

Schemas Defined in an Activity

Introduction

File schemas can be inherited from activities that are adjacent to a transformation, as described here, or they can be [defined directly in the transformation](#). Schemas defined in an activity are not considered part of the transformation but are instead inherited by the transformation when a schema is not directly defined in the transformation. Transformations with both a source and a target schema can be [referenced in multiple operations](#).

Defining a Schema in an Activity

The ability for a user to provide a schema is included as a step in the configuration of a file-based activity. An example of defining a schema in a file share read activity is included below. For endpoint-specific information, refer to the sections under [Connectors](#).

Other types of schemas that are not file-based retrieve any applicable schemas directly from the endpoint, such as is the case with [SOAP](#), [database](#), and [Salesforce](#) endpoints, as well as some [custom endpoints](#). These types of schemas are sometimes referred to as server-based schemas. These types of schema are always automatically defined by the activity, and cannot be provided by a user within the activity or defined in the transformation.

Within the configuration of each file-based activity, there is a section called **Provide Response Schema** or **Provide Request Schema**. Within this section, select one of three options:

- **No:** Choose this option to skip defining a schema in the activity. You may want to select this option if you plan to define the schema later directly within the transformation (see [Schemas Defined in a Transformation](#)), or if no schema is required for your use case (see [When to Use a Schema](#)).
- **Yes, Use Saved Schema:** Choose this option to select an existing file schema that has previously been defined in the current project. When this option is selected, this section becomes available:

- **Saved Schemas:** Use the dropdown to select from an existing schema to reuse.
- **View/Edit Schema:** After an existing schema is selected, you can view or edit it directly within the text area below the dropdown, or click the popout icon  to edit it in a larger area (once within that area, click the return icon  to come back to this screen).

NOTE: This area is not applicable for saved schemas that were originally created as a [custom flat schema](#) or [custom hierarchical schema](#).

- **Validation:** As you edit a schema, validation information will be provided below the text area, with any errors reported one line at a time. That is, after resolving an error on one line, additional syntax errors to resolve may be reported for subsequent lines. Validation is based on the file extension of the saved schema.

On This Page

- [Introduction](#)
- [Defining a Schema in an Activity](#)
- [Accessing Menu Actions](#)

Related Articles

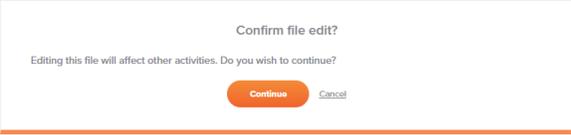
- [Schema Menu Actions](#)

Related Topics

- [Cloud Studio](#)
- [Connectors](#)
- [Schemas](#)
- [Schemas Defined in a Transformation](#)
- [Transformations](#)

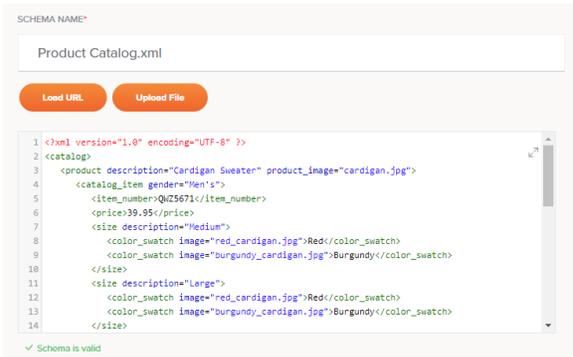
Last updated: Dec 16, 2019

WARNING: If you have edited a saved schema, a popup will ask you to acknowledge that the edits will affect other areas of the project where the saved schema is used. If you click **Continue**, the edits will take effect everywhere the schema is used in the project. If you don't want to affect other areas where the saved schema is used, click **Cancel** and provide a new schema instead.



The dialog box titled "Confirm file edit?" contains the text: "Editing this file will affect other activities. Do you wish to continue?". It features two buttons: "Continue" (highlighted in orange) and "Cancel".

