DASONI

PORTING MANUAL

목차

I. 빌드 및 배포

II. 외부 서비스

I. 빌드 및 배포

1. 실행 환경

a. Server : AWS EC2 Ubuntu 20.04.6 LTS

b. Visual Studio Code : 1.81

c. IntelliJ IDEA : 2023.1.3 (Ultimate Edition) 17.0.7+10-b829.16 amd64

d. JVM : Zulu OpenJDK 11

e. Docker : 24.0.5

f. Node.js : 14.17.0

g. MySQL : 8.0.34

h. Redis : 7.0.12

i. Jenkins : 2.416

j. Openvidu : 2.28.0

k. TypeScript : 4.9.5

l. Cloud Storage : AWS S3

2. 설정 파일 목록 (경로와 파일은 배포 과정 중 생성 될 수 있음)

a. React

i. .env : /var/jenkins_home/workspace/Dasoni/frontend

ii. Dockerfile : /var/jenkins_home/workspace/Dasoni/frontend/docker

iii. entrypoint.sh: /var/jenkins_home/workspace/Dasoni/frontend/docker

iv. create_image.sh: /var/jenkins_home/workspace/Dasoni/frontend/docker

b. Spring Boot

i. application.properties: /var/jenkins_home/workspace/Dasoni/backend/src/main/resources

ii. application.yml: /var/jenkins_home/workspace/Dasoni/backend/src/main/resources

iii. deploy.sh: /home/Ubuntu

c. Docker

i. docker-compose.yml: /opt/openvidu

d. Nginx

i. project.conf: /etc/nginx/sites-available

e. Openvidu

i. .env : /opt/openvidu

3. 설정 파일 및 환경 변수 정보

a. React

i. .env

DANGEROUSLY_DISABLE_HOST_CHECK=true

ii. Dockerfile

```
FROM node:18.16.1

COPY . ./openvidu-react

WORKDIR /openvidu-react

# Install openvidu-react dependencies and build it
RUN npm install && ₩
        npm run build && ₩
        cp -r ./build/ ./openvidu-basic-node/public

# Copy openvidu-basic-node
RUN cp -r ./openvidu-basic-node /opt/openvidu-basic-node && ₩
        rm -rf ../openvidu-react

# Install openvidu-basic-node dependencies
RUN npm --prefix /opt/openvidu-basic-node install

WORKDIR /opt/openvidu-basic-node

COPY docker/entrypoint.sh .
ENTRYPOINT [ "./entrypoint.sh" ]
```

iii. entrypoint.sh

```
#!/bin/sh
exec node index.js "$*"
```

iv. create_image.sh

```
#!/bin/bash
if [ $# -eq 0 ]; then
    echo "No version argument provided. Usage: ₩"./create_image.sh <IMAGE_NAME>₩""
    exit 1
fi

pushd ../

cp -r ../openvidu-basic-node .

trap 'rm -rf ./openvidu-basic-node' ERR

docker build --pull --no-cache --rm=true -f docker/Dockerfile -t "$1" .
```

```
rm -rf ./openvidu-basic-node
```

b. Spring

i. application.properties

```
security:
  jwt:
    secret: {JWT Secret}

logging:
  level:
    org.hibernate.sql: debug
    org.hibernate.type: trace

cloud:
  aws:
    credentials:
      access-key: {S3 Access Key}
      secret-key: {S3 Secret Key}
    region:
      static: ap-northeast-2
```

stack:

auto: false

ii. application.yml

server.port=8081

MySQL ₩uC124₩uC815

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

DB Source URL

spring.datasource.url=jdbc:mysql://{DB컨테이너}:3306/{Schema}?useSSL=false&useUnicode=true&serverTimezone=Asia/Seoul

DB username

spring.datasource.username=admin

DB password

spring.datasource.password={admin Password}

true ₩uC124₩uC815₩uC2DC JPA ₩uCFFC₩uB9AC₩uBB38 ₩uD655₩uC778 ₩uAC00₩uB2A5

spring.jpa.show-`sql=true

DDL(create, alter, drop) ₩uC815₩uC758₩uC2DC DB₩uC758 ₩uACE0₩uC720 ₩uAE30₩uB2A5₩uC744 ₩uC0AC₩uC6A9₩uD560 ₩uC218 ₩uC788₩uB2E4.

spring.jpa.hibernate.ddl-auto=update

JPA₩uC758 ₩uAD6C₩uD604₩uCCB4₩uC778 Hibernate₩uAC00 ₩uB3D9₩uC791₩uD558₩uBA74₩uC11C ₩uBC1C₩uC0DD₩uD55C SQL₩uC758

₩uAC00₩uB3C5₩uC131₩uC744 ₩uB192₩uC5EC₩uC900₩uB2E4.

