



Contribution ID: 31

Type: Oral

An advanced web portal for accessing Grid resources with Virtual Collaboration features.

Monday 12 April 2010 15:30 (20 minutes)

The Virtual Control Room (VCR) is an open source web portal that puts together a rich collaborative environment with the simplified access to the gLite Grid resources. The latest version of the VCR is based on the Gridsphere 3 and Google Web Toolkit (GWT). It uses the DORII Java Common Library for accessing Grid resources, integrates DORII Workflow Management System, presents a much improved Application Manager, introduces tags for user-application mapping and support for robot certificates.

Detailed analysis

Registered portal users may access grid resources from the VCR 3.0 using their personal certificates, or the portal's robot certificate, the latter an approach that proved to be most useful for occasional users of the infrastructure. Users are linked to the various projects through the VCR tags so each user is presented with the correct set of resources that he is entitled to use, and his proxy certificate has the correct VOMS attributes set automatically. Integration of the scientific instrumentation is provided through a graphical Instrument Element client. The VCR's tunneling allows for remote access to the legacy control system and supports interactive application through visualization of the i2glogin client in a user's browser.

Conclusions and Future Work

Future enhancements will be based on the feedback provided by the users of the DORII and its follow-up projects (DORII+). One of the first additions will be support for the visualization using Gvid. Other improvements will come from the developments of a pure Java client for the gLite middleware that is the DORII common library.

Impact

VCR is the main user interface adopted by the DORII project. DORII focuses on application from three different fields of science (Experimental, Environmental, Seismic) which provide for a wide and diverse user base. The VCR portal has already been successfully applied for applications like the on-line and batch data analysis in experimental science, oceanographic and coastal observation and modeling (using imaging or through Mediterranean Ocean Observing Network) and network-centric seismic simulations. VCR is endorsed by EGEE's RESPECT program.

Keywords

Grid, Portal, e-Infrastructure, Scientific Applications, Virtual Collaboratory, Workflow

URL for further information

<http://www.dorii.eu/>

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Session Classification: Scientific Gateways and Portals

Track Classification: End-user environments, scientific gateways and portal technologies