STIBO SYSTEMS
MASTER DATA MANAGEMENT

SETUP and USER GUIDE

Data Onboarding and Standardized Mapping

2025.1 – March 2025

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Data Onboarding and Standardized Mapping

Data Onboarding, coupled with the Standardized Mapping solutions, enables users to seamlessly transfer data between hierarchies within the system. Multiple Web UI components available with this solution facilitate the mapping of data across different industry standards or proprietary data models. With configurable mappings, users can extract, transform, and transfer data efficiently, automating the onboarding process.

This section addresses

- Data Onboarding
- Industry Standard Mapper

Data Onboarding

While the data from multiple industry standards are imported and stored in the STEP system, handling of data across different industry standards and data models can pose significant challenges. The Data Onboarding solution offers a set of tools designed to facilitate the mapping of data between different industry standards or to and from a proprietary data model. This is accomplished by configuring mappings to either onboard or offboard data from one standard to another.

The mapping functionality enables the copying and transformation of data from one STEP object to another. With the appropriate configurations in place, this solution can extract data points from the source or its associated objects and transfer them to a target or its related objects. Additionally, when necessary, it can generate a new target object and its associated hierarchy. This solution provides the flexibility to seamlessly move data across diverse data models.

Data mapping can be executed directly on the selected source object or executed to multiple objects simultaneously through bulk update actions. Data mapping doesn't always have to be carried out while standing on the source object, it can also be performed while standing on the target object.

Furthermore, it is possible to automate the data onboarding process during an import. After some initial configurations in the Web UI design mode, users gain the ability to view, edit, and create Mapper Configuration setup entities and Mapper plugins through the Onboarding Mappings Detail Screen.

This section addresses

- Configuring Data Onboarding Solution
- Configuring Web UI for Data Onboarding Solution
- Executing Mapper Configuration Setup Entity
- Mapping Plugins

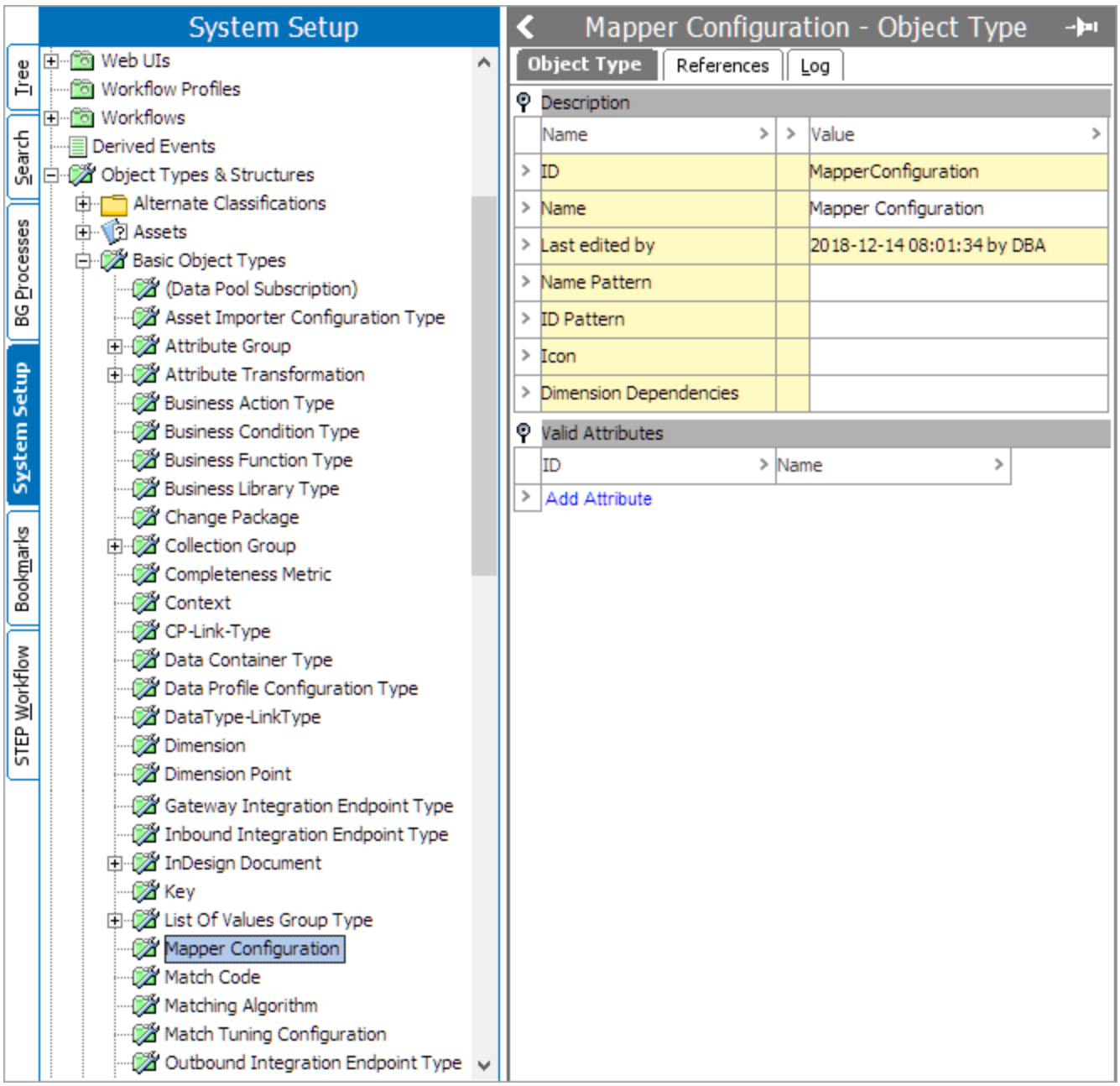
Configuring Data Onboarding Solution

The following topics provide the configuration processes necessary to allow users to be able to set up the Data Onboarding solution. The initial part of the configuration is done in the workbench and the later part is configured in the Web UI.

- Data Onboarding Solution Initial Setup
- Configuring Web UI for Data Onboarding Solution

Prerequisites

Apply the onboarding-mapper recipe to the STEP instance to display **Mapper Configuration** object type under Basic Object Types hierarchy within System Setup tab as displayed in the screenshot below.


System Setup
Tree
Search
BG Processes
System Setup
Bookmarks
STEP Workflow
Web UIs
Workflow Profiles
Workflows
Derived Events
Object Types & Structures
Alternate Classifications
Assets
Basic Object Types
(Data Pool Subscription)
Asset Importer Configuration Type
Attribute Group
Attribute Transformation
Business Action Type
Business Condition Type
Business Function Type
Business Library Type
Change Package
Collection Group
Completeness Metric
Context
CP-Link-Type
Data Container Type
Data Profile Configuration Type
DataType-LinkType
Dimension
Dimension Point
Gateway Integration Endpoint Type
Inbound Integration Endpoint Type
InDesign Document
Key
List Of Values Group Type
Mapper Configuration
Match Code
Matching Algorithm
Match Tuning Configuration
Outbound Integration Endpoint Type
Mapper Configuration - Object Type
Object Type
References
Log
Description
Name
Value
ID
MapperConfiguration
Name
Mapper Configuration
Last edited by
2018-12-14 08:01:34 by DBA
Name Pattern
ID Pattern
Icon
Dimension Dependencies
Valid Attributes
ID
Name
Add Attribute

Data Onboarding Solution Initial Setup

Within the Data Onboarding solution, a STEP setup entity object called **Mapper Configuration** is the fundamental object that is responsible for defining the actions of data onboarding. Before being able to create a Mapper Configuration, a one-time initial setup is essential. This setup entails creating a setup group to house the Mapper Configurations. This document provides a detailed guide on the initial setup, which involves setting up the data model in workbench.

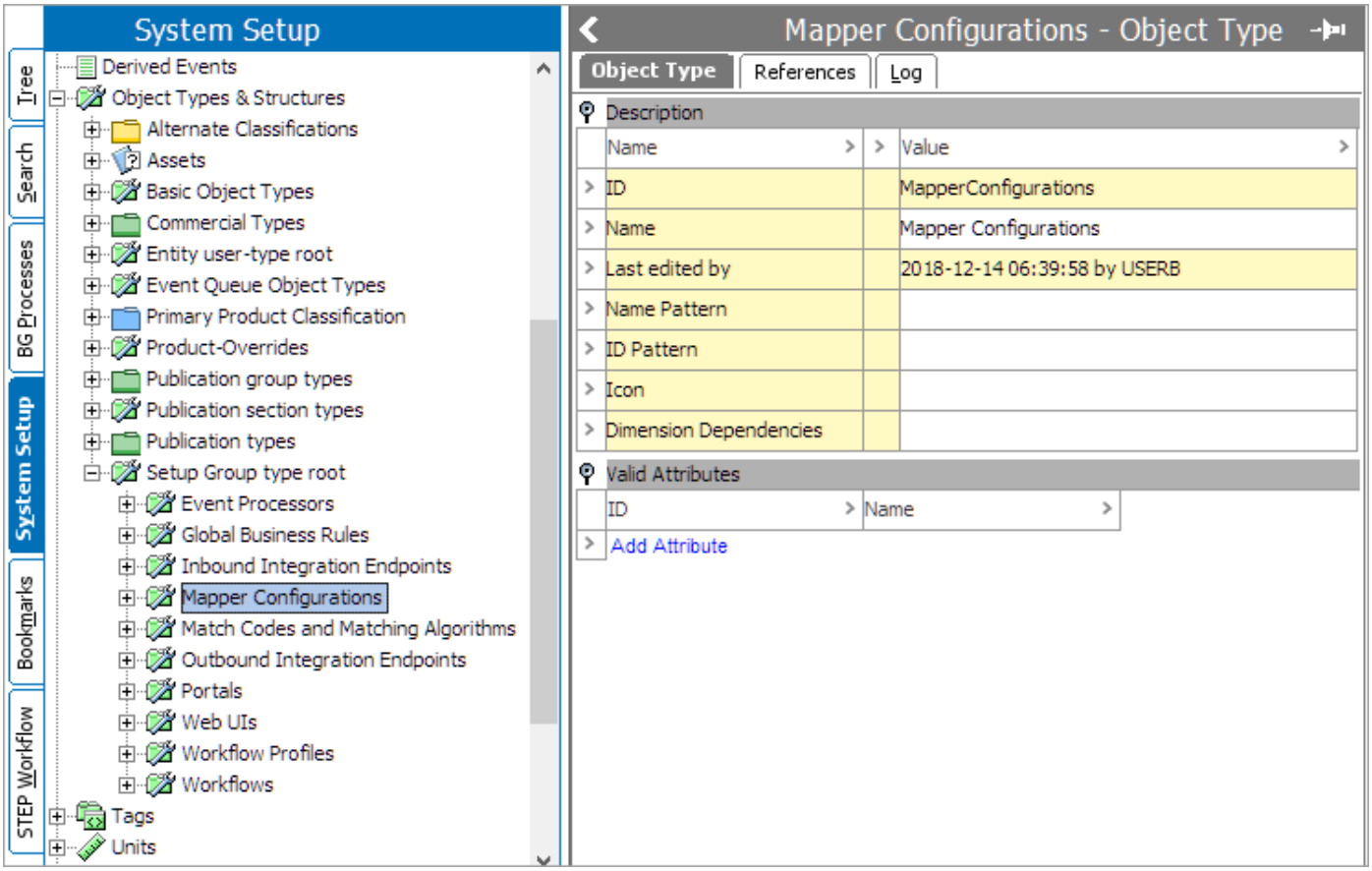
Setup entity definitions can be exported as comments and submitted to an external source control system for comparison purposes. For details, refer to the Configuration Management documentation.

By the end of this configuration in the workbench, a setup group called 'Mappings' is created where users can add new Mapper Configurations. Further configuration of the Mapper Configurations can be only done in the Web UI. For information on configuring Mapper configurations in the Web UI, refer to the Configuring Web UI for Data Onboarding Solution topic.

Below are the steps for an initial setup in the workbench.

1. Navigate to **System Setup** > **Object Types & Structures**, select then right-click the **Setup Group type root** node and select **New Object Type**.
2. In the dialog that displays, enter an ID in the ID parameter (e.g., MapperConfigurations), enter a Name in the Name parameter (e.g., Mapper Configurations), then click the **Create** button. This creates a setup group object type that will be used for the root node of the Mapper Configurations object to store all mapper configurations below.

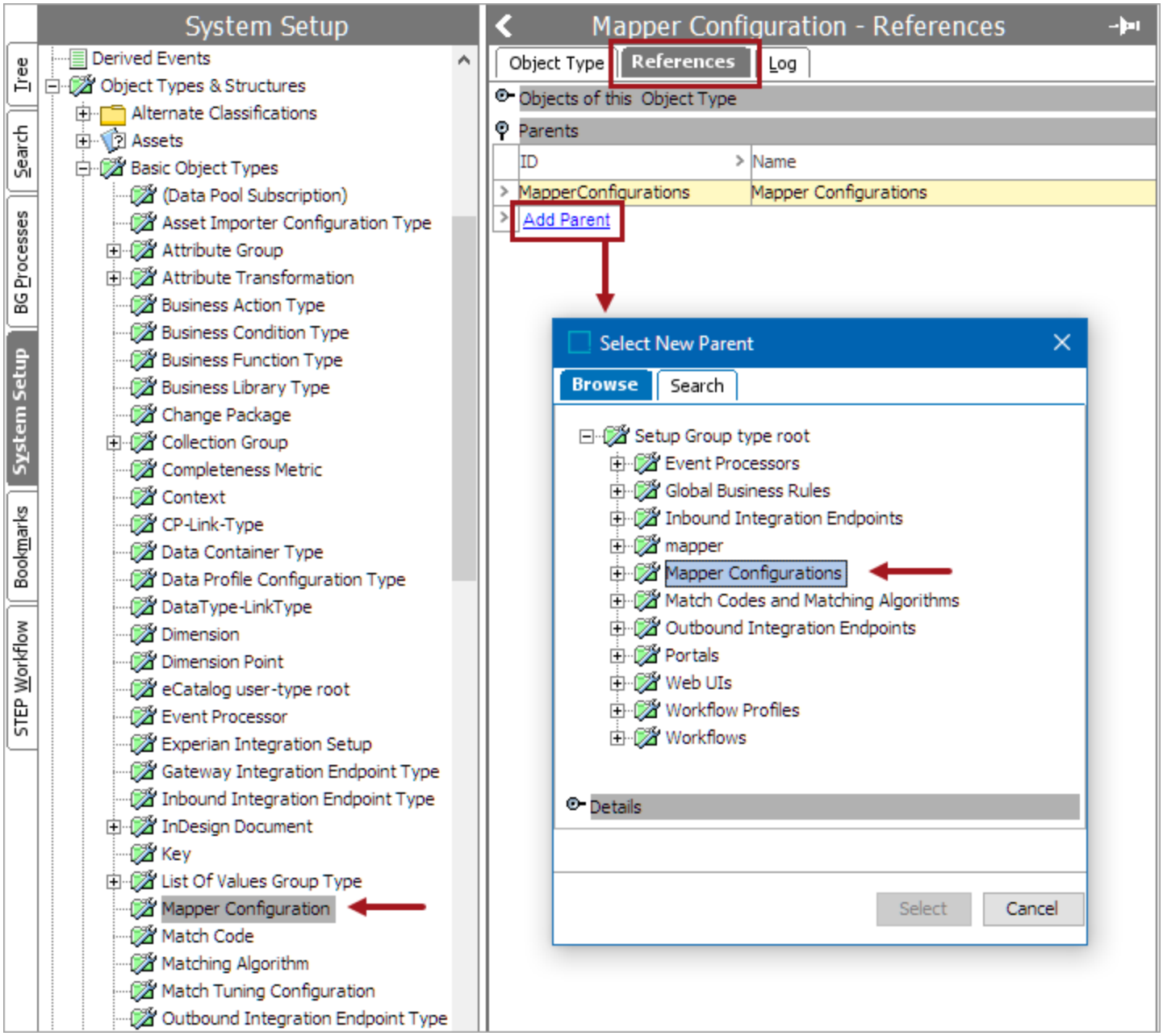
   The sample below illustrates a hierarchy of setup group object types. A Setup Group named 'Mapper Configurations' has been created.



Once the setup group is made, the 'Mapper Configurations' basic object type must be linked to this newly created node as a child. Later, when new Mapper Configurations are created and added to the system, they will use this object type.

3. Navigate to **Object Types & Structures** > **Basic Object Types** > **Mapper Configuration**, and click the **References** tab.

   Under the **Parents** flipper, click **Add Parent**, and in the node selector dialog, specify the **Mapper Configurations** node that was created in the above step.



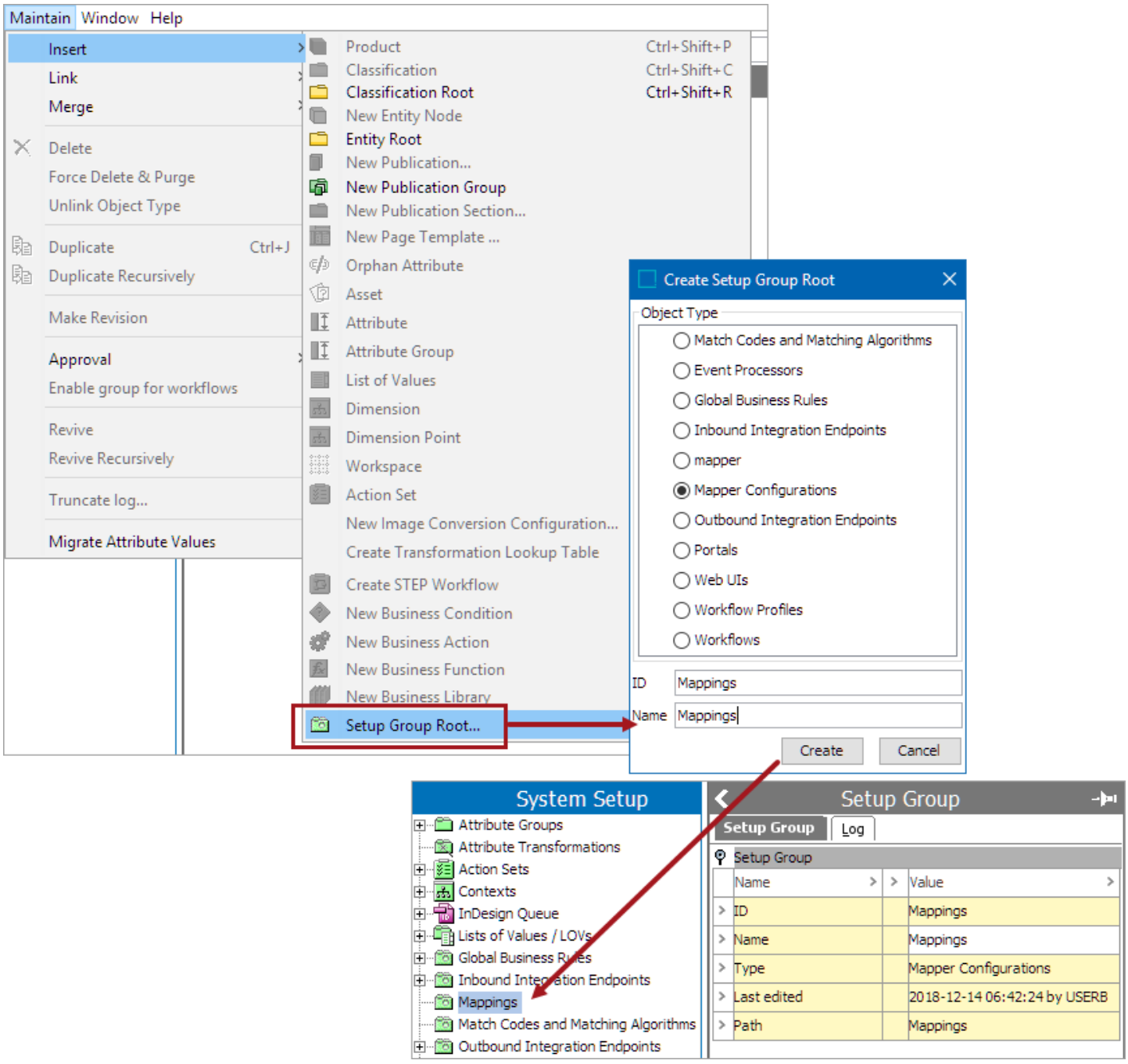
The next step is to create a new setup group root, where all Mapper Configurations will be stored below.

Creating a New Setup Group Root

1. To create the setup group root, navigate to **Maintain** (drop-down menu) > **Insert** > **Setup Group Root...**.
2. Select the 'Mapper Configurations' object type.

3. Specify the **ID** and **Name** for the setup group root object. In this setup, ID and Name value of 'Mappings' is entered.

4. Click **Create**.



The setup group called 'Mappings' of the object type 'Mapper Configurations' is created. From this newly created node, users can right-click and add new Mapper Configurations.

The Mapper Configurations under the setup group 'Mappings' are stored in STEP as a setup entity that can be exported and imported as STEP <Setup Entity> objects. It cannot be imported through Excel.

Configuring Web UI for Data Onboarding Solution

This topic covers how to configure the Web UI for Onboarding / Offboarding data in Web UI.

Prerequisites

Designers need to create and configure an Onboarding Mappings Details Screen, to configure Global Navigation Panel as an access to Mapper Configurations, and to configure different Mapper Configurations to meet user requirements. Detailed configuration and usage instructions are provided in the following topics of this documentation:

- Onboarding Mappings Details Screen
- Configuring Mapper Configuration Setup Entity
- Using the Onboarding Mappings Details Screen

Onboarding Specific Terminologies

Before using this solution, it is advisable to familiarize yourself with key Data Onboarding terminologies for easier navigation:

Source object: In the system, a source object refers to a STEP object from which the Mapper Configuration setup entity extracts data.

Source object type: Object type of the source objects.

Source-related object: In the system, this is a STEP object that is directly or indirectly associated with the source object (For example, child object or referenced object). The Mapper Configuration setup entity can extract data from the source-related object if necessary.

Target object: In the system, a target object refers to a STEP object into which the Mapper Configuration setup entity copies the extracted data.

Target object type: Object type of the target objects.

Target-related object: In the system, this is a STEP object that is directly or indirectly associated with the target object (For example, child object or referenced object). The Mapper Configuration setup entity can copy the extracted data into the target-related object if necessary.

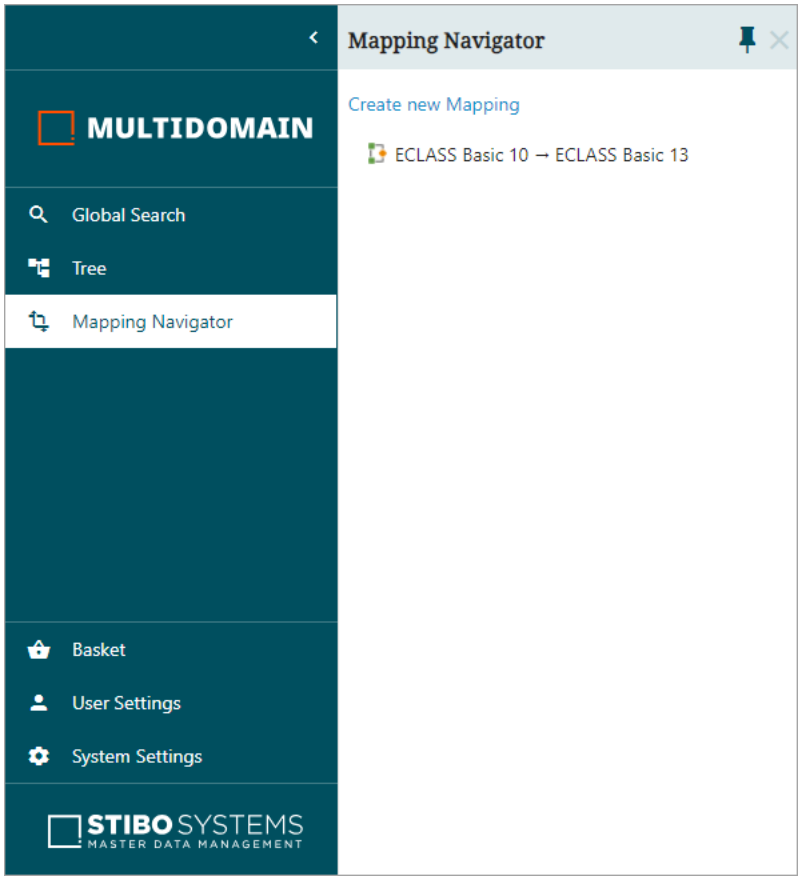
Further terminologies specific to the Onboarding related components / screens are defined in their respective topics of this document.

Onboarding Mappings Details Screen

The Onboarding Mappings Details screen is used to set up Mapper Configurations in Web UI. User can further configure the Mapper Configurations within this screen to configure Mapping plugins. For more information, refer to the topic Using the Onboarding Mappings Details Screenwithin this documentation.

Mapper Configurations - Global Navigation Panel Component

Configure the Global Navigation Panel with the Mapping Navigator component as the central access point for a comprehensive display of Mapper Configurations. In an example screenshot below, a Mapper Configuration named 'ECLASS Basic 10 - ECLASS Basic 13' is listed. Multiple Mapper Configurations can be created to meet the data onboarding requirement. To maintain a clean and organized solution, it is advised to create distinct Mapper Configurations as and when required. Further configuration of these Mapper Configurations is facilitated through the Onboarding Mappings Details screen. For detailed information on accessing and editing the Mapper Configurations, refer to the Onboarding Mappings Details Screen topic within this guide.



Onboarding Mappings Details Screen

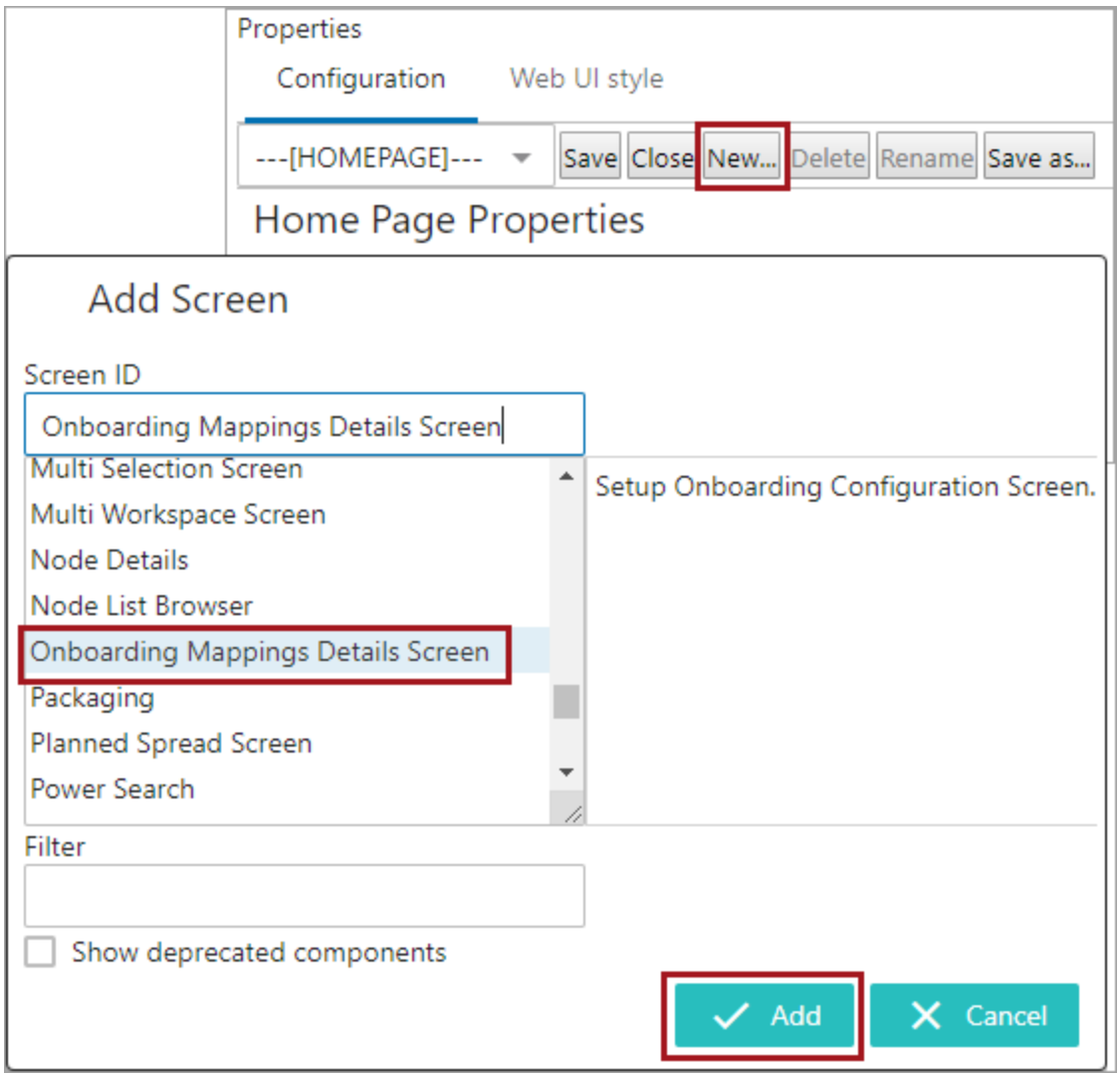
The Onboarding Mappings Details screen allows users to quickly display mapping configurations. The **Onboarding mappings navigator** component functions as a Global Navigation Panel component. For more information about Global Navigation Panel, refer to the Global Navigation Panel topic in the Web User Interfaces documentation.

Configuration Prerequisites

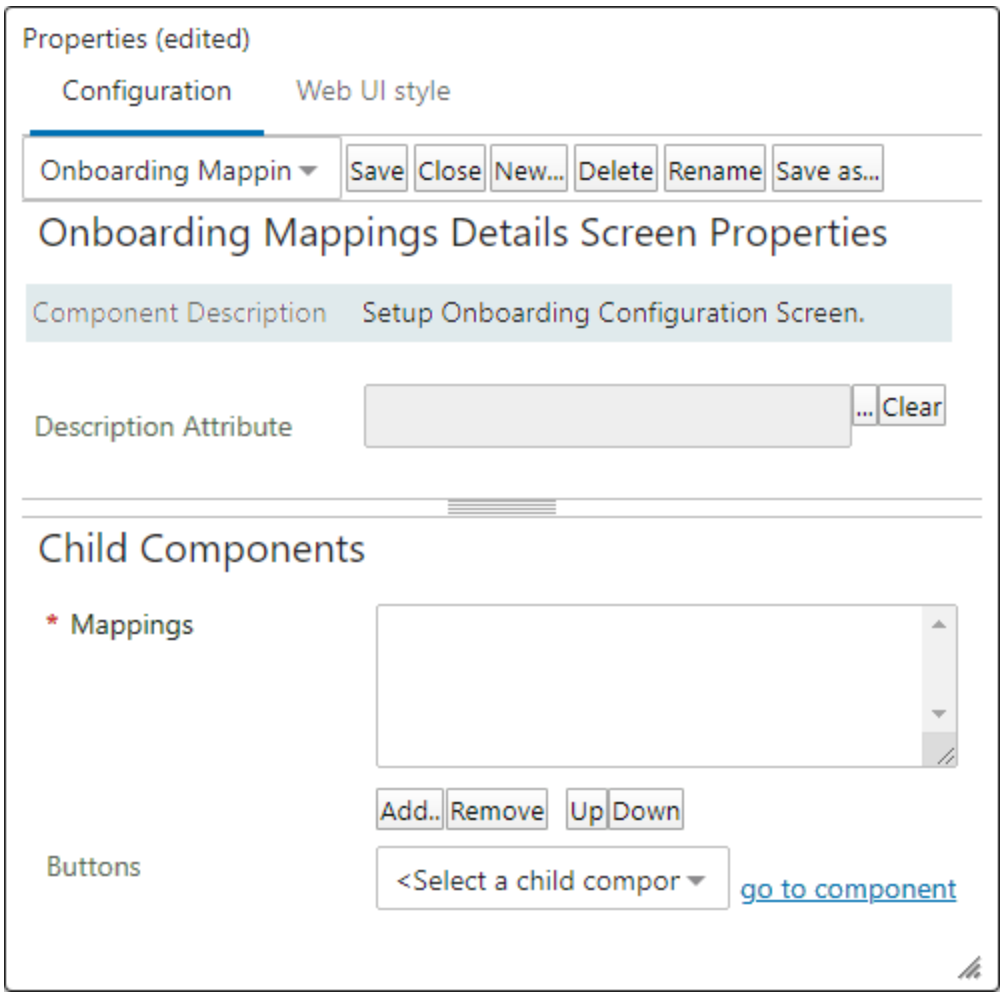
It is expected that anyone configuring the Onboarding Mappings Details Screen component is familiar with the Web UI Designer as basic concepts for working with the designer are not covered in this section. In addition, the user must have appropriate privileges to access the designer. Additional information can be found in the Designer Access section of the Web User Interfaces documentation.

Configuration Process

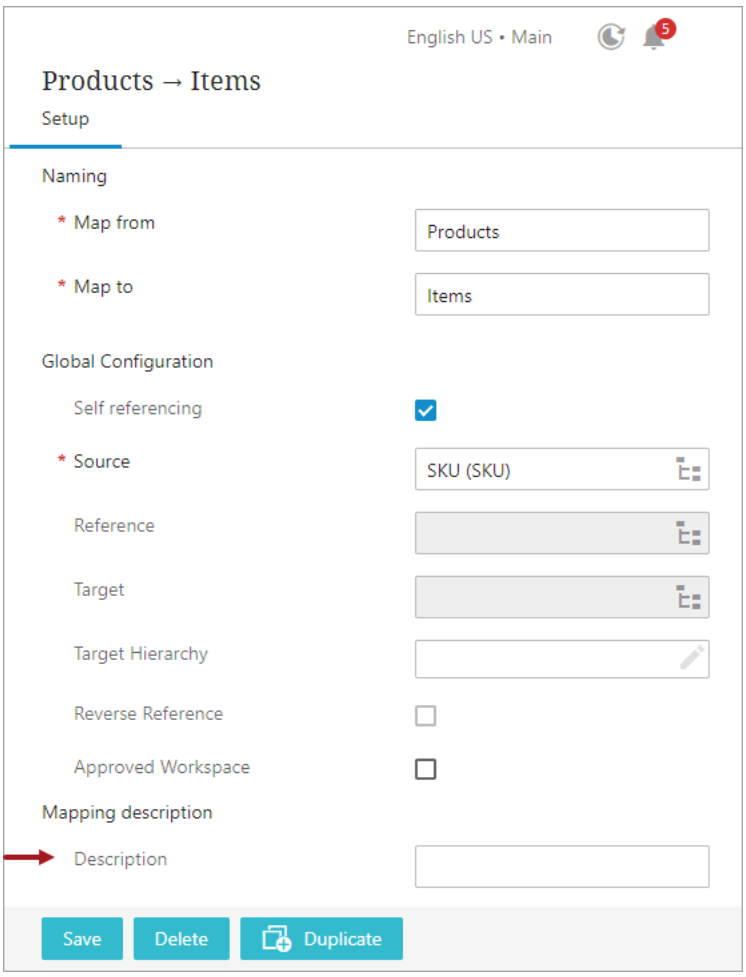
In the designer, create a new screen by selecting 'New.' Select the 'Onboarding Mappings Details Screen,', and create a name for the screen in the 'Screen ID' field. In the example below, the Screen ID is 'Onboarding Mappings Details Screen'. Click 'Add.'



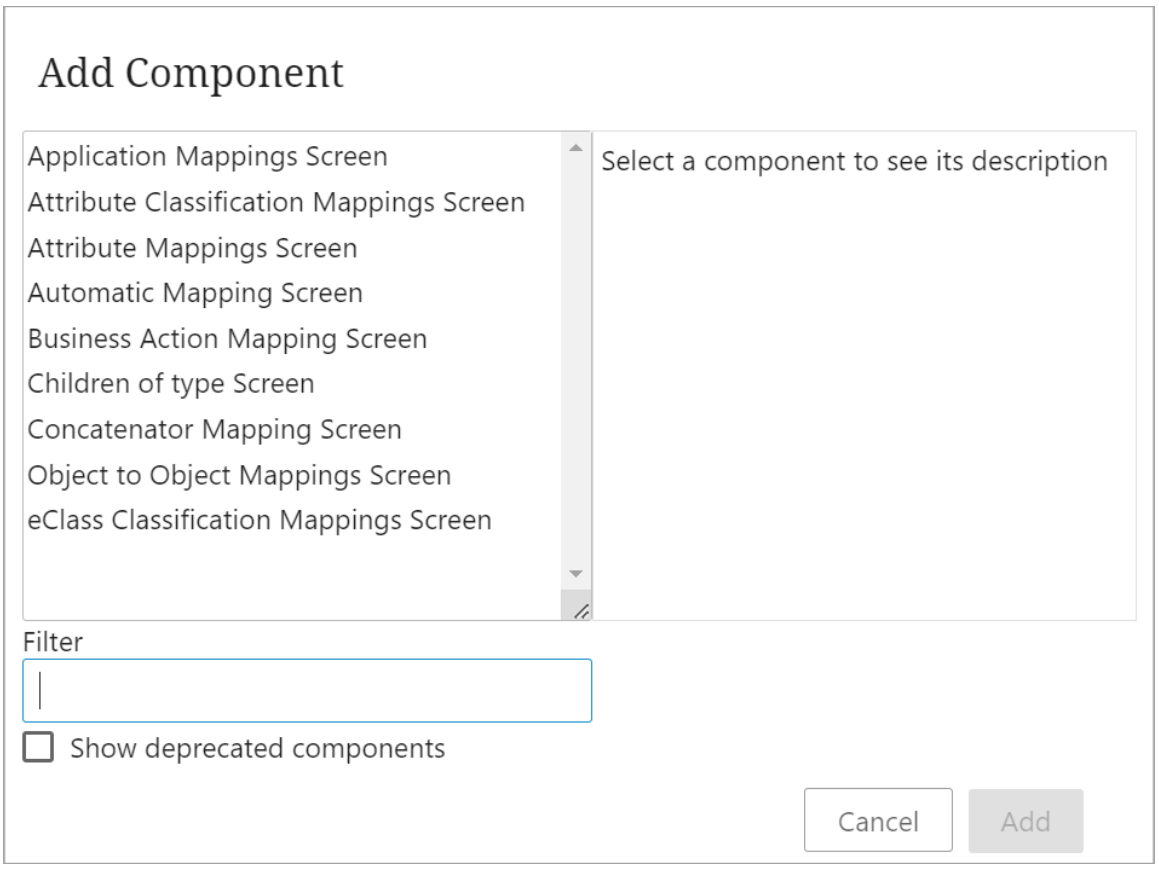
Once this screen is created, the Onboarding Mappings Details Screen Properties designer screen displays, which contains the following parameters for configuration:



- **Description Attribute:** This parameter allows users to configure an attribute that holds the description text for the Mapper Configuration setup entity. The configured attribute must be valid for the object type belonging to the Mapper Configuration setup entity. Any text string entered in the 'Description' field available within the 'Setup' tab of the Onboarding Mappings Details screen for the selected Mapper Configuration setup entity (an example shown below) will be held by the attribute defined in this parameter.



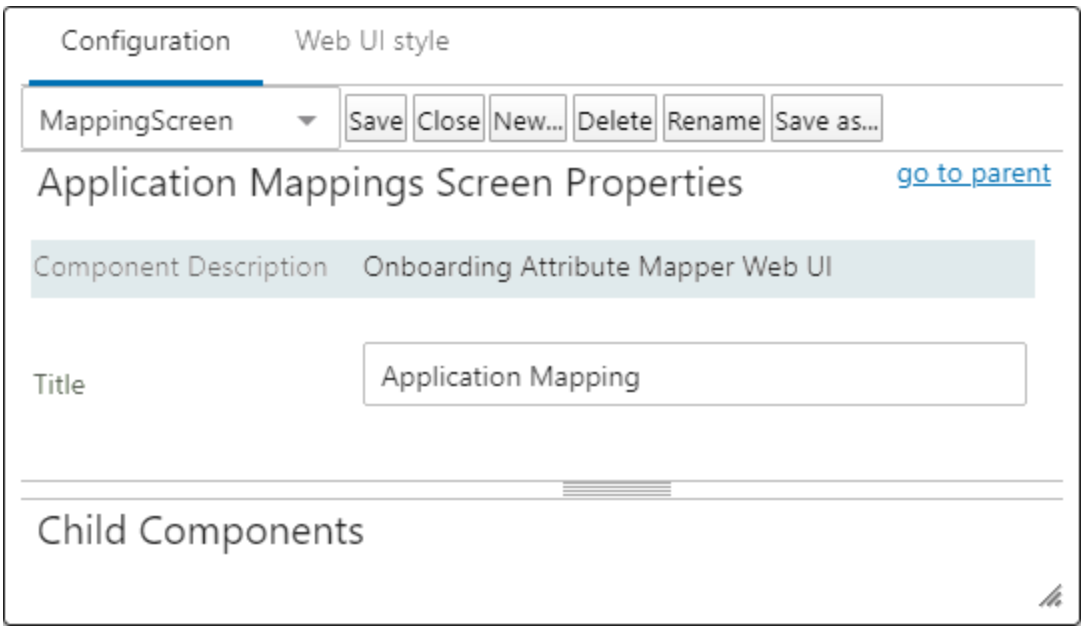
- **Mappings:** By default, this required parameter is blank. Click on the 'Add' button to add the mapping plugins that admin users should be able to view and select when configuring the mappings. The following are the available mapping plugins:



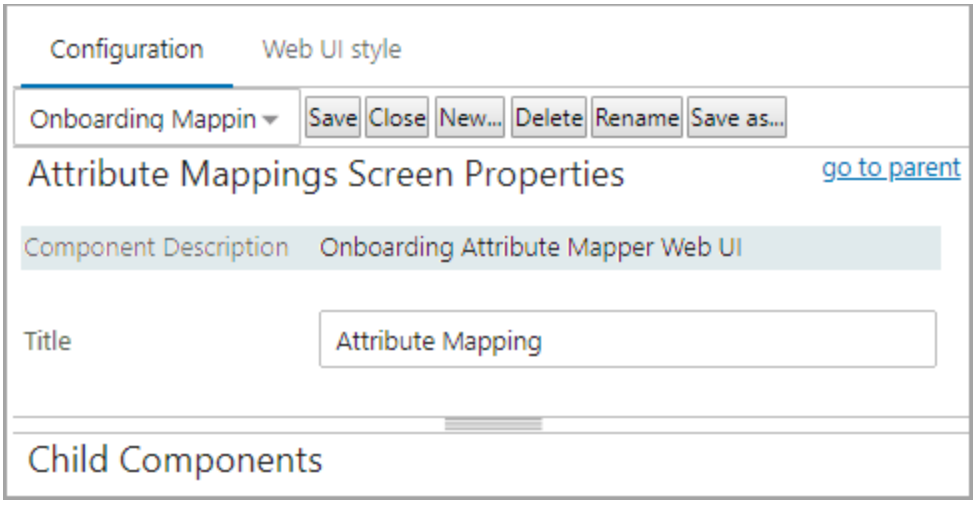
- **Application Mappings Screen:**

  Note: *This mapping plugin is for use with the PMDM for Automotive solution only.*

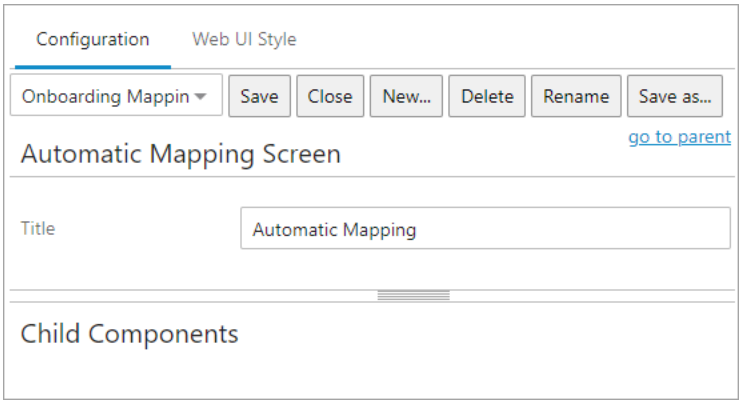
  When configured in the Mapper Configuration, this plugin transfers data from source object applications to create new applications in the target object. Additionally, it establishes references for target applications to both target vehicles and target part types. Double-click the added 'Application Mappings Screen' in the Mappings field to rename the plugin name if necessary by changing the value in the 'Title' parameter.



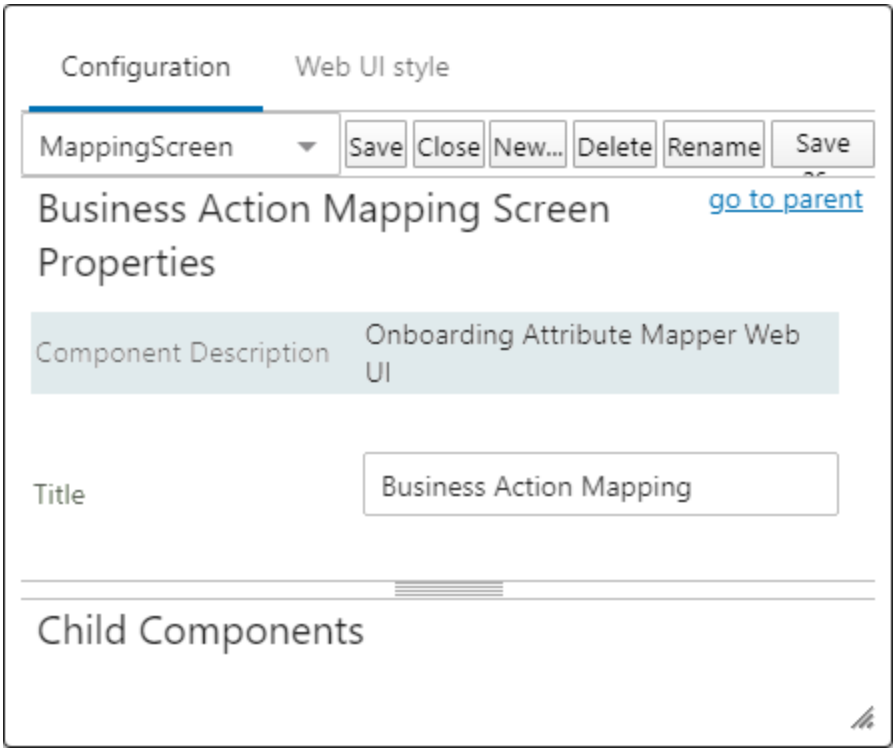
- **Attribute Mappings Screen:** This plugin, when configured in the Mapper Configuration, will copy attribute values from the Source object to populate attributes in the Target object. In other words, If the Source object has an attribute value of 'X,' then this value can be copied into a valid attribute of the Target object (with transformations, if required). Double-click the added 'Attribute Mappings Screen' in the Mappings field to rename the plugin name if necessary by changing the value in the Title parameter.



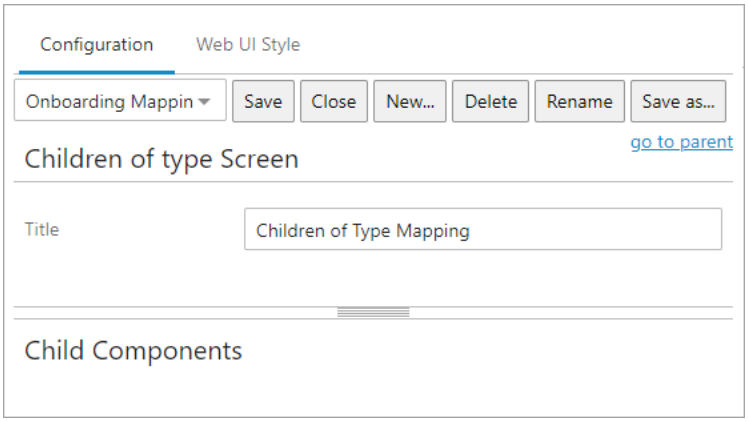
- **Automatic Mapping Screen:** This plugin intelligently recognizes common attributes and references between source and target objects and then facilitates in transferring attribute values and references from the source to the target. Double-click the added 'Automatic Mapping Screen' in the Mappings field to rename the plugin name if necessary by changing the value in the Title parameter.



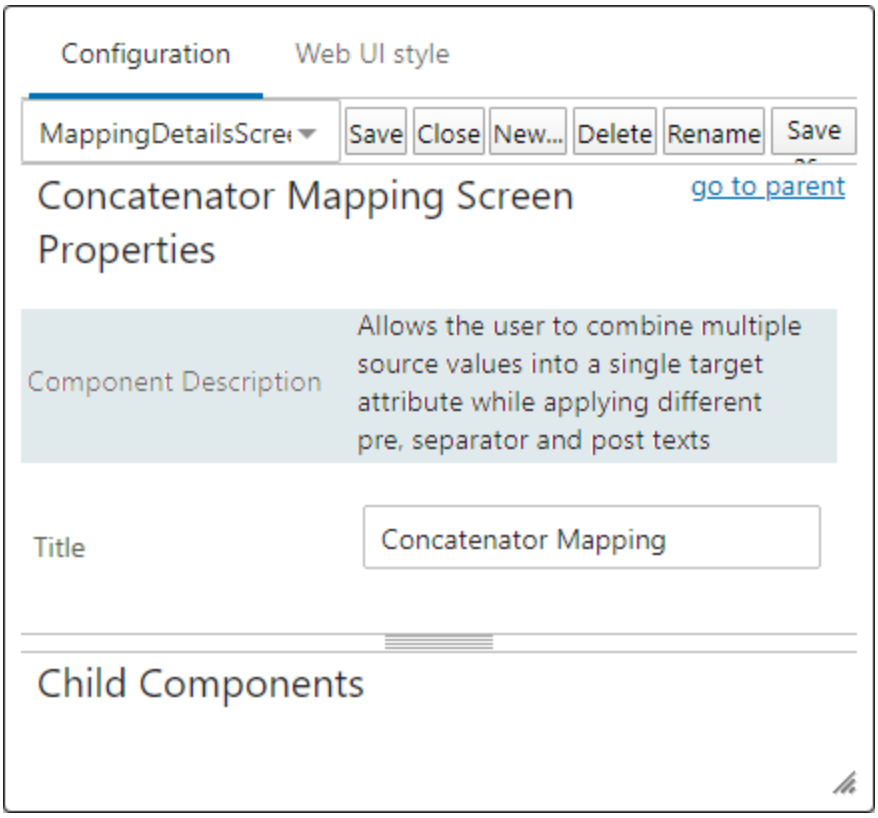
- **Business Action Mapping Screen:** This plugin, when configured in the Mapper Configuration, provides an extended flexibility for users to configure and solve unique mapping cases which cannot be achieved by the other Mapping plugins (Attribute Mapping, Application Mapping, Object to Object Mapping, etc.). The Business Action Mapping plugin takes a business action as a configuration and when executed, executes the business action on the target object.



- **Children of Type Mapping Screen:** This plugin identifies shared child object types between the source and target objects. It then duplicates these child objects, along with their associated data, from the source to the target object.



- **Concatenator Mappings Screen:** This mapper plugin facilitates to retrieve multiple values from the source object and merge them into a single attribute in the target object. This plugin is more valuable especially for applying different pre, separator, and post texts to enhance data cohesion.



- **Object to Object Mappings Screen:** This plugin, when configured in the Mapper Configuration, transfers any data from the source-related object (e.g., child object or referenced object) to the target-related object. Double-click the added 'Object to Object Mappings Screen' in the Mappings field to rename the plugin name if necessary by changing the value in the Title parameter. Double-click the added 'Object to Object Mappings Screen' in the Mappings field to rename the plugin name

if necessary by changing the value in the Title parameter.

- **ECLASS Classification Mappings Screen:** The ECLASS Classification Mapping plugin is designed to facilitate the mapping of ECLASS classification objects. This plugin handles updates and changes in the ECLASS hierarchy, thereby facilitating the mapping of the classification objects.

- **Buttons:** Multiple action buttons can be added to the 'Onboarding Mappings Details Screen' to be used with the Mapper Configuration list. These action buttons are added and configured within the 'Actions' field on the Buttons parameter. The 'Save Action' is required to be configured. Other actions should be added only when necessary.

> **Important:** The **Delete**, **Duplicate**, and **Reset**) buttons configured within the Buttons field will delete / duplicate / reset the Mapper Configuration, NOT the individual mapping plugin rows within the configuration. If the user does not want to be able to delete the Mapper Configuration in Web UI, then do not configure the **Delete** Action.

If the Mapper Configuration is deleted in Web UI, then it will get moved to the Recycle Bin in System Setup. Users can revive the Mapper Configuration via the 'Maintain' dropdown > Revive.

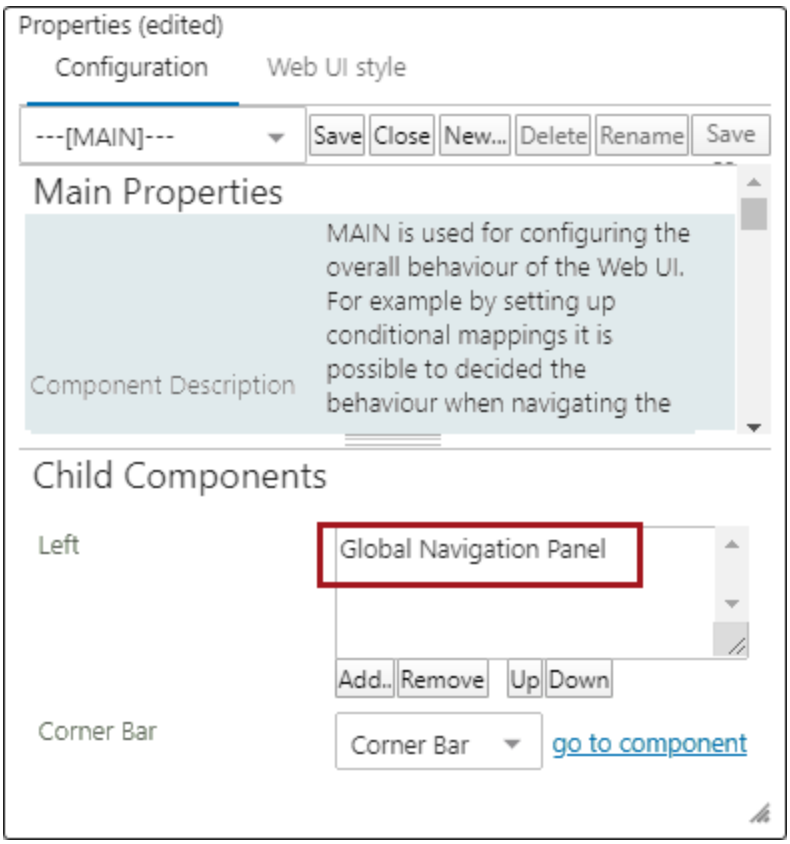
Implementing the Onboarding Mappings Details Screen

Once the 'Onboarding Mappings Details Screen' is created, implementation of the screen requires the following setup:

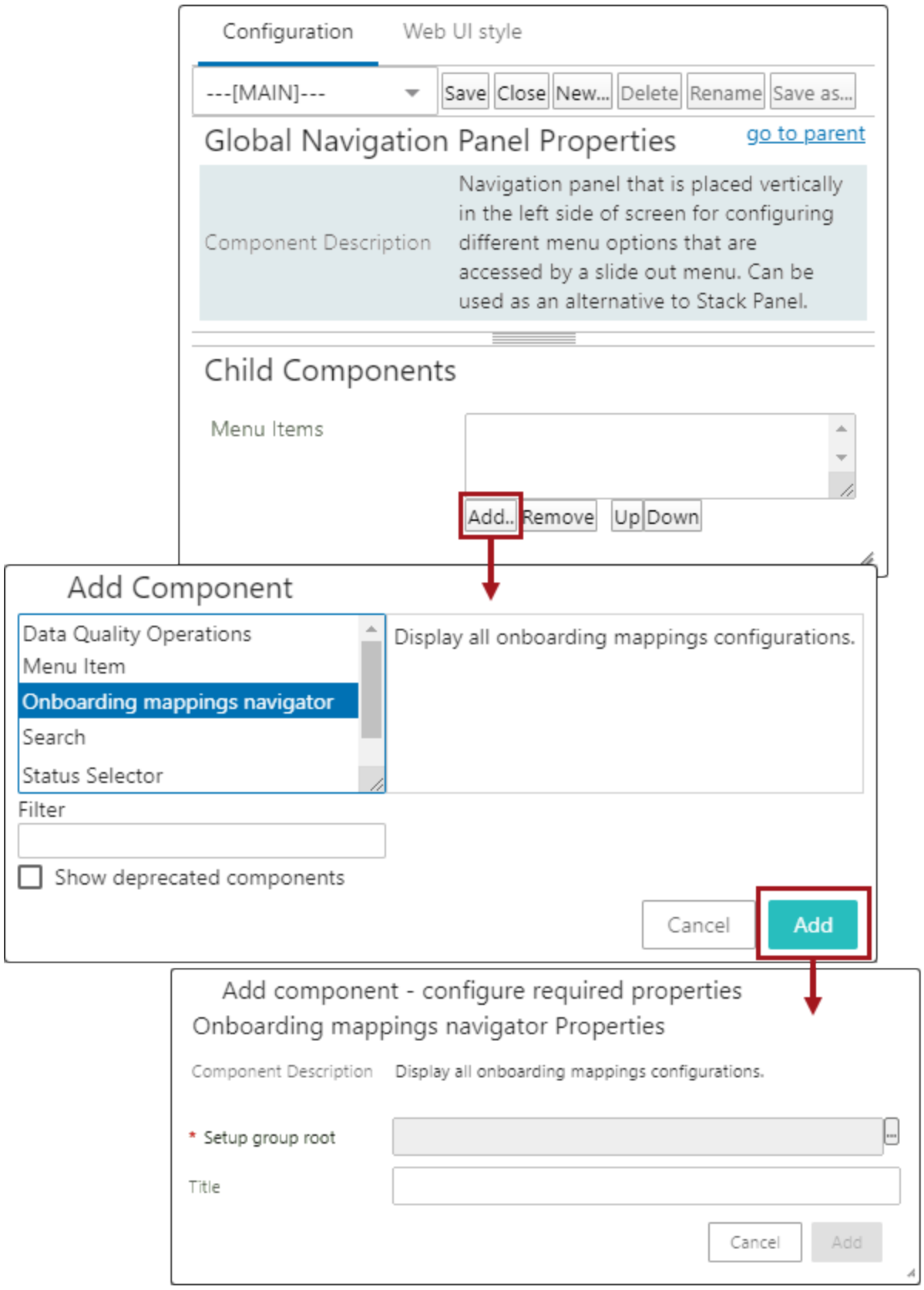
- The Global Navigation Panel needs to be configured to access the Mapper Configurations
- The Mapper Configuration object type must be configured to display the 'Onboarding Mappings Details Screen' when a Mapper Configuration is selected

Configuring the Global Navigation Panel

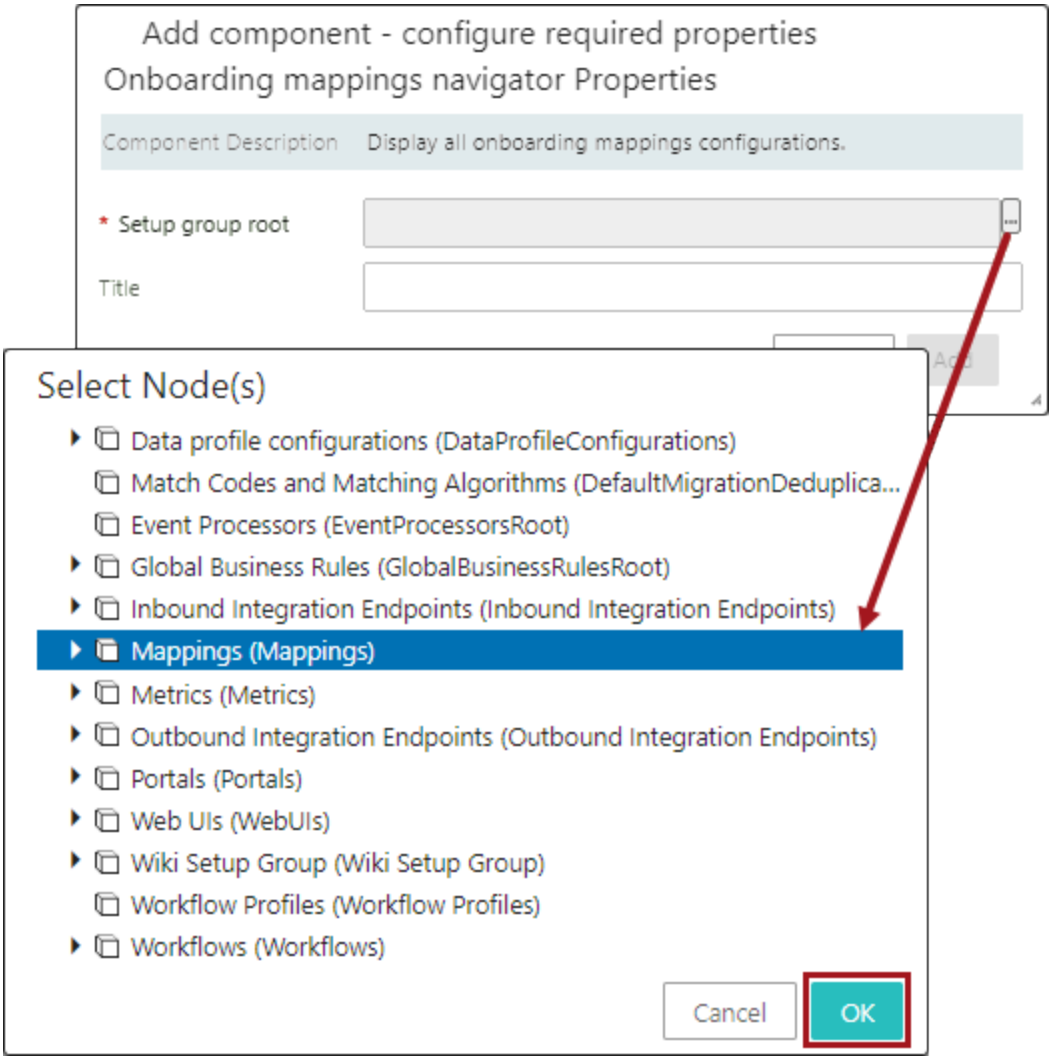
1. From the **Main Properties** screen, add a 'Global Navigation Panel' to the 'Left' section of the child components. Once added, double-click the Global Navigation Panel component. For Information on how to add the Global Navigation Panel, refer to the Global Navigation Panel topic in the Web User Interfaces documentation.



2. From the Global Navigation Panel Properties, select 'Add' in the Menu Items field of the Child Components section. Select 'Onboarding mappings navigator' from this dialog and then click 'Add.' The 'Onboarding mappings navigator Properties' designer screen will be displayed.


Configuration
Web UI style
---[MAIN]---
Save
Close
New...
Delete
Rename
Save as...
Global Navigation Panel Properties
go to parent
Component Description
Navigation panel that is placed vertically in the left side of screen for configuring different menu options that are accessed by a slide out menu. Can be used as an alternative to Stack Panel.
Child Components
Menu Items
Add..
Remove
Up
Down
Add Component
Data Quality Operations
Menu Item
Onboarding mappings navigator
Search
Status Selector
Display all onboarding mappings configurations.
Filter
Show deprecated components
Cancel
Add
Add component - configure required properties
Onboarding mappings navigator Properties
Component Description
Display all onboarding mappings configurations.
* Setup group root
Title
Cancel
Add

3. In the 'Onboarding mappings navigator Properties,' click the ellipsis button (...) next to the 'Setup group root' parameter. Then select the **Mappings** node to define the setup group root for mapping configurations. Click 'OK' to add.

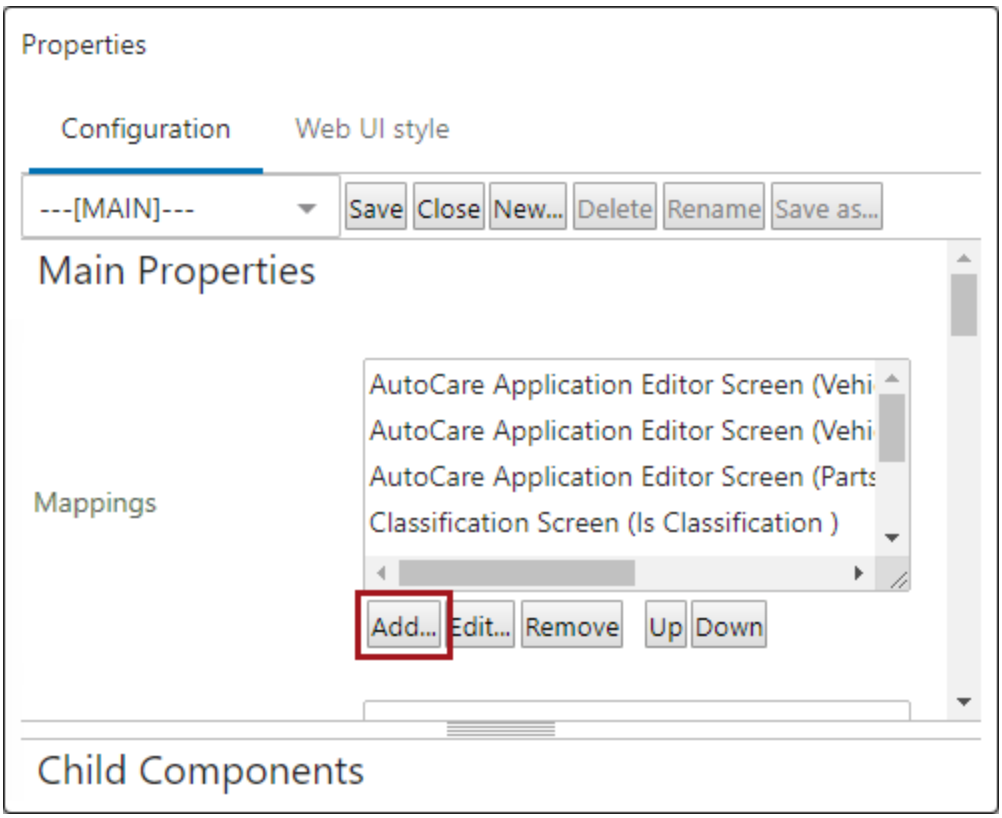


4. If required, type in a suitable title within the Title parameter that displays the 'Onboarding mappings navigator' component in the Global Navigation Panel. If left blank, the default value is set as 'Mapping Navigator'.

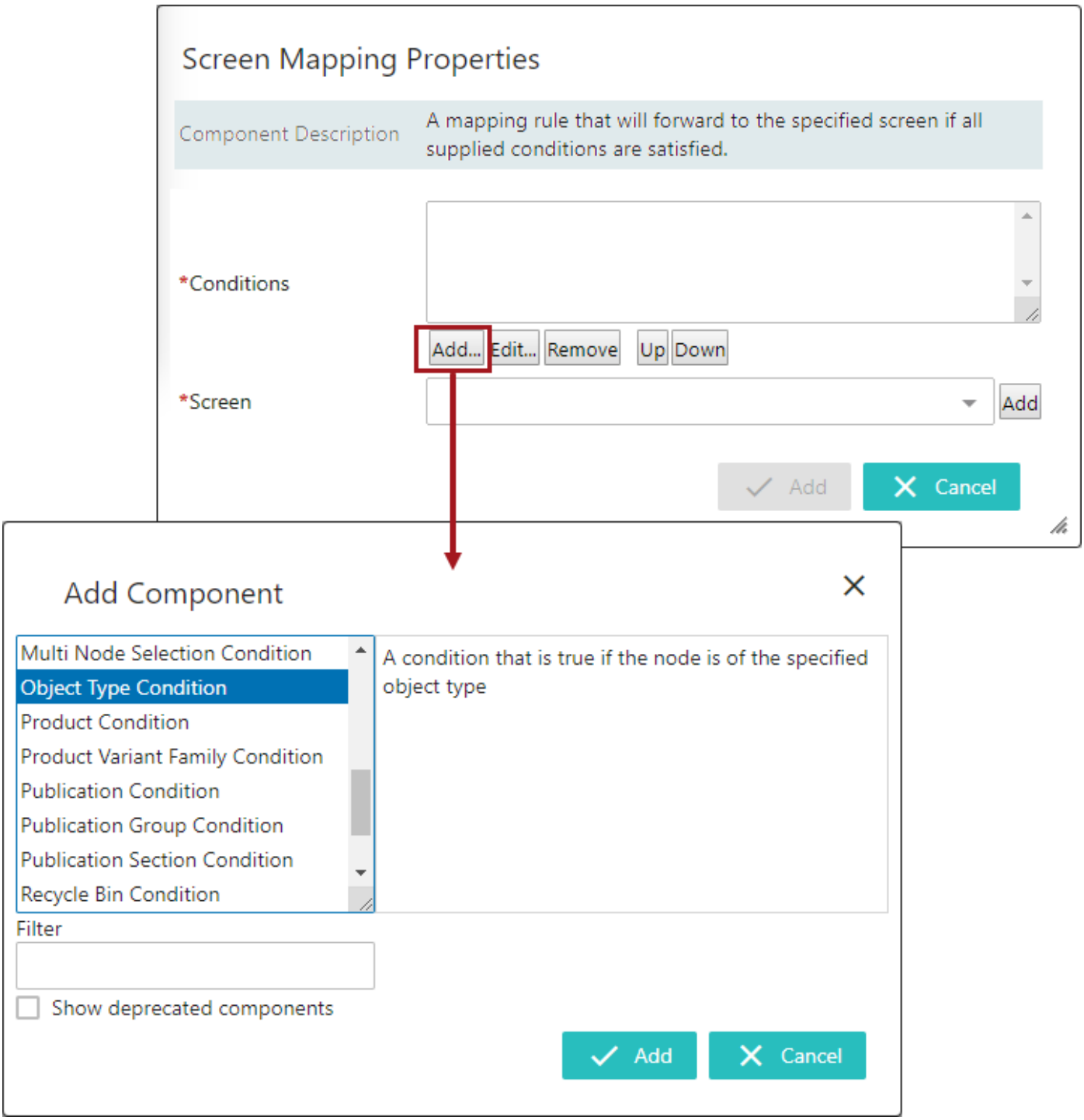
When finished, click **Save** in the designer to save the current settings. Do not close the designer unless you have finished configuring all the other parameters (outlined in the rest of this topic).

Configuring the Mapper Configurations to Display Onboarding Mappings Details Screen

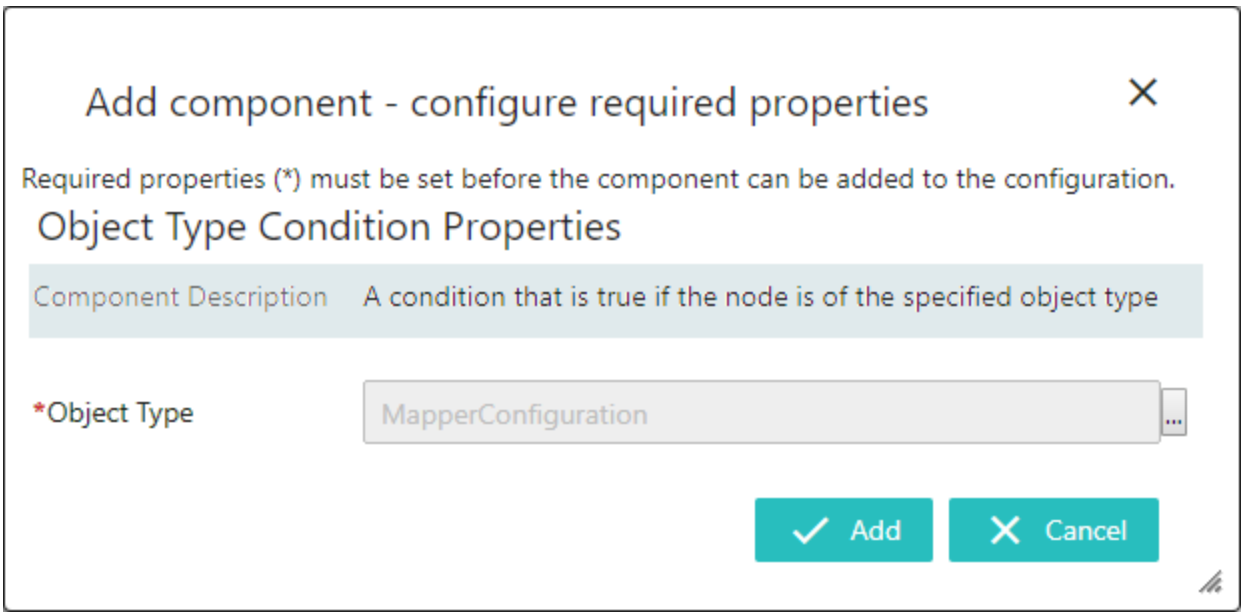
1. From the Main Properties, click the 'Add...' button for the Mappings parameter, and the Screen Mapping Properties will display.



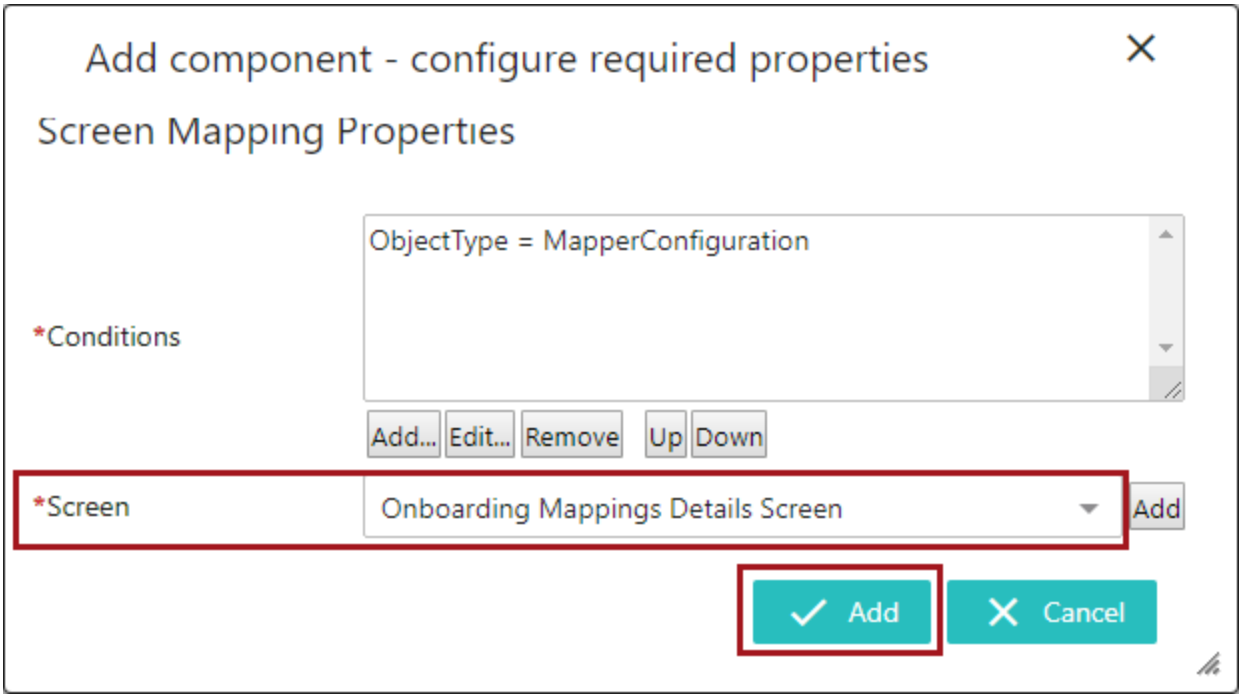
2. Add a condition by clicking the **Add...** button next to the 'Conditions' parameter, and the Add Component dialog will display.



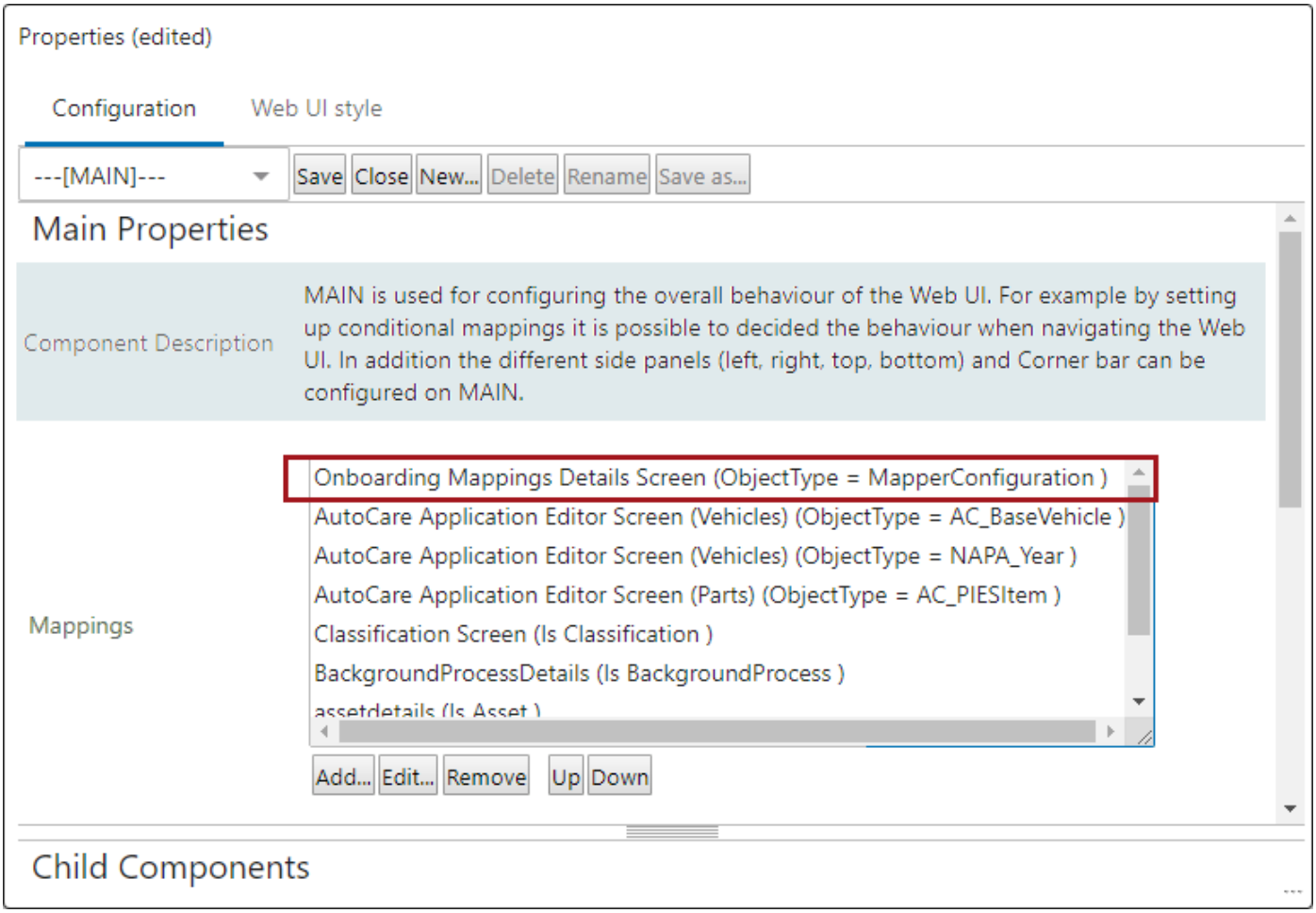
3. Within the Add Component dialog, select the Object Type Condition component and then click **Add**. In the Object Type Condition Properties, click the ellipsis button (...) next to the Object Type parameter, expand Basic Object Types, and select the Mapper Configuration (MapperConfiguration) object type to define that this object type should use the Onboarding Mappings Details Screen. Click **OK** to add the object type. Then click **Add** to add the Object Type Condition.



4. In the Screen Mapping Properties, select the previously created Onboarding Mappings Detail Screen using the dropdown selector next to the 'Screen' parameter.



5. Click **Add**. The new mapping is added in the 'Mappings' field (as shown below). Click **Save** in the designer to save the current settings.


Properties (edited)
Configuration
Web UI style
---[MAIN]---
Save
Close
New...
Delete
Rename
Save as...
Main Properties
Component Description
MAIN is used for configuring the overall behaviour of the Web UI. For example by setting up conditional mappings it is possible to decided the behaviour when navigating the Web UI. In addition the different side panels (left, right, top, bottom) and Corner bar can be configured on MAIN.
Mappings
Onboarding Mappings Details Screen (ObjectType = MapperConfiguration)
AutoCare Application Editor Screen (Vehicles) (ObjectType = AC_BaseVehicle)
AutoCare Application Editor Screen (Vehicles) (ObjectType = NAPA_Year)
AutoCare Application Editor Screen (Parts) (ObjectType = AC_PIESItem)
Classification Screen (Is Classification)
BackgroundProcessDetails (Is BackgroundProcess)
assetdetails (Is Asset)
Add...
Edit...
Remove
Up
Down
Child Components

Configuring Mapper Configuration Setup Entity

The Mapper Configuration is a STEP setup object. It is stored as a STEP setup entity with object type 'MapperConfiguration.' Each Mapper Configuration holds the definition of what the mapper should do.

Important: Creation of the Mapper Configuration setup entity can be done in both workbench and Web UI, but further configurations can only be done in Web UI and not in Workbench.

Setup entity definitions can be exported as comments and submitted to an external source control system for comparison purposes. For details, refer to the Configuration Management documentation.

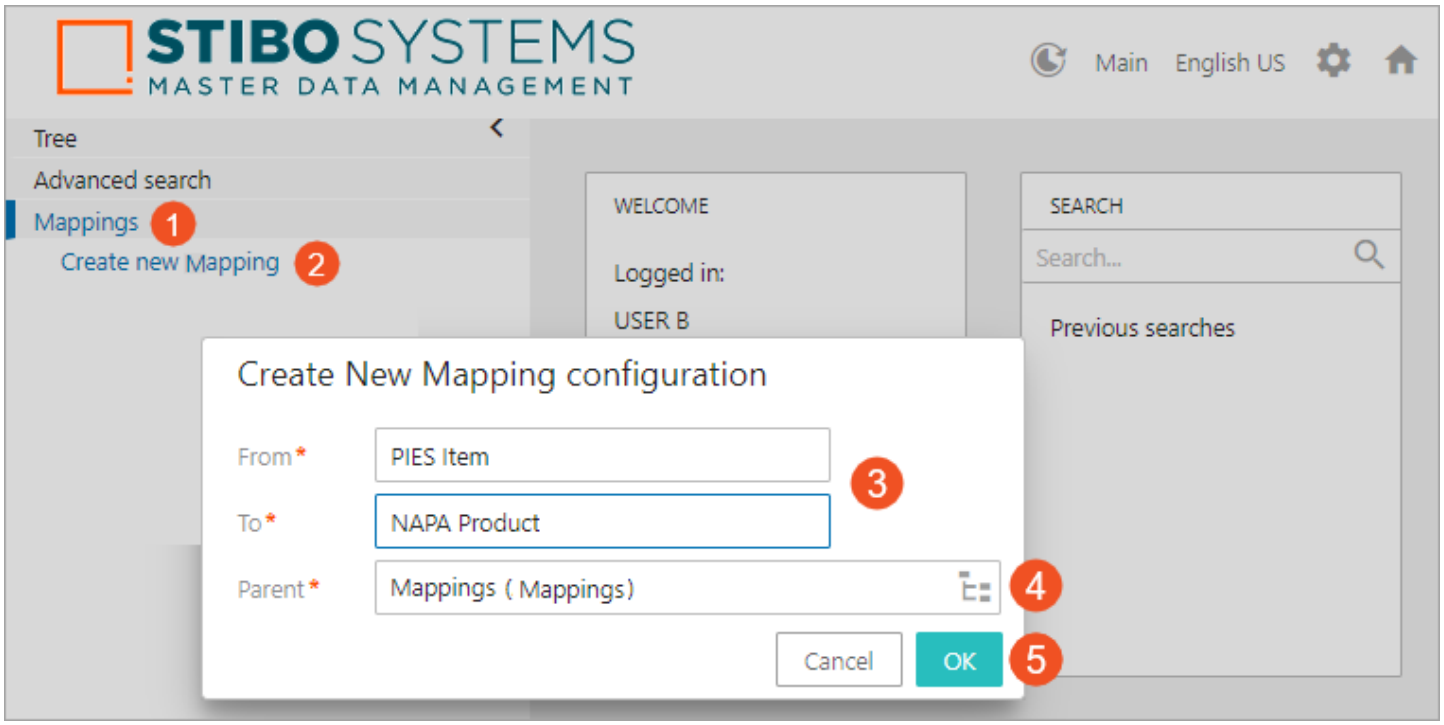
Prerequisites

A setup group must be created to hold the Mapper Configurations. This is a one-time setup in the system. For more information about creating a setup group, refer to the Data Onboarding Solution Initial Setup topic within this section.

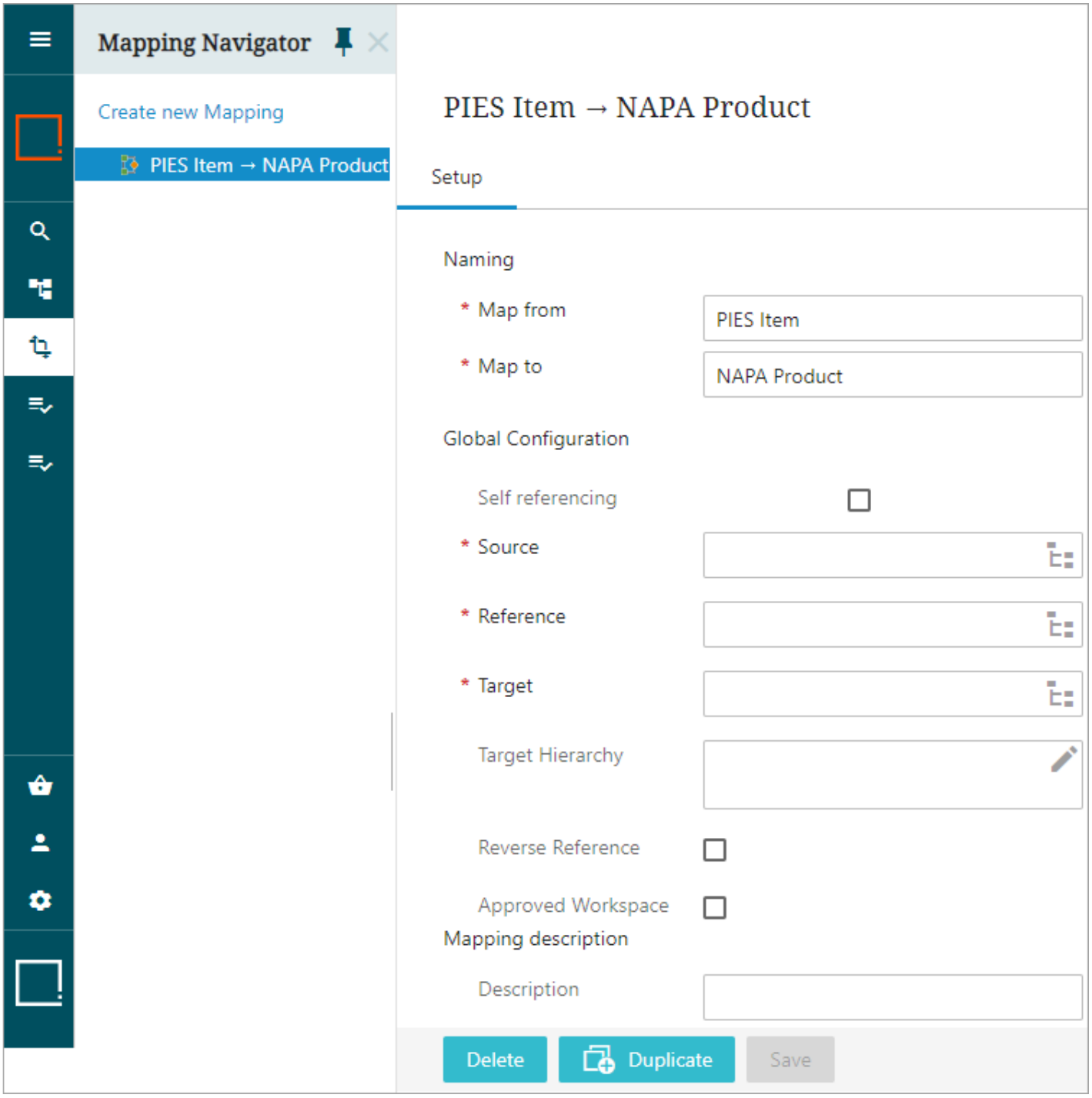
Since basic concepts for working with the designer are not covered in this section, a user configuring the Mapper Configuration setup entity within a Web UI is expected to be familiar with the Web UI Designer. In addition, the user must have appropriate privileges to access the designer. For more information, refer to the Designer Access topic within the Web User Interfaces documentation

Creating Mapper Configuration Setup Entity in Web UI

1. From the Web UI homepage, select the 'Mappings Navigator' component from the Global Navigation Panel.



2. Click on the 'Create new Mapping' link, and the 'Create New Mapping configuration' dialog displays.
3. Type in a suitable name in the 'From' and 'To' fields. Usually, these fields are defined by an identifiable name of the source and target object types. In the example above, 'from' and 'to' fields are populated with values 'PIES Item' and 'NAPA Product' respectively.
4. Select the parent node (Setup Group) under which the newly created mapper configuration will reside.
5. Click **OK**, and the new mapper configuration named 'PIES Item → NAPA Product' is created under setup group 'Mappings' in the Global Navigation Panel (as shown below). Also in the image below, a Unicode arrow → is created between the Source and the Target names demonstrating the direction of the intended mapping.



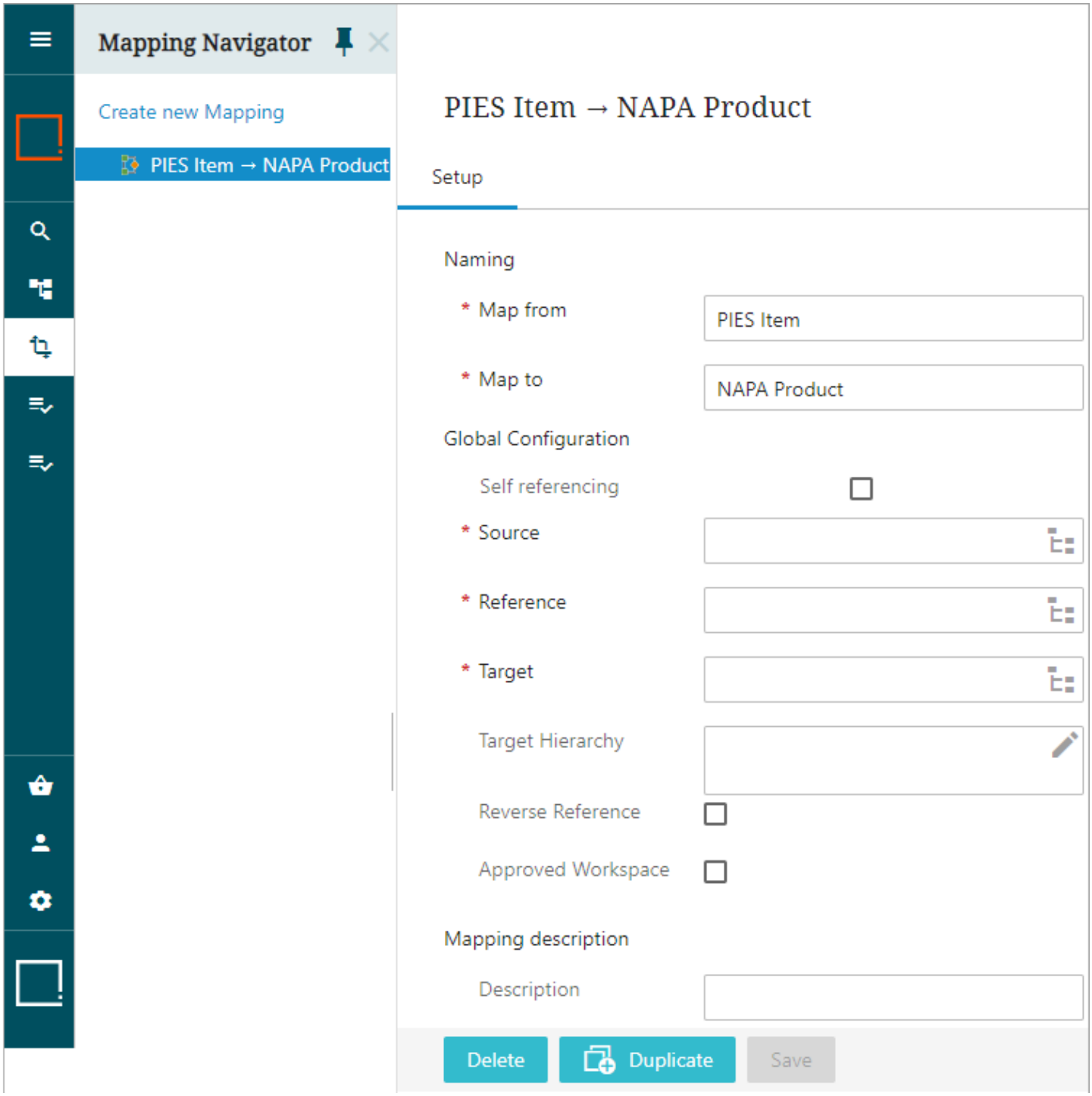
Important: If the Mapper Configuration is deleted in Web UI, then it will get moved to the Recycle Bin folder in System Setup. If the user tries to create a new mapping with the same text string in the 'From' and 'To' field, then the user will get the Unexpected error. If users want to reuse the same text string in the

From' and 'To' field when creating a new mapping, then either purge the deleted Mapper Configuration setup entity from the Recycle Bin, or create a Mapper Configuration with some different text. Click **OK**, hen go back and change it to be what the user requires.

Configuring Mapper Configuration Setup Entity in Web UI

A newly created Mapper Configuration setup entity must first have the Naming and Global Configuration parameters defined and saved in the Setup tab before the Mappings tab will appear for the user to define mapping rules. This is achieved in the Onboarding Mappings Details Screen for the Mapper Configuration.

When a new Mapper Configuration is first created and selected in Web UI, the Setup tab will be empty (as shown below).



1. Populate the available parameters as explained below.

   Map from: By default, this mandatory parameter is prepopulated with the value defined while creating the Mapper Configuration in Web UI. However, this field is blank if the Mapper Configuration is created in

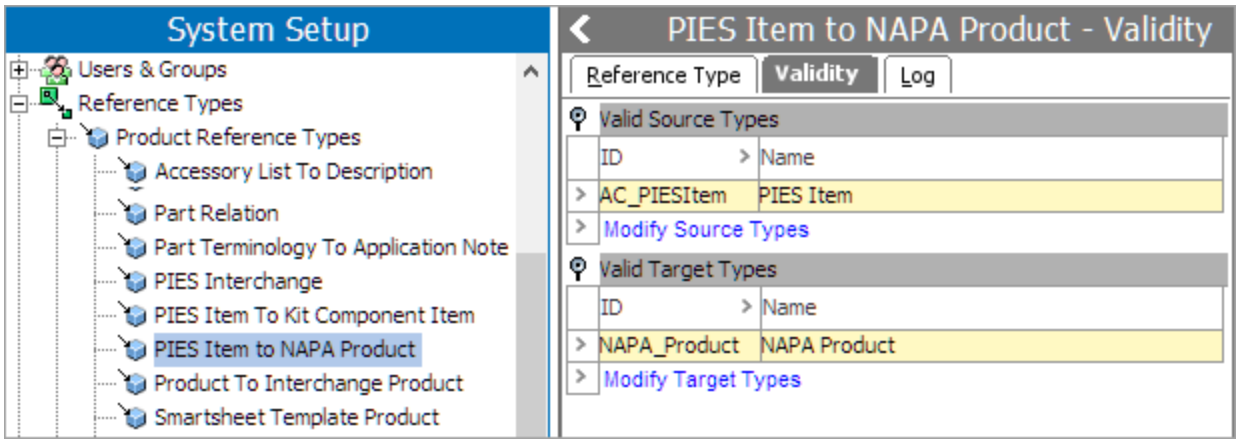
workbench and needs to be populated with an identifiable name of the source object type (this can be any string that the user wants to enter, e.g., PIES Item). Optionally, if a different name is desired, edit the name to be something more suitable.

Map to: By default, this mandatory parameter is prepopulated with the value defined while creating the Mapper Configuration in Web UI. However, this field is blank if the Mapper Configuration is created in workbench and needs to be populated with an identifiable name of the target object type (this can be any string that the user wants to enter, e.g., NAPA Product). Optionally, if a different name is desired, edit the name to be something more suitable.

Self referencing: By default, this remains unchecked. Selecting this checkbox allows users to onboard (move / copy) data within the object, thereby allowing users to execute onboarding that is defined as a self reference mapping. Selecting this checkbox makes the source and target to be the same object. Users only get to determine the source object within the Source parameter, and the Reference, Target, Target Hierarchy, and Reverse Reference parameters will be grayed out upon selecting this parameter.

Source: By default, this mandatory parameter is blank. Start typing in the empty field to enter the source object type, or click the node picker to browse or search for the object type which defines the source object in the system. This parameter defines the source object type of where it is being mapped from (this must be an existing object in STEP, e.g., AC_PIESItem).

Reference: By default, this required parameter is blank. Start typing in the empty field to enter the reference type, or click the node picker to browse or search for the Reference Type in system, so that STEP can follow this reference type and will establish the link between the Source object and the Target object. This Reference Type should contain the object types defined in the Source and Target parameters as Valid Source Types and Valid Target Types respectively in the system.



Target: By default, this mandatory parameter is blank. Start typing in the empty field to enter the target object type, or click the node picker to browse or search for the target object type in STEP. This parameter defines the target object type of where it is being mapped to (this must be an existing object in STEP, e.g., NAPA_Product).

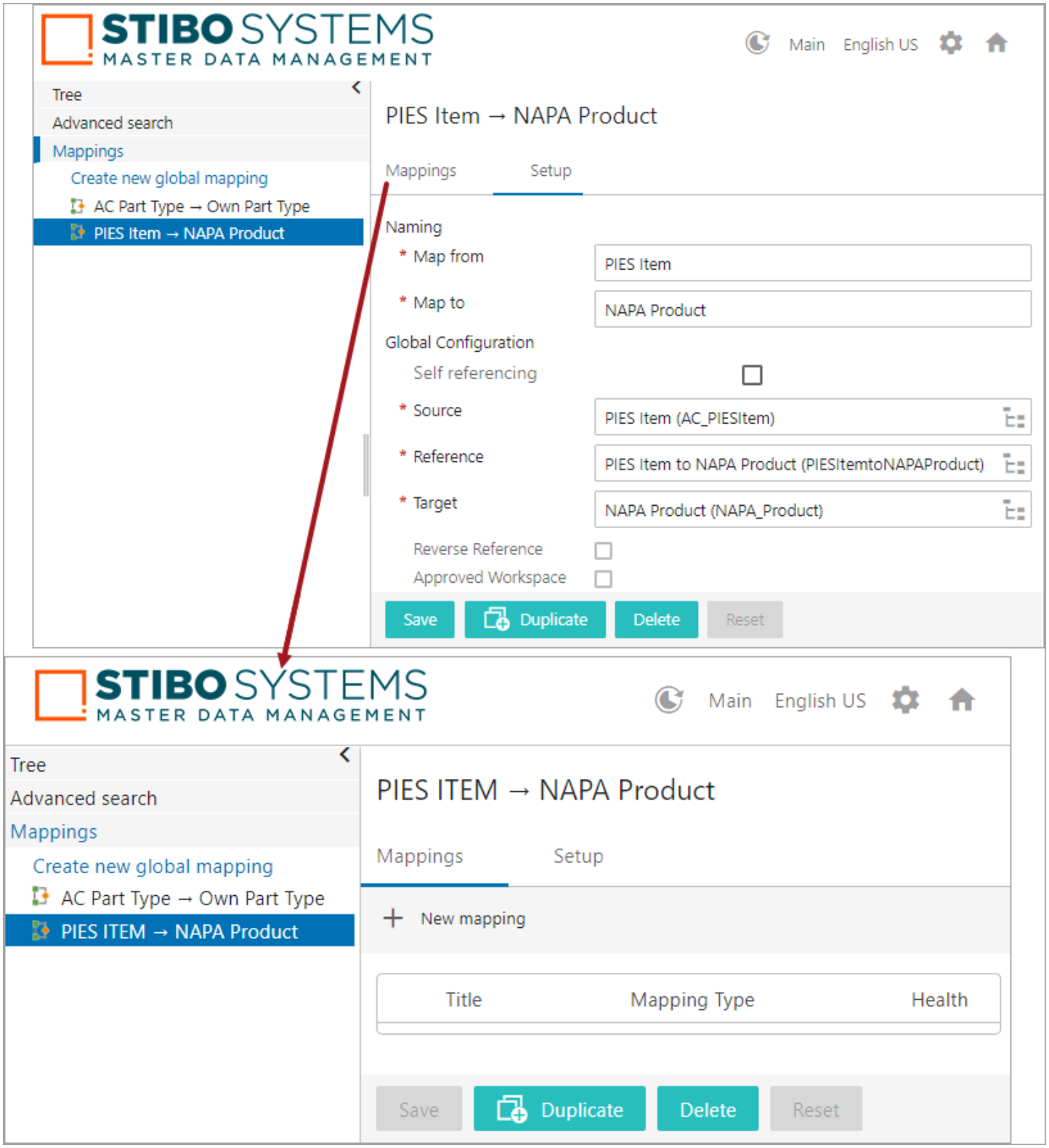
Target Hierarchy: By default, this optional parameter is blank. This parameter lets the user define an automatic creation of the Target object, parent to the Target object, and if required, a whole new hierarchy where the Target object should be created below. Click the Edit icon ( ) available within the right of the

field to open the Target Hierarchy Editor dialog. The way the name and ID structure of the newly created object is to be populated is defined within this dialog. The Target Hierarchy parameter checks for an existing object in the system, and a new object is created only if there are no similar object available in the system. The system will place the Target object in the suitable existing object if the object is already existing in the system. If not, it will create the parent object or a whole new hierarchy as defined in the Target Hierarchy Editor dialog. This ensures that there is no duplicate object created. For more information about Target Hierarchy Editor dialog, refer to the Target Hierarchy Editor Dialog topic within this section.

Reverse Reference: By default, this optional parameter is unchecked. Selecting this field will work the other way of the reference type defined in the Reference parameter above by using the 'Referenced By' tab to find the target. For example, if a mapper configuration with mapping defined from PIES Item to NAPA Product, checking this parameter will reverse the mapping definition, i.e., the mapping shall be defined to happen from NAPA Product to PIES Item.

Approved Workspace: By default, this optional parameter is unchecked. Selecting this field will take all values from the Approved workspace from the Source object and create them in the Main workspace on the Target. For example, if a mapper configuration with mapping defined from PIES Item to NAPA Product, checking this parameter will select all values present only in the Approved workspace of the PIES Item object and create them in the Main workspace on the NAPA Product.

2. Click **Save**, and a new Mappings tab next to the Setup tab gets created to add and configure newer mapping plugins.

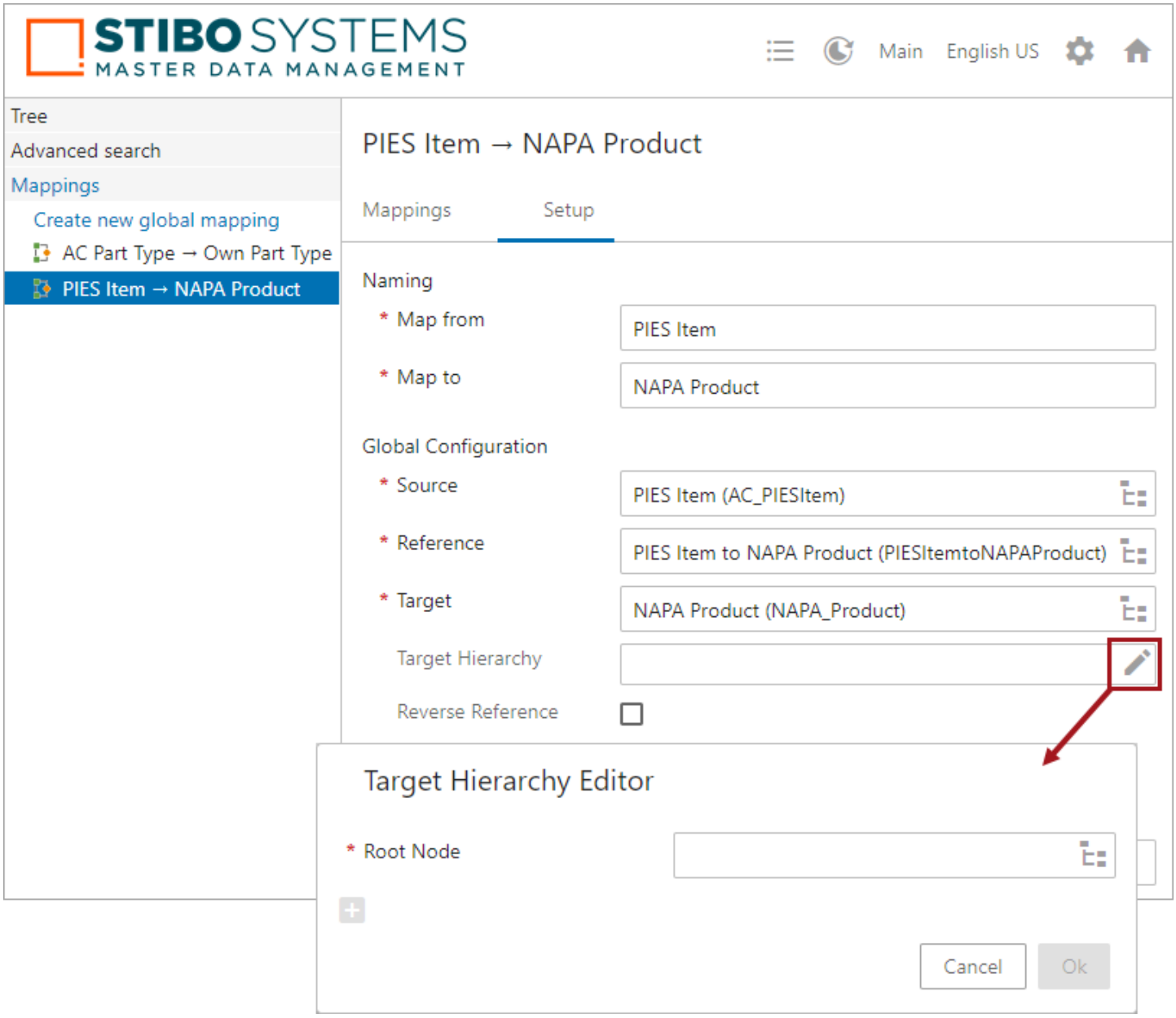

STIBO SYSTEMS
MASTER DATA MANAGEMENT
Main
English US
Tree
Advanced search
Mappings
Create new global mapping
AC Part Type → Own Part Type
PIES Item → NAPA Product
PIES Item → NAPA Product
Mappings
Setup
Naming
* Map from
PIES Item
* Map to
NAPA Product
Global Configuration
Self referencing
* Source
PIES Item (AC_PIESItem)
* Reference
PIES Item to NAPA Product (PIESItemtoNAPAProduct)
* Target
NAPA Product (NAPA_Product)
Reverse Reference
Approved Workspace
Save
Duplicate
Delete
Reset
STIBO SYSTEMS
MASTER DATA MANAGEMENT
Main
English US
Tree
Advanced search
Mappings
Create new global mapping
AC Part Type → Own Part Type
PIES ITEM → NAPA Product
PIES ITEM → NAPA Product
Mappings
Setup
New mapping
Title
Mapping Type
Health
Save
Duplicate
Delete
Reset

Target Hierarchy Editor Dialog

When mapping data, not every Source object in the system will have an existing Target object to run the Mapper Configuration on. If the Target object does not exist, the Mapper should be able to create a Target object and place the Target object in the right hierarchy (referred to as Target object hierarchy). To automate the process of creating the Target object (and its hierarchy), the user has to configure on how the Target object hierarchy is to be automatically created when the Mapper Configuration setup entity is executed.

When the term 'Target object hierarchy' is mentioned in this topic, it is to be noted that the hierarchy could be in its simplest form that consists of just the Target object itself, or it can be a complex hierarchy that includes multi-level folders narrowing down to house the Target object.

When clicking the Edit icon ( ) that is displayed to the right of the **Target Hierarchy** parameter (available on the Setup tab of the Onboarding Mappings Details Screen), the Target Hierarchy Editor dialog appears. This dialog allows the user to define an automatic creation of the Target object, parent to the Target object, and if required, a whole new hierarchy where the Target object should be created below. For more information on configuring the Setup tab of the Onboarding Mappings Details Screen, refer to the Configuring Mapper Configuration Setup Entity topic of the Data Onboarding and Standardized Mapping documentation.



Configuring the Target Hierarchy parameter is only necessary if the parent node of the Target object does not exist.

For example, if application records are to be created in the Target Hierarchy and the part that the applications belong to already exists in the Target Hierarchy, and the relationship between the source part and target part have already been established, then nothing needs to be defined in the Target Hierarchy parameter.

But if the part (parent node) for the applications do not exist, then users can use the Target Hierarchy parameter to configure the hierarchy that the Target object should be created below by defining the root node and its parent object types. Once the root node and parent object types have been defined, then the **OK** button will be enabled and the parent objects will get created along with the applications when the mapping configuration is executed.

The Target Hierarchy parameter has been designed to check for an existing Target object hierarchy in the system, and a new hierarchy is created only if there are no similar hierarchy available in the system. The system would place the Target object in the suitable hierarchy if the similar hierarchy is already existing in the system. This ensures that there is no duplicate hierarchy created. The way the name and ID structure of the newly created object is to be populated can be well defined in the Target Hierarchy Editor dialog.

Note: The Target Hierarchy parameter is designed to check for existing Target objects within the system to ensure that duplicate objects are not created. If existing objects are encountered, then they will be skipped and only new objects will get created.

Prerequisites

Before configuring the Target Hierarchy Editor dialog, the Source, Reference, and the Target parameters that are available within the Setup tab of the Onboarding Mappings Details screen have to be correctly populated.

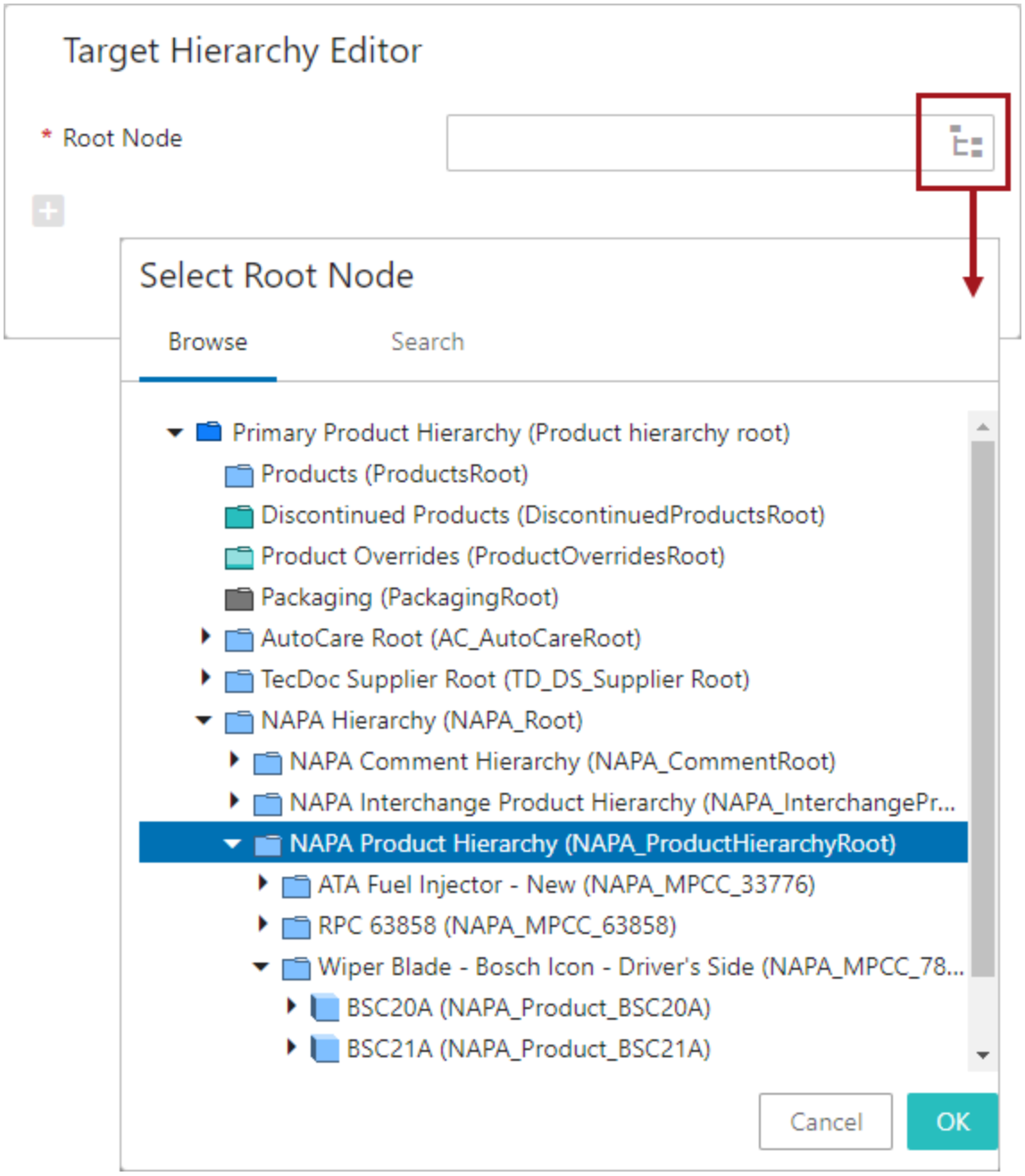
Configuring the Target Hierarchy Editor Dialog

To configure the Target Hierarchy Editor dialog, follow these steps:

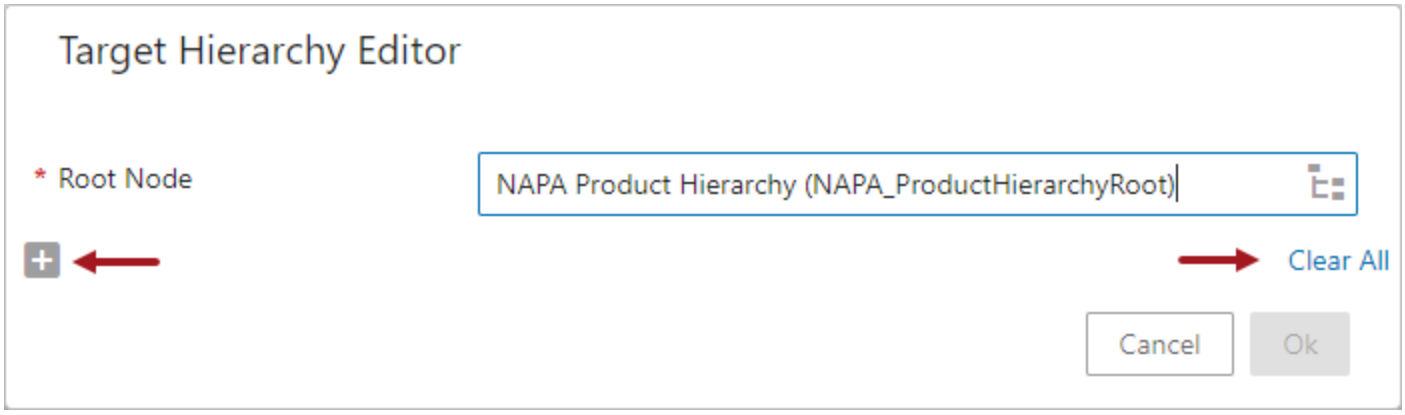
1. Click on the Edit icon ( ) on the Target Hierarchy parameter to open the Target Hierarchy Editor Dialog (as shown in the picture above).
2. In the Target Hierarchy Editor dialog, click on the Node Picker icon available next to the Root Node parameter to select the root node object. This selected object will be considered as the first level of the Target object hierarchy (root node) where the Target object should be created somewhere down below.

Note: Only the parent node of the node holding the object type defined in the 'Target' parameter will be valid to be selected.

In this example below, the NAPA Product Hierarchy is selected to be the root node where the new Target object should be created below.

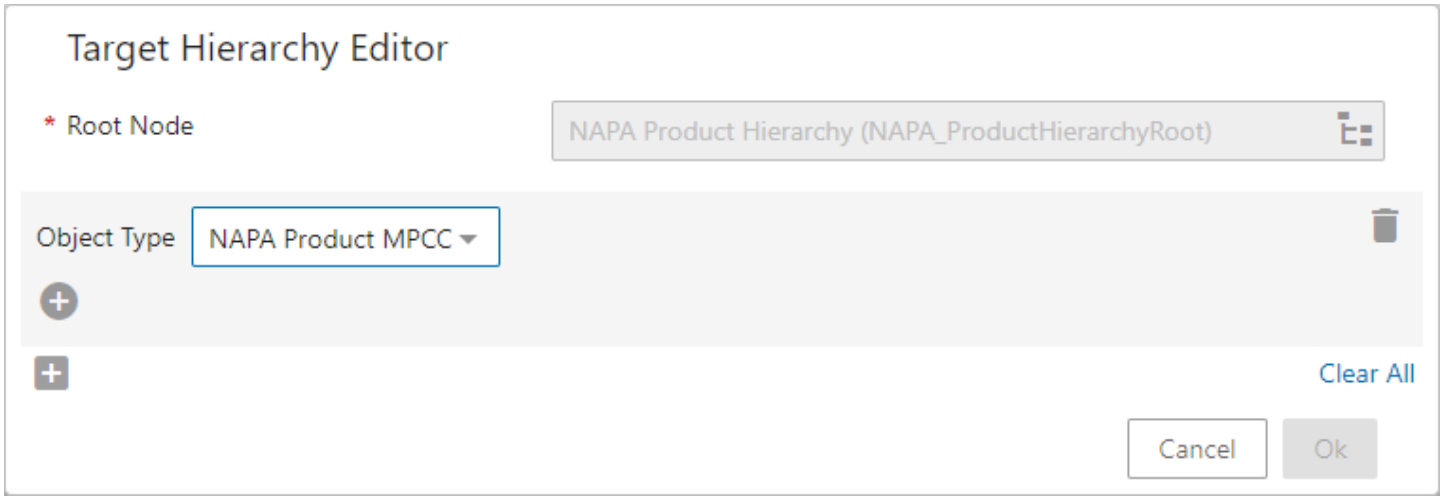


Once selected, the root node will be displayed within the Root Node parameter, and the 'Add Object Type' icon (+) along with the 'Clear All' link gets activated within the dialog. The 'Clear All' link will clear all of the values that are populated within the Target Hierarchy Editor dialog.

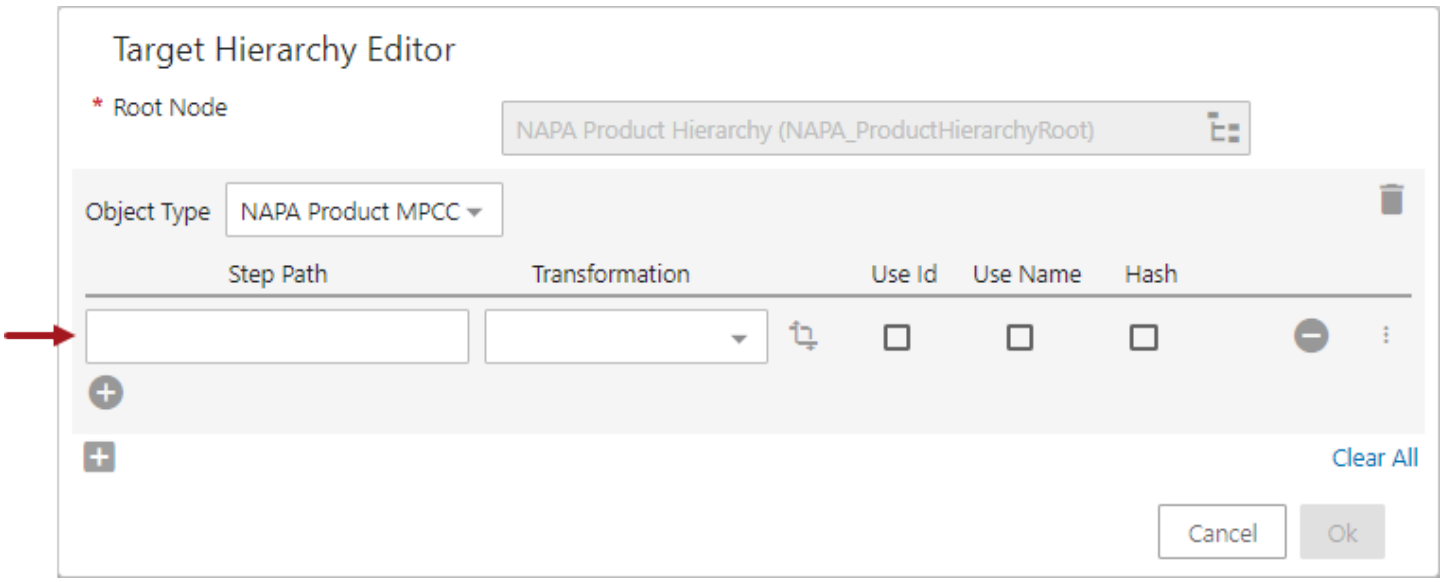


3. Click the 'Add Object Type' icon ( ) to further narrow down the process of defining the Target object hierarchy. This provides an option to select the object type using the dropdown next to the Object Type field. Only the object types that are valid under the root node object type (defined above) are available as options within the dropdown.

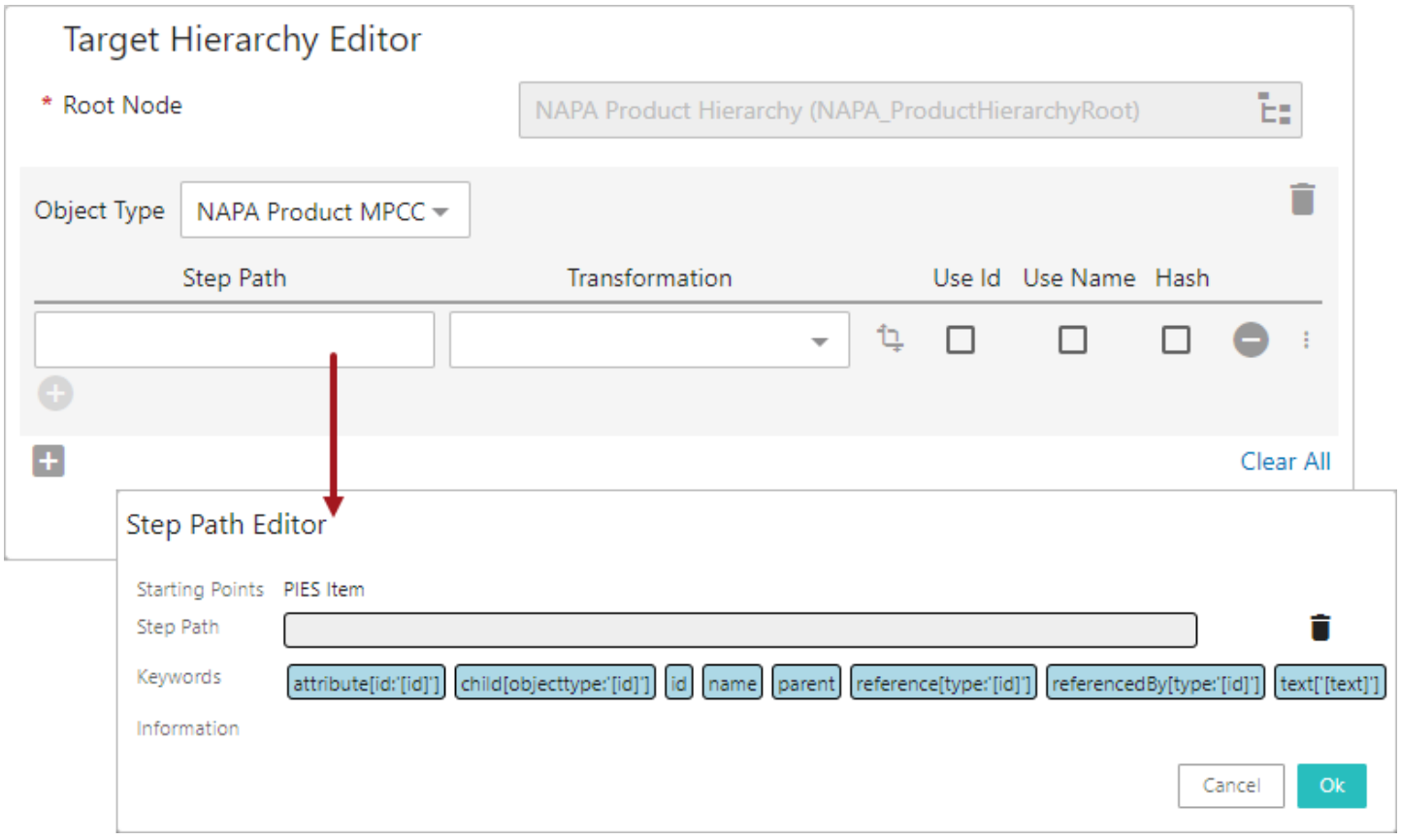
   In the screenshot below, the NAPA Product MPCC object type is selected.



4. By default, the ID of the new objects that are created using the above mentioned object type will have the system generated STEP ID. However, to create an object with a user specific ID and Name, click the 'Add' icon ( ). This provides an option for the user to define a criteria for the ID and Name of the new object that gets created on this level of the hierarchy.



5. Click on the STEP Path field to open the Step Path Editor dialog that the user can use to define which information (ID, Name, attribute values, or references) from the Source object needs to be retrieved. The user also has the option to select specific data points from the Source object, or any of its related objects by selecting a combination of the elements available in the Keywords field and thereby creating a STEP Validation path. For more information on defining the Source STEP Path, refer to the Mapping Validation Path Functionality topic within this guide.



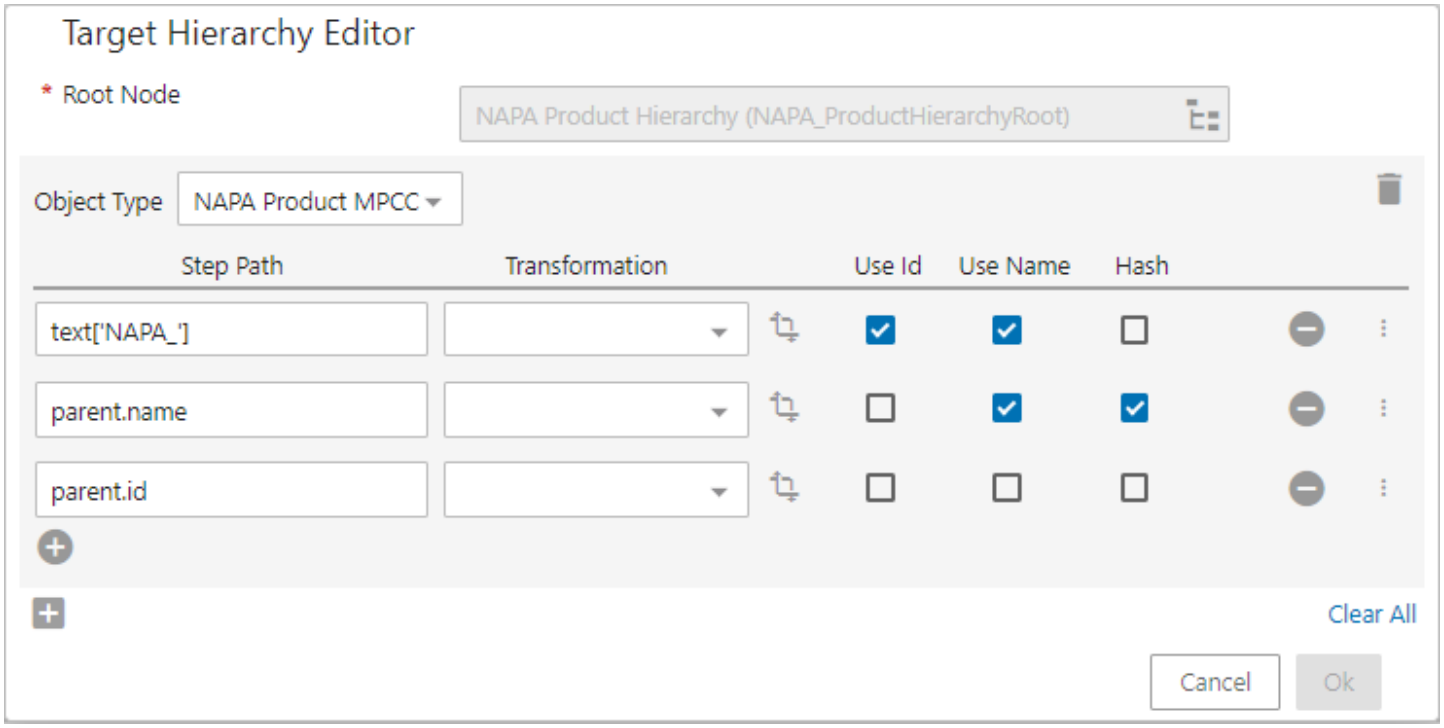
The retrieved information can be used to populate the ID or Name field of the newly created object by selecting the 'Use Id' or 'Use Name' checkbox respectively. Select the 'Hash' checkbox if the STEP Path value should be included in the hash value of the object's ID to calculate the object's uniqueness. The ID is allowed to have a maximum of 40 characters with the free text and hash value combined.

If necessary, use the dropdown in the Transformation column to review the list of available attribute transformations in the system that can be applied while defining the ID and Name of the new object that gets created on this level of the hierarchy. Also, users can click on the 'Select and modify transformation' icon () to create a new or to edit an existing attribute transformation. For more information on creating or editing an attribute transformation via the Target Hierarchy Editor window, refer to the Attribute Transformation in Mapper Configuration Setup Entity topic within this guide.

If required, click the three-dotted icon () that is available in the right of the criteria to display the rearranging dialog. The user can select the Top, Up, Down, or Bottom button to rearrange the criteria accordingly.

For this example, it is considered that the Name and ID values from the parent (PIES PCdb Part Terminology) of the Source object will be used in the Name and ID field of the new object (NAPA Product MPCC). Also, it is considered that the new objects will have a prefix value 'NAPA_'. To achieve this considerations the following setup is used.

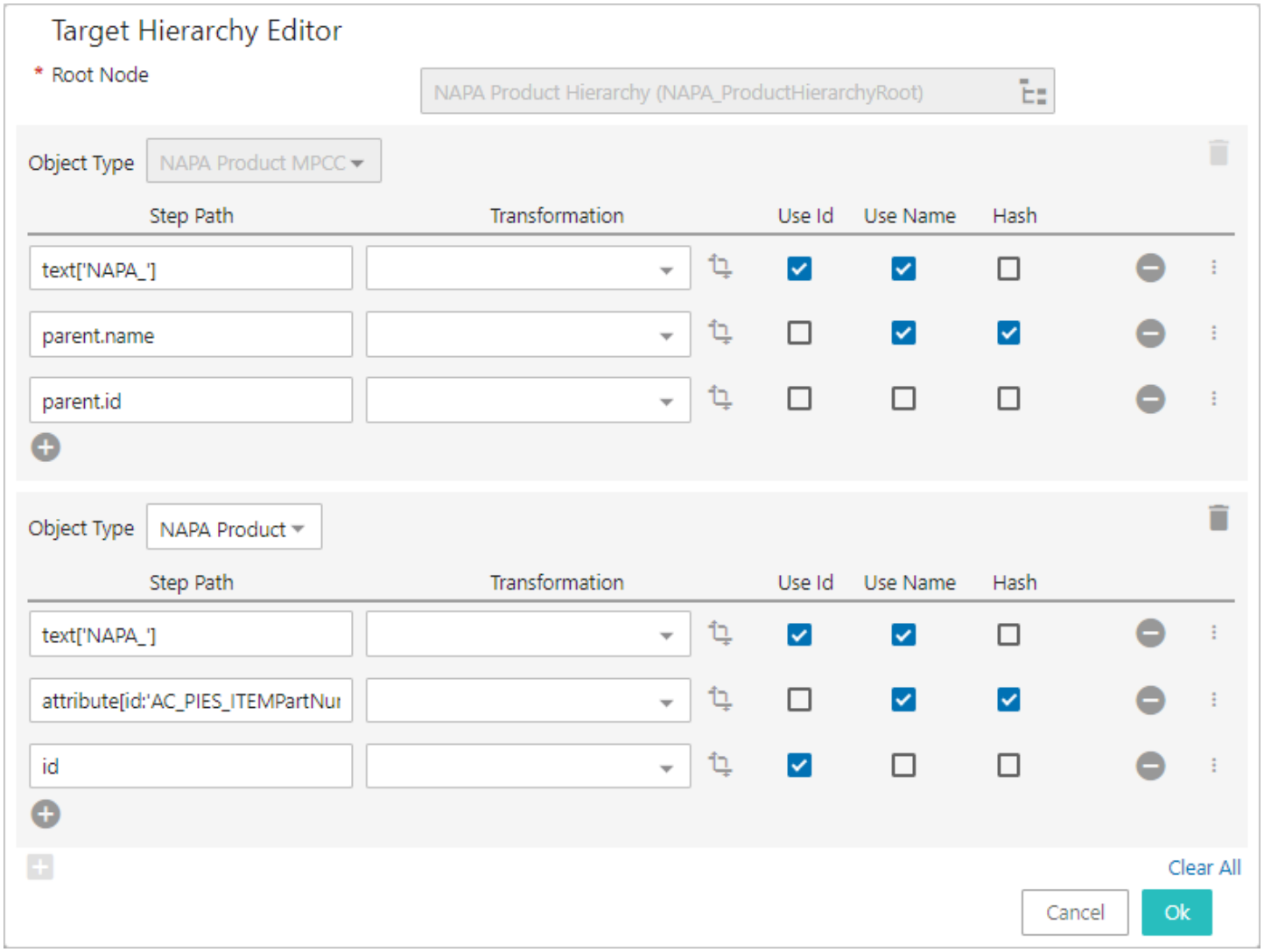
- The **text['[text]']** element is used to add 'NAPA_' as the prefix.
- The **parent** and the **name** elements are used to follow parent of the Source object and retrieve Name value from the parent of the Source object.
- Similarly, The **parent** and the **id** elements are used to follow parent of the Source object and retrieve ID value from the parent of the Source object.
- The 'Use ID,' 'Use Name,' and 'Hash' checkboxes are selected accordingly to use in the Name and the ID of the new object being created, as shown below.



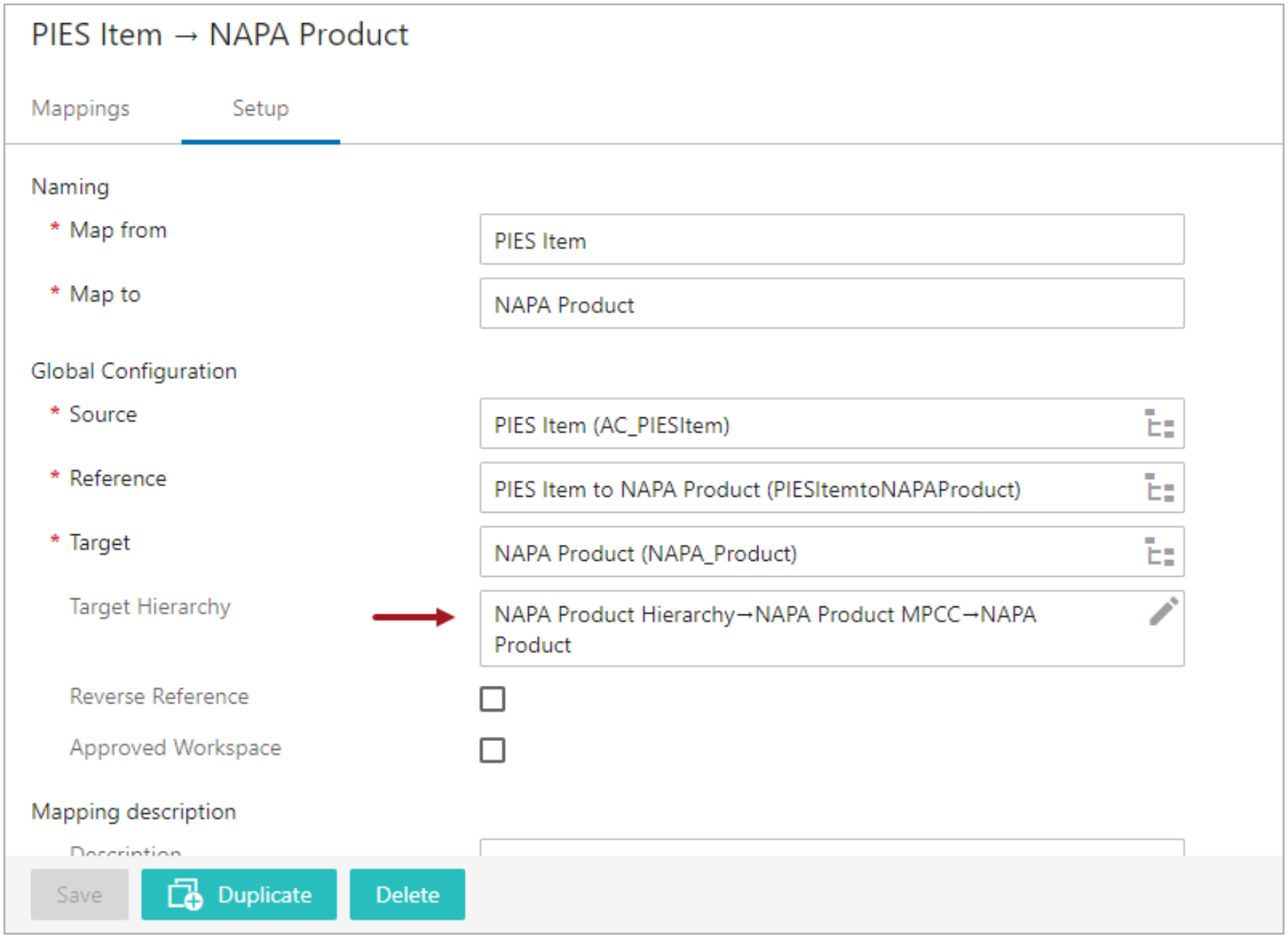
6. Similarly, add and define all of the objects that fall in the Target object hierarchy until the last object i.e., the Target object itself is defined. The **OK** button will be enabled when the Target object is defined.

   For this example, it is considered that the values of the Part Number attribute and ID from the Source object (PIES Item) will be used in the Name and ID field of the Target object (NAPA Product). Also, it is considered that the newly created Target objects will have a prefix value 'NAPA_'. To achieve this considerations the following setup is used.

   - The **text['[text]']** element is used to add 'NAPA_' as the prefix.
   - The **attribute[id:'[id]']** element is used to follow the Source object and retrieve the value of the attribute Part Number from the Source object.
   - Similarly, The **id** element is used to follow the Source object and retrieve ID value from the Source object.
   - The 'Use ID,' 'Use Name,' and 'Hash' checkboxes are selected accordingly to use in the Name and the ID of the Target object being created, as shown below.



7. Click **OK** to close the Target Hierarchy Editor dialog. All the objects in the Target object hierarchy with a direction arrow pointing from Target root node to Target object will be displayed in the Target Hierarchy parameter.


PIES Item → NAPA Product
Mappings
Setup
Naming
* Map from
PIES Item
* Map to
NAPA Product
Global Configuration
* Source
PIES Item (AC_PIESItem)
* Reference
PIES Item to NAPA Product (PIESItemtoNAPAProduct)
* Target
NAPA Product (NAPA_Product)
Target Hierarchy
NAPA Product Hierarchy→NAPA Product MPCC→NAPA Product
Reverse Reference
Approved Workspace
Mapping description
Save
Duplicate
Delete

Using the Onboarding Mappings Details Screen

The Onboarding Mappings Details screen allows users to view and edit Mapper Configurations in Web UI. Key features include:

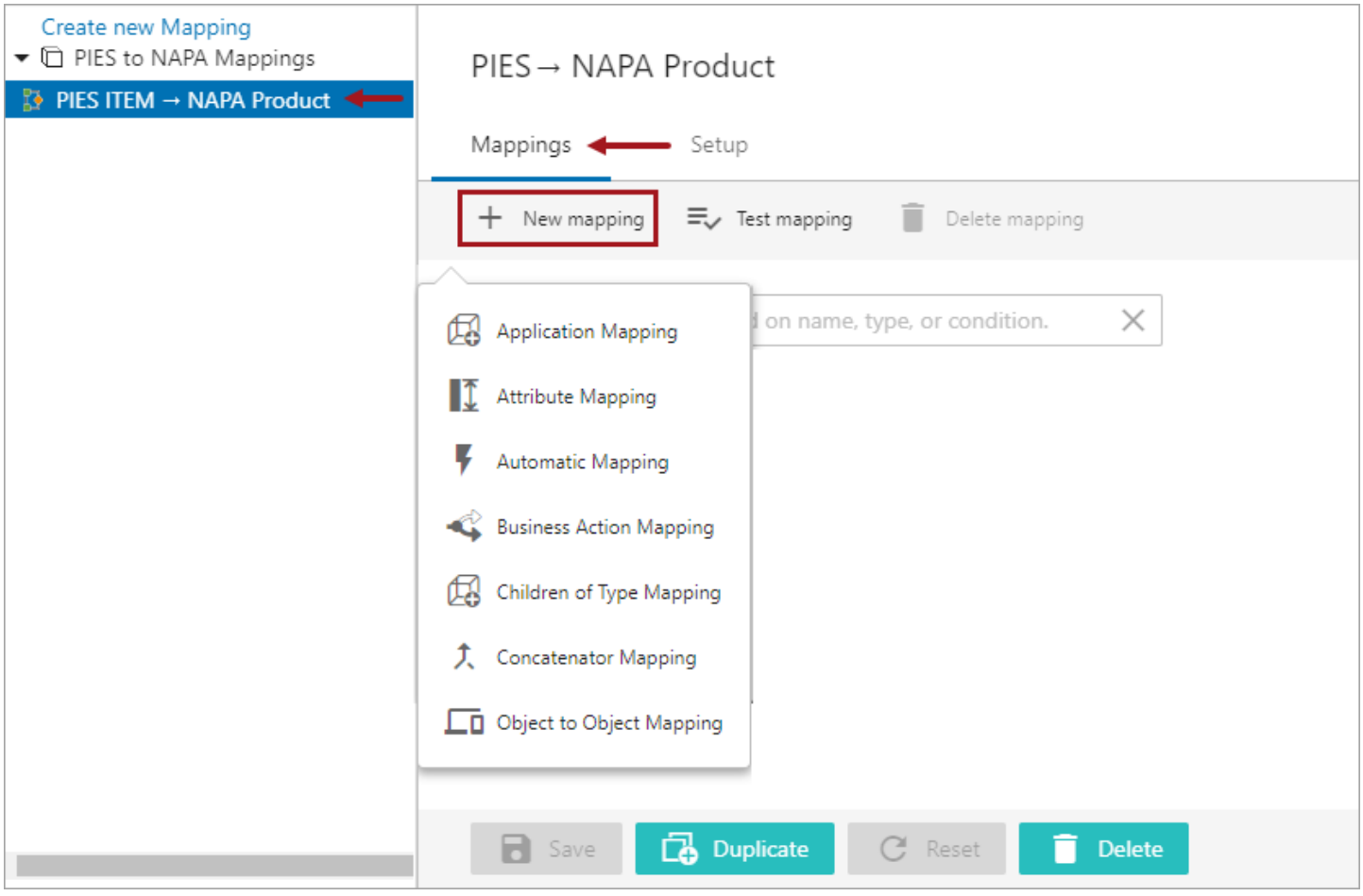
- Can view existing mapping plugin and its configuration
- Can create new mapping plugins
- Can define global configurations for the selected Mapper Configuration setup entity

Mapper Configuration setup entity can be configured to meet different Onboarding and Offboarding requirements in Onboarding Mappings Details screen.

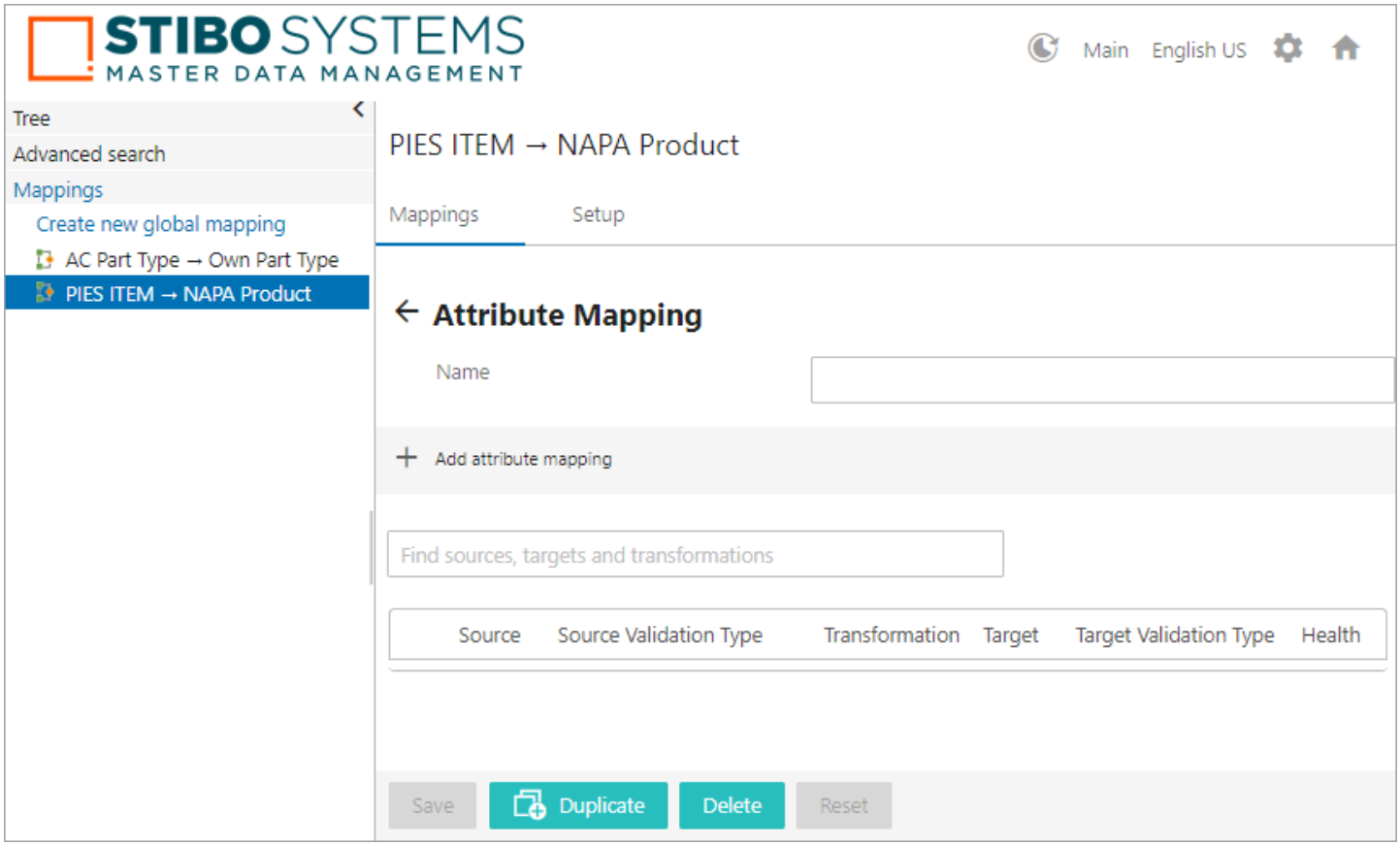
Creating Mapping Plugins

Before adding any plugin for the Mapper Configuration in Onboarding Mappings Details screen, it is essential that the plugins that need to be listed in the Onboarding Mappings Details screen are configured within the Mappings parameter of Onboarding Mappings Details Screen Properties. For more information, refer to the topic Onboarding Mappings Details Screen.

1. With the required Mapper Configuration selected, click on **New mapping** within the Mappings tab of the Onboarding Mappings Details screen.

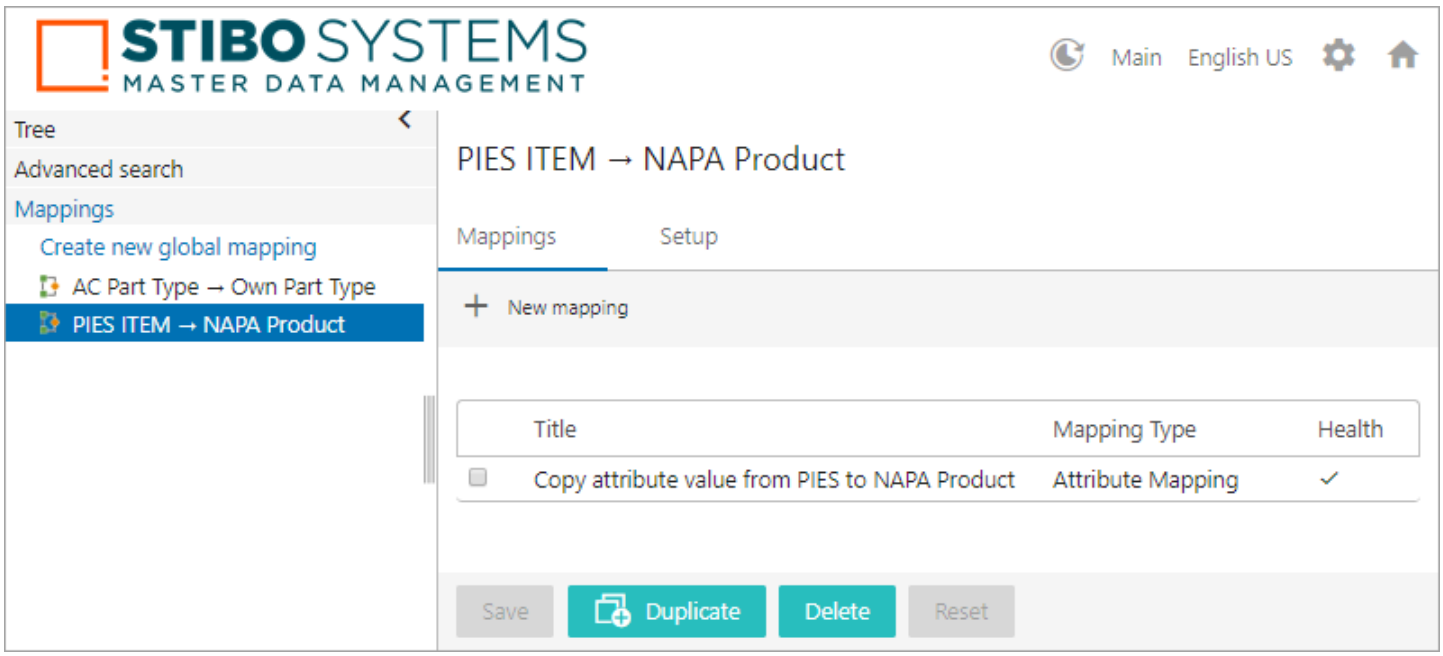


2. Select the desired type of mapping plugin, and a screen is displayed prompting the user to further configure the plugin. For example, in the screenshot below, a screen is displayed when the Attribute Mapping plugin is selected.



3. When done configuring the plugin, click **Save** button available at the bottom of the screen. The newly added mapping plugin is listed within the Mappings tab of the Onboarding Mappings Details screen (as shown below).

Important: The **Delete**, **Duplicate** and **Reset** buttons present at the below toolbar will delete / duplicate / reset the Mapper Configuration, NOT the individual mapping plugin rows within the configuration. If the user does not want to be able to delete the Mapper Configuration in Web UI, then do not configure the **Delete** Action.

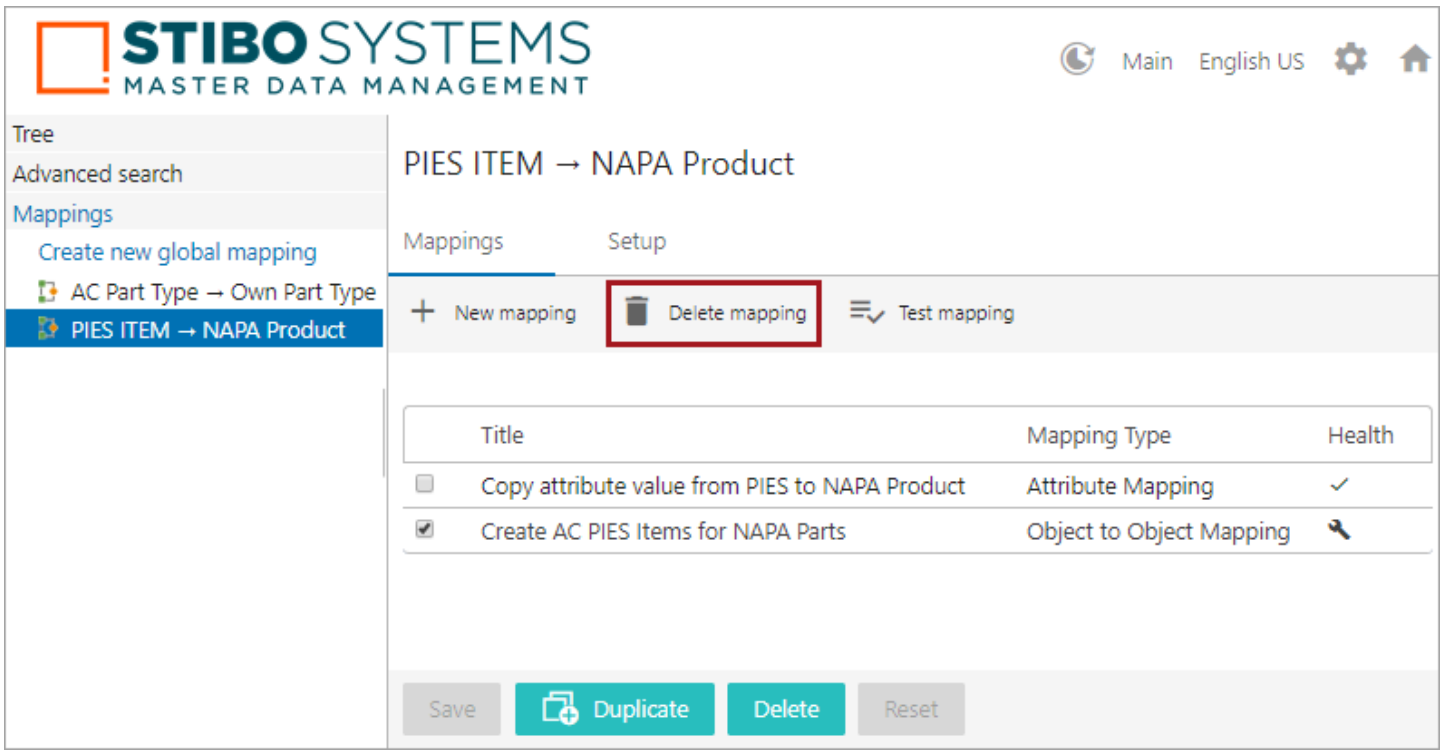


Managing Mapping Plugins

All of the created Mapping plugins are listed in a table format within the Mappings tab of the Onboarding Mappings Details screen for the selected Mapper Configuration. The user can create, test, and delete the mapping plugins within the Mappings tab of the Onboarding Mappings Details screen.

Delete Mapping Plugin

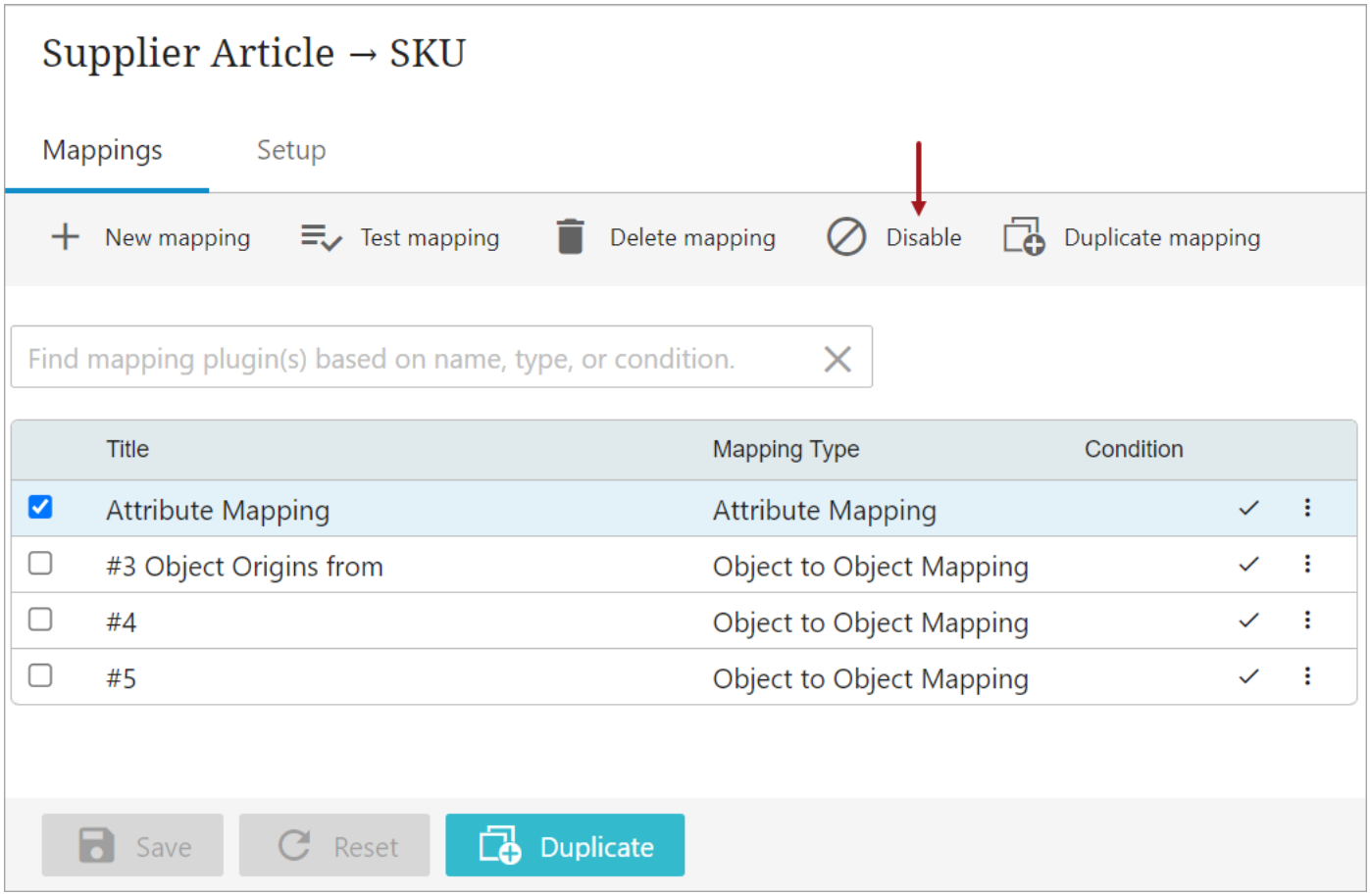
1. Select the Mapping plugins by clicking on the checkbox available at the left side of the listed Mapping plugins. A **Delete mapping** button will be displayed at the top bar (as shown below).



2. Click on the **Delete mapping** button, and the mapping plugin will be deleted from the table.

Disable Mapping Plugin

You can control the execution of mapping plugins within the Mapper Configuration setup entity. When a mapping plugin is disabled, it remains in a deactivated state, no longer executing unless enabled. This feature is especially useful when a mapping plugin is temporarily unnecessary.



1. In the Mapper Configuration setup entity, check the box next to the mapping plugin you want to disable. This activates the Disable button in the toolbar.
2. Click Disable. This action stops the mapping plugin from executing when the associated Mapper Configuration setup entity is executed.
3. Save the configuration after disabling the plugin.

The mapping plugin turns gray when disabled.

Duplicate Mapping Plugin

Just as you can disable mapping plugins, you can also duplicate them to create new plugins with similar configurations.

1. In the Mapper Configuration setup entity, check the box next to the mapping plugin you want to duplicate. This activates the Duplicate button in the toolbar.
2. Click Duplicate. This action creates a new mapping plugin with the same configuration as the original.
3. Save the configuration after duplicating the plugin.

The duplicated mapping plugin will appear with the same name as the original, but with a number suffix to indicate that it is a duplicate.

Mapping Plugins

Within each Mapper Configuration setup entity, mapping plugins are added to define what data needs to be retrieved and moved between the Source and the Target object. The settings available in these plugins allow more control over the behavior of the Mapper Configuration. The plugin suite for various data mapping consists of the following plugins:

- Application Mapping Plugin
- Attribute Mapping Plugin
- Automatic Mapping Plugin
- Business Action Mapping Plugin
- Children of Type Mapping Plugin
- Concatenator Mapping Plugin
- Object to Object Mapping Plugin
- ECLASS Classification Mapping Plugin

Details on how to configure and use these plugins are provided in their respective topics For more information about how to add these plugins, refer to the Using the Onboarding Mappings Details Screen topic within this guide.

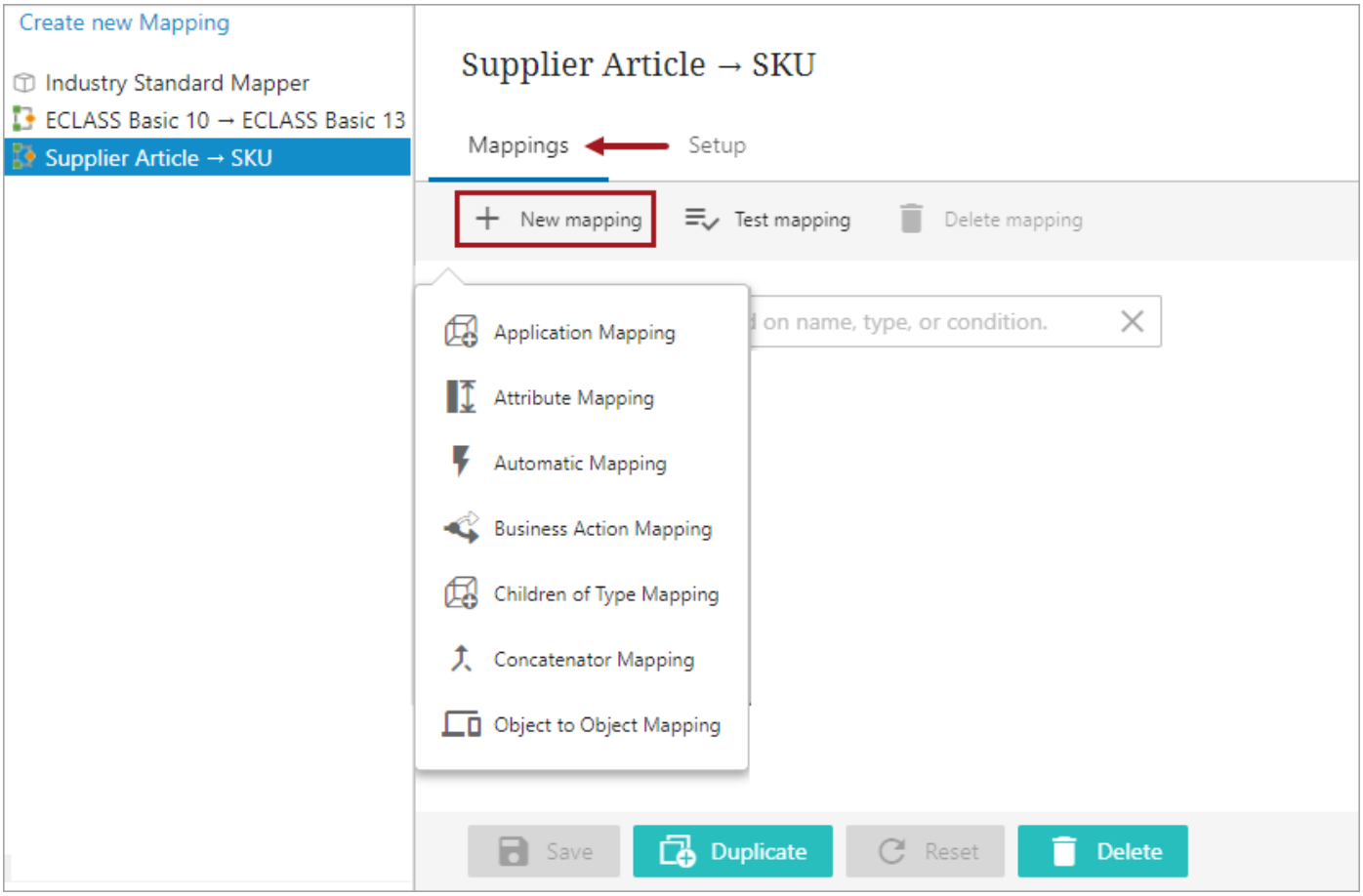
Attribute Mapping Plugin

The Attribute Mapping plugin will copy attribute values from the source object to the target object. It is configured on the Onboarding Mappings Details Screen for the selected Mapper Configuration. The settings available in this plugin allow the user to define what the Mapper Configuration should do with the attribute values.

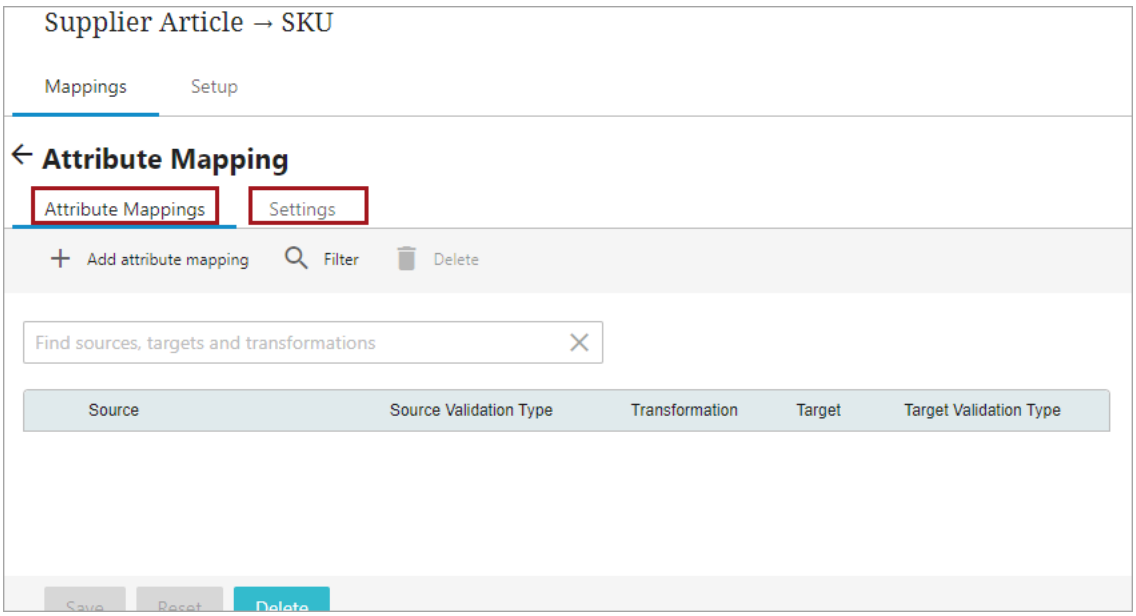
Note: All settings are not necessary for all attributes. The specific combinations chosen are dependent on the unique requirements for the attribute being configured. The settings contained within this plugin can include transformations. The plugin can be configured to either Onboard / Offboard the data or in some cases can be configured to work along with transformations too.

To configure the Attribute Mapping plugin, follow these steps.

1. With the required Mapper Configuration selected, click on **New mapping** available within the Mappings tab of the Onboarding Mappings Details screen.

