



Deployment - What's next?

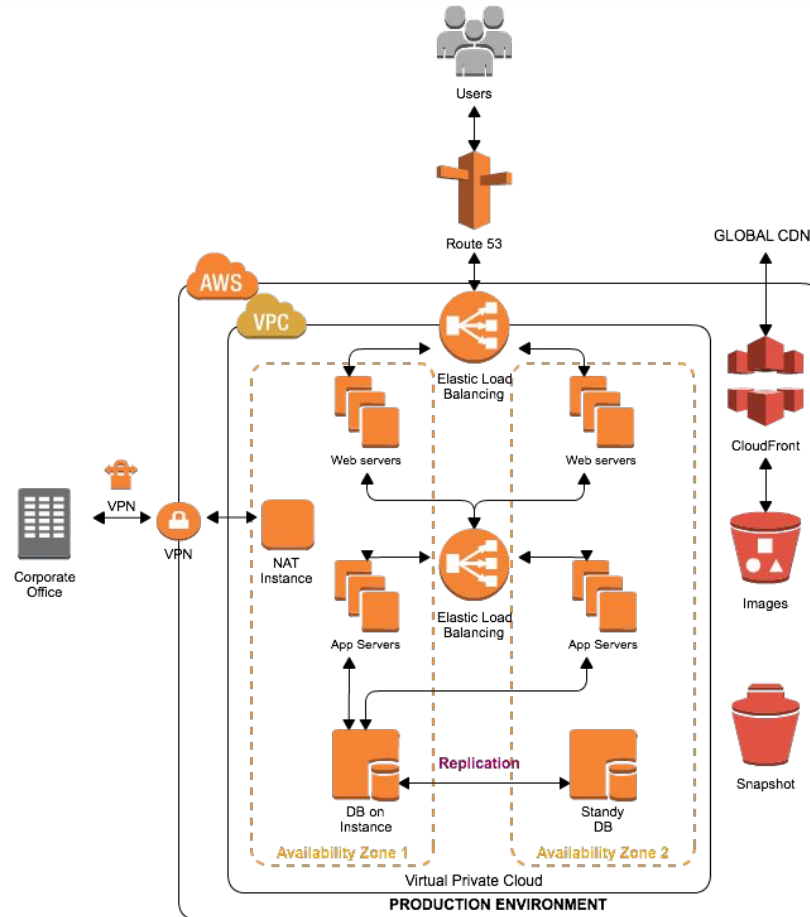
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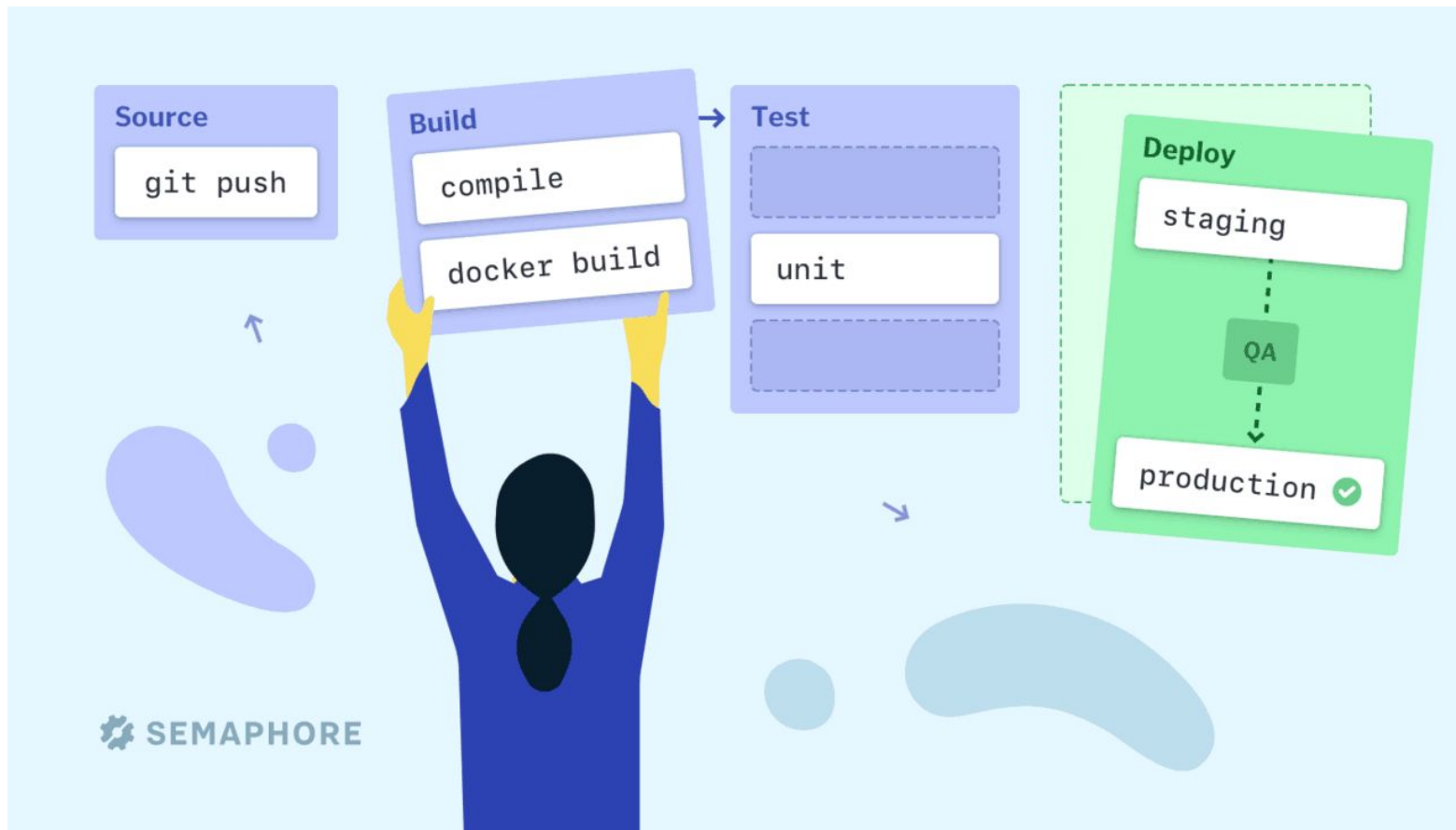
Intro

