Steps for implementing the Jenkins CICD project

1.Install Java jdk and Jenkins

sudo apt install openjdk-17-jre

curl -fsSL https://pkg.jenkins.io/debian/jenkins.io-2023.key | sudo tee \

  /usr/share/keyrings/jenkins-keyring.asc > /dev/null

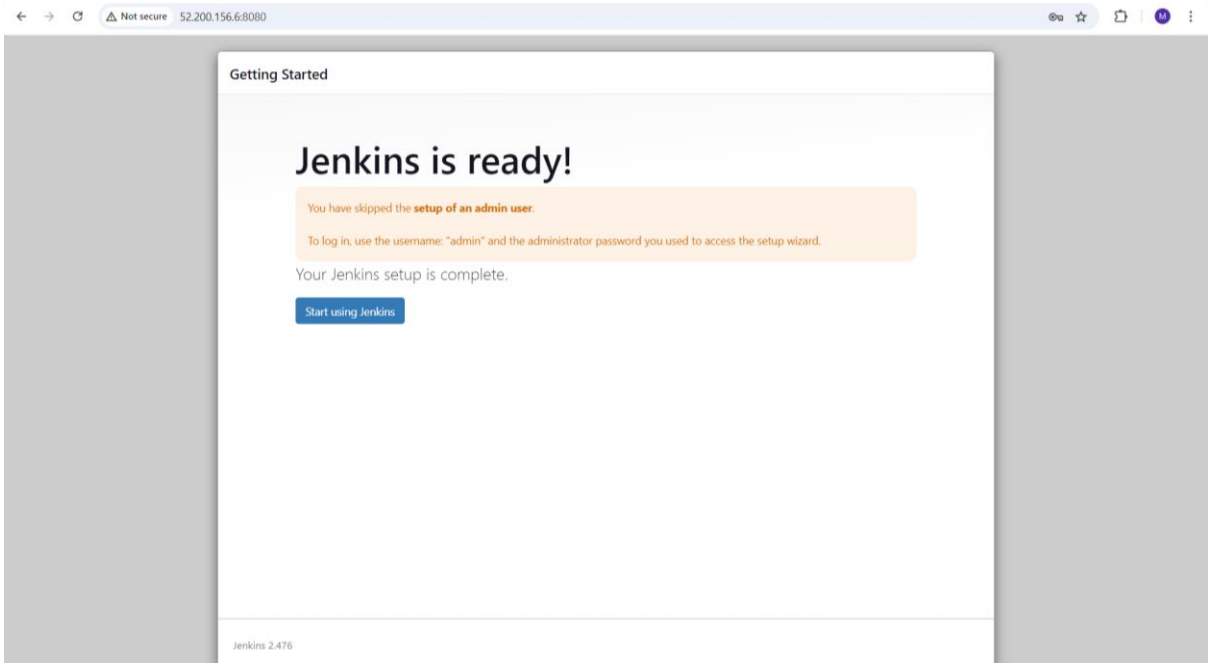
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \

  https://pkg.jenkins.io/debian binary/ | sudo tee \

  /etc/apt/sources.list.d/jenkins.list > /dev/null

sudo apt-get update

sudo apt-get install Jenkins



1.create pipeline

2.install necessary plugins(sonarqube,docker)

3.Install Sonarqube

apt install unzip

adduser sonarqube

wget https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-9.4.0.54424.zip

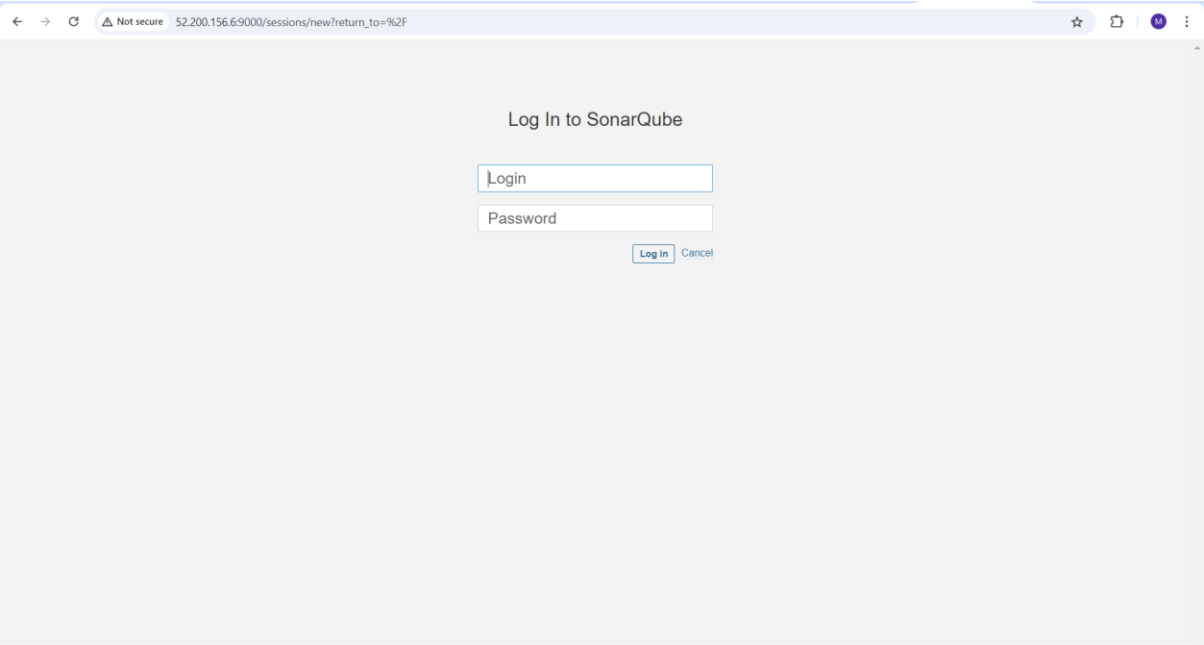
unzip *

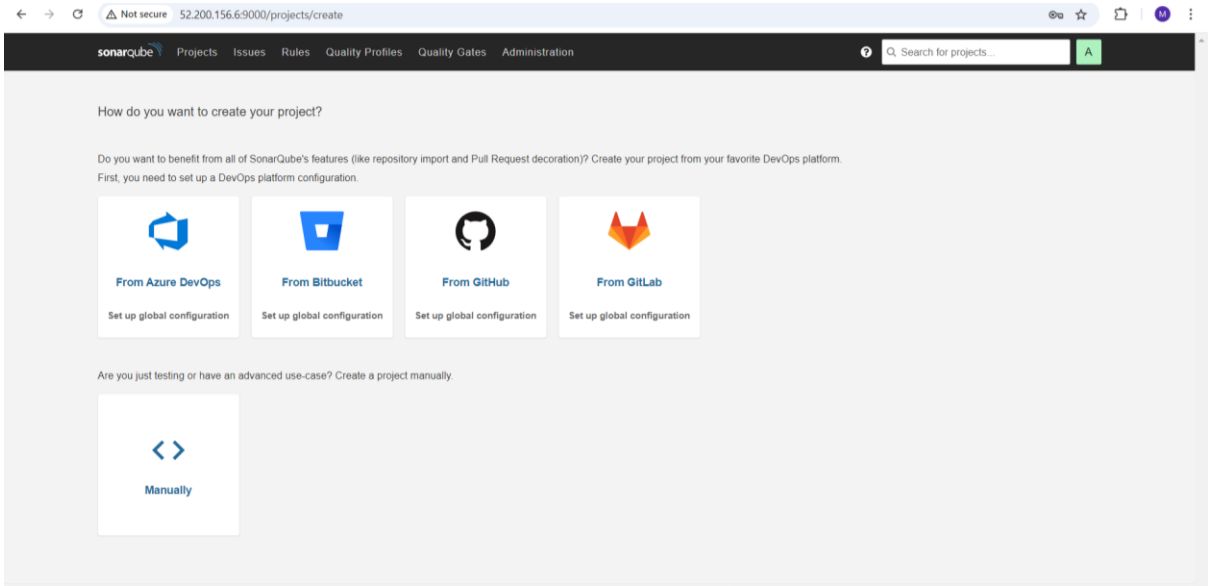
chmod -R 755 /home/sonarqube/sonarqube-9.4.0.54424

chown -R sonarqube:sonarqube /home/sonarqube/sonarqube-9.4.0.54424

cd sonarqube-9.4.0.54424/bin/linux-x86-64/

./sonar.sh start





Generate token for sonarqube to access Jenkins

Install docker

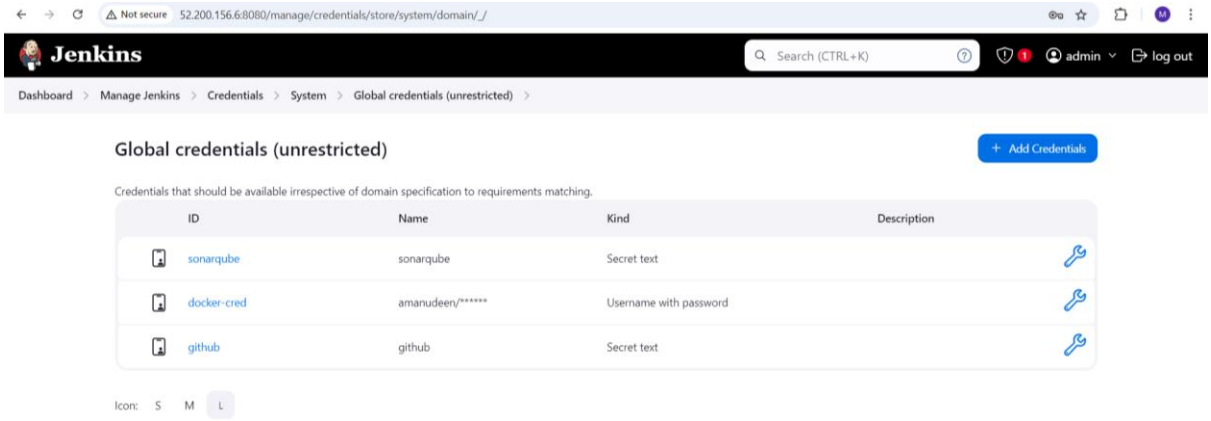
sudo apt install docker.io

sudo su -

usermod -aG docker jenkins

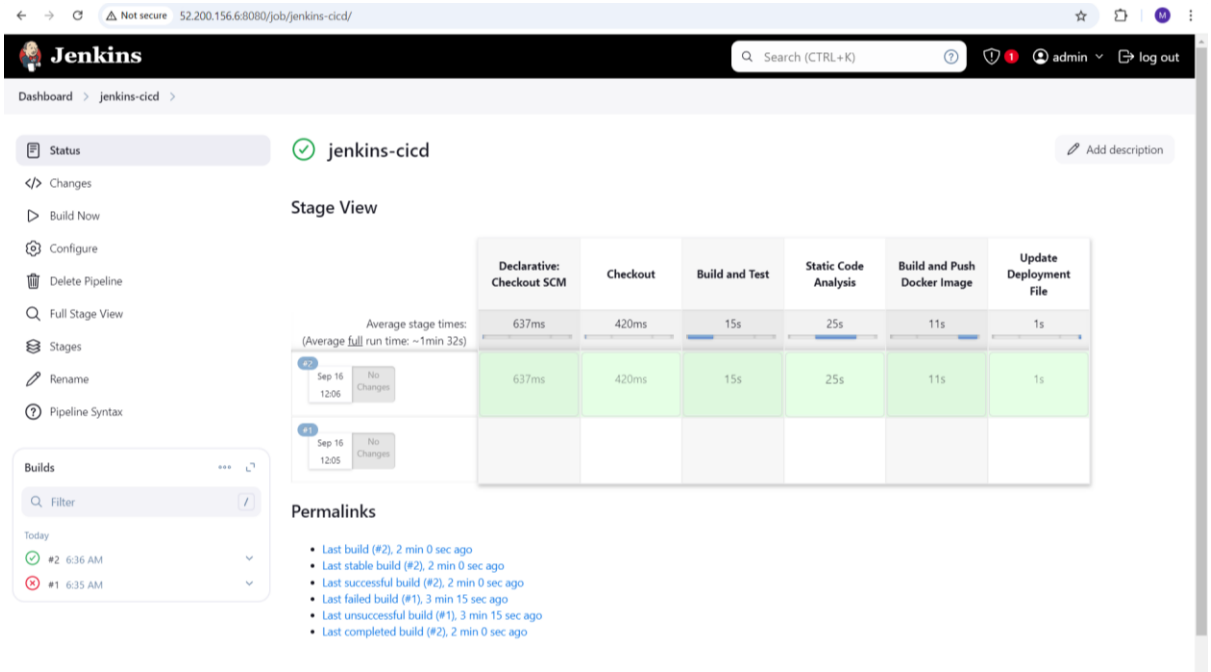
usermod -aG docker ubuntu

systemctl restart docker

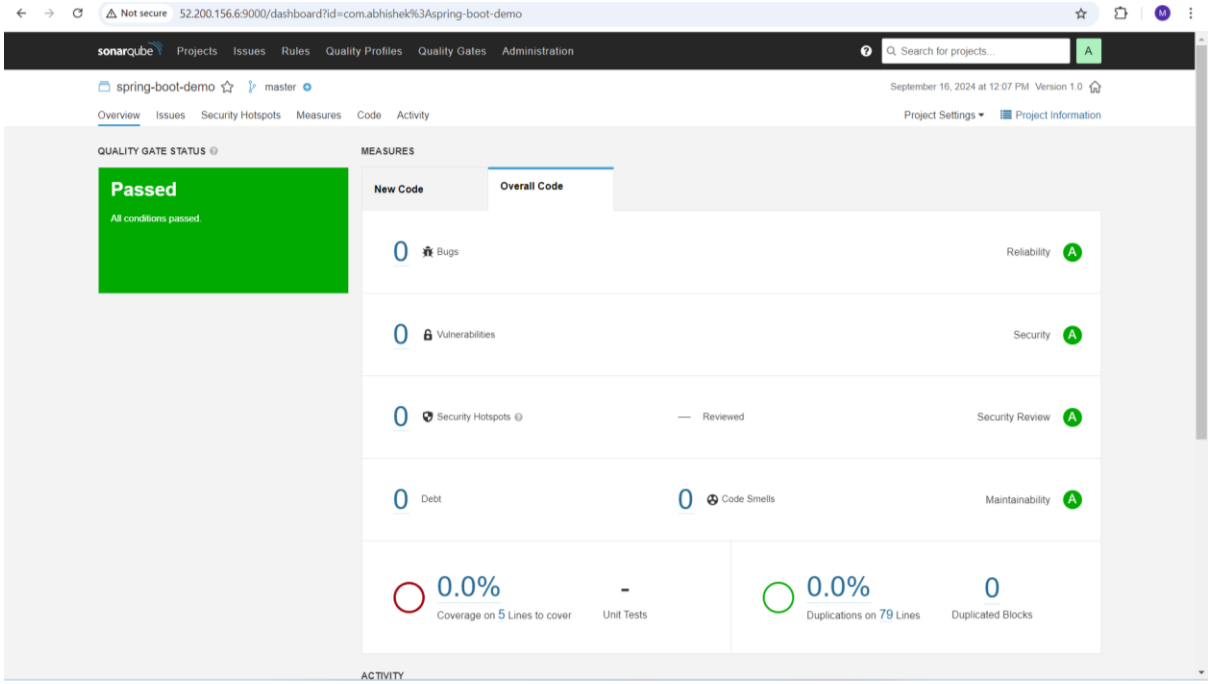


Add the credentials

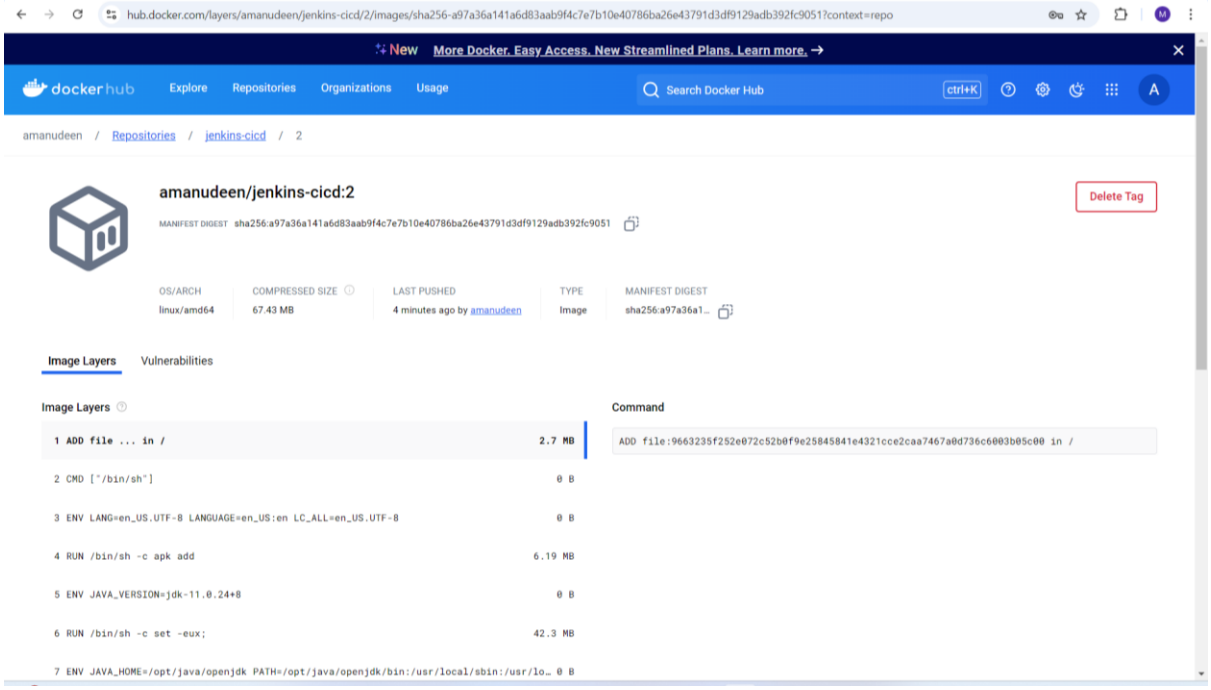
Build the pipeline



JenkinsCI Pipeline is successfully running.



Sonarqube code analysis is passed



New Dockerimage has been pushed with new tag

CI part is done

Install Minikube and Argocd

sudo apt update

curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64

sudo install minikube-linux-amd64 /usr/local/bin/minikube && rm minikube-linux-amd64

sudo chmod 777 /var/run/docker.sock

minikube start --memory=4098 --driver=hyperkit

sudo snap install kubectl --classic

curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64

sudo install minikube-linux-amd64 /usr/local/bin/minikube

sudo chmod 777 /var/run/docker.sock

minikube start --memory=4098 --driver=docker

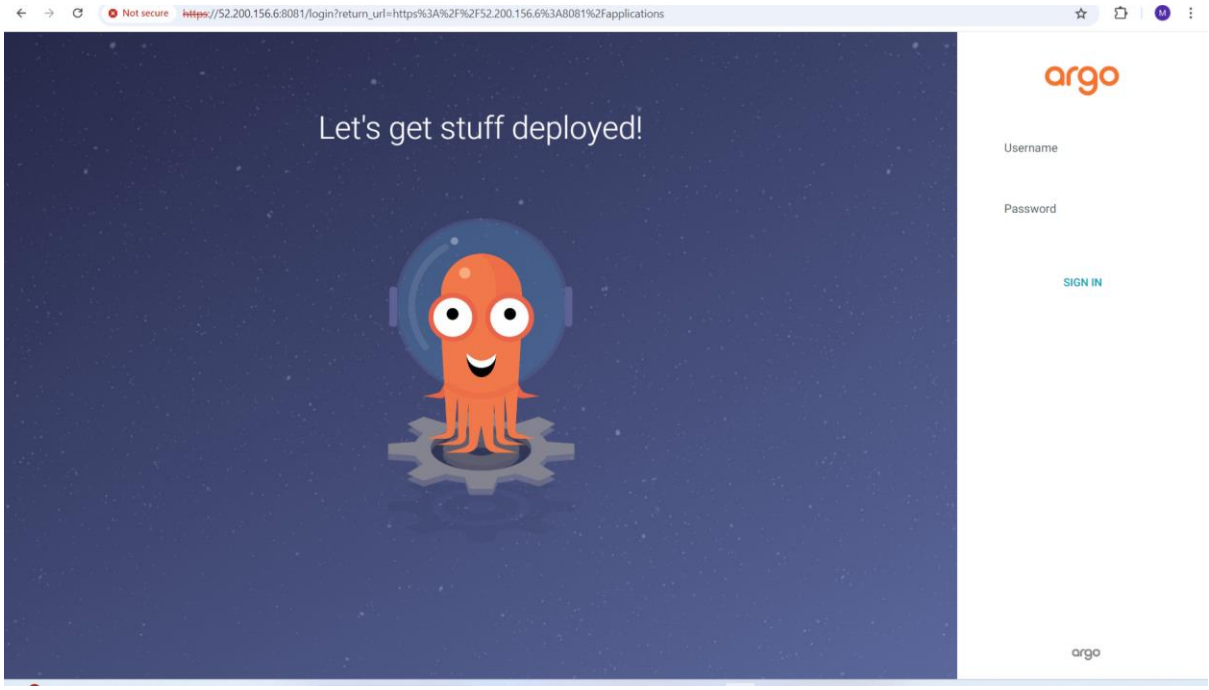
sudo snap install kubectl --classic

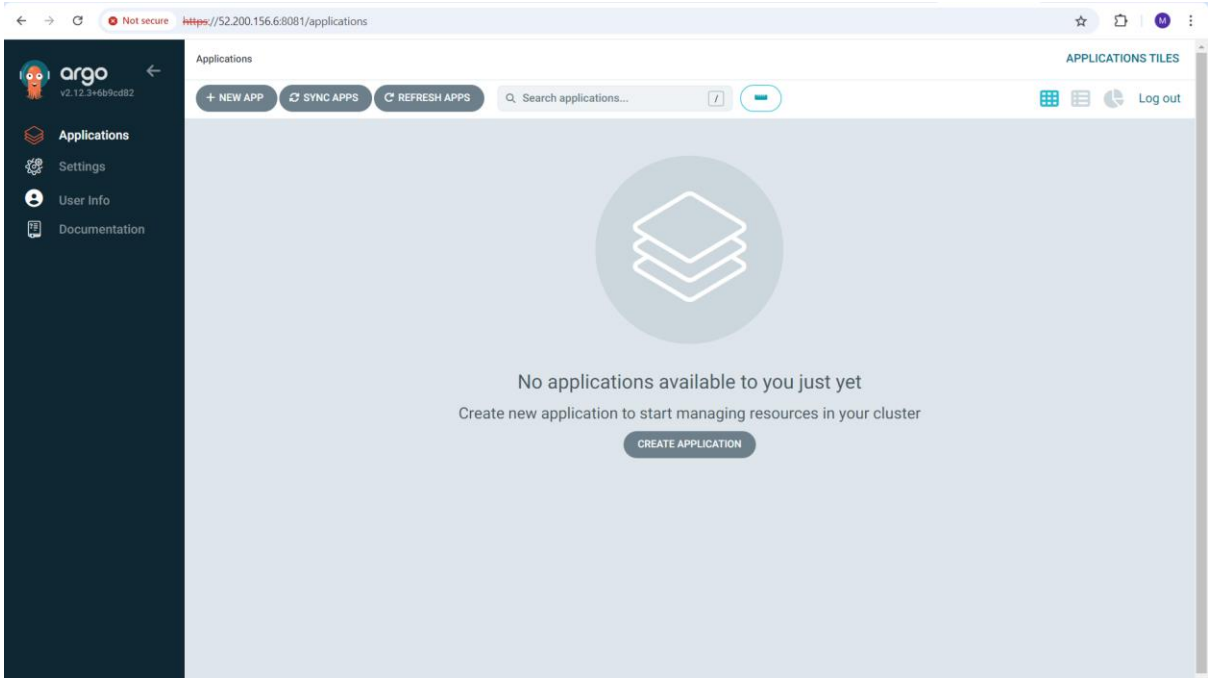
kubectl get pods

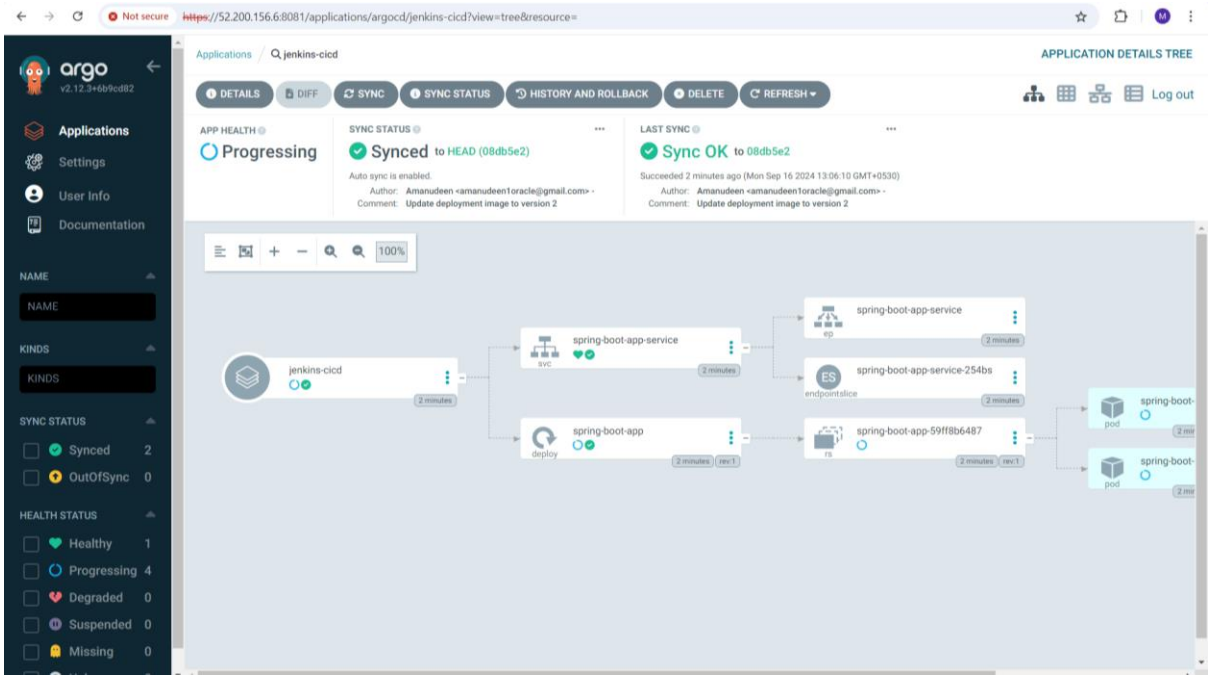
kubectl create namespace argocd

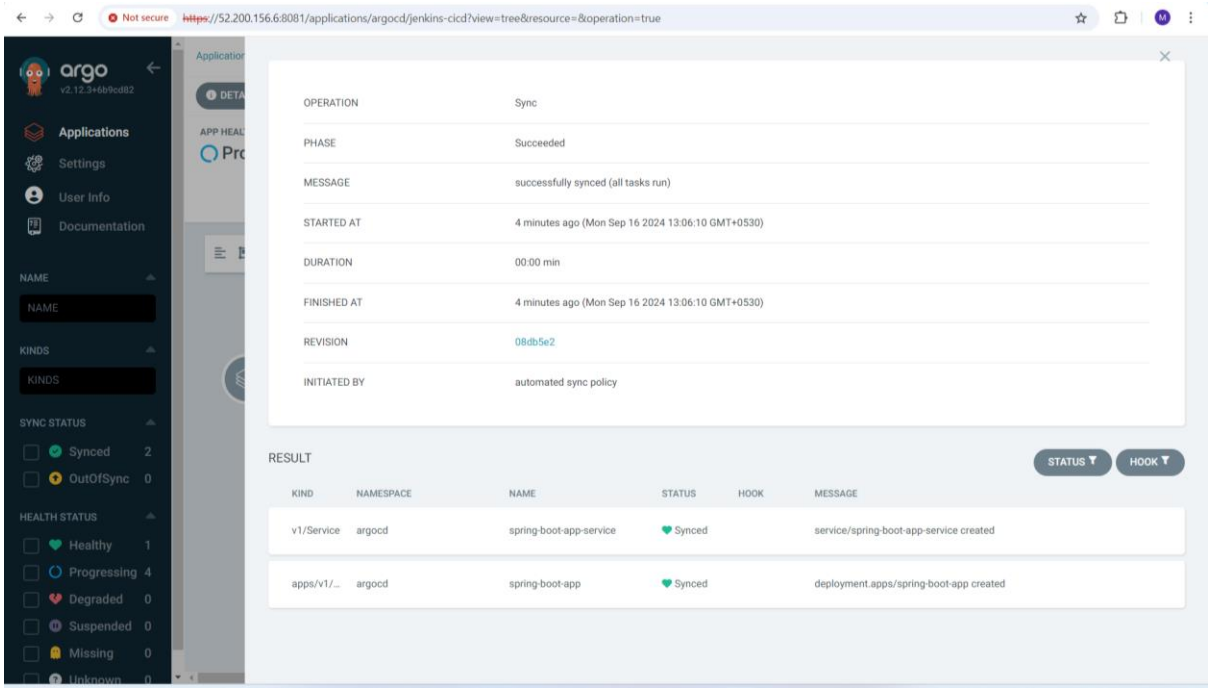
kubectl apply -n argocd -f https://raw.githubusercontent.com/argoproj/argo-cd/stable/manifests/install.yaml

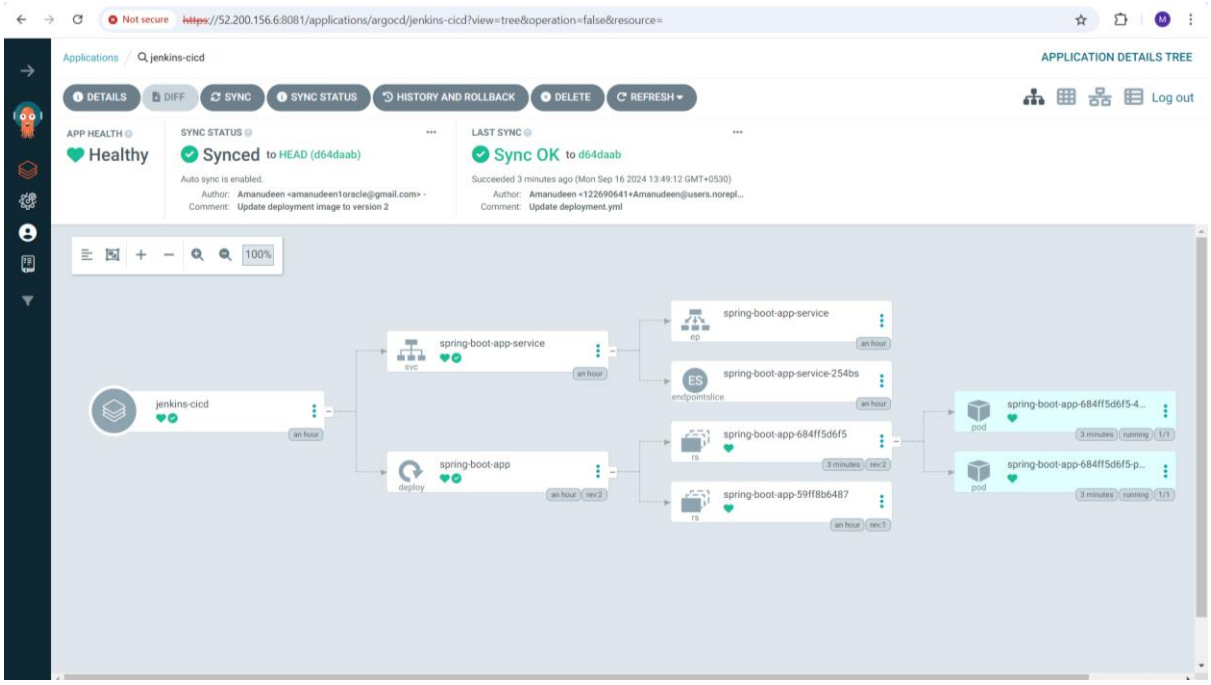
watch kubectl get pods -n argocd




Not secure
https://52.200.156.6:8081/applications
argo
v2.12.3+6b9cd82
Applications
Settings
User Info
Documentation
Applications
APPLICATIONS TILES
+ NEW APP
SYNC APPS
REFRESH APPS
Search applications...
Log out
No applications available to you just yet
Create new application to start managing resources in your cluster
CREATE APPLICATION


Not secure
https://52.200.156.6:8081/applications/argocd/jenkins-cicd?view=tree&resource=
argo
v2.12.3+6b9cd82
Applications
Settings
User Info
Documentation
Applications
jenkins-cicd
APPLICATION DETAILS TREE
DETAILS
DIFF
SYNC
SYNC STATUS
HISTORY AND ROLLBACK
DELETE
REFRESH
Log out
APP HEALTH
Progressing
SYNC STATUS
Synced to HEAD (08db5e2)
Auto sync is enabled.
Author: Amanudeen <amanudeen1oracle@gmail.com> -
Comment: Update deployment image to version 2
LAST SYNC
Sync OK to 08db5e2
Succeeded 2 minutes ago (Mon Sep 16 2024 13:06:10 GMT+0530)
Author: Amanudeen <amanudeen1oracle@gmail.com> -
Comment: Update deployment image to version 2
100%
NAME
KINDS
SYNC STATUS
Synced 2
OutOfSync 0
HEALTH STATUS
Healthy 1
Progressing 4
Degraded 0
Suspended 0
Missing 0
jenkins-cicd
spring-boot-app-service
spring-boot-app-service
spring-boot-app-service-254bs
spring-boot-app
spring-boot-app-59ff8b6487





Pods are healthy

ArgoCD is successfully running.