| | | |
|---|---|---|
| *Nom Complet* : ***ALPHA SOULEYMANE BAH***<br>*Encadreur* ***: M. N'Gor Seck*** | **TAF :** Vous allez déployer l'application stock-ms dans minikube en mode déclarative (fichier yaml) dans un namespace nommé devops | ***Année :*** *2024-2025*<br>*Groupe ISI Dakar (SN)*<br>***Niveau:*** *M2GL* |

Les étapes à suivre de a-z sont :

## 1. Prérequis

Assurez-vous d'avoir installé et configuré correctement :

- **Minikube** : Installation Minikube
- **Kubectl** : Installation kubectl
- **Docker Desktop** (déjà installé) avec **Kubernetes activé**
- **Hyper-V ou WSL 2** (si nécessaire pour Minikube)

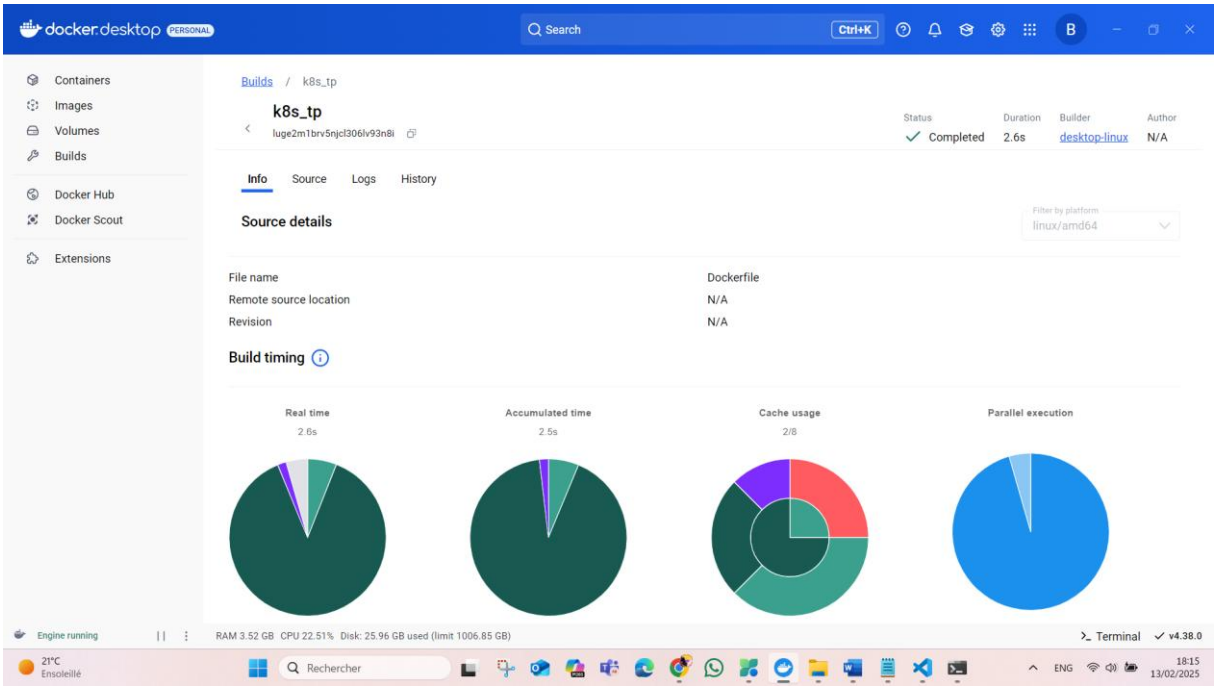
```
PS C:\Users\LENOVO>  minikube version
minikube version: v1.34.0
commit: 210b148df93a80eb872ecbeb7e35281b3c582c61
PS C:\Users\LENOVO>
PS C:\Users\LENOVO> kubectl version
Client Version: v1.31.4
Kustomize Version: v5.4.2
Server Version: v1.31.0
PS C:\Users\LENOVO>
```

