STEP Trailblazer

DIGITAL ASSET EXCHANGE USER GUIDE

Release 9.0 MP5 (November 2018)

StiboSystems

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Digital Asset Exchange

STEP assets can be either images or non-images (based on MIME type), but both include metadata, references, and digital content. For more information, see the **MIME Types** section of the **System Setup / Super User Guide**.

- **Images** are assets, usually with a MIME type of **image/***, and can be converted during export from STEP. Modifications can include changes to size, color, and/or converting the file to a format available in the wizard. Image Conversion Configurations allow these modifications to be saved and applied consistently for additional exports. For more information about converting images, see **Image Conversion Configuration** in the **Digital Asset Exchange** documentation.
- **Non-images** are assets with any other MIME type and cannot be modified during an export. Non-images are exported from STEP in the same format and manner that they were loaded into STEP.

Inbound Assets

These are the methods of importing assets into STEP:

- **Asset Importer** allows you to import assets via Web UI and/or hotfolders configured with an Inbound Integration Endpoint.
- **Manual Asset Importer** allows you to import assets via STEP Workbench but cannot be scheduled.

Outbound Assets

These are the ways to export assets:

- **Export Images and Documents** wizard allows you to manually export asset digital content.
- **Export Manager** or an **OIEP** allows you to manually export asset metadata, references, and digital content, in addition to data, using STEPXML.
- **Asset Push** allows you to automatically export modified / approved assets.
- **REST API** allows you to upload files to REST. For more information, click the **STEP API Documentation** button on the STEP WebStart page.

To exchange data independent of assets, see the **Data Exchange** documentation.

Exporting Assets

STEP assets can be either images or non-images (based on MIME type), but both include metadata, references, and digital content. For more information, see the **MIME Types** section of the **System Setup / Super User Guide**.

- **Images** are assets, usually with a MIME type of **image/***, and can be converted during export from STEP. Modifications can include changes to size, color, and/or converting the file to a format available in the wizard. Image Conversion Configurations allow these modifications to be saved and applied consistently for additional exports. For more information about converting images, see **Image Conversion Configuration** in the **Digital Asset Exchange** documentation.
- **Non-images** are assets with any other MIME type and cannot be modified during an export. Non-images are exported from STEP in the same format and manner that they were loaded into STEP.

Assets can be exported using:

- **Export Images and Documents** wizard allows you to manually export asset digital content.
- **Export Manager** or an **OIEP** allows you to manually export asset metadata, references, and digital content, in addition to data, using STEPXML.
- **Asset Push** allows you to automatically export modified / approved assets.
- **REST API** allows you to upload files to REST. For more information, click the **STEP API Documentation** button on the STEP WebStart page.

Asset Push

Asset push allows users to export assets from STEP to a local file system, where they can be accessed by external users and systems. These assets are automatically exported whenever an object is modified or approved (depending on the asset push configuration), ensuring that the assets stored in the local file system are always updated with the latest versions of the assets from the central STEP database. Considering the potentially large size of the assets being exported, this method is favorable over manually exporting assets in bulk.

With asset push, users can maintain a single high resolution image in STEP, and convert it to all the various formats required for use in external systems. The external files will always reflect the most up-to-date images that are in the STEP system. Conversion templates can be applied to transform these images from high resolution to low resolution, resize images, apply color scales to images, and more. Images can also be pushed as-is from STEP to make them available to other applications.

Low resolution images, such as those used in web applications, are not held inside the STEP system. The STEP system normally holds only the high resolution version of an image. Thus, dragging images or documents out of the STEP system in an ad-hoc manner would require considerable resources, and in addition, they would have to be extracted every time they were requested. That is not only true for web-type images (where conceivably there would have to be multiple on-the-fly conversions to all the required low resolution versions of the image) but also for high resolution images (where, although there is usually no conversion, images of 10-20MB or more are commonly held in STEP).

It is important to note that asset push does not send asset files directly to downstream systems. Instead, it makes files available for retrieval by these systems so that on-demand extractions from the intermediate file system can occur without putting any strain on the STEP system.

Asset Push Terminology

Term	Definition
Asset	Any collateral or document in electronic format, such as an image, Word document, Excel file, PDF, PowerPoint file, text file, etc.
Asset Push	A process that exports assets from STEP to a file system for different purposes. Conversion templates can be applied to transform images, for example from high resolution to low resolution, resizing, applying color scales, etc, though assets can also be sent as-is.
assetpush.properties file	Properties file that specifies parameters specific to an individual asset push, including login credentials for the local file system. One file of this type exists for each asset push event queue. Note that the ImagesFolder property is included in this file, which indicates the root directory to which the Relative Path Template is applied (e.g. [ImagesFolder][RelativePathTemplate]).

Term	Definition
Asset Push Event Queue	Queue to listen for events on assets. Multiple asset push configurations can exist on a single event queue, though one event queue is required per sidecar. In other words, assets being pushed to the same destination system may share a single event queue with one or more configurations assigned to it.
Configurations (as related to asset push)	Definition of how an individual asset push will function, including the conversion, relative path template, and acceptable MIME types. Any number of configurations can exist under a single Asset Push Queue in STEP.
Conversions (as related to asset push)	A series of parameters defining the way in which an image is transformed from the standard high resolution asset that exists in STEP to the required downstream format. Several conversion options are available by default, and additional conversions can be added via custom extensions. Note that conversions change assets as they are pushed, leaving the originating file in STEP unchanged. One asset push configuration is required for each required conversion, as a conversion is simply a parameter within the overall asset push configuration. Note that a Conversion is an optional parameter for each Configuration.
MIME Type	Standard identifier used to indicate the type of data that a file contains. In STEP, each asset push configuration includes an option to specify MIME Types to be used in the configuration. Leaving this entry blank means that all asset types meeting the other configuration parameters will be attempted to be converted and/or pushed as specified. Populating this entry means that conversion and/or push will only be attempted for assets meeting the specified types. Note that the configuration property (AssetPush.SkipMimeTypeCheck=false) should be added to the sharedconfig.properties file to keep undefined MIME types from being imported. Otherwise, no check is made when importing assets. For more information about MIME types, see the **MIME Types** section of the **System Setup / Super User Guide** documentation.
Relative Path Template	Used in conjunction with the asset path specified in the assetpush.properties file to tell the system where to place the pushed assets. Can be used to create a flat structure or a hierarchy structure, and will typically utilize several pre-defined STEP macros to dynamically create directories. The value entered is used following the root directory specified in the assetpush.properties file (e.g. [ImagesFolder]/[RelativePathTemplate]). For more information about Relative Path Templates, see the **Relative Path Template Overview** section of the **Asset Push** documentation.

Term	Definition
Sharedconfig.properties file	Properties file that specifies many system parameters, including some that define general asset push functionality across all asset push event queues on the system.
Sidecar	Optional STEP component consisting of external files installed on various machines, oftentimes on the application server or a remotely located machine. STEP can communicate with sidecars so that when a relevant activity is triggered in STEP, the sidecar is informed of the associated task and carries it out. One sidecar is required for each location to which assets must be pushed. Multiple configurations may share a sidecar if they are also sharing a root destination (as specified in the assetpush.properties file).

Enabling Asset Push

To enable asset push, the user must perform the following actions:

1. Create an image conversion configuration if one is required and none of the standard conversion configurations can be applied. See the **Image Conversion Configuration** section of the **Export Manager** documentation for more information.
2. Create an asset push event queue. See the **Creating Asset Push Event Queues** section of the **Asset Push** documentation for more information.
3. Create one or more asset push configurations. See the **Creating Asset Push Configurations** section of the **Asset Push** documentation for more information.
4. Ensure that the java sidecar application is installed on the client / server where the external file structure is located. The sidecar installation is handled by Stibo Systems Technical Services. Contact your Stibo Systems account manager and/or submit a help desk ticket to complete this step.
5. Initiate the first asset push manually. See the **Starting the Asset Push Process** section of the **Asset Push** documentation for more information.

Additional Information

- Assets that have not been pushed or have failed to push can be found by using the 'Unpushed or Failed Assets' search criterion. See the **Search: Unpushed or Failed Assets** topic within the **Navigation and Searches** section of the **Getting Started / User Guide** documentation for more information.
- It may be necessary to monitor the activity of asset pushes, which can be especially important in the event that an asset conversion or extraction fails. See the **Monitoring Asset Push** section of the **Asset Push** documentation for more information.
- Asset Push is utilized to make **assets continuously available to downstream systems** with the latest content and in any required formats, while also **minimizing any performance** impacts this could have on the system.

Asset Push Properties

System Properties

STEP employs a variety of properties to determine some basic system settings for asset push. Many properties are best utilized in their default setting, but may need to be changed in certain situations. These settings can be found in the sharedconfig.properties file and affect all asset pushes in the system.

The tables below describe all system properties related to asset push, and recommendations for when to change them. Note that changing any property in the sharedconfig.properties file may require a restart of the system for the property to take effect.

AssetPush.AutoDetectedExtension.MimeTypes

Definition	This defines a list of mimetypes (separated by comma) of generated content where auto-detected extensions will be applied (if part of template). Otherwise the original extension will be used.
Default	image/*,application/postscript Using the default, autodetected extensions will only be applied to image and postscript files.
Additional Info / When to Change the Default Value	Change only if the autodetect macro is used as part of the relative path template to ensure that all necessary types of files can be detected. Note that the autodetect macro is used sparingly so this property generally does not need to be changed. Can also be used as a means of filtering which assets have their extensions detected as those not listed will be pushed with their original extensions. You can use an asterisk (*) as wildcard at the end of mimetype.

AssetPush.BatchSize

Definition	This defines Upper limit to how many events to read ahead
Default	Using the default, value would be 100. Value specified for batch size must be an integer.
Additional Info / When to Change the Default Value	Consult with Stibo Systems Technical Services before changing this.

AssetPush.Concurrency

Definition	Option to run in concurrency mode. Running in concurrency mode means that more than one sidecar can get access to events in the same queue. Running in concurrency mode has the consequence that events will be marked read immediately, i.e. before processing. If processing fails, the event will no longer be available on the queue. In that case the asset must be touched to have a new event generated. Must be a Boolean (true or false).
Default	false
Additional Info / When to Change the Default Value	Typically changed only when a full download / push is being performed as it can speed up this process by allowing multiple sidecars to perform the work. Consult with Stibo Systems Technical Services before changing this or the Concurrency Level property (below).

AssetPush.Concurrency.Level

Definition	Defines the number of concurrent sidecars that will be used when the system is running in concurrency mode (see above).
Default	N/A
Additional Info / When to Change the Default Value	Only set if Concurrency is set to 'true'. See above.

AssetPush.DTPConfiguration

Definition	The default configuration to use from DTP Clients (IDS and QXP) when workspace is Main, in order to obtain pushed assets. The property should be an ID of the configuration.
Default	raw-main
Additional Info / When to Change the Default Value	Used for Print / InDesign asset pushes. Only relevant for new (queue-based) asset-pusher.

AssetPush.DTPConfiguration.Approved

Definition	The default configuration to use from DTP Clients (IDS and QXP) when workspace is Approved, in order to obtain pushed assets. The property should be an ID of the configuration.
Default	raw-approved
Additional Info / When to Change the Default Value	Used for Print / InDesign asset pushes. Only relevant for new (queue-based) asset-pusher.

AssetPush.DefaultDTPClientAssetLocation

Definition	Allows a default asset location to be set in the server for use by all DTP clients on site (if they have Use Default Asset Location checked in their preferences). Must be a string in the appropriate form for the DTP client and applicable platform.
Default	N/A (null)
Additional Info / When to Change the Default Value	Used for Print / InDesign asset pushes.

AssetPush.IgnoreClassifications

Definition	Defines a list of classifications (separated by semicolon ';') that will be ignored when an event is fired. ('*' will ignore all classification events).
Default	N/A (null)
Additional Info / When to Change the Default Value	Can be set to ignore classifications for asset hierarchy folders that should not be included in asset push and/or for any non-asset classification hierarchies. It is recommended to use the 'Include Classification' setting in the configuration rather than to exclude via this setting. However, either is acceptable and at least one (if not both) should be populated.

AssetPush.LegalChars

Definition	Legal characters for file name and file structure on the local file system. Any illegal characters encountered (those not in this list) will be converted to underscores. Format=$char$ to indicate a range, or type individual values without using $
Default	N/A (null)
Additional Info / When to Change the Default Value	Should not be used in conjunction with Illegal Characters (use one or the other, or neither). Use when the downstream system has character limitations and allowable characters are limited (e.g. A-Z, a-z, 0-9, hyphen and underscore, indicated as $A-Z$$a-z$$0-9$-_ OR abcdefghijklmnopqrstuvwxyz01234567890-_ ABCDEFGHIJKLMNOPQRSTUVWXYZ).

AssetPush.IllegalChars

Definition	Illegal characters for file name and file structure on the local file system. Any illegal characters encountered (those in this list) will be converted to underscores. Format=$char$ to indicate a range, or type individual values without using $
Default	N/A (null)
Additional Info / When to Change the Default Value	Should not be used in conjunction with Legal Characters (use one or the other, or neither). Use when the file system has character limitations and the allowable characters are significant in number (e.g. standard alphanumerics plus all accented versions allowed but forward slash and asterisk must be omitted, indicated as *).

AssetPush.Instances

Definition	Space separated list of asset push instance names, minus the assetpush- prefix. If the value is 'a b c' then there are 3 asset push instances, named assetpush-a, assetpush-b and assetpush-c. Note: A remote event handler is automatically set up for each instance.
Default	N/A (null)
Additional Info / When to Change the Default Value	Must be matched by: /[a-z0-9\.-]* ([a-z0-9\.-]+)*/

AssetPush.MaxHeapSize

Definition	The amount of memory to allow the Asset Push payload to use.
Default	256m
Additional Info / When to Change the Default Value	Typically left as defaulted. Consult with Stibo Systems Technical Services prior to changing.

AssetPush.PathAddOn

Definition	An intermediate part of the path to inject if attempting to find the asset via the old asset-push system.
Default	N/A (null)
Additional Info / When to Change the Default Value	Inserted between the prePath, and before the (off-cut) relativePath. E.g. if the old pusher stored an asset in /AssetPush/Images/Main/Global/asset.gif, where /AssetPush/Images is the prePath, and the new stored the asset in /AssetPushQueue/Images/ss/et/asset.gif, then setting the AddOn to "../../AssetPush/Images would result in the path (when searching for old-pushed assets) /AssetPushQueue/Images/../../AssetPush/Images/Main/Global/asset.gif, which is hopefully equivalent to the wanted location.

AssetPush.PathCutoff

Definition	The amount of levels (of directories) to cut off the full path, if mounting the client-drives partly into the assetpush-file-system. Defaults to zero.
Default	Zero
Additional Info / When to Change the Default Value	Only relevant for new (queue-based) asset-pusher.

AssetPush.RedownloadAllMethod

Definition	Defines how to find all assetURLs when no classification root has been specified.
Default	Query
Additional Info / When to Change the Default Value	Possible options: 'Query' and 'Traverse.' Notice, when Query is chosen, AssetPush.RedownloadAssetURLsBatchSize will be ignored.

AssetPush.RedownloadAssetURLsBatchSize=10000

Definition	Defines the number of assetURLs to fetch in each batch when doing redownload.
Default	10000
Additional Info / When to Change the Default Value	Value must be an integer. Typically left as default. Consult with Stibo Systems Technical Services prior to changing.

AssetPush.RelativePathTemplate.Sample1

Definition	A pre-defined relative path template. Will be used in the AssetPushConfiguration editor in the Relative Path Template combobox.
Default	$configID$/$contentdimensionpointsID$/$IDpath$/$assetID$.$autodetected-extension$
Additional Info / When to Change the Default Value	Use to provide valid and useful macro templates for asset push administrators.

AssetPush.RelativePathTemplate.Sample2

Definition	A pre-defined relative path template. Will be used in the AssetPushConfiguration editor in the Relative Path Template combobox.
Default	$configID$/$IDpath$/$assetID$_

	$contentdimensionpointsID$.$autodetected-extension$
Additional Info / When to Change the Default Value	Use to provide valid and useful macro templates for asset push administrators.

AssetPush.RelativePathTemplate.Sample3

Definition	A pre-defined relative path template. Will be used in the AssetPushConfiguration editor in the Relative Path Template combobox.
Default	$conversion$/$workspaceID$/$IDpath$/$assetID$_ $contentdimensionpointsID$.$autodetected-extension$
Additional Info / When to Change the Default Value	Use to provide valid and useful macro templates for asset push administrators.

AssetPush.RelativePathTemplate.Sample4

Definition	A pre-defined relative path template. Will be used in the AssetPushConfiguration editor in the Relative Path Template combobox.
Default	N/A (null)
Additional Info / When to Change the Default Value	Use to provide valid and useful macro templates for asset push administrators.

AssetPush.RelativePathTemplate.Sample5

Definition	A pre-defined relative path template. Will be used in the AssetPushConfiguration editor in the Relative Path Template combobox.
Default	N/A (null)
Additional Info / When to Change the Default Value	Use to provide valid and useful macro templates for asset push administrators.

AssetPush.UseSystem

Definition	Entry defining which AssetPush system to use. Legal values are: • new - The new, event-queue-based one. • old - The old one (pre STEP 5.1 and/or December 2009). • both - Attempt the new one, and revert to the former if nothing found.
Default	new
Additional Info / When to Change the Default Value	Should always be populated with 'new' unless on a system with a STEP installation prior to 5.1 or being upgraded from a pre-5.1 system (in which case 'both' may be appropriate).

Assetpush.Email.Notification.Minutes

Definition	Time between email notifications for asset push. Must be an integer. Set in minutes.
Default	60
Additional Info / When to Change the Default Value	Update as needed

Event Queue Properties

When a sidecar is installed for an asset push, Stibo Systems Technical Services will also create and populate an assetpush.properties file. This file defines some key information for the specific event queue with which the asset push is associated. The location of the properties file will be provided by Stibo Systems Technical Services.

Note that this file only affects individual event queues, whereas system properties apply to all asset pushes in the system. Additionally, asset properties always need to be defined, whereas system properties can often be left with the default values.

The assetpush.properties file contains the following properties:

Name	Definition
UserName	Username for file system login.
Password	Password for file system login.
ImageFolder	Specifies the first part of the path and/or parent directory into which all pushed assets will be placed. Relative Path Template takes effect after this, meaning that all asset push configurations under a single event queue will share a parent folder on the local file system, but each configuration is expected to have a separate directory structure under the common parent.
Delay	Rate in seconds for sidecar to ping the file system to ensure connection. Always set to 30 seconds and should not be changed without consultation with Stibo Systems Technical Services.

Creating and Maintaining Asset Push Event Queues

Each asset push runs off of an event queue, which defines the local file system the asset is sent to. An event queue can have any number of asset push configurations running from it, each providing their own specific parameters for the asset push, including any required conversions. While the event queue may determine the destination system, assets can be placed in different hierarchies on that system (as defined by the individual configuration of each asset push).

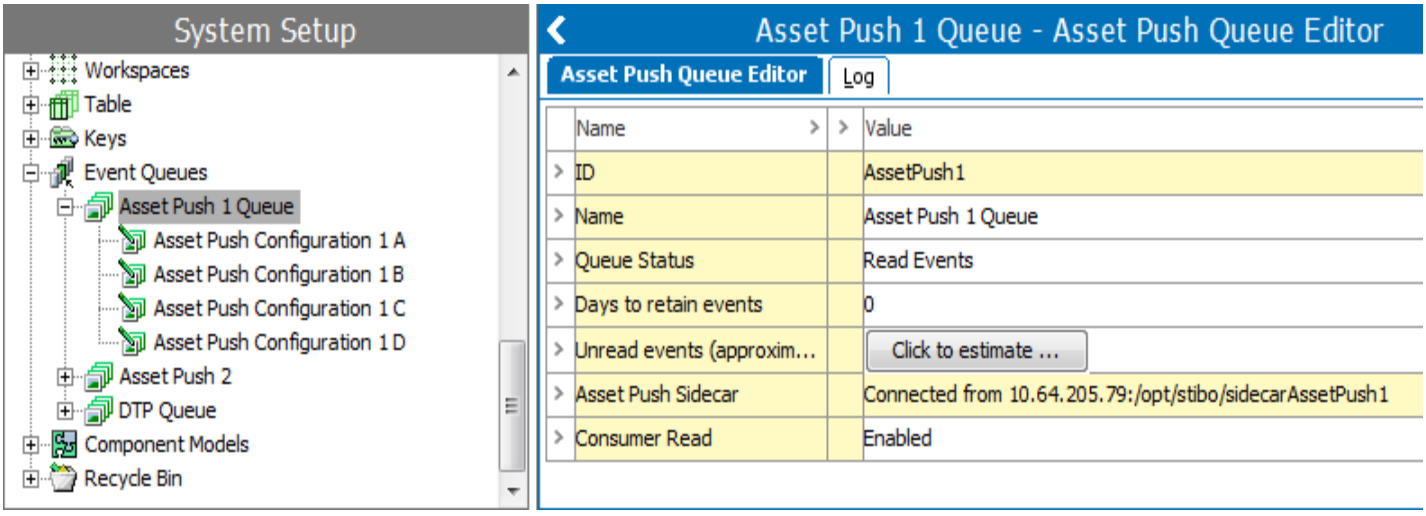
Because multiple asset push configurations can be created for each event queue, multiple queues are only needed if there is a requirement to support different target file systems. If all assets are sent to the same file system, only a single event queue should be created.

Note: The chosen file systems must be directly accessible to STEP. Typically this means pushing to some intermediate location, such as the application server, where downstream systems can access the files without putting any strain on the STEP system.

For more information on setting up asset push configurations, see the **Creating Asset Push Configurations** section of the **Digital Asset Exchange** documentation.

The below section describes how to set up and maintain an asset push event queue in the STEP Workbench. Additional global configuration options are available via the system properties. For more information on configuring event queue properties, see the **Asset Push Properties** section of the **Digital Asset Exchange** documentation.

1. In System Setup, right-click **Event Queues** and then select **New AssetPush Event Queue**. The **Create Asset Push Queue** dialog appears.
2. Enter an **ID** and a **Name** for the Asset Push Event Queue, and then click **Create**. A new Asset Push Event Queue node is created in **System Setup**, and the **Asset Push Queue Editor** tab opens.



3. Click the **Queue Status** field, and select either **Discard Events** or **Read Events**. The default status is Discard Events.
   - **Discard Events**: Any events that occur while the specified classification folders are being monitored are not processed. **Days to retain events** setting will be ignored.
   - **Read Events**: Any events that occur while the specified classification folders are being monitored are processed.
4. Double-click the **Days to retain events** field, and specify for how many days events should be saved.

   The default setting is 0, however if the user wants to reprocess an event that has already been processed, they have to specify the number of days to retain events. Events are typically reprocessed if delivered files are lost and need to be redelivered. This may be set as any integer, though it is recommended to set it between one and ten.

   For more information about rewinding events, see the **Event-Based OIEP Forward, Rewind, Purge, and Republish** section of the **Additional Information for Event-Based OIEPs** documentation.
5. In **Unread Events**, press **Click to estimate** to view approximately how many unread events are currently in the asset push event queue.
6. The **Asset Push Sidecar** displays the IP address of the sidecar. The address comes from the client that the Java sidecar application is installed on. If no sidecar is detected, the field displays **No activity yet**. A sidecar is an integral part of the asset push and is responsible for carrying out the tasks sent by the event queue. The sidecar communicates with both STEP and the local file system and provides the link between the two.

   Each asset push event queue requires its own sidecar.

Note: Installing a sidecar requires Stibo Systems Technical Services. Contact your Stibo Systems account manager and/or submit a help desk ticket to complete this step.

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7. In the **Consumer Read** field, select either **Enabled** or **Disabled**.
   - **Disabled**: Processed events are held and are not delivered to their final destination. This setting can be used if a user wants to temporarily stop the items from queuing, for example, when the location that receives the deliveries is experiencing problems such as a full disk.
   - **Enabled**: Delivers processed events to their final destination.

The overall functionality of the endpoint is determined by a combination of the settings, with resulting functionality as follows:

- **Enabled + Read Events**: 'Active'; Use for active queue that should deliver assets to downstream systems.
- **Disabled + Read Events**: 'Paused'; Use to temporarily disable the feed, while not losing access to events being generated while disabled. Events will continue to be read and queued, but will be retained within STEP and no attempt will be made to pass them to the downstream system until the Consumer Read setting is changed to 'Enabled'.
- **Disabled + Discard Events**: 'Inactive'; Use when no new events should be processed (now or later) and no assets should be delivered downstream.

- **Enabled + Discard Events**: 'Transition'; Not commonly used but can be employed when one queue will take over from another, or prior to running a bulk update process that should not be sent downstream. Allows the old queue to process queued events, but not generate any new ones as new events should be set to queue on the new endpoint (or discarded if bulk update is used and events should not be sent out).

Once the asset push event queue has been set up, asset push configurations can be created. For more information on setting up asset push configurations, see the **Creating Asset Push Configurations** section of the **Digital Asset Exchange** documentation.

Creating and Maintaining Asset Push Configurations

Asset push configurations provide a set of parameters that determine which format to convert assets to, which workspace to extract assets from, which asset folder structure in STEP to monitor for changes, which file formats to convert (e.g. convert TIF, EPS, and JPG images in STEP but not BMP, PNG, or GIFs), and where to place the images on the local file system. Though they are primarily used for converting assets to different formats, some configurations will not have any conversion specified as the asset merely needs to be pushed as-is to the file system.

Any number of asset push configurations can exist within an asset push event queue, but only one is required. A separate configuration must be created for each conversion format desired. Typically, multiple configurations running off of the same event queue will not share a common conversion format unless: a push is needed from both the Main and Approved workspaces, the same assets need to be placed in multiple locations on the local file system for accessibility reasons, or assets from different STEP classifications need to be separated on the file system for organizational purposes.

Prerequisites

Prior to creating any asset push configuration, an event queue must first have been configured. For more information on asset push event queues, see the **Creating and Maintaining Asset Push Event Queues** section of the **Asset Push** documentation.

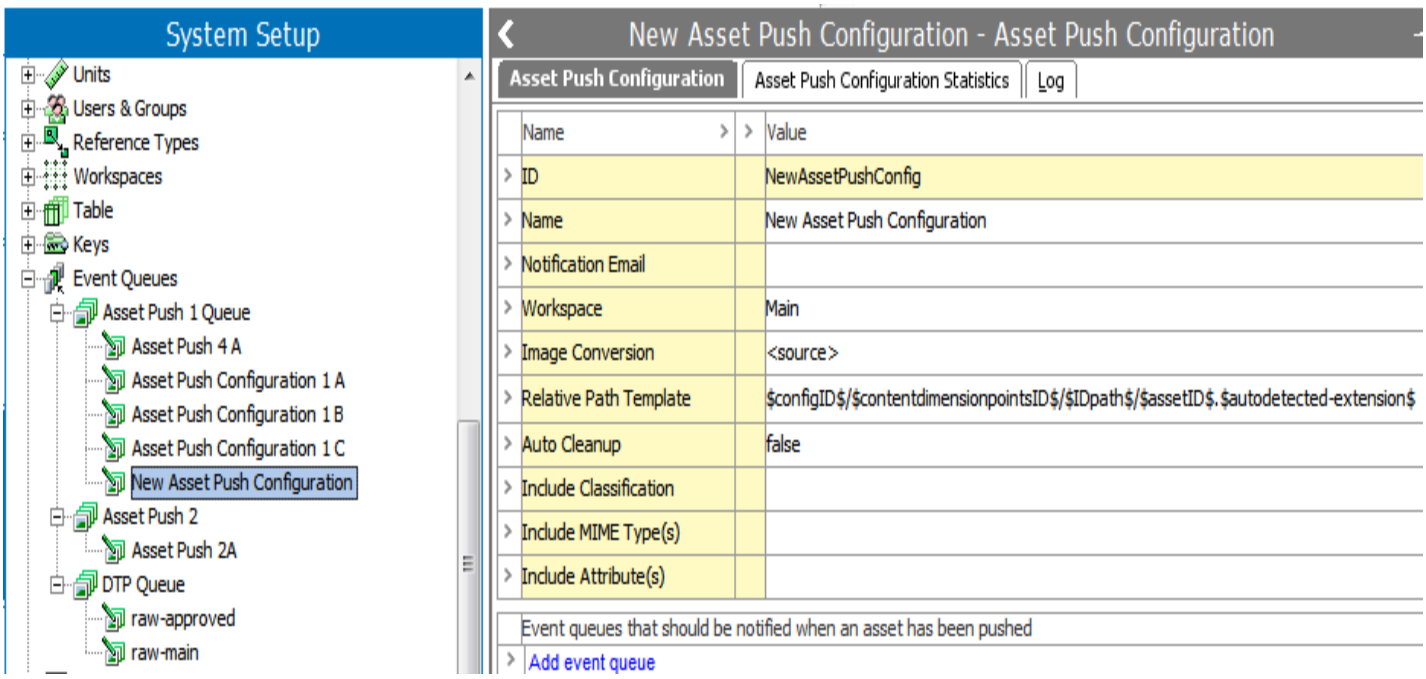
Additionally, if image conversion is required as part of the asset push, the image conversion configuration must be completed prior to the asset push configuration, so that the conversion can be selected as part of the configuration. See the **Image Conversion Configuration** topic for more information.

Configuration

1. In **System Setup**, right-click an **Event Queue** and then choose **New Asset Push Configuration**. Each Configuration consists of ten parameters.
2. Enter an **ID** and a **Name** for the asset push configuration, and then click **Create**.

Important: Do not use spaces in this ID. Also, it is strongly suggested that the ID and the Name of a Configuration be kept the same, or at very least closely the same, e.g., ID of 'HighResLondon,' Name of 'High Res London').

A new asset push configuration node is created in System Setup and the **Asset Push Configuration** tab opens.

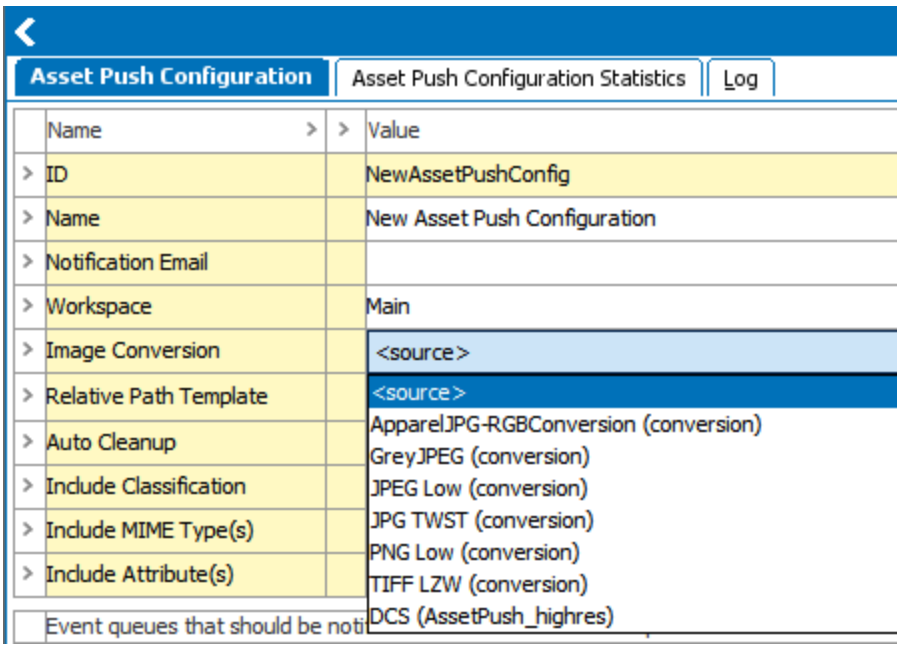


3. (Optional) Click the **Notification Email** field, and enter a valid email address. If populated, this will result in an email being sent to the specified address in the event that a queued asset fails to be converted and / or extracted.

   For information on configuring email from STEP, see the **Email from STEP** topic in the **Resource Materials** of online help.

4. Click the **Workspace** field, and select the workspace from where the assets are to be pushed. If **Approved** is selected, asset push is triggered by asset approval. For example, Web or Electronic initiatives. If **Main** is selected, assets are pushed when they are edited and / or replaced, and no approval is required to trigger the push. For example, print initiatives.
5. If the assets need their format, size, or image color settings converted when pushed to the target system, click **Image Conversion Configuration**, and select the relevant conversion configuration from the list. Upon creation of Asset Push Configuration, <source> is set as default value on Image Conversion.

   The list contains all of the conversions that are available in the system. Configurations that have (conversion) appended to their names are custom conversions, and those without (conversion) appended are standard conversions.



If <Source> is selected, no conversion takes place.

See the **Image Conversion Configuration** topic for more information.

6. In the **Relative Path Template** field, specify how to organize the generated file structure. Typically the folder structure is based on the asset's ID, which cannot be changed and ensures the external structure is stable and free from accidental duplication.

   To specify the structure, a string of macros must be entered into this field.

   Note: That this field accepts predefined STEP “macro” tags.

   See the **Relative Path Template** section of the **Asset Push** documentation for more information on the available macros.

7. In **Setting Auto Cleanup**, the user must specify whether they want to keep or remove pushed assets from the target system. Selecting **True** removes previously pushed assets from the target system in the following situations:

   - The asset has been renamed and pushed again
   - The asset push configuration has been changed, and the asset has been pushed again
   - The asset has been deleted from STEP and the deletion has been approved

   If **False** is selected, which is the default option set, STEP will not automatically cleanup the file system.

   Note: It is recommended to set Auto Cleanup to 'true' so that manual intervention is not required in maintenance of the file system.

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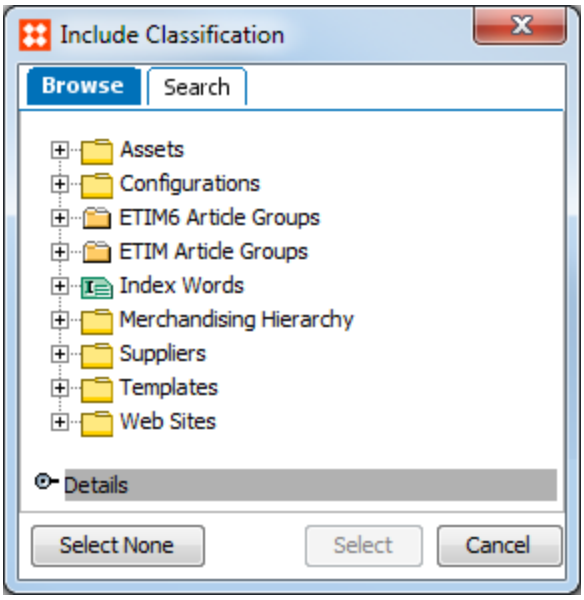
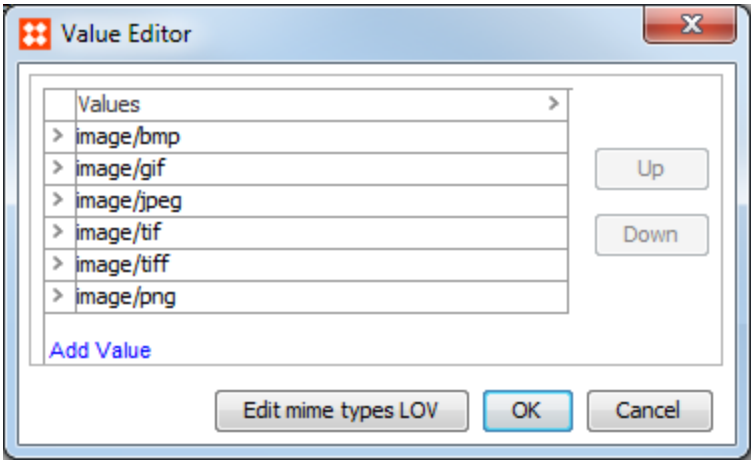
8. Click **Include Classification**, and then click the ellipsis button (...). The **Include Classification** dialog appears. Select which classification node(s) asset push will monitor for changes, and then click **OK**.

Note: This field should not be left blank as that forces the system to monitor all classification folders, of which only a subset are actually valid for assets. At a minimum, the root classification folder for assets should be specified, which causes the system to monitor all child folders in the asset hierarchy.



9. Double-click the **Include MIME type(s)** field to filter which assets are included in the push via their MIME type. In the **Add Value Editor**, click **Add Value** to add the relevant MIME types, and then click **OK**.

It is recommended that this field be filled, otherwise the asset push configuration will convert all MIME types (e.g. .wav, .xls, .exe), which is typically not required. If all standard images should be included, the image/* and application/postscript MIME types should usually be included.

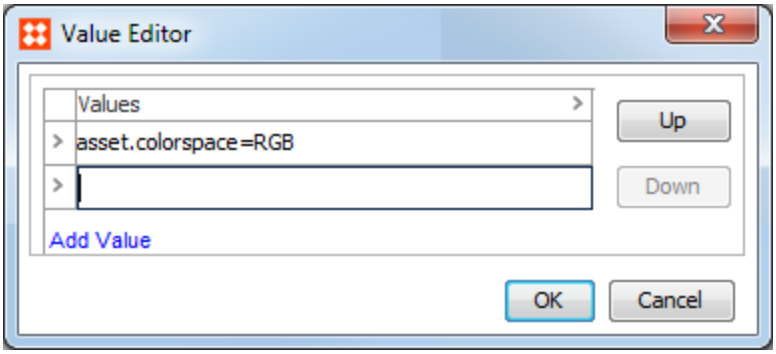


For more information about MIME types, see the **MIME Types** section of the **System Setup \ Super User Guide** documentation.

10. (Optional) Double-click the **Include Attribute(s)** field to specify if the asset push configuration is restricted to assets with specific attribute values. This setting allows users to add some basic intelligence to the conversion without requiring any system extensions. Populating this field means that only assets that have the specified value in the indicated attribute will be pushed.

    In the **Add Value Editor**, click **Add Value** to add the relevant attribute values, then click **OK**.

    Valid inputs require the following format: [Attribute ID]=[Attribute value]. Populating the field with multiple attributes acts in an 'AND' fashion (asset must meet both conditions to be pushed).



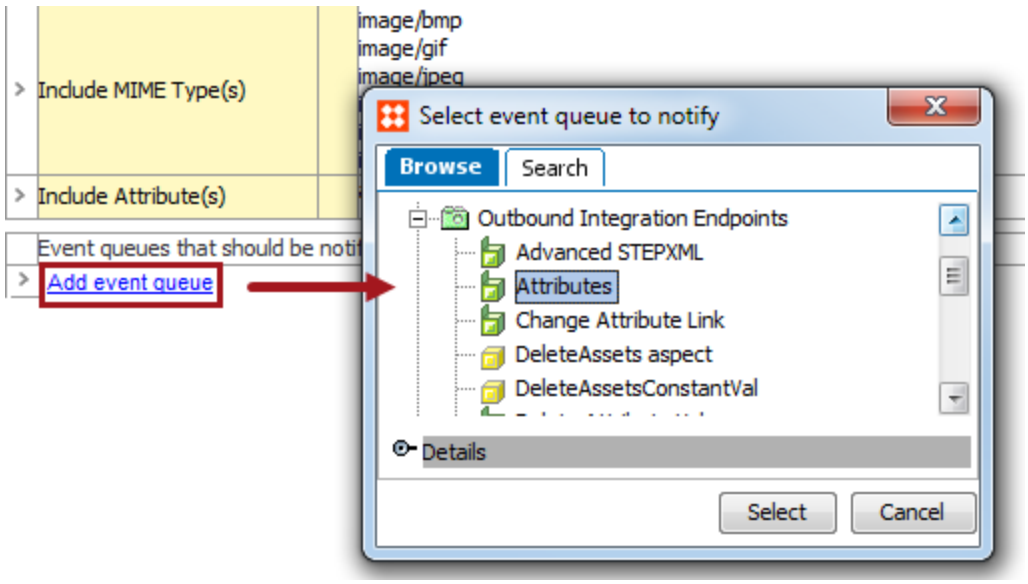
    Each STEP asset has a series of metadata attributes that are automatically set upon import of the asset. Users may also create additional metadata attributes and define how they are to be set as part of the import configuration. Note that any assets with user-created metadata attributes must be pushed from the Approved workspace for the **Include Attribute(s)** setting to operate according to the value. If the asset only uses pre-existing system metadata attributes it can be pushed from either the Main or Approved workspaces.

    See **System Metadata Attributes** below for a list of all metadata attributes that are automatically set upon import of the asset.

    Note: When using this functionality, it is important to ensure that the selected attribute(s) are both valid on the asset types being handled by the push, and that the assets will have value(s) for the attribute(s).

    ---

11. (Optional) Click **Add event queue** and select an integration endpoint from the pop-up window. Populating this setting means that the listed queues will be notified when an asset has been pushed, and an event will be created on the queue if applicable.



Note that asset push sends only the actual asset files to a downstream system. Oftentimes it is useful to also provide an XML or other file type that contains the asset metadata, including the Relative Path of the asset so that users can easily find it on the downstream system.

Outbound endpoints that send asset metadata are often triggered at approval, which is typically the same trigger used for the asset push. This means that the Relative Path for any asset is not yet populated at the time of the outbound metadata file trigger. When the asset Relative Path needs to be included in the outbound metadata file, it is then necessary to notify the outbound queue following the push (using this setting). This triggers an event on the outbound file queue so that the metadata is sent (again) and includes the Relative Path.

12. When a new configuration is created, or an existing configuration is updated, it may be necessary to restart the asset push sidecar.

System Metadata Attributes

The following asset metadata attributes exist as defaults on the system and are populated automatically for any asset that contains the relevant information:

- asset.class
- asset.colors
- asset.colorspace
- asset.compression
- asset.creator
- asset.depth
- asset.dsc-conformance
- asset.extension
- asset.filename

- asset.format
- asset.format-version
- asset.height
- asset.mime-type
- asset.pages
- asset.pixel-height
- asset.pixel-width
- asset.preview
- asset.preview-format
- asset.profile
- asset.samples
- asset.size
- asset.uploaded
- asset.width
- asset.xdpi
- asset.ydpi

Use Cases

- Users can set the assets to be pushed to a file system(s) with or without format conversion.
- Users should use <source> for any situation where you simply want to export the asset as-is. This applies to PDFs, movie clips, Word doc files, etc.
- Users can configure the MIME types, workspace, and asset folder structure in STEP to be monitored for changes on assets.
- Users can push an asset from both the main and approved workspaces with the same conversion format, and can place both configurations beneath the same asset push event queue.
- Users can restrict the asset push configuration to push assets with specific attributes.
- Users can create one configuration for each conversion needed, and have them placed beneath a single Asset push event queue.
- Users can set the asset push configuration to notify any specific event queue.
- Users can configure the notification email to be sent in the event that a queued asset fails to be converted and/or extracted.
- Users can select between standard and custom Image conversion configurations.
- Users can define how to organize the generated file structure using a string of macros in the Relative path template.
- Users can specify whether to keep or remove pushed assets from the target system.

Monitoring Asset Push

It may be necessary to monitor the activity of asset pushes, which can be especially important in the event that an asset conversion or extraction fails. Listed below are methods of monitoring the status of asset pushes within the STEP Workbench. If additional monitoring is required, it is recommended to use standard system monitoring tools (e.g. designated external monitoring system). Additionally, the STEP System Administration page can be used.

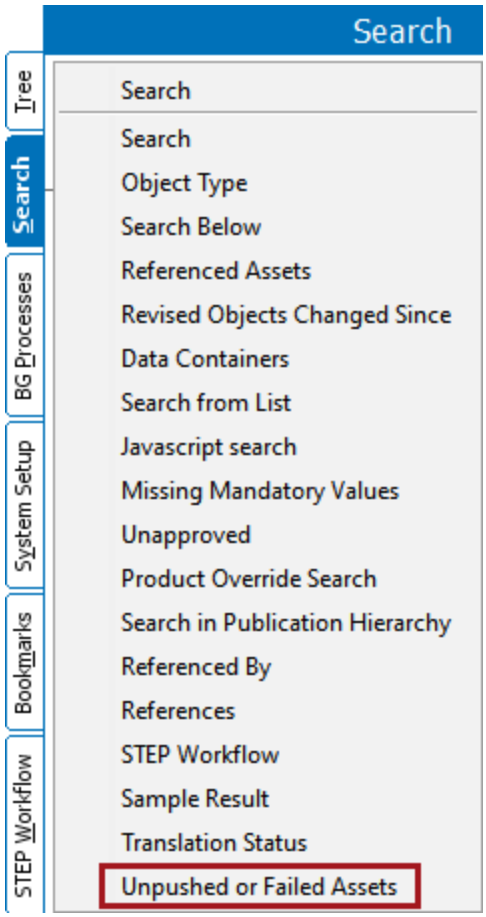
Within STEP, the monitoring functionality includes viewing push status for asset push queues, viewing push statistics, refreshing and resetting counters, finding unpushed and failed pushes, and receiving email for failed pushes.

'Unpushed or Failed Assets' search criterion

Assets that have not been pushed, or have failed to push, can be found by using the 'Unpushed or Failed Assets' search criterion.

An asset push configuration can be set up to send an email when any assets fail attempted extraction and/or conversion. See the **Creating and Maintaining Asset Push Configurations** section of the **Asset Push** documentation for more information.

For information on configuring email from STEP, see the **Email from STEP** topic in the **Resource Materials** of online help.

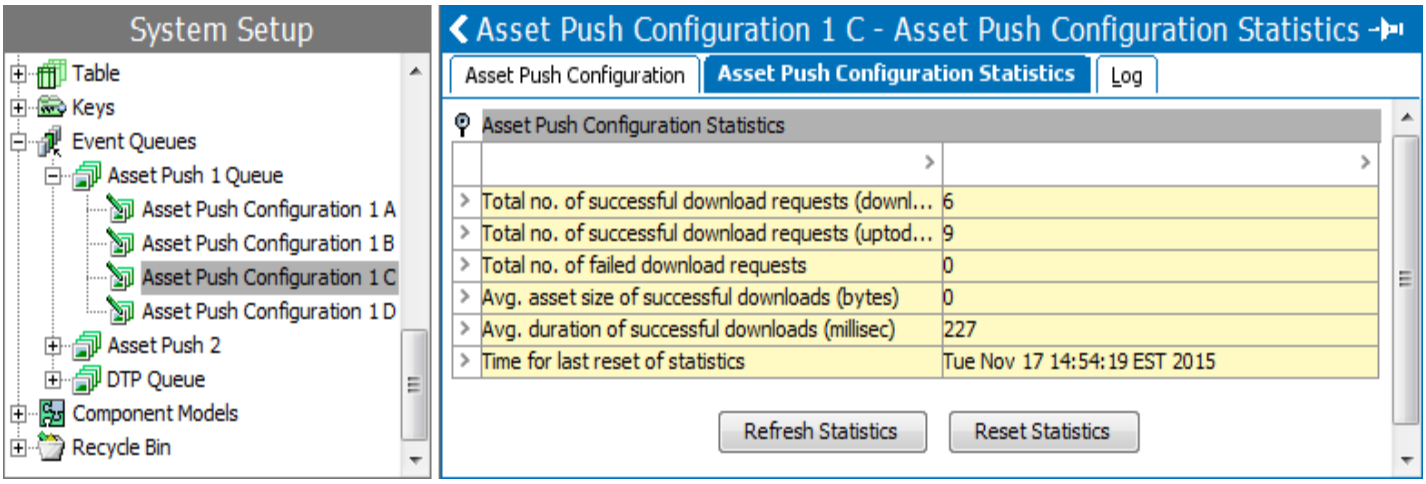


See the **Search: Unpushed or Failed Assets** topic within the **Navigation and Searches** section of the **Getting Started / User Guide** documentation for more information.

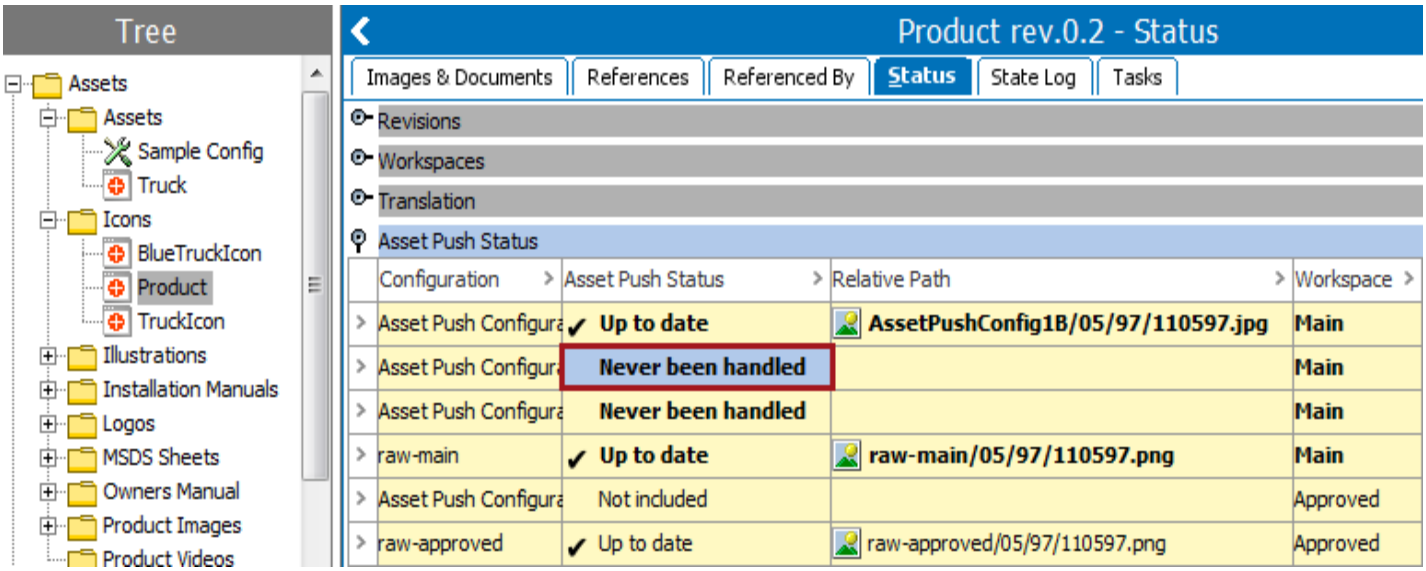
Asset Push Configuration Statistics

Statistics regarding each asset push can be viewed on the **Asset Push Configuration Statistics** tab.

- 'Refresh Statistics' button can be used to refresh and get the updated information.
- 'Reset Statistics' button can be used to reset the counters and last timestamp of last reset can be found in value field of 'Time for last reset of statistics'.



The status of each individual asset relative to all asset push configurations can be viewed on the Status tab of the asset, under the Asset Push Status flipper.



The available statuses are:

- Asset not in workspace: The configuration pushes only from the approved workspace, and the selected asset has never been approved.
- Downloaded: An initial push of the asset has been carried out
- Never been handled: The asset has never been pushed with the indicated configuration. This may be because the configuration is not applicable for the selected asset or because the configuration has not had an initial push carried out.
- Up to date: The asset has been modified since initial push, and the updated image has been pushed.

Monitoring and Handling Asset Push Errors

STEP will monitor failed asset pushes. Two reasons for these failures are:

- Improper asset file in the Asset hierarchy
- File system on Application server is out of space

Higher level of monitoring data can be attained by polling a STEP 'Sensor' for the Asset Push Queue. To poll this sensor, you must use the following URL:

URL: http://<step-app-server> /admin/monitoring/Sidecar-assetpushqueue-AssetPushQueue/

The sensor can present information in a number of formats:

- User readable overview
- Simple status response
- Nagios format
- XML

The problem can be resolved by either correcting the error in STEP, or increasing system storage space on the application server.

Once the problem has been resolved, the Asset Push may be attempted again. This may be done by forcing a new push, or by waiting for the asset push queue to automatically push assets that are changed and approved in the future.

Note: A full push may be very demanding and require a large amount of system resources.

If the Asset Push Sidecar stops working due to patching or an issue in the system, the application server must be restarted. Rebooting the server will re-enable the Asset Push Sidecar.

STEP will not monitor the following processes once STEP has delivered assets to the application server filesystem:

- Transport of files from STEP application server file system to eCommerce Server.
- Import of assets in the eCommerce application for display on the web.

Relative Path Template

Rather than using the file structure in STEP, an asset push configuration specifies how to organize the generated external file structure via a Relative Path Template (RPT). Typically the folder structure is based on the asset's ID, which cannot be changed and ensures the external structure is stable and free from accidental duplication. This means that it is not possible for the same image to occur in multiple folders in the external structure (unless multiple configurations are used).

The RPT is used in conjunction with the ImagesFolder property in the assetpush.properties file to tell the system where to place the extracted assets. Specifically, the RPT dictates a path, file name, and appropriate file name extension, with the intent that all the images pushed into the structure have a unique path and/or file name. The RPT is typically populated with a series of predefined STEP macros and also allows users to control whether the assets will be pushed to a flat file structure or a folder hierarchy structure. In this field, some predefined STEP 'macros' may be used.

Note: RPT takes effect after the path specified in the ImagesFolder property of the assetpush.properties file: [ImagesFolder value]/[Relative Path Template]

The RPT can be constructed using a series of macros for dynamic creation, as well as any static text that is required. Static text can be applied in many ways, including file extensions, folder names, or anything that designates a static folder into which assets and / or child folders should be placed. The system will automatically create all folder structures dictated by the RPT on the local file system, with each slash (/) creating a new directory level.

Important: Care should be taken to ensure that the RPT is constructed in such a way that: file paths do not exceed the length limits of the target system; only legal characters for the target system are incorporated (illegal characters will be automatically replaced by an underscore); and each asset is assigned a unique file name within the target folder.

Many of the macros are optional. The one macro that really is mandatory is the '$assetID$' (or '$assetName$') macro. Without this, all images would be converted to the exact same file name, which is hardly practical.

If assets have been declared as dimension dependent, then it is mandatory to include either the '$contentdimensionpointsID$' or the '$contentdimensionpointsName$' macro in the RPT. The system will not save your RPT entry if you exclude this.

The following is a list of relevant macros:

Macro	Notes
$configID$	STEP ID of the asset push configuration. Often used as a parental folder level for the RPT.
$contentdimensionpointsID$ /	STEP ID / Name of the dimension point of the asset. ID macro should be

Macro	Notes
$contentdimensionpointsNAME$	used whenever possible in place of Name. Required to use a dimension macro if any assets are dimension dependent. System will not save the RPT entry if a dimension macro is not specified and the system includes dimension dependent assets. Note that if any asset types are declared dimension dependent (i.e. the asset's Name is dimension dependent) then the user cannot use the $assetNAME$ macro for file names, $assetID$ must be used instead.
$IDpath$	Tells the system to autogenerate external file folders using the ID of the asset. Use when a folder structure for assets is needed. Excluding this will result in a flat file structure being created on the local file system (all assets placed within the same folder). It is also possible to use $IDpath3$, $IDpath4$, or $IDpath5$ to specify how many characters to use to create the external file folders. For example, if an asset has an ID of 0123456789, then: • $IDpath$ will generate a file folder structure of 67/89/ • $IDpath3$ will generate a file folder structure of 456/789/ • $IDpath4$ will generate a file folder structure of 2345/6789/ • $IDpath5$ will generate a file folder structure of 01234/56789/ The use of more characters reduces the number of possible asset entries in each folder. Higher numbers recommended if large numbers of assets are being pushed as the user should aim to have fewer than 1,000 assets per folder to allow for navigability on the file structure.
$assetID$ / $assetNAME$	STEP ID / Name of the asset being pushed. It is required that one of these or the attribute:key macro be used to define the file name, otherwise all assets will be pushed with the same file name. ID must be used if any of the assets being pushed are dimension dependent (NAME cannot be used in this case). Best practice is to use ID (rather than NAME) whenever possible. Note that STEPXML only includes asset ID in the product references section so communication of product to asset relationships to downstream systems will require an additional section and/or feed to map asset Names and IDs if the NAME macro is utilized.
$attribute:key$	Extracts values from any Description attribute on an asset so that they can

Macro	Notes
	be used as the asset file name. When the asset is pushed, the value of the attribute specified by the key replaces the macro configuration in the file name. Note that this macro can also be used as part of the relative path rather than as the file name, but the intended use is for file name. See below Configure $attribute:key$ Macro section for setup instructions. Dimension dependent Attributes are not available for use as path keys. This is checked when the attribute dimension is changed for an attribute and when a new asset push template is created. A change in value on the attribute bound to the path key will cause the asset to be re-pushed. 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. Note that if 'Auto Cleanup' is set to 'true' in the asset push configuration, the previous version of the updated asset will be deleted.
$autodetected-extension$	Detects the type of file generated by the conversion and applies the appropriate extension. Used only when intelligent conversion is used, whether via asset metadata or a custom conversion, as intelligent conversions may produce different types of output files. Standard conversions produce only one file type per conversion, so static text or the $extension$ macro should be used, and are the preferred methods for applying the file extension. When using this, be sure to insert a text entry of “.” before the $autodetected-extension$ macro so that the file name will have the usual period between the name and its extension (e.g. xxx.$autodetected-extension$).
$extension$	Applies the file type extension specified by the conversion. If the configuration does not include conversion, assets are passed through and assigned the same extension they had within STEP. When using this, be sure to insert a text entry of “.” before the $extension$ macro so that the file name will have the usual period between the name and its extension (e.g. xxx.$extension$).

Macro	Notes
	Either this macro or static text should be used to generate the extension for all standard (non-intelligent) conversions.
$workspaceID$ / $workspaceNAME$	STEP ID / NAME of the workspace which the assets are being pushed from (e.g. Main or Approved). ID macro should be used whenever possible in place of Name. Typically used only if the system has multiple configurations with at least one pushing assets from each workspace.
$conversion$	Specifies the type of image conversion in the file path. This macro is not frequently used, but can be useful if it is required to keep different versions of the same asset separated by conversion type. Example ($conversion$ is bolded): AssetPushConfig1/**plain-thumbnail**/23/45/12345.jpg

Important Macros

Most frequently used macros

- $configID$
- $contentdimensionpointsID$
- $contentdimensionpointsNAME$
- $IDpath$
- $assetID$
- $extension$

Additional useful macros

- $IDpath3$
- $IDpath4$
- $IDpath5$
- $assetNAME$

Relative Path Template Example

- ID of asset push configuration=AssetPushConfig1
- ImagesFolder property in assetpush.properties file set to ‘images’

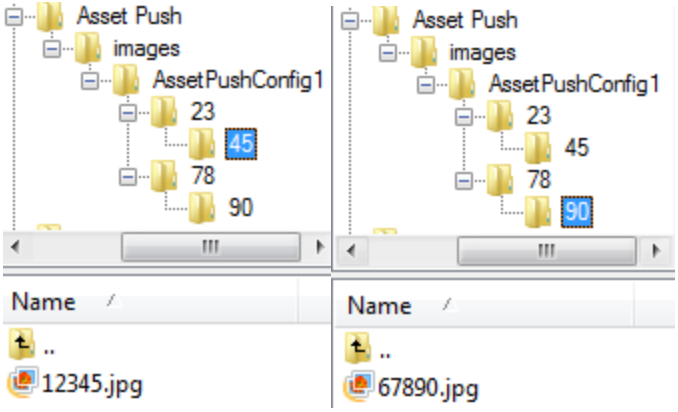
- RPT in configuration set to '$configID$/$IDpath$/$assetID$.jpg'
  - Assumes conversion is used with resulting file type of JPG
- Two assets are pushed, with STEP IDs of '12345.gif' and '67890.png'
- The resulting Relative Paths in the asset status tab should read:
  - AssetPushConfig1/23/45/12345.jpg

Configuration	Asset Push Status	Relative Path	Workspace
AssetPushConfig1	✔ **Downloaded**	**AssetPushConfig1/23/45/12345.jpg**	**Main**

  - AssetPushConfig1/78/90/67890.jpg

Configuration	Asset Push Status	Relative Path	Workspace
AssetPushConfig1	✔ **Up to date**	**AssetPushConfig1/78/90/67890.jpg**	**Main**

- Once on an external server, they resemble the below images:

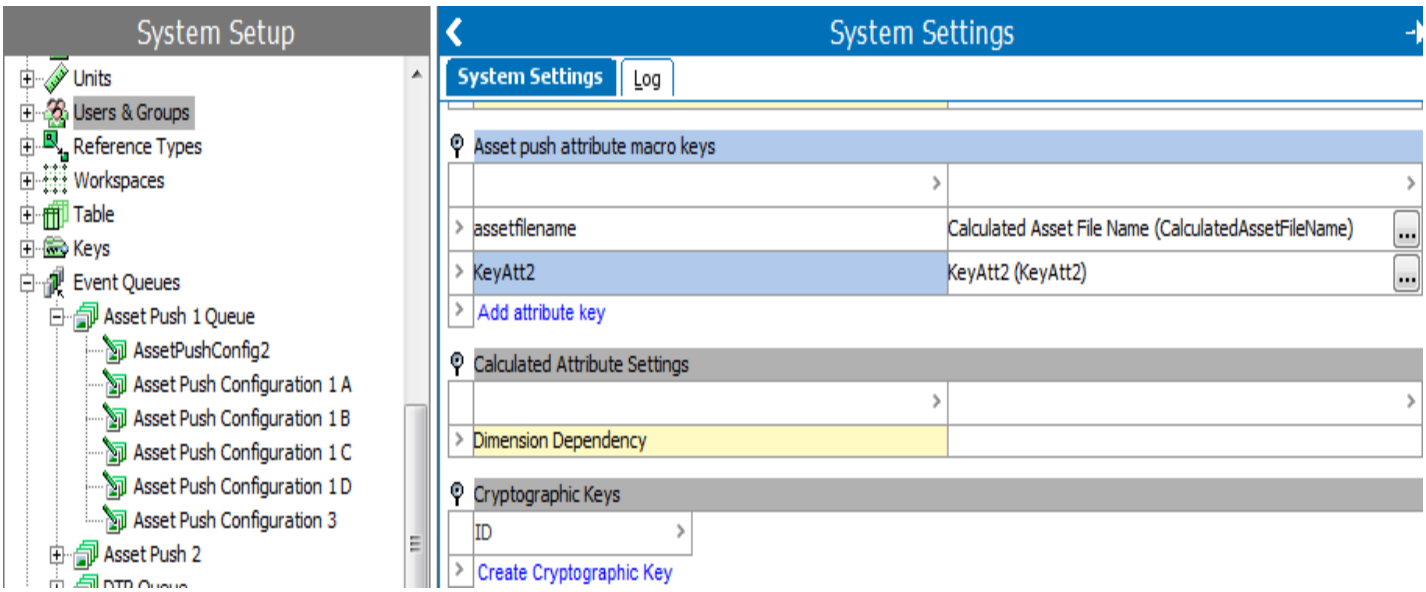


For an example using a calculated attribute and attribute macro key within a Relative Path Template, see the **Asset Push File Name Scenario** documentation.

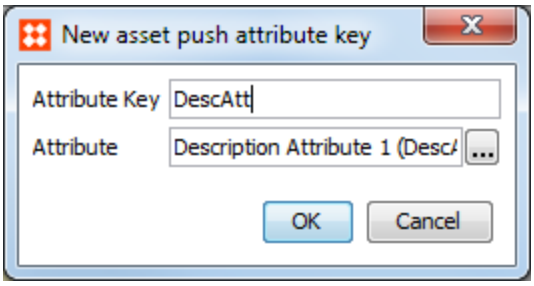
Configure $attribute:key$ Macro

Before the $attribute:key$ macro can be used the applicable attributes must be configured in **System Settings**.

1. In **System Setup**, click on the **Users & Groups** node and navigate to the 'Asset push attribute macro keys' section under the **System Settings** tab.

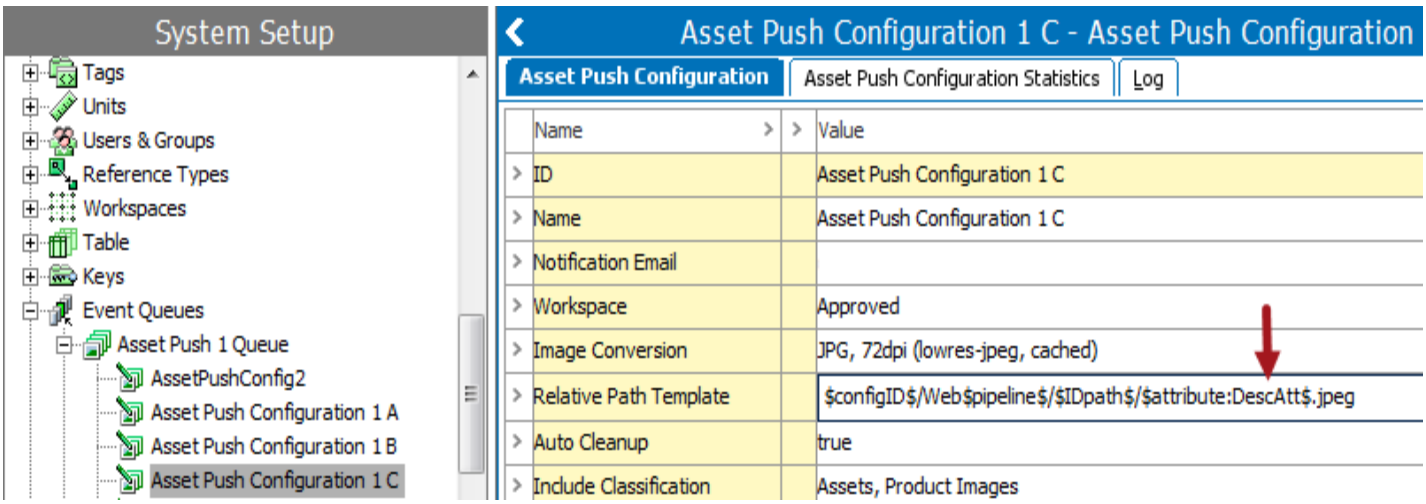


2. Click **Add attribute key**.
3. In the pop up window, enter a name for the Attribute Key. This name can differ from the selected attribute, and is used in place of 'key' in the macro. Click on the ellipsis and select the desired attribute from the list.



Note: On the **System Settings** screen, the Attribute Key appears in the first column and the attribute's STEP name appears in the second column.

4. Return to the desired asset push configuration and enter the desired Attribute Key.



Additional Information

If the user does not have dimension dependent images, there is no need to use either of the $contentdimensionpoint macros (ID or NAME) in the RTP.

Even if the names of the images have not been set to dimension dependent, use the macro $assetID$ in favor of $assetName$.

Use one of the $IDpath macros when it is necessary to have a folder structure for the assets.

- Do not use this macro if it isn't needed. It is normal to have an $IDpath macro for high-resolution images, but for low-resolution web images, you may not need to use a folder structure.

File name extensions — For DTP applications, where there is no image conversion at all, use the macro $extension$.

- Do not use the $autodetected.extension$ macro if it isn't needed. It should only be a very rare occurrence when you do need it.
- For web images, use the actual filename extension that the conversion is creating. If your conversion is creating jpg images, just put .jpg in the RPT.
- Do not bother to use a macro for the extension. Same if the conversion is creating a gif or png file – just type that extension directly in to the RPT.

Specify a Classification Folder to be monitored for assets. Leaving this entry blank forces the system to monitor and review all classification folders.

Also, specify the MIME types that you want the conversion to work on. Otherwise, the conversion will attempt to convert assets such .exe files, .wav files, xls files etc.

With print items, if your user does not wish to use the approved workspace for images, do not set up a configuration for it (e.g. raw-approved). However, the user needs to make sure that in the sharedconfig.properties file that the system pulls from raw-main even when in the Approved workspace.

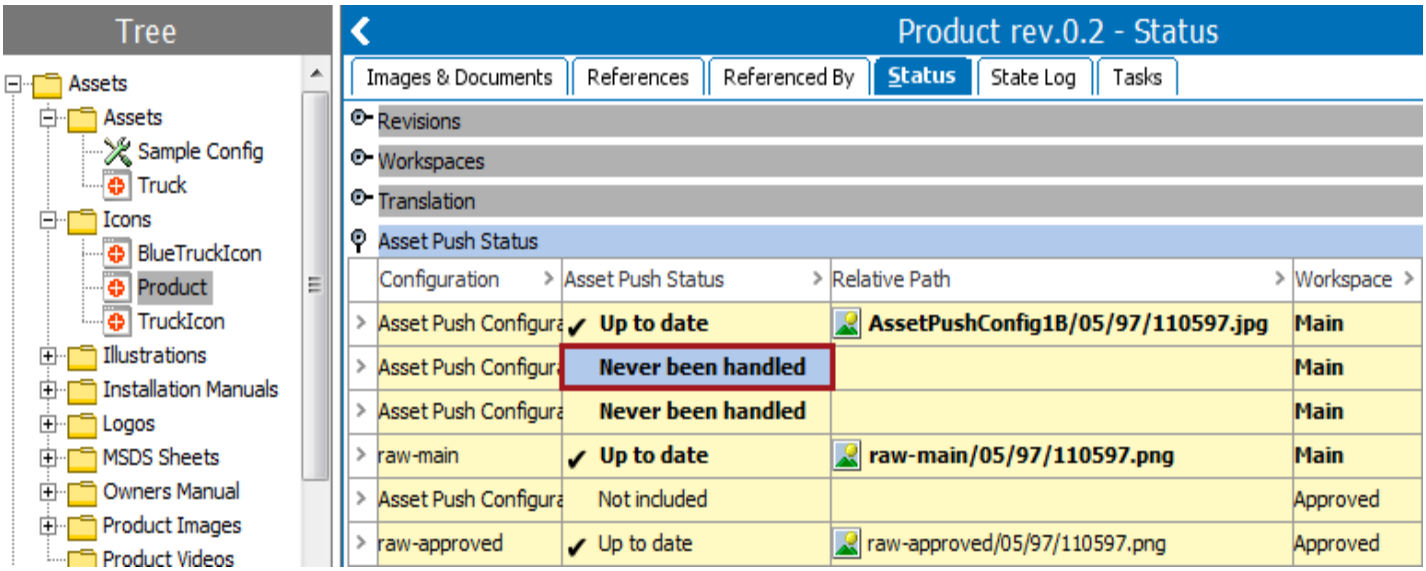
Starting the Asset Push Process

After creating or editing an asset push configuration, an initial asset push must be manually performed. This initial push ensures that the local file system has all of the initial information (assets), and receives only changes from the event queue going forward.

If the configuration has been changed, users can force the asset to the desired asset push queue even if it is up to date.

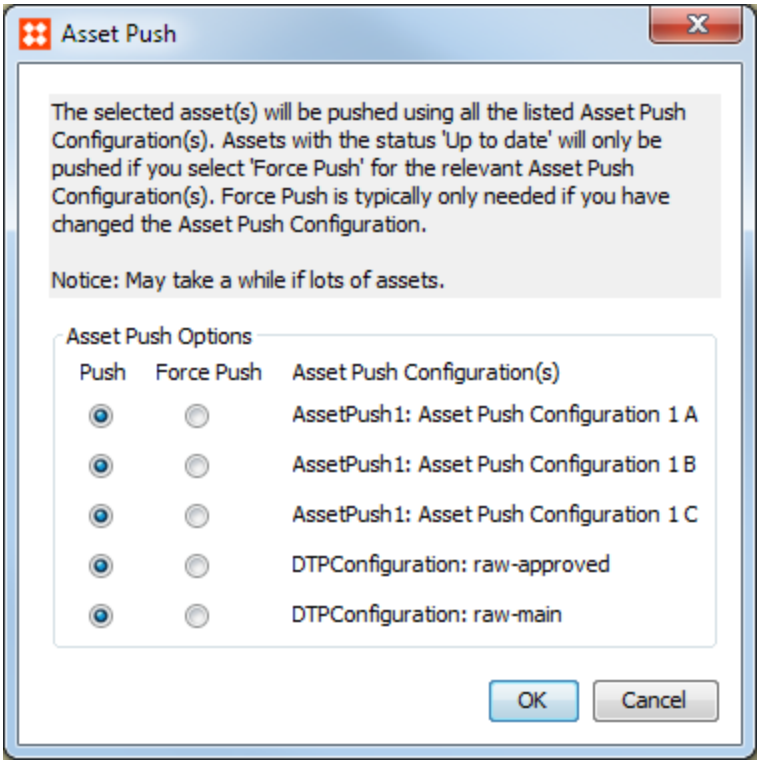
Important: As the initial asset push can be a time consuming process, consider the timing of initiating the push.