spring.jpa.properties.hibernate.format_sql=true

spring.mvc.async.request-timeout=900000

spring.mvc.pathmatch.matching-strategy=ant_path_matcher

spring.devtools.livereload.enabled=true

spring.devtools.restart.enabled=false

spring.freemarker.cache=false

spring.jackson.serialization.fail-on-empty-beans=false

redis

spring.redis.host={Redis 컨테이너}

spring.redis.port=6379

iii. deploy.sh

```
#!/bin/bash

tar -xvf build.tar

rm -rf build.tar

sudo service nginx restart
```

```
pid=$(pgrep -f heartsigniel)

echo ">pid 확인 $pid"



if [ -n "${pid}" ]
then
        kill -15 ${pid}
        echo kill process ${pid}
else
        echo no process
fi

chmod +x ./Dasoni/heartsigniel-0.0.1-SNAPSHOT.jar
                nohup java -jar ./Dasoni/heartsigniel-0.0.1-SNAPSHOT.jar >>
                application.log 2> /dev/null &
```

c. Docker

i. docker-compose.yml

```
version: '3.1'
```

```
services:

    openvidu-server:
        image: openvidu/openvidu-server:2.28.0
        restart: on-failure
        network_mode: host
        entrypoint: ['/usr/local/bin/entrypoint.sh']
        volumes:
            - ./coturn:/run/secrets/coturn
            - /var/run/docker.sock:/var/run/docker.sock
            - ${OPENVIDU_RECORDING_PATH}:${OPENVIDU_RECORDING_PATH}
            -
${OPENVIDU_RECORDING_CUSTOM_LAYOUT}:${OPENVIDU_RECORDING_CUSTOM_LAYOU
T}
            - ${OPENVIDU_CDR_PATH}:${OPENVIDU_CDR_PATH}
            - /opt/openvidu/.env:/.env
        env_file:
            - /opt/openvidu/.env
        environment:
                                                - SERVER_SSL_ENABLED=false
            - SERVER_PORT=5443
            - KMS_URIS=["ws://localhost:8888/kurento"]
            - COTURN_IP=${COTURN_IP:-auto-ipv4}
            - COTURN_PORT=${COTURN_PORT:-3478}
```

```
    logging:
        options:
            max-size: "${DOCKER_LOGS_MAX_SIZE:-100M}"

  kms:
    image: ${KMS_IMAGE:-kurento/kurento-media-server:7.0.1}
    restart: always
    network_mode: host
    ulimits:
      core: -1
    volumes:
      - /opt/openvidu/kms-crashes:/opt/openvidu/kms-crashes
      - ${OPENVIDU_RECORDING_PATH}:${OPENVIDU_RECORDING_PATH}
      - /opt/openvidu/kurento-logs:/opt/openvidu/kurento-logs
    environment:
      - KMS_MIN_PORT=40000
      - KMS_MAX_PORT=57000
      - GST_DEBUG=${KMS_DOCKER_ENV_GST_DEBUG:-}
      -  KURENTO_LOG_FILE_SIZE=${KMS_DOCKER_ENV_KURENTO_LOG_FILE_SIZE:-
100}
      - KURENTO_LOGS_PATH=/opt/openvidu/kurento-logs
    logging:
      options:
        max-size: "${DOCKER_LOGS_MAX_SIZE:-100M}"
```

```
coturn:
    image: openvidu/openvidu-coturn:2.28.0
    restart: on-failure
    ports:
        - "${COTURN_PORT:-3478}:${COTURN_PORT:-3478}/tcp"
        - "${COTURN_PORT:-3478}:${COTURN_PORT:-3478}/udp"
    env_file:
        - .env
                                volumes:
        - ./coturn:/run/secrets/coturn
    command:
        - --log-file=stdout
        - --listening-port=${COTURN_PORT:-3478}
        - --fingerprint
        - --min-port=${COTURN_MIN_PORT:-57001}
        - --max-port=${COTURN_MAX_PORT:-65535}
        - --realm=openvidu
        - --verbose
        - --use-auth-secret
        - --static-auth-secret=$${COTURN_SHARED_SECRET_KEY}
    logging:
        options:
            max-size: "${DOCKER_LOGS_MAX_SIZE:-100M}"
```

```
    nginx:
        image: openvidu/openvidu-proxy:2.28.0
        restart: always
        network_mode: host
        volumes:
            - ./certificates:/etc/letsencrypt
            - ./owncert:/owncert
            - ./custom-nginx-vhosts:/etc/nginx/vhost.d/
            - ./custom-nginx-locations:/custom-nginx-locations
            - ${OPENVIDU_RECORDING_CUSTOM_LAYOUT}:/opt/openvidu/custom-layout
                                    environment:
            - DOMAIN_OR_PUBLIC_IP=${DOMAIN_OR_PUBLIC_IP}
            - CERTIFICATE_TYPE=${CERTIFICATE_TYPE}
            - LETSENCRYPT_EMAIL=${LETSENCRYPT_EMAIL}
            - PROXY_HTTP_PORT=${HTTP_PORT:-}
            - PROXY_HTTPS_PORT=${HTTPS_PORT:-}
            - PROXY_HTTPS_PROTOCOLS=${HTTPS_PROTOCOLS:-}
            - PROXY_HTTPS_CIPHERS=${HTTPS_CIPHERS:-}
            - PROXY_HTTPS_HSTS=${HTTPS_HSTS:-}
            -
ALLOWED_ACCESS_TO_DASHBOARD=${ALLOWED_ACCESS_TO_DASHBOARD:-}
            - ALLOWED_ACCESS_TO_RESTAPI=${ALLOWED_ACCESS_TO_RESTAPI:-}
            - PROXY_MODE=CE
```

```
      - WITH_APP=true
      - SUPPORT_DEPRECATED_API=${SUPPORT_DEPRECATED_API:-false}
      - REDIRECT_WWW=${REDIRECT_WWW:-false}
      - WORKER_CONNECTIONS=${WORKER_CONNECTIONS:-10240}
      - PUBLIC_IP=${PROXY_PUBLIC_IP:-auto-ipv4}
    logging:
      options:
        max-size: "${DOCKER_LOGS_MAX_SIZE:-100M}"


redis_container:
    image: redis:latest
    container_name: redis_prj
    ports:
      - 6379:6379
    # set storage mount volume
    volumes:
      - ./redis/data:/data
      - ./redis/conf/redis.conf:/usr/local/conf/redis.conf
    # add meta data using docker label
    labels:
      - "name=redis"
      - "mode=standalone"
                                # set restart when container off
    restart: always
```

