

SOLUTION ENABLEMENT

PMDM for Automotive Quick Start Guide

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Automotive Quick Start Guide Introduction

This guide provides an introduction to the Product MDM (PMDM) for Automotive solution available in STEP 8.2 and later versions. It covers the necessary actions an admin user must take to set up the solution, as well as providing an overview of the end user functionality that is provided with the solution after Easy Setup actions for one or more automotive standards have been completed by an admin.

The PMDM for Automotive solution supports the AutoCare, TecDoc, and NAPA standard formats. The standards are individually licensed, so you will not be able to access all of them on a system unless the specific license has been applied. To purchase licenses for additional standards, contact your Stibo Systems account manager.

The setup and end user functionalities are the same, regardless of the standard being applied. This guide will often use the AutoCare standard as an example, but the same information is applicable for the NAPA and TecDoc standards.

Note: Setup and use of application editing and mapping functionalities are considered advanced functions that are outside the scope of this guide. In addition, details on the specific data models for each standard are not covered in this guide.

Supported Versions and Formats

The following are the supported import and export versions and/or formats for the various automotive standards.

Note: If there is only one format for the data type and the format itself is not versioned, 'Format is not versioned' is listed.

Generic

- **Asset Exporter:** Format is not versioned (generic exporter not specific to any standard).

AutoCare

- **Brand Table Importer:** All three flat file formats are supported (original, with revision date, and with sub-brands and revision date with or without OEM)
- **PAdb Importer:** ASCII
- **PCdb Importer:** ASCII
- **Qdb Importer:** ASCII
- **VCdb Importer:** ASCII
- **ACES Exporter:** ACES versions 3.0, 3.2, 4.0 and 4.1
- **ACES Importer:** ACES versions 3.0, 3.2, 4.0, and 4.1
- **PIES Exporter:** PIES versions 6.5, 6.7, 7.0, 7.1, and 7.2
- **PIES Importer:** PIES versions 6.5, 6.7, 7.0, 7.1, and 7.2

NAPA

- **Application Exporter:** Format is not versioned
- **Application Importer:** Format is not versioned
- **Asset Reference Exporter:** Format is not versioned
- **Interchange Exporter:** Format is not versioned
- **Interchange Importer:** Format is not versioned
- **Translation Importer:** Format is not versioned
- **Valid Vehicles Importer:** Format is not versioned

TecDoc

- **Reference Data Importer:** TAF 2.4 using either the ZIP or 7z formats
- **Supplier Data Exporter:** TAF 2.4
- **Supplier Data Importer:** TAF 2.4 using either the ZIP or 7z formats

Quick Start Setup for Admins

This section addresses the necessary actions an admin user must take to set up the automotive solution.

Prerequisites

It is assumed that the admin user has knowledge of STEP administrative functions and experience working in System Setup, including creating and editing workflows, business rules, Web UIs, attributes, etc. Therefore, this guide does not provide introductory material for these concepts and instead targets only the specific information needed for a knowledgeable STEP admin user to complete the Automotive solution setup. If additional information is needed, see the **STEP Online Help**.

Important: This guide will often use the AutoCare standard as an example, but the same information is applicable for the NAPA and TecDoc standards.

Quick Start Setup Actions

Below are the required setup actions:

1. Create Easy Setup User
2. Run Easy Setup of Import Flow Process
3. Run Easy Setup of Standards
4. Update IIEP Users and Queues
5. Update Delete Status Attribute and Delta Calculation Method in Import Workflows
6. Update Assignees in Import Workflows
7. Determine Validation Error Handling for Each Import
8. Specify an Application Naming Convention
9. Specify Complete Replacement Handling (ACES Import Workflow Only)
10. Add Country Codes to Approved for LOV (ACES Export Only)
11. Update Web UI Configurations
12. Other Considerations

Important: The setup actions must be performed in the order in which they are listed. All steps are considered required for the setup, unless explicitly stated otherwise.

1. Create Easy Setup User

This setup action is not required, but is strongly recommended. The solution includes functionality to auto-create all objects, references, attributes, workflows, etc., required to support the solution. The user executing the auto-create functions (described in subsequent steps) will be recorded as the creator / editor of those objects in STEP. It is therefore recommended that a new user be created for this purpose, so that an accurate audit trail is in place.

The user must be created as a Super User without any privilege restrictions. For example:

The screenshot shows the 'System Setup' interface. On the left is a tree view with 'Users & Groups' expanded, and 'Easy Setup User' selected under 'Super Users'. The main panel shows the configuration for this user.

Description	
Name	Value
ID	EASYSETUP
Name	Easy Setup User
E-Mail	
Force Authentication via S...	<input type="checkbox"/>
User Information	abc
Change User Password	

Groups	
Name	
Super Users	
Add User to Group	

The screenshot shows the 'System Setup' interface with 'Super Users - Privilege Rules' selected. The main panel displays a table of privilege rules.

Setup Privileges					
Action Set	Attribute Group	Setup Group	Language	Country	
All Setup Actions			<ANY>	<ANY>	
Add Privilege					
User Privileges					
Applies to	Action Set	Attribute Group	Object Type	Group	Language
Classification 1 r	All User Actions			Super Users	<ANY>
Collections	All User Actions			Super Users	<ANY>
eCatalogs	All User Actions			Super Users	<ANY>
Entity hierarchy	All User Actions			Super Users	<ANY>
Primary Product	All User Actions			Super Users	<ANY>
Publications	All User Actions			Super Users	<ANY>
Add Privilege					
<input type="checkbox"/> Read Only					

Additional information on managing users and privileges is available in the **STEP Online Help**.

The admin user managing the initial setup of the system should log in using this newly created user before carrying out the following actions.

2. Run Easy Setup of Import Flow Process

The Import Flow Process is the framework for importing automotive files across any of the standards. It only needs to be run once per system, regardless of how many standards will be implemented. However, it must be run *prior* to any of the Easy Setup functions for the standards.

Incoming automotive data files are modeled as entities in STEP. This setup action creates the necessary entity object types, as well as the attributes that will be available on the objects.

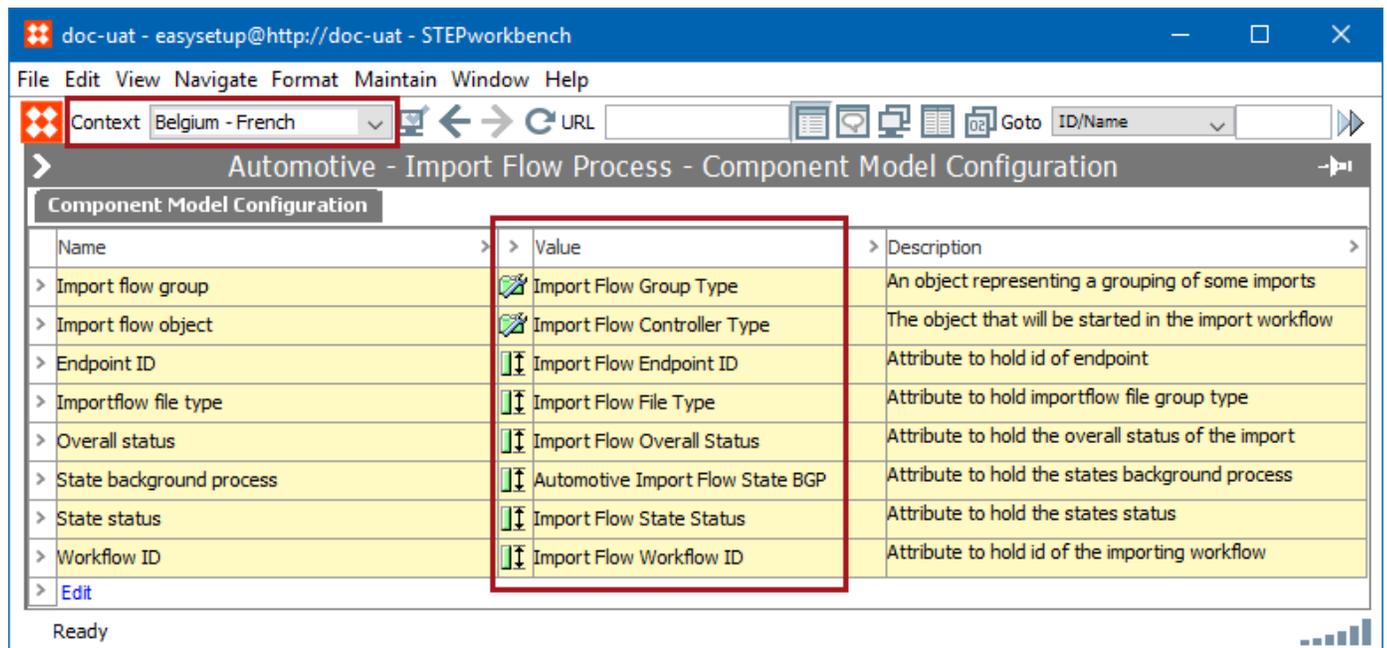
Configuration Steps

Below are the steps necessary to complete Easy Setup of the Import Flow Process:

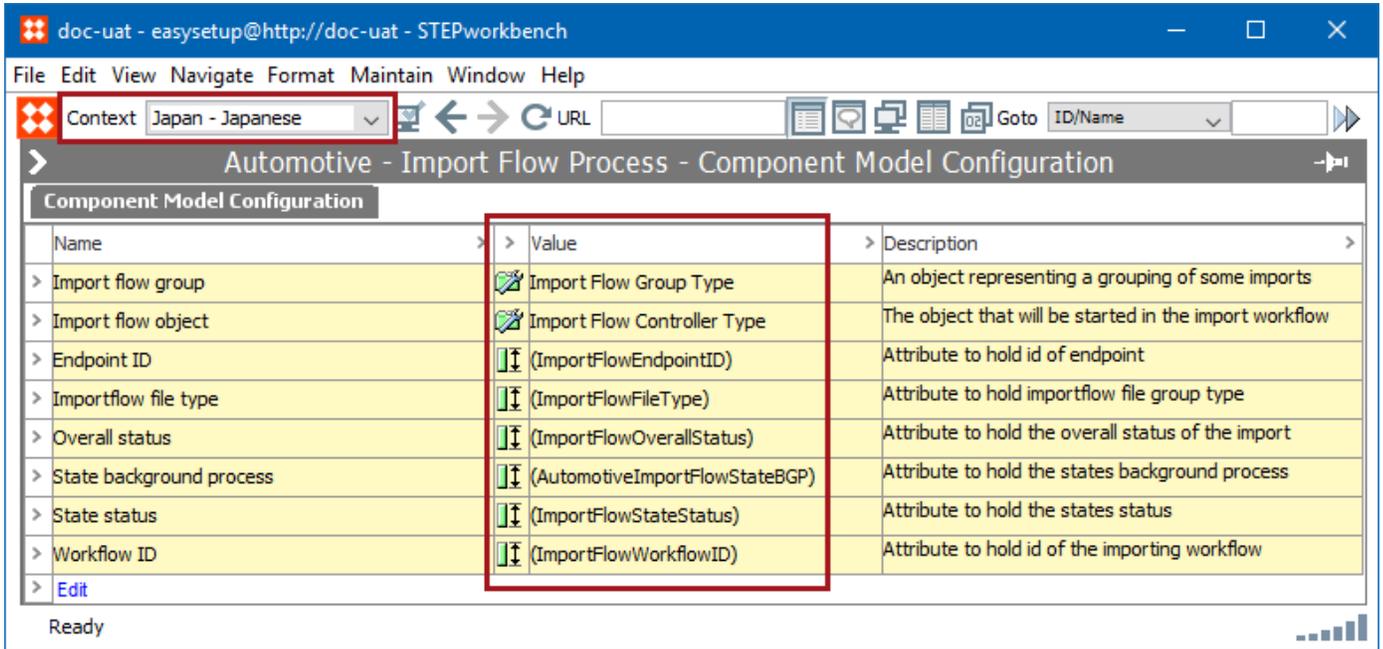
1. If an Easy Setup user will be utilized for maintaining a proper audit trail, log in to STEP as that user.
2. Go to **Context**, and select the most commonly used context option from the dropdown.

When Easy Setup actions are run, any object and/or attributes created will be populated with a respective name only for the context selected when the actions are run. Therefore, when a different context is selected, the default object and/or attribute name will display with parentheses.

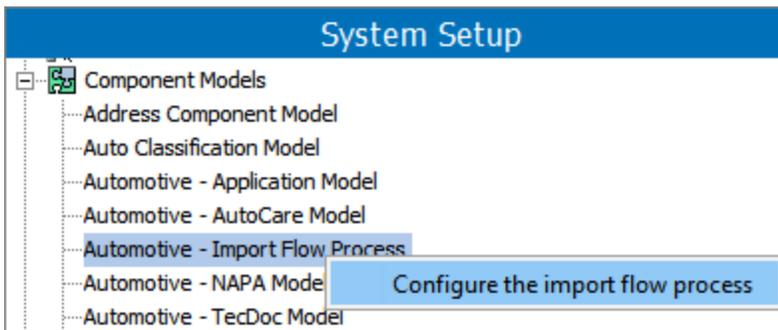
In the example below, the Automotive - Import Flow Process component model is displayed using with the same context used when the Easy Setup actions were run for the component.



Below, the same component - model is displayed, but the context has been changed, and the attribute value names display with parentheses.



3. Go to **System Setup > Component Models > Automotive - Import Flow Process**.
4. Right-click **Automotive - Import Flow Process** > Select **Configure the import flow process**.



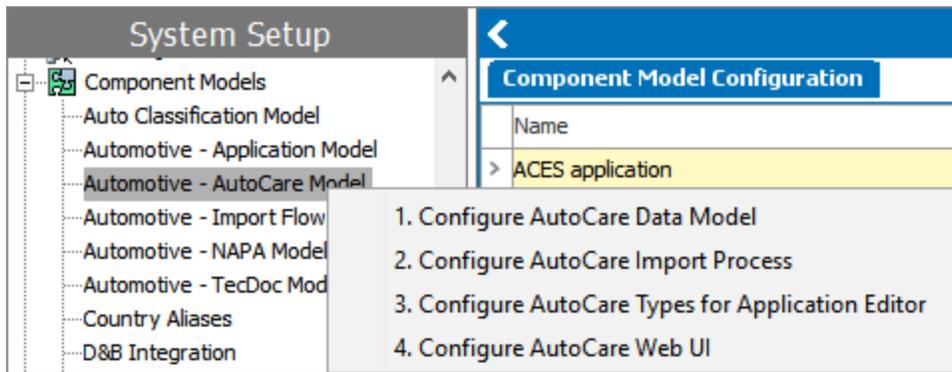
5. A dialog will display stating the changes that will be made by running the process. If you would like to record the changes, you may do so by taking a screenshot of the dialog. When you are ready to start the configuration process, click the **OK** button.
6. The system will create all necessary elements to support the Import Flow Process. This will typically take less than a minute, and when complete, a dialog will display listing each change that was made. Click the **OK** button to close the dialog and resume normal activities on the system.

3. Run Easy Setup of Standards

Each standard has a component model designed to handle the creation of all elements necessary to support the specific standard's core functionality. Regardless of the standard being set up, each follows the same process and has the following four actions that must be run sequentially:

1. Configure Data Model
2. Configure Import Process
3. Configure Types for Application Editor
4. Configure Web UI

For example:



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

A brief description is provided below about what each of the four setup actions creates, with additional information available throughout this and the Quick Start for Users section of this guide.

1. **Configure Data Model:** Each standard has a supporting data model consisting of object types / hierarchies, attributes, LOVs, and references. This setup action creates the elements needed to support the data model.
2. **Configure Import Process:** Each standard has multiple integration endpoints, workflows, business rules, and ID Structures used to support each type of import file.
 - In AutoCare, these are: ACES, PIES, Brand, PAdb, PCdb, Qdb, and VCdb.
 - In TecDoc, these are: Reference and Supplier.
 - In NAPA, these are: Application, Attribute, Interchange, Translation, and Vehicle.

Following configuration of the import process, an inbound integration endpoint and corresponding workflow (with business rules) will be created for each import type supported by the applicable standard, as well as hotfolders for each of the files to be placed into for processing.

Important: If part and application data are imported into STEP without using the proper ID structures, then errors will occur. Prior to importing, review the **ID Structures in Importers** topic within the **Automotive Reference Guide**.

In addition, a Web UI will be created that is pre-configured to provide access to the workflows used to manage the imports after the files are picked up by the hotfolders.

3. **Configure Types for Application Editor:** An application lookup / editor is provided for each standard, which also contains support for mapping application records between the standards or from your own model to one or more standard models. This step of the setup populates the component model (Automotive - Application Model) that supports the mapping of application records between the various models, though additional configuration is required beyond this to enable the mapper functionality.

Note: The population of this component model also drives the functionality of the Web UI screens that are available for application search and editing features, so this step is required to support application search functionality in Web UI (even if application record editing or mapping capabilities are not required).

4. **Configure Web UI:** A starting configuration for application search and edit functionality is provided for each standard, via three screens that are configured in this setup action. Additional configuration of the Web UI is required to make use of the created screens, which is described later in this guide. When running this setup action, you must select a Web UI for the screens to be created within. During the previous Step 2 (Configure Import Process) a Web UI to manage imports for the standard is created. The screens can be added to that Web UI, or to any other Web UI. If multiple models are implemented, it may be useful to have application search / edit / mapping functions for all models available in a single Web UI, hence the option to choose which Web UI to create the screens in.

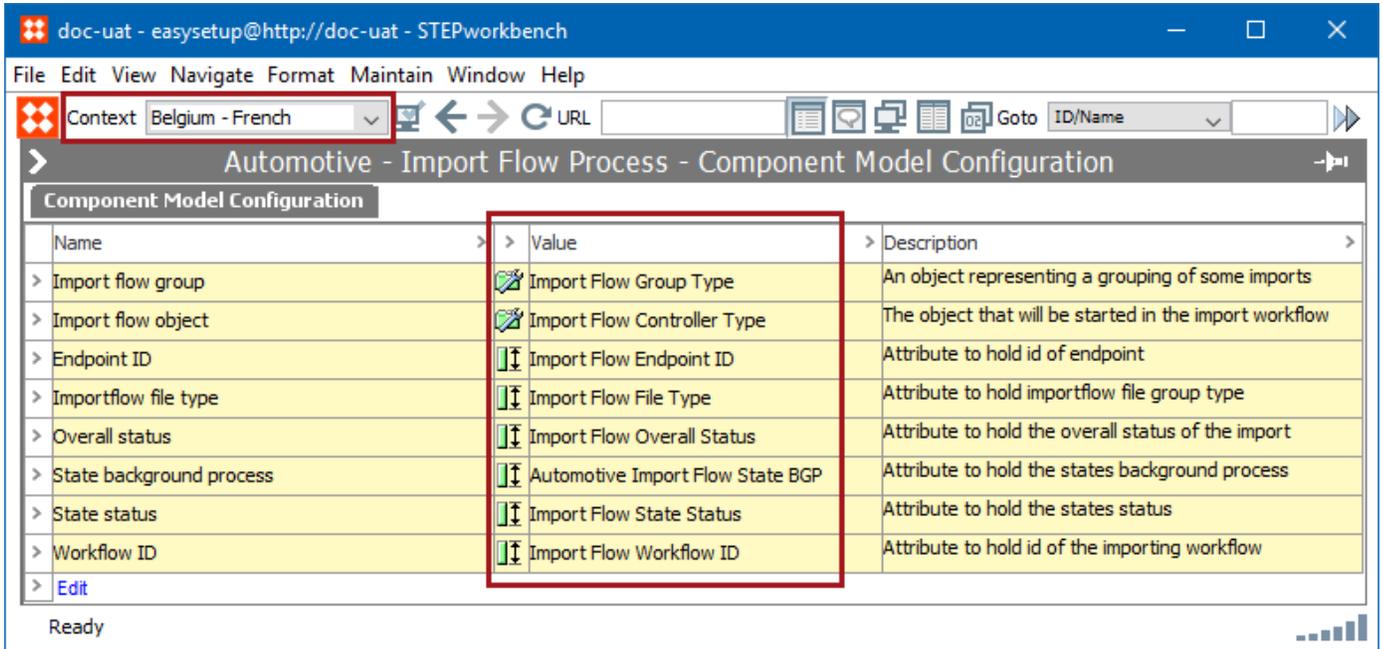
Configuration Steps

The following steps describe how to configure any of the standards using the Easy Setup method.

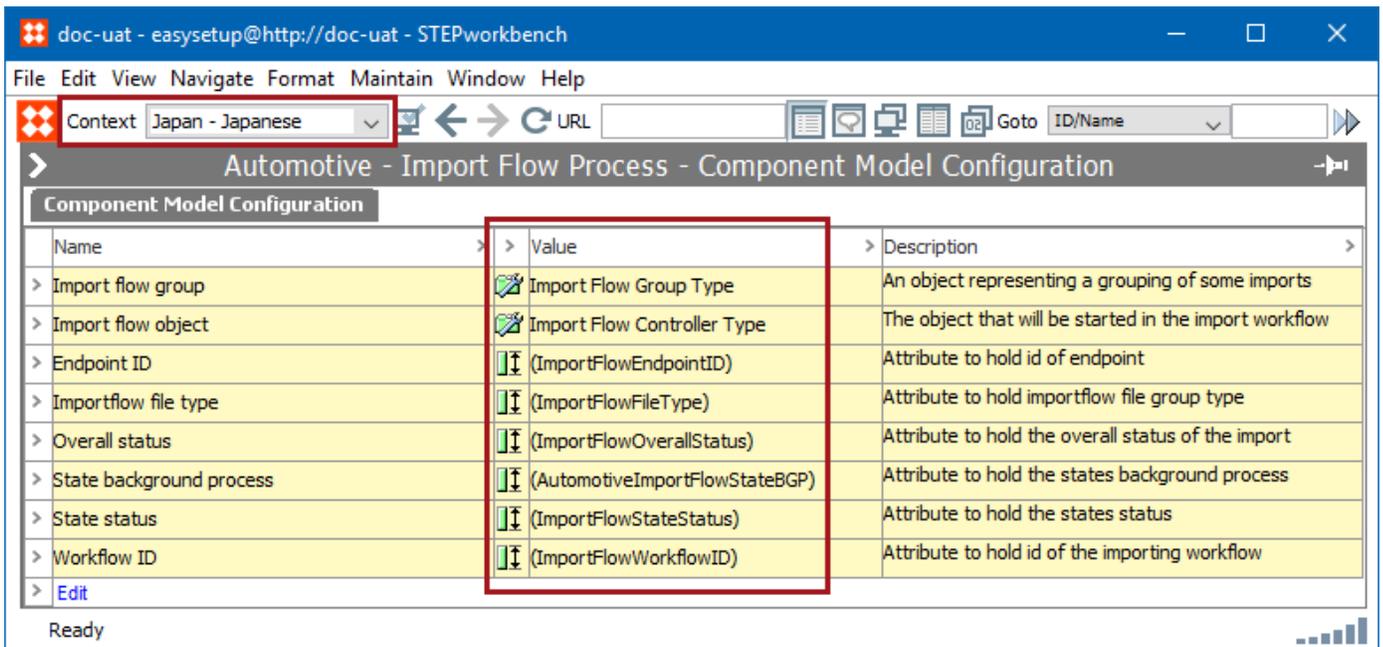
1. If an Easy Setup user will be utilized for maintaining a proper audit trail, log in to STEP as that user.
2. Go to **Context**, and select the most commonly used context option from the dropdown.

