Secreto 배포 가이던스

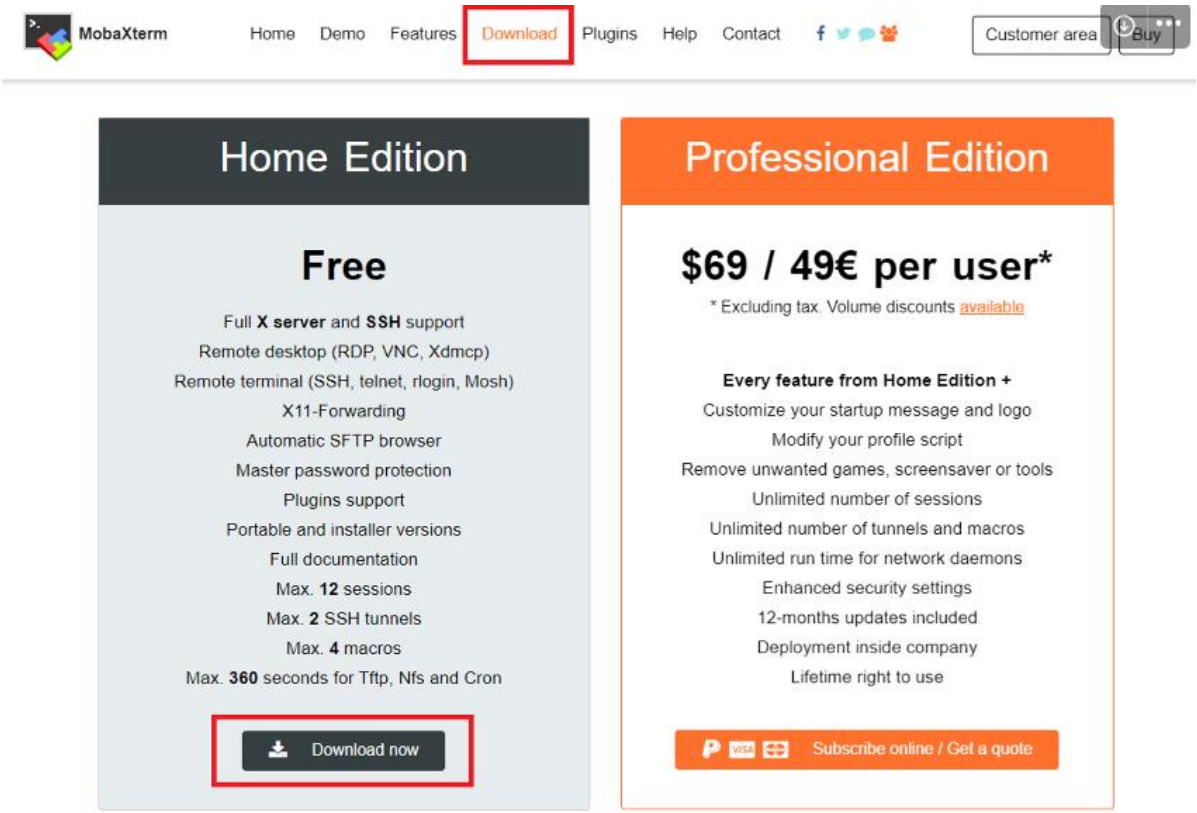
1) AWS Lightsail 인스턴스 생성

- Ubuntu 20.04.6 LTS 80USD

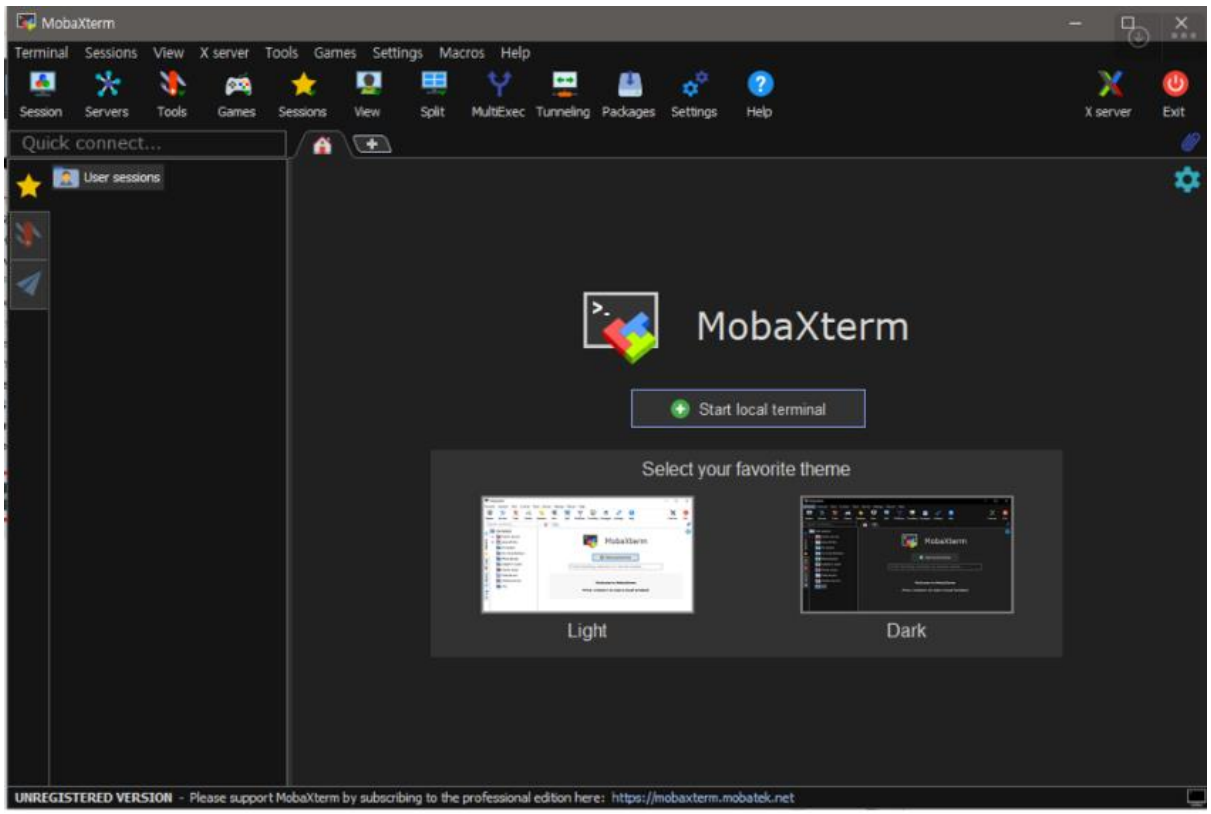
2) MobaXterm 다운로드

- MobaXterm free Xserver and tabbed SSH client for Windows (mobatek.net)

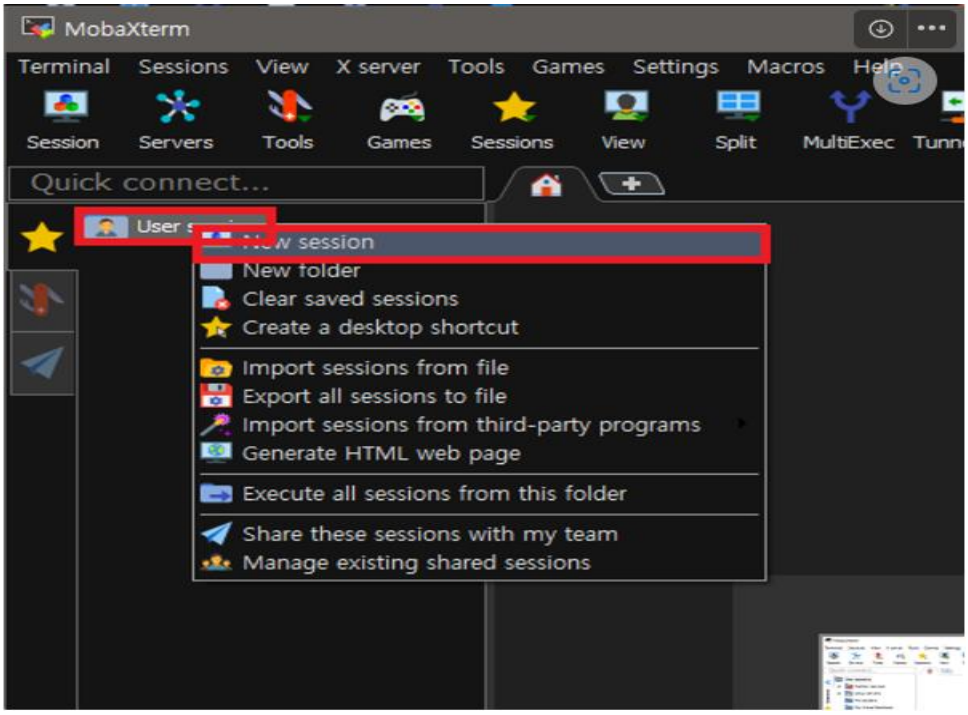
【 위 링크 클릭 후 Download – Download Now 클릭 】



