

Bravura Security Fabric Implementation:Map attributes - admin

Hitachi ID Bravura Security Fabric includes a "catalog" of shipped attribute presets for each target system type. The catalog includes each attribute's native name, and default requirements, configured actions, and profile and request attribute mappings.

Bravura Security Fabric uses the attribute catalog to determine rules for "handling" each attribute when managing accounts on a target system. The catalog also determines which attributes' values should be loaded during auto discovery.

Terminology

The following terms are introduced in this unit:

Account attributes The attributes of user accounts on target systems; for example, most target systems store the "first name" and "last name" of the users on that system. In Active Directory, the attribute that stores the first name is givenName, and the attribute that stores the last name is sn. When you add a target system, there is an option to list account attributes, if supported by the target system.

Profile and request attributes The attributes associated with *Hitachi ID Bravura Security Fabric* users and processes. They can provide information about a user, or a request, or both. Values for these attributes can be loaded automatically from associated account attributes, provided by a plugin, or entered by users in a form on the *Hitachi ID Bravura Security Fabric* GUI.

Attribute groups An attribute group is a named collection of profile and request attributes. *Hitachi ID Bravura Security Fabric* uses attribute groups to determine:

- · Who can see or edit certain attribute values.
- How attributes are displayed to users.

You need to assign permissions, or access controls, to give end users read and write access to attribute groups, and therefore the attributes within each group. You can be selective, using highly configurable rules, about which users have access. In order for a profile attribute to be seen or updated by users – that is, to show up on a self-service request page – it must belong to an attribute group.

This document contains:

- Requirement
- Solution
- Use case: Creating profile and request attributes
- Use case: Mapping account attributes to profile and request attributes
- Use case: Grouping profile and request attributes

Use case: Defining restricted values manually

· Use case: Setting attribute validation rules

· Use case: Modifying attribute priority

1 Requirement

Organizations require the data stored in target systems such as an email address, or phone number to become part of the users' profiles in *Hitachi ID Bravura Security Fabric*.

2 Solution

Profile and request attributes allow any number of account attributes to be mapped to a single value in users' profile data. Several attributes are mapped by default; for example, the Microsoft Active Directorymail and Lotus Domino Server InternetAddress account attributes are mapped to the EMAIL profile and request attribute. Attributes that are mapped to profile and request attributes are listed by default when the target system's List attributes setting is enabled.

In order to map an account attribute to a profile and request attribute, the attributes' requirements (number of values, attribute type, encoding) must be compatible.

Information can be collected by:

- The auto discovery process, which loads *account attribute* information from target systems that support attribute listing into mapped profile and request attributes.
- A plugin that automatically collects and/or generates or looks up information, such as an employee ID, from a database.
- Users who update profile information using the web interface.

2.1 Mapping profile and request attributes

You can map profile and request attributes to account attributes to load users' information from a target system. You can also configure attributes so that users' accounts are updated when their profile information is updated.

The type and number of values of the profile and request attribute must be compatible with the account attribute. For example, you cannot map a required account attribute to an optional profile and request attribute, or a single-valued account attribute to a multi-valued profile and request attribute.

2.2 Grouping attributes

Attributes must be included in an attribute group in order to be used. You can organize attributes into groups to:

- · Assign read and write privileges to users in different stages of authorization workflow.
- Assign read and write privileges to creators of managed system policies, when Bravura Privilege features are used.
- Determine whether attributes are displayed for specific operations, such as view profile.
- Determine how attributes are displayed to users on the request form.

3 Use case: Creating profile and request attributes

In this use case you will create a profile and request attribute to gather information from users.

This use case assumes:

• Hitachi ID Bravura Security Fabric and Hitachi ID Connector Pack are installed.

Add a profile and request attribute

- 1. Log in to Bravura Security Fabric as superuser.
- 2. Click Manage the system \rightarrow Workflow \rightarrow Profile and request attributes \rightarrow Profile and request attributes.
- 3. Click Add new...
- 4. Enter the following information:

ID VEHICLE-DESCRIPTION

Description Vehicle description

Type String

Leave other settings as default.

