DEVOPS

DAY 5 Task

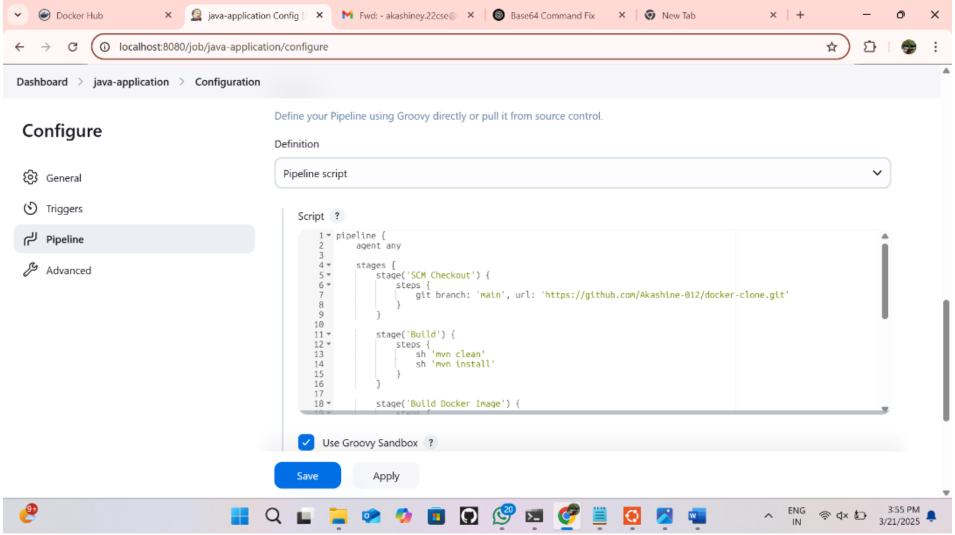
Java Application deployed in minikube

Pipeline script

```
pipeline {
    agent any

    stages {
        stage('scm') {
            steps {
        git branch: 'git branch: 'main', url: 'https://github.com/Akashine-012/docker-clone.git'
            }
        }
        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 akashine/javaapp .'
        }
  }
}
stage('push to hub') {
      steps {
        script{
         withDockerRegistry(credentialsId: 'docker_cred', url: 'https://index.docker.io/v1/') {
          sh 'docker push ' akashine/javaapp
        }
      }
      }
}
    stage('Deploy App') {
      steps {
         withKubeConfig(caCertificate: '', clusterName: 'minikube', contextName: 'minikube',
credentialsId: 'minikube_cred', 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: 'minikube_cred', namespace: '', restrictKubeConfigAccess: false, serverUrl:
'https://192.168.49.2:8443') {


        sh 'minikube service my-service --url | xargs curl'
   }
}
}
}
}
```



Define your Pipeline using Groovy directly or pull it from source control.

Definition: Pipeline script

Script

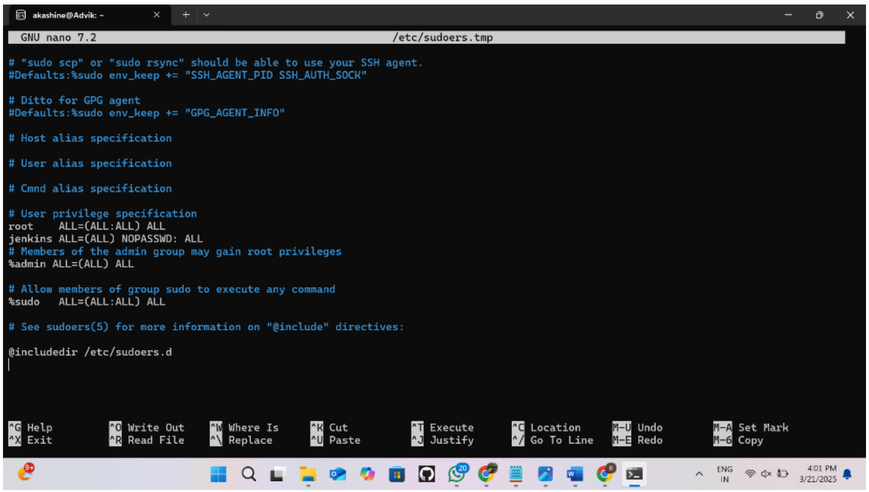
```
pipeline {
    agent any

    stages {
        stage('SCM Checkout') {
            steps {
                git branch: 'main', url: 'https://github.com/Akashine-012/docker-clone.git'
            }
        }

        stage('Build') {
            steps {
                sh 'mvn clean'
                sh 'mvn install'
            }
        }

        stage('Build Docker Image') {
```