1. In the **Tree**, navigate to one of the folders that is being monitored by the asset push configuration, and then click an image.
2. Navigate to the **Status** tab, and in the **Asset Push Status** area, the status should read '**Never been handled**', which means the image has never been pushed.



3. To verify that the process works as expected, right-click the image in **Tree** and choose **Push Asset(s)**. A window appears that lists every conversion associated with this particular folder. Click **OK**.

Note: The initial push of assets can be initiated by selecting the classification(s) under which the assets reside, then right-clicking, and selecting 'Push Asset(s).' This will open the 'Asset Push' dialog, similar to the one shown below.



Note: If the user wants to push assets whose status is set to "Up to date", they have to select **Force Push**.

4. The asset push process is carried out and the **Asset Push Status** changes to **Downloaded** if changes were made or **Up to date** if the downloaded / converted file is already in place and the file-timestamp corresponds to the upload-timestamp on the asset in the database.
5. If the process works as expected, select the top level folder of the folders that are being monitored, and then repeat steps 1-3 above. This starts an initial push of all assets in the top-folder and sub-folders.

Republishing Assets

A republishing of assets should be carried out anytime a change is made to an asset push configuration, and may also be done periodically for synchronization and / or refresh purposes. Prior to completing any republishing, the asset push configuration should be set to ‘true’ for the Auto Cleanup parameter to prevent duplication of assets. Alternatively, existing assets for the configuration may be manually removed from the target system.

To initiate republishing, follow the same steps as for an initial push, except select to ‘Force Push’ in the Asset Push dialog box. This will force the assets to be re-pushed, regardless of the current status.

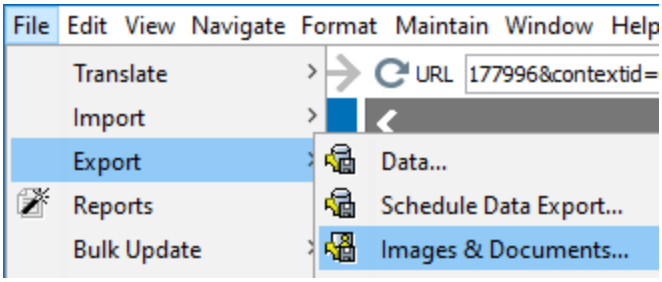
Export Images and Documents Wizard

The Export Images and Documents wizard allows you to export assets on demand. To export data, use the Export Manager as defined in the **Export Manager** topic in the **Data Exchange** documentation.

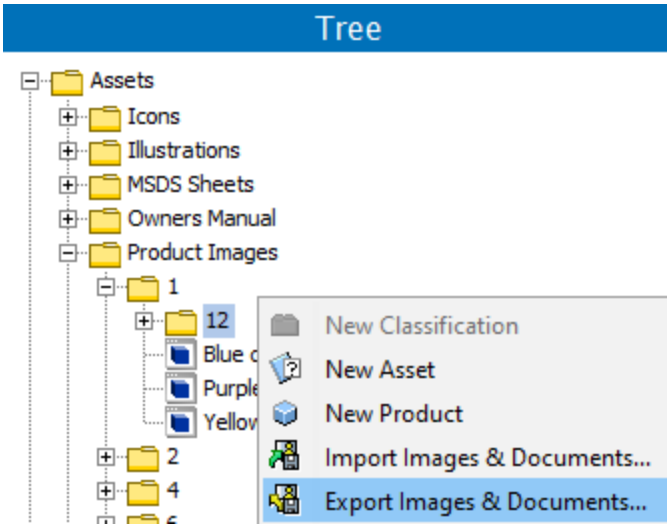
This wizard allows the user to set the export location where assets should be downloaded, specify the name of the asset, include an image conversion or pipeline for format conversion, and have an overview of the export.

Create an Images and Documents Export

1. Select the appropriate STEP context.
2. Use one of the following methods to launch the wizard:
   - On the Tree, select an asset or a classification folder that contains assets to be exported, click the File menu > Export > **Images & Documents**.

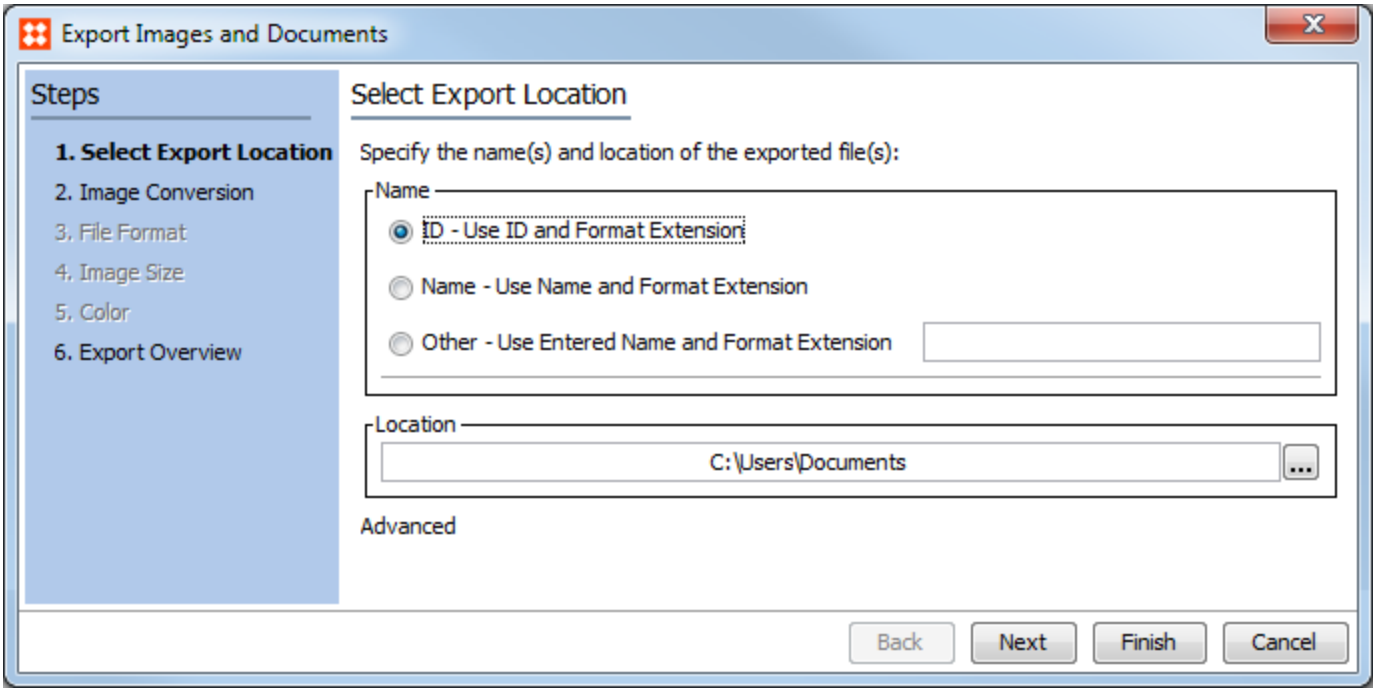


   - On the Tree, select a classification folder that contains assets to be exported, or select an individual asset, right-click, and then click **Export Images and Documents**.



3. The Export Images and Documents wizard displays and can involve the following steps:

Note: If the user does not select a folder first, the 'Export Images & Documents' option will not be enabled.



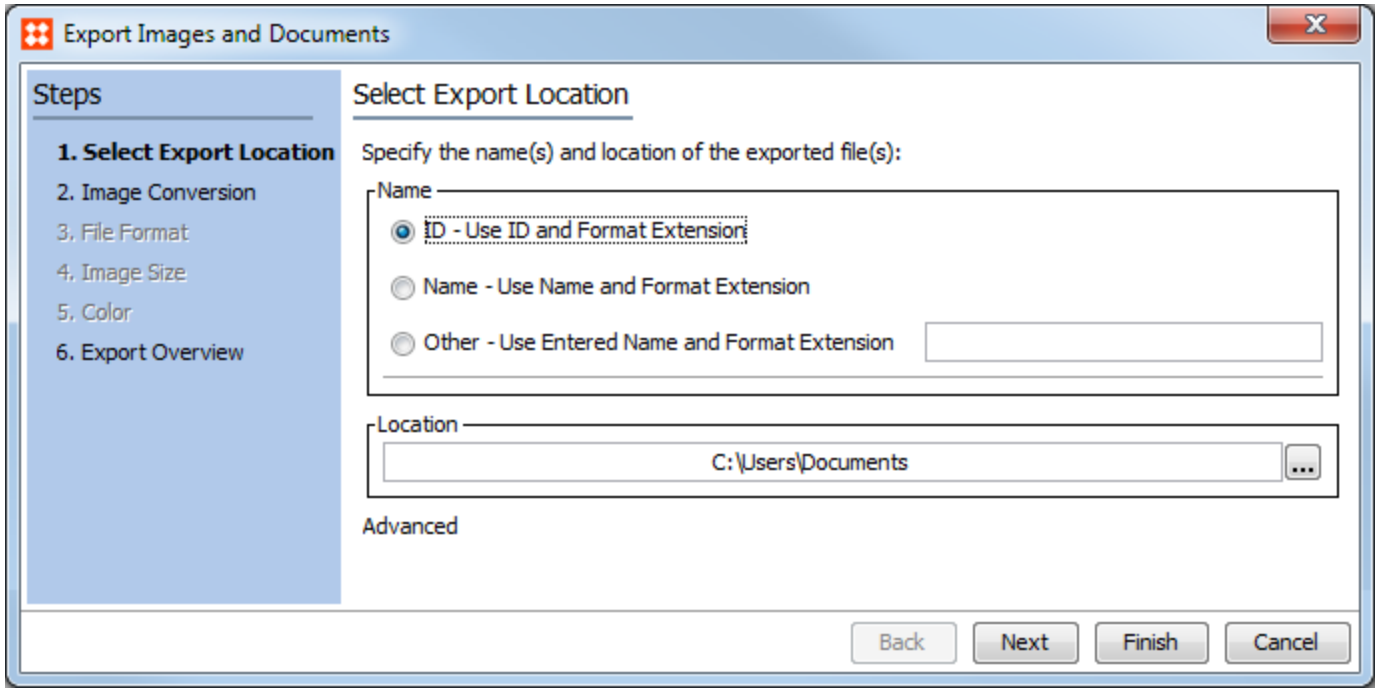
- **Select Export Location**determines the location where assets will be downloaded. In the same window, name of downloading assets can be defined.
- **Image Conversion** allows you to select a predefined image conversion configuration, script, or pipeline, or specify a custom setup to convert the format, size, and/or color settings of the exported images.
- **File Format** allows you to specify the file format of the images exported. This option is available only if the user wants to do custom image conversion.
- **Image Size** allows you to specify the size of the images exported. This option is available only if the user wants to do custom image conversion.
- **Color** allows you to specify the color definition of the images exported. This option is available only if the user wants to do custom image conversion.
- **Export Overview** provides an overview of selected the export settings, which displays name, output name and size of the image, and allows you to start the export.

Additional Information

- Exporting only documents skips three steps and moves directly to the final wizard step.
- Selecting a Classification folder with both images and non-image assets in it, the wizard steps relate only to the images. Also, only the assets directly linked to the selected folder will be exported. If the Classification folder has no assets directly linked, nothing will be exported.
- No parameters can be set for exporting non-image assets.
- The Export Asset component does not export subfolders or contents of subfolders.
- The system does not build subfolder hierarchies on output.

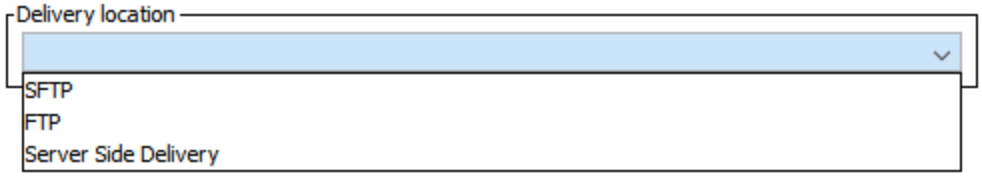
Select Export Location

In this step, the user can set naming format for output file and specify the location and delivery method for the export. The user can normally choose one of two options; the third is only available to you if you have selected only one file for export.

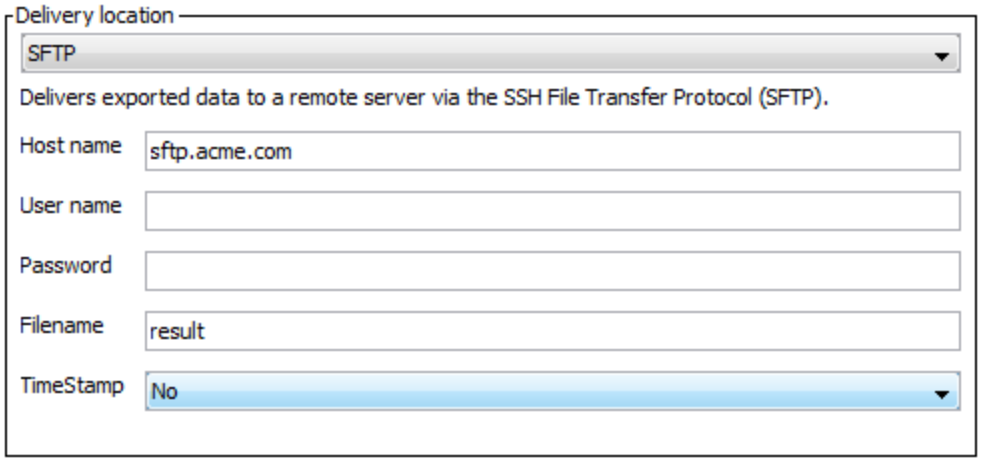


1. In the **Name** area, select one of the following options.
   - **ID – Use ID and Format Extension:** Builds the file names of the exported files by taking the asset's ID and appending the file format's associated extension. For example, a PDF document with the ID 1234567 is exported as 1234567.pdf
   - **Name – Use Name and Format Extension:** Builds the file names of the exported files by taking the asset's name and appending the file format's associated extension. For example, a PDF document with the file name Installation Manual is exported as Installation Manual.pdf.
   - **Other – Use Entered Name and Format Extension:** This option available when you have selected only one asset for export. You can enter any file name and extension that you want.
2. In the **Location** area, select the delivery location. You can toggle between **Advanced** and **Basic** export options, by clicking the Advanced / Basic text below the location field.
   - In **Basic** mode, click the ellipsis button (...), and then navigate to the preferred location. The user will be presented with a standard browse window to your local and network drives. Browse to and select the folder where you want your assets to be placed.

- In **Advanced** mode, use the dropdown to choose a delivery option.



  - **FTP** delivers a file using file transfer protocol (FTP). You must specify the host name of the remote server, the user name and password used to log on to the remote server, a file name, and if the file name should be provided with a time stamp.
  - **SFTP** delivers a file using the Secure File Transfer Protocol (SFTP). You must specify the host name of the remote server, the user name and password used to log on to the remote server, a file name, and if the file name should be provided with a time stamp.



  - **Server Side Delivery** exports the file into a folder located on the Application Server of the STEP system. The file is only delivered if the specified path has read / write access on the server. Enter the path of the application server and the name of the file.

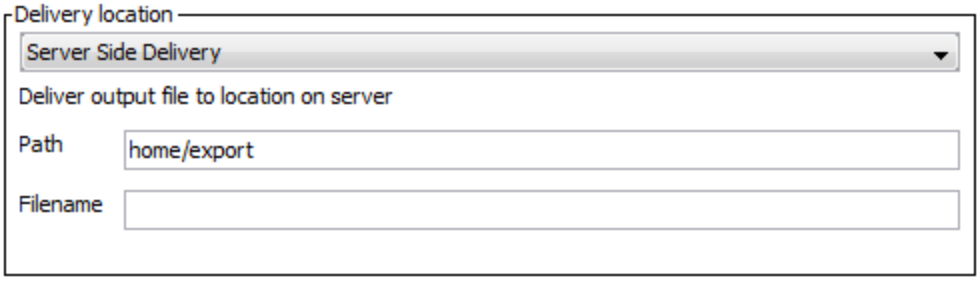
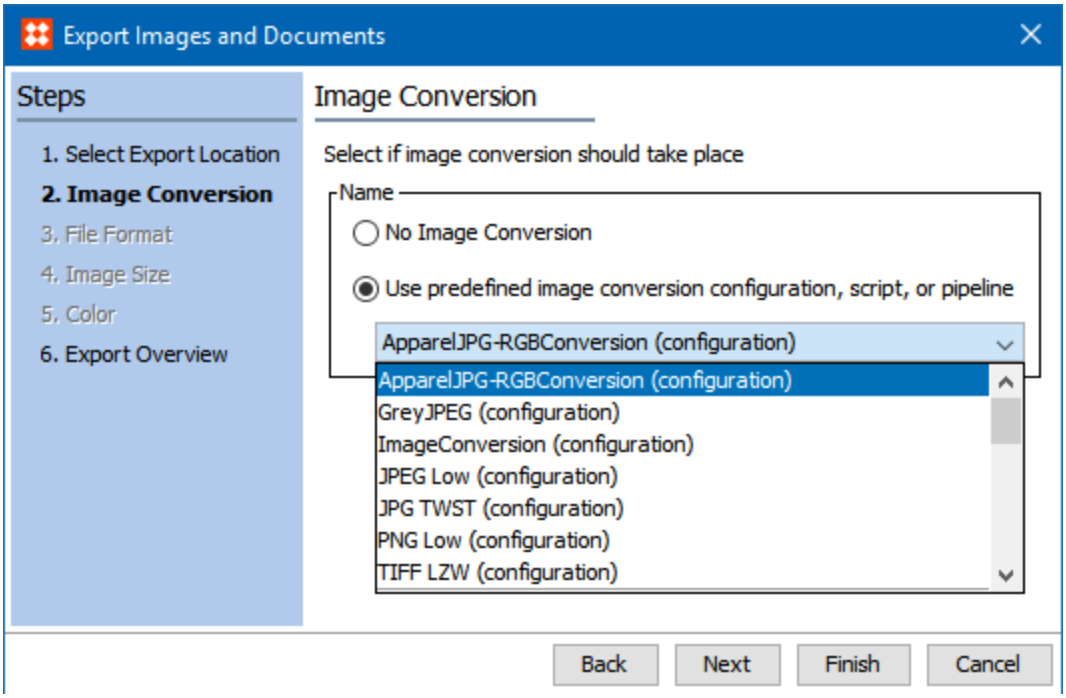


Image Conversion

In this step, the user can define whether an image has to undergo any formatting (includes format conversion, size, and color settings) on export. If formatting is needed, then the user can pick from predefined configuration, script, or pipeline or can define new custom formatting.



1. For Name, select **No Image Conversion** to export the images as is. No additional information is required.
2. If an image conversion is required to change the image settings on export, select **Use predefined image conversion configuration, script or pipeline**.

   For more information, see the **Image Conversion Configuration** topic.

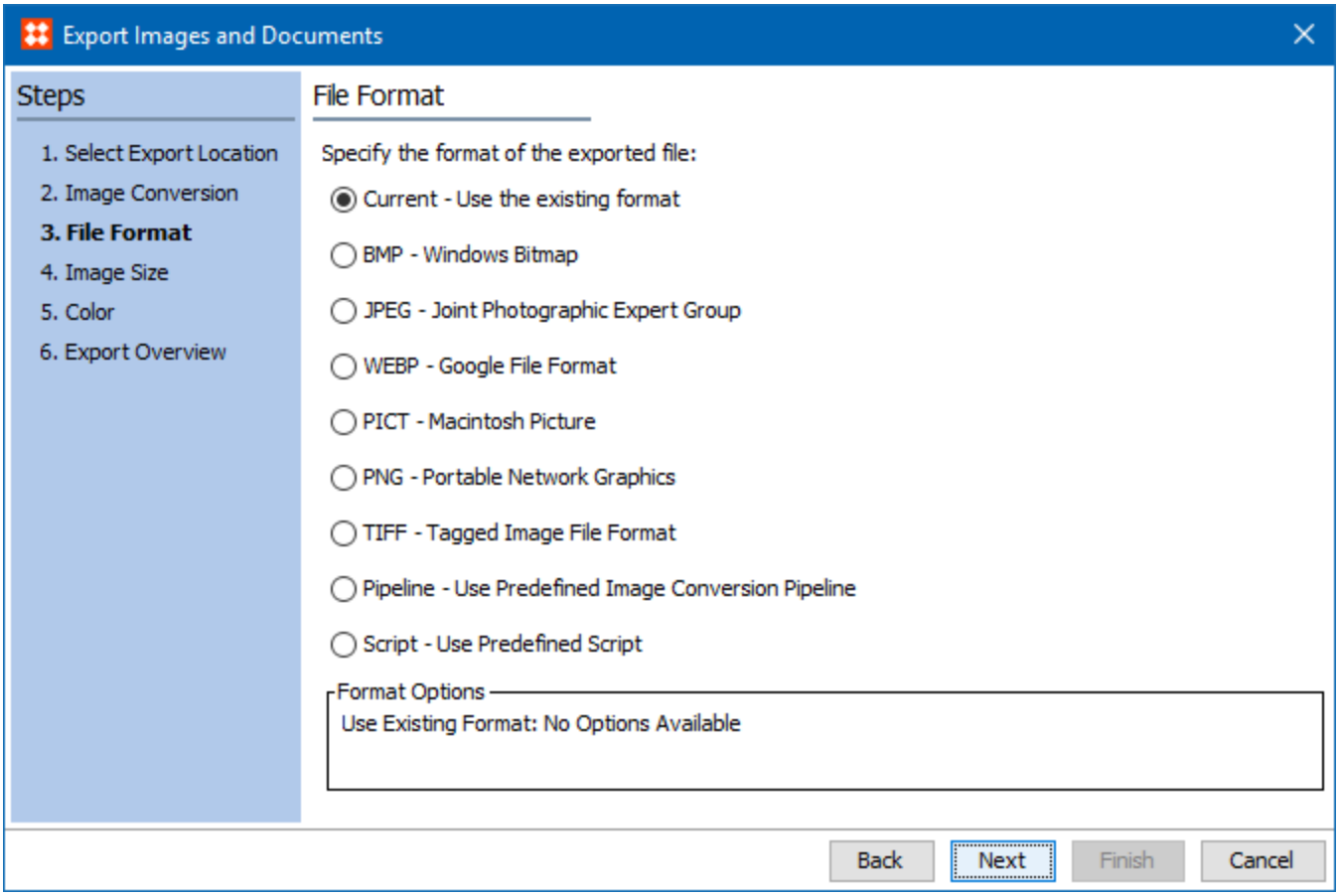
3. Use the dropdown to select one of the predefined image conversion configurations, scripts, or pipelines available on your system. Select **Custom** to specify a new image conversion using the File Format, Image Size, and Color wizard steps.

   Selecting 'Custom...' which enables the **3. File Format**, **4. Image Size**, and **5. Color** steps.

4. Click **Next** to continue or click **Finish** to start the export.

File Format

The File Format option is available only when 'Custom Image Conversion' is selected in the previous step, 'Image Conversion.' File Format allows users to export images in a number of different file formats. Only one output format can be selected per export.

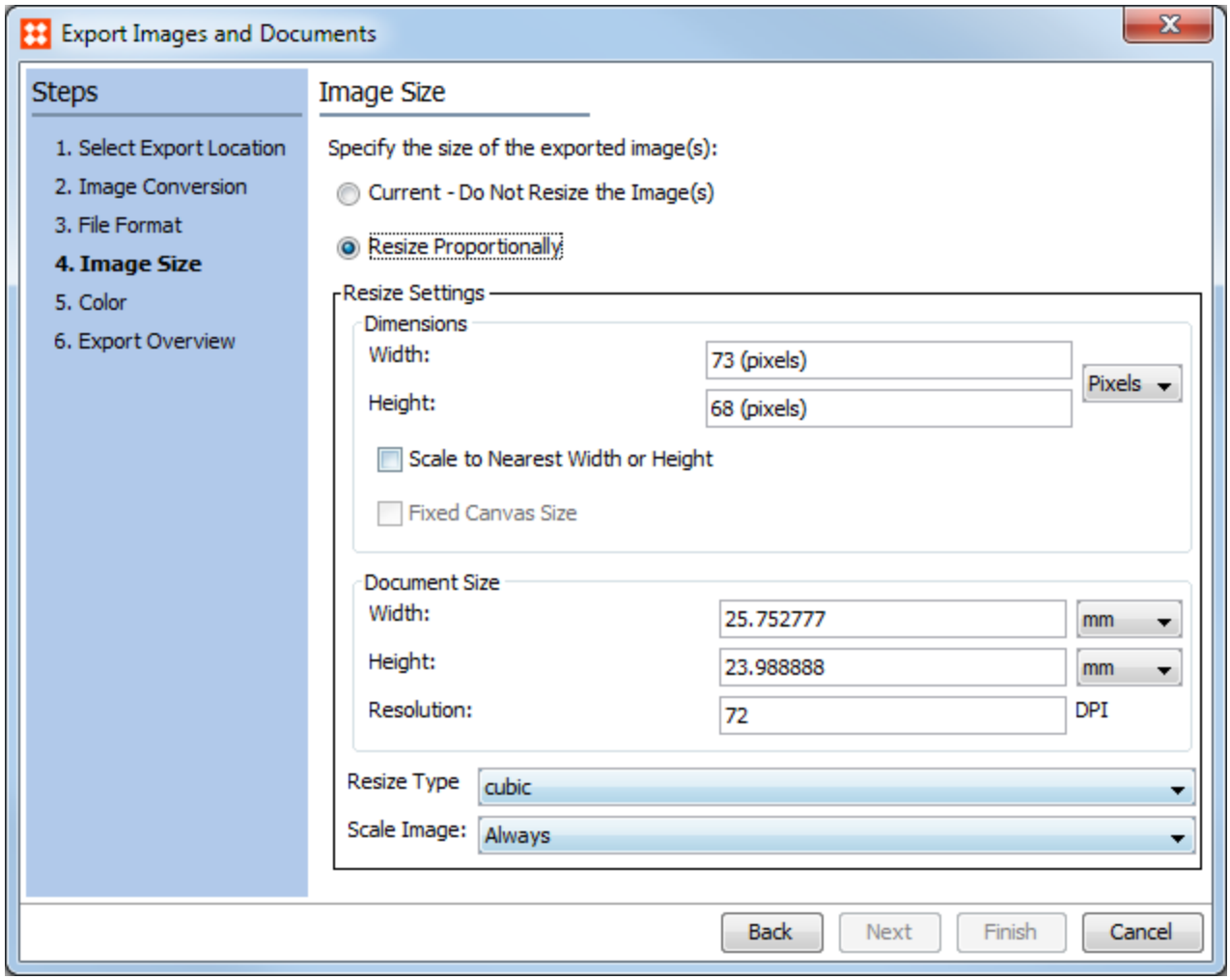


1. Click a radio button to set the format required for export. For details on each option, see the **Image Formats** topic.
2. When all required settings are supplied, click **Next** or click **Finish** to start the export.

Image Size

In this step, the user can define whether the image has to undergo any resizing on export. If yes, then the user can resize proportionally by specifying dimensions, scaling, print size, and resize type.

'Image Size' option will be available only when 'Custom Image Conversion' is selected in previous step, **3. Image Conversion**.



1. Select **Resize Proportional** if you want to resize the images. If you do not want to resize the images select **Current - do not resize the image**.
2. For Resize Settings, use the **Dimensions** area. Enter the desired height *or* width in the selected unit of measure, which may be set in either pixels or percentages (%). Because the images are scaled proportionally, when you enter the first dimension, the other values change accordingly.

- Scale to Nearest Width or Height – when checked the affected image will scale to the nearest width or height in pixels. If both the height and width have values, the system will determine which maximum value is hit first and the image conversion will complete accordingly.
- Fixed Canvas Size – This setting is enabled only when 'Scale to Nearest Width or Height' checkbox is checked. This option will scale and fill with white pixels to the desired canvas size.

  When unit of measure percentage is selected, 'Scale to Nearest Width or Height' checkbox option and 'Fixed Canvas Size' checkbox option are **disabled**.

Important: While users must set only one of the two dimension values (Width or Height) when the 'Scale to Nearest Width or Height' option is enabled, it is good practice to also define a max value in the other field rather than leaving it empty. The reason to set both values in this way is because, without a max value set for one of these values, the image may stretch so far as to cause obvious distortion. Setting both values helps avoid this result.

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3. For Resize Settings, use the **Document Size** area to show the print size of the image and the resolution. In Resolution, specify the preferred resolution if different from the current resolution. Enter the desired height or width in the selected unit of measure. Units of measure available are mm, cm, inches, pt, and pica. Because the images are scaled proportionally, when you enter the first dimension, the other values change accordingly.

   In Resolution, specify the preferred resolution if different from the current resolution. DPI is the available measure, which stands for Dots Per Inch.

4. For **Resize Type**, select the preferred resize type: cubic, scale, subsample, lanczos, and default. These types are similar to those offered by Photoshop.

Note: It is easier to successfully reduce the resolution of an image than it is to increase it. Also, it is recommended to scale TIFF images by no more than 140%.

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5. For **Scale Image**, select when you want the to scale the images from the following options:
   - **Always**: images are always scaled to the specified size.
   - **When Smaller**: images are scaled when they are smaller than the specified size.
   - **When Larger**: images are scaled when they are larger than the specified size.
6. Click **Next** to continue or click **Finish** to start the export.

Additional Information

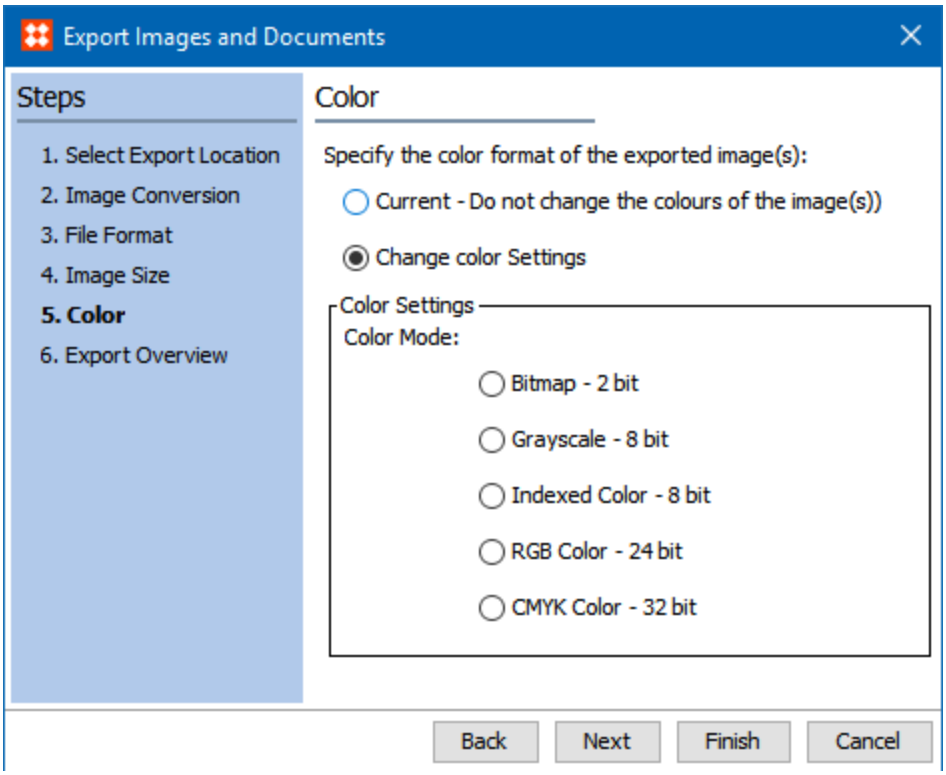
Image Size screen is disabled if **below File Formats** are selected in step **3. File Format** of Export Wizard:

- **Pipeline** – Use Predefined Image Conversion Pipeline
- **Script** - Use Predefined Script

Color

In this step, the user can define whether the image has to undergo any color changes on export. If yes, then the user can select the color mode.

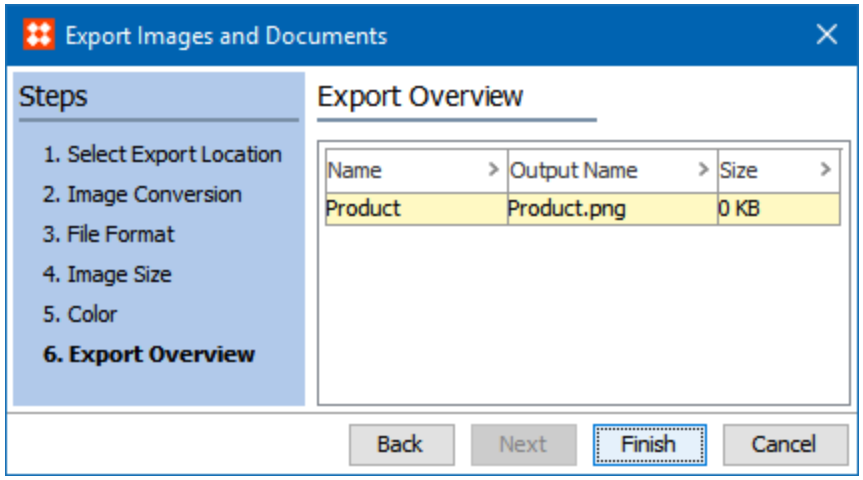
Color option will be available only when 'Custom Image Conversion' is selected in previous step, **Image Conversion**.



1. Select **Change color settings** if you want to modify the image color, otherwise, select **Current - do not change the colors of the image**.
2. For **Color Settings**, select the preferred color mode from the available options:
    - Bitmap – 2 bit
    - Greyscale – 8 bit
    - Indexed Color – 8 bit
    - RGB Color – 24 bit
    - CMYK Color – 32 bit
3. Click **Next** to continue or click **Finish** to start the export.

Export Overview

In the final step, the user may review the image being exported.



1. Review the STEP name of the asset, the file name to be used for export, and the file size.

   No parameters are required on this step. It displays some of the assets that will be exported so that errors can be corrected if necessary. Click **Back** as needed to correct any problems.

2. To start the export process, click **Finish**.
3. A Progress screen displays the file being exported. When the Progress window closes, all assets have been exported. Monitor the output location identified in the Select Export Location step to ensure that all selected assets were exported.

   No monitoring or Execution Report is associated with the export of assets.

Assets and Content with STEPXML

For on demand exporting, the Export Manager wizard STEPXML and Advanced STEPXML formats include the option to export asset metadata, references, and digital content for both images and non-images. For automatic exports based on events, an OIEP can be configured to listen for new, changed, and deleted assets. For automatic exports based on a static set of data, a Select Objects OIEP can be configured. All options are defined below.

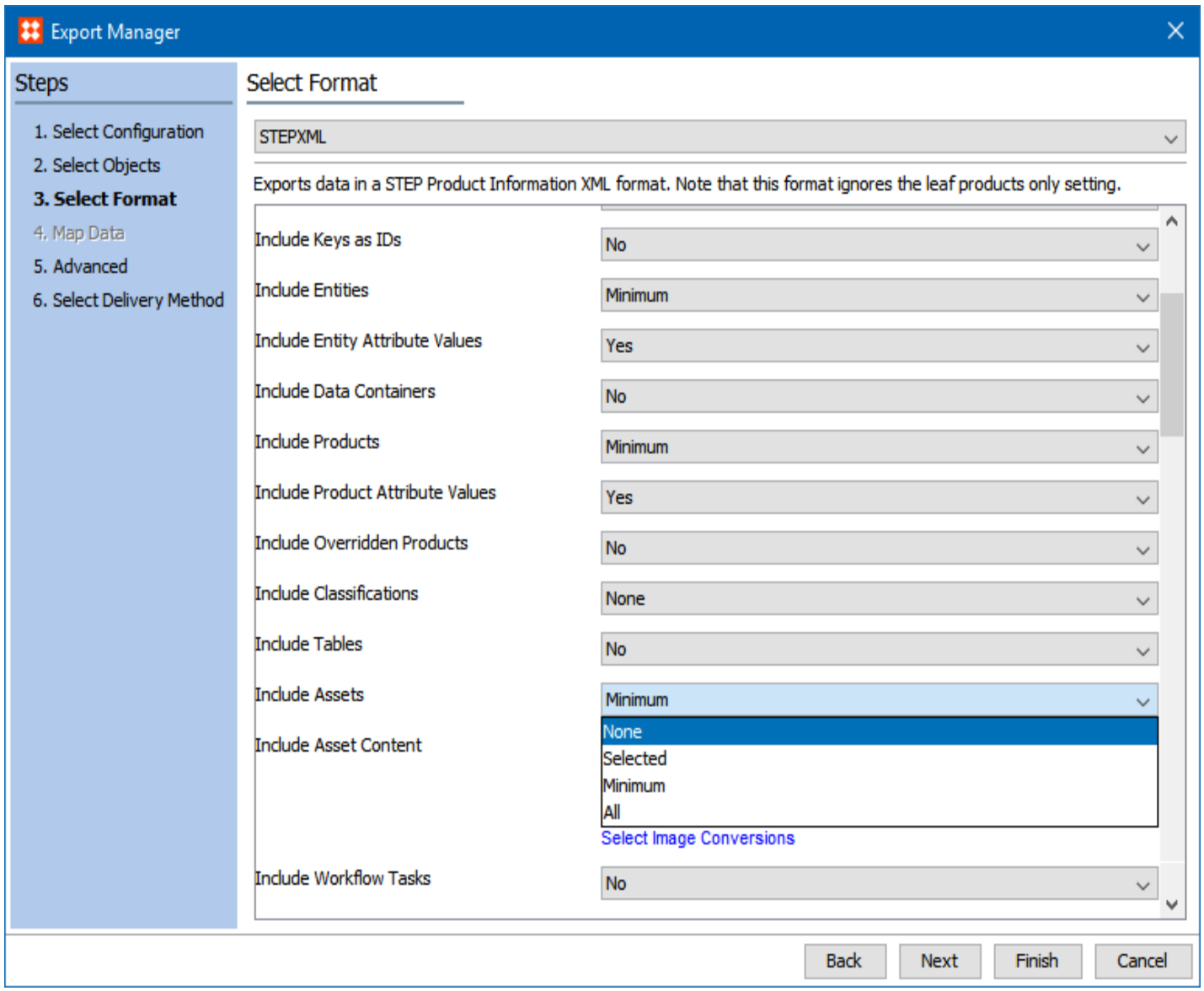
Image Conversion Configurations can be used to save image conversion settings when the same image will be used in a modified way for different use cases, for example on a web site or a printed catalog. Both export manager and the event processor enable the use of Image Conversion Configurations. Additionally, automatic caching of converted images can be achieved via the Image Cache event processor. For more information, see the **Creating an Image Conversion Configuration** section of the **Digital Asset Exchange** documentation and see **Image Cache Parameters and Triggers** section of the **Creating Event Processors** documentation.

Note: These new tags are only available for export from STEP. Importing with these tags is not supported. If assets will routinely be exported with conversions, it is highly recommended to enable the new asset caching functionality (defined below in the 'New event processor and option to cache assets upon import' section) to optimize export performance.

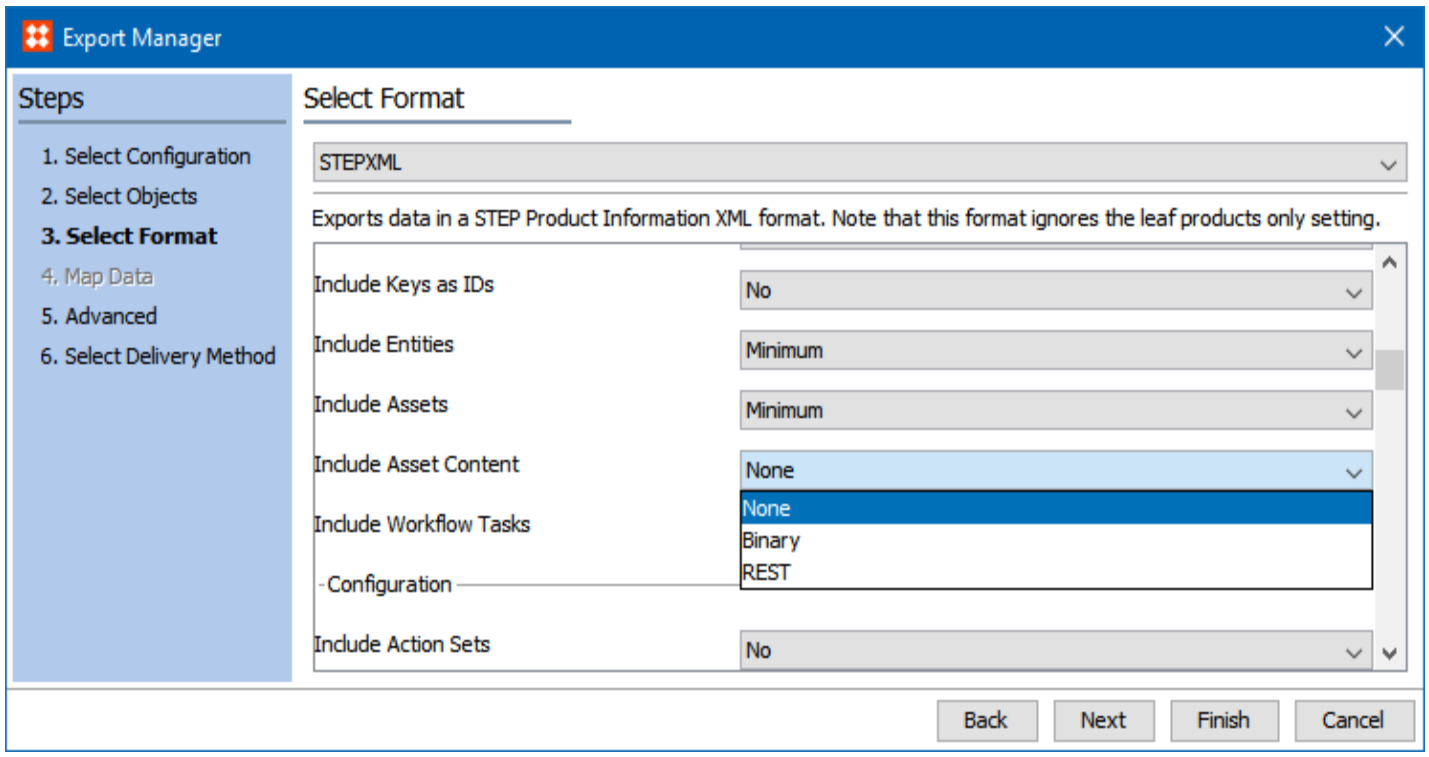
Export using Export Manager

1. Complete the first three steps of the **Export Manager** wizard. If needed, the following topics provide details:
   - Launch the Export Manager wizard as described in **Creating a Data Export**.
   - In **Select Configuration** create a new configuration.
   - In **Select Objects**, select the assets to export.
   - In **Select Format**, select STEPXML. If you will provide your own template including the tag described below, select Advanced STEPXML.
2. For the **Include Assets** parameter, choose an option. For details about these options, see the **Minimum, Referenced, and Selected in STEPXML** topic.

   Important: If None is selected, neither assets nor asset content is output.



3. For the **Include Asset Content** parameter, choose **Binary** or **REST**, based on the information below:
   - The binary option includes the asset content using BASE64 encoding, which can be decoded by the external system.
   - The REST option includes a relative REST resource URL. The external system must provide information necessary to complete the path to the REST resource.



For more information on the STEPXML tag used and the data included in the output of asset content, see the **AssetContent Tag in STEPXML** section of the **STEPXML Format** documentation.

Note: If no content is available for the selected image(s), the XML tag is not exported. In this scenario, a record of the attempt to export the image is included in execution report.

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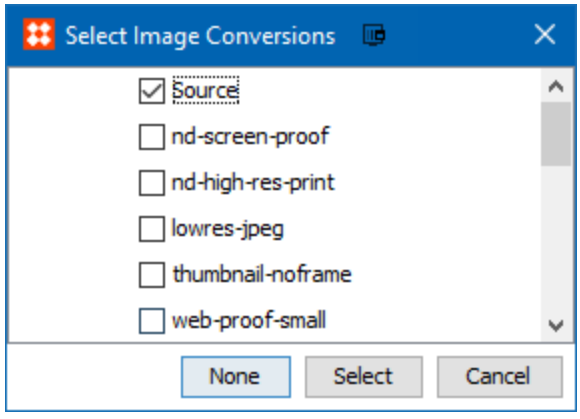
4. Click the **Select Image Conversions** link and select at least one conversion from the dialog to enable the Next and Finish buttons on the wizard. The list displayed includes user created image conversion configurations in STEP, excluding legacy system Image Pipeline or Script conversions.

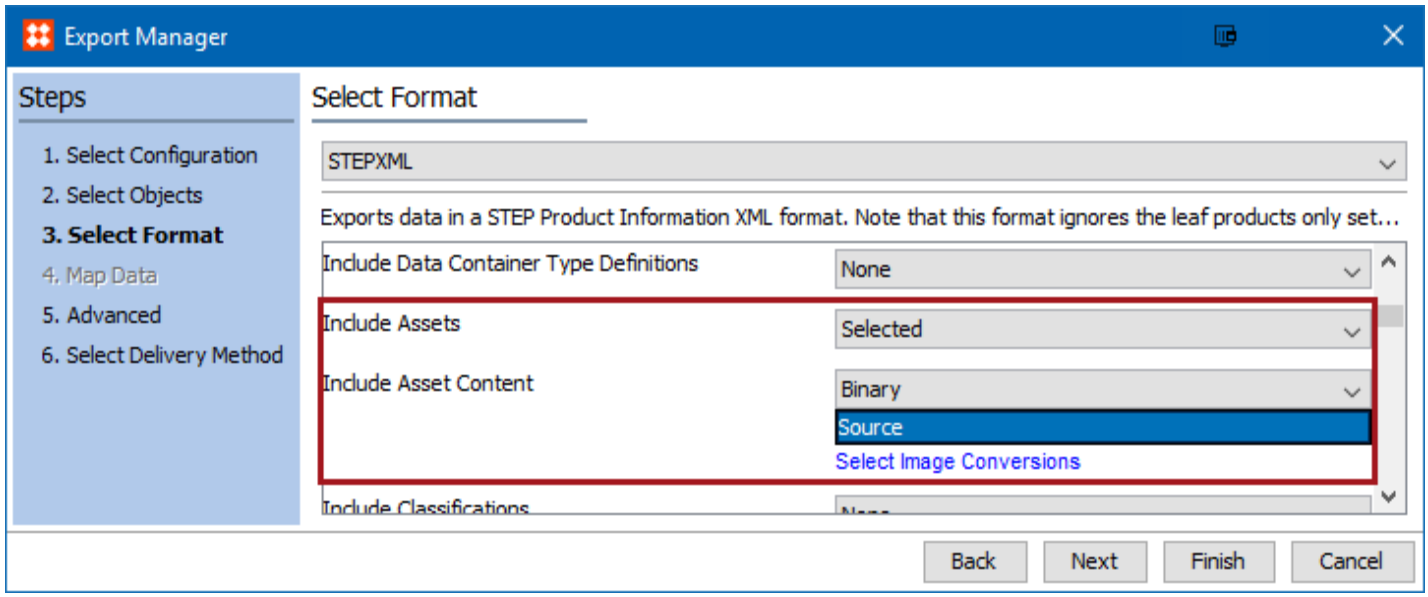
   The **Source** option exports the original asset content and no conversion is applied.



Note: Although selecting multiple conversions is allowed, it may increase export times and file size.

- To clear all selections from the list, click the **None** button.
- To keep your selections and return to the wizard, click the **Select** button.
- To cancel your selections and return to the wizard, click the **Cancel** button.

5. Verify the selected Image Conversion and Asset Content settings are displayed in the wizard:



- To change the displayed Image Conversion selection, click the **Select Image Conversions** link.

For details about the other STEPXML format parameters shown in the wizard, see the **STEPXML Outbound Parameters** documentation.

6. Complete the last two steps of the **Export Manager** wizard. If needed, the following topics provide details:
   - In **Advanced**, update parameters as required.
   - In **Select Delivery Method**, select the delivery method.
7. Click the **Finish** button to complete the configuration and choose the desired export option. For details, see the **Running a Data Export** section.

Export using an Event-Based or Select Objects OIEP

Creating an OIEP that generates assets and content involves the same format setup as is defined above for Export Manager. For STEPXML format, use the Include Assets and Include Asset Content parameters. For Advanced STEPXML, use the AssetContent tag.

All steps required to create an OIEP are outlined in the **Event-Based Outbound Integration Endpoint** section or the **Select Objects Outbound Integration Endpoint** section of the **Outbound Integration Endpoints** documentation.

The following XML attributes, belong to the **AssetBinaryContent** tag:

- **ImageConversionConfigurationID** indicates which image conversion has been used to convert the exported asset content

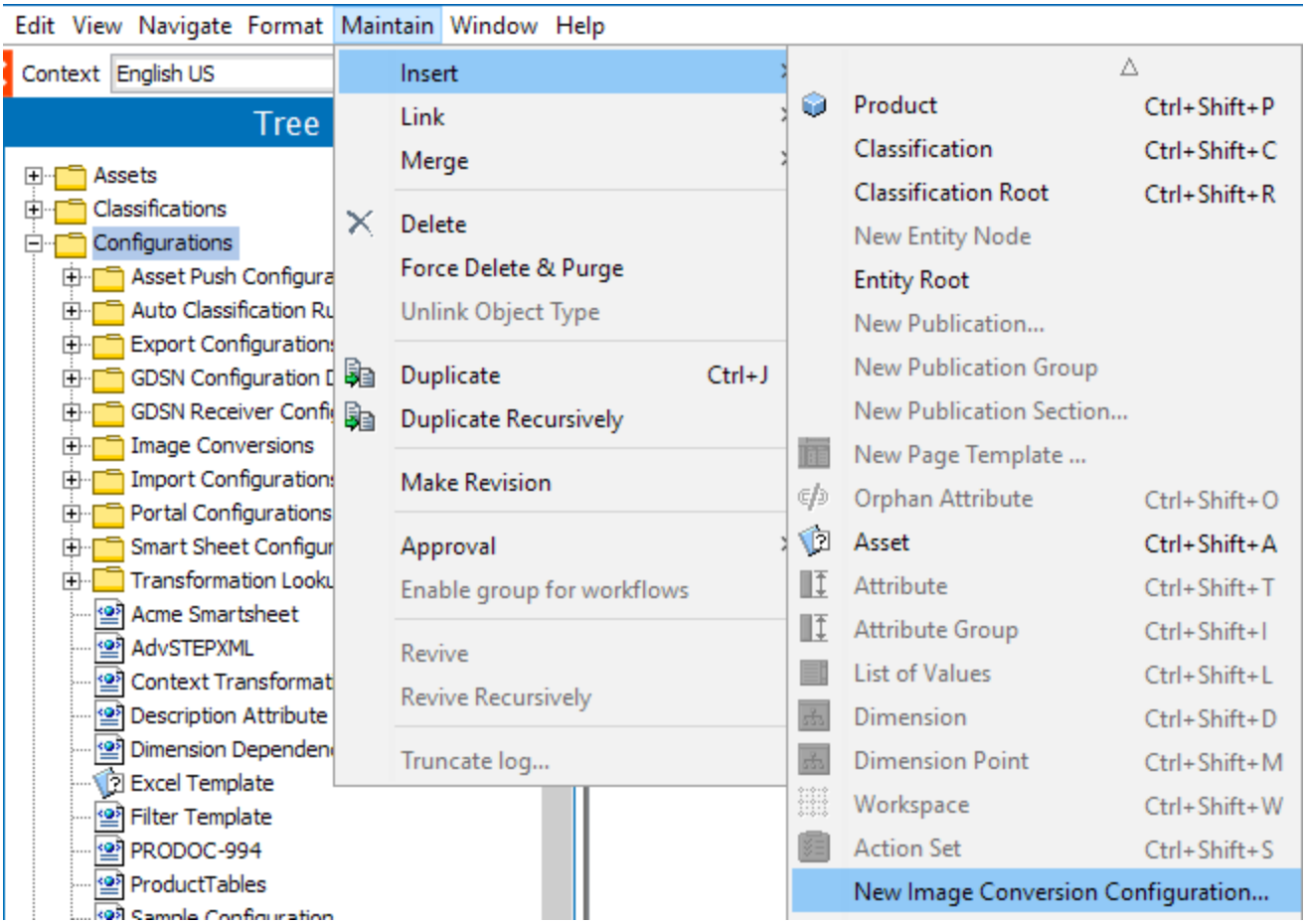
Image Conversion Configuration

Image conversion configurations define a group of image settings to be used during export to change the format, size, and/or color of an image, and to specify when to cache images. An image conversion configuration can also be used to ensure that the image is **not** changed upon export, meaning that the format, size, and color exported are identical to that stored in STEP.

After a one-time setup, an image conversion configuration allows a user to easily apply the same settings for multiple image exports. All methods of asset export allow selection of an image conversion configuration.

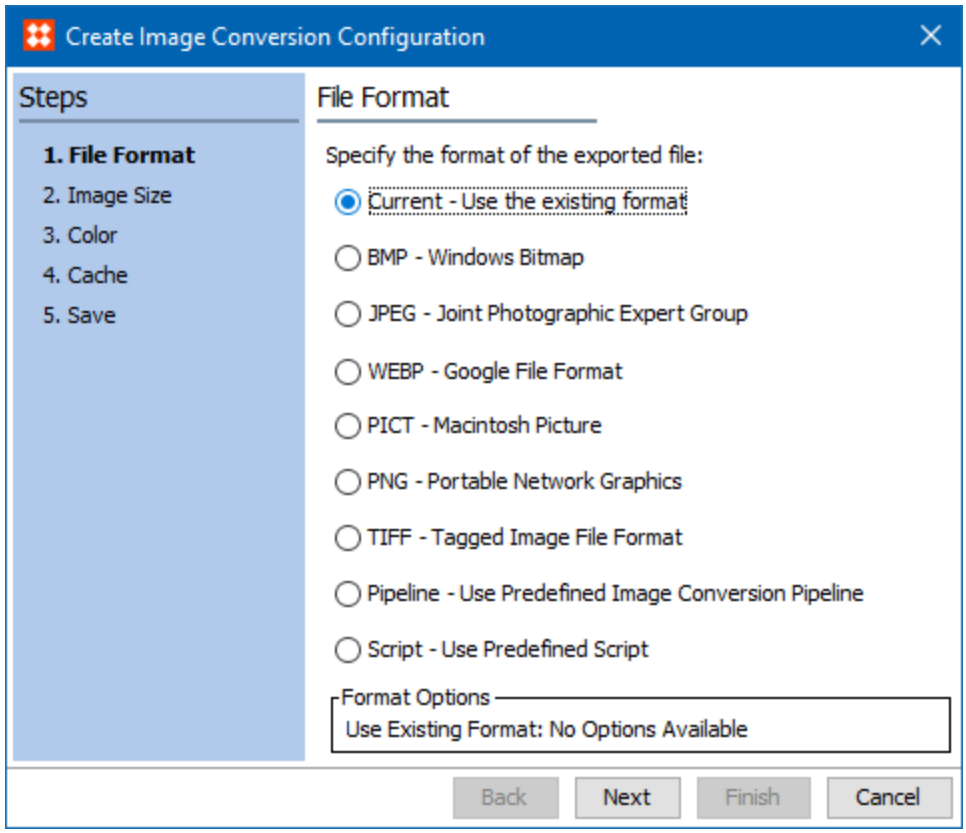
Create an Image Conversion Configuration

1. In the **Tree**, select a classification folder to store the new configuration.
2. Click the Maintain menu > Insert > **New Image Conversion Configuration** to display the Create Image Conversion Configuration wizard.

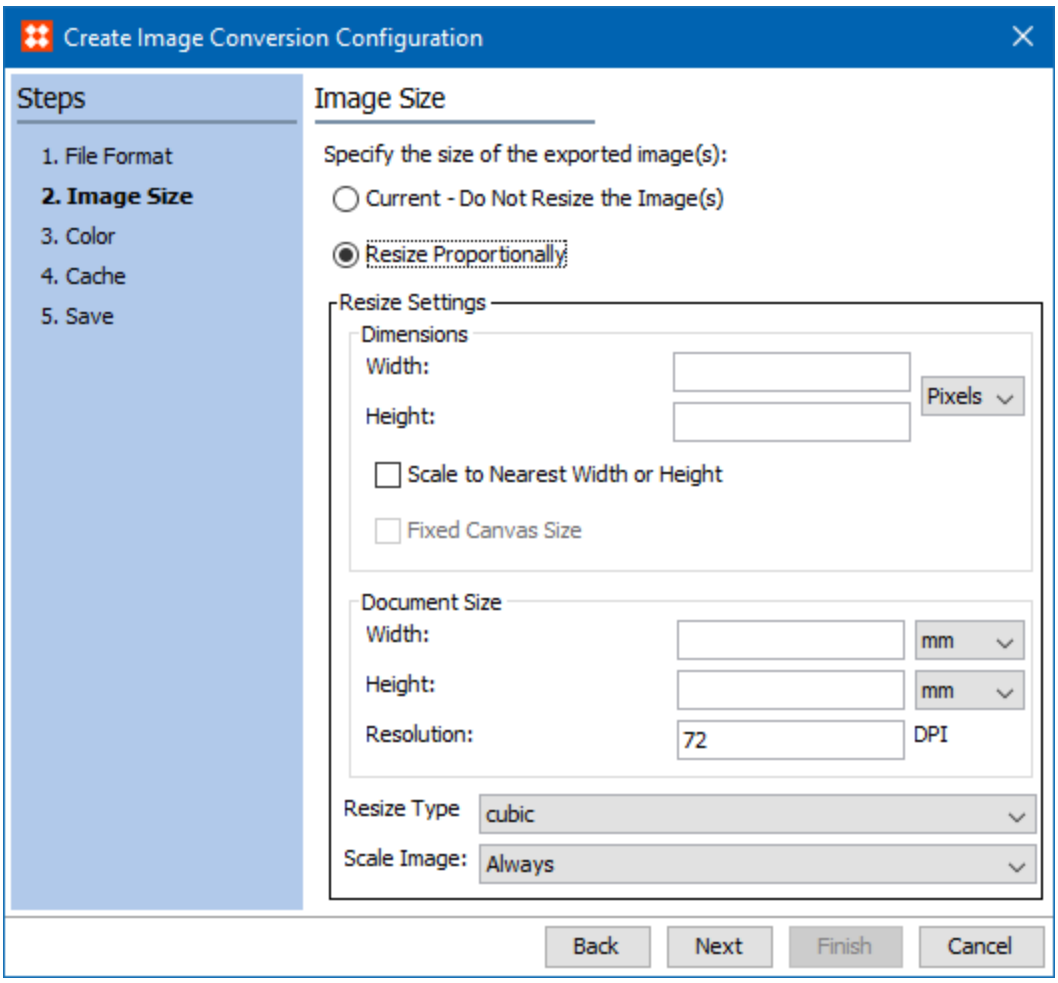


3. For the **File Format** step,

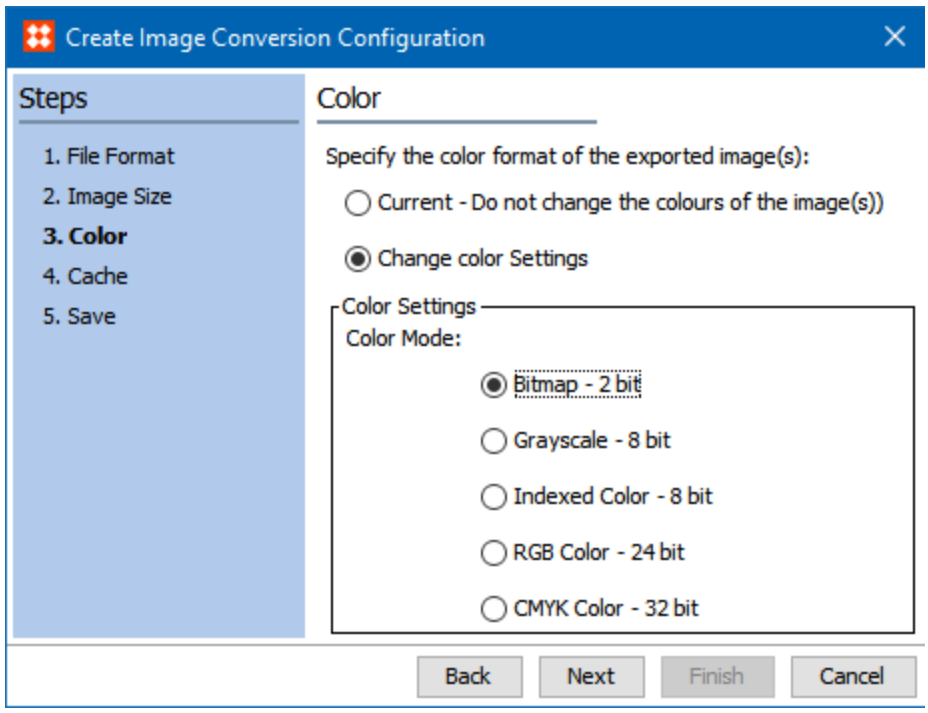
- **Current** ensures that upon export, no changes will be made to the format.
- If changes are necessary, select the desired image format. For details about the individual format options, see the **Image Formats** topic.
- Click **Next**.



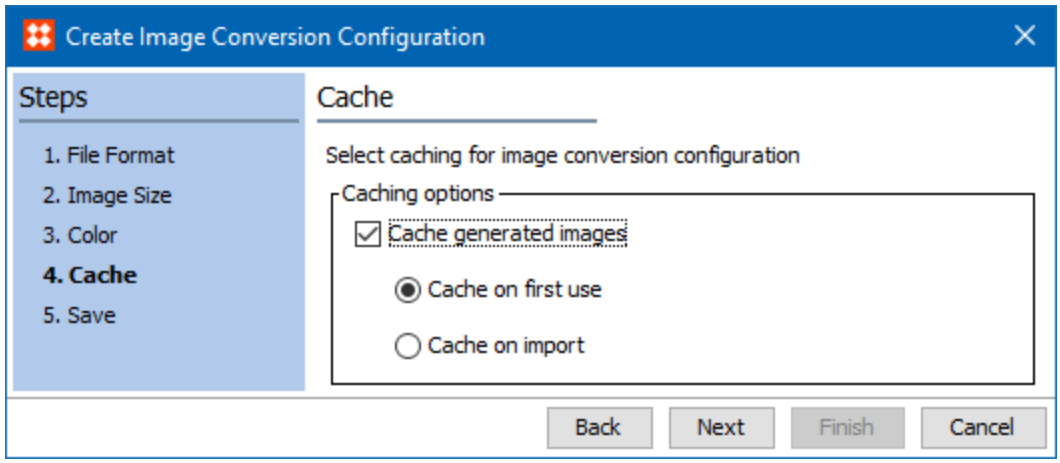
4. For the **Image Size** step,
   - **Current** ensures that upon export, no changes will be made to the size.
   - If changes are necessary, select **Resize Proportionally**, and then specify the dimensions, document size, resize type, and scale image settings. For details about the image size options, see the **Image Size** section of the **Export Images and Documents Wizard** documentation.
   - Click **Next**.



4. For the **Color** step,
   - **Current** ensures that upon export, no changes will be made to the color.
   - If changes are necessary, select **Change color Settings** and specify the desired color mode. For details about the color options, see the **Color** section of the **Export Images and Documents Wizard** documentation.
   - Click **Next**.

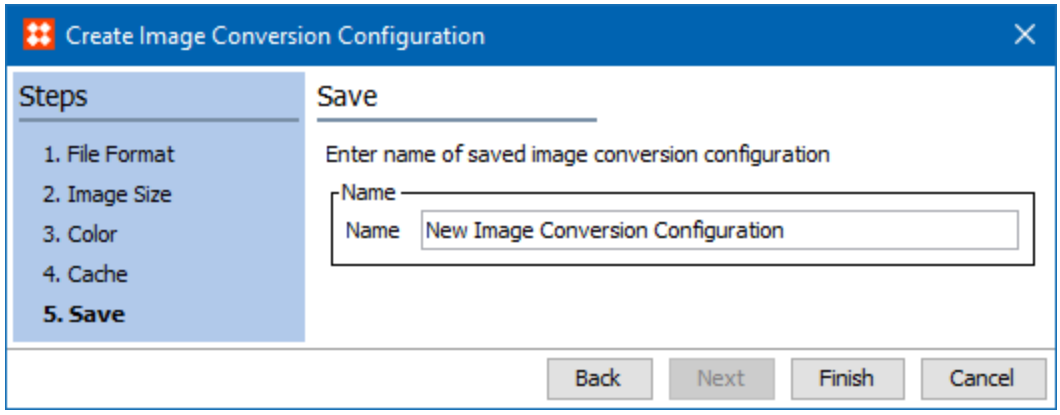


4. For the **Cache** step, the checkbox enables the ability to cache, and the radio buttons determine when the caching will occur. Caching is available via the Export Manager or asynchronously based on events via the Image Cache event processor. For more information, see the **Assets and Content with STEPXML** section of the **Digital Asset Exchange** documentation or the **Image Cache Processing Plugin Parameters and Triggers** section of the **Event Processors** documentation.
   - **Cache on first use** - the converted image is not cached until the first time it is accessed for viewing, exporting, or in an image preview.
   - **Cache on import** - the converted image is cached when it is imported.



Note: For optimal system performance, it is important to configure the 'Image Cache Event Processor' to listen for incoming selected asset object types and to apply the selected conversions automatically. All user configured image conversions that have been set to 'cache on import' are available.

7. For the **Save** step, enter a name for the Image Conversion Configuration.



8. Click **Finish** to save the configuration in the originally selected classification folder.

Edit an Image Conversion Configuration

Once an image conversion configuration has been created, changes can be made using these steps.

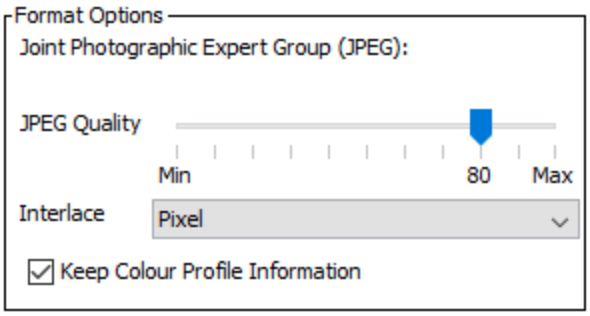
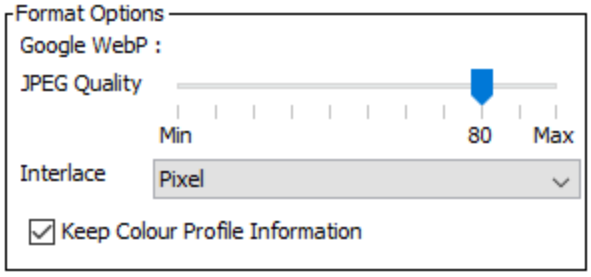
1. In Tree, expand the classification folder that holds the image conversion configuration to edit, right-click the configuration, and select **Edit Image Conversion Configuration**.
2. Use the Edit Image Conversion Configuration wizard to modify the configuration settings.

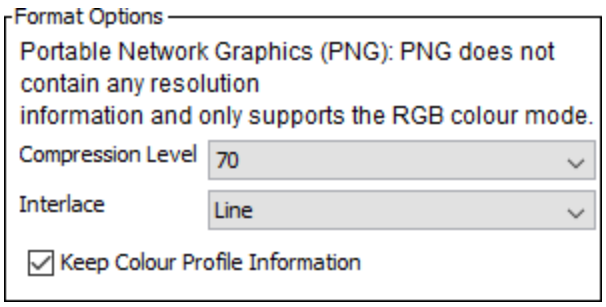
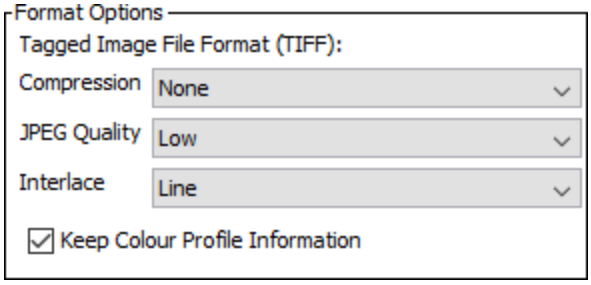
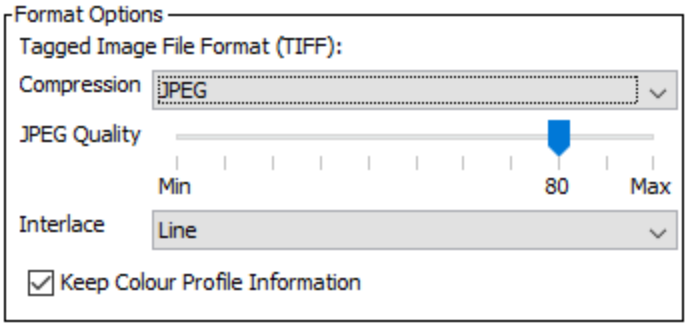
Image Formats

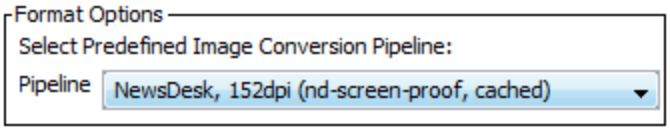
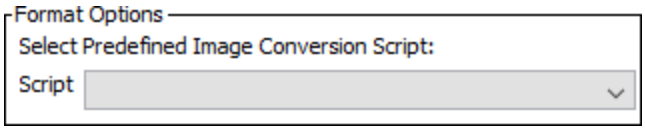
The following formats can be selected when exporting assets using a custom image conversion in the **Export Images and Documents wizard** or when creating an **Image Conversion Configuration**.

For all formats, any non-image asset in the selected folder remains unchanged and is exported as is.

Note: The '**Keep Colour Profile Information**' option available with some formats (JPEG, WEBP, PNG, and TIFF) can override other selections made in the conversion configuration. If results of the conversion are not as expected, try disabling the selection (which is checked by default).

