Deploy SIMO website Manual

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1 Introduction

- SIMO System
- Deploy : Use Docker platform to deploy

2 Tool and version

- Docker Desktop 4.40.0 (187762)
- VPN Client - Connect with VPN of SIMO.

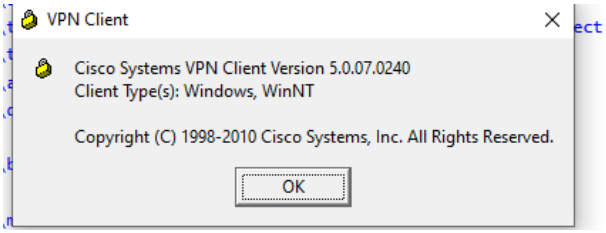

Figure 1: VPN

3 Docker Image and Source code

Link to get the image : https://hub.docker.com/u/phamphuchau28

- Frontend Image : https://hub.docker.com/r/phamphuchau28/simo_frontend_img
- Backend Image : https://hub.docker.com/r/phamphuchau28/simo_backend_img

Link to get source : https://github.com/PhamPhucHau/SYSTEM-REPORT-SIMO-GATEWATE.git
- We need to build frontend image to input the backend IP and port at variable environtment "VITE_SIMO_APP_API_U
"Build image frontend with this command after know the IP and port of server deploy backend " Mr.Hau
will build it and push to docker.

```
docker build \
  --build-arg VITE_SIMO_APP_API_URL=http://localhost:8081 \
  -t phamphuchau28/simo_frontend_img:latest .
```

Figure 2: Docker Images

4 Folder Directory

```
\Deploy\

        .prod_env
        docker-compose.prod.yml
        run_prod.sh
        stop_prod.sh
```

Note

Grand full permission for the folder by running command line : " icacls "<Folder Path>" /grant <username>:F /t"
EXP: "icacls "D:" /grant Administrator:F /t"

5 Environment Config

The enironment configuration is set in these files contain : Public key, secret key, database connection string, configuration system like port,etc. These environment variable must be

```
\Deploy\

        .prod_env
```

Key	Explanation
SPRING_PROFILES_ACTIVE=prod	Activates the Spring Boot `prod` profile. Enables loading of `application-prod.yml`.
MONGO_URI	Connection string for MongoDB with credentials, host, and authentication database.
APP_USER	Username used to authenticate with an external API (e.g., SIMO system).
APP_PASSWORD	Password corresponding to `APP_USER`.
APP_KEY	Application key for identifying and accessing external APIs.
APP_SECRET	Secret associated with `APP_KEY`, used for API authentication.
SIMO_CONSUMER_KEY=	Consumer key for SIMO API integration (same as `APP_KEY`).
SIMO_CONSUMER_SECRET	Secret matching the SIMO consumer key, used for API security.
SIMO_URL	Endpoint of the SIMO API server.
MONGO_DATA_PATH	Filesystem path for storing MongoDB data on the host machine.
MONGO_INIT_PATH	Path to MongoDB initialization scripts (e.g., user setup, initial DB content).
SERVER_PORT	The port on which the Spring Boot application runs.
FRONTEND_DOMAIN	Allowed frontend origin for CORS configuration.
LOG_DIR	Folder where application logs are stored (used by log4j2).
UPLOAD_DIR	The folder inside the container where upload files are written/read.
UPLOAD_DATA=./UPLOAD_DATA/PROD	The host machine path that is mounted to `UPLOAD_DIR` in the container.

6 Deployment

6.1 Upload Folder Deploy

Upload the file Deploy_Production.zip to server host.

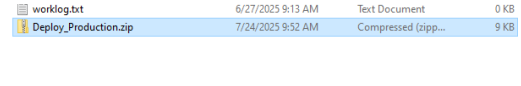

Figure 3: Deploy Production

6.2 Add DNS domain to file host "/etc/hosts" Linux

```
202.58.245.127 mgsimo.sbv.gov.vn
202.58.245.128 simo.sbv.gov.vn
202.58.245.129 msimo.sbv.gov.vn
```

6.3 Run Production Environment

6.3.1 Import Image

Image was zip in this file

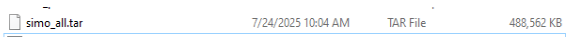

Figure 4: Image SIMO

Load Images to Docker by using this command

```
docker load -i simo_all.tar
```

Run command change drirector to Folder Deploy you uploaded "cd <Path of Deploy Folder>.
Set up Environment variable "FRONTEND_DOMAIN" in file .prod_env with domain for website Ex:http://localhost:5173
Run command bash ./run_prod.sh in terminal windows Double-click on the file run_prod.bat to deploy production environment

