MIS PRIMEROS PASOS CON

kubernetes

Empezamos en pocos minutos...

Bravent

Diego Campos

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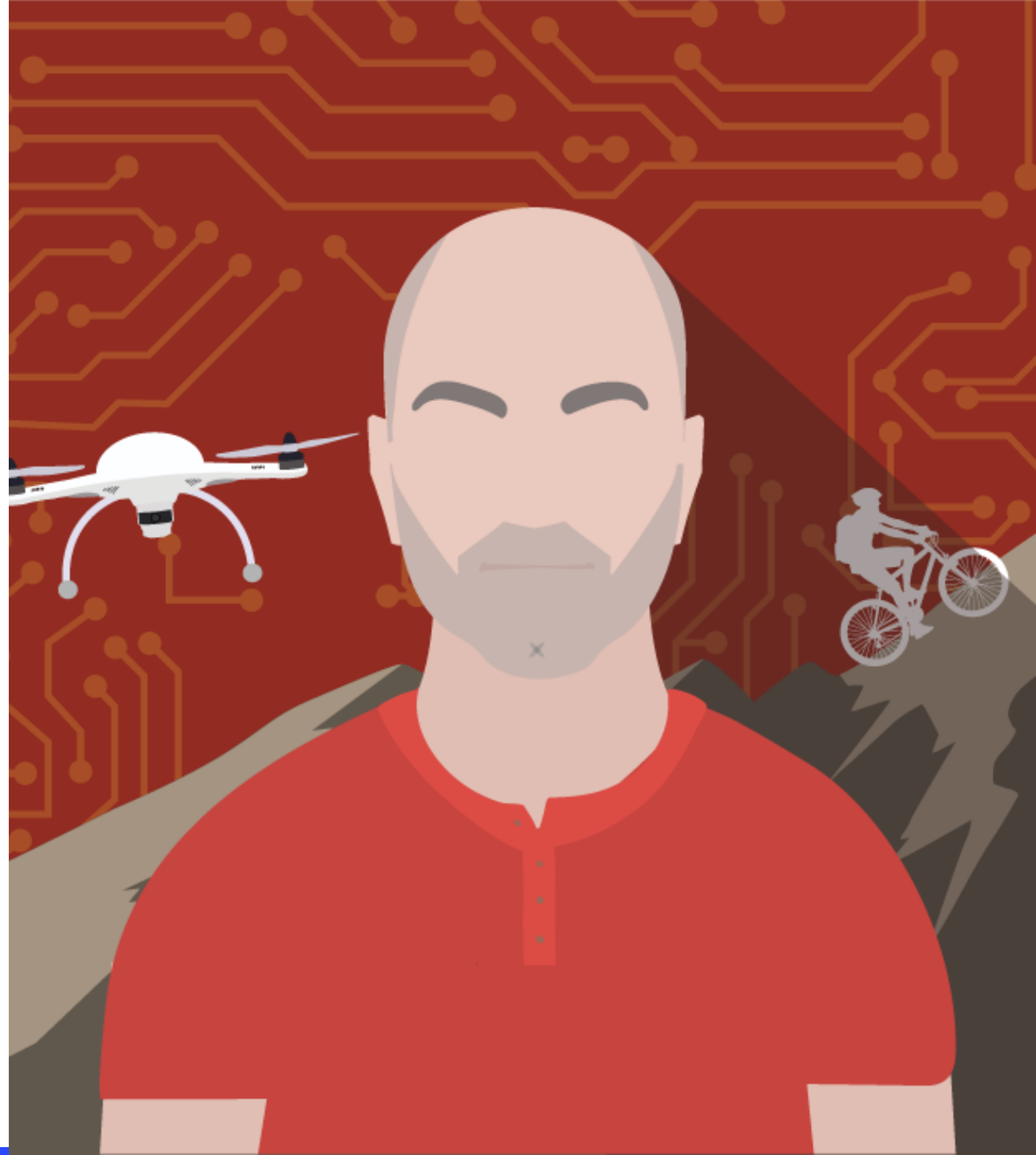
@diecamdia
http://github.com/diecamdia/



kubernetes

Introducción

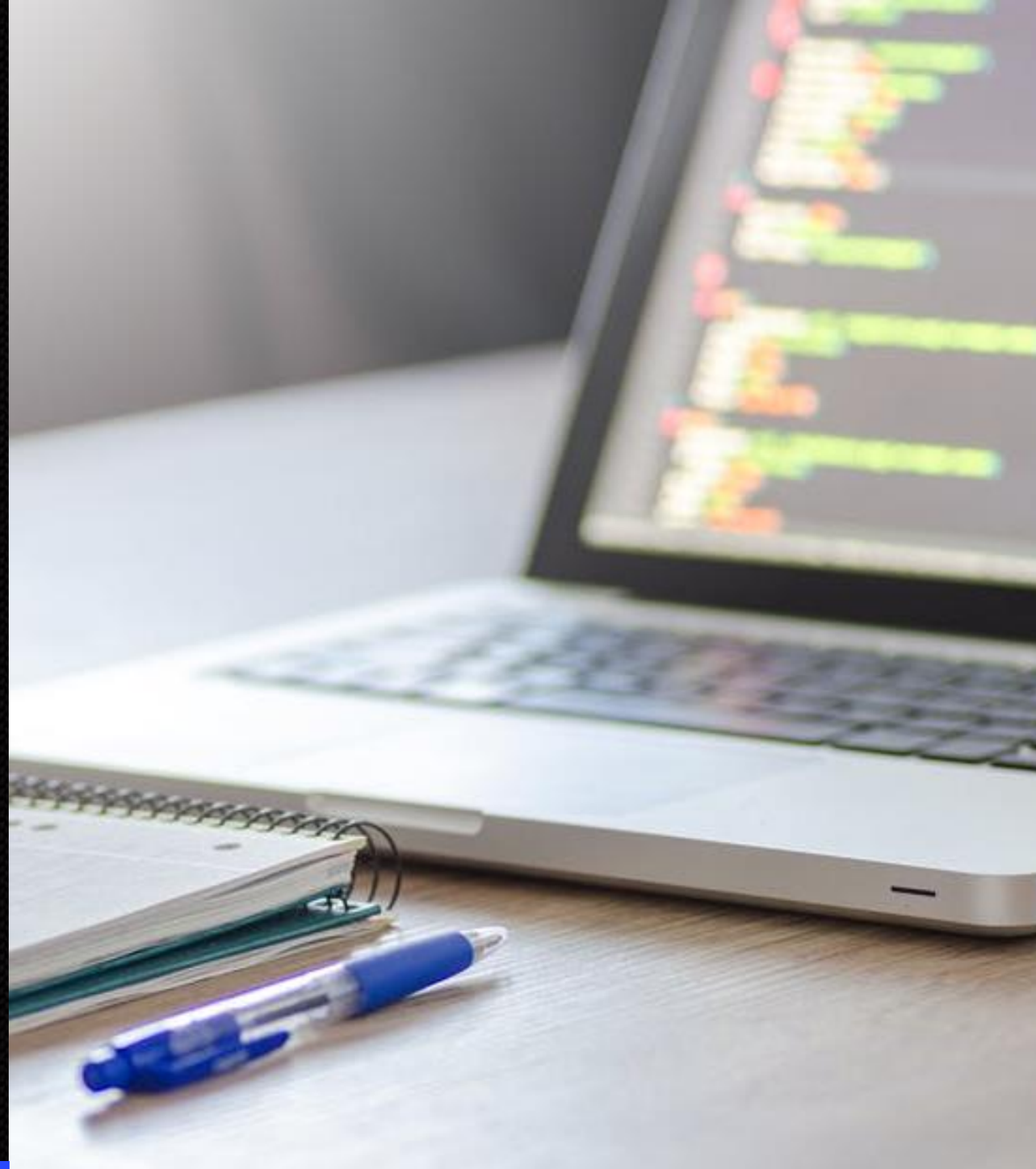
¿Que es?
Containers - Docker
Container - Orchestration
Conceptos: PODs – ReplicaSets – Deployment – Services
Redes en kubernetes
Administración – Kubectl
Ficheros de definición – YAML

Demo

Herramienta de administración.
Definición de ficheros YAML .
Despliegue en la nube.