When Easy Setup actions are run, any object and/or attributes created will be populated with a respective name only for the context selected when the actions are run. Therefore, when a different context is selected, the default object and/or attribute name will display with parentheses.

In the example below, the Automotive - Import Flow Process component model is displayed using with the same context used when the Easy Setup actions were run for the component.



Below, the same component model is displayed, but the context has been changed, and the attribute value names display with parentheses.



- Go to **System Setup > Component Models > Automotive - [Standard] Model** (e.g., Automotive - AutoCare Model).
- Right-click on the applicable component model and select each step (1 through 4) in sequence. In each case, a dialog will display stating the changes that will be made by running the process. If you would like to record the changes, you may do so by taking a screenshot of the dialog.

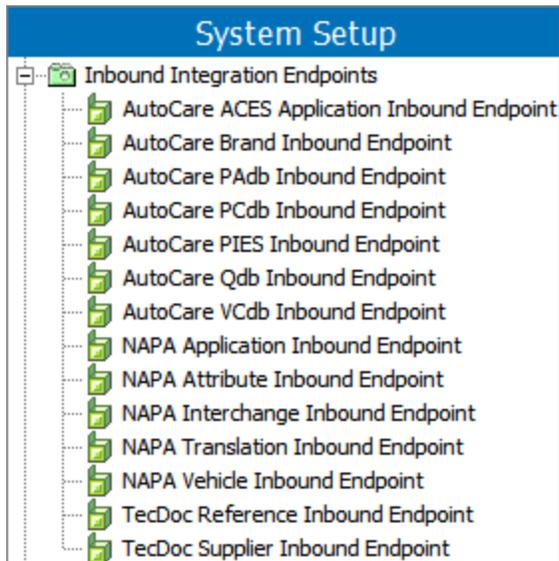
5. When you are ready to start the configuration process, click the **OK** button. The system will create all necessary elements to support the applicable process. This will typically take less than a minute for each of the four steps, and when complete, a dialog will display listing each change that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

The above can be repeated for each standard, as applicable. It is also possible to continue through the setup actions for a single standard, and return to this setup action for an additional standard later. In other words, there are no dependencies between the standards and while the setup steps within a standard must be followed sequentially, the setup process can be independently carried out per standard.

7. If an Easy Setup user is being utilized for maintaining a proper audit trail, log out of STEP as that user.

4. Update IIEP Users and Queues

Each file type supported by the solution has a corresponding inbound integration endpoint. Each endpoint is created with the user who ran the "2. [Standard] Configure Import Process" setup action (within the Easy Setup for the standard) as the executing user of the endpoint. In addition, each endpoint is set up to run using the default endpoint process queue (In). The endpoints can be found under the Inbound Integration Endpoints node on the System Setup tab:



Configuration Steps

While not strictly required, it is recommended to adjust the configuration of each endpoint as follows:

1. It is recommended that a unique user be assigned to each endpoint for auditing purposes. To update the user for each endpoint, right-click on the endpoint and select **Edit Inbound Integration Endpoint**. This will open the first step of the integration endpoint wizard, which contains a **User** parameter.

For example, a 'PIES Import' user could be created and selected as the user for the AutoCare PIES Inbound Endpoint.

Inbound Integration Endpoint Wizard

Steps

- 1. Identify Endpoint**
2. Choose Receiver
3. Configure Endpoint
4. Configure PreProcessor
5. Configure Processing Engine
6. Configure PostProcessor
7. Schedule Endpoint
8. Configure Error Reporter

Identify Endpoint

Endpoint ID: AutoCarePIESInboundEndpoint

Endpoint Name: AutoCare PIES Inbound Endpoint

Description:

User: PIES Import (PIESIMPORT)

Buttons: Back, Next, Finish, Cancel

2. Each implementation should determine how queues should be configured for the system. High priority endpoints and those with long running processes should typically have their own queue. To adjust the queue configuration on any endpoint, select the endpoint and click the **Edit Configuration** link. Then enter a value in the **Queue for endpoint processes** parameter. It is advisable to name the queue something comparable to the endpoint name so that the queue can be clearly identified by the system administrators.

Inbound Integration Endpoint | Background Processes | Statistics | Error Log Excerpts | Log | Status

Next run: 2017-06-20 16:39:00

Configuration	
Pre-Processor	No pre-processing
Process Engine	Import Flow Processor
Post-Processor	No post-processing
Error reporter	Not Defined
Schedule	Start every minute
Queue for endpoint	InboundQueue
Queue for endpoint processes	In
Transactional settings	None
Maximum number of old processes	1000
Maximum age of old processes	1 year
Number of messages per background pro	1
Contexts	English US
Workspace	Main
Edit Configuration	
Hotfolder Receiver Configuration	
ID	
Hotfolder	

Inbound Integration Endpoint Wizard

Steps

1. Identify Endpoint
2. Choose Receiver
- 3. Configure Endpoint**
4. Configure PreProcessor
5. Configure Processing Engine
6. Configure PostProcessor
7. Schedule Endpoint
8. Configure Error Reporter

Configure Endpoint

Processing Engine: Import Flow Processor

Transactional settings: None

Context

Workspace: Main

Context: English US

Queue Settings

Queue for endpoint: InboundQueue

Queue for endpoint processes: In

Maximum number of waiting processes: 1000

Maximum number of old processes: 1000

Maximum age of old processes: 1y

Number of messages per background process: 1

Buttons: Back, Next, Finish, Cancel

Additional information on creating users, editing endpoints, and recommendations for endpoint queue settings can be found in the **Working with Users** topic within the **Users and Groups** section of the **STEP Online Help**, and the **Maintaining an Inbound Integration Endpoint** and the **IIEP - Configure Endpoint** topics within the **Inbound Integration Endpoints** section of the **STEP Online Help**.

5. Update Delete Status Attribute and Delta Calculation Method in Import Workflows

Note: Setup actions 5 - 8 are all carried out within the workflows and do not need to be done sequentially. Therefore, you can make all changes within a given workflow simultaneously to avoid opening and editing each workflow repeatedly.

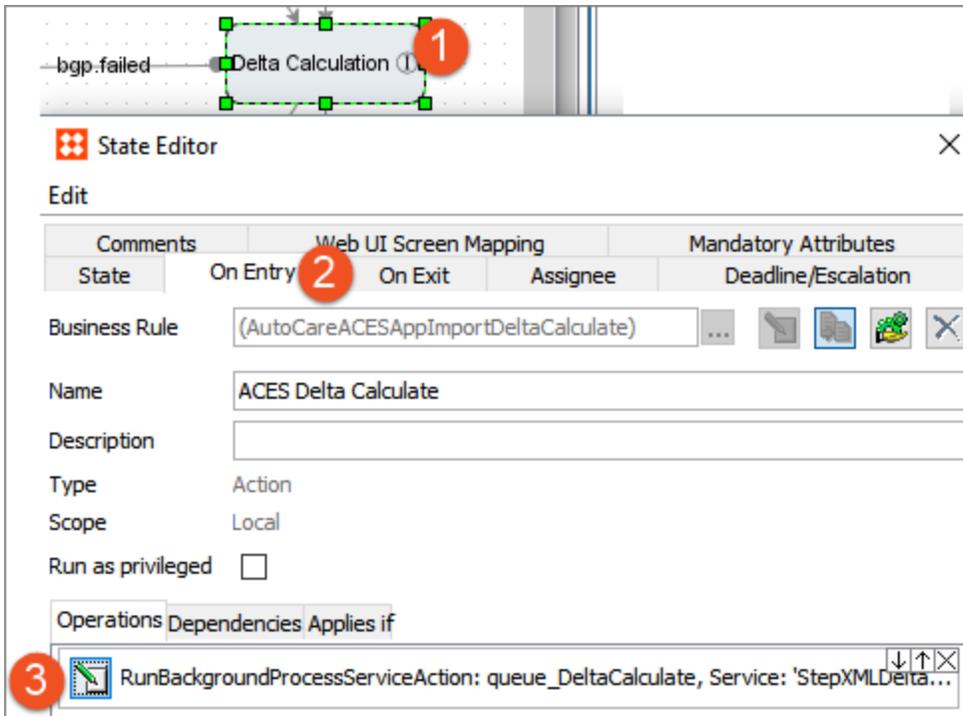
Each workflow has a Delta Calculation state where the system evaluates the content of the import file as compared to the content of the database, or against the previously loaded file of that type. For data that is determined to require deletion, the importer does not actually delete the data, but instead writes to an attribute that the data *should* be deleted. This allows each customer to determine their own strategy for managing deletions, such as processing the deletions via a workflow.

In order to enable the system to indicate data for deletion, the attribute to be used to hold the deletion information must be specified. A single attribute can be used for all imports, or unique attributes can be created to store deletion status for varying objects or imports. In either case, when an importer determines that data should be deleted, it writes 'true' in the attribute indicated in the **Delete status attribute** of the delta calculation service of that importer. Additionally, the system must be configured to process imports by comparing the incoming file against the database, or by comparing it against the previously loaded file of that type. For more information about implementing one or more delete status attributes (also known as change flags), see the **Business Action: Set Import Status Attributes** topic within the **Automotive Business Rule Plugins** section of the **Automotive Reference Guide**.

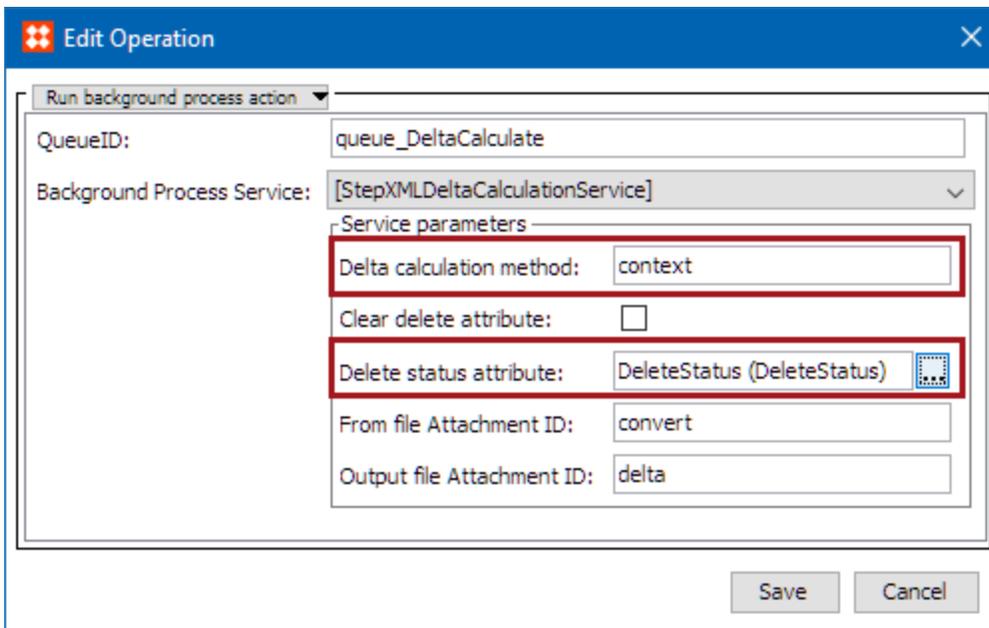
Configuration Steps

Below are the steps necessary to specify the delta calculation method and the delete status attribute in any import workflow:

1. Create an attribute (or verify that one exists) that can be used to store the delete status of an object. The attribute should be valid for the object(s) being managed by the import. For example, an attribute used in the AutoCare ACES Application Importer must be valid on ACES Application objects. Alternatively, an attribute used in the AutoCare PCdb Importer must be valid on all nodes in the PCdb classification hierarchy.
2. Select a workflow, right-click, and select **Edit STEP Workflow**.
3. Double click on the **Delta Calculation** state to open the State Editor. Select the **On Entry** tab and click the Edit icon on the existing business rule.



- In the Edit Operation dialog, write 'file' or 'context' in the **Delta calculation method** parameter, and click the ellipsis button (...) on the **Delete status attribute** parameter to select an attribute that should be used to store deletion status.



Delta calculation methods

- context:** Compares the data in the input file against the data in the database. It is recommended to use this option only as needed, which is when data is managed outside of the import process, or when import files of

that type contain varying data sets. Oftentimes this method is required for supplier data. This method takes longer to process, but ensures accuracy when data management strictly via import cannot be guaranteed, or when datasets vary within the file type.

For example, because ACES files can come from multiple sources (Suppliers or Brands), it is required that the files are imported using 'context' method for delta calculation so that the data is compared against the database instead of the previously imported file. For this reason, Easy Setup configures the 'Delta calculation method' parameter with 'context' for the AutoCare ACES Import workflow.

Important: The context method is required for the following: AutoCare ACES Import Workflow (because of the ACES Complete Replacement functionality), NAPA Application Import workflow, and NAPA Interchange Import workflow.

- **file:** Compares the data in the input file against the data in the last loaded file of the same type. It is recommended to use this option whenever possible as it has a performance advantage over the context method. The file method is suitable for any format where the data is managed strictly via import and contains consistent data sets, as is often the case for reference data.

Important: When using the 'file' delta calculation method, discarded files will not be used for delta calculations. The last loaded file must be retained for it to be used in delta calculation.

For example, a PCdb file always contains all data for the PCdb. If a part terminology is not present in the current file, it is because it has been removed from the PCdb. Using either the file or the context method would result in the missing part terminology being appropriately marked for deletion, but as the data set is consistent and usually only managed via import, the file method is preferred to take advantage of the faster processing time.

Important: The above action of setting the delete status attribute serves only to configure the attribute that will store the deletion. Each implementation should further determine a process for managing deletions for each import.

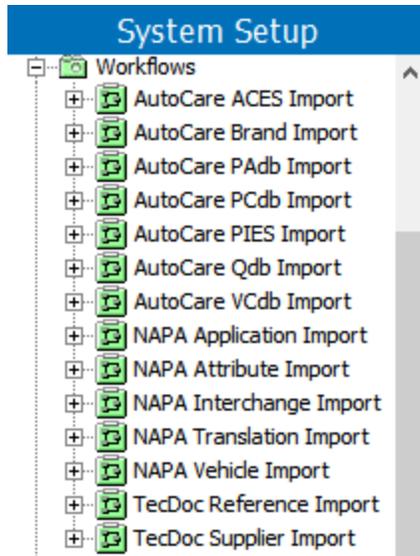
Note: If users want to track new / change / delete flags for PIES objects as well as use replacement rules to update PIES attribute values and data container values, the PIES importer Delta calculation method parameter must be set to '**context**'. And if users want to track only the new or changed objects (without deleted objects), and also use replacement rules, the PIES importer Delta calculation method parameter must be set to '**file**'.

The PIES Importer can mark only the PIES Item, PIES Package, and PIES HazMat objects for deletion. PIES Interchange objects will not be handled to be marked for deletion. Also, the PIES Product Hierarchy objects (PIES Brand / PIES PCdb Category / PIES PCdb Sub Category / PIES PCdb Part Terminology) will not be handled to be marked for deletion.

For more information on editing workflows and/or business rules, see the **Workflows** and **Business Rules** sections of the **STEP Online Help**.

6. Update Assignees in Import Workflows

Each import process has a corresponding workflow and all workflows are created with a default assignee of 'stepsys.' The workflows can be found under the Workflows node of the System Setup tab:



Each workflow must have the assignees updated to appropriate users or groups, either by defining a new default assignee for the workflow, or by removing the existing default and applying specific assignees per state.

Any users with the 'STEP Workflow Administrator' setup action as part of their privileges will be able to see and work with files in all states of the workflows. To quickly get up and running with the import functionality, it may be useful to add admin users to a group that contains this privilege, allowing those users to familiarize themselves with the workflow functionality while end user privileges are determined.

Note: The workflow administrator privilege can be applied to a setup group. If end users should be able to access data and take action in all states of the import workflows, the import workflows can be placed in a setup group and users who need to import the files can be added to a user group that contains the privilege applied to the applicable setup group. This will allow users to have full access to the import functionality, but only for those workflows in the setup group, leaving their access in other workflows unchanged.

For more information on workflow assignees, see the **Assignees in Workflows** topic within the **Workflows** section of the **STEP Online Help**.

For more information on user groups, privileges, and setup groups, see the **Users and Groups** section of the **STEP Online Help**.

7. Determine Validation Error Handling for Each Import

Each import has some basic format validations applied, and each implementation must determine how these should be handled. For more information about the Validation state, see the **Validation State** topic of the **Importing Automotive Data** section within the **Automotive Reference Guide**.

Otherwise, it is important to understand that the handling of validation errors can be configured by enabling / disabling the 'Continue on Error' parameter on the Validation state of each import workflow. By default, the 'Continue on Error' parameter is disabled.

For example, when reference data includes multiple files and a data point included in one is not present in a corresponding related file (e.g., a PCdb Codemaster file includes a position that is omitted from the Position file in the same PCdb), an error will be written to the execution report of the validation process. However, as reference data is typically managed by an outside source (e.g., AutoCare, TecDoc, or NAPA), it may be desired to import the data regardless of these types of errors. If so, the 'Continue on Error' parameter should be checked on the validation service. In this case the validation issues will still be written to the execution report, but all valid data will be converted and made available for the import process. If unchecked, validation errors will cause the import process to stop and will need to be corrected before the file can complete validation and continue on in the import process.

Additionally, consider when an importer has a strict file name validation rule (e.g., NAPA Vehicle and NAPA Translation Importers), should a bad file name stop the data from being imported? If so, then the parameter should remain disabled. If not, then the parameter should be enabled.

For more information on how this setting changes how a users actions when importing data, see the **Validation Error Handling** topic of the **Automotive Reference Guide**.

Enabling / Disabling Continue on Error

Below are the steps to enable / disable the 'Continue on Error' parameter:

1. When editing a workflow, double click on the **Validation** state to open the State Editor.
2. Select the **On Entry** tab and click the **Edit** button on the existing business rule.
3. Check or uncheck the **Continue on Error** setting as desired.

Validation ①

AutoCare

State Editor

Edit

Deadline/Escalation	Comments	Web UI Screen Mapping
State	On Entry	On Exit

Business Rule: (AutoCareACESAppImportValidation)

Name: ACES Validation

Description:

Type: Action

Scope: Local

Run as privileged:

Operations Dependencies Applies if

3 RunBackgroundProcessServiceAction: queue_Validation, Service: 'AutoCare'

Edit Operation

Run background process action

QueueID: queue_Validation

Background Process Service: [AutoCareValidationService]

Service parameters

AutoCare file attachment ID: original

Continue on Error:

8. Specify an Application Naming Convention

When applications are imported into STEP using the ACES, NAPA Application, and/or TecDoc Supplier importers, the STEP Name for applications is set to match the Part Name. However, you can specify a naming convention for the Application Name to be set automatically during the import process.

This is an optional configuration. If you do not have specific requirements around your application naming convention, this setup action can be skipped.

Prerequisites

Configuring a naming convention consists of creating a business action with the provided JavaScript, and editing the 'Import' state for the application Import workflow of each implemented standard created during the Easy Setup actions. For more information, see the **Business Action** section, and the **Workflows** section of the **STEP Online Help**.

Within this topic, two examples of JavaScript are provided that will change the Application Name to be [VehicleName PartName] or [Year Make Model]. The Vehicle Name is retrieved using a classification reference type specific to each standard. Below is a list of each standard and the classification reference used to retrieve the Vehicle Name.

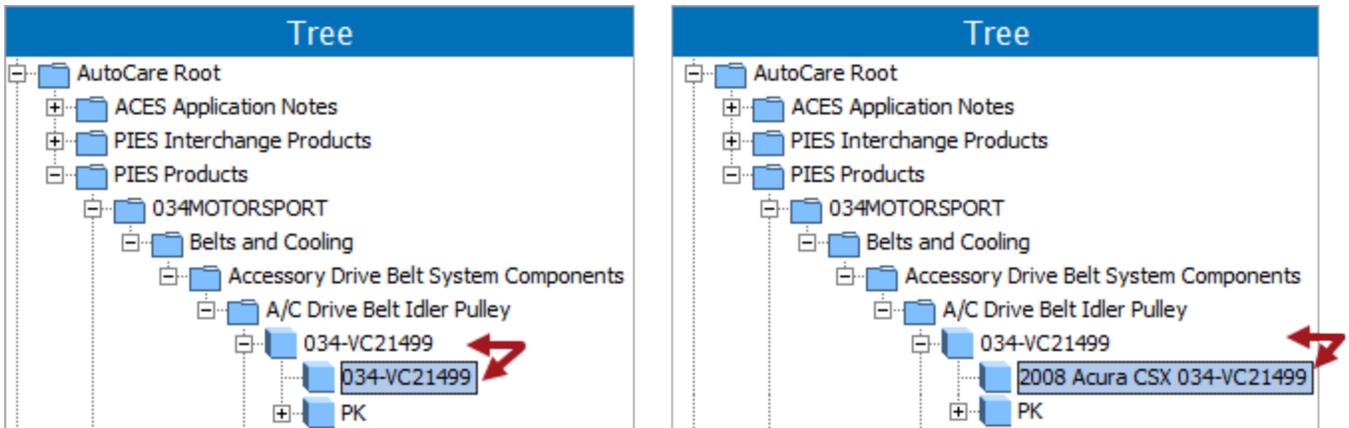
- **AutoCare:** ACES Application To Base Vehicle
- **NAPA:** Application To Year
- **TecDoc:** Supplier Article To Vehicle Type (PC)

Important: If your data model does not use the classification references listed above, then the JavaScript provided in this topic must be modified to work as expected.

Results

When the JavaScript provided within this topic is used, instead of the Application Name matching the Part Name, the Application Name will be a result of the Vehicle Name and the Part Name.

In the example below, two screenshots of the same application are displayed. In the screenshot on the left, the Application Name (034-VC21499) is displayed beneath the Part with the same name. Whereas in the screenshot on the right, the Application Name (2008 Acura CSX 034-VC21499) has been automatically updated during import to include the AutoCare Base Vehicle Name (2008 Acura CSX) and Part Name (034-VC21499). The result is the application named displays below the Part Name '034-VC21499.'



Configuring an Application Naming Convention

To specify a more desirable application naming convention, a new business action to set the Application Name on import needs to be created, and the 'Import' state for the respective workflow must be edited to utilize the newly created business action.

Create a business action to set the Application Name on import

Below are the steps for creating a business action with the provided JavaScript to set the Application Name on import to [VehicleName PartName]. For more information on creating a business rule, see the **Creating a Business Rule or Library** topic of the **Business Rules** section of the **STEP Online Help**.

1. Create a business action using the 'app' variable that binds to 'Current Object.'
2. Add one of the following JavaScript options:

Option A: Displays the [Year Make Model]

```
app.setName (app.getAssembly () .getName ());
```

Option B: Displays the [Year Make Model PartName]

```
app.setName (app.getAssembly () .getName () + " " + app.getPart () .getName ());
```

In the example below, the business action (Set Application Name) is configured to work with the AutoCare, NAPA, and TecDoc standards by selecting the respective Valid Object Types.

