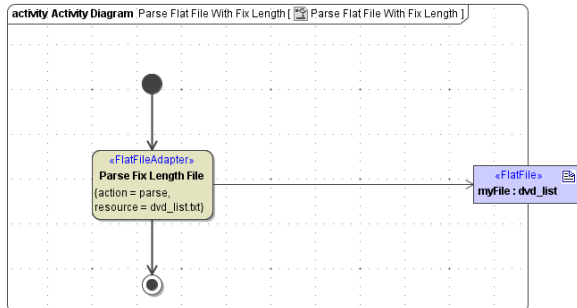


# Defining a Flat File Adapter Action



This page explains the **Flat File Adapter** in Bridge context. If you were looking for the same information regarding the [PAS Designer](#), refer to [Flat File Adapter](#) in the Designer guide.

After having defined the structure of the flat file, you can parse such file by invoking a `<<FlatFileAdapter>>` action as shown in the example below.



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- [IO Objects of the Flat File Adapter](#)
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  - [Number Formatting](#)

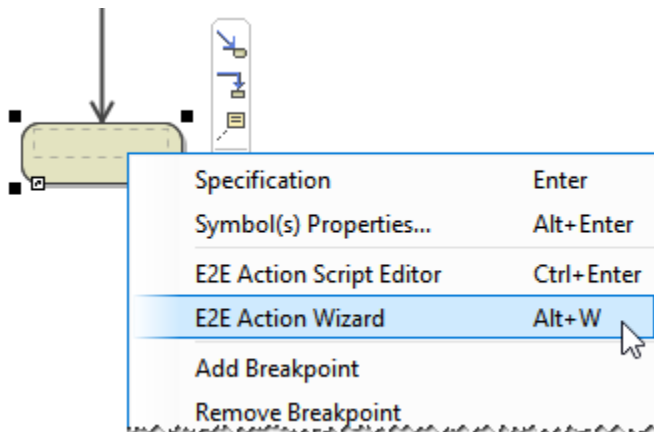
## Related Pages:

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This action will read the complete file **dvd\_list.txt** into an object of having the **myFile** structure.

## Adding a Flat File Adapter with the xUML Action Wizard

To define a `<<FlatFileAdapter>>` action, draw an empty action node and invoke the xUML Action Wizard from the context menu (or press **Alt+W**).



The xUML Action Wizard Dialog opens.

**Action Wizard**

**Enter General Data**

Specify general data of the new action.

Name  
Parse Fix Length File

Stereotype  
FlatFileAdapter

Description

Help Next Finish Cancel

Assign a meaningful name and select stereotype **FlatFileAdapter**.

Click **Next**.

**Action Wizard**

**Enter Properties**

Specify the properties of the new action.

Action  
parse

Alias  
<UNDEFINED> New

Resource  
dvd\_list.txt

Help Next Finish Cancel

The Flat File Adapter supports two actions: **parse** for reading flat files, and **compose** for creating flat files. Select action **parse**.

The file name and the directory where the file is located is defined in the component diagram by a file alias or a file resource. Select an existing file alias, create a new one by clicking **New**, or provide a file resource.

Click **Next**.

**Action Wizard**

**Select Parameters**

Select the parameters of the new action.

Parameter Definitions

- data: Blob
- encoding: String
- locale: NumbersLocale
- name: String

Add Remove New

Parameters

- anyObjectFlow <<FlatFile>>

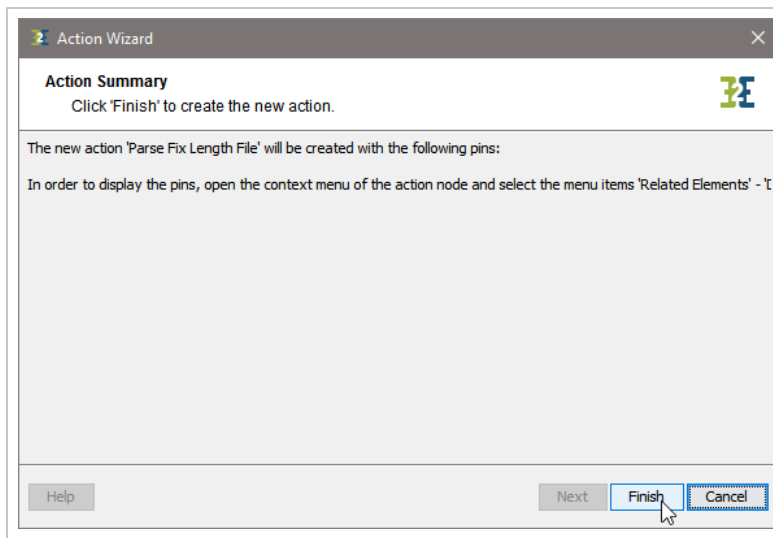
Help Next Finish Cancel

The output of the Flat File Adapter parse action is provided by an any object having stereotype **<<FlatFile>>**.

