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The “Common Solutions” Strategy of the Experiment Support group at CERN for the LHC Experiments

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After two years of LHC data taking, processing and analysis and with numerous changes in computing technology, a number of aspects of the experiments' computing as well as WLCG deployment and operations need to evolve. As part of the activities of the Experiment Support group in CERN's IT department, and reinforced by effort from the EGI-InSPIRE project, we present work aimed at common solutions across all LHC experiments. Such solutions allow us not only to optimize development manpower but also offer lower long-term maintenance and support costs. The main areas cover Distributed Data Management, Data Analysis, Monitoring and the LCG Persistency Framework. Specific tools have been developed including the HammerCloud framework, automated services for data placement, data cleaning and data integrity (such as the data popularity service for CMS, the common Victor cleaning agent for ATLAS and CMS and tools for catalogue/storage consistency), the Dashboard Monitoring framework (job monitoring, data management monitoring, File Transfer monitoring) and the Site Status Board. This talk focuses primarily on the strategic aspects of providing such common solutions and how this relates to the overall goals of long-term sustainability and the relationship to the various WLCG Technical Evolution Groups

Summary

Common Solutions for the LHC experiments provided by the CERN Experiment Support group of the IT department

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