command: redis-server /usr/local/conf/redis.conf

d. Nginx

i. project.conf

```
# user nginx;

server {
        #root /home/ubuntu/build;
        #index index.html index.htm;

        autoindex_localtime on;

        proxy_set_header Host $host;
        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-Forwarded-Proto https;
        proxy_headers_hash_bucket_size 512;
        proxy_redirect off;

        # Websockets
        proxy_http_version 1.1;
```

```
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "upgrade";


        location / {
                root /home/ubuntu/build;
                index index.html index.htm;
                try_files $uri $uri/ /index.html;
#               proxy_pass http://localhost:3000/;
                proxy_connect_timeout 300s;
                proxy_read_timeout 600s;
                proxy_send_timeout 600s;
                proxy_buffer_size       128k;
                proxy_buffers           4 256k;
                proxy_busy_buffers_size 256k;
        }


        location /api {
                proxy_pass http://localhost:8081;
        }
                                location /openvidu/api {
                proxy_pass http://서비스도메인:8443;
        }
```

```
        location ~ /openvidu$ {
                proxy_pass http://서비스도메인:8443;
        }

        location /ws {
                proxy_pass http://localhost:8081;
        }

        listen 443 ssl;
        ssl_certificate /etc/letsencrypt/live/서비스도메인/fullchain.pem;
        ssl_certificate_key /etc/letsencrypt/live/서비스도메인/privkey.pem;

}

server {
        # 서비스도메인
        listen 80;
        server_name 서비스도메인;

        return 301 https://$host$request_uri;

                }
```

e. Openvidu

i. .env

```
DOMAIN_OR_PUBLIC_IP=서비스도메인

OPENVIDU_SECRET= 시크릿

CERTIFICATE_TYPE=letsencrypt

LETSENCRYPT_EMAIL=인증서 발급 이메일

HTTP_PORT=81

HTTPS_PORT=8443
```

f. Jenkins Pipeline Script

```
pipeline {
    agent any
    stages {
        stage('git_clone') {
            steps {
                git branch: '{branch}', credentialsId: 'signiel', url: '{gitlab}'
```

```
        }
    }
    stage('BE-Build'){
        steps{
            dir("./backend"){
                sh'''
                    chmod +x ./gradlew
                    ./gradlew clean bootJar
                '''
            }
        }
    }
    stage('FE-build') {
        steps {
            dir("./frontend") {
                nodejs('18.16.0') {
                    sh 'npm install'
                    sh 'CI=false npm run build'
                }
            }
        }
    }
    stage('Compression') {
        steps {
```

```
                dir("./frontend") {
                    sh'''
                        rm -rf node_modules
                        tar -cvf build.tar build
                    '''
                }
            }
        }
        stage('Deploy'){
            steps{
                sshagent(credentials:['ec2-server']){
                    sh'''
                        ssh -o StrictHostKeyChecking=no ubuntu@서비스도메인
uptime
                        scp /var/jenkins_home/workspace/Dasoni/frontend/build.tar
ubuntu@서비스도메인:/home/ubuntu
                        scp
/var/jenkins_home/workspace/Dasoni/backend/build/libs/heartsigniel-0.0.1-SNAPSHOT.jar
ubuntu@서비스도메인:/home/ubuntu/Dasoni
                        ssh -t ubuntu@서비스도메인 ./deploy.sh
                    '''
                }
            }
        }
    }
```

