# <u>기술스택</u> 백엔드 프론트엔드

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# 기술스택

## 백엔드

- IntelliJ
- Spring boot 2.7.2
- java 17
- gradle 7.5
- Lombok
- JPA
- SockJS

- Stomp
- MySql 5.7
- OpenVidu 2.22.0

#### 프론트엔드

- vscode
- node 16.16.0
- Vue2
- Vuetify
- mediapipe

#### 서버

- AWS
- Docker
- nginx

# 프론트엔드

# 1. 환경변수 설정

```
# moweb_front 폴더 안에 .env 파일 생성 후 아래 변수 작성

# 백엔드 api url

VUE_APP_MOWEB_API_URL = https://i7a507.p.ssafy.io/moweb-api

# 루트 서버 url

VUE_APP_ROOT_URL = https://i7a507.p.ssafy.io

# 오픈비두 url

VUE_APP_OPENVIDU_SERVER_URL = https://i7a507.p.ssafy.io:8443
```

```
# 카카오 api 키
VUE_APP_KAKAO_API_KEY = 59074e20c9d80e6e5200a4bd60122af7

# 오픈비두 시크릿 키
VUE_APP_OPENVIDU_SERVER_SECRET = MY_SECRET

# 백엔드 websocket url
VUE_APP_STOPM_SERVER_URL = https://i7a507.p.ssafy.io/moweb-api/ws/moweb
```

# 2. npm install

# 패키지 설치 npm install

# 3. 개발환경 실행

# 8081 포트로 실행됨 npm run serve

# 4. 빌드

npm run build

# 백엔드

# 1. application.properties 변수

## 아래 3가지 방법 중 하나 사용

• application.properties 직접 설정

배포가이드

4

- 시스템 환경변수 설정
- intellij run configuration 설정

```
# 데이터베이스 이름
db_dbname

# 데이터베이스 패스워드
db_password

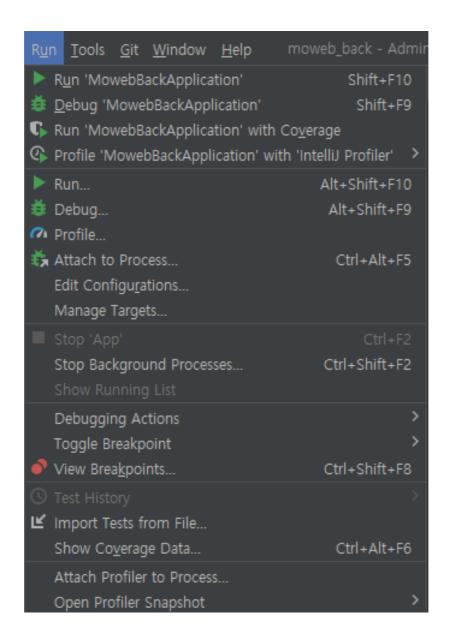
# 데이터베이스 url
db_url

# 데이터베이스 아이디
db_username

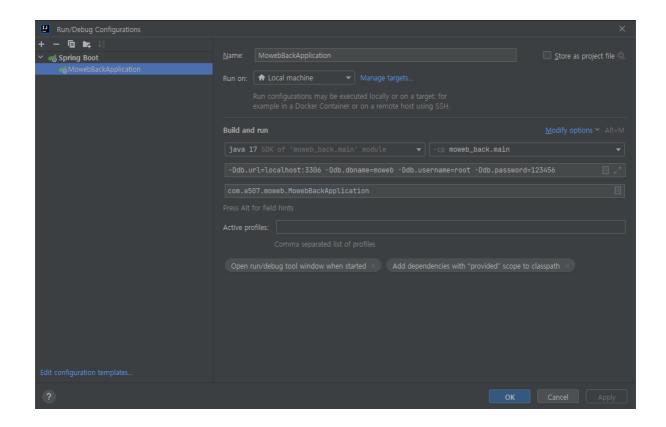
# swagger url
hosturl
```

# 1. 로컬 실행

Menu → Run → Edit Configurations 선택



빌드 옵션에 application.properties에 필요한 값 옵션 설정

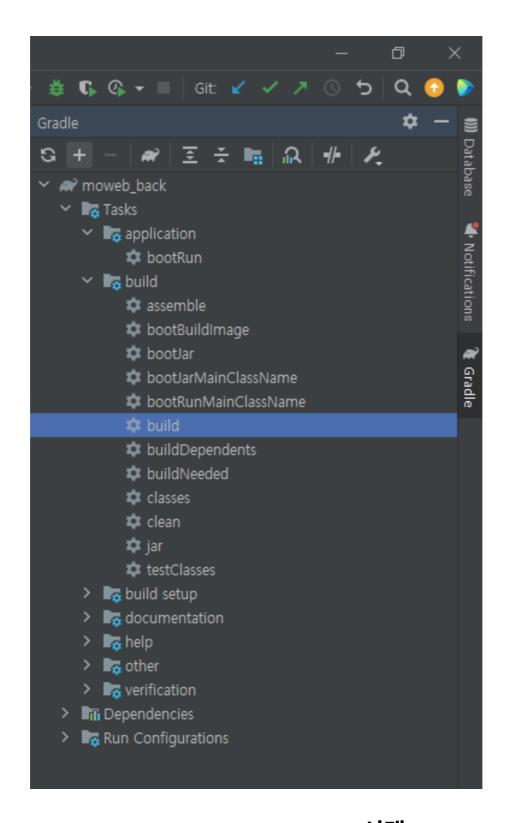


#### 실행

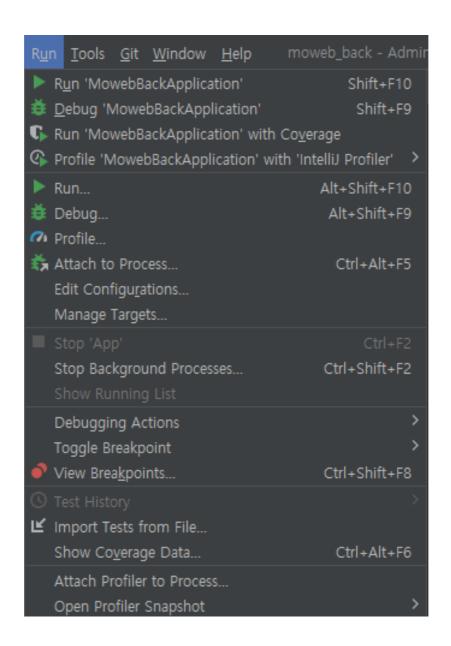


# 2. intellij 빌드

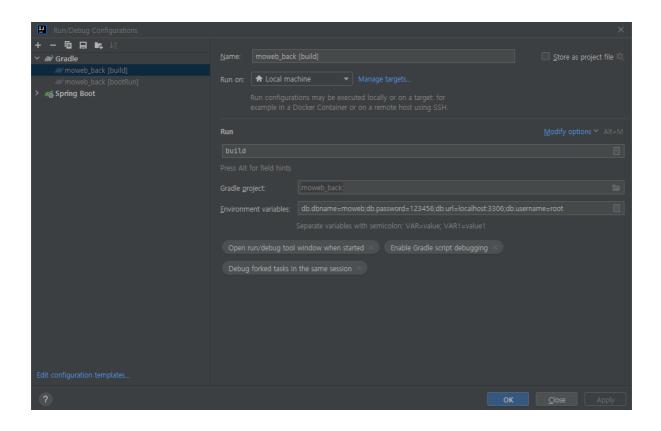
오른쪽 메뉴 → build → build 선택



Menu → Run → Edit Configurations 선택



Gradle → build → Environment variables 설정



# 3. command line build

```
# 빌드
./gradlew clean build
# 실행
java -jar build/libs/moweb_back-0.0.1-SNAPSHOT.jar --db.url=localhost:3
306 --db.dbname=moweb --db.username=root --db.password=123456
```

# 배포

# 1. 서버 시간 설정

```
# 1. 서버 시간 확인
date
# 2. 서버 시간 변경
sudo ln -sf /usr/share/zoneinfo/Asia/Seoul /etc/localtime
```

# 2. 도커 설치

```
#1. apt update
sudo apt update

#2. docker 설치
sudo apt install docker.io

#3. 도커 권한 설정
sudo chmod 666 /var/run/docker.sock
```