- **Yes, Provide New Schema:** Choose this option to define a new schema by loading one from a URL, uploading a file, or manually entering one into the text area. When this option is selected, this section becomes available:



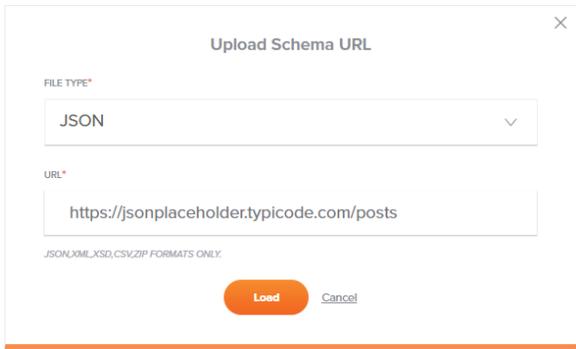
The interface shows a "SCHEMA NAME*" field with "Product Catalog.xml" entered. Below are "Load URL" and "Upload File" buttons. A code editor displays XML content for a product catalog. A status bar at the bottom indicates "Schema is valid".

```

1 <?xml version="1.0" encoding="UTF-8" ?>
2 <catalog>
3   <product description="Cardigan Sweater" product_image="cardigan.jpg">
4     <catalog_item gender="Men's">
5       <item_number>Q125671</item_number>
6       <price>39.95</price>
7       <size description="Medium">
8         <color_switch image="red_cardigan.jpg">Red</color_switch>
9         <color_switch image="burgundy_cardigan.jpg">Burgundy</color_switch>
10      </size>
11     <size description="Large">
12       <color_switch image="red_cardigan.jpg">Red</color_switch>
13       <color_switch image="burgundy_cardigan.jpg">Burgundy</color_switch>
14     </size>

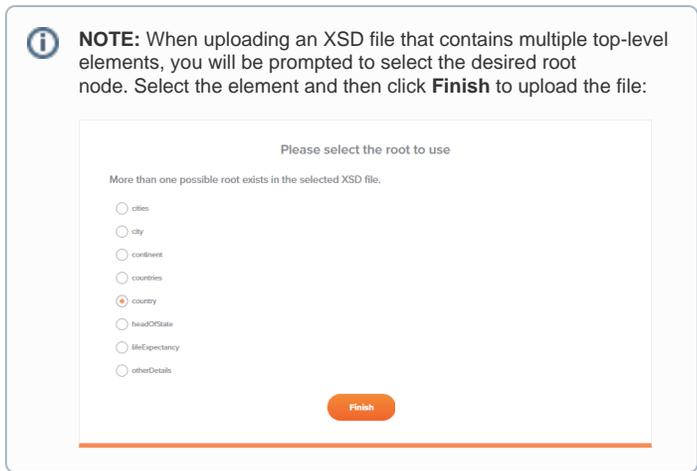
```

- **Schema Name:** Enter a name for the schema into the upper text box, including the file extension (.json, .xml, .xsd, .csv, or .zip). If no file extension is provided, the file will be treated as JSON by default. If you will be loading the schema from a URL or uploading a file, you can leave this blank, as the name will be populated once the file is loaded. Once you upload a file in a selected format, manually changing the extension will have no effect.
- **Load URL:** Click this button to open a window where you can load a schema from a URL:

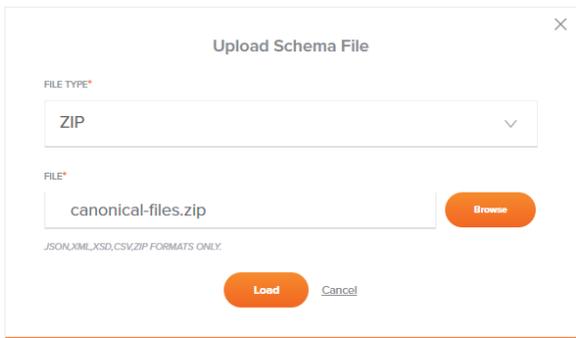


The dialog box titled "Upload Schema URL" has a close button (X) in the top right. It contains a "FILE TYPE*" dropdown menu set to "JSON". Below is a "URL*" text field containing "https://jsonplaceholder.typicode.com/posts". A note at the bottom reads "JSON,XML,XSD,CSV,ZIP FORMATS ONLY.". At the bottom are "Load" and "Cancel" buttons.

