Frigate with Reolink

The Setup

I have 4 Reolink cams, 3 x 510WA and 1 x 510A - seems pretty much the same, just the "WA" hawing Wifi, and the "A" having POE.

I started installing frigate reading the docs and learning from this Youtube video.

Starting up

The first mistake was to install via DockerHub, now a days the image is at GitHub, so I spend a lot of time on an old version and new documentation.

Looking at many issues at gitHub, it seems that this is a very common mistake.

Second mistake, I started using the config from https://docs.frigate.video/configuration/camera_specific#reolink-cameras and with --shm-size=64m

This gave me ALL sort of trouble, and the camera streams stalled within seconds; i tried all sort of streams, https, rstp, rmtp etc etc.

Often ending like this:

I tried all the (bad) advices from a lot of videos, and a lot or article pointing out the problem was the cams.

Then I came across this Youtube video, and found that a simple standard RTSP are working just fine (must be enabled on the Camera) - WITH more memory for 4 cams / 8 streams (--shm-size=256m).

My first <u>working config</u>: config.yml.std

Works fine and the camera streams does not stall

Also the setup of the docker container may require som tweaking, I You have (or not have) the Google Coral.

Starting frigate:

```
docker run -d \
  --name frigate \
  --restart=unless-stopped \
  --mount type=tmpfs,target=/tmp/cache,tmpfs-size=1000000000 \
  --device /dev/bus/usb:/dev/bus/usb \
  --shm-size=256m \
  -v /mnt/LaCie/nas/frigate:/media/frigate \
  -v /opt/frigate/config.yml:/config/config.yml:ro \
  -v /etc/localtime:/etc/localtime:ro \
  -e FRIGATE_RTSP_PASSWORD='***********' \
  -p 5000:5000 \
  -p 1935:1935 \
  ghcr.io/blakeblackshear/frigate:master-433bf69-tensorrt
```

A working/simple config

```
mqtt:
  host: 10.0.0.183
cameras:
  frigate_front_door_cam:
    ffmpeg:
      inputs:
        - path: rtsp://user:password@10.0.0.151:554//h264Preview_01_main
          roles:
            - detect
        - path: rtsp://user:password@10.0.0.151:554//h264Preview_01_sub
          roles:
            - record
    rtmp:
      enabled: False
    detect:
      width: 640
      height: 480
      fps: 10
    objects:
      track:
        - person
    snapshots:
      enabled: True
      timestamp: false
      bounding_box: True
      retain:
        default: 2
  frigate_garden_cam:
    ffmpeg:
      inputs:
        - path: rtsp://user:password@10.0.0.108:554//h264Preview_01_main
          roles:
            - detect
        - path: rtsp://user:password@10.0.0.108:554//h264Preview_01_sub
          roles:
            - record
    rtmp:
      enabled: False
    detect:
      width: 2560
      height: 1920
      fps: 10
    objects:
      track:
        - person
    snapshots:
      enabled: True
      timestamp: false
      bounding_box: True
      retain:
        default: 2
  frigate_behind_house_cam:
    ffmpeg:
      inputs:
        - path: rtsp://user:password@10.0.0.176:554//h264Preview_01_main
          roles:
            - detect
        - path: rtsp://user:password@10.0.0.176:554//h264Preview_01_sub
          roles:
            - record
    rtmp:
      enabled: False
    detect:
      width: 2560
      height: 1920
      fps: 10
    objects:
```

```
        track:
          - person
      snapshots:
        enabled: True
        timestamp: false
        bounding_box: True
        retain:
          default: 2
  frigate_carport_cam:
    ffmpeg:
      inputs:
        - path: rtsp://user:password@10.0.0.191:554//h264Preview_01_main
          roles:
            - detect
        - path: rtsp://user:password@10.0.0.191:554//h264Preview_01_sub
          roles:
            - record
    rtmp:
      enabled: False
    detect:
      width: 2560
      height: 1920
      fps: 10
    objects:
      track:
        - person
        - car
    snapshots:
      enabled: True
      timestamp: false
      bounding_box: True
      retain:
        default: 2
detectors:
  coral:
    type: edgetpu
    device: usb
```

