

DevOps DAY -5

deployment.yml

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: my-deploy
  namespace: my-bank
  labels:
    name: my-deploy
spec:
  replicas: 1
  selector:
    matchLabels:
      apptype: web-backend
  strategy:
    type: RollingUpdate
  template:
    metadata:
      labels:
        apptype: web-backend
    spec:
      containers:
        - name: my-web
          image: 22cs1258/mysimplewebapplication:tagname
          ports:
            - containerPort: 9001
---
apiVersion: v1
kind: Service
metadata:
  name: my-service
  namespace: my-bank
  labels:
    app: my-service
spec:
  type: NodePort
  ports:
    - port: 9001
      targetPort: 8080
```

```
nodePort: 30007
selector:
  apptype: web-backend
```

Minikube

```
Select navin@ITP-CC16-42: ~
[INFO] plugin/kubernetetes: Trace[855174829]: "Reflector ListAndWatch" name:pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229 (21-Mar-2025 05:26:15.517) (total time: 30000ms):
Trace[855174829]: ---"Objects listed" error:Get "https://10.96.0.1:443/apis/discovery.k8s.io/v1/endpointslices?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout 30000ms (05:26:45.517)
Trace[855174829]: [30.00046988s] [30.00046988s] END
[ERROR] plugin/kubernetetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: Failed to watch "v1.EndpointSlice: failed to list "v1.EndpointSlice: Get "https://10.96.0.1:443/apis/discovery.k8s.io/v1/endpointslices?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
[INFO] plugin/kubernetetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: failed to list "v1.Namespace: Get "https://10.96.0.1:443/api/v1/namespaces?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
[INFO] plugin/kubernetetes: Trace[258437970]: "Reflector ListAndWatch" name:pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229 (21-Mar-2025 05:26:15.516) (total time: 30000ms):
Trace[258437970]: ---"Objects listed" error:Get "https://10.96.0.1:443/api/v1/namespaces?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout 30000ms (05:26:45.517)
Trace[258437970]: [30.001275842s] [30.001275842s] END
[ERROR] plugin/kubernetetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: Failed to watch "v1.Namespace: failed to list "v1.Namespace: Get "https://10.96.0.1:443/api/v1/namespaces?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
[INFO] plugin/kubernetetes: Trace[2090896627]: "Reflector ListAndWatch" name:pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229 (21-Mar-2025 05:26:15.516) (total time: 30000ms):
Trace[2090896627]: [30.001053121s] [30.001053121s] END
[ERROR] plugin/kubernetetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: Failed to watch "v1.Service: failed to list "v1.Service: Get "https://10.96.0.1:443/api/v1/services?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
navin@ITP-CC16-42:~$ kubectl describe pod coredns-668dbf9bc-dcw4v -n kube-system
Name:               coredns-668dbf9bc-dcw4v
Namespace:          kube-system
Priority:            2000000000
Priority Class Name: system-cluster-critical
Service Account:    coredns
Node:               minikube/192.168.49.2
Start Time:         Fri, 21 Mar 2025 05:26:14 +0000
Labels:             k8s-app=kube-dns
                   pod-template-hash=668dbf9bc
Annotations:        <none>
Status:             Running
IP:                10.244.0.2
IPs:               10.244.0.2
Controlled By:      ReplicaSet/coredns-668dbf9bc
Containers:
  coredns:
    Container ID:   docker://9b2d86ad235fdcabb75fcf0a7821f002f6ccbd3de41f7c4327c6b7f89cf411e0
    Image:          registry.k8s.io/coredns/coredns:v1.11.3
    Image ID:       docker-pullable://registry.k8s.io/coredns/coredns@sha256:9caabbf6230b109a65d806e6ac138de60d6a1c19e5a341fbbb7c78382559c6e
    Ports:          53/UDP, 53/TCP, 9153/TCP
    Host Ports:     0/UDP, 0/TCP, 0/TCP
    Args:
      -conf
      /etc/coredns/Corefile
    State:          Running
      Started:      Fri, 21 Mar 2025 05:26:15 +0000
    Ready:          True
    Restart Count:  0
    Limits:
      Memory:       170Mi
    Requests:
      Memory:       170Mi