Bravent
IT consulting company

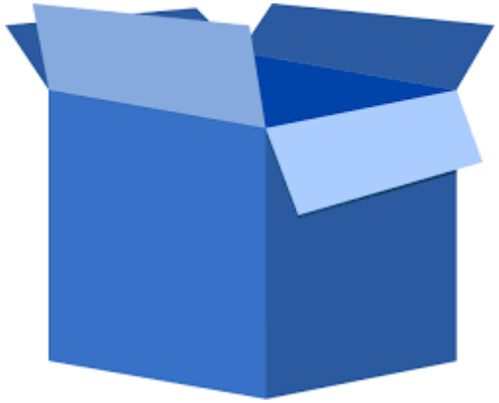
Introducción a Dockers



kubernetes o K8s

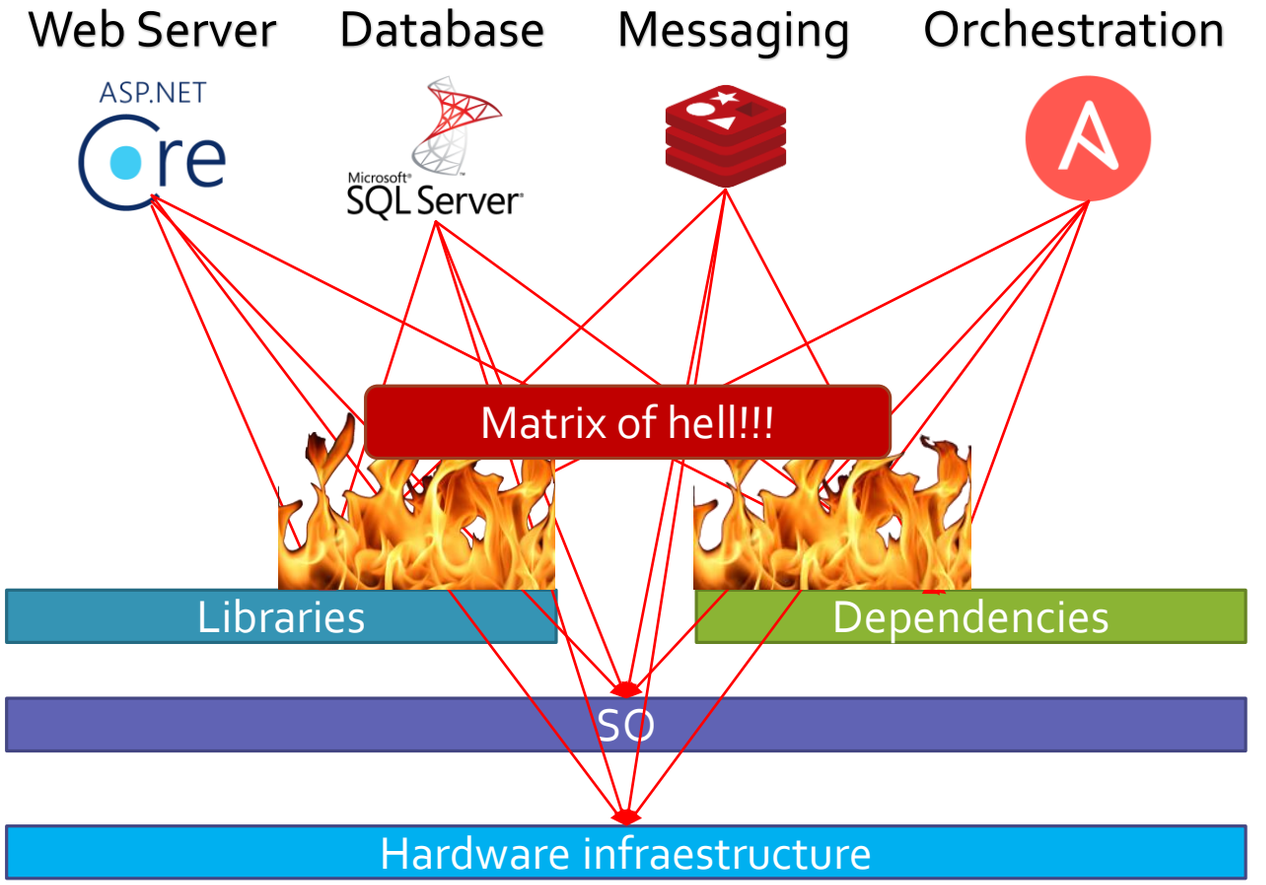
Container + Orchestration

Containers



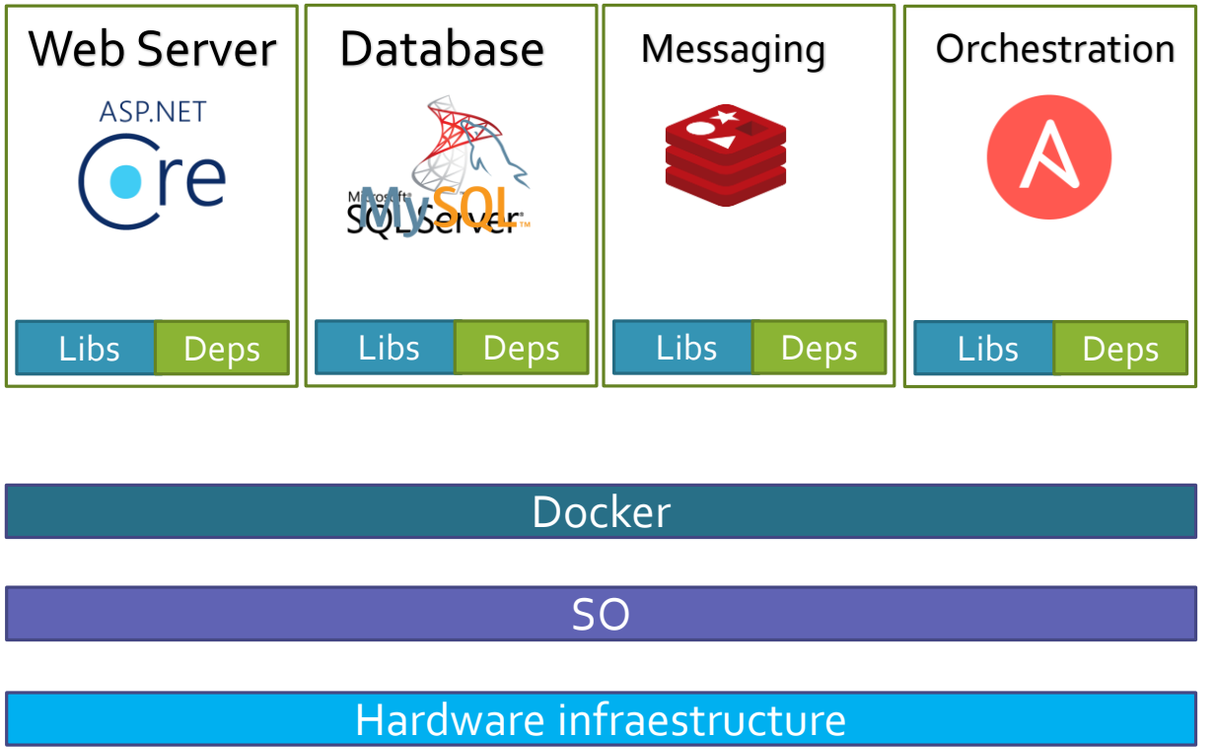
¿Por qué necesitamos contenedores?

Compatibility/Dependencies
Long setup time
Different environments:
Dev/Test/Prod.....



¿Qué se puede hacer?

Containerize Applications
Run each service with its own dependencies in separate containers



¿Qué son contenedores?

Processes Processes Processes Processes

Network Network Network Network

Mounts Mounts Mounts Mounts

Docker

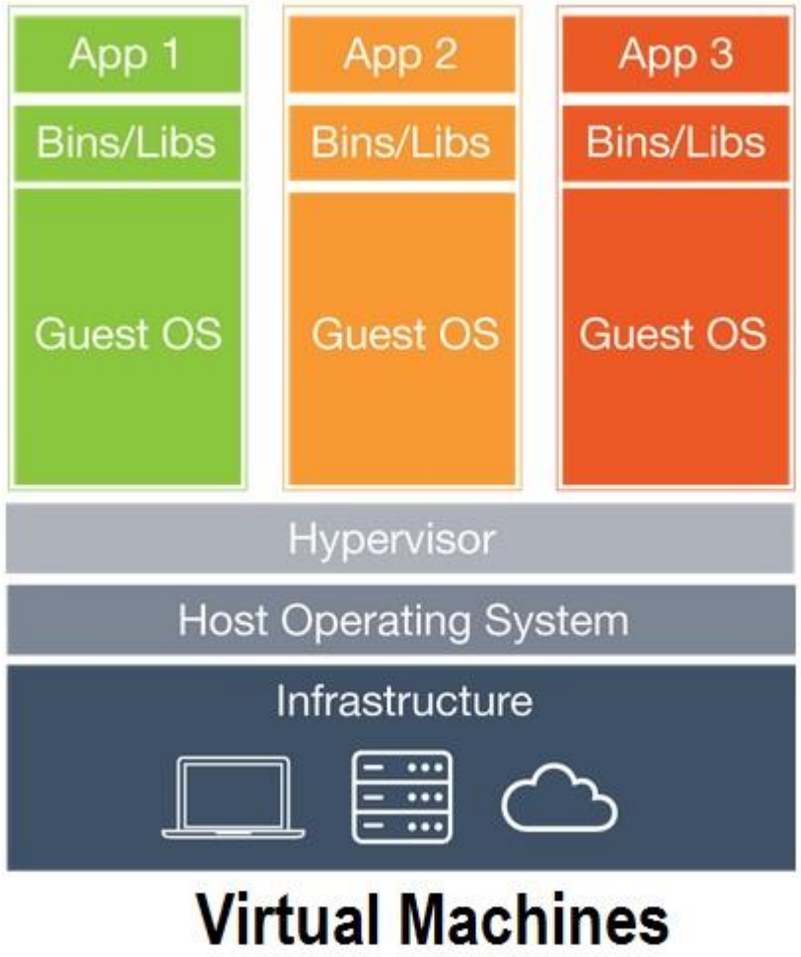
Os Kernel

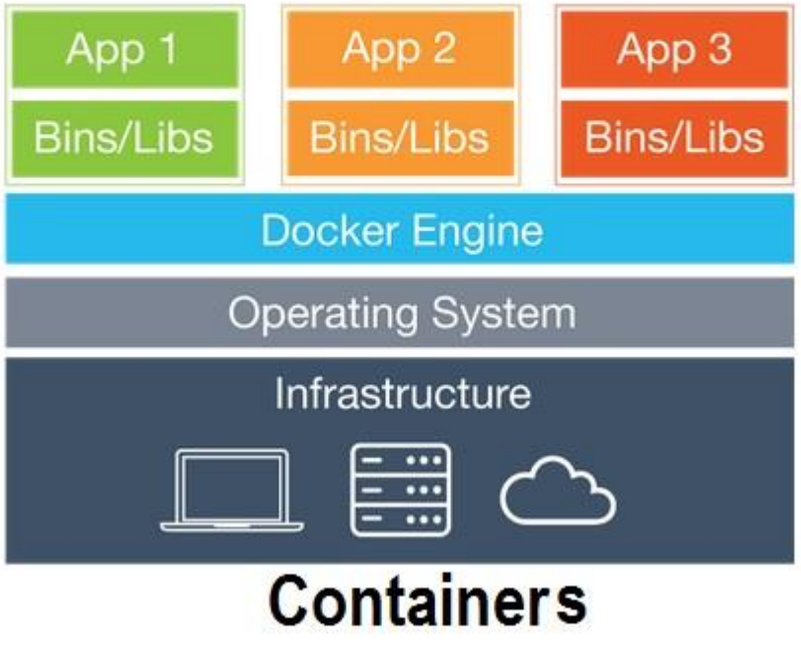
Compartiendo el Kernel

Docker

OS-Ubuntu

¿ Por qué es mejor que una VM?