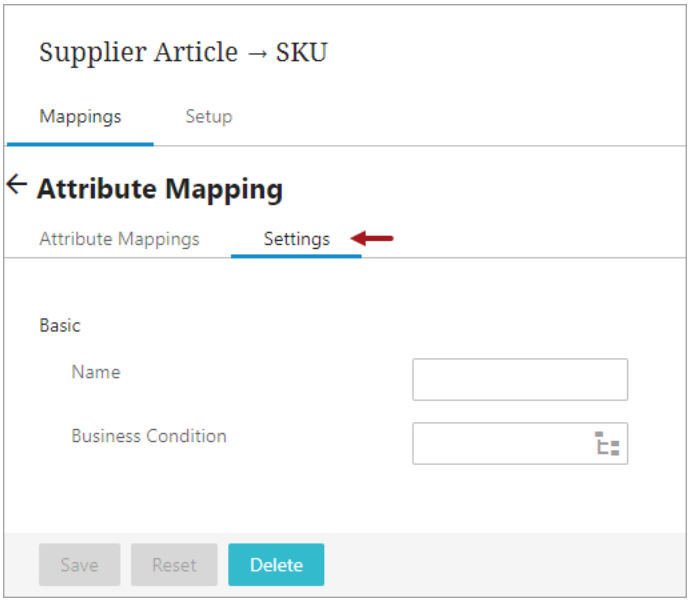


2. Select Attribute Mapping option, and a new screen is displayed with the following two tabs:



- **Attribute Mappings:** This tab includes options that allows users to establish a mapping relationship. Details pertaining to the parameters available within this tab page is explained in the later section of this topic.
- **Settings:** This tab contains few basic parameters that requires to be populated before the user tries to build a mapping relationship in the Attribute Mappings tab. Details pertaining to the parameters available within this tab page is explained in the later section of this topic.

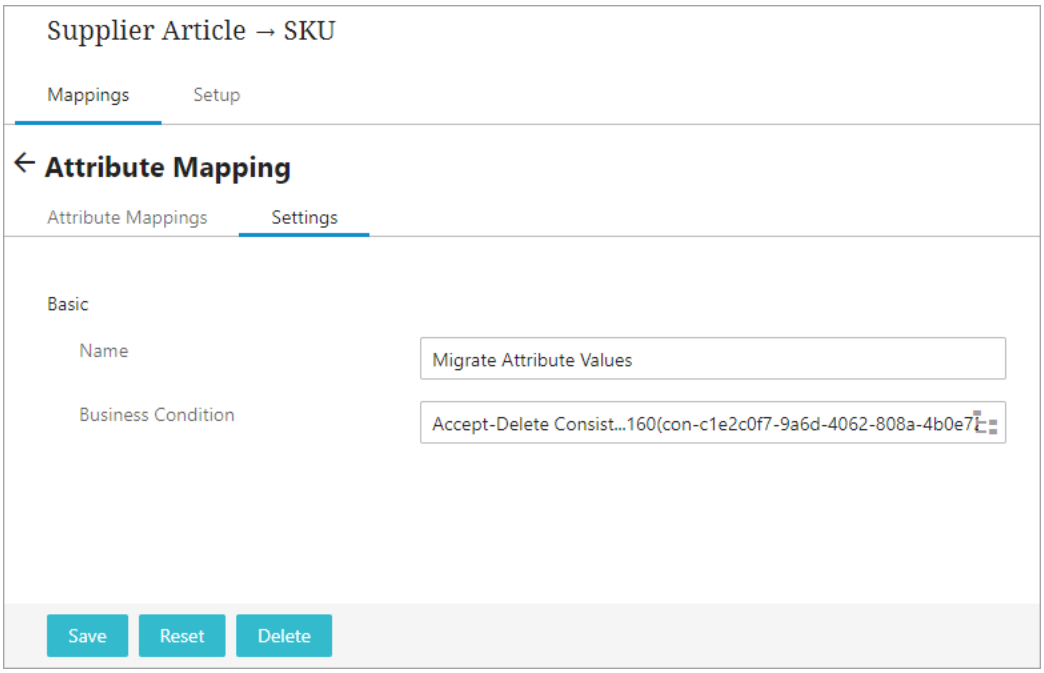
3. Within the Settings tab, as shown in the screenshot below, populate the following parameters:



- **Name:** Type in a suitable name next to this field. This could be any unique name that clearly describes the mapping functionality.

- **Business Condition:** The Business Condition parameter allows users to select a business condition. The selected business condition runs the mapper plugin only on the object if the condition is true.

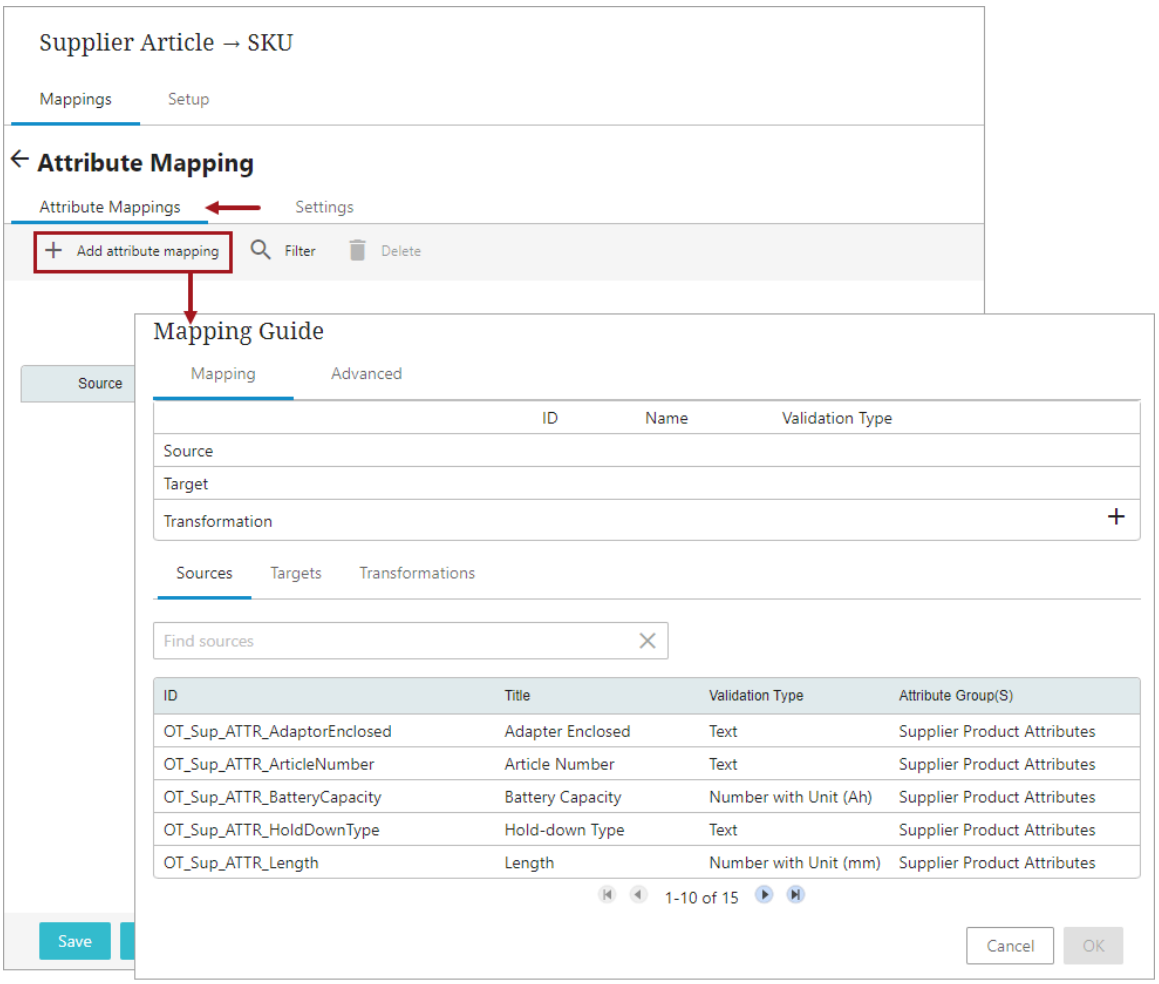
Below is an example of how the Settings tab within the Attribute Mapping plugin is configured in the Web UI.



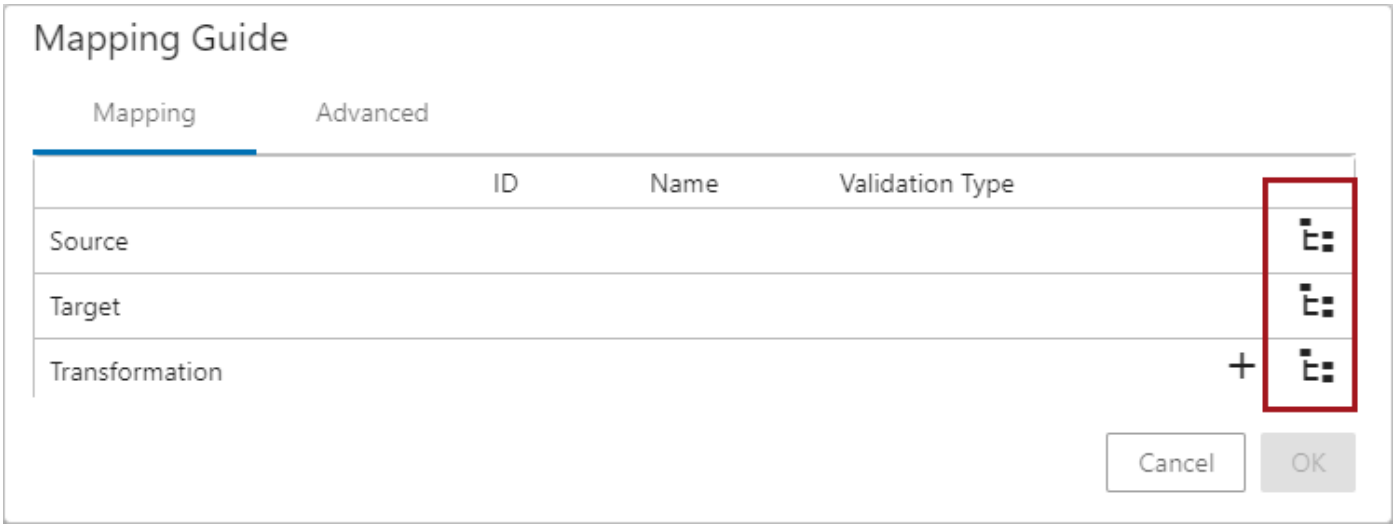
4. After populating all the required parameters within the Settings tab, navigate to the Attribute Mappings tab. and click on the 'Add attribute mapping' button.

   Upon clicking the 'Add attribute mapping' button, the Mapping Guide window will display, as shown in the screenshot below. This window comprises of the following two tabs:

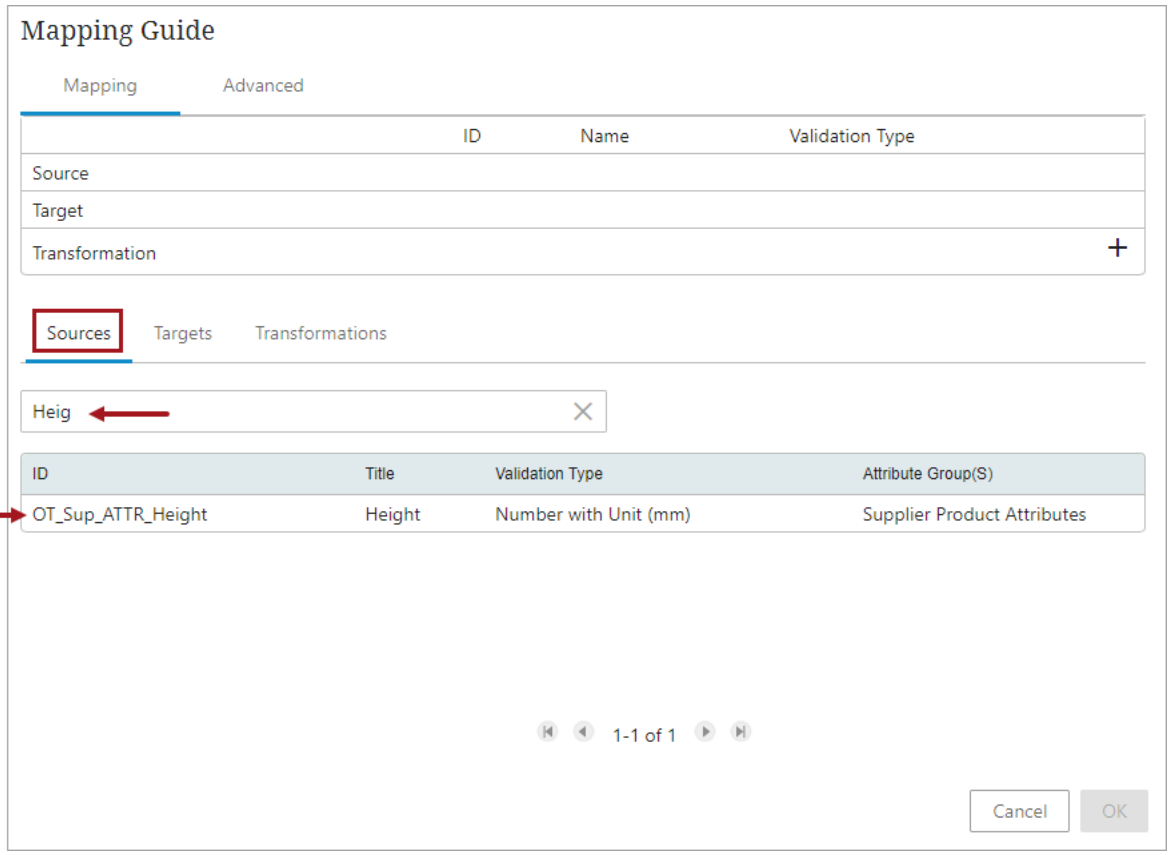
   - **Mapping:** This tab comprises of the fundamental parameters that are required for the Attribute Mapping plugin. This involves populating the Source and Target fields along with the attribute transformations if required.
   - **Advanced:** The parameters available within this tab allows users to perform some advanced transformation functionalities when required. The functionalities in this tab are mainly designed to handle multivalued source attributes. The options available within this tab are explained in the later section of this topic.



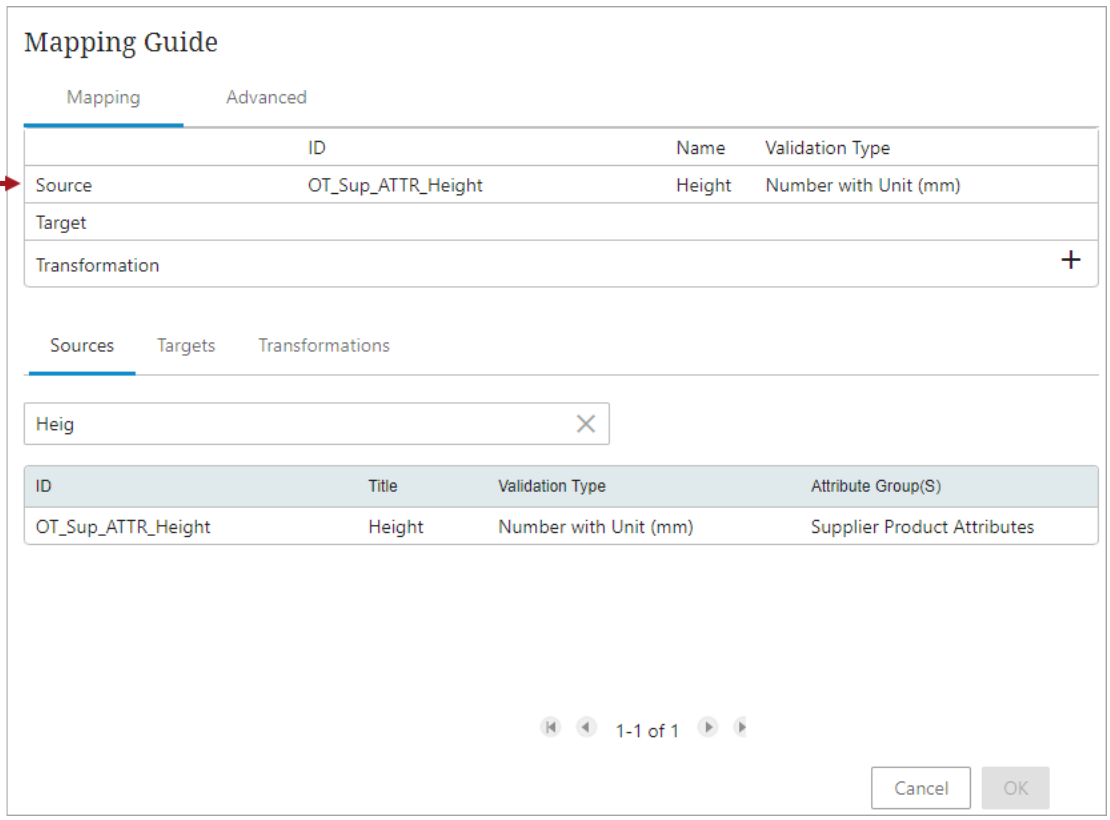
Note: It is possible in the Mapping Guide window to display the regular Node Pickers (as shown below) instead of the typeahead field. In order to use the Node Pickers in the Mapping Guide window, users need to set the following property in the sharedconfig.properties file: `Mapper.MappingGuideUseStandardComponents=true`.



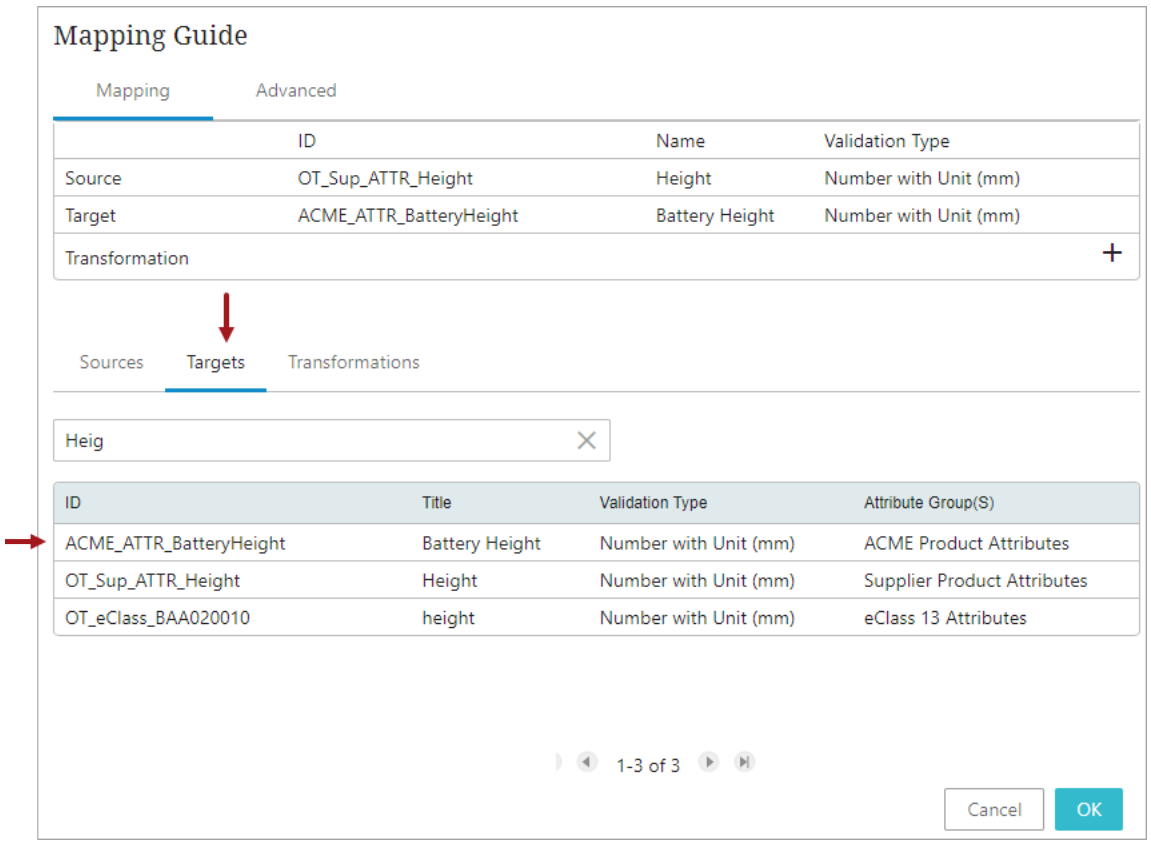
5. Select the Sources tab, then click on the Search field and begin typing the initial letters of the attribute name or ID. This action triggers a dropdown of typeahead search results, displaying the attributes of the Source object available in the system. From the list of results displayed below the search bar, select the desired attribute.



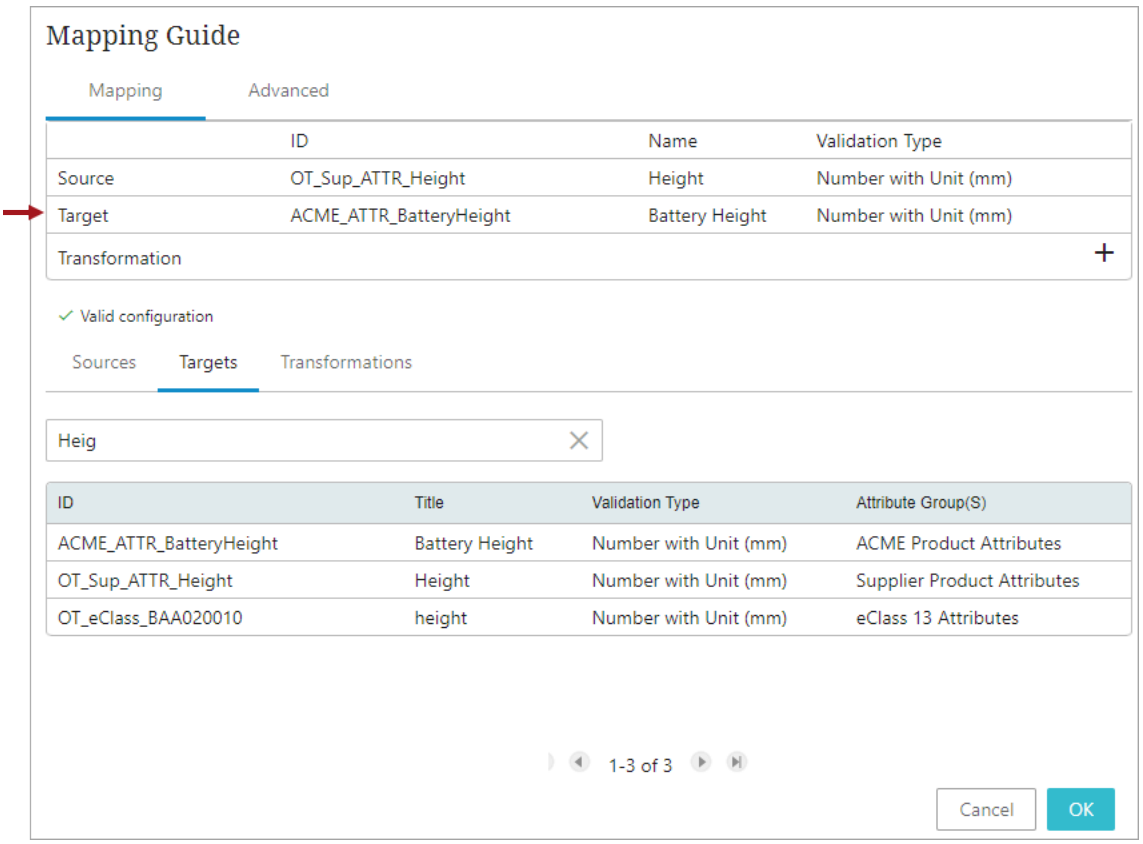
After selecting, the chosen attribute will be automatically filled in the Source field(as shown below).



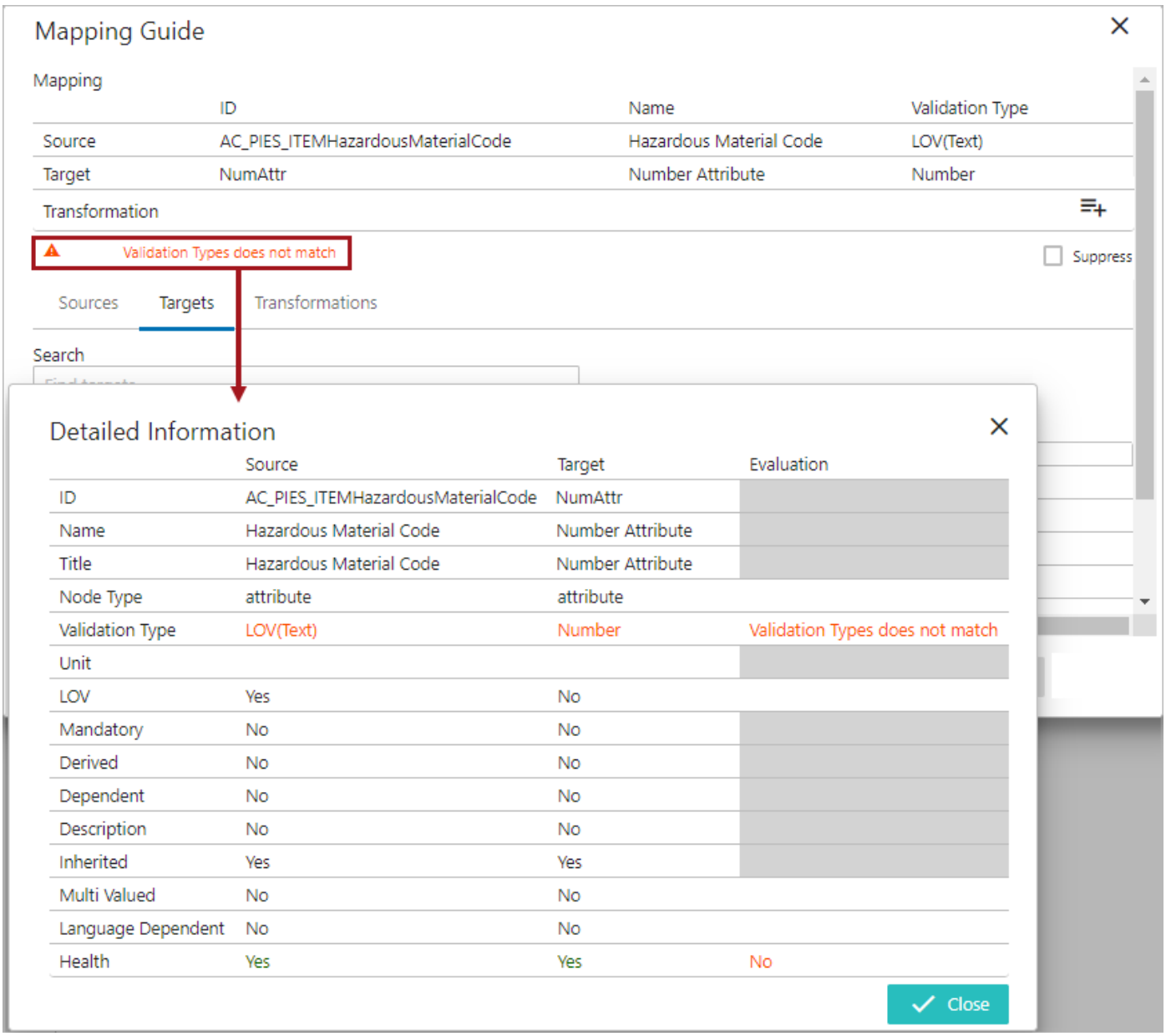
6. Further, ensure that the Targets tab is selected. Then, click on the Search field and begin typing the initial letters of the attribute name or ID. This initiates a search for the attribute from the Target object. From the list of results displayed below the search bar, select the desired attribute.



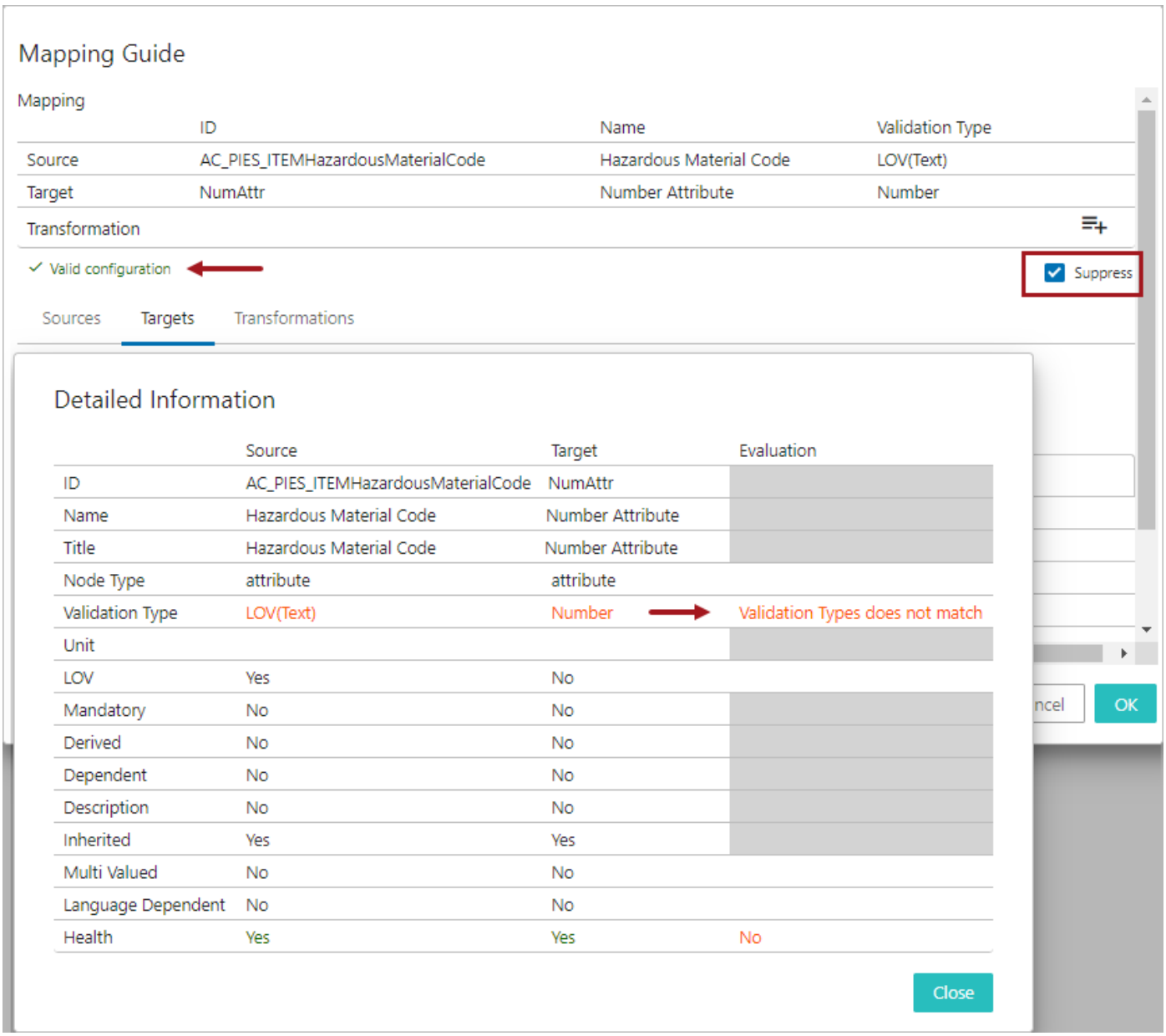
After selecting, the chosen attribute will be automatically filled in the Source field(as shown below).



After the source and target attributes are defined, the system evaluates the validity match between the source and the target attributes. A hyperlink text explaining the reason for the validity match / mismatch gets displayed. Clicking on the hyperlink will open the 'Detailed Information' dialog and displays the validity match / mismatch information of the attribute mapping. Below is an example of a validation mismatch between the source and the target attribute displayed in the 'Detailed Information' dialog:

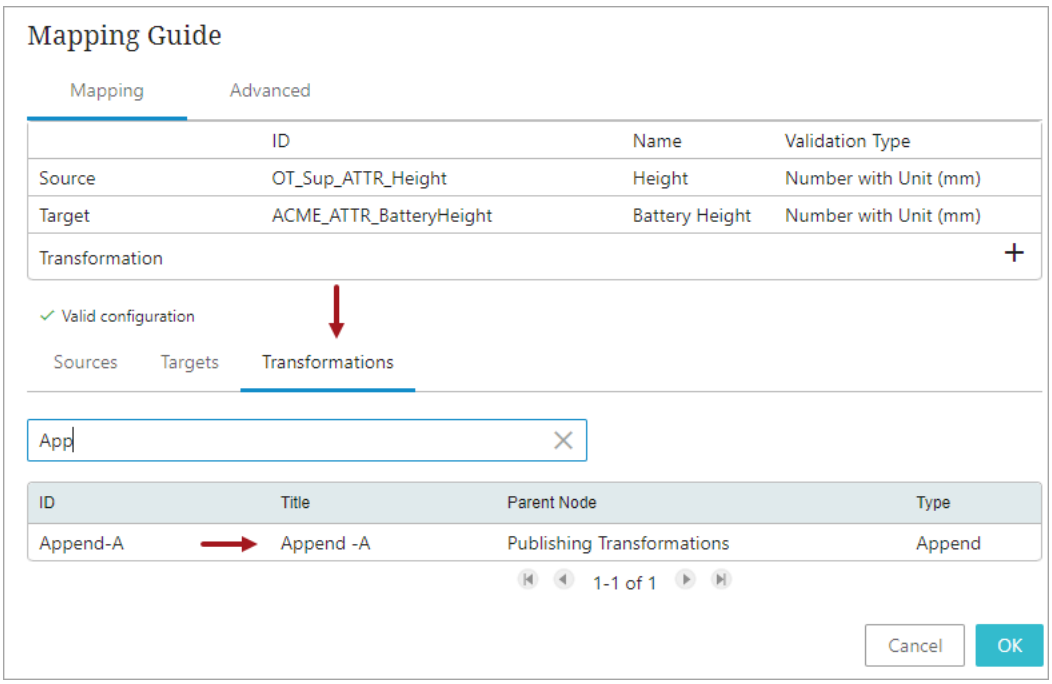


The user can suppress the validation mismatch warning message by clicking on the 'Suppress' checkbox in the Mapping Guide window. Selecting the 'Suppress' checkbox will *only* remove the data type mismatch warnings displayed on the Mapping Guide window and *does not resolve* the mismatch irregularities.

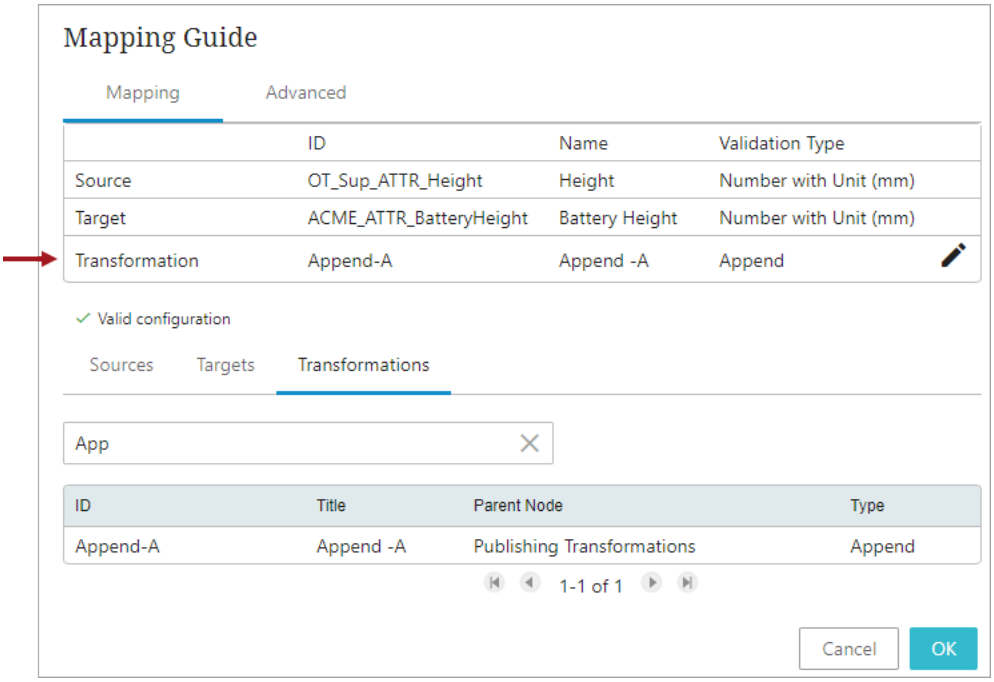


7. If any transformations are required, users can either utilize an existing attribute transformation already present in the system or create a new one by clicking on the 'Create new transformation' icon (+).

   To configure an existing attribute transformation, users should select a pre-existing attribute transformation from the list available in the 'Transformations' tab, which is displayed in the lower half of the window (as shown below).



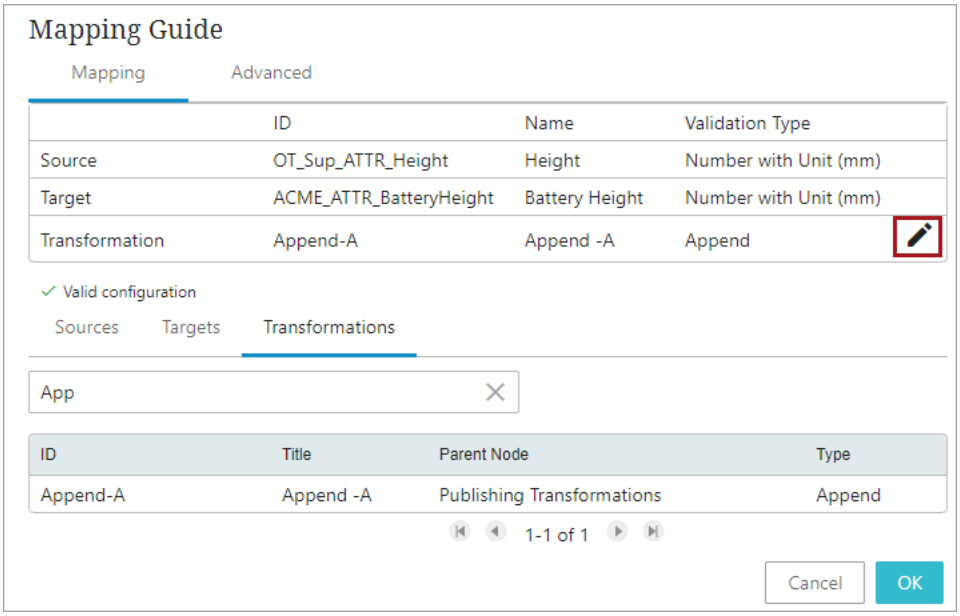
The selected transformation will be populated in the Transformation field (as shown below).



In case the required attribute transformation is not available in the system, then clicking on the 'Create new transformation' icon (+) available within the Transformation field will open the Transformation Overview window where the user can create a new attribute transformation. Details about how to create and

configure an attribute transformation are explained in a separate topic. For details about creating an attribute transformation standing on a Mapping Guide window, refer to Creating Attribute Transformations Through Mapping Guide Window topic within this guide.

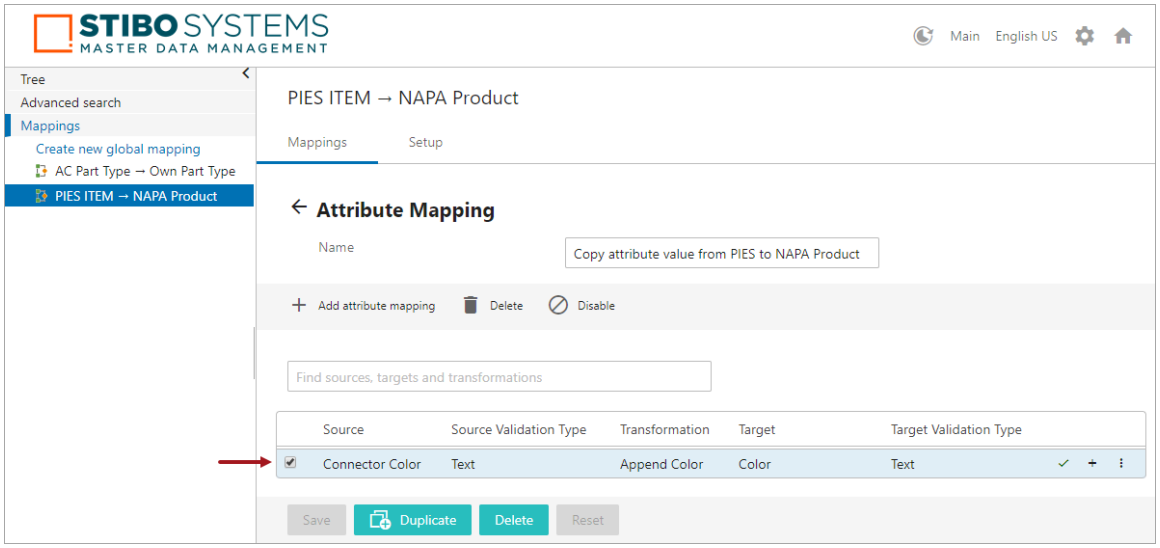
The populated transformation can be edited / removed by clicking the edit icon ( ) in the Transformation field.



Note: Deleting an attribute transformation from the Mapping Guide window means removing it from the current mapping setup; however, editing it impacts all of the other mappings that have used the particular attribute transformation. Users are advised to be cautious before editing the attribute transformation. The Mapping Guide in the Web UI does not analyze if the transformation is applied to any other mapping.

8. After completing all the required parameters within the Mapping tab, users should navigate to the Advanced tab *only* if the source is a multi-valued attribute. If the source is not multi-valued, this step can be ignored. Details pertaining to the Advanced tab is described in the later section of this topic.

9. Click **OK** to close the Mapping Guide window and then click **Save** to save the changes. The newly added attribute mapper row will be listed as shown below. To edit the attribute mapping selections, click on the row and it will open up the Mapping Guide window in order to make edits.



10. Repeat the above steps 4 to 8 to add more attribute mapping rows for the same plugin.

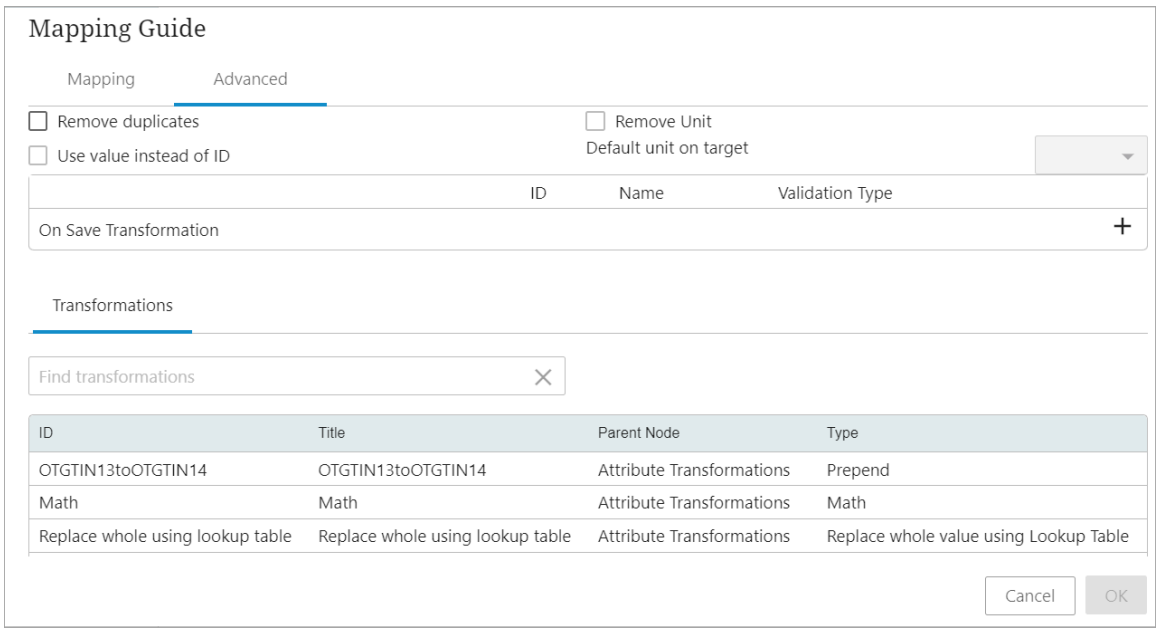
Important: Users must save the changes before exiting the Mapper Configuration. If the user fails to click **Save**, then the mapping will be lost once the user leaves the Mapper Configuration.

User can add any number of mapping rows in the mapping plugin. When there are multiple mapper rows available within the mapping plugin, the order of execution of each mapper row is based on the order in which it is listed within the mapping plugin.

The health of the mapper row is displayed next to each mapper row. Users can also add some additional information describing each of the mapper rows. The user has the flexibility to disable, delete, or rearrange the listing order of the mapper rows. For more information on handling the mapper rows, refer to the topic Modifying Mapper Rows on the Onboarding Mapping Details Screen within this guide.

Handling Multivalued Source Attributes in Attribute Mapping

The Mapping Guide window has the Advanced tab that allows users to perform some advanced transformation functionalities when required. The functionalities in this tab are mainly designed to handle multivalued source attributes.



While the attribute transformation configured in the Mapping tab is applied to the values of the source attribute, the attribute transformation configured in the Advanced tab will be applied to the intermittent string that gets created during the transition of data from the source attribute to the target attribute.

This allows to simplify more complex mapping relationships between source and target attributes. When configured, the Attribute Mapping plugin can handle a multi-valued source attribute and transform the values before populating them into a single-valued target attribute. In this case, the system can extract a specific value from a string of multiple values and apply additional transformations before the final value is populated in the target attribute.

For example, consider that data is being onboarded into a single-valued target attribute (named 'Body Color') from a multivalued source attribute (Color) with an attribute transformation that changes the value from the upper case to the lower case. The source attribute Color has three values, RED, BLUE, and BLACK. If the attribute transformation was set in the Transformation field of the Mapping tab, the target attribute Body Color would be populated with a value 'black' (because the target attribute can accommodate only one value).

However, before it populates this value in the target attribute, it is to be known that in the background, the system creates an intermittent string called 'red<multisep/>blue<multisep/>black' and extracts only the value 'black' out of this string to populate on the target attribute.

The Transformation field in the Advanced tab helps to configure and apply another attribute transformation on this string, and users can transform and retrieve the desired data from this string to be populated in the target attribute value.

For example, if the On Save Transformation field is populated with an attribute transformation that replaces the '<multisep/>' substring into the hyphen '-', then the final value in the target attribute will be populated as 'red-blue-black'.

Along with the functionality described above, the Advanced tab can also be used for the following:

- Ensure that no duplicate values are populated in the target attribute by selecting the 'Remove duplicates' checkbox.
- Determine if the value of a LOV or the ID of the LOV value is to be populated in the target attributes using the 'Use value instead of ID' checkbox.
- Utilize the 'Remove unit' parameter to remove any units retrieved from the source attribute. This parameter ensures that units are stripped from the source attribute before being assigned to the target attribute.
- Specify the desired unit for the target attribute using the 'Default unit on target' parameter. This parameter allows you to assign a new unit to the target attribute

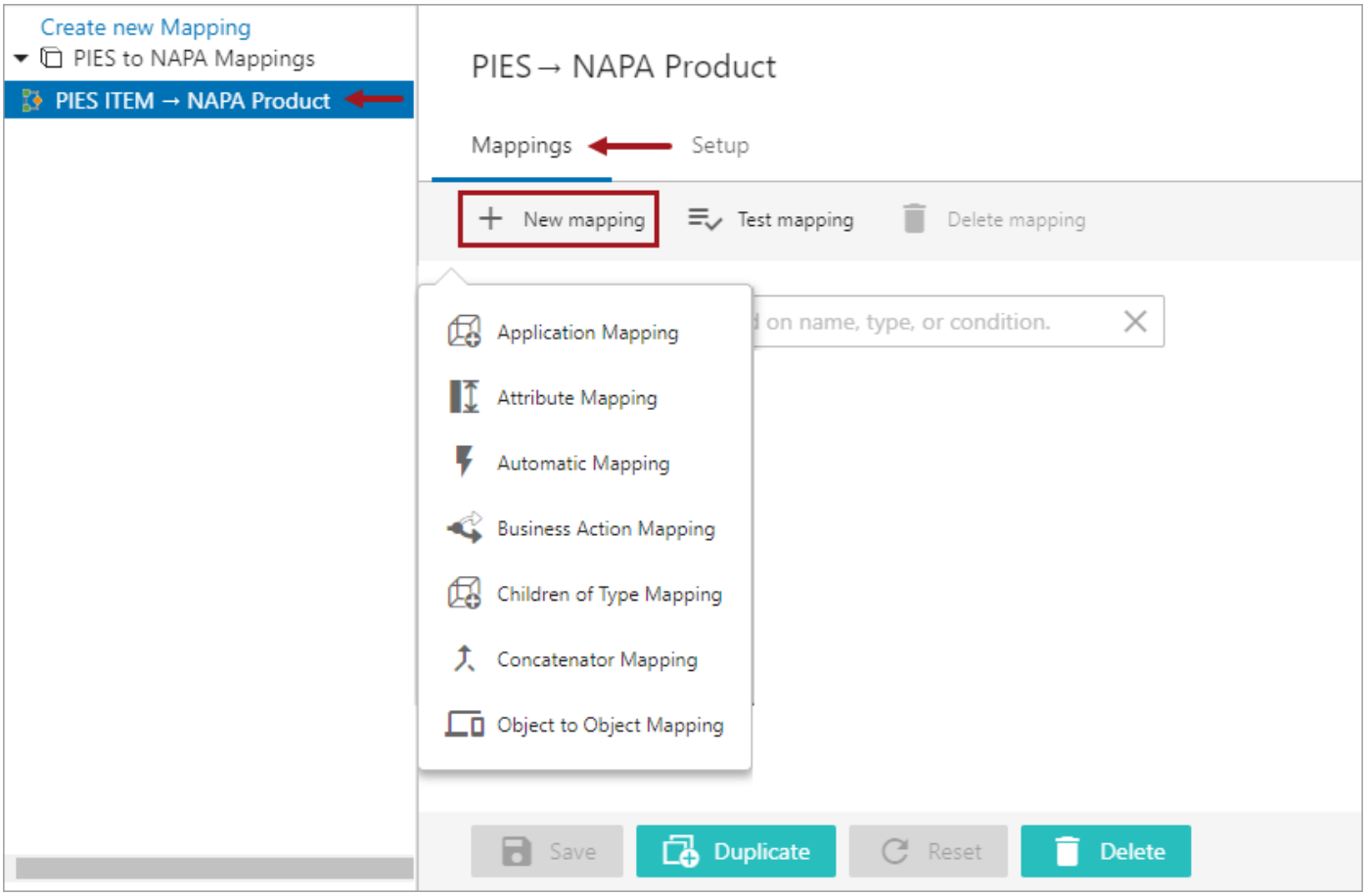
Automatic Mapping Plugin

The Automatic Mapping plugin will automatically identify shared attributes and references between the source and target objects and will move the attribute values and references from the source over to the target. The plugin must be added to the Onboarding Mappings Details Screen first in order for it to be selectable within a Mapper Configuration.

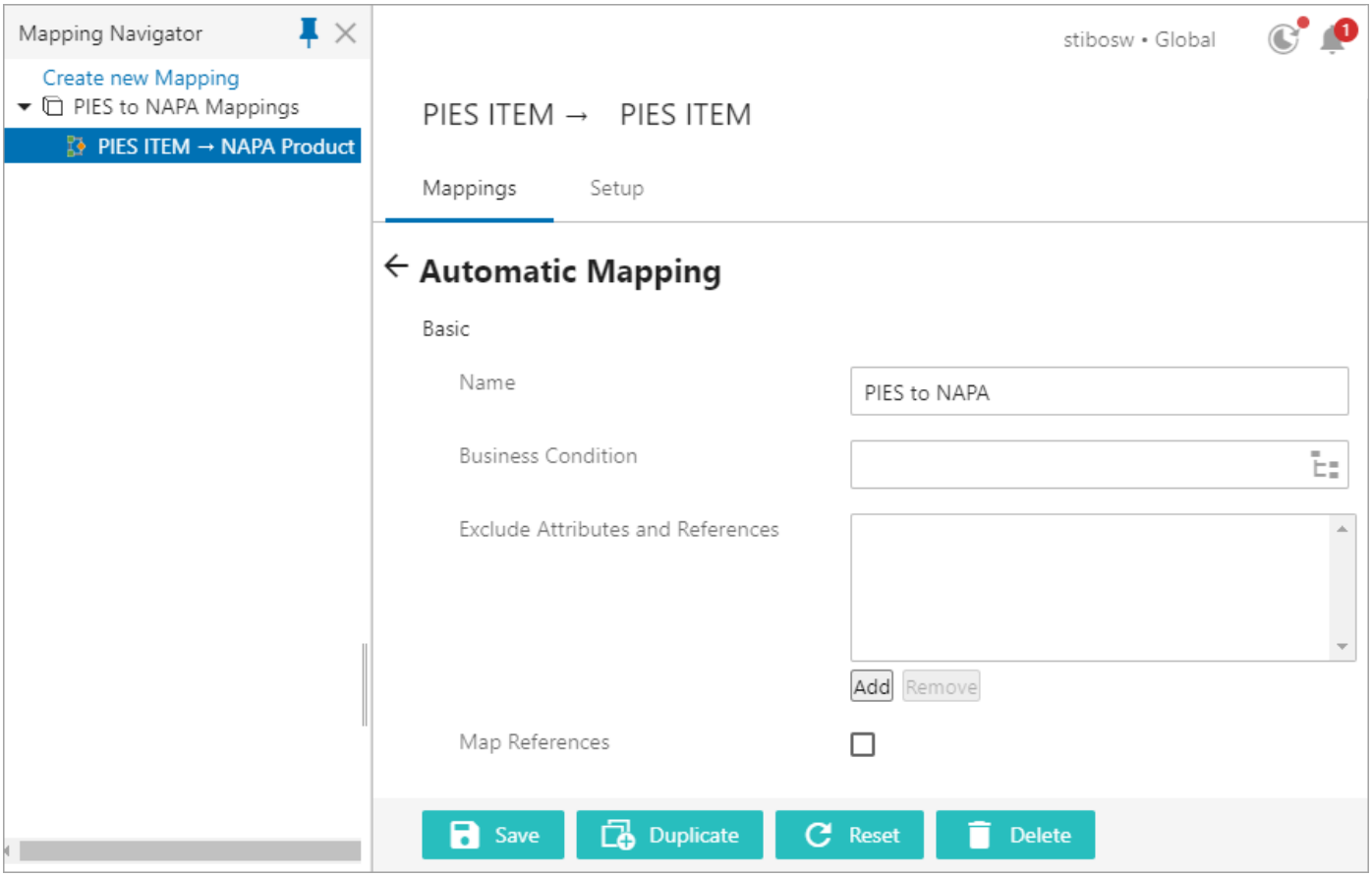
Note: All shared attribute values and references will be copied from the source to the target object except for the attribute(s) / reference(s) that is added in the 'Exclude Attributes and References' parameter (as explained below). The settings contained within this plugin cannot include any transformations.

To configure the Automatic Mapping plugin, follow these steps:

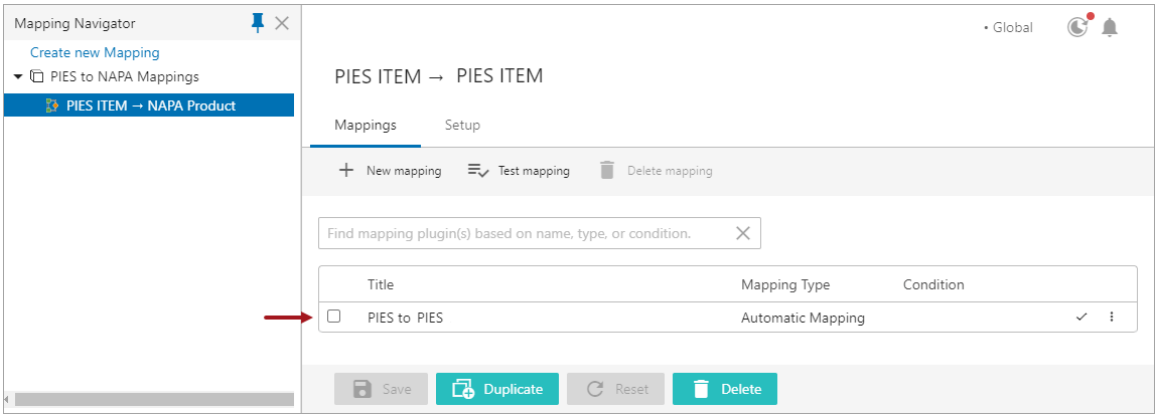
1. With the required Mapper Configuration selected, click on **New mapping** that is available within the Mappings tab of the Onboarding Mappings Details screen.



2. Select **Automatic Mapping**, and a screen is displayed, prompting the user to configure the plugin further (as shown below).



3. Type in a suitable name next to the Name field. This could be any unique name that clearly describes the mapping functionality.
4. In the optional Business Condition parameter, populate a business condition that determines any condition set to execute the mapping plugin. The mapping plugin will be executed only when the defined condition is met.
5. In the 'Exclude Attributes and References' parameter, click the Add button to open the node picker. Then select the desired attributes and / or references that are to be excluded from being onboarded.
6. Select the 'Map References' parameter only if the source object's references are to be onboarded to the target object. Only the references from the shared reference type will be copied to the target object.
7. Select the 'Ignore Attribute Links on Target' parameter only if the Automatic Mapping plugin should include the orphan attributes for onboarding. Leaving this parameter unselected will exclude the orphan attributes from being onboarded.
8. Click **Save** to save the changes. The newly added Automatic Mapping will be listed as shown below.



Important: Users must save the changes before exiting the Mapper Configuration. If the user fails to click **Save**, then the mapping will be lost once the user leaves the Mapper Configuration.

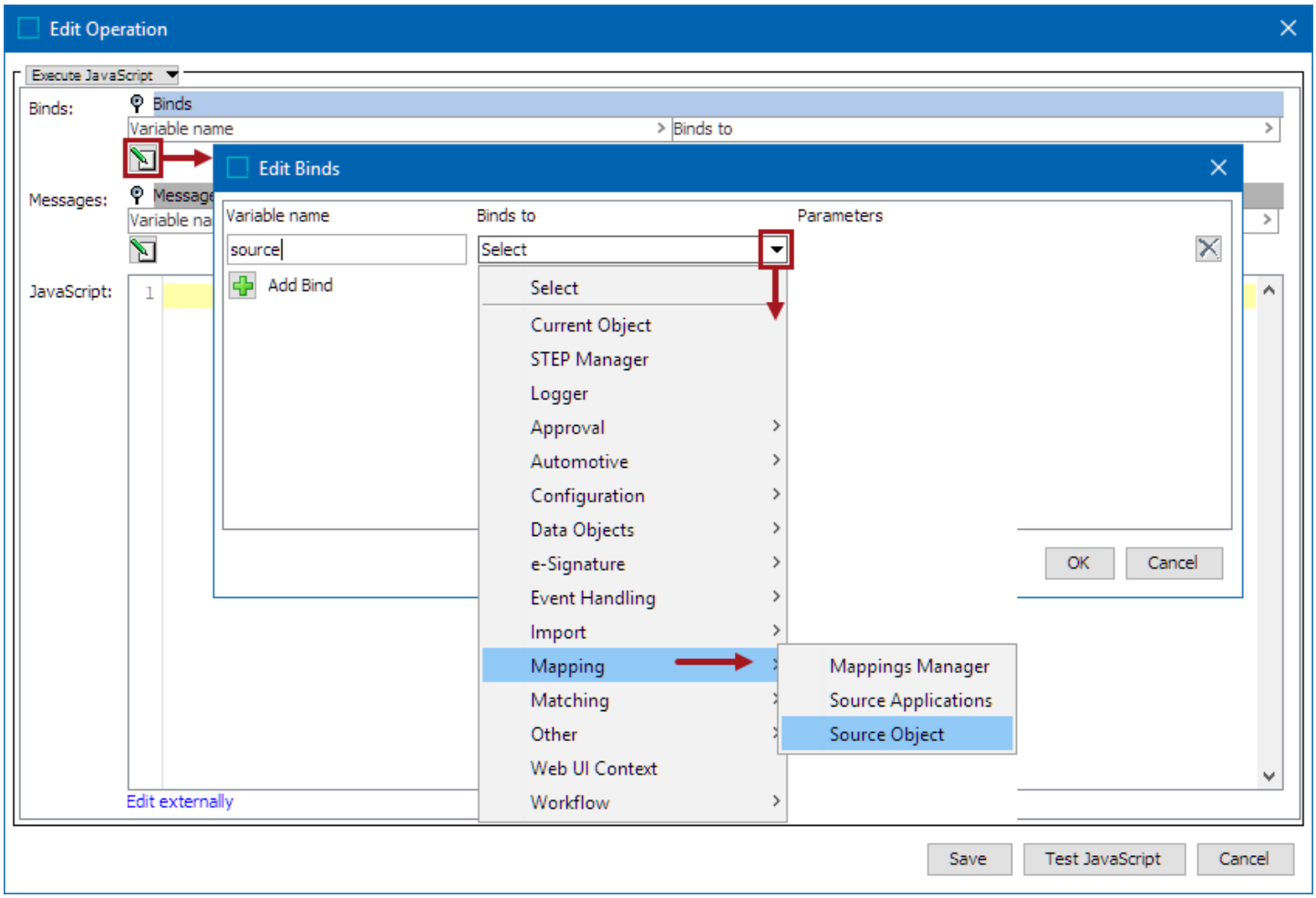
The health of the Automatic Mapping plugin is displayed next to each Mapping plugin. The user has the flexibility to disable, delete, or rearrange the listing order of the Mapping plugins. The checkmark shown in the image above indicates that the mapping plugin is healthy.

Business Action Mapping Plugin

This Mapping plugin gives extended flexibility for users to configure and solve unique mapping cases which cannot be achieved by the other Mapping plugins (Attribute Mapping, Application Mapping, and Object to Object Mapping). The Business Action Mapping plugin takes a business action as a configuration and when executed, executes the business action on the target object. This Mapping plugin is configured on the Onboarding Mappings Details Screen for the selected Mapper Configuration.

The data that is copied from a Source object is determined by the business action that is defined in the **Select Business Action** parameter within the Business Action Mapping plugin. This business action is manually created and configured independently in the workbench.

The business action can use the Source Object bind to gain access to the Source object. This bind is available within the 'Binds to' dropdown, as shown below.



Prerequisites

First, create a business action to define the Source node using Execute JavaScript > Add Bind > Mapping > Source Object. The Source Object bind provides access to the Source node. For information on accessing source object via the Source Object bind, refer to the Source Object Bind topic within the Resource Materials online help documentation

For more information on adding other binds, refer to JavaScript Binds in the Resource Materials online help documentation.

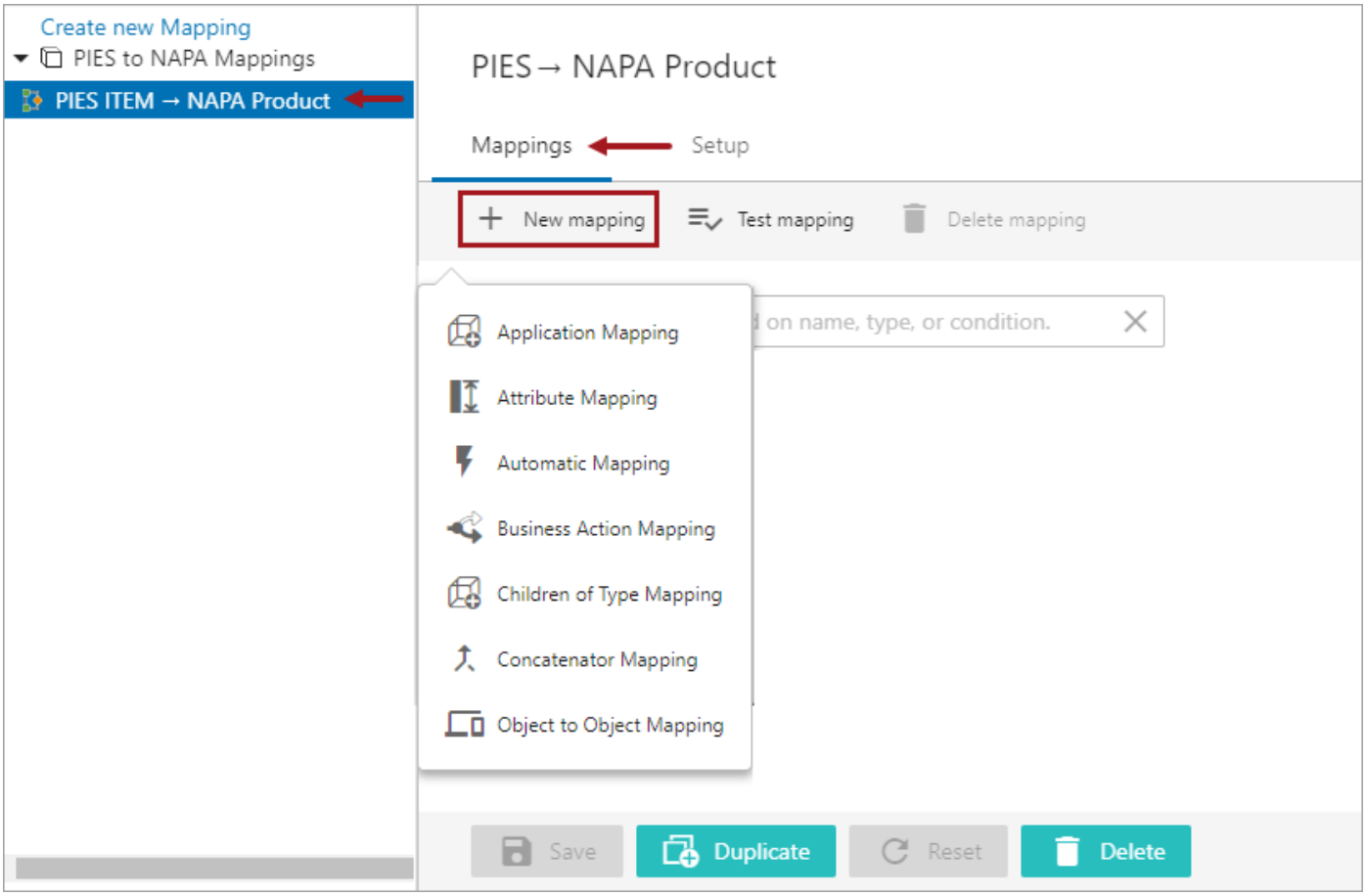
Configuration

Only one business action can be configured in the mapping plugin. To execute multiple business actions, add multiple Business Action Mapping plugins to the Mapper Configuration setup entity.

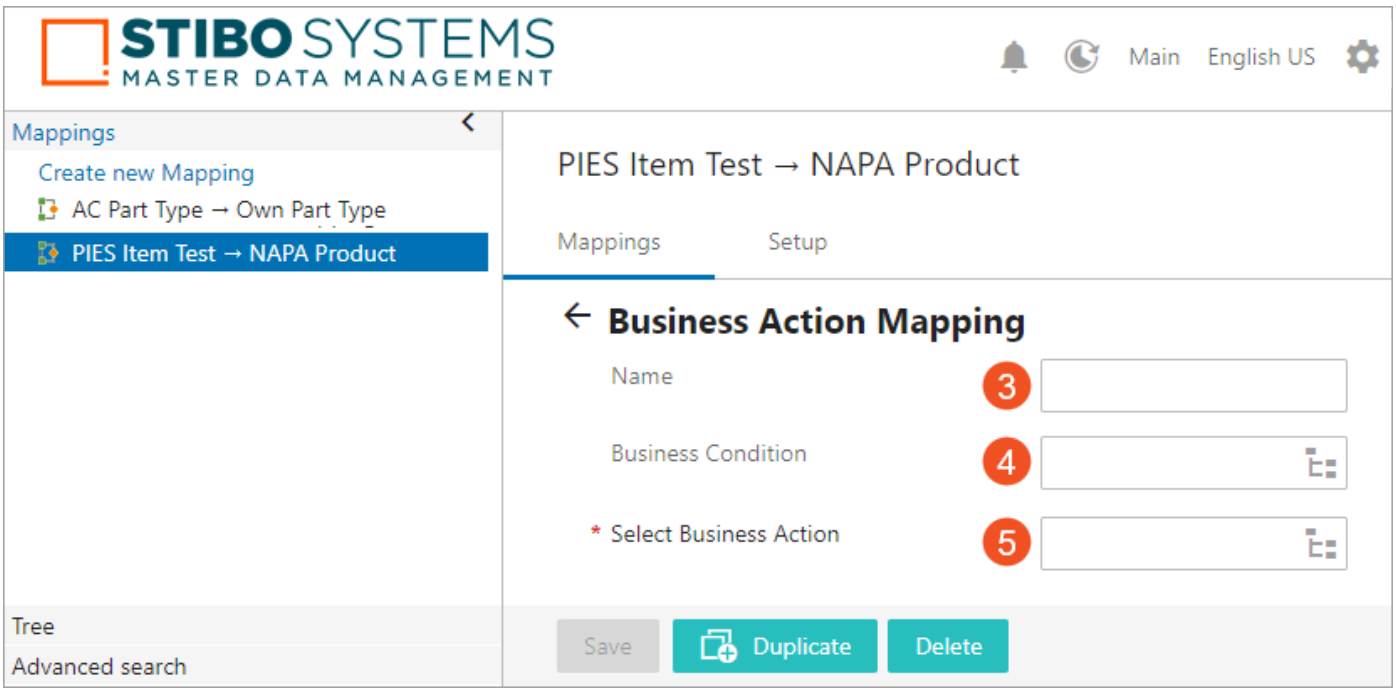
Note: A setup entity definition can be exported as comments and submitted to an external source control system for comparison purposes. For details, refer to the Configuration Management documentation.

To configure the Business Action Mapping plugin, follow these steps:

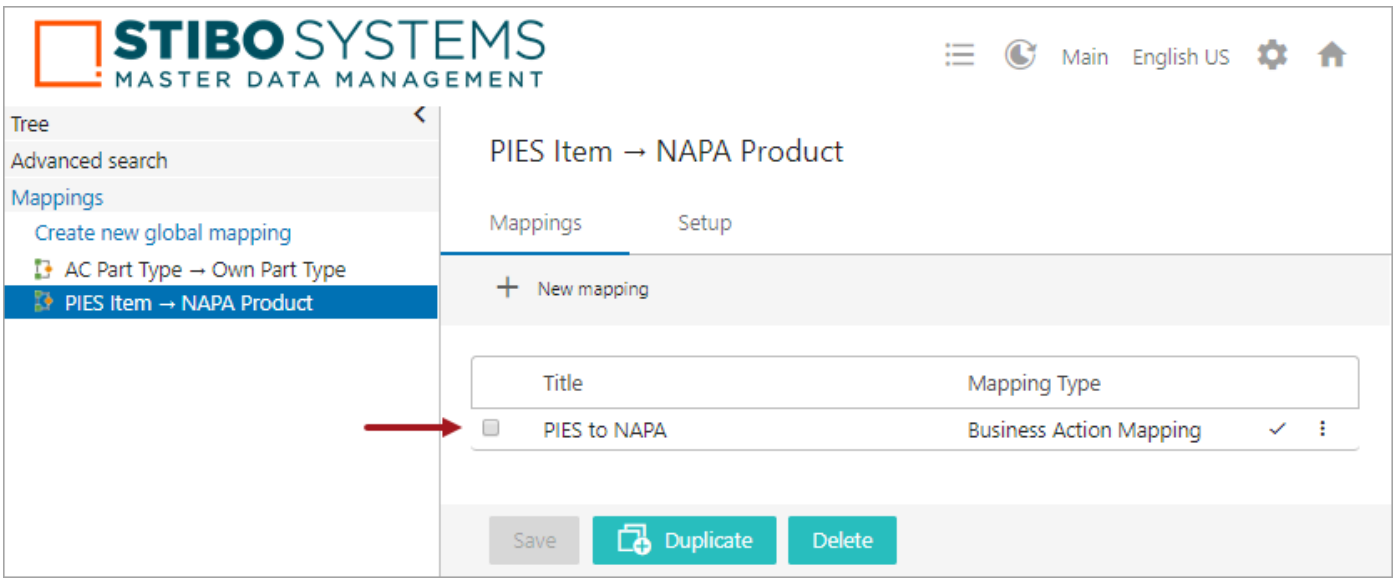
1. With the required Mapper Configuration selected, click on the **New mapping** option that is available within the Mappings tab of the Onboarding Mappings Details screen.



2. Select **Business Action Mapping** and a screen is displayed prompting the user to further configure the plugin (as shown below).



3. In the Name parameter, type in a suitable name. This should be a unique name that clearly describes the mapping functionality.
4. In the optional Business Condition parameter, populate a business condition that defines to run the mapping plugin only on the object if the condition is true.
5. In the 'Select Business Action' parameter, type in the initial letters of the business action name or use the node picker to select and populate the desired business action. The 'Select Business Action' parameter allows the specified business action to run on the Source objects.
6. Click **Save** to save the changes. The newly added Business Action Mapping will be listed as shown below.



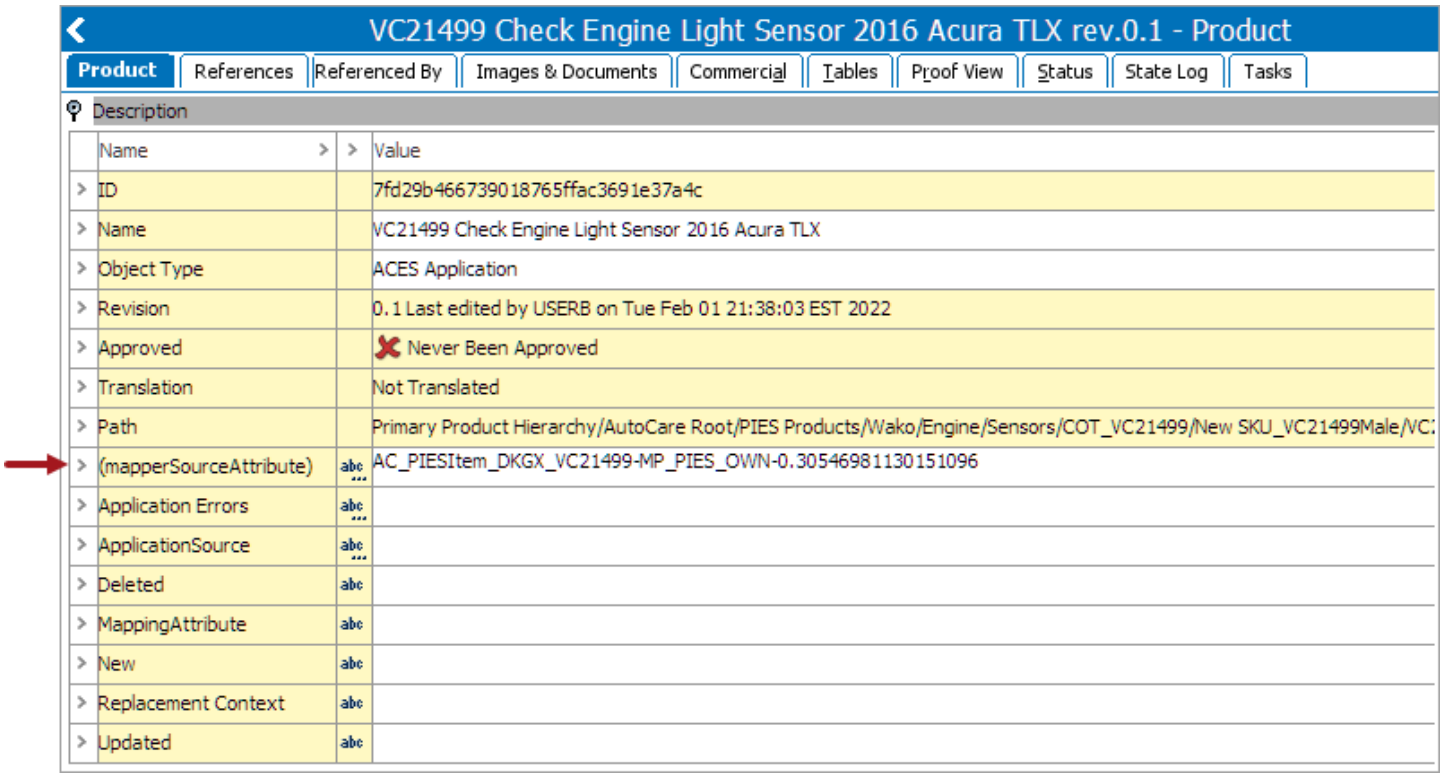
The health of the Business Action Mapping plugin is displayed next to each Mapping plugin. The user has the flexibility to disable, delete, or rearrange the listing order of the Mapping plugins. The check mark displayed in the image above indicates that the mapping was successful.

7. If multiple business actions are required, repeat the steps above to add multiple Business Action Mapping plugins to the Mapper Configuration setup entity.

Children of Type Mapping Plugin

The Children of Type Mapping plugin automatically identifies child object types shared between the source and target objects, and then copies those child objects, along with their data, from the source to the target object. In order for the Onboarding Mappings Details Screen to be selectable within a Mapper Configuration, the plugin must first be added to a Mapper Configuration.

When the Mapper Configuration is run for the first time on the source object, all the source object's eligible child objects are copied to the target object. The child objects created under the target object by the mapper are assigned a unique code that populates the attribute 'mapperSourceAttribute'. This code distinguishes the mapper-created child object from the child objects created by other external methods (for example, child objects created by an import). The mapper later uses this identification whenever an update is run on the existing child objects in the target.

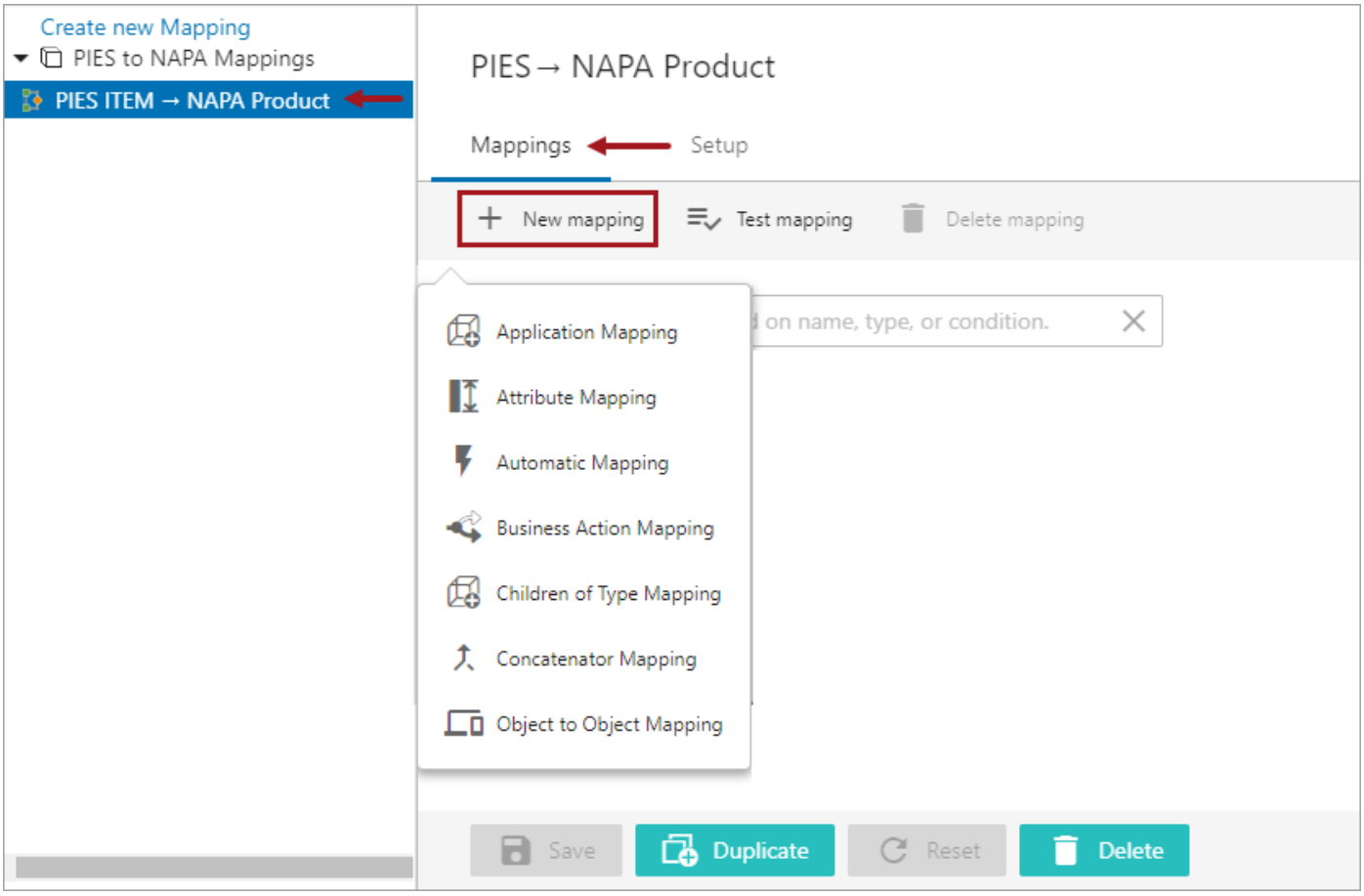


Note: If a child object on the target is created by an external source and not the mapper, then the mapper will not run an update on that child object even if an identical child object exists on the source. Updates to existing child objects on the target are run only if that child object was created by the mapper and not by any other method.

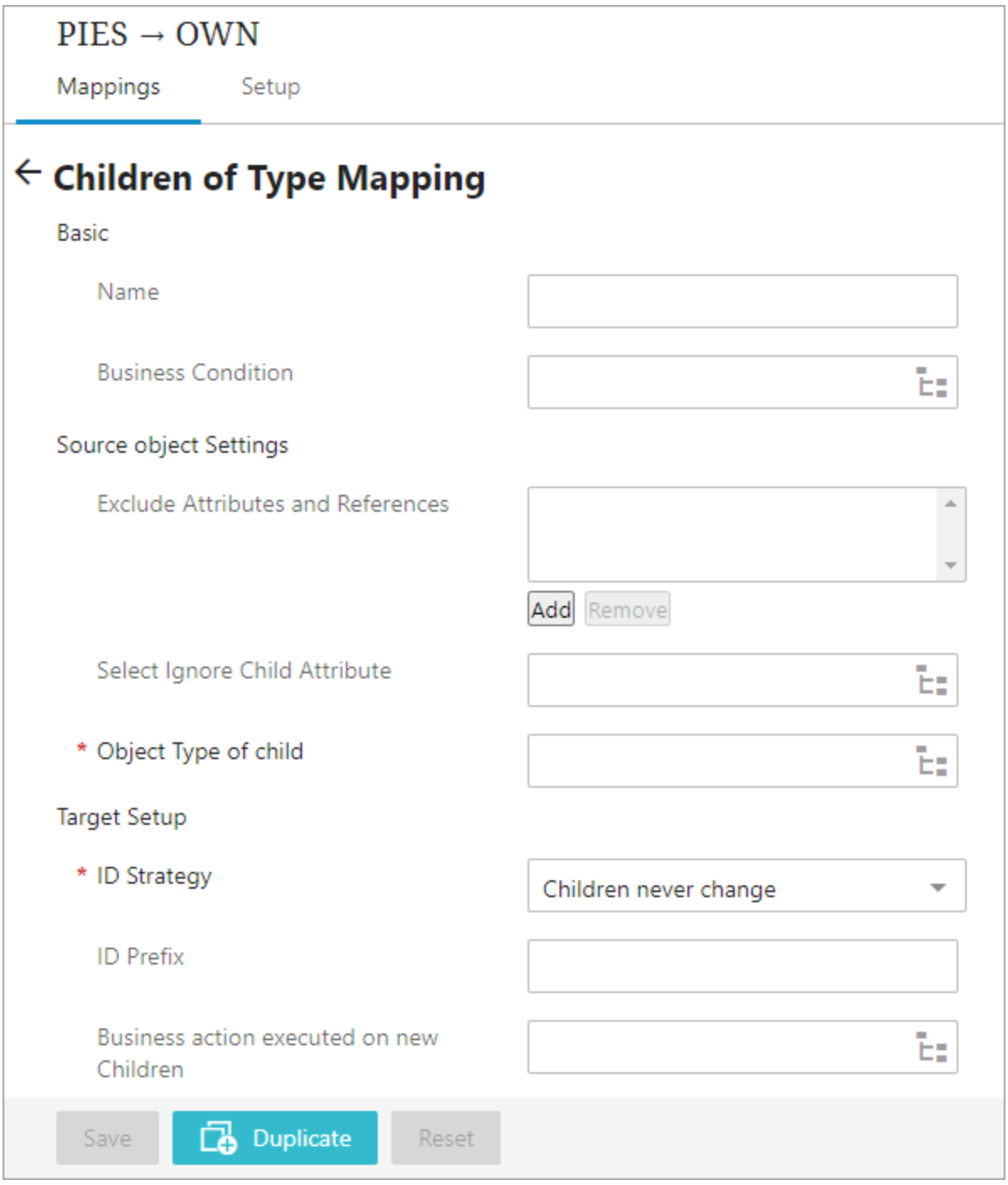
Note: This plugin disallows application of transformations to attributes when copying child objects from the source to the target objects.

