

Configuring Logging

If there is a problem in a specific area of your cluster, then you can enable logging for that area. For example, if your OSDs are running adequately but your metadata servers are not, enable debug logging for the specific metadata server instances. Enable logging for each subsystem as needed.

Adding debugging to your Ceph configuration is typically done temporarily during runtime. You can add Ceph debug logging to your Ceph configuration database if you encounter issues when starting your cluster. View Ceph log files under the default location `/var/log/ceph`. Ceph stores logs in a memory-based cache.



Warning

Logging is resource-intensive. Verbose logging can generate over 1 GB of data per hour. If your OS disk reaches its capacity, then the node stops working. When you fix your cluster issues, revert the logging configuration to default values. Consider setting up log file rotation.

Understanding Ceph Logs

Configure Ceph logging by using the `ceph` command at runtime. If you encounter errors when starting up the cluster, then you can update the Ceph configuration database so that it logs during startup.

You can set different logging levels for each subsystem in your cluster. Debug levels are on a scale of 1 to 20, where 1 is terse and 20 is verbose.

Ceph does not send memory-based logs to the output logs except in the following circumstances:

- A fatal signal is raised.
- An assert in code is triggered.
- You request it.

To use different debug levels for the output log level and the memory level, use a slash (/) character. For example, `debug_mon = 1/5` sets the output log level of the `ceph-mon` daemon to 1 and its memory log level to 5.

Configure Logging at Runtime

To activate debugging output at runtime, use the `ceph tell` command.

```
[ceph: root@node /]# ceph tell type.id config set debug_subsystem debug-level
```

The `type` and `id` arguments are the type of the Ceph daemon and its ID. The `subsystem` is the specific subsystem whose debug level you want to modify.



Note

You can find a list of the subsystems at https://access.redhat.com/documentation/en-us/red_hat_ceph_storage/5/html-single/troubleshooting_guide/index#ceph-subsystems_diag.

This example modifies the OSD 0 debug level for the messaging system between Ceph components: