Contribution ID: **132**   Type: **Poster**

Batch Service Management Tool within g-Eclipse

Tuesday, February 12, 2008 4:00 PM (0 minutes)

The Batch Service editor within the g-Eclipse framework allows the administrator of a Grid site to manage her site(s). The editor presents the administrator with a color-coded representation of the current state of the computing element, queues, and worker nodes as well as their properties. For large sites, the administrator can zoom in/out to view all the elements of the site. Using this editor the administrator can choose from the context menu of the specific item(s) to start/stop/enable/disable/delete queues, enable/disable worker nodes, hold/release/move/delete batch jobs, and initiate wizards to create new queues. If multiple items are selected, then only the actions that can be applied to all the items are available.

In addition to the editor there is also a Batch Job view which presents a table of the batch jobs that are currently present on the selected element (worker node, queue) in the editor. The columns in the table present the properties associated with the batch jobs.

3. Impact

The novelty of this tool is that it is integrated into a framework where an administrator can perform all her tasks. An administrator can manage her site(operator perspective), write Grid applications (developer perspective), and then test out applications/sites (user perspective). The tool also provides an intuitive user-friendly GUI, including wizards to perform site management tasks. This reduces the possibility of misconfiguration because the administrator's operations are validated and only valid options are presented. Compared to the usage of CLI or service tailored GUIs the option of an extensible middleware-independent tool is better choice in our opinion. As the tool is part of the g-Eclipse framework, which is an official technology project of the Eclipse project, it is open and transparent for anybody to request features or contribute features to the tool.

URL for further information:

www.geclipse.eu

4. Conclusions / Future plans

The tool will be used by the local Grid site administrator as a client side tool that remotely interacts with the batch service(s). Currently, the underlying connection method is to SSH into the batch service but in the future gLogin with the administrator's personal certificate will be added. Lessons learned from using the tool are that the batch service commands are not installed in a standard directory and may not be in the system path and the output of a command varies from site-to-site.

Provide a set of generic keywords that define your contribution (e.g. Data Management, Workflows, High Energy Physics)

Batch Service Management Tool

1. Short overview

Eclipse provides a powerful platform for tool building and the g-Eclipse project uses this platform to create a middleware-independent Grid framework for users, developers, and operators. For the operator perspective of this framework a tool to monitor and manage batch services of Grid sites has been devised. This tool assists the Grid site administrator with her day-to-day activities. Not only it simplifies the tasks, but it only allows the administrator to perform correct actions.

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Session Classification: Posters

Track Classification: Existing or Prospective Grid Services