Select navin@ITP-CC16-42: ~
navin@ITP-CC16-42:~$ sudo apt update
[sudo] password for navin:
Ign:1 https://pkg.jenkins.io/debian binary/ InRelease
Hit:2 https://pkg.jenkins.io/debian binary/ Release
Hit:4 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:6 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:7 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
1 package can be upgraded. Run 'apt list --upgradable' to see it.
navin@ITP-CC16-42:~$ LS0tLS1CRUdJTiB0RVJUSUZJQ0FURSB0tLS0tCklJSURCaKNQWUJ2Z0F3SUJZB0lCQVRkTjNa3Foa2lHOXcxQkFRc0ZBREFlWTVJNd0VRWURWUVRERXdwZGFXNXAKYTNWApVpVtKJNqjRYRFRJMUJ1ETXhPREeE56QTVWakFSTkxvd0ZURVRWV0QVFRQ0BeE1LYldsdlFkdFZbVZUVRDQ0FTSXdEUVlKS29saWZ0Y5BUUVCQlFRGdnRlBBRENDQVlvQ2dnRUJBTmpuCKdweGhwMUJ2Sks0Rl1JWENWl1ZiQXRtUDZxV1pFdmZ0L1V0VVF1ZVZQ01TTnBNc-S8KJz2qMElNwElY1NLU0JITZTZWm01sdfBND1QKkU4cGhXTjNkamFOkytVUTRob3dCK1dVSXJVa2JNT3RtZnM2SgpyZUhhYUUNoSGRDV1Z4VG5JVCtQ5XRzQ2tjUfJ2SKfTU0ZFQURxTn1SSmk4b1Z6OEZnN2ZpeUxCSzk5YU3L2Jvs2JSTEzm21jaENHMK500W1w0UxaG1nc202azRkRzZlBlIyRmFS0F1M1FqY21HZU4KVnBxM3HgVCS3cjYyREdEcmh6MhdPTEH5N31HSHNI1ZUMvV2Nnb3dUN31GUDc1c3ZueSt2cmYxeEJrQXpxTytEMQpnMmNFNHbZVvyekOtUY4d8RnMURWJbQ0VF1L3BUURB0t0TUIR0EXvMRKUVFXCK1CUUdQ3NHQVFRKJ3TUNCC22dyQmdFRkRjY0R0RVEFQ0mdOVkhSTUJZBjhFQlRBREFRCS9NQjBHQTFVZERnUVCkQkJTJN282511SaWwU05NbjdxBEtES010aCtS0y9UXNGQUP0P0FRnEufNekp1z2JHwAp1MUTkY1UudUvUoGp1a2FozFhvs31uMGVDRWVQn0N0NDJUME3V0F1VG03VJ3YNEduUC9odmdzNTdLEURCRKZ5CmNOOUFvdTQ5dE11a2RlMURk0a3NIQzFjd3Juc1FLUS9RY29vc29DTzRmWkF1MTdyNkEUS0RmW4YTw2TWtWVjTdmW4Znpk08VYV11v0EK2e1FwMmExckp1STYVMGJyaT1qbml0Lm1QZRT21KYTFHSMFpVwo20CtXN1IwbjTtdFbMFZ0TNRcTAXaW1tcV11NHFKU1RjTXlXNHZzU0Zj0EdsUnaA2ZnA3U0Q4Y20Za3N1TWIhQdtQ1Vvmo0VRWwZfJczR0N3dVVG3JTTJJS19GcuXQhZzaXJEN1J0KysyVjZ4d1UKeFdnVHBPmWRrSng0Bwc9PQotLS0tLVU0RCBDRVJUSUZJQ0FURSB0tLS0tCg==
navin@ITP-CC16-42:~$ /home/navin/.minikube/profiles/minikube/client.crt
-bash: /home/navin/.minikube/profiles/minikube/client.crt: Permission denied
navin@ITP-CC16-42:~$ /home/navin/.minikube/profiles/minikube
-bash: /home/navin/.minikube/profiles/minikube: Is a directory
navin@ITP-CC16-42:~$
```

34°C Mostly sunny Search 15:36 21-03-2025

Pipeline script – jenkins

JAVA Application

```
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'

        }
    }
}

```

Dashboard > java application >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Stages

Rename

Pipeline Syntax

java application

Add description

Stage View

Average stage times:
(full run time: ~20s)

	SCM	Build	Build Docker Image	Push Docker Image	test
#15	711ms	1s	310ms	14s	
#14	746ms	1s	313ms	16s	392ms failed
#13	1s	1s	563ms	17s	1s failed
#11	724ms	1s	299ms	14s	
#10	1s	1s	305ms	22s	

Builds

Filter

Today

#15 10:32 AM

#14 10:30 AM

#13 10:29 AM

#11 10:02 AM

localhost:8080/job/java%20application/

Dashboard > java application > #11

WARNING! Your password will be stored unencrypted in /var/lib/jenkins/workspace/java application@tep/9ff278c-1250-4077-8b43-d85d82b1188/config.json.
Configure a credential helper to remove this warning. See
<https://docs.docker.com/engine/reference/commandline/login/#credentials-store>

Login Succeeded

[Pipeline] {

[Pipeline] sh

+ docker push 22cs1258/mysimplewebapplication

Using default tag: latest

The push refers to repository [docker.io/22cs1258/mysimplewebapplication]

baad0928b04: Preparing

5f70bf18a086: Preparing

43c9fa18061: Preparing

5f70bf18a086: Preparing

bc85207c13b: Preparing

4a955ab7345: Preparing

39c4ba89a5a: Preparing

f844dcf94898: Preparing

3359bc3d7ada: Preparing

4b7c8ae0934: Preparing

f844dcf94898: Waiting

39c4ba89a5a: Waiting

4b7c8ae0934: Waiting

3359bc3d7ada: Waiting

bc85207c13b: Layer already exists

5f70bf18a086: Layer already exists

43c9fa18061: Layer already exists

4a955ab7345: Layer already exists

39c4ba89a5a: Layer already exists

3359bc3d7ada: Layer already exists

f844dcf94898: Layer already exists

4b7c8ae0934: Layer already exists

baad0928b04: Pushed

latest: digest: sha256:95be5478167852102541da177d1f62a782a2ab1c8bdc188967180564387ef5 size: 2489

[Pipeline] }

[Pipeline] // withDockerRegistry

[Pipeline] }

[Pipeline] // script

[Pipeline] }

[Pipeline] // stage

[Pipeline] }

[Pipeline] // node

[Pipeline] End of Pipeline

Finished: SUCCESS

Dashboard

java application

#11

Status

Changes

Console Output

Edit Build Information

Timings

Git Build Data

Pipeline Overview

Pipeline Console

Thread Dump

Pause/resume

Replay

Pipeline Steps

Workspaces

Previous Build

Started by user Navin Kumar D

[Pipeline] Start of Pipeline

[Pipeline] node

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

[Pipeline] {

[Pipeline] stage

[Pipeline] { (SCM)

[Pipeline] git

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/NavinkumarD/Guvitasks.git # timeout=10

Fetching upstream changes from https://github.com/NavinkumarD/Guvitasks.git

> git --version # timeout=10

> git --version # 'git version 2.43.0'

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

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

Checking out Revision 5804759c8acd532c7246d816470a7e863e716df (refs/remotes/origin/main)

> git config core.sparsecheckout # timeout=10

> git checkout -f 5804759c8acd532c7246d816470a7e863e716df # timeout=10

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

> git branch -D main # timeout=10

> git checkout -b main 5804759c8acd532c7246d816470a7e863e716df # timeout=10

Commit message: "jenkinsfile"

> git rev-list --no-walk 5804759c8acd532c7246d816470a7e863e716df # timeout=10

[Pipeline] }

[Pipeline] // stage

Download

Copy

View as plain text