Java Application Minikube Deployment

jenkins ALL=(ALL) NOPASSWD: ALL

sudo systemctl restart ssh.service
sudo systemctl restart sshd.service

sudo apt update
#Installing SSH key
sudo apt install openssh-server
sudo systemctl restart ssh
sudo systemctl status ssh
ls /etc/systemd/system/sshd.service or ls /usr/lib/systemd/system/sshd.service

sudo systemctl daemon-reload
sudo systemctl status ssh
sudo systemctl restart ssh.service
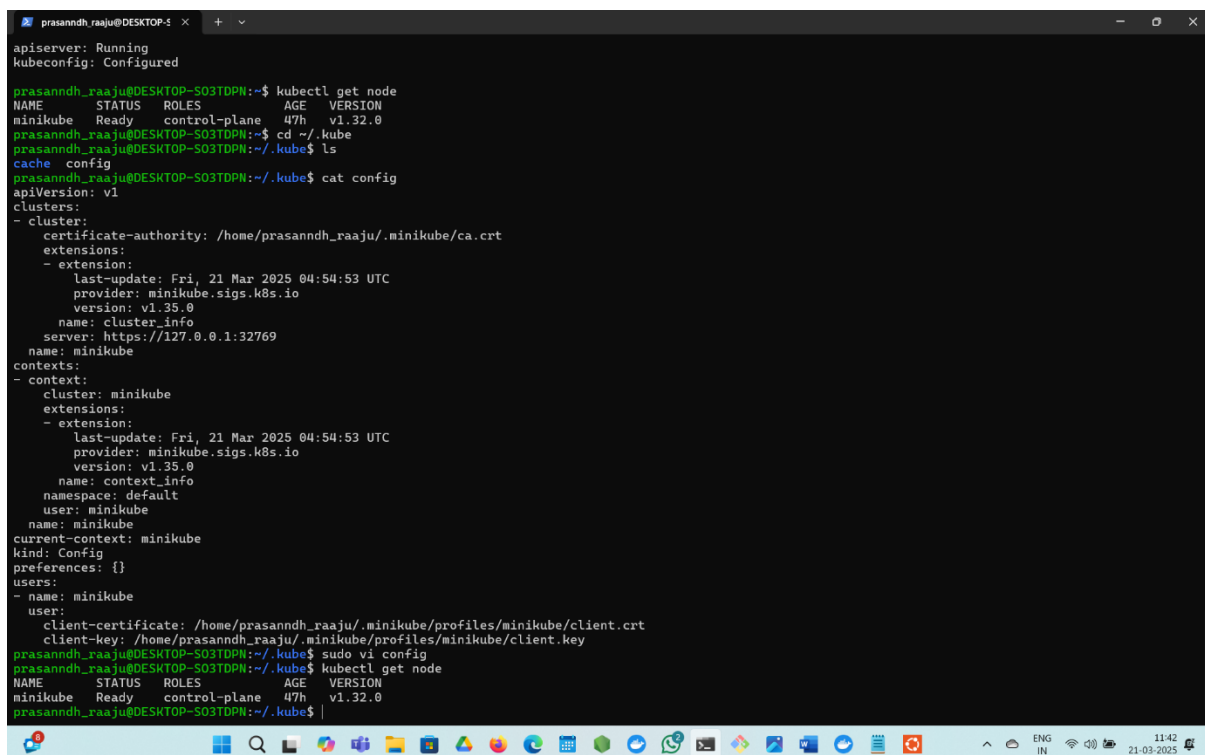cat /home/david/.minikube/ca.crt | base64 -w 0; echo
sudo chmod 666 /var/run/docker.sock
https://192.168.39.226:8443
sh 'kubectl apply -f deployment.yml --validate=false'
minikube service my-service --url | xargs curl

apiVersion: v1
clusters:
- cluster:
    certificate-authority-data: /home/prasanndh_raaju/.minikube/ca.crt
    extensions:
    - extension:
        last-update: Fri, 21 Mar 2025 04:54:53 UTC
        provider: minikube.sigs.k8s.io
        version: v1.35.0
      name: cluster_info
    server: https://127.0.0.1:32769
  name: minikube
contexts:
- context:
    cluster: minikube
    extensions:
    - extension:
        last-update: Fri, 21 Mar 2025 04:54:53 UTC
        provider: minikube.sigs.k8s.io
        version: v1.35.0
      name: context_info
    namespace: default
    user: minikube
  name: minikube
current-context: minikube
kind: Config
preferences: {}
users:
- name: minikube
  user:
    client-certificate: /home/prasanndh_raaju/.minikube/profil
    client-key: /home/prasanndh_raaju/.minikube/profiles/miniku
~
~
~
~
~
~
~
~
~
~
~
~
~
~
-- INSERT --   4,33   All

prasanndh_raaju@DESKTOP-SO3TDPN: ~/.kube
```
prasanndh_raaju@DESKTOP-SO3TDPN:~$ cd ~/.kube
prasanndh_raaju@DESKTOP-SO3TDPN:~/.kube$
```

