

Providing the computing and data to the physicists: Overview of the ATLAS distributed computing system

Friday 31 July 2020 10:40 (20 minutes)

The ATLAS experiment at CERN uses more than 150 sites in the WLCG to process and analyze data recorded by the LHC. The grid workflow system PanDA routinely utilizes more than 400 thousand CPU cores of those sites. The data management system Rucio manages about half an exabyte of detector and simulation data distributed among these sites. With the ever-improving performance of the LHC, more data is expected to come and the ATLAS computing needs to evolve and adapt to that. Disk space will become more scarce which should be alleviated by more active usage of tapes and caches and new smaller data formats. Grid jobs can run not just on the WLCG sites but also on opportunistic resources, i.e. clouds and HPCs. A new grafana-based monitoring system facilitates operation of the ATLAS computing. This presentation will review and explain the improvements put in place for the upcoming Run 3 and will provide an outlook to the many improvements needed for the HL-LHC.

Secondary track (number)

Author: SVATOS, Michal (Czech Academy of Sciences (CZ))

Presenter: SVATOS, Michal (Czech Academy of Sciences (CZ))

Session Classification: Computing and Data Handling

Track Classification: 14. Computing and Data Handling