Placement Groups

PG

Calculations

- https://old.ceph.com/pgcalc/
- Max PG per OSD is 300
- Result must be rounded up to the nearest power of 2.

reweight

Adjust reweight according to current OSD utilisation - to prevent filling one OSD

```
ceph osd reweight-by-utilization
```

In CRUSH hierarchies with a smaller number of OSDs, it's possible for some OSDs to get more PGs than other OSDs, resulting in a higher load. You can reweight OSDs by PG distribution to address this situation by executing the following:

```
ceph osd reweight-by-pg 101
```

NOTE: 101 is a `oload` parameter, which means `overload percentage for consideration` 101%. For example, an argument of 200 would reweight OSDs which are twice as utilized as the average OSD.

Balancer

When the cluster is healthy, the balancer will incrementally move a small fraction of unbalanced PGs in order to improve distribution. This fraction will not exceed a certain threshold that defaults to 5%. Set it to 1%:

```
ceph config set mgr target_max_misplaced_ratio .01
```