

From Localhost to Prod

By Ramiro **Álvarez Fernández**

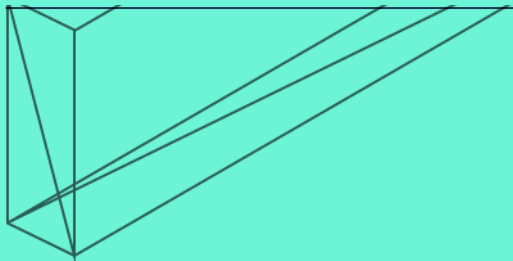


Mayor
autonomía

Menores costes

Mayor conocimiento

Menos
recursos
sin uso

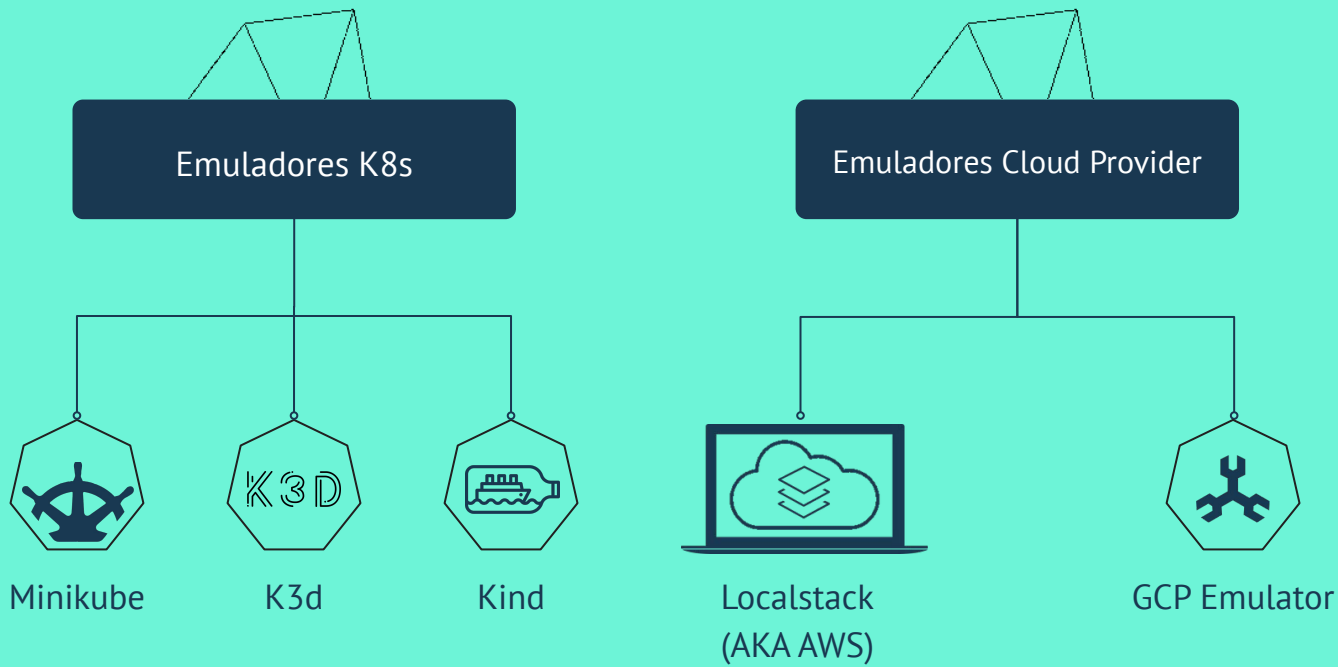


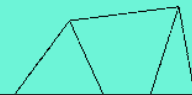
Menor
sobrecarga
a otros
equipos

Mejores prácticas

Mayor confianza

Emuladores





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Emulando K8s

Minikube

1. Kubernetes version_

2. **Pesado => Instalación lenta_**

3. El más antiguo de los emuladores_

4. Addons disponibles (cert-manager, nginx-controller)_

5. Puede correr como Docker container o VirtualBox_

6. No es necesario cargar las imágenes_

K3d

1. Versión ligera de K3s => Rápida instalación_

2. Docker container_

```
MacBook-Pro.local: Fri Oct 9 15:03:17 2020
Every 2.0s: docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED
313702        rancher/k3d-proxyv3.8.2            "/bin/sh -c nginx-pr..." 23 seconds ago
up 22 seconds  80/tcp, 443/tcp, 443/tcp            k3d-mycluster-server-0
1762999555    rancher/k3s:latest                 "/bin/k3s server --l..." 29 seconds ago
up 28 seconds  k3d-mycluster-server-0

MacBook-Pro.local: Fri Oct 9 15:03:18 2020
Every 2.0s: kubectl get nodes
NAME           STATUS    ROLES    AGE   VERSION
k3d-mycluster-server-0 Ready     master   38s   v1.19.2+k3s1

MacBook-Pro.local: Fri Oct 9 15:03:19 2020
Every 2.0s: kubectl get all
NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
service/kubernetes  ClusterIP   10.43.0.1     <none>         443/TCP    26s
```

3. Es necesario cargar las imágenes en los nodos_

Kind

1.

