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Banner Enterprise Identity Services
Release and Upgrade Guide

Release 8.2.1
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Contents

Introduction

Banner® Enterprise Identity Services (BEIS) is a collection of Banner components that support your institution's identity and access management architecture. This document describes the enhancements, resolutions, and upgrade instructions for BEIS 8.2.1.

You must be on BEIS 8.2 before you upgrade to BEIS 8.2.1.

BEIS 8.2.1 is supported on Oracle WebLogic Server 11g. BEIS 8.2.1 is not supported on previous Oracle application servers.

All BEIS 8.2.1 components were tested and certified on Java 7.

Enhancements to SSO Manager

The SSO Manager acts as a single sign on gateway for Internet-Native Banner (INB) and Self-Service Banner (SSB).

BEIS 8.2.1 updates the SSO Manager to allow multiple login sessions for a Banner user. This feature supports performance testing for SSO to INB with a single user account.

Resolutions

The Banner Enterprise Identity Services 8.2.1 Resolutions Report is a companion to this document. The Resolutions Report provides summary information about the change requests that are resolved in Banner Enterprise Identity Services 8.2.1. Use the following steps to access the Resolutions Report on the Ellucian Support Center:

1. Go to https://ellucian.force.com/clients/home/home.jsp.
2. Sign in to the Ellucian Support Center.
3. Select the **Documentation Libraries** tab.
4. Search for the Banner Enterprise Identity Services Resolutions 8.2.1 Report.

Upgrade Instructions

This section provides instructions for upgrading from BEIS 8.2 to BEIS 8.2.1. You must be on BEIS 8.2 before you upgrade to BEIS 8.2.1. If you are on an earlier version, you must upgrade to BEIS 8.2 before you upgrade to BEIS 8.2.1.

The upgrade from BEIS 8.2 to BEIS 8.2.1 involves the following tasks:

1. Download BEIS 8.2.1.
2. Upgrade the Banner Identity Gateway and the Banner Identity Proxy. These components must be upgraded together. You can choose an automated upgrade process or a manual upgrade process.
3. Upgrade the SSO Manager. You can choose an automated upgrade process or a manual upgrade process.

The upgrade process updates the following database components and application server components:

Database Components	Application Server Components
Banner Identity Gateway schema - BNIXMGR Banner Identity Proxy schema - IDENTMGR SSO Manager schema - SSOMGR	JEE applications

Database components must be upgraded with a manual process. Some application server components can be upgraded with a manual process or an automated process. Where applicable, both automated upgrade instructions and manual upgrade instructions are provided. You can choose which method you wish to use.

Download BEIS 8.2.1

Use the following steps to download BEIS 8.2.1:

1. Download `BEIS_8.2.1.zip` from the Ellucian Download Center. The file is located under the Banner General product.
2. Extract `BEIS_8.2.1.zip.`
3. Navigate to the `Deployables` directory.
4. Identify the BEIS components that will be upgraded:

Component	Zip file name	Function
Banner Identity Gateway	`IdGtwyPrxy_8.2.zip`	Creates and publishes identity messages based on changes to identity data in the Banner database
Banner Identity Proxy	`IdGtwyPrxy_8.2.zip`	Propagates identity messages to SPML-enabled applications
SSO Manager	`SSOManager_8.2.zip`	Provides a single sign on (SSO) gateway for Internet-Native Banner (INB) and Self-Service Banner (SSB)

Upgrade Banner Identity Gateway and Banner Identity Proxy to 8.2.1

You can choose an automated upgrade process or a manual upgrade process.

Automated upgrade for Banner Identity Gateway and Banner Identity Proxy

The Banner Identity Gateway and the Banner Identity Proxy must be upgraded together. Use the following steps if you choose an automated upgrade process:

- Step 1 - Verify the BEP installation
- Step 2 - Enable cross domain security
- Step 3 - Delete deprecated objects

- Step 4 - Upgrade the database schema
- Step 5 - Run the automated installer
- Step 6 - Evaluate the environment
- Step 7 - Verify that messaging is working
- Step 8 - Confirm access to the Banner Identity Gateway and the Banner Identity Proxy
- Step 9 - Configure the Banner Identity Gateway and the Banner Identity Proxy

The following sections provide details for each step.

Step 1 - Verify the BEP installation

Verify that the Banner Event Publisher (BEP) is installed and configured. Refer to Chapter 2, "Preinstallation," in the *Banner Enterprise Identity Services 8.2. Installation Guide* for details.

Step 2 - Enable cross domain security

Note: This step is required only if BEIS and BEP are deployed on separate Oracle WebLogic Server domains. Skip this step if BEIS and BEP are deployed on the same Oracle WebLogic Server domain.

Skip this step if cross domain security was previously enabled during the BEIS 8.2 deployment.

Cross domain security establishes trust between two Oracle WebLogic Server domains. A trust relationship is established when the domain credential for one domain matches the domain credential for the other domain.

By default, the domain credential is randomly created the first time an Oracle WebLogic Server domain is started. This process ensures that each Oracle WebLogic Server domain has a unique credential.

To enable trust between the BEIS and BEP Oracle WebLogic Server domains, you must update the credential of each domain so they match. Use the following steps to enable cross domain security for the BEIS and BEP Oracle WebLogic Server domains.

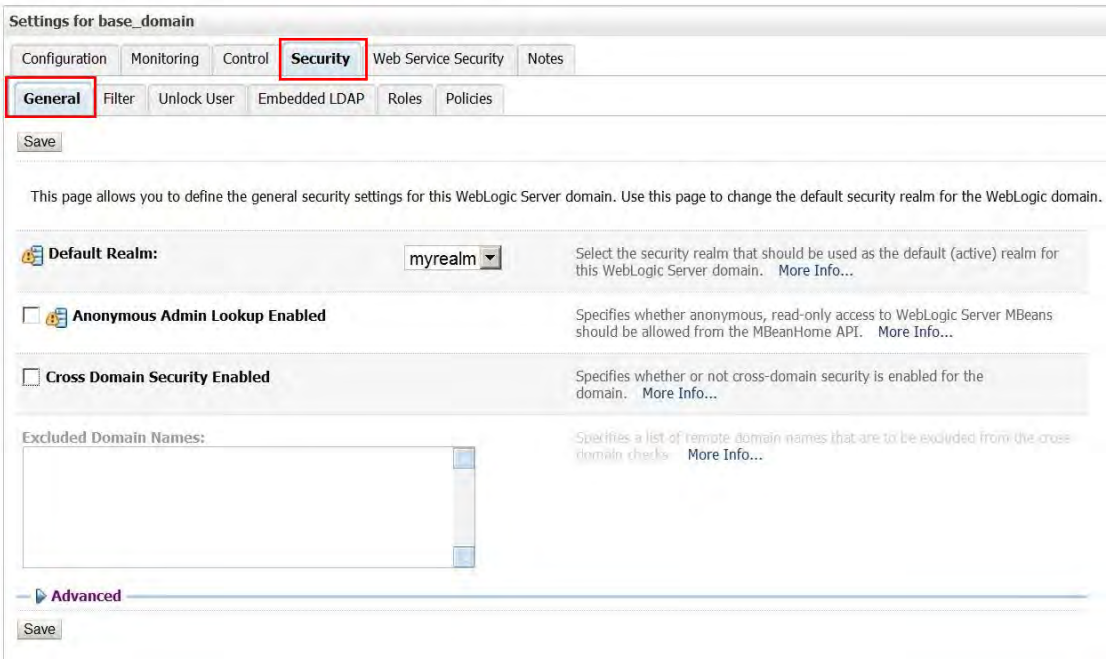
1. Connect to the Oracle WebLogic Server administration console:

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

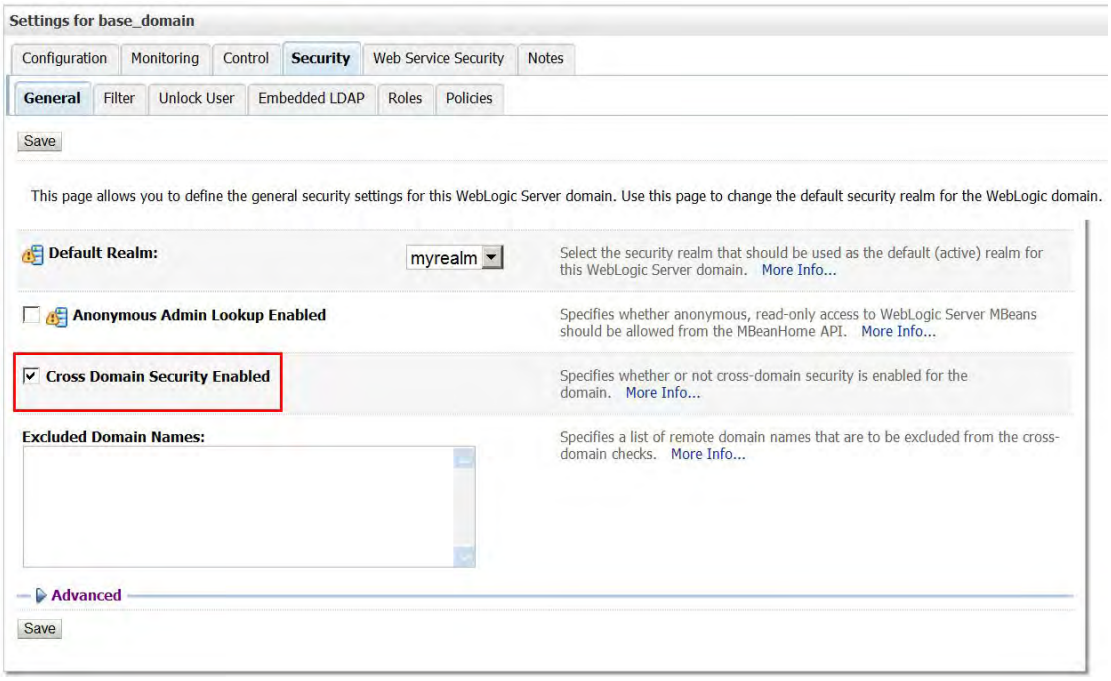
2. In the Change Center pane, click **Lock & Edit**.

3. In the Domain Structure pane, click the name of the BEIS domain. (When you repeat this step for the BEP domain, click the name of the BEP domain.)

4. Select the **Security > General** tab.

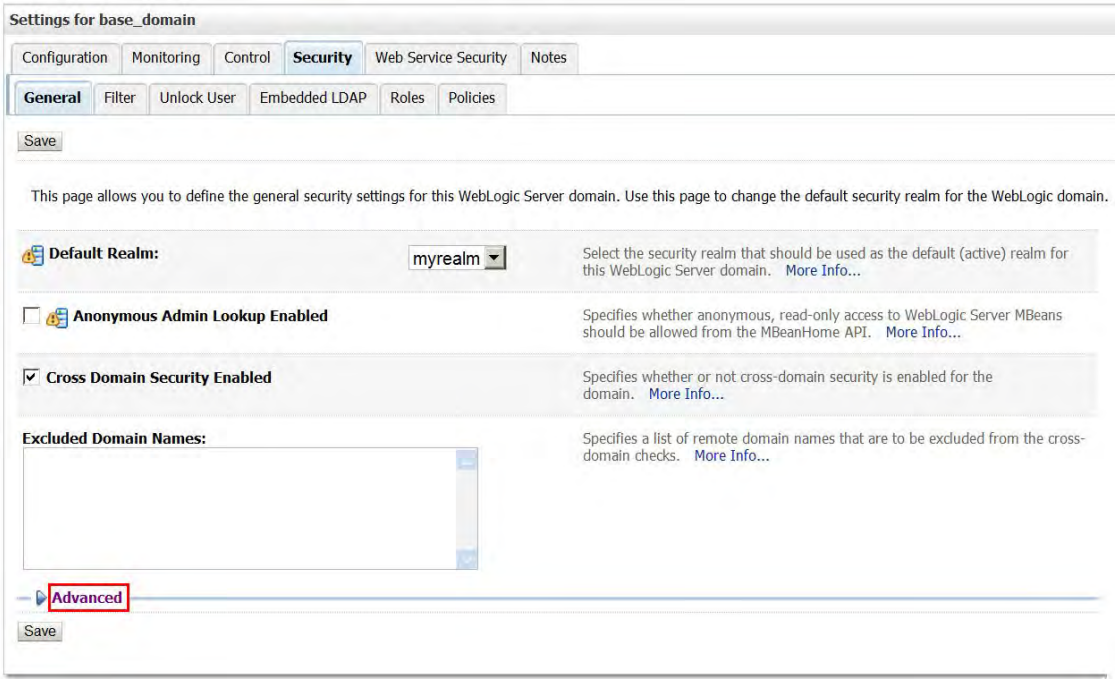


5. Select the **Cross Domain Security Enabled** check box.



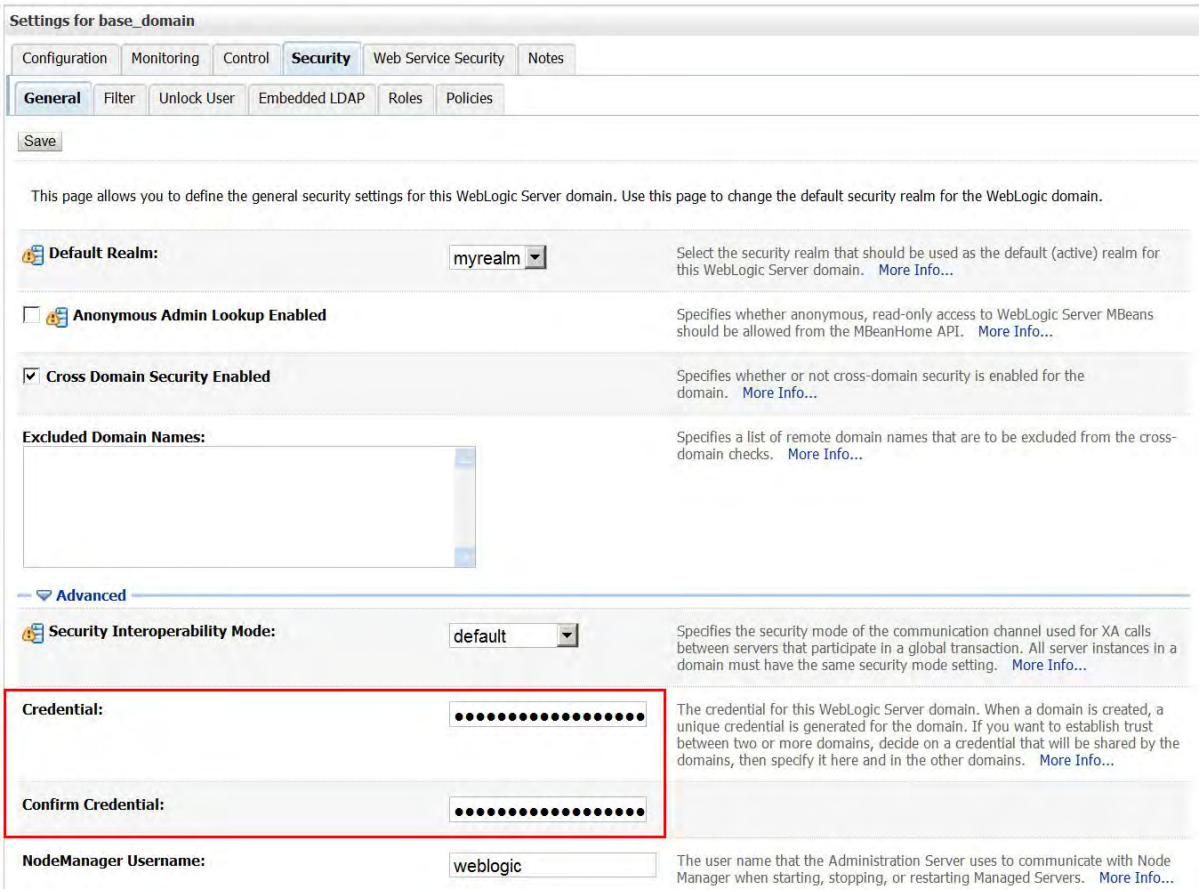
6. Click **Save**.

