

The certification process of the LHCb distributed computing software

Monday, 28 September 2015 11:35 (30 minutes)

DIRAC is a software framework for distributed computing, integrating Workload and Data Management. LHCb created DIRAC in 2003. It was then split-off between a VO-agnostic part, released as an open source software in 2009, and an LHCb-specific extension LHCbDIRAC. DIRAC/LHCbDIRAC is able to handle different types of computing, storage, and catalog resources. It has also been adopted by several other Virtual Organizations who are developing their own extensions. Each LHCbDIRAC version has a strict dependency from a DIRAC version and from a set of externally-developed software packages. Before deploying an LHCbDIRAC version in production, the LHCb computing team has to make sure that this version will not disrupt the ongoing activities.

DIRAC contains around 200 thousand lines of python code, and LHCbDIRAC around 120 thousand. The testing process for each release consists of a number of steps, that includes static code analysis, unit tests, integration tests, regression tests, system tests. We dubbed the full process as the LHCbDIRAC certification process. We use Jenkins for continuous software integration, but we also submit pilots, jobs, and data to the Grid computing and storage resources.

This talk will highlight LHCb achievements obtained with running the certification process. It will also talk about the issues encountered, as well as give hints about the next steps.

Availability

Both days

Will you need the training center (Workshops)?

No

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