

Sesión 16 prometheus on kubernetes

google cloud

- `gcloud config set compute/zone europe-west1-b ←`
(<https://cloud.google.com/compute/docs/regions-zones/>)
- `gcloud container clusters create bootcamp --num-nodes 3 --scopes`
«<https://www.googleapis.com/auth/projecthosting,storage-rw>»
- `gcloud container clusters list`
- en local, con las utilidades G instaladas: `gcloud container clusters get-credentials bootcamp --zone europe-west1-b --project <project>`
 - <https://cloud.google.com/sdk/docs/quickstart-linux>
- y para eliminar después el cluster: `gcloud container clusters delete bootcamp`

helm

- <https://medium.com/google-cloud/helm-on-gke-cluster-quick-hands-on-guide-ecffad94b0>
- `k apply -f create-helm-service-account.yaml`

[create-helm-service-account.yaml](#)

```
# This is an extract from here:
http://jayunit100.blogspot.fi/2017/07/helm-on.html
apiVersion: v1
kind: ServiceAccount
metadata:
  name: helm
  namespace: kube-system
---
apiVersion: rbac.authorization.k8s.io/v1beta1
kind: ClusterRoleBinding
metadata:
  name: helm
roleRef:
  apiGroup: rbac.authorization.k8s.io
  kind: ClusterRole
  name: cluster-admin
subjects:
- kind: ServiceAccount
  name: helm
  namespace: kube-system
```

- obtener password: `gcloud container clusters describe bootcamp --zone europe-west1-b --<project_id>`
 - igual no necesario
- inicializamos helm `helm init --service-account helm`
- `k get deploy,svc tiller-deploy -n kube-system`
 - tiller: parte servidor de helm, con la que interactuamos
- creamos para deployar: `helm create samplechart`
- deployamos: `helm install --name helm-test ./samplechart --set service.type=LoadBalancer`

- vemos el deploy: `k get svc`
- comprobación de nuestro NGINX desplegado: `curl <ip_publica>`

prometheus

- <https://itnext.io/kubernetes-monitoring-with-prometheus-in-15-minutes-8e54d1de2e13>
- instalación a través de helm: `helm install stable/prometheus-operator --name prometheus-operator --namespace monitoring`
- verificamos: `kubectl get pods -n monitoring`
- prometheus: `kubectl port-forward -n monitoring prometheus-prometheus-operator-prometheus-0 9090 → http://localhost:9090`
- grafana: `kubectl port-forward $(kubectl get pods --selector=app=grafana -n monitoring --output=jsonpath={.items..metadata.name}) -n monitoring 3000 → http://localhost:3000` (admin:prom-operator)
- alertmanager: `kubectl port-forward -n monitoring alertmanager-prometheus-operator-alertmanager-0 9093 → http://localhost:9093`

deploy traefik

para usar con el deploy del WHO (necesitamos la IP asignada por el uso de **nip.io**)

[traefik.yaml](#)

```
---
apiVersion: v1
kind: ServiceAccount
metadata:
  name: traefik-ingress-controller
  namespace: kube-system
---
kind: Deployment
apiVersion: extensions/v1beta1
metadata:
  name: traefik-ingress-controller
  namespace: kube-system
  labels:
    k8s-app: traefik-ingress-lb
spec:
  replicas: 1
  selector:
    matchLabels:
      k8s-app: traefik-ingress-lb
  template:
    metadata:
      labels:
        k8s-app: traefik-ingress-lb
        name: traefik-ingress-lb
    spec:
      serviceAccountName: traefik-ingress-controller
      terminationGracePeriodSeconds: 60
      containers:
        - image: traefik
```

```
name: traefik-ingress-lb
ports:
- name: http
  containerPort: 80
- name: admin
  containerPort: 8080
args:
- --api
- --kubernetes
- --logLevel=INFO
- --metrics
- --metrics.prometheus
- --web
- --web.metrics
- --web.metrics.prometheus
---
kind: Service
apiVersion: v1
metadata:
  name: traefik-ingress-service
  namespace: kube-system
spec:
  selector:
    k8s-app: traefik-ingress-lb
  ports:
    - protocol: TCP
      port: 80
      name: web
    - protocol: TCP
      port: 8080
      name: admin
  type: LoadBalancer
```

- k deploy -f traefik.yaml -n kube-system
- k get svc -n kube-system : obtener IP pública → http:<ip>:8080

deploy WHO

- k create namespace who
- k apply -f whoami-deployment.yaml -n who
- k apply -f whoami-ingress.yaml -n who
- k apply -f whoami-service.yaml -n who
- k apply -f whoareyou.yaml -n who
- k get svc,deply -n who

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