To configure the Children of Type Mapping plugin, follow these steps:

1. With the required Mapper Configuration selected, click on **New mapping** that is available within the Mappings tab of the Onboarding Mappings Details screen.



2. Select **Children of Type Mapping** from the dropdown that displays. This prompts display of a screen that enables the user to configure the plugin further (as shown below).



3. Type in a suitable name next to the Name field. This could be any unique name that clearly describes the mapping functionality.
4. In the optional Business Condition parameter, populate a business condition that determines under what conditions the mapping will be run. The defined business condition will run on the source object and not the child object. The mapping plugin will be executed only when the defined condition is met.

5. Populate the parameters displaying in the 'Source object Settings' section:

   - **Exclude Attributes and References:** This parameter allows users to add attributes and references to be excluded when onboarding target child objects. Clicking the Add button opens a node picker dialog from which users can select attributes and references. It is important to note that users must select attributes and references belonging to the child object only, not the source object. Users cannot select inherited attributes.
   - **Select Ignore Child Attribute:** This parameter allows users to select an attribute that is valid for the child of the source object. The attribute selected for this parameter determines whether a child object is to be onboarded or not when the Mapper Configuration is executed on the source object. If the specified attribute belonging to the child object holds the value 'true,' then such child objects will be ignored on onboarding.

     For example, if the user wants to skip onboarding the application records that are marked for deletion, then the attribute used for flagging the deletion of the application record is configured in this parameter. So if there is an application record that has the delete attribute marked 'True,' then that application record will not be onboarded.
   - **Object Type of Child:** In this required parameter, users define the object type of the child object to be onboarded.

6. Populate the parameters available in the Target Setup section:

   - **ID Strategy:** The options available in this parameter define a strategy to handle the ID for the child in the target object during an update. The option selected in this parameter determines how an existing target child object is identified, handled, and updated.

     If a target child object has similar data to the source child object, the mapper will verify if the target child object is created by the mapper based on the unique identification code populated in the 'mapperSourceAttribute' attribute. If the target child object is created by the mapper, then the mapper handles the existing child object based on the following options selected within the parameter.

     - **Children never change:**

       When this option is selected, the mapper looks for an existing child object (as described above) and handles the mapper-created child objects as follows:

       - If an existing target child object is eligible for an update, the mapper will delete and replace it with a newly updated child object (with a new object ID). However, new child object will retain the same 'mapperSourceAttribute' attribute value (unique code) as the replaced and deleted child object.
       - If an existing target child object is not eligible for an update, then the mapper will skip those objects. Thereby the objects remain untouched in the target.

       With this option selected, the ID of new objects are created using the following pattern:

       ```
       [prefix]MD5(DataType.ID="value",DataType.ID="value"…)
       ```

The list id=”value” is alphabetically sorted. If the values are multivalued, they will be separated by the tag “<multisep/>”. The values will be listed in the order supplied by the source.

- **Children can have updates:** With this option selected, whenever an update is run over an existing child object in the target, the mapper does not delete and recreate the child object but instead updates the existing child object. Meaning, the ID of the target child object remains the same even after multiple updates.

  This strategy works fine for most updates, but in some cases, it will end up deleting the target object and creating a new one if a target object has multiple source objects and the primary source object is deleted. Hence the ID pattern can no longer be used to identify the update.

  With this option, the ID pattern is based on the source object:

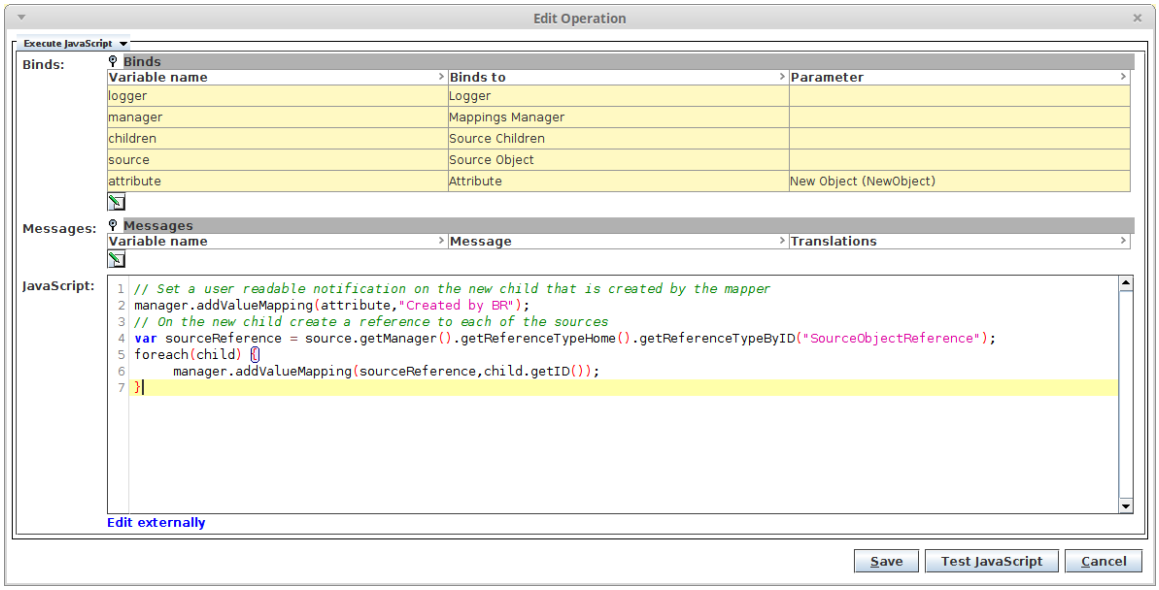
  ```
  [prefix]MD5(source.ID)
  ```

- **ID Prefix:** If required, users can define an ID prefix for the new child objects created under the target object.
- **Business action executed on new Children:** This parameter allows users to add a business rule that will be run on the target child objects created by the mapper.

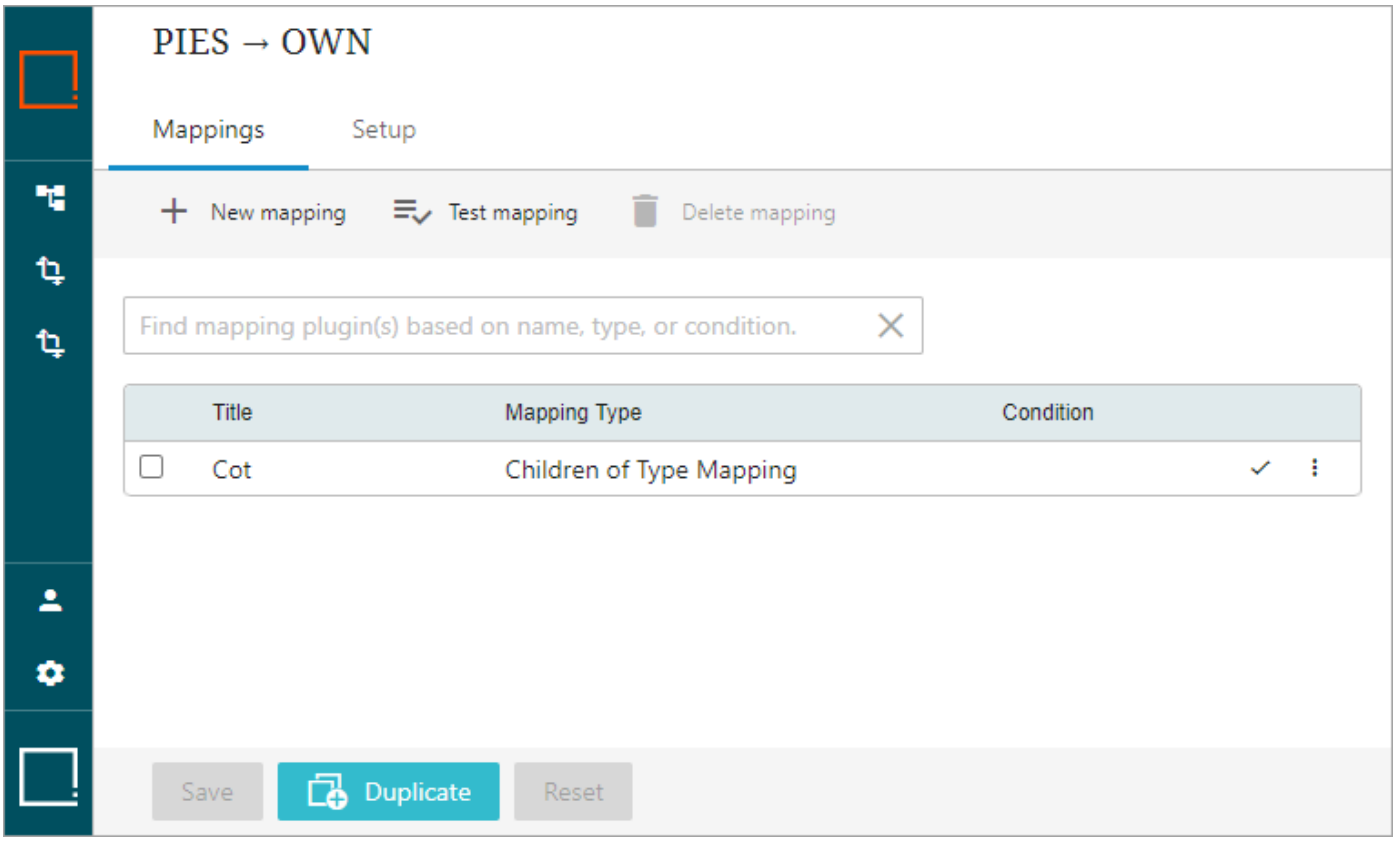
  While configuring a business rule to be used in this parameter, it is recommended that the following binds be used as necessary along with the other standard binds as required:

Bind	Functionality
Mappings Manager	When the Mapper Configuration is being executed, it is quite likely the actual new child object is not created in the target yet. This means the business rule *cannot* use the Current Object bind. Instead, the business rule must use the Mappings Manager bind that has only one method addValue(DataType datatype, String Value). This allows the business rule to create new references and set attribute values on the child object. It is not possible to create new objects through the Mappings Manager bind.
Source Object	Used to retrieve data specific points from the source object
Source Children	The set of children (objects) that are merged into the new target child. The set always contains at least one object.

Below is an example of a business rule using the mapper-specific binds.



7. Click **Save** to save the changes. The newly added Children of Type Mapping will be listed as shown below.



Important: Users must save the changes before exiting the Mapper Configuration. If the user fails to click **Save**, the mapping will be lost once the user leaves the Mapper Configuration.

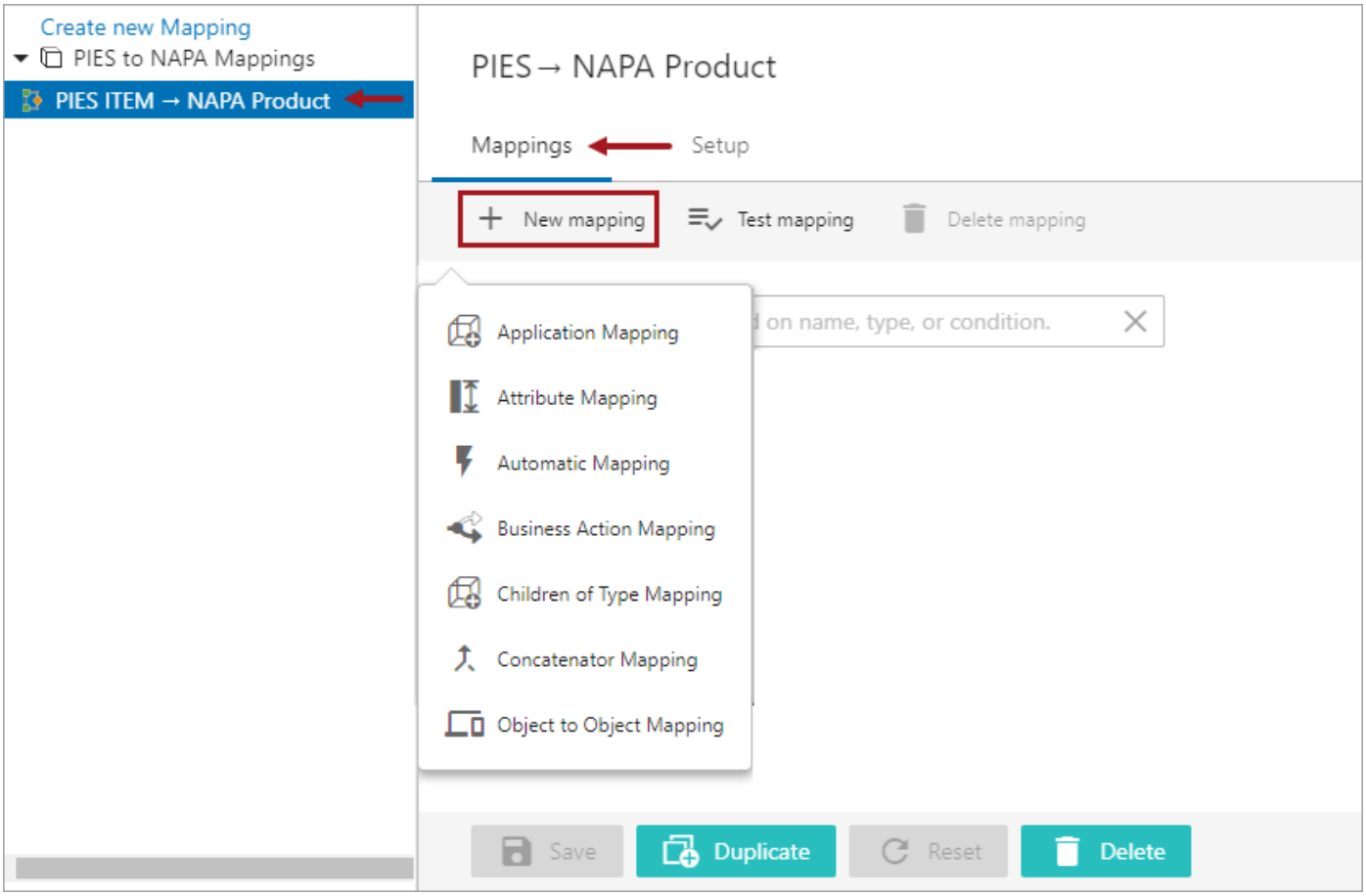
The health of the Children of Type Mapping plugin is displayed next to each Mapping plugin. The user has the flexibility to disable, delete, or rearrange the listing order of the Mapping plugins. The checkmark shown in the image above indicates that the mapping plugin is healthy.

Concatenator Mapping Plugin

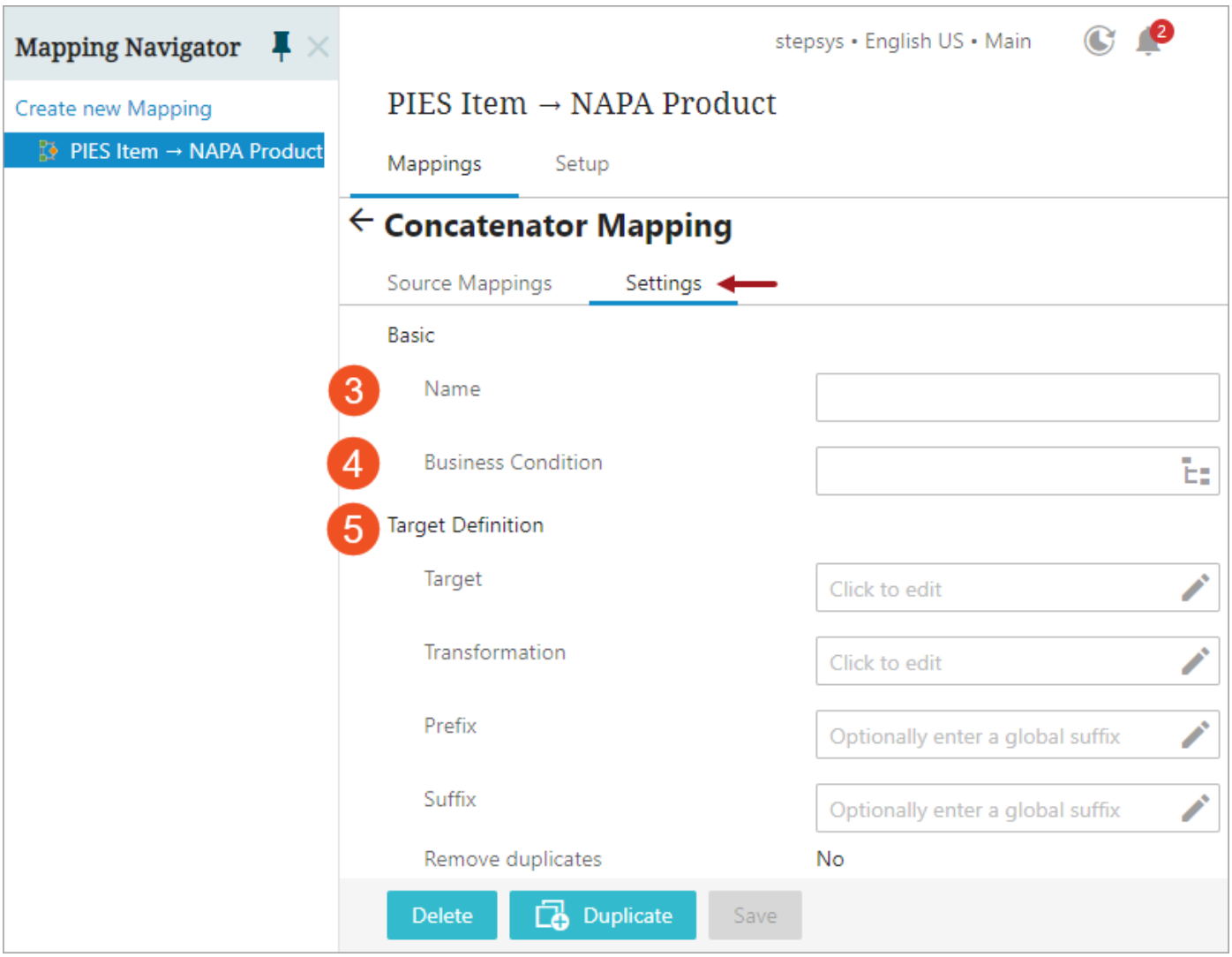
The Concatenator Mapping plugin allows users to combine multiple source values into a single target attribute while applying different texts that can be prepended or appended to the concatenated values, or used to separate those. The plugin is configured on the Onboarding Mappings Details Screen for the selected Mapper Configuration.

Before following the steps described below to configure this plugin, users must first determine which target attribute will be populated with the concatenated value, and then define the source attributes. So, it is advised to follow the steps mentioned below to avoid confusion. To configure the Concatenator Mapping plugin, follow these steps:

1. With the required Mapper Configuration selected, click the **New mapping** button found at the top of the Mappings tab on the Onboarding Mappings Details screen.

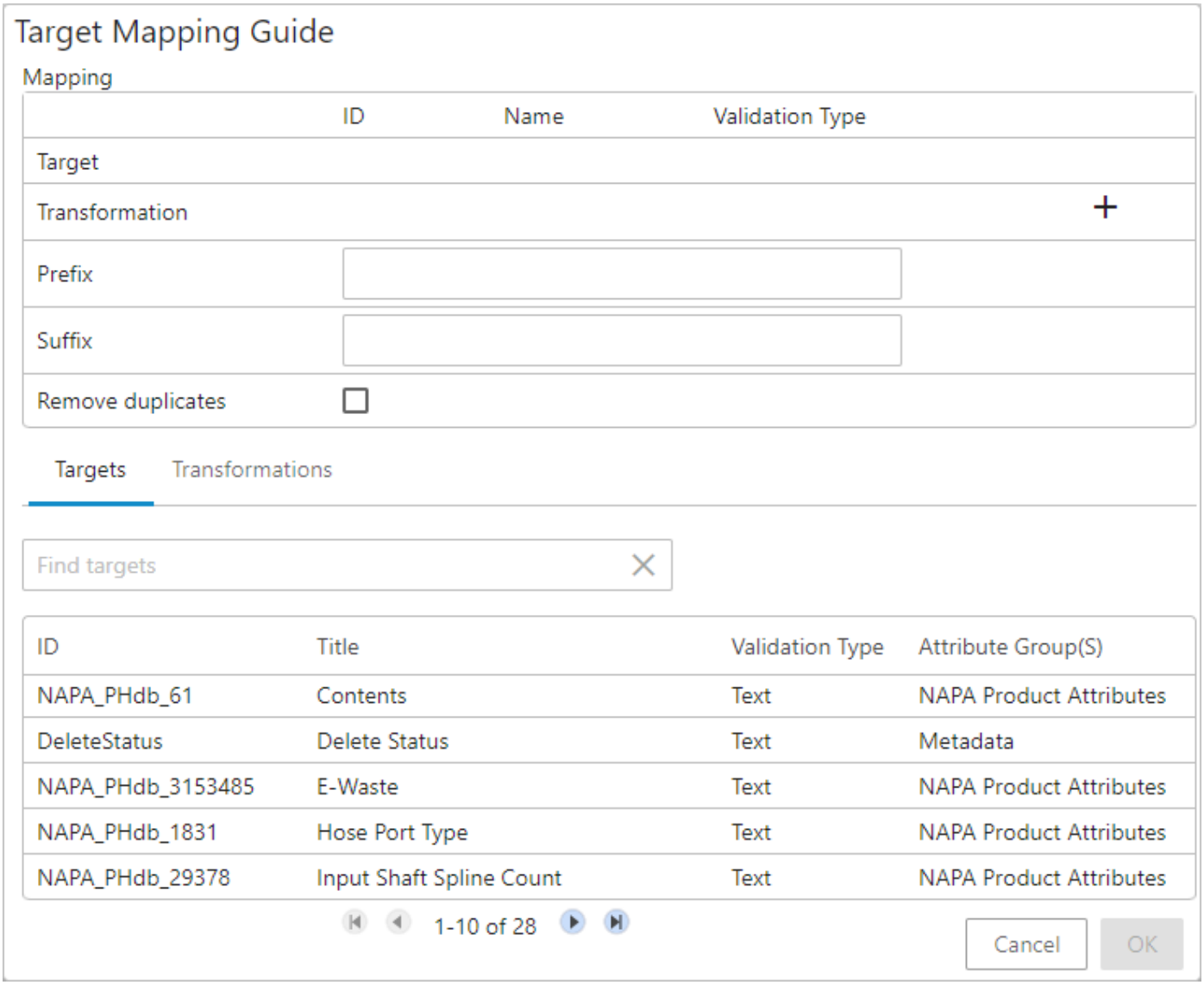


2. Select Concatenator Mapping from the New mapping button's dropdown, and a screen displays with two tabs, Source Mappings and Settings.



3. On the Settings tab, type the desired name in the Name field. This could be any unique name that describes the mapping functionality.
4. If needed, add a business condition in the 'Business Condition' parameter that defines running the mapper plugin only on the object if the condition is true.
5. Populate the parameters in the Target Definition section.

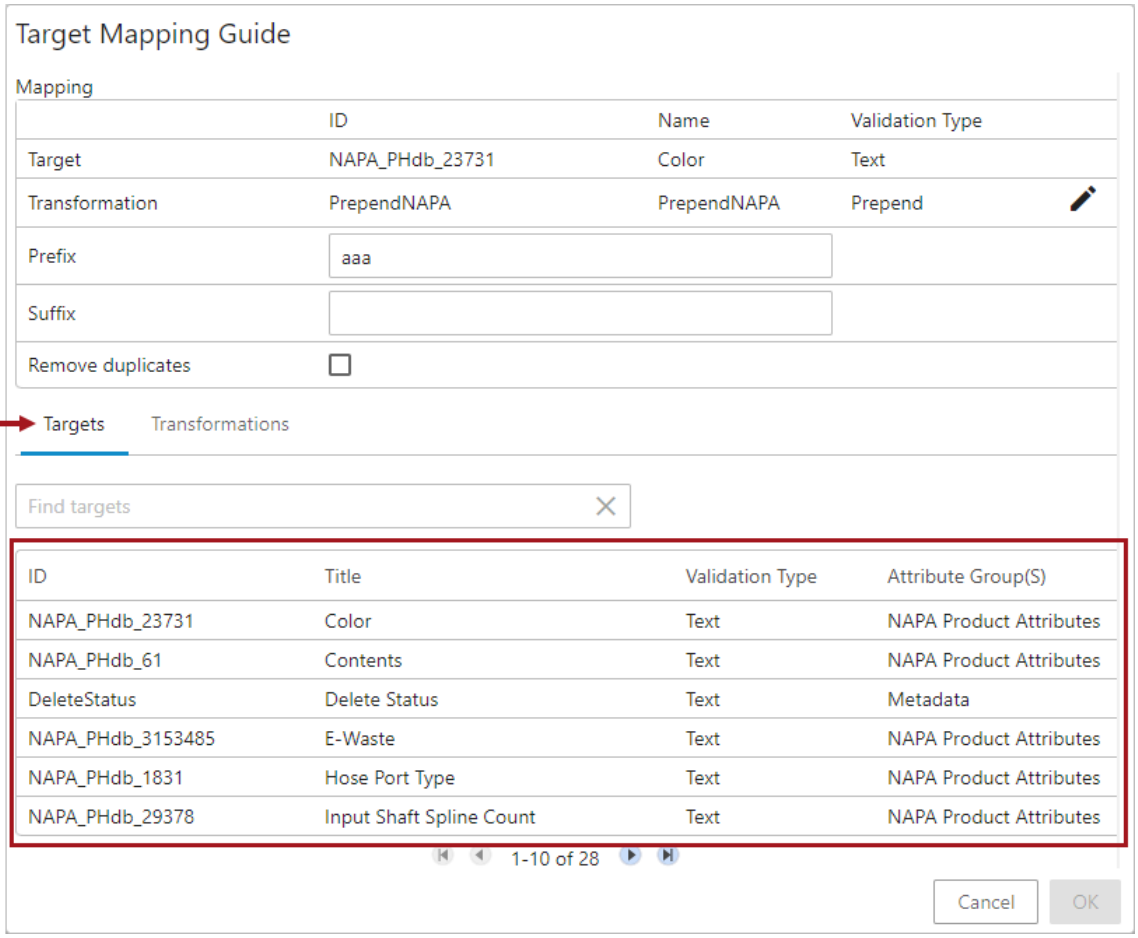
   To configure the five parameters available under the Target Definition field (Target, Transformation, Prefix, Suffix, and 'Remove duplicates'), users must access the Target Mapping Guide window. Click on the edit icon ( ) available next to any of the parameters to access this window. The same parameters will be available for editing within the Target Mapping Guide window, as shown in the screenshot below.



Below are the details about these parameters:

- **Target:** Displaying at the top of the Mapping table, the Target parameter displays the ID, Name. and Validation Type of the Target object attribute. Multiple values retrieved from the source object are concatenated and copied to this attribute. To display a target attribute in the Mapping table, users must select an attribute listed in the table on the 'Targets' tab displayed in the lower half of the window (as shown below). A search bar above the table enables typeahead searching, which allows users to type in the few characters of the attribute name, and then select the desired target attribute from the results.

  It is mandatory to have an attribute defined in the Target parameter.

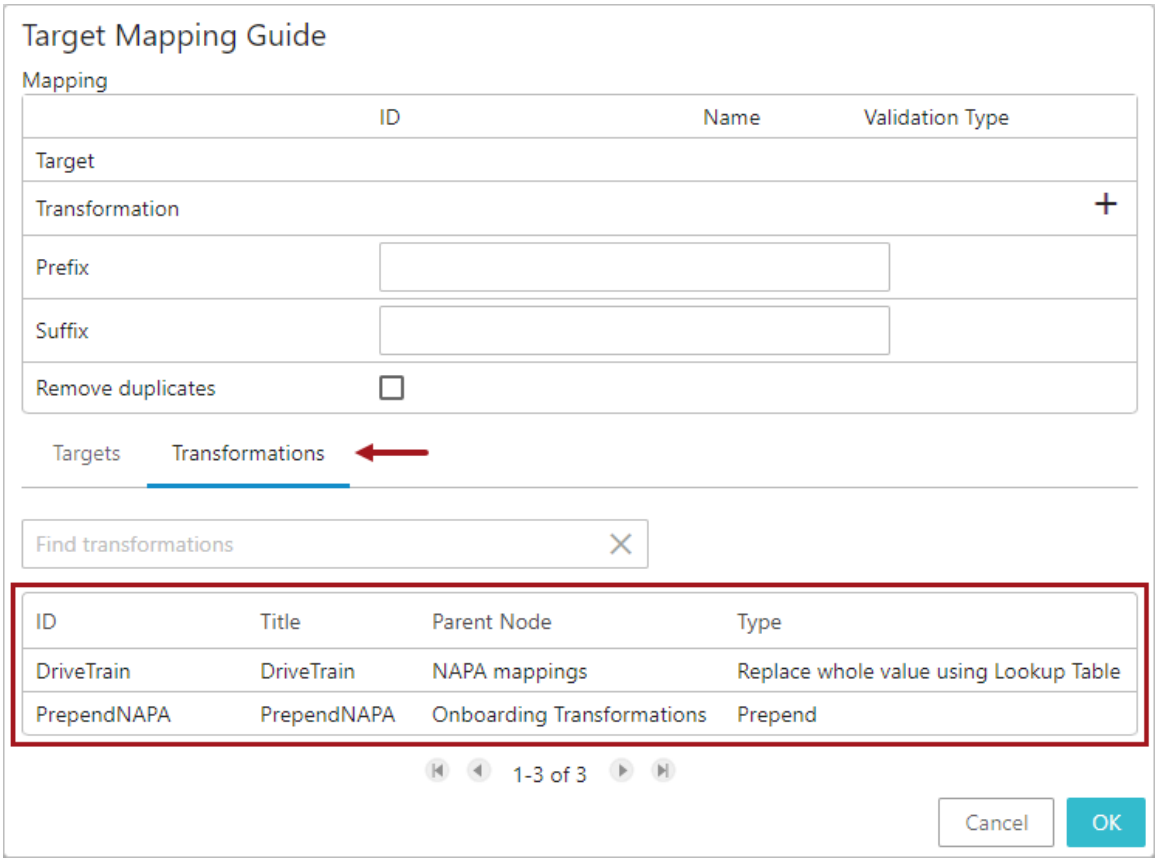


Note: The Concatenator Mapping plugin can have multiple source attributes but not multiple target attributes.

- **Transformation:** This field allows users to add an attribute transformation. The attribute transformation added within this parameter will be applied to the final concatenated value and not the individual values retrieved from multiple source attributes. Users can either use an existing attribute transformation in the system or create a new one by clicking the 'Create new transformation' icon (+) available within the Transformation field. To configure an existing attribute transformation, users should select an existing attribute transformation listed in the 'Transformations' tab displayed in the lower half of the window (as shown below).

  Clicking on the 'Create new transformation' icon (+) available within the Transformation field will open the Transformation Overview window where the user can create a new attribute transformation. For details about creating an attribute transformation standing on a Mapping Guide window, refer to Creating Attribute Transformations Through Mapping Guide Window topic within this guide.

  The populated transformation can be edited / removed by clicking the edit icon (✎) in the Transformation field.

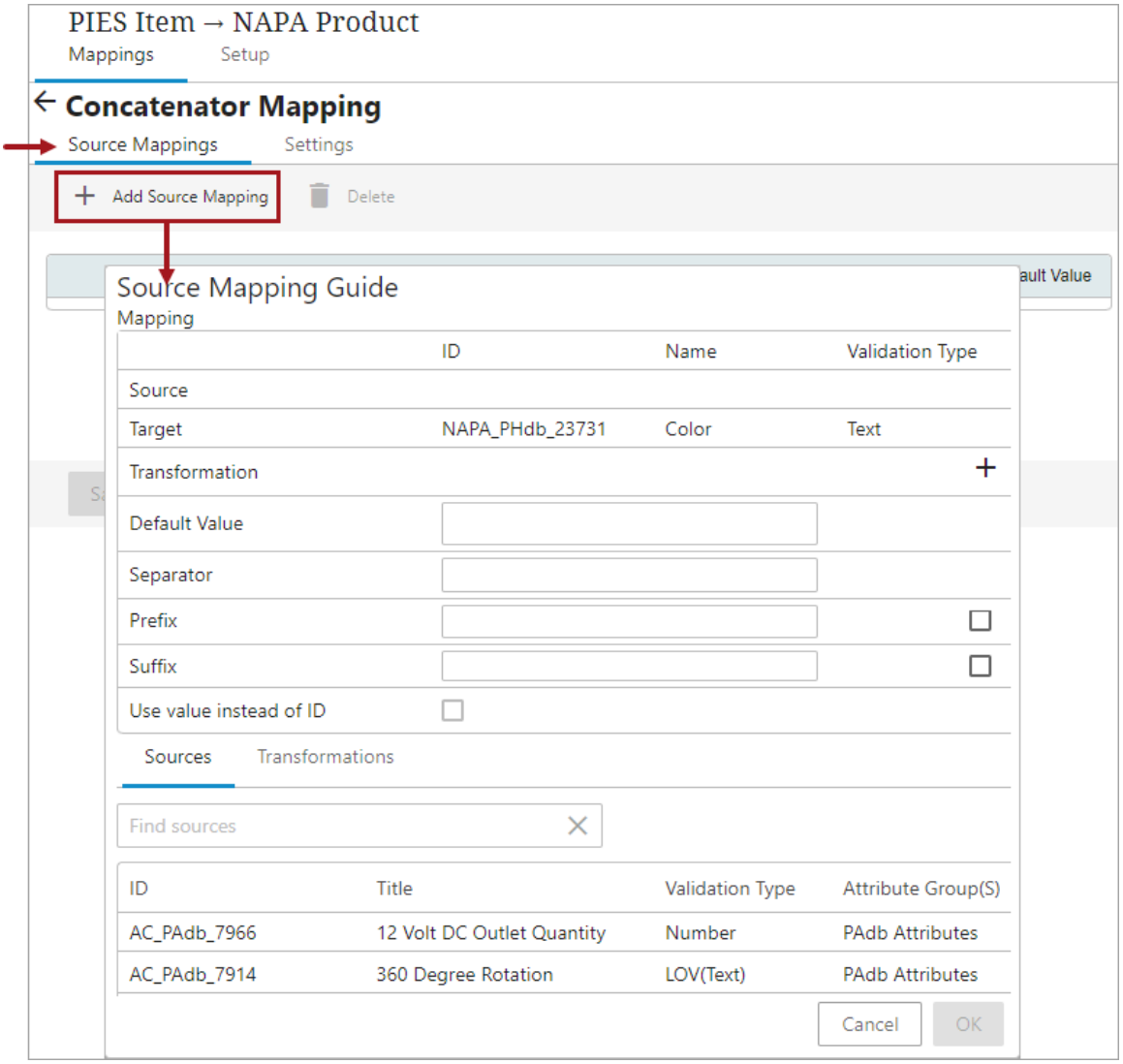


- **Prefix:** If the onboarding process requires any prefix to be prepended to the target attribute value, the user can enter a prefix into the Prefix field. The specified prefix will be applied to the final concatenated value and not on the individual values retrieved from multiple source attributes.
- **Suffix:** If the onboarding process requires any suffix to be appended to the target attribute value, the user can enter the suffix to the Suffix field. The specified suffix will be applied to the final concatenated value and not on the individual values retrieved from multiple source attributes.
- **Remove Duplicates:** Checking the box for this parameter will ensure that only one value of any identified duplicates is populated in the target attribute.

Important: As the Concatenator Mapping plugin allows users to retrieve values from multiple source attributes and copy them to one target attribute, any configuration settings (transformation, prefix, etc.) made within the Target Mapping Guide will only be applied to the final concatenated value on the target attribute and *not* on the individual values retrieved from the source attributes.

Once all the parameters within the Target Mapping Guide window are populated, click the **OK** button at the bottom right of the window to close the window. All the values populated within the Target Mapping Guide window will be reflected accordingly within the five parameters (Target, Transformation, Prefix, Suffix, and 'Remove duplicates') available under the Target Definition field.

6. Once all the necessary parameters in the Settings tab are populated, click the Source Mappings tab to define the source attributes. Then click the Add Source Mapping button to open the Source Mapping Guide window.

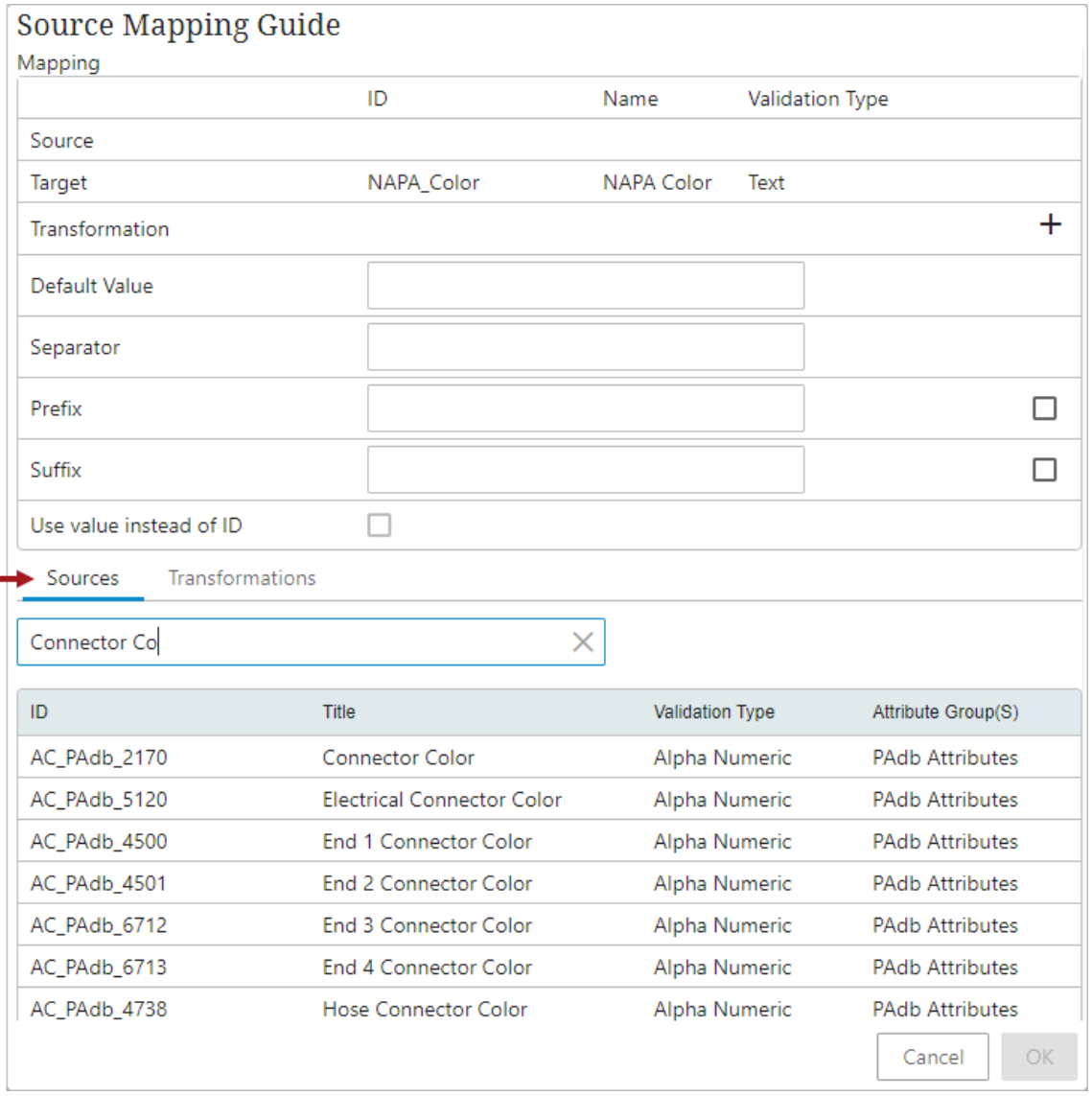


The Source Mapping Guide window allows users to define a source attribute, and configure the value retrieved from the defined source attribute.

Below are the details about these parameters:

- **Source:** The Source row displays the attribute belonging to the Source object from which the value is retrieved. To configure a source attribute to this field, users should select an attribute from the table on the 'Sources' tab found in the lower half of the window (as shown below). A search bar above the table enables typeahead searching, which allows users to type in the first few characters of the desired source attribute name, and then select the desired source attribute from the results. Further, users can take the help of the typeahead field to type in the few characters of the attribute name to find their appropriate source attribute. It is mandatory to have an attribute defined in the Source

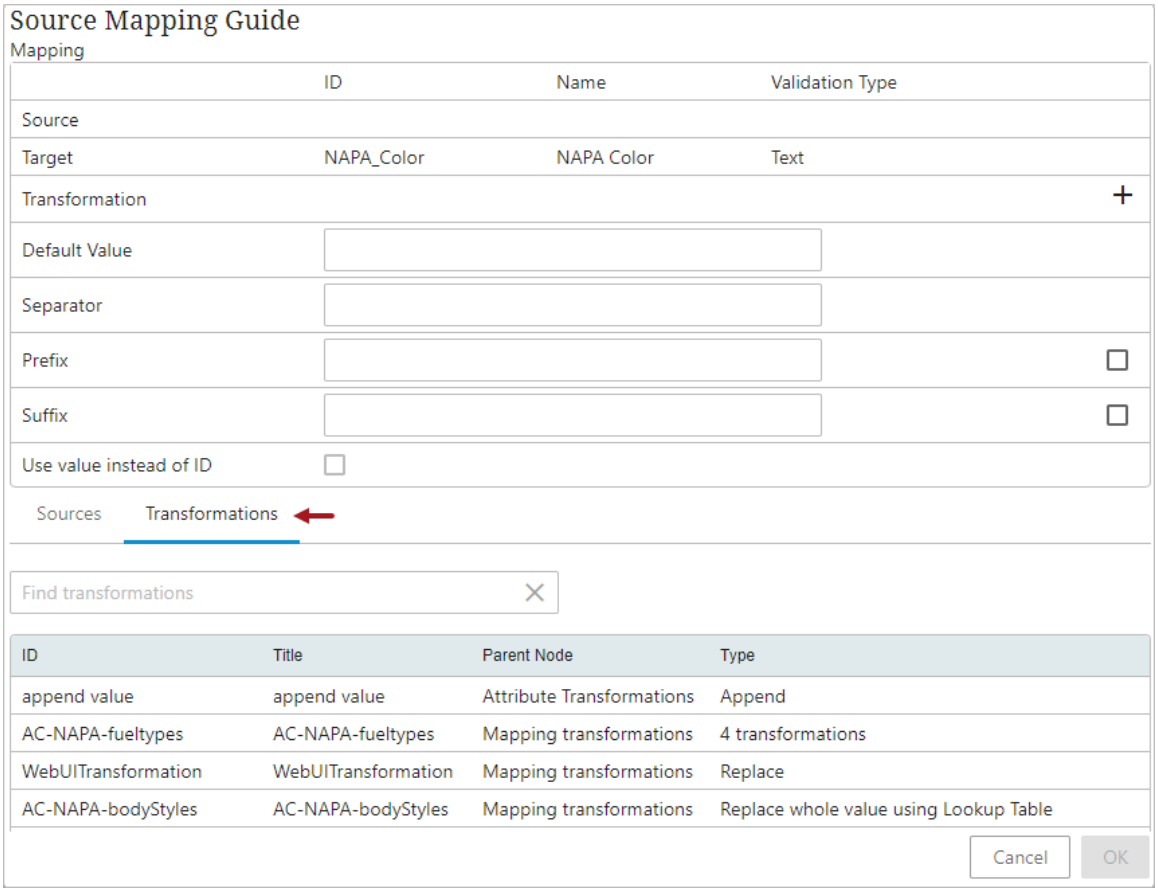
parameter.



- **Target:** This field displays the target attribute where the retrieved value is copied to. Users should access the Target Mapping Guide window as defined in step 5 of this document to edit the target attribute.
- **Transformation:** This field allows users to add an attribute transformation. The attribute transformation added within this parameter will be applied to the selected source attribute's value and not the final concatenated value. Users can either use an existing attribute transformation available in the system or create a new one by clicking on the 'Create new transformation' icon (+) available within the Transformation field. To configure an existing attribute transformation, users should select an attribute transformation that is listed in the 'Transformations' tab displayed in the lower half of the window (as shown below).

Clicking on the 'Create new transformation' icon (+) available within the Transformation field will open the Transformation Overview window where the user can create a new attribute transformation. For details about creating an attribute transformation standing on a Mapping Guide window, refer to Creating Attribute Transformations Through Mapping Guide Window topic within this guide.

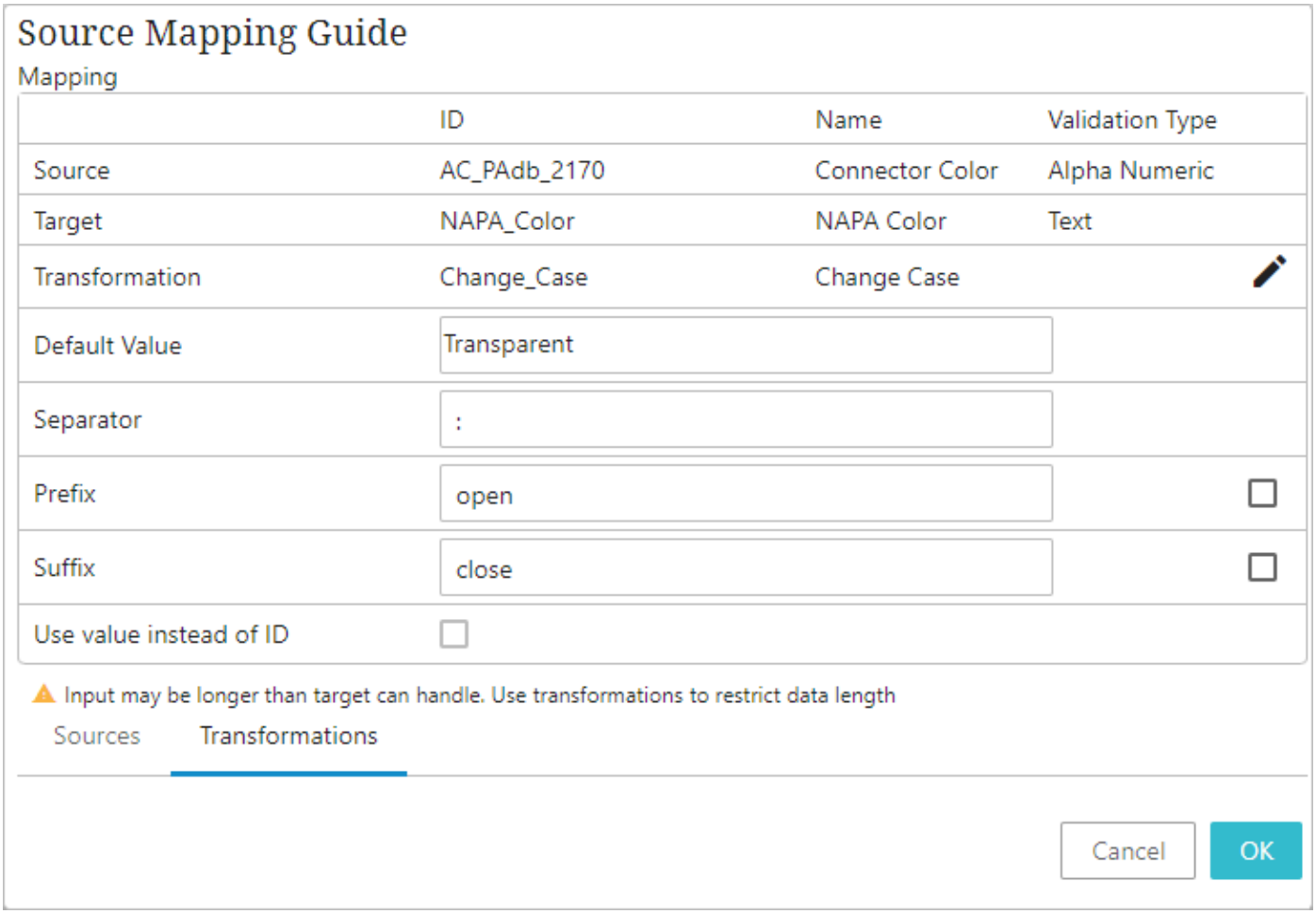
The populated transformation can be edited / removed by clicking the edit icon ( ) in the Transformation field.



- **Default Value:** This field allows users to enter a text which needs to be populated within the target attribute value when the source attribute remains empty for the executed source object. This gets only relevant if the source attribute you are mapping is empty. Otherwise, the default value will not function.
- **Separator:** Any character entered in this field will be a value delimiter when the Concatenator Mapping plugin has multiple source attributes or a single source attribute with multiple values.
- **Prefix:** Any character entered in this field will be placed before the retrieved source attribute value. This gets only relevant if the source attribute you are mapping has any value in it. Otherwise, the prefix will not be set on an empty attribute. In addition, if the Default Value parameter includes any characters, then the prefix will be set on the default value.

- **Suffix:** Any character entered in this field will be placed after the retrieved source attribute value. This gets only relevant if the source attribute you are mapping has any value in it. Otherwise, the suffix will not be set on an empty attribute. However, if the Default Value parameter includes any characters, then the suffix will be set on the default value.
- **Use Value instead of ID:** This option gets only relevant if the source attribute is of LOV validation type. Otherwise, the checkbox will be grayed out. The default is set to retrieve the ID of the populated LOV from the source attribute and not the LOV value. However, selecting this checkbox will retrieve the LOV value from the source attribute for mapping.

Below is an example screenshot of the Source Mapping Guide window when the parameters are populated:



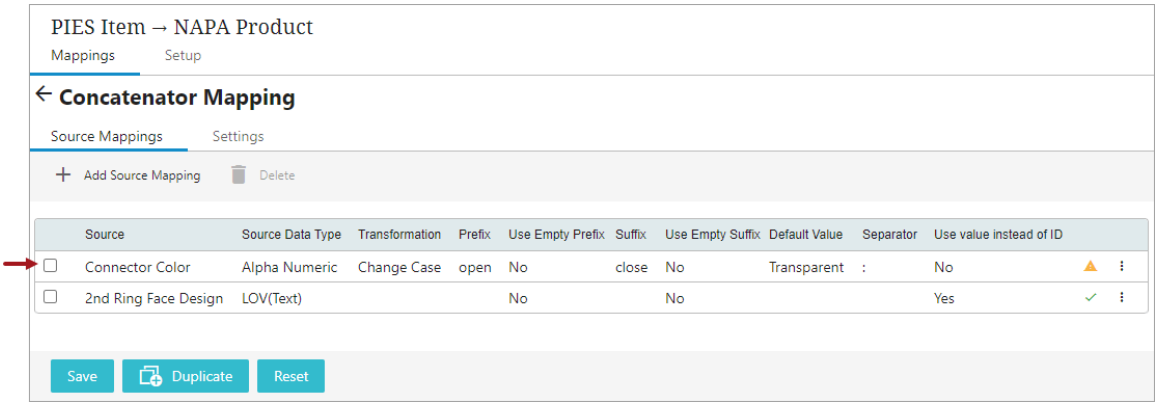
After the source and target attributes are defined in the Source Mapping Guide window, the system evaluates the validity match between the source and the target attributes. A hyperlink text explaining the reason for the validity match / mismatch gets displayed in the middle of the window. Clicking on the hyperlink opens the 'Detailed Information' dialog (shown below) and displays the validity match / mismatch information of the mapper. Below is an example of a validation mismatch between the source and the target attribute displayed in the 'Detailed Information' dialog:

Detailed Information

	Source	Target	Evaluation
ID	AC_PAdb_2170	NAPA_Color	-
Name	Connector Color	NAPA Color	-
Title	Connector Color	NAPA Color	-
Node Type	attribute	attribute	
Validation Type	Alpha Numeric	Text	
Unit			-
LOV	No	No	
Mandatory	No	No	-
Derived	No	No	-
Dependent	No	No	-
Description	No	No	-
Inherited	Yes	Yes	-
Multi Valued	Yes	No	Only one Attribute is multivalued - Use a post transformation to merge multiple values into one or make the target attribute multivalued
Language Dependent	No	No	
Validator max length	N/A	100	Source Validator Length with suffix and padding is potentially longer than the target allows. Reduce the length or extend target Max length.
Health	Yes	Yes	No

Close

Once all the necessary parameters within the Source Mapping Guide window are populated, click **OK** to close the Source Mapping Guide window and then click **Save** to save the changes. All the values populated within the Source Mapping Guide window parameters will be displayed as a mapper row in the table within the Source Mappings tab (as shown below). To edit the source attribute selections, click on the row, and it will open up the Source Mapping Guide window in order to make edits.



Note: After the user edits and closes the Source Mapping Guide / Target Mapping Guide window, the **Save** button remains enabled until the user clicks on the **Save** button. If the user fails to click **Save**, then the mapping changes will be lost if the user navigates out of the selected Mapper Configuration.

7. Repeat step 6 to add more source attributes to concatenate the values for the defined target attribute.

Users can add any number of mapper rows (source attributes) in the mapping plugin. When there are multiple mapper rows available within the mapping plugin, the order of execution of each mapper row is based on the order in which it is listed within the mapping plugin.

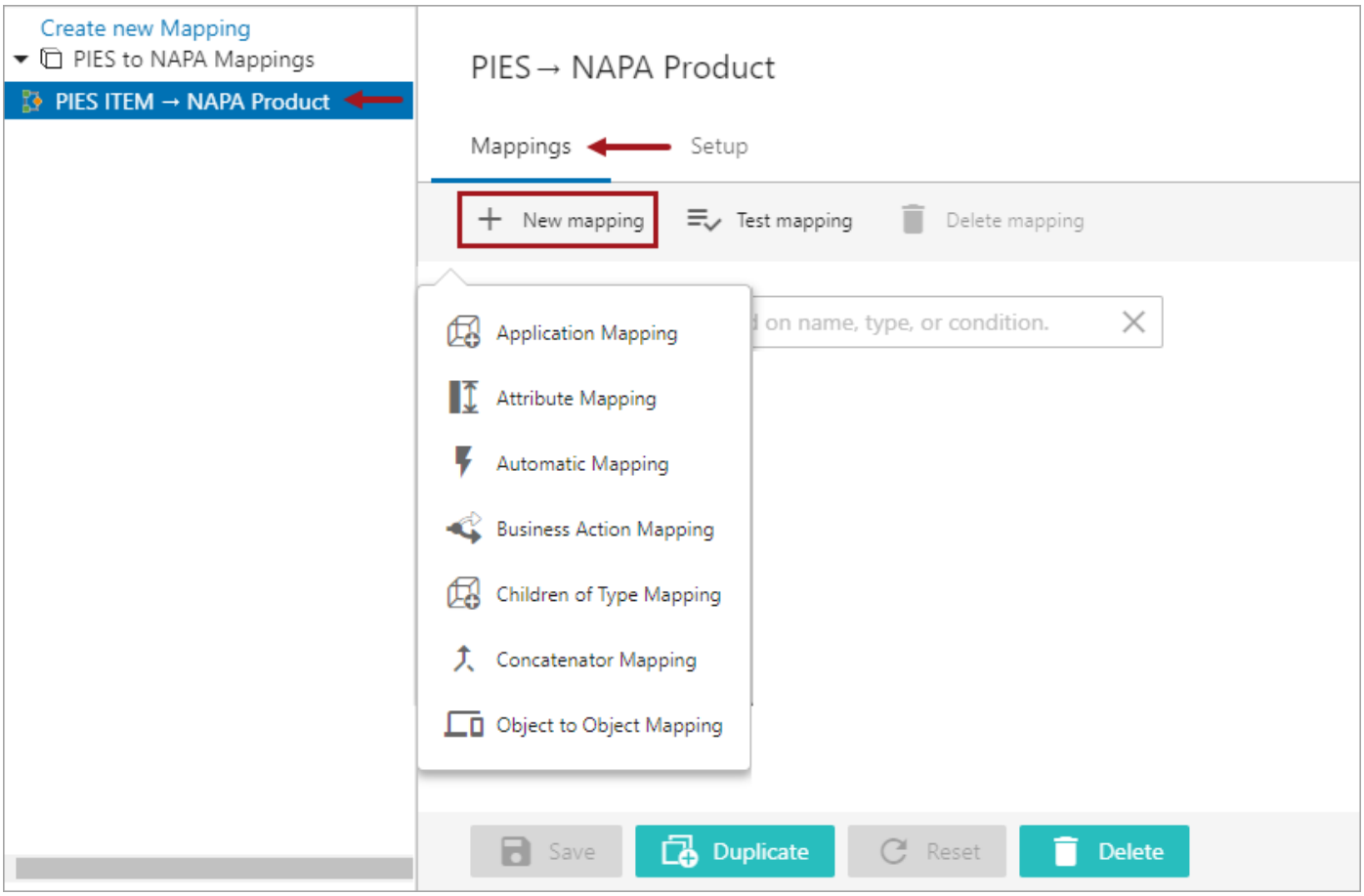
The health of the mapper row is displayed next to each mapper row. Users can also add additional information describing each of the mapper rows. The user has the flexibility to disable, delete, or rearrange the listing order of the mapper rows. For more information on handling the mapper rows, refer to the topic Modifying Mapper Rows on the Onboarding Mapping Details Screen within this guide.

Object to Object Mapping Plugin

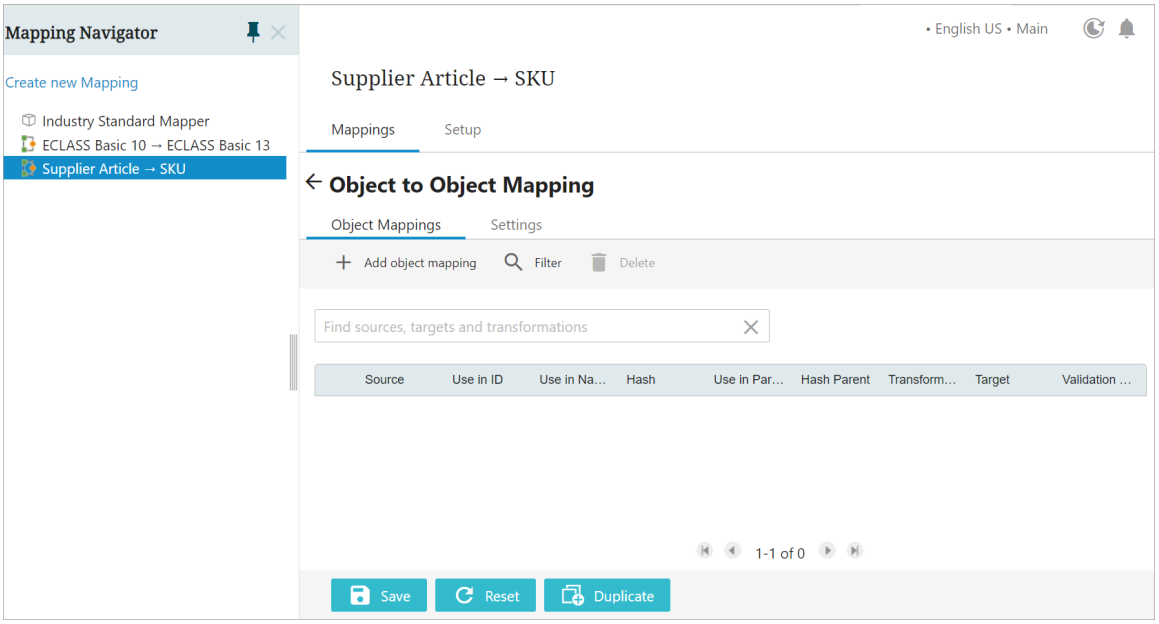
Object to Object Mapping plugin will copy the information present on the Source object or from its related object (Source STEP Path) to the Target object or to its related object. The information retrieved from the Source object could be the ID, name, attribute values, or references. The information from the Source object could be stored directly on Target object, as the child of the Target object, or as the referenced object of the Target object. The Object to Object Mapping plugin is added and configured in the Onboarding Mappings Details Screen for the selected Mapper Configuration.

To configure the Object to Object Mapping plugin, follow these steps:

1. With the required Mapper Configuration selected, click on **New mapping** which is available on the Mappings tab of the Onboarding Mappings Details screen.

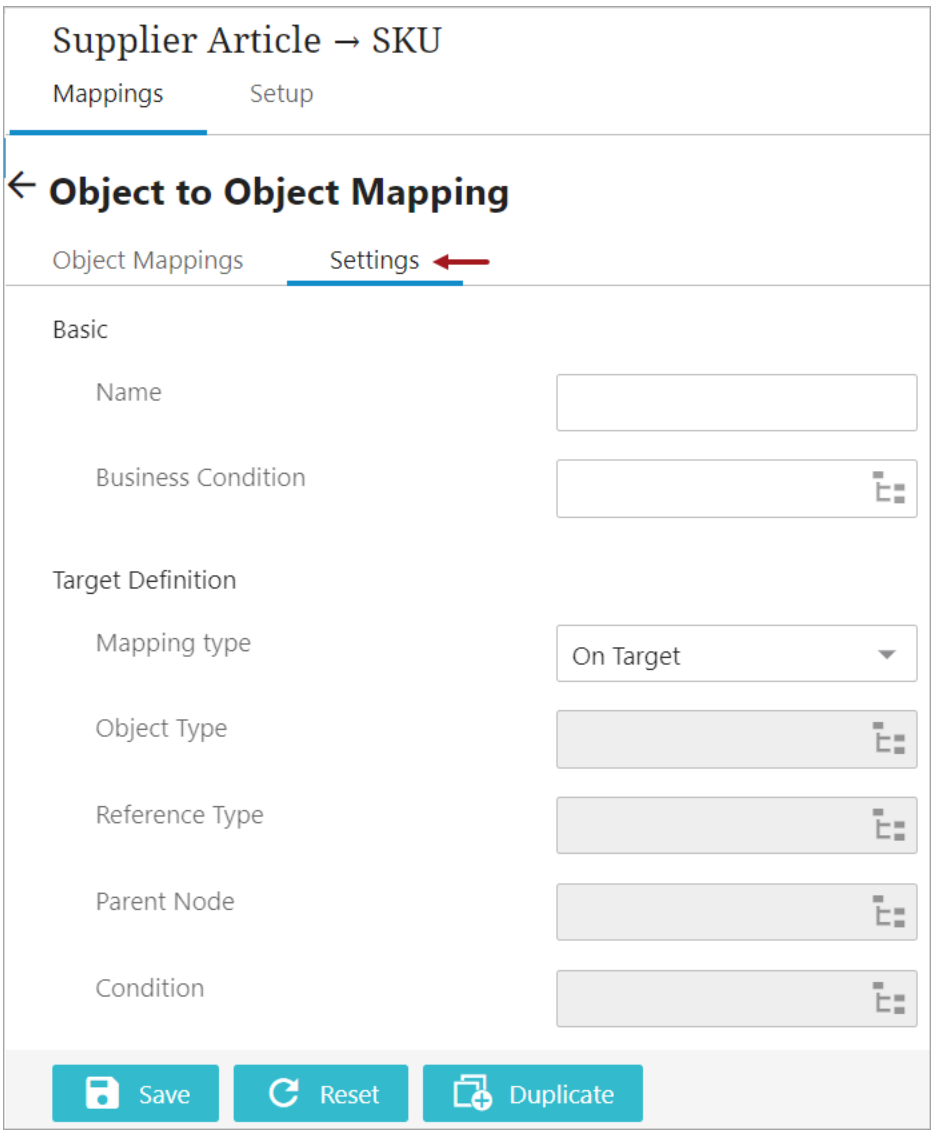


2. Select Object to Object Mapping option, and a new screen is displayed with the following two tabs:



- **Object Mappings:** This tab includes options that allows users to establish a mapping relationship. Details pertaining to the parameters available within this tab page is explained in the later section of this topic.
- **Settings:** This tab contains few basic parameters that requires to be populated before the user tries to build a mapping relationship in the Object Mappings tab. Details pertaining to the parameters available within this tab page is explained in the later section of this topic.

3. Within the Settings tab, as shown in the screenshot below, populate the following parameters:



- **Name:** Type in a suitable name next to this field. This could be any unique name that clearly describes the mapping functionality.
- **Business Condition:** The Business Condition parameter allows users to select a business condition. The selected business condition runs the mapper plugin only on the object if the condition is true.
- **Mapping type:** This parameter defines where the retrieved information from the source object need to be stored in the target location. The available options are:
  - **On Target:** Selecting this option will evaluate the Source STEP Path and store the results in the Target object either as an attribute value or as a referenced object. This will *not* create any new objects.

When this option is selected, the Object Type, Reference Type, and Parent Node parameters available under the Target Definition flipper are grayed out and are not used with the On Target Mapping type.

- **Child:** Selecting this option will evaluate the Source STEP Path in order to get the data to be used to create child objects below the Target object. The child objects that are created can either be Classification or Product objects. The data that is retrieved from the Source object can be used in the new objects as an ID, Name, attribute value, or reference. The object type to be used for the new children objects that will be created below the Target object must already exist. This object type is what will be selected in the Object Type parameter.

  When this option is selected, the Reference Type and Parent Node parameters are grayed out and are **not** used with the Child Mapping type.

- **Reference:** Selecting this option will evaluate the STEP Path on the Source object to create new objects below another object, and then establish a reference between the Target object and the newly created object. The data that is retrieved from the Source object can be used in the new objects as an ID, Name, attribute value, or reference. The new object can be created under any node (called as Parent Node) and then a reference is established between the Target object and the new object.

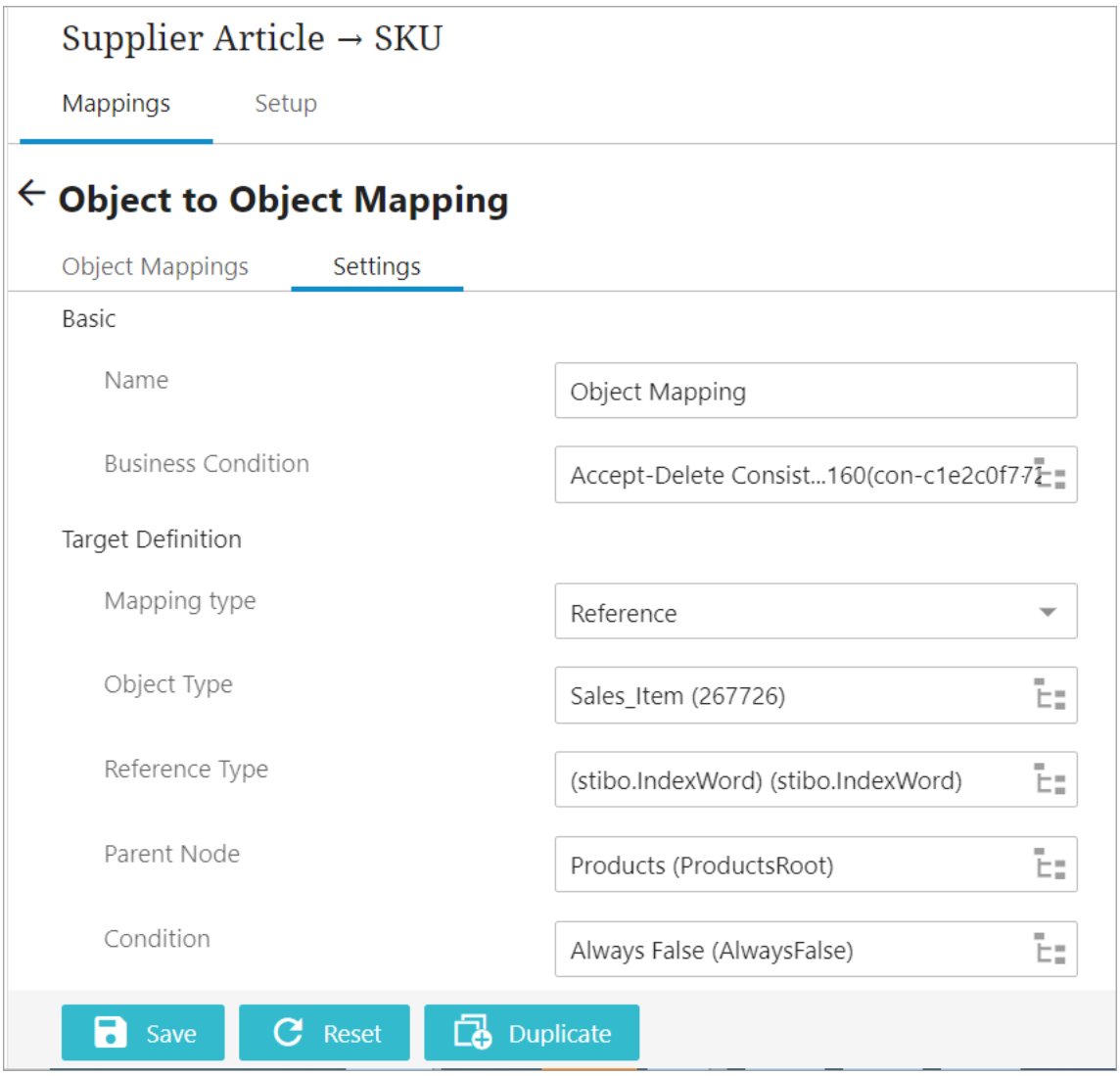
- **Object Type:** This parameter is used when either the Child or Reference Mapping option is selected within the 'Mapping type' parameter. The user can select the object type to be used for the new objects that will be created below the Target object, or below the defined parent node if the Reference Mapping option is selected.

- **Reference Type:** This parameter is used when Reference Mapping option is selected within the 'Mapping type' parameter. This parameter allows the user to select the Reference Type that should be used to establish the reference between the Target object and the newly created objects.

- **Parent Node:** This parameter is only used when Reference Mapping option is selected within the 'Mapping type' parameter. The user can select the parent node under which the newly created objects will reside.

- **Condition:** This parameter is used when either the Child or Reference Mapping option is selected within the 'Mapping type' parameter. The user can select a business condition that gets executed when the associated Mapper Configuration setup entity is executed. This parameter will most often be used to define a business condition that decides whether the objects related to Target is to be created or not.

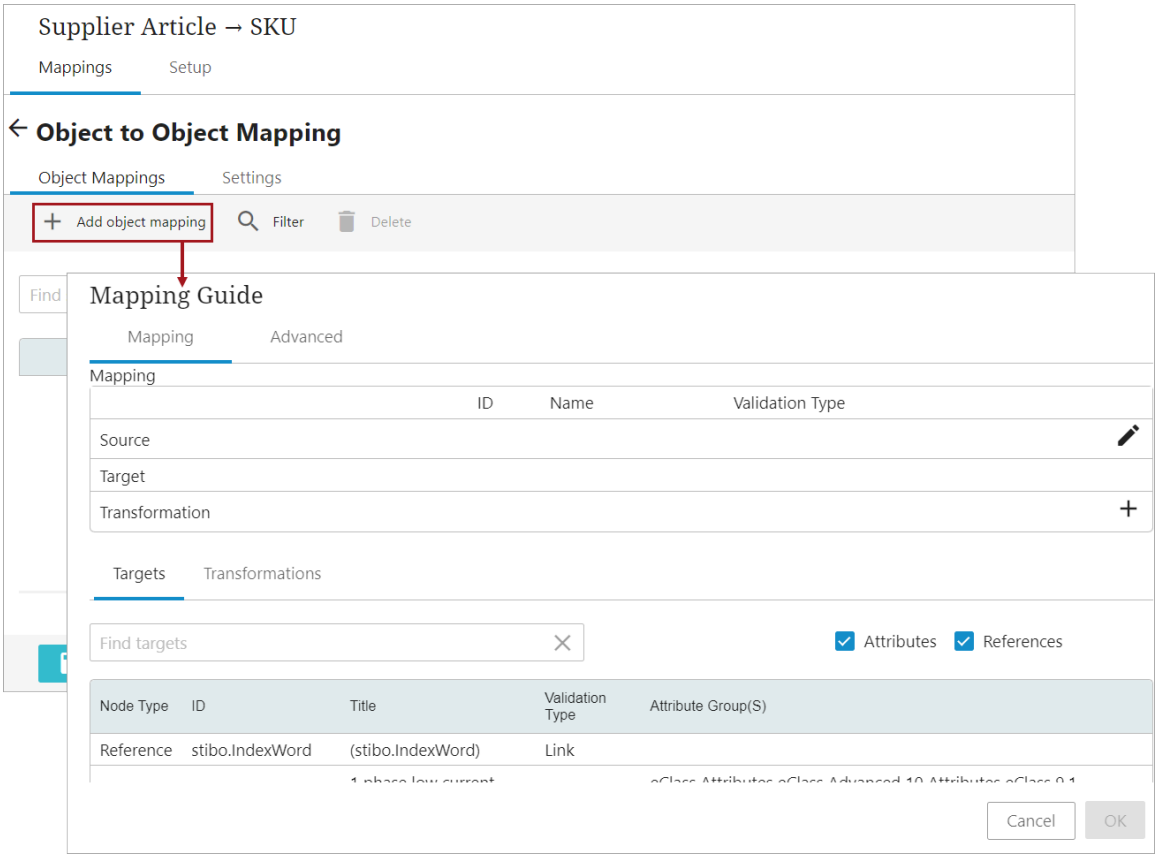
Below is an example of how the Settings tab within the Object to Object Mapping plugin is configured in the Web UI.



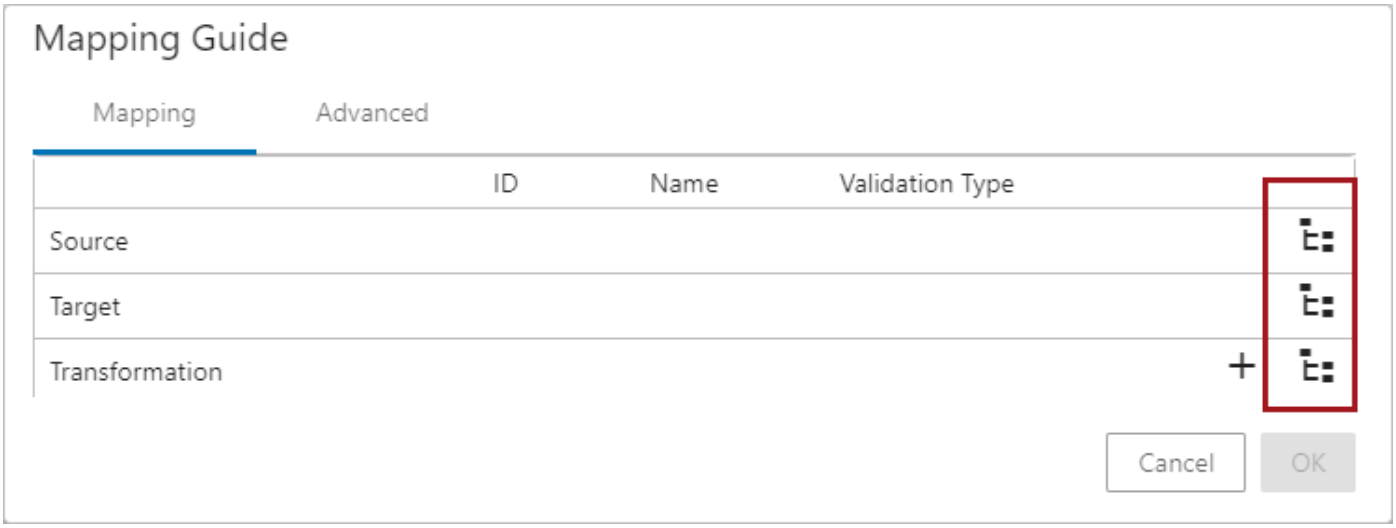
4. After populating all the required parameters within the Settings tab, navigate to the Object Mappings tab. and click on the ‘Add object mapping’ button.

   Upon clicking the 'Add attribute mapping' button, the Mapping Guide window will display, as shown in the screenshot below. This window comprises of the following two tabs:

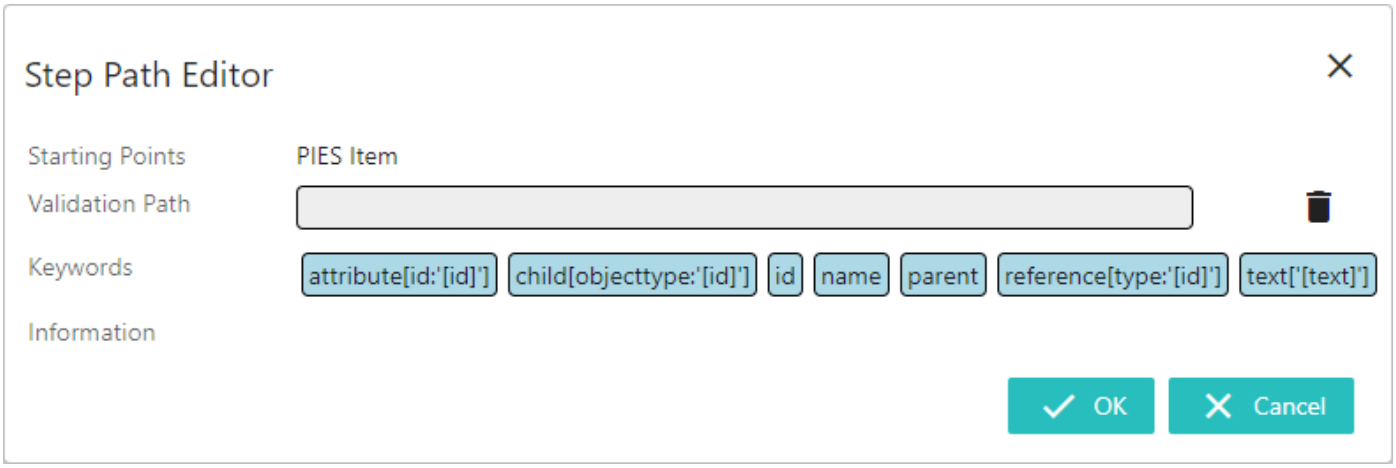
   - **Mapping:** This tab comprises of the fundamental parameters that are required for the Object to Object Mapping plugin. This involves populating the Source and Target fields along with the attribute transformations if required.
   - **Advanced:** The parameters available within this tab allows users to perform some advanced transformation functionalities when required. The functionalities in this tab are mainly designed to handle multivalued source attributes. The options available within this tab are explained in the later section of this topic.



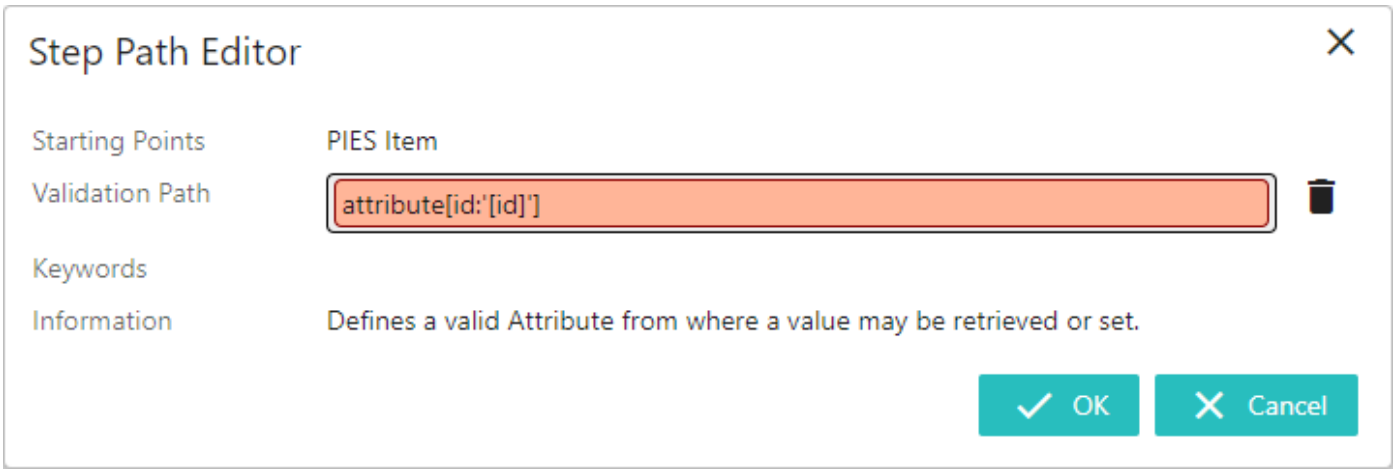
Note: It is possible in the Mapping Guide window to display the regular Node Pickers (as shown below) instead of the typeahead field. In order to use the Node Pickers in the Mapping Guide window, users need to set the following property in the sharedconfig.properties file: `Mapper.MappingGuideUseStandardComponents=true`.



5. To define which information (ID, Name, attribute values, or references) from the Source object needs to be retrieved, click on the Edit icon ( ) in the Source field, and the Step Path Editor window will display (as shown below). The user also has the option to select specific data points from the Source object, or any of its related objects by selecting a combination of the elements available in the Keywords field and thereby creating a STEP Validation path. For more information on defining the Source STEP Path, refer to the Mapping Validation Path Functionality topic within this guide.

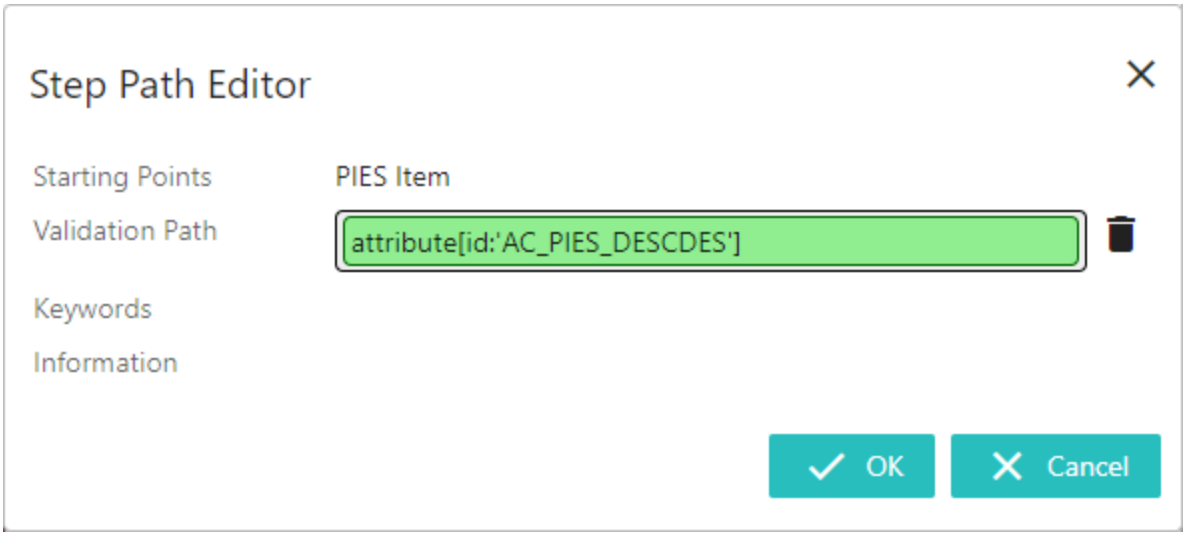


6. Double-click on the required element(s) from the 'Keywords' field. The selected element will be populated in the 'Validation Path' field (as shown below). The specific combination of elements are chosen depending on the unique requirements for the data being retrieved. Selecting the elements will define the Source STEP Path which describes the path from which the source data must be retrieved. Depending on the element selected, further configurations may be required. In the example below, element **attribute[id:'[id]']** is selected and displays in the Validation Path field. The red colored field indicates that additional configuration is required.

