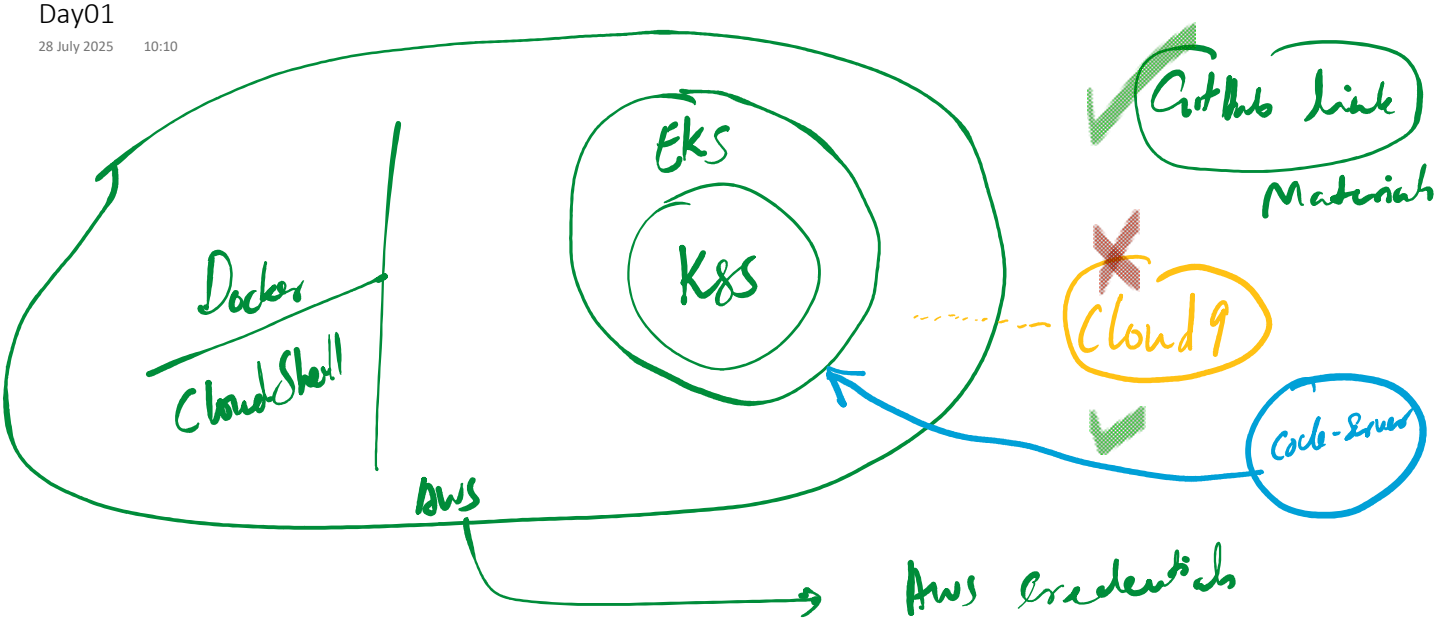
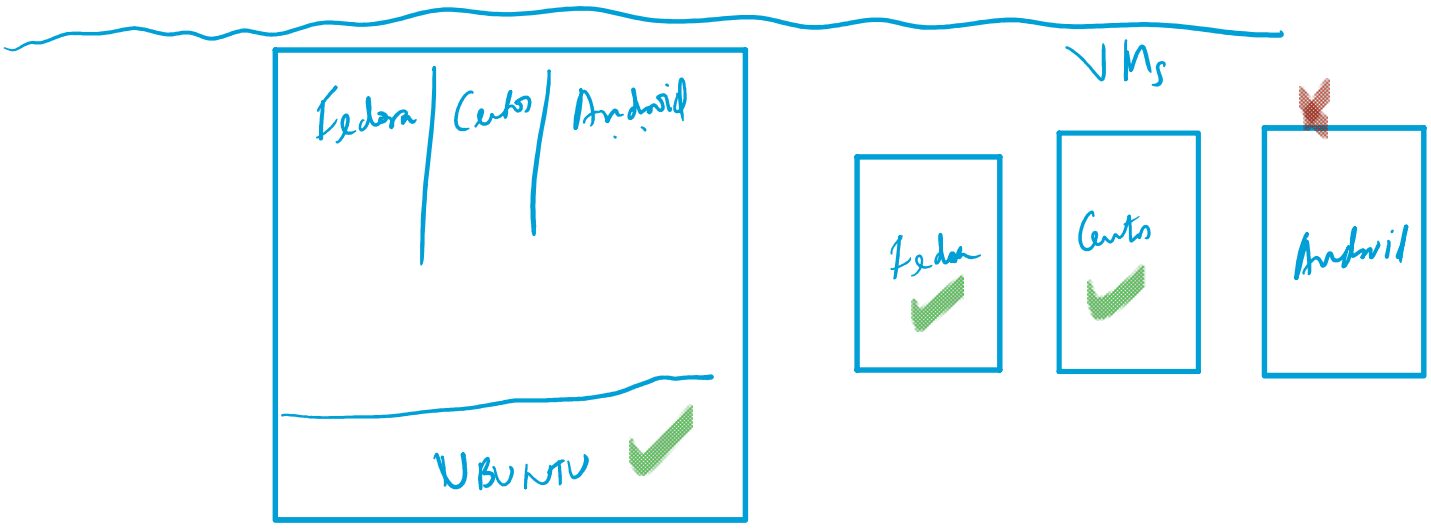
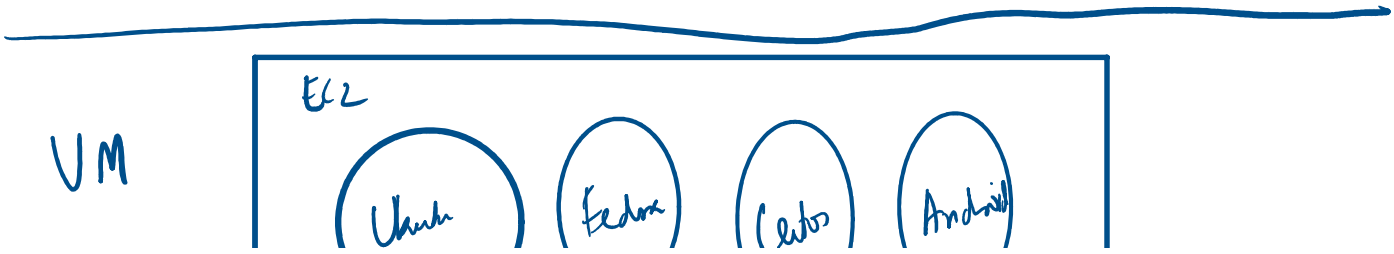
Day01

