

# File System Adapter



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

With the File System add-on, it is possible to read and write files (even incrementally), and to read and create directories.

**Example File (Builder project Add-ons/FileSystem):**



```
<your example path>\Add-ons\FileSystem\uml\fileSystemDyn.xml  
<your example path>\Add-ons\FileSystem\uml\fileSystemStat.xml
```

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## Common Tasks Using the File System Adapter

Find below a table listing some common tasks you can use the File System Adapter for, and which action to use for which task.

Task	Action	Mode	Important Parameters	Comments
Write a complete file in one action.	<a href="#">write</a>			<ul style="list-style-type: none"><li>• If the file exists, it will be overwritten.</li><li>• If the file does not exist, it will be created.</li></ul>
Replace part of a file.	<a href="#">write</a>		position	Writes the data to the file beginning at the specified position. If the file does not exist you'll get the exception FSADM/8 (see <a href="#">Catching Errors</a> ).
Append data to a file.	<a href="#">append</a>	append		<ul style="list-style-type: none"><li>• If the file exists, the given data will be appended.</li><li>• If the file does not exist, it will be created.</li></ul>
Write a complete file line by line.	<a href="#">append</a>	overwrite		Use mode <b>overwrite</b> for all appends. <ul style="list-style-type: none"><li>• If the file exists, it will be overwritten.</li><li>• If the file does not exist, it will be created.</li></ul> <b>overwrite</b> will only be applied to the first append. All subsequent appends (e.g. in a loop) automatically get mode <b>append</b> .
Copy a complete file.	<a href="#">copy</a> <a href="#">Runtime 2020.4 Build 7.8.0</a>			Copy a file in one action. Using <b>copy</b> you can even copy huge files because it does not load the complete file into memory.
Manipulate a file and process the file further (e.g. moving it).	<ol style="list-style-type: none"><li>1. <a href="#">write</a> or <a href="#">append</a></li><li>2. <a href="#">close</a></li><li>3. further processing</li></ol>			Before processing the file further (e.g. moving it), close the file. Otherwise it may be locked.

## Static versus Dynamic Requests

We distinct between **static** and **dynamic** requests.

- Static means that the whole backend information (**path** and **name**) is defined in the component diagram and is not modified when called within an action. However, this information can be accessed within an action via the so called **deployment macros**. This is sometimes useful, e. g. when URL parameters must be calculated or known at runtime only (for details refer to [Deployment Macros](#)).
- A dynamic call means that the necessary parameters are being specified during the execution of the activity. In the present case, a dynamic usage of the file system adapter means that parameters like the name of a file or a directory are not part of the component diagram, but rather specified in an action and passed on to the file system adapter as an input object. Read more on dynamic file system access on [Dynamic File System Access](#).

## Catching Errors

All errors thrown by the File System adapter can be caught as described in [Catching Errors](#).

Domain	Error Code	Description
FSADSM	1	Failed opening file.
FSADSM	3	Position is invalid.
FSADSM	4	Failed reading file.
FSADSM	6	Failed stating file.
FSADSM	7	The content is smaller than the write size.
FSADSM	8	Failed opening file.
FSADSM	9	Position is invalid.
FSADSM	10	Failed writing file.
FSADSM	13	Failed stating file.
FSADSM	14	Failed renaming entry.
FSADSM	16	Failed creating directory.
FSADSM	18	Failed opening directory.
FSADSM	21	Data missing for write request.
FSADSM	22	Failed creating file.
FSADSM	23	Failed stating entry for removal.
FSADSM	25	Failed opening file.
FSADSM	26	Failed renaming entry.
FSADSM	29	File is not open.
FSADSM	31	Failed getting exact file size. The real size may differ.
FSADSM	32	Name is empty.
FSADSM	33	Path '%s' is outside allowed base directory '%s'.
FSADSM	34	Failed copying entry.