RADOS OBJECT STORE

Ceph's RADOS Object Store is the foundation for all Ceph clusters. When you use object store clients such as the CephFS filesystem, the RESTful Gateway or Ceph block devices, Ceph reads data from and writes data to the object store. Ceph's RADOS Object Stores consist of two types of daemons: Object Storage Daemons (OSDs) store data as objects on storage nodes; and Monitors maintain a master copy of the cluster map. A Ceph cluster may contain thousands of storage nodes. A minimal system will have at least two OSDs for data replication.

CONFIG AND DEPLOY

Once you have installed Ceph packages, you must configure. There are a a few required settings, but most configuration settings have default values. Following the initial configuration, you must deploy Ceph. Deployment consists of creating and initializing data directories, keys, etc.

- Configuration
  - Disks and Filesystems
  - Configuring Ceph
  - Network Settings
  - Auth Settings
  - Monitor Settings
  - Heartbeat Settings
  - OSD Settings
  - Filestore Settings
  - Journal Settings
  - Pool, PG & CRUSH Settings
  - Messaging Settings
  - General Settings
- Deployment
  - Transition from mkcephfs
  - Preflight Checklist
  - Install Ceph
  - Create a Cluster
  - Add/Remove Monitor(s)
  - Key Management
  - Add/Remove OSD(s)
  - Add/Remove MDS(s)
  - Purge Hosts
  - Admin Tasks
  - mkcephfs (deprecated)

OPERATIONS

Once you have a deployed Ceph cluster, you may begin operating your cluster.

- Operations
  - Operating a Cluster
  - Monitoring a Cluster
  - Monitoring OSDs and PGs
  - Authentication Overview
  - Cephx Authentication
  - Data Placement Overview
  - Pools
  - Placement Groups
  - CRUSH Maps
  - Adding/Removing OSDs
  - Adding/Removing Monitors
  - Command Reference
  - The Ceph Community
  - Recovering from Monitor Failures
  - Troubleshooting OSDs
  - Troubleshooting PGs
  - Logging and Debugging
  - CPU Profiling
  - Memory Profiling
- Man Pages

APIS

Most Ceph deployments use Ceph block devices, the gateway and/or the CephFS filesystem. You may also develop applications that talk directly to the Ceph object store.

- APIs
  - librados (C)
  - librados (C++)