4, “Configure logging \(optional\)”](#)
- [Step 5, “Configure the Oracle WebLogic Server”](#)
- [Step 6, “Create a Managed server”](#)
- [Step 7, “Define the data source”](#)
- [Step 8, “Install the Banner Translation Service”](#)
- [Step 9, “Configure the security group and user”](#)
- [Step 10, “Populate the Banner Translation Service”](#)

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\\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**

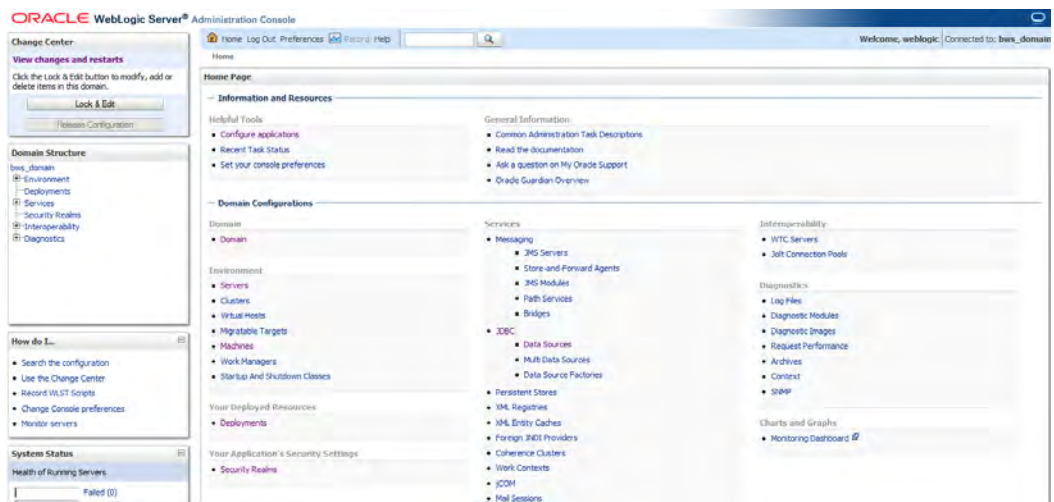
The Oracle WebLogic Server needs to be configured only once. If the server was previously configured, you can skip this step. ■

Use the following steps to configure the server.

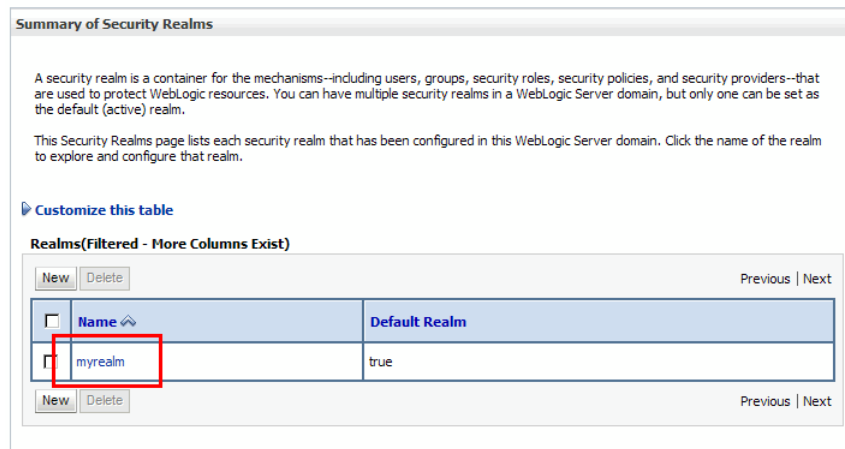
1. Connect to the Oracle WebLogic Server Administration Console:

`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.

Settings for myrealm

Configuration Users and Groups Roles and Policies Credential Mappings Providers Migration

General RDBMS Security Store User Lockout Performance

Save

Use this page to configure the general behavior of this security realm.

Note:
If you are implementing security using JACC (Java Authorization Contract for Containers as defined in JSR 115), you must use the DD Only security model. Other WebLogic Server models are not available and the security functions for Web applications and EJBs in the Administration Console are disabled.

Name: myrealm The name of this security realm. [More Info...](#)

Security Model Default: **Advanced** Specifies the default security model for Web applications or EJBs that are secured by this security realm. You can override this default during deployment. [More Info...](#)

Combined Role Mapping Enabled Determines how the role mappings in the Enterprise Application, Web application, and EJB containers interact. This setting is valid only for Web applications and EJBs that use the Advanced security model and that initialize roles from deployment descriptors. [More Info...](#)

Use Authorization Providers to Protect JMX Access Configures the WebLogic Server MBean servers to use the security realm's Authorization providers to determine whether a JMX client has permission to access an MBean attribute or invoke an MBean operation. [More Info...](#)

[Advanced](#)

Save

5. Select *Advanced* in the **Security Model Default** drop-down list.
6. Click the **Advanced** link to display the advanced options.

Advanced

Check Roles and Policies: **All Web applications and EJBs** Specifies when the Security Service checks for authorization to access Web applications and Enterprise JavaBeans (EJBs). This setting is valid only for Web applications and EJBs that use the Advanced security model. [More Info...](#)

When Deploying Web Applications or EJBs: Initialize roles and policies from DD Specifies whether the Security Service copies security data from the deployment descriptors into the appropriate security provider databases each time the Web application or EJB is deployed. This setting is valid only for Web applications and EJBs that use the Advanced security model and only when Check Roles and Policies is set to All Web applications and EJBs. [More Info...](#)

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

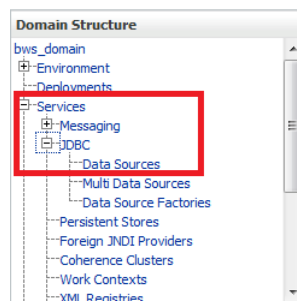
Create a new Managed Server for the Banner Translation Service and the Banner Web Service Adapters so that they can be independently managed. Refer to Oracle WebLogic Server Documentation Library for details.

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.

