

BANNER ENTERPRISE IDENTITY SERVICES RELEASE AND UPGRADE GUIDE

Release 8.1.4, Revision 1
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July 8, 2011	New version that supports Banner Enterprise Identity Services 8.1.4 software.
July 12, 2011	Revised upgrade instructions for recreating the OC4J connection factory.

Contents



Enhancements	5
Performance enhancements	5
Simplified installation process	5
CAS support	6
Configuration verification	6
Interface change	7
Dependencies	8
Upgrade instructions	9
Upgrade from BEIS 8.1.3	9
Upgrade the Banner Identity Gateway	9
Upgrade the Enterprise Identity Proxy Services	12
Upgrade from BEIS 8.1.2	14
Problem resolutions	15



Enhancements

Banner® Enterprise Identity Services (BEIS) 8.1.4 includes the following enhancements.

Performance enhancements

This release includes the following performance enhancements:

- To resolve performance degradation over time, the Banner Identity Gateway no longer uses container-managed persistence. The Gateway now manages its own database connection, refreshing it periodically to ensure optimal performance. To implement this change, you must specify two properties in an embedded properties file: the password for the `integmgr` database connection, and the frequency for creating a new connection. Refer to Chapter 7, “Banner Identity Gateway,” in the *Banner Enterprise Identity Services Handbook* (version 8.1.4) for instructions on setting these properties.
- The Enterprise Identity Proxy Services component now uses preemptive basic authentication when invoking provisioning service provider (PSP) endpoints.
- A secondary timer thread was removed from the Enterprise Identity Proxy Services component. This eliminates duplicate processing that sometimes corrupted data (defect 1-SJUYYVJ).
- The Enterprise Identity Proxy Services uses additional features of the Spring Framework. Specifically, the JMS implementation was changed from EJB to Spring.
- An index was added to SPML Message Log table.
- The `UDC_IDENTITY_TOPIC` is now XA-enabled. This change ensures that messages are cleared in the `UDC_IDENTITY_TOPIC` after they are picked up by the Enterprise Identity Proxy Services. As a result, messages are only picked up once, and the persistence files do not get too large.

Simplified installation process

Installation of BEIS is fairly complex. To reduce complexity and simplify the installation process, version 8.1.4 provides an easier option for installing the Banner Identity Gateway and the Enterprise Identity Proxy Services in one automated process.

The new Banner Enterprise Identity Services Installer has the following limitations:

- It cannot be used to upgrade or uninstall BEIS components. It is intended for new installations only.
- It cannot be used to install the Identity Data Export Utilities or the SPML LDAP Adapter.

The installer provides two modes of operation:

- A graphical user interface can be used on an application server with a windows environment (specifically Microsoft Windows or an X-windows environment).
- A command line mode can be used on an application server with a non-windows environment.

Refer to Chapter 9, “Automated Installer,” in the *Banner Enterprise Identity Services Handbook* (version 8.1.4) for instructions on using the installer.

CAS support

This release of Banner Enterprise Identity Services provides extensions for CAS 3.4.2.1 to make it compatible with BEIS. These version-specific extensions are in addition to the extensions provided for two previous versions of CAS (3.2.1.1 and 3.3.1).

If you are upgrading to a newer version of CAS, you should upgrade to CAS 3.4.2.1 rather than 3.4.2 because the point release includes a security patch.

Configuration verification

`BEIS_Check_script.sql` is a new script that checks the Banner environment to determine its readiness for installing BEIS. Before installing BEIS, new users should run this script and ensure that the values for their environment fall within the range of recommended values. This script is intended for new installations. It can, however, be used when a new BEIS environment is established (such as cloning a test installation) to determine the health of the database environment.

Refer to Chapter 5, “Banner Configuration,” in the *Banner Enterprise Identity Services Handbook* (version 8.1.4) for instructions on running the script.

Interface change

In the Banner Identity Gateway administrative interface, the Banner Streams Process for Identity page now displays database details.