7. Click **Advanced**.



8. Update the following information:

Credential	Credential for the Oracle WebLogic Server domain. Use a credential that can be shared by the BEIS and the BEP Oracle WebLogic Server domains.
Confirm Credential	Confirmation of the credential for the Oracle WebLogic Server domain



9. Click **Save**.
10. In the Change Center pane, click **Activate Changes**.
11. Shut down all Managed Servers in the domain.
12. Shut down the Admin Server.
13. Start the Admin Server.
14. Start all Managed Servers in the domain.
15. Repeat steps 1 through 14 for the BEP Oracle WebLogic Server domain. Enter the same credential that was used for the BEIS Oracle WebLogic Server domain.

Step 3 - Delete deprecated objects

Use the Oracle WebLogic Server administration console to delete the Banner Identity Gateway 8.2 and Banner Identity Proxy 8.2 applications.

Step 4 - Upgrade the database schema

Use the following steps to upgrade the database packages that are required by the Banner Identity Gateway and the Banner Identity Proxy.

1. Extract `IdGtwyPrxy_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/bnig/packages`.
3. Connect to the database instance where BEIS is installed as the BNIXMGR user.
4. Execute `iokp_build.sql` to upgrade the database packages:

   ```
   sqlplus> @iokp_build
   ```
5. Execute the following command to reset the package variables:

   ```
   sqlplus> exec DBMS_SESSION.RESET_PACKAGE;
   ```
6. Exit SQL*Plus.
7. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/idproxy/packages`.
8. Connect to the database instance where BEIS is installed as the IDENTMGR user.
9. Execute `iokp_build.sql` to upgrade the database packages:

   ```
   sqlplus> @iokp_build
   ```
10. Execute the following command to reset the package variables:

    ```
    sqlplus> exec DBMS_SESSION.RESET_PACKAGE;
    ```
11. Exit SQL*Plus.

Step 5 - Run the automated installer

The automated installer *must* be run on the Oracle WebLogic Server to configure the following files:

`bnig.ear`	Banner Identity Gateway
`IdProxy.ear`	Banner Identity Proxy

Use the following steps to run the automated installer.

1. Extract `IdGtwyPrxy_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.

2. Open a command prompt and navigate to `<ZIP_HOME>/ant-installer`.
3. Execute the following command:

   ```
   java -jar gtwy-prxy-weblogic-installer.jar
   ```

   The automated installer is launched. The user interface depends on whether you are running in a windowing (GUI) or non-windowing (command-line) environment. The remaining instructions are based on using the GUI for configuration. Configuration options are identical for a command-line interface.

   Note: In command-line mode, each configuration option is displayed with the default value in brackets. To accept the default value, press Enter on your keyboard. To enter a different value, enter the correct value and press Enter on your keyboard. Valid values for the configuration options are *true* and *false*. All values must be entered without leading and trailing spaces.

4. Click **Next**.

5. Select the following check boxes:

   Configure and Save EAR Files

   Deploy Banner Identity Gateway

   Deploy Banner Identity Proxy

6. Click **Next**.

7. Enter the following Banner Event Publisher (BEP) information:

BEP Server Host	BEP server host name
BEP Server Port	Port number where BEP is running
BEP Server Username	User name for the administrator of the application server where BEP is deployed
BEP Server Password	Password for the administrator of the application server where BEP is deployed

8. Click **Next**.
9. Enter the password for the INTEGMGR account.

10. Click **Next**.

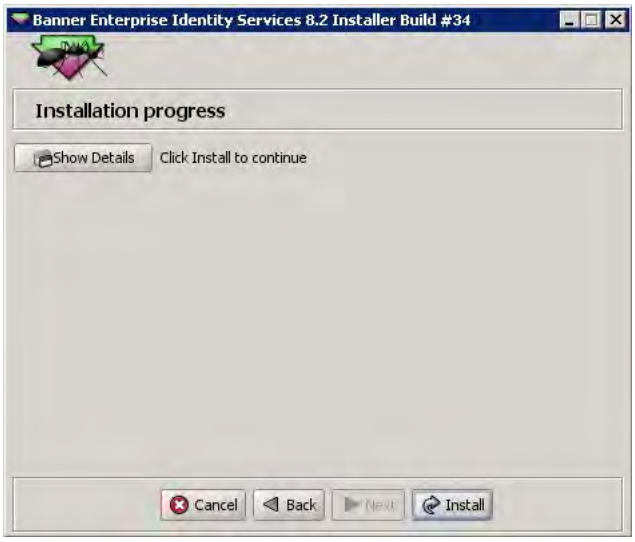
11. Click **Select Folder** and browse to the location where you want to save `bnig.ear` and `IdProxy.ear`.

12. Click **Next**.

13. Enter the following application server information:

WebLogic Server Home Directory	Path of the Oracle WebLogic Server home directory (for example,*C:\Oracle\Middleware\wlserver_10.3*)
Weblogic Admin Username	User name for the application server administrator
Weblogic Admin Password	Password for the application server administrator
Weblogic Server Host	IP address or host name of the machine where the Oracle WebLogic Server is installed
Weblogic Admin Sever Port	Port where the Oracle WebLogic Server is running
Weblogic Managed Server Name	Name of the Oracle WebLogic Managed Server where the data sources are created, the JMS artifacts are created, and the applications are deployed

14. Click **Next**.
15. Click **Show Details**.
16. Click **Install**.



Installation details are displayed as the installation progresses.

The message *Install Finished* is displayed when the installation is complete. The `bnig.ear` and `IdProxy.ear` files are saved in the selected folder.

Step 6 - Evaluate the environment

After you upgrade the Banner Identity Gateway and the Banner Identity Proxy, you should run `post_install_beis_checkscript.sql` to evaluate your environment and identify potential problems. This script reports on several criteria that are essential for a fully functioning BEIS environment. You can use the script to evaluate both new installations and upgrades. Depending on the current state of your Banner/Oracle RDBMS environment, you might need to make changes based on the output of the script.

Use the following steps to run the check script and evaluate the results.

1. Extract `IdGtwyPrxy_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/util`.
3. Ensure that `post_install_beis_checkscript.sql` has read permission.
4. Connect to SQL*Plus as the BANINST1 user.
5. Execute `post_install_beis_checkscript.sql`:

   ```
   sqlplus> @post_install_beis_checkscript
   ```

6. When prompted, enter the following information:
   - Username for the BNIXMGR schema (for example, *BNIXMGR*)
   - Username for the IDENTMGR schema (for example, *IDENTMGR*)
7. Exit SQL*Plus.

8. Evaluate the results as follows:

Result	Evaluation
BNIXMGR schema	The BNIXMGR schema must exist.
Roles assigned to BNIXMGR	The following roles must be assigned to BNIXMGR: • RESOURCE • CONNECT
Privileges granted to BNIXMGR	The following privileges must be granted to BNIXMGR: • DROP PUBLIC SYNONYM • CREATE PUBLIC SYNONYM • UNLIMITED TABLESPACE • CREATE SESSION • CREATE SYNONYM • CREATE VIEW
Database objects in BNIXMGR database schema	The BNIXMGR schema should have the following tables: • BNIXVAL • GTWMETA • PSPALOG • T_UDC_ERROR_LOG • T_UDC_ERROR_LOG_H
Sequences that belong to BNIXMGR	The BNIXMGR schema should have the following sequences: • T_UDC_ERROR_LOG_SEQ • T_UDC_ERROR_LOG_H_SEQ • PSPALOG_SEQ
Views that belong to BNIXMGR	The BNIXMGR schema should have the VW_UDC_ERROR_LOG view.
Triggers that belong to BNIXMGR	The BNIXMGR schema should have the following triggers: • TRG_UDC_ERROR_LOG_BUS • TRG_UDC_ERROR_LOG_BUR • TRG_UDC_ERROR_LOG_AUS
Packages that belong to BNIXMGR	The BNIXMGR schema should have the following packages: • IOKP_GTW_METADATA • IOKP_UDC_ERROR_LOG • IOKP_PSPALOG • IOKP_UDC_ERROR_LOG_H
IDENTMGR schema	The IDENTMGR schema must exist.

Result	Evaluation
Roles assigned to IDENTMGR	The following roles must be assigned to IDENTMGR: • RESOURCE • CONNECT
Privileges granted to IDENTMGR	The following privileges must be granted to IDENTMGR: • CREATE VIEW • UNLIMITED TABLESPACE • DROP PUBLIC SYNONYM • CREATE PUBLIC SYNONYM • CREATE SYNONYM • CREATE SESSION
Database objects in IDENTMGR database schema	The IDENTMGR schema should have the following tables: • T_UDC_PST_LIST • T_UDC_SPML_MSG_BALANCER • T_UDC_SPML_MSG_LOG • T_UDC_SPML_RES_ERROR_LOG
Sequences that belong to IDENTMGR	The IDENTMGR schema should have the following sequences: • T_UDC_PST_LIST_SEQ • T_UDC_SPML_MSG_LOG_SEQ • T_UDC_SPML_RES_ERROR_LOG_SEQ
Packages that belong to IDENTMGR	The IDENTMGR schema should have the following packages: • IOKP_UDC_SPML_MSG_LOG • IOKP_UDC_PST

Step 7 - Verify that messaging is working

During the BEIS 8.2 installation, seed data for BEISIdentityEvent was loaded into the Banner Event Publisher (BEP). BEP uses this event to capture identity data changes in Banner, evaluate the changes, and publish XML messages for BEIS processing.

Use the following steps to verify that the seed data was loaded and that BEP is publishing XML messages properly.

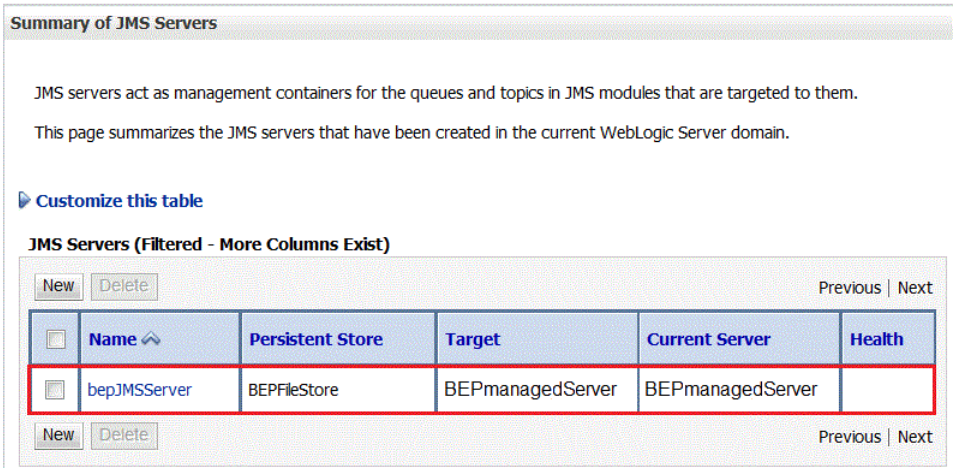
1. Log in to Internet-Native Banner (INB).
2. Access the Identification (SPAIDEN) form.
3. Change the first name of a person.
4. Save the change.

5. Connect to the Oracle WebLogic Server administration console:

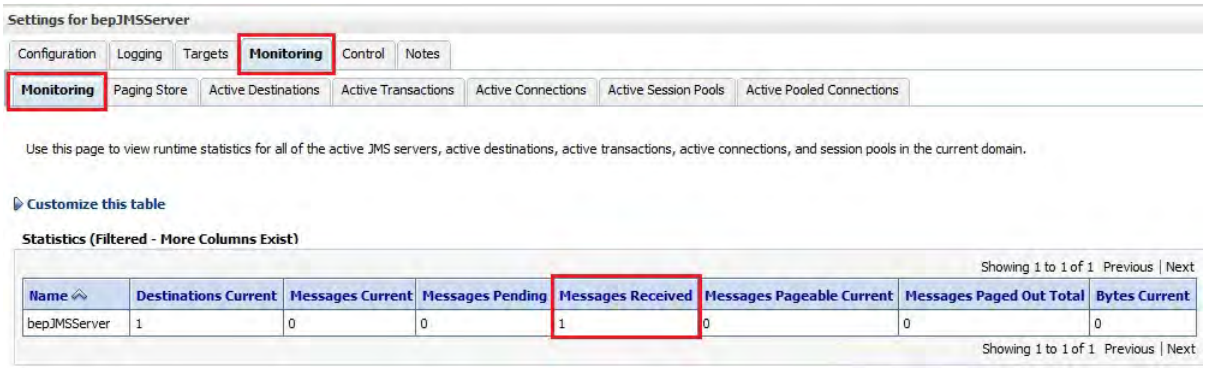
   `http://<host>:<port>/console`

6. In the Domain Structure pane, expand and click **Services > Messaging > JMS Servers**.

7. Click the name of the JMS server that was created for BEP.



8. Select the **Monitoring > Monitoring** tab on the Settings page.



9. Verify that the **Messages Received** count increased by 1.

10. Return to SPAIDEN and update the person's first name to the original value. This should trigger another event.

11. Refresh the Settings page for the JMS server.

12. Verify that the **Messages Received** increased by 1. If the message count increased, BEP consumed the message from the queue and posted it to the JMS topic.

Step 8 - Confirm access to the Banner Identity Gateway and the Banner Identity Proxy

Use the following steps to confirm that you can successfully access the Banner Identity Gateway administrative interface and the Banner Identity Proxy administrative interface.

1. Connect to the Banner Identity Gateway:

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

2. Log in with the user name and password for the Banner Identity Gateway.

   If the login fails, verify that the credentials are correct and that the Oracle WebLogic Server is configured correctly to assign the appropriate users and roles to the application. Repeat these steps until login is successful.

