



Prometheus

What is it?

Open-source systems monitoring and toolkit

- Multi dimensional data model
- Query Language
- Data is retrieved from targets via pull over http/https
- Targets are configured manually or via service discovery

Origins

Kubernetes

- Inspired by Google Borg
- Not Borg

Prometheus

- Inspired by Google Borgmon
- Initially developed by former Google employees working at SoundCloud (2012)
- Not Borgmon

Data model

Multi label time series of a metric

Notation:

`<metric name>{<label name>=<label value>, ...}`

Prometheus Metric Types

https://prometheus.io/docs/concepts/metric_types/

- Counter
 - only goes up
- Gauge
 - Can go up and down
- Histogram and Summary
 - Sampled observations

This talk

- Deployment of Prometheus within OpenShift
- Having a first look at Prometheus
- Configuring Prometheus for OpenShift Cluster Monitoring (SD)
- Getting route metrics into Prometheus using haproxy-exporter
- Using Grafana as Prometheus frontend

code url: <https://github.com/he1nh/openshift-prometheus>

Some Metrics

- container_memory_usage_bytes
 - {container_label_io_kubernetes_pod_name}
 - {container_label_io_kubernetes_pod_namespace}
- container_cpu_usage_seconds_total

Links

Prometheus

- <https://prometheus.io>
- <https://github.com/prometheus>

OpenShift

- <https://docs.openshift.com> (enterprise)
- <https://docs.openshift.org> (upstream)

Bonus: some truly amazing stuff

CRISPR

<https://www.youtube.com/watch?v=jAhjPd4uNFY>

Ruby Seadragon First Glimpse in Wild

<https://www.youtube.com/watch?v=Bp5w4HjoaJM>