---

minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

```
prasanndh_raaju@DESKTOP-SO3TDPN:~$ kubectl get node
NAME       STATUS   ROLES           AGE   VERSION
minikube   Ready    control-plane   47h   v1.32.0
prasanndh_raaju@DESKTOP-SO3TDPN:~$ cd ~/.kube
prasanndh_raaju@DESKTOP-SO3TDPN:~/.kube$ ls
cache  config
prasanndh_raaju@DESKTOP-SO3TDPN:~/.kube$ cat config
```

apiVersion: v1
clusters:
- cluster:
    certificate-authority: /home/prasanndh_raaju/.minikube/ca.crt
    extensions:
    - extension:
        last-update: Fri, 21 Mar 2025 04:54:53 UTC
        provider: minikube.sigs.k8s.io
        version: v1.35.0
      name: cluster_info
    server: https://127.0.0.1:32769
  name: minikube
contexts:
- context:
    cluster: minikube
    extensions:
    - extension:
        last-update: Fri, 21 Mar 2025 04:54:53 UTC
        provider: minikube.sigs.k8s.io
        version: v1.35.0
      name: context_info
    namespace: default
    user: minikube
  name: minikube
current-context: minikube
kind: Config
preferences: {}
users:
- name: minikube
  user:
    client-certificate: /home/prasanndh_raaju/.minikube/profiles/minikube/client.crt
    client-key: /home/prasanndh_raaju/.minikube/profiles/minikube/client.key

```
prasanndh_raaju@DESKTOP-SO3TDPN:~/.kube$
```

```
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ ^C
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo chown -R jenkins:jenkins /home/prasanndh_raaju/.minikube
chmod -R u+rwX /home/prasanndh_raaju/.minikube
chmod: changing permissions of '/home/prasanndh_raaju/.minikube': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/logs': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/logs/lastStart.txt': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/logs/audit.json': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/proxy-client-ca.key': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/ca.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines/server-key.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines/minikube': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines/minikube/config.json': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines/minikube/id_rsa': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines/minikube/id_rsa.pub': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machines/server.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/files': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/addons': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/config.json': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/apiserver.crt.7fb57e3c': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/apiserver.key.7fb57e3c': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/proxy-client.crt': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/client.crt': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/events.json': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/client.key': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/apiserver.crt': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/apiserver.key': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/profiles/minikube/proxy-client.key': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cert.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/key.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/ca.key': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/proxy-client-ca.crt': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/machine_client.lock': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/certs': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/certs/ca.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/certs/cert.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/certs/key.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/certs/ca-key.pem': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/kic': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/kic/amd64': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/kic/amd64/kicbase_v0.0.46@sha256_fd2d445ddcc33ebc5c6b68a17e6219ea207ce63c005095ea15252
96da2d1a279.tar': Operation not permitted
```

```
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/linux/amd64/v1.32.0': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/linux/amd64/v1.32.0/kubeadm': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/linux/amd64/v1.32.0/kubectl': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/linux/amd64/v1.32.0/kubelet': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/preloaded-tarball': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/preloaded-tarball/preloaded-images-k8s-v18-v1.32.0-docker-overlay2-amd64.tar.lz4.check
sum': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/preloaded-tarball/preloaded-images-k8s-v18-v1.32.0-docker-overlay2-amd64.tar.lz4': Ope
ration not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/ca.crt': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/config': Operation not permitted
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo chown -R jenkins:jenkins /home/prasanndh_raaju/.minikube
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ export KUBECONFIG=/home/prasanndh_raaju/.kube/config
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo systemctl restart jenkins
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo visudo
visudo: /etc/sudoers.tmp unchanged
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ cd
prasanndh_raaju@DESKTOP-SO3TDPN: $ nano deployment.yml
prasanndh_raaju@DESKTOP-SO3TDPN: $ kubectl apply -f
.bash_history            .profile
.bash_logout             .sudo_as_admin_successful
.bashrc                  Jenkinsfile
.cache/                  Jenkinsfile.save
.docker/                 deploy.yml
.kube/                   deployment.yml
.landscape/              docker-compose.yml
.local/                  pod
.minikube/               pod.yml
.motd_shown              yml
prasanndh_raaju@DESKTOP-SO3TDPN: $ kubectl apply -f deployment.yml
deployment.apps/my-deploy configured
service/my-service unchanged
prasanndh_raaju@DESKTOP-SO3TDPN: $ minikube service my-service --url

❌ Exiting due to HOST_HOME_PERMISSION: open /home/prasanndh_raaju/.minikube/profiles/minikube/config.json: permission denied
💡 Suggestion: Your user lacks permissions to the minikube profile directory. Run: 'sudo chown -R $USER $HOME/.minikube; chmod -R u+wrx $HOME/.minikube' to
fix
🔗 Related issue: https://github.com/kubernetes/minikube/issues/9165

prasanndh_raaju@DESKTOP-SO3TDPN: $ sudo chown -R $USER:$USER $HOME/.minikube
[sudo] password for prasanndh_raaju:
prasanndh_raaju@DESKTOP-SO3TDPN: $ chmod -R u+wrx $HOME/.minikube
prasanndh_raaju@DESKTOP-SO3TDPN: $ minikube service my-service --url
docker@127.0.0.1's password: http://127.0.0.1:36641
❗ Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

- minikube service my-service
- curl http://192.168.49.2:30002/my-web/
- chmod -R u+wrx $HOME/.minikube
- minikube service my-services
- kubectl port-forward svc/my-service 8000:9000

Pipeline Stages:

Pipeline Script:

```
pipeline {
  agent any

  stages {
    stage('scm') {
      steps {
    git branch: ''
      }
    }
    stage('builb-clean') {
      steps {
```

```
                sh "mvn clean"
        }
}
    stage('build-validate') {
        steps {
            sh "mvn validate"
}
}
    stage('build-com') {
        steps {
            sh "mvn compile"
}
}

    stage('build-test') {
        steps {
            sh "mvn test"
}
}
    stage('build-install') {
        steps {
            sh "mvn package"
}
}
stage('build to images') {
        steps {
            script{
                sh 'docker build -t  .'
            }
    }
}
stage('push to hub') {
        steps {
            script{
                withDockerRegistry(credentialsId: 'Docker_cred', url: 'https://index.docker.io/v1/') {
                    sh 'docker push '
            }
        }
        }
}
    stage('Deploy App') {
        steps {
            withKubeConfig(caCertificate: '', clusterName: 'minikube', contextName: 'minikube',
credentialsId: 'mukubeconfig_011', namespace: '', restrictKubeConfigAccess: false, serverUrl:
'https://192.168.49.2:8443') {
                sh 'kubectl apply -f deployment.yml --validate=false'
            }
        }
        }
    stage('Test') {
        steps {
```

```
    withKubeConfig(caCertificate: '', clusterName: 'minikube', contextName: 'minikube',
credentialsId: 'mukubeconfig_011', namespace: '', restrictKubeConfigAccess: false, serverUrl:
'https://192.168.49.2:8443') {

    sh 'minikube service my-service --url | xargs curl'
  }
}
}
}
}
terraform {
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "5.92.0"
    }
  }
}

provider "aws" {
  # Configuration options
}
```

Output:

Hello World!

Terminal (Ubuntu):

```
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/preloa
ded-tarball/preloaded-images-k8s-v18-v1.32.0-docker-overlay2-amd64.tar.lz4.c
hecksum': Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/cache/preloa
ded-tarball/preloaded-images-k8s-v18-v1.32.0-docker-overlay2-amd64.tar.lz4':
 Operation not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/ca.crt': Ope
ration not permitted
chmod: changing permissions of '/home/prasanndh_raaju/.minikube/config': Ope
ration not permitted
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo chown -R jenkins:jenk
ins /home/prasanndh_raaju/.minikube
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ export KUBECONFIG=/home/pr
asanndh_raaju/.kube/config
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo systemctl restart jen
kins
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ sudo visudo
visudo: /etc/sudoers.tmp unchanged
prasanndh_raaju@DESKTOP-SO3TDPN:/var/lib/jenkins$ cd
prasanndh_raaju@DESKTOP-SO3TDPN: $ nano deployment.yml
prasanndh_raaju@DESKTOP-SO3TDPN: $ kubectl apply -f
.bash_history          .profile
.bash_logout           .sudo_as_admin_successful
.bashrc                Jenkinsfile
.cache/                Jenkinsfile.save
.docker/               deploy.yml
.kube/                 deployment.yml
.landscape/            docker-compose.yml
.local/                pod
.minikube/             pod.yml
.motd_shown            yml
prasanndh_raaju@DESKTOP-SO3TDPN: $ kubectl apply -f deployment.yml
deployment.apps/my-deploy configured
service/my-service unchanged
prasanndh_raaju@DESKTOP-SO3TDPN: $ minikube service my-service --url

❌ Exiting due to HOST_HOME_PERMISSION: open /home/prasanndh_raaju/.minikub
e/profiles/minikube/config.json: permission denied
💡 Suggestion: Your user lacks permissions to the minikube profile director
y. Run: 'sudo chown -R $USER $HOME/.minikube; chmod -R u+wrx $HOME/.minikube
' to fix
🦠 Related issue: https://github.com/kubernetes/minikube/issues/9165

prasanndh_raaju@DESKTOP-SO3TDPN: $ sudo chown -R $USER:$USER $HOME/.minikube
```

Hello World!