☑ Use Groovy Sandbox

Connection with visual studio

1. sudo visudo

2. Add jenkins ALL=(ALL) NOPASSWD: ALL



```
  GNU nano 7.2                                    /etc/sudoers.tmp

# "sudo scp" or "sudo rsync" should be able to use your SSH agent.
#Defaults:%sudo env_keep += "SSH_AGENT_PID SSH_AUTH_SOCK"

# Ditto for GPG agent
#Defaults:%sudo env_keep += "GPG_AGENT_INFO"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
jenkins ALL=(ALL) NOPASSWD: ALL
# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy
ENG IN
4:01 PM
3/21/2025

SSH Installation

1. sudo systemctl restart ssh.service

2. sudo systemctl restart sshd.service

3. sudo apt update

4. sudo apt install openssh-server

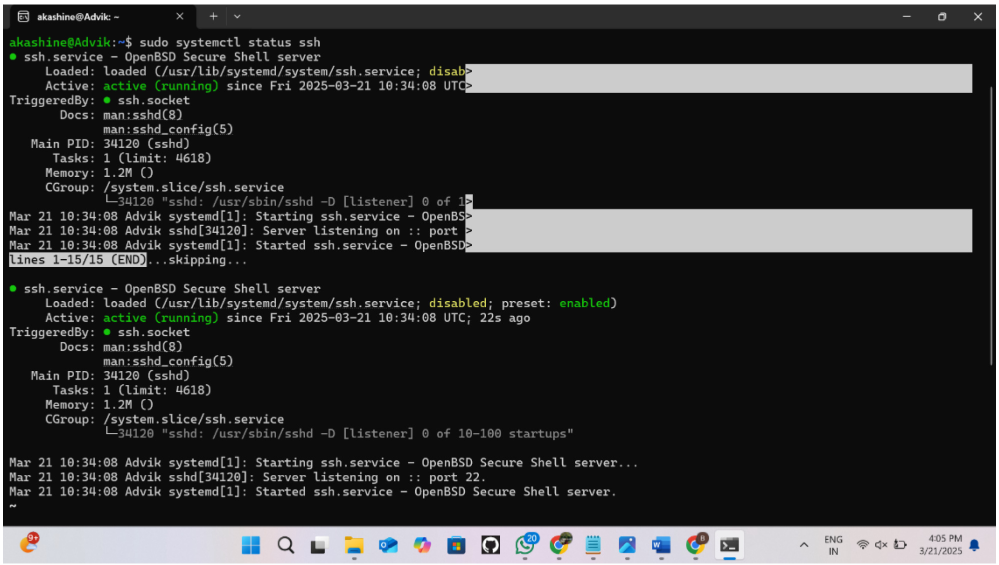
5. sudo systemctl restart ssh

6. sudo systemctl status ssh

7. ls /etc/systemd/system/sshd.service or ls /usr/lib/systemd/system/sshd.service

8. sudo systemctl daemon-reload

9. sudo systemctl status ssh



```
akashine@Advik:~$ sudo systemctl status ssh
● ssh.service - OpenBSD Secure Shell server
     Loaded: loaded (/usr/lib/systemd/system/ssh.service; disab>
     Active: active (running) since Fri 2025-03-21 10:34:08 UTC>
TriggeredBy: ● ssh.socket
       Docs: man:sshd(8)
             man:sshd_config(5)
   Main PID: 34120 (sshd)
      Tasks: 1 (limit: 4618)
     Memory: 1.2M ()
     CGroup: /system.slice/ssh.service
             └─34120 "sshd: /usr/sbin/sshd -D [listener] 0 of 1>
Mar 21 10:34:08 Advik systemd[1]: Starting ssh.service - OpenBS>
Mar 21 10:34:08 Advik sshd[34120]: Server listening on :: port >
Mar 21 10:34:08 Advik systemd[1]: Started ssh.service - OpenBSD>
lines 1-15/15 (END)...skipping...