Business Rule Editor - Set Application Name

ID: SetApplicationName
 Name: Set Application Name
 Description:
 Type: Action
 Scope: Global
 On Approve: Not Executed
 Valid Object Types: DS_Linkage, NAPA Application, ACES Application
 Run as privileged:

Operations Dependencies Applies if

JavaScriptBusinessActionWithBinds: Bindings, 0 messages, app.setName(app.getAssembly().getName() + " " + app.getPart().getName());

Edit Operation

Execute Javascript

Binds:

Variable name	Binds to
app	Current Object

Messages:

Variable name	Message	Translations

JavaScript:

```
app.setName (app.getAssembly().getName() + " " + app.getPart().getName());
```

Add new Business Action

Save Cancel

Option C: Displays the [YearRange Model Part Number]

Note: This option is only applicable for Auto Care standard. To use year range in the application naming convention, the 'Use year range' parameter that is available in the ACES Conversion state must be selected. For more information, see the **Conversion State** topic within the **Automotive Reference Guide**.

To get the year range to display in the application Name, a calculated attribute using the following functions should be created in the system before creating / editing the business action:

```
range (listconcatenate (sort (multivalue2list (prodval ('AC_ACESYears')))), '-')
```

In the example below, the calculated attribute ACES Years Calculated (ID = AC_ACESYearsCalculated) is created.

ACES Years Calculated - Attribute																										
Attribute	References	Attribute Transformation																								
<p>☰ Description</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>ID</td> <td>AC_ACESYearsCalculated</td> </tr> <tr> <td>Name</td> <td>ACES Years Calculated</td> </tr> <tr> <td>Last edited by</td> <td>2020-08-27 16:59:41 by</td> </tr> <tr> <td>Full Text Indexable</td> <td>No</td> </tr> <tr> <td>Externally Maintained</td> <td>No</td> </tr> <tr> <td>Hierarchical Filtering</td> <td>None</td> </tr> <tr> <td>Calculated</td> <td>Yes</td> </tr> <tr> <td>Type</td> <td>Specification</td> </tr> <tr> <td>Dimension Dependencies</td> <td></td> </tr> <tr> <td>Value template</td> <td><code>range(listconcatenate(sort(multivalue2list(prodval('AC_ACESYears')))), '-')</code></td> </tr> <tr> <td>Unit Description</td> <td>abc</td> </tr> </tbody> </table>			Name	Value	ID	AC_ACESYearsCalculated	Name	ACES Years Calculated	Last edited by	2020-08-27 16:59:41 by	Full Text Indexable	No	Externally Maintained	No	Hierarchical Filtering	None	Calculated	Yes	Type	Specification	Dimension Dependencies		Value template	<code>range(listconcatenate(sort(multivalue2list(prodval('AC_ACESYears')))), '-')</code>	Unit Description	abc
Name	Value																									
ID	AC_ACESYearsCalculated																									
Name	ACES Years Calculated																									
Last edited by	2020-08-27 16:59:41 by																									
Full Text Indexable	No																									
Externally Maintained	No																									
Hierarchical Filtering	None																									
Calculated	Yes																									
Type	Specification																									
Dimension Dependencies																										
Value template	<code>range(listconcatenate(sort(multivalue2list(prodval('AC_ACESYears')))), '-')</code>																									
Unit Description	abc																									
<p>☰ Attribute Validation</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Validation Base Type</td> <td>Number</td> </tr> <tr> <td>List Of Values</td> <td>N/A</td> </tr> <tr> <td>Multi Valued</td> <td>No</td> </tr> <tr> <td>Mask</td> <td></td> </tr> <tr> <td>Minimum Value</td> <td></td> </tr> <tr> <td>Maximum Value</td> <td></td> </tr> <tr> <td>Maximum Length</td> <td>N/A</td> </tr> </tbody> </table> <p>Edit Validation Rule</p>			Name	Value	Validation Base Type	Number	List Of Values	N/A	Multi Valued	No	Mask		Minimum Value		Maximum Value		Maximum Length	N/A								
Name	Value																									
Validation Base Type	Number																									
List Of Values	N/A																									
Multi Valued	No																									
Mask																										
Minimum Value																										
Maximum Value																										
Maximum Length	N/A																									

The above created calculated attribute has to be included in the JavaScript of the business action

```
app.setName (app.getValue ("AC_ACESYearsCalculated").getValue () + " " +
app.getAssembly ().getName () + " " + app.getPart ().getName ());
```

In the example below, the business action (Set Application Name) is configured to get the year range to display in the application Name after importing the ACES file.

The image shows two overlapping windows from the Business Rule Editor. The top window, titled "Business Rule Editor - Set Application Name Year Range", displays the configuration for a business action. The ID is "SetApplicationName", the Name is "Set Application Name", and the Type is "Action". The Scope is "Global", and the On Approve status is "Not Executed". The Valid Object Types are "ACES Application, DS_Linkage". The Operations tab is active, showing a JavaScriptBusinessActionWithBindings configuration.

The bottom window, titled "Edit Operation", shows the configuration for the JavaScript action. The Bindings section is expanded, showing a variable named "app" bound to the "Current Object". The JavaScript code is: `app.setName (app.getValue ("AC_ACESYearsCalculated").getValue () + " " + app.getAssembly ().getName () + " " + app.getPart ().getName ());`. A red arrow points from the "app" variable in the Bindings section to the "app" variable in the JavaScript code. At the bottom left of the "Edit Operation" window, there is a button labeled "Add new Business Action" which is highlighted with a red box.

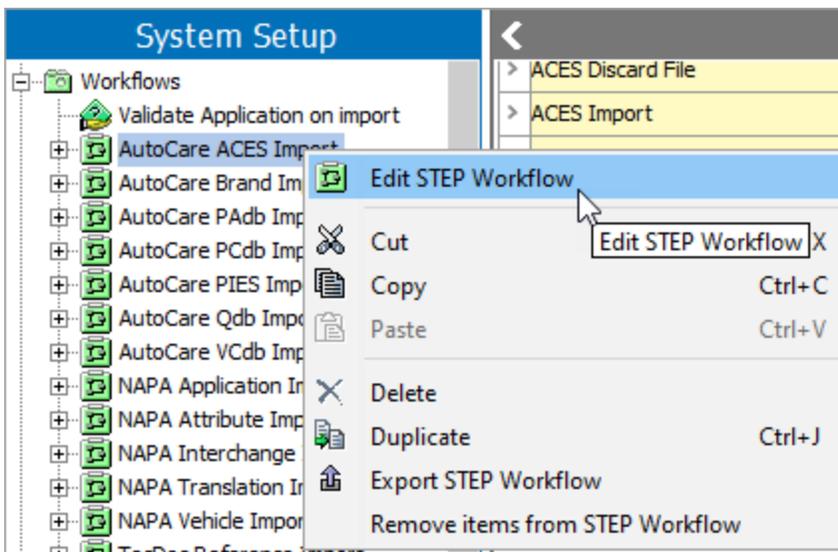
Add the business action to the 'Import' state of the respective Import Workflow

Once a business action has been created with JavaScript, as shown above, the business action needs to be added to the 'Import' state of the respective import workflow.

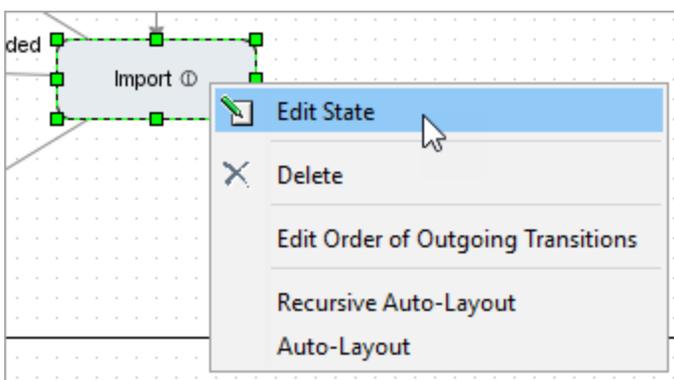
1. Go to System Setup > Workflows > Select the workflow used by the importer.

For the business action example provided above, the configured valid object types allow for the business action to be used in one or more of the following import workflows: AutoCare ACES Import, NAPA Application Import, and TecDoc Supplier Import.

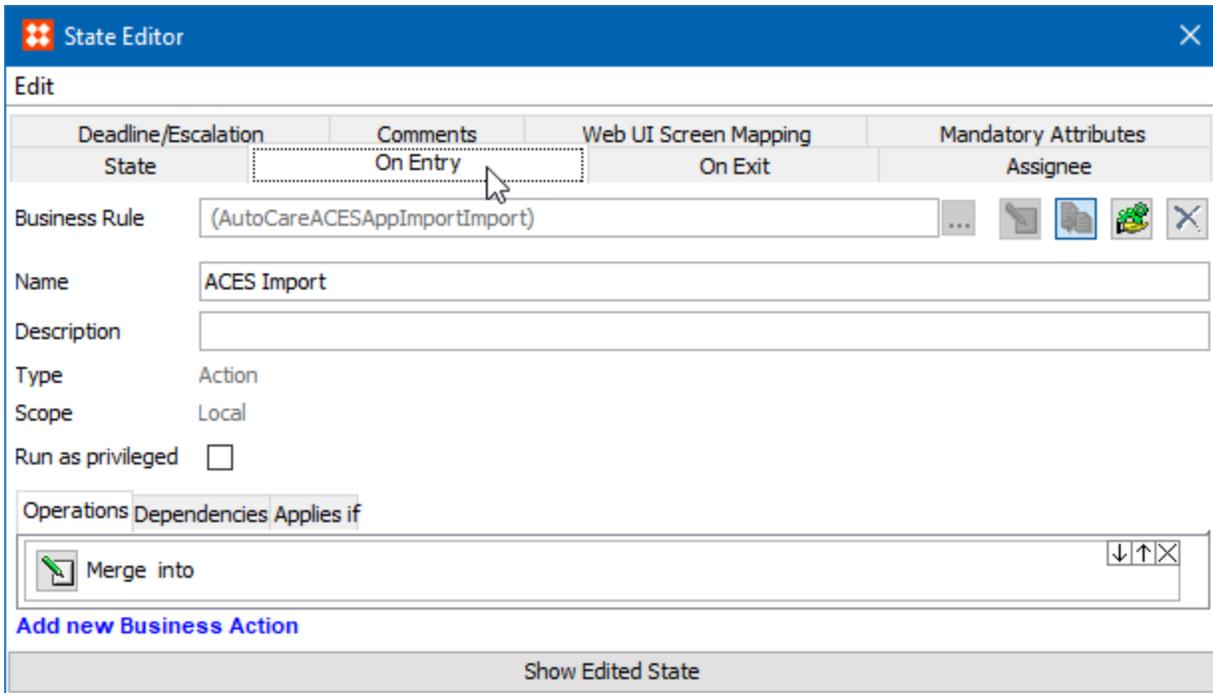
2. Right-click the respective workflow, select **Edit STEP Workflow**, and the STEP Workflow Designer will display.



3. Within the STEP Workflow Designer, right-click the **Import** state, select **Edit State**, and the State Editor will display.

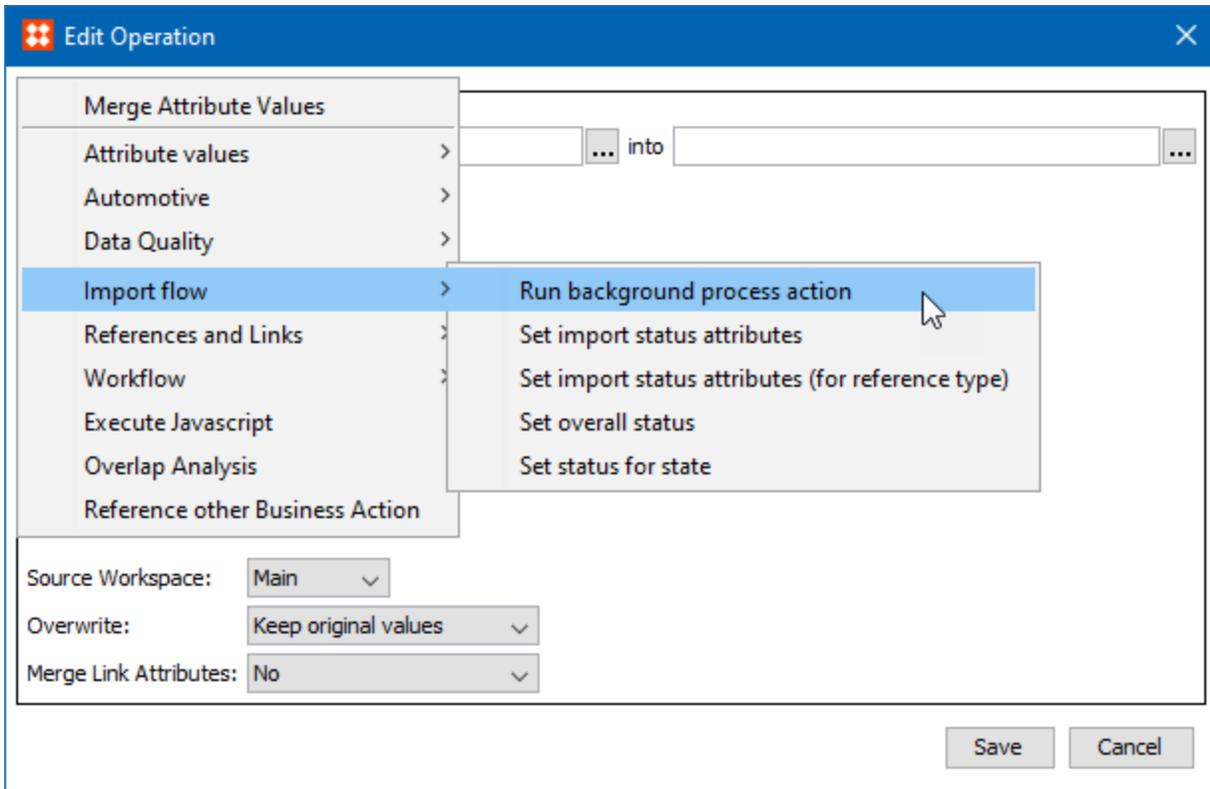


4. Within the State Editor, click the **On Entry** tab (as shown below).

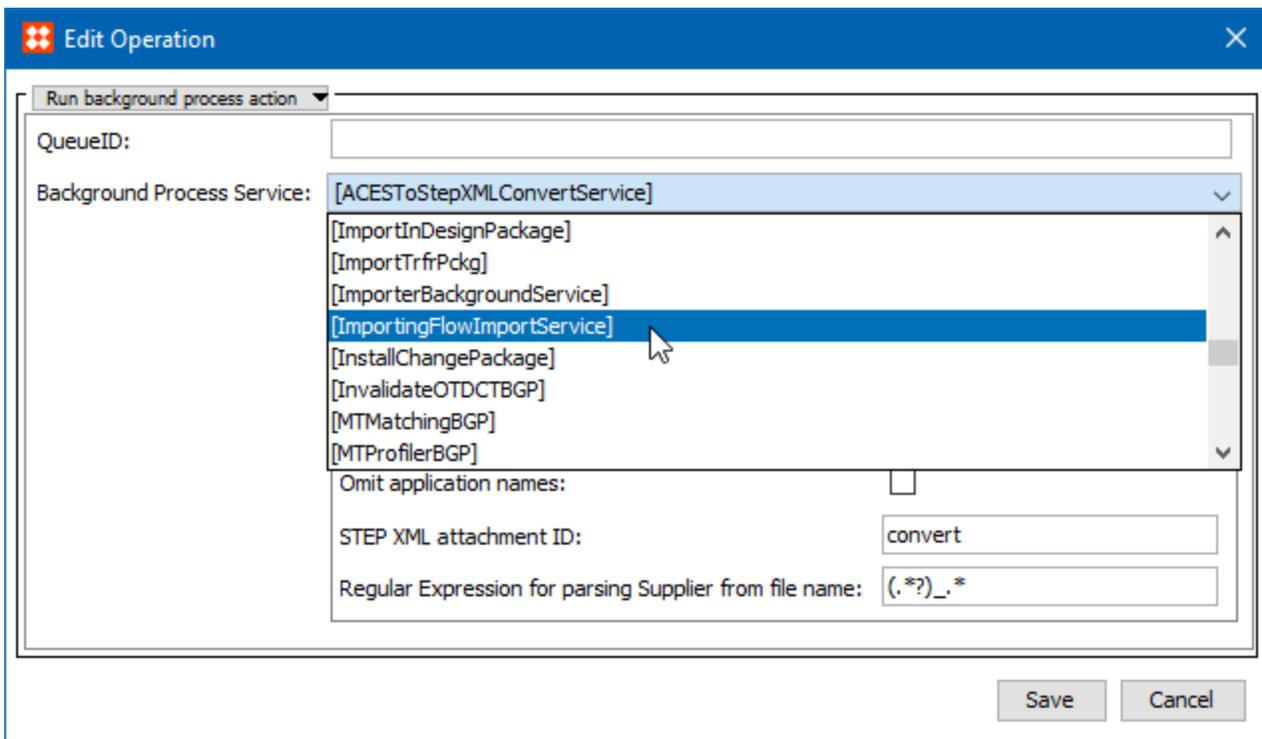


Note: If a business action using the 'Run background process action' has been previously added to this state, then click the **Edit Operation** button and skip to step 11 below.

5. Click the **Edit Operation** button, and the Edit Operation dialog will display.
6. Click the operation dropdown, hover over Import flow, and select the **Run background process action** (as shown below).

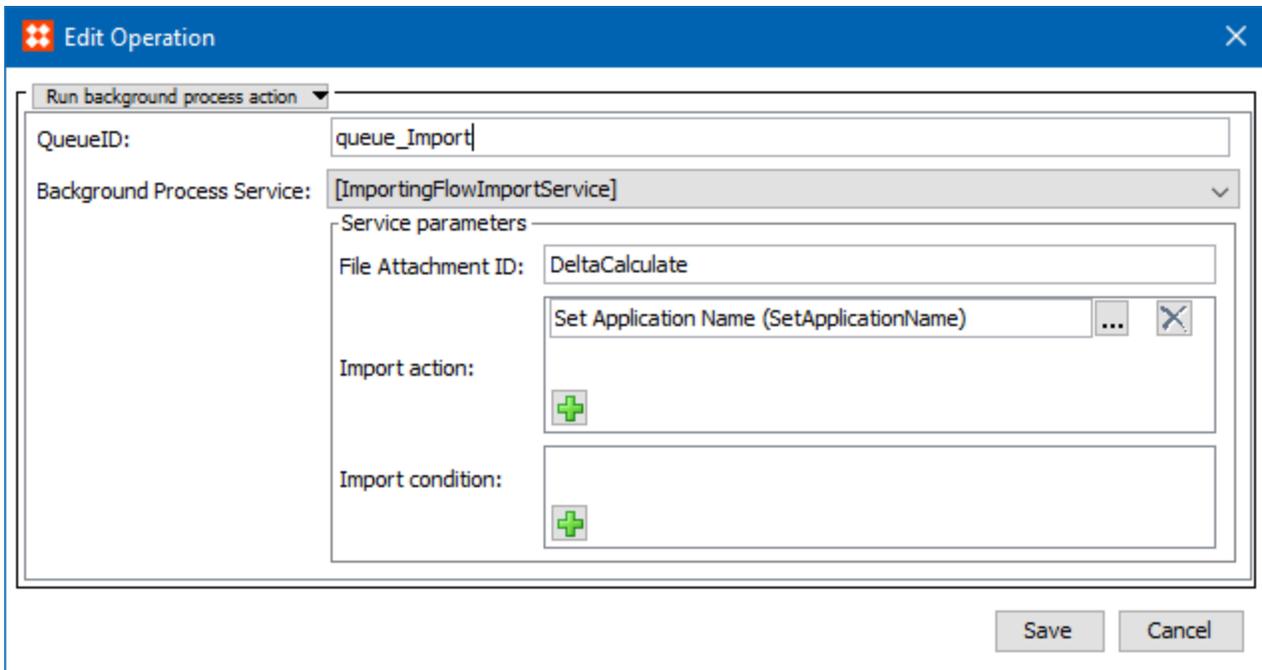


- Use the Background Process Service parameter dropdown to select **[ImportingFlowImportService]**, as shown below.



8. Once the [ImportingFlowImportService] Background Process Service is selected, the Edit Operation dialog will display.
9. **QueueID:** Specify the queue in which the background process should run.
10. **File Attachment ID:** Must be populated with the same value found in the 'Output file Attachment ID' parameter of the Delta Calculation State.
11. Within the 'Import action' parameter, click the green icon () to add an action.
12. Click the ellipsis button () to find and select the business action created to set Application Names on import.

Below is an example of how the operation should look prior to saving.



13. Click the **Save** button, and close the STEP Workflow Designer.

9. Specify Complete Replacement Handling (ACES Import Workflow Only)

This setup action is only required if the AutoCare standard is being configured, and only needs to be carried out within the ACES functionality. If the AutoCare standard is not being configured, this setup action can be skipped.

Important: ACES Complete Replacement functionality requires use of the context method, as described in setup action 5 within this guide.

The ACES standard specifies two file load types, indicated via the 'SubmissionType' field in the header: FULL and UPDATE. At a high level, FULL means "replace what is in the system with what is in this file" while UPDATE means "only update the records in the file, by adding or deleting as indicated in the action code on each record." In practice though, ACES files usually contain sets of application records for a brand, product line, part type, supplier, etc. so the replacement concepts need to be more granularly specified to indicate the level at which the applications should be replaced or updated.

Configuration Steps

To configure ACES application import handling:

1. Verify that the delete status attribute has been populated as described in step 5.
2. Double click on the **Conversion** state to open the State Editor. Select the **On Entry** tab and click the Edit icon on the existing business rule.
3. Populate each of the ACES parameters in the business rule. These parameters specify the global handling for ACES files across the full system and the options for population are defined below. Note that each Brand can also have unique handling applied, which is also further described below.

Edit Operation

Run background process action ▼

QueueID: queue_Conversion

Background Process Service: [ACESToStepXMLConvertService]

Service parameters

ACES Default FULL Import handling:	BRAND
ACES Default SUPPLIER Import handling:	NO
ACES Default UPDATE Import handling:	STANDARD
AutoCare file attachment ID:	original
Create PIES items:	<input checked="" type="checkbox"/>
Error count attribute:	
Error file attachment ID:	error
Filter applications with errors:	<input type="checkbox"/>
Good application count attribute:	
Import mode attribute:	
Importing Brands attribute:	
Importing Part Terminologies attribute:	
Omit application names:	<input type="checkbox"/>
STEP XML attachment ID:	convert
Regular Expression for parsing Supplier from file name:	(.*?)*_*
Treat notes as errors:	<input checked="" type="checkbox"/>
Validate applications:	<input checked="" type="checkbox"/>

Save Cancel

- Optionally, populate the 'Regular Expression for parsing Supplier from file name' parameter (using the JavaScript regular expression format) to specify how the Supplier value should be extracted from the ACES file name. By default, the parameter is populated with `(.*?)*_*`, meaning that the system will extract the first string prior to an underscore (typically a Supplier value) in the file name as this is how the ACES standard defines the naming convention. For example, with a file name of `ACMESupply_BrakeHardware_2016-04-23_FULL.xml`, 'ACMESupply' would be extracted as the Supplier value. If this is not desired, a Regular Expression can be inserted in the parameter to extract Supplier in an alternate way.
- Optionally, enable the Omit application names parameter. When enabled, application names will be omitted during the conversion process so that the record will not be included in the delta file.