}

4. Openvidu 배포 및 ProxyServer를 위한 포트 개방

sudo apt-get install ufw

sudo ufw allow ssh

sudo ufw allow http

sudo ufw allow https

sudo ufw allow 8080

sudo ufw allow 3000

sudo ufw allow 8081

sudo ufw allow 80

sudo ufw allow 81

sudo ufw allow 80/tcp

sudo ufw allow 22/tcp

sudo ufw allow 443/tcp

sudo ufw allow 3478/tcp

sudo ufw allow 3478/udp

sudo ufw allow 8082/tcp

sudo ufw allow 8443/tcp

sudo ufw allow 8080/tcp

sudo ufw allow 6379

a. Openvidu 컨테이너 실행

/opt/openvidu 에서

sudo ./openvidu start

5. SSL 인증서 발급

sudo apt-get install letsencrypt

sudo apt-get install certbot python3-certbot-nginx

sudo certbot --nginx

이메일 입력

약관 동의 - Y

이메일 발송 동의 - Y or N

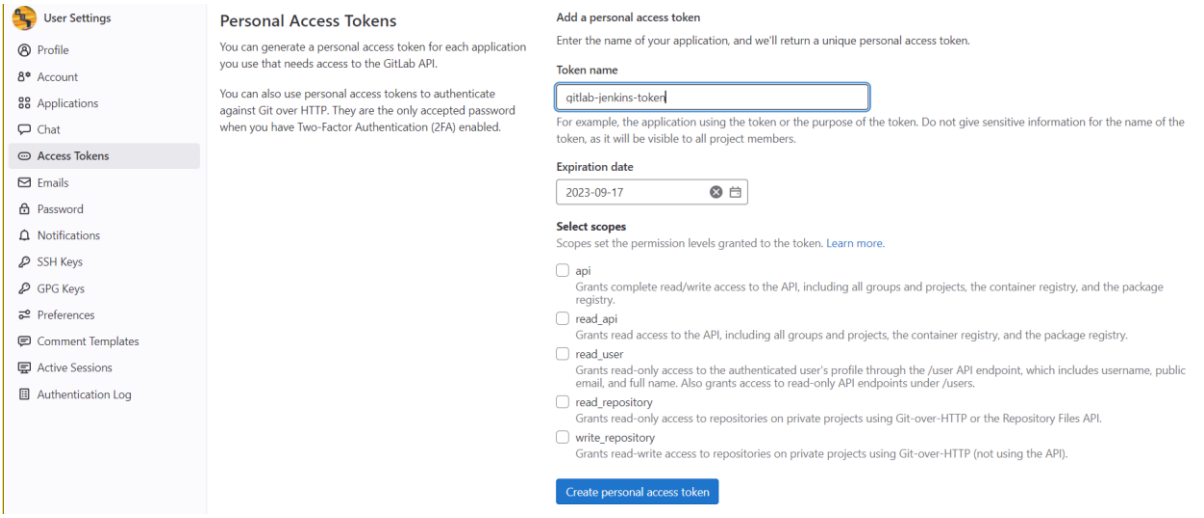
도메인 입력

6. Jenkins에 Gitlab Webhook 연결

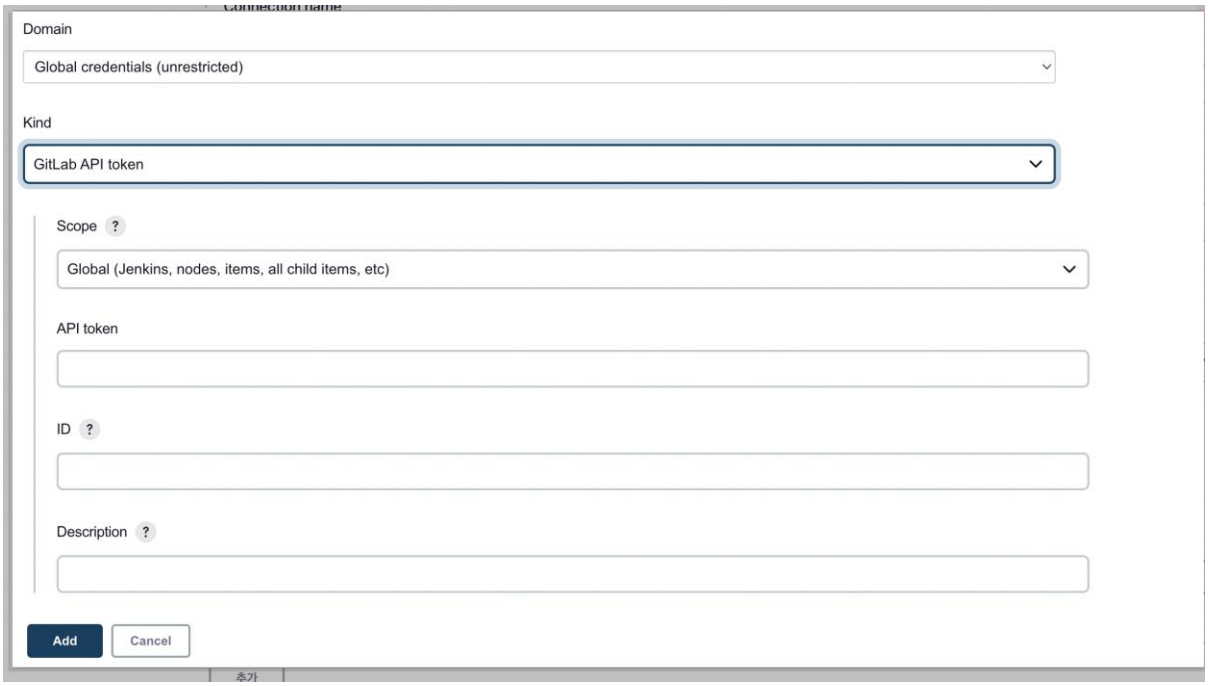
a. Jenkins 대시보드>Jenkins 관리>Plugins

b. Gitlab 플러그인 설치

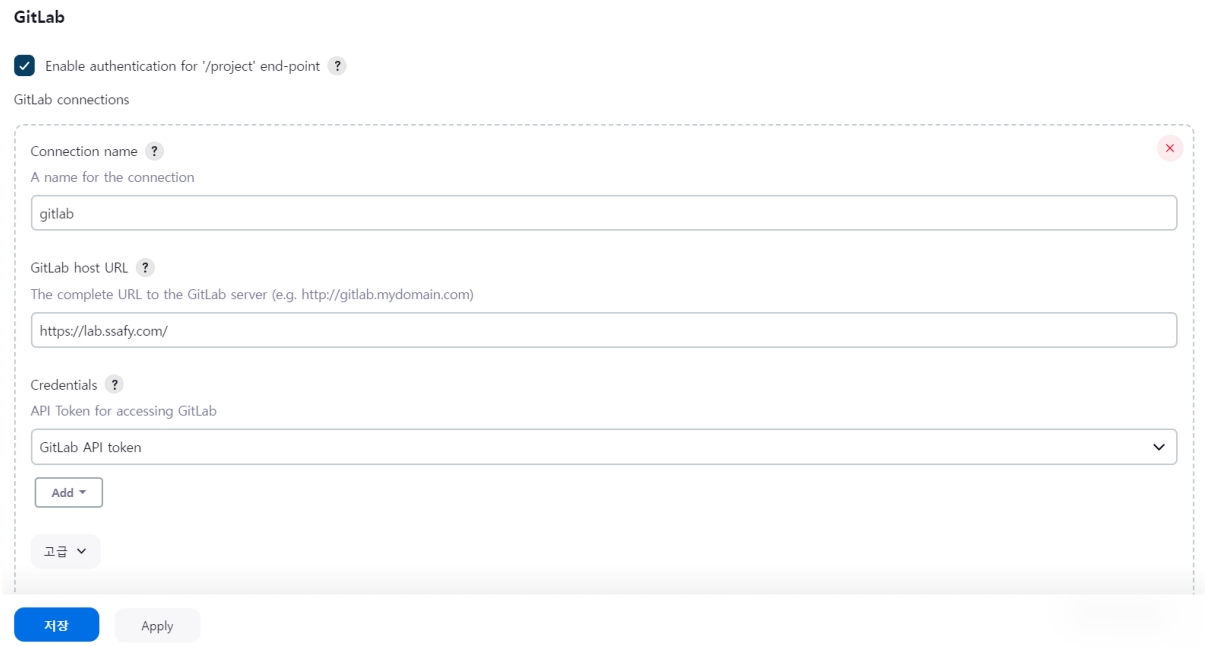
c. Gitlab API Token 발급



d. 발급 받은 Token을 Jenkins에 등록한다



e. Jenkins관리>시스템 설정으로 이동 후, Gitlab 경로와 위에서 등록한 API Token Credential을 사용하여 Gitlab과 Jenkins를 연동한다.

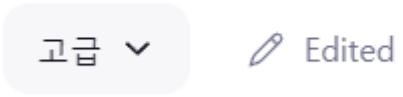


f. Pipeline 프로젝트 생성 및 Webhook 경로 확인

A. CI/CD를 수행할 Pipeline을 생성한다

g. Pipeline Secret Token 발급

A. Build Triggers 메뉴 아래 '고급' 탭 클릭



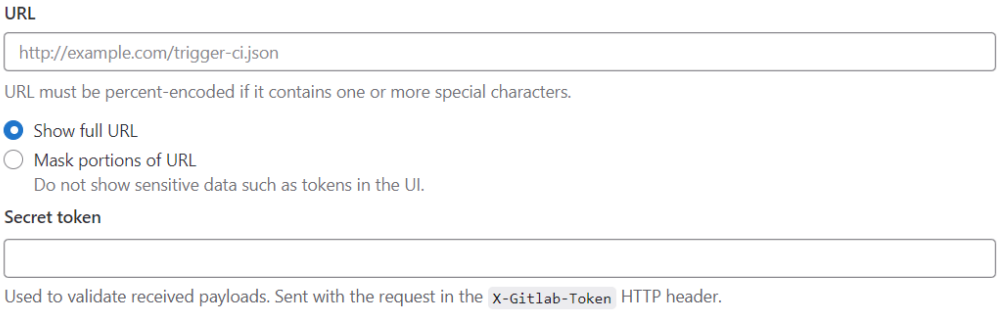
B. Generate를 통해 Secret Token 발급 (꼭 따로 저장해야함)

