



CTIP 환경

TEAM 3

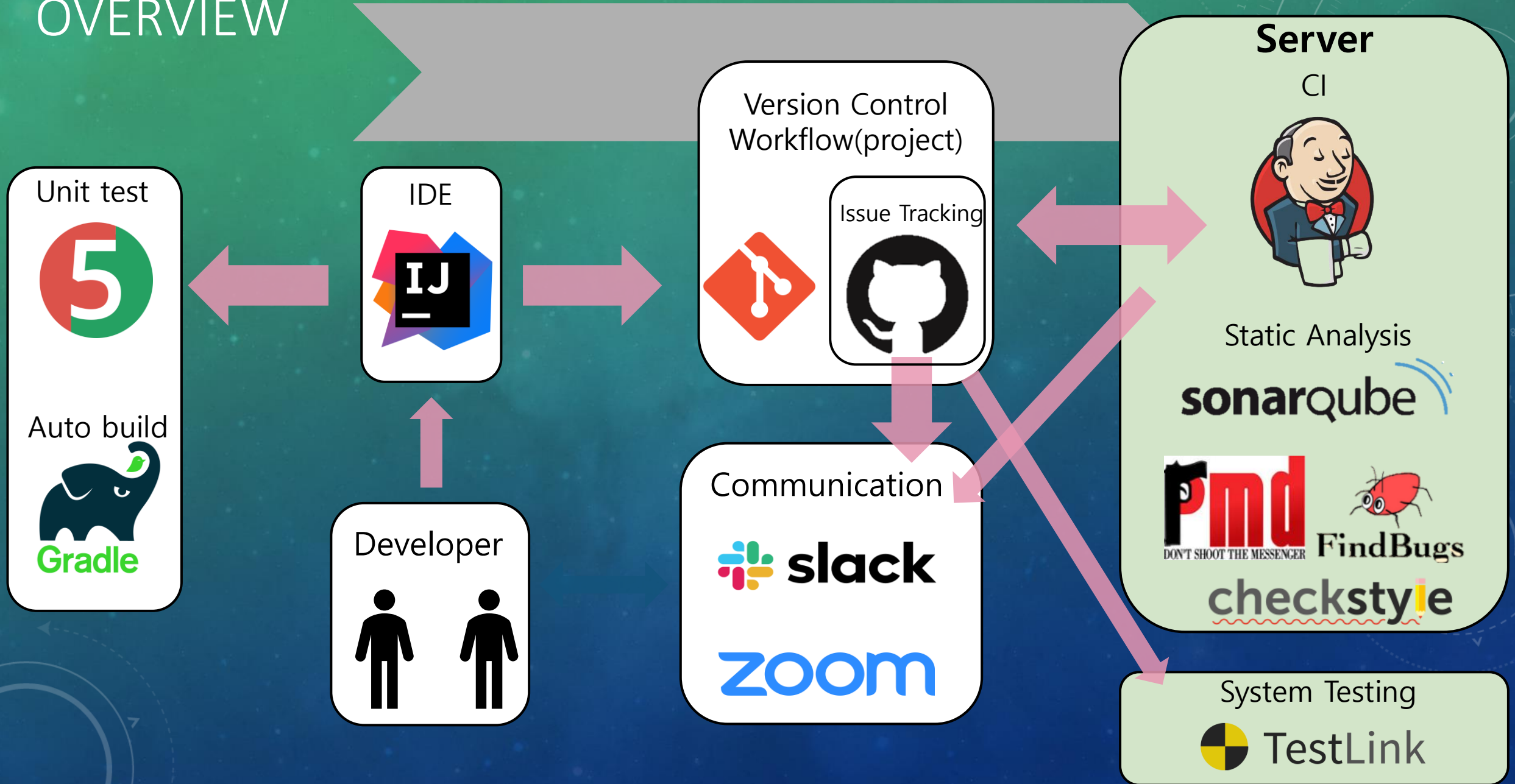
201611262 박동현

201611263 박성호

201611264 박현우

201611272 안찬우

OVERVIEW



SONARQUBE

1. 도커 컨테이너로 서비스



```
$ sudo docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
175396eb2b48  sonarqube     "bin/run.sh bin/sona..." 3 weeks ago   Up 15 hours   0.0.0.0:9111->9000/tcp, :::9111->9000/tcp  sonarqube
```

