

# Creating Element

To create an element for a command line tool select either *Actions > Create element with command line tool* in the main menu or the following icon on the toolbar:



The *Create Element with Command Line Tool* wizard appears. On the first page of the wizard input a name and a description of the element in the *Property Editor*. Letters, numbers and underscores are allowed in the name.

The image shows a dialog box titled "Create Element with Command Line Tool". The dialog has a title bar with a question mark icon and a close button (X). The main content area contains a text box with the text "Name and description for new workflow element." followed by "Status:" and "Please set the name for the new element." in red. Below this, there are two input fields: "Element description" and "Name". The "Name" field is a single-line text box, and the "Description" field is a larger multi-line text box. At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

On the second page add the required input and output data:

Input and output data for external tool. Name is a command line parameter for input/output data in external tool. Set data type and format in which external tool reads/writes input/output data. You also can set description for workflow designer. Each input data will be represented as port in workflow designer. Each output data will be represented as slot of single slot.

**Input data**

Name for command	Type	Read as	Description

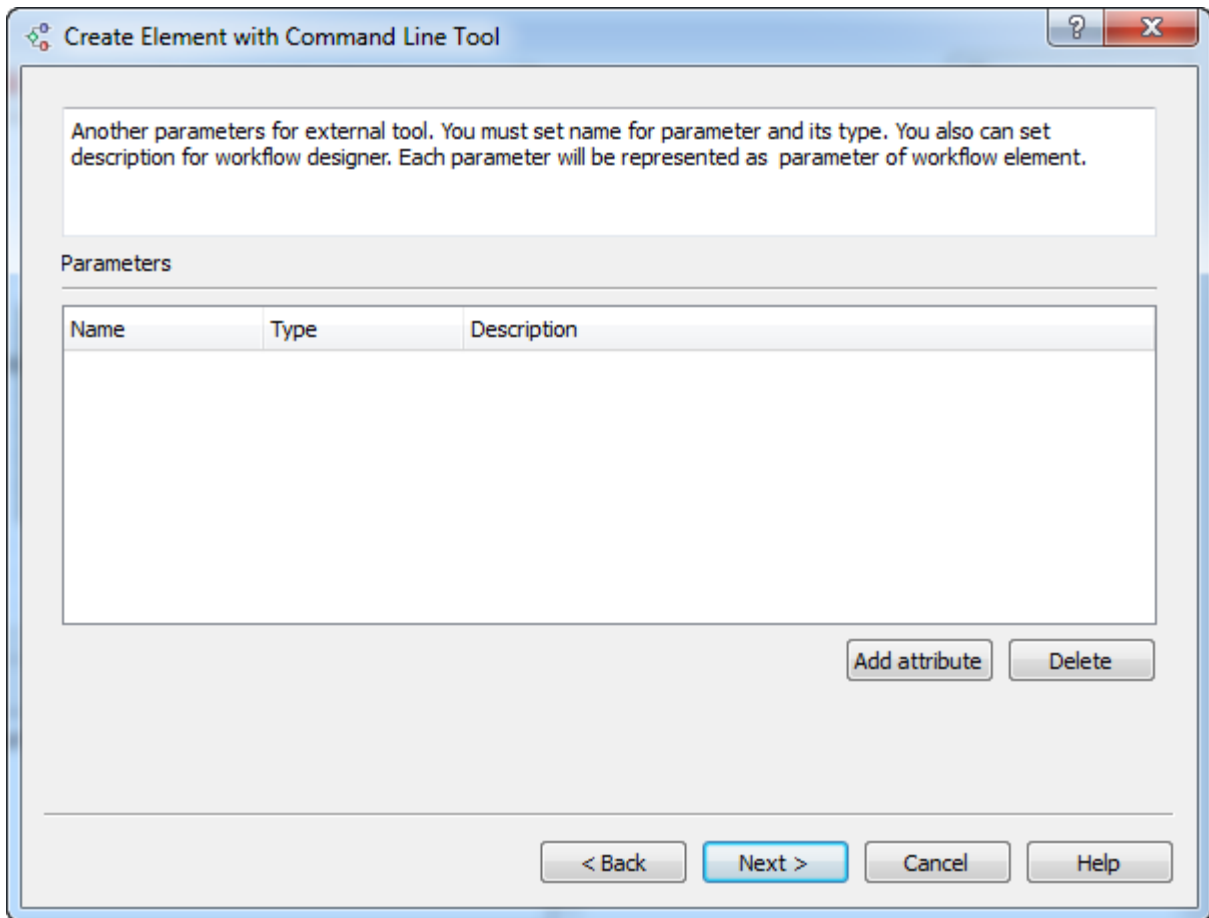
**Output data**

Name for command	Type	Write as	Description

For each input or output you should:

- Input a name (letters, numbers and underscores are allowed in the name).
- Select a type: multiple alignment, sequence, sequence with annotations, a set of annotations or string.
- Specify how the input or output should be handled (for example, you can specify that a value of the input parameter should be handled as a FASTA file).
- Optionally input a description.