h. Repository Webhook Event 설정

A. Gitlab의 Repository에서 Settings>Webhook

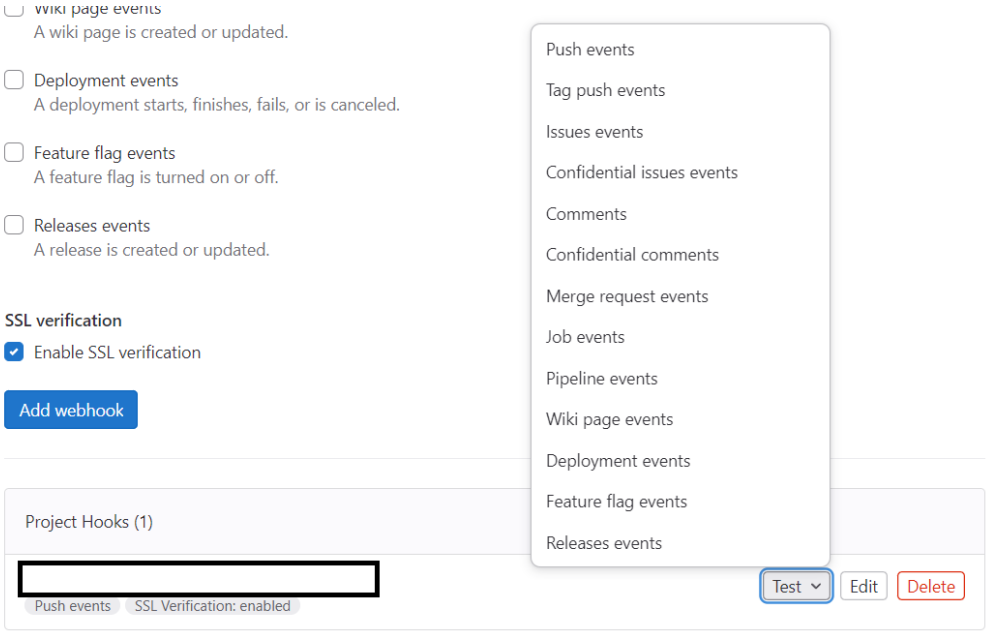
B. Webhook Event는 Repository 별로 저장해주어야함

C. 앞서 기억해둔 URL과 Secret을 입력해주고 원하는 Trigger 체크



i. 등록 확인

A. 등록 후, Test를 통해 연동 확인 테스트를 할 수 있다



B. Test를 하고 나서 이와 같이 표시되면 연동 성공

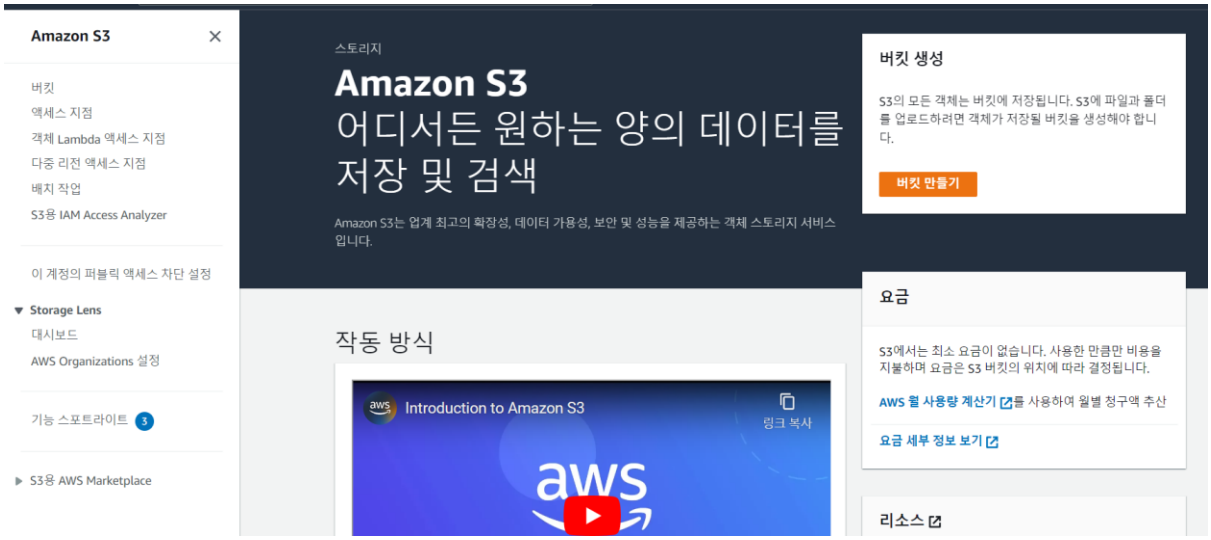
II. 외부 서비스

