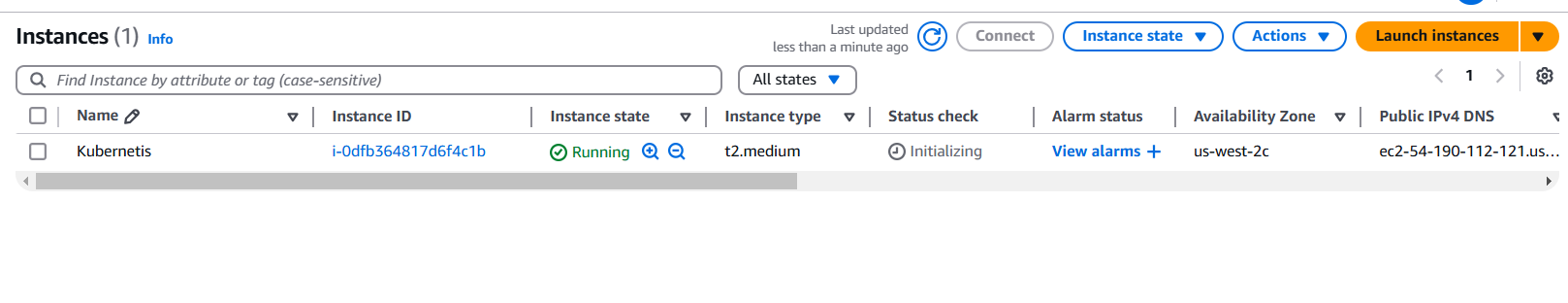
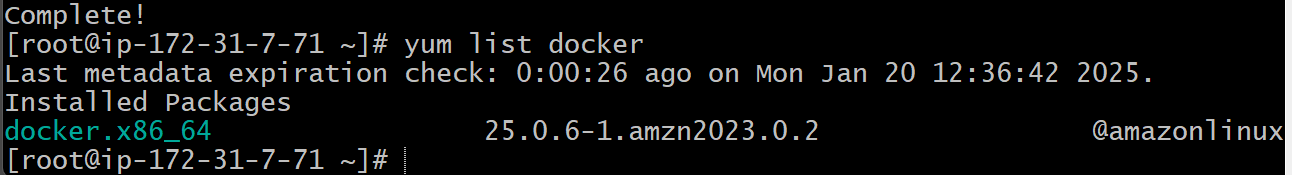
Assignment : Kubernetes

