

DevSecOpsSG Workshop

Jenkins Introduction



DevSecOps
SINGAPORE



HELLO!

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What's covered?

- ▶ Basics of Jenkins
- ▶ Free style Job
- ▶ Pipeline Jobs
- ▶ Continuous Integration
- ▶ Continuous Delivery
- ▶ Security, UI Plugins

Prep work

- 👉 Install JDK
- 👉 Install Maven
- 👉 Download Jenkins.war (based on OS) file from <https://jenkins.io/>
- 👉 Checkout Repository
<https://github.com/WebGoat/WebGoat>

Jenkins Introduction

Jenkins Introduction



Hudson



by Kohsuke Kawaguchi - 2004
Released - Feb 2005

Jenkins



Birth of Jenkins
Feb 2011



Jenkins Version 2
Apr 2016

👉 Starting Jenkins

```
java -jar jenkins.war --httpPort=8080
```

👉 Jenkins with Docker

```
docker pull jenkins
```

```
docker run -d -p 49001:8080 -v $PWD/jenkins:/var/jenkins_home -t jenkins
```



What's the plan?



Build

Test

Package

Security
Scanning

Notifications



Free Style Job

👉 Configuring Git Repo

Configure -> Source Code Management

Repository URL: <https://github.com/<your repo>/WebGoat.git>

Branch: */develop



👉 Compile, Test, Package source code

Configure -> Build -> Invoke Top-level Maven Targets

Goals: compile test package



👉 Archive Artifacts

Configure -> Post-build Actions -> Archive the artifacts

Files to archive: webgoat-container/target/webgoat-container-7.1-SNAPSHOT.war

👉 Cleanup

Configure -> General -> Discard old builds

Few more to Continuous Integration

👉 Automate Triggers

Configure -> Build Triggers
Poll SCM: Check
Schedule: H/2 * * * *

👉 Test Reports

Configure -> Post-build Actions ->
webgoat-container/target/surefire-reports/TEST*.xml

👉 Slack Notifications

install <https://wiki.jenkins-ci.org/display/JENKINS/Slack+Plugin>

Manage Jenkins -> Configure system

Team subdomain: devsecopssg

Integration Token: 2GxawZV39JrnnvqYqHdOFyKur (Token generated by Slack admins)

Channel: #github-jenkins



Pipeline Job

- Configuring Git Repo
- Compile, Test, Package
- Archive Artifacts
- Cleanup
- Approvals



<https://github.com/DevSecOpsSG/Jenkins-Workshop>

Security and other Plugins

👉 OWASP Dependency-Check

Install plugin

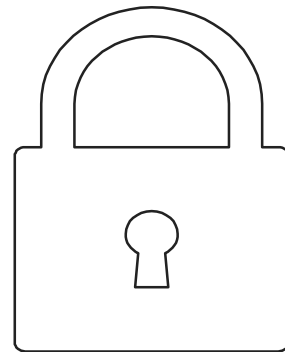
Configure -> Add build step

Path to scan: webgoat-container/target/*.war

👉 SonarQube

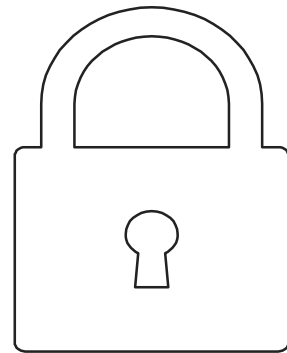
[Setup instructions](#)

👉 Blue Ocean UI



Your machine Hacked !!!

👉 Clean webgoat instance



THANKS!

Any questions?

join our slack channel

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