DIGITAL ASSET EXCHANGE
USER GUIDE

StiboSystems

STEP Trailblazer 8.1

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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 / STEP 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 Configurations** 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

There are two 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

There are three ways to export assets:

- **Export Images and Documents** wizard allows you to manually export asset digital content.
- **Export Manager** wizard 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.

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

Exporting Assets

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- **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.

There are three ways to export assets:

- **Export Images and Documents Wizard** allows you to manually export asset digital content.
- **Export Manager** wizard allows you to manually export asset metadata, references, and digital content using STEPXML.
- **Asset Push** allows you to automatically export modified / approved assets.

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. 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.

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]).
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.

Term	Definition
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. For more information about MIME types, see the **MIME Types** section of the **STEP PIM Superuser / System Setup** 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 here 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.
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 Configurations** 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 helpdesk 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 **Unpushed or Failed Assets** topic within the **Navigation and Searches** section of the **Getting Started / STEP 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 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.

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.
Default	false
Additional Info / When to	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.

Change the Default Value	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.

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.

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.
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. Better practice is to use the 'Include Classification' setting in the configuration 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.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.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.
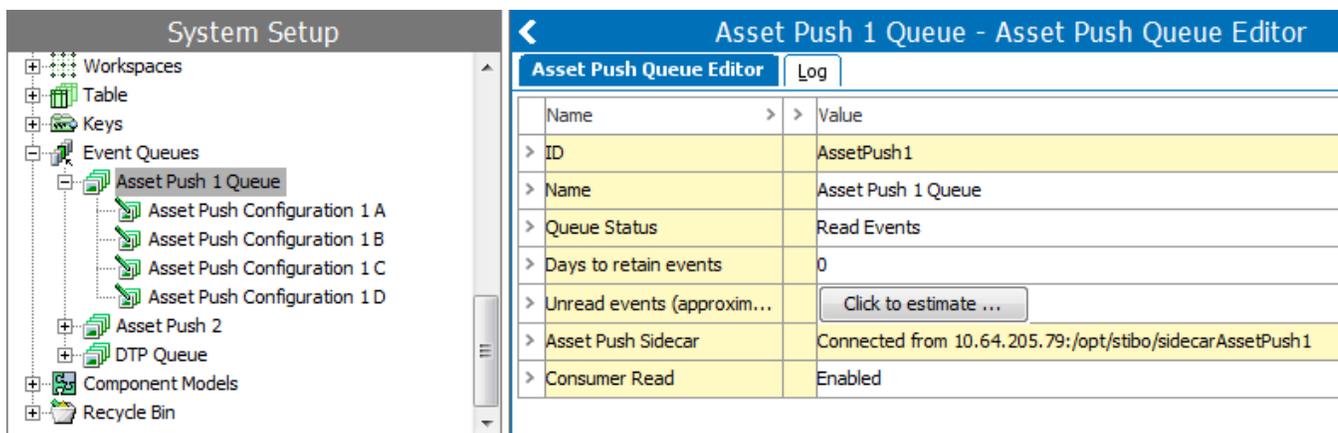
3. Click the **Queue Status** field, and select either **Discard Events** or **Read Events**. The default status is Discard Events.

- **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 Configurations** section of the **Export Manager** documentation for more information.

Configuration

1. In **System Setup**, right-click an **Event Queue** and then choose **New Asset Push Configuration**.
2. Enter an **ID** and a **Name** for the asset push configuration, and then click **Create**. A new asset push configuration node is created in System Setup and the **Asset Push Configuration** tab opens.
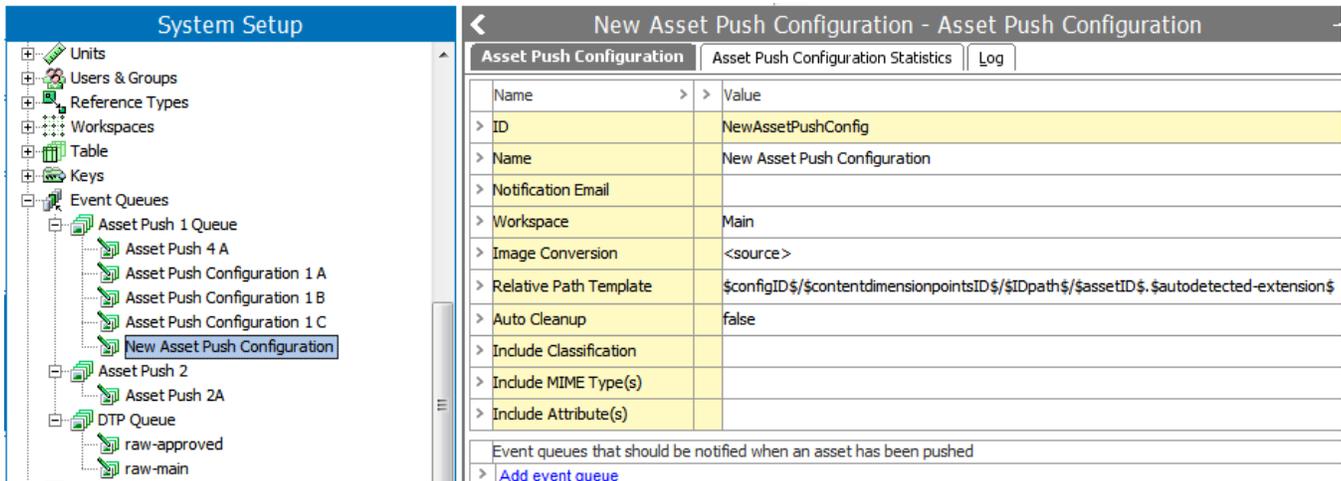
3. (Optional) Click the **Notification Email** field, and enter a valid email address. If populated, this will result in an email being sent to the specified address in the event that a queued asset fails to be converted and / or extracted.

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. If **Main** is selected, assets are pushed when they are edited and / or replaced, and no approval is required to trigger the push.

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.

   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 Configurations** section of the **Export Manager** documentation 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.

   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, 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.

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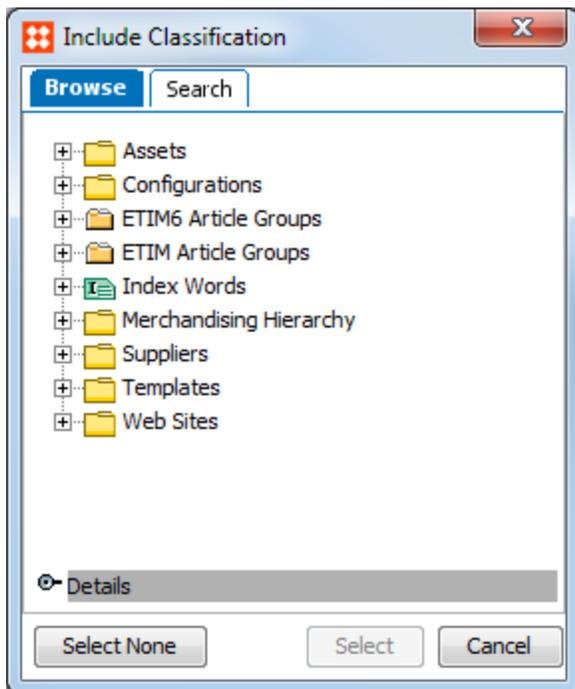
9. Double-click the **Include MIME type(s)** field to filter which assets are included in the push via their MIME type. In the **Add Value Editor**, click **Add Value** to add the relevant MIME types, and then click **OK**.

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.
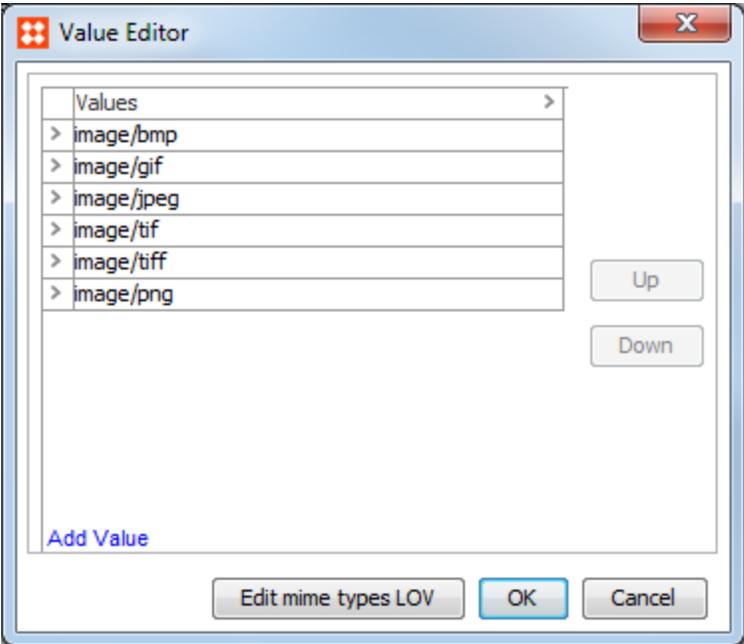
For more information about MIME types, see the **MIME Types** section of the **STEP Superuser / System Setup** documentation.

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]. The value can be specified as null by populating nothing after the equals sign (=). Populating the field with multiple attributes acts in an 'AND' fashion (asset must meet both conditions to be pushed).
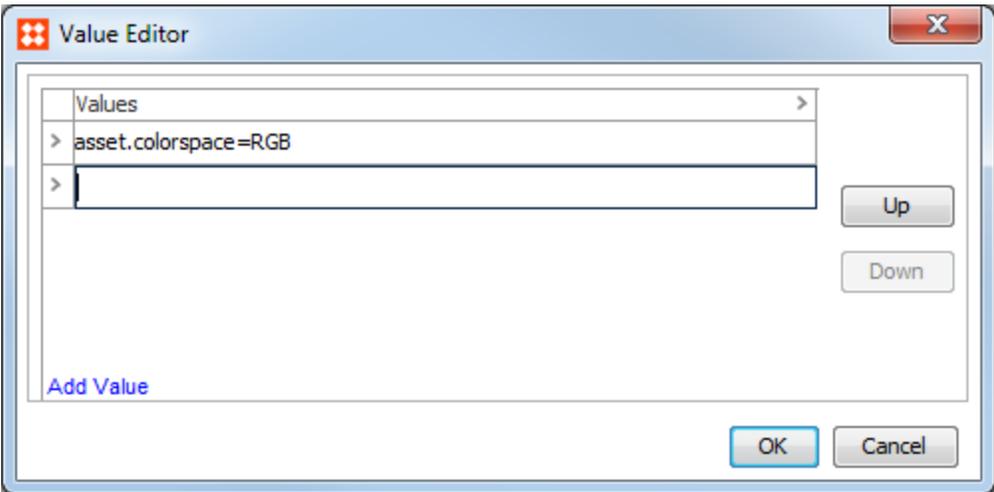
Each STEP asset has a series of metadata attributes that are automatically set upon import of the asset. Users may also create additional metadata attributes and define how they are to be set as part of the import configuration. Note that any assets with user-created metadata attributes must be pushed 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).

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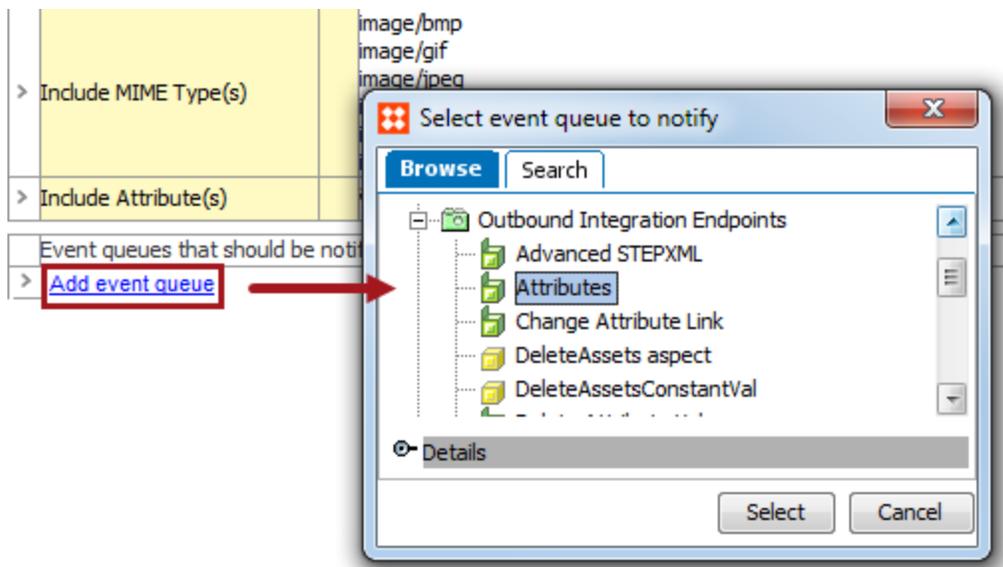
Note that asset push sends only the actual asset files to a downstream system. Oftentimes it is useful to also provide an XML or other file type that contains the asset metadata, including the Relative Path of the asset so that users can easily find it on the downstream system.

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

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 four methods of monitoring the status of asset pushes within the STEP Workbench. If additional monitoring is required, it is recommended that standard system monitoring tools are utilized (e.g. designated external monitoring system). Additionally, the STEP System Administration page can be used.

1. Each asset push configuration can be set up to send an email when any assets fail attempted extraction and/or conversion. See step 3 of the **Creating and Maintaining Asset Push Configurations** section of the **Asset Push** documentation for more information.

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

3. Statistics regarding each asset push can be viewed on the Asset Push Configuration Statistics tab.
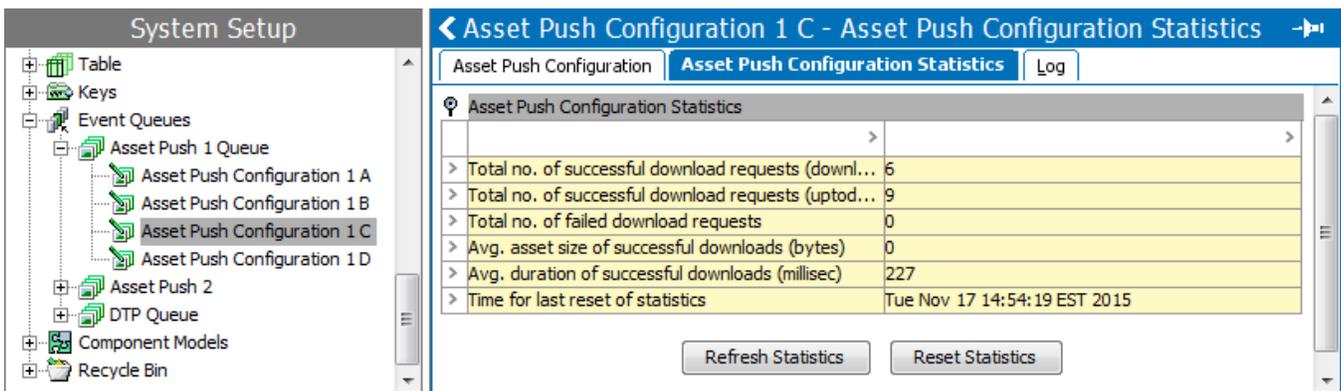
4. The status of each individual asset relative to all asset push configurations can be viewed on the Status tab of the asset, under the Asset Push Status flipper.
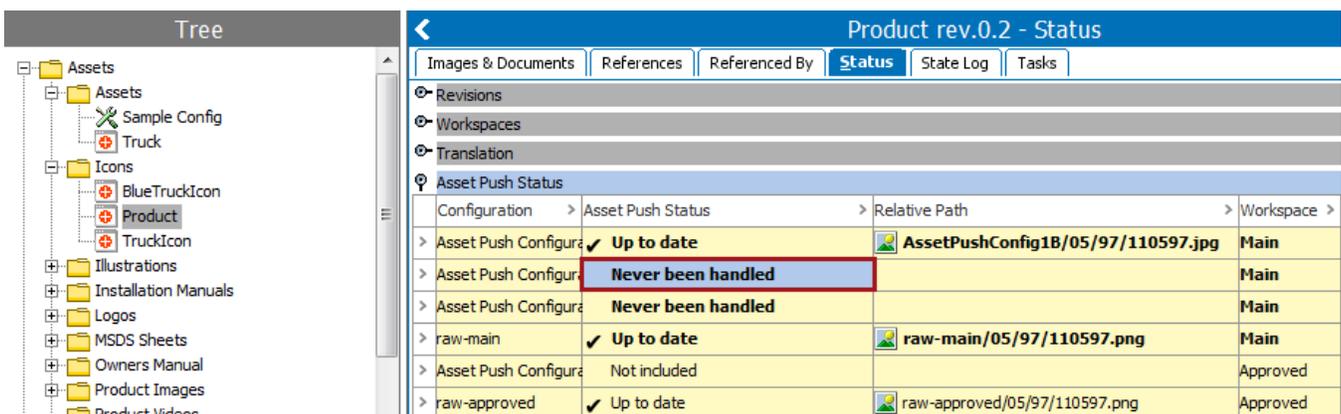
The available statuses are:

- 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.

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.

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.

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.
$contentdimensionpointsID$ / $contentdimensionpointsNAME$	STEP ID / Name of the dimension point of the asset. ID macro should be 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.

Macro	Notes
$IDpath$	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 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.

Macro	Notes
	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.$extension$). 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.

Macro	Notes
$conversion$	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

RPT 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:
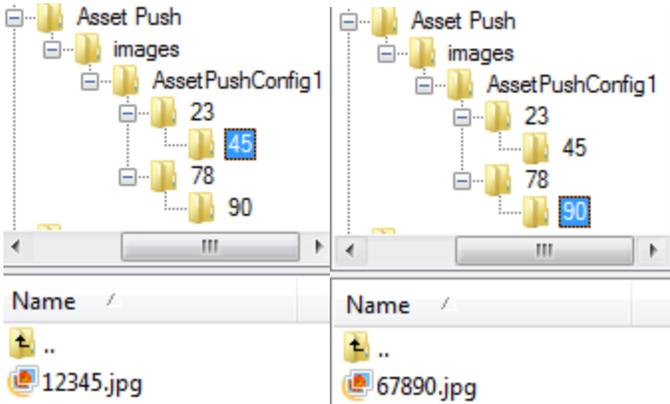
Configure $attribute:key$ Macro

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.
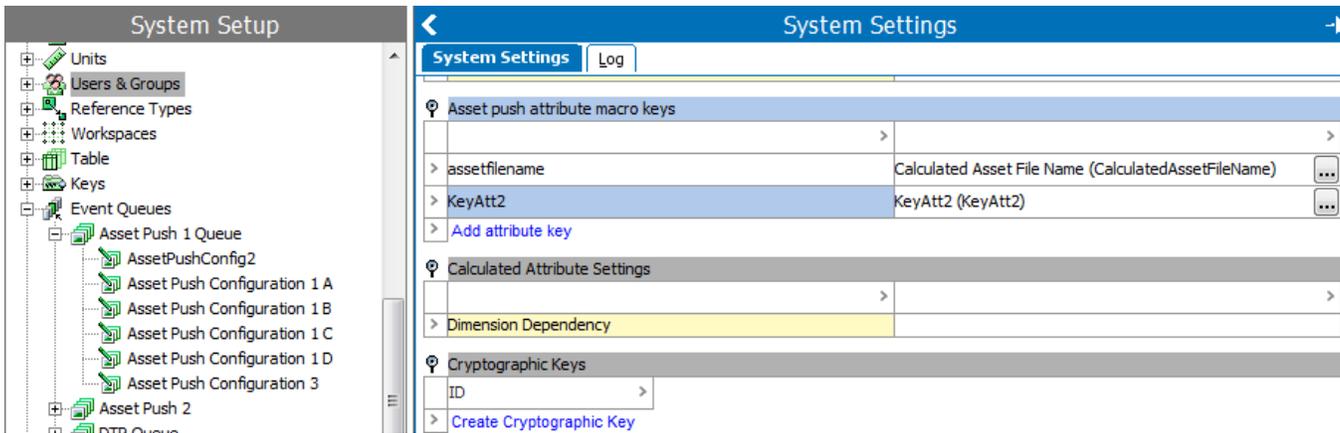
2. Click **Add attribute key**.