# 3. 도커 컴포즈 설치

```
#1. 다운받을 폴더 생성
mkdir -p ~/.docker/cli-plugins/

#2. 다운받기
curl -SL https://github.com/docker/compose/releases/download/v2.9.0/docker-compose-linux-x86_64 -o ~/.docker/cli-plugins/docker-compose

#3. 실행권한 설정
chmod +x ~/.docker/cli-plugins/docker-compose

#4. 링크파일 생성
ln -s ~/.docker/cli-plugins/docker-compose /usr/bin/docker-compose
```

# 4. mysql 설정

```
#1. 도커 mysql 5.7 이미지 pull sudo docker pull mysql:5.7

#2. 도커 MYSQL 설치 sudo docker run -d -p 3306:3306 -v ~/mysql:/var/lib/mysql -e MYSQL_ROOT _PASSWORD='5moweB0!@7' --name mysql5.7 mysql:5.7 --character-set-server =utf8mb4 --collation-server=utf8mb4_unicode_ci
```

```
#3. 도커 mysql 접속
sudo docker exec -it mysql5.7 mysql -u root -p
#4. mysql root 이름 변경
update user set user='a507' where user='root';
#5. 테이블 생성
CREATE DATABASE moweb DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_gen
eral_ci;
#6. 계정 생성
create user 'user_a507'@localhost identified by '5moweB0!@7';
create user 'user_a507'@'%' identified by '5moweB0!@7';
#7. schema 생성
create database moweb;
#8. moweb 데이터베이스 권한 부여
grant all privileges on moweb.* to 'user_a507'@localhost identified by
'5moweB0!@7';
grant all privileges on moweb.* to 'user_a507'@'%' identified by '5mowe
B0!@7';
#9. 권한 확인
show grants for 'user_a507'@localhost;
show grants for 'user_a507'@'%';
#10. 시간 설정
set time_zone='Asia/Seoul';
set global time_zone='Asia/Seoul';
#11. 디비 변경사항 메모리에 반영
flush privileges;
```

# 5. nginx 설치

```
#1. apt udpate
sudo apt update

#2. nginx 설치
sudo apt install nginx

#3. nignx 시작
sudo service nginx start
```

# 6. letsencrypt certbot ssl 발급 및 https 설정 certbot 설치 및 실행

```
#1. apt update
sudo apt udpate

#2. cerbot, certbot nginx 플러그인 설치
sudo apt install certbot python3-cerbot-nginx

#3. nginx 설정에 서버 도메인네임 입력
#3-1. 설정 파일 열기
sudo vi /etc/nginx/sites-available

#3-2. 서버 도메인 네임 입력
server_name i7a507.p.ssafy.io;

#4. nginx 재시작
sudo service nginx restart

#5. certbot 실행
sudo certbot --nginx
```

#### 이메일 입력

```
Saving debug log to /var/log/letsencrypt/letsencrypt.log
Plugins selected: Authenticator nginx, Installer nginx
Enter email address (used for urgent renewal and security notices) (Enter 'c' to
cancel): tanficial9574@gmail.com
```

#### 서비스 이용 동의

## 이메일 수신 동의

#### 발급받을 도메인 네임 선택 or 입력

## nginx https redirect 자동설정

# 7. nginx 설정

#### 설정 파일에 아래 프록시 설정 입력

```
client_max_body_size 50M;
location / {
    # First attempt to serve request as file, then
    # as directory, then fall back to displaying a 404.
    # try_files $uri $uri/ =404;
    ##
    proxy_pass http://localhost:8000;
```

```
proxy_redirect off;
                charset utf-8;
                proxy_set_header X-Real-IP $remote_addr;
                proxy_set_header X-Forwarded-For $proxy_add_x_forwarded
_for;
                proxy_set_header X-Forwarded-Proto $scheme;
                proxy_set_header X-NginX-Proxy true;
        location /moweb-api {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                # try_files $uri $uri/ =404;
                ##
                proxy_pass http://localhost:8080/moweb-api;
                proxy_redirect off;
                charset utf-8;
                proxy_set_header X-Real-IP $remote_addr;
                proxy_set_header X-Forwarded-For $proxy_add_x_forwarded
_for;
                proxy_set_header X-Forwarded-Proto $scheme;
                proxy_set_header X-NginX-Proxy true;
                proxy_set_header Upgrade $http_upgrade;
                proxy_set_header Connection "upgrade";
                ##
        }
```

