Lab

Providing File Storage with CephFS

In this lab, you provide file storage by using the kernel client and deploying a Ceph Metadata Server (MDS).

Outcomes

You should be able to deploy an MDS and use the kernel client to mount the CephFS file system.

- The `serverc`, `serverd`, and `servere` nodes are an operational 3-node Ceph cluster. All three nodes operate as a MON, a MGR, and an OSD host with at least one colocated OSD.
- The `clienta` node is set up as your admin node server and you use it to install the MDS on `serverc`.

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 fileshare-review
```

Instructions

1. Log in to `clienta` as the `admin` user. Create the `ceph_data` and `ceph_metadata` pools for CephFS. Create the `mycephfs` CephFS file system. From `clienta`, deploy the MDS to `serverc`. Verify that the MDS is up and active. Verify that the ceph health is OK.
2. On the `clienta` node, create the `/mnt/cephfs-review` mount point and mount the CephFS file system as a kernel client.
3. Create a 10 MB test file called `cephfs.test1`. Verify that the created data is replicated across all three nodes by showing 30 MB in the `cephfs_data` pool.
4. Return to `workstation` as the `student` user.

Evaluation

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

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

Finish

On the `workstation` machine, use the `lab` command to complete this exercise. This is important to ensure that resources from previous exercises do not impact upcoming exercises.

```
[student@workstation ~]$ lab finish fileshare-review
```