Docker container_

2.

Es necesario cargar las
imágenes en los nodos_

3.

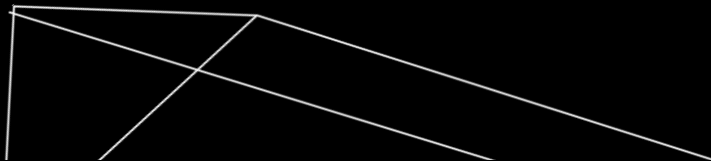
Término medio_

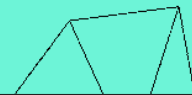
4.

Setup del
cluster
IaC_

5.

Buena documentación_



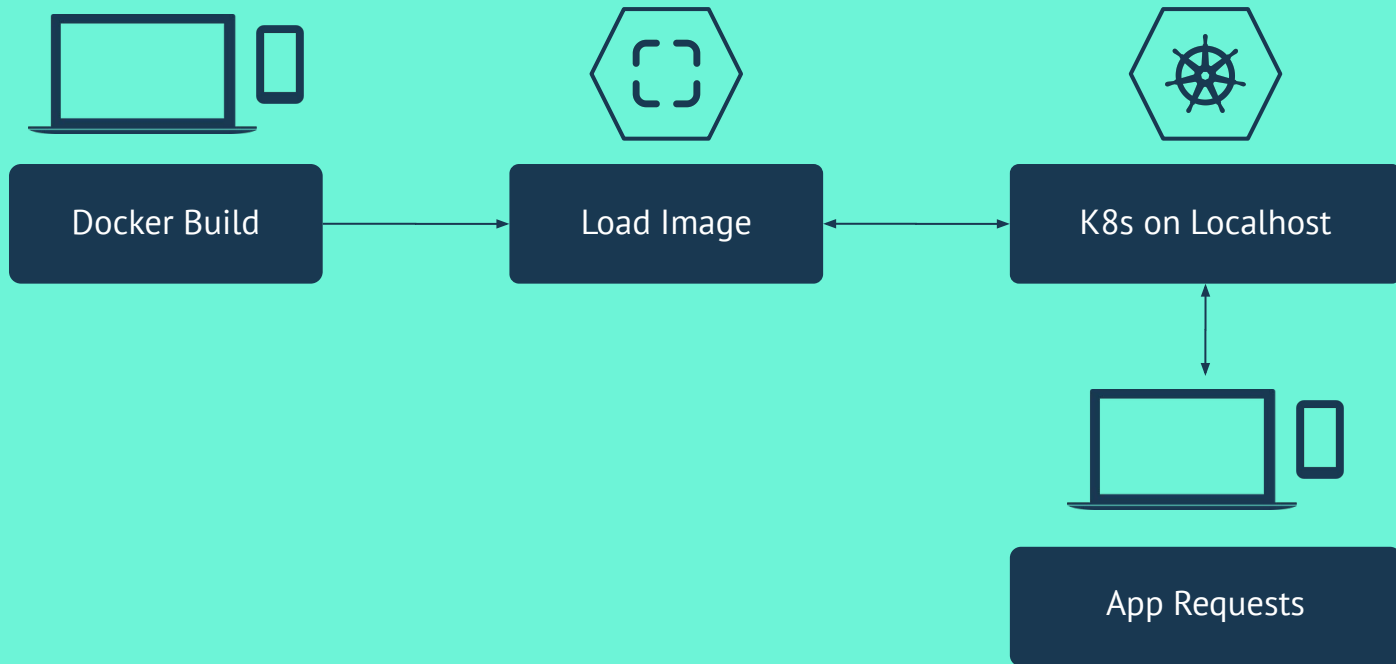


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Emulando el cloud

Architecture Localhost



Localstack

1. AWS Cloud Provider
en localhost_

2. SNS, SQS,
Kinesis, S3...

3. Error injection_

Errores frecuentes como
ProvisionedThroughputExceededException

4. Procesos aislados_
Puede correr como servicios

5. Servicios reemplazables_
Permite probar nuevas funcionalidades

Localstack sample

1. Requirements:_
Localstack_

2. Escucha los mensajes en una cola SQS_

3. Build image_

4. Load image_

5. Run image_

```
❯ kubectl get po
NAME                READY   STATUS    RESTARTS   AGE
localstack-dc576c9955-bnjp4    1/1     Running   0           67m
sqs-localstack        1/1     Running   0           92s

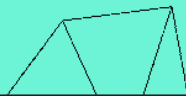
❯ kubectl logs -f sqs-localstack
http://localhost:4566
2020/10/09 15:22:15 No .env file found
Message ID: 4ba366b2-779c-8ffe-85c2-ff7c2b07da35
Body: Test SQS Localstack...
Message Handler: bhw12wzcsppulruwstmbu1sveqnrffcxv1fmpagynrwsbxbpkjgbyqyjrkrpqjsjwovrvsgejxhzlehrdkpyrkfgarmns1zqetxjckgykuvgabhxdepdoozt7djdjwsy1eskuelyqavjrjkgodms
vjahhapijktcpd
Message ID: 4ba366b2-779c-8ffe-85c2-ff7c2b07da35
Body: Test SQS Localstack...
Message Handler: utmcindotcalrghahkeftgkalzvjzqiiillibxyricravahhbikzcczrtagbwyjfbwskovlzhutgajkbndrkguvibhdsbeeytpisscapytchuvsehxfjvfxlvagapjfkzbzcpqlkiddorm
t1h1wvrtzxadik

Every 2.0s: aws --endpoint-url=http://localhost... MacBook-Pro.local: Fri Oct 9 17:22:52 2020
{
  "QueueUrl": {
    "http://localhost.localstack/000000000000/MyQueue"
  }
}