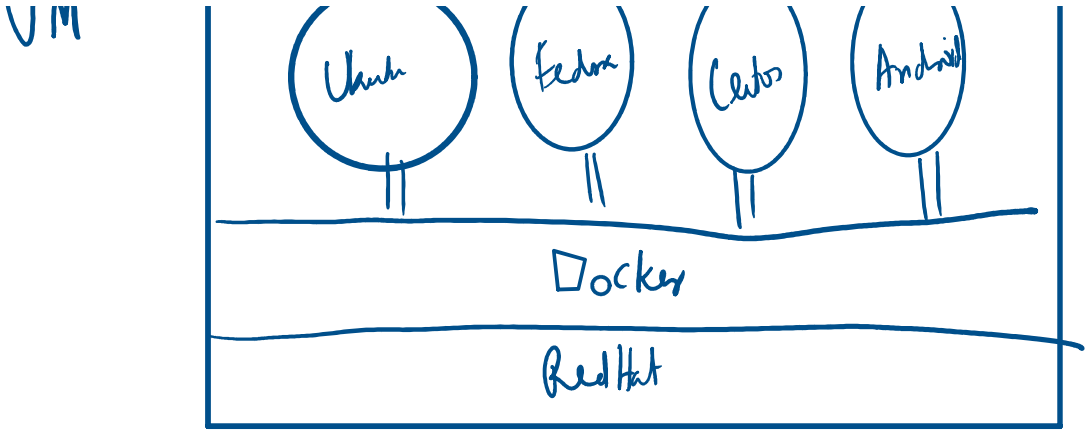
28 July 2025 10:10



DA-Setup

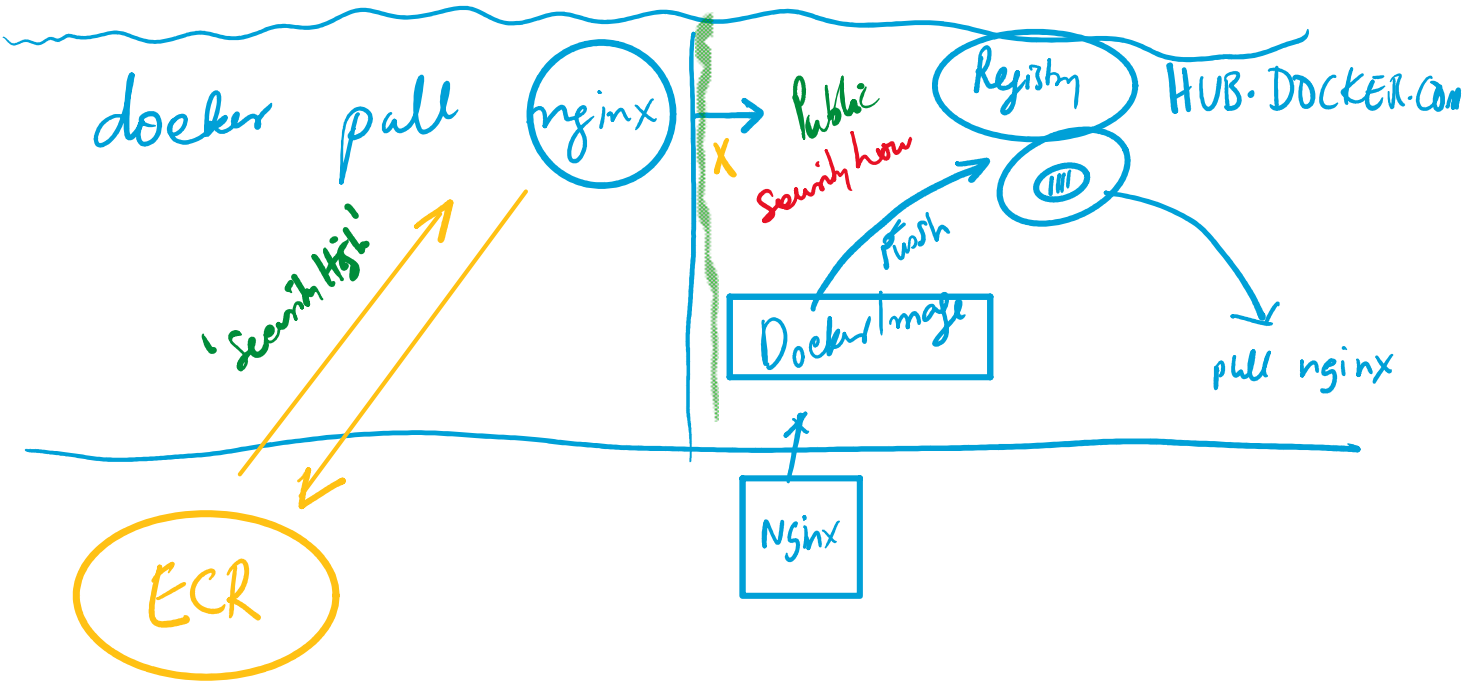


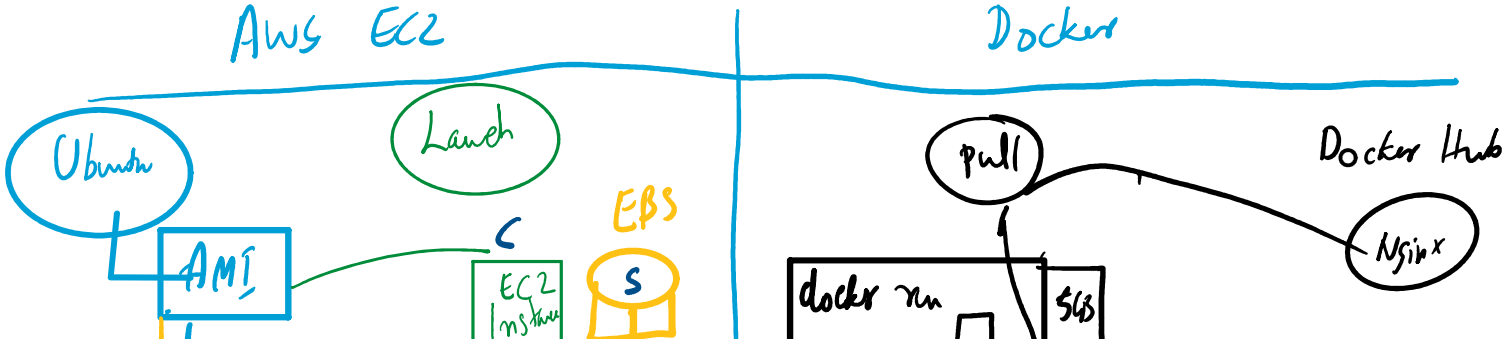


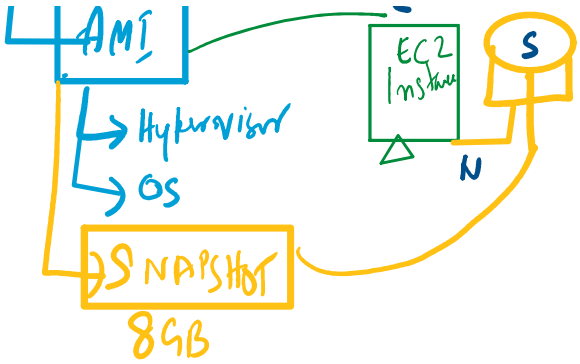


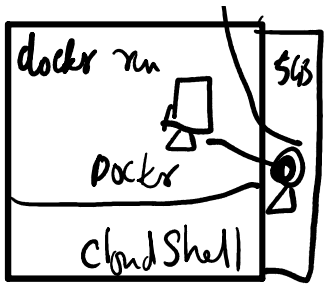
All Users have Admin access!

Full access / Limited Resources — '4'

