



INSPIRE Geoportal Mainstreaming backend infrastructure

JRC INSPIRE Team

64th MIG-T meeting – January 21-22, 2021

Improvement of the harvesting system

- The INSPIRE Geoportal (backend) is a highly **customized** system:
 - code is often **difficult to understand**, **hard to maintain/extend**
 - cannot be integrated with other existing tools/modules
 - overall maintenance & operation is **expensive**
- Sustainability of INSPIRE core infrastructure components:
 - main idea is to reduce day-to-day operation while retaining control on evolution, (also) through **partnerships** with relevant stakeholders & communities
 - for the Geoportal:
 - future role as INSPIRE monitoring component
 - limited addition of new features (except an **API** and related **OpenAPI** documentation)
 - migration to a **cloud environment**, backend based on **GeoNetwork**

Why GeoNetwork?

- GeoNetwork is a **reference catalogue application** within INSPIRE:
 - used by 24 Member States & EFTA countries
 - used by the EEA and the European Commission (e.g. ESTAT)
- GeoNetwork is **open source** (under the GPL) & is an **OSGeo** project
 - code maturity, large base of users & developers
 - current stable version is v. 4.0.2
 - main improvement (funded by the EEA) is on **search** – Elasticsearch replacing home-made search based on Lucene
- Where we are:
 - spring 2020: first (positive) assessment ✓
 - summer/autumn 2020: assessment of the future v.4 ✓
 - this week: opening of call for tenders ✓
 - spring 2021: start the migration

Feasibility assessment on a possible migration of the Geoportal to GeoNetwork

- Performed by GeoCat in April/May 2020, includes:
 - requirements of the INSPIRE Geoportal
 - gap analysis between the INSPIRE Geoportal and GeoNetwork
 - proposal of an alternative GeoNetwork-based setup of the Geoportal + demo
- Conclusions:
 - results are positive and suggest that integration is possible
 - some limitations emerged, e.g. impossibility to use OR and NOT conditions in OGC filters
 - some doubts remain about the performance in managing big catalogues
 - further test/work is necessary before the Geoportal migration

Test on GeoNetwork 4.0 alpha

- Performed internally by the JRC INSPIRE team:
 - installed using the [Docker container](#) provided directly by GeoNetwork
 - sample used for the test: both big and small catalogues
 - Greece
 - Germany
 - France
 - Poland
 - Italy
- Some problems were found when working with the different implementations (e.g. the distributed approach of Poland).

Test on GeoNetwork 4.0 alpha

- Meeting with GeoNetwork developers to report the outcome of our internal test and to provide feedback (end of July 2020).
- Some misconfiguration errors solved with their help.

Outcome

- During the meeting it was highlighted that the harvester of GeoNetwork v.4 is similar to the one of v.3. The improvements are mostly on the search experience.
- An improvement could be to develop a new GeoNetwork harvesting module for a micro-service approach, which was also presented in the GeoNetwork user meeting 2020.

<https://geonetwork-opensource.org/usermeeting2020.html>

Mainstreaming backend infrastructure

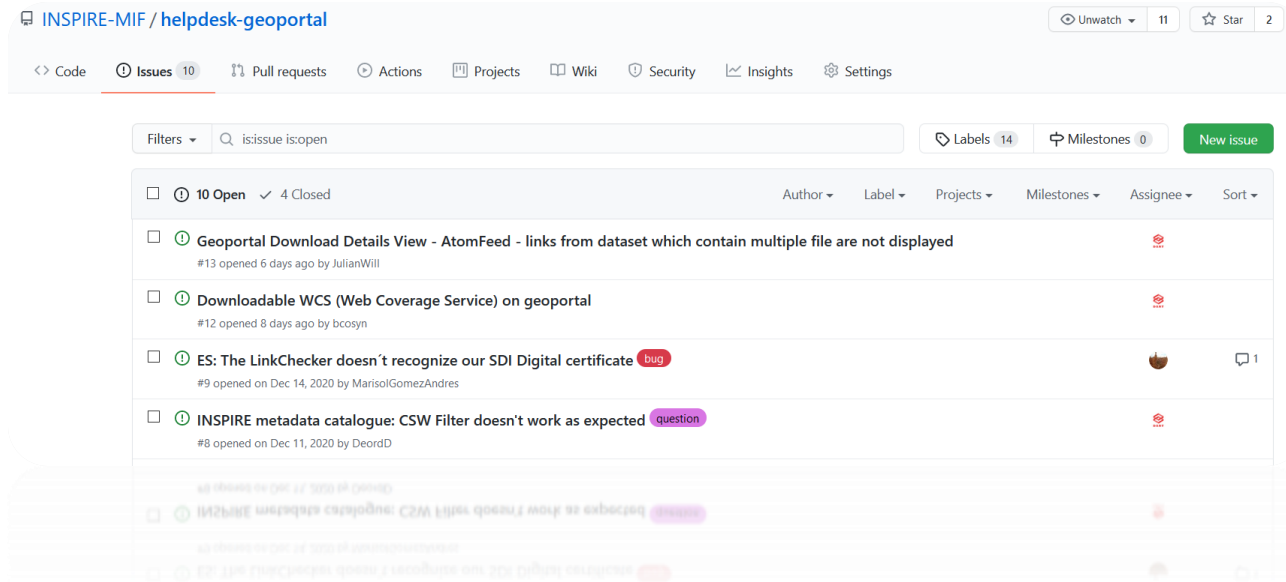
Plan

- Handle the issues found during the JRC testing
 - integrating the functionalities provided by GeoNetwork to support all the features required by INSPIRE (e.g. linkage checking)
 - implementing a micro-service based harvesting system
 - harvesting dashboard (GeoNetwork based) protected with EU Login
 - configurable harvesting options (e.g. OGC filters)
 - integrating the linkage simplification approach to be agreed with MS
- During the work on the new GeoNetwork based system, the support on the current Geoportal will be limited to major bugs highlighted in the helpdesk.

INSPIRE Geoportal helpdesk on GitHub

- The INSPIRE Geoportal helpdesk has been migrated on GitHub:

<https://github.com/INSPIRE-MIF/helpdesk-geoportal>



- The old issues are still available in the archived website:

<https://wayback.archive-it.org/12090/20201221105314/https://ies-svn.jrc.ec.europa.eu/issues>

Thank you!



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