

Paper: Ceph A Scalable, High-Performance Distributed File System

This paper introduces Ceph which is the distributed file system. They eliminated file allocation tables and replacing them with generating functions to decouple data and metadata operations. This leads Ceph to achieve scalability, performance, and reliability by distributing the complexity surrounding data access, failure detection, and recovery. Ceph also address the metadata management architecture on how to efficiently provide a single uniform directory hierarchy obeying POSIX semantics with performance and scalability.