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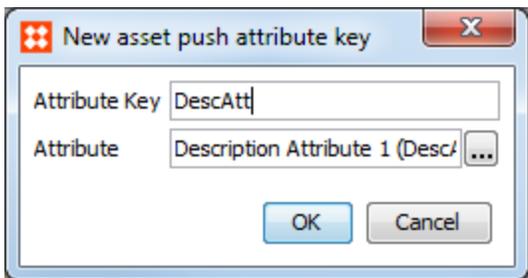
Note: On the **System Settings** screen, the Attribute Key appears in the first column and the attribute's STEP name appears in the second column.

4. Return to the desired asset push configuration and enter the desired Attribute Key.
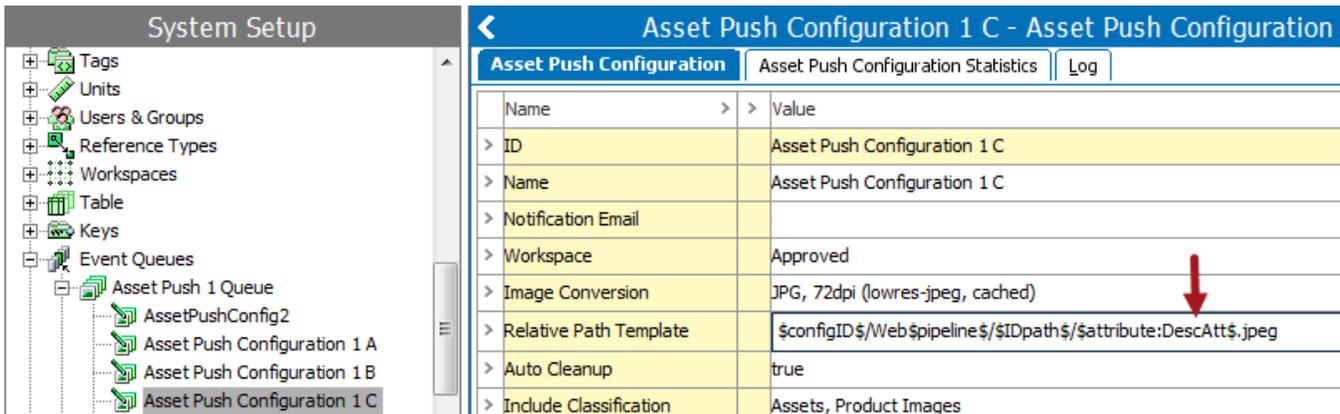
Starting the Asset Push Process

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.

Note that the initial asset push can be a time consuming process so care should be given to the timing and initiation of 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.
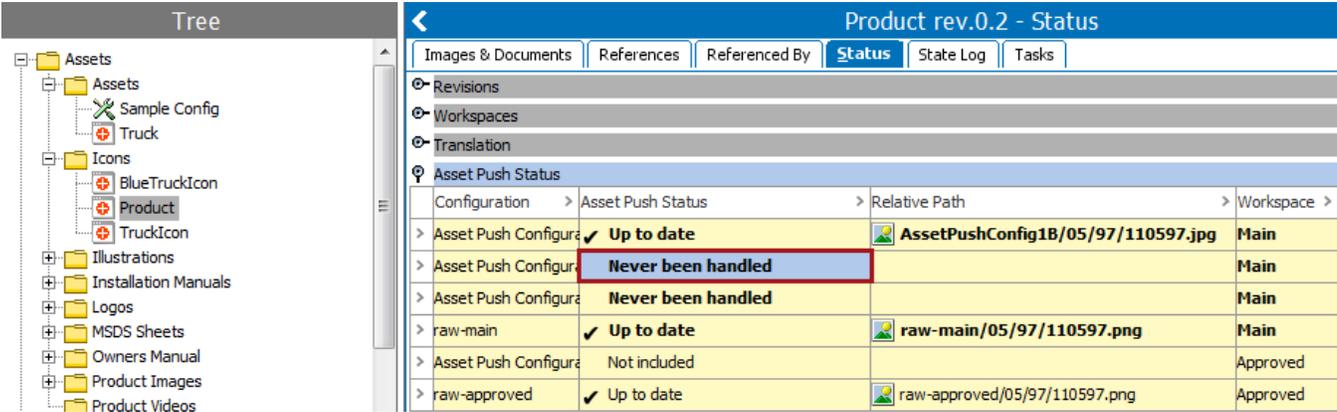
3. To verify that the process works as expected, right-click the image in **Tree** and choose **Push Asset(s)**. A window appears that lists every conversion associated with this particular folder. Click **OK**.

Asset Push

The selected asset(s) will be pushed using all the listed Asset Push Configuration(s). Assets with the status 'Up to date' will only be pushed if you select 'Force Push' for the relevant Asset Push Configuration(s). Force Push is typically only needed if you have changed the Asset Push Configuration.

Notice: May take a while if lots of assets.

Asset Push Options

Push	Force Push	Asset Push Configuration(s)
●	○	AssetPush1: Asset Push Configuration 1 A
●	○	AssetPush1: Asset Push Configuration 1 B
●	○	AssetPush1: Asset Push Configuration 1 C
●	○	DTPConfiguration: raw-approved
●	○	DTPConfiguration: raw-main

OK   Cancel

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.

Export Images and Documents Wizard

The Export Images and Documents wizard allows you to export assets on demand.

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**.
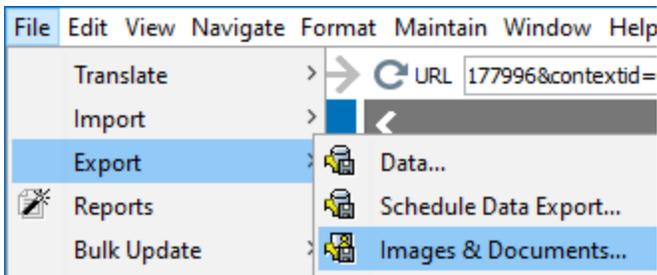
   - On the Tree, select a classification folder that contains assets to be exported, or select an individual asset, right-click, and then click **Export Images and Documents**.
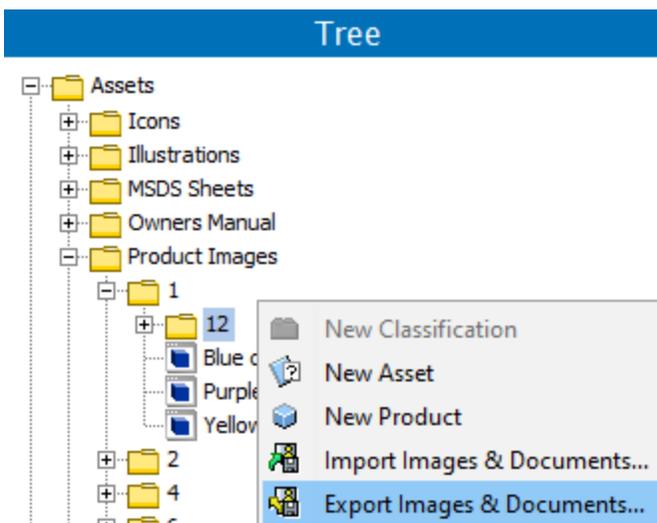
3. The Export Images and Documents wizard displays and can involve the following steps:
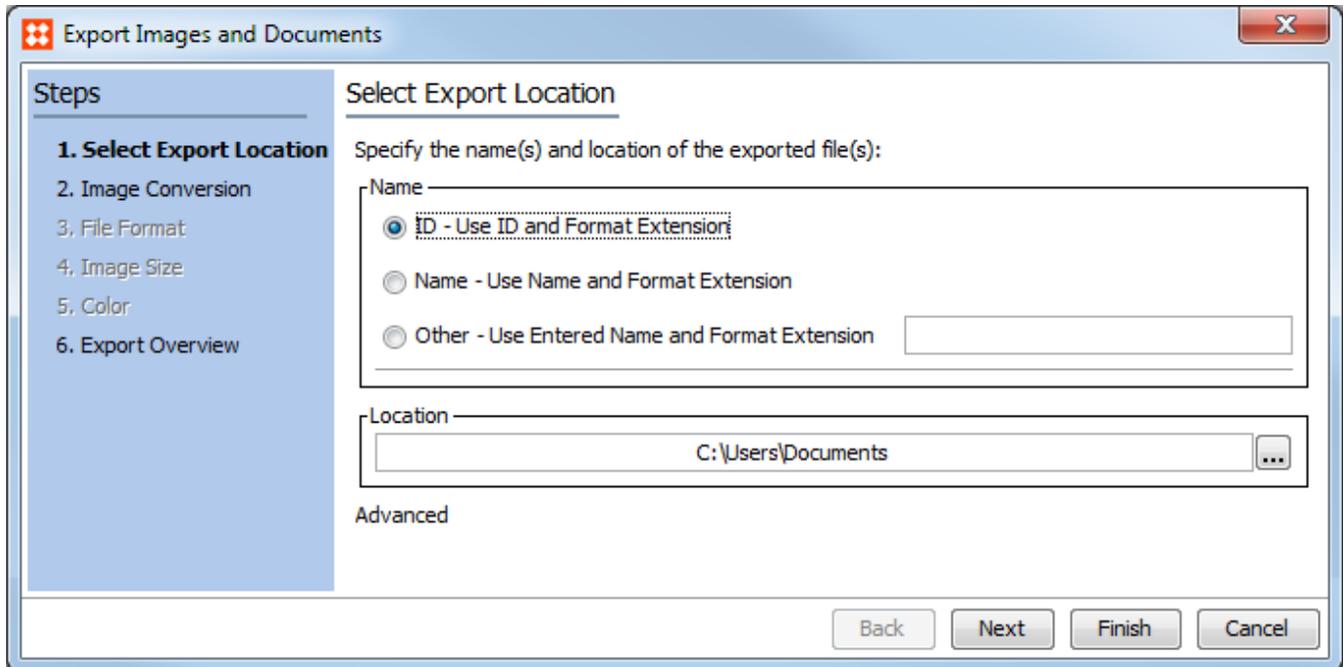
- **Step 1 - Select Export Location**determines the location where assets will be downloaded.
- **Step 2 - Image Conversion** allows you to select a predefined image conversion configuration, script, or pipeline, or specify a custom setup to convert the format, size, and/or color settings of the exported images.
- **Step 3 - File Format** allows you to specify the file format of the images exported.
- **Step 4 - Image Size** allows you to specify the size of the images exported.
- **Step 5 - Color** allows you to specify the color definition of the images exported.
- **Step 6 - Export Overview** provides an overview of selected the export settings and allows you to start the export.

Step 1 - Select Export Location
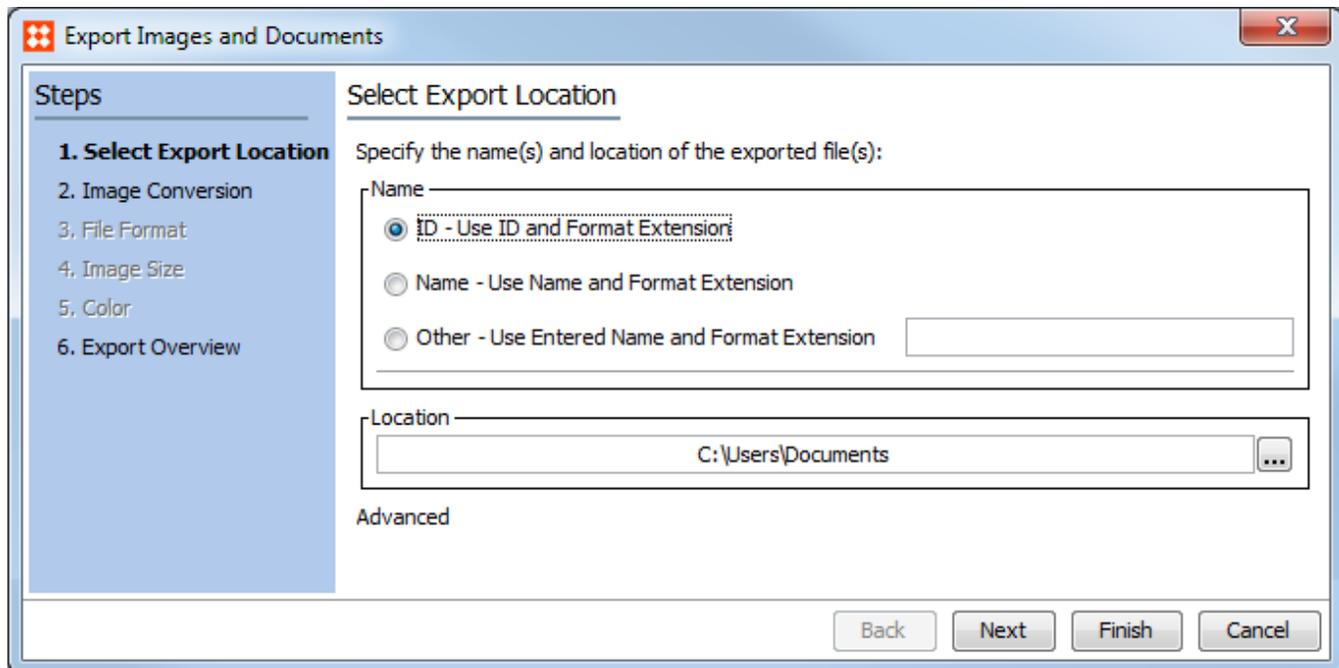
1. In the **Name** area, select one of the following options.

   - **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.

   - 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.

```
┌─Delivery location ──────────────────────────────────────┐
│ SFTP                                                  ▼ │
│                                                          │
│ Delivers exported data to a remote server via the SSH File Transfer Protocol (SFTP). │
│                                                          │
│ Host name   sftp.acme.com                                │
│                                                          │
│ User name                                                │
│                                                          │
│ Password                                                 │
│                                                          │
│ Filename    result                                       │
│                                                          │
│ TimeStamp   No                                        ▼ │
│                                                          │
└──────────────────────────────────────────────────────────┘
```

- **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.

```
┌─Delivery location ──────────────────────────────────────┐
│ Server Side Delivery                                  ▼ │
│                                                          │
│ Deliver output file to location on server                │
│                                                          │
│ Path       home/export                                   │
│                                                          │
│ Filename                                                 │
│                                                          │
└──────────────────────────────────────────────────────────┘
```

Step 2 - Image Conversion
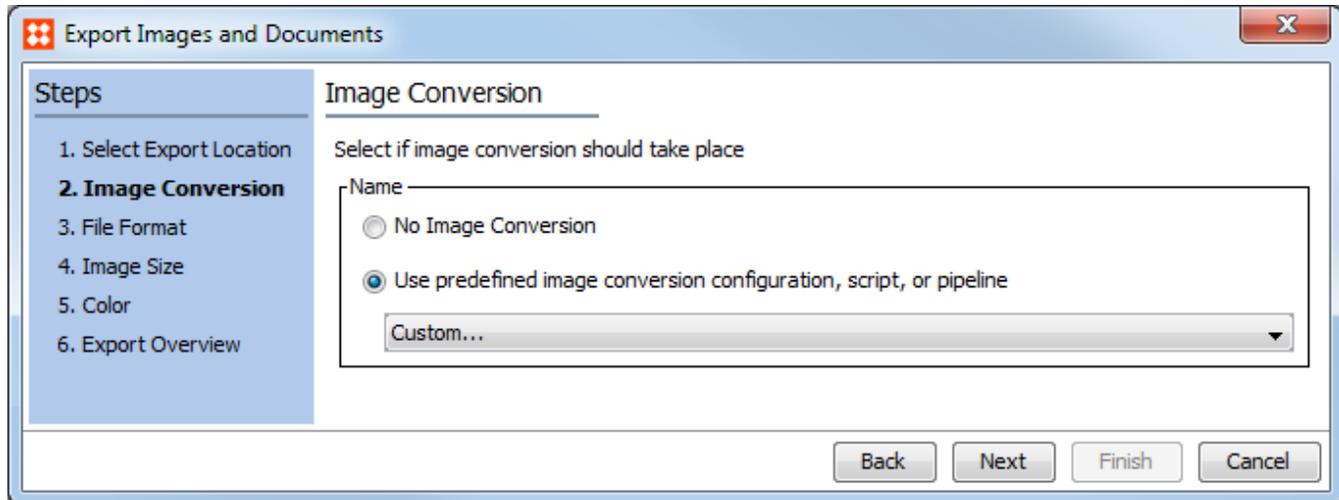
1. For Name, select **No Image Conversion** to export the images as is. No additional information is required.
2. If an image conversion is required to change the image settings on export, select **Use predefined image conversion configuration, script or pipeline**.
3. Use the dropdown to select one 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.
4. Click **Next** to continue or click **Finish** to start the export.

Step 3 - File Format
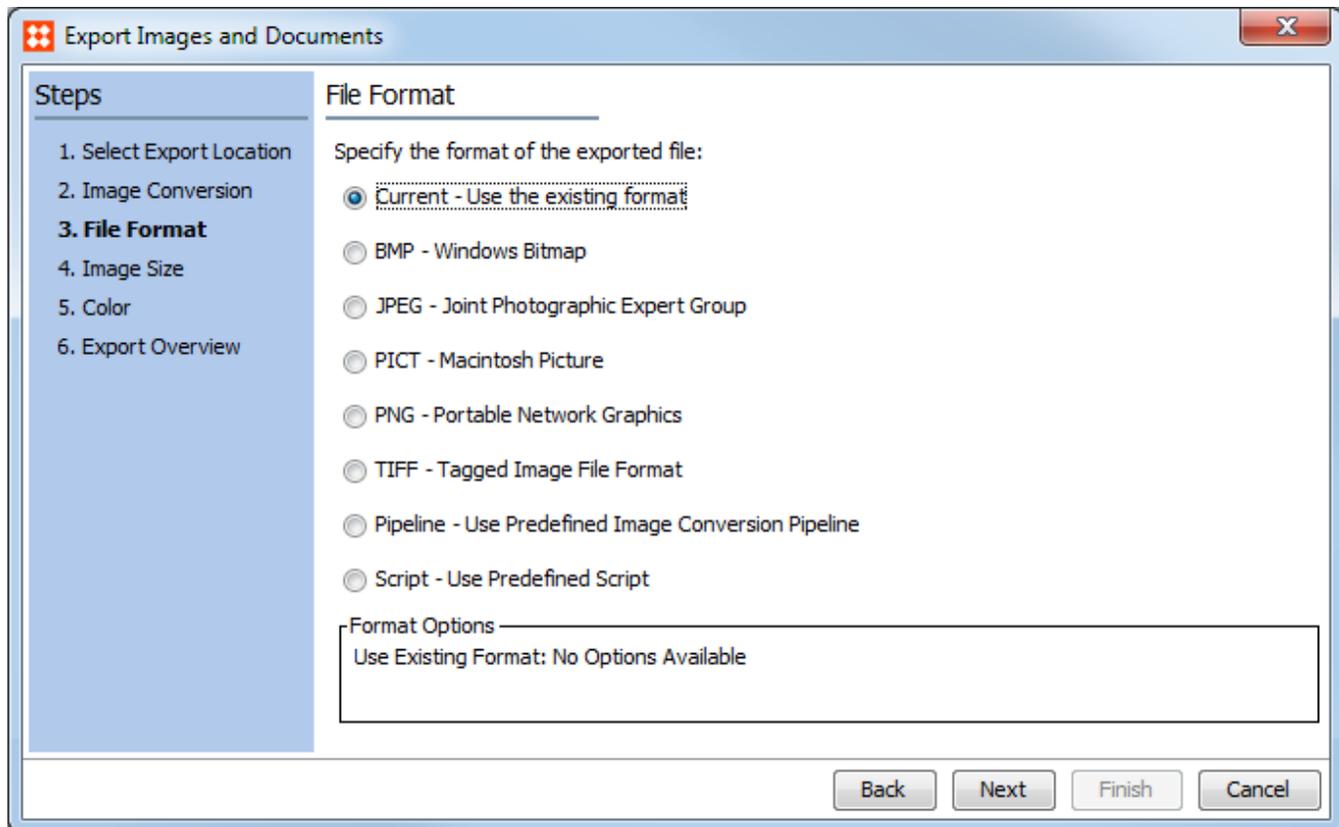
1. Set the format required for export by selecting one of the following options:

   - **Current – Use the existing format**: Keeps the current (original) file format of the images selected for export.

   - **BMP – Windows bitmap**: Converts all image files in your selected folder to .BMP files.

   - **JPEG – Joint Photographic Expert Group**: Converts all image files in your selected folder to .JPG files. When you select this format, you have to specify the following:

     - **Quality Level**: Low, Medium, High Maximum

     - **Interlace**: Pixel or Plane

- **Keep Color Profile Information**

- **PICT – Macintosh Picture**: Converts all image files in your selected folder to .PICT files.

- **PNG – Portable Network Graphics**: Converts all image files in your selected folder to .PNG files. When you select this format, you must specify the following:

  - **Compression Level**: From 0 to 90 in increments of 10

  - **Interlace**: Line or Pixel

  - **Keep Color Profile information**

- **TIFF – Tagged Image File Format**: Converts all image files in your selected folder to .TIFF files. When you select this format, you must specify the following:

  - **Compression Type**: None, ZIP, JPEG, RLE, Fax, Group 4, LZW

  - **JPEG Quality**: Low, Medium, High Maximum

  - **Interlace**: Line, Pixel, Plane

  - **Keep Color Profile Information**

- **Pipeline – Use Predefined Image Conversion Pipeline**: Uses a standard image pipeline. The available conversion pipelines depend on you system setup. Selecting a pipeline automatically provides the image

conversion options each time you export images. No additional wizard settings are required. Click **Next** to display the **Export Overview** or **Finish** to start the export.
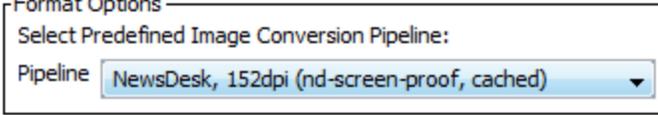
- **Script - Use Predefined Script**: Uses a predefined script to convert the images. Scripts are system dependent. Selecting a script automatically provides the image conversion options each time you export images. No additional wizard settings are required. Click **Next** to display the **Export Overview** or **Finish** to start the export.

Saving an image conversion configuration allows you to apply the same settings for multiple exports. For more information, see **Image Conversion Configurations**.

2. Click **Next** or click **Finish** to start the export.

Step 4 - Image Size
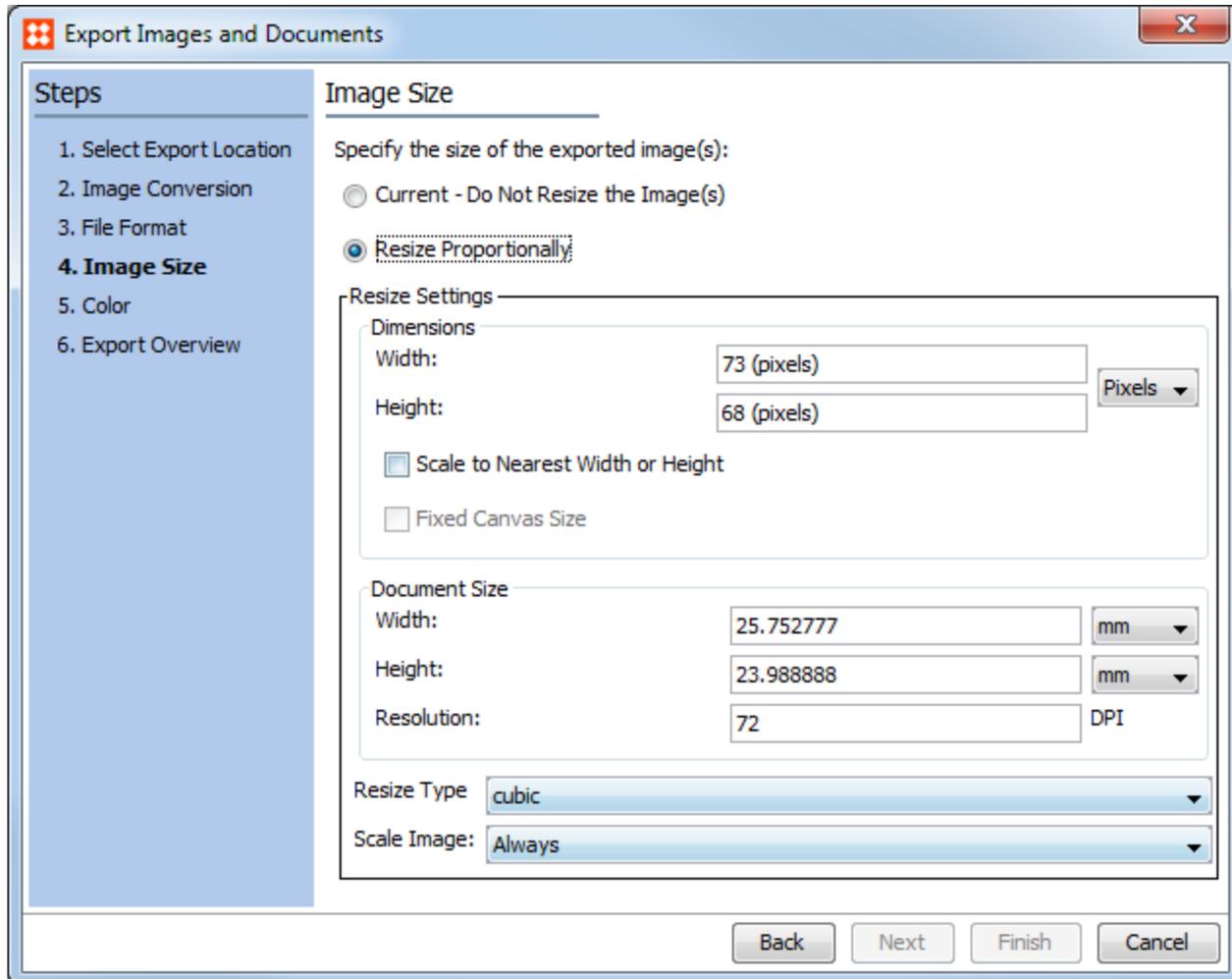
1. Select **Resize Proportional** if you want to resize the images. If you do not want to resize the images select **Current - do not resize the image**.

2. For Resize Settings, use the **Dimensions** area enter the desired height *or* width in the selected unit of measure. Because the images are scaled proportionally, when you enter the first dimension, the other values change accordingly.

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.

4. For **Resize Type**, select the preferred resize type: cubic, scale and subsample. 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%.

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.

Step 5 - Color
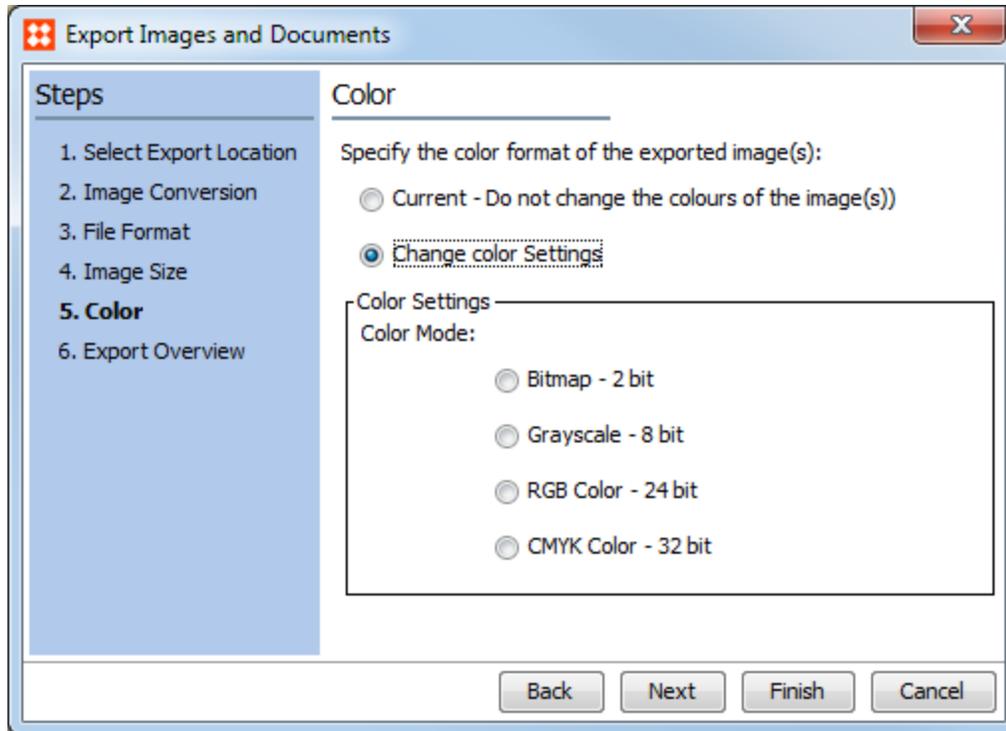
1. Select **Change color settings** if you want to modify the image color, otherwise, select **Current - do not change the colors of the image**.
2. For **Color Settings**, select the preferred color mode option.
3. Click **Next** to continue or click **Finish** to start the export.

Step 6 - Export Overview
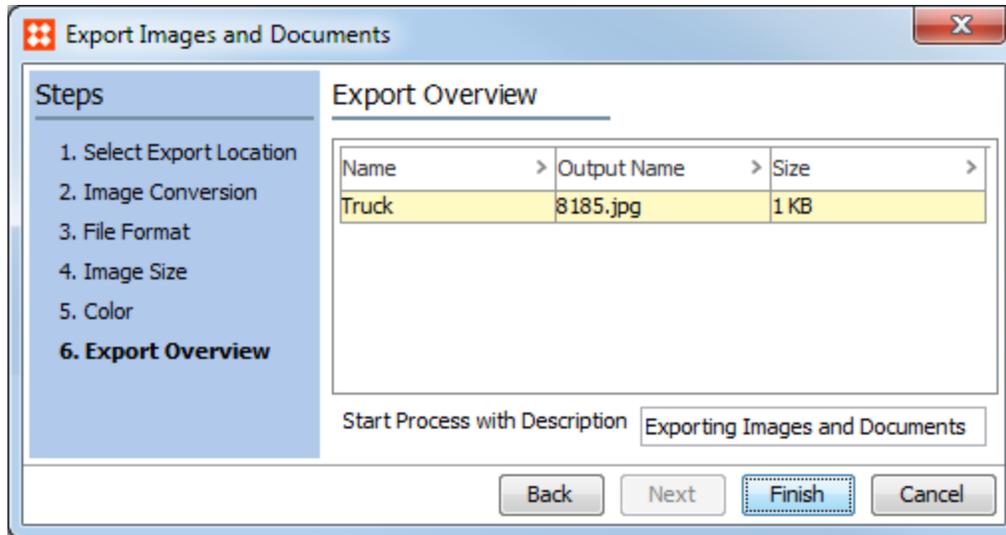
1. Review the STEP name of the asset, the file name to be used for export, and the file size.

2. To start the export process, click **Finish**.

3. Monitor the output location identified in Step 1 to ensure that all selected assets were exported.

Export Manager - Assets and Content with STEPXML

For on demand exporting, the Export Manager wizard STEPXMLformat includes 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 more information, see the **Event-Based Outbound Integration Endpoint** section of the **Outbound Integration Endpoints** documentation.

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 **Image Conversion Configurations** section of the **Digital Asset Exchange** documentation and see **Image Cache** processor section of the **Creating Event Processors** documentation.

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.

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.
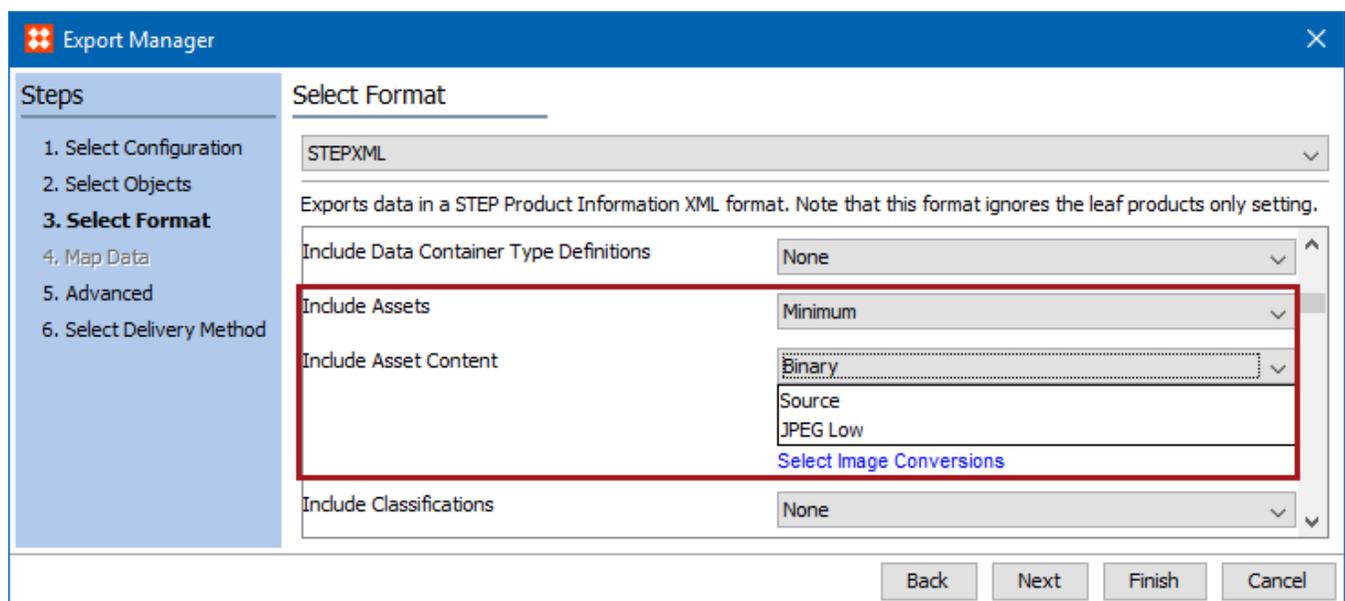
3. For the **Include Asset Content** parameter, choose **Binary** or **REST**, based on the information below:

- 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.

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

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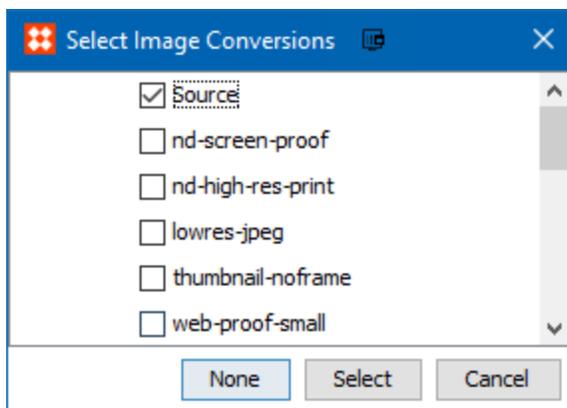
Note: Although selecting multiple conversions is allowed, it may increase export times and file size.

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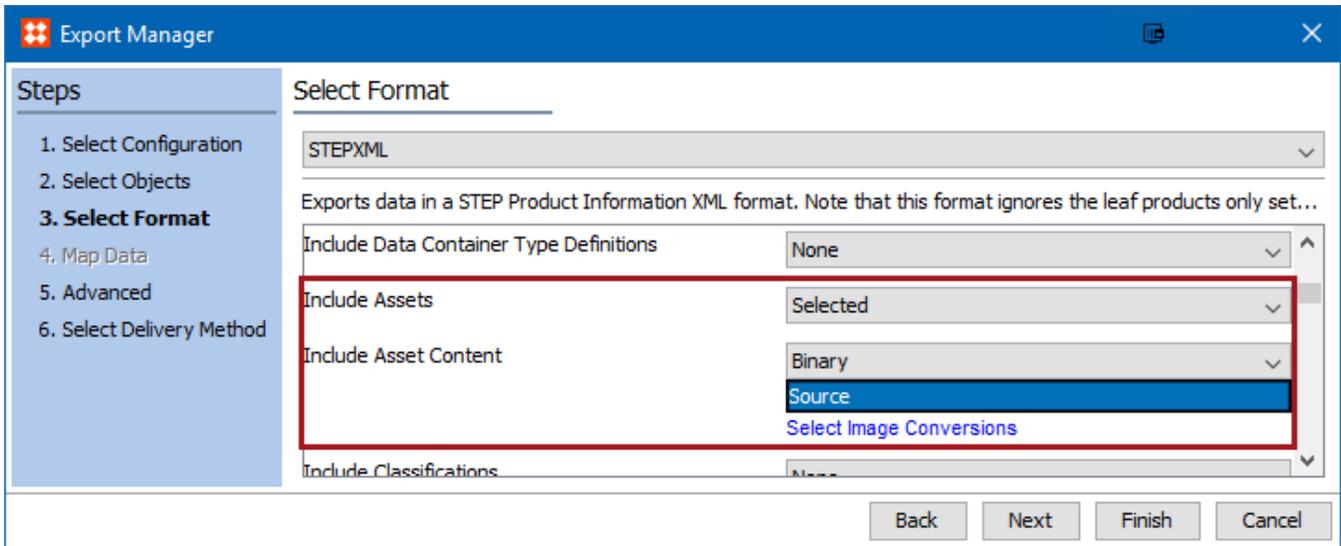
- To change the displayed Image Conversion selection, click the **Select Image Conversions** link.

