Performing Cluster Administration and Monitoring

Objectives

After completing this section, you should be able to administer and monitor a Red Hat Ceph Storage cluster, including starting and stopping specific services or the full cluster, and querying cluster health and utilization.

Defining the Ceph Manager (MGR)

The role of the Red Hat Ceph Storage Manager (MGR) is to collect cluster statistics.

Client I/O operations continue normally while MGR nodes are down, but queries for cluster statistics fail. Deploy at least two MGRs for each cluster to provide high availability. MGRs are typically run on the same hosts as MON nodes, but it is not required.

The first MGR daemon that is started in a cluster becomes the active MGR and all other MGRs are on standby. If the active MGR does not send a beacon within the configured time interval, a standby MGR takes over. You can configure the `mon_mgr_beacon_grace` setting to change the beacon time interval if needed. The default value is 30 seconds.

Use the `ceph mgr fail <MGR_NAME>` command to manually failover from the active MGR to a standby MGR.

Use the `ceph mgr stat` command to view the status of the MGRs.

```
[ceph: root@node /]# ceph mgr stat
{
    "epoch": 32,
    "available": true,
    "active_name": "mgr1",
    "num_standby": 3
}
```

Ceph MGR Modules

The Ceph MGR has a modular architecture. You can enable or disable modules as needed. The MGR collects cluster statistical data and can send the data to external monitoring and management systems.

View the modules that are available and enabled by using the `ceph mgr module ls` command.

View published addresses for specific modules, such as the Dashboard module URL, by using the `ceph mgr services` command.

The Ceph Dashboard Module

The Ceph Dashboard provides cluster management and monitoring through a browser-based user interface. The Dashboard enables viewing cluster statistics and alerts, and performing selected cluster management tasks. The Ceph Dashboard requires an active MGR daemon with the Dashboard MGR module enabled.