Video:
https://youtu.be/QwGm5m4AxNA

Install Grafana on Debian or Ubuntu

```
sudo apt-get install -y apt-transport-https
sudo apt-get install -y software-properties-common wget
sudo wget -q -O /usr/share/keyrings/grafana.key
```

https://apt.grafana.com/gpg.key

Stable release

```
echo "deb [signed-by=/usr/share/keyrings/grafana.key]
https://apt.grafana.com stable main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list
```

Beta release

```
echo "deb [signed-by=/usr/share/keyrings/grafana.key]
https://apt.grafana.com beta main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list

# Update the list of available packages
sudo apt-get update

# Install the latest OSS release:
sudo apt-get install grafana

#To start Grafana Server

sudo /bin/systemctl status grafana-server
```

Install Loki and Promtail using Docker

Download Loki Config

```
wget
https://raw.githubusercontent.com/grafana/loki/v2.8.0/cmd/loki/loki-local-
config.yaml -O loki-config.yaml
```

Run Loki Docker container

```
docker run -d --name loki -v $(pwd):/mnt/config -p 3100:3100
grafana/loki:2.8.0 --config.file=/mnt/config/loki-config.yaml
```

Download Promtail Config

```
wget
https://raw.githubusercontent.com/grafana/loki/v2.8.0/clients/cmd/promtail
/promtail-docker-config.yaml -O promtail-config.yaml
```

Run Promtail Docker container

```
docker run -d --name promtail -v $(pwd):/mnt/config -v /var/log:/var/log

--link loki grafana/promtail:2.8.0

--config.file=/mnt/config/promtail-config.yaml
```

Install Prometheus and cAdvisor

cAdvisor (short for **c**ontainer **Advisor**) analyzes and exposes resource usage and performance data from running containers. cAdvisor exposes Prometheus metrics out of the box.

Download the prometheus config file

Wget https://raw.githubusercontent.com/prometheus/prometheus/main/documentation/examples/prometheus.yml

Install Prometheus using Docker

```
docker run -d --name=prometheus -p 9090:9090 -v
<PATH_TO_prometheus.yml_FILE>:/etc/prometheus/prometheus.yml
prom/prometheus --config.file=/etc/prometheus/prometheus.yml
```

Add cAdvisor target

```
scrape_configs:
- job_name: cadvisor
  scrape_interval: 5s
  static_configs:
  - targets:
    - cadvisor:8080
```

#Using Docker Compose

```
version: '3.2'
services:
  prometheus:
    image: prom/prometheus:latest
    container_name: prometheus
    ports:
    - 9090:9090
    command:
    - --config.file=/etc/prometheus/prometheus.yml
    volumes:
    - ./prometheus.yml:/etc/prometheus/prometheus.yml:ro
    depends_on:
```

```
    - cadvisor
  cadvisor:
    image: gcr.io/cadvisor/cadvisor:latest
    container_name: cadvisor
    ports:
    - 8080:8080
    volumes:
    - /:/rootfs:ro
    - /var/run:/var/run:rw
    - /sys:/sys:ro
    - /var/lib/docker/:/var/lib/docker:ro
    depends_on:
    - redis
  redis:
    image: redis:latest
    container_name: redis
    ports:
    - 6379:6379

#  Verify

docker-compose up -d
docker-compose ps


Test PromQL
rate(container_cpu_usage_seconds_total{name="redis"}[1m])
container_memory_usage_bytes{name="redis"}
```