- 5. Click Add.
- 6. Click **Profile and request attributes** in the top navigation path.

Locate the new attribute in the list.

4 Use case: Mapping account attributes to profile and request attributes

In the event you need to track a particular attribute loaded from a target system account you can link a profile or request attribute within *Hitachi ID Bravura Security Fabric* to the account attribute through mapping. We will create a new profile attribute to map our Active Directory carLicense account attribute to.

When using *Bravura Security Fabric* there are often many ways to achieve the same outcome. To demonstrate an alternative way to create a profile attribute, you will create the new VEHICLE-LICENSE profile attribute during the process of mapping the carLicense account attribute.

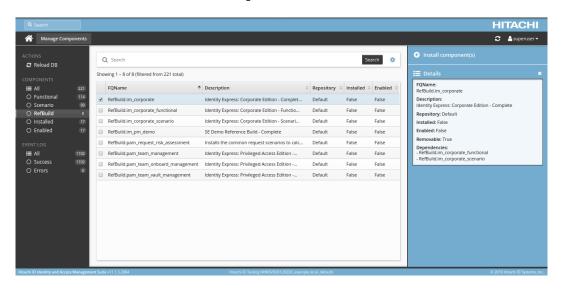
This use case assumes:

- Bravura Security Fabric and Hitachi ID Connector Pack are installed.
- · An Active Directory target system is added as a source of profiles.

Install Bravura Pattern: Workforce Edition

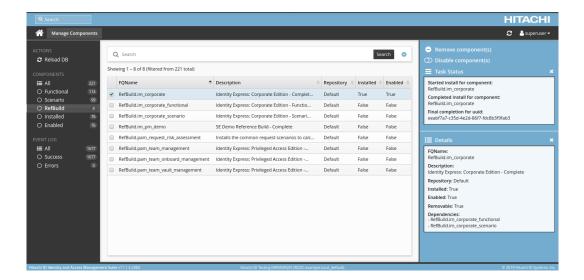
To install the Hitachi ID Bravura Pattern: Workforce Edition components:

- 1. Log in to Bravura Security Fabric as superuser.
- 2. Click Manage Components → RefBuild.
- 3. Select the checkbox for Refbuild.im corporate.



4. Click Install component(s) from the Actions panel on the right.

The component management program installs the components along with any dependencies. This may take some time depending on configuration requirements and dependencies. You should see "Completed install for component" messages for each selected component in the *Details* section of the Actions panel.



When you install a component, the component management program creates the database tables and configurations that are necessary for the plugin points to function. Additional post-install configuration may still be required for some use cases to run properly.

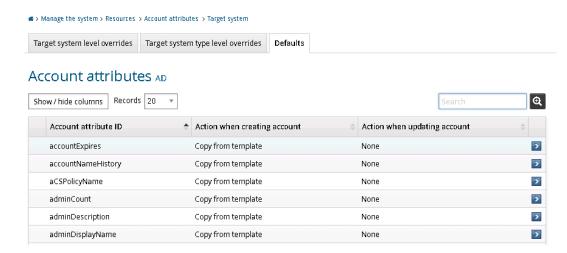
5. Take a look at some of the new configuration parameters that the reference implementation components add to the manually defined target systems by navigating to **Manage the system** → **Resources** → **Target systems** → **Manually defined**.



As we continue through the training you will see how we utilize the configurations installed by the reference implementation to enhance the functionality of *Hitachi ID Bravura Security Fabric*.

Map the carLicense account attribute to a new profile attribute

- 1. Click Resources → Account attributes → Target system, then select the Active Directory target system.
- 2. Click the **Defaults** tab.



This page lists all the default actions for account attributes that the Active Directory connector extracts from the target.