Format	Description	Format Options
Current – Use the existing format	Keep the current / original format of the image.	No format options are available.
BMP – Windows Bitmap	Convert the image to .BMP format.	No format options are available.
JPEG – Joint Photographic Expert Group	Convert the image to .JPG format via the parameters. **JPEG Quality**: Move slider as desired; Defaults to 80. Min (Minimum) - lowest quality, smallest file size; Max (Maximum) - highest quality, largest file size. **Interlace**: Pixel, Plane **Keep Color Profile Information**	
WEBP - Google File Format	Convert the image to .WEBP format via the parameters. **JPEG Quality**: Move slider as desired; Defaults to 80. Min (Minimum) - lowest quality, smallest file size; Max (Maximum) - highest quality, largest file size. **Interlace**: Pixel, Plane	

Format	Description	Format Options
	Keep Color Profile Information	
PICT – Macintosh Picture	Convert the image to .PICT format.	No format options are available.
PNG – Portable Network Graphics	Convert the image to .PNG format via the parameters: **Compression Level**: From 0 - 90 in increments of 10 **Interlace**: Line, Pixel **Keep Color Profile information** PNG supports only RGB-color mode.	
TIFF – Tagged Image File Format	Convert the image to .TIFF format via the parameters: **Compression Type**: None, Fax, Group 4, JPEG, LZW, RLE, ZIP. The Compression Type selection determines the JPEG Quality option displayed. **JPEG Quality**: Either select Low, Medium, High Maximum from the dropdown; or, move the slider as desired; Defaults to 80. Min (Minimum) - lowest quality, smallest file size; Max (Maximum) - highest quality, largest file size. **Interlace**: Line, Pixel, Plane **Keep Color Profile Information** All of these options relate to those offered by Adobe Photoshop.	 

Format	Description	Format Options
Pipeline – Use Predefined Image Conversion Pipeline	Use a standard image pipeline. The available options depend on your system setup. Selecting a pipeline automatically provides the same image conversion options each time. Saving an image conversion configuration allows you to apply the same settings for multiple exports. For more information, see **Image Conversion Configuration**. Steps **Image Size** and **Color** are disabled. No additional wizard settings are required.	
Script - Use Predefined Script	Use a predefined script to convert images. A 'script' is a piece of code that can make a special transformation on an asset. Typically, this is custom development done by Stibo Systems to fulfill customer requirements. Once saved to a specific folder on the application server, a script displays in the dropdown. The script must take three arguments: 1. The contents of the asset 2. The properties of the asset (e.g., MIME type, width, extension etc.) as a property file 3. A file name where the converted images should be generated No additional wizard settings are required.	

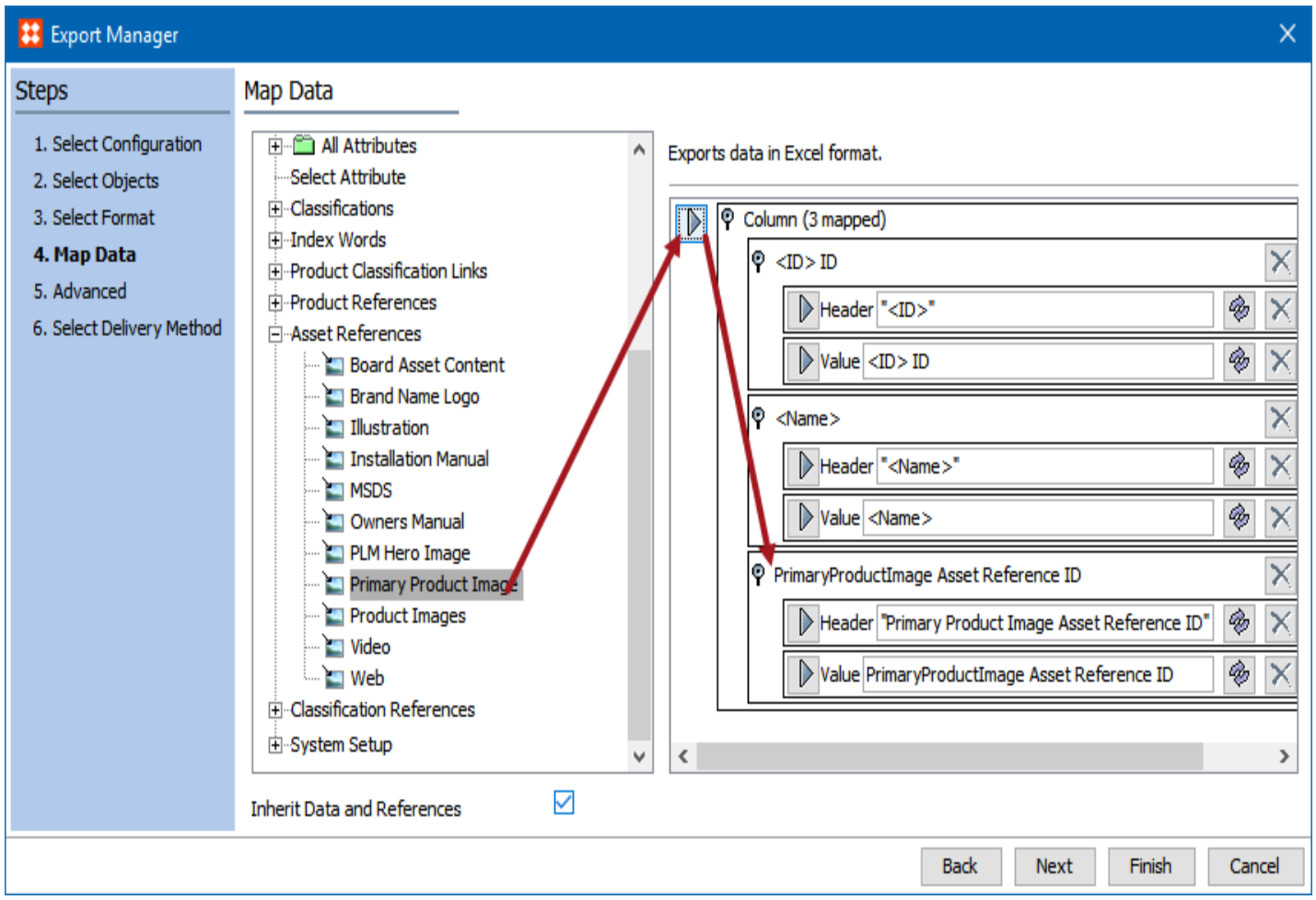
Referenced Assets in ZIP file with Excel or CSV

For on-demand exporting, the Export Manager wizard Excel and CSV formats include the option to export referenced assets in a .ZIP file. For automatic exports based on events, an OIEP can be configured to listen for new, changed, and deleted assets. For automatic exports based on a static set of data, a Select Objects OIEP can be configured. All options are defined below.

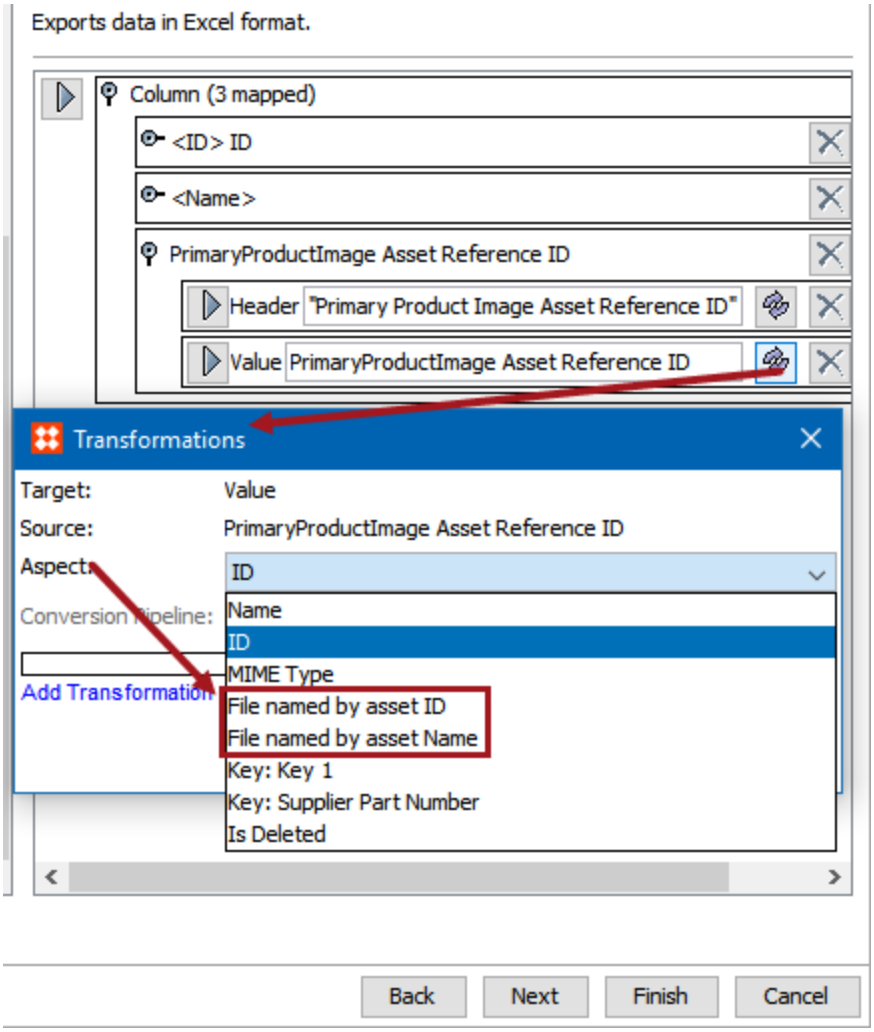
Image Conversion Configurations can be used to save image conversion settings when the same image will be used in a modified way for different use cases, for example on a web site or a printed catalog. Both export manager and the event processor enable the use of Image Conversion Configurations. Additionally, automatic caching of converted images can be achieved via the Image Cache event processor. For more information, see the **Creating an Image Conversion Configuration** section of the **Digital Asset Exchange** documentation and see **Image Cache Parameters and Triggers** section of the **Creating Event Processors** documentation.

Exporting in ZIP file using Export Manager

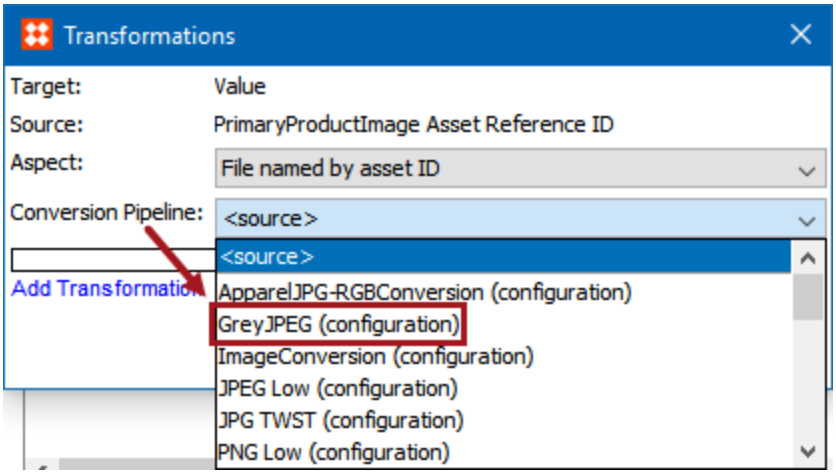
1. Complete the first three steps of the **Export Manager** wizard. If needed, the following topics provide details:
   - Launch the Export Manager wizard as described in **Creating a Data Export**.
   - In **Select Configuration**, create a new configuration.
   - In **Select Objects**, select the objects with referenced assets to export.
   - In **Select Format**, select Excel or CSV.
2. For the **Map Data** step, select the necessary data sources and move them to the right-hand column, including the asset reference.
   - For details about mapping data sources, see **Outbound Map Data - Data Source**.
   - For detail on how to map referenced assets, see the **Asset References - Data Source Outbound** documentation.



3. For the **Asset Reference Value** parameter, click the Transformation button and select the desired file name option for the asset files that will be included in the zipped export file.
   - **File named by asset ID** - uses the STEP ID as the asset file name for the exporting asset.
   - **File named by asset Name** - uses the STEPName as the asset file name for the exporting asset.

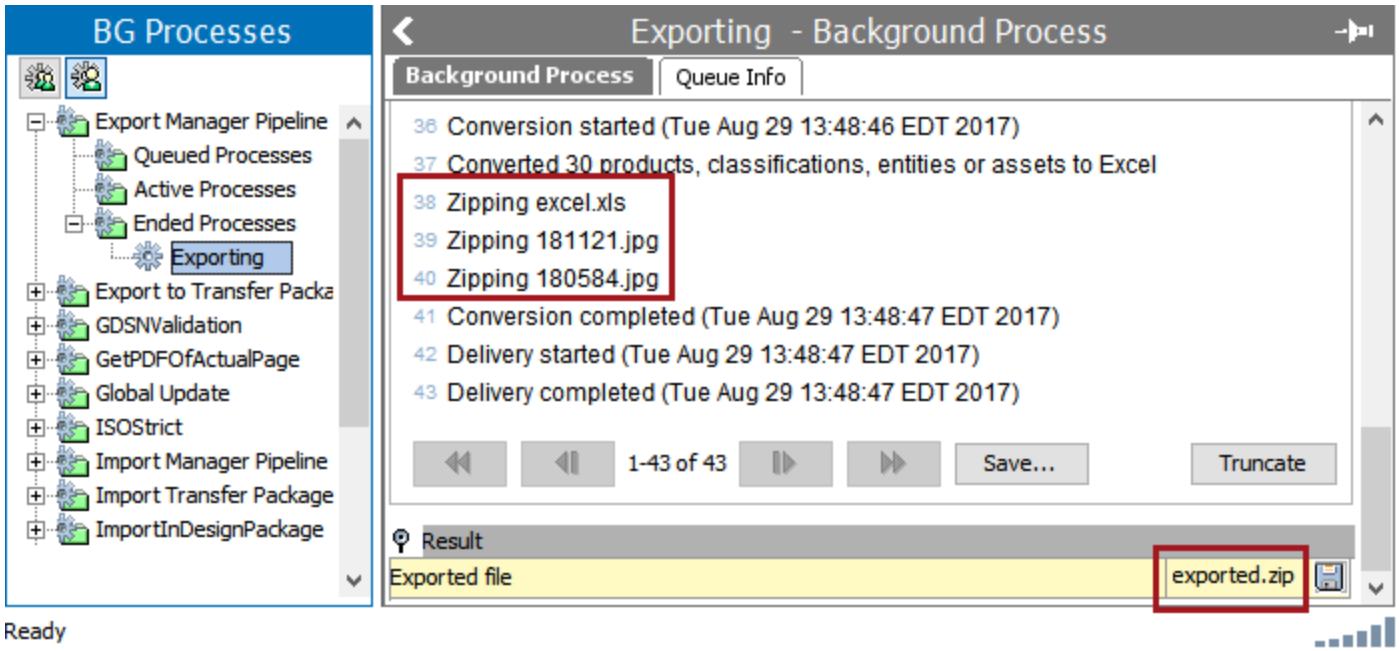


4. If needed, choose an image conversion configuration from the **Conversion Pipeline** field and click the **Save** button. The list displayed includes user created image conversion configurations in STEP. The **Source** option exports the original asset content and no conversion is applied.

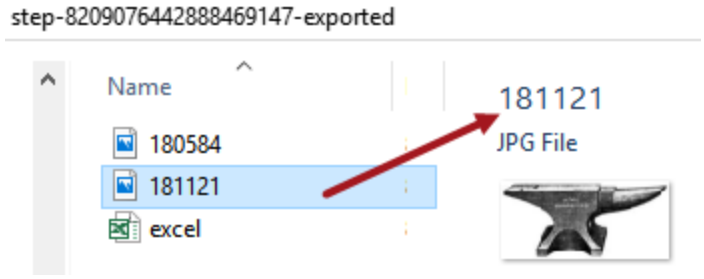


5. Complete the last two steps of the **Export Manager** wizard. If needed, the following topics provide details:
   - In **Advanced**, update parameters as required.
   - In **Select Delivery Method**, select the delivery method.
6. Click the **Finish** button to complete the configuration and choose the desired export option. For details, see the **Running a Data Export** section.

The export file is displayed on the background processes tab under the Export Manager Pipeline node. The contents of the zip file are listed in the Execution Report flipper.



Opening the exported.zip file shows the contents reported in the Execution Report. The zipped asset files reflect the selected image conversion configuration.



Exporting in ZIP file using Event-Based or Select Objects OIEP

Creating an OIEP that generates zipped referenced assets via Excel or CSV formats involves the same mapping setup as is defined above for Export Manager.

All steps required to create an OIEP are outlined in the **Event-Based Outbound Integration Endpoint** section or the **Select Objects Outbound Integration Endpoint** section of the **Outbound Integration Endpoints** documentation.

Importing Assets

There are two methods of importing assets into STEP:

- **Asset Importer -** This is the primary method of importing assets via Web UI and/or hotfolders configured with an Inbound Integration Endpoint. It can, among other things, be configured to run business rules, interact with STEP workflows, convert image files to other formats, and make quality checks on images to make sure that they meet any minimum requirements.

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

- **Manual Asset Importer -** This is the only method of importing assets via STEP Workbench. This functionality offers a simpler solution for quickly importing assets with on-the-fly manual configurations. Unlike Asset Importer, this functionality cannot be configured for scheduled imports.

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

Asset Importer

The Asset Importer is a robust tool that offers users a wide variety of options for mass loading images, documents, and other digital assets into STEP.

The Asset Importer is core functionality used to import and update asset data in STEP. It was inspired by the previous hotfolder-based add-on component known as the 'Enhanced Image and Document Uploader.'

Additionally, the importer can be configured to run business rules, interact with STEP workflows, convert image files to other formats, create classification hierarchies, link assets to products, purge old revisions, and perform quality checks on images during the import to ensure that they meet any minimum requirements.

To access the Asset Importer functionality, the 'Asset Import Compatibility Mode' parameter (located under Users & Groups > System Settings > Image & Document Settings) must be set to 'Advanced.' For information on this and other configuration steps, see the **Asset Importer Configuration Overview** section of this documentation.

Once an Asset Importer configuration has been created in STEP Workbench, assets can be loaded via hotfolders configured with an Inbound Integration Endpoint (using the Asset Importer processing engine), or through various means in Web UI. Note that STEP Workbench handles asset imports differently and does not use asset import configurations.

For more information on importing assets via workbench, see the **Manual Asset Importer** section of the **Digital Asset Exchange** documentation.

Importing Assets via Web UI

Assets can be imported / updated in a number of ways via Web UI. Assets importing methods include:

- Asset Importer Widget - Users can upload assets using a simple drag-and-drop interface from the Web UI homepage
- Upload Asset action - Assets can also be added via the Upload Asset action, or if one needs to be updated
- Replace Asset Content - Assets can be replaced via the Replace Asset Content icon (configurable on any Asset Mid Sized (superseded) or Asset Representation components)

For details about importing assets via Web UI, see the **Asset Importer in Web UI** section of the documentation.

Importing Assets via an Inbound Integration Endpoint

Inbound Integration Endpoints (IIEP) can be configured to utilize the Asset Importer functionality, allowing users to apply the rules and quality checks associated with an importer configuration(s) to any number of asset hotfolder imports. An IIEP can be configured for each hot folder, or to control a hierarchy of hot folders. When configured with a hierarchy of hotfolders, global configurations can be set on the highest level hotfolder and inherited down to all lower level hotfolders. Each of these lower level hotfolders can have their own unique variation of the base configuration (e.g. Logos, Product Images, Web Images, etc.).

For more information, see the **Asset Importer Configuration Overview** section of the documentation.

For more information on configuring inherited hotfolder settings, see the **IIEP - Configure Asset Importer Processing Engine** section of the **Inbound Integration Endpoints** documentation.

Additional Information

Whatever the interface, the Asset Importer includes functionality allowing users to:

- Import digital assets in STEP, as well as update them when updated versions are received
- Upload loose asset files or a zip file containing multiple asset files
- Use metadata files to control the way digital assets are uploaded
- Locate the correct folder in which to categorize assets, and generate the asset hierarchy if it doesn't exist
- Approve new folders, assets, and product-to-asset references
- Launch a new workflow or trigger a transition in an active workflow
- Run business rules after the assets have been imported
- Examine the assets and reject file formats, color spaces, DPI, physical sizes, and file sizes that don't meet minimum requirements
- Import metadata from an asset file and/or import EXIF information stored within assets
- Create references between products and digital assets based on configurable match criteria
- Purge old, unused revisions of assets in STEP to prevent the database from growing larger than needed
- Set global configurations on the highest level hotfolder that are inherited to all lower level hotfolders, each of which can have their own unique variation of the base configuration (e.g. Logos, Product Images, Web Images, etc.)

Asset Importer Configuration

The Asset Importer provides a wide array of configuration options, allowing users to address both simple and complex requirements.

Prerequisites

The Asset Importer functionality requires a new Setup Group called 'Asset Import Configurations,' which will hold all import configurations at a central place in the STEP system. A child setup group for storing the actual import configuration will need to be created as well and should be named 'Asset Import Configuration Type.' This allows for storing all asset import configurations in one location in STEP.

Before importer configurations can be created, it may be required to create a setup group for the configurations if they don't already exist, and to set up user privileges for viewing and maintaining the configurations. Additionally, 'Asset Import Compatibility Mode' must be set to 'Advanced' on the Users and Groups node.

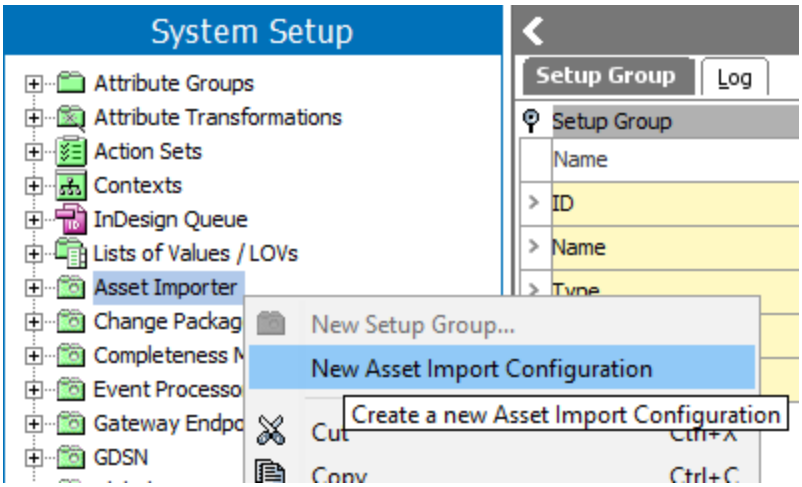
For more information on this and other initial setup steps, see the **Asset Importer Initial Setup** section.

Important: It is highly recommended to enable the asset caching functionality to optimize future export performance. For more information, see the **Event Processors** section of the **System Setup / Super User Guide** documentation.

Creating a New Asset Importer

If a new Asset Import configuration needs to be created, it can be done directly in System Setup by right-clicking on the 'Asset Import Configuration' setup group and selecting 'New Asset Import Configuration.'

1. Navigate to the System Setup tab.
2. Right-click the appropriate setup group root node from System Setup.
3. Select 'New Asset Import Configuration.'



See the **Identify Configuration** topic in this documentation for more information.

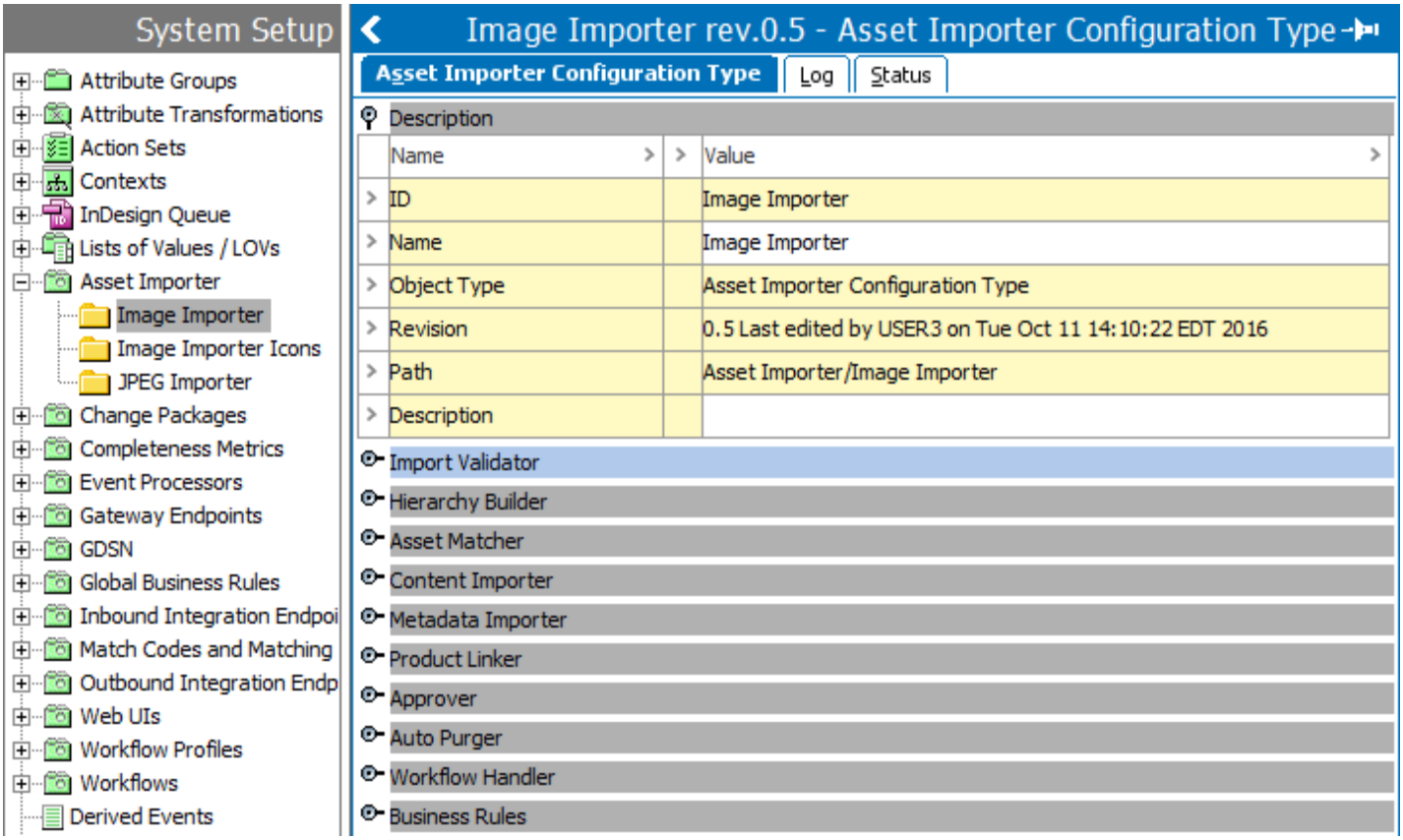
Creating Asset Importer Configurations

Once the necessary setup tasks have been completed, Asset Importer configurations allow users to select previously set up configurations to keep consistent imports. Asset Importer configuration can be modified at any time.

To maintain an Asset Importer configuration:

1. Go to System Setup.
2. Navigate to the relevant configuration.
3. Select the 'Asset Importer Configuration Type' tab.

The full configuration can be viewed and edited from this tab.



When creating an asset importer, the wizard displays all available configuration options. See the following topics in this documentation for how to configure the flippers when maintaining an Asset Importer:

- Import Validator
- Hierarchy Builder
- Asset Matcher
- Content Importer
- Metadata Importer

- Product Linker
- Approver
- Auto Purger
- Workflow Handler
- Business Rules

Configuring IIEP and Web UI

It is also necessary to set up an IIEP and/or Web UI in order to use Asset Importer.

For more information on Asset Importer in Web UI, see the **Asset Importer in Web UI** section of the documentation.

For more information on configuring an IIEP for Asset Importer, see the **Asset Importer Inbound Integration Endpoint Configuration** section of the documentation.

Asset Importer Initial Setup

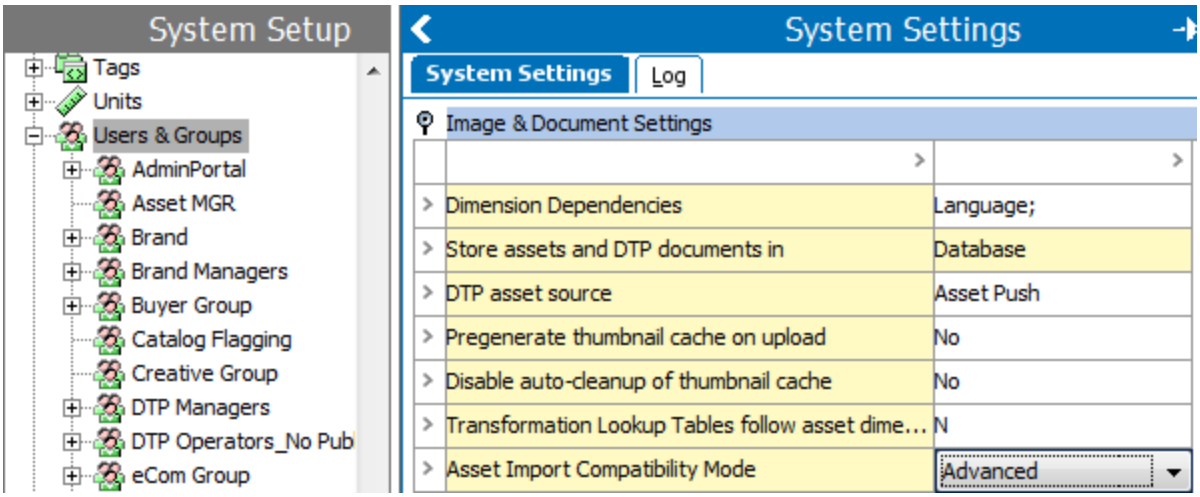
Some initial setup may be required before Asset Importer configurations can be created.

- The Asset Import Compatibility Mode must be set to 'Advanced'
- A setup group must be created to hold the Asset Importer configurations
- User permissions must be established for viewing and maintaining import configurations.

Advanced Asset Import Compatibility Mode

To enable the Asset Importer functionality, the 'Asset Import Compatibility Mode' setting must be set to 'Advanced' as described below.

1. Navigate to System Setup > Users & Groups, and click the **System Settings** tab.
2. Under the 'Images & Documents Settings' flipper, select 'Advanced' from the 'Asset Import Compatibility Mode' dropdown list.



Important: If enabled, the old asset import functionality will become disabled. This will ensure a consistent method to import and update assets in STEP.

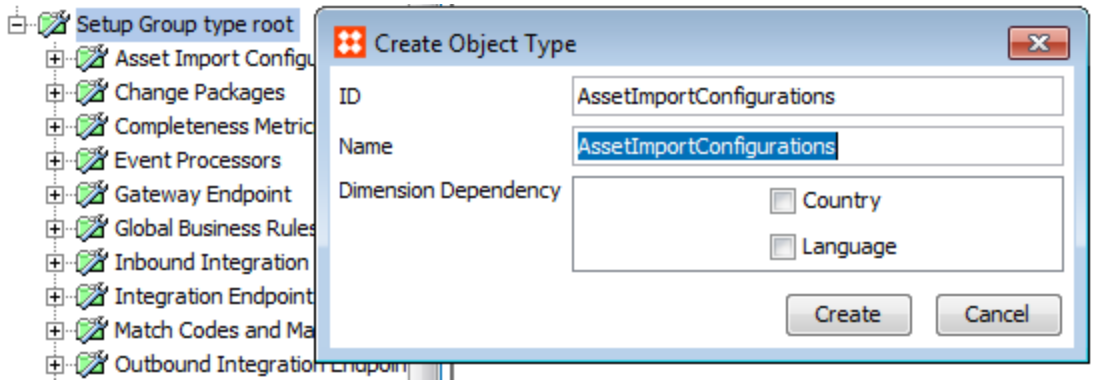
The other Asset Import Compatibility Mode is **Simple**. This mode is the default setting and deactivates the AI functionality. It ensures that the legacy image import is the default on existing STEP systems.

Setup Group

A setup group must be created to hold the Asset Importer configurations.

1. Navigate to System Setup > Object Types & Structures, right-click the 'Setup Group type root' node and select **New Object Type**.

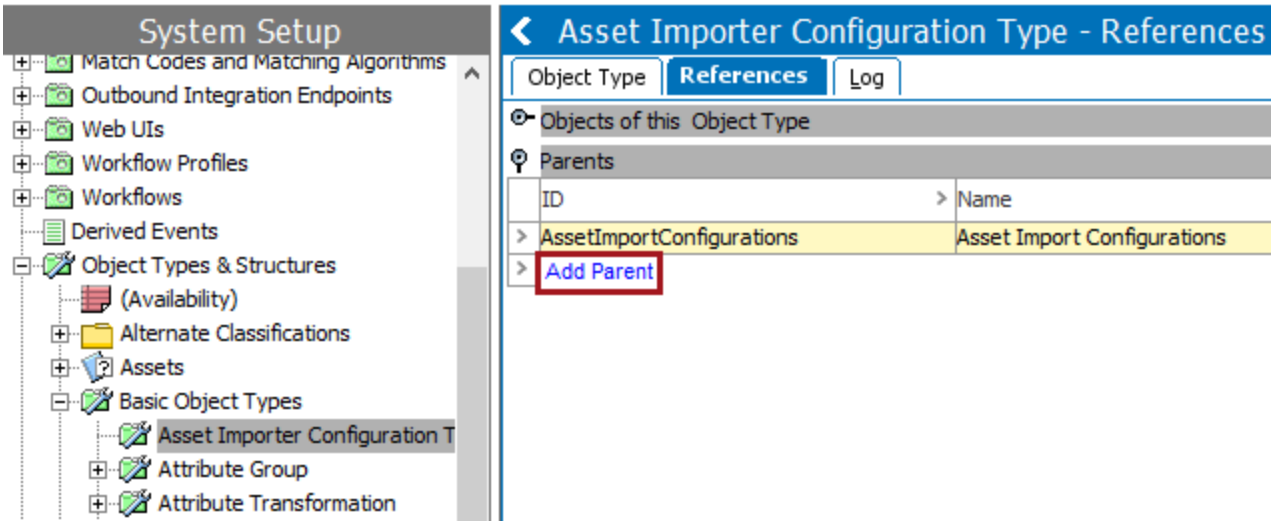
2. In the window that appears, enter 'AssetImportConfigurations' in the ID parameter, then click **Create**. This creates a setup group in which all import configurations will reside.



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

3. Navigate to 'Object Types and Structures' > 'Basic Object Types' > 'Asset Import Configuration Type', and click the 'References' tab.

   Under the 'Parents' flipper, click **Add Parent**, and in the node selector dialog, specify the 'AssetImportConfigurations' node created in the above step.

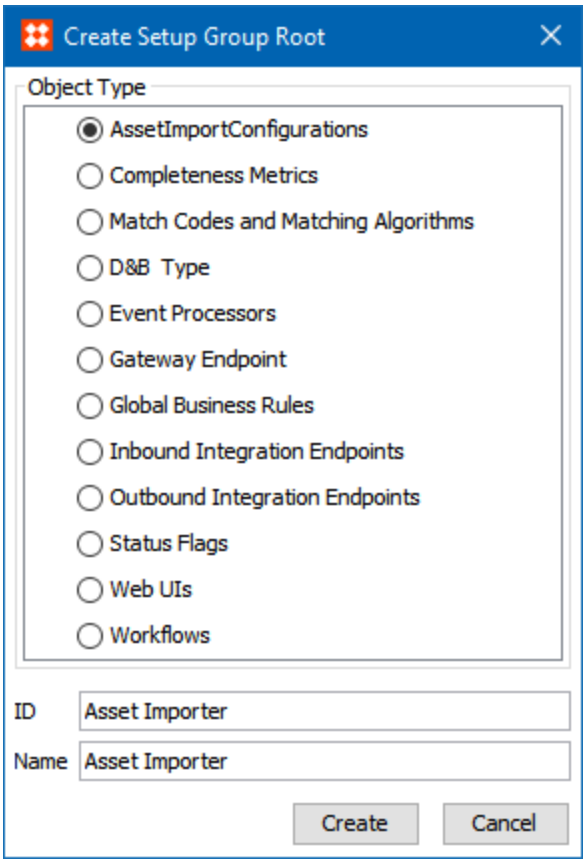


The next step is to create a new setup group root, where all Asset Importer configurations are to be added upon creation.

Creating a New Setup Group Root

1. To create the setup group root, navigate to Maintain > Insert > Setup Group Root
2. Select the 'AssetImportConfigurations' setup group.

3. Specify 'ID' and 'Name.'



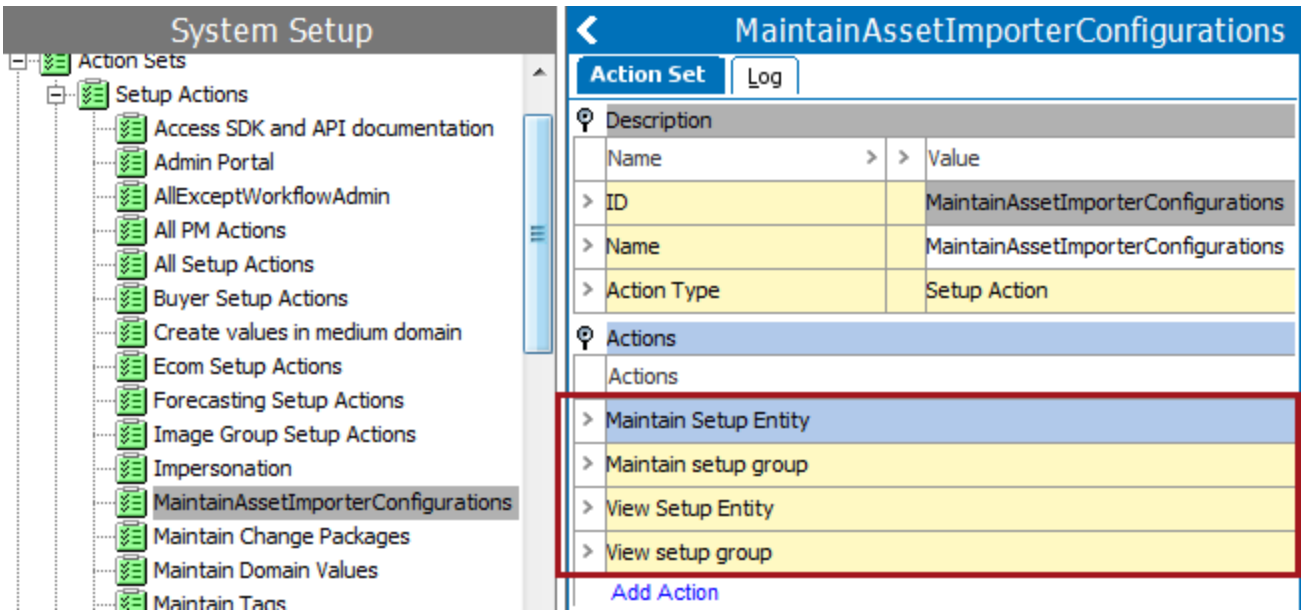
4. Click **Create**.

   The setup group 'Asset Importer' of the type 'AssetImportConfigurations' is created. From this newly created node, users can right-click and add new Asset Importer configurations.

User Privileges

User permissions must also be established for viewing and maintaining import configurations.

1. Navigate to System Setup > Action Sets, right-click 'Setup Actions.'
2. Select 'New Action Set.' In the window that appears, enter 'MaintainAssetImporterConfigurations' in the ID parameter, then click **Create**.

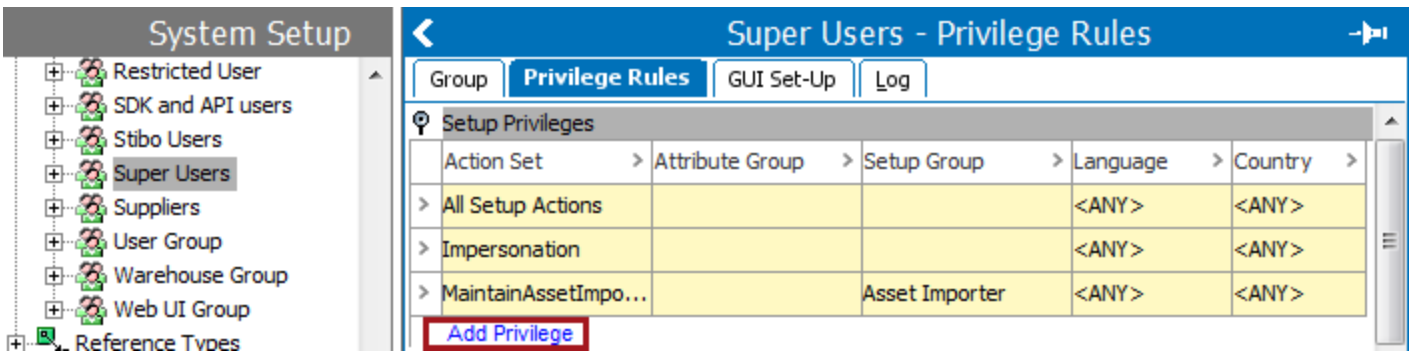


3. In the 'MaintainAssetImporterConfigurations' node created in the previous step, navigate to the 'Action Set' tab, and click **Add Action** found under the 'Actions' flipper.

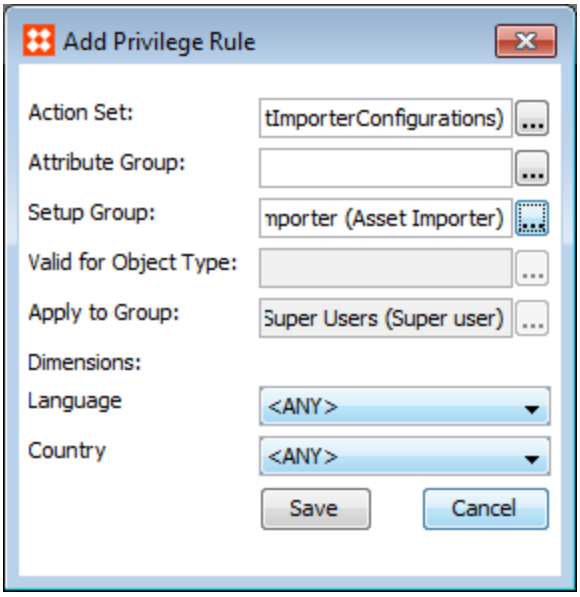
   From the list that appears, choose the follow actions and click **Select**:

   - 'View Setup Entity'
   - 'View setup group'
   - 'Maintain Setup Entity'
   - 'Maintain setup group'

4. Finally, navigate to System Setup > Users & Groups, and right-click the relevant user group.
5. Navigate to the 'Privilege Rules' tab, and under the 'Setup Privileges' flipper, click **Add Privilege**.



6. In the window that appears, click the ellipsis button (...) next to the 'Action Set' parameter.
7. Select the action set created in the above step. Alternatively, enter the name of the action set directly into the parameter.

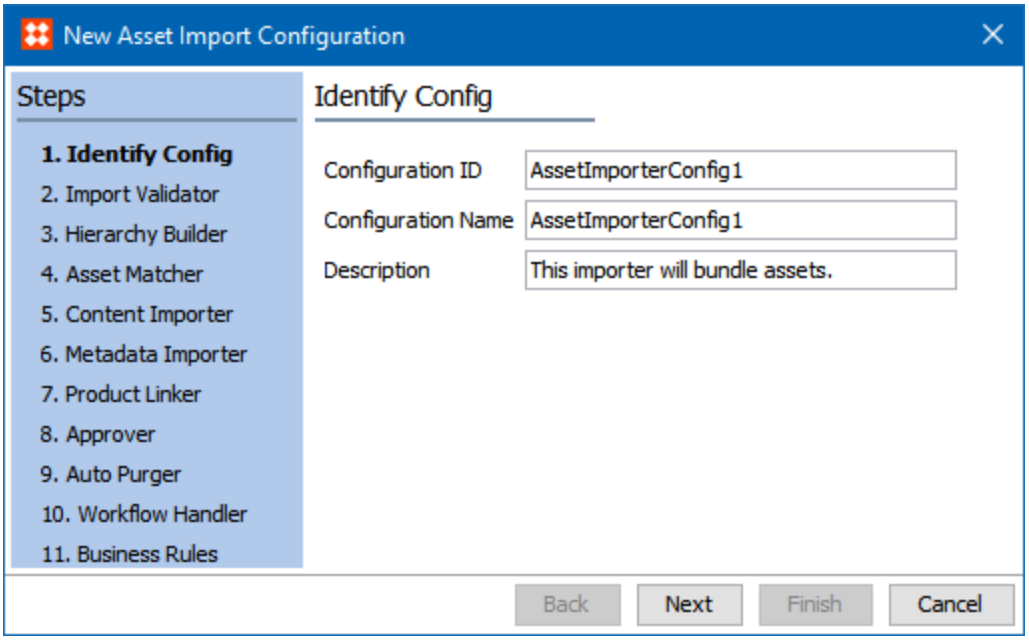


8. For the 'Setup Group' parameter, specify the setup group root created in ‘Setup Group’ section. In this example, ‘Asset Importer’ is specified.
9. Click **Save** when finished.

Identify Configuration

New Asset Import configurations can be created directly in System Setup by right-clicking on the 'Asset Import Configuration' setup group and then selecting 'New Asset Import Configuration.'

A configuration wizard with further options will appear to allow the creation of a new configuration.



1. The 'Configuration ID' field is a mandatory field that specifies the ID for the image import configuration. The ID must be unique among other configurations.

   Note: A check will be performed that prevents the user from using an already existing image import configuration ID.

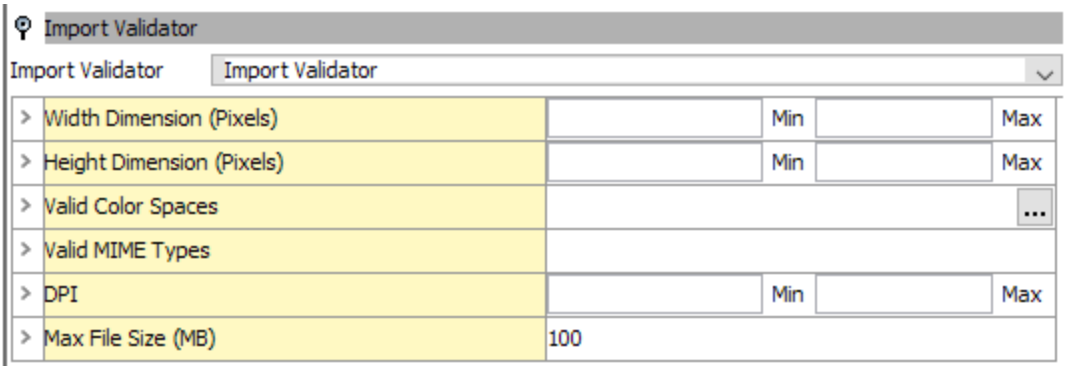
2. The 'Configuration Name' field is an optional field that specifies the name for the configuration. Though a name does not need to be specified, it is suggested to add a name to distinguish each configuration from the other.

   The configuration Name is pre-populated with the ID when switching to the field.

3. The 'Description' field is an optional field that provides a space for the user to describe the Asset Import configuration in more detail.

Import Validator

The Import Validator controls the allowable physical size of images, allowable color spaces, valid file types, DPI, and maximum file size. All settings under this flipper are optional and may be left blank.



If any of these fields are populated, assets not meeting the validation requirements will not be imported. In this case, an error will be reported explaining why validation has failed.

The validation configuration options are as follows:

1. The 'Width Dimensions (pixels)' and 'Height Dimensions (pixels)' fields dictate the minimum and maximum dimensions of an imported image asset.
2. This setting is ignored if a non-image file (MIME type other than image/* or Application / postscript) is imported that does not have a DPI property.
3. Populate either or both fields if the size of the imported images must be above, below, or within a specific range.
4. If populated, enter a whole number defining the maximum / minimum dimensions (in pixels).

   Note: An error will be displayed if the user tries to enter a non-integer into this field.

5. If minimum and maximum values are populated, check if the minimum value of each property does not exceed its corresponding maximum value or vice versa.
6. If a field is left empty, the entry for this particular field will be ignored as part of the validation.

   Examples

   - The maximum width has been set to 600 pixels. If the values for height have been left empty, the height of the image will be ignored as part of this validation. The image cannot be larger than 600 pixels in width to pass validation.
   - The minimum height has been set to 500 pixels. If the values for width have been left empty, the width will not be validated at all. The image has to be at least 500 pixels in height in order to pass validation.

- The minimum height has been set to 300 pixels and the minimum width has been set to 600 pixels. In this case the image has to be at least 300 pixels in height and 600 pixels in width. Larger images will also pass validation, but smaller images will not.
- The minimum height has been set to 300 pixels and the maximum width has been set to 600 pixels. In this case the image has to be at least 300 pixels in height and cannot exceed the width of 600 pixels in order to pass validation.

Valid Color Spaces

The 'Valid Color Spaces' field determines which color spaces are valid for imported image assets.

1. This setting will be ignored if a non-image file (MIME type other than image/* or Application / postscript) is imported.
2. If left empty, no color space check will be performed on imported image assets.
3. Choose from the default color spaces, a multi-selection is possible.

Valid MIME Types

The 'Valid MIME Types' field determines which MIME types are valid for imported assets.

1. Populating this field is recommended, regardless of the type of assets being handled by the importer, but may be left empty if no validation is desired.
2. All valid values should be populated in the field, separated by a comma (no spaces).
3. Wildcards are allowed. For example, image/*, application/postscript.

DPI (Min / Max)

The 'DPI (min / max)' fields determine the minimum and maximum DPI of imported image assets.

1. This setting is ignored if a non-image file (MIME type other than image/* or Application / postscript) is imported that does not have a DPI property.
2. Populate either or both if the DPI of the imported images must be above, below, or within a specific range.

Note: Ranges can be greater than, less than, or an exact match. This is determined by filling out one of the two fields, or by filling out both fields.

Examples

- To only accept images with a minimum required DPI, fill out only the 'min' field (e.g. '300 min' will only accept images with 300 or greater DPI).
- To only accept images up to a maximum allowed DPI, fill out only the 'max' field (e.g. '400 max' will only accept images up to 400 DPI).
- To specify a DPI range, fill out both fields (e.g. 72 min – 300 max will only accept images with a minimum of 72 DPI but not more than 300 DPI).

- For an exact match fill out both fields (e.g. 300 max and 300 min will only accept images with exactly 300 DPI).

3. If a field is left empty, the entry for this particular field will be ignored as part of the validation.
4. If populated, enter a whole number defining the min or / and max allowed DPI.

Note: An error will be displayed if the user tries to enter a non-integer into the min / max DPI fields.

5. If minimum and maximum values are populated, check that the minimum value does not exceed the maximum value.

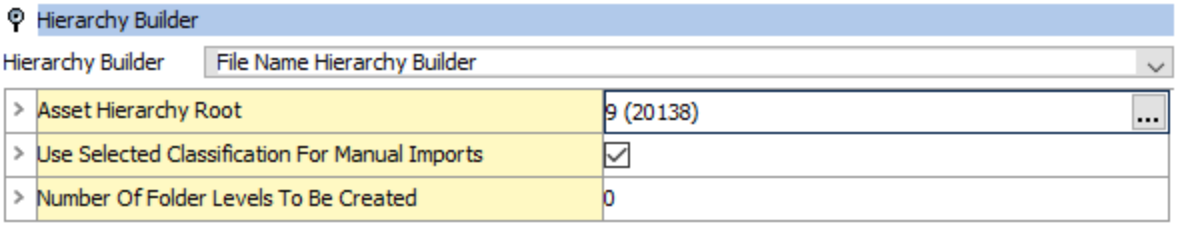
Max File Size (MB)

1. The 'Max File Size' field determines how large the imported asset file can be (in megabytes).
2. If left empty, no file size restriction will be applied.

Hierarchy Builder

The Hierarchy Builder creates classification folders in which the imported assets are stored (if they do not already exist). By default, 'File Name Hierarchy Builder' is the only configuration option available for the Hierarchy Builder. The 'File Name Hierarchy Builder' configuration uses the names of the assets being loaded to generate a multi-level hierarchy in STEP and is the most commonly selected Hierarchy Builder option.

Ultimately, parameters under this flipper define the root classification folder, number of folder levels to be created, and whether or not to overwrite the asset hierarchy root with the selected classification hierarchy during manual import.



Besides the default hierarchy builder plugin, custom ones can be created to extend and modify the hierarchy builder functionality further.

When selecting the 'File Name Hierarchy Builder' option, the following parameters must be specified:

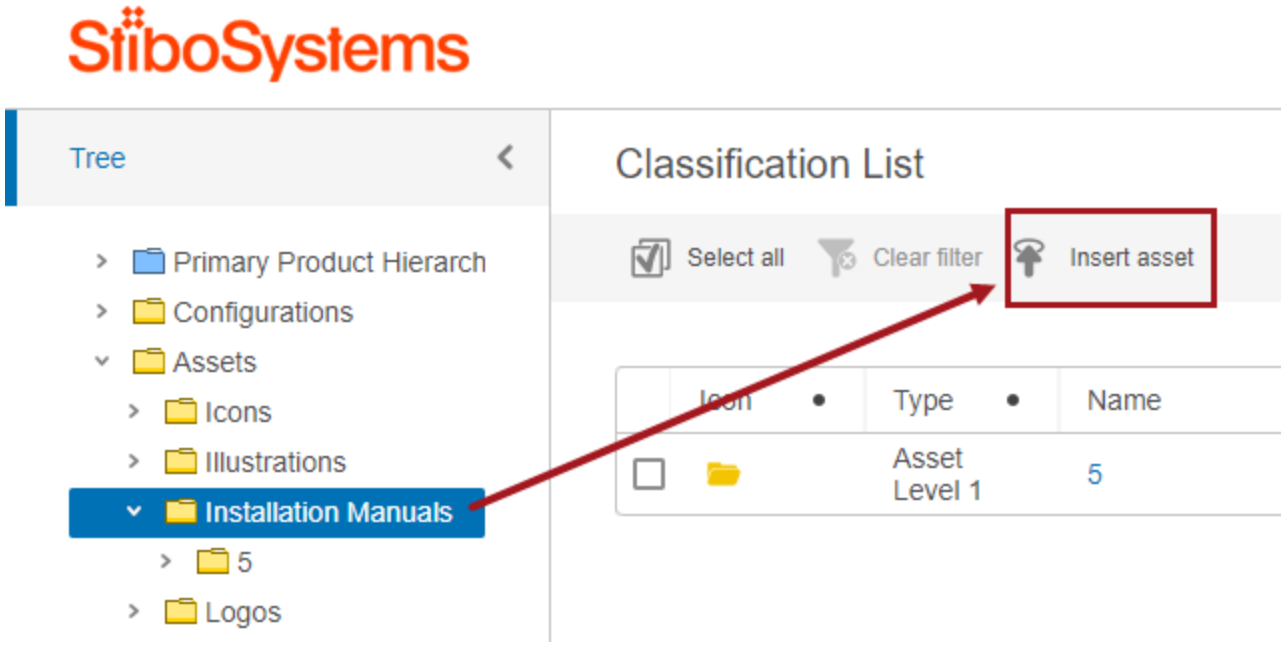
1. **Asset Hierarchy Root**

   In the 'Asset Hierarchy Root' field, click the ellipsis button (...) and select the STEP ID for the root classification folder under which all asset hierarchy folders will be created. The user can select or search for classifications in STEP.

2. **Use selected classification for manual imports**

   If the 'Use selected classification for manual imports' checkbox is enabled, the asset hierarchy root selection made above will be overwritten by a classification hierarchy selected during manual import (via Web UI).

   Example of selected classification context in Web UI:

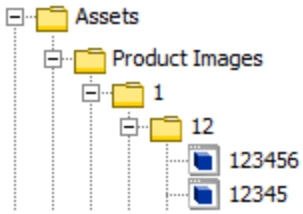


3. **Number of Folder Levels to be Created**

   In the 'Number of folder levels to be created' field, specify the number of hierarchy levels to be generated.

   By default this parameter is set to '0', which results in placement of the asset(s) directly into the indicated Asset Hierarchy folder. Any numbers exceeding '0,' or non-zero whole numbers, create a pattern of hierarchy folders under the root. The first level is named after the first character of the asset name, the second level uses the first two characters, and so on.

   For example, population with two (2) results in the following:



It is recommended to set up a classification structure of repeating asset sub-folders via the object type setup. Doing so will allow for the creation of sub-classification folders during import. These asset hierarchy classification object types should use auto generated IDs to avoid potential errors.

Folder Identification and Creation

When creating the classification structures, the system searches for a classification in STEP under the indicated Asset Hierarchy Root with a STEP name matching that indicated by the filename.

- If a match is found, the asset is placed under it.
- If a match is not found, the system attempts to create a new folder based on the file name using the first available classification child object type. If the folder cannot be created due to either no available sub-classification object types or missing permissions, then the system logs an error and the asset is not uploaded.

Considerations

- Supplier users are only allowed to have access to their specified classification structure in the yellow supplier hierarchy under the suppliers sub folder 'assets.' This will ensure protection from other suppliers.
- For this special scenario, ensure that the Asset Hierarchy Root property is adjusted to match the dedicated classification root folder for the particular supplier user.
- It is strongly recommended to set up a repeating asset sub-hierarchy classification structure via the object types setup to allow the creation of sub-classification folders.
- It is strongly recommended to set asset hierarchy classification object types to use auto generated IDs to avoid the potential error described above.
- Usage of STEP ID:

  Auto generated if the object type is set to have an ID pattern of [id].

  As with the STEP Name, if the IDs are not set, the name will be auto generated.

  If ID is already in use, folder creation fails, the system logs an error, and the asset is not uploaded.

Asset Matcher

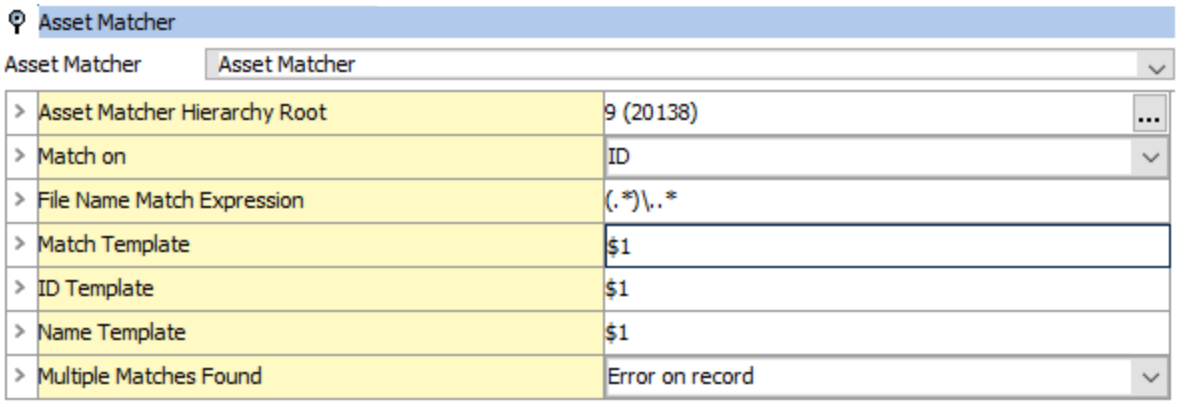
Based on criteria defined in the Asset Matcher configuration, the Asset Importer can determine when an asset is new to STEP or is a replacement for an existing asset. It also indicates whether or not new assets are allowed to be created, and if so, allows for the use of regular expressions or metadata to control how the STEP Names and IDs of those assets are set.

The Asset Matcher comes with one default option, the Standard Asset Matcher, which lets you define how new and existing assets will be handled, using a series of configuration options and regular expressions.

A number of the parameters on this step require the use of regular expressions. For more information, see the **Regular Expression** section of the **Resource Materials** online help.

Besides the default Asset Matcher plugins, custom ones can be created to extend and modify the asset matcher functionality further.

An asset matcher selection must be made, and the corresponding configuration options populated.



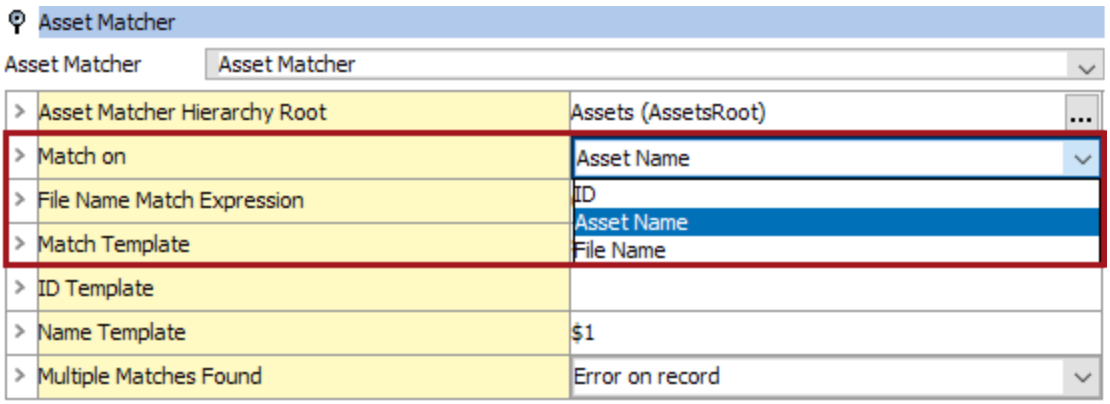
1. **Asset Matcher Hierarchy Root**

   In the 'Asset Hierarchy Root' field, click the ellipsis button (...) and select the STEP ID of the root folder under which the Asset Importer will look for asset matches. This field is **mandatory**.

   This option is based on a node picker where the user can select or search for a classification in STEP or type the name in the field and the typeahead search will be displayed.

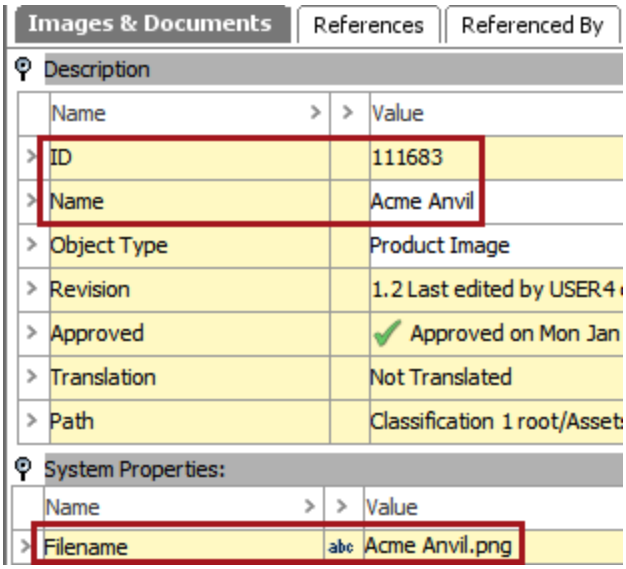
2. **Match on**

   In the 'Match on' field, define how to match assets to existing assets via the dropdown list. The default value 'Asset Name' will be selected from the dropdown list. This field is **mandatory**.



Options include:

- ID: Match asset filename to STEP ID
- Asset name: Match asset file name to STEP Name
- File Name: Match asset file name to Filename metadata attribute in STEP



Note: If the Match template filters out the file extension, matching by File Name is not possible.

3. **File Name Match Expression**

The 'File Name Match Expression' field is used in conjunction with the 'Match Template' field to match assets based on their file names via a regular expression. The default value with a regular expression – (.*)\..* will be populated for this field. This option is used to define match groups to be referenced in the Match Template, defined by the parentheses. This field is **mandatory**. If left empty, the 'Next' button will be disabled to indicate this field will need to be filled out.

Note: Each group of parentheses indicates a match group. For more information on match groups, see the **Grouping** section of the **Regular Expression** topic.

Examples:

(.*)\.(.*)

- Indicates that the asset file name contains zero or more characters, followed by a period (.), followed by zero or more characters
- May be used to isolate the file name and exclude the extension - 12345.jpeg
- Finds any file with any extension
- Indicates a single match group, which would necessitate a corresponding Match Template entry of '$1'

4. **Match Template**

   In the 'Match Template' field, specify which match group (or combination of match groups) to use for matching assets via a regular expression. Populate with a dollar sign symbol ($), followed by a whole number to indicate a match group. The default value with a regular expression $1 is populated for this field. The first set of parentheses in the File Name Match Expression field is assigned '1,' the second '2,' and so on. This field is **mandatory**.

   Examples:

   - $1 - Match only on the first match group identified in the regular expression
   - $1.$2 - Match on the first match group identified in the regular expression, followed by the second match group, with the two match groups separated by a period (.)

5. **ID Template**

   In the 'ID Template' field, use a regular expression to specify how the STEP ID of an asset should be set if no match can be found and creation of new assets is allowed.

   - This is an **optional field** that should be left blank if you want STEP to auto generate the ID.
   - Populate with '$' plus the number of the match group (parentheses set in the File Name Match Expression) that should be used to create the STEP ID.
   - Can be combined with static text to form the template

   Examples:

   - $1 - Create the STEP ID using the value identified in the first match group from expression
   - asset-$1 - Create the STEP ID using the value identified in the first match group from the expression, prefixed with 'asset-'

6. **Name Template**

   - In the 'Name Template' field, use a regular expression to specify how the STEP Name of an asset should be set if no match can be found, and creation of new assets is allowed.

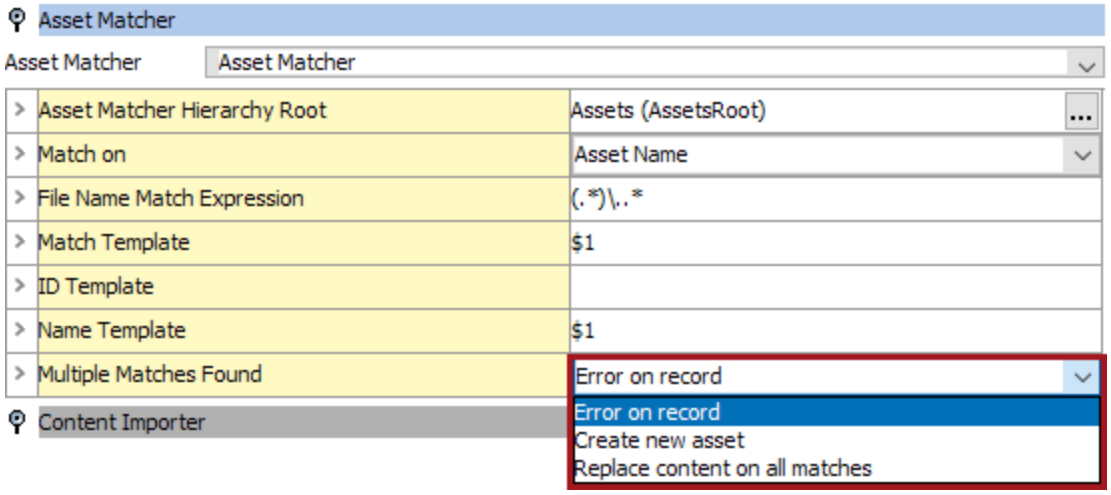
- Though optional, it is recommended to populate this field. Otherwise, the STEP Name of the asset will be left blank.
- Populate with '$' plus the number of the match group (parentheses set in the File Name Match Expression) that should be used to create the STEP Name.

Example:

- $1 - Create the STEP Name using the value identified in the first match group from the expression.
- Logo.$1 - Create the STEP Name using the value identified in the first match group from the expression, prefixed with 'Logo'.

7. **Multiple Matches found**

In the 'Multiple Matches found' dropdown field, select which method to use when dealing with multiple matches.



Default value 'Error on record' will be populated for this field. Options include:

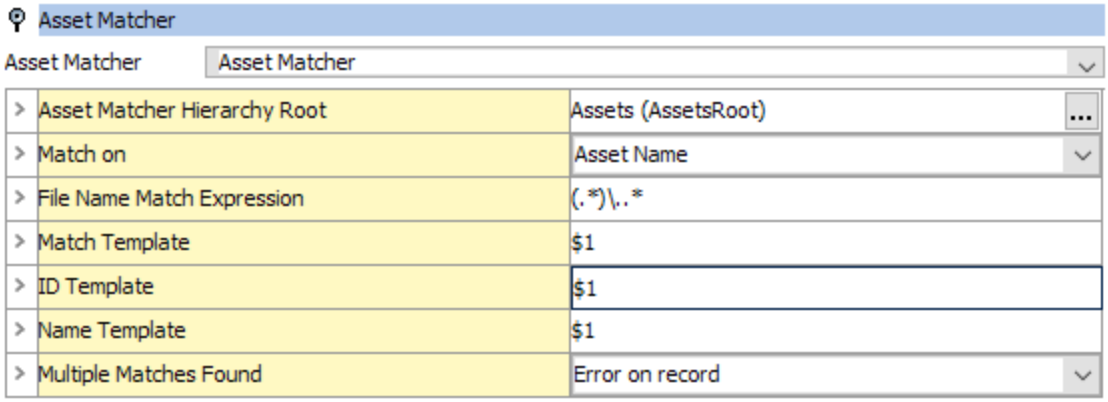
- 'Error on record' - This option will log an error for the current asset and the Asset Importer will proceed to the next asset for import.
- 'Create new asset' - This option will cause the Asset Importer to attempt to create a new asset.
- 'Replace content on all matches' - This option will cause the Asset Importer to replace the content on all matching assets with the content of the file being imported.

Note: This requires 'Allow content replace' to be set to 'Yes' in the Content Importer settings. Using this setting can potentially change a large number of assets and should be considered carefully. If 'Allow content replace' is set to 'No' an error will be logged and the Asset Importer will proceed with the next file to import.

Example:

An example is provided to demonstrate how the File Name Match Expression, Match By, and Match Template fields are used in combination to yield the desired match results.

Consider the following configuration loading an asset with the file name 12345.tif.



The Asset Importer will identify '12345' as the match group and will search STEP for an existing asset with the STEP Name of '12345' within the Assets hierarchy.

If the asset is found, the existing asset will be replaced by the new file.

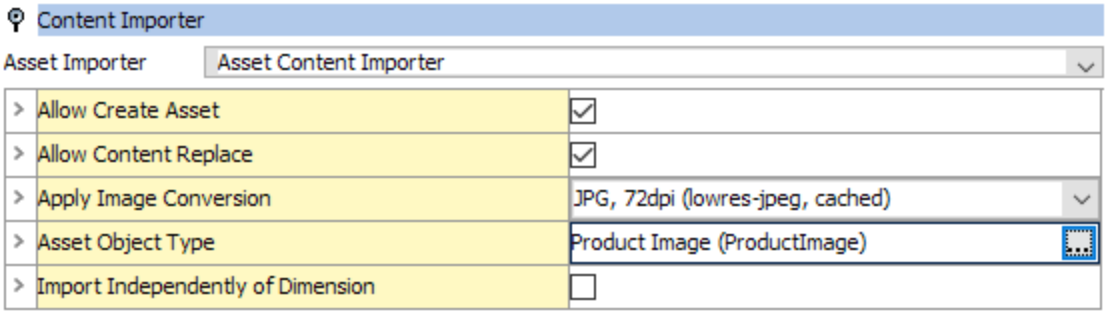
If no asset exists under the Assets folder (or any child folders) with the STEP Name '12345', a new asset will be created. The STEP Name and ID of this asset will be '12345.'

Placement of the asset in STEP is determined by the **Hierarchy Builder** configuration.

Content Importer

By configuring the Content Importer, users can define basic rules for importing assets and their content. The default (and only) option is 'Standard Asset Content Importer.'

Note that some fields are optional.



When selecting the Standard Asset Content Importer, the following must also be specified, noting that some fields are required while others are optional.

1. **Allow Create Asset**

   'Allow Create Asset' is a required parameter that determines whether or not the Asset Importer can create new assets.

   - **Select the checkbox** if creation of new assets and replacement of existing assets should be allowed.
   - **Uncheck the checkbox** if replacement of existing assets is allowed, but creation of new assets is not allowed.

