

## Projet Kubernetes partie 1

### Construction de l'image Docker

Pour le fichier Dockerfile, j'ai du faire cette configuration :

```
ssagnane@ubuntu: ~/projet-1 X + v
FROM amazoncorretto:17-alpine

WORKDIR /app

COPY target/paymybuddy.jar /app/paymybuddy.jar

EXPOSE 8080

CMD ["java", "-jar", "paymybuddy.jar"]
```

### Fichier Docker Compose

docker-compose.yml

```
version: '3.8'

services:
  paymybuddy-backend:
    build:
      context: .
      dockerfile: Dockerfile
    ports:
      - "8080:8080"
    environment:
      SPRING_DATASOURCE_USERNAME: root
      SPRING_DATASOURCE_PASSWORD: password
      SPRING_DATASOURCE_URL: jdbc:mysql://paymybuddy-db:3306/db_paymybuddy
    depends_on:
      - paymybuddy-db
  paymybuddy-db:
    image: mysql:5.7
    environment:
      MYSQL_ROOT_PASSWORD: password
      MYSQL_DATABASE: db_paymybuddy
    volumes:
      - ./initdb:/docker-entrypoint-initdb.d
    ports:
      - "3306:3306"
    volumes:
      - db_data:/var/lib/mysql

volumes:
  db_data:
```

Voici le fichier que j'ai configuré.

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## Push les images vers Docker Hub

Construire les images Docker :

```
ssagnane@ubuntu:~/projet-esgi$ sudo docker build -t paymybuddy-backend .
[sudo] password for ssagnane:
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 46.56MB
Step 1/5 : FROM amazoncorretto:17-alpine
17-alpine: Pulling from library/amazoncorretto
f18232174bc9: Pull complete
584747a5efa7: Pull complete
Digest: sha256:7ce85412211246ff5ce362b59aa5dbdc9093d8bb088da7f7c8b9ef09a8704cdf
Status: Downloaded newer image for amazoncorretto:17-alpine
----> 053f9c68599d
Step 2/5 : WORKDIR /app
----> Running in 6e704f5d88a9
----> Removed intermediate container 6e704f5d88a9
----> cdcc74c8425f
Step 3/5 : COPY target/paymybuddy.jar /app/paymybuddy.jar
----> feb3e3cfeb56
Step 4/5 : EXPOSE 8080
----> Running in 23c5eb008ce7
----> Removed intermediate container 23c5eb008ce7
----> ddf616c6454f
Step 5/5 : CMD ["java", "-jar", "paymybuddy.jar"]
----> Running in 37aeeddf17e3
----> Removed intermediate container 37aeeddf17e3
----> c86637c0298e
Successfully built c86637c0298e
Successfully tagged paymybuddy-backend:latest
ssagnane@ubuntu:~/projet-esgi$ |
```

Se connecter au registre Docker

```
ssagnane@ubuntu:~/projet-esgi$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/
Username: ssagnane
Password:
WARNING! Your password will be stored unencrypted in /home/ssagnane/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ssagnane@ubuntu:~/projet-esgi$ |
```

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```
ssagnane@cosmian:~/projet-esgi$ sudo docker build -t paymybuddy .
[+] Building 97.7s (8/8) FINISHED                                docker:default
=> [internal] load build definition from Dockerfile              0.0s
=> => transferring dockerfile: 230B                             0.0s
=> [internal] load metadata for docker.io/library/amazoncorretto:17-alpine 0.4s
=> [internal] load .dockerignore                                0.0s
=> => transferring context: 51B                                   0.0s
=> [1/3] FROM docker.io/library/amazoncorretto:17-alpine@sha256:7ce85412211246ff5ce362b59aa5dbdc9093d8bb088da7f 96.5s
=> => resolve docker.io/library/amazoncorretto:17-alpine@sha256:7ce85412211246ff5ce362b59aa5dbdc9093d8bb088da7f 0.0s
=> => sha256:053f9c68599d35742cd96478cae1087a03d571e938519205188ec043144fc67c 2.40kB / 2.40kB 0.0s
=> => sha256:f18232174bc91741fdf3da96d85011092101a032a93a388b79e99e69c2d5c870 3.64MB / 3.64MB 2.9s
=> => sha256:584747a5efa75c554a1694422dbb83cd51737c9345280744ae0fb36f23bc0ca5 145.68MB / 145.68MB 92.2s
=> => sha256:7ce85412211246ff5ce362b59aa5dbdc9093d8bb088da7f7c8b9ef09a8704cdf 2.67kB / 2.67kB 0.0s
=> => sha256:c57f2a61fe3dcc37dbe91f4bfff81f2ddcd3cb10bceb39a3f2fd41b89df4f0e57 1.37kB / 1.37kB 0.0s
=> => extracting sha256:f18232174bc91741fdf3da96d85011092101a032a93a388b79e99e69c2d5c870 0.1s
=> => extracting sha256:584747a5efa75c554a1694422dbb83cd51737c9345280744ae0fb36f23bc0ca5 4.1s
=> [internal] load build context                                0.2s
=> => transferring context: 43.42MB                             0.2s
=> [2/3] WORKDIR /app                                          0.3s
=> [3/3] COPY target/paymybuddy.jar /app/paymybuddy.jar       0.4s
=> exporting to image                                          0.1s
=> => exporting layers                                          0.1s
=> => writing image sha256:18f04f2382a122975c43183b8c1b38569284388c962c3c2c90a6e0441da2db02 0.0s
=> => naming to docker.io/library/paymybuddy                   0.0s
ssagnane@cosmian:~/projet-esgi$ |
```

## Docker push

```
ssagnane@cosmian:~/projet-esgi$ sudo docker login
[sudo] password for ssagnane:
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/

Username: ssagnane
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
ssagnane@cosmian:~/projet-esgi$ sudo docker push ssagnane/paymybuddy:latest
The push refers to repository [docker.io/ssagnane/paymybuddy]
13df8bfed049: Pushed
c7c2f6d839cb: Pushed
9599d4d8ca8c: Mounted from library/amazoncorretto
08000c18d16d: Mounted from library/amazoncorretto
latest: digest: sha256:2286fab9cd28c17aca159adaf9d5ebc7386c52382e5982a9a02b2bb54b669de size: 1159
ssagnane@cosmian:~/projet-esgi$ |
```

## Déploiement Kubernetes

ssagnane/paymybuddy

Last pushed less than a minute ago

Add a description

Add a category

General

Tags

Image Management

Collaborators

Webhooks

Settings

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest		Image	less than 1 day	5 minutes

See all

Docker commands

To push a new tag to this repository:

docker push ssagnane/paymybuddy:tagname

buildcloud

Build with Docker Build Cloud

Accelerate image build times with access to cloud-based builders and shared cache.

Docker Build Cloud executes builds on optimally-dimensioned cloud infrastructure with dedicated per-organization isolation.

Get faster builds through shared caching across your team, native multi-platform support, and encrypted data transfer - all without managing infrastructure.

Go to Docker Build Cloud

## Lancement Kubernetes

### Kubectl cluster-info

```
ssagnane@cosmian:~/projet-esgi/stack$ kubectl cluster-info
Kubernetes control plane is running at https://127.0.0.1:6443
CoreDNS is running at https://127.0.0.1:6443/api/v1/namespaces/kube-system/services/kube-dns:dns/proxy
Metrics-server is running at https://127.0.0.1:6443/api/v1/namespaces/kube-system/services/https:metrics-server:https/proxy

To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.
```

### kubectl create namespace paymybuddy

```
ssagnane@cosmian:~/projet-esgi/stack$ kubectl create namespace paymybuddy
namespace/paymybuddy created
ssagnane@cosmian:~/projet-esgi/stack$ |

ssagnane@cosmian:~/projet-esgi$ sudo vim kubernetes/configmaps/initdb-config.yaml
ssagnane@cosmian:~/projet-esgi$ kubectl apply -f kubernetes/configmaps/
configmap/initdb-config created
configmap/paymybuddy-config unchanged
ssagnane@cosmian:~/projet-esgi$ kubectl apply -f kubernetes/secrets/
secret/mysql-credentials created
ssagnane@cosmian:~/projet-esgi$ kubectl apply -f kubernetes/storage/
persistentvolumeclaim/mysql-pvc created
ssagnane@cosmian:~/projet-esgi$ kubectl apply -f kubernetes/services/
service/paymybuddy-service created
service/paymybuddy-db-service created
ssagnane@cosmian:~/projet-esgi$ kubectl apply -f kubernetes/deployments/
deployment.apps/paymybuddy created
deployment.apps/paymybuddy-db created
ssagnane@cosmian:~/projet-esgi$
```

### Vérification du déploiement

