



Metadata harvesting, map-enabled data access and distributed monitoring in the Climate-G testbed

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The Climate-G testbed is a data-oriented research effort conceived in the context of the EGEE Earth Science Cluster Community and devoted to the Climate Change community. The testbed is an interdisciplinary effort joining expertise in the field of climate change and computational science and involves partners both in Europe and US. The main goal of Climate-G is to allow scientists carrying out geographical and cross-institutional data discovery, access, visualization and sharing of climate data. The main objectives of the testbed, the architecture, infrastructure and the scientific gateway (the Climate-G portal) have been presented in the last EGU conferences.

Conversely, this time, the central topics are:

- the metadata harvesting system exploiting the GRelC service and a GSI-based protocol to collect the relevant metadata information. The metadata hierarchy (three levels) will be presented too, to better understand the indexing mechanism adopted into the testbed;
- the web-based search page providing aggregated metadata information stored into the geographically spread grid metadata services and related to the distributed climate change datasets. This functionality has been included into the Climate-G Portal and basically it is map-enabled. The target of a “search experiment” can be the whole testbed (through the harvester) or a specific site (directly accessing to the related GRelC service). In both cases the user can transparently and easily select the metadata source, through a google map.
- the real time monitoring system of the Climate-G testbed providing charts, tables and reports about the distributed resources. It is a novel system providing a complete set of statistics about the available services. Mash-up and google maps are strongly adopted to provide a user-oriented and high-level interface.
- an OPeNDAP registry providing an aggregated view about the available OPeNDAP/THREDDS services. This registry represents a central point integrating several OPeNDAP/THREDDS resources. It basically provides browsing and access functionalities.

All of the aforementioned functionalities have been included into the Climate-G portal since it represents the central access point to the entire infrastructure.