

Sonarqube-Github Workflow에 Sonarscanner 작업 만들기

이 문서는 Sonarqube-Gitlab Workflow에 Sonarscanner 작업 만들기 가이드를 공유하기 위해 작성되었다.

도구명	Sonarqube, Github
버전	9.5
OS	CentOS 8

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Github Self-hosted Runner 만들기

초기 서버 설정 및 설치

- 시간 확인 및 파일 읽기 수 설정
- JDK11
- NodeJS 18
- Maven 3.8.6 설치
- cmake 설치

```

#
date
#
timedatectl list-timezones | grep Seoul
sudo timedatectl set-timezone Asia/Seoul

vi /etc/profile
#
    ulimit -n 131072
    ulimit -u 8192

#
ulimit -n
ulimit -u

#JDK 11
wget 'https://github.com/AdoptOpenJDK/openjdk11-binaries/releases/download/jdk-11.0.7%2B10/OpenJDK11U-jdk_x64_linux_hotspot_11.0.7_10.tar.gz' -O /opt/OpenJDK11U-jdk_x64_linux_hotspot_11.0.7_10.tar.gz
#JDK 11
cd /opt
chmod 700 OpenJDK11U-jdk_x64_linux_hotspot_11.0.7_10.tar.gz
tar -xvzf OpenJDK11U-jdk_x64_linux_hotspot_11.0.7_10.tar.gz
mkdir javall
mv jdk-11.0.7+10/ jdk11
mv jdk11 /opt/
#
vi /etc/profile
#
    JAVA_HOME=/opt/jdk11
    PATH=$PATH:$JAVA_HOME/bin
    export JAVA_HOME
    export PATH
source /etc/profile

#JDK
echo $JAVA_HOME
java -version

#NodeJS
sudo curl -fsSL https://rpm.nodesource.com/setup_18.x | bash -
sudo yum install -y nodejs

#Maven
cd /opt
wget https://archive.apache.org/dist/maven/maven-3/3.8.6/binaries/apache-maven-3.8.6-bin.tar.gz
chmod 700 apache-maven-3.8.6-bin.tar.gz
tar -xvzf apache-maven-3.8.6-bin.tar.gz
ln -s apache-maven-3.8.6 maven
#
    MAVEN_HOME=/opt/jdk11
    PATH=$PATH:$JAVA_HOME/bin:$MAVEN_HOME/bin
    export JAVA_HOME MAVEN_HOME
source /etc/profile
#Maven
echo $MAVEN_HOME
mvn -v

#CFamily (cmake)
yum install cmake -y
yum install gcc-c++

```

Sonarscanner 설치 및 설정

- Maven Sonarqube 설정
- Sonarscanner 다운로드
- Sonarscanner Cfamily 다운

```

#Maven Sonarqube
cd $MAVEN_HOME/conf
vim settings.xml
#      (ex: PluginGroups  PluginGroup)
<settings>
  <pluginGroups>
    <pluginGroup>org.sonarsource.scanner.maven</pluginGroup>
  </pluginGroups>
  <profiles>
    <profile>
      <id>sonar</id>
      <activation>
        <activeByDefault>true</activeByDefault>
      </activation>
      <properties>
        <project.reporting.outputEncoding>UTF-8</project.reporting.outputEncoding>
        <sonar.sourceEncoding>UTF-8</sonar.sourceEncoding>
      </properties>
    </profile>
  </profiles>
</settings>

#Sonarscanner
cd /opt
wget https://binaries.sonarsource.com/Distribution/sonar-scanner-cli/sonar-scanner-cli-4.7.0.2747-linux.zip
chmod 755 sonar-scanner-cli-4.7.0.2747-linux.zip
unzip sonar-scanner-cli-4.7.0.2747-linux.zip
#
ln -s sonar-scanner-4.7.0.2747-linux/ sonar-scan

#Sonarscanner CFamily
cd /opt/
wget {SonarQube URL}/static/cpp/build-wrapper-linux-x86.zip
chmod 755 build-wrapper-linux-x86.zip
unzip build-wrapper-linux-x86.zip
#
ln -s build-wrapper-linux-x86 build-wrapper

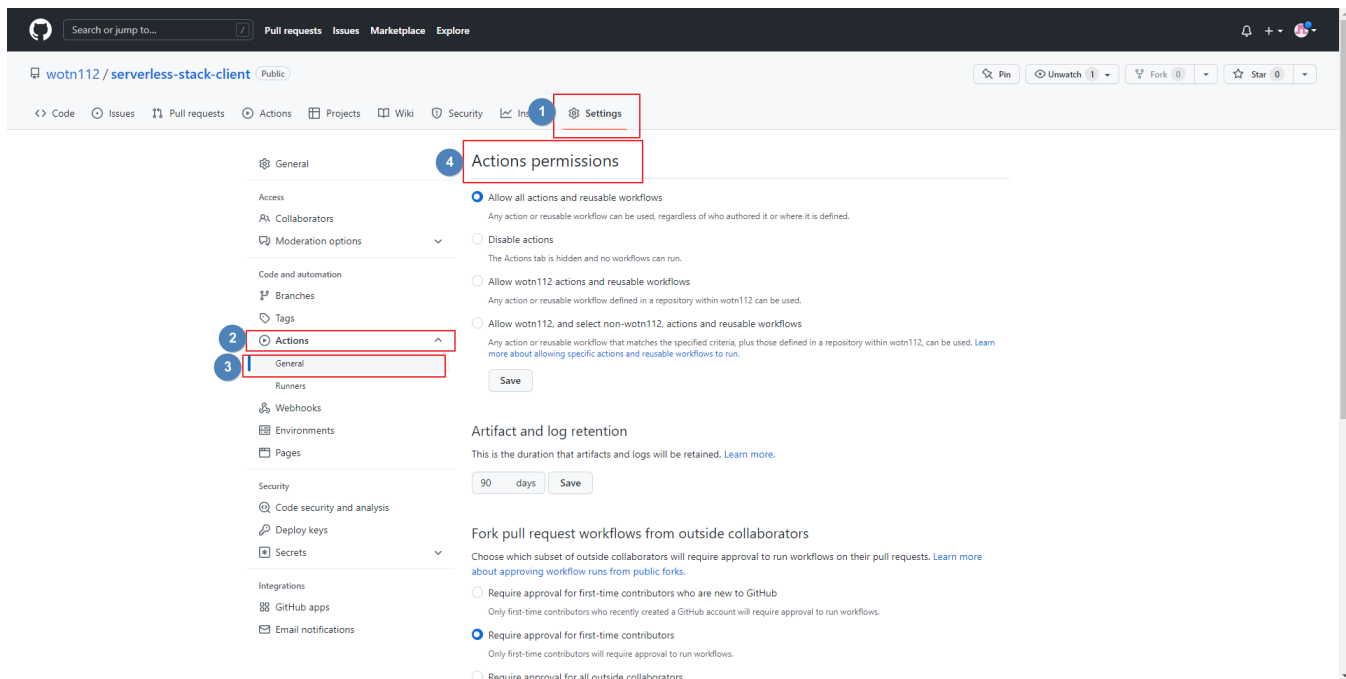
#
vi /etc/profile
#
    export SONAR_SCAN=/opt/sonar-scan
    export SONAR_CSCAN=/opt/build-wrapper
    #PATH
    PATH=$PATH:$JAVA_HOME/bin:$MAVEN_HOME/bin:$SONAR_SCAN/bin:$SONAR_CSCAN
    source /etc/profile
#
echo $SONAR_SCAN
echo $SONAR_CSCAN

#Runner  Command
shasum

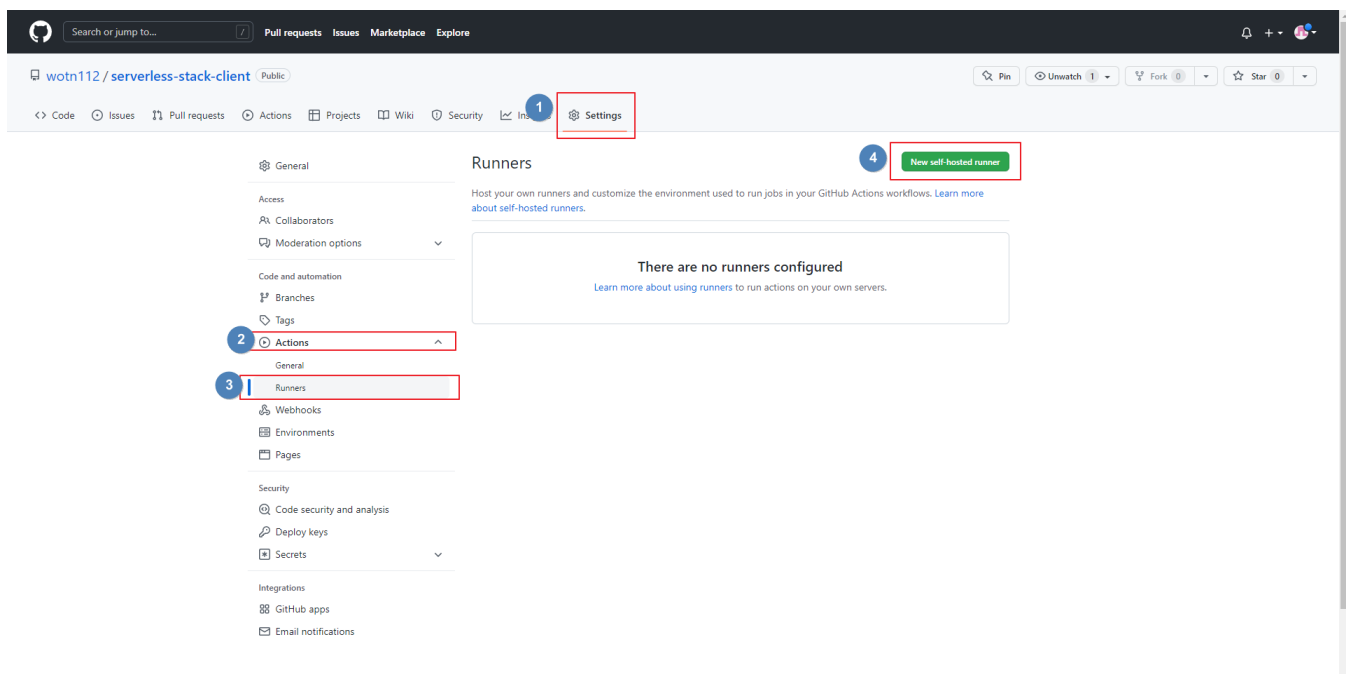
```

Github에 Self-hosted Runner 등록하기

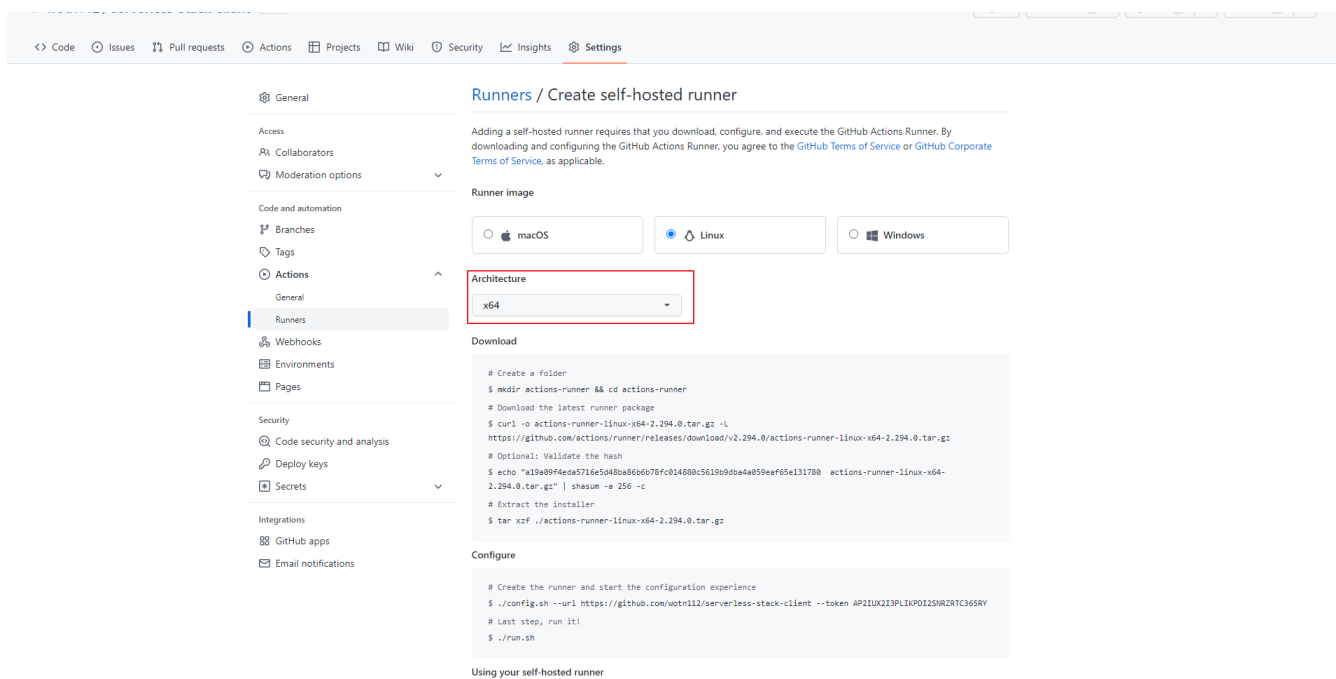
- Actions 권한 확인
Settings → Actions → General → Actions permissions



- 저장소 기준: 저장소 → Settings → Actions → Runner → New Self-hosted runner root로 실행불가



- Architecture : 해당 서버에서 `uname -m` 으로 확인 해당 페이지에 나오는 대로 명령어 입력



- name: sonar
- label: sonar

```
# Runner removal
Enter runner remove token: *****
http response code: Not Found from 'POST https://api.github.com/actions/runner-registration'
(message: "Not Found", "documentation url": "https://docs.github.com/rest")
Failed: Removing runner from the server
Response status code does not indicate success: 404 (Not Found).
[atlassian@jk actions-runner]$
[atlassian@jk actions-runner]$
[atlassian@jk actions-runner]$ ./config.sh remove -c
[atlassian@jk actions-runner]$ ./config.sh remove --token AP2IUXXHQNNWPC437VWIG53C4EHP4

# Runner removal

Runner removed successfully
Removed .credentials
Removed .runner

[atlassian@jk actions-runner]$ ./config.sh --url https://github.com/wotn112/sonarqubeCrunner --token AP2IUX73RWF2IBMEF78FDG3C4EHRM

-----
GitHub Actions
Self-hosted runner registration
-----

# Authentication
Connected to GitHub

# Runner Registration
Enter the name of the runner group to add this runner to: [press Enter for Default]
Enter the name of runner: [press Enter for jk] sonar
This runner will have the following labels: 'self-hosted', 'Linux', 'X64'
Enter any additional labels (ex. label-1,label-2): [press Enter to skip] sonar

Runner successfully added
Runner connection is good

# Runner settings
Enter name of work folder: [press Enter for _work]
Settings Saved.
[atlassian@jk actions-runner]$
```