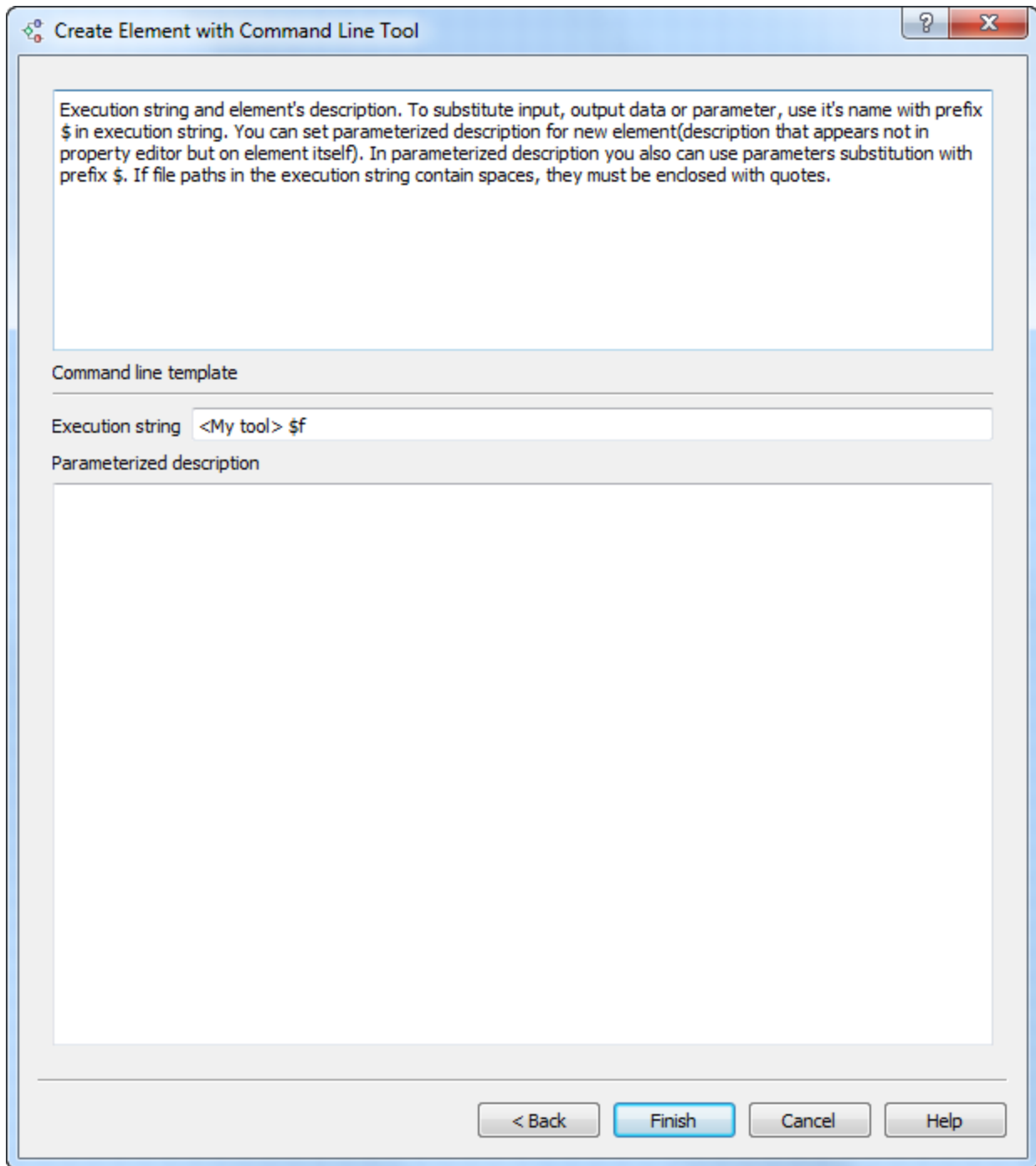
On the third page of the wizard you can add attributes for the command line tool. Later you would be able to set values for the attributes in the Property Editor, i.e. the attributes are actually the parameters of the new element.



For each attribute added you should:

- Input a name (letters, numbers and underscores are allowed in the name).
- Select it's type: boolean, number, string or URL.
- Optionally input the description.

On the last page of the wizard you should input the execution string, i.e. the command that would be executed.



The signature of the execution string depends on the command that is launched. But the general rule is that input/output data and attributes have prefix \$. For example let there be some perl script "myScript.pl" that accepts an input file as the first attribute and accepts the second attribute denoted as "param1". The command may look as follows:

```
perl [path_to_script]myScript.pl $infile $param1 > $outfile
```

Here *infile* and *outfile* are input and output data set on the step 2, *param1* is an attribute set on the step 3.

On the same wizard page you can optionally input the description of the element. It would be shown on the element on the *Scene*. The description can be parameterized. This means that if you input e.g. an attribute name (with prefix \$), the name on the element would be substituted with the value of the corresponding parameter.

For example input the following parameters:

Execution string `perl C:\myScript.pl $infile $param1 > $outfile`

Parameterized description

This element reads `$infile` and calculates something with the parameter `$param1`. The result is written to the file `$outfile`.)

The element created looks as follows:

