DOCKER PROJECT

STEP-1: LAUNCH AN INSTANCE WITH T2.LARGE

STEP-2: INSTALL JENKINS, GIT, DOCKER & TRIVY

STEP-3: INSTALL THE FOLLOWING JENKINS PLUGINS

- SONAR SCANNER
- NODEJS
- OWASP DEPENDENCY CHECK
- DOCKER PIPELINE
- Eclipse Temurin installerVersion

STEP-4: CONFIGURE ALL THE PLUGINS INTO JENKINS

STEP-5: WRITE A PIPELINE

TRIVY INSTALLATION:

- wget https://github.com/aquasecurity/trivy/releases/download/v0.18.3/trivy_0.18.3_Linux-64bit.tar.gz
- tar zxvf trivy_0.18.3_Linux-64bit.tar.gz
- sudo mv trivy /usr/local/bin/
- vim .bashrc
- export PATH=$PATH:/usr/local/bin/
- source .bashrc

JENKINS INSTALLATION:

- amazon-linux-extras install java-openjdk11 -y
- sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
- sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
- yum install jenkins -y
- systemctl start jenkins

GIT & DOCKER INSTALLATION:

- yum install git docker -y

- systemctl start docker
- chmod 777 ///var/run/docker.sock

SETUP SONAR USING DOCKER:

docker run -d --name sonar -p 9000:9000 sonarqube:lts-community

After creating the sonar container, access the sonarqube with 9000 port number.

Login to the sonar dashboard with the following and credentials

- username: admin
- password: admin

After entering the credentials we have to set a new password.

CONFIGURE ALL THE PLUGINS INTO JENKINS:

Goto your Sonarqube Server. Click on Administration ----> Security ----> Users → Click on Tokens and Update Token ----> Give it a name ----> and click on Generate Token.

copy Token

Goto Jenkins Dashboard ----> Manage Jenkins ----> Credentials ----> Add Secret Text with id

sonar-token.

Goto Jenkins Dashboard → Manage Jenkins → Credentials → Add Secret Text.

Add sonarqube

Now, go to Dashboard ---> Manage Jenkins -----> System and Add sonar servers with the name of **mysonar**

Click on Apply and Save

The Configure option is used in Jenkins to configure different server.

Click on add **SonarQube Scanner**

Name: mysonar

click on install automatically and proceed with default version.

In the Sonarqube Dashboard add a quality gate also

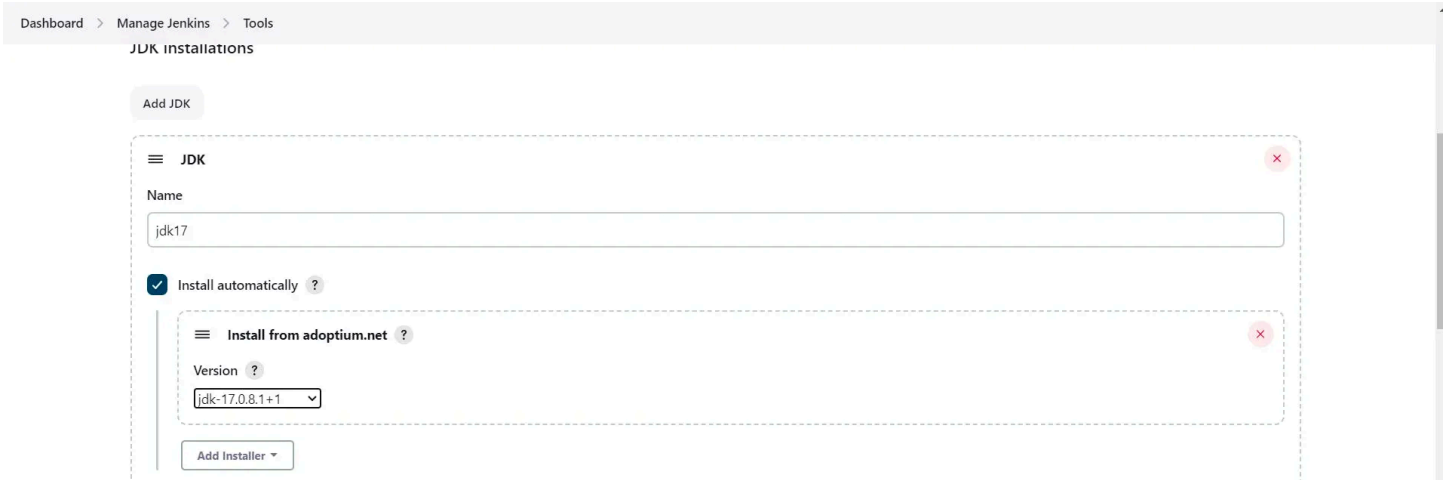
Administration → Configuration →Webhooks

