

The same naming applies to the `[osd]`, `[mgr]`, `[mds]`, and `[client]` sections. For OSD daemons, the instance ID is always numeric, for example `[osd.0]`. For clients, the instance ID is the active user name, such as `[client.operator3]`.

Meta Variables

Meta variables are Ceph-defined variables. Use them to simplify the configuration.

`$cluster`

The name of the Red Hat Ceph Storage 5 cluster. The default cluster name is `ceph`.

`$type`

The daemon type, such as the value `mon` for a monitor. OSDs use `osd`, MDSes use `mds`, MGRs use `mgr`, and client applications use `client`.

`$id`

The daemon instance ID. This variable has the value `serverc` for the Monitor on `serverc`. `$id` is 1 for `osd.1`, and is the user name for a client application.

`$name`

The daemon name and instance ID. This variable is a shortcut for `$type.$id`.

`$host`

The host name on which the daemon is running.

Using the Centralized Configuration Database

The MON cluster manages and stores the centralized configuration database on the MON nodes. You can either change a setting temporarily, until the daemons restart, or configure a setting permanently and store it in the database. You can change most configuration settings while the cluster is running.

Use `ceph config` commands to query the database and view configuration information.

- `ceph config ls`, to list all possible configuration settings.
- `ceph config help setting`, for help with a particular configuration setting.
- `ceph config dump`, to show the cluster configuration database settings.
- `ceph config show $type.$id`, to show the database settings for a specific daemon. Use `show-with-defaults` to include default settings.
- `ceph config get $type.$id`, to get a specific configuration setting.
- `ceph config set $type.$id`, to set a specific configuration setting.

Use the `assimilate-conf` subcommand to apply configuration from a file to a running cluster. This process recognizes and applies the changed settings from the configuration file to the centralized database. This command is useful to import custom settings from a previous storage cluster to a new one. Invalid or unrecognized options display on standard output, and require manual handling. Redirect screen output to a file using the `-o output-file`.

```
[ceph: root@node /]# ceph config assimilate-conf -i ceph.conf
```

Cluster Bootstrap Options

Some options provide the information needed to start the cluster. MON nodes read the `monmap` to find other MONs and establish a quorum. MON nodes read the `ceph.conf` file to identify how to communicate with other MONs.