Red Hat Ceph Storage 3.2 Release Notes

Release notes for Red Hat Ceph Storage 3.2
Abstract

The Release Notes document describes the major features and enhancements implemented in Red Hat Ceph Storage in a particular release. The document also includes known issues and bug fixes.
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CHAPTER 1. INTRODUCTION

Red Hat Ceph Storage is a massively scalable, open, software-defined storage platform that combines the most stable version of the Ceph storage system with a Ceph management platform, deployment utilities, and support services.

The Red Hat Ceph Storage documentation is available at https://access.redhat.com/documentation/en/red-hat-ceph-storage/.
CHAPTER 2. ACKNOWLEDGMENTS

Red Hat Ceph Storage version 3.2 contains many contributions from the Red Hat Ceph Storage team. Additionally, the Ceph project is seeing amazing growth in the quality and quantity of contributions from individuals and organizations in the Ceph community. We would like to thank all members of the Red Hat Ceph Storage team, all of the individual contributors in the Ceph community, and additionally (but not limited to) the contributions from organizations such as:

- Intel
- Fujitsu
- UnitedStack
- Yahoo
- UbuntuKylin
- Mellanox
- CERN
- Deutsche Telekom
- Mirantis
- SanDisk
- SUSE
CHAPTER 3. NEW FEATURES

This section lists all major updates, enhancements, and new features introduced in this release of Red Hat Ceph Storage.

The main features added by this release are:

- General availability of the BlueStore OSD back end
- Technology preview of erasure coding for Ceph File System

3.1. THE `CEPH-ANSIBLE` UTILITY

Ansible now configures `firewalld` by default

The `ceph-ansible` utility now configures the `firewalld` service by default when creating a new cluster. Previously, it only checked if required ports were opened or closed, but it did not configure any firewall rules.

Specifying more than one OSD per device is now possible

With this version, a new `batch` subcommand has been added. The `batch` subcommand includes the `-osds-per-device` option that allows specifying multiple OSD per device. This is especially useful when using high-speed devices, such as Non-volatile Memory Express (NVMe).

Pool size can now be customized when deploying clusters with `ceph-ansible`

Previously, the `ceph-ansible` utility set the pool size to 3 by default and did not allow the user to change it. However, in Red Hat OpenStack deployments, setting the size of each pool is sometimes required. With this update, the pool size can be customized. To do so, change the `size` setting in the `all.yml` file. Each time, the value of `size` is changed, a new size is applied.

Ansible now validates CHAP settings before running playbooks

Previously, when the Challenge Handshake Authentication Protocol (CHAP) settings were set incorrectly, the `ceph-ansible` utility returned an unclear error message during deploying Ceph iSCSI gateway. With this update, `ceph-ansible` validates the CHAP settings before deploying Ceph iSCSI gateways.

New subcommand: `ceph-volume lvm batch`

This update adds the `ceph-volume lvm batch` subcommand that allows creation of volume groups and logical volumes for OSD provisioning from raw disks. The `batch` subcommand makes creating logical volumes easier for users who are not familiar with the Logical Volume Manager (LVM). With `batch`, one or many OSDs can be created by passing an array of devices and an OSD count per device to the `ceph-volume lvm batch` command.

The `noup` flag is now set before creating OSDs to distribute PGs properly

The `ceph-ansible` utility now sets the `noup` flag before creating OSDs to prevent them from changing their status to `up` before all OSDs are created. Previously, if the flag was not set, placement groups (PGs) were created on only one OSD and got stuck in creation or activation. With this update, the `noup` flag is set before creating OSDs and unset after the creation is complete. As a result, PGs are distributed properly among all OSDs.

Variables are now validated at the beginning of an invocation of `ceph-ansible` playbooks
The **ceph-ansible** utility now validates variables specified in configuration files located in the `group_vars` or `host_vars` directories at the beginning of playbooks invocation. This change makes it easier to discover misconfigured variables.

### 3.2. CEPH FILE SYSTEM

**A new subcommand: drop_cache**

The **ceph tell** command now supports the `drop_cache` subcommand. Use this subcommand to drop Metadata Server (MDS) cache without restarting, trim its journal, and ask clients to drop all capabilities that are not in use.

