2. Install Kubernets

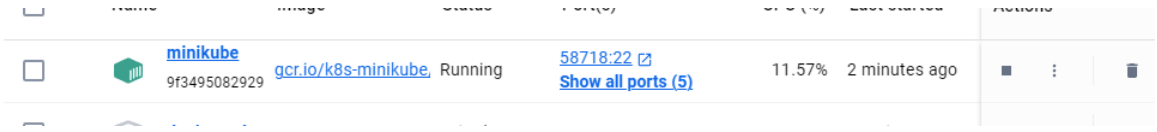
Hafelago = Harold Felipe Lara Gonzalez

Kubectl installation

```
hafelago@DESKTOP-208TC4I:~$  curl -LO https://storage.googleapis.com/kubernetes-release/release/`curl -s https://storage
.googleapis.com/kubernetes-release/release/stable.txt`/bin/linux/amd64/kubectl
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 49.0M  100 49.0M    0     0  34.0M      0  0:00:01  0:00:01 --:--:-- 34.0M
hafelago@DESKTOP-208TC4I:~$ chmod +x ./kubectl
hafelago@DESKTOP-208TC4I:~$ chmod +x ./kubectl
hafelago@DESKTOP-208TC4I:~$ sudo mv ./kubectl /usr/local/bin/kubectl
[sudo] password for hafelago:
hafelago@DESKTOP-208TC4I:~$ kubectl version --client
Client Version: v1.30.0
Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3
hafelago@DESKTOP-208TC4I:~$
```

Minikube Installation

```
hafelago@DESKTOP-208TC4I:~$ kubectl version --client
Client Version: v1.30.0
Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3
hafelago@DESKTOP-208TC4I:~$ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 91.2M  100 91.2M    0     0  38.2M      0  0:00:02  0:00:02 --:--:-- 38.2M
hafelago@DESKTOP-208TC4I:~$ sudo install minikube-linux-amd64 /usr/local/bin/minikube
hafelago@DESKTOP-208TC4I:~$ minikube start
😄  minikube v1.33.0 on Ubuntu 22.04 (amd64)
✨  Automatically selected the docker driver. Other choices: none, ssh
📌  Using Docker driver with root privileges
❗  For an improved experience it's recommended to use Docker Engine instead of Docker Desktop.
Docker Engine installation instructions: https://docs.docker.com/engine/install/#server
👍  Starting "minikube" primary control-plane node in "minikube" cluster
🚜  Pulling base image v0.0.43 ...
💾  Downloading Kubernetes v1.30.0 preload ...
    > preloaded-images-k8s-v18-v1...:  342.90 MiB / 342.90 MiB  100.00% 25.96 M
    > gcr.io/k8s-minikube/kicbase...:  480.29 MiB / 480.29 MiB  100.00% 26.53 M
🔥  Creating docker container (CPUs=2, Memory=2200MB) ...
🐳  Preparing Kubernetes v1.30.0 on Docker 26.0.1 ...
    ▪ Generating certificates and keys ...
    ▪ Booting up control plane ...
    ▪ Configuring RBAC rules ...
🔗  Configuring bridge CNI (Container Networking Interface) ...
🔎  Verifying Kubernetes components...
    ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟  Enabled addons: storage-provisioner, default-storageclass
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
hafelago@DESKTOP-208TC4I:~$
```



3. Quiz

Kubernets is a platform designed to manage workloads and containerized services. It offers service discovery, load balancing, storage orchestration, automated deployments and rollback, auto-recovery, and batch execution. it provides building blocks for diverse workloads and preserves user choice and flexibility. It eliminates the need for orchestration by continuously pushing the current state to the desired state through independent, composable control processes.

One of the key Strengths of Kubernetes is its automation capabilities. It excels at automating containers' deployment, management, and scalability across multiple nodes in a cluster. You can efficiently deploy and manage containerized applications without micromanaging the underlying infrastructure.

Kubernetes is not just about automation; it also offers powerful scalability features. It can automatically scale application resources based on workload, ensuring your applications can handle traffic spikes without manual intervention. This capability significantly improves user experience and operational efficiency.