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 Manager - 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.

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 **Image Conversion Configurations** section of the **Digital Asset Exchange** documentation and see **Image Cache** processor section of the **Creating Event Processors** documentation.

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.
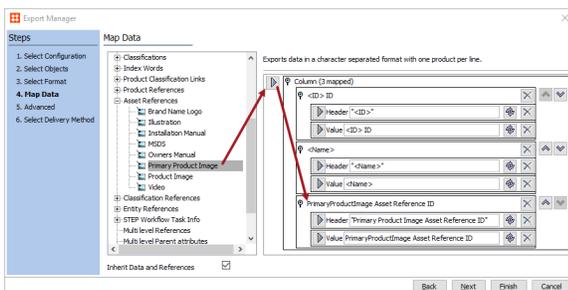
3. For the **Asset Reference Value** parameter, click the Transformation button and select the desired file name option for the asset files that will be included in the zipped export file.

   - **File named by asset ID** - uses the STEP ID as the asset file name.

   - **File named by asset Name** - uses the STEP ID as the asset file name.
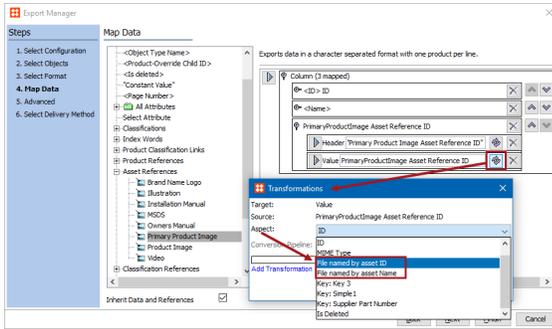
4. If needed, choose an image conversion configuration from the **Conversion Pipeline** field and click the **Save** button. The list displayed includes user created image conversion configurations in STEP. The **Source** option exports the original asset content and no conversion is applied.
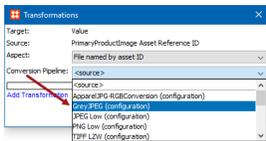
5. Complete the last two steps of the **Export Manager** wizard. If needed, the following topics provide details:

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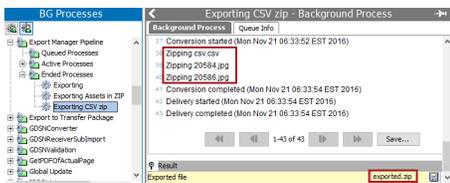
Opening the exported.zip file shows the contents reported in the Execution Report. The zipped asset files reflect the selected image conversion configuration.
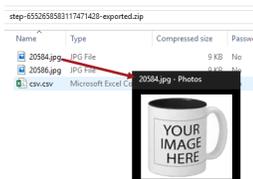
Image Conversion Configurations

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. 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.

Creating 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 File Format, **Current** ensures that upon export, no changes will be made to the format. If changes are necessary, select the desired image format. Click **Next**.

   For details about the individual format options, see the **Step 3 - File Format** section of the **Export Images and Documents Wizard** documentation.
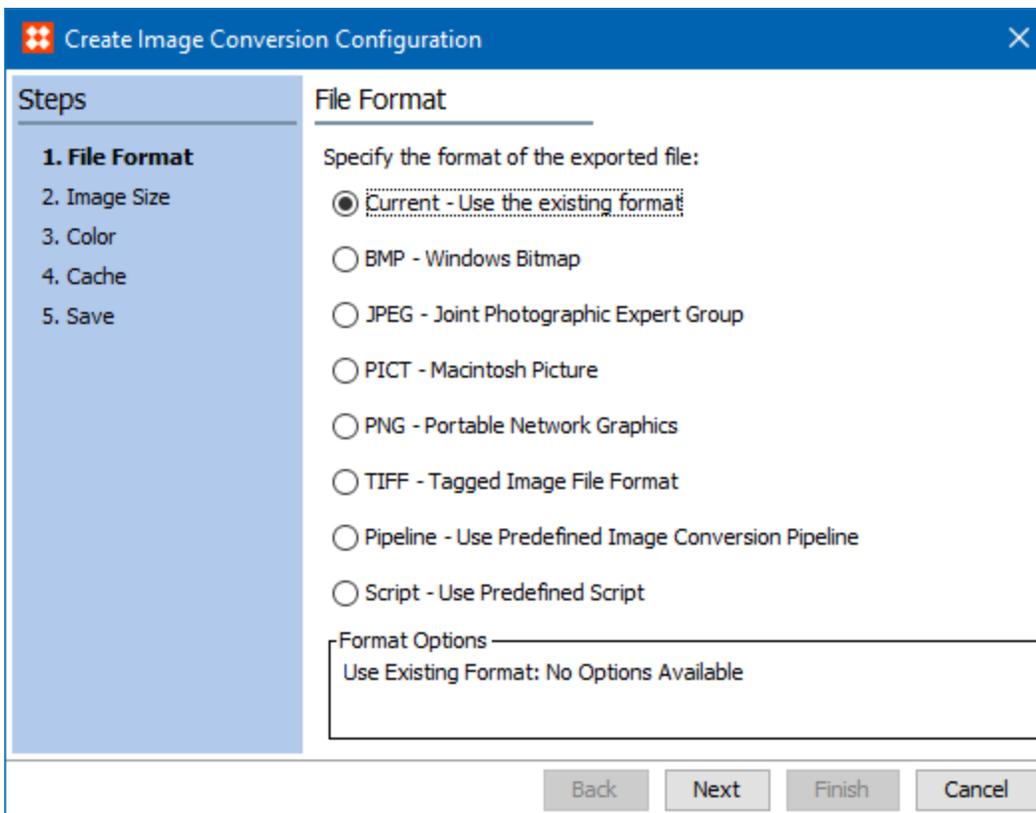
Note: The '**Keep Colour Profile Information**' option available with some formats can override other selections made in the conversion configuration. If results of the conversion are not as expected, try disabling the selection (which is checked by default).

4. For Image Size, **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. Click **Next**.

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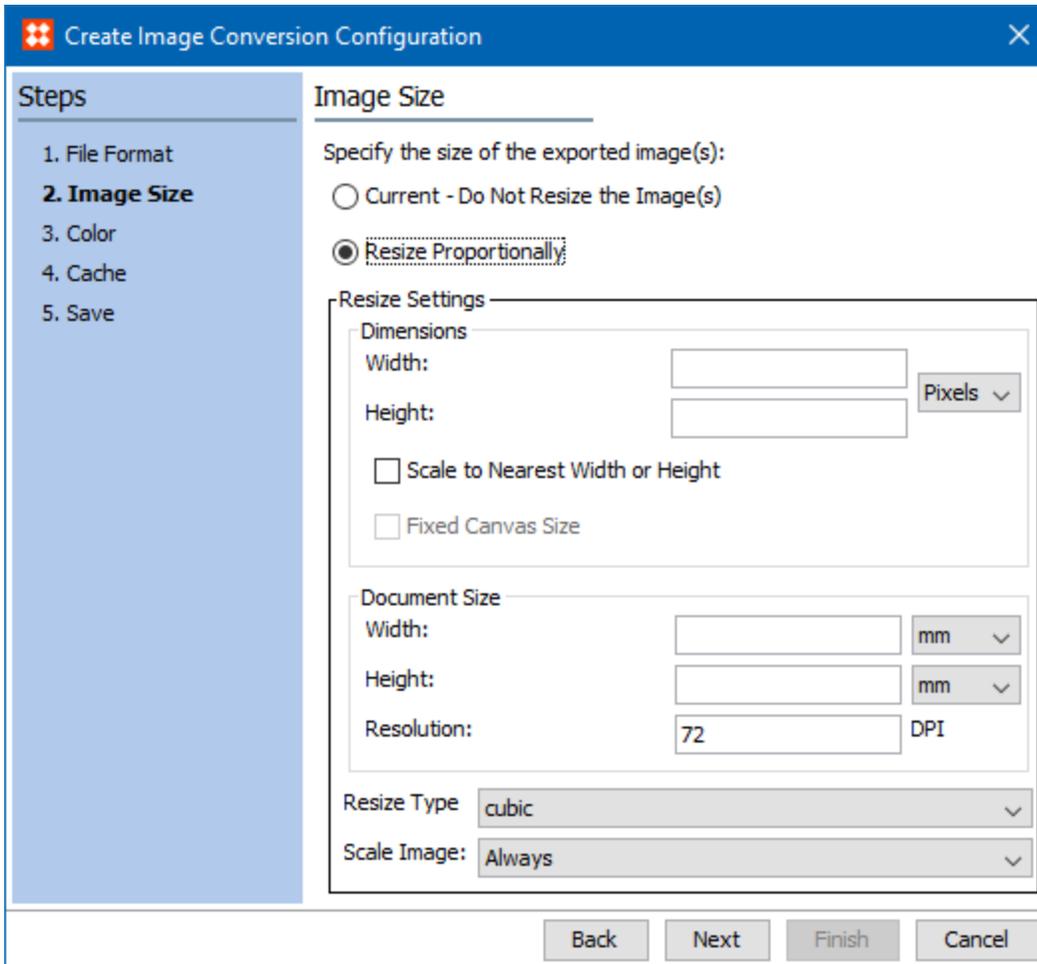
5. For Color, **Current** ensures that upon export, no changes will be made to the color. If changes are necessary, select **Change color Settings** and specify the desired color mode. Click **Next**.

 For details about the color options, see the **Step 5 - Color** section of the **Export Images and Documents Wizard** documentation.
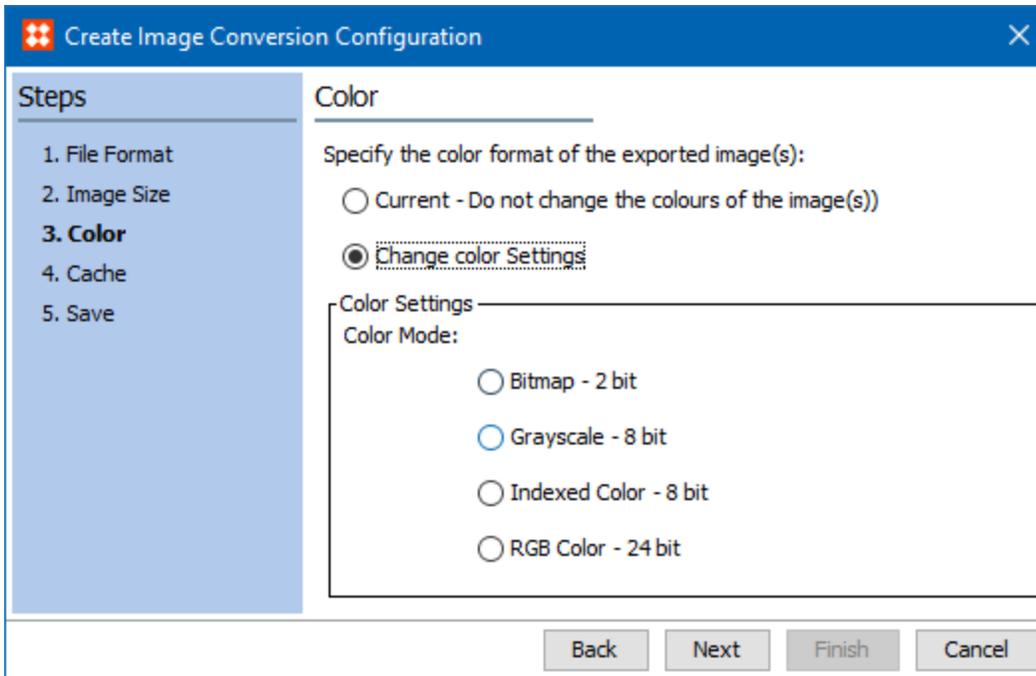
6. For Cache, the checkbox enables the ability to cache, and the radio buttons determine when the caching will occur. Caching is available via the Export Manager or asynchronously based on events via the Image Cache event processor. For more information, see the **Export Manager - Assets and Content with STEPXML** section of the **Digital Asset Exchange** documentation or the **Image Cache** processor section of the **Creating 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.
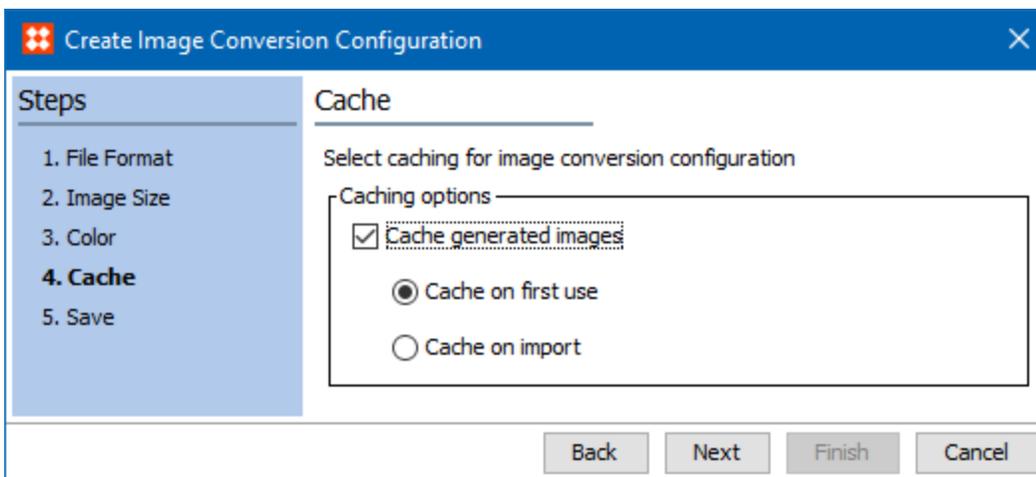
7. For Save, enter a name for the Image Conversion Configuration. Click **Finish** to save the configuration in the originally selected classification folder.
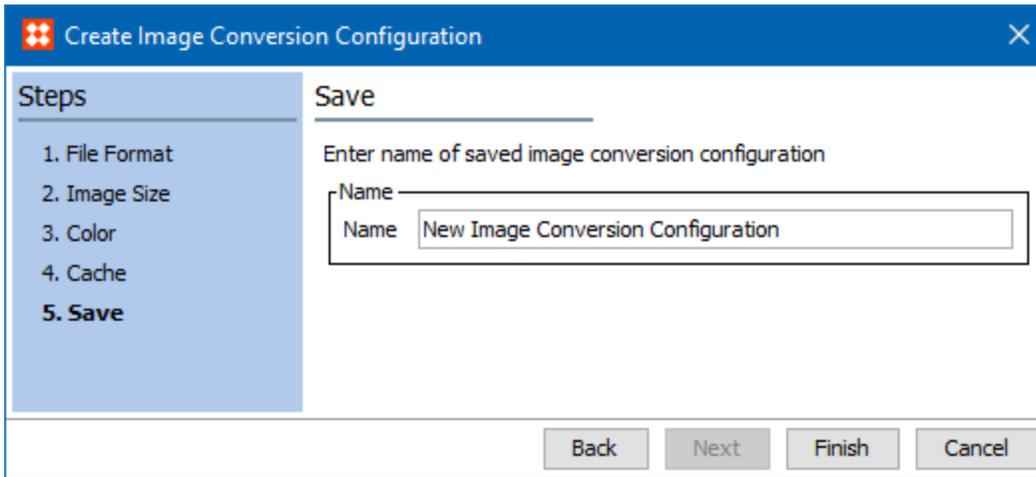
Editing an Image Conversion Configuration

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**.
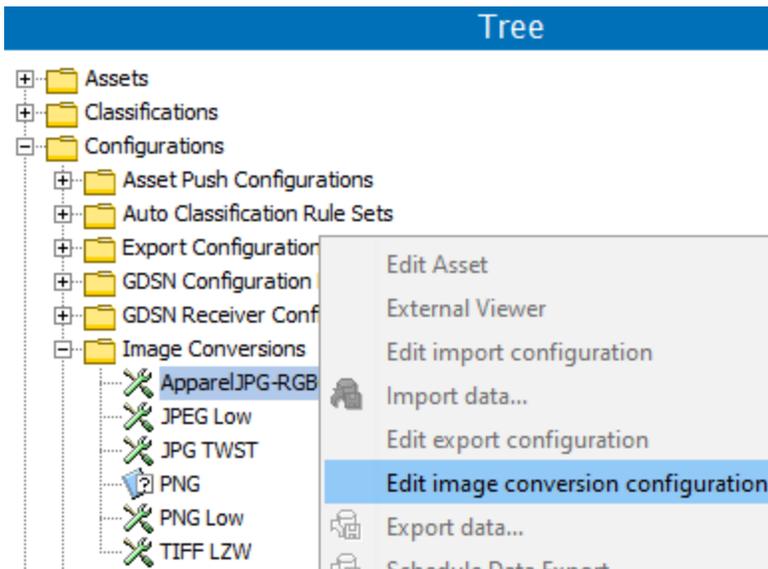
2. Use the Edit Image Conversion Configuration wizard to modify the configuration settings. appears. The options are identical to those in the Create Image Conversion Configuration wizard.

Importing Assets

There are two methods of importing assets into STEP:

- **Asset Importer -** 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 -** 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

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. Additionally, it can be configured to run business rules, interact with STEP workflows, convert image files to other formats, and perform quality checks on images to make sure that they meet any minimum requirements.

In order to access the Asset Importer functionality, ensure that the 'Asset Import Compatibility Mode' parameter is set to 'Advanced' on the Users and Groups node. For information on this and other configuration steps, see the **Asset Importer Configuration Overview** section of the 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. Among these methods is the Asset Importer widget, with which users can upload assets using a simple drag-and-drop interface from the Web UI homepage. Assets can also be added via the Upload Asset action, or if one needs to be updated, it can be replaced via the Replace Asset Content icon (configurable on any Asset Mid Sized or Asset Image Value screens).

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.

Asset Importer Configuration

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

Prerequisites

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 / STEP Super User Guide** documentation.

Creating Asset Importer Configurations

Once the necessary setup tasks have been completed, asset importer configurations can be created via the configuration wizard.

To create new configurations, right-click the appropriate setup group root node from **System Setup** and select 'New Asset Import Configuration'.
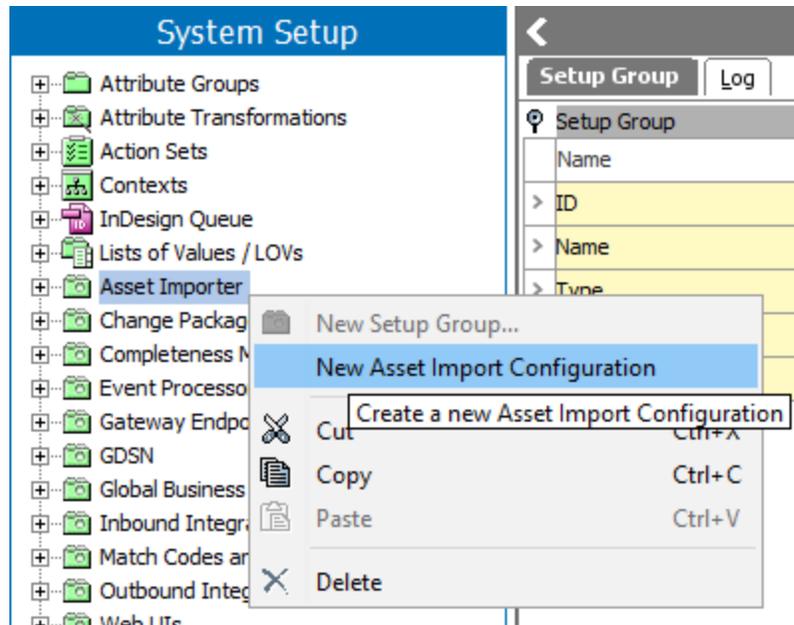
A series of standard setup configurations are available by default, however custom plugins can be created by custom development to extend and customize the functionality further.