- Technology keeps moving.
- In just a few years, we've gone from:
 - Servers running on dedicated hardware,
 - Through virtualization,
 - Then cloud computing.
 - And now we've reached the container age.

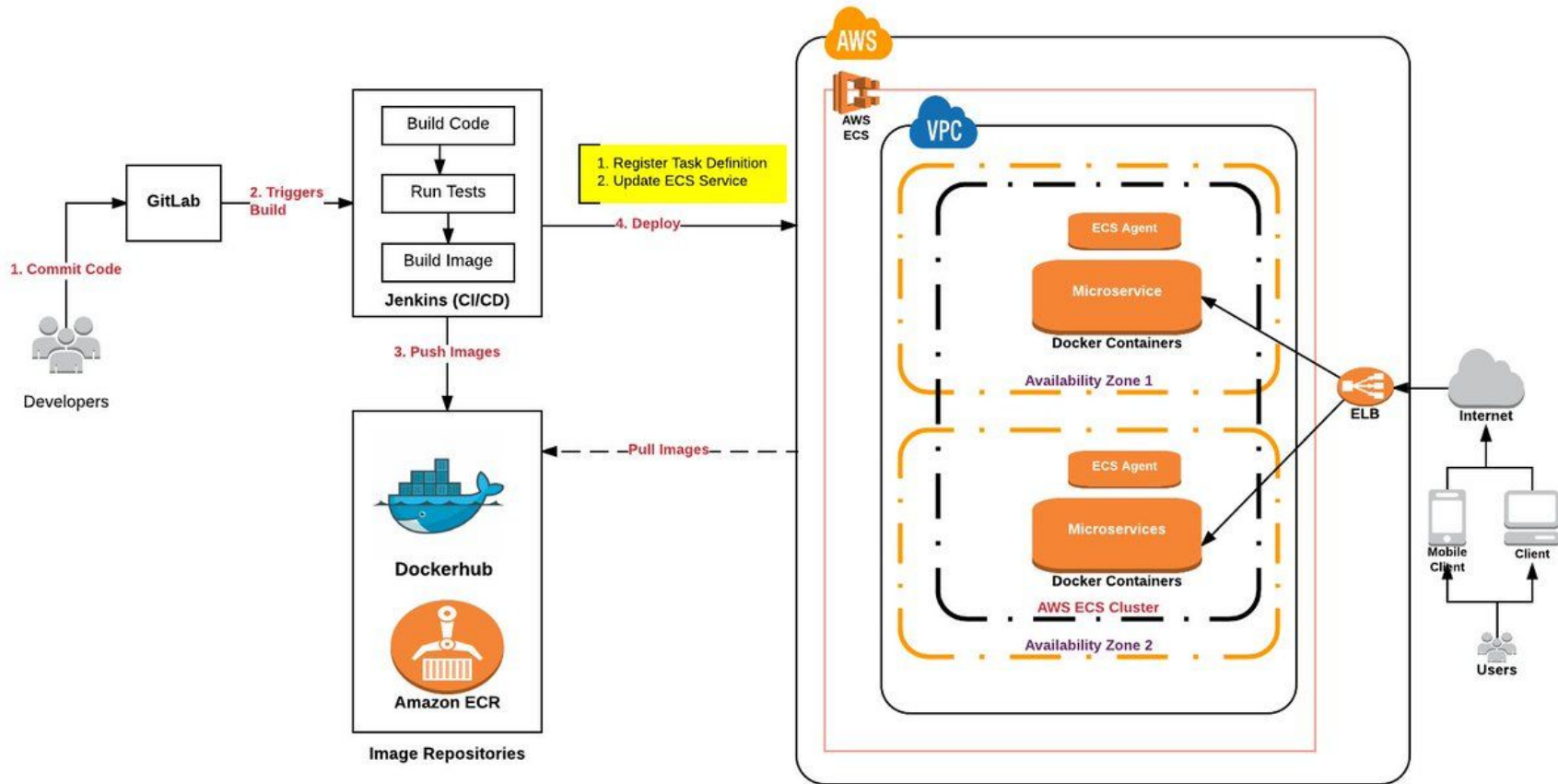
Traditional deployment to AWS Cloud service