2. Jenkins와 연동

Analysis properties 작성

플러그인 설치

사용가능	이름 ↓	버전	이전 설치 버전	설치 제거
<input checked="" type="checkbox"/>	Credentials This plugin allows you to store credentials in Jenkins.	2.3.15		설치 제거
<input checked="" type="checkbox"/>	Plain Credentials Plugin Allows use of plain strings and files as credentials.	1.7		설치 제거
<input checked="" type="checkbox"/>	SonarQube Scanner for Jenkins This plugin allows an easy integration of SonarQube , the open source platform for Continuous Inspection of code quality.	2.13		설치 제거

Execute SonarQube Scanner

Task to run

JDK
(Inherit From Job)

JDK to be used for this SonarQube analysis

Path to project properties

Analysis properties

```
sonar.projectKey = software-v-v
sonar.projectName = software-v-v
sonar.login=admin
sonar.password=admin
sonar.host.url = http://localhost:9111/
sonar.sources=src/main/java
sonar.tests=src/test/java
sonar.projectVersion=1.0
sonar.sourceEncoding=UTF-8
sonar.java.binaries=build/classes
```

PMD



기본 제공 규칙 세트를 사용하거나
몇개를 골라내서
사용자 지정 규칙을 작성할 수 있음

1. SonarQube에 플러그인 Install

Plugins

Plugins available in the MarketPlace are not provided or supported by SonarSource. Please reach out directly to their maintainers for support.

All Installed Updates Only

PMD EXTERNAL ANALYSERS	3.3.1 installed	Homepage Issue Tracker	Uninstall
Analyze Java code with PMD. Licensed under GNU LGPL 3			