You can select additional parameters, as there are

- **data**, to parse a file given by a **Blob** object (see [Blob Output](#) below)
- **encoding**, to specify a divergent file encoding (see [File Encoding](#) below)
- **locale**, to set a divergent number formatting
- **name**, to set the file name dynamically (see [Dynamic Usage of Flat Files](#) below).

Click **Next**.

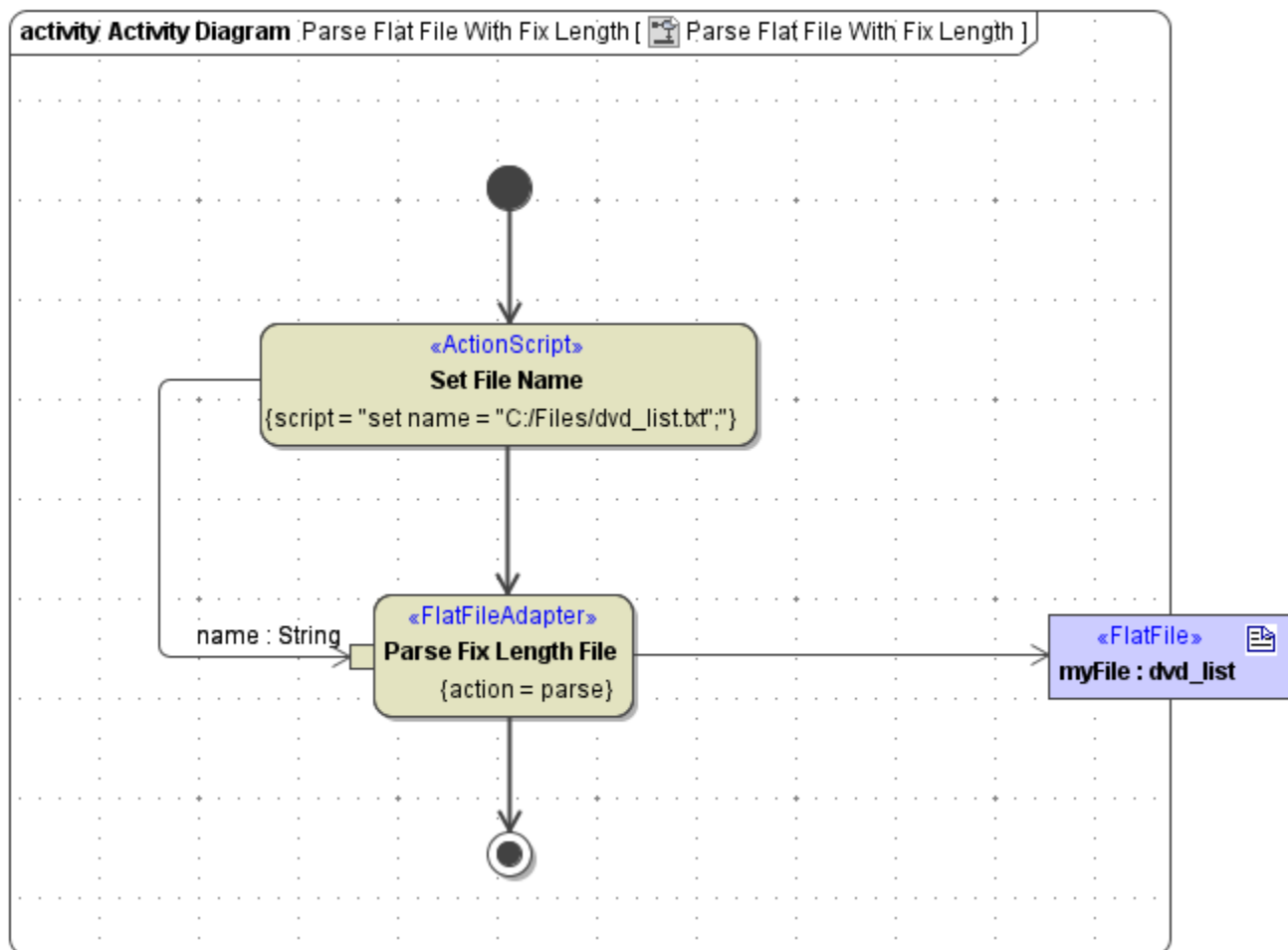


The Action Wizard displays a summary of your settings.