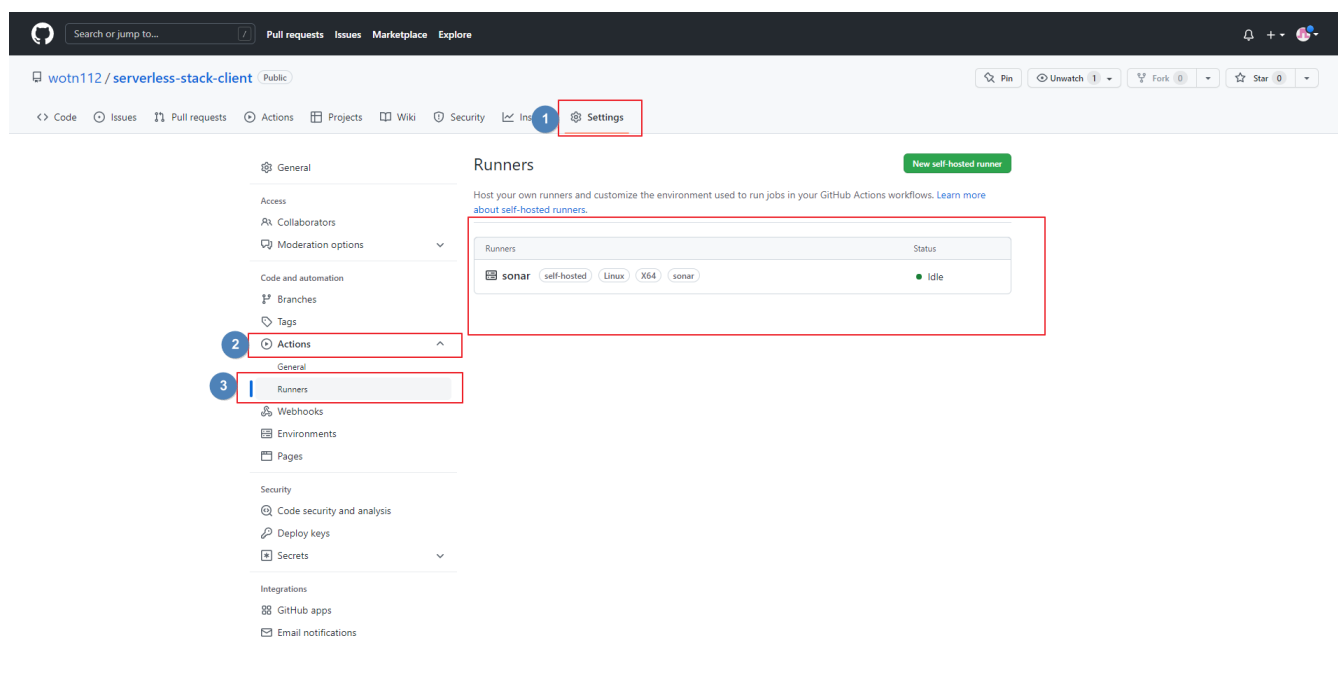
- 해당 서버에 `./run.sh` 실행(백그라운드 실행 시 `./run.sh &`)
- 서비스로 변경(`sudo ./svc.sh install USERNAME`)
- 시작(`sudo ./svc.sh start`)

```
[atlassian@jdk actions-runner]$ ./run.sh

✓ Connected to GitHub

Current runner version: '2.294.0'
2022-07-26 09:14:24Z: Listening for Jobs
```

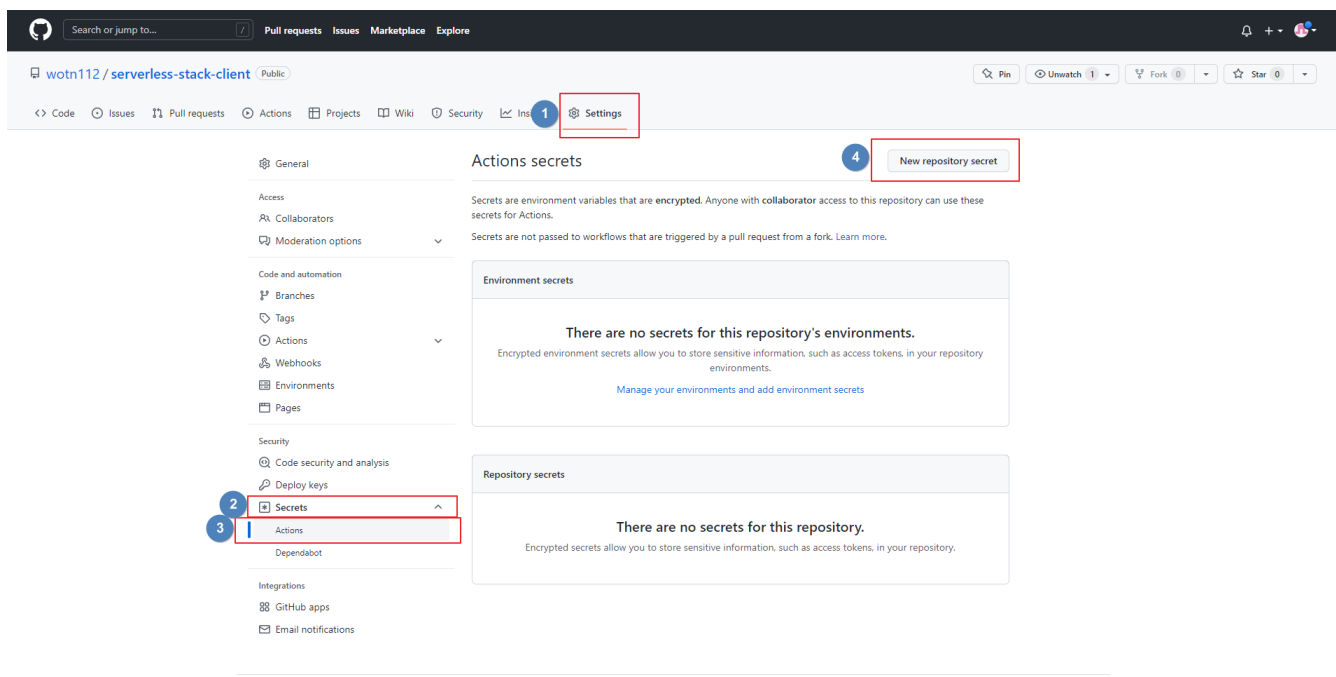
- Settings → Actions → Runners 에서 상태 확인



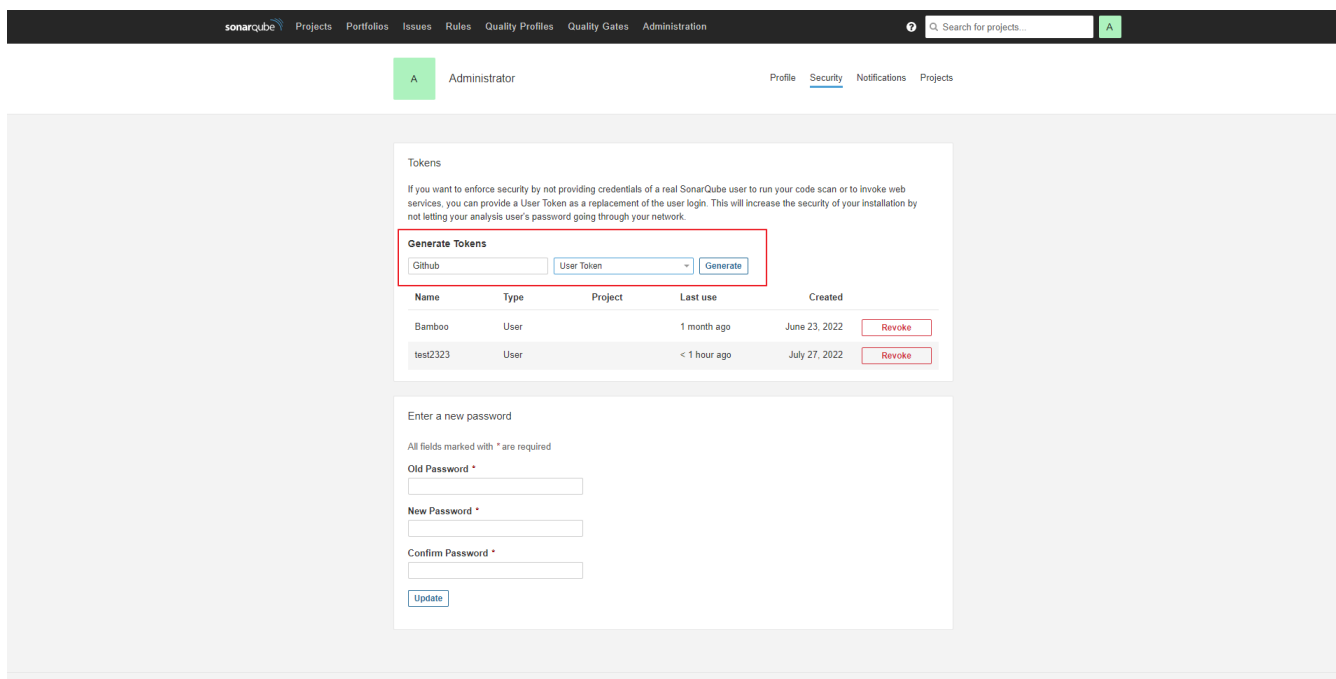
Github Action

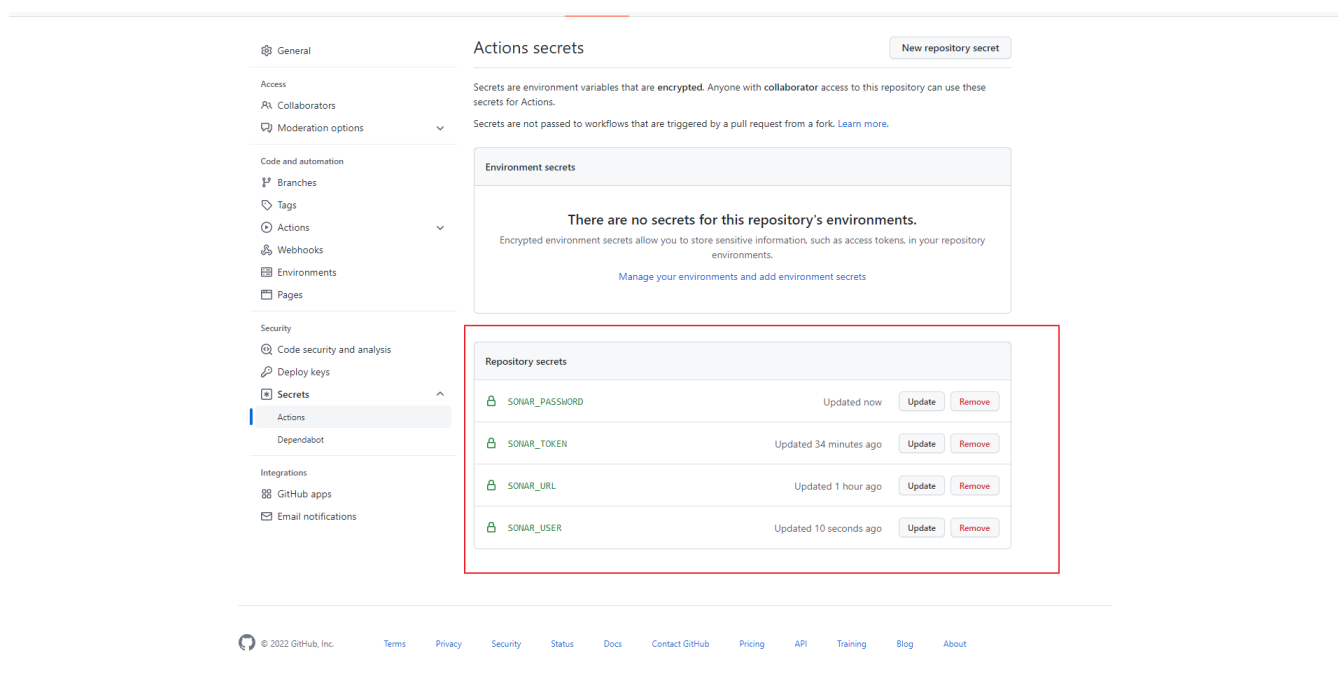
비밀키 생성하기

- Settings → Secrets → Actions → New repository secret 선택



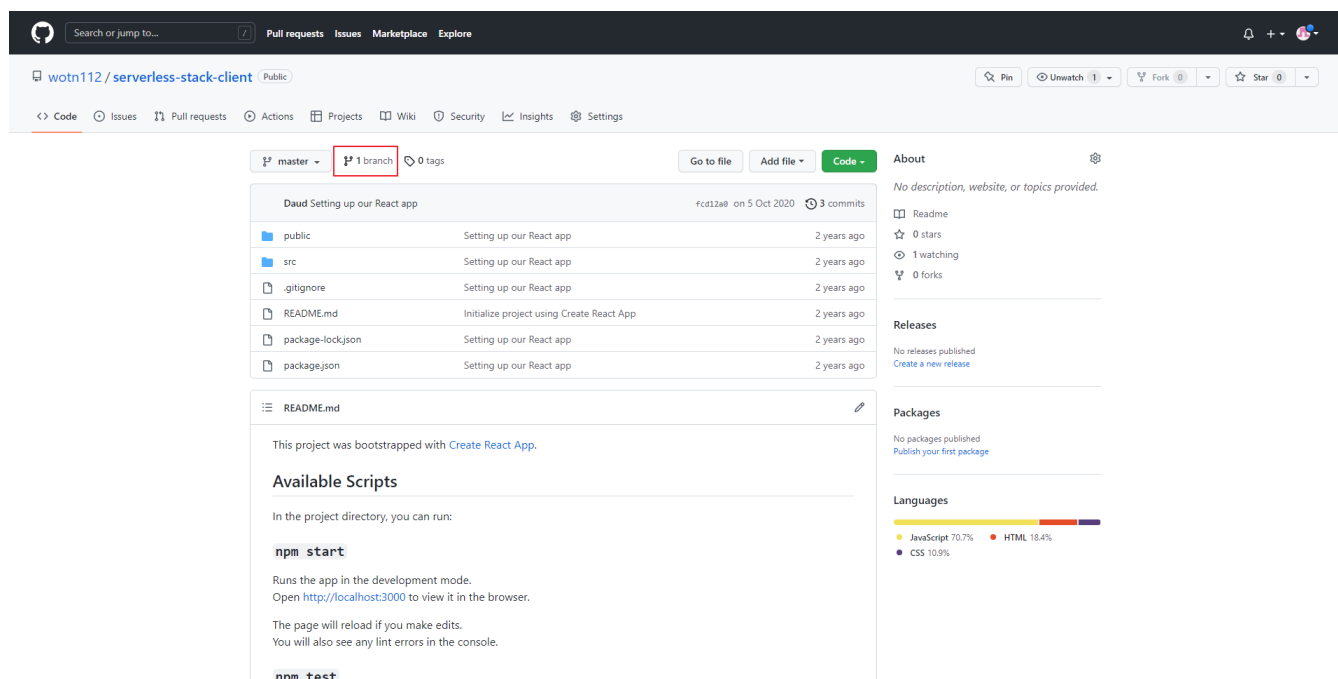
- SONAR_URL: sonarqube Url
- SONAR_TOKEN: sonarqube token
- SONAR_USER: sonarqube ID
- SONAR_PASSWORD: 해당 ID password



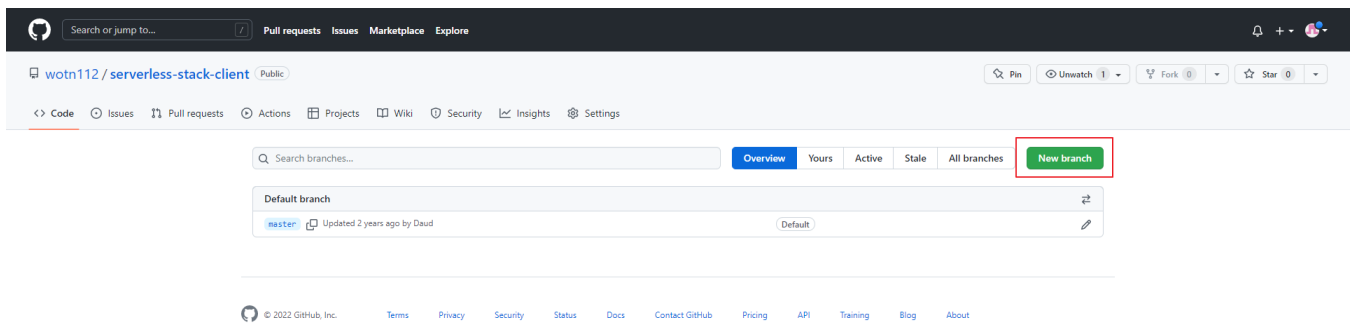


Sonarcube 용 Branch 생성

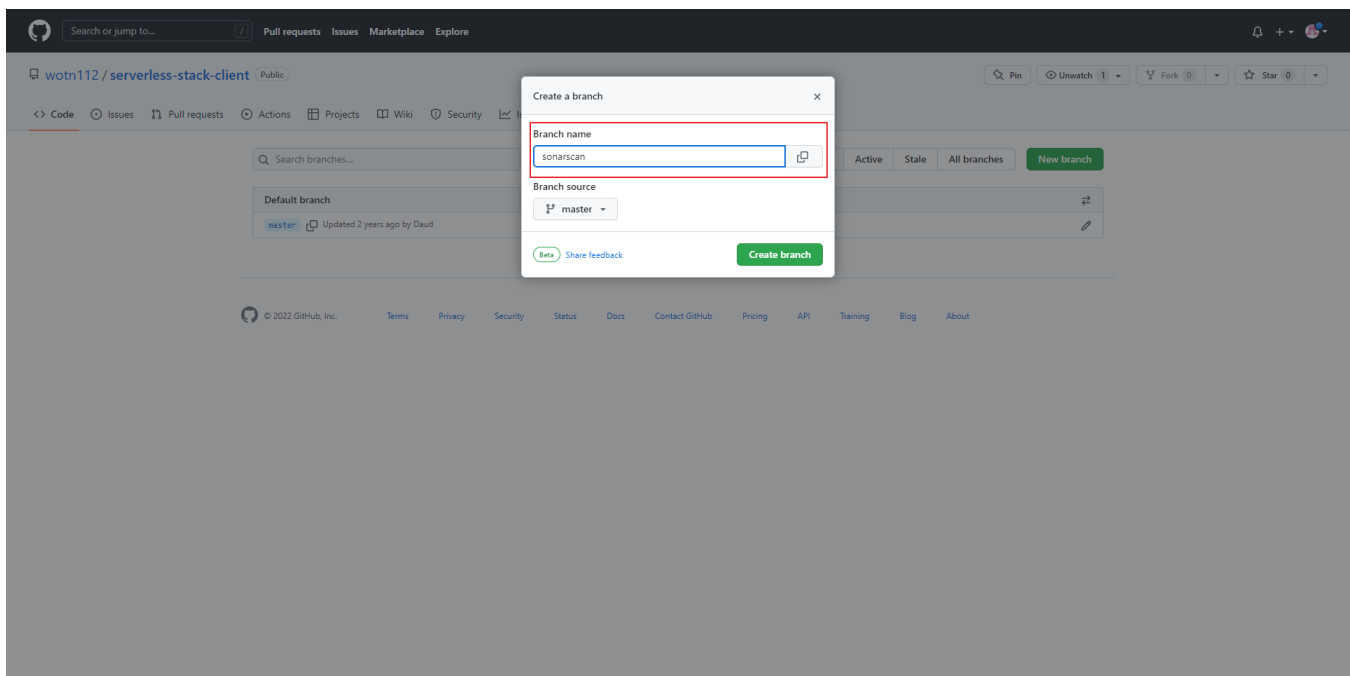
- 해당 저장소에서 branch 선택



- New Branch 선택

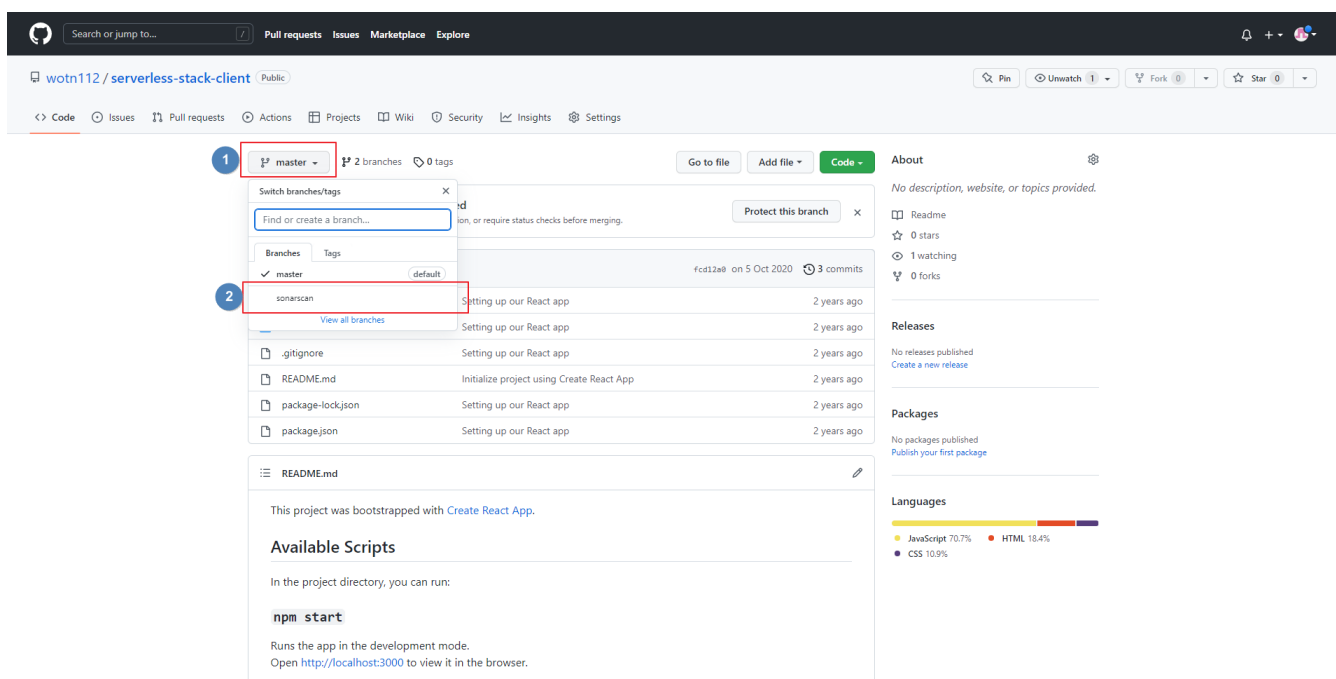


- Branch Name: sonarscan

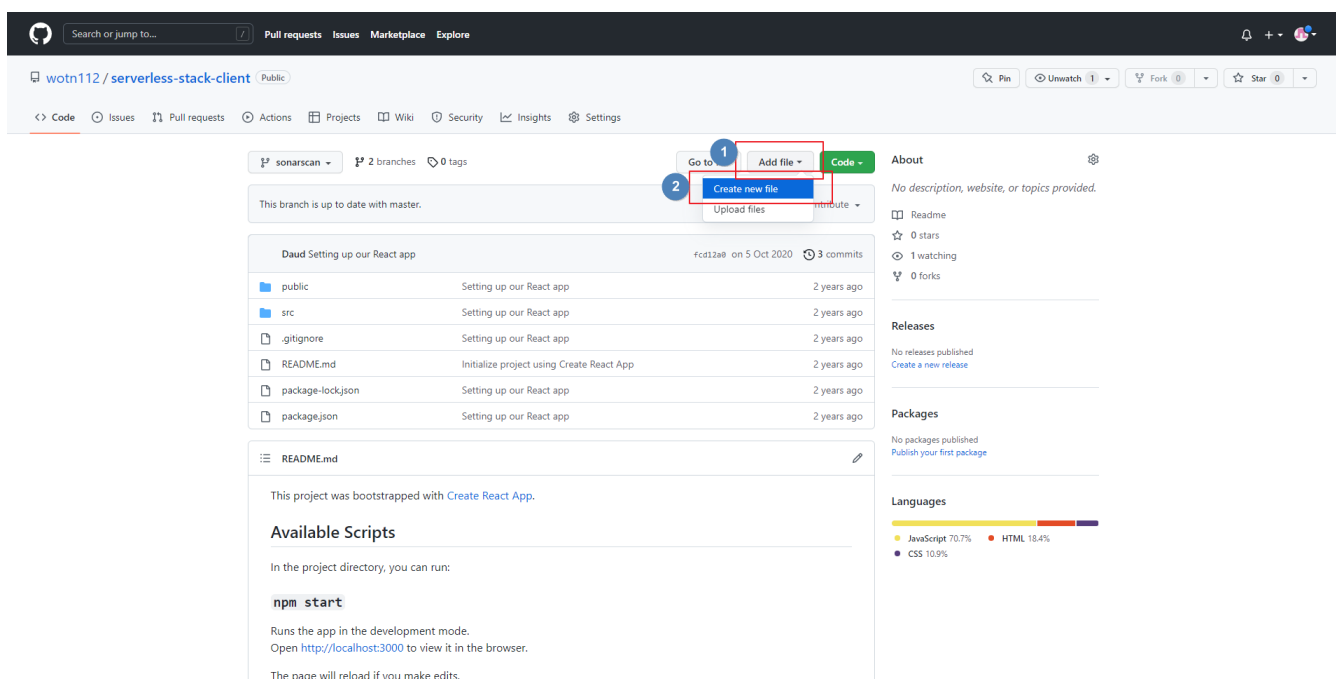


Workflow 생성

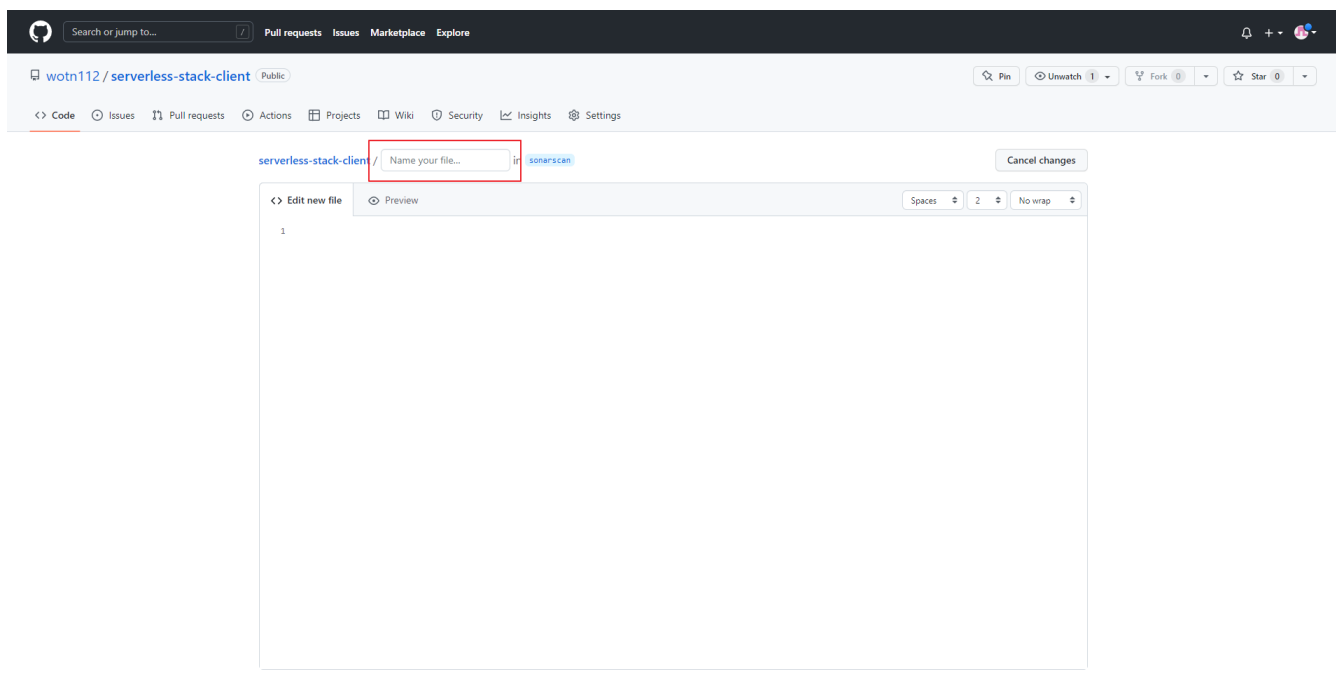
- 저장소에서 sonarscan Branch 선택



■ Add File → Create New file 선택



■ 해당 부분에 ".github/workflows/sonar.yml" 입력

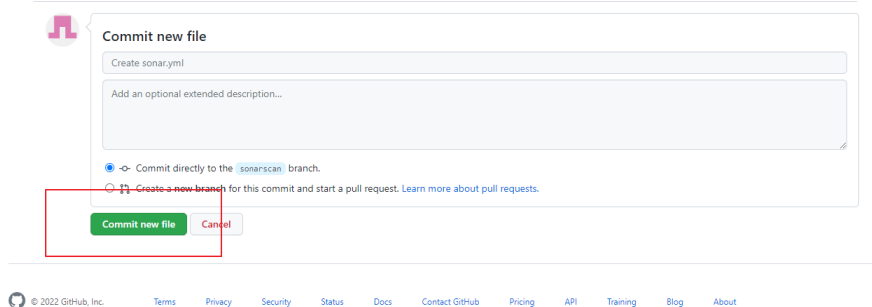


- 적용할 yml 파일 작성 후 commit new file(yml 내용은 아래 참조)

```

10 name: SonarQube Scan
11 runs-on: [self-hosted, sonar]
12 steps:
13   - uses: actions/checkout@v3
14   - name: Run sonarqube
15     run: |
16       $SONAR_SCANNER/bin/sonar-scanner
17       -Dsonar.projectKey=${GITHUB_REPOSITORY}
18       -Dsonar.sources=${GITHUB_WORKSPACE}
19       -Dsonar.sourceEncoding=UTF-8
20       -Dsonar.language=js
21       -Dsonar.host.url=${ secrets.SONAR_URL }
22       -Dsonar.login=${ secrets.SONAR_TOKEN }

```



Github 자체 Runner를 통해 Sonarqube를 사용하려는 경우 Sonarqube 서버와 Github 자체 Runner 가 통신 가능해야한다

Java Maven용 Action yml 파일

- Self-hosted Runner 사용 시

```
on:
  push:
    branches:
      - "sonarscan"
    paths:
      - ".github/workflows/sonar.yml"

name: SonarQube
env:
  MAVEN_HOME: /opt/maven
  SONAR_PROJECTKEY: maven
jobs:
  sonarQubeTrigger:
    name: SonarQube Scan
    runs-on: [self-hosted, sonar]
    steps:
      - uses: actions/checkout@v3
      - name: memory increase
        run: export MAVEN_OPTS="-Xmx512m"
      - name: Run sonarqube
        run: $MAVEN_HOME/bin/mvn sonar:sonar
          -Dsonar.host.url=${{ secrets.SONAR_URL }}
          -Dsonar.login=${{ secrets.SONAR_TOKEN }}
          -Dsonar.projectName=GITHUB_REPOSITORY
          -Dsonar.projectKey=$SONAR_PROJECTKEY
          -Dsonar.sourceEncoding=UTF-8
```

- Github 제공 Runner 사용 시

```

on:
  push:
    branches:
      - "sonarscan"
    paths:
      - ".github/workflows/sonar.yml"

name: SonarQube
env:
  MAVEN_HOME: /opt/maven
  SONAR_PROJECTKEY: maven
jobs:
  sonarQubeTrigger:
    name: SonarQube Scan
    runs-on: [self-hosted, sonar]
    steps:
      - uses: actions/checkout@v2
        with:
          fetch-depth: 0 # Shallow clones should be disabled for a better relevancy of analysis
      - name: Set up JDK 11
        uses: actions/setup-java@v1
        with:
          java-version: 11
      - name: Cache SonarQube packages
        uses: actions/cache@v1
        with:
          path: ~/.sonar/cache
          key: ${ runner.os }-sonar
          restore-keys: ${ runner.os }-sonar
      - name: Cache Maven packages
        uses: actions/cache@v1
        with:
          path: ~/.m2
          key: ${ runner.os }-m2-${ hashFiles('**/pom.xml') }
          restore-keys: ${ runner.os }-m2
      - name: Build and analyze
        env:
          SONAR_TOKEN: ${ secrets.SONAR_TOKEN }
          SONAR_HOST_URL: ${ secrets.SONAR_URL }
        run: mvn -B verify org.sonarsource.scanner.maven:sonar-maven-plugin:sonar
          -Dsonar.host.url=$SONAR_HOST_URL
          -Dsonar.login=$SONAR_TOKEN
          -Dsonar.projectName=$GITHUB_REPOSITORY
          -Dsonar.projectKey=$SONAR_PROJECTKEY
          -Dsonar.sourceEncoding=UTF-8

```

NodeJs용 Action yml 파일