【 원하는 테마 선택 】

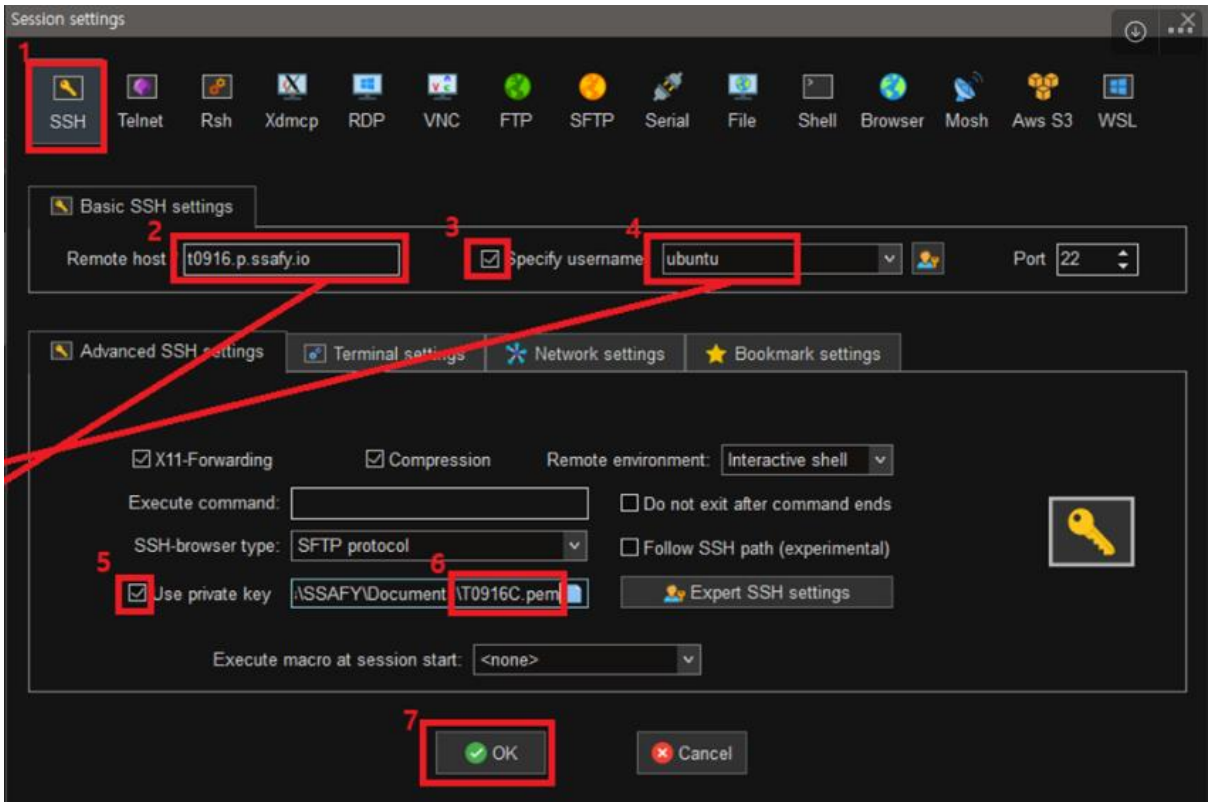


【 SSH 프로토콜로 접속할 서버 정보 입력 】

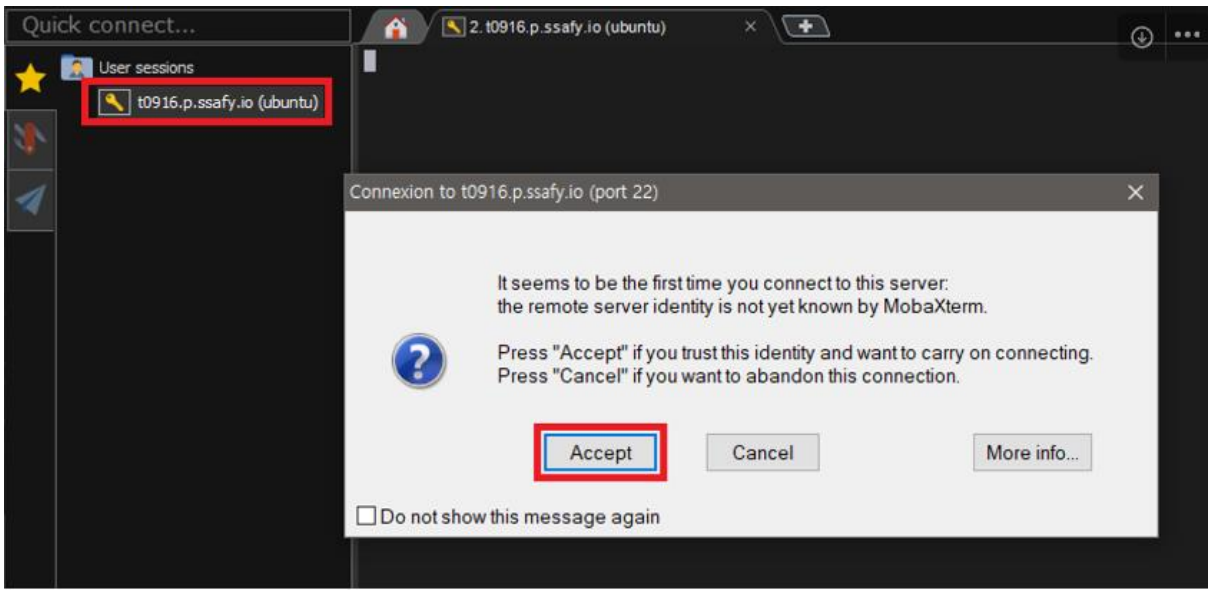


【 SSH 접속정보 입력 】

1. SSH 타입 선택
2. 서버 주소 입력
3. Specify username 체크
4. 계정명 입력 (Ubuntu)
5. Use private key 체크
6. 디렉토리에서 *.pem 키 선택
7. OK 클릭



【 알림창이 뜨면 Accept 클릭 】



3) Ubuntu 서버 세팅

【 우분투 서버의 시간을 한국 표준시로 변경 (UTC+9) 】

sudo timedatectl set-timezone Asia/Seoul

【 미러 서버를 카카오 서버로 변경 】

sudo sed -i 's/ap-northeast-2.ec2.archive.ubuntu.com/mirror.kakao.com/g' /etc/apt/sources.list

【 패키지 목록 업데이트 및 패키지 업데이트 】

sudo apt-get -y update && sudo apt-get -y upgrade

【 스왑 영역 4GB 할당 】

sudo fallocate -l 4G /swapfile

【 swapfile 권한 수정 】

sudo chmod 600 /swapfile

【 swapfile 생성 】

sudo mkswap /swapfile

【 swapfile 활성화 】

sudo swapon /swapfile

【 시스템이 재부팅 되어도 swap 유지할 수 있도록 설정 】

sudo echo '/swapfile none swap sw 0 0' | sudo tee -a /etc/fstab

【 swap 영역이 할당 되었는지 확인 】

free -h

4) Docker 세팅

【 Docker 설치 전 필요한 패키지 설치 】

sudo apt-get -y install apt-transport-https ca-certificates curl gnupg-agent software-properties-common

【 Docker에 대한 GPC Key 인증 진행 】

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -

【 Docker 레포지토리 등록(AMD64 계열) 】

sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable"

【 패키지 리스트 갱신 】

sudo apt-get -y update

【 Docker 패키지 설치 】

sudo apt-get -y install docker-ce docker-ce-cli containerd.io

【 Docker 일반 유저에게 권한 부여 】

sudo usermod -aG docker Ubuntu

【 Docker 서비스 재시작 】

sudo service docker restart

5) NginX 세팅

【 NginX 설치 (Host OS) 】

sudo apt-get -y install nginx

【 Nginx 삭제 명령어 】

sudo apt-get -y remove --purge nginx nginx-full nginx-common

5-1) NginX SSL 설정 (CertBot)

【 CertBot 다운로드 】

sudo snap install --classic certbot

【 NginX 다운로드에 필요한 플러그인 설치 】

sudo apt-get install python3-certbot-nginx

【 SSL 인증서 발급 】

sudo certbot --nginx -d i10a805.p.ssafy.io

5-2) NginX로 vue.js 프로젝트 배포 설정

- UBUNTU에서 /etc/nginx/sites-available/default 파일의 내용을 아래와 같이 설정한다.

