ADD/REMOVE OSDS

Adding and removing Ceph OSD Daemons to your cluster may involve a few more steps when compared to adding and removing other Ceph daemons. Ceph OSD Daemons write data to the disk and to journals. So you need to provide a disk for the OSD and a path to the journal partition (i.e., this is the most common configuration, but you may configure your system to your own needs).

In Ceph v0.60 and later releases, Ceph supports `dm-crypt` on disk encryption. You may specify the `--dmcrypt` argument when preparing an OSD to tell `ceph-deploy` that you want to use encryption. You may also specify the `--dmcrypt-key-dir` argument to specify the location of `dm-crypt` encryption keys.

You should test various drive configurations to gauge their throughput before before building out a large cluster. See Data Storage for additional details.

LIST DISKS

To list the disks on a node, execute the following command:

```
ceph-deploy disk list {node-name [node-name]...}
```

ZAP DISKS

To zap a disk (delete its partition table) in preparation for use with Ceph, execute the following:

```
ceph-deploy disk zap {osd-server-name}:{disk-name}
ceph-deploy disk zap osdserver1:sdb
```

Important: This will delete all data.

CREATE OSDS

Once you create a cluster, install Ceph packages, and gather keys, you may create the OSDs and deploy them to the OSD node(s). If you need to identify a disk or zap it prior to preparing it for use as an OSD, see List Disks and Zap Disks.

```
ceph-deploy osd create --data {data-disk} {node-name}
```

For example:

```
ceph-deploy osd create --data /dev/ssd osd-server1
```

For bluestore (the default) the example assumes a disk dedicated to one Ceph OSD Daemon. Filestore is also supported, in which case a `--journal` flag in addition to `--filestore` needs to be used to define the Journal device on the remote host.

Note: When running multiple Ceph OSD daemons on a single node, and sharing a partioned journal with each OSD daemon, you should consider the entire node the minimum failure domain for CRUSH purposes, because if the SSD drive fails, all of the Ceph OSD daemons that journal to it will fail too.

LIST OSDS

To list the OSDs deployed on a node(s), execute the following command:

```
ceph-deploy osd list {node-name}
```

DESTROY OSDS

Note: Coming soon. See Remove OSDs for manual procedures.