3. Connect to the Banner Identity Proxy:

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

4. Log in with the user name and password for the Banner Identity Proxy.

   If the login fails, verify that the credentials are correct and that the Oracle WebLogic Server is configured correctly to assign the appropriate users and roles to the application. Repeat these steps until login is successful.

Step 9 - Configure the Banner Identity Gateway and the Banner Identity Proxy

Refer to the *Banner Enterprise Identity Services 8.2 User Guide* for instructions on configuring the Banner Identity Gateway and the Banner Identity Proxy as follows.

If...	Then...
You are implementing outbound account provisioning	Refer to chapter 2 of the user guide to configure Banner: • Declare the PIDM as a bind variable. • Configure email, address, and telephone number content. • Configure the display of tax IDs. • Customize the UDCIdentity XML structure. • Define extension attributes for the LDAP user name and password (if you are integrating with an LDAP directory). • Define capture data for monitoring the LDAP user name and password (if you are integrating with an LDAP directory). Refer to chapter 4 of the user guide to configure BEIS: • Identify the Banner instance that provides identity data. • Configure the location of each Provisioning Service Provider (PSP).
You are implementing inbound account provisioning	Refer to chapter 2 of the user guide to configure Banner: • Configure email, address, and telephone number content. • Configure a GTVSDAX rule for Common Matching. Refer to chapter 5 of the user guide to update the default user profile for new INB users.

Manual upgrade for Banner Identity Gateway and Banner Identity Proxy

The Banner Identity Gateway and the Banner Identity Proxy must be upgraded together. Use the following steps if you choose a manual upgrade process:

- Step 1 - Verify the BEP installation
- Step 2 - Enable cross domain security
- Step 3 - Delete deprecated objects
- Step 4 - Upgrade the database schema
- Step 5 - Configure the Banner Identity Gateway and Banner Identity Proxy .ear files
- Step 6 - Deploy the Banner Identity Gateway
- Step 7 - Deploy the Banner Identity Proxy

- Step 8 - Evaluate the environment
- Step 9 - Verify that messaging is working
- Step 10 - Confirm access to the Banner Identity Gateway and the Banner Identity Proxy
- Step 11 - Configure the Banner Identity Gateway and the Banner Identity Proxy

The following sections provide details for each step.

Step 1 - Verify the BEP installation

Verify that the Banner Event Publisher (BEP) is installed and configured. Refer to Chapter 2, "Preinstallation," in the *Banner Enterprise Identity Services 8.2. Installation Guide* for details.

Step 2 - Enable cross domain security

Note: This step is required only if BEIS and BEP are deployed on separate Oracle WebLogic Server domains. Skip this step if BEIS and BEP are deployed on the same Oracle WebLogic Server domain.

Skip this step if cross domain security was previously enabled during the BEIS 8.2 deployment.

Cross domain security establishes trust between two Oracle WebLogic Server domains. A trust relationship is established when the domain credential for one domain matches the domain credential for the other domain.

By default, the domain credential is randomly created the first time an Oracle WebLogic Server domain is started. This process ensures that each Oracle WebLogic Server domain has a unique credential.

To enable trust between the BEIS and BEP Oracle WebLogic Server domains, you must update the credential of each domain so they match. Use the following steps to enable cross domain security for the BEIS and BEP Oracle WebLogic Server domains.

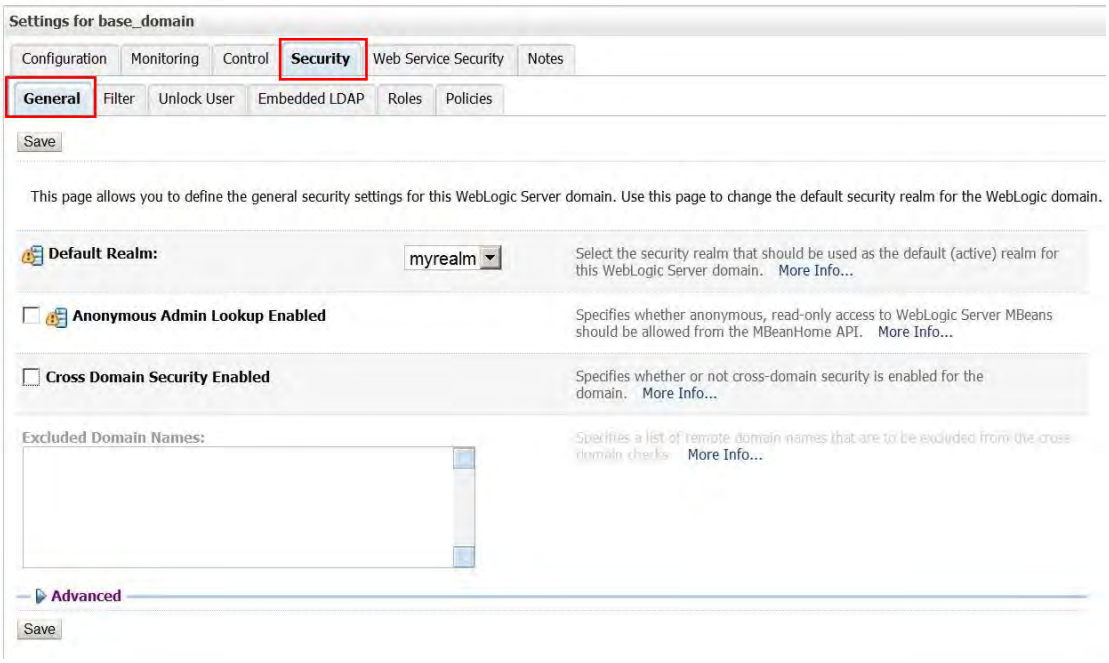
1. Connect to the Oracle WebLogic Server administration console:

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

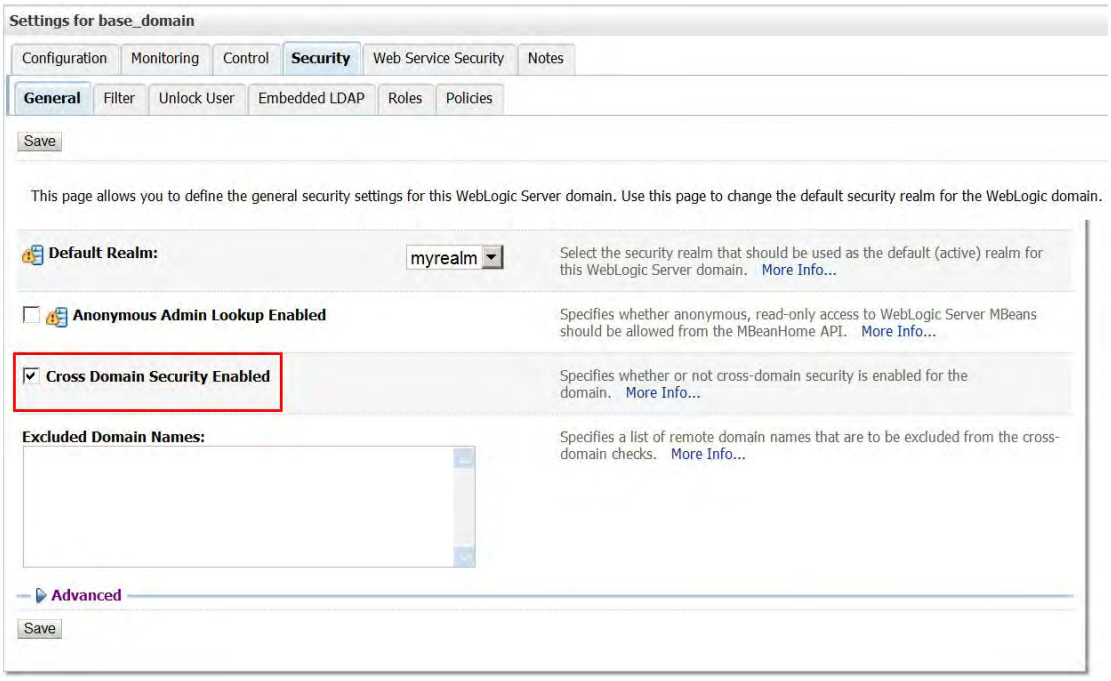
2. In the Change Center pane, click **Lock & Edit**.

3. In the Domain Structure pane, click the name of the BEIS domain. (When you repeat this step for the BEP domain, click the name of the BEP domain.)

4. Select the **Security > General** tab.

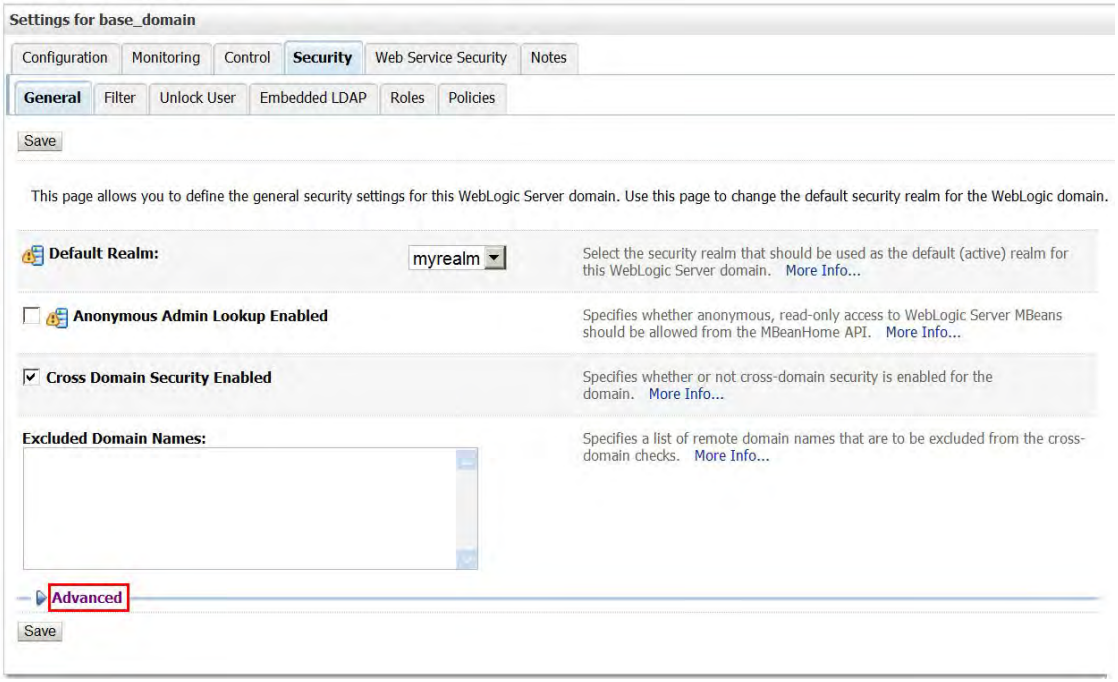


5. Select the **Cross Domain Security Enabled** check box.



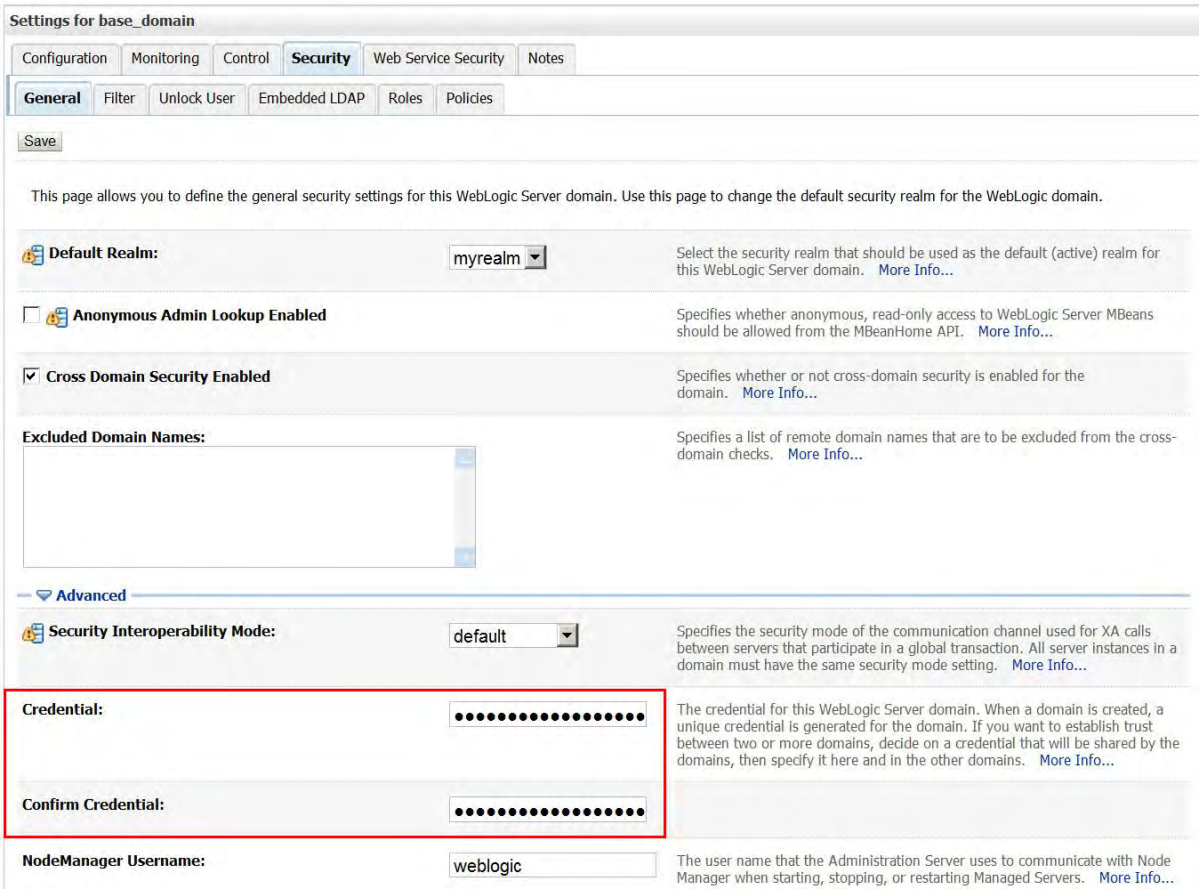
6. Click **Save**.

7. Click **Advanced**.



8. Update the following information:

Credential	Credential for the Oracle WebLogic Server domain. Use a credential that can be shared by both the BEIS and the BEP Oracle WebLogic Server domains.
Confirm Credential	Confirmation of the credential for the Oracle WebLogic Server domain



9. Click **Save**.
10. In the Change Center pane, click **Activate Changes**.
11. Shut down all Managed Servers in the domain.
12. Shut down the Admin Server.
13. Start the Admin Server.
14. Start all Managed Servers in the domain.
15. Repeat steps 1 through 14 for the BEP Oracle WebLogic Server domain. Enter the same credential that was used for the BEIS Oracle WebLogic Server domain.

