RELEASE NOTES

STEP Trailblazer 8.0

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Release Notes for STEP Trailblazer 8.0

Release Date: April 2016

Document Overview

Audience

This document is intended for use by active STEP users and serves to describe the new and enhanced features provided by the release. It does not serve as a replacement for the STEP online help, which includes additional information on previously existing 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 licenses and may not be available on a particular system. Questions regarding licensing for any customer should be directed to the Stibo Systems account manager.

Release Overview

Stibo Systems has enhanced the STEP platform in a number of areas, for example:

- Increased security of the STEP system
- Additions to the STEP APIs, including improved documentation
- New user-friendly multi-object onboarding tool in Web UI
- New data visualization interface in Web UI
- Improved handling of shared data in Web UI
- Increased support for deduplication tasks in Web UI
- Updated the STEP GDSN solution to support the GS1 MR3 format (BMS + 1WS)
- New option to create and maintain attributes and LOVs in Web UI
- New features and improved user experience across the STEP Print Publishing offerings
- Support for conditionally mandatory attributes in workflow states
- Ability to control inclusion and exclusion of automatically added objects in Change Packages
- Renaming of Portal to Web UI throughout the STEP interfaces

This document describes the above, as well as a long list of other improvements, in more detail.

Security Enhancements

Summary

Several updates have been made in Trailblazer 8.0, across multiple functional areas, to allow for increased security of STEP systems and data.

Details

Enhanced logging and authentication

The STEP log (available on the application server and the Admin Portal) has been updated to allow more granular reporting for authentication events.

System events and security events can now be differentiated in the STEP log, with events related to authentication being defined as security events. Security events are logged on two levels:

- Security Success defines a successful authentication event and is logged on log level Finest
- Security Failure defines a failed authentication event and is logged on log level Severe

In addition, STEP can now be configured to log user IP addresses along with the identification information that is logged by default. This is enabled by setting the Security.Log.IpRoute property in the sharedconfig.properties file on the application server to 'true'.

An example of each of the new log options is shown below:

```
2016/02/03-12:14:29 [UserID] [Class Function] Security Success: User with id [UserID]
authenticated successfully

2016/02/03-12:14:30 [UserID] [Class Function] Security Failure: Authentication failed for
user with id [UserID]

2016/02/03-12:14:29 [UserID] [IP Route] [Class Function] Security Success: User with id
[UserID] authenticated successfully
```

Additional information on STEP logging and authentication functionality can be found in the SDK documentation.

Increased security in Smartsheets

A number of enhancements have been made to increase security of Smartsheets.

- Users attempting to access the implementation of the Visual Basic macros in a Smartsheet will be prompted for a password for the project, rendering the macros inaccessible to users who do not have proper credentials. Note that knowledge of the password will be limited to the Stibo Systems R&D group.
- Smartsheet macros have been signed via digital certificate from Stibo Systems, allowing for easy verification of their integrity. End users will not experience any functional differences related to this change and previously existing unsigned Smartsheets will continue to function as usual.
- Additional updates have been completed that provide added security to Smartsheets with little or no impact to Smartsheet end users.

For more information on Smartsheets functionality, see the Smartsheets documentation.

Increased STEP'n'design security

The STEP'n'design solution has been updated to provide greater security by using the latest third-party libraries and improved password encryption.

For more information on STEP'n'Design functionality, see the STEP'n'Design documentation.

New setup actions for user privileges

Three new setup actions have been added to provide more granular control of access to potentially sensitive information.

- View Background Processes of Other Users - Allows users to view and download files from background processes that they did not start. Users without the privilege will notice that the 'Show processes of everyone' button on the workbench BG Processes tab is disabled and that any processes not started by them are not visible in workbench or in Web UI. In addition, all inbound / outbound integration endpoints and event queues are not visible to users who do not have this privilege. Gateway integration endpoints are still visible as they do not have associated background processes.
- View System Setup Logs - Allows users to see the System Setup Log and Workspace Log available via the workbench View menu, and the Logs tab on System Setup objects. Users without the privilege will notice that the System Setup Log option in the View > Logs menu is grayed out, and will not see any Log tab on System Setup objects.
- Run Reports - Allows users to run reports (including starting a reports background process) from the workbench File menu. Users without the privilege will notice that the Reports option in the workbench File menu is grayed out.

As these actions are new, they control functions that have previously been available to all users. Therefore, to preserve consistency for end users upon upgrade, each action is automatically added to all existing Setup action sets. New implementations will find the actions only in the 'All Setup Actions' actions set.

For more information on action sets and/or users and groups, see the System Setup / Super User documentation here.

Increased security of the Oracle database

The use of the Oracle native database package UTL_FILE may be seen as a security risk due to its ability to access part of the file system on the database server. The UTL_FILE package was previously referenced in database packages on the STEP schema used for the built-in SQL report system, which caused the STEP reporting system to trigger security audits.

In order to remove this potential vulnerability, the reference to UTL_FILE has been removed in the STEP reporting system. Note that this change does not cause any changes to the STEP SQL reporting functionality when used to register and run reports within STEP.

New option to perform patching from a private mirrored server

The Stibo Patch Operations Tool (SPOT) usually downloads files from the secure server called updates.stibosystems.com, via https. As an alternative to accessing the updates server directly, it is now possible to set up a private mirror directly on the customer's network. SPOT can then be configured to use that mirror

instead of the global updates server. Customers interested in this option should contact Stibo Systems Technical Services for further information.

STEP update security enhancements

In order to protect a STEP system from running software not approved by Stibo Systems or by partners of Stibo Systems, all updates to be applied to a STEP system will need to be digitally signed using GNU Privacy Guard, a derivative of the commercially available PGP cryptography library. For standard customers, this is completely transparent and no additional steps need to be taken. For partners (or customers) writing their own software extensions, extra steps are needed in order to apply their own certificates. Additional information, including specifics on these steps, is included in the Extension API documentation accessible on the SDK documentation page ([system]/SDK).

Enhancements to the STEP APIs

Summary

The STEP APIs have been enhanced with both new features and improved documentation.

As part of these changes, it is important to note that to ensure compatibility with the Trailblazer 8.0 release **all existing extensions must be re-compiled as part of the upgrade.**

Highlights of the changes are listed in text below, with complete details covering the API additions and updates from Trailblazer 7.4 to 8.0 available in the SDK documentation at [system]/sdk.

Details

Improved API documentation

Previously the documentation for REST and SOAP Web Service APIs was provided via PDF documents available for download on the SDK Documentation page in the STEP online help. This has been updated and the documentation is now available online as web-based documents, which are also usable offline via download. The updated materials are available on the STEP SDK page ([system]/sdk) and the previously available PDFs have been removed. Note that this change also ensures that the Web Services documentation is only available to privileged users as the STEP SDK page requires users to provide valid credentials for access.

The Javadoc for the Extension API and the Scripting API have both been updated and improved. In addition, it is now possible to view a combined Javadoc covering all available bundles in each API. As before, these materials are available on the [system]/sdk page.

Additions to the Scripting and Extension APIs

Via the Scripting and Extension APIs it is now possible to:

- Get product to classification link types and reference types linked into an attribute group from the attribute group object
- Get product to classification links of a specific type from a product
- Check whether or not a given value is valid according to LOV filtering configured on attributes, product to attribute links, or classification to attribute links
- Move a classification to a new parent
- Get all contexts on a system
- Create a new user (without password - method is intended to be used for setups where authentication is handled externally)
- Get the valid source and target object types for a reference type
- Get the valid product and classification object types for a product to classification link type
- Run searches finding instances of Node instead of just DataNode
- Determine whether a workflow state is a leaf (e.g., has no sub states)

- Get all valid events for a workflow state
- Get all tasks for a specific workflow instance
- Write business rules for the GDSN Publisher component (publish and register preactions, validation conditions, and success / failure actions) using a redesigned API

Additions exclusive to the Extension API

Via the Extension API, it is now possible to:

- Retrieve the next available auto-generated ID for a given object type, for which the primary use case is when constructing STEPXML with new referenced objects in an inbound integration endpoint pre-processor
- Get hold of all units on a system
- Get a localizable title for a workflow state, which is intended to be used when creating workflow and/or task-specific components for the Web UI
- Get a localizable title for a workflow event, for which the primary use case is to create custom submit actions for the Web UI
- Create Web UI components with a date picker
- Create workflow task-specific Web UI components
- Create Web UI components that work on Initiate Item screens
- Create Web UI corner bar components
- Set the title for Web UI node selection dialogs
- React on changes to the selection for the SuggestTextBox Web UI widget
- Enable and disable dropdown and checkbox Web UI widgets
- React on blur and focus events for the Web UI TextArea and TextBox widgets

Updates to the SQL API

The get_parent function in the SQL API has been changed to accept qualid and workspaceid as optional arguments. In addition, the getcontextvalues4node function has been updated to inherit from the right parent according to the context and workspace passed as parameters.

Updates to STEPXML

The ExcludeFromProfiling attribute in the AttributeGroup element has been deprecated and will now be ignored during import, due to the change in how attributes to be profiled are identified. Additional information on changes to the data profiling functionality can be found in the Data Profiling Enhancements section of this document.

In-Memory Database Enhancements

Summary

Since the Trailblazer 7.4 release, the STEP In-Memory Database solution has been further refined, with updates being released in the 7.4 maintenance patches as they became available. Specifically, work has been done to ensure that the solution is optimized to accomplish a number of specific use cases, and additional monitoring and debugging tools have been added to allow for better support of systems using the In-Memory component.

Additional information on the In-Memory Database component is included below.

Details

The STEP In-Memory Database component takes advantage of large amounts of application server memory to hold all data in memory. This optimizes data fetch speed since it is no longer necessary to access Oracle or the disk in order to fetch data. This especially improves the time it takes to handle complex requirements, such as complex searches or exports with calculated attributes that reference other objects.

The primary benefits of the In-Memory Database component are:

- Faster search results when using search functionality that takes advantage of the In-Memory Database (currently Object Type, Search Below / Hierarchy, Revised Objects Changed Since, and ID / Name / Value).
- Faster operations on complex data models where business rules and calculated attributes navigate references. This offers performance improvements across imports, exports, workflow transitions, object approvals, and UI displays.
- Faster performance of heavy write operations such as large imports, as offloading a lot of read operations from the database has been shown to have a positive impact on performance in scalability tests. In particular, imports having a spread of distribution of changes to existing products across a large import file will benefit from running in-memory because the comparison evaluating whether or not an existing value will be changed by the import is much faster.

Testing of the In-Memory component across large sets of production data has yielded the following results:

- Searches up to 50-100x faster
- Exports of data sets including calculated attributes perform 2-3x faster
- Data quality profiling performs 3x faster

The In-Memory functionality is easily enabled (and disabled again) on STEP installations running Trailblazer 8.0, provided that the application servers have sufficient memory. In addition, use of the STEP In-Memory Database is fully backwards compatible for existing queries, reports, and backup scripts.

The Stibo Systems Technical Support team is available to offer assistance in evaluating existing systems for memory requirements, as well as to assist customers in setting up an environment in the Amazon Cloud to test out the In-Memory component. This makes it possible for customers to test out the functionality without purchasing hardware. Customers interested in pursuing an In-Memory Database solution should contact their Stibo Systems account manager.

Considerations and Limitations

Important considerations and limitations to be aware of when considering whether or not to use the In-Memory Database component are listed below.

- Windows is not supported for In-Memory in 8.0.
- The In-Memory solution synchronizes data between the servers in a cluster and reads all data from the database upon startup. This leads to increased network requirements that will be specified as part of a hardware evaluation.
- Full text search and Database mode import functions are not available.
- Single update mode operations take longer since they need a repair read-up from the database. Note that most single update mode operations run directly on Oracle.
- Statistics are not available when using In-Memory searches. This applies both to the Search Result Profiling page in workbench and to the Search Statistics component in Web UI.

GDSN Enhancements

Summary

The STEP Global Data Synchronization Network (GDSN) solution has been enhanced to offer:

- Support for the new GS1 GDSN Major Release 3 format
- Support for the new Hierarchy Withdrawal command
- Greater flexibility for processing inbound GDSN transactions via updates to the STEP GDSN Receiver Data Pool inbound configuration options
- Use of a pre-action prior to taking a Register or Publish action in the GDSN Provider Web UI
- New JavaScript binds in business rules allow binding to individual GDSN components

Detailed information on each of the enhancements can be found below.

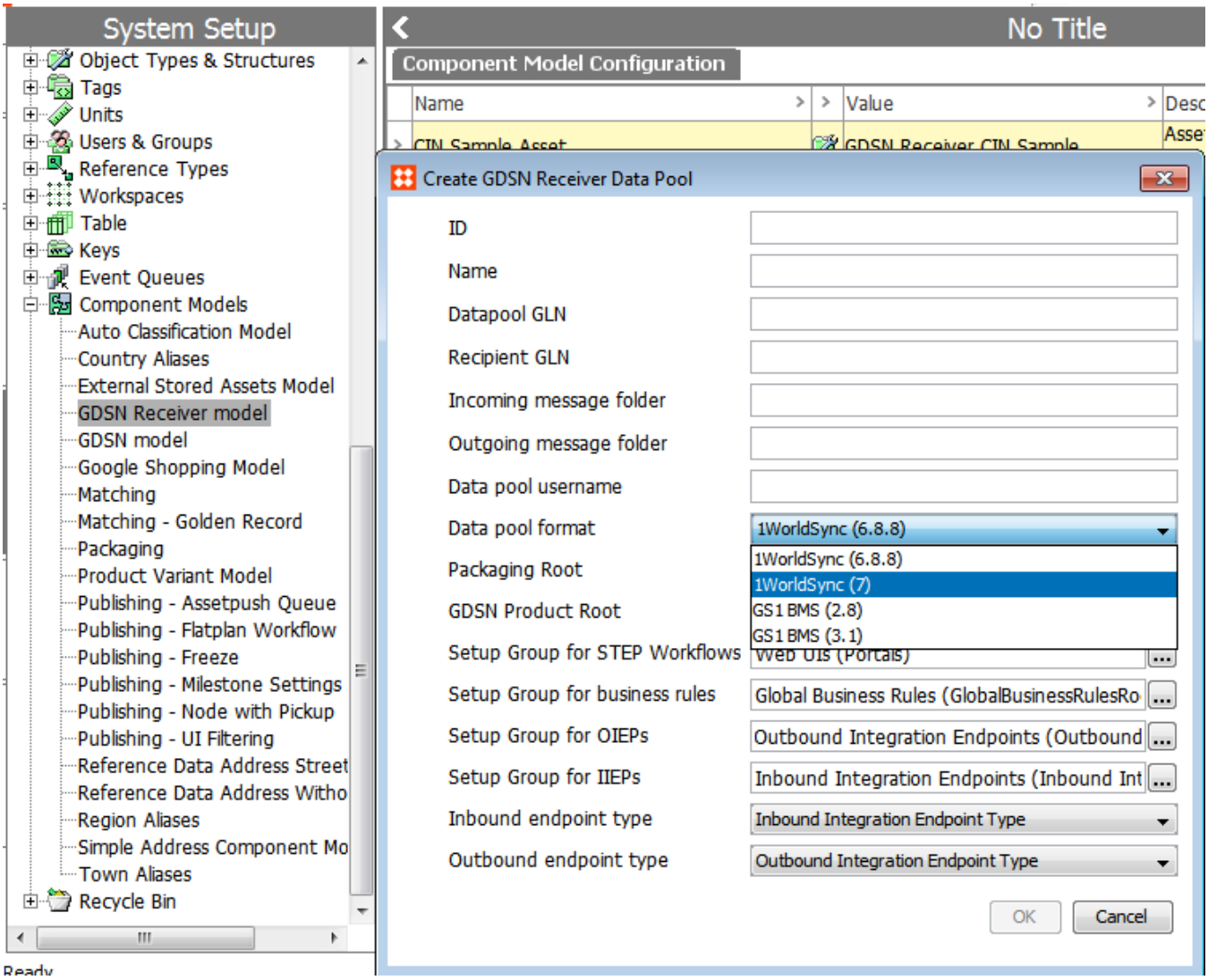
Details

New configuration packages to support GS1 MjR3

GS1 is scheduled to do a major release (MjR3) of their Global Data Synchronization Network (GDSN) Standard in May 2016, and eventually, older versions will be deprecated. To support this update, the STEP GDSN solution has been enhanced to include the following 1WorldSync (1WS) and GS1 Business Message Standard (BMS) formats:

- GS1 BMS 3.1 and 1WS 7 formats are available when creating a GDSN Receiver Data Pool
- 1WS 7 format is available when creating a GDSN Provider Data Pool

The new format options are available when using the 'Easy setup' option of GDSN receiver or provider data pools, as appropriate.

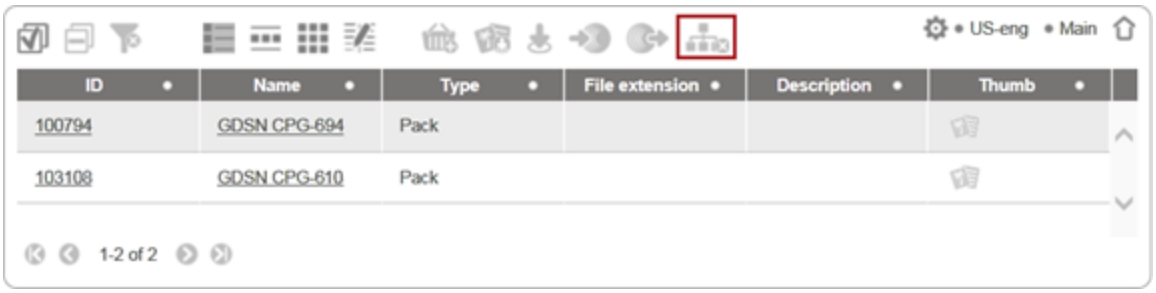


Contact your Stibo Systems account manager for documentation to assist in upgrading an existing GDSN implementation, including modifying Generic XML templates and mappings to work with the new formats.

For more information, see the Setting Up the GDSN Receiver Data Pool section of the GDSN Receiver documentation and/or the Setting Up a GDSN Provider Data Pool section of the GDSN Provider documentation.

New Hierarchy Withdrawal command for GDSN Providers

1WS Providers and BMS Providers can use a new hierarchy withdrawal button to send a HierarchyWithdrawal command to an item hierarchy that has already been synchronized. The GDSN Hierarchy Withdrawal Action button can be added to any Node Details and Node List components, but is intended for use only in GDSN Provider Web UI configurations. Once configured, clicking the button sends a hierarchy withdrawal command for the selected object(s).



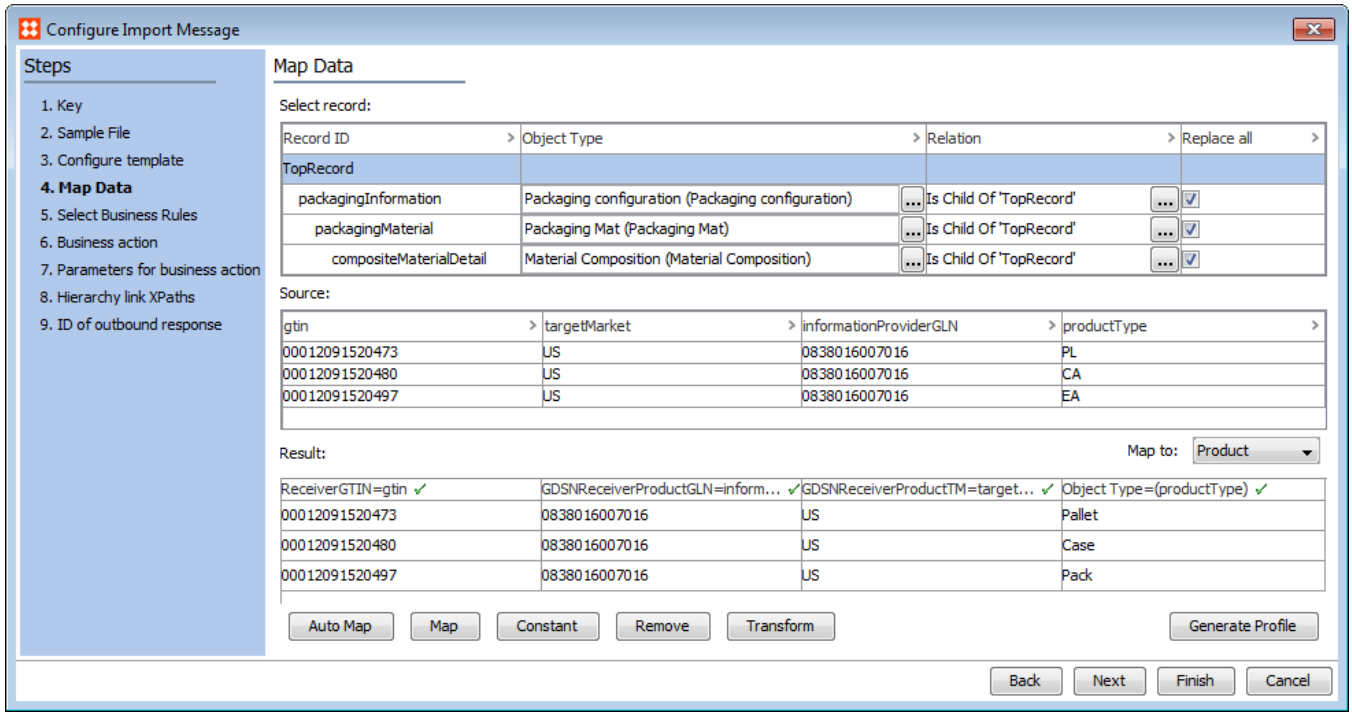
For more information, see the GDSN Web UI Buttons section of the GDSN Provider documentation.

Greater flexibility for processing inbound GDSN messages that contain complex data structures

The GDSN Receiver solution now includes many new import configuration options:

- Mapping and processing of repeating sets of information
- Ability to create a GXML template that has multiple record scopes; for each record an object type can be configured
- Import objects as referenced objects to another record within the import file
- Import objects as child objects of another record within the import file
- Option to delete specific objects before a new import is started
- Values will be deleted on import if no import value exists for a mapped attribute

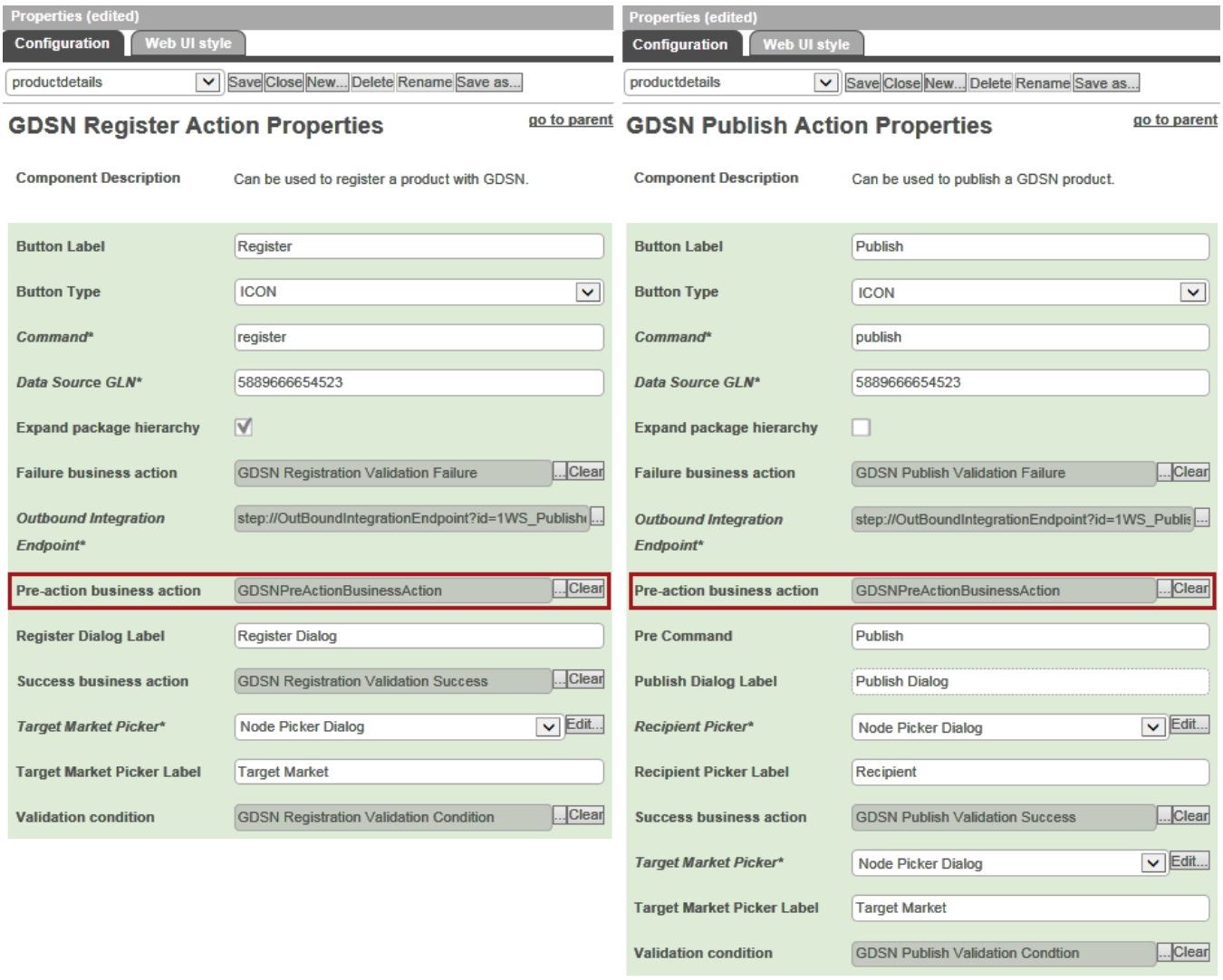
The Map Data step of the wizard now includes a Record table that displays all records based on the configured template. Each record can have a set of information that can be mapped. A new 'Replace All' flag allows the existing record and any references to be deleted before the update is imported and new objects and references are created. A new description attribute with the ID GDSNReceiverRecorderPath, is now available in the GDSN receiver component model and will identify items created with the 'Replace All' option. For existing GDSN Receiver implementations, an update to the component model is required.



For more information on the import wizard, see the Configure How Products are Imported when a CIN Message is Received section of the GDSN Receiver documentation.

New pre-action parameter available for Register and Publish actions in GDSN Provider Web UI

The GDSN Register Action and the GDSN Publish Action buttons can each now use a 'Pre-action business action' to run a specified business action before any other business rules run, including any validation conditions. For example, the 'Pre-action business action' can be used when configuring which GDSN command should be sent, such as Change_By_Refresh or Modify. In this case, the desired command would be stored in an attribute, which is then mapped to the GDSN command in the GDSN outbound configuration.



For more information on the Register and Publish actions, see the GDSN Web UI Buttons section of the GDSN Provider documentation.

New JavaScript GDSN binds for Business Rules

Several new GDSN binds are now available in JavaScript business rules and that allow binding to individual GDSN components. This improves available functionality for any of the Business Action and Business Condition parameters, including the 'Pre-action business action' and the 'Validation condition.' The new binds include:

- GDSN Product - binds the selected GDSN product
- GDSN Provider Datapool - binds the selected GDSN provider datapool
- GDSN Recipient - binds the selected GDSN recipient
- GDSN Target Market - binds the selected GDSN target market
- GDSN Validation Logger - gives access to the GDSN validation logger

For information about GDSN JavaScript binds, see the GDSN Binds section of the Business Rules documentation.

New Data Visualization in Web UI

Summary

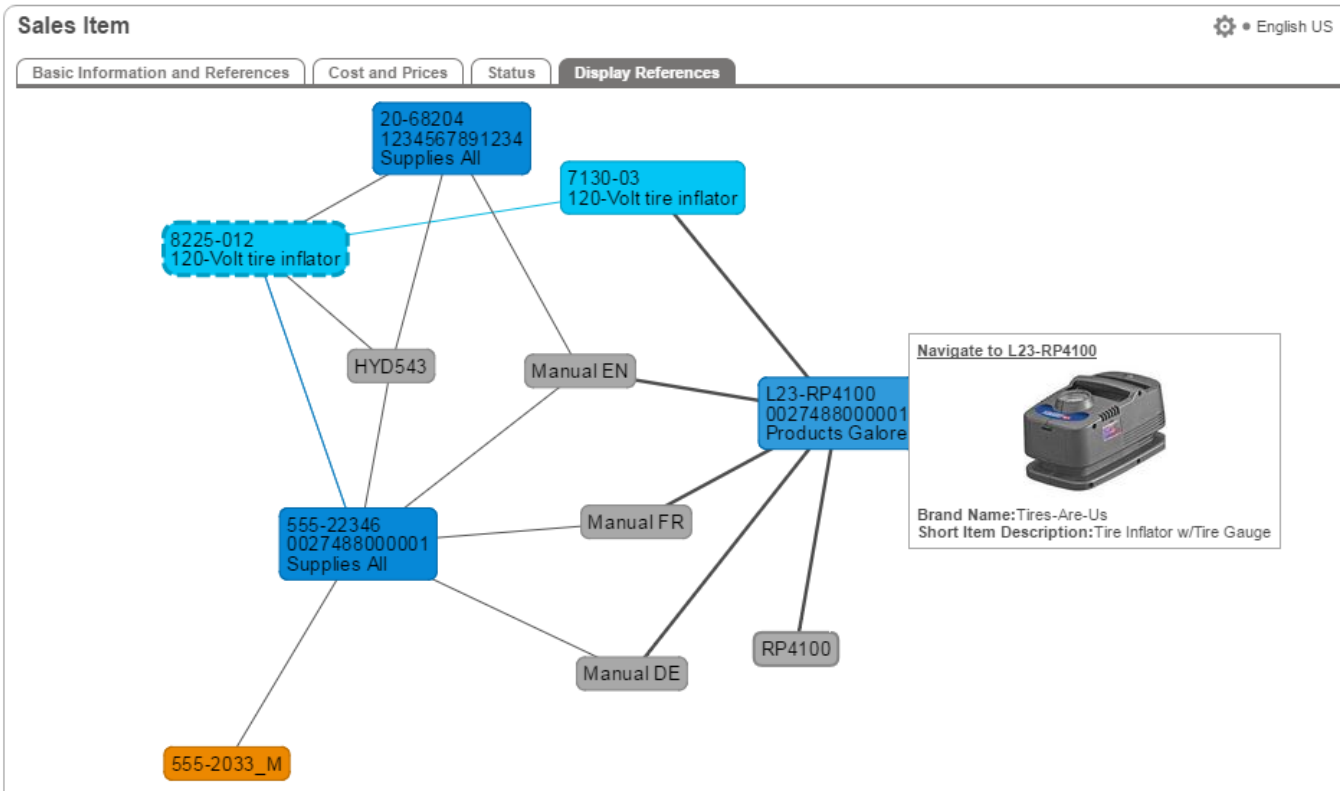
New functionality in Web UI allows users to see a visual representation of objects in STEP and how they relate to one another. The visualization of object types and their reference objects may help users better understand data and identify patterns, better organize objects, and ultimately build better data relationships. The customizable interface is interactive, allowing users to click on and mouse over graphical objects on the screen to get more information on an object, or navigate directly to it.

Details

The data visualization functionality in Web UI is powered by a number of configurable components and parameters.

A new screen type (Display Relations Screen) is dedicated to visually displaying objects and references. Web UI designers can decide which references to display to end users for the selected objects, assign colors to object and reference types to provide meaningful visual distinctions, and determine how far to branch out within the default display (e.g., one reference 'step' away from the object or five reference 'steps' away from the object).

The display is dynamic, which means that when a user clicks on a graphical object on the screen, the display will automatically expand based on that selection (e.g., take another 'step' out of the reference evaluation). Hover text can be set up to display to a user as they are mousing over the graphical objects, giving them easy access to identifying information about the object without having to navigate away from the display. In addition, a clickable link is available that the user can use to navigate directly to the selected object.



Within the Main (Screen) Properties, which are used to determine the overall behavior of the Web UI, configuration can be done to set up the look of the graphical interface. The 'Relations' settings are located under Main Properties, within the Representation List parameter, so that object type and reference styling can be set up one time and applied throughout a specific Web UI, regardless of how many Display Relations screens are configured.

For more information about setting up the Display Relations Screen and the Main Properties parameters, see the Data Visualization section of the Web User Interfaces / Using a Web UI documentation.

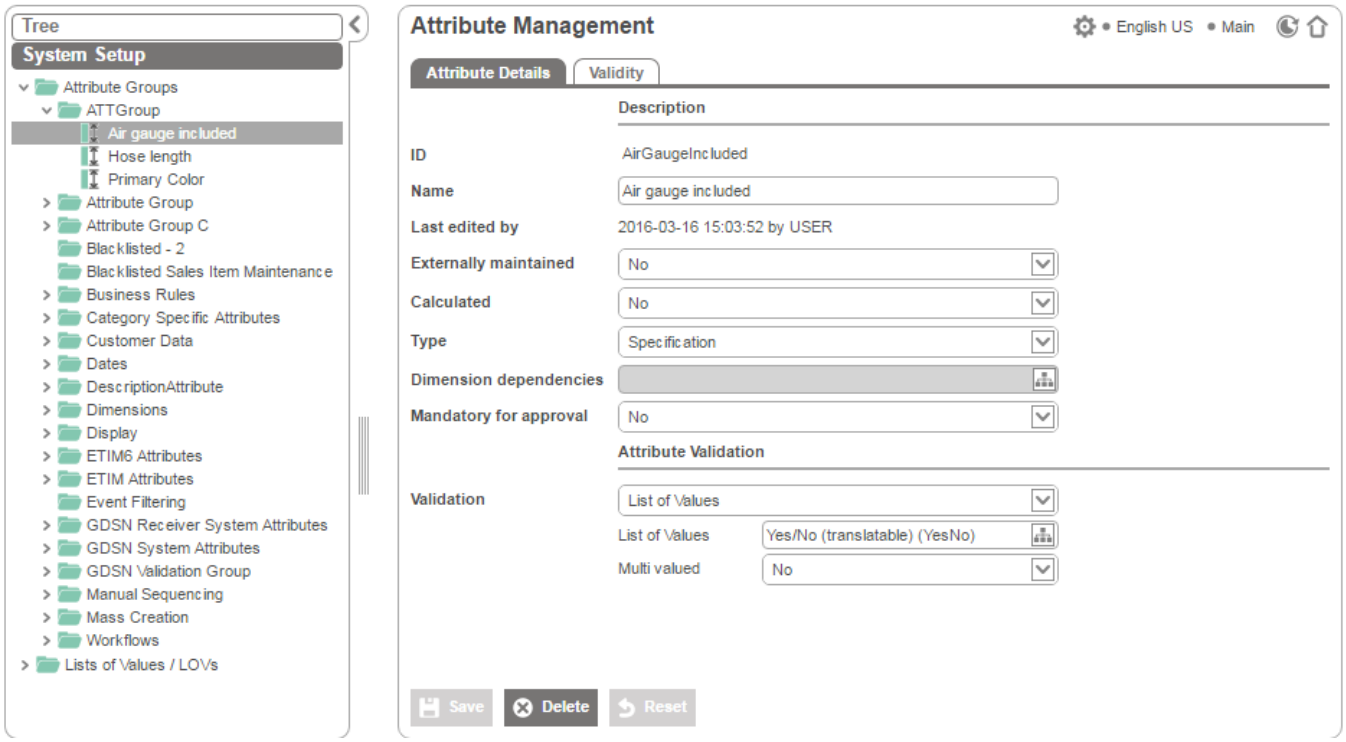
New Attribute and LOV Creation and Maintenance in Web UI

Summary

Users can now create and maintain attributes, attribute groups, Lists of Values (LOVs), and LOV groups in the Web UI. Previously, these tasks could only be accomplished in the STEP Workbench. Adding this functionality to Web UI is yet another step towards removing the gap between what can be done in the Web UI and in the STEP Workbench.

