Flat File Adapter

A flat file is a file that contains no information about the structure of the data. Any types of flat files can be read and parsed into a class structure using the Flat File Adapter. The structure of the flat file has to be defined in with classes and properties in the data model of your service. Any record definitions, separators and even dependencies between different records can be defined there.

For manipulating files and directories in general, have a look at the Filesystem Adapter.

On this Page:

FlatFileAdapter_ProductExport_Example

Click the icon to download a simple example model that shows the usage of the Flat File adapter in **Scheer PAS** *Designer*.

Related Pages:

- Defining a Flat File Data Structure
- Parsing Flat Files
- Composing Flat Files
- Using Macro Expressions on Parsing or Composing a Flat File
- Common Flat File Issues
- Flat File Adapter Reference

General Approach

A flat file is a file that contains no information about the structure of the data. The most simple flat file is a position delimited file without header or trailing lines. More complex flat files can have a field delimiter, or can be of hierarchical structure, or can have a pattern to delimit the attributes. If you want to access such a file, you need information about the file structure, and build that structure in the data model of your Designer service.

The screenshot below shows the flat file used in the example. This file has a header line and the records are numbered.

```
Product Export
1    00001AF-1200          Adapter      micro    0000064.50   52
2    00002AF-1300          Adapter      micro    0000067.50   52
3    00003AF-1400          Adapter      mini     0000072.50   52
4    00008CD-2000          Connector    micro    0000510.00   26
5    00009CD-2002          Connector    mini     0000570.00   26
6    00010CD-2006          Connector    mini     0000585.00  104
```

The class diagram below shows the data structure that reflects the structure of the file. Refer to Defining a Flat File Data Structure for more information on how to build such a structure.

Flat files can be parsed to a data structure or composed from such a structure to a **Blob** or to the file system.

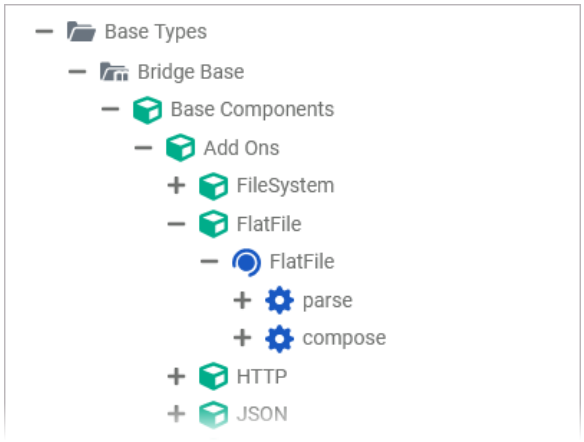
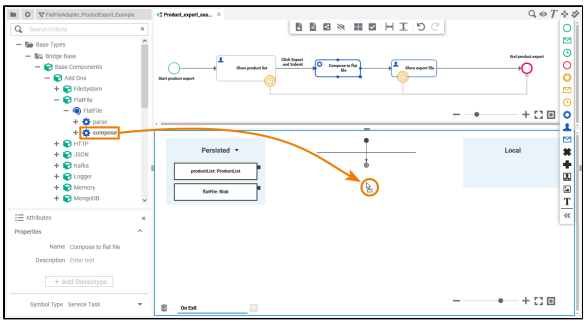
Limitations

When working with the Flat File adapter, please note the following limitations:

- The size of **one record** within a flat file is limited to **4 MB**. The size of the file itself is not limited.
- Be aware, that the Flat File Adapter will parse the file all in once. If you need to process big files, it may be better to process them line by line to save resources during execution.

Do do this, use a combination of Filesystem Adapter (to read one record) and Flat File Adapter (to parse the record).

Adding a Flat File Adapter Operation to a Diagram

	Expand the path to the Flat File adapter in the service panel (**Base Types /Bridge Base /Base Components /Add Ons /FlatFile**).
	You can drag out operations from the data model to any diagram: • BPMN execution diagram • mapping diagram • activity diagram The example on the left shows how to add a Flat File adapter operation to a BPMN execution diagram.

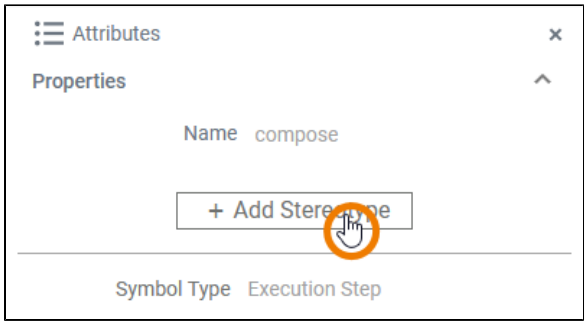
Configuring a Flat File Adapter Operation

Once a parse or compose operation has been added to a diagram, it needs to be configured as a Flat File adapter.