- 3. for and select ≥ the carLicense attribute.
- Click Override.
- 5. Set Action when creating account to "Set to specified value".
- 6. Set Action when updating account to "Set to specified value".
- 7. Set the Minimum number of values to 0.
- 8. Click the search icon a in the Map account attribute to profile/request attribute field.
- Click Add new... at the bottom left of the Profile and request attributes table.
 Hitachi ID Bravura Security Fabric displays the Profile and request attribute information form in a pop-up page.
- 10. Create another attribute with the following information:

ID VEHICLE-LICENSE

Description Vehicle license

Type String

Leave the other settings as default.

11. Click Add.

Bravura Security Fabric warns about access control, which we will fix later.

- 12. Close the pop-up window to return to the profile attribute selection page.
- 13. Refresh the page so that VEHICLE-LICENSE is included in the list.
- 14. Search for and select VEHICLE-LICENSE and click Select.
- 15. Select the **Load attribute values from target system** checkbox to allow *Bravura Security Fabric* to import carLicense account attribute values from the target system.

The Populate mapped profile attribute with values from target system is automatically selected.

- 16. Click Add.
- 17. Click **Yes** to retrieve a full attribute list during the next auto discovery.

Run auto discovery

You need to run auto discovery to apply the override on the account attribute action and to populate VEHICLE-LICENSE profile attribute:

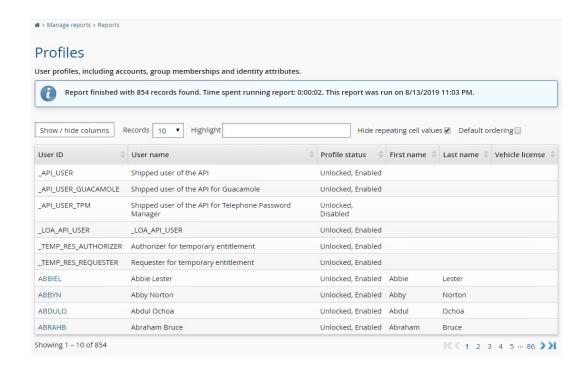
- 1. In the *Manage the system* (PSA) module, click **Maintenance** → **Auto discovery**.
- Click Execute auto discovery.
 The Execute auto discovery page is displayed.
- 3. Click Continue.
- 4. Click Refresh 2 until the page displays Auto discovery is not running.

Confirm the attributes have been mapped

You can now run a report to confirm the attributes are mapped and loaded correctly:

- 1. Click Home ...
- 2. Click Manage reports → Reports.
- 3. Click Users → Profiles.
- 4. Select the following from User attributes to display:
 - Vehicle license
 - · First name
 - · Last name
- 5. Click Run.

You should now see the Vehicle license profile attribute for each user, but it will be blank since our Active Directory users do not have values for the carLicense account attribute.



You have now mapped an account attribute to a profile and request attribute, and used the configuration to populate user profile data.

5 Use case: Grouping profile and request attributes

This use will show you how to include attributes in an attribute group to allow them to be seen and updated by users.

This use case assumes:

- · Hitachi ID Bravura Security Fabric and Hitachi ID Connector Pack are installed.
- An Active Directory target system is added as a source of profiles.
- · Complete Use case: Creating profile and request attributes.
- Complete Use case: Mapping account attributes to profile and request attributes.

Create a vehicle attribute group

- 1. Log in to Bravura Security Fabric as superuser.
- 2. Click Manage the system \rightarrow Workflow \rightarrow Attribute groups.
- 3. Click Add new...
- 4. Type the following information:

ID VEHICLE-INFO

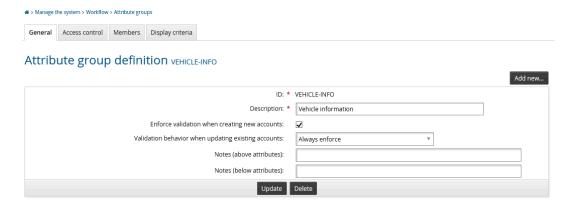
Description Vehicle information

If you want to provide additional information for end users, enter text in the **Notes (above attributes)** or **Notes (below attributes)** fields.

