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Storage at CERN

Thursday, 11 October 2018 11:10 (25 minutes)

The CERN IT Storage group operates multiple distributed storage systems and it is responsible for the support of the CERN storage infrastructure, ranging from the physics data of the LHC and non-LHC experiments to users' files.

This talk will summarise our experience and the ongoing work in evolving our infrastructure, focusing on some of the most important areas.

EOS is the high-performance distributed file system from CERN which allows to operate at high incoming data rates for experiments' data taking and running complex production workloads. EOS is also the key component behind CERNBox, the cloud storage service with the goal to provide sync and share files across all
major mobile and desktop platforms for EOS data. Due to its popularity and the integration with other CERN services (Batch, SWAN, Microsoft Office, other Office suites) CERNBox is experiencing an exponential usage growth.

CASTOR is the CERN system for the experimental data recording while we are developing CTA, the next-generation tape archival system.

The storage group provides also the storage backbone of the OpenStack infrastructure with a large Ceph deployment, offering also S3 functionality and CephFS for internal storage and to support the CERN HPC facility.

Our group also operates the Stratum 0 and the CERN Stratum 1 for CVMFS (grid data distribution system) and, in connection with the CERN EP-SFT group (in charge with CVMFS development), we are contributing to the CVMFS project in order to cope with new use cases from the experiments.

Desired length

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