Step 3 - Delete deprecated objects

Use the Oracle WebLogic Server administration console to delete the Banner Identity Gateway 8.2 and Banner Identity Proxy 8.2 applications.

Step 4 - Upgrade the database schema

Use the following steps to upgrade the database packages that are required by the Banner Identity Gateway and the Banner Identity Proxy.

1. Extract `IdGtwyPrxy_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/bnig/packages`.
3. Connect to the database instance where BEIS is installed as the BNIXMGR user.
4. Execute `iokp_build.sql` to upgrade the database packages:

   ```
   sqlplus> @iokp_build
   ```
5. Execute the following command to reset the package variables:

   ```
   sqlplus> exec DBMS_SESSION.RESET_PACKAGE;
   ```
6. Exit SQL*Plus.
7. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/idproxy/packages`.
8. Connect to the database instance where BEIS is installed as the IDENTMGR user.
9. Execute `iokp_build.sql` to upgrade the database packages:

   ```
   sqlplus> @iokp_build
   ```
10. Execute the following command to reset the package variables:

    ```
    sqlplus> exec DBMS_SESSION.RESET_PACKAGE;
    ```
11. Exit SQL*Plus.

Step 5 - Configure the Banner Identity Gateway and Banner Identity Proxy .ear files

The automated installer *must* be run on the Oracle WebLogic Server to configure the following files:

`bnig.ear`	Banner Identity Gateway
`IdProxy.ear`	Banner Identity Proxy

Use the following steps to run the automated installer and configure the .ear files.

1. Extract `IdGtwyPrxy_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.

2. Open a command prompt and navigate to `<ZIP_HOME>/ant-installer`.
3. Execute the following command:

   ```
   java -jar gtwy-prxy-weblogic-installer.jar
   ```

   The automated installer is launched. The user interface depends on whether you are running in a windowing (GUI) or non-windowing (command-line) environment. The remaining instructions are based on using the GUI for configuration. Configuration options are identical for a command-line interface.

   Note: In command-line mode, each configuration option is displayed with the default value in brackets. To accept the default value, press Enter on your keyboard. To enter a different value, enter the correct value and press Enter on your keyboard. Valid values for the configuration options are *true* and *false*. All values must be entered without leading and trailing spaces.

4. Click **Next**.

5. Select the **Configure and Save EAR Files** check box.

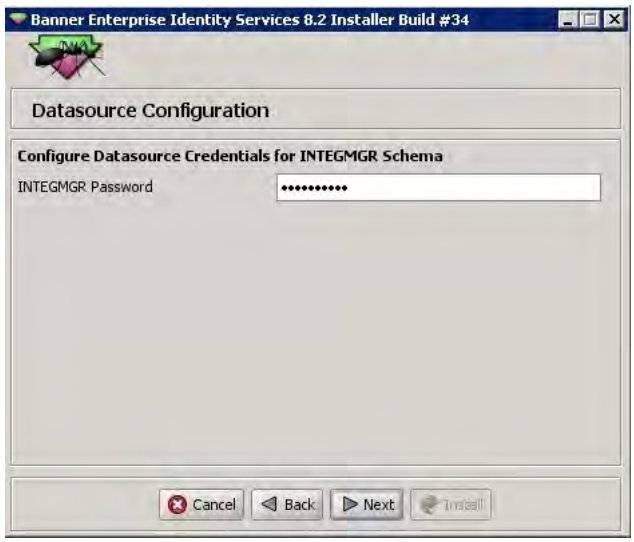
6. Click **Next**.

7. Enter the following Banner Event Publisher (BEP) information:

BEP Server Host	BEP server host name
BEP Server Port	Port number where BEP is running
BEP Server Username	User name for the administrator of the application server where BEP is deployed
BEP Server Password	Password for the administrator of the application server where BEP is deployed

8. Click **Next**.

9. Enter the password for the INTEGMGR account.



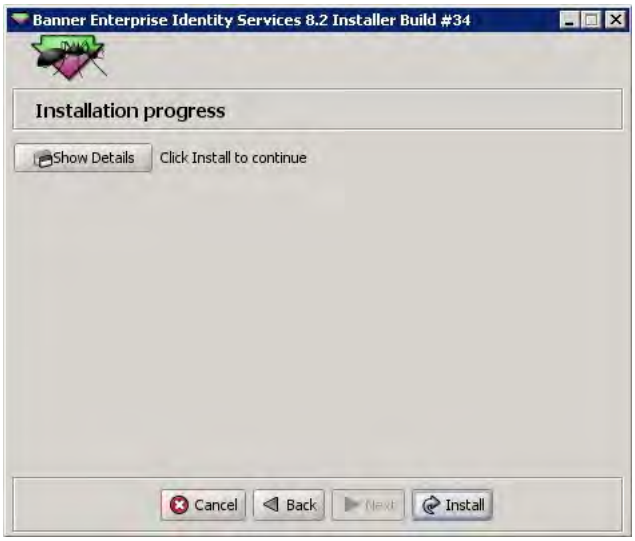
10. Click **Next**.

11. Click **Select Folder** and browse to the location where you want to save `bnig.ear` and `IdProxy.ear` for manual deployment.

12. Click **Next**.

13. Click **Show Details**.

14. Click **Install**.



Installation details are displayed as the installation progresses.

The message *Install Finished* is displayed when the installation is complete. The `bnig.ear` and `IdProxy.ear` files are saved in the selected folder.

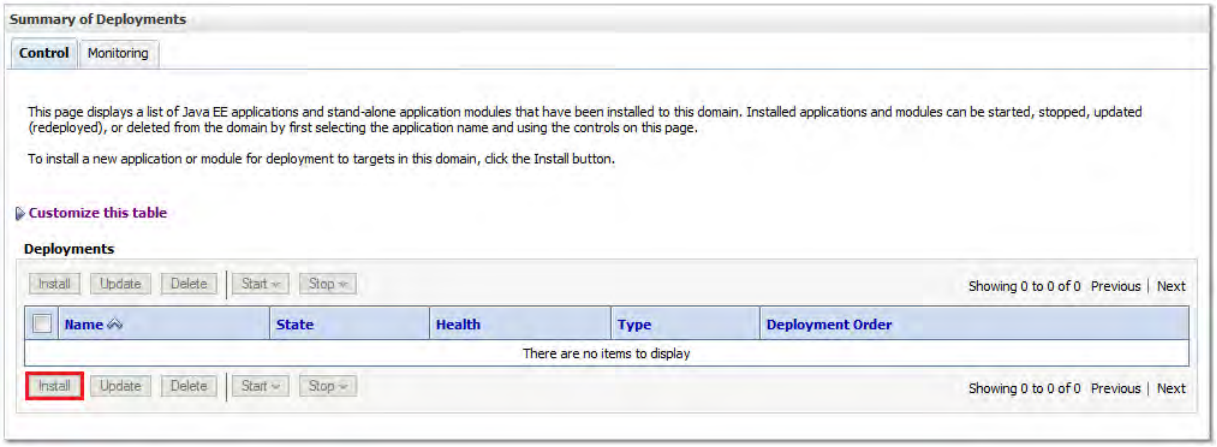
Step 6 - Deploy the Banner Identity Gateway

Use the following steps to deploy the Banner Identity Gateway.

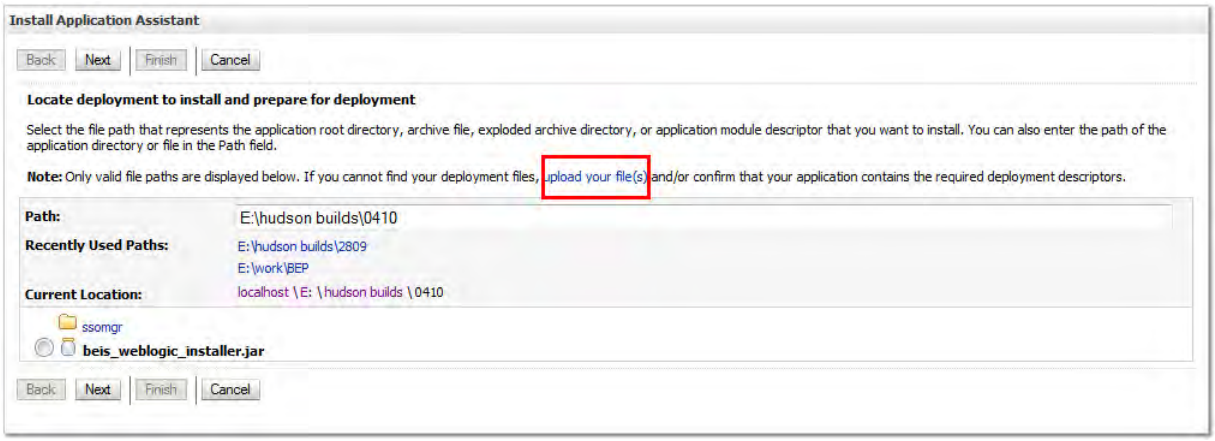
1. In the Change Center pane, click **Lock & Edit**.

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

3. Click **Install**.

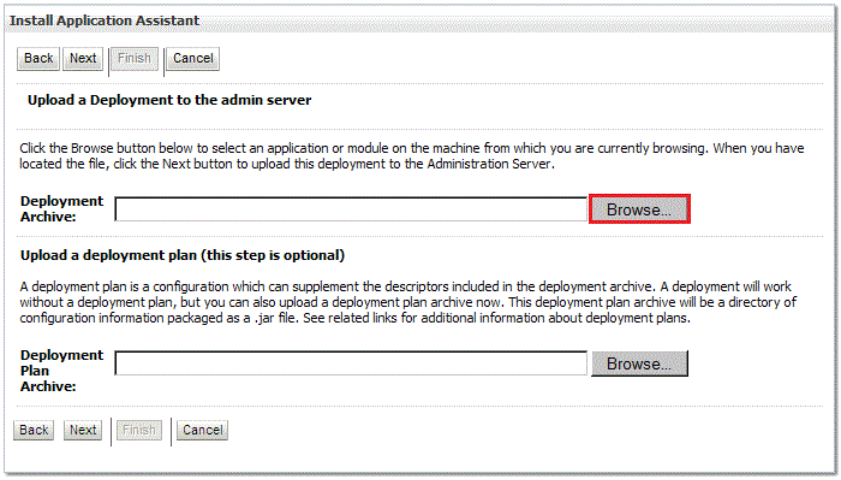


4. Click **upload your file(s)**.



5. Select the file to be uploaded as follows:

   5.1. In the **Deployment Archive** field, click **Browse**.

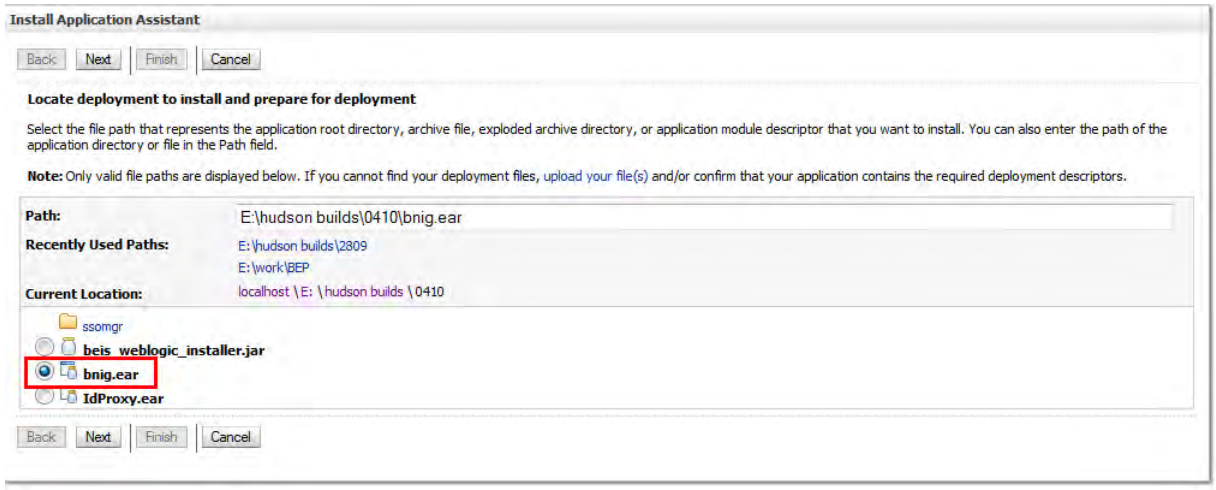


   5.2. Navigate to `bnig.ear`. This file was copied to a specified location when the automated installer was run in Step 5 - Configure the Banner Identity Gateway and Banner Identity Proxy .ear files.

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

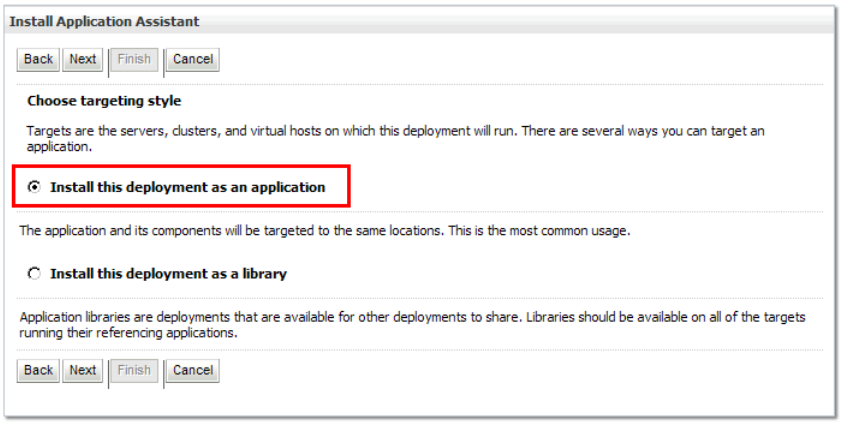
6. Click **Next**.

7. Select `bnig.ear` from the list at the bottom of the page.



8. Click **Next**.

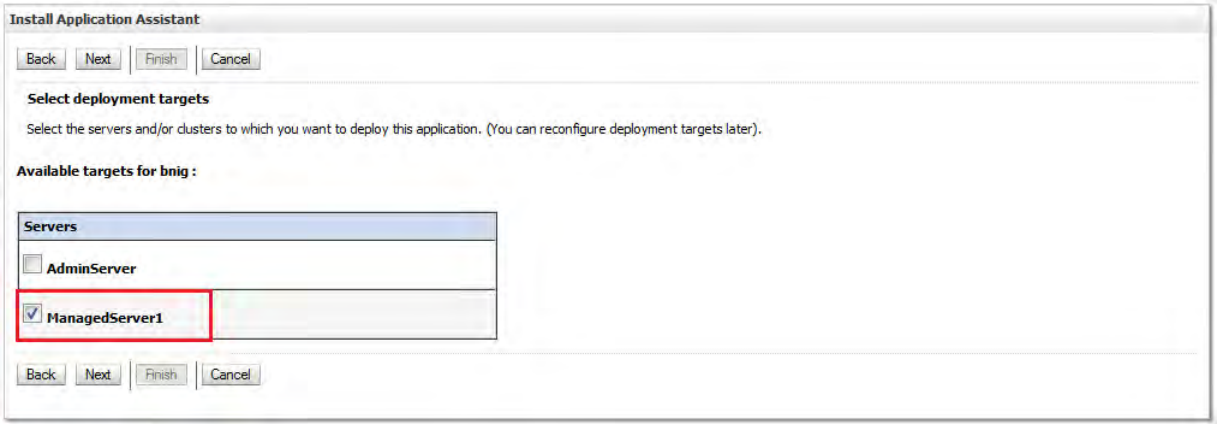
9. Select **Install this deployment as an application**.