2. **Allow Content Replace**

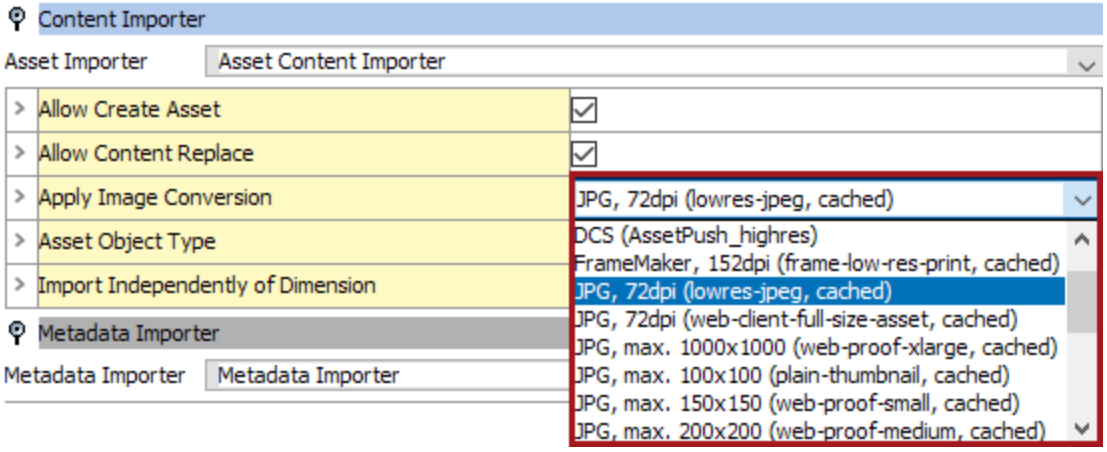
   'Allow Content Replace' is a required parameter that determines whether a new asset can replace the content of an existing asset in STEP when a match is found via the Asset Matcher configuration.

   For more information, see the **Asset Matcher** section of the documentation.

   - **Select the checkbox** if the content of an existing asset in STEP should be replaced when a new asset is provided when it meets the matching criteria.
   - **Uncheck the checkbox** if the content of an existing asset in STEP should not be replaced when a new asset is provided that meets the matching criteria. This option will create an error log whenever a replacement is attempted and fails.

3. **Apply Image Conversion**

   The 'Apply Image Conversion' field indicates if the image content should be converted into a different format. Use the dropdown selector to choose the desired image conversion configuration in STEP:



- By default this parameter is set to **None**, as it does not apply to non-image files. The asset content will be imported as the original import file.
- The available image conversion configurations will be listed next, indicating which image conversion should be applied during import.

  User created image conversion configurations are listed as well as custom image conversions.

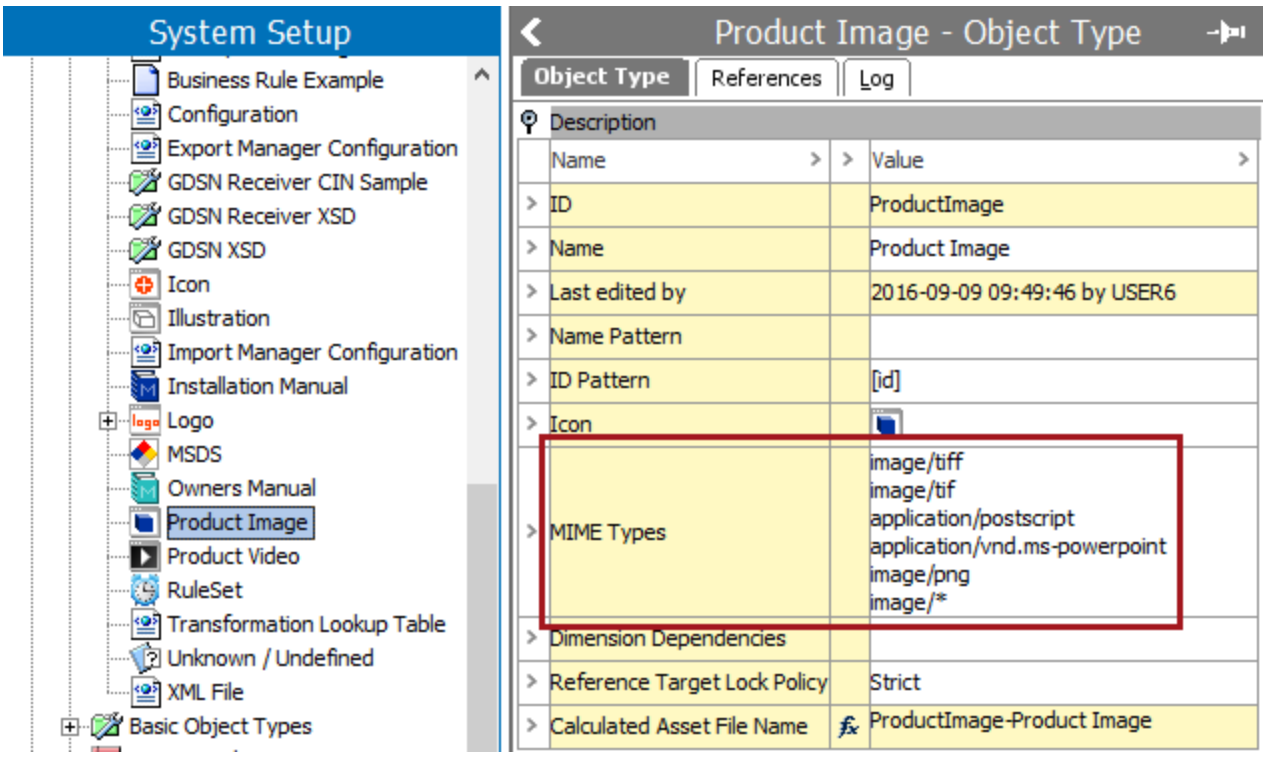
  User created as well as custom image conversions will be displayed as one list. This option only applies to image files and will be ignored during the import of any non-image assets which cannot be converted into a different format

4. **Asset Object Type**

   'Asset Object Type' is an optional field that assigns a specific object type to imported assets.

   If left blank, STEP will automatically provide imported assets with an appropriate object type; however, it is recommended that this parameter be set so that there is no room for error. If utilized, select from the asset object types in STEP.

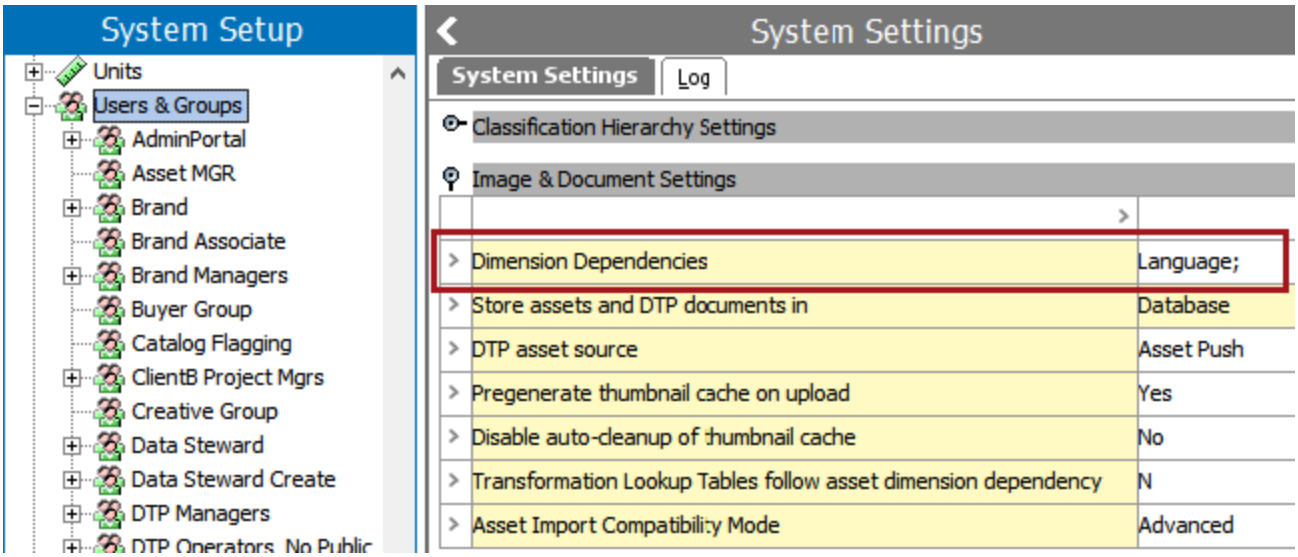
Note: The object type must be configured to accept the MIME Types included in the import.



5. **Import Independently of Dimensions**

'Import Independently of Dimensions' is a required field that determines whether dimension dependencies on images should be ignored or honored during import.

Note: This field is unavailable if the images and documents do not have dimensional dependencies.



This setting is only relevant if the above configuration is populated with a dimension dependency, and may be populated with either 'Yes,' signaling that dependencies do exist, or 'No,' means that no dependencies exist.

- This field will be **disabled** if the dimension dependency for images and documents in the system settings is not populated.
- **Select the checkbox** if assets should be imported independently of dimension specifications, meaning that all assets will be available in all contexts.
- **Uncheck the checkbox** if assets should be imported only into the context set in the Configure Endpoint context selection.

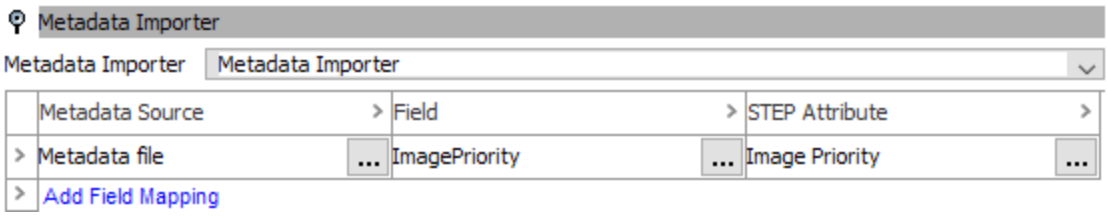
Metadata Importer

When importing assets, STEP captures a pre-defined set of metadata in the asset file (which varies by file type). By configuring the Metadata Importer, users can define rules for importing additional asset metadata, as well as EXIF (Exchangeable Image File Format) and XMP (Extensible Metadata Platform) metadata from asset files (e.g. images, movies, sound files, etc.). Open source third party tools / libraries such as EXIFTool can be used, and support a wide range of metadata formats.

Asset Metadata

Asset metadata attributes can be found by going to System Setup > Attributes > System Attributes (ID=Uncategorized).

By default, no mapping fields are defined, meaning that no additional metadata import is required. In the image below, additional metadata is mapped to the configuration.

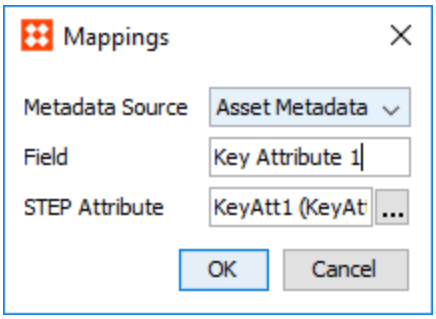


If you are not importing additional metadata and/or EXIF/XMP data, there is no need to change the default configuration, which contains no field mappings.

Mapping Metadata Fields

1. To map metadata fields to STEP attributes, click **Add Field Mapping** link.
2. A new row of options appears which allows the user to specify a new field mapping.
3. **Metadata Source**

   In the dialog that displays, select a metadata source from the 'Metadata Source' dropdown. Options for this field include: a **metadata import file** or a **metadata property** contained within the asset file itself (from EXIF or XMP data).



- Select 'Metadata file' to map a field specified in the metadata import file to a STEP attribute.

  When configuring this option for an IIEP that uses the Asset Importer processing engine, the Metafile Receiver or Zip with Metafile Receiver option must also have been selected as the Receiver part of the corresponding IIEP configuration. For more information, see the **IIEP - Configure Asset Importer Processing Engine** documentation.

- Select 'Asset Metadata' to map a metadata property of the asset to a STEP attribute.

4. **Field**

   In the 'Field' parameter, specify the name of the field to map. This field is **required**, and an empty value will result in an error message.

5. **STEP Attribute**

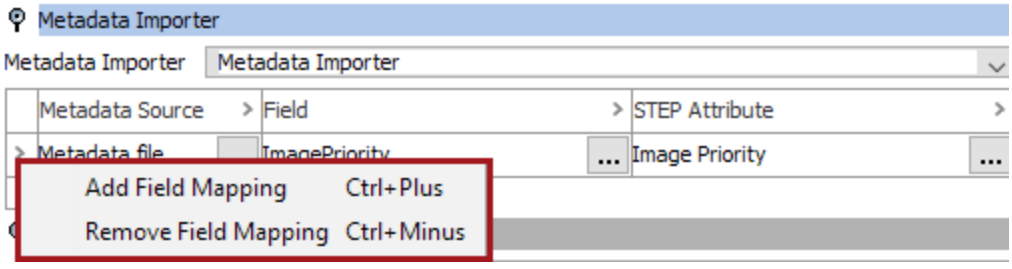
   In the 'STEP Attribute' parameter, click the ellipsis button (...) and select a valid attribute for which the specified metadata info will be inserted. This field is **required**, and an empty value will result in an error message.

When configuring this step for the first time, consider setting the 'AssetImporter.MetaDataImporter.DumpAssetMetaData' property in sharedconfig.properties to 'true.' This property enables the Metadata Importer to dump the metadata from imported assets into the server log and into the execution report of background processes started by the IIEP, allowing users to see metadata on the image. It is not recommended to keep this property set to true once the configuration has been properly tested, as it can eventually create a large amount of entries in the step.0.log.

Note: The metadata is not reported in background processes started from Web UI.

Remove Field Mapping

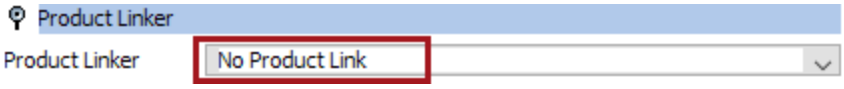
To remove any field mapping configurations, right click on the configuration and select Remove Field Mapping (Ctrl+Minus) option as shown in below.



Product Linker

The Product Linker determines if and when incoming assets should be linked to related products in STEP, how those products should be identified, and which reference type should be applied.

The Product Linker configuration has three options: Asset Filename Linker, Metadata Product Linker, and No Product Link (which is the default selection). If no product linking is required, no adjustments need to be made to the default configuration.



If product linking is required, it can be done via regular expressions or metadata, and the appropriate option should be selected and all corresponding configuration options completed.

A number of the parameters in this step may require the use of regular expressions. For more information, see the **Regular Expression** section of the **Resource Materials** online help.

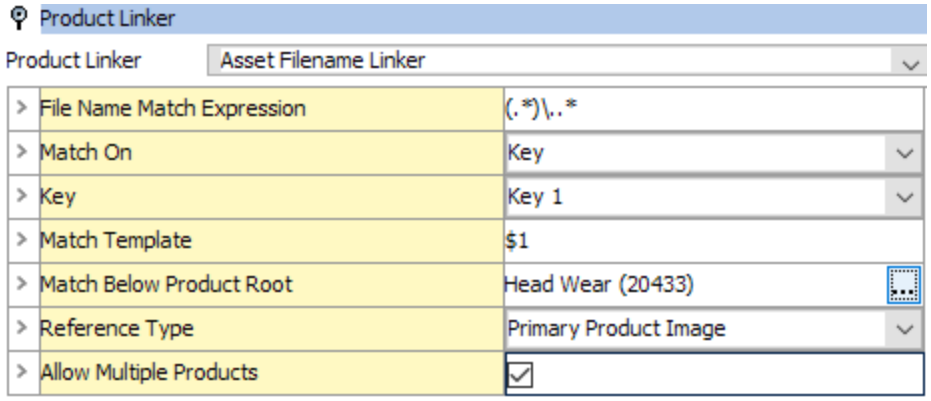
No Product Link

If assets should not be matched to products, select 'No Product Link' from the 'Product Linker' dropdown. This is the default selection, and no additional configuration is required.

Asset Filename Linker

By configuring the Asset Filename Linker, imported assets can be linked to products using a series of configuration options and regular expressions in STEP by matching the asset's file name to the STEP ID, Name, or Unique Key of the existing product.

Note: Take care in considering how the File Name Match Expression, Match On, and the Match Template parameters work together.



The Asset Filename Linker dropdown option should be specified with following parameters. Note that some are mandatory.

1. **File Name Match Expression**

   In the 'File Name Match Expression' parameter, write a regular expression that defines which match groups should be used to identify existing products. These same match groups should be specified in the 'Match Template' parameter detailed below. This is a **required** field. Default value with a regular expression – (.*)\..* will be populated for this field. These are used to define match groups to be referenced in the Match Template, defined by the parentheses (e.g. each set of parentheses indicates a match group).

   Example:

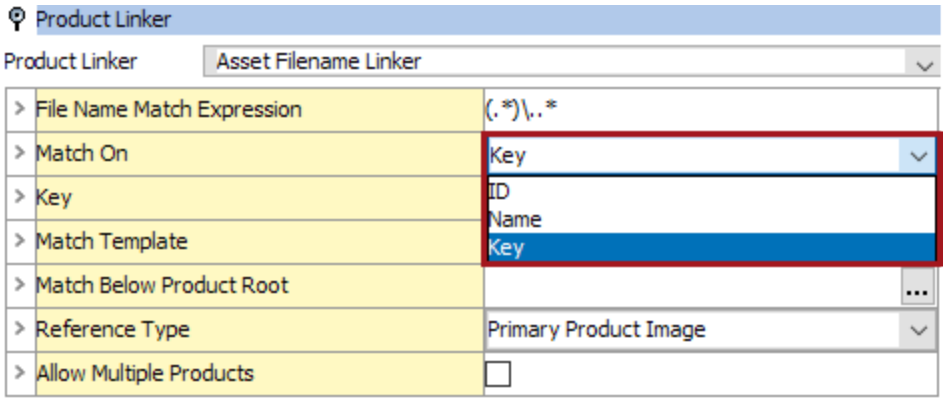
   - (.*)\..*
   - Indicates that the asset file name contains zero or more, followed by a period (.), followed by zero or more characters
   - Used to isolate the file name and exclude the extension - 12345.jpeg
   - Finds any file with any extension
   - Indicates a single match group, which would necessitate a corresponding Match Template entry of '$1'

2. **Match On**

   In the 'Match On' parameter, specify how the system identifies existing products in STEP. Options include: ID, Name, and Key (requires the Key field to be populated). This is a **required** field. The default value ID will be selected from the dropdown field.

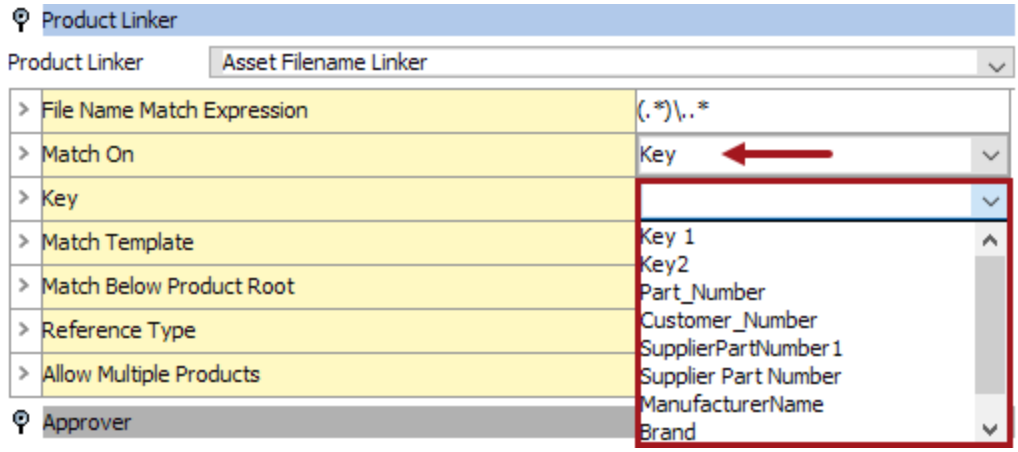
   Options include:

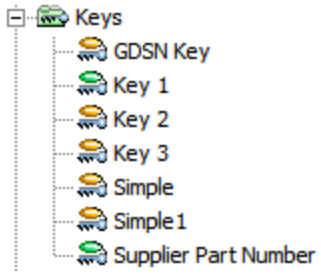
   - ID: Match template value to the STEP ID of a product
   - Name: Match template value to STEP Name of a product
   - Key: Match template value to a particular Key value on a product



3. **Key**

In the 'Key' parameter, select the STEP ID of the key from the dropdown selector for use in matching. The dropdown menu will list STEP ID of all Keys available in that specific system. This field is only required if 'Key' was selected in the previous step. This field will be disabled if Match On is Name or ID.





4. **Match Template**

   In the 'Match Template' parameter, specify which match group(s) to use for identifying products via a regular expression. These match groups must also appear in the 'File Name Match Expression' field. This is a **required** field. Default value with a regular expression $1 is populated for this field. Populate with a dollar sign symbol ($), followed by a whole number to indicate a match group. The first set of parentheses in the File Name Match Expression field is assigned '1', the second '2', and so on.

   Example

   - $1 - Match only on the first match group identified in the regular expression
   - $1.$2 - Match on the first match group identified in the regular expression, followed by the second match group, with the two match groups separated by a period (.)

5. **Match Below Product Root**

   In the 'Match Below Product Root' parameter, click the ellipsis button (...) and select the STEP ID of the root folder under which the importer will search for product matches. This is a **required** field. A node picker dialog will be presented to help the user choose a product hierarchy folder. Only product objects will be presented in the node picker

Note: For Supplier Users, they are only allowed to have access to their specified product structure in the supplier hierarchy. This ensures protection from other suppliers. Additionally, the Match Below Product Root property will need to be adjusted to match with the dedicated root supplier product folder for the particular supplier user.

6. **Reference Type**

   In the 'Reference Type' parameter, specify the reference type that links the imported asset with the product via the dropdown selector. This is a **required** field.

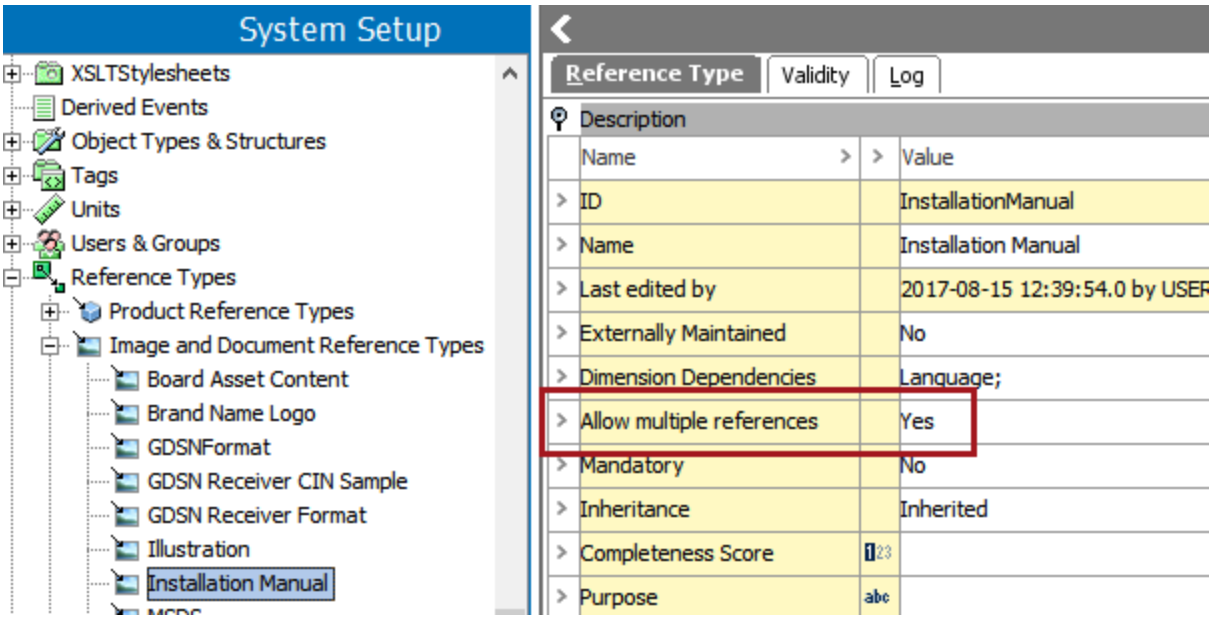
   - Default value - Primary Product Image will be chosen from dropdown selector. Populate with the STEP ID of the reference type. Only asset to product reference types will be presented in the dropdown selector.

7. **Allow Multiple Products**

   The 'Allow Multiple Products' parameter determines whether or not the Asset Importer can link the same asset to multiple products. Checking the box indicates that the Asset Importer can make such a link. Leaving the box unchecked indicates that an imported asset should only be linked to one product. Checking the checkbox indicates that the importer can make such a link – assets can be linked to multiple products if more than one match is found.

   Keep in mind that there can be more than one result since more than one product can have the same name.

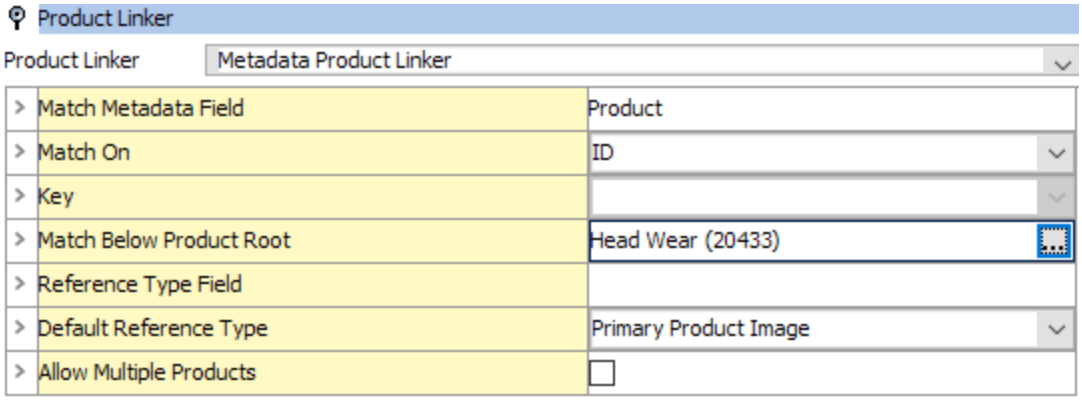
Note: The 'Allow multiple references' setting on the reference must be set to 'Yes'.



Metadata Product Linker

By configuring the Metadata Product Linker, imported assets can be linked to products in STEP via information stored in a metadata file. Note that to use this option, the Metafile Receiver or Zip with Metafile Receiver option must also have been selected as part of the corresponding IIEP configuration.

For more information, see the **IIEP - Configure Asset Importer Processing Engine** documentation.



When selecting the Metadata Product Linker option, the following parameters need to be specified. Note that some fields are required while others are optional.

1. **Match Metadata Field**

   In the 'Match Metadata Field' parameter, enter the column heading of the metafile field that contains the value for the product match criteria. The specified heading must contain either the STEP ID, STEP Name, or Key value of a product. This is a **required** field.

2. **Match On**

   In the 'Match On' parameter, specify how the system identifies existing products in STEP. The default value for this dropdown field is ID. This is a **required** field. Options include:

   - ID: Match template value to the STEP ID of a product
   - Name: Match template value to STEP Name of a product
   - Key: Match template value to a particular Key value on a product

3. **Key**

   In the 'Key' parameter, choose the STEP ID of the key from the dropdown selector for use in matching. This field is only required if 'Key' was selected in the previous step. This dropdown will list the STEP IDs of all Keys available in the STEP system. This key is used when the metafile does not contain a key indicator.

4. **Match Below Product Root**

   In the 'Match Below Product Root' parameter, click the ellipsis button (...) and select the STEP ID of the root folder under which the importer will search for product matches. This is a **required** field. A node picker dialog will be presented to help the user choose a product hierarchy folder. Only product objects will be presented in the node picker.

5. **Reference Type Field**

   In the 'Reference Type Field' parameter, enter the column heading of the metafile field that contains the STEP ID of the reference used to link the imported asset to the product. This parameter is **mandatory**. If the

specified reference type is missing in the metadata file, the default reference type (set in the next step) will be used.

6. **Default Reference Type**

   In the 'Default Reference Type' parameter, specify the reference type that links the imported asset with the product. A default value 'Primary Product Image' is populated from the dropdown selector. This field is **mandatory**. As indicated in the previous step, this parameter is used when the metafile **does not** contain a reference indicator. The dropdown selector will be presented to help the user choose a reference type. Only reference types will be presented in the node picker.

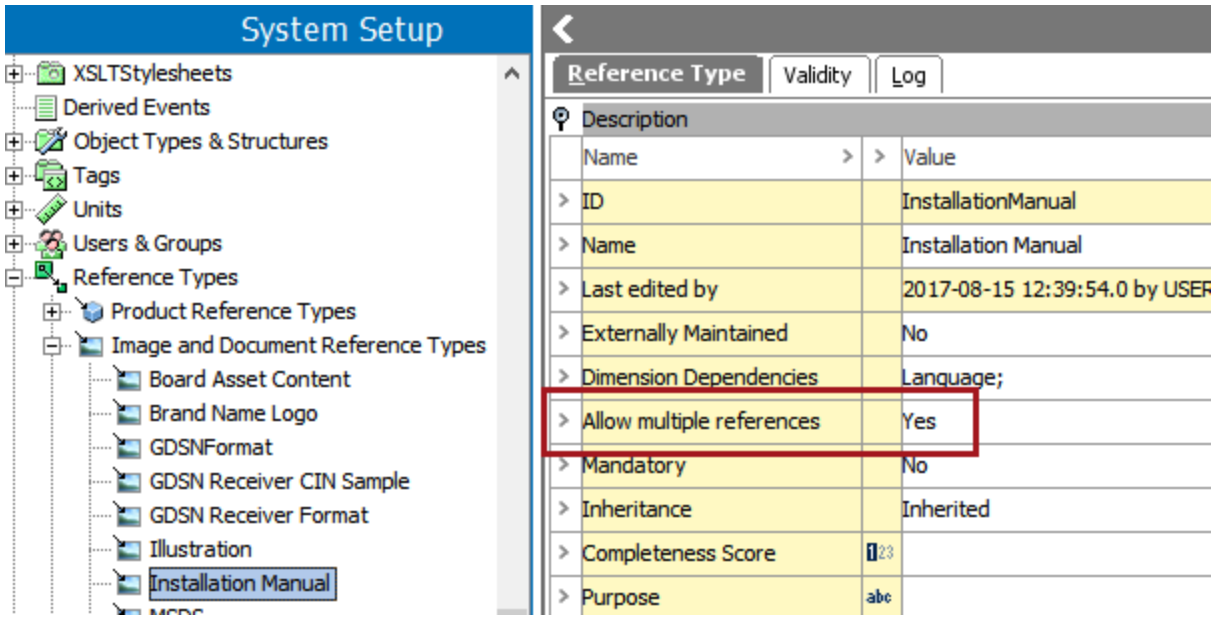
7. **Allow Multiple Products**

   The 'Allow Multiple Products' parameter determines whether or not the Asset Importer can link the same asset to multiple products. Leaving the box unchecked indicates that an imported asset should only be linked to one product. In this case, if multiple product matches are found, an error will be logged, and the asset will not be linked to any products. Checking the box indicates that the importer can make such a link; assets can be linked to multiple products if more than one match is found.

   Keep in mind that more than one product can reference the same asset.

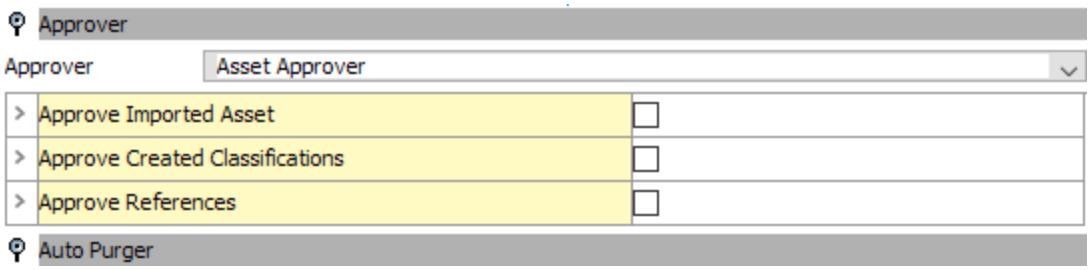
   The Asset Importer will support multiple line entries in the metadata file to link an asset to products. In other words, an asset can have multiple line entries in the metadata file, which can link to a different product(s) per line entry.

Note: The 'Allow multiple references' setting on the reference must be set to 'Yes'.



Approver

The Approver determines whether assets, references between products and assets, and whether new asset folders should be automatically approved by the Asset Importer. By default, 'Standard Asset Approver' is the only configuration option available for the Approver.



1. **Approve Imported Asset**
   - If the 'Approve Imported Asset' parameter checkbox is selected, the asset will be approved upon import.

     As the parental classification is already approved (or 'Approve Created Classifications' box is checked), the asset will be approved.

     If the parental Classification has never been approved, the asset will not be approved. An error will be logged with an explanation as to why the asset could not be approved.

   - If the 'Approve Imported Asset' checkbox is left unchecked, the asset will not be approved upon import. This option is typically used when the asset is initiated into a workflow upon import.
2. **Approve Created Classifications**
   - If the 'Approved Create Classifications' checkbox is checked, the classification in which the asset is placed will be approved upon creation. Additionally, if imported assets are to be approved, this should be checked.
   - If the box is left unchecked, the classification in which the asset is placed will not be approved upon import. Assets will not be approved as part of the import if this is unchecked.
3. **Approve References**
   - Check the 'Approve References' parameter checkbox if the imported asset has a product-to-asset reference (s) to be created, and references should be approved upon import.

     Newly created assets must be approved upon import for this configuration to take effect. Additionally, this acts as a partial approval for the products being linked.

Note: The referred product must have been approved at some point in the past, otherwise the reference cannot be approved.

   - If the referred product has never been approved, the reference will not be approved either. An error will be logged with an explanation as to why the reference could not be approved.

Trying to re-import an existing asset with the same reference and same product will succeed. However the reference will not be approved. This limitation is due to the fact that the reference is not recreated and users are only allowed to approve links that they created themselves. In this case, STEP cannot differentiate between a link that was created by the Asset Importer previously and a link which was created by the user manually.

- If the **Approve References** checkbox is left unchecked the product to asset references will not be approved upon import. This option is typically used when the asset is initiated into a workflow upon import.

Note: The approving STEP user should be the same user who is performing the import via Web UI, or the user that has been authenticated through Web API. If importing via integration endpoint, the executing user specified by the IIEP will be used.

Auto Purger

By configuring the Auto Purger, users can define how many revisions of a particular asset should be retained. By default, the standard 'Asset AutoPurger' is the only configuration option available for the Auto Purger.

The only configurable parameter for this step is the 'Max Revision Count.'

Max Revision Count

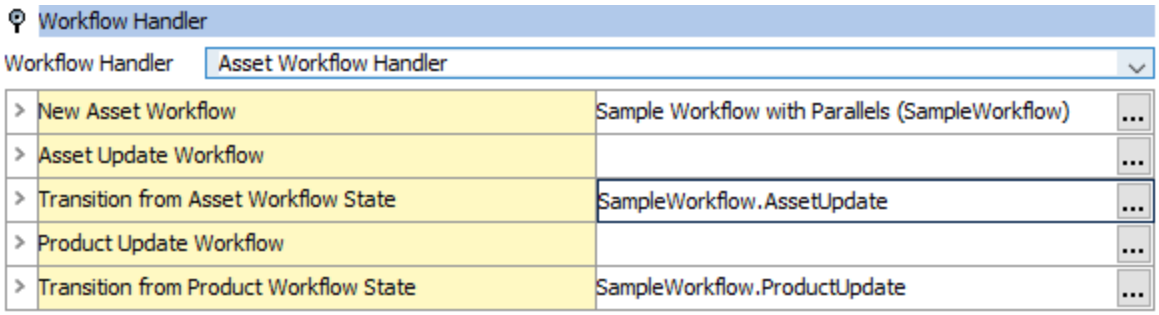
- This field determines how many revisions of an asset can be retained.
- If the number of revisions exceeds the number specified in this parameter, older versions will be deleted every time a new revision is made.
- By default, this value is set to '10000000.'
- If previous revisions should be purged set this field to any integer value, indicating the number of revisions that should be retained. All earlier versions of the asset will be automatically deleted from STEP.

Workflow Handler

By configuring the Workflow Handler, imported assets can be automatically initiated into a workflow. Additionally, imported assets can trigger a transition in an existing workflow for either the asset itself or the product that is linked to the imported asset. By default, 'Standard Asset Workflow Handler' is the only configuration option available for the Workflow Handler.

Because this is an optional step, all configuration options are left blank by default, meaning that no workflows or transitions will be initiated via the import. All parameters detailed below are **optional**.

The screenshot below shows an example of a configuration involving both asset and product workflows.



Note: If no workflow initiations or transitions are required for products or assets as part of the import, there is no need to change the default (blank) configuration.

When selecting the Standard Asset Workflow Handler, the following may also be specified, with each field being **optional**.

1. **New Asset Workflow**

   In the 'New Asset Workflow' parameter, click the ellipsis button (...), and select the STEP ID of a workflow that handles new asset onboarding.

   - The workflow specified will be initiated for each new asset created as part of an upload.
   - The node picker dialog with Workflow objects will be presented for the user to choose the required workflow.

2. **Asset Update Workflow**

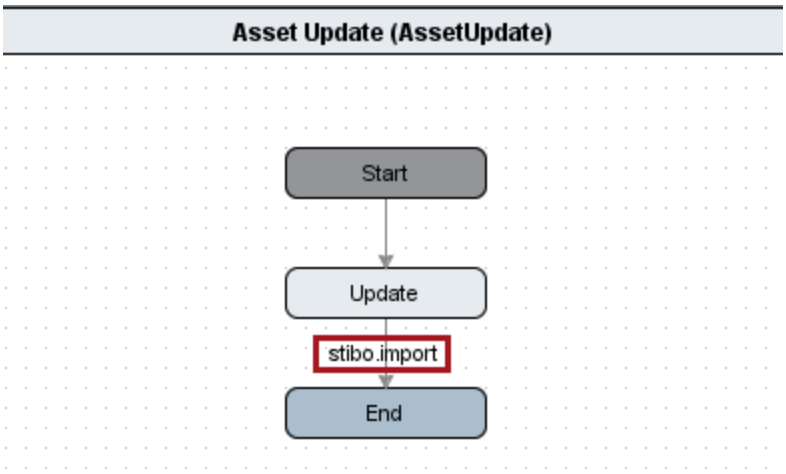
   In the 'Asset Update Workflow' parameter, click the ellipsis button (...), and select the STEP ID of a workflow that handles updates to existing assets.

   - The workflow specified will be initiated for each **existing asset** included in the upload.
   - Node picker dialog with Workflow objects will be presented for the user to choose the required workflow.

3. **Transition from Asset Workflow State**

   In the 'Transition from Asset Workflow State' parameter, click the ellipsis button (...), and select the STEP ID of the desired workflow state.

- The value must be formatted as such: [workflow ID].[State ID].
- Any asset in the specified workflow state that is included in an upload will transition from that state to the next via the 'stibo.import' transition.
- Example: The asset is in the 'Update' state and should be transitioned to the 'End' state upon import of the asset. The Asset update event field is populated with 'AssetUpdate.Update.'



4. **Product Update Workflow**

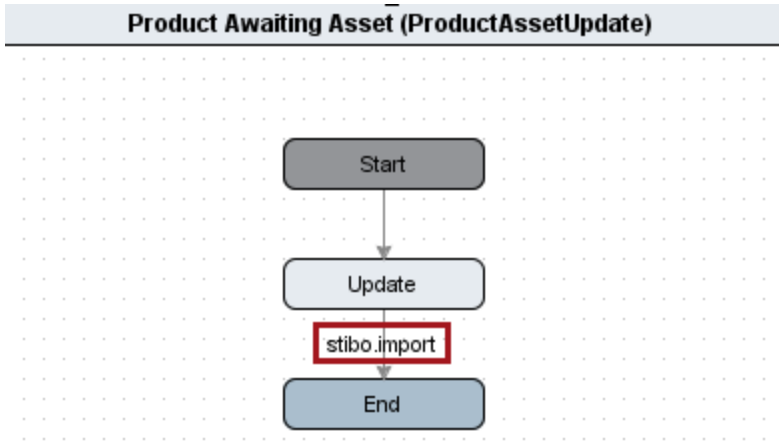
   In the 'Product Update Workflow' parameter, click the ellipsis button (...), select the STEP ID of a workflow that handles products.

   - When a new product to asset link is created via an asset upload, the product which owns the newly created link will be initiated into the specified workflow.
   - If such a link already exists, no action will be taken.
   - The node picker dialog with Workflow objects will be presented for the user to choose the required workflow that handles products.

5. **Transition from Product Workflow State**

   In the 'Transition from Product Workflow State' parameter, click the ellipsis button (...), and select the STEP ID of the desired workflow state.

   - The value must be formatted as such: [workflow ID].[State ID].
   - When a new product to asset link is created via an asset import for a product in the specified state, the product will be transitioned from that state using the stibo.import transition.
   - Example: The product is in the 'Update' state and should be transitioned to the 'End' state upon successful import of a linked asset. The product update event field is populated with 'ProductAssetUpdate.Update.'


Product Awaiting Asset (ProductAssetUpdate)
Start
Update
stibo.import
End

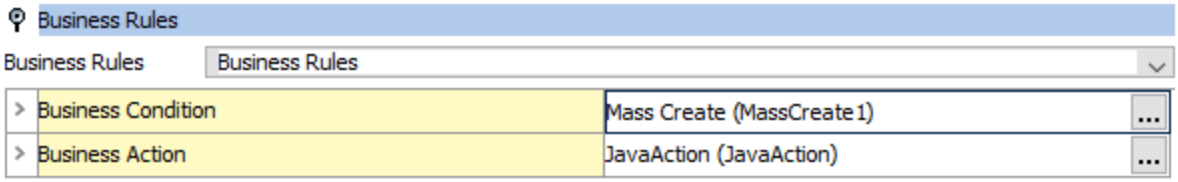
Business Rules

By configuring the Business Rule Handler, business conditions can be set to run during an asset import and may reject assets that fail to meet one or more of the specified conditions (any structure created to support the asset will also be rejected, e.g. a new classification folder to store the asset). Additionally, a business action can be set that performs additional work following import of the asset. By default, 'Standard Business Rule Handler' is the only configuration option available for the Business Rules configuration.

Because this is an optional step, all configuration options are left blank by default, meaning that no business rules will be called as part of the asset upload.

All parameters detailed below are **optional**.

The screenshot below shows am example of a configuration involving both Business Conditions and Business Actions.



Note: If no business rule conditions or actions should be called as part of the import, there is no need to change the default (blank) configuration.

When selecting the Standard Business Rule Handler, the following parameters can be specified:

1. **Business Conditions**

   In the 'Business Condition' parameter, click the ellipsis button (...) and select one or more business conditions that are to be run during asset import.

   - Though multiple business condition IDs can be specified, it is best practice to include all relevant conditions in *one* business condition.

   Error Handling

   - If one specified condition fails by returning 'FALSE' or null pointer exception, an error is logged, and the transaction is rolled back. This error handling includes the asset import, as well as the creation of any structures supporting it.

2. **Business Action**

   In the 'Business Action' parameter, click the ellipsis button (...) and select one or more business actions that are to be run following the import of an asset.

   - Though multiple business action IDs can be specified, it is best practice to include all relevant conditions in *one* business action.

- Business actions are invoked following approvals carried out via the Approver configuration. Because of this, if any changes to data need to be approved, the rule itself must include an approval step.

For more information on the Approver, see the **Approver** section of the **Asset Importer Configuration** documentation.

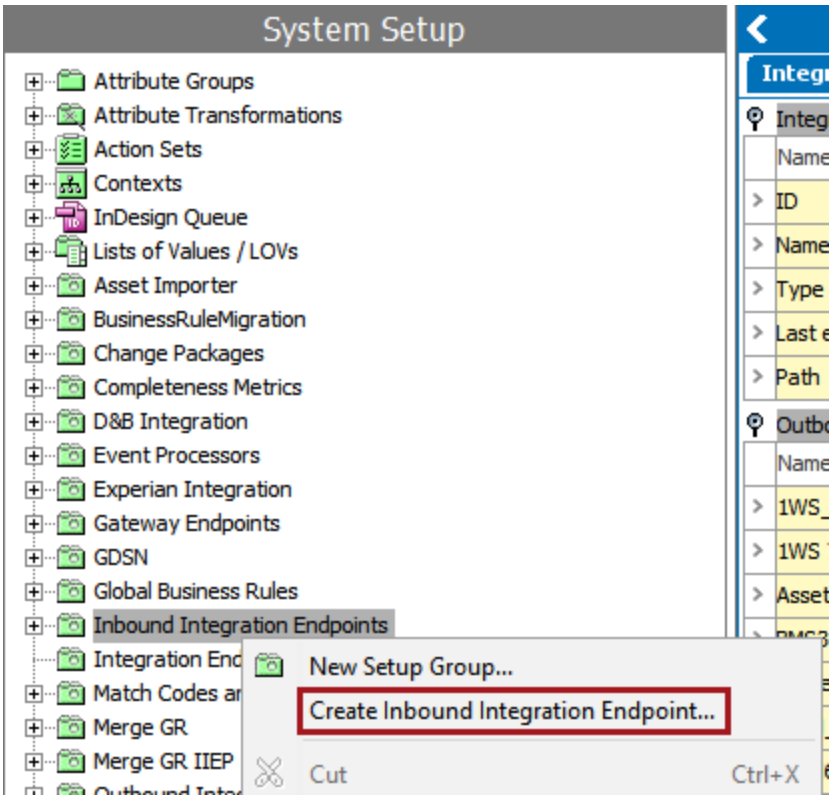
Error Handling

- Errors from all executed business actions will be passed on and logged.
- Null pointer exceptions and other errors caused by business actions will result in the transaction to be rolled back. This error handling includes the asset import, as well as the creation of any structures supporting it.

Asset Importer Inbound Integration Endpoint Configuration

The Asset Importer can be configured using one IIEP for each hotfolder, or using one IIEP to control a hierarchy of hot folders.

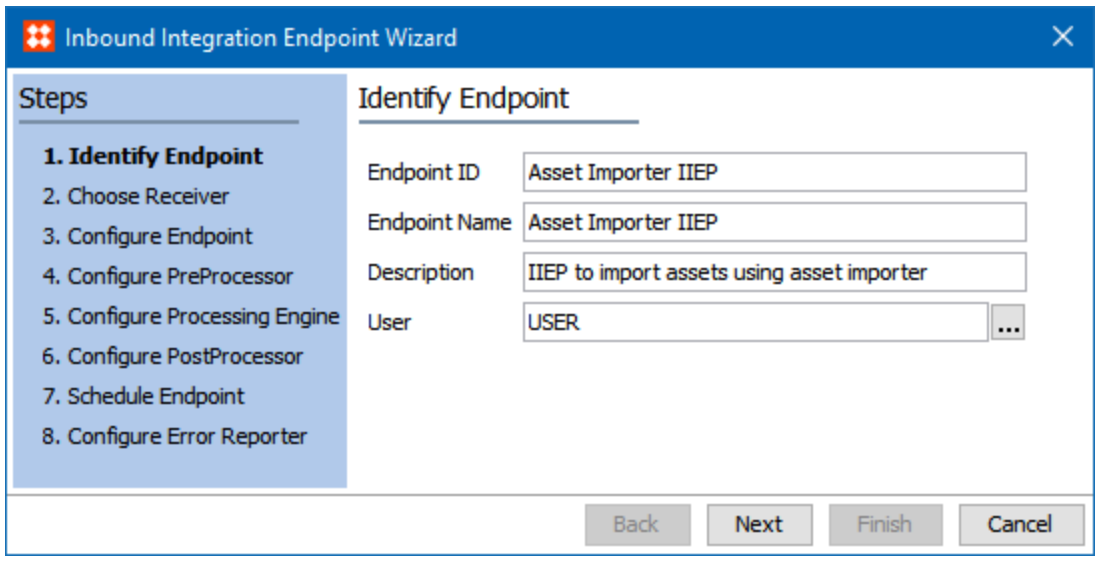
On the System Setup tab, right-click on the inbound integration endpoints node to create an endpoint. Select 'Create Inbound Integration Endpoint....'



It may also be necessary to set up an Inbound Integration Endpoint (IIEP) for some of (if not all) of your importer configurations. In order to use an IIEP with Asset Importer, it is recommended to configure the endpoint in the following ways:

1. **Identify Endpoint**

   On the 'Identify Endpoint' step, select a user that has privileges to perform the required functions defined by the hot folder configuration. It is recommended to create a dedicated STEP user for this purpose so that audit trails can log activity associated with the hot folder(s). Typically this user should be created with a non-restricted privilege set (e.g. a super user).

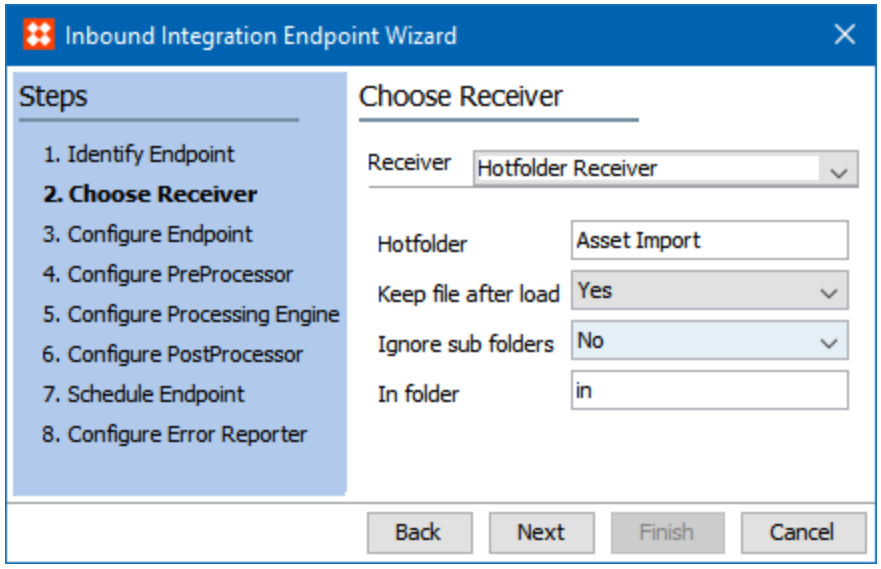


The system user who is configured to run the integration endpoint will need network security privileges to the application server area where the hot folder will exist, as well as to the background process area.

For more information on the Identify Endpoint step, see the **IIEP - Identify Endpoints** section of the **Inbound Integration Endpoints** documentation.

2. **Choose Receiver**

On the 'Choose Receiver' step of the IIEP configuration wizard, select 'Hotfolder Receiver' as the receiver. All the fields must be specified when hotfolder is chosen as receiver.

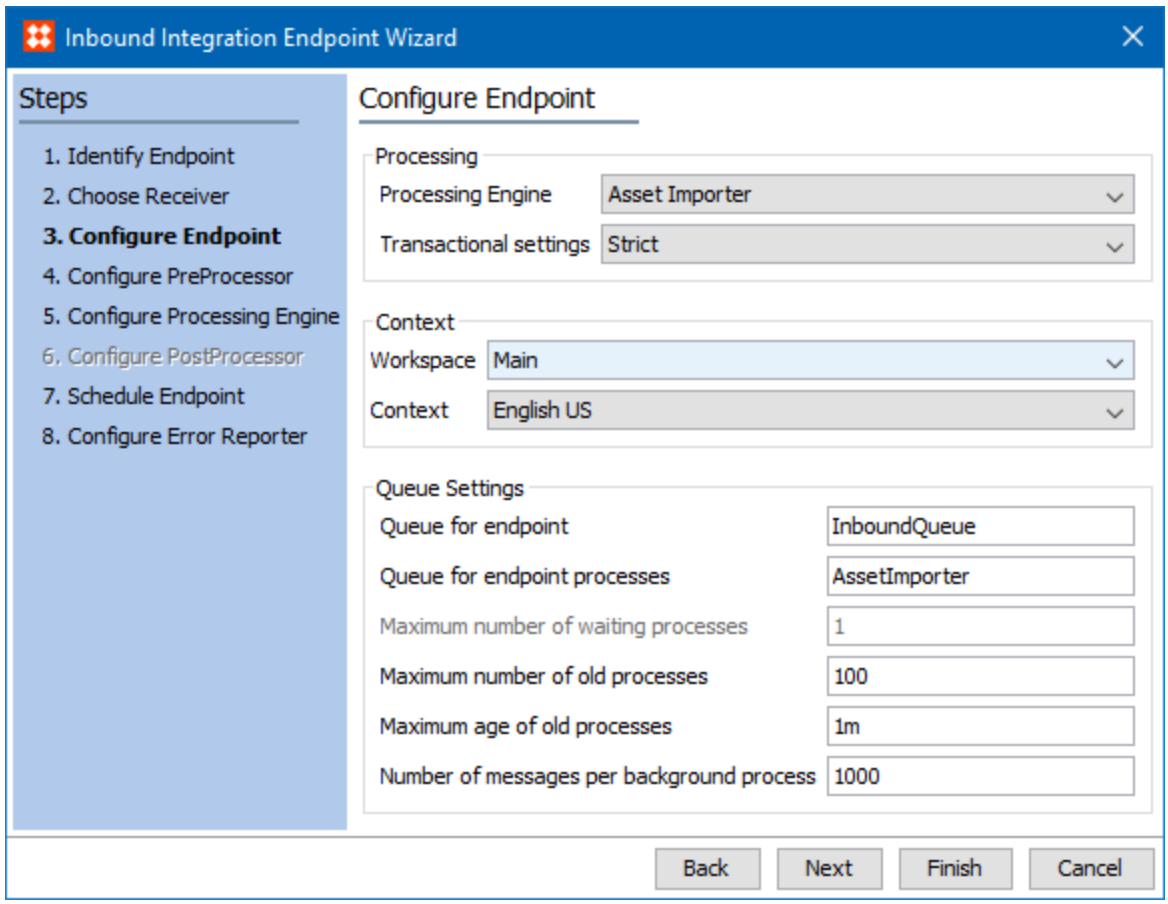


Note: The integration endpoint receiver is not the same as the receiver options of the asset importer engine.

For more information on the 'Choose Receiver' step, see the **IIEP - Choose Receiver** section of the **Inbound Integration Endpoints** documentation.

3. **Configure Endpoint**

   On the 'Configure Endpoint' step of the wizard, select 'Asset Importer' as the processing engine and consider the following recommended configurations:



- The **Transactional settings** parameter should be set to 'Strict' in most cases, which is the most efficient way to process large batches of images. The strict setting disables the **Maximum number of waiting** processes selection as this must be '1' when transactions are 'Strict.'

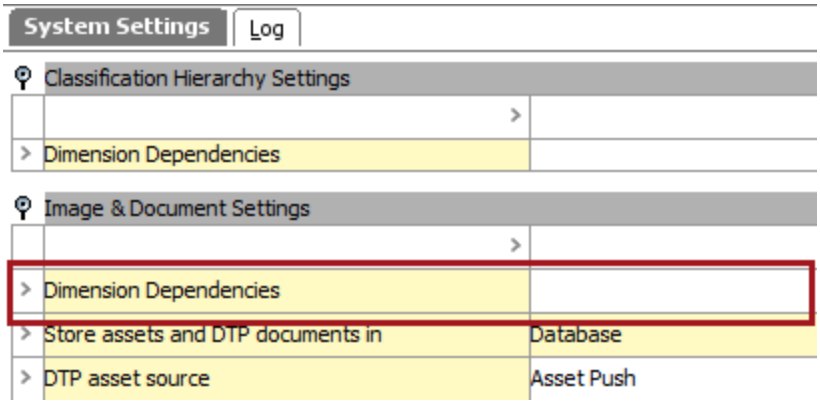
  When you select Strict, also set the **Number of messages per background process** to a high number (e.g., 1000 or greater) to cut down on the overhead of launching multiple background processes.

  For more information on transaction settings, see the **Integration Endpoint Transactional Settings** topic.

- The **Workspace** parameter should always be set to 'Main' as data cannot be imported directly into the 'Approved' workspace.

Set if assets should be automatically approved upon import as part of the configuration. This results in the data being imported into the Main workspace, then automatically being reflected in the 'Approved' workspace.

- The configuration of the **Context** parameter largely depends on the dimension dependent setting of the assets. This is a global setting determined in **System Setup** on the Users & Groups System Settings editor:



If assets are not dimension dependent (e.g., the above is blank), the selection of context has no impact on the import. Asset content will be identical in all contexts, regardless of the selection made in the Configure Endpoint screen.

If assets are dimension dependent, and asset content should be imported into one specific context only, select that context. This requires a corresponding selection of **No** in the **Import Independently of dimensions** configuration option within the Content Importer configuration.

If assets are dimension dependent, and asset content should be imported independently of context (e.g. available to all contexts rather than only a single one), the selection of context has no impact on the import. This requires a corresponding selection of **Yes** in the **Import Independently of dimensions** configuration option within the Content Importer configuration.

Additionally, ensure that the 'Import Independently of dimensions' setting on the relevant Asset Importer configuration corresponds with the selection made. For more information, see the **Content Importer** section.

- **Queue for endpoint**: It is recommended to leave the Queue for endpoint parameter as 'InboundQueue', as there is typically no reason and/or performance benefit to changing this setting. This is used to pick up the message (e.g., initiate processing per schedule).
- **Queue for endpoint processes**: It is recommended to set the Queue for endpoint processes parameter to something indicative of asset processes (e.g., AssetImporter), as loading of assets can be intensive. This selection does the actual processing of each message (e.g. load the data into STEP).

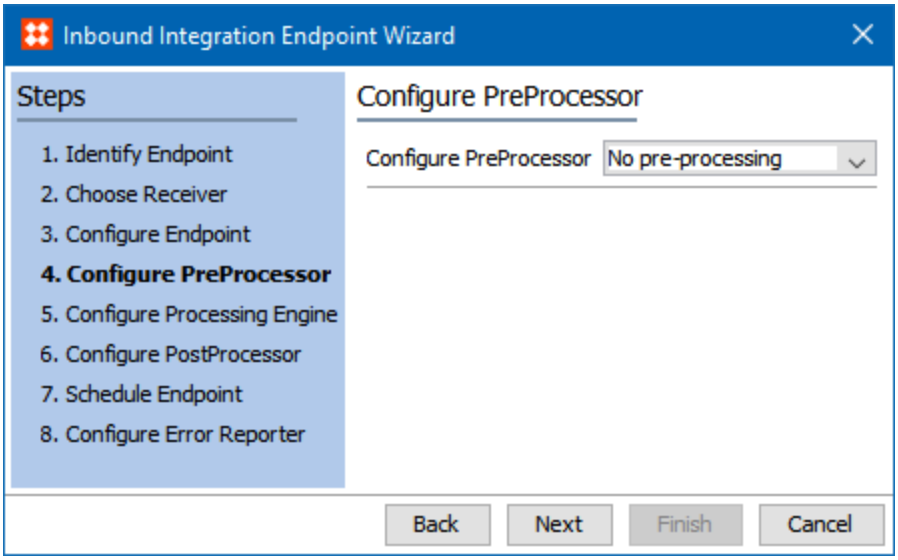
Note: Setting this as a separate queue prevents competition of resources between asset loading and other inbound processes.

- **Maximum number of waiting processes**: The maximum number of waiting processes parameter is automatically set to '1' for Strict transactional settings.
- **Maximum number of old processes**: It is recommended to set the Maximum number of old processes parameter to a reasonable number based on the number of processes expected. Setting it too high may cause eventual performance issues. Oldest processes above this number set are automatically deleted.
- **Maximum age of old processes**: It is recommended to set the Maximum age of old processes parameter to '1M' (one month) unless requirements dictate otherwise. Setting too long may cause eventual performance issues.
- **Number of messages per background process**: It is recommended to set the Number of messages per background process parameter to a high number (e.g., 1000 or greater) to cut down on the overhead of launching multiple background processes.

For more information on the Configure Endpoint step, see the **IIEP - Configure Endpoint** section of the **Inbound Integration Endpoints** documentation.

4. **Configure PreProcessor**

   On the 'Configure PreProcessor' step of the wizard, select 'No pre-processing.'



Note: No PreProcessor Configuration is required or supported for the Asset Importer as the component itself is a specific processing engine. The available PreProcessor options depend on the STEP release and your system.

5. **Configuring the Processing Engine**

   On the 'Configure Processing Engine' step of the wizard, select the relevant asset importer configuration. The Configure Processing Engine screen allows the user to select a receiver option, asset import configuration and allows users to create folder overrides, which replace certain aspects of the asset import configuration for sub folders within the hotfolder if desired.

Detailed configuration instructions can be found in the **IIEP - Configure Asset Importer Processing Engine** section of the **Inbound Integration Endpoints** documentation.

6. **Configure PostProcessor**

   On the 'Configure PostProcessor' step of the wizard, select 'No post-processing.'

7. **Schedule Endpoint**

   There are no required or recommended settings for the 'Schedule Endpoint' step.

   All parameters in the Schedule Endpoint screen are part of the standard Inbound Integration Endpoint configurations. The endpoint should be scheduled to run regularly, and as often as is needed to efficiently process incoming data.

8. **Configure Error Report**

   The Configure Error Reporter screen is used by some endpoint configurations to handle error reporting.

   Since the Asset Loader uses a dedicated Notification Handler the general error reporter is not required and should typically be set as ‘Not Defined’.

Asset Importer in Web UI

Web UI can utilize Asset Importer for uploading asset content in a number of ways:

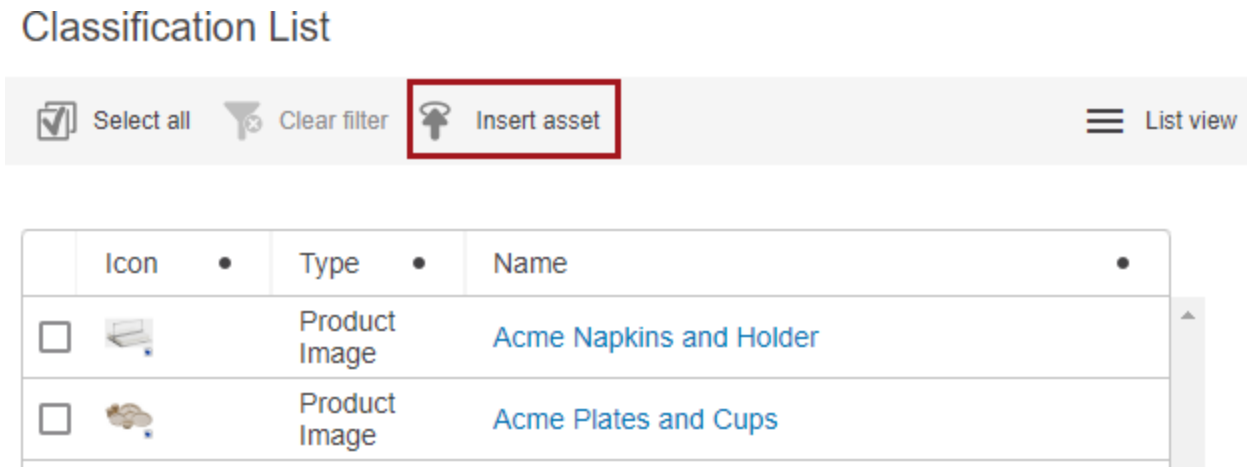
- The Upload Asset Action
- The Replace Asset Content button (via the Asset Mid Sized (superseded) or Asset Representation components)
- The Asset Importer Widget

For more information about the Asset Importer Widget, see the **Asset Importer Widget** section of the **Web User Interfaces** documentation.

Upload Asset Action

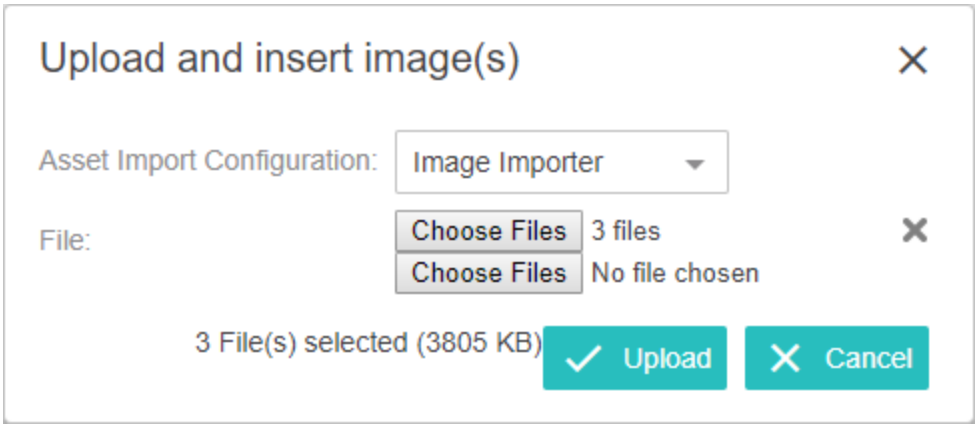
When uploading assets via the Upload Asset action, an asset importer configuration must be selected. The configuration will apply its rules against the imported asset and make any necessary changes (or reject it if it fails to meet minimum requirements).

1. Navigate to the relevant Classification folder in Web UI and click the 'Insert asset' button (the Upload Asset action).



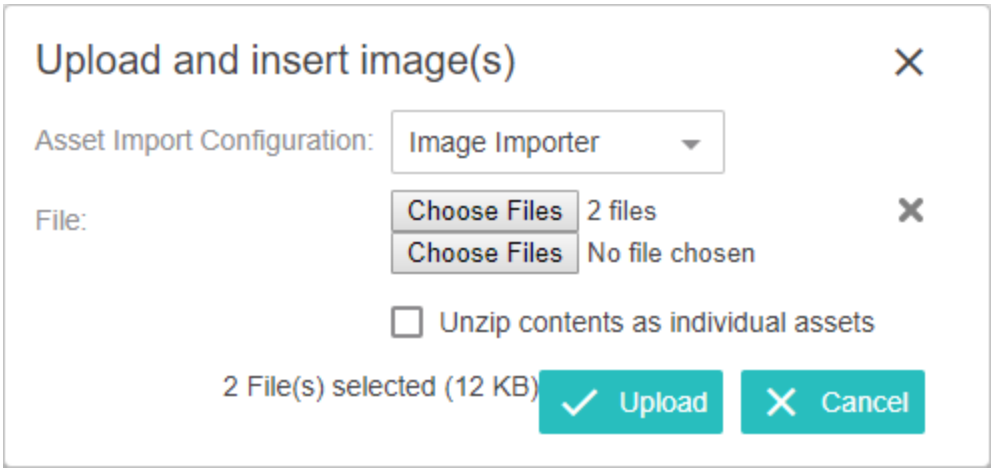
Note: The node this action is performed on does not matter unless the 'Use selected classification for manual imports' option is enabled in the Hierarchy Builder configuration.

2. In the 'Upload and insert image(s)' dialog, select the desired importer configuration from the dropdown menu.

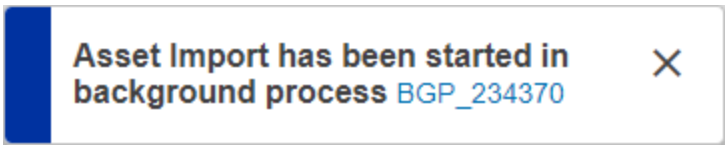


The Upload button is activated only upon choosing the asset for importing.

Note: An asset importer configuration can be specified in the component's configuration, meaning it will not need to be selected upon import.



3. Next, click **Choose File** and select a file to import.
4. Click **Open** once the selection is made. Multiple files can be added by repeating this step. Additionally, these files can be removed by clicking the red 'X' icon.
5. Click **Upload** to initiate the import. A dialog will appear, providing a link to the background process.



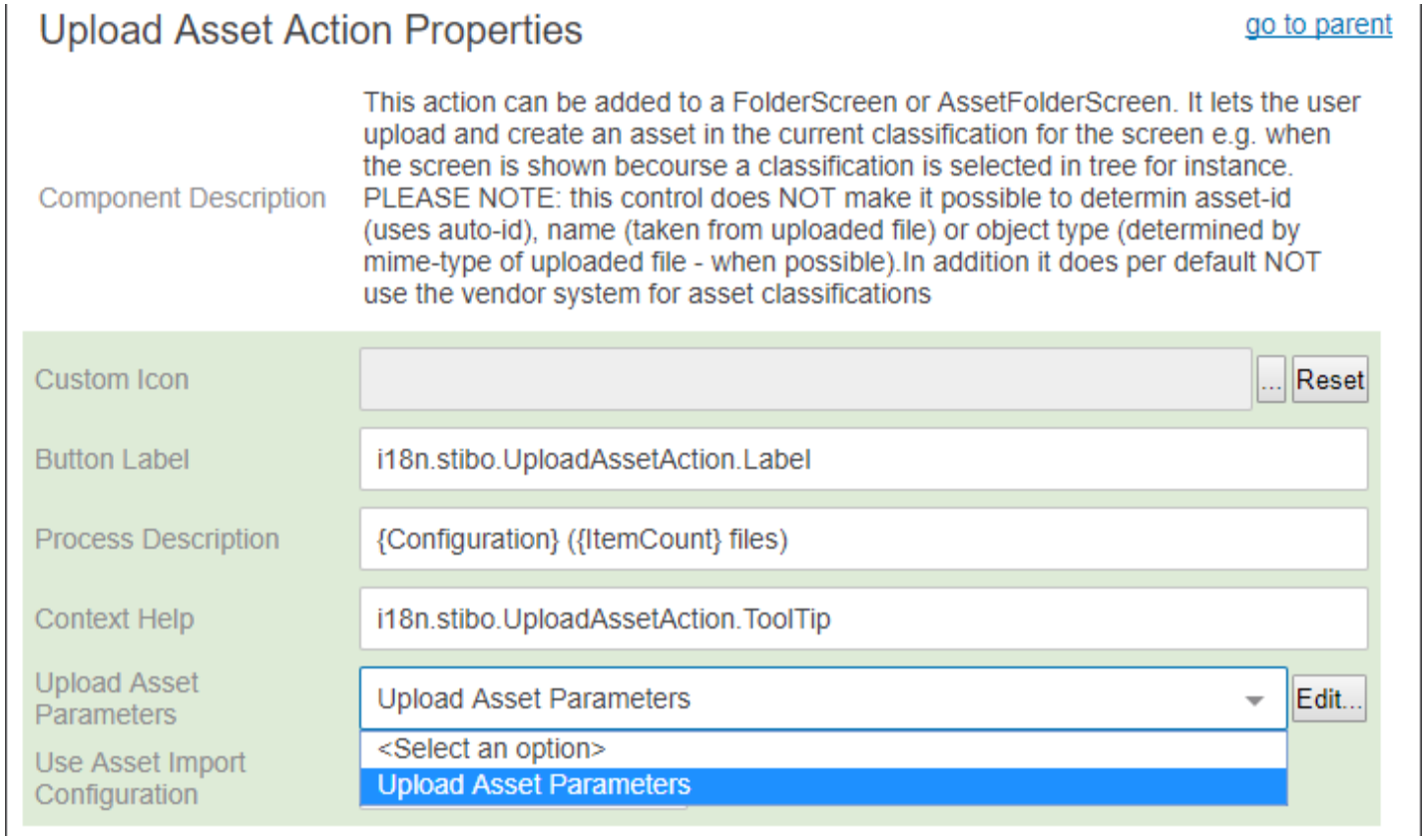
Important: Ensure that the Asset Importer configuration allows for the selection of classification folders *when importing assets manually*, otherwise the import will ignore which node this action was performed on and follow

the Hierarchy Builder configuration instead. For more information, see the **Hierarchy Builder** section of the **Asset Import** documentation.