In the Enterprise Identity Proxy Services administrative interface, the SPML Messages page now defaults the display of all SPML messages. The **Message Status** field defaults to *SELECT*, allowing the user to choose a subset of messages if desired. Previously, the **Message Status** field defaulted to *FAILURE*, and only messages with the status *FAILURE* were displayed initially.

Dependencies

BEIS 8.1.4 requires the following Banner products:

Product	Minimum Version
Banner General	8.3.1
Banner Web Tailor	If Cascade is enabled, version 8.4.2 is the minimum version required. If Cascade is not enabled, version 8.3.1 plus patch p1-dc06g9_twb8030101 is the minimum version required.
Banner Intcomp	8.0.1

BEIS 8.1.4 is certified on Oracle Application Server (OAS) 10.1.3.4/5 and Oracle WebLogic Server 11g with Java 1.6. 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

An Oracle Streams environment for BEIS is required

Upgrade instructions

The BEIS 8.1.4 package contains all components required to install Banner Enterprise Identity Services for account provisioning and single sign on. It is important to know, however, that only the following components were modified for the 8.1.4 release:

- Banner Identity Gateway
- Enterprise Identity Proxy Services

If you previously installed BEIS and are upgrading to the 8.1.4 release, you only need to install these components. Instructions follow.



Note

The Banner Enterprise Identity Services Installer, new in the 8.1.4 release, *cannot* be used to upgrade an existing BEIS environment. ■

Upgrade from BEIS 8.1.3

The only database change in release 8.1.4 is a new table index that improves performance for the Proxy Services. Therefore, the BEIS 8.1.3 database and all configured data sources, JMS queues and topics, and security users can be used for the 8.1.4 components.

The following sections give instructions for upgrading the Banner Identity Gateway and the Enterprise Identity Proxy Services.

Upgrade the Banner Identity Gateway

The 8.1.4 version of the Banner Identity Gateway must be configured before it is deployed. Use the following steps to configure and deploy the Banner Identity Gateway.

Step 1 Configure the integmgr user password

BEIS 8.1.4 includes a significant change that resolves performance degradation of the Gateway over time. Instead of using container-managed persistence, the Gateway now manages its own database connection, refreshing it periodically to ensure optimal performance. This change requires the Gateway to be configured for the password of the `integmgr` user in your environment. Use the following steps to configure the password.

1. Navigate to the `bnig.ear` file.
2. Rename `bnig.ear` to `bnig.zip`.
3. Extract `bnig.zip` to a folder named `bnig`.

4. Navigate to the `/bnig/lib` subdirectory.
5. Execute the following command:

```
jar xvf bnigCore.jar BnigResources.properties
```

6. Open the `BnigResources.properties` file, which is extracted under the `lib` directory.
7. Modify the last two properties in the file:

<code>integmgr.pwd</code>	Password for the <code>integmgr</code> user for your environment. Required.
<code>connection.refresh.count</code>	Frequency for creating a new connection. A new connection is created each time this number of message sets is processed. Default is 10000.

8. Save and close the file.
 9. Execute the following command from the `lib` directory to rebuild the `bnigCore.jar` with the changed file:
- ```
jar uvf bnigCore.jar BnigResources.properties
```
10. After this command runs successfully, delete the `BnigResorces.properties` file under the `lib` directory.
  11. Rezip the contents of the `bnig` folder to `bnig.zip`.
  12. Rename `bnig.zip` to `bnig.ear`.

## Step 2 Undeploy the current Gateway

Use the Enterprise Manager in Oracle Application Server 10.1.3.4/5 or Oracle WebLogic Server 11g to undeploy the current Gateway.

## Step 3 Validate the application server configuration (OC4J only)

Installation instructions in previous versions of the *Banner Enterprise Identity Services Handbook* did not specify the creation of the `UDC_IDENTITY_SUBSCRIBER` connection factory as XA-enabled. On OC4J, this caused messages to be held in the `UDCIdentity` Topic after they were processed, resulting in the following problems:

- Previously processed messages were reprocessed when the OC4J container was restarted.
- Restart of the OC4J container was unreliable.
- Performance was degraded when the Proxy Services produced messages.

