

# Model I/O JSON Schema

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## Input

### Root

Name	Type	Allowed Values	Description
id	String		The identifier of the input
name	String		The name of the input (human readable)
description	String		The description of the input (human readable)
obligation	Boolean	true false	This is true if the input is mandatory, false otherwise
hasDefault	Boolean	true false	This is true if the input has a default value, false otherwise
inputType	String	individual array	This property defines if this input is a single object (individual) or a list of objects (array).
valueType	String	value keyValue	This property defines if the value for this input is expected to be a value or a key-value pair (encoded as key=value).
valueKey	JSON Object		This property describes the key object of inputs whose valueType is 'keyValue'.
valueSchema	String	url bbox number_parameter string_parameter sat_product	<p>This property defines the schema of the value, i.e. how the value is interpreted.</p> <p>When the value schema is url, the value is expected to be valid 'ready to use' URL.</p> <p>When the value schema is bbox, the value is expected to be a bounding box in the form west,south,east,north.</p> <p>The schema sat_product is expected to be a valid identifier of a satellite product. Presently, supported satellite products include: Sentinel 2.</p> <p>The schema number_parameter is expected to be a number.</p> <p>The schema string_parameter is expected to be a string.</p> <p>When the schema is one of bbox, number_parameter, string_parameter then the input object is saved as a model parameter (<a href="#">see here</a>).</p>
value	String		The value of this input. This property is taken into account only if this input has inputType=individual.
valueArray	String Array		The array of values of this input. This property is taken into account only if this input has inputType=array.
valueKeyArray	JSON Object Array		The array of valid keys for setting the values in valueArray of this input in case the valueType is 'keyValue'. The objects of this array must of type <a href="#">valueKey</a> .
valueArrayInterpretation	String	replace extend	This property defines the interpretation of the provided valueArray for an input of type array. When this property is set to extend, the list in valueArray is used to extend the default list for this input. When this property is set to replace, the list in valueArray is used to replace the default list for this input. When this property is not set, the extend strategy is applied.
target	String		The target path where to store this input
defaultValue	String		The default value for this input (this is used only if valueType is individual)
defaultValueArray	String Array		The default value array for this input (this is used only if valueType is array)

### ValueKey

Name	Type	Allowed Values	Description
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key	String		The key
label	String		A human-readable label for this key

## Model Parameters

Model Parameters are saved in a json file called

`vlabparams.json`

The file is saved in the home directory of the execution. I.e. assuming your model is triggered by a `run.sh` defined by the following

```
{
  "repoPath": "run.sh",
  "targetPath": "run.sh",
  "pathType": "FILE"
}
```

you can print the `vlabparams.json` by adding the following line at the beginning of the `run.sh`

```
less vlabparams.json
```

An example of `vlabparams.json` is the following:

```
{
  "bboxid": "-10.1,-5.0,20.0,30.4",
  "param1Numericid": 2,
  "param2Numericid": 3.9,
  "param2Stringid": "example"
}
```

It is up to model developers to read and parse the `vlabparams.json` file.

## Output

### Root

Name	Type	Allowed Values	Description
id	String		The identifier of the output
name	String		The name of the output (human readable)
description	String		The description of the output (human readable)
outputType	String	individual array	This property defines if this output is a single object (individual) or a list of objects (array).
valueType	String	value keyValue	This property defines if the value for this output is expected to be a value or a key-value pair (encoded as key=value).
valueSchema	String	url bbox wms	This property defines the schema of the value, i.e. how the value is interpreted. When the value schema is url, the value is expected to be valid 'ready to use' URL. When the value schema is bbox, the value is expected to be a bounding box in the form west,south,east,north. When the value schema is wms, the value is expected to be JSON Object representing a <a href="#">wms layer</a> .
value	String		The value of this input. This property is taken into account only if this output has outputType=individual.
valueArray	String Array		The array of values of this input. This property is taken into account only if this output has outputType=array.
target	String		The target path where to this output is stored

### WMS Layer

Name	Type	Allowed Values	Description
url	String		The base URL of the WMS
name	String		The layer name to be displayed
protocol	String		The protocol, including the version. E.g. urn:ogc:serviceType:WebMapService:1.1.1:HTTP