Sonarqube integrate with Jenkins

What is SonarQube

[SonarQube](https://www.sonarqube.org/" \t "_blank) is an open-source platform for continuous inspection of code quality. Using [static code analysis](https://www.owasp.org/index.php/Static_Code_Analysis" \t "_blank), it tries to detect bugs, code smells and security vulnerabilities.

Why use sonarqube integrate with jenkins

It can integrate with your existing workflow to enable continuous code inspection across your project branches and pull requests.

* Sonarqube server install process

\*Installation of Sonarqube in aws using ec2 instance

\*create an ec2 instance with size of t2.small and assign port at security groups 9000

\*connect to git bash to ec2

1. ubuntu@ip-172-31-21-100:~$ sudo su –
2. root@ip-172-31-21-100:~# apt update
3. root@ip-172-31-21-100:~# apt install openjdk-11-jre-headless
4. root@ip-172-31-21-100:~# java -version

openjdk version "11.0.13" 2021-10-19

1. root@ip-172-31-21-100:~# apt install -y unzip
2. root@ip-172-31-21-100:~# apt install net-tools
3. root@ip-172-31-21-100:~# netstat -ntlp

Active Internet connections (only servers)

1. root@ip-172-31-21-100:~# wget <https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-9.2.4.50792.zip>
2. root@ip-172-31-21-100:~# mv sonarqube-9.2.4.50792.zip /opt/
3. root@ip-172-31-21-100:~# cd /opt/
4. root@ip-172-31-21-100:/opt# unzip sonarqube-9.2.4.50792.zip
5. root@ip-172-31-21-100:/opt# adduser sonaradmin

Adding user `sonaradmin' ...

Adding new group `sonaradmin' (1001) ...

Adding new user `sonaradmin' (1001) with group `sonaradmin' ...

Creating home directory `/home/sonaradmin' ...

Copying files from `/etc/skel' ...

New password:( enter password)

Retype new password:

passwd: password updated successfully

Changing the user information for sonaradmin

(Enter the new value, or press ENTER for the default)

Full Name []:

Room Number []:

Work Phone []:

Home Phone []:

Other []:

Is the information correct? [Y/n]

1. root@ip-172-31-21-100:/opt# chown -R sonaradmin:sonaradmin sonarqube-9.2.4.50792
2. root@ip-172-31-21-100:/opt# cd sonarqube-9.2.4.50792/
3. root@ip-172-31-21-100:/opt/sonarqube-9.# ls -la

total 92

drwxr-xr-x 11 sonaradmin sonaradmin 4096 Dec 20 15:31 .

drwxr-xr-x 3 root root 4096 Feb 1 11:09 ..

- rw-r--r-- 1 sonaradmin sonaradmin 7651 Dec 20 15:12 COPYING

drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:12 bin

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 conf

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 data

-rw-r--r-- 1 sonaradmin sonaradmin 40615 Dec 20 15:15 dependency-license.json

drwxr-xr-x 7 sonaradmin sonaradmin 4096 Dec 20 15:31 elasticsearch

drwxr-xr-x 4 sonaradmin sonaradmin 4096 Dec 20 15:12 extensions

drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:31 lib

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 logs

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 temp

drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:31 web

1. root@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792# cd bin/
2. root@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin# ls -la

total 24

drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:12 .

drwxr-xr-x 11 sonaradmin sonaradmin 4096 Dec 20 15:31 ..