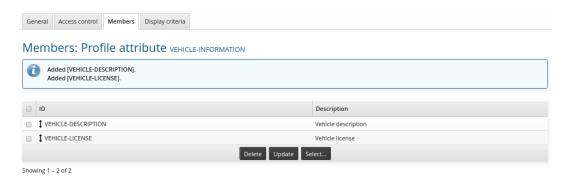
Leave other values as default.

The validation rules will be discussed in a later unit.

5. Click Add.



- 6. Click the **Members** tab.
- 7. Click **Select...** to see a list of all attributes.
- 8. Select the checkboxes next to:
 - VEHICLE-DESCRIPTION
 - VEHICLE-LICENSE

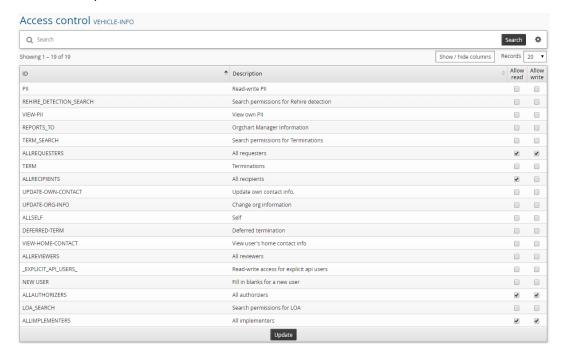


- 9. Click Select.
- 10. Use the drag-and-drop arrows next to the attribute ID to move VEHICLE-LICENSE above VEHICLE-DESCRIPTION.

This determines the order in which the attributes are listed when displayed to users.

11. Click **Update** to save the changes.

- 12. Click the Access control tab.
- 13. Assign permissions to allow it to be updated by a user requesting an update or a new account. You probably wouldn't want all recipients to be able to change these values however. For this example:
 - Select Read and Write permissions for ALLREQUESTERS, ALLAUTHORIZERS, and ALLIMPLE-MENTERS.
 - Select Read permissions for ALLRECIPIENTS.

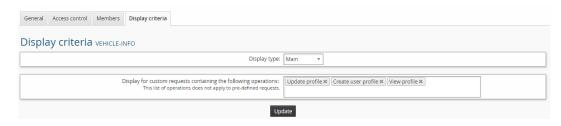


Click Update.

- 14. Click the **Display criteria** tab.
- 15. Set the **Display type** to "Main" to display these attributes on users' main profile page.

 The "Subsidiary" option means that user must click an icon to display the values on a separate page.
- 16. Select the operations for which the attributes will be displayed. For this lab select:

View profile Update profile Create user profile



17. Click Update.

Create an employee attribute group

- 1. Click Manage the system \rightarrow Workflow \rightarrow Attribute groups.
- 2. Click Add new...
- 3. Type the following information:

ID EMPLOYEE-INFO

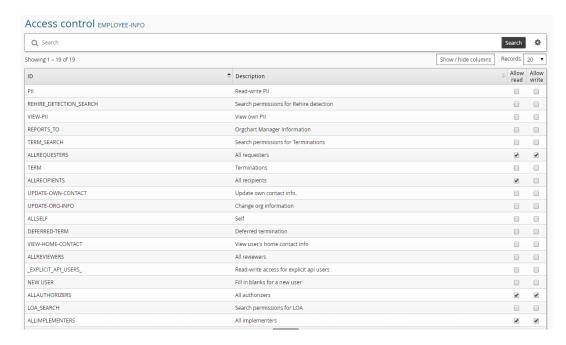
Description Employee information

Leave other values as default.

