Jenkins Installation

Prerequisites:

Java 8 or above installed and JAVA_HOME environment variable set to the right path.

Installing Jenkins:

Step 1: import GPG keys of the Jenkins repository.

$ wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add –

Step 2: Add Jenkins repository to the system.

$ sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ >/etc/apt/sources.list.d/jenkins.list'

Step 3 : Update the apt package list and install the latest version of Jenkins

$ sudo apt update

$ sudo apt install Jenkins

Step 4 : Check if Jenkins is working properly

$ systemctl status Jenkins

Step 5 : Adjust firewall to allow the port 8080 for Jenkins

$ sudo ufw allow 8080

Integrating Sonarqube with Jenkins

Step 1 : Go to plugin-manager of Jenkins to install "Sonarqube Plugin"

Step 2 : Go to Global system configurations and set up the Sonarqube server details(URL and Token Number)

Step 3 : In Jenkins job configuration, go to pre build option and select "execute shell" and write the following shell script

```
mvn sonar:sonar \

-Dsonar.host.url= <URL of the sonarqube sever> \

-Dsonar.login= <Token number>
```

Step 4 : Build the job to check sonarqube running and sonarqube server for report

Integrating Artifactory with Jenkins

Step 1 : Install the plugin "Artifactory" from the plugin manager

Step 2 : Go to "Configure system" and set up the Artifactory server credentials

Step 3 : Go to Jenkins job and configure the job to store the releases and snapshots.

Step 4 : Go to add post-build actions and select "Deploy artifacts to artifactory"

Step 5 : Select desired artifactory server and set up Target releases repository and Target releases snapshots repository