Contribution ID: **15**   Type: **Demo**

g-Eclipse - Accessing grid infrastructures

Tuesday 23 September 2008 16:02 (1 minute)

Describe the activity, tool or service using or enhancing the EGEE infrastructure or results. A high-level description is needed here (Neither a detailed specialist report nor a list of references is required).

The g-Eclipse framework is a middleware independent tool for accessing grid infrastructures. Based on its abstraction layer it comes with a fully featured implementation for the gLite middleware, allowing job submission and monitoring, data management with GSIFTP, SRM and LFC and many other features. Therefore it provides a complete graphical user interface for accessing gLite based grids, supporting users, operators and software developers in their daily work on the EGEE infrastructure.

Report on the impact of the activity, tool or service. This should include a description of how grid technology enabled or enhanced the result, or how you have enabled or enhanced the infrastructure for other users.

Middleware providers most often do not have the resources to develop highly sophisticated user interfaces for their software. Therefore accessing grid infrastructures is still difficult and inexperienced users often face problems that drive them away from using grid computing at all. By providing a middleware independent and user friendly graphical user interface - based on the well-known and wide-spread Eclipse platform - g-Eclipse lowers the barrier of entering the world of grid computing for new users. Instead of spending hours to get in touch with the basic paradigms needed to access a given grid infrastructure, a g-Eclipse user is able to submit his first simple job to the grid within five minutes. Furthermore being a pure Java implementation g-Eclipse runs on any Java platform (e.g. Windows, Linux, Mac OS, etc.) and does not have any additional requirements on the client side such as a native UI installation.

Abstracts for online demonstrations must provide a summary of the demo content. Places for demos are limited and this summary will be used as part of the selection procedure. Please include the visual impact of the demo and highlight any specific requirements (e.g. network connection). In general, a successful demo is expected to have some supporting material (poster) and be capable of running on a single screen or projector.

The g-Eclipse demo will show the easy setup of the framework and the access to existing grid infrastructures. It will strongly focus on the gLite middleware but will also demonstrate the possibility to access other infrastructures based on the GRIA middleware and the Amazon Web Services (S3 and EC2). Whereas these parts will only show the most essential use cases for the underlying infrastructures, the gLite part will cover all available functionalities, i.e. job submission and management, data management, batch system administration, remote application development, visualization, monitoring, benchmarking and many more. The demonstration will

be supported by printed material like posters, flyers, newsletters and DVDs containing full g-Eclipse packages for the four supported platforms, i.e. Windows, Linux32/64 and Max OS X. For accessing grids a reliable internet connection will be mandatory.

Describe the added value of the grid for your activity, or the value your tool or service adds for other grid users. This should include the scale of the activity and of the potential user community, and the relevance for other scientific or business applications.

The g-Eclipse framework builds a common user interface for any grid middleware on top of its middleware independent abstraction layer. As g-Eclipse is based on Eclipse, which itself profits from the flexibility and extensibility of OSGi, the middleware providers are able to plug-in their middleware specific code in the g-Eclipse framework. This allows them to make use of g-Eclipse for accessing any grid infrastructure based on this middleware. Therefore g-Eclipse is a client for grid computing in general and - with the support of the Amazon Web Services - also for other grid concepts like cloud computing. Furthermore the g-Eclipse API can be used to build applications, making middleware access simple, reliable and scalable. Such applications can either make use of already available middleware implementations or can be based on the g-Eclipse abstraction layer. In the last case the applications have middleware independent character and may profit from any middleware specific plug-in.

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