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## EOS as the present and future solution for data storage at CERN

*Thursday, 16 April 2015 10:00 (15 minutes)*

EOS is an open source distributed disk storage system in production since 2011 at CERN. Development focus has been on low-latency analysis use cases for LHC and non-LHC experiments and life-cycle management using JBOD hardware for multi PB storage installations. The EOS design implies a split of hot and cold storage and introduced a change of the traditional HSM functionality based workflows at CERN.

The 2015 deployment brings storage at CERN to a new scale and foresees to breach 100 PB of disk storage in a distributed environment using tens of thousands of (heterogeneous) hard drives. EOS has brought to CERN major improvements compared to past storage solutions by allowing quick changes in the quality of services of storage pools. This allows the data centre to quickly meet the changing performance and reliability requirements of the LHC experiments with minimal data movements and dynamic reconfigurations. For example, the software stack has met the specific needs of the dual computing centre set-up required by CERN and allowed the fast design of new workflows accommodating the separation of long-term tape archive and disk storage required for the LHC Run II.

The talk will give a high-level state of the art overview of EOS with respect to Run II, introduce new tools and use cases and set the new roadmap for the next storage solutions to come.

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