**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