See the individual wizard step topics for additional information:

- Identify Configuration
- 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.

Data Importer Initial Setup

Some initial setup may be required before Data Importer configurations can be created. The Asset Import Compatibility Mode must be set to advanced, a setup group must be created to hold the Data Importer configurations, and user permissions must be established for viewing and maintaining import configurations.

Advanced Asset Import Compatibility

In order to enable the Data Importer functionality the Asset Import Compatibility Mode must be set to advanced.

Navigate to System Setup > Users & Groups, and click the **System Settings** tab.

Under the 'Images & Documents Settings' flipper, select 'Advanced' from the 'Asset Import Compatibility Mode' dropdown list.
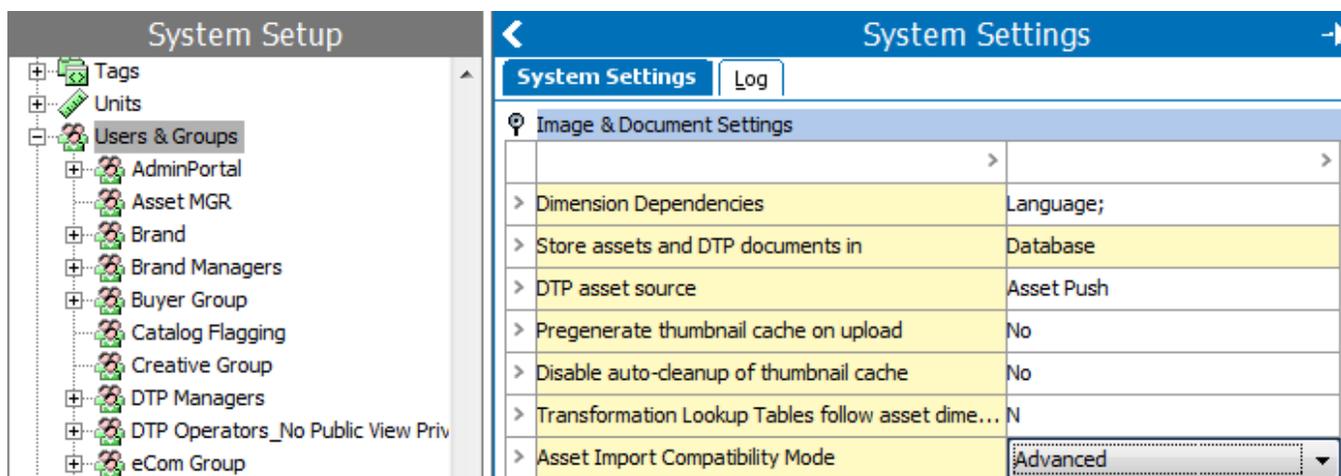
Important: If enabled, the old asset import functionality will become disabled.

Setup Group

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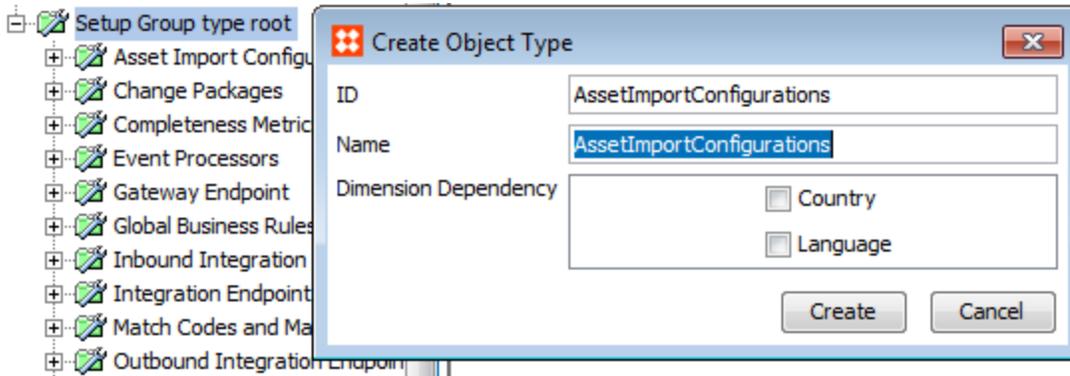
Once the setup group is made, the 'Asset Import Configuration Type' basic object type must be linked to this newly created node as a child. Later, when new asset configurations are created and added to the system, they will use this object type.

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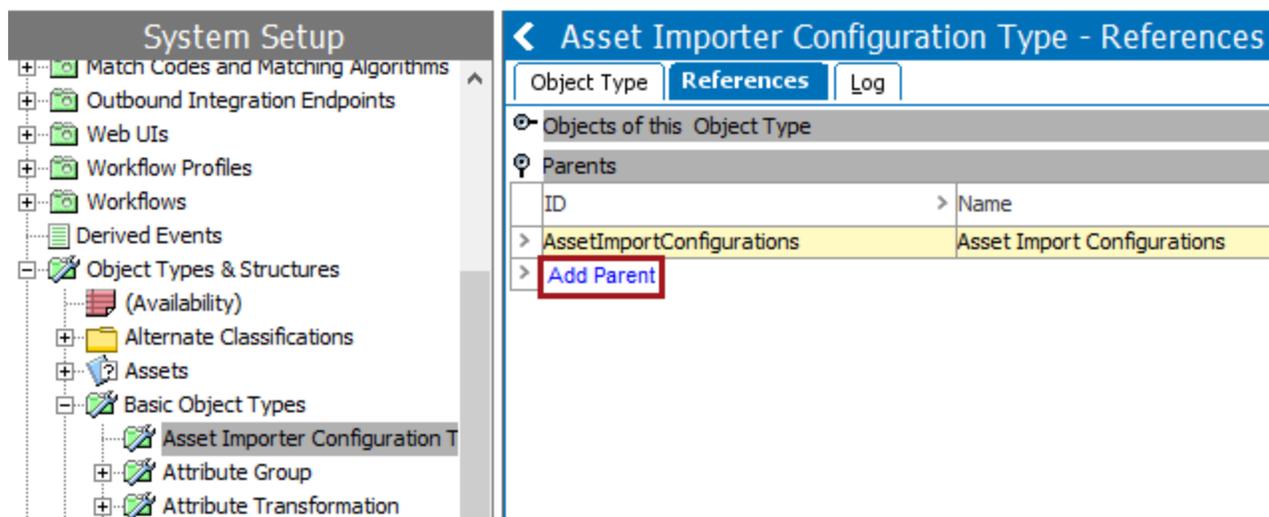
The next step is to create a new setup group root, where all importer configurations are to be added upon creation.

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

2. Select the 'AssetImportConfigurations' setup group

3. Click **Create**.

    From this newly created node, users can right-click and add new Data 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' and select 'New Action Set'. In the window that appears, enter 'MaintainAssetImporterConfigurations' in the ID parameter, then click **Create**.

2. In the 'MaintainAssetImporterConfigurations' node created in the above step, navigate to the 'Action Set' tab and click **Add Action** found under the 'Actions' flipper. From the list that appears, select: 'View Setup Entity', 'View setup group', 'Maintain Setup Entity', and 'Maintain setup group', then click **Select**.

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

4. In the window that appears, click the ellipsis button **(…)** next to the 'Action Set' parameter and select the action set created in the above step. Alternatively, enter the name of the action set directly into the parameter.

5. For the 'Setup Group' parameter, specify the setup group root created in Step 4.

6. Click **Save** when finished.

Add Privilege Rule

Action Set:	tImporterConfigurations) [...]
Attribute Group:	[...]
Setup Group:	nporter (Asset Importer) [...]
Valid for Object Type:	[...]
Apply to Group:	Super Users (Super user) [...]
Dimensions:	
Language	<ANY> ▼
Country	<ANY> ▼

[Save] [Cancel]

Step 1 - Identify Configuration

First and foremost, the asset importer configuration needs to be given a STEP ID and name. A description can also be added but is optional.

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.

2. The 'Configuration Name' field is a mandatory field that specifies the name for the configuration.

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

Step 2 - Import Validator

If needed, configure the Import Validator to control the allowable physical size of images, allowable color spaces, valid file types, DPI, and maximum file size. All settings within this step 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. 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.

    Populate either or both fields if the size of the imported images must be above, below, or within a specific range. If a field is left empty, the entry for this particular field will be ignored as part of the validation.

2. The 'Valid Color Spaces' field determines which color spaces are valid for imported image assets. This setting will be ignored if a non-image file (MIME type other than image/* or Application / postscript) is imported. If left empty, no color space check will be performed on imported image assets.

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

All valid values should be populated in the field, separated by a comma (no spaces). Wildcards are allowed.

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

   Populate either or both if the DPI of the imported images must be above, below, or within a specific range. If a field is left empty, the entry for this particular field will be ignored as part of the validation.

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

Step 3 - Hierarchy Builder

By configuring the Hierarchy Builder, users can create classification folders in which the imported assets are stored (if they don't 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.
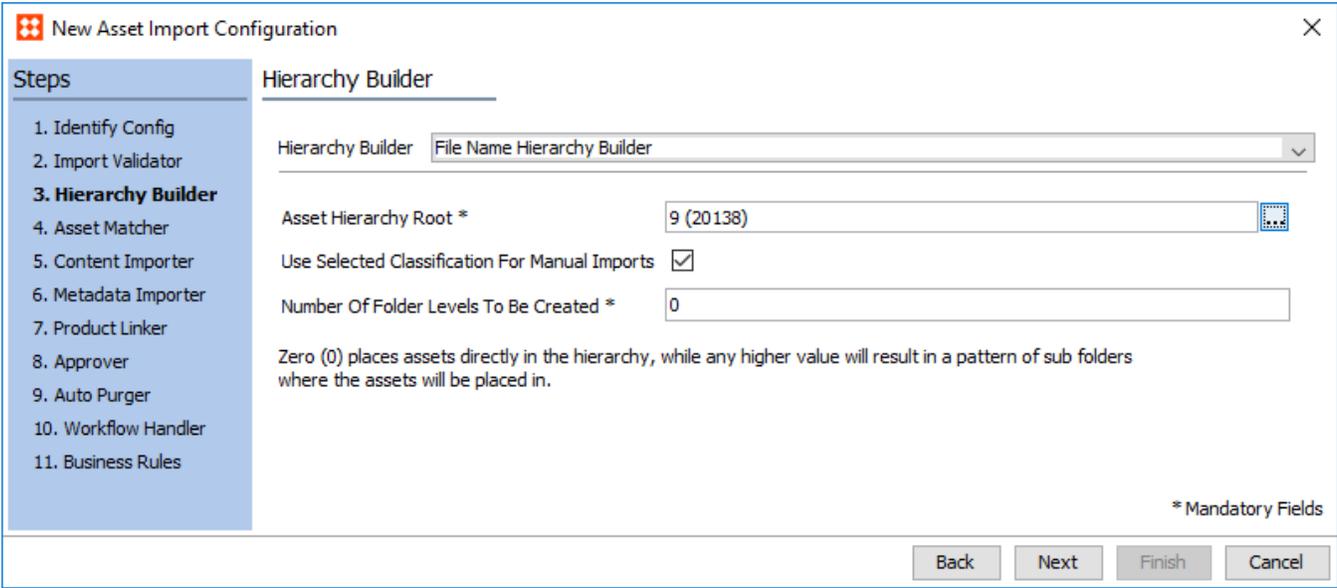
Note: Parameters marked with an asterisk (*) are mandatory.

1. In the 'Asset Hierarchy Root' field, click the ellipsis button **(…)** and select the STEP ID of the root classification folder under which all asset hierarchy folders will be created.

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

3. 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' 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:
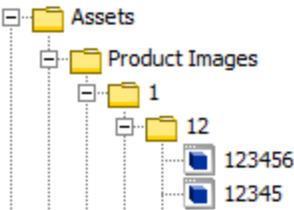
It is recommended to set up a classification structure of repeating asset sub-folders via the object type setup. Doing so will allow for the creation of sub-classification folders during import. These asset hierarchy classification object types should use auto generated IDs to avoid potential errors.

Step 4 - 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 Expressions** section of the **Asset Importer** documentation.

Note: Parameters marked with an asterisk (*) are mandatory.

1. 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. Note that this field is mandatory.

2. In the 'Match on' field, define how to match assets to existing assets via the dropdown list. Options include: ID, Asset name, and File Name. Note that this field is mandatory.

3. The 'File Name Mach Expression' field is used in conjunction with the 'Match Template' field to match assets based on their file names via a regular expression. Note that this field is mandatory.

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

4. In the 'Match Template' field, specify which match group(s) 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. Note that this field is mandatory.

5. 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.

6. 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.

7. In the 'Multiple Matches found' dropdown field, select which method to use when dealing with multiple matches. Options include: 'Error on record', 'Create new asset', and 'Replace content on all matches'.

    If 'Error on record' is selected, an error will be logged for the current asset and the asset importer will proceed to the next asset for import.

    If 'Create new asset' is selected, the Asset Importer will attempt to create a new asset.

    If 'Replace content on all matches' is selected, Asset Importer will attempt to replace the content on all matching assets with the content of the file being imported. Note that this requires 'Allow content replace' to be set to 'Yes' in the Content Importer settings (next wizard step). Using this setting can potentially change a large number of assets and should be considered carefully.

Step 5 - 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.

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

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

   For more information, see the **Step 4 - Asset Matcher** section of the documentation.

3. 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. By default this parameter is set to 'None', as it does not apply to non-image files.

4. 'Asset Object Type' is a 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.

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

5. '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.

Step 6 - 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, user can define rules for importing additional asset system 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.

Note: Asset metadata attributes can be found in System Setup Tab > Attributes > System Attributes (ID=Uncategorized).

Note that 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.
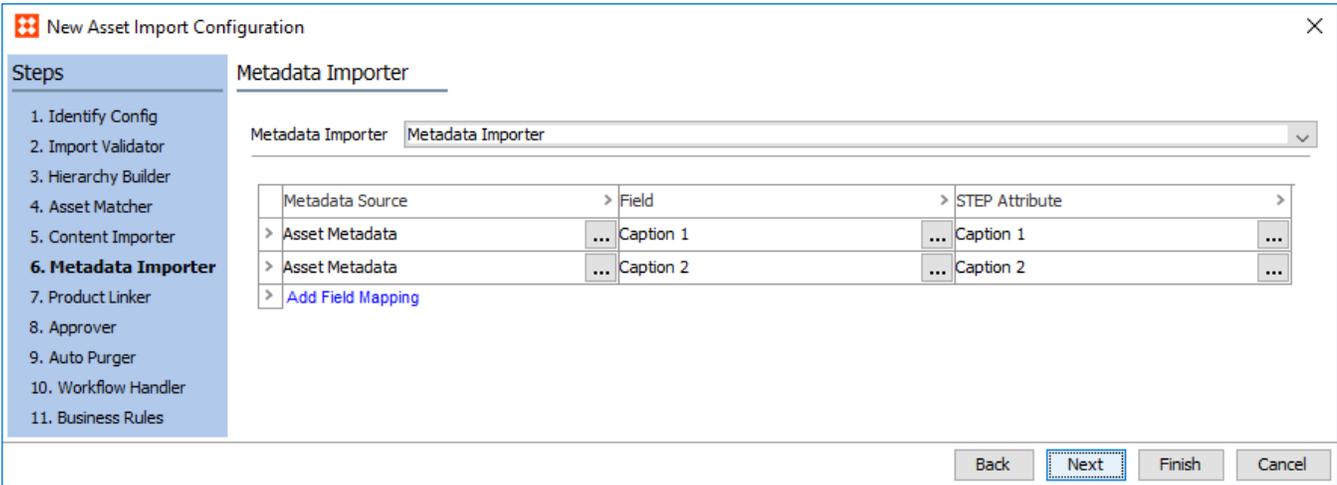
In the 'Metadata Importer' field, the default (and only) option is 'Standard Metadata Import'.

1. To map metadata fields to STEP attributes, click **Add Field Mapping**.

2. In the window that appears, 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).
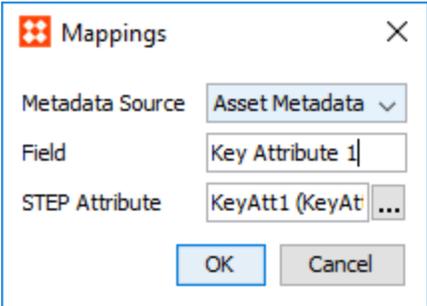
Select 'Metadata file' to map a field specified in the metadata import file to a STEP attribute. Note that to use this option, the Metafile Receiver or Zip with Metafile Receiver option must also have been selected as part of the corresponding IIEP configuration.

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

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

3. In the 'Field' parameter, specify the name of the field to map.

4. In the 'STEP Attribute' parameter, click the ellipsis button **(…)** and select a valid attribute for which the specified metadata info will be inserted.

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 meta data is not reported in background processes started from Web UI.

Step 7 - Product Linker

By configuring the Product Linker, users can determine if and when imported 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.

Note: Parameters marked with an asterisk (*) are mandatory.

A number of the parameters on this step may require the use of regular expressions. For more information, see the **Regular Expressions** section of the **Asset Importer** documentation.

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 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.

1. 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.

2. 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.

3. In the 'Key' parameter, enter the STEP ID of the key for use in matching. This field is only required if 'Key' was selected in the previous step.

4. 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.

5. In the 'Match Below Product' 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.

6. 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.

7. 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 importer can make such a link. Leaving the box unchecked indicates that an imported asset should only be linked to one product.

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.

1. In the 'Match Metadata Field' parameter, enter the column heading of the metafile field which 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. 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.

3. In the 'Key' parameter, enter the STEP ID of the key for use in matching. This field is only required if 'Key' was selected in the previous step. This key is used when the metafile does not contain a key indicator.

4. In the 'Match Below Product' 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.

5. In the 'Default Reference Type' parameter, specify the reference type that links the imported asset with the product. The user can choose to configure either this or the 'Reference Type Field'. Configuring one of these two fields is mandatory.

   Used when the metafile does *not* contain a reference indicator.

6. In the 'Reference Type Field' parameter, enter the column heading of the metafile field which contains the STEP ID of the reference used to link the imported asset to the product. The user can choose to configure either this or the 'Default Reference Type'. Configuring one of these two fields is mandatory.

   This parameter is used when the metafile *does* contain a reference indicator.

7. 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 importer can make such a link. Leaving the box unchecked indicates that an imported asset should only be linked to one product.

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

Step 8 - Approver

By configuring the Approver, users can determine whether assets, references between products and assets, and 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. In the 'Approve Imported Asset' parameter, check the box if the asset should be approved upon import. So long as the parental classification is already approved (or 'Approve Created Classifications' box is checked), the asset will be approved. Otherwise, the asset will not be approved.

   If the box 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. In the 'Approve Created Classifications' parameter, check the box if the classification in which the asset is placed should be approved upon creation. Additionally, if imported assets should 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.

3. In the 'Approve References' parameter, check the box if the imported asset should have a product to asset reference(s) created and 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 that the referred product must have been approved at some point in the past, otherwise the reference cannot be approved.

If the box 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: Trying to re-import an existing asset with the same reference and product will succeed; however the reference will not be approved. This 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

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.

Step 9 - Auto Purger

By configuring the Auto Purger, users can define how many revisions of a particular asset should be retained. By default, 'Standard Asset AutoPurger' is the only configuration option available for the Auto Purger.
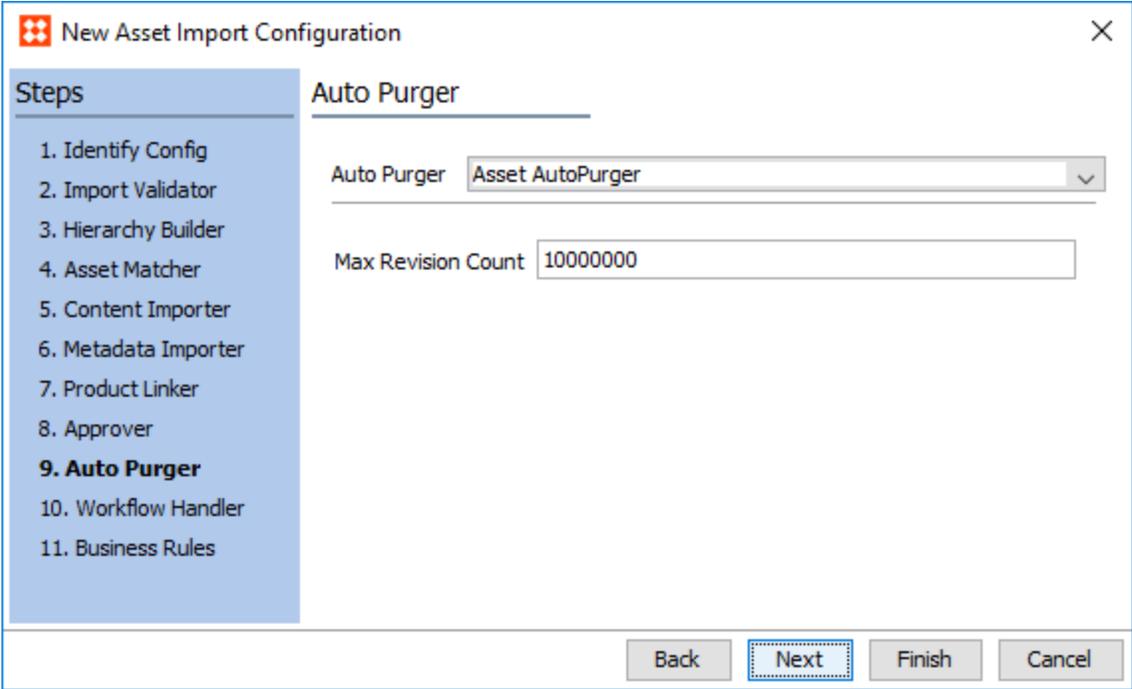
The only configurable parameter for this step is the 'Max Revision Count', which determines how many revisions of an asset can be retained. If the number of revisions exceeds the number specified in this parameter, older versions will begin to get deleted every time a new revision is made. By default, this value is set to '10000000'.

Step 10 - 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.

1. In the 'New Asset Workflow' parameter, click the ellipsis button **(…)**, and select or enter the STEP ID of a workflow that handles new asset onboarding. The workflow specified here will be initiated for each new asset created as part of an upload.

2. In the 'Updated Asset Workflow' parameter, click the ellipsis button **(…)**, and select or enter the STEP ID of a workflow that handles updates to existing assets. The workflow specified here will be initiated for each existing asset included in the upload.

3. In the 'Asset Update Workflow.State' parameter, enter the STEP ID of a workflow that handles assets, in addition to the STEP ID of a specific workflow state found within. The value must be formatted as such: [workflow ID].[State ID].

   Any asset in the specified workflow and workflow state that is included in an upload will transition from that state to the next, via the 'stibo.import' transition.

Asset Update (AssetUpdate)

```
        ┌──────────┐
        │  Start   │
        └──────────┘
             │
             ▼
        ┌──────────┐
        │  Update  │
        └──────────┘
        ┌──────────────┐
        │ stibo.import │
        └──────────────┘
        ┌──────────┐
        │   End    │
        └──────────┘
```
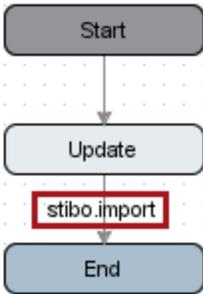
4. In the 'Product Workflow' parameter, click the ellipsis button **(…)**, select or enter the STEP ID of a workflow that handles products. When a new product to asset link is created via an asset upload, the product which owns the newly created link will be initiated into the specified workflow. If such a link already exists, no action will be taken.

5. In the 'Product Update Workflow.State' parameter, enter the STEP ID of a workflow that handles products, in addition to the STEP ID of a specific workflow state found within. 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 workflow and state, the product will be transitioned from that state using the stibo.import transition.

Product Awaiting Asset (ProductAssetUpdate)

```
        ┌──────────┐
        │  Start   │
        └──────────┘
             │
             ▼
        ┌──────────┐
        │  Update  │
        └──────────┘
        ┌──────────────┐
        │ stibo.import │
        └──────────────┘
        ┌──────────┐
        │   End    │
        └──────────┘
```
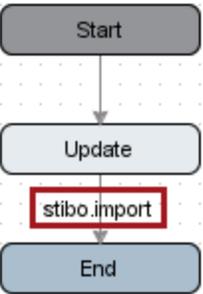
Step 11 - Business Rules

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 get 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.

1. 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.

2. 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 an 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 **Step 8 - Approver** section.

Maintaining Asset Importer Configurations

Once created, an asset importer configuration can be modified at any time. In System Setup, navigate to relevant configuration, and select the 'Asset Importer Configuration Type' tab. The full configuration can be viewed and edited from this tab.

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.

For more information, see the **Step 2: Import Validator** section of the documentation.

Hierarchy Builder

The Hierarchy Builder creates classification folders in which the imported assets are stored (if they don't already exist). The 'File Name Hierarchy Builder' configuration is the default option here, and uses the names of the assets being loaded to generate a multi-level hierarchy in STEP. 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.

For more information, see the **Step 3: Hierarchy Builder** section of the documentation.

⚲ Hierarchy Builder	
Hierarchy Builder	File Name Hierarchy Builder ⌄
› Asset Hierarchy Root	9 (20138) ...
› Use Selected Classification For Manual Imports	☑
› Number Of Folder Levels To Be Created	0

Asset Matcher

Based on criteria defined in the Asset Matcher section, 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.

For more information, see the **Step 4: Asset Matcher** section of the documentation.

⚲ Asset Matcher	
Asset Matcher	Asset Matcher ⌄
› Asset Matcher Hierarchy Root	9 (20138) ...
› Match on	ID ⌄
› File Name Match Expression	(.*)\..*
› Match Template	$1
› ID Template	$1
› Name Template	$1
› Multiple Matches Found	Error on record ⌄

Content Importer

The Content Importer defines basic rules for importing assets, such as whether to allow for the creation of new assets upon import, replacement of assets during import, apply image conversions upon import, etc.

For more information, see the **Step 5: Content Importer** section of the documentation.

Metadata Importer

The Metadata Importer defines rules for importing additional asset system metadata, as well as EXIF (Exchangeable Image File Format) and XMP (Extensible Metadata Platform) metadata from asset files (e.g. images, movies, sound files), and inserts them into attributes in STEP.

For more information, see the **Step 6: Metadata Importer** section of the documentation.

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.

For more information, see the **Step 7: Product Linker** section of the documentation.

Approver

The Approver determines whether assets, references between products and assets, and new asset folders should be automatically approved by the asset importer.

For more information, see the **Step 8: Approver** section of the documentation.

⚲ Approver	
Approver	Asset Approver ▾
⟩ Approve Imported Asset	☐
⟩ Approve Created Classifications	☐
⟩ Approve References	☐

Auto Purger

The Auto Purger defines how many revisions of a particular asset should be retained.

For more information, see the **Step 9: Auto Purger** section of the documentation.

⚲ Auto Purger	
Auto Purger	Asset AutoPurger ▾
⟩ Max Revision Count	10000000

Workflow Handler

By configuring the Workflow Handler, incoming assets can be automatically initiated into a workflow. Additionally, incoming assets can trigger a transition in an existing workflow for either the asset itself or the product that is linked to the imported asset.

For more information, see the **Step 10: Workflow Handler** section of the documentation.

⚲ Workflow Handler	
Workflow Handler	Asset Workflow Handler ▾
⟩ New Asset Workflow	Sample Workflow with Parallels (SampleWorkflow) …
⟩ Updated Asset Workflow	…
⟩ Asset Update Workflow.State	SampleWorkflow.AssetUpdate
⟩ Product Workflow	…
⟩ Product Update Workflow.State	SampleWorkflow.ProductUpdate

Business Rules

By configuring the Business Rule Handler, business conditions can be set to run during an asset import and may reject incoming assets that fail to meet one or more of the specified conditions (any structure created to support the asset will also get 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.

For more information, see the **Step 11: Business Rules** section of the documentation.

Asset Importer Inbound Integration Endpoint Configuration

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. 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. On the 'Choose Receiver' step of the IIEP configuration wizard, select 'Hotfolder Receiver' as the receiver.

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

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

- The configuration of the **Context** parameter largely depends on whether or not assets are dimensionally dependent. Dimension dependency of assets 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. If assets are dimension dependent, and asset content should be imported into one specific context only, select that context. 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. Additionally, ensure that the 'Import Independently of dimensions' setting on the relevant Asset Importer configuration corresponds with the selection made here. For more information, see the **Step 5 Content Importer** section.

- 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.

- 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. Note that setting this as a separate queue prevents competition of resources between asset loading and other inbound processes.

- The **Maximum number of waiting processes** parameter is automatically set to '1' for Strict transactional settings.

- 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.

- 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.

- 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.

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

8. On the 'Configure Processing Engine' step of the wizard, select the relevant asset importer configuration. Detailed configuration instructions can be found in the **IIEP - Configure Processing Engine** section of the **Inbound Integration Endpoints** documentation.

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

10. There are no required or recommended settings for the 'Schedule Endpoint' or 'Configure Error Report' steps.

Regular Expressions

Several settings in the asset importer make use of regular expressions. While it is not required to be an expert in regular expressions, having some familiarity with the concept will help users to better understand the configuration options available for the asset importer.

In a nutshell, a regular expression is shorthand for describing patterns that can be matched by text.

This is can be extremely useful when describing, for example, how a file name should be used to match an existing asset or product object, which part of a folder structure should be processed or ignored, and many other scenarios related to matching text patterns.

Regular expressions are a very powerful (and sometimes complicated) tool, and a complete understanding of their capabilities and applications goes well beyond this primer. Instead, some standard expressions that are typically used in the configuration of the asset importer will be presented.

The Basics

There are some special characters, modifiers, and rules that must be understood in order to read regular expressions.

- **Character Matches**
  - **Literals:** Any character matches itself.
    - Example: 'a' matches the character 'a'.
  - **Dot / Period (.):** Matches one single character (any character).
    - Example: a..d
      - Matches: 'abcd', 'a12d', and 'aaad'
      - Does Not Match: 'abbb', 'abcde', or 'ba1d'
- **Character Sets**
  - Uses brackets (**[ ]**) to match any one of a set of characters.
    - Example: [ae]
      - Matches: 'a' and 'e'
      - Does Not Match: 'b', 'c', or 'd'
    - Example: [12345]
      - Matches: '1', '2', '3', '4', and '5'
      - Does Not Match: '0', '6', '7', '8', or '9'
- **Ranges**

- Us a dash (**-**) to indicate ranges within a Character Set.
  - Example: [a-e]
    - Matches: 'a', 'b', 'c', 'd', and 'e'
    - Does Not Match: '1' or 'f'
  - Example: [1-5]
    - Matches: '1', '2', '3', '4', and '5'
    - Does Not Match: '0', '6', '7', '8', or '9'
- **Combined Examples**
  - [a-z][a-z0-9][a-z0-9]
    - Match ant lowercase letter followed by two other lowercase letter or numbers
      - Matches: 'a11', 'bt9', and 'xyz'
      - Does Not Match: '1ab' or 'abc1'

Repetition Modifiers

To specify that a certain character or character set can be matched more than once, you can add repetition modifiers after the character or character set. Some common repetition modifiers are described below.

- **+:** One (1) or more
  - 'Have at least one of these'
  - Example: [a-z]+[0-9]
    - Match anything starting with one or more lowercase letters, followed by a single number
    - Matches: 'abc1', 'a1', and 'abcxyz9'
    - Does Not Matter: '9a', 'a22', or 'a-4'
- **?:** Zero (0) or one (1)
  - 'This is optional'
  - Example: [a-z]+[0-9]?
    - Match anything starting with one or more lower-case letters, optionally followed by a single number
    - Matches: 'abc', 'abc2', 'x', 'y3', and 'abcdefgh8'
    - Does Not Match: '9', 'a99', or 'a-4'
- ***:** Zero (0) or more
  - 'Have as many as you want of these, or none at all'
  - Example: .*
    - Any number (0 or more, due to the '*') of any character (due to the '.')
    - Will match any text
    - Matches: 'a1b2c3', 'aaaa', and '111'
- **{min, max}:** Between the minimum and maximum occurrences

- Have between X and Y of the indicated character / set / range
- If max is omitted, this means exactly min number of times
- Example: [0-9]{5}-[0-9]{4}
    - Simple zip code + 4 matcher
    - Matches: '12345-0123'
    - Does Not Match: '12345' or '6789012'

Grouping

Grouping is not related to matching, but is used to store certain matched sets of characters for use later, typically in a substitution.

- **Grouping**
    - Done using parenthesis **( )** to isolate groups for storage
    - Example: ([0-9]{5})-([0-9]{4})
        - Stores the first five digits in group 1
        - Stores the last four digits in group 2
        - The dash (**-**) character is not stored as it is not inside parenthesis
- **Referencing Groups**
    - Done using a dollar sign (**$**) to indicate a group
    - Example: $1
        - Use the content from group 1
        - With the expression '([0-9]{5})-([0-9]{4})' and value '12345-0123'. $1 = '12345' and $2 = '0123'

Escaping Special Characters

There are several characters that have special meanings, such as **?**, **.** (dot), *****, **+**, **(**, **)**, **{**, **}**, and more. This prompts the question: how can you match a literal example of one of these characters? The key is to escape the special character by putting a backslash (****) in front of it.

- **Escaping**
    - Done using backslash (****) to indicate retention of the literal
    - If you need to match a backslash, escape it in the same way: \\
    - Example: \.
        - Retain the dot (**.**)
    - Example: .*\..*
        - Match anything that has a number of characters, followed by a period, followed by any number of characters
        - Used to match file names with extensions (e.g. abc123.pdf)
        - Can also be used to match any text (e.g. 'Hello there this is matched')

Practical Examples

- Match a file name and save the part before the extension
    - (.*)\..*
    - 'abc123.pdf' will yield $1 = 'abc123'
- Match the last folder in a path
    - .*/(.*)
    - '/net/share/imageupload/product_images' will yield $1 = 'product_images'
        - To understand why it doesn't yield $1 = 'share/imageload/product_images', it is necessary to understand that by default the repetition modifiers are 'greedy' and try to match as far as they can while still resulting in an overall match
        - The initial '.*' will match all the path separators (/) except the last one that has to be saved to be matched by the literal '/' in the expression
        - There are modifiers to make the match lazy, but that is beyond the scope of this primer

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 or Asset Image Value screens)
- The Asset Importer Widget

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

Note: Asset Importer configurations can not be used with the Asset Value component.

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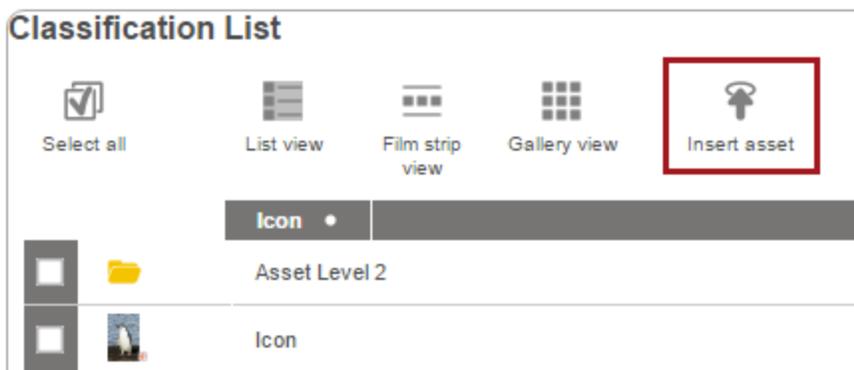
Note: The node this action is performed on does not matter unless the 'Use selected classification for manual imports' option is enabled in the Hierarchy Builder configuration.

2. In the 'Upload and insert image(s)' dialog, select the desired importer configuration from the dropdown menu.
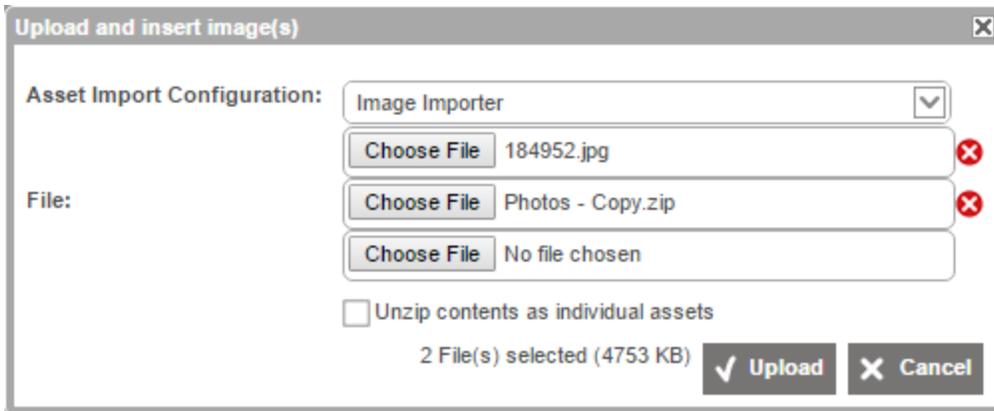
Note that an asset importer configuration can be specified in the component's configuration, meaning it will not need to be selected upon import.
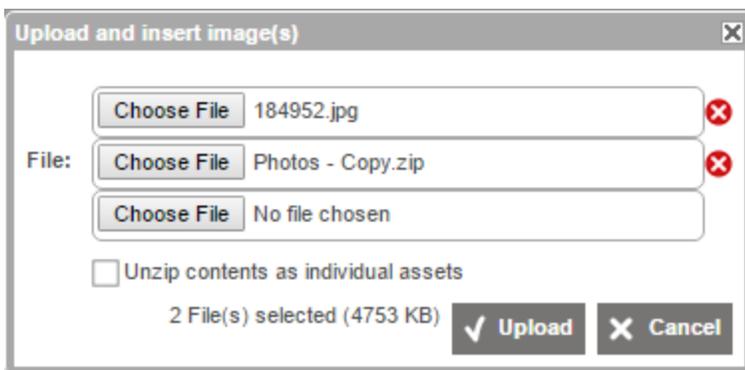
3. Next, click **Choose File** and select a file to import. Click **Ok** once the selection is made. Multiple files can be added by repeating this step. Additionally, these files can be removed by clicking the red 'X' icon.