Check the configuration of the `UDC_IDENTITY_SUBSCRIBER` connection factory to determine whether it is XA-enabled. If it is not XA-enabled, use the following steps to remove and recreate the necessary connection factory.

1. On the Oracle Enterprise Manager console, click the name of the OC4J instance where the Gateway will be redeployed. The home page for the selected instance is displayed.
2. Click the **Administration** tab. A list of tasks is displayed.
3. Select **JMS Connection Factories** in the Enterprise Messaging Service section. The JMS Connection Factories page is displayed.
4. Delete the existing configuration for `jms/UDC_IDENTITY_TCF`.
5. Click **Create New**. The Add Connection Factory page is displayed.
6. Enter the following information to create a connection factory:

|                                |                             |
|--------------------------------|-----------------------------|
| <b>Connection Factory Type</b> | <i>Topic</i>                |
| <b>JNDI Location</b>           | <i>jms/UDC_IDENTITY_TCF</i> |
| <b>Host</b>                    | <i>[ALL]</i>                |
| <b>Client Identifier</b>       | Leave blank                 |
| <b>XA Enabled</b>              | checked (yes)               |

7. Click **OK**. The JMS Connection Factories page is redisplayed.
8. Restart the OC4J container for the changes to take effect.

#### Step 4 Deploy the new Gateway

Aside from creating the connection factory configuration in step 3, you can reuse all data sources, JMS queues and topics, and security users that were configured for BEIS 8.1.3. All that is needed is to deploy the new `bnig.ear` to your application server.

Refer to Chapter 7, “Banner Identity Gateway,” of the *Banner Enterprise Identity Services Handbook* (version 8.1.4) for instructions. The steps depend on your application server:

- Oracle Application Server 10.1.3.4/5 - Use “Step 9 - Deploy the Banner Identity Gateway” in the instructions for Oracle Application Server 10.1.3.4/5.
- Oracle WebLogic Server 11g - Use “Step 13 - Deploy the Banner Identity Gateway” in the instructions for Oracle WebLogic Server 11g.

## Upgrade the Enterprise Identity Proxy Services

Use the following steps to configure (if necessary) and deploy the 8.1.4 version of the Enterprise Identity Proxy Services.

### Step 1 Determine whether processing properties need to be changed

Proxy Services is delivered with default values for processing properties in the `spml.properties` file. These properties can be changed to improve performance, depending on the capabilities of the adapters to which the Proxy Services application provisions.

Determine whether you changed any properties in your current deployment of Proxy Services:

- If you have made changes, go to step 2 to make corresponding changes to the new version of the Proxy Services before deployment.
- If you made no changes, go to step 3 to continue the upgrade.

### Step 2 Update processing properties (if needed)

If you determined in step 1 that processing properties were changed in your current deployment of Proxy Services, use the following steps to update the processing properties in the 8.1.4 version of Proxy Services.

1. Navigate to the `idproxy.ear` file.
2. Rename `idproxy.ear` to `idproxy.zip`.
3. Extract `idproxy.zip` to a folder named `idproxy`.
4. Navigate to the `/IdProxy` subdirectory.
5. Execute the following command:  

```
Jar xvf IdProxyEJB.jar spml.properties
```
6. Open the `spml.properties` file, which is extracted under `IdProxy` directory.
7. Change any default values as needed.

8. Save and close the file.
9. Execute the following command from the `IdProxy` directory to rebuild the `IdProxyEJB.jar` with the changed file:

```
jar uvf IdProxyEJB.jar spml.properties
```
10. After this command runs successfully, delete the `spml.properties` file under the `IdProxy` directory.
11. Rezip the contents of the `idproxy` folder to `idproxy.zip`.
12. Rename `idproxy.zip` to `idproxy.ear`.

### Step 3 Undeploy current Proxy Services

Use the Enterprise Manager in Oracle Application Server 10.1.3.4/5 or Oracle WebLogic Server 11g to undeploy the current Proxy Services.

### Step 4 Create an index on the T\_UDC\_SPML\_MSG\_LOG table

BEIS 8.1.4 includes an update script to create an index on the `T_UDC_SPML_MSG_LOG` table to improve performance. Use the following steps to apply this script.