10. Click **Next**.

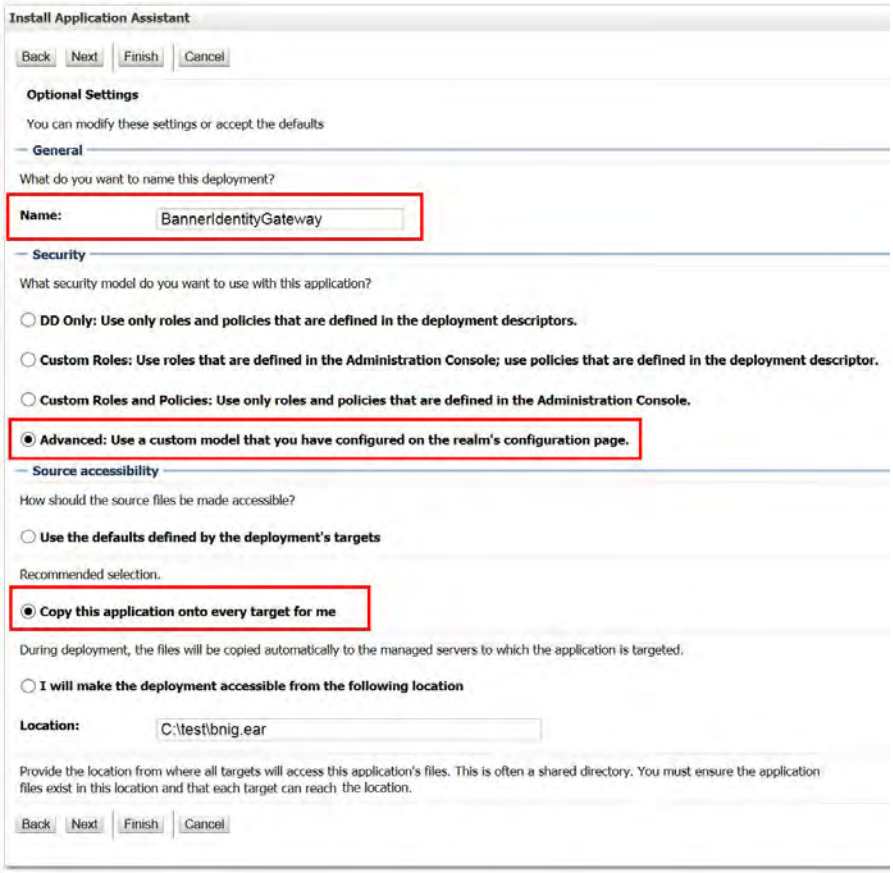
11. The next page is either an optional settings page *or* a deployment targets page, depending on the domain.

    - If an optional settings page is displayed, check your Oracle WebLogic Server configuration before you continue. Make sure 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. Then go to step 12.
    - If a select deployment targets page is displayed, select the server where the application should be deployed. The application can be deployed to an existing server. The application should be installed to a Managed Server, not to the Admin Server. The application must be installed on the same server with the Banner Identity Proxy. Then click **Next** and go to step 12.



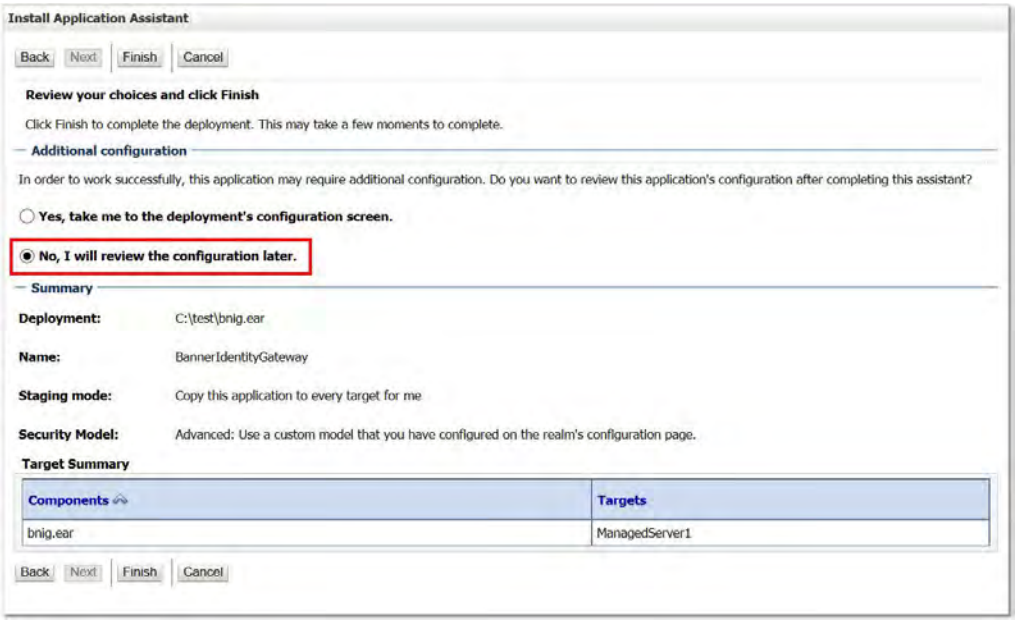
12. Enter the following settings:

Name	Name for the application (for example, *BannerIdentityGateway*)
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.

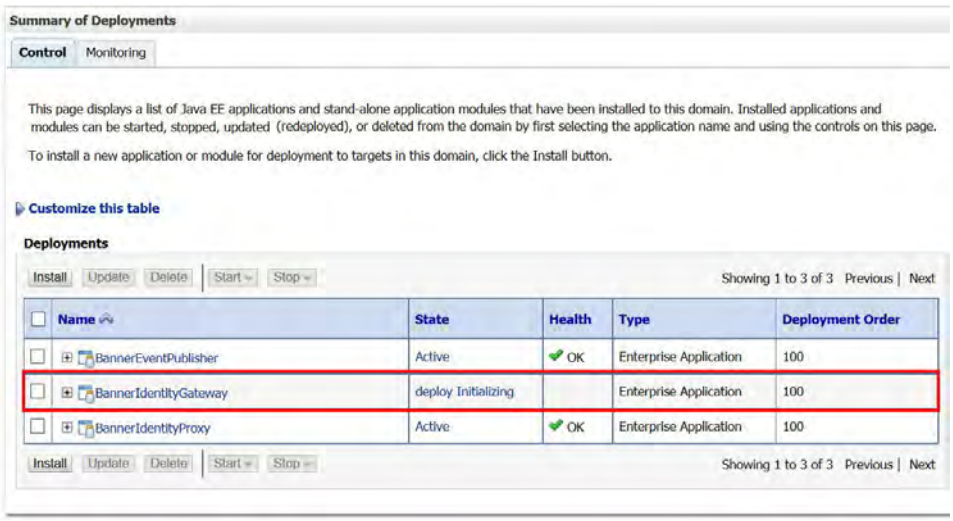


13. Click **Next**.

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



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



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

17. Start the newly deployed application as follows:

    17.1. Make sure the Summary of Deployments page is displayed.

    17.2. Select the newly deployed application.

    17.3. Click **Start > Servicing all requests**.

    17.4. Click **Yes** to start the application.

Step 7 - Deploy the Banner Identity Proxy

Use the following steps to deploy the Banner Identity Proxy.

1. In the Change Center pane, click **Lock & Edit**.
2. In the Domain Structure pane, click **Deployments**.
3. Click **Install**.
4. Click **upload your file(s)**.
5. Select the file to be uploaded as follows:

    5.1. In the **Deployment Archive** field, click **Browse**.

    5.2. Navigate to `IdProxy.ear`. This file was copied to a specified location when the automated installer was run in Step 5 - Configure the Banner Identity Gateway and Banner Identity Proxy .ear files.

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

6. Click **Next**.

7. Select `IdProxy.ear` from the list at the bottom of the page.
8. Click **Next**.
9. Select **Install this deployment as an application**.
10. Click **Next**.
11. The next page is either an optional settings page *or* a deployment targets page, depending on the domain.
    - If an optional settings page is displayed, check your Oracle WebLogic server configuration before you continue. Make sure 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. Then go to step 12.
    - If a select deployment targets page is displayed, select the server where the application should be deployed. The application can be deployed to an existing server. The application should be installed to a Managed Server, not to the Admin Server. The application must be installed on the same server with the Banner Identity Gateway. Then click **Next** and go to step 12.
12. Enter the following settings:

Name	Name for the application (for example, *BannerIdentityProxy*)
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.

13. Click **Next**.
14. Select **No, I will review the configuration later**.
15. Click **Finish** to start the deployment. When deployment is completed, the Summary of Deployments page is redisplayed with the newly deployed application.
16. In the Change Center pane, click **Activate Changes**.
17. Start the newly deployed application as follows:
    - **17.1.** Make sure the Summary of Deployments page is displayed.
    - **17.2.** Select the newly deployed application.
    - **17.3.** Click **Start > Servicing all requests**.
    - **17.4.** Click **Yes** to start the application.

Step 8 - Evaluate the environment

After you upgrade the Banner Identity Gateway and the Banner Identity Proxy, you should run `post_install_beis_checkscript.sql` to evaluate your environment and identify potential problems. This script reports on several criteria that are essential for a

fully functioning BEIS environment. You can use the script to evaluate both new installations and upgrades. Depending on the current state of your Banner/Oracle RDBMS environment, you might need to make changes based on the output of the script.

Use the following steps to run the check script and evaluate the results.

1. Extract `IdGtwyPrxy_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/util`.
3. Ensure that `post_install_beis_checkscript.sql` has read permission.
4. Connect to SQL*Plus as the BANINST1 user.
5. Execute `post_install_beis_checkscript.sql`:

   ```
   sqlplus> @post_install_beis_checkscript
   ```

6. When prompted, enter the following information:
   - Username for the BNIXMGR schema (for example, *BNIXMGR*)
   - Username for the IDENTMGR schema (for example, *IDENTMGR*)
7. Exit SQL*Plus.
8. Evaluate the results as follows:

Result	Evaluation
BNIXMGR schema	The BNIXMGR schema must exist.
Roles assigned to BNIXMGR	The following roles must be assigned to BNIXMGR: • RESOURCE • CONNECT
Privileges granted to BNIXMGR	The following privileges must be granted to BNIXMGR: • DROP PUBLIC SYNONYM • CREATE PUBLIC SYNONYM • UNLIMITED TABLESPACE • CREATE SESSION • CREATE SYNONYM • CREATE VIEW
Database objects in BNIXMGR database schema	The BNIXMGR schema should have the following tables: • BNIXVAL • GTWMETA • PSPALOG • T_UDC_ERROR_LOG • T_UDC_ERROR_LOG_H

Result	Evaluation
Sequences that belong to BNIXMGR	The BNIXMGR schema should have the following sequences: • T_UDC_ERROR_LOG_SEQ • T_UDC_ERROR_LOG_H_SEQ • PSPALOG_SEQ
Views that belong to BNIXMGR	The BNIXMGR schema should have the VW_UDC_ERROR_LOG view.
Triggers that belong to BNIXMGR	The BNIXMGR schema should have the following triggers: • TRG_UDC_ERROR_LOG_BUS • TRG_UDC_ERROR_LOG_BUR • TRG_UDC_ERROR_LOG_AUS
Packages that belong to BNIXMGR	The BNIXMGR schema should have the following packages: • IOKP_GTW_METADATA • IOKP_UDC_ERROR_LOG • IOKP_PSPALOG • IOKP_UDC_ERROR_LOG_H
IDENTMGR schema	The IDENTMGR schema must exist.
Roles assigned to IDENTMGR	The following roles must be assigned to IDENTMGR: • RESOURCE • CONNECT
Privileges granted to IDENTMGR	The following privileges must be granted to IDENTMGR: • CREATE VIEW • UNLIMITED TABLESPACE • DROP PUBLIC SYNONYM • CREATE PUBLIC SYNONYM • CREATE SYNONYM • CREATE SESSION
Database objects in IDENTMGR database schema	The IDENTMGR schema should have the following tables: • T_UDC_PST_LIST • T_UDC_SPML_MSG_BALANCER • T_UDC_SPML_MSG_LOG • T_UDC_SPML_RES_ERROR_LOG

Result	Evaluation
Sequences that belong to IDENTMGR	The IDENTMGR schema should have the following sequences: • T_UDC_PST_LIST_SEQ • T_UDC_SPML_MSG_LOG_SEQ • T_UDC_SPML_RES_ERROR_LOG_SEQ
Packages that belong to IDENTMGR	The IDENTMGR schema should have the following packages: • IOKP_UDC_SPML_MSG_LOG • IOKP_UDC_PST

Step 9 - Verify that messaging is working

During the BEIS 8.2 installation, seed data for BEISIdentityEvent was loaded into the Banner Event Publisher (BEP). BEP uses this event to capture identity data changes in Banner, evaluate the changes, and publish XML messages for BEIS processing.

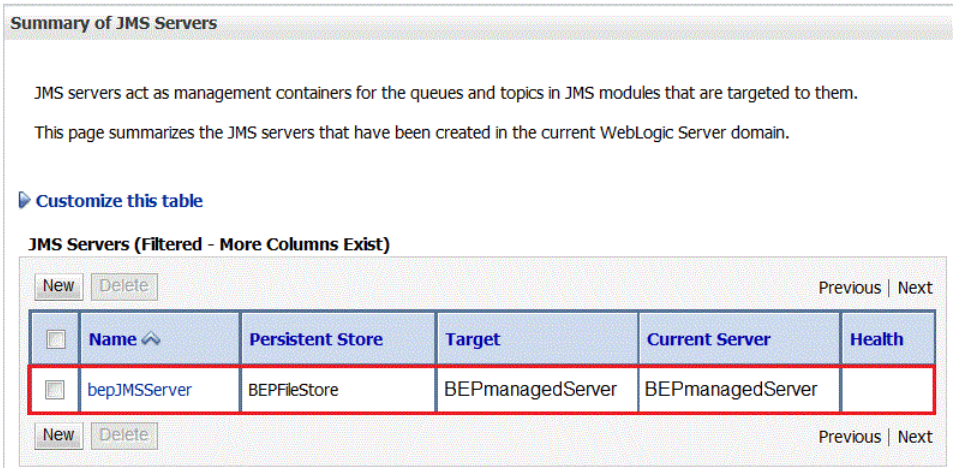
Use the following steps to verify that the seed data was loaded and that BEP is publishing XML messages properly.

1. Log in to Internet-Native Banner (INB).
2. Access the Identification (SPAIDEN) form.
3. Change the first name of a person.
4. Save the change.
5. Connect to the Oracle WebLogic Server administration console:

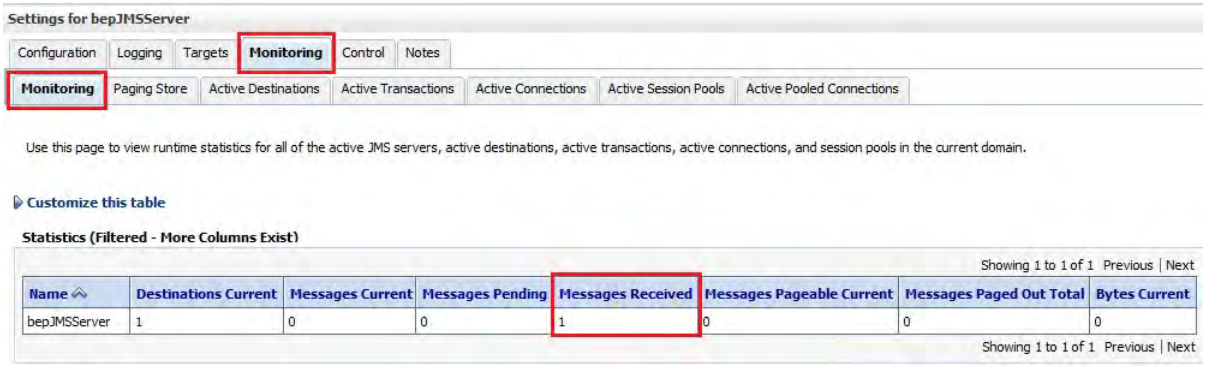
   ```
   http://<host>:<port>/console
   ```

6. In the Domain Structure pane, expand and click **Services > Messaging > JMS Servers**.

7. Click the name of the JMS server that was created for BEP.



8. Select the **Monitoring > Monitoring** tab on the Settings page.



9. Verify that the **Messages Received** count increased by 1.
10. Return to SPAIDEN and update the person's first name to the original value. This should trigger another event.
11. Refresh the Settings page for the JMS server.
12. Verify that the **Messages Received** increased by 1. If the message count increased, BEP consumed the message from the queue and posted it to the JMS topic.

Step 10 - Confirm access to the Banner Identity Gateway and the Banner Identity Proxy

Use the following steps to confirm that you can successfully access the Banner Identity Gateway administrative interface and the Banner Identity Proxy administrative interface.

1. Connect to the Banner Identity Gateway:

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

2. Log in with the user name and password for the Banner Identity Gateway.

   If the login fails, verify that the credentials are correct and that the Oracle WebLogic Server is configured correctly to assign the appropriate users and roles to the application. Repeat these steps until login is successful.

3. Connect to the Banner Identity Proxy:

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

4. Log in with the user name and password for the Banner Identity Proxy.

   If the login fails, verify that the credentials are correct and that the Oracle WebLogic Server is configured correctly to assign the appropriate users and roles to the application. Repeat these steps until login is successful.

Step 11 - Configure the Banner Identity Gateway and the Banner Identity Proxy

Refer to the *Banner Enterprise Identity Services 8.2. User Guide* for instructions on configuring the Banner Identity Gateway and the Banner Identity Proxy as follows.

If...	Then...
You are implementing outbound account provisioning	Refer to chapter 2 of the user guide to configure Banner: • Declare the PIDM as a bind variable. • Configure email, address, and telephone number content. • Configure the display of tax IDs. • Customize the UDCIdentity XML structure. • Define attributes for the LDAP user name and password (if you are integrating with an LDAP directory). • Define capture data for monitoring the LDAP user name and password (if you are integrating with an LDAP directory). Refer to chapter 4 of the user guide to configure BEIS: • Identify the Banner instance that provides identity data. • Configure the location of each Provisioning Service Provider (PSP).
You are implementing inbound account provisioning	Refer to chapter 2 of the user guide to configure Banner: • Configure email, address, and telephone number content. • Configure a GTVSDAX rule for Common Matching. Refer to chapter 5 of the user guide to update the default user profile for new INB users.

Upgrade SSO Manager to 8.2.1

You can choose an automated process or a manual process.

Automated upgrade for SSO Manager

Use the following steps if you choose an automated process to upgrade the SSO Manager:

- Step 1 - Delete deprecated objects
- Step 2 - Upgrade the database schema
- Step 3 - Run the automated installer
- Step 4 - Evaluate the environment
- Step 5 - Confirm access to the SSO Manager
- Step 6 - Configure supporting components

The following sections provide details for each step.

Step 1 - Delete deprecated objects

Use the Oracle WebLogic Server administration console to delete the SSO Manager 8.2 application.

Step 2 - Upgrade the database schema

Use the following steps to upgrade the database tables that the SSO Manager requires.

1. Extract `SSOManager_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/tables`.
3. Connect to the database instance where the SSO Manager is installed as the SSOMGR user.
4. Execute `db_821_upgrade.sql` to upgrade the SSO Manager:

   ```
   sqlplus> @db_821_upgrade
   ```

5. Exit SQL*Plus.

Step 3 - Run the automated installer

The automated installer must be run on the Oracle WebLogic Server to configure the following files:

`sso-manager.ear`	SSO Manager
`ssoclient.jar`	SSO Client

Use the following steps to run the automated installer.

1. Extract `SSOManager_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/ant-installer`.
3. Execute the following command:

   ```
   java -jar sso-manager-weblogic-installer.jar
   ```

   The automated installer is launched. The user interface depends on whether you are running in a windowing (GUI) or non-windowing (command-line) environment. The remaining instructions are based on using the GUI for configuration. Configuration options are identical for a command-line interface.

   Note: In command-line mode, each configuration option is displayed with the default value in brackets. To accept the default value, press Enter on your keyboard. To enter a different value, enter the correct value and press Enter on your keyboard. Valid values for the configuration options are `true` and `false`. All values must be entered without leading and trailing spaces.

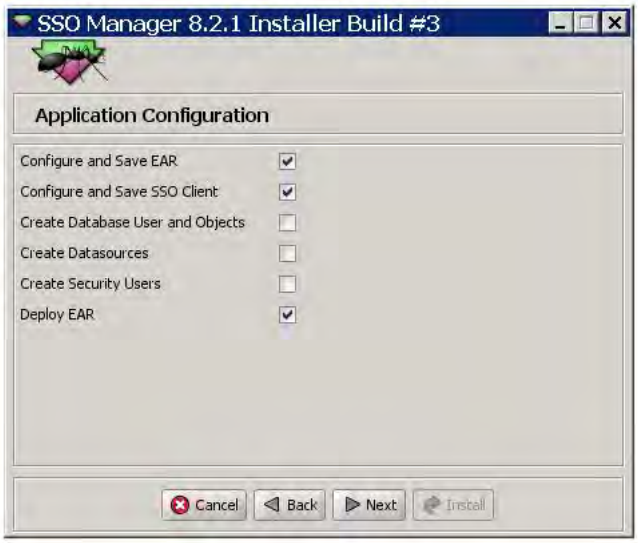
4. Click **Next**.

5. Select the following check boxes:

   Configure and Save EAR

   Configure and Save SSO Client

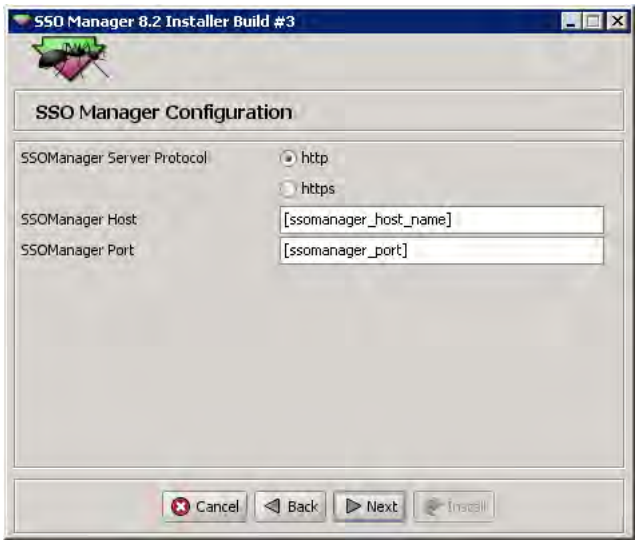
   Deploy EAR



6. Click **Next**.

7. Enter the following SSO Manager information:

SSO Manager Server Protocol	Protocol used by the SSO Manager (`https` or `http`)
SSO Manager Host	SSO Manager server host name
SSO Manager Port	Managed Server port number where the SSO Manager is deployed



8. Click **Next**.
9. Enter the SSO Manager user configuration:

Username	User name for the SSO Manager web application
Password	Password for the SSO Manager web application

10. Click **Next**.

11. Choose one of the following:

11.1. If you are using the SSO Manager with a third-party access manager, skip to step 12.

11.2. If you are using the SSO Manager with CAS, enter the following information:

CAS Server Protocol	Protocol used by the CAS server (`https` or `http`)
CAS Server Host	CAS server host name
CAS Server Port	Port number where the CAS server is running
CAS Server Context	Context under which CAS is deployed and accessible via a browser (for example, `http(s)://<host>:<port>/<context>`)

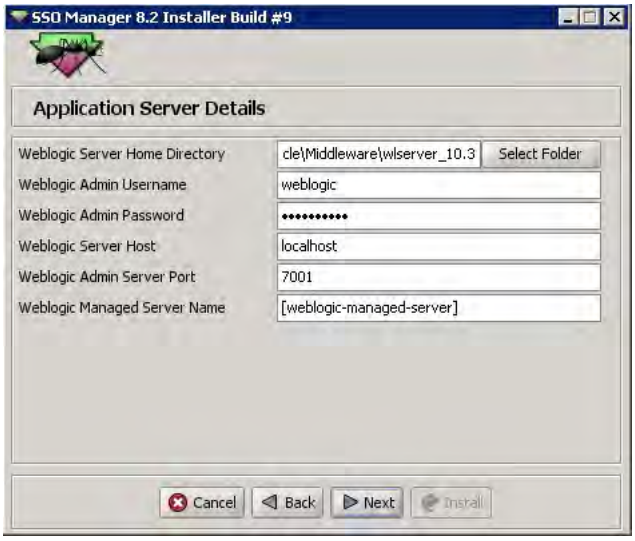
12. Click **Next**.

13. Click **Select Folder** and browse to the location where you want to save `sso-manager.ear` and `ssoclient.jar`.

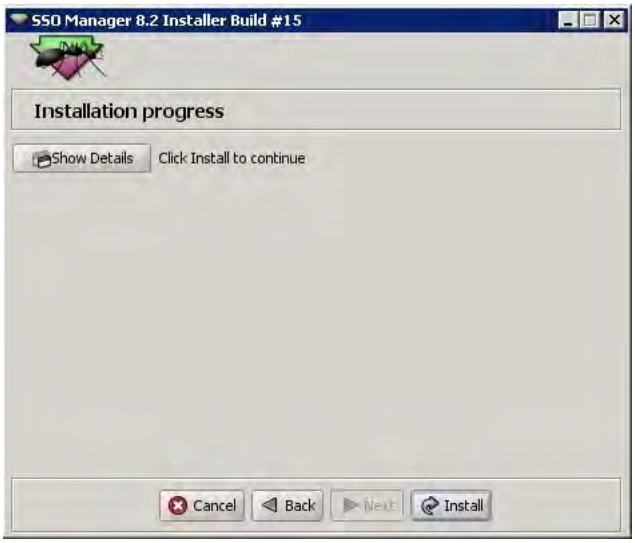
14. Click **Next**.

15. Enter the following application server information:

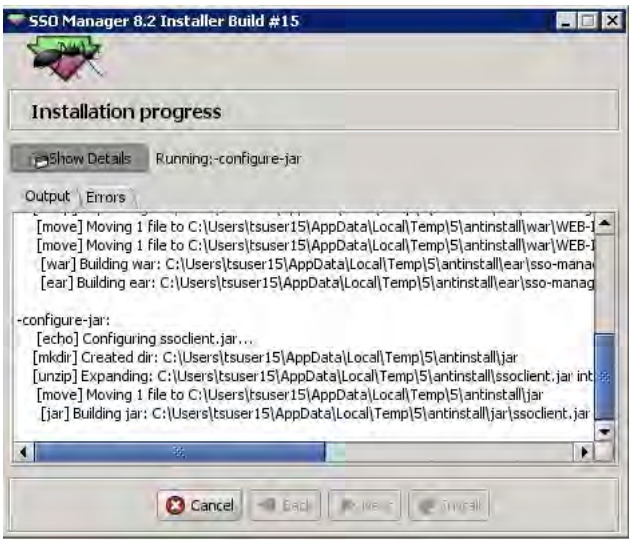
Weblogic Server Home Directory	Path of the Oracle WebLogic Server home directory (for example,`C:\Oracle\Middleware\wlserver_10.3`)
Weblogic Admin Username	User name for the application server administrator
Weblogic Admin Password	Password for the application server administrator
Weblogic Server Host	IP address or host name of the machine where the Oracle WebLogic Server is installed
Weblogic Admin Sever Port	Port where the Oracle WebLogic Server is running
Weblogic Managed Server Name	Name of the Oracle WebLogic Managed Server where the data sources are created and the application is deployed



16. Click **Next**.
17. Click **Show Details**.
18. Click **Install**.



Installation details are displayed as the installation progresses.



The message *Install Finished* is displayed when the installation is complete. The `sso-manager.ear` and `ssoclient.jar` files are saved in the selected folder.

Step 4 - Evaluate the environment

After you upgrade the SSO Manager, you should run `post_install_ssomgr_checkscript.sql` to evaluate your environment and identify potential problems. This script reports on several criteria that are essential for a fully functioning SSO Manager environment. You can use the script to evaluate both new installations and upgrades. Depending on the current state of your Banner/Oracle RDBMS environment, you might need to make changes based on the output of the script.

Use the following steps to run the check script and evaluate the results.