CI/CD

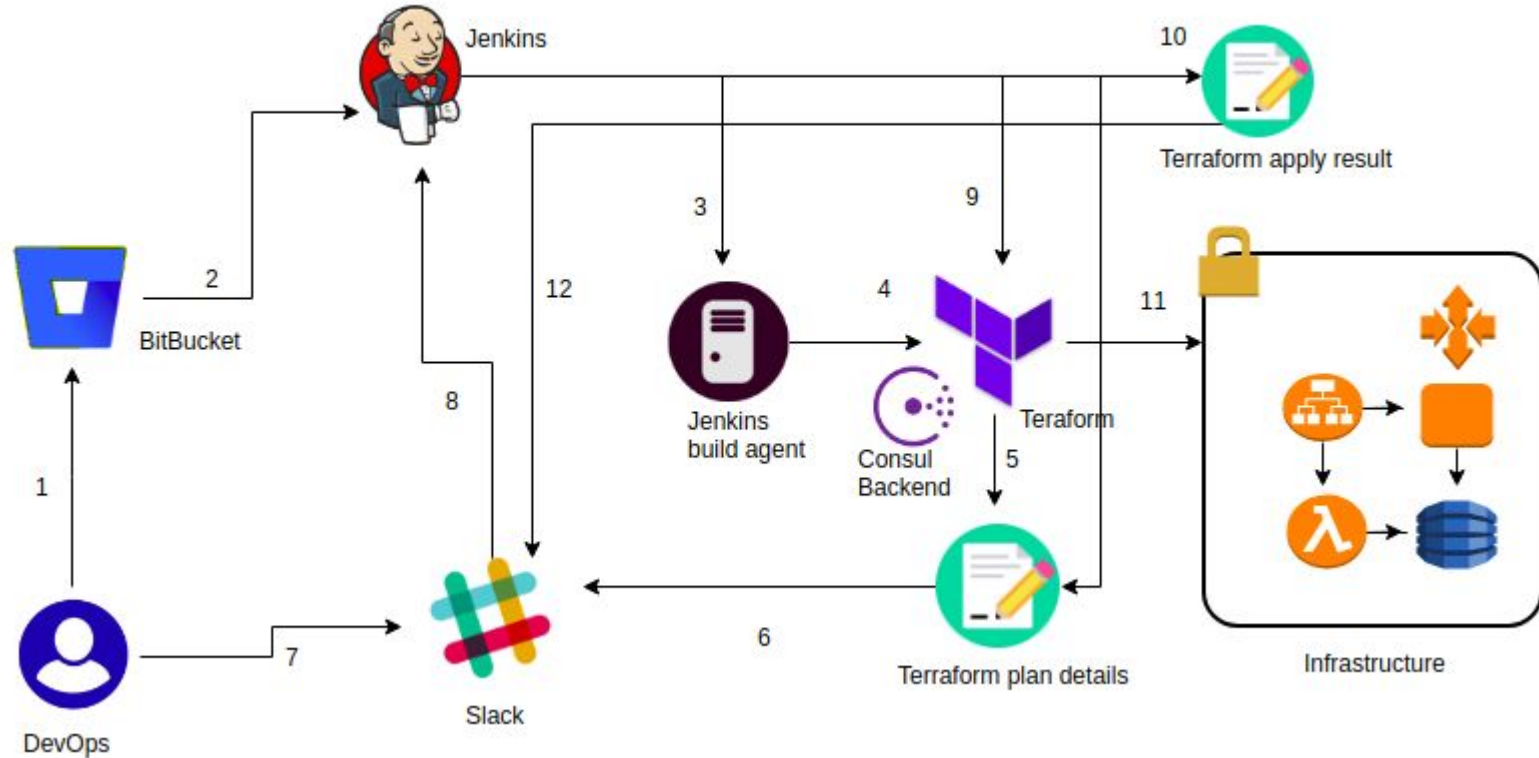


Deploy app containers to AWS - ECS



IaC - Infrastructure As