#### nginx 재시작

```
# nginx 재시작
sudo service nginx restart
```

# 8. openvidu 설치, 설정, 실행

#### 공식문서

<a href="https://docs.openvidu.io/en/2.17.0/deployment/deploying-on-premises/">https://docs.openvidu.io/en/2.17.0/deployment/deploying-on-premises/</a>

#### 설치

```
#1. root 계정 sudo su

#2. opt 폴더로 이동 cd /opt

#3. openvidu 다운로드 curl https://s3-eu-west-1.amazonaws.com/aws.openvidu.io/install_openvidu_latest.sh | bash

#4. root 접속 종료 exit

#5. openvidu 폴더로 이동 cd /openvidu

#6. openvidu 설정파일 수정 sudo vi .env
```

## 설정파일 수정할 내용

```
DOMAIN_OR_PUBLIC_IP=i7a507.p.ssafy.io

LETSENCRYPT_EMAIL=tanficial9574@gmail.com

CERTIFICATE_TYPE=letsencrypt

HTTPS_PORT=8443
```

#### 시작

```
# openvidu 시작
./openvidu start
```

# 9. 프로젝트 git clone

```
git clone https://lab.ssafy.com/s07-webmobile1-sub2/S07P12A507.git
```

# 10. 환경변수 설정

환경변수 설명

# 11. docker compse 실행

```
# docker compose 실행
docker compse up -d --build
```

# 12. 전체 설정파일

#### 1. nginx 설정파일

```
# SSL configuration
#
# listen 443 ssl default_server;
# listen [::]:443 ssl default_server;
#
# Note: You should disable gzip for SSL traffic.
# See: https://bugs.debian.org/773332
#
# Read up on ssl_ciphers to ensure a secure configuration.
# See: https://bugs.debian.org/765782
#
# Self signed certs generated by the ssl-cert package
# Don't use them in a production server!
#
# include snippets/snakeoil.conf;

root /var/www/html;
# Add index.php to the list if you are using PHP index index.html index.htm index.nginx-debian.html;
```

```
server_name i7a507.p.ssafy.io;
        client_max_body_size 50M;
        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                # try_files $uri $uri/ =404;
                ##
                proxy_pass http://localhost:8000;
                proxy_redirect off;
                charset utf-8;
                proxy_set_header X-Real-IP $remote_addr;
                proxy_set_header X-Forwarded-For $proxy_add_x_forwarded
_for;
                proxy_set_header X-Forwarded-Proto $scheme;
                proxy_set_header X-NginX-Proxy true;
                ##
        }
        location /moweb-api {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                # try_files $uri $uri/ =404;
                ##
                proxy_pass http://localhost:8080/moweb-api;
                proxy_redirect off;
                charset utf-8;
                proxy_set_header X-Real-IP $remote_addr;
                proxy_set_header X-Forwarded-For $proxy_add_x_forwarded
_for;
                proxy_set_header X-Forwarded-Proto $scheme;
                proxy_set_header X-NginX-Proxy true;
                proxy_set_header Upgrade $http_upgrade;
                proxy_set_header Connection "upgrade";
                ##
        }
        # pass PHP scripts to FastCGI server
        #location ~ \.php$ {
        #
                include snippets/fastcgi-php.conf;
        #
                # With php-fpm (or other unix sockets):
        #
                fastcgi_pass unix:/var/run/php/php7.4-fpm.sock;
```

```
# With php-cgi (or other tcp sockets):
        #
                fastcgi_pass 127.0.0.1:9000;
        #}
        # deny access to .htaccess files, if Apache's document root
        # concurs with nginx's one
        #location ~ /\.ht {
                deny all;
        #
        #}
    listen [::]:443 ssl ipv6only=on; # managed by Certbot
    listen 443 ssl; # managed by Certbot
    ssl_certificate /etc/letsencrypt/live/i7a507.p.ssafy.io/fullchain.p
em; # managed by Certbot
    ssl_certificate_key /etc/letsencrypt/live/i7a507.p.ssafy.io/privke
y.pem; # managed by Certbot
    include /etc/letsencrypt/options-ssl-nginx.conf; # managed by Certb
ot
    ssl_dhparam /etc/letsencrypt/ssl-dhparams.pem; # managed by Certbot
}
# Virtual Host configuration for example.com
# You can move that to a different file under sites-available/ and syml
ink that
# to sites-enabled/ to enable it.
#
#server {
       listen 80;
#
        listen [::]:80;
#
#
        server_name example.com;
#
#
        root /var/www/example.com;
#
        index index.html;
#
        location / {
#
                try_files $uri $uri/ =404;
#
        }
#}
server {
    if ($host = i7a507.p.ssafy.io) {
        return 301 https://$host$request_uri;
    } # managed by Certbot
```

```
listen 80 default_server;
listen [::]:80 default_server;
server_name i7a507.p.ssafy.io;
return 404; # managed by Certbot
}
```