Details

To create and maintain attributes, attribute groups, Lists of Values (LOVs), and LOV groups in Web UI, four new screen types are available. Each screen is listed below and contains functionality comparable to the corresponding workbench editors.



The new screen types are:

- Attribute Management - Allows users to maintain attributes, as shown above
- Attribute Group Management - Allows users to create attributes, and create and maintain attribute groups, including the ability to manually sequence attributes within the group, if applicable
- List of Values Management - Allows users to maintain an LOV, including adding values
- List of Values Group Management - Allows users to create LOVs, and create and maintain LOV groups

Each screen is pre-configured to include all components necessary to create and maintain attribute and LOV objects. It is recommended that the designer retain this base configuration to ensure all relevant functionality remains operational. With that said, designers do have the option to configure the available fields and may wish to add additional options, such as attribute metadata, to the base configuration.

As part of this new functionality, access to the LOVs and Attributes can be configured as a stack panel element in the left navigation panel. These root nodes for Attributes and LOVs can be added as a new stack panel (e.g., System Setup) or to an existing stack panel (e.g., Tree).

For more information about the new screens and how to set them up, see the Attribute and LOV Creation and Maintenance section in the Web User Interfaces / Using a Web UI documentation.

Considerations and Limitations

The intent of this component is to provide access for basic management of attributes and LOVs in Web UI. With that in mind, some of the more advanced features available in workbench are unavailable, or available in a reduced manner, within the Web UI.

- A calculated attribute editor is not provided in Web UI.
- The Web UI does not have capacity for managing changes to attributes that conflict with and/or impact existing data values for the attribute.
- Linking of attributes to hierarchies requires use of the previously existing Attribute Link Editor component.
- As with all STEP functionality, the ability to create and maintain attribute and LOV objects requires the user to have privileges to do so.

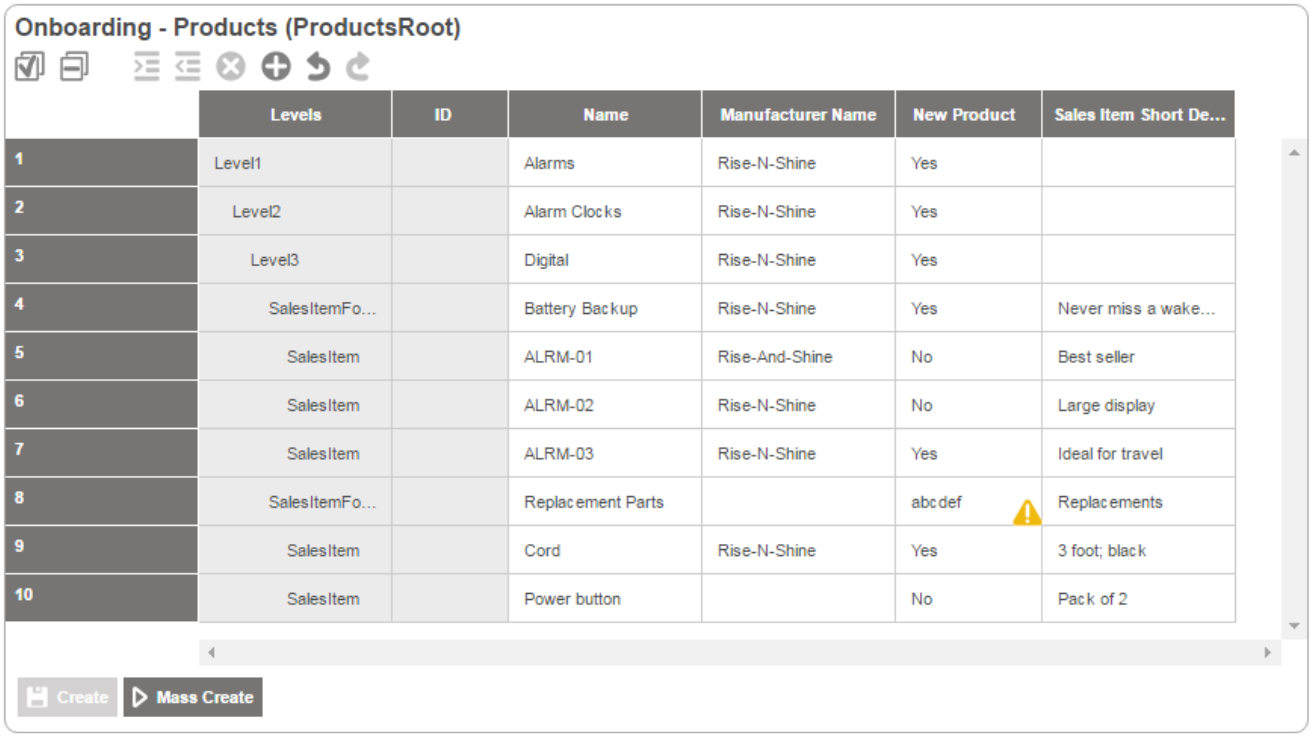
New Multi-Object Onboarding Tool in Web UI

Summary

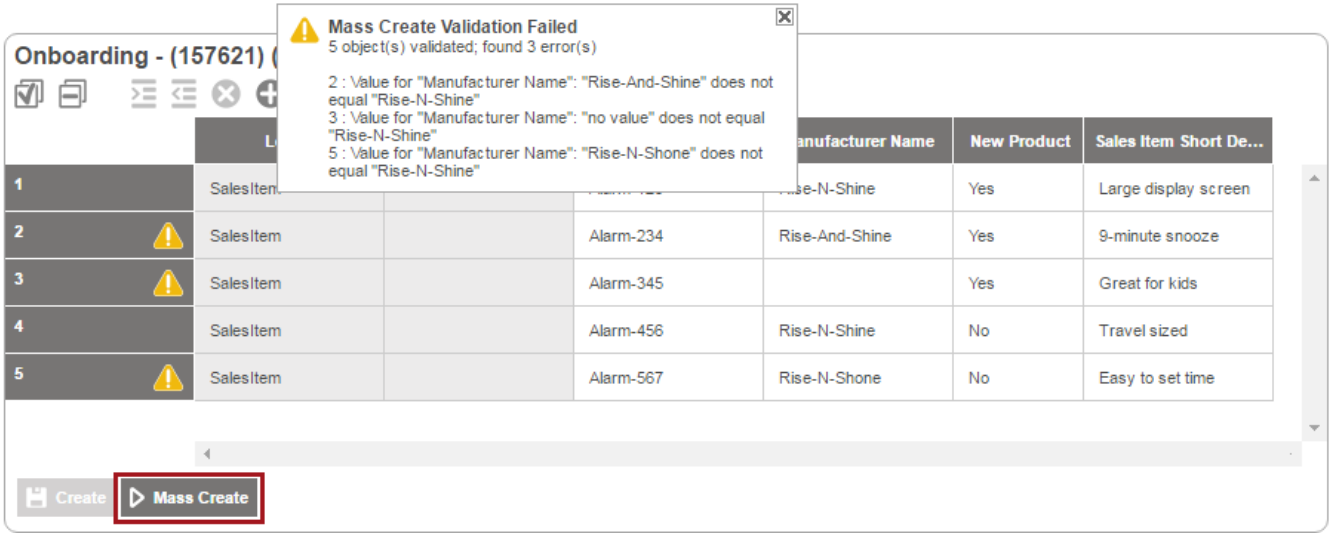
Users can now onboard multiple products directly in the Web UI via a user-friendly grid-based interface. Previously, initiating objects in Web UI could only be done one at a time, or via the use of Smartsheets or other import processes. The new interface provides users with an easy way to onboard new objects and object structures, including the ability to copy / paste in bulk, dictate parent / child relationships, and perform crucial validation checks prior to creation.

Details

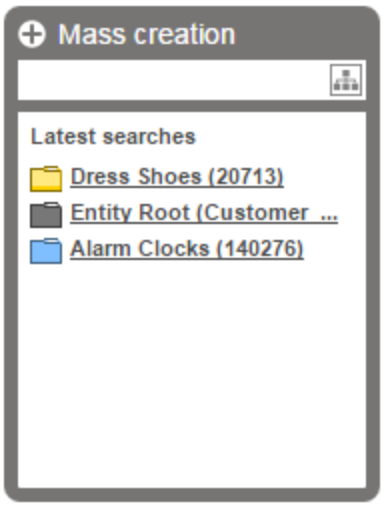
A new Web UI screen type (Mass Creation) has been added that, once configured, allows users to create multiple Product, Entity, or Classification objects by manually entering or copying and pasting object data into an editable grid-based view. In addition, the surrounding object hierarchy structure can easily be set up from the same screen using the various action buttons (e.g., indent and outdent buttons to create the parent / child relationship, plus add row and remove row buttons). The Mass Creation screen also works seamlessly with existing components to allow, for example, objects to be passed into workflows as they are created.



Cell-level data validations are done during the data entry process (shown above), while a business condition can be used to do further validations prior to saving the data (shown below). Additional configuration is available, including the option to forward users to a designated screen once objects are successfully saved into STEP.



There is also a new Web UI homepage widget (Mass Creation) that serves as an entry point to a Mass Creation screen.



Objects can be created under one root parent node at a time, though multiple levels within that parent are allowed (e.g., both children and grandchildren of the selected parent can be created in each session). If creating objects in multiple categories, or to accommodate a variety of other onboarding needs, multiple Mass Creation screens and Mass Creation widgets can be created, configured, and used.

For more information on configuring and using these new components, see the Onboarding Multiple Objects Using Web UI Screens section of the Web User Interfaces / Using a Web UI documentation.

Considerations and Limitations

- Up to 500 objects can be created and saved per Mass Creation screen session
- Only one supertype at a time can be loaded per Mass Creation screen session (e.g., all Products or all Classifications—not a mix of both)
- Assets currently cannot be created using the Mass Creation screen

Enhanced Handling of Shared Data in Web UI

Summary

Users must be careful when working with shared data in order to maintain data integrity and safeguard data from inadvertent changes. This becomes particularly relevant when objects are referenced by more than one other object, in which case changes to that target have the potential to impact every source object referencing it. In order to better assist users in working with shared data, new features have been added to Web UI to improve the way shared data is identified and handled.

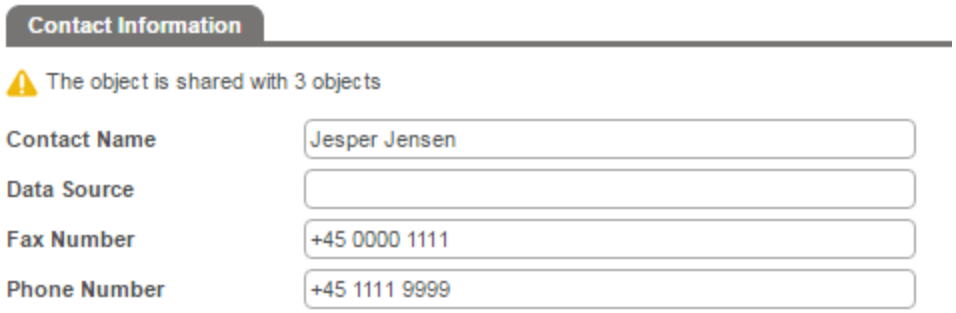
These features include a visual indicator that can be configured to display for shared objects shown on a Node Editor screen, a warning that can be presented to users when attempting to save changes to a shared object, and the ability to clone a reference target.

Details

Visual indicator on shared objects in a Node Editor

A new Shared Target Information component is available for use within a Node Editor. Once configured to display, the component provides a visual indicator when a selected object is referenced by multiple objects. The total number of those referencing objects is also displayed. These all combine to serve as a notice to the user that updating data, if allowed, will impact more than the selected object.

The Shared Target Information component is available to add as a child component within Node Editors, following the same process that is used to add other components like Name Value, ID Value, Attribute Value, and Attribute Value Group.



Similar visual indicators for shared objects were introduced in the STEP Trailblazer 7.4 release with the introduction of the ID Shared Target Header (Multi-Reference Editor) component and the Follow Single Reference (Node Editor) component.

For more information on Web UI components and configurations, see the Web User Interfaces documentation.

Warning when saving changes to a shared object

When a shared object is edited and then saved, either through an actual Save action or implied save (e.g., Submit Action or Approve Action), an additional layer of protection has been added by way of a new warning message. The user will be presented with a dialog letting them know that the object that they have edited and are saving is a shared object and any changes could have implications for other objects. The user must actively confirm that this is acceptable before the object can be saved successfully. The user may also choose to cancel out of the warning and decide not to save the changes.

To activate the warning, it must be enabled on the Node Details configuration. The Show Warning parameter is accessed under the Multiple Target References parameter group. When Show Warning is enabled (checked), the warning will display to end users upon save. If disabled (which is the default), no warning will be shown and changes will save as they have previously.

New option to duplicate and edit references and target objects

This feature, exclusive to the Multi-Reference Editor, has also been added for improved shared data handling. See the Enhanced Multi-Reference Editor Functionality section of the STEP Trailblazer 8.0 Release Notes for details.

Improved Usability and Added Flexibility in Change Packages

Summary

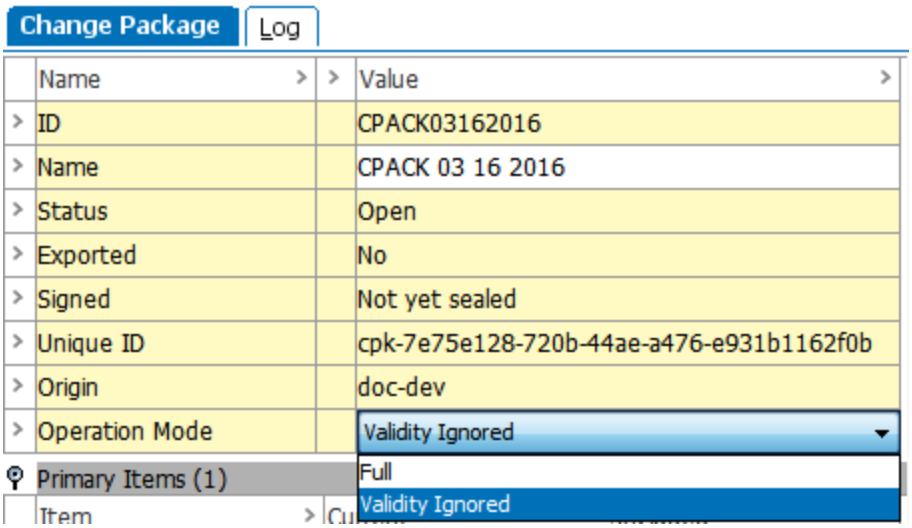
A number of updates have been made to change packages to simplify their use and provide better control and understanding of their contents. Specifically, users are now offered the following options when working with change packages:

- Selection of an operation mode, specifying whether the change package should automatically include all associated objects of any selected objects, or if it should ignore associations that are generated via shared validity
- Identify which objects triggered the inclusion of auto-added objects, assisting users in determining if items are necessary for migration or if they can be omitted from the package
- Manually select items to be excluded from the change package to allow users greater control over the contents of the package

Details

Refined analysis, including options to specify inclusiveness of auto-selection

It is now possible to choose an Operation Mode for the change package, with options being 'Full' and 'Validity Ignored', and the selection determining how the dependency analysis between selected object and auto-included objects functions.

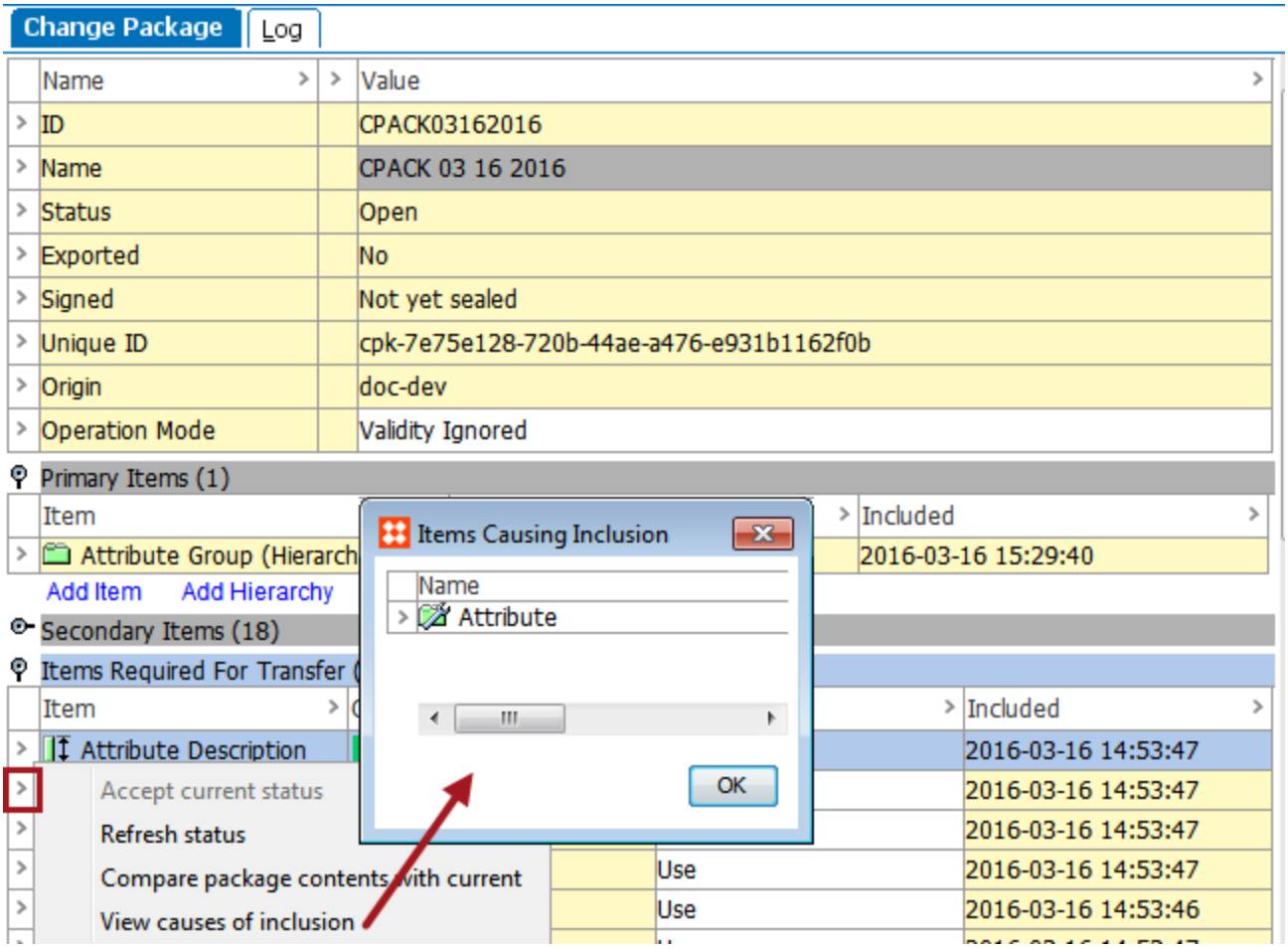


If 'Full' mode is selected, all associations to the selected items are included. This is also the default mode and is consistent with the previous functionality of change packages.

If 'Validity Ignored' is chosen, the change package ignores associations made as a result of valid attributes, object types, and reference types when the dependency analysis is made. For example, when the user adds an attribute in this mode, the object types and references on which the attribute is valid are *not* automatically added, whereas they would be in 'Full' mode. Careful consideration should be given when using this option as it carries the risk that the contents of the change package will not function in the same way on the target system as they did on the source system.

New messaging to explain auto-selected objects

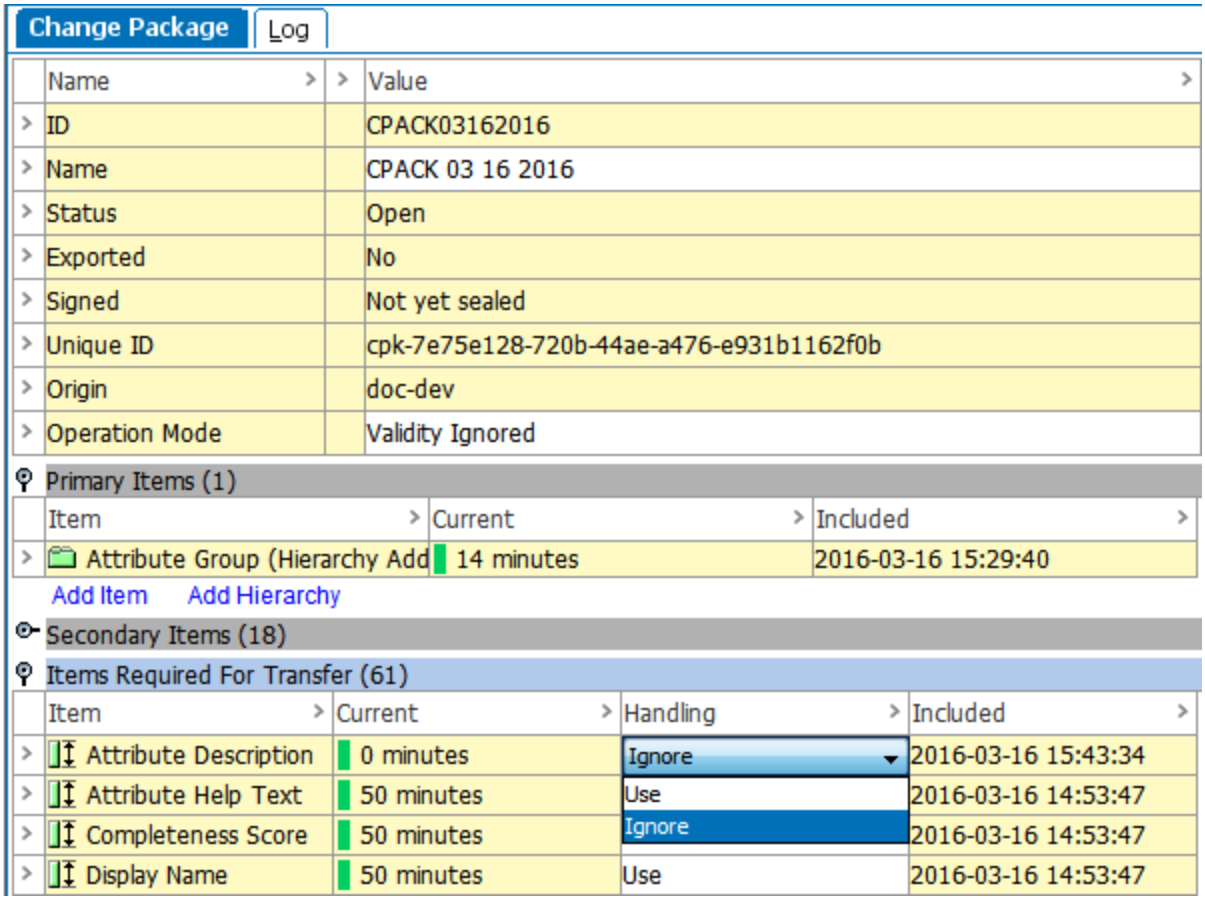
If a user is unsure why an item is included in a change package, they can now right-click on the arrow next to the item and select 'View cause of inclusion' to see the results. This is especially useful in helping a user determine whether or not an object can be excluded from the change package.



In order to enable this feature on previously existing change packages (following a system upgrade to Trailblazer 8.0), right-click on the change package and select the 'Update Included Items' option.

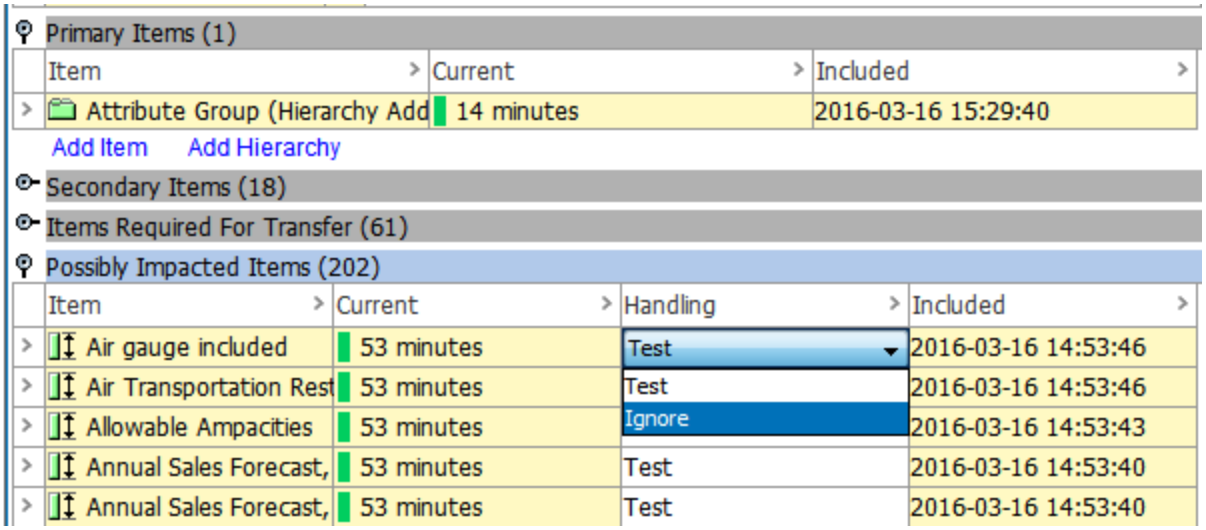
New option to manually ignore auto-selected objects

In creating a change package, it is now possible to ignore items that are added as 'Items Required For Transfer'.



The 'Ignore' selection means that while the items are still part of the package, when the package is transferred over to the receiving system, these items will not be installed on the target system. In addition, these items are not evaluated or included in the impact report. This is especially useful if a user knows that a particular item is set up correctly on the receiving system and / or wants to isolate a particular set of objects for transfer without accounting for the full dependency analysis. However, careful consideration should be given when using this option as it carries the risk that the contents of the change package will not function in the same way on the target system as they did on the source system.

For 'Possibly Impacted Items', a Handling column is also available, though the options differ as these items are not ever included when a change package is installed on a target system.



In this case, it is meant as a means of communication between administrators creating change packages and those that are deploying them on target systems. A Handling selection of 'Test' is meant to tell the installer that there are potential impacts to this object and it should be tested accordingly. A selection of 'Ignore' indicates that the package creator is confident in the outcome of the deployment and additional testing on the specified object is not needed.

For more information on Change Packages and items included, see Editing a Change Package in the Configuration Management documentation.

Enhanced Customer MDM Functionality

Summary

A number of Web UI enhancements and new features have been added that, while available for use with any data type, have specific benefits for those working with Customer MDM data. Each is briefly listed below, with additional details available throughout the Trailblazer 8.0 Release Notes.

Details

Enhanced Web UI Multi-Reference Editor functionality

- To help prevent users from creating duplicate objects in the STEP system, users can now use Find Similar functionality to search for and identify similar objects prior to adding references and creating target objects within the Multi-Reference Editor.
- When using the 'Add reference' action and creating a new reference object from a template, a new List tab can be configured to display object attributes, making it easier to identify the template that best fits the new object.

See the Enhanced Multi-Reference Editor Functionality in Web UI section of the Trailblazer 8.0 Release Notes for more information.

New deduplication features

- Match code values can now be automatically generated / updated via an event processor when events occur on specific objects acted on by a matching algorithm, ensuring that match codes are always up to date without requiring them to be re-run manually or to regenerate match codes for the entire data set.
- New Find Similar functionality gives users the option to search attribute values on direct objects and referenced objects prior to initiating new, and potentially duplicate, objects in Web UI.
- Objects that have been confirmed as matches can now be merged in Web UI, allowing users to go through the full process of matching and merging objects without having to access the STEP Workbench.
- New options have been added to the Deduplication List and Potential Duplicates List Web UI components that allow users to easily identify differences and similarities between matched objects.
- New golden record match action handlers allow for business rules to be called for golden record life cycle events (create, delete, add, merge, or split), allowing for more granular processing of events (beyond what is available in survivorship rules). In addition, a new Secondary Object bind is available in business rules to provide access to a secondary object when merging or splitting golden records.
- A Statistics tab has been added to match codes, providing users with performance data for match code processes running via event processors.

See the New Deduplication Features section of the Trailblazer 8.0 Release Notes for more information.

New Compare Revisions Component in Web UI

A new configurable screen type (Multi Revision Screen) shows revision information on the attribute values and outbound references of an object. This functionality is similar to the revision compare view in the workbench.

See the New Revisability and Revision Comparison Features section of the Trailblazer 8.0 Release Notes for more information.

Enhanced handling of shared data in Web UI

Enhancements to handling of shared data include a visual indicator that can be configured to display on Node Editors to indicate that the current object is referenced by two or more other objects. This alerts users to the fact that changing the data on the object could have an impact on these other referential objects. As an extra layer of protection, it is possible to configure a warning to be presented to end users that requires them to confirm that they wish to change data on an object with multiple incoming references. Finally, an option has been added to clone existing reference targets so that users can easily modify data *without* impacting shared data, in the cases where it is warranted.

For more information, see the Enhanced Handling of Shared Data in the Web UI and the Enhanced Multi-Reference Editor Functionality sections of the STEP Trailblazer 8.0 Release Notes for details.

New option to auto-populate country selecting using an LOV in the Web UI Address Detail component

The Web UI Address Detail component allows for the use of a List of Values (LOV) with a country attribute, and the LOV now works with the Google address search feature to auto-populate the country if a corresponding LOV value ID (country name) exists.

See the Miscellaneous Enhancements and Bugfixes section of the Trailblazer 8.0 Release Notes for more information.

Data Profiling Enhancements

Summary

Several enhancements have been made to provide greater flexibility and granularity in the STEP data profiling capabilities.

These new features include options to:

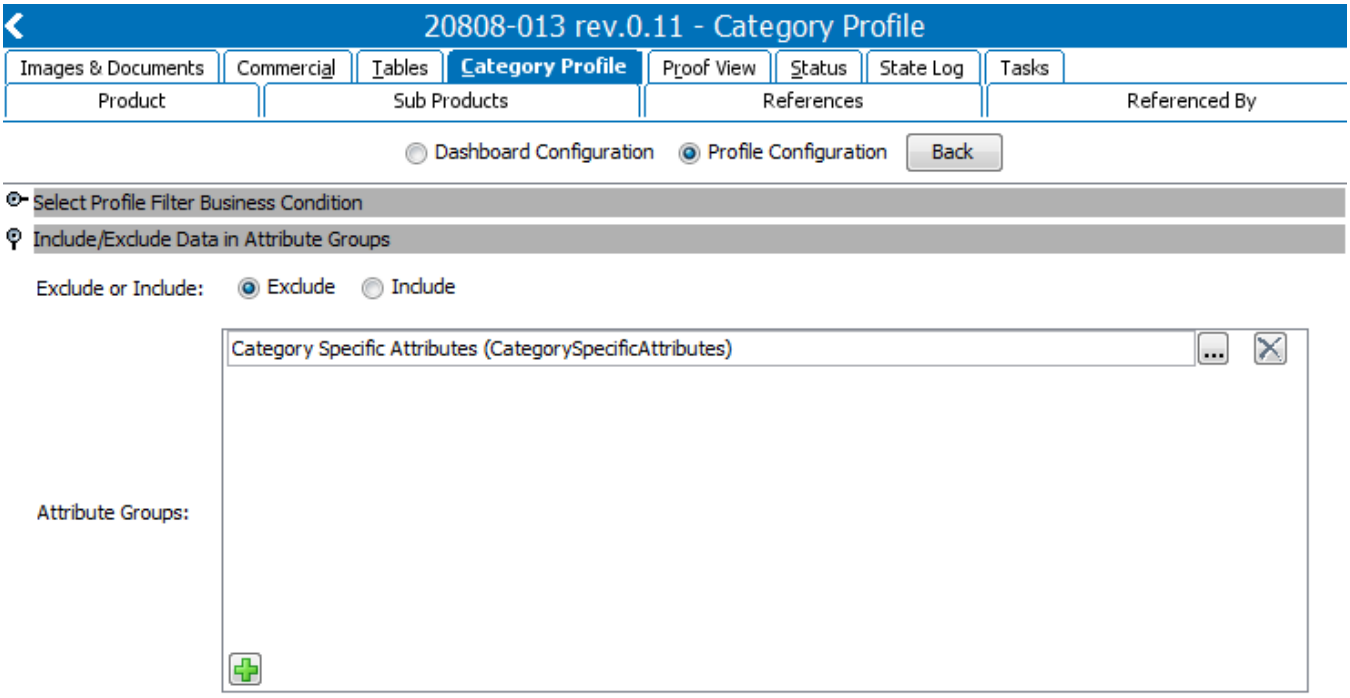
- Choose which attribute groups to profile data from, allowing users to focus on the most relevant data
- Choose which completeness metrics to utilize for any given data profile, instructing the system to only profile applicable data
- Configure multiple dashboards for any given data profile, allowing users more flexibility in organizing their widgets
- Configure a widget to display data from a specific context, workspace, and/or object type, giving users more control over what data is displayed
- Configure what data (attributes, references, and links) appears on the Value Details and Reference Details views by applying an attribute group filter, allowing users to display the most relevant data

Details

New option to specify attributes to be included or excluded from profiling

Previously, users could exclude specific attribute groups from profiling using the 'Exclude from Profiling' setting found in the attribute group editor. This was a global setting that affected all profiles in the system. With the Trailblazer 8.0 release, the 'Exclude from Profiling' option is replaced by a new flipper on the Profile Configuration page that lets users choose which attribute groups qualify for any given data profile, allowing for far more flexible and granular profile configurations. Note that when patching to the new release, all previously generated profiles are automatically configured to exclude any attribute groups set as 'Exclude from Profiling'. Nodes with modified profile configurations will also automatically update in this way.

On the Profile Configuration page, a new flipper called Include / Exclude Data in Attribute Groups is now available, and allows the user to toggle between 'Include' and 'Exclude'. If 'Include' is selected, the data profile will *only* pull data from the attribute groups specified by the user in the Attribute Groups field. If 'Exclude' is selected, the data profile will pull data from all attribute groups *except* those specified in the Attribute Groups field. Typically, the choice between 'Include' and 'Exclude' will largely depend on which requires the shorter list. To include all attribute groups in the system, the user can simply select 'Exclude' and leave the Attribute Groups field blank.



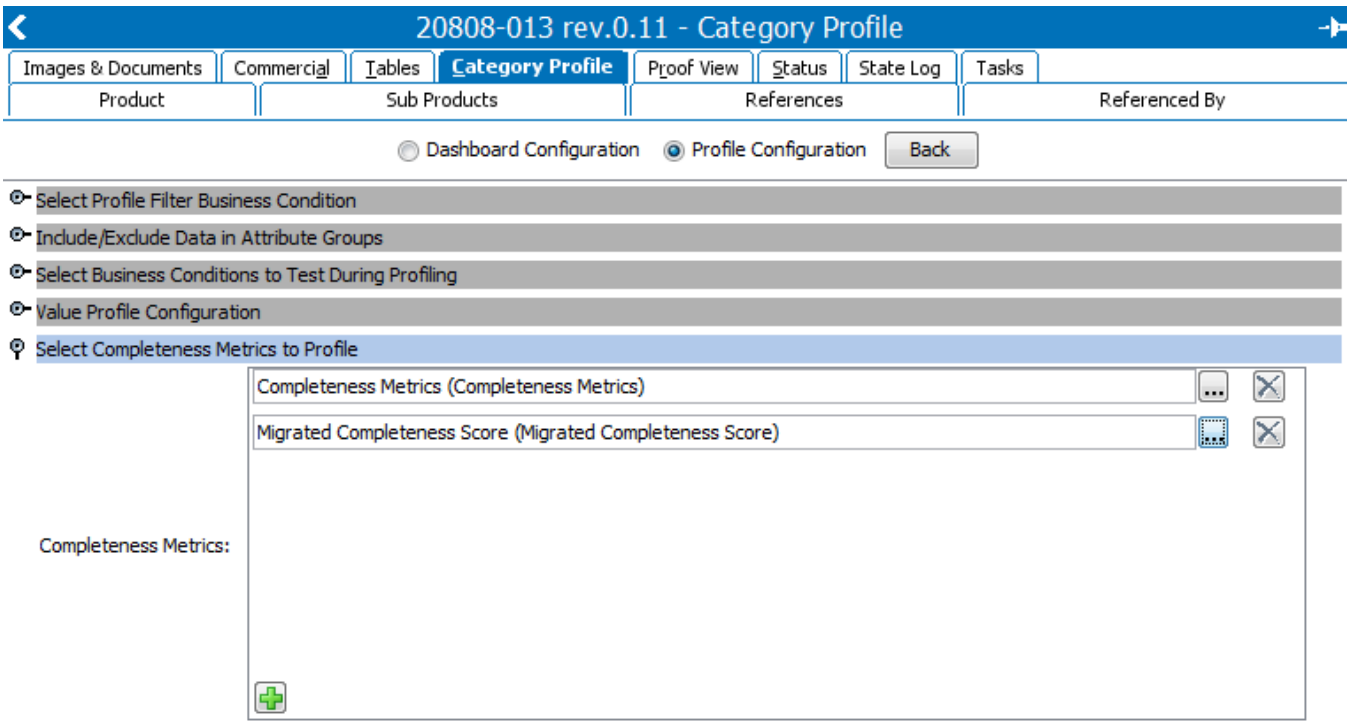
Note that this new functionality only impacts the profiling of attribute data, reference data, and referenced by data. Other configurations such as completeness profiling and approval status profiling are unaffected.

For more information, see the Profile Configuration section of the Data Profiling documentation.

New configurable completeness metrics profiling

Data profiles can now specify which completeness metrics to profile. Previously, all completeness metrics were automatically profiled. Depending on the number of completeness metrics defined in the system, it often slowed down the profiling process. Now that users can specify which completeness metrics to profile, profiling average completeness can be performed much faster.

On the Profile Configuration page, a new flipper called Select Completeness Metrics to Profile is now available. Click the ellipsis button and select a completeness metric from the list the appears. Click the green plus sign to add additional completeness metrics.



Users must specify which completeness metrics to profile now that they are no longer automatically profiled. Also note that when using the Average Object Completeness dashboard widget the completeness metric specified in the widget's configuration needs to be represented in the Profile Configuration.

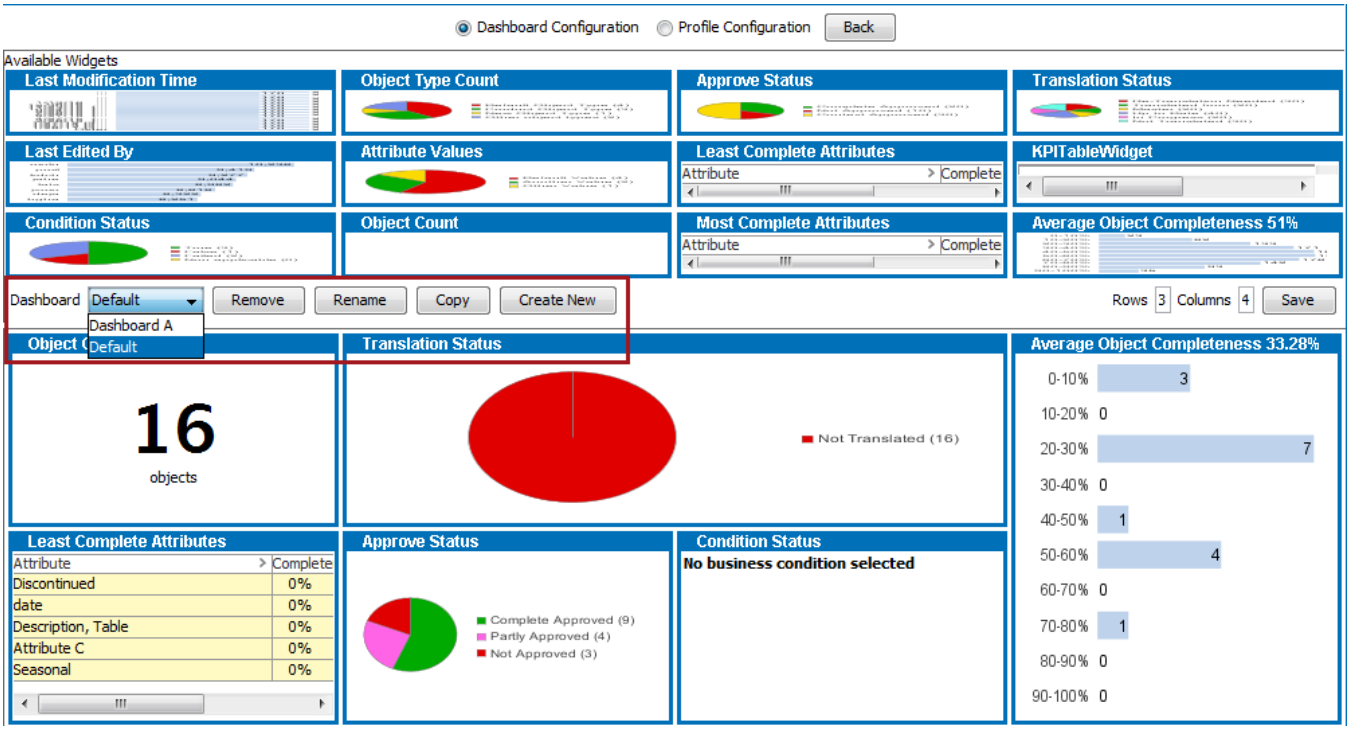
Note that in Trailblazer 7.4 an option was added that would let customers migrate from pre-7.4 completeness calculation to the new completeness metric concept. If this migration has not been performed, the old completeness will still be calculated even though no completeness metrics are listed in the profile configuration.

For more information, see the Profile Configuration section of the Data Profiling documentation.

New option to configure multiple dashboards per data profile

Individual data profiles can now be configured with multiple dashboards in the workbench, allowing users more flexibility in organizing their widgets. This allows users to group widgets together in a logical manner, and to create different views for specific user roles or tasks. Previously, data profiles could only have one dashboard, limiting users in how they could display their data.

Users can toggle between different dashboard views via the dropdown list in the Category / Data Profile editor and the Dashboard view. Additionally, dashboards can be created, copied, renamed, and removed by clicking the applicable buttons on the Dashboard Configuration screen.



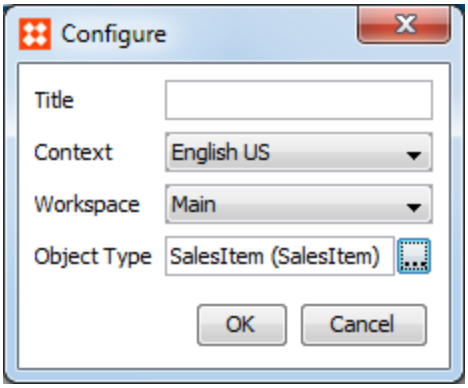
For more information, see the Category Profile Dashboard section of the Data Profiling documentation.

Enhanced widget profiling configuration options to include object type, context, and workspace selections

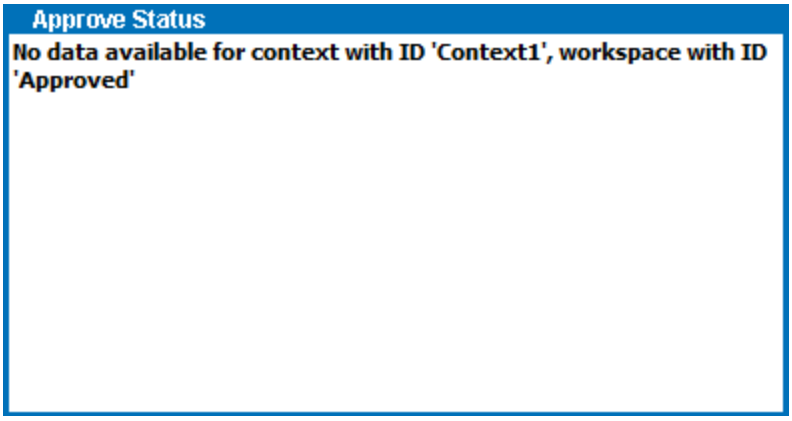
Data profile dashboards can now be configured with object type, context, and workspace-specific widgets. Previously, the widgets displayed data profiled in the current context / workspace only. With the Trailblazer 8.0 release, the remaining applicable workbench and Web UI widgets have included these as optional parameters during configuration.

By specifying the object type, the widget will only display data from objects of that type. If this parameter is left blank, the widget will pull data from *all* object types. Similarly, by specifying the context and/or workspace the widget will only pull data from profiles in the applicable context / workspace. If the Context or Workspace parameters are left blank, the widget will pull data from the current context / workspace as appropriate.

To specify an object type, context, or workspace, right-click the title bar of the desired widget on the Dashboard Configuration screen and click 'Configure'. In the window that appears, choose a Context and/or Workspace from the applicable dropdown menus, and click the ellipsis to select an object type.



If no data is available for the chosen object type, context, or workspace a message will appear in the widget explaining that no data is available.



In addition, many data profile widgets have been renamed in order to align their various iterations across the workbench data profile, global dashboard, and Web UI. All data profile widgets can also be renamed if desired using the Title parameter.

For more information on data profile widgets, see the Available Widgets section of the Data Profiling documentation.

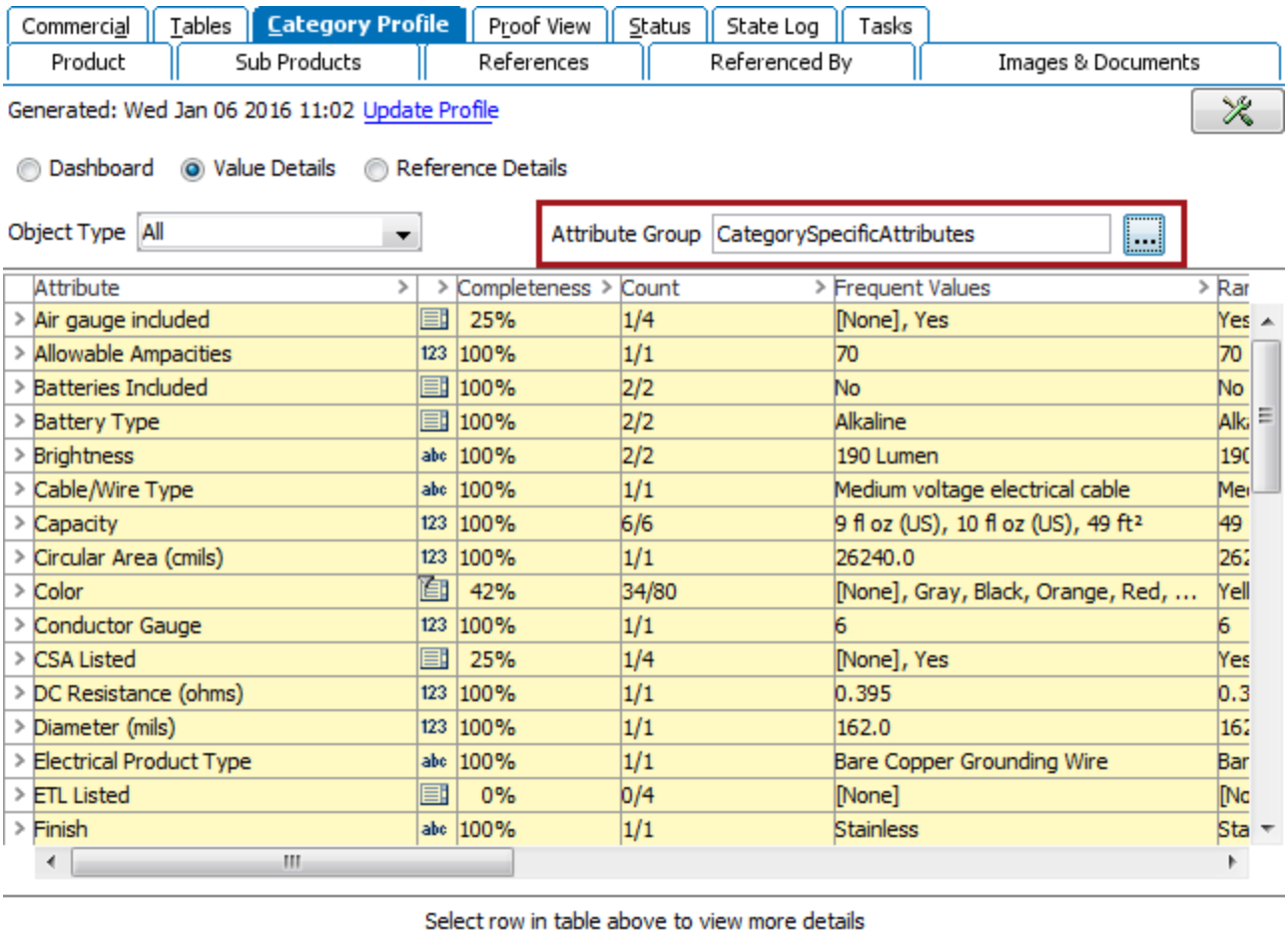
For more information on global dashboard-specific widgets, see the Global Dashboard section of the Data Profiling documentation.

For more information on profile widgets in Web UI, see the Data Profiling Widgets in Web UI section of the Web User Interfaces documentation.

New attribute group filter for viewing profiled data

An attribute group filter has been added to the data profile Value Details and Reference Details views, allowing users to limit what data objects (attributes, references, and links) appear. Previously, users could only filter the tables via object type, and it was not possible to omit non-attribute data in the Value Details view.

To apply an attribute group filter, navigate to either the Value Details or Reference Details view and enter the name of the attribute group into the type-ahead field labeled 'Attribute Group'. Alternatively, click the ellipsis and select the desired attribute group from the list.



For more information on how this functions in the Value Details view, see the Value Details section of the Data Profiling documentation.

For more information on how this functions in the Reference Details view, see the Reference Details section of the Data Profiling documentation.

Considerations and Limitations

The following widgets and settings have been deprecated:

- The Exclude from Profiling setting found on the attribute group editor has been replaced by new functionality detailed in the Attribute Group Profile Configuration Filter section above.
- The Object Type Counts dashboard widget's purpose became redundant in light of enhancements made to the Object Type Distribution widget, and was therefore removed.
- The KPI Table widget has been deprecated and will be removed in a future release.
- The Rankings / Match Comparisons widget has been deprecated and removed.
- The root node of the product hierarchy (ID=Product hierarchy root) no longer supports global category profiling, which has been discontinued. Instead, it can be configured for profiling in the same manner as all of its child nodes.

New Deduplication Features

Summary

Several enhancements have been made to the STEP deduplication functionality, across both workbench and Web UI. These include:

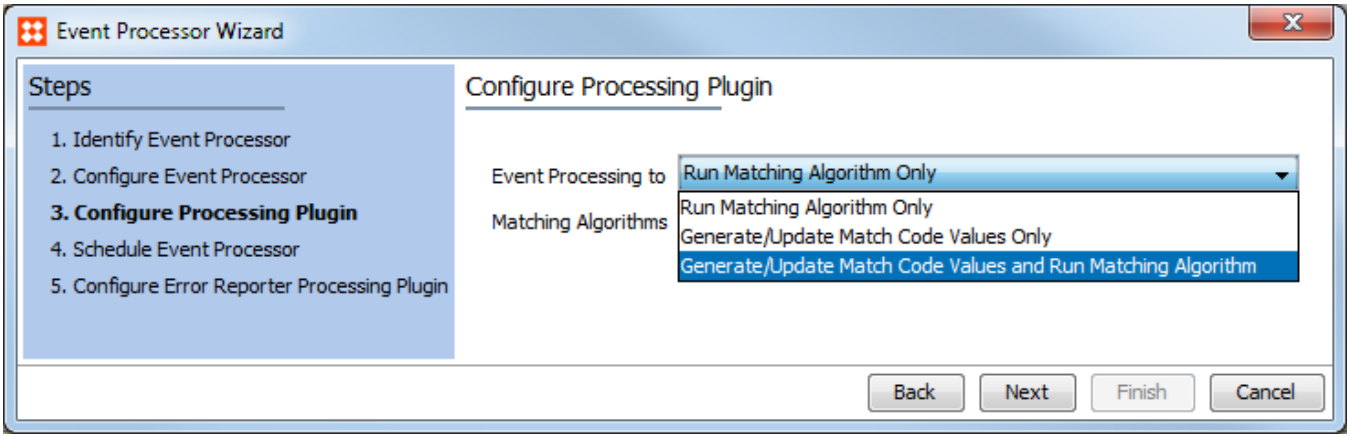
- Match code values can now be automatically generated / updated via an event processor when events occur on specific objects acted on by a matching algorithm, ensuring that match codes are always up to date without requiring them to be re-run manually or to regenerate match codes for the entire data set.
- New 'Find Similar' functionality gives users the option to search attribute values on referenced objects when working in Item Initiate screens in Web UI. This allows users to identify potential duplicates prior to initiating new objects, and to take action on the existing objects rather than creating new ones.
- Objects that have been confirmed as matches can now be merged in Web UI, allowing users to go through the full process of matching and merging objects without having to access the STEP Workbench.
- New options have been added to the Deduplication List and Potential Duplicates List Web UI components that allow users to easily identify differences and similarities between matched objects.
- New golden record match action handlers allow for business rules to be called for golden record life cycle events (create, delete, add, merge, or split), allowing for more granular processing of events (beyond what is available in survivorship rules). In addition, a new Secondary Object bind is available in business rules to provide access to a secondary object when merging or splitting golden records.
- A Statistics tab has been added to match codes, providing users with performance data for match code processes running via event processors.

Details

New option to automatically regenerate match codes after data changes

A new parameter has been added to the Configure Processing Plugin step of the Event Processor Wizard that enables match codes to be automatically updated whenever an applicable event is handled. For example, when an object is subject to a matching algorithm and match code assignment and data on that object is approved, that approval can trigger the match code to be regenerated. Alternatively, events could be passed to the event processor via a republish business rule as part of a workflow or integration.

Previously, users could only run matching algorithms via the event processor and were not able to update match codes. The new 'Event Processing to' parameter allows for the generation / updating of match code values, as well as the option to run matching algorithms, whenever an event is processed on the objects acted on by the algorithm. Note that the configuration requires selection of a matching algorithm and match codes are only updated for objects acted on by the algorithm, and only when events are passed for those objects.

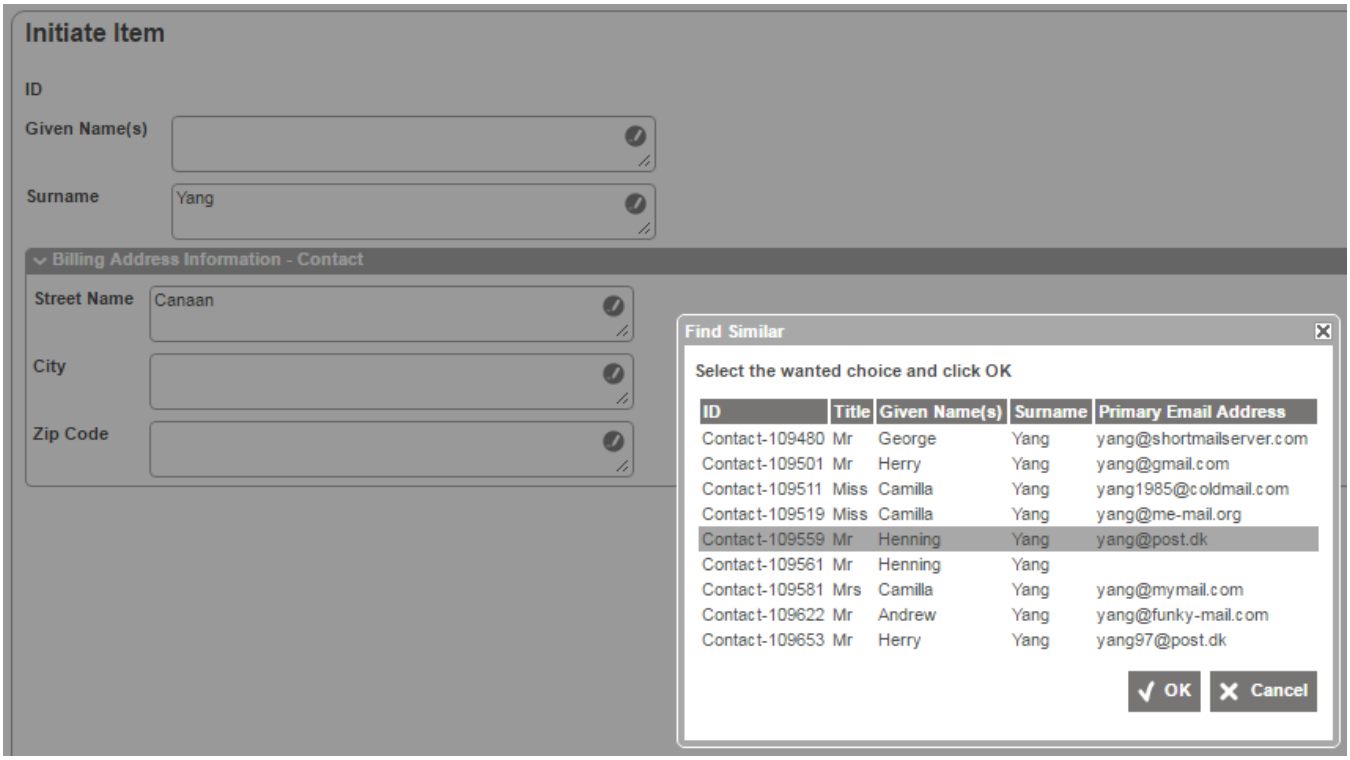


For more information, see the 'Run Matching Algorithms and Update Match Codes Using an Event Processor' section of the Matching and Linking documentation.

Enhanced deduplication handling in Web UI item initiation to support evaluation of referenced objects

To help prevent users from creating duplicate objects, a new Find Similar Action has been introduced in Web UI to search attribute values on both direct objects *and* referenced objects to identify similar objects prior to initiating new ones.

If similar objects are found, the user is provided with the results in a detailed list that includes attribute values for those objects. Having all the info on one screen allows users to compare the data to determine if they can use an existing object or need to create a new one. From the Find Similar dialog, the user may select an existing object, which will take the user directly to the selected object. Alternatively, if no similar objects are identified or if the user decides none are suitable and a new object must be created, they may cancel out of the dialog and proceed with creation of the new objects.



This functionality is enabled via addition of a new Store Single Referenced Target component to Initiate Item screens, and a List Dialog component to the Find Similar Action button. Note that the Find Similar Action is also new, and supersedes the previously existing Check Duplicates Action. The List Dialog component allows users to configure the set of attribute values to be shown to the user when the Find Similar action is taken so that the user can identify if a comparable object exists for the one they intend to create. The Store Single Referenced Target component allows the system to search attribute values on referenced objects and store those values for use if a similar object is not selected for use. Note that when using the Store Single Referenced Target component, both the direct object and the referenced object are created / initiated upon Save / Submit (with an appropriate reference between them).

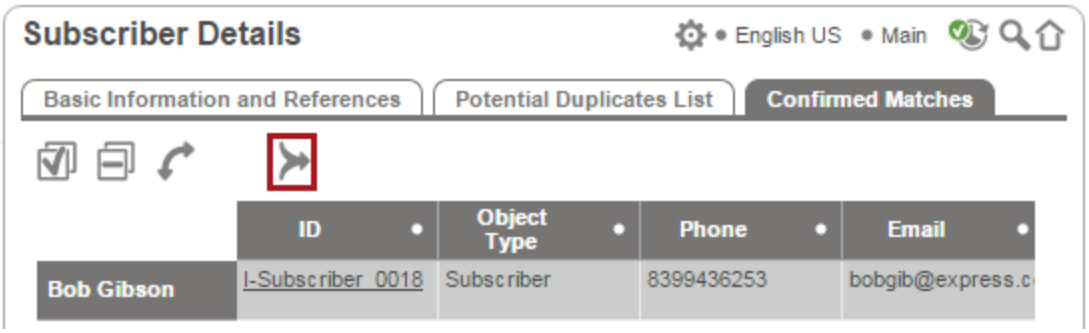
The Find Similar functionality is also available when creating new objects within a Multi-Reference Editor. For more information, see the Enhanced Multi-Reference Editor Functionality in Web UI section of the STEP Trailblazer 8.0 Release Notes for more information.

For information regarding the setup and use of the Find Similar functionality within the Initiate Item component, see the Find Similar section of the Web User Interfaces / Using a Web UI documentation.

New functionality to merge confirmed matches in Web UI

Previously, users could view matched objects in Web UI and determine whether or not they were matches. In order to merge those confirmed matches, however, use of the workbench was required. New functionality introduced with the Trailblazer 8.0 release has taken the Web UI process a step further, allowing users to merge matched objects via a new action button and Web UI screen.

A new Merge Confirmed Match From Grid action is available for the previously existing Confirmed Matches component. A user selects the match from the table to merge into the selected record (displayed first in the table).



The Merge Confirmed Match From Grid action invokes a new Merge Nodes screen interface that mimics the merging functionality found in workbench. Like in the workbench, this Merge Nodes screen type allows users to choose which of the two objects will persist following the merge, which will be deleted, and to select the specific attribute values and outgoing references to be applied to the surviving record. Note that in order to connect the Merge Confirmed Match From Grid action to the resulting Merge Nodes screen, the Merge Nodes screen needs to be mapped to [MAIN] using the new Merge Duplicates Condition.

Compare and Merge Confirmed Matches English US Main

	Bobby Gibson (Bobby Gibson)		Merge Results		Bob Gibson (Bob Gibson)
Name	Bobby Gibson	>	Bobby Gibson	<	Bob Gibson
City	Casper	>	Casper	<	Casper
Country	United States	>	United States	<	United States
Email	bobgib@express.com	>	bobgib@express.com	<	bobgib@express.com
First Name(s)	Bobby	>	Bobby	<	Bob
Last Name	Gibson	>	Gibson	<	Gibson
Phone	8399226253	>	8399226253	<	8398997632
State	Wyoming	>	Wyoming	<	Wyoming
Street	594-3842 Consequat Ave	>	594-3842 Consequat Ave	<	594-3842 Consequat Ave
ZIP	70992	>	70992	<	70992
Subscriber Duplicate	Bob Gibson (Bob Gibson)	>	Bob Gibson (Bob Gibson)	<	

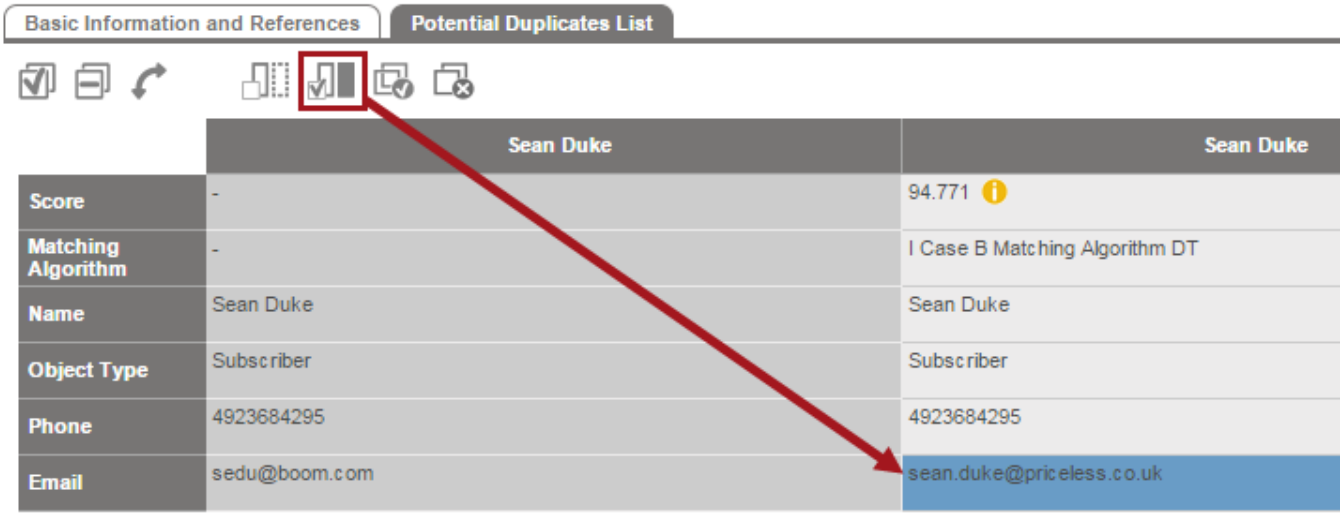
Note that while the Merge Nodes Screen can be used to merge random nodes of the same super type, it is intended for usage with matching algorithms using the Match Action for Identify Duplicates in conjunction with the Merge Confirmed Match From Grid action in the Confirmed Matches component.

For more information, including detailed configuration instructions, see the Merging Confirmed Matches section of the Web User Interfaces / Using a Web UI documentation.

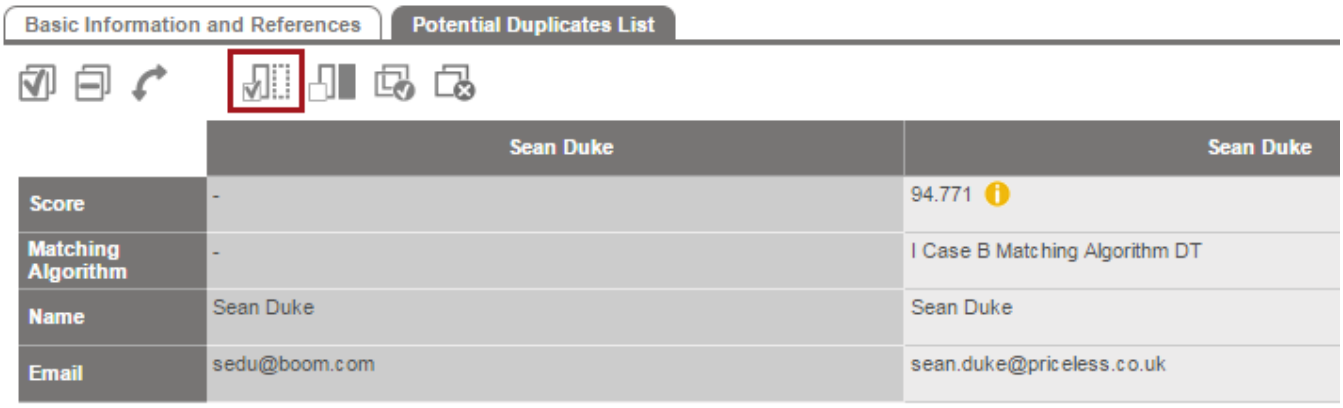
New comparison functionality in Web UI matching and deduplication components

Two new actions have been added to the Deduplication List and Potential Duplicates List Web UI components that enable users to easily identify differences and similarities between matching objects. The Hide Equals action hides all equal values from the user, while the Mark Different action highlights all values that are different. Previously, these actions were only available for the Golden Record Members, Multi Workspace Screen, and Multi Revision Screen components.

In the below image, the 'Mark Different' action has highlighted the attribute 'Email' because the displayed nodes have different values for 'Email'.



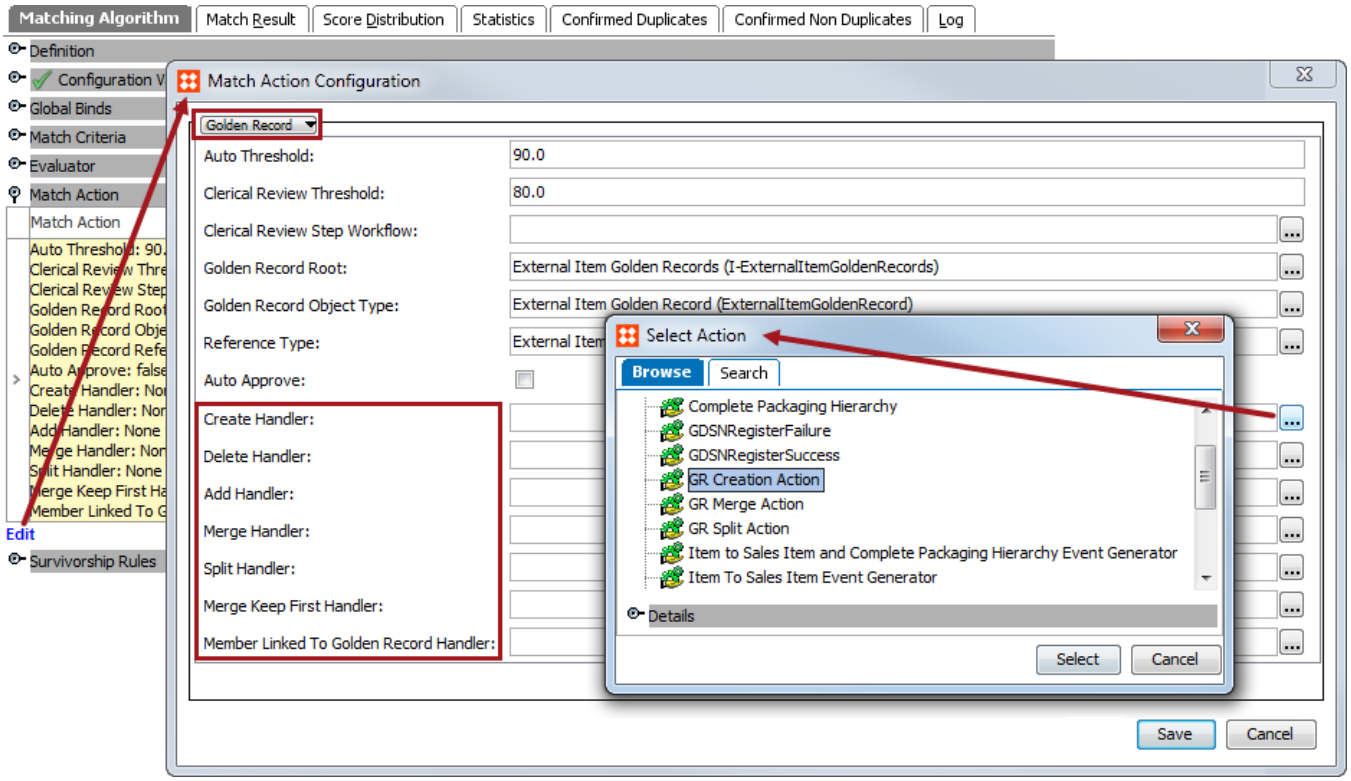
In the below image, the 'Hide Equals' action hid the 'Object Type' and 'Phone' attribute values (pictured above) because the displayed nodes have the same values for those attributes.