Note: If the SUPPLIER parameter is set to 'Yes' and Supplier cannot be parsed from the file name, the file will fail during the Conversion process and will be unable to be imported.

ACES Parameter Options

The values supplied in the conversion service specify the global system defaults. Each Brand can also have local values applied for handling that Brand specifically.

Description	
Name	Value
Name	0 Brand
Object Type	Brand
Import Handling FULL	
Import Handling SUPPLIER	
Import Handling UPDATE	
Brand Revision Date	2016-12-21

If a Brand does not have local values applied, the system defaults are used. The options for populating each parameter are the same, regardless of whether they are provided in the global or local parameters.

FULL

The FULL parameter defines how files with a SubmissionType=FULL are handled. The options are:

- **Brand:** Replacement of application records is within the brand. All applications for all brands in the input file are replaced (with or without regard to the Supplier, as per the value in that parameter), regardless of part terminology.
- **Brand + Part Number:** Replacement of application records is within the brand and part number. All applications for a particular brand are replaced for all part numbers that are in the input file (with or without regard to the Supplier, as per the value in that parameter). Applications for part numbers that are NOT in the input file are left untouched.
- **Brand + Part Terminology:** Replacement of application records is within the brand and part terminology. All applications for a particular brand are replaced for all part terminologies that are present in the input file (with or without regard to the Supplier, as per the value in that parameter). Applications for part terminologies NOT in the input file are left untouched.

SUPPLIER

The SUPPLIER parameter defines whether or not Supplier is taken into consideration when evaluating replacement scenarios. If multiple suppliers can provide records for the same Brand, and suppliers should not overwrite one another's records, this should be set to 'Yes.' If only a single supplier provides records for a given Brand, or suppliers are allowed to overwrite one another's data and only the most current data (regardless of supplier) is desired, this should be set to 'No.'

Note that both the FULL and UPDATE parameters work in conjunction with the SUPPLIER parameter, for which the options are:

- **No:** Replacements for this brand will replace applications records across all Suppliers, regardless of who provided the existing application records. In other words, do NOT take Supplier into account when evaluating replacements.
- **Yes:** Replacements for this brand will only replace application records provided by the Supplier in the input file. In other words, DO take Supplier into account when evaluating replacements. With this setting, it is important to ensure the Supplier can be accurately parsed from the file name.

Note: Supplier handling must be consistent within a Brand. Changing the Supplier setting in a Brand will have unintended consequences (e.g., the Supplier-based records will be duplicates of the non-Supplier ones). If it does need to change for a Brand, it is recommended to delete the existing records first and then do a full re-load of all records for the Brand.

UPDATE

The UPDATE parameter defines how files with a SubmissionType=UPDATE are handled. The options are:

- **Partial Replacement:** Evaluate the combinations of Brand, Part Terminology, and Base Vehicle of each record provided in the file. For each combination found, replace all records in the database with those in the input file (with or without regard to the Supplier, as per the value in that parameter). This is essentially an additional variation of the FULL scenarios, but is used for UPDATE files only, to "update all records for this set of vehicles and part types."
- **Standard Update:** Delete records with action="D"; Add records with action="A." Only records explicitly in the file will be acted on (with or without regard to the Supplier, as per the value in that parameter).

10. Add Country Codes to Approved for LOV (ACES Export Only)

If ACES 3.2 Export will be used *and* the ApprovedFor tag in the header will be populated as part of ACES Exports, this setup action must be carried out.

The ACES Exporter includes an option to select countries that will be populated in the ApprovedFor element of the export. The values to select from are controlled by an LOV that is created as part of Easy Setup. The LOV is created without values as each implementation must determine the allowable values. Therefore, prior to running an export using the ApprovedFor element, values must be added to the LOV with ID=AC_ACESApprovedFor.

The screenshot shows the 'System Setup' interface. On the left is a tree view with 'Lists of Values / LOVs' expanded to 'AutoCare LOV Group' > 'PADb LOV Group' > 'ACES Approved For'. The main area shows the 'List of Values' configuration for 'AC_ACESApprovedFor'. The configuration table is as follows:

Name	Value
ID	AC_ACESApprovedFor
Name	ACES Approved For
Edited by	2017-07-26 15:02:10 by
Path	Lists of Values
Dimension Dependencies	
Use Ids on values	Yes
Use Ids for sorting	No
Value-ID Pattern	

Below the configuration table is the 'Values' section:

Values	Value ID
> Denmark	DK
> Poland	PL
> USA	US

On the right, the 'Steps' panel shows: 1. Select Configuration, 2. Select Objects, 3. Select Format, 4. Map Data. The 'Select Format' panel shows 'AutoCare ACES 3.2 Application Exporter' selected, with the text 'Exports data in AutoCare ACES 3.2 format.' and checkboxes for 'Approved For' with options USA, Denmark, and Poland. A red arrow points from the 'Values' table to these checkboxes.

Note: The ACES standard allows for two character country codes only. The exporter interface displays the value of the LOV, while the export itself passes the value ID. Care must be taken to ensure that all value IDs are exactly two characters, or the export could generate a file that will fail validation on a downstream system.

11. Update Web UI Configurations

While not strictly required, it may be helpful to update some elements of the Web UI that are created by Easy Setup during setup action 2 (Configure import process) and 4 (Configure Web UI) for any standard that includes creation of screens in the Web UI. Some of these screens are ready to be used as-is, while others are considered a starting point only, and require additional work to complete the setup.

This section describes the following changes that may be helpful to apply in the Web UI:

- Adding Additional Headers to Application Screens
- Adjusting Homepage Import Status Selectors
- Displaying the Import Details Report Column
- Accessing Application Editor Manager Screens
- Allowing Applications Outside Part Type
- Displaying More States in Controller Screen

Adding Additional Headers in Controller Screen

A series of 'controller' screens are created by the Easy Setup, one for each import format. These controllers are named '[Standard][Format]ControllerScreen' (e.g., AutoCareACESApplicationControllerScreen) and are used to display the details of any importer. The controller screens created for the AutoCare, TecDoc, and the NAPA standards will function without requiring further configuration, once they have been made accessible following the Easy Setup instructions. However, they are intended as 'starter' screens only, meaning that it is expected that users will want to see additional data on them, which can easily be added via configuration.

The Easy Setup action is set to display a default of three headers / columns within the Imports section in the Controller Screen. If the user insists to view more information of the Controller, they can add or remove the headers / columns that need to be displayed. For example, if a user wishes to see the count of good and bad application records imported in the ACES import, information on the total count of new, updated, and deleted objects for an Automotive data import, ability to see the error file generated in the ACES Conversion, etc. these can be added in the configurations. Thus, the headers / columns that could be displayed within the Importer section of the Controller screen of any importer are configurable. This topic describes the detailed procedure on adding or removing the headers displayed in the Importer section of the Controller screen for the selected importer.

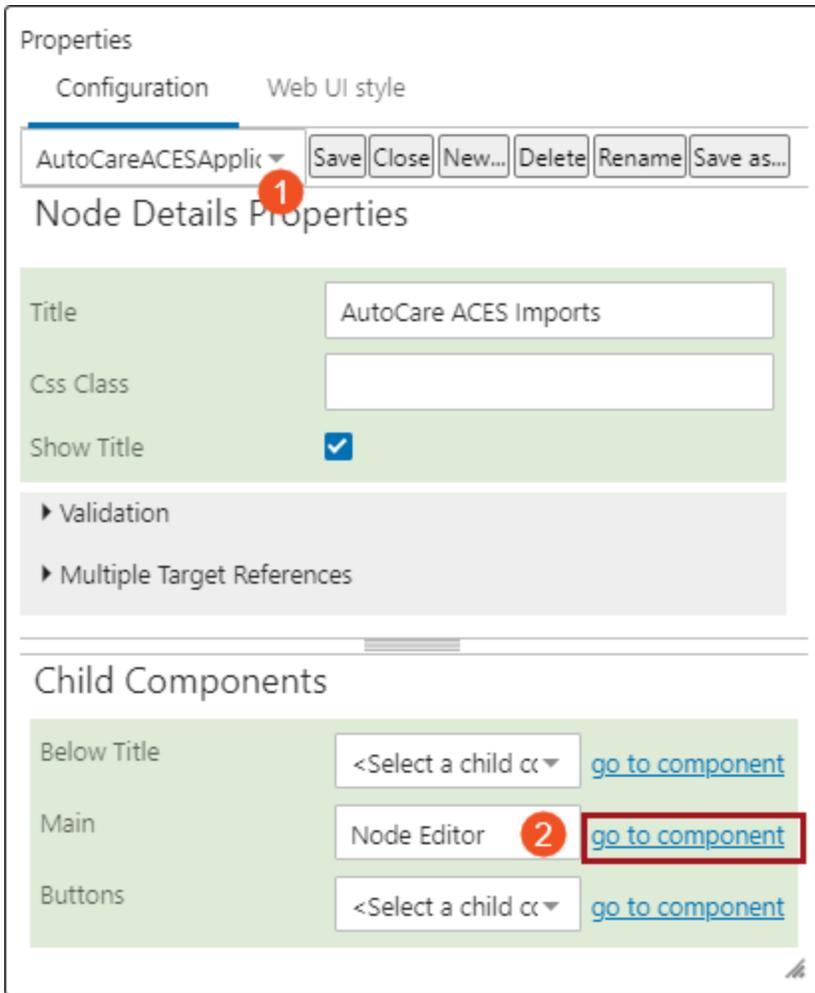
Each of the controller screens uses a Refreshable Node List within which the regular Node List is configured. Configuration of the Node List component is covered in detail in the **Node List Component** documentation in the **Web User Interfaces / Web UI Getting Started** documentation of the **STEP Online Help**. Within the Node List Headers parameter, users can choose any number of columns / headers to apply to the table view. Many of the most commonly used header components are covered in the STEP Online Help.

For the ease of explanation, we have considered AutoCare ACES Importer Controller screen as an example to configure throughout this topic.

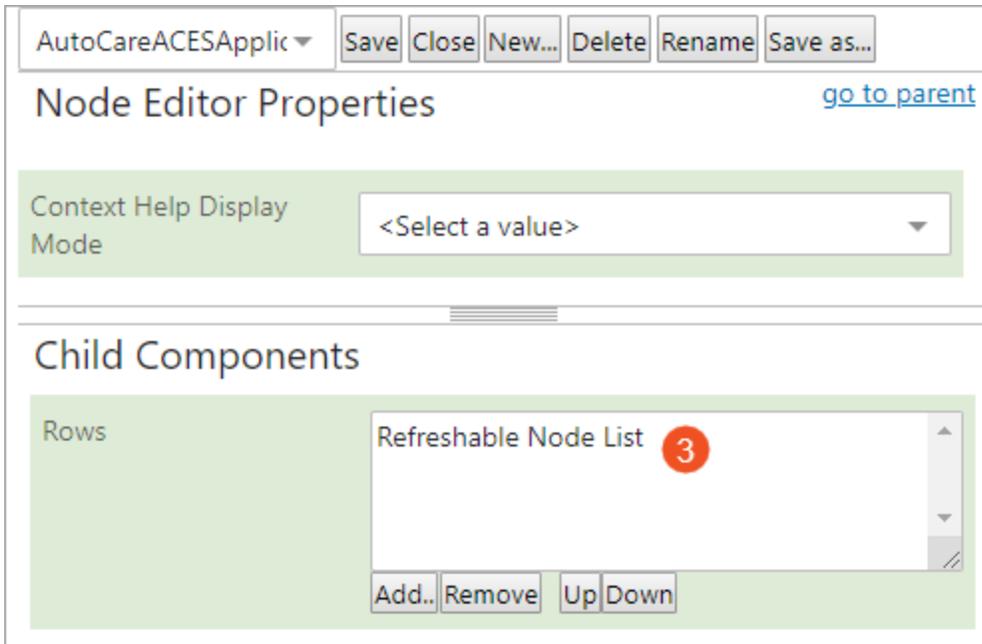
Adding headers in Controller screen

Below are the steps to add headers in Controller screen.

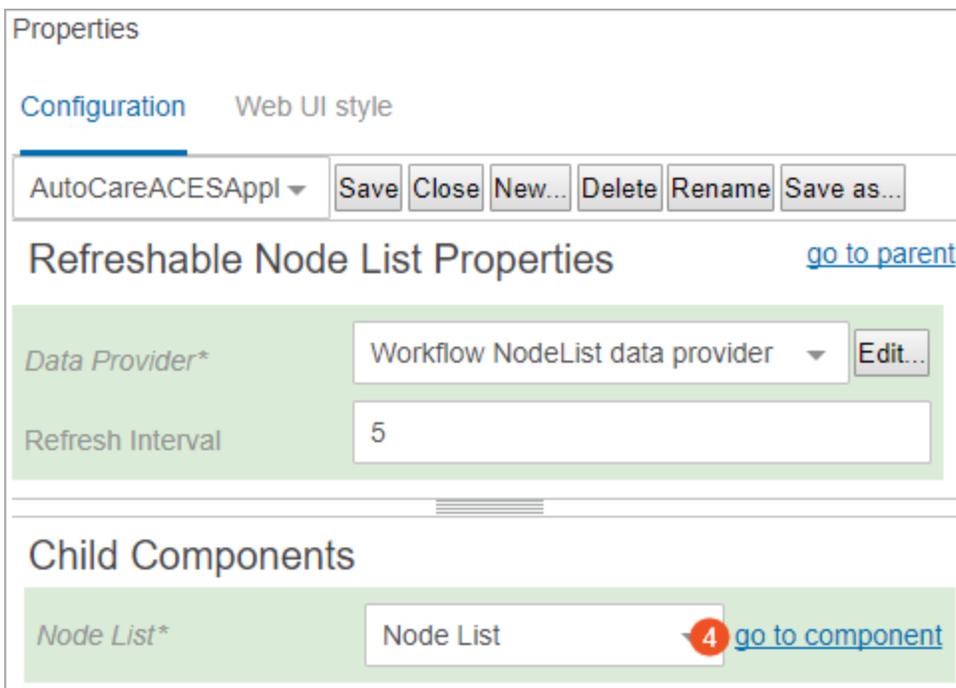
1. Open the Web UI Designer and using the screen dropdown in the upper left of the designer pane, select the controller screen you would like to edit.
2. Click the **go to component** link for the Node Editor component.



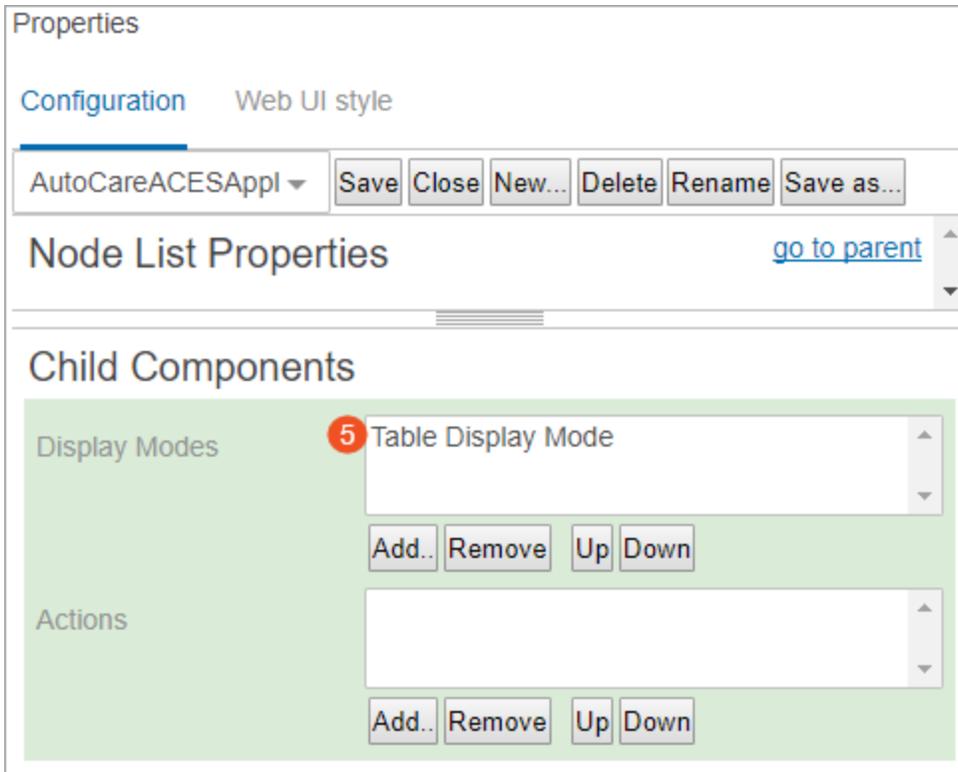
3. Double-click the **Refreshable Node List** component to open the Refreshable Node List Properties.



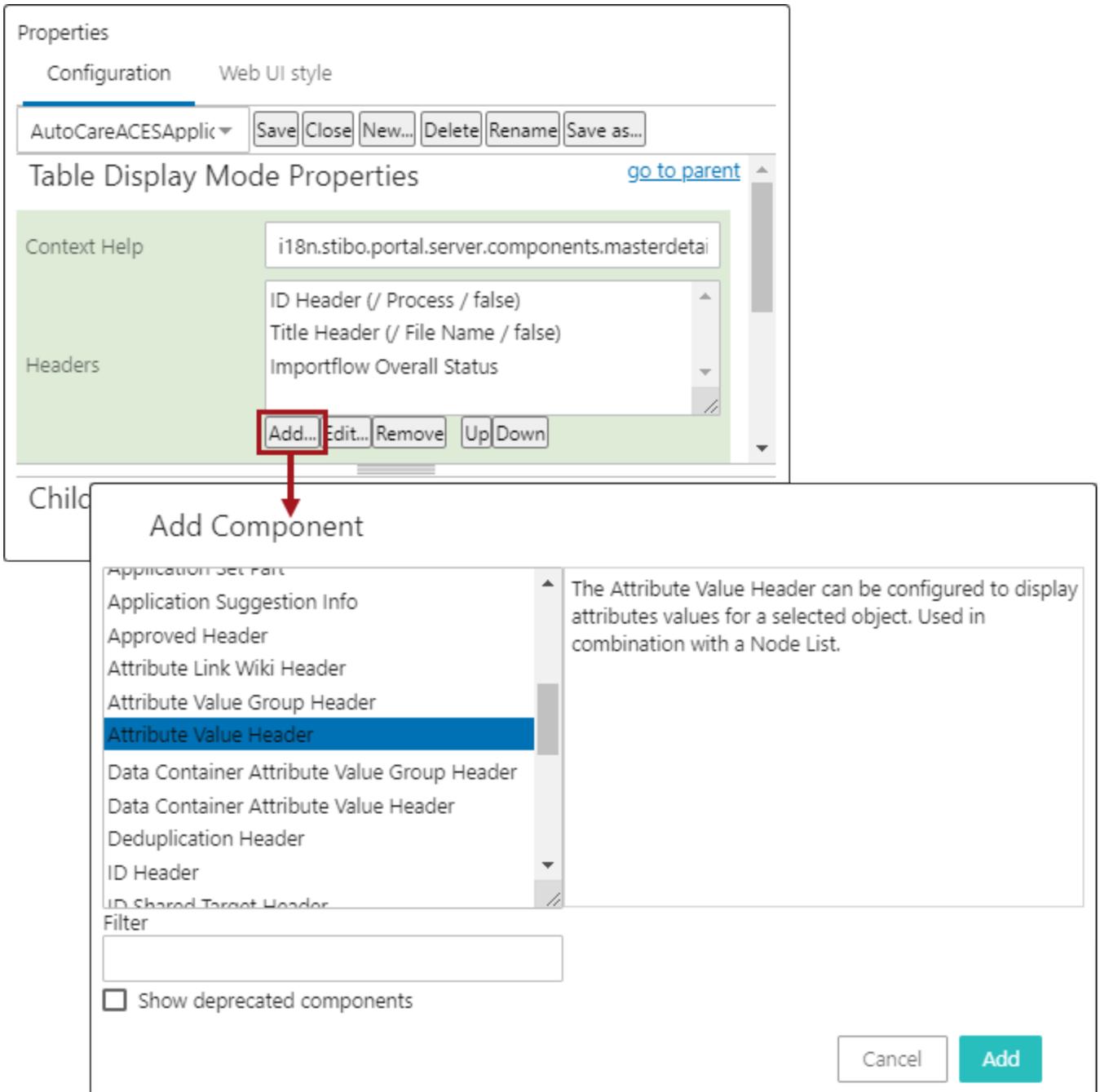
- Click **go to component** for the Node List to open the Node List Properties.



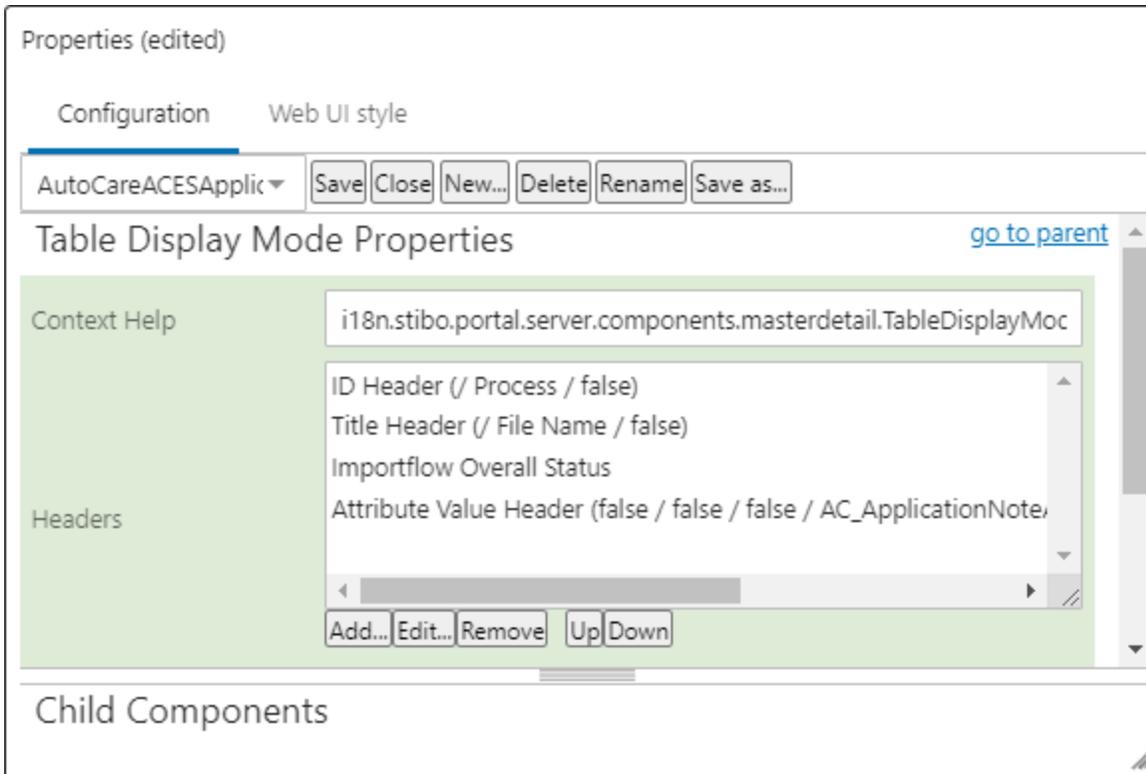
- Double-click the **Table Display Mode** component to open the Table Display Mode Properties.