Summary of JDBC Data Sources

A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a pool of JDBC connections. Applications can look up a data source on the JNDI tree and then borrow a database connection from a data source.

This page summarizes the JDBC data source objects that have been created in this domain.

[Customize this table](#)

Data Sources (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Delete Previous | Next

<input type="checkbox"/>	Name	JNDI Name	Targets
<input type="checkbox"/>	bnixmgr	jdbc/bnixmgr	AdminServer
<input type="checkbox"/>	Identmgr	jdbc/identmgr	AdminServer
<input type="checkbox"/>	inbadmin	jdbc/inbadmin	AdminServer
<input type="checkbox"/>	Integmgr_Banner	jdbc/integmgr_banner	AdminServer
<input type="checkbox"/>	streamsadmin	jdbc/streamsadmin	AdminServer

New Delete Previous | Next

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

Create a New JDBC Data Source

Back Next Finish Cancel

JDBC Data Source Properties

The following properties will be used to identify your new JDBC data source.
* Indicates required fields

What would you like to name your new JDBC data source?

* Name: transsvc

What JNDI name would you like to assign to your new JDBC Data Source?

* JNDI Name: jdbc/transsvc

What database type would you like to select?

Database Type: Oracle

What database driver would you like to use to create database connections? Note: * indicates that the driver is explicitly supported by Oracle WebLogic Server.

Database Driver: *Oracle's Driver (Thin) for Instance connections; Versions:9.0.1,9.2.0,10,11

Back Next Finish Cancel

- Enter the following data source properties:

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

- 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.

Create a New JDBC Data Source

Back Next Finish Cancel

Transaction Options

You have selected non-XA JDBC driver to create database connection in your new data source.

Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.

Supports Global Transactions

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the *Logging Last Resource* (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit.

Logging Last Resource

Select this option if you want to enable non-XA JDBC connections from the data source to emulate participation in global transactions using JTA. Select this option only if your application can tolerate heuristic conditions.

Emulate Two-Phase Commit

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the one-phase commit transaction processing. With this option, no other resources can participate in the global transaction.

One-Phase Commit

Back Next Finish Cancel

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

Create a New JDBC Data Source

Back Next Finish Cancel

Connection Properties

Define Connection Properties.

What is the name of the database you would like to connect to?

Database Name:

What is the name or IP address of the database server?

Host Name:

What is the port on the database server used to connect to the database?

Port:

What database account user name do you want to use to create database connections?

Database User Name:

What is the database account password to use to create database connections?

Password:

Confirm Password:

Back Next Finish Cancel

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	<i>transsvc</i>
Password	Password for the <i>transsvc</i> user
Confirm Password	Confirmation of the password

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

The screenshot shows the 'Create a New JDBC Data Source' wizard at the 'Test Database Connection' step. The window title is 'Create a New JDBC Data Source'. At the top, there are navigation buttons: 'Test Configuration', 'Back', 'Next', 'Finish', and 'Cancel'. The main content area contains the following fields and instructions:

- Test Database Connection**: Test the database availability and the connection properties you provided.
- What is the full package name of JDBC driver class used to create database connections in the connection pool? (Note that this driver class must be in the classpath of any server to which it is deployed.)
 - Driver Class Name:** oracle.jdbc.OracleDriver
- What is the URL of the database to connect to? The format of the URL varies by JDBC driver.
 - URL:** jdbc:oracle:thin:@m08804
- What database account user name do you want to use to create database connections?
 - Database User Name:** transsvc
- What is the database account password to use to create database connections? (Note: for secure password management, enter the password in the Password field instead of the Properties field below)
 - Password:** [Masked with dots]
 - Confirm Password:** [Masked with dots]
- What are the properties to pass to the JDBC driver when creating database connections?
 - Properties:** user=transsvc
- What table name or SQL statement would you like to use to test database connections?
 - Test Table Name:** SQL SELECT 1 FROM DUAL

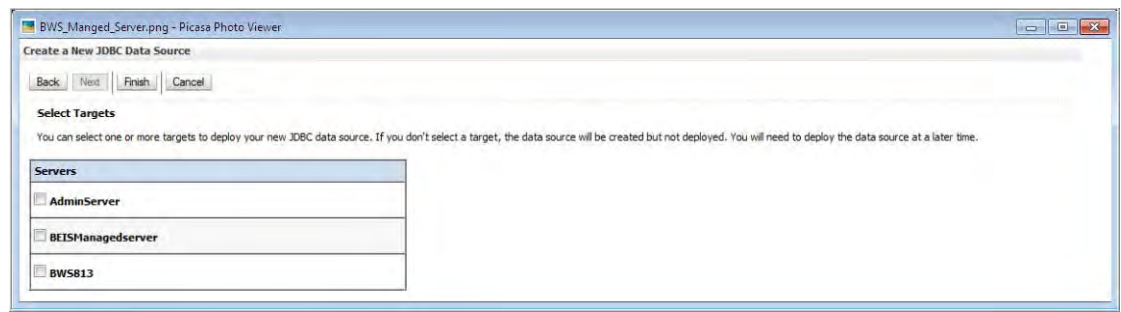
- Verify the property values.

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

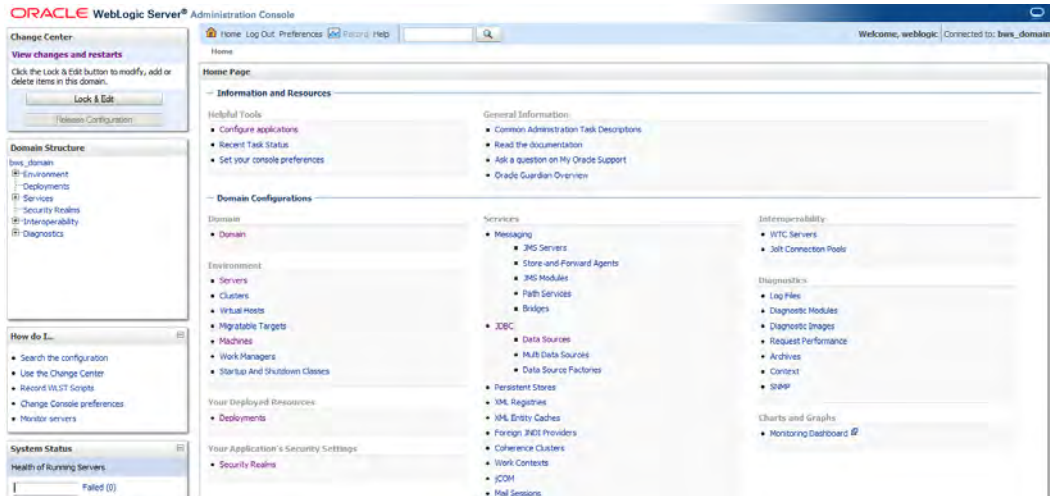
Before beginning this step, you must also understand the concepts published by Oracle regarding the deployment of ear files.

