STEP

RELEASE NOTES

Release 9.1 (December 2018)

StiboSystems

MASTER DATA MANAGEMENT

Table of Contents

Release Notes for 9.1

Document Overview

Audience

This document is intended for use by active STEP users and partners. It serves to describe the new and enhanced features provided with the release. It does not serve as a replacement for the STEP Online Help, which includes additional information on previously existing and new system functionality, as well as more detailed explanations and step-by-step instructions for use, when appropriate.

Content

This document describes the changes between the current and previous release.

Some functionality is controlled via component activation, which may include licenses and/or component installations, and may not be available on a particular system. Questions should be directed to the Stibo Systems account manager or partner manager.

Release Overview

A wide variety of Product Master Data Management (PMDM), Customer Master Data Management (CMDM), PLM, and STEP platform enhancements were implemented with the 9.1 release. These updates embody the business-first mindset that drives Stibo Systems customer solutions.

PMDM

- New audit messaging framework will allow companies to use data to improve agility, deliver personalized experiences, and accelerate time-to-market while increasing customer satisfaction.
- Product Data Syndication (PDS) capabilities have been expanded, and a new Web UI component displays PDS channel status and improves navigation from Web UI to PDS.
- New image deduplication functionality enables identification of duplicate images across an entire Product MDM system, or within defined ownership structures such as suppliers or business units.

CMDM

- Data profiling functionality has been extended to the Web UI where data profiles can be run and presented to data stewards via a new Data Profile screen.
- A new Matching and Merging configuration type allows surrounding systems to bulk create or update customer data and entities synchronously via a web service.
- A new address validation web service allows users to send addresses for validation in STEP using the built-in Loqate Local API.

PLM

- New recipe creation capabilities assist customers in creating recipe specifications to provide to suppliers and help suppliers create recipes to provide back to the customer.
- A new Bill of Materials (BOM) comparison view lets customers compare their recipe specification to suppliers' recipes.

STEP Platform

- The Java version that the STEP platform relies on is changing to AdoptOpenJDK, the de facto version of Java. **User action is needed to make this change.**
- Improved performance of data profiling has been added with new default behavior in STEP to scale to several processors when profiling. This change improves the performance of profiling across the board. Be aware that this may change the hardware load profile in systems where data profiling is used a lot. **See installation information below in the Recipe section.**
- New tooling has been introduced to reduce the complexity and improve STEP configuration management capabilities for customers.
- A new property is available so that customers can add user authentication to STEP Online Help.
- More In-Memory optimizations are available.
- Universally Unique Identifier (UUID) autogeneration functionality added as a baseline feature.

This document describes the above, as well as a long list of other new functionality and improvements, in greater detail.

As with every release, some components are deprecated, removed, or desupported for various reasons. Anything with a user impact has been called out in the applicable release note and may require special attention and user action before upgrading to 9.1.

A summary list follows. Customers should also read the Platform and Software Support Changes release note for additional items that may not be listed below.

- Customers using custom CSS in Web UI should also be aware of changes to Stibo Systems custom CSS policy. **Before upgrading to 9.1, these customers must contact Stibo Systems.** See the Web UI Enhancements release note (Updated policy regarding custom CSS section) for details.
- Some functionality will be removed as baseline STEP functionality and become accessible via a separate component installation. **User action is needed to continue using this functionality.** See the Platform and Software Support Changes release note and the Data Exchange Enhancements and Changes release notefor specific info regarding the new components for ETIM import format, eCl@ss Importer, and the BMEcat2005 import and export format.
- All existing replacement options (except for 'ReplaceTerms') have been marked as deprecated in the STEPXML. A set of new replacement options has been added. See the Data Exchange Enhancements and Changes release note for more information.

- **Stibo Systems is officially ending support for STEP 8.0 (effective 1-Apr-2019) and STEP 8.1 (effective 1-Nov-2019). See the Platform and Software Support Changes release note for full details.**

In addition to the information above, if there are any known future deprecations or impending desupports planned, the information can be found in individual release notes.

Recipe

The baseline update can be installed with the following recipe: `to:step/trailblazer/step-9.1.spr`

Also, a set of add-on components must be activated on your system in addition to the normal update procedures for 9.1 to ensure all systems default to the new data profiling functionality. These add-on components are 'reactive-webui', 'graphql', and 'profiling'.

See the SPOT Program documentation for help doing the STEP upgrade and installing add-on components.

Please contact your Stibo Systems account manager or your partner manager for additional information on upgrading or installing the 9.1 release.

Upon installation of 9.1, users need to complete a one-time install of the STEP Workbench Launcher prior to launching STEP Workbench. Details can be found in the STEP Java Changes and Launch Updates release note.

STEP Java Changes and Launch Updates

Summary

STEP relies on the Java programming language to run on both the server side and the client side. With this release, Stibo Systems has removed its dependence on Oracle Java. Also, Java is no longer required to be installed separately on workstations meant for workbench work.

In addition to the Java changes, there is also a change to the way the STEP Workbench can be launched from the Start page (formerly WebStart, an Oracle option).

Details

STEP Java changes

Prior to 9.1, the STEP solution ran on a Oracle Java version. As of February 1st, 2019, Oracle will cease to support the free version of Java 8 and continued long-term support from Oracle will only be available under a commercial license agreement. Because of this and because AdoptOpenJDK is advocated by renowned brands as well as broadly recognized as the de facto version of Java, Stibo Systems has replaced the Oracle Java with the open-sourced Java version by AdoptOpenJDK. More information about AdoptOpenJDK can be found at https://adoptopenjdk.net/.

The new functionality is built into the baseline. For STEP versions 8.0 to 9.0, a 'java' add-on component (x64) can be added to and used with these systems. If adding the 'java' add-on component, a new 'workbench-launcher' add-on component must also be added at the same time. The Workbench Launcher is described in the STEP Workbench Launcher section below.

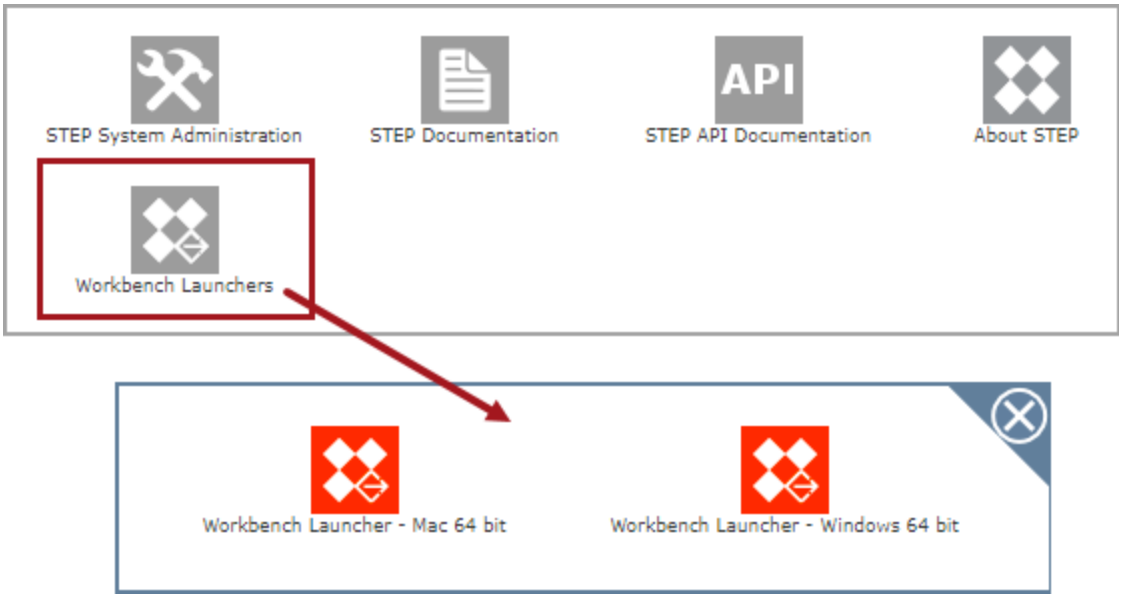
Important Information

- The security and level of support from Stibo Systems remains unchanged.
- Customers choosing to stay with Oracle beyond January 31, 2019 (those versions lower than 9.1 not activating the 'java' add-on component or those choosing to enable WebStart on 9.1), will need to work with Oracle directly regarding licensing and do so with the understanding that Stibo System will no longer be testing and supporting anything but the OpenJDK version.
- No new security fixes will be available from Oracle without a commercial agreement (as explained in the previous bullet).
- If using Oracle Java, the WebStart functionality can be added via a sharedconfig.properties file update. However, effective with Java 11 (9.2 release), the WebStart technology will be removed entirely. See the next section for more information.
- Stibo will continue to support and release the OpenJDK upgrades for Java 8 for as long as the 8.0 - 9.1 versions of STEP are supported. Once a STEP version is desupported, (e.g., 8.0 on 1-Apr-2019 and 8.1 on 1-Nov-2019), Java 8 updates will cease.

STEP Workbench Launcher

The STEP Workbench relies on the Java WebStart technology for both launch and updates, allowing the user to do both from the STEP WebStart page. With the Java change described above, the initial landing page will now be referred to as the 'Start' page.

Upon taking the 9.1 release (or after adding the 'java' and 'workbench-launcher' components for 8.0 - 9.0 versions), an installer will be added to the Start page, and workbench instances will have a new file extension (.stepwrb). **Users, or their IT departments, will have to run the installer on client workstations prior to initially starting the workbench the first time after installing 9.1 or the add-on component.** The launcher will open a wizard, and users should follow the step-by-step instructions.



Users can access a set of Frequently Asked Questions (FAQs) regarding the Java changes and Start page updates by logging into the customer portal (JIRA). More information about the launch functionality will also be accessible via the STEP Workbench Launcher dialog that displays upon clicking the Workbench Launchers icon on the Start page.

New Product MDM Auditing Capabilities

Summary

Companies are increasingly using data to improve agility, deliver personalized experiences, accelerate time-to-market, and increase customer satisfaction. The new Audit Message Framework can help your business achieve these objectives by exposing and extracting data in STEP that can be processed for statistical analysis. For example, by auditing the information obtained by tracking products in workflows, the resulting data can be analyzed and blended with data from third-party systems, via BI tools, to provide valuable insights that identify issues and improve processes.

Details

The new Audit Message Framework is a powerful message delivery solution that adds a new level of robustness to STEP's already-existing data analytics integration functionality. The framework utilizes a public JavaScript API interface that allows users to send configurable messages of their choosing to an external system. These messages can support the auditing of workflows and related data, as well as help users determine where objects in a workflow are spending most of their time, and why conditions fail for particular objects in a workflow.

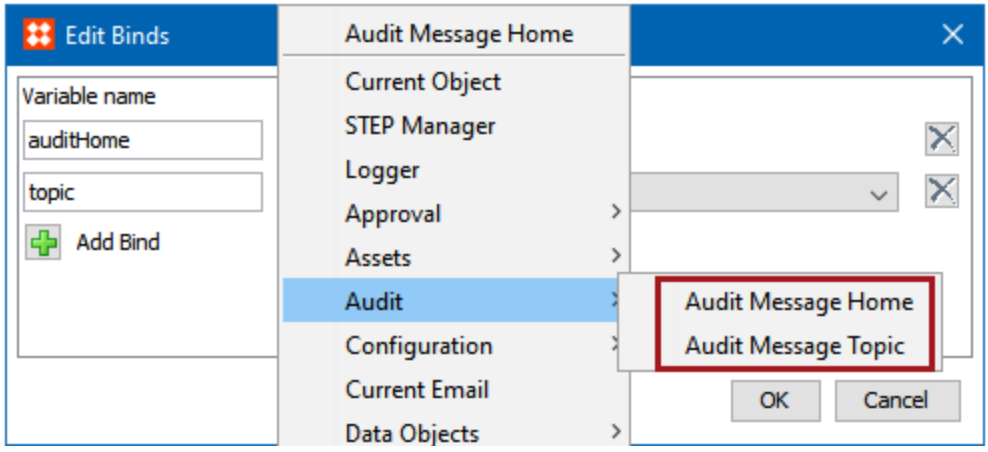
The Audit Message Framework uses:

- JavaScript API methods to audit and persist STEP data, including workflow status and events
- A simplified messaging system to deliver data to an external database via Java Database Connectivity (JDBC)
- A public API interface for custom extensions

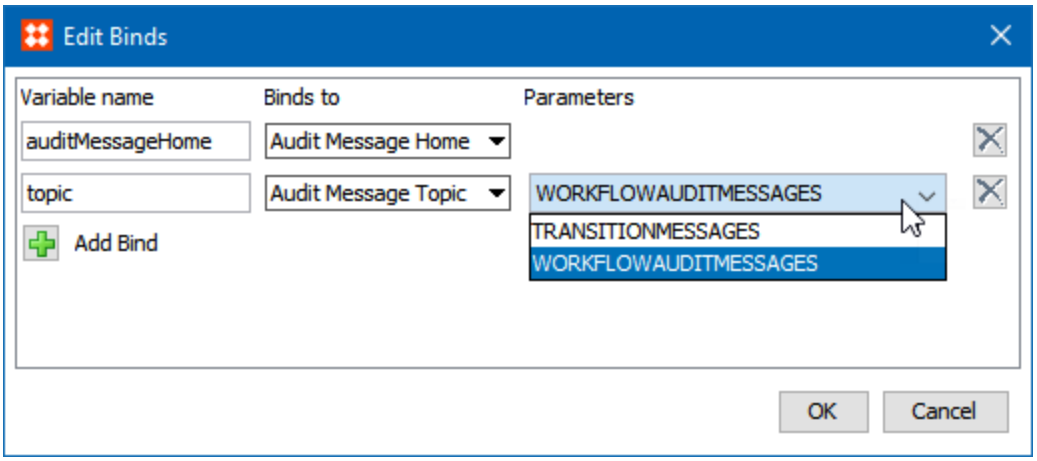
The public API methods can be used from custom code or from within JavaScript business actions.

New JavaScript binds and public JavaScript API methods

Two new JavaScript binds have been introduced to enable the business rules used within the Audit Message Framework—Audit Message Home and Audit Message Topic. These binds are located within the new Audit category for Execute JavaScript business actions. The Audit Message Home bind provides access to the new getTopicByID JavaScript API method, and the Audit Message Topic bind provides access to three new JavaScript API methods: sendMessage, sendMessageAsync, and getTopicID.

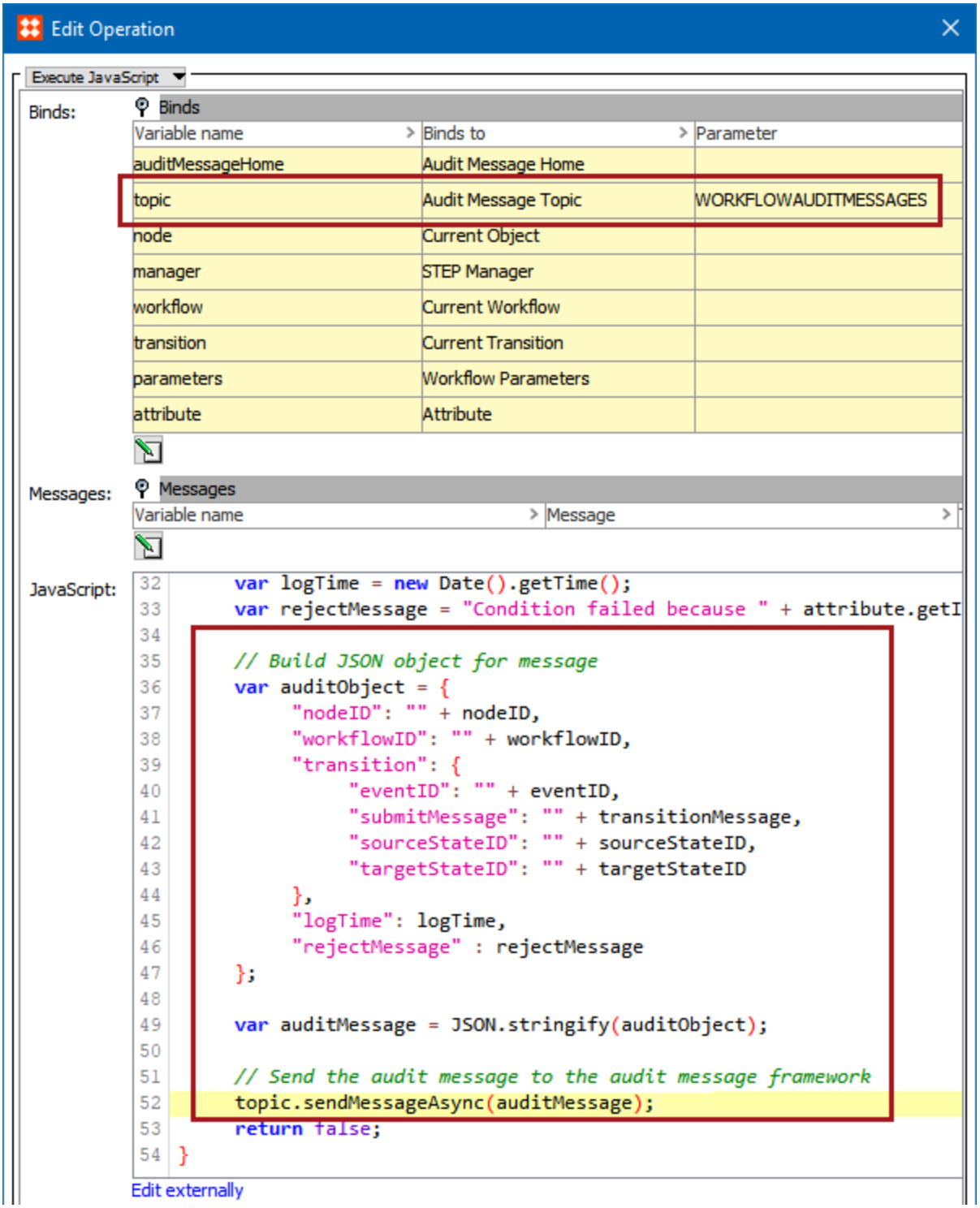


Messages are sent to the Audit Message Framework via the following Audit Message Topic methods: sendMessage or sendMessageAsync. These methods are available by binding directly to a particular Audit Message Topic (selected from the Parameters dropdown list of the Audit Message Topic bind). Alternatively, the Audit Message Home bind can be used to dynamically access an Audit Message Topic via the getTopicByID JavaScript API method.



Topics are different queues within the message framework that enable the system to route and process messages. These topics are defined by (and subsequently subscribed to by) the Audit Message Receiver plugins, which can handle the messages in any way they wish. The list of topics is generated by the Audit Message Receiver plugins installed on the system. The Audit Message Framework solution includes one out-of-the-box Audit Message Receiver plugin, which delivers audit information to JDBC database tables.

The Audit Message Topic bind can be used to send a message like the following example, which creates a JSON message object and uses the bind's API sendMessageAsync method. The JSON message is received and handled by the plugin associated with a specific topic; in this case, the out-of-the-box JDBC database delivery plugin.



To access the Audit Message Framework, an 'audit-messaging' add-on component must be activated on your system in addition to the normal update procedures for 9.1. Additional setup tasks and system configurations must also be performed by Stibo Systems' Technical Services team upon initial setup. See your Stibo Systems representative for more information.

For additional information about Audit Message Framework, see the Audit Message Framework section of the Resource Materials documentation. For additional information about the JavaScript API interface and creating JavaScript based Business Rules in STEP, see the Scripting API section of the STEP API documentation. For additional information on Audit Message Receiver plugins, see the Extension API section of the STEP API documentation. The STEP API documentation is accessed from the Start page of your STEP instance.

PDS Integration Enhancements

Summary

The Product Data Syndication (PDS) solution has been updated to include the following new features and enhancements:

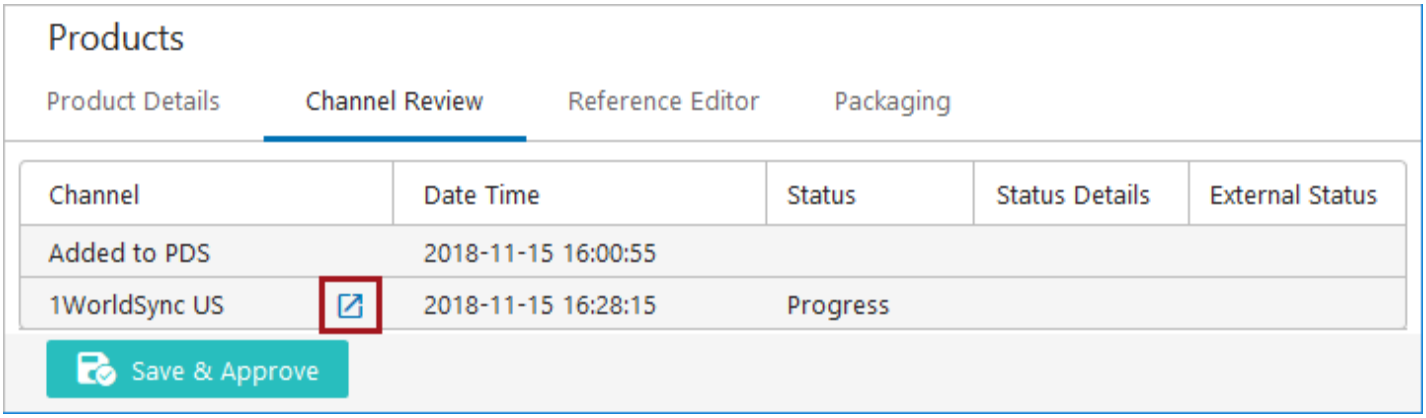
- A new Web UI component that displays PDS channel status and improves navigation from Web UI to PDS
- Improved PDS channel status monitoring through new status attributes
- Improved logging in BGP execution reports
- Improved method for sending composite data structures (nested referenced objects) to 1WorldSync
- Added support for CIC messaging
- Addition of 'initial load' indicator in PDS
- Default transactional setting changed to 'None' in PDS IIEP
- Default Advanced STEPXML template changed to include inherited values
- New ability to export metadata attribute values on references
- Improved outbound performance between STEP and PDS

Details

PDS Channel Status in Web UI

Users can now navigate directly to products in PDS (Product Data Syndication) from within the Web UI.

By adding the new 'PDS Channel Status' component, users can view all the PDS channels through which a given object's information is being sent, that object's status for all of those channels, as well as a link to that product in the relevant channel in PDS. The displayed information is contained within the PDS Data Container, which is a data container designed to hold PDS channel status values on a Node Editor screen. Provided users are also logged into the PDS system, clicking the link (the blue icon shown in the 'Channel' column in the screenshot below) takes users directly to PDS to view the product in the relevant channel. There they can make any desired changes.



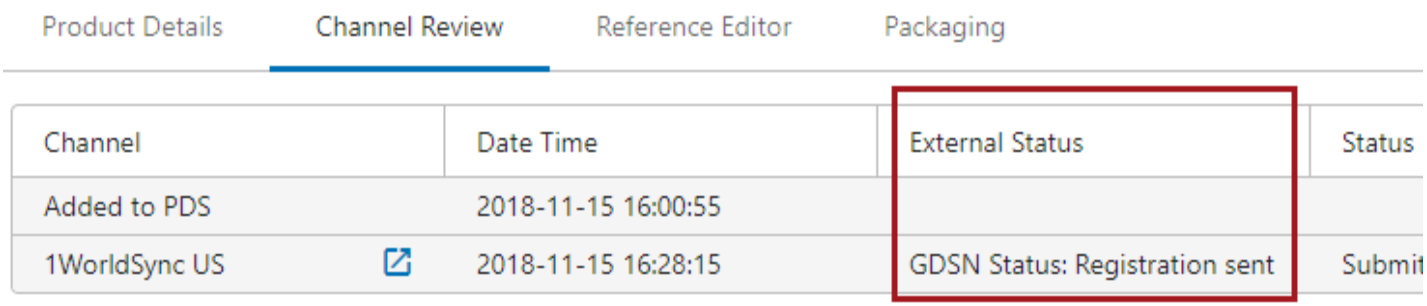
Previously, users could view an object's current statuses for various PDS channels from within the Data Container Table View Editor component in the Web UI, but there was no ability to link out directly to that object in PDS. By adding links from the Web UI directly to PDS, the users' ability to smoothly transition from one tool (the Web UI) to another (PDS) to manage data is appreciably improved.

To access and use the PDS Channel Status component, a 'pds-channel-status' add-on component must be activated on your system in addition to the normal update procedures for 9.1. See your Stibo Systems representative for more information.

Improved PDS channel status monitoring

To provide users with more expanded PDS status information, three new attributes have been added to the PDS Status Attribute Group and PDS Status Data Container:

- External Status (PDS External Status): Displays detailed information about the external channel status, such as the GDSN status. This attribute is populated after a product is submitted to a channel in PDS and STEP receives new status information from PDS.



- Status Details (PDS Status Details): Displays the content of the status message received from PDS so users can see the data receiver's response to the publication of the product. For example, this could be the CIC messages for the 1WorldSync channels, or an explanation of why something might have been rejected in PDS, such as a missing required field.
- Product Channel URL (PDS Product Channel URL): Provides the URL to the product in PDS. The URL is displayed within the Web UI PDS Channel Status component as a hyperlink icon that will route users to their product in PDS when clicked. This new component is documented in the 'PDS Channel Status in Web UI' subsection of this release note, above. When the PDS Data Container is viewed from within the STEP Workbench, the full URL displays.

All of these attributes are automatically added to the PDS Status Attribute Group and made valid for the PDS Status Data Container upon installation of the PDS component. On systems that already have the PDS component, the new attributes are added upon upgrade to STEP 9.1.

Improved logging in BGP execution reports for products submitted to PDS

More information is now available to users viewing export background process execution reports for products submitted to PDS. This information helps users verify that a given export process to PDS has been executed as expected.

Details that are now available include:

- Connection to PDS is created
- PDS server URL and credentials (excluding password)
- Number of products sent
- Number of attributes per product
- Number of composite attributes
- Log end of handling the request and that the connection to PDS is closed

Improved syndication of composite data structures (nested referenced objects)

Users of the 1WorldSync channel in PDS can now take advantage of an improved method for exporting composite data structures from STEP. A composite data structure is a structure of multi-leveled product references, metadata attributes on references, and attributes on products.

Currently is it not possible to map attributes within a composite structure in PDS. Composite attributes that should be exported to 1WorldSync, then, need to be have the right names in STEP during the export. This is done in a JSON structure containing the attribute names and the values of the attributes.

To prepare these composite structures, data setup is required in the STEP Workbench that involves configuration properties, metadata attributes, and product references. For more information on these configurations, see the Product Data Syndication section of the Data Integration documentation.

Added support for CIC messaging

Items submitted to 1WorldSync within PDS now support CIC (Catalog Item Confirmation) status messaging. The four CIC statuses are: Received, Review, Synchronized, and Reject. In addition to being visible in PDS, these status messages also display within the PDS Data Container in the 'External Status' field.

Addition of 'initial load' indicator in PDS

Functionality has been introduced in PDS that allows channel managers to indicate whether products should be published as 'new' or 'initial load.' This way, users can indicate to the receiver if it is a brand-new product or if the receiver has already received the product via other PDS channels. This property is contained within the data standard as a required PDS attribute named 'Initial Load.'

Default transactional setting changed to 'None' in PDS IIEP

A new default value of 'None' has been set for Transactional Settings on the PDS Inbound Integration Endpoint. Previously, the default was 'Strict.' This change was made because the Strict setting could sometimes cause product information data to be lost due to one date being logged when the BGP was created, then the next request to PDS reflecting a different last update date. Now, only one request is made at the beginning, so product data is not lost.

Note: For current PDS users, this change will not be made automatically upon upgrade to 9.1. The transactional setting will have to be manually changed to None.

Default Advanced STEPXML template changed to include inherited values

The default Advanced STEPXML template, which is used within the PDS Outbound Integration Endpoint to send data from STEP to PDS, has been updated to include inherited attribute values in exports. This has been achieved by adding the tag `<Values IncludeInherited="true"/>` to the template.

The `IncludeInherited` tag existed prior to STEP 9.1, but it was not included in the export template by default.

New ability to export metadata attribute values on references

Metadata attribute values on cross references can now be exported from STEP to PDS by being included within the composite JSON structure that is sent to PDS. Previously, metadata values on references were only supported for products within the packaging hierarchy.

Improved outbound performance between STEP and PDS

- Attributes and assets that have not changed since the last time they were sent to PDS are no longer sent each time products are submitted.
- A server restart will cause the caches to be cleared.

For more information on all the enhancements detailed within this release note, see the Product Data Syndication section of the Data Integration documentation.

New Image Deduplication Functionality

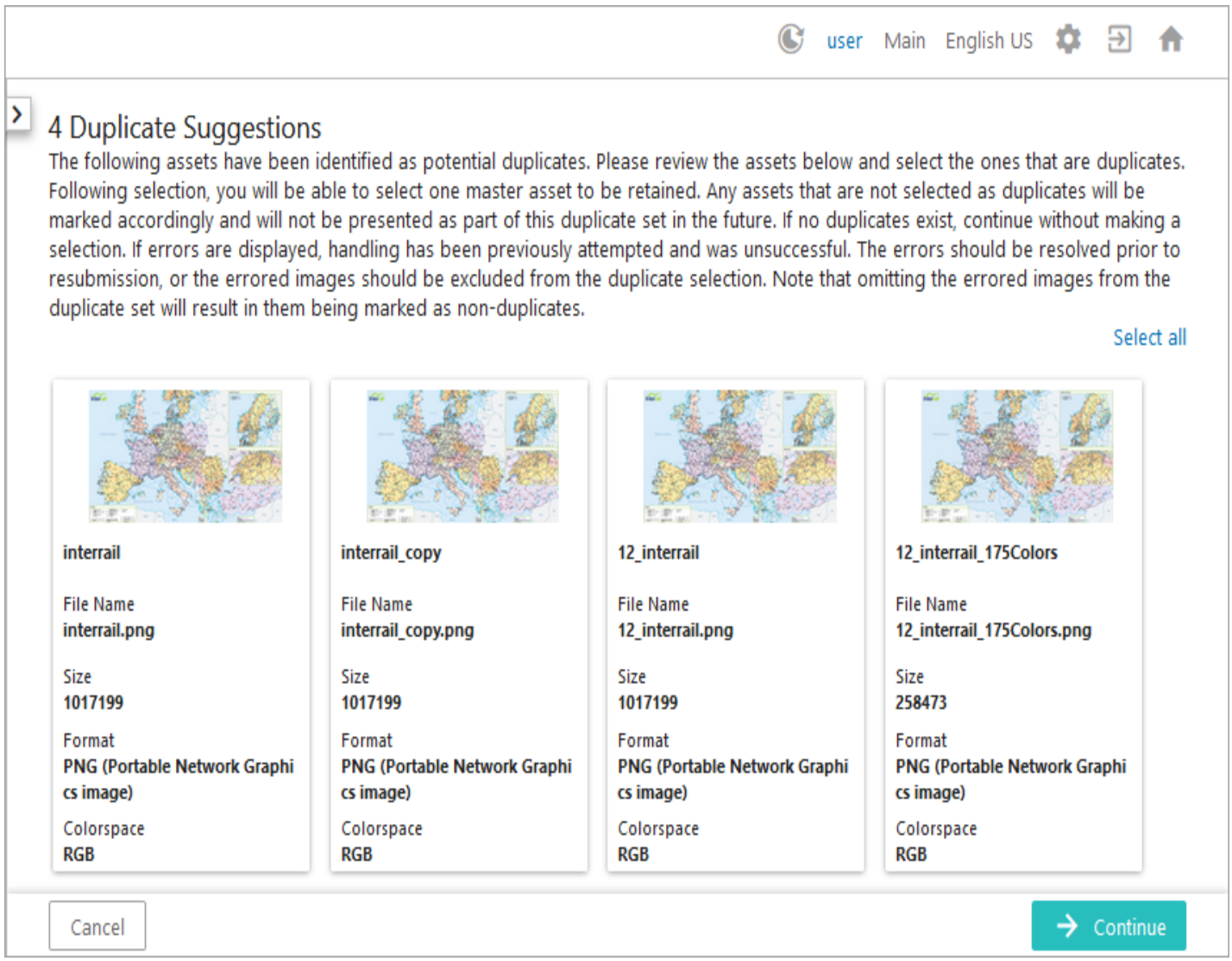
Summary

The new Image Deduplication functionality identifies and manages duplicate images to ensure that only one version of a particular image is maintained in the system.