1. Amazon S3 Cloud Storage

a. https://aws.amazon.com/ko/ 로 접속

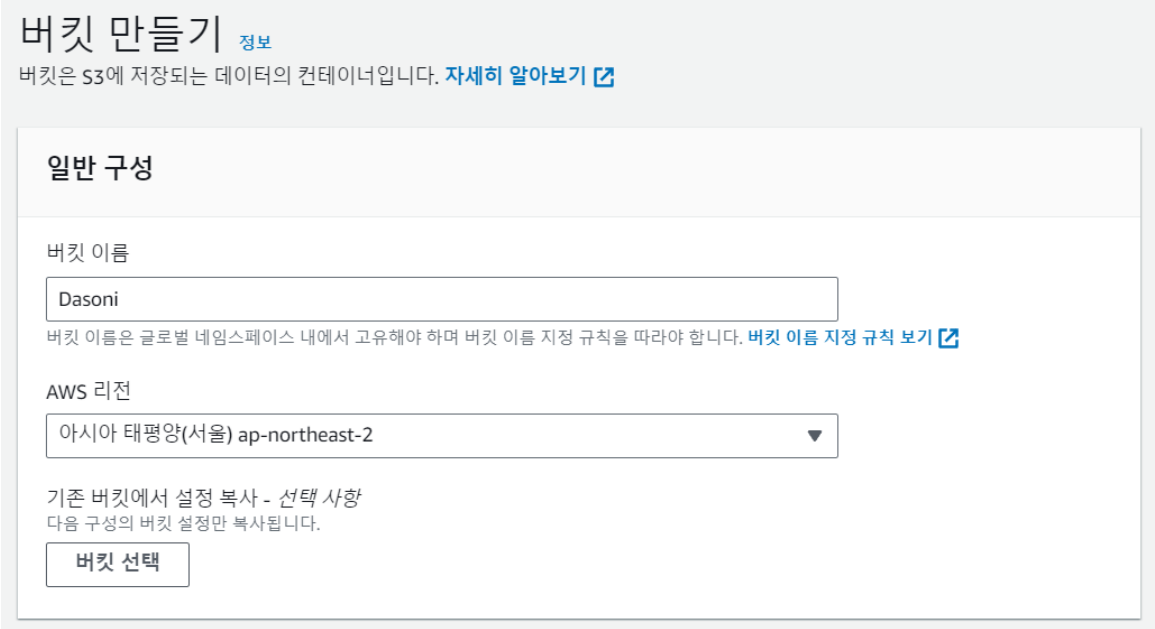
b. 로그인 후, 서비스 창에서 S3 선택

c. 버킷 만들기 클릭



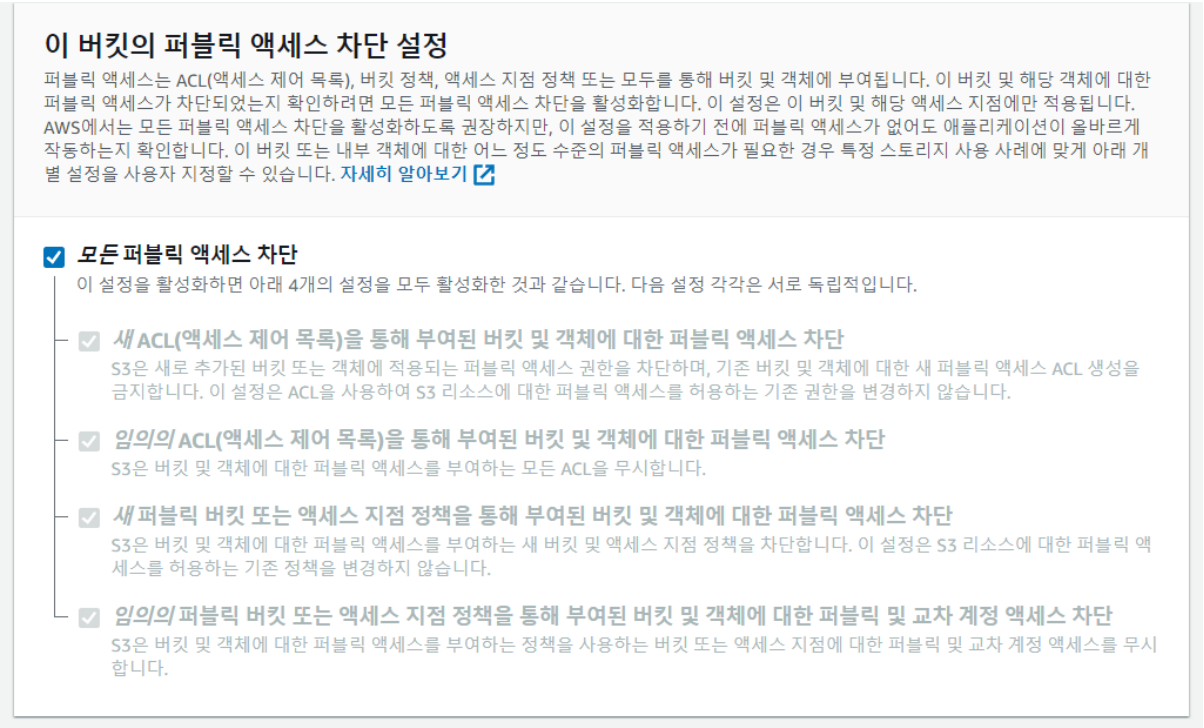
d. 버킷 이름과 리전 설정

i. 버킷 이름은 고유한 값이어야 함



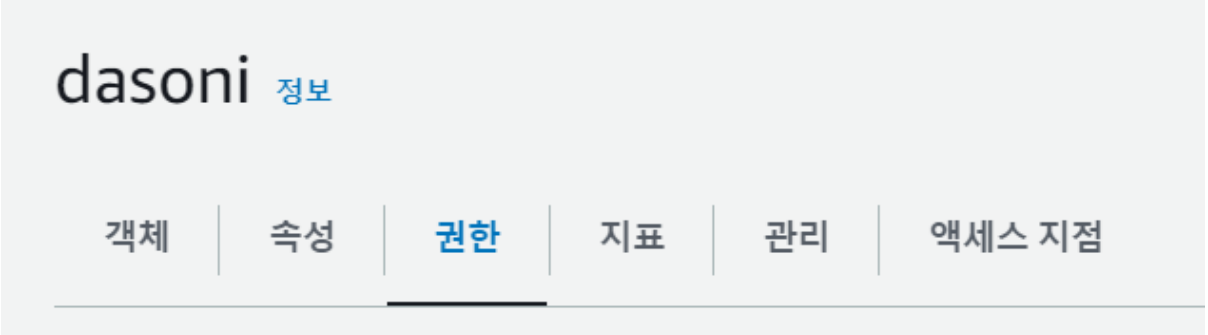
e. 퍼블릭 엑세스 설정 후 버킷 만들기 클릭

i. 외부에 S3를 공개할 경우 모든 퍼블릭 액세스 차단을 체크 해제, 공개하지 않는다면 체크