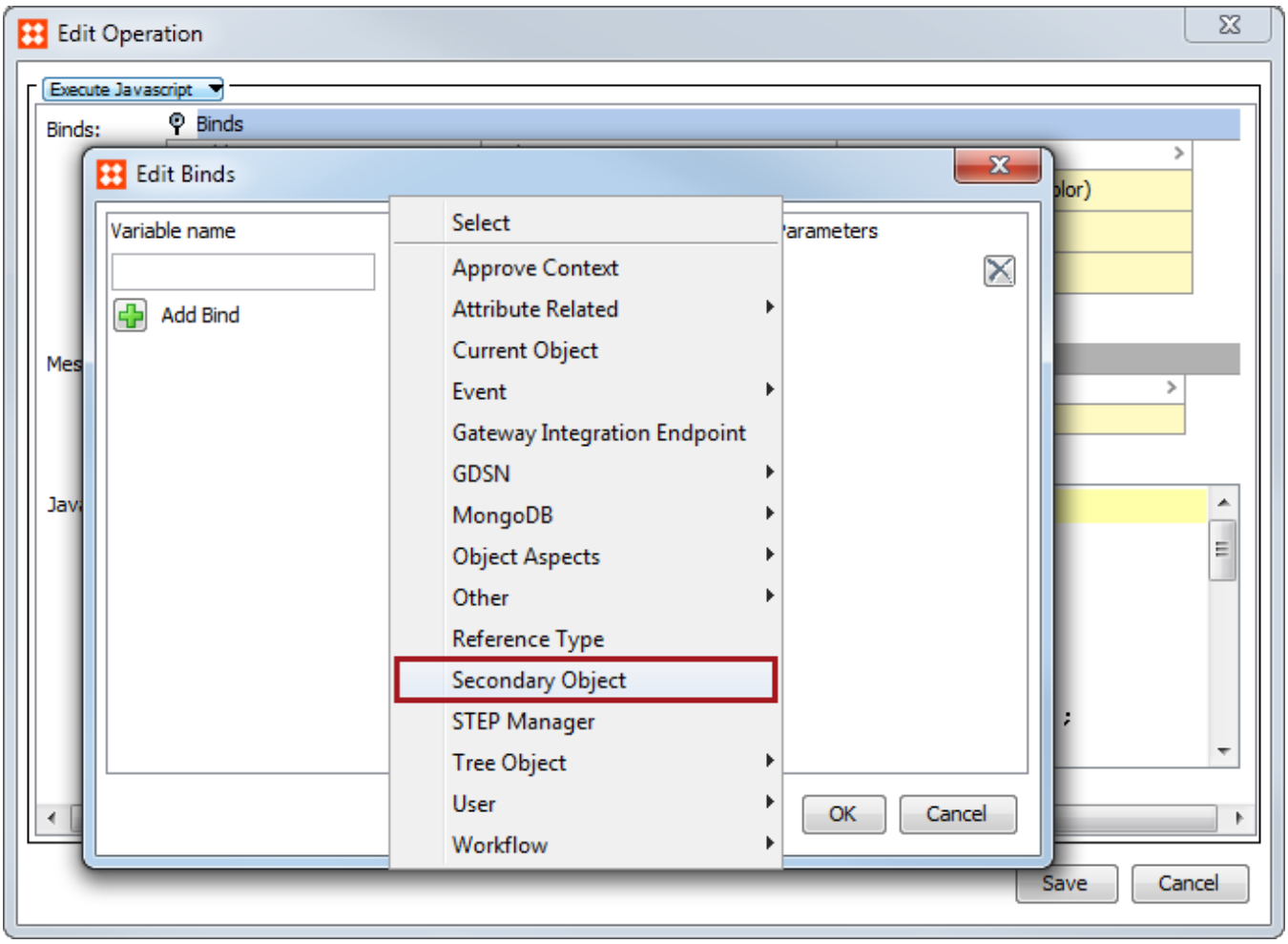
For more information, see the Comparing Data Using Hide Equal and Mark Different section of the Web User Interfaces / Using a Web UI documentation.

New match action handlers allow for business rules to manage golden record events

When editing a matching algorithm, new golden record life cycle handlers allow for a JavaScript business rule to be run when specific events occur. For example, when a golden record is created or deleted, or when two existing golden records are merged, it is often necessary for some additional actions to occur, beyond those defined by the survivorship rules.



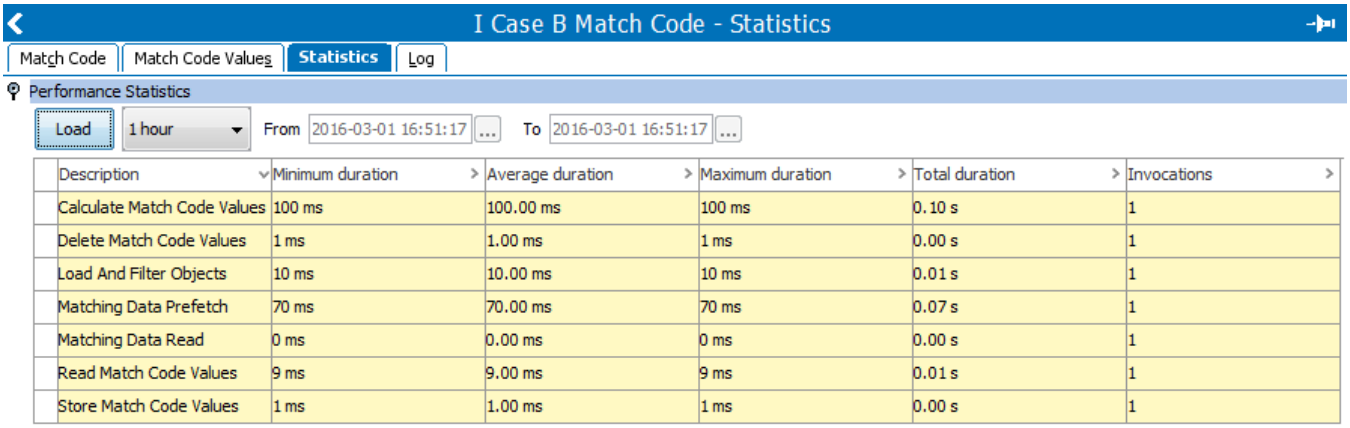
As part of this, the Execute JavaScript bind set now includes a new 'Secondary Object' bind type which allows access to two objects, such as two golden records in merge and split cases. For example, using a business action when merging two golden records, the two golden records to be merged are accessed using the Current Object and Secondary Object binds.



For more information, see the Updating Golden Records section of the Matching and Linking documentation.

Statistics tab now available on match codes

Now that Match Codes can update via an event processor, a Statistics tab has been added to provide users with measurements on how the process performed. Previously, this tab was only available for Match Algorithms. Note that the Statistics tab will only provide statistics when match codes are generated / updated via an event processor, and not when match codes are generated / updated via the right-click context menu found on match codes.



Description	Minimum duration	Average duration	Maximum duration	Total duration	Invocations
Calculate Match Code Values	100 ms	100.00 ms	100 ms	0.10 s	1
Delete Match Code Values	1 ms	1.00 ms	1 ms	0.00 s	1
Load And Filter Objects	10 ms	10.00 ms	10 ms	0.01 s	1
Matching Data Prefetch	70 ms	70.00 ms	70 ms	0.07 s	1
Matching Data Read	0 ms	0.00 ms	0 ms	0.00 s	1
Read Match Code Values	9 ms	9.00 ms	9 ms	0.01 s	1
Store Match Code Values	1 ms	1.00 ms	1 ms	0.00 s	1

For more information, see the 'Automatically Generate Match Code Values and Run Matching Algorithms' section of the Matching and Linking documentation.

Smartsheet Enhancements

Summary

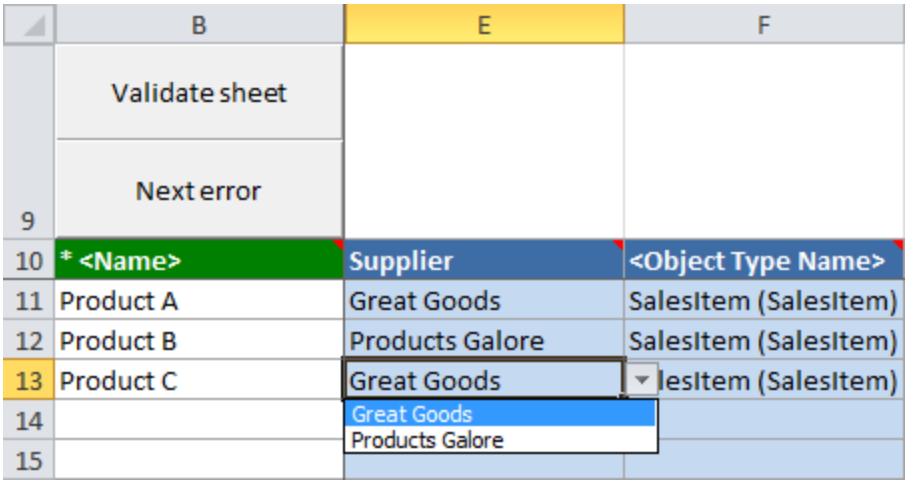
Enhancements to existing Smartsheet functionality have been made in three areas:

- Ability to load data for multiple Suppliers in a single Smartsheet, via addition of an optional Supplier dropdown
- Enhanced Smartsheet security via a number of changes, including changes to macro access in Visual Basic
- Ability to display conditionally mandatory attributes

Details

New option to load data for multiple suppliers simultaneously

Users that belong to multiple supplier groups can now, within a single Smartsheet, load data for all suppliers to which they have access. Once configured, a supplier selector column will appear on the Smartsheet template. Users can select suppliers on a row-by-row basis, with each object being linked to the selected supplier upon import.



For more information on configuring this column, see Step 3 of the 'Creating Smartsheet Data and Template Configurations in the Export Manager' section in the 'Excel Smartsheet' documentation.

For information on how to export a Smartsheet with a supplier selector column, see the 'Initiating and Maintaining Products in the Supplier Portal Using Smartsheets' section in the 'Excel Smartsheet' documentation.

Note that the 'Enable all-view for users that are a member of multiple suppliers' setting must be set to 'Y' in the System Settings for this functionality to be available. For more information on this setting, see the 'New Multi-Supplier View' section of the STEP Trailblazer 7.3 Release Notes.

New support for conditionally mandatory attributes in workflows

It is now possible to enforce the mandatory status of an attribute or attribute group via business conditions set on a state or transition in a workflow. When maintaining objects in a Smartsheet that has been exported for a workflow state (i.e. from the WebUI Tasklist), any cells containing attributes that are conditionally mandatory for that particular state are highlighted blue. Additionally, unless the condition driving the mandatory status of the attributes returns 'False', the user must enter values for all applicable attributes before the sheet can be validated.

For more information on conditionally mandatory attributes, see the 'New Option to Make Attributes Conditionally Mandatory Within a Workflow' section of the STEP Trailblazer 8.0 Release Notes.

Security enhancements

A number of enhancements have been made to increase security of Smartsheets. For additional information on these updates, see the Security Enhancements section of the Trailblazer 8.0 Release Notes.

Enhanced Business Rule Functionality

Summary

Existing business rule functionality has been updated to include several new binding options, as well as improved error messaging for end users.

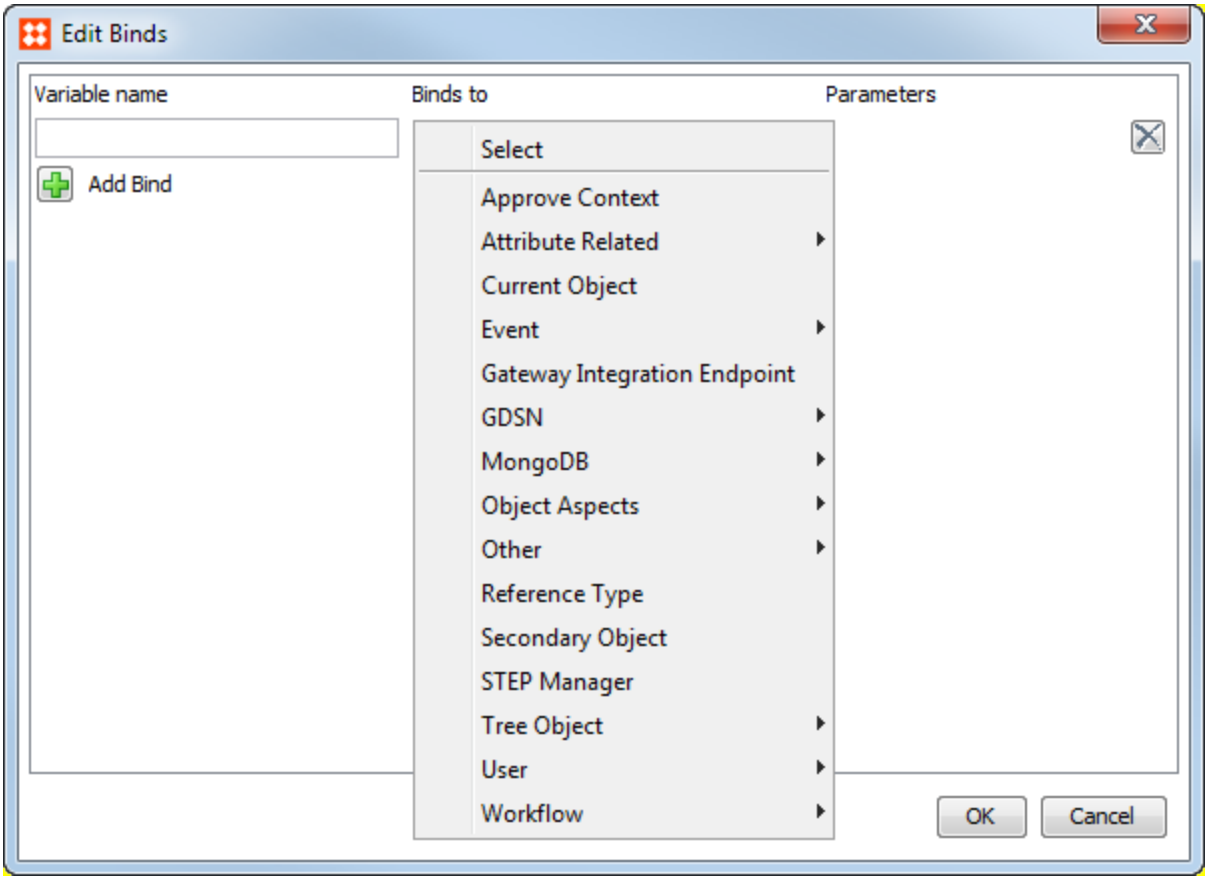
Details

New JavaScript Binds

Several new binds have been added for use in JavaScript business rules, allowing for the creation of more robust (and simpler to read) business rules. The new options are briefly described below:

- Asset - binds the selected asset to the variable
- Attribute - binds the selected attribute to the variable
- Attribute Group - binds the selected attribute group to the variable
- Classification - binds the selected classification to the variable
- Entity - binds the selected entity to the variable
- GDSN Product - binds the selected GDSN product for use in the 'Pre action business action' parameter or in the validation conditions
- GDSN Provider Datapool - binds the selected GDSN provider datapool for use in the 'Pre action business action' parameter or in the validation conditions
- GDSN Recipient - binds the selected GDSN recipient for use in the 'Pre action business action' parameter or in the validation conditions
- GDSN Target Market - binds the selected GDSN target market for use in the 'Pre action business action' parameter or in the validation conditions
- GDSN Validation Logger - gives access to the GDSN validation logger for use in the 'Pre action business action' parameter or in the validation conditions
- List of Values - binds the selected list of values to the variable
- Product - binds the selected product to the variable
- Reference Type - binds the selected reference type or link type to the variable
- Secondary Object - for business rules that work on two objects, this binds the secondary object, while Current Object binds the first object; currently, only business rules used as handlers in the matching component work on more than one object
- Unit - binds the selected unit to the variable
- Unit Group - binds the selected unit group to the variable
- User - binds the selected user to the variable
- User Group - binds the selected user group to the variable

In addition, in order to provide simpler navigation and better organization of the binding options, all available binds are now grouped into categories.



For more information on JavaScript business rules and binds, see the Execute JavaScript section of the Business Rules documentation.

New option to return messages to the user from business actions

Previously, the Messages field was only available for business conditions. Now both business conditions and business actions can include user-defined messages. When a business action returns an error message, processing is stopped and any updates are rolled back. To highlight this difference between the semantics of a condition and an action returning an error message, the 'return' statement is used in a condition (processing may continue to evaluate other conditions), but the 'throw' statement is used in an action (processing of the overall transaction is terminated and a roll-back performed at that point).

There are use cases where this will streamline the writing and execution of business rules by mixing validations and data updates, especially if the conditions include data, as it appears after the updates have been made.

However, it is strongly recommended that, whenever possible, conditions (which are read-only) and actions (which contain updates) continue to be separate, and that any validation-related error messaging is performed only in the business condition. This will ensure the best performance. Additionally, there are situations where conditions can be evaluated dynamically to provide on-the-fly feedback to users prior to performing an expected action (e.g., enabling / disabling action buttons based on condition results).

In addition, in order to make business rule messages more user-friendly, the following updates and enhancements have been made:

- Error message presentation across the Web UI and workbench has been aligned.
- New line handling is now available in the message editing dialog. Use '\n' in the editor to insert a new line in the message displayed to the end user.
- Name of the business rule is no longer included in messages by default. To include the rule name in the message, write it into the business rule return message.

For more information on messages in business rules, see Translatable Messages for JavaScript Business Rules documentation.

New Revisability and Revision Comparison Features

Summary

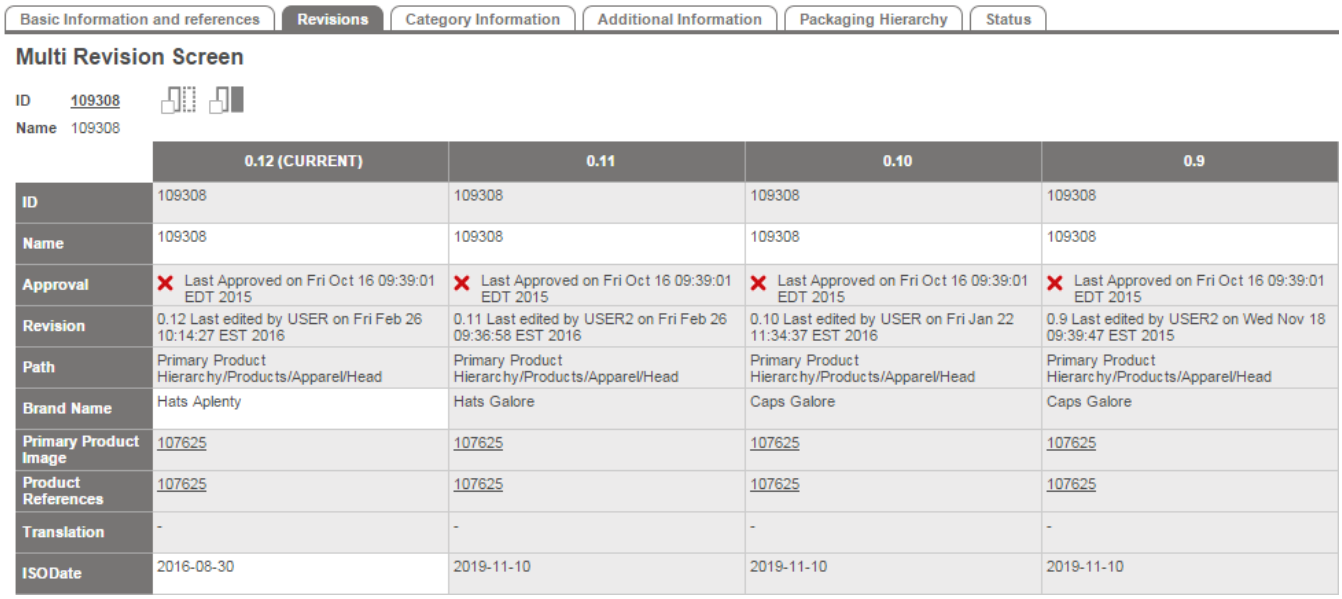
Several updates have been made in regards to revision history and the ability to view revisions in workbench and in Web UI. These include:

- New Web UI component to compare revisions, offering similar functionality to the revision compare view in workbench
- New configuration option to specify how often revisions should be automatically generated when only a single user is acting on an object, ensuring that revisions are captured throughout the work process
- Integration endpoints are now revisable, allowing for improved auditing and the ability to revert to previous configurations

Details

New revision comparison tool in Web UI

A new screen type (Multi Revision Screen) has been added to Web UI that, once configured, shows revision information on the attribute values and outbound references of an object. This screen and its child component, the Multi Revision Editor table, need to be configured to display the desired attributes and references to compare. Other configurable display settings include data filtering options that can be used to hide equal values and highlight differences. This can be especially useful to quickly evaluate an object for approval, for example.



	0.12 (CURRENT)	0.11	0.10	0.9
ID	109308	109308	109308	109308
Name	109308	109308	109308	109308
Approval	✗ Last Approved on Fri Oct 16 09:39:01 EDT 2015	✗ Last Approved on Fri Oct 16 09:39:01 EDT 2015	✗ Last Approved on Fri Oct 16 09:39:01 EDT 2015	✗ Last Approved on Fri Oct 16 09:39:01 EDT 2015
Revision	0.12 Last edited by USER on Fri Feb 26 10:14:27 EST 2016	0.11 Last edited by USER2 on Fri Feb 26 09:36:58 EST 2016	0.10 Last edited by USER on Fri Jan 22 11:34:37 EST 2016	0.9 Last edited by USER2 on Wed Nov 18 09:39:47 EST 2015
Path	Primary Product Hierarchy/Products/Apparel/Head	Primary Product Hierarchy/Products/Apparel/Head	Primary Product Hierarchy/Products/Apparel/Head	Primary Product Hierarchy/Products/Apparel/Head
Brand Name	Hats Aplenty	Hats Galore	Caps Galore	Caps Galore
Primary Product Image	107625	107625	107625	107625
Product References	107625	107625	107625	107625
Translation	-	-	-	-
ISODate	2016-08-30	2019-11-10	2019-11-10	2019-11-10

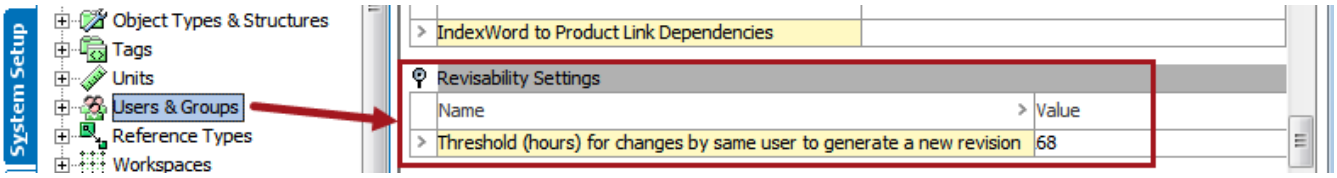
For more information on this revision history functionality, see the Multi Revision Screen section of the Web User Interfaces / Using a Web UI documentation.

New option to specify timing of auto-creation of revisions

Previously, if the same user made successive changes to a revisable object, only the first change they made would generate a new revision of the object. This meant that when only a single user acted on an object, revisions of the object were only generated if the user selected to do so manually, though the user was actively making data changes. In order to get an automatic revision, a second user would need to act on the object. In practice, this meant that if an object that only a single user had been working with had to be reverted, there often was not a recent revision to revert to.

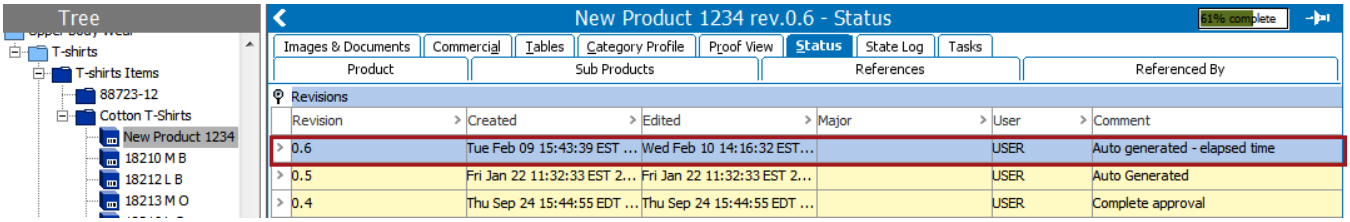
Now by specifying the timing of creation of automatic revisions, even if the same user makes all changes to a revisable object, a revision is created once the set number of hours is exceeded from when the object was first touched after the last revision was made. This prevents an excessive number of revisions from being created, while still keeping records of important changes.

The global default number of hours for creating automatic revisions for all revisable objects is set to 168, or one week, before a revision is created. This number can be changed via the System Settings (Users & Groups node) under the Revisability Settings flipper.



Note that the minimum allowable number of hours is 24, though there is no maximum. If the threshold parameter is left blank, then it is considered disabled, which allows for backwards compatibility. In this case, all revisions must be made manually or due to different users touching the revisable object.

When an object has an automatic revision made due to the threshold time elapsing, it is noted in the comments column on the Status tab.

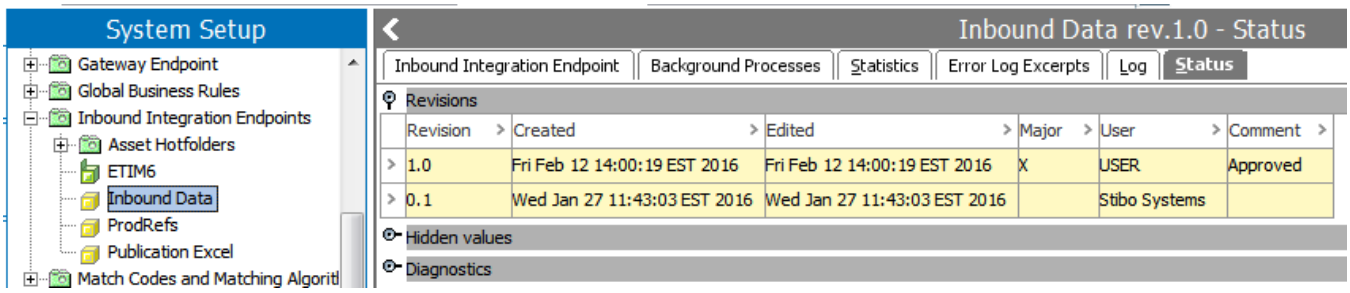


Should a user want to create a revision before the set number of hours passes, they can still do so manually by selecting Make Revision from the Maintain menu.

For more on revisions, see Managing Revisions in STEP in the System Setup / Super User documentation.

Integration Endpoints now under revision control

All types of Integration Endpoints (inbound, outbound, and gateway endpoints) are now revisable and equipped with a Status tab. From the Status tab, users can revert to past revisions and purge old revisions.



Note that when an IEP is reverted to an earlier version, the IEP stops running and needs to be restarted. Additionally, in order for a revived IEP to work without errors, all processing engines, formatters, pre-processors, post- processors, attributes, and object types that were related to or referred to in the IEP must still be available, else the user will encounter errors when the IEP is run. Should an IEP be deleted, it can be retrieved from the System Setup Recycle Bin, and must be restarted again once revived.

Integration endpoint configurations can often become quite complex. It is therefore recommended that users make major revisions manually, using the available comment functionality to specify the changes in configuration. This allows users to return to well-defined previous versions of an endpoint if needed.

As part of this change, standard stand-alone event queues are also made revisable and include Status tabs. However, asset push event queues are exempt from this and remain unchanged.

For more information on revision functionality, see Managing Revisions in STEP in the System Setup / Super User documentation.

Enhanced Multi-Reference Editor Functionality in Web UI

Summary

Several enhancements have been made to improve the user experience when using the Multi-Reference Editor component in Web UI. These new features include options to:

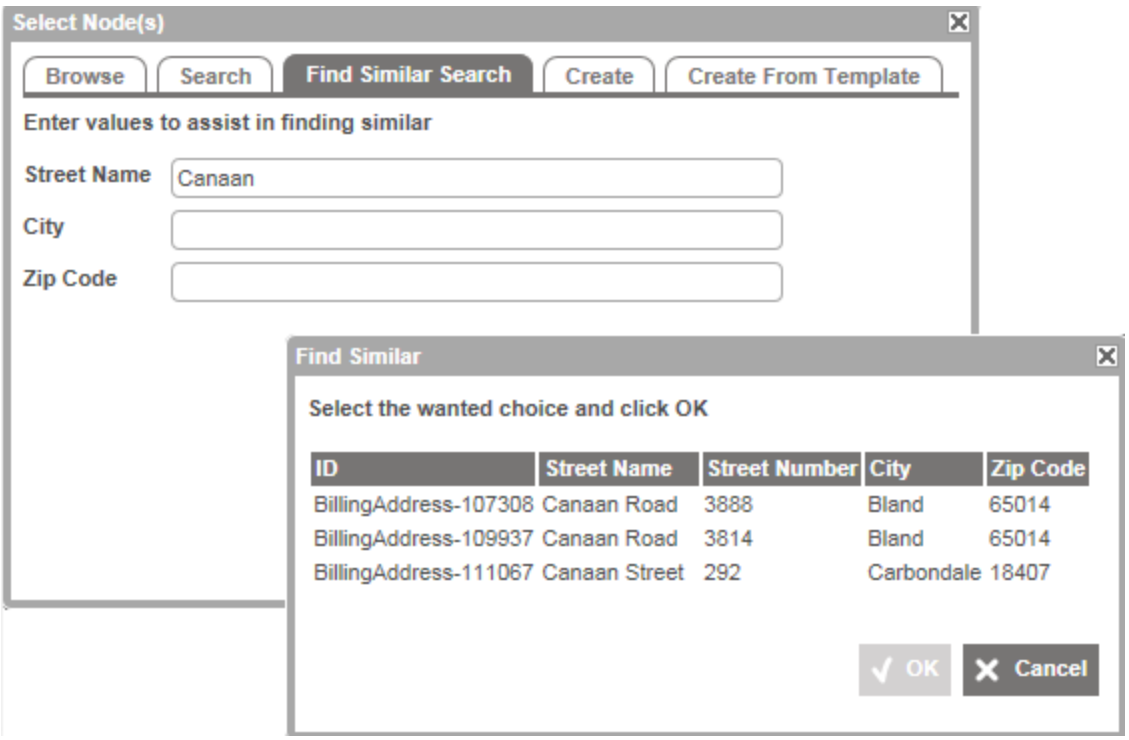
- Determine if similar objects exist before adding new references
- Quickly identify a template to use when creating new objects
- Easily add data by duplicating existing references and target objects
- Efficiently add references using type-ahead and multi-select functionality

Details

New option to input attribute values and search for matching objects when creating references

To help prevent users from creating duplicate objects in the STEP system, users can now use Find Similar functionality to search for and identify similar objects prior to adding references and creating target objects within a Multi-Reference Editor. This allows users to search for objects on a more granular level, rather than just the standard Search functionality where the system identifies objects based on a name or ID match only.

When using the Add References Action, the Find Similar functionality can be configured to display on a new Find Similar Search tab. Attribute values of both direct objects and target objects (based on a specific reference type) can be configured as searchable fields. If similar objects are found, a configurable results list will display attribute values for those objects. This allows users to compare the results to determine if they can use an existing object. If an existing object cannot be found, the user can create a new one using the Create or Create from Template functions.

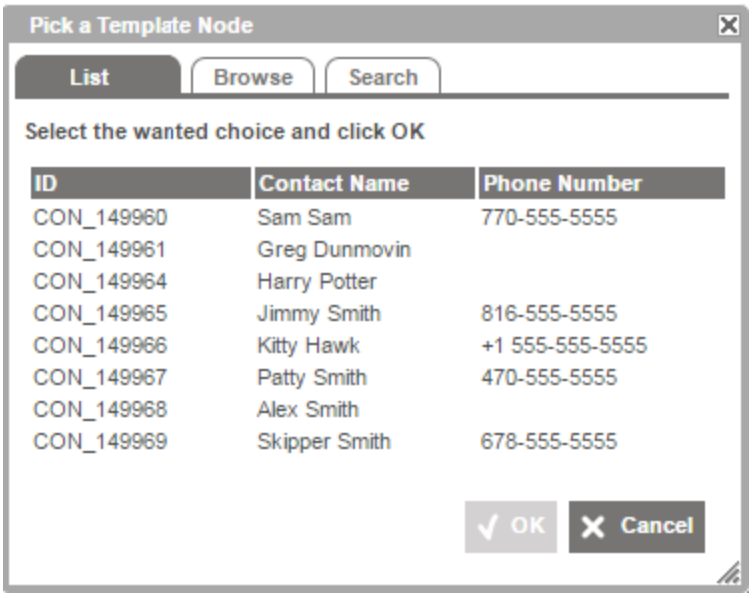


The Find Similar functionality is also available in Initiate Item screens. For more information, see the New Deduplication Features section of the STEP Trailblazer 8.0 Release Notes for more information.

For information regarding the setup and use of the Find Similar functionality, see the Find Similar section in the Web User Interfaces / Using a Web UI documentation.

Improved usability in Create from Template option

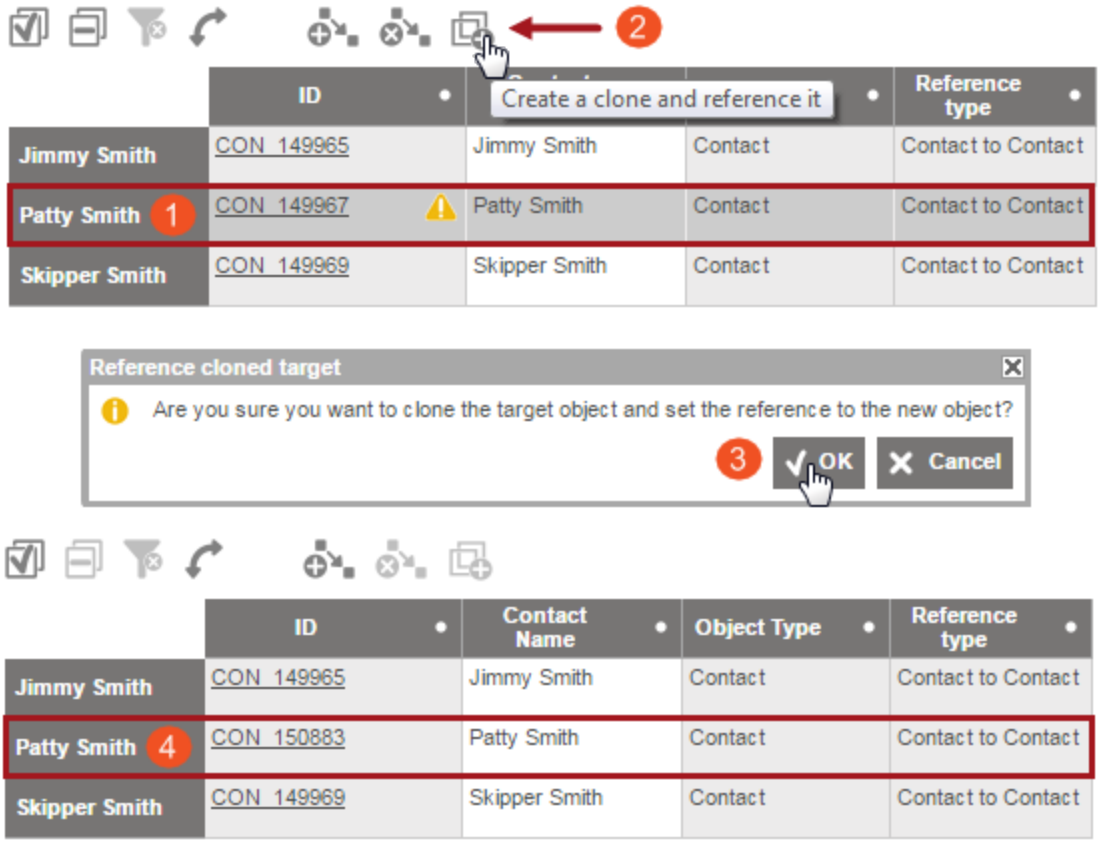
When using the 'Add reference' action and creating a new reference object from a template, three tabs can be configured to display when picking a template. They are Browse, Search, and a new List tab. In addition to displaying a list of templates (similar to the Browse tab), the List tab is configurable and users can choose to include attributes within the tab view, making it easier to identify the template that best fits the new object.



New option to duplicate and edit references and target objects

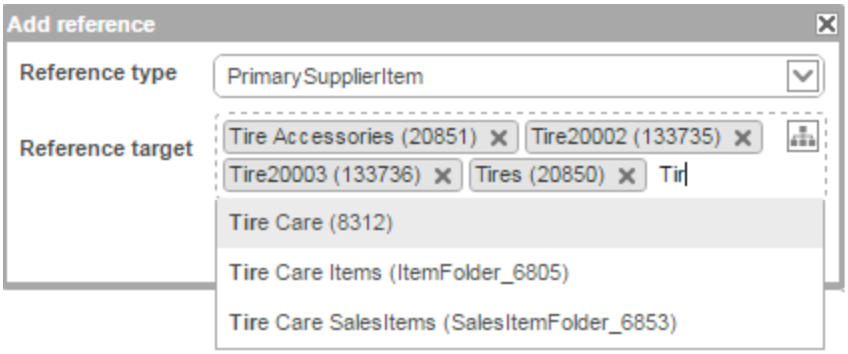
A new action (Reference Cloned Target Action) has been added to the Node List Child Component Properties that allows a user to select an existing reference target and duplicate / clone it, creating a new object that includes the original attribute values and references. This is particularly useful in making sure a user does not inadvertently edit shared data that could have implications to other objects with the same reference. When a user needs to make changes to data that is shared (e.g., the object is referenced by multiple objects), they can clone the existing object and freely edit the data on the clone, without fear of impacting the other objects with references to the original object. An example is shown below.

Note that users can only clone one object at a time, and objects being cloned must use auto-generated IDs.



New multi-select functionality when adding references

It is now possible for users to multi-select reference objects and add them simultaneously. Previously, all reference objects could only be added one at a time. In addition, the 'Reference target' and 'Reference source' value fields within the 'Add reference' dialog now support type-ahead functionality and handle each selection individually. This allows users to easily add and remove references without having to click through various hierarchies and/or folders.



For more information regarding all of the Multi-Reference Editor functionality, see the Multi-Reference Editor section of the Web User Interfaces / Using a Web UI documentation.

Web UI Node List Enhancements

Summary

A number of enhancements have been made to the Node List functionality within Web UI. New features include:

- The ability for users to customize how objects are identified in a Node List
- More comprehensive search capabilities
- Conveniently displayed item count

Details

Enhanced header options to allow for ID or attribute value display

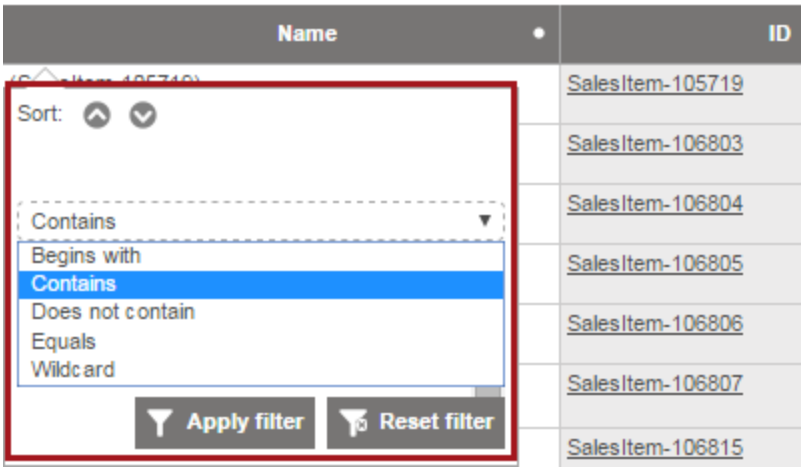
Previously, Web UI Node Lists (including Task Lists and Advanced Search results lists) used object name as the display header, with no option to configure the field. To provide greater flexibility in the display to end users, a new parameter is now available in the Web UI designer called 'Title Display'. The parameter is found under the Advanced heading in the Multi Edit Display Mode and Compare Display Mode properties. This parameter allows designers to select to identify objects in a Node List by object name, ID, or by an attribute value. If an attribute is selected that is not valid for the object or does not have a value populated, the object name will be displayed (or object ID if name is not populated). Note that the Title Display parameter defaults to the object name selection to ensure backwards compatibility for existing Web UIs.

	Thumbnail	ID	Object Type	Path	Title
Red		20695	Item	Primary Product Hierarchy/Products/Footwear/Shoes/Pumps/Pumps Items/Heels - High: 3" or higher/Red Pumps	Red Pumps
(20862)		20862	Item	Primary Product Hierarchy/Products/Hardware/Tools/Task Lighting/Flashlights/Flashlights Items/(20862)	(20862)
Yellow		20883	Item	Primary Product Hierarchy/Products/Hardware/Tools/Task Lighting/Flashlights/Flashlights Items/190 Lumen LED Cyber Light	190 Lumen LED Cyber Light
Bed Frame Set		22163	SalesItem	Primary Product Hierarchy/Products/Furniture/Bedroom/Beds/Beds Sales Items/Bed Frame Set	Bed Frame Set

For more information on Web UI components and configurations, see the Web User Interfaces / Web UI Setup and User Guide documentation.

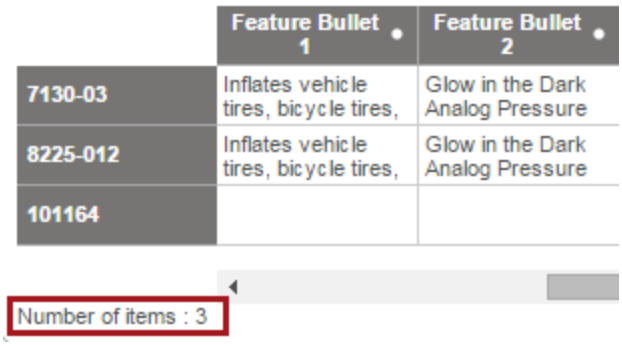
Enhanced filtering functionality to search full values

Previously, Node Lists with filtering enabled allowed users to search and filter for objects with a value beginning with the entered search term. This functionality has been expanded to allow users to select how the search term is applied by selecting Begins with, Contains, Does not contain, Equals, or Wildcard. By default, the Contains option is utilized if no selection is made. The new filtering options are enabled if the 'Enable Filtering' parameter is checked in the Web UI designer for Multi Edit Display Mode, Table Display Mode, or Compare Display Mode.



Added number of items count

When viewing data in Multi Edit Display Mode (Multi edit view) and Compare Display Mode (Compare view), the number of items in the Node List is now displayed at the bottom of the table. This is similar to the functionality that exists for the List view.



If the number of items to be displayed exceeds the limit of the server cache size, the user is informed that only a subset of the items is present.

New Option to Make Attributes Conditionally Mandatory Within a Workflow

Summary

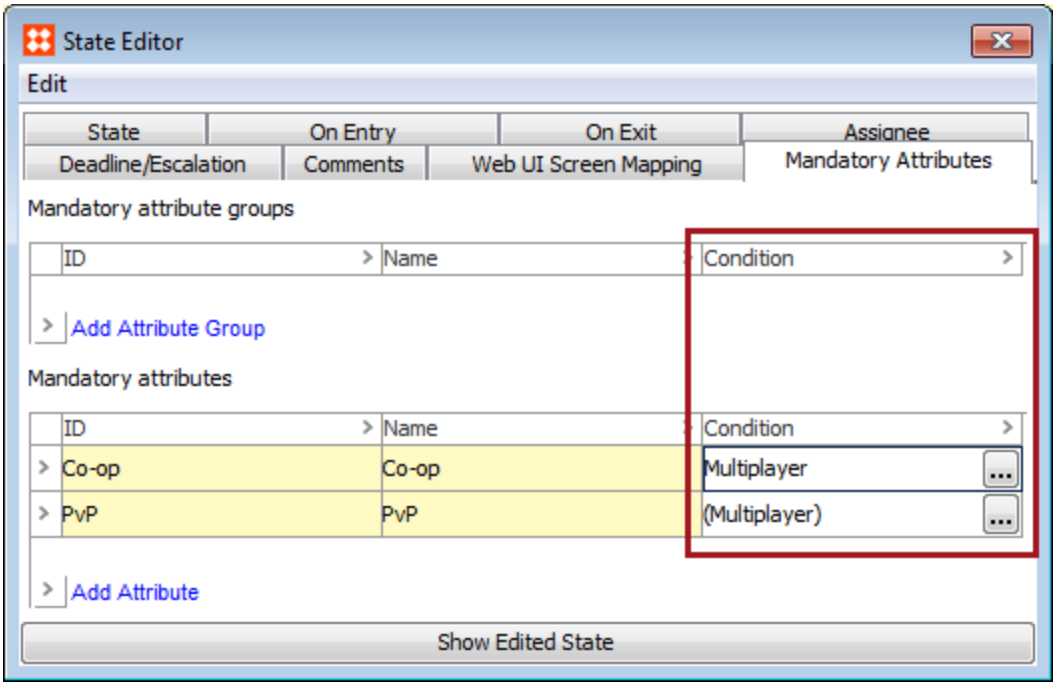
It is now possible to determine the mandatory status of an attribute or attributes in a group via a business condition set on a state or transition in a workflow. This allows users to make attributes mandatory only under specific conditions (based on other data on the object), and to have these conditions evaluated on the fly and dynamically reflected as the user works with the data.

Details

Previously, the mandatory status for an attribute was simply a static setting that could be configured on a state or transition in a workflow. Any attributes specified as mandatory on the workflow state / transition had to be populated for the object to be able to progress in the workflow.

The mandatory status of an attribute (or all attributes in an attribute group) can now be determined via business conditions set on a state or transition in the workflow. Mandatory attributes configured with a condition will remain mandatory unless that condition returns false, indicating that the condition was not met and the attributes in question are not required when proceeding to the next state in the workflow. Like with standard mandatory attributes, if conditionally mandatory attributes are missing values when attempting to submit an object to the next state, the object is prevented from progressing through the workflow and the user receives a message listing the attributes that have missing mandatory values.

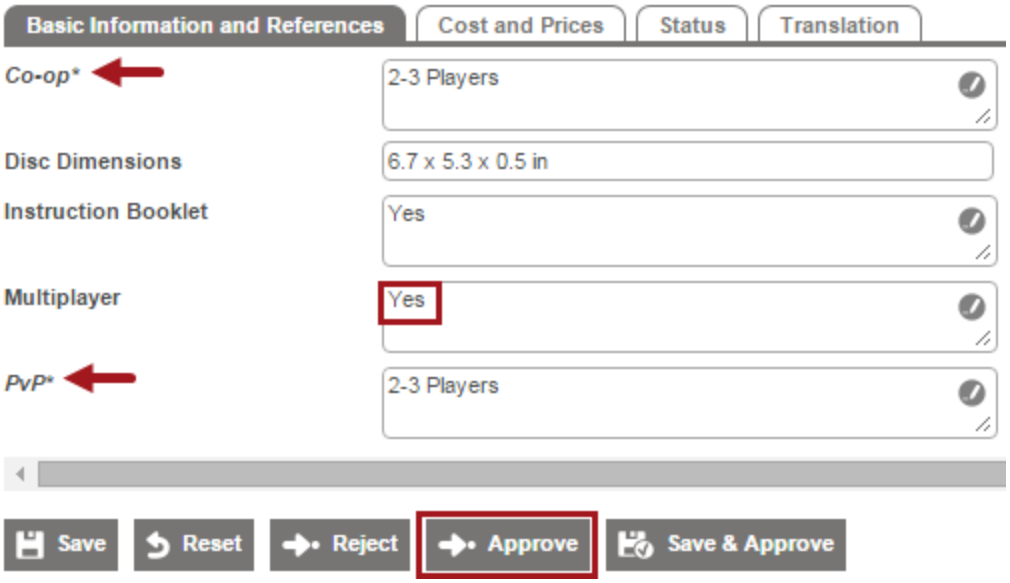
The below examples use this very basic business condition: If the value of the attribute 'Multiplayer' is 'Yes', the attributes 'Co-op' and 'PvP' are mandatory. Otherwise, 'Co-op' and 'PvP' are not mandatory. It is important to note that the use of business rules to determine mandatory status of an attribute should be done with care as the performance of the dynamic behavior of the editors could be impacted if highly complex business rules are used.



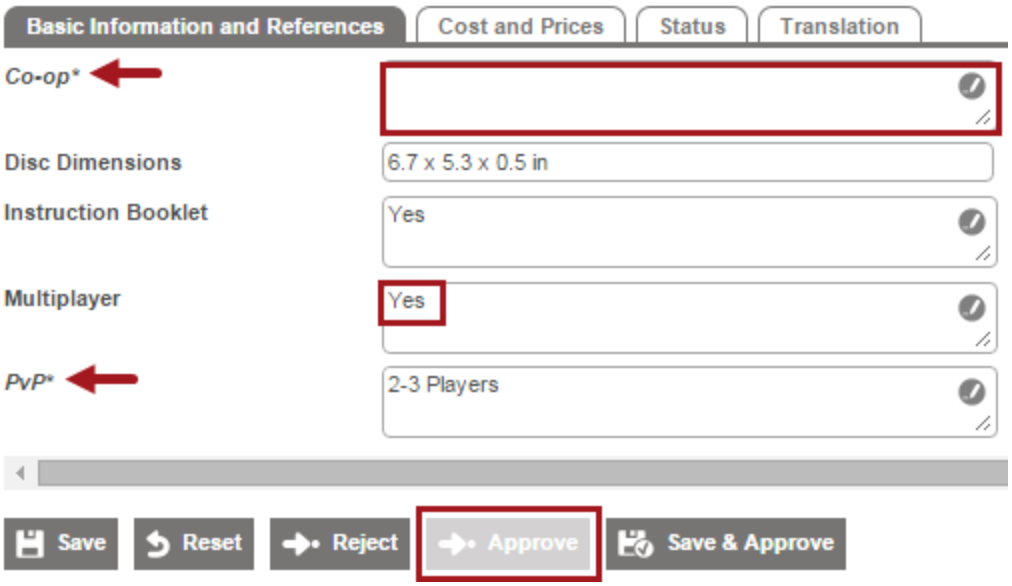
In Web UI, conditionally mandatory attributes are evaluated on the fly as the user works with the data, with a change in mandatory status being reflected on the screen in real time. This allows users to react immediately, without having to submit and receive an error message. In order to display these dynamic changes, the attribute values driving the condition need to be bound to that condition in the business rule configuration. Also note that the condition driving the mandatory status of an attribute can take more than just attributes into account. However, if something else is driving the condition, such as a reference, the page will need to be refreshed in order update the interface. Additionally, conditionally mandatory attributes on transitions do not have visual indicators to end users as they are not evaluated until the transition is selected.

In Node Editors, any attributes that are currently mandatory are marked with an asterisk. If the condition returns false due to changes in data on the page, these indicators vanish. Additionally, if there are any missing attributes that are currently mandatory, the Submit / Approve button will be locked.

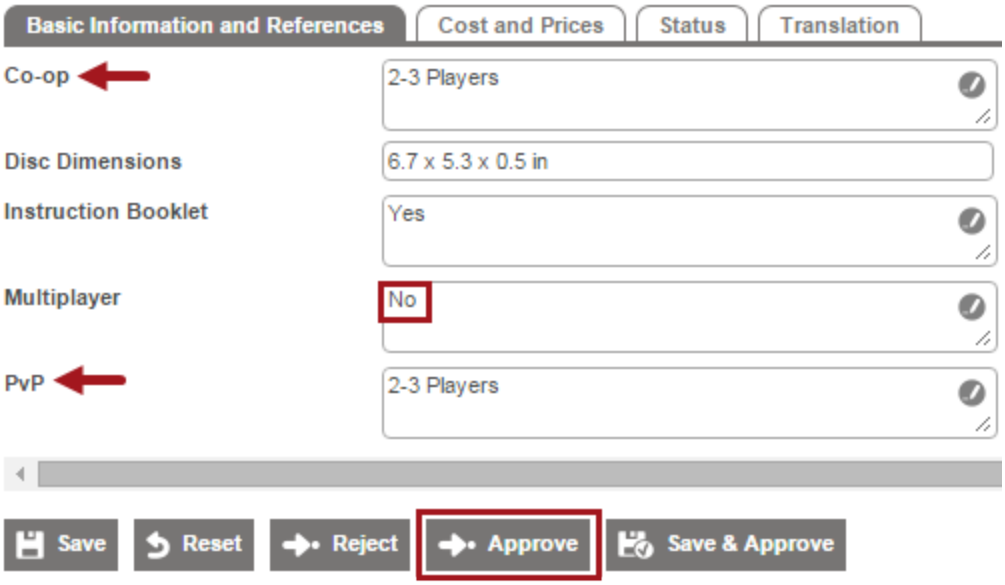
In the below image, the condition is returning true, so 'Co-op' and 'PvP' are mandatory (and are marked with asterisks). Since they have values, the Submit / Approve button is not locked.



In the below image, the condition is returning true, so 'Co-op' and 'PvP' are mandatory (and are marked with asterisks). Since 'Co-op' is missing a value, the Submit / Approve button is locked.



In the below image, the condition is returning false, so 'Co-op' and 'PvP' are not mandatory (and are not marked with asterisks). Since it does not matter if they have values, the Submit / Approve button is not locked.



On Node Lists using Multi Edit Display Mode, conditionally mandatory attributes are indicated by highlighting the cell blue. As with the Node Editor screen, the mandatory status is dynamically evaluated so if the condition returns false, the highlighting disappears.

In the below image, the condition is returning true for the Space Adventure Game, so 'Co-op' and 'PvP' are mandatory (and are highlighted blue). Clicking Submit / Approve if either mandatory value is missing will result in a warning message listing which mandatory attribute(s) are missing. If both attributes have values, they are free to move on to the next state.

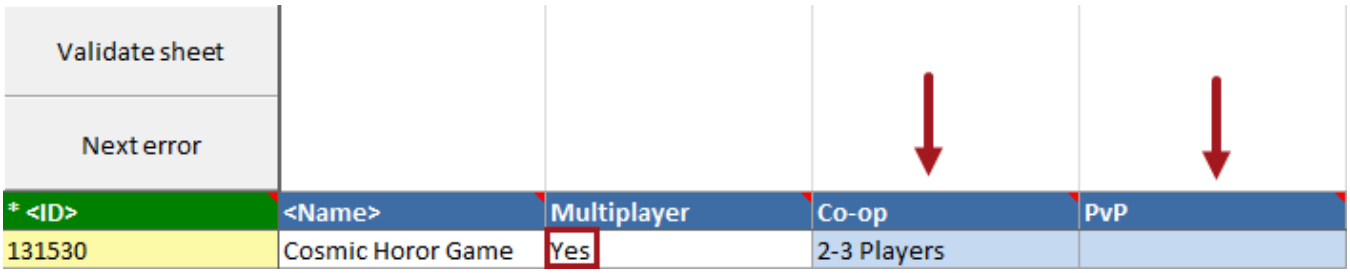
	ID	Title	Co-op	PvP	Multiplayer
Cosmic Horror Game	131530	Cosmic Horror Game	2-3 Players		Yes
Space Adventure Game	131536	Space Adventure Game	2-6 Players	2-16 Players	Yes
80's Slasher Game	131542	80's Slasher Game			No

In the below image, the condition is returning false for the Space Adventure Game, so 'Co-op' and 'PvP' are not mandatory (and are not highlighted). This object is free to move on to the next state, even if 'Co-op' and 'PvP' don't have values.

	ID	Title	Co-op	PvP	Multiplayer
Cosmic Horror Game	131530	Cosmic Horror Game	2-3 Players		Yes
Space Adventure Game	131536	Space Adventure Game	2-6 Players	2-16 Players	No
80's Slasher Game	131542	80's Slasher Game			No

Smartsheets can also indicate the mandatory status of attributes based on conditions. If exported on the relevant state of the workflow, any attribute values that are currently mandatory are highlighted blue. If changes are made to the attribute values driving the condition, the sheet needs to be validated to reflect those changes.

In the below image, the condition is returning true, so 'Co-op' and 'PvP' are mandatory (and are highlighted blue). The sheet can be validated without errors.



In the below image, the condition is returning false, so 'Co-op' and 'PvP' are not mandatory (and are not highlighted). The sheet can be validated without errors.

* <ID>	<Name>	Multiplayer	Co-op	PvP
131530	Cosmic Horor Game	No	2-3 Players	

In the below image, a validation was run and reported the object and its missing attributes by highlighting their cells red. The sheet failed because condition was true and 'PvP' was missing a value.

* <ID>	<Name>	Multiplayer	Co-op	PvP
131530	Cosmic Horor Game	Yes		

Support for conditionally mandatory attributes is also available in the workbench, though visual indicators are not managed in relation to this. When attempting to submit an object, conditionally mandatory attributes are evaluated and an error is presented to the user listing any missing conditionally mandatory attributes (in the same manner as standard mandatory attributes are reported).

For more information, see the Conditionally Mandatory Workflow Attributes section of the Workflows documentation.

Improved Consistency of Attribute Value History and Help Text Options in Web UI

Summary

The attribute help text and attribute value history functionality in Web UI have been updated in the following ways:

- To provide consistency among icons and functions in Web UI, attribute help text is now available on attributes via the yellow information icon
- Attribute value history has been given a unique history icon to avoid overlapping functions of the information icon
- The presence / absence of attribute value history is now configurable so that Web UI designers can make the decision on whether or not to expose this information to end users
- Attribute help text is no longer limited to object detail components and is now available on list-based components

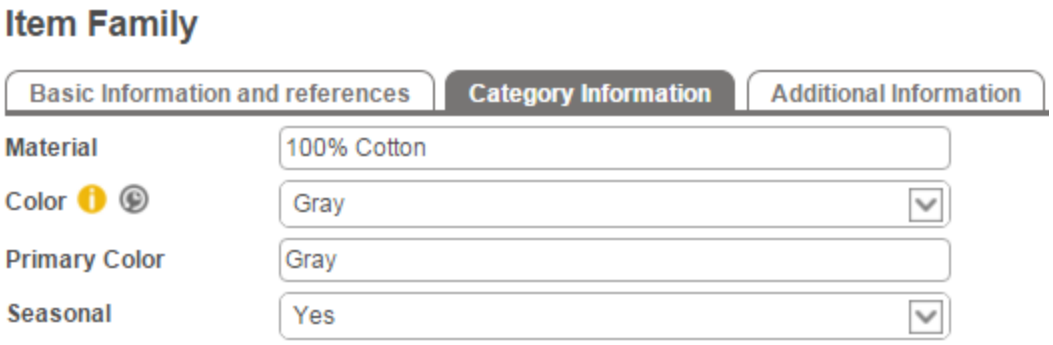
Additional information on these changes is provided below.

Details

Improved attribute value history and attribute help text display

Previously, attribute value history was available by hovering over and clicking the yellow information icon, , while attribute help text was available by hovering over the attribute label. In addition, the presence / absence of help text was configurable, while attribute value history was always present, without an option to disable.

As the information icon is used throughout Web UI for informational and/or help purposes, the functionality for attributes has been updated to do the same. Users will now only see attribute help text available when clicking on the information icon. In addition, a new history icon, , has been added to display attribute value history (which was previously available via the information icon). Both options can be enabled / disabled using the Display Context Help and Display Value History parameters on the Attribute Value and Attribute Value Group components. If enabled, the icons will be shown on all attributes for which help text and/or history is available.



For more information on help text, see Attribute Help Text in the Web User Interfaces / Using a Web UI documentation.

For more information on attribute value history, see Attribute Value History in the Web User Interfaces / Using a Web UI documentation.

Attribute help text added to tables

Previously, the help text option was only available on the Node Details screen for Attribute Value and Attribute Value Group components configured within a Node Editor. Now help text is available for Attribute Value Header, Attribute Value Group Header, and Variants Header, all of which can be configured using a Node List with any of the following display modes: Multi Edit Display Mode, Compare View, Sequence View, and List View.

As with the help text options available on Node Details, the help text for attributes on Node Lists is set in the workbench, with an option available to locally overwrite it in Web UI for any screen. For more information on configuring help text, see Attribute Help Text in the Web User Interfaces / Using a Web UI documentation.

Enhanced Workflow Status Flag Capabilities in Web UI

Summary

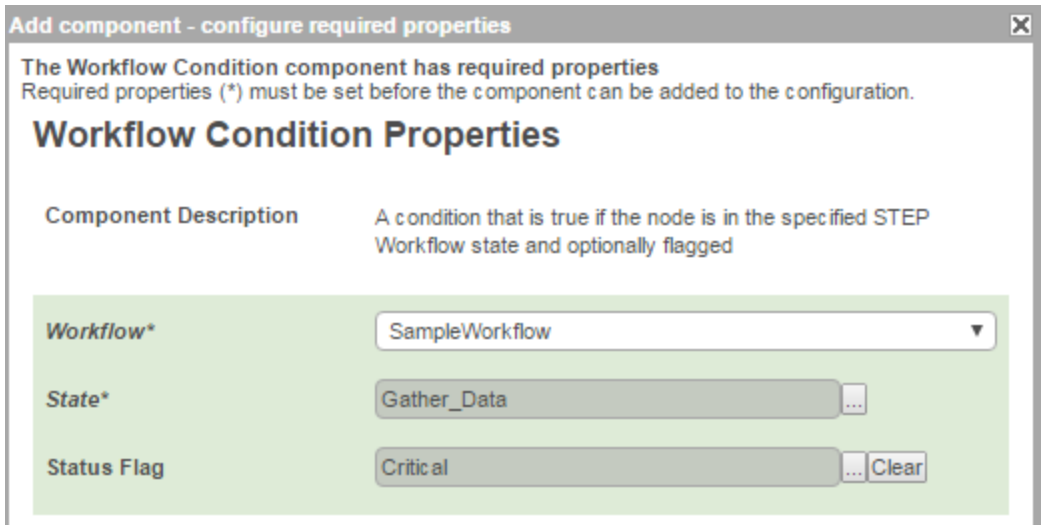
Additional support for workflow status flags has been added to Web UI. Specifically, designers now have the option to:

- Include status flags in screen mapping conditions so that users can be directed to specific Task Lists and/or Web UI screens based on the status flags on workflow objects
- Include status flags in Task List screen titles so that users can easily identify the status of the objects they are working with when routed to status-specific screens

Details

New option to include status flag values in screen mapping conditions

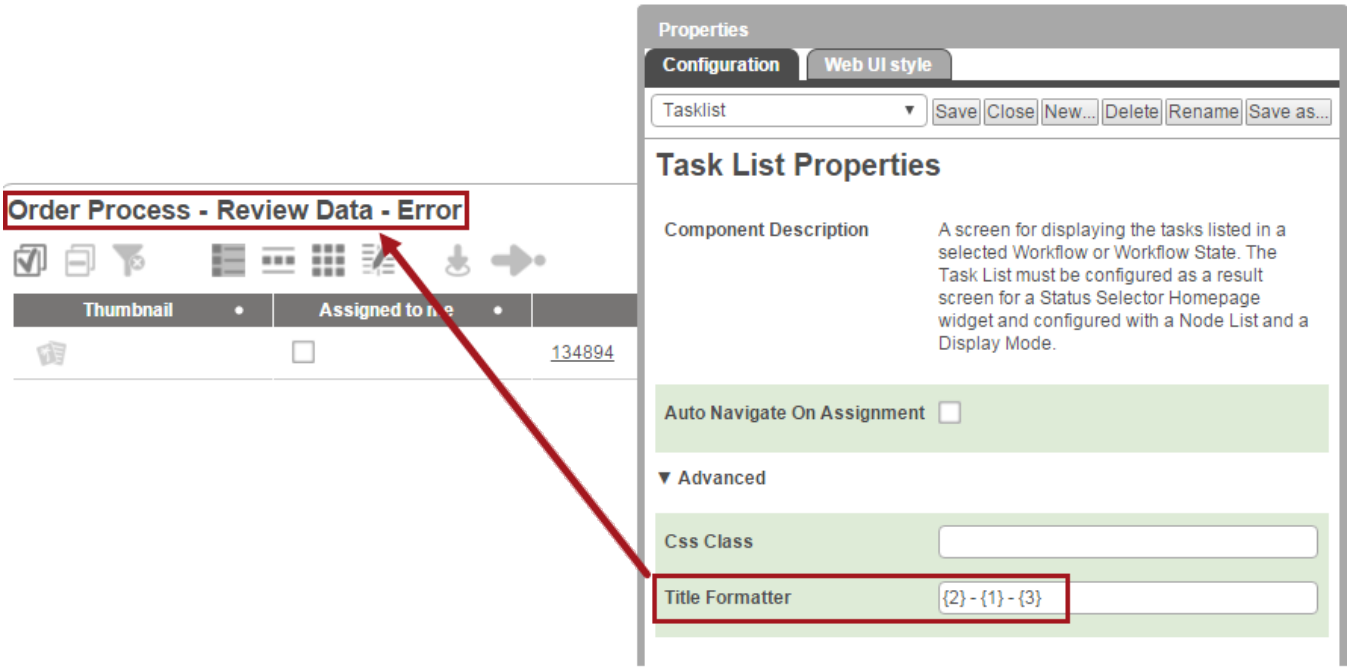
There is now an option to add a status flag on the Workflow Condition and Status Selector Condition when creating screen mappings in the Web UI designer. This makes it possible for tasks that have a status flag of one type, such as Normal, to bring the user to one screen when selected, while tasks that have a status flag of a different type, such as Error, to bring the user to a different screen. This helps users to isolate and address high priority tasks in the appropriate way, as Web UI designers have the option to present different data and/or instructions to the end user based on task status.



Only status flags that are relevant to the selected workflow are available for selection in the Status Flag parameter. In addition, the parameter is optional, allowing for full backwards compatibility in existing configurations.

New option to dynamically include status flag in screen titles

A new expression, {3}, can be used in the Title Formatter parameter on Task Lists and returns the name of the status flag object associated with the end user workflow / state selection. This allows designers to include status flag in the Task List header so that, when mapping screens based on status flag as described above, the status flag can also be dynamically reflected in the screen title.



For more information on status flags, please see Status Flags in Web UI in the Web User Interface / STEP Web UI Setup and User Guide documentation.

Enhanced Functionality in Tables

Summary

A number of usability enhancements and functionality improvements have been made to the Tables functionality in the workbench. These include:

- New image scale functionality, allowing users to easily set the size of images in tables and reduce the number of previously employed workarounds
- New copy and paste functionality for table columns, easing maintenance of tables across product groupings
- Improved handling of alternate row colors for split tables, solving issues where alternating row colors no longer lined up properly in tables when split

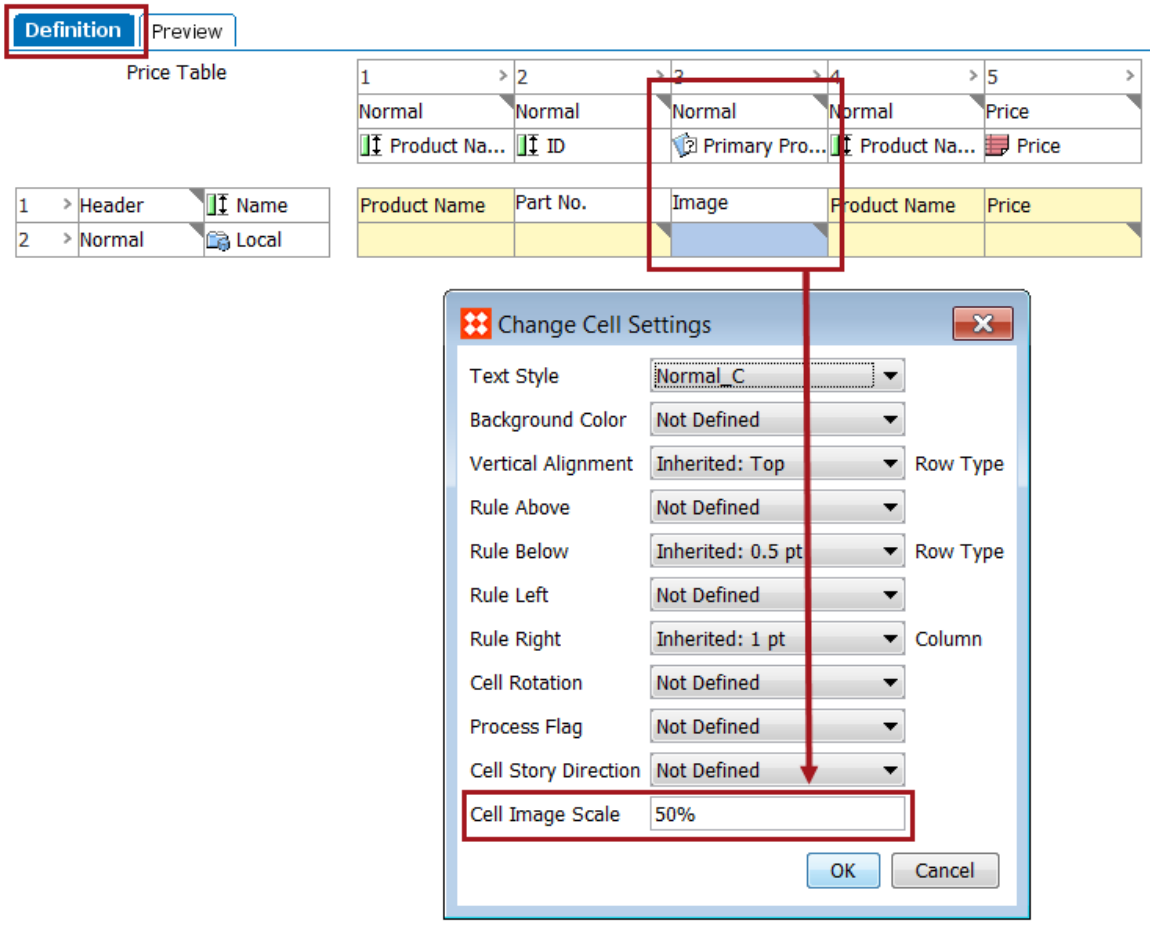
Details

New image scale functionality

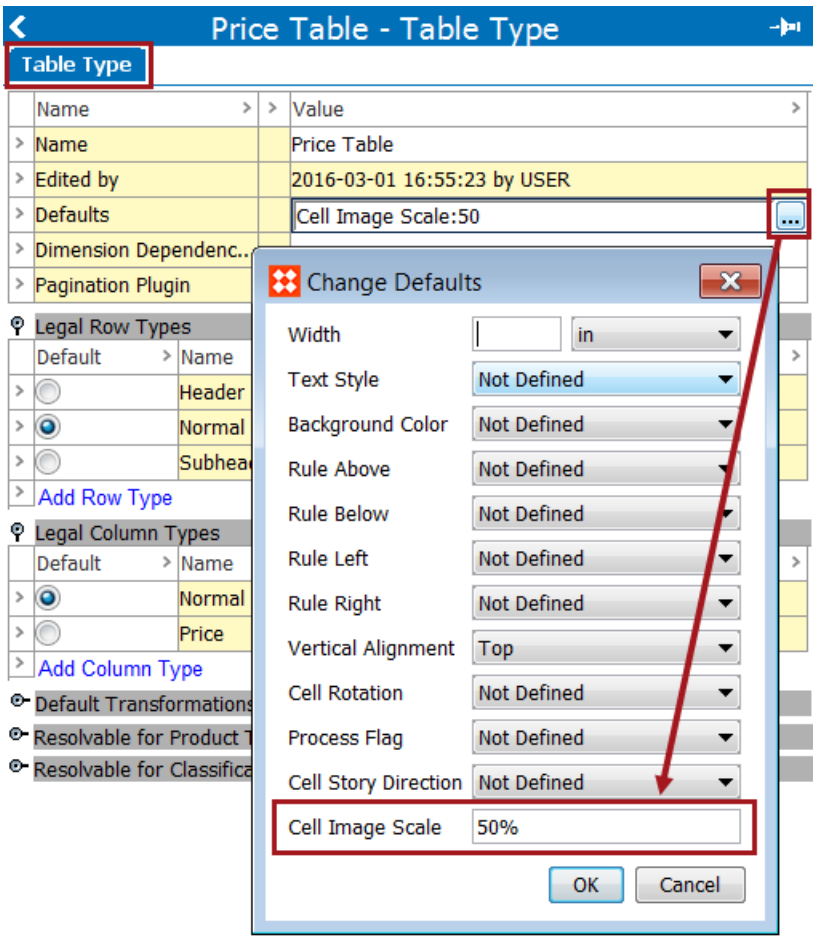
An option to adjust the scale of images in STEP Tables is now available. This setting, called Cell Image Scale, allows users to scale images in tables from 25% to 500%.