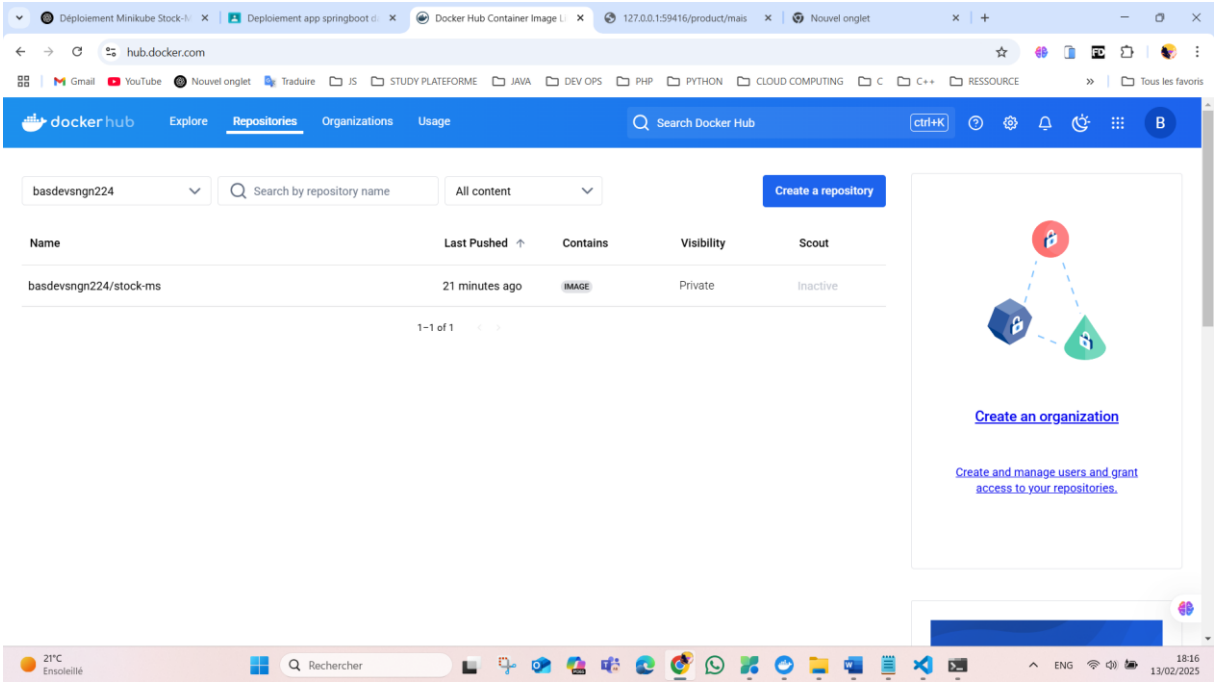
## 2. Build de l'application et push sur docker hub

```
PS C:\Users\LENOVO> docker login
Authenticating with existing credentials...
Login Succeeded
```

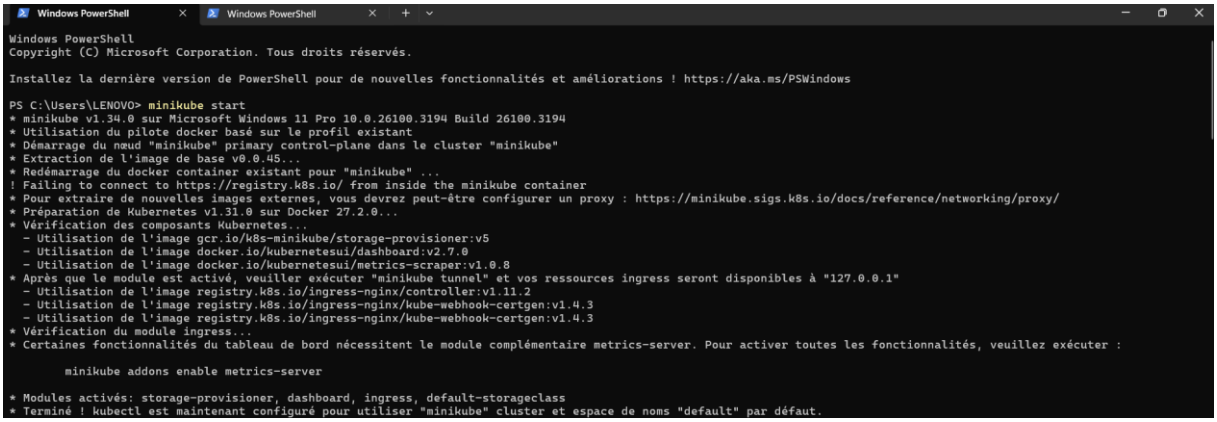
```
PS D:\> cd D:\MASTER_II_GL\DEV_OPS\k8s_tp
PS D:\MASTER_II_GL\DEV_OPS\k8s_tp> docker build -t basdevsngn224/stock-ms:latest .
[+] Building 2.9s (9/9) FINISHED                                                
```

```
View build details: docker-desktop:///dashboard/build/desktop-linux/desktop-linux/luge2m1brv5njcl306lv93n8i
PS D:\MASTER_II_GL\DEV_OPS\k8s_tp> docker push basdevsngn224/stock-ms:latest
The push refers to repository [docker.io/basdevsngn224/stock-ms]
e3d1bc399bc1: Layer already exists
6f9ff1c5de04: Layer already exists
6be690267e47: Layer already exists
13a34b6fff78: Layer already exists
9c1b6dd6c1e6: Layer already exists
latest: digest: sha256:a50956dac165ea3207131d75c9f5f323248c1ea96aa0762e654801ff6ec5c92f size: 1371
```