Click **Finish** to create the parse action.

## Dynamic Usage of Flat Files

Besides the static definition of the file name and path in the component diagram, it is possible to set the filename dynamically within your activity diagram. In this case, an object **name** of type **String** has to be an input to the Flat File Adapter. For dynamic usage, the Flat File Adapter does not require an **alias** or a **resource**.



Name	Type	Direction	Mandatory	Description	Allowed Values	Example
------	------	-----------	-----------	-------------	----------------	---------

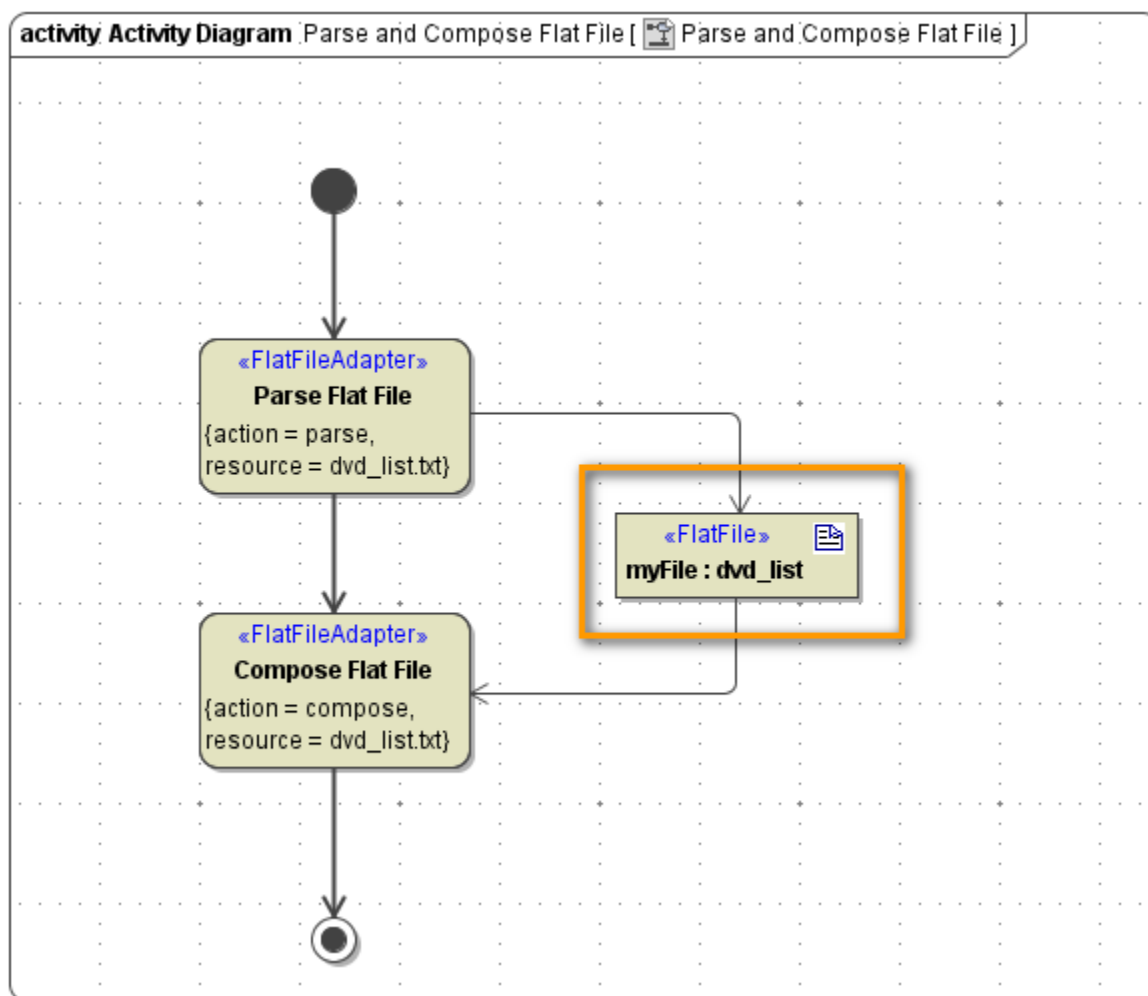
<b>data</b>	<b>Blob</b>	in	✓	Provide the flat file data to be parsed. Alternatively, you can specify a path to a flat file in the file system (see parameter <b>name</b> ). Note, that the <b>name</b> parameter takes priority over <b>data</b> .		
<b>name</b>	<b>String</b>	in	✓	Specify a full path to the flat file to be parsed. Alternatively, you can parse the flat file from a <b>Blob</b> object (see parameter <b>data</b> ). Note, that the <b>name</b> parameter takes priority over <b>data</b> .		tmp /myfile. txt
<b>encoding</b>	<b>String</b>	in		Provide the encoding of the file to be parsed as specified in the <a href="#">Charset Definitions</a> appendix.	any valid encoding (see <a href="#">Charset Definitions</a> )	UTF-8
					d ef a ult	ISO- 8859-1 (Latin1)
<b>locale</b>	<b>Numbe rsLocale</b>	in		Specify how number values will be treated, when parsed from the flat file (decimal point, currency symbol, ...). You can overwrite the system locales here, if the file was written with divergent locales. Refer to <a href="#">Number Formatting</a> for more information.		
<b>&lt;any&gt;</b>	<b>&lt;&lt;FlatF ile&gt;&gt; cl ass</b>	out	✓	The adapter returns a parsed flat file object. The class defining the type of this object should have stereotype <b>&lt;&lt;FlatFile&gt;&gt;</b> and should depict the structure of the file.		

