
PGPOOL

PGPool is a structure used to manage and update the status of removed snapshots. It does this by maintaining two fields, `cached_removed_snaps` - the current removed snap set and `newly_removed_snaps` - newly removed snaps in the last epoch. In `OSD::load_pgs` the osd map is recovered from the pg's file store and passed down to `OSD::_get_pool` where a PGPool object is initialised with the map.

With each new map we receive we call `PGPool::update` with the new map. In that function we build a list of newly removed snaps (`pg_pool_t::build_removed_snaps`) and merge that with our `cached_removed_snaps`. This function included checks to make sure we only do this update when things have changed or there has been a map gap.

When we activate the pg we initialise the snap trim queue from `cached_removed_snaps` and subtract the `purged_snaps` we have already purged leaving us with the list of snaps that need to be trimmed. Trimming is later performed asynchronously by the `snap_trim_wq`.