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A Login Shell interface for INFN-GRID

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The user interface is a crucial service to guarantee the Grid accessibility. The goal to achieve, is the implementation of an environment able to hide the grid complexity and offer a familiar interface to the final user.

Currently many graphical interfaces have been proposed to simplify the grid access, but the GUI approach appears not very congenial to UNIX developers and users accustomed to work with command line interface.

In 2004 the GridShell project proposed an extension of popular UNIX shells such as TCSH and BASH with features supporting Grid computing.

Starting from the ideas included in GridShell, we propose IGSH (INFN-GRID SHELL) a new login shell for the INFN-GRID middleware, that interact with the Resource Broker services and integrates in a "naturally way" the grid functionality with a familiar interface.

The architecture of IGSH is very simple, it consist of a software layer on the top of the INFN-GRID middleware layer. When some operation is performed by the user, IGSH takes in charge to parse the syntax and translate it in the correspondents INFN-GRID commands according to some semantic rules specified in the next sections.

The final user interacts with the underlying distributed infrastructure by using IGSH instead of his default login shell, with the sensation to work on a local machine.

Moreover IGSH shows interesting potentialities, by allowing the user to create complex workflow by using the standard shell language.

Submitted on behalf of Collaboration (ex, BaBar, ATLAS)

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Summary

The paper is structured as follows.

- the architecture of INFN-GRID shell
- jobs submission and data management facilities with IGSH.
- a first implementation with some use case.
- workflow

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