Contribution ID: **63**   Type: **Oral**

An Extension to the SAGA Service Discovery API

Tuesday 3 March 2009 11:25 (25 minutes)

The work presented is being undertaken as part of the Simple API for Grid Applications (SAGA) group within the OGF. SAGA aims to provide simple middleware–independent APIs for grid users. This paper outlines the current SAGA Service Discovery API, which provides a means of selecting a set of services based on a number filters; and then goes on to propose an extension that allows access to all information related to the selected service.

Impact

Currently, to interact with an information system, you must be aware of the implementation. The SAGA Service Discovery API will help with the interoperability of different grids by hiding the implementation of different information systems. Moreover it will enable a grid infrastructure to migrate the technology used for its information system with minimal impact to grid users and middleware components; and to provide as much independence as possible from changes in the GLUE schema. The new extended Service Discovery API will provide a simple interface for navigating around the information model, with an API that conforms to the existing look & feel of the SAGA API. If it is accepted by the SAGA community, and by end users, it will make a major impact upon the way in which users view the information system.

URL for further information

http://hepunx.rl.ac.uk/egee/sa3-uk/index.html

Conclusions and Future Work

The extended Service Discovery API will provide a way to interact with different grids using the same set of commands. It will also protect users from changes to the implementation of the information system. C++ and Java implementations of the extended Service Discovery API are being developed, with a Python API being derived from the C++. We will also provide gLite plugins in C++ and Java for use with GLUE 1 and GLUE 2; these will be available by the end of the year.

Keywords

grid, API, SAGA, OGF

Detailed analysis

The Service Discovery API, which has been proposed as an OGF standard, has been implemented based on the GLUE 1 information model. We are working on an extension API that will allow a user to navigate and view all data for a given service. This extension API will be proposed to the OGF SAGA group. It will be implemented so users can move from entity to entity as expressed in the GLUE entity relationship diagrams. An important part of the design is that entities do not have to be directly related –as a consequence application code will be unaffected by small changes to the GLUE schema. A plugin will be written to support LDAP – and specific details of the information model including any relationships between entities will be held in a configuration file. This will help facilitate a smooth transition to the GLUE 2 information model.

Primary author: Dr WILSON, Antony (RAL)

Co-author: Dr FISHER, Steve (RAL)

Presenter: Dr WILSON, Antony (RAL)
Session Classification: Grid programming

Track Classification: Grid Services exploiting and extending gLite middleware

Primary author: Dr WILSON, Antony (RAL)

Co-author: Dr FISHER, Steve (RAL)

Presenter: Dr WILSON, Antony (RAL)
Track Classification: Grid Services exploiting and extending gLite middleware