## 3. Lançons Minikube et Vérification




```
PS C:\Users\LENOVO> minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured
```

### 3.2. Créer le Namespace devops et Vérification

```
PS C:\Users\LENOVO> kubectl create namespace devops
namespace/devops created
```

```
PS C:\Users\LENOVO> kubectl get namespace devops
NAME      STATUS   AGE
devops    Active   28m
PS C:\Users\LENOVO>
```

## 4. Création d'une imagePullSecret pour Docker Hub et Vérification

```
PS D:\MASTER_II_GL\DEV_OPS\k8s_tp> kubectl create secret docker-registry docker-hub-secret `
>>    --docker-server=https://index.docker.io/v1/ `
>>    --docker-username=basdevsngn224 `
>>    --docker-password=dckr_pat_pyrgBvuL9d74k-lAHIVMWpf4AoY `
>>    --docker-email=bahalphasouleymane2019@gmail.com `
>>    --namespace=devops
secret/docker-hub-secret created
```

```
PS C:\Users\LENOVO> kubectl get secrets -n devops
NAME                TYPE                                  DATA   AGE
docker-hub-secret   kubernetes.io/dockerconfigjson        1      27m
PS C:\Users\LENOVO>
```

**5. Création des fichiers YAML pour le déploiement**

**Voir (lien github)=**

**https://github.com/sombregn/k8s_mode_declarative**

**5.1. Appliquons les fichiers YAML**

```
PS D:\MASTER_II_GL\DEV_OPS\k8s_tp> kubectl apply -f deployment.yaml
deployment.apps/stock-ms created
PS D:\MASTER_II_GL\DEV_OPS\k8s_tp> kubectl apply -f service.yaml
service/stock-ms-service created
```

**6. Vérification du déploiement**

**6.1. Vérification des pods**

```
PS C:\Users\LENOVO> kubectl get pods -n devops
NAME                          READY   STATUS    RESTARTS      AGE
stock-ms-5f688fd79-482ch      1/1     Running   1 (23m ago)   30m
stock-ms-5f688fd79-7wm5n      1/1     Running   1 (23m ago)   30m
PS C:\Users\LENOVO>
```