- 4. Click Add.
- 5. Click the **Members** tab.
- 6. Click **Select...** to see a list of all attributes.
- 7. Select the checkboxes next to:
 - EMPLOYEE-NUMBER
 - EMPLOYEE-TYPE



- 8. Click Select.
- 9. Click the Access control tab.
 - Select Read and Write permissions for ALLREQUESTERS, ALLAUTHORIZERS, and ALLIMPLE-MENTERS.
 - Select Read permissions for ALLRECIPIENTS.



Click Update.

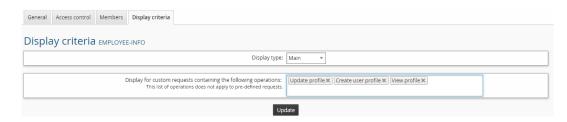
- 10. Click the **Display criteria** tab.
- 11. Set the **Display type** to "Main" to display these attributes on users' main profile pages.

 The "Subsidiary" option means that user must click an icon to display the values on a separate page.
- 12. Select the operations for which the attributes will be displayed. For this lab select:

View profile

Update profile

Create user profile



13. Click Update.

Login as a regular user

To test this attribute group you will sign in as a regular user to see that the attributes are displayed when viewing or updating the user profile. Later, you will create a new user profile and add values to these attributes.

To log in and enroll as a regular user:

- 1. Log into the Front-end (PSF) as <user>.
- 2. Enter the password <password>.
- In the My profile section, click View and update profile
 You should see the Vehicle information and Employee information displayed on the Profile information and entitlements page.



6 Use case: Defining restricted values manually

The *Hitachi ID Bravura Pattern* onboarding scenario components defines an EMPLOYEE-TYPE profile attribute that is mapped to the Active Directory employeeType account attribute. This type of attribute is populated by a set of restricted values. This use case will guide you through adding an additional restricted value to this attribute.

This use case assumes:

- · Hitachi ID Bravura Security Fabric and Hitachi ID Connector Pack are installed.
- An Active Directory target system is added as a source of profiles.
- Complete Use case: Creating profile and request attributes.
- Complete Install Hitachi ID Bravura Pattern: Workforce Edition.

Define additional restricted values

To manually define restricted values:

- 1. Log in to Bravura Security Fabric as superuser.
- 2. Click Manage the system \rightarrow Workflow \rightarrow Profile and request attributes \rightarrow Profile and request attributes.
- 3. Select ► EMPLOYEE-TYPE.

 Hitachi ID Bravura Security Fabric loads the **Profile and request attribute information** page.
- Click the Restricted values tab.
- 5. Type the following values in the empty fields at the bottom of the table:

Actual value S

Displayed value Student

- 6. Click More.
- 7. Type:

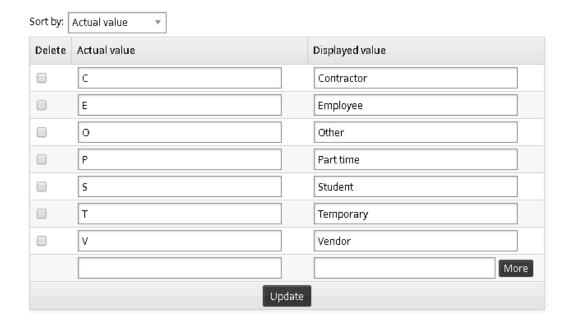
Actual value P

Displayed value Part time

8. Click Update.



Restricted values EMPLOYEE-TYPE



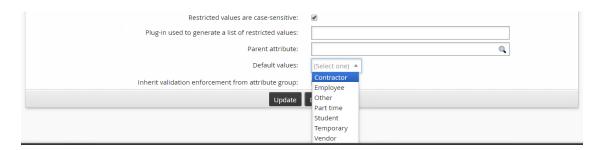
The **Actual value** is recorded in the database and written out to target systems, The **Displayed value** is shown to users in the *Bravura Security Fabric* interface.

CAUTION: If actual values contain the sequence !!!, Bravura Security Fabric will treat them as macros and expand them according to the skin being used. The actual values applied in this case will be different from what is defined in the attribute configuration. This will lead to the values being rejected, due to restricted list mismatch. The !!! sequence must therefore be avoided in actual values. If localization is required, specify the macro tag in the displayed value instead.