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.

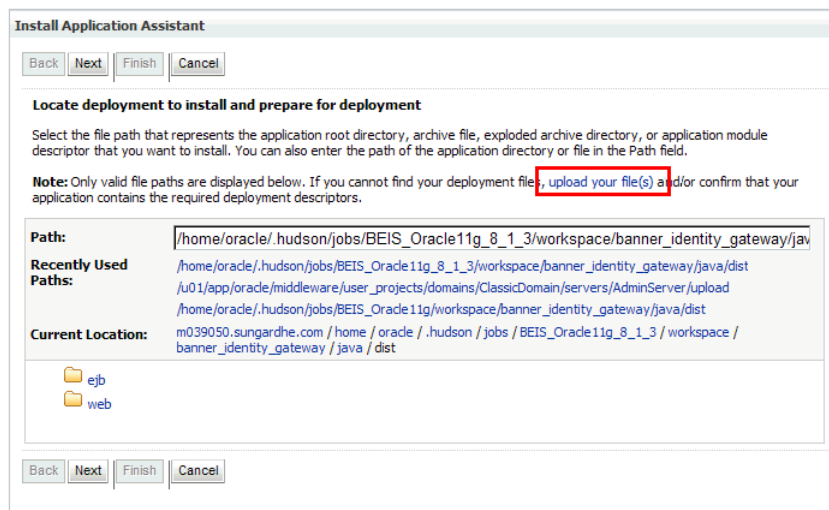


2. In the Domain Structure pane, click **Deployments**.

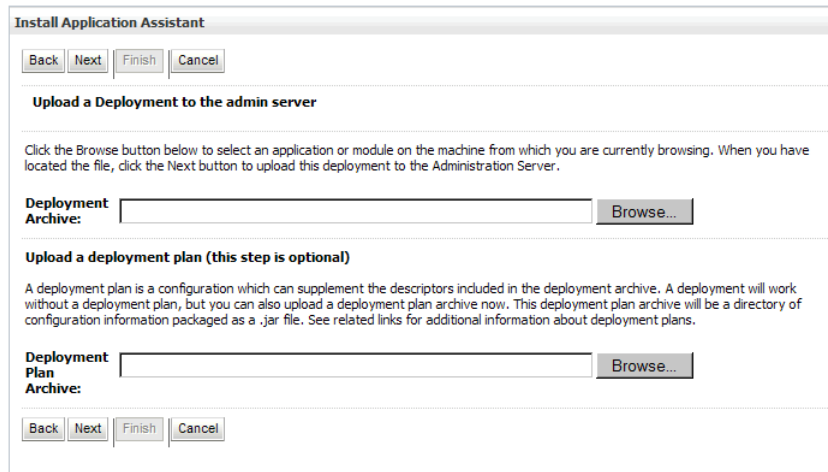


The Summary of Deployments page is displayed.

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.

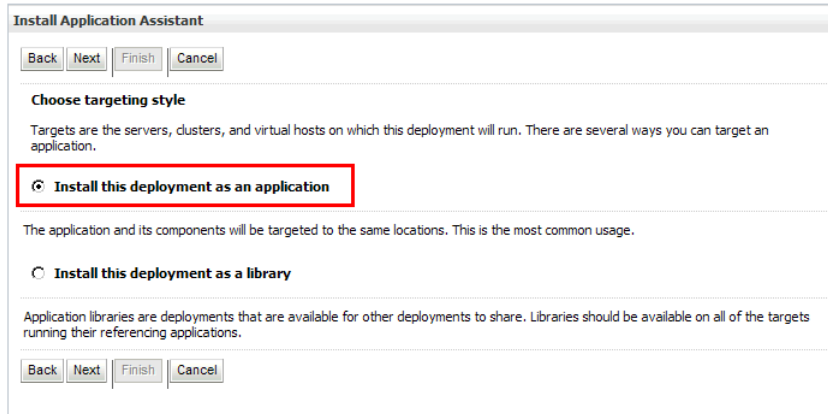
- 5.1. Select the file and click **Open**.

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

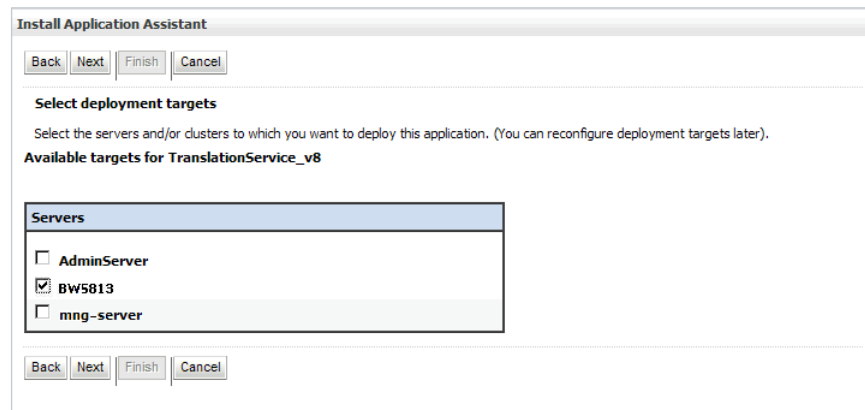


7. Select the `TranslationService_v8.1.3.ear` file from the list.

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.

