

of scrubbing or deep-scrubbing can also occur in a healthy cluster and does not indicate a problem.

Placement group *scrubbing* is a background process that verifies data consistency by comparing an object's size and other metadata with its replicas on other OSDs and reporting inconsistencies. *Deep scrubbing* is a resource-intensive process that compares the contents of data objects by using a bitwise comparison and recalculates checksums to identify bad sectors on the drive.



Note

Although scrubbing operations are critical to maintain a healthy cluster, they have a performance impact, particularly deep scrubbing. Schedule scrubbing to avoid peak I/O times. Temporarily prevent scrub operations with the `noscrub` and `nodeep-scrub` cluster flags.

Placement groups can have the following states:

PG state	Description
creating	PG creation is in progress.
peering	The OSDs are being brought into agreement about the current state of the objects in the PG.
active	Peering is complete. The PG is available for read and write requests.
clean	The PG has the correct number of replicas and there are no stray replicas.
degraded	The PG has objects with an incorrect number of replicas.
recovering	Objects are being migrated or synchronized with replicas.
recovery_wait	The PG is waiting for local or remote reservations.
undersized	The PG is configured to store more replicas than there are OSDs available to the placement group.
inconsistent	Replicas of this PG are not consistent. One or more replicas in the PG are different, indicating some form of corruption of the PG.
replay	The PG is waiting for clients to replay operations from a log after an OSD crash.
repair	The PG is scheduled for repair.
backfill, backfill_wait, backfill_toofull	A backfill operation is waiting, occurring, or unable to complete due to insufficient storage.
incomplete	The PG is missing information from its history log about writes that might have occurred. This could indicate that an OSD has failed or is not started.
stale	The PG is in an unknown state (OSD report time-out).