

NETCDF-CF_TIMESERIES Export

Overview



This export is available in DELFT-FEWS versions after 28-10-2009 (FEWS version 2009.02)

Exports data to NetCDF files which comply to the CF 1.4 standard.

To indicate that data values are missing, NetCDF-CF exports use float value 9.96921e+036 by default. It is possible to change it by entering a different missing value (NaN or other) in the configuration files. Use option <exportMissingValue> in TimeSeriesExport module, and <missVal> in GeneralAdapter. More information about the cf standards can be found at: <http://cfconventions.org/Data/cf-standard-names/current/build/cf-standard-name-table.html>

There are six types of NetCDF-CF exports which can be defined:

- Time series ([NETCDF-CF_TIMESERIES](#))
- Profiles ([NETCDF-CF_PROFILE](#))
- Grids ([NETCDF-CF_GRID](#))
- Time series ([NETCDF-CF_TIMESERIES_MATROOS](#))
- Profiles ([NETCDF-CF_PROFILE_MATROOS](#))
- Grids ([NETCDF-CF_GRID_MATROOS](#))

Configuring the export

An example of the NETCDF-CF_TIMESERIES export will be given here.

In FEWS, it is possible to couple time series with pre-configured properties. From 2021.02 the properties can be exported to the NETCDF file as NETCDF attributes. See a config example below. Using the example, the name of the NETCDF attribute will be systemid, the value will be the value of timeSeriesProperty with the name rivieren2, that belongs to the exported time series.

Since 2021.02 it is also possible to import NETCDF attributes into FEWS and save them as timeSeriesProperty. You can see a config example for that here: [NETCDF-CF_GRID](#)

ExportNetcdf_Timeseries 1.00 default.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<timeSeriesExportRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.wldelft.nl/fews
http://fews.wldelft.nl/schemas/version1.0/timeSeriesExportRun.xsd">
  <export>
    <general>
      <exportType>NETCDF-CF_TIMESERIES</exportType>
      <folder>%REGION_HOME%/Export/netcdf/0D</folder>
      <exportFileName>
        <name>.nc</name>
        <prefix>
          <timeZeroFormattingString>yyyyMMddHHmm</timeZeroFormattingString>
        </prefix>
      </exportFileName>
      <idMapId>IdExportNetCDF</idMapId>
      <exportMissingValueString>-999</exportMissingValueString>
      <exportTimeZone>
        <timeZoneName>GMT</timeZoneName>
      </exportTimeZone>
    </general>
    <properties>
      <string key="timeseriesproperty:rivieren1" value='netcdfattribute:discharge_forcing_id'
/>
      <string key="timeseriesproperty:rivieren2" value='netcdfattribute:systemid ' />
    </properties>
    <timeSeriesSet>
      <moduleInstanceId>ExportNetcdf_Timeseries</moduleInstanceId>
      <valueType>scalar</valueType>
      <parameterId>Q.udm</parameterId>
      <locationSetId>DMFlowPoints</locationSetId>
      <timeSeriesType>simulated historical</timeSeriesType>
      <timeStep unit="nonequidistant"/>
      <relativeViewPeriod unit="day" start="-365" end="365"/>
      <readWriteMode>add originals</readWriteMode>
    </timeSeriesSet>
  </export>
</timeSeriesExportRun>
```

An example of the IdMapping used for the NETCDF-CF_TIMESERIES export will be given below. In this example, the mapped locations correspond to the locations of the locationsSet as defined above in the ExportNetcdf_Timeseries.xml.

IdExportNetCDF 1.00 default.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<idMap version="1.1" xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/idMap.xsd">
  <parameter internal="Q.udm" external="discharge" externalQualifier1="discharge (not standardname, just
for test)"/>

  <location internal="DMTak_1001" external="1001"/>
  <location internal="DMTak_1002" external="1002"/>
  <location internal="DMTak_1003" external="1003"/>
  <location internal="DMTak_1004" external="1004"/>
  ...
  <location internal="DMTak_6115" external="6115"/>
</idMap>
```

NetCDF standard names

If the parameter has an entry in the standard name CF table, you can enter this standard name to the parameters.xml file. The value of this standardName element will be added as the standard_name attribute for this variable in the exported netcdf file.

IdExportNetCDF 1.00 default.xml

```
<parameter id="P.obs" name="Observed Rainfall">  
  <shortName>P.obs</shortName>  
  <standardName>precipitation_amount</standardName>  
</parameter>
```