Details

Storing images in STEP allows easy access to them, for example, when publishing to websites. However, as the number of images grows, duplicates are often included. Now, STEP gives control of image data by identifying duplicates that should be deleted, while allowing for separate ownership of intentional duplicates, such as for business units or suppliers. Ultimately, having a single correct image instead of duplicates provides a single source of truth which ensures consistent and accurate image data across the whole system.

Handling duplicate images involves choosing a master image to keep, marking the duplicates for deletion, and moving references and links that exist on duplicates to the master. For the most common image formats, the Image Deduplication configuration allows for pixel-to-pixel matches to be automatically handled, requiring no further user interaction. The user can also set thresholds to define a duplicate image based on a degree of similarity. Images that meet the user-defined threshold are sent to the provided Web UI clerical review workflow. The workflow allows a user to manually confirm or override the chosen duplicates and master, after which the duplicates are automatically marked for deletion and the references and links are automatically moved.



To access the new Image Deduplication option, in addition to the normal update procedures, the 'asset-deduplication' component must be activated. Contact a Stibo Systems representative for details.

For more information, see the Deduplicating Images topic in the Getting Started / User Guide documentation.

Data Profiling Enhancements

Summary

A variety of enhancements have been made to data profiling in both workbench and Web UI:

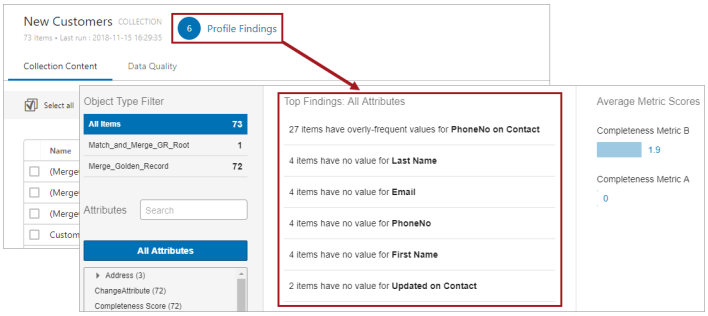
- Data profiles can now be manually run from within the Web UI and viewed from a new Data Profile component screen.
- Data profiles run on collections and entities now provide Top Findings, which assist data stewards in identifying issues with the data.
- Profiling configurations can now be saved as setup entities in workbench and applied to multiple data profiles.
- Profiling can now scale to multiple processors, improving the performance of profiling across the board.

Details

Data Profiling now available in Web UI

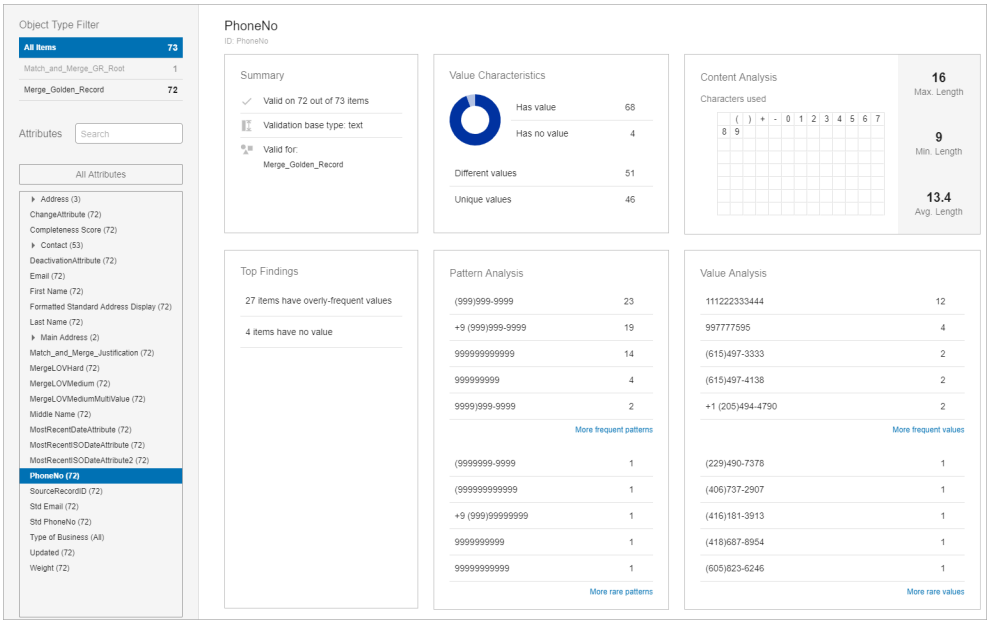
With the release of STEP 9.1, the data profiling functionality has been extended to the Web UI. Data profiles can now be run on any entity or collection, and presented to data stewards via a new Data Profile screen.

If enabled on the Collection Summary or Entity Summary component, Top Findings are generated every time a data profile is run and can be viewed from the Data Profile screen. These findings highlight outliers in the data such as missing attribute values, irregular value patterns, overly-frequent values, and more.



Aside from Top Findings, the Data Profile screen offers a robust view of the data in the profiled collection. Like its counterpart in workbench, the Web UI data profile view allows users to:

- View the object types, attributes, and data containers that compose the profiled data
- View the different completeness scores applied to the data
- Filter data by object type, attribute, and/or data container
- View detailed breakdown of attribute / data container statistics such as those provided by the Value Details view in workbench



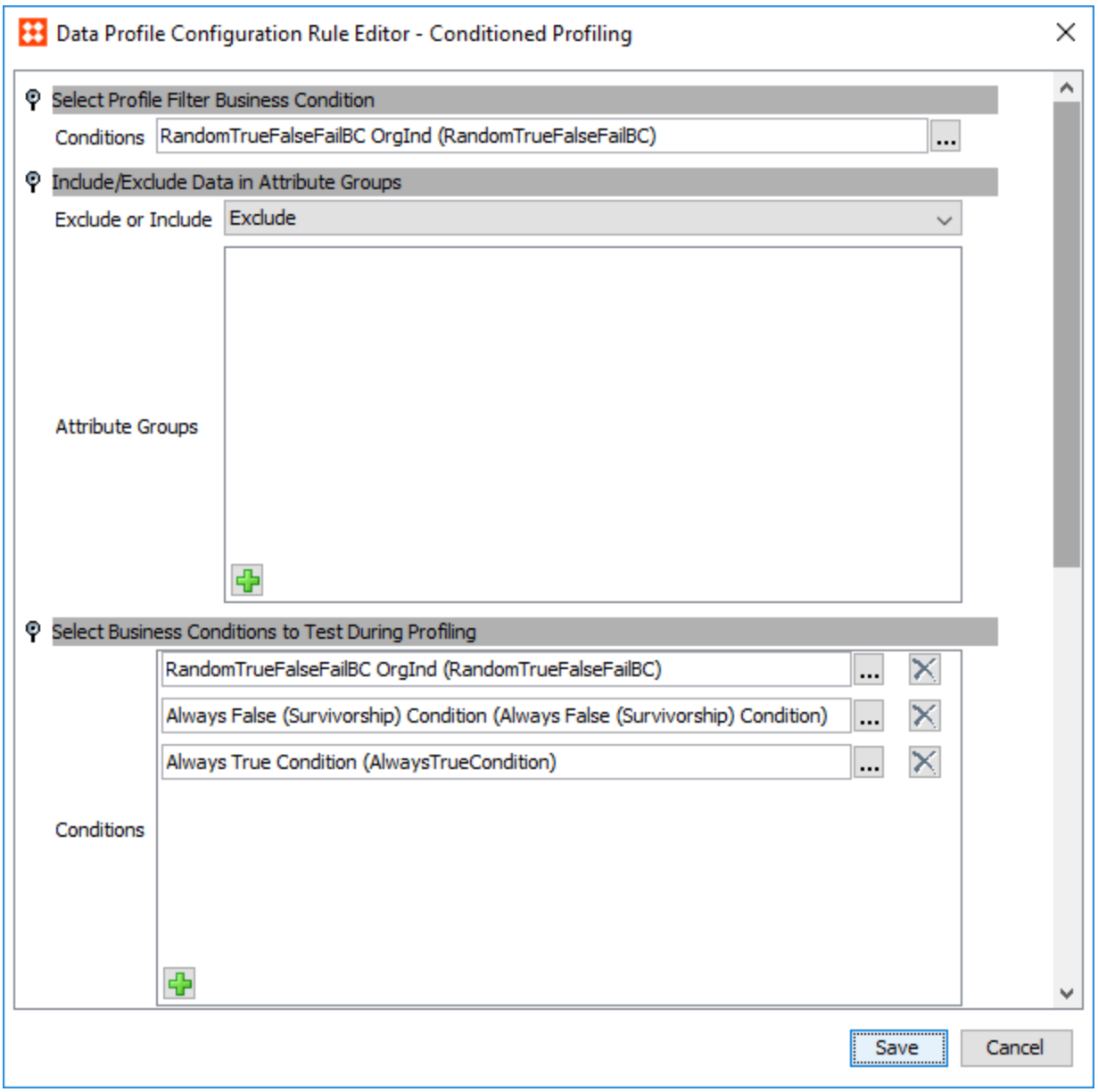
The Data Profile screen can also provide exact value counts, even when an attribute has many different values. This enhanced precision provides data stewards with more reliable data.

Previously, the majority of data profile functionality was only available in workbench.

For more information, see the Data Profile Screen topic in the Web User Interfaces documentation.

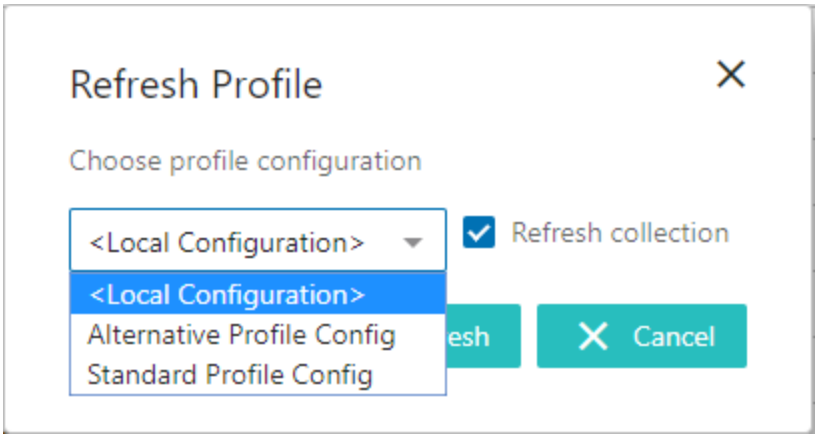
Data Profile configurations can now be saved as objects in STEP

Data Profile configurations now exist as individual setup entities in STEP and can be applied to any product, entity, classification, or collection. Rather than configuring a data profile from scratch every time one is generated for a new node, a single data profile configuration can be created and applied to a multitude of nodes.



To apply a configuration to a node via workbench, a new parameter called 'Select configuration' has been added to the Profile Configuration section on the Category / Data Profile tab. This new dropdown allows you to select between existing (saved) configurations to apply, or you can select <Local Configuration> to create a configuration specific to the node in question.

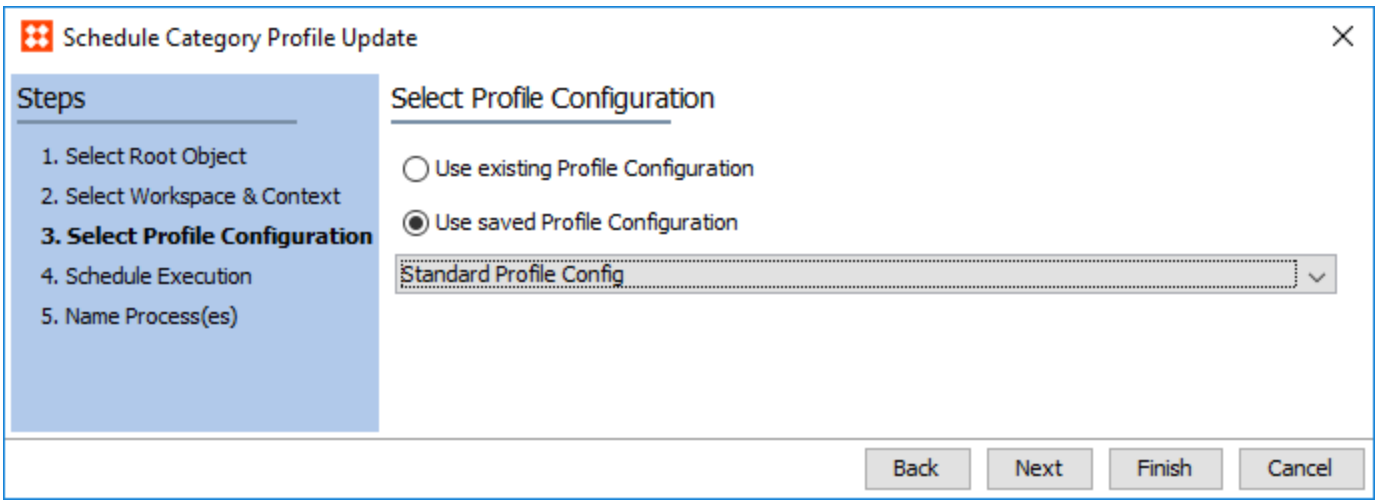
In the case of the Web UI, whenever you use the Update Profile Action or Refresh Profile Action, you will be prompted to choose between <Local Configuration> or any of the saved configurations listed in the dropdown menu.



This feature is backwards compatible, so if no profile configuration setup entities have been created, you can still use <Local Configuration> for every profile.

Previously, data profile configurations were unique to each profiled node / object and were only configurable on the profiles themselves.

In addition, when scheduling profile updates it is now possible to apply saved profile configurations. It is, however, no longer possible to copy local profile configurations from one node to all those being profiled. Nevertheless, any previously existing scheduled profiles will still function.



Improved performance of Data Profiling

The new default behavior in STEP is to scale to several processors when profiling. This change improves the performance of profiling across the board.

Be aware that this may change the hardware load profile in systems where data profiling is used a lot.

For more information, see the Data Profiling section of the online help documentation.

Considerations

To access the Data Profile screen, a set of add-on components must be activated on your system in addition to the normal update procedures for 9.1. These add-on components are 'reactive-webui', 'graphql', and 'profiling'. For more information on installing add-on components, see the SPOT Program section of the STEP System Administration documentation.

Users should also read the Customer MDM Enhancements release note for more information.

Customer MDM Enhancements

Summary

The following Customer Master Data Management (MDM) improvements have been implemented to enhance the quality of customer data with STEP:

- Updated the Loqate Local API version to 'Loqate 2018Q3'
- Exposed a new Address Validation Web Service
- Added a new way to filter Data Containers in STEPXML exports
- Added a new Web Service integration endpoint
- Added a new Matching and Merging Web Service Integration type
- Introduced Data Profiling enhancements to Web UI

Details

Updated Loqate Local API version to 2018Q3.1

Since STEP 8.2, it has been possible to include the Loqate Local API in the STEP installation. This is an optional add-on component used for validation and enrichment of address data. Now, Loqate Local API has been updated to the 2018Q3.1 version (2.28.1.9800) as a part of STEP 9.1 release. For information on what is included with this version of Loqate, see the Loqate 2018Q3.1 release notes that are included upon upgrade in the Loqate Local API STEP component. Existing STEP installations with Loqate Local API installed must install the latest version of the 'local-loqate' component when upgrading to STEP 9.1. To finalize the upgrade, the Loqate Install Manager application must be used to update or reinstall the Loqate reference data.

For more information on the 2018Q3.1 changes, see the Loqate Installation Guide that is available from your Stibo Systems representative or by contacting Technical Support. Users should also refer to the Loqate Integration section of the Data Integration documentation for more information about this functionality.

New Address Validation Web Service

With STEP 9.1, a new address validation web service is now available for users of Loqate Local API. This web service allows users to send addresses for validation in STEP using the built-in Loqate Local API. Previously, this functionality was only available with the Loqate Cloud solution, but with the Loqate Local API and the Address Validation Web Service, users can now validate addresses on data entry or as part of bulk updates in any third-party application that is integrated with the Address Validation Web Service. Through this web service, users may provide address data, and receive standardized address data and information on address quality and geolocation.

For more information, see the Loqate Integration topic of the Data Integration documentation.

New Data Container filter for STEPXML export

A new filtering option is now available for exporting data containers using Advanced STEPXML.

Using the following tag while exporting entities with data containers, any data containers with the specified type will be the only type of items to be exported.

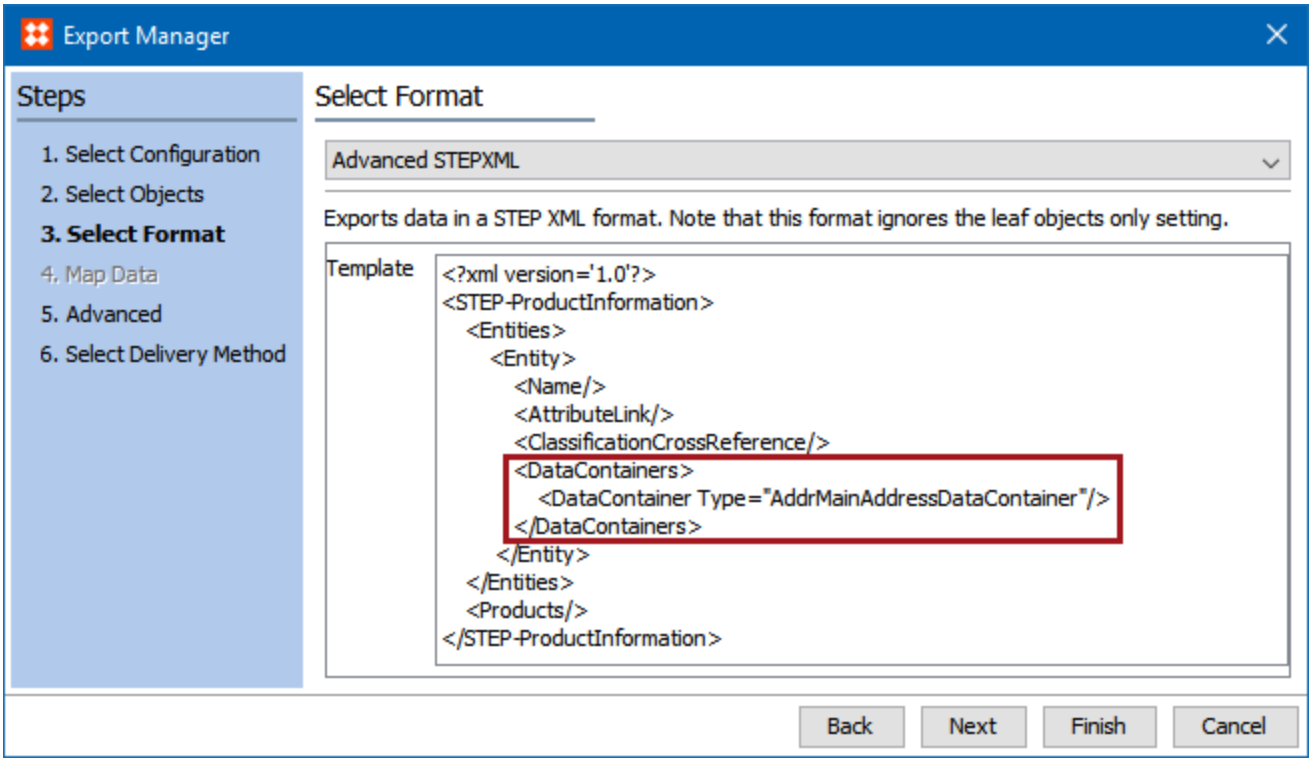
For single-instance data containers:

```
<DataContainers>
    <DataContainer Type="AddrMainAddressDataContainer"/>
</DataContainers>
```

For multi-instanced data containers:

```
<DataContainers>
    <MultiDataContainer Type="ContEmailDataContainer"/>
</DataContainers>
```

The following example shows how the export file will look with a single-instance data container.

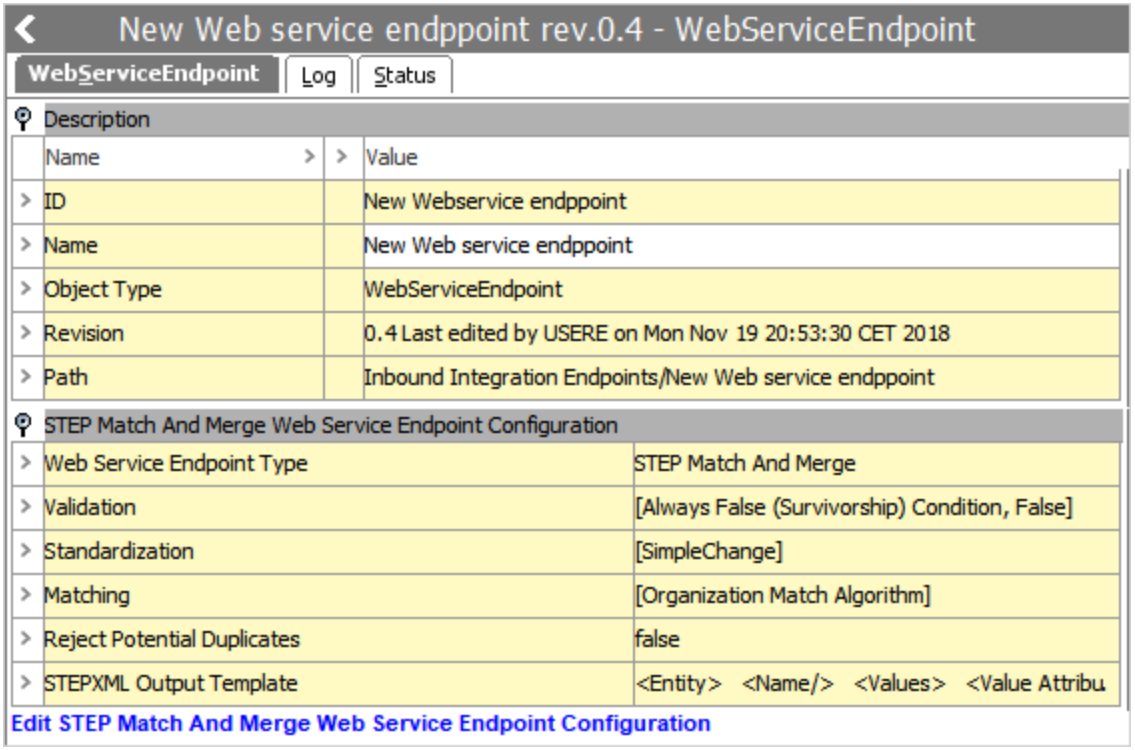


For more information, see the Filter Data Containers in STEPXML topic in the Data Exchange documentation.

New Integration Endpoint type

A new setup entity type called Web Service Endpoint is now available for exchanging data with STEP. At this time, the Web Service Endpoint is a configuration container for web services. The component does not track metrics like web service traffic nor load.

As of the STEP 9.1 release, there is only one Web Service Endpoint type available: STEP Match and Merge Web Service. For more information, see the Match and Merge Web Service Type topic in the Matching, Linking, and Merging documentation.

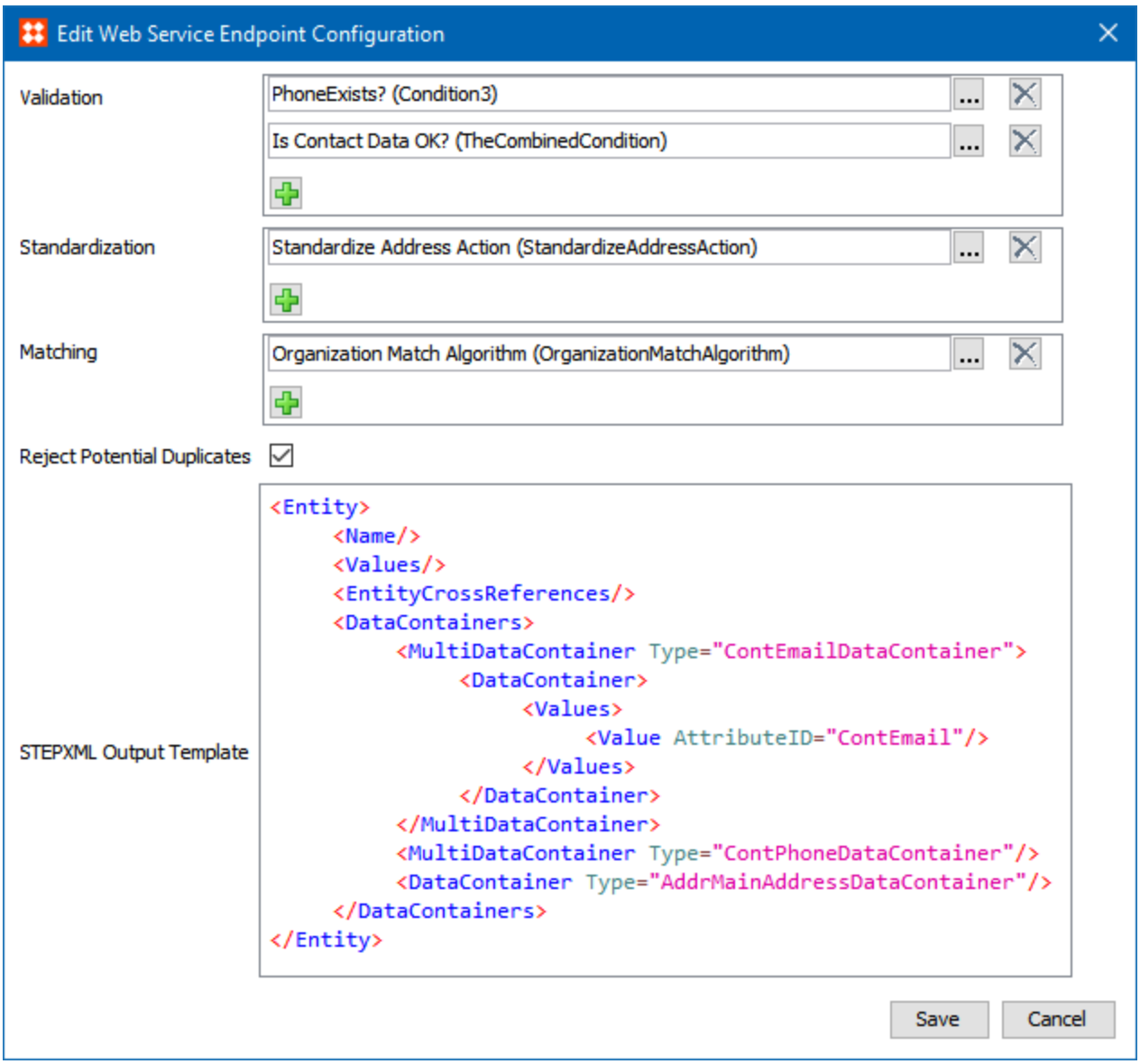


For more information on the Web Service Endpoint setup entity, see the Web Service Endpoint topic of the Data Exchange documentation.

New Matching and Merging Web Service type

As part of the new Web Service Endpoint in STEP 9.1, a Matching and Merging Web Service Type has been made available for users. This Matching and Merging configuration type allows surrounding systems to bulk create or update customer data and entities synchronously via a web service. Systems integrated with STEP via this endpoint will receive a response that reports on duplicates, potential duplicates, custom validation, and custom standardizations of the sent data.

Using business conditions, business actions, and matching algorithms, users may send records to a Web Service Endpoint to validate, standardize, and consolidate records. Previously, this functionality was only possible when using the asynchronous Match and Merge Importer. The following image is an example of a Match and Merge Web Service.



For more information, see the Match and Merge Web Service Type topic in the Matching, Linking, and Merging documentation.

Data Profiling enhancements

The data profiling functionality is now available in Web UI and features a number of new tools to assist data stewards in identifying issues with data.

For more information, see the Data Profiling Enhancements release note.

New Features for PLM

Summary

Using the private label food solution to create recipes from the ground up, collaboration between customers and their suppliers has been streamlined for accuracy and ease. Customers create a recipe specification, decide upon the flavor variations of the product, communicate these specifications with their suppliers, receive supplier recipes, and agree upon a final supplier for a recipe.

The following PLM private label food solution features make it easier to create and compare recipes:

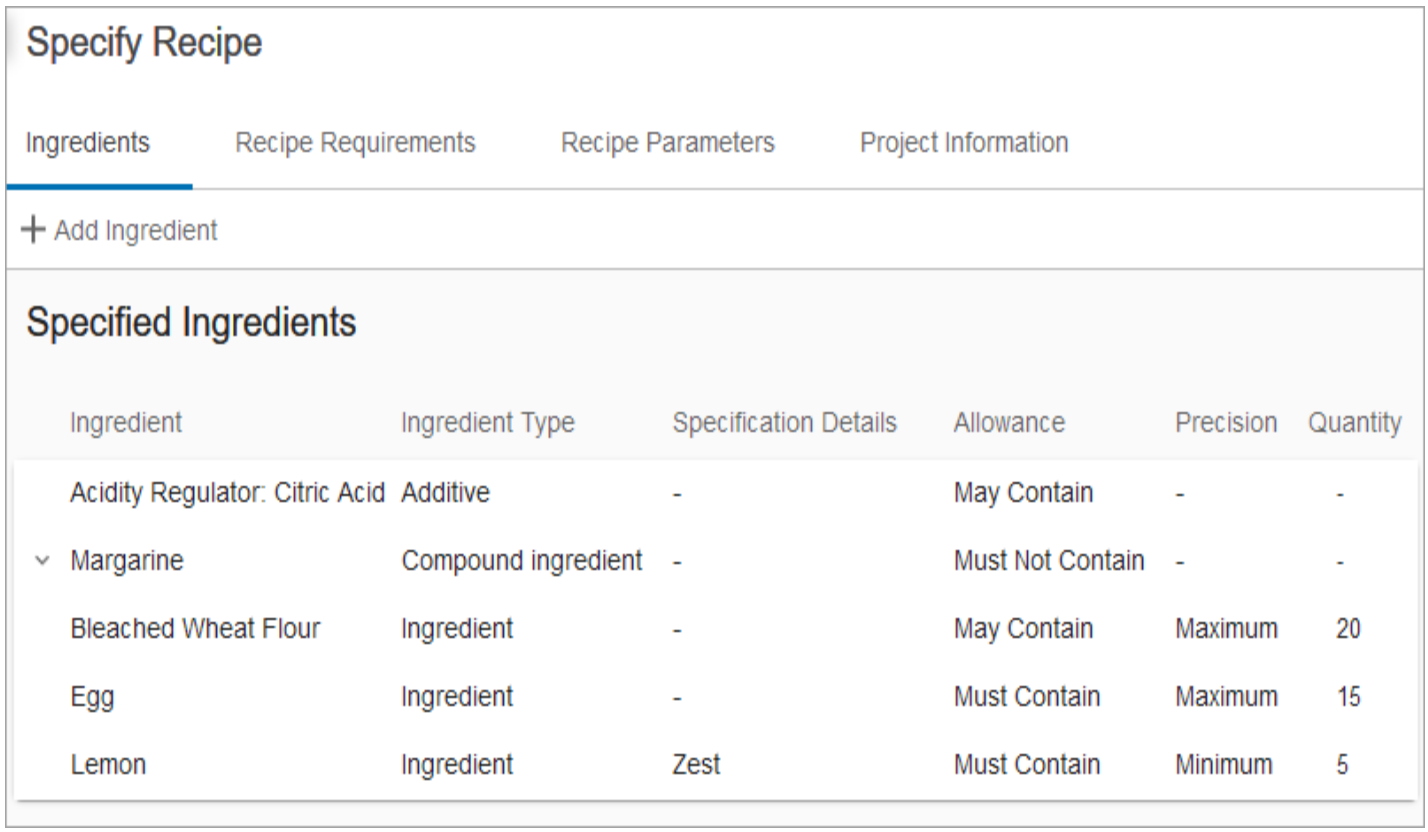
- Recipe Creations: Two new tab components—the Specify Ingredients Tab and the Supplier Ingredients Tab—assist with recipe creations.
- Compare Recipes: Customers can compare their recipe specification to one or more selected suppliers' recipes, as well as compare recipes among various suppliers.

Details

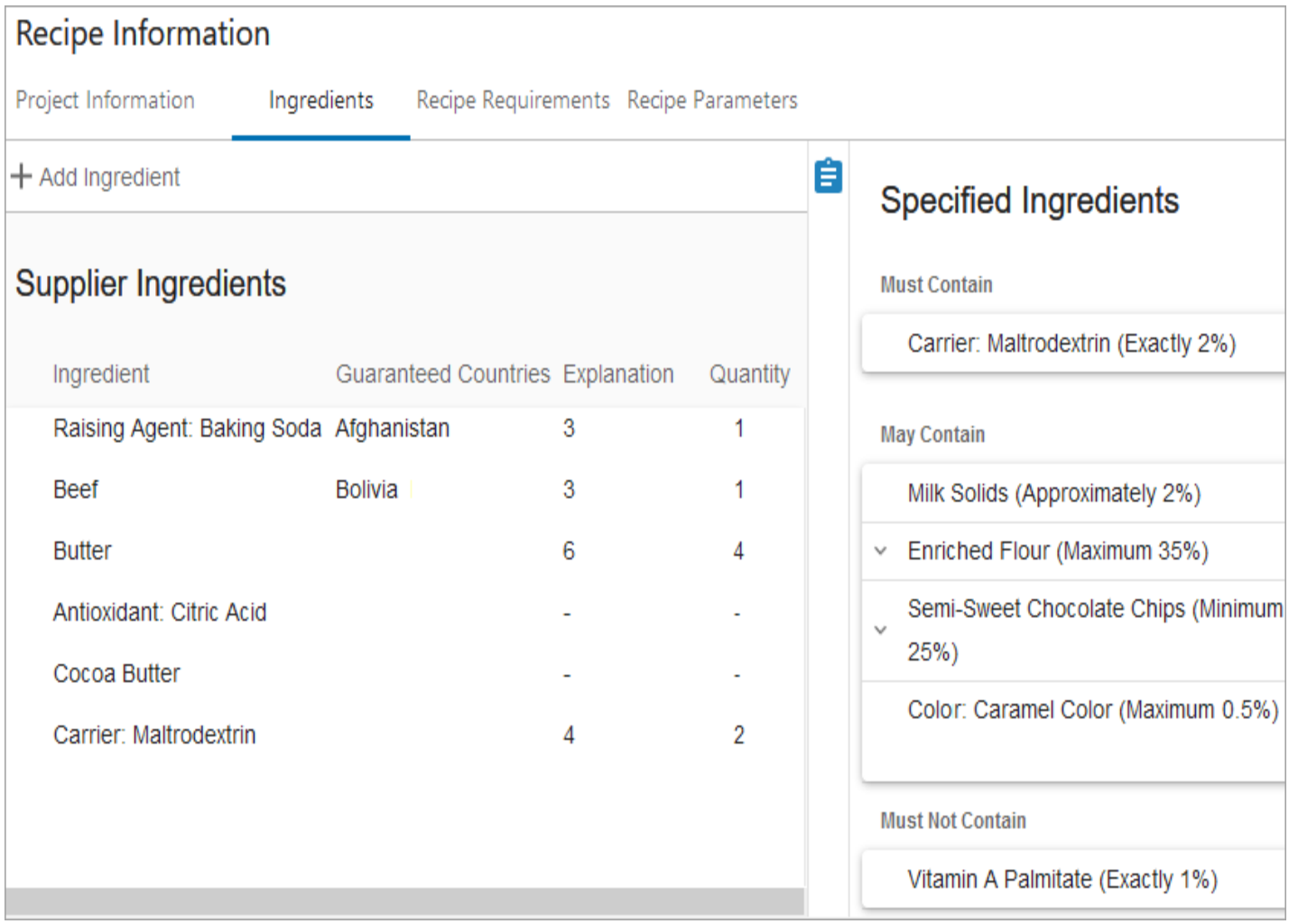
New recipe creation abilities

New recipe creation capabilities in PLM's private label food solution assist customers in creating recipe specifications to provide to suppliers and helps suppliers create recipes to provide back to the customer.

For customers, recipe specification creation is available in Web UI on a Node Details screen via the Specify Ingredients Tab component. From this component, customers can decide what ingredients, additives, or compound ingredients to include in their recipe specification, as well as specify any additional information that they wish to pass on to suppliers.



For suppliers, recipe creation is available in Web UI on a Node Details screen via the Supplier Ingredients Tab component. From this component, suppliers can view the customer's recipe specification as they create their version of the recipe to provide back to the customer for evaluation.



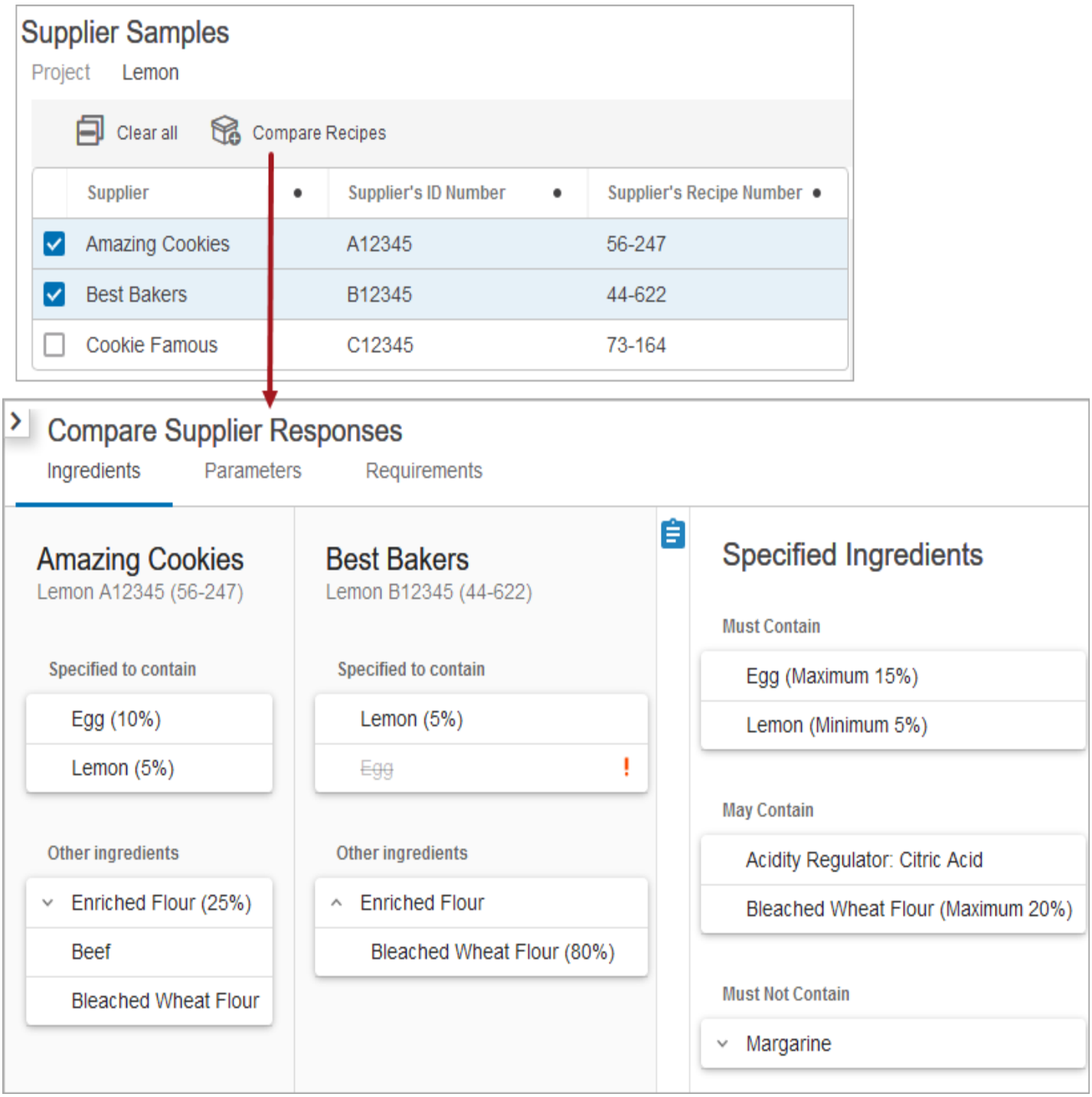
For more information on recipe creation, see the Private Label Food Solution Setup in Web UI topic in the Private Label Food Solution section of the PLM for Admins documentation. Additionally, see the Specify Ingredients and Supplier Ingredients Tabs topic in the Private Label Food Solution section of the PLM for Users documentation.

New child component tabs to compare recipes

Customers are now able to compare their recipe specification (bill of materials, or BOMs) to one or more selected suppliers' recipes, as well as compare recipes among various suppliers. This is handled via the 'Compare BOMs Action' child component configurable on Node List Properties or Task List Properties in conjunction with the compare tab child components via a Node Details screen.

From a Node List or Task List, customers select like object types from their suppliers, such as recipe variants, and click the 'Compare BOMs Action' button (labeled 'Compare Recipes' in the image below) which displays the compare tab child components. Three compare tab child components can be enabled: Compare Ingredients Tab, Compare Parameters Tab, and Compare Requirements Tab.

Each of these compare tabs enable customers to see supplier responses and evaluate different aspects of the supplier recipes in contrast to other suppliers' recipes or in contrast to the recipe specification. Pictured below is a selection of two recipes using the 'Compare BOMs Action' and the Compare Ingredients Tab component.



For more information on how these tabs function, see the Private Label Food Solution Setup in Web UI topic in the Private Label Food Solution section of the PLM for Admins documentation. Additionally, see the Private Label Food Solution section of the PLM for Users documentation.

Web UI Enhancements

Summary

Enhancements to the Web UI for the STEP 9.1 release include user experience improvements to screens and processes, revised error messaging, and updated visual indicators. There are also new / updated components and screens.

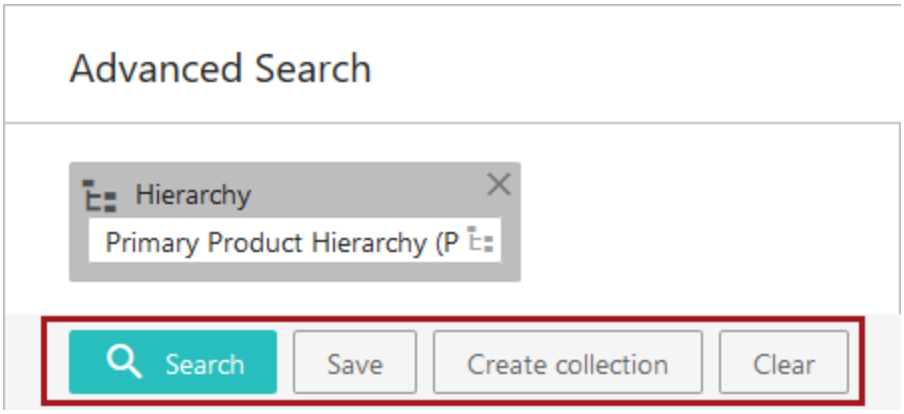
Customers using custom CSS in Web UI should also be aware of changes to Stibo Systems' custom CSS policy. Before upgrading to STEP 9.1, these customers must contact Stibo Systems. See the 'Updated policy regarding custom CSS' section of this release note for more information.

Details

Web UI visual update

The STEP Web UI has been updated with a series of visual improvements designed to make the Web UI faster, more intuitive to use, and simpler to navigate. Listed below are some of the changes:

- The font used throughout the Web UI, Arial, has been changed to the system font native to the user's operating system: Segoe UI for Windows operating systems, and San Francisco for Mac operating systems, as examples. This change improves alpha-numeric readability throughout the Web UI, provides better support for localization, and enhances the Web UI's performance.
- 'Semantic' colors have been implemented consistently throughout the Web UI. 'Semantic' in this context refers to how different colors and gradations of color are applied to various web elements like buttons and homepage widgets. Minor differences in color can convey a variety of meanings the user will perceive intuitively. For instance, on the Advanced Search screen (pictured below), a primary button and secondary buttons display together.



The secondary buttons, 'Save', 'Create collection', and 'Clear', are without color, which makes them recede into the background. The primary button, in this case 'Search,' is colored turquoise by default, which makes it stand out. When there are multiple buttons to choose from, this variation is intended to direct the user's eye to

the button they are most likely to use. The color of the primary button is determined by 'Accent' in the designer's 'Web UI style' tab. The secondary buttons are unaffected by the colors selected.

- When a user places the cursor over a primary button on a Web UI screen, the button will transition from the darker shade of that color to a lighter shade. When the cursor is placed over a secondary button, the gray outline and text of the button turns black. These transitions help signal to the user that the buttons are activated. Applying the use of semantics to the UI in this way enhances the UI's ease of use, and makes it more clear to the user which action to take next.

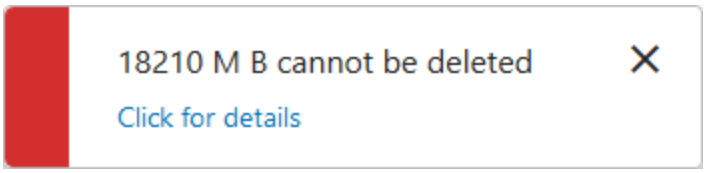
Improved messaging in the Web UI

The way system messages are communicated to the user has been updated to enhance clarity, consistency, and relevance. Whether the notification is informing the user about an error, a potential error, or some pertinent information about a process that has completed, these improvements are intended to make system messages not only more informational, but more instructive about a user's next steps.

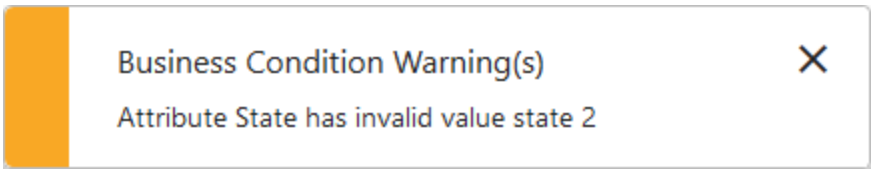
- In an effort to make system-generated Web UI messages visually meaningful, notifications have been broken into four categories: Errors, Warnings, Acknowledgments, and Information.

  Dependent on the kind of message the system displays, system notifications are now accompanied by a color that visually conveys its message category. By classifying and color-coding notifications, users will know right away what kind of notification is being surfaced when a message displays, enabling users to respond quickly and effectively.

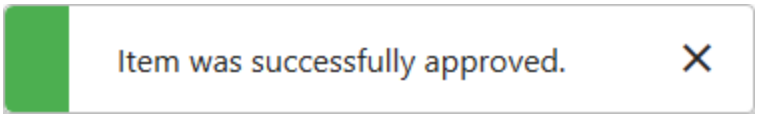
  - Error notifications are red. These display when a user-attempted action cannot be completed.

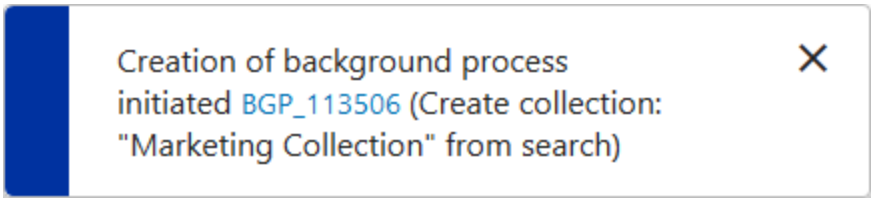
  - Warning notifications are yellow. These display when a user-attempted action can proceed, but aspects of the request may require additional caution.

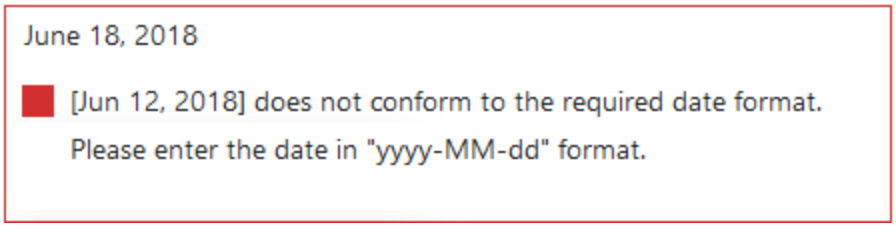
  - Acknowledgment notifications are green. These display when a user-prompted action has completed.

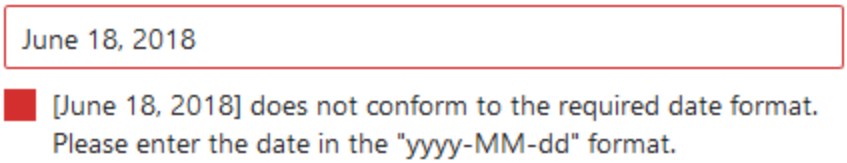
  - Informational notifications are blue. These display when a system action or process has begun or when it has completed.



- A significant percentage of error messages have had their wording updated to provide users with actionable information about the error. Previously, many error messages only stated the nature of the error, without always communicating why the error occurred or potential next steps the user might take to resolve that error. Now, system-generated error messages indicate not only what the error is, but also why it occurred and information on how a user can correct the error. In the error message example shown below, a date value has been entered that does not conform to the configured format. This updated message clearly states what has prompted the error, as well as the step the user must take next to successfully complete the action.



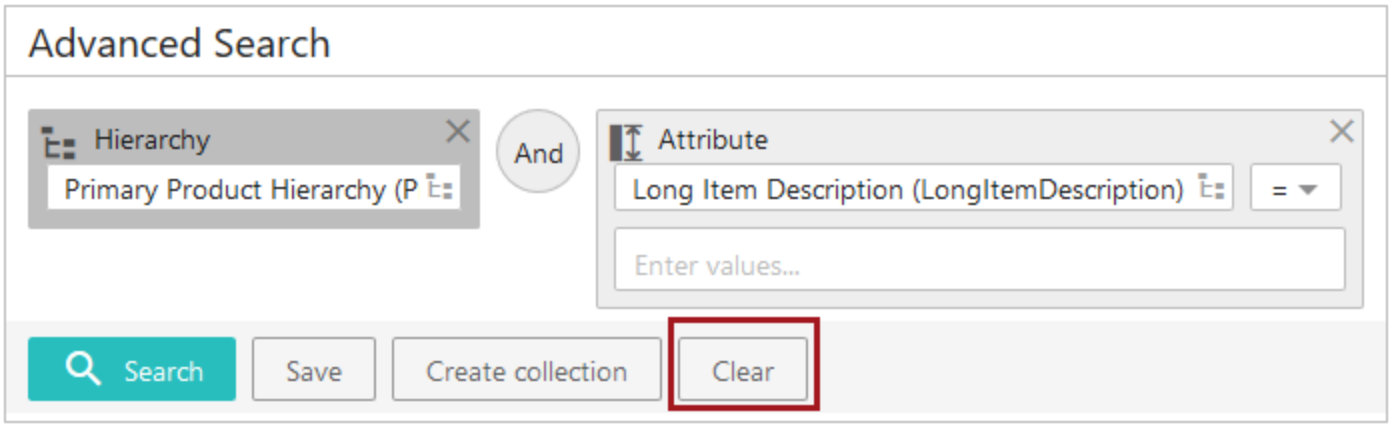
- When user-added values conflict with the configured validation base type, the warnings and errors this conflict generates now result in a colored outline around the affected fields and cells: yellow for warnings and red for errors. This helps users more quickly identify where erroring fields and cells are located on a given screen. The specifics of how the error message will display is dependent on the nature of the erroring field and how it is being viewed. For instance, an improperly formatted date error in a Node List will display as shown in the screenshot above: with the field outlined in red and the color-coded icon and error message displaying inside the affected cell. An improperly formatted date error in a Node Editor will display with the icon and message below the outlined field, as in the screenshot below.



Advanced Search screen improvements

Three enhancements have been made to improve ease of use for the Advanced Search screen in the Web UI:

- A 'Clear' button has been added that enables users to remove all search criteria added to a search with a single click. Previously, users had to delete each search term individually to clear the search area and start a new search.



- 'Semantic' colors have been implemented on the Advanced Search screen. 'Semantic' refers to how color can be applied to web elements like buttons and homepage widgets to convey meaning the user will perceive intuitively. Applying this concept, the buttons on the Advanced Search screen have been organized into primary and secondary buttons, as shown in the screenshot above. The primary button, 'Search', is colored turquoise by default, and the secondary buttons, 'Save', 'Create collection', and 'Clear', are without color. This variation is intended to direct the user's eye to the button they are most likely to use.
- Text-based search conditions are now fully implemented on the Advanced Search screen. Previously, the 'Not' condition was expressed as the symbol ' ÷ '. Now, when a user wants to search, for example, the Primary Product Hierarchy but exclude 'Sales Item' object type objects from their search results, they can add a 'Not' condition between the 'Hierarchy' and 'Object Type' criteria, (as pictured below). Implementing text-based conditions in Advanced Search removes ambiguity from the search-building process, and makes the intent of a search more clear.

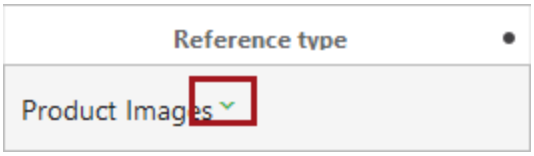
For more information on advanced search, see the Advanced Search section of the Web User Interfaces documentation.

Visual indicators on inherited references

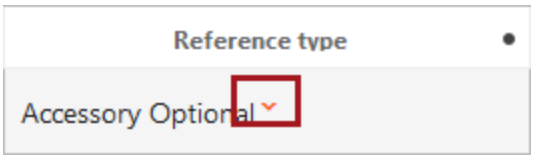
Two new visual indicators have been added to references in the Web UI that allow users to see whether references on objects are inherited from parent nodes, parent contexts, or both. Previously, users could not determine which references were local and which inherited, making it a challenge to know which references might be most relevant, or which references could easily be removed. Because this information is now provided on the reference in a clear and visual way, users can now quickly see where their references originate and make more informed decisions about how best to manage them.

The new visual indicators on references display to the right of the label under the 'Reference Type' header (when configured on a Multi Reference editor), and to the far right of a row on a References component (configured within a Node Editor).

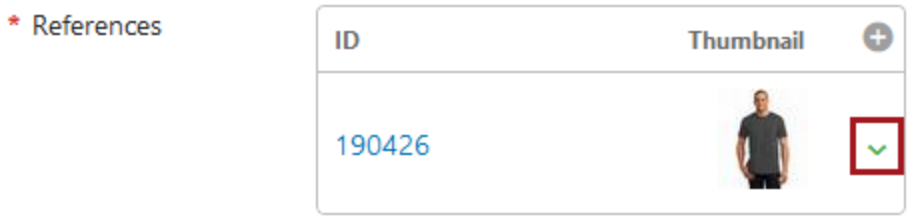
- A green arrow displays on references inherited from a parent node.



- A red arrow displays on references inherited from a parent context.



- An example of how an arrow displays on a reference using the References component in a Node Editor. In this example, a green arrow indicates inheritance from a parent node.



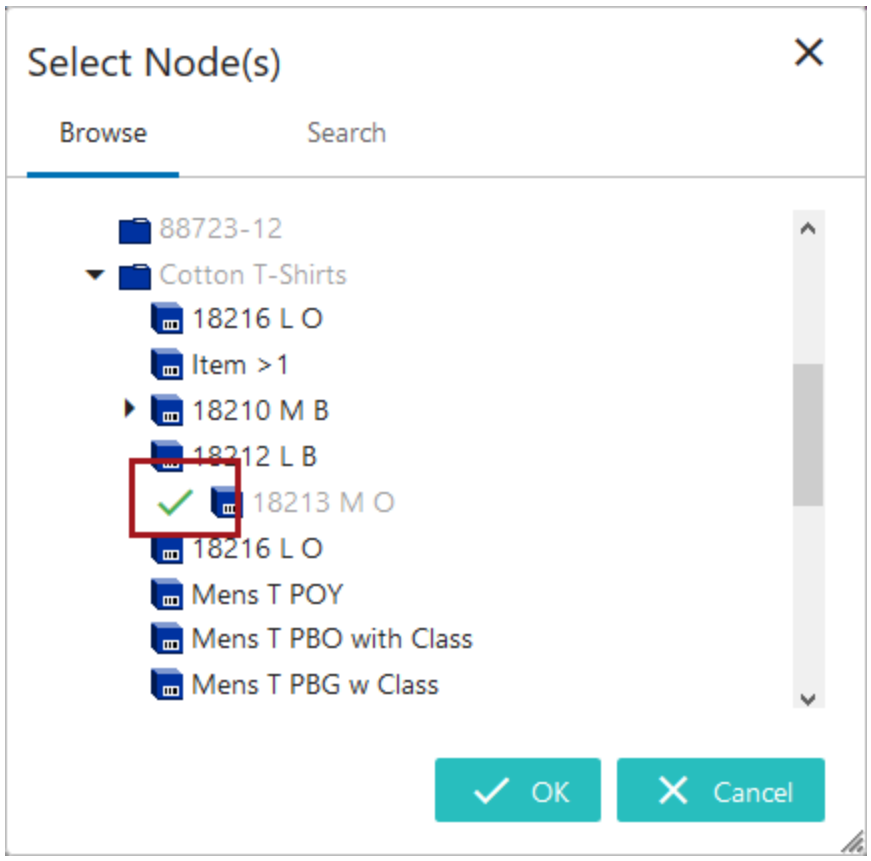
For more information on inheritance as it applies to references, see the Inheritance Example for a Reference topic in the System Setup / Super User Guide documentation. For more information on adding and maintaining references in the Web UI, see the Multi Reference Editor topic in the Web User Interfaces documentation.

Improved reference creation process in Web UI

The process of creating references in the Web UI has been enhanced to make it simpler and more intuitive.

When creating a new reference using the Reference component or by clicking the 'Add Reference' toolbar action in the Multi Reference editor, invalid objects will now display as grayed out. For example, objects that are either not valid for the selected reference type, or objects that have already been referenced by the chosen object, will now display in gray text to indicate the object is not valid or selectable. This enhancement is intended to show in a clear, visual way which objects are valid for a reference and can be selected, and which are invalid and cannot.

To further improve clarity in the reference creation process, a green checkmark now displays in the Node Selector popup beside objects that have already been referenced. This has been added to help prevent users from attempting to create duplicate references.



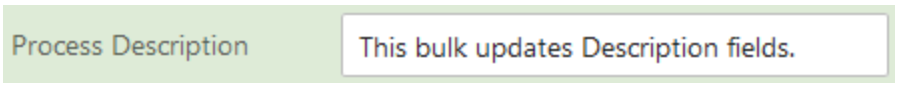
Prior to these updates, all objects displayed as valid in the Node Selector when creating a reference, including objects that had already been referenced. If the user attempted to create a duplicate reference, the system raised an error only after the user had completed the attempt. This could lead to a frustrating reference-creation process. Now, in addition to clearly identifying invalid selections, the Web UI also displays an error message as soon as the user selects an invalid object.

With the addition of these changes to the reference creation process, users can now easily see which objects are available to create new references.

For more information on adding references in the Web UI, see the Multi Reference Editor topic in the Web User Interfaces documentation.

Bulk Update Template Action improvement

The 'Bulk Update Template Action' now allows users to configure a message that displays when a bulk update background process is initiated. Bringing the 'Bulk Update Template Action' in line with existing configurability on the 'Bulk Update' and 'Bulk Update List Actions', the 'Bulk Update Template Action' now also includes the 'Process Description' parameter.