**New option: mds_cap_revoke_eviction_timeout**

This update adds a new configurable timeout for evicting clients that have not responded to capability revoke request by the Metadata Server (MDS). MDS can request clients to release its capabilities under certain conditions, such as another client requesting a capability that is currently held by a client. The client then releases its capabilities and acknowledges the MDS which can handover the capability to other clients. However, a misbehaving client might not acknowledge or could totally ignore the capability revoke request by the MDS, causing other clients to wait and thereby stalling requested I/O operations. Now, MDS can evict clients that have not responded to capability revoke requests for a configured timeout. This is disabled by default and can be enabled by setting the `mds_cap_revoke_eviction_timeout` configuration parameter.

**SELinux support for CephFS**

This update adds the SELinux policy for the Metadata Server (MDS) and **ceph-fuse** daemons so that users can use Ceph File System (CephFS) with SELinux in enforcing mode.

### 3.3. CONTAINERS

**Support the iSCSI gateway in containers**

Previously, the iSCSI gateway could not be run in a container. With this update to Red Hat Ceph Storage, a containerized version of the Ceph iSCSI gateway can be deployed with a containerized Ceph cluster.

### 3.4. DISTRIBUTION

**nfs-ganesha rebased to 2.7**

The **nfs-ganesha** package has been upgraded to upstream version 2.7, which provides a number of bug fixes and enhancements over the previous version.

### 3.5. ISCSI GATEWAY

**Target-level control parameters can be now overridden**

Only if instructed to by Red Hat Support, the following configuration settings can now be overridden by using the `gwcli reconfigure` subcommand:

- `cmdsn_depth`
- `immediate_data`
• initial_r2t
• max_outstanding_r2t
• first_burst_length
• max_burst_length
• max_recv_data_segment_length
• max_xmit_data_segment_length

Tuning these variables might be useful for high IOPS/throughput environments. Only use these variables if instructed to by Red Hat Support.

**Automatic rotation of iSCSI logs**

This update implements automatic log rotation for the `rbd-target-gw`, `rbd-target-api`, and `tcmu-runner` daemons that are used by Ceph iSCSI gateways.

### 3.6. PACKAGES

**ceph rebased to 12.2.8**

The `ceph` package has been upgraded to upstream version 12.2.8, which provides a number of bug fixes and enhancements over the previous version.

### 3.7. RADOS

**OSD BlueStore is now fully supported**

BlueStore is a new back end for the OSD daemons that allows for storing objects directly on the block devices. Because BlueStore does not need any file system interface, it improves performance of Ceph Storage Clusters.

To learn more about the BlueStore OSD back end, see the **OSD BlueStore** chapter in the Administration Guide for Red Hat Ceph Storage 3.

**New option: osd_scrub_max_preemptions**

With this release a new `osd_scrub_max_preemptions` option has been added. This option sets the maximum number of times Ceph preempts a deep scrub due to a client operation before blocking the client I/O to complete the scrubbing process. The option is set to 5 by default.

**Offline splitting FileStore directories to a target hash level is now supported**

The `ceph-objectstore-tool` utility now supports splitting FileStore directories to a target hash level.

**New option: osd_memory_target**

A new option, `osd_memory_target`, has been added with the release. This option sets a target memory size for OSDs. The BlueStore back end adjusts its cache size and attempts to stay close to this target. The `ceph-ansible` utility automatically adjusts `osd_memory_target` based on host memory. The default value is 4 GiB. The `osd_memory_target` option is set differently for Hyper-converged infrastructure (HCl) and non-HCl setups. To differentiate between them, use the `is_hci` configuration parameter. This parameter is set to `false` by default. To change the default values of `osd_memory_target` and `is_hci`, set them in the `all.yml` file.
New options: osd_delete_sleep, osd_remove_threads, and osd_recovery_threads

This update adds a new configuration option, osd_delete_sleep to throttle object delete operations. In addition, the osd_disk_threads option has been replaced with the osd_remove_threads and osd_recovery_threads options so that users can separately configure the threads for these tasks. These changes help to throttle the rate of object delete operations to reduce the impact on client operations. This is especially important when migrating placement groups (PGs). When using these options, every removal thread sleeps for the number of seconds specified between small batches of removal operations.