Contenedor vs imagen

Docker image

Package

Template

Plan

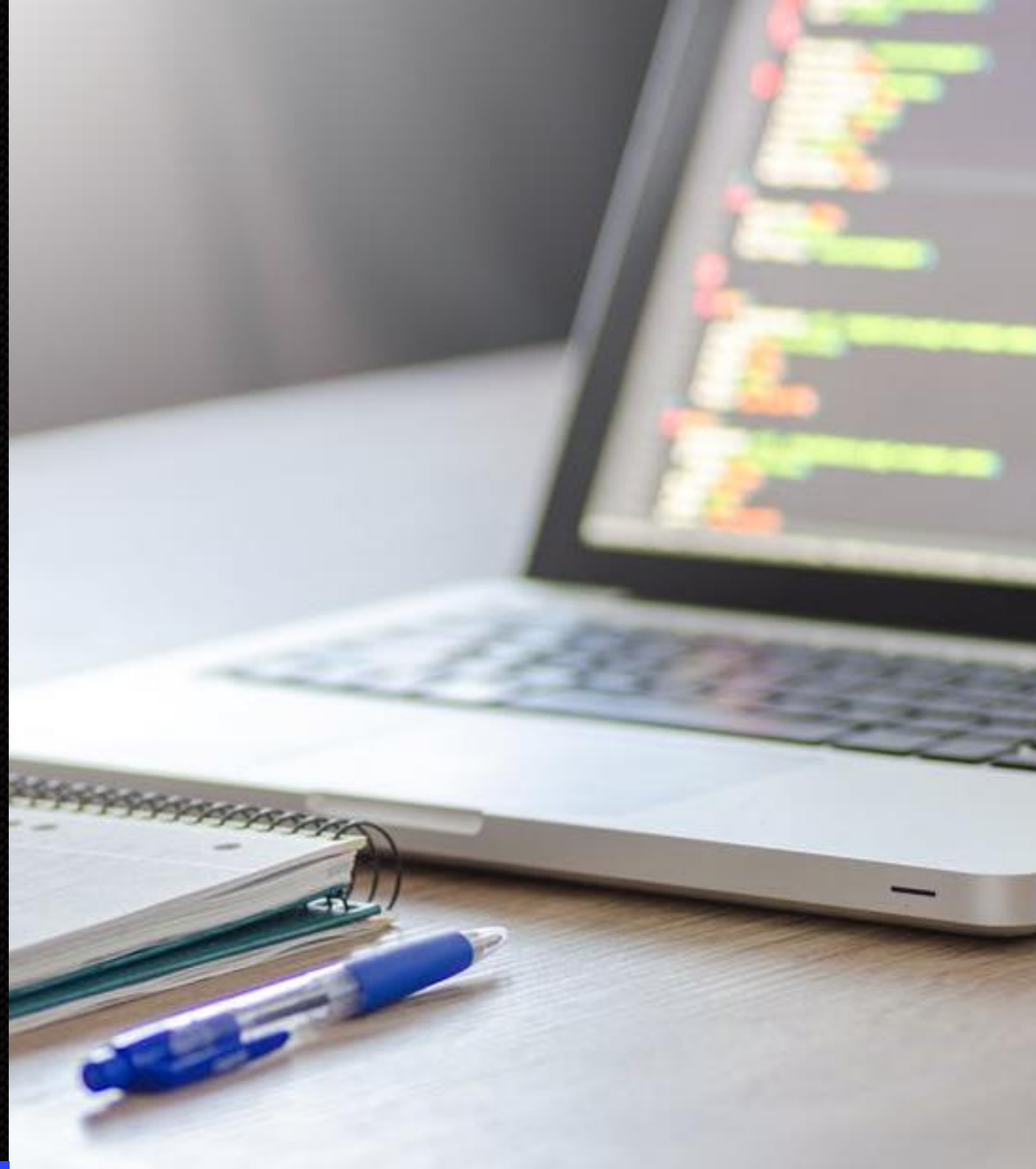
Docker Container#1

Docker Container#2

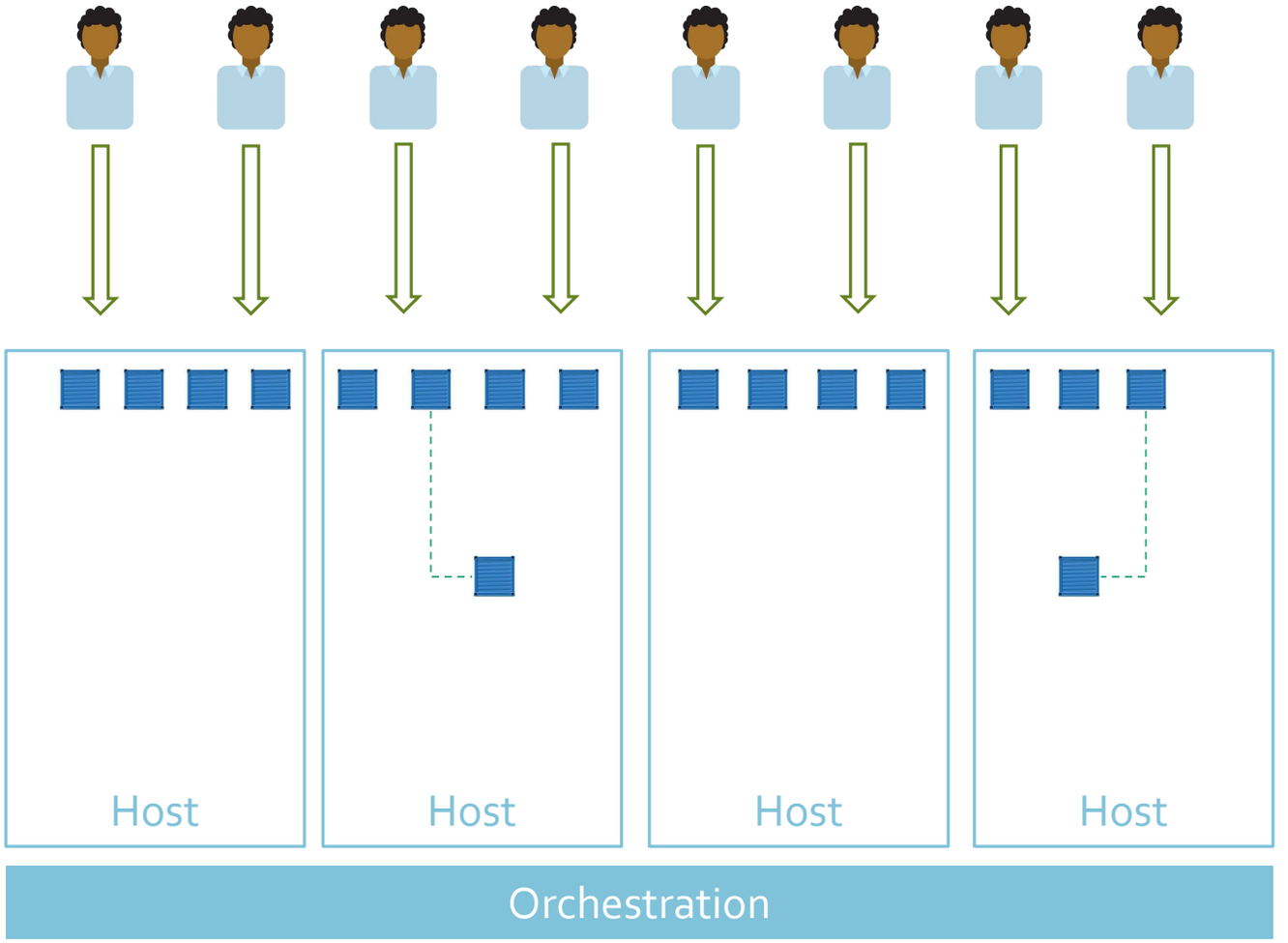
Docker Container#3

Ventajas de un contenedor

Orquestación de contenedores



Orquestación de contenedores



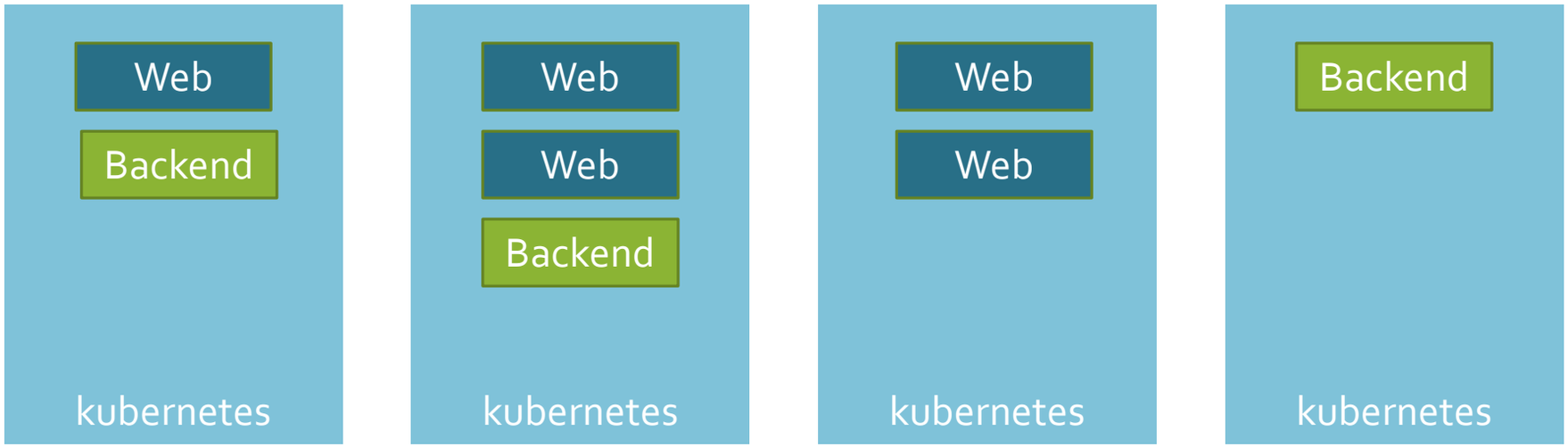
Tecnologías de orquestación

Docker Swarm

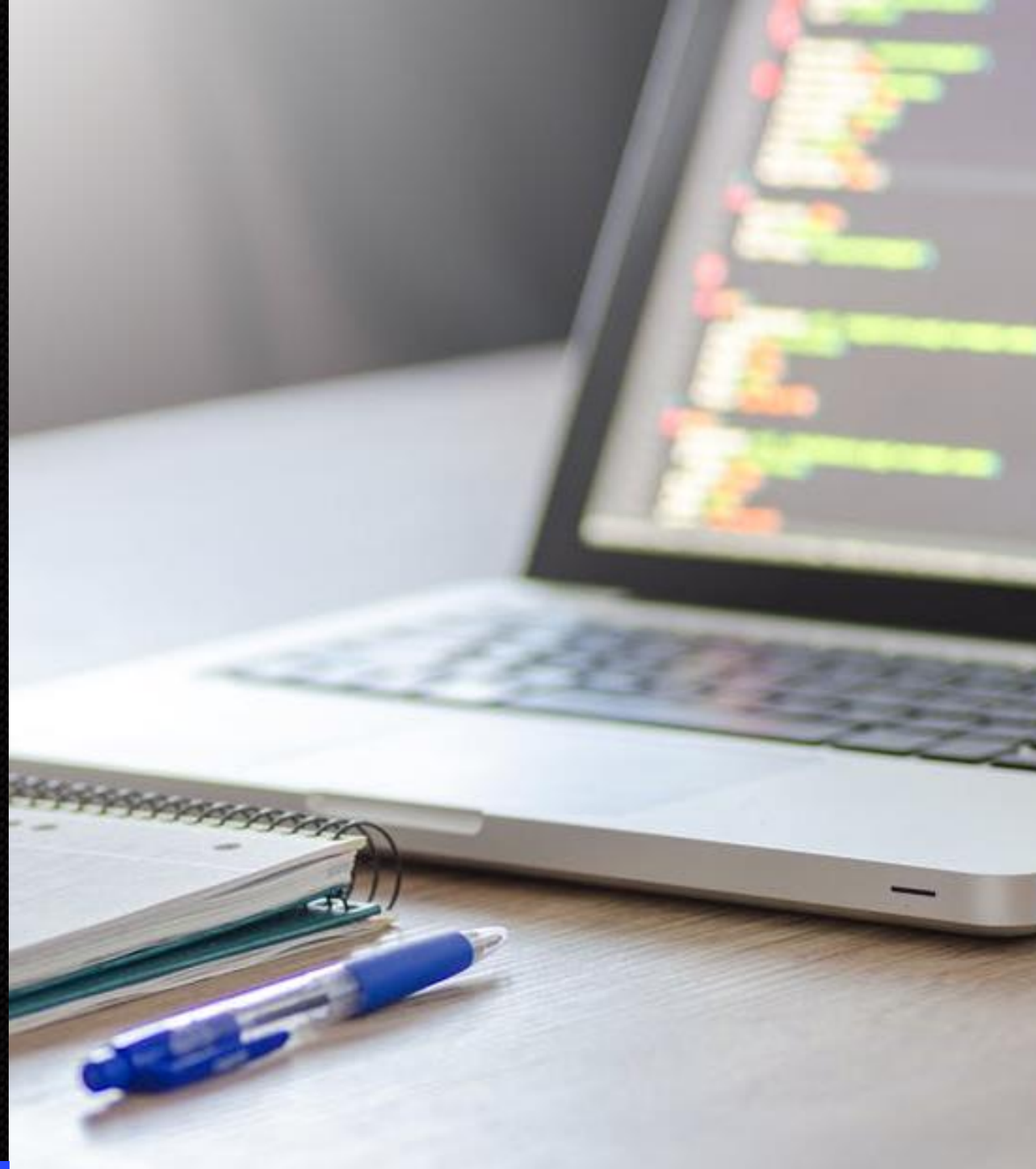
