



Contribution ID: 83

Type: **Presentation**

### **Access climate data in ESG from the EGI infrastructure**

The work of the Earth Science(ES)activity of EGI-InSPIRE SA3 is devoted to ES data access. The activity is investigating and following the development of specialized data access and management methods in the area of Earth Science. Since Grid Infrastructures have been exploited by ES, methods of how running jobs can access data, stored outside of the infrastructure, have been discussed. The community is highly interested to use the OPeNDAP protocol and corresponding Hyrax Data Server. Hyrax offers many interesting features that go beyond high performance access to distributed datasets, such as an extensible component-based architecture, multiple data representations, static and dynamic THREDDS catalogues and more. One challenge is to integrate Hyrax based infrastructures with compute Infrastructures like EGI.

To address this condition a testbed, deployed on EGI, consists of applications that need climate data, stored in the distributed Earth System Grid (ESG). On one hand, the Grid user belongs to a Virtual Organization and owns a certificate provided by his national certificate authority. On the other hand, the user needs to access data from ESG. ESGF (Earth System Grid Federation) itself is an international collaboration to facilitate access to earth-science climate data. The ESGF system has been deployed at a number of sites around the world and a number of projects are exploiting and building on this infrastructure. They are using a federated security infrastructure which is not interoperable with the one of EGI. In the EGI testbed .different application scenarios have been installed to identify the problems and to find solutions also in the case of security. The solutions may be based on the ideas of the ongoing developments of the ESG community, who is developing mechanisms to manage automatic mapping of credentials, provide data access adapters and call heterogeneous security protocols. We will present this ongoing work between EGI-Inspire and ESG

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**Track Classification:** User Community