Step 1: Create server with t2.medium



Step 2: Install Docker in it and start the docker service

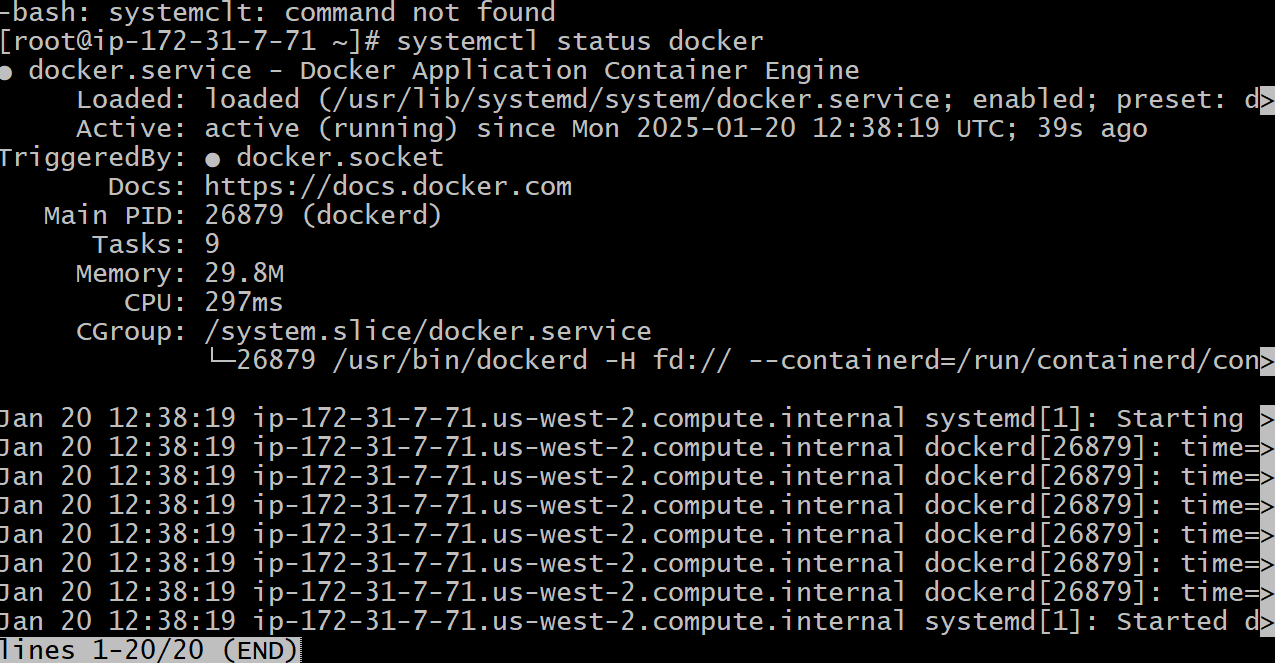
Command : yum install docker -y



Step 3: Start the docker service

Command: systemctl start docker

Systemctl enable docker



Step 4 : Create Docker for Jenkins which contains java-17, docker ,maven

Dockerfile:  
FROM jenkins/jenkins:lts

USER root

# Install Docker

RUN apt-get update && apt-get install -y docker.io \

&& rm -rf /var/lib/apt/lists/\*

# Install JDK 17 and Maven

RUN apt-get update && apt-get install -y openjdk-17-jdk maven \

&& rm -rf /var/lib/apt/lists/\*

# Set environment variables

ENV JAVA\_HOME=/usr/lib/jvm/java-17-openjdk-amd64

ENV PATH="$JAVA\_HOME/bin:$PATH"

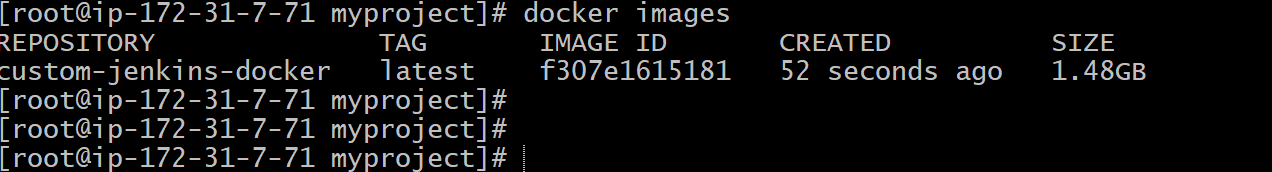
USER Jenkins

After that buid the docker file

Command: docker build -t custom-jenkins-docker .