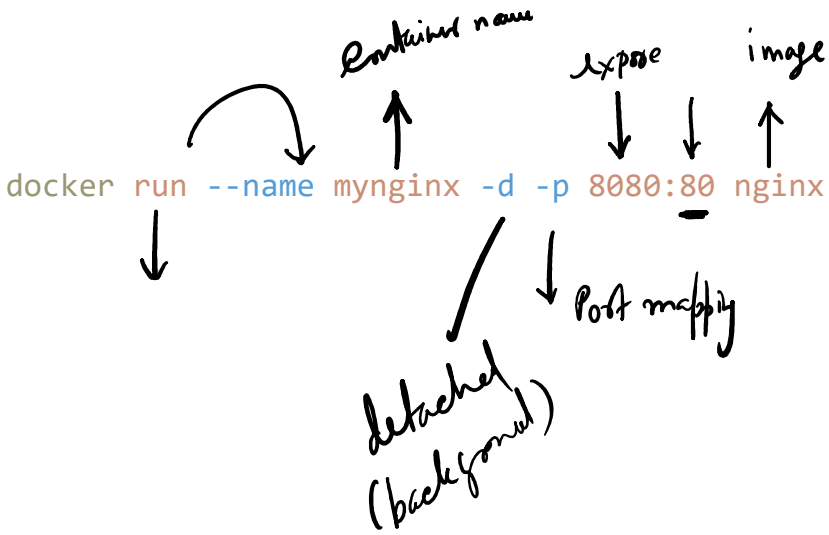


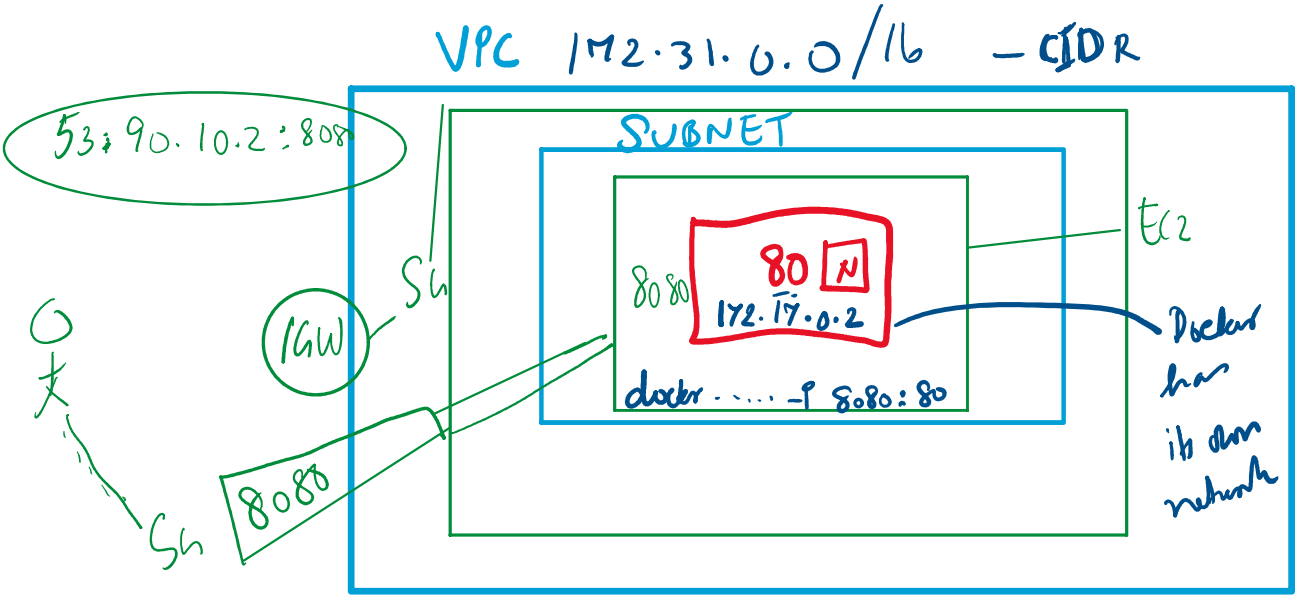


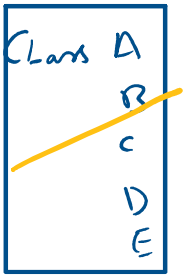

AMI
Hypervisor
OS
SNAPSHOT
8GB
EC2
Instance
S
N


docker run
5GB
Docker
CloudShell

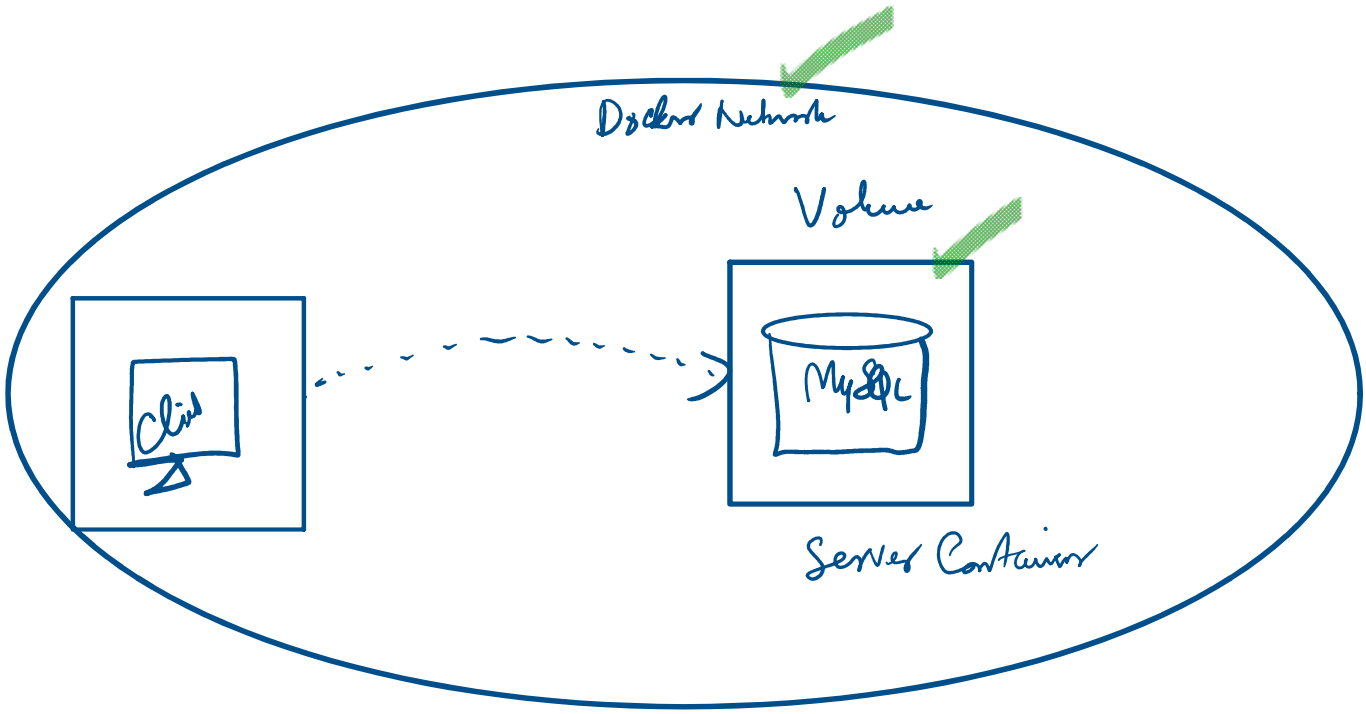

Nginx


Container name
expose
image
docker run --name mynginx -d -p 8080:80 nginx
Port mapping
detached
(background)


