

Minikube deployment

```
maahij@MOHAMEDMAHIJ:~$ minikube start
minikube: command not found
maahij@MOHAMEDMAHIJ:~$ minikube start
🐳 minikube v1.35.0 on Ubuntu 24.04 (amd64)
🔥 Using the docker driver based on existing profile
👉 Starting "minikube" primary control-plane node in "minikube" cluster
📡 Pulling base image v0.0.46 ...
🔄 Restarting existing docker container for "minikube" ...
🔧 Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
🔍 Verifying Kubernetes components...
  * Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟 Enabled addons: storage-provisioner, default-storageclass
🎉 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
maahij@MOHAMEDMAHIJ:~$ sudo nano docker-compose.yml
[sudo] password for maahij:
Sorry, try again.
[sudo] password for maahij:
maahij@MOHAMEDMAHIJ:~$ ls
deploy.yml  docker-compose.yaml  jenkinsfile  my-app  ns.yml  pod-ns.yml  pod.yml  rs.yml  web-app
maahij@MOHAMEDMAHIJ:~$ ls
deploy.yml  docker-compose.yaml  jenkinsfile  my-app  ns.yml  pod-ns.yml  pod.yml  rs.yml  web-app
maahij@MOHAMEDMAHIJ:~$ sudo visudo
/etc/sudoers:48:28: expected a fully-qualified path name
jenkins ALL=(ALL) NOPASSWD: ALL
^~~~~~
What now? ^XCvisudo exiting due to signal: Interrupt
maahij@MOHAMEDMAHIJ:~$ sudo visudo
/etc/sudoers:48:28: expected a fully-qualified path name
jenkins ALL=(ALL) NOPASSWD: ALL
^~~~~~
What now? ^Cvisudo exiting due to signal: Interrupt
maahij@MOHAMEDMAHIJ:~$ sudo visudo
maahij@MOHAMEDMAHIJ:~$ sudo apt update
Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:3 https://pkg.jenkins.io/debian-stable binary/ Release
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [671 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [922 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8960 B]

client-key-data:LS0tLS1CRUdJTiBSU0EgUUFJJVkJFURSBURVktLS0tLQpNSUlfFjQkFBS0NB0UUVBM09JRXVzZzNFYy9ZTE9rcKkVhZWwYUUpVMMVScKZYUjJENzZrUS9rdGUrdEfrbkHWCitCeTgz
TncvMlVEMG9EUIWQSGsVWk3JSE1KWmSuVGpCOHpyZTdLaS9lcVRcBUHuzWkYxYUdSbEFmYmVSTVTVVUKdFRhU1hSOVF3MXpraEzpdzgra2xvYXpWNEt6SU10ZVhEdEE3dGE3WEPoXMDLmdTRXZXfAbnpKcXBq
b1NUcJzJEMAovUjFob1dWm2FPd1nLaEU1aUhpS3lnaWU1T04Rnk1ZWUzMnJrSElXWVZBM2h6a2ZqZ0trRnQzY1hsd3RYXNHCLhQUGR3YklPeTVsR0dIMWI0Vkl0KcEtpbnpuTC96amx6U0U9WQ1ZxVjdHU21p
c1UvRy9MVzA3OGpRSTRDcUWwFcKdTVzb0pKUnFDa0LVd1Z6aGtdnDLqS25pRELBd25NM2Y4UFl1MXdJREFRQUJBo0LCOUVna2RnRC9kYVROZ1dDaAp3MVJmMXpUdUFTmZHB7ZHZUpWszR1SGxsNnA2bXJ0
