

Towards a Federated Collaborative Platform

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From OGC Testbed13 to the Future

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OGC Testbed 13 - Recall



- Part of the Open Geospatial Consortium (OGC) Interoperability Program (IP).
- The IP provides global, hands-on, collaborative prototyping for rapid development and delivery of proven candidate specifications to the OGC Standards Program.
- A Testbed is a collaborative research and development effort to develop, architect, test, and demonstrate candidate standards for interoperability.
- In a Testbed participants collaborate to examine specific geo-processing interoperability questions posed by the initiative's Sponsors.



- Thread composed of two independent Work Packages. Sponsored by NRCan and ESA.
- **Cloud API interoperability**
Look into how Cloud APIs can be standardized, so interaction with different clouds would have minimal impact on the customer's components. Changing cloud services across providers would be a smooth experience.
- **Thematic Exploitation Platform - Application portability**
Investigate how to easily transfer an application or application components from one cloud service to a comparable cloud service and run the application in the target cloud service, without making significant changes to the application code.

Primary, Application Package for (Thematic) Exploitation Platforms

- Definition of a package for user applications enabling automatic management (upload, deploy, run) and sharing between platforms
- Definition and execution of bulk processing (time-driven) for historical data and continuous data generation

Secondary, gain experience with:

- GeoJSON OpenSearch extension (17-003r0)
- AuthN and AuthZ (IdP+STS) in interoperability context
- *Accounting information exchange interface between platforms (not being pursued)*

EOC Thread status



- Overall both sub-groups have converged on these main elements:
 - WPS
 - Containers (i.e. Docker and Docker Registry)
- Two major alternatives on the Application Package description:
 - OWS Context
 - WPS Process Description
- *Information is reserved until Engineering Reports are approved by Working Groups. Interested parties should join the OGC TB as an observer to obtain more information until then.*



Testbed schedule

CFP Issuance (all approvals received prior)	25 January
CFP Proposals Due– Part 1 CFP	20 February
TEM-1	28 February
TEM-2	7 March
Bidder Notifications begin	1 March
Kickoff Workshop– Reston, VA	4-6 April
... work work work ...	
Demo Event	12-13 December

Draft Engineering reports are expected by October.

First installations and tests are now on-going in both sub-groups.

“Bring the User to the Data”

- ESA has 7 Thematic Exploitation Platforms (TEP) setup contracts active (see other presentation):
 - Coastal,
 - Forestry,
 - Hydrology,
 - Geohazards (the CEOS FDA Pilot),
 - Polar,
 - Urban themes; and
 - Food Security
- ESA has also sponsored the appearance of EO Cloud (i.e. IPT Poland - Innovative Platform Testbed), acting as an anchor tenant and making resources available to select project through an open call mechanism)
- The IPT concept will continue in the “Copernicus Data and Information Access System” (DIAS – see other presentation)
- All of this is part of an on-going process to create a “Network of EO Exploitation Platforms”, or a “Network of Resources”, linked through a set of open interfaces → **Common Architecture.**

- ESA will setup a dedicated team (under a dedicated contract) for the definition of a reference architecture and implementation for the EO Exploitation Platforms and their interconnection into a Federated Collaborative Platform.
- The plan is to consolidate all work done over the last 10+ years on the subject (funded by ESA GSTP/TRP/EOEP, EC FP7/H2020).
- The team will coordinate as much as possible with the different stakeholders through the GSCB, the OGC and CEOS (WGISS) for the definition of this architecture and implementation.
- ESA and OGC have active discussions about the use of an OGC Domain Working Group as a open forum for Architecture discussions.

Near future Activities



- OGC Testbed 14 Sponsorship definition – suggestions welcome
- Issue of the ESA ITT for the Common Architecture
- OGC Testbed 13 close-out → Demo Event in Reston, VA
- OGC Testbed 14 - Call for Participation
- KO of the ESA ITT for the Common Architecture
- (TBC) An ad-hoc meeting at the OGC TC Meeting in March 2018.

Alignment with partner Agencies in CEOS WGISS





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