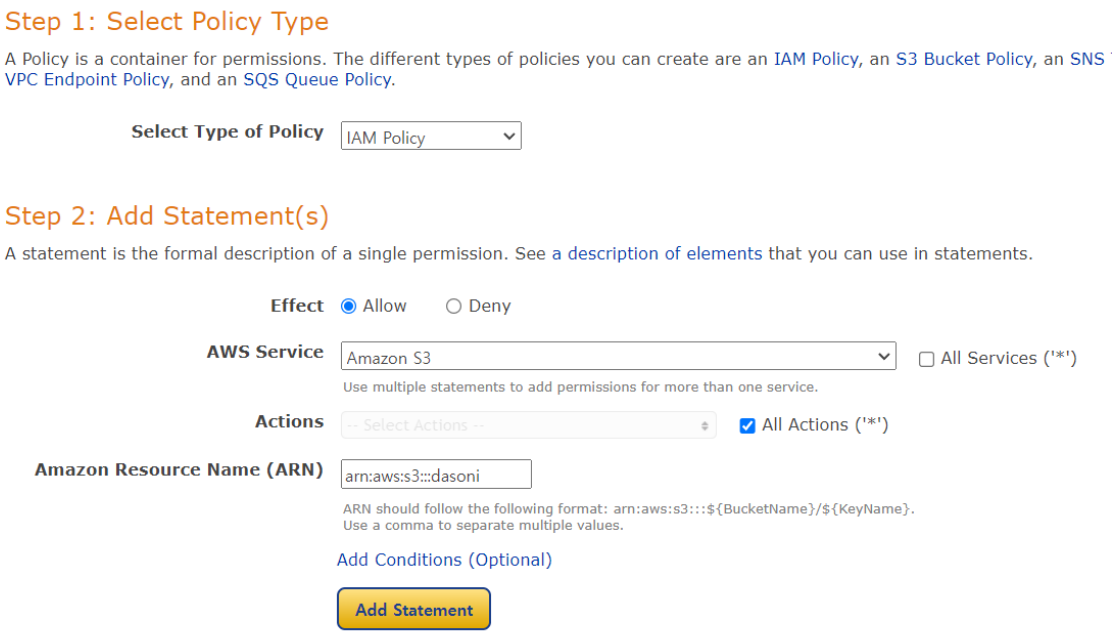


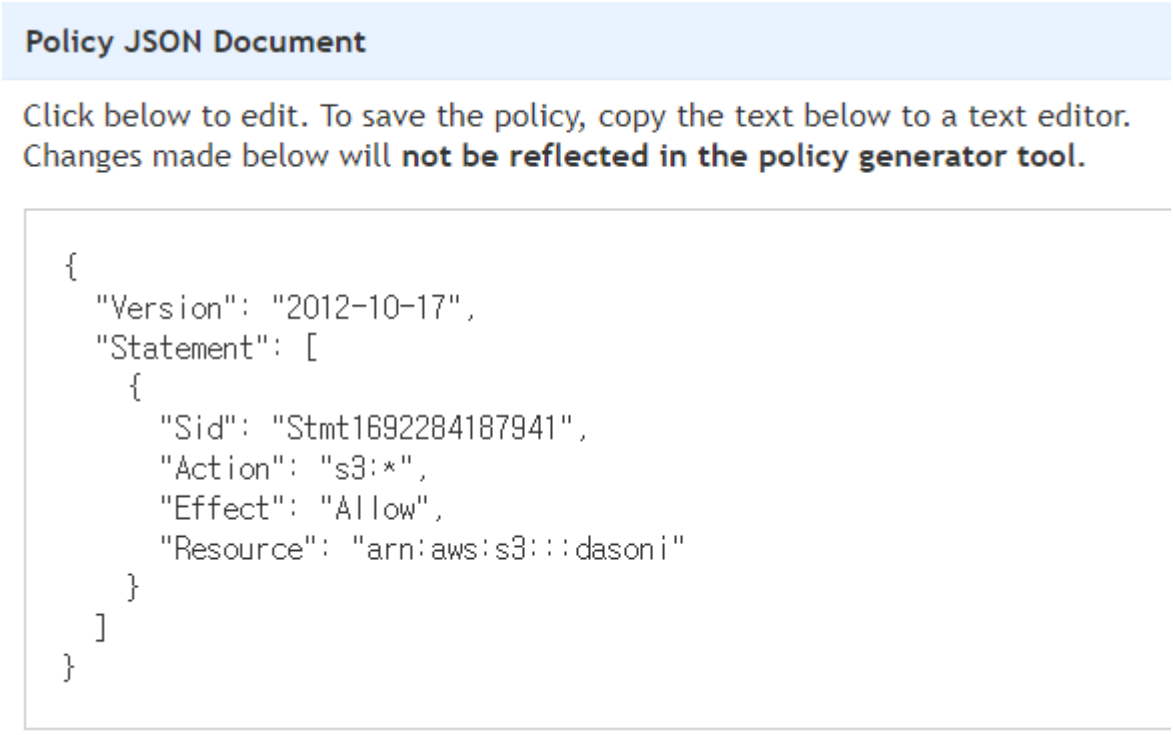
f. 버킷 정책 생성

i. 생성된 버킷을 클릭 후, 권한 메뉴를 클릭한 다음 버킷 정책 메뉴의 편집을 클릭



ii. 버킷 ARN을 복사한 뒤, AWS 정책 생성기로 접속 (http://awspolicygen.s3.amazonaws.com/policygen.html) 하여 정책 타입과 상태를 추가한 뒤, 정책 생성





g. 생성된 정책을 복사 후, 버킷의 정책란에 붙여넣기를 하고 변경 사항을 저장