【 Default server configuration 설정 】

```
# Default server configuration
#
server {
        listen 80 default_server;
        listen [::]:80 default_server;

        # 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;

        server_name _;

        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                try_files $uri $uri/ /index.html;
        }

        # 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;
        #}
}
```

【 Virtual Host configuration 설정 】

```
server {

        # 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/dist;

        # Add index.php to the list if you are using PHP
        index index.html index.htm;
    server_name i10a805.p.ssafy.io; # managed by Certbot


        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                try_files $uri $uri/ /index.html;
        }

        #location @rewrites {
        #       rewrite ^(.+)$ /index.html last;
        #}

        # 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/i10a805.p.ssafy.io/fullchain.pem; # managed by Certbot
    ssl_certificate_key /etc/letsencrypt/live/i10a805.p.ssafy.io/privkey.pem; # managed by Certbot
    include /etc/letsencrypt/options-ssl-nginx.conf; # managed by Certbot
    ssl_dhparam /etc/letsencrypt/ssl-dhparams.pem; # managed by Certbot

}
```

【 nginx 서비스 재시작 】

sudo service nginx restart

6) MariaDB 세팅

【 MariaDB 이미지 받기 】

sudo docker pull mariadb:latest

【 MariaDB 컨테이너 실행 】

docker run -d -p 3306:3306 -e MYSQL_ROOT_PASSWORD=비밀번호 -v /var/lib/mysql:/var/lib/mysql --name mariadb mariadb

【 MariaDB OS 재시작 후 자동실행 설정 】

sudo vim /etc/systemd/system/docker-mariadb.service

- docker-mariadb.service 등록

```
[Unit]
Description=docker-mariadb
Wants=docker.service
After=docker.service

[Service]
RemainAfterExit=yes
ExecStart=/usr/bin/docker start mariadb
ExecStop=/usr/bin/docker stop mariadb

[Install]
WantedBy=multi-user.target
```

【 docker 서비스 활성화 】

sudo systemctl enable docker

【 docker 서비스 시작 】

sudo systemctl start docker

【 docker-mariadb 서비스 활성화 】

sudo systemctl enable docker-mariadb.service

【 docker-mariadb 서비스 시작 】

sudo systemctl start docker-mariadb.service

【 데이터베이스 접속 】

sudo mysql -u MariaDB계정이름 -p

【 데이터베이스 생성 】

create database 데이터베이스이름;

【 생성한 데이터베이스 사용 】

use 데이터베이스이름;

【 MariaDB 사용자 목록 조회 】

use mysql;

select host, user, password from user;

【 사용자 계정 생성 】

create user '계정이름'@'%' identified by '비밀번호';

【 사용자 계정 삭제 】

drop user 계정이름@아이피주소;

【 사용자에게 데이터베이스 사용 권한 부여 】

grant all privileges on 데이터베이스이름.* to '계정이름'@'%';

【 변경한 환경 설정 반영 】

flush privileges;

7) Jenkins 세팅

【 Jenkins 이미지 받기 】

docker pull jenkins/jenkins:jdk17

【 Jenkins 컨테이너 실행 】

docker run -d --env JENKINS_OPTS=--httpPort=8081 -v /etc/localtime:/etc/localtime:ro -e TZ=Asia/Seoul -p 8081:8081 -v /jenkins:/var/jenkins_home -v /var/run/docker.sock:/var/run/docker.sock -v /usr/local/bin/docker-compose:/usr/local/bin/docker-compose --name jenkins -u root jenkins/jenkins:jdk17

【 Jenkins OS 재시작 후 자동실행 설정 】

sudo vim /etc/systemd/system/docker-jenkins.service

```
[Unit]
Description=docker-jenkins
Wants=docker.service
After=docker.service

[Service]
RemainAfterExit=yes
ExecStart=/usr/bin/docker start jenkins
ExecStop=/usr/bin/docker stop jenkins

[Install]
WantedBy=multi-user.target
```

