Contribution ID: **183**   Type: **not specified**

GPGPU workshop: introduction

Wednesday, 10 April 2013 14:10 (20 minutes)

Impact

The short-term goal is to develop a greater understanding of the range of technical problems that currently hinder tighter integration of Computational Accelerators into the grid infrastructure. If possible, we would like to encourage Resource Centres to converge towards an early prototype standard access method. In the medium-term, we would like encourage interested parties to volunteer and participate in the development of a user-community driven standards and solutions to these integration issues.

Summary

The EGI GPGPU Resource Centre survey indicated the increasing deployment and usage of commodity massively parallel "Computational Accelerators"- for example, the so-called "general purpose graphics processing units"(GPGPUs) - on the grid infrastructure over the next 18 months.
Despite this increased usage of Computational Accelerators, they cannot currently be discovered or accessed using the standard methods familiar to the grid user-community. Many other issues remain to be solved before they can be treated as a "first-class"grid resource.
This workshop brings together experts from the grid community to discuss these integration issues. Moreover, as an outcome of the workshop, we will seek to assemble a team of experts to drive forward a community-derived grid-standard and solution to this integration problem.
Participation is welcome from parties interested in supporting and advancing the provisioning of grid-enabled access to Computational Accelerators.

Description

In this workshop we will look at a number of key technical areas that need to be further investigated as part of a community-driven solution to the problem of grid-enabling access to Computational Accelerators. These areas include: Computational Accelerators/GPGPU LRMS Integration; Computational Accelerators/GPGPU Glue-schema definition and User Requirements; Information System Providers; Nagios Probes; GOCDB integration; and Accounting. Furthermore, although there are obvious and implicit dependencies between many of these functional areas (e.g. LRMS Integration and Accounting), there are also less-obvious dependencies (e.g. the interaction between the LRMS and the Glue Schema/Information Providers) that require significant investigation and development.
We will also look at a number of Resource Centre case studies to see if the Resource Centres and grid-users can develop an early-stage and community-led prototype that enables consistent access to these resources.

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Session Classification: Operational Services