CEPH GLOSSARY

Ceph is growing rapidly. As firms deploy Ceph, the technical terms such as "RADOS", "RBD," "RGW" and so forth require corresponding marketing terms that explain what each component does. The terms in this glossary are intended to complement the existing technical terminology.

Sometimes more than one term applies to a definition. Generally, the first term reflects a term consistent with Ceph's marketing, and secondary terms reflect either technical terms or legacy ways of referring to Ceph systems.

Ceph Project
> The aggregate term for the people, software, mission and infrastructure of Ceph.

cephx
> The Ceph authentication protocol. Cephx operates like Kerberos, but it has no single point of failure.

Ceph

Ceph Platform
> All Ceph software, which includes any piece of code hosted at https://github.com/ceph.

Ceph System

Ceph Stack
> A collection of two or more components of Ceph.

Ceph Node

Node

Host
> Any single machine or server in a Ceph System.

Ceph Storage Cluster

Ceph Object Store

RADOS

RADOS Cluster

Reliable Autonomic Distributed Object Store
> The core set of storage software which stores the user's data (MON+OSD).

Ceph Cluster Map

cluster map
> The set of maps comprising the monitor map, OSD map, PG map, MDS map and CRUSH map. See Cluster Map for details.

Ceph Object Storage
> The object storage "product", service or capabilities, which consists essentially of a Ceph Storage Cluster and a Ceph Object Gateway.

Ceph Object Gateway

RADOS Gateway

RGW
> The S3/Swift gateway component of Ceph.

Ceph Block Device

RBD

The block storage component of Ceph.

Ceph Block Storage

The block storage "product," service or capabilities when used in conjunction with `librbd`, a hypervisor such as QEMU or Xen, and a hypervisor abstraction layer such as `libvirt`.

Ceph Filesystem

CephFS

Ceph FS

The POSIX filesystem components of Ceph.

Cloud Platforms

Cloud Stacks

Third party cloud provisioning platforms such as OpenStack, CloudStack, OpenNebula, ProxMox, etc.

Object Storage Device

OSD

A physical or logical storage unit (*e.g.*, LUN). Sometimes, Ceph users use the term "OSD" to refer to Ceph OSD Daemon, though the proper term is "Ceph OSD".

Ceph OSD Daemon

Ceph OSD Daemons

Ceph OSD

The Ceph OSD software, which interacts with a logical disk (OSD). Sometimes, Ceph users use the term "OSD" to refer to "Ceph OSD Daemon", though the proper term is "Ceph OSD".

OSD id

The integer that defines an OSD. It is generated by the monitors as part of the creation of a new OSD.

OSD fsid

This is a unique identifier used to further improve the uniqueness of an OSD and it is found in the OSD path in a file called `osd_fsid`. This `fsid` term is used interchangeably with `uuid`

OSD uuid

Just like the OSD fsid, this is the OSD unique identifer and is used interchangeably with `fsid`

bluestore

OSD BlueStore is a new back end for OSD daemons (kraken and newer versions). Unlike filestore it stores objects directly on the Ceph block devices without any file system interface.

filestore

A back end for OSD daemons, where a Journal is needed and files are written to the filesystem.

Ceph Monitor

MON

The Ceph monitor software.

Ceph Manager

MGR

The Ceph manager software, which collects all the state from the whole cluster in one place.

Ceph Metadata Server

MDS
    The Ceph metadata software.

Ceph Clients

Ceph Client
    The collection of Ceph components which can access a Ceph Storage Cluster. These include the Ceph Object Gateway, the Ceph Block Device, the Ceph Filesystem, and their corresponding libraries, kernel modules, and FUSEs.

Ceph Kernel Modules
    The collection of kernel modules which can be used to interact with the Ceph System (e.g., `ceph.ko`, `rbd.ko`).

Ceph Client Libraries
    The collection of libraries that can be used to interact with components of the Ceph System.

Ceph Release
    Any distinct numbered version of Ceph.

Ceph Point Release
    Any ad-hoc release that includes only bug or security fixes.

Ceph Interim Release
    Versions of Ceph that have not yet been put through quality assurance testing, but may contain new features.

Ceph Release Candidate
    A major version of Ceph that has undergone initial quality assurance testing and is ready for beta testers.

Ceph Stable Release
    A major version of Ceph where all features from the preceding interim releases have been put through quality assurance testing successfully.

Ceph Test Framework

Teuthology
    The collection of software that performs scripted tests on Ceph.

CRUSH
    Controlled Replication Under Scalable Hashing. It is the algorithm Ceph uses to compute object storage locations.

CRUSH rule
    The CRUSH data placement rule that applies to a particular pool(s).

Pool

Pools
    Pools are logical partitions for storing objects.

systemd oneshot
    A systemd `type` where a command is defined in `ExecStart` which will exit upon completion (it is not intended to daemonize)

LVM tags
    Extensible metadata for LVM volumes and groups. It is used to store Ceph-specific information about devices and its relationship with OSDs.