you get the clock skew error. This error can cause packet loss, high latency, or limited bandwidth, impacting cluster performance and stability.

A following network troubleshooting checklist suggests next steps:

- Ensure that the `cluster_network` and `public_network` parameters in the cluster include correct values. You can retrieve their values by using the `ceph config get mon cluster_network` or `ceph config get mon public_network` commands, or by checking the `ceph.conf` file.
- Verify that all network interfaces are functional.
- Verify the Ceph nodes and verify they are able to reach each other using their host names.
- Ensure that Ceph nodes are able to reach each other on their appropriate ports, if firewalls are used. Open the appropriate firewall ports if necessary.
- Validate that network connectivity between hosts has the expected latency and no packet loss, for example, by using the `ping` command.
- Slower connected nodes could slow down the faster ones. Verify that the inter-switch links can handle the accumulated bandwidth of the connected nodes.
- Verify that NTP is working correctly in your cluster nodes. For example, you can check the information provided by the `chronyc tracking` command.

Troubleshooting Ceph Clients

The following list includes the most common problems that clients experience when accessing a Red Hat Ceph Storage cluster:

- Monitors (MONs) are not available to the client.
- Incorrect or missing command line arguments that result from using the CLI.
- The `/etc/ceph/ceph.conf` file is incorrect, missing, or inaccessible.
- Key-ring files are incorrect, missing, or inaccessible.

The `ceph-common` package provides `bash` tab completion for the `rados`, `ceph`, `rbd`, and `radosgw-admin` commands. You can access option and attribute completions by pressing the `Tab` key when you enter the command at the shell prompt.

Enabling and Changing Log Files

Increase the logging level when troubleshooting a client.

On the client system, you can add the `debug_ms = 1` parameter to the configuration database by using the `ceph config set client debug_ms 1` command. The Ceph client stores debug messages in the `/var/log/ceph/ceph-client.id.log` log file.

Most of the Ceph client commands, such as `rados`, `ceph`, or `rbd`, also accept the `--debug-ms=1` option to execute only that command with an increased logging level.

Enabling the Client Admin Socket

By default, Ceph clients create a UNIX domain socket on start up. You can use this socket to communicate with the client to retrieve real-time performance data or to dynamically get or set a configuration parameter.

In the `/var/run/ceph/`*`fsid`* directory, there is a list of admin sockets for that host. Allow one admin socket per OSD, one for each MON, and one for each MGR. Administrators can use the