4. 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 **Step 3 - Hierarchy Builder** section of the **Asset Import** documentation.

Replace Asset Content

When configured on an Asset Mid Sized or Asset Image Value screen, the Replace Asset Content button ( ) will appear on the asset thumbnail, which when clicked, allows users to replace the content of the asset. An asset importer configuration must be specified so that its rules can be applied against the new content.

1. Navigate to the relevant asset node and click the 'Replace content' icon ( ) found next to the asset thumbnail.

   If the asset is dimensionally dependent, the Create Local Content button ( ) may need to be clicked first.

Asset Detail

Image
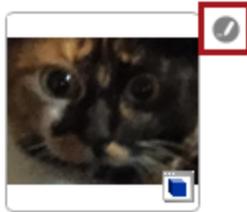
2. In the 'Replace asset content' dialog, select the desired importer configuration from the dropdown menu.
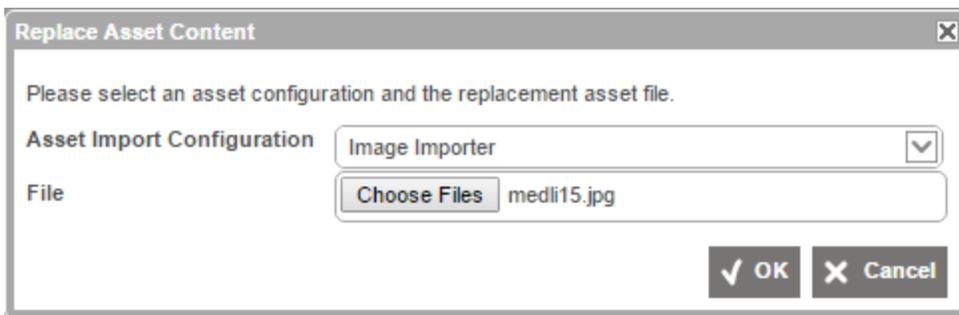
Note that an asset importer configuration can be specified in the component's configuration, meaning it will not need to be selected upon import.
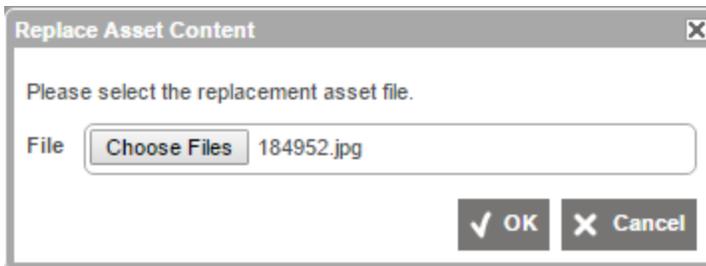
3. Next, click **Choose File** and select a file to import. Click **Ok** once the selection is made.

4. Click **Upload** to initiate the import. A dialog will appear, providing a link to the background process.

For more information on the Asset Mid Sized component, see the **Asset Mid Sized** section of the **Web User Interfaces** documentation.

For more information on the Asset Image Value component, see the **Asset Image Value** 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 released in Trailblazer 8.1 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

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 wizard are detailed below. Note that the asset importer configuration wizard 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 wizards.

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:
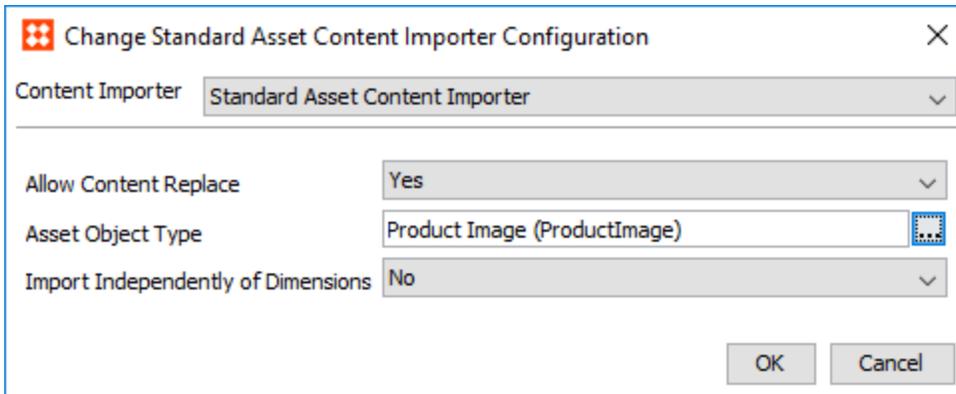
Asset Importer configuration:
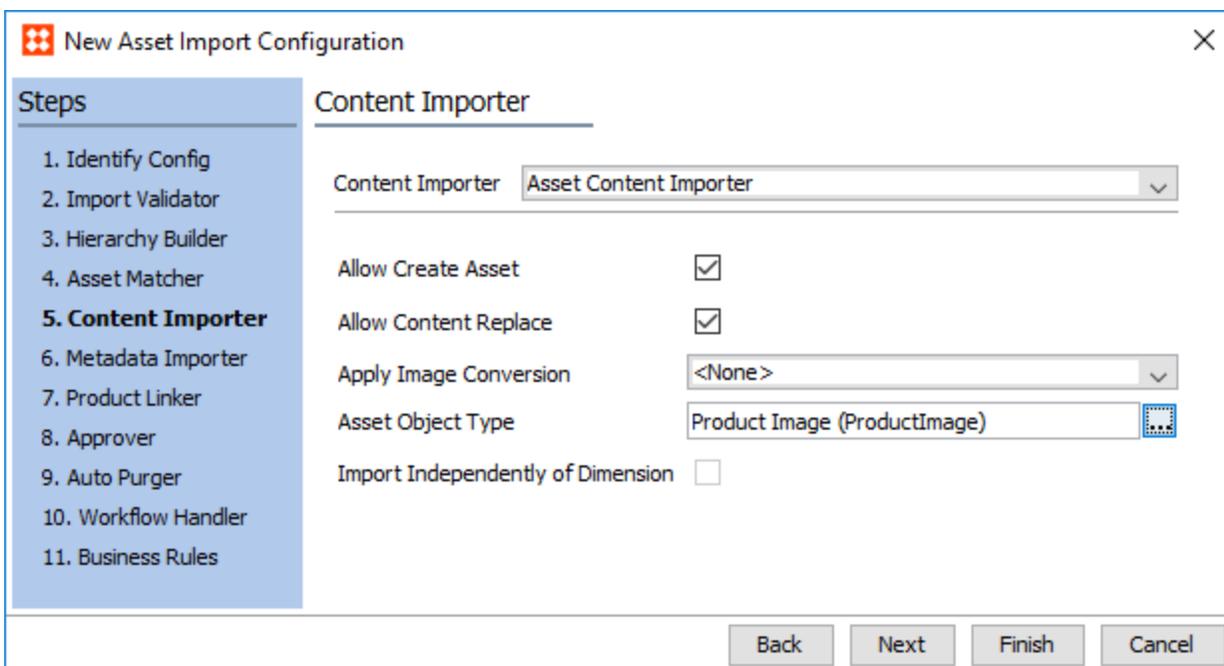
6. **Metadata Importer -** Though formatted completely differently, this step has nearly identical options in both wizards. The below points / images illustrate how the parameters correspond between the two wizards:

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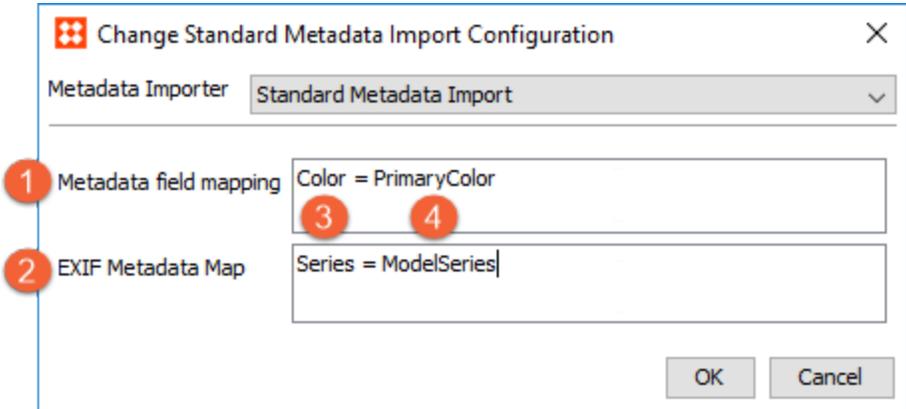
Asset Importer configuration:
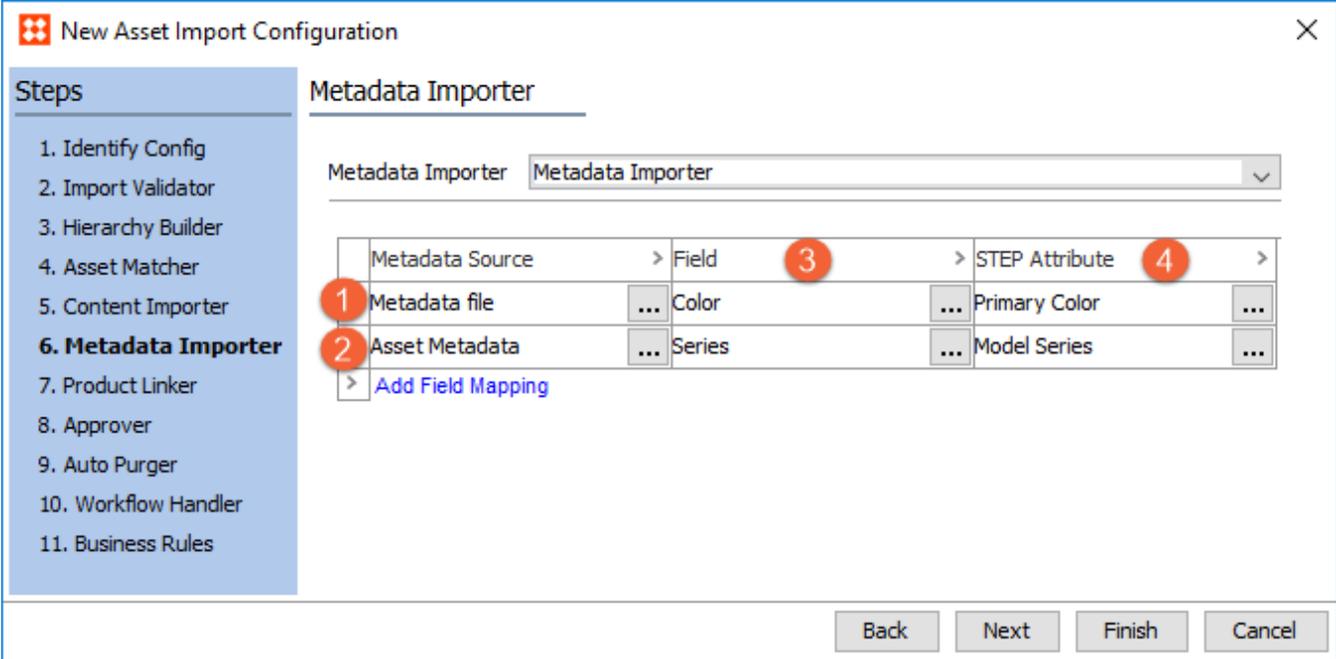
7. **Product Linker -** As this is an optional step for both configurations, the 'No Product Link' option is available in both wizards.

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.

   Configure Processing Engine : Configuration

   | Asset Importer Configuration | Image Importer (Image Importer) | ... |
   | Handle content as | Files | ∨ |
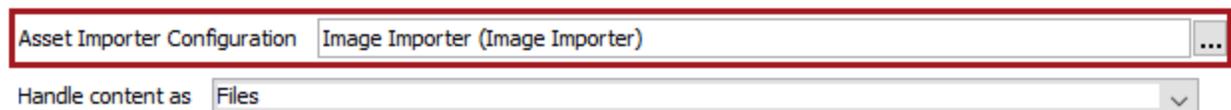
   - **Handle content as -** This parameter is nearly identical to the original Receiver configuration, and provides the same four receiver options (albeit renamed): 'Files', 'Meta File', 'Zip File', and 'Zip Metafile'.
     - **Files -** Exactly the same as the EIDI option 'File Receiver'.
     - **Meta 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:
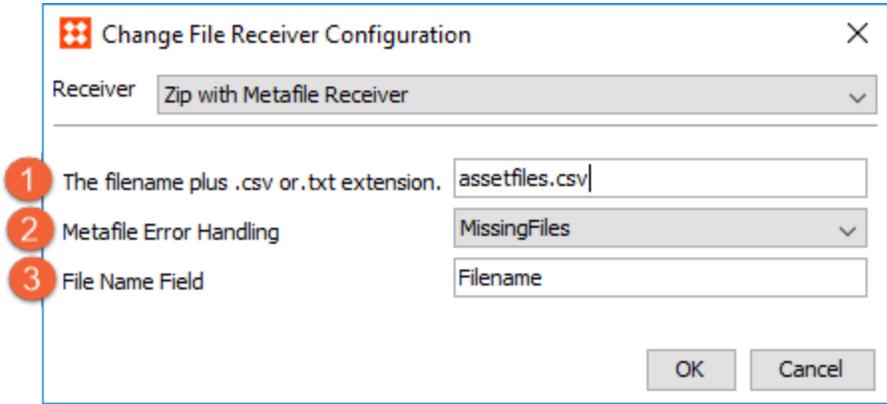
       EIDI configuration:
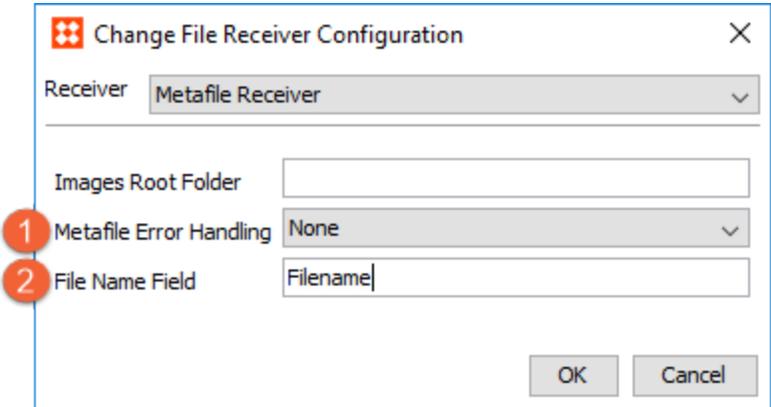
Asset Importer configuration:
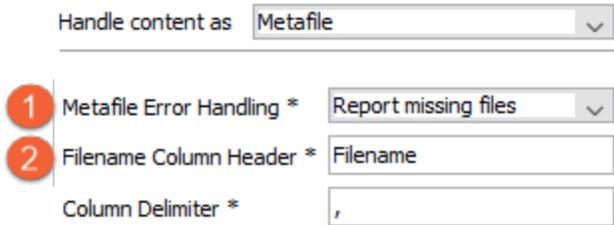
- **Zip File -** Exactly the same as the EIDI option 'ZIP Receiver'.
- **Zip Metafile -** A few options differ between the two interfaces. To begin, the Asset Importer's 'Metafile Error Handling' parameter is the same except that the 'ExtraFiles' option is not available for Asset Importer. The Asset 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 IIEP's 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.

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.
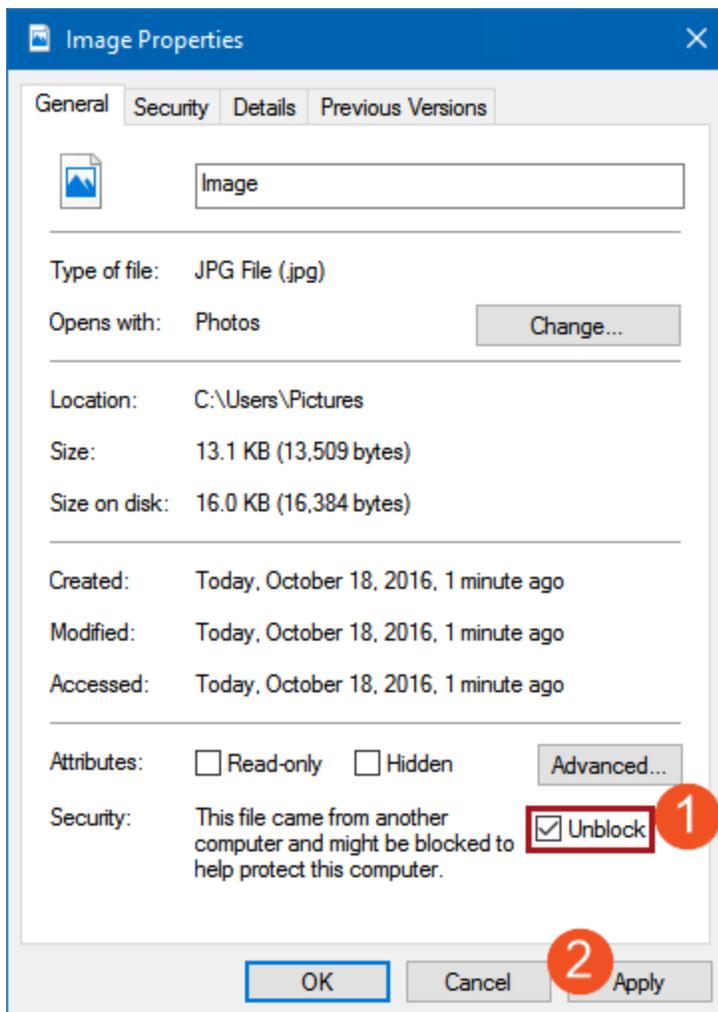
Import Images and Documents Wizard

