Guided Exercise

Managing and Customizing the CRUSH Map

In this exercise, you will view and modify the cluster CRUSH map.

Outcomes

You should be able to create data placement rules to target a specific device class, create a pool by using a specific data placement rule, and decompile and edit the CRUSH map.

Before You Begin

As the `student` user on the `workstation` machine, use the `lab` command to prepare your system for this exercise.

```
[student@workstation ~]$ lab start map-crush
```

This command confirms that the hosts required for this exercise are accessible, backs up the CRUSH map, adds the `ssd` device class, and sets the `mon_allow_pool_delete` setting to `true`.

Instructions

1. Log in to `clienta` as the `admin` user and use `sudo` to run the `cephadm shell`. Verify that the cluster returns a `HEALTH_OK` state.

```
[student@workstation ~]$ ssh admin@clienta
[admin@clienta ~]$ sudo cephadm shell
[ceph: root@clienta /]# ceph health
HEALTH_OK
```

2. Create a new CRUSH rule called `onssd` that uses only the OSDs backed by SSD storage. Create a new pool called `myfast` with 32 placement groups that use that rule. Confirm that the pool is using only OSDs that are backed by SSD storage.

   2.1. List the available device classes in your cluster.

```
[ceph: root@clienta /]# ceph osd crush class ls
[
    "hdd",
    "ssd"
]
```

   2.2. Display the CRUSH map tree to locate the OSDs backed by SSD storage.