SeaDataCloud

SWE ingestion service
SOS Viewing service

Christian Autermann, 52°North GmbH

Second annual meeting, Barcelona, Spain, 8-9 November 2018
sdn-userdesk@seadatanet.org – www.seadatanet.org
SWE Ingestion Service
Objectives

• Facilitate the publication of observation data (streams)
  – Operate under the supervision of the PI of the observatories
  – Link from CDIs to (possibly unvalidated) near-real-time data

• Describe observatories (or networks of observatories) to
  – Be able to receive, decode and check data
  – Enrich CDI metadata with detailed information about sensors
Deliverables

• D9.9 – Specification of the SWE ingestion service, including SWE profiles and architecture – (M10, End of August 2017)

• D9.10 – SWE ingestion service and user interfaces operational – (M19, End of May 2018)
Architecture
SWE Ingestion Service

```xml
<sml:SimpleProcess>
    <sml:inputs>
        <sml:InputList>
            <sml:input name="csv-input" xlink:href="#outputStreamStructure"/>
        </sml:InputList>
    </sml:inputs>
    <sml:outputs>
        <sml:OutputList>
            <sml:output name="csv-output" xlink:href="#outputStreamStructure"/>
        </sml:OutputList>
    </sml:outputs>
    <sml:parameters>
        <sml:ParameterList>
            <sml:parameter name="file-filter-config">
                <swe:Count definition="https://52north.org/swe-ingestion/csv-file-filter#header-line-count">
                    <swe:label>Header Line Count</swe:label>
                    <swe:description>The number of lines to strip from the csv file</swe:description>
                    <swe:value>3</swe:value>
                </swe:Count>
            </sml:parameter>
        </sml:ParameterList>
    </sml:parameters>
</sml:SimpleProcess>
```
smle /smle/ — The Friendly SensorML Editor

You can choose between different templates for your Ingestion workflow:

- Create Ingestion Workflow for MQTT sources
  Based on a template you can create an Ingestion Workflow for MQTT sources.

- Create Ingestion Workflow for CSV files on FTP server
  Based on a template you can create an Ingestion Workflow for CSV files on FTP server.

This tool was developed as part of the SeaDataCloud project. SeaDataCloud is funded by the Horizon 2020 Framework Programme for Research and Innovation (H2020-INFRAIA-2016-1) of the European Union under grant agreement number 730960.
Helgoland
Helgoland

Second annual meeting, Barcelona, Spain, 8-9 November 2018

sdn-userdesk@seadatanet.org – www.seadatanet.org
Helgoland

Second annual meeting, Barcelona, Spain, 8-9 November 2018

Legend
- Mean temperature
- Seawater salinity
- Air temperature
- Seawater salinity

sdn-userdesk@seadatanet.org – www.seadatanet.org
Future work – Within SeaDataCloud

- Prototype is ready
- Continue to different integrate data sources
- Support data providers
Future work – Beyond SeaDataCloud

- Integration of QA/QC mechanisms
- Event detection
  - In other projects: analysis of insitu and COPERNICUS data using ML for flooding area detection, element inputs in streams of water
SOS Viewing Services
SOS Viewing Services

- Integration of SensorML metadata
- Support for new observation types: out-of-band, spectral data
- Improvements regarding
  - (Near-) real-time data
  - Performance
  - User experience
  - Discovery (facet search, free-text search)
  - Vocabularies
Deliverables

- D10.18 – SOS viewing services for data streams operational – (M31, End of May 2019)
Thank you for your attention!

- c.autermann@52north.org
- jirka@52north.org