The Cell Image Scale setting can be accessed from the following locations:

1. The 'Change Settings' dialogs, which are accessed on the Definition tab when applying formatting to cells, rows, columns, or entire tables (Change Cell Settings, Change Row Settings, Change Column Settings, and Change Table Settings)



2. The 'Change Defaults' dialog, which is accessed on the Table Type, Column Type, and Row Type tabs when applying formatting to table types, column types, and row types in System Setup



Previously, the only way to control the size of images in tables was to use one of the following methods:

- Set a fixed width or height on the column or row containing the image
- Load the image into STEP at the (smaller) actual size intended for the table
- Use inset adjustments on the table rule lines that border the image-containing cells
- Obtain the image through an attribute transformation

By default, the Cell Image Scale field is blank. If this field is left blank, and a width or height has not been set on the column or row containing the image, the image will mount at 100% (actual size). If a scale value is entered, the image will mount at the specified size, even if a width or height has been set on the column or row.

For more information on formatting STEP Tables, see the Formatting Tables section of the STEP Tables documentation.

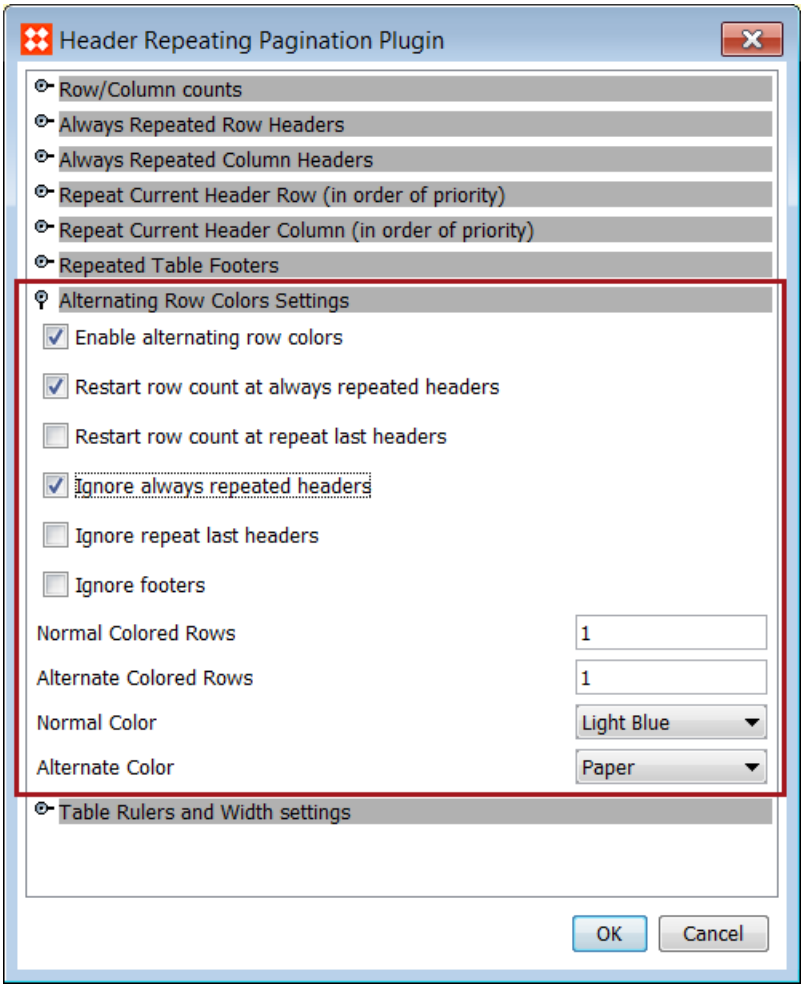
New copy and paste functionality for table columns, rows, and cells

Previously, columns, rows, and cells could only be copied and pasted within the same table. Columns, rows, and cells in STEP Tables may now be copied from one table to another table, even if the tables are of different table types. Columns and rows may be copied and pasted even if the number of columns and/or rows are different in the source and the destination tables.

For more information, see the Modifying Tables section of the STEP Tables documentation.

Improved handling of alternate row colors for split tables

Alternating row colors settings are now available in the Header Repeating Pagination Plugin, which is accessed on the Table Type tab when configuring table types in System Setup.



Though there is an existing 'Alternate Row Colors' transformation that adds color shading to alternating table rows, this transformation offers no additional control over the alignment of shaded rows when a table splits across a column or a page. The introduction of alternate row color settings to the Header Repeating Pagination Plugin provides a more complex level of control over the appearance of split tables with multiple repeated headers. The following screenshot shows neatly aligned row colors in a table split across two columns, accomplished by applying alternate row coloring using the Header Repeating Pagination Plugin.

Product Name	Part No.	Price	Product Name	Part No.	Price
Christmas Party Hat	121184-A	$7.99	Yellow & Green Party Hat	134416-A	$4.79
Cosmic Party Hat	134413-A	$3.99	Glitter Party Hat	138934-A	$3.99
Pink & Green Party Hat	134420-A	$4.79	Political Party Hat	138935-A	$4.79
Pink & Green Pom-Pom Hat	138925-A	$3.99	Birthday Party Hat	134426-A	$3.99
Christmas Party Hat	138926-A	$2.99	1st Birthday Party Hat	138936-A	$2.99
Purple & White Party Hat	138927-A	$2.99	2nd Birthday Party Hat	121192-A	$2.99
Glitter Party Hat	121177-A	$3.99	3rd Birthday Party Hat	134417-A	$3.99
Purple Foil Party Hat	134414-A	$2.99	Sweet 16 Party Hat	134428-A	$2.99
Yellow & Pink Party Hat	134422-A	$2.99	Over the Hill Party Hat	138937-A	$2.99
Yellow & Green Party Hat	138928-A	$2.99	Fringe Party Hat	138938-A	$3.99
Ice Princess Party Hat	138929-A	$2.99	Political Party Hat	138939-A	$2.99
Fairy Princess Party Hat	138930-A	$2.99	Purple & White Party Hat	121178-A	$4.79

For more information on the Header Repeating Pagination Plugin, see the Header Repeating Pagination Plugin section of the STEP Tables documentation. For more information on the Alternate Row Colors transformation, see Table Layout Transformations in the STEP Tables documentation.

Improved Functionality for Merging LOV Values and Processing Updates

Summary

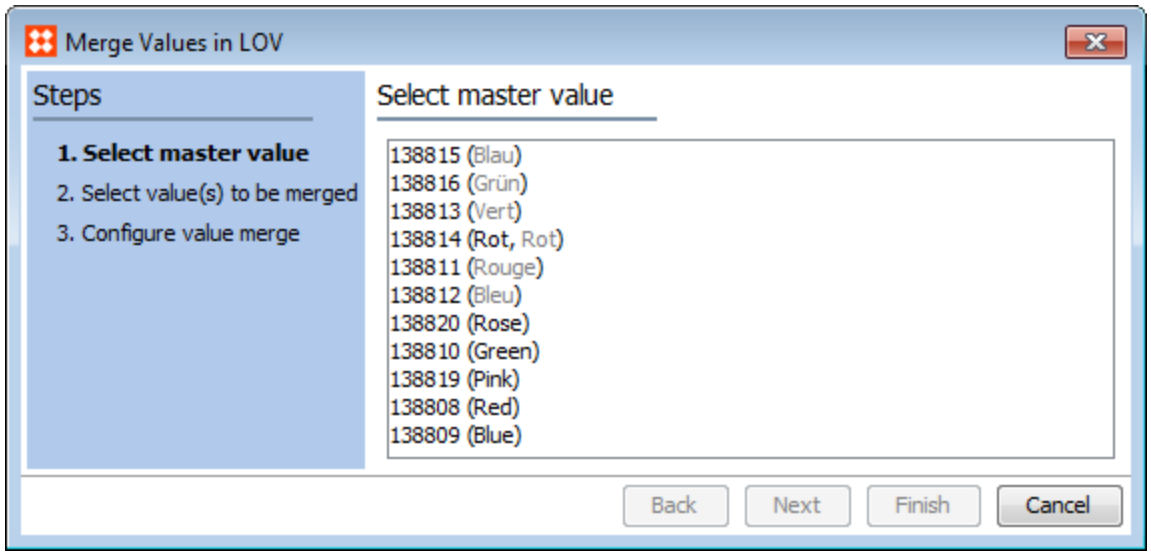
The Merge Values in LOV wizard has been updated to enable users to easily consolidate LOV values across contexts and dimension points. In addition, a new event processor plugin has been added that listens for LOV value update events and propagates these to generate events for any objects that use an LOV value that has changed.

Details

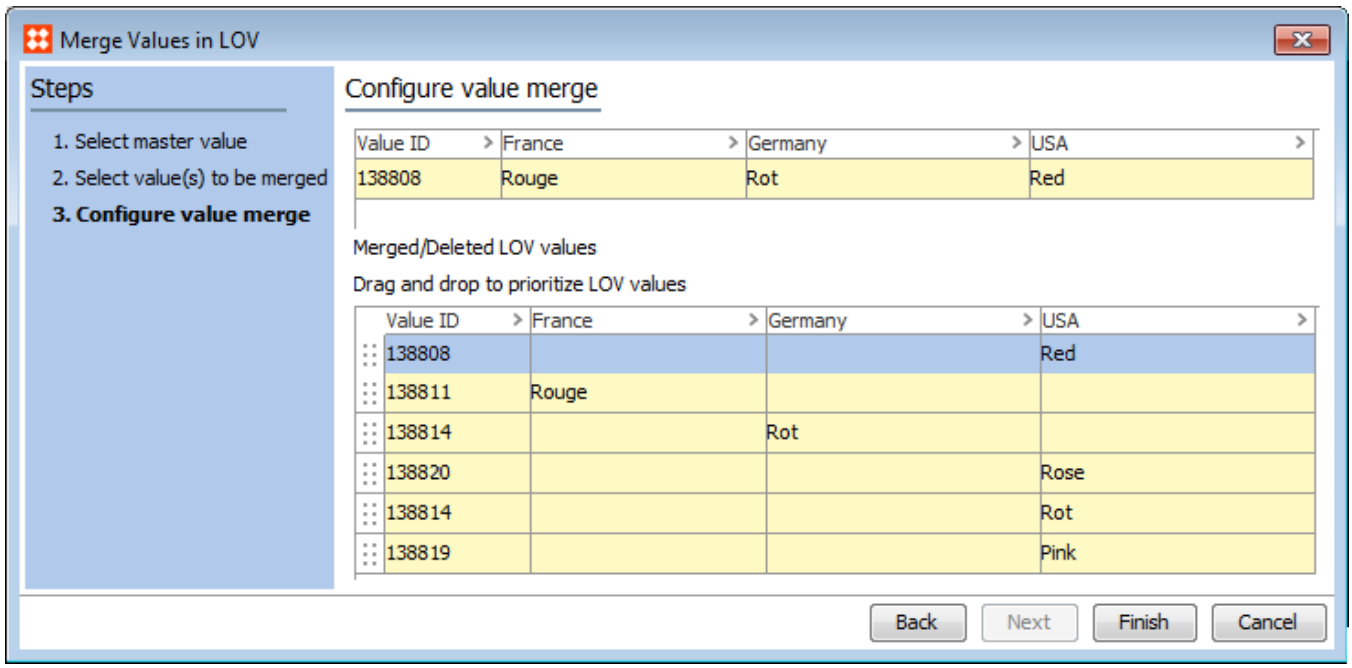
Improved usability and functionality for merging values in an LOV

Previously, the LOV values in the Merge Values in LOV wizard were hidden if a value did not exist in the current context, which sometimes happened for customers using translations. The workaround was to add values for all LOV values in the current context / workspace before using the wizard.

The wizard has been modified to allow all LOV values with a single Dimension Dependency to be visible across contexts, even when a value does not exist in the current context. **Note that this requires that the LOV uses Value IDs on LOV values and does not have more than one dimension dependency. This constitutes a change in existing functionality and users must be aware that the Merge Values in LOV option is no longer available for LOVs that do not use value IDs.** Existing LOVs without IDs can be updated via the 'Use Ids on values' parameter on the LOV.



Additionally, it is now possible to prioritize the values being merged, and to preview the effects of the merge before committing the change.



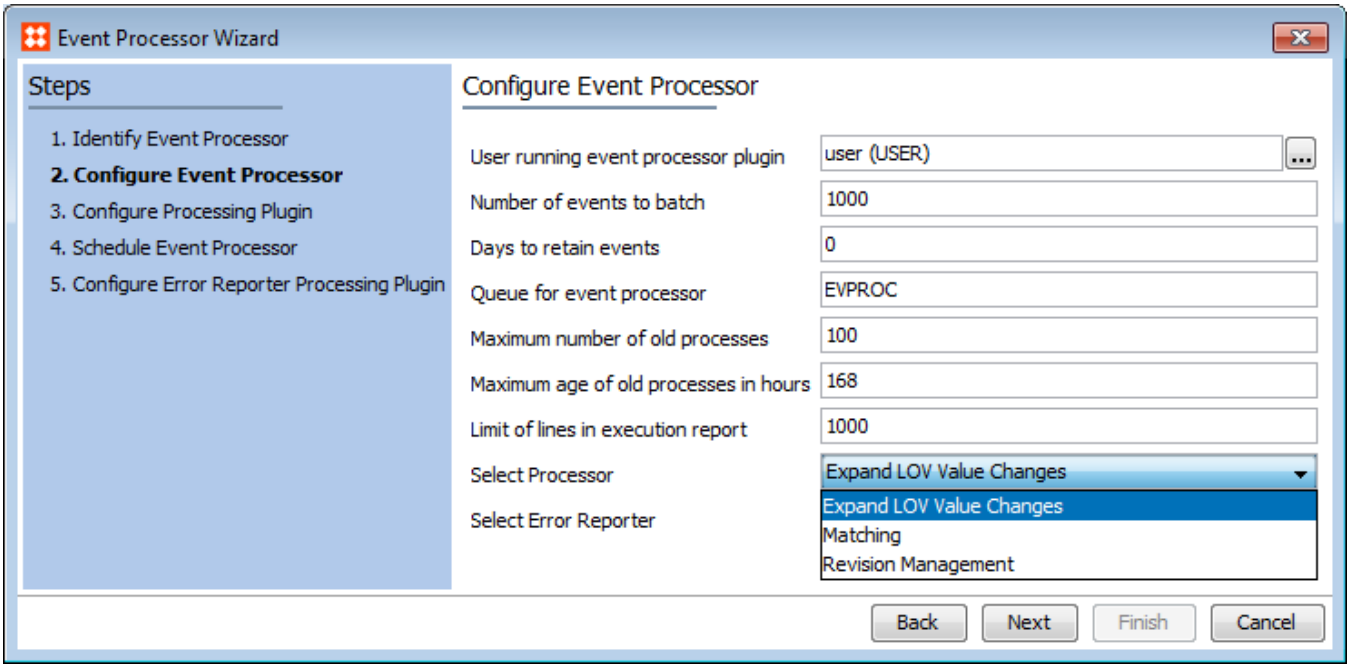
For more information, see Merging LOVs Overview in the System Setup / STEP Super User Guide.

New event handling for LOV value changes

Previously, there was no support for customers to handle changes to LOV values using event-driven publishing, since the updates were not propagated to the objects using the values. A new out-of-the box event processor option has been added to manage LOV value changes for LOVs that use Value IDs. This processor identifies objects using a changed LOV value and generates events on those objects, which can in turn be handled by an outbound integration endpoint to propagate the changes to downstream systems.

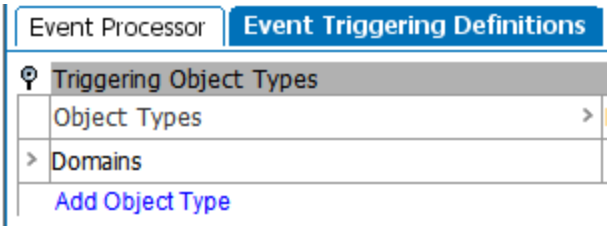
The 'Expand LOV Value Changes' processor can be configured to listen for changes to LOV values and generate events for objects using the modified values. The event processor plugin is only capable of propagating events for LOVs that use Value IDs. Changes to LOVs not using Value IDs will be ignored.

Selecting the new processor allows the event processor to react on all LOV value update events including those made manually from workbench or Web UI, via LOV value merge, via import, etc. Note that the processor handles LOV value updates only, not additions or deletions.



For more information, see Creating Event Processors in the System Setup / STEP Super User Guide.

For the 'Expand LOV Value Changes' processor to take effect, the event processor must be configured to listen only for changes on LOVs (Domains), and all other default triggering definitions should be unselected.



Further, in order to complete the full use case of passing events on products that have an LOV value changed, an outbound integration endpoint would need to be set up to listen for modify events on the relevant objects. Note that if change flags are used in the format for the endpoint receiving the event, the relevant products will have change flags on all attributes set to true, as the endpoint interprets the event generated by the processor as a change to the product rather than to the individual attribute value.

For more information, see the Event-Based Outbound Integration Endpoint Wizard section of the System Setup / STEP Super User Guide.

STEP’n’design and General Print Publishing Enhancements

Summary

A number of usability enhancements and functionality improvements have been made to the STEP’n’design component, both in the STEP Workbench and within the InDesign interface.

Below, details can be found on the following enhancements:

- New STEP’n’design typeahead and filtered search functionality, enabling quicker and more pinpointed search results in the STEP Structure View and STEP Template Palette panels
- Expanded table rule styles in STEP'n'design, including dotted and dashed rule lines
- STEP Template Palette improvements, including the ability for non-grouped frames to repeat, greater control over splitting across spreads, and max image scale when fitting images to frames
- New Transfer Package export / import functionality for Publications, enabling simple export and import of Publications and all associated templates from one STEP system to another
- New alphabetical ordering in commercial list dropdown menu, speeding the mapping process of Excel columns when there are numerous commercial lists attached to a Publication
- Increased security for the STEP’n’design solution

Details

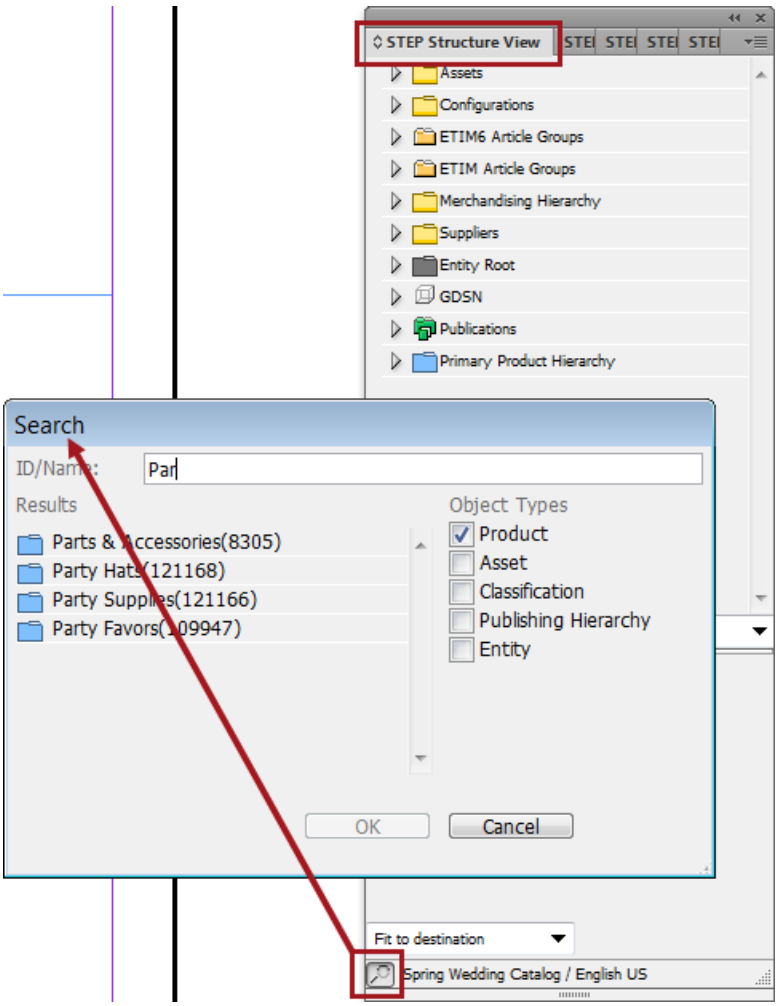
New STEP’n’design typeahead and filtered search functionality

A new search dialog has been added to STEP'n'design that allows typeahead and filtered searches in the STEP Structure View and STEP Template Palette panels.

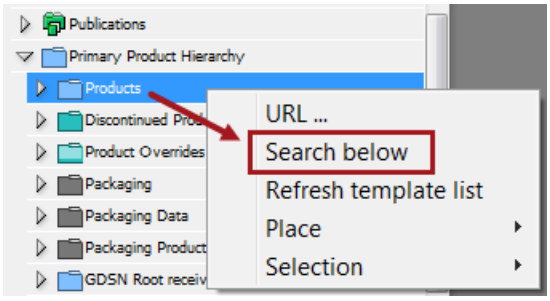
Searches are performed by Name or ID as before, but users will no longer have to remember to use wildcard operators or select the object that they are looking for from an overly long list of search results. (Search result lists would often be very lengthy due to duplicate results, e.g., an attribute linked to 25 attribute groups would appear 25 times in the search results.) In addition, this improvement enables more pinpointed searches, as the new search dialog allows filtering by object type.

To access the new Search dialog in either panel, click on the magnifying glass search icon in the lower left corner of the panel.

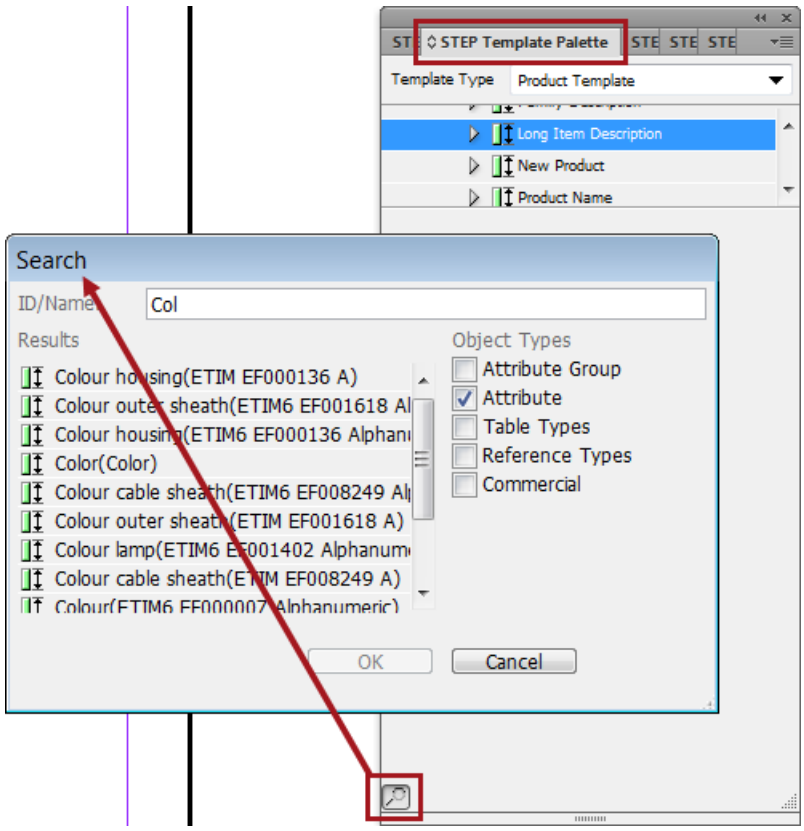
Searches in the STEP Structure View panel may be filtered by one or more of the following object types: Product, Asset, Classification, Publishing hierarchy, and Entity.



Searches in the STEP Structure View may also be limited to a specific level (node) of a hierarchy by using the 'Search below' option. 'Search below' is accessed through a right-click action on the chosen node. Note that there is a three-character limit before typeahead search results will populate using 'Search below'.



Searches in the STEP Template Palette panel may be filtered by one or more of the following object types: Attribute Group, Attribute, Table Types, Reference Types, and Commercial data lists.

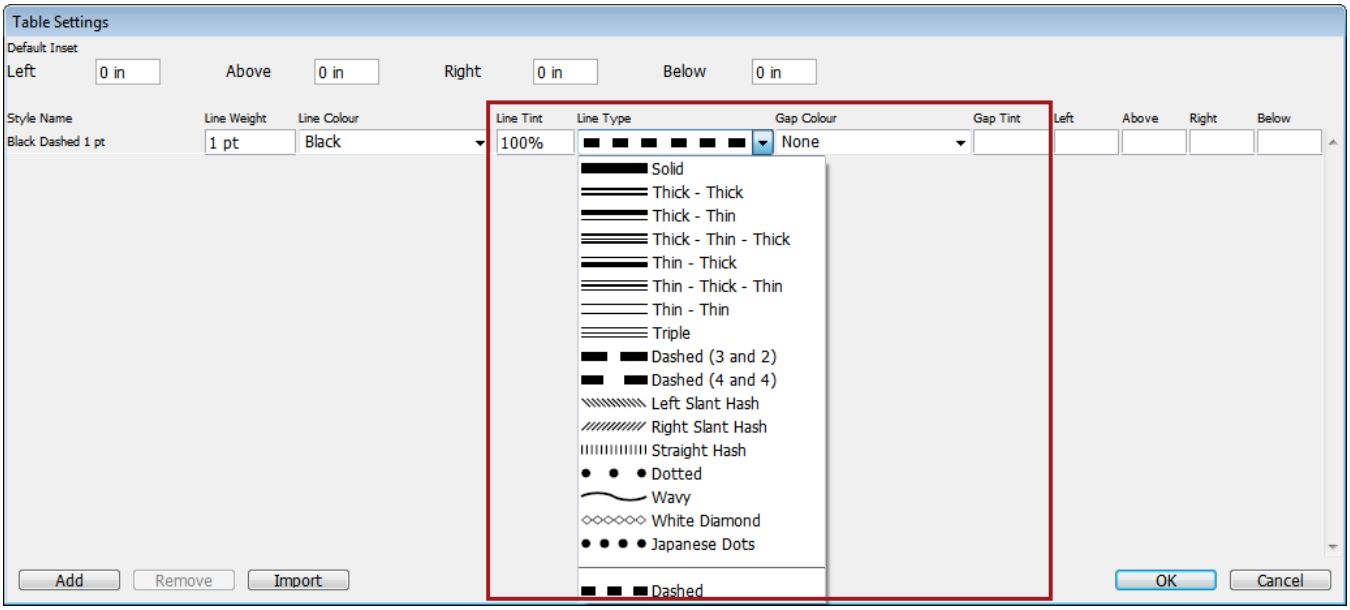


For more information on performing searches on the STEP Structure View and STEP Template Palette panels in InDesign, see the following sections of the STEP'n'design documentation:

- STEP Structure View
- STEP Template Palette

Expanded table rule styles in STEP'n'design

Dotted, dashed, and additional table rule line styles are now available in the STEP'n'design Table Settings dialog in InDesign. New functionality for Line Tint, Gap Colour, and Gap Tint is also now available. These new line style and color settings function identically to those available in the InDesign 'Stroke' panel (a native feature in InDesign).



For more information, see Defining Table Rules in STEP in the STEP Tables documentation and Configuring Table Styles in Publication Templates in the STEP'n'design documentation.

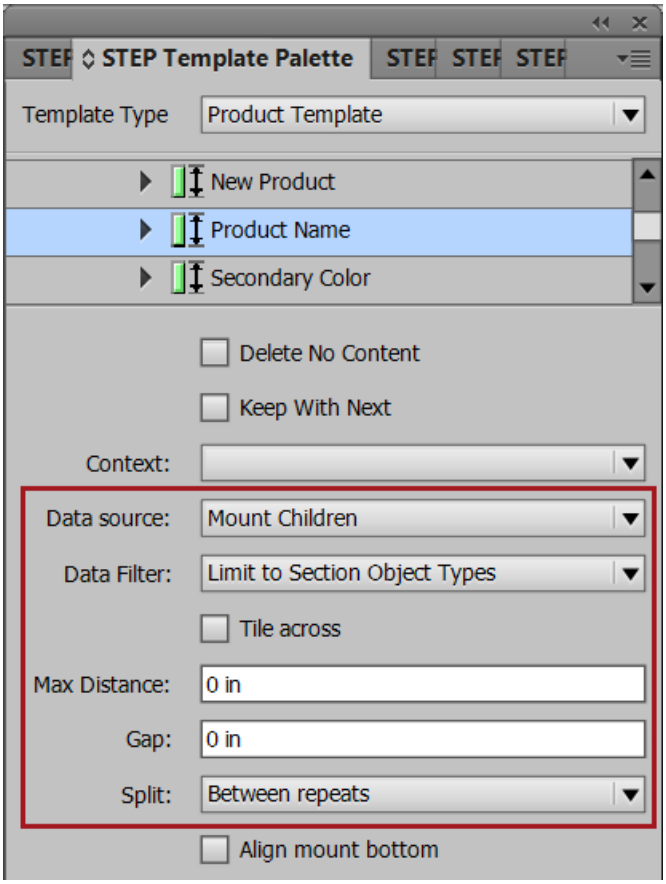
STEP'n'design STEP Template Palette improvements

Three new options have been added to the STEP Template Palette panel in InDesign: allow non-grouped frames to repeat, greater control over splitting across spreads, and max image scale when fitting images to frames.

Allow non-grouped frames to repeat

Text and image frames with a data source of Mount Children or a reference type can now be repeated without having to be grouped with another frame. Previously, only grouped frames could be repeated.

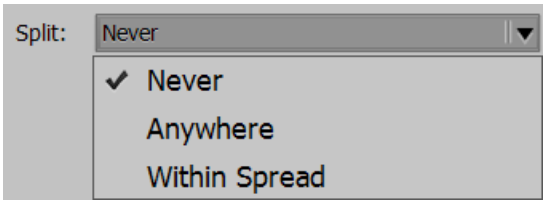
The following repeat-enabling options are now available on the STEP Template Palette for non-grouped text and asset frames: Data source, Data Filter, Tile across, Max Distance, Gap, and Split. These options are disabled when the data source is Mount Object (which is the default to retain backwards compatibility).



Greater control over splitting across spreads

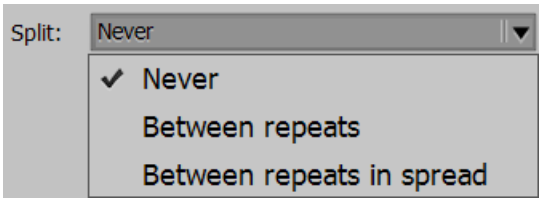
Two new 'Split' dropdown lists are now available on the STEP Template Palette to provide users with greater control over when text frames and repeated frames should split across spreads. These new lists replace the 'Can Split' and 'Can split between objects' checkboxes that were previously available for text frames and repeated grouped frames, respectively.

For text frames, the three split options are Never, Anywhere, and Within Spread.



'Never' is the equivalent of leaving the 'Can Split' checkbox unchecked in pre-8.0 STEP Template Palettes. 'Anywhere' is the equivalent of checking the 'Can Split' checkbox. The new option, 'Within Spread', limits the splits to within a spread only. For example, if there is a text box that contains so much content that it becomes too tall to fit on a page and needs to split across to the next page, checking 'Anywhere' allows this text frame to split from a right-hand page to a left-hand page, which creates a new spread. Checking 'Within Spread' only allows the text frame to split from a left-hand page to a right-hand page, disabling the ability to create a new spread.

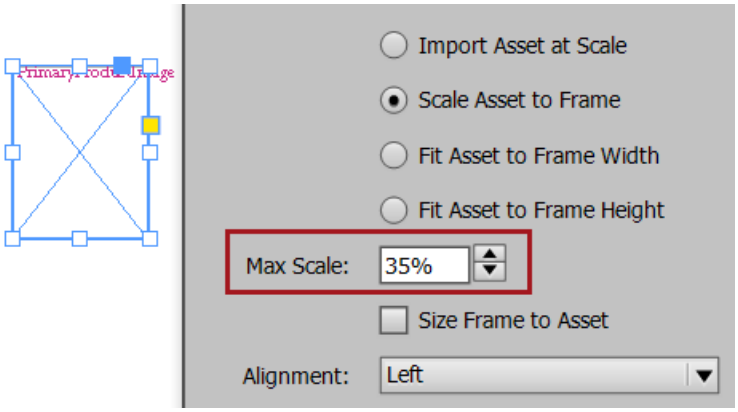
For repeated frames, the three split options are Never, Between repeats, and Between repeats in spread.



'Never' is the equivalent of leaving the 'Can split between objects' checkbox unchecked in pre-8.0 STEP Template Palettes. 'Between repeats' is the equivalent of checking the 'Can split between objects' checkbox. The new option, 'Between repeats in spread', limits the splits to within a spread only. For example, if there are so many repeated objects that they cannot fit on a page and must continue onto the next page, checking 'Between repeats' allows the repeated objects to continue from a right-hand page to a left-hand page, which creates a new spread. Checking 'Between repeats in spread' only allows the repeated objects to continue from a left-hand page to a right-hand page, disabling the ability to create a new spread.

Max image scale when fitting images to frames

An option to set the maximum scale of images when fitting to frames is now available on the STEP Template Palette. This option, 'Max Scale', is available when any of the following three options are selected: Scale Asset to Frame, Fit Asset to Frame Width, and Fit Asset to Frame Height. Max Scale can be set from 5% to 500%.



Previously, these three options would fit an image to a frame automatically, with STEP'n'design calculating the scale and offering users no control over the scaling percentage. The ability to constrain this scale prevents issues where scaling too high results in a poor image that is not acceptable when printed. For example, if the actual size of the image in STEP is much smaller than the frame to which it is being mounted, the Max Scale option can prevent this small image from scaling up to such a large size that its resolution is too low for print.

Note that if the actual size of the image is larger than the frame, it will still scale down to fit the frame, regardless of whether the Max Scale value is set above 100%. If Max Scale is left blank, images will scale as they did previously—up or down to fit the frame, frame width, or frame height.

For more information on the STEP Template Palette, see the STEP Template Palette section of the STEP'n'design documentation.

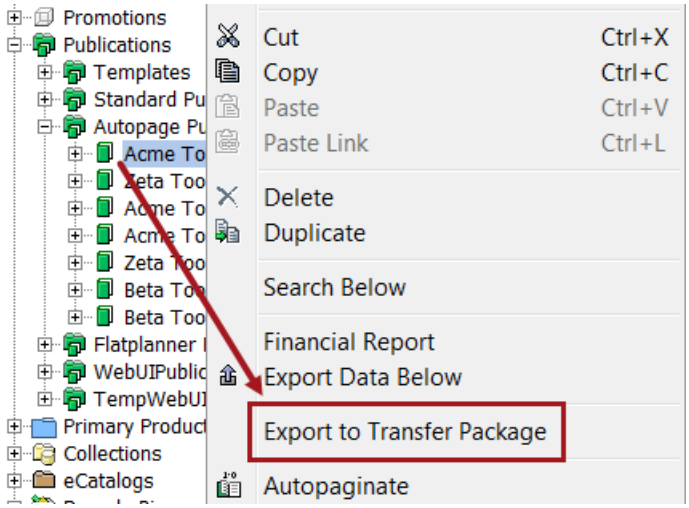
New Transfer Package export / import functionality for Publications

New functionality has been introduced that allows the exporting of entire STEP Publications and their associated templates into a .ZIP folder, which can then be imported into another STEP system through a simple right-click operation. Previously, Publications themselves could be exported / imported using Publication Excel or STEPXML files, but their associated templates (Publication, Product, and Page) could not be exported from the Publication structure of one STEP system and imported into the Publication structure of another STEP system.

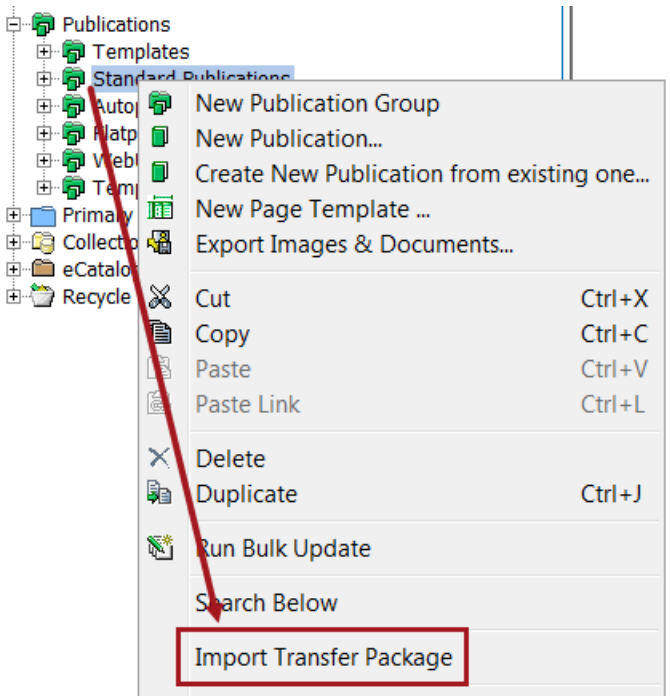
Publication Transfer Packages contain the following items:

- Publication Excel spreadsheet
- Publication STEPXML file
- Publication Templates
- Product Templates
- Page Templates (for Flatplanner Publications only)
- XML mapping files that link the STEP names of all templates to STEP IDs
- Export configuration property file

To create a Transfer Package for export, users will right-click on a Publication object and select 'Export to Transfer Package'.



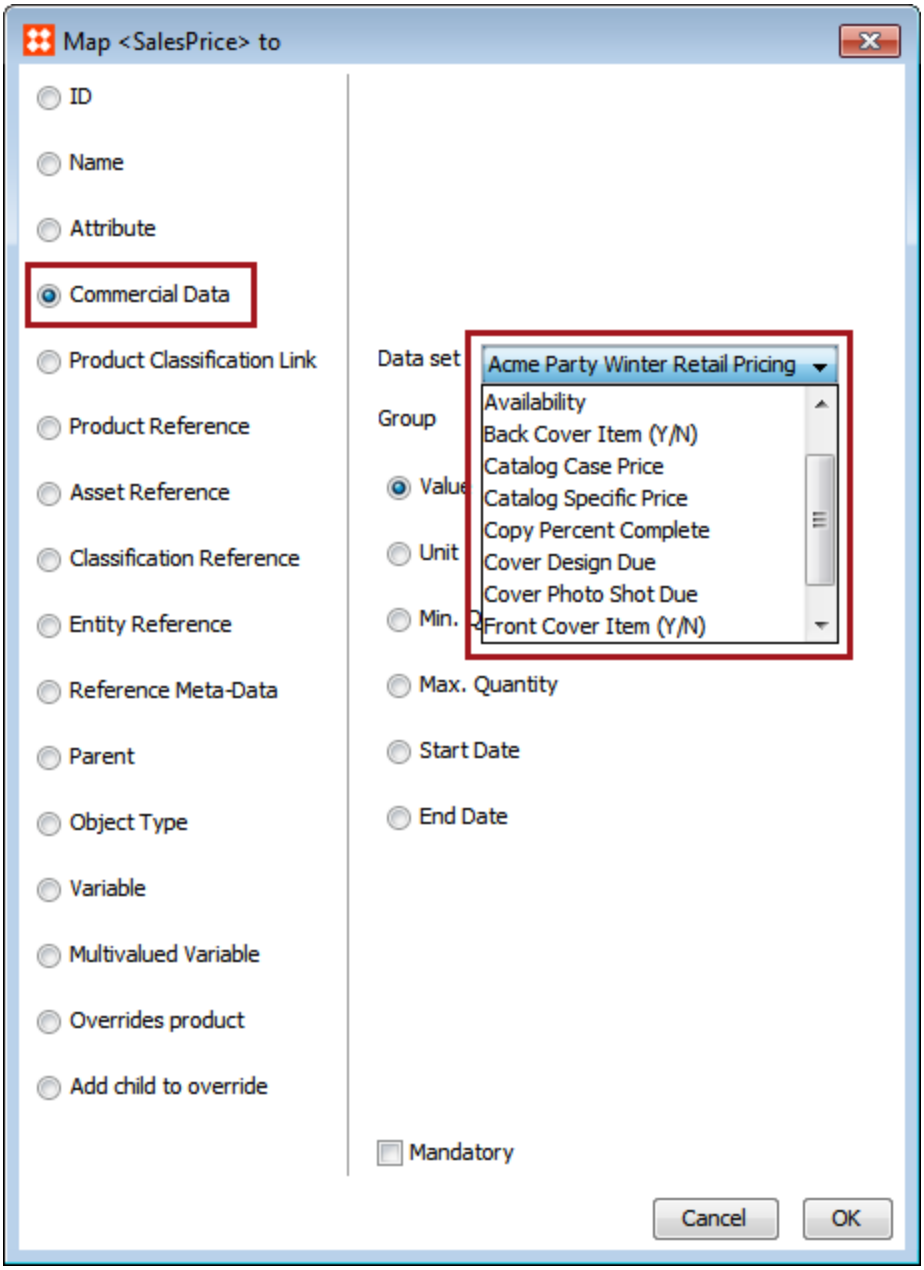
To import a Transfer Package, users will right-click on a Publication Group object and select 'Import Transfer Package'.



For more information, see Working with Publication Transfer Packages in the STEP'n'design documentation.

New alphabetical ordering in commercial list dropdown menu

Commercial Data lists now appear in alphabetical order when Excel spreadsheet columns are mapped to Commercial Data lists from the Map Data screen (Step 4) of the Import Manager wizard. Previously, these lists would appear in random order, making the process of mapping numerous lists very time consuming if there were a large number of Commercial Data lists to choose from.



For more information on Commercial Data import configurations, see Defining Import Settings for Commercial Data in the Commercial Data documentation.

Increased security

The STEP'n'design solution has been updated to provide greater security by using the latest third-party libraries and improved password encryption.

AutoPage Enhancements

Summary

The STEP Print solution has been updated in a number of ways across all components, including AutoPage. Details on new features and enhancements spanning multiple components are included in the 'STEP'n'design and General Print Publishing Enhancements' section of the Trailblazer 8.0 Release Notes.

Below, details can be found on enhancements and new features that are specific to the STEP AutoPage component. These include:

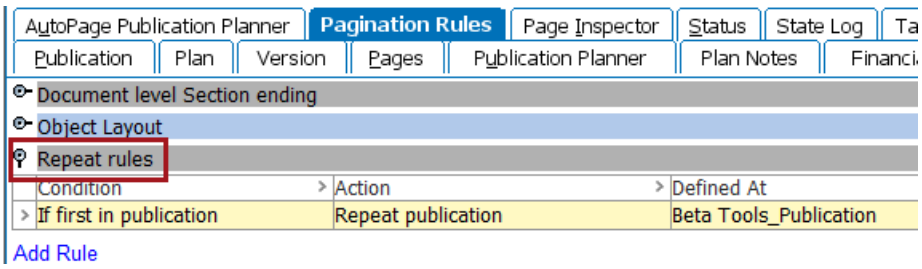
- New functionality to create tables of contents at the Publication level, which could previously only be done at the Section level
- Addition of Publication types to 'If the Object Type is' pagination rule condition Browse tab, signaling to users that Publication objects are valid for conditions

Details

New functionality to mount Publication objects when using AutoPage

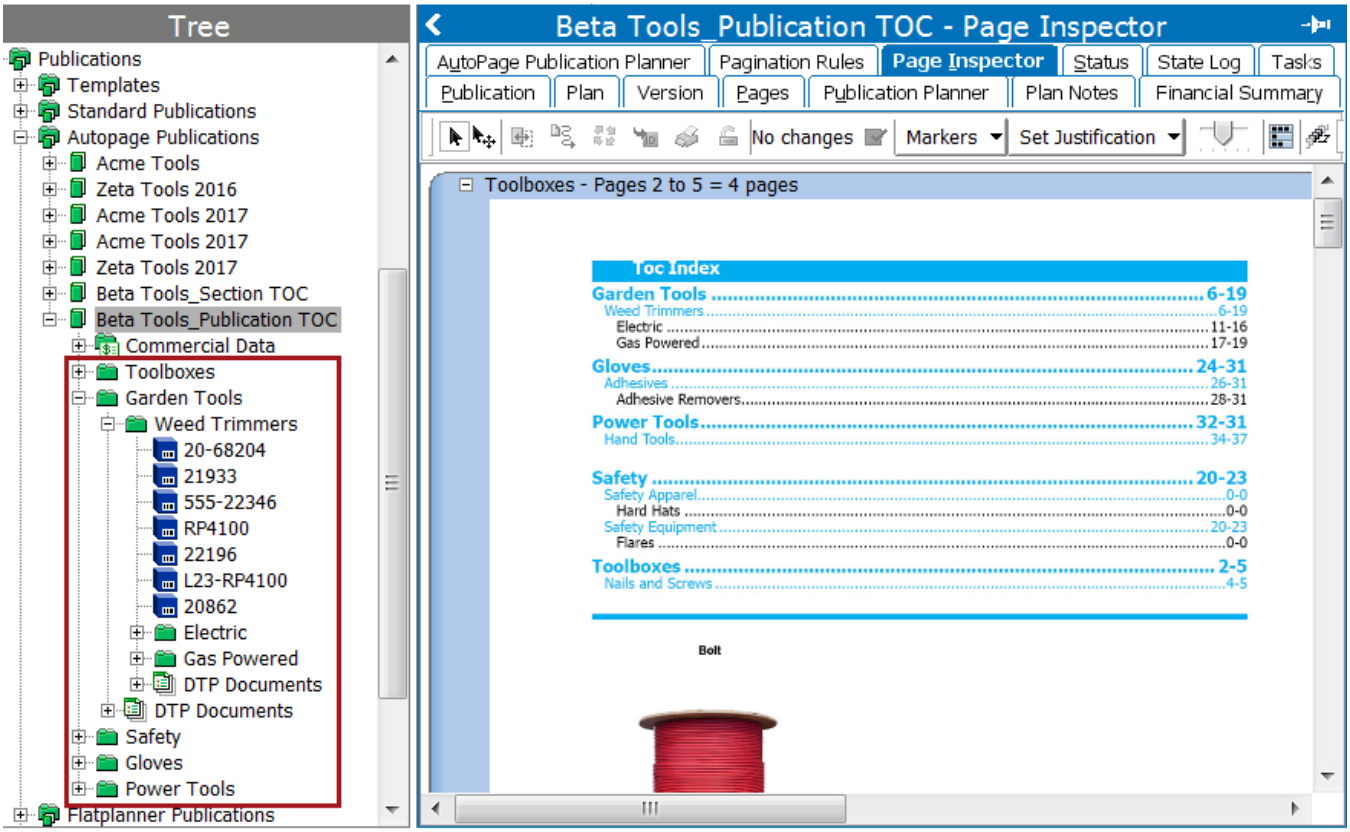
Publication objects themselves may now be mounted to pages when using AutoPage.

In order to achieve this, the pagination rule group 'Repeat rules' (previously known as 'Repeat section') now contains a pagination rule condition called 'If first in publication' and a pagination rule action called 'Repeat publication.'

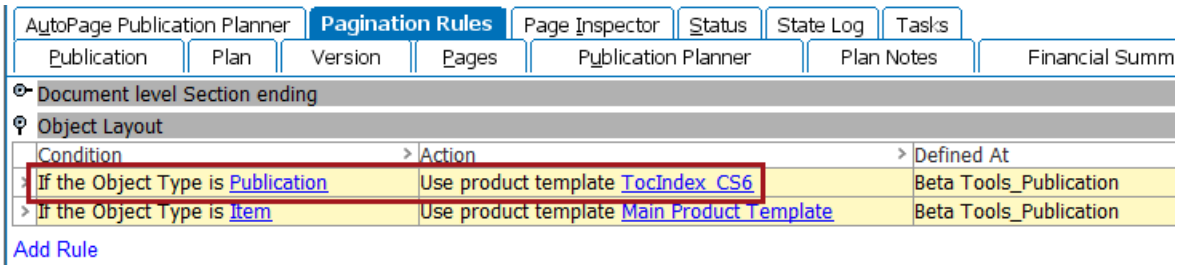


Essentially, the combination of this condition and action enable the Publication object itself to be mounted at the beginning of the Publication. This new functionality allows, for example, the ability to create tables of contents (TOCs) at the Publication level in AutoPage. Previously, TOCs could only be created at Section levels.

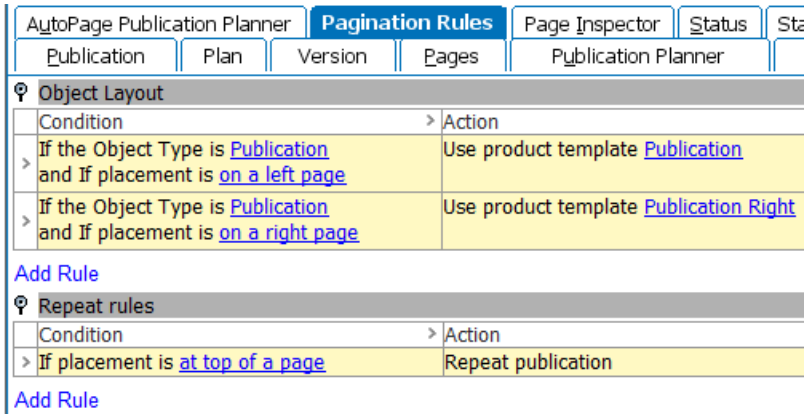
For the creation of a Publication-level TOC, the TOC is created through a Product Template that is designed to pull metadata from the Publication object as well as the STEP names of its child Sections.



This TOC Product Template must be connected to the Publication object through a second pagination rule, which is configured in the 'Object Layout' pagination rule group. This rule functions through a combination of an 'If the Object Type is' condition and a 'Use product template' action. The following screenshot shows this combination using the Publication object type and a Product Template designed to create a TOC.



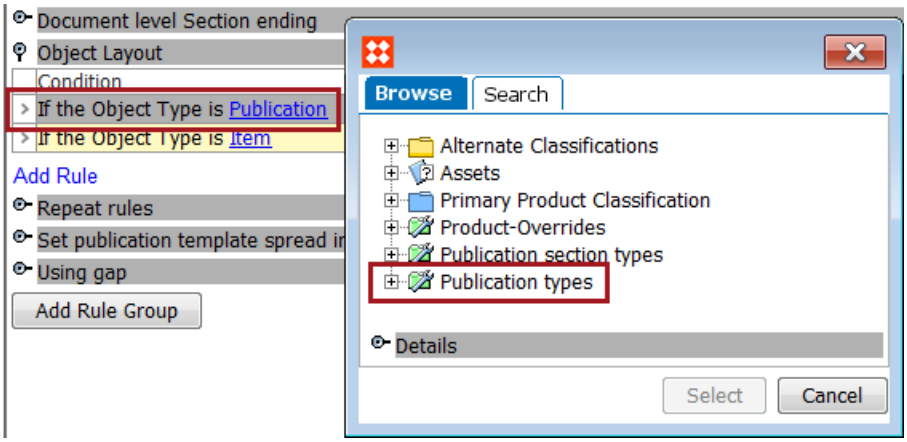
The new 'Repeat publication' pagination rule action in the 'Repeat rules' pagination rule group can also be used to pull information from Publication objects other than TOCs. For example, the following screenshot shows a combination of Object Layout and Repeat rules that could be used to mount information from the Publication object, such as its STEP name, at the top of each page in the Publication. Other use cases could include the automatic creation of a cover sheet or confidentiality statement at the beginning of a Publication.



For more information, see About AutoPage Pagination Rules in the STEP AutoPage documentation.

Addition of Publication types to 'If the Object Type is' pagination rule condition Browse tab

In all pagination rule groups where the 'If the Object Type is' condition is present, Publication objects may now be chosen as an object type from the Browse tab. Previously, Publication object types could only be chosen by searching for them on the Search tab. This addition signals to users that Publication objects are valid for conditions, whereas before users may not have thought to use the Search tab since the 'Publication types' node was not visible on the Browse tab.



For more information, see About AutoPage Pagination Rules in the STEP AutoPage documentation.

Flatplanner Enhancements

Summary

The STEP Print solution has been updated in a number of ways across all components, including Flatplanner. Details on new features and enhancements spanning multiple components are included in the 'STEP'n'design and General Print Publishing Enhancements' section of the Trailblazer 8.0 Release Notes.

Below, details can be found on enhancements and new features that are specific to the STEP Flatplanner component. These include:

- Flatplanner workflow improvements, greatly simplifying configurations and bringing its functionality more in line with that of standard STEP workflows
- Ability to link 'empty' InDesign actual pages to Planned Pages, removing the need for previously employed workarounds

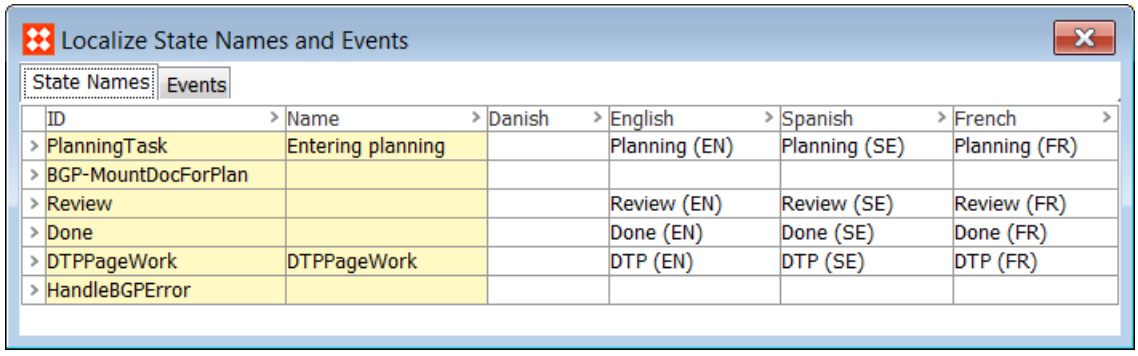
Details

Flatplanner workflow improvements

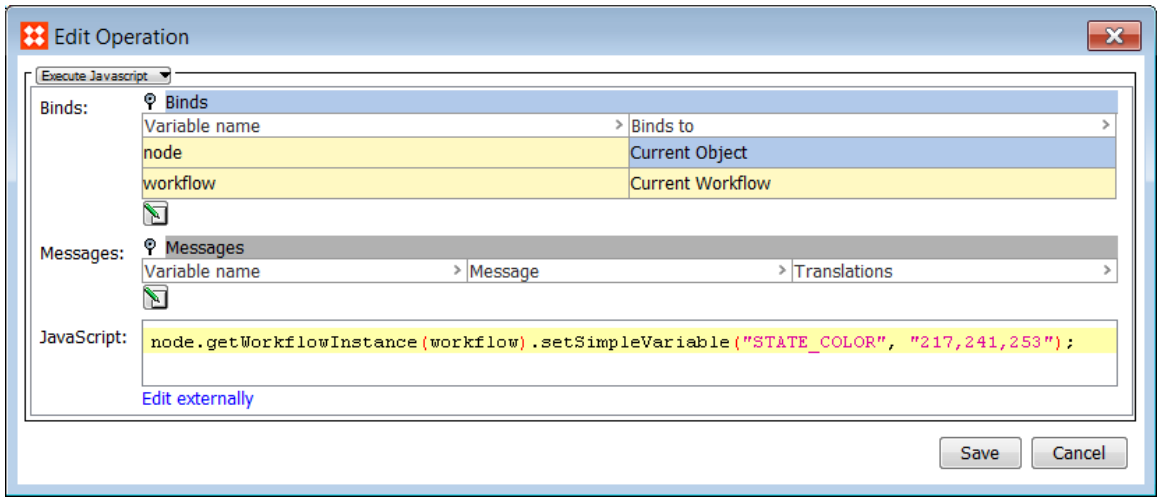
With Trailblazer 8.0, the Flatplanner workflow for Planned Pages has been significantly overhauled and simplified. Along with better usability, these updates bring its functionality more in line with that of standard STEP workflows.

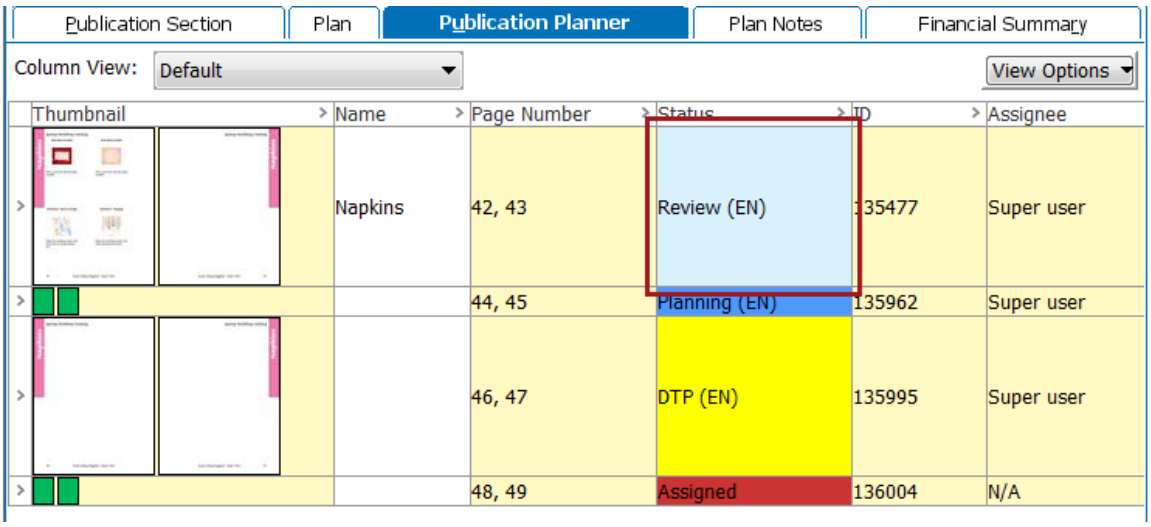
Improvements to the Flatplanner workflow are as follows:

- Planned pages may now be auto-initiated into Flatplanner workflows
- User Groups and their permissions are controlled through configurations made in the STEP Workflow Designer—not through entries in the sharedconfig.properties file—just like with any other STEP workflow
- More than one Flatplanner workflow can be used without the need to set up a Component Model to override hard-coded settings in the sharedconfig.properties file
- Localization of state names (and transition events) is now handled the same way as in any other STEP Workflow—through settings applied in the STEP Workflow Designer under Edit > Localize State Names and Events:

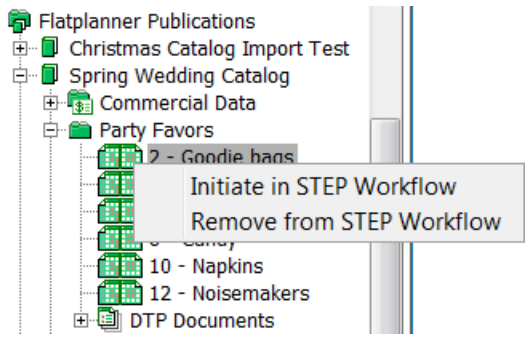


- Workflow Parameters are no longer required to provide information to the workflow, which also means that the need for Workflow Variables has been significantly reduced
- Colors that represent workflow states in the Publication Planner, on Planned Pages, and on actual (mounted) pages are now easily configured (and customizable) by adding an RGB value to an On Entry business action for each state that should receive a color code. This is done by setting the value of a workflow variable called STATE_COLOR.





- Planned Pages can now be initiated into and removed from workflows by right-clicking on Planned Pages in the Tree:



- Desktop publisher (DTP) tasks are no longer assigned in the Publication Planner. DTP users will be able to accept tasks in InDesign as long as they are members of the User Group that is assigned to the workflow state that requires its tasks to be picked up in InDesign.

The updated Flatplanner workflow cannot be run unless the following property is added to the sharedconfig.properties file: `Workflow.FlatPlanner.SelfContained=true`. This is because both the new and old Flatplanner workflow types cannot be run simultaneously. This property should be set to **false** for users who upgrade to STEP 8.0 but need to continue using an existing (pre-STEP 8.0) Flatplan workflow.

Also note that the new workflow 'mode' will ignore all settings applied in the 'Publishing - Flatplan Workflow' Component Model. However, no changes have been made to the configuration of Publication milestones, which are still configured using the 'Publication - Milestone Settings' Component Model. In addition, due to the discontinuation of unsupported scripting, PDFs may no longer be generated by a background process and displayed on the STEP Workflow Items and/or Tasks tab as an attachment. In order to review a PDF of a Flatplan while it is in a workflow, users must navigate to the Plan and generate the PDF from there.

For more information on Flatplanner workflows, see the About Flatplanner Workflows section of the STEP Flatplanner documentation.

New 'mark page against plan with no content' functionality

Empty InDesign actual pages with no content mounted on them from a Flatplan (Planned Page spread) are now linked to Flatplans when saved back into STEP.

Linking actual (mounted) pages to Planned Pages previously required something to be mounted on the page. If an empty page was planned to allow space for content outside of STEP, the page mounting options in the STEP Publication View in InDesign ('Create document from plan' and/or 'Mount planned page') appeared to work, but when the actual page was saved to STEP, no link to the Flatplan was created.

For more information on saving mounted Flatplanner pages back to STEP, see the Mounting Planned Pages section of the STEP Flatplanner documentation.

Publishing Web UI Enhancements

Summary

The STEP Print solution has been updated in a number of ways across all components, including the Publishing Web UI. Details on new features and enhancements spanning multiple components are included in the 'STEP'n'design and General Print Publishing Enhancements' section of the Trailblazer 8.0 Release Notes.

Below, details can be found on enhancements and new features that are specific to the STEP Publishing Web UI. These include:

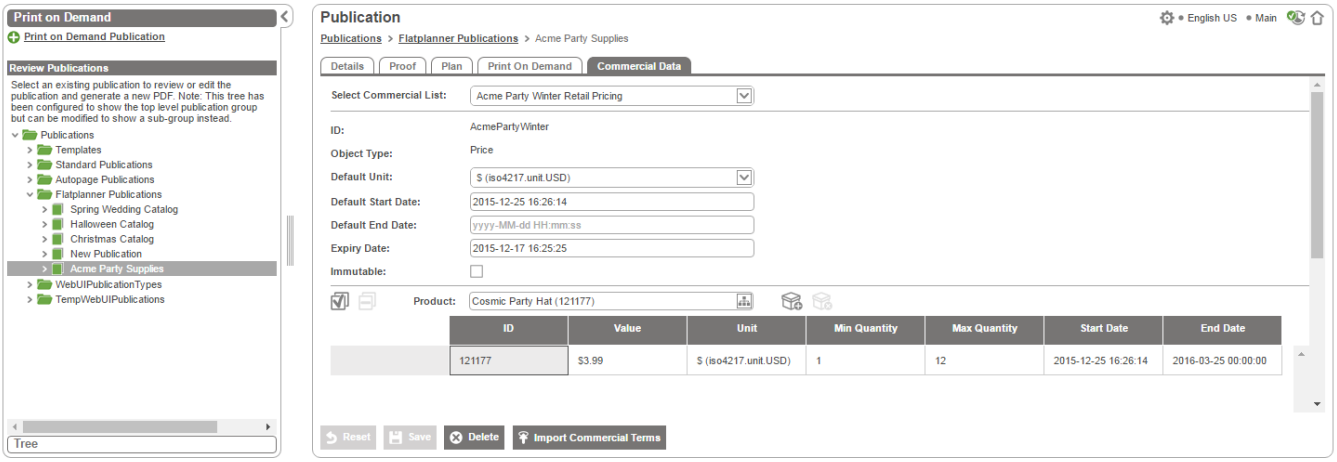
- New commercial data import and editing functionality in Web UI, enabling users to easily access and edit commercial terms outside of the workbench
- Addition of Publication hierarchy breadcrumbs in Web UI, easing navigation of the 'green' hierarchy

Details

New commercial data import and editing functionality in Web UI

Commercial data (commercial terms lists) may now be imported, viewed, and edited in the Web UI.

A new component called Commercial Terms Editor is available as a child component for addition to Node Editors. The component can be added to any Node Editor, but is intended for use only on Node Editor configurations used to work with Publication objects.



Visible term fields for Commercial Data lists in the Web UI are the same as those in the workbench.

The initial import configuration for commercial data, including mapping of columns within the Excel import sheet, must still be created in the workbench. However, these Excel sheets may be imported in the Web UI through the Import Commercial Terms action, which can be added as a button on a Node Details component. It is intended to be used from a Publication details screen, as commercial data may only be imported into a Publication object. This button is not activated unless the chosen Publication has at least one import configuration defined in the workbench.

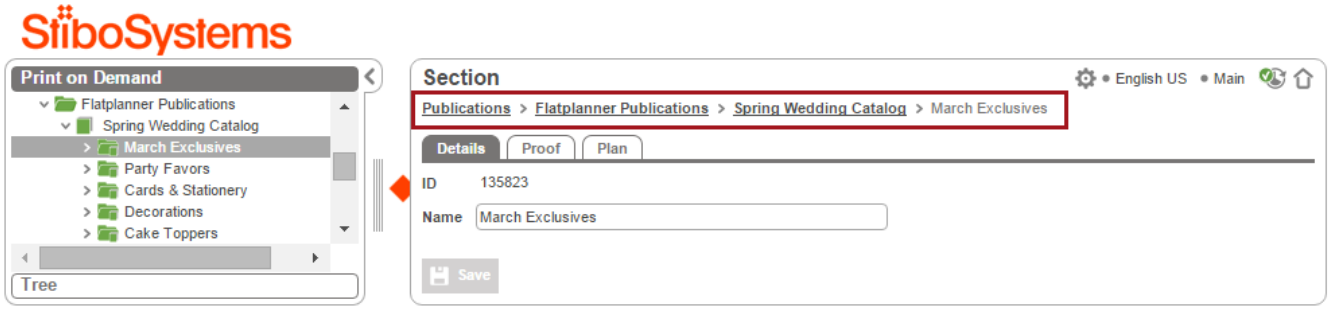
Once imported, users can edit, add, and remove terms in the Web UI without having to log into the workbench to do so. However, it is important to note that editing of commercial data is limited to taking place directly on the applicable product. No view allows the user to see commercial data associated with multiple products on the same screen.

For more information about the Publishing Web UI, see the STEP Publishing Web UI section of the Web User Interfaces / Sample Web UIs documentation.

Availability of Publication hierarchy breadcrumbs in Web UI

Navigation breadcrumbs are now available for objects in the Publication (green) hierarchy in the Web UI, eliminating the need to use a web browser's 'back' button to return to higher levels in the hierarchy. These breadcrumbs bring the functionality of Publication objects in the Web UI more in line with that of objects in other hierarchies, such as Products and Classifications.

Breadcrumbs are available at all levels in the Publication hierarchy, including Publication Groups, Publications, Sections, and Actual Pages (DTP Documents).



For more information about the Publishing Web UI, see the STEP Publishing Web UI section of the Web User Interfaces / Sample Web UIs documentation.

Minor Enhancements and Bugfixes

STEP has received a number of bugfixes and minor enhancements in various areas of the software as part of the Trailblazer 8.0 release. These are briefly listed below:

New Revision Management Event Processor plugin

The new Revision Management plugin for Event Processors allows automatic purging of object revisions in order to limit the total number of revisions retained. Multiple event processors can be configured, which enables the number of revisions to differ based on the object type or event (e.g. approval).

For more information, see the Creating Event Processors section of the System Setup / Super User documentation.

Upgraded MongoDB Java Driver

The MongoDB Java driver used by STEP has been upgraded to version 3.2.1, which adds support for MongoDB 3.0 and 3.2. The driver is still backwards compatible with MongoDB 2.4 and 2.6, but in order to benefit from all the improvements offered by the new driver, MongoDB users should upgrade to MongoDB 3.2.

MongoDB 2.4 reached end of life March 2016 and will not be supported by any future drivers. Therefore databases older than version 2.6 should be upgraded, in order to maintain compatibility with the officially available drivers.

The MongoDB Java driver 3.x corrects a security issue regarding SSL Hostname Verification found in the MongoDB Java driver 2.x. Therefore, MongoDB users should verify that their MongoDB server SSL certificate(s) contain the correct hostname in order to use SSL encrypted communication. If SSL is enabled and the MongoDB server certificate contains an incorrect hostname, all communication between STEP and the MongoDB server will fail.

Existing Business Actions may be affected by API changes in the new driver. MongoDB users should verify that their JavaScript does not use any functionality deprecated in the MongoDB Java Driver 2.13 API.

Additional resources and information can be found in the STEP SDK documentation and online at:

- https://api.mongodb.org/java/2.13/
- https://docs.mongodb.org/manual/release-notes/
- http://mongodb.github.io/mongo-java-driver/
- https://www.mongodb.com/support-policy

Upgraded IBM Websphere MQ Drivers

For both security reasons and to fix a problem with SSL support for the message queue integration with IBM Websphere MQ, the drivers have been upgraded from version 7.5 to version 8.0. **This will bring a change to the way endpoints using a JMS Receiver or JMS Delivery are configured**, as it means

the end of life for the driver class mentioned in the user documentation. The WMQInitialConnectionFactory has been replaced by RefFSContextFactory, and needs an additional file system based configurations file.