Code enters the game

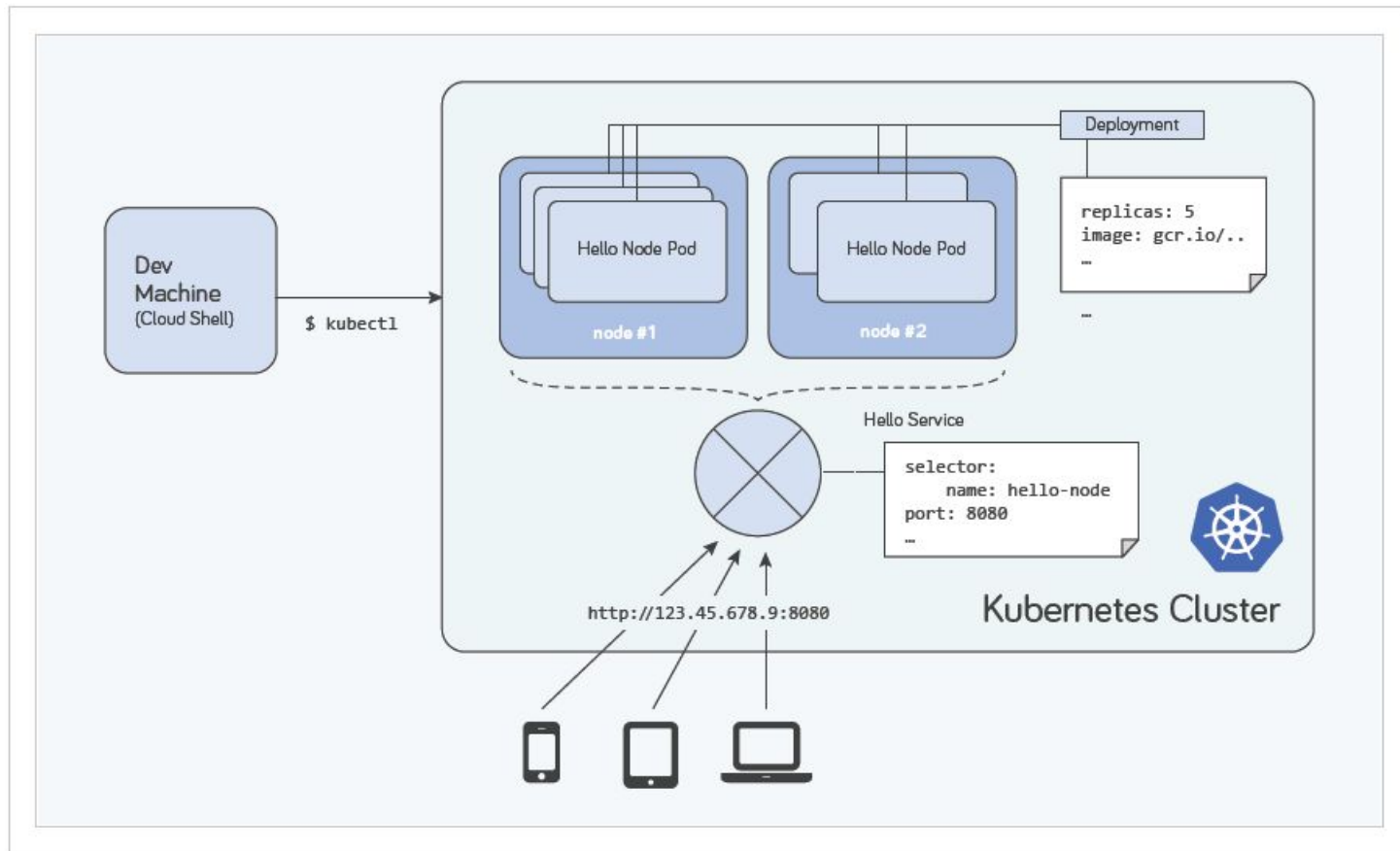
CI/CD using Hashicorp Terraform and Jenkins