【 docker 서비스 활성화 】

```
sudo systemctl enable docker
```

【 docker 서비스 시작 】

```
sudo systemctl start docker
```

【 docker-jenkins 서비스 활성화 】

```
sudo systemctl enable docker-jenkins.service
```

【 docker-jenkins 서비스 시작】

```
sudo systemctl start docker-jenkins.service
```

【 Jenkins 접속 】

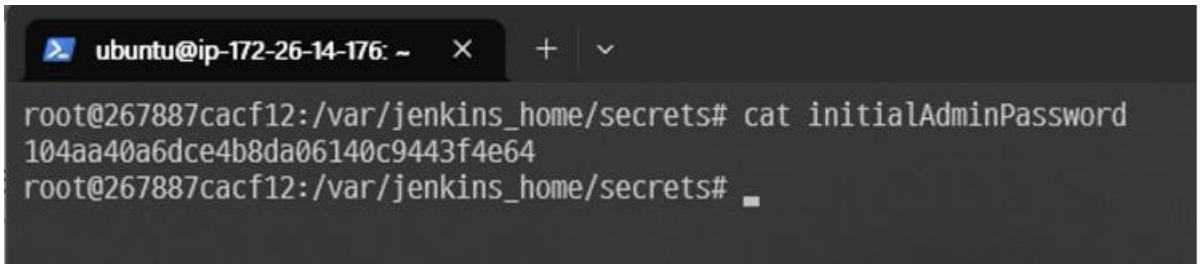
docker exec -it jenkins /bin/bash

【 해당하는 디렉토리로 이동 】

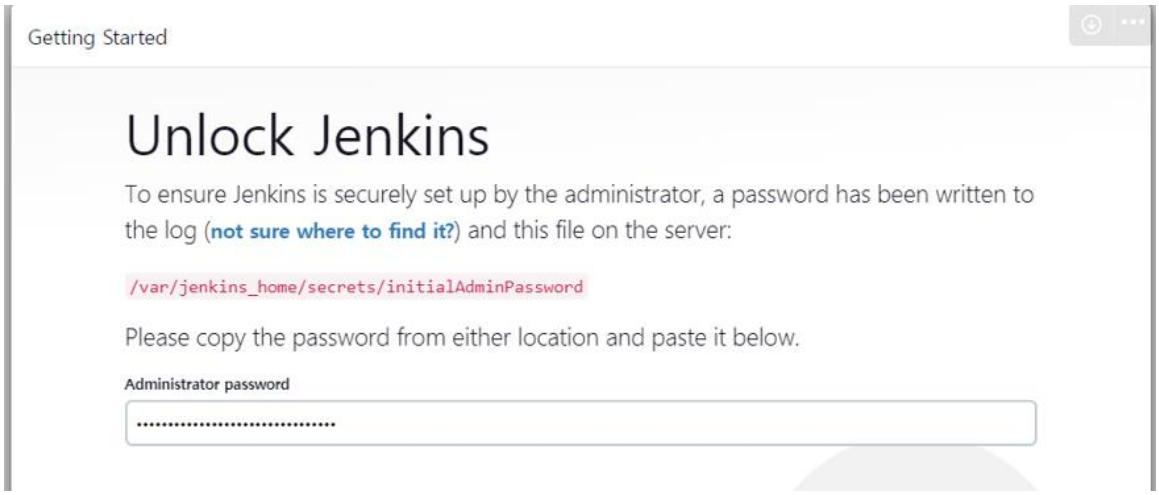
cd /var/jenkins_home/secrets

【 cat 명령어를 이용하여 초기 비밀번호를 확인 】

cat initialAdminPassword

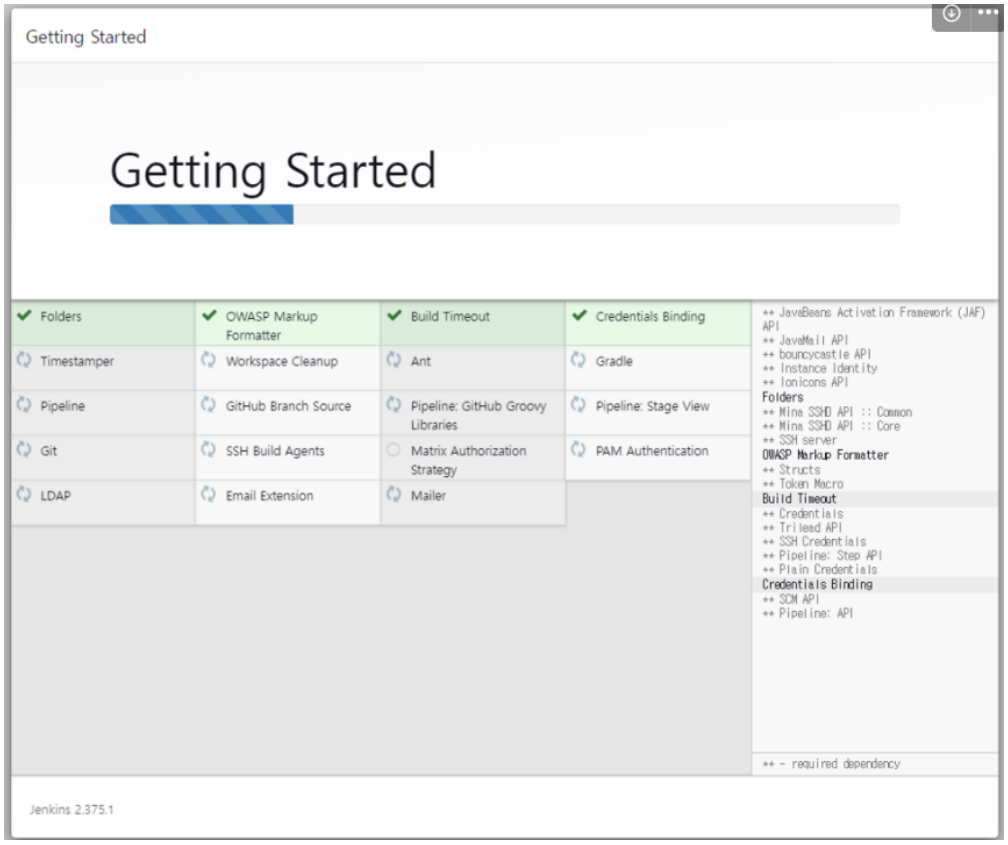


【 확인한 방법으로 얻어낸 관리자 비밀번호를 입력 】

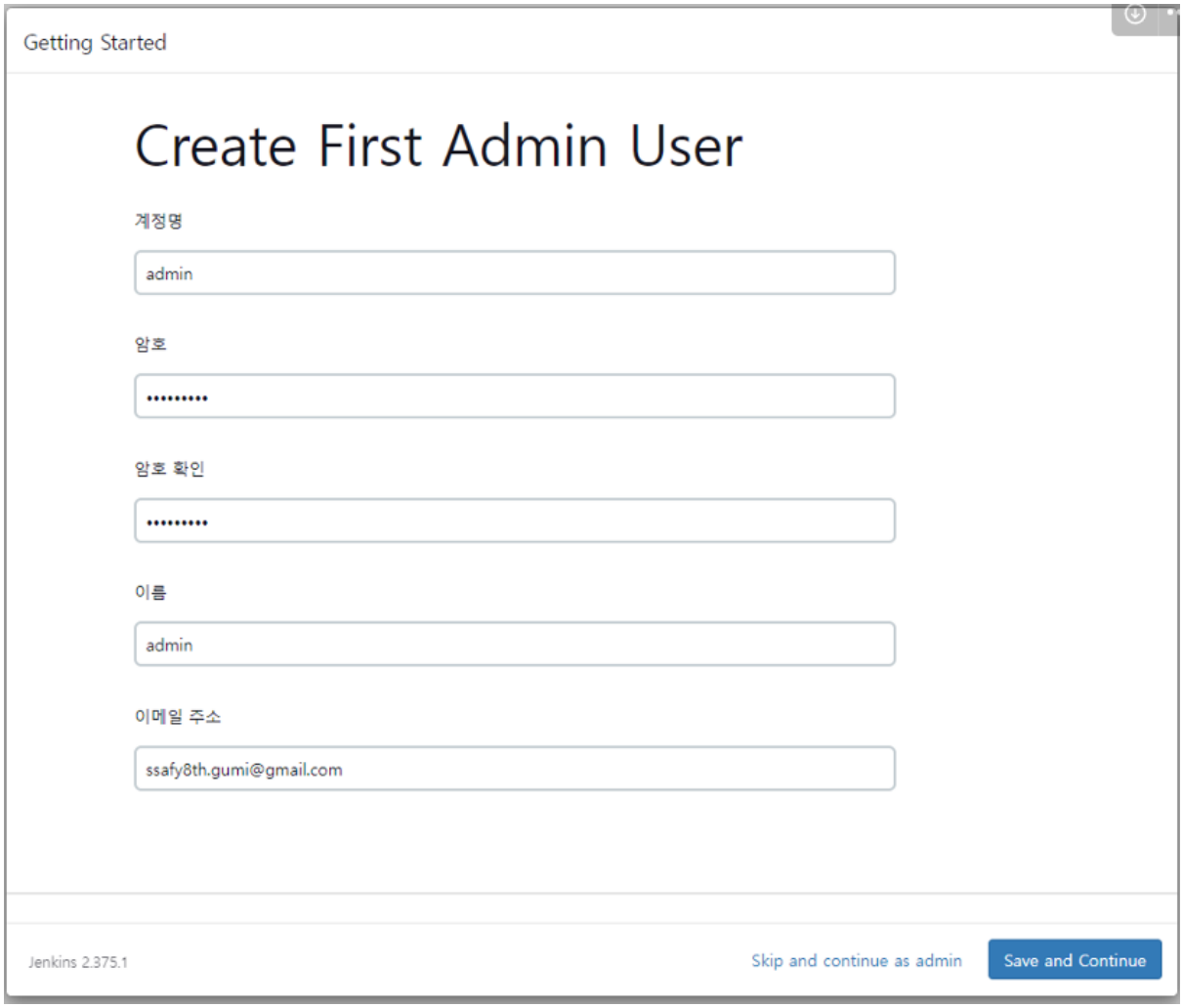


【 기본 플러그인 설치 】

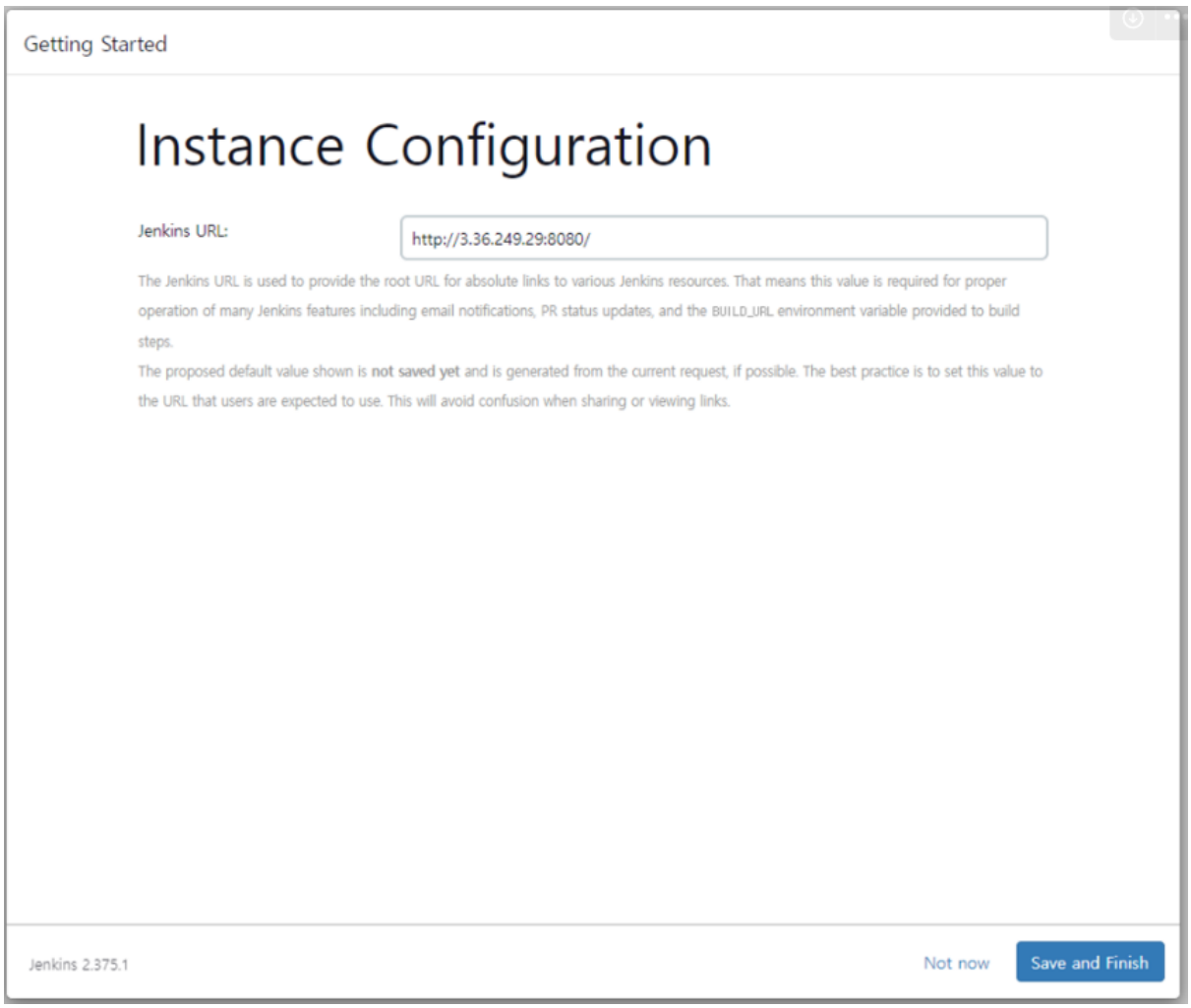

Getting Started
Customize Jenkins
Plugins extend Jenkins with additional features to support many different needs.
Install suggested plugins
Install plugins the Jenkins community finds most useful.
Select plugins to install
Select and install plugins most suitable for your needs.
Jenkins 2.375.1


Getting Started
Getting Started
Folders
OWASP Markup Formatter
Build Timeout
Credentials Binding
Timestamper
Workspace Cleanup
Ant
Gradle
Pipeline
GitHub Branch Source
Pipeline: GitHub Groovy Libraries
Pipeline: Stage View
Git
SSH Build Agents
Matrix Authorization Strategy
PAM Authentication
LDAP
Email Extension
Mailer
++ JavaBeans Activation Framework (JAF) API
++ JavaMail API
++ bouncycastle API
++ Instance Identity
++ Ionicons API
Folders
++ Mina SSHD API :: Common
++ Mina SSHD API :: Core
++ SSH server
OWASP Markup Formatter
++ Structs
++ Token Macro
Build Timeout
++ Credentials
++ Trilead API
++ SSH Credentials
++ Pipeline: Step API
++ Plain Credentials
Credentials Binding
++ SCM API
++ Pipeline: API
++ - required dependency
Jenkins 2.375.1

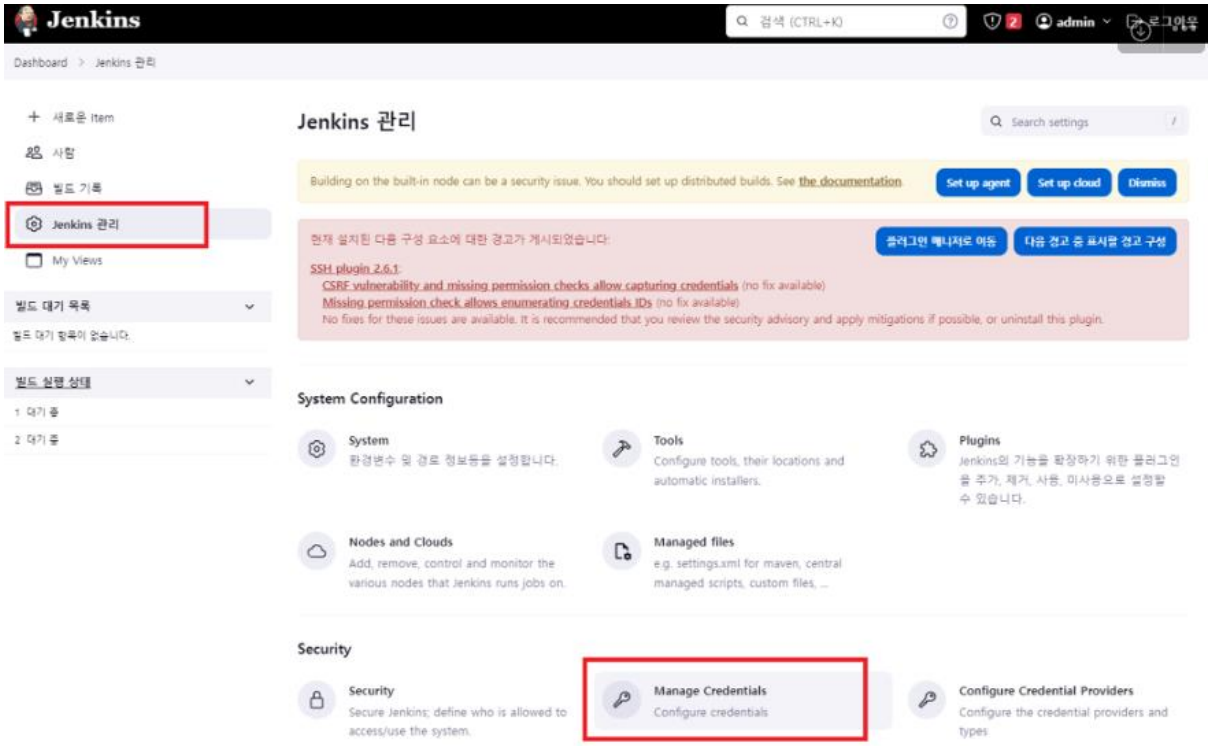
【 관리자 계정 설정 】


Getting Started
Create First Admin User
계정명
admin
암호
••••••••••
암호 확인
••••••••••
이름
admin
이메일 주소
ssafy8th.gumi@gmail.com
Jenkins 2.375.1
Skip and continue as admin
Save and Continue

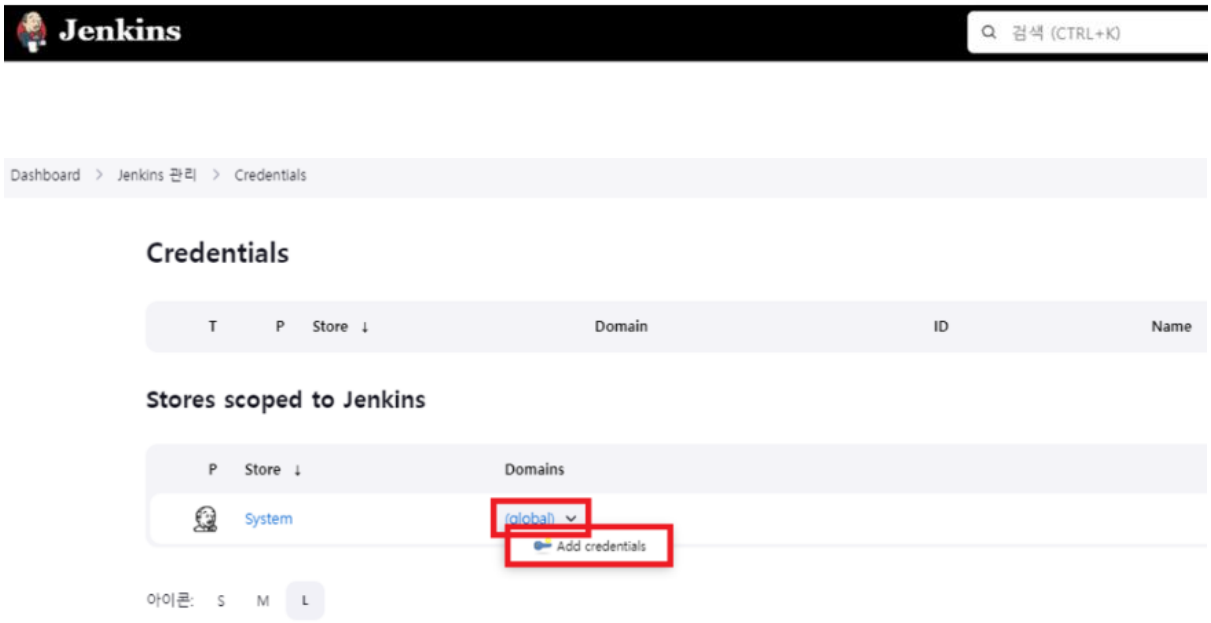
【 서버 인스턴스 확인 】

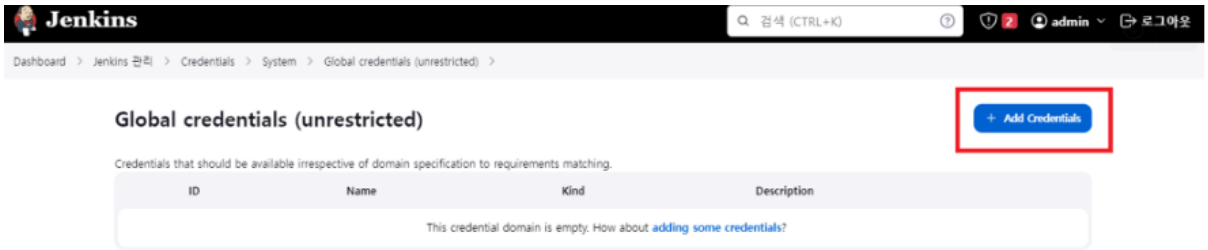

Getting Started
Instance Configuration
Jenkins URL:
http://3.36.249.29:8080/
The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD_URL environment variable provided to build steps.
The proposed default value shown is not saved yet and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.
Jenkins 2.375.1
Not now
Save and Finish

【 GitLab Credential 등록 (Username with password) 】



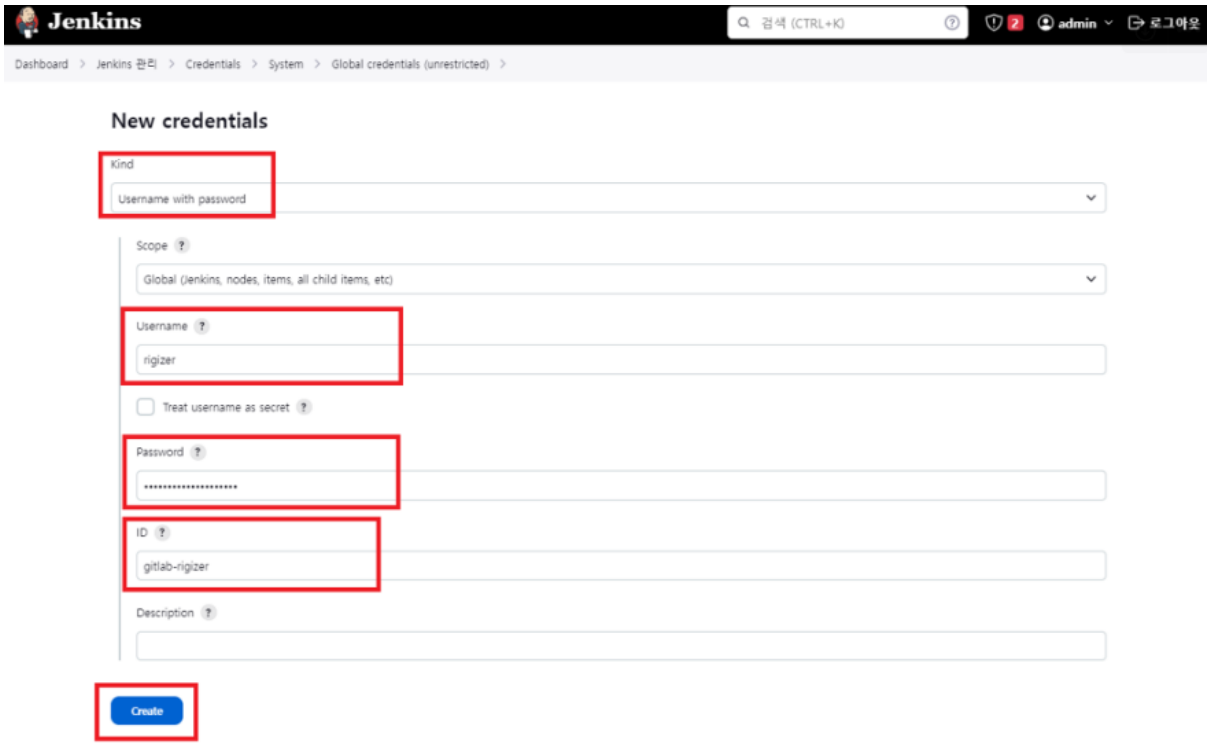
- Stores scoped to Jenkins - Domains - (global) - Add credentials 클릭



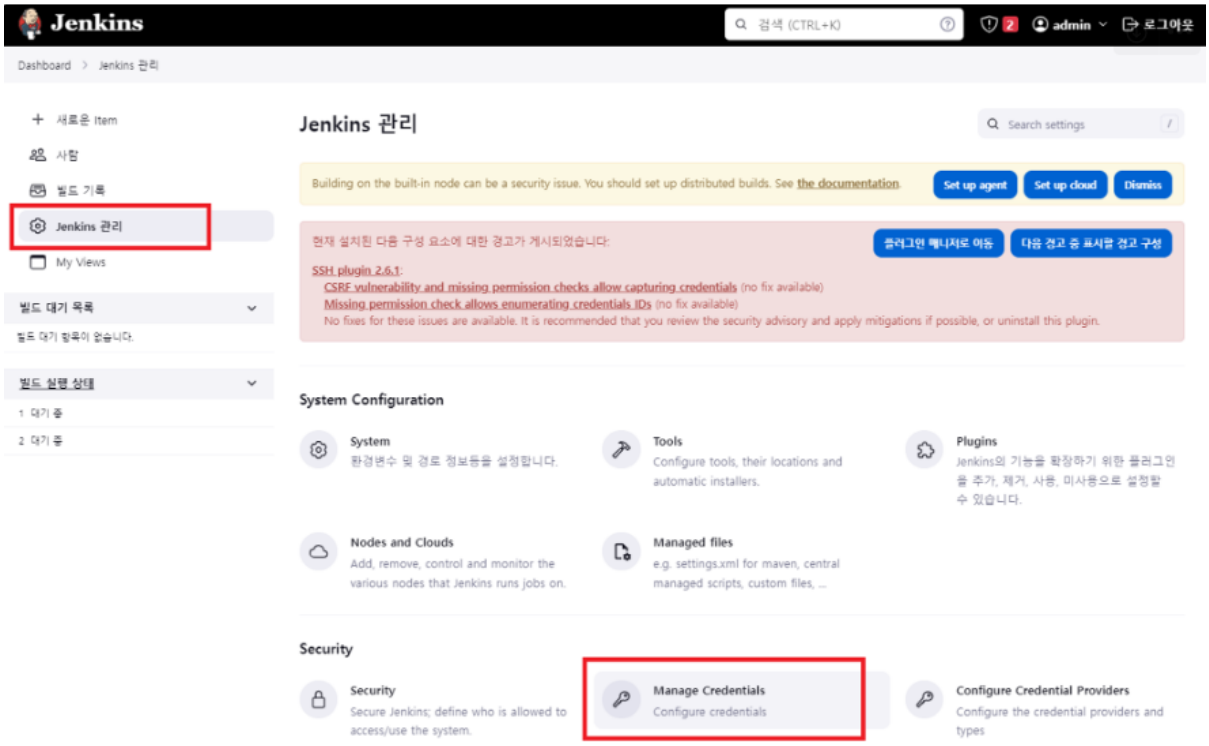


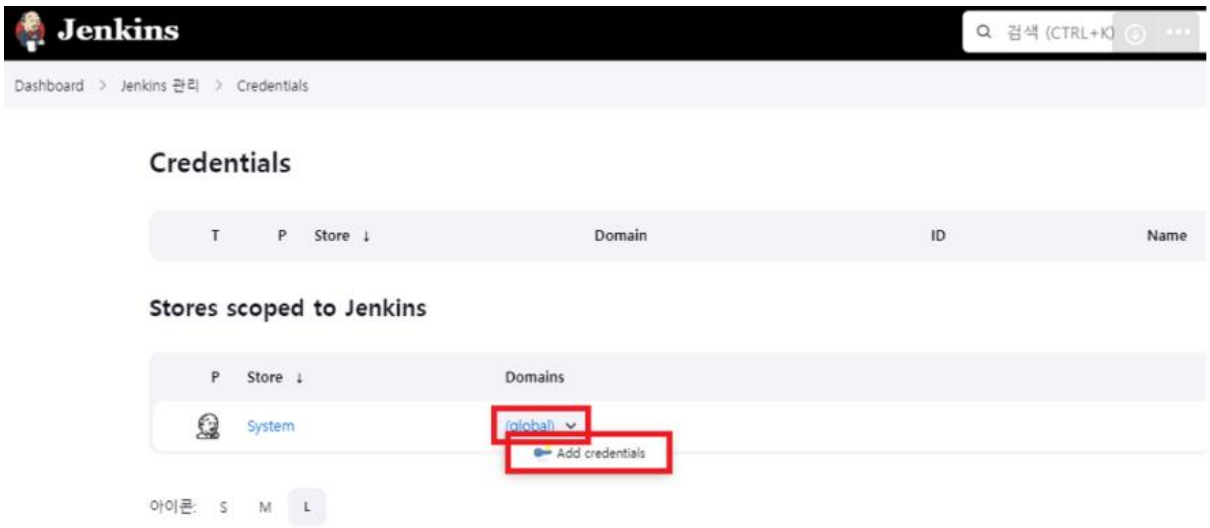
【 정보 입력 후 **Create** 클릭 】

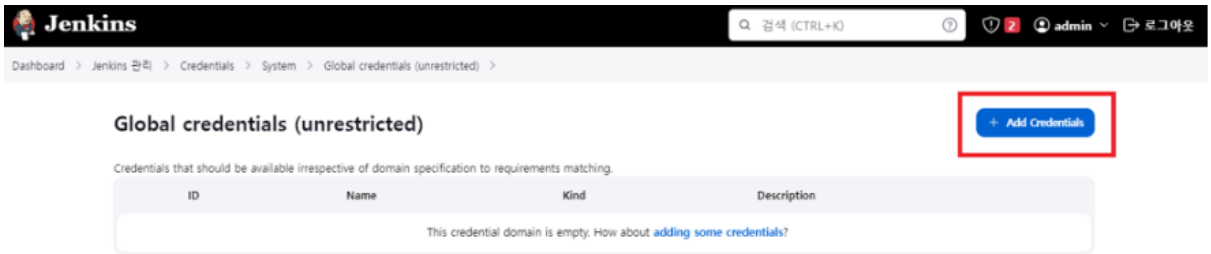
- Kind : Username with password 선택
- Username : Gitlab 계정 아이디 입력
- Password : Gitlab 계정 비밀번호 입력 **(토큰 발행시, API 토큰 입력)**
- ID : Credential에 대한 별칭



