Contribution ID: **22** Type: **poster**

Accessing Grid-based Data Via a Web Browser

Wednesday 9 May 2007 17:30 (20 minutes)

Describe the scientific/technical community and the scientific/technical activity using (planning to use) the EGEE infrastructure. A high-level description is needed (neither a detailed specialist report nor a list of references).

Researchers in the life sciences need easy but secure access to grid-based
data from their work stations. Their working environments are highly variable
(different OSes, tools, etc) and include platforms not typically supported by
gLite. Having secure access to grid-based data via a web browser facilitates
access to data without the need to install grid client software. Equally, other
communities could benefit such a solution to browse data, log files, or reports
residing in the grid.

Report on the experience (or the proposed activity). It would be very important to mention key services which are essential for the success of your activity on the EGEE infrastructure.

This project developed a system to access the grid-based data with a web-
browser. The system consists of two components. First we developed a trivial
web interface to the LHC File Catalog (LFC). This allows users to browse logical
file names and recover the transport URL of files to be accessed. Second and
most important we have added the https protocol to the DPM (Disk Pool
Manager) implementation of SRM (Storage Resource Manager). We adapted
the GridSite Apache module (http://www.gridsite.org/) to perform authorization
callouts to DPM. DPM facilitates the addition of new protocols and requires only
an http server for each DPM disk server running the modified GridSite module
and a minor configuration change on the DPM server.

With a forward look to future evolution, discuss the issues you have encountered (or that you expect) in using the EGEE infrastructure. Wherever possible, point out the experience limitations (both in terms of existing services or missing functionality)

The current prototype allows https access to grid-based data and provides
tangible benefits to grid users. The prototype uses standard grid certificates
allowing authorization based only on the user's identity (DN). It will be
extended to use VOMS proxies to allow full group and role authorization. One
could imagine also a more complete front-end that incorporates, for example,
file metadata and the ability to push files into the grid.

Describe the added value of the Grid for the scientific/technical activity you (plan to) do on the Grid. This should include the scale of the activity and of the potential user community and the relevance for other scientific or business applications

The primary benefit of this development is making grid-based data directly and
universally accessible, hence lowering the barriers for grid technology
adoption. Adding the https protocol to grid storage makes access to data easy
from a variety of existing languages and tools (web browsers included) without
needing to install any grid client software. The direct access to the storage
avoids needing to copy the data to an intermediate server as is typically done
for web portals.

Author: Mr JOUVENOT, Daniel (NA4)

Co-author: Mr LOOMIS, Charles (NA4)

Presenter: Mr JOUVENOT, Daniel (NA4)

Session Classification: Poster and Demo Session