kubernetes

MESOS

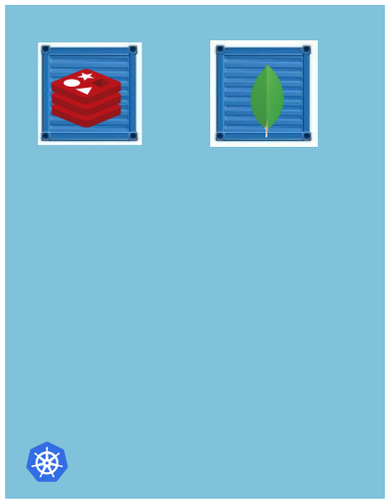
Ventajas de Kubernetes



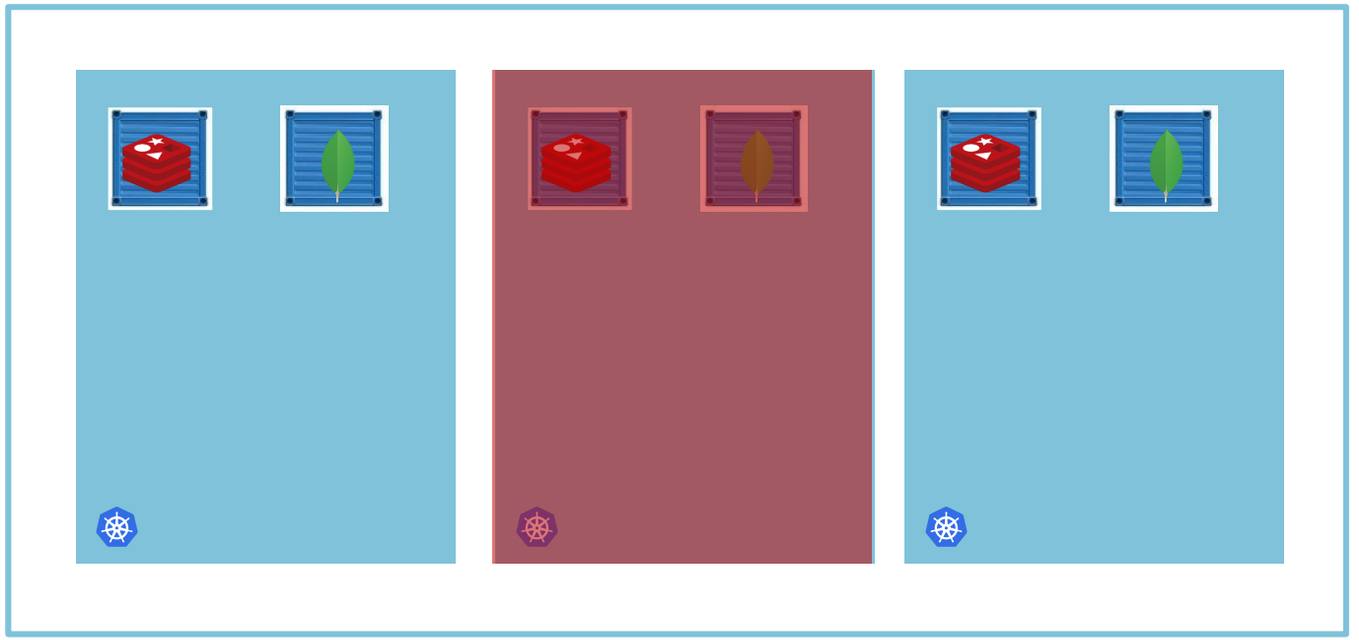
Arquitectura



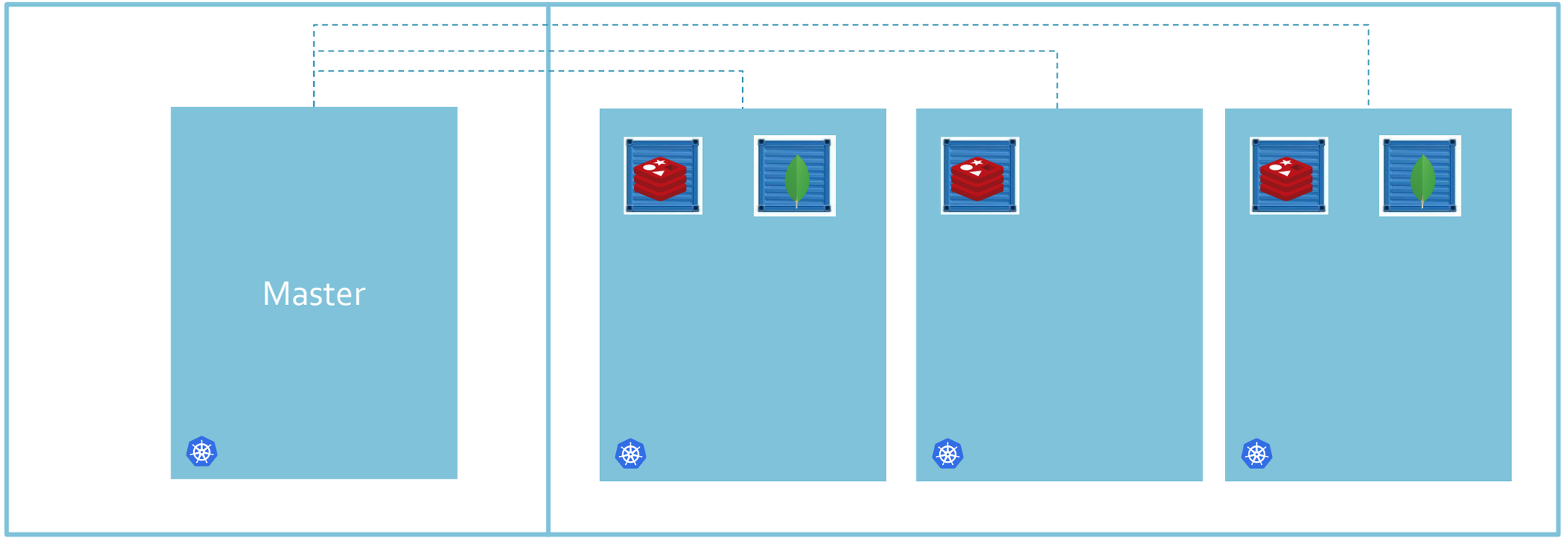
Nodos (Minions)



Cluster



Master



Master vs Node

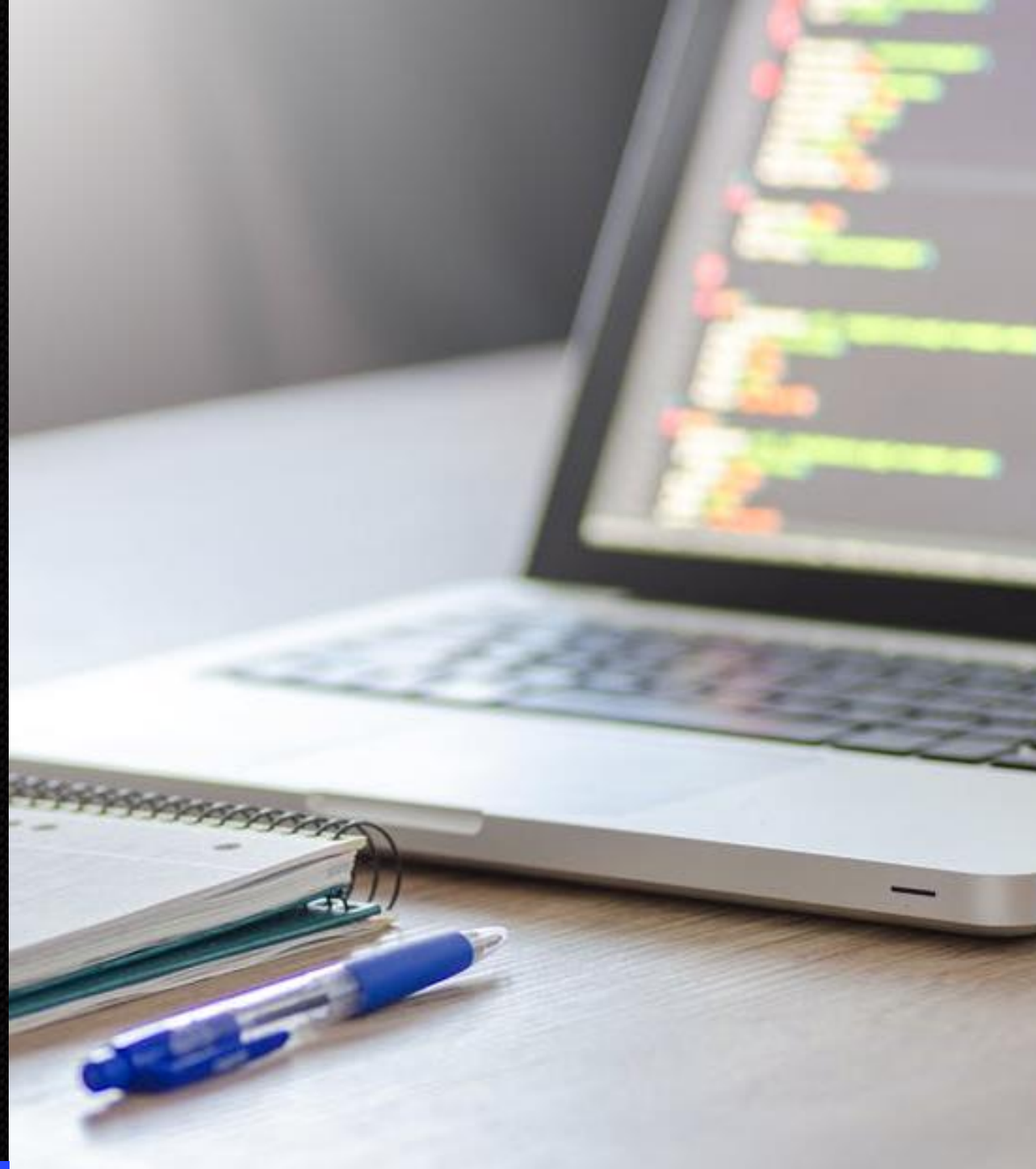
kubectl

```
kubectl run hello-world
```

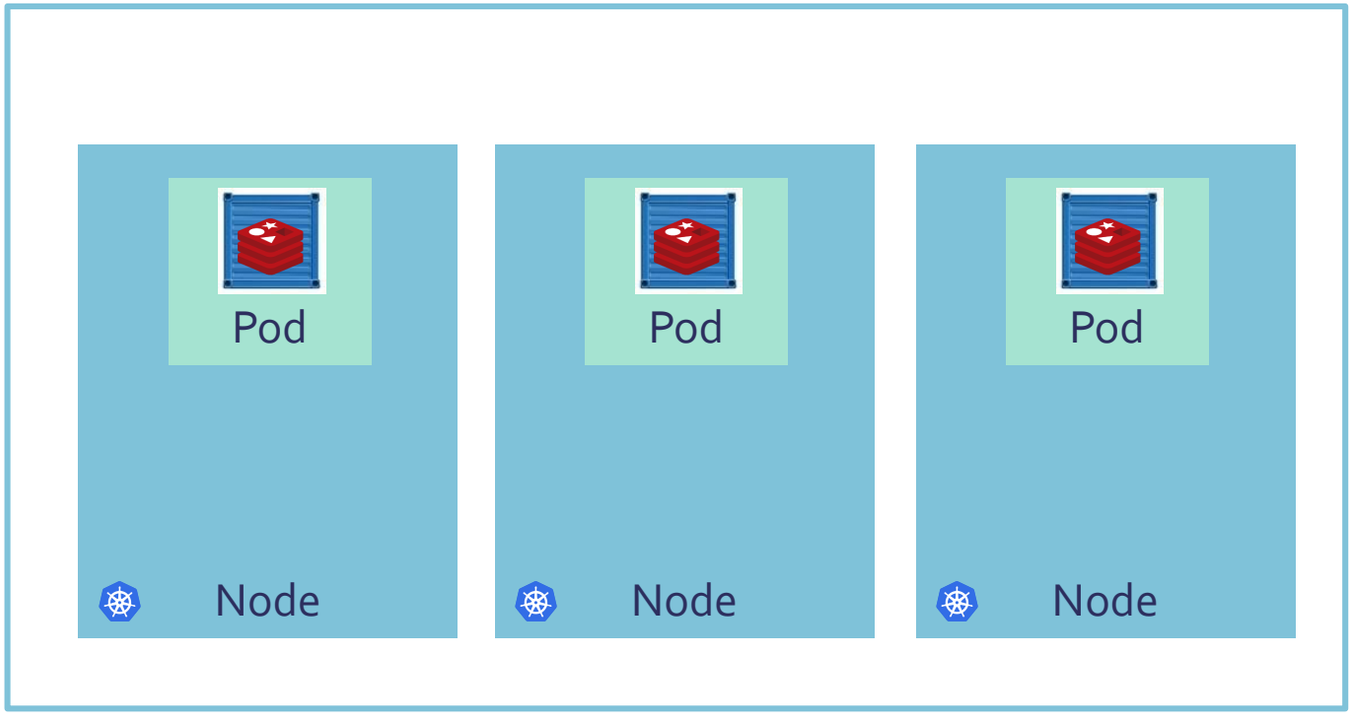
```
kubectl cluster-info
```

```
kubectl get nodes
```

