Week 9

Learning

Objective: I want to be able to observe the health, availability and utilization of my application all in one place, and generate reports from historical data.

Tools

Possible Tools: https://landscape.cncf.io/card-mode?category=monitoring&project=graduated,incubating,member,no&grouping=category&sort=stars

Prometheus

I've decided to go with Prometheus because it is something new that I haven't tried yet, and it comes from the Cloud Native Computing Foundation. It's fully open source, unlike the other possible tools in the above link.

There are two types of data aggregation tools: pull based and event-based. Prometheus is pull based meaning that it will constantly fetch metrics at a certain interval. It collects pre-determined metrics about your application based on rules.

Helm

Helm is a package manager for Kubernetes. It will be used to install Prometheus into our cluster.

Installation

1. Install Helm

```
curl -fsSL -o get_helm.sh https://raw.githubusercontent.com/helm/helm/master/scripts/get-helm-3
chmod 700 get_helm.sh
./get_helm.sh
```

2. Add Helm Stable and Prometheus repository to Helm repository list

```
helm repo add stable https://charts.helm.sh/stable
helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
```

3. Install Prometheus and Grafana into your cluster:

```
helm install prometheus prometheus-community/kube-prometheus-stack
```

4. Portforward the Prometheus-Grafana instance to localhost

```
kubectl port-forward deployment/prometheus-grafana 3000
```

5. Visit localhost:3000 and login with:

   Username: admin

   Password: prom-operator

Problems

When I run the load test, no data is appearing in Grafana