Install Application Assistant

Back Next Finish Cancel

Optional Settings
You can modify these settings or accept the defaults.

General

What do you want to name this deployment?

Name: TranslationService

Security

What security model do you want to use with this application?

DD Only: Use only roles and policies that are defined in the deployment descriptors.

Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor.

Custom Roles and Policies: Use only roles and policies that are defined in the Administration Console.

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

Source accessibility

How should the source files be made accessible?

Use the defaults defined by the deployment's targets

Recommended selection.

Copy this application onto every target for me

During deployment, the files will be copied automatically to the managed servers to which the application is targeted.

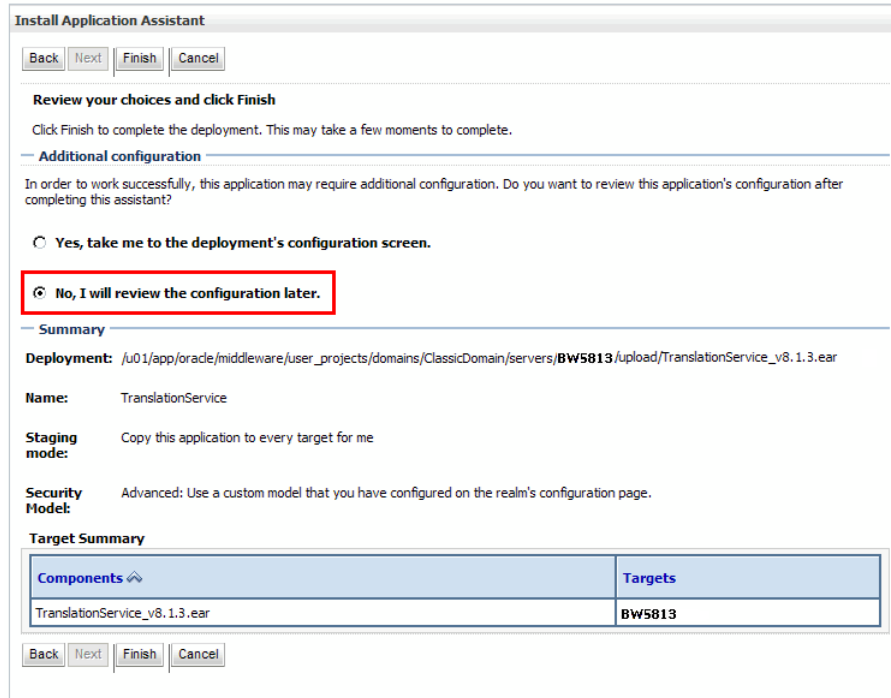
I will make the deployment accessible from the following location

Location: /u01/app/oracle/middleware/user_projects/domains/Class

Provide the location from where all targets will access this application's files. This is often a shared directory. You must ensure the application files exist in this location and that each target can reach the location.

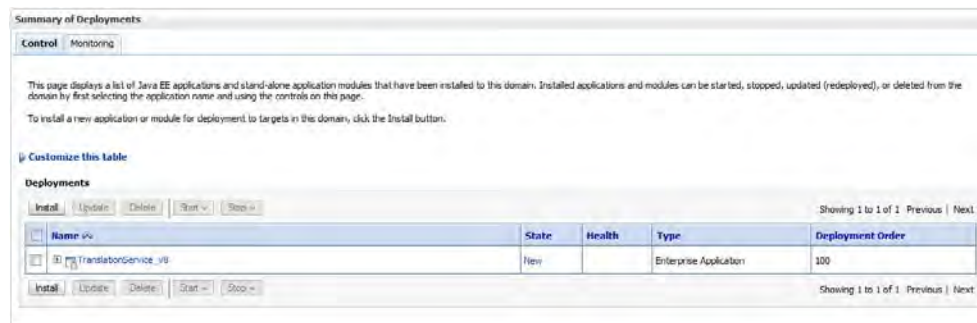
Back Next Finish Cancel

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:

Summary of Deployments

Control | Monitoring

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

Customize this table

Deployments

Install | Update | Delete | Start ▼ | Stop ▼

Showing 26 to 30 of 30 Previous | Next

<input type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input type="checkbox"/>	coral18n-adf(11,11.1.1.1.0)	Active		Library	100
<input type="checkbox"/>	reports (11.1.1.2.0)	Prepared		Enterprise Application	100
<input checked="" type="checkbox"/>	TranslationService	distribute Initializing		Enterprise Application	100
<input type="checkbox"/>	UIX(11,11.1.1.1.0)	Active		Library	100
<input type="checkbox"/>	wsil-wls	Active	OK	Enterprise Application	5

Install | Update | Delete | Start ▼ | Stop ▼

Showing 26 to 30 of 30 Previous | Next

20.1. Select the newly deployed application.

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

Start Application Assistant

Yes | No

Start Deployments

You have selected the following deployments to be started. Click 'Yes' to continue, or 'No' to cancel.

- TranslationService

Yes | No

20.2. Click **Yes**.

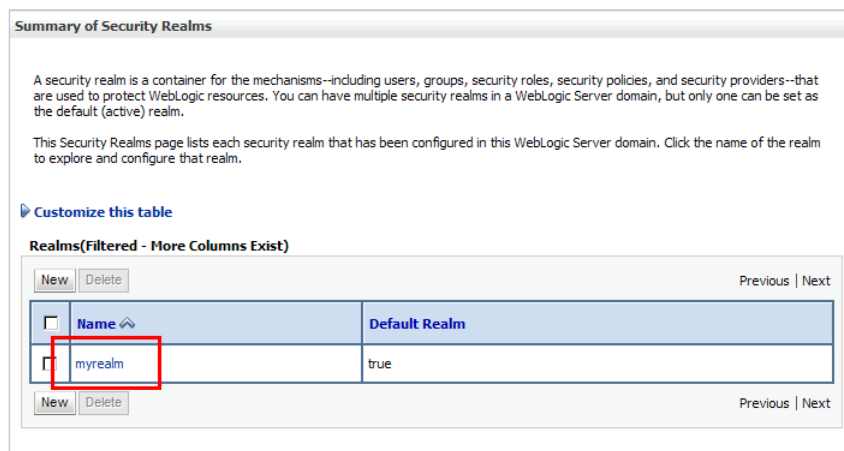
Step 9 Configure the security group and user