```
ssagnane@ubuntu:~/projet-esgi$ sudo kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
paymybuddy-694c5dc9cd-vch7s        1/1     Running   2 (4m27s ago)    5m10s
paymybuddy-db-78d86b79f5-xl9qh     1/1     Running   1 (4m26s ago)    5m10s
ssagnane@ubuntu:~/projet-esgi$ sudo kubectl get services
NAME      TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes  ClusterIP   10.43.0.1     <none>        443/TCP          4h31m
paymybuddy-db-service  ClusterIP   10.43.248.218 <none>        3306/TCP         5m20s
paymybuddy-service    NodePort    10.43.30.207  <none>        8080:30229/TCP   5m20s
ssagnane@ubuntu:~/projet-esgi$ sudo kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
paymybuddy    1/1     1             1           5m23s
paymybuddy-db 1/1     1             1           5m23s
ssagnane@ubuntu:~/projet-esgi$ sudo kubectl get pvc
NAME      STATUS   VOLUME                                     CAPACITY   ACCESS MODES   STORAGECLASS   VOLUMEATTRIBUTE
mysql-pvc Bound    pvc-25d6f6a0-81d1-4475-9906-a6f027a67d62  1Gi        RWO              local-path      <unset>
5m38s
ssagnane@ubuntu:~/projet-esgi$ |
```

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```
ssagnane@cosmian:~/projet-esgi$ sudo docker compose -f docker-compose.yml up -d
WARN[0000] /home/ssagnane/projet-esgi/docker-compose.yml: 'version' is obsolete
[+] Running 17/17
  ✓ paymybuddy-db Pulled                                152.2s
  ✓ 804bb8ae89de Pull complete                          49.4s
  ✓ 34a45e327c17 Pull complete                          49.5s
  ✓ 5b7dcae372f2 Pull complete                          49.5s
  ✓ 77895c94e6d5 Pull complete                          49.8s
  ✓ ba9f25a041ba Pull complete                          49.8s
  ✓ 841b743c6edc Pull complete                          49.9s
  ✓ f11e07506c9a Pull complete                          69.1s
  ✓ 8615fa21e026 Pull complete                          69.2s
  ✓ 0b80abb4aed Pull complete                          150.3s
  ✓ 6594c9f77fef Pull complete                          150.3s
  ✓ cbcad5d15a99 Pull complete                          150.3s
  ✓ paymybuddy-backend Pulled                          124.2s
  ✓ f18232174bc9 Pull complete                          3.4s
  ✓ 584747a5efa7 Pull complete                          122.2s
  ✓ cde352ce6da4 Pull complete                          122.3s
  ✓ fbe8128a6b5d Pull complete                          122.6s
[+] Running 4/4
  ✓ Network projet-esgi_default      Created           0.1s
  ✓ Volume "projet-esgi_mysql-data"  Created           0.0s
  ✓ Container paymybuddy-db          Started           1.1s
  ✓ Container paymybuddy             Started           1.3s
ssagnane@cosmian:~/projet-esgi$ |
```

```
ssagnane@ubuntu:~/projet-esgi$ docker-compose exec paymybuddy-db mysql -u root -ppassword
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 18
Server version: 8.0.41 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> USE db_paymybuddy;
Database changed
mysql> SHOW TABLES;
Empty set (0.01 sec)

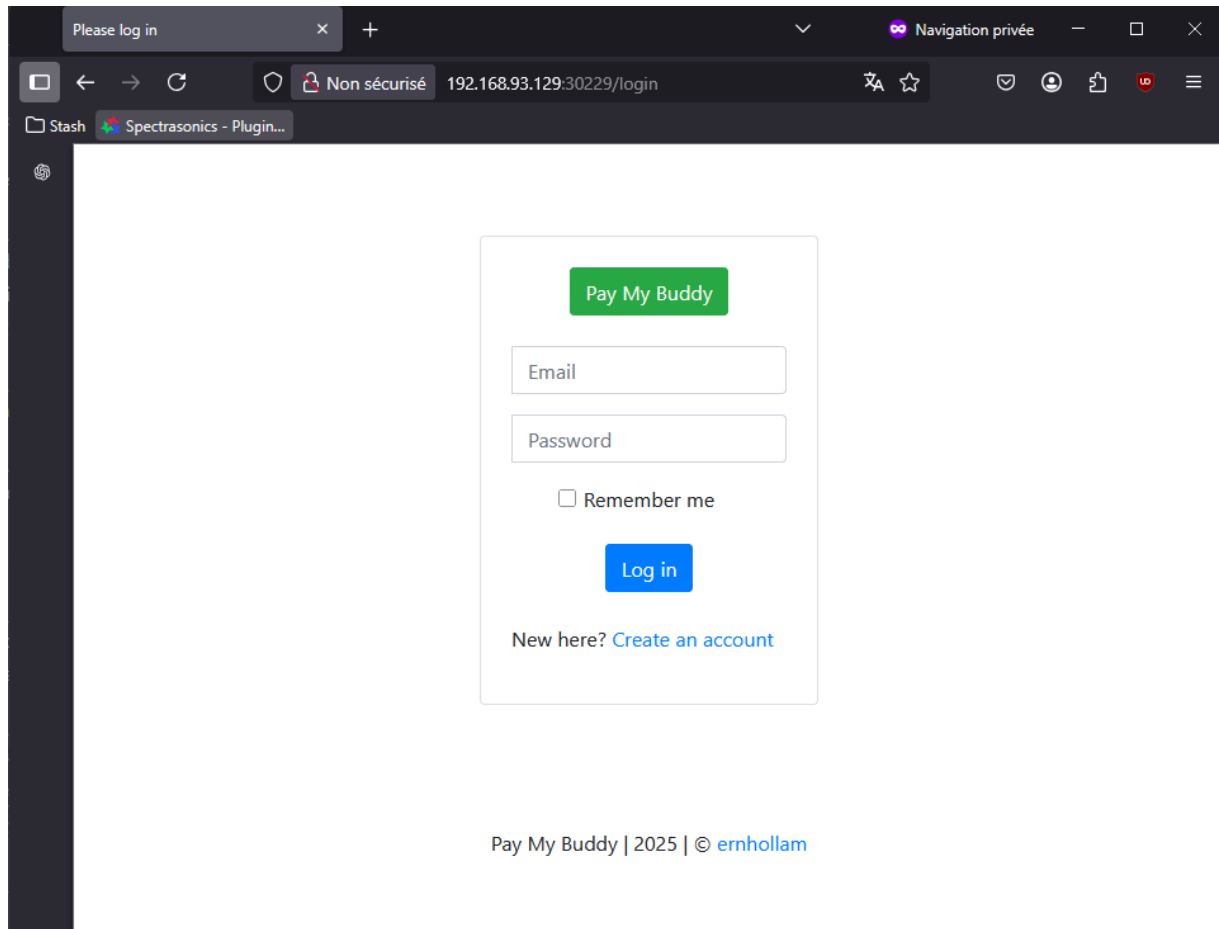
mysql> CREATE DATABASE db_paymybuddy;
ERROR 1007 (HY000): Can't create database 'db_paymybuddy'; database exists
mysql> USE db_paymybuddy;
Database changed
mysql>
mysql> CREATE TABLE user (
->   user_id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
->   email VARCHAR(100) NOT NULL UNIQUE,
->   password VARCHAR(100) NOT NULL,
->   firstname VARCHAR(50) NOT NULL,
->   lastname VARCHAR(50) NOT NULL,
->   balance DECIMAL(10, 2) NOT NULL DEFAULT 0.0
-> );
mysql> CREATE TABLE bank (
->   _user_id INT NOT NULL,
->   bank_name VARCHAR(100) DEFAULT NULL,
->   iban VARCHAR(34) DEFAULT NULL,
```

