

CHALLENGE 3

1. Create docker-compose.yaml with code

```
2. version: "3"
3.
4. services:
5.   nginx:
6.     image: nginx:latest
7.     build: ./docker/nginx
8.     ports:
9.       - "8080:80"
10.    depends_on:
11.      - node-service
12.
13.   node-service:
14.     build: ./docker/api
15.     ports:
16.       - "3000:3000"
17.     environment:
18.       - DB_HOST=${DB_HOST}
19.       - DB_USERNAME=${DB_USERNAME}
20.       - DB_PASSWORD=${DB_PASSWORD}
21.       - DB_DATABASE=${DB_DATABASE}
22.     depends_on:
23.       - db
24.
25.   db:
26.     image: mysql:latest
27.     ports:
28.       - "3307:3306"
29.     environment:
30.       - MYSQL_ROOT_PASSWORD=${MYSQL_ROOT_PASSWORD}
31.       - MYSQL_DATABASE=${MYSQL_DATABASE}
32.       - MYSQL_USER=${MYSQL_USER}
33.       - MYSQL_PASSWORD=${MYSQL_PASSWORD}
34.     volumes:
35.       - db-data:/var/lib/mysql
36.     command: --default-authentication-plugin=mysql_native_password
37. volumes:
38.   db-data:
```

2. Edit docker/api/Dockerfile

```
# Use the official Node.js image as base
FROM node:alpine

# Set the working directory in the container
WORKDIR /app

# Copy package.json and package-lock.json
COPY package*.json ./

# # Install dependencies
RUN npm install

# Copy the rest of the application
COPY * .

# Expose port 3000 to the outside world
EXPOSE 3000

# Command to run the application
CMD ["node", "server.js"]
# CMD ["sleep", "infinity"]
```

3. Create .env file inside challenge3 folder

```
# APPLICATION CONFIG
DB_ROOT_PASSWORD=root
DB_DATABASE=challenge3
DB_USERNAME=anthony
DB_PASSWORD=password
DB_HOST=db

# DATABASE CONFIG
MYSQL_ROOT_PASSWORD=root
MYSQL_DATABASE=challenge3
MYSQL_USER=anthony
MYSQL_PASSWORD=password
MYSQL_HOST=db
```

4. Run in command docker-compose up --build

- Result of docker-compose ps

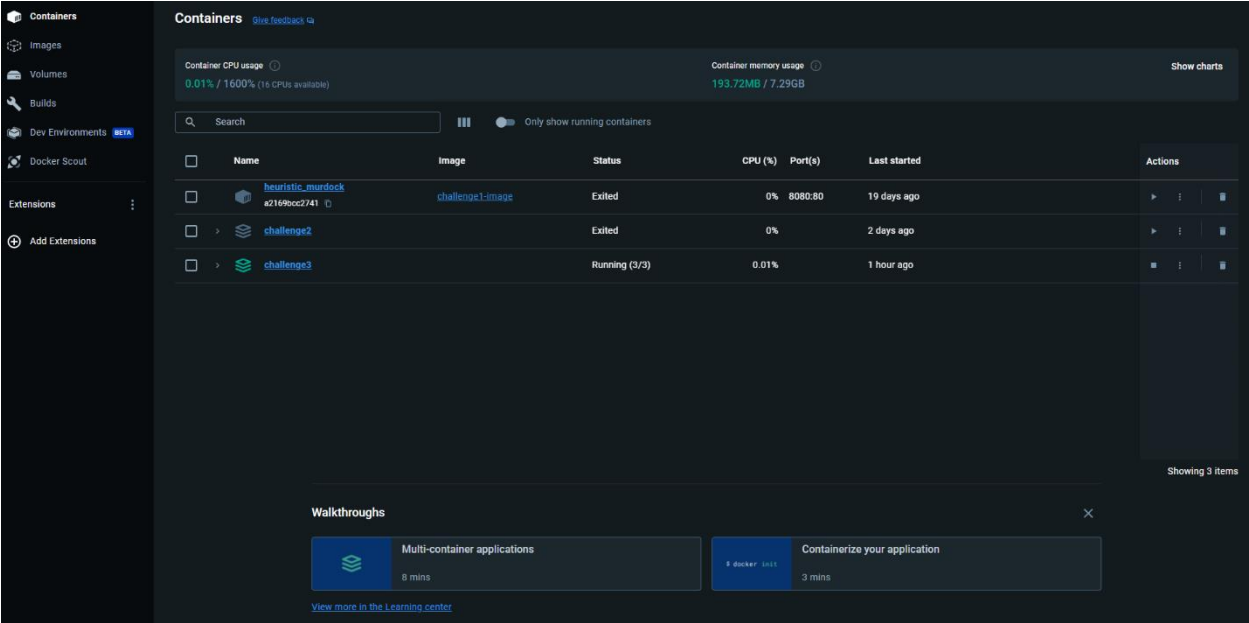
```
PROBLEMS  DEBUG CONSOLE  TERMINAL  PORTS  POSTMAN CONSOLE

Anthony Magpantay@ROG-Antony MINGW64 ~/Desktop/Github Files/docker-challenge-template (main)
$ docker-compose ps
no configuration file provided: not found

Anthony Magpantay@ROG-Antony MINGW64 ~/Desktop/Github Files/docker-challenge-template (main)
$ cd challenge3

Anthony Magpantay@ROG-Antony MINGW64 ~/Desktop/Github Files/docker-challenge-template/challenge3 (main)
$ docker-compose ps
time="2024-04-24T19:54:44-06:00" level=warning msg="C:\\Users\\Anthony Magpantay\\Desktop\\Github Files\\docker-challenge-template\\challenge3\\docker-compose.yml: 'version' is obsolete"
NAME                IMAGE                COMMAND              SERVICE    CREATED      STATUS      PORTS
challenge3-db-1      mysql:latest         "docker-entrypoint.s..." db         35 minutes ago Up 35 minutes 0.0.0.0:3307->3306/tcp
challenge3-nginx-1   nginx:latest         "/docker-entrypoint..." nginx      35 minutes ago Up 35 minutes 0.0.0.0:8080->80/tcp
challenge3-node-service-1 challenge3-node-service "docker-entrypoint.s..." node-service 35 minutes ago Up 35 minutes 0.0.0.0:3000->3000/tcp
```

- Screenshot of Docker



REFERENCES

<https://www.youtube.com/watch?v=1je3VxDF67o>

CHALLENGE 4

- Before Scaling

Hostname: **4057c906bbe8**

- Command to scale

docker-compose up --scale node-service=3

- After Scaling

Hostname: **084e4bbdb924**

Hostname: **b3a342771bdc**

Hostname: **06ea8f93668c**

- Result of docker-compose ps

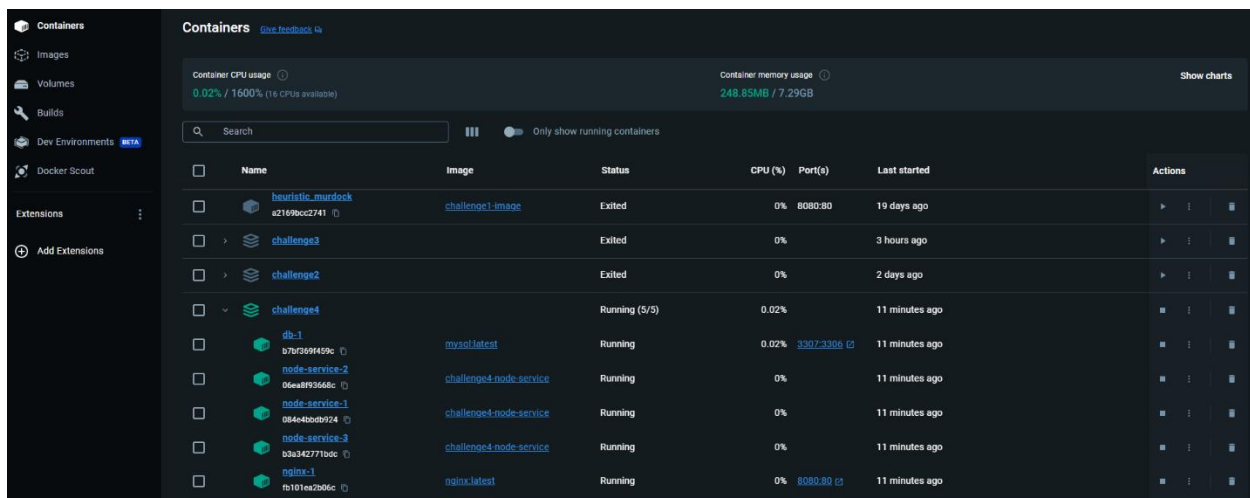
```
PROBLEMS  DEBUG CONSOLE  TERMINAL  PORTS  POSTMAN CONSOLE

bash: cd: challenge4: No such file or directory

Anthony Magpantay@ROG-Anthony MINGW64 ~/Desktop/Github Files/docker-challenge-template (main)
$ cd challenge4

Anthony Magpantay@ROG-Anthony MINGW64 ~/Desktop/Github Files/docker-challenge-template/challenge4 (main)
$ docker-compose ps
time="2024-04-24T22:46:07-06:00" level=warning msg="C:\\Users\\Anthony Magpantay\\Desktop\\Github Files\\docker-challenge-template\\challenge4\\docker-compose.yaml: `version` is obsolete"
NAME                IMAGE              COMMAND              SERVICE      CREATED      STATUS      PORTS
challenge4-db-1     mysql:latest      "docker-entrypoint.s..." db           12 minutes ago Up 12 minutes 0.0.0.0:3307->3306/tcp
challenge4-nginx-1  nginx:latest      "/docker-entrypoint..." nginx        12 minutes ago Up 12 minutes 0.0.0.0:8080->80/tcp
challenge4-node-service-1  challenge4-node-service "docker-entrypoint.s..." node-service 12 minutes ago Up 12 minutes 3000/tcp
challenge4-node-service-2  challenge4-node-service "docker-entrypoint.s..." node-service 12 minutes ago Up 12 minutes 3000/tcp
challenge4-node-service-3  challenge4-node-service "docker-entrypoint.s..." node-service 12 minutes ago Up 12 minutes 3000/tcp
```

- Screenshot of Docker



REFERENCE:

<https://www.appsdeveloperblog.com/scaling-with-docker-compose-a-beginners-guide/>