**6.2 Vérification des services**

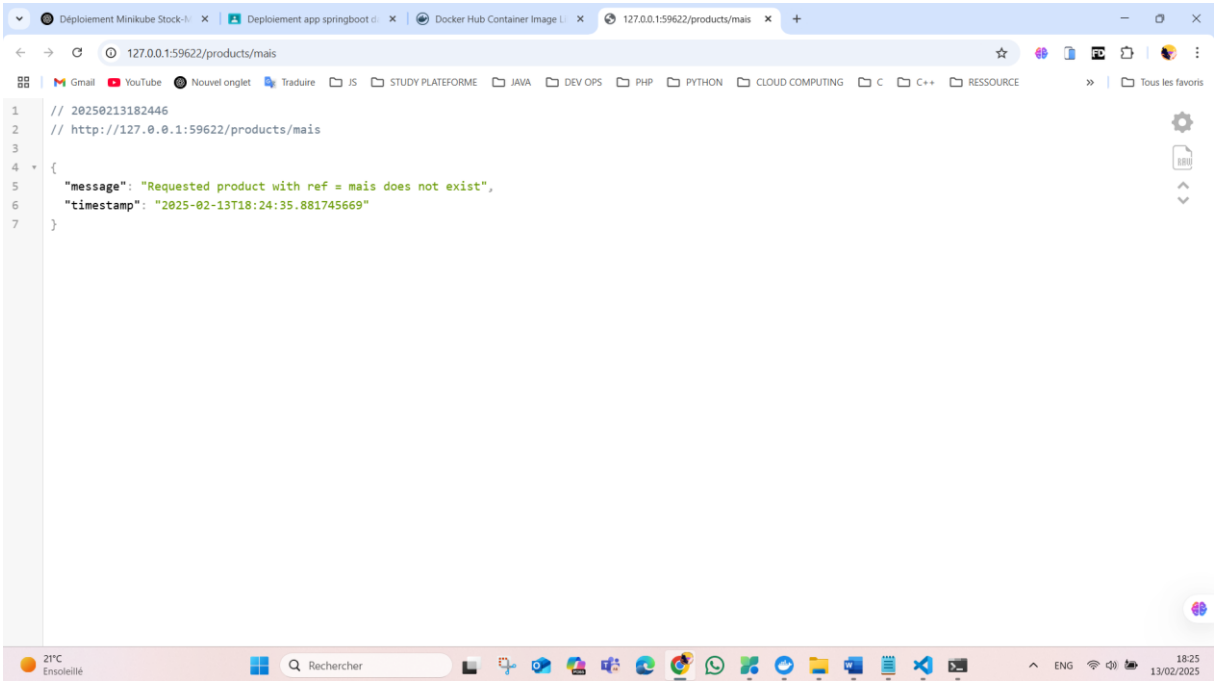
```
PS C:\Users\LENOVO> kubectl get svc -n devops
NAME               TYPE       CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
stock-ms-service   NodePort   10.104.185.95   <none>        80:31004/TCP   31m
PS C:\Users\LENOVO>
```

**7. Ouverture et Test de l'application**

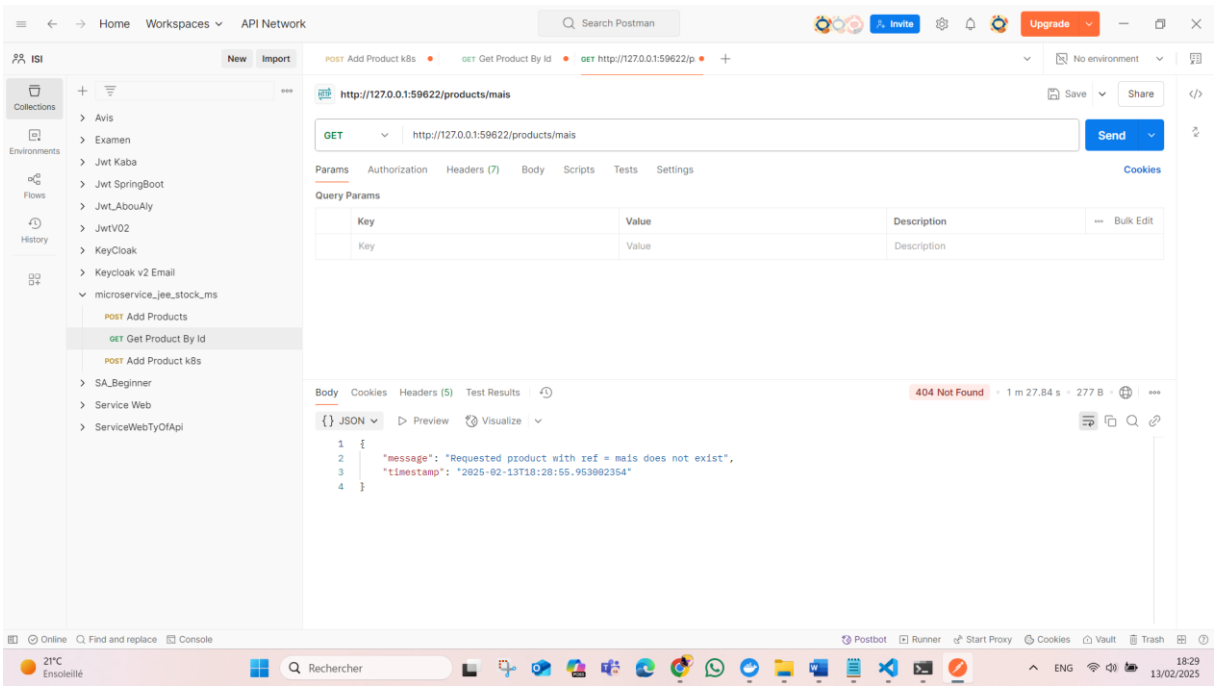
```
PS D:\MASTER_II_GL\DEV_OPS\k8s_tp> minikube service stock-ms-service -n devops --url
http://127.0.0.1:59622
! Comme vous utilisez un pilote Docker sur windows, le terminal doit être ouvert pour l'exécuter.
```