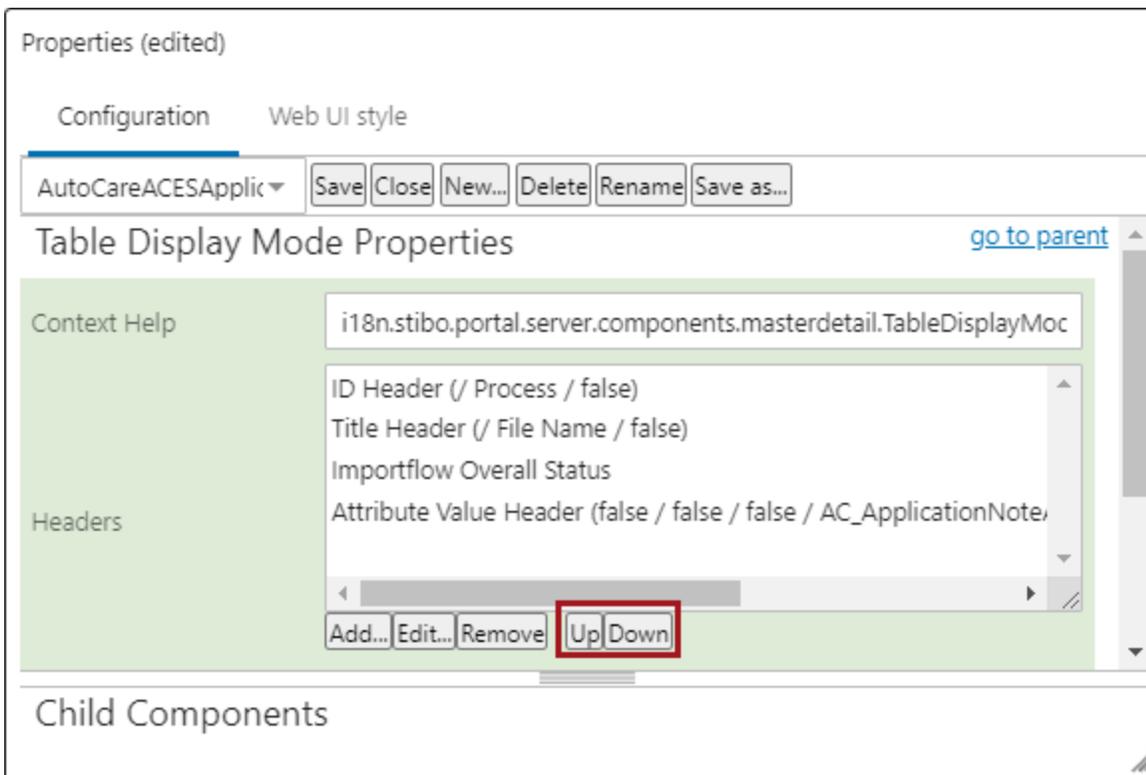
6. On the Table Display Mode Properties dialog, find the Headers parameter. Click **Add** to display the Add Component dialog.



7. With the required table header component selected, click **Add**. Configure the additional parameters of the table header component if required. The selected component will be populated in the Headers field as shown below. In the example below, the Attribute Value Header is added to display.



8. User can add more table headers by repeating the steps mentioned above and also can rearrange the order of the headers by using the Up / Down button.



9. Click Save and then Close to exit the designer with all of the configurations saved. The newly added header shall be displayed within the Controller screen of the importer. In the example below, the Attribute Value Header component is added to display the ACES Import Mode attribute.

stepsys • English US  

AutoCare ACES Imports

Process	File Name	Overall Status	ACES Import Mode
Controller-107241	Centric Fleet Performance and Tactical Police Duty Brake Pads_ACES.xml	Import completed	
Controller-107259	thyssenkrupp Bilstein of America_ACES_Receiver_2019-06-05_FULL.xml	Import completed	
Controller-107324	Centric Premium and GCX Brake Discs_ACES.xml	Completed with errors: 238	
Controller-107330	Centric Disc Brake Hardware Kits_2018-11-29_130151_FULL_ACES.XML	Completed with errors: 1	

Import Details

Process	Started Time	Duration	Started By	Status	Background Process Link
Validation	2019-07-15 11:59:50	5 secs	STEPSYS	Validation completed	
Conversion	2019-07-15 11:59:55	7 secs	STEPSYS	Conversion completed	
Delta Calculation	2019-07-15 12:00:02	7 secs	STEPSYS	Delta calculation completed	
Import	2019-07-15 13:04:45	10 mins 21 secs	STEPSYS	Import completed	

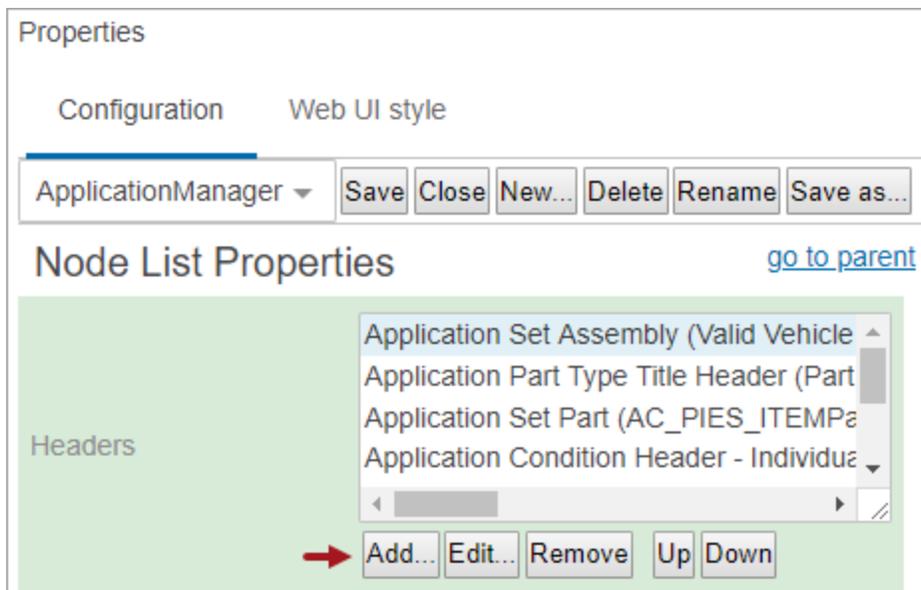
Frequently Used Headers in Controller screen

- While most headers are self-explanatory via the header name and/or description text provided within the designer. However, there are few headers that are often used in the controller screens for which additional explanation can be helpful:
 - Importflow Attachment:** This table header component, when configured in a Controller screen, helps to retrieve a report and/or other file type generated during an import. Importflow column will provide a downloadable file link for the applicable controller. Users can use the link to download and view the file. Additional information on configuring the Importflow Attachment header and the supporting data model behind them is covered in the **Importflow Attachment Component in Controller Screens** topic of the **Automotive Reference Guide** found within the **Solution Enablement** section of **STEP Online Help**.
 - Attribute Value Header:** This table header component dynamically displays the attribute values derived from the import controller. In the Controller screen, this component can be used to view the count of good and bad application records imported in the ACES import, information on the total count of new, updated, and deleted objects for an Automotive data import, etc. Information on the usage of Attribute Value Header within the Controller screen is covered in the **Specify Import Information Retrieving Attributes** topic of the **Automotive Quick Start Guide** found within the **Solution Enablement** section of **STEP Online Help**.

Adding Additional Headers to Application Screens

The Application Editor screens created for the AutoCare, TecDoc, and the NAPA standards are usable as-is, once they have been made accessible following the Easy Setup instructions. However, they are intended as 'starter' screens only, meaning that it is expected that users will want to see additional data on them, which can easily be added via configuration.

Each of the Application Editor screens uses a Node List. Configuration of the Node List component is covered in detail in the **Node List Component** documentation in the **Web User Interfaces / Web UI Getting Started** documentation of the **STEP Online Help**. Within the Node List Headers parameter, users can choose any number of columns / headers to apply to the table view. Many of the most commonly used header components are covered in the STEP Online Help. Access the Node List Properties in the designer, and click the **Add** button to add additional headers to the screen.



Below are tips for adding headers within the Automotive model:

- Be aware of the active selection of the screen when choosing headers to add. For example, on the Parts screen, a part object is the active selection so to display data from the part itself, standard Web UI components such as Attribute Value Header, Name Header, and Reference Header can be used. However, to display data from the application record or vehicle when on the Parts screen, the Application headers must be used (e.g., Application Assembly value to display data from the vehicle used in the application record, or Application Condition Header - Group to show criteria / option data from the application record).
- Most Application headers are self-explanatory via the header name and/or description text provided within the designer. However, there are two headers for which additional explanation can be helpful: 'Application Condition Header - Individual' and 'Application Condition Header - Group.'
 - Both are used to display data in conditions / criteria / options on an application record (e.g., Engine Base or Drive Type in the AutoCare model, Axle or Clutch Type in TecDoc, etc.).

- The headers are differentiated by whether they display multiple conditions in a single column in the results table, or display conditions individually in their own columns.
- **Application Condition Header - Individual:** displays all other populated conditions in a single header, where double-clicking in the cell opens a value editor where users can search for and populate data in the 'less important' conditions.
- **Application Condition Header - Group:** dynamically displays all conditions identified as 'important' for the part type(s) of the application record(s) being displayed.

Note: A condition is identified as 'important' by setting the Display Condition attribute to 'true' on the reference between the attribute and the part type.

Additional information on configuring these headers and the supporting data model behind them is covered in the **Controlling Display of Conditions in Application Manager** topic of the **Automotive Reference Guide** found within the **Solution Enablement** section of **STEP Online Help**.

Adjusting Homepage Import Status Selectors

Easy Setup creates a number of workflows to manage imports, along with a corresponding Web UI homepage widget, in this case, a status selector, for each import. Each workflow contains a number of states, though not all are reflected in the corresponding status selector in Web UI. Specifically, the initial Validation and Conversion states are omitted as these states do not produce any interesting results for the end user if completed successfully. If errors are encountered, they can be viewed via the Error state. Whether successful or in error, transition out of these states is automatic so no user intervention is needed.

Furthermore, as described in the subsequent section, some implementations will likely choose to add additional states to the workflow which could produce an interesting result for the end user, such as a Reporting state.

Whether it is needed to display additional existing states or to display new ones, it may be necessary to adjust the configuration of the status selectors to display additional states. If so, detailed documentation for configuring status selectors is available in the **Status Selector Homepage Widget** topic within the **Workflows in Web UI** section of the **Web User Interfaces / Web UI Getting Started** documentation of STEP Online Help.

Displaying the Import Details Report Column

A series of 'workflow' screens are created by Easy Setup, one for each import format. These are named [Standard][Format]WorkflowScreen (e.g., TecDocReferenceWorkflowScreen), and are used to display the details of any file import.

By default, each workflow screen contains a 'Report' column, as it is expected that many customers will add a workflow state to evaluate data in an incoming file and report on it. This reporting functionality can be developed using the Extension API. Once developed, the Report column will provide a downloadable report link for the applicable state. Users can use the link to view and analyze the report prior to making the decision to actually import the data within a file.

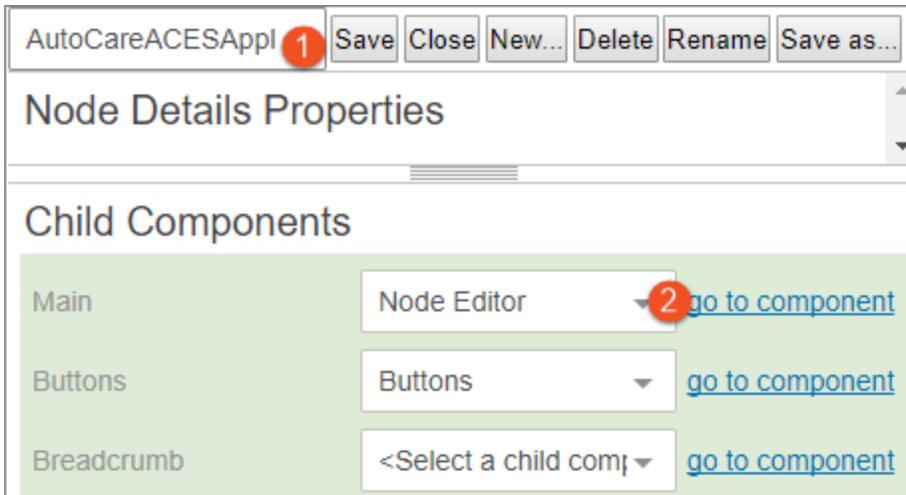
Import Details							
Process	Started Time	Duration	Started By	Status	Background Proce	Report	
Validation	2017-07-25 13:29:40	4 secs	STEPSYS	Validation completed	succeeded		
Conversion	2017-07-25 13:29:44	5 secs	STEPSYS	Conversion completed	succeeded		
Delta Calculation	2017-07-25 13:29:49	5 secs	STEPSYS	Delta calculation completed	succeeded		
Import	2017-07-25 13:30:25	5 secs	STEPSYS	Import completed	succeeded		

If reports will be created for the import, no action is needed. However, if there are not any plans to develop reports, it is suggested that the column be removed so as not to confuse end users who may then question why a report is not available.

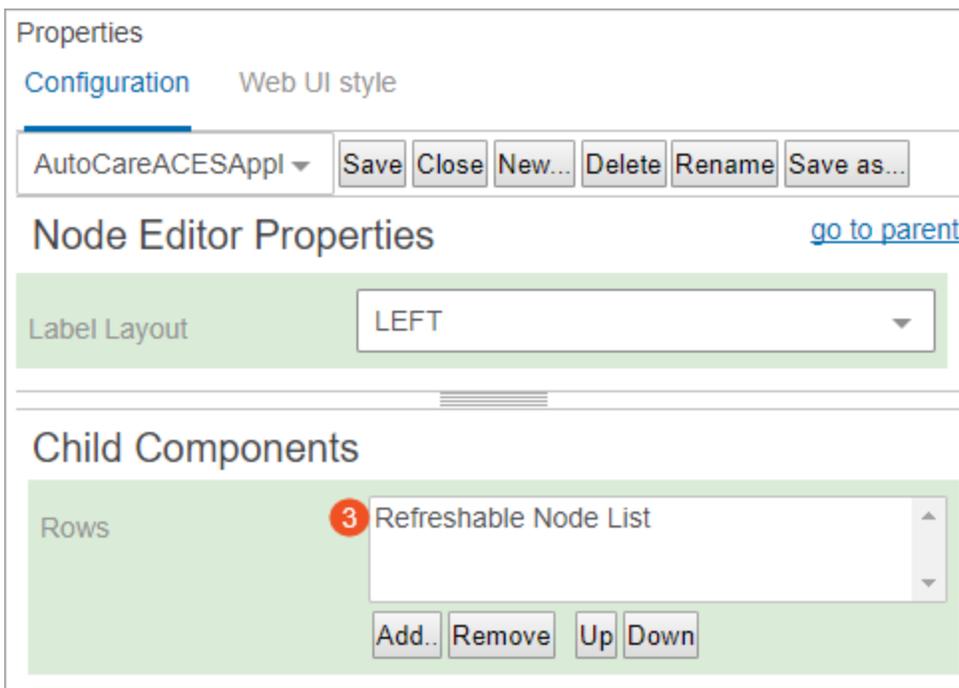
Removing the Report Column

Below are the steps to remove the Report column.

1. Open the Web UI Designer and using the screen dropdown in the upper left of the designer pane, select the workflow screen you would like to edit.
2. Click the **go to component** link for the Node Editor component.



3. Double-click the **Refreshable Node List** component to open the Refreshable Node List Properties.



4. Click **go to component** for the Node List to open the Node List Properties.

Properties

Configuration Web UI style

AutoCareACESAppl ▾ Save Close New... Delete Rename Save as...

Refreshable Node List Properties [go to parent](#)

Data Provider* Workflow NodeList data provider ▾ Edit...

Refresh Interval 5

Child Components

Node List* Node List **4** [go to component](#)

5. Double-click the **Table Display Mode** component to open the Table Display Mode Properties.

Properties

Configuration Web UI style

AutoCareACESAppl ▾ Save Close New... Delete Rename Save as...

Node List Properties [go to parent](#)

Child Components

Display Modes **5** Table Display Mode

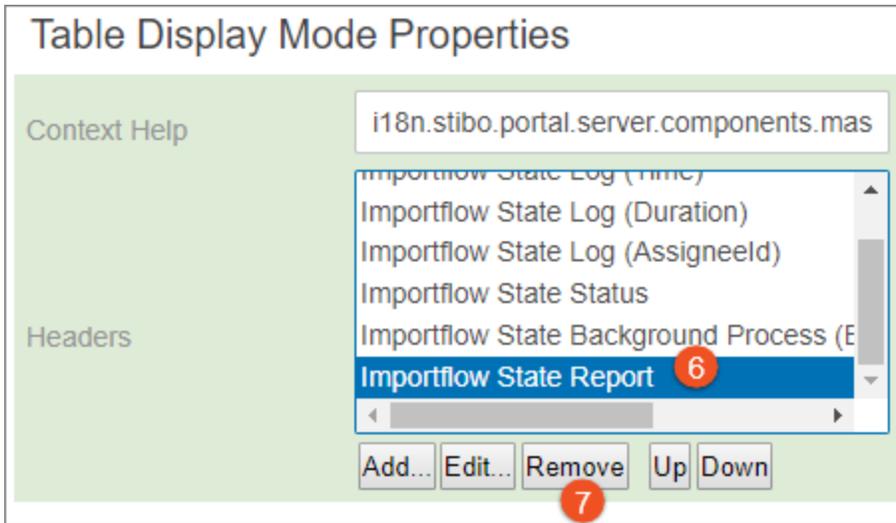
Add.. Remove Up Down

Actions

Add.. Remove Up Down

6. On the Table Display Mode Properties dialog, find the Headers parameter. Scroll down within the Headers parameter to locate and select the **Importflow State Report**.

7. Click the **Remove** button.



Accessing Application Editor and Manager Screens

Within each standard, Easy Setup creates multiple screens that can be used for viewing and editing application records. Each of the standards and their out of the box screens are described below. Though these screens can be customized as needed, this topic describes each of the screens created across the different standards (AutoCare, NAPA and TecDoc) and steps for adding the Application Manager screen to the Links Widget.

AutoCare

Each of the automatically configured screens for the AutoCare solution are described below:

- **AutoCare Application Editor Screen (Parts):** A screen for viewing / editing application records when a part is selected.
- **AutoCare Application Editor Screen (Vehicles):** A screen for viewing / editing application records when a vehicle is selected
- **AutoCare Application Manager Screen:** A screen for viewing / editing application records where users input vehicle, part type, and/or part number selections to search for application records, and optionally search for missing coverage on the input selections

When Easy Setup actions are completed, the Automotive - Application Model is populated with the following value IDs related to these screens:

- Application Records = AC_ACESApplication
- Vehicles / Assemblies = AC_BaseVehicle
- Part Types = AC_PartTerminology

In the example below, the Application parameter is displayed within the Automotive - Application Model component model configured with the ACES Application (AC_ACESApplication) value. When Easy Setup actions are completed, the component model is configured automatically.

Name	Value	Description
Application	ACES Application	The object that represent an application record, should be child of the Part object type
	DS_Linkage	
	NAPA Application	

Note: A tooltip is visible over the 'ACES Application' value, displaying 'ACES Application ID = AC_ACESApplication'.

Important: For the Application Editor and/or Manager screens to properly function, the desired object types must be configured within both the component model and the Web UI screens.

NAPA

Each of the automatically configured screens for the NAPA solution are described below:

- **NAPA Application Editor Screen (Parts):** A screen for viewing / editing application records when a part is selected.
- **NAPA Application Editor Screen (Vehicles):** A screen for viewing / editing application records when a vehicle is selected

- **NAPA Application Manager Screen:** A screen for viewing / editing application records where users input vehicle, part type (MPCC), and/or part number selections to search for application records, and optionally search for missing coverage on the input selections

When Easy Setup actions are completed, the Automotive - Application Model is populated with the following value IDs related to these screens:

- Application Records = NAPA_Application
- Vehicles / Assemblies = NAPA_Year
- Part Types = NAPA_MPCC

In the example below, the Application parameter is displayed within the Automotive - Application Model component model configured with the NAPA Application (NAPA_Application) value. When Easy Setup actions are completed, the component model is configured automatically.

Name	>	>	Value	>	Description
Application			ACES Application		The object that represent an application record, should be child of the Part object type
			DS_Linkage		
			NAPA Application		
			NAPA Application ID = NAPA_Application		

Important: For the Application Editor and/or Manager screens to properly function, the desired object types must be configured within both the component model and the Web UI screens.

TecDoc

Each of the automatically configured screens for the TecDoc solution are described below:

- **TecDoc Application Editor Screen (Articles):** A screen for viewing / editing application records when an article is selected.
- **TecDoc Application Editor Screen (Assemblies):** A screen for viewing / editing application records when an assembly is selected
- **TecDoc Application Manager Screen:** A screen for viewing / editing application records (where users input vehicles or assemblies and/or part types (TD generic article) selections to search for application records, and optionally search for missing coverage on the input selections.

When Easy Setup actions are completed the Automotive - Application Model is populated with the following value IDs related to these screens:

- Application Records = TD_DS_Linkage
- Vehicles / Assemblies = TD_VehicleType(PC), TD_VehicleType(CV), TD_EngineCode
- Part Types = TD_StandardAssemblyGA, TD_UniversalAssemblyGA

In the example below, the Application parameter is displayed within the Automotive - Application Model component model configured with the TecDoc Application (TD_DS_Linkage) value. When Easy Setup actions are completed, the component model is configured automatically.

Name	Value	Description
Application	DS_Linkage	The object that represent an application record, should be child of the Part object type

Important: For the Application Editor and/or Manager screens to properly function, the desired object types must be configured within both the component model and the Web UI screens.

Each of the above screens are created by Easy Setup and mapped to the following object types:

- AC_Basevehicle
- AC_PIESITEM
- NAPA_Year
- NAPA_Product
- TD_VehicleType(PC)
- TD_DS_SupplierArticle

However, it is up to each implementation to make them available to all the necessary object types.

The Application Editor screens require an object selection, so these screens need to be mapped for a particular object type or added on a tab within another screen that is mapped to the appropriate object. To map the Parts or Vehicles screen directly (meaning that when you are on a part or vehicle, you will only see that screen) see the **Mappings** topic within the **Main Properties Overview** section of **STEP Online Help**.

To add the Parts or Vehicles screen to an existing screen, use the Sub Screen Tab Page configuration, described in the **Tab Pages** topic in the **Web User Interfaces / Web UI Getting Started** documentation of **STEP Online Help**.