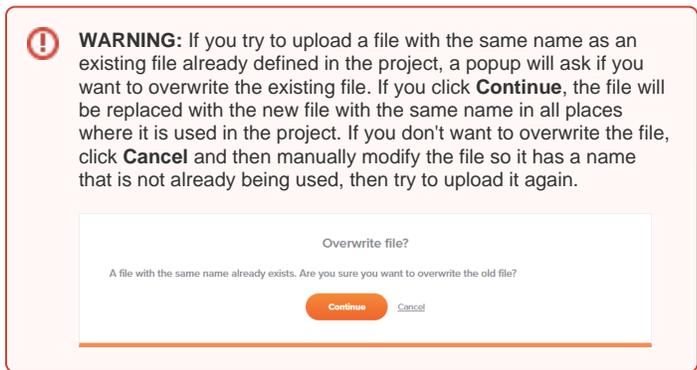
- **File Type:** Use the dropdown to select from the supported file types, including **JSON, XML, XSD, CSV, and ZIP**. Take note:
 - **XSD:** An XSD provided by URL can import/include other XSD URLs by reference. Cyclical references are not supported.
 - **ZIP:** A ZIP archive should contain a collection of XSDs, which may import/include each other by reference. Any non-XSD files in the archive will be ignored. Multiple directory levels are supported.
- **URL:** Enter a URL that is accessible without authentication. Files up to 5 MB in size can be uploaded.
- **Load:** Click this button to load the schema from the URL. Note that the file is retrieved only a single time for schema generation. In addition, be aware that some data may be converted during processing as described in [Schema Processing](#).



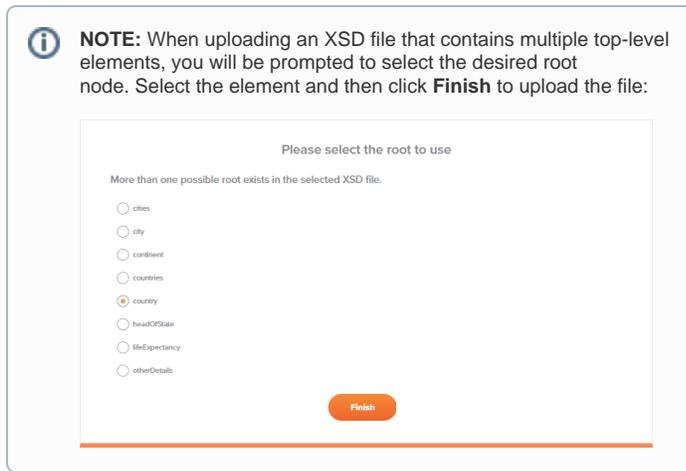
- **Cancel:** Click **Cancel** to close the **Upload Schema URL** window without saving.
- **Upload File:** Click this button to open a window where you can load a schema from a file that is accessible from the current machine:



- **File Type:** Use the dropdown to select from the supported file types, including **JSON, XML, XSD, CSV, and ZIP**. Take note:
 - **XSD:** Cyclical references are not supported.
 - **ZIP:** A ZIP archive should contain a collection of XSDs, which may import/include each other by reference. Any non-XSD files in the archive will be ignored. Multiple directory levels are supported.
- **File:** Use the **Browse** button to the right to browse to a file that has not yet been used in the current project. Files up to 5 MB in size can be uploaded.



- **Load:** Click this button to load the schema from the file. Note that some data may be converted during processing as described in [Schema Processing](#).



- **Cancel:** Click **Cancel** to close the **Upload Schema File** window without saving.
- **View/Edit Schema:** After a schema is loaded, you can view or edit it directly within the text area below the **Load URL** and **Upload File** buttons, or click the popout icon  to edit it in a larger area (once within that area, click the return icon  to come back to this screen).

Another option is to manually enter or paste a schema into this area without loading a schema from a URL or file.

- **Validation:** As you edit a schema, validation information will be provided below the text area, with any errors reported one line at a time. That is, after resolving an error on one line, additional syntax errors to resolve may be reported for subsequent lines. Validation is based on the file extension of the provided schema.

Accessing Menu Actions

After a schema is defined in an activity, you can access additional menu options that are available for all schemas.

These include deleting, renaming, viewing dependencies of, deploying, configurable deploying, and adding to a group, as well as re-opening the activity configuration screen.

For details on these actions, see [Schema Menu Actions](#).