- ✓ **Sur le navigateur avant insertion sur postman**

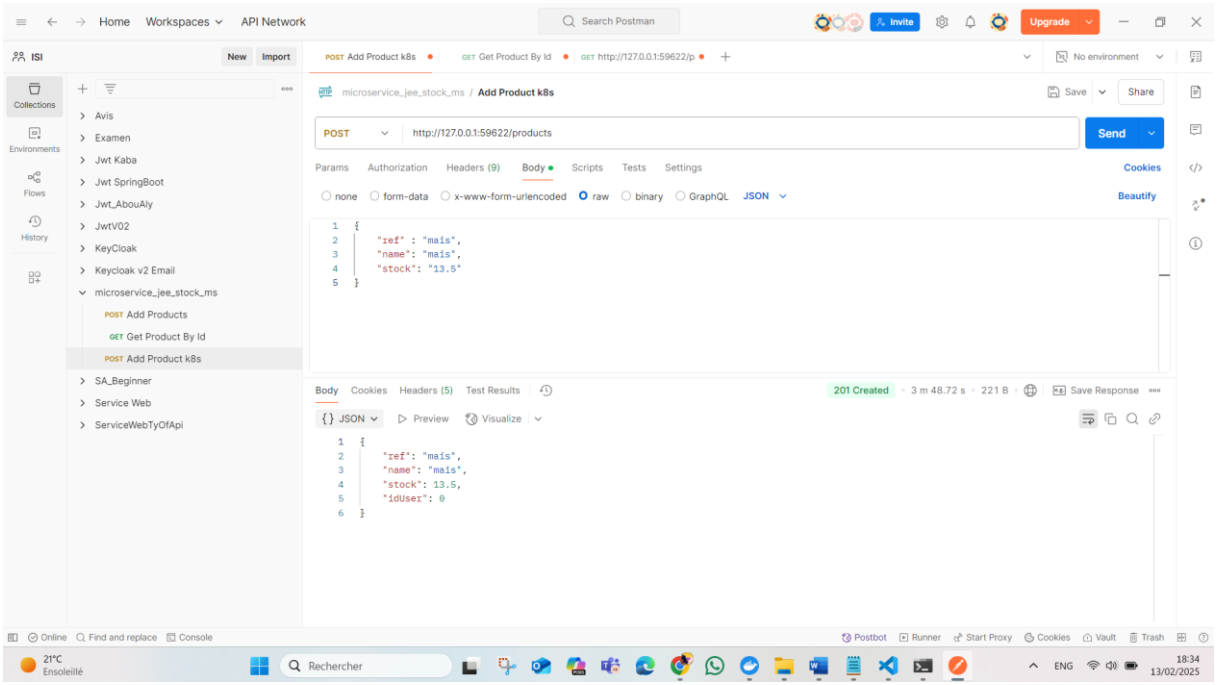
**Ref=mais**



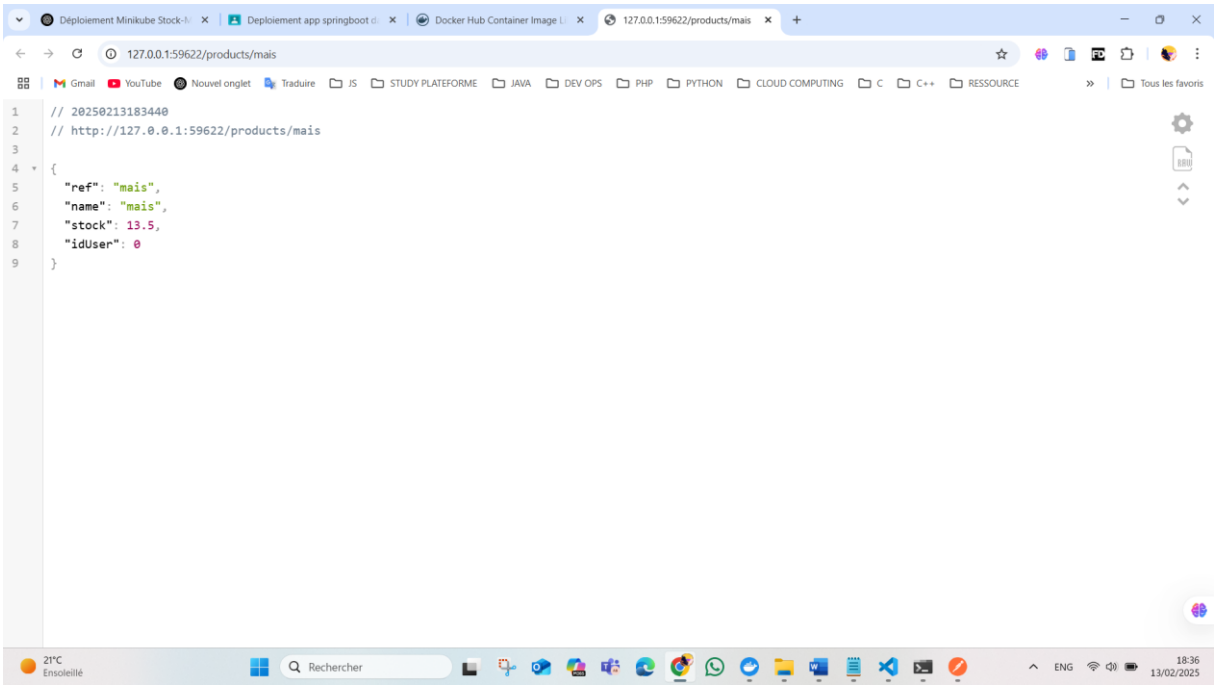

- ✓ **Insertion sur postman et test**
  **Sans succès car la ref = mais n'existe**




