= 4096. Setting the `bluestore_min_alloc_size` variable overrides specific settings for HDD or SSD if previously set with the `bluestore_min_alloc_size_ssd` or `bluestore_min_alloc_size_hdd` variables.

Important

Red Hat does not recommend changing the `bluestore_min_alloc_size` value in your production environment before first contacting Red Hat Support.

Set the value for the `bluestore_min_alloc_size` variable by using the `ceph config` command:

```
[root@node ~]# ceph config set osd.ID bluestore_min_alloc_size_device-type value
```

The BlueStore Fragmentation Tool

An OSD's free space becomes fragmented over time. Fragmentation is normal, but excess fragmentation degrades OSD performance. When using BlueStore, review fragmentation levels using the BlueStore fragmentation tool. The BlueStore fragmentation tool generates a fragmentation level score for the BlueStore OSD. The fragmentation score is between 0 and 1, with 0 indicating no fragmentation, and 1 indicating severe fragmentation.

For reference, a value between 0 and 0.7 is considered small and acceptable fragmentation, a score between 0.7 and 0.9 is considerable but still safe fragmentation, and scores higher than 0.9 indicates severe fragmentation that is causing performance issues.

View the fragmentation score using the BlueStore fragmentation tool:

```
[root@node ~]# ceph daemon osd.ID bluestore allocator score block
```

Maintaining Data Coherence with Scrubbing

OSDs are responsible for validating data coherence, using light scrubbing and deep scrubbing. Light scrubbing verifies an object's presence, checksum, and size. Deep scrubbing reads the data and recalculates and verifies the object's checksum.

By default, Red Hat Ceph Storage performs light scrubbing every day and deep scrubbing every week. However, Ceph can begin the scrubbing operation at any time, which can impact cluster performance. You can enable or disable cluster level light scrubbing by using the `ceph osd set noscrub` and `ceph osd unset noscrub` commands. Although scrubbing has a performance impact, Red Hat recommends keeping the feature enabled because it maintains data integrity. Red Hat recommends setting the scrubbing parameters to restrict scrubbing to known periods with the lowest workloads.

Note

The default configuration allows light scrubbing at any time during the day.