Configuring the Asset Import Action in Web UI

Upload Asset Parameters

- **<Select an option>** (default): No predefined asset import configuration will be used for the import, the end-user will be presented with a dialog to choose one of the available asset import configurations
- **Use asset import configuration** (NEW): Allows the web UI designer to specify an asset import configuration to use for the Upload Asset Action.



Note: If an existing Web UI configuration uses the Upload Asset Parameter and the asset importer is enabled, the Upload Asset Parameter should reset to the default option in the dropdown menu.

If no asset import configuration is selected (<Select an option>, which is the default), the end user will be asked to choose one of the existing asset import configurations during the import as well with the desired file(s) for import.

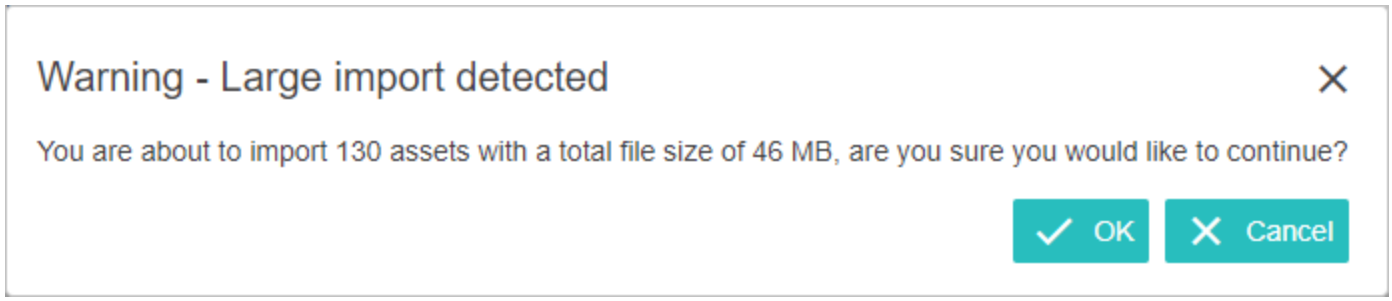
Asset Import post file selection

This section describes the file selection and confirmation regardless how files and folders have been selected via Web UI via Asset Import Action.

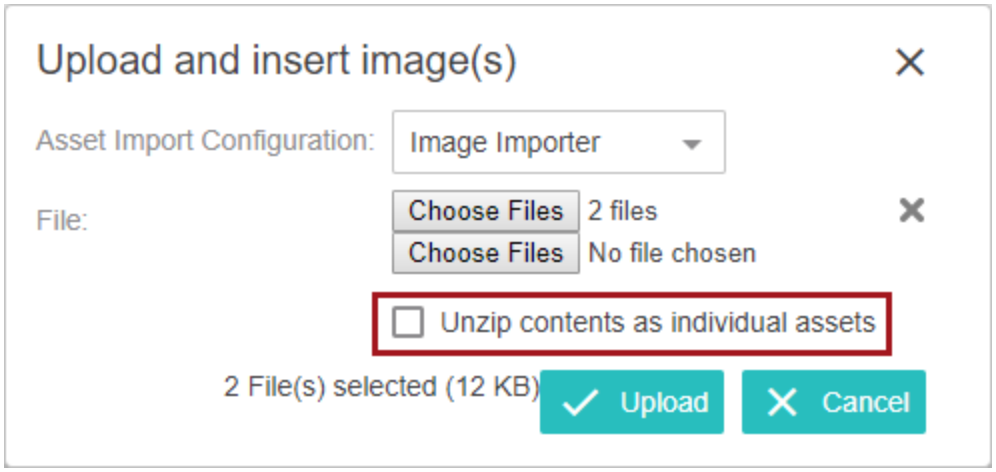
File selection check

A preliminary check based on the files and folder selection executed on the client side will be performed to inform of specific scenarios:

- If the threshold of 100 files or the total import size exceeds more than 100MB, a warning will be displayed informing the user about the magnitude of the import, asking for confirmation to continue the import process



- If a ZIP file is included in the file selection, allow the user to select if its contents should be imported as separate assets or if the ZIP file should be handled as one asset file to be imported



Unzip contents as individual assets:

- Unchecked (default) will import the ZIP file as one asset into STEP
- Checked will extract all of the contents of each ZIP file into a temporary folder on the file server and import each of the containing files separately as asset into STEP

Replace Asset Content

Replace Asset Content behaves similar to the asset import as described in other sections, with the main exception that it does not make sense to execute certain parts of the asset import configuration since the operation will be executed on an existing asset in STEP. Therefore, the Hierarchy Builder and Asset Matcher steps should be neglected during the replace asset content procedure.

Configuring the Replace Asset Content in Web UI

When configured on an Asset Representation or Referenced Asset Representation component, the Replace Asset Content button () will appear on the asset thumbnail. When clicked, this button allows users to replace the content of a given asset. An asset import configuration must be specified so that its rules can be applied against the new content.

For more information on enabling replacement of asset content in the Web UI using the Asset Representation component (for display of assets on the asset object), see the **Asset Representation** section of the **Web User Interfaces** documentation.

For more information on enabling replacement of asset content in the Web UI using the Referenced Asset Representation component (for display of assets on an object that references the asset object), see the **Referenced Asset Representation** section of the **Web User Interfaces** documentation.

Asset Importer Migration Guide

The purpose of this guide is instruct users on how to migrate configurations to use the Asset Importer for implementations that previously used the Enhanced Image and Document Importer add-on component.

The original Enhanced Image and Document Importer (EIDI) was designed around an Inbound Integration Endpoint (IIEP) solution, and was configured entirely within one IIEP. By contrast, the more advanced Asset Importer can be configured to function with both IIEPs and Web UI, and exists independently from both interfaces.

Before the migration is performed, ensure that the initial setup steps have been performed. For more information, see the **Asset Importer Initial Setup** section of the documentation.

A basic understanding of how to configure Asset Importer is necessary to complete this migration. For more information, see the **Asset Importer Configuration Overview** section of the documentation.

Note that a small number of EIDI features are not available in Asset Importer. These features include:

- The Folder Builder and Metadata Builder options of the Hierarchy Builder
- The Metadata Matcher option of the Asset Matcher
- The ExtraFile option for Meta File and Zip Metafile configurations

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Important: These migration instructions only apply to those that used the standard EIDI configuration options for and no custom extensions.

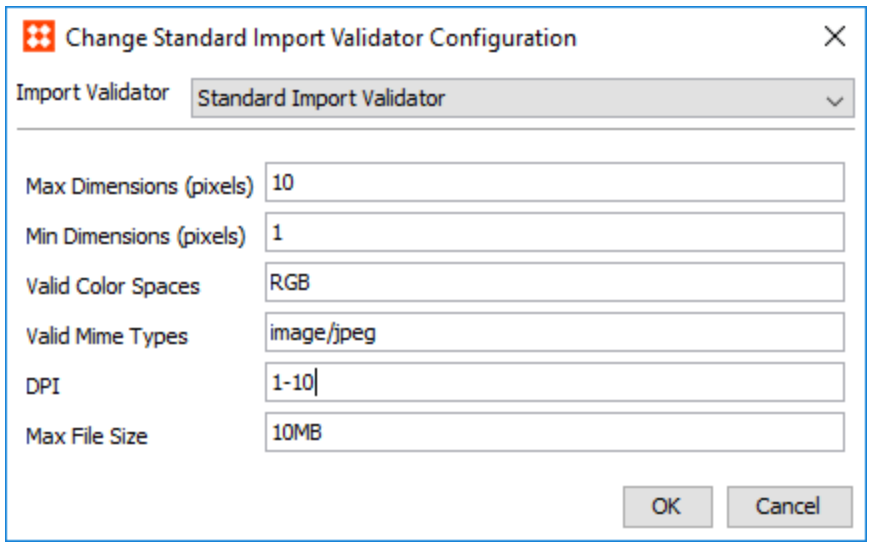
Because the configuration process varies between the two, this guide will follow the logic of an Asset Importer configuration, starting with importer configuration itself and the IIEP after.

Asset Importer Configuration

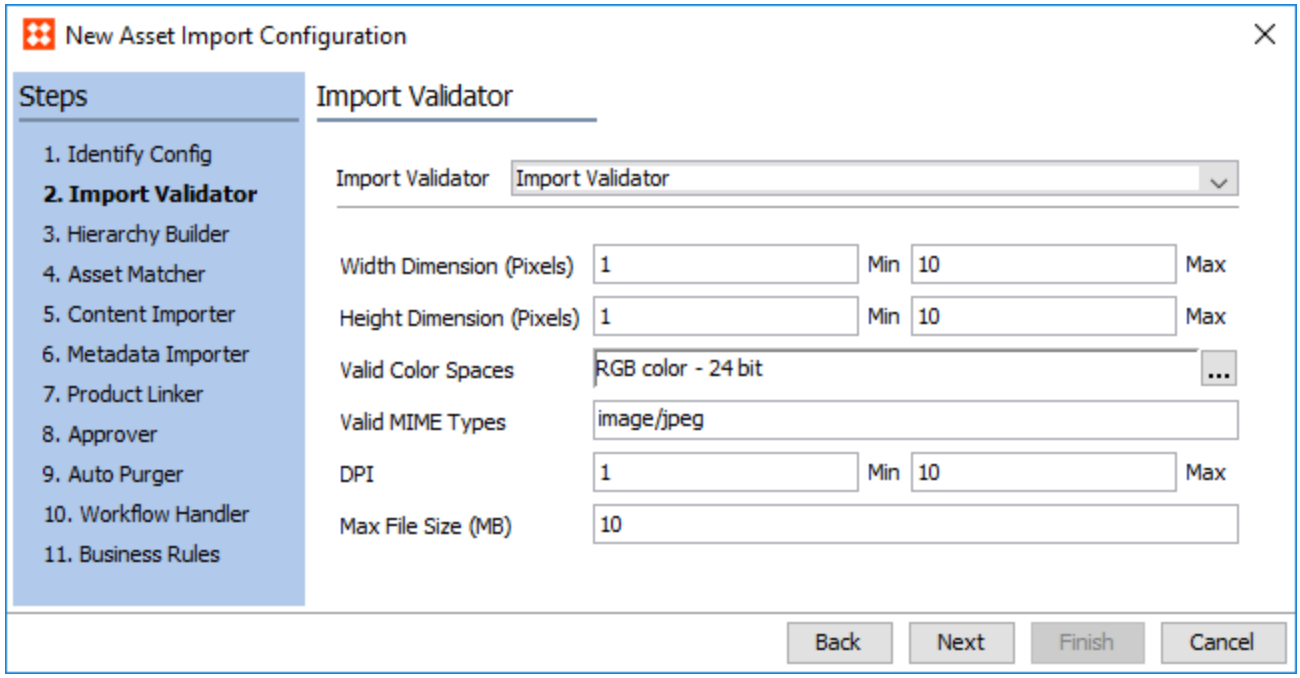
Step-by-step configuration instructions for the asset importer configuration are detailed below. Note that the asset importer configuration steps correspond with those found on the 'Configure Processing Engine' step of the (EIDI) IIEP configuration wizard.

1. **Identify Config -** Create an ID, Name, and an (optional) description for the configuration.
2. **Import Validator -** The fields for this wizard step and its EIDI counterpart are nearly identical. The format is slightly different, but it otherwise provides the same options.

   EIDI configuration:



Asset Importer configuration:

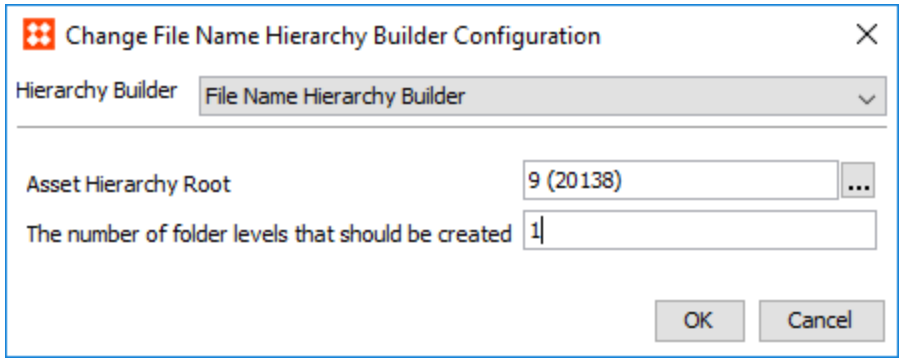


Note: With Asset Importer the min / max dimensions can differ between width and height.

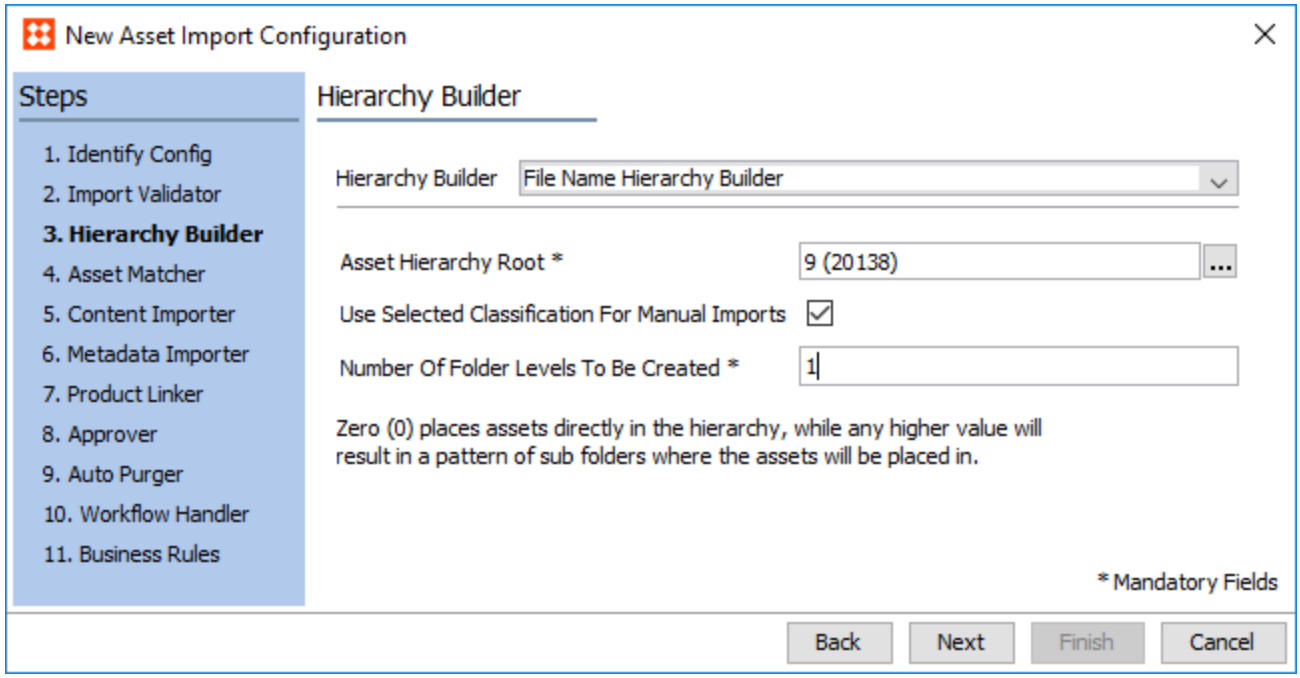
3. **Hierarchy Builder -** The 'File Name Hierarchy Builder' is the only configuration option available for Asset Importer (outside of custom extensions).

   When migrating your EIDI configuration note that an additional option is available: 'Use Selected Classification For Manual Imports.' If this box is checked the asset hierarchy root selection made on this step will be overwritten by a classification hierarchy selected during manual import (via Web UI).

EIDI configuration:



Asset Importer configuration:

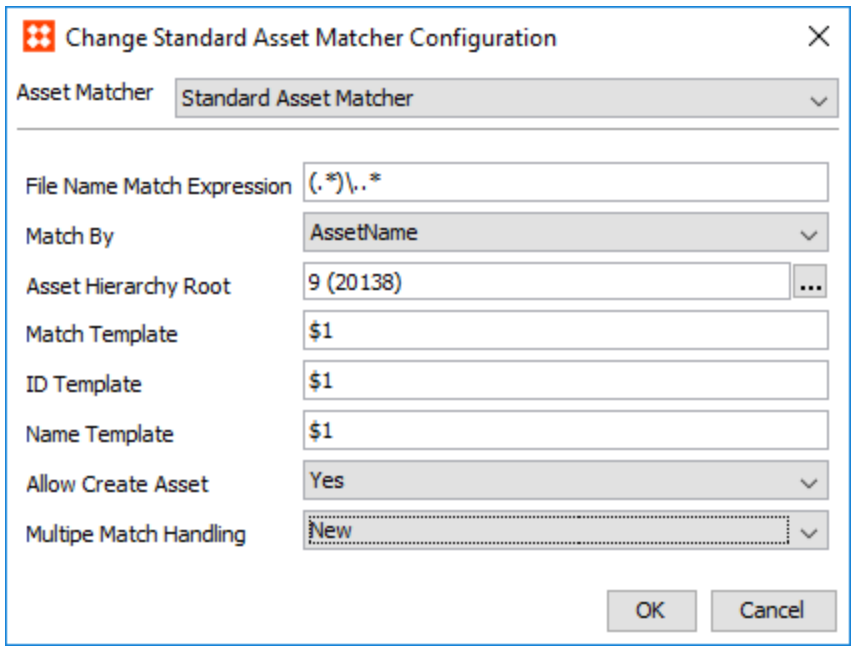


4. **Asset Matcher -** The 'Asset Matcher' is the only configuration option available for Asset Importer (outside of custom extensions).

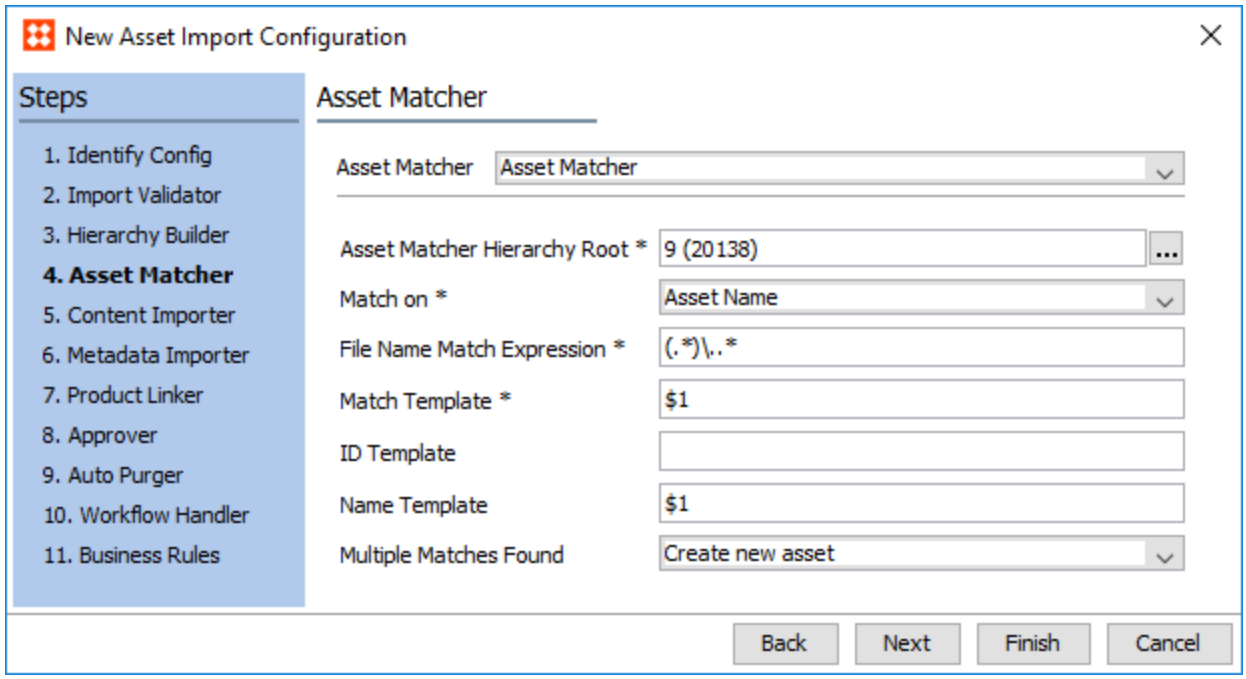
   Though organized in a different order, most of the parameters are identical between the two.

   An important difference to note is that the 'Allow Create Asset' and 'Multiple Match Handling' parameters found in the EIDI configuration are handled by a single parameter for Asset Importer: 'Multiple Matches Found.' The 'Yes' / 'New' and 'No' / 'Error' combinations of the two EIDI options can be replicated by the 'Create new asset' and 'Error on record' Asset Importer options, respectively.

   EIDI configuration:



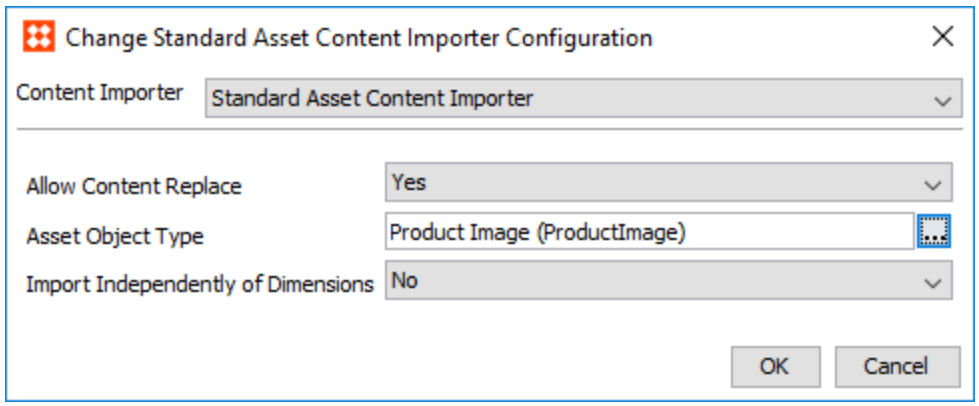
Asset Importer configuration:



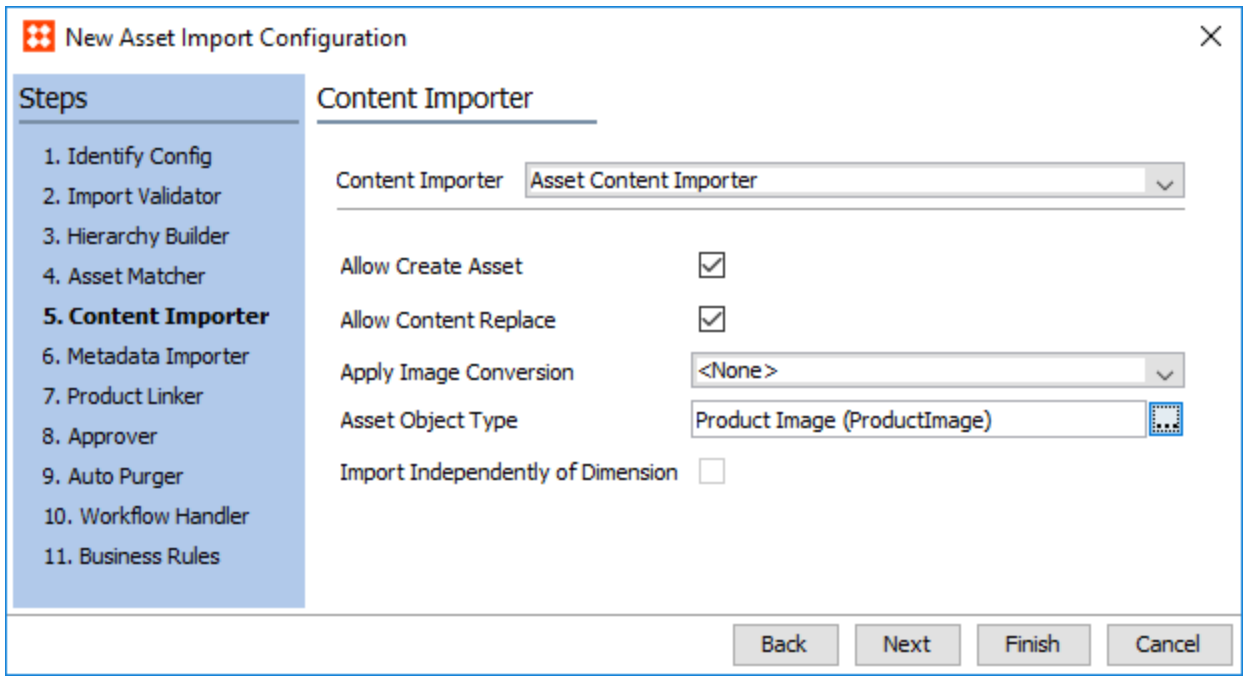
5. **Content Importer -** The fields for this wizard step and its EIDI counterpart are nearly identical. The only difference is that two new options are available: 'Allow Create Content' and 'Apply Image Conversion.'

Important: Asset Importer cannot create new assets unless the 'Allow Create Content' box is checked.

EIDI configuration:

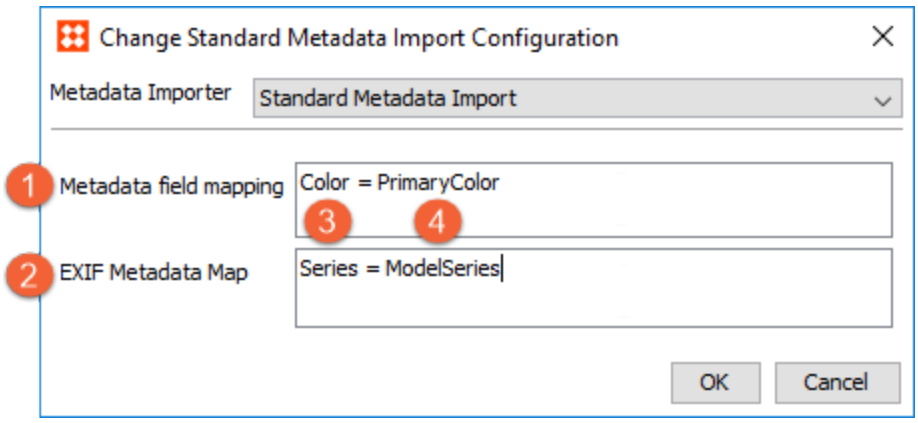


Asset Importer configuration:

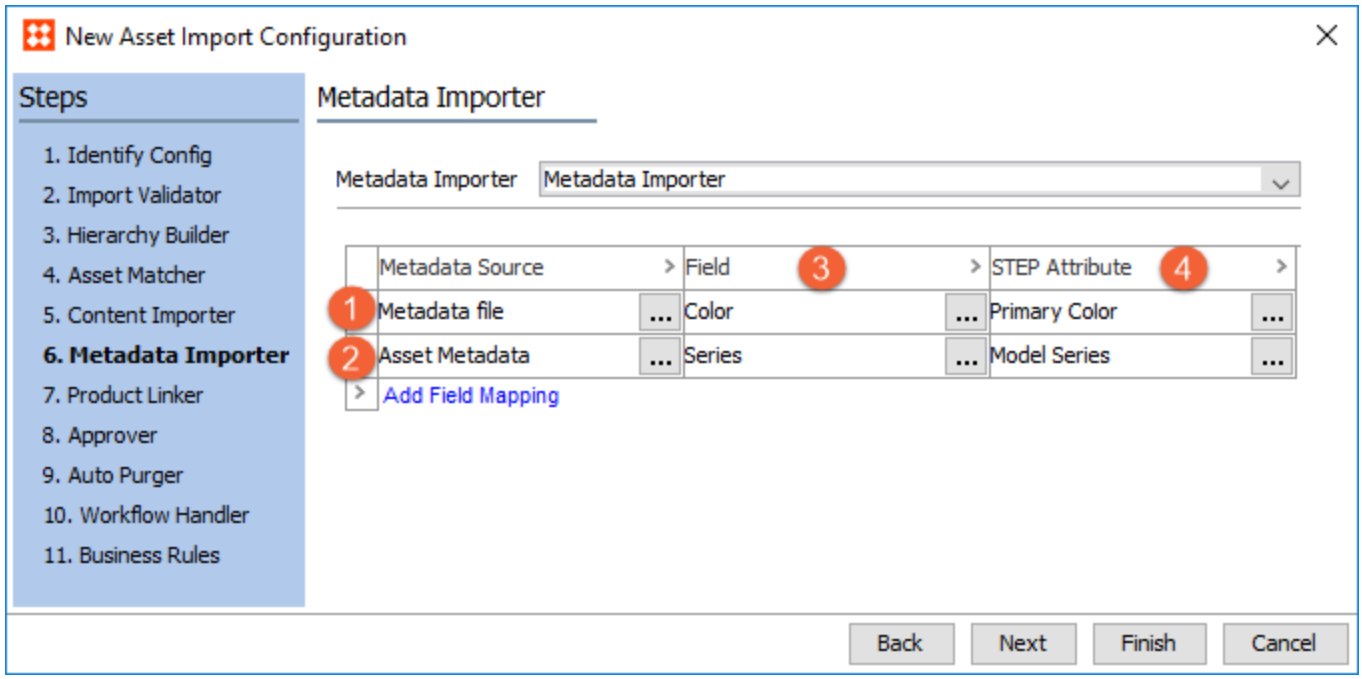


6. **Metadata Importer -** Though formatted completely differently, this step has nearly identical options in both wizards. The below points / images illustrate how the parameters correspond between the two wizards:
   - The 'Metadata field mapping' parameter from the EIDI wizard corresponds to the Metadata Source option 'Metadata file' (1).
   - The 'EXIF Metadata Map' EIDI parameter corresponds to the Metadata Source option 'Asset Metadata' (this parameter also supports XMP data) (2).
   - The 'Field' and 'STEP Attribute' parameters in the Asset Importer wizard correspond to the '[Column / Property] = [STEP metadata attribute ID]' (3 & 4).

   EIDI configuration:



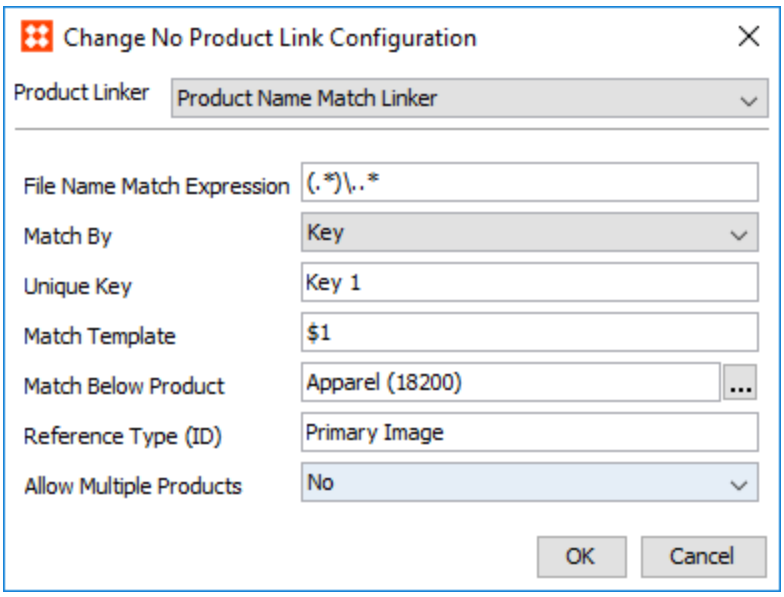
Asset Importer configuration:



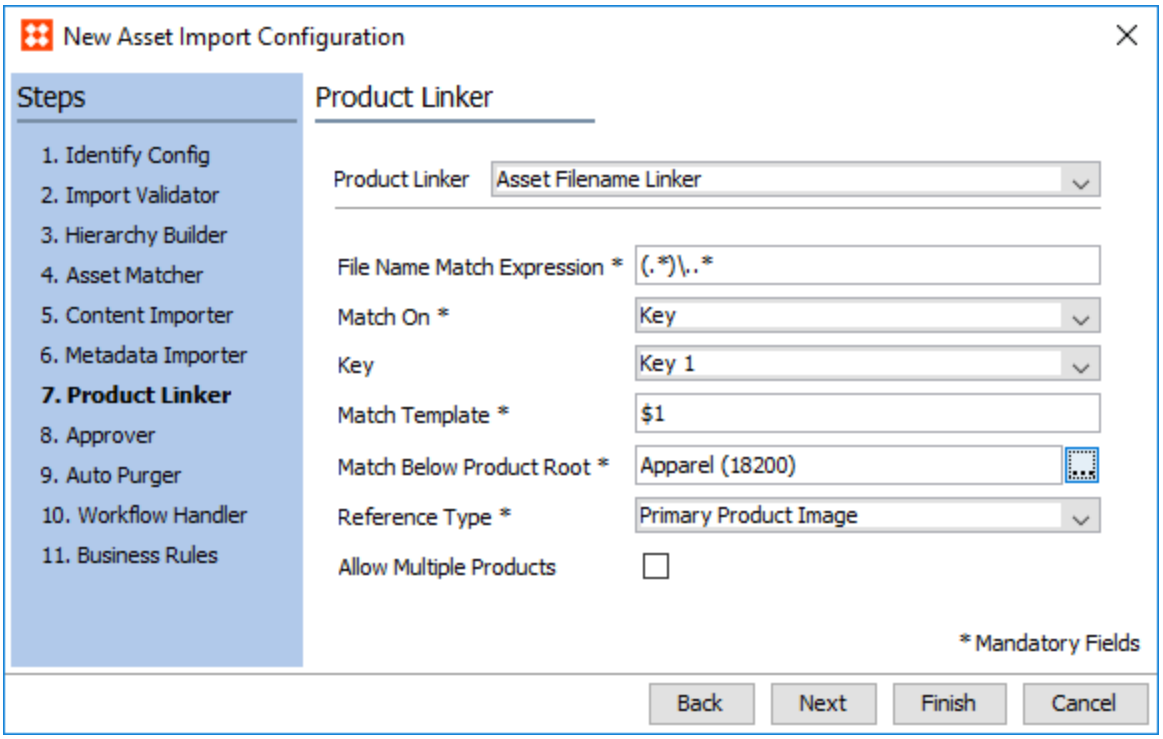
7. **Product Linker -** As this is an optional step for both configurations, the 'No Product Link' option is available in both wizards.

   The EIDI's 'Product Name Match Linker' configuration corresponds to the 'Asset Filename Linker', and offers identical configuration options.

   EIDI configuration:

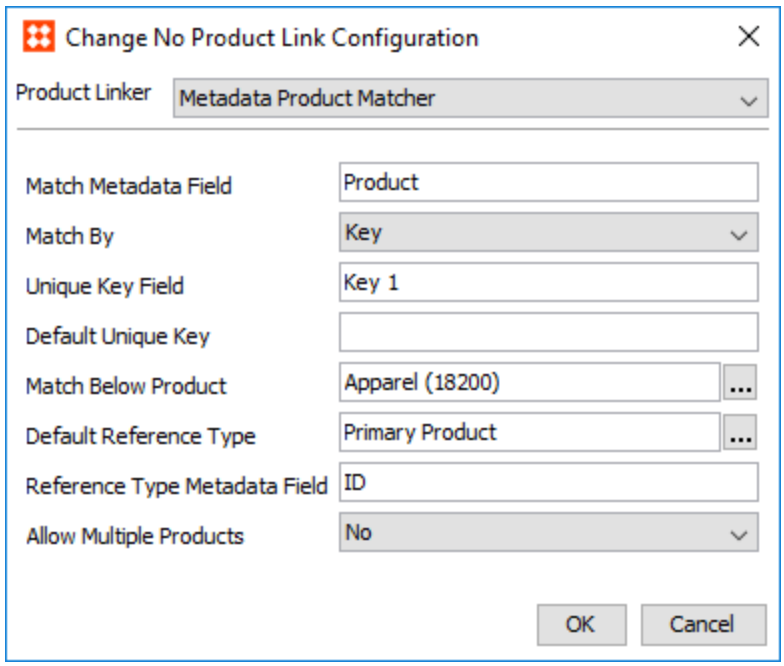


Asset Importer configuration:

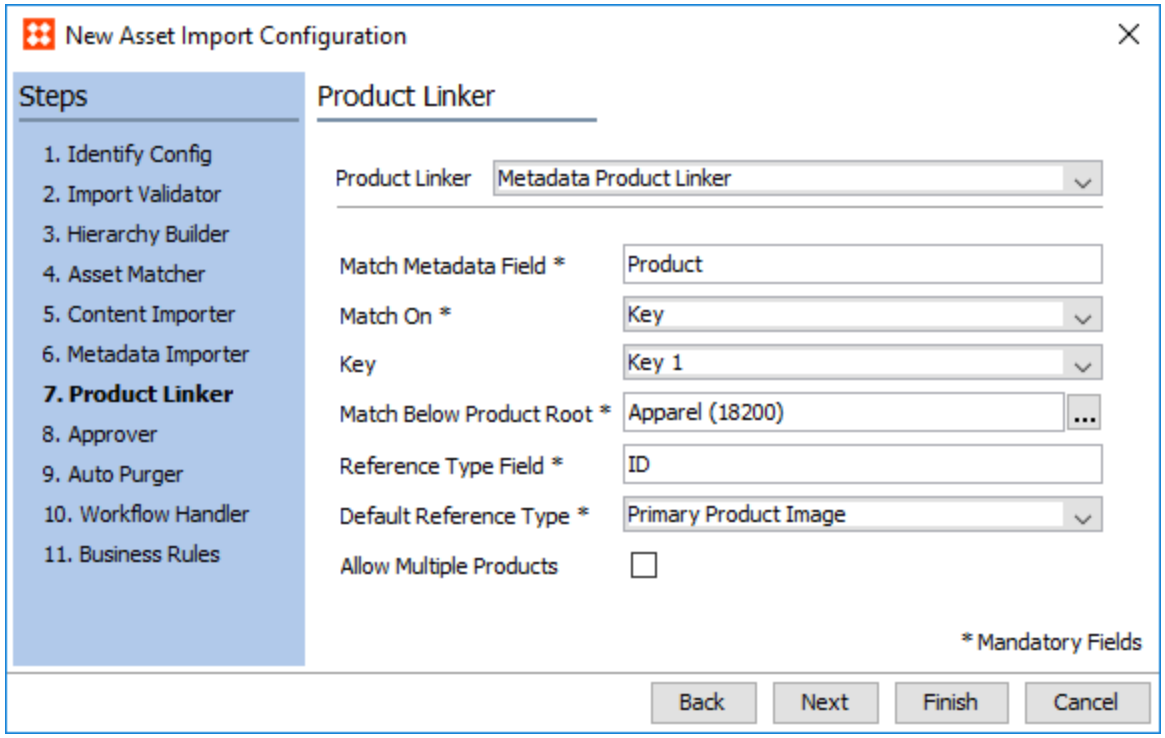


The EIDI's 'Metadata Product Matcher' configuration corresponds to the 'Metadata Product Linker', and offers nearly identical configuration options. The EIDI's 'Unique Key' and 'Default Unique Key' parameters were merged into the 'Key' parameter.

EIDI configuration:



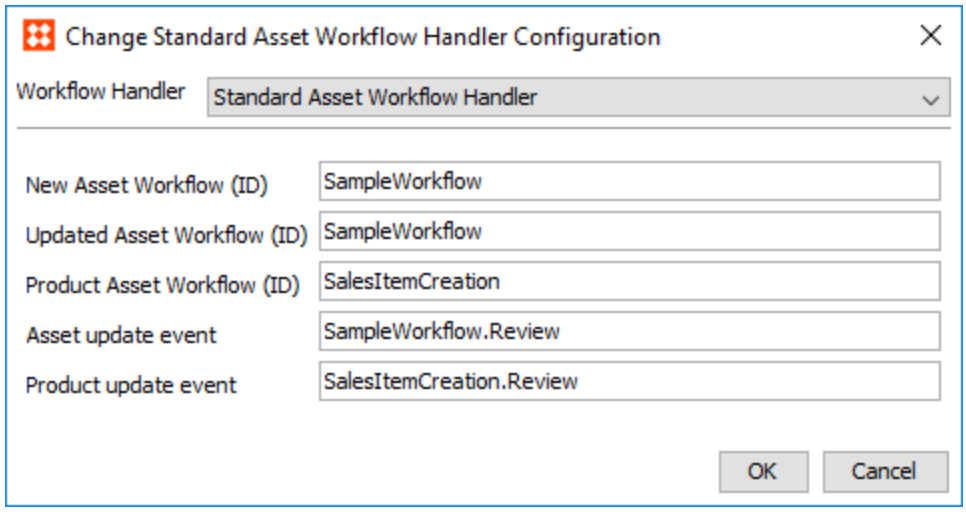
Asset Importer configuration:



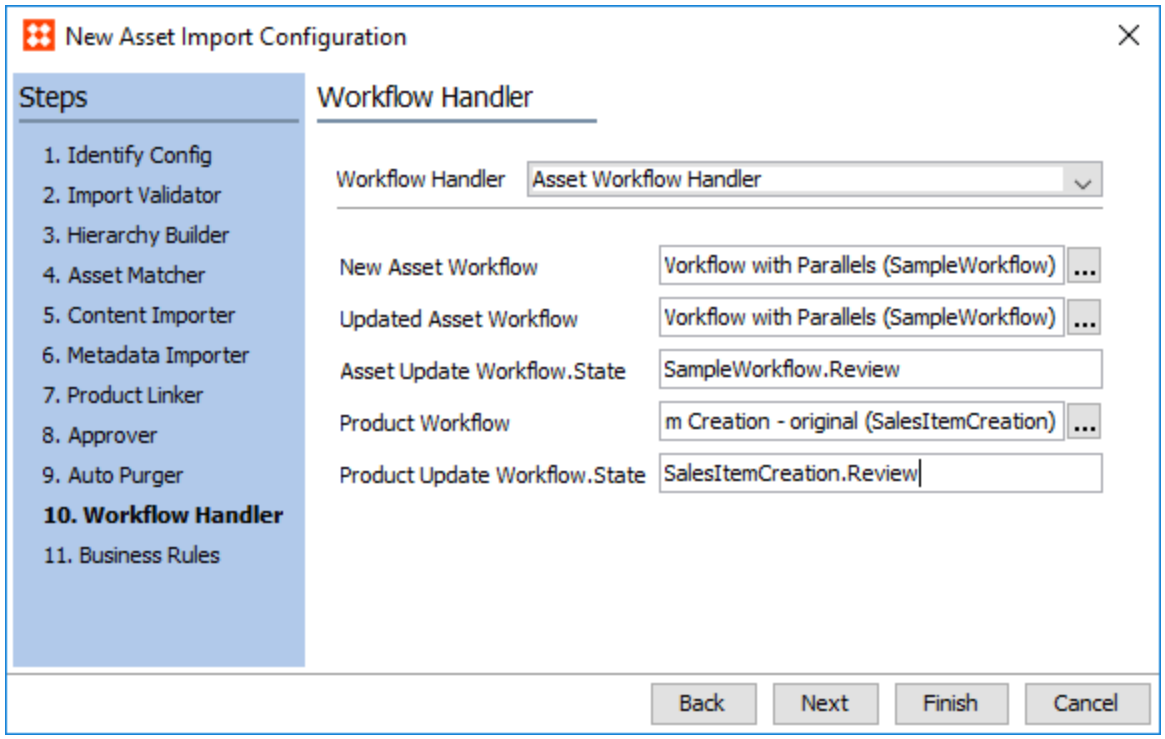
8. **Approver -** The Approver step is identical between both interfaces.
9. **Auto Purger -** The Auto Purger step is identical between both interfaces.

10. **Workflow Handler -** The Workflow Handler step offers the same options for both configurations, but has slightly different parameter names.
    - 'Product Asset Workflow (ID)' corresponds to 'Product Workflow'
    - 'Asset update event' corresponds to 'Asset Update Workflow.State'
    - 'Product update event' corresponds to 'Product Update Workflow.State.'

    EIDI configuration:



    Asset Importer configuration:



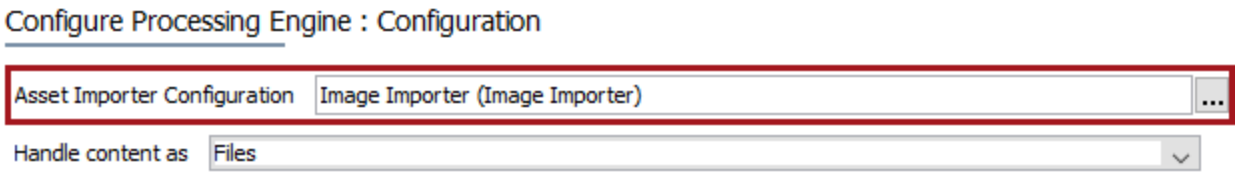
11. **Business Rules -** The Business Rules step is identical between both interfaces.

Inbound Integration Endpoint Configuration

Once the Asset Importer configuration has been created it can be used as the processing engine for an IIEP. To complete the migration, see the step-by-step configuration instructions for the IIEP detailed below.

1. **Identify Endpoint -** Does not require adjustments.
2. **Choose Receiver -** This should already be configured with a Hotfolder receiver, and therefore does not require any adjustments.
3. **Configure Endpoint -** This should already be configured with an Asset Importer processing engine, and therefore does not require any adjustments.
4. **Configure PreProcessor -** This should already be set to 'No pre-processing', and therefore does not require any adjustments.
5. **Configure Processing Engine -** As the core of the Asset Importer solution now resides within its own configuration, this step only contains those original configuration options specific to an IIEP solution: 'Receiver' and 'SubFolder Override.'

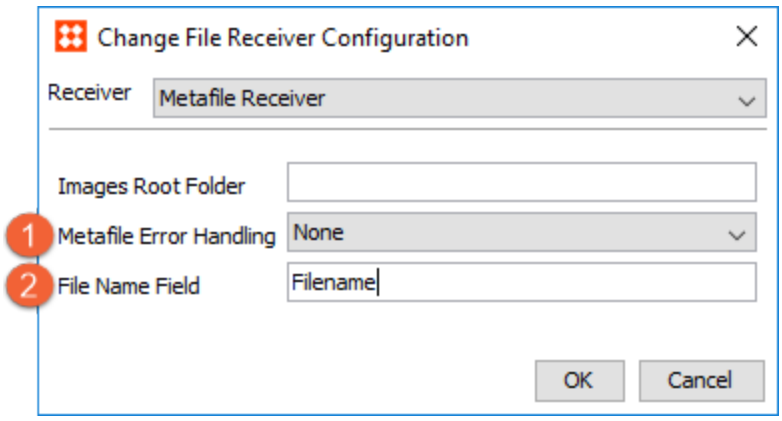
   Before configuring these two options, ensure that the relevant Asset Importer configuration is selected.



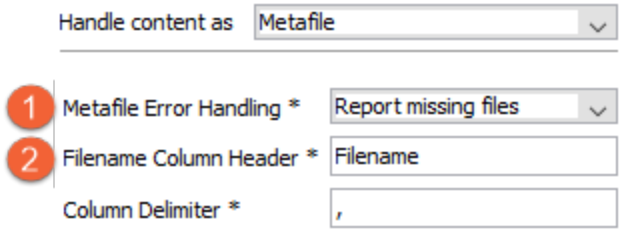
- **Handle content as -** This parameter is nearly identical to the original Receiver configuration, and provides the same four receiver options (albeit renamed): 'Files', 'Meta File', 'Zip File', and 'Zip Metafile.'
  - **Files -** Exactly the same as the EIDI option 'File Receiver.'
  - **Meta File -** A few options differ between the two interfaces. To begin, the 'Image Root' parameter is no longer necessary, and is not included in the Asset Importer configuration. Additionally, the 'Metafile Error Handling' parameter is the same except that the 'ExtraFiles' option is not available for Asset Importer. The Asset Importer 'Column Delimiter' parameter is required field that specifies what character should be used to separate each of the columns in the metadata file.

  See below images for how the parameters correspond between the two interfaces:

  EIDI configuration:



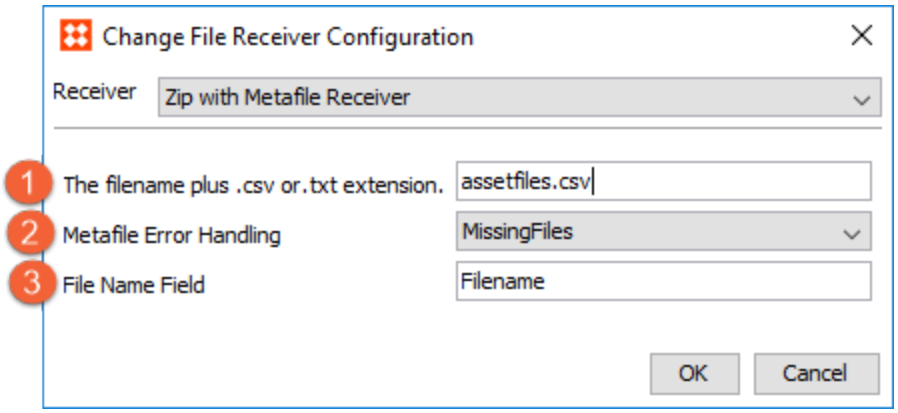
Asset Importer configuration:



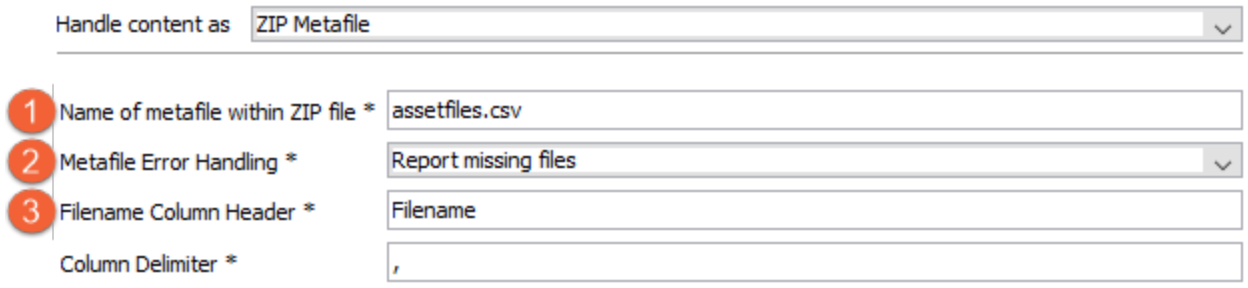
- **Zip File -** Exactly the same as the EIDI option 'ZIP Receiver.'
- **Zip Metafile -** A few options differ between the two interfaces. To begin, the Asset Importer's 'Metafile Error Handling' parameter is the same except that the 'ExtraFiles' option is not available for Asset Importer. The Asset Importer 'Column Delimiter' parameter is required field that specifies what character should be used to separate each of the columns in the metadata file.

See below images for how the parameters correspond between the two interfaces:

EIDI configuration:



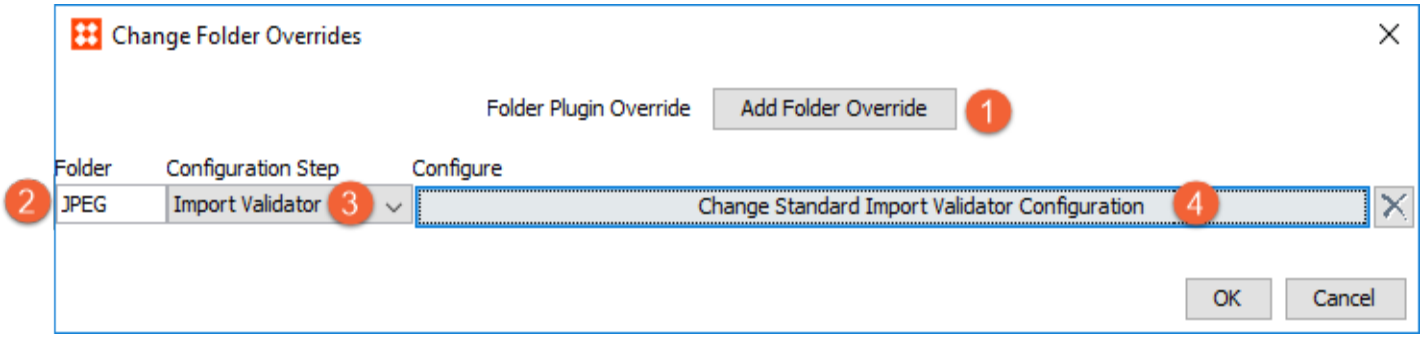
Asset Importer configuration:



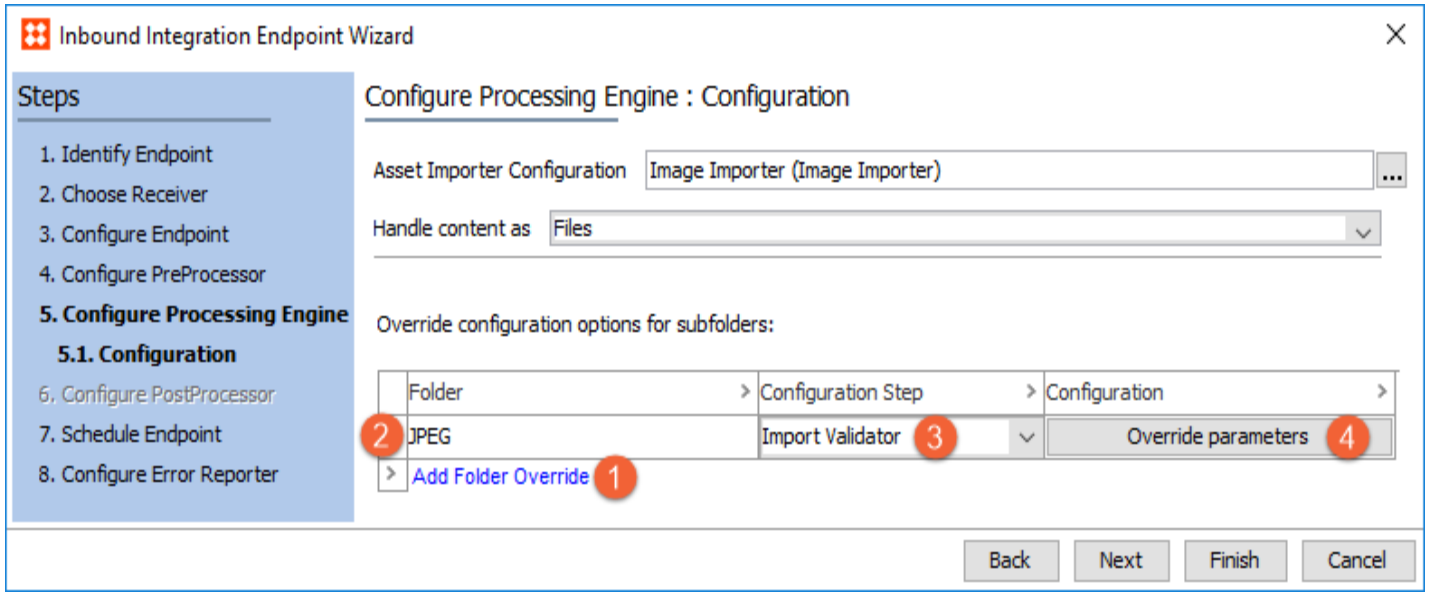
- **Override configuration options for subfolders -** The same options exist between both interfaces, but are arranged slightly differently.

  See below images for how the parameters correspond between the two interfaces:

  EIDI configuration:



  Asset Importer configuration:



6. **Schedule Endpoint -** Does not require adjustments.
7. **Configure Error Reporter -** The Log Handler and Notification Handler configurations do not apply in Asset Importer and are instead handled by the default IIEP Error Reporter.

For more information on configuring IIEPs for Asset Importer, see the **Asset Importer Inbound Integration Endpoint Configuration** section of the **Asset Importer** documentation.

Manual Asset Importer

Import Images and Documents wizard is used to import assets. Images are the most frequently imported asset, however, it is possible to import any electronic file using the same procedures as the ones used for images.

We recommend that users of the Import Images and Documents wizard have the following skills:

- An understanding of the basic concepts of STEP, of maintaining attributes and their values, and of creating and maintaining products, classifications or entities.
- Knowledge of the STEP system equivalent to basic STEP training
- Thorough knowledge of the files that are imported.
- Knowledge of dimensions and dimension points and whether or not you require assets to be dependent on dimensions, and how you would use such a set-up.
- Knowledge of MIME types and asset object types.
- Knowledge of asset reference types and its validity.

Also, ensure that your system is set up to accept appropriate file formats for imports of assets, and ensure that each of these formats is assigned an appropriate icon.

Preparing to Import Assets

Before starting the import process, be aware of the following:

- You can load assets and use either the file name as ID or use an automatically generated number. In either case, the file name is used as the name of the asset in STEP.

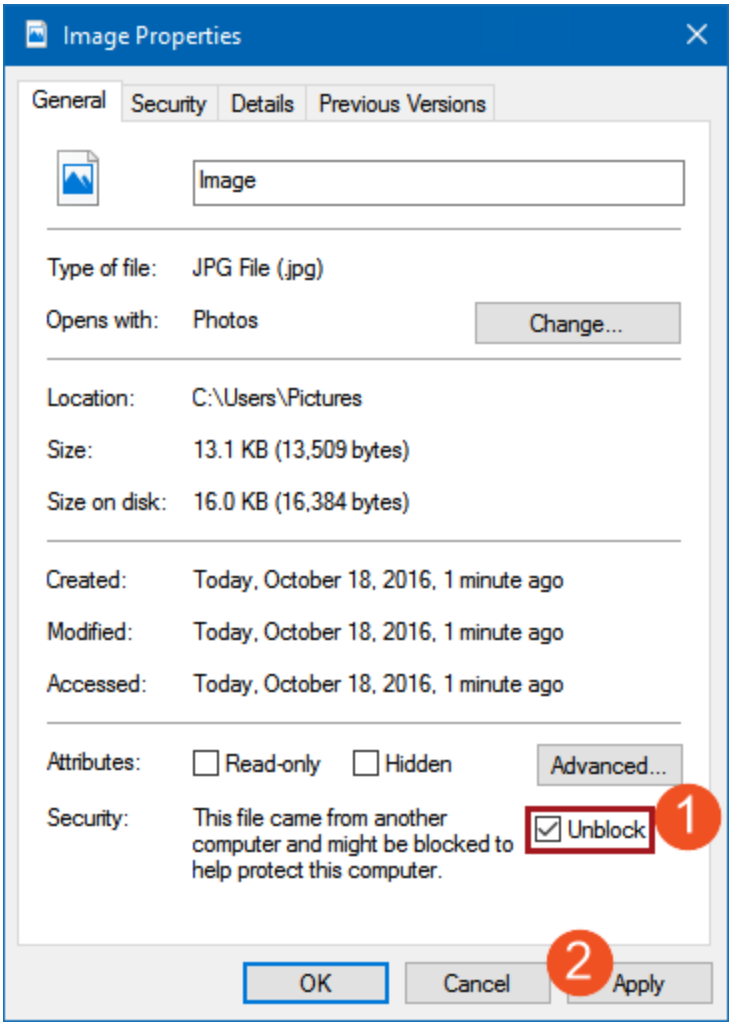
  Note: Asset IDs have a maximum length of 40 bytes, and names have a maximum of 80 bytes.

- Do not to use special characters or spaces in asset IDs or names.
- Although you can upload images of almost any file format, print publications in the system accept only TIFF or EPS file formats. You can upload other formats for non-print applications.
- You should check all images for accuracy and suitability before uploading them to STEP. This includes file size, resolution, one clipping path maximum, compression type, actual image size at 100 percent, if there are embedded low-res TIFF or EPS images, and so on.
- If you have a Photoshop image that has text in it, you must outline that text. You cannot have text with font calls within an image. For Illustrator files, you can also outline the text. If you choose not to do so, you must select the option to embed the font(s) within the EPS file.
- To ensure a smooth upload of images of different file types, you are strongly advised to use extensions to the image file names that match the file type, for example, .TIFF or .EPS.
- Avoid having assets in STEP that have different IDs but the same name. Technically, IDs must be unique, but names do not have to be unique. However, having different images with the same name can be confusing with the exception of country- or market-specific assets. In this case, you can import assets with the same ID and name into different contexts.

- Depending on your system security, downloaded images may be blocked. Blocked files will generate an asset creation failure when imported.

Unblocking Downloaded Image Files

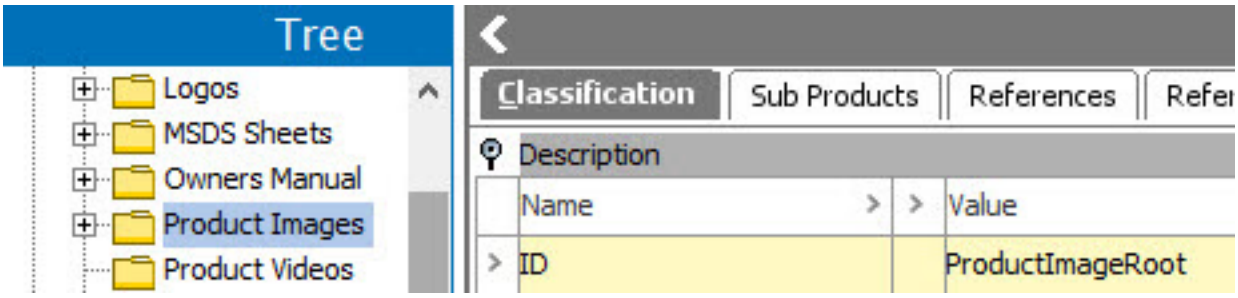
1. Right-click on the image, and select **Properties**.
2. In the Image Properties dialog, under Security, ensure that the **Unblock** checkbox is selected.
3. Select **Apply** to save the change.



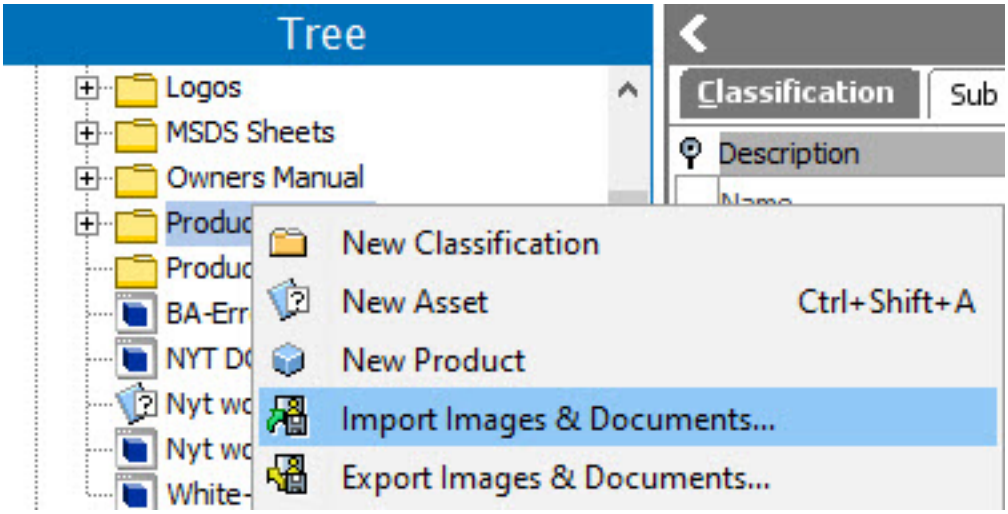
Import Images and Documents Wizard

Import of Images and Documents can be initiated in different ways.

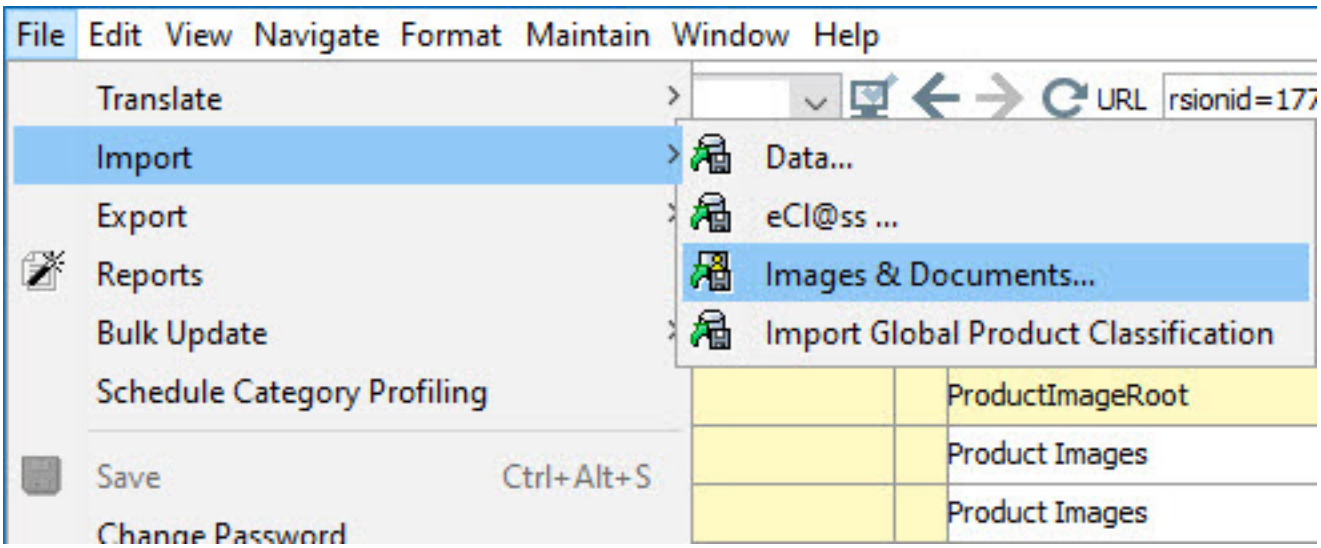
1. Determine the location of the assets that you want to import.
2. In **Tree** > **Classification** hierarchy, select the folder that will house the imported asset files.



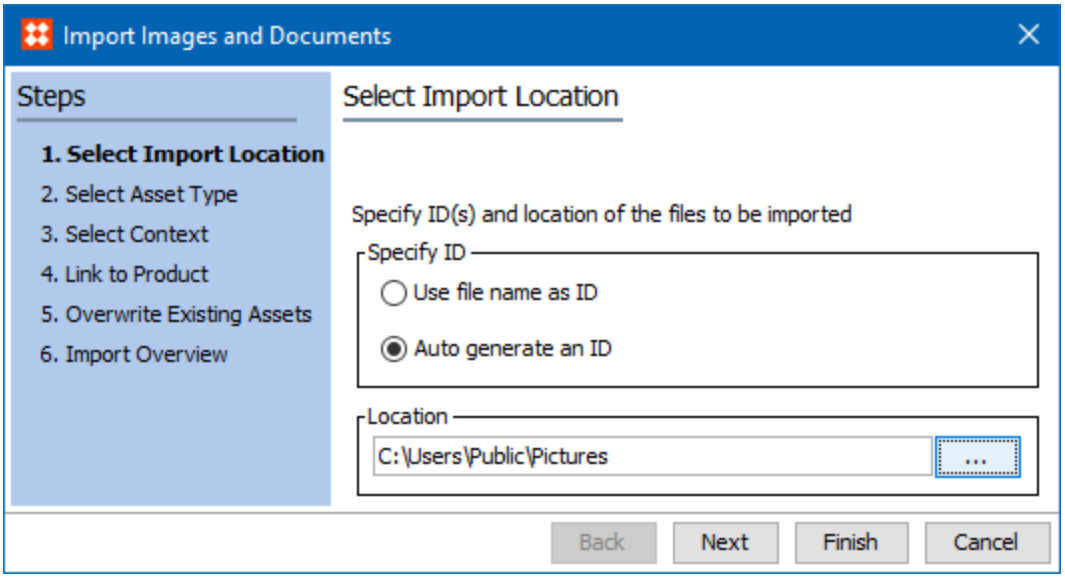
3. Choose one of the following options to start the wizard:
   - Either right-click the classification folder and select **Import Images & Documents** from the menu.



   - Or from the **File** menu, point to **Import**, and then select **Images & Documents**.



4. The **Import Images and Document** wizard opens. The wizard guides you through the required steps. Not all steps are necessary for every import. Often you can skip the later steps and proceed to the end to launch the import process.

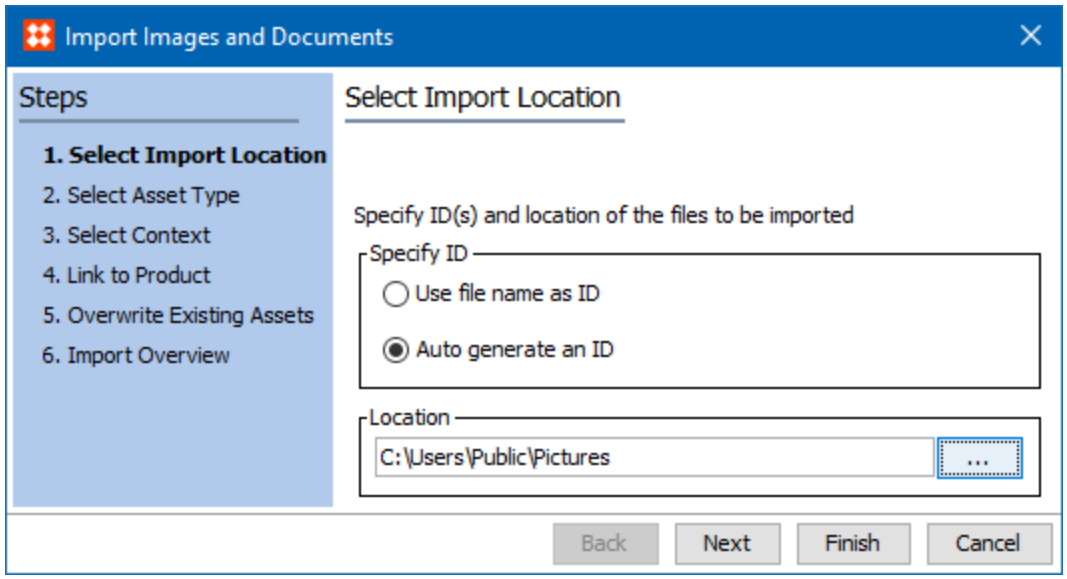


- **Select Import Location** allows you to determine the asset ID and choose the location of the objects to import.
- **Select Asset Type** allows you to set the asset object type to be used.
- **Select Context** allows you to set dimension dependencies.
- **Link To Product** allows you to create reference links between the imported assets and existing objects.
- **Overwrite Existing Assets** allows you to determine if the imported assets replace existing assets.
- **Import Overview** allows you to review a sampling of the assets to be imported.

5. The 'Asset Import Process' starts after clicking on **Finish** button in 'Import Images and Document' wizard. For more information on the asset import process, see the **Manual Asset Importer** topic in the **Digital Asset Exchange** documentation.

Select Import Location

In 'Select Import Location' screen, you specify where the file or folder is located that contains the assets to be uploaded into STEP. This is also where you specify whether or not the asset file name should be used as the asset's ID in STEP (as well as the name).