**Ajout avec succès sur postam**

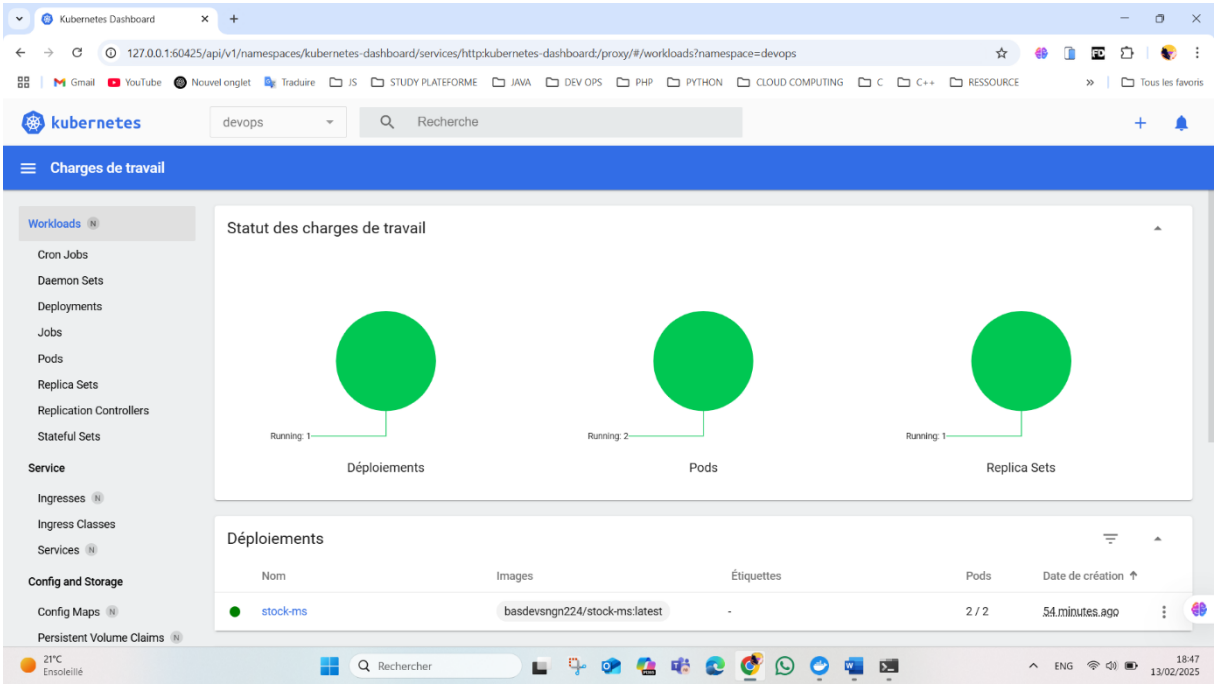


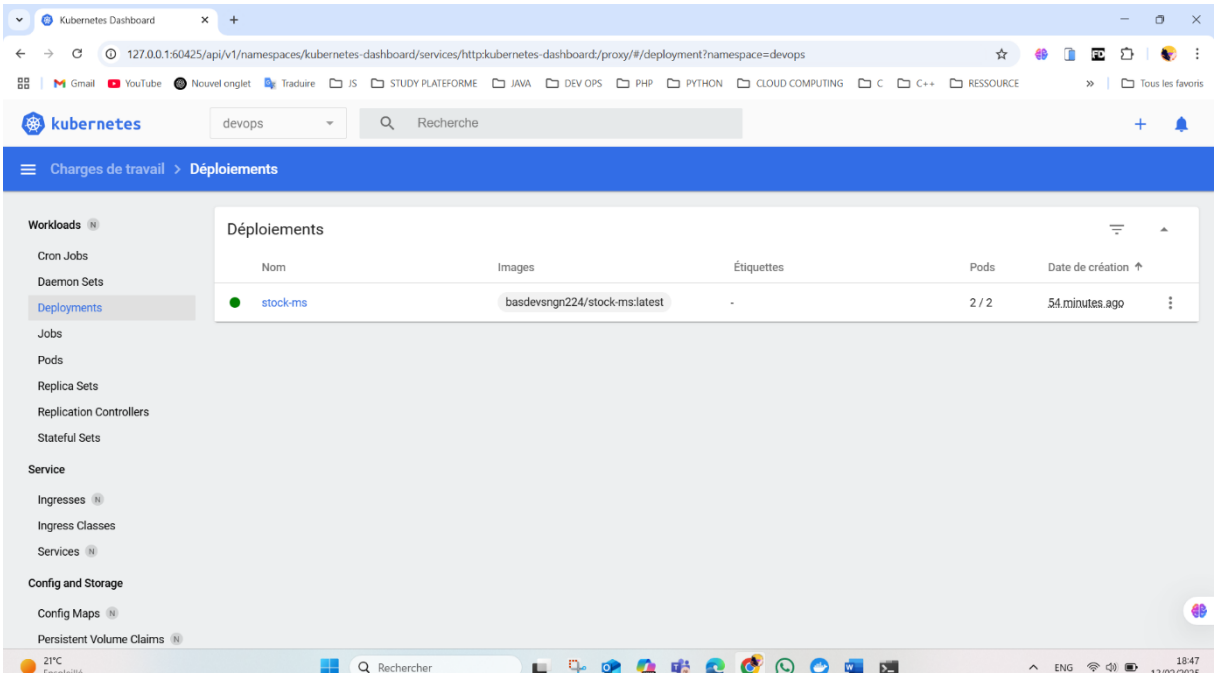

## Récupération avec succès

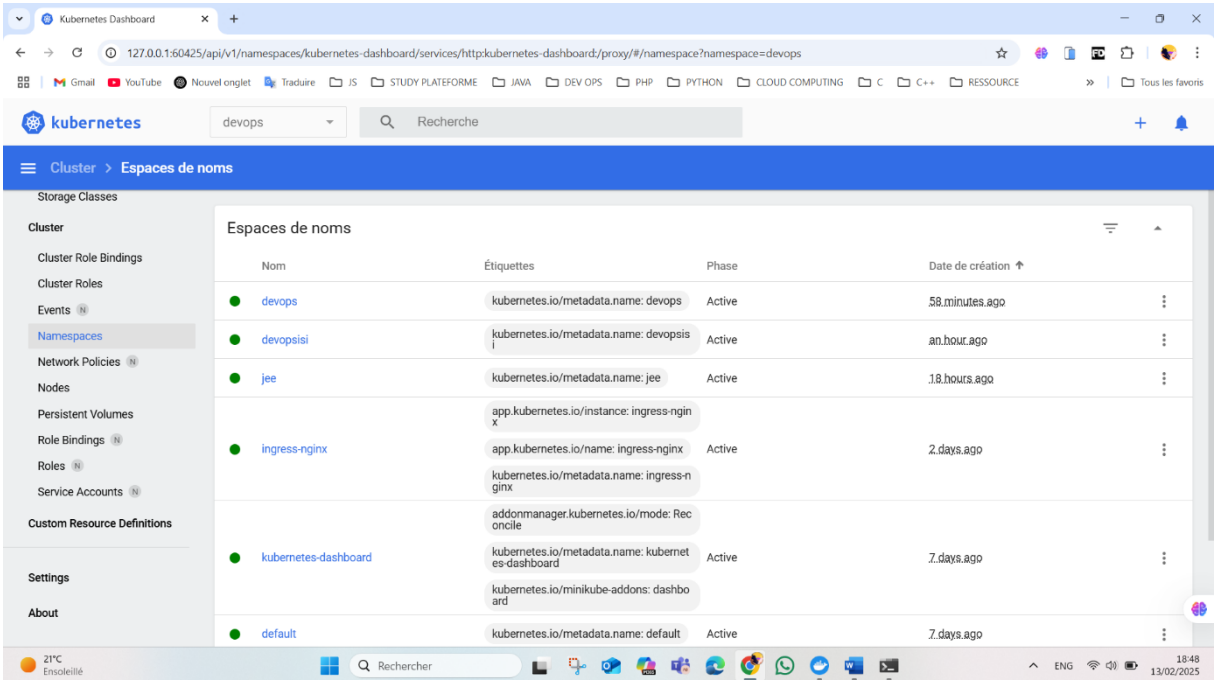



## Et enfin

## Minikube Dashboard


Kubernetes Dashboard
127.0.0.1:60425/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/#/workloads?namespace=devops
kubernetes
devops
Recherche
Charges de travail
Workloads
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses
Ingress Classes
Services
Config and Storage
Config Maps
Persistent Volume Claims
Statut des charges de travail
Running: 1
Déploiements
Running: 2
Pods
Running: 1
Replica Sets
Déploiements
Nom
Images
Étiquettes
Pods
Date de création
stock-ms
basdevsngn224/stock-ms:latest
-
2 / 2
54 minutes ago