3.8. BLOCK DEVICES (RBD)

Support for RBD mirroring to multiple secondary clusters

Mirroring RADOS Block Devices (RBD) from one primary cluster to multiple secondary clusters is now fully supported.

rbd 1s now uses IEC units

The rbd 1s command now uses International Electrotechnical Commission (IEC) units to display image sizes.
CHAPTER 4. BUG FIXES

This section describes bugs with significant impact on users that were fixed in this release of Red Hat Ceph Storage. In addition, the section includes descriptions of fixed known issues found in previous versions.

4.1. THE CEPH-ANSIBLE UTILITY

**osd_scenario: lvm now works when deploying Ceph in containers**

Previously, the `lvm` installation scenario did not work when deploying a Ceph cluster in containers. With this update, the `osd_scenario: lvm` installation method is supported as expected in this situation.

(BZ#1509230)

**Ansible now sets container and service names that correspond with OSD numbers**

When containerized Ceph OSDs were deployed with the `ceph-ansible` utility, the resulting container names and service names of the OSDs did not correspond in any way to the OSD number and were thus difficult to find and use. With this update, `ceph-ansible` has been improved to set container and service names that correspond with OSD numbers. Note that this change does not affect existing deployed OSDs.

(BZ#1544836)

**Expanding clusters deployed with osd_scenario: lvm works**

Previously, the `ceph-ansible` utility could not expand a cluster that was deployed by using the `osd_scenario: lvm` option. The underlying source code has been modified, and clusters deployed with `osd_scenario: lvm` can be expanded as expected.

(BZ#1564214)

**Ansible now stops and disables the iSCSI gateway services when purging the Ceph iSCSI gateway**

Previously, the `ceph-ansible` utility did not stop and disable the Ceph iSCSI gateway services when using the `purge-iscsi-gateways.yml` playbook. Consequently, the services had to be stopped manually. The playbook has been improved, and the iSCSI services are now stopped and disabled as expected when purging the iSCSI gateway.

(BZ#1621255)

4.2. THE CEPH-VOLUME UTILITY

**Using custom storage cluster names is now supported**

When using a custom storage cluster name other than `ceph`, the OSDs could not start after a reboot. With this update, using custom cluster names is supported, and rebooting OSDs works as expected in this case.

(BZ#1621901)

4.3. OBJECT GATEWAY
Red Hat Ceph Storage passes the Swift Tempest test in the RefStack 15.0 toolset

Various improvements have been made to the Ceph Object Gateway Swift service. As a result, when configured correctly, Red Hat Ceph Storage 3.2, which includes the ceph-12.2.8 package, passes the Swift Tempest tempest.api.object_storage test suite with the exception of the test_container_synchronization test case. Red Hat Ceph Storage includes a different synchronization model, multisite operations, for users who require that feature.

(BZ#1436386)

Mounting the NFS Ganesha file server in a containerized IPv6 cluster no longer fails

When a containerized IPv6 Red Hat Ceph Storage cluster with an nfs-ganesha-rgw daemon was deployed by using the ceph-ansible utility, an attempt to mount the NFS Ganesha file server on a client failed with the Connection Refused error. Consequently, I/O requests were unable to run. This update fixes the default configuration IPv6 connections, and mounting the NFS Ganesha server works as expected in this case.

(BZ#1566082)

The Keystone credentials were moved to an external file

When using the Keystone identity service to authenticate a Ceph Object Gateway user, the Keystone credentials were set as plain text in the Ceph configuration file. With this update, the Keystone credentials are configured in an external file that only the Ceph user can read.

(BZ#1637529)

4.4. OBJECT GATEWAY MULTISITE

Redundant multi-site replication sync errors were moved to debug level 10

A few multi-site replication sync errors were logged multiple times at log level 0 and consumed extra space in logs. This update moves the redundant messages to debug level 10 to hide them from the log.