1. Extract `SSOManager_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/util`.
3. Ensure that `post_install_ssomgr_checkscript.sql` has read permission.
4. Connect to SQL*Plus as the BANINST1 user.
5. Execute `post_install_ssomgr_checkscript.sql`:

   ```
   sqlplus> @post_install_ssomgr_checkscript
   ```

6. When prompted, enter the username for the SSOMGR schema (for example, SSOMGR).
7. Exit SQL*Plus.

8. Evaluate the results as follows:

Result	Evaluation
SSOMGR schema	The SSOMGR schema must exist.
Roles assigned to SSOMGR	The following roles must be assigned to SSOMGR: • RESOURCE • CONNECT
Privileges granted to SSOMGR	The following privileges must be granted to SSOMGR: • UNLIMITED TABLESPACE • ALTER USER
Database objects in SSOMGR database schema	The SSOMGR schema should have the following tables: • APP_CONFIG • UDC_CREDENTIAL_INFO • UDC_CREDENTIAL_SERVICES • UDC_TICKET_SERVICES
Sequences that belong to SSOMGR	The SSOMGR schema should have the following sequences: • APP_CONFIG_SEQ • UDC_CREDENTIAL_SERVICES_SEQ • UDC_CREDENTIAL_INFO_SEQ
Packages that belong to SSOMGR	The SSOMGR schema should have the IP_SSO_MANAGER package.

Step 5 - Confirm access to the SSO Manager

Use the following steps to confirm that you can successfully access the SSO Manager administrative interface.

1. Connect to the SSO Manager:

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

2. Log in with the user name and password for the SSO Manager.

   If the login fails, verify that the credentials are correct and that the Oracle WebLogic Server is configured correctly to assign the appropriate users and roles to the application. Repeat these steps until login is successful.

Step 6 - Configure supporting components

Refer to Chapter 6, "Single Sign On," in the *Banner Enterprise Identity Services 8.2. User Guide* for instructions on configuring the components that support SSO:

- SSO Manager settings
- Banner Web Tailor settings for Self-Service Banner (SSB)
- Oracle Forms server settings for Internet-Native Banner (INB)

Manual upgrade for SSO Manager

Use the following steps if you choose a manual process to upgrade the SSO Manager:

- Step 1 - Delete deprecated objects
- Step 2 - Upgrade the database schema
- Step 3 - Configure the SSO Manager .ear file and the SSO client .jar file
- Step 4 - Deploy the SSO Manager
- Step 5 - Evaluate the environment
- Step 6 - Confirm access to the SSO Manager
- Step 7 - Configure supporting components

The following sections provide details for each step.

Step 1 - Delete deprecated objects

Use the Oracle WebLogic Server administration console to delete the SSO Manager 8.2 application.

Step 2 - Upgrade the database schema

Use the following steps to upgrade the database tables that the SSO Manager requires.

1. Extract `SSOManager_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/tables`.
3. Connect to the database instance where the SSO Manager is installed as the SSOMGR user.
4. Execute `db_821_upgrade.sql` to upgrade the SSO Manager:

   ```
   sqlplus> @db_821_upgrade
   ```

5. Exit SQL*Plus.

Step 3 - Configure the SSO Manager .ear file and the SSO client .jar file

The automated installer *must* be run on the Oracle WebLogic Server to configure the following files:

`sso-manager.ear`	SSO Manager
`ssoclient.jar`	SSO Client

Use the following steps to run the automated installer.

1. Extract `SSOManager_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.
2. Open a command prompt and navigate to `<ZIP_HOME>/ant-installer`.
3. Execute the following command:

   ```
   java -jar sso-manager-weblogic-installer.jar
   ```

   The automated installer is launched. The user interface depends on whether you are running in a windowing (GUI) or non-windowing (command-line) environment. The remaining instructions are based on using the GUI for configuration. Configuration options are identical for a command-line interface.

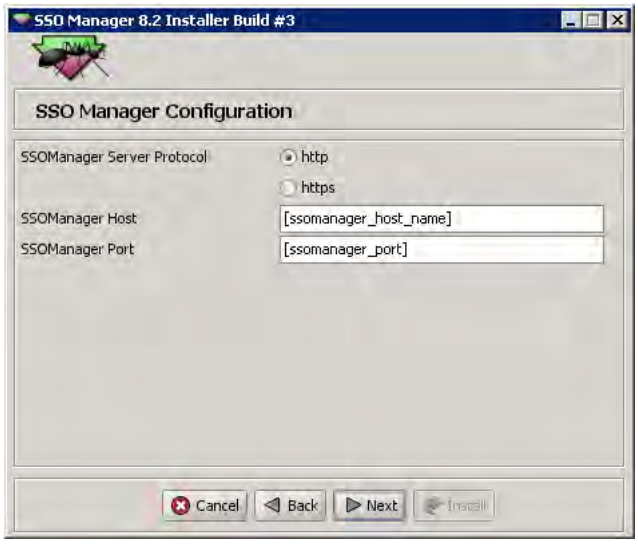
   Note: In command-line mode, each configuration option is displayed with the default value in brackets. To accept the default value, press Enter on your keyboard. To enter a different value, enter the correct value and press Enter on your keyboard. Valid values for the configuration options are *true* and *false*. All values must be entered without leading and trailing spaces.

4. Click **Next**.

5. Select the **Configure and Save EAR** and the **Configure and Save SSO Client** check boxes.

6. Click **Next**.
7. Enter the following SSO Manager information:

SSO Manager Server Protocol	Protocol used by the SSO Manager (`https` or `http`)
SSO Manager Host	SSO Manager server host name
SSO Manager Port	Managed Server port number where the SSO Manager is deployed



8. Click **Next**.

9. Enter the SSO Manager user configuration:

Username	User name for the SSO Manager web application
Password	Password for the SSO Manager web application

10. Click **Next**.

11. Choose one of the following:

    11.1. If you are using the SSO Manager with a third-party access manager, skip to step 12.

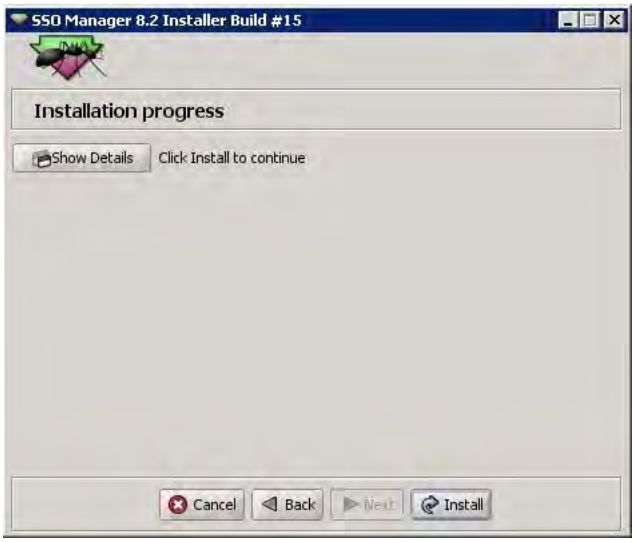
    11.2. If you are using the SSO Manager with CAS, enter the following information:

CAS Server Protocol	Protocol used by the CAS server (`https` or `http`)
CAS Server Host	CAS server host name
CAS Server Port	Port number where the CAS server is running
CAS Server Context	Context under which CAS is deployed and accessible via a browser (for example, `http(s)://<host>:<port>/<context>`)

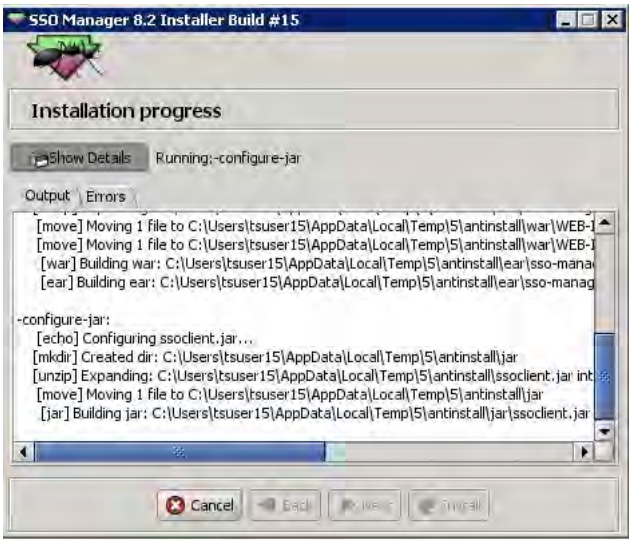
12. Click **Next**.
13. Click **Select Folder** and browse to the location where you want to save `sso-manager.ear` and `ssoclient.jar` for manual deployment.

14. Click **Next**.
15. Click **Show Details**.

16. Click **Install**.



Installation details are displayed as the installation progresses.



The message *Install Finished* is displayed when the installation is complete. The `sso-manager.ear` and `ssoclient.jar` files are saved in the selected folder.

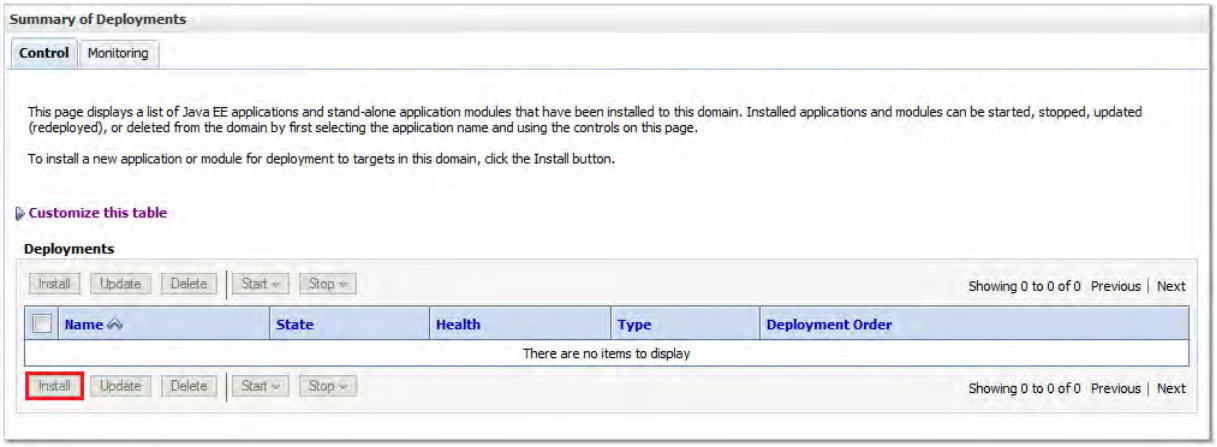
Step 4 - Deploy the SSO Manager

Use the following steps to deploy the SSO Manager.

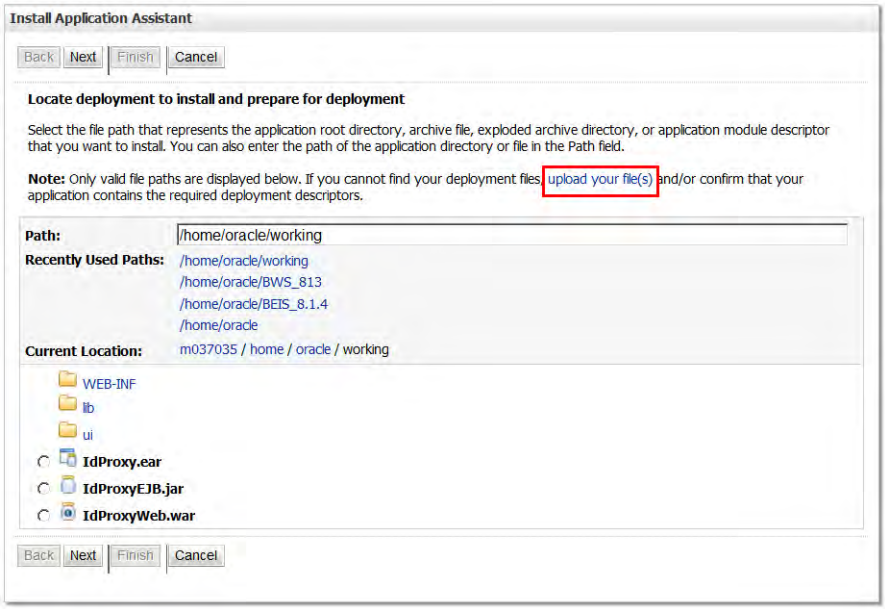
1. In the Change Center pane, click **Lock & Edit**.

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

3. Click **Install**.

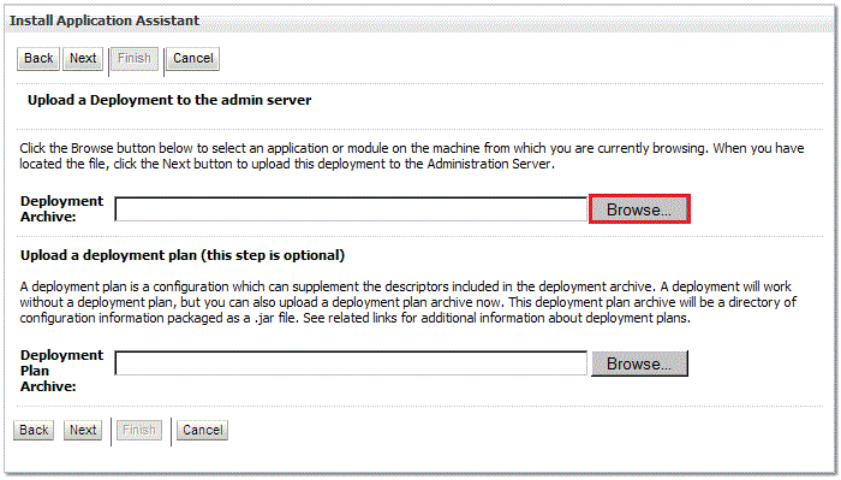


4. Click **upload your file(s)**.



5. Select the file to be uploaded as follows:

   5.1. In the **Deployment Archive** field, click **Browse**.



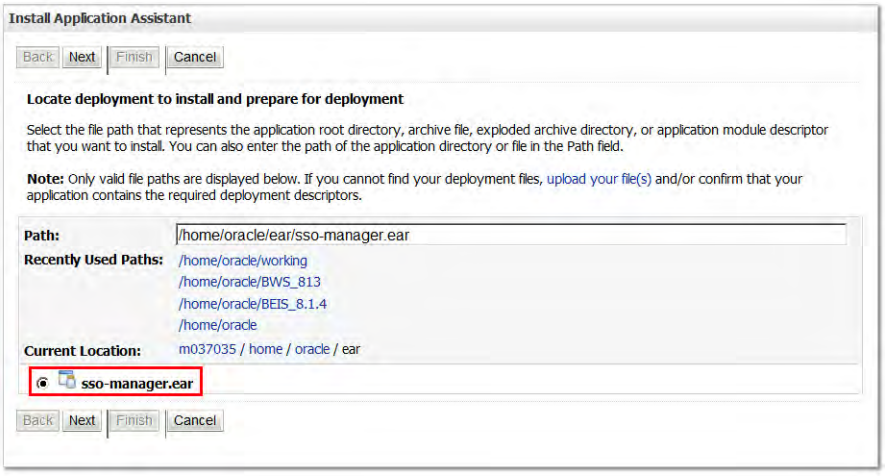
   5.2. Navigate to `sso-manager.ear`.

   This file was copied to a specified location when the automated installer was run in Step 3 - Configure the SSO Manager .ear file and the SSO client .jar file.

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

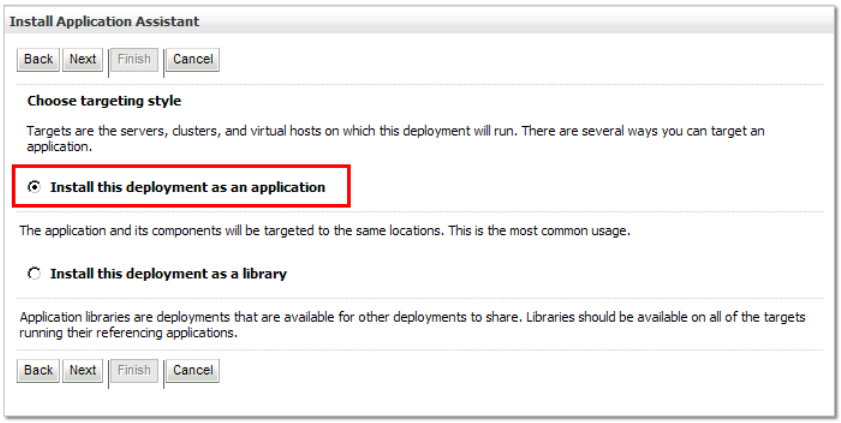
6. Click **Next**.

7. Select `sso-manager.ear` from the list at the bottom of the page.



8. Click **Next**.

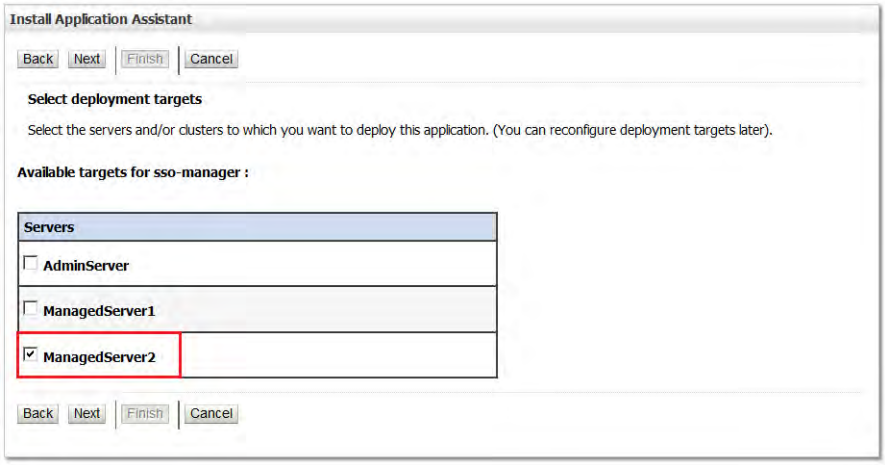
9. Select **Install this deployment as an application**.



10. Click **Next**.

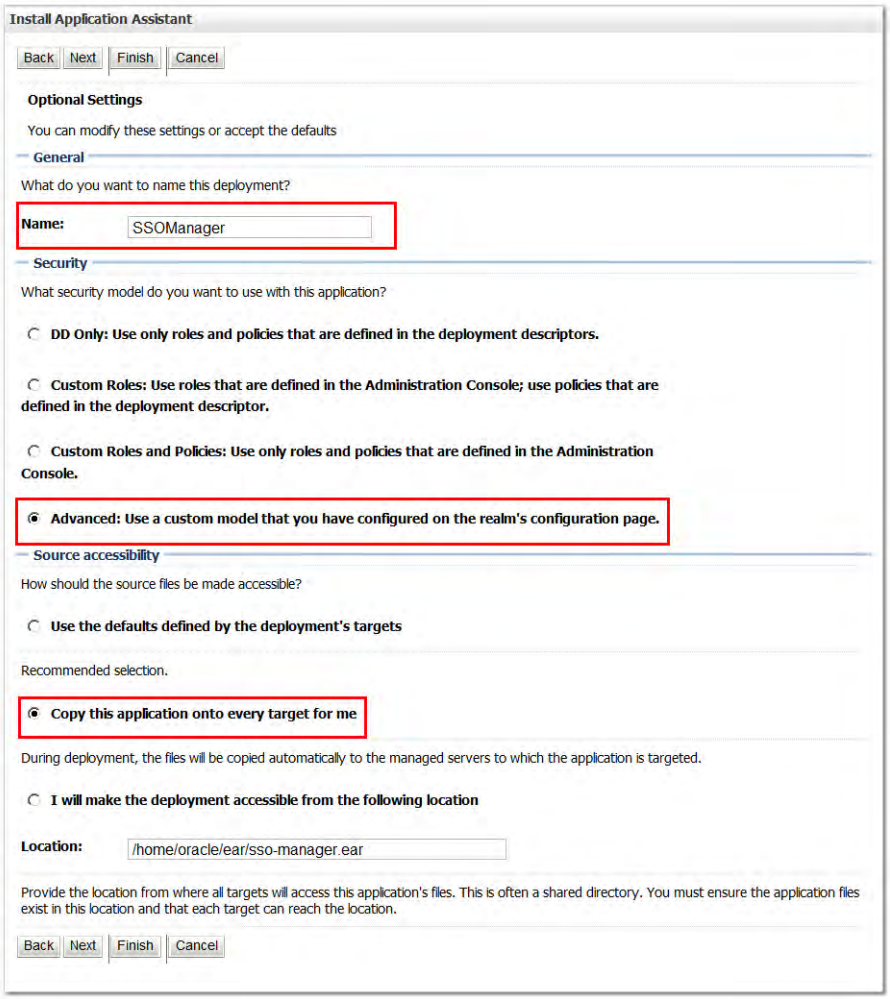
11. The next page is either an optional settings page *or* a deployment targets page, depending on the domain.

    - If an optional settings page is displayed, check your Oracle WebLogic Server configuration before you continue. Make sure 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. Then go to step 12.
    - If a select deployment targets page is displayed, select the server where the application should be deployed. The application can be deployed to an existing server. The application should be installed to a Managed Server, not to the Admin Server. Then click **Next** and go to step 12.



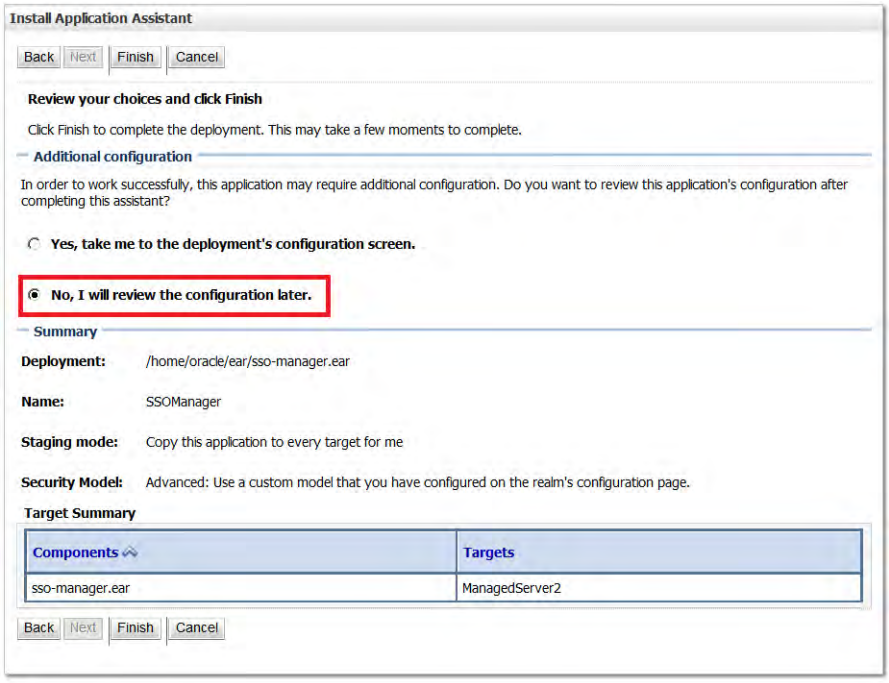
12. Enter the following settings:

Name	Name for the application (for example, `SSOManager`)
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.

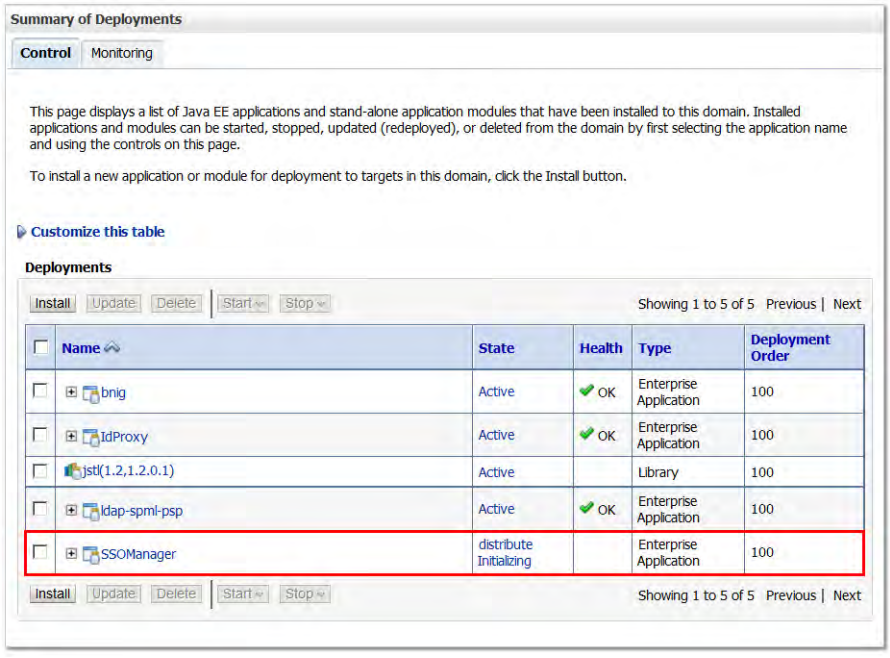


13. Click **Next**.

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



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



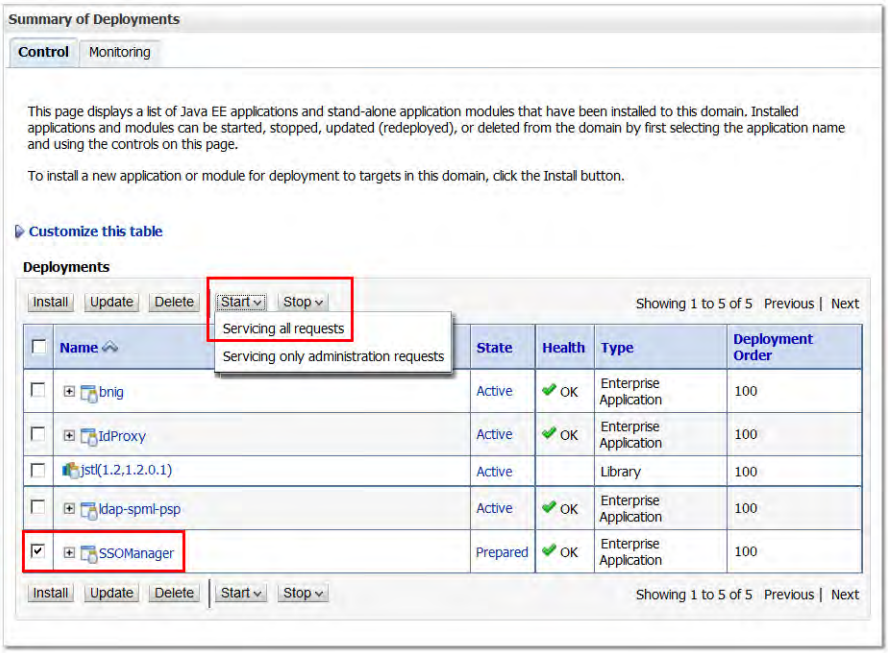
16. In the Change Center pane, click **Activate Changes**.

17. Start the newly deployed application as follows:

    17.1. Make sure the Summary of Deployments page is displayed.

    17.2. Select the newly deployed application.

    17.3. Click **Start > Servicing all requests**.



    17.4. Click **Yes** to start the application.

Step 5 - Evaluate the environment

After you upgrade the SSO Manager, you should run `post_install_ssomgr_checkscript.sql` to evaluate your environment and identify potential problems. This script reports on several criteria that are essential for a fully functioning SSO Manager environment. You can use the script to evaluate both new installations and upgrades. Depending on the current state of your Banner/Oracle RDBMS environment, you might need to make changes based on the output of the script.

Use the following steps to run the check script and evaluate the results.

1. Extract `SSOManager_8.2.zip`. The extract directory is referred to as `<ZIP_HOME>`.

2. Open a command prompt and navigate to `<ZIP_HOME>/db-scripts/util`.

3. Ensure that `post_install_ssomgr_checkscript.sql` has read permission.
4. Connect to SQL*Plus as the BANINST1 user.
5. Execute `post_install_ssomgr_checkscript.sql`:

   ```
   sqlplus> @post_install_ssomgr_checkscript
   ```

6. When prompted, enter the username for the SSOMGR schema (for example, SSOMGR).
7. Exit SQL*Plus.
8. Evaluate the results as follows:

Result	Evaluation
SSOMGR schema	The SSOMGR schema must exist.
Roles assigned to SSOMGR	The following roles must be assigned to SSOMGR: • RESOURCE • CONNECT
Privileges granted to SSOMGR	The following privileges must be granted to SSOMGR: • UNLIMITED TABLESPACE • ALTER USER
Database objects in SSOMGR database schema	The SSOMGR schema should have the following tables: • APP_CONFIG • UDC_CREDENTIAL_INFO • UDC_CREDENTIAL_SERVICES • UDC_TICKET_SERVICES
Sequences that belong to SSOMGR	The SSOMGR schema should have the following sequences: • APP_CONFIG_SEQ • UDC_CREDENTIAL_SERVICES_SEQ • UDC_CREDENTIAL_INFO_SEQ
Packages that belong to SSOMGR	The SSOMGR schema should have the IP_SSO_MANAGER package.

Step 6 - Confirm access to the SSO Manager

Use the following steps to confirm that you can successfully access the SSO Manager administrative interface.

1. Connect to the SSO Manager:

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

2. Log in with the user name and password for the SSO Manager.

   If the login fails, verify that the credentials are correct and that the Oracle WebLogic Server is configured correctly to assign the appropriate users and roles to the application. Repeat these steps until login is successful.

Step 7 - Configure supporting components

Refer to Chapter 6, “Single Sign On” in the *Banner Enterprise Identity Services 8.2 User Guide* for instructions on configuring the components that support SSO:

- SSO Manager settings
- Banner Web Tailor settings for Self-Service Banner (SSB)
- Oracle Forms server settings for Internet-Native Banner (INB)