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Recent advancements in user-job management with Ganga

The Ganga project (<http://cern.ch/ganga>) has long been used by several experimental communities within HEP, most notably Atlas and LHCb. This talk describes the most recent developments in job submission and management within Ganga with a focus on newly developed tools and features.

Ganga offers a powerful unified interface for submitting complex user-jobs to many different backends, this allows the user to exploit their available computing resources without the need to worry about implementation details.

The release of Ganga 6.1 in 2014/2015 will offer a new unified approach to file management within distributed analyses. One of the benefits of this is that it will allow for a user's data to be transferred directly between worker nodes and various storage solutions without the need for a centrally managed instance of Ganga.

In addition to this, Ganga now also supports a powerful new job queuing system. This system allows for users to perform job manipulation in a more automated way, providing them with more freedom over their job management.

Working closely with recent developments in DIRAC, Ganga will soon support bulk job submission to the grid allowing users to more easily exploit the currently available distributed resources. Alongside this, and with recent GridPP developments at Imperial College, Ganga offers an out of the box solution for experiments looking to work with vanilla DIRAC.

Ganga offers a modular codebase allowing for smaller experiments to easily adopt it with the ability to readily expand and develop additional modules to suit their particular requirements. Offering support for multiple HEP experiments Ganga development follows a "release early, release often" mantra. This allows for the development of new features whilst still focusing on stability and support for the existing user-base. Recent Ganga developments have also added a new Jenkins based unit-testing system to provide more comprehensive testing and debugging.

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