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.
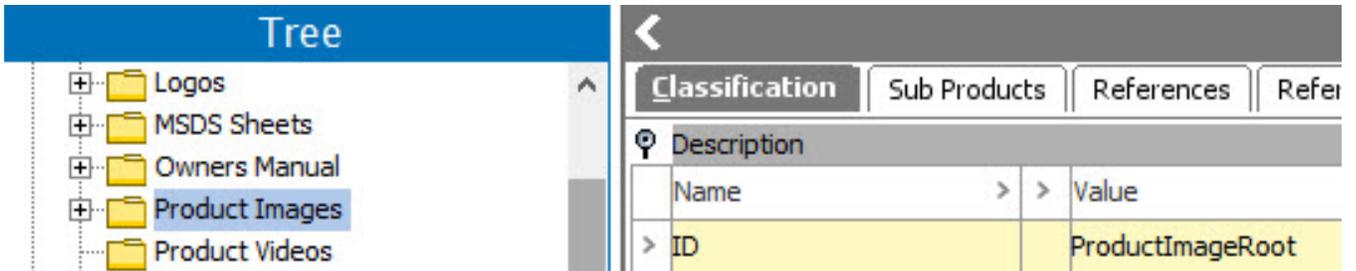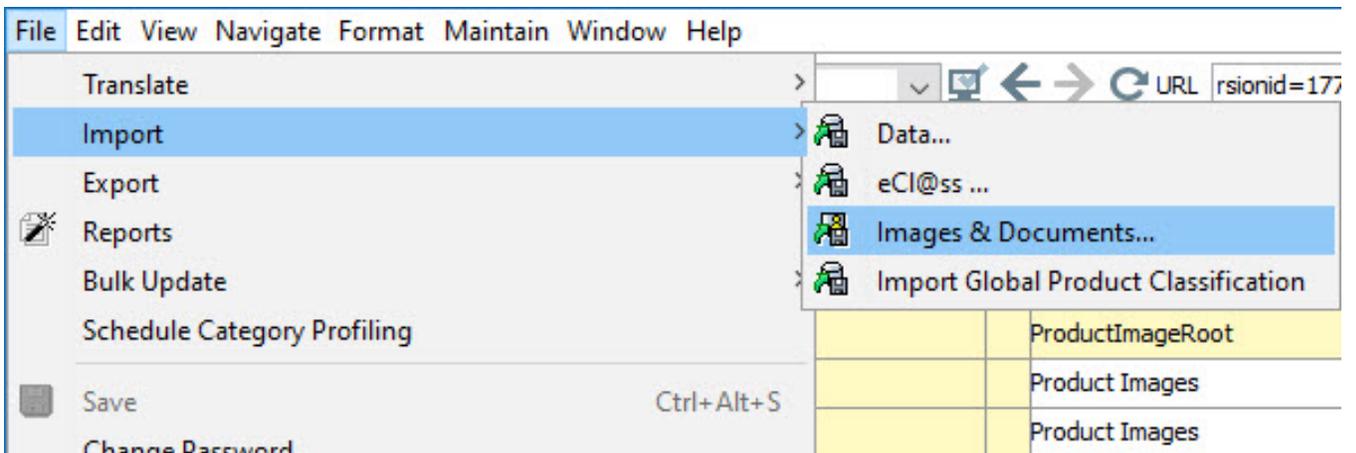

3. Choose one of the following options to start the wizard:

- Either right-click the classification folder and select **Import Images & Documents** from the menu.
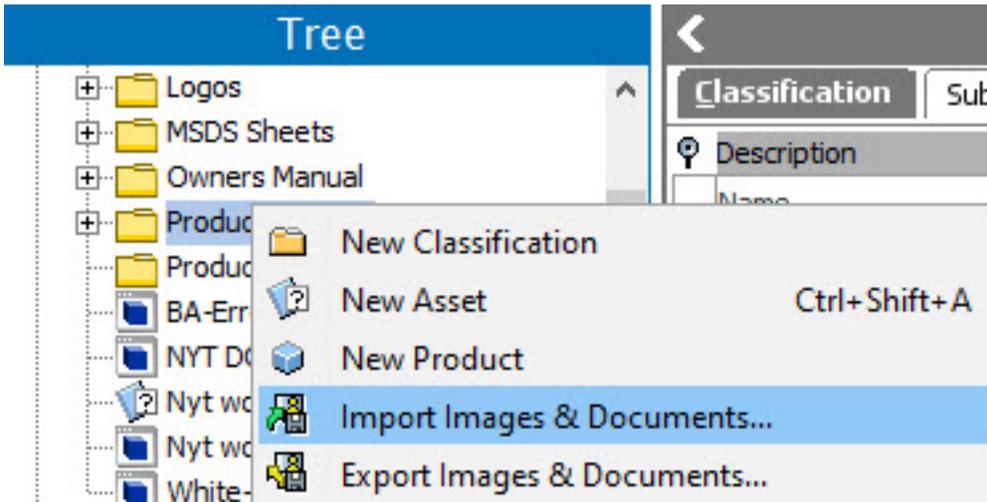
- Or from the **File** menu, point to **Import**, and then select **Images & Documents**.

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.
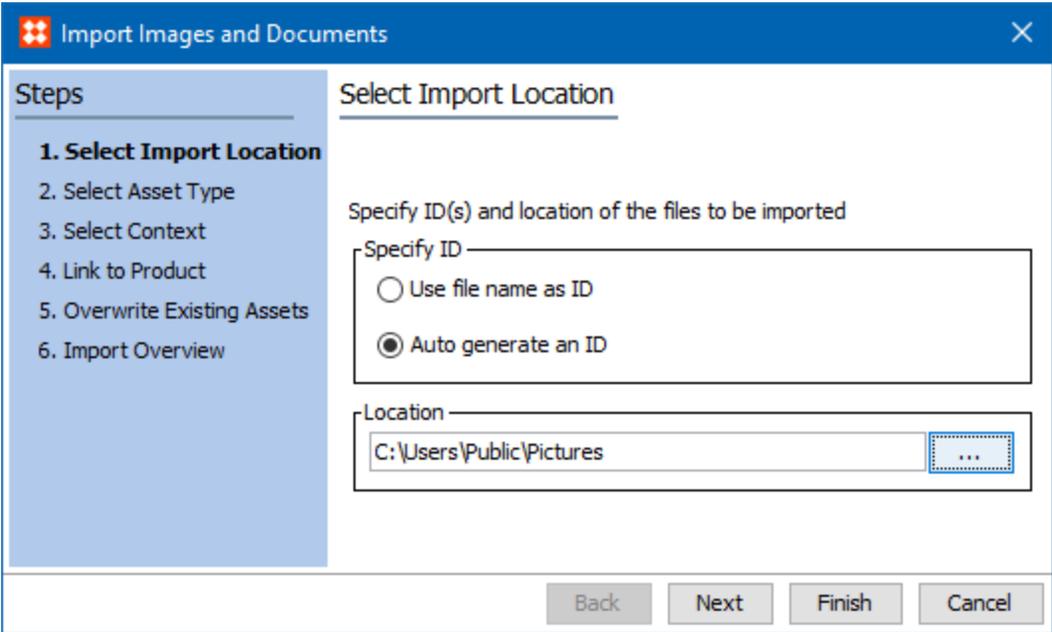

- **Step 1 - Select Import Location** allows you to determine the asset ID and choose the location of the objects to import.
- **Step 2 - Select Asset Type** allows you to set the asset object type to be used.
- **Step 3 - Select Context** allows you to set dimension dependencies.
- **Step 4 - Link To Product** allows you to create reference links between the imported assets and existing objects.
- **Step 5 - Overwrite Existing Assets** allows you to determine if the imported assets replace existing assets.
- **Step 6 - Import Overview** allows you to review a sampling of the assets to be imported.

Step 1 - Select Import Location

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.

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.

Step 2 - Select Asset Type
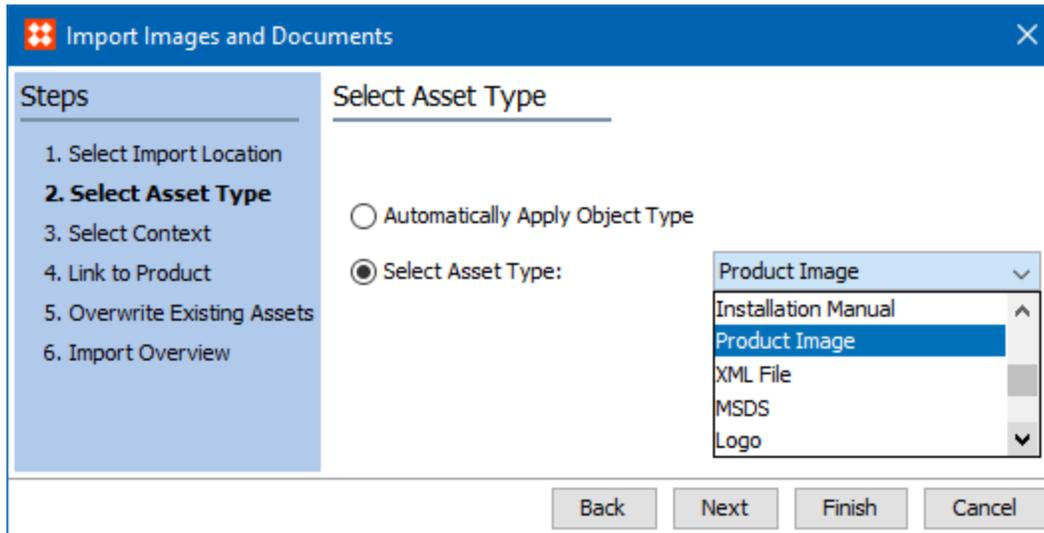
1. Choose an option to determine how the object type is assigned:

   - **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.

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

Step 3 - Select Context

Contexts allow 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.
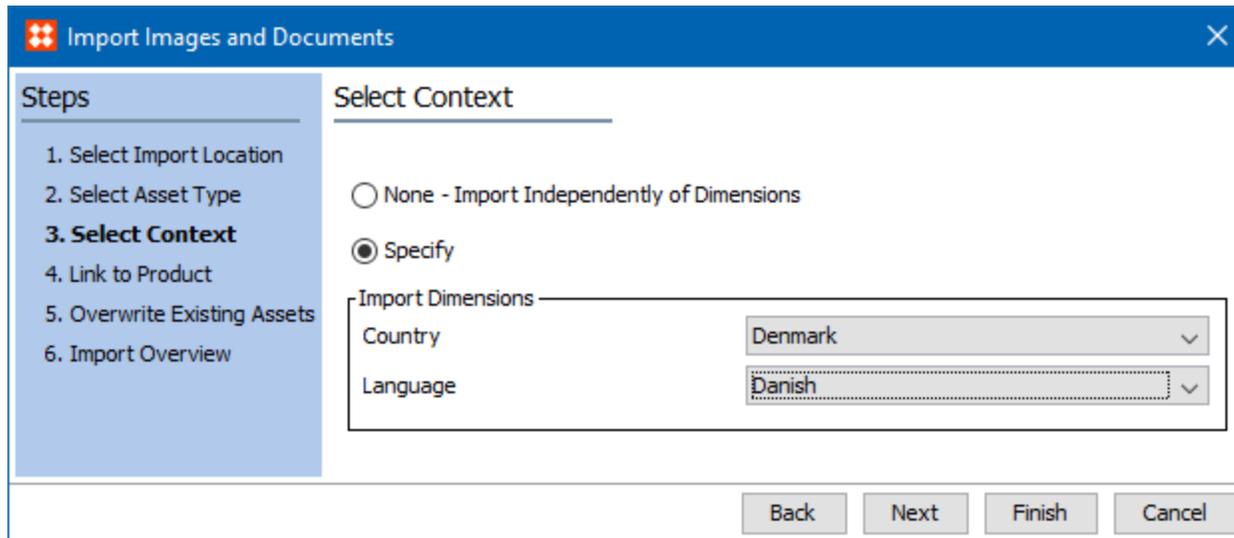
1. Determine if dimensions should be considered for assets being imported:

    - **None** 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.

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

Creating Context-Sensitive Assets

For example, to load an asset which is dependent on a country dimension 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**. 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.

Note: 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.

Step 4 - Link To Product

1. Check **Link to Product** to create links and then select an option to determine the required reference / link type.

   - **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.

   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.

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.

Step 5 - Overwrite Existing Assets

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.

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

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

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.

Step 6 - Import Overview
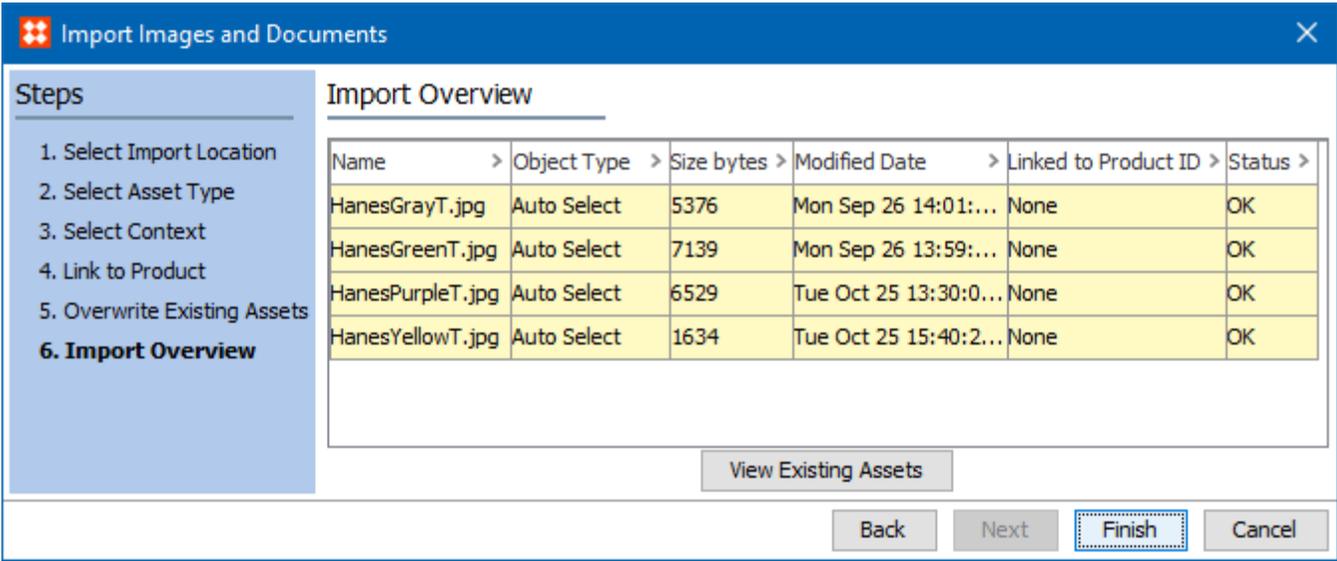
1. Review a sample of the assets to be imported. Depending on the number of assets found in the selected folder, not all will be displayed. When importing only a few, all are displayed.

   Status = Skipping when the image already exists and you selected not to overwrite

   Status = Overwriting when you chose to overwrite existing images and an image with the same name exists

   Linked to Product = File Name / Product ID is displayed if a match exists. "None" is displayed when no match is found.

2. Click the **View Existing Assets button** to view any existing assets that may be overwritten. Click **Close** to close the report window.
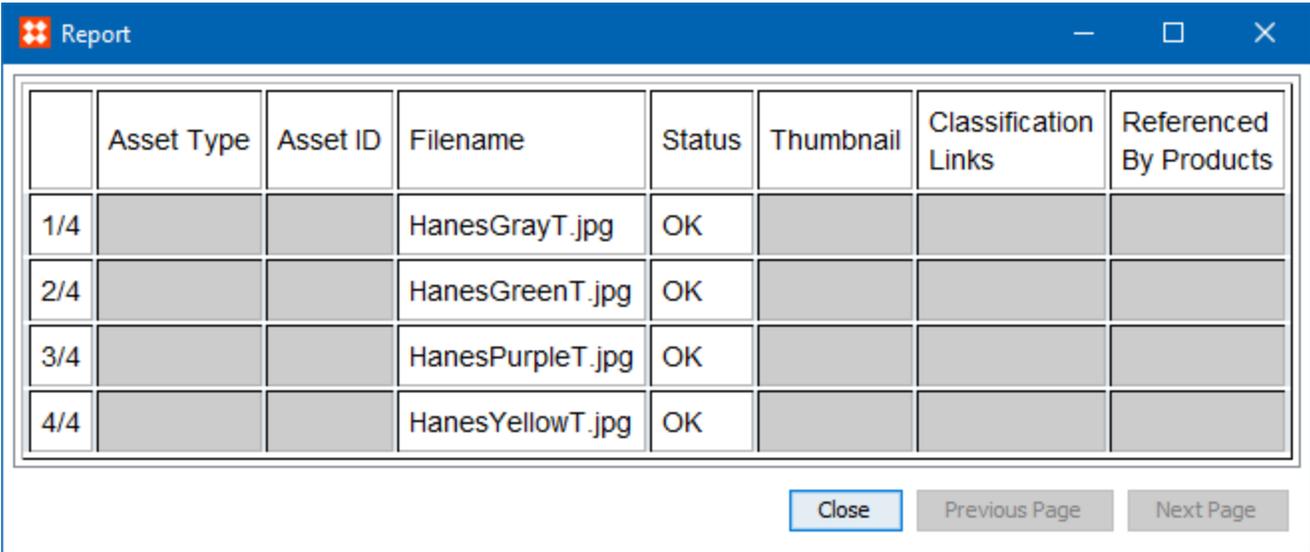
3. If necessary, use the **Back** button to correct any errors displayed.

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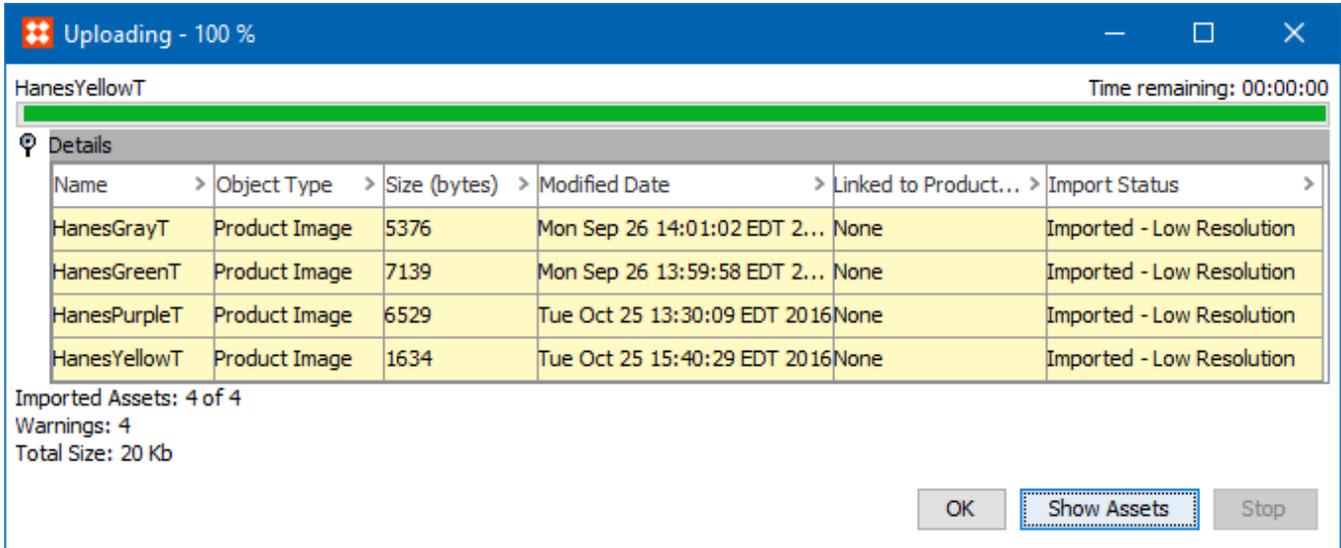
- Click the **Details** flipper to view the status of and any warning for each imported asset.
- Click **Show Assets**, to see a multi-view display of the imported assets and their location in the hierarchy.
- Click **Stop** to halt the import process.
- Click **OK** to close the import process dialog.