PLACEMENT GROUP STATES

When checking a cluster's status (e.g., running `ceph -w` or `ceph -s`), Ceph will report on the status of the placement groups. A placement group has one or more states. The optimum state for placement groups in the placement group map is `active + clean`.

Creating
: Ceph is still creating the placement group.

Active
: Ceph will process requests to the placement group.

Clean
: Ceph replicated all objects in the placement group the correct number of times.

Down
: A replica with necessary data is down, so the placement group is offline.

Replay
: The placement group is waiting for clients to replay operations after an OSD crashed.

Splitting
: Ceph is splitting the placment group into multiple placement groups. (functional?)

Scrubbing
: Ceph is checking the placement group for inconsistencies.

Degraded
: Ceph has not replicated some objects in the placement group the correct number of times yet.

Inconsistent
: Ceph detects inconsistencies in the one or more replicas of an object in the placement group (e.g. objects are the wrong size, objects are missing from one replica *after* recovery finished, etc.).

Peering
: The placement group is undergoing the peering process

Repair
: Ceph is checking the placement group and repairing any inconsistencies it finds (if possible).

Recovering
: Ceph is migrating/synchronizing objects and their replicas.

Backfill
: Ceph is scanning and synchronizing the entire contents of a placement group instead of inferring what contents need to be synchronized from the logs of recent operations. *Backfill* is a special case of recovery.

Wait-backfill
: The placement group is waiting in line to start backfill.

Incomplete
: Ceph detects that a placement group is missing a necessary period of history from its log. If you see this state, report a bug, and try to start any failed OSDs that may contain the needed information.

Stale
: The placement group is in an unknown state - the monitors have not received an update for it since the placement group mapping changed.

Remapped
: The placement group is temporarily mapped to a different set of OSDs from what CRUSH specified.