(BZ#1635381)

4.5. RADOS

PGs per OSD limits have been increased

In some situations, such as widely varying disk sizes, the default limit on placement groups (PGs) per OSD could prevent PGs from going active. These limits have been increased by default to make this situation less likely.

(BZ#1633426)
CHAPTER 5. TECHNOLOGY PREVIEWS

This section provides an overview of Technology Preview features introduced or updated in this release of Red Hat Ceph Storage.

**IMPORTANT**

Technology Preview features are not supported with Red Hat production service level agreements (SLAs), might not be functionally complete, and Red Hat does not recommend to use them for production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process.

For more information on Red Hat Technology Preview features support scope, see [https://access.redhat.com/support/offerings/techpreview/](https://access.redhat.com/support/offerings/techpreview/).

5.1. BLOCK DEVICES (RBD)

**Erasure Coding for Ceph Block Devices**


5.2. CEPH FILE SYSTEM

**Erasure Coding for Ceph File System**


5.3. OBJECT GATEWAY

**Improved interoperability with S3 and Swift via a unified tenant namespace**

This enhancement allows buckets to be moved between tenants. It also allows buckets to be renamed.

In Red Hat Ceph Storage 2 `rgw_keystone_implicit_tenants` only applied to Swift. As of Red Hat Ceph Storage 3 this option applies to s3 also. Sites that used this feature with Red Hat Ceph Strage 2 now have outstanding data that depends on the old behavior. To accomodate that issue this enhancement also expands `rgw_keystone_implicit_tenants` so it can be set to any of "none", "all", "s3" or "swift".


**AWS4 signature support in S3 authentication for Ceph Object Gateway when using Keystone**

With this update, S3 user authentication using the new AWS4 signatures as a part of the Keystone service is supported as a Technology Preview.
The Ceph Object Gateway supports a subset of the Amazon Secure Token Service (STS) REST APIs. STS Lite is one supported API. It provides access to a set of temporary credentials for identity and access management. For more information, see Authentication using the STS Lite API (Technology Preview) in the Developer Guide.

**The Beast HTTP front end**

This update adds a new Ceph Object Gateway HTTP front end called Beast as a Technology Preview. The Beast front end uses the Boost.Beast library for HTTP parsing and the Boost.Asio library for asynchronous I/O.
CHAPTER 6. KNOWN ISSUES

This section documents known issues found in this release of Red Hat Ceph Storage.

6.1. THE CEPH-ANSIBLE UTILITY

The `shrink-osd.yml` playbook currently has no support for removing OSDs created by `ceph-volume`

The `shrink-osd.yml` playbook assumes all OSDs are created by the `ceph-disk` utility. Consequently, OSDs deployed by using the `ceph-volume` utility cannot be shrunk.

To work around this issue, remove OSDs deployed by using `ceph-volume` manually.

(BZ#1569413)

Partitions are not removed from NVMe devices by `shrink-osd.yml` in certain situations

The Ansible playbook `infrastructure-playbooks/shrink-osd.yml` does not properly remove partitions on NVMe devices when used with `osd_scenario: non-collocated` in containerized environments.

To work around this issue, manually remove the partitions.

(BZ#1572933)

When putting a dedicated journal on an NVMe device installation can fail

When the `dedicated_devices` setting contains an NVMe device and it has partitions or signatures on it Ansible installation might fail with an error like the following:

```
  journal check: ondisk fsid 00000000-0000-0000-0000-000000000000 doesn't match expected c325f439-6849-47ef-ac43-439d9909d391, invalid (someone else's?) journal
```

To work around this issue, ensure there are no partitions or signatures on the NVMe device.

(BZ#1619090)

The values passed into `devices` in `osds.yml` are not validated

In the `osds.yml` Ansible playbook the values passed into `devices` are not validated. This could cause errors when `ceph-disk`, `parted`, or other device preparation tools fail to operate on devices that don't exist. It could also cause errors if the number of values passed into `dedicated_devices` is not equal to the number of values passed into `devices`.

To work around this issue, ensure the devices you pass into `devices` exist and if you use `dedicated_devices` ensure the devices passed into it equal the number of values in `devices`.