For more information on JMS configurations, see the JMS Receiver and JMS Delivery sections of the Integration Endpoint documentation.

New option to populate workflow variables in Web UI workflow submit dialogs

It is now possible to populate workflow variables when submitting objects in a workflow using the Submit Action (on Node Editors) or Submit from Grid Action (on Task Lists). Each action now includes a new Workflow Variables parameter. Designers can add workflow variables to the parameter via typing the workflow variable ID and clicking 'Add'. End users then see in the submit dialog each workflow variable that has been configured. As with standard process notes available in the submit dialog, text entered for workflow variables is applied to all objects being submitted if multi-select has been used.

For more information on workflow variables, see the Workflow Variables section of the Workflows documentation.

Improved handling of greater than (>) and less than (<) symbols in Web UI

Previously, the Enable Tag Conversion parameter (available on Attribute Value and Attribute Value Group components in Node Editors) was disabled by default, resulting in users receiving errors when attempting to use greater than (>) and/or less than (<) symbols in attribute values. In addition, some fields could become locked once a style had been applied to text within the field if the Rich Text Editor had not been enabled for the attribute.

With 8.0, the Enable Tag Conversion parameter is enabled by default when adding new instances of the Attribute Value and Attribute Value Group components. **In addition, users will automatically have access to the Rich Text Editor ('Edit formatted value' icon) when Enable Tag Conversion is selected for attributes with text and numeric text validation base types, preventing field lockouts due to applied styles. Automatic rich-text editing availability is new Web UI behavior for Attribute Value Components and overrides any existing Rich Text Editing parameter settings, if applicable, on Attribute Value Group Components.** Existing Web UI functionality for Trailblazer 7.2 and later versions of STEP will not change and designers will need to manually select Enable Tag Conversion to take advantage of the new functionality. However, as the parameter did not exist prior to Trailblazer 7.2, systems upgrading from a Trailblazer 7.0 or earlier version of STEP will have the Enable Tag Conversion (and the associated Rich Text Editor) enabled by default.

For additional information on the Enable Tag Conversion parameter, see the Attribute Value Components section and Attribute Value Group Components section of the Web User Interfaces / Using a Web UI documentation.

Expanded collections access in Web UI Status Selectors

Previously, users who did not have permissions to view the top-level collections node were unable to view *any* collections using the collections filter in Web UI Status Selector components. This has been updated so that users who have privileges to view specific collections or collection groups will now be able to search

and filter on the collections to which they have access if the relevant Status Selector component has been configured to include child collections.

Specifically, a new 'Collection Top Nodes' parameter is available in the Status Selector Sidebar Widget on the Stack Panel Item in Main and on the Status Selector Homepage Widget on the Homepage. This parameter allows Web UI designers to select collections that should be available for selection by end users, with end users only seeing the collections to which they have access.

For more information, see the Status Selector Homepage Widget section of the Web User Interfaces / Using a Web UI documentation.

Additional screen mapping details shown to user in Web UI Main properties

Configured conditions are now shown with the target Screen IDs in the Mappings parameter area of the Main Properties screen. This makes it easy for admin users to see the underlying conditions for screen mappings without having to open the individual mappings.

New option to add and display background process description in Web UI

Previously in Web UI, all background processes (BGPs) were identifiable in Web UI by an auto generated ID without any descriptive information of what the actual process was. Now there is a new optional property called 'Process Description' that is available on actions that generate BGPs, which allows designers to specify a more user-friendly BGP description to be displayed to end users.

In the 'Process Description' parameter, users can insert a combination of placeholder expressions and static text to return a coherent description of the background process. For example, a BGP description template which uses a combination of static text and placeholders could be 'Export {ItemCount} SKU(s) from {WorkflowState} state'. Assuming we are performing an export action from a node list, the description template could resolve to: 'Export 5 SKU(s) from Enrich state'. A complete list of available expressions is included in the online help.

If the Process Description parameter is configured on the associated action buttons, BGP creation messages and status popups will include the specified message. In addition, a new 'Description header' parameter has been added for use on Node Lists that will display the Process Description message in BGP tables.

In addition to the new messaging, BGP Node Lists that include the 'Started By Header' will now default to filtering by the 'Started By Me' selection. This allows for better user experience as users will by default see the processes that they are most likely to be interested in at the top of the list.

For more information on configuring background process screens, as well as a list of placeholder expressions to be used in the Process Description parameter and a list of all actions and components where the new parameter is available, see the Background Processes section in the Web User Interfaces / Using a Web UI documentation.

Improved reporting of empty Advanced Search results in Web UI

Previously in the Advanced Search screen in Web UI, if a user carried out a search that returned no results, the display remained empty with no message to the user signaling that the search was carried out successfully. This has been corrected so that users will now receive an appropriate message.

For additional information on Web UI Advanced Search, see the Advanced Search section of the Web User Interfaces / Using a Web UI documentation.

Enhanced Asset Push attribute macro so that changes in value trigger a re-push of the asset

Any attribute value pulled in using the $attribute:key$ macro in the Relative Path Template of an asset push configuration can now be monitored for changes by the system. If the asset push configuration is set to publish from the Main workspace, any changes made to the relevant attribute value will prompt an asset push. Likewise, if the configuration is set to publish from the Approved workspace, the asset push will trigger when the value change is reflected in the Approved workspace. Changes made to externally maintained attributes will prompt an asset push from either workspace.

For additional information on asset push path templates and macros, see the Relative Path Template section of the Asset Push documentation.

Entity parent / child references now reflected in Web UI Tree navigator

The 'Parent/Child relation' parameter available on Entity references allows users to specify if the reference should be reflected as a parent / child relationship in Tree. However, the parent / child display was reflected only in the workbench Tree, while not in the Web UI Tree. This has been updated so that the hierarchical display is now reflected in both interfaces. **Note that this constitutes a change in existing behavior** that end users should be made aware of as they will now see these relationships reflected without having carried out any change in configuration.

For additional information on the Parent / Child relation parameter, see the 'Using the Parent / Child Relationship with Entity to Entity References' section in Reference and Link Types of the System Setup / STEP Super User Guide documentation.

Replaced legacy use of word 'portal' with 'Web UI' throughout the STEP system

In order to provide better clarity and consistency, use of the word 'portal' in the STEP interfaces has been replaced with 'Web UI'. This includes the URLs used to access Web UIs so the URL will now be [system]/webui/[Web UI ID] instead of [system]/portal/[Web UI ID]. Note that use of the old style URL will continue to work and will automatically be redirected to the new URL so that existing links and bookmarks will continue to work. Also note that configurable information in STEP remains unchanged, as well as the names of all properties in the sharedconfig.properties and config.properties files.

Addition of 'More' button for viewing large sets of references on the References tab in workbench

Previously on the References tab in workbench, only 50 references were able to be viewed at one time. If more than 50 references were present, users were unable to view the full set of references. This has been corrected via addition of the 'More...' button to the References tab, with the same functionality as is present on the Referenced By tab.

The 'More...' button is displayed if more than 50 references of a particular reference type exist on the object. Clicking the button doubles the number of references shown, until the full set is displayed. Note that if new references are added, they display on the list immediately indicating that they were added properly, though normal functionality will resume if the user needs to press the 'More...' button again. After the list has been fully expanded, it will stay expanded until the user refreshes the page or clicks away to another object in workbench. Be advised that in very extreme cases (e.g. several thousand references), the retrieval functionality of the 'More...' button will become slow.

For more on references, see the About Reference Types section of the System Setup / Super User documentation.

About screen withdrawn from Web UI

The ‘About Screen’ component is withdrawn and no longer available as a screen type.

Upon entering design mode in Web UI following an 8.0 upgrade, users will receive an alert that says ‘The Web UI configuration contains components that are no longer supported,’ if they currently have a screen configured using this component. An admin user should delete any screens created using the ‘About Screen’ screen type to remove the error. As an example, if the alert says the screen name is [AboutScreen (News)], then the admin user should first choose the screen named ‘AboutScreen’ using the screen dropdown in the Designer window, and then click the Delete button. Once this has been done, the alert / error messaging will no longer appear. Note that as part of this change, the ‘About STEP portal’ icon has been removed from the User Widget, so admin users will no longer see the ‘About Screen’ parameter within the User Widget Properties.

New option to auto-populate country selection using an LOV in Web UI Address Detail component

The Web UI Address Detail component allows for the use of a List of Values (LOV) with a country attribute, and the LOV now works with the Google address search feature to auto-populate the country if a corresponding LOV value ID (country name) exists. Using an LOV promotes data consistency when it comes to the format of the displayed / stored values. The LOV setup must be followed carefully or the auto-populate feature may not work as expected. The LOV value IDs must match what the Google search returns and can be impacted by locale / language. If the country name presented in the Address Detail Search field does not exactly match a value ID field, then the country field will not auto-populate.

For more information about the Address Detail component and LOV setup, see the Address Detail section of the Web User Interfaces / Using a Web UI documentation.

Install.ProcessArea property deprecated

The Install.ProcessArea property in the sharedconfig.properties file has been discontinued as it was only used in a previously deprecated component. If this property is included in the sharedconfig.properties file on any system, it will need to be deleted or commented out in order for the system to be restarted after updating to the 8.0 release.

Corrected issue that prevented Web UI tabs from being accessed when the number of tabs on a page exceeded the width of the screen

Previously, when a large number of Tab Pages were configured on a Tab Control component in Web UI, there was the potential for some tabs not to be accessible. This occurred when the number of tabs exceeded the width of the available screen real estate.

This has been corrected via addition of a new tab navigator that is automatically enabled anytime the number of tabs exceeds the screen space. In this case, a double arrow appears (at either the beginning, end, or both locations of the tab row, depending on where the hidden tabs are located), indicating there is more to be seen. Clicking on the arrow exposes a dropdown menu , allowing the user to select the tab they would like to see. Whenever a tab is selected, it becomes visible in the tab row resulting in the tab row being 'redrawn'.

This new functionality is enabled automatically on all Trailblazer 8.0 systems, requiring no configuration or setup work on the part of Web UI designers.

Corrected issue that prevented inherited references on product override objects from being included in Generic XML exports

Previously when exporting a product override object via Generic XML using 'Data path' mapping, if the override was based on an object that included inherited references, those original inherited references were not included in the export, even when the 'Inherit Data and References' parameter was checked as part of the configuration. This has been corrected so that references inherited from the origin product are also included in the export of the override object.

Note that this constitutes a change in previously existing functionality. Customers using product overrides and Generic XML for exports or integrations should be aware that inherited references on product override objects will now be included for all cases where the 'Inherit Data and References' option is checked.

ISSUE-230299 - Change in Enforce Validity behavior in Web UI so that save and submit actions are never enabled when invalid data is present

Previously it was necessary to have Enforce Validity configured on various save and submit buttons to ensure that the user could not attempt to save data on a node details screen with invalid values (i.e. data that could not be saved). However, if a user attempted to save this invalid data, the system would error as the data could of course not be saved. To provide better user experience, this functionality has now been improved so that invalid data (e.g text in an attribute with validity of 'Integer') will always disable save and submit buttons, regardless of the Enforce Validity setting. This decouples the relationship between valid / invalid data and the enabling / disabling of save and submit actions. However, Enforce Validity still controls the enabling / disabling of buttons based on mandatory attributes and/or business condition results. When Enforce Validity is checked, save and submit actions are disabled if mandatory attributes are not populated or if business conditions fail.

ISSUE-233280 - Updated STEPXML generated for metadata in cross-context exports of product overrides and System Setup nodes

The cross-context export of metadata on product overrides and System Setup nodes has been improved to be consistent with other STEPXML outputs. This includes grouping the values correctly, adding the correct qualifiers for the values, and including the derived attributes for all contexts.

Note that this constitutes a change in previously existing functionality. Customers generating cross-context exports that include metadata and use the STEPXML format will notice a change in the format of the output and downstream systems may need to be updated accordingly to account for this. Specifically:

- **Calculated metadata attributes were not grouped correctly inside a ValueGroup tag**

  Previously on a product override or setup node:

  ```
  <Value Derived="true" DerivedContextID="FR CAN" AttributeID="AttributeA">Attribute A Value FR</Value>
  <Value Derived="true" DerivedContextID="EN USA" AttributeID="AttributeA">Attribute A Value EN</Value>
  ```

  Now on product overrides and setup nodes, same as previous behavior on products:

  ```
  <ValueGroup AttributeID="AttributeA">
     <Value Derived="true" DerivedContextID="FR CAN">Attribute A Value FR</Value>
     <Value Derived="true" DerivedContextID="EN USA">Attribute A Value EN</Value>
  </ValueGroup>
  ```

- **Attributes were grouped in a ValueGroup when they should not have been when only a single value was included**

  Previouslyon a product override or setup node:

  ```
  <ValueGroup AttributeID="AttributeA">
     <Value QualifierID="EN">EN Value</Value>
  </ValueGroup>
  ```

  Now on product overrides and setup nodes, same as previous behavior on products:

  ```
  <Value AttributeID="AttributeA" QualifierID="EN">EN Value</Value>
  ```

- **Values were duplicated across contexts in some cases**

  Previously on a product override or setup node:

  ```
  <ValueGroup AttributeID="AttributeB">
     <Value QualifierID="DE" ID="Y">Yes</Value>
     <Value QualifierID="FR" ID="N">No</Value>
     <Value QualifierID="DE" ID="Y">Yes</Value>
  </ValueGroup>
  ```

  Now on product overrides and setup nodes, same as previous behavior on products:

  ```
  <ValueGroup AttributeID="AttibuteB">
     <Value QualifierID="DE" ID="Y">Yes</Value>
     <Value QualifierID="FR" ID="N">No</Value>
  ```

```
</ValueGroup>
```

- **Multivalued attributes were repeated for each context**

  Previously on a product override or setup node:

```
<ValueGroup AttributeID="AttributeC">
   <MultiValue>
      <Value>DE Value</Value>
      <Value>FR Value</Value>
   </MultiValue>
   <MultiValue>
      <Value>DE Value</Value>
      <Value>FR Value</Value>
  </MultiValue>
</ValueGroup>
```

  Now on product overrides and setup nodes, same as previous behavior on products:

```
<MultiValue AttributeID="AttributeC">
   <Value QualifierID="DE" Changed="true">DE Value</Value>
   <Value QualifierID="FR" Changed="true">FR Value</Value>
</MultiValue>
```

ISSUE-223951 - Updated error reporting in Web UI for invalid attribute values

In Web UI in a Node Editor, users could receive an error message that indicated a problem but did not provide enough information for users to be able to correct it. This has been fixed by providing a more informative error message, as well as a visual indication of the attribute causing the error. Users will now see a yellow warning icon next to attributes having an invalid value.

ISSUE-234733 - Performance enhancement in database upgrade script

In the database upgrade script, a performance optimization has been made which will have effect for large database installations. This only impacts customers with STEP versions prior to 6.0, who will notice a change when upgrading to Trailblazer.

ISSUE-235803 - Added new line support for help texts in Web UI

In Web UI, help texts can be provided on attributes to assist end users in populating the values. Line breaks can now be added to the help texts by inserting '<br>'.

ISSUE-225507 - Fixed an issue with typeahead selection of LOV values in Web UI Node Lists

When attempting to update an LOV value on multiple objects simultaneously from a Web UI Node List, when the LOV being used contained more than 5000 values, users would in some cases experience an

error when using typeahead to select the LOV value. The error incorrectly stated that the value was invalid. This has been corrected so that the functionality works as expected.

ISSUE-221435 - Updated handling of webservice asset requests

Webservice requests for assets now include asset system properties in response to the restapi/assets/id call. Previously they were only included for the restapi/assets/id/values call.

ISSUE-229265 - Improved performance in publication data display

Performance of showing the contents of commercial data under a publication (when the Content of flipper is opened) has been improved. Previously, a list with a large number of values in a large database could take many minutes to open.

ISSUE-159319 - Updated unmatched object logging during imports

When importing using matching, the rejected objects are now only logged as info and not as an error during the mapping step of the import. Objects can be rejected either if 'Reject New' or 'Reject Updates' has been selected in the 'Identify Destination' step in the Import Manager. As part of this change, the line number printing from the Generic XML importer plugin was also corrected - previously no line numbers were printed when using this plugin.

ISSUE-234893 - Added new options for LOV IDs created via GPC Importer to enable use of these LOVs in Smartsheets

When importing a GPC hierarchy in workbench using the GPC Importer (File > Import > Import Global Product Classification), LOVs created via the importer would be assigned IDs containing 'stibo.gdsn.lov-<number>' and could not be exported and used in Smartsheets. Although this behavior remains the same default behavior, the possibility to create the LOVs with a different ID has been added so that they can be exported and used from Smartsheets. However, note that objects with an ID prefixed with 'stibo.' are considered system objects that cannot be exported.

ISSUE-230158 - Updated handling of unpopulated ISO validation fields in Web UI

In Web UI multi editors, you can now see the syntax to be used for ISO Date and ISO Date and Time attribute values when they are unpopulated. If no values have been keyed in, the syntax is indicated in the attribute value field, e.g. yyyy-MM-dd or yyyy-MM-dd HH:mm:ss.

ISSUE-232257 - Disabled ability to add multiple references in Web UI when the reference type does not allow for it

Previously in Web UI, it was possible to add multiple references on a reference type that only allowed a single reference. The error was detected upon save and the data was not committed, but usability was an issue. This has been corrected by disabling the ability to add references in the Web UI when the reference type doesn't allow multiples.

ISSUE-233666 - Improved performance in recycle bin

A change was made to improve performance of the recycle bin by counting elements before loading children. If the recycle bin contains large numbers of objects that are not residing directly under the root node, this change will not have any impact. However, if the recycle bin contains a lot of objects as direct children, this change will improve performance as the recycle bin will now respect the max number of nodes to be loaded and not read everything.

ISSUE-234119 - Fixed bug in Web UI attribute value filtering in Node Editor

Fixed a problem in Web UI filtering on Attribute Value headers in the Node Editor. When flipping the table, the filter would get applied to ALL attribute value columns, rather than just the selected one. This has been corrected so filtering functions as expected.

ISSUE-230197 - Fixed file descriptor leak

Fixed a file descriptor leak when using a non-documented option. Running out of file descriptors can cause the STEP application to fail in more or less random locations and ultimately become an application-wide problem. This will only affect customers who have the non-documented option set.

ISSUE-227393 - Corrected issue that caused Plans to be 'lost' when dragging between sections

After dragging a plan from one section to another a plan, either the dragged plan or one already in the section could be lost if the publication is multi-version and the page number exists in the drop section. This has been fixed by disabling handling of very old planned pages (pre STEP 5.2.2) but can be re-enabled by setting a config property "Flatplan.LegacyVersionMode=true".

ISSUE-233438 - Fixed a bug in Kerberos SSO plugin

When starting the application server, STEP would try to instantiate the Kerberos Single Sign On plugin, even with LDAP disabled. This has been fixed so that STEP will only try to instantiate the plugin if it is configured for use and if LDAP is enabled.

ISSUE-234135 - Corrected issue with some i18n texts

Some particular french translations of i18n texts could cause JavaScript exceptions, so the texts have been updated to avoid the problem.

ISSUE-231971 - Corrected bug encountered in Web UI when using Attribute Value Group with tag-related parameters enabled

A null pointer exception has been fixed in Web UI that was encountered if an Attribute Value Group component was configured with both Enable STEP Tags and Enable Tag Conversion parameters enabled.

ISSUE-216187 - Fixed bug in Autopage when using 'Place on top...' rule

Autopage could add too many pages when the rule 'Place on top of the next left/right page' was applied, causing gaps in the page inspector. This has been corrected and now functions as expected.

ISSUE-233485 - Corrected bug encountered when editing privilege rules

Previously, when editing privilege rules on user groups, it was not possible to remove an attribute or object type selection from an existing rule. This has been corrected so that attributes and object types can be deselected as expected.

ISSUE-176577 - Corrected problem with style update for a resolved attribute in planned pages

When mounting a planned page, previously the style assigned to the first paragraph was retained even if a different style was applied in InDesign. This has been corrected so that styles are updated as expected.

ISSUE-229279 - Corrected a bug with typeahead search in workbench with < or > in the object Name or ID

Typeahead search for an object (e.g. when adding references) now uses a selected object even if the name or ID includes < or > characters. Previously in the case of objects with < or > in the name or ID, even though the object could be selected in the typeahead, no search results were shown and therefore the object could not truly be selected.

ISSUE-232515 - Fixed improper sorting of suppliers in the Web UI Smartsheet Export Widget

When the user wanted to create a new Smartsheet from the Web UI, the list of available suppliers was not sorted. This issue has been fixed and now the user should see the list sorted alphabetically.

ISSUE-234041 - Corrected bug with Reference Metadata Value Header in Web UI

The Reference Metadata Value Header component had no ability to work with calculated attributes in Web UI. It was grayed out and users were not able to edit / override it to change the value. This has now been fixed.

ISSUE-217098 - Corrected bug in copy / paste for multi-valued attributes in Web UI

Copy and paste from Excel did not work in some cases when attempting to populate multi-valued attributes in the Web UI, as some values would be seen as invalid by the system even when correct. This has been solved by removing spaces before validating numbers and values should now validate successfully after copy / paste.

ISSUE-214028 - Fixed problem in customizations setting commercial values in terms lists

This issue manifested as an exception in the background processes attempting to set the values, causing the background processes to fail. It was only an issue when the value was set via a customization rather than using standard functionality. This has been corrected so that the processes will set the values without error.

ISSUE-101425 - Fixed bug in reviving sub product overrides

In Recycle Bin, reviving a sub product override would not revive the linkage to its parent object. When reviving a sub product override, the override will now be revived and appear as a child to its parent object.

ISSUE-234804 - Corrected issue with unit selection in Web UI multi-editors using numeric text attributes

In Web UI, when working in multi-editor components (e.g. Task Lists, etc), it was in some cases not possible to select or display units when editing a Numeric Text validated attribute. This has been corrected so that units are editable and displayed as expected.

ISSUE-234892 - Corrected issue with Web UI navigation from task lists

In Web UI, when using workflow states with overlays, the Submit action would not navigate to the next product in the task list. Now, when clicking Submit for an object when more objects exist in the task list, you will be navigated to next product in the list.

ISSUE-234937 - Fixed bug in STEPXML import of classification references using replacement rules and unique keys

Fixed a problem where importing a classification reference from a product using unique keys and replacement rules would not import the reference. Specifically, when the ReplaceClassificationReferences and KeyValue elements were used in combination, existing classification references were deleted but the new references were not created. This has been corrected so that the combination now functions as expected.

ISSUE-232992 - Corrected bug in NodePickerField.setNode() in the Web UI extension API

When calling NodePickerField.setNode() in the Web UI extension API, the selected node will now be displayed in the client. Previously, only initial selections were reflected, and not updated selections.

ISSUE-235135 - Corrected bug in workflow navigation with screens using overlays

For Web UI configurations setup to have a Status Selector Widget in a sidebar panel, it would not navigate to a selected workflow state if the state was configured to use an overlay. This has been corrected so that now clicking a state in the Status Selector Widget properly navigates to the workflow state and the overlay is kept. Clicking a state in the sidebar panel when current data has not been saved causes a dialog to appear that prompts the user to save the data before navigating away from the current active state.

ISSUE-230915 - Corrected bug in Web UI Product Attribute Links component

The Web UI Product Attribute Links component for displaying the attribute links would display the delete icon if the component was configured as read-only and the show inherited action was checked. This has been corrected so that when the read-only parameter is checked, the delete icon does not display.

ISSUE-235164 - Corrected bug in Web UI Packaging Hierarchy editor

The pop-up dialog for selecting actions in the Web UI Packaging Hierarchy had ceased to work when there was more than one action configured. This has been corrected and the actions are now available as expected.

ISSUE-199320 - Corrected bug in translation search functionality

When using the translation search functionality in the workbench, STEP would in some cases return all potential results, regardless of whether or not the object needed translation or re-translation. This bug has been fixed so now STEP will correctly return only the results that need translation.

ISSUE-202513 - Corrected bug in business rule usage information on imported rules

When importing business rules, the usage information was not updated correctly. This problem has been fixed and now the importer updates the usage information for the business rules to ensure that the correct information is displayed in the workbench.

ISSUE-222873 - Fixed bug in Web UI Node List encountered when using Internet Explorer

When using Internet Explorer as the browser for Web UI, clicking on the ID of an object in a Node List component could cause an exception error under certain configurations. This has been corrected so that users will no longer encounter an exception when clicking links within Node Lists.

ISSUE-225970 - Corrected issue with multi-selection in Node Lists using Multi Edit Display Mode

There was a bug in Web UI with selecting multiple items with shift-click when in Node Lists using the Multi Edit Display Mode. This has been corrected so that multi-select works properly in all Node List components.

ISSUE-235974 - Fixed bug seen in Web UI multi editors when selecting an item from a long list

A bug has been corrected in the Web UI multi editor where attempting to select items in the bottom of a long list could result in the wrong item being selected. Selections are now appropriately honored.

ISSUE-234857 - Corrected issue in suppression of references in Web UI

In the Reference Value Component to be used in the Web UI in a Node Editor, it is now possible to open the visibility / suppression dialog on an item which is already suppressed, allowing users the ability to unsuppress references. Previously, this dialog was hidden for such suppressed items.

ISSUE-233313 - Corrected bug when moving objects in Web UI using 'Select All'

In WebUI task lists, the 'Select All' option did not work when being used to move objects. When selecting all objects to be moved, a dialog would appear indicating objects had been moved, but they were not. This has been corrected so that the objects are moved as expected.

ISSUE-228262 - Fixed bug in the handling of max number of events in integration endpoints

The configuration of an integration endpoint is now checked before the background process is executed - if the number of events to be read exceeds the limit applied by the configuration property OutboundMessageProcessor.BatchEventsMaxSize, the batch size and/or number of batches per delivery is reduced by the endpoint so that the limit is obeyed and a warning message is reported into the background process. Previously in this case the background process would repeatedly process the same events.

ISSUE-229344 - Corrected issue with GDSN Web UI preflight option

When running GDSN Register and Publish commands in Web UI with the preflight option selected, the system was to run validation conditions only and not take any business actions. However, in some cases the system was running business actions as well as validation conditions when the preflight option was selected. This has been corrected so that only business conditions used for validation are run when preflight is selected.

ISSUE-230591 - Corrected an issue in partial approval functionality

An issue has been fixed where it was not possible to partially approve an item in the workbench when the item had multiple parallel references to the same object. Objects can now be partially approved as expected.

ISSUE-225550 - Fixed bug with function editor toolbar action enabling

In some cases the function editor toolbar actions were not enabled correctly, which has been corrected. This affected, for example, editing calculated attribute formulas and business condition functions.

ISSUE-157937 - Corrected bug in SQL API attribute views

In the SQL API, the views ATTRIBUTE_ALL and ATTRIBUTE_V now show correct value of the revisability of the attribute (where it previously claimed revised attributes to be unrevised).

ISSUE-233436 - Corrected revision comment on business rules running as privileged

If a business rule approves an object by running as 'privileged' the revision status comment now correctly includes the '(rule-modified)' suffix. Previously, this was missing in the comment.

ISSUE-229547 - Corrected issue in Web UI pie chart widget display

In Web UI, sometimes the piechart widgets could not show all data in mouseover text as it expanded below the bottom of the widget and was hidden. Widgets for piecharts in Web UI have now been set to a new default height, to allow for mouseover text to fit in the display panel.

ISSUE-235872 - Corrected bug in Web UI rendering of objects for users in a high number of supplier groups

When a user was connected to a large number of suppliers, they could receive an Oracle error when attempting to access objects in a workflow in Web UI due to a hard limit in Oracle's within clause. This has been corrected so that users do not encounter the error.

ISSUE-237033 - Corrected issue in In-Memory when changing validity of references or links

When the In-Memory component is used, removing some object types as valid for a link or reference could potentially cause an out-of-memory problem when the system attempted to remove the no longer valid links / references. This has now been corrected.

ISSUE-235921 - Fixed bugs in cross-context exports

An issue has been corrected in cross-context exports that could lead to product hierarchy objects not being exported correctly in some cases when a product had dimension-dependent cross references. It could also lead to calculated attributes values being calculated incorrectly when the calculation uses inherited values. Finally, it could lead to incorrect products in the export if the product hierarchy is dimension dependent. These issues have all been corrected.

ISSUE-237362 - Corrected bug in adding inline references in Web UI rich text editor

An inline reference could not be added using the 'Insert / Edit Inline Reference' dialog unless an object was specified. This has been corrected.

ISSUE-235212 - Fixed bug in cut / paste functionality in LOVs in workbench

Previously, when editing an LOV in the workbench System Setup and right-clicking on an LOV value and selecting 'Cut', the system would in some cases throw an exception error, and in others would not allow pasting of the value. This has been corrected and copy / paste functionality in the LOV editor works as expected.

Platform and Software Support for Trailblazer 8.0

STEP Database Server

Server Component	Supported Software
Hardware architecture	x86-64 (aka. x64, AMD64, Intel 64)
Operating System (OS)	Red Hat Enterprise Linux 7.2+ / 6.7+ 64-Bit Oracle Enterprise Linux 7.2+ / 6.7+ 64-Bit *(UEK3 or RHEL kernel)* [1] MS Windows Server 2012 R2 / 2008 R2 64-Bit
Database software	Oracle 12.1.0.2 64-bit SE2 and EE [2] Oracle 11.2.0.4 64-bit SE/One, SE and EE [3] *Enterprise Edition may be needed if advanced Oracle options (like oracle RAC or Dataguard) are requested – this must be checked with Oracle. The STEP application itself does not require any EE features.*
Application Software (optional)[4]	Oracle Java 8 SE (Java JDK 1.8.0_72+ 64-bit) STEP DB Server Toolbox

[1] UEK3 = Unbreakable Enterprise Kernel v3, RHCK = Red Hat Compatible Kernel

[2] Only SE2 (Standard Edition 2) and EE (Enterprise Edition) licenses are available. SE2 has new licensing rules.

[3] Oracle 11.2.0.4 is not installed by Stibo unless explicitly requested by customer. Stibo recommends using Oracle Database 12.1.0.2. Oracle has waived the fee for Extended Support for 11.2 for all customers through 31 May 2017 (See Oracle support note 742060.1).

[4] Required if customer has a DBA Support agreement with Stibo or if customer / hosting partner wishes to utilize the STEP DB Server Toolbox which includes scripts for e.g. Oracle RMAN backup and restore and Oracle Datapump export/import etc.

STEP Application Server

Server Component	Supported Software
Hardware architecture	x86-64 (aka. x64, AMD64, Intel 64)
Operating System (OS)	Red Hat Enterprise Linux 7.2+ / 6.7+ 64-Bit

Server Component	Supported Software
	Oracle Enterprise Linux 7.2+ / 6.7+ 64-Bit *(UEK3 or RHEL kernel)* [1] MS Windows Server 2012 R2 / 2008 R2 64-Bit [2]
Server runtime environment	Oracle Java SE 8 (standalone) (Java JDK 1.8.0_72+ 64-bit) [3]
Reverse Proxy	Apache 2.2.x (using mod_proxy) on RHEL6 / OEL6[4] Apache 2.4.x (using mod_proxy) on Windows / RHEL7 / OEL7 [4]
Application Software	STEP Trailblazer 8.0 STEP AssetPush [5]

[1] UEK3 = Unbreakable Enterprise Kernel v3, RHCK = Red Hat Compatible Kernel.

[2] Windows is not supported for In-Memory installations.

[3] New Java versions will be updated automatically once tested with the STEP software. This occurs during patching of the STEP Trailblazer software using the SPOT tool.

[4] The STEP application utilizes the default Apache HTTPD installation on RHEL and OEL. On RHEL/OEL 6 this is version 2.2.15. On RHEL/OEL 7 the version is 2.4.6. The major version does not change, but security fixes are applied when using Yum to update the RPM package.

[5] STEP AssetPush is configured if images from the STEP system are to be used in different formats for e.g. a website.

STEP InDesign Server

Server Component	Supported Software
Hardware architecture	x86-64 (aka. x64, AMD64, Intel 64)
Operating System (OS)	MS Windows Server 2012 R2 / 2008 R2 64-Bit Mac OS X 10.8.x[1] / 10.9.x / 10.10.x Server 64-Bit
Server runtime environment	Oracle Java SE 8 (Java JDK 1.8.0_72+ 64-bit)
Application Software	Adobe® InDesign® CC2015 Server (64-bit) [2]

Server Component	Supported Software
	Adobe® InDesign® CC2014 Server (64-bit) [3] Adobe® InDesign® CS6 Server (32-bit) STEP AssetPush [4]

[1] Mac OS X 10.8.x only used with InDesign Server CS6

[2] Adobe® InDesign® CC2015 Server is not support on Mac OS X 10.11. CC2015 is the recommended version for all new installations.

[3] Adobe® InDesign® CC2014 Server is not supported on Mac OS X 10.10 and 10.11.

[4] STEP AssetPush is configured to "push" images to a filesystem on the server to be locally available for the Adobe InDesign Server application.

STEP AssetPush File Server

This server is required only if the customer wishes to use high-resolution images in remote locations (i.e. offices that are not at the same site as the STEP server) for STEP'n'design (using Adobe InDesign Client). One server for each remote office location that uses high-resolution images is required.

Server Component	Supported Software
Hardware architecture	x86-64 (aka. x64, AMD64, Intel 64)
Operating System (OS)	Mac OS X 10.9.x / 10.10.x / 10.11.x Server 64-Bit Red Hat Enterprise Linux 7.2+ / 6.7+ 64-Bit Oracle Enterprise Linux 7.2+ / 6.7+ 64-Bit *(UEK3 or RHEL kernel)*[1] MS Windows Server 2012 R2 / 2008 R2 64-Bit
Server runtime environment	Oracle Java SE 8 (Java JDK 1.8.0_72+ 64-bit)
Application Software	STEP AssetPush [2]

[1] UEK3 = Unbreakable Enterprise Kernel v3, RHCK = Red Hat Compatible Kernel.

[2] STEP AssetPush is configured to "push" images to a filesystem on the server to be locally available for the Adobe InDesign Server application.

STEP Client Requirements

Windows Client

Server Component	Supported Software
Processor	Intel based 2.0GHz Core i3 Ivy Bridge or newer
Number of Processor Units	1
Total System Memory	Min. 4 GB (8 GB recommended)
Operating System	Windows 7 / 8 / 8.1 / 10
Storage	Minimum 5 GB free disk space for STEP Workbench installation, including client cache Additional free storage required for usage of DTP applications
Software	Java Runtime (JRE) 1.8.0_xx (latest update) STEP Workbench Client Adobe® InDesign® CC 2015 / CC 2014 / CS 6 [1] Browsers: IE 9/10/11, Firefox, Safari, Chrome, Edge for Windows 10 (manually tested only)

[1] Client version must match the server version

Mac Client

Server Component	Supported Software
Processor	Intel based 2.0GHz Core i3 Ivy Bridge or faster
Number of Processor Units	1
Total System Memory	Min. 4 GB (8 GB recommended)
Operating System	Mac OS X 10.9.x / 10.10.x / 10.11.x
Storage	Minimum 5 GB free disk space for STEP Workbench installation, including client cache Additional free storage required for usage of DTP applications

Server Component	Supported Software
Software	Java Runtime (JRE) 1.8.0_xx (latest update) STEP Workbench Client Adobe® InDesign® CC 2015 / CC 2014 / CS 6 [1] Browsers: Firefox, Safari, Chrome

[1] Client version must match the server version. CC2015 is the only version support on Mac OS X 10.11.x