Contribution ID: **260** Type: **oral presentation**

DIRAC Infrastructure for Distributed Analysis

Tuesday, 14 February 2006 15:00 (20 minutes)

DIRAC is the LHCb Workload and Data Management system for Monte Carlo simulation, data processing and distributed user analysis. Using DIRAC, a variety of resources may be integrated, including individual PC's, local batch systems and the LCG grid. We report here on the progress made in extending DIRAC for distributed user analysis on LCG. In this paper we describe the advances in the workload management paradigm for analysis with computing resource reservation by means of Pilot Agents. This approach allows DIRAC to mask any inefficiencies of the underlying Grid from the user thus increasing the effective performance of the distributed computing system. The modular design of DIRAC at every level lends the system intrinsic flexibility. The possible strategy for the evolution of the system will be discussed.

The DIRAC API consolidates new and existing services and provides a transparent and secure way for users to submit jobs to the Grid. Jobs find their input data by interrogating the LCG File Catalogue which the LCG Resource Broker also uses to determine suitable destination sites. While it may be exploited directly by users, it also serves as the interface for the GANGA Grid front-end to perform distributed user analysis for LHCb.

DIRAC has been successfully used to demonstrate distributed data analysis on LCG for LHCb. The system performance results are presented and the experience gained is discussed.

Primary authors: Dr TSAREGORODTSEV, Andrei (CPPM, Marseille); Mr PATERSON, Stuart (University of Glasgow / CPPM, Marseille)

Presenter: Mr PATERSON, Stuart (University of Glasgow / CPPM, Marseille)

Session Classification: Distributed Data Analysis

Track Classification: Distributed Data Analysis