Geophysical Research Abstracts
Vol. 14, EGU2012-11142, 2012
EGU General Assembly 2012

European grid services for global earth science

S. Brewer (1) and G. Sipos (2)
(1) EGI.eu, Amsterdam, Netherlands (steve.brewer@egi.eu), (2) EGI.eu, Amsterdam, Netherlands (gergely.sipos@egi.eu)

This presentation will provide an overview of the distributed computing services that the European Grid Infrastructure (EGI) offers to the Earth Sciences community and also explain the processes whereby Earth Science users can engage with the infrastructure. One of the main overarching goals for EGI over the coming year is to diversify its user-base. EGI therefore – through the National Grid Initiatives (NGIs) that provide the bulk of resources that make up the infrastructure – offers a number of routes whereby users, either individually or as communities, can make use of its services. At one level there are two approaches to working with EGI: either users can make use of existing resources and contribute to their evolution and configuration; or alternatively they can work with EGI, and hence the NGIs, to incorporate their own resources into the infrastructure to take advantage of EGI's monitoring, networking and managing services. Adopting this approach does not imply a loss of ownership of the resources. Both of these approaches are entirely applicable to the Earth Sciences community. The former because researchers within this field have been involved with EGI (and previously EGEE) as a Heavy User Community and the latter because they have very specific needs, such as incorporating HPC services into their workflows, and these will require multi-skilled interventions to fully provide such services.

In addition to the technical support services that EGI has been offering for the last year or so - the applications database, the training marketplace and the Virtual Organisation services - there now exists a dynamic short-term project framework that can be utilised to establish and operate services for Earth Science users.

During this talk we will present a summary of various on-going projects that will be of interest to Earth Science users with the intention that suggestions for future projects will emerge from the subsequent discussions:

• The Federated Cloud Task Force is already providing a cloud infrastructure through a few committed NGIs. This is being made available to research communities participating in the Task Force and the long-term aim is to integrate these national clouds into a pan-European infrastructure for scientific communities.

• The MPI group provides support for application developers to port and scale up parallel applications to the global European Grid Infrastructure.

• A lively portal developer and provider community that is able to setup and operate custom, application and/or community specific portals for members of the Earth Science community to interact with EGI.

• A project to assess the possibilities for federated identity management in EGI and the readiness of EGI member states for federated authentication and authorisation mechanisms.

• Operating resources and user support services to process data with new types of services and infrastructures, such as desktop grids, map-reduce frameworks, GPU clusters.