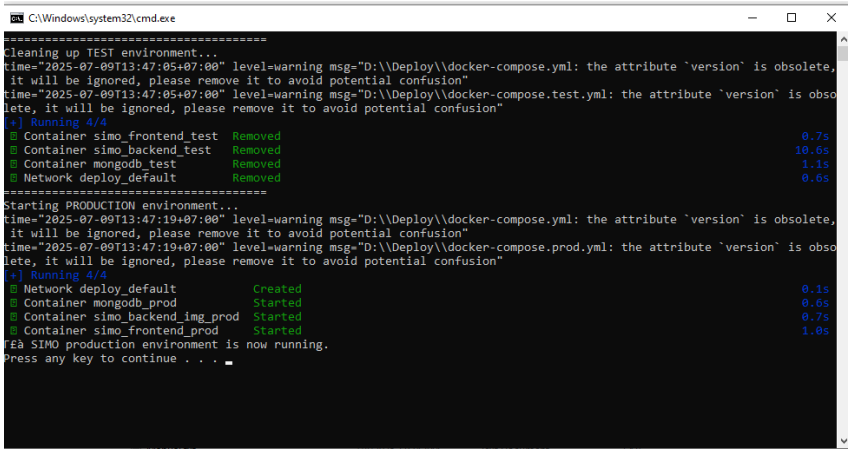

Figure 5: Stop old container and start new

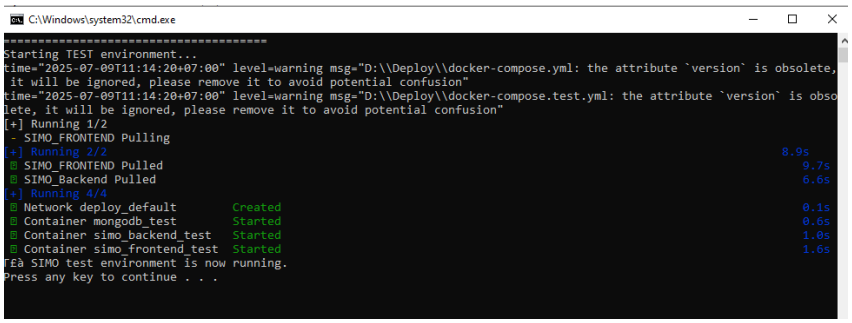

Figure 6: Pull Image and Deploy

7 Monitoring

- Frontend http://<domain>:5173

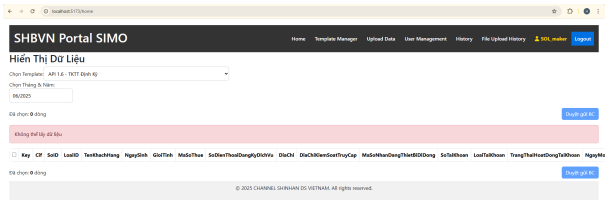

Figure 7: Frontend

- Backend http://<IP>:8081/actuator/health
- Database : Kt ni MongoDB bng MongoDB Compass: mongodb://admin:admin123@<IP>:27017

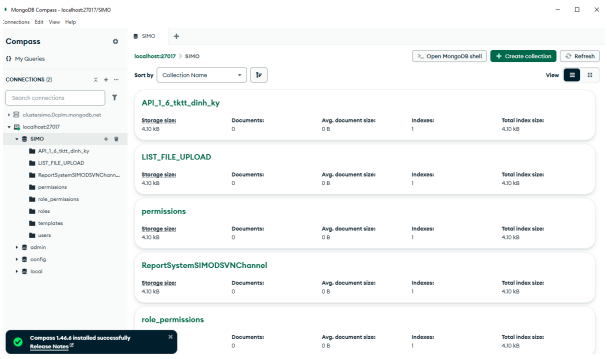

Figure 8: Mongo DB Compass
s

8 Troubleshooting

8.1 Port is already use

1. Get process id is running this port : "5173" by commnand : netstat -ano | findstr ":5173"

```
C:\Users\Administrator>netstat -ano |findstr "5173"
  TCP    0.0.0.0:5173           0.0.0.0:0              LISTENING       5288
  TCP    [::]:5173              [::]:0                 LISTENING       5288
  TCP    [::1]:5173             [::]:0                 LISTENING       2584
```

Figure 9: Check port

2. Check process name is running : tasklist /FI "PID eq <PID>"
   (a) Get process id is running this port : "5173" by commnand : netstat -ano | findstr ":5173"

```
C:\Users\Administrator>tasklist /FI "PID eq 5288"

Image Name                     PID Session Name        Session#    Mem Usage
========================= ======== ================ =========== ============
com.docker.backend.exe        5288 Console                    1    193,448 K
```

Figure 10: Check port

   (b) Kill the port by typing this commnad : taskkill /PID <PID> -F

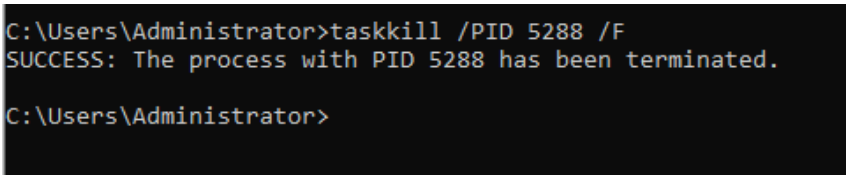

Figure 11: Check port