Step 5: Check the custom image built or not

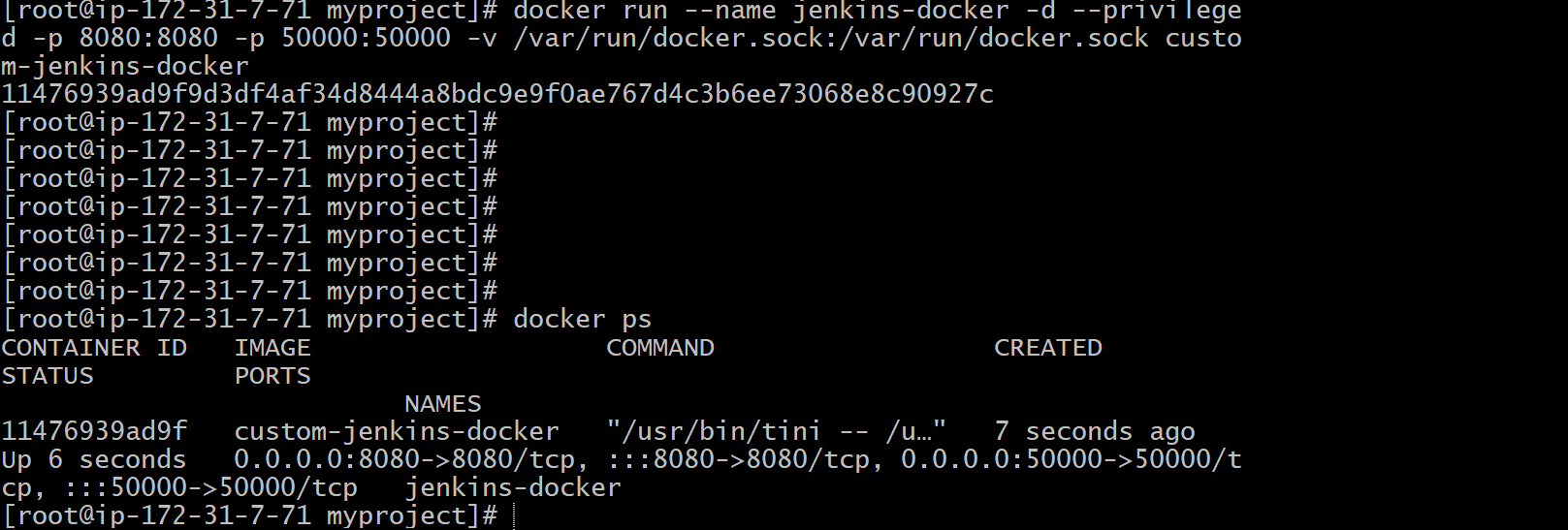
Command: docker images



Step 6:Run the images and create container for the same

Command: docker run --name jenkins-docker -d --privileged -p 8080:8080 -p 50000:50000 -v /var/run/docker.sock:/var/run/docker.sock custom-jenkins-docker  
  
and check process is running or not

Command: docker ps



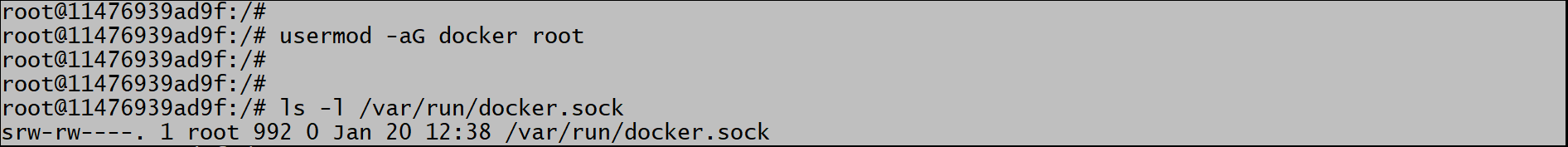
Step 6: Now enete in container

Command: docker exec -it --user root 11476939ad9f bash

Now create rrot user in container

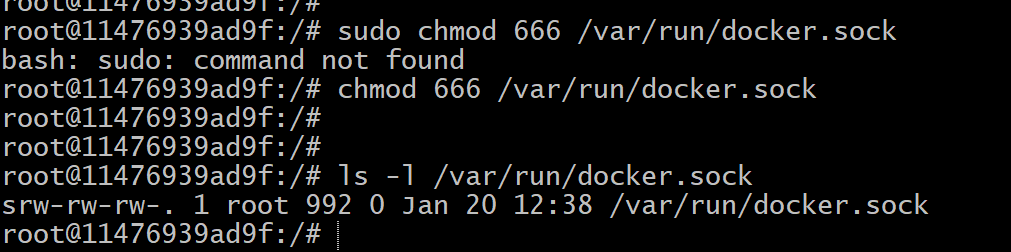
Command: usermod -aG docker root

Now provide the credentials for container



Now change the permission for docker

chmod 666 /var/run/docker.sock



Step 7: Now provide the access to Jenkins user using visudo

Command: visudo

Prerqusite: install sudo

Command: apt update && apt install nano -y

Install yum :

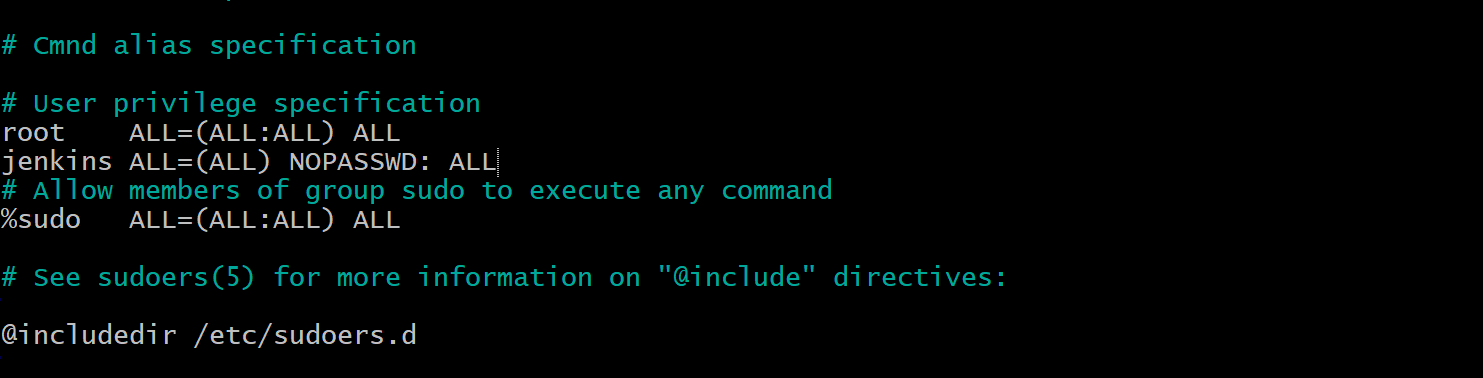
Command: apt update && apt install vim -y