1 shown

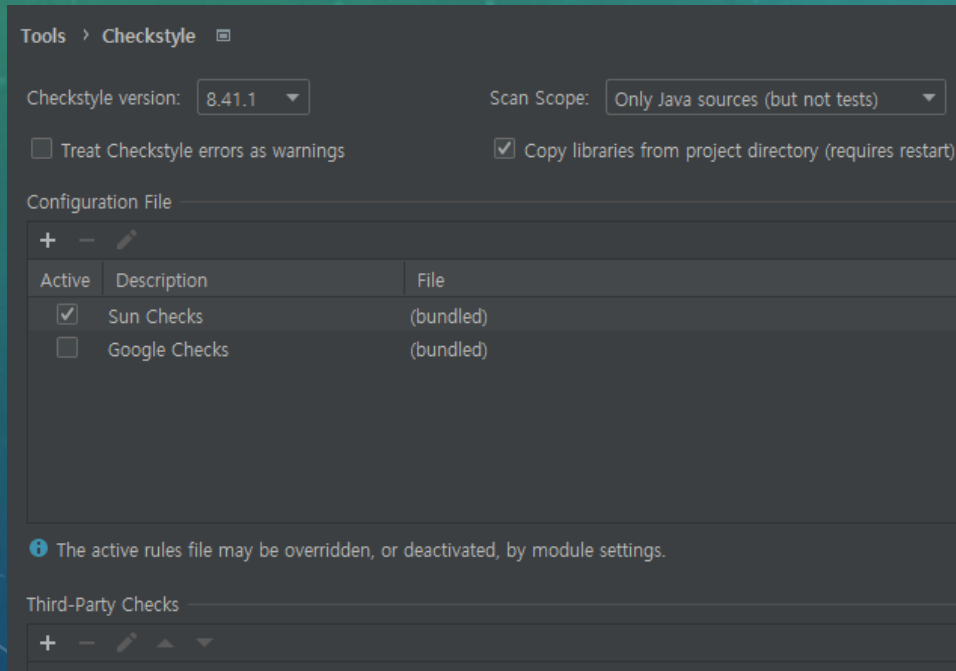
2. 분석 필터에 PMD 추가됨

The screenshot shows the SonarQube interface with the 'Rules' tab selected. The left sidebar shows a list of filters, with 'Repository PMD' highlighted. The main content area displays a list of rules, including 'Abstract Class Without Abstract Method', 'Abstract class without any methods', 'Abstract naming', 'Accessor Class Generation', 'Add Empty String', 'Android - call super first', 'Android - call super last', 'Android - Do Not Hard Code SD Card', 'Append Character With Char', 'Assignment In Operand', 'Assignment To Non Final Static', 'At Least One Constructor', 'Avoid Accessibility Alteration', 'Avoid Array Loops', 'Avoid Assert As Identifier', 'Avoid Branching Statement As Last In Loop', 'Avoid Calling Finalize', 'Avoid Catching Generic Exception', 'Avoid Catching NPE', 'Avoid Catching Throwable', 'Avoid Constants Interface', 'Avoid Decimal Literals In Big Decimal Constructor', 'Avoid Deeply Nested If Stmts', 'Avoid Duplicate Literals', 'Avoid Enum As Identifier', 'Avoid Final Local Variable', 'Avoid Instanceof Checks In Catch Clause', 'Avoid Instantiating objects in loops', 'Avoid Literals In If Condition', 'Avoid Losing Exception Information', and 'Avoid Multiple Unary Operators'. Many rules are marked as 'DEPRECATED'.

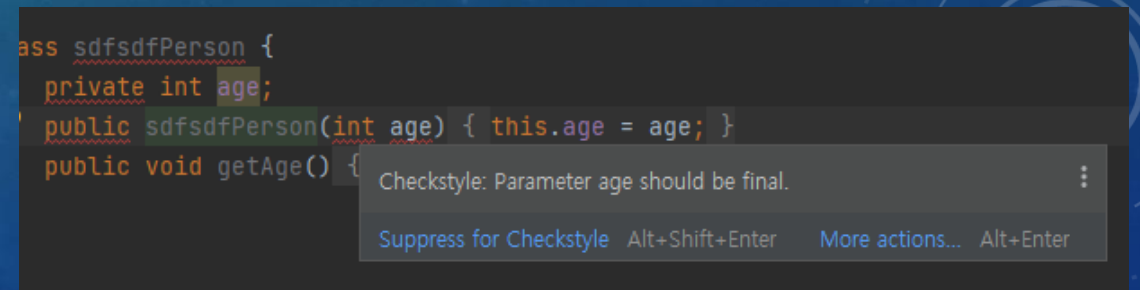
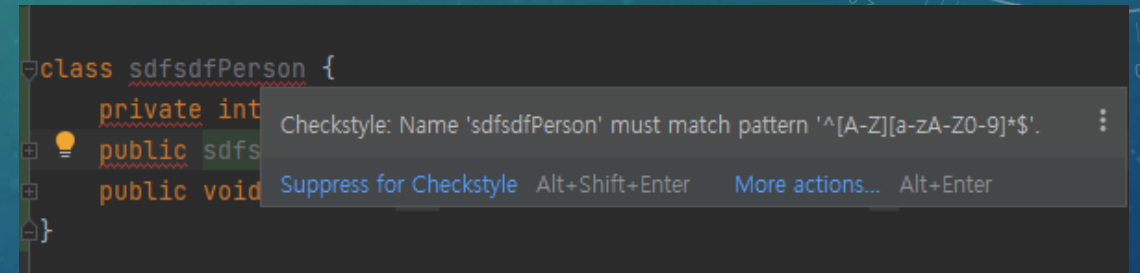
CHECKSTYLE

- 정해진 규칙(Google, Sun ...)에 따라 코딩 스타일을 강제
 - SonarQube, IDE 차원에서 규제

IDE 설정

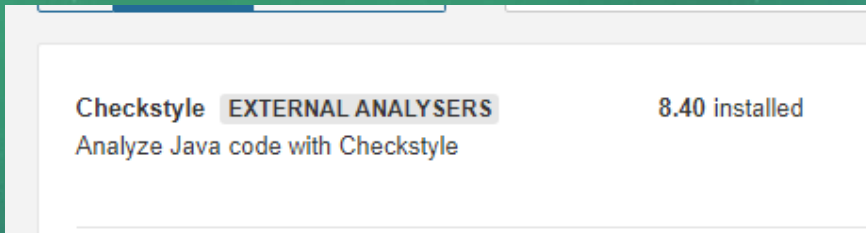


Checkstyle 작동 확인

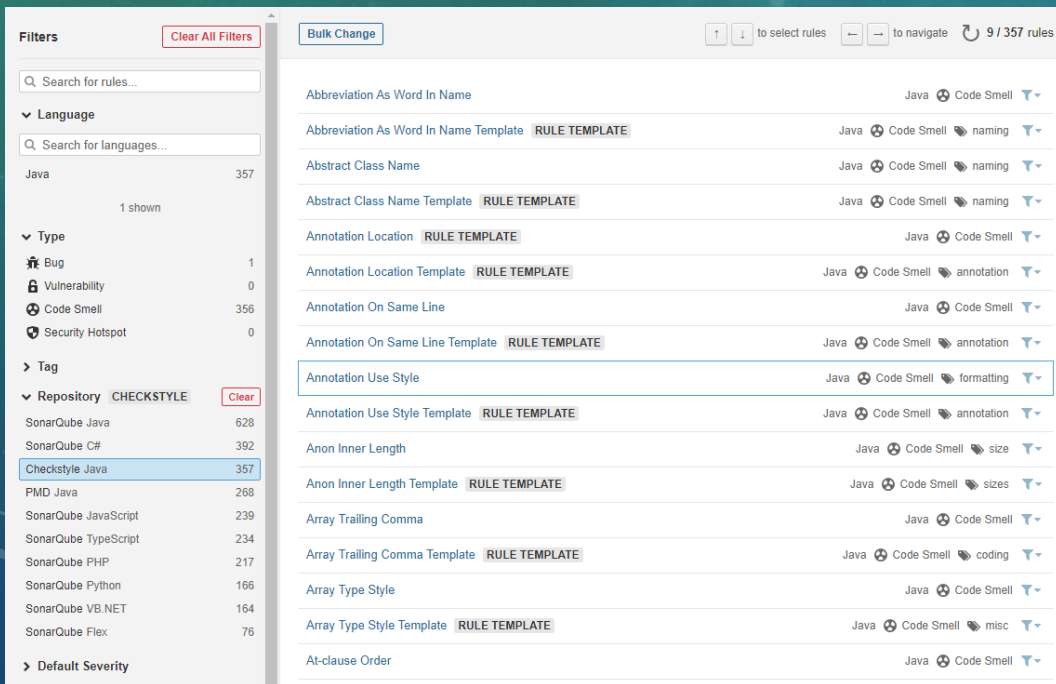


CHECKSTYLE : SONARQUBE

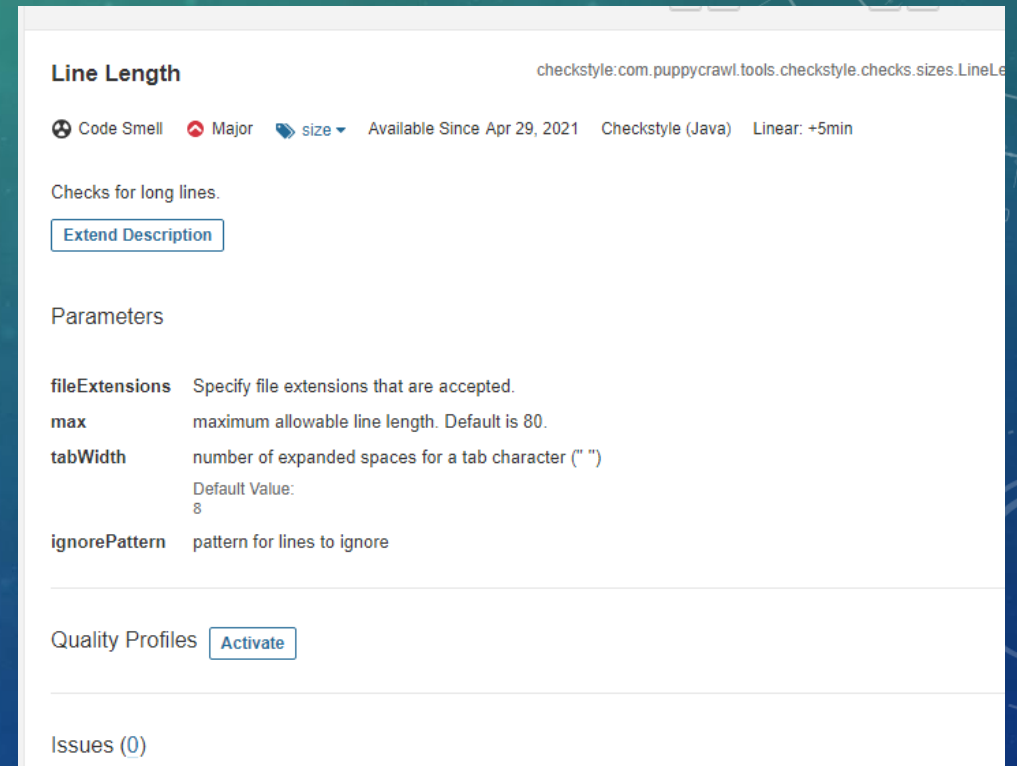
Plugin(installed)



필터에 CheckStyle 추가됨



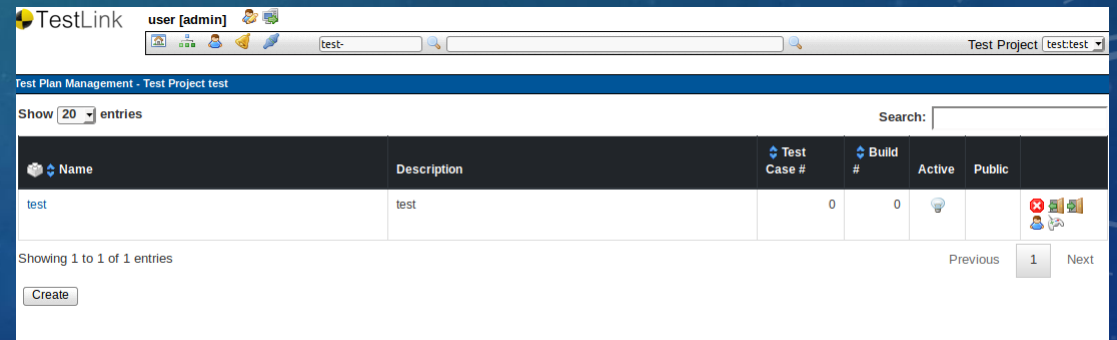
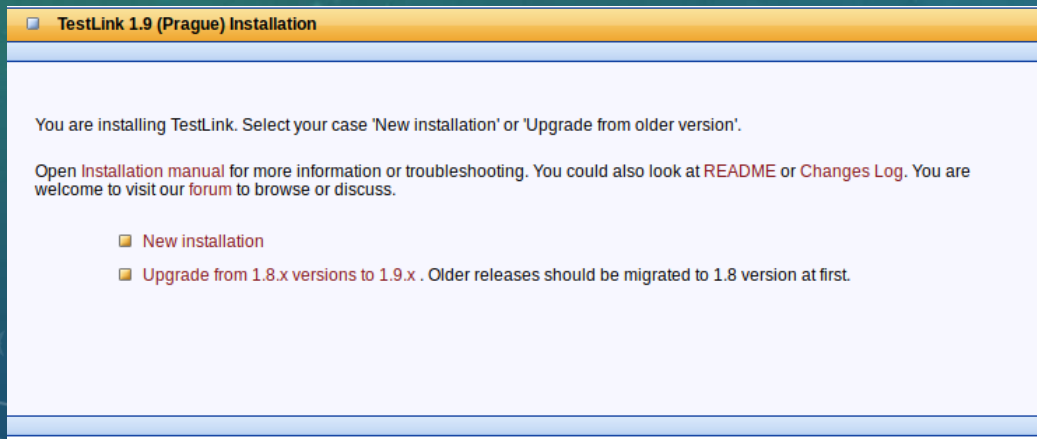
규칙 예시



SYSTEM TESTING : TestLink

- Chart 등의 사용으로 simple하다는 장점. 무료
- Document가 많고, 쉽게 습득할 수 있으며, trouble shooting에 있어서도 정보가 가장 많다.

TestLink구성에 필요한 Apache, DB(MYSQL), php 설치 후,
TestLink를 apache에 올려 웹 브라우저로 접속하여 편하게 설치가능



SYSTEM TESTING:



TestLink with Jenkins



TestLink 플러그인 설치

<input checked="" type="checkbox"/>	JUnit Plugin Allows JUnit-format test results to be published.	1.49	설치 제거
<input checked="" type="checkbox"/>	TestLink Plugin This plugin integrates Jenkins and TestLink. <p>Warning: The currently installed plugin version may not be safe to use. Please review the following security notices:</p> <ul style="list-style-type: none">• Credentials stored in plain text	3.16	설치 제거

This plugin is up for adoption! We are looking for new maintainers. Visit our [Adopt a Plugin](#) initiative for more information.

설치확인

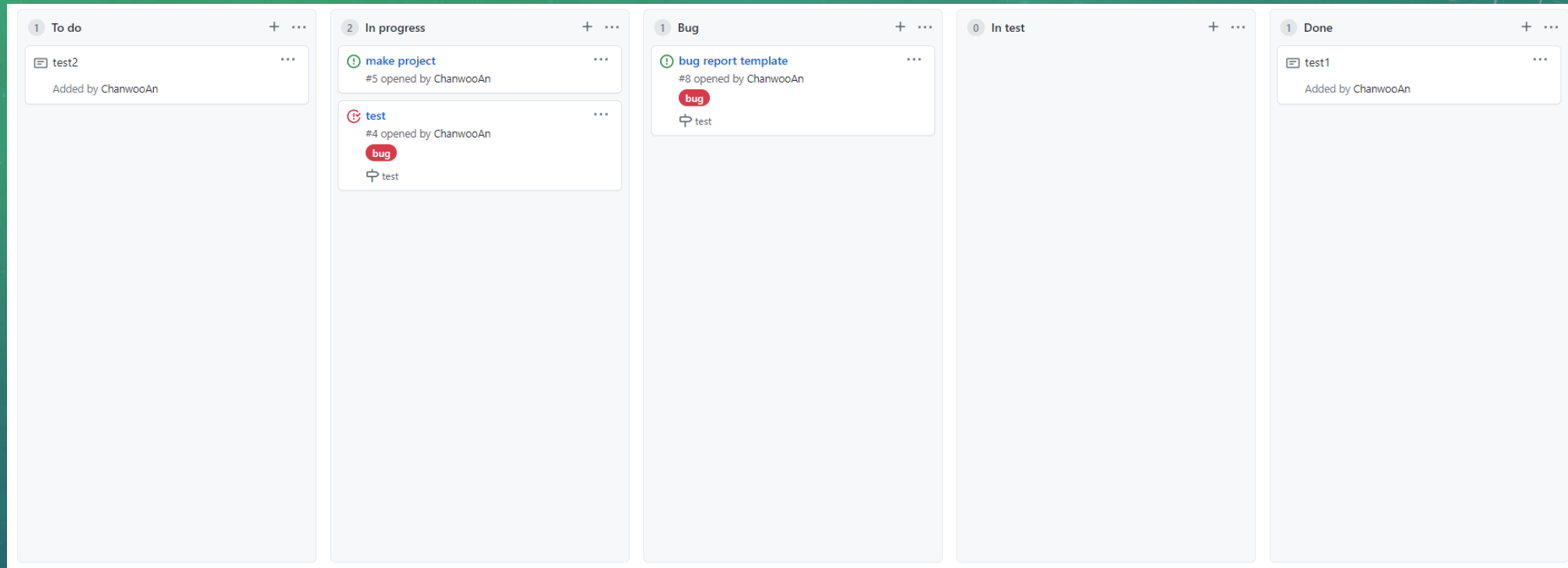
TestLink

TestLink Installation

[추가](#)

List of TestLink installations in this system

ISSUE TRACKING : GIT HUB

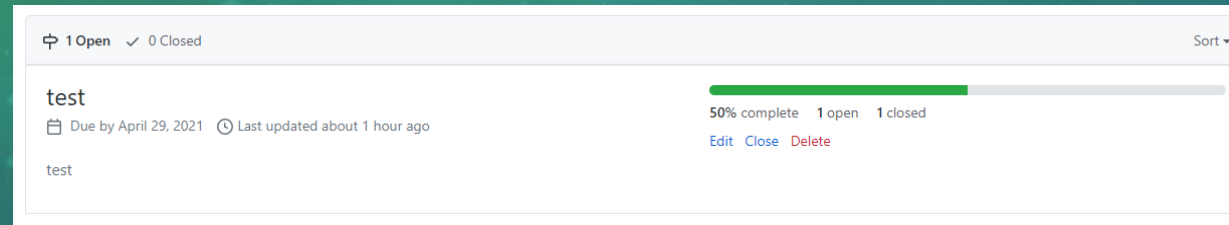


Project를 구성하여 여러 column으로 나누어 진행을 쉽게 관리

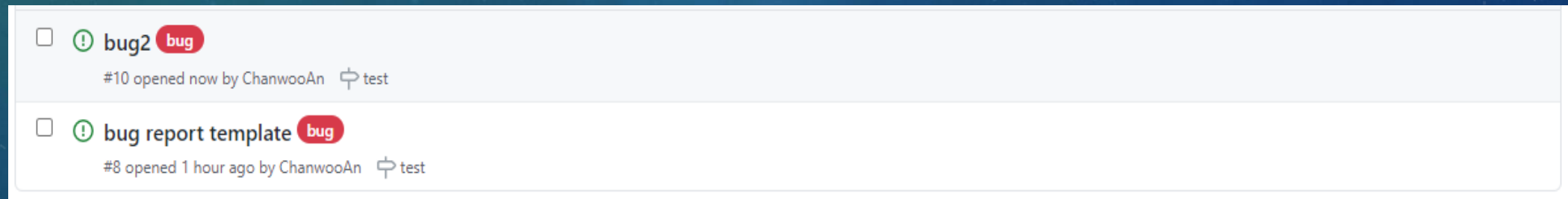
Project내에서 Issue를 바로 추가하고, 완료표시 하는 등 진척도관리에 장점을 가짐

ISSUE TRACKING : GIT HUB

Milestone을 이용하여 여러 issue들을 묶어
Project 중간중간 목표를 지정하고, 진척도를 관리



Label을 사용하여 Issue의 성격을 구분 지을 수 있고,
정렬 또한 label을 기준으로 가능



FINDBUGS



FindBugs

잠재적 에러를 네 단계로 분석해주는 분석 툴

자체 GUI 제공, Eclipse, Gradle, Maven, Jenkins 등 다양한 플러그인 제공

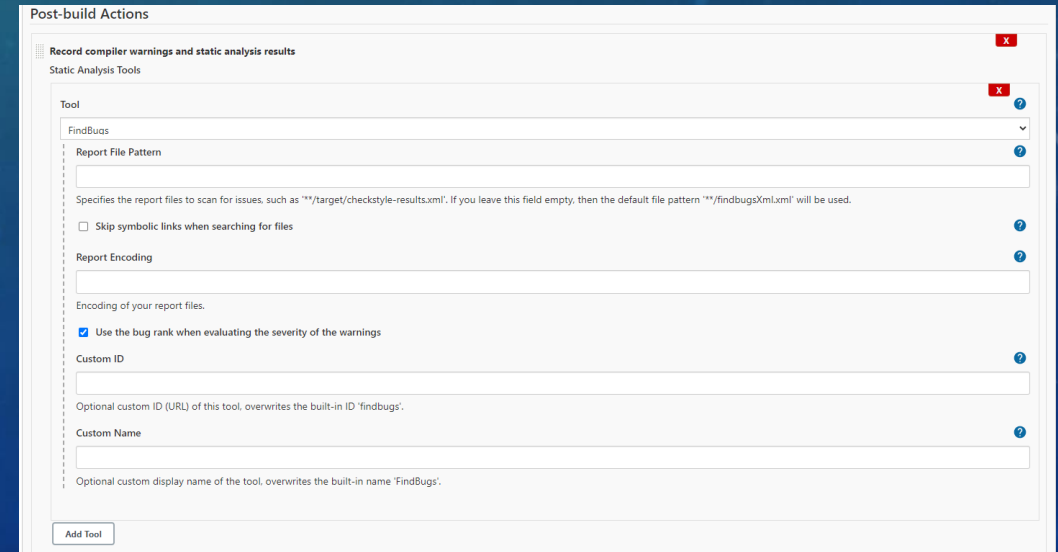
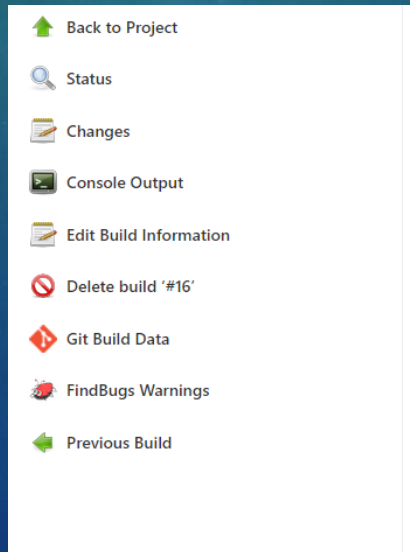
Jenkins Analysis Model API Plugin 설치