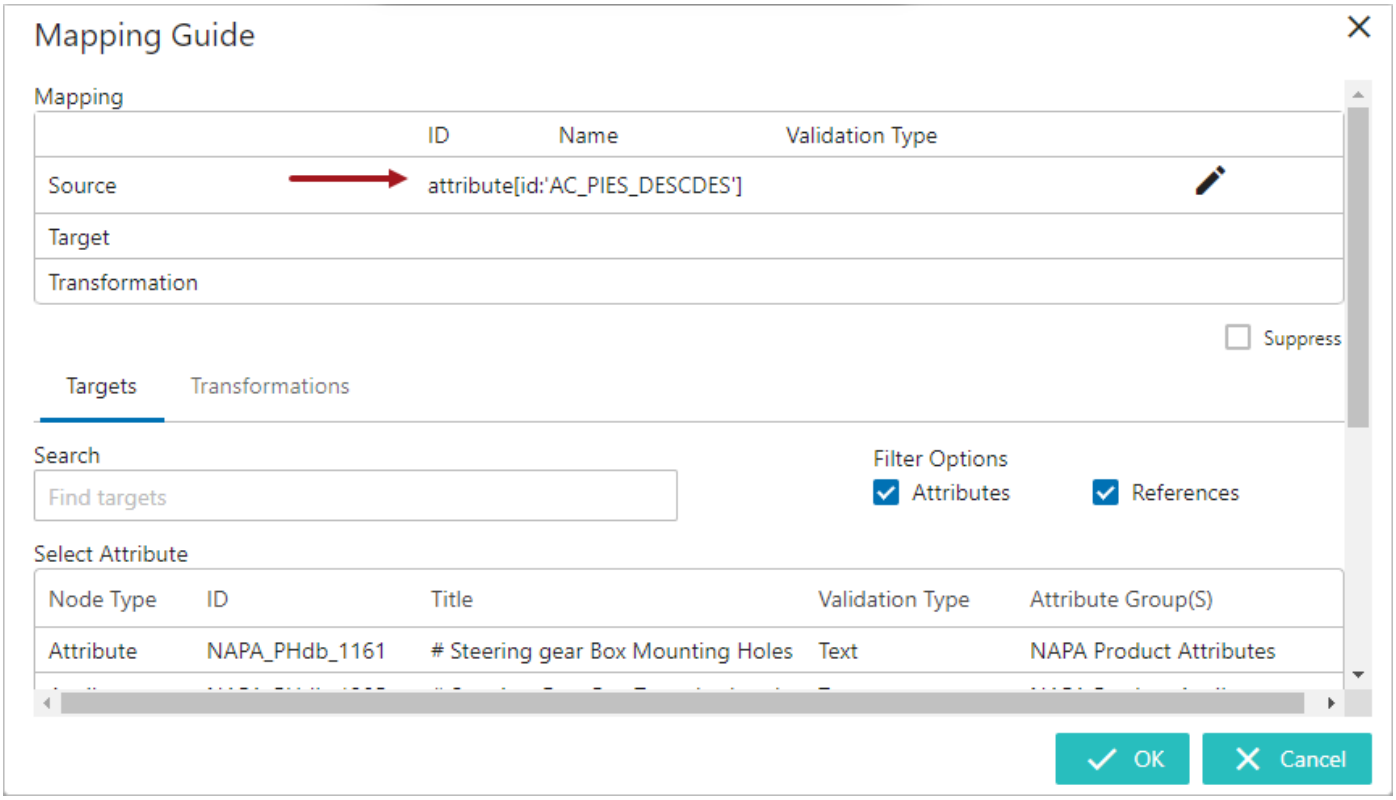


Users can add one element or a combination of elements to create a Source STEP Path. For more information on creating the Source STEP Path, refer to the Mapping Validation Path Functionality topic within this guide.

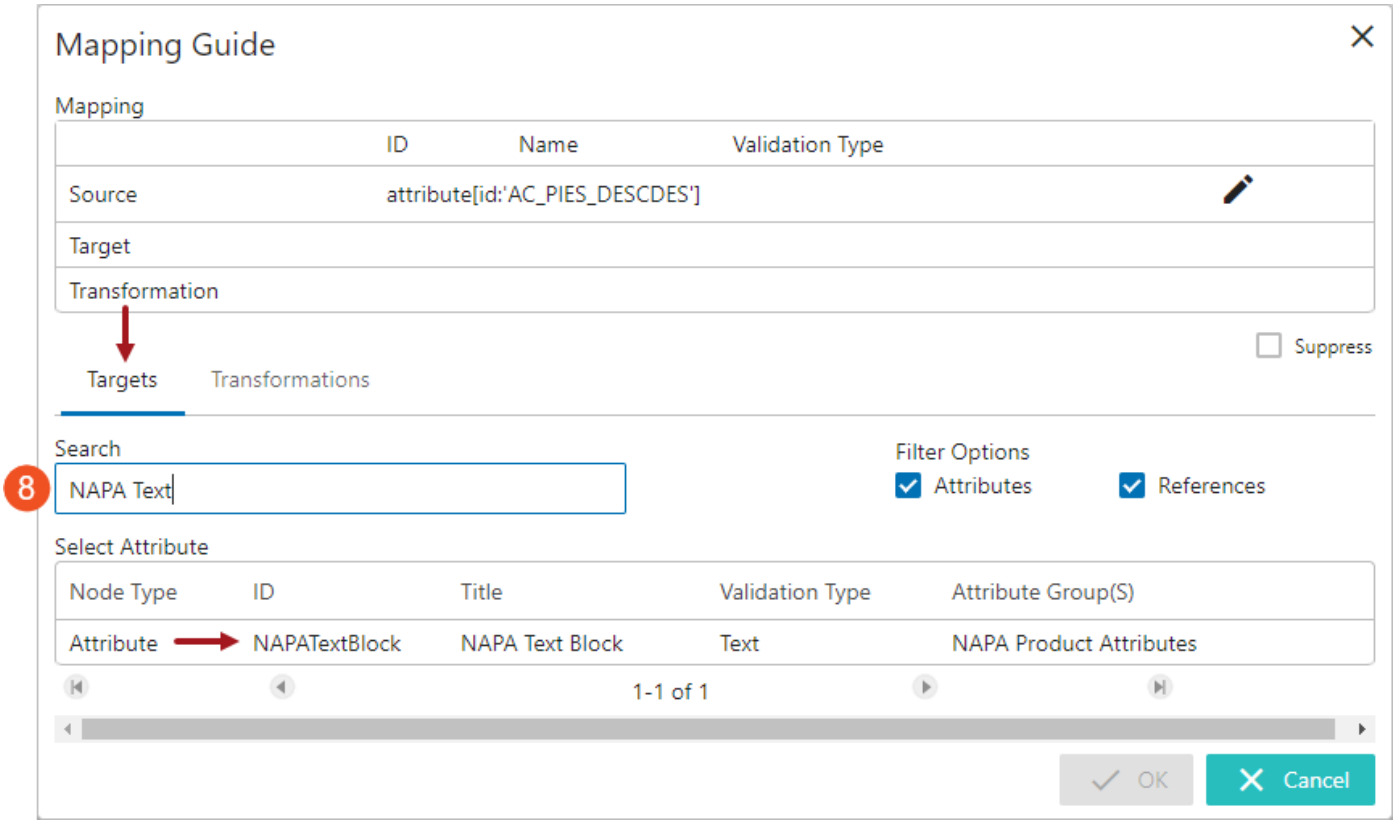
In this example, the selected element 'attribute[id:'[id]']' is configured to retrieve the value from attribute with ID 'AC_PIES_DESCDES'.



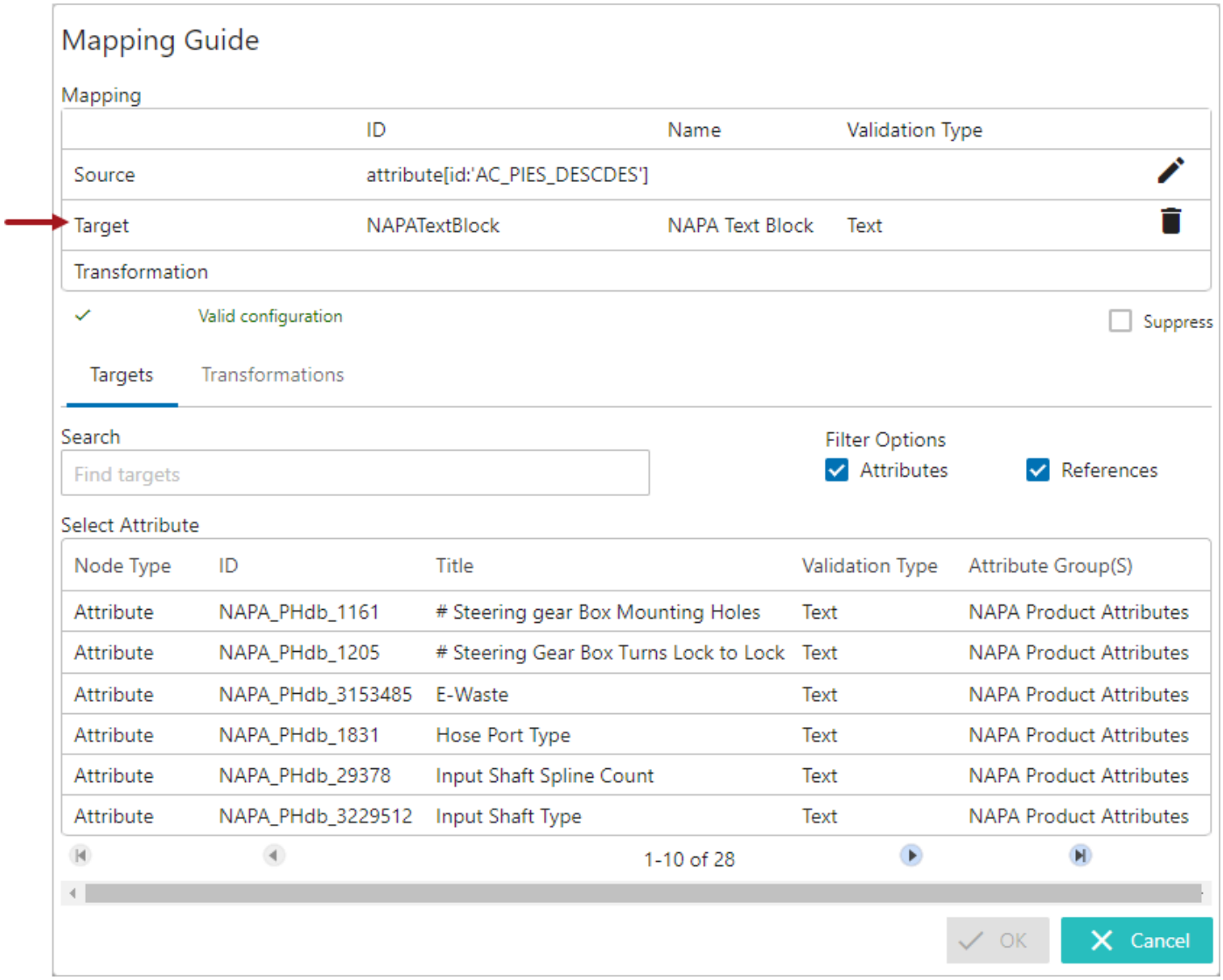
Once selected, the Source STEP Path with the defined data will be populated in the Source field.



7. With the 'Targets' tab selected, click in the Search field and start typing the initial letters of the attribute / reference name or ID of the target attribute / reference to which the value should be copied. Select the attribute / reference from the typeahead results displayed below the search bar.

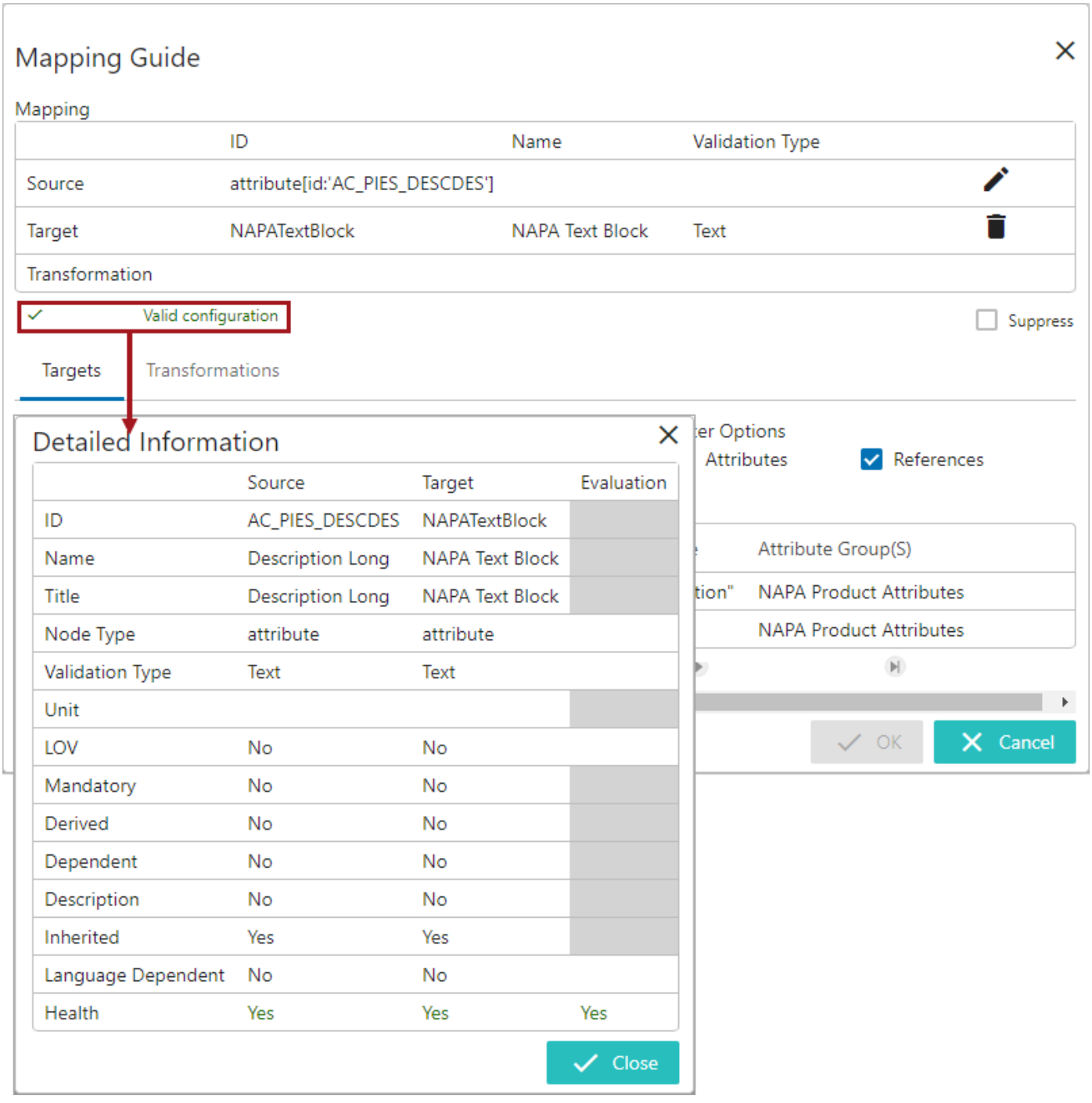


Once selected, the attribute / reference will be populated in the Target field.



Note: Only attributes / references that are valid for the object type defined in the mapping Setup tab will be displayed as options to select on the Targets tab.

After the Source STEP Path and target attribute / reference are defined, the system evaluates the validity match between the Source STEP Path and the target attribute / reference. A hyperlink text explaining the reason for the validity match / mismatch displays. Clicking on the hyperlink opens the 'Detailed Information' dialog which displays the validity match / mismatch information of the Object to Object mapping. Below is an example of a valid match between the Source STEP Path and the target attribute displayed in the 'Detailed Information' dialog.

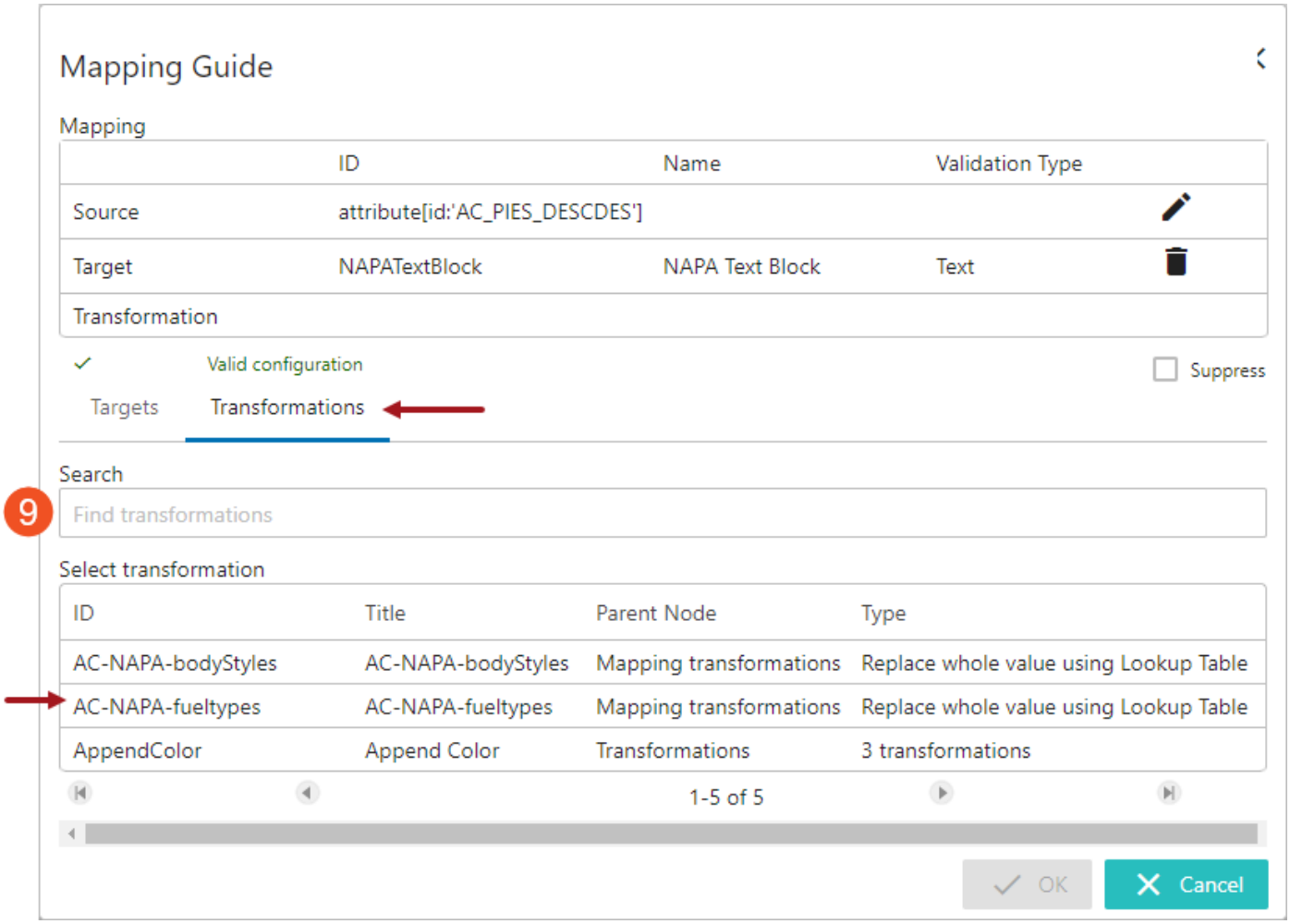


Users can suppress the validation mismatch warning message by clicking on the 'Suppress' checkbox in the Mapping Guide window. Selecting the 'Suppress' checkbox *only* removes the data type mismatch warnings displayed on the Mapping Guide window and does not resolve the mismatch irregularities.

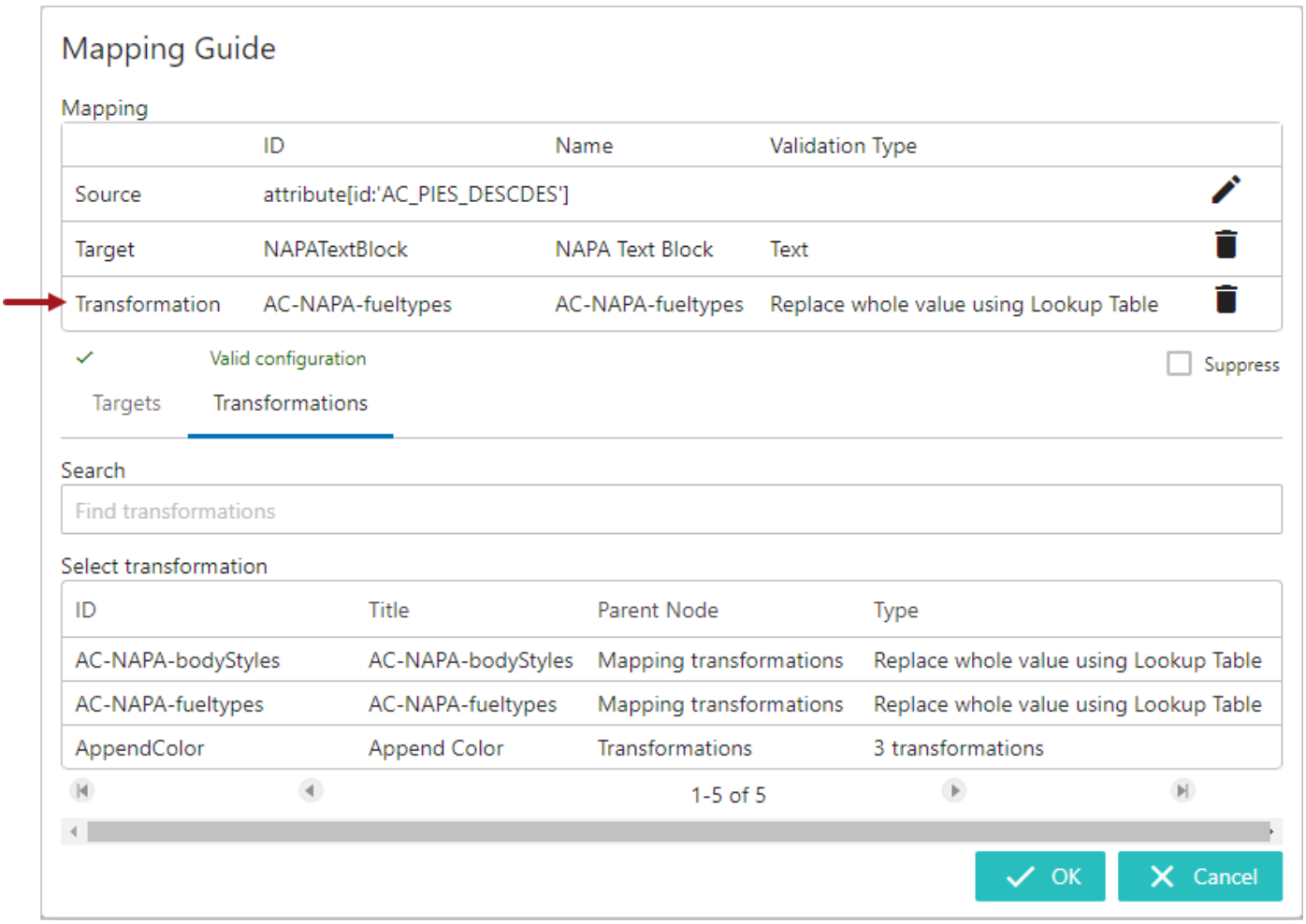
8. With the 'Transformations' tab selected, click in the search field and start typing the initial letters of the transformation name or ID. This brings up a dropdown of typeahead search results listing the attribute transformations available in the system. Select the relevant transformation from the list displayed below

the search bar.

Note: The transformations must be created and defined in workbench System Setup prior to being available to be selected in the Mapping Guide.

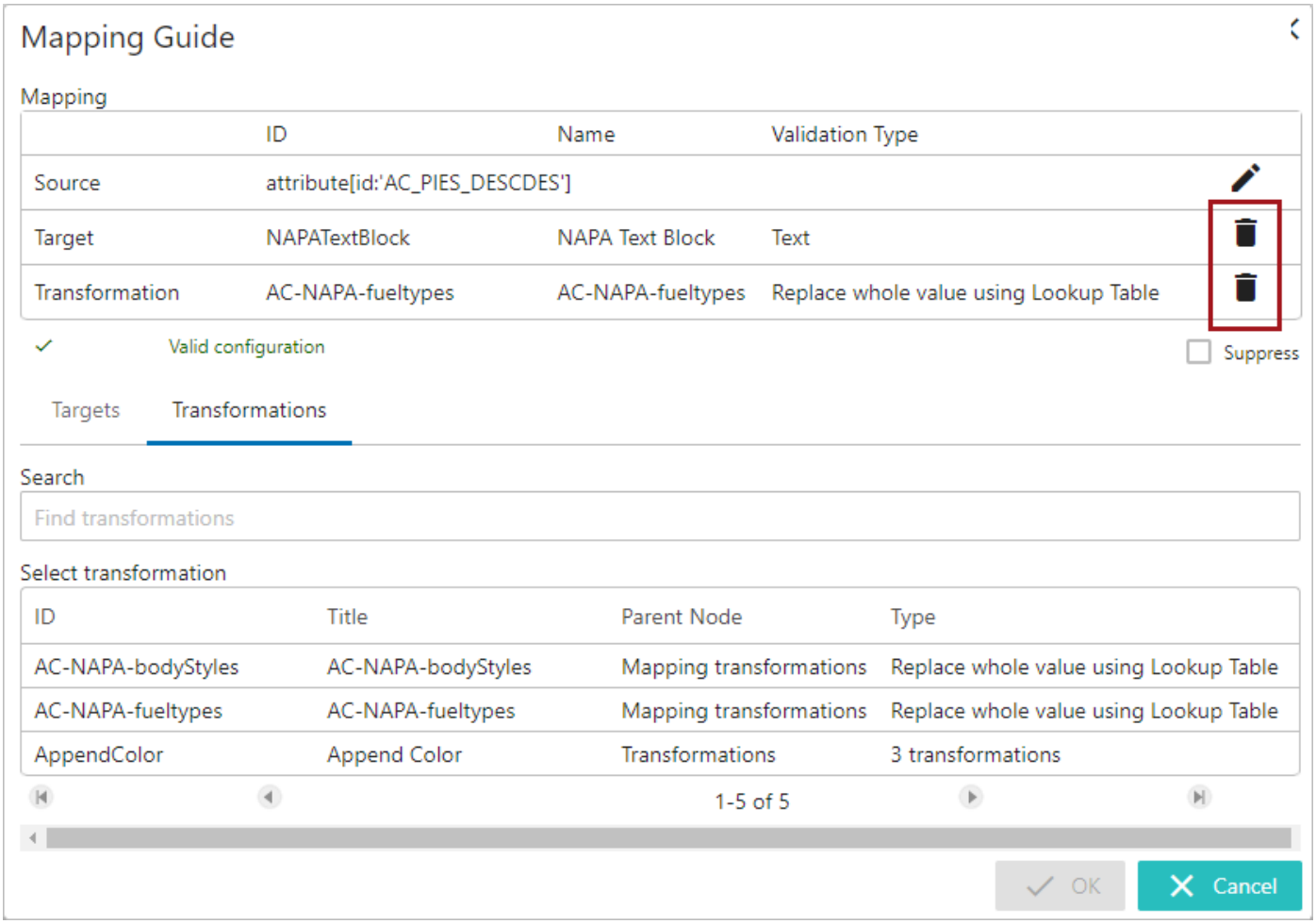


The selected transformation will be populated in the 'Transformation' field (as shown below).



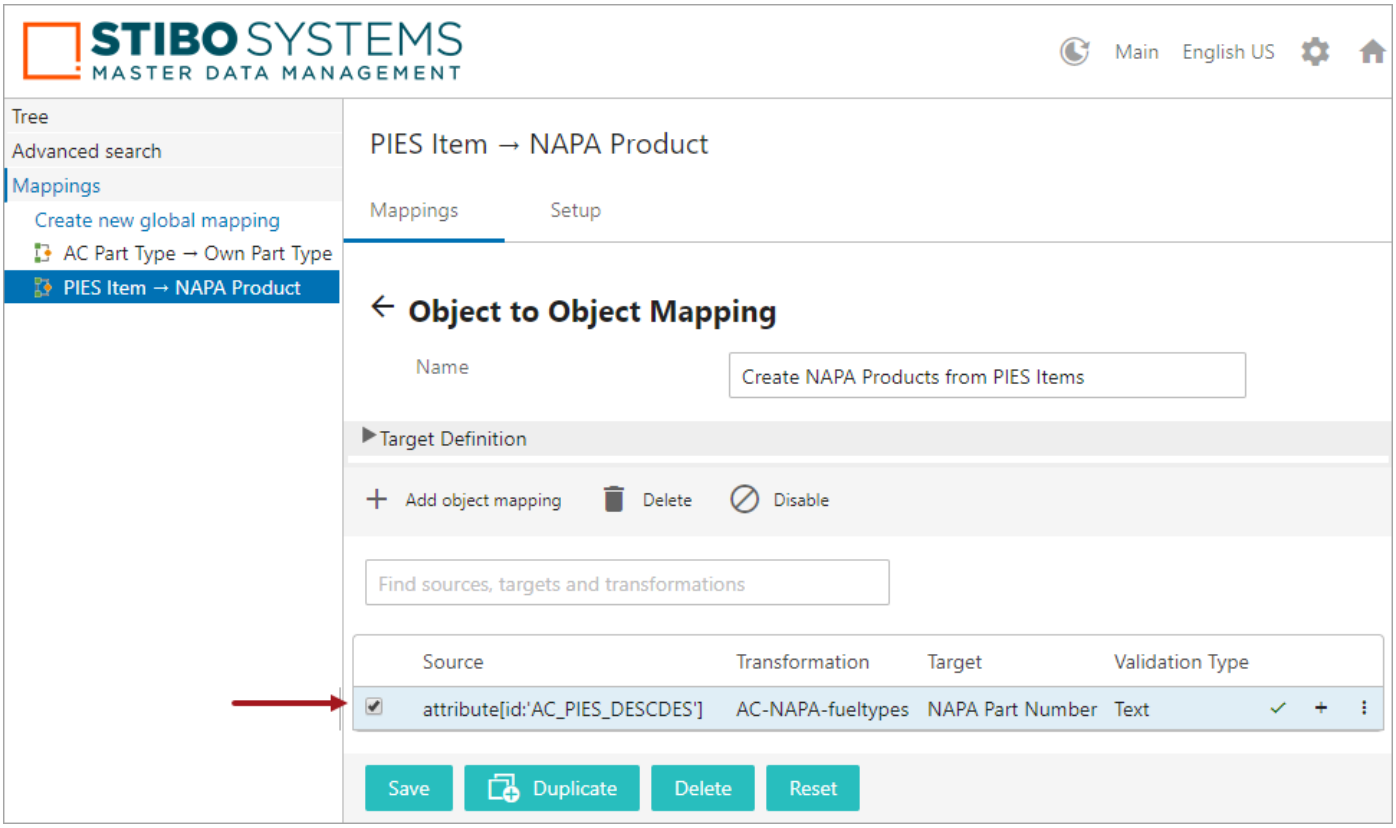
For information on configuring the attribute transformations, refer to the Attribute Transformations topic within the System Setup documentation. And for details on each of the available transformation options, refer to the Transformations topic in the Resource Materials online help documentation.

The populated transformation can be deleted by clicking the delete icon ( ) in the 'Transformation' field. Similarly the populated Target attribute / reference can also be deleted by clicking the delete icon ( ) in the 'Target' field.



9. Click **OK** to save and close the 'Mapping Guide' window and then click **Save** to save the changes. As shown in the screenshot below, the newly added object mapping row will display. To edit the object mapping, click on the row to open the Mapping Guide window in which edits can be made.

Note: Once the user adds a mapping and selects the Source STEP Path and Target and clicks **OK** to close out of the Mapping Guide window, the **Save** button is enabled until the user clicks on **Save** button. If the user fails to click **Save**, than the mapping will be lost once user selects a new mapping configuration.



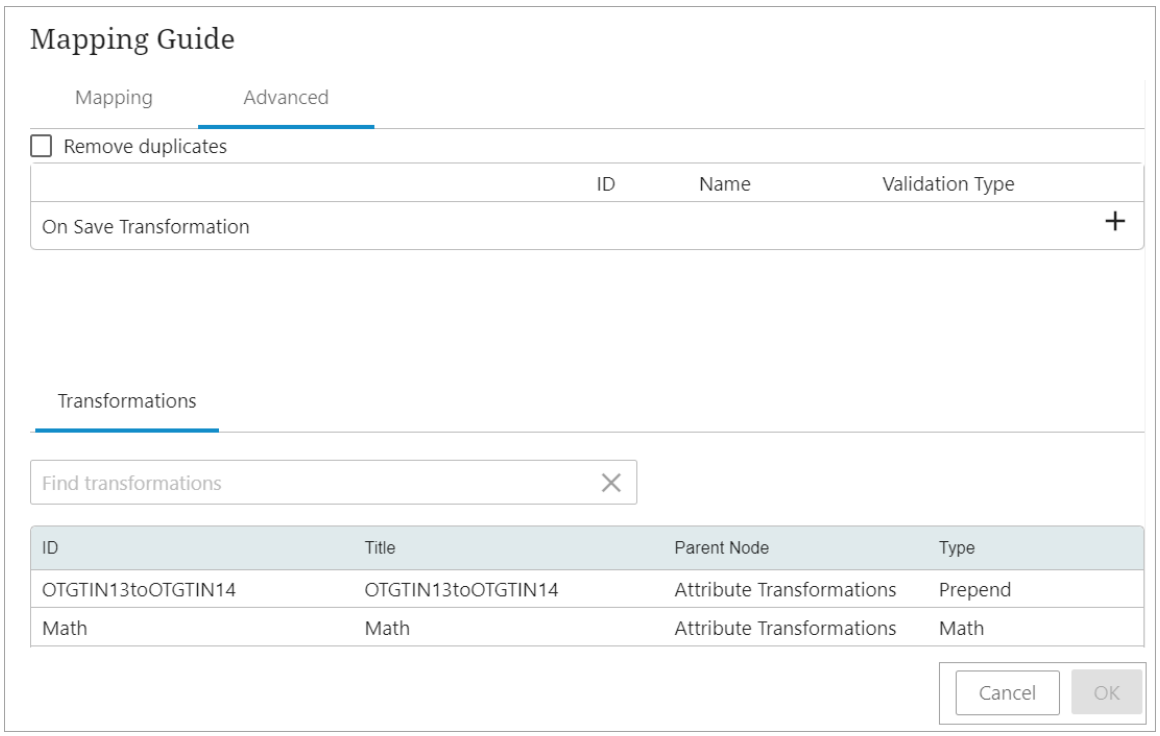
10. Repeat the above steps 4 to 9 to add more object mapping rows for the same plugin.

    User can add any number of mapping rows in the mapping plugin. When there are multiple mapper rows available within the mapping plugin, the order of execution of each mapper row is based on the order in which it is listed within the mapping plugin.

    The health of the mapping row is displayed next to each mapping row. Users can also add some additional information describing each of the mapper rows. The user has the flexibility to disable, delete, or rearrange the listing order of the mapper rows. For more information on handling the mapper rows, refer to the topic Modifying Mapper Rows on the Onboarding Mapping Details Screen within this guide.

Handling Multivalued Source Attributes in Object to Object Mapping

The Mapping Guide window has the Advanced tab that allows users to perform some advanced transformation functionalities when required. The functionalities in this tab are mainly designed to handle multivalued source attributes.



While the attribute transformation configured in the Mapping tab is applied to the values of the source attribute, the attribute transformation configured in the Advanced tab will be applied to the intermittent string that gets created during the transition of data from the source attribute to the target attribute.

This allows to simplify more complex mapping relationships between source and target attributes. When configured, the Object to Object Mapping plugin can handle a multi-valued source attribute and transform the values before populating them into a single-valued target attribute. In this case, the system can extract a specific value from a string of multiple values and apply additional transformations before the final value is populated in the target attribute.

For example, consider that data is being onboarded into a single-valued target attribute (named 'Body Color') from a multivalued source attribute (Color) with an attribute transformation that changes the value from the upper case to the lower case. The source attribute Color has three values, RED, BLUE, and BLACK. If the attribute transformation was set in the Transformation field of the Mapping tab, the target attribute Body Color would be populated with a value 'black' (because the target attribute can accommodate only one value).

However, before it populates this value in the target attribute, it is to be known that in the background, the system creates an intermittent string called 'red<multisep/>blue<multisep/>black' and extracts only the value 'black' out of this string to populate on the target attribute.

The Transformation field in the Advanced tab helps to configure and apply another attribute transformation on this string, and users can transform and retrieve the desired data from this string to be populated in the target attribute value.

For example, if the On Save Transformation field is populated with an attribute transformation that replaces the '<multisep/>' substring into the hyphen '-', then the final value in the target attribute will be populated as 'red-blue-black'.

Along with the functionality described above, the Advanced tab can ensure that no duplicate values are populated in the target attribute by selecting the 'Remove duplicates' checkbox.

Mapping Validation Path Functionality

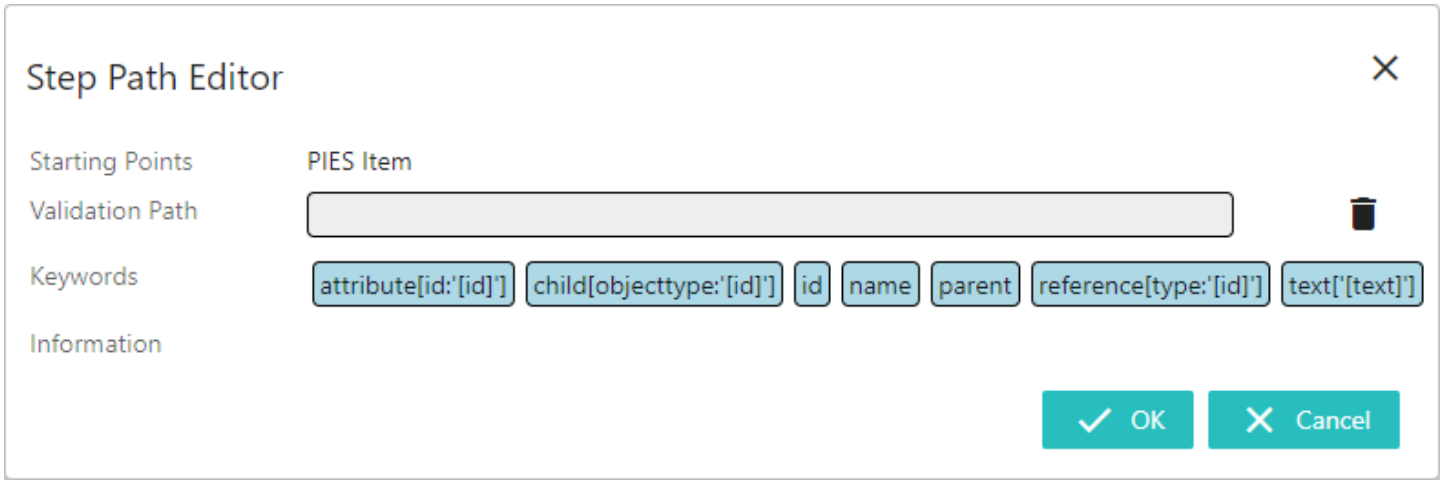
The Mapping Validation Path functionality in the STEP Path Editor dialog ensures that users are able to select valid Source and Target objects to define their mapping setup in Object to Object Mapping or Application Mapping configurations. The premise behind this concept is that when some level of valid Source STEP Path data (or valid Target STEP Path data) for objects is provided, the mapping is able to retrieve the ID / Name / attribute values / references of the object present at the defined path.

Based on the Source and the Target object type defined for the Mapper Configuration, the system always evaluates the Source STEP path (or Target STEP path) and suggests the valid attributes / reference types / object types from the system.

The Starting Points parameter available in the STEP Path Editor dialog displays the object type that the Validation Path will begin evaluation on in order to follow the path to retrieve information from.

This relationship data is captured within the Validation Path field based on the data model setup that defines the relationship between different object types.

Each of the elements available within the Keywords field in the STEP Path Editor dialog is explained in detail below. Note that all elements are not necessarily used in all requirements. The specific combinations of elements are chosen depending on how the data needs to be retrieved from the Source object.



- **attribute[id:'[id]']**: This element helps to retrieve the attribute value(s). Further configuration is required to define the attribute. Once the attribute[id:'[id]'] keyword has been selected, double-click on the Validation Path field to select an attribute (only attributes valid to the Source object type are displayed) from the Select Attribute dialog.
- **child[objecttype:'[id]']**: This element allows the user to retrieve the data from the child of the object that is displayed in the Starting Points parameter. Further configuration is required to define the object type and also what value of the child object (ID / Name / attribute value /references) is to be retrieved. This element should always be accompanied by **id** / **name** / **attribute[id:'[id]']** / **reference[type:'[id]']** elements.
- **id**: This element retrieves the ID of the defined object.
- **name** : This element retrieves the name of the defined object.

- **parent**: This element retrieves the data from the parent of the defined object. Further configuration is required to define what value of the parent object (ID / Name / attribute value /references) is to be retrieved. This element can always be accompanied by **id** / **name** / **attribute[id:'[id]']** / **reference [type:'[id]']** elements.
- **reference[type:'[id]']**: This element retrieves the data from the referenced object of the defined object. Further configuration is required to define the reference type and is also required to define what value of the referenced object (ID / Name / attribute value /references) is to be retrieved. This element can always be accompanied by **id** / **name** / **attribute[id:'[id]']** / **reference[type:'[id]']** elements.
- **referenceBy[type:'[id]']**: This element retrieves the data from the source object when the defined object is the target object of the configured reference. Further configuration is required to define the reference type and is also required to define what value of the source object (ID / Name / attribute value /references) is to be retrieved. This element can always be accompanied by **id** / **name** / **attribute[id:'[id]']** / **reference[type:'[id]']** elements.
- **text['[text]']**: This element lets the user enter a static text of the user's choice.

For example, if the user needs to retrieve the value from ACES Body Num Doors attribute (AC_ ACESBodyNumDoors) stored at the child level object (object type = AC_ACESApplication) of the Source object (PIES Item), the Source STEP path is configured as:

```
child[objecttype:'AC_ACESApplication'].attribute[id:'AC_ACESBodyNumDoors']
```

This Source STEP Path is determined by:

- Identifying the source object.
- Examining all children of the source object with object type AC_ACESApplication.
- Evaluating the value of the ACES Body Num Doors attribute (AC_ACESBodyNumDoors) that is stored on the child object.

Attribute Transformation in Mapper Configuration Setup Entity

Attribute transformations within the onboarding process can be used to transform attribute values, names, and IDs of the target object while onboarding data from the source object to the target object. When the Mapping plugin is defined with the source and the target attributes, users can add an attribute transformation if necessary. As with all transformations, the source object data is not modified, but the target object data is altered by the transformations applied. Attribute transformation can be used to make a set of transformations, and then apply it in the Mapper rows of the Mapping plugins. Attribute transformations can be applied only in the following Mapping plugins:

- Application Mapping Plugin
- Attribute Mapping Plugin
- Concatenator Mapping Plugin
- Object to Object Mapping Plugin

Apart from being used in the Mapping plugins, the attribute transformations can be also applied while defining the ID and name for the target object hierarchy that are created through the Target Hierarchy field in the Setup tab of the Onboarding Mappings Details screen.

Users can perform the following functions with regards to the attribute transformations in the Target Hierarchy Editor window and the Mapping Guide window:

- Create a new attribute transformation and define transformation function(s), as described in the Creating Attribute Transformations Through Mapping Guide Window topic.
- Add, edit, delete, or rearrange the listing order of the transformations for an attribute transformation, as described in the Modifying Transformations on the Transformation Overview Dialog topic.
- Test the outcome of the added, as described in the Testing Attribute Transformations Configured in Mapping Plugins topic.

Note: The modifications made to the attribute transformations by accessing it through the Mapping Guide window / Target Hierarchy Editor window is global and affects the attribute transformations residing in System Setup. Meaning, changes made through the Mapping Guide window will have an impact on every place in the system where the changed attribute transformation is applied / used on. Before editing any of the existing attribute transformations, its effect on other places it is being used must be properly assessed.

This topic explains how to access and create / edit attribute transformations in Mapper Configuration setup entity. For information on how to create and configure an attribute transformation in workbench, refer to the Attribute Transformations section of the System Setup documentation.

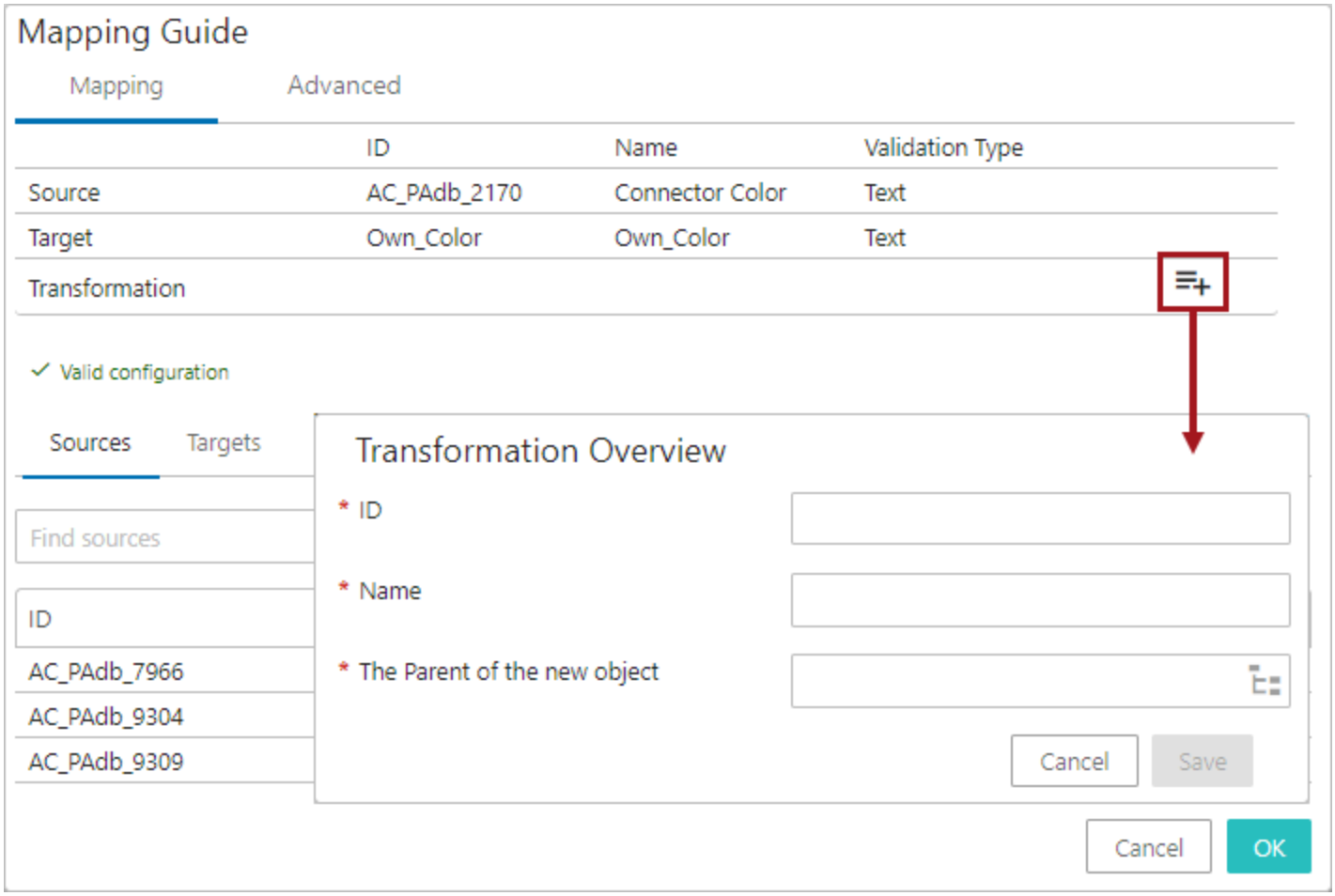
Note: A setup entity definition can be exported as comments and submitted to an external source control system for comparison purposes. For details, refer to the Configuration Management documentation.

Creating Attribute Transformations Through Mapping Guide Window

Users can create an attribute transformation and define one or more transformations to it through a Mapping Guide window and the Target Hierarchy Editor window. The created attribute transformation will reside in System Setup under the Attribute Transformations node and will be available to be used in all other places where the attribute transformations can be applied on.

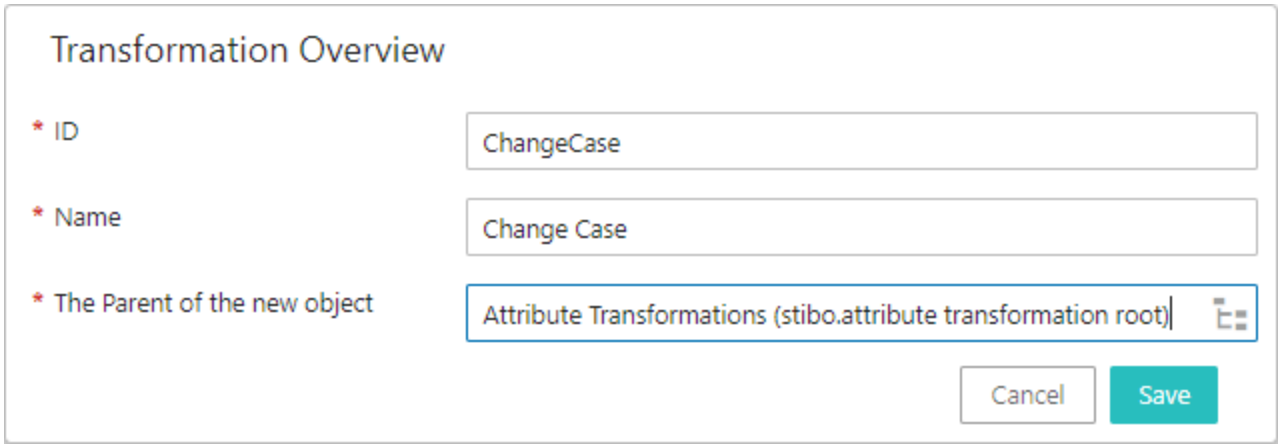
This topic explains how to create an attribute transformation through a Mapping Guide window in the Web UI. For information on how to create and configure an attribute transformation through the Target Hierarchy Editor window, refer to the Creating Attribute Transformations Through Target Hierarchy Editor Window topic within this guide. For information on how to create and configure an attribute transformation in workbench, refer to the Attribute Transformations section of the System Setup documentation.

For any Mapping Guide window, if no attribute transformation is applied, then a create button ( ) is displayed within the Transformation field. Clicking the create button( ) will open the Transformation Overview dialog with the parameters explained as follows:

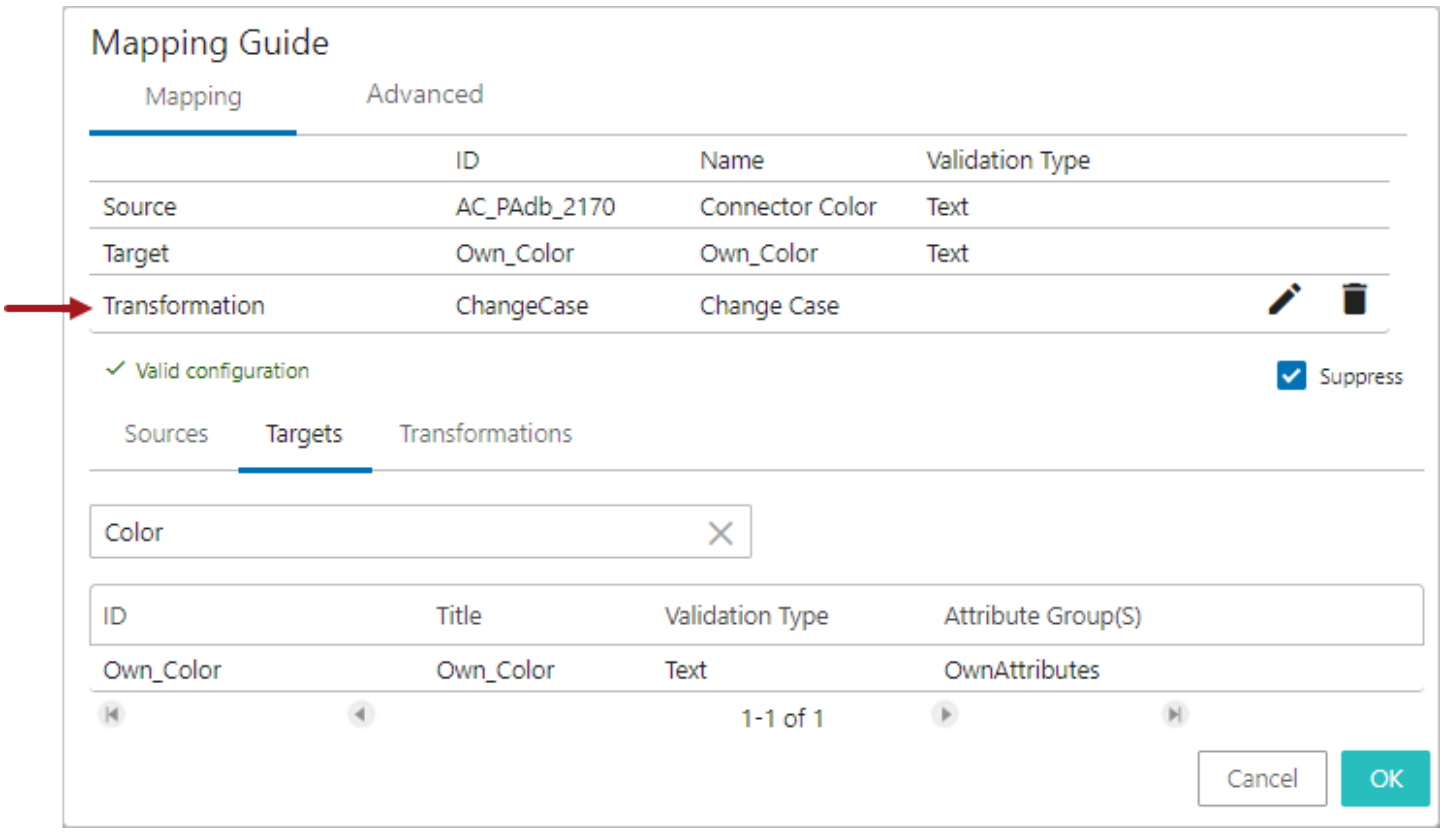


- **ID:** Type an ID for the attribute transformation.
- **Name:** Type a suitable name that describes the attribute transformation functionality.
- **The Parent of the new object:** The user can select the parent node under which the newly created attribute transformation will reside.

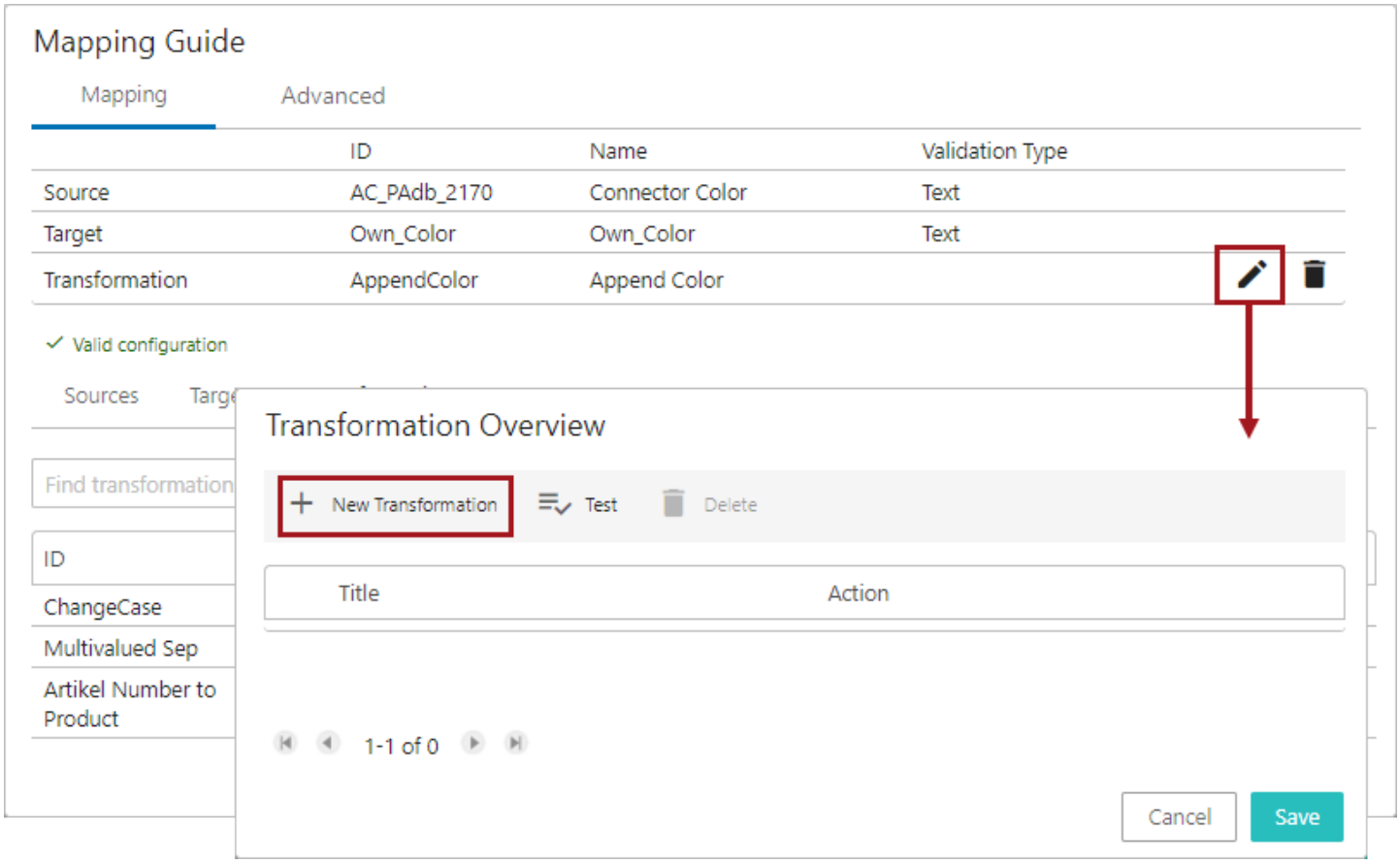
In the example below, an attribute transformation named 'Change Case' (ID=ChangeCase) is created to reside in the Attribute Transformations folder.



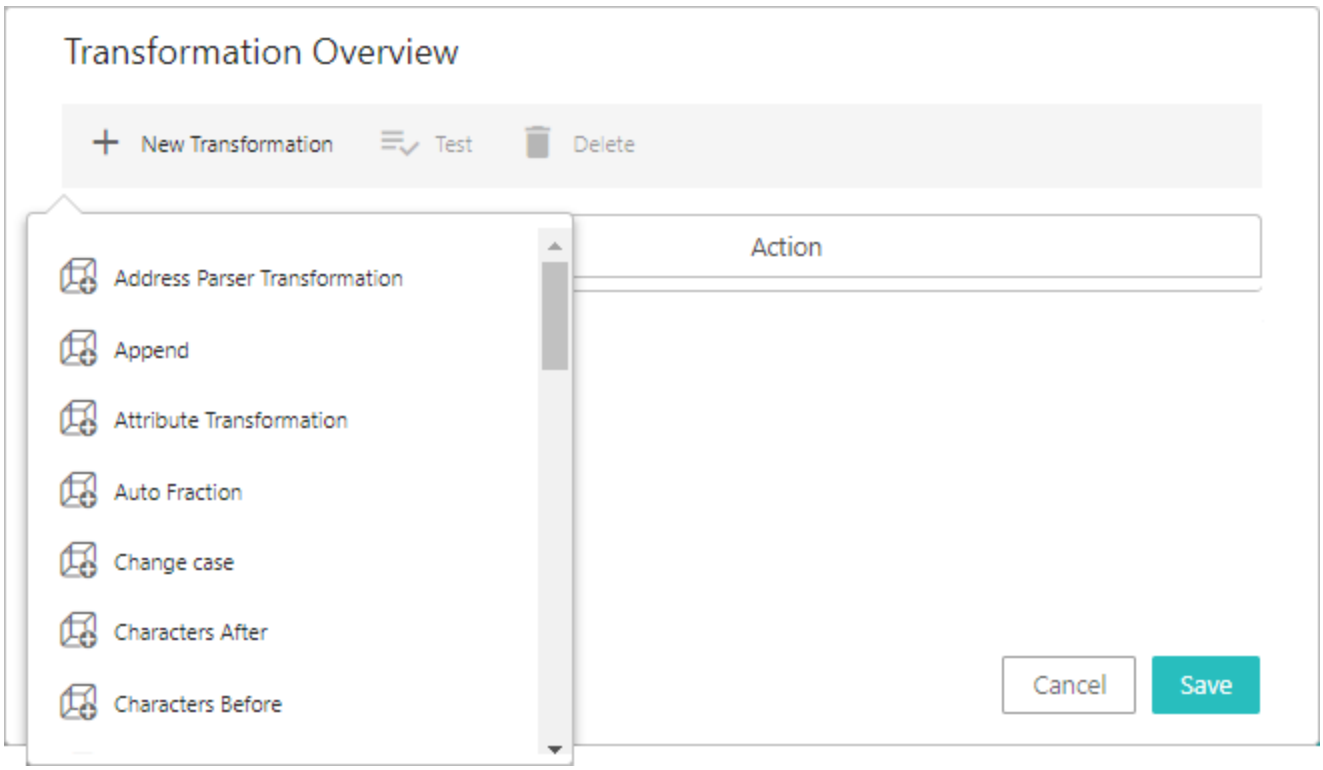
Once all parameters are populated, clicking on the **Save** button will save and close the Transformation Overview dialog, and the newly created attribute transformation will be populated within the Transformation field of the Mapping Guide window. Should changes need to be made, an edit ( ) and a delete ( ) button will be displayed next to the attribute transformation placed in the Transformation field.



The newly created attribute transformation will not have any transformations defined in them. To define one or more transformations, click the edit button ( ) to open the Transformation Overview dialog and add a transformation by clicking the New Transformation button (as shown below).



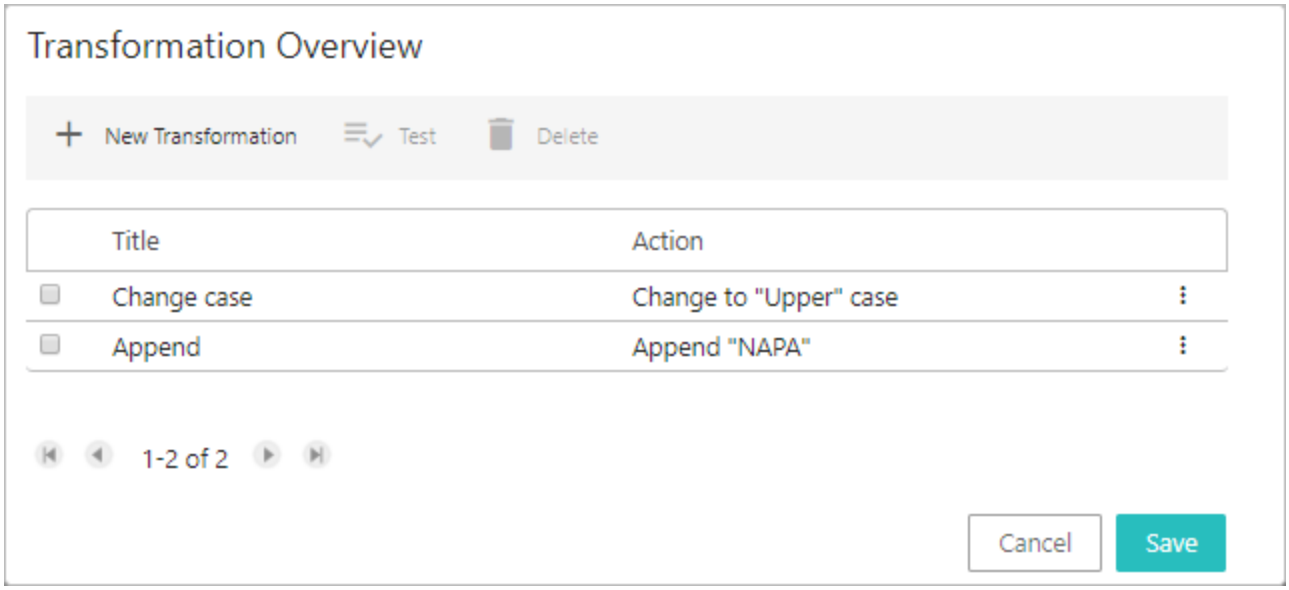
Clicking on **New Transformation** displays the list of rules to be used. Select the relevant transformation.



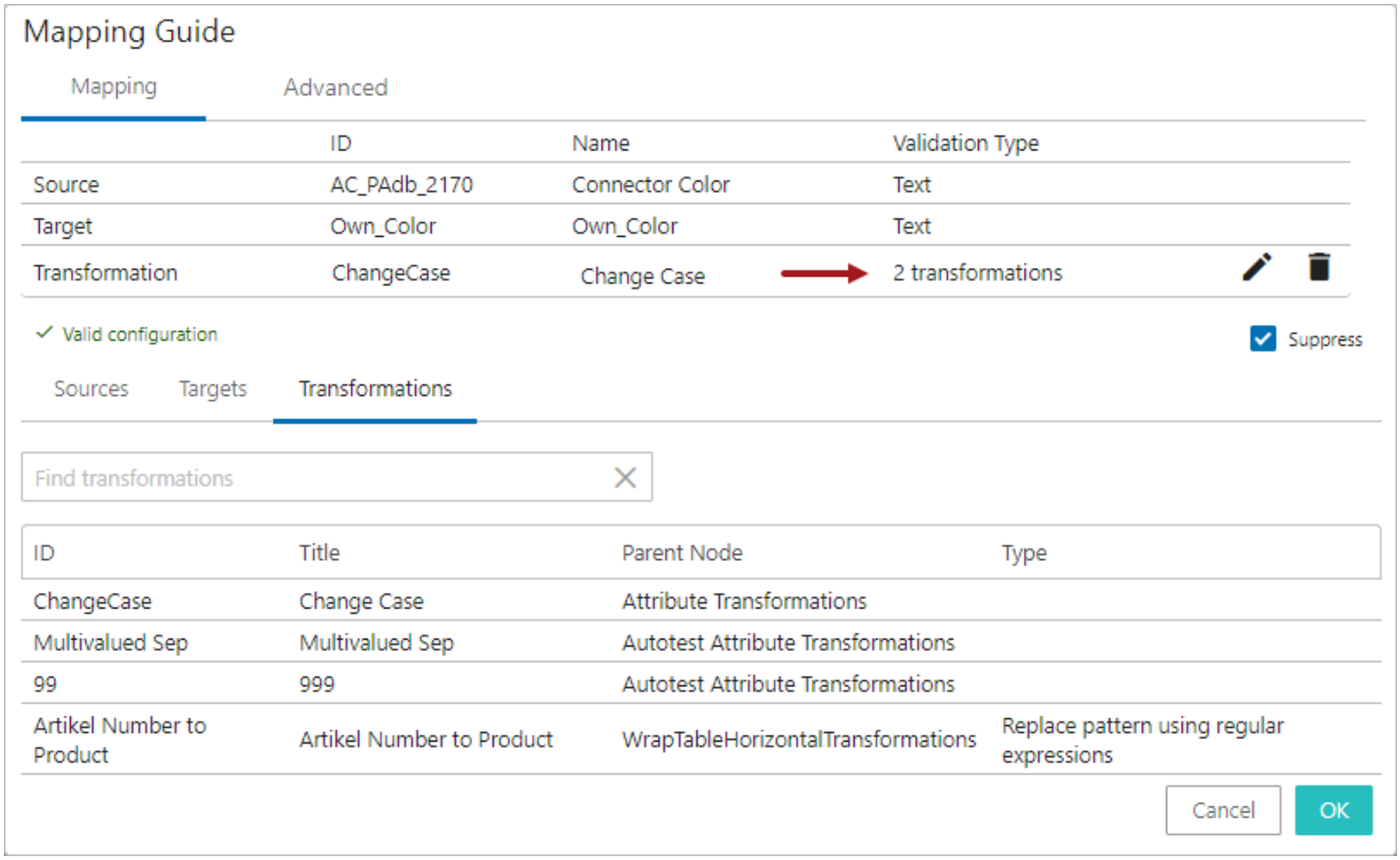
If the selected transformation requires any further configuration, then the **Edit Transformation** dialog will display. Enter the necessary values and click **Save** to save and close the Edit Transformation dialog. The selected transformation will get listed in the Transformation Overview dialog (as shown below). For a description of the available transformations, refer to the Transformations topic in the Resource Materials online help documentation.

Note: It is possible to create multiple sequential transformations as a rule, but the user must to be careful about the order in which the transformations are applied.

In the example below, 'Change case' and 'Append' transformations are used.



Click **Save** to save and close the Transformation Overview dialog. The Validation Type column within the Mapping Guide window will display the total number of transformations available in the selected attribute transformation.



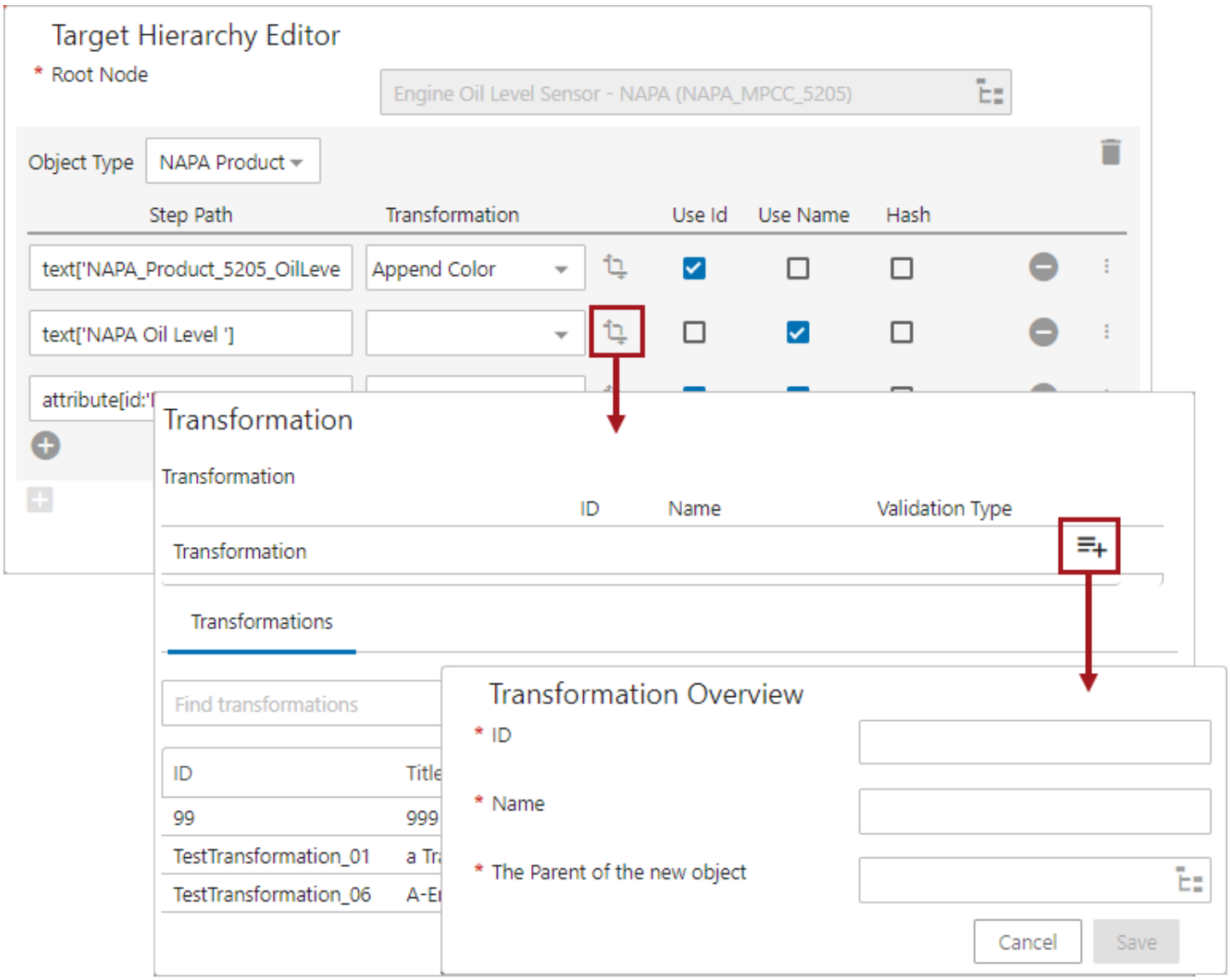
Creating Attribute Transformations Through Target Hierarchy Editor Window

Users can create an attribute transformation and define one or more transformations to it through a Mapping Guide window and the Target Hierarchy Editor window. The created attribute transformation will reside in System Setup under the Attribute Transformations node and will be available to be used in all other places where the attribute transformations can be applied on.

This topic explains how to create an attribute transformation through a Mapping Guide window in the Web UI. For information on how to create and configure an attribute transformation through the Target Hierarchy Editor window, refer to the Creating Attribute Transformations Through Mapping Guide Window topic within this guide. For information on how to create and configure an attribute transformation in workbench, refer to the Attribute Transformations section of the System Setup documentation.

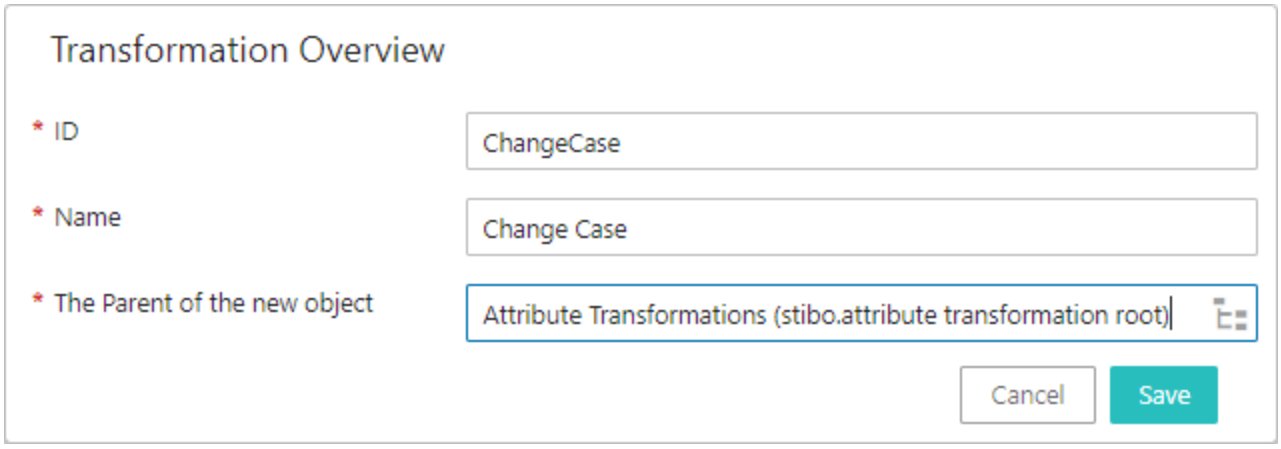
When clicking the Edit icon ( ) that is displayed to the right of the **Target Hierarchy** parameter (available on the Setup tab of the Onboarding Mappings Details Screen), the Target Hierarchy Editor window displays.

Clicking on the 'Select and modify transformation' icon ( ) will open the Transformations dialog. For any Transformation dialog, if no attribute transformation is applied, then a create button ( ) is displayed within the Transformation field. Clicking the create button( ) will open the Transformation Overview dialog with the parameters explained as follows:

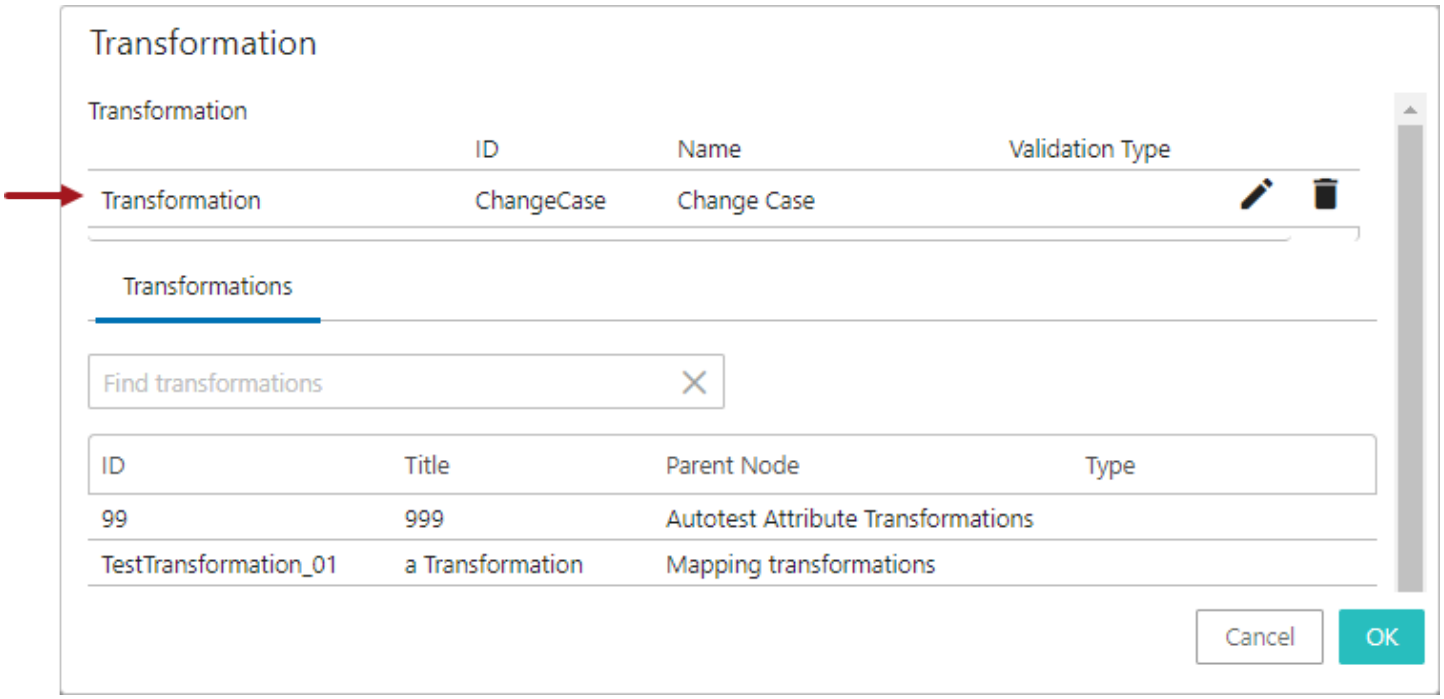


- **ID:** Type an ID for the attribute transformation.
- **Name:** Type a suitable name that describes the attribute transformation functionality.
- **The Parent of the new object:** The user can select the parent node under which the newly created attribute transformation will reside.

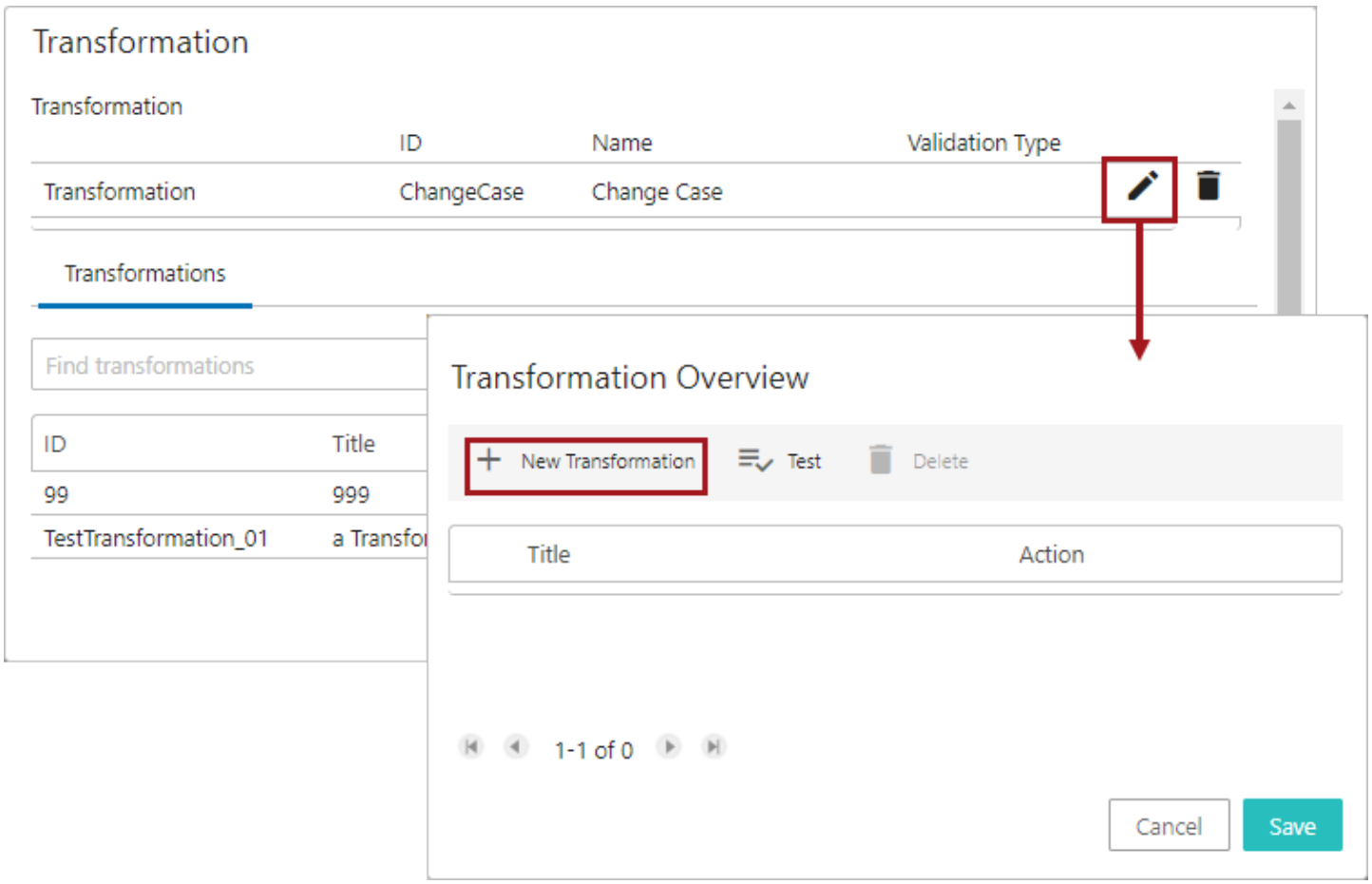
In the example below, an attribute transformation named 'Change Case' (ID=ChangeCase) is created to reside in the Attribute Transformations folder.