NStNCFZ5VcrVmdtUXJSeUJDSDRYRjc0dEZ5VvNhVU1iCmo1VTLDaE5ueGLwcmOyTXhTZzLxVGk3VzZuMGp2TFZXMKiYyNrsQTK4eVZVUENyUndQSFpPMVpEMmhNb3U3YUgKWmLmOWNSTVZDT1lMZU1sRU1B
bGRJbCZjU19ibzB00S91lB1rbHU3aHM2VlBvaWtSdG90TzUwN1F3S2FzRjUvamo2TGtNbU5pRE1PejNkL1MwMTlVekJjVzVVTExNTV0UFEeXNTFDOFhScjJZnZyZ1cyQWZMR0xvenVtSXNVR1I1CmJWQU2
YjhMWB0mZ3K2M0enIzcW5YStKOUFsZTUvVBEMDUwE5neTL5UFFPS2x8aTn0VU1JMD16Ly94aGQKM3BHBjFsa0NnUUVBNW1HM3hCUWZCdUJTaK1QWGVQbzFvR0ExcmlheGh3NXhjdnlPamM2RG5BKzNw
dGFGN2LDUAo3RUhzaERwejdUR2xPclJtU0hTUm9ZSHAvmVdsaeWmmM1E3dHmcWYyYU9tNE5rUEEx6citzWDEvN1M4VWldqdE8zcjVUUFUyNTJBDVDFEZERLUkJudVRvcGLjUTBmMHBDR3dFTUNGaTNsaGJTZnNU
dFgzBgtM0nMjU1BDZ1lFQTLVSGwKdHVL1VRWjZDbVhrdFB0bk5KU29NM2lMVS9weHBBZEZ3bGxNRUx1ZRsZT8mekc0LzBQVUJfMTVqQUo2d3Fiago5RytZdGF1b3Q5bkNnTWtMumtUN2tOTkpNZy9RQWxv
NGJuRdrNWRLTU5sZCYnFVut0xJMXhmnVJFuitnSjdRCLJrFNFUkR3WTcStDnZWk2NzJjZTZCLyqtUzA5K0diRWJab1dZTUNnUUVBdNBvbmduK0x6a3dsTwxZVpzak8Kb0xVW3kzQ1ovamV3ZnFwLWk
cXFfa1lxTzBNCVV1VzMrYtdmRU1nRXdHZmQ4Wp1MESHVmtmMEhMNU9hcU1hUgpgdTVTeEFJ0HFUMUK2bDdBR0I1cXgyS0hubWFXy1dtSVVaQWYrKy9KMm1GS1N1RWLVYytd1lMbLVlWFFraGFFCmwxgZ0
empUSzI8ODJoUBHakdIM3JrQ2dZRUe4Sk9FTXNSeG9kKzBUVzdVUHB6NmhwDvDkVUDFocTUybU43MjJkSGFNRFVMM0dkQ2U5VHBNQkhvHdUQXRZWktWTKdIQVdyYmVZeWkwY3phQU82c2FrVzJzUUhVTkww
bHIzYXVzIzAplnJPUkFtOXc2bThIZGhQTMZ1RUduaHdkZjd3ODhjMnBEaWp0WUNoNzFGQUk3ZXVkrnowL2FRReTdKOHU1bXptCjN2U28wVnNDZ1lFQXp4K08J0TVJibEo0QmF1UnJyQVfabUNFQkhqkeCtpVGtJ
U0F3Vkl0YnQmQwsScjJyZG1rYzQKU0ZiZDFlSkZVTY2pVRkftOUNM29LVjRmeDFVRUVrazk5bC9JNGtGVFIjdjBPDx16bnYxK3V5WjVnNbTLCU1VBdgpjT28xmJi4RGtWeWw1RldYL1pmcEJOZUJWd0J1bXU0
aElxemNjK0boVlytNefL0bkdwL3FvN3BzPQotLS0tLUVORCBSU0EgUUFJJVkJFURSBURVktLS0tLQo=
maahij@MOHAMEDMAHIJ:~/.$ kubectl sudo vi config
[sudo] password for maahij:
maahij@MOHAMEDMAHIJ:~/.$ kubectl get node
NAME      STATUS    ROLES    AGE   VERSION
minikube  Ready     control-plane  2d   v1.32.0
maahij@MOHAMEDMAHIJ:~/.$ cd
maahij@MOHAMEDMAHIJ:~$ sudo chmod 666 /var/run/docker.sock
[sudo] password for maahij:
maahij@MOHAMEDMAHIJ:~$ sudo service jenkins restart
maahij@MOHAMEDMAHIJ:~$ sudo service jenkins restart
maahij@MOHAMEDMAHIJ:~$ cd ~/.kube
maahij@MOHAMEDMAHIJ:~/.$ kubectl sudo vi config
maahij@MOHAMEDMAHIJ:~/.$
maahij@MOHAMEDMAHIJ:~/.$
maahij@MOHAMEDMAHIJ:~/.$
maahij@MOHAMEDMAHIJ:~/.$
```