#### 2. openvidu 설정파일

```
# OpenVidu configuration
# -----
# Documentation: https://docs.openvidu.io/en/stable/reference-docs/open
vidu-config/
# NOTE: This file doesn't need to quote assignment values, like most sh
# All values are stored as-is, even if they contain spaces, so don't qu
ote them.
# Domain name. If you do not have one, the public IP of the machine.
# For example: 198.51.100.1, or openvidu.example.com
DOMAIN_OR_PUBLIC_IP=i7a507.p.ssafy.io
# OpenVidu SECRET used for apps to connect to OpenVidu server and users
to access to OpenVidu Dashboard
OPENVIDU_SECRET=MY_SECRET
# Certificate type:
# - selfsigned: Self signed certificate. Not recommended for productio
n use.
#
                Users will see an ERROR when connected to web page.
# - owncert:
               Valid certificate purchased in a Internet services com
pany.
#
                Please put the certificates files inside folder ./ownc
ert
                with names certificate.key and certificate.cert
# - letsencrypt: Generate a new certificate using letsencrypt. Please s
et the
                required contact email for Let's Encrypt in LETSENCRYP
T_EMAIL
                variable.
```

```
CERTIFICATE_TYPE=letsencrypt
# If CERTIFICATE_TYPE=letsencrypt, you need to configure a valid email
for notifications
LETSENCRYPT_EMAIL=tanficial9574@gmail.com
# Proxy configuration
# If you want to change the ports on which openvidu listens, uncomment
the following lines
# Allows any request to http://DOMAIN_OR_PUBLIC_IP:HTTP_PORT/ to be aut
omatically
# redirected to https://DOMAIN_OR_PUBLIC_IP:HTTPS_PORT/.
# WARNING: the default port 80 cannot be changed during the first boot
# if you have chosen to deploy with the option CERTIFICATE_TYPE=letsenc
rypt
HTTP PORT=4080
# Changes the port of all services exposed by OpenVidu.
# SDKs, REST clients and browsers will have to connect to this port
HTTPS_PORT=8443
# Old paths are considered now deprecated, but still supported by defau
lt.
# OpenVidu Server will log a WARN message every time a deprecated path
is called, indicating
# the new path that should be used instead. You can set property SUPPOR
T_DEPRECATED_API=false
# to stop allowing the use of old paths.
# Default value is true
# SUPPORT DEPRECATED API=true
# If true request to with www will be redirected to non-www requests
# Default value is false
# REDIRECT_WWW=false
# How many workers to configure in nginx proxy.
# The more workers, the more requests will be handled
# Default value is 10240
# WORKER CONNECTIONS=10240
# Access restrictions
# In this section you will be able to restrict the IPs from which you c
an access to
# Openvidu API and the Administration Panel
# WARNING! If you touch this configuration you can lose access to the p
latform from some IPs.
# Use it carefully.
```

```
# This section limits access to the /dashboard (OpenVidu CE) and /inspe
ctor (OpenVidu Pro) pages.
# The form for a single IP or an IP range is:
# ALLOWED_ACCESS_TO_DASHBOARD=198.51.100.1 and ALLOWED_ACCESS_TO_DASHBO
ARD=198.51.100.0/24
