The `activate` subcommand enables a `systemd` unit for the OSD so that it starts at boot time. You need the OSD `fsid` (UUID) from the output of the `ceph-volume lvm list` command to use the `activate` subcommand. Providing the unique identifier ensures that the correct OSD is activated, because OSD IDs can be reused.

```
[ceph: root@node /]# ceph-volume lvm activate <osd-fsid>
```

When the OSD is created, use the `systemctl start ceph-osd@$id` command to start the OSD so it has the `up` and `in` state in the cluster.

The `batch` subcommand creates multiple OSDs at the same time.

```
[ceph: root@node /]# ceph-volume lvm batch \
--bluestore /dev/vdc /dev/vdd /dev/nvme0n1
```

The `inventory` subcommand provides information about all physical storage devices on a node.

```
[ceph: root@node /]# ceph-volume inventory
```

References

For more information, refer to the *Red Hat Ceph Storage 5 Architecture Guide* at
https://access.redhat.com/documentation/en-us/red_hat_ceph_storage/5/html-single/architecture_guide/index

For more information, refer to the *BlueStore* chapter in the *Red Hat Ceph Storage 5 Administration Guide* at
https://access.redhat.com/documentation/en-us/red_hat_ceph_storage/5/html-single/administration_guide/osd-bluestore

For more information, refer to the *Advanced service specifications and filters for deploying OSDs* chapter in the *Red Hat Ceph Storage 5 Operation Guide* at
https://access.redhat.com/documentation/en-us/red_hat_ceph_storage/5/html-single/operations_guide/index#advanced-service-specifications-and-filters-for-deploying-osds_ops