



Contribution ID: 135

Type: Poster

The ENEA gateway approach to provide EGEE/gLite access to unsupported platforms and operating systems

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 success of the GRID depends also on its flexibility in accommodating the computational resources available over the network. A big effort is underway to develop accepted GRID standards but in the meanwhile solutions have to be found to include into EGEE infrastructure resources based on platforms or operation systems which are not currently supported by gLite middleware. The ENEA gateway approach provides a working solution to this issue, now enabling GRID access to its AIX SP systems.

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.

The poster will describe the architecture and the implementation of the gateway solution built on the main components of ENEA-GRID middle-ware, which is based on very mature and reliable software, namely the AFS distributed file system and LSF Multicluster. The key element of the architecture is a set of Linux proxy machines, running standard gLite middle-ware, which support the communication between the non standard worker nodes and the EGEE infrastructure. EGEE technical reports have also been prepared to document the implementation.

In the last year the ENEA-INFO EGEE site has been certified in the gateway configuration for AIX resources and it is open to production jobs. The site supports at present several VOs (COMPCHEM, EGRID, FUSION) and the experimentation with applications is underway. Proposals by other interested VO are also well accepted.

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

ENEA, the Italian agency for the energy, environment and new technologies, has a substantial experience in GRID technologies and its multi-platform HPC resources are integrated in the ENEA-GRID infrastructure. ENEA participation in EGEE has focused on the interoperability between EGEE and ENEA-GRID and resulted in the development of a gateway architecture. The gateway provides a flexible and affordable solution for the access in principle to all the platforms and operating systems available in ENEA-GRID and has been finalized to the case of the AIX SP system, but tests have also been performed for Altix IA64, IRIX, MacOS X and Solaris. This result can be used to expand the EGEE GRID capability by including a wider range of resources but also,

on the other hand, to take advantage on the maturity of the gLite grid services to offer a working GRID solution to communities have been up to now discouraged by the middle-ware rigidity.

Author: Dr BRACCO, Giovanni (ENEA)

Co-authors: Dr ROCCHI, Alessio (CASPUR); Dr QUINTILIANI, Andrea (ENEA); Dr SANTORO, Andrea (ENEA); Dr SCIO', Carlo (Esse3Esse); Dr MIGLIORI, Silvio (ENEA)

Presenter: Dr BRACCO, Giovanni (ENEA)

Track Classification: Demo and Poster session