Lab

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.
2. Deploy the `rbd-mirror` daemon in the primary and secondary clusters.
3. Enable `pool-mode` mirroring on the `rbd` pool and verify it. Verify that the `journaling` feature on the `myimage` image is enabled.
4. Register the storage cluster peer to the pool, and then copy the bootstrap token file to the `secondary` cluster.
5. In the secondary cluster, import the bootstrap token located in the `/home/admin/mirror-review/` directory. Verify that the RBD image is present.
6. Verify the mirroring status in both clusters. Note which is the primary image.
7. Demote the primary image and promote the secondary image, and then verify the change.
8. Return to `workstation` as the `student` user.

Evaluation

Grade your work by running the `lab grade mirror-review` command from your `workstation` machine. Correct any reported failures and rerun the script until successful.

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