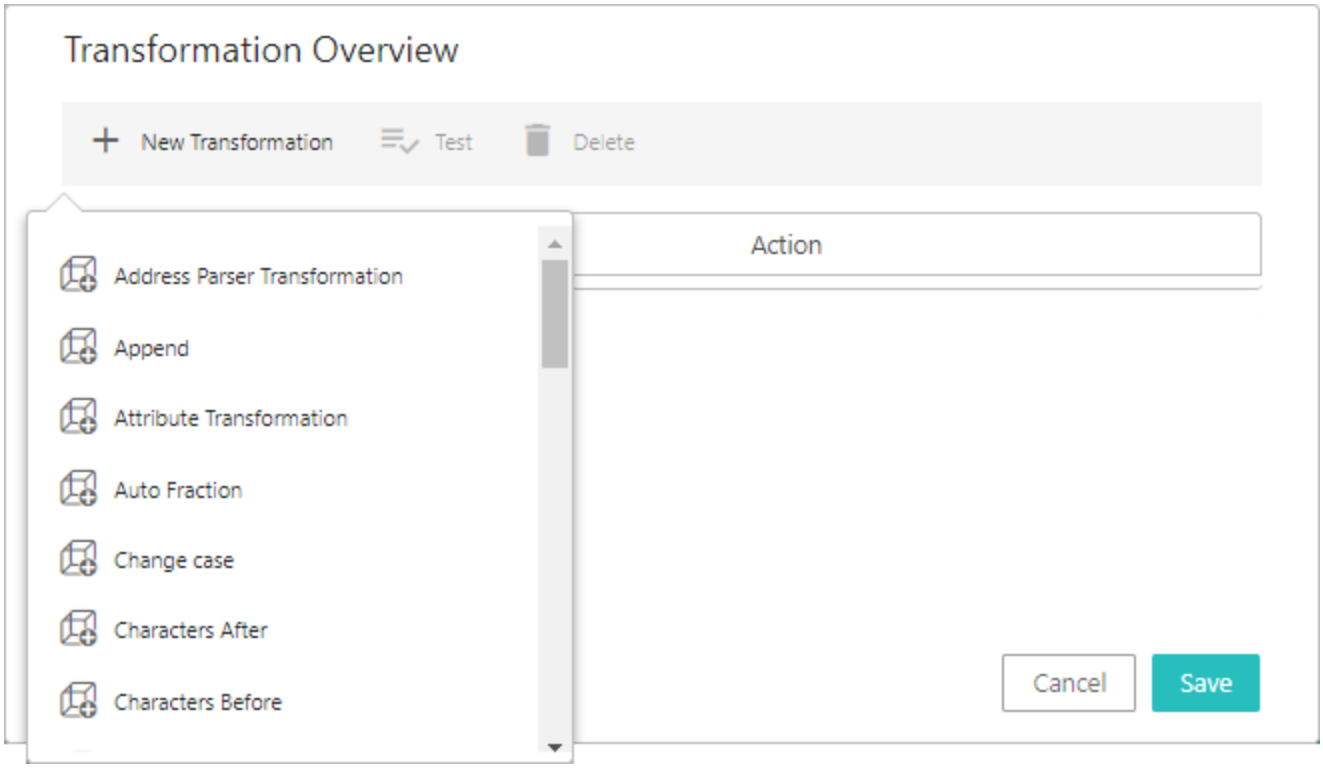
Once all parameters are populated, clicking on the **Save** button will save and close the Transformation Overview dialog, and the newly created attribute transformation will be populated within the Transformation field of the Transformation window. Should changes need to be made, an edit ( ) and a delete ( ) button will be displayed next to the attribute transformation placed in the Transformation field.



The newly created attribute transformation will not have any transformations defined in them. To define one or more transformations, click the edit button ( ) to open the Transformation Overview dialog and add a transformation by clicking the New Transformation button (as shown below).



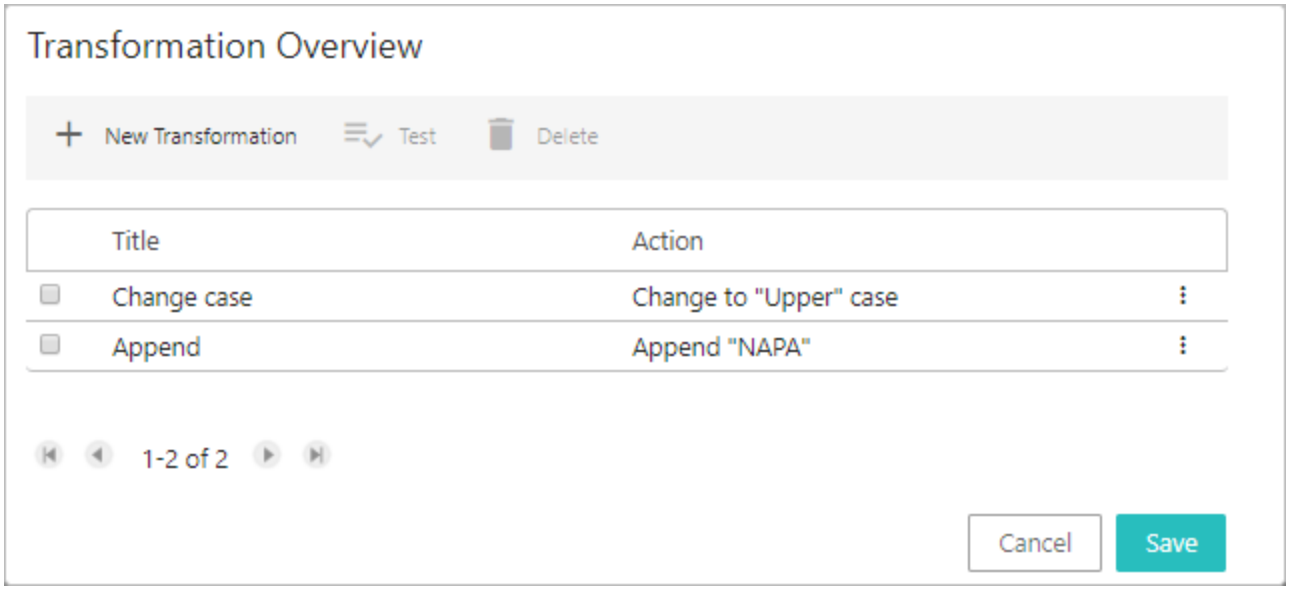
Clicking on **New Transformation** displays the list of rules to be used. Select the relevant transformation.



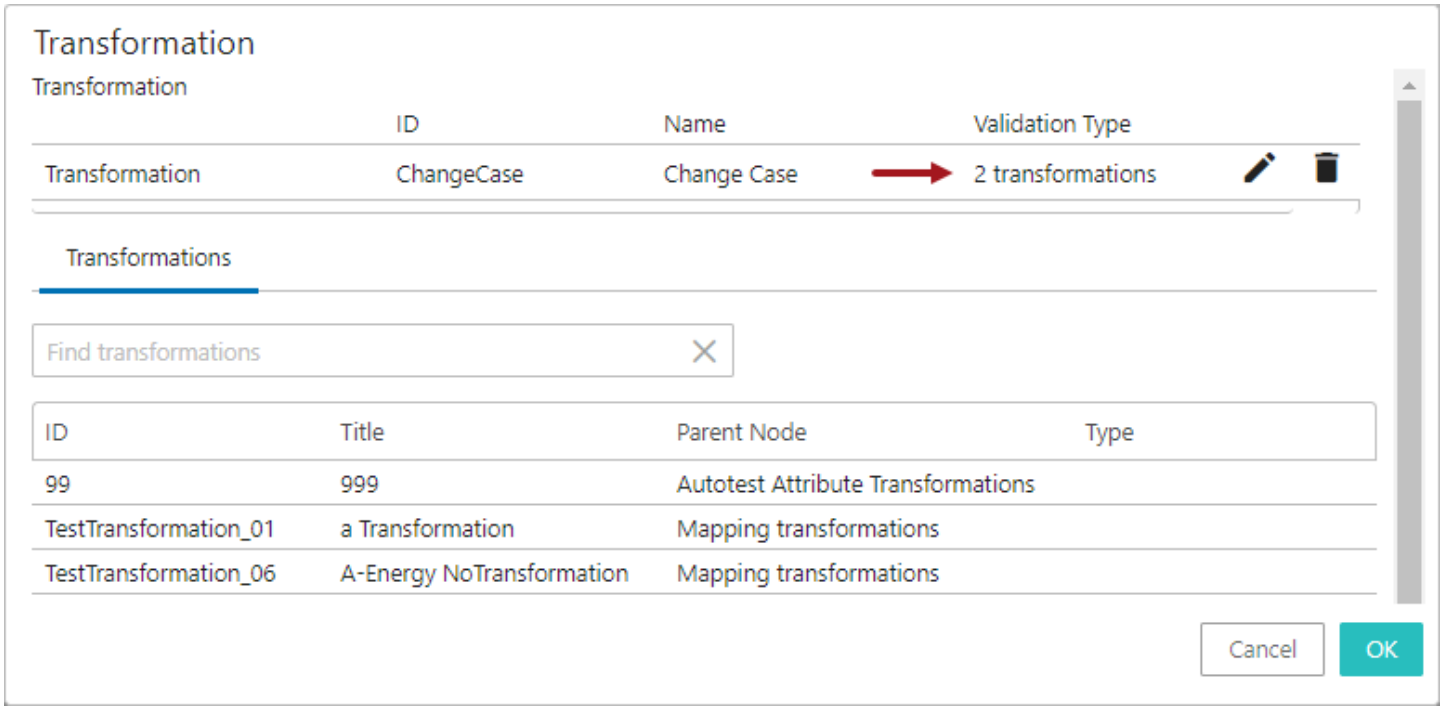
If the selected transformation requires any further configuration, then the **Edit Transformation** dialog will display. Enter the necessary values and click **Save** to save and close the Edit Transformation dialog. The selected transformation will get listed in the Transformation Overview dialog (as shown below). For a description of the available transformations, refer to the Transformations topic in the Resource Materials online help documentation.

Note: It is possible to create multiple sequential transformations as a rule, but the user must to be careful about the order in which the transformations are applied.

In the example below, 'Change case' and 'Append' transformations are used.



Click **Save** to save and close the Transformation Overview dialog. The Validation Type column within the Mapping Guide window will display the total number of transformations available in the selected attribute transformation.

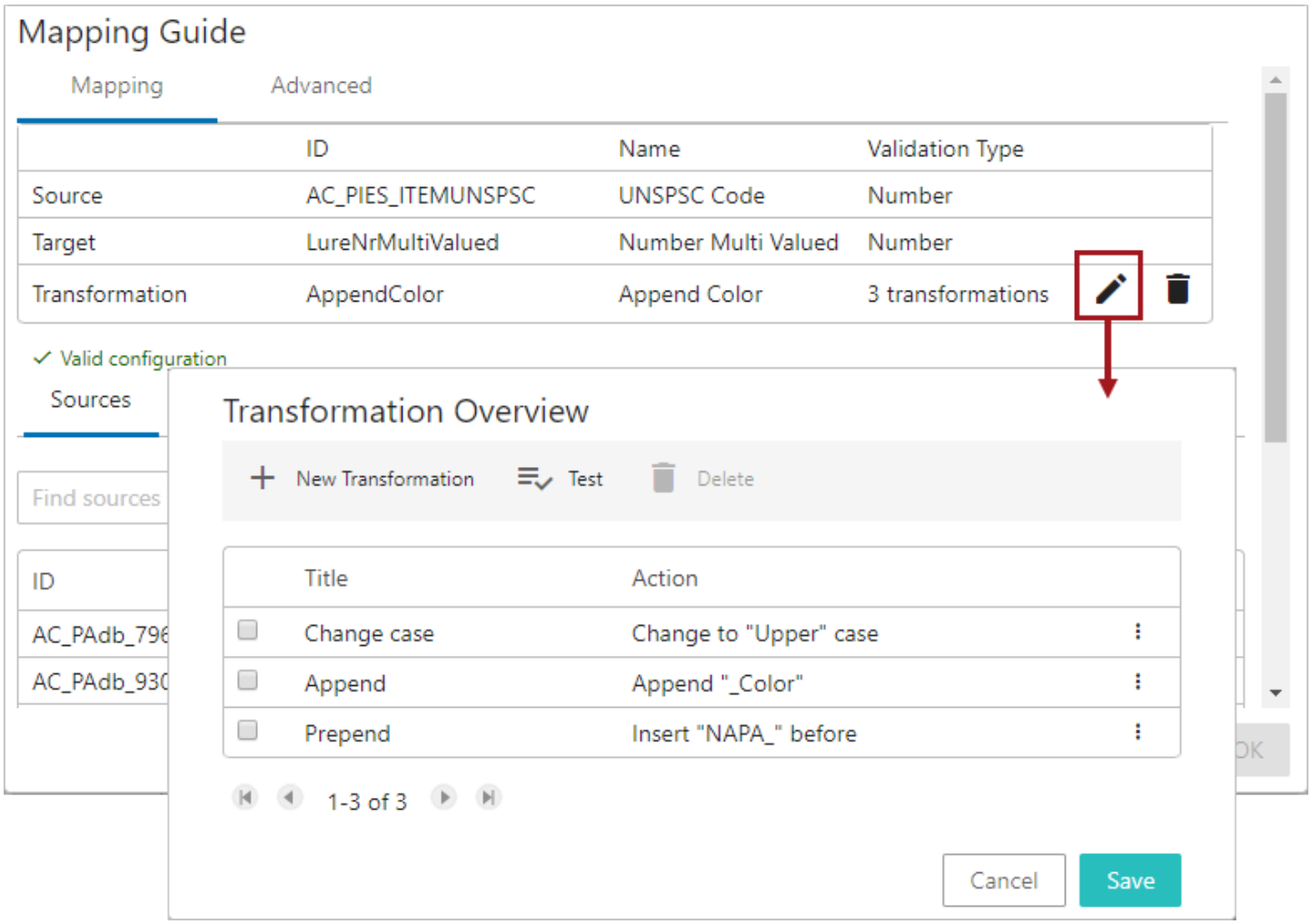


Modifying Transformations on the Transformation Overview Dialog

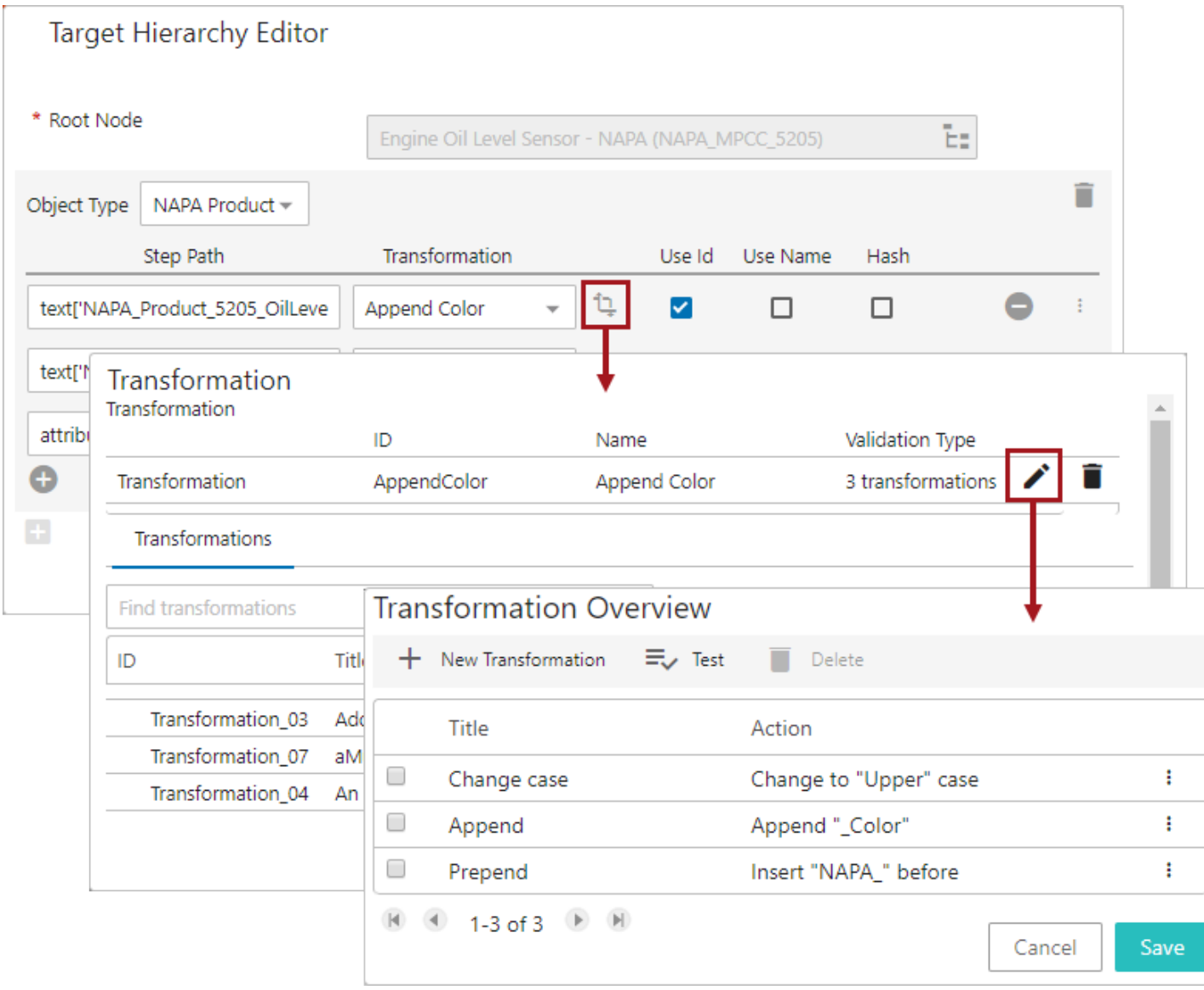
On the Transformation Overview dialog, the user has the flexibility to add, edit, delete, or rearrange the listing order of the transformations. When there are multiple transformations listed, the order of execution of each transformation is based on the order in which it is listed within the Transformation Overview dialog.

Following are the two ways that the Transformation Overview dialog can be accessed in the Web UI:

- Through the Mapping Guide window by clicking the edit button ( ) for the attribute transformation.

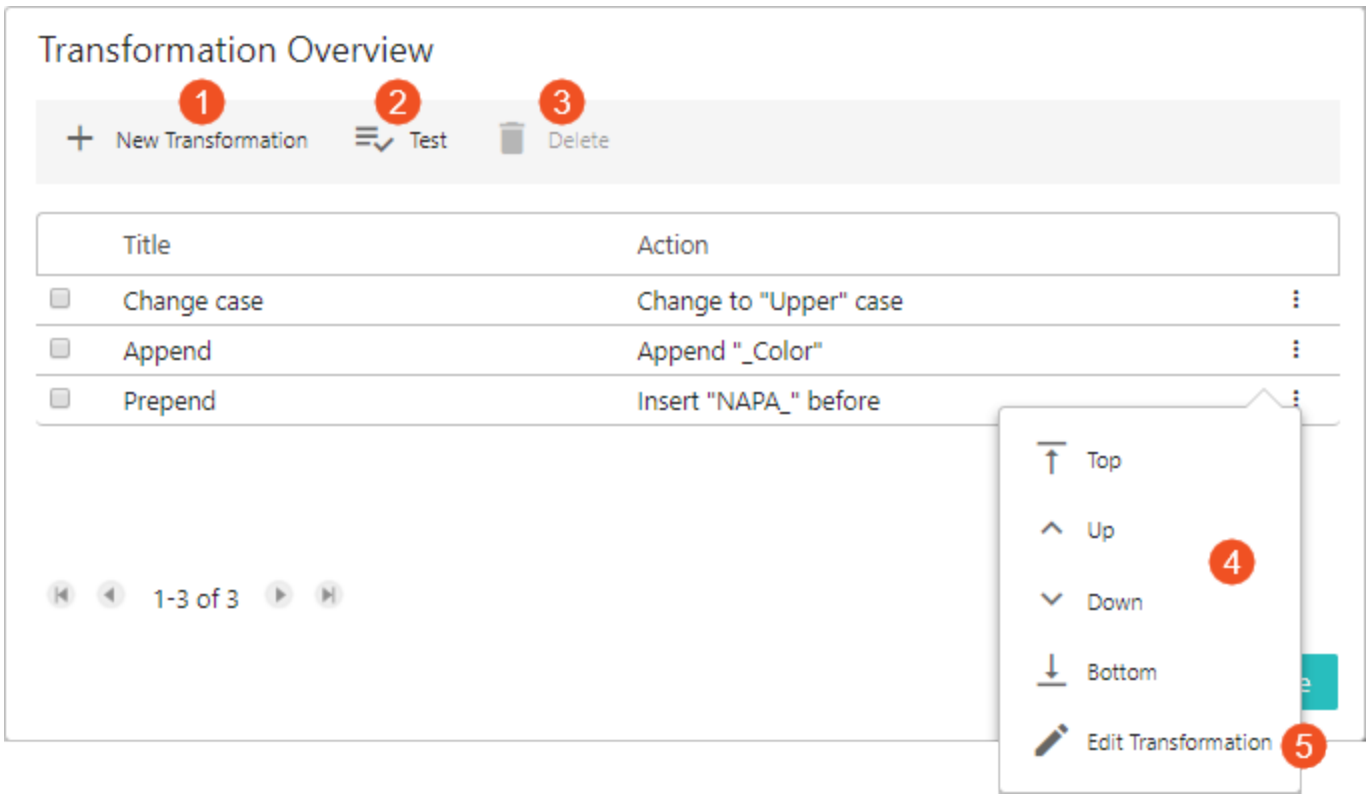


- Through the Transformation Hierarchy Editor window by clicking the 'Select and modify transformation' icon ( ), and then clicking the edit button ( ) for the attribute transformation.



In the following image, the various functionalities that are available in the Transformation Overview dialog are numbered.

In the image below, the attribute transformation is configured to include multiple transformations. Each of the transformation is displayed as rows.

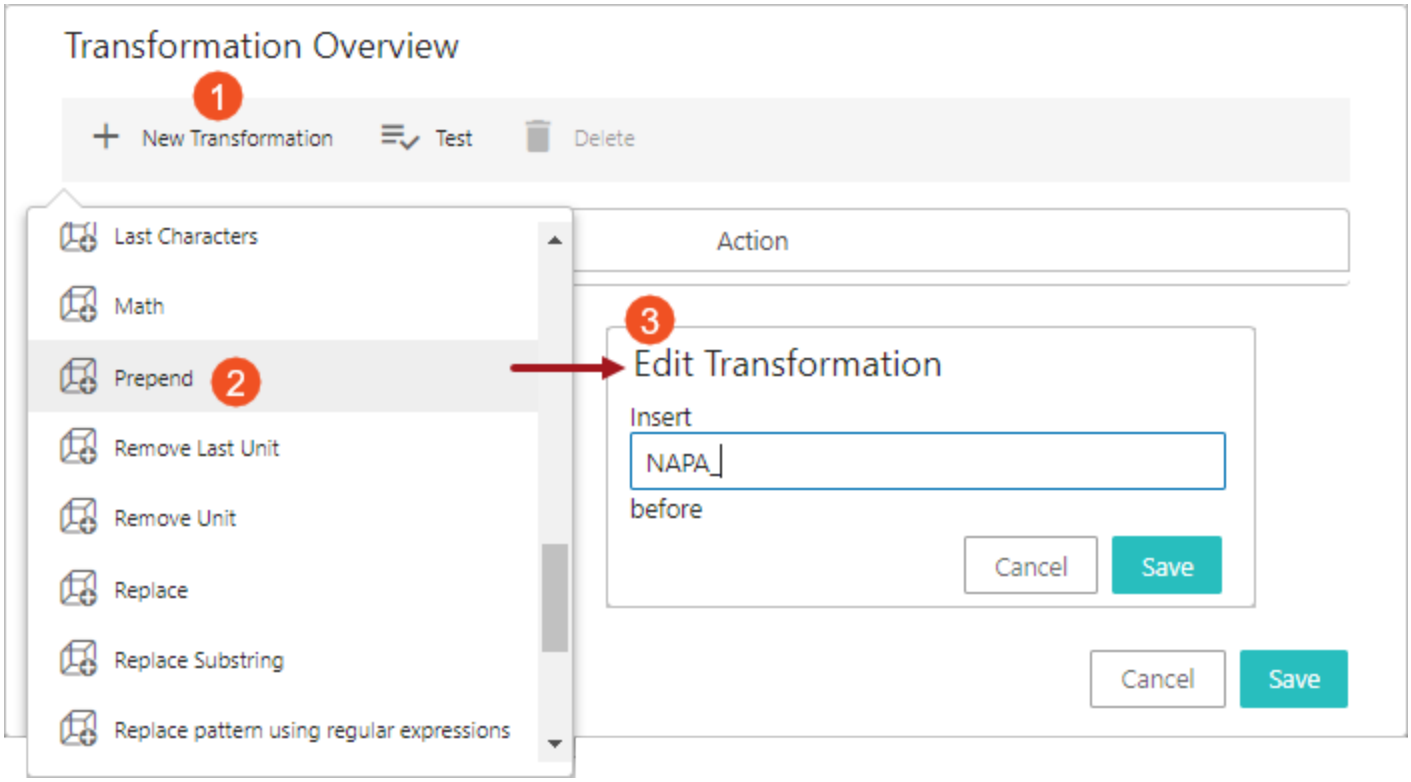


The available modifications defined below include:

1. Add a new transformation to the attribute transformation
2. Test the result of the attribute transformation
3. Delete an existing transformation
4. Change the listing order of the transformation
5. Edit an existing transformation

Add a transformation

Adding a set of transformations to the attribute transformation will make a rule, and when applied in the Mapping plugin, it will affect the Target object name / ID / attribute value as defined within each of the transformations.



1. Click on the **New Transformation** button to display the list of transformations available.
2. Select the relevant Transformation. If the selected Transformation requires any further configuration, then the **Edit Transformation** dialog will display.
3. Define the transformation and click **Save** to save and close the Edit Transformation dialog.

The selected transformation is listed in the Transformation Overview dialog. For a description of the available transformations, refer to the Transformations topic in the Resource Materials online help documentation.

Test an Attribute Transformation

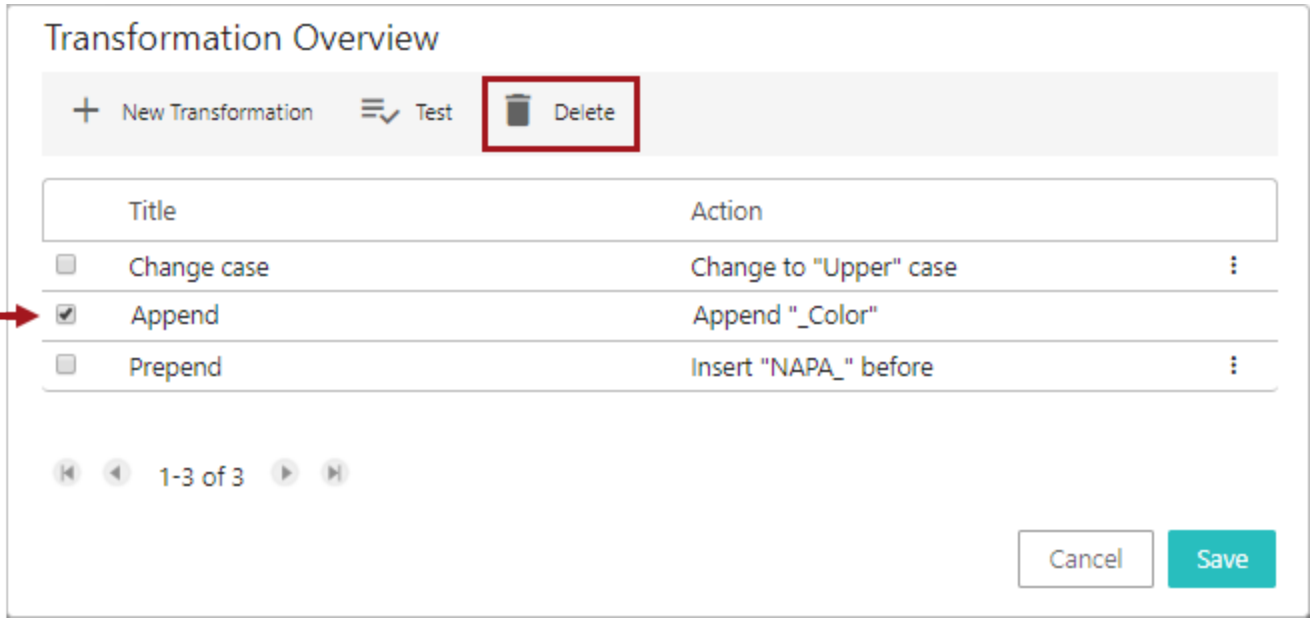
Details on how to test an attribute transformation configured in a Mapping plugin is explained in the Testing Attribute Transformations Configured in Mapping Plugins topic.

Delete a Transformation

Deleting a transformation will no longer display nor execute the transformation in the selected attribute transformation. It must only be deleted when it is no longer required. Deletion made through the Mapping Guide window impacts every other place where this transformation is applied / used.

1. In the Transformation Overview dialog, select the checkbox that is available on the left of the transformation that is intended to be deleted. This makes the **Delete** button (

) visible in the toolbar.

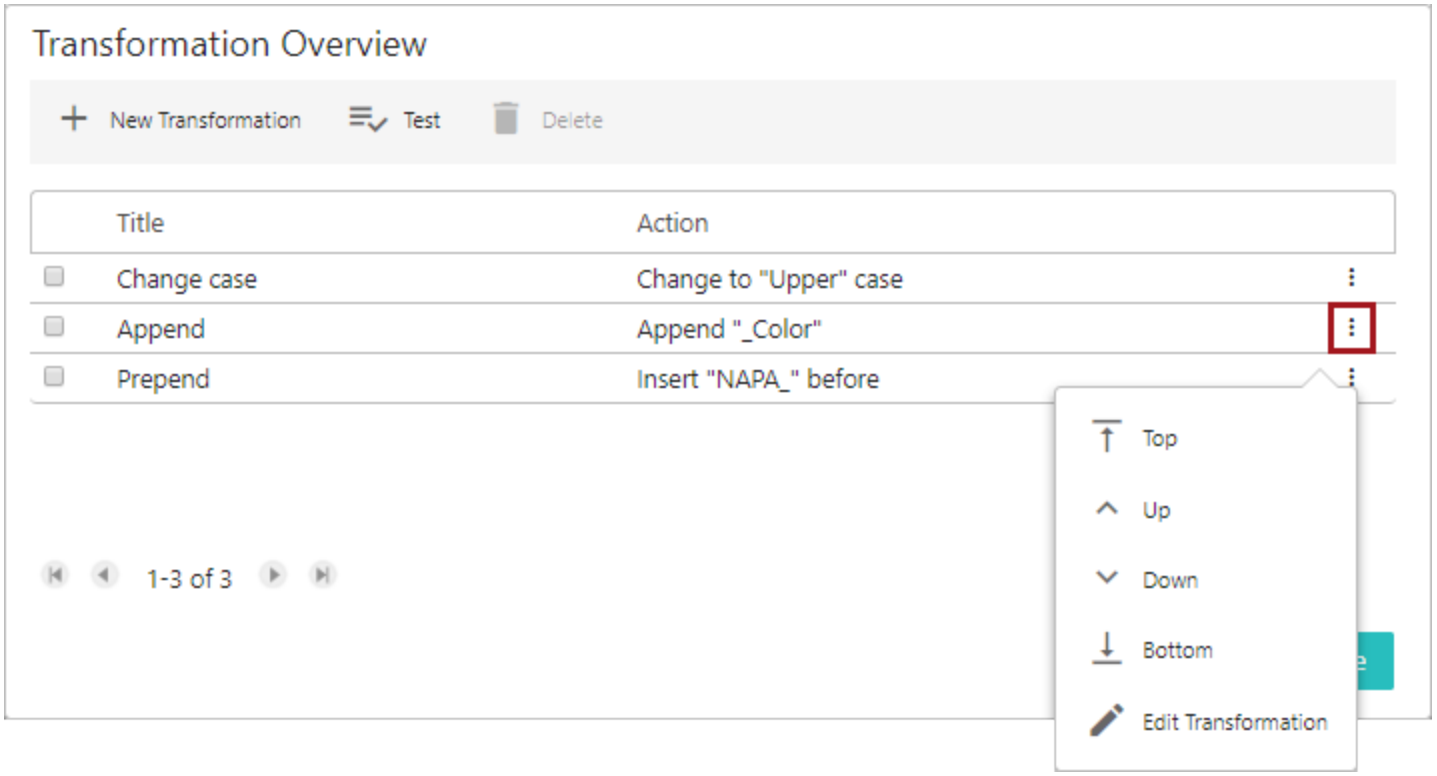


2. Click the **Delete** button. This removes the selected transformation(s) from the Transformation Overview dialog in Web UI and also removes the functionalities defined in that particular transformation.
3. Click the **Save** button to confirm that the transformation row should be deleted.

Change the Order of the Transformations

When there are multiple transformations available within the attribute transformation, the transformations are applied in the order in which they are listed within the Transformation Overview dialog. Users can rearrange the order of the transformation as defined below.

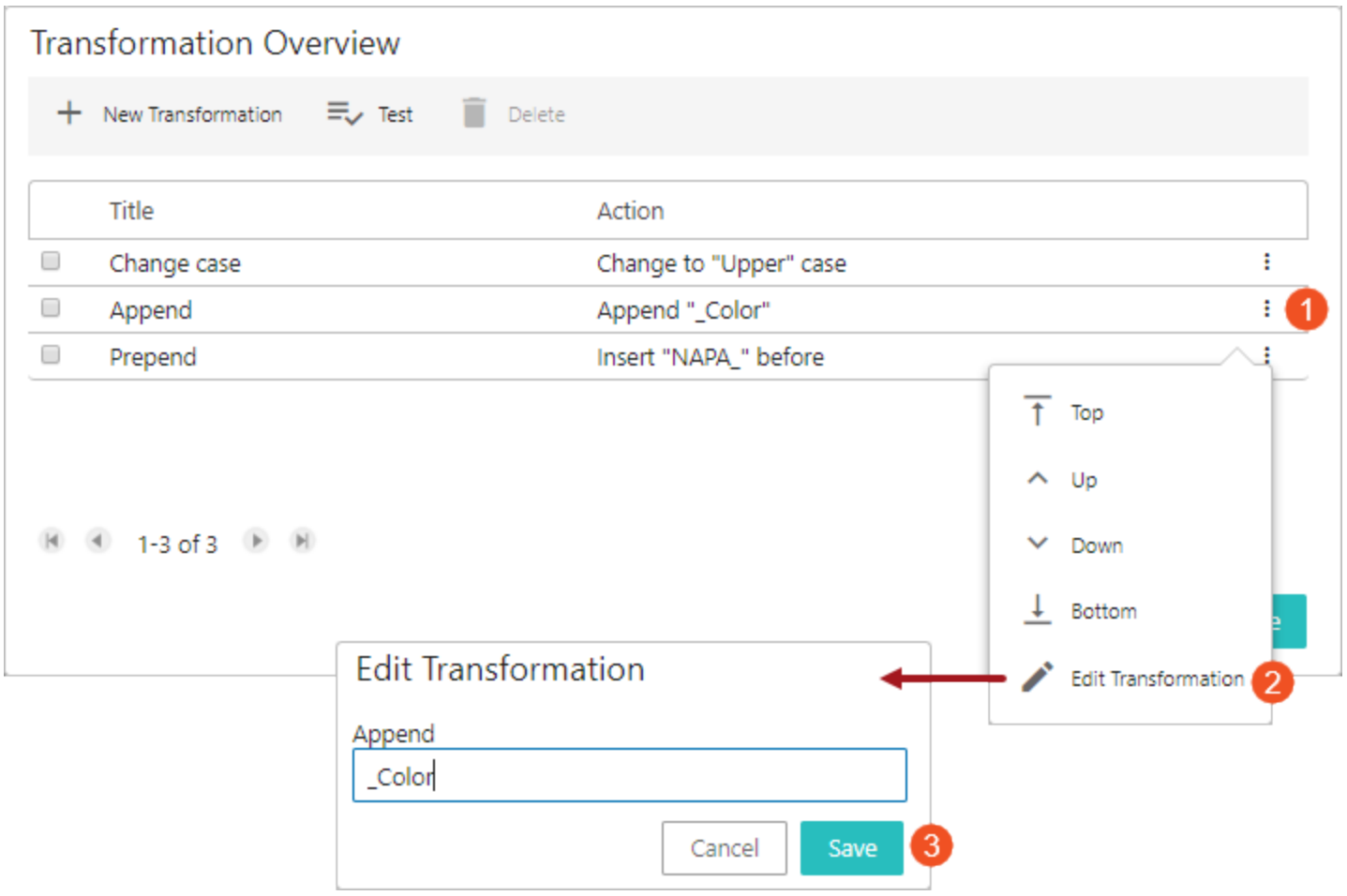
1. For the selected attribute transformation, access the Transformation Overview dialog.
2. Click the three-dotted icon (⋮) that is available in the right of the transformation to display the rearranging dialog. The user can select the Top, Up, Down, or Bottom button to rearrange the transformation accordingly.



Edit an Existing Transformation

Users can edit an existing transformations through the Transformation Overview dialog. Below is the procedure to edit an existing transformation.

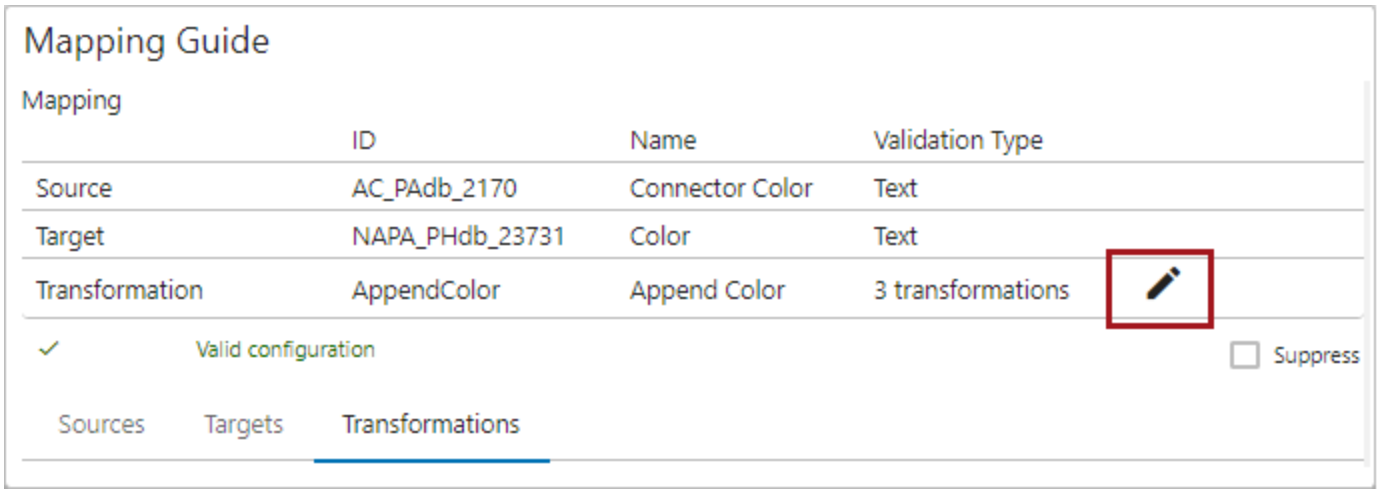
1. For the selected attribute transformation, access the Transformation Overview dialog, and click the three-dotted icon (⋮) that is available in the right of the transformation to display the rearranging dialog.
2. Click the **Edit Transformation** button to open the Edit Transformation dialog.
3. Edit the transformation as needed and click **Save** to save and close the Edit Transformation dialog.


Transformation Overview
New Transformation
Test
Delete
Title
Action
Change case
Change to "Upper" case
Append
Append "_Color"
Prepend
Insert "NAPA_" before
1-3 of 3
Top
Up
Down
Bottom
Edit Transformation
1
2
Edit Transformation
Append
_Color
Cancel
Save
3

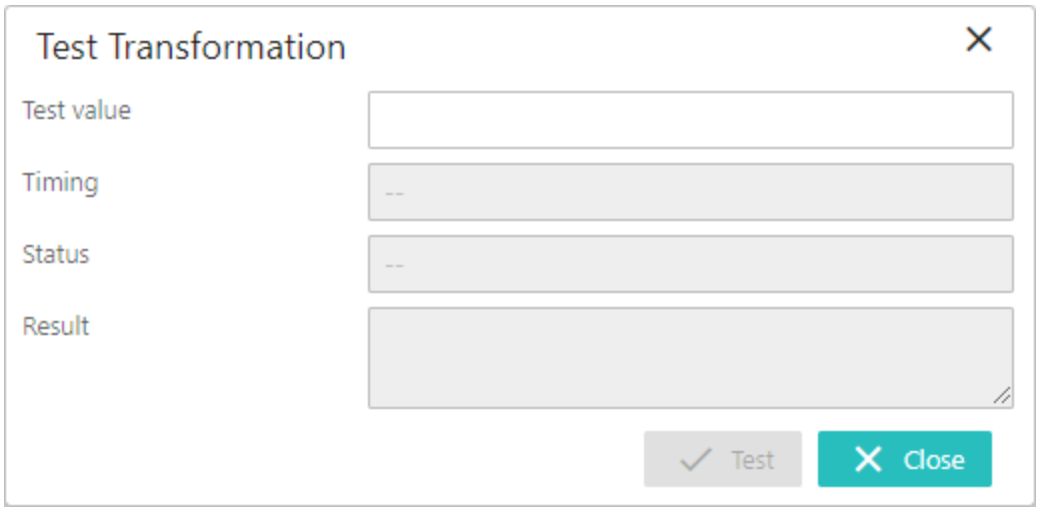
Testing Attribute Transformations Configured in Mapping Plugins

Users can test the attribute transformation configured in the Mapping plugin in the Web UI by entering a sample test value as explained below. This helps to test the transformation by evaluating if the attribute value is transformed correctly without actually changing the data or moving the data from one attribute to the other.

When an existing attribute transformation is added for any Mapping plugin, an edit icon ( ) is displayed within the Transformation field in the Mapping Guide window. Clicking the edit icon ( ) opens the Transformation Overview dialog and lets users test the functionality of the transformation via the Test button (as shown below).

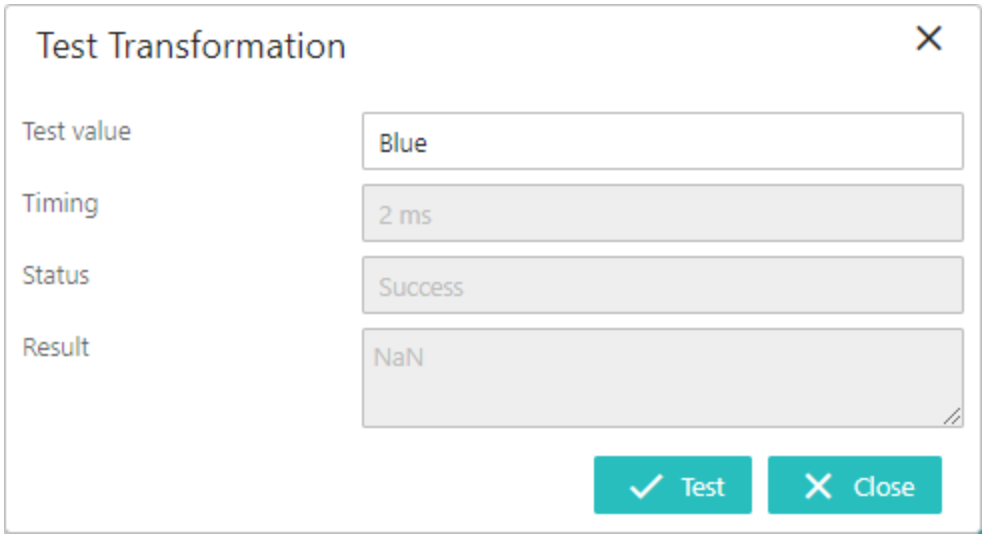


Click the Test button in the Transformation Overview dialog to open the Test Transformation dialog with the parameters explained as follows:



- **Test Value:** This editable blank field lets users enter text to be used as the sample value for testing.
- **Timing:** This read-only field displays the time elapsed in transforming the 'Test value' field once the **Test** action button is clicked in the Test Transformation dialog.
- **Status:** This read-only field displays the success or failure status of the transformation when the **Test** action button is clicked in the Test Transformation dialog.
- **Result:** This read-only field displays the final transformed value of the 'Test value' field.

In the provided example, when the value "Blue" is entered into the 'Test value' field and the 'Test' action button is clicked, the result displayed is 'NaN.' This outcome occurs because the transformation process checks for a numerical value, and as "Blue" is not a number, the result returned is 'NaN,' indicating 'Not a Number.'



Executing Mapper Configuration Setup Entity

The Mapper Configuration Setup Entity can be executed in the following ways:

- By Executing Through Mapper Action Button (this is the recommended method in the Web UI as it will be faster)
- By executing through Stacked Mapper Action button (this is being used when multiple Mapper Configuration Setup Entity has to be accessed standing on the object)
- By executing through the Onboarding Comparison Screen

Setup entity definitions can be exported as comments and submitted to an external source control system for comparison purposes. For details, refer to the Configuration Management documentation.

Prerequisites

It is assumed that the admin user has knowledge of STEP administrative functions and experience working in System Setup, including creating and editing business rules, workflows, and Web UIs. This section targets only the specific information needed for a knowledgeable STEP admin user to execute the Mapper Configuration in different possible ways. For more introductory material of these concepts, refer to the Business Rules, Workflows, and Web User Interfaces sections of **STEP Online Help**.

Before any Mapper Configuration is executed, the relationship must be established through references between the Source object to the Target object.

Before any Mapper Configuration is executed, it is necessary that the configuration aspects of the Data Onboarding solution in both the workbench and the Web UI are completed. For more information about creating and configuring the mapper configuration setup entity, refer to the Data Onboarding Solution Initial Setup and the Configuring Web UI for Data Onboarding Solution topics within this section.

Executing Through Mapper Action Button

This process involves defining an action button called **Mapper Action** to hold the Mapper Configuration setup entity, and configuring the action button in required screens. Clicking on the action button will initiate the Mapper Configuration setup entity on the selected node.

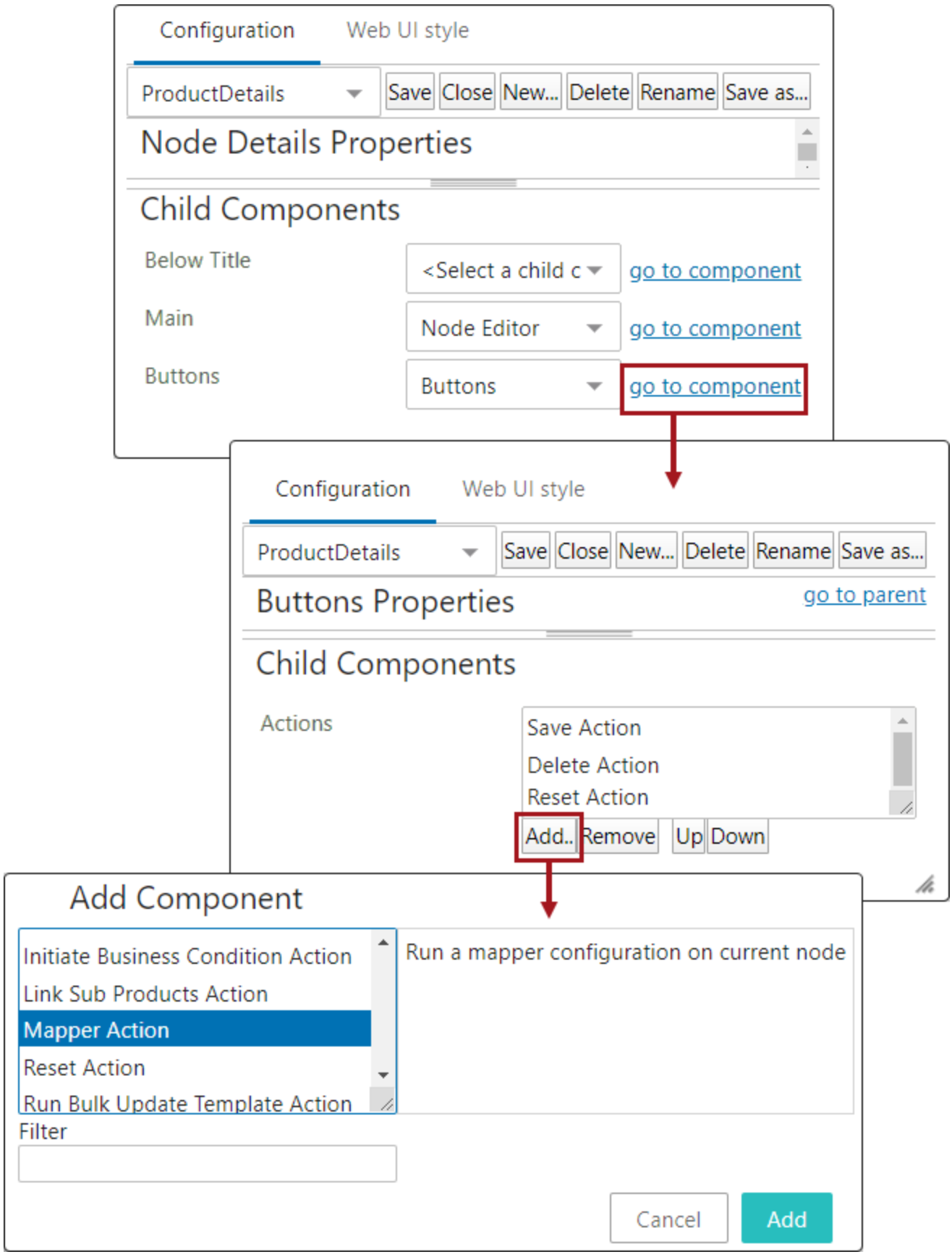
The **Mapper Action** button can be configured to be available within the Source object (or Target object) screen, or any other places that allows the action button to be executed (e.g., run as a bulk update on a Collection, or initiate the action button with a node selected in the Search by Card screen). For the ease of understanding, this document depicts an example of configuring the Mapper Action button in the Node Detail screen that is configured to view the Source object.

> **Note:** If the Mapper Action button is to be configured in the Target object screen, then it is required that the user selects the Run From Target parameter as explained in this topic below.

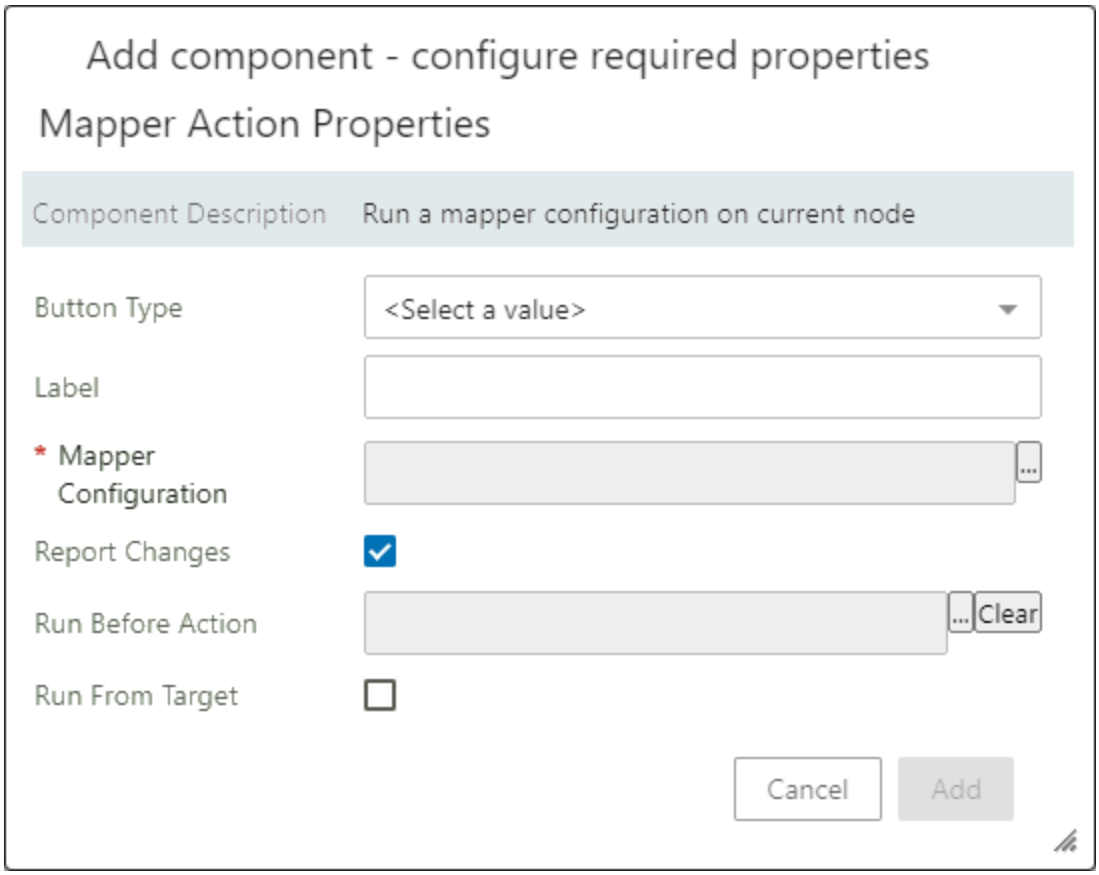
Following are the steps to configure the Mapper Action button.

1. In the Web UI designer, navigate to the screen that requires the Mapper Action button to be configured > Buttons > go to component > Button Properties.

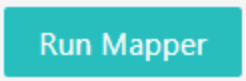
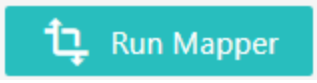
2. Click **Add** next to the Actions field that is available within the Buttons Properties to access the Add Component dialog.


Configuration
Web UI style
ProductDetails
Save
Close
New...
Delete
Rename
Save as...
Node Details Properties
Child Components
Below Title
<Select a child c
go to component
Main
Node Editor
go to component
Buttons
Buttons
go to component
Configuration
Web UI style
ProductDetails
Save
Close
New...
Delete
Rename
Save as...
Buttons Properties
go to parent
Child Components
Actions
Save Action
Delete Action
Reset Action
Add..
Remove
Up
Down
Add Component
Initiate Business Condition Action
Link Sub Products Action
Mapper Action
Reset Action
Run Bulk Update Template Action
Run a mapper configuration on current node
Filter
Cancel
Add

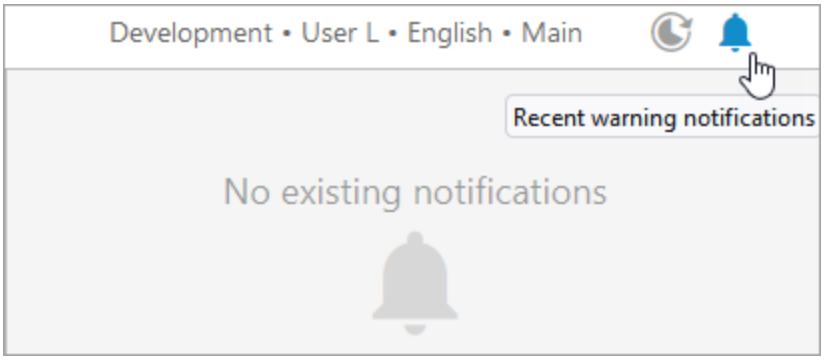
3. Find **Mapper Action** and click **Add**, and the Mapper Action Properties dialog will be displayed.



4. Populate the parameters as detailed below:
   - **Button Type:** Select from ICON_AND_TEXT, ICON, and TEXT using the Button Type dropdown. If the user choose to select TEXT or ICON_AND_TEXT and the Label parameter is empty, the default text 'Run Mapper' will display.

Button Types	Button Displayed As
ICON	
TEXT	
ICON_AND_TEXT	

- **Label:** This parameter defines the text that the user wants to appear in the button that is displayed on screen.
- **Mapper Configuration:** Required parameter to specify the Mapper Configuration setup entity that needs to be executed. Click the ellipsis button (...) to find and select the Mapper Configuration setup entity that is available in the system.
- **Report Changes:** This parameter is checked by default. Having this parameter checked ensures that the changes effected by the execution of the associated Mapper Configuration setup entity is displayed in the message dialog (explained below) and also in the 'Recent warning notifications' panel, located in the upper right corner of Web UI.

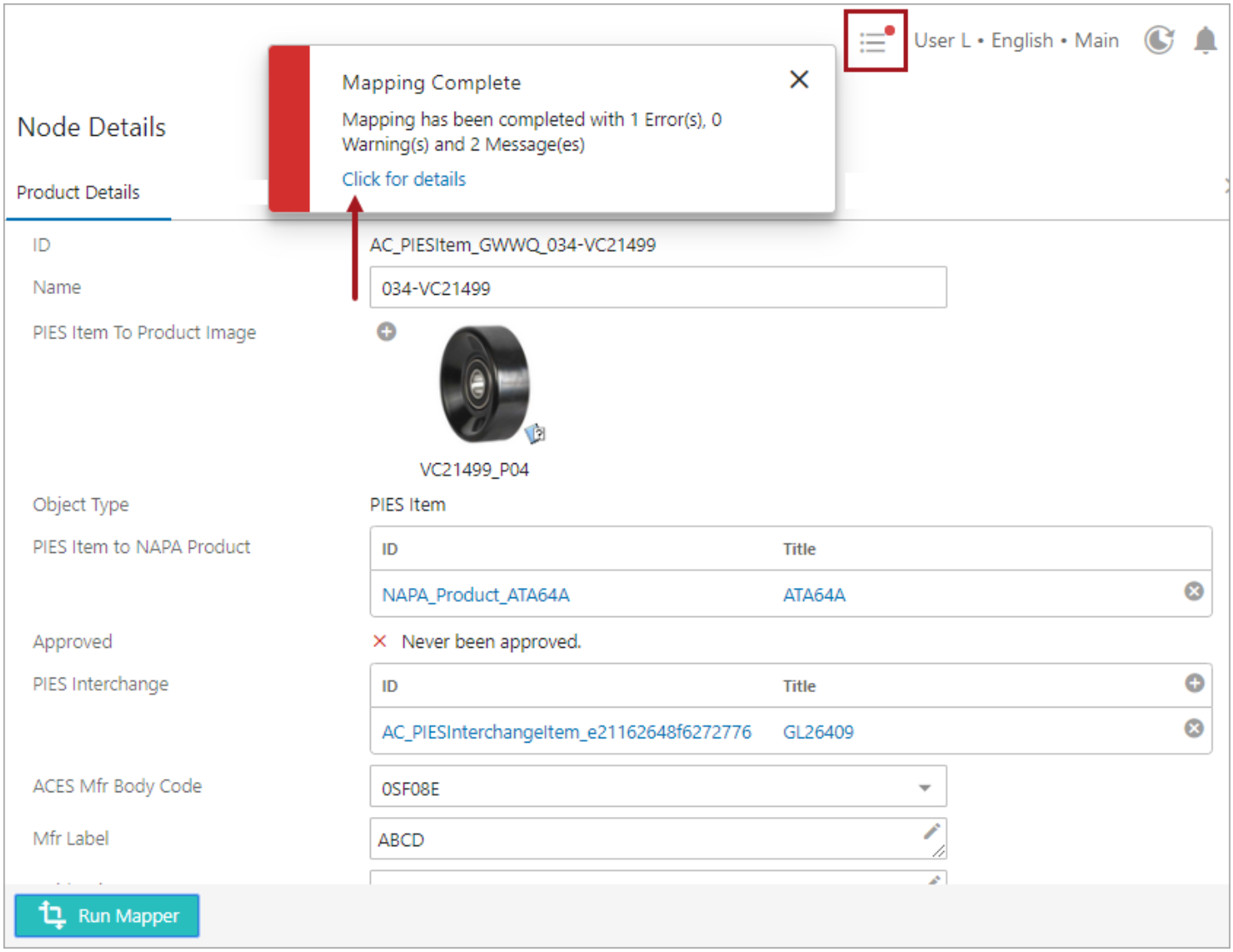


With the parameter checked, the "Mapping Complete - Mapping has been completed with X Error(s), X Warning(s) and X Message(es)" message with the 'Click for details' link will display in the message dialog (as shown below). If this parameter is left unchecked, any errors and warnings encountered in the execution of the Mapper Configuration setup entity will not be displayed, and the message dialog displays as 'Mapping Complete.'

- **Run Before Action:** This parameter allows the user to configure a business action. The configured business action gets executed before the Mapper Configuration setup entity is executed.
- **Run From Target:**This parameter allows the user to execute the Mapper Configuration from the target object. When the Run From Target parameter is selected, users can initiate the onboarding from the target object. The onboarding of the data will continue the same way as it was run from the source object. It is required that the selected target object has a valid source object.

5. Click the **Add** button to close the Mapper Action Properties designer screen.
6. Click the **Save** button in the designer and **Close**.

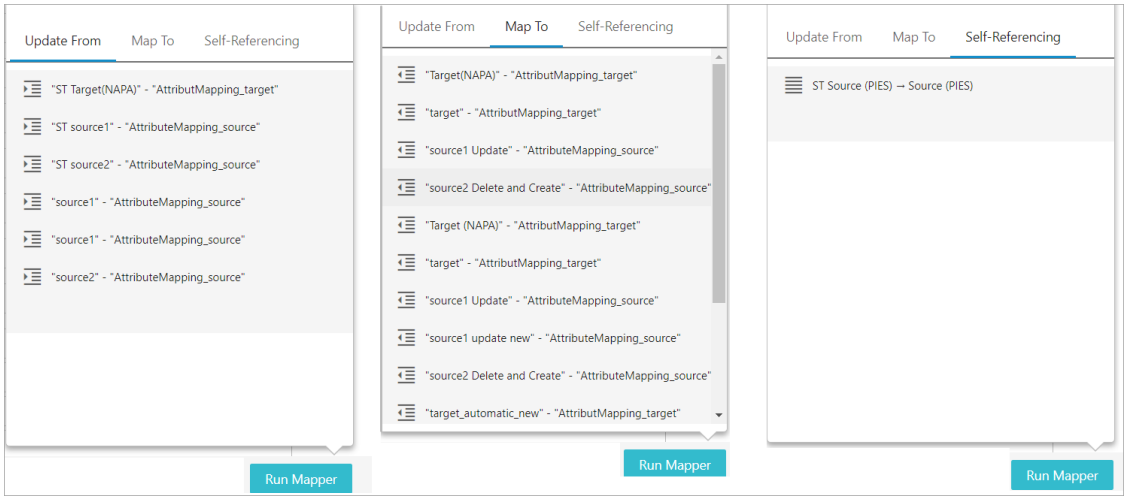
A status message dialog will be displayed when the user clicks on the action button that is configured in any screen. This dialog shows the execution status of the Mapper Configuration and configured business action execution in the top center of the screen. More details on the status of the execution can be found either by clicking the 'Click for details' link in the message dialog, or by accessing it through the 'Recent warning notifications' side panel located in the upper right corner of Web UI.



Executing Through Stacked Mapper Action Button

This process involves defining an action button called **Stacked Mapper Action** to hold multiple Mapper Configuration setup entities, and configuring the action button in required screens. Unlike the Mapper Action button described above, this action button provides an option to configure multiple Mapper Configuration setup entity, thereby allowing users to select a Mapper Configuration setup entity standing on the object.

Clicking on the action button will display a dialog (with one or more tabs depending on the Mapper type configured) where users can select a Mapper Configuration setup entity and on the selected node. The Map To tab contains the Mapper Configuration setup entities that are to be run on the source object, the Update From tab contains the Mapper Configuration setup entities that are to be run from the target object, and the Self-Referencing tab contains the Mapper Configuration setup entities that are being self referenced.



The **Stacked Mapper Action** button can be configured to be available within the Source object (or Target object) screen, or any other places that allows the action button to be executed (e.g., run as a bulk update on a Collection, or initiate the action button with a node selected in the Search by Card screen). For the ease of understanding, this document depicts an example of configuring the Stacked Mapper Action button in the Node Detail screen that is configured to view the Source object.

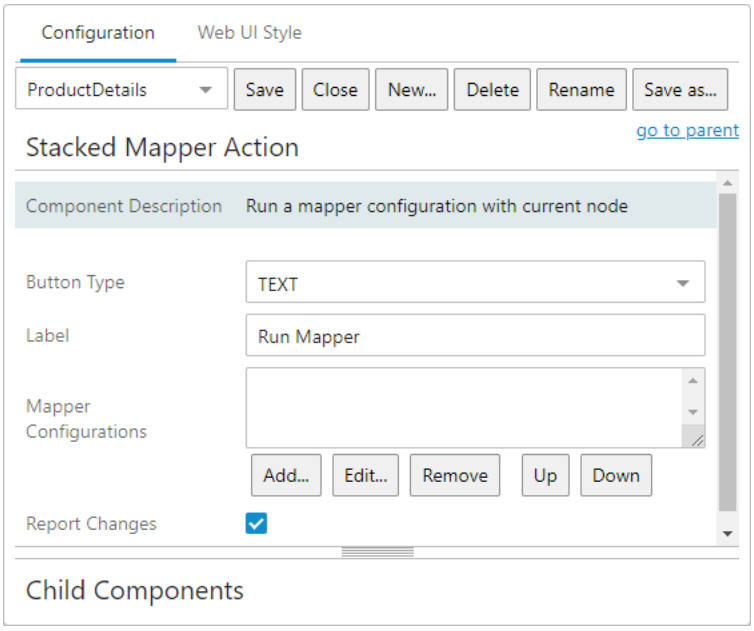
Note: If the Mapper Action button is to be configured in the Target object screen, then it is required that the user selects the appropriate option in the Run On parameter as explained in this topic below.

Following are the steps to configure the Mapper Action button.

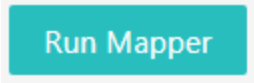
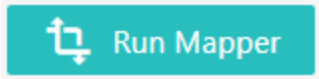
1. In the Web UI designer, navigate to the screen that requires the Mapper Action button to be configured > Buttons > go to component > Button Properties.
2. Click **Add** next to the Actions field that is available within the Buttons Properties to access the Add

Component dialog.

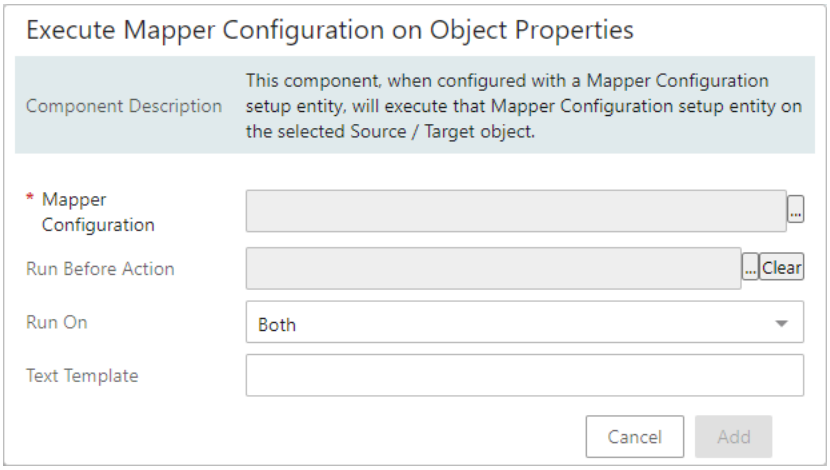
3. Find **Stacked Mapper Action** and click **Add**, and the Stacked Mapper Action Properties dialog will be displayed.



4. Populate the parameters as detailed below:
   - **Button Type:** Select from ICON_AND_TEXT, ICON, and TEXT using the Button Type dropdown. If the user choose to select TEXT or ICON_AND_TEXT and the Label parameter is empty, the default text 'Run Mapper' will display.

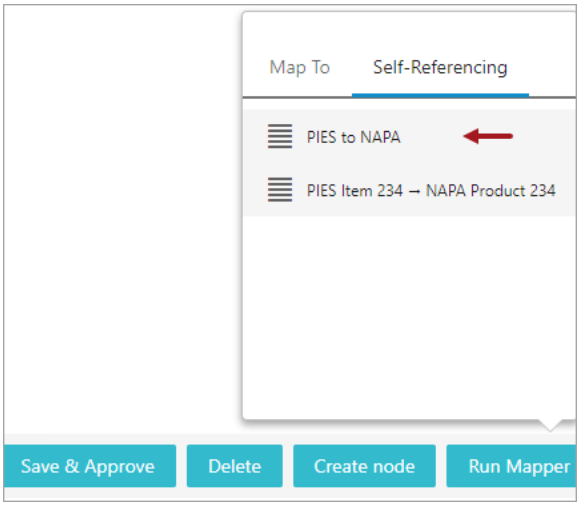
Button Types	Button Displayed As
ICON	
TEXT	
ICON_AND_TEXT	

- **Label:** This parameter defines the text that the user wants to appear in the button that is displayed on screen.
- **Mapper Configurations:** Required parameter to specify the Mapper Configuration setup entity(ies) that needs to be executed. Click the Add button to display the 'Execute Mapper Configuration on Object Properties' dialog where users can find and select the Mapper Configuration setup entity. Further configuration is required within the 'Execute Mapper Configuration on Object Properties' dialog as explained in detail below:

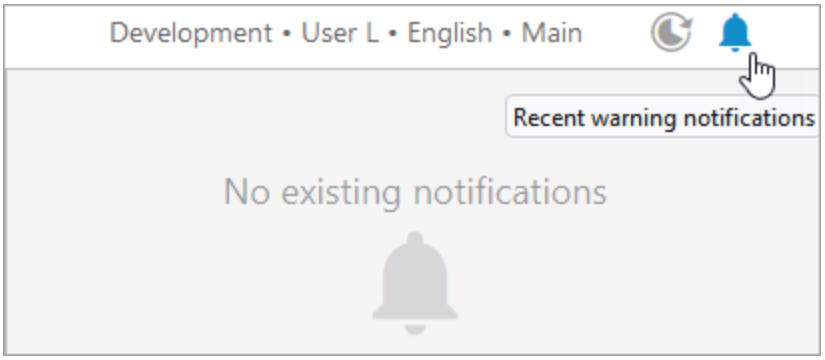


  - **Mapper Configuration:** Required parameter to specify the Mapper Configuration setup entity that needs to be executed. Click the ellipsis button (...) to find and select the Mapper Configuration setup entity that is available in the system.

- **Run Before Action:** This parameter allows users to configure a business action. The configured business action gets executed before the Mapper Configuration setup entity is executed.
- **Run On:** This parameter contains options that determine whether the Mapper Configuration setup entity is to be executed on the source object, target object, or both. The available options are Source, Target, and Both.
- **Text Template:** This field allows users to determine how the Mapper Configuration setup entity has to be displayed in the dialog when the Stacked Mapper action button is clicked.



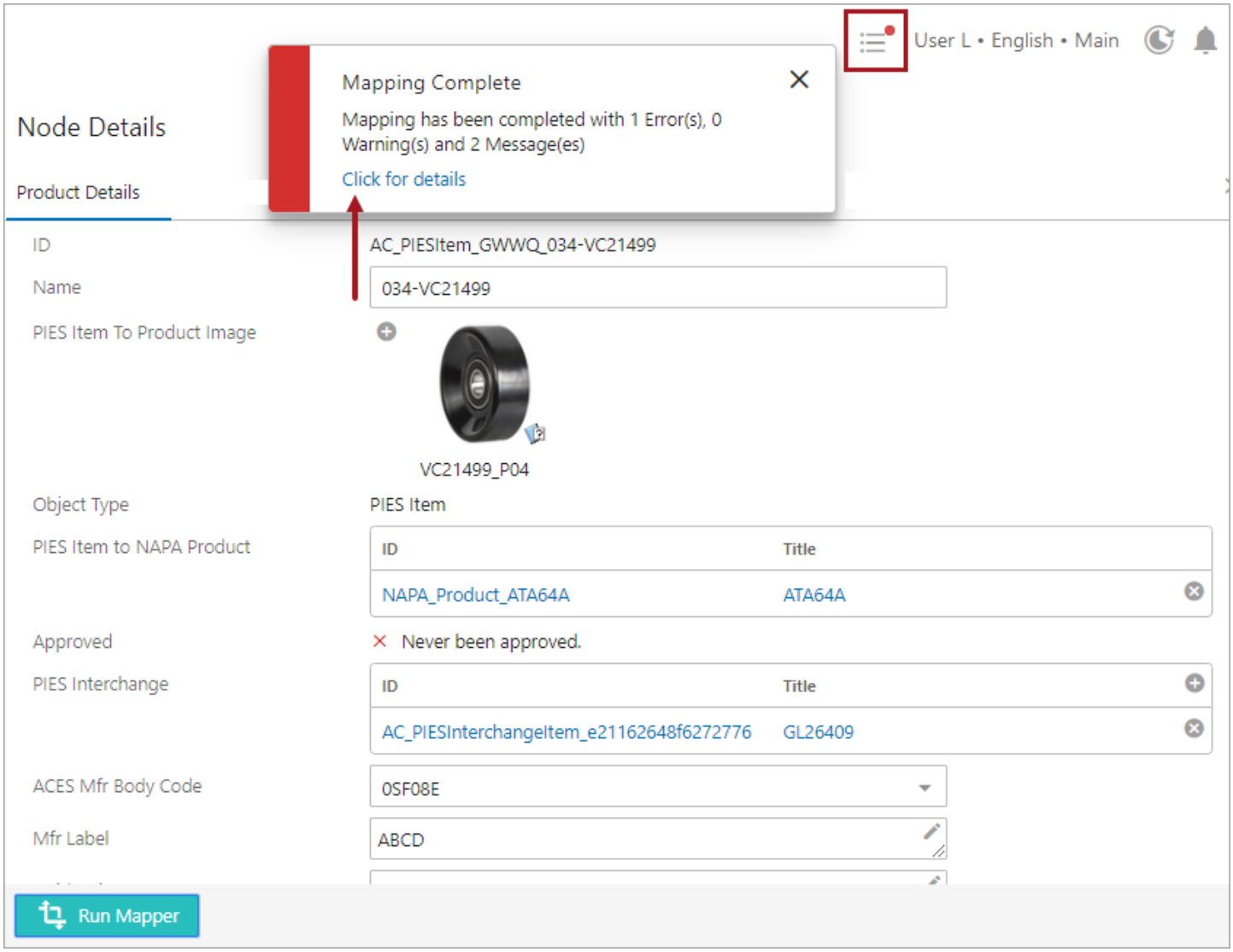
- **Report Changes:** This parameter is checked by default. Having this parameter checked ensures that the changes effected by the execution of the associated Mapper Configuration setup entity is displayed in the message dialog (explained below) and also in the 'Recent warning notifications' panel, located in the upper right corner of Web UI.



With the parameter checked, the "Mapping Complete - Mapping has been completed with X Error(s), X Warning(s) and X Message(es)" message with the 'Click for details' link will display in the message dialog (as shown below). If this parameter is left unchecked, any errors and warnings encountered in the execution of the Mapper Configuration setup entity will not be displayed, and the message dialog displays as 'Mapping Complete.'

5. Click the **Add** button to close the Mapper Action Properties designer screen.
6. Click the **Save** button in the designer and **Close**.

A status message dialog will be displayed when the user clicks on the action button that is configured in any screen. This dialog shows the execution status of the Mapper Configuration and configured business action execution in the top center of the screen. More details on the status of the execution can be found either by clicking the 'Click for details' link in the message dialog, or by accessing it through the 'Recent warning notifications' side panel located in the upper right corner of Web UI.



Executing by Onboarding Comparison Screen

This process involves configuring an Onboarding Comparison Screen to hold the Mapper Configuration and then access this screen for the Source object through multiple ways. This type of execution provides an option for the user to preview the changes affecting the Target object even before the data is onboarded. The Onboarding Comparison Screen allows users to assess each of the changes, and gives the user an option to

accept or reject the changes that will affect the Target object. Additionally, this screen also provides users an option to exclude any Mapping plugin being executed for any required Source object on its subsequent import.

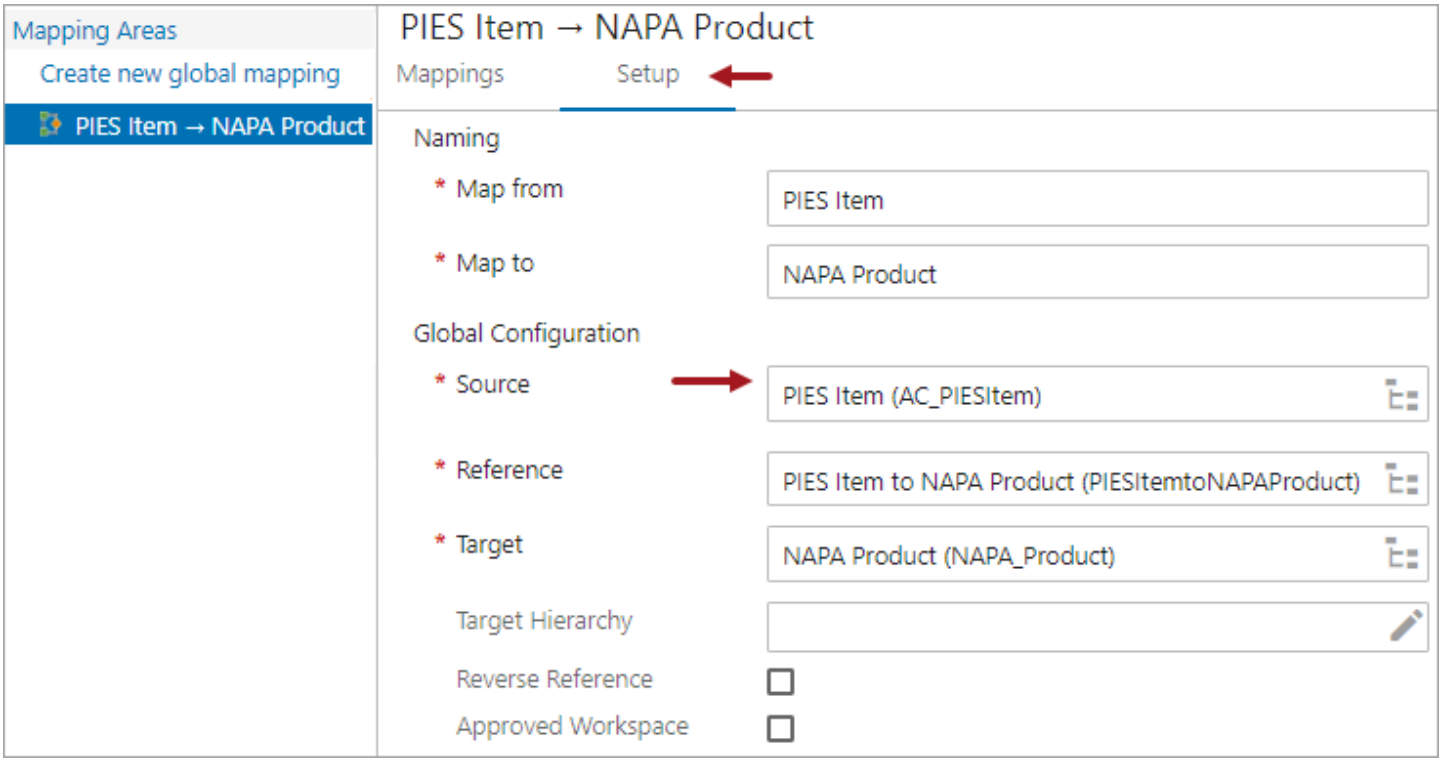
1. Create and configure a Onboarding Comparison Screen. For the full set of instructions on configuring the Onboarding Comparison Screen, refer to the **Configuring Onboarding Comparison Screen** documentation.
2. Review and implement the most common ways to use Onboarding Comparison Screen as described in **Using Onboarding Comparison Screen Interface** topic within this guide.

Executing by a Background Process

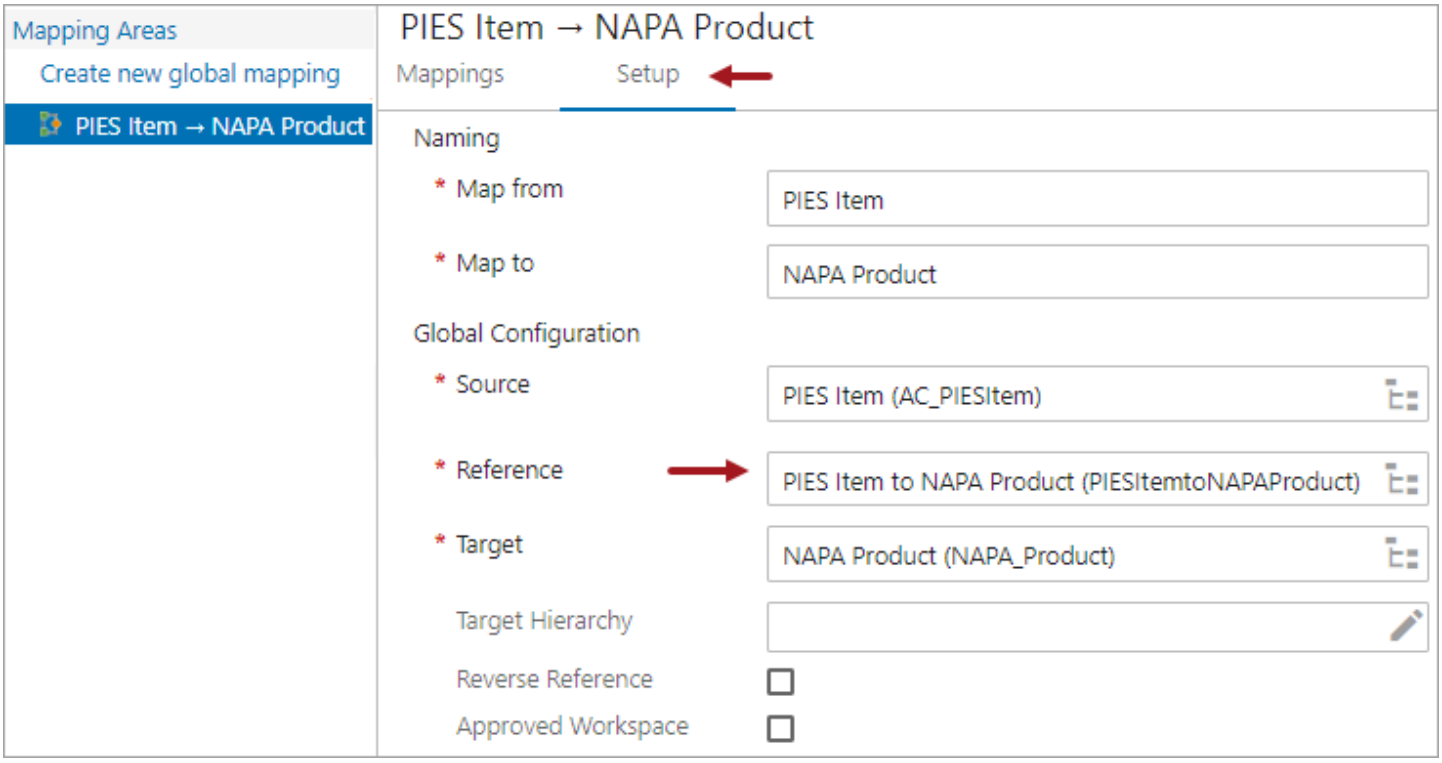
This method of execution is also considered as the automatic onboarding method. This process involves creating a new state in the Import workflow to hold a Mapper Configuration setup entity that gets automatically executed whenever there is a new import. After the file is imported in the system, the Onboarding background process runs a drill down search for the following:

- To identify *all* the **Source objects** in the system that has the change flag attribute value set to 'true.' The change flag attribute is configured in the 'Changed attribute' parameter (explained below). The Source object(s) belong to the object type configured in the 'Source' parameter that is available within the 'Setup' tab of the Onboarding Mappings Details screen for the selected Mapper Configuration setup entity (an example shown below).

  Note: When executing through this method, the background process executes the Mapper Configuration setup entity on *every source objects residing in the system* that has the change flag attribute value set to 'true.' *Not* just the source objects in the importing file.