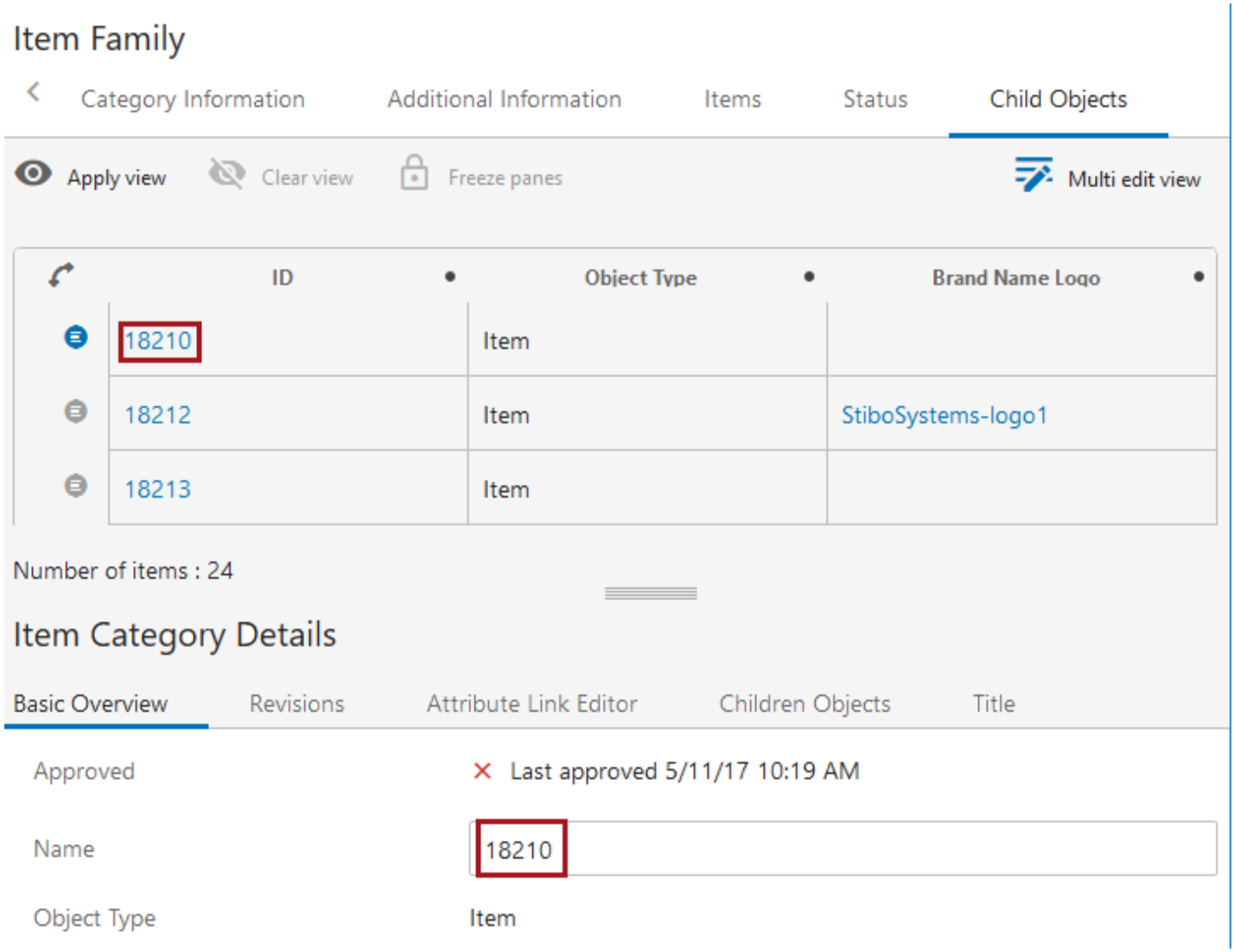


This parameter allows users to include a customized description to the background process notification that displays following initiation of a bulk update process. For instance, the value added to the 'Process Description' parameter shown above would result in a background process notification message that displays like this:

This added layer of configurability gives admin users another tool to make background process descriptions more meaningful to the user.

Automatic display of top object details on Node Lists

Node Lists now feature a setting called 'Show Top Item Details on Load'. This setting, configurable on the Multi Edit, Compare, and Table Display Modes, enables automatic display of a Node List's first object's details when the screen loads. Previously, Node Lists with the Show Details setting activated required users to click an object's details icon to trigger display of that object's details in the Show Details screen. In the screenshot below, the first item in the Node List, a product named '18210', displays with its details in the Show Details screen below.



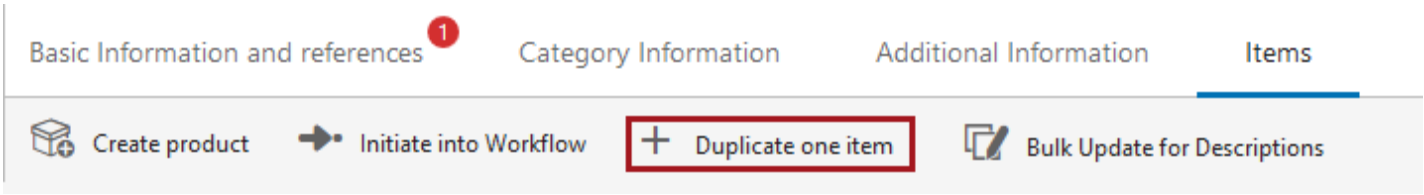
It should be noted that, for this new parameter to be effective, either a mapping must be created for display of objects in the Web UI, or the relevant Node List must have a screen configured under the 'Selection Screens' dropdown in which the relevant object's details will display.

For more information on Node Lists, see the Node List Component topic in the Web User Interfaces documentation.

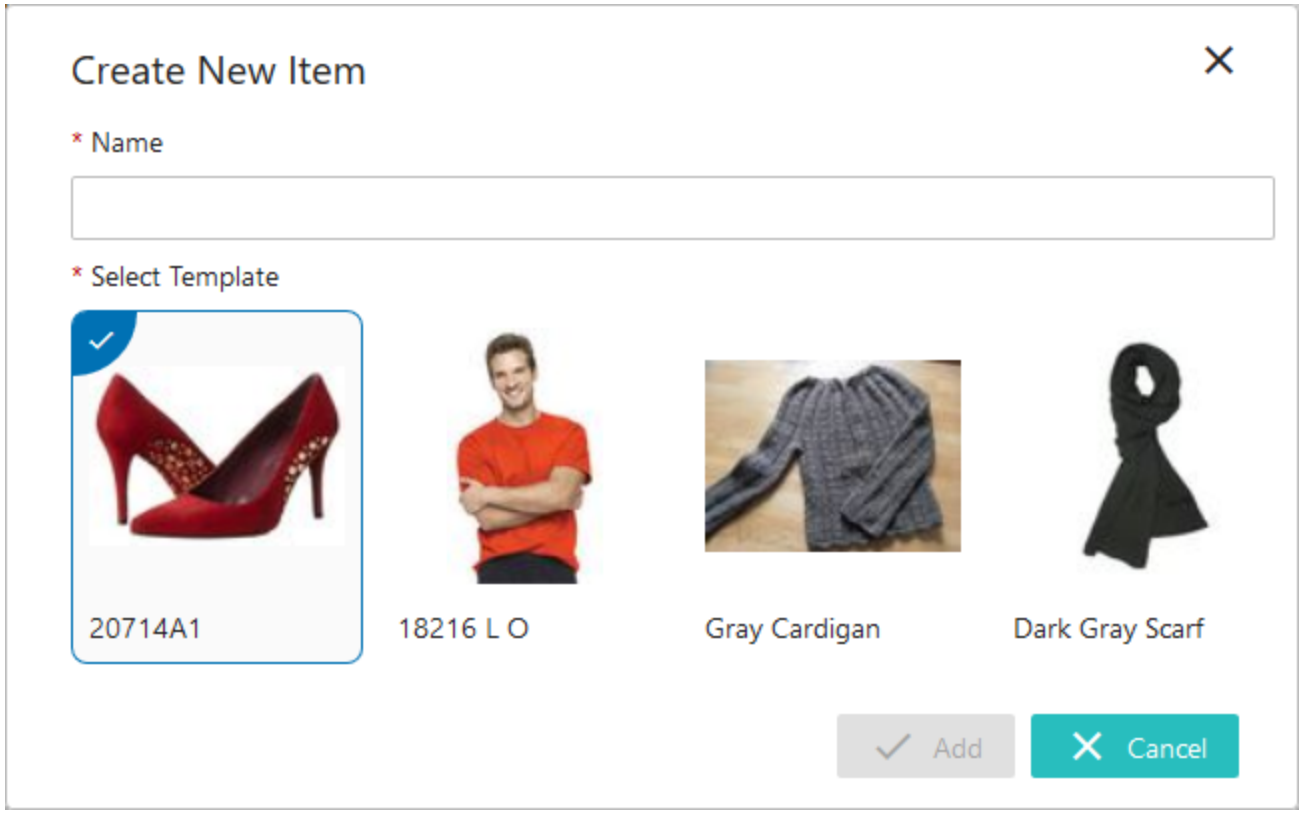
Object creation improvements

Two new toolbar action components for Node Lists are now available that enable simplified duplication of existing products.

- 'Duplicate Item Action' enables users to quickly duplicate a single item in a Node List. Using this toolbar action, users can select a product displaying on a Node List in a tabular view style and duplicate it. The duplicated item is added to the same parent node as the original and retains all of the original item's information, including references.



- 'Create from Template' allows users to configure product-based templates that can be used to create new products. When one or more templates have been created, users can click on the new 'Create from Template' toolbar action to create a new product. A 'Create New Item' window displays with a series of template options, each indicated by an image. Once created and a new name assigned, the selected template's attributes, attribute values, and references are applied to the new product. The component allows users to configure object type and placement in the hierarchy to be different than the product the template is based on by application of additional configuration when setting up the template.



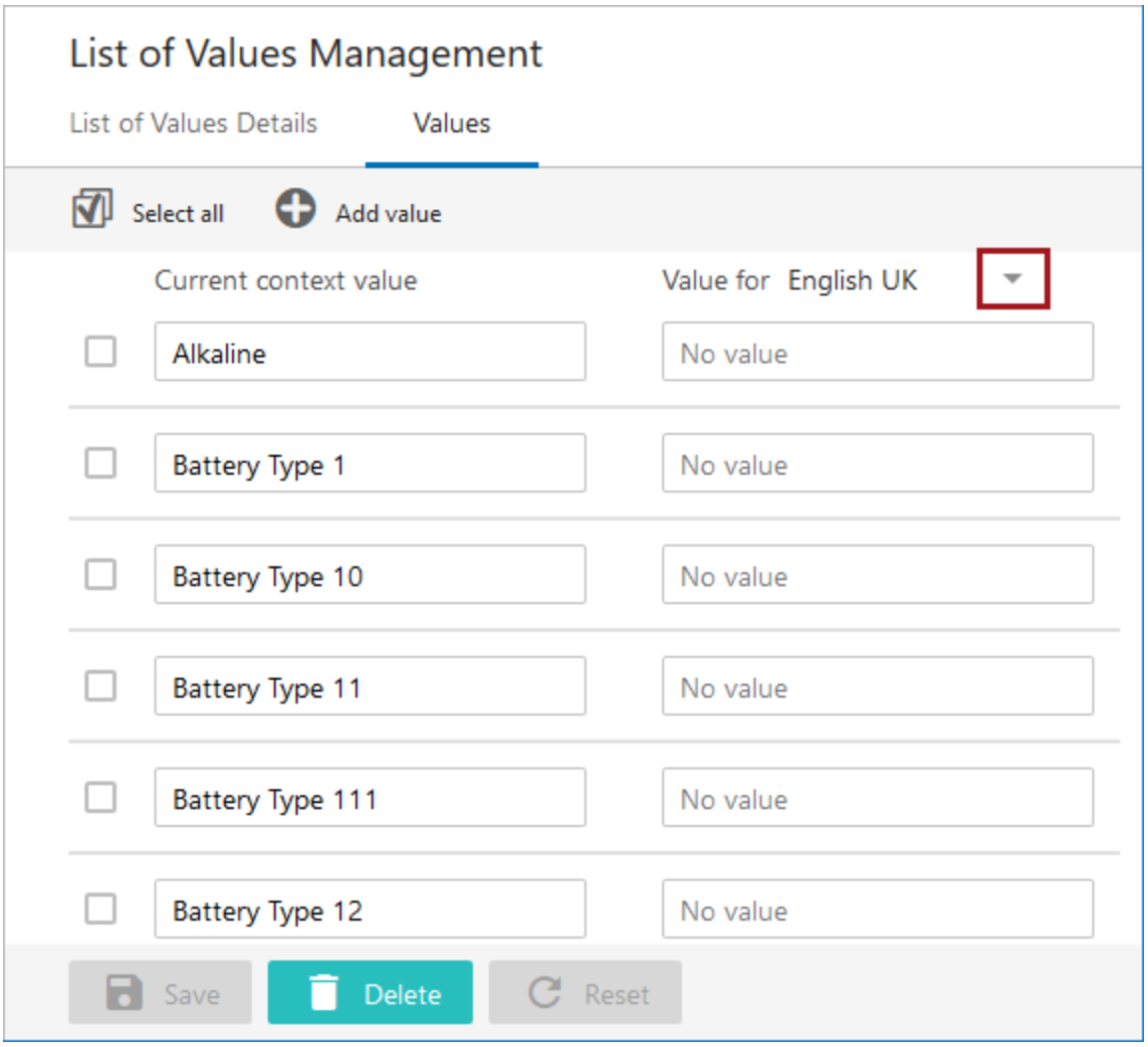
For more information on these toolbar action buttons, see the Action Buttons topic in the Web User Interfaces documentation.

Localization of LOVs on the List of Values Management screen

In an effort to further expand the user's ability to manage Lists of Values (LOVs) in the Web UI, values in dimension-dependent LOVs can now be added, edited, and maintained for all contexts in the LOV Management screen. As previously announced with the 9.0 MP1 release, this improvement in functionality is designed to further

enable important setup tasks to be completed in the Web UI.

When viewing the updated 'Values' tab on the LOV Management screen, users can now view all of an LOV's values in the current context and in one additional context, selection of which is controlled by the user via a dropdown, indicated by a red box in the screenshot below.



Previously, users could only edit LOV values in different contexts by changing the current context. Now, users can more easily complete their LOV management tasks in the Web UI, including bringing in translated LOV values for multiple languages in multiple contexts.

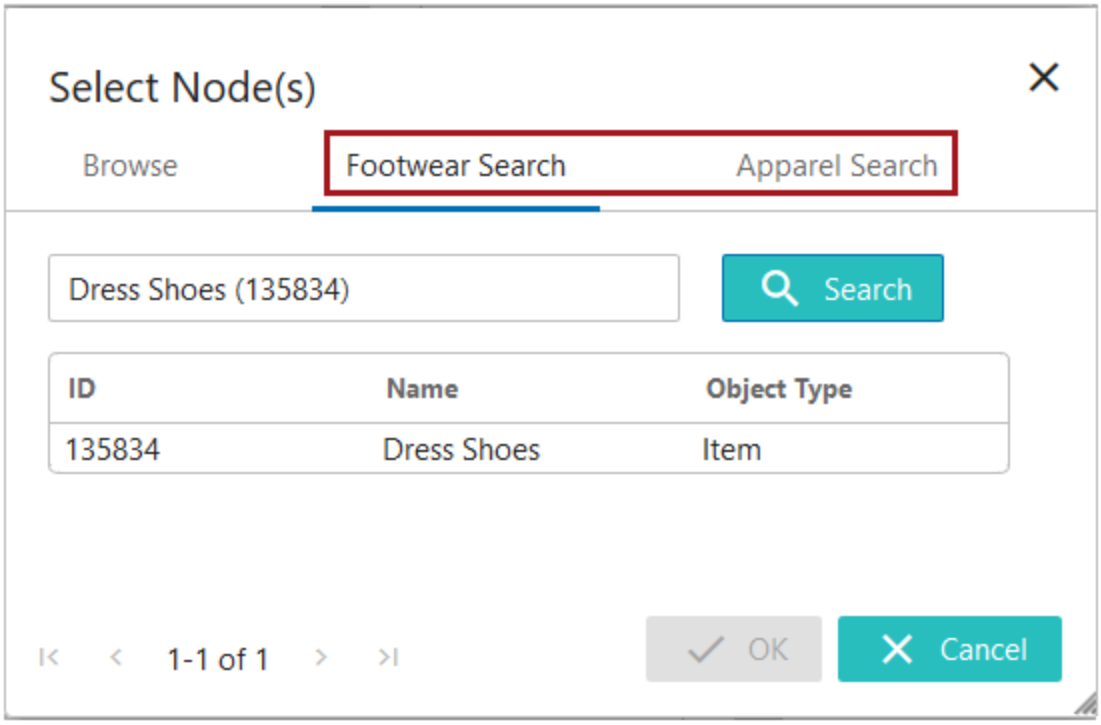
It is important to note that if an LOV has more than 5,000 values, those values will not display on the 'Values' tab.

For more information on managing Lists of Values in the Web UI, see the List of Values Management Screen section of the Web User Interfaces documentation.

Configurable 'Search' tab in Node Picker

The 'Search' tab in the Node Picker window now enables customization of the tab's title. To support business cases in which multiple 'Search' tabs are required in a single Node Picker window, the Web UI now enables admin

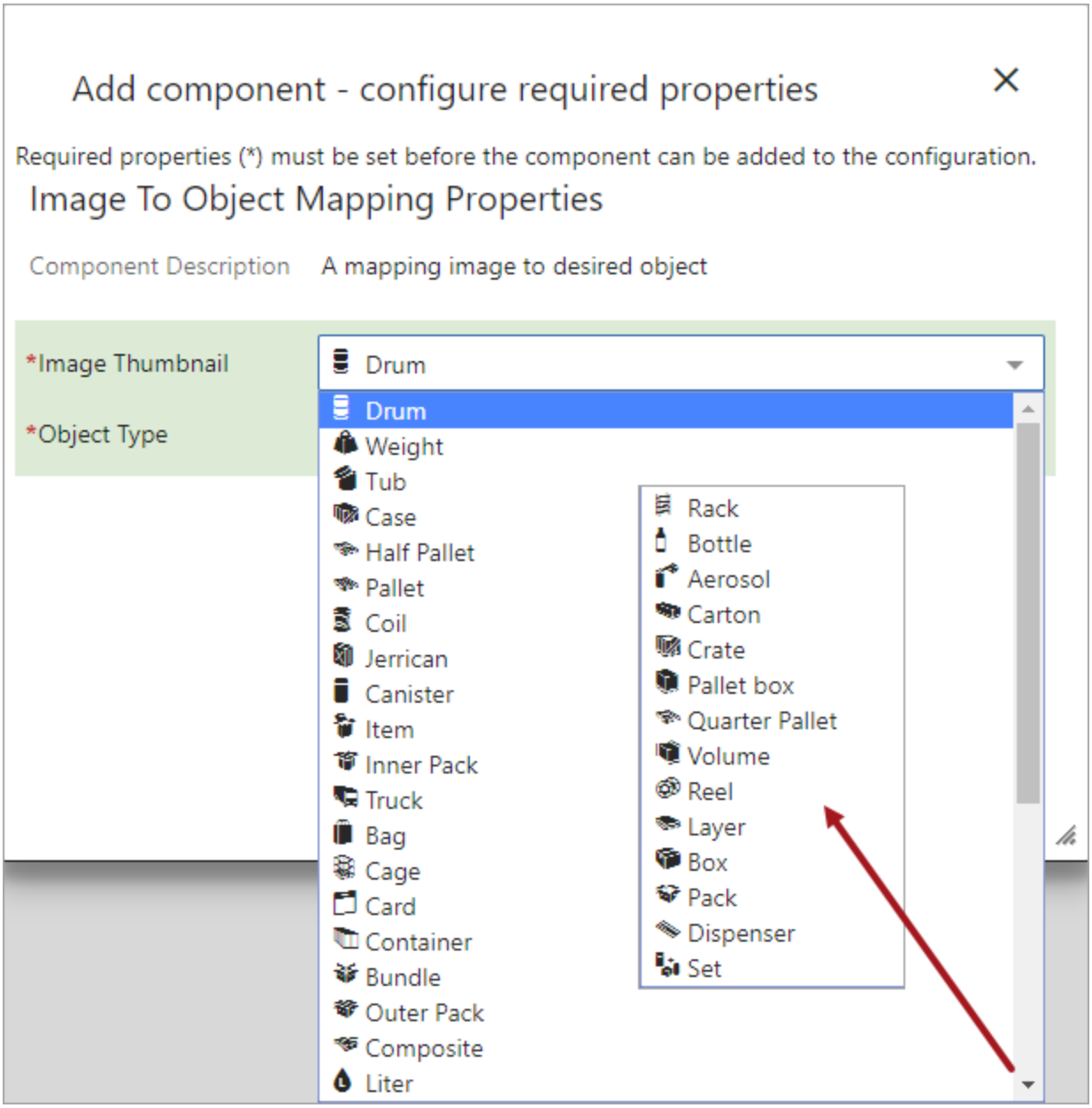
users to establish a clear distinction between those tabs via the title parameter.



Icon improvements for Packaging screen

Two improvements have been made to how graphical packaging hierarchy elements display on the Packaging screen.

- The number of Image Thumbnail icons available to display on the Packaging screen has increased from 12 icons to 34. This gives the admin user more options when working to build out a visually meaningful packaging hierarchy in the Web UI.
- The icon thumbnails now display alongside the icon title in the configuration dropdown in the designer. This allows users to see the icon that will be added at the moment the selection is made. Previously, the appearance of the icon was not known until after the configuration was completed.



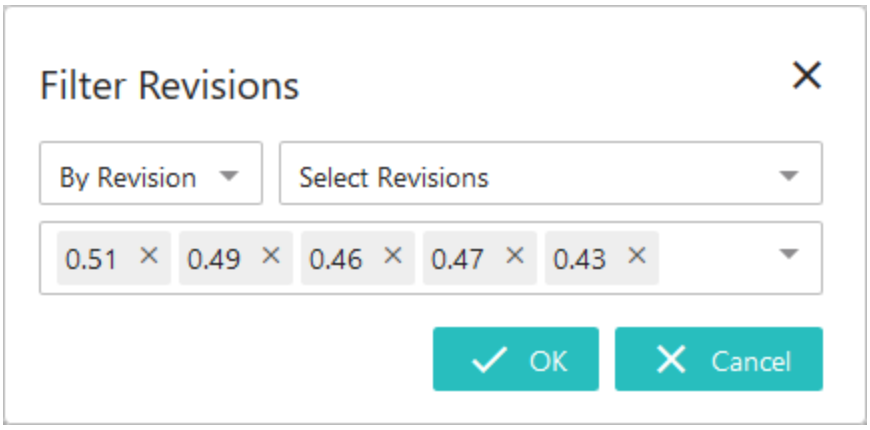
For more information on configuring and using the Packaging Hierarchy Editor on the Packaging screen in the Web UI, see the Packaging Hierarchy Editor topic in the Web User Interfaces documentation.

Improved display of empty states on References component

On a References component that does not contain references, a ⊕ icon now displays beside the References parameter label without the accompanying table headers that may be configured on the component. Previously, empty References components displayed not only the ⊕ icon, but also all table headers configured for the component, causing a potentially cluttered screen. This enhancement was done in an effort to further streamline the visual appearance of the Web UI, and to more clearly signal to users which References components are without references.

Multi Revision Editor screen improvements

On the Multi Revision Editor component available in the Multi Revision screen, users have two new filtering options. When determining which revisions display on a Multi Revision screen, users can now filter by a range of revision numbers (i.e., '0.23-0.28'), or filter by selecting specific revision numbers the user wants to display.



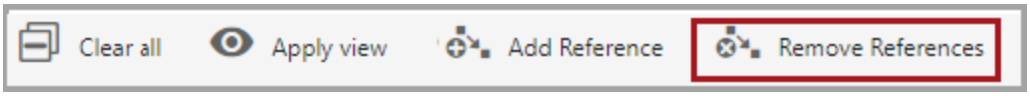
For more information on the screen and filtering options, see the Multi Revision Screen topic of the Web User Interfaces documentation.

Grouping component enhancements

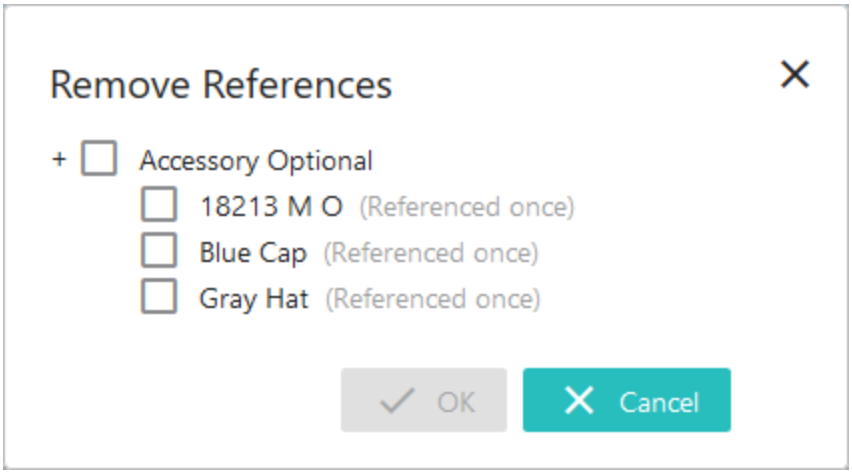
The Grouping component in the Web UI has been updated so the grouped titles and fields are visually aligned. Previously, the Grouping component would clearly group the configured attributes, but the effect on a screen in which multiple groups displayed was perceived by some users as disorganized.

New Remove References component

A new toolbar action called 'Remove References' is now available for Node Lists. 'Remove References' enables users to select one or multiple items in a Node List, and then remove one or multiple references from all selected items in a single action.



In the same way that the 'Create References' toolbar action can be used to add a reference to multiple objects at once, 'Remove References' enables users to remove a reference from multiple objects at once. When the 'Remove References' toolbar action is initiated, a window displays (as shown in the screenshot below) that gives users a list of all references for the selected objects, categorized by reference type. If the listed referenced object shows as 'Referenced once', then selecting that object and clicking 'OK' will remove that single reference from the object(s) selected in the Node List. If the listed referenced object shows as being referenced two or more times, then selecting that reference and clicking 'OK' will remove that reference from all objects selected in the Node List.

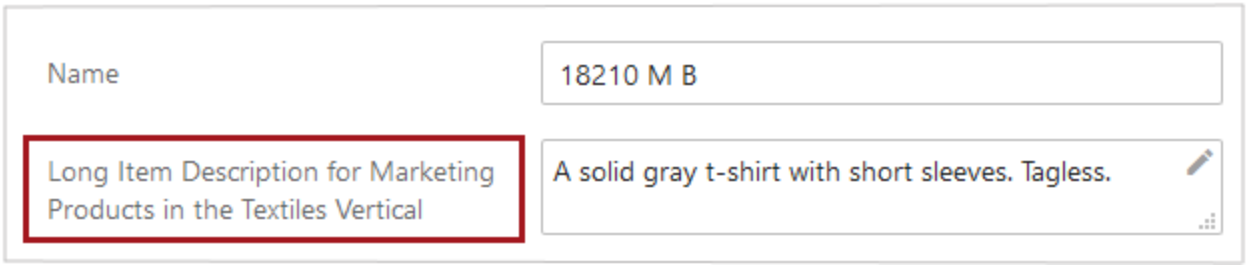


For more information on this and other toolbar actions configurable on Node Lists, see the Action Button section of the Web User Interfaces documentation.

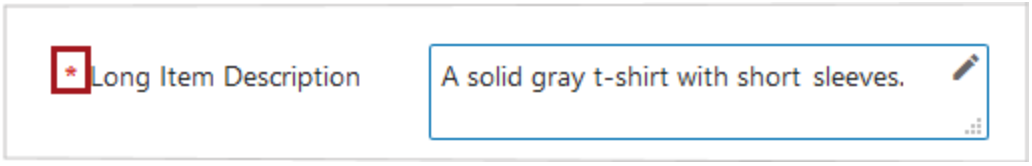
General improvements to display of information in Node Editors

In an effort to further streamline the display of information in the Web UI, labels, help text, and mandatory indicators in Node Editors have been modified to present a cleaner, more unified look and feel.

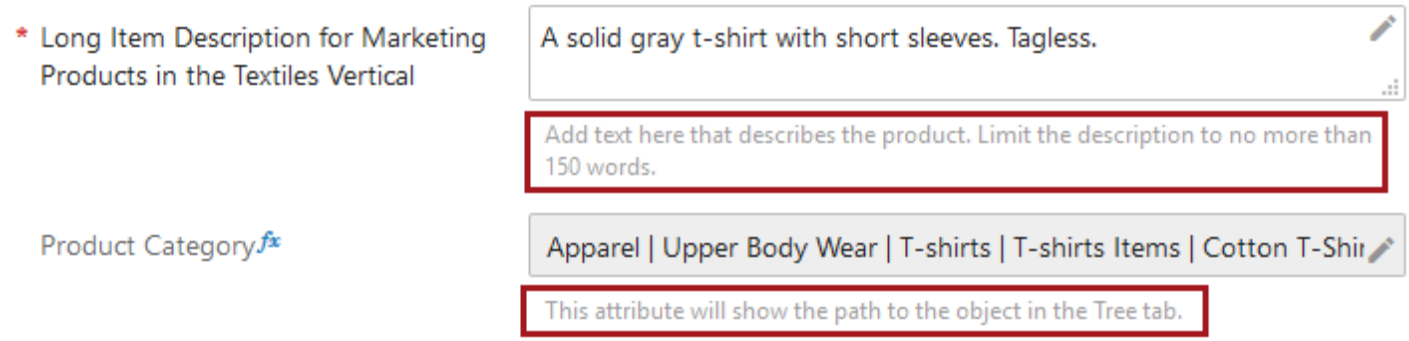
- Field labels now wrap. Previously, because long labels would not break to a second line, long field labels pushed the field further to the right, which could result in a disorganized UI appearance. Now, field labels break to a second line (after approximately 35+ characters), allowing the Node Editors' data fields to stay aligned from top to bottom, no matter how long the field labels.



- Also in support of label alignment, the red asterisk that indicates whether an attribute is mandatory, now displays to the left of the field label. Previously, these indicators displayed to the right of the field label, which, because of the variability allowed in label lengths, had the potential to highlight the variability of attribute labels. Now, because the asterisks are located in the same screen location no matter the length of the label, the overall look of the screen appears less cluttered.



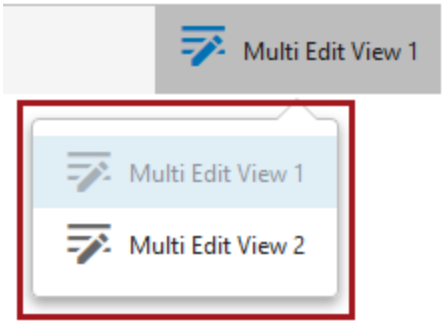
- Help text can now display beneath the field. The Web UI now supports two methods of displaying help text. By configuring the 'Context Help Display Mode' setting in the Node Editor component, users can select either the 'Display below input fields' setting, which displays all configured help text to display beneath the field, or 'Click icon to display', which makes help text accessible by clicking the help text icon to the right of the field. For implementations likely to involve Web UI users for whom constant-display of help text will be useful or, in some cases, satisfy a legal requirement, the 'Display below input fields' may be a good option. For users who are more experienced but may still need to occasionally consult help text, the 'Click icon to display' may work better. In the screenshot below, the 'Display below input fields' setting has been selected for the Node Editor. The help text displays in light gray text directly beneath the input field.



For more information on the Node Editor component upon which this setting can be configured, see the Node Editor Component topic in the Web User Interfaces documentation.

View Mode titles now customizable

Display modes on Node Lists can now be configured with a customized title. To support instances in which multiple view modes of the same type are required for one Node List, the Web UI now allows display modes to be differentiated on a single screen.

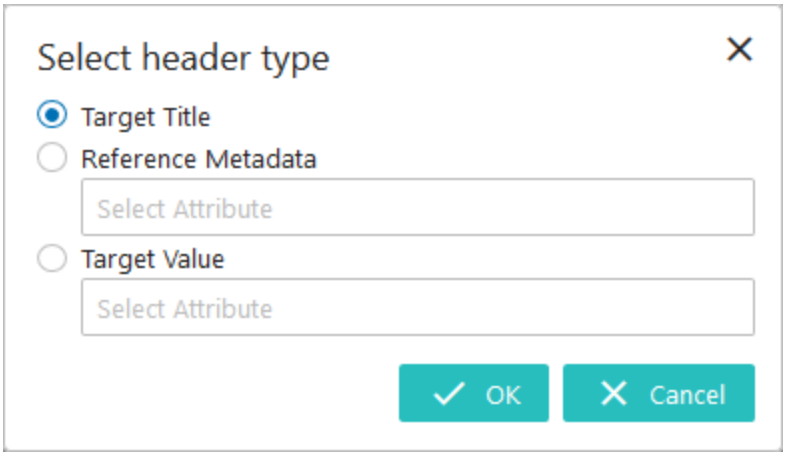


Extend functionality on Value Target Header

The Node List header component called 'Value Target Header' has been enhanced and renamed. Now called the 'Target or Reference Metadata Value Header', this component enables users to configure a header to show either the value of an attribute on a referenced target object, or the value of a metadata attribute on the reference linking

the viewed object to the target object. Previously, using the 'Value Target Header' component, users could elect to display an attribute value for a referenced object, but no option existed to display a metadata attribute value from the reference. This allows users to see, at a glance, an unlimited amount of information about an object the current object is referencing, or about the reference itself, all in a single table.

This functionality also extends to user configurable views. The screenshot below shows the window that displays when a user adds a valid single-valued reference type to a user configurable view. Users can choose to display either an attribute value from the referenced object or a metadata attribute on the reference.

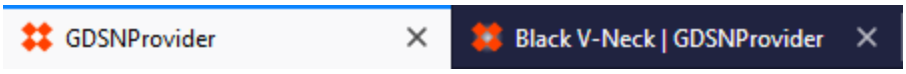


It is important to note that this feature only works with single-value reference types.

For more information on Node Lists, see the Node List Component topic in the Web User Interfaces documentation. For more information on user configurable views, see the User Configurable Views section of the Web User Interfaces documentation.

Enhanced Web UI label format for browser tabs

The format for the label that displays on browser tabs in which the Web UI is being viewed has been amended. When the user is viewing a screen that is not specific to an object, like the Homepage or Advanced Search screen, the browser tab will display with the name of the Web UI. When a user is viewing a specific object, like a product, entity, workflow, or workflow state (in the case of a task list), the user will see displayed in the browser tab the name of the selected object, followed by the name of the Web UI. Previously, the browser tab titles read with the text 'Web UI Application', followed by the name of the Web UI, regardless of whether an object had been selected in the Web UI. The aim of this change is to make the tab titles more meaningful for users, particularly those working with multiple Web UI tabs open in a single session. In the screenshot below, the first tab shows a browser tab in Firefox in which the user is in a non-object-specific screen. The second shows the browser tab in which the user is standing on a product called 'Black V-Neck'.



Updated policy regarding custom CSS

Custom CSS styling (Cascading Style Sheets) is a simple HTML design language applied by some customers to change a Web UI's appearance and/or behavior. While this can achieve a desired effect, it also has the potential to create impediments to the proper functioning of the Web UI, and for Stibo's ability to support those Web UIs. With those challenges in mind, Stibo Systems now requires customers to obtain a license in order to override the Web UI's default CSS and apply their own custom CSS styling.

While this license grants customers the ability to override a Web UI's default CSS, it also requires acceptance of license terms pertinent to Stibo Systems' support of Web UIs running custom CSS:

- On systems running custom CSS, backward compatibility of Web UI functionality on any applied STEP patch cannot be guaranteed by Stibo Systems.
- Patches applied to systems with custom CSS will require full regression testing, to be undertaken by the customer, on functionality affected by the custom styling.
- Errors reported on Web UIs running custom CSS must be reproducible using default styles. Errors that cannot be reproduced with these default styles are not supported by Stibo Systems.

For information on the Unsupported CSS license, contact your Stibo Systems account manager or partner manager.

Change to data container components

Users may now save data containers even if one or more mandatory attributes are missing values. A new 'Enforce Mandatory' parameter for the Data Container Table View Editor and Data Container Attribute View Editor components is now available. By disabling this parameter, users can save data containers with missing mandatory values. Previously, all mandatory fields had to be populated before a user could save data in either data container component.

For users upgrading to 9.1 that already have data container components configured in the Web UI, this new parameter will be set to 'on' (enabled) by default and users should disable as needed. It should be noted that, regardless of the setting for 'Enforce Mandatory', data containers must have values for all mandatory attributes to be approved.

For more information on these components, see the Data Containers in Web UI topic in the Web User Interfaces documentation.

Referenced Asset Representation customization enhancement

A new parameter has been added to the Referenced Asset Representation component that allows users to turn off display of the asset name beneath the asset thumbnail. By unchecking the setting called 'Show Asset Name', users can display a thumbnail without the asset name showing beneath it. For users who upgrade to 9.1 that already have this component configured, the new parameter will be checked by default.

For more information on this component, see the Referenced Asset Representation topic in the Web User Interfaces documentation.

PDS (Product Data Syndication) Enhancements

Functionality connecting PDS with the Web UI is now available in Node Editors. Web UI users now have a the ability to quickly navigate to product information in PDS by clicking a link on the product in the Web UI.

For more information, see the PDS Integration Enhancements release note.

Data Exchange Enhancements and Changes

Summary

The following updates have been made within the Data Exchange functionality:

- STEP now allows import of FAB-DIS ETIM and Media information, in addition to the export functionality previously released with STEP 9.0.
- New inbound and outbound integration endpoint (IIEP and OIEP) message processor options allow for handling the import and export of messages in proprietary formats (JSON, CSV, etc.) using business actions.
- Importing eCl@ss attributes now creates specification attributes, allowing hierarchy inheritance to be employed for nodes. Additional changes have been made to improve working with eCl@ss attributes in Tree and System Setup.
- Running business conditions during import can now allow data that fails the condition to be imported with a warning logged. This allows data to be imported and then later cleansed, rather than completely rejecting the object during import.
- Industry standards for ETIM, BMEcat 2005, and eCl@ss are now available as add-on components, providing flexibility in update schedules.
- The MongoDB driver used by STEP has been upgraded to support Mongo database versions 2.6 through 4.0.
- The Product Data Container Attribute is now available for inbound mapping in Import Manager and IIEPs.
- As part of the Improved Configuration Management Tooling project, updated and enhanced STEPXML import replacement options are available.
- A number of STEPXML import / export enhancements were added.

In addition to the above enhancements, customers should note that the option to import eCl@ss Basic CSV files will be removed with the next STEP release (9.2). eCl@ss Basic XML import is still supported.

Details

New IIEP processing engine for FAB-DIS

STEP now allows importing ETIM and Media information in the FAB-DIS format, providing a full exchange of ETIM data and assets. Previously, FAB-DIS data could only be exported from STEP.

FAB-DIS is an exchange format primarily used by companies doing business in France, and facilitates the sharing of quality product information between manufacturers and distributors. To access the FAB-DIS import functionality, in addition to the normal update procedures, the 'fabdis' component must be activated. Contact a Stibo Systems representative for details.

A FAB-DIS file is delivered using the Excel format and contains seven tabs. The STEP FAB-DIS Importer processing engine is available in Inbound Integration Endpoints (IIEPs), and can receive data from the ETIM and Media tabs. Imports can be invoked and monitored from an IIEP in the workbench, as well as from the Web UI via a File Loading Widget and the Background Process Notification Component.

For more information, see the FAB-DIS Format topic in the Data Exchange documentation.

New IIEP and OIEP message processors

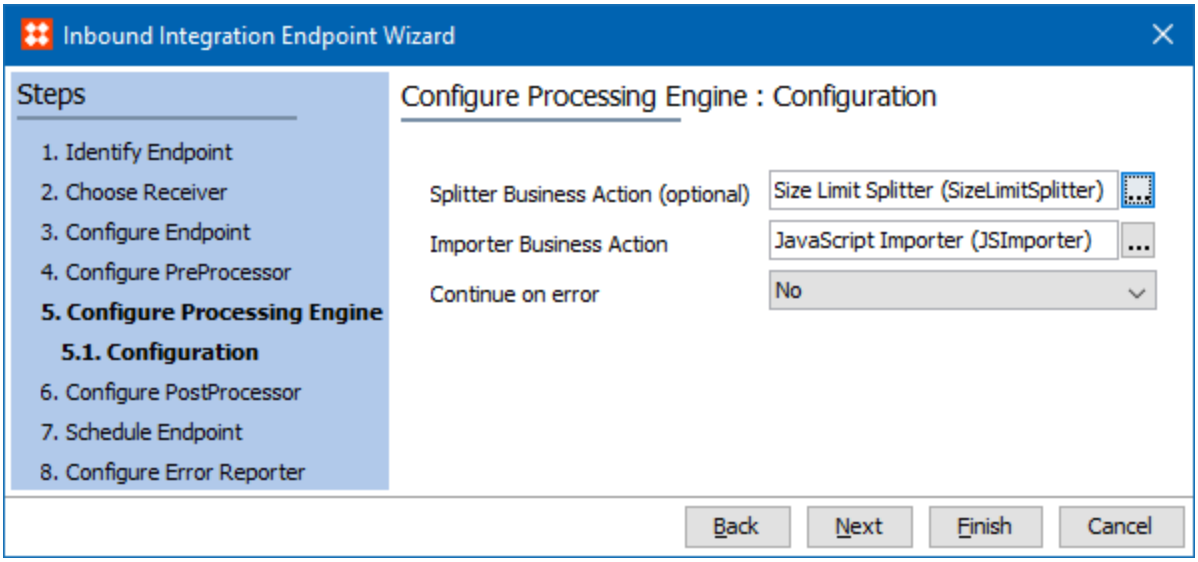
STEP integration endpoint functionality has been enhanced with two new message processor options that, via the use of business actions, allow for the consumption and production of proprietary message formats that cannot be handled via the standard STEP Importer / STEP Exporter message processors.

While the new message processors are very flexible, the following topics in the Data Exchange documentation define their optimal uses: IIEP - Configure Processing Engine topic, OIEP - Event-Based - Configure Endpoint topic, and OIEP - Select Objects - Configure Endpoint topic.

To access the new import and export functionality, in addition to the normal update procedures, the 'business-action-processor' component must be activated. Contact a Stibo Systems representative for details.

Inbound Business Rule Based Message Processor

The inbound message processor uses two business actions for processing incoming messages, namely a 'splitter' business action and an 'importer' business action.

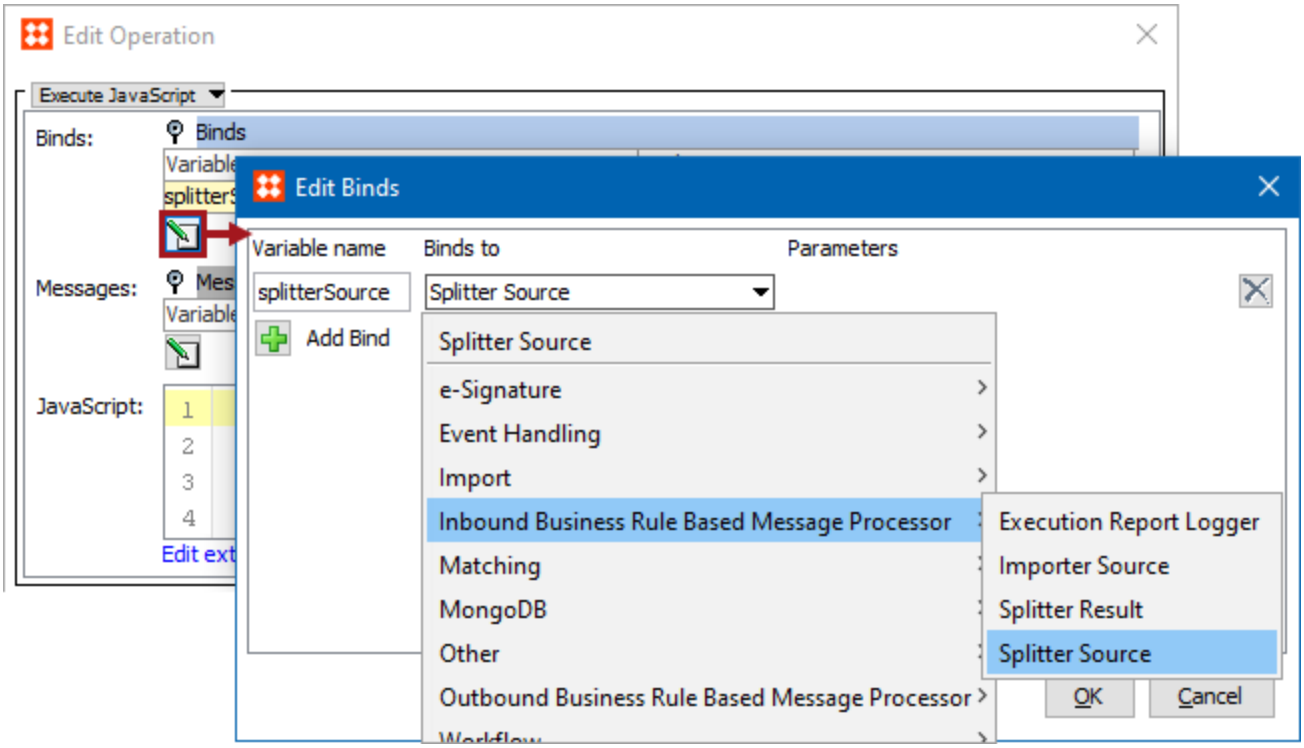


The splitter action divides incoming messages into smaller parts (e.g., a line in a CSV file or a JSON structure representing a single object in STEP) and the smaller parts are then handled one at a time by the importer action that is to update STEP directly via the Scripting / Extension API. The splitter action is optional if incoming messages are guaranteed to not exceed a size of 1 MB.

The splitter action has access to the incoming message via the InboundBusinessProcessorSplitterSource interface (available via the 'Splitter Source' bind in JavaScript business rules) and delivers its output via the InboundBusinessProcessorSplitterResult interface (available via the 'Splitter Result' bind in JavaScript business rules).

The importer action has access to its input via the InboundBusinessProcessorImporterSource interface (available via the 'Importer Source' bind in JavaScript business rules) and further has access to a Manager for updating STEP. Both splitter and importer can write to the message processor background process execution report via the

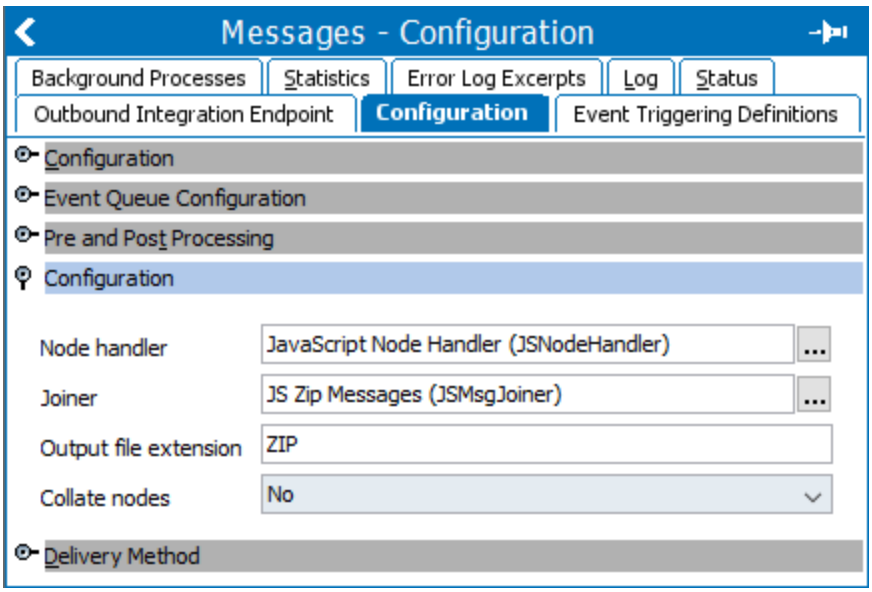
InboundBusinessProcessorExecutionReportLogger interface (available via the 'Execution Report Logger' bind in JavaScript business rules).



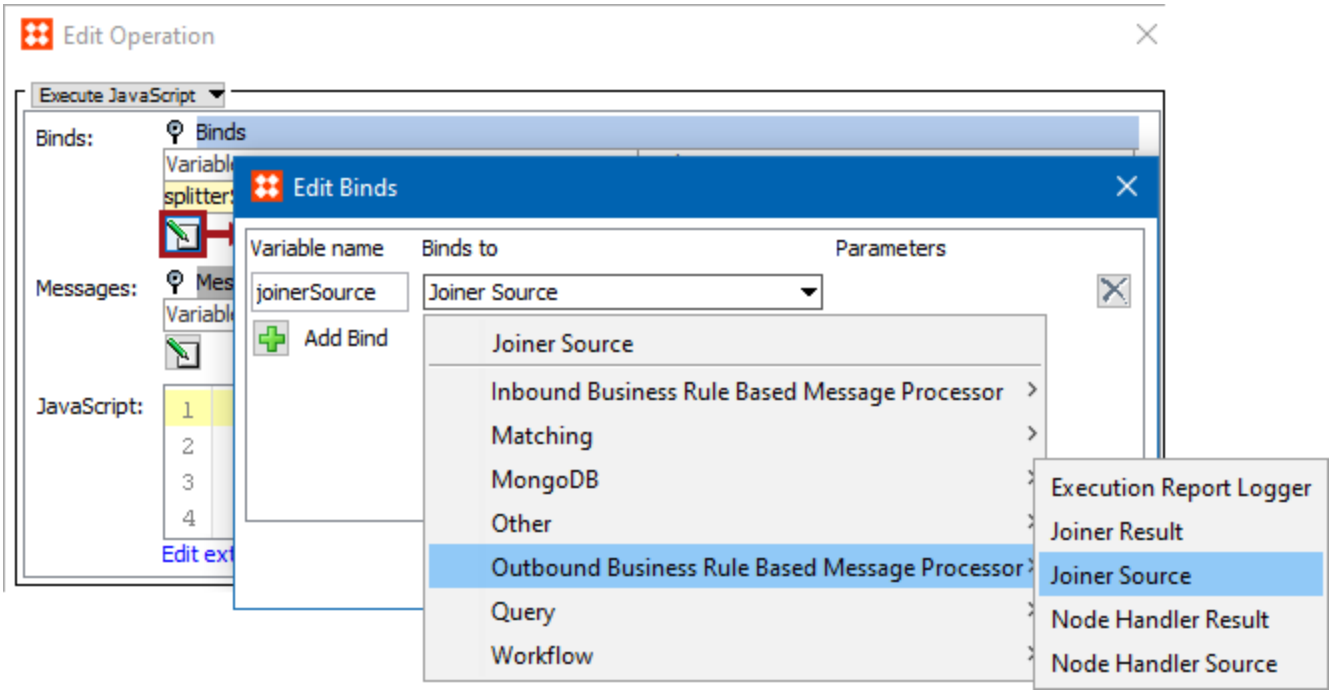
For more information, see IIEP - Configure Business Rule Based Message Processor Processing Engine topic in the Data Exchange documentation.

Outbound Business Rule Based Message Processor

The outbound message processor works on a batch and, like the inbound message processor, uses two business actions, namely a 'node handler' and a 'joiner' business action.'



The node handler action is invoked for each node / event in the batch to be processed and is responsible for producing a String representation of the data. It has access to the node / event via the OutboundBusinessProcessorNodeHandlerSource interface (available via the 'Node Handler Source' bind in JavaScript business rules) and delivers its output via the OutboundBusinessProcessorNodeHandlerResult interface (available via the 'Node Handler Result' bind in JavaScript business rules). Further, the action has access to a Manager and can write to the execution report via the OutboundBusinessProcessorExecutionReportLogger interface (available via the 'Execution Report Logger' bind in JavaScript business rules).



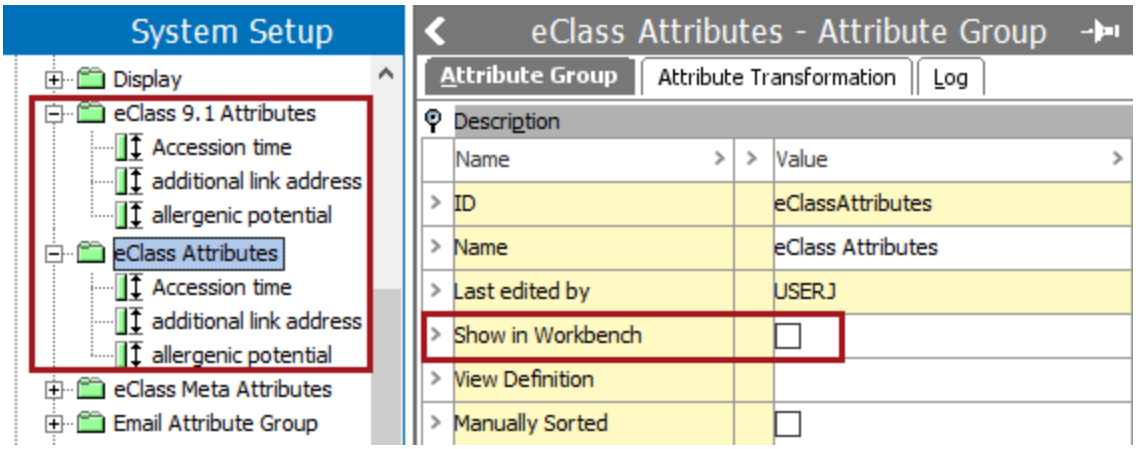
The joiner business action is responsible for combining messages produced by the node handler into one message. It has access to the messages produced by the node handler via the OutboundBusinessProcessorJoinerSource interface and delivers its result via the OutboundBusinessProcessorJoinerResult interface (available via the 'Joiner Source' and 'Joiner Result' binds in JavaScript business rules). Further, the joiner has access to a Manager and can log to the execution report via the OutboundBusinessProcessorExecutionReportLogger interface.

For more information. see the OIEP - Configuration Flipper for Business Rule Based Message Processor topic in the Data Exchange documentation.

eCl@ss attributes creation improvements

The STEP 9.1 eCl@ss Classification importer has been enhanced as follows and applies to newly created eCl@ss attributes and classifications:

- The 'eCl@ss [*version*] Attributes' node and 'eCl@ss Attributes' node contents are created as specification attributes. This allows inheritance through the product-to-classification link and restricts the eCl@ss specification attributes from displaying on objects based solely on the validity setting. However, 'eCl@ss Meta Attributes' node contents continue to be created as description attributes.
- The 'eCl@ss Attributes' node is no longer set to have the 'Show in Workbench' option enabled by default. This attribute node group holds attributes used across all versions. This change allows the attributes to be displayed only under the eCl@ss version node flipper on products in Tree.
- Attribute subgroups are no longer created within System Setup for 'eCl@ss [*version*] Attributes' or 'eCl@ss Attributes' groups, which results in displaying all 'eCl@ss [version] Attributes' node contents in the same flipper when viewing a product in Tree, and as a flat list in System Setup.

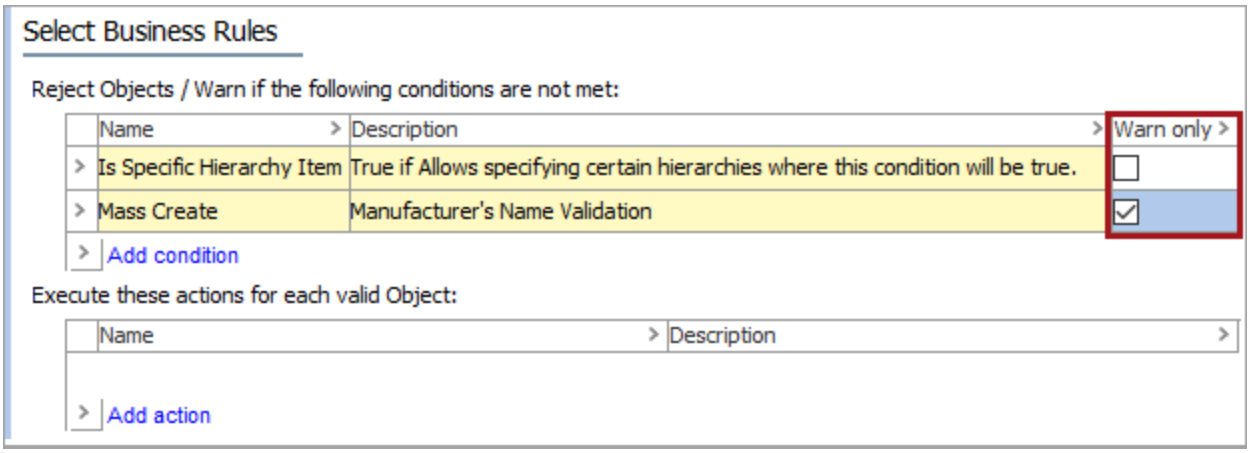


Previously, the eCl@ss attributes were defined as description attributes, which prevented inheritance, and the attributes also displayed on all objects that were valid for the attributes. Additionally, by default, the 'eCl@ss Attributes' node contents were displayed in Tree; and 'eCl@ss [*version*] Attributes' node and 'eCl@ss Attributes' node contents included subgroups in System Setup and also in Tree. For more information, see the eCl@ss Format topic in the Data Exchange documentation.

Existing eCl@ss implementations cannot be modified by these enhancements, but can be manually updated using a STEPXML export / change / import. Contact a Stibo Systems representative for assistance.

Failed business conditions allowed to import data with warnings

Previously during import, data that failed to meet a business condition was not imported, in an attempt to ensure data quality. While this is a valuable option, there are cases where an object with some 'imperfect' data is preferred over not having the object at all, such as when importing via the Excel Smartsheet format or when a separate STEP process is used for scrubbing data. Now, on the 'Select Business Rules' step in Import Manager and with Inbound Integration Endpoints (IIEPs), the new 'Warn only' checkbox determines how failed conditions are handled. When checked, a failed condition is reported in the BGP log as a warning, and allows the data to be imported. When unchecked, which is the option's default setting, a failed business condition is reported in the BGP log as an error, and the data is not imported.



For more information, see the Import Manager - Select Business Rules topic which describes the functionality for both Import Manager and IIEP.

Add-on components for Industry standards

The functionality for several industry standard classification structures has previously been part of the core STEP platform. For this release, ETIM, BMEcat 2005, and eCl@ss must now be installed separately as add-on components. This gives Stibo Systems greater flexibility in updating and expanding the standards individually as needed. **This constitutes a change in existing functionality since upgrading to 9.1 via the baseline recipe removes these components from STEP.**

Please note that when a component is removed, no data is lost. However, there can be adverse system effects if other functionality relied on the removed component. Contact a Stibo Systems representative for more information and to apply the add-on components as listed below.

The components can be added at the same time normal update procedures for 9.1 are performed or after the upgrade has been done.

- To access ETIM, activate the ‘etim-importer’ add-on component.
- To access eCl@ss, activate the ‘eclassimporter’ add-on component.
- To access BMEcat 2005, activate the ‘bmecat’ add-on component.

For more information, see the ETIM Format topic, the eCl@ss Format topic, and the BMEcat 2005 Format topic, all in the Data Exchange documentation.

New support for MongoDB 4.0 and driver 3.8

The MongoDB Java driver used by STEP has been upgraded to version 3.8.2, which adds support for Mongo database versions 2.6 through 4.0. Before this release, STEP used MongoDB driver 3.6.3, which supported Mongo database versions through 3.6.

The extension API for accessing the MongoDB has been extended to support the new Mongo client as introduced in the MongoDB driver 3.7. The previous way of accessing the MongoDB is also still valid. For detailed information, see 'STEP API Documentation' on the STEP WebStart page.

Additional resources can be found online:

- http://mongodb.github.io/mongo-java-driver/3.8/driver/
- https://docs.mongodb.org/manual/release-notes/
- http://mongodb.github.io/mongo-java-driver/
- https://www.mongodb.com/support-policy

Product Data Container Attribute now available for inbound mapping

For Import Manager and IIEPs, the Data Container Attribute option now allows you to map data container attributes to specific (new or existing) data containers when mapping to product objects, in addition to entity objects. For more information, see the Data Container Attribute - Map Inbound topic in the Data Exchange documentation.

Updated and enhanced STEPXML import replacement options

The STEPXML import functionality generally runs in a mode where properties not represented in the XML file are left untouched by the import. For 'list properties' (multiple instances of the same XML element at the same level) such as 'Value' elements inside the 'Values' element for a product or 'TargetUserTypeLink' elements for a reference type definition, this means that special processing instructions must be used to express that properties not present in the import file must be removed from the system as part of the import.

With 9.1, a set of new replacement options has been added. Additionally, new, more powerful versions of the existing replacement options have been introduced.

All new replace options must be configured in new supertype-specific subsections of the existing 'ReplacementRules' element. The XML snippet below shows all of the available options. The individual instructions are described in detail in online help.

