## Solution

# 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.

   1.1. Log in to `clienta` as the `admin` user and use `sudo` to run the `cephadm` shell.

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

   1.2. Create the two required CephFS pools. Name these pools `cephfs_data` and `cephfs_metadata`.

```
[ceph: root@clienta /]# ceph osd pool create cephfs_data
pool 'cephfs_data' created
[ceph: root@clienta /]# ceph osd pool create cephfs_metadata
pool 'cephfs_metadata' created
```

   1.3. Create the CephFS file system with the name `mycephfs`. Your pool numbers might differ in your lab environment.

```
[ceph: root@clienta /]# ceph fs new mycephfs cephfs_metadata cephfs_data
new fs with metadata pool 7 and data pool 6
```