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

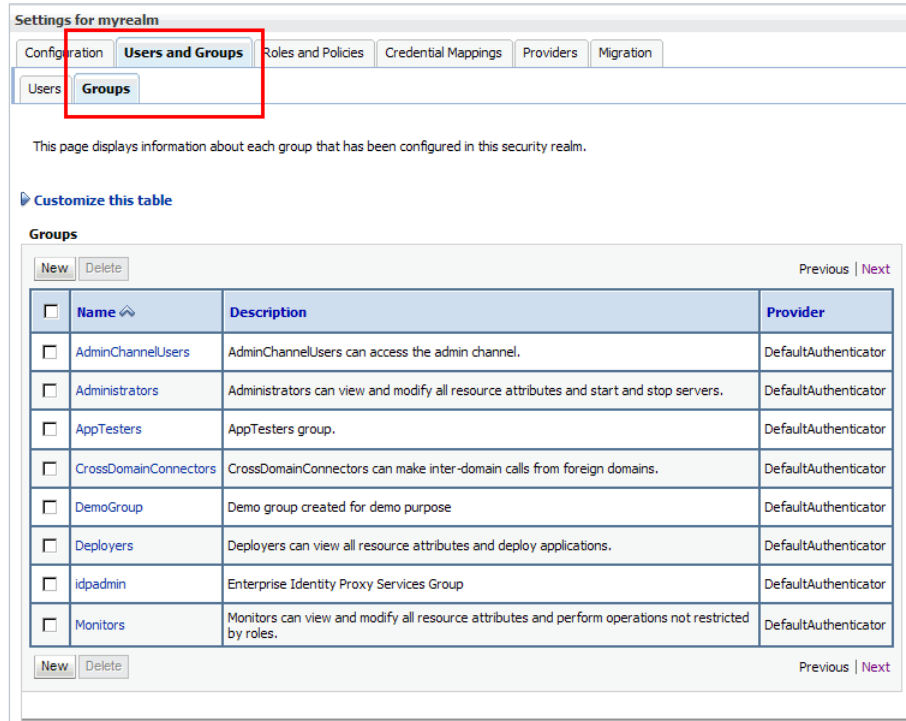
1. In the Domain Structure pane, click **Security Realms**.



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.



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

Create a New Group

OK Cancel

Group Properties

The following properties will be used to identify your new Group.

* Indicates required fields

What would you like to name your new Group?

* **Name:**

How would you like to describe the new Group?

Description:

Please choose a provider for the group.

Provider:

OK Cancel

- Enter the following information to create a group:

Name *transsvcAdminGroup*

Description *Banner Translation Service Administrative Group*

Provider *DefaultAuthenticator*

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

Settings for myrealm

Configuration **Users and Groups** Roles and Policies Credential Mappings Providers Migration

Users **Groups**

This page displays information about each group that has been configured in this security realm.

Customize this table

Groups

New Delete Previous | Next

<input type="checkbox"/>	Name ↕	Description	Provider
<input type="checkbox"/>	idpAdminGroup	Enterprise Identity Proxy Services Administrative Group	DefaultAuthenticator
<input type="checkbox"/>	Monitors	Monitors can view and modify all resource attributes and perform operations not restricted by roles.	DefaultAuthenticator
<input type="checkbox"/>	Operators	Operators can view and modify all resource attributes and perform server lifecycle operations.	DefaultAuthenticator
<input type="checkbox"/>	OracleSystemGroup	Oracle application software system group.	DefaultAuthenticator
<input type="checkbox"/>	transsvcAdminGroup	Banner Translation Service Administrative Group	DefaultAuthenticator

New Delete Previous | Next

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

Settings for myrealm

Configuration **Users and Groups** Roles and Policies Credential Mappings Providers Migration

Users Groups

This page displays information about each user that has been configured in this security realm.

Customize this table

Users

New Delete Previous | Next

<input type="checkbox"/>	Name ↕	Description	Provider
<input type="checkbox"/>	bnix	Banner Identity Gateway Administrator	DefaultAuthenticator
<input type="checkbox"/>	DemoUser	Demo user created for demo purpose	DefaultAuthenticator
<input type="checkbox"/>	idproxy	Enterprise Identity Proxy Services User	DefaultAuthenticator
<input type="checkbox"/>	weblogic		DefaultAuthenticator