VPC 172.31.0.0/16 - CIDR
53.90.10.2:8080
SUBNET
EC2
80
N
172.17.0.2
8080
docker ..... -p 8080:80
IGW
SG
8080
SG
Docker has its own network


Class A
B
C
D
E

classes




```
docker run --name mysql-server \
  --network mysql-net \
  -e MYSQL_ROOT_PASSWORD=rootpass \
  -v mysql-data:/var/lib/mysql \
  -d mysql:8.0
```

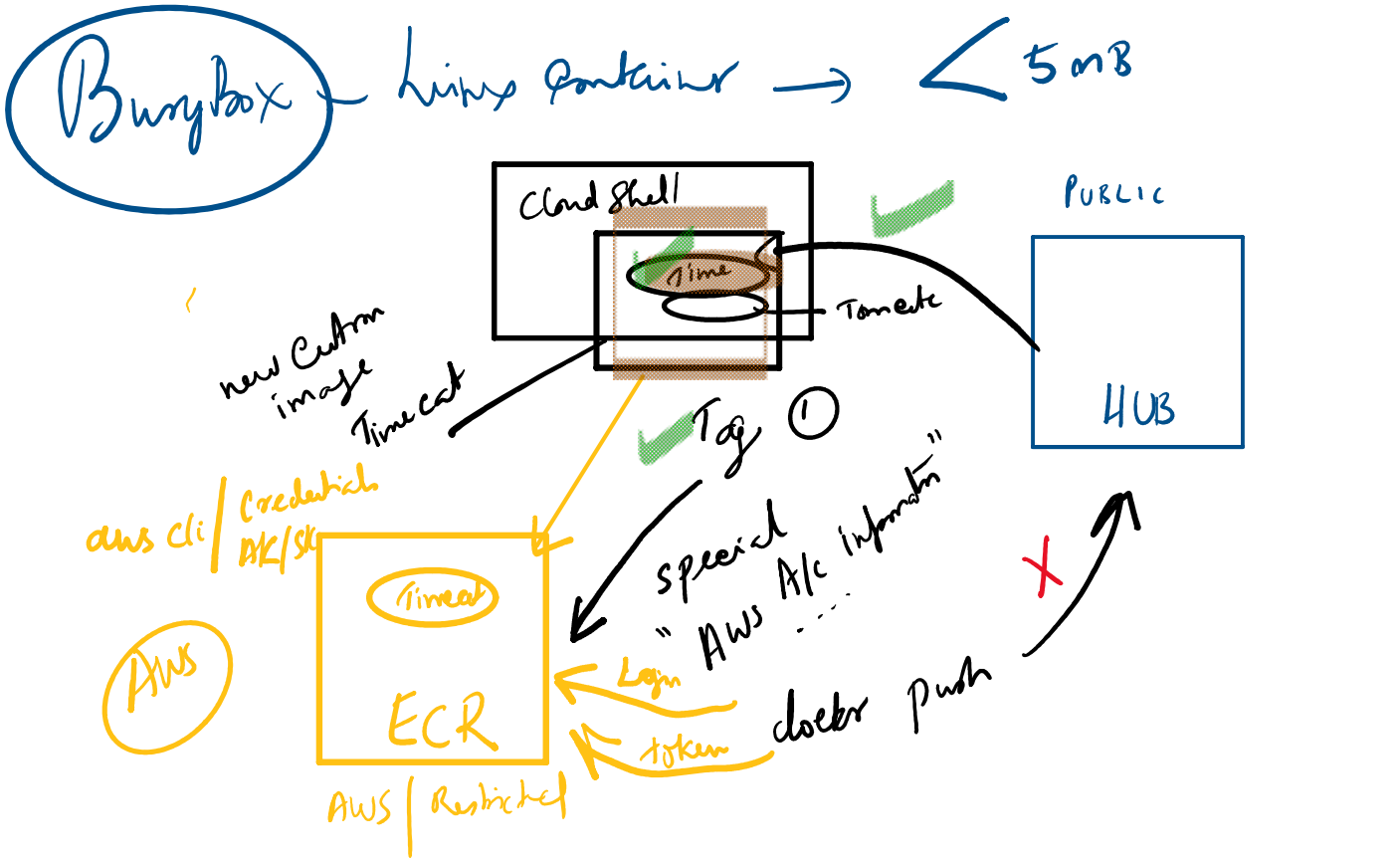
1. Network
2. MySQL 8.0.
3. Volume / directory
4. Environment Variable

HUB → mysql-server

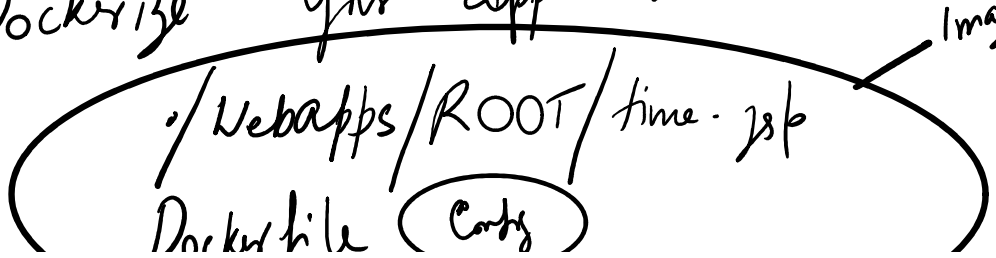
```
docker exec -it mysql-server mysql -uroot -prootpass
```

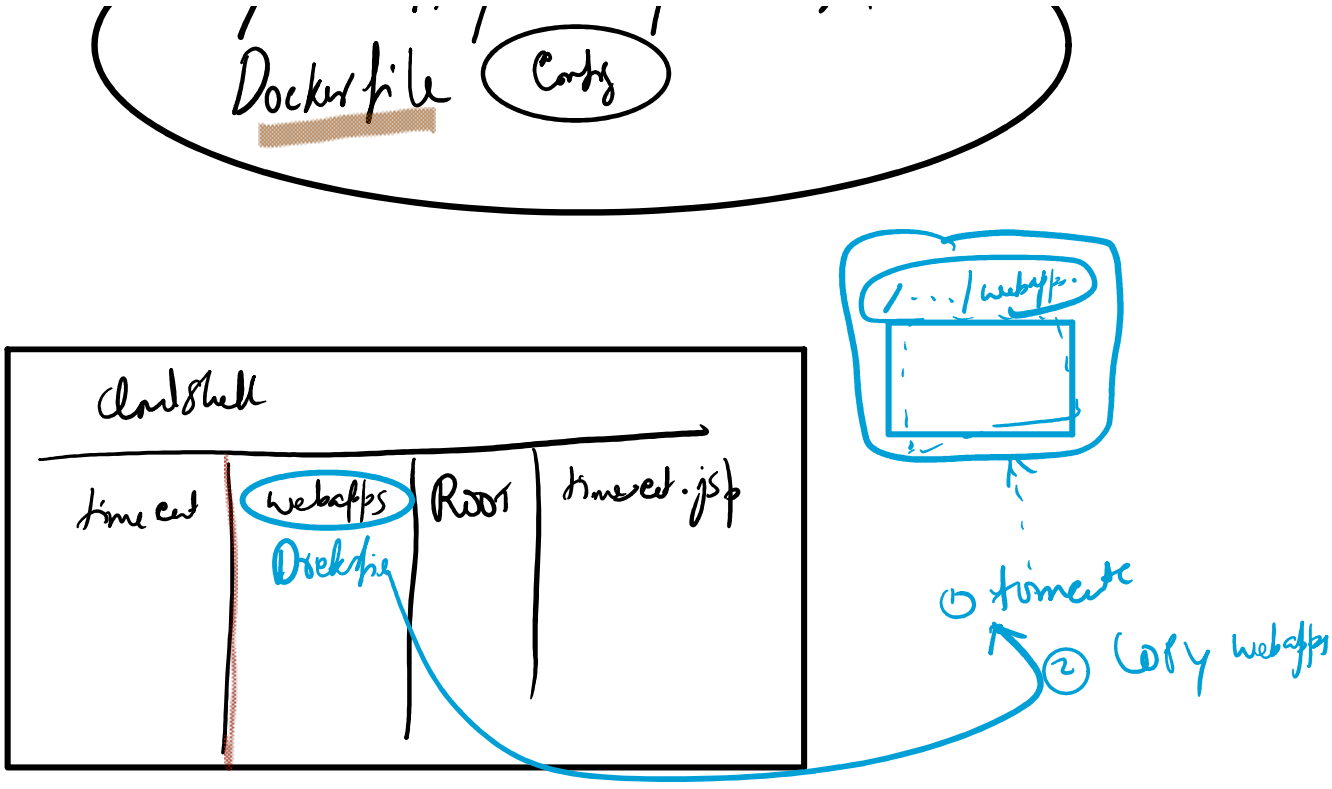
i - interactive
t - tty

```
docker run -it --rm \
  --network mysql-net \
  mysql:8.0 mysql -h mysql-server -ulabuser -
plabpass
```



1. Get new Tomcat image by pulling — tomcat
2. Develop an JSP app — timecat
3. "Dockerize" your application — image






```
docker run --rm -d -p 8082:8080 --name timecat-container timecat:1.0
```

Docker image created

Modified the docker image tag

Logged into AWS ECR

Pushed timecat into ECR Repo!

Done with Basic Docker

// One with Docker

Welcome EKS | K8S

EKS | K8S cluster

EC2

Code-Server

CloudFront

UI rendering

CACHE POLICY

Code-Server

CloudFormation Stack

Secret

EC2

CloudFront

(Policy)

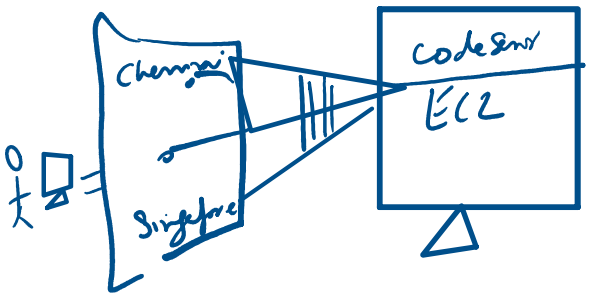
Password

Backend

Frontend

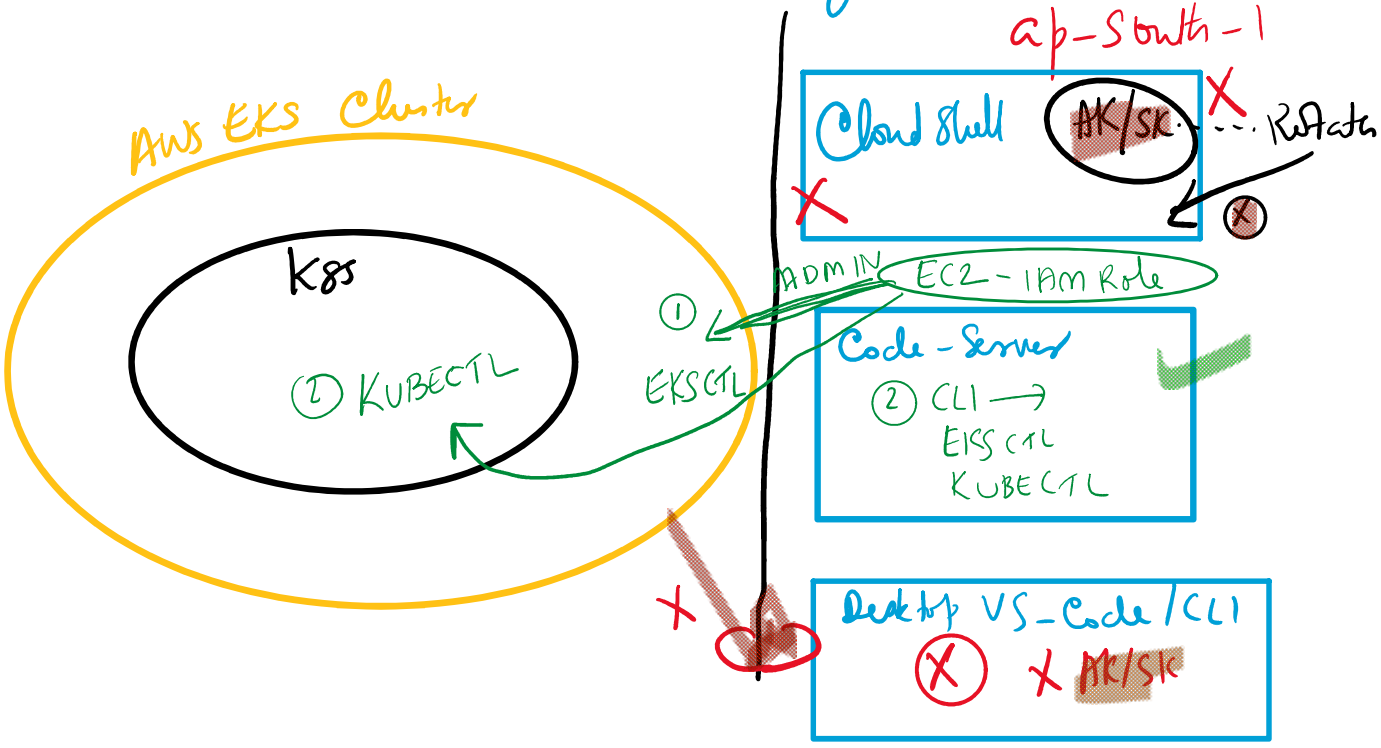
script ——— stop EC2

Restart-IDE



Env variables = My ID : ep51 ~~ep33~~

= AWS_Region = ~~us-east-1~~ ap-South-1



AWS → IAM / Identity Center / ....AD... |

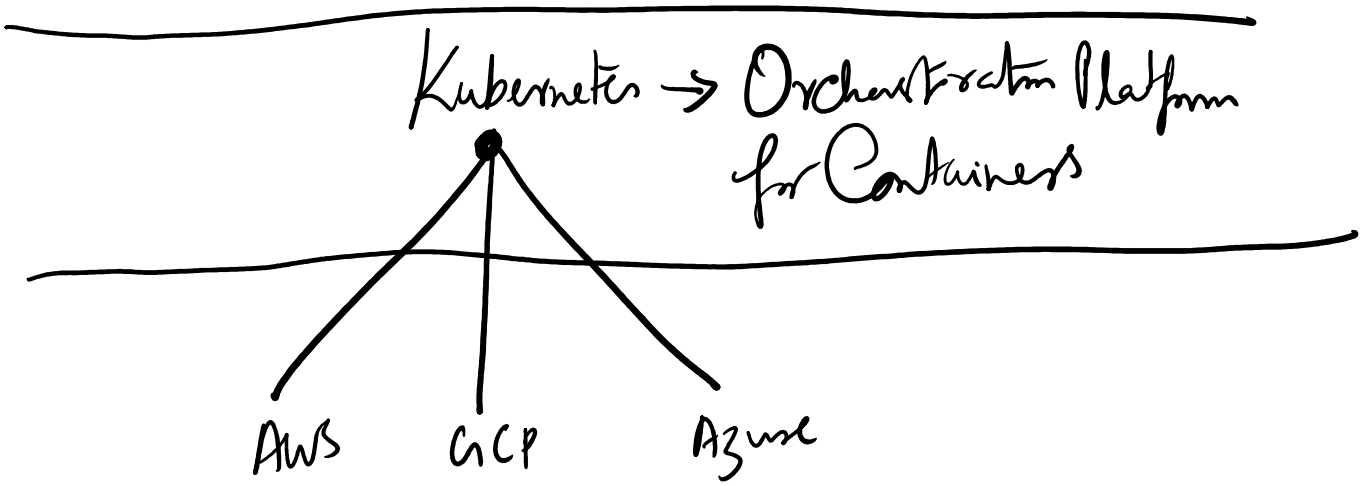
