SONARQUBE

1. SonarQube (formerly Sonar) is an open-source platform developed by Sonar-Source for continuous inspection of code quality
2. To perform automatic reviews with static analysis of code to detect bugs, code smells, and security vulnerabilities on 20+ programming languages.
3. SonarQube offers reports on duplicated code, coding standards, unit tests, code coverage, code complexity, comments, bugs, and security recommendations.
4. SonarQube is available for free under the GNU Lesser General Public License. An enterprise version for paid licensing also exists, as well as a data center edition that supports high availability.

ADVANTAGES

Detects And Alerts

SonarQube detects bugs in the code automatically and gives alerts to the developers to resolve the issues before rolling it out for production.

Raise Quality

SonarQube performs multi-dimensional analysis and can generate results on seven sections of code quality mentioned above. It helps developers in avoiding code redundancy, maintain low code complexity.

Developers can create customizable dashboards to focus on the areas which are more important. It helps in on-time delivery of the quality product.

Sustainability

SonarQube platform significantly increases the lifetime of applications by reducing complexities, duplications and potential bugs in the code, by keeping neat and clean code architecture and increased unit tests. It increases software maintainability. It also has the ability to handle changes.

Productivity

SonarQube facilitates the team members to reduce the size of the application, code complexity, maintenance time and cost and make code easy to read and understand.

Increase Developer Skills

SonarQube provides enormous value to the development teams and hence it can be adopted easily. Developers receive regular feedback on coding standards and quality issues which helps in increasing the programming skills. It creates a good understanding of software quality and ensures code transparency.

Scale With Business Needs

There has been no limit discovered to its scalability yet as it is designed to scale with business needs.

SonarQube has been tested in environments. It performs daily analysis on more than five thousand projects with more than four million lines of code and twenty developers.

Enable Continuous Code Quality Management

Adopting SonarQube make code quality a well-recognized part of the development process. It enables continuous code quality management and decreases the cost and risk associated with software management. Developers receive valuable insights to ensure that this is broadly adopted.

Define And Increment Requirements Efficiently

It has a set of predefined standards that enable developers and software managers to get immediate insight into application quality. To adapt to the organization or team specific requirements, it can be configured easily.

Foster Innovation

As more companies migrate to the SonarQube platform, they increase in size as well as in diversity. This platform enables these companies to customize and extend its functionality. Companies can get an increasing number of plugins and an extensive developer's network.

Reduce Risk with Vendor Support and Services

To enable customers to get maximum value from their investment, SonarQube provides additional value and professional support. Services including development, technical support, consulting and training are designed to help companies get long term benefits.

Fully integrated with DevOps tool chains it comes with:

- built-in integration with most build tools, which enables in most cases a no configuration approach
- easy integration with continuous integration engines such as Jenkins, Azure DevOps, TeamCity, Bamboo,…
- support for numerous source configuration management tools such as Git, Subversion, CVS, Mercurial, …

INSTALLATION:

1. Wget https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-8.9.6.50800.zip
2. unzip sonarqube-8.9.6.50800.zip
3. cd sonarqube-8.9.6.50800/bin /linux-x86-64/
4. vi conf

```
sonar.jdbc.username=sonarqube
sonar.jdbc.password=sonarqube

#----- Embedded Database (default)
# H2 embedded database server listening port, defaults to 9092
sonar.embeddedDatabase.port=9093
```

```
sonar.web.host=0.0.0.0

# Web context. When set, it must start with forward slash (for example /sonarqube
# The default value is root context (empty value).
sonar.web.context=/sonarqube
# TCP port for incoming HTTP connections. Default value is 9000.
sonar.web.port=9000
```

5. find / -name java

```
[root@ip-172-31-80-125 conf]# find / -name java
/etc/pki/ca-trust/extracted/java
/etc/pki/java
/etc/java
/etc/alternatives/java
/var/lib/alternatives/java
/usr/bin/java
/usr/lib/java
/usr/lib/jvm/java-11-openjdk-11.0.13.0.8-1.amzn2.0.3.x86_64/bin/java
/usr/share/java
```

6. vim wrapper.conf

```
#wrapper.java.command=/path/to/my/jdk/bin/java
wrapper.java.command=/usr/lib/jvm/java-11-openjdk-11.0.13.0.8-1.amzn2.0.3.x86_64/bin/java
```

7. cd ~ && cp -R sonarqube-8.9.6.50800 /home/ec2-user/ && chown -R ec2-user:ec2-user /home/ec2-user/ && logout && ll &&
8. cd sonarqube-8.9.6.50800/ bin/linux-x86-64/
9. ./sonar.sh console
10. Now give Publicip:9000/sonarqube in a browser (give admin for username and password).