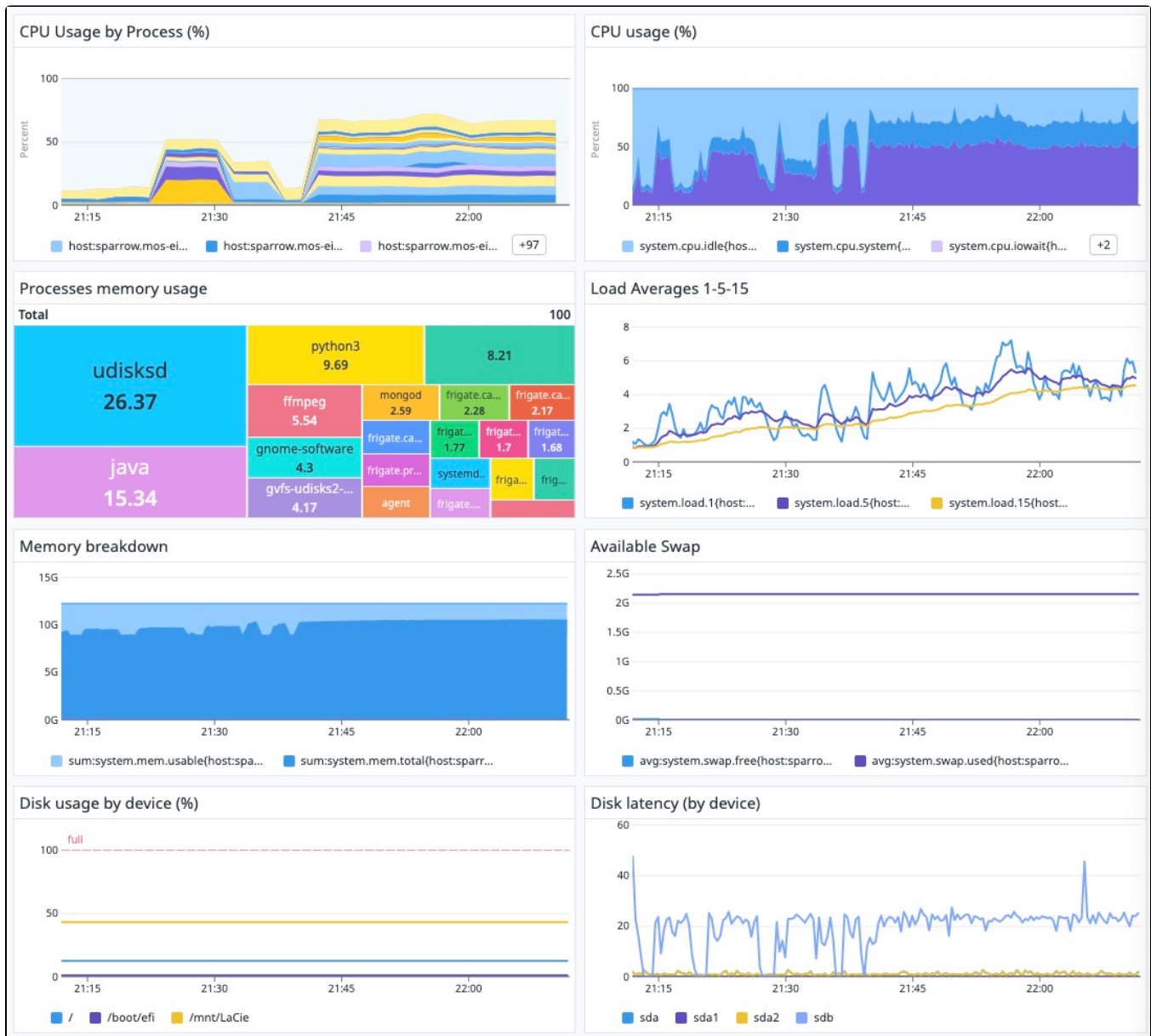# CPU - With Google Coral

As the logs states:
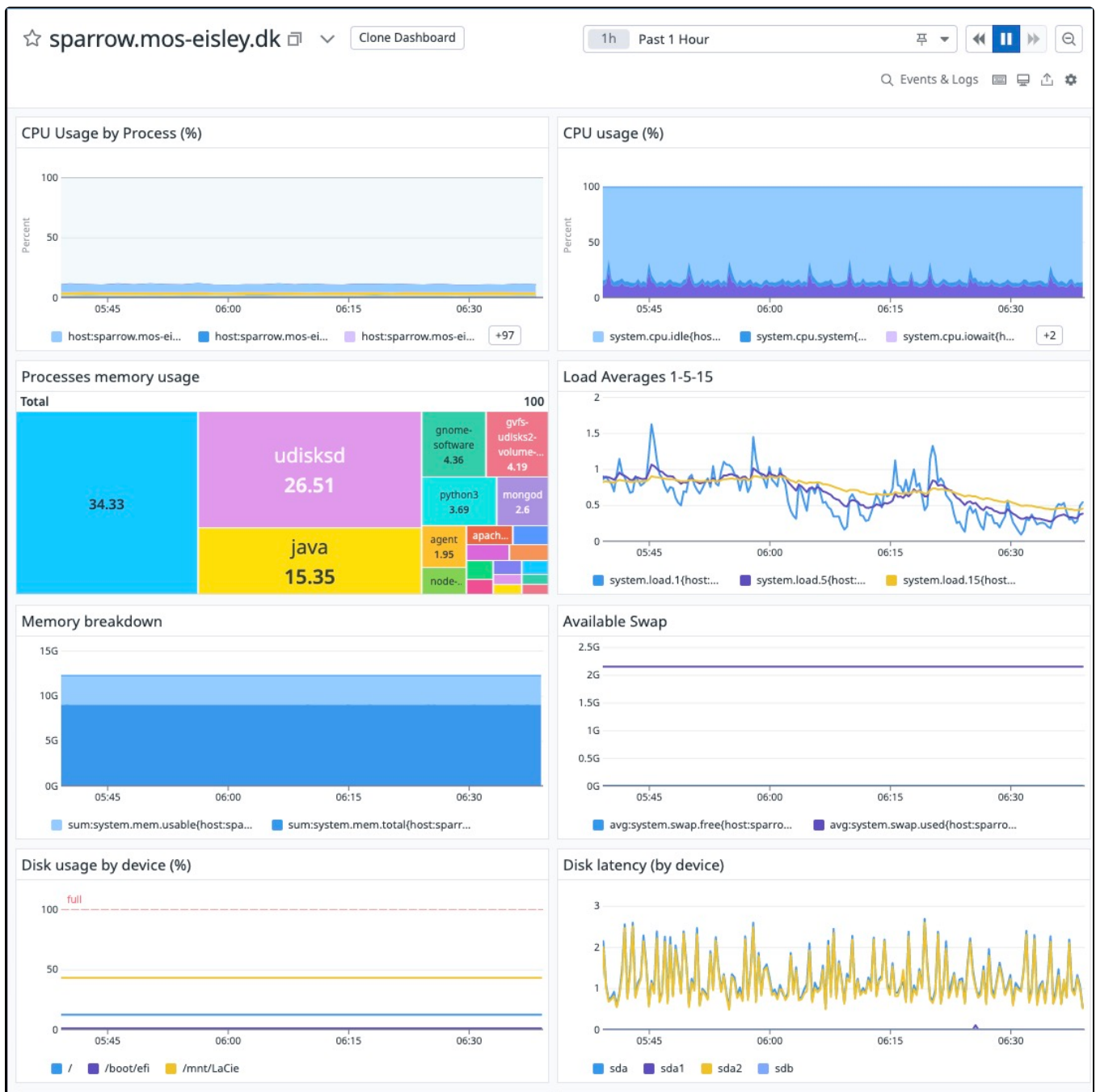
```
2023-04-19 21:39:43.672054592  [INFO] Starting Frigate...
2023-04-19 21:39:45.123307770  [2023-04-19 21:39:45] frigate.app                    INFO    : Starting Frigate
(0.12.0-433bf69)
2023-04-19 21:39:45.170477205  [2023-04-19 21:39:45] peewee_migrate                 INFO    : Starting
migrations
2023-04-19 21:39:45.175774528  [2023-04-19 21:39:45] peewee_migrate                 INFO    : There is nothing
to migrate
2023-04-19 21:39:45.204354047  [2023-04-19 21:39:45] detector.coral                 INFO    : Starting
detection process: 290
2023-04-19 21:39:48.422390105  [2023-04-19 21:39:45] frigate.app                    INFO    : Output process
started: 292
2023-04-19 21:39:48.422396583  [2023-04-19 21:39:45] frigate.comms.dispatcher       INFO    : Turning off
snapshots for frigate_carport_cam
2023-04-19 21:39:48.422404731  [2023-04-19 21:39:45] frigate.app                    INFO    : Camera processor
started for frigate_front_door_cam: 298
2023-04-19 21:39:48.422409419  [2023-04-19 21:39:45] frigate.app                    INFO    : Camera processor
started for frigate_garden_cam: 300
2023-04-19 21:39:48.422426668  [2023-04-19 21:39:45] frigate.app                    INFO    : Camera processor
started for frigate_behind_house_cam: 302
2023-04-19 21:39:48.422431296  [2023-04-19 21:39:45] frigate.app                    INFO    : Camera processor
started for frigate_carport_cam: 303
2023-04-19 21:39:48.422434562  [2023-04-19 21:39:45] frigate.app                    INFO    : Capture process
started for frigate_front_door_cam: 304
2023-04-19 21:39:48.422459193  [2023-04-19 21:39:45] frigate.app                    INFO    : Capture process
started for frigate_garden_cam: 308
2023-04-19 21:39:48.422463190  [2023-04-19 21:39:45] frigate.app                    INFO    : Capture process
started for frigate_behind_house_cam: 311
2023-04-19 21:39:48.422466294  [2023-04-19 21:39:45] frigate.app                    INFO    : Capture process
started for frigate_carport_cam: 315
2023-04-19 21:39:48.446236449  [2023-04-19 21:39:45] frigate.detectors.plugins.edgetpu_tfl INFO    : Attempting
to load TPU as usb
2023-04-19 21:39:48.446242266  [2023-04-19 21:39:48] frigate.detectors.plugins.edgetpu_tfl INFO    : TPU found
```

