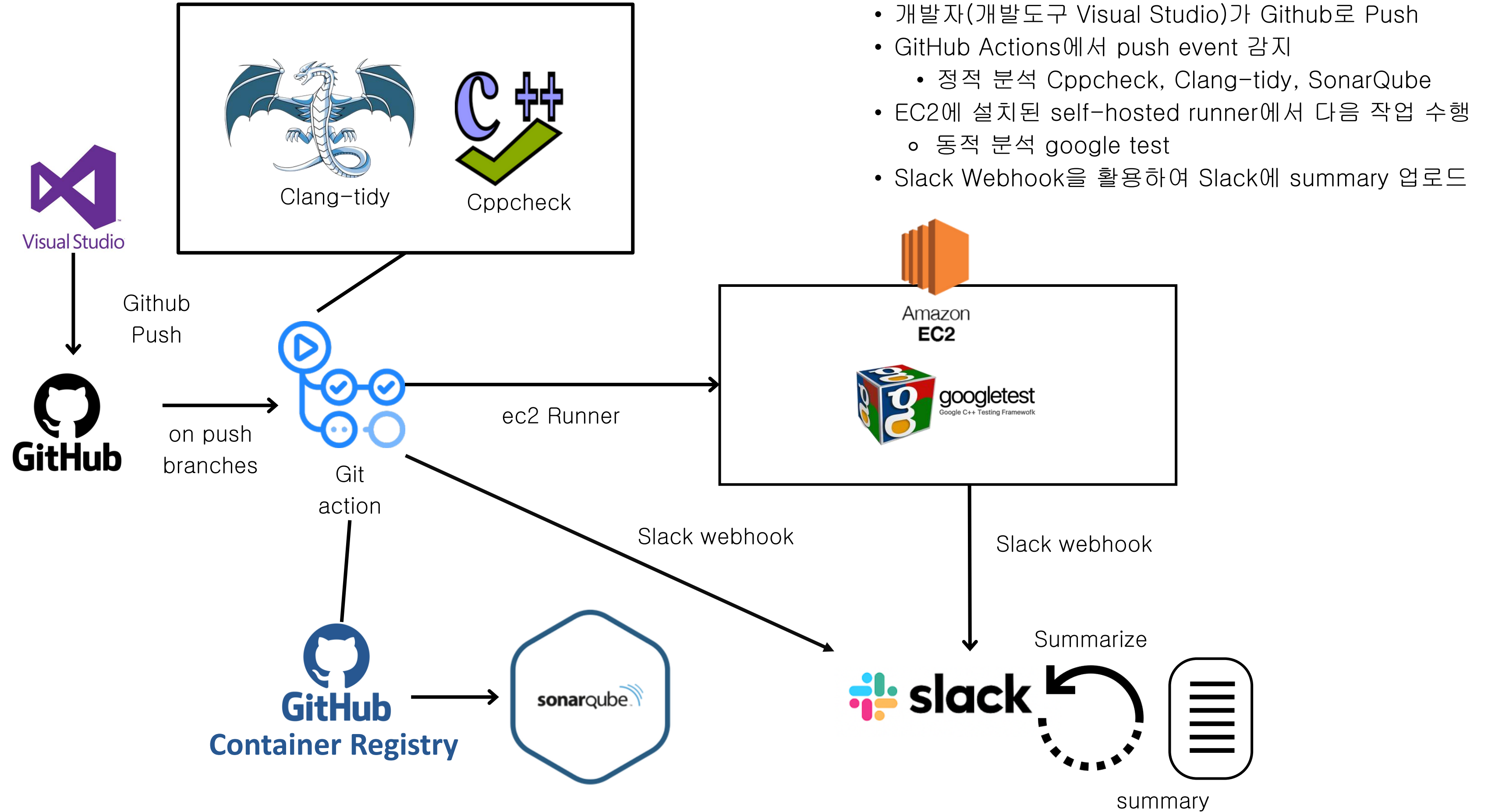


Software Testing and Analysis

CTIP 환경 구축

CTIP 환경 구조



- 개발자(개발도구 Visual Studio)가 Github로 Push
- GitHub Actions에서 push event 감지
 - 정적 분석 Cppcheck, Clang-tidy, SonarQube
- EC2에 설치된 self-hosted runner에서 다음 작업 수행
 - 동적 분석 google test
- Slack Webhook을 활용하여 Slack에 summary 업로드

EC2와 Github Action 연동

Github action 스크립트

```
- name: Run Cppcheck
run: |
  cppcheck --enable=all --inconclusive --std=c++17 . 2> cppcheck_result.txt || true
  echo '```' > cppcheck_summary.txt
  head -n 30 cppcheck_result.txt >> cppcheck_summary.txt
  echo '```' >> cppcheck_summary.txt
continue-on-error: true
```

cppcheck

```
- name: Run Clang-Tidy
run: |
  find ./src -name '*.cpp' > file_list.txt
  clang-tidy @file_list.txt -- -I./include > clang_tidy_result.txt || true
  echo '```' > clang_tidy_summary.txt
  head -n 30 clang_tidy_result.txt >> clang_tidy_summary.txt
  echo '```' >> clang_tidy_summary.txt
continue-on-error: true
```