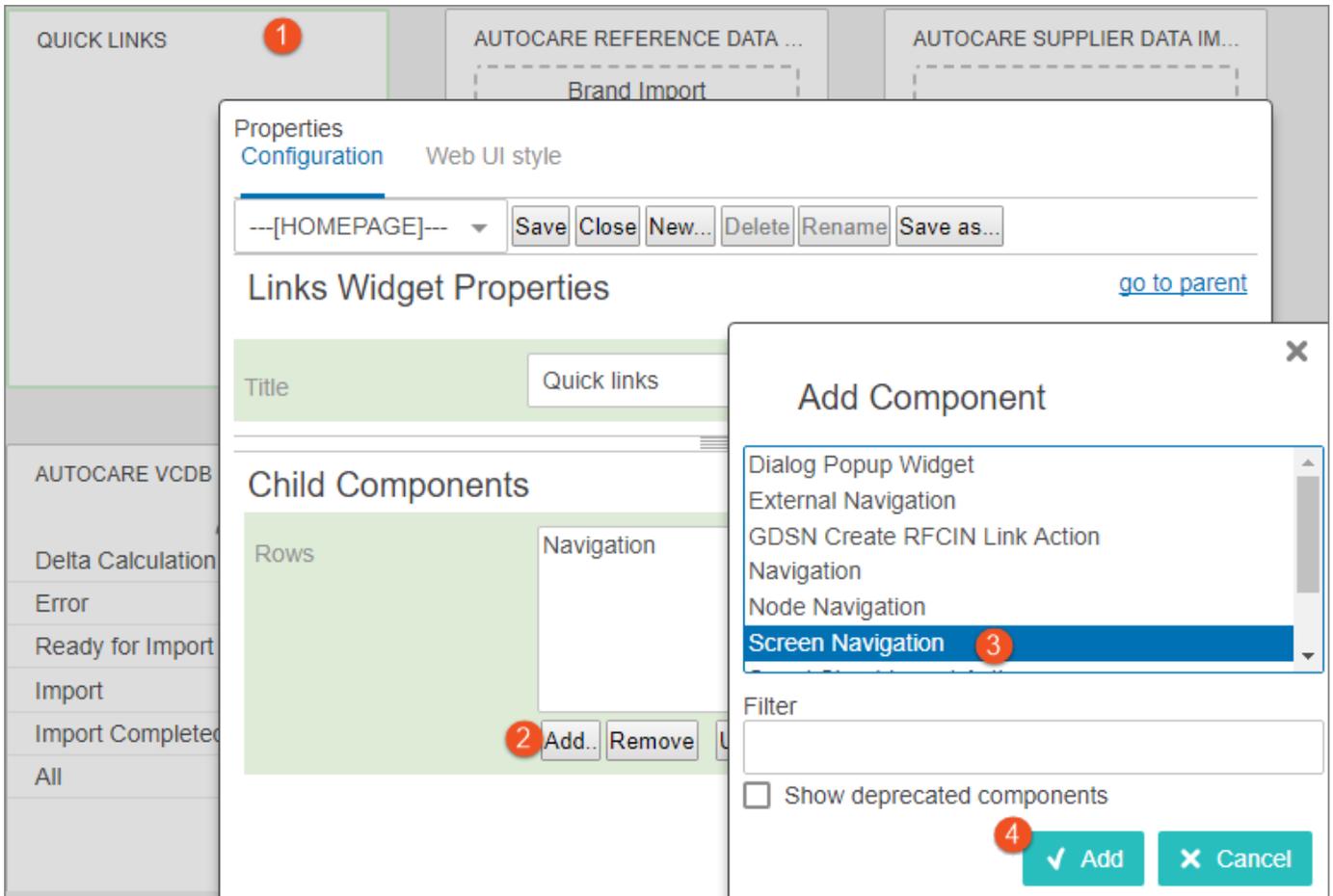
The Application Manager screen does not require an object selection, so this needs to be made accessible to users, which can easily be done by adding a link to the screen on the homepage.

To add access to the Application Manager screen from the homepage, use the Links widget, which is configured as part of Easy Setup. For more information about the Links Widget, see the **Homepage Widgets** topic in the **Web User Interfaces / Web UI Getting Started** documentation of **STEP Online Help**.

Adding an Application Manager Screen to a Links Widget

Note: If Easy Setup actions for the AutoCare, NAPA, or TecDoc solution have been completed as described in the Automotive Quick Start Guide, then the links to the standard specific Application Manager screens will automatically be added to the Quick Links Homepage Widget as shown in the examples below. Otherwise, the following steps can be used to complete configuration.

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



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

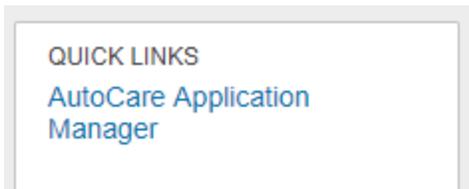
In the screenshot below, the Label and Screen parameters are populated with the value 'AutoCare Application Manager.'

Screen Navigation Properties

Context Help	<input type="text"/>
Css Class	<input type="text"/>
Label	<input type="text" value="AutoCare Application Manager"/>
Object Type ID	<input type="text" value=""/> ... Clear
Screen*	<input type="text" value="AutoCare Application Manager"/> Add
Workflow	<input type="text" value="<Select a STEP Workflow>"/>

✓ Add
✗ Cancel

6. The result will be that the Links widget in the homepage will now include a link directly to the Application Manager screen.



Additional information on the Links Homepage widget, and its configurations, is available in the **Homepage Widgets** section within the **Web User Interfaces / Web UI Getting Started** documentation of **STEP Online Help**.

Allowing Applications Outside Part Type

When using an Application Manager, if a part number is found using the part type search, but the part number is being applied to a part type that differs from the one used to search, an error dialog will display informing the user that the part cannot be linked because the part type is different. In other words, when using the application manager to apply parts, a part's part type must match the application's part type.

However, it is possible to override this, allowing users to select a part number with a part type that does not match the part type searched for application. In other words, the Application Manager will ignore the searched part type when assigning the part number to the application. This is helpful when working with a part that can only have a single part type, but can be applied for multiple part types.

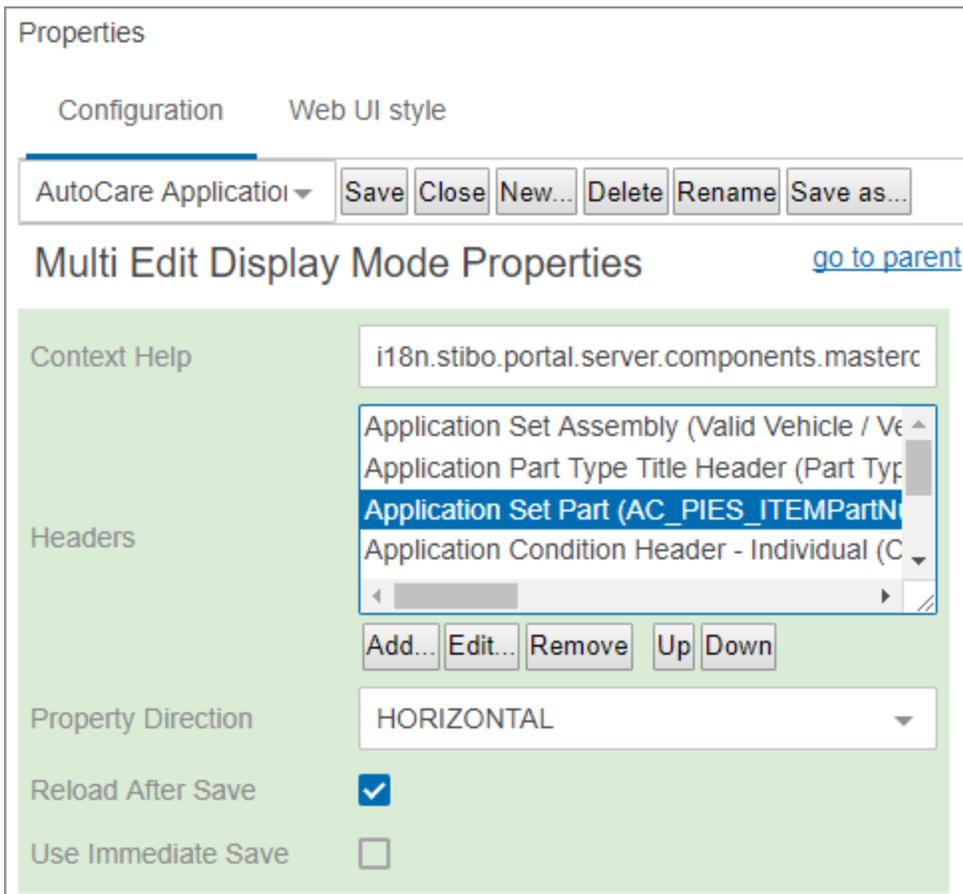
Prerequisites

The parameter will need to be added by running **Automotive - [Standard] Model > 4. Configure [Standard] WebUI Easy Setup**.

Enabling the Allow Applications Outside Part Type

Below are the steps to enable the Allow Applications Outside Part Type parameter.

1. Go to the Application Manager's Multi Edit Display mode Properties > Headers.
2. Select **Application Set Part**.



3. Click the **Edit** button, and the Application Set Part Properties will display.
4. Click the checkbox for the **Allow Applications Outside Part Type**.

The screenshot shows a dialog box titled "Edit component" with a close button (X) in the top right corner. Below the title is the section "Application Set Part Properties". The properties are listed on the left, and their values are in input fields on the right:

- Attribute:** AC_PIES_ITEMPartNumber (with a "Clear" button)
- Dimensions:** Table Header Dimensions (with an "Edit..." button)
- Display ID*:** ATTRIBUTE_VALUE
- Label:** Part Number
- Node Picker Configuration:** Node Picker Dialog (with an "Edit..." button)
- Table Sorting:** <Select a value>
- Subcomponent:** AC_Model
- Allow Applications Outside Part Type:** An unchecked checkbox with a red arrow pointing to it.

At the bottom right of the dialog are two buttons: "Save" (with a checkmark icon) and "Cancel" (with an X icon).

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

Displaying More States in Controller Screen

The Easy Setup action is set to display a default of four workflow states within the Import Details section in the Controller Screen. If the user insists to view the status of the Controller, for example, time elapsed in passing the Controller through different states, status of the Controller in the particular state, etc., in all the workflow states it is passing through, the user can add or remove the states that need to be displayed. Thus, the number of workflow states that could be displayed within the Import Details Section of the Controller screen of any importer are configurable. This topic describes the detailed procedure on adding or removing the workflow states displayed in the Import Details section within the Controller screen for the selected importer.

For the ease of explanation, we have considered AutoCare ACES Importer Controller screen as an example to configure throughout this topic.

AutoCare ACES Imports

Process	•	File Name	•	Overall Status	•	
		Controller-100575		Acme_ACESFileWithQualifiersNoAmpersands.xml		Import completed
		Controller-100703		ODM_ACES_00729571-LoadPart110.xml		Import completed
		Controller-100940		ADMU_Bond_2018-06-13_FULL.xml		Import completed
		Controller-101012		TOYOTA_XXXXXXXX_2018-06-18_FULL.xml		Import completed
		Controller-101024		TOYOTA_XXXXXXXX_2018-06-18_FULL.xml		Import completed
		Controller-103081		FederalM_ACES_AdvantageChassisUS2018-07-25_v4.XML		Completed with errors: 3
		Controller-103088		FederalM_ACES_AdvantageChassisUS2018-07-25_v4.XML		Completed with errors: 3
		Controller-103848		ACDelco_ACES_Spark Plugs_2018-10-11_12.43.27.xml		Completed with errors: 4

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Import Details

Process	•	Started Time	•	Duration	•	Started By	•	Status	•	Background Process Link	•
Validation		2018-05-22 08:03:36		5 secs		STEPSYS		Validation completed			
Conversion		2018-05-22 08:03:41		5 secs		STEPSYS		Conversion completed			
Delta Calculator		2018-05-22 08:03:46		5 secs		STEPSYS		Delta calculation completed			
Import		2018-05-22 08:12:15		3 secs		STEPSYS		Import completed			

⏪ < 1-4 of

➡ Start import
➡ Reject
➡ Discard

Adding States within Import Details section in Controller screen

Below are the steps to add states within Import Details section in Controller screen.

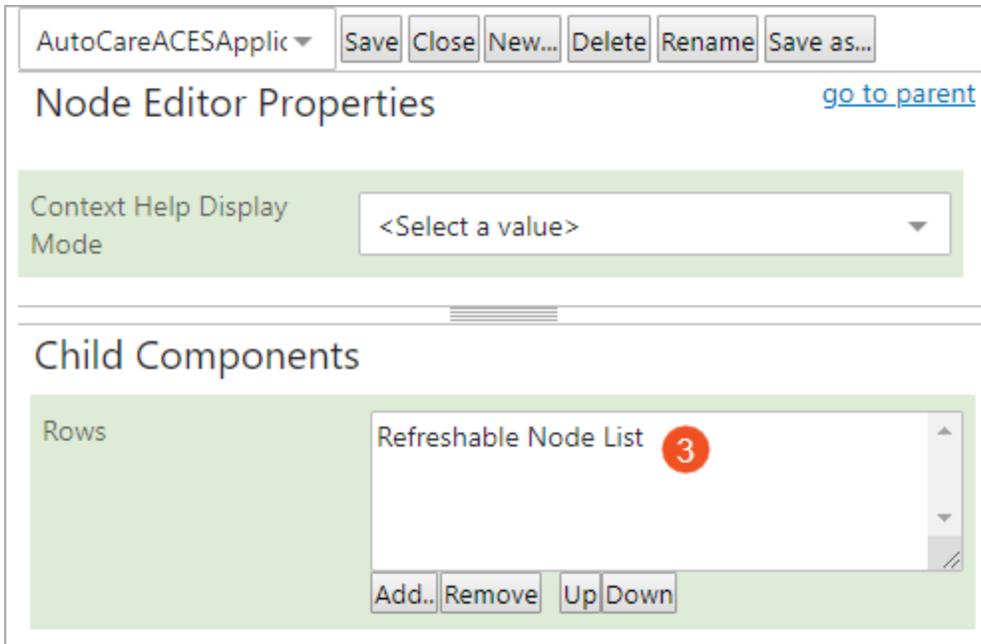
1. Open the Web UI Designer and using the screen dropdown in the upper left of the designer pane, select the workflow screen you would like to edit.

Note: In the Automotive solution, by default a particular workflow screen is set to display as the screen a user will get to see after clicking on Controller in the table. This is one of the Node List configurable feature. Hence, the adding / removing of the workflow states is to be done in the particular workflow screen and not in the controller screen.

2. Click the **go to component** link for the Node Editor component.

The screenshot shows a web interface for editing a node. At the top, there is a breadcrumb 'AutoCareACESApplic' with a red circle '1' next to it, followed by buttons for 'Save', 'Close', 'New...', 'Delete', 'Rename', and 'Save as...'. Below this is the 'Node Details Properties' section, which includes a 'Title' field with the value 'Import Details', an empty 'Css Class' field, and a checked 'Show Title' checkbox. There are also expandable sections for 'Validation' and 'Multiple Target References'. The bottom section is 'Child Components', which has three rows: 'Below Title' with a dropdown menu and a 'go to component' link; 'Main' with a dropdown menu containing 'Node Editor' (highlighted with a red circle '2') and a 'go to component' link; and 'Buttons' with a dropdown menu and a 'go to component' link.

3. Double-click the **Refreshable Node List** component to open the Refreshable Node List Properties.



4. In the dropdown next to Data Provider field, select 'Workflow State NodeList data provider' option and then click Edit. The 'Workflow State NodeList data provider properties' window displays.

AutoCareACESApplic ▾ Save Close New... Delete Rename Save as...

Refreshable Node List Properties [go to parent](#)

Component Description Component to display nodeList with refreshing it's content

* Data Provider Workflow State NodeList data provid ▾ **4** Edit...

Refresh Interval 5

Child Components

* Node List Node List ▾ [go to component](#)

Edit component

Workflow State NodeList data provider Properties

Component Description Workflow state data provider. It cannot be used as a stand-alone component.

* States

AutoCareACESAppImport | Conversion ▾

Add Remove Up Down

* Workflow AutoCareACESAppImport ▾

Cancel Save

Note: All the existing default workflow states that were available for display gets erased when the user selects different data provider in the Data Provider parameter. The user needs to add all the required workflow states as described below to display the existing default workflow states too.

5. In the dropdown next to the Workflow parameter, select the workflow which the user needs to edit. In this example, AutoCare ACES importer workflow 'AutoCareACESAppImport' is selected.

Edit component

Workflow State NodeList data provider Properties

Component Description Workflow state data provider. It cannot be used as a stand-alone component.

* States

AutoCareACESAppImport | Conversion

Add Remove Up Down

* Workflow

AutoCareACESAppImport **5**

Cancel Save

6. With the required workflow selected, select the workflow state in the dropdown next to States parameter and then click Add.

Edit component

Workflow State NodeList data provider Properties

Component Description Workflow state data provider. It cannot be used as a stand-alone component.

* States

AutoCareACESAppImport | Import 6

Add Remove Up Down

* Workflow

AutoCareACESAppImport

Cancel Save

The selected workflow state will be populated in the States field as shown below. In the example below, the Import state is added to display.

Workflow State NodeList data provider Properties

Component Description Workflow state data provider. It cannot be used as a stand-alone component.

* States

Import ←

AutoCareACESAppImport | Import

Add Remove Up Down

* Workflow

AutoCareACESAppImport

Cancel Save

- User can add more workflow states by repeating the steps mentioned above and also can rearrange the order of the states by using the Up / Down button.

Workflow State NodeList data provider Properties

Component Description Workflow state data provider. It cannot be used as a stand-alone component.

* States

Validation
 Conversion
 DeltaCalculate
 Import
 ImportCompleted

AutoCareACESAppImport | DeltaCalculate

Add
Remove
Up
Down

* Workflow

AutoCareACESAppImport

Cancel Save

- Click Save to close the 'Workflow State NodeList data provider Properties' window, and then save and close the designer. The newly added workflow states shall be displayed within the Import Details section of the selected Controller screen.

AutoCare ACES Imports			
Process	File Name		Overall Status
Controller-100575	Acme_ACESFileWithQualifiersNoAmpersands.xml		Import completed
Controller-100703	ODM_ACES_00729571-LoadPart110.xml		Import completed
Controller-100940	ADMU_Bond_2018-06-13_FULL.xml		Import completed
Controller-101012	TOYOTA_xxxxxxxxx_2018-06-18_FULL.xml		Import completed
Controller-101024	TOYOTA_xxxxxxxxx_2018-06-18_FULL.xml		Import completed
Controller-103081	FederalIM_ACES_AdvantageChassisUS2018-07-25_v4.XML		Completed with errors: 3
Controller-103088	FederalIM_ACES_AdvantageChassisUS2018-07-25_v4.XML		Completed with errors: 3

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Import Details

Process	Started Time	Duration	Started By	Status	Background Proce
Validation	2018-05-22 08:03:36	5 secs	STEPSYS	Validation completed	
Conversion	2018-05-22 08:03:41	5 secs	STEPSYS	Conversion completed	
Delta Calculation	2018-05-22 08:03:46	5 secs	STEPSYS	Delta calculation completed	
Import	2018-05-22 08:12:15	3 secs	STEPSYS	Import completed	
Import Completed	2018-05-22 08:12:18	17 days 3 hrs 8 mins 3 secs	STEPSYS		

⏪ < 1-5 of 5 > ⏩

➡ Start import ➡ Reject ➡ Discard file

Importflow Attachment Component in Controller Screen

When configured, the Importflow Attachment component can be used to retrieve and display a report and/or other file type generated during an import within a Controller screen. The addition of this column will provide a downloadable file link for the applicable controller. Users can use the link to download and view the file.

Prerequisites

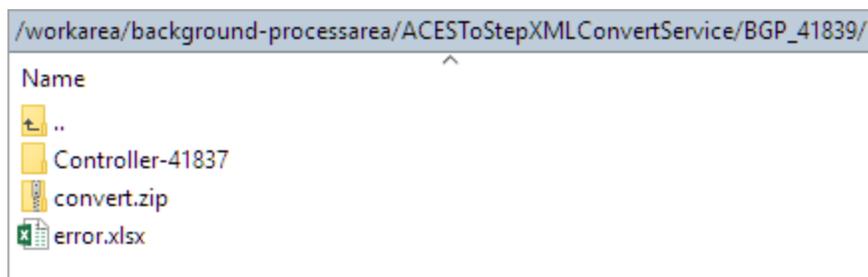
It is expected that anyone configuring the Importflow Attachment component is familiar with the Web UI Designer as basic concepts for working with the designer are not covered in this section. In addition, the user must have

appropriate privileges to access the designer. Additional information can be found in the **Designer Access** section of the **Web User Interfaces / Web UI Getting Started** documentation.

For information about accessing and configuring the Controller screen, see the **Adding Additional Headers in Controller Screen** topic within this guide.

Configuration

The [ACESToStepXMLConvertService] conversion service generates an error report if the ACES imported file encounters validation errors. As the conversion service runs a background process (BGP), a corresponding BGP folder is created on the application server in the /workarea/background-processarea/ACESToStepXMLConvertService directory. Along with the output file of the conversion process, the BGP folder also contains an additional error.xlsx file if the ACES imported file encounters validation errors. In the screenshot below, **error.xlsx** is the error report file that is placed in the BGP_41839 folder.



The 'Error file attachment ID' parameter in the Conversion state of the AutoCare ACES import workflow allows users to define a value to identify the error file. The value that is entered in this parameter specifies the filename of the error report in the conversion process. Meaning, that the error report Excel file will contain the name that is specified in the 'Error file attachment ID' parameter.

Edit Operation

Run background process action

QueueID: queue_Conversion

Background Process Service: [ACESToStepXMLConvertService]

Service parameters

ACES Default FULL Import handling: BRAND

ACES Default SUPPLIER Import handling: NO

ACES Default UPDATE Import handling: STANDARD

AutoCare file attachment ID: original

Create PIES items:

→ Error file attachment ID: error

Omit application names:

STEP XML attachment ID: convert

Regular Expression for parsing Supplier from file name: (.*)_*

Treat notes as errors:

Validate application:

Save Cancel

This error file generated can be accessed in the AutoCare ACES Import Controller screen of the Web UI that is used to display the details of the ACES file import. Users need to add the Importflow Attachment table header component to the AutoCare ACES Import Controller screen to access this file in the Web UI. Below is the detailed procedure to add and configure the Importflow Attachment component:

1. Using the Web UI designer as shown in the image below, access the Headers parameter for the AutoCare ACES Import Controller screen that displays error file link. For information about accessing and adding headers to the Controller screen, see the **Adding Additional Headers in Controller Screen** topic within this guide
2. Click the **Add** button for the Headers parameter, and the Add Component dialog will display.
3. Find and select the **Importflow Attachment** component.
4. Click the **Add** button, and the Importflow Attachment Properties dialog will display (as shown below).

The image illustrates the steps to add a component to a table display mode:

- Click the **Add...** button in the **Table Display Mode Properties** dialog.
- Select **Importflow Attachment** in the **Add Component** dialog.
- Click the **Add** button in the **Add Component** dialog.
- Configure the **Importflow Attachment Properties** in the **Add component - configure required properties** dialog.

5. Populate the required parameters listed below.

- **Attachment ID** : Within this parameter, the user has to enter the same value that is entered in the 'Error file attachment ID' parameter in the Conversion state to identify the error report file. The value key entered in this parameter forms the relationship between the error file created in the application server and the Importflow column displayed in the Web UI.

Important: If this key is not entered exactly in both places, then the error file will not properly function within the Web UI.

