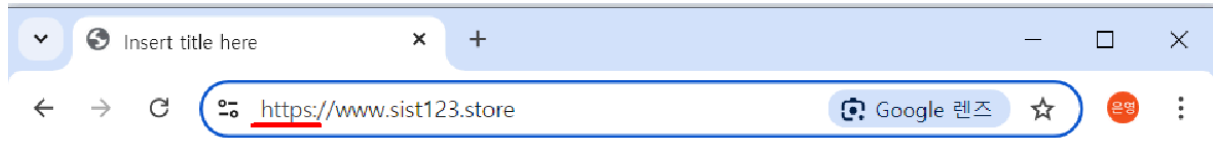


https 배포

HTTPS 배포는 웹 애플리케이션을 안전하게 운영하기 위한 필수 과정입니다. HTTPS는 HTTP 프로토콜에 SSL/TLS(보안 소켓 계층/전송 계층 보안)를 적용한 것으로, 클라이언트와 서버 간의 데이터 전송을 암호화하여 제3자가 데이터를 가로채거나 조작하지 못하게 합니다.



도서목록

도서번호	도서명	가격	수량	출판사
1	자바	5000	5	코스타미디어

준비) ec2 생성

mysql 컨테이너 배포 및 madang 계정 생성 후 권한 부여

어플리케이션 book_service 배포

참조) [06_git Action 을 이용한 스프링부트 도커허브 ec2 배포 자동화\(DB연동하기\)](#)

배포후 로컬에서 인증키 등록

파이썬 설치 후 패스설정

cmd에서 python -> 설치

<https://chocolatey.org/install>

다운받아 설치

파워셸에서

```
pip install certbot
```

```
certbot --version
```

```
certbot certonly --standalone -d www.sist123.store
```

```
alice20240103@gmail.com
```

```
(Y)es/(N)o: y
```

```
(Y)es/(N)o: y
```

파이썬 설치 안되어 있으면 설치 필요

```
pip --version
```

```
python -m ensurepip --default-pip
```

선택 관리자: Windows PowerShell

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

새로운 크로스 플랫폼 PowerShell 사용 https://aka.ms/pscore6

PS C:\Windows\System32> certbot --version
certbot 2.11.0
PS C:\Windows\System32> certbot certonly --standalone -d www.sist123.store
Saving debug log to C:\Certbot\log\letsencrypt.log
Enter email address (used for urgent renewal and security notices)
(Enter 'c' to cancel): alice20240103@gmail.com

-----
If you really want to skip this, you can run the client with
--register-unsafely-without-email but you will then be unable to receive notice
about impending expiration or revocation of your certificates or problems with
your Certbot installation that will lead to failure to renew.

Enter email address (used for urgent renewal and security notices)
(Enter 'c' to cancel): alice20240103@gmail.com

-----
Please read the Terms of Service at
https://letsencrypt.org/documents/LE-SA-v1.4-April-3-2024.pdf. You must agree in
order to register with the ACME server. Do you agree?
-----
(Y)es/(N)o: y

-----
Would you be willing, once your first certificate is successfully issued, to
share your email address with the Electronic Frontier Foundation, a founding
partner of the Let's Encrypt project and the non-profit organization that
develops Certbot? We'd like to send you email about our work encrypting the web,
EFF news, campaigns, and ways to support digital freedom.
-----
(Y)es/(N)o: y
Account registered.
Requesting a certificate for www.sist123.store

Certbot failed to authenticate some domains (authenticator: standalone). The Certificate Authority reported these problems:
  Domain: www.sist123.store
  Type:   connection
  Detail: 13.124.61.66: Fetching http://www.sist123.store/.well-known/acme-challenge/dIkfdRpxUbStEZUgX-QBophPeZVUcZDkJZvt8Kf1Lq4: Connection t
Hint: The Certificate Authority failed to download the challenge files from the temporary standalone webserver started by Certbot on port 80.
It can accept inbound connections from the internet.

Don't know how to fix?
Ask for help or search for solutions at https://community.letsencrypt.org. See the logfile C:\Certbot\log\letsencrypt.log or re-run Certbot w
```

어플리케이션을 ec2에 배포하고 웹브라우저에서 <https://www.sist123.store/> 로 서비스 확인하기

명령어 참조)

<< Dockerfile >

1단계: Maven을 사용하여 스프링부트 프로젝트 빌드

FROM maven:3.8.4-openjdk-17 AS build

WORKDIR /app

COPY . .

RUN mvn clean package -DskipTests

2단계: 빌드된 JAR 파일을 실행할 OpenJDK 이미지를 이용하여 Docker 이미지 생성

FROM openjdk:17-jdk

VOLUME /uploadtest

WORKDIR /app

COPY --from=build /app/target/*.jar app.jar

SSL 관련 파일 복사 제거

COPY src/main/resources/keystore.p12 /app/keystore.p12

ENTRYPOINT ["java"]

CMD ["-jar", "app.jar"] # SSL 제거하고 8080 포트에서 실행

<< application.properties >

spring.application.name=demo

spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

#spring.datasource.driver-class-name=oracle.jdbc.driver.OracleDriver

spring.datasource.username=\${DB_USER}

spring.datasource.password=\${DB_PWD}

spring.datasource.url=\${DB_URL}

spring.jpa.hibernate.ddl-auto=update

spring.jpa.generate-ddl=true

spring.jpa.show-sql=true

logging.level.org.hibernate=debug

<< git Action의 workflow >>

name: Deploy To EC2

on:

push:

branches:

- main

jobs:

build:

runs-on: ubuntu-latest

env:

DB_USER: \${ secrets.DB_USER }}

DB_PWD: \${ secrets.DB_PWD }}

DB_URL: \${ secrets.DB_URL }}

steps:

저장소에서 코드 가져오기

- name: Checkout code

uses: actions/checkout@v3

Maven을 설치하고 애플리케이션 빌드

- name: Set up JDK

uses: actions/setup-java@v3

with:

java-version: '17'

distribution: 'temurin' # Java 배포판을 지정합니다

```

- name: Build with Maven
  run: mvn clean package -DskipTests

# Docker Hub로 로그인
- name: Log in to Docker Hub
  uses: docker/login-action@v2
  with:
    username: ${ secrets.DOCKER_USER }
    password: ${ secrets.DOCKER_HUB_ACCESS_TOKEN }

# Docker 이미지를 빌드하고 Docker Hub에 푸시
- name: Build and push Docker image
  run: |
    docker build -t ${ secrets.DOCKER_USER }/myapp:latest .
    docker push ${ secrets.DOCKER_USER }/myapp:latest
deploy:
  runs-on: ubuntu-latest
  needs: build

steps:
  # EC2에 SSH로 접속하여 Docker 컨테이너 실행
  - name: SSH로 EC2에 접속하기
    uses: appleboy/ssh-action@v1.0.3
    with:
      host: ${ secrets.EC2_HOST }
      username: ${ secrets.EC2_USERNAME }
      key: ${ secrets.EC2_PRIVATE_KEY }
      script_stop: true
      script: |
        # Docker Hub에 로그인
        echo "${ secrets.DOCKER_HUB_ACCESS_TOKEN }" | docker login -u ${ secrets.DOCKER_USER }
--password-stdin
        # Docker 이미지 풀
        docker pull ${ secrets.DOCKER_USER }/myapp:latest
        # 기존 컨테이너 중지 및 제거
        docker stop myapp || true
        docker rm myapp || true

        # 새로운 컨테이너 실행
        docker run -d -p 8080:443 --name myapp --network=mynet \
        -e DB_URL=${ secrets.DB_URL } \
        -e DB_USER=${ secrets.DB_USER } \
        -e DB_PWD=${ secrets.DB_PWD } \
        ${ secrets.DOCKER_USER }/myapp:latest

```

배포 후 로컬에서 인증키 등록

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 pip --version

```
python -m ensurepip --default-pip
```

<< Certbot을 Windows에 직접 설치 >>

관리자 권한으로 PowerShell을 열고 아래 명령어를 실행하여 Chocolatey를 설치합니다:

powershell

```
choco install certbot
certbot certonly --standalone -d www.sist123.store
choco source list
choco search certbot
choco install certbot
certbot certonly --standalone -d www.sist123.store
pip install certbot
certbot certonly --standalone -d www.sist123.store
```

```
pip --version
python -m ensurepip --default-pip
pip install certbot
certbot certonly --standalone -d www.sist123.store
```

PATH 환경 변수 설정 확인

```
C:\Users\WD\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.12_qbz5n2kfra8p0\LocalCache\local-packages\Python312\Scripts
```