Kubernetes enters the game



What is Kubernetes?



A Start In a nutshell



STEP 1: CREATE A CLUSTER

```
$ gcloud container clusters create separated-cluster
```

STEP 2: SPIN UP A DEPLOYMENT FROM GOOGLE CONTAINER REGISTRY.

```
$ kubectl run app --image gcr.io/google-samples/hello-app:1.0  
deployment "app" created
```

STEP 3: SCALE DEPLOYMENT.

We should scale up the deployment across three pods for redundancy:

```
$ kubectl scale deployment app --replicas 3  
deployment "app" scaled
```

STEP 4: OPEN PORTS.

Now that the website is deployed, we are ready to open it up to the world:

```
$ kubectl expose deployment app --port 80 --type=LoadBalancer  
service "app" exposed
```

STEP 5: UPDATE CODEBASE.

Let's imagine that the website has been updated and we need to deploy:

```
$ kubectl set image deployment app app=gcr.io/google-samples/hello-app:2.0
```

ECS vs K8s



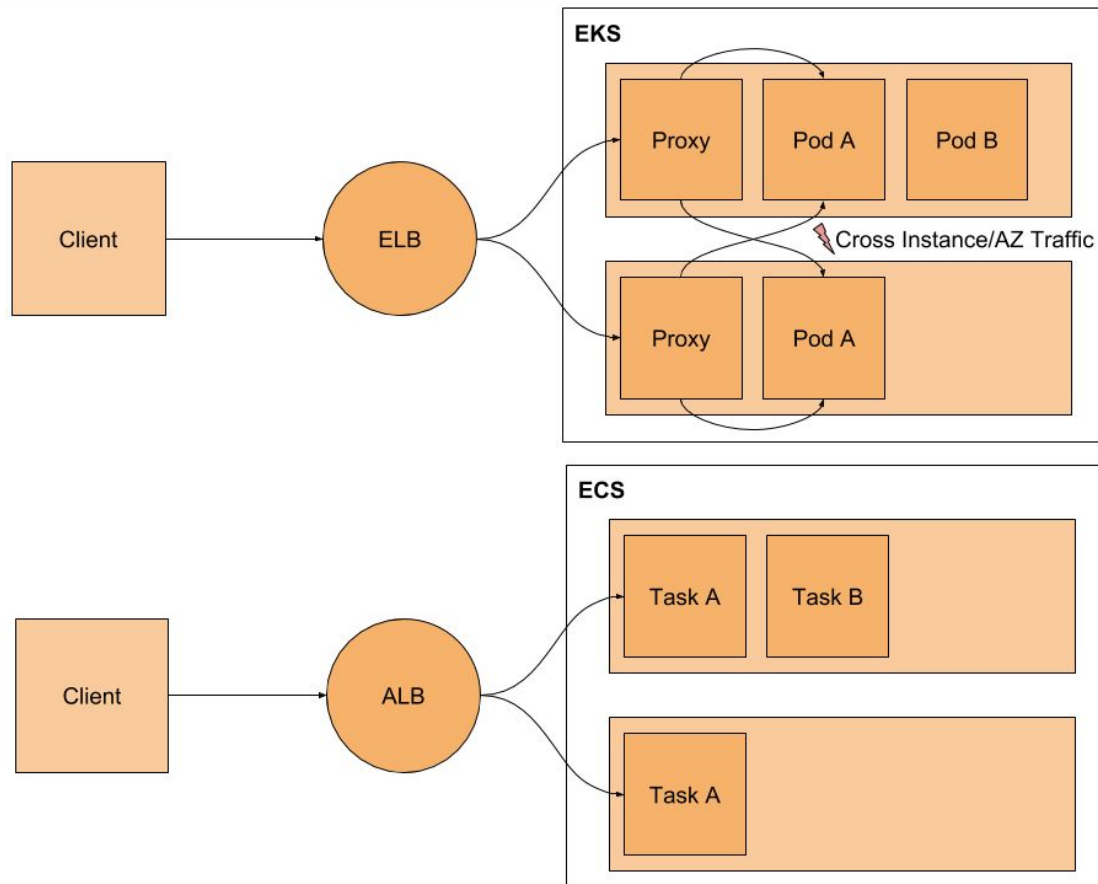
ECS



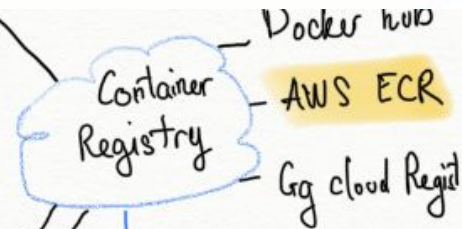
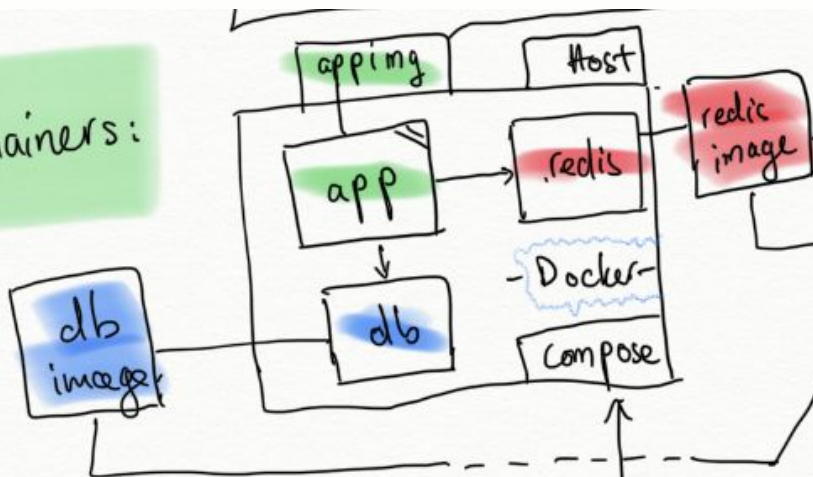
K8s

| | | |
|--|---|--|
| Running on Amazon Web Services (AWS) | Production-ready out of the box, highly integrated with AWS universe. | Building a production-ready cluster on AWS is possible but a lot of work. |
| Running on Google Cloud Platform (GCP) | Not available. | Production-ready out of the box, highly integrated with GCP universe. |
| Running on other IaaS provider or on-premise | Not available. | Expect significant effort when building a production-ready cluster your own. |

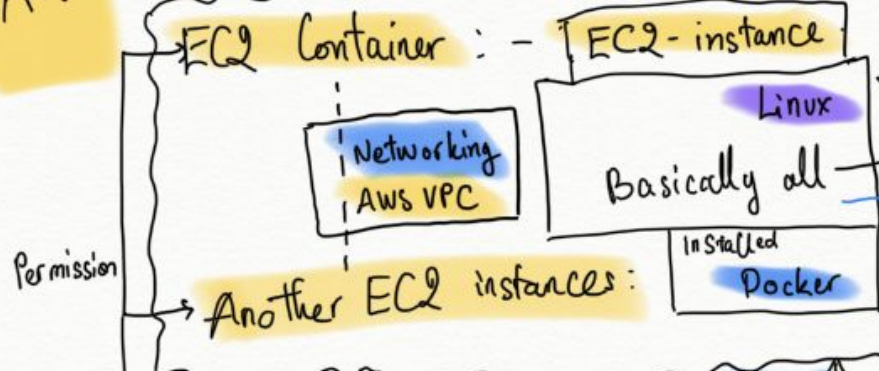
EKS enters the game



Offline Containers:



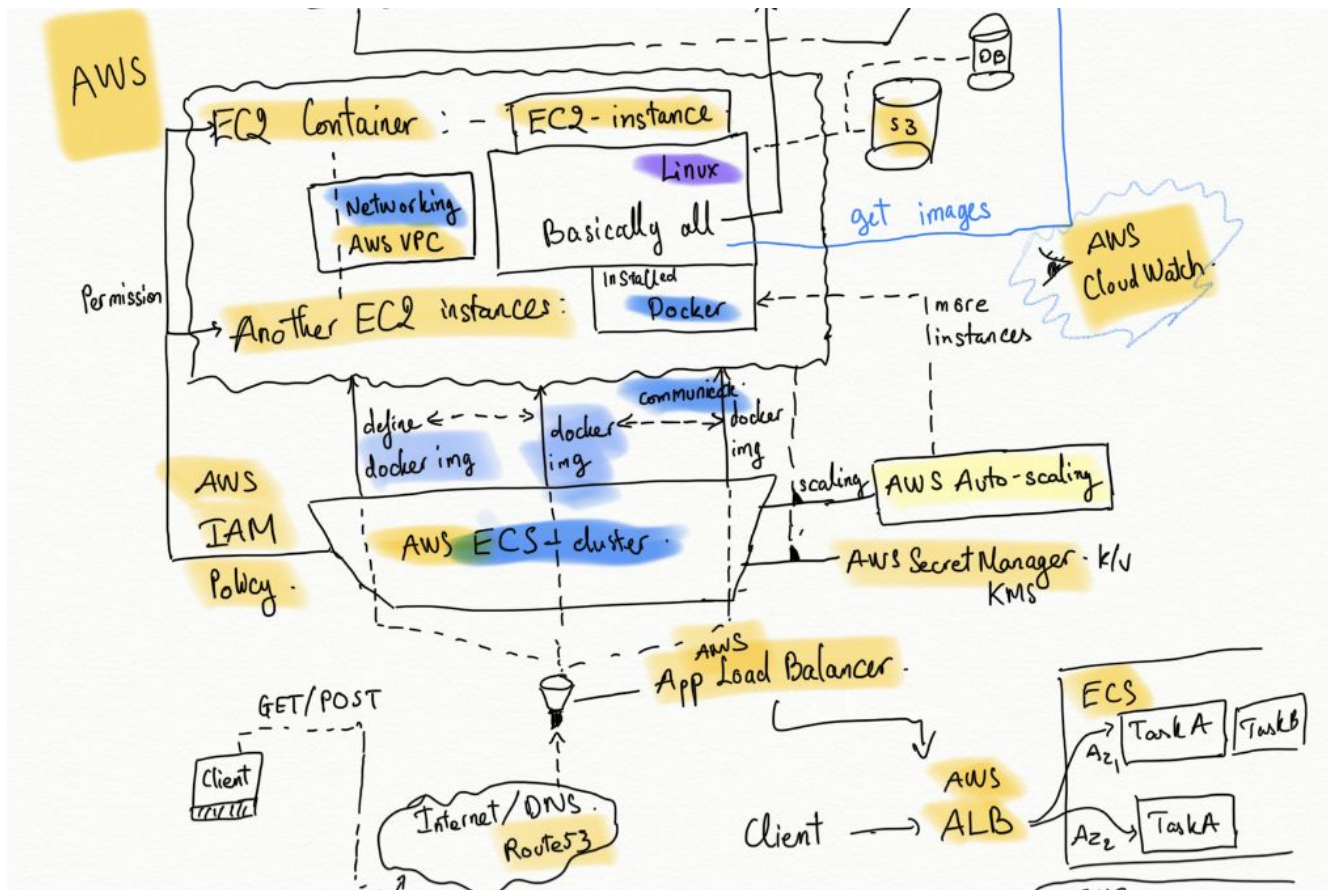
AWS



get images

AWS CloudWatch

Progress update



Next Step

Apply?



Devs need to know Ops

Thanks!

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