- **Attachment Title** :In this parameter, enter the text that will display as the name of the error file link in the Importflow column.
6. Once the required parameters are populated, the Add button will activate. Optionally, populate the parameters listed below.
 - **Attachment Tooltip:** In this parameter, enter the help text that will display when the user hovers the cursor over the error file link.
 - **Dimensions:** By default, the parameter is blank. Optionally, to configure the column width and height, select 'Table Header Dimensions.
 - **Label:** By default, the parameter is blank. But after clicking the **Add** button, the default column header label (Attachment) will be stored. Optionally, enter the desired label to be displayed as the column header within the Controller screen
 - **Table Sorting:** By default, the parameter is blank. Optionally, select from the dropdown values to specify the default sorting order of the column data.
 7. Click the **Save** button to save the newly added component to the Headers parameter.
 8. Optionally, on the Node List Properties Headers parameter, use the **Up** and/or **Down** buttons to configure the order in which the newly added column should display within the results table.
 9. Click the **Save** and **Close** buttons for the designer.

In the screenshot below, **error.xlsx** is the error report file that can be downloaded by clicking on the link.

AutoCare ACES Imports						
Process	File Name	Error	Convert output	Overall Status		
Controller-41564	41_ALL.xml		convert.zip	Completed with errors: 5		
Controller-41570	41_ALL.xml		convert.zip	Import completed		
Controller-41834	error-error.xlsx			Error: Validation failed		
Controller-41837	ACES_41_BurnsStainless with Errors_App_Notes.xml	error.xlsx	convert.zip	Done creating delta file		

Import Details							
Process	Started Time	Duration	Started By	Status	Background Process Link	Report	
Validation	2020-05-14 09:33:41	5 secs	STEPSYS	Validation completed	suceeded		
Conversion	2020-05-14 09:33:46	12 secs	STEPSYS	Conversion completed with errors	completedwitherrors		
Delta Calculation	2020-05-14 09:33:58	3 secs	STEPSYS	Delta calculation completed	suceeded		
Import							

➔ Start import
➔ Reject
➔ Discard file

Specify Import Information Retrieving Attributes

Once a valid Automotive file is uploaded to a hotfolder on the application server (optionally using a File Loading Widget), the file is picked up from the hotfolder by an IIEP, and the IIEP creates an Entity in the system that represents the file. This Entity object is called the 'Controller' and contains basic data about the file and the file's status in the workflow. However, if the user insists to view some additional information of the Controller, they must create some attributes that holds these information and the same needs to be configured to display in the Controller screen. For example, if the user wishes to view the count of good and bad application records imported in the ACES import, information on the total count of new, updated, and deleted objects for an Automotive data import, Submission Type, Brands, and Part Types information from the ACES file, etc. these attributes must be created. Thus, some additional Attribute Value Header components is to be added in the Controller screen. This topic describes the detailed procedure on configuring these headers and the supporting data model behind them.

To easily start and monitor an Automotive Import, recommended practice is to use a Web UI Import Controller screen specific to the Importer. When the Easy Setup actions for the AutoCare, TecDoc, and NAPA standards are completed, the Import Controller screen for each of the importers are automatically created and configured for use.

Configuration Steps to Track the Good and Bad Application Counts

Note: This setup action is only required if the AutoCare standard is being configured and only needs to be carried out within the ACES functionality. If the AutoCare standard is not being configured, this setup action can be skipped.

The ACES import Conversion state can be configured to keep a track of the count for good and bad application records in the imported ACES file. The 'Error count attribute' parameter in the Conversion state of the AutoCare ACES import workflow allows users to define the attribute that will store the error application count, and the 'Good application count attribute' parameter in the Conversion state of the AutoCare ACES import workflow allows users to define the attribute that will store the good application (application records without error) count.

To track the good and bad application counts, the following manual setup needs to be done in workbench:

1. Create an externally maintained, Text Validation Base Type, Description attribute to hold the count for the good applications. Make the attribute Valid for Entity Types = Import Flow Controller Type.

The screenshot displays the 'ACES Good Application Count - Attribute' configuration window. The left sidebar shows the 'System Setup' tree with 'ACES Good Application Count' selected under 'Import Flow Attribute Group'. The main window shows the attribute configuration details:

Description	
Name	Value
ID	ImportAppGoodCount
Name	ACES Good Application Count
Last edited by	2020-06-02 11:41:50 by USERN
Full Text Indexable	No
Externally Maintained	Yes
Completeness Score	
Hierarchical Filtering	None
Calculated	No
Type	Description
Dimension Dependencies	
Mandatory	No
ATTR_Article OK	
ATTR_Delete	
ATTR_Has Value	
ATTR_Linking Targets	
ATTR_Short Description	abc
ATTR_Sort Nr	
ATTR_Sucessor To	abc
Unit Description	abc

Attribute Validation	
Name	Value
Validation Base Type	Text
List Of Values	N/A
Multi Valued	No
Mask	
Minimum Value	N/A
Maximum Value	N/A

2. Create an externally maintained, Text Validation Base Type, Description attribute to hold the count for the error applications. Make the attribute Valid for Entity Types = Import Flow Controller Type.

Description	
Name	Value
ID	ImportAppErrorCount
Name	ACES Error Application Count
Last edited by	2020-06-02 11:41:41 by USERN
Full Text Indexable	No
Externally Maintained	Yes
Completeness Score	
Hierarchical Filtering	None
Calculated	No
Type	Description
Dimension Dependencies	
Mandatory	No
ATTR_Article OK	
ATTR_Delete	i23
ATTR_Has Value	i23
ATTR_Linking Targets	
ATTR_Short Description	abc
ATTR_Sort Nr	i23
ATTR_Sucesser To	abc

Attribute Validation	
Name	Value
Validation Base Type	Text
List Of Values	N/A
Multi Valued	No
Mask	
Minimum Value	N/A
Maximum Value	N/A

3. Go to the ACES Conversion business action within the ACES Import workflow and edit the business rule. Add the 'ACES Good Application Count' attribute into the 'Good application count attribute' parameter, and add the 'ACES Error Application Count' attribute into the 'Error count attribute' parameter. For more details regarding how to fully configure the ACES Conversion business action, see the **Conversion State** topic within the **Default Workflow States and Functions** section topic of the **Automotive Reference Guide** documentation.

Run background process action

QueueID: queue_Conversion

Background Process Service: [ACESToStepXMLConvertService]

Service parameters

ACES Default FULL Import handling: BRAND_PART_TERMINOLOGY

ACES Default SUPPLIER Import handling: NO

ACES Default UPDATE Import handling: PARTIAL

AutoCare file attachment ID: original

Create PIES items:

→ Error count attribute: ACES Error Application Count (ImportAppErrorCount) ...

Error file attachment ID: error

Filter applications with errors:

→ Good application count attribute: ACES Good Application Count (ImportAppGoodCount) ...

Import mode attribute: ACES Import Mode (ImportMode) ...

Importing Brands attribute: ACES Import Brand (ImportBrand) ...

Importing Part Terminologies attribute: ACES Import Part Terminology (ImportPartTerminology) ...

Omit application names:

STEP XML attachment ID: Conversion

Regular Expression for parsing Supplier from file name: (.*?)*_*

Treat notes as errors:

Validate applications:

Save Cancel

To display the good and error count in the Web UI, users need to configure an Attribute Value Header component in the 'AutoCareACESApplicationControllerScreen' for each of the attributes. For information about accessing the Headers parameter and adding table header components to the Controller screen, see the **Adding Additional Headers in Controller Screen** topic within this guide.

Configuration Web UI style

AutoCareACESApplic ▾ Save Close New... Delete Rename Save as...

Table Display Mode Properties [go to parent](#)

Component Description Shows the nodes from a Node List in a table.

Context Help

Headers

Add... Edit... Remove Up Down

Show Details

Title

► Sizing and

► Advanced

Child Co

Add Component

The Attribute Value Header can be configured to display attributes values for a selected object. Used in combination with a Node List.

Filter

Show deprecated components

Cancel **Add**

Add component - configure required properties

Attribute Value Header Properties

Component Description The Attribute Value Header can be configured to display attributes values for a selected object. Used in combination with a Node List.

* Attribute ...

Dimensions Edit...

Label

Mandatory

Readonly

Table Sorting

► Advanced

Cancel **Add**

Below is an example of the 'AutoCareACESApplicationControllerScreen' that has been configured to display the error application count and good application count in the Web UI.

AutoCare ACES Imports											
Process	File Name	Overall Status	Good	Errors	Error Report	Adds	Deletes	Updates	Brand	Part Type	Import Mode
Controller-118498	SFF_Full	Completed with errors: 1	8	3	Error Report	0	0	0	SFF	Clutch Release Bearing Engine Crankshaft Repair Sleeve Engine Crankshaft Seal Wheel Bearing Wheel Bearing and Hub Assembly Wheel Bearing Retaining Ring	FULL

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Import Details							
Process	Started Time	Duration	Started By	Status	Background Process Link	Report	
Validation	2020-06-17 20:11:18	5 secs	ACESIMPORT	Validation completed	Succeeded		
Conversion	2020-06-17 20:11:23	6 secs	ACESIMPORT	Conversion completed with errors	Completed With Errors	Download file	
Delta Calculation	2020-06-17 20:11:29	1 min 43 secs	ACESIMPORT	Delta calculation completed	Succeeded	Download file	
Import	2020-06-17 20:13:12	2 secs	ACESIMPORT	Completed with errors: 1	Completed With Errors		

Start import Reject **1 file**

Configuration Steps to Retrieve Submission Type, Brands, and Part Types from the ACES File

Note: This setup action is only required if the AutoCare standard is being configured and only needs to be carried out within the ACES functionality. If the AutoCare standard is not being configured, this setup action can be skipped.

The ACES import Conversion state can be configured to retrieve information such as Submission Type, Brands, and Part Types from the ACES file. The following parameters in the Conversion state of the AutoCare ACES import workflow helps in configuring this solution:

- The 'Import mode attribute' parameter allows users to define the attribute that will store the value for the Submission Type (FULL or UPDATE),
- The 'Importing Brands attribute' parameter allows users to define the attribute that will store the Name of the BrandAAIAID that is used in the ACES import file. The Name is retrieved by looking up the BrandAAIAID in the Brand table.
- The 'Importing Part Terminologies attribute' parameter allows users to define the attribute that will store the Name of the Part Type that is used in the ACES import file. The Name is retrieved by looking up the PartType ID in the PCdb table.

To retrieve and display information of Submission Type, Brands, and Part Types from the ACES file, the following manual setup needs to be done in workbench:

1. Create an attribute with the following configuration to hold the value for the import mode:
 - Externally maintained
 - Text Validation Base Type
 - Multi Valued = No
 - Description attribute
 - Valid for Entity Types = Import Flow Controller Type.

The screenshot displays the configuration for the 'ACES Import Mode' attribute. The left pane shows the 'System Setup' tree with 'ACES Import Mode' selected under 'Import Flow Attribute Group'. The right pane shows the attribute configuration details.

Description	
Name	Value
ID	ImportMode
Name	ACES Import Mode
Last edited by	2020-06-01 13:00:46 by USERN
Full Text Indexable	No
Externally Maintained	Yes
Completeness Score	
Hierarchical Filtering	None
Calculated	No
Type	Description
Dimension Dependencies	
Mandatory	No
Unit Description	abc

Attribute Validation	
Name	Value
Validation Base Type	Text
List Of Values	N/A
Multi Valued	No
Mask	
Minimum Value	N/A
Maximum Value	N/A

2. Create an attribute with the following configuration to hold the value for Brand(s):
 - Externally maintained
 - Text Validation Base Type
 - Multi Valued = Yes
 - Description attribute
 - Valid for Entity Types = Import Flow Controller Type.

System Setup

- Attribute Groups
 - Application Record Attributes
 - Asset Export Configuration
 - AutoCare Attributes
 - Business Rules
 - Calculated Attributes
 - Category Specific Attributes
 - Display
 - Event Filtering
 - General Attributes
 - Import Flow Attribute Group
 - ACES Error Application Count
 - ACES Good Application Count
 - ACES Import Brand**
 - ACES Import Mode
 - ACES Import Part Terminology
 - Automotive Import Flow State BGP
 - Import Delete Count
 - Import Flow Endpoint ID
 - Attribute Transformations
 - Action Sets
 - Contexts
 - InDesign Queue
 - Lists of Values / LOVs
 - Data profile configurations
 - Event Processors
 - Global Business Rules
 - Inbound Integration Endpoints
 - Mappings
 - Match Codes and Matching Algorithms
 - Metrics
 - Outbound Integration Endpoints
 - Portals
 - Match UT...

ACES Import Brand - Attribute

Validity Profile Log State Log Tasks

Attribute References Attribute Transformation

Description

Name	Value
ID	ImportBrand
Name	ACES Import Brand
Last edited by	2020-06-01 13:13:00 by USERN
Full Text Indexable	No
Externally Maintained	Yes
Completeness Score	
Hierarchical Filtering	None
Calculated	No
Type	Description
Dimension Dependencies	
Mandatory	No
Display Sequence	123
New Object	abc
Purpose	abc
Unit Description	abc

Attribute Validation

Name	Value
Validation Base Type	Text
List Of Values	N/A
Multi Valued	Yes
Mask	
Minimum Value	N/A
Maximum Value	N/A

eady

3. Create an attribute with the following configuration to hold the value for Part Type(s):
- Externally maintained
 - Text Validation Base Type
 - Multi Valued = Yes
 - Description attribute
 - Valid for Entity Types = Import Flow Controller Type.

System Setup

- Attribute Groups
 - Application Record Attributes
 - Asset Export Configuration
 - AutoCare Attributes
 - Business Rules
 - Calculated Attributes
 - Category Specific Attributes
 - Display
 - Event Filtering
 - General Attributes
 - Import Flow Attribute Group
 - ACES Error Application Count
 - ACES Good Application Count
 - ACES Import Brand
 - ACES Import Mode
 - ACES Import Part Terminology**
 - Automotive Import Flow State BGP
 - Import Delete Count
 - Import Flow Endpoint ID
- Attribute Transformations
- Action Sets
- Contexts
- InDesign Queue
- Lists of Values / LOVs
- Data profile configurations
- Event Processors
- Global Business Rules
- Inbound Integration Endpoints
- Mappings
- Match Codes and Matching Algorithms
- Metrics
- Outbound Integration Endpoints
- Portals

ACES Import Part Terminology - Attribute

Validity Profile Log State Log Tasks

Attribute References Attribute Transformation

Description

Name	Value
ID	ImportPartTerminology
Name	ACES Import Part Terminology
Last edited by	2020-06-23 18:47:02 by USERN
Full Text Indexable	No
Externally Maintained	Yes
Completeness Score	
Hierarchical Filtering	None
Calculated	No
Type	Description
Dimension Dependencies	
Mandatory	No
Display Sequence	123
New Object	abc
Purpose	abc
Unit Description	abc

Attribute Validation

Name	Value
Validation Base Type	Text
List Of Values	N/A
Multi Valued	No
Mask	
Minimum Value	N/A
Maximum Value	N/A

4. Go to the ACES Conversion business action within the ACES Import workflow and edit the business rule. Configure the parameters as follows:

- Add the import mode attribute into the 'Import mode attribute' parameter
- Add the brand mode attribute into the 'Importing Brands attribute' parameter
- Add the part terminology attribute into the 'Importing Part Terminologies attribute' parameter

For more details regarding how to fully configure the ACES Conversion business action, see the **Conversion State** topic within the **Default Workflow States and Functions** section topic of the **Automotive Reference Guide** documentation.

Run background process action

QueueID: queue_Conversion

Background Process Service: [ACESToStepXMLConvertService]

Service parameters

ACES Default FULL Import handling: BRAND_PART_TERMINOLOGY

ACES Default SUPPLIER Import handling: NO

ACES Default UPDATE Import handling: PARTIAL

AutoCare file attachment ID: original

Create PIES items:

Error count attribute: ACES Error Application Count (ImportAppErrorCount)

Error file attachment ID: error

Filter applications with errors:

Good application count attribute: ACES Good Application Count (ImportAppGoodCount)

Import mode attribute: ACES Import Mode (ImportMode)

Importing Brands attribute: ACES Import Brand (ImportBrand)

Importing Part Terminologies attribute: ACES Import Part Terminology (ImportPartTerminology)

Omit application names:

STEP XML attachment ID: Conversion

Regular Expression for parsing Supplier from file name: (.*?)*

Treat notes as errors:

Validate applications:

Save Cancel

To display the import mode, Brand(s), and Part Type(s) from the ACES file within the Web UI, users need to configure an Attribute Value Header component in the 'AutoCareACESApplicationControllerScreen' for each of the attributes. For information about accessing the Headers parameter and adding table header components to the Controller screen, see the **Adding Additional Headers in Controller Screen** topic within this guide.

Configuration Web UI style

AutoCareACESApplic ▾ Save Close New... Delete Rename Save as...

Table Display Mode Properties [go to parent](#)

Component Description Shows the nodes from a Node List in a table.

Context Help

Headers

- ID Header (/ Process / false)
- Title Header (/ File Name / false)
- Importflow Overall Status

Add... Edit... Remove Up Down

Show Details

Title

- Sizing and
- Advanced

Child Co

Add Component

The Attribute Value Header can be configured to display attributes values for a selected object. Used in combination with a Node List.

- Application Part Type Value
- Application Part Value
- Application Set Assembly
- Attribute Value Group Header
- Attribute Value Header**
- Classification-Specific Attribute Value Header
- Data Container Attribute Value Group Header

Filter

Show deprecated components

Cancel **Add**

Add component - configure required properties

Attribute Value Header Properties

Component Description The Attribute Value Header can be configured to display attributes values for a selected object. Used in combination with a Node List.

* Attribute ...

Dimensions Edit...

Label

Mandatory

Readonly

Table Sorting

▸ Advanced

Cancel **Add**

Below is an example of the 'AutoCareACESApplicationControllerScreen' that has been configured to display the Brand, Part Types, and Submission Type in the Web UI.

AutoCare ACES Imports											
Process	File Name	Overall Status	Good	Errors	Error Report	Adds	Deletes	Updates	Brand	Part Type	Import Mode
Controller-118498	SFF_Full	Completed with errors: 1	8	3	Error Report	0	0	0	SFF	Clutch Release Bearing Engine Crankshaft Repair Sleeve Engine Crankshaft Seal Wheel Bearing Wheel Bearing and Hub Assembly Wheel Bearing Retaining Ring	FULL

⏪ < 51-53 of 53 > ⏩

Import Details

Process	Started Time	Duration	Started By	Status	Background Process Link	Report
Validation	2020-06-17 20:11:18	5 secs	ACESIMPORT	Validation completed	Succeeded	
Conversion	2020-06-17 20:11:23	6 secs	ACESIMPORT	Conversion completed with errors	Completed With Errors	Download file
Delta Calculation	2020-06-17 20:11:29	1 min 43 secs	ACESIMPORT	Delta calculation completed	Succeeded	Download file
Import	2020-06-17 20:13:12	2 secs	ACESIMPORT	Completed with errors: 1	Completed With Errors	

➔ Start import ➔ Reject 📄 I file

Configuration Steps to Track the New, Updated, and Deleted Objects Count for an Automotive Data Import

The Delta Calculation state can be configured to keep a track of the count for new, updated, and deleted objects in the imported file. The 'Object Type changes count' parameter in the Delta Calculation state of the Automotive import workflow allows users to define the object type and attributes that will store the New, Updated, or Deleted count.

Important: This functionality works only for the 'Context' method of delta calculation.

To track the new, updated, and deleted objects counts, the following manual setup needs to be done in workbench:

1. Create three externally maintained, Text Validation Base Type, Description attributes to hold the counts for the New, Deleted, and Updated objects. Make the attribute Valid for Entity Types = Import Flow Controller Type.
2. For any import workflow that uses 'context' Delta calculation method (e.g., ACES Delta Calculate), go to the Delta Calculate business action within the workflow and edit the business rule. In the 'Object Type changes count' parameter do the following:
 - Click on the Add icon (+), select 'NEW' from the drop-down list, select the object type that should be included in the new count (e.g., ACES Application), and add the 'New' attribute

- Click on the Add icon (+), select 'DELETED' from the drop-down list, select the object type that should be included in the delete count, and add the 'Deleted' attribute
- Click on the Add icon (+), select 'UPDATED' from the drop-down list, select the object type that should be included in the update count, and add the 'Updated' attribute

For more details regarding how to fully configure the Delta Calculation state, see the **Delta Calculation State** topic within the **Default Workflow States and Functions** section topic of the **Automotive Reference Guide** documentation.

The screenshot shows the 'Edit Operation' dialog box. The 'Run background process action' dropdown is set to 'Run background process action'. The 'QueueID' field contains 'queue_DeltaCalculate'. The 'Background Process Service' dropdown is set to '[StepXMLDeltaCalculationService]'. Under 'Service parameters', the 'Delta calculation method' is 'context'. A table lists three object types: NEW, UPDATED, and DELETED. Each row has a dropdown menu, an 'ACES Application (AC_ACESApplication)' field, and an 'Import Count' function (Import New Count, Import Update Count, and Import Delete Count respectively). A red arrow points to the 'Object Type changes count:' label. Below the table is a '+' icon. Other fields include 'Clear delete attribute' (checked), 'Delete status attribute' (Delete Status), 'From file Attachment ID' (Conversion), and 'Output file Attachment ID' (DeltaCalculate). 'Save' and 'Cancel' buttons are at the bottom right.

To display the New, Updated, or Deleted count in the Web UI, users need to configure an Attribute Value Header component in the Import Controller screen (e.g., 'AutoCareACESApplicationControllerScreen') for each of the attributes. For information about accessing the Headers parameter and adding table header components to the Controller screen, see the **Adding Additional Headers in Controller Screen** topic within this guide.

The screenshot illustrates the configuration process for a table display mode in StiboSystems. It is divided into three main sections:

- Table Display Mode Properties:** Shows the configuration for the 'AutoCareACESApplic' component. The 'Context Help' is 'i18n.stibo.portal.server.components.masterdetail.Tab'. The 'Headers' list includes 'ID Header (/ Process / false)', 'Title Header (/ File Name / false)', and 'Importflow Overall Status'. The 'Add...' button is highlighted with a red box.
- Add Component:** A modal dialog where 'Attribute Value Header' is selected from a list of components. The description states: 'The Attribute Value Header can be configured to display attributes values for a selected object. Used in combination with a Node List.' The 'Add' button is highlighted with a red box.
- Add component - configure required properties:** A configuration dialog for the 'Attribute Value Header' component. The 'Attribute' is set to 'ImportNewCount'. Other fields include 'Dimensions' (set to '<Select an option>'), 'Label', 'Mandatory' (set to '<Select a value>'), 'ReadOnly' (unchecked), and 'Table Sorting' (set to '<Select a value>'). The 'Add' button is highlighted with a red box.

Below is an example of the 'AutoCareACESApplicationControllerScreen' that has been configured to display the new application count, deleted application count, and the updated application count in the Web UI.