1. For **Specify ID**, select to use the asset's file name as the asset's ID in STEP or auto generate the STEP ID.

   Note: By default, "Auto generate an ID" is selected and once the Asset is imported, an automated ID is specified as an ID whereas the name will be the Asset file name itself.

   When selecting your ID specifications:

   - When 'Use file name as ID' option is selected, we can avoid duplicate of assets of same name being uploaded to STEP.
   - When 'Auto generate an ID' is selected, we cannot identify the duplicate assets being uploaded since the same asset will be present in STEP but with a different STEP ID.

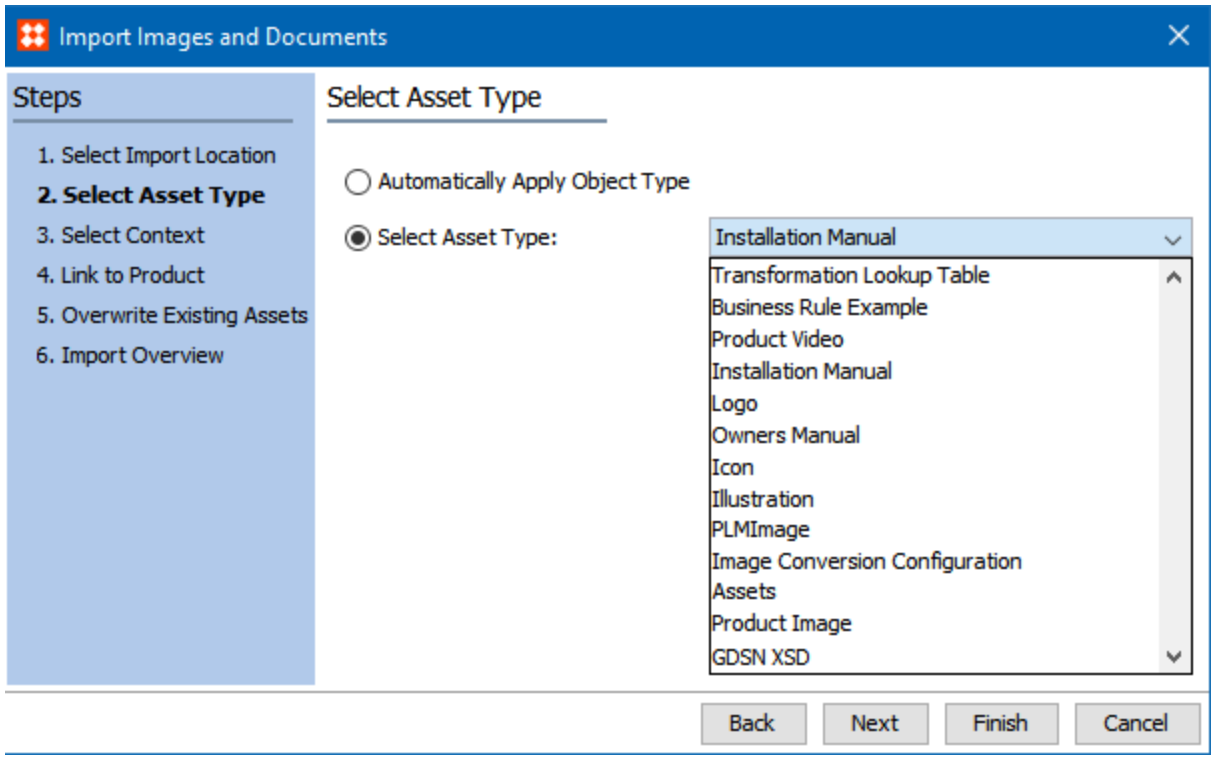
2. For **Location**, click the ellipsis button (...) and use the file browser to navigate to the location of the assets that will be uploaded. You can upload multiple assets by selecting a folder and not just an individual asset. All assets in the selected folder, and any assets in any child folders to the selected folder are uploaded. All assets within the selected folder are loaded to the location you specified before starting the wizard.

3. Click **Next** to continue.

   Note: The user will be able to select an asset which is either in the local desktop or in a network to which the local desktop has access.

Select Asset Type

In the Select Asset Type step, specify to manually apply an asset type to a specific object type, or if the system will determine the object type of each asset.



1. Choose an option to determine how the object type is assigned:
   - **Automatically Apply Object Type** assigns a STEP object type automatically based on the MIME types allowed. For more information, see **MIME Types** in the **System Setup / Super User Guide** documentation.
   - **Select Asset Type** allows you to manually apply the selected object type to all imported assets. The list of available asset types is determined by your system setup.

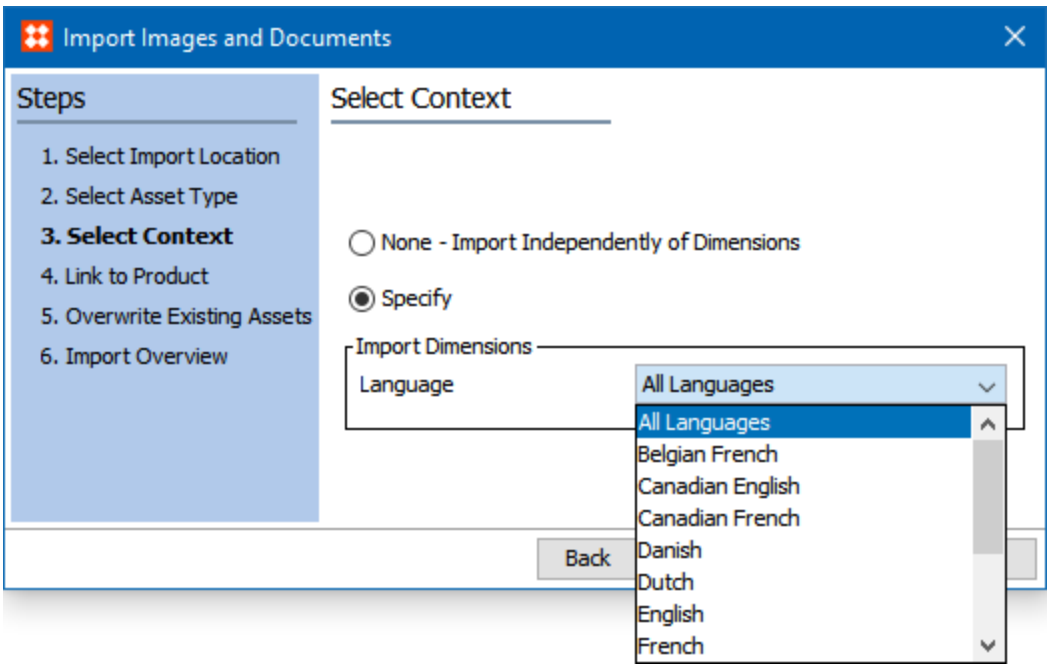
     Object types are supposed to be created under the Object Types and Structures > Assets in the System Setup Tree and only these object types will be available for the user to select under the dropdown list as shown in the above screenshot. For more details on how to create or maintain an Object type, see the **Object Maintenance in Tree** topic of the **Getting Started** documentation.

   Note: STEP Workbench may be configured to automatically recognize the file type. However, selecting the Asset Type ensures the item can be assigned to your product successfully.

2. Click **Next** to continue or click **Finish** to start the import process without specifying any further parameters.

Select Context

In 'Import Images and Documents' wizard, step '3. Select Context' you to specify any dimension dependencies. This is useful when loading illustrations that are essentially the same but are, for example, language or country specific. You might also specify a context when publishing a catalog that includes illustrations with embedded texts, which requires different language versions of the illustration.



1. Determine if dimensions should be considered for assets being imported:
   - **None - Import Independently of Dimensions** means the assets are loaded in a global context.
   - **Specify** allows you to select the one or more dimensions from the list in the **Import Dimensions** area.

   Note: Common setup for assets is to use the language dimension. The available options are based on your system setup which may allow selection of more than one dimension.

   Dimensions should be set up in the System Setup tab, so that the same is available in the dropdown list. To know more on how to set up Dimensions, see the **Contexts** topic in the **System Setup** documentation.

2. Click **Next** to continue or click **Finish** to start the import process without specifying any further parameters.

Creating Context-Sensitive Assets

To load an asset which is dependent on a country dimension, for example, when your system is only set up to have the language dimension for assets, you can upload that image for a context using a specific country. From the asset's right-click menu, use the **Create Local Content of Asset** and then use the **Replace Asset Content** option. This is done on an individual basis. It keeps the image IDs the same, and all the links from modules and/or products are maintained to the appropriate version of the image.

When an asset has been replaced, a major revision will be created with the changed image. The major revision enables the option to revert to an older revision of the asset.

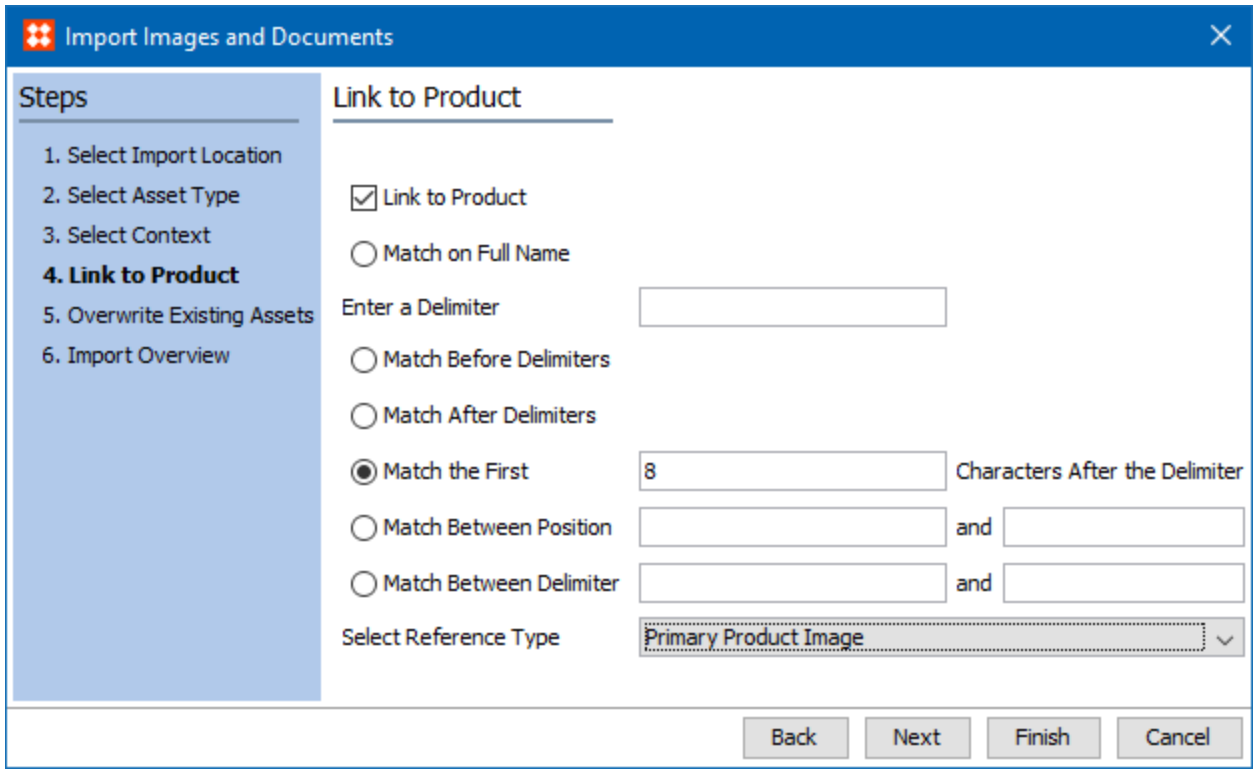
Using context-sensitive assets in STEP'n'design

Loading context-sensitive assets using the same asset ID allows publication swaps in STEP'n'design, for example, to swap both product data and language-relevant images.

When an asset is imported for the first time with language dependency, then the asset will be available only for the context in which it was imported. When the same asset is viewed in a different context, then the message will show which says "Asset has no content". Similarly, the System Properties flipper in the right pane will show no attribute values which eventually means that the asset is empty.

Link To Product

In 'Import Images and Documents' wizard, step '4. Link To Product' you can specify a link to product via a number of matching options.



1. Check **Link to Product** to create links and then select an option to determine the required reference / link type. All other fields of this STEP are activated only when Link to Product option is checked.
   - **Match on Full Name** means the system attempts to match the file name of the asset (minus the extension) to a STEP ID. For all successful matches, a link is created.
   - **Enter a Delimiter** allows you to add one or more delimiter characters in order to find a match between STEP ID and the asset file name. This field is enabled only when selecting one of the option 'Match Before Delimiters', 'Match After Delimiters' or 'Match the First Characters After the Delimiters.'

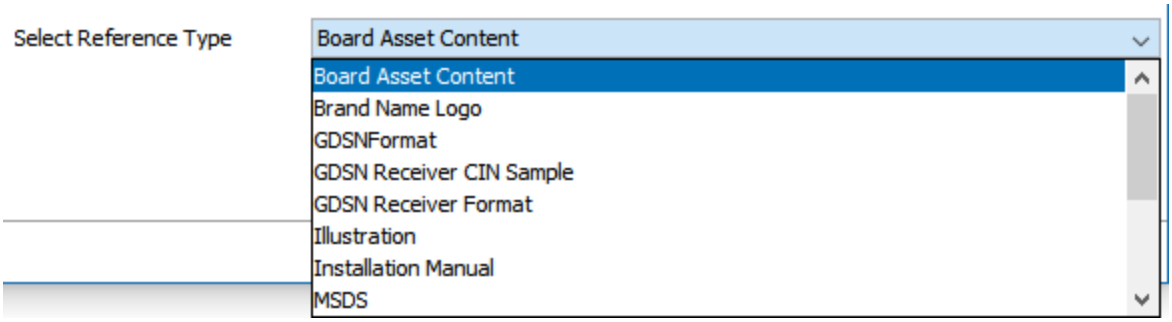
   Note: Leaving Link to Product unchecked means no references / links are created.

2. Determine the how to use the delimiter by choosing one of the following options:
   - **Match Before Delimiters** If the asset's file name is 17268_AS-56, and the delimiter is set to the underscore character (_), then the system tries to find the product with the ID of 17268.
   - **Match After Delimiters** If the asset's file name is UK_177628, and the delimiter is set to the underscore character (_), then the system tries to find the product with the ID of 177628.

- **Match the First Characters After the Delimiter** If the asset's file name is UK_9014514-ASH, and the delimiter is set to the underscore character (_), and the number of characters to match is set to 7, then the system tries to find the product with the ID of 9014514.
- **Match Between Position** Enter the start and end character positions to use for making the match to the STEP ID. If the asset's file name is UK_447628ASP, and the starting position is set to 4 and the ending position is set to 11, then the system tries to find the product with the ID of 447628AS.
- **Match Between Delimiter** Enter the start and end delimiters to use for making the match to the STEP ID. If the asset's file name is UK_44762877_EAS, and the starting delimiter is set to an underscore (_), and the ending delimiter is also set to the underscore, then the system tries to find the product with the ID of 44762877.

4. **Select Reference Type** to determine a single reference type to use for the link between the asset and the object. The content of the list varies depending on the system setup. All assets loaded in this session use the same selected reference type.

   For more information on creating a reference types, see the **Reference and Link Types** topic of the **System Setup / Super User Guide** documentation.



5. Click **Next** to continue or click **Finish** to start the import process without specifying any further parameters.

Creating Additional Reference Links

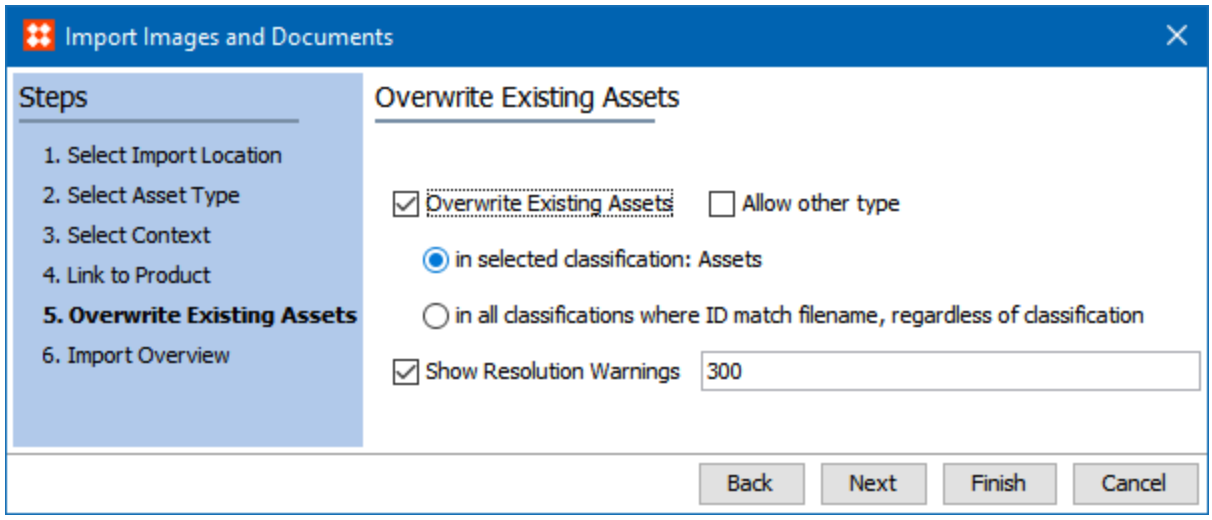
When more references are required, use one of the following ways to create them:

- Manually link any asset to any existing object via any existing reference type in STEP on the asset's References tab.
- Create a STEPXML file to create links between assets and products and load that file via the Data Import Manager wizard.
- Create a tab delimited or Excel file that holds the object ID and the asset ID, and create multiple reference links and load that file via the Data Import Manager wizard.

For more information on the Data Import Manager wizard, see the **Creating a Data Import** documentation.

Overwrite Existing Assets

In 'Import Images and Document' wizard, step '5. Overwrite Existing Assets' allows you to specify how replacement of assets on import should be handled.



1. **Overwrite Existing Assets** replaces assets that already exist in STEP with assets being imported. Selecting to overwrite enables the following options:
   - **Allow other type** enables replacing assets when the file extension of the imported asset does not match extension of the asset in the database. This option is unchecked by default.

     Example: An image with ID: Art123 exists in the database as png image. An image is being imported with name Art123.jpg. The image will be replaced if Allow other type is checked, else it will be ignored.

   - **in selected classification** means exiting assets are only overwritten when they are located in the originally selected classification folder.

     If 'Assets' is a selected classification, while importing an image Art123.jpg with replacement option, then process searches for an image Art123 only in classification 'Assets.'

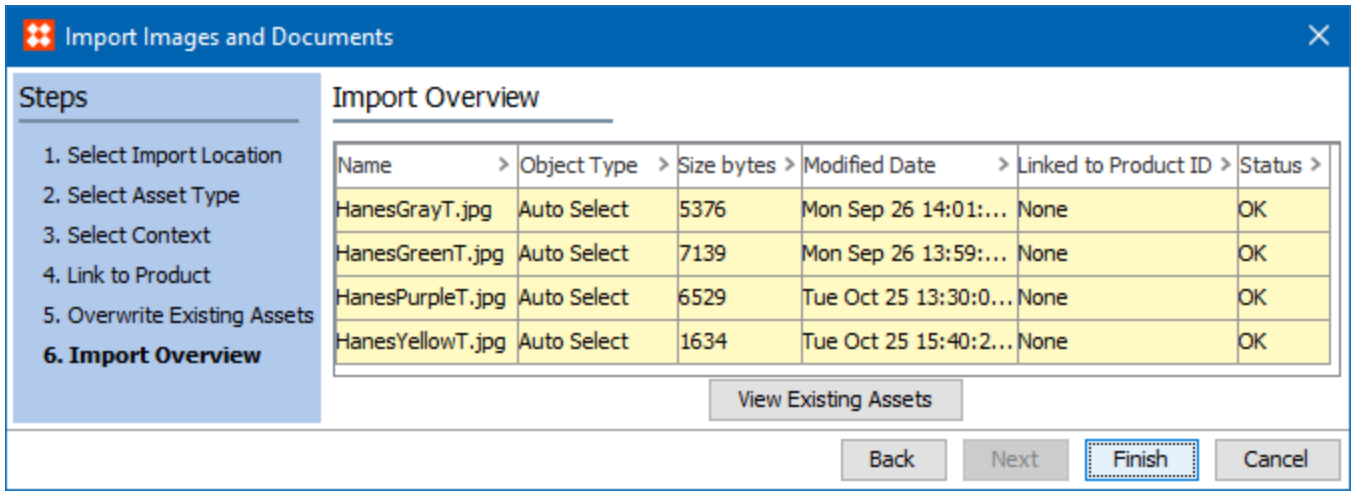
   - **in all classifications where ID match filename, regardless of classification** means existing assets are overwritten wherever they are found in STEP.

     While importing an image Art123.jpg with replacement option, then process searches for an image Art123 in all classification available.

2. **Show Resolution Warnings** determines the minimum resolution requirement of the imported assets. All assets are imported, but if the resolution of an image is lower than specified, a warning is reported.
3. Click **Next** to continue.

Import Overview

In 'Import Images and Documents' wizard, step '6. Import Overview' you can review some of the assets that you are about to load - provided that you selected a folder and not an individual file.

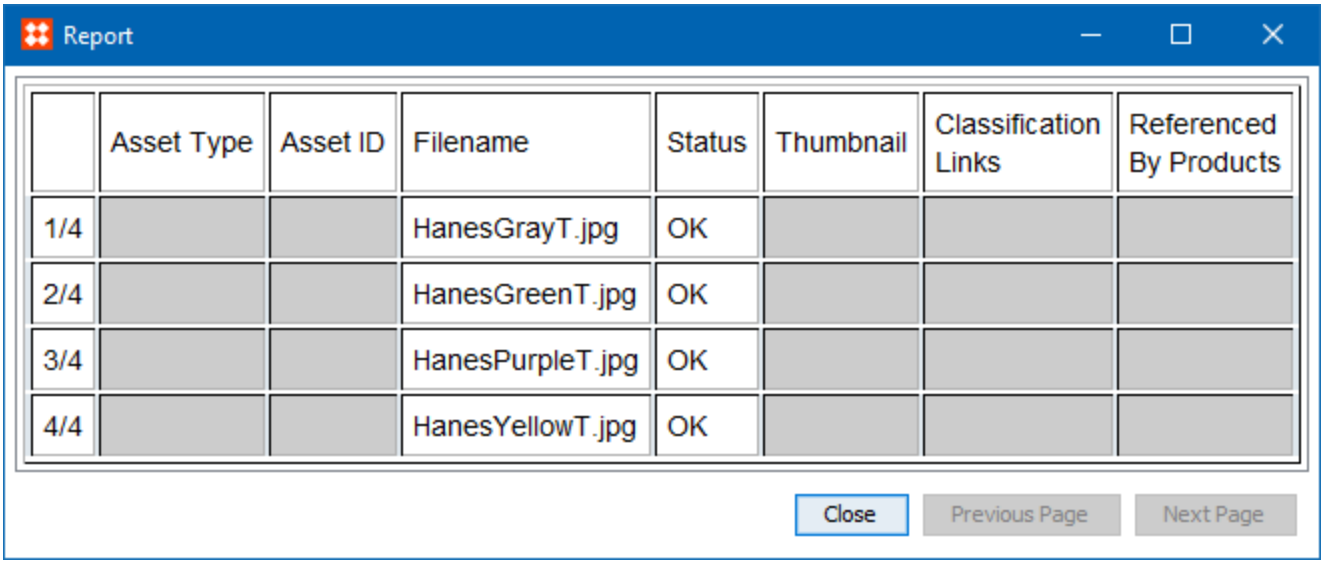


1. Review a sample of the assets to be imported. Depending on the number of assets found in the selected folder, not all will be displayed. When importing only a few, all are displayed.

   The Import Overview shows you the following information about the file about to be imported:

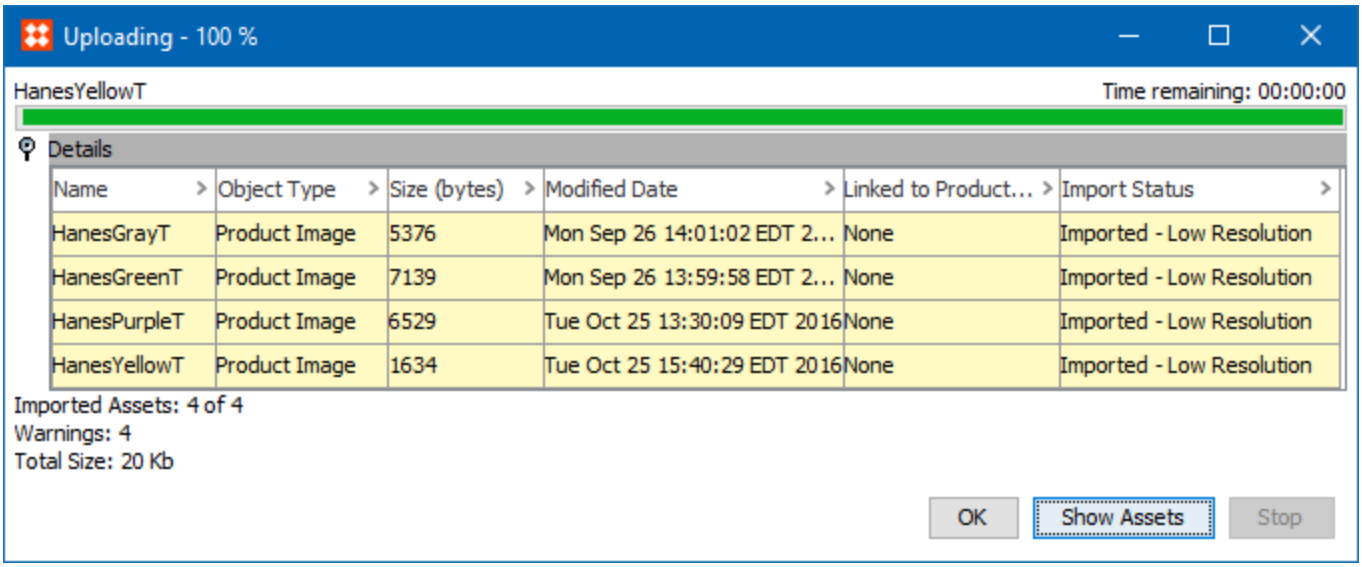
   - Name
   - Object type
   - Size bytes
   - Modified Date
   - Linked to Product ID: File Name / Product ID is displayed if a match exists. "None" is displayed when no match is found.
   - Status = Skipping when the image already exists and you selected not to overwrite; or Overwriting when you chose to overwrite existing images and an image with the same name exists

2. Click the **View Existing Assets button** to view any existing assets that may be overwritten. Click **Close** to close the report window.



Note: If there are more than 20 assets that are being imported, then the Next Page and Previous Page buttons are activated. By default there are totally 20 images that are shown in one page and the remaining in the next page.

3. If necessary, use the **Back** button to correct any errors displayed.
4. Click **Finish** to start the asset import process.
5. The **Import Status** window displays the progress of the import. As each asset is loaded, the screen updates with the percentage complete and the number of warnings.



- Click the **Details** flipper to view the status of and any warning for each imported asset.
- Click **Show Assets**, to see a multi-view display of the imported assets and their location in the hierarchy.

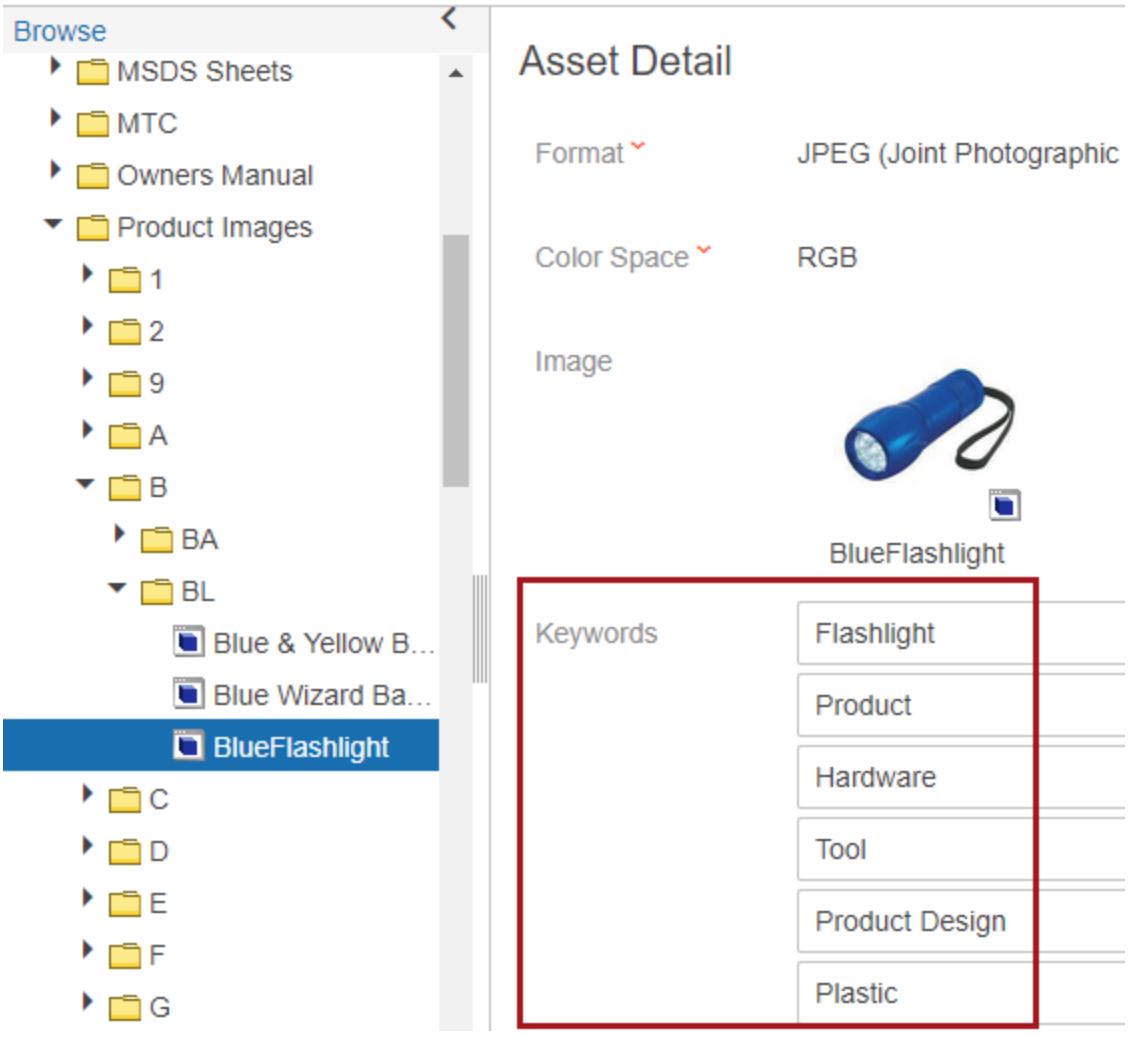
- Click **Stop** to halt the import process.
- Click **OK** to close the import process dialog.

Asset Analyzer

Asset Analyzer is an add-on component for STEP that leverages machine-learning capabilities to automatically tag image assets with keywords through visual analysis. This automated metadata enrichment enables enhanced search capabilities, improved categorization, and better search engine optimization (SEO) for web publishing.

The Asset Analyzer component integrates STEP directly with the Google Cloud Vision API. Users can easily send assets to the Google Cloud Vision API by performing bulk updates or executing business actions on assets and/or on products with referenced image assets. To simplify the setup, these bulk update and business action operations are installed, and largely pre-configured, when the Asset Analyzer is first installed.

The Google Cloud Vision API analyzes the images and automatically computes tags based on their visual characteristics. These tags are then stored in STEP and can be used to search images, export metadata about an image for the web, and improve the classification of products according to their referenced images. The Asset Analyzer can be used from within the Web UI, workbench, and during imports—i.e., any location where bulk updates and JavaScript business rules can be run.



Additionally, the Asset Analyzer component helps users to:

- Enrich data-poor images by running images through an analytics algorithm to gather relevant metadata for each image, then assigning metadata values to that image based on the value's certainty score
- Make newly enriched images more searchable
- Enhance matching and linking by using metadata on assets

Prerequisites for Using the Asset Analyzer

- Your STEP server must be able to communicate externally with the specified Google Cloud Vision API server
- A Google Cloud Vision API account and API key is required to use this functionality. For more information, contact your Stibo Systems representative. The following websites also provide instructions for enabling the Google Cloud Vision API: https://cloud.google.com/vision/docs/before-you-begin and https://cloud.google.com/vision/docs/auth.
- The executing user for Asset Analyzer business rules and bulk updates must have permissions to write values to the specified Keywords attribute

Topics Covered in This Guide

This guide / documentation section covers the following topics:

- Configuring the Asset Analyzer - Setup Group Items and Business Rules
- Configuring the Asset Analyzer - Additional Configurations
- Using the Asset Analyzer

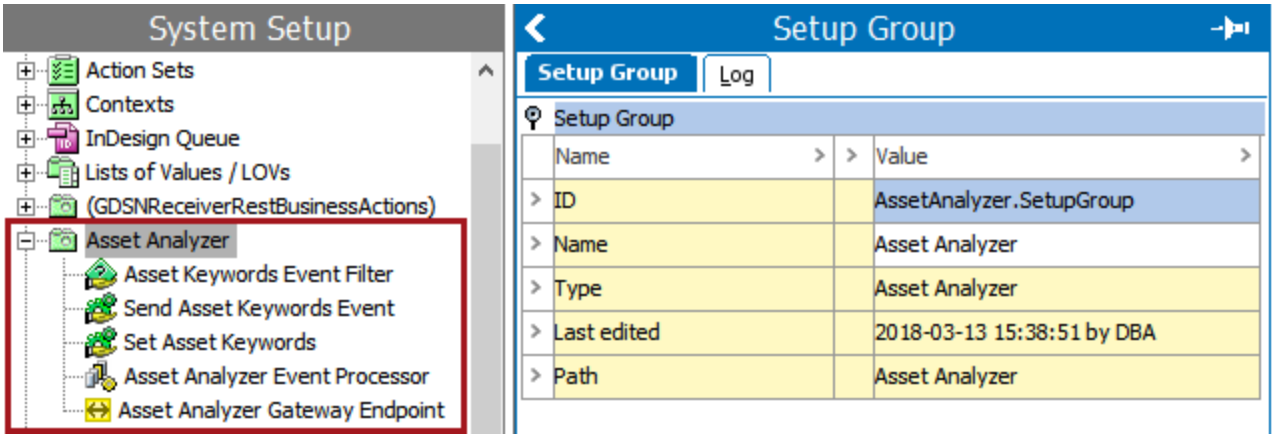
Configuring Asset Analyzer - Setup Group Items and Business Rules

When the Asset Analyzer component is first installed, the majority of the configurations necessary to run the solution are installed automatically. This pre-configuration means that setup is only done once, making the solution easy to set up and use.

Asset Analyzer Setup Group

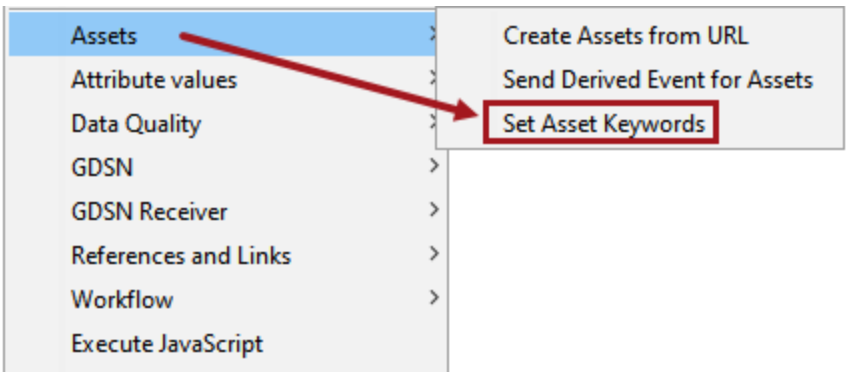
A setup group named **Asset Analyzer** (AssetAnalyzer.SetupGroup) is created upon installation, which contains the following items:

- Set Asset Keywords - business action
- Send Asset Keywords Event - business action
- Asset Keywords Event Filter
- Asset Analyzer Event Processor
- Asset Analyzer Gateway Endpoint



Set Asset Keywords – Business Action

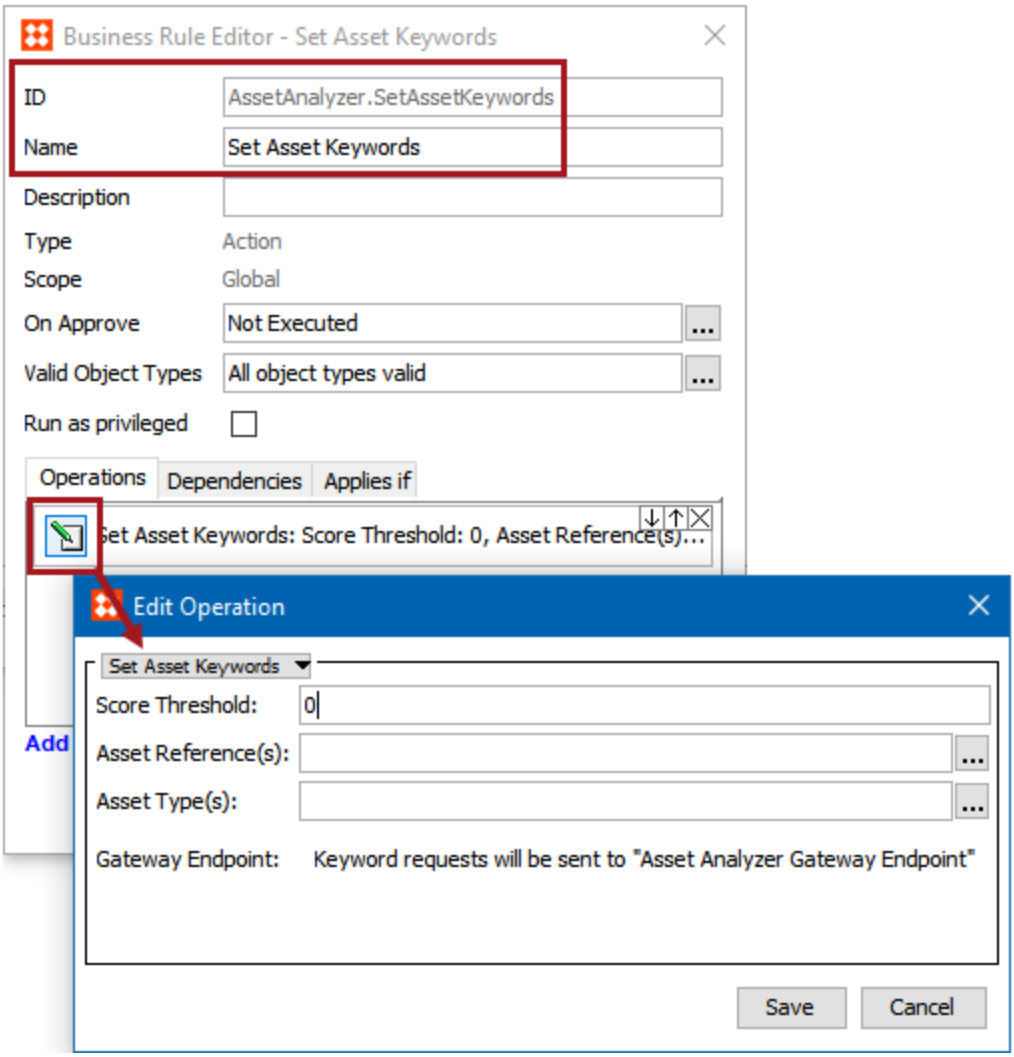
The **Set Asset Keywords** (AssetAnalyzer.SetAssetKeywords) action handles the communication to and from the Google Cloud Vision API using the Asset Analyzer Gateway Endpoint. The **Set Asset Keywords** operation is used to send assets to the Google Cloud Vision API, return keywords, then set the keywords on the asset, storing them in the Keywords (AssetAnalyzer.Keywords) description attribute. It is used for synchronous operations, meaning that each operation has to wait for another operation to complete before it can begin.



Optional Configurations

Though Set Asset Keywords is automatically created upon installation of the Asset Analyzer, additional configurations are needed if you wish to change and/or add any of the following behaviors:

- Add a Description to the rule
- Change the behavior of On Approve. By default, the selection is **Not Executed**.
- Limit the selection of valid object types for the rule. By default, all object types are valid.
- Run as privileged



In the Edit Operation dialog, the following optional parameters may also be set:

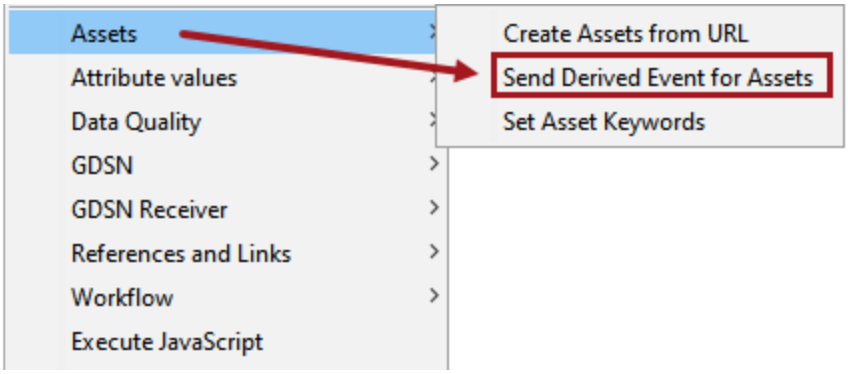
- **Score Threshold:** Keywords returned by the Google Cloud Vision API have a score that indicates the confidence level of the returned keywords. If a keyword score falls below this threshold, the keyword is ignored. The default value set to 0, meaning that all keywords will be returned, unless a limitation is placed on the maximum returned results in System Settings; see **Configuring the Asset Analyzer - Additional Configurations** for more information.
- **Asset Reference(s):** This parameter is *optional* when executing the business action on asset(s).

Note: If executing the business action on an object with referenced assets, e.g., a product, this parameter is required. In this instance, the asset reference type(s) must be specified so the system knows which reference type(s) to check for linked assets. These linked assets will then be sent to the Google Cloud Vision API for analysis.

- **Asset Type(s):** This parameter is optional. If set, the asset being operated on (either the current asset or the referenced asset) must match this type. If it does not match the type, the asset will not be sent to the Google Cloud Vision API for analysis.
- **Gateway Endpoint:** This is a read-only parameter that displays the gateway endpoint selected under Asset Analyzer Settings in System Settings. If no endpoint is specified in System Settings, then a warning is displayed. For more information about the Asset Analyzer Settings, see **Configuring the Asset Analyzer - Additional Configurations**.

Send Asset Keywords Event – Business Action

The Asset Analyzer business action **Send Asset Keywords Event** (AssetAnalyzer.SendAssetKeywordsEvent) is used by the **Send Derived Events for Assets** operation, which is accessible from the **Assets** category in the 'Edit Operation' dialog for business rules.



The Send Asset Keywords Event raises the derived event **Asset Keywords Event** and is used for asynchronous operations. By default, it is configured to use the **Asset Analyzer Event Processor,** which is also automatically created upon installation of the Asset Analyzer (more information about this event processor follows below).

One use case where this action would be used is for setting asset keywords asynchronously, in a non-blocking fashion; i.e. it does not need to wait for another operation to complete. For example, as part of an import, it could be used to trigger the setting of asset keywords without blocking the import while the asset keywords are retrieved. In order to do this, the Asset Analyzer Event Processor is used to run the **Set Asset Keywords** business action (detailed in the following section). The event processor is configured to listen for a particular derived event, via an event filter. The workflow could then be configured to use the **Send Derived Event for Assets** action to trigger the event processor in the background.

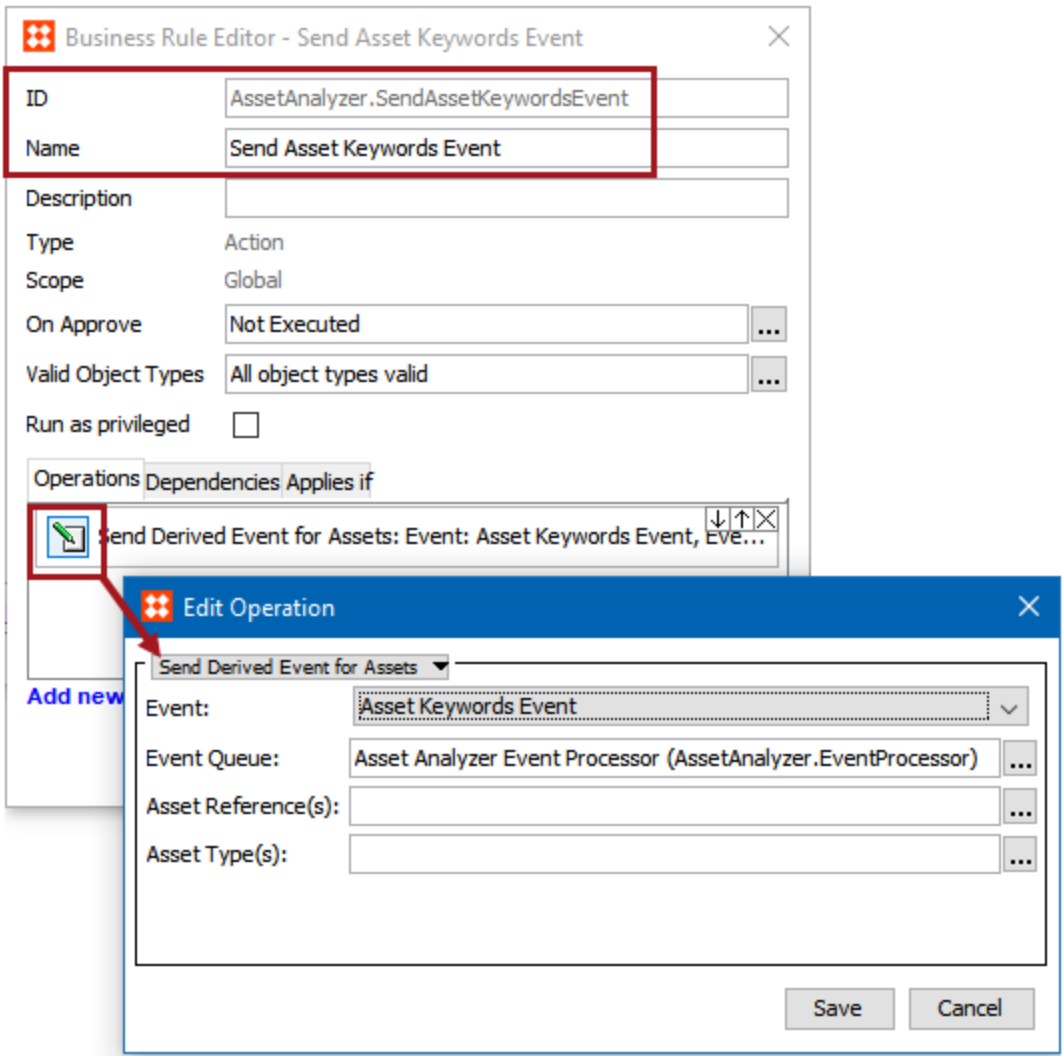
Optional Configurations

Though Send Derived Events is automatically created upon installation of the Asset Analyzer, additional configurations are needed if you wish to change add and/or add any of the following behaviors:

- Add a Description to the rule
- Change the behavior of On Approve. By default, the selection is Not Executed.
- Limit the selection of valid object types for the rule. By default, all object types are valid.
- Run as privileged

- Specify the asset reference types and/or asset types that are valid for the business action. By default, all asset types are valid.

Note: If running the business rule from an object to which the assets are linked via an asset reference type (e.g., a product object), then at least one asset reference type must be specified so the system will know which referenced assets to fetch.



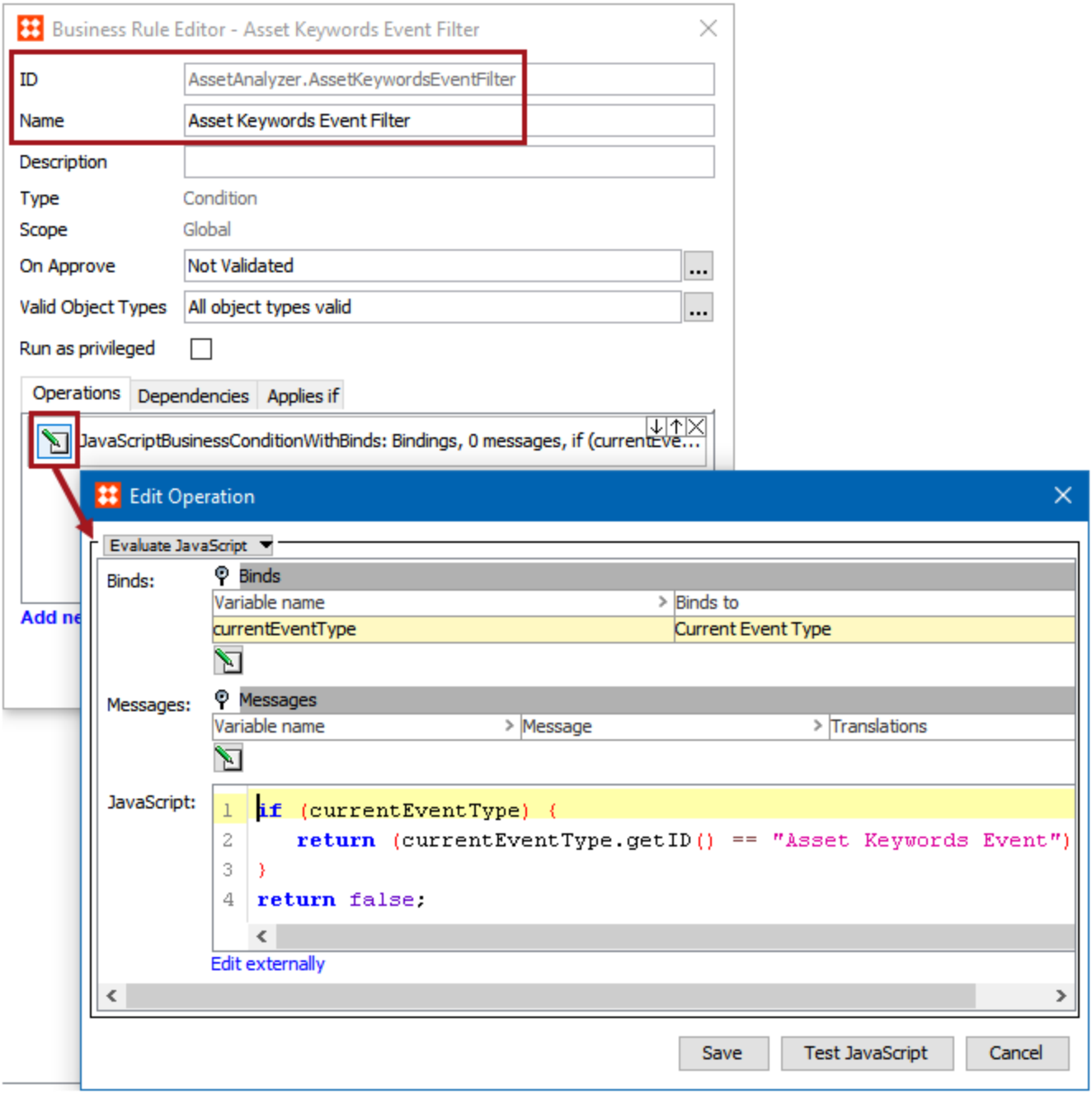
Asset Keywords Event Filter

The **Asset Keywords Event Filter** (AssetAnalyzer.AssetKeywordsEventFilter) is an Execute JavaScript business condition that binds to the derived event **Asset Keywords Event**. The Asset Keywords Event is automatically created under System Settings > **Derived Events** when the Asset Analyzer is installed.

Optional Configurations

Though the Asset Keywords Event Filter is automatically created upon installation of the Asset Analyzer, additional configuration is needed if you wish to change and/or add any of the following behaviors:

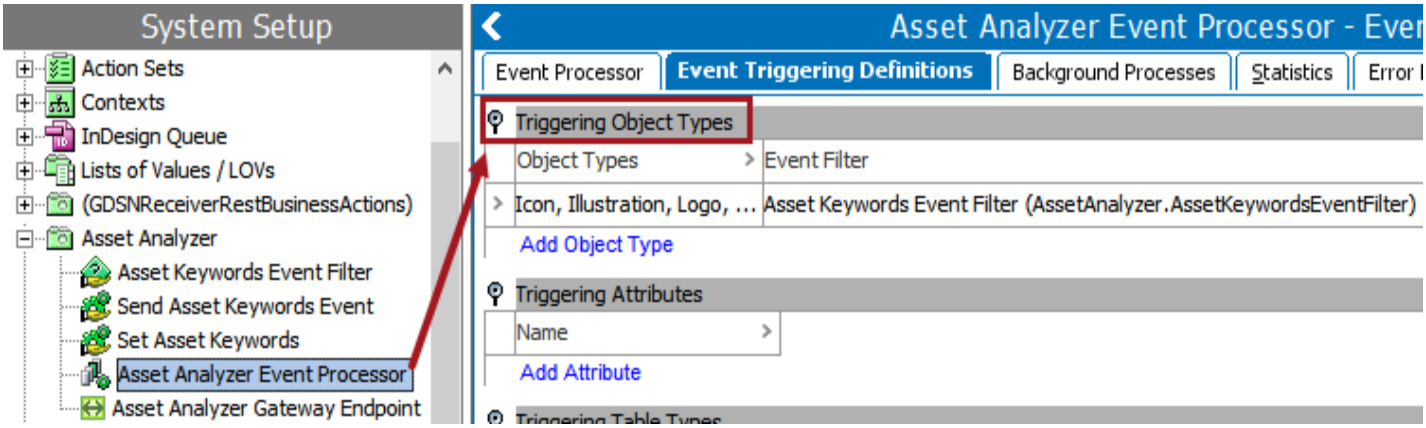
- Add a Description to the rule
- Change the behavior of On Approve. By default, the selection is Not Validated.
- Limit the selection of valid object types for the rule. By default, all object types are valid.
- Run as privileged
- Add additional binds (e.g., Logger) and/or add a message



Asset Analyzer Event Processor

The Asset Analyzer Event Processor (AssetAnalyzer.EventProcessor) is a standard event processor that executes the **Set Asset Keywords** business action.

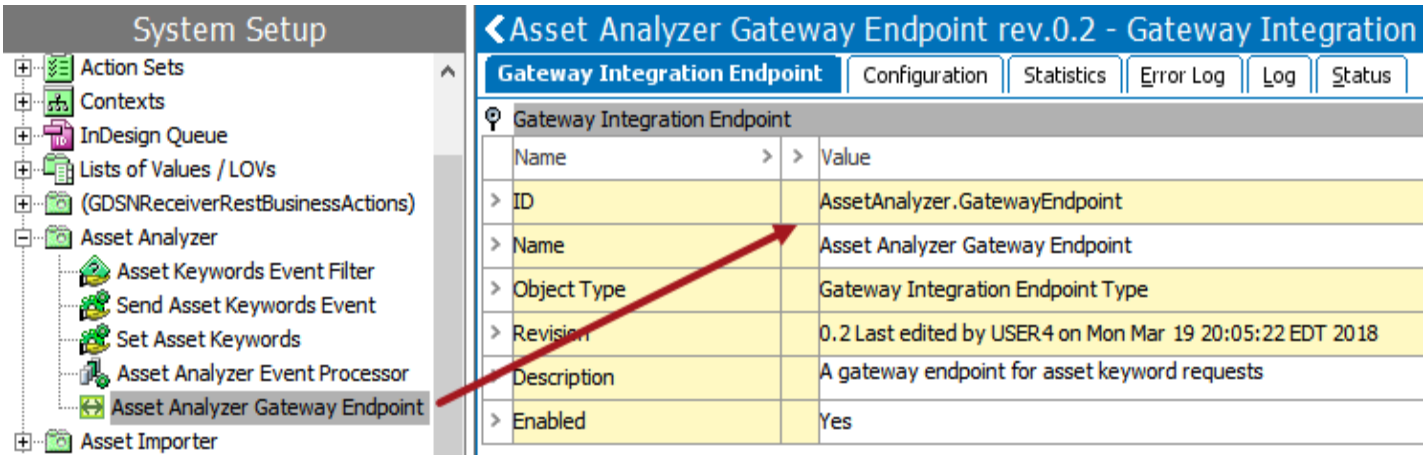
By default, all asset object types are valid for **Triggering Object Types**, though it is recommended that only image asset types are made valid. The default Event Filter is the **Asset Keywords Event Filter** business condition.



Though the event processor is functional upon installation, there are a multitude of additional configurations that can be made, such as number of events to batch, days to retain events, scheduling, and so forth. For more information on the available configuration options for event processors, see the **Event Processors** section of the **System Setup** / **Super User Guide** documentation.

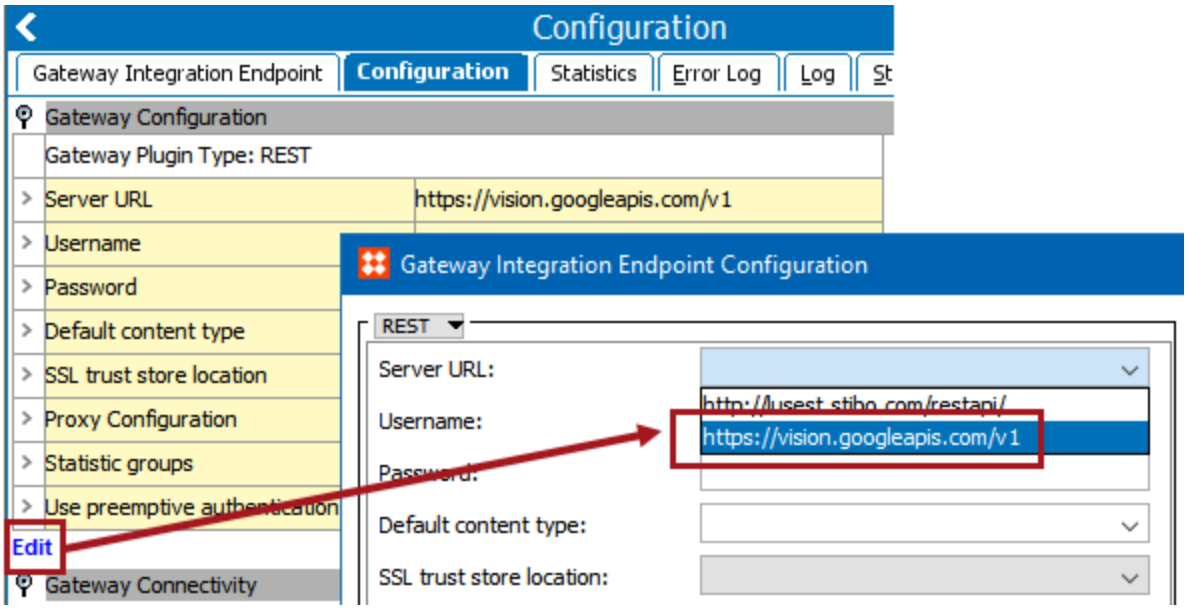
Asset Analyzer Gateway Endpoint

The **Asset Analyzer Gateway Endpoint** (AssetAnalyzer.GatewayEndpoint) enables STEP to communicate with the Google Cloud Vision API. The endpoint must be running to enable the solution will work.



The URL to the Google Cloud Vision API service must be specified in the **Server URL** field of the Gateway Integration Endpoint Configuration, using a REST plugin.

Note: The Google Vision API URL must first be added to your sharedconfig.properties file before it will be available in the Server URL dropdown. The below screenshot shows a sample URL and may not be the same server address that will ultimately be obtained from Google. For more information on the configuration of Gateway Integration Endpoints, see the **Gateway Integration Endpoints** section of the **Data Exchange** documentation.



Sharedconfig Properties file

The Google vision API URL is obtained from Google, and must first be added to your sharedconfig.properties file.

If no other REST URLs are already available in the file, you will enter a string similar to the following:

```
RESTGateway.ServerURL=googlevision=https://vision.googleapis.com/v1
```

Since the RESTGateway.ServerURL is a comma separated list of name / value pairs, if other REST URLs are available, they will be entered after the other URLs, similar to the following:

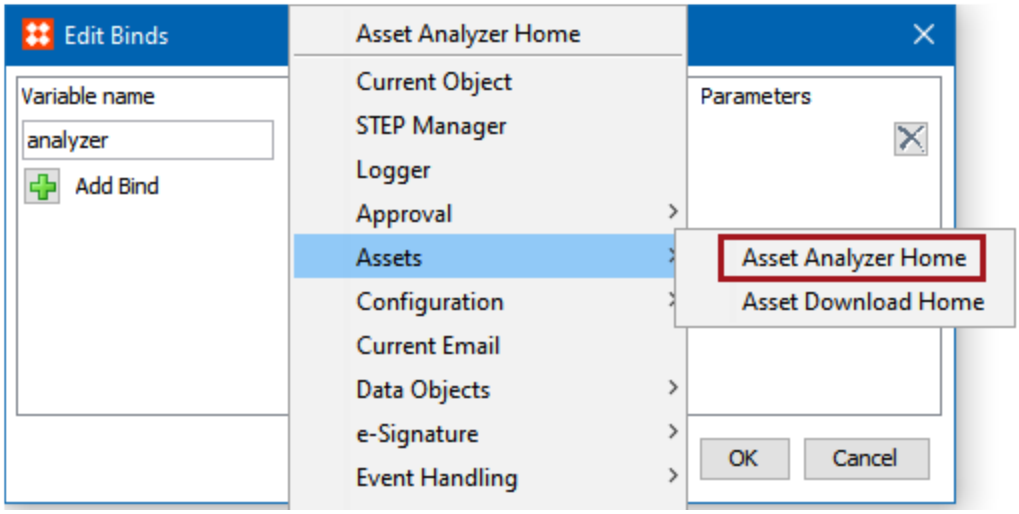
```
RESTGateway.ServerURL=01=http://lusest.stibo.com/restapi/,
googlevision=https://vision.googleapis.com/v1
```

```
#=============================================================================#
#RestGateway Proxy Server Settings
#=============================================================================#
RESTGateway.ServerURL=01=http://lusest.stibo.com/restapi/,googlevision=https://vision.googleapis.com/v1
RESTGateway.ProxyConfiguration.1=testProxyConfig1,10.64.8.253,808,username,password
RESTGateway.ProxyConfiguration.2=testProxyConfig2,10.64.9.253,64,user10,password1
```

Public JavaScript API methods to get and set asset keywords

Two public API JavaScript methods are also installed with the Asset Analyzer to handle scenarios outside of those covered by the other two asset keyword business actions, such as performing operations based on the returned keywords and their score. These new methods are **getAssetKeywords** and **setAssetKeywords**. Both are used

with the **Asset Analyzer Home** bind, which is located under the **Assets** category for Execute JavaScript business actions. Both methods analyze the asset and return the keywords found. The setAssetKeywords method sets the relevant keywords to the Keywords Attribute. The getAssetKeywords method returns the keywords found, but does not set them.



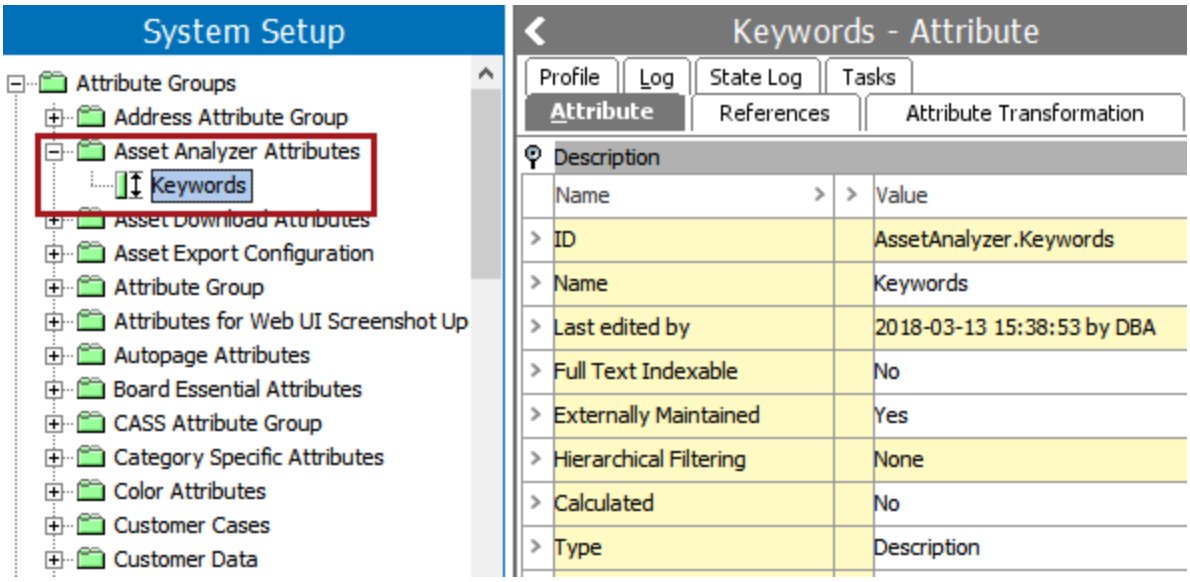
For more information on the STEP Scripting API, see the **JavaScript in STEP** section of the **Resources Materials** documentation.

Configuring Asset Analyzer - Additional Configurations

When the Asset Analyzer component is first installed, additional items are created in the workbench for configuration in addition to the business rules, event filter, event processor, and gateway endpoint that are created in the Asset Analyzer Setup group. This topic explains the additional configurations required to enable the Asset Analyzer functionality.

Keywords Attribute

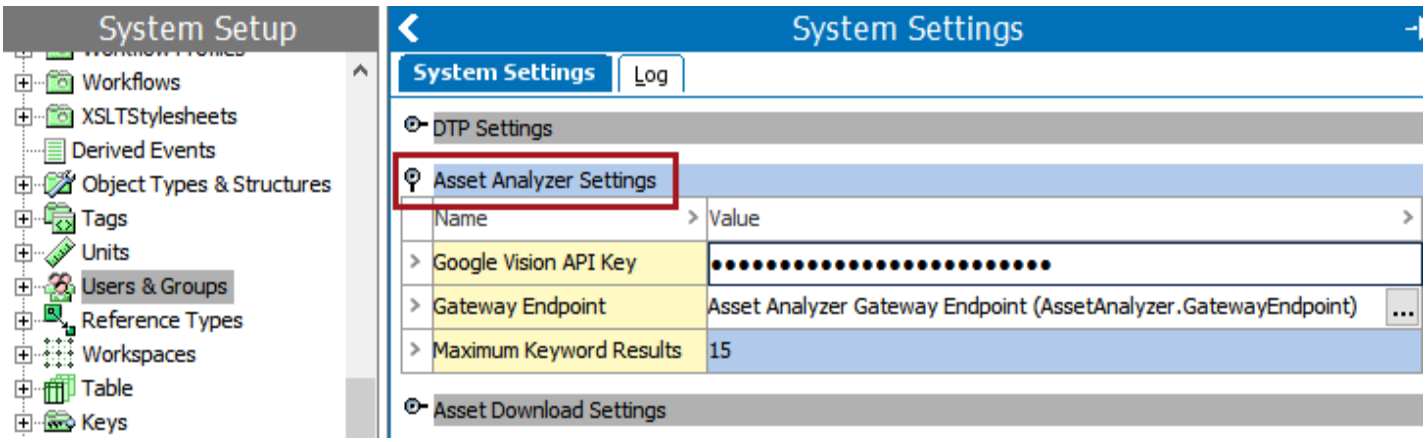
A multi-valued description attribute named **Keywords** (AssetAnalyzer.Keywords) is created along with an attribute group named Asset Analyzer Attributes (AssetAnalyzer.Attributes) when the Asset Analyzer is installed. This attribute holds all keywords returned by the Google Cloud Vision API. By default, this attribute is valid on all asset object types, though the object types can be limited by removing them from the Asset Analyzer component model. See the subsection on the 'Asset Analyzer Component Model' below for more information.



System Settings

Three settings are available under Asset Analyzer Settings in Users & Groups > System Settings:

- **Google Vision API Key:** This field is used to authenticate requests to the Google Cloud Vision API. To use the Set Asset Keywords functionality in the Asset Analyzer component, you must have a valid Google Vision API Key, which is obtained from Google.
- **Gateway Endpoint:** By default, this is the Asset Analyzer Gateway Endpoint, which is created upon installation of the Asset Analyzer.
- **Maximum Keyword Results:** This is the maximum number of keywords that can be returned after the asset is analyzed. The default is 15.



Asset Analyzer Component Model

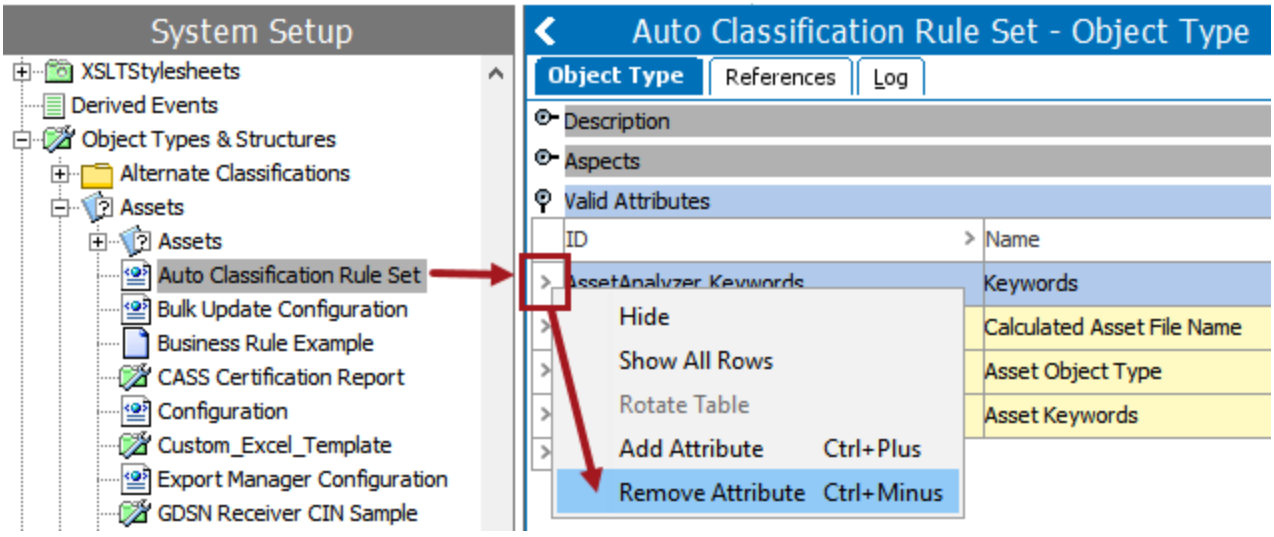
The Asset Analyzer component model enables the specification of:

- The attribute used to store keywords, which is, by default, Keywords (AssetAnalyzer.Keywords)
- The asset object types that the Keywords attribute is valid for.