Default values

Attributes can be set up with default values for new resources and new profiles.

In the **General** tab, the **Default values** field is a drop-down list, allowing you to select one of the restricted values as the default. For this lab we will leave the Default values blank.



7 Use case: Setting attribute validation rules

The EMPLOYEE-NUMBER profile attribute that we added to the EMPLOYEE-INFO attribute group (p11) is mapped to the Active Directory employeeNumber account attribute. In this use case you will define a validation rule for this attribute so that when new users are created their employee number must follow a particular format.

This use case assumes:

- Hitachi ID Bravura Security Fabric and Hitachi ID Connector Pack are installed.
- An Active Directory target system is added as a source of profiles.
- Complete Use case: Grouping profile and request attributes.

To define a validation rule:

1. Log in to Bravura Security Fabric as superuser.

- 2. Click Manage the system \rightarrow Workflow \rightarrow Profile and request attributes \rightarrow Profile and request attributes.
- 3. Select ≥ EMPLOYEE-NUMBER.

Bravura Security Fabric loads the **Profile and request attribute information** page.

4. In the Description of input values type One character followed by seven numbers only (example E1234567).

This is the description displayed to users to show them how to enter a value.

- 5. In the **Format requirement of input values** field, type ANNNNNNN.
- 6. Click Update.

Users will now be required to enter employee number values in the correct format.

Test the validity rules

You can test an attribute's validity once you have configured it.

To test, click the **Test** tab, enter an attribute value to validate, then click the **Test** button. You should see that a value like 1234 will fail, whereas entering a value that follows the format, such as E7654321 will pass.

The value entered is validated against the Format requirement of input values setting, the Regular expression used for validation of input values setting, the Plugin used to generate a list of restricted values, and any manually entered restricted values.

8 Use case: Modifying attribute priority

When you install *Hitachi ID Bravura Pattern: Workforce Edition*, the onboarding scenario component mapped employeeNumber to the EMPLOYEE-NUMBER profile attribute. However, that is not the only account attribute mapped to the EMPLOYEE-NUMBER. In cases where multiple account attributes have values and are all mapped to a single profile attribute, the attribute priority will determine which value is used. You will configure the EMPLOYEE-NUMBER profile attribute so that the employeeNumber from Active Directory takes priority.

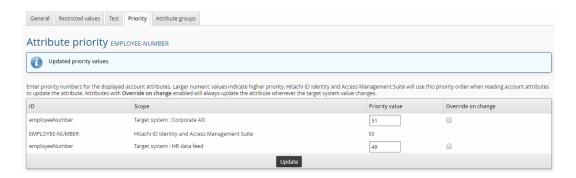
This use case assumes:

- Hitachi ID Bravura Security Fabric and Hitachi ID Connector Pack are installed.
- Bravura Pattern: Workforce Edition is installed.
- An Active Directory target system is added as a source of profiles.

To define attribute priority:

- 1. Log in to Bravura Security Fabric as superuser.
- 2. Click Manage the system \rightarrow Workflow \rightarrow Profile and request attributes \rightarrow Profile and request attributes.

- 3. Select ≥ EMPLOYEE-NUMBER.
 - Bravura Security Fabric loads the **Profile and request attribute information** page.
- 4. Click the Priority tab.
 - Note that all priority values are set at 50, which means that *Bravura Security Fabric* will default to setting priority by alphabetical order of the attribute ID.
- 5. Set the Priority value of the Corporate AD employeeNumber to 51 and set the Priority value of the HR data feed employeeNumber to 49.
- 6. Click Update.



The employeeNumber attribute from the Corporate AD target now has a higher priority and its value will be used first even if the other account attributes have values.

See also:

- For more detailed information about attributes see the Bravura Security Fabric Documentation .
- The Connector Pack Integration Guide provides details on handling account attributes for each target system type.