Minikube deployment

```
Setting up openssh-server (1:9.6p1-3ubuntu13.8) ...

Creating config file /etc/ssh/sshd_config with new version
Creating SSH2 RSA key; this may take some time ...
3072 SHA256:gml7nqvVj9VG7fiJAg6KWVBgazDEoC/XwQv78+aRhXk root@MOHAMEDMAAHIJ (RSA)
RSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:i1lyqg0sfZGE8RG2vnIQkLOH386E2ofECRg7KHJ3aOE root@MOHAMEDMAAHIJ (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:UfYTeL4QgLw7MSL2wZyeI/h8htXa05xV7Z/2U33GM/M root@MOHAMEDMAAHIJ (ED25519)
Created symlink /etc/systemd/system/sockets.target.wants/ssh.socket → /usr/lib/systemd/system/ssh.socket.
Created symlink /etc/systemd/system/ssh.service.requires/ssh.socket → /usr/lib/systemd/system/ssh.socket.
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.4) ...
maahij@MOHAMEDMAAHIJ:~$ sudo systemctl restart ssh
maahij@MOHAMEDMAAHIJ:~$ sudo systemctl status ssh
● 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 05:47:50 UTC; 6s ago
 TriggeredBy: ● ssh.socket
    Docs: man:sshd(8)
          man:sshd_config(5)
   Process: 19881 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
  Main PID: 19883 (sshd)
    Tasks: 1 (limit: 9115)
   Memory: 1.2M ( )
   CGroup: /system.slice/ssh.service
           └─19883 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Mar 21 05:47:50 MOHAMEDMAAHIJ systemd[1]: Starting ssh.service - OpenBSD Secure Shell s>
Mar 21 05:47:50 MOHAMEDMAAHIJ sshd[19883]: Server listening on :: port 22.
Mar 21 05:47:50 MOHAMEDMAAHIJ systemd[1]: Started ssh.service - OpenBSD Secure Shell se>

maahij@MOHAMEDMAAHIJ:~$ ls
deploy.yml      jenkinsfile    ns.yml         pod.yml        web-app
docker-compose.yaml  my-app         pod-ns.yml     rs.yml
maahij@MOHAMEDMAAHIJ:~$ cd ~/.kube
maahij@MOHAMEDMAAHIJ:~/.kube$ sudo vi config
maahij@MOHAMEDMAAHIJ:~/.kube$ kubectl get node
error: error loading config file "/home/maahij/.kube/config": json: cannot unmarshal string into Go struct field NamedAuthInfo.users.user of type v1.AuthInfo
o
maahij@MOHAMEDMAAHIJ:~/.kube$ cat config
apiVersion: v1
```

```
3359bc3d7a6a: Preparing
4b7c01ed0534: Preparing
39cf0ac89a5a: Waiting
f844dcf94898: Waiting
3359bc3d7a6a: Waiting
4b7c01ed0534: Waiting
5f70bf18a086: Layer already exists
bc05267c613b: Layer already exists
43c9f8a1dd61: Layer already exists
4e5b554b7345: Layer already exists
f844dcf94898: Layer already exists
3359bc3d7a6a: Layer already exists
39cf0ac89a5a: Layer already exists
4b7c01ed0534: Layer already exists
20753cea2647: Pushed
latest: digest: sha256:55df9d4580d830be82072c22d8c2c7f0ea52128c71df12d063673103d44e395c size: 2409
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Minikube deployment

Dashboard > java-application > #7

Status

Changes

Console Output

Edit Build Information

Delete build '#7'

Timings

Git Build Data

Pipeline Overview

Pipeline Console

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

Console Output

Started by user Mohamed Maahij N

[Pipeline] Start of Pipeline

[Pipeline] node

Running on Jenkins in /var/lib/jenkins/workspace/java-application

[Pipeline] {

[Pipeline] stage

[Pipeline] { (SCM)

[Pipeline] git

Selected Git installation does not exist. Using Default

The recommended git tool is: NONE

No credentials specified

> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/java-application/.git # timeout=10

Fetching changes from the remote Git repository

> git config remote.origin.url https://github.com/Maahij2004/web-app.git # timeout=10

Fetching upstream changes from https://github.com/Maahij2004/web-app.git

> git --version # timeout=10

> git --version # 'git version 2.43.0'

> git fetch --tags --force --progress -- https://github.com/Maahij2004/web-app.git +refs/heads/*:refs/remotes/origin/* # timeout=10

> git rev-parse refs/remotes/origin/main^{commit} # timeout=10

Checking out Revision 3ccb703154f44e0ee8cb84d02418ccdba2bd152 (refs/remotes/origin/main)

> git config core.sparsecheckout # timeout=10

> git checkout -f 3ccb703154f44e0ee8cb84d02418ccdba2bd152 # timeout=10

> git branch -a -v --no-abbrev # timeout=10

> git branch -D main # timeout=10

> git checkout -b main 3ccb703154f44e0ee8cb84d02418ccdba2bd152 # timeout=10

Download

Copy

View as plain text

Dashboard > java-application >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Stages

Rename

Pipeline Syntax

Builds

Filter

Today

#7 8:41 AM

#6 8:28 AM

#5 8:27 AM

#4 8:15 AM

java-application

Add description

Stage View

	SCM	Build-clean	Build-validate	Build-compile	Build-test	Build-package	build to images	docker push hub
Average stage times: (full run time: ~31s)	1s	1s	1s	2s	2s	2s	517ms	6s
#7 1411 No Changes	823ms	1s	1s	2s	2s	2s	428ms	15s
#6 1358 No Changes	833ms	1s	1s	2s	2s	2s	428ms	22s
#5 1357 No Changes	1s	1s	1s	2s	2s	2s	465ms	408ms failed
#4 1345 No Changes	813ms	1s	1s	2s	3s	3s	428ms	217ms failed
#3 1342 No Changes	886ms	1s	1s	2s	2s	3s	685ms	237ms

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```
maahij@MOHAMEDMAAHIJ:~$ sudo service jenkins restart
maahij@MOHAMEDMAAHIJ:~$ sudo service jenkins restart
maahij@MOHAMEDMAAHIJ:~$ cd ~/.kube
maahij@MOHAMEDMAAHIJ:~/.kube$ sudo vi config
maahij@MOHAMEDMAAHIJ:~/.kube$
maahij@MOHAMEDMAAHIJ:~/.kube$
maahij@MOHAMEDMAAHIJ:~/.kube$ cd
maahij@MOHAMEDMAAHIJ:~$ kube$
maahij@MOHAMEDMAAHIJ:~$ minikube service my-service
Error: unknown command "service" for "minikube"

Did you mean this?
service

Run 'minikube --help' for usage.
maahij@MOHAMEDMAAHIJ:~$ minikube service my-service

