Guided Exercise

Tuning Object Storage Cluster Performance

In this exercise, you will tune the recovery and backfill processes to preserve cluster performance.

Outcomes

You should be able to:

- Inspect your OSDs for BlueStore fragmentation.
- Preserve cluster performance under heavy loads.
- Adapt how backfill requests are processed for placement group migration to deal with added or removed OSDs.
- Adjust recovery requests to synchronize a recovered OSD with the OSD's peers following an OSD crash.

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 tuning-perf
```

Instructions

- The `clienta` node is the admin node and is a client of the Ceph cluster.
- 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 three 10 GB collocated OSDs.

Warning

The parameters used in this exercise are appropriate for this lab environment. In production, these parameters should only be modified by qualified Ceph administrators, or as directed by Red Hat Support.

1. Log in to `clienta` as the `admin` user. Inspect OSD 0 for BlueStore fragmentation.

1.1. Connect 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. Retrieve information about OSD 0 fragmentation. The value should be low because the number of operations in the cluster is low and the cluster is new.