If you provide both parameters, **name** and **data**, the **<<FlatFile>>** object will be parsed from the file system. If you specified tagged value **resource** (see section [Tagged Values](#)), the file will only be parsed from the resource.

## IO Objects of the Flat File Adapter

### <<FlatFile>> Root Class

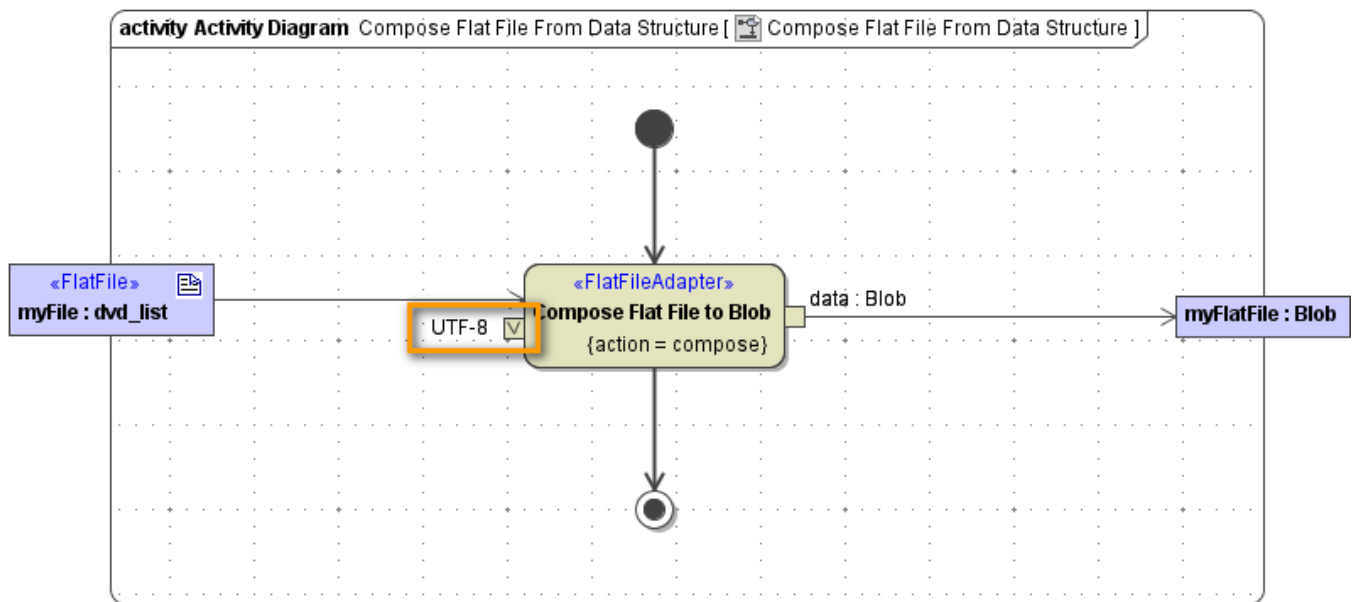
The flat file structure definition always has a **<<FlatFile>>** root class. An instance of this class has to be input or output of the **<<FlatFileAdapter>>** action: as an output object if the action parses a file, as an input object if the action composes a file.



## File Encoding

The Flat File Adapter uses ISO-8859-1 encoding as a default. For any divergent charset definitions of the file, use the **encoding** parameter of type **String** and provide the charset (e.g. UTF-8). For more information on how to add the **encoding** parameter, refer to [Adding a Flat File Adapter with the xUML Action Wizard](#) above.

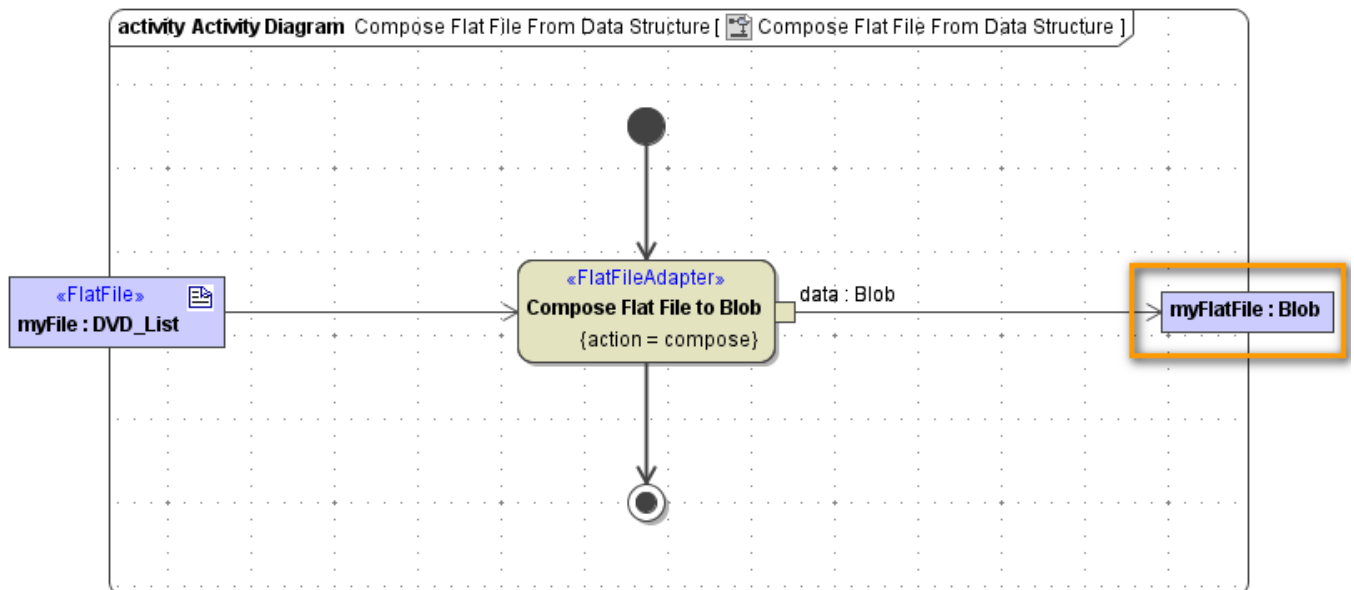
An **encoding** input parameter will override any definitions made in the component diagram.



## Blob Output

The Flat File Adapter can also handle **Blob** inputs to the parse action and provide **Blob** outputs of the compose action by adding a **data** parameter. This can be useful, if the file to parse is provided as blob, resp. the file should not be written by the compose action. One use case could be that the file should be parsed/composed line by line (read/write done with the File System Adapter).

For more information on how to add the **data** parameter, refer to [Adding a Flat File Adapter with the xUML Action Wizard](#) above.



## Number Formatting

The parse and compose functionality is influenced by locales. Parameter **locale** of type **NumbersLocale** can be used to influence the formatting of numbers.

**locale** is only considered for fields that have a **formatPattern** assigned.

For more information on number formatting refer to [Number Formatting](#), for more information on how to add the **locale** parameter refer to [Adding a Flat File Adapter with the xUML Action Wizard](#) above.

activity Activity Diagram Parse Flat File With Fix Length [ Parse Flat File With Fix Length ]