K8S → Credentials

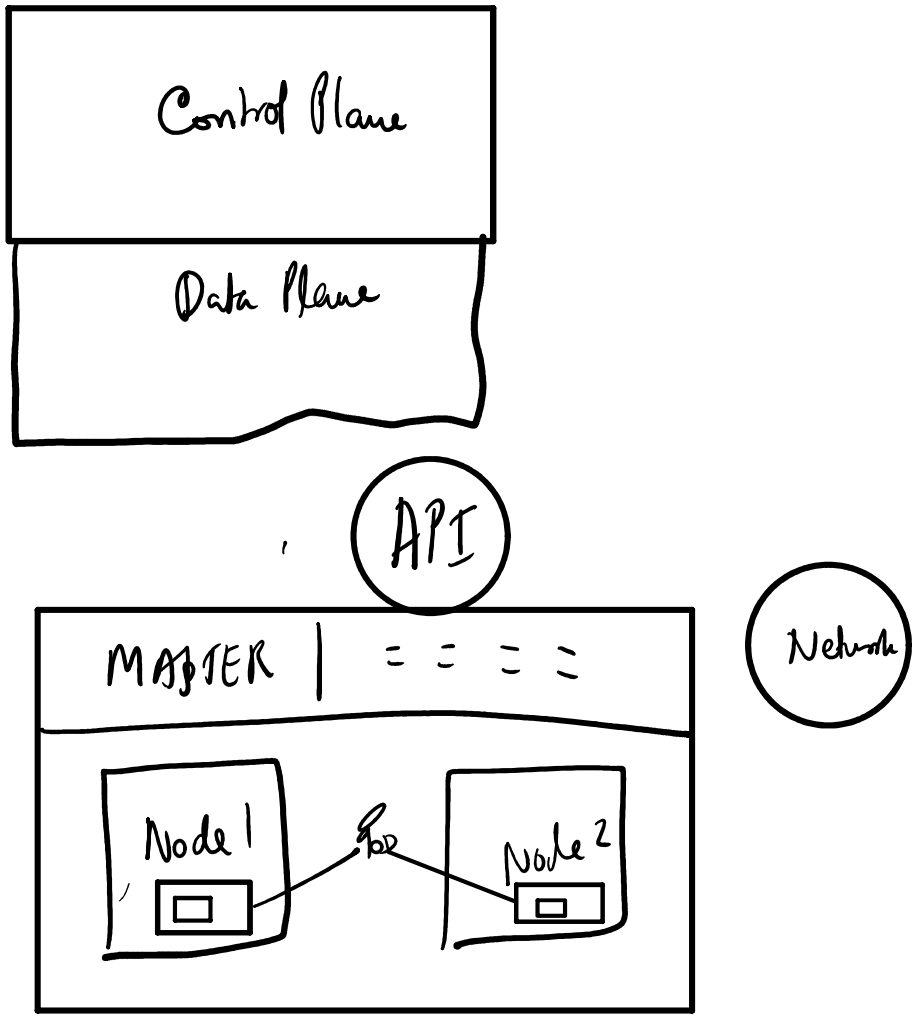
EKS → eksctl → AWS + 3rd Party

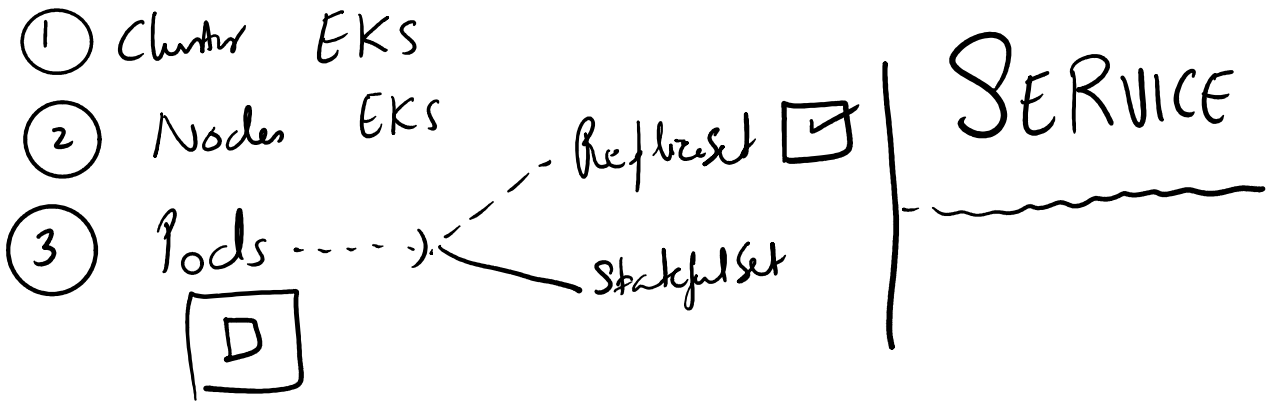
kubectl → AWS = customized

EKS → eksctl

K8S → kubectl → AWS = customized






1 Cluster EKS
2 Nodes EKS
3 Pods
D
ReplicaSet
StatefulSet
SERVICE