All existing replacement options (except for 'ReplaceTerms') have been marked as deprecated in the STEPXML XSD but will continue to work in 9.1 with the old logic.

```
<?xml version="1.0" encoding="utf-8"?>
<STEP-ProductInformation ContextID="Context1" WorkspaceID="Main">
   <ReplacementRules>
     <Attributes>
        <ReplaceAttributeGroupLinks/>
        <ReplaceUserTypeLinks/>
        <ReplaceUnitLinks/>
     </Attributes>
```

```
      <LinkTypes>
        <ReplaceUserTypeLinks/>
        <ReplaceTargetUserTypeLinks/>
      </LinkTypes>
      <UserTypes>
        <ReplaceUserTypeLinks/>
      </UserTypes>
      <UserGroups>
        <ReplacePrivilegeRules/>
      </UserGroups>
      <Products>
        <ReplaceCrossReferences CrossContext="Y"/>
        <ReplaceCrossReferences ReferenceTypeID="MyReferenceType"
CrossContext="Y"/>
        <ReplaceOverrideSubProducts/>
        <ReplaceValues CrossContext="Y"/>
        <ReplaceValues AttributeGroupID="MyAttrGrp" CrossContext="Y"/>
        <ReplaceValues AttributeID="MyAttr" CrossContext="Y"/>
        <ReplaceAttributeLinks CrossContext="Y"/>
        <ReplaceClassificationReferences CrossContext="Y"/>
        <ReplaceClassificationReferences
LinkTypeID="MyClassificationProductLinkType" CrossContext="Y"/>
        <ReplaceDataContainers/>
        <ReplaceDataContainers DataContainerTypeID="MyDcType"/>
      </Products>
      <Classifications>
        <ReplaceCrossReferences CrossContext="Y"/>
        <ReplaceCrossReferences ReferenceTypeID="MyReferenceType"
CrossContext="Y"/>
        <ReplaceAttributeLinks CrossContext="Y"/>
        <ReplaceProductReferences CrossContext="Y"/>
        <ReplaceProductReferences LinkTypeID="MyClassificationProductLinkType"
CrossContext="Y"/>
        <ReplaceValues CrossContext="Y"/>
        <ReplaceValues AttributeGroupID="MyAttrGrp" CrossContext="Y"/>
        <ReplaceValues AttributeID="MyAttr" CrossContext="Y"/>
      </Classifications>
      <Entities>
        <ReplaceCrossReferences CrossContext="Y"/>
        <ReplaceCrossReferences ReferenceTypeID="MyReferenceType"
CrossContext="Y"/>
        <ReplaceDataContainers/>
        <ReplaceDataContainers DataContainerTypeID="MyDcType"/>
        <ReplaceValues CrossContext="Y"/>
        <ReplaceValues AttributeGroupID="MyAttrGrp" CrossContext="Y"/>
        <ReplaceValues AttributeID="MyAttr" CrossContext="Y"/>
      </Entities>
      <Assets>
        <ReplaceCrossReferences CrossContext="Y"/>
        <ReplaceCrossReferences ReferenceTypeID="MyReferenceType"
CrossContext="Y"/>
```

```
        <ReplaceValues CrossContext="Y"/>
        <ReplaceValues AttributeGroupID="MyAttrGrp" CrossContext="Y"/>
        <ReplaceValues AttributeID="MyAttr" CrossContext="Y"/>
      </Assets>
    </ReplacementRules>
    <!-- Data omitted -->
</STEP-ProductInformation>
```

For more information, see the ReplacementRules Tag in STEPXML topic within the STEPXML Format section of the Data Exchange documentation.

STEPXML import / export enhancements

A number of enhancements have been made to the STEPXML format and the export and import of STEPXML. These are:

- When exporting workflow definitions via STEPXML, local business rules are now always exported nested in the STEPWorkflows element.
- A 'ParentID' attribute has been added for Unit elements in STEPXML allowing for units to be imported without being nested inside a UnitFamily element.
- The strict validation setting for ISO Date and ISO Date Time validated attributes can now be expressed in STEPXML and exported/imported. Attributes not using strict validation will in STEPXML have a 'legacy' prefix for the Validation element BaseType attribute value. Further newly created ISO Date and ISO Date Time validated attributes will now by default be strictly validated.
- The STEPXML XSD has been updated to contain schema definition for status flags.
- It is now possible to get definitions for obfuscated configuration elements exported in an XML comment also via the STEPXML format plugin. This option was earlier only available when the 'Advanced STEPXML' format plugin was used. Further, the option to have the definition exported in a comment is now available for more obfuscated types, namely import, export and bulk update configurations, transformation lookup tables, tag types, matching algorithms and match codes, event processors, gateway integration endpoints, and setup entities.
- The entity reference type parent/child relation setting can now be expressed in STEPXML and exported / imported.
- The STEPXML functionality for filtering exports on object type is now available for both products, entities and classifications. For the 'Advanced STEPXML' format plugin by using the 'FilterUserType' element in the export template, for the 'STEPXML' format plugin by adding the desired object types for the "Include object types" parameter in the "Select Objects" step of the export manager wizard.
- Event queues for outbound integration endpoint are now exported nested inside OutboundIntegrationEndpoint elements and the XSD has been updated accordingly.
- ClassificationCrossReference will now be included when exporting products using the STEPXML export plugin via the export manager or an OIEP.
- More System Settings can be exported / imported.

For more information, see the STEPXML format topic within the Data Formats section of the Data Exchange documentation.

New support for data container filtering with Advanced STEPXML exports

Now, STEP allows users to specify the types of data containers to include with Advanced STEPXML exports.

For more information, see the Customer Master Data Management Enhancements release note.

Digital Asset Exchange Enhancements

The following updates have been made within the Data Exchange functionality:

- The Asset Import Widget has been updated with better text / button spacing.
- There are two enhancements to the way asset importing works in Web UI. Changes were made to better support multi-vendor users uploading assets via the widget and Referenced Asset Representation component.
- The Asset Importer configuration for metadata now includes the ability to write metadata asset values on a reference, giving access to attributes on references.
- The Asset Importer now allows importing assets from URLs, via a metadata file, providing a way to import assets stored on an external system.
- The Asset Importer now allows creating asset placeholder objects when STEP cannot access the asset being imported. This allows references to be established until the asset content can be provided.

Details

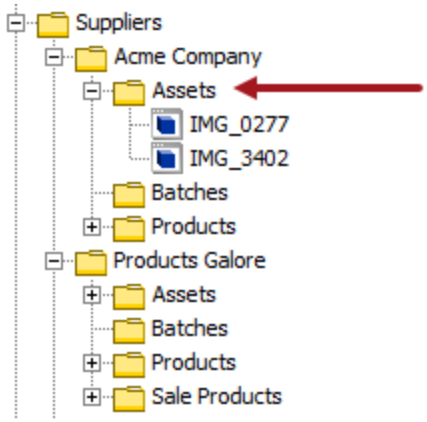
Asset Import Widget updates

The Asset Import Widget has been updated with increased spacing within the widget (between any text and 'Select File' option(s)). This improves the look and readability, and better aligns with the design of the File Loading Widget.

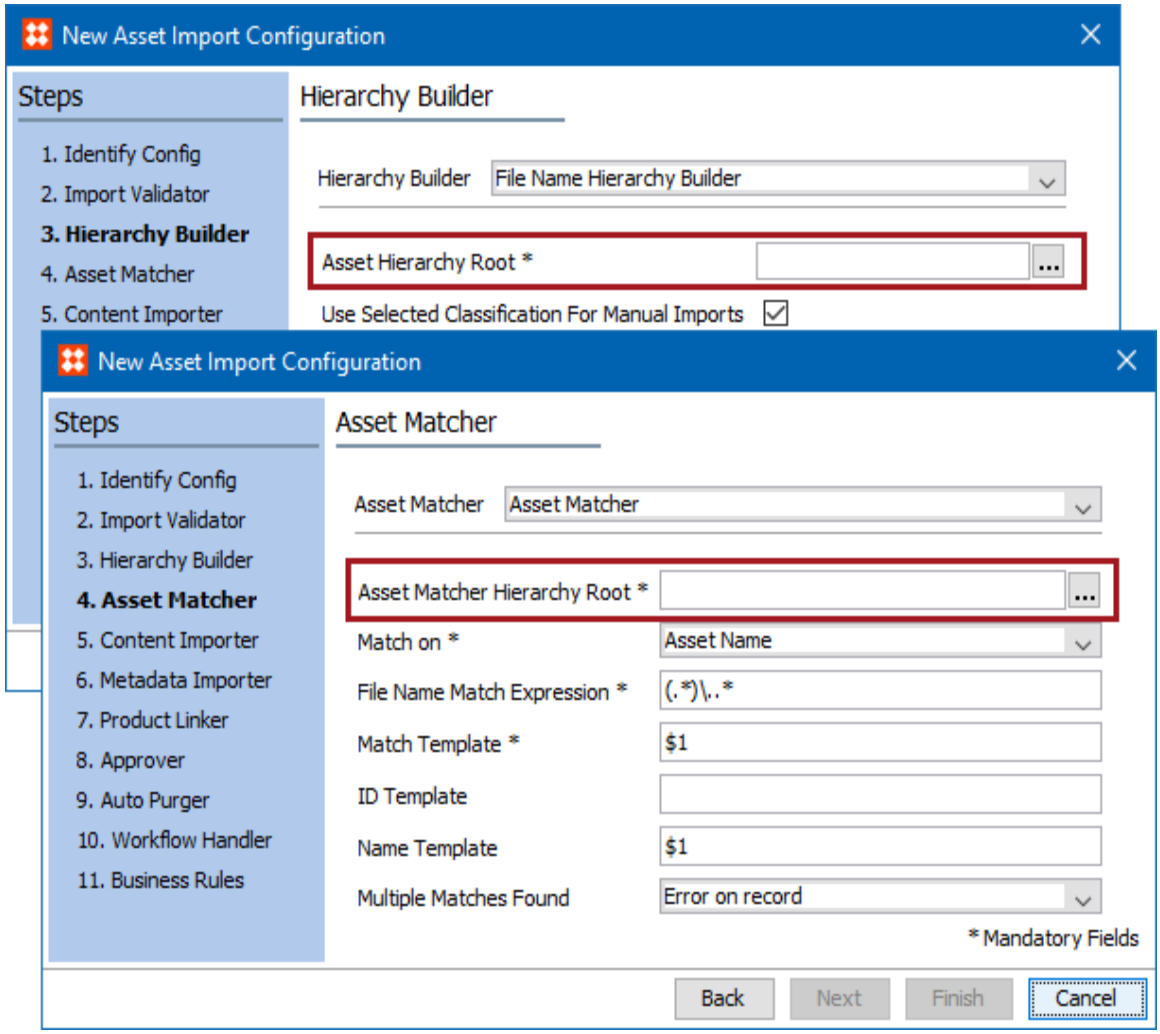
For more information, see the Asset Importer Widget topic in the Web User Interfaces documentation.

Asset Import enhancements for multi-vendor users

If a user is a member of multiple vendor groups, they are now able to upload assets to a specific supplier that they are acting on behalf of. When using the Asset Import Widget in Web UI, the Supplier ID chosen from the Corner Bar Supplier Selector will be passed to the import background process so that the correct supplier / vendor classification assets folder is selected to import the asset into.



Successful importing relies on the proper configuration of the root selected for Hierarchy Builder and the root selected for Asset Matcher within the asset import configuration.



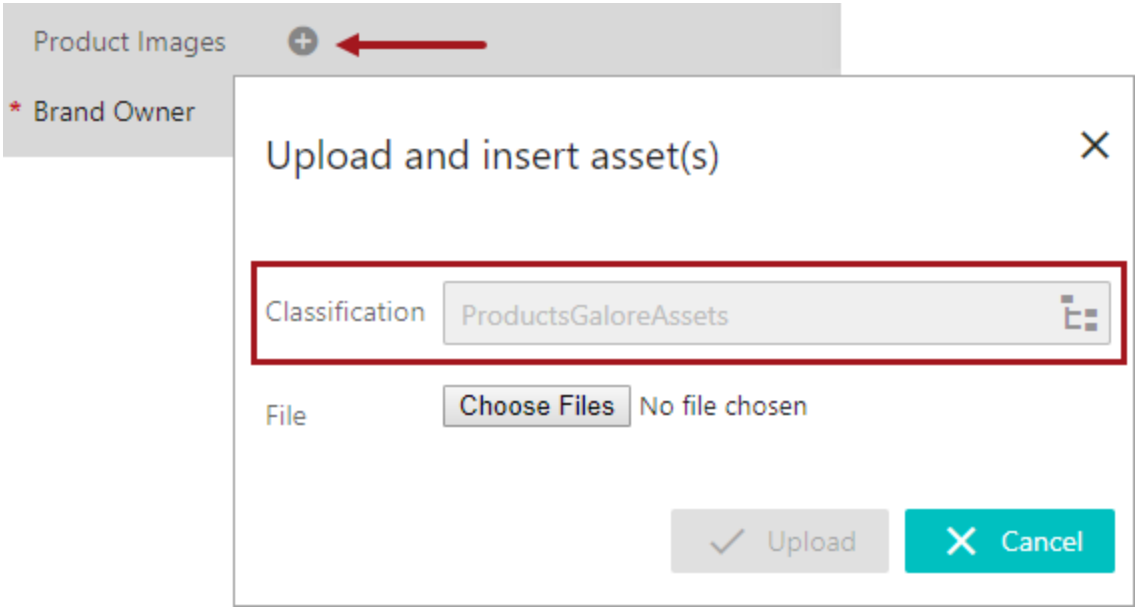
Users also need to be aware of any matching products, which are currently below a product node, and should only link to products owned by the selected vendor.

For more information, see the Asset Importer section of the Digital Asset Exchange documentation.

Referenced Asset Representation component fix for vendor users

Previously, when this component was configured to use an Asset Import Configuration, it did not work correctly. Now, when multi-vendor users use the component, the Corner Bar Supplier Selector Supplier ID is passed through the process so that the imported asset is placed in the correct supplier / vendor classification assets folder.

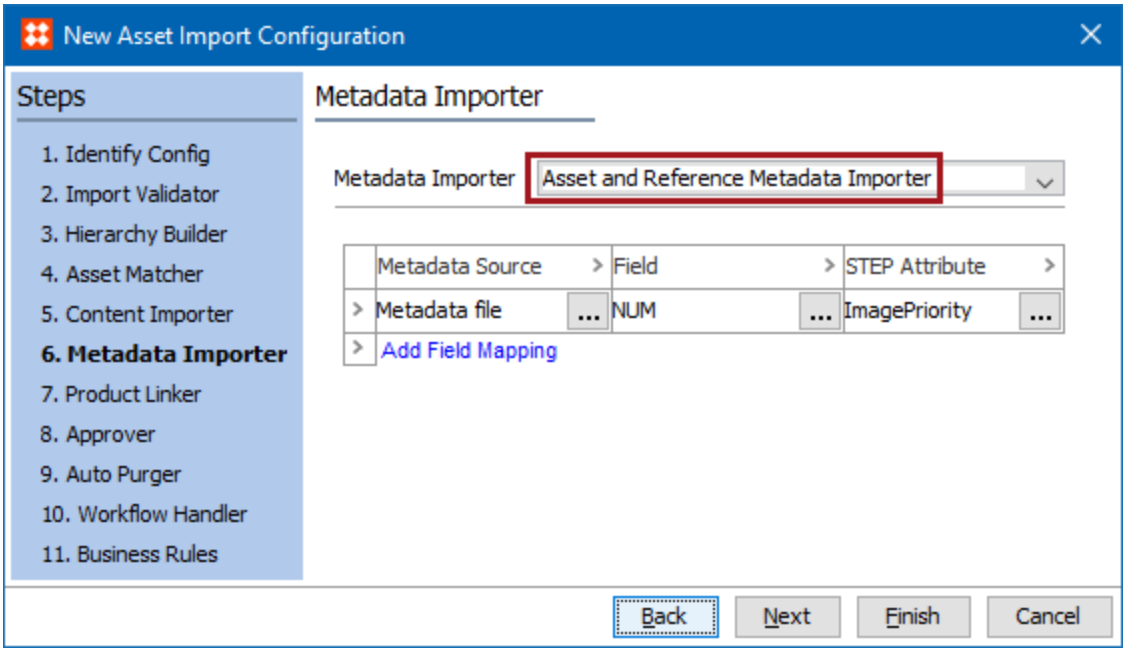
When the 'Reference Asset Representation' component is not configured to use an Asset Import configuration, the 'Upload and insert asset(s)' dialog displays with the asset classification of the currently selected user group automatically pre-selected. The user will still be able to choose a different classification folder, if needed.



For more information, see the Asset Handling in Web UI section of the Web User Interfaces documentation.

New Asset and Reference Metadata Importer option

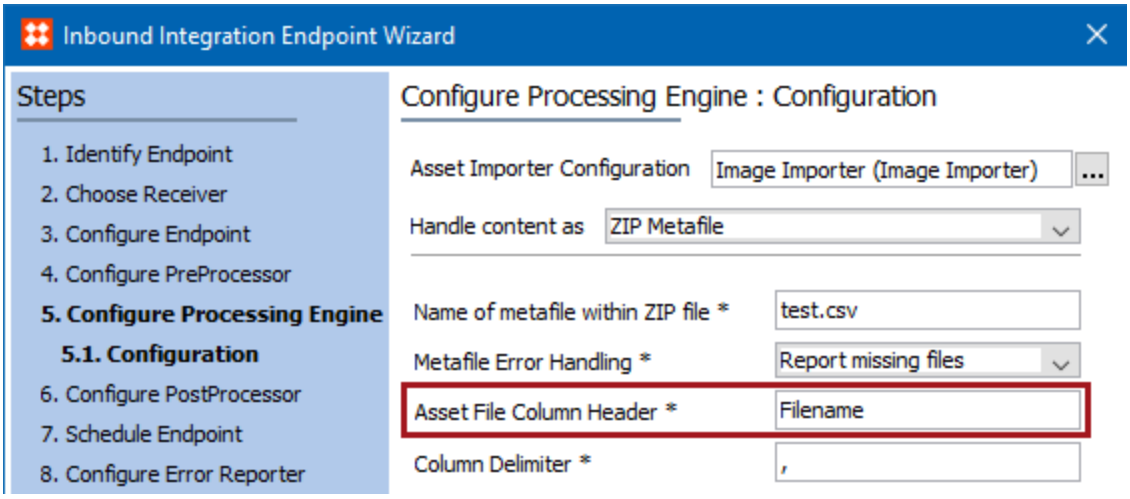
Importing metadata on references between products and assets is now possible using the new 'Asset and Reference Metadata Importer' option on the Metadata Importer step of an Asset Import Configuration. Additionally, the field mapping table allows the user to specify if metadata from a metadata file or from an asset will be added to the specified reference type selected in the Product Linker step. The asset importer did not previously allow the import of metadata to references.



For more information, see the Metadata Importer topic in the Asset Importer section of the Digital Asset Exchange documentation.

Importing assets from URL now available

Assets identified by a URL (due to being stored externally) can now be imported using an IIEP and the Asset Importer processing engine and a metafile (Excel or CSV). Previously, the Asset Importer Configuration setup included the 'Filename Column Header' parameter. This option only allowed specifying the column heading within the metafile that contains the asset name or a relative path to the file name (when the asset was stored below the root hotfolder directory). The parameter has been renamed to 'Asset File Column Header' to indicate that more than just a file name is allowed. The parameter continues to provide the previous functionality, as well as the new ability for the metafile column to include a URL for external assets.



For more information, see the IIEP - Configure Asset Importer Processing Engine topic in the Data Exchange documentation.

Importing assets without content

Using the Asset Importer processing engine in an inbound integration endpoint (IIEP) now includes an 'Allow Create Asset Without Content' parameter. This allows creation of an *asset placeholder* object when the content is not available, for example, due to an incorrect asset name in the import file or blocked access to the URL. The asset object is created and referenced as configured, and the thumbnail shows 'No Content' instead of an image. For more information, see the IIEP - Configure Asset Importer Processing Engine topic of the Data Exchange documentation.

Expanded Asynchronous Translation Functionality

Summary

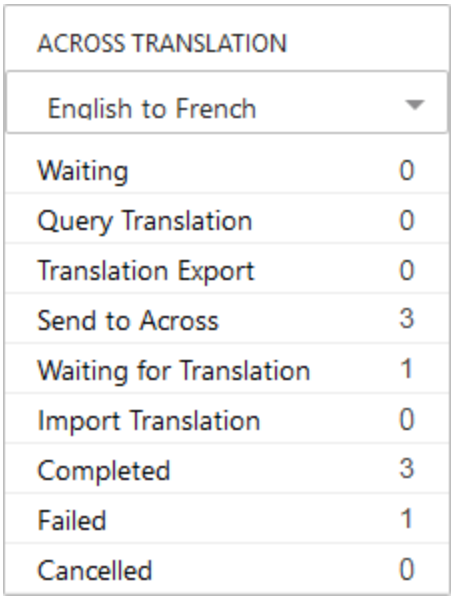
STEP now includes a solution for integrating with the Across Language Server (referred to as 'Across' below) translation software, allowing users to manage translations in-house, on their own hardware.

Additionally, all service options have been enhanced as follows:

- Properties within the sharedconfig.properties file are used to display the contents of the Server URL dropdown in the wizard, eliminating the need for manual entry when creating a new asynchronous configuration.
- The new 'Auto-approve translation' checkbox determines if translated data is approved upon import.
- Users can now define a unique transformation lookup table for each service, as required, to convert language dimension point IDs, for example, into ISO language / country qualifiers or Windows Language Code Identifier (LCID).

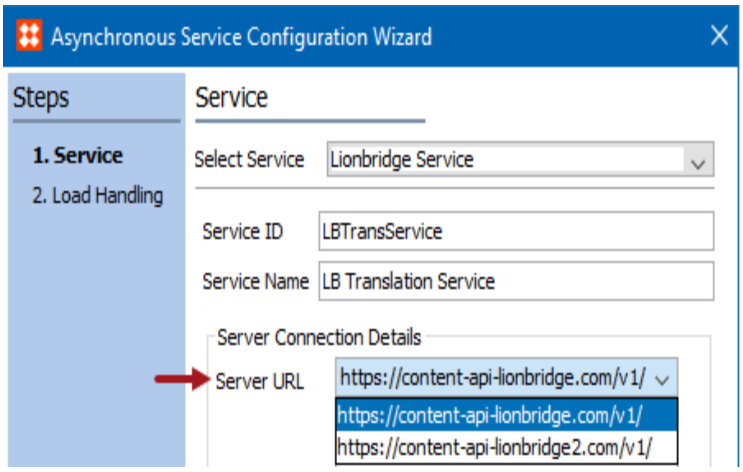
Details

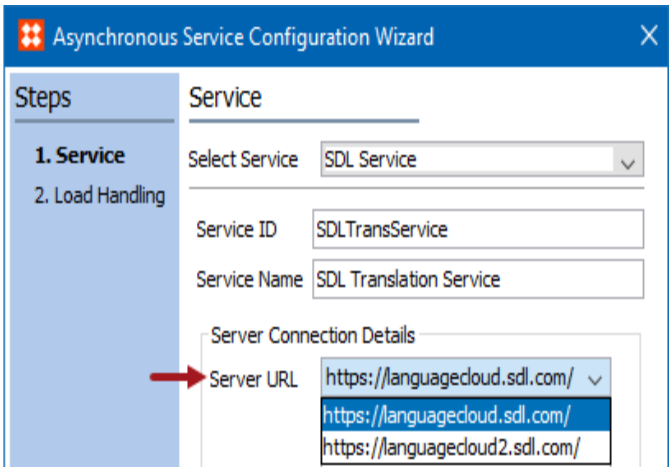
STEP asynchronous translation capabilities can be used with Across, a third-party translation software. Using the same functionality as is available for SDL and Lionbridge services, an Across translation configuration can be used to communicate data for translation between STEP and Across. Users can track the progress of an Across translation process in Web UI with the Translation Status widget, as shown below.

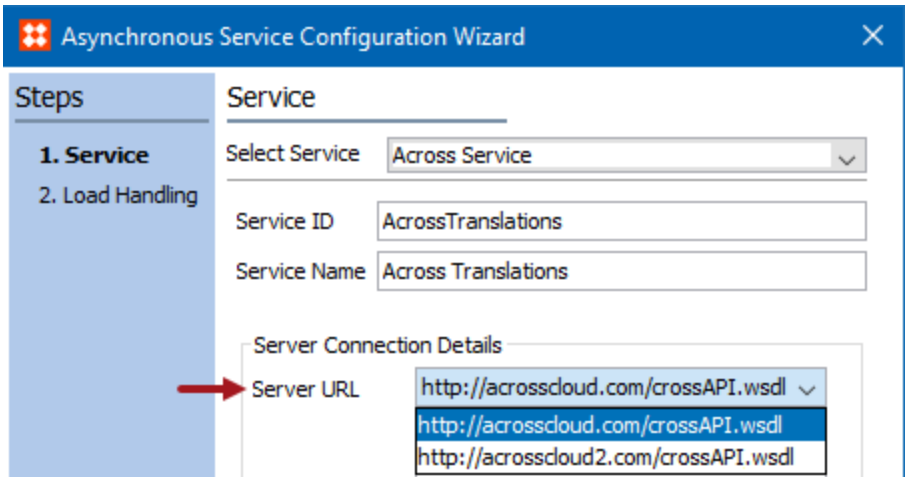


To access and use the functionality as described above, the 'across' component and its associated framework must be activated on your system in addition to the normal update procedures for 9.1. Contact your Stibo Systems representative for more information.

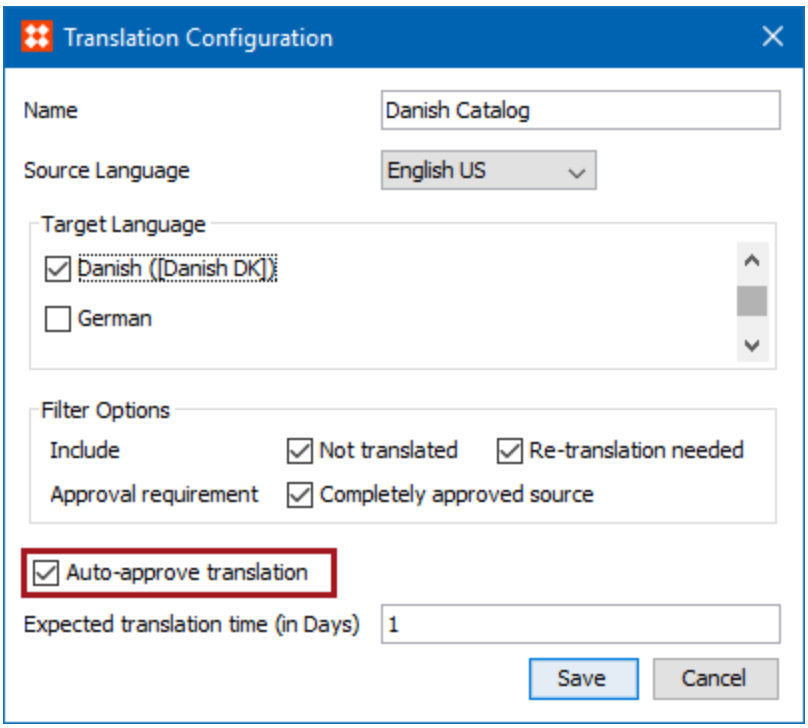
For an easier configuration process, Across, SDL, and Lionbridge now each use a unique entry in the sharedconfig.properties file to display data in the 'Server URL' dropdown of the wizard. This allows customers to work with multiple asynchronous translation options simultaneously. **This constitutes a change in functionality, however; for existing asynchronous service configuration types, the manually entered URL text is retained and displayed in the dropdown.** Editing an existing asynchronous service configuration type allows a manual entry to be overwritten, and once the change is saved, the entry can only be restored by including it in the sharedconfig.properties file.



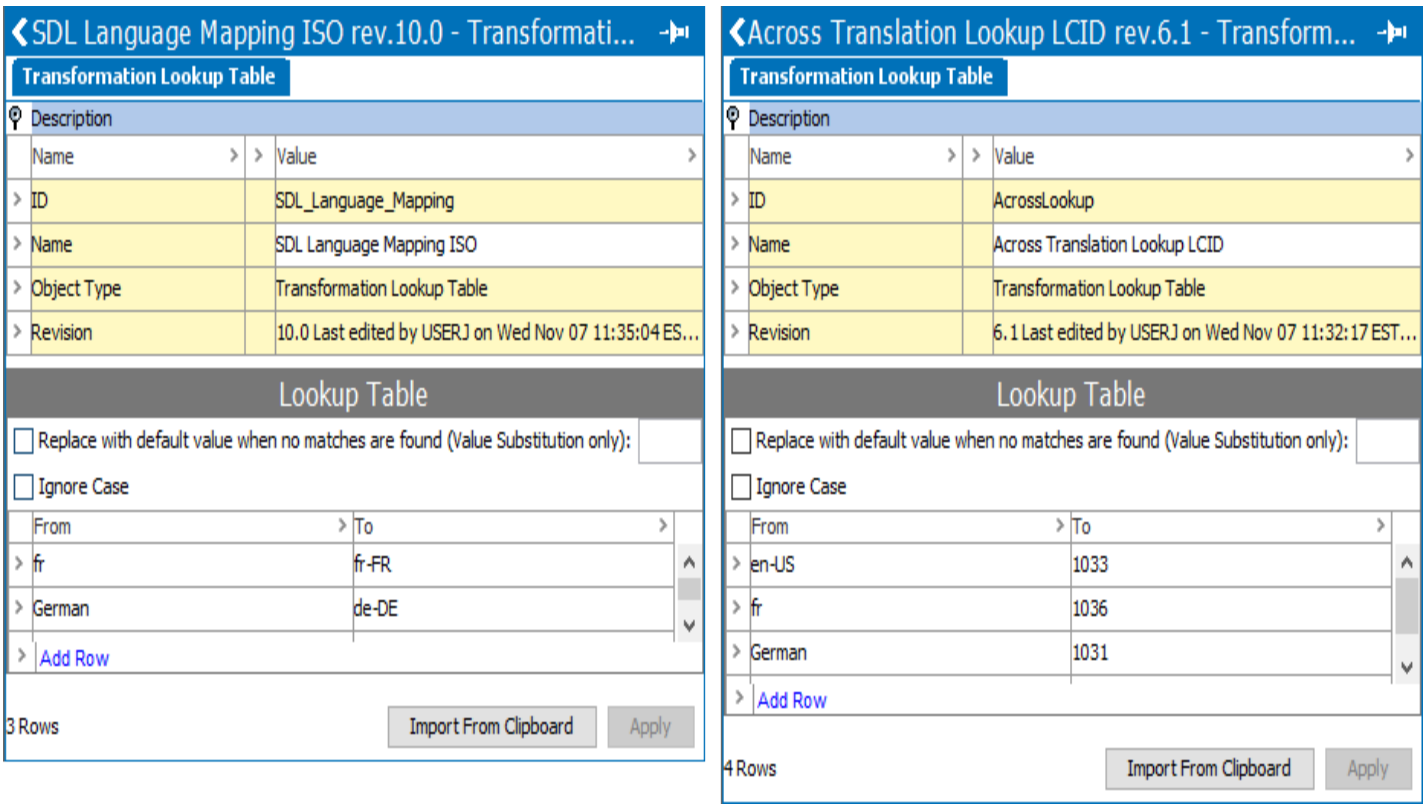




By default, all translations received via an asynchronous service configuration type are automatically approved. The new 'Auto-approve translation' checkbox allows the user to change this default and receive translations without automatic approval. This allows manual inspection of the translation prior to moving it to the approved workspace.



Across, SDL, and Lionbridge can now each use a unique entry in the sharedconfig.properties file to define the transformation lookup table required to match the language ID with the STEP language dimension. This allows customers to maintain multiple transformation lookup tables simultaneously. **This constitutes a change in setup, however, for existing asynchronous service configuration types where a single transformation lookup table is already in use, no changes are necessary.** Adding more than one STEP transformation lookup table requires an update to the sharedconfig.properties file to identify the service.



