SHD - Swiss Hydro Data

Overview

Imports Swiss Hydro Data time series data as ASCII files that are delivered to FOEN in Switzerland. The files contain discharge time series in m3/s and water levels in cm. The files have a name that contains the delivery date ("hbchaFEWS.2016041223.txt"), this information is not used when importing the files..

Configuration (Example)

A complete import module configuration consists of an ID Mapping file and an Import Module Instance file. Examples of the two are provided below.

The SHD file has the following characteristics:

- Header lines start with a %
- A new data section (time series) in the file starts with %ASCI or ASCII
- The second header line contains the location ID, parameter ID and qualifier ID.
  In the old header formatting (using <importType> "SHD"): the header *%GL-04140875-10-0* is split by the '-' character, so first part %GL is ignored, the second part is used as location ID, the third as the parameter ID and the forth as the qualifier ID (if present).
  In the new header formatting (using <importType> "shd-extloc", available since 2017.01): the header %GL-04140875-10-0 the starting % is removed, then the header is split by the '-' character, the first and second part are used as location ID (separated by '-', "GL-04140875" for the example), the third as the parameter ID and the forth as the qualifier ID.
- The third header line contains the unit. The header *%Schwanden Sernf - Abfluss - m3/s* is split by the '-' character, only last part is used (m3/s)
- All rows that does not start with % are data lines
- Missing value identifier is expected to be: blank
  - First column contains data with format "dd.MM.yyyy"
  - Second column contains time with format ""HH:mm:ss" or ""HH:mm"
  - Third column contains value with decimal point.

ModuleConfigFiles/

The following example of an Import Module Instance will import the time series as equidistant 1 hour interval series for time zone GMT+1 hour.

Import_SHD.xml

```
<timeSeriesImportRun 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/timeSeriesImportRun.
xsd">
        <import>
                <general>
                        <importType>shd-extloc</importType>      <!-- use importType "SHD" for the old location
id formatting -->
                        <folder>$IMPORT_FOLDER_ROOT$//hbcha</folder>
                        <failedFolder>$FAILED_FOLDER_ROOT$</failedFolder>
                        <idMapId>ImportSwiss</idMapId>
                        <unitConversionsId>ImportHydroUnits</unitConversionsId>
                        <missingValue>-999</missingValue>
                        <importTimeZone>
                                <timeZoneOffset>+01:00</timeZoneOffset>
                        </importTimeZone>
                        <dataFeedId>Import.HBCHA</dataFeedId>
                </general>
                <timeSeriesSet>
                        <moduleInstanceId>Observed</moduleInstanceId>
                        <valueType>scalar</valueType>
                        <parameterId>Q.m</parameterId>
                        <locationSetId>HydroStations_ALL</locationSetId>
                        <timeSeriesType>external historical</timeSeriesType>
                        <timeStep unit="hour" multiplier="1"/>
                        <readWriteMode>add originals</readWriteMode>
                </timeSeriesSet>
                <timeSeriesSet>
                        <moduleInstanceId>Observed</moduleInstanceId>
                        <valueType>scalar</valueType>
                        <parameterId>H.m</parameterId>
                        <locationSetId>HydroStations_ALL</locationSetId>
                        <timeSeriesType>external historical</timeSeriesType>
                        <timeStep unit="hour" multiplier="1"/>
                        <readWriteMode>add originals</readWriteMode>
                </timeSeriesSet>
        </import>
</timeSeriesImportRun>
```

IdMapFiles/

The ID mapping file will contain a mapping of the parameters and locations in the data file with the internal parameter and location ID's of the Delft-FEWS application.

sample of IdMapSHD.xml

```
<idMap 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" version="1.1">
        <!--mapped Observed water level data series-->
        <parameter external="2" internal="H.m"/>
        <parameter external="10" internal="Q.m"/>
        <locationIdFunction externalLocationFunction="@EXTERNAL_ID@" internalLocationSet="
HydroStations_ImportSwiss"></locationIdFunction>
</idMap>
```

Example File/

hbchaFEWS.2016041223.txt

```
%ASCII-Tabelle/von HydroPro; ©HBCHa 2016
%HBBEa-A013-10-10
%Zweisimmen - Abfluss - m3/s
11.04.2016        01:00        6.589
11.04.2016        02:00        6.610
11.04.2016        03:00        6.494
11.04.2016        04:00        6.411
11.04.2016        05:00        6.395
11.04.2016        06:00        6.291
11.04.2016        07:00        6.254
11.04.2016        08:00
11.04.2016        09:00        6.116
11.04.2016        10:00        6.145
........
```

Java source code

Delft-FEWS Java import parser source code: ShdTimeSeriesParser.java