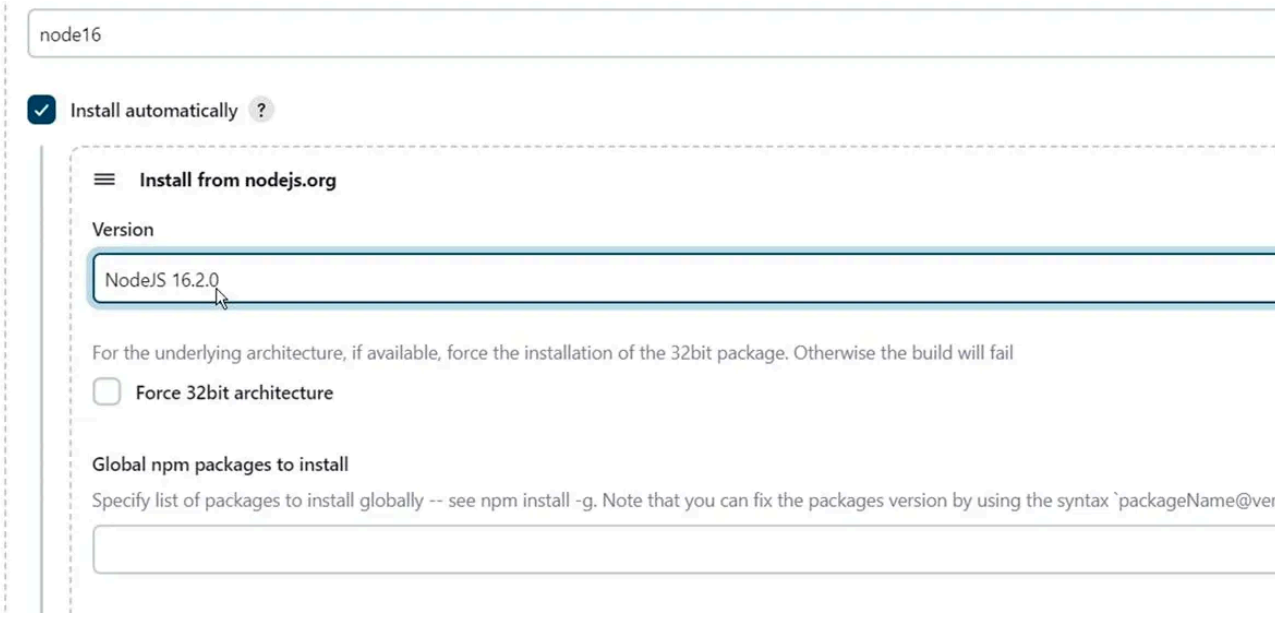
Click on Create

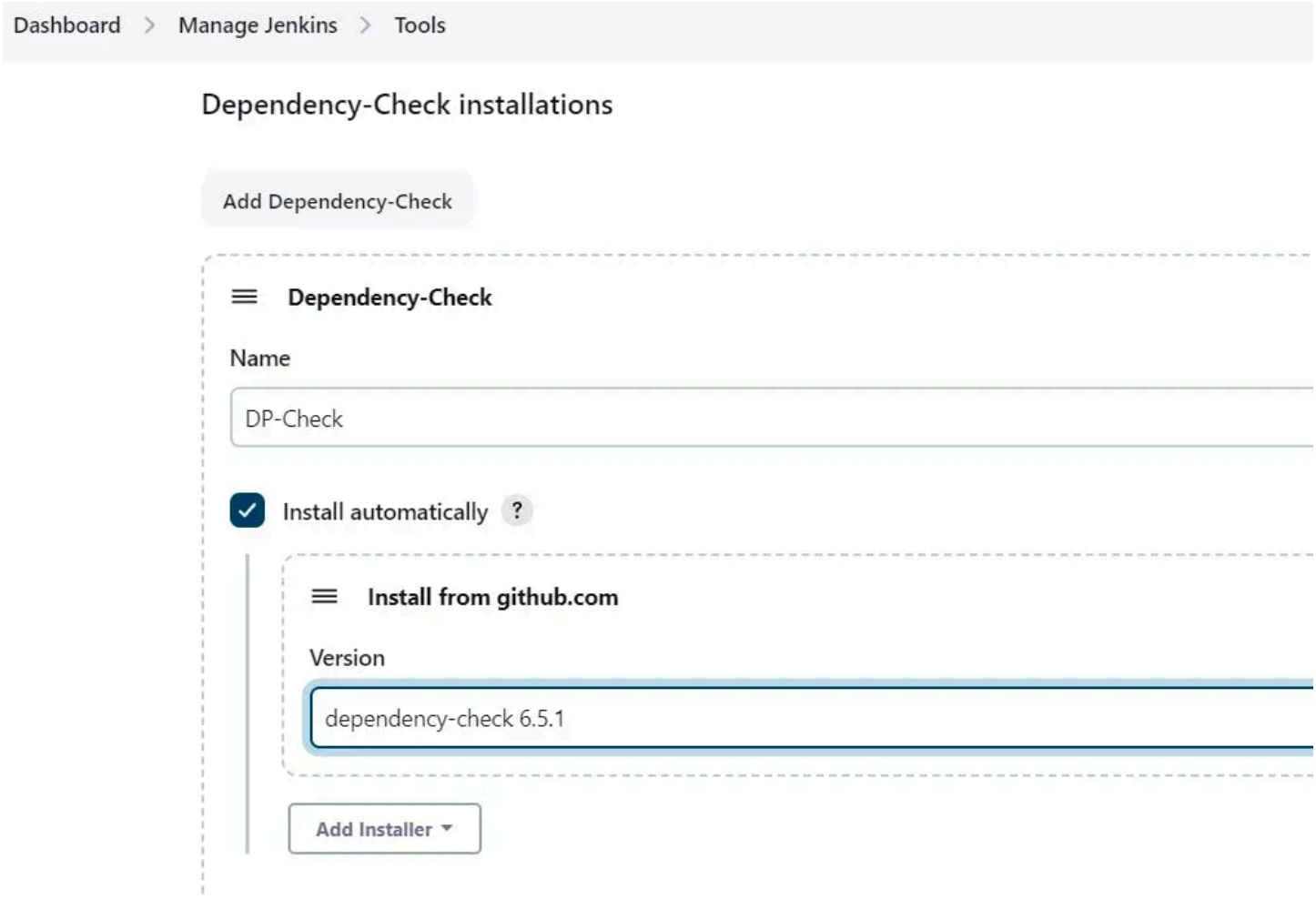
Name: Jenkins

URL: <http://jenkins-public-ip:8080>/sonarqube-webhook/

Now configure NodeJs, Java & DP-Check







Click on Apply and Save here.

START WRITING DECLARATIVE PIPELINE:

pipeline {

```
agent any
tools {
   jdk 'jdk17'
   nodejs 'node16'
}
environment {
   SCANNER_HOME = tool 'mysonar'
}
stages {
   stage("Clean WS") {
      steps {
         cleanWs()
      }
   }
   stage("Code") {
      steps {
         git “https://github.com/devops0014/Zomato-Project.git”
      }
   }
   stage("Sonarqube Analysis") {
      steps {
         withSonarQubeEnv('mysonar') {
            sh """$SCANNER_HOME/bin/sonar-scanner \
               -Dsonar.projectName=zomato \
               -Dsonar.projectKey=zomato"""
```

```
        }
      }
    }
    stage("Quality Gates") {
      steps {
        script {
          waitForQualityGate abortPipeline: false, credentialsId: 'sonar-token'
        }
      }
    }
    stage("Install Dependencies") {
      steps {
        sh 'npm install'
      }
    }
    stage("OWASP") {
      steps {
        dependencyCheck additionalArguments: '--scan ./ --disableYarnAudit --
disableNodeAudit', odcInstallation: 'DP-Check'
        dependencyCheckPublisher pattern: '**/dependency-check-report.xml'
      }
    }
    stage("Trivy") {
      steps {
        sh 'trivy fs . > trivyfs.txt'
      }
```

```
    }
    stage("Build") {
      steps {
        sh 'docker build -t image1 .'
      }
    }
    stage("Tag & Push") {
      steps {
        script {
          withDockerRegistry(credentialsId: 'docker-password') {
            sh 'docker tag image1 shaikmustafa/mydockerproject:myzomatoimage'
            sh 'docker push shaikmustafa/mydockerproject:myzomatoimage'
          }
        }
      }
    }
    stage("Scan the Image") {
      steps {
        sh 'trivy image shaikmustafa/mydockerproject:myzomatoimage'
      }
    }
    stage("Container") {
      steps {
        sh 'docker run -d --name cont1 -p 3000:3000
shaikmustafa/mydockerproject:myzomatoimage'
      }
```

```
    }

  }

}
```