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EOS storage for Alice O2

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In this contribution we report on the ongoing R&D activity aiming at preparing the EOS ALICE O2 storage cluster for the very demanding requirements of Run 3. After the planned upgrades of LHC and ALICE detectors, the ALICE experiment is expected to increase the data-taking rate handled by the online system and then recorded into permanent storage by one order of magnitude. In order to accommodate the data sent by the ALICE Data Acquisition system (aggregated throughput of 100GB/s), the EOS ALICE O2 cluster will be equipped with one of the latest generation storage servers and configured to apply erasure coding to the registered data.

During this talk we are going to present the latest tests and experiments we conducted on the storage server cluster in the context of ALICE O2 project. In particular we give an overview of the aggregate throughput tests with EOS native erasure coding, as well as with client side erasure coding. In addition, we discuss the tuning of the storage servers including testing different kernel versions and firewall settings that enables utilizing the hardware at its nominal speed.

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