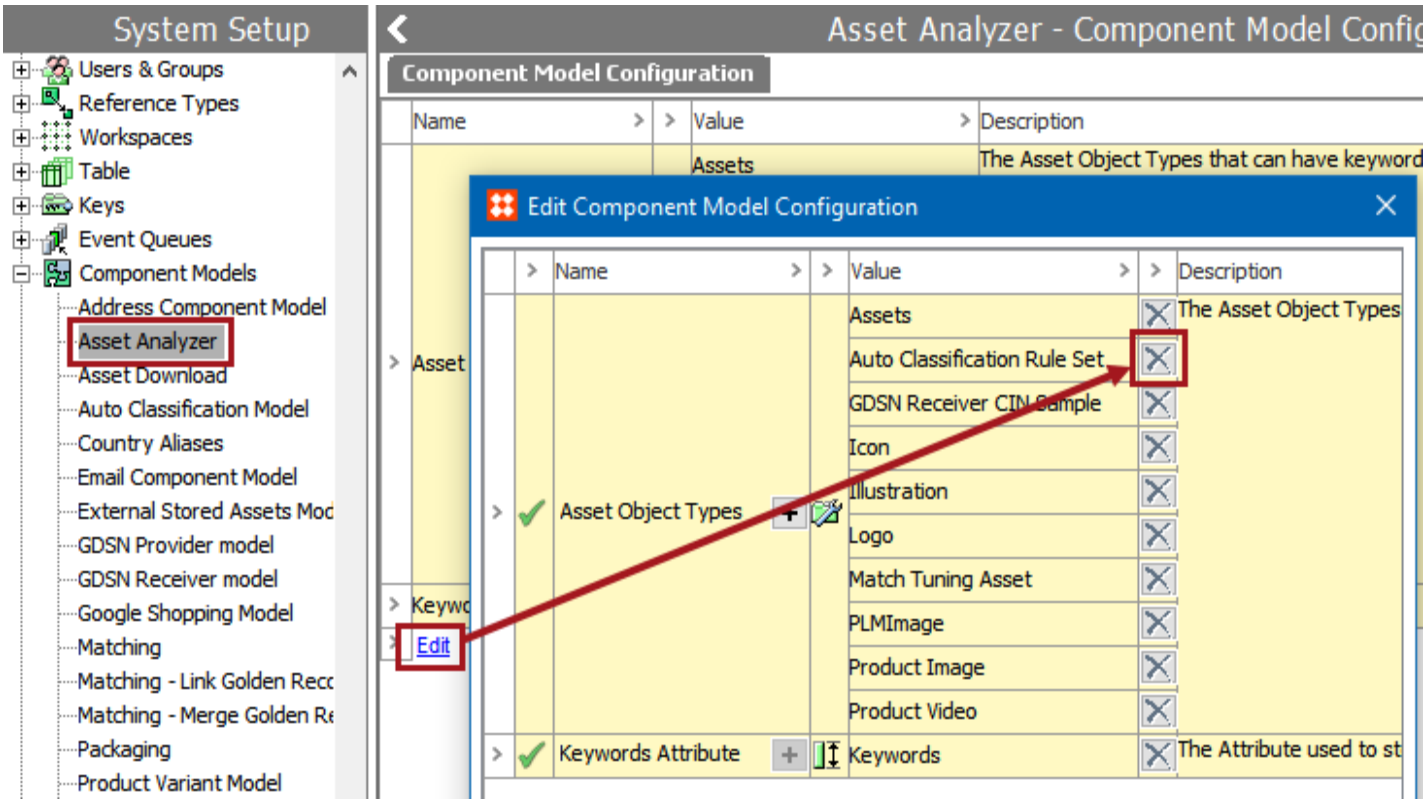
By default, all asset object types are automatically included in the component model. Since some of these asset types may not be used for images (for example, PDF, Word, or Excel files), it is recommended to remove them from the component model, which is done by following these steps:

Removing an Asset Object Type from the Asset Analyzer Component Model

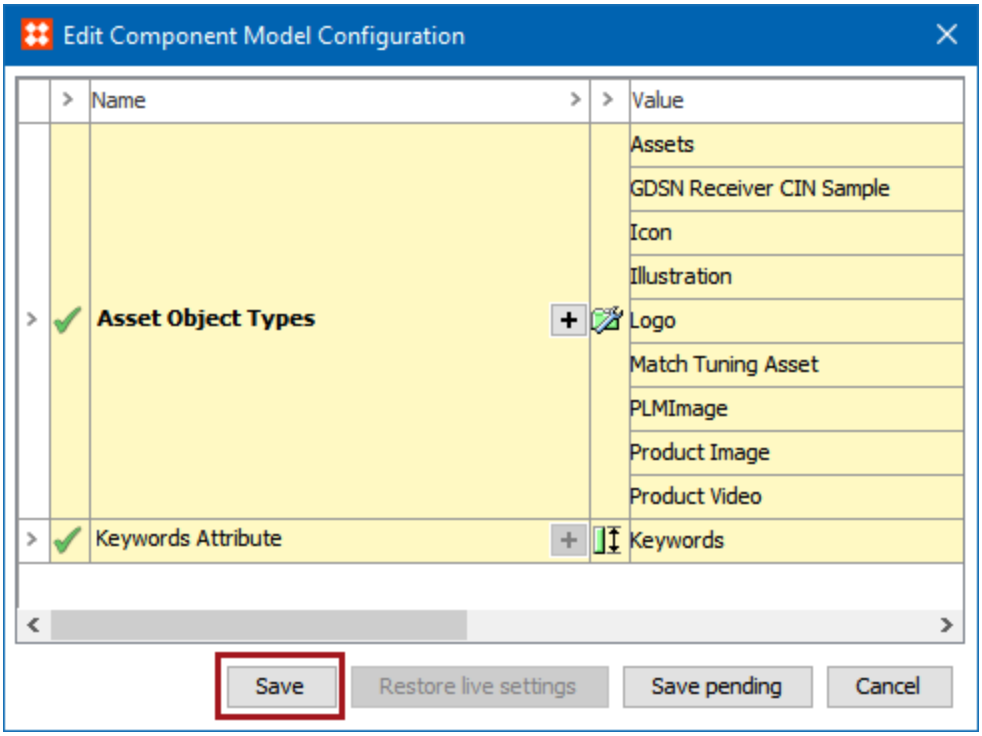
1. In System Setup, navigate to Object Types & Structures > **Assets** and select the asset object type that you want to remove from the component model. The following example uses the 'Auto Classification Rule Set' asset object type.
2. Under the Valid Attributes flipper, right-click on the arrow in the row containing the AssetAnalyzer.Keywords attribute, then click **Remove Attribute**.



3. While still in System Setup, select the **Asset Analyzer** component model and click the 'Edit' hyperlink. The **Edit Component Model Configuration** window displays.
4. Double-click on the **X** next to the object type that you want to remove from the component model.



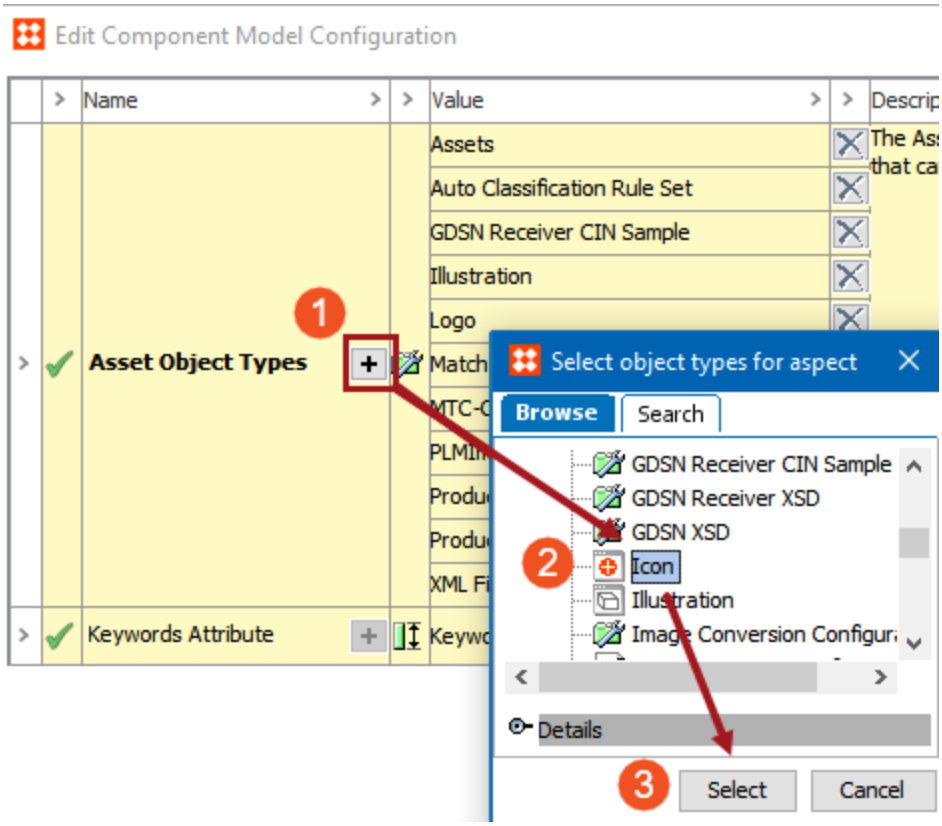
5. The **Save** and **Save pending** buttons are activated. Click **Save** to remove the asset object type and close the Edit Component Model Configuration dialog. Click **Save pending** to keep the live configuration as-is and make additional changes later.



Adding an Asset Type to the Asset Analyzer Component Model

To add a new asset object type or re-add a previously deleted asset object type to the component model:

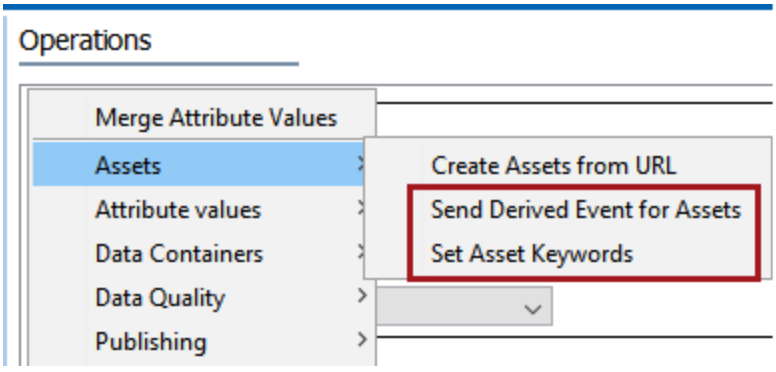
1. Launch the 'Edit Component Model Configuration' dialog by following the steps outlined in the previous sub-section
2. Double-click the plus sign icon to launch the **Select object types for aspect** dialog.
3. Select the asset object type(s) that you want to add to the component model, then click **Select**.



4. Click Save to close the 'Edit Component Model Configuration' dialog.

Asset Analyzer Bulk Update Operations

A category of bulk update operations named **Assets** is added to the system when the Asset Analyzer component is installed. The Assets category contains two operations for asset keywords: **Send Derived Event for Assets** and **Set Asset Keywords**. These are configured and behave in a near-identical fashion to the 'Send Asset Keywords Event' and 'Set Asset Keywords' business actions, which are explained in detail in the **Configuring the Asset Analyzer - Setup Group Items and Business Rules** topic.



Using Asset Analyzer

The Asset Analyzer can be used from within the Web UI, workbench, and during imports—i.e., any location where bulk updates and JavaScript business rules can be run.

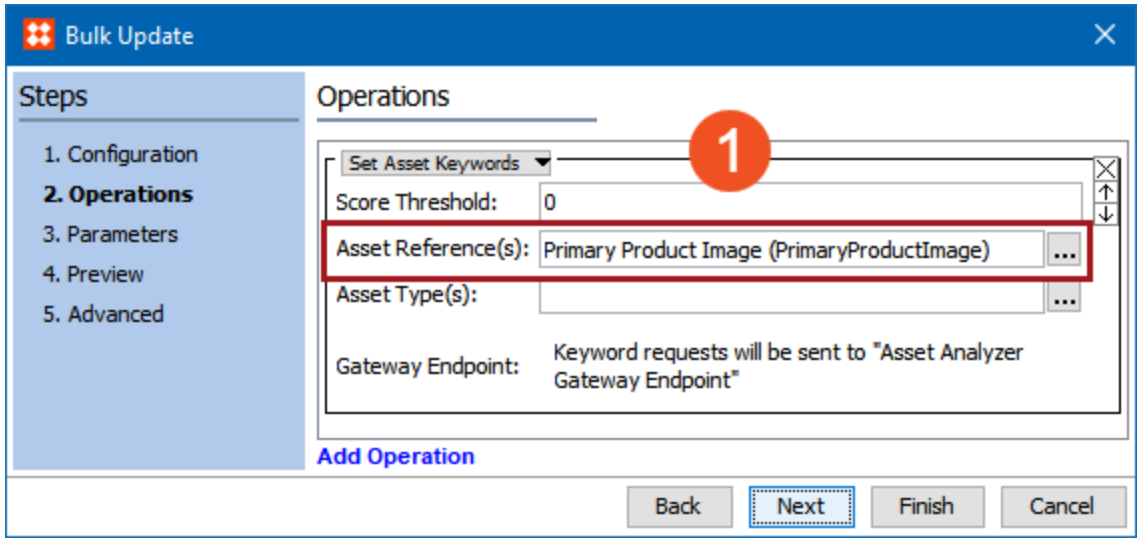
Users can send assets to the Google Cloud Vision API by performing bulk updates or executing business actions on **assets** and/or on **products** with referenced image assets. Running these operations on **assets** will set keywords directly on the **assets**; running these operations on products will set the keywords on referenced assets after fetching them from the asset reference links specified in the business rule or bulk update configuration.

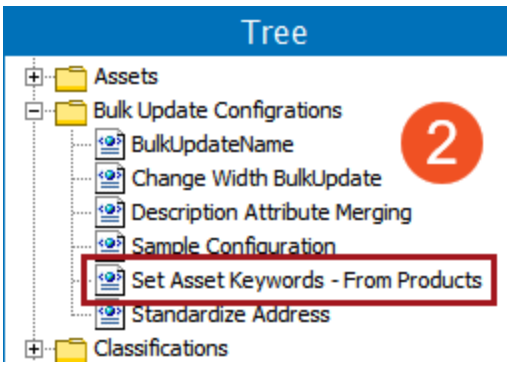
The following examples describe a small selection of use cases and possible setups for using the Asset Analyzer.

Run a Bulk Update on a Product Collection

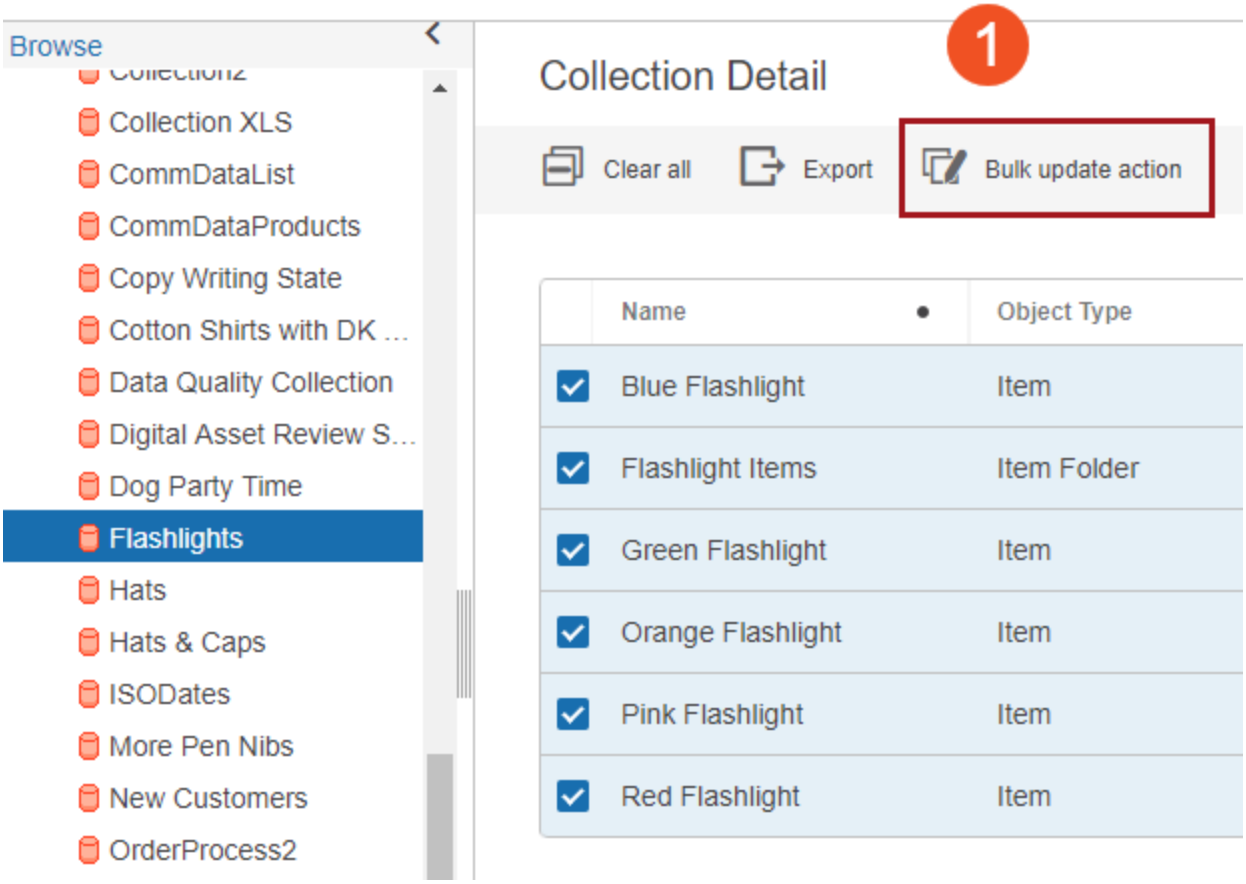
This simple example shows how keywords can be set on assets by performing a bulk update on a product collection of Flashlights in the Web UI.

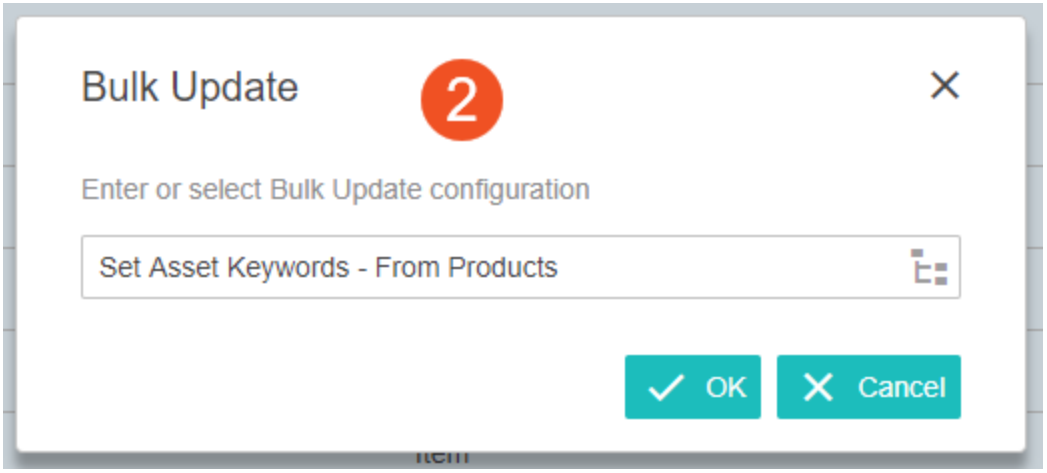
1. The **Set Asset Keywords** bulk update will first be configured in the workbench to use the Primary Product Image asset reference type, then saved as a bulk update configuration named 'Set Asset Keywords - From Products.' For information on how to create a bulk update configuration, see the **Bulk Updates** documentation.



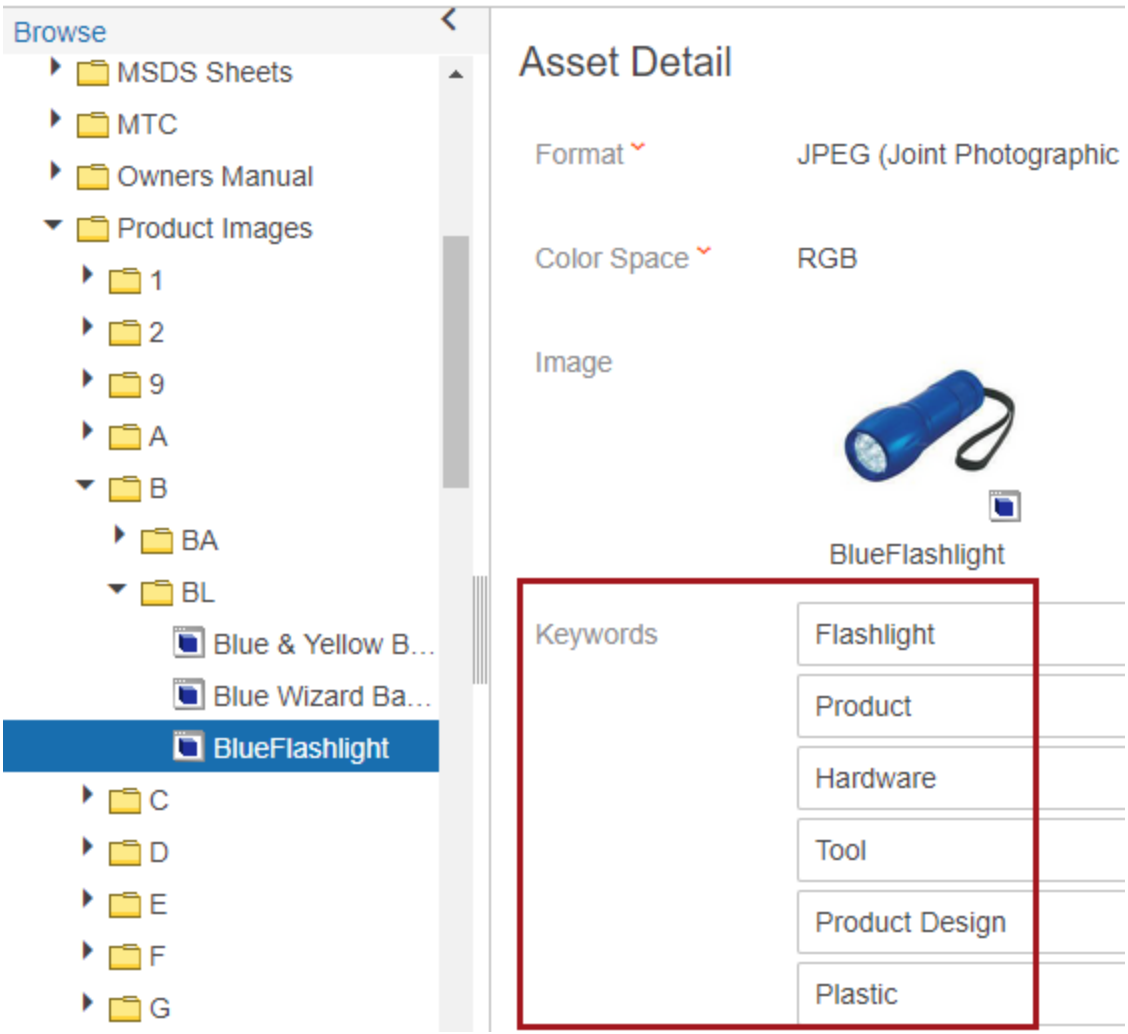


2. In the Web UI, the Flashlights collection is selected on the Collection Detail screen, and all objects within the collection are selected.
3. To perform the bulk update, click the **Bulk update action** button, then choose the 'Set Asset Keywords - From Products' bulk update configuration. For information on how to add an action button to a Node List Properties screen, see the **Action Button Configuration on a Node List** topic in the **Web User Interfaces** documentation.





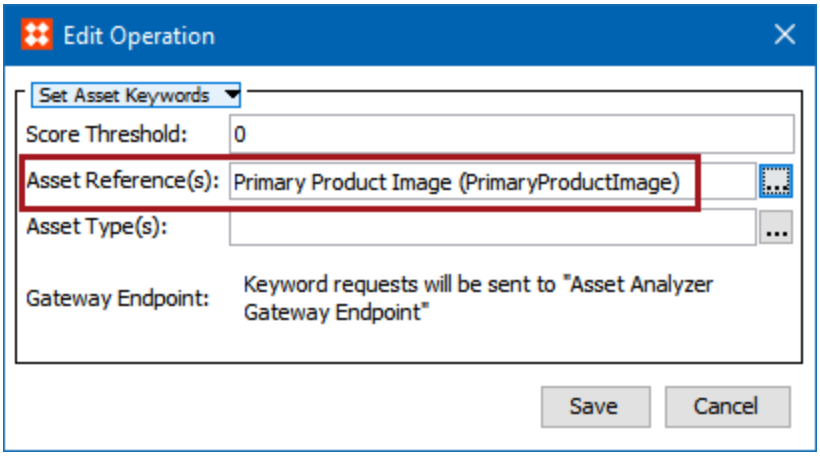
4. After the bulk update action process completes, the keywords are set on the referenced images. The below image shows the keywords that have been set on the BlueFlashlight image, which is the Primary Product Image referenced by the Blue Flashlight item.



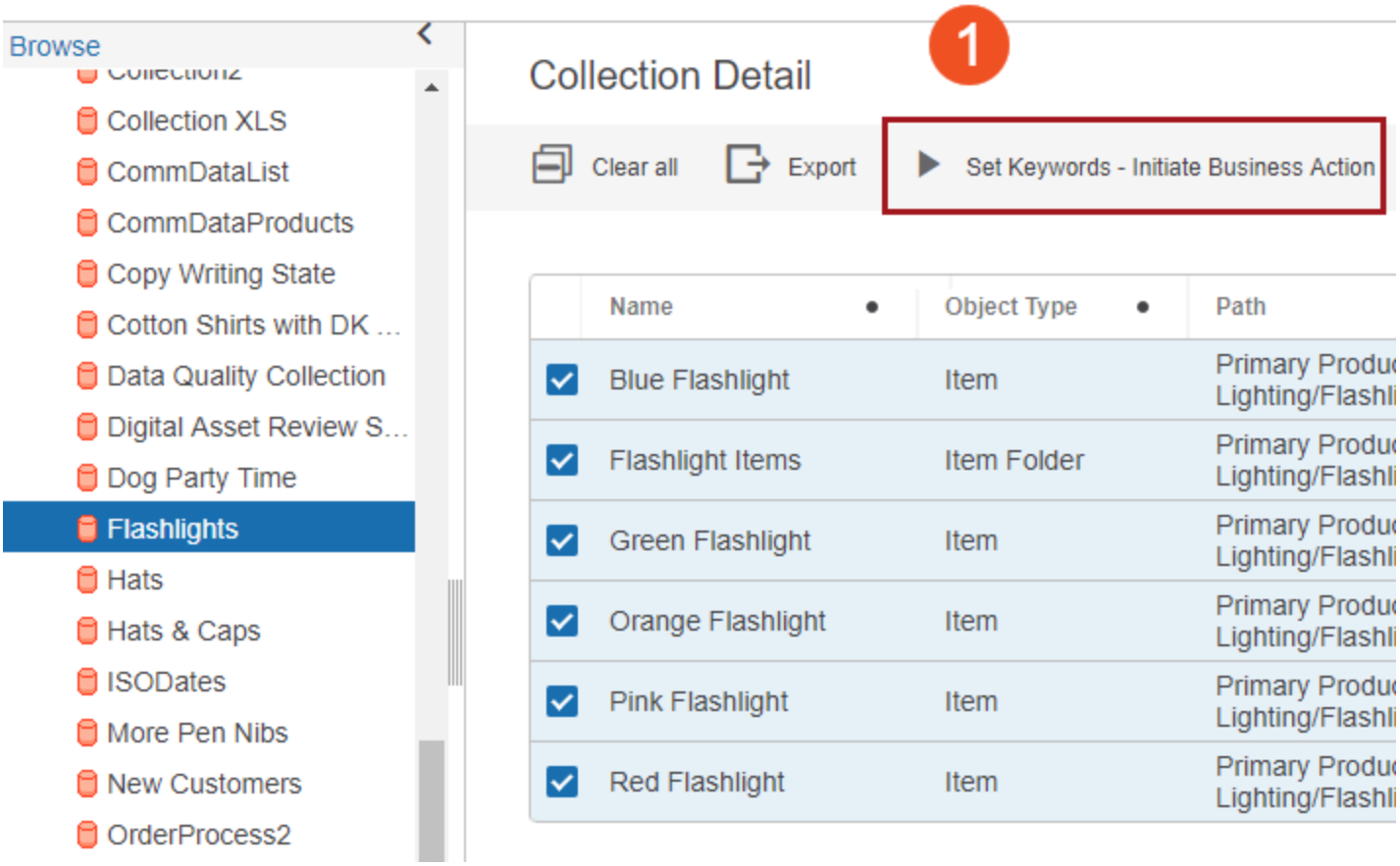
Run a Business Rule on a Product Collection

This example uses the same Flashlights collection as shown in the previous example for bulk updates, except the keywords are set using a business rule.

1. The **Set Asset Keywords** business action operation is configured in the workbench in a similar fashion to the bulk update detailed above, by choosing the Primary Product Image asset reference type.



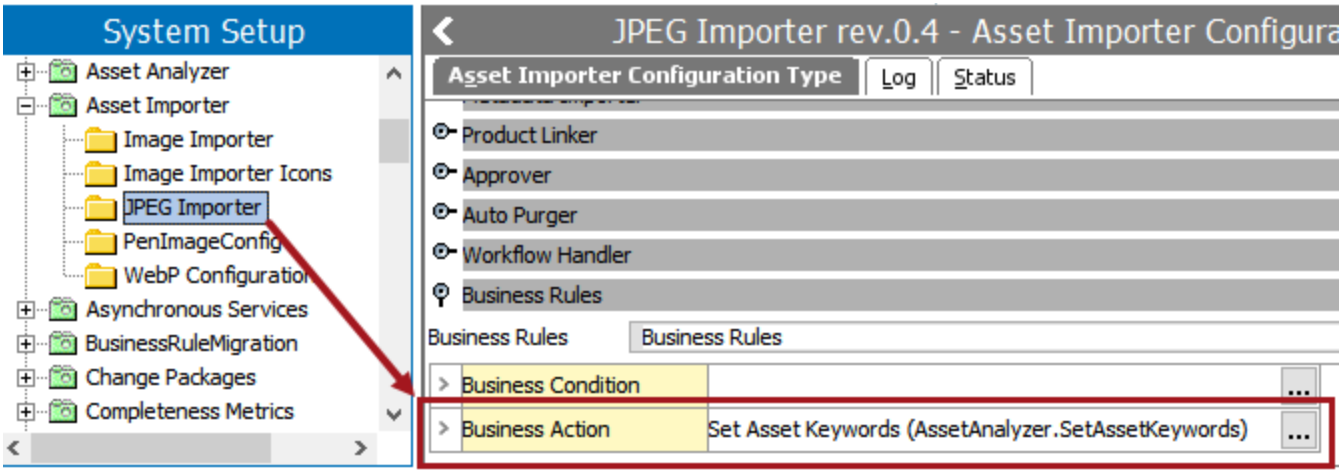
2. In the Web UI, the Flashlights collection is selected on the Collection Detail screen, and all objects within the collection are selected.
3. Click the 'Initiate Business Action' button to run the business rule, which is labeled 'Set Keywords - Initiate Business Action' in this example. For information on how to add an action button to a Node List Properties screen, see the **Action Button Configuration on a Node List** topic in the **Web User Interfaces** documentation.



4. After the business rule executes, The keywords are set on the referenced Primary Product Image assets, as shown in the screenshot provided in the previous 'Run a Bulk Update on a Product Collection' subsection.

On Import of Assets

Another example of where a Set Asset Keywords business action can be executed on assets is when they are imported into STEP. The below screenshot shows a sample Asset Importer Configuration where the **Set Asset Keywords** business rule has been specified to run on import. For more information on adding business rules to Asset Importer Configurations, see the **Business Rules** section of the **Asset Importer** documentation.

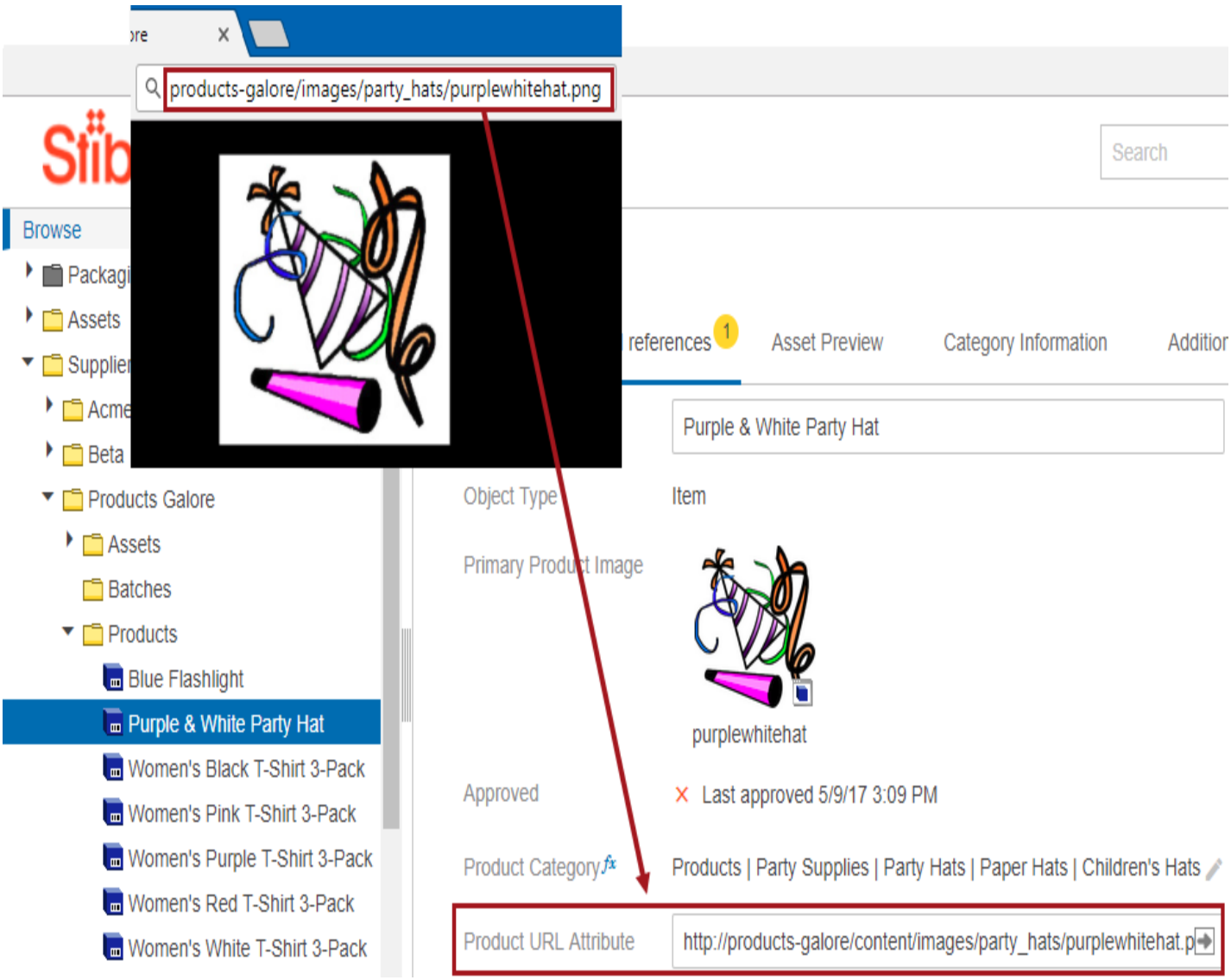

System Setup
Asset Analyzer
Asset Importer
Image Importer
Image Importer Icons
JPEG Importer
PenImageConfig
WebP Configuration
Asynchronous Services
BusinessRuleMigration
Change Packages
Completeness Metrics
JPEG Importer rev.0.4 - Asset Importer Configura
Asset Importer Configuration Type
Log
Status
Product Linker
Approver
Auto Purger
Workflow Handler
Business Rules
Business Rules
Business Rules
Business Condition
Business Action
Set Asset Keywords (AssetAnalyzer.SetAssetKeywords)

Asset Download

Asset Download is an add-on component for STEP that enables users to provide a URL to an asset on a product and have STEP automatically download the asset. This functionality allows users—typically suppliers—to efficiently create and/or replace their business-critical assets in STEP, adding an additional layer of flexibility in how they can manage and store the assets and images that need to be linked to their products.

The Asset Download component enables STEP to pull assets (e.g., images) from external URLs, store them in supplier asset classification structures, and link them to products in an automated operation. It can be used from within the Web UI, workbench, and during imports—i.e., any location where bulk updates and business actions can be run. This functionality can be used for non-image assets as well, such as owners manuals, MSDS sheets, videos, and so forth.

This feature supports both the download of new assets and the replacement of existing assets. Users can have an asset downloaded from the web by providing the image URL as an attribute value on the product to which the asset will be linked. Through a bulk update operation, or a business action invoked from, for instance, an import or workflow transition, STEP fetches the asset from the URL, stores it in a specified supplier asset classification hierarchy, then links it to the product using a specified asset reference type. The same processes can also be used to replace the content of existing assets. The image URL is checked against previously downloaded assets to determine whether to replace an existing asset or create a new one.



Prerequisites and Considerations for Using Asset Download

- Your STEP server must be able to communicate externally with the location of the specified URL attribute value before assets can be downloaded.
- Standard Asset Download functionality will only work on **supplier** products, which are products that are linked into a supplier product classification. However, the actual execution of the features (such as the running of an asset URL bulk update or business rule, detailed within this documentation section) can be performed by any STEP user.

  If you need to work with non-supplier products or perform other non-standard operations, such as asset content replacement, you can script an 'Execute JavaScript' business action using the public JavaScript API method, which is detailed in the **Configuring Asset Download - Business Rules and Bulk Updates** topic.

- The executing user for Asset Download business rules and bulk updates must have the required permissions, which include, but are not limited to, writing values to the specified URL attribute, linking assets to products, and linking assets to classification structures.

Topics Covered in This Guide

This guide / documentation section covers the following topics:

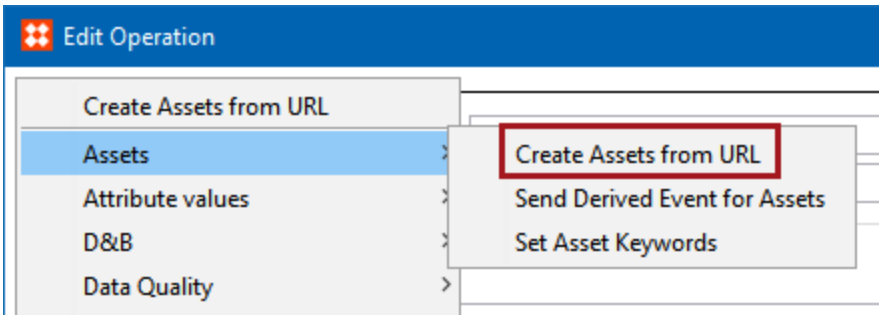
- Configuring Asset Download - Business Rules and Bulk Updates
- Configuring Asset Download - Additional Configurations
- Asset Download Component Model
- Using Asset Download

Configuring Asset Download - Business Rules and Bulk Updates

When the Asset Download component is first installed, many of the configurations necessary to run the solution are installed automatically. This topic covers the pre-configured business action operation 'Create Assets from URL,' the public JavaScript API method to download assets, and the 'Create Assets from URL' bulk update operation.

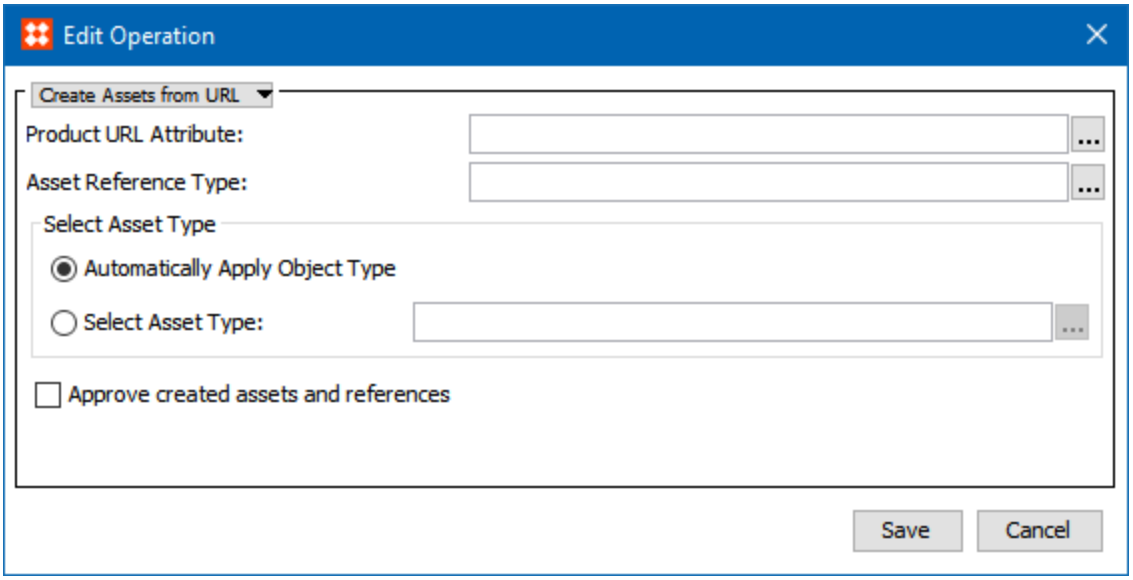
Create Assets from URL – Business Action Operation

Though a business rule itself is not created when Asset Download is installed, a business action *operation* for asset downloads is created, called **Create Assets from URL**, which is located under the **Assets** category. This action is used for synchronous operations, meaning that each operation has to wait for another operation to complete before another can be run. The business action works on a product level and looks at a specified attribute which contains asset file URLs. If a file URL is found, the asset is downloaded, created, and an asset reference is created according to the configuration.



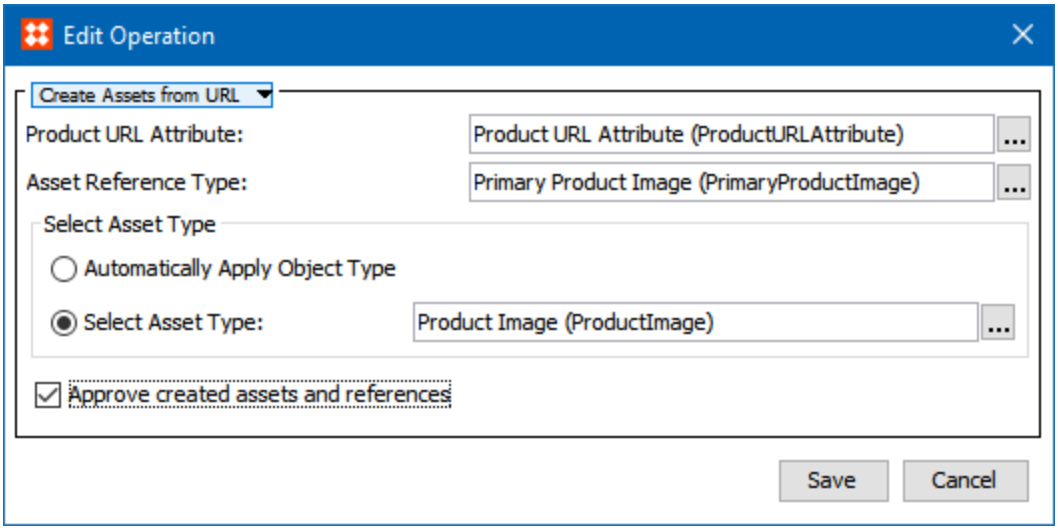
Create Assets From URL - Business Rule Configurations

The following configurations are required for the business action to function.



- **Product URL Attribute:** This field contains the URL that exists on the **product** object. Click the ellipsis button (...) to the right of the field to browse to or search for the relevant attribute. Only one attribute can be selected.
- **Asset Reference Type:** Specify the asset reference type that will be used to link the downloaded asset to the product object(s). Click the ellipsis button (...) to the right of the field to browse to or search for the relevant asset reference type. Only one reference type can be selected.
- **Automatically Apply Object Type:** The default is for the object type to be automatically applied, based on the asset's MIME Type. To explicitly specify the asset type, use the 'Select Asset Type' option.
- **Select Asset Type:** Choose a specific asset type to apply to the asset that is downloaded from the URL. When the Select Asset Type radio button is selected, the ellipsis button to the right of the field is activated. Click the ellipsis button (...) to browse to or search for the relevant asset type. Only one asset type can be selected.
- **Approve created assets and references:** Check this box to automatically approve the downloaded assets and their reference links.

The following is a sample configuration for this business action:

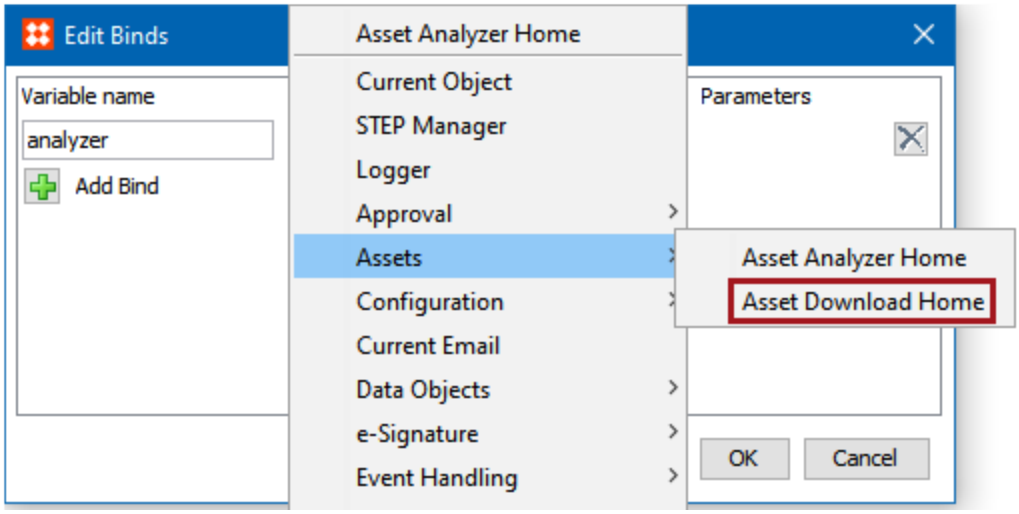


Public JavaScript API Method to Download Assets

A public API JavaScript method is also created upon installation of the Asset Download component, which is used to handle scenarios outside of those covered by the Create Assets from URL business action. This method, called **downloadAssetContent**, is used with the **Asset Download Home** bind that is found under the **Assets** category for **Execute JavaScript** business actions.

Two possible use cases for using the scripting API to create assets from a URL are:

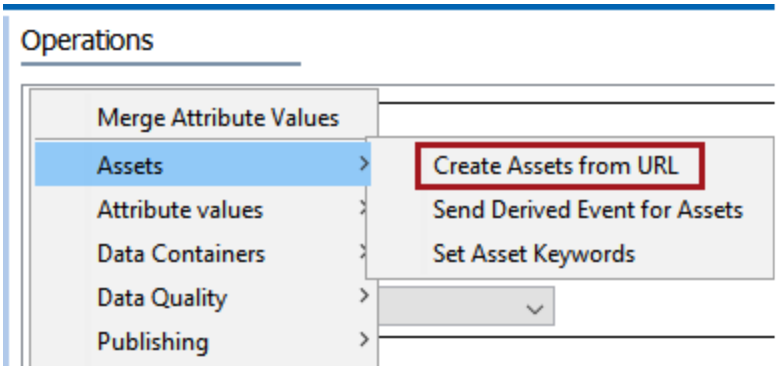
- Allowing for asset download actions to be performed on non-supplier products
- Executing an asset download action on **asset** objects, which can be used to replace the content of these assets. This use case is described in the **Using Asset Download** topic.

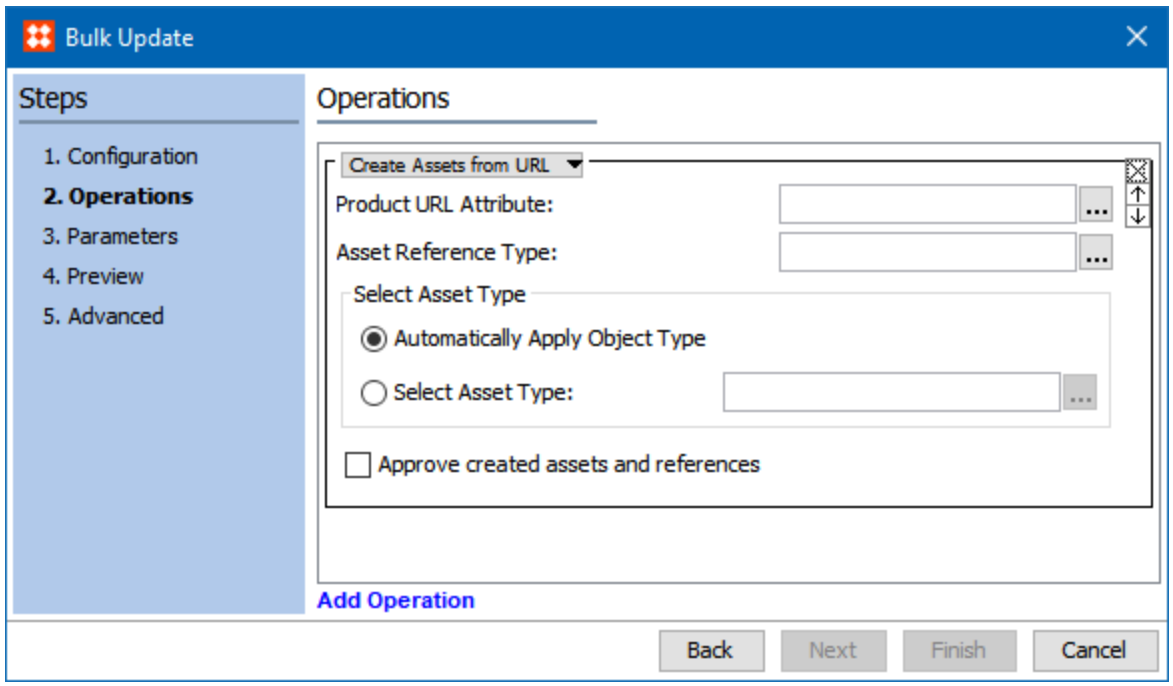


For more information on the STEP Scripting API, see the **JavaScript in STEP** section of the **Resources Materials** documentation.

Create Assets from URL – Bulk Update Operation

A category of bulk update operations named **Assets** is created when Asset Download is installed, which contains the asset download bulk update operation **Create Assets from URL**. The bulk update operation is configured and behaves in identically to the 'Create Assets from URL' business action described earlier in this topic.



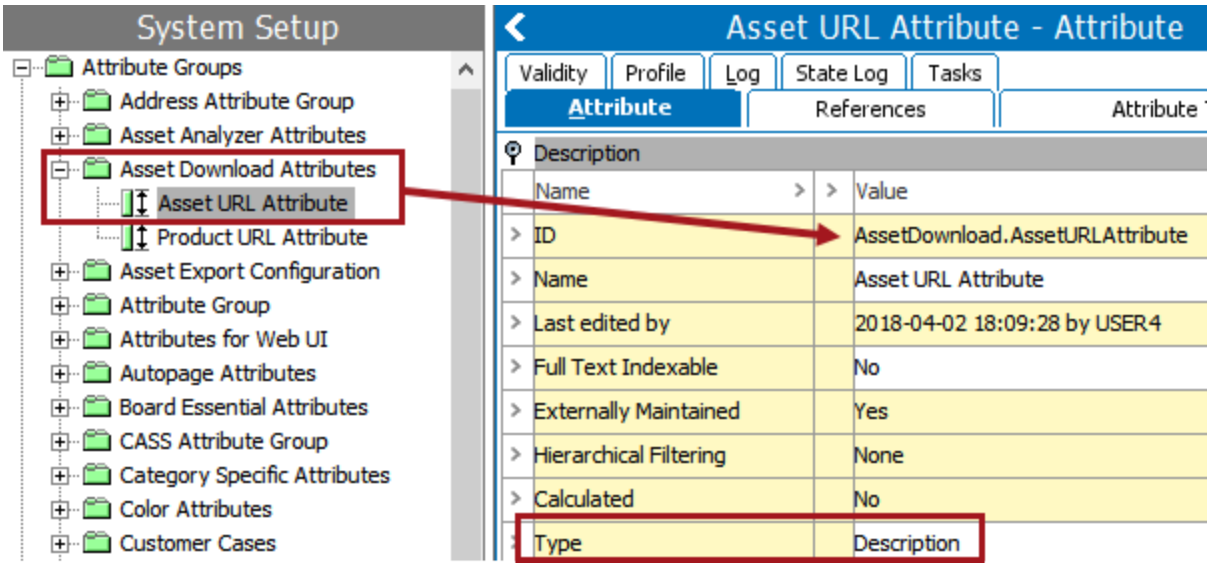

Bulk Update
Steps
1. Configuration
2. Operations
3. Parameters
4. Preview
5. Advanced
Operations
Create Assets from URL
Product URL Attribute:
Asset Reference Type:
Select Asset Type
Automatically Apply Object Type
Select Asset Type:
Approve created assets and references
Add Operation
Back
Next
Finish
Cancel

Configuring Asset Download - Additional Configurations

When the Asset Download component is first installed, many of the configurations necessary to run the solution are installed automatically. Some additional settings must also be configured under Users & Groups > System Settings to enable Asset Download. This topic covers the pre-configured attribute (Asset URL Attribute) and unique key (Asset URL Key), as well as the settings that must be configured in System Settings under 'Asset Download Settings' and 'Web UI Settings.'

Asset URL Attribute

An attribute group named **Asset Download Attributes** (AssetDownload.Attributes) is created upon installation that contains a description attribute named **Asset URL Attribute** (AssetDownload.AssetURLAttribute). This attribute is valid for asset object types and stores the URL (from which the image is downloaded) on the asset.

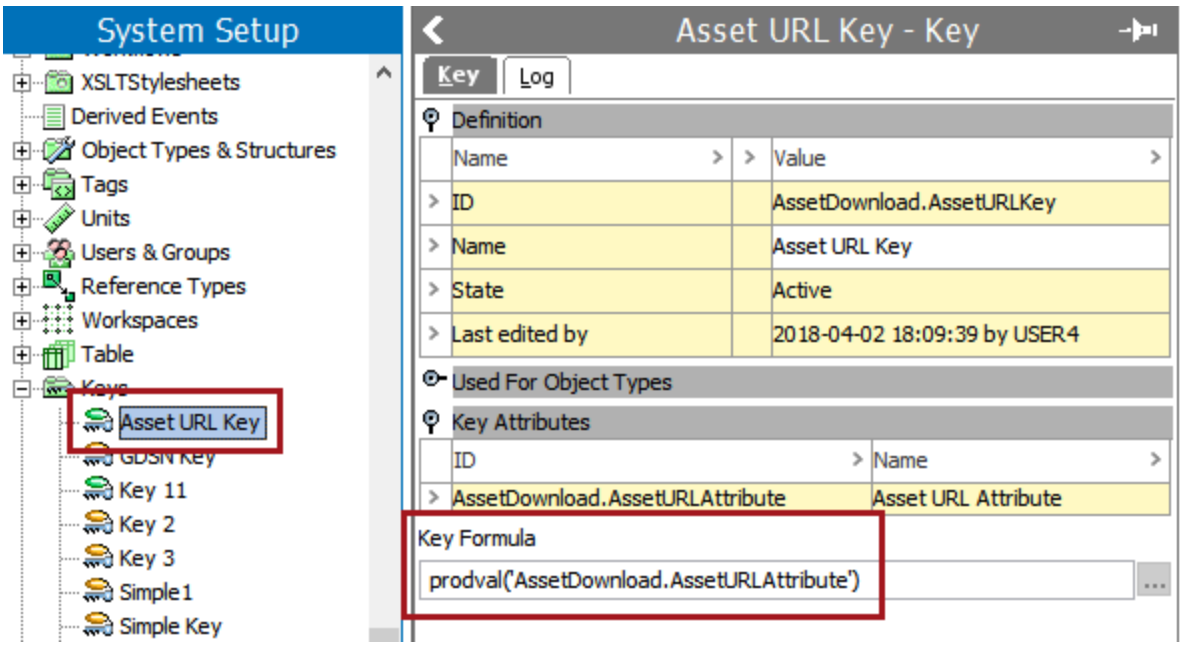


Note: The attribute that is valid on **product** objects, which contains the asset's URL, is *not* automatically created; it must be created by users. In the above screenshot, this attribute is named 'Product URL Attribute' and has been stored in the Asset Download Attributes folder alongside the Asset URL Attribute. However, any attribute can be used whose validation base type is **Text** or **URL**. It can be either a specification or a description attribute, and can also be either single or multi-valued, in case multiple assets need to be linked to a single product using an asset reference type that allows multiple references.

Asset URL Key

When Asset Download is installed, a unique key named **Asset URL Key** (AssetDownload.AssetURLKey) is created upon installation that is used to return the value of the Asset URL Attribute when identifying whether or not an asset has already been downloaded. By default, all asset types in the system are valid for the key. The Key Attribute is **Asset URL Attribute** and the Key Formula is based on the value of this attribute. The formula is:

```
prodval('AssetDownload.AssetURLAttribute')
```

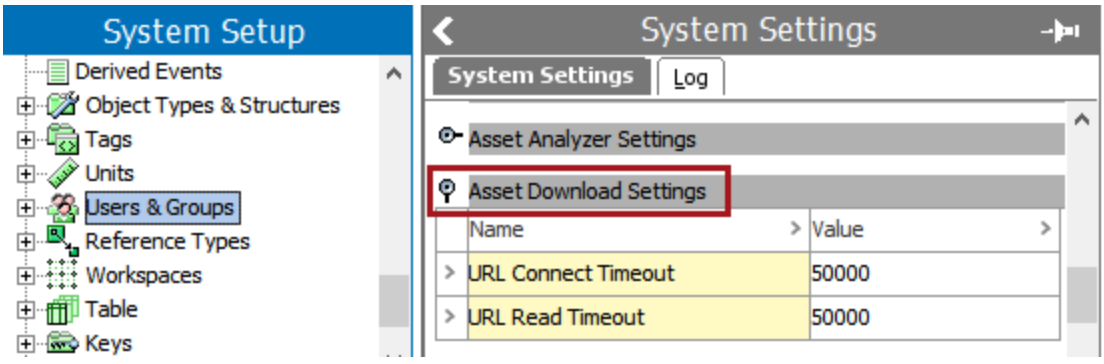


System Settings

To enable the Asset Download component, a number of settings must be specified in System Setup > Users & Groups > System Settings under the **Asset Download Settings** and **Web UI Settings** categories.

Asset Download Settings

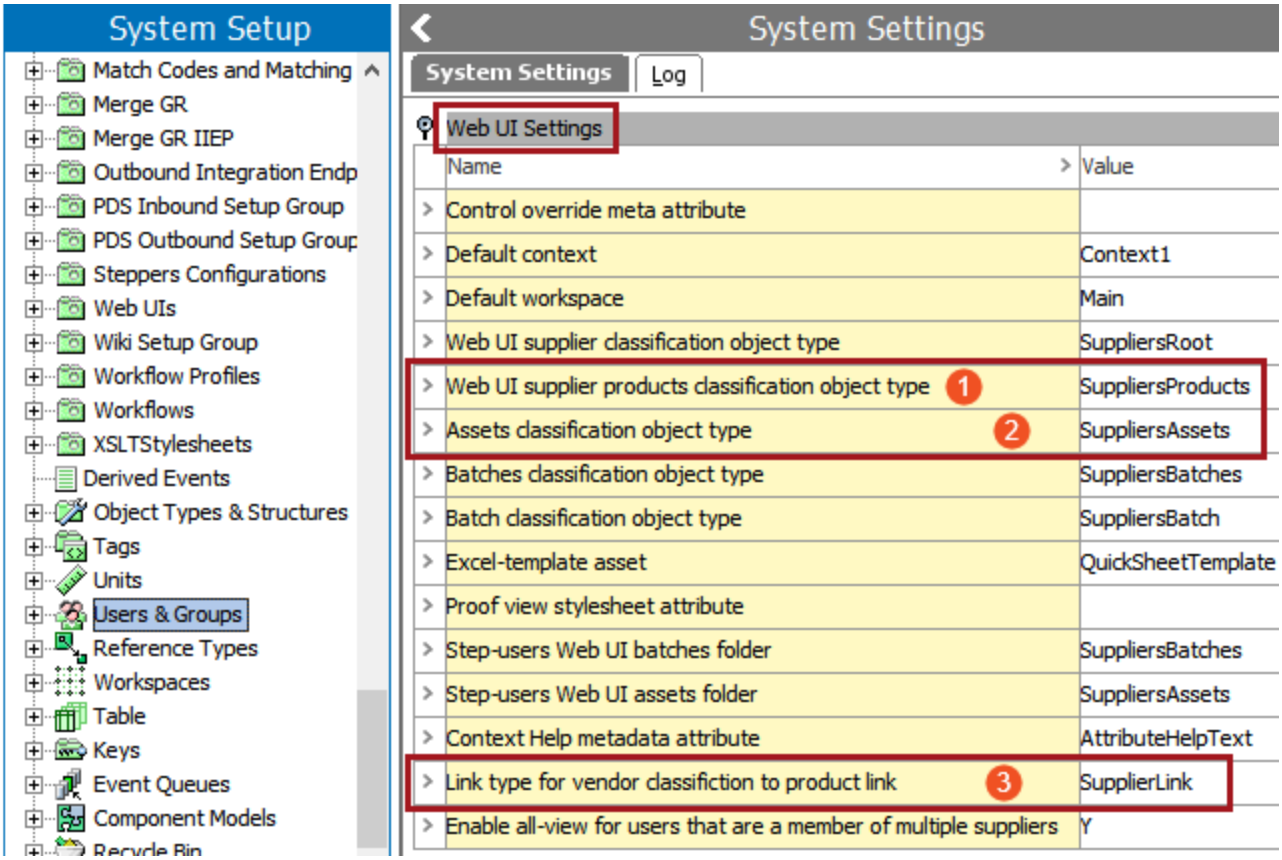
Two settings are available under Asset Download Settings: **URL Connect Timeout**, which specifies how long the system should wait before it gives up on connecting to the URL, and **URL Read Timeout**, which specifies the time allowed to download the asset. By default, the value for each is 50000 milliseconds.



Web UI Settings

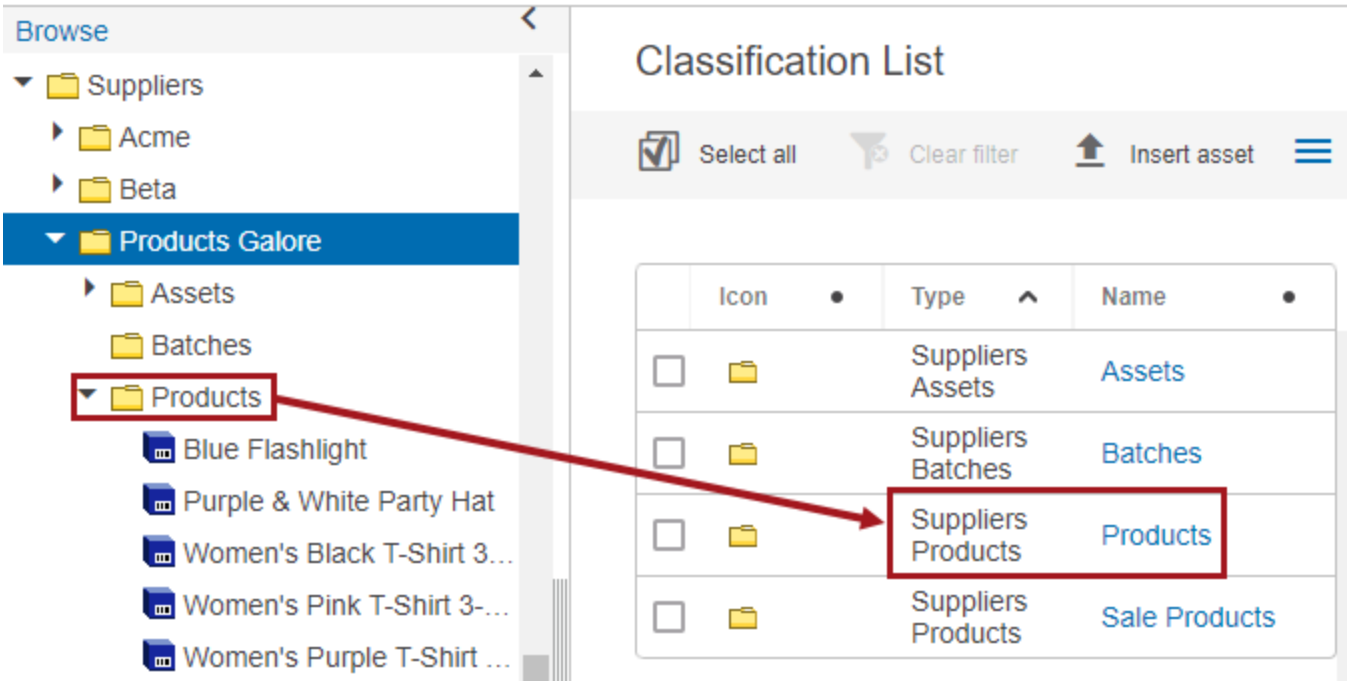
Since the Asset Download component is geared toward supplier users who work exclusively in Web UI, a number of Web UI Settings must first be specified in System Settings that are related to supplier classification hierarchies. This section highlights the three primary Web UI settings that are needed to enable Asset Download. The full list of these settings is detailed in the **Web UI Settings** topic in the **System Settings / Super User Guide** documentation.

The settings related to Asset Download are as follows. The numbers in the screenshot correspond to the entries in the numbered list that appears directly beneath.



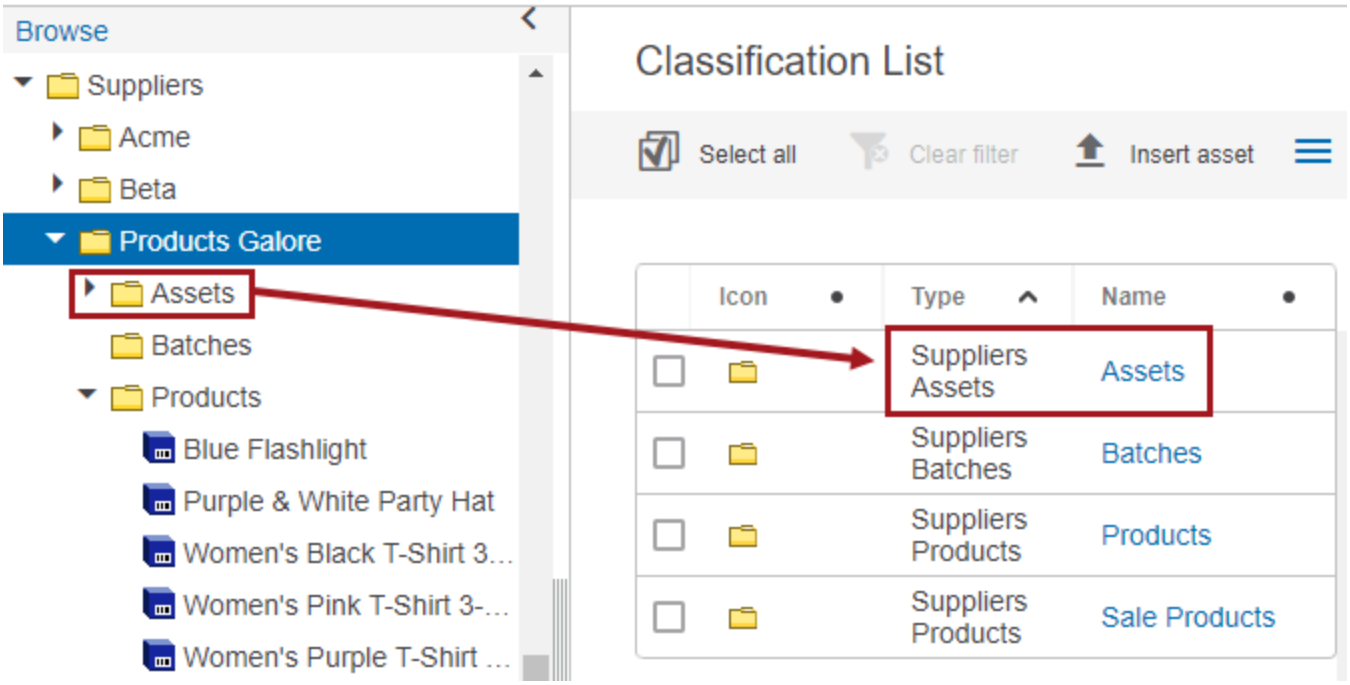
1. **Web UI supplier products classification object type:** This setting specifies the object type of the folder in the supplier classification hierarchy that will be used to store **product** objects. For this example, the specified object type is Suppliers Products (SuppliersProducts).

   The below screenshot shows a Web UI Classification Screen that displays a list of child folders in the 'Products Galore' classification structure. The folder named 'Products' is of the object type Suppliers Products (SuppliersProducts). So, for this example, this will be a valid folder in which to store products that will be used for Asset Download.



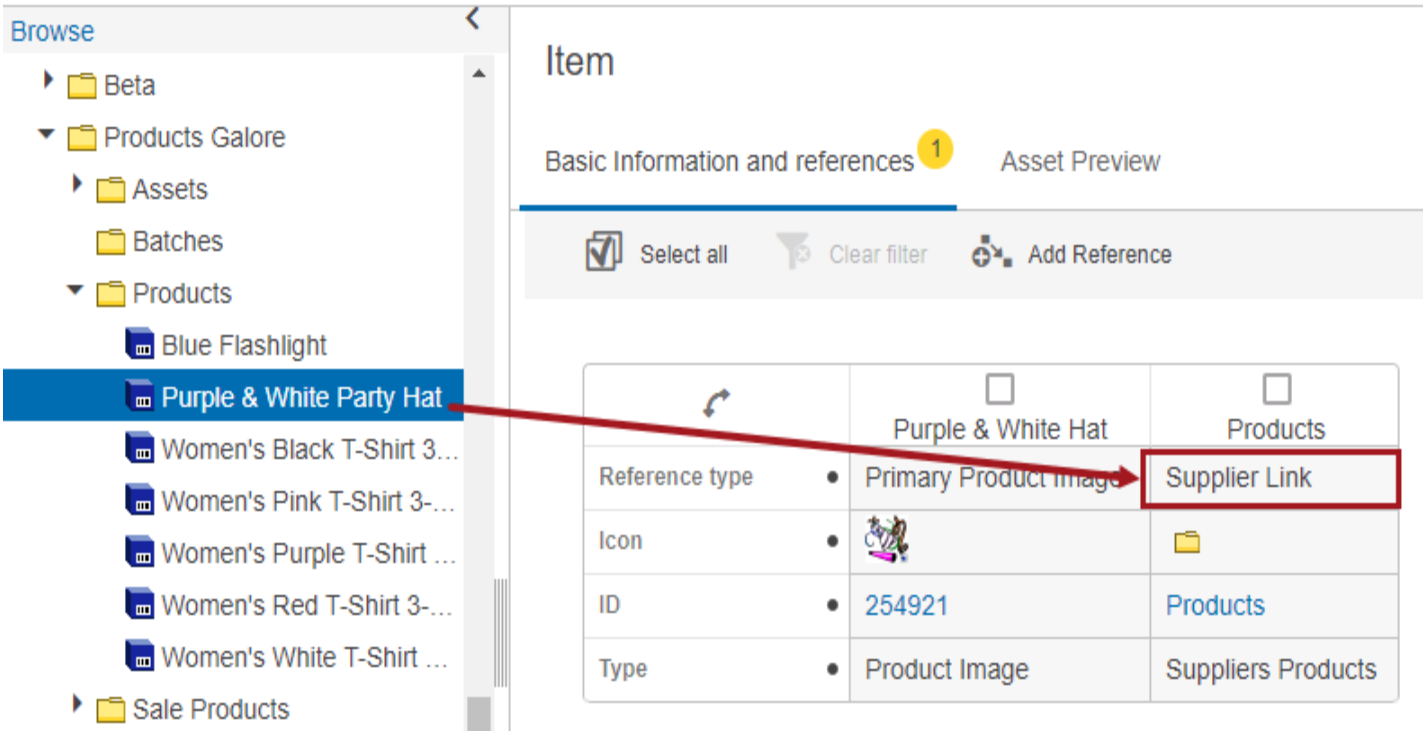
2. **Assets classification object type:** This setting specifies the object type of the folder in the supplier classification hierarchy that will be used to store **asset** objects. For this example, the specified object type is Suppliers Assets (SuppliersAssets).

