

Online Workshop

Docker & Kubernetes

Session #5 | @inicopaez



Session Agenda

Orchestrators

Kubernetes concepts (part 2)

Kubernetes in production (part 1)

Kubernetes Concepts

Pod

Namespace

Replica Set

Daemon Set

Service

Jobs / Cron-jobs

Ingress

Volumes

Configmap

Stateful Sets

Secret

Deployments

```
kubectl config set-context --current --namespace=balanz
```

```
kubectl run passwordapi --image=nicopaez/password-api:2.1.0
```

```
kubectl apply -f deployment-v3.yaml
```

K8s cluster

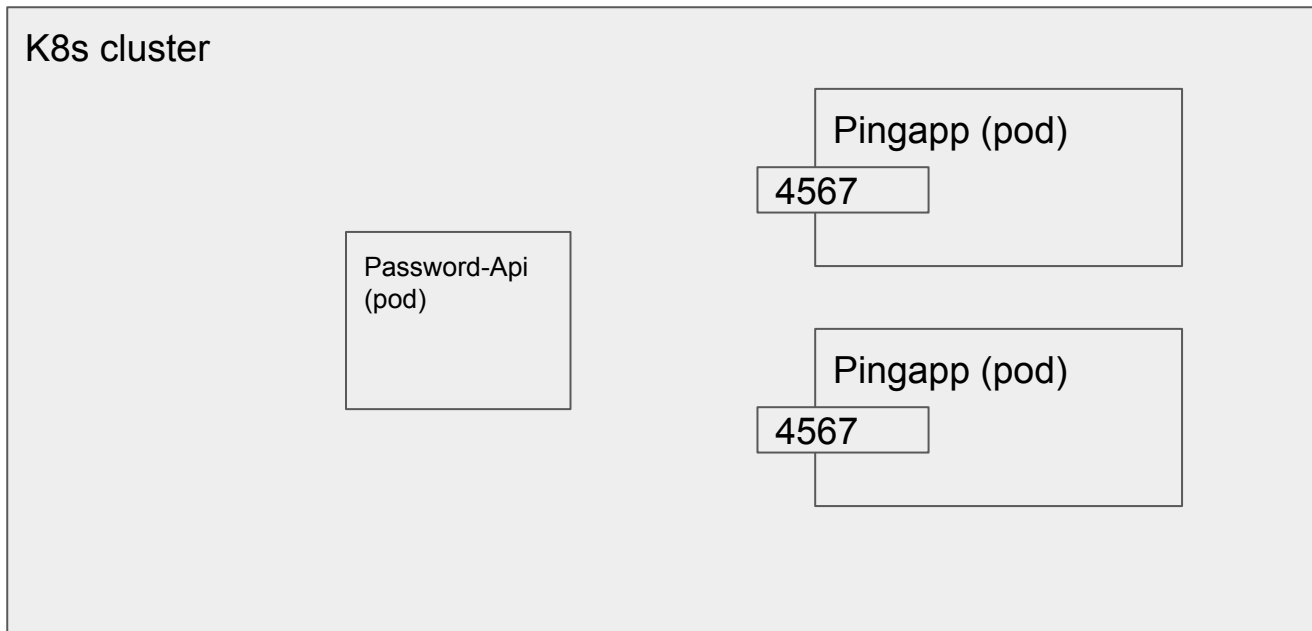
Password-Api
(pod)

Pingapp (pod)

4567

Pingapp (pod)