I assume the Google Coral is working, but still Frigate is highly CPU intensive for 4 cams:

CPU Usage by Process (%)

Legend: host:sparrow.mos-ei..., host:sparrow.mos-ei..., host:sparrow.mos-ei..., +97

CPU usage (%)

Legend: system.cpu.idle{hos..., system.cpu.system{..., system.cpu.iowait{h..., +2

Processes memory usage

Total — 100

udisksd 26.37	python3 9.69
	8.21
	ffmpeg 5.54, mongod 2.59, frigate.ca... 2.28, frigate.ca... 2.17
java 15.34	gnome-software 4.3, frigate.ca..., frigat... 1.77, frigat... 1.7, frigat... 1.68
	gvfs-udisks2-... 4.17, frigate.pr..., systemd..., friga..., frig...
	agent, frigate....

Load Averages 1-5-15

Legend: system.load.1{host:..., system.load.5{host:..., system.load.15{host...

Memory breakdown

Legend: sum:system.mem.usable{host:spa..., sum:system.mem.total{host:sparr...

Available Swap

Legend: avg:system.swap.free{host:sparro..., avg:system.swap.used{host:sparro...

Disk usage by device (%)

Legend: /, /boot/efi, /mnt/LaCie

Disk latency (by device)

Legend: sda, sda1, sda2, sdb

With frigate not running:

If this is not improving / improved somehow, I will setup Frigate on a seperate piece of hardware.

This is 1 cam high res detect:

```
top - 08:34:03 up 21:02,  3 users,  load average: 2.36, 1.61, 1.10
Tasks: 349 total,   2 running, 290 sleeping,   0 stopped,   0 zombie
%Cpu(s): 28.6 us, 11.5 sy,  0.0 ni, 58.1 id,  0.1 wa,  0.0 hi,  1.7 si,  0.0 st
KiB Mem : 12000956 total,  1087464 free,  3220632 used,  7692860 buff/cache
KiB Swap:  2097148 total,  2095100 free,     2048 used.  8271664 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
21546 root      20   0  436984 100192  18196 S  71.3  0.8   6:11.13 ffmpeg
21538 root      20   0 3327792 204212  19420 S  27.4  1.7   2:19.54 frigate.capture
 2436 root      20   0 1410932 511172  71928 S  24.1  4.3  52:31.98 python3
28883 bnp       20   0   73520  22108   9132 S   6.3  0.2   0:00.19 python3
21530 root      20   0 3177704 186780  24120 S   3.0  1.6   0:14.06 frigate.output
21536 root      20   0 3260464 200244  29356 S   2.6  1.7   0:19.95 frigate.process
21346 root      20   0 4356820 402396 205684 S   2.0  3.4   0:17.41 python3
  616 dd-agent  20   0 2010440 281244  69828 S   1.0  2.3 308:53.35 agent
```