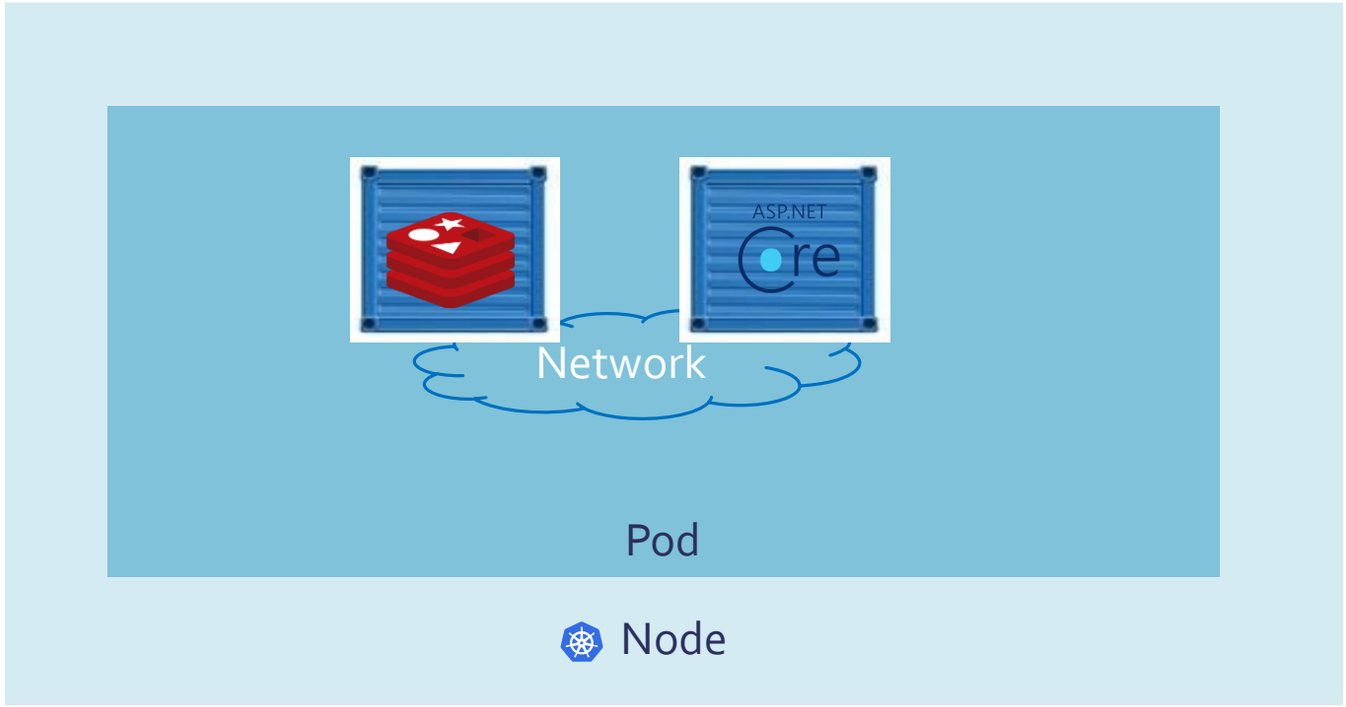
Conceptos



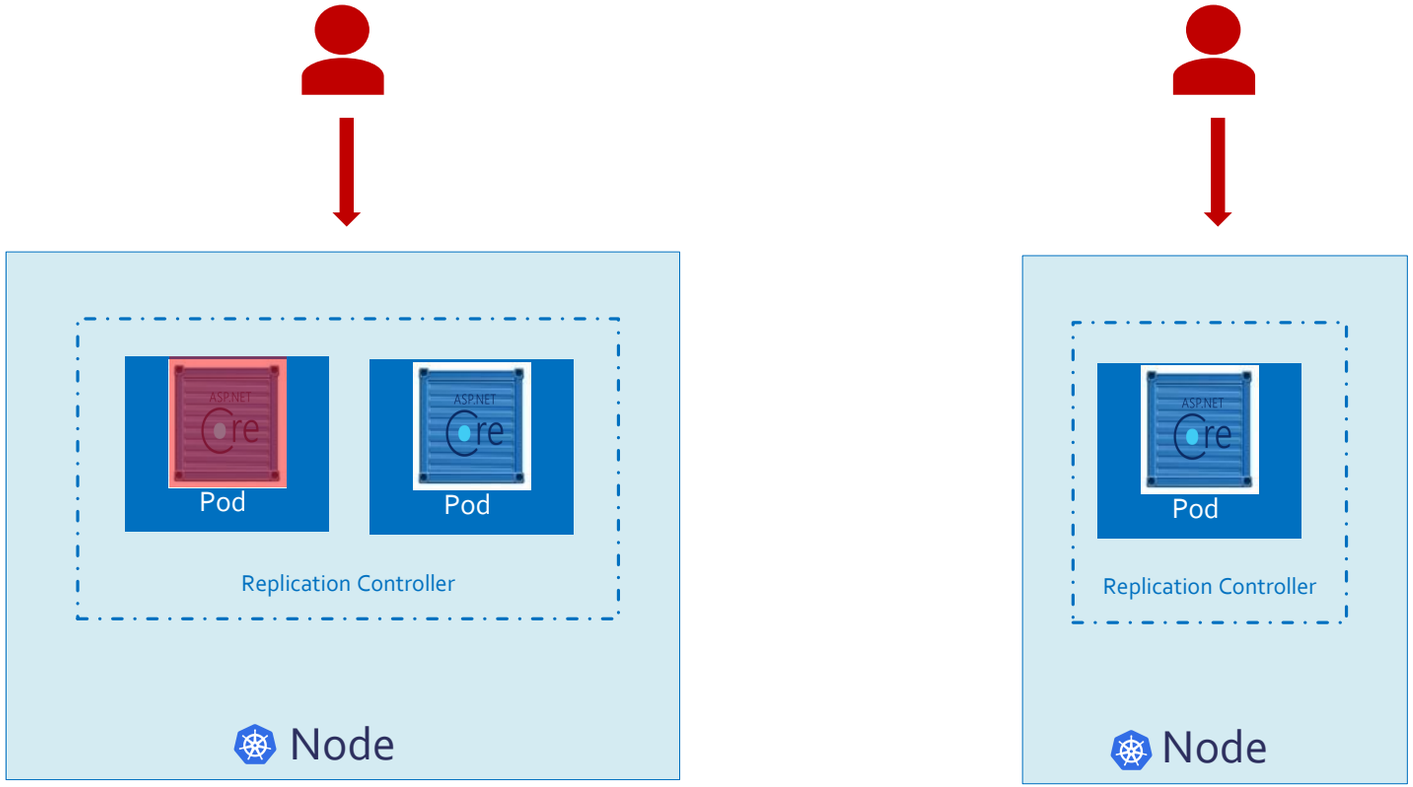
Pod



Pods multicontenedor



Alta disponibilidad

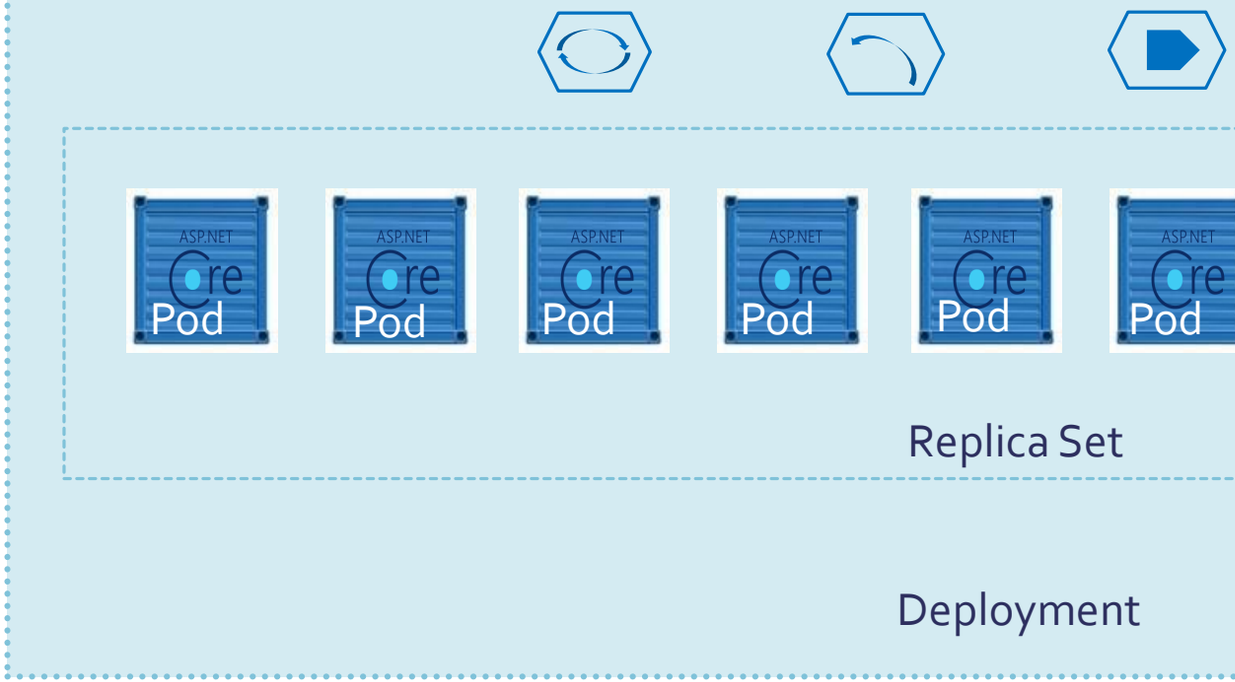


Replication Controler

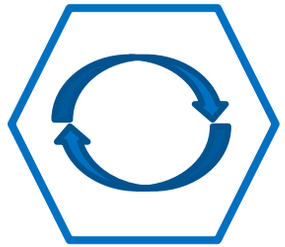
Replica Set

Deployment


ASP.NET
Core


Pod
Pod
Pod
Pod
Pod
Pod
Pod
Pod
Pod
Replica Set
Deployment

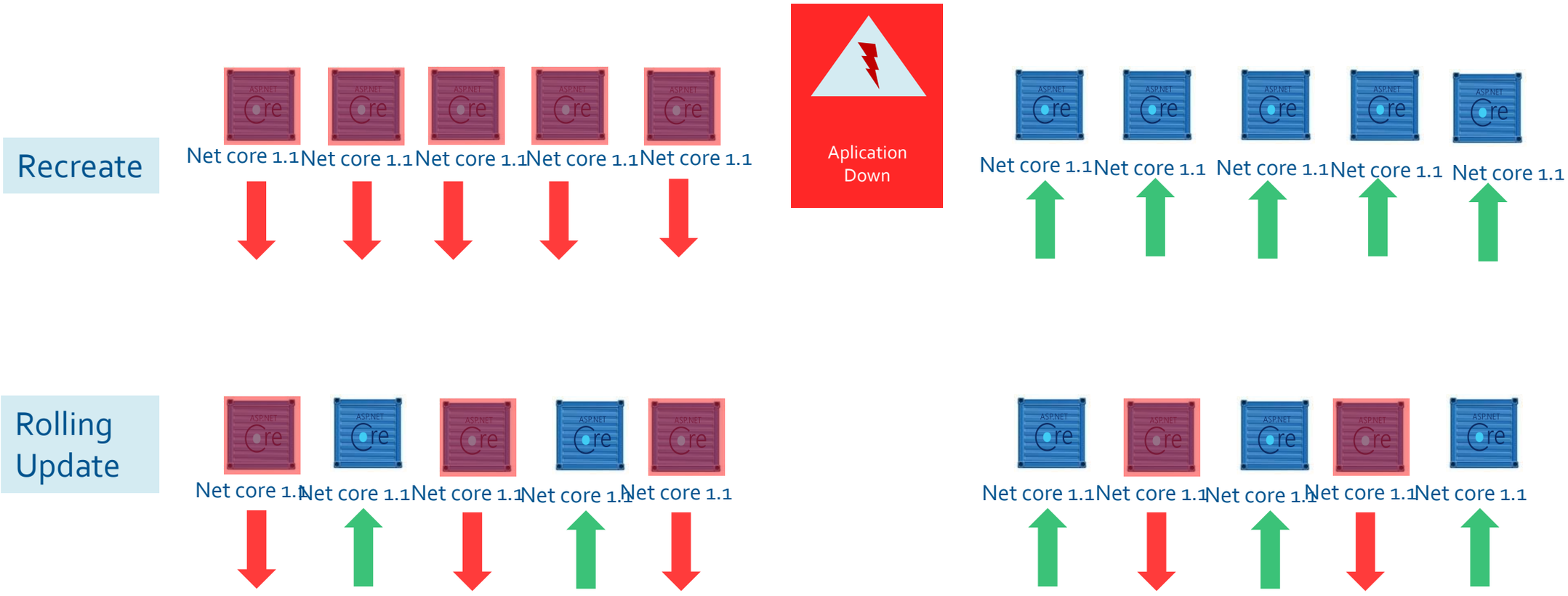
Rollout and Versioning



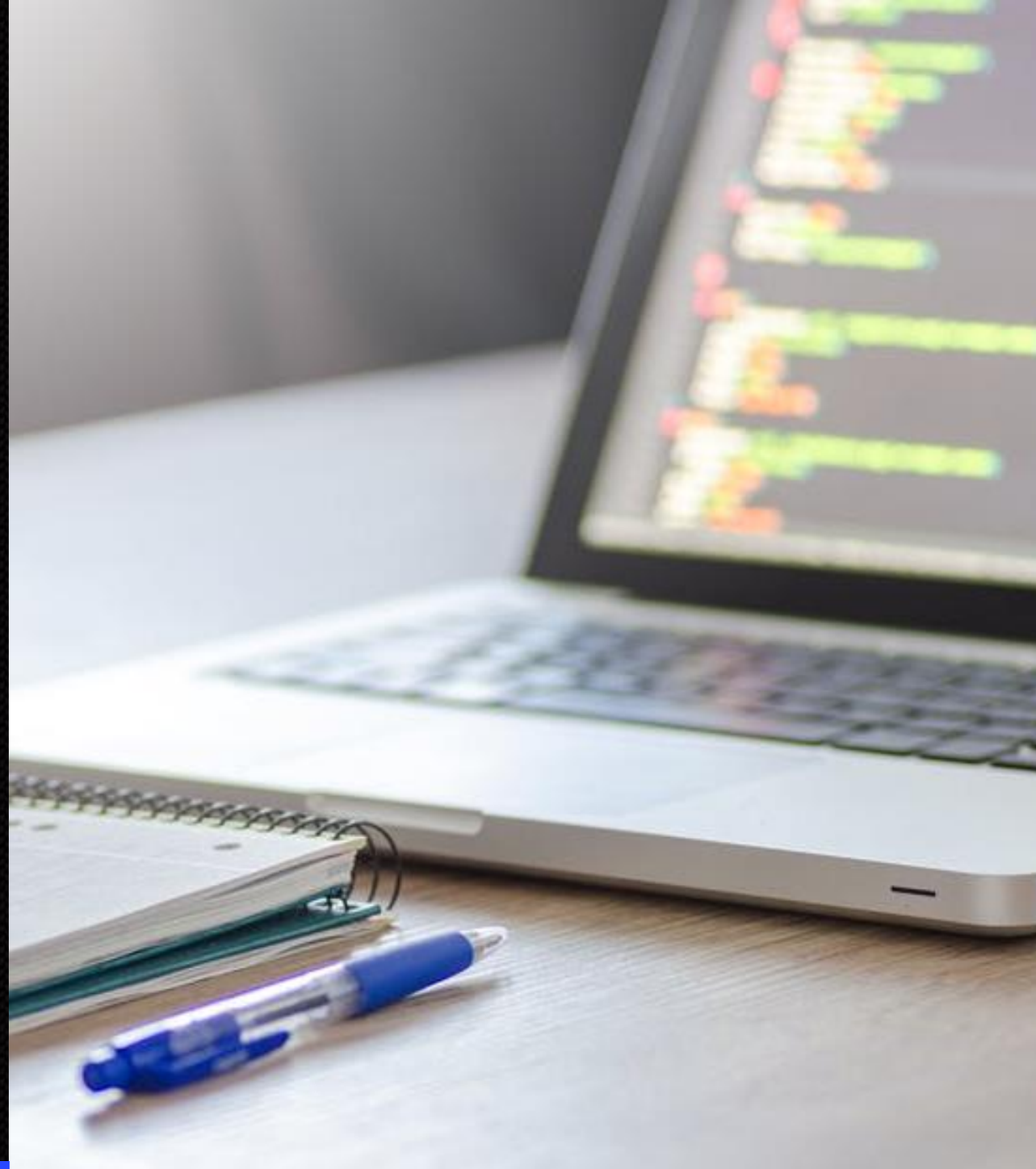
Revison 1

Revison 2

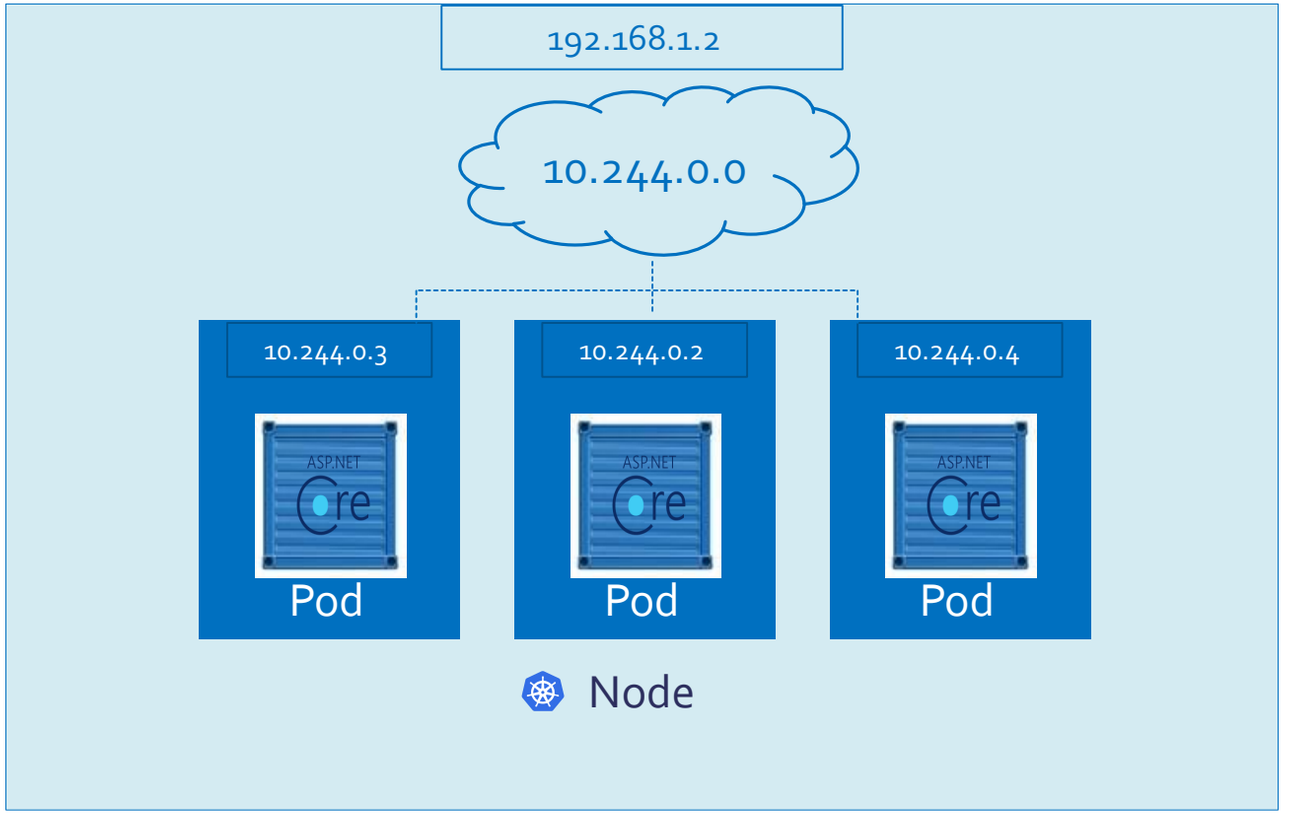
