

Ganga - an Optimiser and Front-End for Grid Job Submission (Demo)

Wednesday 9 May 2007 19:30 (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).

The presentation will introduce the Ganga job-management system (<http://cern.ch/ganga>), developed as an ATLAS-LHCb common project. The main goal of Ganga is to provide a simple and consistent way of preparing, organising and executing analysis tasks, allowing physicists to concentrate on the algorithmic part without having to worry about technical details.

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.

Although Ganga is being developed for LHCb and ATLAS, it is not limited to use with HEP applications, and already has several non-HEP users. These include users on projects in bio-medicine, engineering, and (Grid) software testing.

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)

Ganga is a higher-level Grid tool and therefore tries to circumvent typical problems when submitting jobs to the Grid, easing the user experience. Ganga has a plug-in mechanism, so that it can be highly customised to suit the needs of a given user community.

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

Ganga provides a clean Python API that reduces and simplifies the work involved in preparing an application, organizing the submission, and gathering results. Technical details of submitting a job to the Grid, for example the preparation of a job-description file, are factored out and taken care of transparently by the systems. By changing the parameter that identifies the execution back-end, a user can trivially switch between running an application on

a portable PC, running higher-statistics tests on a local batch system, and analysing all available statistics on the Grid.

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Session Classification: Poster and Demo Session

Track Classification: On-line Demonstrations