AutoCare ACES Imports																																														
Process	File Name	Overall Status	Good	Errors	Error Report	Adds	Deletes	Updates	Brand	Part Type	Import Mode																																			
Controller-118498	SFF_Full	Completed with errors: 1	8	3	Error Report	0	0	0	SFF	Clutch Release Bearing Engine Crankshaft Repair Sleeve Engine Crankshaft Seal Wheel Bearing Wheel Bearing and Hub Assembly Wheel Bearing Retaining Ring	FULL																																			
<p>Navigation: < 51-53 of 53 ></p> <p>Import Details</p> <table border="1"> <thead> <tr> <th>Process</th> <th>Started Time</th> <th>Duration</th> <th>Started By</th> <th>Status</th> <th>Background Process Link</th> <th>Report</th> </tr> </thead> <tbody> <tr> <td>Validation</td> <td>2020-06-17 20:11:18</td> <td>5 secs</td> <td>ACESIMPORT</td> <td>Validation completed</td> <td>Succeeded</td> <td></td> </tr> <tr> <td>Conversion</td> <td>2020-06-17 20:11:23</td> <td>6 secs</td> <td>ACESIMPORT</td> <td>Conversion completed with errors</td> <td>Completed With Errors</td> <td>Download file</td> </tr> <tr> <td>Delta Calculation</td> <td>2020-06-17 20:11:29</td> <td>1 min 43 secs</td> <td>ACESIMPORT</td> <td>Delta calculation completed</td> <td>Succeeded</td> <td>Download file</td> </tr> <tr> <td>Import</td> <td>2020-06-17 20:13:12</td> <td>2 secs</td> <td>ACESIMPORT</td> <td>Completed with errors: 1</td> <td>Completed With Errors</td> <td></td> </tr> </tbody> </table> <p>Buttons: Start import Reject file</p>												Process	Started Time	Duration	Started By	Status	Background Process Link	Report	Validation	2020-06-17 20:11:18	5 secs	ACESIMPORT	Validation completed	Succeeded		Conversion	2020-06-17 20:11:23	6 secs	ACESIMPORT	Conversion completed with errors	Completed With Errors	Download file	Delta Calculation	2020-06-17 20:11:29	1 min 43 secs	ACESIMPORT	Delta calculation completed	Succeeded	Download file	Import	2020-06-17 20:13:12	2 secs	ACESIMPORT	Completed with errors: 1	Completed With Errors	
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Import	2020-06-17 20:13:12	2 secs	ACESIMPORT	Completed with errors: 1	Completed With Errors																																									

12. Other Considerations

As you have seen above, the PMDM for Automotive solution provides a large amount of ready-to-use functionality. In addition, the solution is designed to be flexible and extendable via standard STEP configuration and use of the Extension API. Within the elements of the PMDM for Automotive solution, it is expected that users will modify and expand on the base solution to best meet their particular needs. In addition to the PMDM for Automotive solution, most customers will also want to take advantage of the core STEP capabilities to accomplish standard data management activities. Some suggestions for additional topics to be considered as part of a comprehensive STEP implementation are listed below, though this should not be considered an all-inclusive list as each customer will likely have unique business cases to be solved.

- What is the onboarding and approval process for parts? Should a workflow be added for new product onboarding?
- What is the approval process for reference and supplier data? Will reporting capabilities be added via the Extension API so data can be reviewed prior to import? Should business rules (and/or additional states) be added to the existing import workflows to validate data beyond the standard format validations? Should all data be considered trusted and auto-approved, and the import files modified to approve the data upon import? Should data be entered into a workflow for further review and approval following import?
- Is any unique processing of import files required? Does any data need to be filtered out, validated, etc in a non-standard way? If so, a new state could be added to the relevant workflow and additional processing could be managed within that state using the Extension API.
- Will an "Own" model be considered as part of the solution? If so, what needs to be added to support that (e.g., data model, integrations, workflows, etc)?
- If an Own model is used, consider adding the Reference Delegation screen to an Application Editor screen.
- What data do users need to view and manage in Web UI? Should additional screens be added for onboarding, maintenance, or viewing of parts, vehicles, or any other data?
- How will data deletions be handled? The automotive importers have the capability to mark data for deletion, but will not actually carry out the deletions as each implementation should determine how to review and process deletions. The existing import workflows could be modified to carry out deletions rather than marking the data for deletion. Alternatively, data marked for deletion could be added to a separate workflow for review and execution of the deletion.

Quick Start for Users

This section provides an overview of end user functionality that is provided with the solution after Easy Setup actions for one or more automotive standards have been completed by an admin.

This section addresses the following topics:

- Using Automotive Importers
- Using Automotive Exporters

Prerequisites

This guide assumes that the reader has had some degree of STEP training and is able to perform basic navigation and data maintenance tasks in the STEP Web UI. Additional introductory material is provided in **STEP Online Help**, if needed.

Important: This guide will often use the AutoCare standard as an example, but the same information is applicable for the NAPA and TecDoc standards.

Using Automotive Importers

The individual processing of each import is of course different, but the way a user initiates and manages the imports is the same, and is described in the subsequent sections.

For information on the supported versions, see the **Supported Versions and Formats** topic.

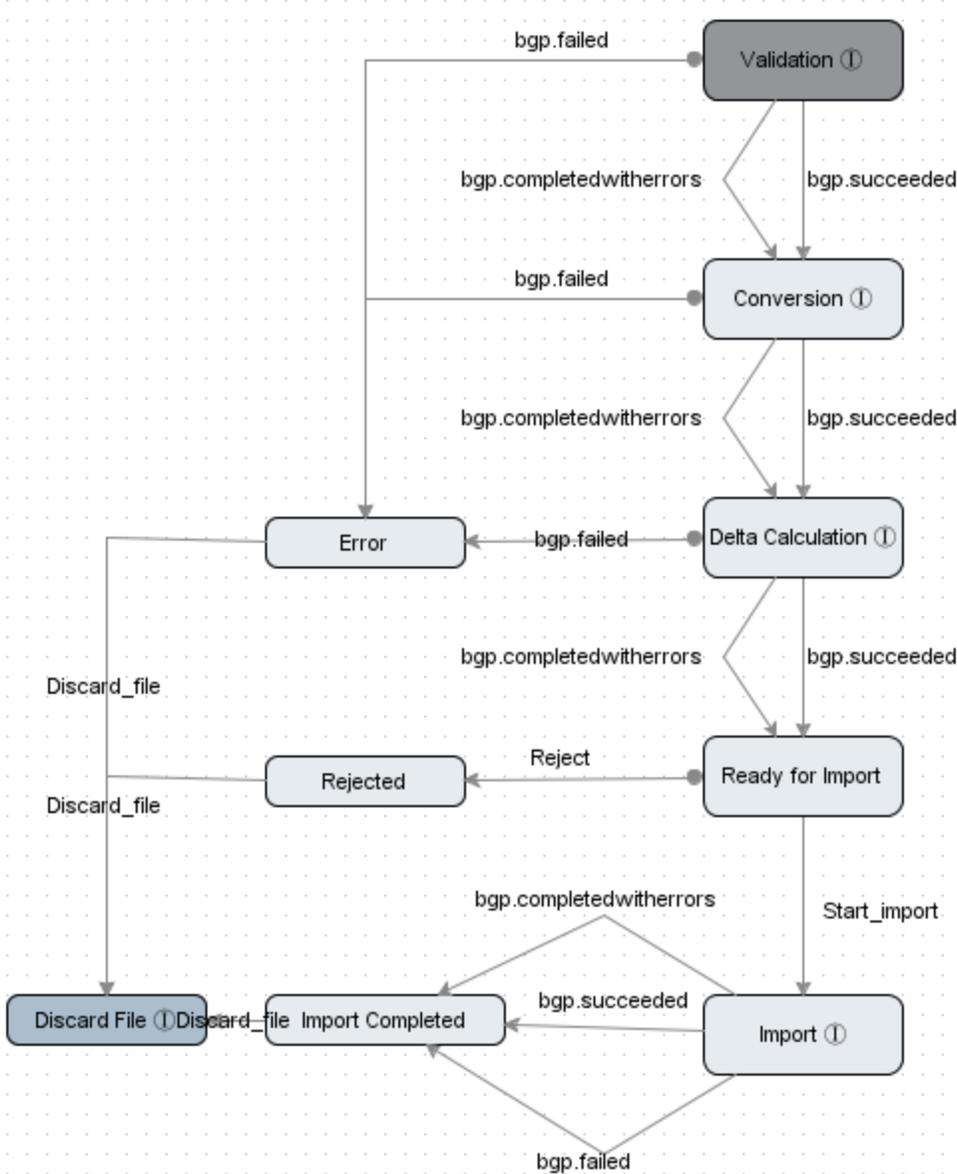
Important: If part and application data are imported into STEP without using the proper ID structures, then errors will occur. Prior to importing, review the **ID Structures in Importers** topic within the **Automotive Reference Guide**.

Topics in this section

- Import Workflow Overview
- File Loading
- Web UI Status Selectors & Import Control Panel Screens

Import Workflow Overview

When a file is loaded through an automotive importer, a STEP entity is created that represents the file, and then the entity (referred to as the controller) is initiated into a workflow. This section provides an overview of the default Automotive Import workflow.



Note: Each workflow can be extended to accomplish additional processing and/or reporting activities specific to any customer. Therefore, you may notice additional states (or additional activities occurring within the default states) on your system.

Validation

The Validation state does some basic schema validation of the file. If the standard supplies an XSD, the file format is validated against the XSD. If an XSD is not provided by the standard, the file is loosely validated to ensure the format conforms to what is expected for the file type. If the file fails validation, it will move to the Error state and will remain there until a user takes action on it. Files that successfully complete validation (with no errors or with only non-fatal errors) will move automatically to the Conversion state.

Conversion

The Conversion state converts the original file into a series of STEPXML files that include the full dataset from the import file. If the import file fails conversion, it will move to the Error state and will remain there until a user takes action on it. Files that successfully complete conversion (with no errors or with only non-fatal errors) will move automatically to the Delta Calculation state.

Delta Calculation

The Delta Calculation state evaluates the converted files against either the database or the previously loaded converted files of that type (depending on the configuration of the delta calculation method for the import) and generates a set of delta files for import. Any existing data that would be unchanged by the import is omitted from the delta files as a means of increasing performance of the actual import. If the file fails delta calculation, it will move to the Error state and will remain there until a user takes action on it. Files that successfully complete delta calculation (with no errors or with only non-fatal errors) will move automatically to the Ready for Import state.

For more information, see the **Delta Calculation State** topic within the **Importing Automotive Data** section of this guide.

Error

Files that have failed validation, conversion, or delta calculation will end up in the Error state. From there, the errors can be reviewed and the file can be discarded. Note that it is not possible to do further processing of the file after it has failed, though it can be subsequently reloaded.

Ready for Import

When a file has successfully completed validation, conversion, and delta calculation, it will be available in the Ready for Import state, which is the first state in which user interaction is required for successful files. If customer-specific reporting has been added to the implementation, it is likely that reports can be viewed in this state. Whether or not reporting has been added, the Ready for Import state is where the user must decide whether to import or reject the file. If the user rejects the file, it will be moved to the Rejected state. If the user chooses to import the file, it is moved to the Import state.

Rejected

The Rejected state displays files that have successfully completed all pre-import processing, but have been deemed unacceptable for import by a user, usually due to data issues. A rejected file cannot be imported unless it is reloaded, so the only option to act on a file in this state is to discard it.

Import

The Import state carries out the actual import of the delta calculation files. When complete, the file is automatically moved to the Import Completed state.

Import Completed

Upon completion of the import, the file will be assigned a 'completed' or 'completed with errors' status. If errors are present, they can be reviewed in this state. Files may be left in the Import Completed state or discarded. In either case, no further processing of the file occurs unless additional customer-specific processing states have been added.

Discard File

Sending a file to the Discard File state removes it from the workflow. It does not delete any data from STEP or the application server, unless customer-specific processing has been added to the state to do so.

Important: When using the 'file' delta calculation method, discarded files will not be used for delta calculations. The last loaded file must be retained for it to be used in delta calculation.

Additional information on configuration and processing within each standard's importer is available within the **Importing Automotive Data** section of the **Automotive Reference Guide**.

File Loading

All of the automotive importers use hotfolders to import automotive data. The automotive integration endpoints automatically create hotfolders on the application server for file loading.

Users can upload files to hotfolders by accessing the application server or by using a Web UI configured with a File Loading Widget for the desired file type.

Uploading Files via the Application Server

To upload a file to a specific hotfolder by accessing the application server:

1. Access the application server and navigate to /upload/hotfolders/[Importer].
2. Drop the file into the folder with a name aligning with the importer (e.g., TecDoc Reference Inbound Endpoint should have files dropped into the 'TecDocReferenceInputFolder').
3. The endpoint will pick up the file at the next scheduled polling, and the file load will begin.

Note: The endpoints are created with a default schedule of polling the hotfolder once per minute, but this setting is adjustable for each endpoint, so it may vary between importers and implementations.

To understand what happens after the file loads it is important to first understand how the import workflows operate, which is described in the **Import Workflow Overview** section.

Uploading Files via Web UI

To upload a file to a specific hotfolder via a Web UI, a File Loading Widget can be used. For more information, see the **File Loading Widget** topic within **STEP Online Help**, and the relevant standard specific topics available within the **Automotive Reference Guide** listed below:

TecDoc File Loading via Web UI

- Importing Reference Data Files via Web UI

Web UI Status Selectors & Import Control Panel Screens

Easy Setup provides a separate Web UI for each of the three supported standards: AutoCare, NAPA, and TecDoc. One or more Web UIs will be available, depending on configurations applied during the Easy Setup actions.

It is expected that the Web UI administrator will modify the default configurations to provide access to customer-specific data and processes as needed so your Web UI may look different from what is described below. However, it is likely that the default configurations have been expanded upon rather than removed so you should see something comparable to what is described. If not, contact your administrator for additional information.

Below is an example of how the Web UI launch buttons (when created for each of the standards) will display on the Start Page.



Clicking the applicable launch button will open your default browser and navigate you directly to the Web UI URL.

After logging in, the Web UI homepage will display the following widgets: Welcome, Search, Quick Links, File Loading specific to the Standard, and Status Selector Homepages corresponding to each importer for that standard.

For example, the AutoCare Web UI homepage displays the following widgets:

1. Welcome
2. Search
3. Quick Links
4. File Loading for Reference Data Imports
5. File Loading for Supplier Data Imports
6. Status Selector Homepage for the AutoCare ACES Importer
7. Status Selector Homepage for the AutoCare PIES Importer
8. Status Selector Homepage for the AutoCare VCdb Importer
9. Status Selector Homepage for the AutoCare PCdb Importer
10. Status Selector Homepage for the AutoCare Qdb Importer
11. Status Selector Homepage for the AutoCare PAdb Importer
12. Status Selector Homepage for the AutoCare Brand Importer

1

WELCOME

Logged in:
USER M

 [User Details](#)

 [Design Mode](#)

Logout

2

SEARCH

Search... 

3

QUICK LINKS

- [Browse](#)
- [Basket](#)
- [Background Processes](#)
- [Advanced Search](#)

4

REFERENCE DATA IMPORTS

Brand
Select file

PAdb
Select file

PCdb
Select file

Qdb
Select file

VCdb
Select file

5

SUPPLIER DATA IMPORTS

PIES
Select file

ACES
Select file

6

AUTOCARE ACES IMPORT



Delta Calculation	0
Error	0
Ready for Import	0
Rejected	0
Import	0
Import Completed	0
All	0

7 AUTOCARE PIES IMPORT		8 AUTOCARE VCDB IMPORT		9 AUTOCARE PCDB IMPORT	
Delta Calculation	0	Delta Calculation	0	Delta Calculation	0
Error	0	Error	0	Error	0
Ready for Import	0	Ready for Import	0	Ready for Import	0
Rejected	0	Rejected	0	Rejected	0
Import	0	Import	0	Import	0
Import Completed	0	Import Completed	0	Import Completed	0
All	0	All	0	All	0

10 AUTOCARE QDB IMPORT		11 AUTOCARE PADB IMPORT		12 AUTOCARE BRAND IMPORT	
Delta Calculation	0	Delta Calculation	0	Delta Calculation	0
Error	0	Error	0	Error	0
Ready for Import	0	Ready for Import	0	Ready for Import	0
Rejected	0	Rejected	0	Rejected	0
Import	0	Import	0	Import	0
Import Completed	0	Import Completed	0	Import Completed	0
All	0	All	0	All	0

This section will address the basics of what you need to know to carry out an import within the Automotive solution.

For general information about the File Loading Widget and Status Selector Homepage Widget, including additional information about working with these widgets, see the **File Loading Widget** topic within the **Web User Interfaces** section of **STEP Online Help**, and the **Status Selector Homepage Widget** topic within the **Web User Interfaces** section of **STEP Online Help**.

To work with any importer, choose one of the three filter option icons available at the top of the widget:

-  Displays items assigned directly to the user logged in.
-  Displays items assigned to the user logged in or to any group the user is part of.

-  Displays all items assigned to any user.

Once the appropriate filter is selected, then click on the state in which you wish to view files, or click on the 'All' state to view all files in the workflow, regardless of state.

Note: By default, the Validation and Conversion states are not displayed as files usually move fairly quickly through these states and no user intervention is required. Because of this, there is a slight delay between loading a file and the appearance of the file in the widget. If this is bothersome, the configuration of the status selectors can easily be updated by the Web UI administrator to include the Validation and Conversion states (along with any other customer-specific states).

Clicking on any state will take you to a screen that displays data for all files in that state. Selecting an individual file will display additional details about the file, and the available actions that can be taken (based on the state in which it sits).

For example, when the 'All' option on the import widget is selected, then the import list screen can display as shown below.

AutoCare PCdb Imports

Process	File Name	Overall Status
 Controller-100504	AAIA PCdb ASCII 20170630.zip	Import completed
 Controller-100832	AAIA PCdb ASCII 20170127 (2).zip	Error: Validation failed
 Controller-100871	AAIA PCdb ASCII 20170127 (2).zip	Done creating delta file
 Controller-102118	AAIA PCdb ASCII 20170714.zip	Import completed
1  Controller-102823	AAIA PCdb ASCII 20170728.zip	Done creating delta file

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Import Details

Process	Started Time	Duration	Started By	Status	Background	Report 3
Validation	2017-08-07 15:01:46	17 secs	STEPSYS	Validation failed	2 succeeded	
Conversion	2017-08-07 15:02:03	11 secs	STEPSYS	Conversion completed	succeeded	
Delta Calculation	2017-08-07 15:02:14	1 min 21 secs	STEPSYS	Delta calculation completed	succeeded	

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4
➔ Start import
➔ Reject
➔ Discard file

1. Click the details icon of any file to view the import details.
2. Each completed process will include a link to the background process. Clicking the link will take you to a background process screen where you can view any errors that the process encountered. Note that the process can still succeed when validation has failed (as shown above). This occurs when schema validation is

successful, but some allowable data errors were found and the importer is configured to continue when these types of errors are encountered.

3. If customer-specific reporting has been added, links will appear in the Report column for any states that generate a report as part of the output. If customer-specific reporting has not been added, the Report column may have been removed by the administrator.
4. Three actions are available, and will be enabled or disabled depending on the state of the file. These are further described below.

Available Action Buttons

- **Start Import:** This button is only enabled if the file is in the Ready to Import state. By default, this will occur after the delta calculation has completed and the file will have a 'Done creating delta file' status. However, additional customer-specific states may have been added and/or the overall status setting may have been changed. When the 'Start import' button is clicked, the actual import process starts, and the content of the delta files is imported. A background process link will be displayed in the table and clicking the link will take you to a screen where you can monitor status and progress of the import if desired.

Important: The 'Start import' button will not be enabled unless the file is in a state from which it is legal to import (e.g., there is a 'Start import' transition available in the workflow from the current state).

- **Reject:** Similar to the 'Start import' button, the Reject button is only enabled if the file is in the Ready to Import state. The intent of the Ready to Import state is to allow users to make the decision as to whether or not the file should be imported. This is typically done by reviewing the errors (if any) generated by the preceding processes and/or reviewing any customer-specific reports that have been added. Based on the available data, if it is determined that the file should not be imported, then it should be rejected. This will put the file in a Rejected state and it will not be possible to import the file without reloading it.
- **Discard file:** The option to discard a file is only available for files that are in the Error, Rejected, or Import Completed states as these are files that have already been determined not to be allowable for import due to errors and/or data concerns or are files that have already been successfully imported. Therefore no further work can or will be done on them within the import workflow. Discarding the file removes it from the import workflow and it will no longer show up in the list of files for that importer.

Using Automotive Exporters

This topic serves as an overview of how each of the available Automotive exporters are used, and how to access them.

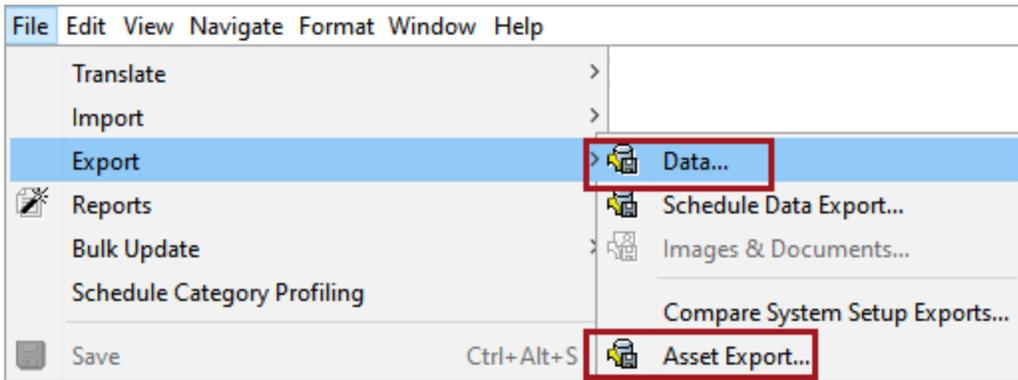
For information on the supported versions, see the **Supported Versions and Formats** topic.

- **Asset Exporter:** Used to export asset data.
- **AutoCare ACES Application Exporter:** Used to export application data in ACES format. ACES versions 3.0 and 3.2 are supported. The exporter requires that applications be stored in the standard AutoCare data model. The result is that all ACES Application objects beneath the selection(s) (either as child objects or via links) are exported. For more information, see the **AutoCare ACES Application Exporter** topic within the **Automotive Reference Guide**.
- **AutoCare PIES 6.5 Exporter:** Used to export parts data in PIES 6.5 format. The exporter defaults to exporting data in the standard AutoCare data model, but configuration options are also available to export data in PIES format from an Own model. The result is that all PIES objects beneath the selection(s) (either as child objects or via links) are exported. For more information, see the **AutoCare PIES 6.5 Exporter** topic within the **Automotive Reference Guide**.
- **NAPA Application Exporter:** Used to export application data in NAPA Application format. The exporter requires that applications be stored in the standard NAPA data model. The result is that all NAPA Application objects beneath the selection(s) (either as child objects or via links) are exported. For more information, see the **NAPA Application Exporter** topic within the **Automotive Reference Guide**.
- **NAPA Asset Reference Exporter:** Used to export a full digital asset reference file in NAPA format, which links a part number to an image.
- **TecDoc Supplier Data Exporter:** Used to export a specified supplier's parts data in the supported TAF 2.4 format. By default, data within the standard TecDoc data model will be exported. The export will contain the specified supplier data.

Accessing Automotive Exporters

The individual processing of each export is of course different, but the way a user initiates and manages the exports is the same.

Each exporter can be accessed by using the workbench File > Export menu (as shown below).



Once the Export Manager dialog displays, then the format can be selected.