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 jsw-license

drwxr-xr-x 3 sonaradmin sonaradmin 4096 Dec 20 15:12 linux-x86-64

drwxr-xr-x 3 sonaradmin sonaradmin 4096 Dec 20 15:12 macosx-universal-64

drwxr-xr-x 3 sonaradmin sonaradmin 4096 Dec 20 15:12 windows-x86-64

1. root@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin# cd linux-x86-64/

* Jenkins server install root@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64# ls -la
* total 144
* drwxr-xr-x 3 sonaradmin sonaradmin 4096 Dec 20 15:12 .
* drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:12 ..
* drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 lib
* -rwxr-xr-x 1 sonaradmin sonaradmin 16393 Dec 20 15:12 sonar.sh
* -rwxr-xr-x 1 sonaradmin sonaradmin 111027 Dec 20 15:12 wrapper

1. root@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64# su sonaradmin
2. sonaradmin@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64$ ls -la

total 144

drwxr-xr-x 3 sonaradmin sonaradmin 4096 Dec 20 15:12 .

drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:12 ..

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 lib

-rwxr-xr-x 1 sonaradmin sonaradmin 16393 Dec 20 15:12 sonar.sh

-rwxr-xr-x 1 sonaradmin sonaradmin 111027 Dec 20 15:12 wrapper

1. sonaradmin@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64$ ./sonar.sh

Usage: ./sonar.sh { console | start | stop | force-stop | restart | status | dump }

1. sonaradmin@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64$ ls -la

total 144

drwxr-xr-x 3 sonaradmin sonaradmin 4096 Dec 20 15:12 .

drwxr-xr-x 6 sonaradmin sonaradmin 4096 Dec 20 15:12 ..

drwxr-xr-x 2 sonaradmin sonaradmin 4096 Dec 20 15:12 lib

-rwxr-xr-x 1 sonaradmin sonaradmin 16393 Dec 20 15:12 sonar.sh

-rwxr-xr-x 1 sonaradmin sonaradmin 111027 Dec 20 15:12 wrapper

1. sonaradmin@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64$ ./sonar.sh start

Starting SonarQube...

Started SonarQube.

1. sonaradmin@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64$ ./sonar.sh status

SonarQube is running (3954).

1. sonaradmin@ip-172-31-21-100:/opt/sonarqube-9.2.4.50792/bin/linux-x86-64$ netstat -ntlp

(Not all processes could be identified, non-owned process info

will not be shown, you would have to be root to see it all.)

Active Internet connections (only servers)

Proto Recv-Q Send-Q Local Address Foreign Address State PID/Program name

tcp 0 0 127.0.0.1:32000 0.0.0.0:\* LISTEN 3956/java

tcp 0 0 127.0.0.53:53 0.0.0.0:\* LISTEN -

tcp 0 0 0.0.0.0:22 0.0.0.0:\* LISTEN -

tcp6 0 0 127.0.0.1:9092 :::\* LISTEN 4050/java

tcp6 0 0 127.0.0.1:34021 :::\* LISTEN 3978/java

tcp6 0 0 :::9000 :::\* LISTEN 4050/java

tcp6 0 0 127.0.0.1:9001 :::\* LISTEN 3978/java

tcp6 0 0 :::22 :::\* LISTEN -

1. we can take the public ip of the ec2 instance and with port number 9000 we
2. we can see sonarqube is running
3. as default give username and password as admin in sonarqube browser page
4. after change password

* jenkins server install

Installation of jenkins in aws using ec2 instance

\*create an ec2 instance with size of t2.micro and assign port at security groups 8080

\*connect to git bash to ec2

Installing Jenkins

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1. Connect to jenkins server using Git bash

1. Update the apt repoistory

sudo apt-get update

1. Install jdk

sudo apt-get install -y openjdk-8-jdk or sudo apt install openjdk-11-jre-headless -y

1. Install git and maven

sudo apt-get install -y git maven

1. curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo tee \

/usr/share/keyrings/jenkins-keyring.asc > /dev/null

1. echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \

https://pkg.jenkins.io/debian-stable binary/ | sudo tee \

/etc/apt/sources.list.d/jenkins.list > /dev/null

1. sudo apt-get update
2. sudo apt-get install jenkins

\*we can take the public ip of the ec2 instance and with port number 8080 we

we can see jenkins is running

as default give username and password as admin in jenkins browser page

after change password