Docker

- Determining and Clearing Container Disk Usage in Overlay2
- Display live container resource usage

Determining and Clearing Container Disk Usage in Overlay2

Show disk usage using docker df:

```
docker system df
```

Should output similar to below:

```
TYPE            TOTAL     ACTIVE    SIZE      RECLAIMABLE
Images          23        22        11.15GB   799.2MB (7%)
Containers      28        27        2.751GB   0B (0%)
Local Volumes   19        19        477.2MB   0B (0%)
Build Cache     0         0         0B        0B
```

Show disk usage using du:

```
du -shc /var/lib/docker/overlay2/*/diff | grep total
```

should output similar to below:

```
15G     total
```

Show disk usage using du:

```
du -h /var/lib/docker | sort -h
```

Script to clear overlay2 storage and volumes :

```
#!/bin/bash

# remove exited containers:
docker ps --filter status=dead --filter status=exited -aq | xargs -r docker rm -v

# remove unused images:
docker images --no-trunc | grep '<none>' | awk '{ print $3 }' | xargs -r docker rmi

# remove unused volumes:
find '/var/lib/docker/volumes/' -mindepth 1 -maxdepth 1 -type d | grep -vFf <(
  docker ps -aq | xargs docker inspect | jq -r '.[] | .Mounts | .[] | .Name | select(.)'
) | xargs -r rm -fr
```

Docker Logs can also take up a significant amount of space. Logs are located under /var/lib/docker/containers/<container-id>/<container-id-json.log.

Logs can be set to maximum size and number by setting the following in docker-compose.yml:

```
services:
  my-app:
    image: my-app:latest
    container_name: mycontainer
    logging:
      options:
        max-size: 10m
....
```

Additionally, you can setup logging driver default options at the daemon level as described in the URL below:

https://docs.docker.com/config/containers/logging/configure/#configure-the-default-logging-driver

Display live container resource usage

Run the following command to view CPU and memory usage of all your containers in real-time:

```
docker stats --all --format "table {{.ID}}\t{{.Name}}\t{{.CPUPerc}}\t{{.MemUsage}}"
```