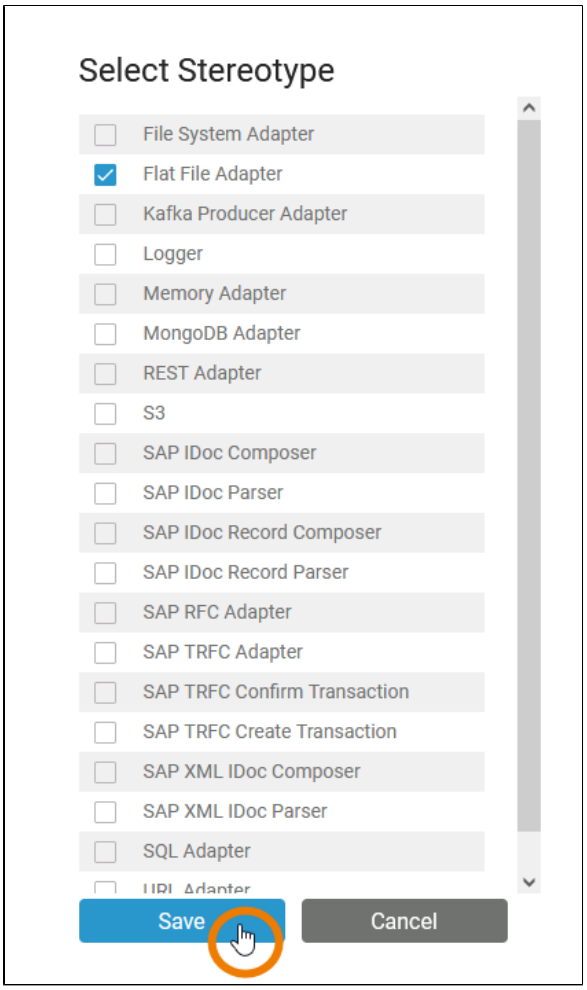
Select the newly added adapter operation and switch to the **Attributes** panel. Depending on the diagram type you can see the following information (example BPMN execution diagram):

Attribute	Description	Allowed Values / Example
Name	The name of the Flat File adapter operation.	compose
Symbol Type	Operations added to a execution diagram are execution steps.	**Execution Step**

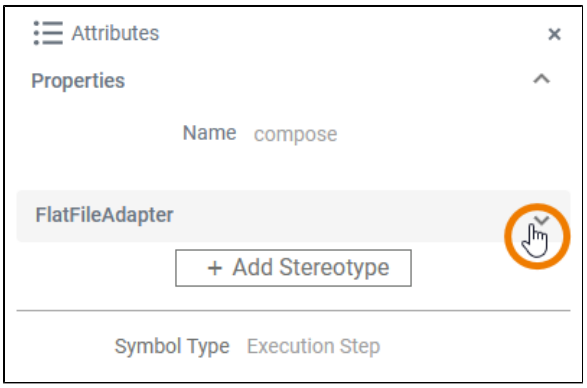
All this is predefined and cannot be changed.



Click **Add Stereotype** to define the selected operation as to be a Flat File adapter.

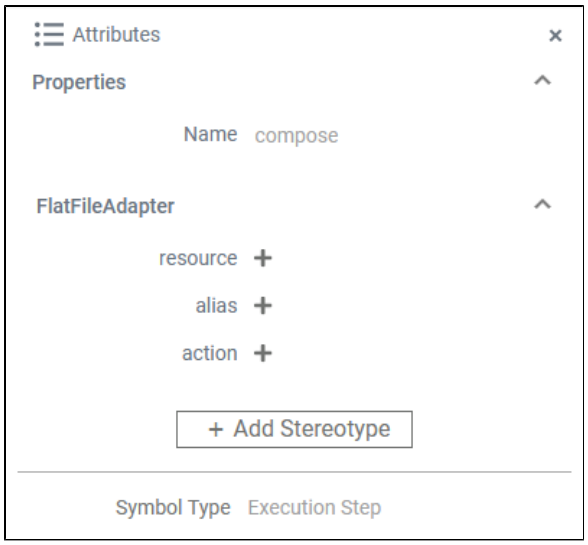


Select **Flat File Adapter** from the list of available adapter stereotypes.
Click **Save**.



The **Attributes** panel shows the added adapter stereotype. Now you still need to configure the adapter.

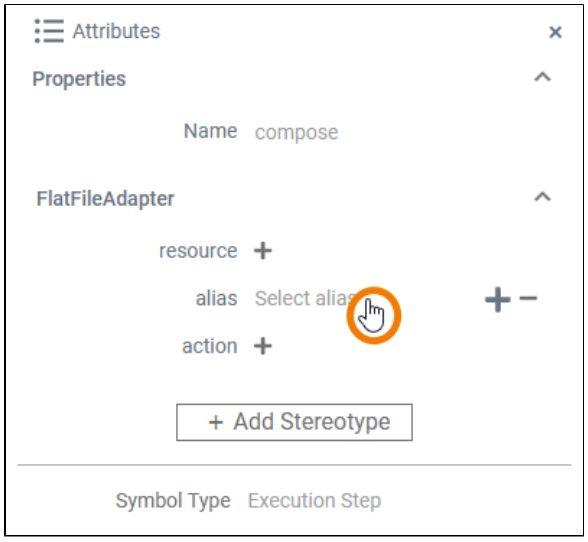
Expand the stereotype by clicking the arrow on the right.



On the Flat File adapter, you have the following options:

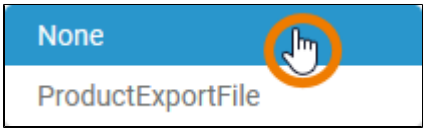
- **resource:** This option is not enabled yet, but will be available to you soon.
- **alias:** You can add a file or directory alias to the adapter operation to specify the file to be parsed from or composed to.

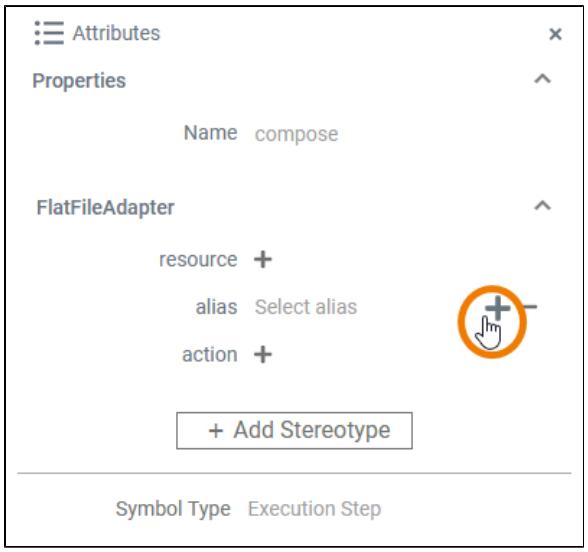
Refer to Flat File Adapter Reference for detailed information. The adapter option **action** derives from the used operation. Do not configure this.



After clicking the corresponding + icon you can select an existing alias from a drop-down list by clicking the text **Select alias**:

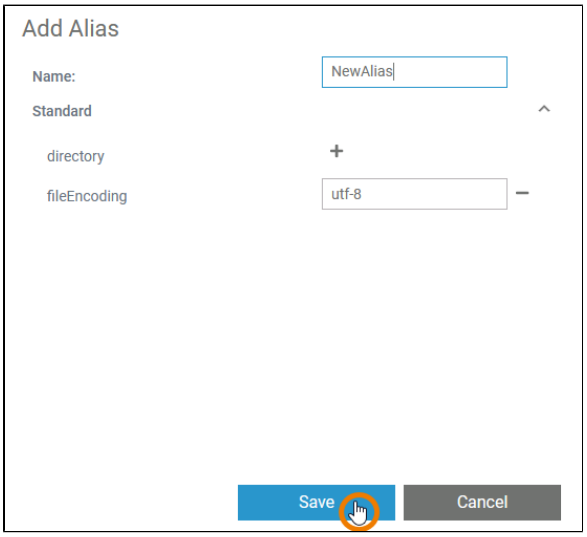
If you want to remove an added alias, click the corresponding − icon on the right side or select **None** from the drop-down list:





You can also create and add a new alias by clicking the corresponding + icon.

Refer to Aliases for more information on how to create a new alias.

	A new dialog opens where you can choose an alias stereotype: • **DirectoryAlias** • **FileAlias** Select the desired alias stereotype an click **Save** .
	In the following dialog, name and configure the new file alias. Refer to Filesystem Adapter for more information on the configuration options of this adapter. Click **Save** to create and add the new alias.