Estrategia de depliegue



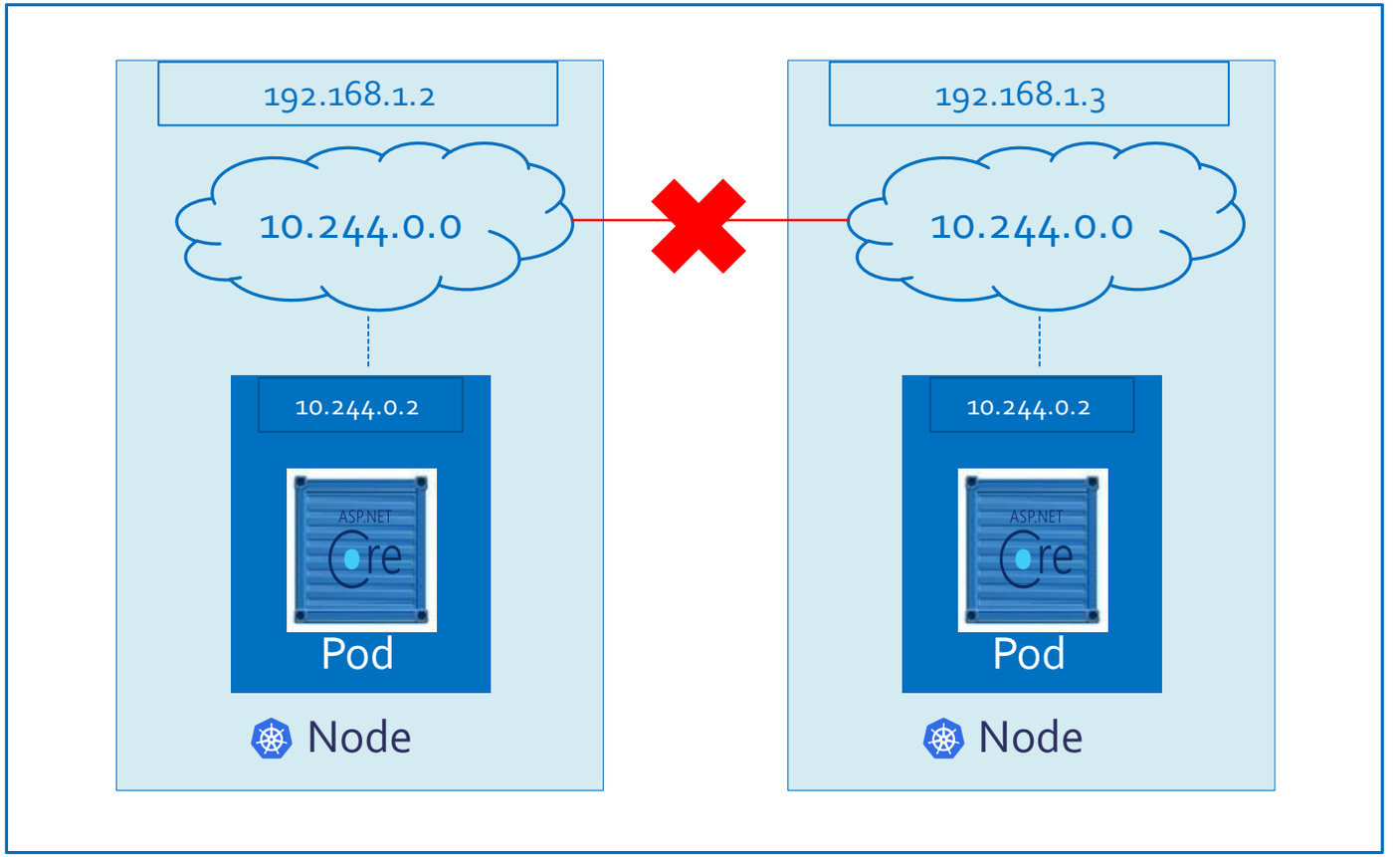
Redes en kubernetes



Redes en Kubernetes



Redes en Cluster

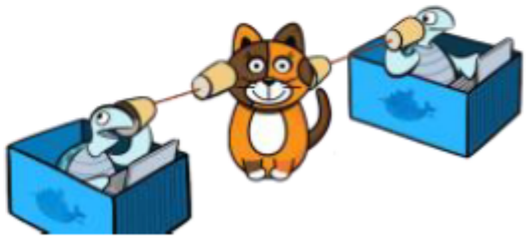



CISCO

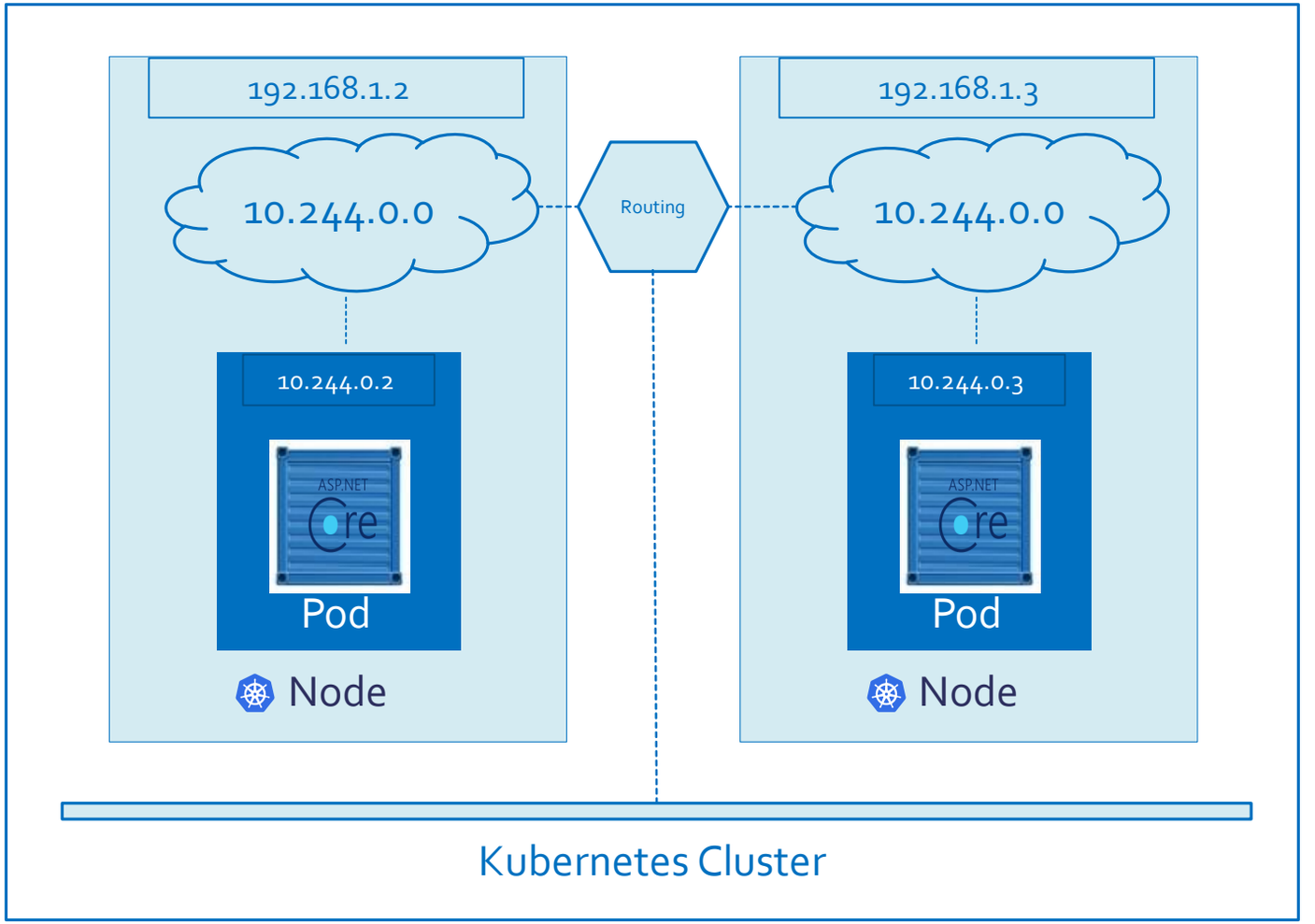

cilium


flannel

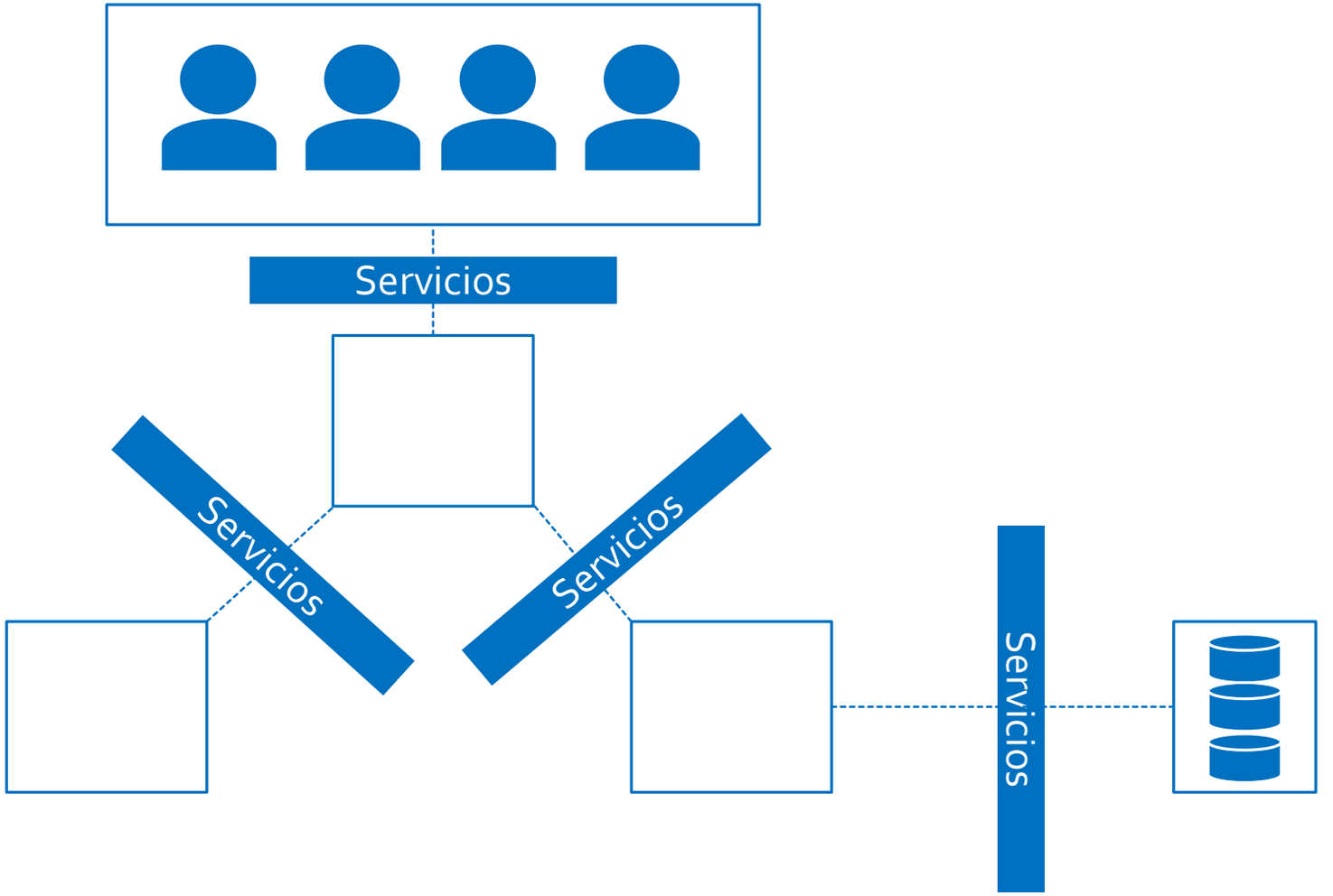

vmware
NSX



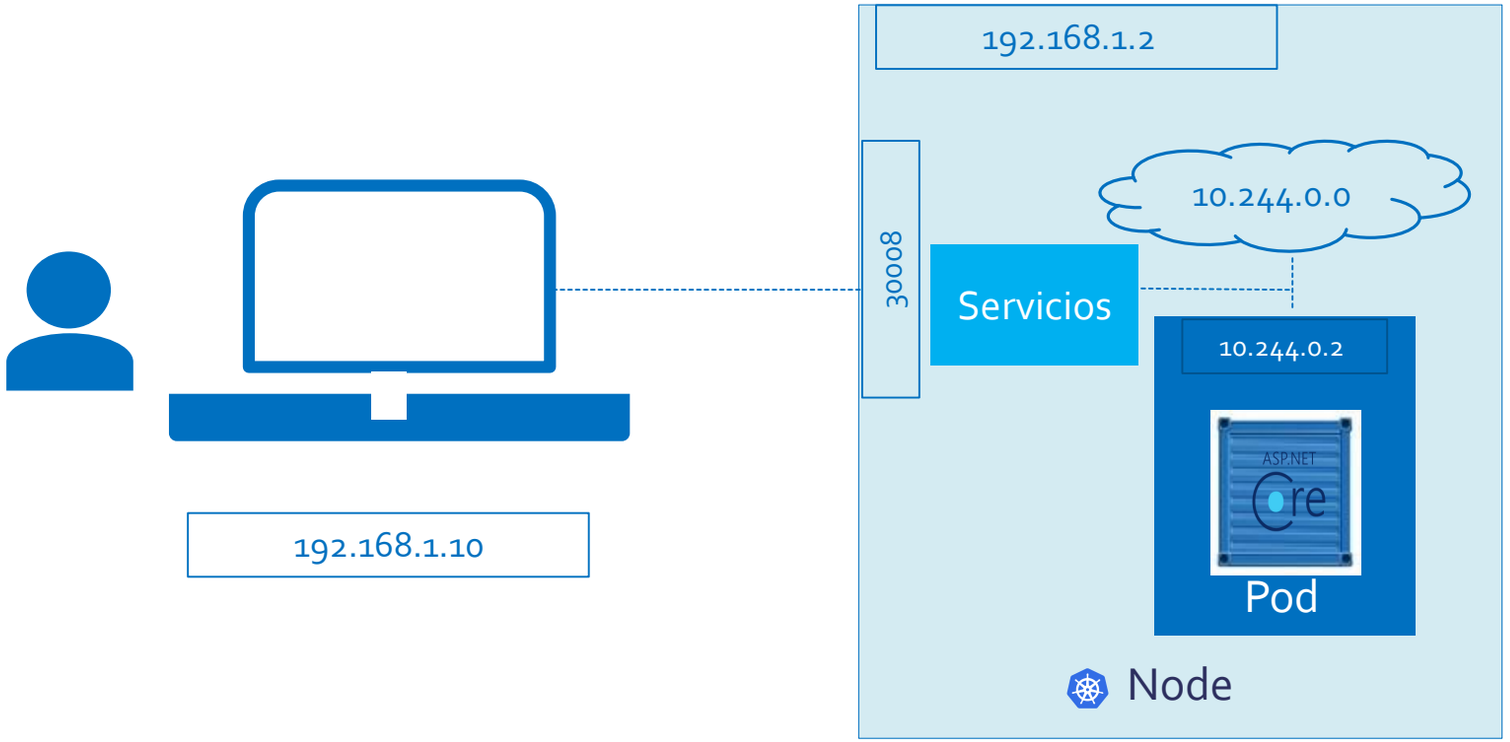
Redes en Cluster



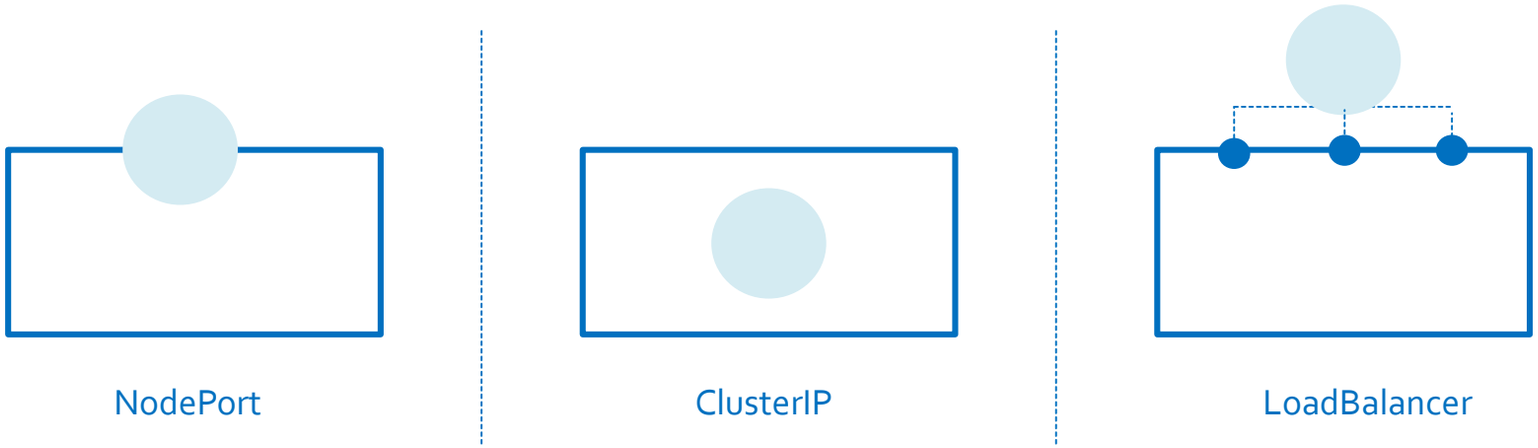
Servicios



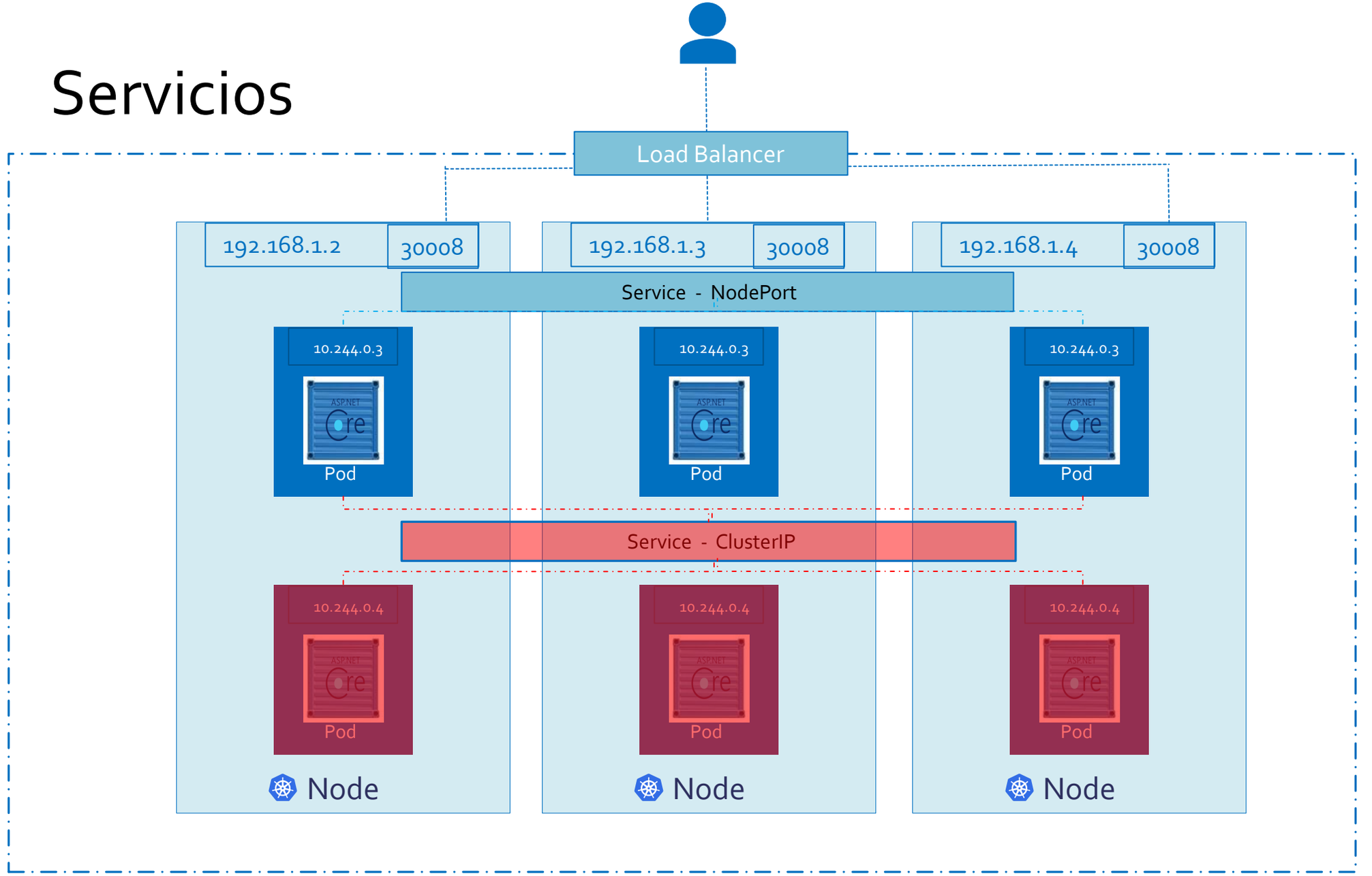
Servicios


192.168.1.2
30008