# To limit multiple IPs or IP ranges, separate by commas like this:
# ALLOWED_ACCESS_TO_DASHBOARD=198.51.100.1, 198.51.100.0/24
# ALLOWED_ACCESS_TO_DASHBOARD=
# This section limits access to the Openvidu REST API.
# The form for a single IP or an IP range is:
# ALLOWED_ACCESS_TO_RESTAPI=198.51.100.1 and ALLOWED_ACCESS_TO_RESTAPI=
198.51.100.0/24
# To limit multiple IPs or or IP ranges, separate by commas like this:
# ALLOWED_ACCESS_TO_RESTAPI=198.51.100.1, 198.51.100.0/24
# ALLOWED_ACCESS_TO_RESTAPI=
# Whether to enable recording module or not
OPENVIDU_RECORDING=false
# Use recording module with debug mode.
OPENVIDU_RECORDING_DEBUG=false
# Openvidu Folder Record used for save the openvidu recording videos. C
hange it
# with the folder you want to use from your host.
OPENVIDU_RECORDING_PATH=/opt/openvidu/recordings
# System path where OpenVidu Server should look for custom recording la
OPENVIDU_RECORDING_CUSTOM_LAYOUT=/opt/openvidu/custom-layout
# if true any client can connect to
# https://OPENVIDU_SERVER_IP:OPENVIDU_PORT/recordings/any_session_file.
# and access any recorded video file. If false this path will be secure
d with
# OPENVIDU_SECRET param just as OpenVidu Server dashboard at
# https://OPENVIDU_SERVER_IP:OPENVIDU_PORT
# Values: true | false
OPENVIDU_RECORDING_PUBLIC_ACCESS=false
# Which users should receive the recording events in the client side
# (recordingStarted, recordingStopped). Can be all (every user connecte
# the session), publisher_moderator (users with role 'PUBLISHER' or
# 'MODERATOR'), moderator (only users with role 'MODERATOR') or none
```

```
# (no user will receive these events)
OPENVIDU_RECORDING_NOTIFICATION=publisher_moderator
# Timeout in seconds for recordings to automatically stop (and the sess
ion involved to be closed)
# when conditions are met: a session recording is started but no user i
s publishing to it or a session
# is being recorded and last user disconnects. If a user publishes with
in the timeout in either case,
# the automatic stop of the recording is cancelled
# 0 means no timeout
OPENVIDU RECORDING AUTOSTOP TIMEOUT=120
# Maximum video bandwidth sent from clients to OpenVidu Server, in kbp
# 0 means unconstrained
OPENVIDU_STREAMS_VIDEO_MAX_RECV_BANDWIDTH=1000
# Minimum video bandwidth sent from clients to OpenVidu Server, in kbp
S.
# 0 means unconstrained
OPENVIDU_STREAMS_VIDEO_MIN_RECV_BANDWIDTH=300
# Maximum video bandwidth sent from OpenVidu Server to clients, in kbp
s.
# 0 means unconstrained
OPENVIDU_STREAMS_VIDEO_MAX_SEND_BANDWIDTH=1000
# Minimum video bandwidth sent from OpenVidu Server to clients, in kbp
s.
# 0 means unconstrained
OPENVIDU_STREAMS_VIDEO_MIN_SEND_BANDWIDTH=300
# All sessions of OpenVidu will try to force this codec. If OPENVIDU_ST
REAMS_ALLOW_TRANSCODING=true
# when a codec can not be forced, transcoding will be allowed
# Default value is VP8
# OPENVIDU_STREAMS_FORCED_VIDEO_CODEC=VP8
# Allow transcoding if codec specified in OPENVIDU_STREAMS_FORCED_VIDEO
_CODEC can not be applied
# Default value is false
# OPENVIDU_STREAMS_ALLOW_TRANSCODING=false
# true to enable OpenVidu Webhook service. false' otherwise
# Values: true | false
OPENVIDU_WEBHOOK=false
```