```

NAMESPACE	NAME	TARGET PORT	URL
default	my-service	9000	http://192.168.49.2:30002

```

★ Starting tunnel for service my-service.

```

NAMESPACE	NAME	TARGET PORT	URL
default	my-service		http://127.0.0.1:40177

```

🌐 Opening service default/my-service in default browser...
http://127.0.0.1:40177
🔥 Because you are using a Docker driver on linux, the terminal needs to be open to run it.
^C 🛑 Stopping tunnel for service my-service.
maahij@MOHAMEDMAAHIJ:~$ curl http://192.168.49.2:30002
<doctype html><html lang="en"><head><title>HTTP Status 404 - Not Found</title><style type="text/css">body {font-family:Tahoma,Arial,sans-serif;} h1, h2, h3
, b {color:white;background-color:#525D76;border:none;} h1 {font-size:22px;} h2 {font-size:16px;} h3 {font-size:14px;} p {font-size:12px;} a {color:black;} .line {height:1px;background-color:#525D76;border:none;}</style></head><body><h1>HTTP Status 404 - Not Found</h1><hr class="line" /><p><b>Type</b> Status Report</p><p><b>Description</b> The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.</p><hr class="line" /><h3>Apache Tomcat/9.0.102</h3></body></html>maahij@MOHAMEDMAAHIJ:~$ curl http://192.168.49.2:30002/my-app/
<html>
<body>
<h2>Hello World!</h2>
</body>
</html>
maahij@MOHAMEDMAAHIJ:~$
```

Commands

apt update

sudo apt install openssh-server

sudo systemctl restart ssh

sudo systemctl status ssh

cat /home/david/.minikube/ca.crt | base64 -w 0; echo

sudo chmod 666 /var/run/docker.sock

PIPELINESCRIPT

pipeline {

agent any

stages {

stage('scm') {

steps {

git branch: "

}

Minikube deployment

```
    }  
    stage('build-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 .'
```

Minikube deployment

```
    }
  }
}
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: 'cred-1', 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: 'cred-1', namespace: '', restrictKubeConfigAccess: false, serverUrl:
'https://192.168.49.2:8443') {

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

Minikube deployment

}