10.244.0.0
Servicios
10.244.0.2
ASP.NET
Core
Pod
Node
192.168.1.10

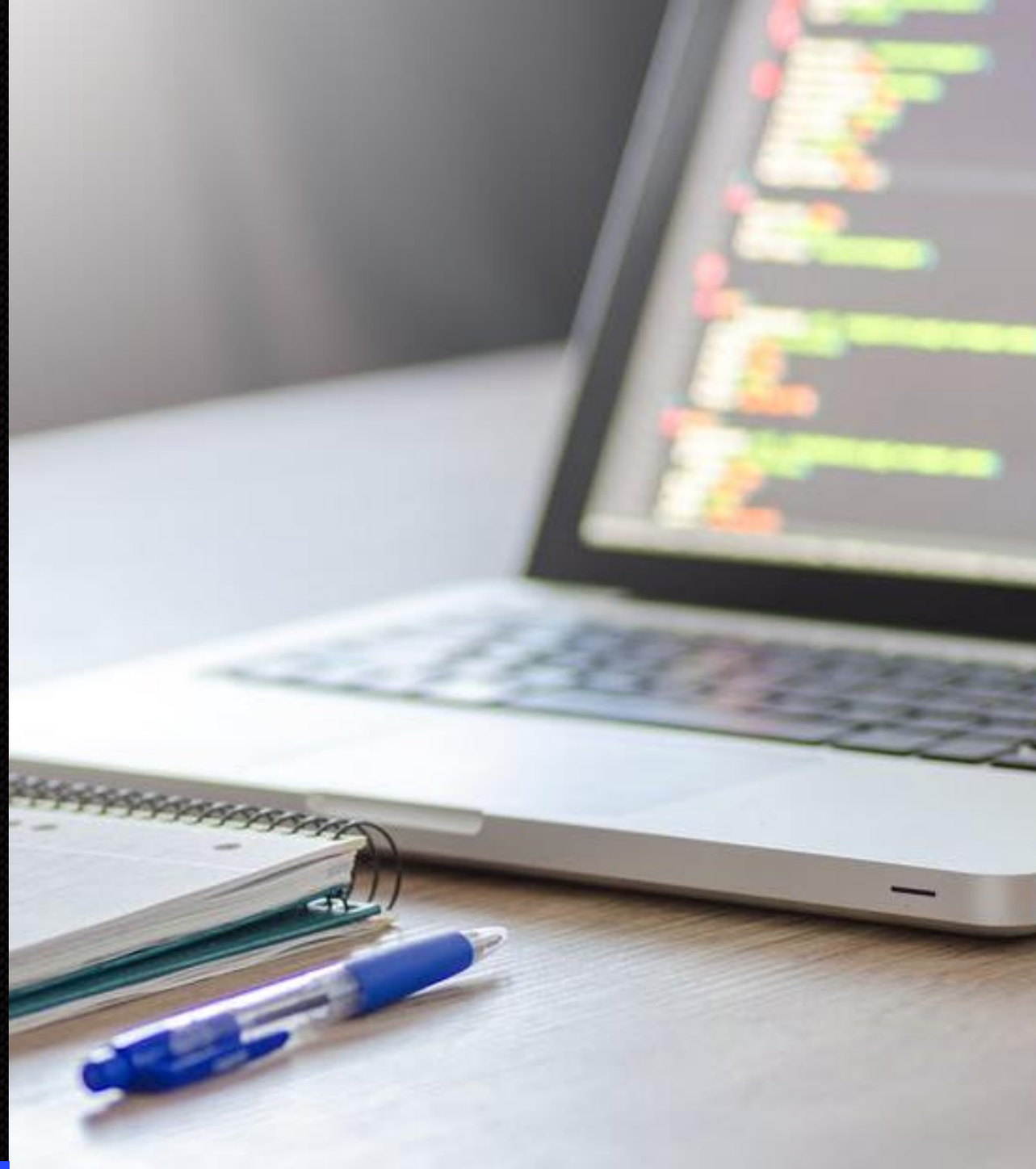
Tipos de Servicios



Servicios


Load Balancer
192.168.1.2
30008
192.168.1.3
30008
192.168.1.4
30008
Service - NodePort
10.244.0.3
Pod
10.244.0.3
Pod
10.244.0.3
Pod
Service - ClusterIP
10.244.0.4
Pod
10.244.0.4
Pod
10.244.0.4
Pod
Node
Node
Node

YAML – Fichero de definición.



Ficheros de definción

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: result-app-deployment
  labels:
    app: demo-voting-app
spec:
  replicas: 1
  selector:
    matchLabels:
      name: result-app-pod
      app: demo-voting-app
  template:
    metadata:
      name: result-app-pod
      labels:
        name: result-app-pod
        app: demo-voting-app

    spec:
      containers:
      - name: result-app
        image: dockersamples/examplevotingapp_result
        ports:
        - containerPort: 80
```

Demo

Thank You!

Diego Campos

Senior Web Developer,...

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