Pour cette partie, j'ai copier/coller le fichier create.sql car il y avait une erreur que je n'arrivais pas à résoudre.

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## Test

Test de connexion



SAGNANE Saïdou

5SRC2

Création de compte

# Sign up

We make money transfer easier.

Join the other buddies and have no worries for  
your next trip organisation or restaurant bill share!

Pay My Buddy

Saidou

Sagnane

ssagnane1@myges.fr

•••••

Sign up

Cancel

## Congratulations!

You can now take full advantage of PayMyBuddy!

Pay My Buddy

Email

Password

☐ Remember me

Log in

New here? [Create an account](#)

Pay My Buddy

[Home](#) [Transfer](#) [Profile](#) [Contact](#) [Logoff](#)

Home

## Good to see you again, Saidou!



Most recent connection

No connections. [Add a connection](#)



Most recent transaction

No transactions. [Add transaction](#)



Current balance

0 ₪

[Update balance](#)



Test ajout d'utilisateur pour le transfert d'argent.

Selected Buddy email:

clara@mail.com

Amount:

30.0

You will pay a total amount of 30.15€.

Please enter a short description:

Everyday is a bank account, and time is our currency

140 characters remaining

Pay

Send money

Add Connection

Clara Tarazi

0.0

Pay

Your transactions

Name	Description	Amount
No transactions.		

Total transactions: 0

Pay My Buddy | 2025 | © [ernhollam](#)



## Most recent connection

Clara, added the 14/03/2025 16:14