● ssh.service - OpenBSD Secure Shell server
     Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: enabled)
     Active: active (running) since Fri 2025-03-21 10:34:08 UTC; 22s ago
TriggeredBy: ● ssh.socket
       Docs: man:sshd(8)
             man:sshd_config(5)
   Main PID: 34120 (sshd)
      Tasks: 1 (limit: 4618)
     Memory: 1.2M ()
     CGroup: /system.slice/ssh.service
             └─34120 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Mar 21 10:34:08 Advik systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Mar 21 10:34:08 Advik sshd[34120]: Server listening on :: port 22.
Mar 21 10:34:08 Advik systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
~
```

Deployment

1. cd ~/.kube

2. ls

3. cat config

4. sudo vi config

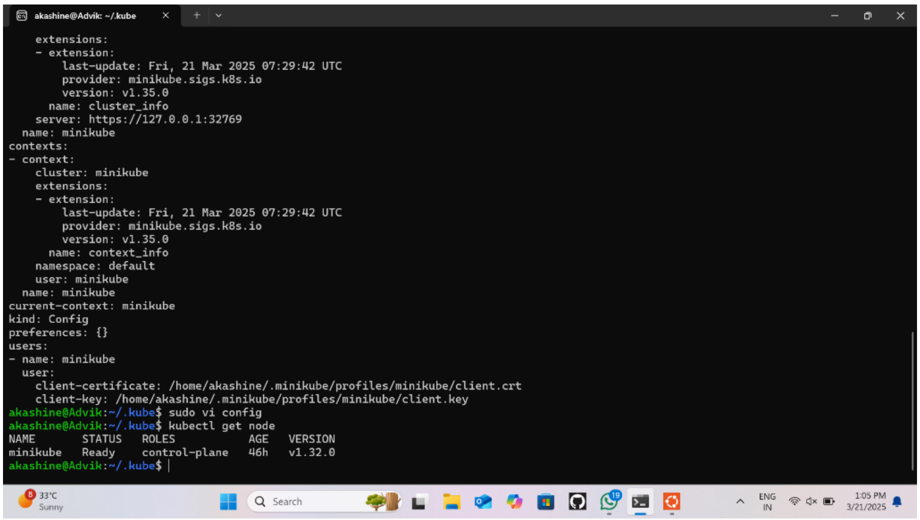
5. i

6. -data

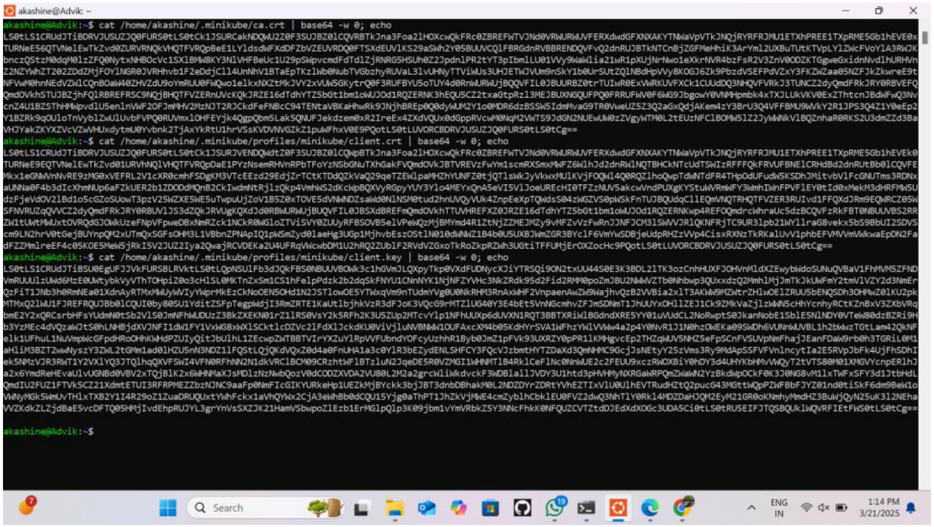
7. cat url | base64 -w 0; echo

8. minikube start

9. kubectl get node



```
    extensions:
    - extension:
        last-update: Fri, 21 Mar 2025 07:29:42 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 07:29:42 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/akashine/.minikube/profiles/minikube/client.crt
    client-key: /home/akashine/.minikube/profiles/minikube/client.key
akashine@Advik:~/.kube$ sudo vi config
akashine@Advik:~/.kube$ kubectl get node
NAME       STATUS   ROLES           AGE   VERSION
minikube   Ready    control-plane   46h   v1.32.0
akashine@Advik:~/.kube$ |
```



```
akashine@Advik:~$ cat /home/akashine/.minikube/ca.crt | base64 -w 0; echo
```

LS0tLS1CRUdJTiBDRVJUSUZJQ0FURS0tLS0tCk1JSURCakNDQWU2Z0F3SUJBZ0lCQVRBTkJna3Foa2lHOXcwQkFRc0ZBRE [illegible]

```
akashine@Advik:~$ cat /home/akashine/.minikube/profiles/minikube/client.crt | base64 -w 0; echo
```

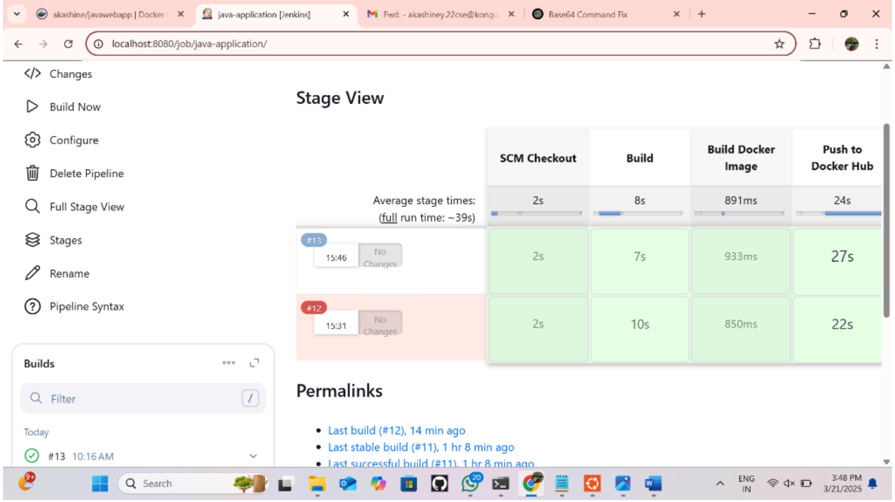
LS0tLS1CRUdJTiBDRVJUSUZJQ0FURS0tLS0tCk1JSURJVENDQWdtZ0F3SUJBZ0lCQWpBTkJna3Foa2lHOXcwQkFRc0ZBRE [illegible]

```
akashine@Advik:~$ cat /home/akashine/.minikube/profiles/minikube/client.key | base64 -w 0; echo
```

LS0tLS1CRUdJTiBSU0EgUFJJVkFURSBLRVktLS0tLQpNSUlFb3dJQkFBS0NBUUVBdWk3c1hGVmJLQXpyTkp0VXdFUDNycXJiYTRSQi9ON2txUU44S0E3K3BDL2lTK3oz [illegible]

```
akashine@Advik:~$
```

Stage view



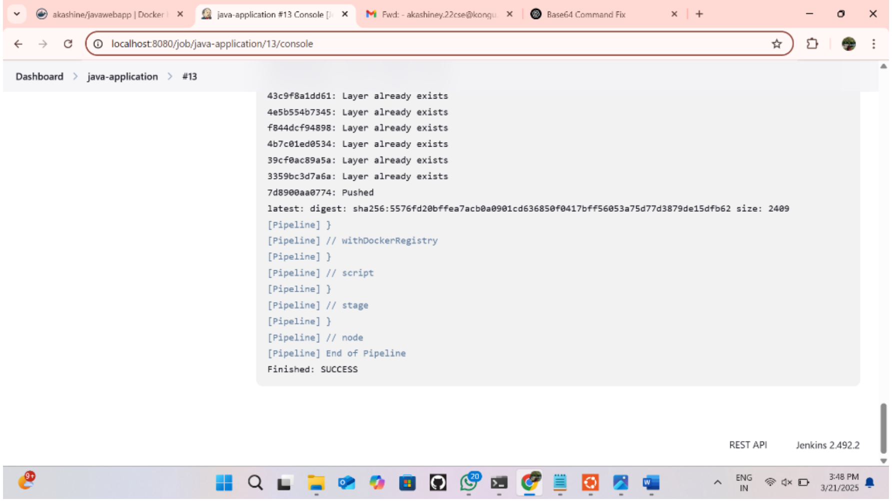
Stage View

	SCM Checkout	Build	Build Docker Image	Push to Docker Hub
Average stage times: (full run time: ~39s)	2s	8s	891ms	24s
#13 15:46 No Changes	2s	7s	933ms	27s
#12 15:31 No Changes	2s	10s	850ms	22s

Permalinks

- Last build (#12), 14 min ago
- Last stable build (#11), 1 hr 8 min ago
- Last successful build (#11), 1 hr 8 min ago

Console Output



akashine/javawebapp | Docker
java-application #13 Console [J
Fwd: - akashiney.22cse@kongu
Base64 Command Fix
localhost:8080/job/java-application/13/console
Dashboard
java-application
#13
REST API
Jenkins 2.492.2
ENG
IN
3:48 PM
3/21/2025

```
43c9f8a1dd61: Layer already exists
4e5b554b7345: Layer already exists
f844dcf94898: Layer already exists
4b7c01ed0534: Layer already exists
39cf0ac89a5a: Layer already exists
3359bc3d7a6a: Layer already exists
7d8900aa0774: Pushed
latest: digest: sha256:5576fd20bffea7acb0a0901cd636850f0417bff56053a75d77d3879de15dfb62 size: 2409
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```