【 GitLab Credential 등록 (API Token) 】

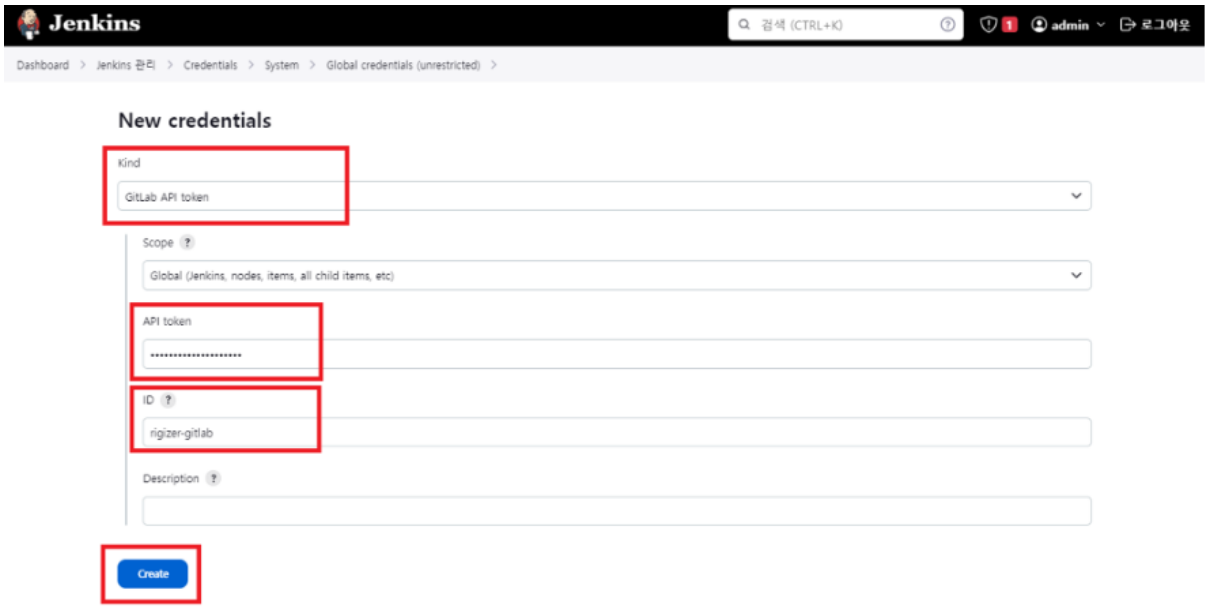




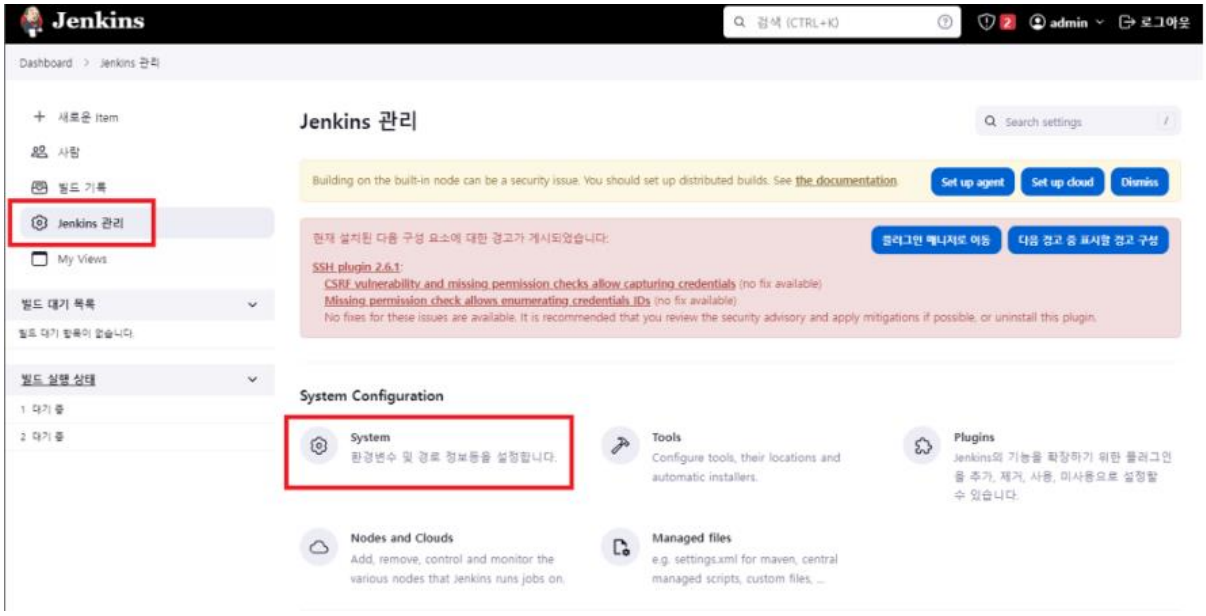


【 정보 입력 후 **Create** 클릭 】

- Kind : Gitlab API token 선택
- API tokens : Gitlab 계정 토큰 입력
- ID : Credential에 대한 별칭

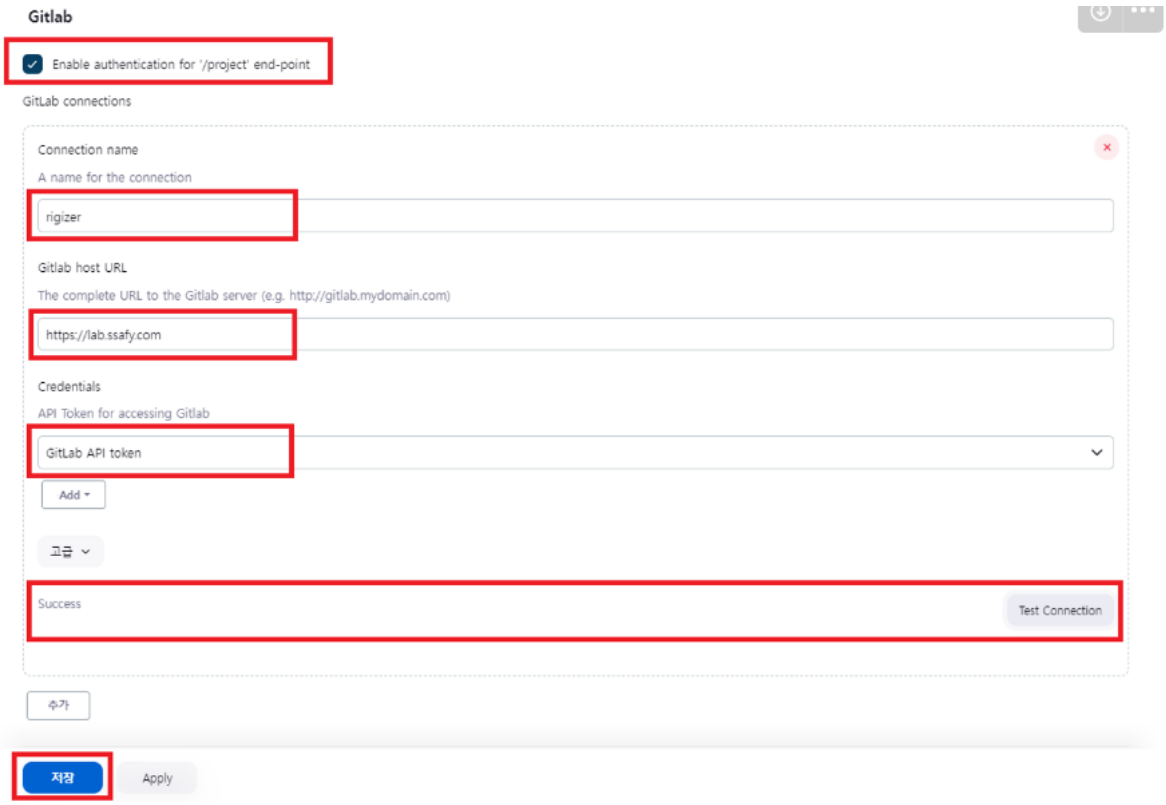


【 GitLab 커넥션 추가 】



【 Gitlab의 **Enable authentication for '/project' end-point** 체크】

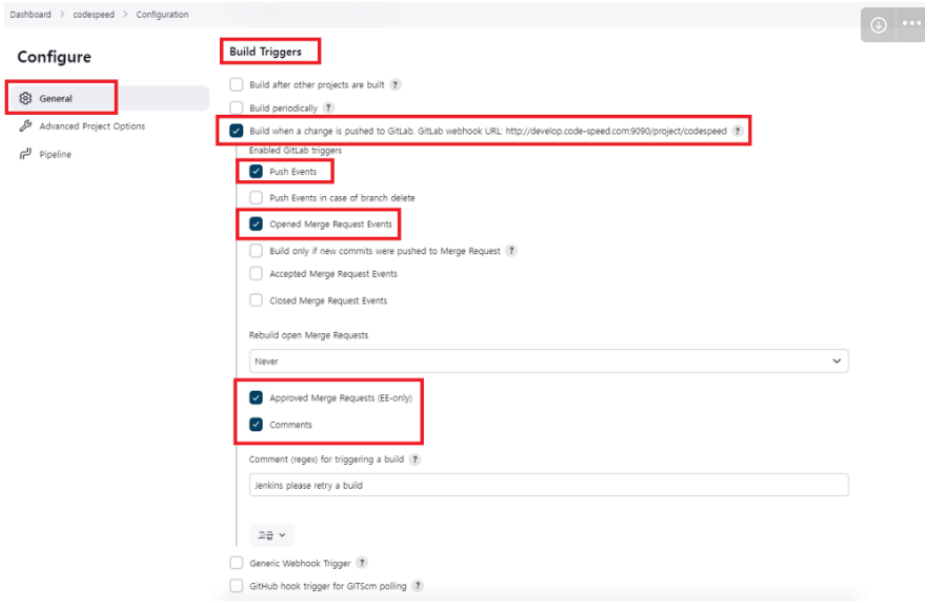
- Connection name : Gitlab 커넥션 이름 지정
- Gitlab host URL : Gitlab 시스템의 Host 주소 입력
- Credentials : 조금 전 등록한 **Jenkins Credential (API Token)**을 선택
- 이후, **Test Connection**을 눌러 Success가 뜨면 **저장** 클릭