1. Navigate to the `db-scripts\upgrade-scripts` folder.
2. Run SQL\*Plus and connect as the `identmgr` user.
3. Execute the `db_upgrade_8_1_3_to_8_1_4.sql` script:

```
sqlplus> @db_upgrade_8_1_3_to_8_1_4
```
4. Exit SQL\*Plus.

### Step 5 Deploy the new Proxy Services

Aside from creating the table index in step 4, you can reuse all data sources, JMS queues and topics, and security users that were configured for BEIS 8.1.3. All that is needed is to deploy the new `idproxy.ear` file to your application server.

Refer to Chapter 8, “Enterprise Identity Proxy Services,” of the *Banner Enterprise Identity Services Handbook* (version 8.1.4) for instructions. The steps depend on your application server:

- Oracle Application Server 10.1.3.4/5 - “Use Step 6 - Install the Proxy Services” in the instructions for Oracle Application Server 10.1.3.4/5.
- Oracle WebLogic Server 11g - Use “Step 10 - Install the Proxy Services” in the instructions for Oracle WebLogic Server 11g.

## Upgrade from BEIS 8.1.2

Due to changes in supported application servers and in the BEIS components themselves, clients upgrading from BEIS 8.1.2 to BEIS 8.1.4 should follow the upgrade instructions for BEIS 8.1.3. Refer to the *Banner Enterprise Identity Services Release Guide and Upgrade Guide (8.1.3)* for instructions. You can, however, deploy the 8.1.4 versions of the Gateway and Proxy Services, instead of the 8.1.3 versions. Be sure to follow the 8.1.4 instructions in this document if you deploy the 8.1.4 versions of the Gateway and Proxy Services.

# Problem resolutions



Banner Enterprise Identity Services 8.1.4 includes the following problem resolutions. For comprehensive and detailed information for all problem resolutions delivered in this release, refer to the `beis80104resolutions.txt` file delivered with this release guide. Information in this text file is extracted from the Customer Support Center immediately before release of the product. This text file may include additional defects that were resolved after this release guide was finalized.

| Object Name             | Defect Number | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Banner Identity Gateway | 1-ORMJK4      | Data in GORCTAB, GORCCOL, and GORCRUL was corrupted. New data load scripts delete existing rows in GORCTAB where <code>GORCTAB_SQPR_CODE = IAM</code> and all related rows in GORCCOL and GORCRUL. The scripts were delivered in patch <code>p1-N3IZO3_beis08010301</code> and are being rolled into BEIS 8.1.4.                                                                                                                                                                                                                                                            |
| Banner Identity Gateway | 1-N3IZO3      | The following data load scripts were missing in Banner General releases after 8.1:<br><br><code>gorctabi_070501.sql</code><br><code>gorcruli_070501.sql</code><br><code>gorccoli_070501.sql</code><br><br>The scripts were delivered in patch <code>p1-N3IZO3_beis08010301</code> and are being rolled into BEIS 8.1.4 with new names:<br><br><code>gorccoli_iam_meta_data.sql</code><br><code>gorcruli_iam_meta_data.sql</code><br><code>gorctabi_iam_meta_data.sql</code><br><code>load_iam_streams_meta_data.sql</code><br><code>repair_iam_streams_meta_data.sql</code> |
| Banner Identity Gateway | 1-SJUYVL      | A potential security issue existed with single sign on to Banner Self-Service via a third-party access manager.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



| Object Name                        | Defect Number | Summary                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAS Extension                      | 1-P8UT6F      | JPA service registry was not configured correctly. Application registrations were lost when the CAS server was restarted, requiring the CAS administrator to register services every time the CAS server was restarted.                                                                                                                                   |
| Enterprise Identity Proxy Services | 1-SJUYVJ      | A provisioning message could be picked up by two different processing threads, leading to the message being left in <i>PENDING</i> status with corrupted data. The Enterprise Identity Proxy Services component was modified to use a Spring JMS message driven bean instead of an EJB. This change removed a rogue timer thread that caused the problem. |





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