(BZ#1648168)

When purging a cluster with ceph-ansible that deployed OSDs with ceph-volume the logical volumes are not deleted

This issue causes logical volumes to remain after the `purge-cluster.yml` playbook completes.
To work around this issue, use the `ceph-volume` utility to wipe a list of LVs or block devices:

```
[root@ansible ~]# ansible $OSD_HOST_INVENTORY_SECTION_OR_HOSTNAME -m command -a "ceph-volume lvm zap --destroy $DEVICE1/LV1DEVICE2/LV2"
```

(BZ#1653307)

When deploying Ceph NFS Ganesha gateways on Ubuntu IPv6 systems `ceph-ansible` may fail to start the nfs-ganesha services

This issue causes Ceph NFS Ganesha gateways to fail to deploy.

To work around this issue, rerun `ceph-ansible` playbook `site.yml` to deploy only the Ceph NFS Ganesha gateways:

```
[root@ansible ~]# ansible-playbook /usr/share/ceph-ansible/site.yml --limit nfss
```

(BZ#1656908)

The `ceph-ansible` `purge-cluster.yml` playbook fails when run a second time

Running `purge-cluster.yml` against a cluster that has already been purged will result in the playbook failing with the error `No such file or directory`. This is because `ceph-volume` was removed in the first run and the command can no longer be found.

This error is not serious if the first run of `purge-cluster.yml` successfully removed the Ceph related packages.

(BZ#1656935)

When using dedicated devices for BlueStore the default sizes for `block.db` and `block.wal` might be too small

By default `ceph-ansible` does not override the default values `bluestore block db size` and `bluestore block wal size`. The default sizes are 1 GB and 576 MB respectively. These sizes might be too small when using dedicated devices with BlueStore.

To work around this issue, set `bluestore_block_db_size` or `bluestore_block_wal_size`, or both, using `ceph_conf_overrides` in `ceph.conf` to override the default values.

(BZ#1657883)

### 6.2. CEPH MANAGEMENT DASHBOARD

Ceph OSD encryption summary is not displayed in the Red Hat Ceph Storage Dashboard

On the Ceph OSD Information dashboard, under the OSD Summary panel, the OSD Encryption Summary information is not displayed.

There is no workaround at this time.

(BZ#1605241)

The Prometheus node-exporter service is not removed after purging the Dashboard
When purging the Red Hat Ceph Storage Dashboard, the `node-exporter` service is not removed, and is still running.

To work around this issue, manually stop and remove the `node-exporter` service.

Perform the following commands as root:

```
# systemctl stop prometheus-node-exporter
# systemctl disable prometheus-node-exporter
# rpm -e prometheus-node-exporter
# reboot
```

For Ceph Monitor, OSD, Object Gateway, MDS, and Dashboard, nodes, reboot these one at a time.

(BZ#1609713)

**The OSD node details are not displayed in the Host OSD Breakdown panel**

In the Red Hat Ceph Storage Dashboard, the *Host OSD Breakdown* information is not displayed on the *OSD Node Detail* panel under *All*.

There is no workaround at this time.

(BZ#1610876)

**The OSD down tab shows an incorrect value**

When rebooting OSDs, the *OSD down* tab in the *CEPH Backend storage* dashboard shows the correct number of OSDs that are *down*. However, when all OSDs are *up* again after the reboot, the tab continues showing the number of *down* OSDs.

There is no workaround at this time.

(BZ#1652233)

**The Top 5 pools by Throughput graph lists all pools**

The *Top 5 pools by Throughput* graph in the *Ceph Pools* tab lists all pools in the cluster instead of listing only the top five pools with the highest throughput.

There is no workaround at this time.

(BZ#1652807)

**The MDS Performance dashboard displays the wrong value for Clients after increasing and decreasing the number of active MDS servers and clients multiple times.**

This issue causes the Red Hat Ceph Storage dashboard to display the wrong number of CephFS clients. This can be verified by comparing the value in the Red Hat Ceph Storage dashboard with the value printed by the `ceph fs status $FILESYSTEM_NAME` command.

