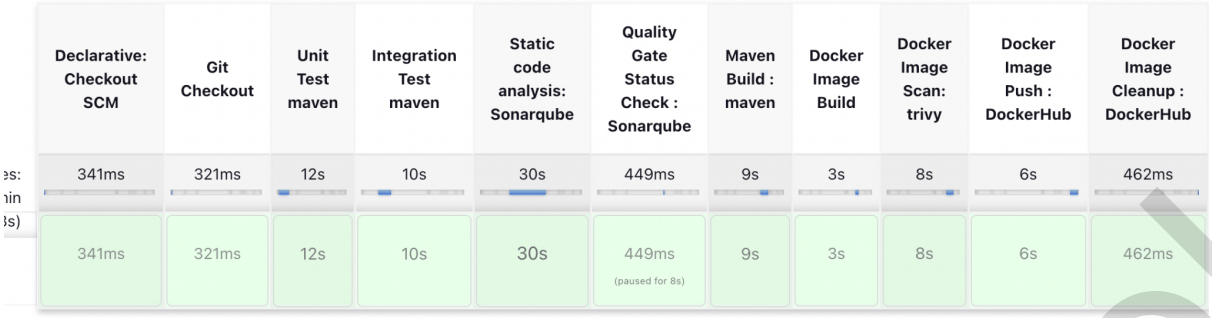


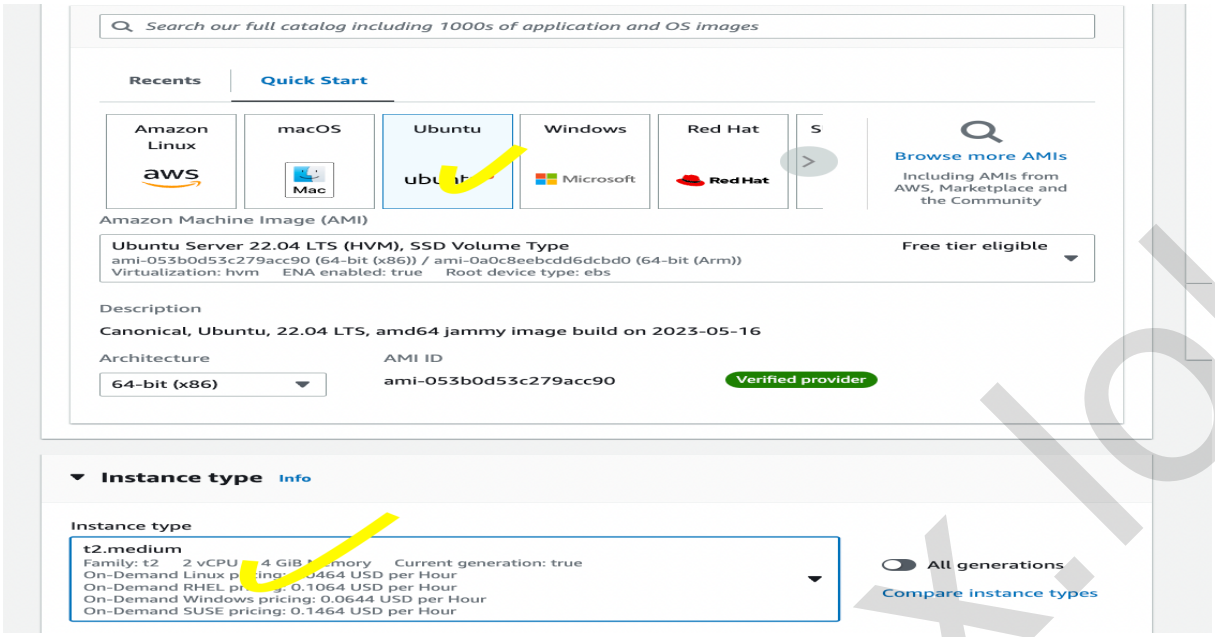
| Declarative: Checkout SCM | Git Checkout | Unit Test maven | Integration Test maven | Static code analysis: Sonarqube | Quality Gate Status Check : Sonarqube | Maven Build : maven | Docker Image Build | Docker Image Scan: trivy | Docker Image Push : DockerHub | Docker Image Cleanup : DockerHub |
|---|---|---|---|---|---|---|---|---|---|---|
| 341ms | 321ms | 12s | 10s | 30s | 449ms | 9s | 3s | 8s | 6s | 462ms |
| 341ms | 321ms | 12s | 10s | 30s | 449ms (paused for 8s) | 9s | 3s | 8s | 6s | 462ms |

# CI PIPELINE SETUP WITH VARIOUS TOOLS

****You need to complete this in one go ****
**100 rupees max it will cost**
**[ 8 GB –> 30 GB ] and t2.micro -> t2.medium [ More memory and more cpu ]**

**Step 1 – Create the Ec2 instance in AWS account with these parameters**

**EC2 type – Ubuntu t2.medium**
**EBS volume – 30 GB**
**Region – US-EAST-1**




**Step 2 – Connect to EC2 and Install all tools in that system as root user**

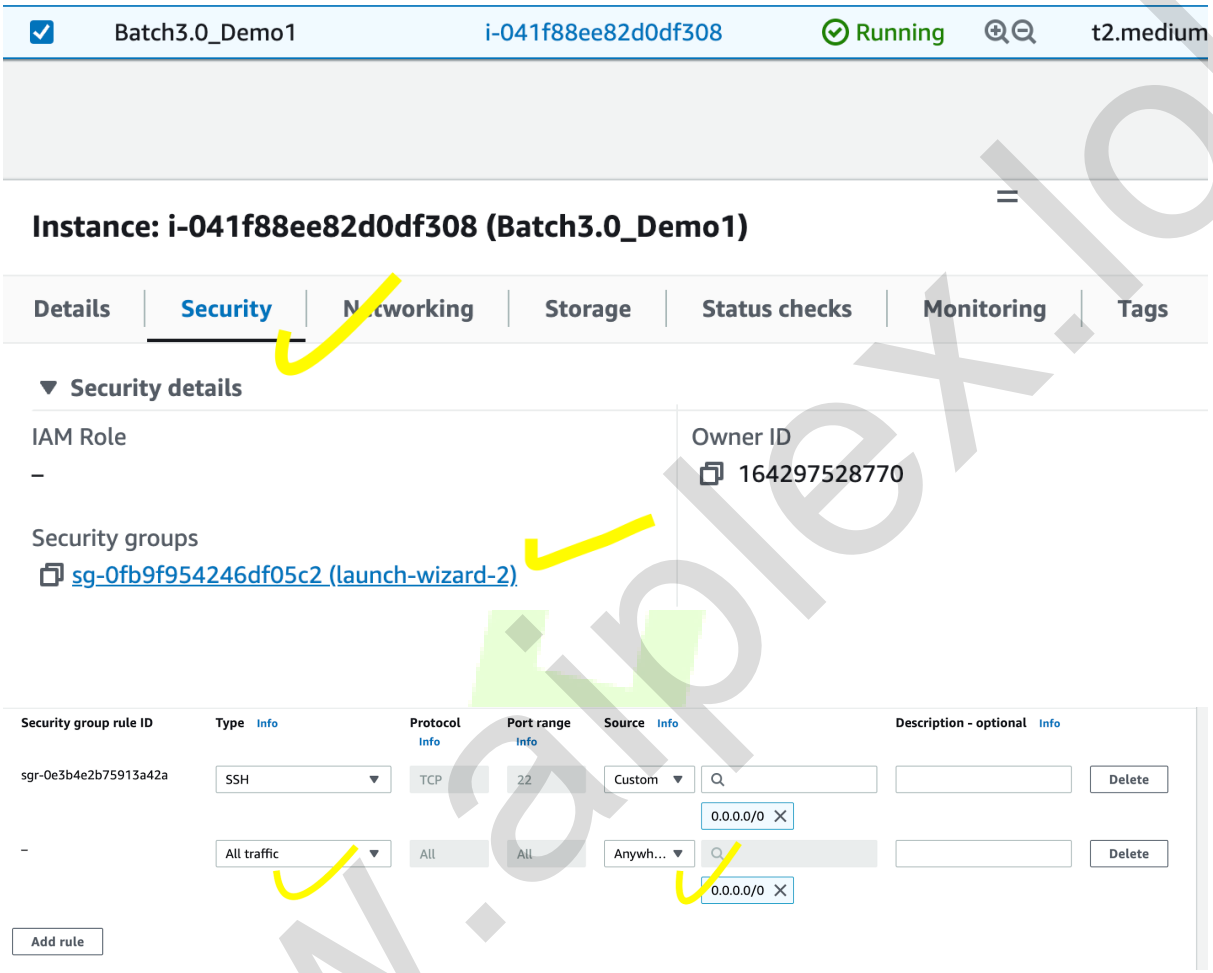
**To login as root user - sudo su**

**Step 3 – Install Jenkins on Ubuntu**

**Just copy paste the entire commands**

**https://github.com/praveen1994dec/tools_installation_scripts/blob/main/jenkins.sh**

## Step 4 – Change the security group of ec2 instance

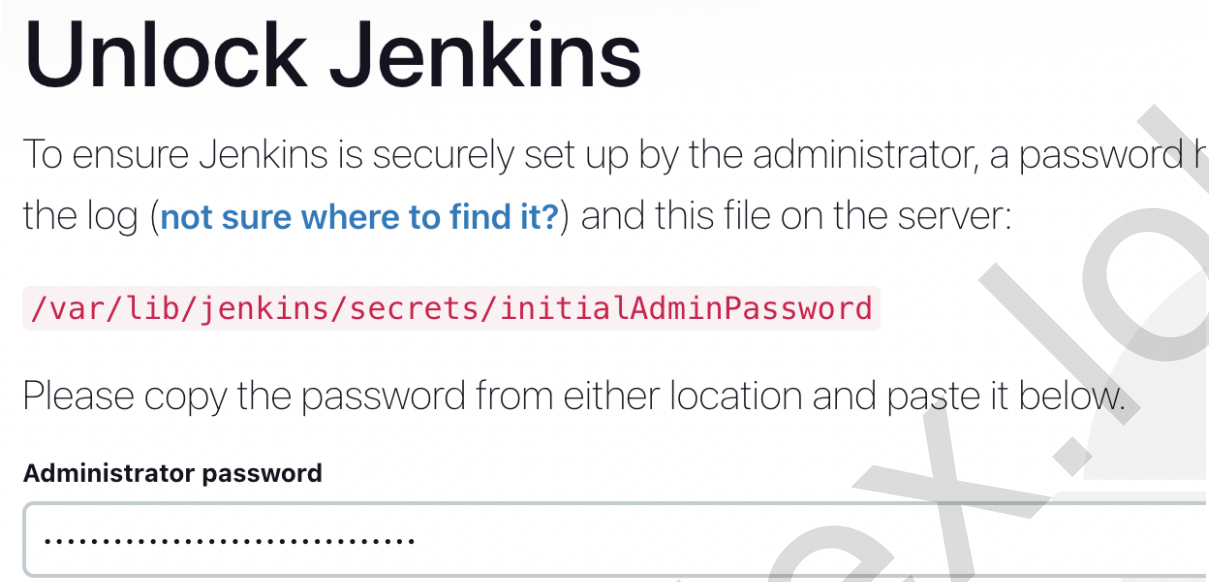



## Step 5 – Sign Into Jenkins console

## http://<EC2_PUBLIC _IP>:8080/

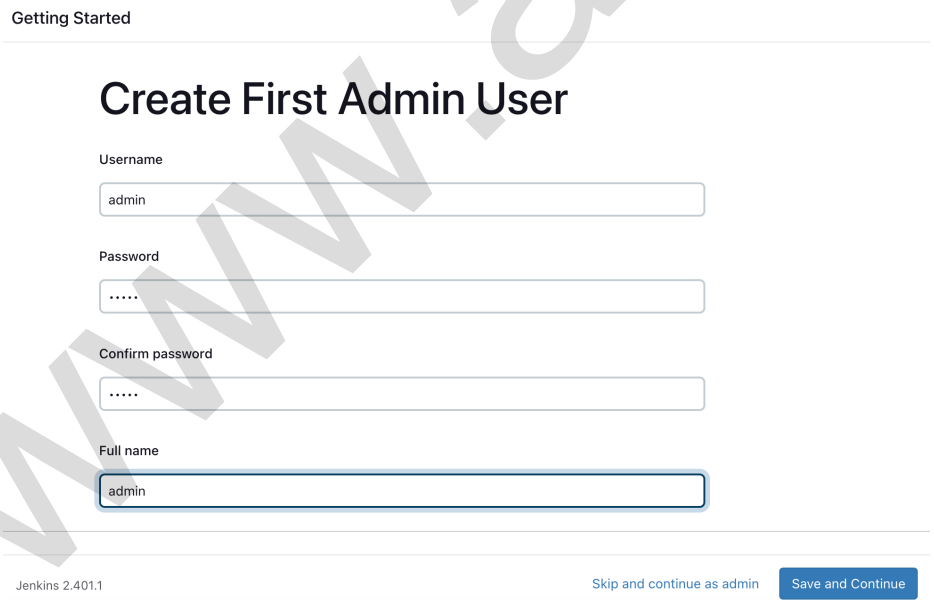
## Step 6 – Get the Administrator password by hitting the below command in EC2

```
cat /var/lib/jenkins/secrets/initialAdminPassword
```

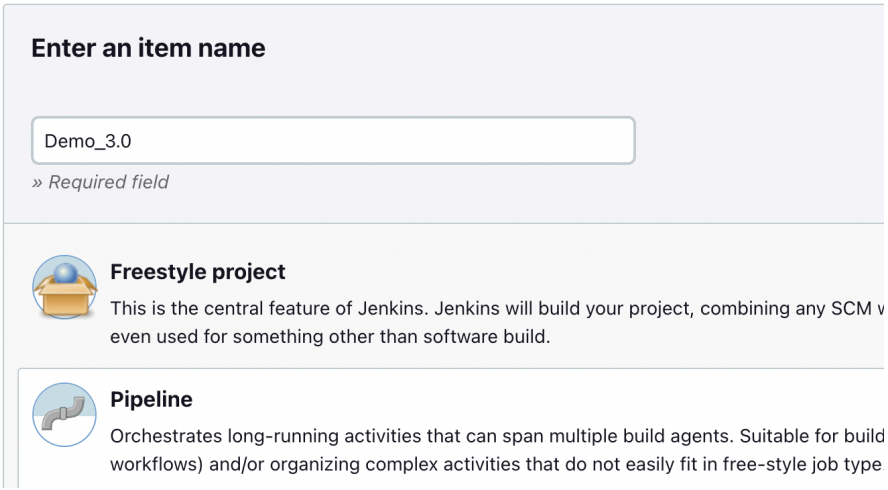



## Step 7 – Install all suggested plugins

## Step 8 – Create first user

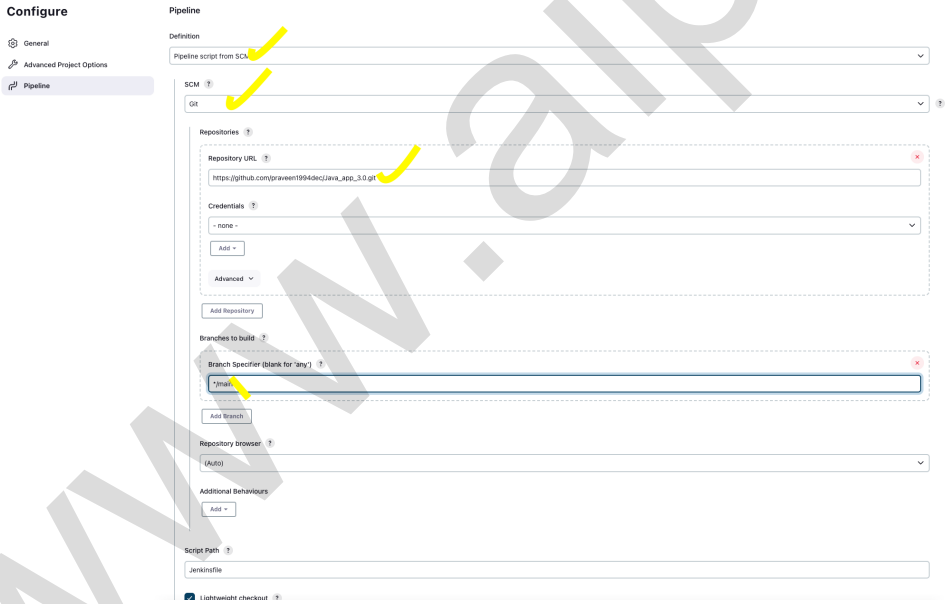



## Step 9** – Create a pipeline Job




# Step 10 – Add pipeline script as SCM

https://github.com/praveen1994dec/Java_app_3.0.git

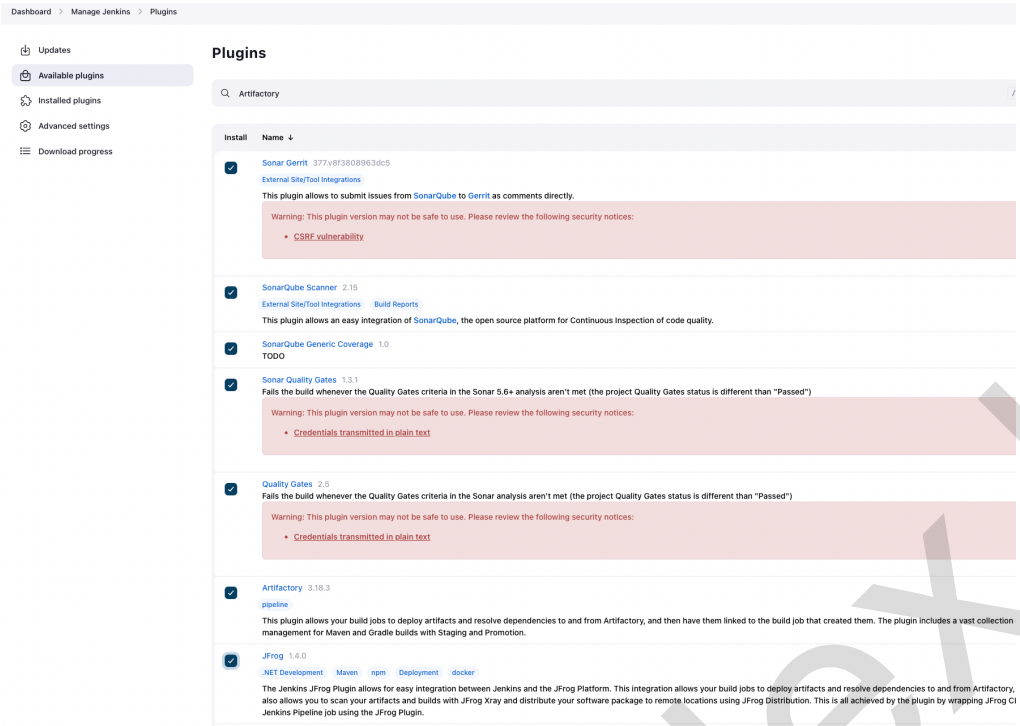


## Step 11 – Add the Plugins

**Dashboard -> Manage Jenkins -> Plugins -> Available plugins**

**Plugins for Sonar/Jfrog –**

**Sonar Gerrit**
**SonarQube Scanner**
**SonarQube Generic Coverage**
**Sonar Quality Gates**
**Quality Gates**
**Artifactory**
**Jfrog**




## Step 12 – Setup Docker

https://github.com/praveen1994dec/tools_installation_scripts/blob/main/docker.sh

**docker -v**

## Step 13- Install SonarQube

https://github.com/praveen1994dec/tools_installation_scripts/blob/main/sonarqube.sh

## Step 13 .1 -> Start docker container if it's not up

## docker ps -a [ Get the container ID ]

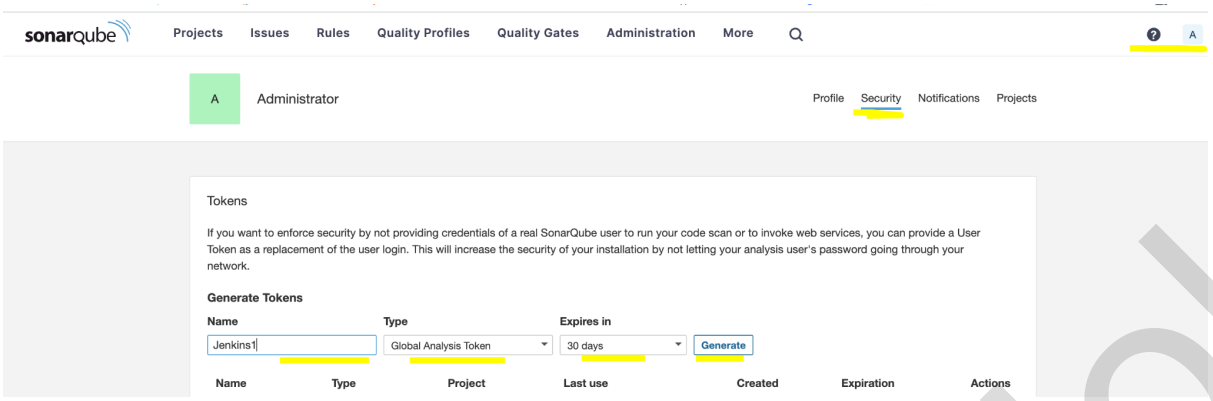

## docker start <containerID>

## Step 13.2 -> Login into sonar dashboard

## Username – admin
## Password – admin

## Step 13.3 -> Create Sonar token for Jenkins

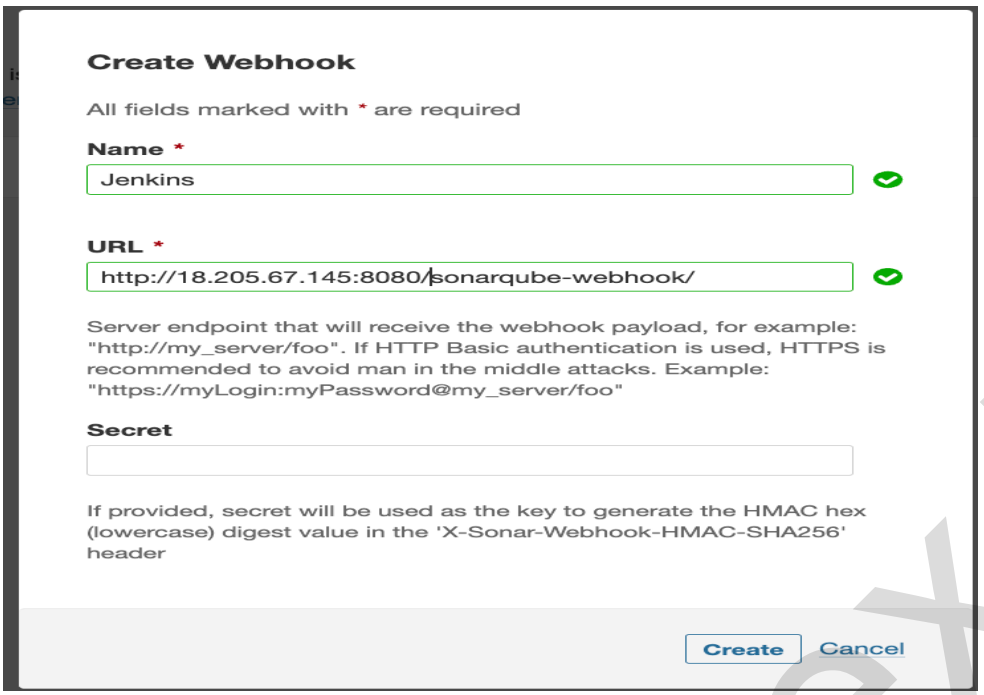
## Sonar Dashboard -> Administration -> My Account -> Security -> Create token -> Save the token to some text file




## Step 13.4 -> Integrate Sonar to Jenkins

**Sonar Dashboard -> Administration -> Configuration -> webhooks -> Add the below name and url and save**

**http://<EC2_IP>:8080/sonarqube-webhook/**




## Step 14 – Install Maven

https://github.com/praveen1994dec/tools_installation_scripts/blob/main/Maven.sh

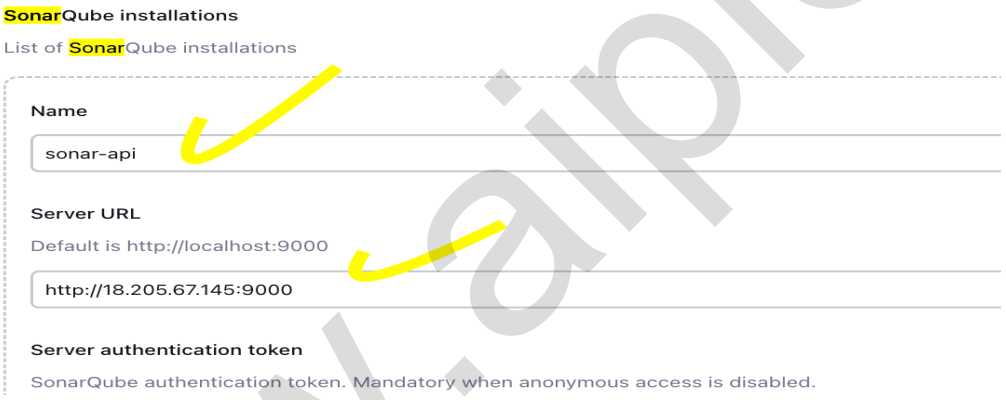
## Step 15 – Install TRIVY for docker image scan

https://github.com/praveen1994dec/tools_installation_scripts/blob/main/trivy.sh

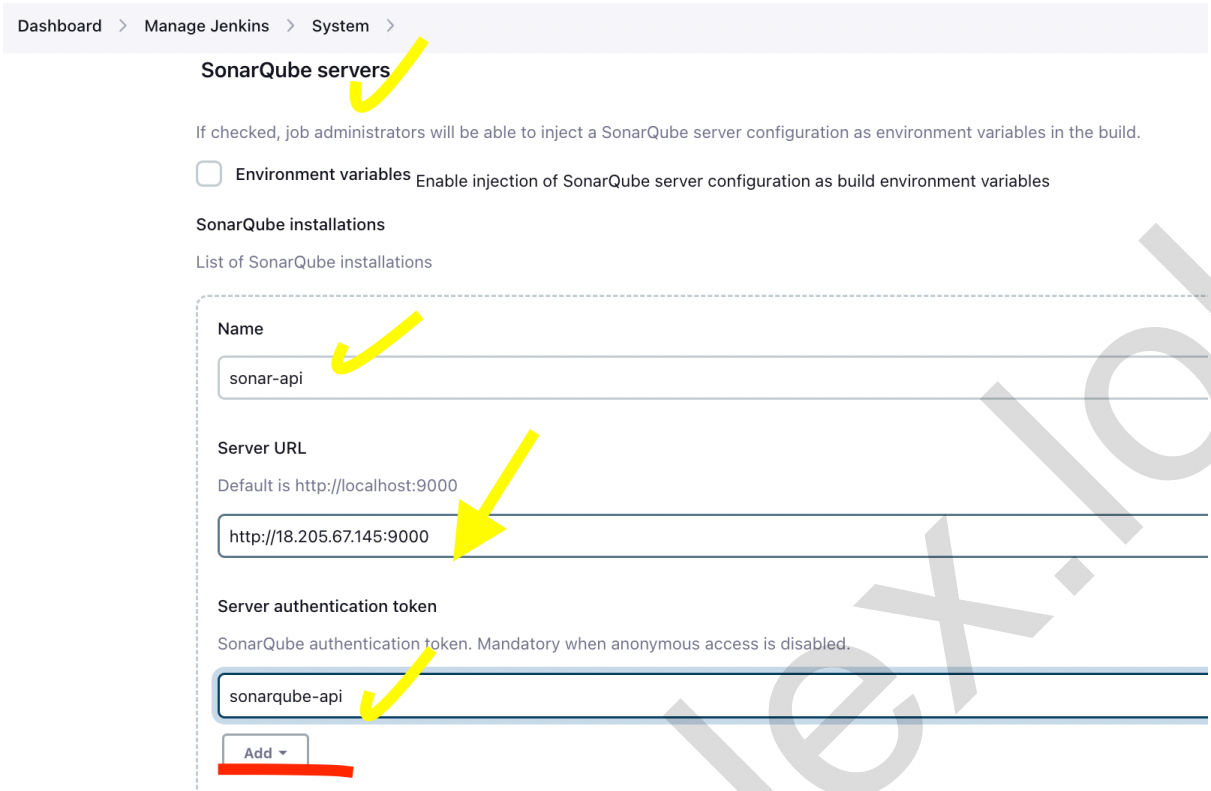
# Integrate All tools with Jenkins

**Jenkins Dashboard -> Manage Jenkins -> configure system**

## Step 16 – ADD SONARQUBE



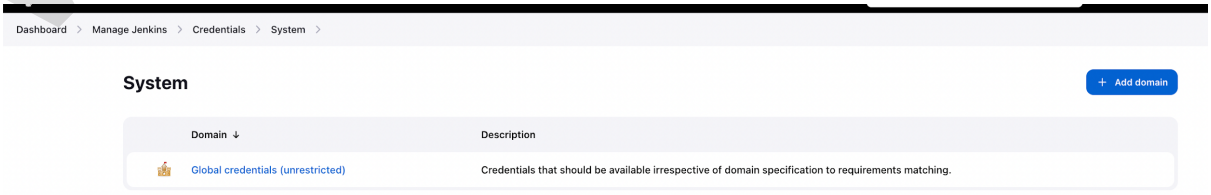

**Step 16.1 -> Click on sonarqube servers -> add url and name -> Click on add token -> Select Secret text -> Add the sonar token from step13.3 -> Give name of token as sonarqube-api**



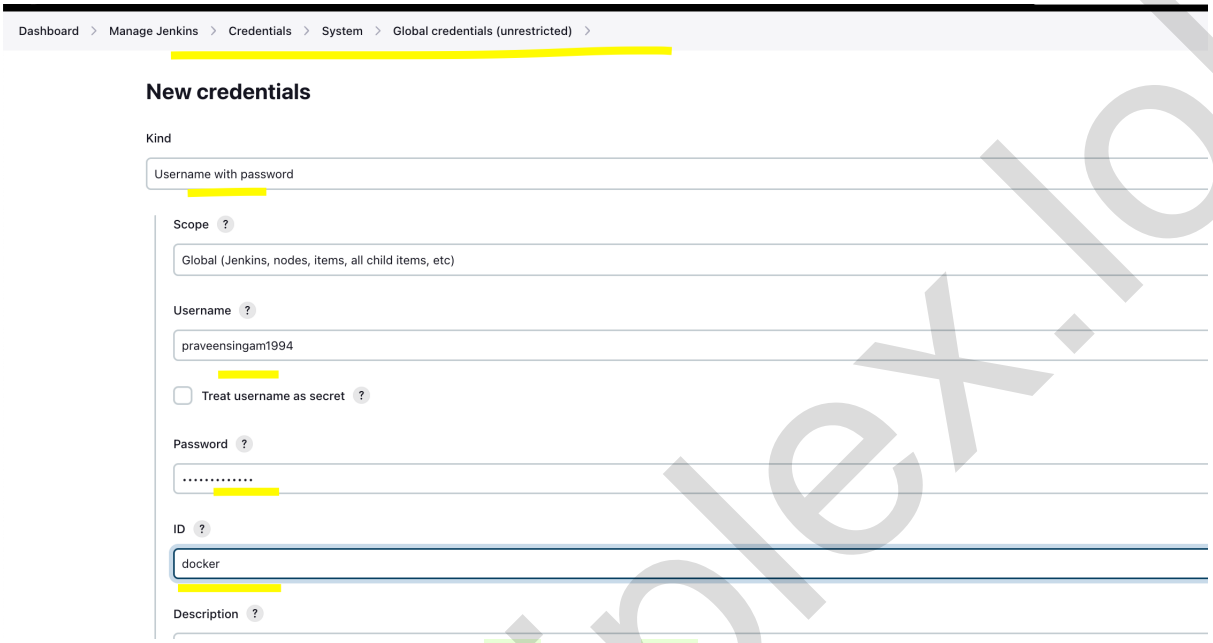



# Step 17 - Add the docker HUB credentials ID

# Jenkins dashboard -> Manage Jenkins -> Credentials -> System -> click on global credentials



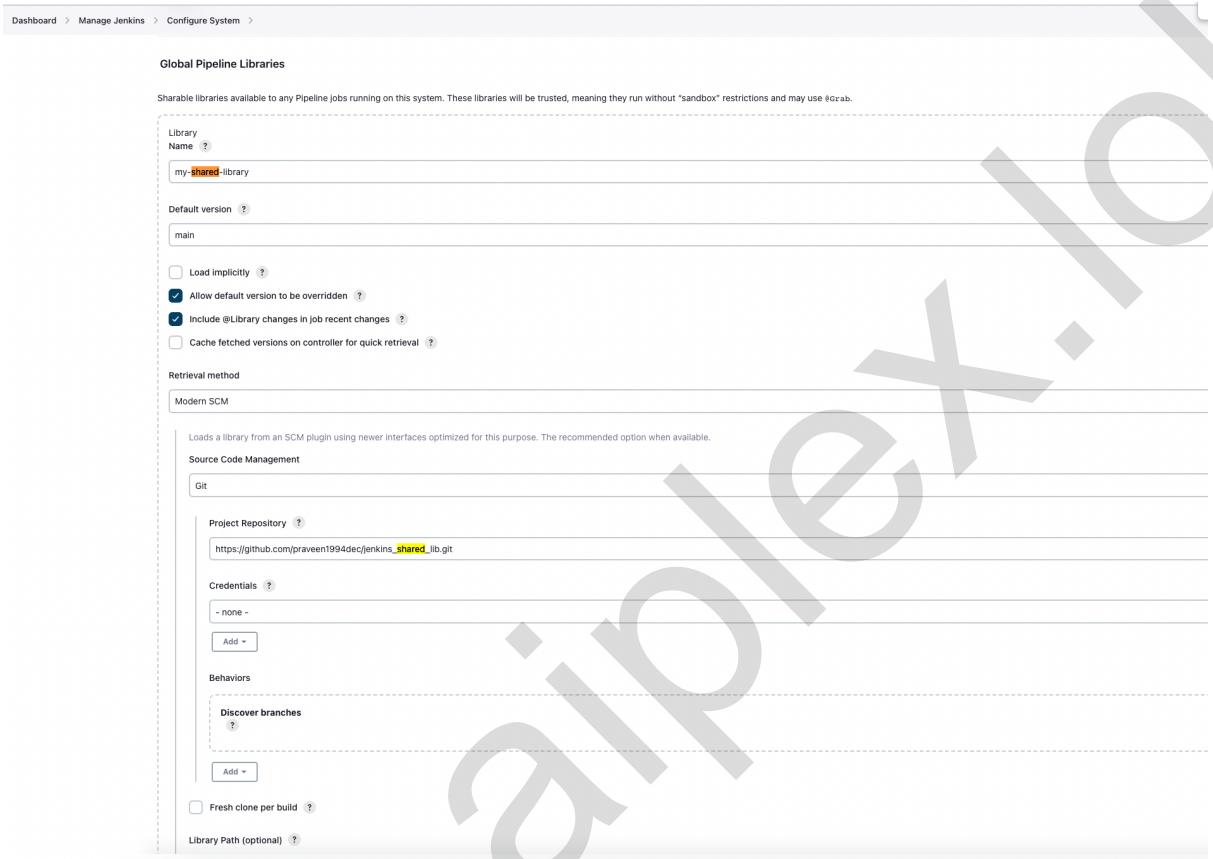
# ADD the docker hub credentials with name as docker






## Step 18 – Add the Jenkins Shared library

**Go to Manage Jenkins -> Configure system -> Global pipeline library -> Add below data**
**Name - my-shared-library**
**Default version – main**
**Git - https://github.com/praveen1994dec/jenkins_shared_lib.git**



# Step 19 - Once pipeline is Run Check

- The Jenkins logs
- The Trivy scan vulnerabilities
- The sonarqube dashboard for report