

EGI and INDIGO-DataCloud services for the ESA EO Collaborative Ground Segment

Attendees:

- Gioacchino Buscemi (ESA)
- Barbara Angelucci (ESA)
- Davide Salomoni (INFN/Indigo-DC)
- Giacinto Donvito (INFN/Indigo-DC)
- Enol Fernandez (EGI Foundation)
- Diego Scardaci (EGI Foundation/INFN)

Agenda: <https://indico.egi.eu/indico/event/3356/>

Notes

Roundtable to introduce the participants.

Intro EGI FedCloud by Enol Fernandez

Slides available in agenda

Intro Indigo-DataCloud by Davide Salomoni

Slides available in agenda

Questions:

- Relationship between EOSC and INDIGO-DC: Aim of INDIGO-DC is providing key technical services to the EOSC. They will be published in the EOSC catalogue.
- How to use INDIGO-DC services on a cloud infrastructure: INDIGO-DC provides a set of services able to run on different types of cloud (public or private). Indigo services are compliant with the most common Cloud management frameworks, OpenStack, OpenNebula, AWS, Microsoft Azure, etc. ESA should pick-up from the INDIGO catalogue, the services that best fit with their needs.
- VMware support: INDIGO-DC services do not support VMware.

EGI, EUDAT and INDIGO-DC submitted a proposal to the EC call EINFRA-12 with the aim to start the implementation of the EOSC. The project, EOSC-hub, led by EGI, will start in January 2018 (if funded).

EOSC-hub will publish the EOSC service catalogue. Apart from technical services, such catalogue will also include several thematic services developed within different European research collaborations (including some of the main ESFRI projects).

ESA EO Collaborative Ground Segment - Introduction and use cases for EGI and INDIGO-DataCloud services by Gioacchino Buscemi

The most important point for ESA is understanding if the current infrastructure can be moved to cloud. This means understanding if the applications can be installed, if the performance requirements are satisfied, if the requested level of security is satisfied, etc.

For each service, there are several applications and VMs running in the current infrastructure. There are interactions between different applications.

Diego suggests to run some tests to verify if the current applications running in VMware can be moved to a public cloud (e.g OpenStack). EGI FedCloud can offer resources and support for testing aim. ESA should identify some simple case to perform tests. This exercise could allow ESA to know better both EGI infrastructure and INDIGO-DC services.

Davide asks if ESA is willing to launch any tender/ITT to move the infrastructure to a “Scientific Cloud” since the problem is complex and requires many effort.

Gioacchino says that, before launching any tender, he wants to understand if the cloud solution can satisfy their needs.

There’s a general agreement that we should start with some tests to assess the feasibility.

Barbara underlines that ESA has strong security requirements. EGI should be able to satisfy such requirements, anyway technical details are needed to define the better solution.

For more information on EGI security please refer to:

- EGI Security Policy Group wiki page: https://wiki.egi.eu/wiki/Security_Policy_Group
- EGI CSIRT wiki page: https://wiki.egi.eu/wiki/EGI_CSIRT:Main_Page

Cost of the EGI resources: EGI can offer resources both for pay or for free. Resource providers interested to support the case for scientific reasons could offer resources for free. Anyway, if the amount of requested resources is huge, it could be hard finding resources for free. In such case, a pay-for-use approach can be considered.

A draft price schema for EGI pay-for-use is available at <https://wiki.egi.eu/wiki/Pay-for-use>. Not all providers are included yet.

Gioacchino raises the problem of the IPRs if ESA moves to open source software. Davide underlines that almost all INDIGO-DC software is released under an Apache 2 license, so there is not a real problem. Diego confirms that the same is valid for EGI.

ESA is also interested on Cloud Bursting (using EGI FedCloud resources to scale-up) and EO data dissemination.

Barbara suggests that some tests for Cloud Bursting could be executed.

About data dissemination, Diego underlines that many EGI RPs would be very happy to host subsets of EO data for free (e.g. rolling archive of a given region). In general, EGI is very keen to disseminate EO data (including Copernicus). A new EGI service, the Data Hub

(based on one INDIGO-DC services, OneData - see <https://onedata.org/>) has been designed to easily distributed big data repository on a geographical scale.

Next Steps

Gioacchino needs to discuss internally in ESA to understand if first tests can be started. This will require some time.

Likely, the collaboration could move further after the Summer.

EGI and INDIGO-DC people can provide any additional information that could help Gioacchino and Barbara in the internal discussions.

