

SonarQube Installation on AWS

Prerequisite

- Have an AWS Account.
- Create Redhat EC2 T2.medium Instance with minimum of 4GB RAM.
- Create Security Group and open Required ports **9000**
- Attach Security Group to EC2 Instance.
- Install java openJDK 1.8+ for SonarQube version 7.8.

Create sonar user to manage the SonarQube server

For optimal security measures, it's recommended not to run the SonarQube Server using the root user. Instead, create a new user specifically for SonarQube, named 'sonar', and grant it necessary sudo access to manage Sonar services. Follow these steps:

1. Create a new user named 'sonar': **sudo useradd sonar**
2. Grant sudo access to the 'sonar' user for managing Sonar services:

sudo echo 'sonar ALL=(ALL) NOPASSWD:ALL' | sudo tee /etc/sudoers.d/sonar

The 'sudo' command allows temporary superuser privileges to execute 'echo' and 'tee' commands. This line adds an entry to the sudoers file ('/etc/sudoers.d/sonar') that permits the 'sonar' user to execute commands with 'sudo' (superuser) privileges without requiring a password ('NOPASSWD:ALL').

3. Set the hostname for the SonarQube server: **sudo hostnamectl set-hostname sonar**
4. Switch to the 'sonar' user profile: **sudo su – sonar**

Enable Password Authentication in the server

To enable password authentication via SSH, you can modify the SSH configuration using the following commands:

1. Adjust the SSH configuration to allow password authentication:

sudo sed -i

'/^[\^#]*PasswordAuthentication[[:space:]]no/c\PasswordAuthentication yes'
/etc/ssh/sshd_config

2. Restart the SSH service to apply the changes: **sudo service sshd restart**

Install Java JDK 1.8+ required for SonarQube to start

Navigate to the '/opt' directory and install necessary tools using the following commands:

1. Change directory to '/opt': **cd /opt**
2. Install essential packages - 'unzip', 'wget', and 'git': **sudo yum -y install unzip wget git**
3. Proceed to install Java Development Kit 11: **sudo yum install java-11-openjdk-devel**

Download and extract the SonarQube Server software.

Download the SonarQube package, extract its contents, and organize them with the following commands:

1. Fetch the SonarQube package: **sudo wget**

<https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-7.8.zip>

2. Unzip the downloaded package: **sudo unzip sonarqube-7.8.zip**

3. Remove the downloaded zip file (cleanup): **sudo rm -rf sonarqube-7.8.zip**

4. Rename the extracted folder to 'sonarqube' for convenience: **sudo mv sonarqube-7.8 sonarqube**

Grant file permissions for sonar user to start and manage SonarQube

Set ownership and permissions for the SonarQube directory to ensure proper access:

1. Assign ownership to the 'sonar' user and group for the '/opt/sonarqube/' directory:

sudo chown -R sonar:sonar /opt/sonarqube/

2. Adjust permissions for the '/opt/sonarqube/' directory and its contents: **sudo chmod -R 775 /opt/sonarqube/**

Start SonarQube server

To initiate the SonarQube server and check its status, execute the following commands:

1. Start the SonarQube server: **sh /opt/sonarqube/bin/linux-x86-64/sonar.sh start**

2. Check the status of the SonarQube server: **sh /opt/sonarqube/bin/linux-x86-64/sonar.sh status**

SonarQube default port is = **9000**

Get the SonarQube public ip address from AWS

represented as == **publicIP:9000**

curl -v localhost:9000

to check if it's running locally or via web using publicIP:9000

After Successfully setting up and running SonarQube

We Vi in to the pom.xml file on the Maven server and enter SonarQube server credentials in the properties tag what needs changing is the IP address.

Perform code quality with this command **mvn sonar:sonar**