For more information about asynchronous translations in STEP, including configuration, usage and sharedconfig.properties file setup, see the Asynchronous Translations topic in the Data Integration documentation.

Smartsheet Enhancements

Summary

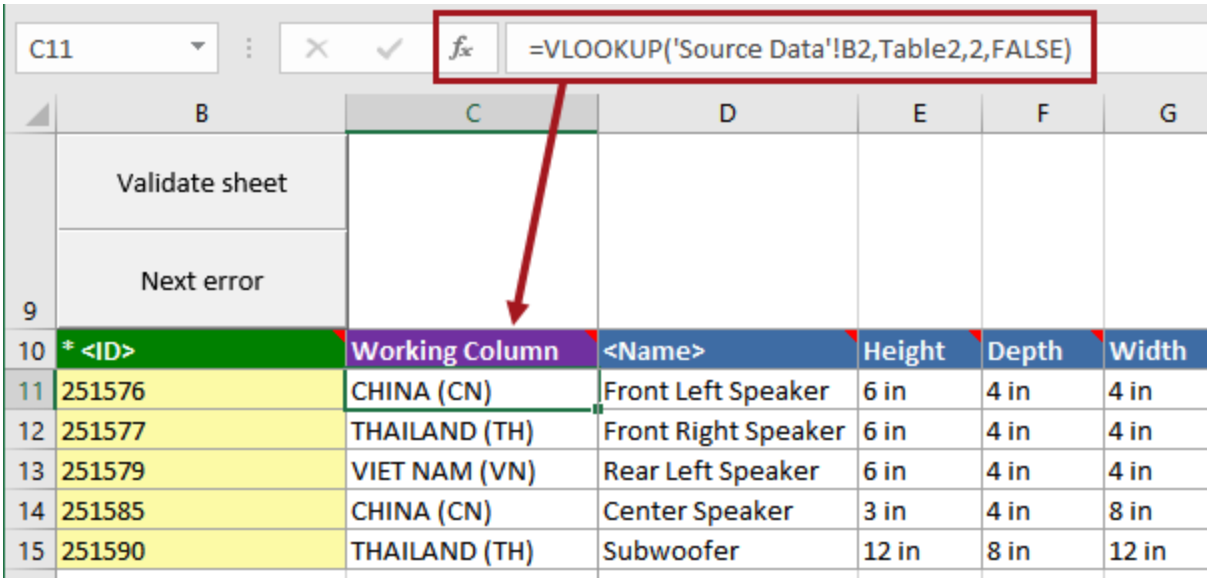
Several enhancements to existing Smartsheet functionality have been made in the areas of usability and data standards / guidance, making it easier for vendors to onboard and maintain products. These enhancements include:

- Addition of a new 'working' column that allows users to utilize formulas while working with restricted data cells
- New sample data row that provides users with guidance on how to enter and maintain data
- New ability to override the export context of Smartsheets with the currently selected context

Details

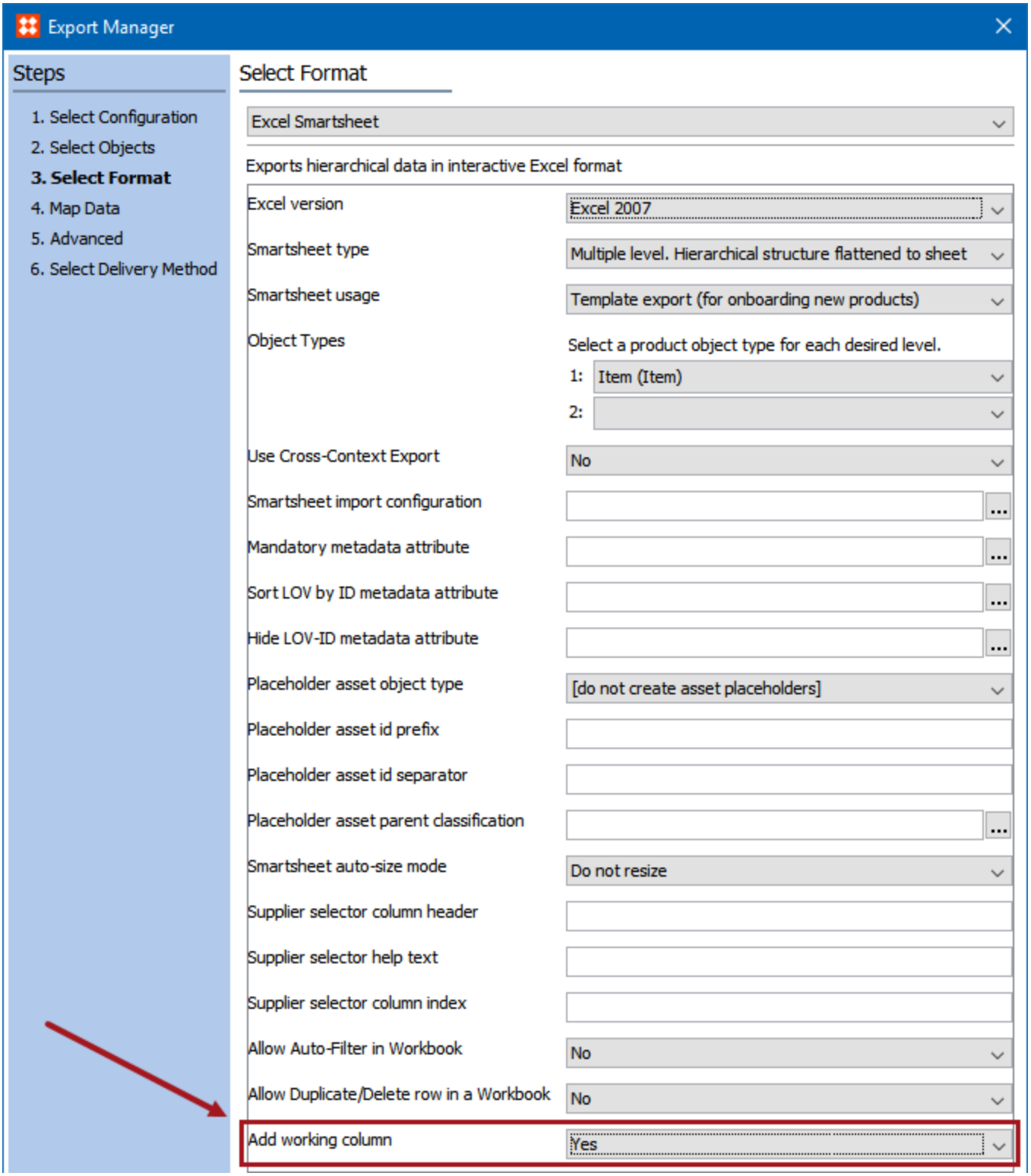
New 'working column' in Smartsheets for Excel formulas

An optional 'working column' has been introduced to Smartsheets that allows users to enter Excel formulas, which are restricted from other data cells in the Smartsheet. Data that is generated in cells within the working column can be copied and pasted into other cells using a Paste Special operation.



	B	C	D	E	F	G
9						
10	* <ID>	Working Column	<Name>	Height	Depth	Width
11	251576	CHINA (CN)	Front Left Speaker	6 in	4 in	4 in
12	251577	THAILAND (TH)	Front Right Speaker	6 in	4 in	4 in
13	251579	VIET NAM (VN)	Rear Left Speaker	6 in	4 in	4 in
14	251585	CHINA (CN)	Center Speaker	3 in	4 in	8 in
15	251590	THAILAND (TH)	Subwoofer	12 in	8 in	12 in

To add the working column to Smartsheets, a new Yes/No option named 'Add working column' has been added to the Select Format screen of the Export Manager wizard. When Yes is selected, the working column will appear in the second column of the exported Smartsheet (column C). This column will be frozen, and any values it contains will be ignored during both product validation and data imports.



For more information, see the Excel Smartsheet Format section of the Data Exchange documentation.

Addition of 'template product' row for Smartsheet data input guidance

A new 'template product' row can now be added to Smartsheet data and template exports, providing an additional level of guidance to suppliers and vendors who initiate and/or maintain product data in STEP. This new row contains sample product data, which provides users with a visual example of how to correctly fill out attributes. It is read-only, frozen, and will be ignored for product validations and imports.

The following screenshot shows how a template product row displays in a Smartsheet data export.

	B	C	D	E	F	G	H	I	J
9	Validate sheet Next error								
10	* <ID>	<Name>	Height	Depth	Width	Power Rating	Decibels	Frequency Re	Impedance
11	*Example*	*Front Left Speaker*	*6 in*	*4 in*	*4 in*	*175 W*	*65 dB*	*75 Hz*	*3 Ω*
12	267850	Front Left Speaker							
13	267851	Front Right Speaker							
14	267852	Rear Left Speaker							
15	267853	Center Speaker							
16	267856	Subwoofer							

The template product row is added to the sheet by first configuring a product in the Tree that will be used to hold the sample data. Then, this product will be referenced by the product at the top-level of the relevant product category using the new Smartsheet Template Product (SmartsheetProductTemplate) product reference type. This reference type is automatically added to STEP systems when they are upgraded to STEP 9.1.

The sample data entered onto the referenced product is the data that will display in the template product row. Since the Smartsheet Template Product reference type is inherited, the sample data will be picked up by child products within the product category.

When the Smartsheet is exported, the template product row is included if the exporter finds the Smartsheet Template Product reference. If not found, the row is not included. No configuration is required on the Smartsheet export configuration.

Note that the sample row will be unavailable if the user does not have the permissions to view the referenced products.

For more information, see the Excel Smartsheet Format section of the Data Exchange documentation.

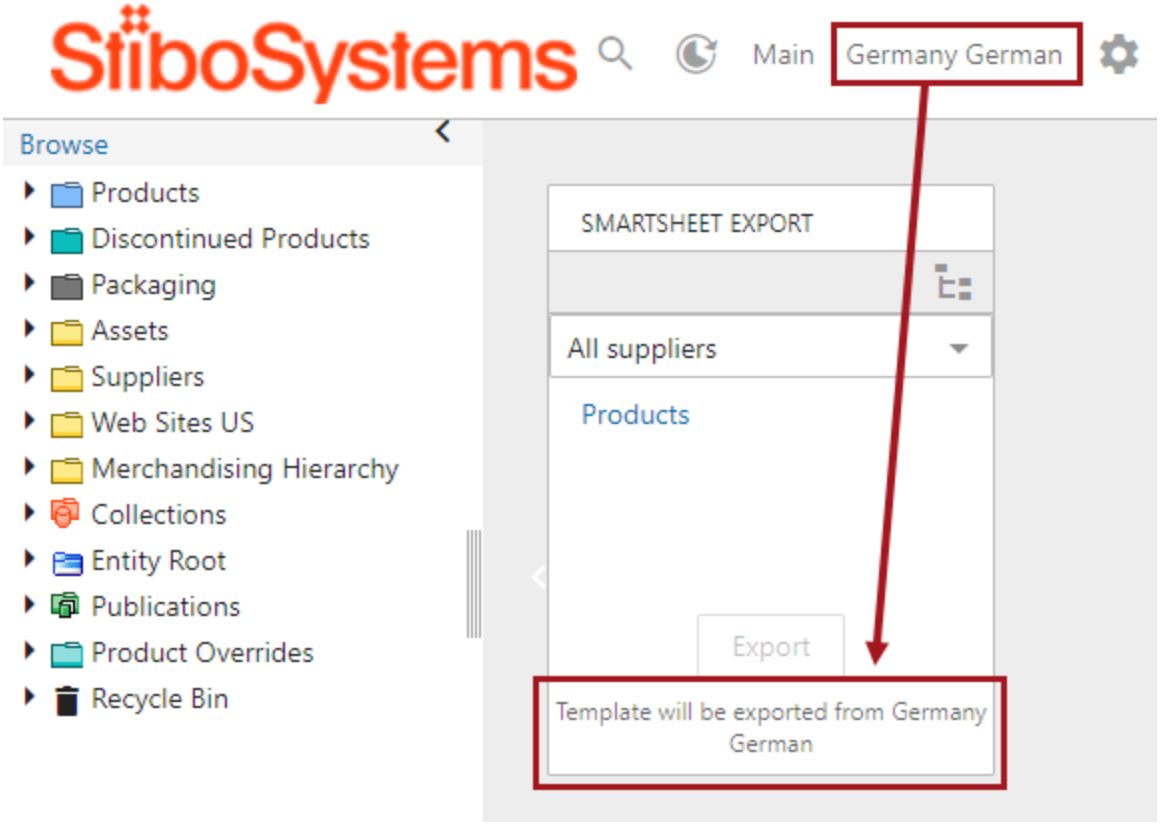
New ability to override export context in Smartsheets

Supplier users who export dimension-dependent data in Smartsheets can now export Smartsheet templates and data from the context in which they are currently working in the Web UI. This new functionality provides users with more of a 'what you see is what you get' approach to data exports, allowing Smartsheets to be exported with data as it displays on the screen.

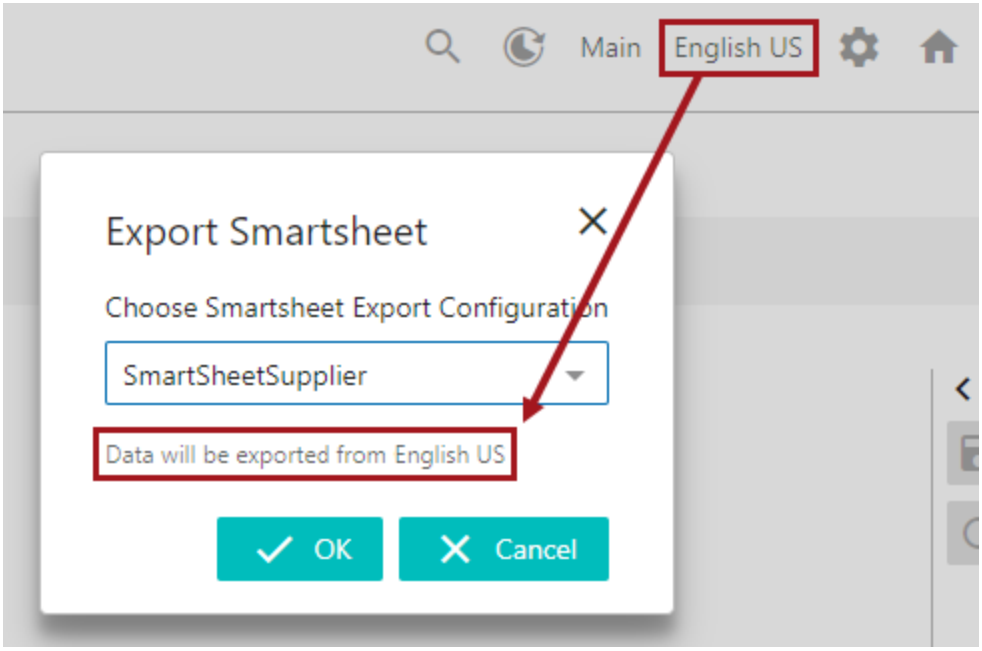
This feature also simplifies the creation and maintenance of Smartsheet export configurations, eliminating the need to maintain a separate export configuration for each context.

To enable Smartsheet exports in the current context, two Web UI components—Smartsheet Export Widget and Smartsheet Export Action—have been updated with a new 'Use Current Context' option.

When 'Use Current Context' is selected in the Smartsheet Export Widget component, any exported Smartsheet templates will display dimension-dependent headers (e.g., language-specific attribute names) in the current context. Additionally, the widget itself will display a message that the template will be exported in the current context, as pictured below.



When 'Use Current Context' is selected in the Smartsheet Export Action component, any exported Smartsheets will display dimension-dependent headers and values in the current context. The 'Export Smartsheet' dialog will also display a message that the data will be exported in the current context, as pictured below.



Note: This feature is not compatible with cross-context exports. If an export is attempted using a Smartsheet export configuration that has been configured to use a cross-context export, an error message will display, and the export will not occur.

For more information, see the Smartsheets in Web UI section of the Web User Interfaces documentation.

STEP Publisher and Tables Enhancements

Summary

Several usability enhancements and functionality improvements have been made to the STEP Publisher and Tables components, both in the STEP Workbench and within the InDesign interface.

These enhancements include:

- Addition of STEP Publisher support for entities
- Addition of STEP Publisher support for classification references
- New support for composite attributes (data containers) in tables
- New ability to choose vertical or horizontal orientation for tables

Additionally, with this release, InDesign CC 2015 is desupported. See the 'Updated InDesign version support' section for an updated list of currently supported versions.

Details

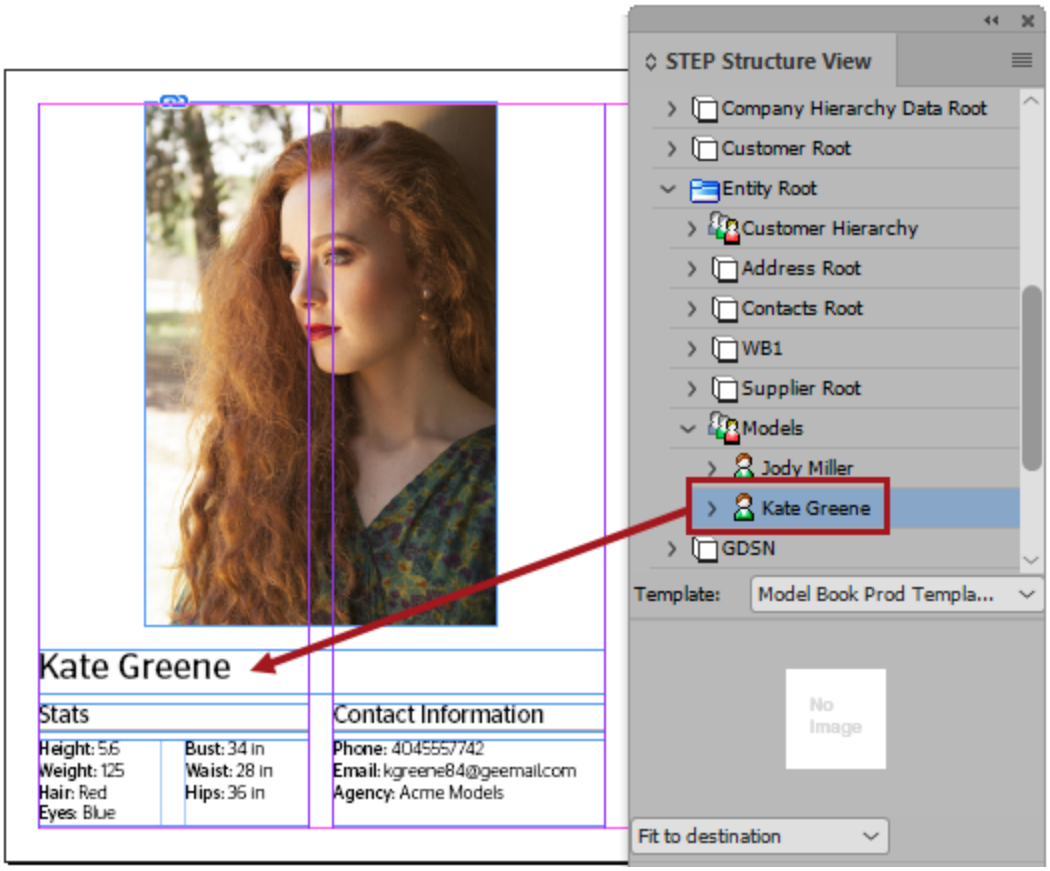
New STEP Publisher support for entities

Users who store information in STEP using entities can now output this information onto InDesign pages with STEP Publisher. This expansion of STEP Publisher's capabilities allows entities to be handled in a near-identical fashion to products, allowing entities to be:

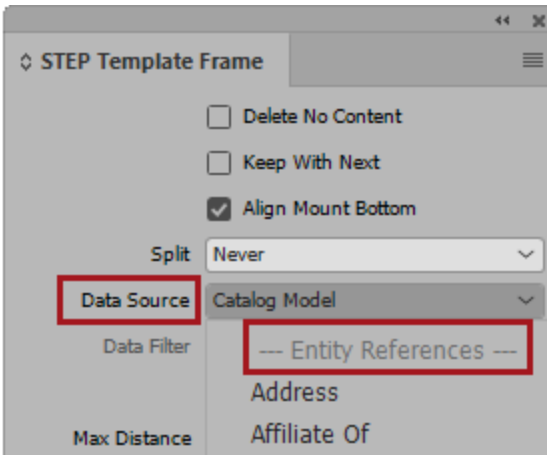
- Mounted to InDesign pages using standard 'drag and drop' functionality
- Linked into Flatplanner planned page frames
- Used in pagination rules
- Linked into publication sections
- Organized in AutoPage publications using the AutoPage Publication Planner
- Included in space usage calculations

Previously, data could only be mounted onto InDesign pages from product, classification, or asset objects. Adding print support for entities now streamlines the publication of non-product data such as people information (e.g., customer data), businesses (e.g., retail store locations, floor plans, opening hours), and 'technology / feature' objects linked to products in catalogs (e.g., quality standards, care instructions, materials).

The below example shows an entity directly mounted to an InDesign page using STEP Publisher. The entity contains information related to a fashion model (including height, weight, and hair color) and is also referenced to an image asset (a modeling headshot).



Entities that are referenced to products can also be mounted to InDesign pages, along with their associated products, by using an entity reference type. This has been accomplished with the addition of Entity References to the Data Source dropdown on the STEP Template Frame panel.



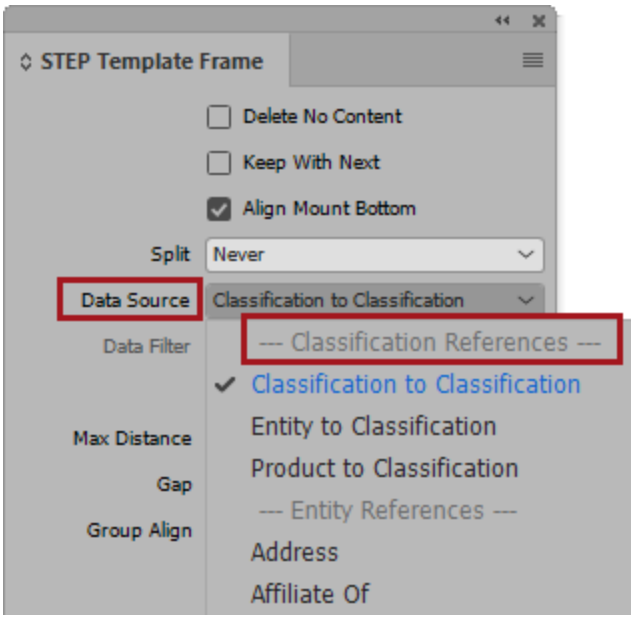
Note that entities are not currently supported in the following areas:

- Proof View
- Tables
- Flatplanner baskets
- Publication exports and imports

More information about using entities for print can be found throughout the STEP Publisher (InDesign) online help.

New STEP Publisher support for classification references

In addition to the newly added support for entity references in STEP Publisher, classification references are also now supported. This includes support for Classification to Classification, Entity to Classification, and Product to Classification references.



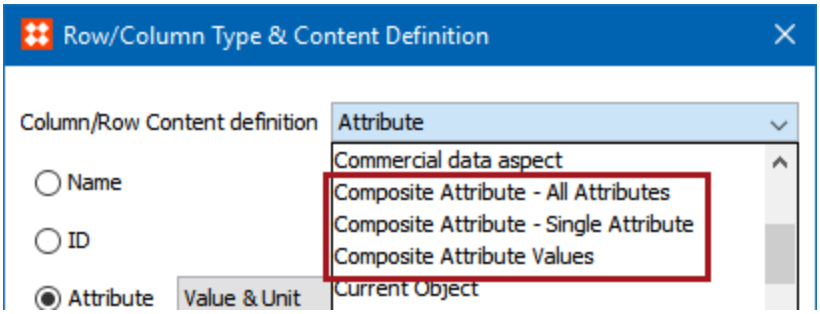
More information about mounting data from classifications can be found throughout the STEP Publisher online help.

New support for composite attributes (data containers) in tables

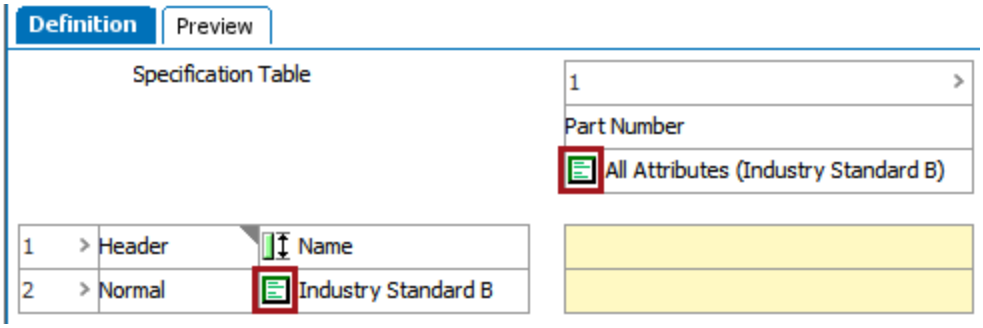
Users who work with composite attributes (data containers) on products now have the option to display composite attribute values on printed pages using STEP tables. Support for composite attributes in tables has been made available through the addition of three new content definitions for rows and columns:

- Composite Attribute - All Attributes: Dynamically creates a row / column for each attribute within the composite attribute type every time the table is rendered.
- Composite Attribute - Single Attribute: Creates a single row / column for each attribute selected from the composite attribute type.

- Composite Attribute Values: Required to enable the two other composite attribute content definitions. I.e., if 'Composite Attribute - All Attributes' is placed in a column, then 'Composite Attribute Values' must be placed in a row to return the values from the specified composite attribute type on the current object.



When a composite attribute content definition is used in a table, it is represented by the square icon pictured in the below screenshot.



Note: Since tables cannot be resolved on entities in STEP, this functionality only applies to composite attributes (data containers) on products.

For more information, see the Composite Attribute Content Definitions section of the Tables documentation.

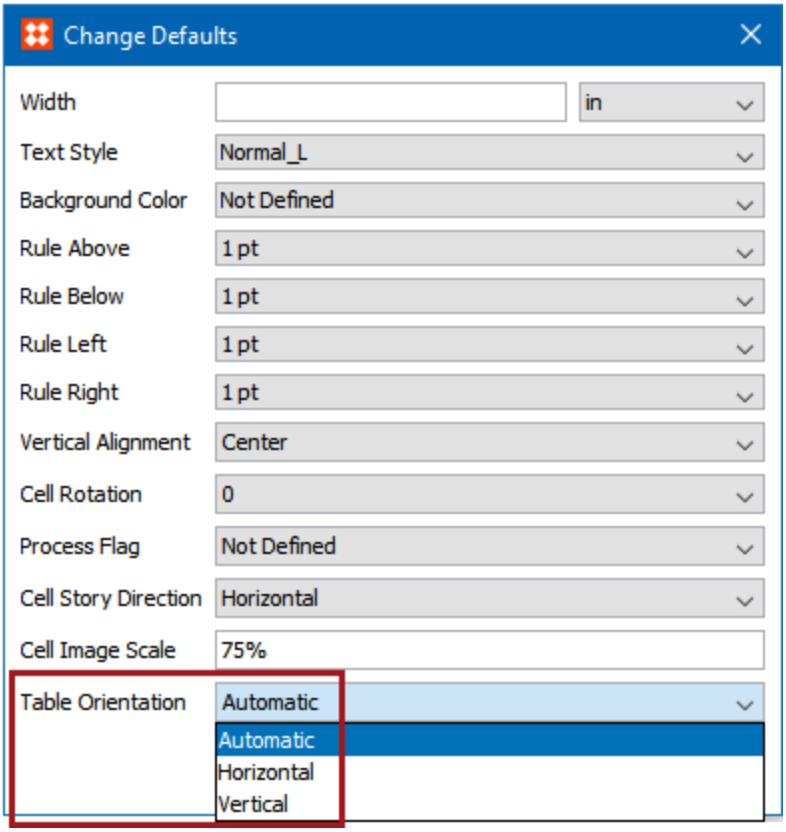
New ability to choose vertical or horizontal orientation for tables

Users who create tables with transformations have a new option in STEP to explicitly set the orientation of their tables to either horizontal or vertical, enabling more predictability in cell values after transformations are applied.

This new feature, named Table Orientation, determines how STEP should calculate the cell values based on the placement of the data providers (e.g., products) and data selectors (e.g., attributes) in the table.

Previously, STEP would always calculate the table orientation automatically. If a data provider (product) was found in a row when values were being resolved, then the table was deemed to be horizontal. Conversely, if a data provider (product) was found in a column, then the table was deemed to be vertical. This could sometimes cause issues with the resolution of cell values after merge transformations were applied. For example, if a transformation ended up leaving a cell in the table with a data *selector* (attribute) in *both* the column and row (e.g., a column attempting to pull the STEP Name of an attribute in the row), the cell would be empty.

Table Orientation appears in the Table Settings dialog that displays when Default settings are configured on table types in System Setup and when table settings are configured on tables in the Tree. This setting is also supported in STEPXML exports and imports of table types, using the `TableOrientation` tag.



The available Table Orientation options are:

- Automatic: This is the default setting, which ensures backward compatibility with tables created prior to STEP 9.1. The Automatic orientation calculation treats a table as horizontal if it encounters a data provider in a row, and vertical if it encounters a data provider in a column.
- Horizontal: When set to Horizontal, STEP calculates the cell value based on the assumption that the data provider is in the row and the data selector is in the column.
- Vertical: When set to Vertical, STEP calculates the cell value based on the assumption that the data provider is in the column and the data selector is in the row.

For more information on Table Orientation and other table settings, see the Configuring Table Settings topic in the Tables documentation.

Updated InDesign version support

As Adobe continually releases new versions of InDesign through its Creative Cloud subscription service, STEP'n'design plugins must continually be updated to support these versions.

- Support for Adobe InDesign CC 2015 is discontinued with this release.
- Support for Adobe InDesign CC 2017 and CC 2018 continues. See the Platform and Software Support for STEP 9.1 topic for version details.
- Support for Adobe InDesign CC 2019 is planned for a future release.

Improved Configuration Management Tooling

Summary

To improve STEP configuration management capabilities for customers, new tooling has been introduced to reduce the complexity and make it easier for customers to manage configurations in STEP.

Details

STEP Version Control System (VCS) integration

Via a set of new outbound integration endpoint plugins, it is possible to configure STEP to publish the system configuration as STEPXML files to a branch in Git, an external Version Control System (VCS) (see: https://git-scm.com). Using new inbound integration endpoint plugins, STEPXML files from a Git branch can be combined, enriched with processing instructions, and imported on a target system.

This functionality allows for easy comparison of configurations across systems in a Development, Test, Acceptance, and Production (DTAP) environment and is meant to aid customers who need to transfer configuration changes between different systems and/or ensure systems are in sync configuration-wise.