- Self-hosted Runner 사용 시

```

on:
  push:
    branches:
      - "sonarscan"
    paths:
      - ".github/workflows/sonar.yml"

name: SonarQube
env:
  SONAR_SCAN: /opt/sonar-scan
  SONAR_PROJECTKEY: nodejs
jobs:
  sonarQubeTrigger:
    name: SonarQube Scan
    runs-on: [self-hosted, sonar]
    steps:
      - uses: actions/checkout@v3
      - name: memory increase
        run: export SONAR_SCANNER_OPTS="-Xmx512m"
      - name: Run sonarqube
        run: $SONAR_SCAN/bin/sonar-scanner
          -Dsonar.projectBaseDir="${GITHUB_WORKSPACE}/src"
          -Dsonar.host.url=${{ secrets.SONAR_URL }}
          -Dsonar.login=${{ secrets.SONAR_USER }}
          -Dsonar.password=${{ secrets.SONAR_PASSWORD }}
          -Dsonar.projectName=GITHUB_REPOSITORY
          -Dsonar.projectKey=$SONAR_PROJECTKEY
          -Dsonar.sources=GITHUB_WORKSPACE
          -Dsonar.sourceEncoding=UTF-8
          -Dsonar.language=js

```

- Github 제공 Runner 사용 시


```

on:
  push:
    branches:
      - "sonarscan"
    paths:
      - ".github/workflows/sonar.yml"

name: SonarQube
env:
  SONAR_PROJECTKEY: nodejs
jobs:
  sonarQubeTrigger:
    name: SonarQube Scan
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3
      - name: SonarQube Scan
        uses: sonarsource/sonarqube-scan-action@master
        env:
          SONAR_TOKEN: ${ secrets.SONAR_TOKEN }
          SONAR_HOST_URL: ${ secrets.SONAR_URL }
    with:
      projectBaseDir: ./src
      args: >
        -Dsonar.projectName=GITHUB_REPOSITORY
        -Dsonar.projectKey=$SONAR_PROJECTKEY
        -Dsonar.sourceEncoding=UTF-8
        -Dsonar.language=js