There is no workaround at this time.

(BZ#1652896)

**Request Queue Length displays an incorrect value**
In the **Ceph RGW Workload** dashboard, the **Request Queue Length** parameter always displays 0 even when running Ceph Object Gateways I/Os from different clients.

There is no workaround at this time.

(BZ#1653725)

**Capacity Utilization in Ceph - At Glance** dashboard shows the wrong value when an OSD is down

This issue causes the Red Hat Ceph Dashboard to show capacity utilization which is less than what `ceph df` shows.

There is no workaround at this time.

(BZ#1655589)

**Some links on the Ceph - At Glance page do not work after installing ceph-metrics**

After installing `ceph-metrics`, some of the panel links on the Ceph - At Glance page in the Ceph Dashboard do not work.

To work around this issue, clear the browser cache and reload the Ceph Dashboard site.

(BZ#1655630)

**The iSCSI Overview dashboard does not display graphs if the [iscsigws] role is included in the Ansible inventory file.**

When deploying the Red Hat Ceph Storage Dashboard, the iSCSI/Overview dashboard does not display any graphs or values if the Ansible inventory file has the [iscsigws] role included for iSCSI gateways.

To work around this issue, add [iscsis] as a role in the Ansible inventory file and run the Ansible playbook for `cephmetrics-ansible`. The iSCSI Overview dashboard then displays the graphs and values.

(BZ#1656053)

**In the Ceph Cluster dashboard the Pool Capacity graphs display values higher than actual capacity**

This issue causes the Pool Capacity graph to display values around one percent higher than what `df -cluster` shows.

There is no workaround at this time.

(BZ#1656820)

**Graphs on the OSD Node Detail dashboard might appear incorrect when used with All**

Graphs generated under **OSD Node Detail > OSD Host Name > All** do not show all OSDs in the cluster. A graph with data for hundreds or thousands of OSDs would not be usable. The ability to set All is intended to show cluster-wide values. For some dashboards it does not make sense and should not be used.

There is no workaround at this time.

(BZ#1659036)
6.3. THE **CEPH-DISK** UTILITY

**A race condition causes ceph-disk to fail when running an Ansible playbook**

In some cases, *udev* fails to activate block devices in time for OSD activation, causing the OSD to fail when starting up.

To work around this issue, use the `ceph-volume lvm` command instead of the deprecated `ceph-disk` command. By using the `ceph-volume lvm` command, the OSDs start consistently on reboot.

(BZ#1654011)

6.4. **CEPH FILE SYSTEM**

**The Ceph Metadata Server might allow recursive stat rctime to go backwards**

The Ceph Metadata Server uses the client’s time to update rctime. Because client time is not reliable rctime can go backwards.

There is no workaround at this time.

(BZ#1632506)

**The ceph-fuse client indicates incorrect recursive change time**

This issue is caused by the ceph-fuse client not updating change time when file content is modified.

There is no workaround at this time.

(BZ#1632509)

**The Ceph Metadata Server might terminate when dumping the cache if its size is large**

If you dump an MDS cache with a size of around 1 GB or larger the Ceph Metadata Server might terminate.

To work around this issue, avoid dumping the cache if its size is around 1 GB or larger. Cache usage can be checked with the `cache status` admin socket command.

(BZ#1636037)

**The Ceph Metadata Server might crash during scrub with multiple MDS**

This issue is triggered when the `scrub_path` command is run in an environment with multiple Ceph Metadata Servers.

There is no workaround at this time.

(BZ#1642015)

**When Monitors cannot reach an MDS, they sometimes incorrectly mark its rank as damaged**

When Monitors are evicting and fencing an unreachable Metadata Server (MDS), the MDS can signal that its rank is damaged due to improper handling of blacklist errors. Consequently, Monitors incorrectly mark the rank as damaged, and the file system can become unavailable because of one or more damaged ranks.
To work around this issue, mark the rank as repaired by using the `ceph fs` utility.

(BZ#1652464)

### 6.5. THE CEPH-VOLUME UTILITY

**Deploying an OSD on devices with GPT headers fails**

Drives with GPT headers will cause an error to be returned by LVM when deploying an OSD on them. The error says the device has been excluded by a filter.