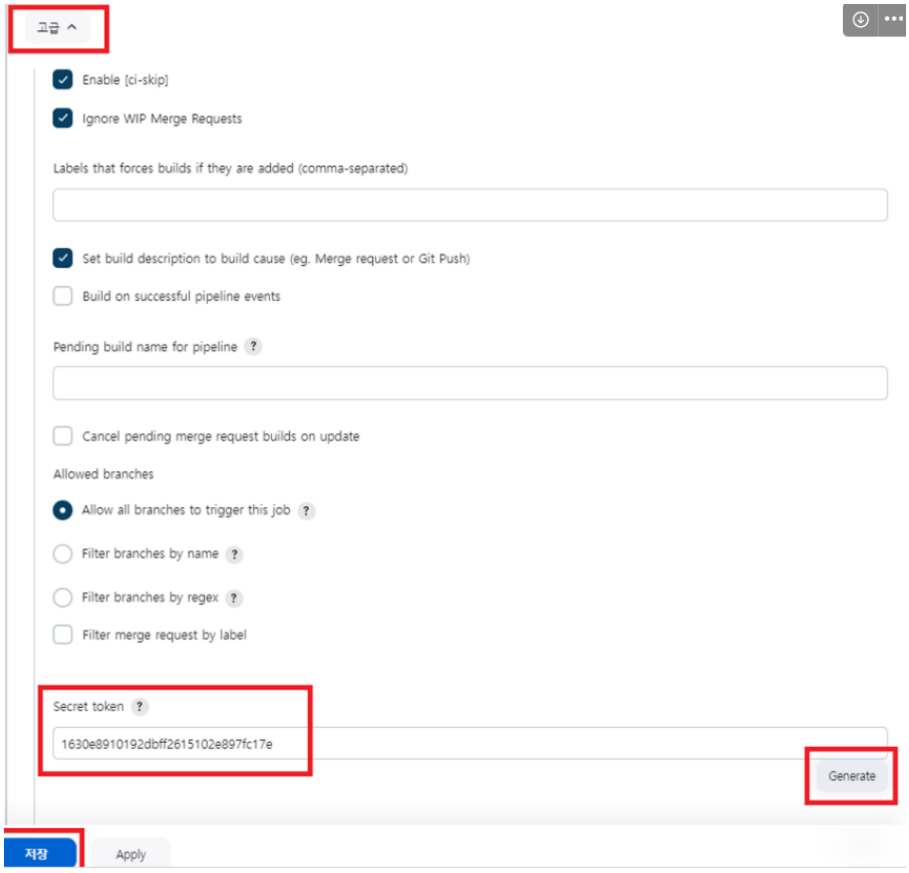
8) Jenkins Webhook Integration 설정

- Jenkins 관리 - Plugins 클릭
- Available plugins에서 Generic Webhook Trigger 플러그인 설치

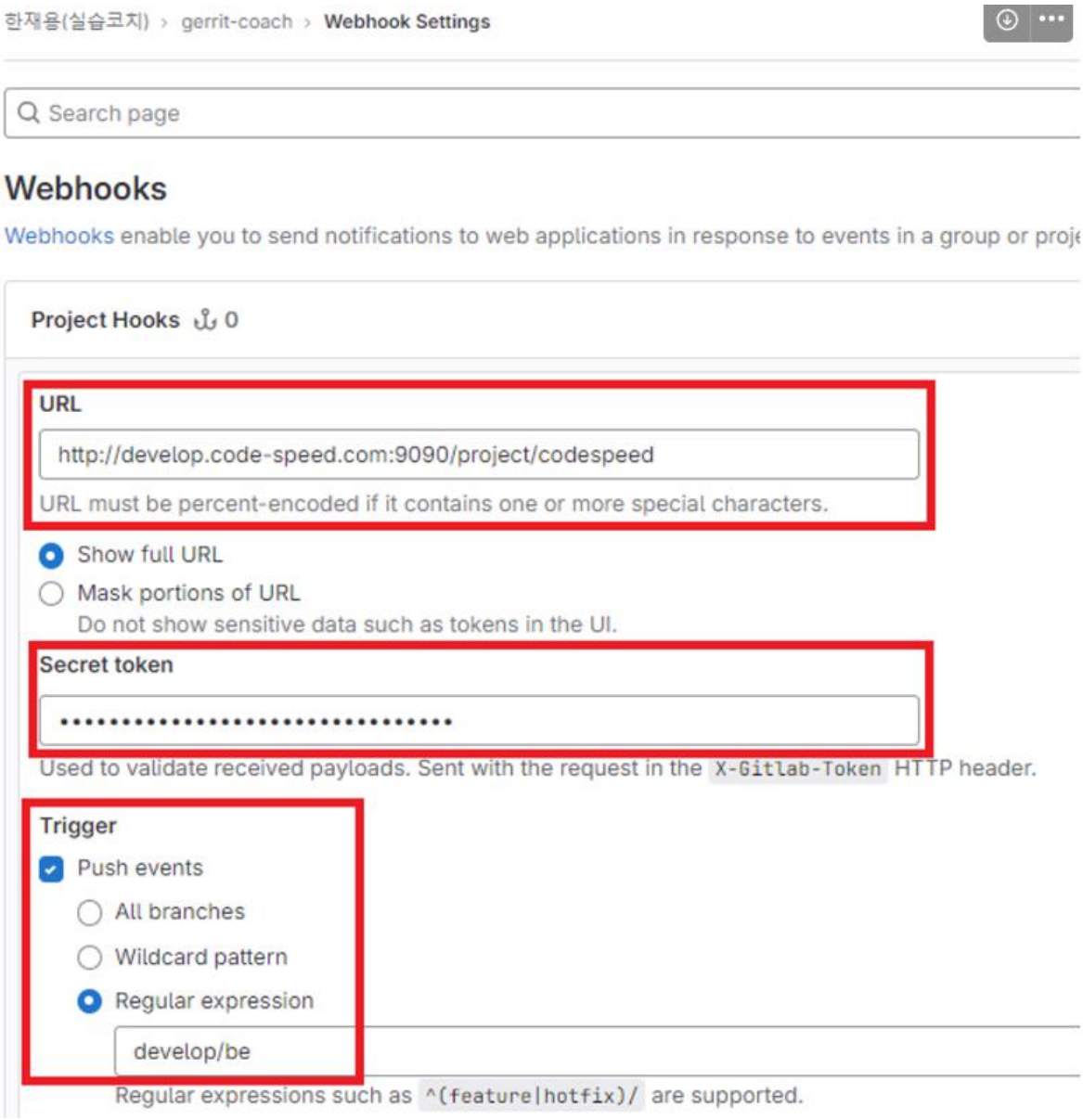
【 Pipeline 아이템에 다음과 같은 설정 추가 】



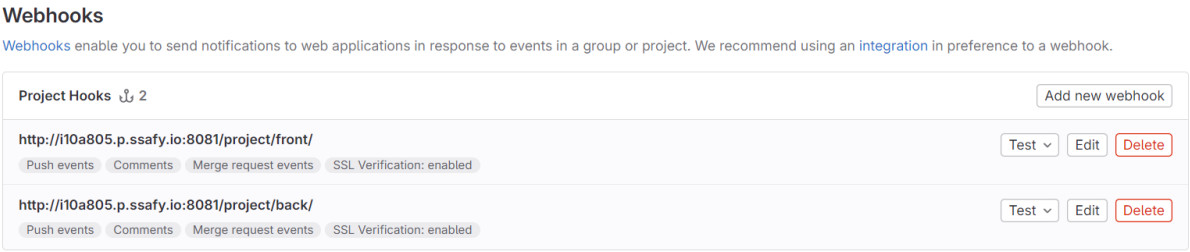
【 고급 - Generate 클릭 후 발행된 Secret token 복사해두고 **저장** 클릭 】



【 Gitlab Webhook 지정 】



【 추가한 화면 】



【 프론트엔드 설정 】

Build Triggers

- [ ] Build after other projects are built
- [ ] Build periodically
- [x] Build when a change is pushed to GitLab. GitLab webhook URL: http://i10a805.p.ssafy.io:8081/project/front

Enabled GitLab triggers

- [x] Push Events
- [ ] Push Events in case of branch delete
- [x] Opened Merge Request Events
- [ ] Build only if new commits were pushed to Merge Request
- [ ] Accepted Merge Request Events
- [ ] Closed Merge Request Events

Rebuild open Merge Requests

Never

- [x] Approved Merge Requests (EE-only)
- [x] Comments

고급

- [x] Enable [ci-skip]
- [x] Ignore WIP Merge Requests

Labels that launch a build if they are added (comma-separated)

- [x] Set build description to build cause (eg. Merge request or Git Push)
- [ ] Build on successful pipeline events

Pending build name for pipeline

- [ ] Cancel pending merge request builds on update

Allowed branches

- (•) Allow all branches to trigger this job
- ( ) Filter branches by name
- ( ) Filter branches by regex
- [ ] Filter merge request by label

Secret token

f9529f48883d30ae778fba21850b7579

Generate

【 프론트엔드 pipeline script 】

```
pipeline{
    agent any
    stages {
        stage('gitlab Connect'){
            steps{
                git branch: 'frontend-develop',
                credentialsId: 'secreto',
                url: 'https://lab.ssafy.com/s10-webmobile1-sub2/S10P12A805.git'
            }
        }
        stage('build'){
            steps{
                sh 'cd /var/jenkins_home/workspace/front/frontend/'
                dir('frontend'){
                    // sh 'npm install -g vite'
                    // sh 'vite build'
                    sh 'npm install'
                    sh 'npm run build'
                }
            }
        }
        stage('deploy'){
            steps{
                dir('frontend'){
                  sh 'cp -r ./dist /var/www/html/'
```

```
                }
            }
        }
    }
}
```

【 백엔드 pipeline script 】

```
pipeline{
    agent any
    stages {
        stage('gitlab Connect'){
            steps{
                git branch: 'backend-develop',
                credentialsId: 'secreto',
                url: 'https://lab.ssafy.com/s10-webmobile1-sub2/S10P12A805.git'
            }
        }
        stage('build'){
            steps{
                sh 'cd /var/jenkins_home/workspace/back/backend/'
                dir('backend'){
                    sh 'chmod +x gradlew'
                    sh './gradlew clean build'
                }
```

```
            }
        }
        stage('deploy'){
            steps{
                sh 'docker stop secreto && docker rm secreto && docker rmi backend'
                dir('backend'){
                    sh 'docker build -t backend ./'
                    sh 'docker run --restart=on-failure -p 8080:8080 -d --name secreto backend'
                }
            }
        }
    }
}
```