Solution

Expanding Block Storage Operations

In this lab you will configure pool-mode RBD mirroring between two Red Hat Ceph clusters, demote the image on the `primary` cluster, and promote the image on the `secondary` cluster.

Outcomes

You should be able to configure two-way pool-mode RBD mirroring between two clusters.

Before You Begin

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

```
[student@workstation ~]$ lab start mirror-review
```

The `lab` command confirms that the hosts required for this exercise are accessible. It creates the `rbd` pool in the `primary`, and `secondary` clusters. It also creates an image in `primary` cluster, called `myimage` with `exclusive-lock` and `journaling` features enabled. Finally, this command creates the `/home/admin/mirror-review` directory in the `primary` cluster.

Instructions

1. Log in to `clienta` as the `admin` user. Run the `cephadm` shell with a bind mount of the `/home/admin/mirror-review/` directory. Verify that the primary cluster is in a healthy state. Verify that the `rbd` pool is created successfully.

   1.1. Log in to `clienta` as the `admin` user and use `sudo` to run the `cephadm` shell with a bind mount. Use the `ceph health` command to verify that the primary cluster is in a healthy state.

```
[student@workstation ~]$ ssh admin@clienta
...output omitted...
[admin@clienta ~]$ sudo cephadm shell --mount /home/admin/mirror-review/
[ceph: root@clienta /]# ceph health
HEALTH_OK
```

   1.2. Verify that the `rbd` pool and the `myimage` image are created.

```
[ceph: root@clienta /]# ceph osd lspools
1 device_health_metrics
2 .rgw.root
3 default.rgw.log
4 default.rgw.control
5 default.rgw.meta
6 rbd
```