

# Creating Element

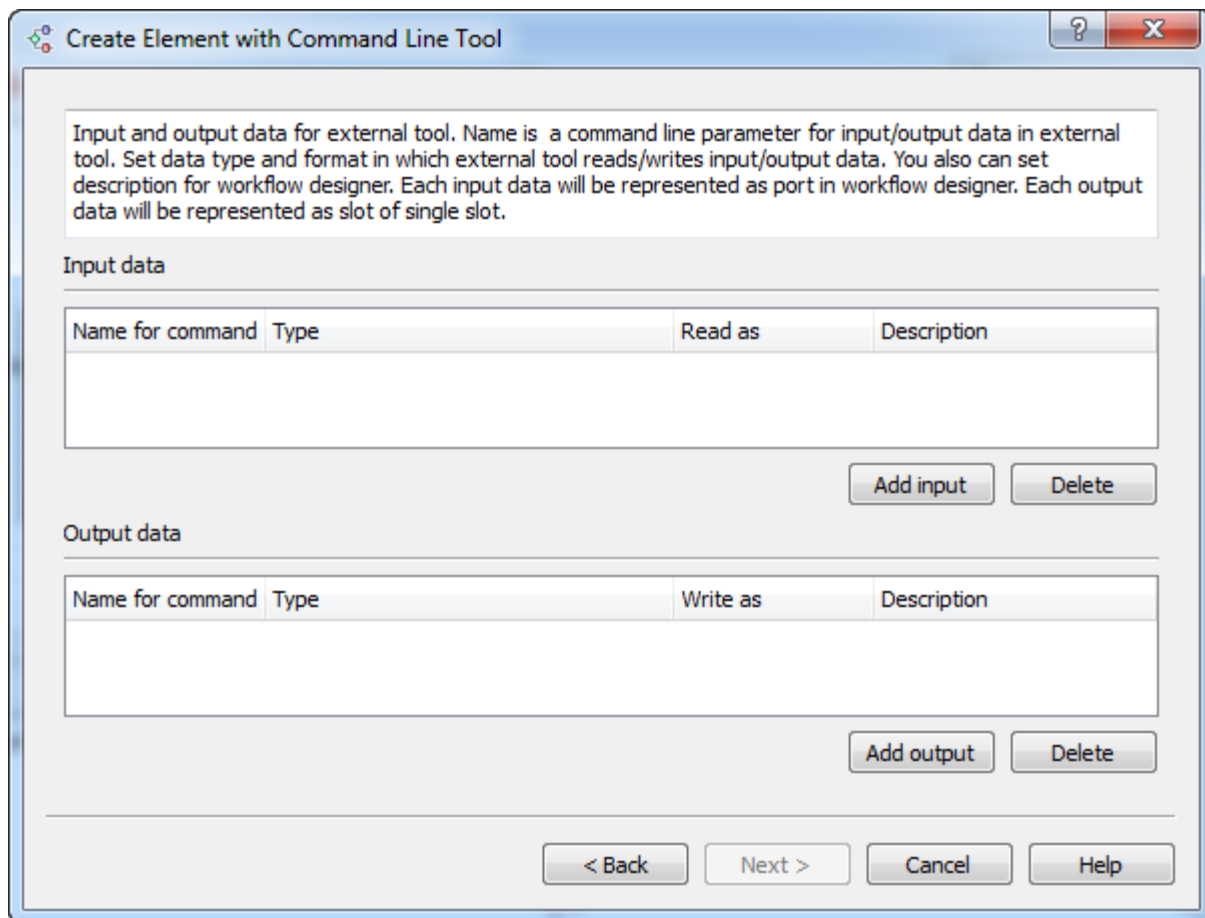
To create an element for a command line tool select either *Actions > Create element with command line tool* in the main menu or the following icon on the toolbar:



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 screenshot shows a window titled "Create Element with Command Line Tool". Inside, there is a text area for "Name and description for new workflow element." with a status message: "Status: Please set the name for the new element." Below this, there are two input fields: "Element description" and "Name". The "Name" field is currently empty. Below the "Name" field is a large text area for "Description". At the bottom of the window, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

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

The image shows a software dialog box titled "Create Element with Command Line Tool". It contains a text area with instructions, two tables for input and output data, and navigation buttons at the bottom.

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 |
|------------------|------|---------|-------------|
|                  |      |         |             |

Add input Delete

Output data

| Name for command | Type | Write as | Description |
|------------------|------|----------|-------------|
|                  |      |          |             |

Add output Delete

< Back Next > Cancel Help

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.

Another parameters for external tool. You must set name for parameter and its type. You also can set description for workflow designer. Each parameter will be represented as parameter of workflow element.

Parameters

| Name | Type | Description |
|------|------|-------------|
|------|------|-------------|

Add attribute Delete

< Back Next > Cancel Help

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.

Execution string and element's description. To substitute input, output data or parameter, use it's name with prefix \$ in execution string. You can set parameterized description for new element(description that appears not in property editor but on element itself). In parameterized description you also can use parameters substitution with prefix \$. If file paths in the execution string contain spaces, they must be enclosed with quotes.

Command line template

Execution string

Parameterized description

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:

