

The Dashboard relies on the *Prometheus* and *Grafana* services to display collected monitoring data and to generate alerts. Prometheus is an open source monitoring and alerting tool. Grafana is an open source statistical graphing tool.

The Dashboard supports alerts based on Ceph metrics and configured thresholds. The Prometheus AlertManager component configures, gathers, and triggers the alerts. Alerts are displayed in the Dashboard as notifications. You can view details of recent alerts and mute alerts.

Monitoring Cluster Health

You can use the `ceph health` command to quickly verify the state of the cluster. This command returns one of the following states:

- **HEALTH_OK** indicates that the cluster is operating normally.
- **HEALTH_WARN** indicates that the cluster is in a warning condition. For example, an OSD is down, but there are enough OSDs working properly for the cluster to function.
- **HEALTH_ERR** indicates that the cluster is in an error condition. For example, a full OSD could have an impact on the functionality of the cluster.

If the Ceph cluster is in a warning or an error state, the `ceph health detail` command provides additional details.

```
[ceph: root@node /]# ceph health detail
```

The `ceph -w` command displays additional real-time monitoring information about the events happening in the Ceph cluster.

```
[ceph: root@node /]# ceph -w
```

This command provides the status of cluster activities, such as the following details:

- Data rebalancing across the cluster
- Replica recovery across the cluster
- Scrubbing activity
- OSDs starting and stopping

To monitor the `cephadm` log, use the `ceph -W cephadm` command. Use the `ceph log last cephadm` to view the most recent log entries.

```
[ceph: root@node /]# ceph -W cephadm
```

Managing Ceph Services

Containerized services are controlled by `systemd` on the container host system. Run `systemctl` commands on the container host system to start, stop, or restart cluster daemons.

Cluster daemons are referred to by the type of `$daemon` and the daemon `$id`. The type of `$daemon` is `mon`, `mgr`, `mds`, `osd`, `rgw`, `rbd-mirror`, `crash`, or `cephfs-mirror`.

The daemon `$id` for `MON`, `MGR`, and `RGW` is the host name. The daemon `$id` for `OSD` is the OSD ID. The daemon `$id` for `MDS` is the file system name followed by the host name.

Use the `ceph orch ps` command to list all cluster daemons. Use the `--daemon_type=DAEMON` option to filter for a specific daemon type.