To work around this issue ensure there is no GPT header present on devices to be used by OSDs.

(BZ#1644321)

### 6.6. ISCSI GATEWAY

**Using `ceph-ansible` to deploy the iSCSI gateway does not allow the user to adjust the `max_data_area_mb` option**

Using the `max_data_area_mb` option with the `ceph-ansible` utility sets a default value of 8 MB. To adjust this value, set it manually using the `gwcli` command. See the Red Hat Ceph Storage Block Device Guide for details on setting the `max_data_area_mb` option.

(BZ#1613826)

**Ansible fails to purge RBD images with snapshots**

The `purge-iscsi-gateways.yml` Ansible playbook does not purge RBD images with snapshots. To purge the images and their snapshots, use the `rbd` command-line utility:

- To purge a snapshot:
  
  ```
  rbd snap purge pool-name/image-name
  ```

  For example:

  ```
  # rbd snap purge data/image1
  ```

- To delete an image:

  ```
  rbd rm image-name
  ```

  For example:

  ```
  # rbd rm image1
  ```

(BZ#1654346)

### 6.7. OBJECT GATEWAY

**Ceph Object Gateway garbage collection decreases client performance by up to 50% during mixed workload**
In testing during a mixed workload of 60% read operations, 16% write operations, 14% delete operations, and 10% list operations, at 18 hours into the testing run, client throughput and bandwidth drop to half their earlier levels.

(BZ#1596401)

**Pushing a docker image to the Ceph Object Gateway over s3 does not complete**

In certain situations when configuring `docker-distribution` to use Ceph Object Gateway with the s3 interface the `docker push` command does not complete. Instead the command fails with an HTTP 500 error.

There is no workaround at this time.

(BZ#1604979)

**Wildcard policies do not match objects with colons in the name**

This issue is caused by an error in a matching function not allowing wildcards to match beyond colons.

To work around this issue, translate colons to another character or use ACLs rather than polices to govern them.

(BZ#1650674)

**An object can still be deleted even if a bucket or user policy with DENY s3:DeleteObject exists**

This issue is caused by an incorrect value being returned by a method which evaluates policies.

There is no workaround for this issue at this time.

(BZ#1654694)

**Delete markers are not removed with a lifecycle configuration**

In certain situations after deleting a file and a lifecycle triggers, delete markers are not removed.

There is no workaround at this time.

(BZ#1654820)

### 6.8. RADOS

**When two or more Ceph Gateway daemons use the same name in a cluster, Ceph Manager can crash**

Currently, Ceph Manager can terminate unexpectedly if some Ceph Gateway daemons use the same name. The following assert is generated in this case:

```cpp
DaemonPerfCounters::update(MMgrReport*)
```

To work around this issue, rename all the Ceph Gateway daemons that have the same name with new unique names.

(BZ#1634964)

**Performing I/O in CephFS erasure-coded pools can cause a failure on assertion**
This issue is being investigated as a possible latent bug in the messenger layer which could be causing out of order operations on the OSD.

The issue causes the following error:

```
FAILED assert(repop_queue.front() == repop)
```

There is no workaround at this time. CephFS with erasure-coded pools are a Technology Preview. For more information see Creating Ceph File Systems with erasure coding in the Ceph File System Guide (BZ#1637948)
CHAPTER 7. DEPRECATED FUNCTIONALITY

This section provides an overview of functionality that has been deprecated in all minor releases up to this release of Red Hat Ceph Storage.

7.1. THE CEPH-ANSIBLE UTILITY

The rgw_dns_name parameter

The `rgw_dns_name` parameter is deprecated. Instead, configure the RADOS Gateway (RGW) zonegroup with the RGW DNS name. For more information, see: Ceph - How to add hostnames in RGW zonegroup in the Red Hat Customer Portal.
CHAPTER 8. SOURCES

The updated Red Hat Ceph Storage source code packages are available at the following locations:

- For Ubuntu: https://rhcs.download.redhat.com/ubuntu/