

# Merge Interpolation

## Interpolation

### Input

- inputVariable ( 1 or more input time series)

### Options

- interpolationType (closest distance or bilinear)

### Output

- outputVariable

### Description

This transformation can be used to map multiple grids to a single output grid.

This transformation consists of 2 steps:

- 1) All input time series are mapped by using an spatial interpolation to the output grid.
- 2) All the time series created in step 1 are merged to a single grid in the output time series

### Application

This transformation can be used to merge several output grids to single output grid even if the input grids have a different grid than the output. For example the results of a Delft3D-FM model that has been run on multiple computational domains can be imported as is, i.e. with the data spread out over the multiple domains. This way of data handling improves the efficiency of data display. However, you might want to export the model output as 1 single grid. In that case you can make use of this merge interpolation, to merge the data from the different computational domains into 1 single grid for export.

### Configuration example

```
<transformation id="merge interpolation example">
  <merge>
    <interpolation>
      <inputVariable>
        <variableId>input</variableId>
      </inputVariable>
      <interpolationType>closestDistance</interpolationType>
      <outputVariable>
        <variableId>output</variableId>
      </outputVariable>
    </interpolation>
  </merge>
</transformation>
```

```

<variable>
  <variableId>SigmaLayer_0_0000</variableId>
  <timeSeriesSet>
    <moduleInstanceId>Partitions_DFlowFM</moduleInstanceId>
    <valueType>grid</valueType>
    <parameterId>C.simulated.u</parameterId>
    <qualifierId>SigmaLayer_0_0000</qualifierId>
    <locationId>DFlowFM</locationId>
    <timeSeriesType>temporary</timeSeriesType>
    <timeStep unit="nonequidistant"/>
    <relativeViewPeriod unit="hour" start="-6" end="0"/>
    <readWriteMode>add originals</readWriteMode>
  </timeSeriesSet>
</variable>
<variable>
  <variableId>SigmaLayer_0_0001</variableId>
  ...
</variable>
...
<variable>
  <variableId>SigmaLayer_0_0011</variableId>
  ...
</variable>
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  <variableId>Merge</variableId>
  <timeSeriesSet>
    <moduleInstanceId>Merge_Partitions_DFlowFM</moduleInstanceId>
    <valueType>grid</valueType>
    <parameterId>C.simulated.u</parameterId>
    <locationId>DFlowFM</locationId>
    <timeSeriesType>simulated historical</timeSeriesType>
    <timeStep unit="nonequidistant"/>
    <relativeViewPeriod unit="hour" start="-6" end="0"/>
    <readWriteMode>add originals</readWriteMode>
  </timeSeriesSet>
</variable>
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  <merge>
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      </inputVariable>
      <inputVariable>
        <variableId>SigmaLayer_0_0001</variableId>
      </inputVariable>
      ...
      <inputVariable>
        <variableId>SigmaLayer_0_0011</variableId>
      </inputVariable>
      <outputVariable>
        <variableId>Merge</variableId>
      </outputVariable>
    </simple>
  </merge>
</transformation>

```