```
# HTTP endpoint where OpenVidu Server will send Webhook HTTP POST messa
ges
# Must be a valid URL: http(s)://ENDPOINT
#OPENVIDU_WEBHOOK_ENDPOINT=
# List of headers that OpenVidu Webhook service will attach to HTTP POS
T messages
#OPENVIDU_WEBHOOK_HEADERS=
# List of events that will be sent by OpenVidu Webhook service
# Default value is all available events
OPENVIDU_WEBHOOK_EVENTS=[sessionCreated,sessionDestroyed,participantJoi
ned, participantLeft, webrtcConnectionCreated, webrtcConnectionDestroyed, r
ecordingStatusChanged, filterEventDispatched, mediaNodeStatusChanged]
# How often the garbage collector of non active sessions runs.
# This helps cleaning up sessions that have been initialized through
# REST API (and maybe tokens have been created for them) but have had n
o users connected.
# Default to 900s (15 mins). O to disable non active sessions garbage c
ollector
OPENVIDU_SESSIONS_GARBAGE_INTERVAL=900
# Minimum time in seconds that a non active session must have been in e
# for the garbage collector of non active sessions to remove it. Defaul
t to 3600s (1 hour).
# If non active sessions garbage collector is disabled
# (property 'OPENVIDU_SESSIONS_GARBAGE_INTERVAL' to 0) this property is
ignored
OPENVIDU SESSIONS GARBAGE THRESHOLD=3600
# Call Detail Record enabled
# Whether to enable Call Detail Record or not
# Values: true | false
OPENVIDU_CDR=false
# Path where the cdr log files are hosted
OPENVIDU_CDR_PATH=/opt/openvidu/cdr
# Kurento Media Server image
# Docker hub kurento media server: https://hub.docker.com/r/kurento/kur
ento-media-server
# Uncomment the next line and define this variable with KMS image that
you want use
# KMS_IMAGE=kurento/kurento-media-server:6.16.0
```

```
# Kurento Media Server Level logs
# Uncomment the next line and define this variable to change
# the verbosity level of the logs of KMS
# Documentation: https://doc-kurento.readthedocs.io/en/stable/features/
logging.html
# KMS_DOCKER_ENV_GST_DEBUG=
# Openvidu Server Level logs
# ------
# Uncomment the next line and define this variable to change
# the verbosity level of the logs of Openvidu Service
# RECOMENDED VALUES: INFO for normal logs DEBUG for more verbose logs
# OV_CE_DEBUG_LEVEL=INFO
# Java Options
# Uncomment the next line and define this to add
# options to java command
# Documentation: https://docs.oracle.com/cd/E37116_01/install.111210/e2
3737/configuring_jvm.htm#0UDIG00058
# JAVA_OPTIONS=-Xms2048m -Xmx4096m -Duser.timezone=UTC
```

#### 3. 환경변수

```
# 백엔드 api url
VUE_APP_MOWEB_API_URL = https://i7a507.p.ssafy.io/moweb-api
# 루트 서버 url
VUE_APP_ROOT_URL = https://i7a507.p.ssafy.io
# 오픈비두 url
VUE_APP_OPENVIDU_SERVER_URL = https://i7a507.p.ssafy.io:8443
# 카카오 api 키
VUE_APP_KAKAO_API_KEY = 59074e20c9d80e6e5200a4bd60122af7
# 오픈비두 시크릿 키
VUE_APP_OPENVIDU_SERVER_SECRET = MY_SECRET
# 백엔드 websocket url
VUE_APP_STOPM_SERVER_URL = https://i7a507.p.ssafy.io/moweb-api/ws/moweb
# 데이터베이스 이름
db_dbname = moweb
```

```
# 데이터베이스 패스워드
db_password = 5moweB0!@7

# 데이터베이스 url
db_url = localhost:3306

# 데이터베이스 아이디
db_username = user_a507

# swagger url
hosturl = i7a507.p.ssafy.io
```