Clang-tidy

```
- name: SonarCloud 분석
run: |
  TAG=$(git rev-parse --short HEAD)
  docker run --rm \
  -e SONAR_TOKEN=${{ secrets.SONAR_TOKEN }} \
  -v "${{ github.workspace }}:/usr/src" \
  sonar-scanner-image \
  -Dsonar.projectKey=${{ secrets.YOUR_ORG_YOUR_PROJECT }} \
  -Dsonar.organization=${{ secrets.YOUR_ORG }} \
  -Dsonar.cfamilly.compile-commands=bw-output/compile_commands.json \
  -Dsonar.sources=. \
  -Dsonar.host.url=https://sonarcloud.io \
  -Dsonar.cfamilly.build-wrapper-output=bw-output \
  -Dsonar.projectVersion=$TAG
```

SonarCube

```
Enter the name of the runner group to add this runner to: [press Enter for Default] ec2-runner
Could not find any self-hosted runner group named "ec2-runner".
ubuntu@ip-172-31-23-160:~/actions-runner$ ./config.sh --url https://github.com/saetu0422/CICD --token AT2JFEJ7CBM22GWHM5GWGYDIACZHY

-----
Github Actions
Self-hosted runner registration
-----

Authentication

Connected to GitHub

Runner Registration

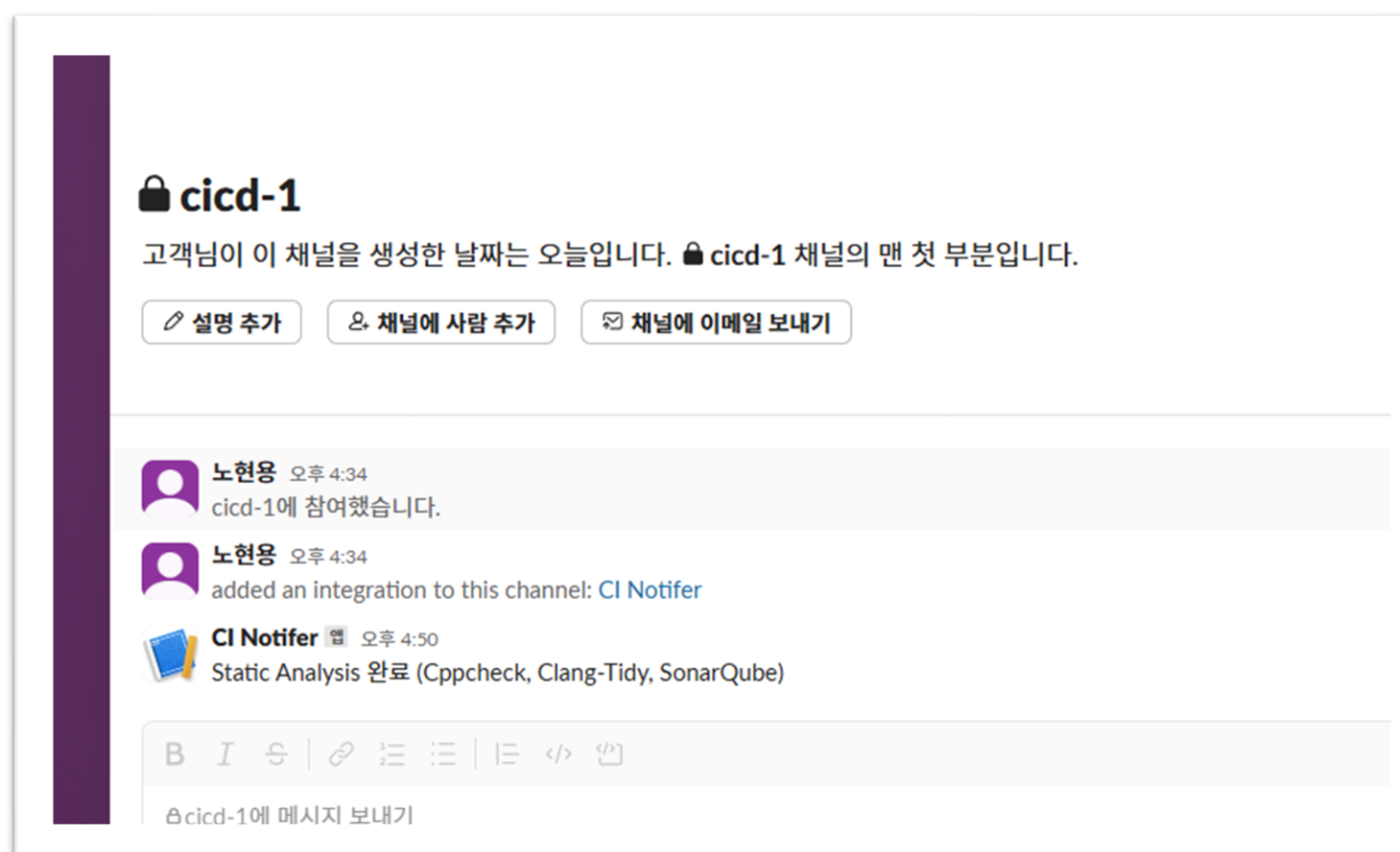
Enter the name of the runner group to add this runner to: [press Enter for Default]

Enter the name of runner: [press Enter for ip-172-31-23-160] ec2-runner

This runner will have the following labels: 'self-hosted', 'Linux', 'X64'
Enter any additional labels (ex. label-1,label-2): [press Enter to skip]

Runner successfully added
```

Webhook을 이용한 Slack



감사합니다