❯ aws --endpoint-url=http://localhost.localstack s3 create-queue --queue-name MyQueue
❯ aws --endpoint-url=http://localhost.localstack s3 watch --n 2 kubectl get all
❯ aws --endpoint-url=http://localhost.localstack sqs send-message --queue-url http://localhost.localstack/000000000000/MyQueue --message-body "Test SQS Localstack..."
❯ aws --endpoint-url=http://localhost.localstack sqs receive-message --queue-url http://localhost.localstack/000000000000/MyQueue --max-number-of-messages 10
```

6. Enviar mensajes a la cola SQS_

7. Los mensajes se leen por el log de nuestra imagen desde localhost_



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GCP Emulator

Official GCP

BigTable

Datastore

Firestore

PubSub

Spanner

GCP PubSub Emulator

1. `Gcloud beta emulators
pubsub start_`

```
--host-port=0.0.0.0:8085 --project=test
```

2. `Set
environment
variables_`

3. `Crea topic de pubsub donde enviar los eventos
y crea una subscription de pubsub para leer
los eventos_`

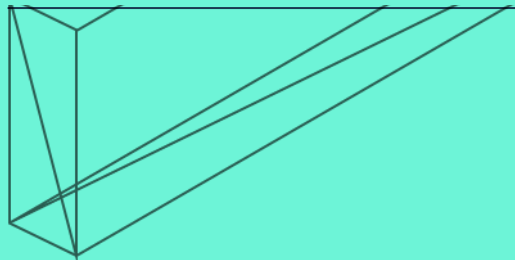


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Ramiro
Álvarez
Fernández

DevOps Engineer
en **Empathy.co**



HI WORLD I'M
RAMIRO

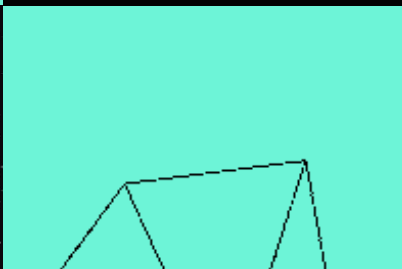
I'm a DevOps engineer based in Asturias, ES



Contact



access



SKILLS



The background is a dark navy blue. It is decorated with various geometric elements: a red-outlined triangle in the top left, a cyan circle in the top center, a cyan rectangle in the top right, a yellow-outlined rectangle in the middle right, a purple L-shaped bracket on the left, a yellow-outlined L-shaped bracket on the right, a grey wireframe dome at the bottom center, and several thin lines and small circles in cyan and yellow scattered around. The word "Gracias" is centered in a light cyan, monospace-style font.

Gracias