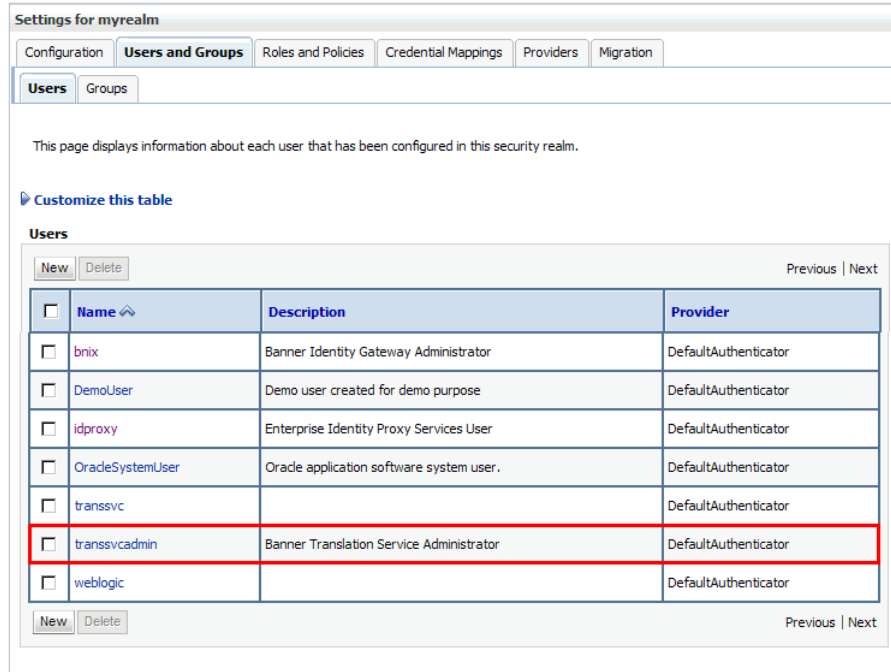
New Delete Previous | Next

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

10. Enter the following information to create a user:

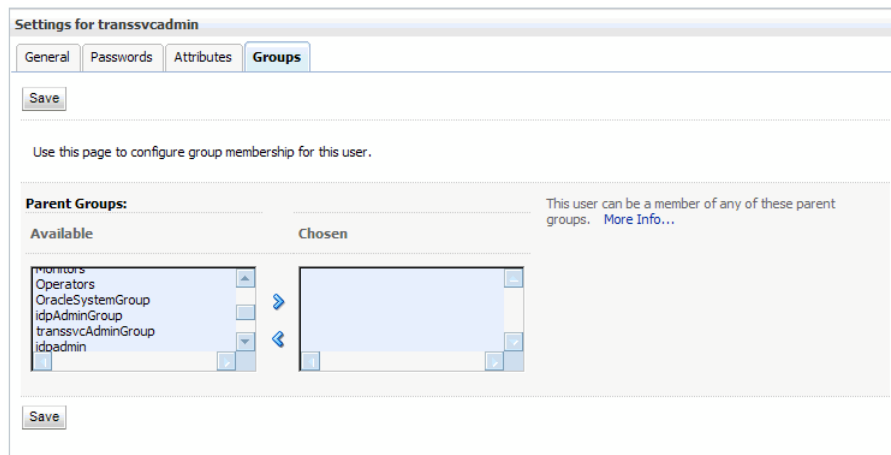
Name	<i>transvcadmin</i> (This is an example. Enter the name of your choice.)
Description	<i>Banner Translation Service Administrator</i>
Provider	<i>DefaultAuthenticator</i>
Password	Password for the user being created
Confirm Password	Confirmation of the password

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

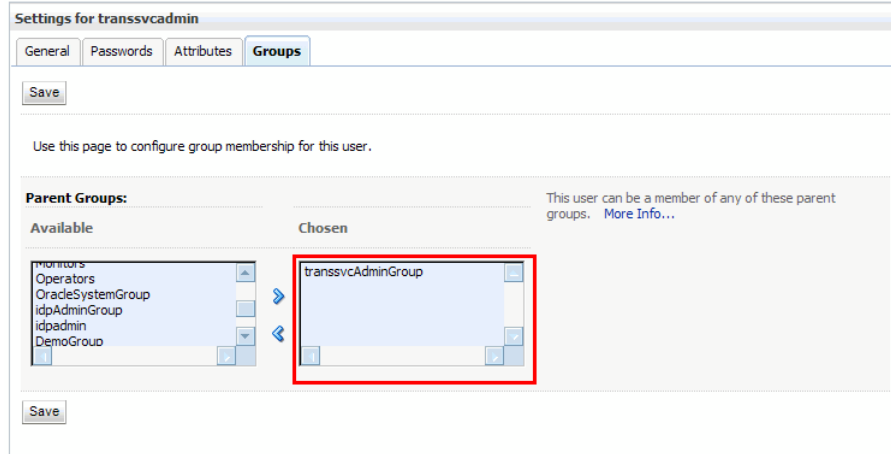


12. Click the name of the user you just created. The Settings page for the user is displayed.

13. Select the **Groups** tab.



14. In the Parent Groups section, select *transvcAdminGroup* 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, <i>rco:Gender</i>).
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.

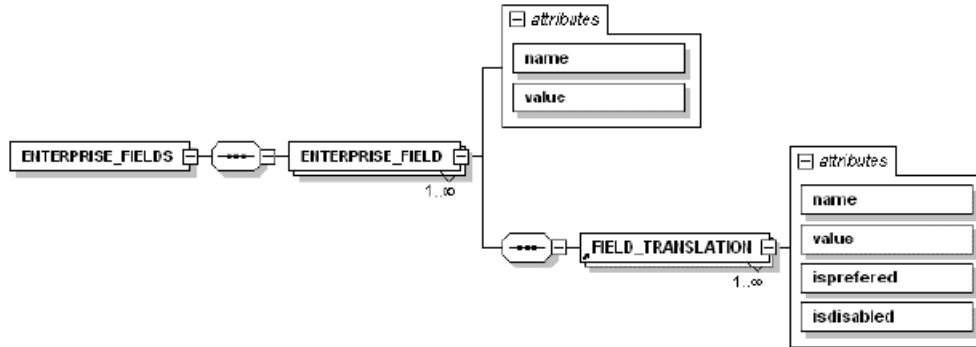
Import enterprise fields

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:

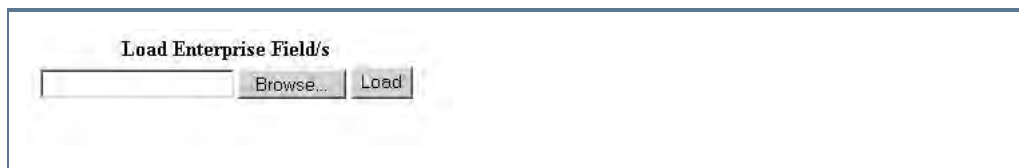


A sample XML file follows:

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

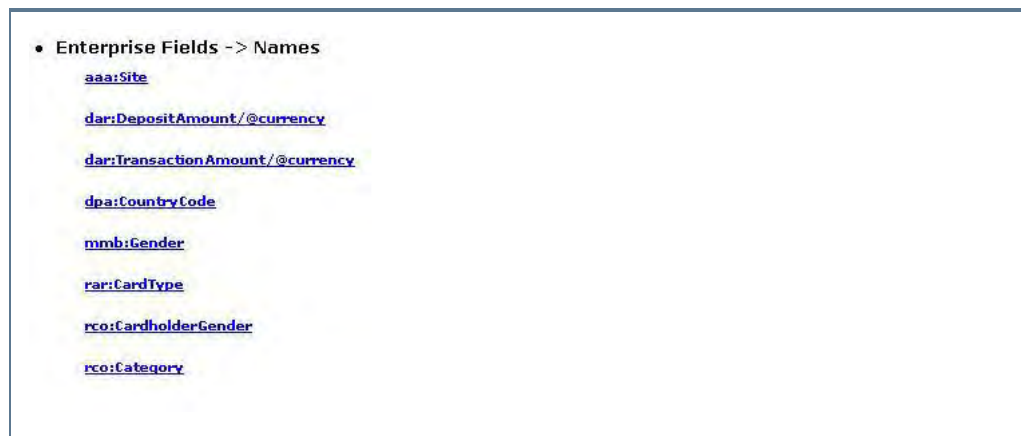
You can export a single enterprise field or all enterprise fields from the Banner Translation Service.

Export one enterprise field

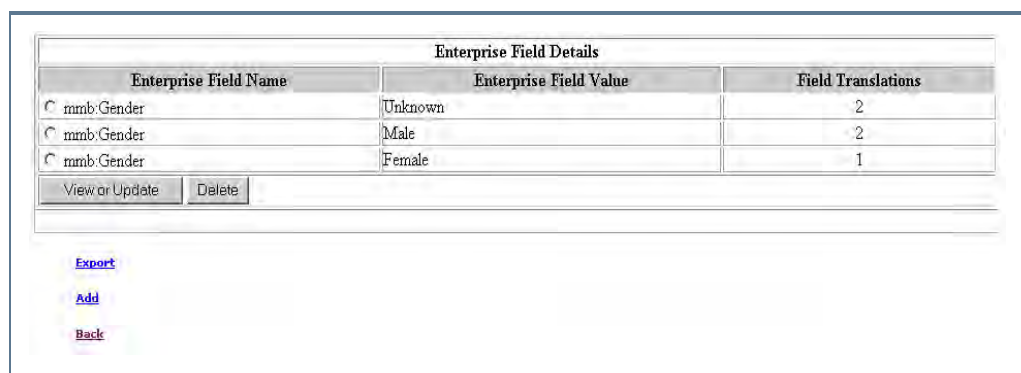
Use the following steps to export a single enterprise field.

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.

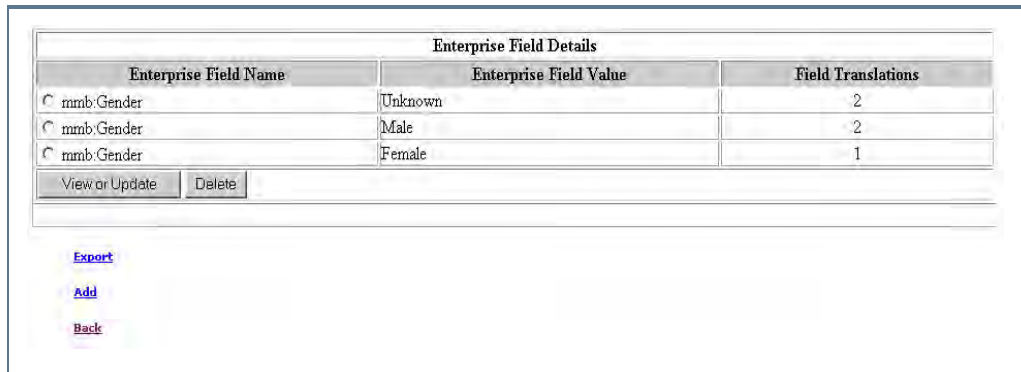
1. Click **List** under the Enterprise Field menu.

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.

Enterprise Field Details		
Enterprise Field Name	Enterprise Field Value	Field Translations
<input type="radio"/> mmb:Gender	Unknown	2
<input type="radio"/> mmb:Gender	Male	2
<input type="radio"/> mmb:Gender	Female	1

View or Update Delete

[Export](#)

[Add](#)

[Back](#)

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

Create Enterprise Field

Enterprise Field Value

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.

Field Translations for mmb:Gender - Miscellaneous

Application Name	Application Value	Disable	Default
<input type="button" value="Delete"/>	<input type="button" value="Enable"/>	<input type="button" value="Set Default"/>	<input type="button" value="Clear Default"/>

Add Field Translations

Application Name	Application Value	Disable	Default
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

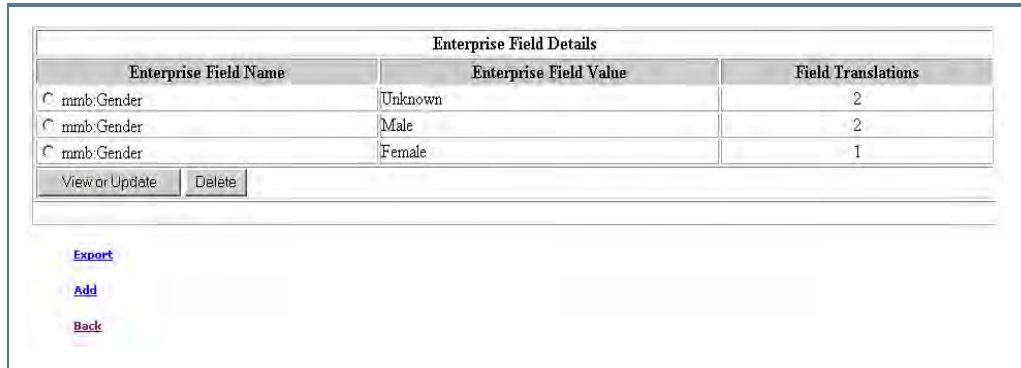
Add a field translation

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.

