CPU PROFILING

If you built Ceph from source and compiled Ceph for use with oprofile you can profile Ceph's CPU usage. See Installing Oprofile for details.

INITIALIZING OPROFILE

The first time you use `oprofile` you need to initialize it. Locate the `vmlinux` image corresponding to the kernel you are now running.

```
ls /boot
sudo opcontrol --init
sudo opcontrol --setup --vmlinux={path-to-image} --separate=library --callgraph=6
```

STARTING OPROFILE

To start oprofile execute the following command:

```
opcontrol --start
```

Once you start `oprofile`, you may run some tests with Ceph.

STOPPING OPROFILE

To stop `oprofile` execute the following command:

```
opcontrol --stop
```

RETRIEVING OPROFILE RESULTS

To retrieve the top cmon results, execute the following command:

```
opreport -gal ./cmon | less
```

To retrieve the top cmon results with call graphs attached, execute the following command:

```
opreport -cal ./cmon | less
```

> **Important:**   After reviewing results, you should reset oprofile before running it again. Resetting oprofile removes data from the session directory.

RESETTING OPROFILE

To reset oprofile, execute the following command:

```
sudo opcontrol --reset
```

> **Important:**   You should reset oprofile after analyzing data so that you do not commingle results from different tests.