```

C/C++/Objective-C용 Action yml 파일

 CFamily의 경우 먼저 Build가 되어야한다

▪ Self-hosted Runner 사용 시

```
on:
  push:
    branches:
      - "sonarscan"
    paths:
      - ".github/workflows/sonar.yml"

name: SonarQube
env:
  SONAR_PROJECTKEY: cfamily
  SONAR_CSCAN: /opt/build-wrapper
  SONAR_SCAN: /opt/sonar-scan/
jobs:
  sonarQubeTrigger:
    name: SonarQube Scan
    runs-on: [self-hosted, sonar]
    steps:
      - uses: actions/checkout@v3
      - name: create property file
        run: |
          echo "sonar.host.url=${{ secrets.SONAR_URL }}" >> sonar-project.properties
          echo "sonar.login=${{ secrets.SONAR_TOKEN }}" >> sonar-project.properties
          echo "sonar.projectKey=$SONAR_PROJECTKEY" >> sonar-project.properties
          echo "sonar.projectName=$GITHUB_REPOSITORY" >> sonar-project.properties
          echo "sonar.sources=$GITHUB_WORKSPACE" >> sonar-project.properties
          echo "sonar.cfamily.build-wrapper-output=${GITHUB_WORKSPACE}/build" >> sonar-project.properties
          echo "sonar.sourceEncoding=UTF-8" >> sonar-project.properties
      - name: build sonarqube
        run: |
          mkdir build
          cmake -S . -B build
          $SONAR_CSCAN/build-wrapper-linux-x86-64 --out-dir ${GITHUB_WORKSPACE}/build cmake --build build/ --
          config Release
      - name: scanner start
        run: $SONAR_SCAN/bin/sonar-scanner
```

• Github 제공 Runner 사용 시

```

on:
  push:
    branches:
      - "sonarscan"
  paths:
    - ".github/workflows/sonar.yml"

name: SonarQube
env:
  SONAR_PROJECTKEY: cFamily
jobs:
  Sonarscan:
    name: Build
    runs-on: ubuntu-latest
    env:
      SONAR_SCANNER_VERSION: 4.7.0.2747
      SONAR_SERVER_URL: ${ secrets.SONAR_URL }
      BUILD_WRAPPER_OUT_DIR: sonar_build
      SONAR_PROJECTKEY: cFamily
    steps:
      - uses: actions/checkout@v2
        with:
          fetch-depth: 0 # Shallow clones should be disabled for a better relevancy of analysis
      - name: Set up JDK 11
        uses: actions/setup-java@v1
        with:
          java-version: 11
      - name: Download and set up sonar-scanner
        env:
          SONAR_SCANNER_DOWNLOAD_URL: https://binaries.sonarsource.com/Distribution/sonar-scanner-cli/sonar-scanner-cli-${ env.SONAR_SCANNER_VERSION }-linux.zip
        run: |
          mkdir -p $HOME/sonar
          curl -sSLo "$HOME/sonar/sonar-scanner.zip" ${ env.SONAR_SCANNER_DOWNLOAD_URL }
          unzip -o "$HOME/sonar/sonar-scanner.zip" -d $HOME/sonar/
          echo "$HOME/sonar/sonar-scanner-${ env.SONAR_SCANNER_VERSION }-linux/bin" >> $GITHUB_PATH
      - name: Download and set up build-wrapper
        env:
          BUILD_WRAPPER_DOWNLOAD_URL: ${ env.SONAR_SERVER_URL }/static/cpp/build-wrapper-linux-x86.zip
        run: |
          curl -sSLo $HOME/sonar/build-wrapper-linux-x86.zip ${ env.BUILD_WRAPPER_DOWNLOAD_URL }
          unzip -o $HOME/sonar/build-wrapper-linux-x86.zip -d $HOME/sonar/
          echo "$HOME/sonar/build-wrapper-linux-x86" >> $GITHUB_PATH
      - name: create property file
        run: |
          echo "sonar.host.url=${ secrets.SONAR_URL }" >> sonar-project.properties
          echo "sonar.login=${ secrets.SONAR_TOKEN }" >> sonar-project.properties
          echo "sonar.projectKey=$SONAR_PROJECTKEY" >> sonar-project.properties
          echo "sonar.projectName=$GITHUB_REPOSITORY" >> sonar-project.properties
          echo "sonar.sources=$GITHUB_WORKSPACE" >> sonar-project.properties
          echo "sonar.cfamily.build-wrapper-output=${GITHUB_WORKSPACE}/build" >> sonar-project.properties
          echo "sonar.sourceEncoding=UTF-8" >> sonar-project.properties
      - name: Run build-wrapper
        run: |
          mkdir ${ env.BUILD_WRAPPER_OUT_DIR }
          cmake -S . -B ${ env.BUILD_WRAPPER_OUT_DIR }
          build-wrapper-linux-x86-64 --out-dir ${ env.BUILD_WRAPPER_OUT_DIR } cmake --build build/ --config Release
      - name: Run sonar-scanner
        run: sonar-scanner

```

확인

- Actions → All workflows 에 해당 작업의 성공여부를 확인 할 수 있다

Workflow run deleted successfully.

wotn112 / sonarqubeCrunner Public

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All workflows

Build

SonarQube

Tell us how to make GitHub Actions work better for you with three quick questions. [Give feedback](#)

All workflows

Showing runs from all workflows

Filter workflow runs

1 workflow run

Update sonar.yml
SonarQube #4: Commit f16e20 pushed by wotn112

sonarscan

31 minutes ago
3%

<https://github.com/wotn112/sonarqubeCrunner/actions/runs/2745045553>

Branch 삭제

- 해당 작업을 완료한 후 해당 Branch를 삭제하고자 하는 경우
Branch 선택 → 삭제하고자 하는 Branch 오른쪽 휴지통 선택

wotn112 / sonarqubeCrunner Public

Code Issues Pull requests Actions **Projects** Wiki Security Insights Settings

sonarscan had recent pushes 15 minutes ago [Compare & pull request](#)

main 3 branches 0 tags [Go to file](#) [Add file](#) [Code](#)

Your main branch isn't protected
Protect this branch from force pushing, deletion, or require status checks before merging. [Protect this branch](#)

SonarTech up the date to retrigger analysis 73d38cb 2 days ago 100 commits

.github/workflows	Replace token	3 months ago
src	Add coverage	3 months ago
.gitattributes	Add code and boilerplate files	14 months ago
.gitignore	Ignore XCode stuff	14 months ago
CMakeLists.txt	Add coverage	3 months ago
README.adoc	Go back to the default section tag	3 months ago
examples-structure.adoc	Updated github links v2	13 months ago
sonar-project.properties	stray indent	3 months ago
update-date.txt	up the date to retrigger analysis	2 days ago

README.adoc

About

No description, website, or topics provided.

Readme

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0 forks

Releases

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Contributors 4

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tomasz-kaminski-sonarsource

amelie-renard-sonarsource Amélie Ren...

geoffray-adde-sonarsource

<https://github.com/wotn112/sonarqubeCrunner/branches>

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Overview Yours Active Stale All branches New branch

Default branch

main Updated 2 days ago by SonarTech Default

Your main branch isn't protected
Protect this branch from force pushing, deletion, or require status checks before merging. Dismiss Protect this branch

Your branches

Branch	Updated	By	0 9	New pull request	
sonarscan	Updated 16 minutes ago	wotn112	0 9	New pull request	
geoffray/coverage_conf_after_config	Updated 3 months ago	geoffray-adde-sonarsource	15 4	New pull request	

Active branches

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참조 링크

Sonarqube

- [Sonarqube Doc-Maven scanner](#)
- [Sonarqube Doc-JS, CSS scanner](#)
- [Sonarqube Doc-Cfmaily scanner](#)

Github

- [Github Doc-Self_hosted_runner](#)
- [Github Doc-Workflow](#)