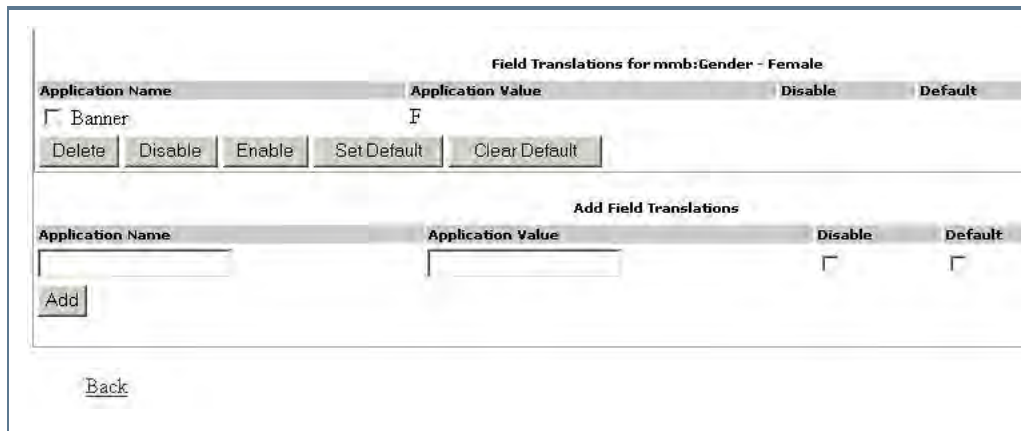
1. Click **List** under the Enterprise Field menu.

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*).

- 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.



- Select the enterprise field name/value pair to which you want to add field translations.
- Click **View or Update**. The Field Translations page displays existing field translations.



- 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

- (optional) Select the **Disable** check box if the field translation is disabled initially.
- Click **Add**. The Field Translations page displays the new translation value.

Field Translations for mmb:Gender - Female			
Application Name	Application Value	Disable	Default
<input type="checkbox"/> Banner	F		
<input type="checkbox"/> hr-XML	Female		
<input type="button" value="Delete"/> <input type="button" value="Disable"/> <input type="button" value="Enable"/> <input type="button" value="Set Default"/> <input type="button" value="Clear Default"/>			
Add Field Translations			
Application Name	Application Value	Disable	Default
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="button" value="Add"/>			
Back			

- (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.

- 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*).

<ul style="list-style-type: none"> Enterprise Fields -> Names <ul style="list-style-type: none"> aaa:Site dar:DepositAmount/@currency dar:TransactionAmount/@currency dpa:CountryCode mmb:Gender rar:CardType rco:CardholderGender rco:Category
--

- 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.

Enterprise Field Details		
Enterprise Field Name	Enterprise Field Value	Field Translations
<input type="radio"/> mmb:Gender	Unknown	2
<input type="radio"/> mmb:Gender	Male	2
<input type="radio"/> mmb:Gender	Female	1
<input type="button" value="View or Update"/> <input type="button" value="Delete"/>		

[Export](#)
[Add](#)
[Back](#)

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*).

<ul style="list-style-type: none"> • Enterprise Fields -> Names <ul style="list-style-type: none"> aaa:Site dar:DepositAmount/@currency dar:TransactionAmount/@currency dpa:CountryCode mmb:Gender rar:CardType rco:CardholderGender rco:Category
--

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.

Enterprise Field Details		
Enterprise Field Name	Enterprise Field Value	Field Translations
<input type="radio"/> mmb:Gender	Unknown	2
<input type="radio"/> mmb:Gender	Male	2
<input type="radio"/> mmb:Gender	Female	1

View or Update Delete

[Export](#)

[Add](#)

[Back](#)

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.

Field Translations for mmb:Gender - Female			
Application Name	Application Value	Disable	Default
<input type="checkbox"/> Banner	F		
Delete Disable Enable Set Default Clear Default			
Add Field Translations			
Application Name	Application Value	Disable	Default
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add			
Back			

- 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

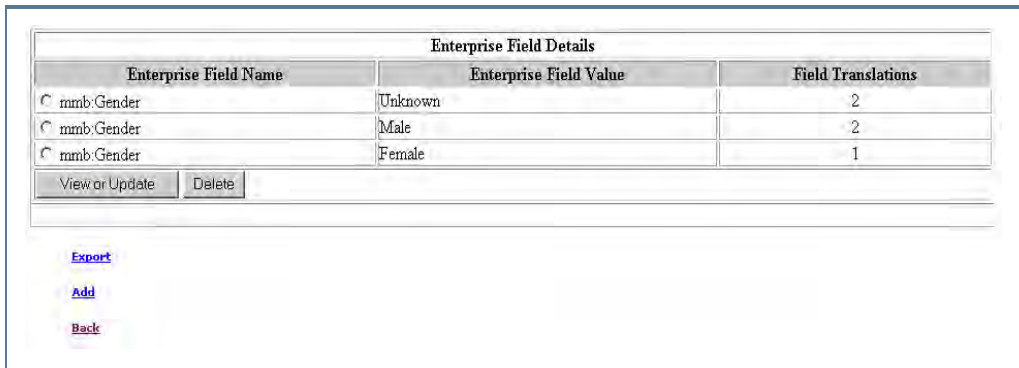
value when the Banner Translation Service processes a translation request. Use the following steps to disable or enable field translations.

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

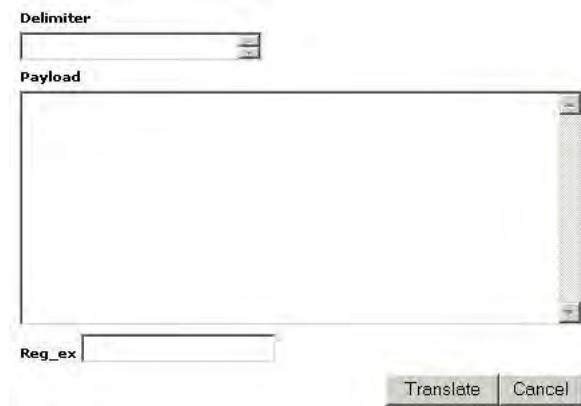
The Banner Translation Service provides a translation Web tool that can be used to test your Banner Translation Service data setup and diagnose any issues. This tool tests the following scenarios:

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: <ul style="list-style-type: none">• 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:





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