Below is a list of the different plugins for VCS integrations:

- Outbound Integration Endpoint 'STEPXML Splitter' Post-processor Plugin
- Outbound Integration Endpoint 'Git Delivery' Plugin
- Inbound Integration Endpoint 'STEPXML Joiner' Pre-processor Plugin
- Inbound Integration Endpoint 'Invoke OIEP' Post-processor Plugin

The functionality described above is only limited per standard STEP functionality, meaning that not all configurations can be exported / expressed in STEPXML, and not all changes can be applied via the STEP Importer processing engine. The functionality works for settings stored in the STEP database rather than files in the application server file system.

Refer to the Version Control System Integration section of online help for information regarding the known configurations / settings that cannot be exported / expressed in STEPXML as well as known import limitations.

Updated and enhanced STEPXML import replacement options

With 9.1, a set of new replacement options has been added, and new, more powerful versions of the existing replacement options have been introduced. See the Data Exchange Enhancements and Changes release note for details.

STEPXML import / export enhancements

A number of enhancements have been made to the STEPXML format and the export and import of STEPXML. See the Data Exchange Enhancements and Changes release note for details.

Invalid data allowed in past / historical revisions

With STEP 9.1, a change has been made that means that for certain cases it is possible to have data in past / historical revisions that is not valid according to the current configuration. The invalid data now allowed in past revisions is:

- Values for attributes that are no longer valid for a given object type
- Values with units that are no longer valid for a given attribute
- References and classification product links from objects of object types that are no longer valid sources
- References and classification product links to objects of object types that are no longer valid targets

This change has been made to allow for configurations to be changed without having to modify, and thereby corrupting, the history of affected data objects.

With this change, additional checks have been added for the functionality that lets users revert to an old revision ensuring that it is not possible to revert to a revision with invalid data.

For more information about revisions, see the Revisions section of the System Setup / Super User Guide documentation.

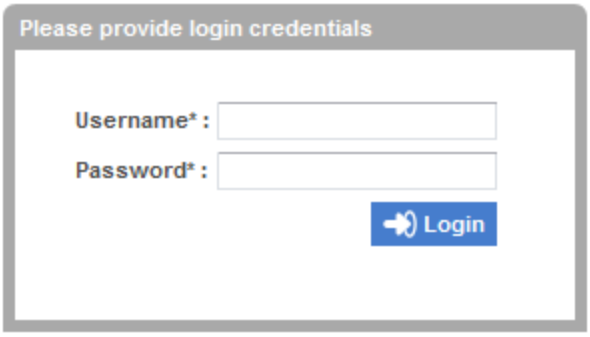
New Authentication Option for Online Help

Summary

Functionality has been added to implement user authentication to the online help documentation. Once enabled via a new property that can be added to the sharedconfig.properties file, users will be prompted to enter their STEP login information when accessing online help. Having the documentation password-protected keeps it easily accessible while ensuring that only STEP users have access to the information.

Details

The new property OnlineHelp.Documentation.Authentication.Enabled is disabled by default. By enabling it (=true) and adding it to the properties file, users who access STEP online help (including the separate SpirePLM Documentation, if applicable to your system) will be presented with a login screen. Users enter their STEP username and password to gain access.



When users are done with online help, they should click the Logout icon / button located on the far right of the online help toolbar. Upon logging out, users are taken back to the documentation login screen.

If authentication is disabled, the Logout button will still display. In this scenario, clicking on the button will take users to the STEP Online Help welcome page.

The login / logout process enabled with this new property, brings STEP Documentation into alignment with other default password-protected areas, including About STEP, STEP API Documentation, and STEP System Administration. Additionally, it should be noted that the authentication option will not work with any Single Sign On (SSO) solutions other than LDAP.

Functionality within online help remains the same, and users should refer to the Welcome to the STEP Online Help topic for useful information regarding searching within the online help. Also, refer to the Additional STEP Enhancements and Changes release note for information about updates within STEP Online Help.

Additional STEP Enhancements and Changes

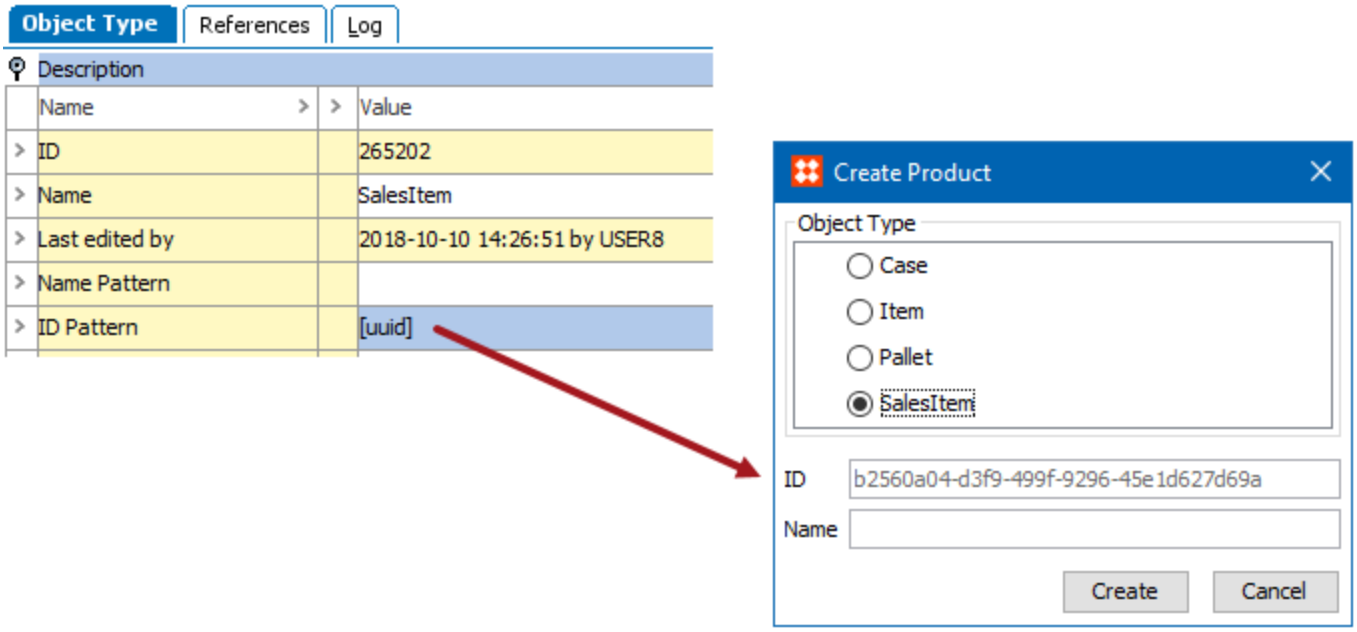
STEP has received a number of other enhancements in various areas of the software as part of the 9.1 release. These are described below.

Composite attribute improvements

Data containers are used to hold and display composite attribute information on products and entities in Web UI and workbench. With this release, a total of 1000 data container records can exist on a single object, which allows storing ten times more composite data than before. This is especially helpful for Dun & Bradstreet integrations and other scenarios where large numbers of data containers are required. Previously, attempting to add more than 100 data containers through the user interface or via import caused an error. Additionally, performance enhancements have been made for the Data Container Table View Editor component in Web UI. Information regarding updates to Web UI Data Container components can be found in the Web UI Enhancements release note. For general information on composite attributes, see the Data Containers topic in the System Setup / Super User Guide documentation.

UUID generator for IDs

All users can now autogenerate IDs using a universally unique identifier (UUID) generator as it is now part of the core STEP functionality. Customers can add the tag [uuid] to the ID-pattern when they define an object type, and then all objects created with that object type will automatically get an UUID as the object ID. It should be noted that a UUID takes up 36 characters out of the maximum 40 characters that a STEP ID can contain, so it either needs to be used alone or with a four character prefix and/or suffix. Anyone interested in using this functionality should search the internet for more information about UUIDs.



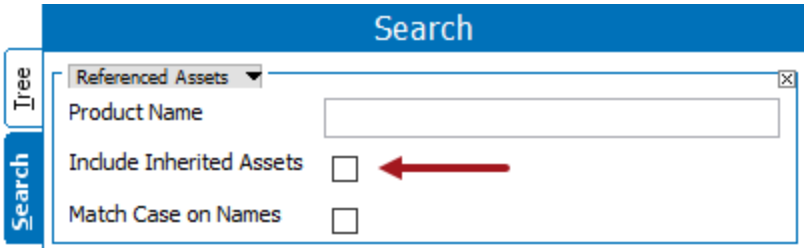
For more information about setting object IDs, see the Autogenerate Using Name Pattern and ID Pattern topic in the Object Types and Structures section of the System Setup / Super User Guide documentation.

Optimistic savepoint handling

Optimistic savepoint handling for event processors is now enabled by default, saving valuable execution time during event processing. For more information, see the Initial Setup for Event Processors topic in the Event Processors section of the STEP Online Help.

Referenced Assets search dialog update

In the workbench Referenced Assets search dialog, the parameter wording for inheritance has been changed to 'Include Inherited Assets.' Previously, it read as 'Include Inherited Values,' which did not clearly describe the functionality. For more information on the Referenced Assets search, see the Search: Referenced Assets topic in the Searches section of the documentation.



New order of fired events for simple values

Business rules configured as event filters or event generators for Outbound Integration Endpoints (OIEPs) and event processors are executed synchronously when externally maintained attribute values change. Until now, such business rules have only had access to simple values as it looked prior to the change. Now, by default, the system will instead access the new value. This updated functionality also matches what currently occurs with LOV changes.

In-Memory optimizations

More Web UI and workbench search features, more Query API features, and a large number of internal database queries have been optimized for In-Memory. Specific examples include:

- The Query API: name, value, below, object type (and ID), references, and data containers.
- The Lookup LOV value (as used by the importer)
- Additional drill-down searches
- Minor accelerations in a larger number of places (e.g., SQL conversion).

For more In-Memory information, see the In-Memory Database Component for STEP in the Resource Materials section, available in STEP online help.

New warning for user deletion

A warning has been added to notify a user when they are about to delete a user that has Scheduled BGPs or Integration Endpoints running. If a user deleted from the system and there are still Scheduled BGPs or Integration Endpoints, the step.0.log will continue to log exceptions, and the log information will include the deleted user ID.

STEP Online Help updates

Enhancement of the STEP Online Help documentation is continuous with updates released with each feature release and with most maintenance patches. When these updates are significant and/or include high-level content reorganizations, they are communicated within the patch notes.

With the 9.1 release, the following major updates have occurred:

- For any version of STEP that is no longer supported, the release notes have been removed from the online help. This information is still accessible via the customer portal (JIRA) or by contacting your Stibo Systems representative.
- A 'STEP System Administration' section has been added. The information in this section serves as a starting point for anyone working with administration of a complete STEP system and infrastructure and is intended to provide recommended practice guidelines. More information will be added to this section in the future.

Platform and Software Support Changes

This section lists current and future planned changes to platform and software support. The complete list of platform and software support is available in the Platform and Software Support for STEP 9.1 section of the System Release and Patch Notes documentation.

Baseline Functionality / Patching Updates

Changes have been made that will impact baseline functionality. Users should be aware of the following changes as both require user action. **These constitute a change in existing functionality.**

Changes to Java and workbench launching

Stibo Systems is replacing the Oracle Java with the open-sourced Java version by AdoptOpenJDK. In addition to this Java change, there is also a change to the way the STEP Workbench is launched from the Start page. More information can be found in the STEP Java Changes and Launch Updates release note.

Componentized Industry Standards

Some STEP functionality will be removed as baseline functionality and become accessible via a separate component installation. Because fewer components are installed by default, component-based architecture allows for easier and faster software development and delivery. With this change, customers have the flexibility to build and manage a STEP system that meets their business needs.

Before upgrading, it is important to plan ahead and verify if the following independent components are being used:

- ETIM Importer
- eCl@ss Importer*
- BMEcat2005 Exporter

If used, upgrading to STEP 9.1 must include each individual independent component recipe. Otherwise, the functionality will no longer be available after upgrade.

More information can be found in the individual release notes for these components within the Release Notes for STEP 9.1.

**See the Future Updates and End of Life Notifications section below for important information.*

Additional Current Updates

The changes in platform and software support from STEP 9.0 to 9.1 are listed below:

- Adobe InDesign CC 2015 (Client and Server) is no longer supported.
- macOS Mojave is supported for Mac Clients.
- Stibo Systems no longer recommends Apache for the reverse proxy. Instead, STEP 9.1 includes a frontend solution based on HAProxy, which provides both load balancing between app servers and frontend failover out of the box. The Platform and Software Support for STEP 9.1 reflects this updated information.

Future Updates and End of Life Notifications

The changes in platform and software support expected in the future include the following:

- The option to import eCl@ss Basic CSV files will be removed with the next feature release (9.2). Support remains for the eCl@ss Basic XML import. This information is also noted in the Data Exchange Enhancements and Changes release note.
- Oracle Enterprise Linux / Red Hat Enterprise Linux 6 (all versions) will be desupported with the 9.2 release.
- **Support for STEP 8.0 is ending, effective 1-Apr-2019.**
- **Support for STEP 8.1 is ending, effective 1-Nov-2019.**

  The purpose of the support notifications above is to officially communicate desupport / end of life for these systems and request that customers update as soon as possible to the latest release of STEP. Please contact your Stibo Systems account manager or partner manager, or the support department, to receive help and guidance on how to update to a supported release.

  Software errors reported on version 8.0 may be rejected after 1-Apr-2019, and errors reported on version 8.1 may be rejected after 1-Nov-2019. Application support issues in progress for the STEP releases being desupported will be closed on the desupport date. It is not possible to extend the support services for desupported versions.

  If you have any questions or would like to be contacted to receive help on updating the STEP application, please contact: STEP-updates@stibosystems.com.

Miscellaneous Bugfixes

A number of bugfixes have been applied as part of the 9.1 release.

BUG FIXES

ISSUE-307778 - Correction for Deduplication List not updating as expected

Now, the Deduplication List screen in Web UI is being reloaded correctly after a user confirms duplicates by performing a Confirm Duplicates From Grid action. Previously, the list was not being updated after the action was performed.

ISSUE-309333 - Global Header Search updated with new parameter and updated descriptions

A new design mode parameter (Object Types For Typeahead) has been introduced within the Global Header Search component in Web UI. The parameter is located under the new, initially collapsed, parameter group called ‘Typeahead options’. Additional updates include a changed description of the Search Configurations parameter of Global Header Search component to: ‘Configure sets of search plugins to create specified searches to narrow down the search query and get a more accurate search result. These plugins are not applicable to the typeahead search result.” And, the Global Header Search plugins description was extended with “This component type is not applicable to the prefix (typeahead) search." information.

ISSUE-313215 - Fixed issue with Task List screen reloading

Fixed a problem in Web UI when a Task List screen was not reloading after some items from a selected list were submitted after performing 'Submit From Grid Action.' Some would be submitted successfully and some would be rejected (for example, by a business condition), but the Task List would not update. This has been corrected.

ISSUE-317772 - Corrected the ability to move or delete IndexWordRoot

It is no longer possible to move the IndexWordRoot in workbench using drag and drop, and the IndexWordRoot can no longer be deleted in workbench. Moving or deleting it caused the system to malfunction and present errors. This fix is applicable to step-9.0-mp5 and newer installations.

ISSUE-318275 - Web UI window height update

A simple styling change was made that makes the window height automatically adjustable. In this case, it was the window for LOV value selection in Web UI. This has also been hotfixed to step-8.3-mp3.

ISSUE-319205 - Fix for tables in a translation XML file

Customer expectation is that no table should be included in the translation XML file. The issue was about including tables in XML output files after translation. Previously, there was a workaround to avoid it. The current fix resolves this problem, and now tables are not included in the translation XML file. A hotfix for step-8.3-mp2 and mp3 is available.

ISSUE-319506 - Empty Object Type Smartsheet column fix

Fixed a problem occurring when an empty Object Type column was shown for Smartsheet Maintenance sheets, if the object type was not mapped. Now this column will not be automatically included in Smartsheet data export, but only to the template export for Multiple Object Type Smartsheets.

ISSUE-320396 - Fixed a Web UI Edit Unique Key Action Properties bug

Fixed a bug in Web UI for the Edit Unique Key Action Properties. The 'Button Label' and 'Button Type' parameters now exist and are editable.

ISSUE-320979 - Amended Add Reference popup behavior

Now, the Add Reference popup on a Web UI Multi Reference screen will not be closed when a user presses the Escape key. Instead, the search string will be cleared out and the suggestions list will be reset.

ISSUE-321205 - OutOfMemory error fix for large AribaCIF 3.0 exports

Export in AribaCIF 3.0 format could, for large exports, result in OutOfMemory errors due to memory consumption corresponding to export size. The AribaCIF conversion has been rewritten to use streaming in order to make memory usage more independent on export size. Also, an error with escaping of characters that occurred when a value contains both comma and quote characters, was found and fixed.

ISSUE-321218 - SFTP delivery retries added for Signature Validation Exceptions

A recent Java update caused the SFTP delivery to sometimes fail with a signature validation exception. In order to avoid the integration endpoints failing, a retry mechanism has been added so that STEP now retries the SFTP delivery up to 10 times when signature validation exceptions occur. Also, a hotfix for step-9.0-mp5 is available for this solution.

ISSUE-321527 - Oracle hint for SoftSingleFastValue execution

Improved a hint to Oracle about how to execute "SoftSingleFastValue". This query is used when filtering values in Web UI tables. Sometimes Oracle would choose an execution plan for this query, which would cause performance problems. This hint should make it less likely that Oracle executes the query in a way that causes performance problems.

ISSUE-321686 - Updated diagnostic logging for profiling data

Improved logging for the collection diagnostics information.

ISSUE-323109 - Fixed XML parsing error

An XML parsing error, when using the SOAP request getSimilarObjects on a STEP server, would prevent child entities from being exported. An error was generated instead. This works as expected now. A hotfix for step-9.0-mp3 is also available.

ISSUE-324321 - Integration endpoint fix for Change Package installation

When trying to install a Change Package that contains an integration endpoint, the STEP system could stop the integration endpoint from running, and detach it from the background process. When the integration endpoint was re-enabled, it created a duplicate background process. This has been corrected. The installation process of the Change Package will be stopped if an integration endpoint is running. A warning will appear saying that the user must disable the running integration endpoints to be able to perform the installation process.

ISSUE-324371 - Fixed supplier exporting of invalid records

Fixed a problem that occurred when a vendor user was able to export supplier nodes from another supplier's hierarchy, by adding to the nodes, selected for export supplier root classification. Please note that checking supplier visibility during export may harm performance, depending on the number of nodes being selected and the number of their classification links. Hotfixes for step-8.3-mp3 and step-9.0-mp5 are also available for this solution.

ISSUE-324539 - Fixed NPE when opening the Advanced Merge Screen

Users faced a NullPointerException (NPE) when they opened the Advanced Merge Screen in Web UI, if they were missing the privileges to see Source System references. This is now fixed, and a hotfix is also available for step-9.0-mp3.

ISSUE-324724 - Global Header Search updated with new parameter and updated descriptions

A new design mode parameter (Object Types For Typeahead) has been introduced within the Global Header Search component in Web UI. The parameter is located under the new, initially collapsed, parameter group called ‘Typeahead options’. Additional updates include a changed description of the Search Configurations parameter of Global Header Search component to: ‘Configure sets of search plugins to create specified searches to narrow down the search query and get a more accurate search result. These plugins are not applicable to the typeahead search result.” And, the Global Header Search plugins description was extended with “This component type is not applicable to the prefix (typeahead) search." information.

ISSUE-325050 - Fixed Clerical Review Task List screen load exception

Fixed ClassCastException being shown to user during the loading of the Clerical Review Task List screen in Web UI, when Clerical Review items were not Merged Golden Records.This works as expected now. Hotfixes are also available for step-8.2-mp3 and step-8.3-mp3.

ISSUE-325134 - Fixed missing dependency element for LocalBusinessRule

Fixed a problem with STEP XML The XSD was missing a dependency element for LocalBusinessRule.

ISSUE-325955 - Fixed a problem with closing an LOV dropdown

Fixed a problem that occurred in Web UI on a Multi Edit Node List when editing a hard LOV value within a Table Header Attribute Value. The LOV dropdown was not closing even after the user clicked outside of the table cell.

ISSUE-326048 - Error fix for importing a translation-XML

When importing translated STEPXML from offline translations, the privilege system sometime gave incorrect feedback for users with context-dependent privileges set up. The normal user interfaces (Web UI and workbench), normal import, etc., are not affected by this.

ISSUE-326794 - ServerSide delivery exception fix with export BGP failure

Now, an export BGP will fail if ServerSide delivery causes an exception. It was a problem before, when in the customer's case the background process had a "Succeeded" status, which was incorrect.

ISSUE-327088 - Fix for JavaScript error upon approval

Fixed a business condition with an "Evaluate JavaScript" operation that failed with a class cast exception when Business Rule Tracing was turned on in System Administration.

ISSUE-327432 - JMS delivery fix for empty file exports

Fixed problem where an empty file was being sent from an OIEP via JMS. A step-8.3-mp3 hotfix is also available for this solution.

ISSUE-327555 - NPE fix for Excel Smartsheets login

Fixed client-side NullPointerException (NPE) on Excel Smartsheets when login to the server failed. Now, the actual error displays. There is a step-9.0-mp4 hotfix for this solution.

ISSUE-327977 - Reference search / Recycle Bin fix

When searching for references in the workbench, the search result list would incorrectly include reference sources that where in the Recycle Bin. This is now fixed.

ISSUE-328204 - Bugfix for value search with units and wildcards

In the STEP 9.0 release, a bug was introduced and occurred when searching for attribute values with units and using wildcards in search string. This has now been fixed so that if searching for a value ending with wildcard character "*" we now also ignore unit comparison (unless a unit is explicitly specified).

ISSUE-328218 - Fixed an issue with importing converted Excel files

Fixed a problem when an exported Excel workbook, exported with usage of the Streaming Window converter property, was not importable from STEP Workbench. A hotfix for step-8.2-mp3 and step-8.3-mp3 is also available.

ISSUE-328880 - Fixed a Task List exception

Fixed a problem occurring in Web UI. The Assign to Me table header on a Task List caused a client-side exception when a user checked the assign check box and the number of shown items on a Task List was less than the overall number of items in the state shown (by default, only 10000 items are shown). A step-9.0-mp2 / 8.1-mp5 hotfix is also available for this solution.

ISSUE-328883 - Fix for action buttons enabled in conjunction with bad values

Introduced the possibility to disable the following behavior: the Approve action on Web UI Node Editor is enabled if an attribute with a hard LOV has a previously approved value, which is filtered incorrectly by the LOV filter. To disable this behavior and show the value as incorrect on a Node Editor and disable the Approve and Save buttons in this scenario, please contact Stibo Systems Support to implement this solution and any hotfixes.

ISSUE-328886 - Corrected rendering issue

Resolved rendering issue during asset download, when special characters were not correctly resolved. This lead to incorrect behavior.

ISSUE-328926 - Corrected In-Memory exporter error

The In-Memory exporter had an error when combining tag conversion of values with embedding of products (or flattening). This resulted in the tag conversion accidentally being omitted. This has now been fixed. A hotfix for step-9.0-mp4 and step-9.0-mp5 is also available.

ISSUE-328936 - Bulk Update List Action viewing privilege update

Now, the Bulk Update List Action on a Web UI's Node List will not be visible to users who do not have permission to see (configured in design mode) root classification with Bulk Update configurations. A step-8.3-mp3 hotfix is also available for this solution.

ISSUE-329308 - In-Memory Consistency Reports update

When running In-Memory Consistency Reports (online and offline), they will no longer report data inconsistencies when In-Memory is installed but not enabled.

ISSUE-329676 - Corrected a problem with the Allow Rule in Automatic Classification in workbench

A problem was seen when doing a bulk update with 'Automatic Classification.' If a product did not match an 'Allow Rule', then the reference that was set up in the rule was removed from the product. To correct this, a configuration / property has been made (AutoClassification.SkipIfRulesDoNotAllow), which determines if the references should be skipped or not when the product does not match any 'Allow Rule.' Hotfix solutions are also available for step-8.2-mp3 and step-9.0-mp5.

ISSUE-329679 - Fixed gateway endpoint failure issue

An "Invalid content type" error was detected during testing of a REST API call that an MDM system would make to the GDSN Receiver STEP system. The issue was related to a gateway endpoint and appeared when the Content Type was not selected (empty by default). This issue has been fixed. There is also a hotfix available for step-9.0-mp5.

ISSUE-329866 - Global Header Search updated with new parameter and updated descriptions

A new design mode parameter (Object Types For Typeahead) has been introduced within the Global Header Search component in Web UI. The parameter is located under the new, initially collapsed, parameter group called ‘Typeahead options’. Additional updates include a changed description of the Search Configurations parameter of Global Header Search component to: ‘Configure sets of search plugins to create specified searches to narrow down the search query and get a more accurate search result. These plugins are not applicable to the typeahead search result.” And, the Global Header Search plugins description was extended with “This component type is not applicable to the prefix (typeahead) search." information.

ISSUE-330011 - Fixed Table Header Reference Metadata exception

Fixed a problem occurring when the Table Header Reference Metadata caused a class cast exception if it had been set up to show multi-valued attributes for Classification-to-Product links on Web UI's Multi Reference screen. This fix is applicable to step-9.0-mp5 and newer versions.

ISSUE-330168 - Corrected a warning message when a duplicate key is detected

When creating and initiating a new item into a workflow from Web UI, it is possible to create a business action that is initially run in the workflow. In the action, values can be assigned to the item from which a unique key is potentially generated. If a duplicate key is detected, the creation of the item should fail as a result. Previously, Web UI would show a generic 'Internal error' alert in that case. This error message has been updated to better inform the user what went wrong.

ISSUE-330270 - GWT compile failure fix for localization limit

Patching a STEP server with multiple recipes containing Web UI components could result in a compile error in some cases. There was a limitation in the Web UI framework in how many localizable texts could exist in the same installation. This restriction has been removed. There is also a step-9.0-mp4 hotfix available for this solution.

ISSUE-330480 - Fixed button localization on Select Assignee popup

Fixed label localization for the "OK" and "Cancel" buttons on Select Assignee popup, which is displayed when a user clicks on the Reassign action button on Web UI's Advanced Merge screen.

ISSUE-330640 - Workbench issue for cut / paste permissions

If a user group was selected in the System Setup tab and a right-click was made, then it was possible to cut (and paste) even though the user did not have permission to the action “Maintain users and groups”. The problem did not occur if more user groups were selected. The solution: the user can cut (and paste) if they have the “Maintain users and groups” privilege. A step-9.0-mp5 hotfix is also available.

ISSUE-330753 - Fixed problem with MS Office files being archived during SFTP delivery

Fixed a problem occurring when MS Office files, such as .doc, .xls, .ppt, and others, were always archived during SFTP delivery. This happened even if a user chose to not archive them on the Select Delivery Method step in STEP Workbench Export Manager. A hotfix is also available for step-9.0-mp5.

ISSUE-330778 - Display fix for LOV values with IDs within Search suggestions

Fixed a problem occurring when LOV values with IDs were cut off and replaced partially with asterisks if their length was more then 50 characters in the STEP Workbench Search panel's suggestions.

ISSUE-330793 - In-Memory search fix

In-Memory: a specific search using the 'referenced by' search criteria multiple times in combination with many attributes on a system could cause an out-of-memory error. Fixed to consume less memory, ensuring this will run without problems. A hotfix is available for previous versions (inmemory-7.0-27 and inmemory-7.0.34).

ISSUE-330887 - Fixed a problem in Web UI on the Advanced Search screen

Fixed a problem occurring when a search string was not cleared out when a user selected a suggested LOV value from the list on the Attribute Search Descriptor's attribute value field on the Advanced Search screen. A hotfix for step-9.0-mp5 is also available.

ISSUE-330898 - Readonly / non-readonly fix for multi-object type Smartsheets

Fixed problem with multi-object type Smartsheets. It was related to the case, when multiple objects with different object type were exported in Smartsheet format, and these objects had same valid set of attributes. However, some of those attributes were readonly for a particular object type and editable for others. When the user performed online validation or reopened the workbook, readonly styling and cell protection disappeared. It happened only if one Excel Smartsheet column contained both readonly and non-readonly cells. This problem has been fixed. Also, a hotfix for step-9.0-mp2 / mp5 is available

ISSUE-330944 - Fixed an error occurring during new item creation in Web UI

Previously, trying to create a new item in Web UI without an ID or an object type that supported an auto ID would result in an 'Internal server error' alert. This message has now been updated to show a more informative error message to the user.

ISSUE-331165 - Asset supplier classifications expansion fix

Fixed a problem occurring when, at times, the asset supplier classifications were not expandable in a browser result in the Asset Reference picker on a Smartsheet. This was for the multi-supplier user and when the classification contained both valid and invalid assets.

ISSUE-331426 - Suppress Rows/Columns transformation fix

Fixed the transformation Suppress Rows/Columns for single values in workbench on the Table tab for Products. Previously, it was not working on single values.

ISSUE-331741 - Fixed Oracle error occurring during refresh

An Oracle error was occurring when a node collection was being refreshed by two threads concurrently. This is now fixed, and a hotfix for step-9.0-mp5 is also available.

ISSUE-331873 - Reference search fix

In-Memory fix for a bug occurring in a reference search where references were not filtered based on context or workspace. This lack of filtering caused the search to return too many results.

ISSUE-332280 - Time zone fix for logging memory usage

Fixed a problem occurring when a negative time zone in the gc.log on an application server prevented the Administration Portal from gathering information about memory usage.

ISSUE-332328 - Asset approval fix

Asset approval: if the user encountered an Oracle error during approval, the approval could sometimes succeed anyway but lose the asset content. This is now fixed so that this can no longer occur.

ISSUE-332480 - Improved error messaging when throwing a message object

Improved the error message shown when throwing a message object from a business action to include the message in the Web UI. Prior to this, when using the throw message object from a business action in a referenced business action, it would only show the generic business action failed message.

ISSUE-332538 - AribaCIF 3.0 exporting output fix

Exporting with AribaCIF 3.0 resulted in output with minor invalid syntactic problems. The field name "Unit of Measure" had the wrong case of letter, and there was a few spaces placed in invalid places. This has been

fixed.

ISSUE-332592 - Smartsheet Preformatted Template Row format property fix

An issue was fixed for when the Preformatted Template Row format property was incorrectly respected during import of Smartsheets. Only the first product sheet was imported correctly, while remaining sheets had only one row imported. This works as expected now.

PERFORMANCE ENHANCEMENTS

ISSUE-326708 - Fix made to the Streaming Mapper performance

A general performance fix to the Streaming Mapper, a component used when transforming the standard STEPXML format to other formats such as Excel or BMEcat, was made. A hotfix is also available for step-8.3-mp3.