Now open visudo

Command: jenkins ALL=(ALL) NOPASSWD: ALL

Save ctrl+s

Exit:ctrl+x



Step 7:Check docker install in container along with maven



Step 8:Now Add the jenknis script

pipeline {

agent any

environment {

DOCKER\_HUB\_USERNAME = 'manish527'

DOCKER\_HUB\_PASSWORD = 'Manish@1058'

}

stages {

stage('git Checkout Stage') {

steps {

git 'https://github.com/Manish172-hub/myweb.git'

}

}

stage('Build') {

steps {

sh "mvn clean package"

}

}

stage('docker image build') {

steps {

sh "docker build -t b840image ."

}

}

stage('docker image push to docker hub') {

steps {

// Log in to Docker Hub

sh 'echo $DOCKER\_HUB\_PASSWORD | docker login -u $DOCKER\_HUB\_USERNAME --password-stdin'

// Tag the image

sh 'docker tag b840image manish527/b840image'

// Push the image to Docker Hub

sh 'docker push manish527/b840image'

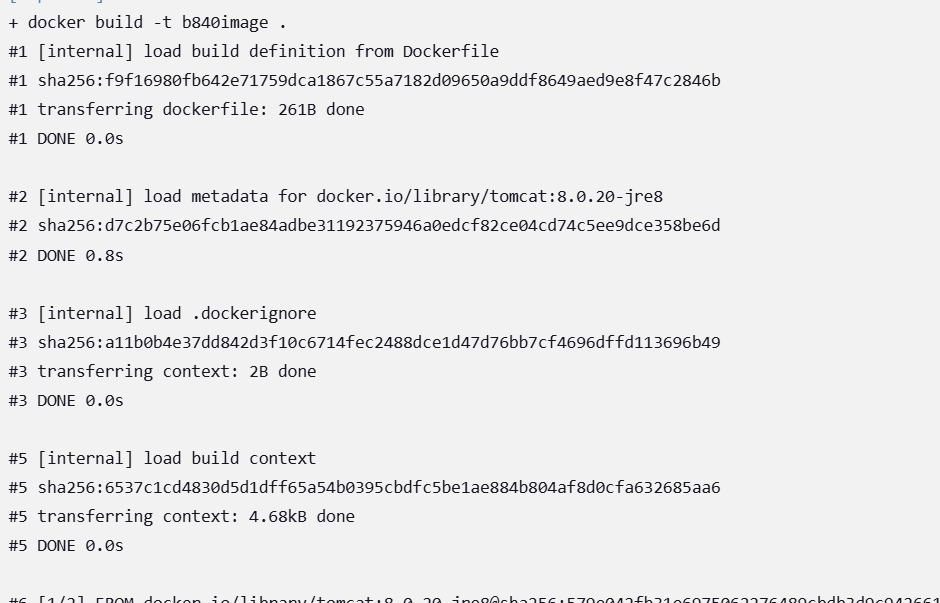
}

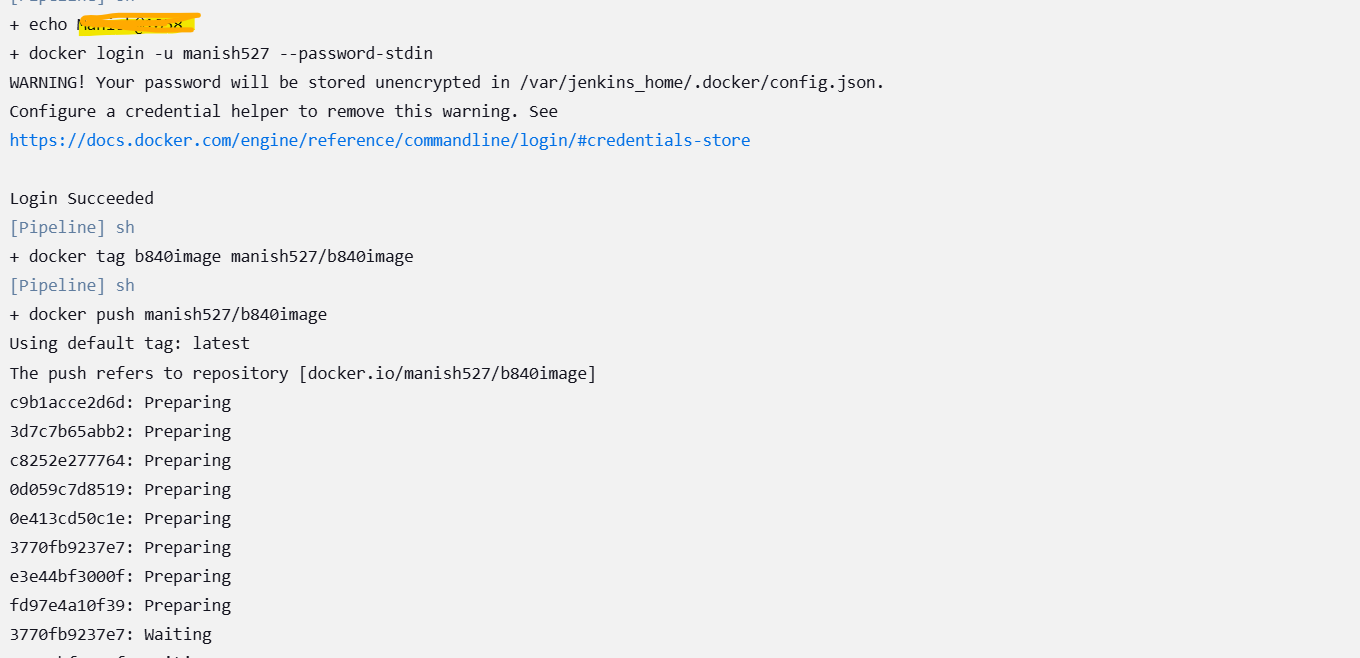
}

}

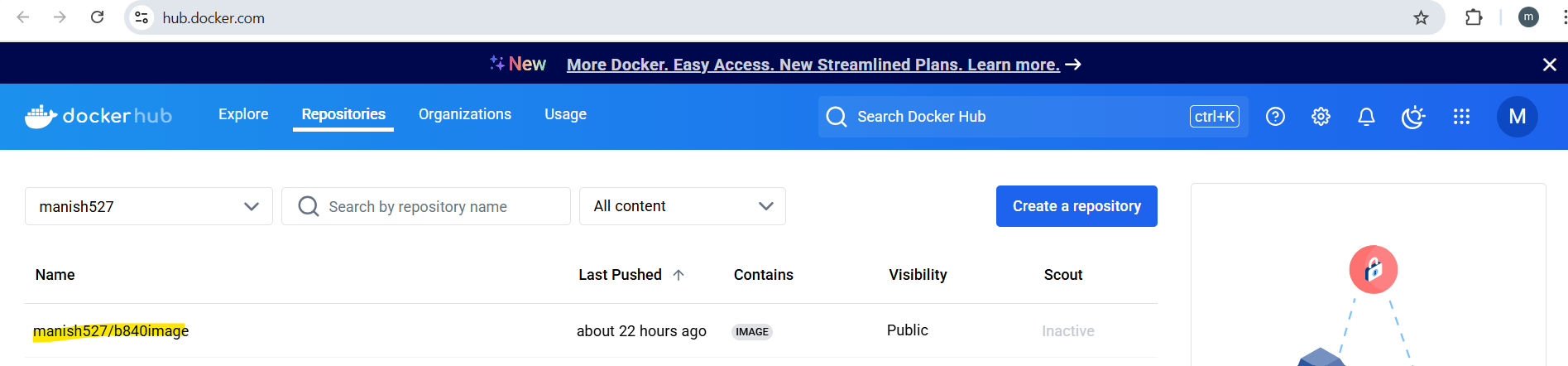
}

Step 9:Check the console output





Step 9: Verify the image in docker hub



Step 10:Now install kubectl in container or create docker file