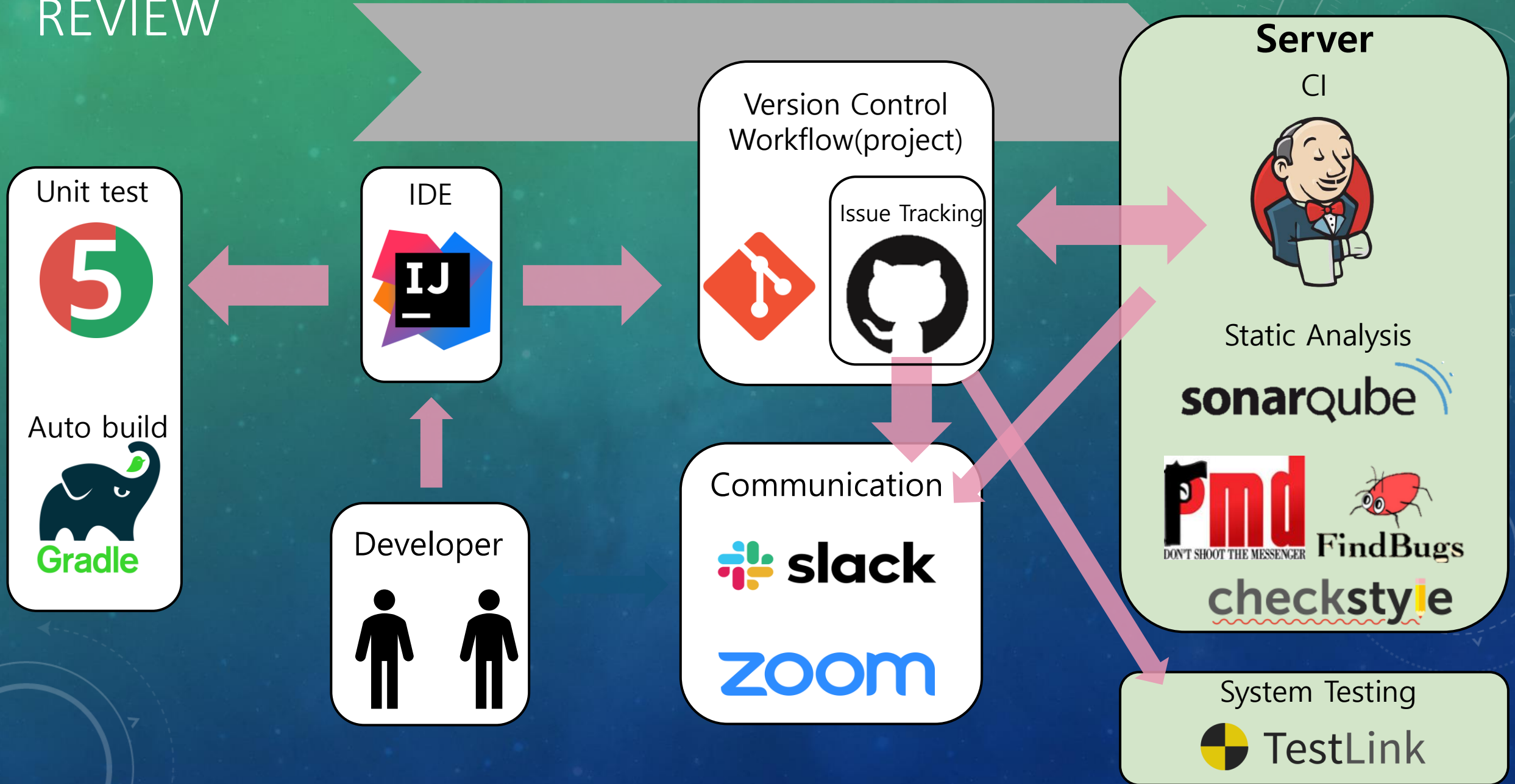
Analysis Model API Plugin

Static Analysis Model and Parsers API used by the Warnings plugin.

빌드 후 analysis report 가져오기



REVIEW



감사합니다