   The below screenshot shows the same 'Products Galore' classification structure. The folder named 'Assets ' is of the object type Suppliers Assets (SuppliersAssets). So, for this example, this will be a valid folder in which to store assets that will be used for Asset Download.



3. **Link type for vendor classification to product link:** This setting specifies the product to classification **link type** that will be used to link **product** objects into supplier product folders in the supplier classification hierarchy. For this example, the specified link type is Supplier Link (SupplierLink).

   The below screenshot shows the same 'Products Galore' classification structure, this time with a product object selected. The product's references are shown in the Multi Edit Display Mode component. The link to the parent Products folder is of the type Supplier Link (SupplierLink). So, for this example, this will be a valid link type to connect product objects to the supplier product folders used for Asset Download.



Asset Download Component Model

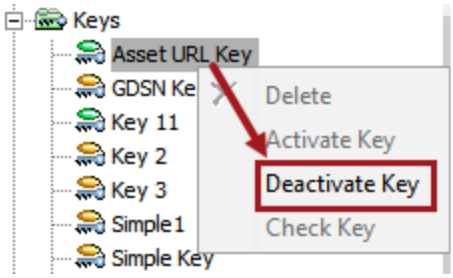
The Asset Download component model enables the specification of:

- The attribute used to store the asset URL on asset objects, which is, by default, **Asset URL Attribute** (AssetDownload.AssetURLAttribute)
- The valid asset object types for the Asset Download component

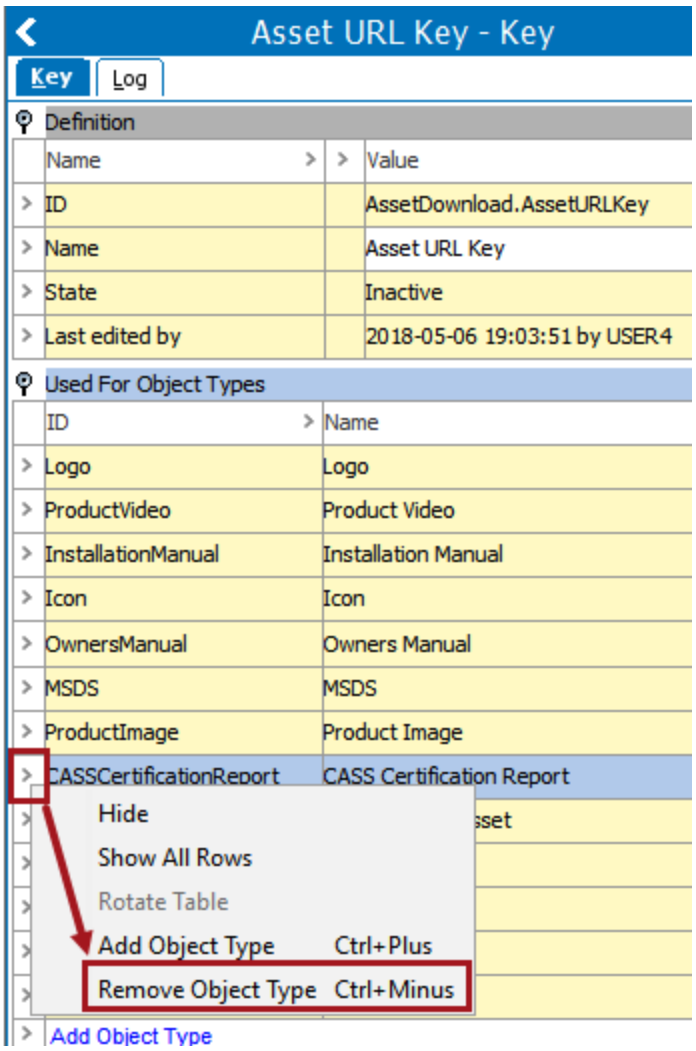
By default, all asset object types are automatically included in the component model. Since some of these asset types may never be used with the Asset Download component, you can remove them by following these steps:

Removing an Asset Object Type from the Asset Download Component Model

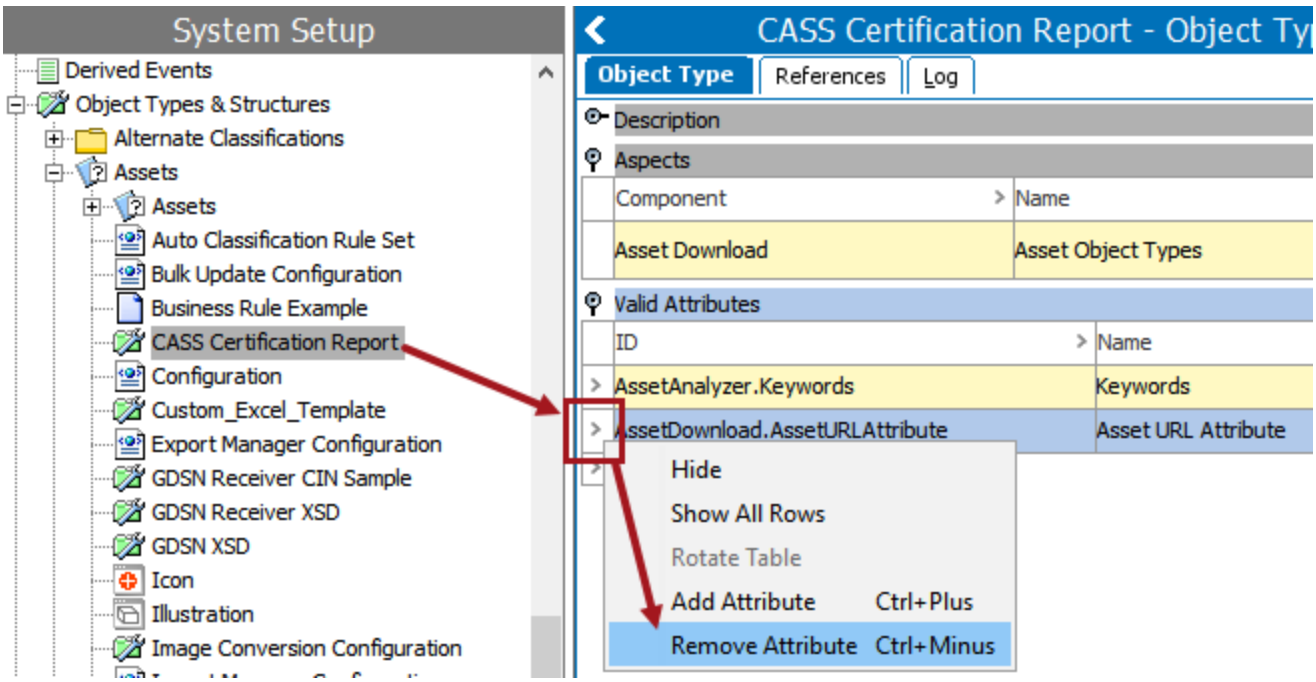
1. Deactivate the **Asset URL Key** by selecting the key in System Setup, then right-click and select Deactivate Key.



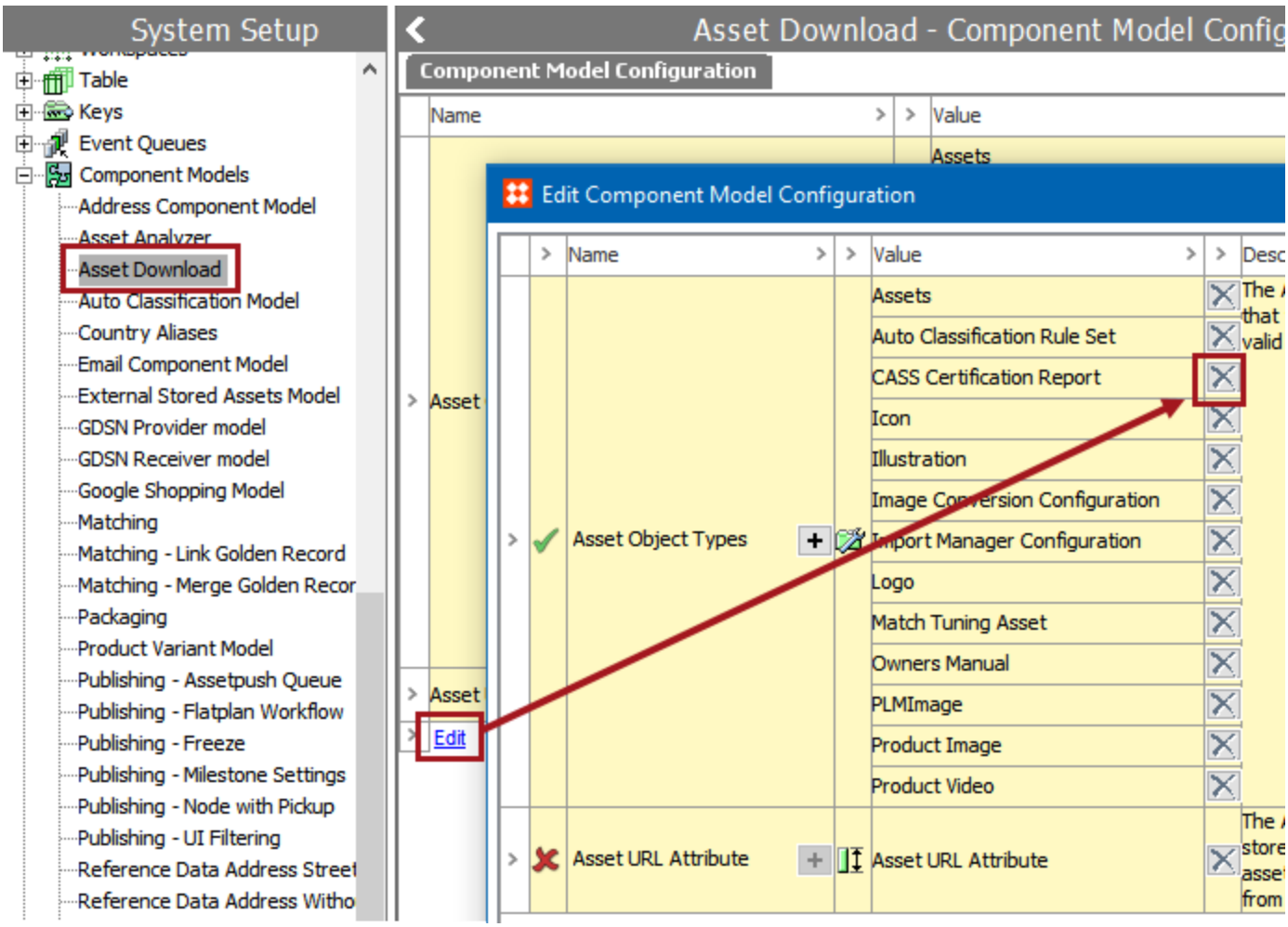
2. With the Key still selected, locate the object type that you want to remove under the **Used for Object Types** flipper on the **Key** tab.
3. Right-click on the arrow in the row containing the object that you want to remove, then click **Remove Object Type**. This example uses the 'CASS Certification Report' asset object type.



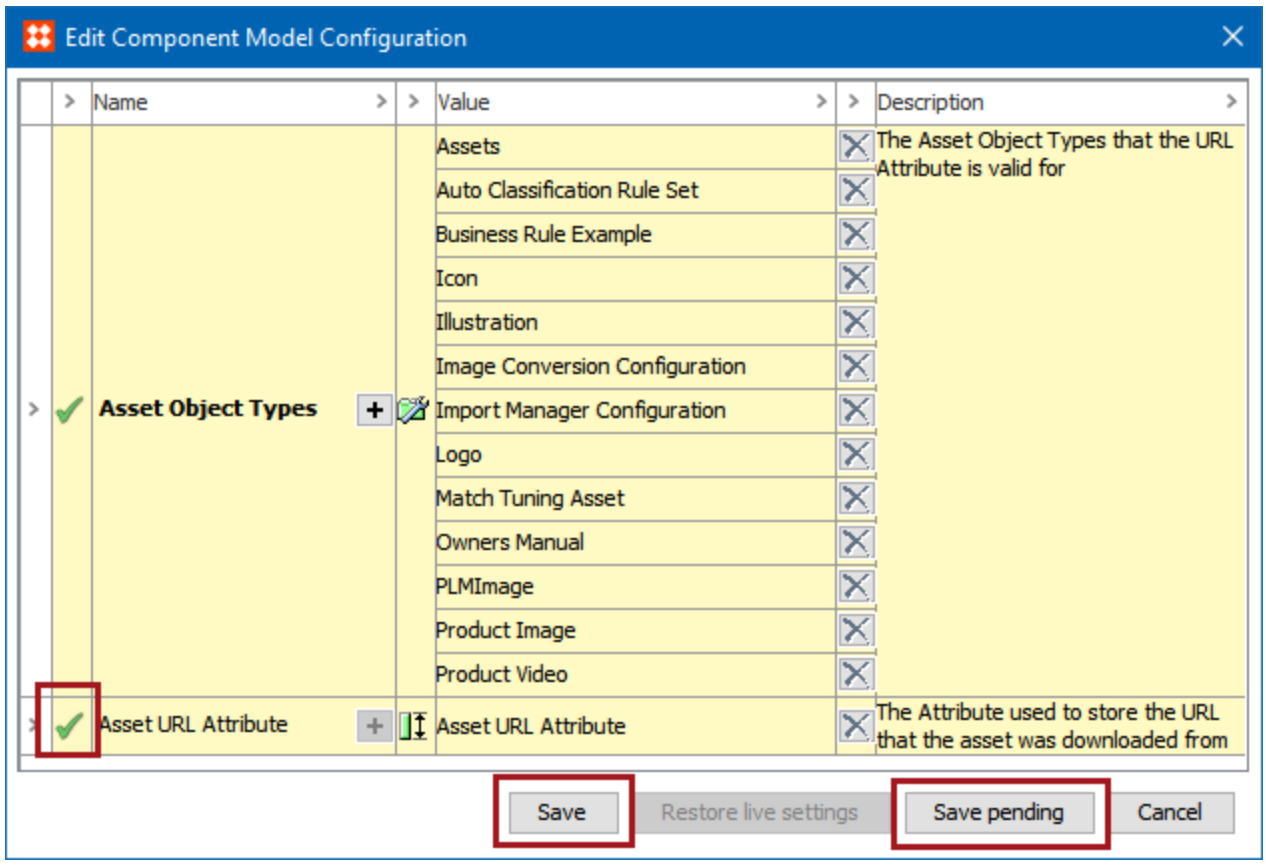
4. Next, locate the asset object type under System Setup > Object Types & Structures > **Assets** and select it.
5. Under the **Valid Attributes** flipper, right-click on the arrow in the row containing the AssetDownload.AssetURLAttribute attribute, then click **Remove Attribute**.



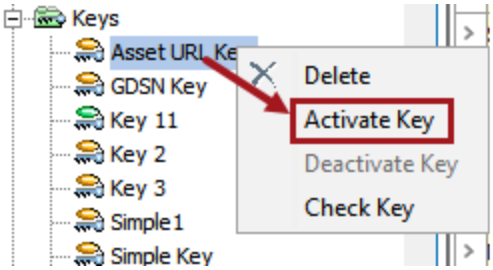
6. While still in System Setup, select the **Asset Download** component model (under Component Models), then click the 'Edit' hyperlink. The **Edit Component Model Configuration** window displays.
7. Double-click on the **X** next to the object type that you want to remove from the component model.



8. If the object type can be successfully removed, the red **X** next to Asset URL Attribute will change to a green check mark. The red X was present because there was an object type in the component model that was not valid for the Asset URL Attribute, e.g., the CASS Component Model object type.



9. The **Save** and **Save pending** buttons are activated. Click **Save** to remove the asset object type and close the 'Edit Component Model Configuration' dialog. Click **Save pending** to keep the live configuration as-is and make additional changes later.
10. Re-activate the **Asset URL Key** by selecting the key, right-clicking, and selecting **Activate Key**.

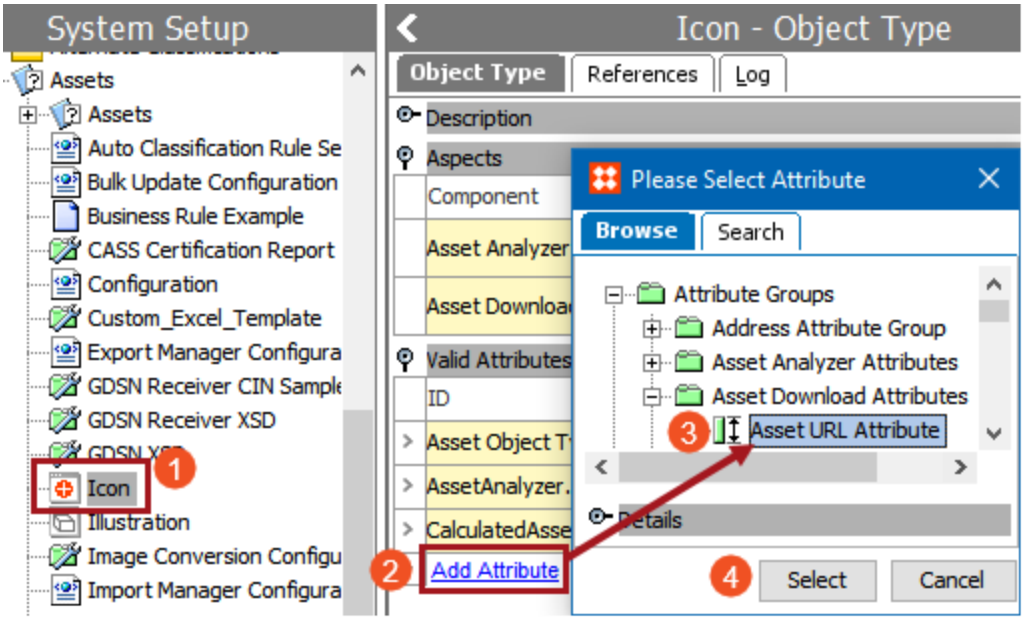


Adding an Asset Type to the Asset Download Component Model

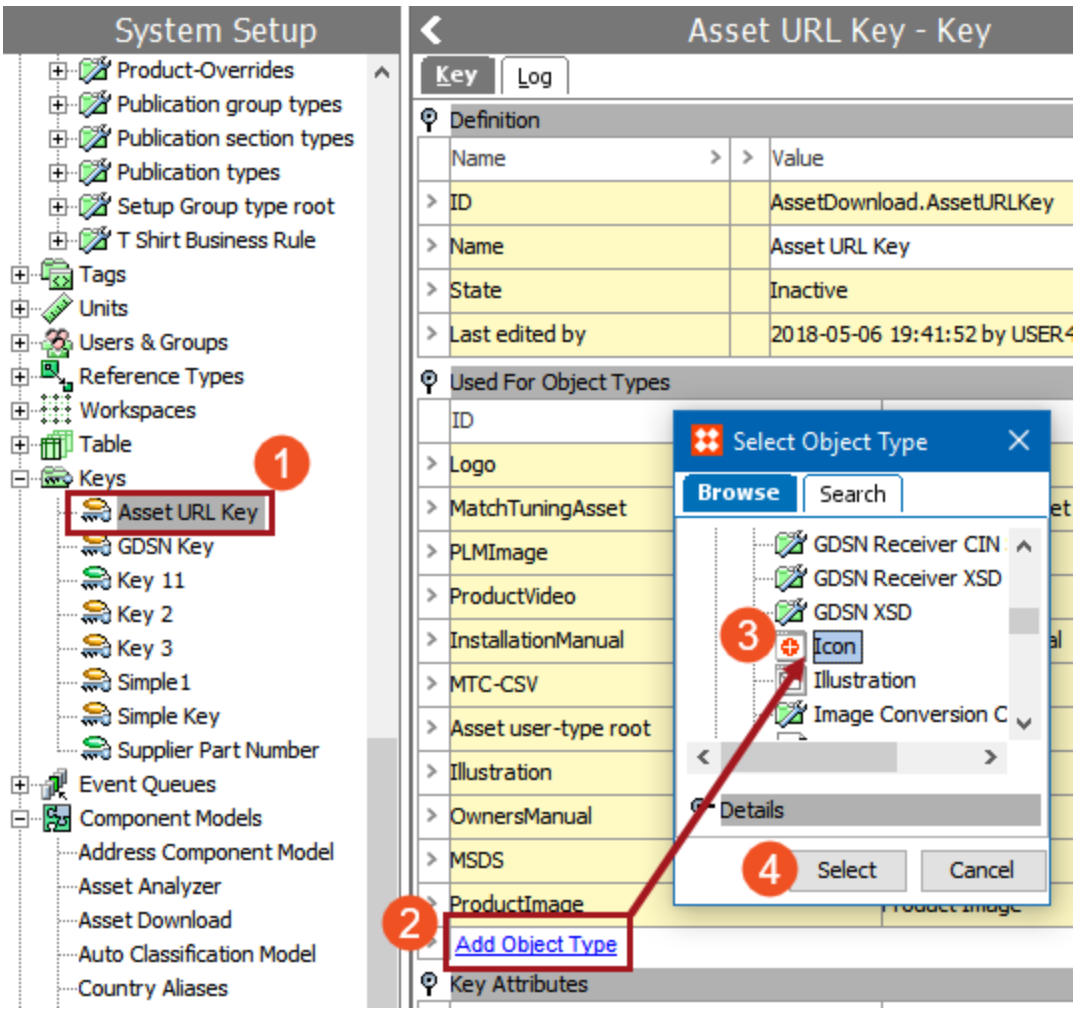
To add a new asset object type or re-add a previously deleted asset object type to the component model:

1. Deactivate the **Asset URL Key** following the steps outlined in the previous subsection.
2. Locate the asset object type that you want to add to the component model under System Setup > Object Types & Structures > **Assets**. In the following example, the **Icon** object type is used.

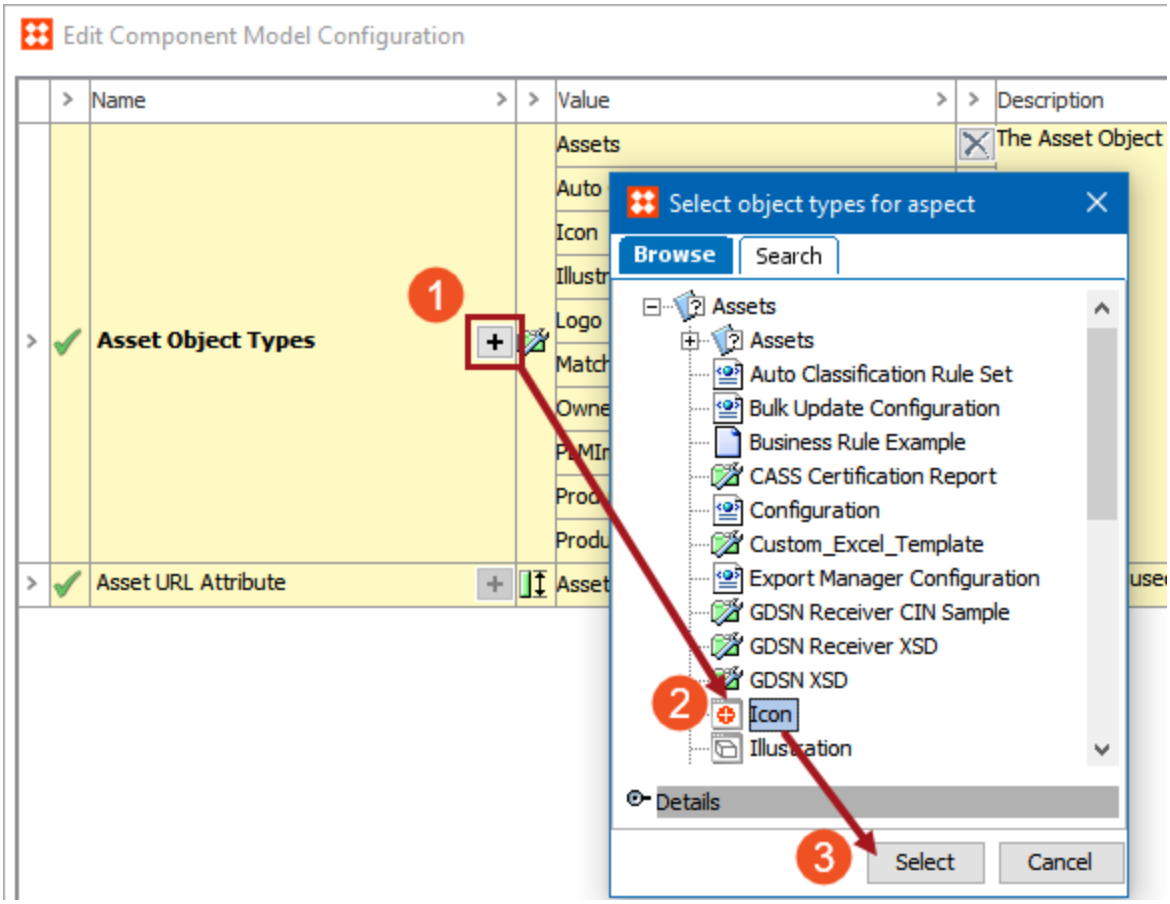
3. With the object type selected, click the **Add Attribute** hyperlink under the 'Valid Attributes' flipper on the **Object Type** tab.
4. In the 'Please Select Attribute dialog, browse to or search for the **Asset URL Attribute**, then click **Select**.



5. Return to the **Asset URL Key** and click the 'Add Object Type' hyperlink under the 'Used for Object Types' flipper on the **Key** tab.
6. In the 'Select Object Type' dialog, browse to or search for the relevant object type, then click **Select**.



7. Go to the **Asset Download** component model and launch the 'Edit Component Model Configuration' dialog by following the steps outlined in the previous sub-section
8. Double-click the plus sign icon to launch the **Select object types for aspect** dialog.
9. Select the asset object type(s) that you want to add to the component model, then click **Select**.



10. Click **Save** to close the 'Edit Component Model Configuration' dialog.
11. Reactivate the Asset URL Key by following the steps outlined in the previous subsection.

Using Asset Download

The Asset Download component enables users to download assets from URLs and link them to supplier products by performing bulk updates or executing business actions on these products. By using the **downloadAssetContent** public API JavaScript method, users can perform any number of additional operations, such as downloading assets to non-supplier products, or executing an action on **asset** objects to replace their content.

Multiple assets can be downloaded onto multiple products in single actions, including, but not limited to: bulk updates; as part of a workflow; as part of an import; or executed based on events via an event processor. This functionality can also be used for non-image assets, such as owners manuals, MSDS sheets, and so forth.

The following examples describe a small selection of use cases and possible setups for using the Asset Download component.

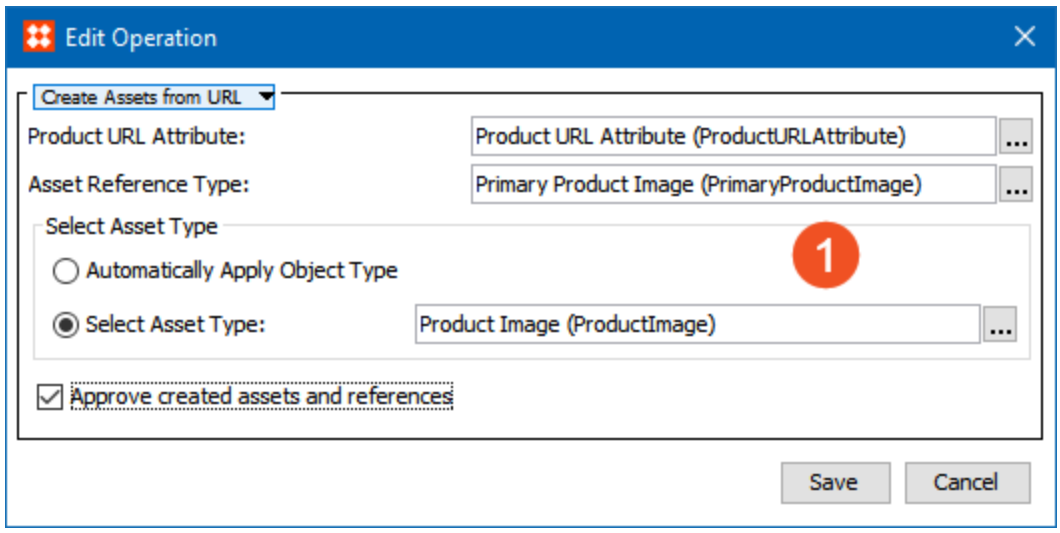
Run a Bulk Update on a Product Collection

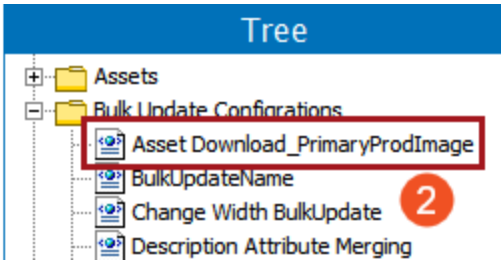
This example shows how assets can be downloaded and linked to products by performing a bulk update on a collection of T-Shirt products in the Web UI. This example will download images and link them to the products using the Primary Product Image asset reference type. Setups must be performed both in the STEP Workbench and the Web UI to enable the solution. The same type of operation could also be used for scheduled bulk updates, which could be run overnight to enrich a larger number of products with images.

Workbench Configurations

1. The required settings under Users & Groups > System Settings > **Web UI Settings** must first be configured so the system will know where to store the downloaded assets. For more information on these settings, see the 'System Settings' subsection of the **Configuring Asset Download - Additional Configurations** topic.
2. Additionally, the product(s) that will be linked to assets must first be linked to a supplier product folder of a specified classification object type, using a specified vendor classification to product link. Both of these settings are also configured under **Web UI Settings**.
3. The **Create Assets from URL** bulk update will be configured, then saved as a bulk update configuration. In this example, the configuration is named 'Asset Download_PrimaryProdImage.'

   For more information on how to configure a 'Create Assets from URL' bulk update operation, see the **Configuring Asset Download - Business Rules and Bulk Updates** topic. For more information on how to create a bulk update configuration, see the **Bulk Updates** documentation.



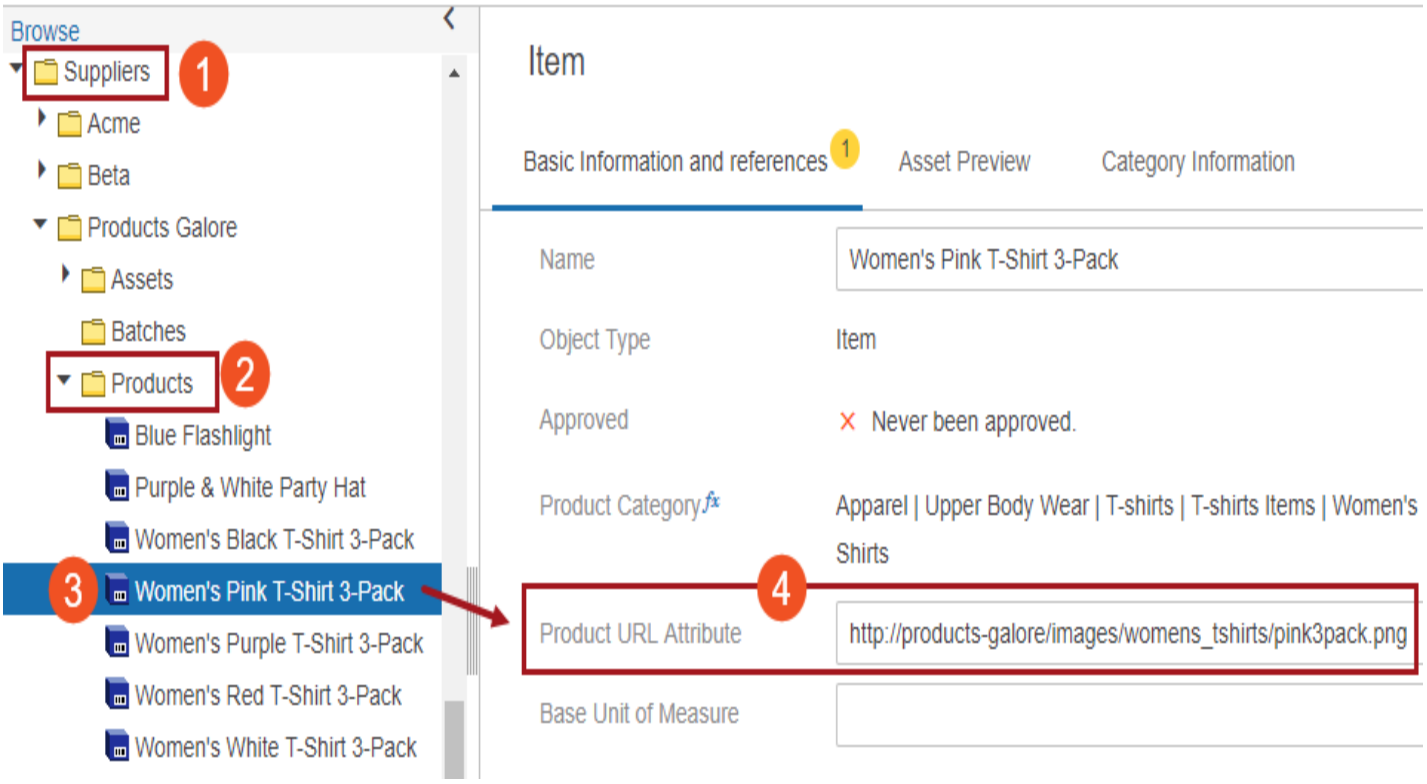


4. In System Setup, activate the **Asset URL Key** if it is not already activated. See the **Activating and Deactivating Keys** topic in the **Unique Keys** documentation for more information.

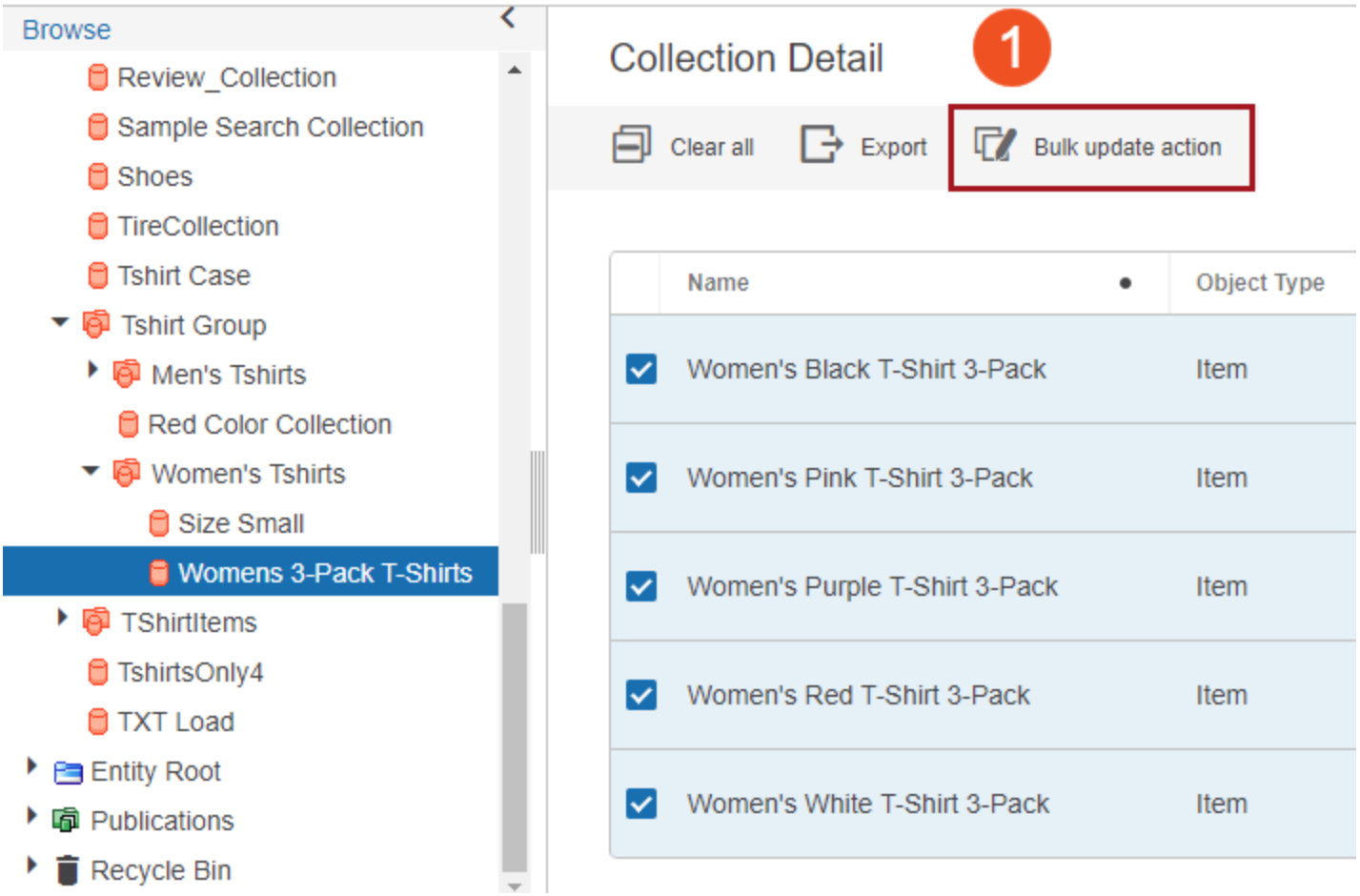
Web UI Setup and Actions

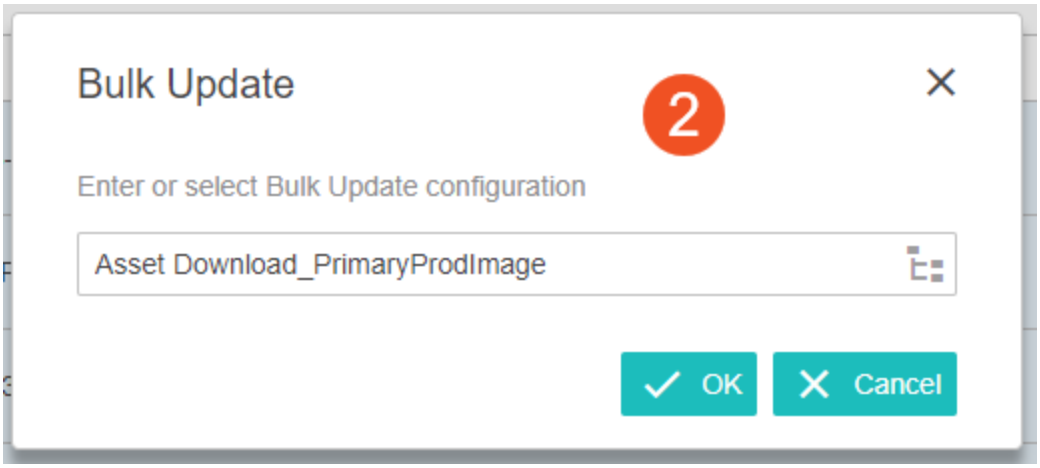
1. In the Web UI, for our example, there are multiple products stored in a **Suppliers** classification structure (**1**, below) within a **Products** folder (**2**). The product named 'Women's Pink T-Shirt 3-Pack' (**3**) is selected, and contains a URL to an asset in the 'Product URL Attribute' field (**4**).

   Note: This attribute is the *user-created* product URL attribute that is valid on *products*, not the Asset URL Attribute, valid on *assets*, that is automatically created when Asset Download is installed. It does not matter if this attribute is populated in the workbench or in the Web UI.

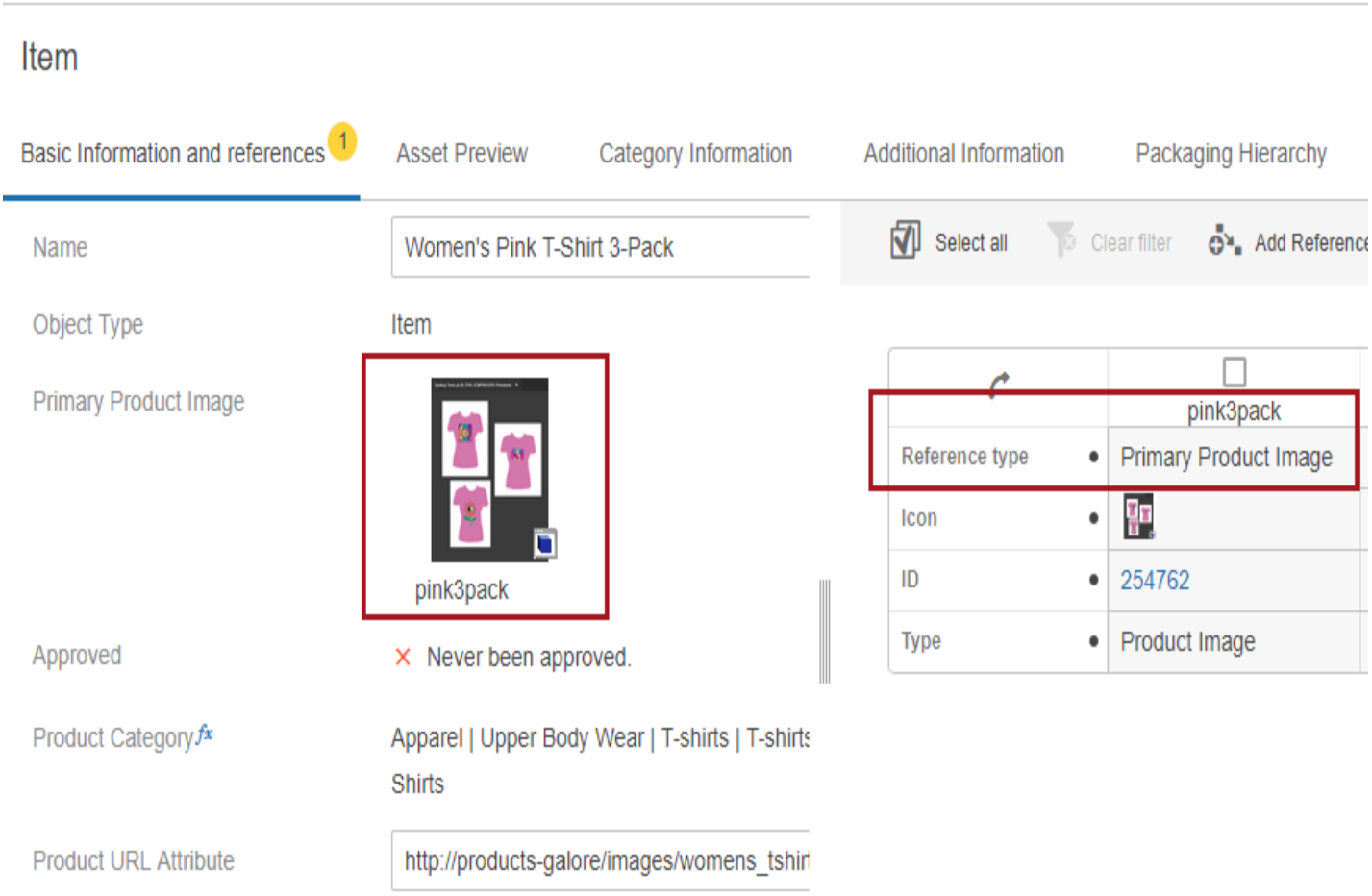


2. The 'Women's Pink T-Shirt 3-Pack' product is also included as part of a **collection** named 'Womens 3-Pack T-Shirts.' The screenshot in the next step shows the Collection Detail screen for this collection, with all objects selected.
3. To perform the bulk update, click the **Bulk update action** button, then choose the 'Asset Download_Primary ProdImage' bulk update configuration. For information on how to add an action button to a Node List Properties screen, see the **Action Button Configuration on a Node List** topic in the **Web User Interfaces** documentation.

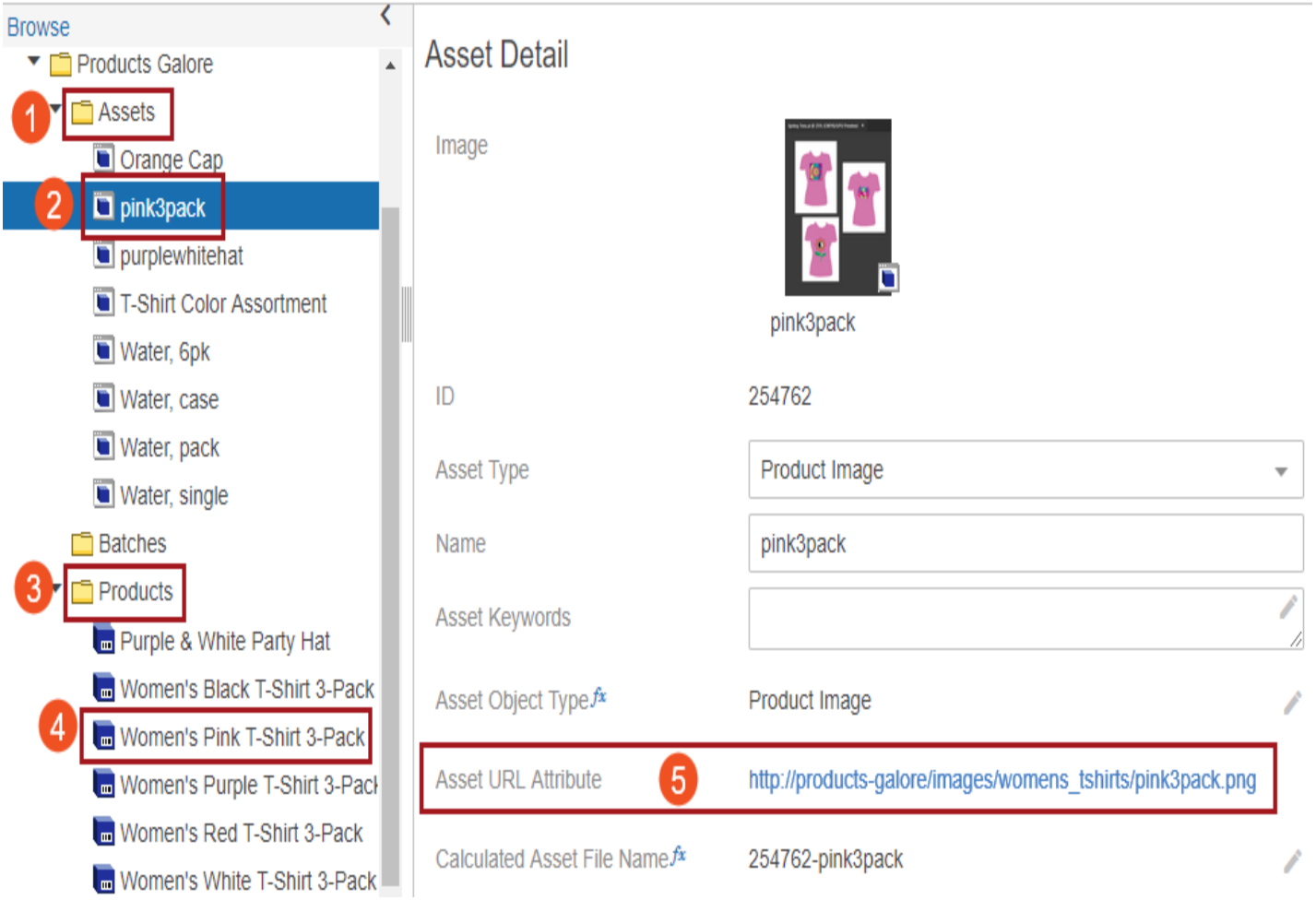




4. After the bulk update action process completes, the assets pointed to by the URL in the 'Product URL Attribute' attribute value field are linked to the products. In the below screenshot, the product is selected, and the linked image (pink3pack) displays as the Primary Product Image on the Node Details Screen.



5. The image (**2**, below) is also stored in the **Assets** folder (**1**) in the same supplier classification hierarchy as the **Products** folder (**3**), which contains the linked product (**4**). The URL that the image was downloaded from is stored on the image in the **Asset URL Attribute** field (**5**) as a read-only value.

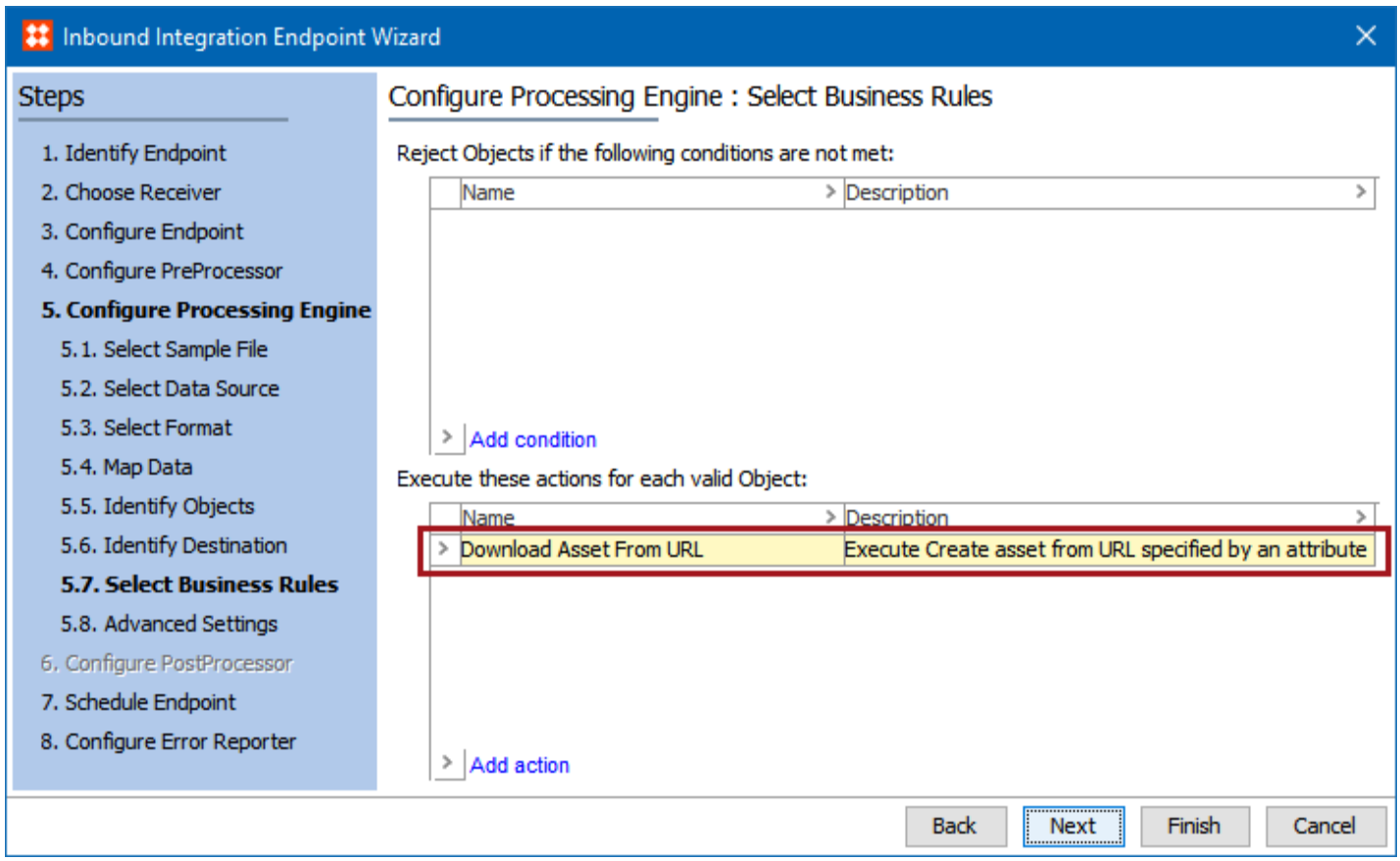


On Import of Products

Another example of where a **Create Assets from URL** business action can be executed is when products are imported into STEP. The below screenshot shows a sample screen from the Inbound Integration Endpoint Wizard, where a business rule named 'Download Asset From URL' has been specified to execute for each valid object on import.

This method could, for example, be used as an alternative to the Asset Importer tool (detailed in the **Asset Importer** documentation). By importing a spreadsheet containing supplier products and the attribute values for each asset URL, not only can the products be created, but the assets can also be created, linked to the products, and linked into the assets folder that exists alongside the product folder in the supplier classification hierarchy (both being located inside the same supplier root folder).

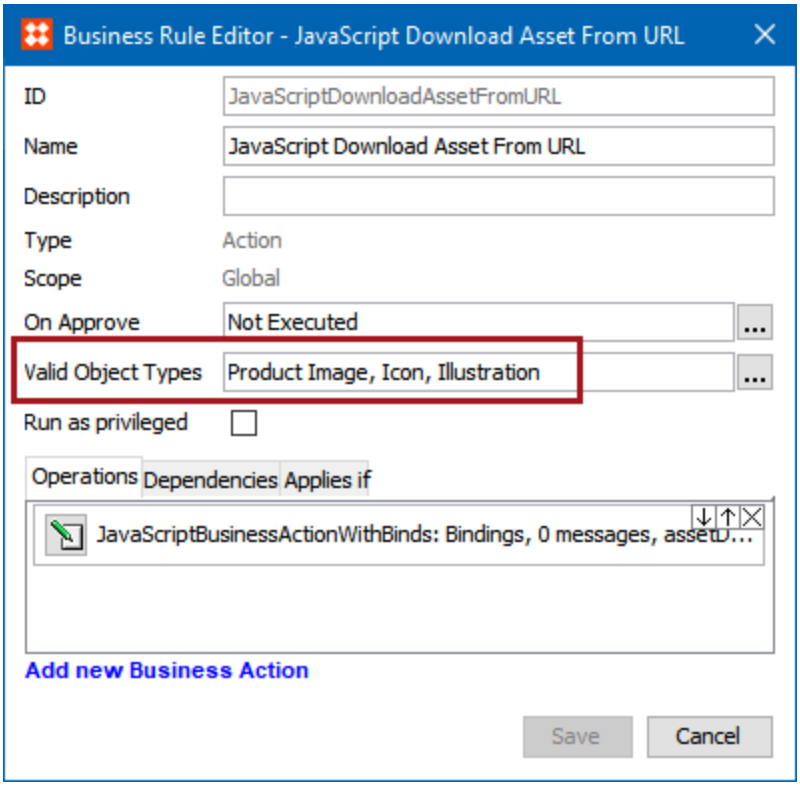
For more information on adding business rules to Inbound Integration Endpoints and using business rules on import, see the **IIEP - Configure STEP Importer Processing Engine** section of the **Inbound Integration Endpoints** documentation and the **Import Manager - Select Business Rules** section of the **Import Manager** documentation.



Asset Content Replacement – Public JavaScript API Method

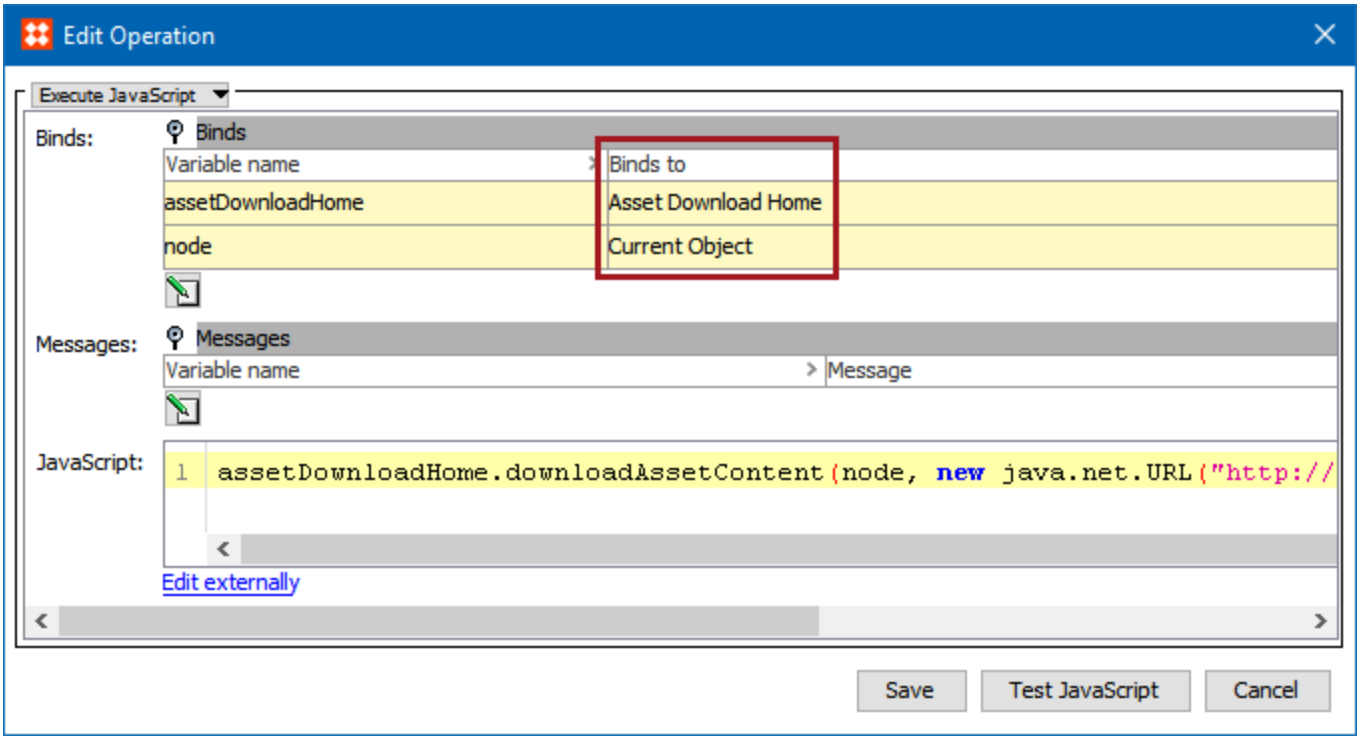
This example shows a basic **Execute JavaScript** business action that uses the **downloadAssetContent** public API JavaScript method along with the **Asset Download Home** bind, which is located under the **Assets** category for Execute JavaScript business actions.

1. In this example, the business rule is named 'JavaScript Download Asset From URL' and the valid object types are image assets—Product Image, Icon, and Illustration.

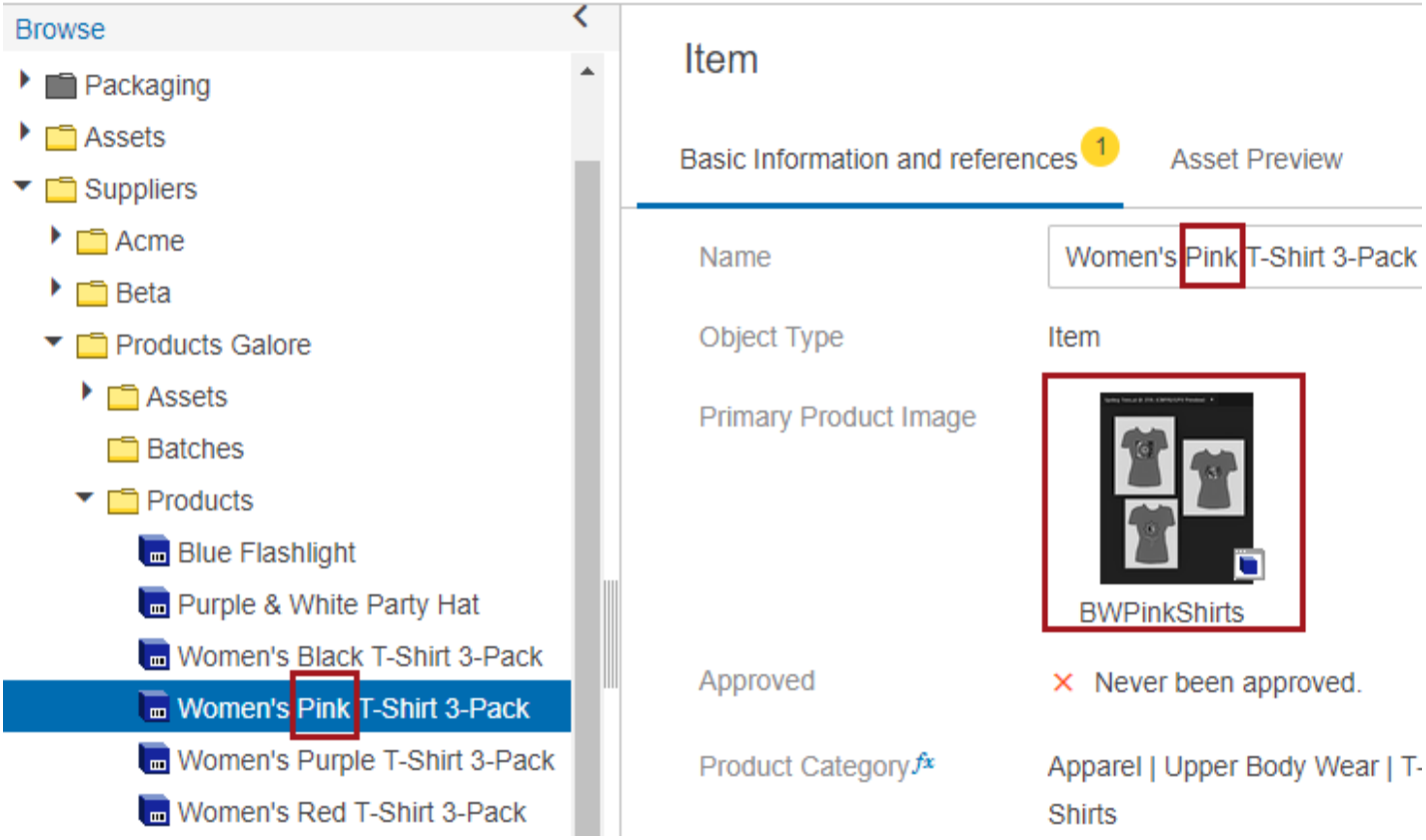


2. Two binds are used: **Asset Download Home** and **Current Object**. The sample JavaScript (not fully pictured in the screenshot below) contains the asset URL within the script:

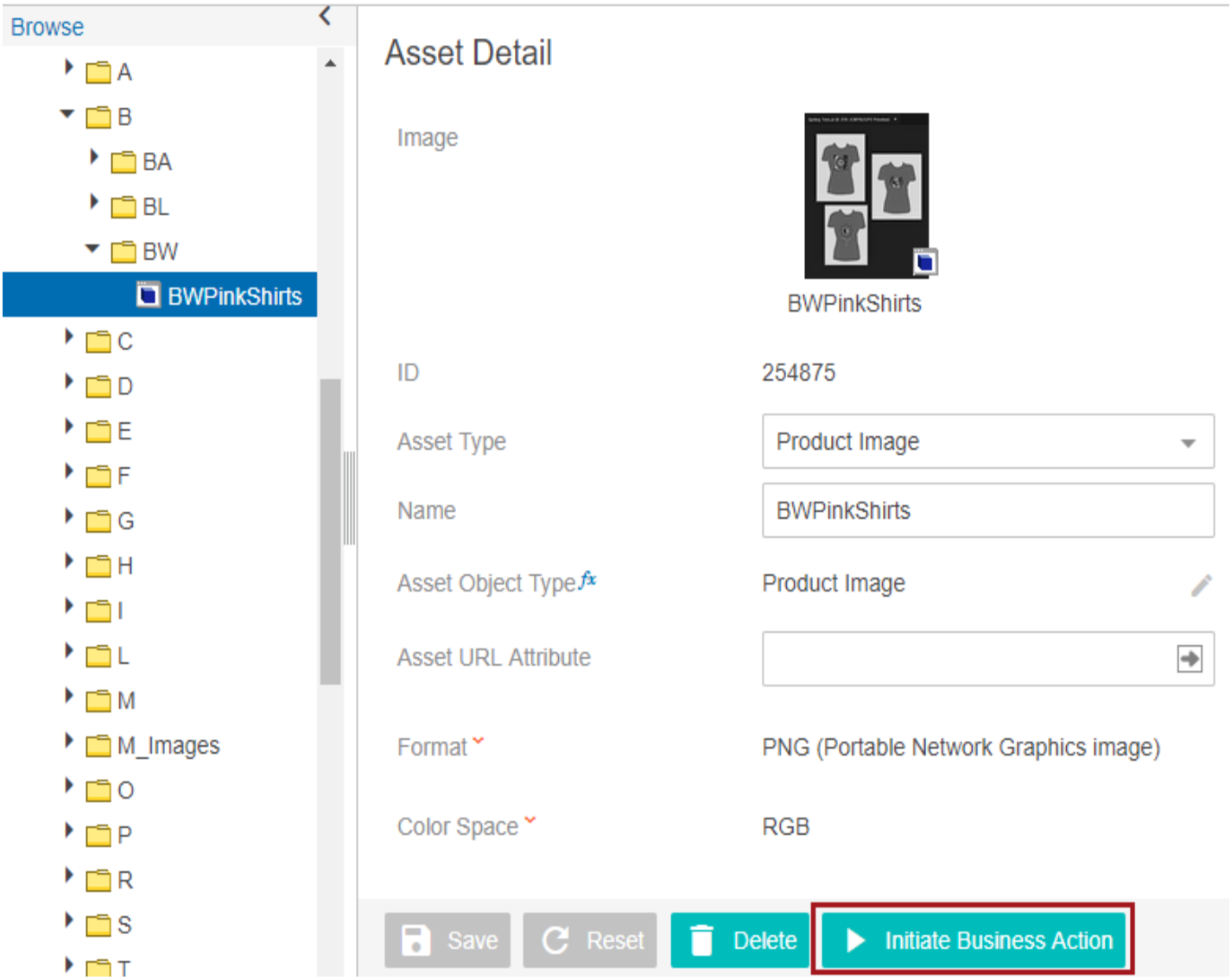
```
assetDownloadHome.downloadAssetContent(node, new java.net.URL("http://products-galore/images/womens_tshirts/pink3pack.png"));
```



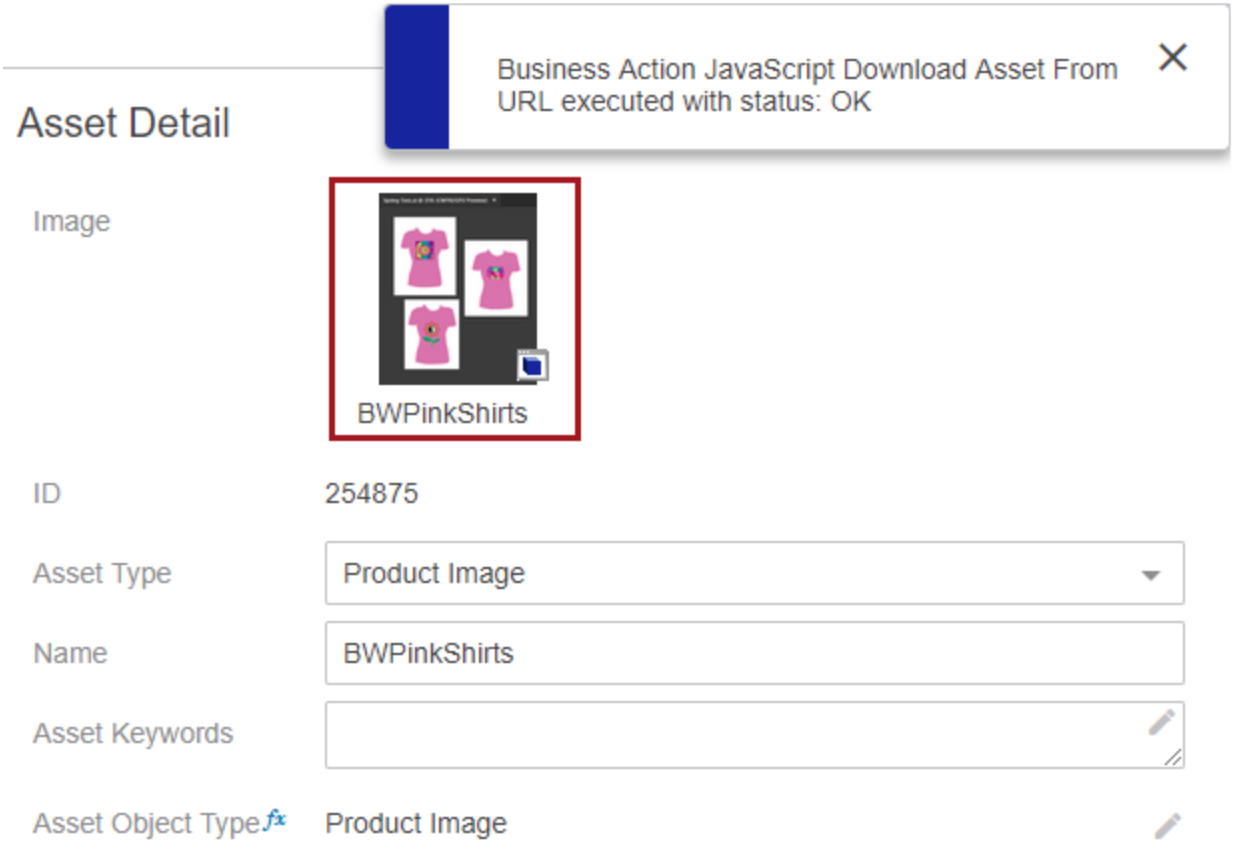
3. The asset to be replaced is the Primary Product Image linked to the Women's Pink T-Shirt 3-Pack. Instead of a color image of three pink shirts, a black and white image of shirts is currently linked to the product instead. Since this is the wrong image, it needs to be replaced.



4. Navigate to the asset itself, where an **Initiate Business Action** button has been placed at the bottom of the page. This button has been configured to run the 'JavaScript Download Asset From URL' business rule. For information on how to add an action button to a Web UI screen, see the **Action Button Configuration on a Node List** topic in the **Web User Interfaces** documentation.



5. Click the 'Initiate Business Action' button to run the JavaScript Download Asset From URL business action. The image is downloaded from the URL specified in the JavaScript and has replaced the content of the asset. Now, the correct image of the pink t-shirts is displayed.


Business Action JavaScript Download Asset From URL executed with status: OK
Asset Detail
Image
BWPinkShirts
ID
254875
Asset Type
Product Image
Name
BWPinkShirts
Asset Keywords
Asset Object Type
Product Image