4567



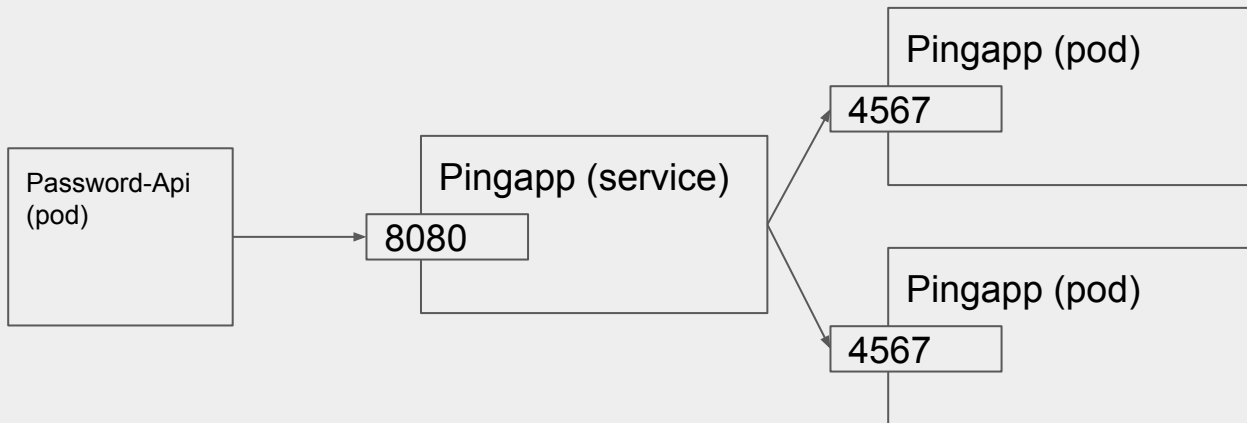
Kubernetes Service Types

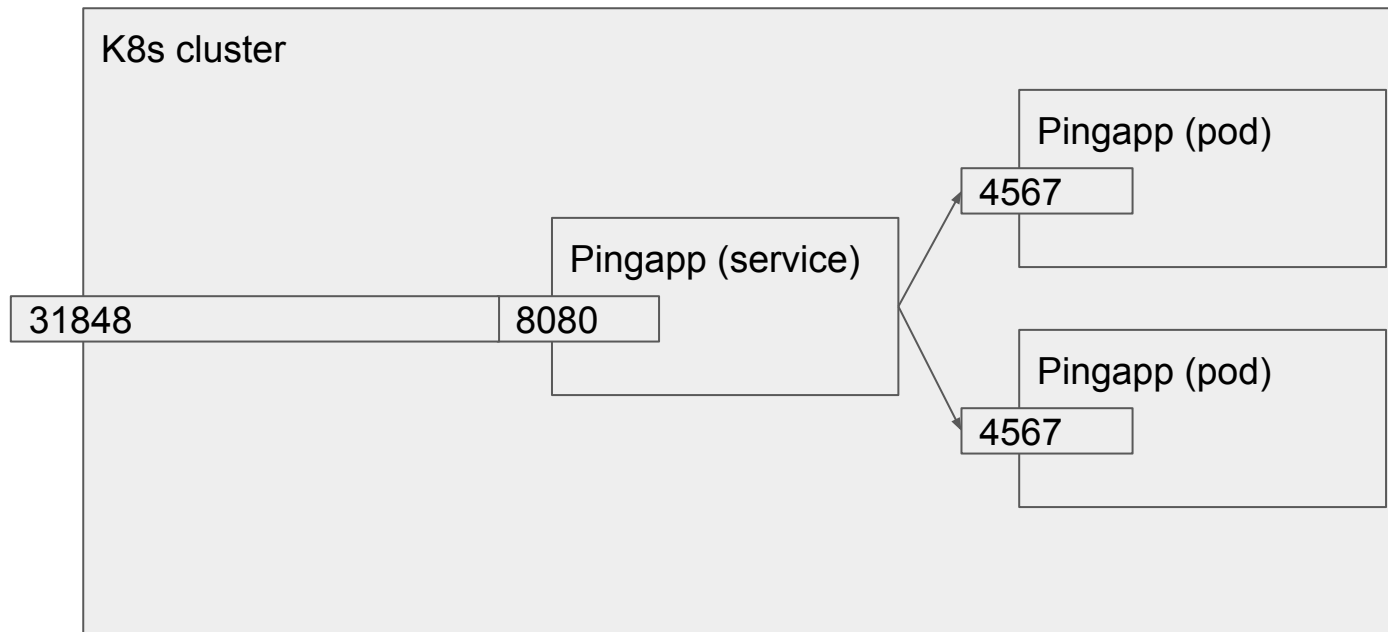
ClusterIP

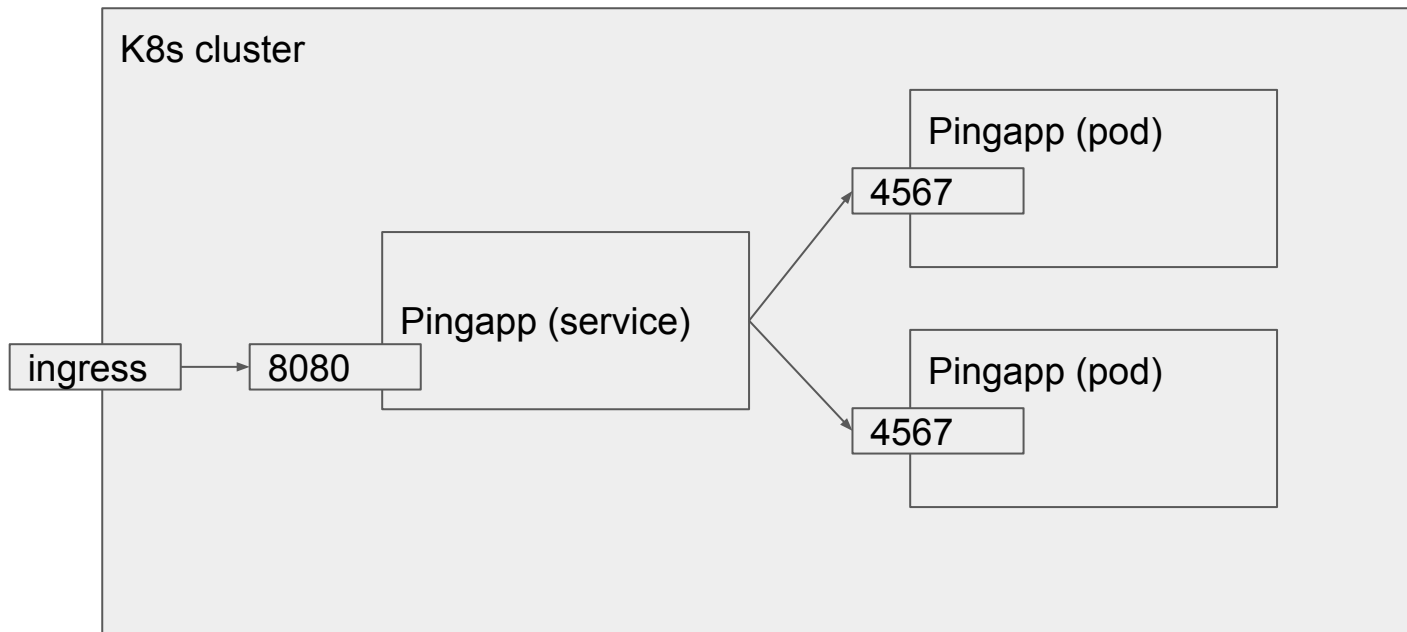
NodePort

LoadBalancer

K8s cluster



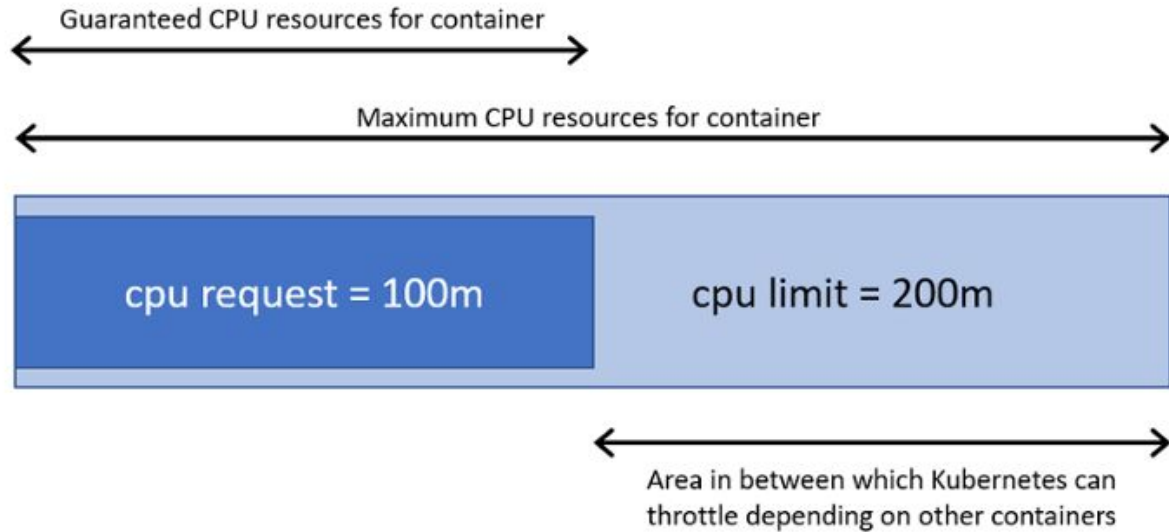




CronJob

```
---
apiVersion: batch/v1beta1
kind: CronJob
metadata:
  name: pgbackup
spec:
  schedule: "30 05 * * *"
  jobTemplate:
    spec:
      template:
        spec:
          containers:
            - name: pgbackup
              image: pgbackups:0.0.2-pg12
              env:
                - name: DATACENTER
                  value: do2
```

Resources & Quotas



Resources sample



resources:

limits:

cpu: 100m

memory: 256Mi

requests:

cpu: 100m

memory: 256Mi

Probes overview

Liveness & Readiness & Startup

Actions: ExecAction, TCPSocketAction, HTTPGetAction

Results: success, failure, unknown

Default state: success

Probe sample

livenessProbe:

initialDelaySeconds: 60

timeoutSeconds: 5

periodSeconds: 60

successThreshold: 1

failureThreshold: 12

httpGet:

path: /actuator/health

port: 8080

Kubernetes Operators

(<https://github.com/nicopaez/jmeter-operator>)

Recommendations

1. Infra as Code
2. Never use latest
3. Request / limits
4. Probes

End of Session 5