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CEPH Tutorial

Wednesday, August 31, 2016 1:00 PM (5 hours)

Ceph is an open-source, software-defined distributed storage system that strives to achieve scalability and reliability through an innovative decentralised design.

Distributed file systems nowadays face multiple challenges: scaling to peta-byte capacity and providing high performance, while protecting against failures. Moreover, file systems should be able to adapt to dynamic distributed workloads to provide the best performance.

Ceph tries to tackle these challenges with a completely decentralised architecture that has no single point of failure. Reliability is achieved through distributed data placement and replication. Ceph's dynamic metadata partitioning feature helps deal with dynamic workloads.

This session is an introduction to Ceph and it will cover theoretical background on Ceph's architecture, as well as hands-on exercises, such as installation and configuration of a Ceph cluster, basic usage and monitoring, and a dive into Ceph's secret to extreme scalability: the CRUSH algorithm.

After completing this session, you should be able to understand and discuss Ceph concepts, and deploy and manage a Ceph Storage Cluster.

Basic knowledge of Linux and storage concepts is required.

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