Kubernetes Dashboard
127.0.0.1:60425/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/#/deployment?namespace=devops
kubernetes
devops
Recherche
Charges de travail > Déploiements
Workloads
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses
Ingress Classes
Services
Config and Storage
Config Maps
Persistent Volume Claims
Déploiements
Nom
Images
Étiquettes
Pods
Date de création
stock-ms
basdevsngn224/stock-ms:latest
-
2 / 2
54 minutes ago


Kubernetes Dashboard
127.0.0.1:60425/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/#/namespace?namespace=devops
kubernetes
devops
Recherche
Cluster > Espaces de noms
Storage Classes
Cluster
Cluster Role Bindings
Cluster Roles
Events
Namespaces
Network Policies
Nodes
Persistent Volumes
Role Bindings
Roles
Service Accounts
Custom Resource Definitions
Settings
About
Espaces de noms
Nom
Étiquettes
Phase
Date de création
devops
kubernetes.io/metadata.name: devops
Active
58 minutes ago
devopsisi
kubernetes.io/metadata.name: devopsisi
Active
an hour ago
jee
kubernetes.io/metadata.name: jee
Active
18 hours ago
ingress-nginx
app.kubernetes.io/instance: ingress-nginx
app.kubernetes.io/name: ingress-nginx
kubernetes.io/metadata.name: ingress-nginx
Active
2 days ago
kubernetes-dashboard
addonmanager.kubernetes.io/mode: Reconcile
kubernetes.io/metadata.name: kubernetes-dashboard
kubernetes.io/minikube-addons: dashboard
Active
7 days ago
default
kubernetes.io/metadata.name: default
Active
7 days ago
21°C
Ensoleillé
Rechercher
ENG
18:48
13/02/2025

***Merci !!!!***