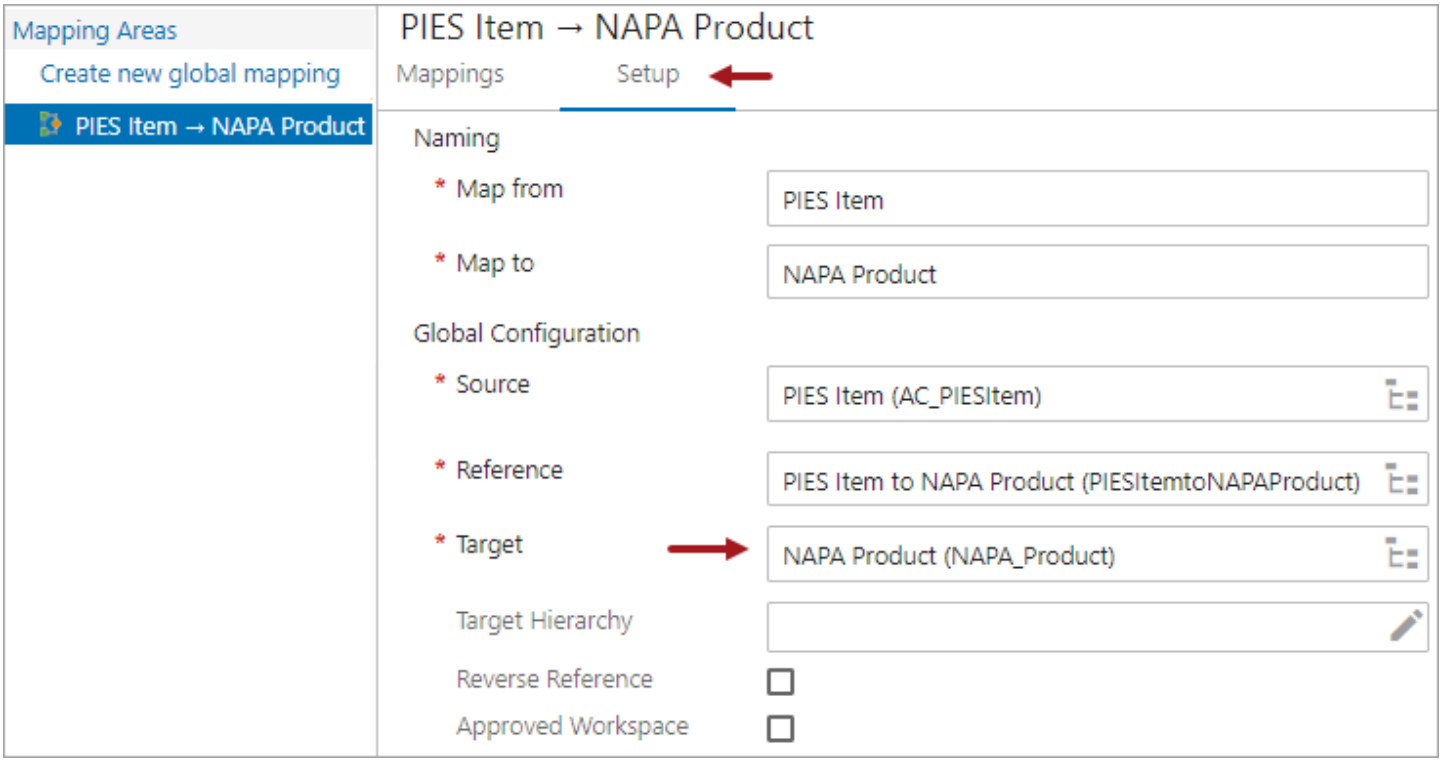


- To identify the **Reference type** configured in the 'Reference' parameter which is available within the 'Setup' tab of the Onboarding Mappings Details screen for the selected Mapper Configuration setup entity (an example shown below).



- To identify the **Target object** belonging to the object type configured in the 'Target' parameter which is available within the 'Setup' tab of the Onboarding Mappings Details screen for the selected Mapper Configuration setup entity (an example shown below). If the Target object does not exist to run the Mapper Configuration on, then it can be made possible to create a Target object based on the condition defined in

the 'Target Hierarchy' Parameter.



Once the Onboarding background process identifies the Source object, Target object, and the reference linking the Source object with the Target object, then the Mapper Configuration setup entity will be executed only on the identified results. This way, Onboarding background process eliminates execution of the Mapper Configuration on all other objects in the system than those that actually requires to be updated.

To execute the Mapper Configuration by a background process, the following configuration is needed:

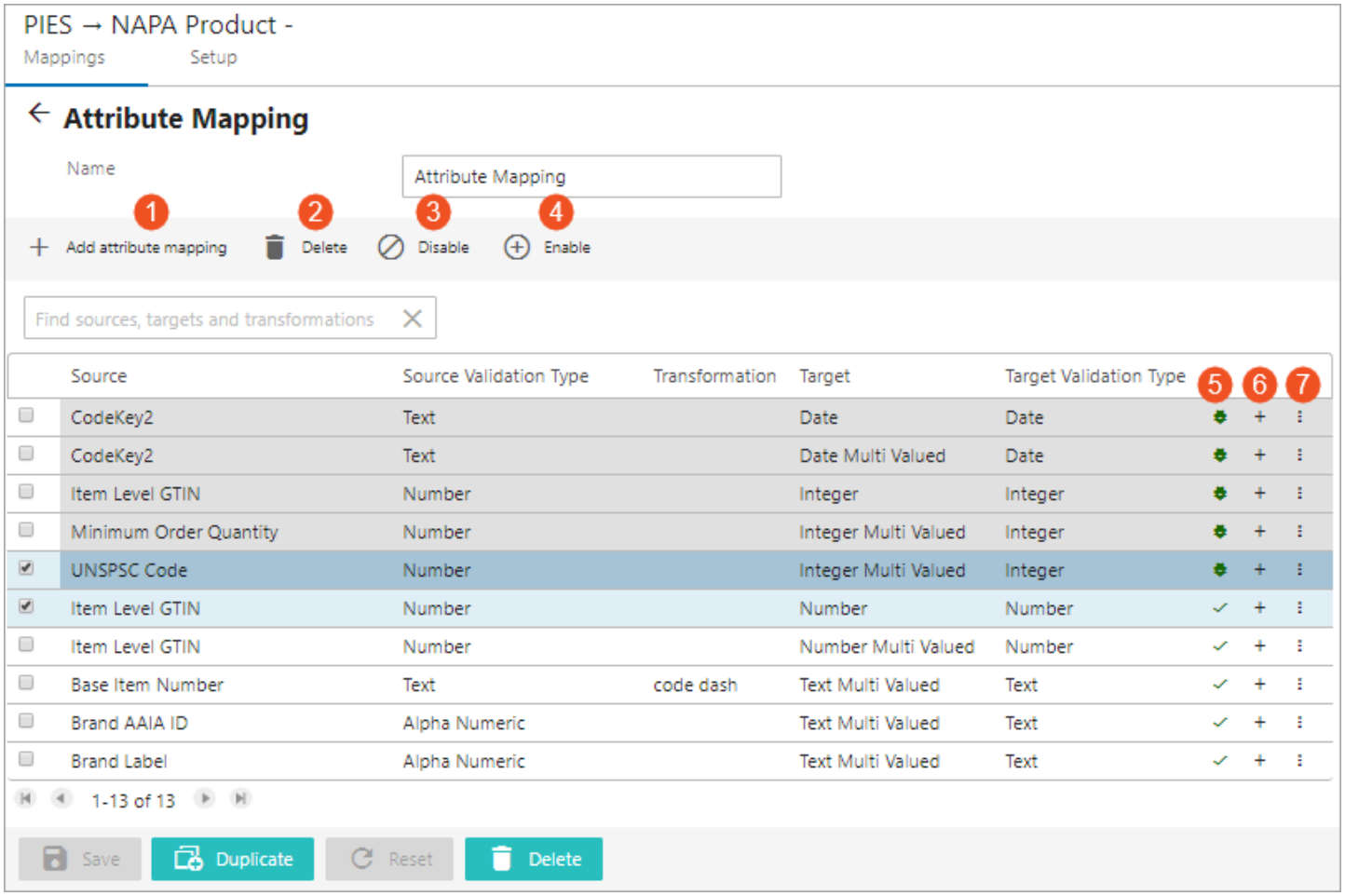
These levels of configuration are explained in detail below. For more information on creating / editing the business action and workflows, refer to the Business Actions section, and the Workflows section of the **STEP Online Help**.

Modifying Mapper Rows on the Onboarding Mapping Details Screen

As described within each of the mapping plugin topics, the user can add any number of mapping rows in the mapping plugin. When there are multiple mapper rows available within the mapping plugin, the order of execution of each mapper row is based on the order in which it is listed within the mapping plugin.

The user has the flexibility to disable, delete, or rearrange the listing order of the mapper rows. The health of the mapper row is displayed next to each mapper row. Users can also add some additional information describing each of the mapper rows. In the following image, the various functionalities are numbered.

In the image below, the Attribute Mapping plugin is configured to perform multiple mapping functions. Each of the mapping functions is displayed as rows, and are called mapping rows.



The available modifications defined below include:

1. Add a mapper row to the mapping plugin
2. Delete a mapper row in the mapping plugin
3. Disable a mapper row in the mapping plugin

4. Enable the disabled mapper row in the mapping plugin
5. Check the health of the mapper row
6. Add a description to the mapper row
7. Change the order of the mapper row in the mapping plugin

Add a Mapper Row to the Mapping Plugin

Details on how to add the mapper rows are provided within each of the mapping plugin topics. For more information about how to add these mapper rows, refer to the Mapping Plugins topic.

Delete a Mapper Row in the Mapping Plugin

Deleting a mapper row allows you to no longer display (and execute) the mapper row for the selected plugin in the Onboarding Mappings Details screen when it is no longer required.

1. For the selected Mapper Configuration setup entity, on the Mappings tab, open the mapping plugin for the mapper row that should be deleted.
2. Select the checkbox that is available on the left of the mapper row that is intended to delete. This makes the Delete button visible in the toolbar.
3. Click the Delete button. This removes the mapper row from the Onboarding Mappings Details screen in Web UI and also removes the functionalities defined in that particular mapper row from being executed when the user executes the Mapper Configuration setup entity.
4. Save the configuration after the row has been deleted.

Disable a Mapper Row in the Mapping Plugin

The execution of the mapper rows within the plugin can be controlled. The rows displayed within the plugin can be disabled as needed, and the disabled mapper row lies in a deactivated state on the mapping plugin. Disabling a mapper row allows you to no longer execute (unless enabled) the mapper row for the selected plugin in the Onboarding Mappings Details screen when it is temporarily not required. By default, all the newly created mapper rows remain activated / enabled.

1. For the selected Mapper Configuration setup entity, on the Mappings tab, open the mapping plugin for the mapper row that should be disabled.
2. Select the checkbox that is available on the left of the mapper row that is intended to be disabled. This makes the Disable button visible in the toolbar.
3. Click the Disable button. This disables the particular mapper row from being executed when the user executes the associated Mapper Configuration setup entity.
4. Save the configuration after the row has been disabled.

The mapper row turns gray when disabled.

Enable the Disabled Mapper Row in the Mapping Plugin

The disabled mapper row can be enabled (reactivated) as per the user requirement. Enabling a mapper row allows you to execute the mapper row for the selected plugin in the Onboarding Mappings Details screen. By default, all the newly created mapper rows remain activated / enabled.

1. For the selected Mapper Configuration setup entity, on the Mappings tab, open the mapping plugin for the disabled mapper row that should be enabled.
2. Select the checkbox that is available on the left of the disabled mapper row that is intended to be enabled. This makes the Enable button visible in the toolbar.
3. Click the Enable button. This enables the particular mapper row to be executed when the user executes the associated Mapper Configuration setup entity.
4. Save the configuration after the row has been enabled.

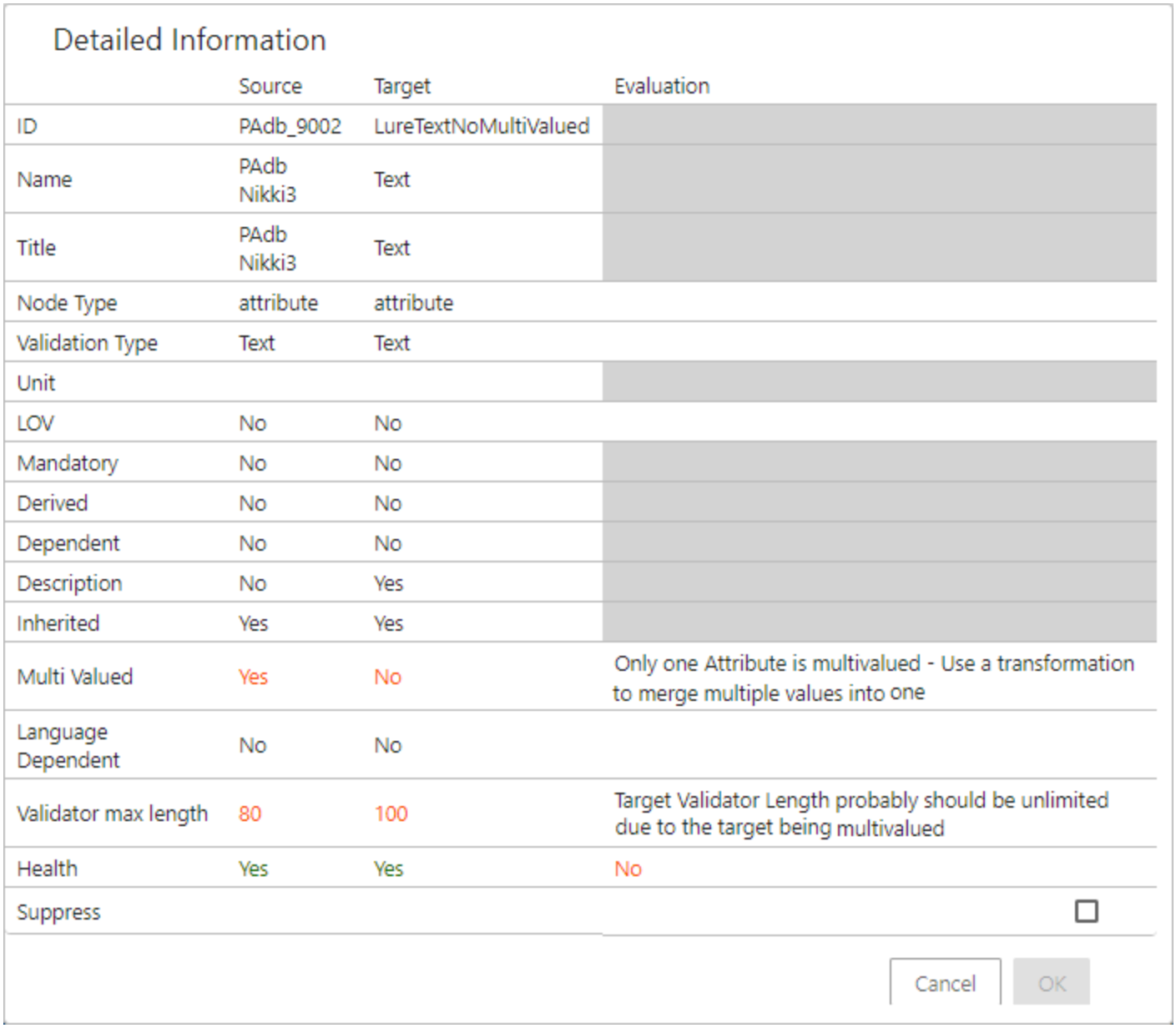
Check the Health of the Mapper Row

The health of the mapper row is displayed by a unique type of icon that is visible next to each mapper row. The following are three different types of icons that depict the health of the mapper row. Click any of the below-mentioned icons to view the health of the mapper row.

- Red bug icon 

  This icon denotes the mapper row as unhealthy and includes some flaws. Clicking on the icon displays a 'Detailed Information' dialog.

  Users can suppress the mismatch warning message by clicking on the 'Suppress' checkbox in the Mapping Guide window. Selecting the 'Suppress' checkbox *only* removes the data type mismatch warnings that is displayed on the Mapping Guide window and **does not** resolve the mismatch irregularities.



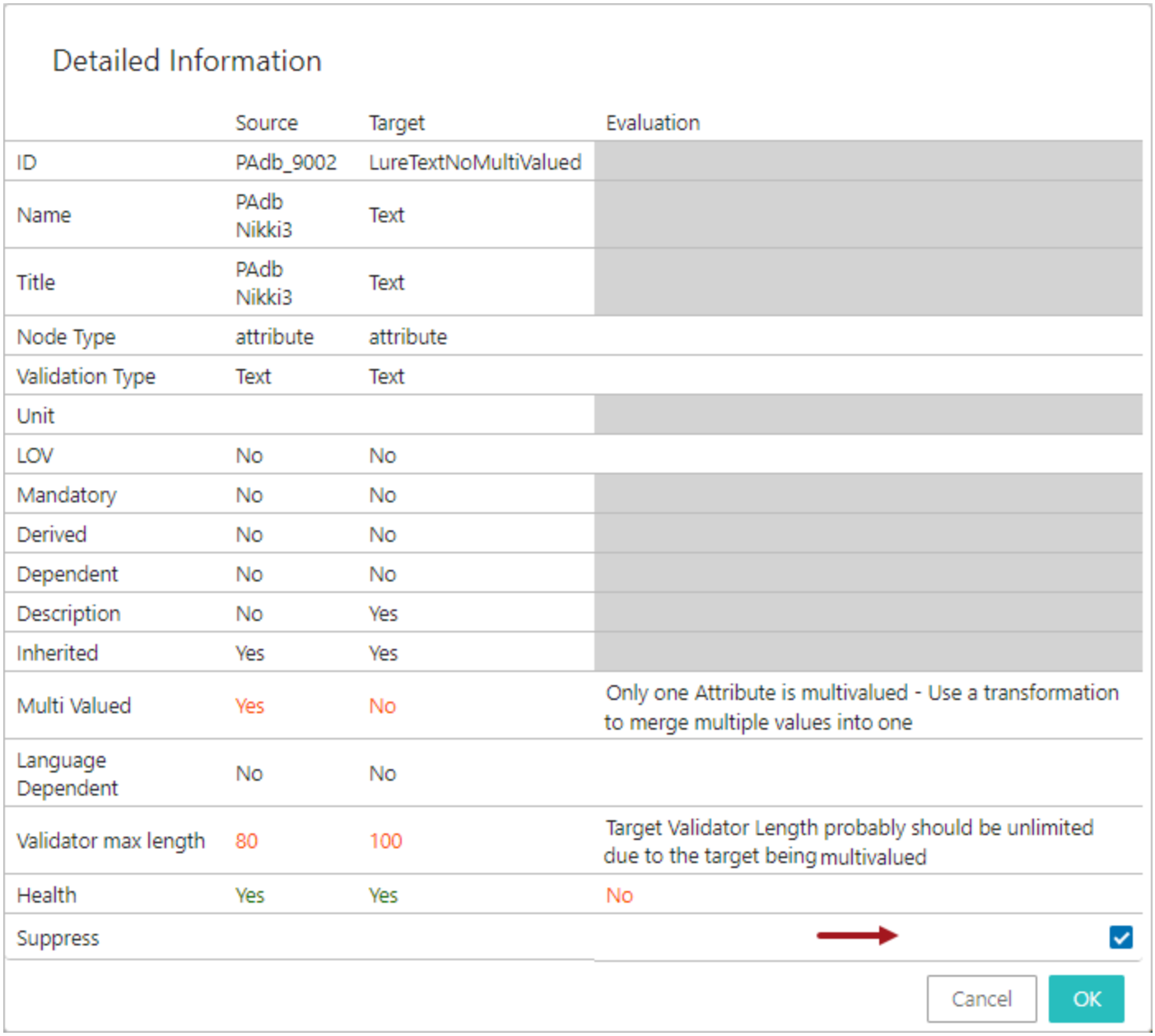
Detailed Information

	Source	Target	Evaluation
ID	PAdb_9002	LureTextNoMultiValued	
Name	PAdb Nikki3	Text	
Title	PAdb Nikki3	Text	
Node Type	attribute	attribute	
Validation Type	Text	Text	
Unit			
LOV	No	No	
Mandatory	No	No	
Derived	No	No	
Dependent	No	No	
Description	No	Yes	
Inherited	Yes	Yes	
Multi Valued	Yes	No	Only one Attribute is multivalued - Use a transformation to merge multiple values into one
Language Dependent	No	No	
Validator max length	80	100	Target Validator Length probably should be unlimited due to the target being multivalued
Health	Yes	Yes	No
Suppress			☐

Cancel OK

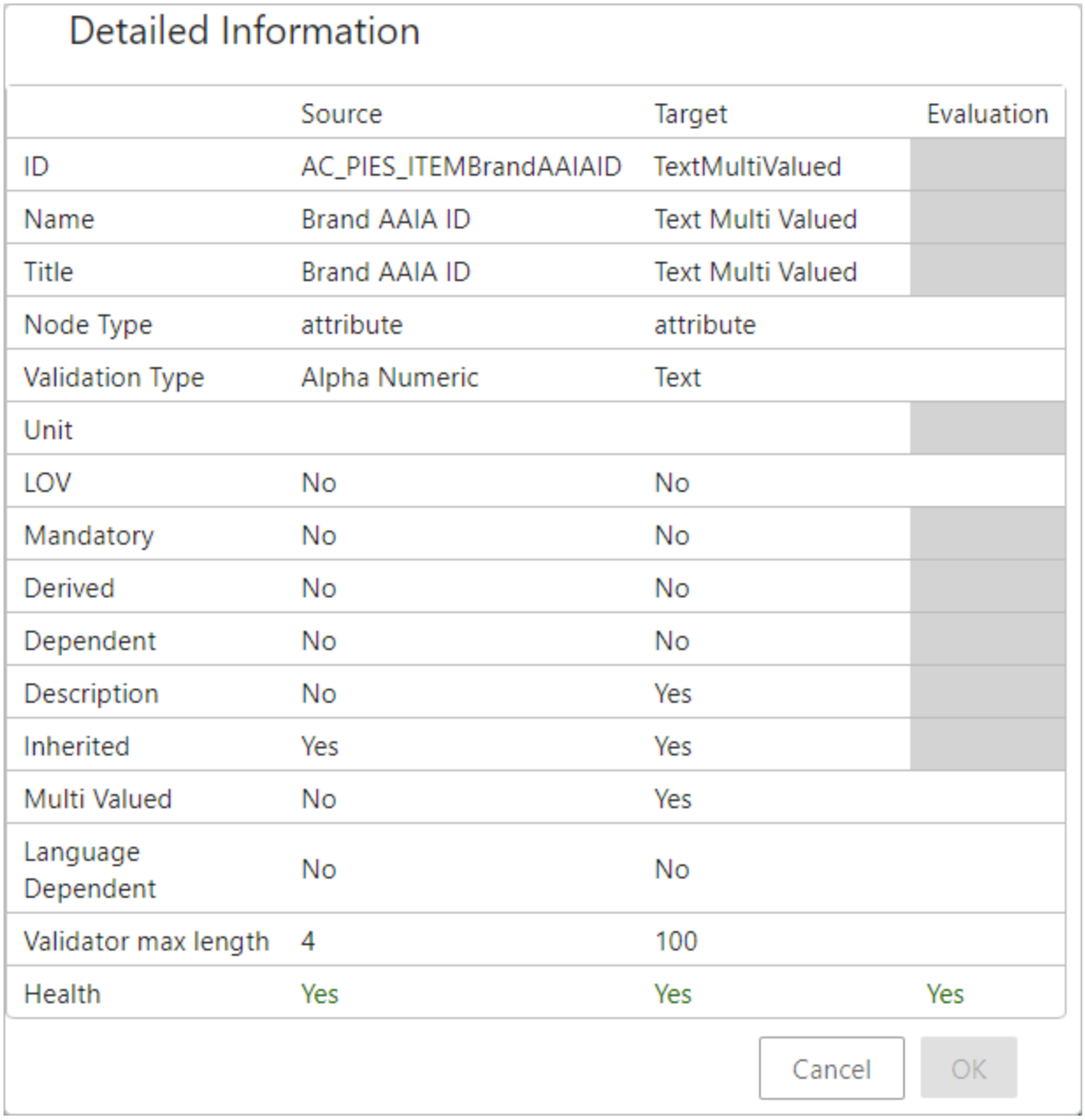
- Green bug icon

This icon denotes the mapper row as unhealthy with some flaws but the user has decided to suppress the warning message. Clicking on the icon displays a 'Detailed Information' dialog.



- Green check ✓

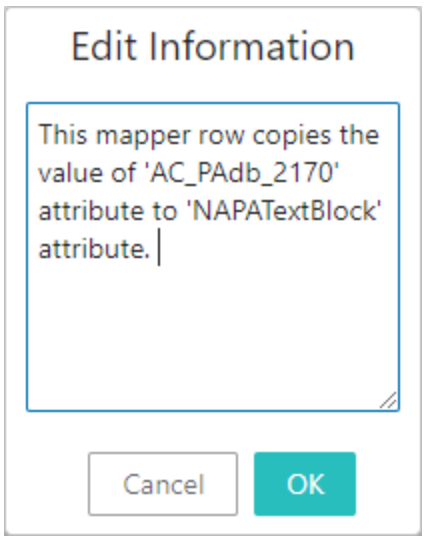
  This icon denotes the mapper row as healthy without any flaws. Clicking on the icon displays a 'Detailed Information' dialog.



Add a Description to the Mapper Row

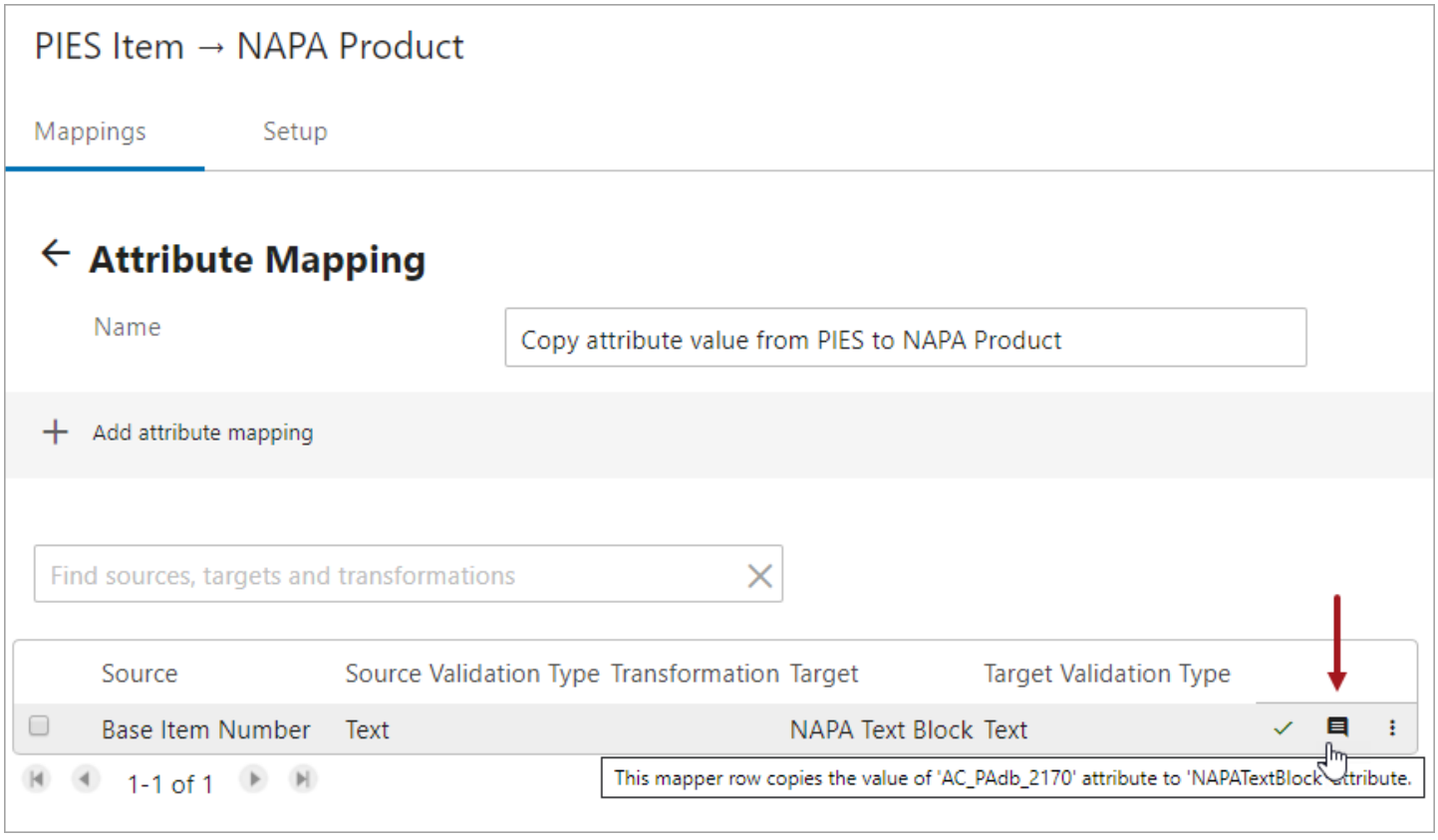
Users can add any information as text that helps explain the mapper row functionality. Below is the detailed procedure to add a description to the mapper row.

1. For the selected Mapper Configuration setup entity, on the Mappings tab, open the mapping plugin for the mapper row that should be described.
2. Click the Add Description icon (+) that is available to the right of the mapper row. This will display the Edit Information dialog.



3. Type in the required text and click OK to save and close the dialog.

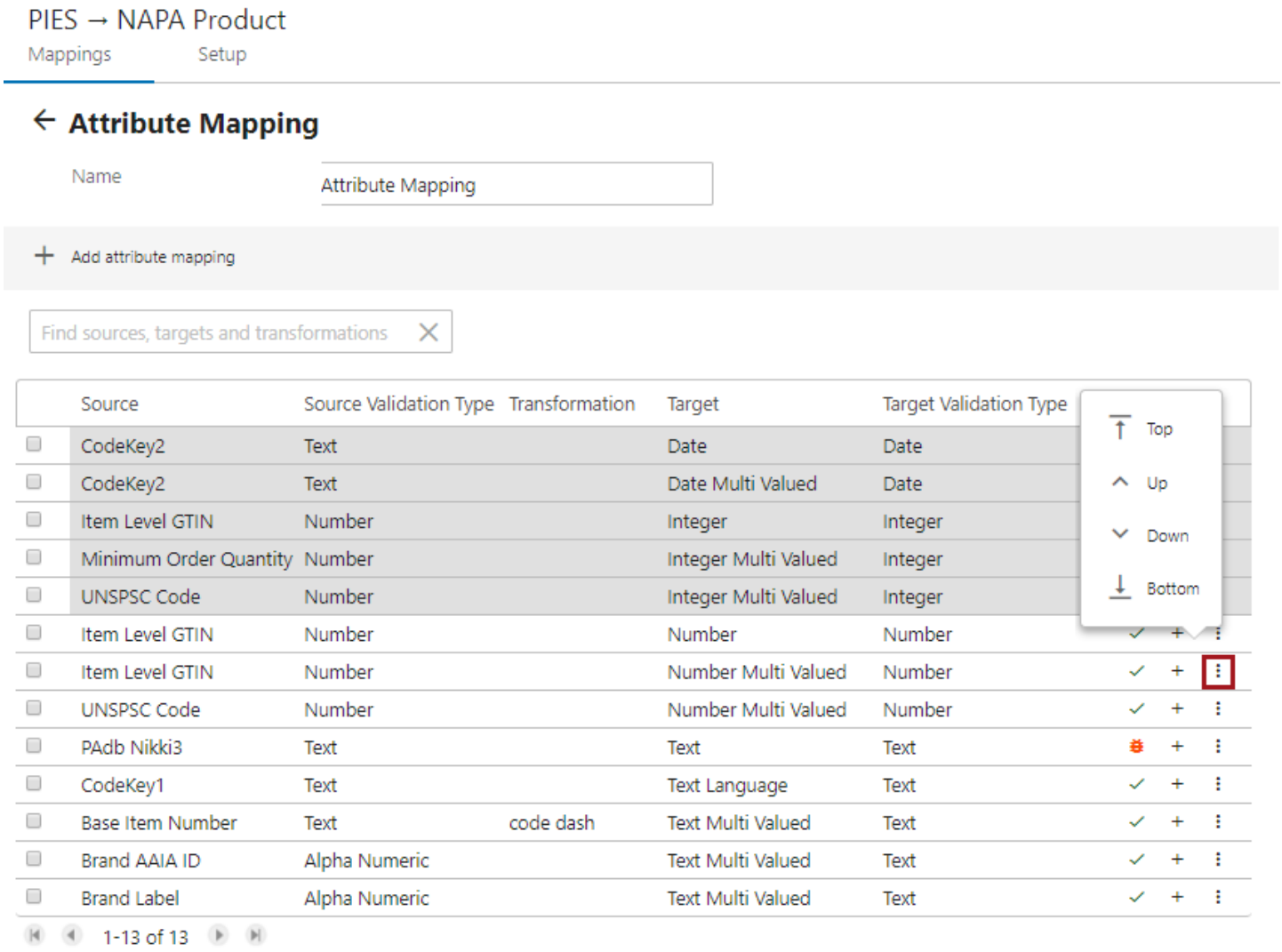
After the description has been entered, the icon style will be changed from (+) to ( ) symbolizing the presence of some information within the icon. The description will be visible when the user clicks or hovers over the ( ) icon.



Change the Order of the Mapper Row in the Mapping Plugin

When there are multiple mapper rows available within the mapping plugin, the order of execution of each mapper row is based on the order in which it is listed within the mapping plugin. The user can rearrange the order of the mapper row. Below is the procedure to rearrange the order of the mapper row.

1. For the selected Mapper Configuration setup entity, on the Mappings tab, open the mapping plugin for the mapper row that the order should be rearranged.
2. Click the three-dotted icon (⋮) that is available in the right of the mapper row. This will display the rearranging dialog. The user can select the Top, Up, Down, or Bottom button to rearrange the mapper row accordingly.



Industry Standard Mapper

When utilizing industry standards in your data model, users typically operate within the confines of a specific release of that standard. However, challenges arise in scenarios where a new version is introduced or a customer requests data in an older version than the one a product has been initially classified in. Additionally, even if a product has been described using one industry standard, there may be instances where it becomes necessary to describe the same product using different industry standards. Industry standards evolve through periodic releases, introducing updates to their reference files.

While STEP provides solutions like Data Onboarding where users can reclassify the product, it still requires Mapper Configuration setup entities to be manually created in the system. An extended automated solution that creates the Mapper Configuration setup entity that addresses challenges associated with those evolving industry standards is the Industry Standard Mapper solution.

This solution supports seamless mapping between different versions of a standard, allowing users to automate reclassification and data transfer tasks. This solution helps in an automated approach to handling standard upgrades.

Every time there is a version upgrade, many industry standards provide a description file that contains an instruction on how to upgrade from one of their versions to their next major version, which Stibo Systems refers to as Industry Standard Mapping files. The Industry Standard Mapper solution interprets those Industry Standard Mapping files to create Mapper Configuration setup entities with necessary mapping instructions. These created Mapper Configuration setup entities later facilitate onboarding of data from one version to another version.

Note: Currently the Industry Standard Mapper solution supports only ECLASS BASIC. For optimal functionality of this solution, it is required that the system utilizes the version-specific object type structure for ECLASS classifications. This can be achieved by selecting the 'Version specific object types' option on the Advanced step of the ECLASS Classification Importer during an import. Users can map between ECLASS Basic versions, benefiting from both automated and manual mapping capabilities.

Important: The Industry Standard Mapper solution works in conjunction with the existing Data Onboarding solution in STEP. Implementation of the Industry Standard Mapper is dependent upon the prior implementation of the Data Onboarding solution.

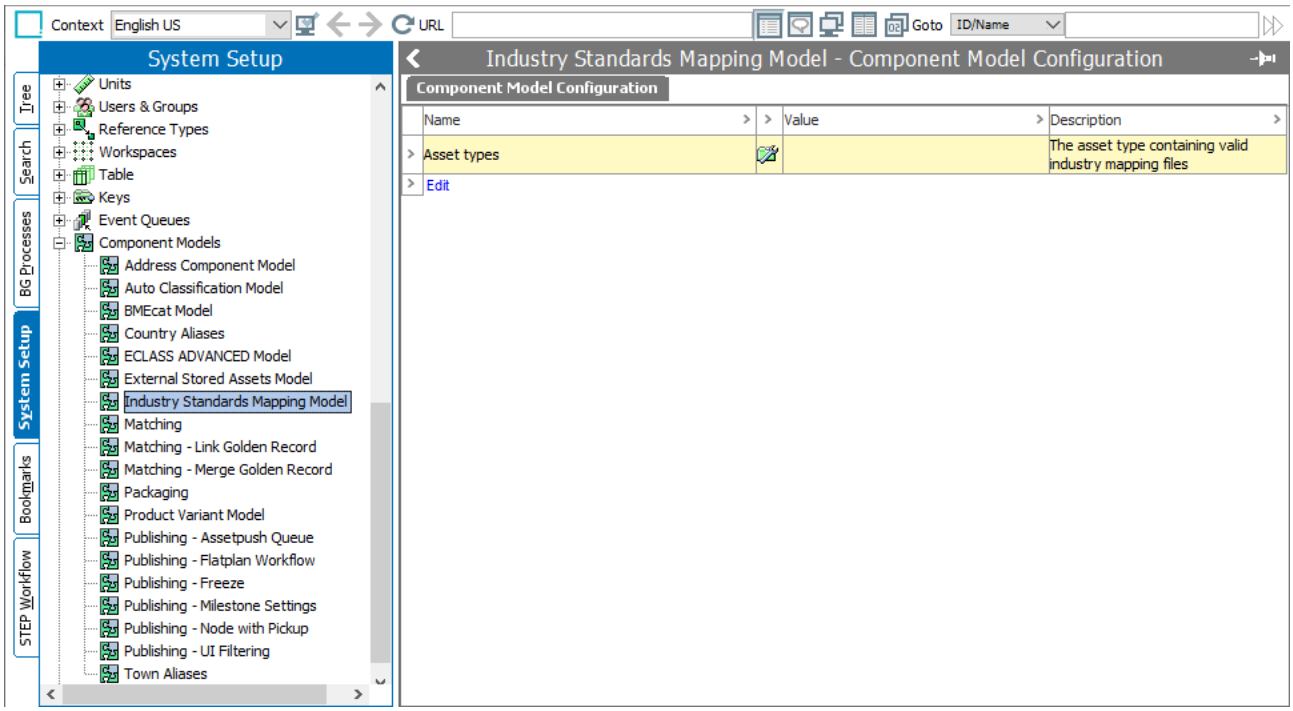
Configuring Industry Standard Mapper Solution

The following topics provide the configuration processes necessary to allow users to be able to set up the Industry Standard Mapper solution. The initial part of the configuration is done in the workbench and the later part is configured in the Web UI.

- Industry Standard Mapper Initial Setup
- Configuring an IIEP for Industry Standard Mapper Imports
- Configuring Web UI for Industry Standard Mapper Solution

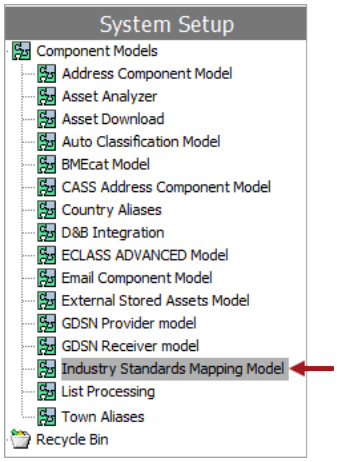
Prerequisites

Apply the Industry Standard Mapper recipe to the STEP instance to display the 'Industry Standards Mapping Model' component model within Workbench > System Setup > Component Models (as shown below).



Industry Standard Mapper Initial Setup

The Industry Standard Mapper solution includes an Easy Setup wizard that creates elements necessary to support the functionality. The process involves running the **Industry Standards Mapping Model** component model.



Note: If an object already exists on a system, running Easy Setup will not change it. Therefore, users can run Easy Setup as needed to deploy new functionality, without risk of disrupting or changing current processes. If manual changes have been made to an object following creation by Easy Setup, these changes are retained if setup is subsequently re-run. This also means that when enablement of new functionality requires changing the setup of an existing object, that change must be made manually on existing implementations (while Easy Setup can handle it automatically in new implementations). Because of this, it is important to pay attention to information included in patch notes and carry out any manual configurations needed to enable new functionality.

A brief description is provided below about what the setup action creates. For a detailed information on the elements created by the Easy Setup action, refer to ISM Elements Created by Easy Setup Action topic of the Data Onboarding and Standardized Mapping documentation.

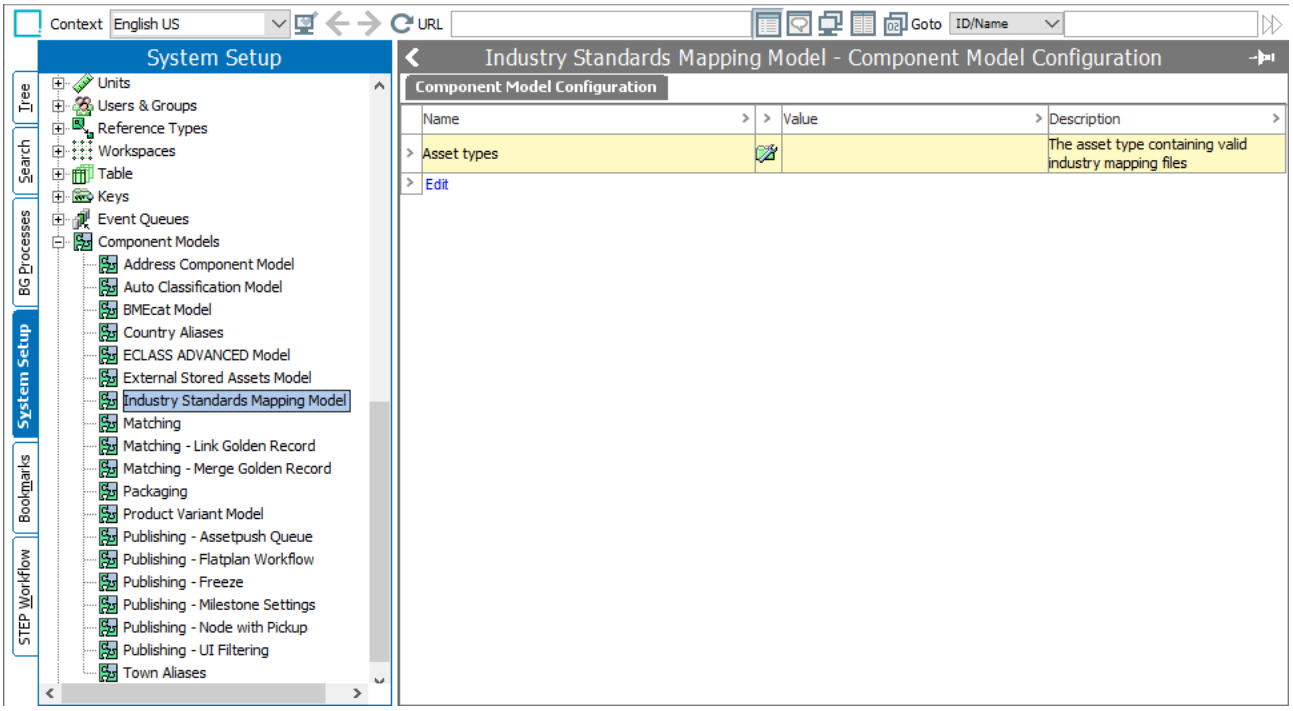
Configuration Steps

The following steps describe how to configure Industry Standard Mapper using the Easy Setup method.

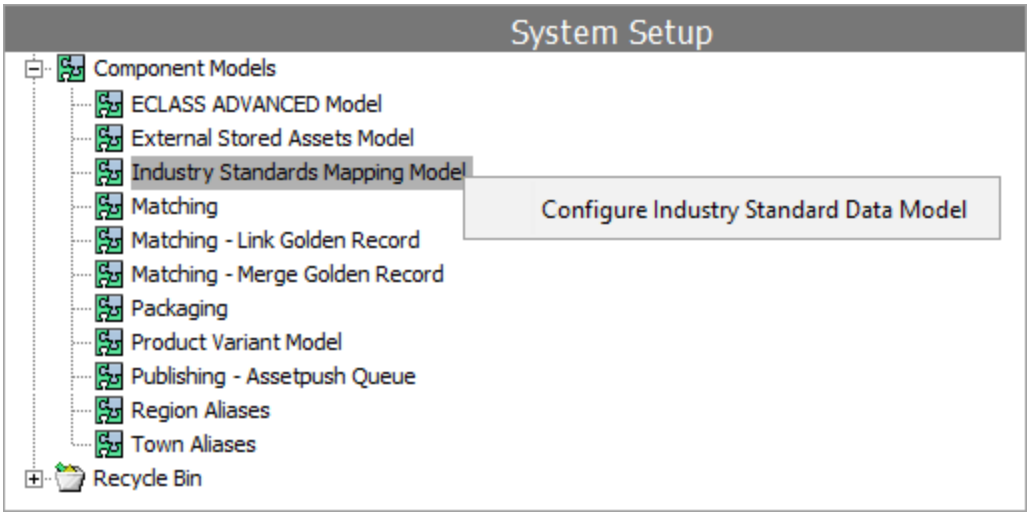
1. Go to **Context** and select the relevant context option from the dropdown.

   Note: Consider your relevant STEP Context before you trigger the Easy Setup. Pay attention to the language-dependent data such as attribute names and others. If you perform the Easy Setup in a second attempt using a different STEP context, the imported data from the first attempt will not be updated.

2. Go to **System Setup** > **Component Models** > **Industry Standards Mapping Model**



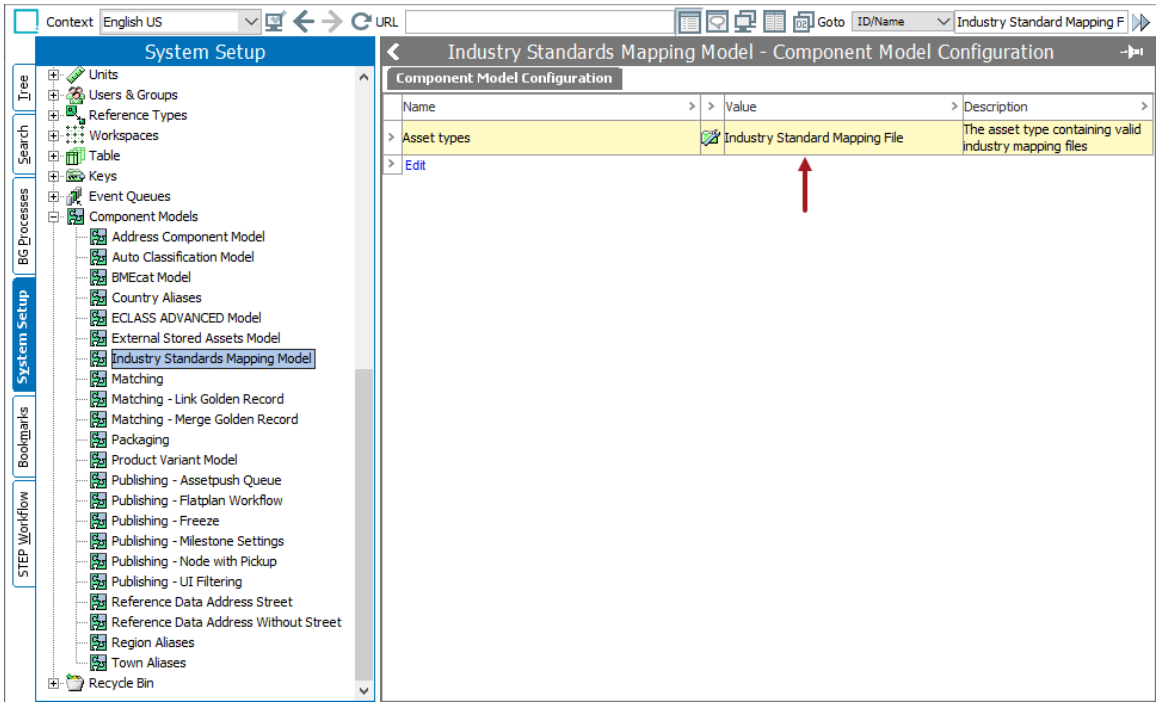
3. Right-click on the **Industry Standard Mapper** and select **Configure Industry Standard Data Model**.



4. The Configure Industry Standard Data Model dialog will display stating the changes that will be made by running the process. If you would like to record the changes, you may do so by taking a screenshot of the dialog.

5. When you are ready to start the configuration process, click the **OK** button. The system will create all necessary elements to support the applicable process. This will typically take less than a minute, and when complete, a dialog will display listing each change that was made.
6. Click the **OK** button to close the dialog and resume normal activities on the system.

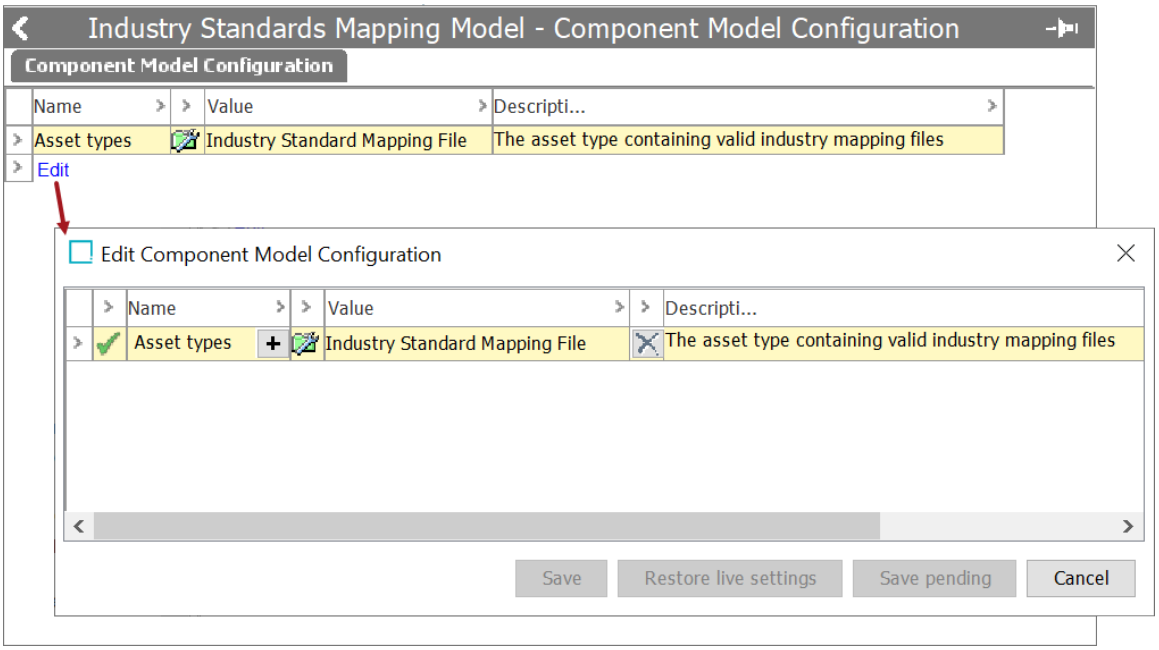
The Easy Setup action creates a new object type called 'Industry Standard Mapping File' which is mapped to the Industry Standard Mapper component model will be listed within the Value column of the Component Model Configuration window.



Add / Remove object types from the Industry Standards Mapping Component Model

To add or remove object types from the Industry Standard Mapping Component Model, access the Component Model Configuration window. Follow the steps below to add a new object type or remove an existing one from the component model:

1. Click the blue Edit link shown at the bottom of the table. This will open the editor, allowing you to add, edit, and remove object type mappings.



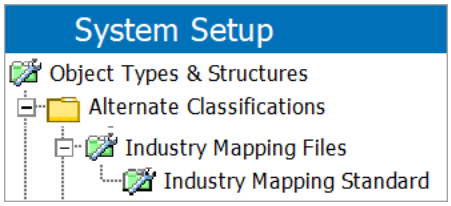
2. When editing the mappings, double-click the + button to make value additions and the X button to remove any existing values. If the + button is inactive, then the value must be removed before trying to add a new one.

ISM Elements Created by Easy Setup Action

This topic explains the elements that are created by the Easy Setup actions available within the Industry Standards Mapping Model component model. Running the **Industry Standards Mapping Model** action automatically creates and configures the following.

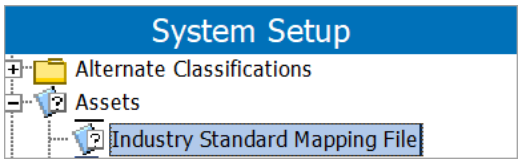
Non-Version dependent Object Type Model:

The following Classification Object Types are created:



Object Type Name	Object Type ID
Industry Mapping Files	Mapping_Asset_Root
Industry Mapping Standard	Mapping_Asset_Standard

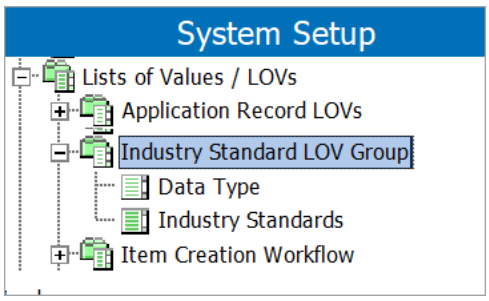
The following Asset Object Type is created:



Object Type Name	Object Type ID
Industry Standard Mapping File	Mapping_Asset

LOV Group Creation:

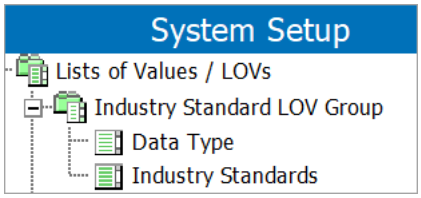
The following LOV group is created:



LOV Group Name	LOV Group ID
Industry Standard LOV Group	Mapping_LOV_GRP

LOV Creation:

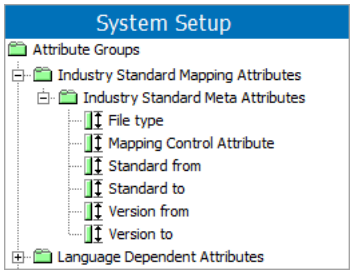
The following LOVs are created under the LOV group Industry Standard LOV Group (ID = Mapping_LOV_GRP)



LOV Name	LOV ID	Validation Base Type
Data Type	Mapping_LOV_DataType	Text
Industry Standards	Mapping_LOV_IndustryStandard	Text

Metadata Attributes:

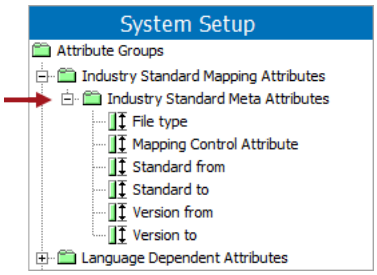
The following attributes are created:



Attribute Name	Attribute ID	Validation Base Type
File type	Mapping_FileType	LOV
Mapping Control Attribute	Mapping_ControlAttribute	Text
Standard from	Mapping_StandardFrom	LOV
Standard to	Mapping_StandardTo	LOV
Version from	Mapping_VersionFrom	Text
Version to	Mapping_VersionTo	Text

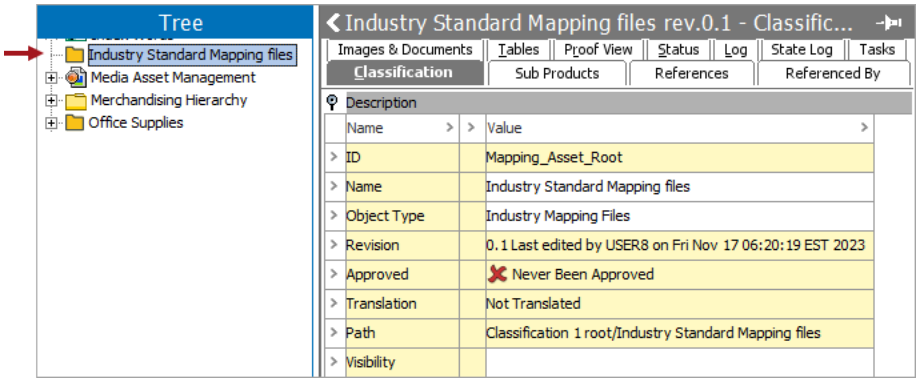
Relevant Root Nodes:

The following attribute groups are created:



Attribute Group Name	Attribute Group ID
Industry Standard Meta Attributes	Mapping_MetaAttributes

A classification folder named 'Industry Standard Mapping files' (ID = Mapping_Asset_Root) is created as shown below.



Configuring an IIEP for ECLASS Industry Standard Mapper Imports

An inbound integration endpoint (IIEP) can be configured in Workbench to help the process of importing Industry Standard Mapping files into STEP. Once an IIEP is configured for Industry Standard Mapper imports, Industry Standard Mapping files can be imported after they are uploaded either to a configured hotfolder, or to a File Loading Widget on a Web UI Homepage.

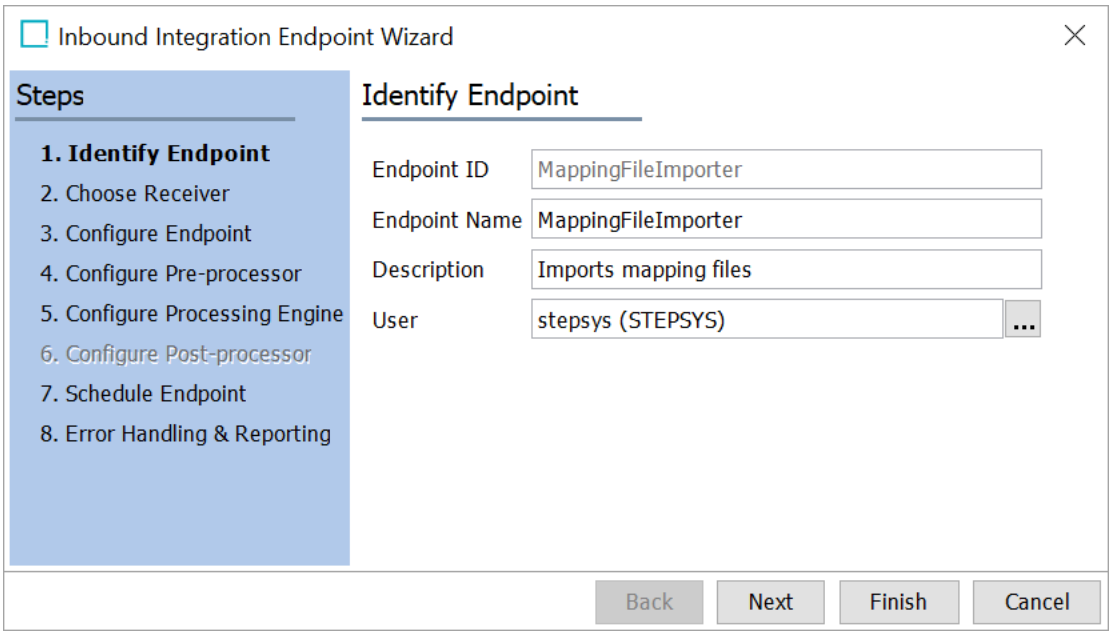
This section describes how to configure an IIEP that can allow for the automated processing of Industry Standard Mapping files. Each screenshot example within this section provides recommended values for the parameters in Industry Standard Mapping files Importer.

Prerequisites

This topic aims to acquaint users with the IIEP specifically designated for the import of Industry Standard Mapping files. It does not cover general IIEP functionalities. It is assumed that individuals configuring an IIEP for Industry Standard Mapping files Import are well-versed in configuring and processing standard inbound integration endpoints. For a comprehensive understanding of the standard functionalities provided in inbound integration endpoints, refer to Inbound Integration Endpoints topic within the Data Exchange documentation.

Configuration Steps

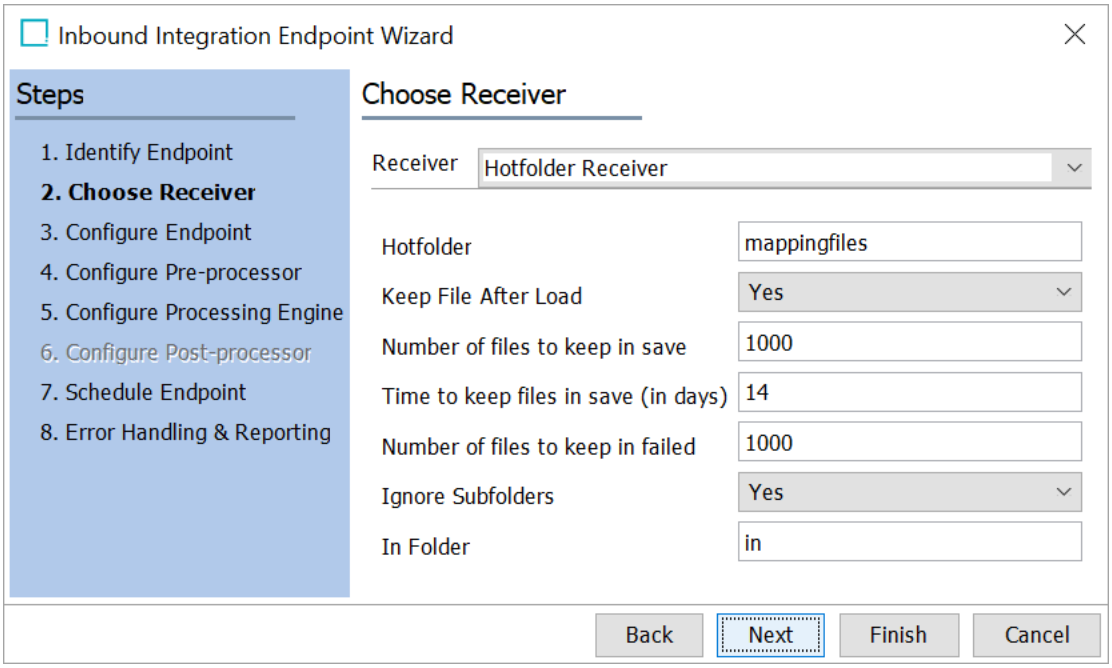
1. In Workbench, go to System Setup, select and right-click the **Inbound Integrations Endpoints** setup group, and click **Create Inbound Integration Endpoint**.
2. Once the Inbound Integration Endpoint Wizard displays, the parameters are to be populated as recommended and shown below.



For more information about the parameters available within the Identify Endpoint step, refer to IIEP - Identify Endpoints topic within the Inbound Integration Endpoint section of the Data Exchange documentation.

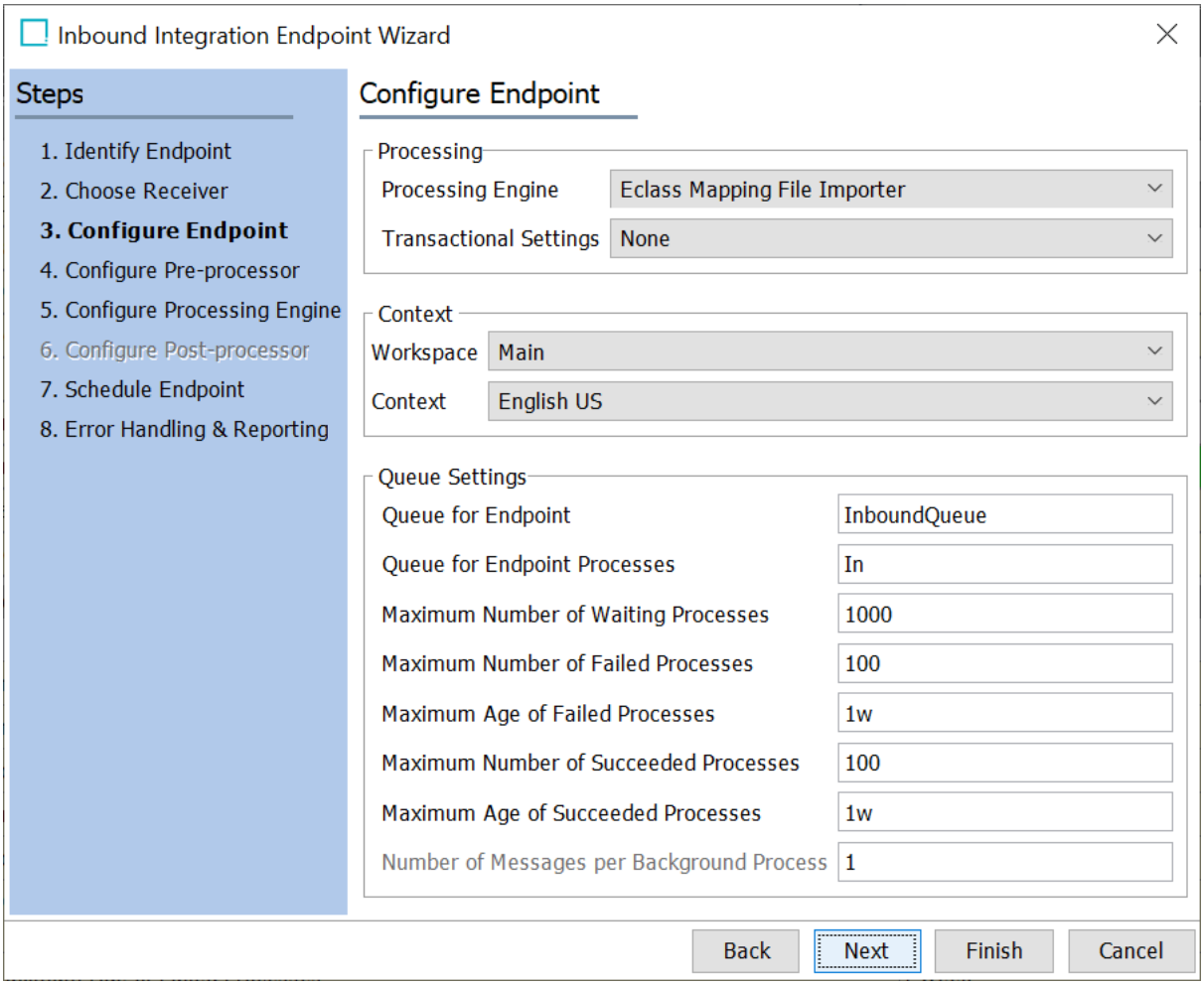
3. Click the **Next** button, and the Choose Receiver parameters will display. The parameters are to be populated as recommended and shown below. The mandatory parameter Hotfolder must be populated with a hotfolder name before the Next button will enable. In the screenshot below, the Hotfolder parameter is populated with the value 'mappingfiles.'

Note: The value within this hotfolder parameter will be used to create the new hotfolder, once the IIEP Wizard is complete.



For more information about the parameters, refer to IIEP - Choose Receiver topic within the Inbound Integration Endpoints section of the Data Exchange documentation.

4. Click the **Next** button, and the Configure Endpoint parameters will display. The selection of the processing engine within this step makes the IIEP unique for importing Industry Standard Mapping files.

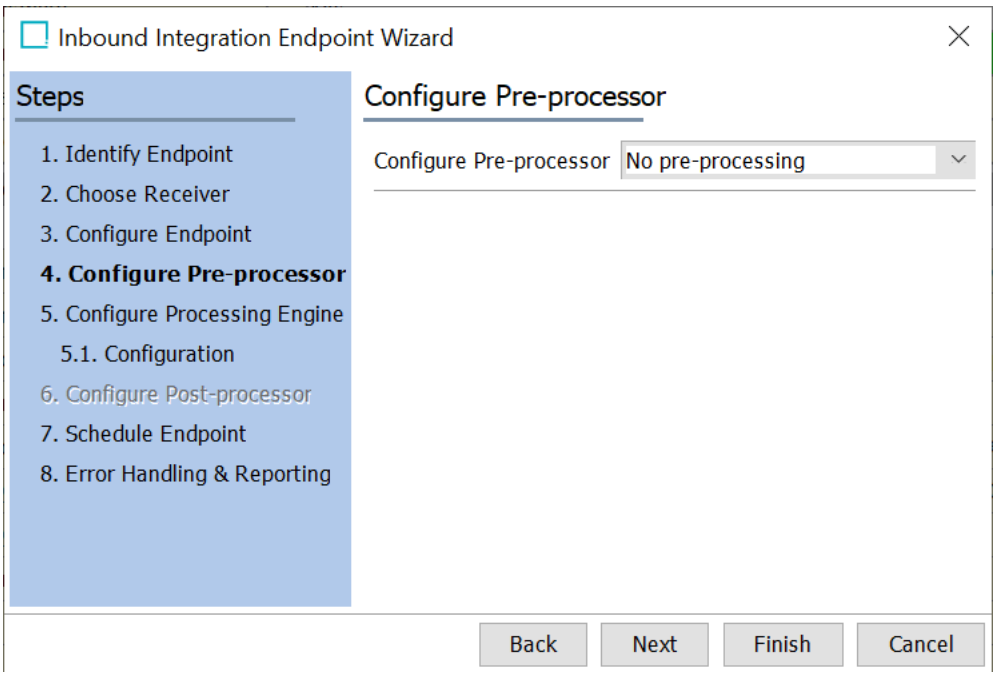


- **Processing Engine:** This parameter has to be populated with an option that is capable of processing and importing Industry Standard Mapping files. In the screenshot above, ECLASS Mapping File Importer option is selected as this processing engine is exclusive processing engine designed to process and import mapping files belonging to the ECLASS Standard. For more information about the parameter, refer to IIEP - Configure Endpoint topic within the Inbound Integration Endpoints section of the Data Exchange documentation.

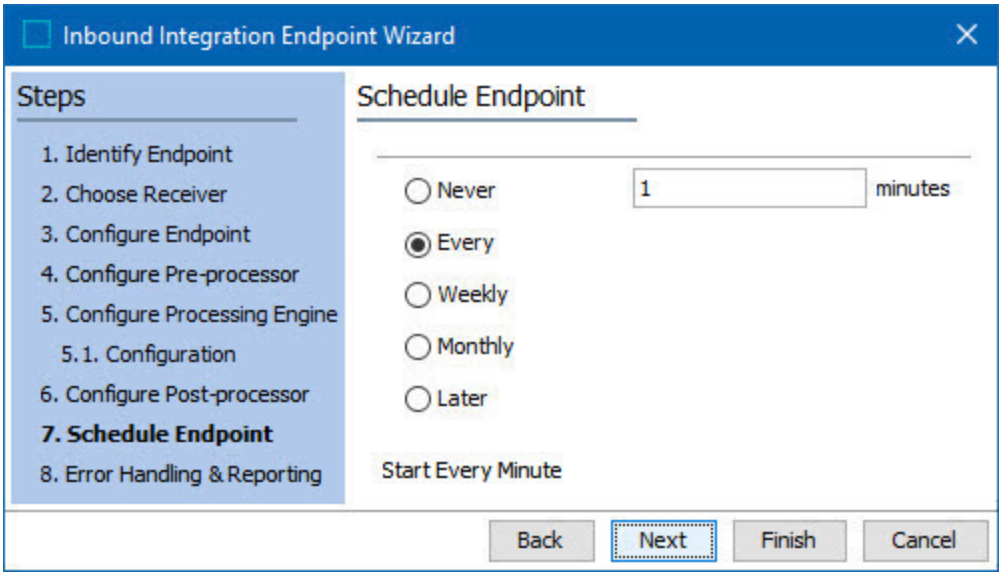
  Note: Currently the Industry Standard Mapper solution supports only the ECLASS BASIC.

  The rest of the parameters are to be populated with the recommended values as shown above.

5. Click the **Next** button, and the Configure Pre-processor parameter will display. The parameter is to be populated as recommended and shown below:

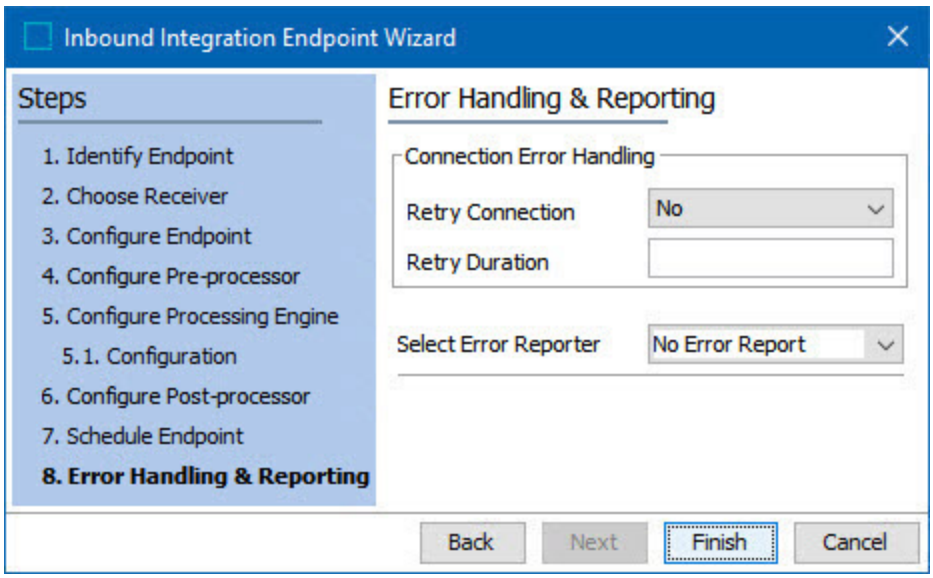


7. Click the **Next** button to display the Schedule Endpoint parameters (bypass the Configure Post-processor parameters). Update the values to those shown below.



For information about the parameters available within this step, refer to IIEP - Schedule Endpoint topic within the Inbound Integration Endpoints section of the Data Exchange documentation.

8. Click the **Next** button, and the Error Handling & Reporting step will display. The parameters are to be populated as recommended and shown below:



For more information about the parameters available within this step, refer to IIEP - Error Handling & Reporting topic within the Inbound Integration Endpoints section of the Data Exchange documentation.

9. Click the **Finish** button, the Inbound Integration Endpoint Wizard will close, and the newly created endpoint will display within workbench.

Important: An endpoint must be enabled before it can start processing data. For more information, refer to the Running an Inbound Integration Endpoint topic within the Inbound Integration Endpoints section of the Data Exchange documentation.

If users need to access the IIEP via a Web UI, then the IIEP must be configured within a File Loading Widget. For more information, refer to the Configuring a File Loading Widget for Industry Standard Mapping File Imports topic.

Configuring Web UI for Industry Standard Mapper Solution

This topic covers how to configure the Web UI for using the Industry Standard Mapper solution in Web UI.

Prerequisites

The configuration of the Industry Standard Mapper solution within the Web UI involves several sequential stages. It is imperative to note that the successful implementation of the Data Onboarding solution precedes the configuration of these stages. Therefore, it is a prerequisite to have a fully operational Data Onboarding Automation solution in place before proceeding with the Industry Standard Mapper configuration. For more information on how to configure and setup Data Onboarding solution, refer to Data Onboarding section of the Data Onboarding and Standardized Mapping documentation.

Following are the sequential stages. Detailed configuration and usage instructions are provided in the following topics of this documentation:

- Configuring a File Loading Widget for Industry Standard Mapping File Imports
- Modifying Onboarding Mappings Details Screen
- Configuring Industry Standard Mapping Creator Screen
- ECLASS Classification Mapping Plugin

Configuring a File Loading Widget for Industry Standard Mapping File Imports

Web UI users can import Industry Standard Mapping files into STEP using a File Loading Widget. This topic describes how to configure a File Loading Widget so that users can drag and drop Industry Standard Mapping files onto a File Loading Widget on a Web UI Homepage.

Note: Currently the Industry Standard Mapper solution supports only ECLASS BASIC. Only the Industry Standard Mapping files relevant to the ECLASS standard are sighted as an example in the subsequent section of these topics.

Prerequisites

Before configuring the Web UI portion of this solution, an IIEP for an Industry Standard Mapping files Importer must be configured within workbench. For more information, refer to Configuring an IIEP for Industry Standard Mapper Imports topic.

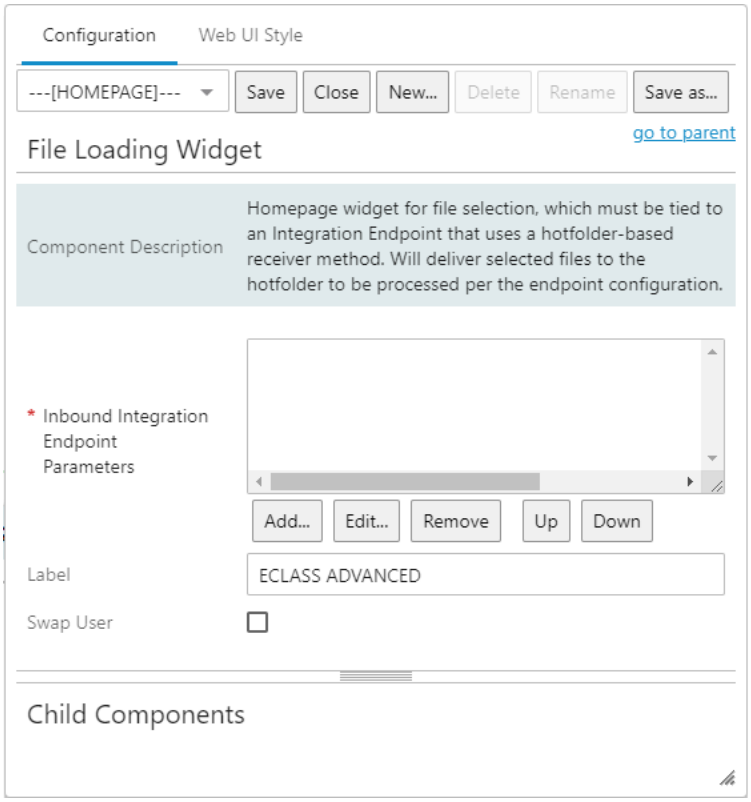
It is expected that anyone configuring the Industry Standard Mapper Import solution within a Web UI be familiar with the Web UI Designer, as basic concepts for working with the designer are not covered in this section. In addition, the user must have appropriate privileges to access the designer. For more information, refer to Designer Access topic within the Web User Interfaces documentation.

Additionally, it is helpful to know how to add a widget to a Web UI Homepage. Details on how to do this can be found in Adding Widgets to a Homepage topic in the Web User Interfaces documentation.

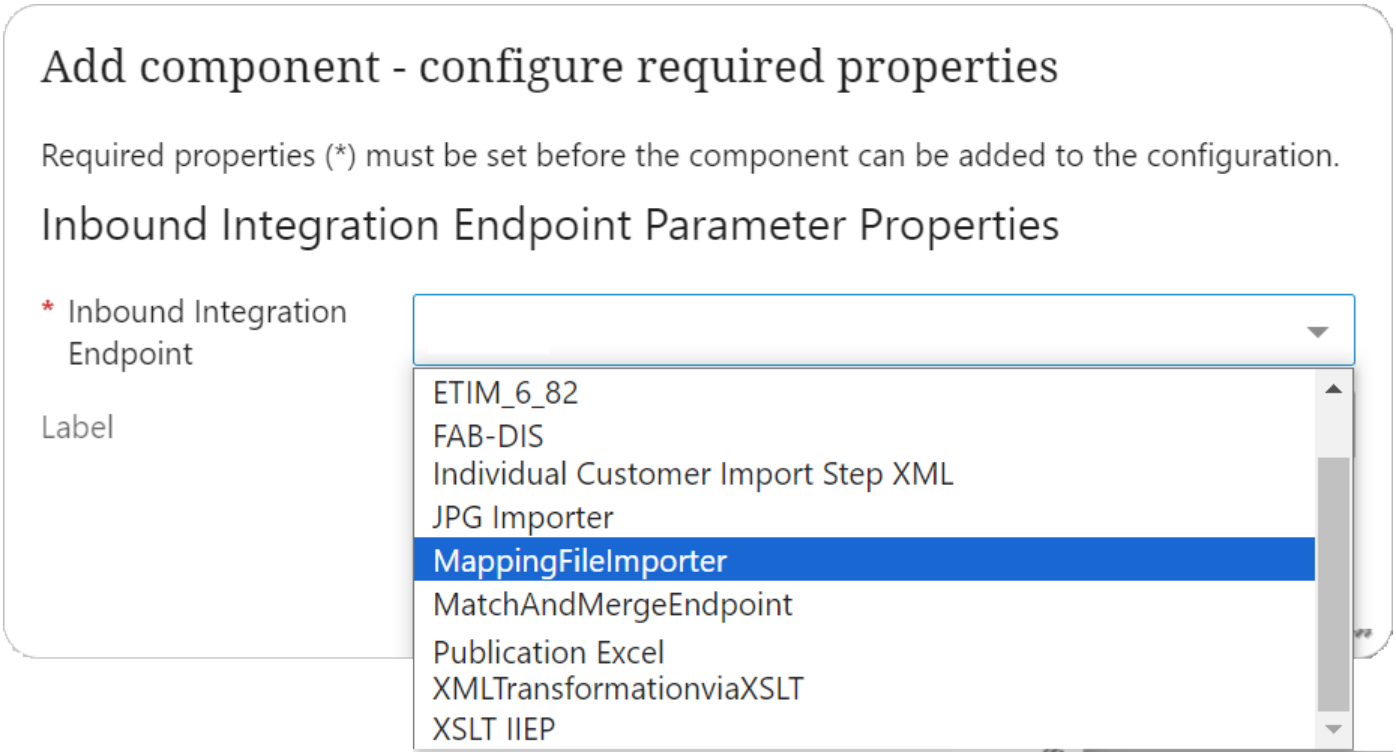
Configuration

Each screenshot example within this section provides recommended values for the parameters in ECLASS Mapping file Importer.

1. In the designer, select an existing File Loading Widget to be used, or add a new File Loading Widget to the Homepage Widget Grid component. For more information, refer to File Loading Widget topic within the Web User Interfaces documentation.
2. Go to the Inbound Integration Endpoint Parameters field, click the **Add** button, and the Inbound Integration Endpoint Parameter Properties dialog will display.



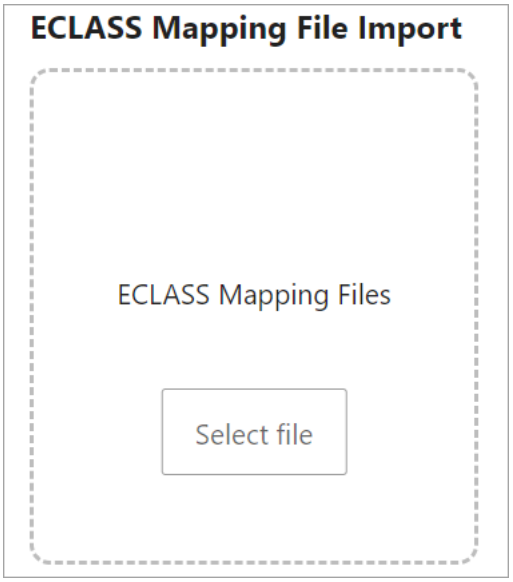
3. Click the dropdown for the Inbound Integration Endpoint parameter, and select **Mapping File Importer** (the IIEP created for ECLASS Industry Standard Mapping file imports).



Note: If the desired IIEP is not displayed in the dropdown, then it can be created using the steps described in Configuring an IIEP for Industry Standard Mapper Imports topic.

4. Optionally, provide a label to be displayed within the drop zone of the widget.

   In the example below, a File Loading Widget labeled as 'ECLASS Mapping File Import' is displayed above its configurations.



5. Click the **Save** and **Close** buttons to save the changes and close the designer.

Modifying Onboarding Mappings Details Screen

Within the Onboarding Mappings Details screen, users gain swift access to the Mapper Configuration setup entities. A Mapper Configuration setup entity is composed of multiple mapping plugins strategically utilized to achieve precise results in data onboarding. Notably, the Industry Standard Mapper solution, specifically tailored for the ECLASS standard, incorporates an exclusive mapping plugin called ECLASS Classification Mappings Screen

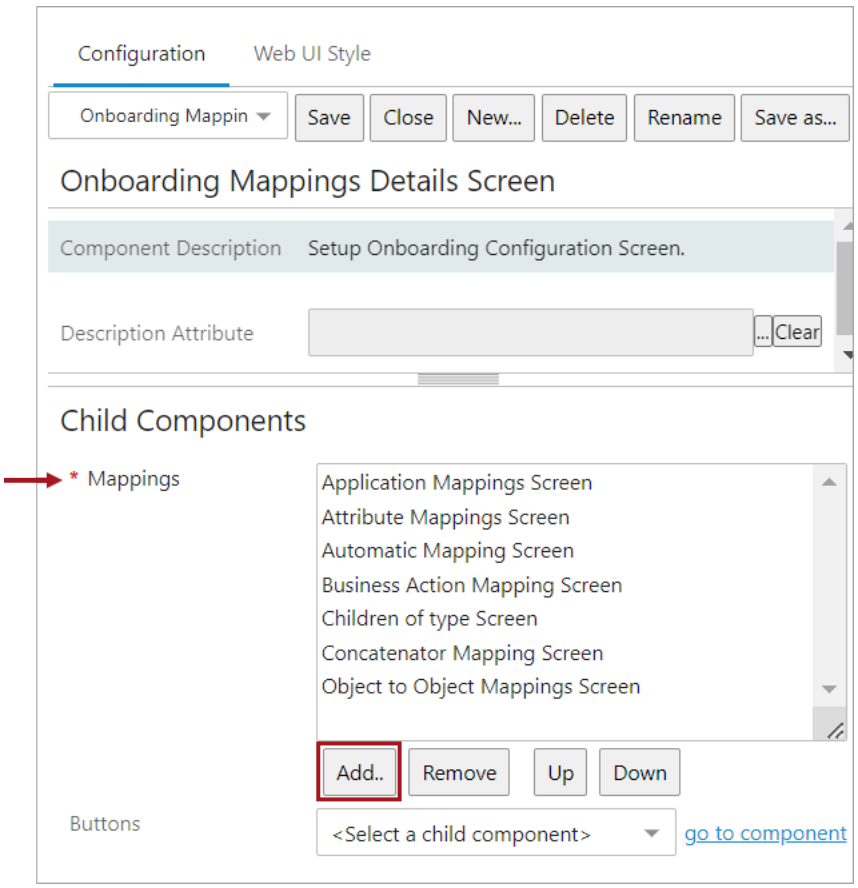
It is necessary to ensure that this mapping plugin is included in the Onboarding Mappings Details screen when leveraging the Industry Standard Mapper solution for the ECLASS standard.

Configuration Prerequisites

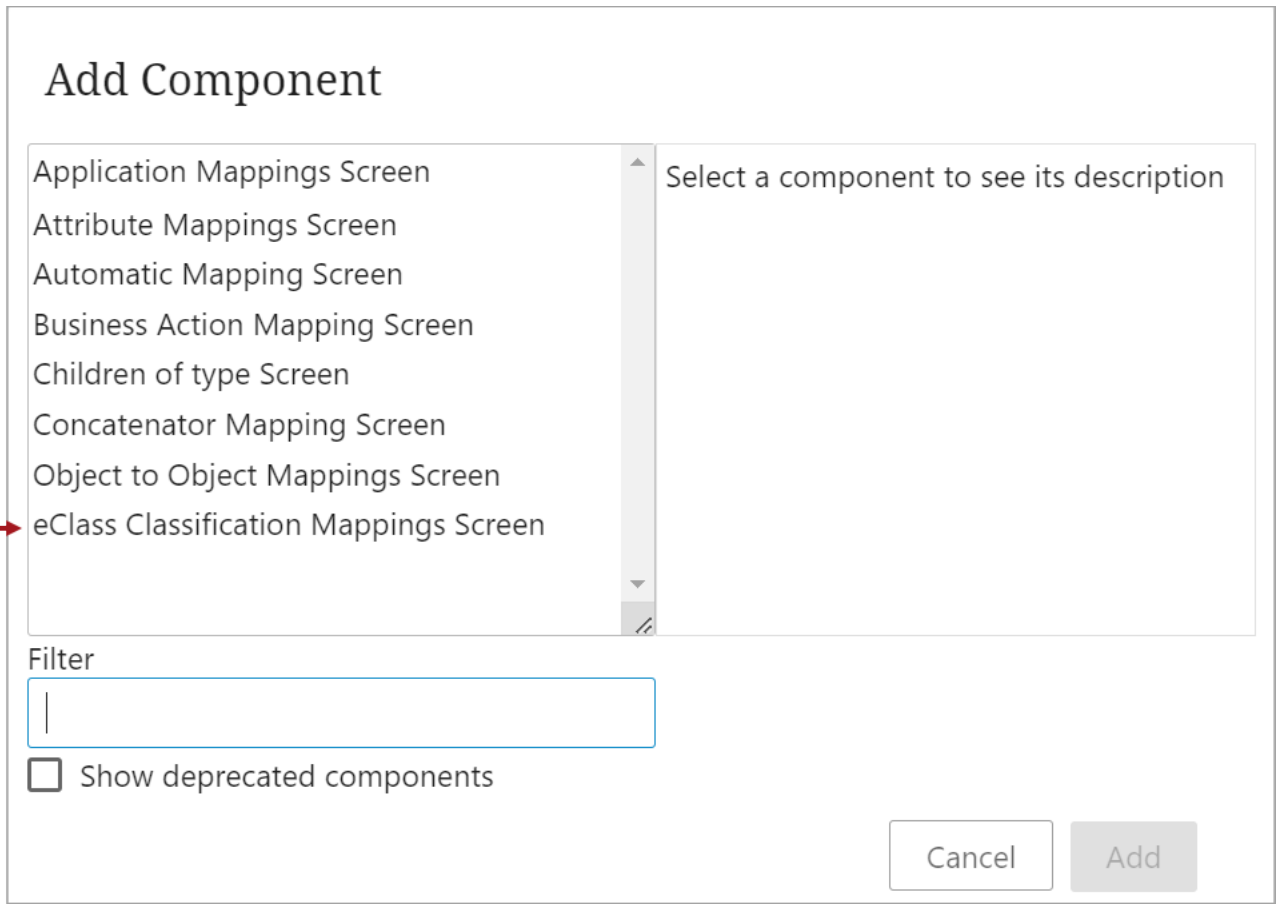
It is expected that a ready Onboarding Mappings Details Screen is already configured in your Web UI as this topic only focus on modifying an Onboarding Mappings Details Screen and not creating a new screen. Further, it is assumed that anyone configuring the Onboarding Mappings Details Screen component is familiar with the Data Onboarding solution as basic concepts for working with the Data Onboarding solution are not covered in this section. For more information about configuring the Onboarding Mappings Details Screen, refer to Onboarding Mappings Details Screen topic of the Data Onboarding and Standardized Mapping documentation.

Configuration Process

Access the existing Onboarding Mappings Details Screen in the Web UI design mode and navigate to the Mappings parameter.



For an existing Onboarding Mappings Details Screen, this required parameter would already have many other generic plugins populated. Click on the 'Add' button to add the ECLASS standard mapping plugins that users should be able to view and select when configuring the Mapper Configuration setup entity. The following is the available mapping plugins that is exclusively available for the ECLASS standard.



- **ECLASS Classification Mappings Screen:** The Industry Standard Mapper framework handles the ECLASS standard. It includes the ECLASS Classification Mapping plugin within its Mapper Configuration to achieve its mapping criteria.

  The fundamental concept revolves around the reclassification of the products. The plugin enables users to handle actions like join, move, or split based on the information derived from the CUF (Classification Update File). For more information, refer to the ECLASS Classification Mapping Plugin topic.

Configuring Industry Standard Mapping Creator Screen

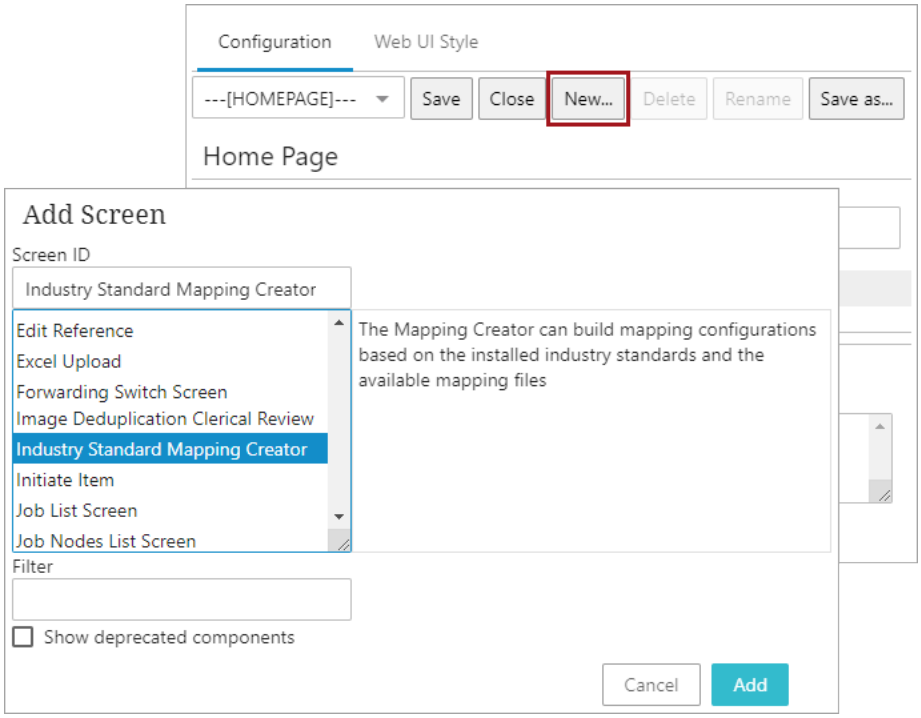
The Industry Standard Mapping Creator screen displays Mapper Configuration setup entities and facilitates users in building mapping configurations based on the installed industry standards and the available mapping files.

Configuration Prerequisites

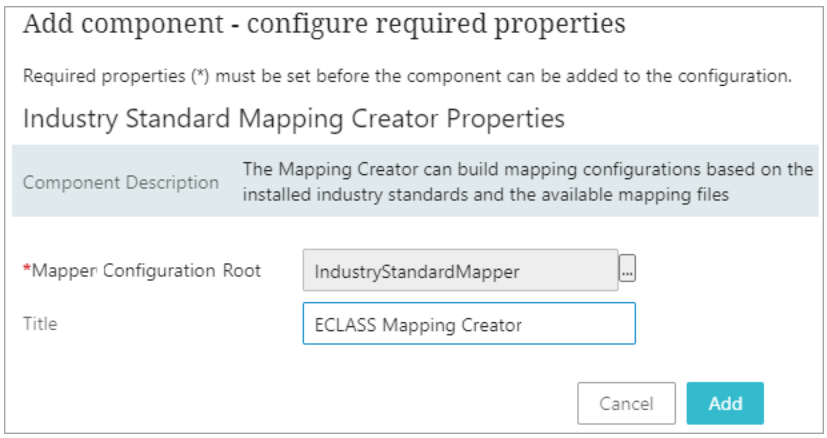
It is expected that anyone configuring the Industry Standard Mapping Creator component is familiar with the Web UI Designer as basic concepts for working with the designer are not covered in this section. In addition, the user must have appropriate privileges to access the designer. Additional information can be found in the Designer Access section of the Web User Interfaces documentation.

Configuration Process

In the designer, create a new screen by selecting 'New.' Select the 'Industry Standard Mapping Creator,' and create a name for the screen in the 'Screen ID' field. In the example below, the Screen ID is 'Industry Standard Mapping Creator'. Click 'Add.'



Once this screen is created, the Industry Standard Mapper Creator Properties designer screen displays, which contains the following parameters for configuration:



Mapper Configuration Root: This parameter allows users to define a parent node (Setup Group) under which the newly created mapper configuration setup entities will reside.

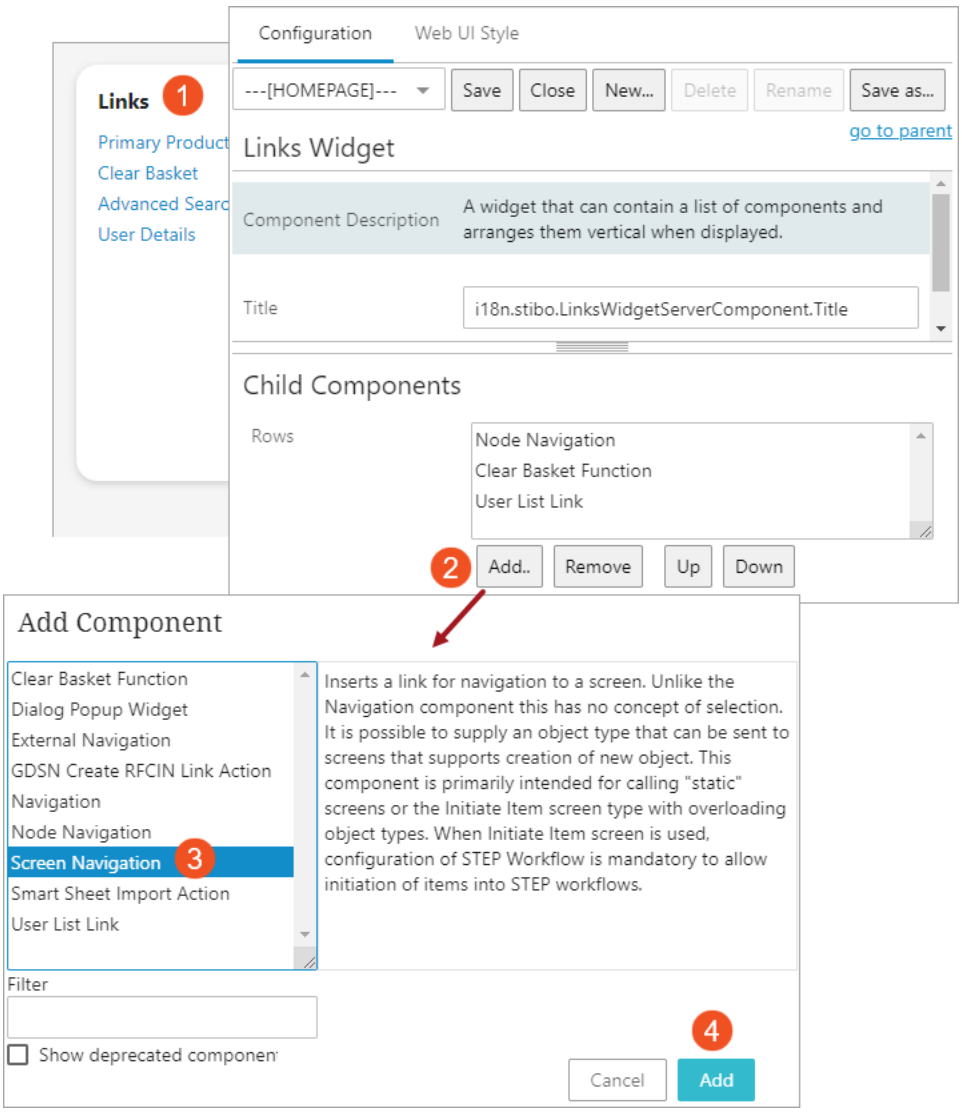
Title: Type in a suitable name that should be displayed on the top left of the screen.

Accessing Industry Standard Mapping Creator Screen

Any number of Industry Standard Mapping Creator screens can be added to a Web UI. An admin user must configure how users can access the Industry Standard Mapping Creator screens.

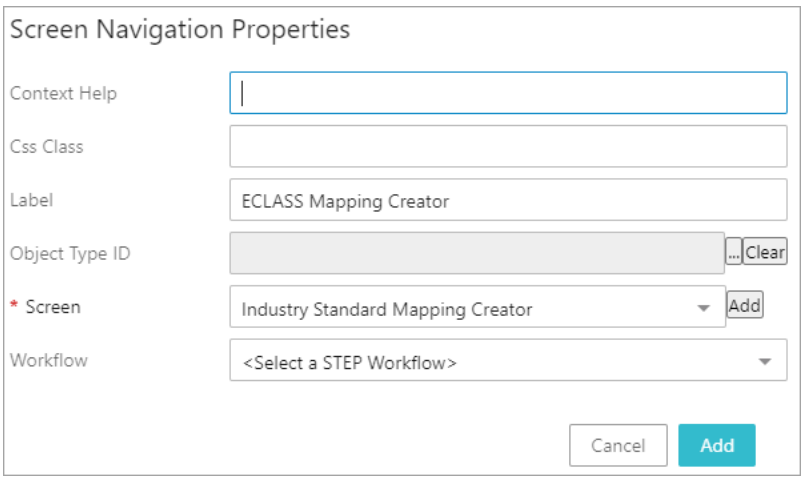
Creating an access to the Industry Standard Mapping Creator screen in a Web UI is s a free style implementation where you can adopt your own methods for easy access. One of the commonly used implementation is to create a Screen Navigation link within a Links Widget in the home screen of a Web UI. The following steps describe procedure for adding the Industry Standard Mapping Creator screen to the Links Widget.

1. In design mode, select the **Links Widget** from the Homepage
2. Click the **Add** button
3. Select **Screen Navigation**
4. Click the **Add** button.

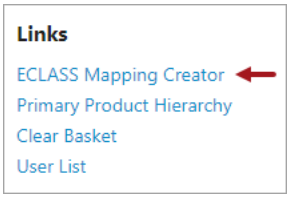


5. Add a **Label** that will display as a clickable link in the Links widget, select the appropriate Industry Standard Mapping Creator screen, and click the **Add** button

   In the screenshot below, the Label and Screen parameters are populated with the value 'AutoCare Application Manager.'



6. The result will be that the Links widget in the homepage will now include a link directly to the Industry Standard Mapping Creator screen.



Additional information on the Links Homepage widget, and its configurations, is available in the Homepage Widgets section within the Web User Interfaces documentation.

ECLASS Classification Mapping Plugin

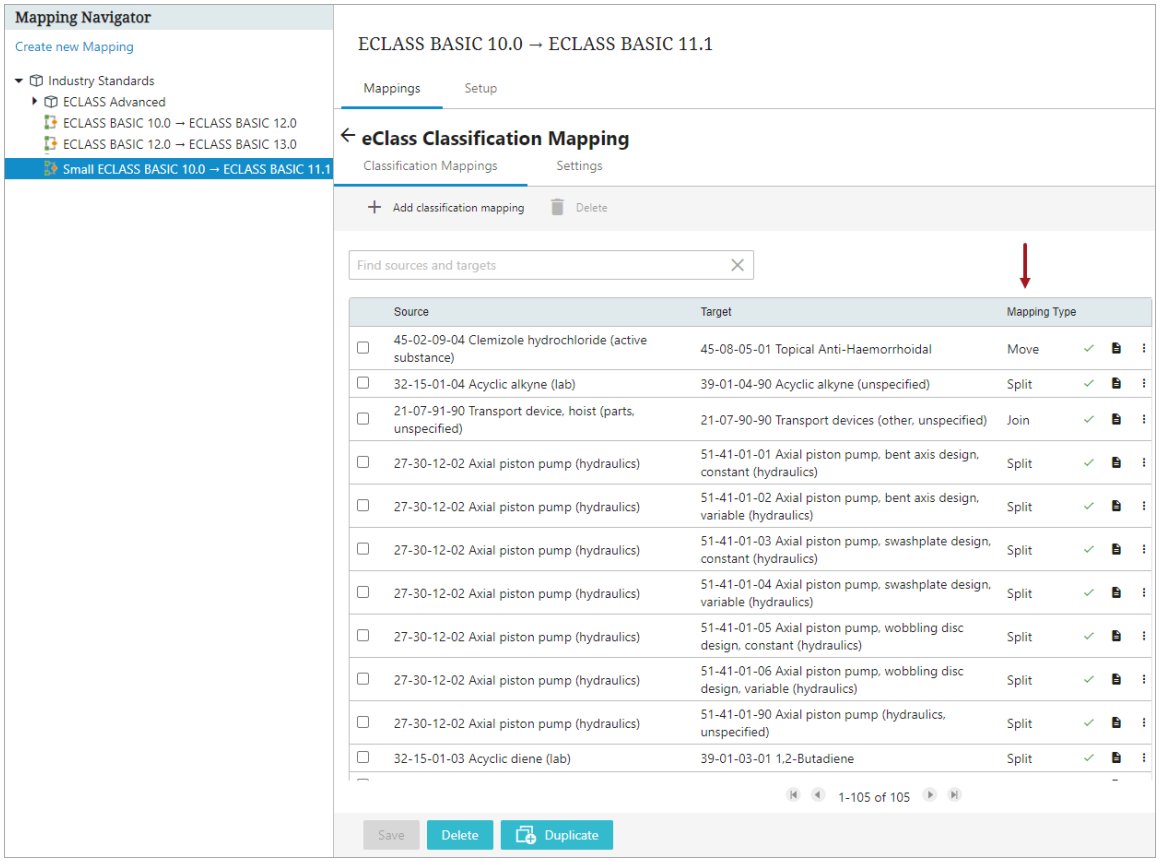
Whenever the Industry Standard Mapper framework builds a Mapper Configuration setup entity for ECLASS Basic, it will include the ECLASS Classification Mapping plugin and the Attribute Mapping plugin within its Mapper Configuration to achieve its mapping criteria.

The ECLASS Classification Mapping plugin is a Data Onboarding plugin designed to facilitate the mapping of ECLASS classification objects. This plugin handles updates and changes in the ECLASS hierarchy, thereby facilitating the mapping of the classification objects. This topic defines the key features, functionalities, and configuration settings of the ECLASS Classification Mapping plugin.

The fundamental concept revolves around the revision / updation of the referenced target classification object. The plugin enables users to perform actions like Join, Move, or Split based on the information derived from the CUF (Classification Update File).

- **Move:** Allows for the relocation of a classification, changing its ID and reference.
- **Join:** Merges specialized classifications into a more generalized one.
- **Split:** Divides an existing generic classification into more specialized multiple classifications.

The example below illustrates a Mapper Configuration setup entity that encompasses multiple ECLASS Classification Mapping plugins configured for Move, Split, or Join functions. The Mapping Type column in the screenshot specifies the type of operation performed by each ECLASS Classification Mapping plugin.



Prerequisites

It is assumed that the user creating or configuring the ECLASS Classification Mapping plugin is familiar with the Data Onboarding Automation solution and well-versed in the creation and configuration of the Mapper Configuration setup entity. The basics related to the handling of the Mapper Configuration setup entity are not discussed in this topic. For more information on how to configure and set up the Data Onboarding solution, refer to Data Onboarding section of the Data Onboarding and Standardized Mapping documentation.

Typically, when importing CUFs (Classification Update Files), the Mapper Configuration setup entities are created with the necessary ECLASS Classification Mapping plugin configured to perform join, split, or move operations of / on the classification object files. The ECLASS Classification Mapping plugin is designed to automatically handle Join and Move operations, while for Splits, human intervention is required. The plugin identifies cases where manual intervention is necessary and guides users through defined workflows. The admin should create one workflow to handle all exceptions. Further, that workflow must be configured for each ECLASS Classification Mapping plugin that is instructed to perform a Split function.

This topic only includes information about where to configure workflow within the ECLASS Classification Mapping that handles the split function. How the customer handles such classification objects in a unique workflow is beyond the scope of this topic. It is a customized solution that the Solution Consultant can implement into their system.

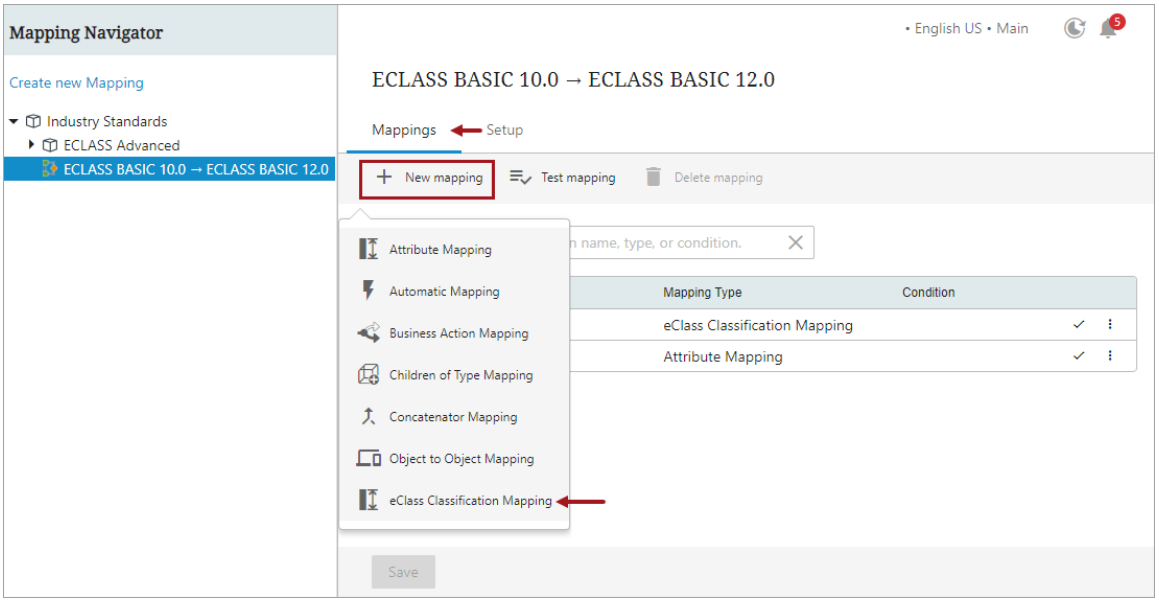
A newly created mapping framework is always specific for a fixed source and target object type. They may be the same object type, but it is not a requirement. They may differ, and if they do, a reference must exist between them for the mapping to be applied. In the majority of ECLASS Basic cases, classifications from various versions referenced by products belong to the same object type. Therefore, the recommended approach would be to configure the mapping as 'Self referencing,' where only the source type needs to be defined, as the target object is the same. For more information about creating and configuring a Mapper Configuration setup entity, refer to the Configuring Mapper Configuration Setup Entity topic in the Data Onboarding and Standardized Mapping documentation.

Configuration of ECLASS Classification Mapping Plugin

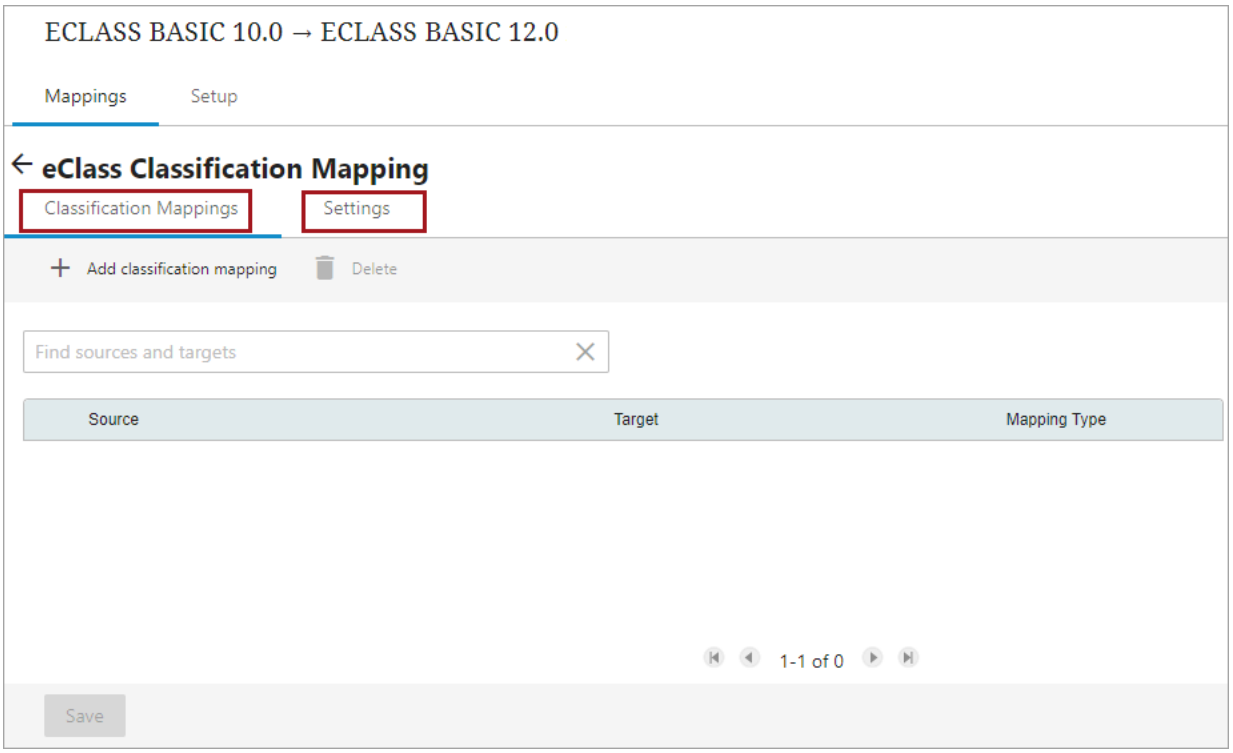
Note: The Industry Standard Mapper solution is primarily an automated process. Typically, users do not need to create an ECLASS Classification Mapping plugin from scratch. The following procedure is provided for user understanding in the event that manual configuration of a plugin is required.

To configure the ECLASS Classification Mapping plugin, follow these steps.

1. With the required Mapper Configuration selected, click on **New mapping** available within the Mappings tab of the Onboarding Mappings Details screen.



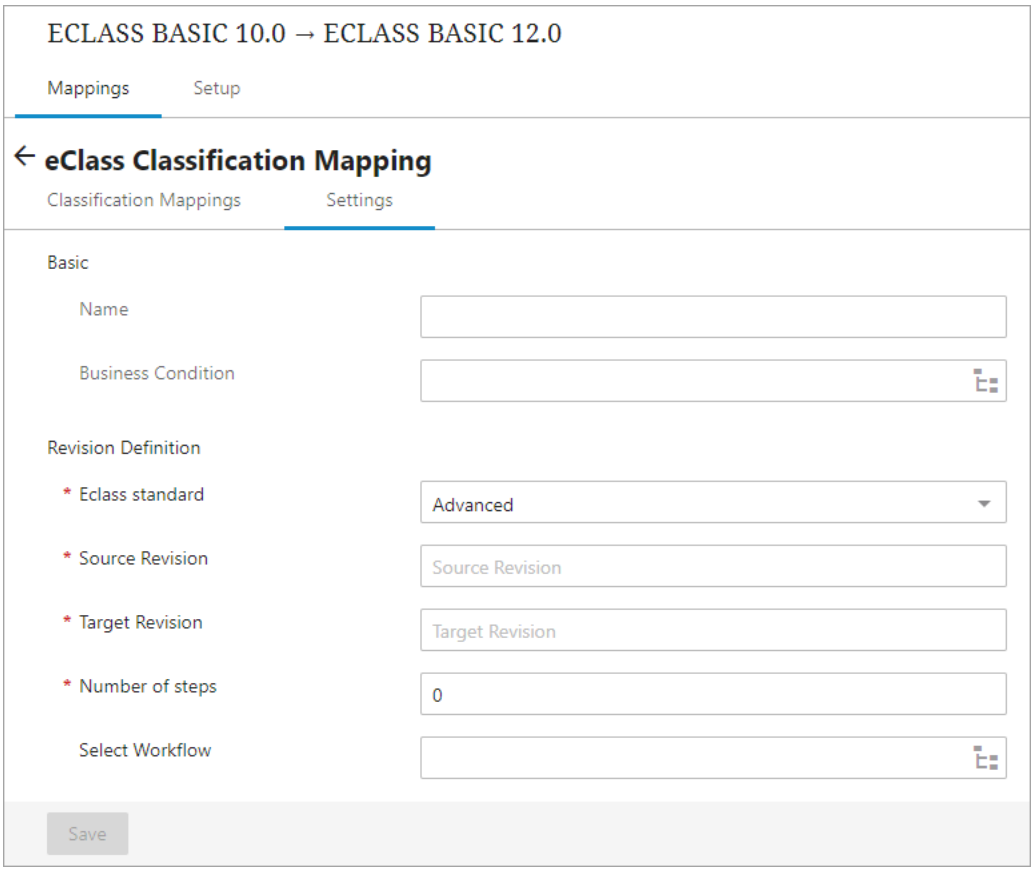
2. Select 'eClass Classification Mapping' option, and a new screen is displayed with the following two tabs:



- **Classification Mappings:** This tab includes options that allow users to establish a mapping relationship. Details pertaining to the parameters available within this tab page is explained in the later section of this topic.

- **Settings:** This tab contains multiple parameters that require to be populated before the user tries to build a mapping relationship in the Classification Mappings tab. Details pertaining to the parameters available within this tab page are explained in the later section of this topic.

3. Within the Settings tab, as shown in the screenshot below, populate the following parameters:



- **Name:** Type in a suitable name in this field. This could be any name that clearly describes the mapping functionality.
- **Business Condition:** The Business Condition parameter allows users to select a business condition. The selected business condition runs the mapper plugin only on the object if the condition is true.
- **Eclass standard:** This parameter offers two options: ECLASS Advanced and ECLASS Basic. The selection between these options should be made based on the intended data onboarding versions.

  Important: Currently the Industry Standard Mapper solution supports only the ECLASS Basic and does not support the ECLASS Advanced standard. So ensure that the 'ECLASS standard' parameter is always set to Basic.

- **Source Revision:** Parameter to type in the version number of the source object.
- **Target Revision:** Parameter to type in the version number of the target object.

- **Number of steps:** This parameter requires the input of the total number of revisions that have been released between the Source Revision and the Target Revision.

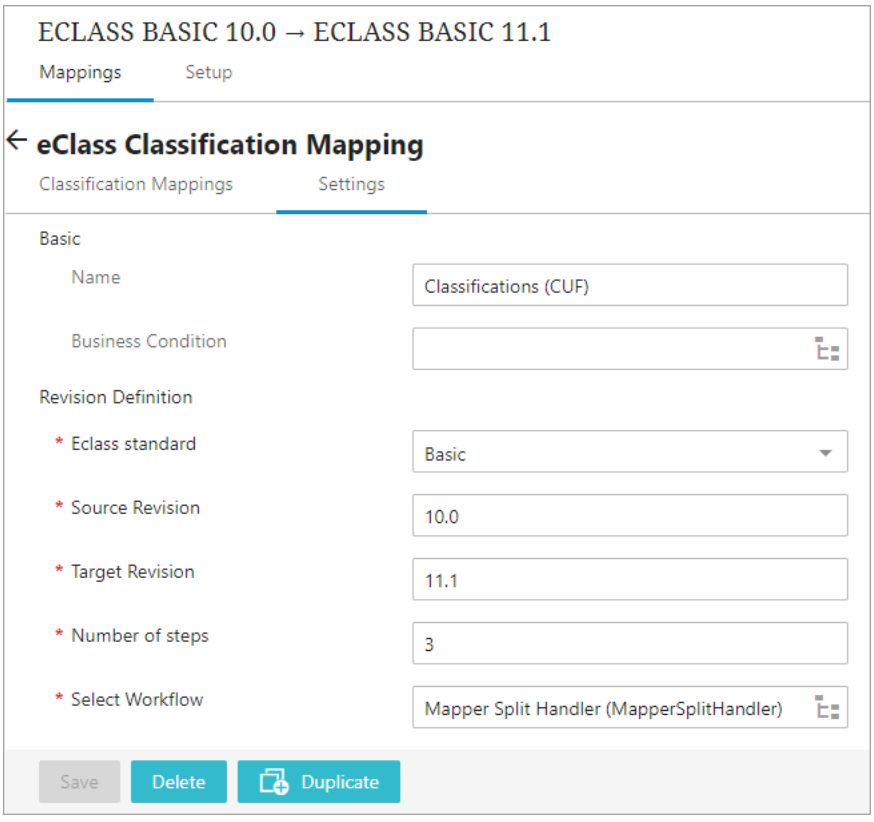
  For example, consider a mapping relation established between ECLASS version 10.0 and 11.1. If ECLASS has released the following versions: 10.0 → 10.1, 10.1 → 11.0, and 11.0 → 11.1, then the total number of steps involved is three. Therefore, the numeric value 3 should be populated in the 'Number of steps' parameter.

  Note: ECLASS increments the version numbers of all classifications with each release, whether it is a minor or major update. Since the version number is included in the STEP ID, knowing the start and end version numbers, as well as the number of steps between them, is crucial for calculating the correct ID.

- **Select Workflow:** This parameter is to be defined with a workflow that has been configured to handle the Split. As mentioned earlier in the topic, the Industry Standard Mapper solution cannot handle a situation where a division of an existing generic classification into more specialized multiple classifications is required. Such classifications are being initiated into the workflow that is being defined within this parameter. The classification objects that are initiated into the workflow will always be written in the execution report of the background processor log.

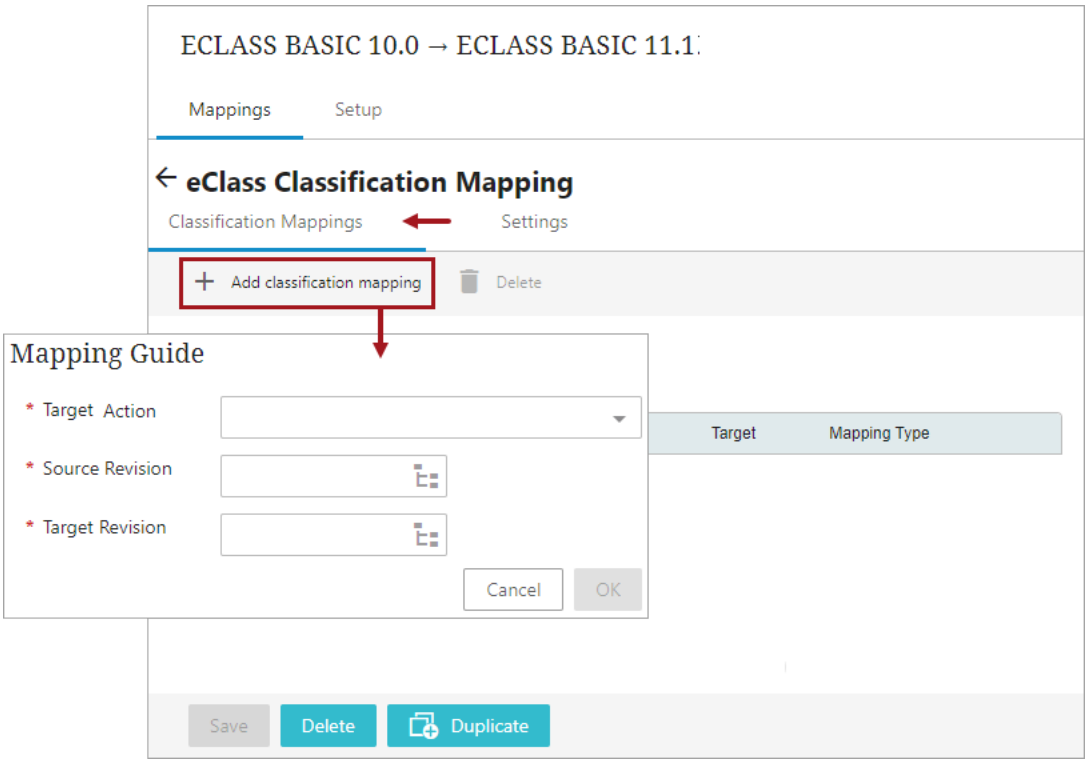
  This means that every time a mapping encounters an issue that cannot be solved programmatically, the object will be entered into the workflow configured in this parameter.

Below is an example of how the Settings tab within the eClass Classification Mapping plugin is configured in the Web UI.



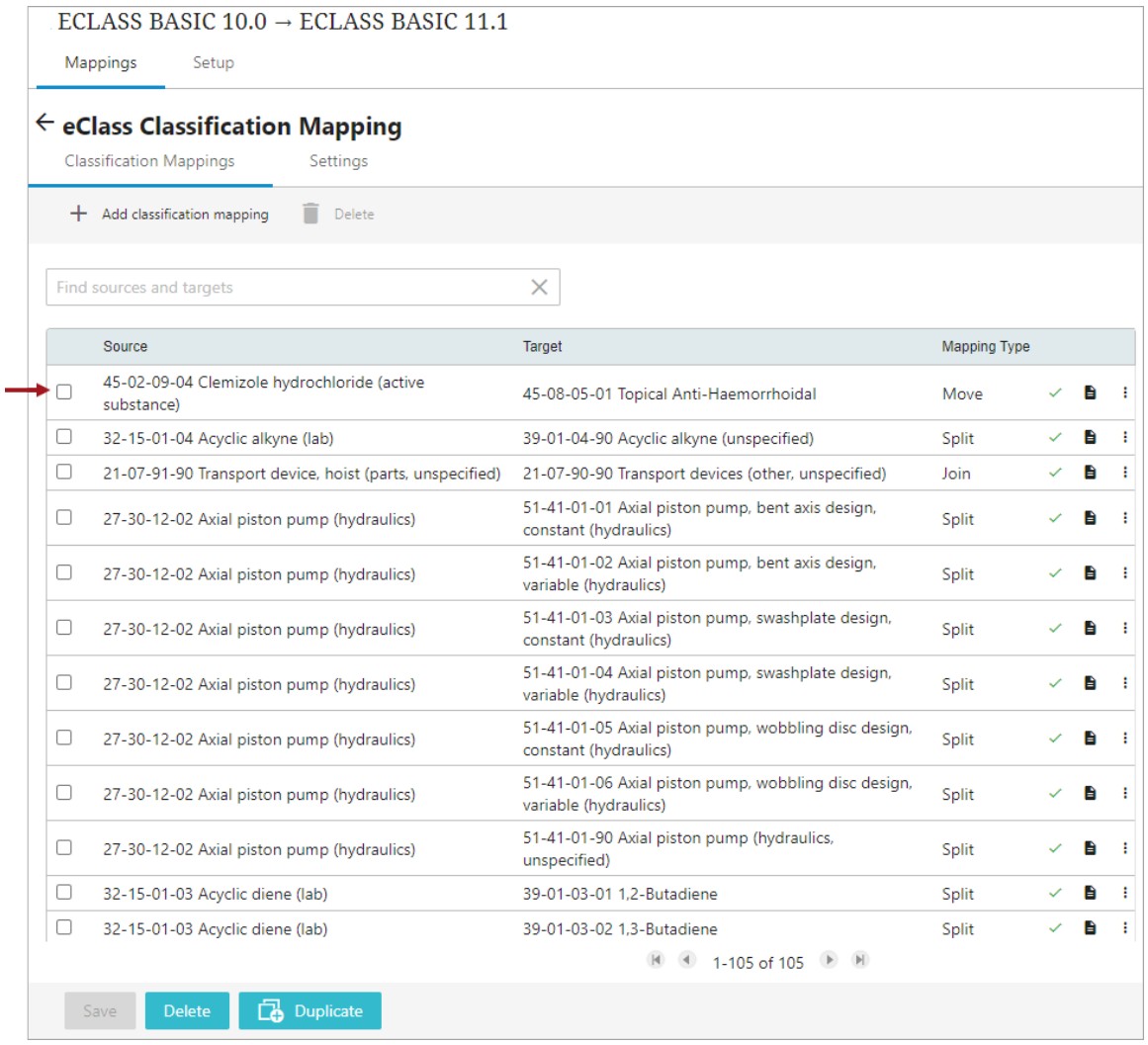
4. After completing all the required parameters within the Settings tab, navigate to the Classification Mappings tab and click on the **Add classification mapping** button.

   Upon clicking the **Add classification mapping** button, the Mapping Guide window will display, as shown in the screenshot below. Populate the following parameters:



   - **Target Action:** This parameter offers three options: Join, Move, and Split. Each option specifies how the classification object from the source should be handled. Refer to the earlier section of this topic for details on the actions performed by each option.
   - **Source Revision:** Populate this parameter with the classification object from the source version.
   - **Target Revision:** Populate this parameter with the classification object from the target version.

5. Once all the parameters in the Mapping Guide window are populated, click **OK** to close the window. Then, click **Save** to save the changes. The newly added mapper row will be listed, as shown below. To edit the eClass Classification Mapping selections, click on the row, and it will open up the Mapping Guide window for you to make edits.



6. Repeat step 4 to add more mapping rows for the same plugin.

Important: Users must save the changes before exiting the Mapper Configuration. If the user fails to click **Save**, the mapping will be lost once the user leaves the Mapper Configuration.

Users can add any number of mapping rows in the mapping plugin. When there are multiple mapper rows available within the mapping plugin, the order of execution of each mapper row is based on the order in which it is listed within the mapping plugin.

The health of the mapper row is displayed next to each mapper row. Users can also add some additional information describing each of the mapper rows. The user has the flexibility to disable, delete, or rearrange the listing order of the mapper rows. For more information on handling the mapper rows, refer to the Modifying Mapper Rows on the Onboarding Mapping Details Screen topic within the Data Onboarding and Standardized Mapping documentation

Using the Industry Standard Mapper Solution

The Industry Standard Mapper solution addresses challenges associated with those evolving industry standards. The solution supports seamless mapping between different versions of a standard, allowing users to automate reclassification and data transfer tasks. This ensures an automated approach to handling standard upgrades.

Note: Every time there is a version upgrade, many industry standards provide a description file that contains an instruction on how to upgrade from one of their versions to their next major version, which Stibo Systems refers to as **Industry Standard Mapping files**. However, for easier understanding, this guide will often use the ECLASS standard as an example, and would sometime refer to them as ECLASS Upgrade files. However, the same information is applicable for other standards too.

The Industry Standard Mapper framework interprets the Industry Standard Mapping files to create Mapper Configuration setup entities with necessary mapping instructions. These created Mapper Configuration setup entities later facilitate onboarding of data from one version to another version.

To accomplish this, the Industry Standard Mapping solution provides comprehensive support for two primary use cases, each associated with distinct user roles. This guide outlines the step-by-step procedures for both admin users and generic users (data stewards) to effectively utilize the mapping system.

Admin User

The role of an admin user will be to create a new Mapper Configuration Setup Entity based on the provided Industry Standard Mapping files. The following steps are to be followed by an admin user to create a new Mapper Configuration Setup Entity from the provided Industry Standard Mapping files.

- Download the Industry Standard Mapping files from the standard's web Page. This is a generic procedure where users have to identify their own methods to access the web page of the standard and download the relevant file version. For example, downloading ECLASS Upgrade files from the ECLASS main web page.
- Upload the entire downloaded zip files to STEP to a designated hotfolder (using IIEP or a File Loading widget). For information about how to upload a file into a hot folder, refer to the Uploading Industry Standard Mapping Files topic.
- Access the Industry Standard Mapping Creator Screen in the Web UI, and define the 'from' and 'to' versions to be mapped, thereby creating a Mapper Configuration setup entity. For information on how to create Mapper Configuration setup entities using Industry Standard Mapping Creator Screen, refer to the Using Industry Standard Mapping Creator Screen topic.
- Review the newly created mapping. As part of the structural analysis, ensure to filter the warnings and disabled mappings. Each warning should be thoroughly reviewed, as disabled mappings might still be applicable in some cases, even when declared as unmappable from ECLASS. Additionally, look for any potential clashes regarding attributes changing from global to context-defined or supporting different units. Both of these scenarios require manual attention.

Data Steward / User

- Navigate to the product requiring reclassification.
- Reclassify the product to a different ECLASS version by executing the designated Mapper Configurations generated by the Industry Standard Mapper. This process closely resembles the execution of any other Mapper Configuration within the Data Onboarding framework. Users can adopt any of the methods from the ways described in the Executing Mapper Configuration Setup Entity topic of the Data Onboarding and Standardized Mapping documentation.

Uploading Industry Standard Mapping Files

Industry Standard Mapping files can be imported into STEP by uploading it to either a configured hotfolder, or through a File Loading Widget on a Web UI Homepage. The purpose of the Industry Standard Mapping Importer Web UI setup outlined in this topic is to offer a readily available solution for importing Industry Standard Mapping files. Currently, only the ECLASS Upgrade files are allowed to be imported as the Industry Standard Mapping files.

Considerations before initiating an import

Before importing ECLASS Upgrade files into the system, it is important to consider the following:

- ECLASS offers multiple sets of version update files, each detailing the mapping rules for transitioning from one version to another. These update files explicitly outline the mapping specifications that facilitate a smooth transition between ECLASS versions.
- ECLASS does not furnish update files when transitioning from a major release to a minor release (e.g., from version 10.0 to 10.1). This decision is grounded in the fact that update files are specifically designed for addressing structural changes, and minor releases do not introduce any structural modifications to the preceding major release. Minor releases solely consist of additional content, referred to as add-ons. To integrate these add-ons, users simply need to subtract all contents already present in the 10.0 release from the 10.1 release.
- It is required that the system utilizes the version-specific object type structure for ECLASS classifications. This can be achieved by selecting the 'Version specific object types' option on the Advanced step of the ECLASS Classification Importer during an import.
- Data in the ECLASS Upgrade file corresponds to specific ECLASS version(s), requiring the prior import of the corresponding / matching ECLASS classification files (Unit file and Dictionary file) before commencing the ECLASS Upgrade file import.

Prerequisites

Before engaging in any ECLASS Upgrade file import scenarios, it is essential to import the related ECLASS unit and ECLASS Dictionary file into the system.

Import Process Overview

Once a valid ECLASS Upgrade file is uploaded using a File Loading Widget (or uploaded directly to a hotfolder), the file is picked up from the hotfolder by an IIEP, and the IIEP starts a Background Process.

Procedure

1. Access the Web UI Homepage.
2. Drag and drop a valid ECLASS Upgrade file into the 'ECLASS Mapping Files' File Loading Widget, or upload to the hotfolder (root/upload/hotfolders/mappingfiles/In).

For information about File Loading Widget, refer to File Loading Widget topic within the Web User Interfaces documentation.

3. Once the upload has started, users can view the progress of the upload using the 'Recent background processes' side panel.

   For more information on using the 'Recent background processes' side panel, refer to Recent Background Processes Side Panel topic within the Main Properties Overview section of the Web User Interfaces documentation.

After uploading the file, the IIEP picks it up and initiates a Background Process for the import process. The file loading widget does not provide background process monitoring in the Web UI. You can monitor the import status within the workbench through the IIEP Background Process that is generated.

For more information about monitoring the IIEP via background process, refer to Monitoring an IIEP via Background Process topic within the Data Exchange documentation.

Structure of ECLASS Upgrade Files

ECLASS provides several sets of version update files. An update file which is in the .Zip format, describes the actual mapping rules for going from one version to another. An ECLASS Update File comprises of the following:

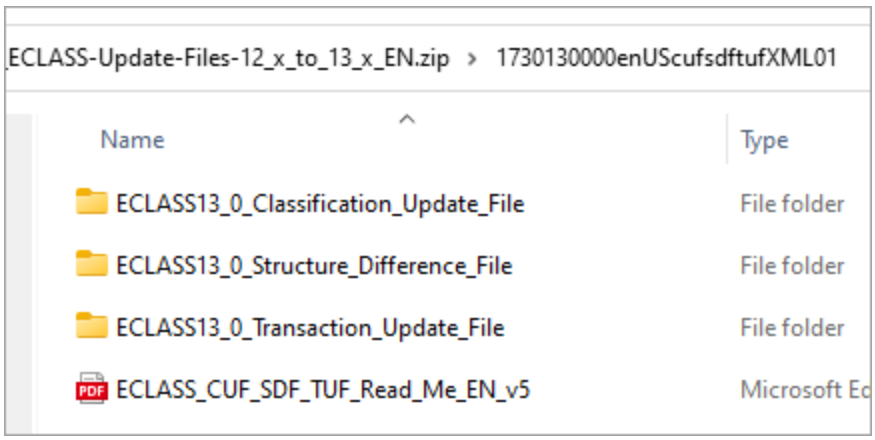
- A set of excel files describing all changes from the previous version to the new version.
- A set of XML files containing a description of all instructions from the previous version to the new for automated updates. These files are known as CUF, TUF, and SDF.

Currently, because the Industry Standard Mapper solution supports only the ECLASS standard, the subsequent section of the topic describes how the above defined files are CUF, TUF, and SDF files are placed in the system.

ECLASS Upgrade Files Import Framework

After the ECLASS Upgrade file is loaded in the system, the system automatically unpacks the files and creates assets containing the imported mapping files in their designated classification folders.

The main file contains either the 'RUF' or 'CUF' and 'TUF' files. The 'RUF' files are ignored as these are the human readable mapping files. However, the CUF (classification update file) zipped folder consists of the following folders:

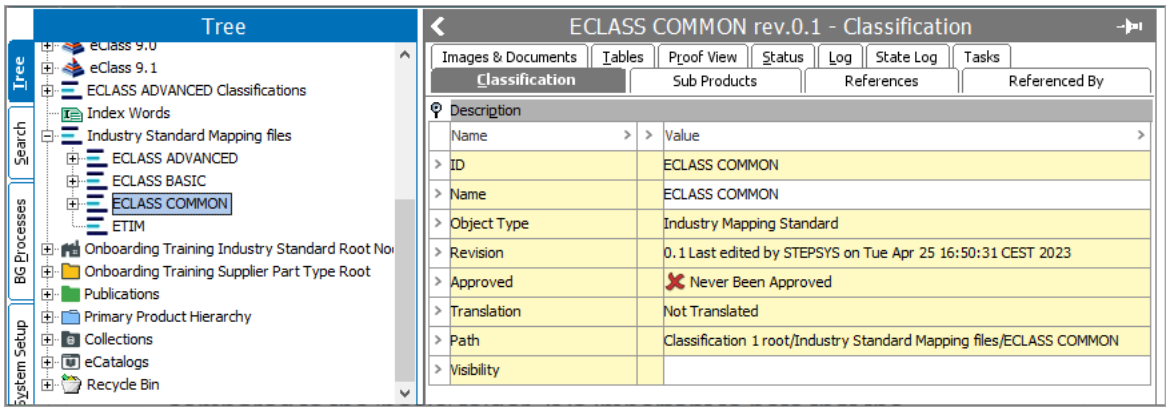


The importing process necessitates the extraction of two essential files: the CUF (Classification Update File) and the TUF (Transaction Update File).

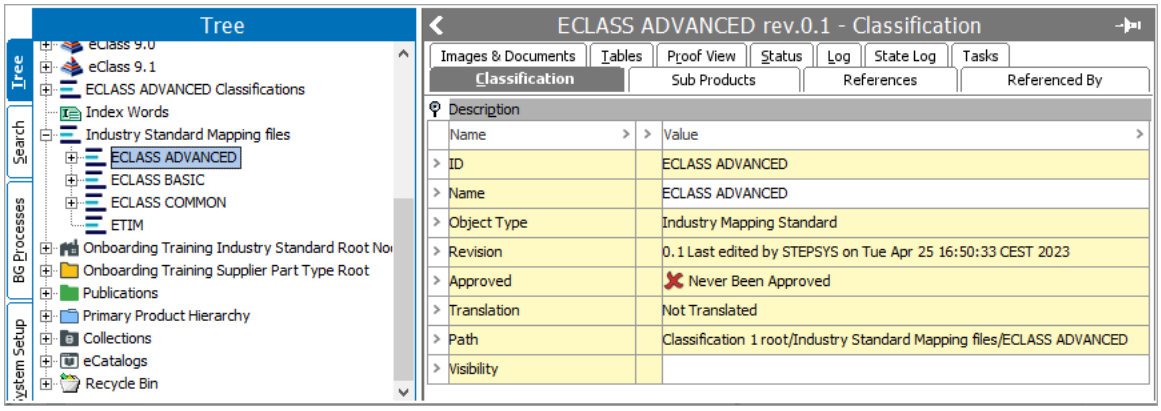
Notably, the SDF (Structure Difference File) holds relevance only for systems lacking distinct hierarchies for each version and are being disregarded during the import. Further, the 'Transaction Update File,' includes two distinct folders, namely Basic and Advanced.

The 'Advanced' folder accommodates a broader set of attributes compared to the 'Basic' folder. It is important to note that the classification hierarchy is shared between both folders.

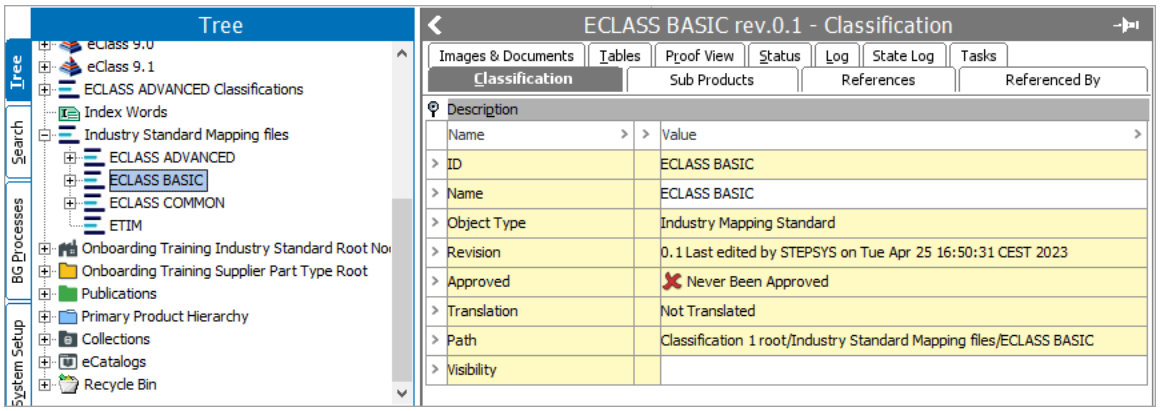
Consequently, the 'CUF' file will be created under the classification folder ECLASS COMMON.



The Advanced file consisting of attributes will be placed in the classification folder ECLASS ADVANCED



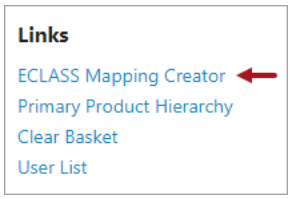
The Basic file consisting of attributes will be placed in the classification folder ECLASS BASIC.



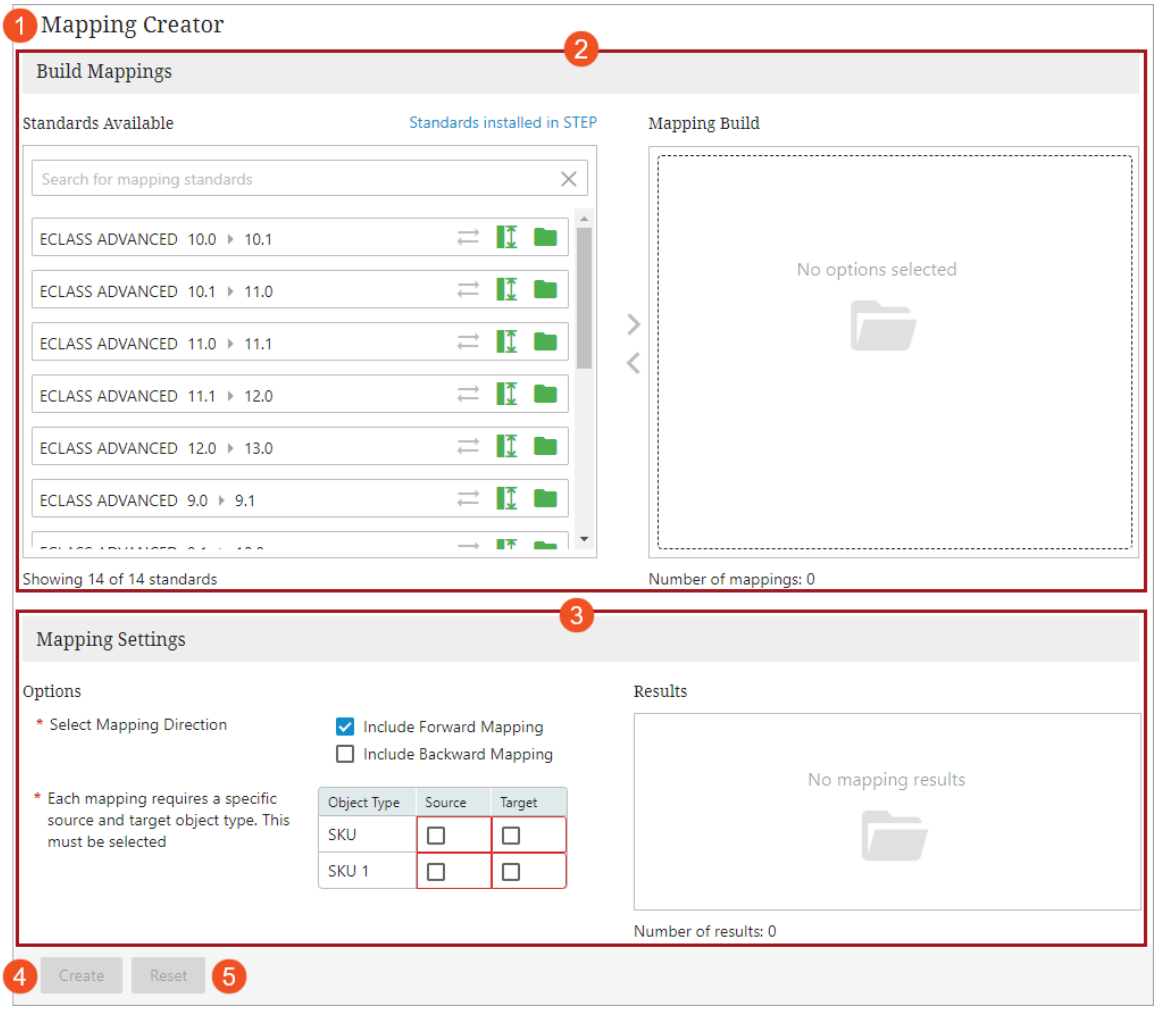
Using Industry Standard Mapping Creator Screen

The Industry Standard Mapping Creator is an interactive and robust tool that features an easy-to-use intelligent mapping builder interface. This interface empowers Web UI users to swiftly and effortlessly construct custom Mapper Configuration setup entities involving valid combinations of different standards or different versions of the same standard. The primary objective of this screen is to offer a user-friendly interface for easily defining mapping criteria. Upon clicking the Create button, a new Mapper Configuration setup entity is generated based on the specified criteria.

For ease of access a link to the Industry Standard Mapping Creator Screen is to be added to the Quick Links widget on the Web UI Homepage. For more information, refer to the Configuring Industry Standard Mapping Creator Screen topic. In the example below, we have configured a Industry Standard Mapping Creator Screen called ECLASS Mapping Creator and provided a link within the Quick Links widget.



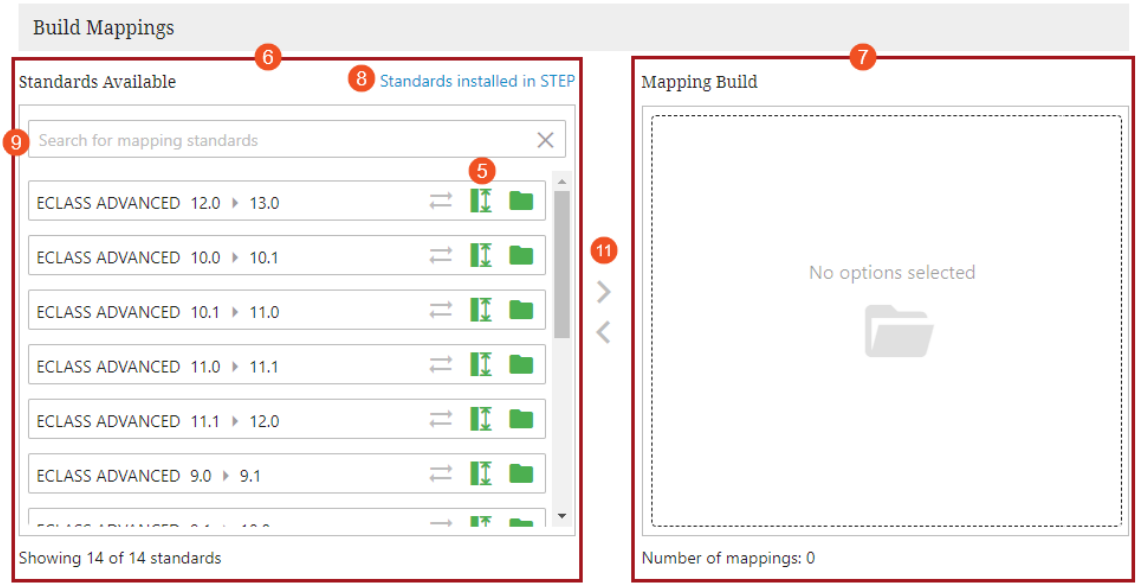
The Industry Standard Mapping Creator Screen is structured around two primary areas, each of which is not subject to individual configuration. The top half of the Industry Standard Mapping Creator Screen offers features related to defining a valid start and endpoint by specifying the 'from' and 'to' versions for mapping. The bottom half of the screen is dedicated to the additional settings related to the mapping criteria defined in the top half.



1. **Title of the screen:** Displays the name of the screen.
2. **Build Mappings interface:** Within this area, users have the capability to actively define a mapping criteria by specifying a valid start and endpoint for mapping, resulting in the creation of a Mapper Configuration setup entity. The interface is partitioned into two panels: the left panel, labeled 'Standards Available,' showcases all available mapping standards within the system, while the right panel, termed 'Mapping Build,' aids in constructing the start and endpoint of the mapping based on the options available in the left panel. The features available within this interface are described in the later section of this topic.
3. **Mappings Settings interface:** This area comprises additional settings relevant to the mapping criteria defined in the Build Mappings interface. Additionally, it includes a result area that displays the start point and the end point of the mapping.
4. **Create button:** Once all the required fields in the Build Mappings interface and Mappings Settings interface are populated, the Create button becomes activated. Clicking this button generates a new Mapper Configuration setup entity based on the criteria defined above.
5. **Reset button:** In any circumstances where you wish to erase all the mapping criteria defined above and start over from the beginning, click the **Reset** button.

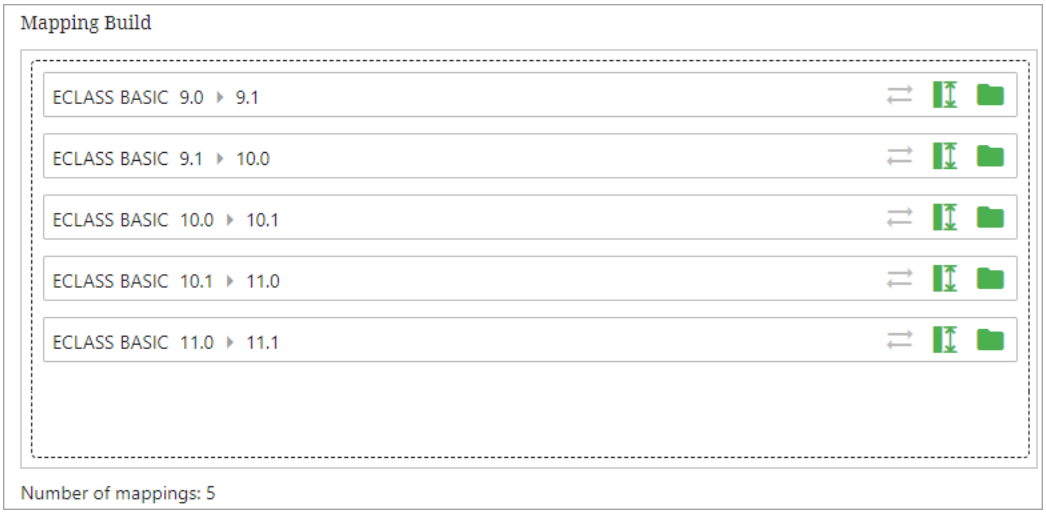
Build Mappings

This interface basically facilitates in building a mapping criteria. It is partitioned into two panels: the left panel, labeled 'Standards Available,' showcases all available mapping standards within the system, while the right panel, termed 'Mapping Build,' aids in constructing the start and endpoint of the mapping based on the options available in the left panel. Below are the functions available within this area:

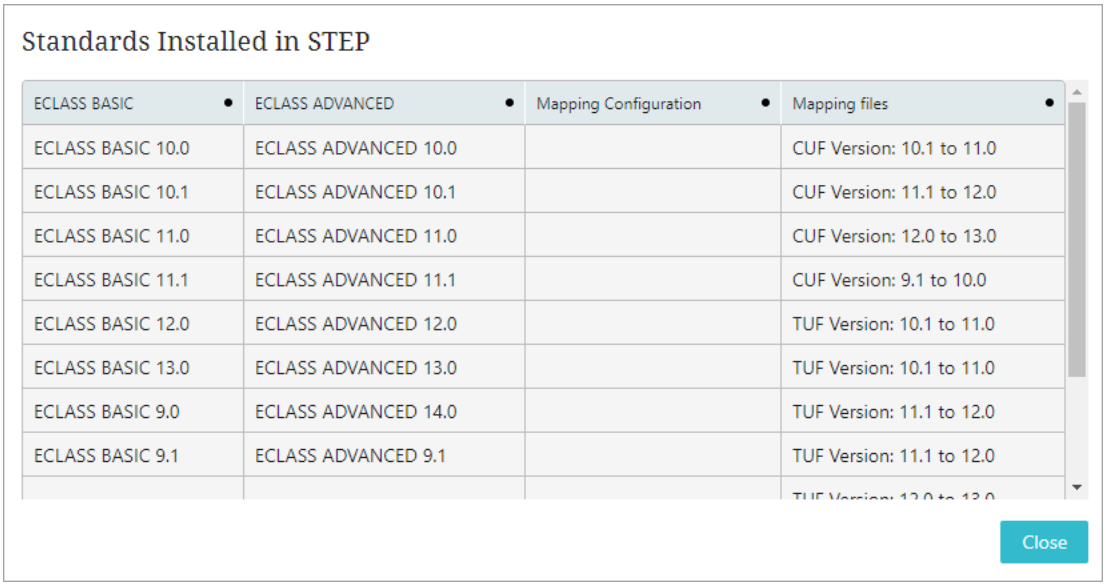


6. **Standards Available panel:** This panel provides users with a comprehensive view of all available mapping options in the system. Further, it aims to offer precise guidance on the sequential steps required to navigate from the starting point to the endpoint of the mapping. While this may seem less useful when upgrading within a single standard, it becomes pivotal when traversing across different standards. Once the initial selection is made, the system intelligently presents only valid options for further mapping. This area includes the following options

7. **Mapping Build:** This column showcases all the built mapping standards that have been moved from the Standards Available column. The mapping options displayed within this area always considers a directional flow from the old standard to the new standard. The interpretation of this mapping, including how the system should perceive it, can be precisely configured using the Select Mapping Direction field that is available in the lower left area of this screen, as detailed in a later section of this topic. Below is an example of how the mapping standard is built from ECLASS Basic 9.0 to ECLASS Basic 11.1.



8. **'Standards installed in STEP' link:** Clicking this link opens a dialog called Standards Installed in STEP. The dialog provides a comprehensive overview of the installed standards, encompassing their respective versions. It also displays the created and the currently existing Mapper Configuration setup entity. Users are encouraged to navigate to the Onboarding Mappings Details screen for a detailed exploration and management of mappings.



9. **Search field:** Type in the keywords within this field to find a mapping standard that meets your requirement.

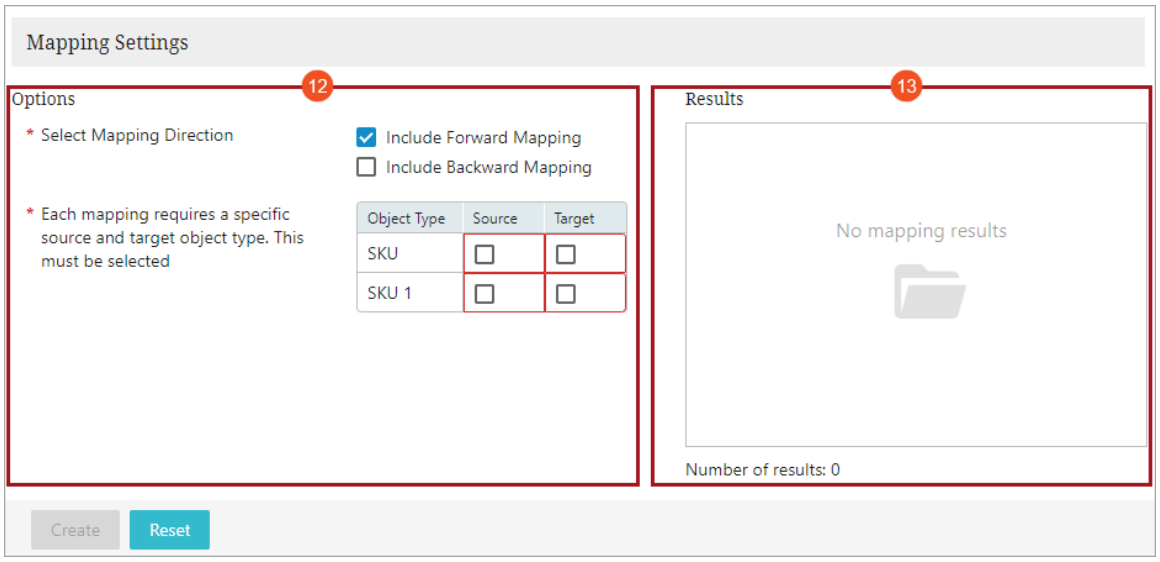
10. **Status Icons:** Within the Standards Available column and the Mapping Build columns, three icons are consistently visible for each mapping standard. The color of these icons, whether green or gray, indicates their status as active or inactive, respectively. The three icons displayed are as follows:

- **Mapping across a standard** : This icon gets activated (turns green in color), only when the mapping is performed between different standards. In the example above, where the mapping is within different versions of the ECLASS standard, the icon remains grayed out.
- **Handles Attributes** : Activation of this icon (turning green), signifies that the mapping involves attributes in the system.
- **Handles Classifications** : Activation of this icon (turning green), signifies that the mapping involves classifications in the system.

11. **Right / Left arrow:** These arrows facilitate the movement of mapping standards from the Standards Available panel to the Mapping Build panel.

Mapping Settings

This interface serves to manage additional settings related to the mapping criteria defined in the Build Mappings interface of the screen. It is subdivided into two panels:

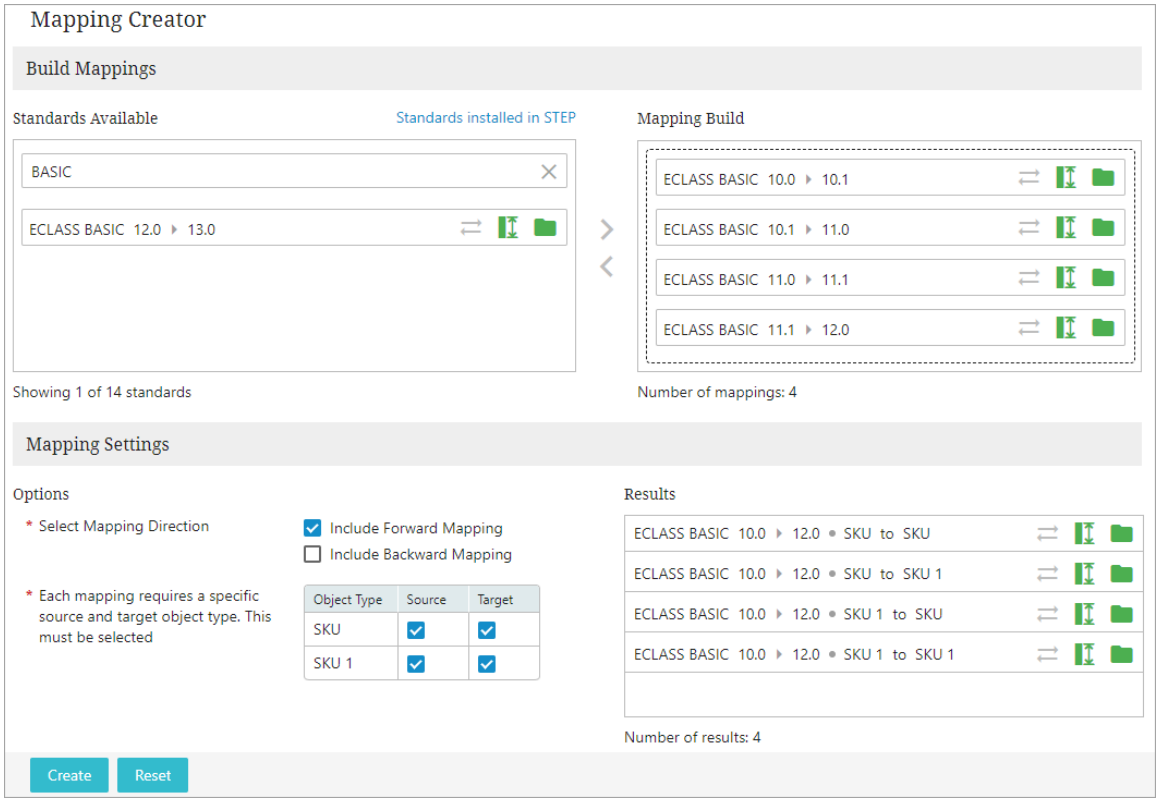


12. **Options panel:** The bottom left panel, labeled 'Options,' provides features for fine-tuning the mapping criteria built in upper half of the screen. The functions available within this panel are detailed below:
    - **Select Mapping Direction:** In the upper half of the screen, mapping criteria are consistently constructed from old to new standards. This signifies that a mapping always progresses from the old standard to the new standard. However, the system's interpretation of the mapping direction is configured in the 'Select Mapping Direction' field. The option selected in this field provides explicit instructions to the system on to which direction to construct the mapping. While a direction must be selected, it is also possible to construct a mapping criteria in both directions. The impact of this selection is immediately reflected in the Result panel. The selected direction instructs the system to

construct the mapping in the specified direction or both directions if so desired.

- **Object Type selection:** During the mapping process, the system identifies the permissible object types for both the source and the target. The presented object types in this field consistently align with the current selection made in the upper half of the screen. The system derives these permissible object types from the options allowed at the start point and the end point, as defined in the mapping criteria. This approach ensures management of internal mapping, covering scenarios of mapping to the same product, as well as mapping from one object type to another.

  To construct a mapping criteria, there must be at least one valid object type for both the source and the target (though they need not be the same). If only one object type is available, it will be automatically selected and cannot be deselected. In cases where multiple object types are selected for mapping, the system dynamically generates mappings for all combinations of the selected object types.

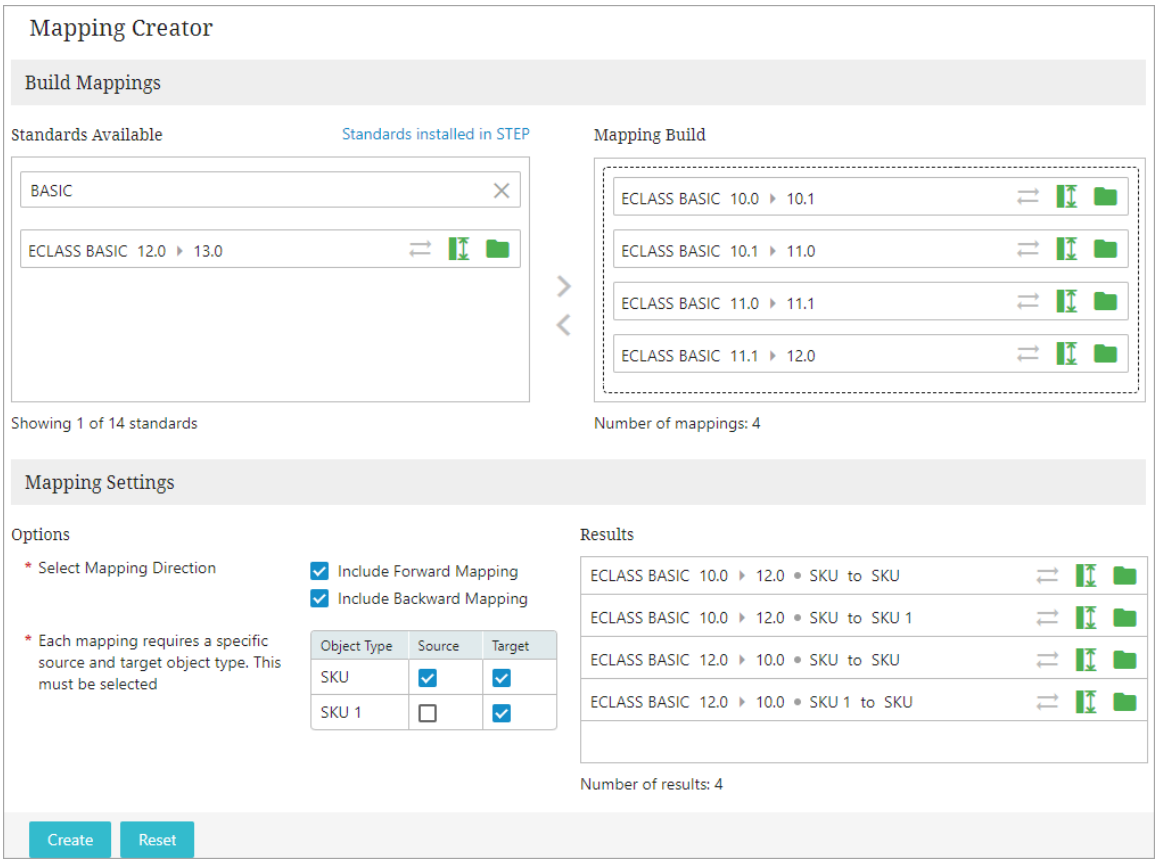


Taking the example screenshot above, where both object types are selected for both source and target, the system will dynamically generate the following combinations:

- SKU →SKU
- SKU →SKU 1
- SKU 1 →SKU 1
- SKU 1 →SKU

  The impact of selecting different object types becomes immediately visible in the Results panel.

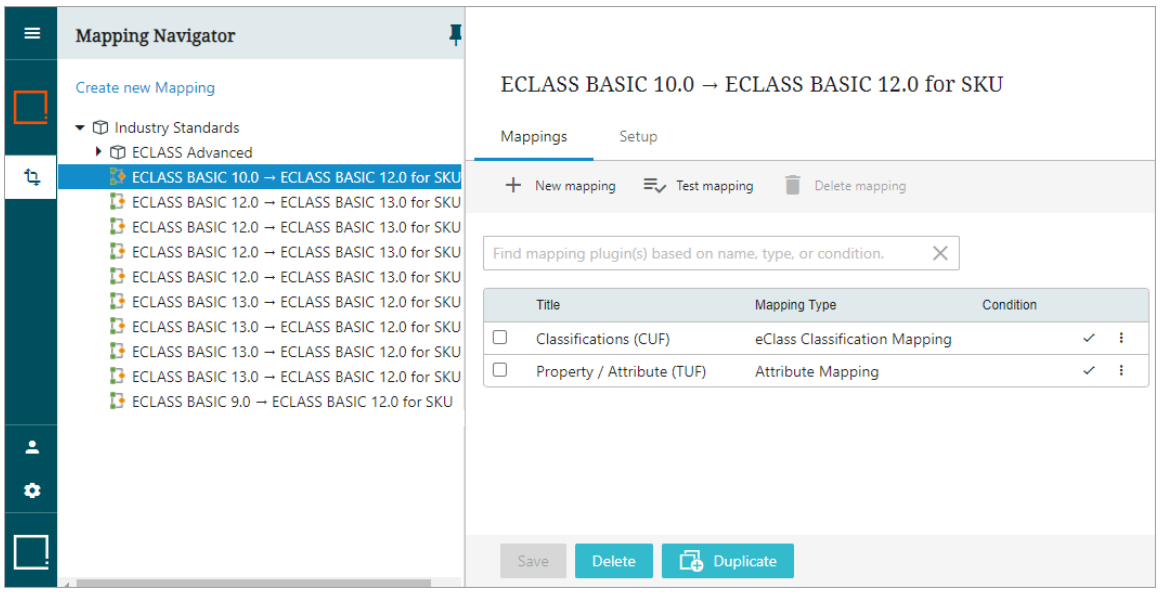
13. **Results panel:** The bottom right panel, termed 'Results,' displays the mapping that is built based on the current selections – if they represent valid mappings. The result panel presents the anticipated mappings based on the current settings. In the below screenshot, the result screen showcases a mapping scenario from ECLASS BASIC version 10.0 to 12.0 for both directions. However, this mapping specifically involves SKU sources, with the flexibility to map to either SKU or SKU 1 object types.



Upon populating and selecting all the necessary fields, clicking the 'Create' button, located at the bottom left of the screen, initiates the generation of a Mapper Configuration setup entity. This Mapper Configuration setup entity is crafted based on the mapping criteria defined in the other panels of the screen.

The resulting Mapper Configuration setup entity will be stored within the Setup Group folder which is defined while creating this screen in the designer.

Below is an example of a Mapper Configuration setup entity named 'ECLASS BASIC 10.0 → ECLASS BASIC 12.0 for SKU,' created for the transition from ECLASS BASIC version 10.0 to 12.0. This specific Mapper Configuration is configured with SKU as both the source and target object types, incorporating both the Attribute Mapping plugin and ECLASS Classification Mapping plugin to achieve the desired results.



Executing Mapper Configuration Setup Entity

Executing the Mapper Configurations created by the Industry Standard Mapper is just similar to the executing any other Mapper Configuration in the Data Onboarding framework. Users can adopt any of the methods from the ways described in the Executing Mapper Configuration Setup Entity topic of the Data Onboarding and Standardized Mapping documentation.

Generally, the Onboarding Comparison Screen is used if user discretion is required regarding the acceptance / rejection of the mapping changes. For more information about how to use the Onboarding Comparison Screen for executing the Mapper Configuration, refer to the Onboarding Comparison Screen topic of the Data Onboarding and Standardized Mapping documentation.